Draft
Environmental Impact Report
SCH No. 2021110122

THE COVE AT EL NIGUEL RESIDENTIAL PROJECT

Prepared for:

City of Laguna Niguel
30111 Crown Valley Parkway
Laguna Niguel, California 92677

Prepared by:

Carlson Strategic Land Solutions
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San Juan Capistrano, California 92675

April 2022

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City of Laguna Niguel
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APRIL 2022

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TABLE OF CONTENTS

EXECUTIVE SUMMARY ES-1

ES.1 Document Purpose ES-1
ES.2 Project Description ES-1
ES.3 Required Approvals ES-3
ES.4 Area of Controversy/Issues to be Resolved ES-4
ES.5 Summary of Project Alternatives ES-5
ES.6 Summary of Environmental Impacts and Mitigation ES-8

SECTION 1.0 INTRODUCTION 1-1

1.1 Purpose of the EIR 1-1
1.2 Authorization 1-1
1.3 Public Review/Involvement 1-1
1.4 Cumulative Impacts 1-15
1.5 Lead Agency 1-23
1.6 Responsible and Trustee Agencies 1-23
1.7 Project Applicant 1-23
1.8 Documents and Incorporated by Reference 1-23
1.9 EIR Technical Documents 1-24

SECTION 2.0 PROJECT DESCRIPTION 2-1

2.1 Project Location and Setting 2-1
2.2 City of Laguna Niguel 2-1
2.3 Project Site History 2-1
2.4 Existing Site Conditions 2-3
2.5 Site Vicinity 2-3
2.6 Existing General Plan Land Use and Zoning 2-3
2.7 Project Description 2-4
2.8 Discretionary Actions 2-13

SECTION 3.0 ENVIRONMENTAL EFFECTS FOUND NOT TO BE SIGNIFICANT 3-1

3.1 Introduction 3-1
3.2 Environmental Effects Screened from Detailed Analysis 3-1
3.3 Environmental Effects Discussed in Detailed in the EIR 3-14

SECTION 4.0 ENVIRONMENTAL IMPACT ANALYSIS 4-1

4.1 Aesthetics 4.1-1
4.2 Air Quality 4.2-1
4.3 Biological Resources 4.3-1
4.4 Cultural and Paleontological Resources 4.4-1
4.5 Energy 4.5-1
4.6 Geology and Soils 4.6-1
4.7 Greenhouse Gas 4.7-1
4.8 Hazards and Hazardous Materials 4.8-1
4.9 Hydrology and Water Quality 4.9-1
4.10 Land Use and Planning 4.10-1
4.11 Noise 4.11-1
4.12 Transportation 4.12-1
4.13 Tribal Cultural Resources 4.13-1
4.14 Wildfire 4.14-1

SECTION 5.0 ADDITIONAL TOPICS REQUIRED BY CEQA 5-1

5.1 Significant Unavoidable Environmental Impacts 5-1
5.2 Significant Irreversible Changes 5-1
5.3 Growth-Inducing Impacts 5-2

SECTION 6.0 ALTERNATIVES 6-1

6.1 Introduction 6-1
6.2 Project Objectives 6-2
6.3 Summary of the Proposed Project's Environmental Impacts 6-2
6.4 Alternatives Considered But Not Analyzed Further 6-9
6.5 Alternatives Under Consideration 6-11
6.6 Alternative Impact Analysis 6-24
6.7 Comparison of Project Alternatives 6-43
6.8 Environmentally Superior Alternative 6-53

SECTION 7.0 GLOSSARY OF ACRONYMS 7-1

APPENDICES

A. Notice of Preparation

B. Notice of Preparation Comments

C. CalEEMod Air Pollution Emissions Calculations, October 2021, EnPlanners.

D. Biological Resource Assessment, May 2021, Carlson Strategic Land Solutions.

E. Cultural Resources Assessment, September 2021, Duke CRM.

F. Geotechnical Reports

F-1. Response to Questions Regarding Geotechnical Review, February 2022, American Geotechnical, Inc.

F-2. Addendum Report – Adding Geology to Current Site Plan, May 2021, American Geotechnical, Inc.

F-3. Response to City of Laguna Niguel Geotechnical Review Sheet Dated February 15, 2021 and Notice of Incompleteness Dated February 23, 2021, April 2, 2021, American Geotechnical, Inc.

F-4. Geotechnical Review of Tentative Tract Map, January 2021, American Geotechnical, Inc.

F-5. Conditional Approval of Geotechnical Reports, June 2021, Goffman, McCormick, and Urban.

G. Fire Safety

G-1. Safety Plan, October 2021, FireSafe Planning Solutions

G-2. Fuel Modification Plan, December 2021, FireSafe Planning Solutions

H. Phase I Environmental Assessment Report, March 2022, Transaction Management Corporation, Inc.

I. Hydrology Analysis, August 16, 2021, Hunsaker & Associates Irvine, Inc.

J. Conceptual Water Quality Management Plan, August 24, 2021, Hunsaker & Associates Irvine, Inc

K. Noise and Vibration Analysis Report, The Cove at El Niguel, February 2022, A/E Tech LLC

L. Traffic Assessment for The Cove at El Niguel Project, June 2021, Linscott Law & Greenspan

M. Mitigation Monitoring and Reporting Program

LIST OF TABLES

Table ***Page***

ES-1 Summary of Impacts, Mitigation Measures, and Level of Signification after Mitigation ES-9

1-1 Summary of NOP Comments 1-3
1-2 Cumulative Projects 1-16

2-1 List of Potential Responsible Agencies/Project Approvals 2-3
2-2 Summary of NOP Comments 2-4

3.2.5-A Proposed On-Site Recreational Facilities 3-9

4.2-1 Project Area Air Quality Monitoring Summary 2018- 2020 ..... 4.2-2
4.2-2 Attainment Status of Criteria Pollutants in the South Coast Air Basin 4.2-4
4.2-3 Maximum Daily Regional Emissions Thresholds 4.2-10
4.2-4 Tentative Project Schedule 4.2-14
4.2-5 Construction Equipment Utilized by Construction Phase 4.2-14
4.2-6 Regional Construction Emissions 4.2-15
4.2-7 Regional Operational Emissions 4.2-15
4.2-8 Construction Localized Impact Analysis 4.2-16
4.2-9 Long-Term Operational Localized Impact Analysis 4.2-17

4.5-1 Construction Duration 4.5-8
4.5-2 Construction Off-Road Equipment 4.5-9
4.5-3 Off-Road Construction Equipment Diesel Fuel Usage 4.5-10
4.5-4 Construction Worker Vehicle Gasoline Fuel Use 4.5-11
4.5-5 Existing and Estimated Annual Energy Use at the Proposed Project 4.5-12

4.7-1 Project Greenhouse Gas Emissions 4.7-5

4.9-1 Hydrology Analysis Summary Construction Duration 4.9-13

4.10-1 Laguna Niguel General Plan Consistency Analysis 4.10-6

4.11-1 Typical Sound Levels Measured in the Environment 4.11-3
4.11-2 Existing Sensitive Receivers Distance and Sound Levels 4.11-5
4.11-3 Laguna Niguel Noise Ordinance Standards at Residential Properties 4.11-9
4.11-4 Laguna Niguel General Plan – Interior and Exterior Noise Standards 4.11-10
4.11-5 Construction Vibration Damage Criteria 4.11-14
4.11-6 Groundborne Vibration Potential Annoyance Criteria 4.11-14

4.11-7 Combined Construction and Existing Noise Levels (Leq, dBA) 4.11-18
4.11-8 Comparison of AM Peak-Hour Traffic Leq (dBA) Between Existing and Existing with Construction Conditions 4.11-19
4.11-9 Calculated Groundborne Vibration Levels (PPV, in/sec) 4.11-20

4.12-1 Project Trip Generation 4.12-7

4.13-1 Cultural Resources within ½ Mile of the Project Boundary 4.13-6
4.13-2 Cultural Reports within ½ Mile of the Project Boundary 4.13-7

6-1 Environmental Effects of Proposed Project 6-2
6-2 Comparison of Alternative 2: Maximum Development Identified in the General Plan to the Project Objectives 6-30
6-3 Comparison of Alternative 3: Reduced Density to the Project Objectives 6-36
6-4 Comparison of Alternative 4: Higher Density Larger Footprint 38 Unites to the Project Objectives 6-42
6-5 Impact Comparison of Project Alternatives 6-44

LIST OF FIGURES

Figure ***Page***

1.A Regional and Project Location Map 1-11
1.B Aerial View of the Project Area 1-13
1.C Cumulative Projects 1-21

2.A Existing General Plan Land Uses 2-5
2.B Existing Zoning Map 2-7
2.C Tentative Tract Map 2-9
2.D Conceptual Site Plan 2-15
2.E Site Plan Cross Sections 2-17

3.2.4.A Open Space Exhibit 3-7

4.1.A Architectural Rendering 4.1-11
4.1.B Building Elevations - Duplex 4.1-13
4.1.C Building Elevations - Triplex 4.1-15
4.1.D Landscape Plan 4.1-17
4.1.E Lighting Concept Plan 4.1-19

4.3.A CNDDB Occurrences and Critical Habitat Map 4.3-9

4.6.A Preliminary Geotechnical/Geologic Map 4.6-9

4.6.B Geotechnical Cross Sections 4.6-11
4.6.C Geotechnical Cross Section J-J 4.6-13

4.9.A Utility Plan 4.9-9

4.11.A Sensitive Receivers and Noise Measurement Locations 4.11-7

4.12.A Median Diverter and Northbound Left-Turn Pocket 4.12-13

4.14.A Laguna Niguel Very High Fire Hazard Severity Zone Map 4.14-5
4.14.B Conceptual Fuel Modification Map 4.14-13

6.5.A Alternative 2 – Maximum Development Identified in the General Plan 6-13
6.5.B Alternative 3 – Reduced Density 6-15
6.5.C Alternative 4 – Higher Density 6-17

EXECUTIVE SUMMARY

ES.1 Document Purpose

The purpose of this Draft Environmental Impact Report (Draft EIR) is to evaluate and disclose potential environmental impacts resulting from implementation of the proposed project, Cove at El Niguel residential project (Project). The approximately 4.2-acre Project site is located at 30667 Crown Valley Parkway in the City of Laguna Niguel, California.

ES.1.1 Project Location

The proposed Project lies on a 4.2-acre property on Crown Valley Parkway at Playa Blanca in the City of Laguna Niguel (City) in Orange County, CA. Figure 1- A shows the regional location and Project vicinity. The Project is comprised of one lot, Assessor's Parcel Number (APN) 656-321-02. Figure 1-B shows an aerial view of the Project location. The topography of the site is generally sloping downward from west to east. Elevations onsite range from approximately 450 feet above mean sea level (msl) at the westerly boundary to approximately 360 feet msl along the east boundary.

ES.2 Project Description

ES.2.1 Background

The Project site was originally graded and developed in 1979 as a 10-building townhome project with 41 condominiums. On March 19, 1998, a large landslide destroyed part of the former 41-unit condominium development on the site, as well as nine (9) single-family homes located above the site.

Following the landslide, the entire 41-unit condominium project was demolished to perform grading necessary to stabilize the former landslide. The landslide was repaired between 1998 and 2000 and involved installation of a caisson wall with tieback anchors, removal of the 10 condominium buildings and associated structures, partial removal of the landslide mass, installation of subdrains, and construction of a compacted fill buttress. The work included an application by the Niguel Summit Community Association to re-grade the hillside, re-compact and re-contour the slope and to construct a buttress at the base of the slope, and the associated site development permit was approved by the City in 1999. The repair work was overseen by the City and a variety of consultants, including American Geotechnical representing the Niguel Summit Homeowners Association. American Geotechnical developed the plans for construction including refinements, calculations, detailing, structural analysis and the preparation of the repair plans and provided the field services during the construction of the stabilization measure for the landslide.

The City of Laguna Niguel was awarded $5.6 million of Hazard Mitigation Grant Program (HMGP) funds from the Federal Emergency Management Agency (FEMA) to assist in disaster recovery efforts by purchasing landslide damaged properties resulting from the 1998 El Niño winter storms. The HMGP funds are administered by the Governor's Office of Emergency Services (OES) in conjunction with FEMA. The purpose of the HMGP is to purchase private property subject to future hazards and to avoid future property damage by holding the property in perpetual open space.

In order to receive the HMGP funds, FEMA and OES required the City change the land use designation of the effected properties to open space and acquire a conservation easement over the subject properties in order to restrict the use of the land to open space in perpetuity.

Resolution 2002-703, which granted approval of the General Plan Amendment and Zone Change included a "sunset provision," which stated:

> "GPA 02-03 shall become void and of no force and effect, and the subject properties shall revert to their former land use designations, if the HMGP funding is materially reduced, deobligated, or otherwise required to be returned. Additionally, should the "sunset provision" take effect and the subject properties revert to their former land use designations and zoning districts, any new development project proposed on the subject properties shall require that the Planning Commission approve a Site Development Permit or other applicable discretionary actions, including compliance with the California Environmental Quality Act and the preparation of other technical studies such as geotechnical reports."

Following adoption of Resolution 2002-703, the "sunset provision" was enacted because the HMGP funds were never received, and the Project site reverted back to its prior land use designations and GPA 02-03 designating the property Open Space became null and void.

The Project site has remained vacant since the landslide repair. In 2012 and 2013, American Geotechnical prepared feasibility reports and then conducted a preliminary geotechnical investigation for a proposed 38-unit condominium complex on the Project site, where residential units were proposed throughout the 4.2-acres on both the lower eastern portion of the Project site and upper western portion of the Project site. Although the proposal was never approved, the findings and recommendations contained in American Geotechnical's feasibility reports and preliminary geotechnical investigation was conditionally approved by the City's geotechnical reviewer, Goffman, McCormick, and Urban Geotechnical Inc. (GMU).

ES.2.2 Project Description

The proposed Project will result in the construction of 22 three-story condominium style homes configured in 6 triplex and 2 duplex buildings on approximately 2 acres, and approximately 2.2 acres of open space. The 4.2-acre Project site is designated as APN 656-321-02. The property will be subdivided into two lots, Lot 1 and Lot A. Lot 1 includes the 2-acre residential area and Lot A, a lettered lot on the tentative tract map, does not permit residential home construction. The Project is consistent with the existing Residential Attached General Plan land use designation for the site and the existing Multi-Family District, RM zoning for the site. The discretionary actions to be considered by the City as part of the proposed Project include a Tentative Tract Map (TTM 17721), Minor Adjustment, and a Site Development Permit (SP 16-04) including Alternative Development Standards. There are no other discretionary approvals required by Responsible or Trustee Agencies for the proposed Project.

ES.2.3 Project Objectives

The following project objectives have been developed for the proposed Project:

- Provide new for-sale housing that is responsive to market conditions and provides a uniquely designed product type that is currently limited elsewhere in the City.
- Design the grading and geotechnical stabilization to ensure site stability consistent with City codes and minimize grading into the existing previously stabilized landslide mass.
- Design the grading and geotechnical stabilization to minimize off-site grading and balance the earthwork on site to minimize import/export, which would reduce air quality, noise, and traffic impacts from truck traffic on adjacent residential uses and City roadways.
- Redevelop the previously existing residential site with a residential project consistent with existing General Plan and Zoning designations that provides an updated housing product to meet the City's growing population and further address the City's and state's housing needs.
- Create a financially successful development that is fiscally responsible by equitably contributing to the expansion and operation of the public services and facilities impacted by the project through the payment of fees.
- Improve the aesthetic character along Crown Valley Parkway through enhanced landscaping consistent with General Plan policies.

ES.3 Required Approvals

Implementation of the proposed Project requires approval by the City of several discretionary actions. These include, but are not limited to, the following.

ES.3.1 Tentative Tract Map

The Project requires City approval of TTM 17721 to form two lots within APN 656-231-02. Lot 1 would encompass the relatively flat, rectangular-shaped, approximately 2-acre portion of the

parcel in the eastern portion of the site and is the location of the proposed 22 condominium style homes and ancillary development and utility improvements. Lot A would encompass the steeper hillside and flat areas in the western approximately 2.2-acre portion of the parcel. Proposed TTM 17721 is shown in Figure 2.C.

ES.3.2 Minor Adjustment

Minor Adjustment provides an adjustment for retaining walls that exceed the 12' height limit established in the Zoning Code. The tallest wall found on the Project site is located in the northern portion and measures approximately 15.5 feet.

ES.3.3 Site Development Permit, including Alternative Development Standards

Site Development Permit (SDP) number SDP 16-04 contains the details of the proposed Project improvements and is shown in the conceptual Project site plan shown in Figure 2.D. The proposed SDP would allow the construction of the 22 condominium style homes configured into 6 triplex and 2 duplex 3-story buildings on 2 acres, while preserving approximately 2.2 acres of open space. The proposal is supported by the existing General Plan and Zoning for the site.

The following three alternative development standards are being requested: common open space, active recreation, and building heights.

ES.3.4 Tribal Consultation

In compliance with California law chaptered pursuant to the Native American Historic Resource Protection Act, or AB 52 (Pub. Resources Code, §§ 5097.94, 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, 21084.3), the City has consulted with California Native American tribes during the planning and environmental review processes. Tribal Consultation concluded on March 1, 2022.

ES.4 Area of Controversy/Issues to be Resolved

Section 15123(b) (2) of the CEQA Guidelines requires that areas of controversy known to the lead agency must be stated in the EIR summary. The City distributed a Notice of Preparation (NOP) to solicit agency and public comments on the scope and content of the environmental analysis to be included in the Draft EIR. CEQA requires a NOP to circulate for a 30-day period. The City prepared and circulated the NOP to responsible and affected agencies and other interested parties for public review that begun on November 2, 2021 and ended February 21, 2022.The NOP was posted on the City's website, the Orange County Clerk's office and sent to the State Clearinghouse at the Governor's Office of Planning and Research to solicit statewide agency participation in determining the scope of the EIR. A total of three agencies and two members of the public provided written comments in response to the NOP.

The public agencies included:

- California Department of Fish and Wildlife
- California Department of Transportation
- Native American Heritage Commission

The City hosted a public scoping meeting to solicit input from the public and agencies on the scope of the EIR. The public scoping meeting was held during the NOP review period on November 17, 2021, at the City of Laguna Niguel City Hall. Six speakers presented their comments, and no formal written comments were received from public commentors during the public scoping meeting. A summary of the six speaker comments received during the public scoping meeting are included in Appendix B.

Comments received included concerns regard geology and soils, traffic and circulation, biological impacts, impacts on adjacent neighborhoods, and alternatives. All issues raised during the public and agency review process are address in this Draft EIR within Chapter 4 *Environmental Impact Analysis*.

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR identify issues to be resolved. The issues to be resolved by the lead agency include whether and how to mitigate the significant effects of the proposed project, consideration of the various mitigation measures and alternatives recommended in the Draft EIR by the City, and whether the discretionary approvals required to implement the proposed Project and its development components should be granted. No significant and unavoidable impacts have been identified in this EIR for the proposed Project; therefore, a Statement of Overriding Considerations would not be required for the proposed Project.

ES.5 Summary of Project Alternatives

Section 15126.6 of the CEQA Guidelines identifies the parameters within which consideration and discussion of alternatives to the proposed Project should occur. As stated in this section of the guidelines, alternatives must focus on those that are reasonably feasible and that attain most of the basic objectives of the proposed Project. Each alternative should be capable of avoiding or substantially lessening any significant effects of the proposed Project. The rationale for selecting the alternatives to be evaluated and a discussion of the No Project Alternative are also required, per Section 15126.6.

ES.5.1 Alternative 1: No Project No Build

This alternative assumes that no new development would occur on the 4.2-acre parcel. No ground-disturbing activities would take place, nor would any multi-family structures be erected. Under this alternative, the potential impacts associated with development of the proposed Project would not occur. This alternative provides for an analysis of the existing baseline conditions at the time

the Notice of Preparation (NOP) was published, as well as what would be reasonably expected to occur in the foreseeable future if the proposed Project were not approved. Analysis of this alternative compares the environmental effects of the Project site remaining in its existing state against environmental effects which would occur if the proposed Project were approved.

Maintaining the site's existing improvements and limited uses would produce no environmental impacts, but the alternative would not fulfill any of the Project objectives. This alternative would be the environmentally superior alternative compared to the proposed Project, due to the minimization and avoidance of physical environmental impacts. However, according to the State CEQA guidelines, if the environmentally superior alternative is the No Project No Build alternative the EIR shall identify an environmental superior alternative among the other alternatives in accordance with Section 15126.6 (c). This alternative is rejected from further analysis.

ES.5.2 Alternative 2: Maximum Development Density Identified in the General Plan

This alternative allows for the maximum number of residential attached dwelling units permitted by the General Plan on the 4.2-acre Project site. This alternative would result in the development of 41 dwelling units. This alternative assumes all of the dwelling units would be placed on Lot 1, the 2-acre portion of the Project site proposed for development, in a more clustered configuration. The remaining 2.2 acres would be open space found within Lot A, similar to the proposed Project. Alternative 2 is graphically depicted in Figure 6.5.A.

This alternative would result in a slight increase in the severity of several environmental impacts due to the increase in number of housing units and residents, but the significance of the impacts would remain the same. These impact categories include: air quality; energy; greenhouse gases; hazards; noise; population; public services; recreation; and utilities. While not a fully engineered alternative, it appears this alternative may also not meet the City's open space and recreation requirements, resulting in the need for Alternative Development Standards. This alternative would meet all of the Project Objectives. However, because this alternative would slightly increase the severity of environmental impacts compared to the Project, this alternative is not environmentally superior.

ES.5.3 Alternative 3: Reduced Density

This Reduced Density alternative assumes construction of 8 duplex structures, 16 dwelling units, on the 4.2-acre subdivided parcel comprised of Lot 1, the 2-acre area proposed for Project development, and Lot A the 2.2-acre area of open space similar to the proposed Project. This alternative provides 16 units. Total parking spaces provided would be 63, comprised of 24 garage parking spaces, 8 shared parking spaces, and 11 guest parking spaces. The additional space on the site would remain for landscaping, building setbacks, active recreation space, storm water

infiltration, and open space. This alternative would reduce the total number of residents from 57 to 42 compared to the proposed Project. Alternative 3 is graphically depicted in Figure 6.5.B.
This alternative would result in a slight decrease in the severity of several environmental impacts due to the decrease in number of housing units and residents, but the severity of the impact would remain the same. These impact categories include: aesthetics; air quality; energy; geology (paleontology); greenhouse gases; hazards; population; public services; and utilities. However, one Project Objective, *create a financially successful development that is fiscally responsible by equitably contributing to the expansion and operation of the public services and facilities impacted by the project through the payment of fees*, would not be met. In addition, two Project Objectives would be met to a lesser degree including: (1) *provide new for-sale housing that is responsive to market conditions and provides a uniquely designed product type that is currently limited elsewhere in the City*; and (2) *redevelop the previously existing residential site with a residential project consistent with existing General Plan and Zoning designations that provides an updated housing product to meet the City's growing population and further address the City's and state's housing needs*. The Reduced Density alternative is considered the environmentally superior alternative.

ES.5.4 Alternative 4: Higher Density Larger Footprint 38-units

The Higher Density Larger Footprint 38 Units alternative would increase the number of dwelling units from 22 to 38. This Alternative would expand the development footprint further uphill into the western portion of the site. This Alternative would introduce new units in areas further uphill and near the prior landside area. The 2.2-acres of open space would be removed. Alternative 4 would utilize the entire 4.2-acre parcel to construct 19 duplexes, 38 dwelling units. This alternative would eliminate the 2.2 acres of open space included in the proposed Project and instead construct 11 additional duplexes on the site over and above the proposed Project. As a result, this would increase the number of residents from 57 to 99 in comparison to the proposed Project. Additionally, parking would increase to 76 total garage spaces and 30 guest parking spaces. Three terraced six-foot high retaining walls would be constructed in the southwest part of the site to build pads on the upper west portion of the site (proposed Lot A of the Project). Access to the site would remain at Playa Blanca, and private Drive B would be lengthened to gain access to the additional dwellings on the west side of the site. Additional terraced retaining walls are introduced at the west end of the site to increase the buildable area. Furthermore, the additional space on the alternative site would be used for landscaping, building setbacks, active recreation space, and storm water infiltration. Alternative 4 is graphically depicted in Figure 6.5.C.

This alternative would result in a slight increase in the severity of several environmental impacts due to the increase in number of housing units and residents, but the significance of the impacts would remain the same. These impact categories include: aesthetics; air quality; biological resources; cultural resources; energy; geology (paleontology); greenhouse gases; hazards; hydrology; noise; population; public services; recreation; utilities and wildlife. However, two

Project Objectives would be met to a lesser degree including: (1) *design the grading and geotechnical stabilization to ensure site stability consistent with City codes and minimize grading into the existing previously stabilized landslide mass; and (2) design the grading and geotechnical stabilization to minimize off-site grading and balance the earthwork on site to minimize import/export, which would reduce air quality, noise, and traffic impacts from truck traffic on adjacent residential uses and City roadways*.

ES.6 Summary of Environmental Impacts and Mitigation Measures

Table ES -1, Summary of Environmental Impacts and Mitigation Measures, provides a summary of the impact analysis related to the proposed Project. The table identifies a summary of the significant environmental impacts resulting from the Project pursuant to the CEQA Guidelines Section 15123(b)(1). For more detailed discussion, please see Chapter 4.0 *Environmental Impact Analysis* of this document. Table ES -1 also lists the applicable mitigation measures related to identified significant impacts, as well as the level of significance after mitigation is identified.

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Table ES -1. Summary of Impacts, Mitigation Measures, and Level of Significance after Mitigation

Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Aesthetics			
Threshold AES-1: Scenic Vistas	Less than Significant	N/A	N/A
Threshold AES-2: Scenic Highways	No Impact	N/A	N/A
Threshold AES-3: Visual Character	Less than Significant	N/A	N/A
Threshold AES-4: Light and Glare	Less than Significant	N/A	N/A
Cumulative	Less than Significant	N/A	N/A
Air Quality			
Threshold AQ-1: Conflict with or Obstruct an Air Quality Plan	Less than Significant	N/A	N/A
Threshold AQ-2: Result in Cumulatively Considerable Net Increase in any Criteria Pollutant	Less than Significant	N/A	N/A
Threshold AQ-3: Expose sensitive receptors to	Less than Significant	N/A	N/A

Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
substantial pollutant concentrations			
Threshold AQ-4: Result in other emissions adversely affecting a substantial number of people	Less than Significant	N/A	N/A
Cumulative	Less than Significant	N/A	N/A
Biological Resources			
Threshold BIO-1: Candidate, Non-listed Sensitive, or Special-Status Species	No Impact	N/A	N/A
Threshold BIO-2: Riparian Habitat or Other Sensitive Natural Communities	No Impact	N/A	N/A
Threshold BIO-3: Jurisdictional Waters/ Wetlands	No Impact	N/A	N/A
Threshold BIO-4: Wildlife Movement and Migratory Species	Potentially Significant	**MM BIO-1** If construction is started during the typical avian breeding season ((February 15 to August 31 for songbirds; January 15 to August 31 for raptors), a qualified biologist shall conduct a nesting bird survey within all suitable habitat, on-site and within 300-feet surrounding the site (as	Less than Significant

Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		feasible), to identify any potential nesting activity within 3 days before start of construction. If active nests are identified, the biologist would establish buffers around the vegetation (500 feet for raptors and sensitive species, 200 feet for non-raptors/non-sensitive species). All work within these buffers would be halted until the nesting effort is finished (i.e. the juveniles are surviving independent from the nest). The onsite biologist would review and verify compliance with these nesting boundaries and would verify the nesting effort has finished. Work can resume within these areas when no other active nests are found. Alternatively, a qualified biologist may determine that construction can be permitted within the buffer areas and would develop a monitoring plan to prevent any impacts while the nest continues to be active (eggs, chicks, etc.). Upon completion of the survey and any follow-up construction avoidance management, a report shall be prepared and submitted to City for mitigation monitoring compliance record keeping.	
Threshold BIO-5: Adopted Policies and/or Ordinances	No Impact	N/A	N/A

Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Threshold BIO-6: Adopted habitat Conservation Plans	No Impact	N/A	N/A
Cumulative	Potentially Significant	Implement **MM BIO-1**	Less than Significant
Cultural Resources			
Threshold CUL-1: Adverse change in the significance of a historical resource	No Impact	N/A	N/A
Threshold CUL-2: Adverse change in significance of an archaeological resource	Potentially Significant	**MM CUL-1** Prior to the issuance of grading permits, the applicant will retain a qualified archaeological monitor who will prepare an Archaeological Resources Mitigation Monitoring Plan. The qualified archaeological monitor will attend all pre-grading meetings to inform the grading and excavation contractors of the archaeological resources mitigation program and will instruct them with respect to its implementation. The qualified archaeological monitor will be on site during grading within native soil that has the potential to yield archaeological resources. If such resources are discovered and are in danger of loss and/or destruction, the qualified archaeological monitor will recover them. In instances where recovery requires an extended salvage time, the qualified archaeological monitor will be allowed to temporarily direct, divert, or halt grading to	Less than Significant

Topic	Impact Before Mitigation	Mitigation Measure(s)		Level of Significance After Mitigation
			allow recovery of resource(s) in a timely manner. Recovered archaeological resources, along with copies of pertinent field notes, photographs, and maps, will be deposited in a certified curation facility that meets the standards of the California Office of Historical Preservation. The resources will be recorded in the California Archaeological Inventory Database. Should archaeological resources with ties to Native Americans be discovered, the archaeological monitor will immediately notify the City and the most likely tribal representative for the area if not already present during monitoring activities. A final monitoring report will be submitted to the City within 30 days of the end of monitoring activities.	
Threshold CUL-3: Disturb human remains	Potentially Significant	**MM CUL-2**	Human Remains. Consistent with the requirements of CCR Section 15064.5(e), if human remains are encountered during site disturbance, grading, or other construction activities on the Project site, the construction contractor shall halt work within 25 feet of the discovery; all work within 25 feet of the discovery shall be redirected and the Orange County (County) Coroner notified immediately. No further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code	Less than Significant

Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		Section 5097.98. If the remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the City, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Consistent with CCR Section 15064.5(d), if the remains are determined to be Native American and an MLD is notified, the City shall consult with the MLD identified by the NAHC to develop an agreement for the treatment and disposition of the remains. Upon completion of the assessment, the consulting archaeologist shall prepare a report documenting the methods and results and provide recommendations regarding the treatment of the human remains and any associated cultural materials, as appropriate, and in coordination with the recommendations of the MLD. The report shall be submitted to the City Development Services Director, or designee, and the South Central Coastal Information Center. The City Development Services Director, or designee, shall be responsible for reviewing any reports	

Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		produced by the archaeologist to determine the appropriateness and adequacy of the findings and recommendations.	
Cumulative	Potentially Significant	Implement **MM CUL-1 and MM CUL-2**	Less than Significant
Energy			
Threshold EN-1: Wasteful, inefficient, unnecessary consumption of energy	Less than Significant	N/A	N/A
Threshold EN-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency	Less than Significant	N/A	N/A
Cumulative	Less than Significant	N/A	N/A
Geology and Soils			
Threshold GEO-1i: Fault Rupture	Less than Significant	N/A	N/A
Threshold GEO-1ii: Ground Shaking	Less than Significant	N/A	N/A
Threshold GEO-1iii: Seismic-Related Ground Failure	Less than Significant	N/A	N/A

Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Threshold GEO-1iv: Landslides	Less than Significant	N/A	N/A
Threshold GEO-2: Soil Erosion or Loss of Topsoil	Less than Significant	N/A	N/A
Threshold GEO-3: Unstable Soils	Less than Significant	N/A	N/A
Threshold GEO-4: Expansive Soils	Less than Significant	N/A	N/A
Threshold GEO-5: Septic Tanks	Less than Significant	N/A	N/A
Threshold GEO-6: Destroy paleontological resource	Potentially Significant	**MM GEO-1** If paleontological resources are found during grading and construction within the Project, all work shall be halted immediately within a 200-foot radius of the discovery until a qualified paleontologist has evaluated the find. Work shall not continue at the discovery site until the paleontologist evaluates the find and makes a determination regarding the significance of the resource and identifies recommendations for conservation of the resource, including preserving in place or collecting the resource to the extent feasible and documenting the find with an appropriate museum or university collection.	Less than significant
Cumulative	Potentially Significant	Implement **MM GEO-1**	Less than significant

Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Greenhouse Gas Emissions			
Threshold GHG-1: Generate direct or indirect greenhouse gas emissions	Less than Significant	N/A	N/A
Threshold GHG-2: Conflict with a plan, policy, or regulation adopted to reduce greenhouse gas emissions	Less than Significant	N/A	N/A
Cumulative	Less than Significant	N/A	N/A
Hazards and Hazardous Materials			
Threshold HAZ-1: Routine Transport, use, or Disposal of Hazardous Materials	Less than Significant	N/A	N/A
Threshold HAZ-2: Reasonably Foreseeable Upset and Accident Conditions	Less than Significant	N/A	N/A
Threshold HAZ-3: Emit Hazards Near Existing or Proposed School	No Impact	N/A	N/A
Threshold HAZ-4: Located on a Listed	No Impact	N/A	N/A

Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Hazardous Materials Site			
Threshold HAZ-5: Within an Airport Land Use Plan or Within Two Miles of a Public Airport	No Impact	N/A	N/A
Threshold HAZ-6: Conflict with Emergency Response Plans	Less than Significant	N/A	N/A
Threshold HAZ-7: Wildland Fire Risks	Less than Significant	N/A	N/A
Cumulative	Less than Significant	N/A	N/A
Hydrology and Water Quality			
Threshold HYD-1: Violate any water quality standards or waste discharge requirements	Less than Significant	N/A	N/A
Threshold HYD-2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge	Less than Significant	N/A	N/A
Threshold HYD-3i: Alter Drainage	Less than Significant	N/A	N/A

Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Resulting in Erosion or Siltation Offsite			
Threshold HYD-3ii: Alter Drainage or Increase of Surface Runoff Resulting in Flooding On- or Off-site	Less than Significant	N/A	N/A
Threshold HYD-3iii: Runoff Exceeding Capacity of Existing or Planned Facilities	Less than Significant	N/A	N/A
Threshold HYD-3iv: Impede or Redirect Flood Flows	Less than Significant	N/A	N/A
Threshold HYD-4: Inundation by Seiche, Tsunami, or Mudflow	No Impact	N/A	N/A
Threshold HYD-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan	Less than Significant	N/A	N/A
Cumulative	Less than Significant	N/A	N/A

Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Land Use and Planning			
Threshold LU-1: Physically divide an established community	Less than Significant	N/A	N/A
Threshold LU-2: Conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect	Less than Significant	N/A	N/A
Cumulative	Less than Significant	N/A	N/A
Noise			
Threshold NOI-1: Temporary or permanent ambient noise in excess of established standards	Less than Significant	N/A	N/A
Threshold NOI-2: Excessive groundborne vibration or groundborne noise levels	Less than Significant	N/A	N/A
Threshold NOI-3: Exposure to Excessive	No Impact	N/A	N/A

Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Noise from Public or Private Airport			
Cumulative	Less than Significant	N/A	N/A
Population and Housing			
Threshold A: Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)	No Impact	N/A	N/A
Threshold B: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere	No Impact	N/A	N/A
Cumulative	No Impact	N/A	N/A
Public Services			
Threshold Ai: Fire Protection Facilities	No Impact	N/A	N/A
Threshold Aii: Police Protection Facilities	No Impact	N/A	N/A

Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Threshold Aiii: Schools	No Impact	N/A	N/A
Threshold Aiv: Parks	No Impact	N/A	N/A
Threshold Av: Other Public Facilities	No Impact	N/A	N/A
Cumulative	No Impact	N/A	N/A
Recreation			
Threshold A: Existing Recreational and Park Facilities	No Impact	N/A	N/A
Threshold B: New or Physically Altered Recreation and Park Facilities	No Impact	N/A	N/A
Cumulative	No Impact	N/A	N/A
Transportation and Traffic			
Threshold TRA-1: Conflict with applicable circulation system program, plan, ordinance, or policy.	Less than Significant	N/A	N/A
Threshold TRA-2: Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)	Less than Significant	N/A	N/A

Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Threshold TRA-3: Hazards Due to Design Features or Incompatible Uses	Potentially Significant	**MM TRA-1** Construction Traffic Management Plan Prior to the issuance of demolition, grading, or any construction permits, the Applicant shall submit a Construction Traffic Management Plan for review and approval by the both the City Community Development Department and Traffic Engineer. The Construction Traffic Management Plan shall address the following: • Equipment mobilization and demobilization to and from the Project site, including truck route, delivery timing, traffic control, and demobilization routes. • Daily site circulation ingress and egress for construction personnel for the duration of construction at the Project site, including parking since all construction parking shall occur on the project site, unless otherwise approved by the City. • Traffic control for any street closure, detour, or other disruption to traffic circulation during construction within the public right-of-way or equipment mobilization/demobilization. • Prohibit left turns out of the Project site for all construction personnel and delivery trucks, including temporary food trucks. The Plan shall identify the physical means in which left turns will be prohibited from the Project site.	Less than Significant

Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		• Routes that construction vehicles will utilize for the delivery of construction materials (i.e., lumber, tiles piping, windows, etc.) to access the site, traffic controls and detours, and proposed construction phasing plan for the Project. • Specify the hours during which transport activities can occur and methods to mitigate construction-related impacts to adjacent streets. • Require the Applicant to keep all haul routes clean and free of debris including but not limited to gravel and dirt as a result of its operations. The Applicant shall clean adjacent streets, as directed by the City Engineer (or representative of the City Engineer) of any material which may have been spilled, tracked, or blown onto adjacent streets or areas. • Hauling or transport of oversize loads will be coordinated with the City as to the haul route as well as the hours allowed. Hauling or transport may be permitted/required during nighttime hours, weekends, or Federal holidays, at the discretion of the City Engineer. All hauling/delivery access to and from the site will be from Crown Valley Parkway. An approved Haul Route Permit will be required from the City.	

Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		• If hauling operations cause any damage to existing pavement, street, curb and/or gutter along the haul route, the applicant will be fully responsible for repairs. The repairs shall be completed to the satisfaction of the City Engineer. • This Plan shall meet standards established in the current *California Manual on Uniform Traffic Control Device (MUTCD)* as well as City's requirements. **MM TRA-2** Median Diverter for Left-Turn Egress at Project Driveway Prior to the issuance of a grading permit, the Applicant shall install a temporary physical median diverter on Crown Valley Parkway or the driveway entrance to prohibit outbound left-turn movements onto Crown Valley Parkway during construction activities. The design of the temporary barrier shall be approved by the City's Traffic Engineer. Prior to the first certificate of occupancy, the installation of a permanent physical median diverter on Crown Valley Parkway is required to restrict outbound left-turn movements from the Project driveway at Playa Blanca. The median diverter along with the left-turn pocket shall be designed in a manner consistent with Figure 4.12.A. The median diverter shall be submitted for review and	

Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		approved by the City Traffic Engineer prior to issuance of grading permits. **MM TRA-3** Modification of Northbound Left-Turn Pocket on Crown Valley Parkway at Project Driveway Prior to the first certificate of occupancy and in conjunction with the installation of **MM TRA-2**, the northbound left-turn pocket shall be modified to provide a 100-foot left-turn lane with a transition area of 120-feet. The modification would include restriping of the existing left-turn pocket to better accommodate queuing and high speeds along Crown Valley Parkway. The northbound left-turn pocket shall be designed in a manner consistent with Figure 4.12.A. The left-turn pocket along with the median diverter shall be submitted for review and approved by the City Traffic Engineer prior to issuance of grading permits.	
Threshold TRA-4: Inadequate Emergency Access	Less than Significant	N/A	N/A
Cumulative	Potentially Significant	Implement **MM TRA-1** through **MM TRA-3**	Less than Significant

Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Tribal Cultural Resources			
Threshold TRC-1a: Listed or Eligible Tribal Cultural Resources Threshold TRC-1b: Lead Agency Defined Tribal Cultural Resources	Potentially Significant	**MM TCR-1** An archaeologist shall be retained by the Applicant to conduct cultural resources awareness training prior to any ground disturbance related to construction. **MM TRC-2** An archaeological monitor shall conduct spot-check monitoring, up to 10 hours per week, during ground disturbing activities related to construction. If any artifacts are discovered, a member of the Juaneno Band of Mission Indians, Acjachemen Nation- Belardes shall be contacted immediately. The archaeologist and Acjachemen Nation shall consult to determine the nature and significance of the discovery and make recommendations to the Applicant and City for further cultural resource efforts. **MM TCR-3** If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the County Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a	Less than Significant

Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.	
Cumulative	Potentially Significant	Implement **TRC-1** through **TRC-3**	Less than Significant
Utilities and Service Systems			
Threshold A: Wastewater Treatment Requirements	No Impact	N/A	N/A
Threshold B: Sufficient Water Supplies	No Impact	N/A	N/A
Threshold C: Wastewater Treatment Capacity	No Impact	N/A	N/A
Threshold D: Solid Waste Regulations	No Impact	N/A	N/A
Threshold E: Solid Waste Regulations	No Impact	N/A	N/A
Cumulative	No Impact	N/A	N/A

Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Wildfire			
Threshold FIRE-1: Impair an adopted emergency response plan or emergency evacuation plan	Less than Significant	N/A	N/A
Threshold FIRE-2: Expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire	Less than Significant	N/A	N/A
Threshold FIRE-3: Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment	Less than Significant	N/A	N/A

Topic	Impact Before Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Threshold FIRE-4: 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	Less than Significant	N/A	N/A
Cumulative	Less than Significant	N/A	N/A

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SECTION 1.0 INTRODUCTION

1.1 Purpose of the EIR

The purpose of this Draft Environmental Impact Report (Draft EIR) is to evaluate and disclose potential environmental impacts resulting from implementation of the proposed project, Cove at El Niguel residential project (Project). The approximately 4.2-acre Project site is located at 30667 Crown Valley Parkway in Laguna Niguel, Orange County, California. The location of the proposed Project is illustrated in Figure 1.A, Regional and Project Location, and Figure 1.B, Aerial View of the Project Area.

1.2 Authorization

The Draft EIR has been prepared by the City of Laguna Niguel (City) as "Lead Agency" in accordance with the Guidelines for the implementation of the California Environmental Quality Act (State CEQA Guidelines), (Sections 15000-15387 of the California Code of Regulations), and the City's CEQA Manual. The proposed Project considered in this Draft EIR is a "project," as defined by Section 15378 of the State CEQA Guidelines, which state that an EIR must be prepared for any project that may have a significant impact on the environment. The City, as Lead Agency, has determined that the proposed Project may have a significant adverse impact on the environment; therefore, preparation of an EIR is required.

1.3 Public Review and Involvement

1.3.1 Notice of Preparation

The City has determined an EIR is required for approval of the proposed Project. Pursuant to Section 15060(d) of the State CEQA Guidelines, the City initiated the environmental process without preparation of an Initial Study and proceeded directly to the Notice of Preparation (NOP). Pursuant to Section 15082 of the State CEQA Guidelines, the City prepared and circulated the NOP to responsible and affected agencies and other interested parties for a minimum 30-day public review period that began on November 2, 2021 and ended on February 21, 2022. The NOP was also posted in the Orange County Clerk's office on January 21, 2022, for 30 days and sent to the State Clearinghouse at the Governor's Office of Planning and Research to solicit statewide agency participation in determining the scope of the EIR. The purpose of the NOP was to convey formally that the City, as the lead agency under CEQA, solicited input regarding the scope and proposed content of the EIR. The NOP is provided in Appendix A of this Draft EIR. On November 17, 2021, the City held a public scoping meeting in conjunction with the NOP, in order to receive public comments and suggestions regarding the scope and content of the Draft EIR.

A total of five comment letters were received during the NOP review period, and six public speakers presented comments during the NOP scoping meeting. Specific applicable and relevant

CEQA environmental concerns raised in these comment letters and by the speakers are discussed in Table 1-1 below. All comments received during the NOP review period and during the NOP scoping meeting are included in Appendix B of this Draft EIR.

1.3.2 Tribal Consultation

The City is required to comply with the provisions of AB 52 (Pub. Resources Code, §§ 5097.94, 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, 21084.3) regarding consultation with California Native American Tribes and consideration of Tribal Cultural Resources. On June 19, 2021, the City notified the Native American Heritage Commission (NAHC) and California Native American Tribes who have registered with the City to be notified in accordance with AB 52. The two registered tribes include the Juaneño Band of Mission Indians Acjachenmen Nation; Belardes and Romero. Both tribes have requested consultation as presented in Appendix E. Consultation with the Juaneño Band of Mission Indians Acjachenmen Nation; Belardes and Romero began on August 17, 2021 and concluded on March 1, 2022. The parties agreed to measures to mitigate or avoid potentially significant effects, if significant effects exist, on a tribal cultural resource, thereby concluding consultation. (Pub. Resources Code, § 21080.3.2, subd. (b)(1).)

1.3.3 Public Scoping Meeting

The City hosted a public scoping meeting to solicit input from the public and agencies on the scope of the EIR. The public scoping meeting was held during the 30-day NOP review period on November 17, 2021, at the City of Laguna Niguel City Hall. Public comments received during the scoping meeting are provided in Appendix B. Six speakers presented their comments, and no formal written comments were received from public commentors during the public scoping meeting. Specific applicable and relevant CEQA environmental concerns raised in these comments are discussed in previously referenced Table 1-1. All comments received during the public scoping meeting are included in Appendix B.

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Table 1-1. Summary of NOP Comments

Agency / Individual	Summary of Comments	Response / Section in Draft EIR Where Issue is Addressed
Native American Heritage Commission 1550 Harbor Boulevard, Suite 100 West Sacramento, CA 95691 (November 12, 2021)	The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources.	Ten Native American Tribes were notified on June 19, 2021. As a result of the notification, two tribes requested to consult. Additional information regarding the consultation and associated mitigation measures can be found in Section 4.13 Tribal Cultural Resources.
NOP Scoping Meeting Speaker 1 (November 17, 2021)	Resident shared their residence backs up to the Project. Resident shared concerns regarding the Project and enjoys the current view and does not support the construction of the Project.	Comment noted.
NOP Scoping Meeting Speaker 2 (November 17, 2021)	Resident asked question regarding the access road on the Site Plan and the purpose of the road.	Location the resident referred to is proposed to be a fitness recreation open space area. Additional information regarding this feature is found in Section 3.2.4 and 3.2.5
NOP Scoping Meeting Speaker 3 (November 17, 2021)	Resident asked question regarding the egress and ingress of construction traffic on Crown Valley Parkway.	Section 4.12 discusses potential impacts to transportation based on the City's adopted thresholds of significance and provides mitigation to reduce impacts.
	Resident asked question regarding the analysis of construction (air quality, noise, greenhouse gas, etc.) and its impact on the environment.	Section 4.11 discusses potential impacts from construction noise and provides mitigation to reduce impacts.

Agency / Individual	Summary of Comments	Response / Section in Draft EIR Where Issue is Addressed
		Section 4.2 discusses potential impacts from construction on air quality. Section 4.7 discusses potential impacts from construction and resulting greenhouse gases.
NOP Scoping Meeting Speaker 4 (November 17, 2021)	Resident asked question regarding target start date of construction of the Project.	Applicant stated the proposed start date is Quarter 1 of 2023, with the earliest start date at the end of Quarter 1 2023.
	Resident asked question regarding traffic at the entrance into the development off Crown Valley Parkway.	Automobile delay, as described by level of service (LOS) or similar measures of vehicular capacity or traffic congestion, is no longer considered a significant impact on the environment under CEQA under Public Resources Code section 21099 and case law. (Citizens for Positive Growth & Preservation v. City of Sacramento (2019) 43 Cal.App.5th 609). Section 4.12 discusses potential impacts to transportation including consistency with policies addressing the circulation system and the potential for hazards due to geometric design features or potential incompatible uses.
NOP Scoping Meeting Speaker 5 (November 17, 2021)	Resident asked question regarding the historical buttress that was constructed as a legal settlement.	Comment noted. The Project would be subject to standard conditions that require specific engineering and grading requirements be met as described in Section 4.6.
	Resident suggested that a portion of the buttress is to be graded per the proposed grading plans. Resident asked if the buttress fill in its existing condition will be analyzed in the Geotechnical Report, or if only the proposed buttress will be analyzed in the Geotechnical Report.	

Agency / Individual	Summary of Comments	Response / Section in Draft EIR Where Issue is Addressed
NOP Scoping Meeting Speaker 6 (November 17, 2021)	Resident asked if the streets have room for fire trucks, and if the width of the road meets the ladder requirements.	The Project would be subject to the Orange County Fire Authority Standards for street widths and turning radii. Additional information regarding adherence to those standards are described in Section 4.12.
	Resident shared they oppose the proposed Project and in favor of the current conditions.	Comment noted.
Marcello & Kelly Dworzak 30585 N Hampton Rd (December 2, 2021)	Commentor stated the proposed Project would have a negative impact on quality of life and on the value and appeal of the Commentor's property. The Commentor shared their canyon view would change to driveways, windows and rooftops and would reduce privacy.	Comment noted. Private views are not protected under CEQA or by local ordinance, as stated in the City's CEQA manual. Section 4.1 discusses potential impacts to aesthetics in accordance with the City's adopted thresholds of significance and provides mitigation to reduce impacts.
	Commentor stated that noise pollution would increase significantly. The current road sound from Crown Valley Pkwy is monotonous and disguised as background noise.	Section 4.11 discusses potential impacts from construction noise and operational noise compared to existing conditions and provides mitigation to reduce impacts.
	The Commentor opposes the proposed Project. However, if the City decides to move forward and approve the plans, the Commentor would like to see efforts made to minimize the negative impact of the development. The Commentor proposed the potential solutions: • Move the entrance/exit and park area to the other side (south side) of the new development	Comment noted. Consistency with policies addressing the circulation system, emergency access and the potential for hazards due to geometric design features or potential incompatible uses were analyzed as part of this DEIR within Section 4.12. Furthermore, Figure 2.D: Conceptual Site Plan provides locations of retaining wall and height of the walls. Potential impacts from construction noise and operational

Agency / Individual	Summary of Comments	Response / Section in Draft EIR Where Issue is Addressed
	to connect with Vallarta Dr. This would help reduce noise to existing homes and give better visibility for vehicles exiting The Cove and entering onto Crown Valley Pkwy. • Create a retaining wall of approximately 35' in height along Playa Blanca and Charter Terrace community, like the wall on the south side of the development along Vallata Dr. This would create a barrier to help block noise pollution. It would also help maintain privacy and salvage some of the view by extending useable backyard area for 2-3 of the most affected Charter Terrace homes.	noise compared to existing conditions is analyzed within Section 4.11. This section also provides mitigation to reduce impacts.
Department of Transportation District 12 1750 east Fourth Street, Suite 100 Santa Ana, CA 92705 (December 7, 2021)	1. Commentor requested scale on Figures 1 and 2 of the NOP. 2. The Department firmly embraces racial equity, inclusion, and diversity. These values are foundational to achieving our vision of a cleaner, safer, and more accessible and more connected transportation system. Caltrans recognizes our responsibility to assist communities of color and underserved communities by removing barriers to provide a more equitable transportation system for all. Please consider including a discussion on equity in the Environmental Impact Report.	Scales have been added to the figures as appropriate. Existing and future opportunities for bicycle and pedestrian movement were analyzed as part of the Traffic Study and can be found within DEIR Section 4.12. Furthermore, potential impacts to transportation including consistency with policies addressing the circulation system and the potential for hazards due to geometric design features or potential incompatible uses were addressed within Section 4.12. No work within the State Right-of-Way (ROW) occurs for the proposed Project.

Agency / Individual	Summary of Comments	Response / Section in Draft EIR Where Issue is Addressed
	3. Caltrans supports projects which provide a diversity of housing choices and destinations accessible by Active Transportation (i.e., bicycle and pedestrian) and transit users. New development projects should incorporate opportunities to support sustainable and multimodal transportation options, including, but not limited to transit, walking and biking, and electric cars and bicycles. 4. Any project work proposed in the vicinity of the State Right-of-Way (ROW) would require an encroachment permit and all environmental concerns must be adequately addressed. If the environmental documentation for the project does not meet Caltrans's requirements for work done within State ROW, additional documentation would be required before approval of the encroachment permit. Please coordinate with Caltrans to meet requirements for any work within or near State ROW. For specific details for Encroachment Permits procedure, please refer to the Caltrans's Encroachment Permits Manual at: http://www.dot.ca.gov/hq/traffops/developserv/permits	
California Department of Fish and Wildlife South Coast Region 3883 Ruffin Road San Diego, CA 92123 (December 7, 2021)	1. Recommends indicating the floral and faunal species of the 2.2 acres of open space. 2. Adherence to the Migratory Bird Treaty Act (MBTA) and pre-construction nesting bird surveys. 3. Analysis of adjacent uses and the Project site and indirect impacts as a result of Project implementation on adjacent public lands, open space, adjacent natural habitats, riparian ecosystems, and any designated and/or	The Project consists of non-native acacia species, scattered laurel sumac and developed streets and infrastructure as outlined within the Biological Section 4.3. Due to impacts to suitable nesting and foraging habitat, the Project includes a pre-construction mitigation measure in accordance with the MBTA. Section 4.3 discusses potential biological impacts from Project implementation

Agency / Individual	Summary of Comments	Response / Section in Draft EIR Where Issue is Addressed
	proposed or existing reserve lands (e.g., preserve lands associated with a NCCP). 4. Cumulative biological impacts.	and provides mitigation to reduce impacts.
Jim Kozel, Niguel Summit HOA John Ulrich, Charter Terrace HOA (February 18, 2022)	The Commentors provide two concerns regarding the Project. The Commentors request the following sections be removed: 1. Alternative Development Standard – The proposed Project is located at 'ground zero' of the most devasting slope failure in Orange County history. What is the basis for allowing 'alternate development standards' by the City of Laguna Niguel? We interpret this as an indication that the City is intending to reduce its standards instead of requiring developers to meet and hopefully exceed current development standard. Based on the inherent risk of building in this area, it would appear that any project should be required to strictly adhere to the existing development standards. Moreover, the proponent of the project has a lengthy and well documented record of slope failures within the Laguna Niguel and elsewhere in Orange County. There, the burden should be on the developer to establish compliance with the required City code. 2. Minor Adjustment – A 15.5 foot retaining wall that exceeds the zoning Code's height limit is objectively not a "minor adjustment" and is inappropriate for this site.	The comments are noted. Alternative Development Standards do not reduce grading or geotechnical standards. Alternative Development Standards apply to site planning issues beyond the scope of this EIR. To the extent that site planning issues could have an environmental impact, those issues are analyzed in the Draft EIR. As it pertains to grading and the potential for slope failure, Section 4.6 analyzes potential impacts on soils and geology in accordance with the City's adopted thresholds of significance and provides mitigation to reduce impacts. Although a prior proposal included residential development on the upper western portion of the site and was shown to be geotechnically stable, consistent with the City's grading and geotechnical codes and review, the proposed Project, unlike the prior proposal, places the upper 2-acre portion of the site in a lettered lot on the tract map as outlined in project design feature **PDF GEO-1**. Since Lot A is a lettered lot on the tentative tract map and no residential development is allowed on lettered lots, no residential homes would occur on the remediated hillside. As it pertains to retaining wall heights, Section 4.1 discusses potential impacts to aesthetics in accordance with the City's adopted thresholds of significance and

Agency / Individual	Summary of Comments	Response / Section in Draft EIR Where Issue is Addressed
		provides mitigation to reduce impacts. Views of the Project site from private residences are not protected. Additionally, the Zoning Code allows for modifications to the height, size, and location standards with approval of a minor adjustment. (LNMC, § 9-1-35.3 (f).)

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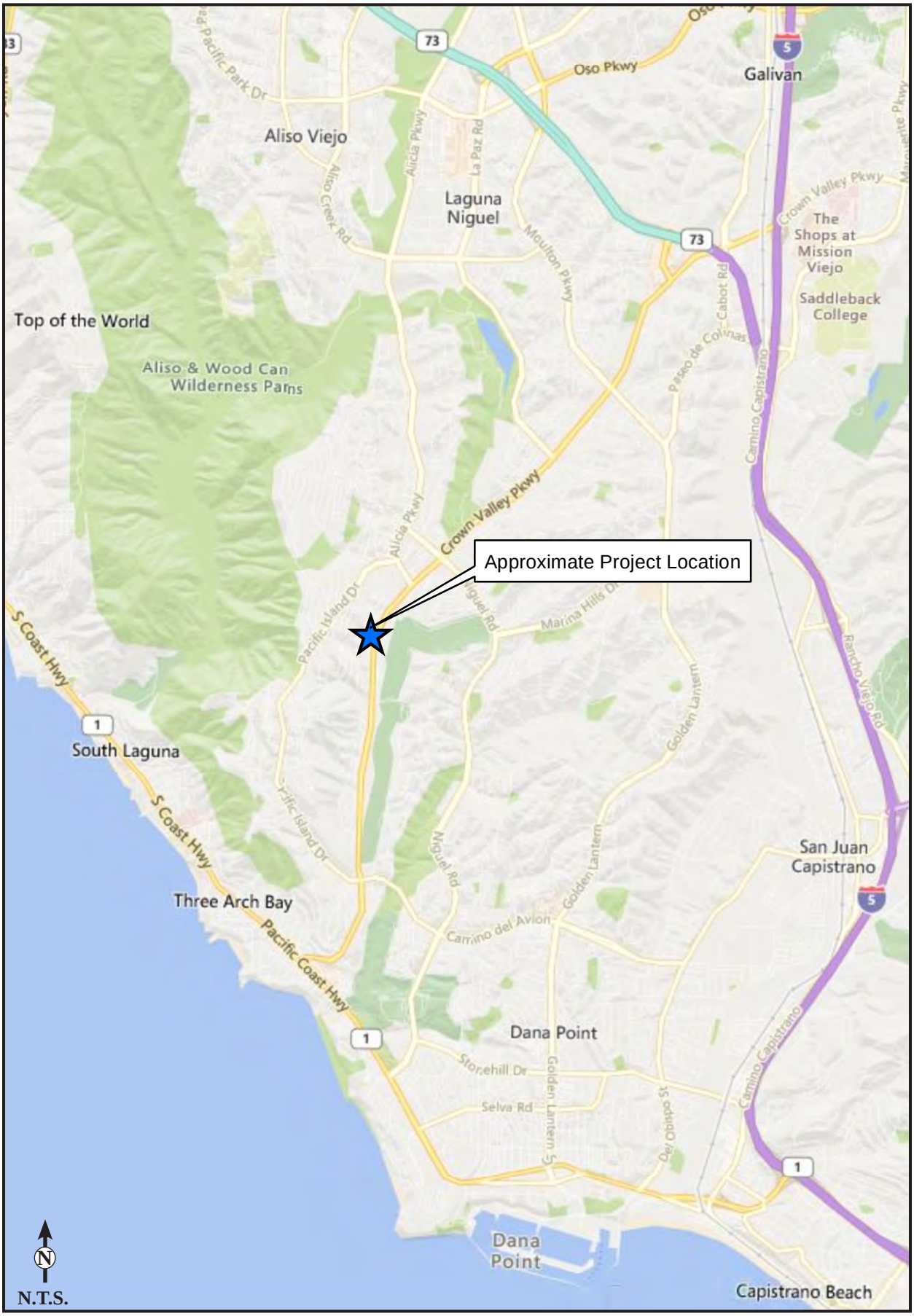

Source: Bing Maps (2021).

Figure 1.A Regional and Project Location Map

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Source: Bing Map (2021).

Figure 1.B Aerial View of the Project Area

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1.3.4 Draft EIR Review

This Draft EIR was distributed to responsible and trustee agencies, other affected agencies, and interested parties. Additionally, in accordance with Public Resources Code section 21092, subdivision (b)(3), the EIR has been provided to all parties who have previously requested copies. The Notice of Completion (NOC) and Notice of Availability (NOA) of the EIR have been distributed as required by CEQA. During the 45-day public review period, the EIR and technical appendices have been made available for review. The EIR has been made available for review on the City's website during the public review period.

Written comments related to this EIR should be addressed to:

Ms. Amber Gregg, Contract Planner
City of Laguna Niguel
30111 Crown Valley Parkway
Laguna Niguel, California 92677
Email: agregg@cityoflagunaniguel.org

After the 45-day public review period, written responses will be prepared to all comments provided on the Draft EIR. These responses will be available for review for a minimum of 10 days prior to the public hearing before the City's Planning Commission, at which time the certification of the Final EIR will be considered. The Final EIR (which will include the Draft EIR, the public comments and responses to the public comments, and findings) will be included as part of the environmental record used during the consideration of the proposed project by the City decision-makers.

1.3.5 Public Hearings

The Planning Commission will consider the Final EIR and all public comments as part of its deliberation on the Project. The Planning Commission's action (approve, conditionally approve, or deny) is final unless the Planning Commission's decision is appealed to the City Council.

1.4 Cumulative Impacts

CEQA requires that an EIR examine the cumulative impacts of a proposed project. Cumulative effects are defined as "two or more individual effects that, when considered together, are considerable or which compound or increase other environmental impacts" (State CEQA Guidelines Section 15355, 15130). The Guidelines further state the cumulative impact from several projects is the environmental affect resulting from the incremental impact of the project plus the impact from other closely related past, present, and reasonably foreseeable probable future projects. (Section 15355). With respect to the analysis of cumulative impacts, CEQA generally requires the following:

a. Cumulative impacts shall be discussed when the project's incremental effect is cumulatively considerable.
b. The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided of the effects attributable to the project. The discussion should be guided by the standards of practicality and reasonableness.

Pursuant to CEQA Guidelines, Section 15130, the assessment of cumulative impacts contained in EIRs is typically based on either: (i) past, present, and probable future projects, which are either approved or being considered for approval by the City or other municipalities (or anticipated to be submitted for consideration, including projects in the design phase or under construction); or (ii) growth projections set forth in regional plans, including regional modeling plans. For each of the environmental topics addressed in this EIR (i.e., Sections 4.1 through 4.14), the methodology for determining cumulative impacts and the corresponding cumulative impact area is discussed after the project specific impact analysis of each section.

Table 1-2 summarizes data provided by the City Planning Department pertaining to potential development projects that could contribute to cumulative environmental impacts. The list of cumulative projects includes all projects within the City limits as well as other known projects in neighboring jurisdictions proximate to the project site. This same list of cumulative projects has been used, where applicable, in the cumulative impact assessments for the environmental topics in which the list of project methods has been utilized.

Table 1-2. Cumulative Projects

No.	Project	Address	Land Use	Dwelling Units (DU)	Non-residential Area (SF)	Other
1	City Center Mixed-Use Project	Southwest corner of Alicia Parkway and Pacific Island Drive, adjacent to City Hall City of Laguna Niguel	Apartments Commercial/Civic	275 -	- 174,851	- -
2	Sunpointe	Southeast corner of Paseo De Colinas and Cabot Road City of Laguna Niguel	Single-Family	53	-	-

No.	Project	Address	Land Use	Dwelling Units (DU)	Non-residential Area (SF)	Other
3	Senior Living Project	27762 Forbes Road City of Laguna Niguel	Senior Adult Assisted Living Continuing Care	35 44 32	- - -	- - -
4	Picerne Apartments	Northeast corner of Crown Valley Parkway at Cabot Road City of Laguna Niguel	Apartments	425	-	-
5	Forbes Road Apartment	Northeast corner of Crown Valley Parkway at Forbes Road City of Laguna Niguel	Apartments Retail	300 -	- 8742	- -
6	River Street Development	Northeast corner of Paseo Adelanto and Del Obispo Street City of San Juan Capistrano	Commercial	-	64,900	-
7	San Juan Hills High School	West of La Pata Avenue City of San Juan Capistrano	Public High School	-	-	2,200 Students
8	J. Serra Catholic High School	North and South of J. Serra Road, west of I-5 City of San Juan Capistrano	Private High School	-	-	2,000 Students
9	Pacifica San Juan	East of I-5 extending from McCracken Hill south to Camino Las Ramblas City of San Juan Capistrano	Estates Single-Family Condominiums	23 311 82	- - -	- - -
10	Plaza Banderas	Northeast corner of El Camino Real & State Route 74	Hotel Restaurant	- -	- 3,898	124 Rooms -

No.	Project	Address	Land Use	Dwelling Units (DU)	Non-residential Area (SF)	Other
		City of San Juan Capistrano				
11	Distrito La Novia - San Juan Meadows	North and south sides of La Novia Avenue, east of Valle Road City of San Juan Capistrano	Retail General Office Condominiums Apartments Single-Family Equestrian Center	- - 90 50 93 -	75,100 16,000 - - - -	- - - - - 500 Horses
12	LDS Church	North side of Vista Montana, west of La Pata Avenue City of San Juan Capistrano	Church	-	16,558	-
13	The Farm Specific Plan	32382 Del Obispo Street City of San Juan Capistrano	Single-Family	180	-	-
14	Tirador Residential Project	Terminus of Calle Arroyo City of San Juan Capistrano	Townhomes Single-Family	89 47	- -	- -
15	Proposed Drive Through Coffee Shop	32291 Camino Capistrano City of San Juan Capistrano	Coffee Shop	-	2,000	-
16	Ganahl Lumber	North of Stonehill Drive, adjacent to San Juan Creek	Fast-Food Coffee Shop Car Storage	-	5,040 1,710	- - 622 Spaces
17	Downtown Playhouse	Southeast corner of Ortega Highway and El Camino Real City of San Juan Capistrano	Theater Commercial Office	- - -	18,828 31,385 3,268	- - -
18	Mission Grill	31721 Camino Capistrano	Restaurant Retail	- -	4,750 4,750	- -

No.	Project	Address	Land Use	Dwelling Units (DU)	Non-residential Area (SF)	Other
		City of San Juan Capistrano	Office	-	7,500	-
19	St. Edwards Pastoral Center	33926 Calle La Primavera City of Dana Point	Church Expansion	-	11,463	-
20	Headlands Specific Plan	Dana Point Marine Life Refuge City of Dana Point	Single-Family Hotel Commercial Hostel Conservation Park Open Space	40 - - - - -	- - 35,000 - - -	- 90 Rooms - 40 Beds 28 Acres 41 Acres
21	Dana Point Harbor Revitalization	Dana Point Harbor City of Dana Point	Retail/Restaurant Parking Deck	- -	25,000 -	- 610 Spaces
22	Doheny Plaza	34202 Del Obispo Street City of Dana Point	Condominiums Commercial	169 -	- 2,500	- -
23	Dana Point Town Center	South side of Pacific Coast Highway, between Blue Lantern Street and Del Obispo Street City of Dana Point	Retail/Restaurant Office Institutional Residential	- - - 237	192,165 31,244 50,000 -	- - - -
24	Orion Public Storage	4 Orion City of Aliso Viejo	Storage Facility	-	17,528	-
25	The Ranch	100 Park Avenue City of Aliso Viejo	Community Facility	-	16,000	-
26	Polaris Office Building	6 Polaris City of Aliso Viejo	Office Parking Structure	- -	42,400 -	- 423 Spaces
27	Soka University Residence Halls	Soka University City of Aliso Viejo	Student Dormitory	102	-	-

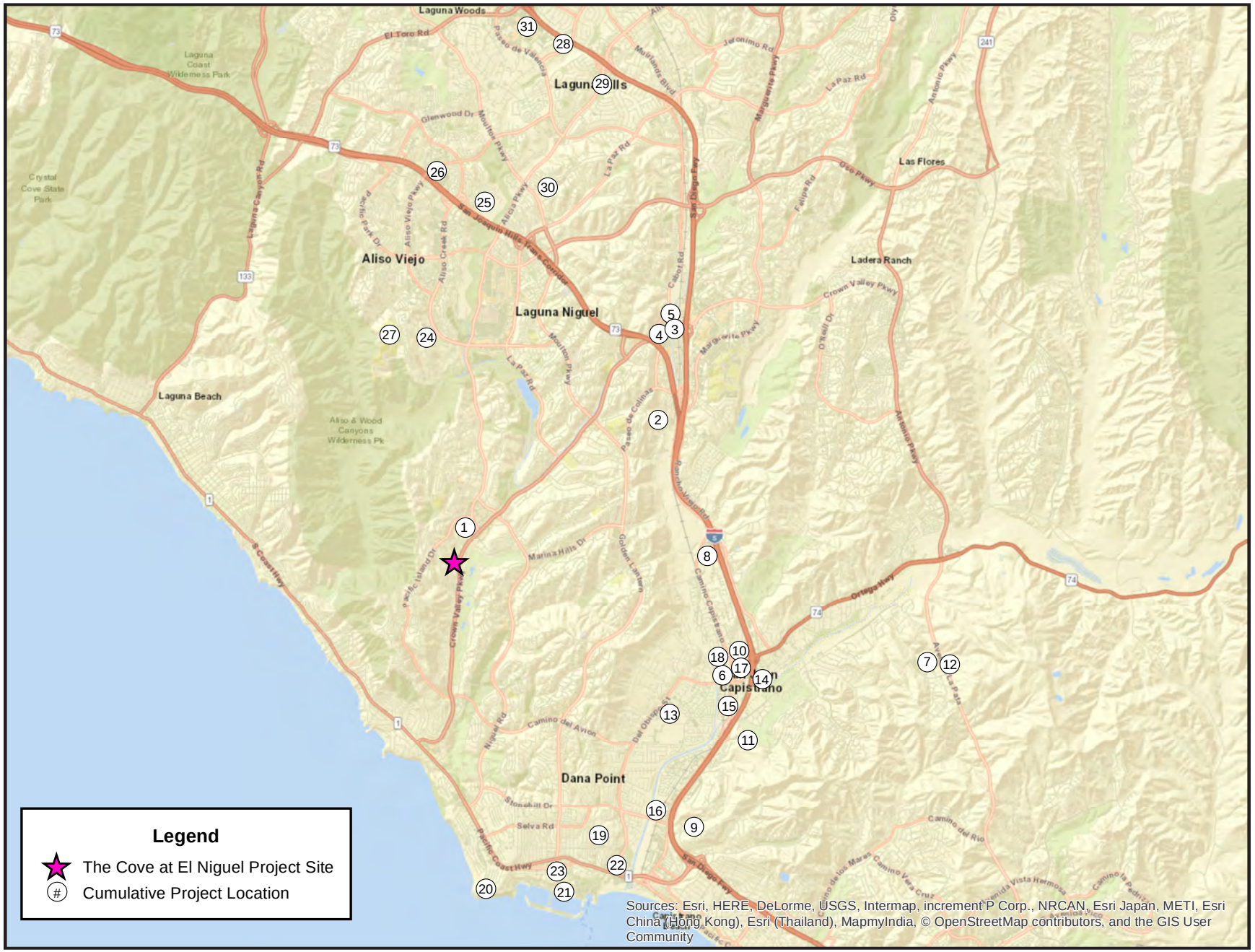
No.	Project	Address	Land Use	Dwelling Units (DU)	Non-residential Area (SF)	Other
28	Oakbrook Village	Avenida de la Carlota, north of Los Alisos Boulevard City of Laguna Hills	Retail Multi-Family	- 289	139,000 -	- -
29	Activcare	24888 Alicia Parkway City of Laguna Hills	Elderly Care Housing	-	-	72 Beds
30	MNWD Facility Expansion	26161 Gordon Road City of Laguna Hills	Community/Private Institution	-	64,000	-
31	Five Laguna	Laguna Hills Mall City of Laguna Hills	Mall Medical Office Apartments	- - 988	843,706 45,890 -	- - -
			Total	**3,701**	**1,780,325**	**-**

Source: City of Laguna Niguel.

The locations of the cumulative projects are detailed in Figure 1.C.

Because the nature of individual environmental factors differs from one environmental issue to another, the cumulative area for each environmental issue addressed in this EIR may not be identical. For example, the cumulative area for air quality impacts is reasonably assumed to be the entire South Coast Air Basin, which is much larger than the cumulative area for public service impacts (i.e., the service area of the various service providers). For this reason, the criteria for evaluating the significance of adverse effects are identified for each environmental issue in Section 3.0 and 4.0. These criteria, which are based on resource sensitivity, quality, and quantity, and include whether cumulative effects are based on the list or projection method.

Implementation of the mitigation measures identified in each section of the EIR will reduce the cumulative impact of the proposed project to the extent feasible. In many cases, the mitigation measures result in reducing the proposed project's cumulative impact to a less than significant level. The analyses indicate to what degree the proposed project makes a significant contribution to cumulatively considerable impacts for each environmental issue.



Source: City of Laguna Niguel (July 2021)

Figure 1.C Cumulative Projects

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1.5 Lead Agency

CEQA defines a "Lead Agency" as the public agency that has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment. Both the Lead Agency and responsible agencies must consider the information contained in the EIR prior to acting upon or approving a project. The City is the Lead Agency for the proposed Project.

1.6 Responsible and Trustee Agencies

Pursuant to Sections 15381 and 15386 of the State CEQA Guidelines, "responsible agencies" are public agencies with some authority or responsibility to issue discretionary approvals or permits for projects in which a lead agency is preparing or has prepared an EIR or negative declaration. A trustee agency is a state agency that has jurisdiction by law over natural resources held in trust for the people of California (Section 15386) that may be affected by the project. Trustee agencies include the California Department of Fish and Wildlife (CDFW).

1.7 Project Applicant

The Project Applicant is:

Laguna Niguel Properties
27422 Portola Parkway, Suite 300
Foothill Ranch, CA 92610
(714) 272-9278

1.8 Documents incorporated by Reference

Section 15150 of the State CEQA Guidelines permits and encourages an environmental document to incorporate, by reference, other documents that provide relevant data. The documents summarized below are incorporated by reference, and the pertinent material is summarized throughout this Draft EIR, where the information is relevant to the analysis of potential Project impacts. All documents incorporated by reference are available for review at the Laguna Niguel Community Development Department, 30111 Crown Valley Parkway, Laguna Niguel CA 92677. Cited documents are also available for review on the City of Laguna Niguel's website.

1.8.1 City of Laguna Niguel

- City of Laguna Niguel General Plan, August 1992
- City of Laguna Niguel Zoning Code, February 1999

1.9 EIR Technical Documents

Technical studies prepared specifically for the proposed Project are included as Appendices to the Draft EIR and are therefore part of the Draft EIR.

1. CalEEMod Air Pollution Emissions Calculations, October 2021, EnPlanners. (Appendix C)
2. Biological Resource Assessment, May 2021, Carlson Strategic Land Solutions. (Appendix D)
3. Cultural Resources Assessment, September 2021, Duke CRM. (Appendix E)
4. Geotechnical Reports (Appendix F)
   - F-1. Response to Questions Regarding Geotechnical Review, February 2022, American Geotechnical, Inc.
   - F-2. Addendum Report – Adding Geology to Current Site Plan, May 2021, American Geotechnical, Inc.
   - F-3. Response to City of Laguna Niguel Geotechnical Review Sheet Dated February 15, 2021 and Notice of Incompleteness Dated February 23, 2021, April 2, 2021, American Geotechnical, Inc.
   - F-4. Geotechnical Review of Tentative Tract Map, January 2021, American Geotechnical, Inc.
   - F-5. Conditional Approval of Geotechnical Reports, June 2021, Goffman, McCormick, and Urban Geotechnical Inc.
5. Fire Safety (Appendix G)
   - G-1. Safety Plan, October 2021, FireSafe Planning Solutions
   - G-2. Fuel Modification Plan, December 2021, FireSafe Planning Solutions
6. Phase I Environmental Assessment Report, March 4, 2022, Transaction Management Corporation, Inc. (Appendix H)
7. Hydrology Analysis, August 16, 2021, Hunsaker & Associates Irvine, Inc. (Appendix I)
8. Conceptual Water Quality Management Plan, August 24, 2021, Hunsaker & Associates Irvine, Inc (Appendix J)
9. Noise and Vibration Analysis Report, The Cove at El Niguel, February 2022, A/E Tech LLC (Appendix K)
10. Traffic Assessment for The Cove at El Niguel Project, June 2021, Linscott Law & Greenspan (Appendix L)

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SECTION 2.0 PROJECT DESCRIPTION

The information in this section is provided pursuant to CEQA Guidelines (Section 15124) governing the identification of the proposed Project's location, features, and project objectives at a level of detail sufficient to evaluate environmental impacts.

2.1 Project Location and Setting

The proposed Project lies on a 4.2-acre property and is located on Crown Valley Parkway at Playa Blanca in the City of Laguna Niguel (City) in Orange County, CA. Previously referenced Figure 1.1 shows the regional location and Project vicinity. The property is comprised of one lot, Assessor's Parcel Number (APN) 656-321-02. Previously referenced Figures 1.A and 1.B show an aerial view of the Project location. The topography of the site is generally sloping downward from west to east. Elevations on-site range from approximately 450 feet above mean sea level (msl) at the westerly boundary to approximately 360 feet msl along the east boundary.

2.2 City of Laguna Niguel

The City was incorporated in 1989 as one of the first major planned communities in Southern California and covers approximately 14.72 square miles in the southwestern area of Orange County. The City is described as a "Sea Country" atmosphere because of its coastal orientation and its early development of planned communities. The Laguna Niguel General Plan (LNGP) preserves and enhances this unique identity by guiding land use and establishing goals and policies. The City consists of both residential and commercial development residing within an attractive suburban landscape and extensive open space with a variety of features such as parks, trails, landscaped slopes, and highways, and large open space parcels.

2.3 Project Site History

The Project site was originally graded and developed in 1979 as a 10-building townhome project with 41 condominiums. On March 19, 1998, a large landslide destroyed part of the former 41-unit condominium development on the site, as well as nine (9) single-family homes located above the site.

Following the landslide, the entire 41-unit condominium project was demolished to perform grading necessary to stabilize the former landslide. The landslide was repaired between 1998 and 2000 and involved installation of a caisson wall with tieback anchors, removal of the 10 condominium buildings and associated structures, partial removal of the landslide mass, installation of subdrains, and construction of a compacted fill buttress. The work included an application by the Niguel Summit Community Association to re-grade the hillside, re-compact and re-contour the slope and to construct a buttress at the base of the slope, and the associated site development permit was approved by the City in 1999. The repair work was overseen by the City

and a variety of consultants, including American Geotechnical, Inc. (American Geotechnical) representing the Niguel Summit Homeowners Association. American Geotechnical developed the plans for construction including refinements, calculations, detailing, structural analysis and the preparation of the repair plans and provided the field services during the construction of the stabilization measure for the landslide.

The City of Laguna Niguel was awarded $5.6 million of Hazard Mitigation Grant Program (HMGP) funds from the Federal Emergency Management Agency (FEMA) to assist in disaster recovery efforts by purchasing landslide damaged properties resulting from the 1998 El Niño winter storms. The HMGP funds are administered by the Governor's Office of Emergency Services (OES) in conjunction with FEMA. The purpose of the HMGP is to purchase private property subject to future hazards and to avoid future property damage by holding the property in perpetual open space.

In order to receive the HMGP funds, FEMA and OES required the City change the land use designation of the effected properties to open space and acquire a conservation easement over the subject properties in order to restrict the use of the land to open space in perpetuity.

Resolution 2002-703, which granted approval of the General Plan Amendment and Zone Change included a "sunset provision," which stated:

> "GPA 02-03 shall become void and of no force and effect, and the subject properties shall revert to their former land use designations, if the HMGP funding is materially reduced, deobligated, or otherwise required to be returned. Additionally, should the "sunset provision" take effect and the subject properties revert to their former land use designations and zoning districts, any new development project proposed on the subject properties shall require that the Planning Commission approve a Site Development Permit or other applicable discretionary actions, including compliance with the California Environmental Quality Act and the preparation of other technical studies such as geotechnical reports."

Following adoption of Resolution 2002-703, the "sunset provision" was enacted because the HMGP funds were never received, and the Project site reverted back to its prior land use designations and GPA 02-03 designating the property Open Space became null and void.

The Project site has remained vacant since the landslide repair. In 2012 and 2013, American Geotechnical prepared feasibility reports and then conducted a preliminary geotechnical investigation for a proposed 38-unit condominium complex on the Project site, where residential units were proposed throughout the 4.2-acres on both the lower eastern portion of the Project site and upper western portion of the Project site . Although the proposal was never approved, the findings and recommendations contained in American Geotechnical' s feasibility reports and

preliminary geotechnical investigation was conditionally approved by the City's geotechnical reviewer, Goffman, McCormick, and Urban Geotechnical Inc. (GMU).

2.4 Existing Site Conditions

The topography of the site is generally sloping downward from the west to the east. The site is planted with Acacia species and scattered laurel sumac (*Malosma laurina*) planted for erosion control. Existing site improvements include the caisson wall and tieback anchors, subdrains, and the compacted earthen fill buttress. Access to the Project site is currently provided via an existing driveway on the west frontage of Crown Valley Parkway located opposite Paseo Del Niguel.

Crown Valley Parkway along the Project site is at an elevation of approximately 360 feet msl. From Crown Valley Parkway, a 2:1 fill slope approximately 10 feet in height forms the east property boundary along the Crown Valley Parkway frontage. A relatively flat, rectangular-shaped area exists farther west into the site and above the Crown Valley Parkway slope. This relatively flat portion of the site ranges in elevation from approximately 370 feet msl to 380 feet msl. Farther west, an east-facing fill slope of varying steepness rises approximately 160 feet in height to more gently sloping terrain with an elevation ranging from approximately 440 msl to 450 feet msl at the western property boundary.

2.5 Site Vicinity

The Project site is surrounded by residential uses, including single family homes to the west and north, La Vista Condominiums to the south, and Crown Valley Parkway on the east. Previously referenced Figures 1.A and 1.B show an aerial view of the site and the surrounding built environment.

2.6 Existing General Plan Land Use and Zoning

Figure 2.A shows the existing General Plan land use designations for the Project site and surrounding properties. As shown in the figure, the Project site contains a Residential Attached land use designation. The proposed Project is consistent with the existing General Plan land use designation.

Existing zoning for the Project site is Multi-family District, (RM). The purpose of the RM zone is to provide for the development and preservation of low- and medium-density neighborhoods with multi-family residences or attached dwelling units constructed on common lots. The RM residential development standards are detailed in Section 9-1-33 of the Laguna Niguel Zoning Code (LNZC). The existing zoning designations for the site and surrounding area are shown on Figure 2.B. The proposed Project is consistent with existing zoning for the site.

2.7 Project Description

2.7.1 Overall Development

The proposed Project will result in the construction of 22 three-story condominium style homes configured in 6 triplex and 2 duplex buildings on approximately 2 acres, and approximately 2.2 acres of open space. The 4.2-acre Project site is designated as APN 656-321-02. The property will be subdivided into two lots, Lot 1 and Lot A. Lot 1 includes the 2-acre residential area and Lot A, a lettered lot on the tentative tract map, does not permit residential home construction[1] . As noted previously, the Project is consistent with the existing Residential Attached General Plan land use designation (previously referenced Figure 2.A) for the site and the existing Multi-Family District, RM zoning (previously referenced Figure 2.B) for the site.

In accordance with Sections 15050 and 15367 of the State CEQA Guidelines, the City as Lead Agency has principal authority and jurisdiction for CEQA actions. The discretionary actions to be considered by the City as part of the proposed Project include: a Tentative Tract Map (TTM 17721); Alternative Development Standards; Minor Adjustment; and a Site Development Permit (SP 16-04). There are no other legislative or discretionary approvals required by Responsible or Trustee Agencies for the proposed Project.

2.7.2 Tentative Tract Map

The Project requires City approval of a Tentative Tract Map TTM 17721 to form two lots within APN 656-231-02. Lot 1 would encompass the relatively flat, rectangular-shaped, approximately 2-acre portion of the parcel in the eastern portion of the site. Lot A would encompass the steeper hillside and flat areas in the western approximately 2.2-acre portion of the parcel. Lot 1 would be developed with the proposed 22 condominium style homes and ancillary development and utility improvements. Lot A, a lettered lot on the tentative tract map, does not permit residential home construction. Proposed TTM 17721 is shown in Figure 2.C.

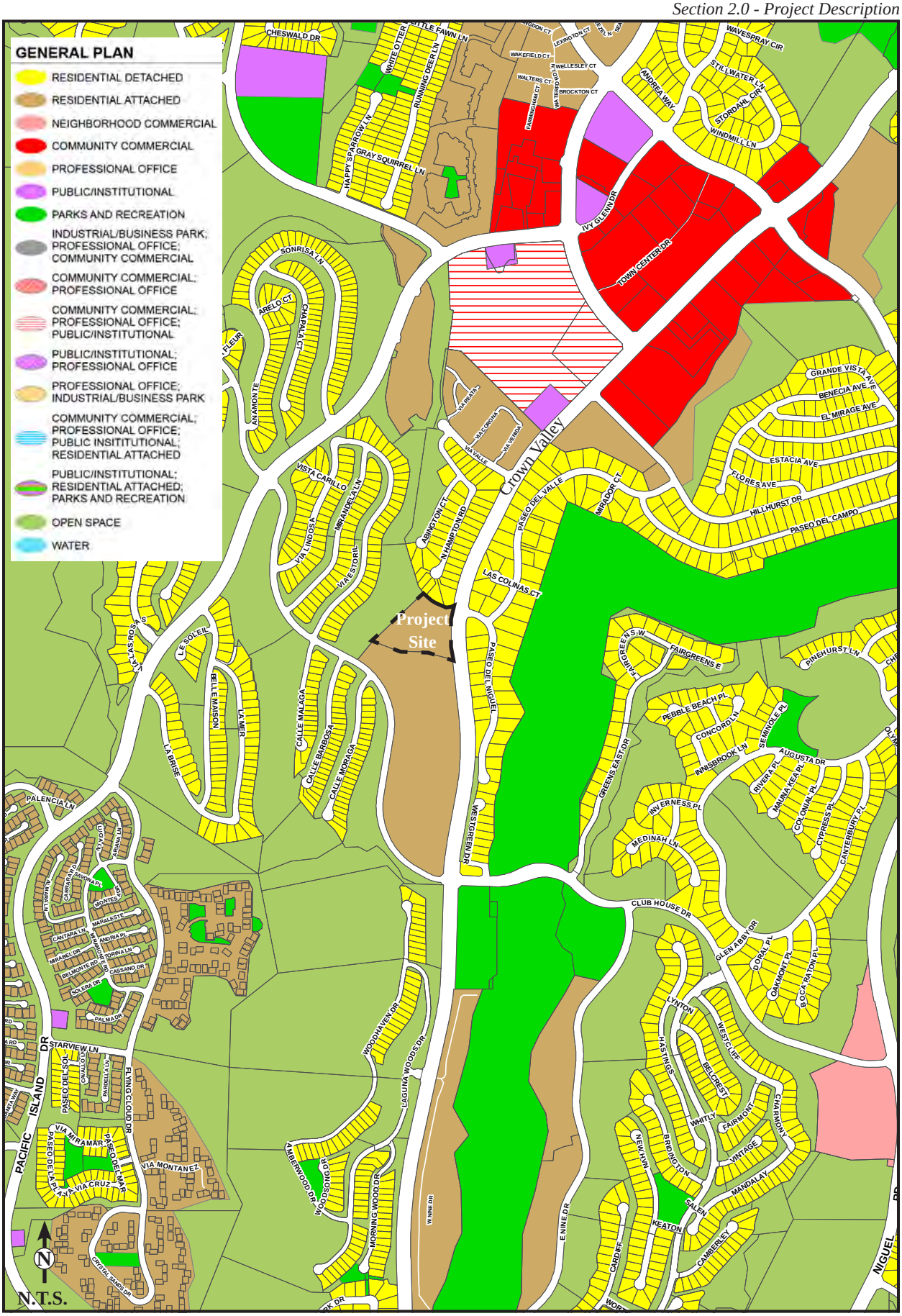
2.7.3 Alternative Development Standard

Three alternative development standards are being requested: common open space, active recreation, and building heights.

2.7.4 Minor Adjustment

Minor Adjustment provides an adjustment for retaining walls that exceed the 12-foot height limit established in the Zoning Code. The tallest wall found on the Project site is located in the northern portion and measures approximately 15.5 feet.

[1] Residential home construction is not permitted within Lot A. Minor disturbance within Lot A is permitted to support residential development on Lot 1, such as installation of utilities, or similar. Lot A will remain as open space, however this area is not protected or conserved as biological habitat.



Source: City of Laguna Niguel (2012).

Figure 2.A Existing General Plan Land Use

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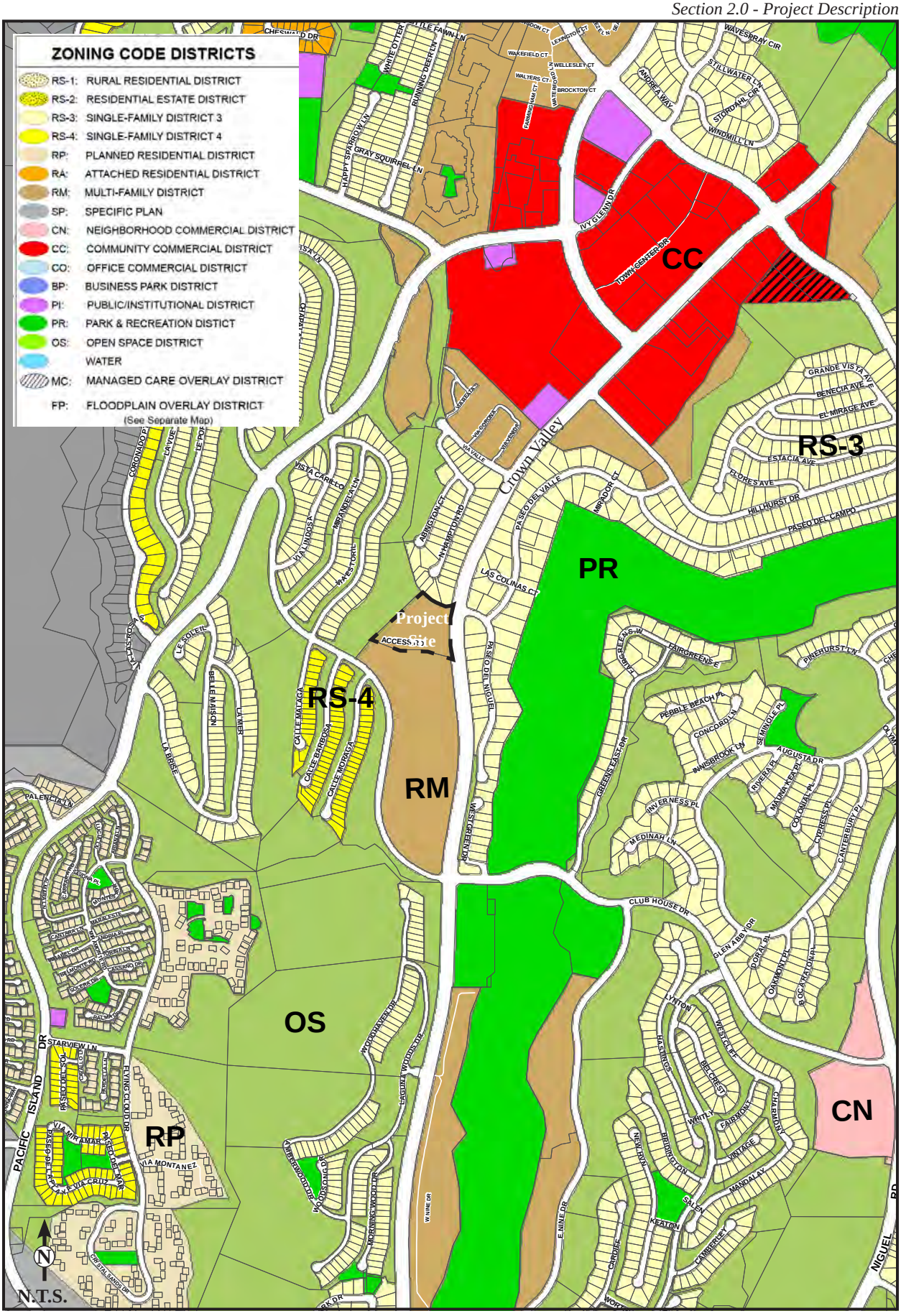

Source: City of Laguna Niguel (2012).

Figure 2.B Existing Zoning Map

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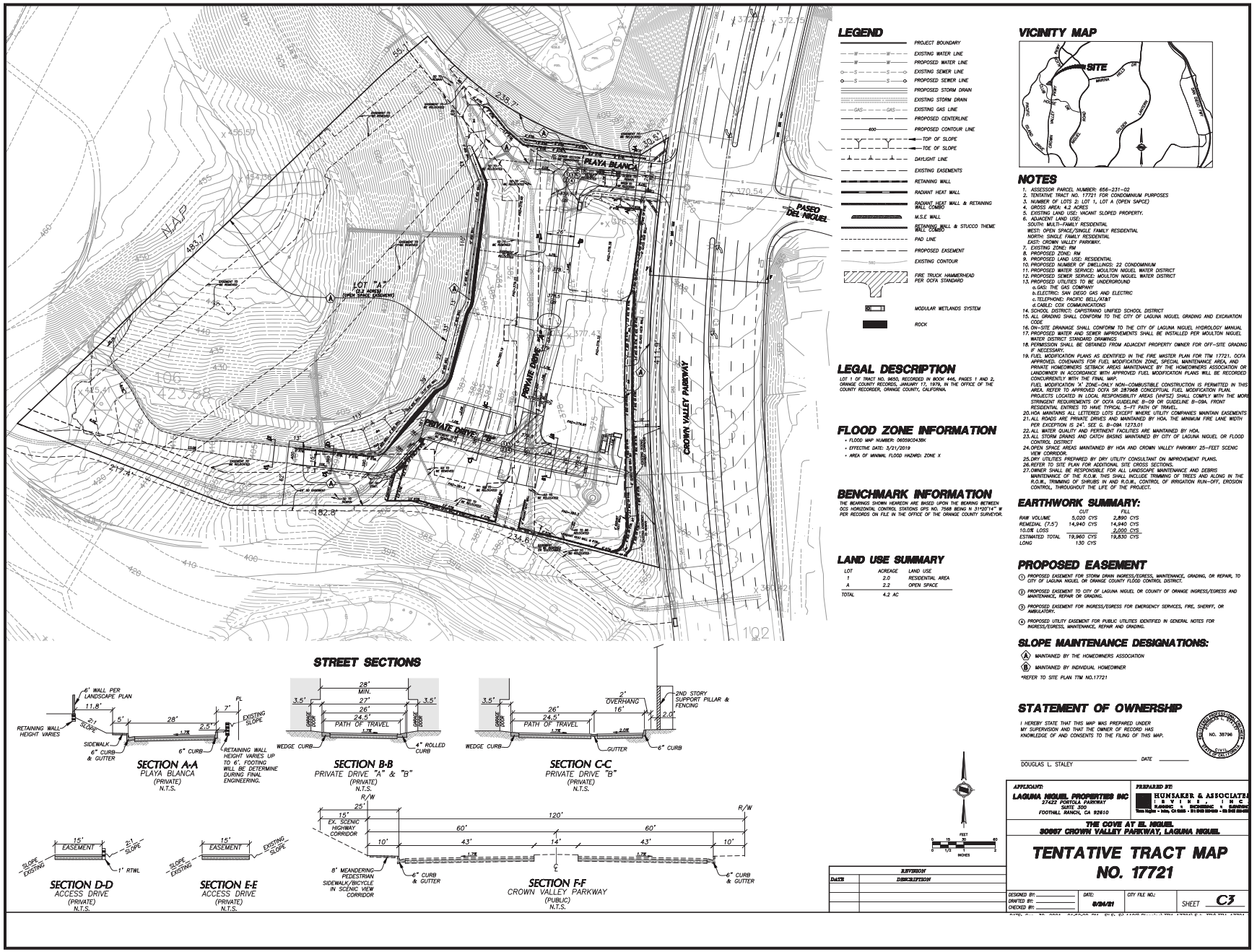

Source: Hunsaker&Associates (8/24/2021).

Figure 2.C Tentative Tract Map

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2.7.5 Site Development Permit

Site Development Permit (SDP) number SDP 16-04 contains the details of the proposed Project improvements and is shown in the conceptual Project site plan shown in Figure 2.D. The proposed SDP would allow the construction of the 22 condominium style homes configured into 6 triplex and 2 duplex 3-story buildings on 2 acres. Approximately 2.2 acres would remain open space. The proposal is supported by the existing General Plan and Zoning for the site.

The Project will feature two different architectural building designs. The duplex buildings are referenced on the architectural plans as Building 1 and are comprised of two mirrored floor plans, Plan 2 (left) and Plan 2R (right). Each of these floor plans are identical in size with 1,937 square feet (sf) of total livable space, a 205-sf porch, a 94-sf deck, and a 644 sf two-car garage. The triplex buildings are referenced as Building 2 and are comprised of three floor plans, Plan 2 (left), Plan 1(middle), and Plan 2R (right). Three-story Plan 2 and Plan 2R are as described above for the duplex Building 1. Plan 1 has 1,808 sf of total livable space, a 68-sf porch, a 98-sf deck, and a 707 sf two-car garage.

The proposed condominiums would reflect a Spanish architectural theme as commonly seen throughout the City, with updated design elements. The basic design elements are simple asymmetrical forms, arched entries, predominantly stucco wall finishes, and shallow gabled 'S' tile roofs that animate building elevations. Grouping of accent windows and vertical forms of openings would reinforce this design character. Material blending of slump stone, simulated wood corbels, shutters, shaped wood trims and posts, decorative metal railings and downspouts are purposefully composed to enhance the overall design character on all sides of every building.

In attempt to distinguish the proposed residences from others within the City, the Project proposes community features not typically found in Laguna Niguel. For example, the product floor plans would accommodate work from home occupants and each unit would contain an oversized garage enabling in-home exercise and recreation equipment. Each dwelling unit would also contain a fenced usable backyard larger in size than typically seen in other townhome designs, which provides each residence with outdoor entertaining and recreation space.

As shown on the proposed site plan, the 22 condominium units would be developed on the eastern, flatter half of the site while leaving the upper, western half of the site undeveloped. This footprint would maintain the previously installed geotechnical and drainage improvements including the caisson wall and tieback anchors, subdrains, and the compacted earthen fill buttress that was installed during the remediation of the prior landslide. As a result of leaving the geotechnical remediation area intact, open space would be provided between the proposed condominiums and the existing homes to the west.

Proposed construction would include approximately 19,960 cubic yards (cy) of cut and 19,830 cy of fill to create eight buildable pads, the Playa Blanca entrance from Crown Valley Parkway, and two interior streets. No import or export soil is anticipated because the excess 130 cy of soil will likely shrink during soil compaction. Pads will include mechanically stabilized earth (MSE) walls up to 15.5 feet high along the west perimeter of Lot 1 at the toe of the compacted fill buttress slope and up to 6 feet high along the east perimeter of Lot 1. On the north perimeter of Lot 1, a two-tier retaining wall is proposed with the upper tier up to 6 feet high and the lower tier up to 6.6 feet high. Figures 2.D (Conceptual Site Plan) and 2.E (Site Plan Sections) show the site cross sections including the proposed MSE and retaining walls.

Additional walls up to 6.5 feet high are proposed surrounding Buildings 4 and 5 located on the south portion of Lot 1. A 6-foot-high radiant heat wall would also be installed around Buildings 4 and 5, in some places constructed on top of the retaining wall. Up to a 6.5-foot-high retaining wall is proposed on the west side of Building 5, and up to a 2-foot high retaining wall is proposed along the 15-foot wide access road located on the southeast side of Lot A adjacent to the proposed MSE walls along the west perimeter of Lot 1. All of the proposed slopes will have a ratio of 2:1 (horizontal:vertical). Additional work will include relocating the existing storm drain, and the removal and/or relocation of easements on Lot 1 and Lot A. Figures 2.D (Conceptual Site Plan) and 2.E (Site Plan Sections) show the site cross sections including the proposed MSE, retaining, and radiant heat walls.

The Project would be connected to water, sewer, drainage, and other public utilities readily available within the Project site.

Construction of the proposed Project is anticipated to start in the first quarter of 2023 and would be completed and operational by 2024.

2.7.6 Project Objectives

The following intended specific objectives have been developed for The Cove at El Niguel to assist decision-makers in their review of the Project and its associated environmental impacts.

- Provide new for-sale housing that is responsive to market conditions and provides a uniquely designed product type that is currently limited elsewhere in the City.
- Design the grading and geotechnical stabilization to ensure site stability consistent with City codes and minimize grading into the existing previously stabilized landslide mass.
- Design the grading and geotechnical stabilization to minimize off-site grading and balance the earthwork on site to minimize import/export, which would reduce air quality, noise, and traffic impacts from truck traffic on adjacent residential uses and City roadways.

- Redevelop the previously existing residential site with a residential project consistent with existing General Plan and Zoning designations that provides an updated housing product to meet the City's growing population and further address the City's and state's housing needs.
- Create a financially successful development that is fiscally responsible by equitably contributing to the expansion and operation of the public services and facilities impacted by the project through the payment of fees.
- Improve the aesthetic character along Crown Valley Parkway through enhanced landscaping consistent with General Plan policies.

2.8 Discretionary Actions

As described above, the Project requires approval of several discretionary actions by the City. These include the following:

- Tentative Tract Map
- Site Development Permit, including Alternative Development Standards
- Minor Adjustment

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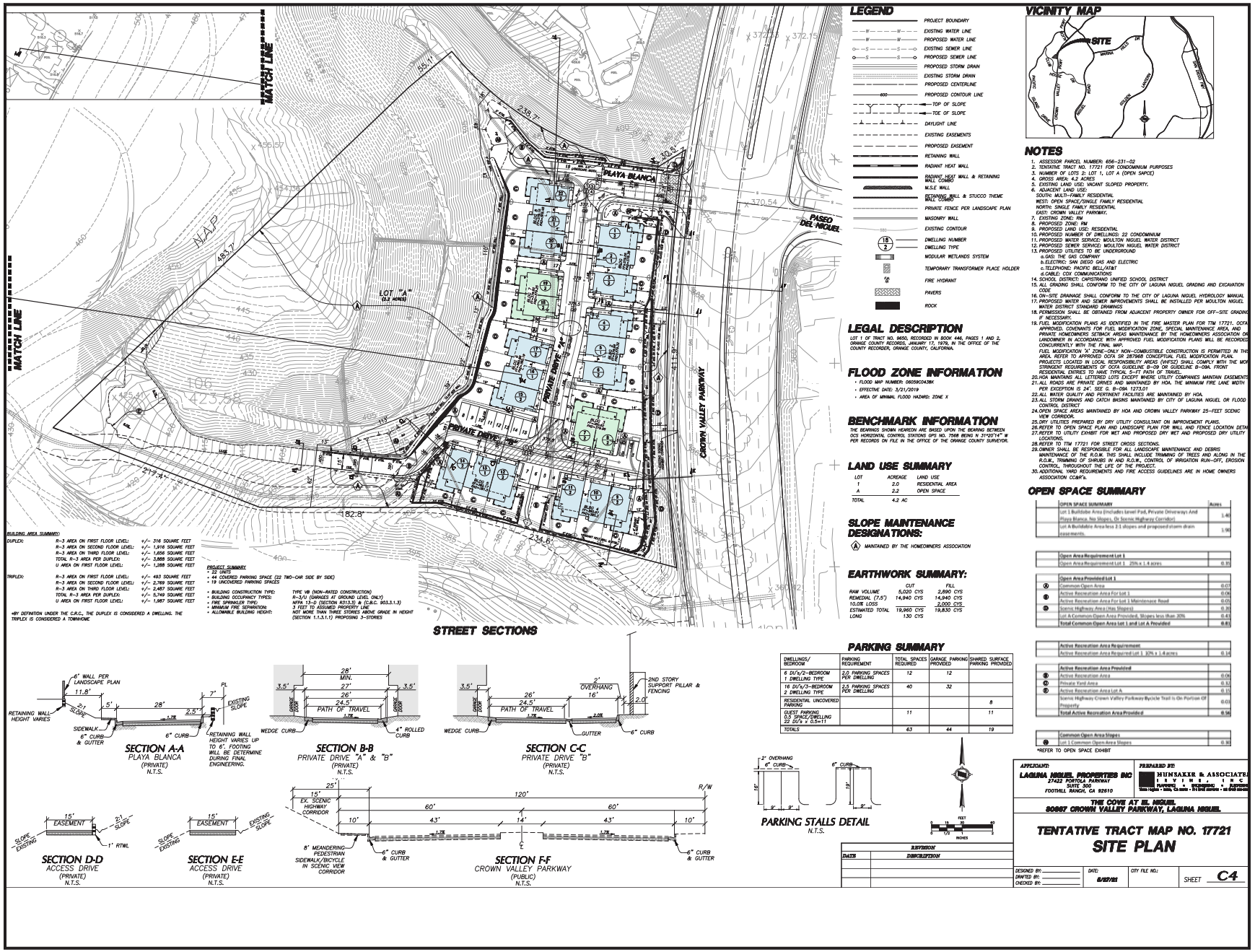

Source: Hunsaker&Associates (8/27/2021).

Figure 2.D Conceptual Site Plan

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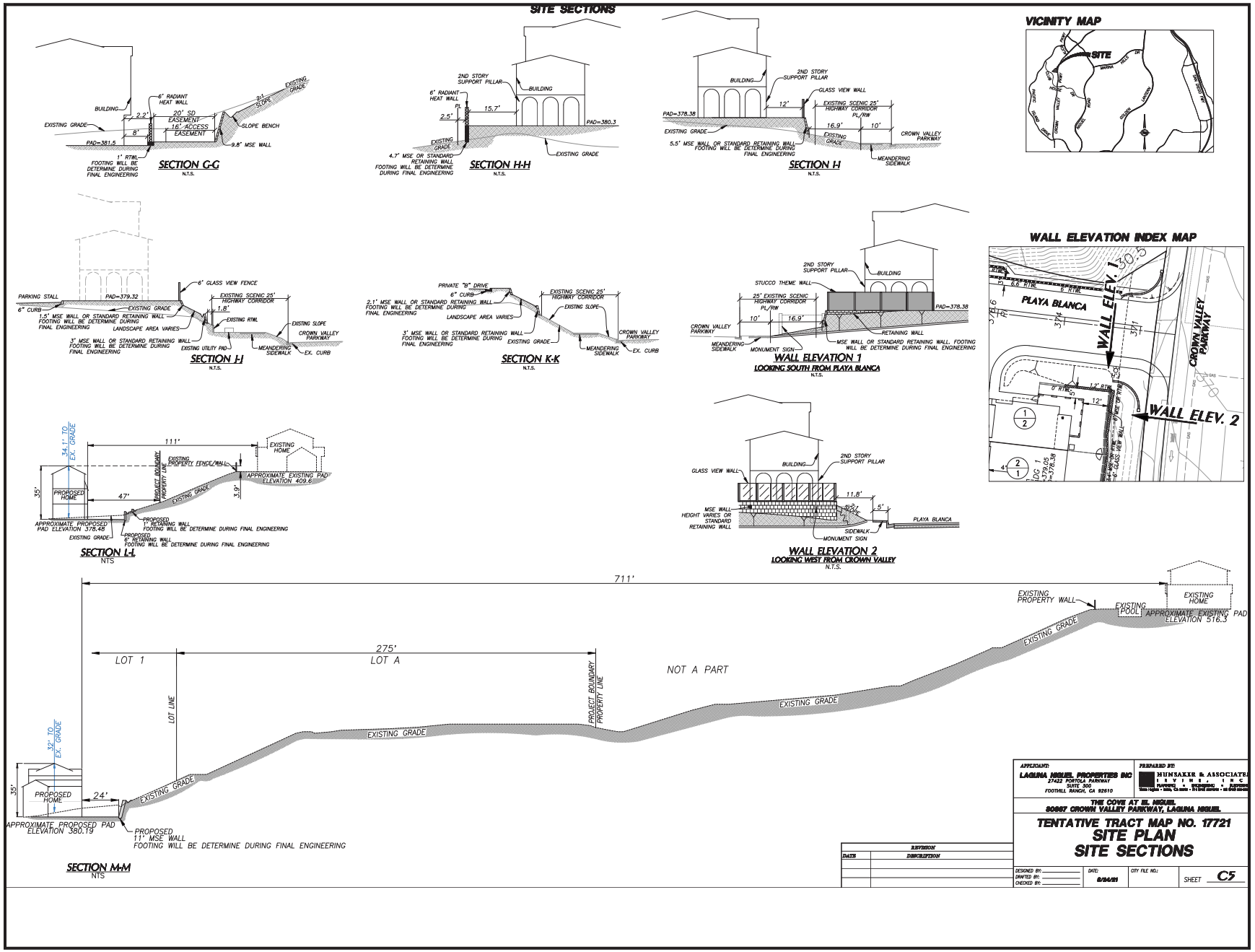

Source: Hunsaker&Associates (8/27/2021).

Figure 2.E Site Plan Sections

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SECTION 3.0 ENVIRONMENTAL EFFECTS FOUND NOT TO BE SIGNIFICANT

3.1 Introduction

The California Environmental Quality Act (CEQA) provides that an Environmental Impact Report (EIR) focus on the significant effects on the environment, discussing the effects with emphasis in proportion to their severity and probability of occurrence.

Section 21100, subdivision (c), and Section 21002.1, subdivision (e), of the Public Resources Code and Section 15128 of the CEQA Guidelines states that an EIR shall contain a statement briefly indicating the reasons various possible effects of a project were determined not to be significant and were, therefore, not discussed in detail in the EIR. Since an Initial Study was not prepared with the Notice of Preparation (NOP), this EIR evaluates all of the possible significant effects of the Project in accordance with Appendix G of the CEQA Guidelines and the City's CEQA Manual.

However, several environmental effects of the Project have been screened out from detailed discussion. These environmental topics are Agriculture and Forestry Resources, Mineral Resources, Population and Housing, Public Services, Recreation, and Utilities and Service Systems. The following discussion briefly indicates the reasons why these significant effects of the Project were determined not to be significant and are not discussed in detail in this EIR.

3.2 Environmental Effects Screened from Detailed Analysis

This section describes the potential impacts on the following environmental topics and why implementation of the proposed Project would result in no impact or a less than significant impact. The significance of impacts is based on the thresholds contained in Appendix G of the CEQA Guidelines and the criteria contained in the City's CEQA Manual.

3.2.1 Agriculture and Forestry Resources

Threshold A	*Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program (FMMP) of the California Resources Agency, to non-agricultural use?*

The proposed Project is within a General Plan designation of Residential Attached, with a zoning designation of RM, Multi-family District. Surrounding land use designations include RS-3 (Single-family District 3), RS-4 (Single-family District 4), OS (Open Space), and PR (Park & Recreation District). The Farmland Mapping and Monitoring Program (FMMP) designates the Project site as Urban/Built-up and Other Land on its California Important Farmlands Finder map

for Orange County. The map does not identify the Project site as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Atkins 2011). Therefore, the proposed Project would not convert any such farmland to non-agricultural use and no impact to farmland would occur.

Threshold B	*Conflict with existing zoning for agricultural use, or a Williamson Act contract?*

The Project site is currently vacant, having been previously developed, demolished, and re-graded with existing installed site erosion control due to previous landslide. Neither the Project site nor any parcels within the Project vicinity are zoned for agricultural use or subject to any Williamson Act contracts. Therefore, the proposed Project would not conflict with existing zoning for agricultural use or conflict with a Williamson Act contract, and no impact would occur.

Threshold C	*Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220[g]), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g])?*

As previously described, the Project site is currently zoned RM, Multi-family District for Multi-family development and the General Plan land use designation is Residential Attached. No land zoned as forest land or timberland exists within the proposed Project boundaries. The proposed Project would not conflict with existing zoning for forest land or timberland. Therefore, no impact would occur and no mitigation is required.

Threshold D	*Result in the loss of forest land or conversion of forest land to non-forest use?*

No land zoned as forest land or timberland exists within the proposed Project boundaries. Approval of the proposed Project would not result in the loss of forest land or conversion of forest land to other uses; therefore, no impact would occur.

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

No agricultural land uses, forest land, or timberland exist in the vicinity of the Project, and the Project site is currently vacant, having been previously developed, demolished, and re-graded with existing installed site erosion control due to a previous landslide. The proposed Project would develop the site with 22 homes configured into 6 triplex and 2 duplex, 3-story buildings on approximately 2.0 acres. The proposed Project would not involve other changes in the existing environment that, due to their location or nature, could result in conversion of farmland to non-agricultural use or forest land to non-forest use; therefore, no impact would occur.

3.2.2 Mineral Resources

Threshold 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?*

There are no areas within the City designated by the General Plan or zoning for mineral resources or mineral resource activities. The Project site is designated MRZ-1, which is defined as an area that contains no significant mineral deposits, or where it is judged that little likelihood exists for their presence. Therefore, the proposed Project would not result in the loss of availability of a known mineral resource and impacts would be less than significant and no mitigation measures are required.

Threshold 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 plans.*

As noted above, there are no areas within the City designated by the General Plan or zoning for mineral resources or mineral resource activities. The Project site is designated Residential Attached per the General Plan and zoned RM, Multi-family District, which designates the area for planned Multi-family development. Also as detailed above, the site is designated MRZ-1, which is an area that contains no significant mineral deposits or where it is judged that little likelihood exists for their presence and the site has not been identified as containing locally important mineral resources. As such, the proposed Project would not cause the loss of availability of a locally important mineral resource recovery site. No impacts would occur and no mitigation measures are required.

3.2.3 Population and Housing

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

Direct Impacts

The proposed Project includes the construction of 22 Multi-family condominium residences on 2 acres of a 4.2-acre site, with 2.2 acres remaining open space. The Project site is designated Residential Attached in the LNGP and zoned Multi-family District (RM). The Project is consistent with existing land use and zoning. The proposed 22 condominiums are expected to accommodate approximately 57 residents (22 dwellings x 2.61 average persons per household). Compared to the City's 2020 estimated population of 67,285, the additional 57 residents would represent a less than one-tenth of one percent increase in population. This increase would not be considered substantial population growth. Furthermore, the Project site was previously developed with 41 condominium

units, which generated more population than the proposed Project. Therefore, the proposed population is less than what was previously generated from the Project site and the increase in population from the proposed Project is de minimis, resulting in less than significant and no mitigation is required.

Indirect Impacts

Construction activities associated with the proposed Project would provide short-term employment opportunities. These jobs would be temporary and are expected to be filled by the local labor force. Therefore, construction activities associated with the proposed Project would not indirectly stimulate the need for additional housing or services. The proposed Project would not extend roads and supporting infrastructure. Modifications to existing infrastructure would be conducted to specifically service the Project site as opposed to servicing the greater surrounding areas. Therefore, the proposed Project would not induce indirect population growth by extending infrastructure to previously undeveloped areas.

As the proposed Project would not indirectly stimulate the need for additional housing or services or result in the need for extended roads or addition of new infrastructure, indirect impacts would be less than significant.

Threshold B **Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?**

The Project site is currently vacant and as a result, the proposed Project does not involve the demolition of any housing or structures. Housing displacement impacts would not occur as a result of Project implementation. Therefore, the proposed Project would not displace people or housing, and no impact would occur and no mitigation measures are required.

3.2.4 Public Services

Threshold A (i) *Fire Protection*

During construction of the Project, fire protection services could be required; however, this phase of the Project would be temporary and short term in nature, and fire protection services are already available to the Project area. Therefore, impacts are expected to be less than significant.

Operation of the Project would lead to an increased demand for fire protection services by increasing the permanent population. However, given that the City's estimated population in 2021 was approximately 65,168 (Section 3.2.3 Population and Housing), the proposed Project would represent an approximate population increase of less than one-tenth of one percent. Therefore, the Project is not expected to result in an additional strain on fire protection services such that new or

expanded facilities would be required, and impacts related to fire protection services would be less than significant, and no mitigation is required.

Threshold A (ii) *Police Protection*

With the City's regular coordination with Orange County Sheriff's Department (OCSD) and reviewing staffing levels in concert with population and geography during service contract renewals, as described above in **Threshold A (i)**, it is expected that the Project would not result in substantial adverse impacts on police protection services such that new or expanded facilities would be required due to the Project's minimal impact to population increase. The Project site is in an urbanized area surrounded by residential uses currently served by the OCSD. Patrols to existing residential communities currently pass by the Project site. The addition of the proposed Project would not change the patrol areas or require additional staffing. Therefore, impacts would be less than significant, and no mitigation is required.

Threshold A (iii) *Schools*

The proposed Project would be served by Hidden Hills Elementary School (K–5), Niguel Hills Middle School (6–8), and Dana Hills High School (9–12). Pursuant to Government Code Section 65996, mitigation of impacts on school facilities is limited to the imposition of statutory school fees. Compliance with **Standard Condition of Approval SCA PUB-1** would ensure that the proposed Project pays the statutory school impact fees to fully mitigate the addition of students to Capistrano Unified School District (CUSD) facilities. Therefore, impacts related to school facilities would be less than significant.

Standard Condition of Approval (SCA): Compliance of the following SCA will render impacts to California Government Code Section 65995 to less the significant.

SCA PUB-1: Consistent with current City requirements, the developer will pay to CUSD no less than the statutory school fees in effect at the time of issuance of building permits.

Threshold A (iv) *Parks*

Section 3.2.5, *Recreation,* of this Draft EIR includes an analysis of park and open space requirements and the Project design features. Section 9-1-522 of the LNZC requires either parkland dedication or payment of park fees, and based on the formula provided in Section 9-1-522, the proposed Project has a local park code requirement of 0.14 acres. As seen below in Figure 3.2.4.A, the Project would meet and exceed such requirements by implementing **Project Design Feature PDF PUB-1** which provides 0.51 acres of recreational area. As a result, impacts would be less than significant, and no mitigation is required.

Project Design Features (PDF): Implementation of the following PDF will render impacts to Recreation to less the significant:

PDF PUB-1: To meet the parkland dedication requirement per the LNZC, the Project has implemented the following areas onsite to achieve such requirement.

- **Area B:** Active Recreation Area, includes two neighborhood parks both with open play lawns and one with a picnic table and BBQ. Totals 0.13 acres.
- **Area C:** Private Yard Area are included for each 22 condominium units. Totaling. Totaling 0.38 acres.

Threshold A (v) *Other Public Facilities*

Answered above in **Threshold A (i),** the proposed Project would create an additional demand to library services in the City and County. However, this increase would not be substantial, and new or expanded facilities would not be required as a result of the Project. Furthermore, on June 23, 2013, the Orange County Board of Supervisors adopted resolution No. 13-062 with respect to the Development Fee Program for Branch Libraries, stating that those facilities have been constructed and accordingly the fee program is no longer needed. Therefore, impacts related to other public facilities would be less than significant, and no mitigation is required.

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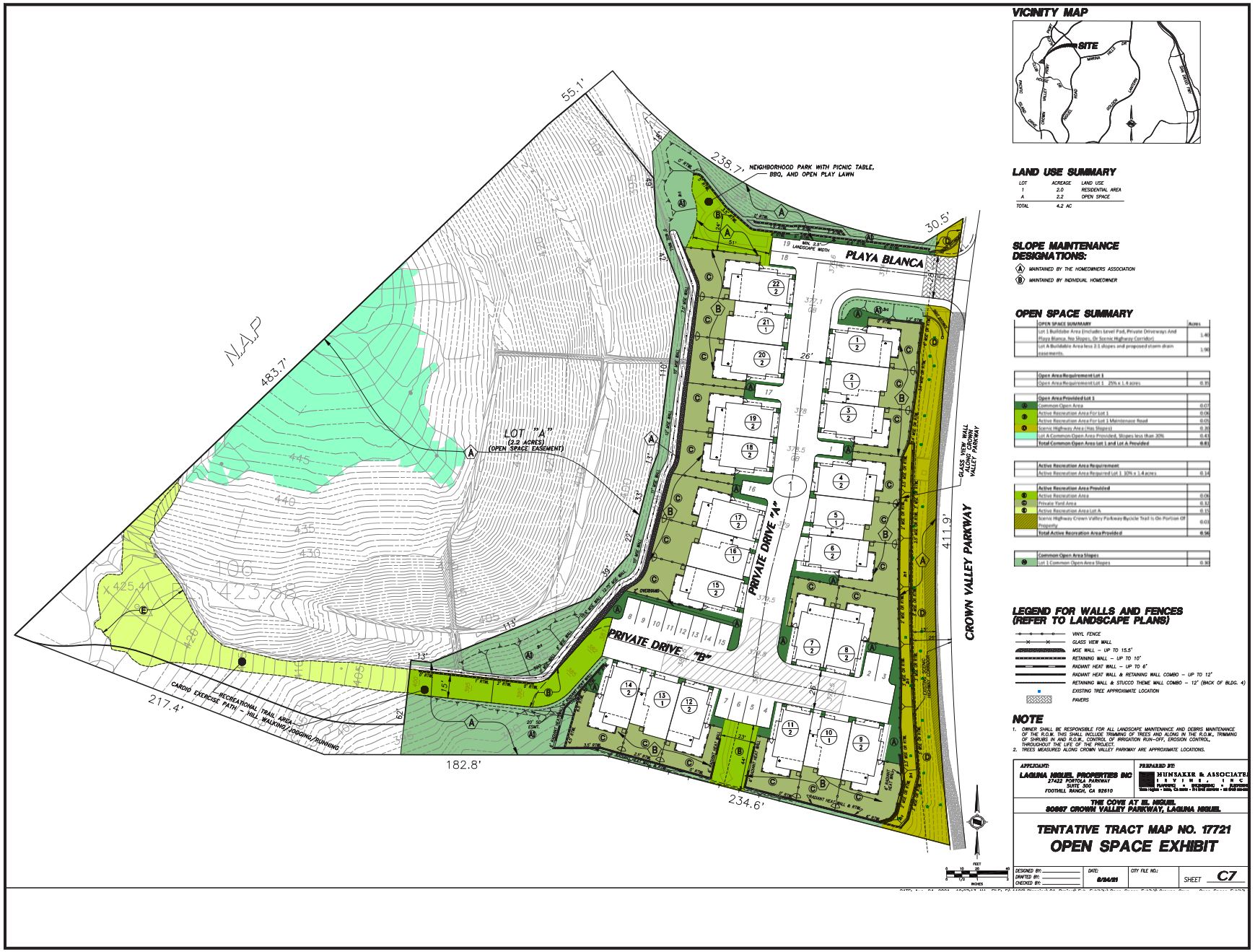

Source: Hunsaker&Associates (8/24/2021).

Figure 3.2.4A Open Space Exhibit

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3.2.5 Recreation

Threshold 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?*

The proposed Project is expected to house up to 57 residents based on the City's 2020 estimated occupancy of 2.61 persons per dwelling unit, which in turn could generate an increased demand for recreation facilities. However, as discussed previously in Section 3.2.3, *Population and Housing*, this increase to the City's population is negligible. Similarly, the increase in demand on parks and recreational facilities attributable to the proposed Project would be negligible and impacts to existing recreational facilitates would be less than significant. As described below, the proposed Project is required to satisfy the Quimby Act and meet the requirements for providing parkland per the LNZC Section 9-1-522 and Section 9-1-35.13.

Table 3.2.5-A: Proposed On-Site Recreational Facilities

Open Area	Required (Acres)	Provided (Acres)
Common Open Space	0.35	0.13
Active Recreation	0.14	0.38
Total	**0.49**	**0.51**

The proposed Project provides a combination of private yard space and two open play lawn areas for recreation for the residents and guests of the development, all of which would be maintained by the future HOA. Since the Project provides less common open space than required (although more open space overall) and relies on private yard space to satisfy the private recreation requirement, approval of Alternative Development Standards is required.

Since the Project provides overall open space greater than required and approval of the Project is contingent upon approval of Alternative Development standards, potential impacts on existing parks as a result of the increase in population from the proposed Project would be less than significant, and no mitigation is required.

Threshold B *Does the project include recreational facilities or require the construction of or expansion of recreational facilities that might have an adverse physical effect on the environment?*

As described in **Threshold A**, the proposed Project includes sufficient open space and active recreational areas to satisfy the Project's local park code requirements. The construction of open space and active recreation facilities would occur onsite and the potential impacts of constructing

such facilities would be less than significant as they are to be built and approved per code. Furthermore, the proposed improvements would be managed by the HOA and accessible through the neighborhood for residents and guests. The Project would not require the construction of new or expanded off-site recreational facilities. Potential impacts would be less than significant, and no mitigation is required.

3.2.6 Utilities and Service Systems

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

The proposed Project would tie-in to existing utilities and services on-site, in adjacent property, and in Crown Valley Parkway. Minimal abandonment of existing utilities and service systems would be required to accommodate the Project. The increase in demand on utilities and service systems from the Project is considered to be minimal, and the Project will be adequately served by the service providers as described below.

Water

Moulton Niguel Water District (MNWD) would provide service to the Project for domestic water, irrigation, and fire suppression. A connection will be made to the existing underground water line located at the Project entrance on Playa Blanca. The tie-in would be designed and coordinated through MNWD during the building permitting process to ensure the water distribution system meets peak flow rate and fire flow requirements. All system improvements would be required to comply with Ordinance No. 15 of the MNWD's Water Rates, Rules, and Regulations that would result in adequate peak flow rate and fire flow requirements. Therefore, the Project would not result in the construction of new or expanded off-site water facilities. Impacts would be less than significant, and no mitigation is required.

Wastewater

MNWD would also provide wastewater services to the Project. In order to make necessary tie-in to existing sewer line, the sewer line will be partially abandonment from Playa Blanca at Private Road "A" to the end of sewer line to the west end of Playa Blanca. Similar to the water system connection, design and coordination of the connection improvements will be made through MNWD during the building permit process to ensure construction requirements are met. Therefore, the Project would not result in the construction of new or expanded off-site wastewater facilities. Impacts would be less than significant, and no mitigation is required.

Natural Gas

SoCalGas would provide natural gas services to the Project. Similar to the previous services mentioned, on-site connection to the existing nature gas infrastructure would be made during

construction for operation. The existing gas line runs under Crown Valley Parkway east to west and tie-in would be made at the Project entrance at Playa Blanca. Compliance with the existing building code and SoCalGas construction and design regulations would ensure the Project's connection to the existing natural gas infrastructure is conducted safely and provides adequate service. Therefore, the Project would not result in the construction of new or expanded off-site natural gas facilities. Impacts would be less than significant, and no mitigation is required.

Electricity

San Diego Gas and Electric (SDGE) would provide electrical service to the Project. An on-site connection to the existing electrical supply and distribution network within the area surrounding the Project would be made during construction and operation. The existing electrical supply is underground and located at the south side of the Project entrance at Playa Blanca and tie-in would be identified prior to construction with proper mark out. Compliance with the existing building code and SDGE construction and design regulations would ensure the Project's connection to the existing electrical infrastructure is conducted safely and provides adequate service. Therefore, the Project would not result in the construction of new or expanded off-site electrical facilities. Impacts would be less than significant, and no mitigation is required.

Storm Water

An existing onsite 36-inch storm drain ultimately conveys onsite storm water flows under Crown Valley Parkway to the Siphon Creek Reservoir. The proposed Project would expand this storm drain to 48 inches to improve the flow of stormwater as discussed subsequently in Section 4.9, *Hydrology and Water Quality*. With implementation of this expanded storm water line within the Project site, estimated stormwater flows with the Project will be adequately accommodated. Therefore, the Project would not result in the construction of new or expanded off-site storm water facilities. Impacts would be less than significant, and no mitigation is required.

Telecommunications

Telephone services will be provided to the Project site by Pacific Bell and AT&T and cable services will be provided by Cox Communication. These services are privately operated and offered to each location in the City for a fee defined by the provider.

The proposed Project would not require the relocation, expansion, or construction of any physical improvements related to the provision of telecommunications services. Therefore, the Project would not result in the construction of new or expanded off-site telecommunications facilities. Impacts would be less than significant, and no mitigation is required.

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

As stated in Moulton Niguel Water District (MNWD), *2020 Urban Water Management Plan*, from the years 2019-2020, approximately 23,000 Acre Feet (AF) of treated drinking water was supplied to over 170,000 customers in its district. Additionally, MNWD expects to be able to meet its districts' projected water supply demand through 2045 and has taken an integrated approach to developing a diversity of supply sources to achieve a reliable and economical water supply system during the current drought conditions. According to CalEEMod calculations seen in Appendix C, the proposed Project would use an estimated 1.43 million gallons of water per year. This is equivalent to 4.4 AF of water which is the increase in the Project's demand for water supplies within MNWD. Additionally, MNWD supplied a June 2017 Conditional Will Serve Letter (Appendix O), which stated there would be adequate domestic water supplies for the previously proposed Project of 23 townhomes. Further stated in the will serve letter, no upsizing was anticipated for water or sewer mains. As a result, the water supply demand will be adequately accommodated for the Project during normal dry, and multiple dry years. Impacts would be less than significant, and no mitigation measures are required.

Threshold C	*Result in a determination by the wastewater treatment provider which serves or may serve the project that has adequate capacity to serve the project's projected demand in addition to the provider's existing comments?*

Wastewater would flow to the 3A Treatment Plant located at 26801 Camino Capistrano, in the City of Mission Viejo. The 3A Treatment Plant has an average flow of 1.8 mgd of wastewater with capacity for an additional 4.2 mgd. The Project would generate approximately 6,985 gpd of wastewater, representing 0.001 percent of the remaining daily treatment capacity at the 3A Treatment Plant. Through long-range planning activities, MNWD would be able to accommodate the demand for wastewater treatment generated by the proposed Project and other projects in its service area. Therefore, the proposed Project would not result in a significant contribution to the wastewater flows at the Regional Treatment Plant and would result in less than significant impact related to the wastewater treatment capacity, and no mitigation measures are required.

Threshold D	*Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

Solid waste generation and regulation compliance associated with Project construction, and operation are determined to have less than significant impacts due to construction compliance with the City's Construction and Demolition Waste Ordinance which would divert at least 65 percent of solid waste generated during construction activities which an estimated total of waste would be approximately under 100 tons. Described below in Threshold E, of the 100 tons of waste generated

by the project over 65% would be applicable for recycling. The solid waste generation estimate for the operation of the proposed Project would also have a negligible contribution to the daily tonnage processed at approved landfills, as approximately 10 tons would be generated annually. In addition, documentation demonstrating compliance with the City's debris recycling regulations and with applicable City regulations is required. As a result, the three local landfills would be able to accommodate such demand during the Project's temporary construction and operation as they each accept 7,000 to 8,000 tons of refuse disposal a day for residential and commercial properties. Therefore, impacts due to generation of excess solid waste are less than significant, and no mitigation is required.

Threshold E	*Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

As mentioned in Threshold D, CalGreen mandates the reduction of construction and demolition waste disposal in landfills which mandates a minimum 65% diversion goal. The proposed Project would be implemented in a manner consistent with the City's commitment and in compliance with such requirements, including the Construction and Demolition Waste Ordinance that requires diversion of at least 65 percent of solid waste generated during construction. During construction, all green waste and debris generated from the demolition of existing pavement, curbs, and gutters will be recycled at an approved recycling center for reuse. The City ensures compliance with this ordinance by requiring either the use of the City's Franchise Waste Hauler (CR&R) or self-haul of recycled construction materials to a City approved recycling facility, or implementation of a Waste Stream Reduction Alternative for new construction only.

The proposed Project would be subject to and comply with the conditions of Title 6 of the Laguna Niguel Municipal Code, which regulates solid waste disposal practices. Each resident would be provided with trash bins for curbside refuse, recycling, and green waste pick up. It is the responsibility of the residents for sorting their own individual trash into refuse, recyclable, and green waste.

As a result, the proposed Project would not conflict with federal, state, and local statutes and regulations related to solid waste. No impact would occur, and no mitigation is required.

3.3 Environmental Effects Discussed in Detail in the EIR

With the environmental topics screened out from detailed analysis as discussed above, Chapter 4.0 of this EIR addresses in detail the potential environmental impacts associated with the proposed Project limited to the following issue areas:

4.1 Aesthetics

4.2 Air Quality

4.3 Biological Resources

4.4 Cultural Resources

4.5 Energy

4.6 Geology and Soils

4.7 Greenhouse Gas

4.8 Hazards and Hazardous Materials

4.9 Hydrology and Water Quality

4.10 Land Use and Planning

4.11 Noise

4.12 Transportation

4.13 Tribal Cultural Resources

4.14 Wildfire

SECTION 4.0 ENVIRONMENTAL IMPACT ANALYSIS

With the environmental topics screened out from detailed analysis as discussed in Section 3.0, this Draft EIR has been limited to detailed impact analyses of the following issue areas:

4.1	Aesthetics	4.8	Hazards and Hazardous Materials
4.2	Air Quality	4.9	Hydrology and Water Quality
4.3	Biological Resources	4.10	Land Use and Planning
4.4	Cultural Resources	4.11	Noise
4.5	Energy	4.12	Transportation
4.6	Geology and Soils	4.13	Tribal Cultural Resources
4.7	Greenhouse Gas	4.14	Wildfire

The analysis relative to each environmental issue will include the following:

- A description of the existing setting relative to each environmental issue;
- A summary of policies and regulations relevant to the specific environmental issue;
- The identification of the significance thresholds against which the project's impact will be measured;
- An evaluation of project-specific impacts and a determination of significance based on identified threshold;
- A description of proposed project design features and/or standard conditions that will help reduce the level of any potential impact;
- An identification of feasible measures to minimize any significant environmental effect;
- A determination of the level of significance after mitigation measures are implemented; and
- An evaluation of cumulative impacts and determination of significance.

Mitigation Measures are the requirements imposed on the proposed Project to reduce the significance of identified impacts. Mitigation Measures have been identified for those significant impacts. Mitigation Measures will be required during implementation of the proposed Project.

The environmental analysis provided in Sections 4.1 through 4.14 focuses on changes in the existing physical environment and identifies the direct, indirect, and cumulative impacts associated with the development of the proposed Project.

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4.1 Aesthetics

This section describes the existing aesthetic and visual conditions that could be adversely affected by implementation of the proposed Project, including scenic vistas, scenic resources, and the overall visual quality of the Project site and surrounding areas as seen from sensitive viewing locations or representative viewpoints. The discussion of aesthetics and potential impacts related to visual changes in the physical elements within and surrounding the Project site is subjective by nature.

4.1.1 Setting

Laguna Niguel is in southern Orange County, approximately 50 miles south of downtown Los Angeles and 65 miles north of downtown San Diego. The 14.72-square-mile planned community consists of residential neighborhoods, parks, and supporting commercial businesses with a distinct coastal orientation.

The Project site is in Community Profile Area 8 of the Laguna Niguel General Plan (LNGP), which consists of 1,001.7 acres located in the western portion of Laguna Niguel.

The Project area is comprised primarily of residential uses terraced along the coastal hillsides. The area includes both residential detached and attached dwelling units. The hilly topography limits pedestrian circulation while creating open space opportunities provided by public park sites and private recreation facilities.

4.1.2 Existing Conditions

Visual Character of the Project Site

The Project site is located along Crown Valley Parkway, which is designated by the City as a landscape corridor as seen in Open Space Component Figure OS-3, in the LNGP. Along the Project frontage the existing landscape corridor on Crown Valley Parkway consists of assorted trees, shrubs, and ground cover next to a public sidewalk on a slight slope. The Project site sits above Crown Valley Parkway along the hillside and has an existing graded slope west to east, terrace drains installed, and dense Acacia species planted for erosion control.

Visual Character of the Surrounding Area

Residential communities in the Project area tend to hug hilltops and hillsides, while leaving steeper and undevelopable slopes as open space. These more natural elements of the suburban landscape combine with developed open space, low-lying country club, coastal hillsides, and Crown Valley Parkway to form the viewsheds and vistas within the Project area.

The Project site is located within a suburban setting on an east-facing hillside, bound by existing residential neighborhoods including Charter Terrace community to the north, Vista Del Niguel neighborhood and El Niguel Country Club to the east, La Vista condominiums to the south, and an open space slope ascending up to the Paragon at Niguel Summit community to the west.

Light, Glare, and Shading Characteristic of the Project Site and Surrounding Area.

The Project site is surrounded by residential uses and a traffic corridor that emit light from exterior sources (i.e., street lighting, building illumination, security lighting, and landscape lighting), which is common in the area.

4.1.3 Related Policies and Regulations

Federal Regulations

There are no federal regulations regarding aesthetics that are applicable to the proposed Project.

State Regulations

California Scenic Highway Program

The California Scenic Highway System includes a list of highways that either have already been designated as scenic highways or that are eligible for designation as scenic highways. According to the Department of Transportation's California State Scenic Highway System Map, no state-designated or eligible scenic highways exist within or near the Project site. **T**he nearest highways that are eligible for a state scenic highway designation are Pacific Coast Highway, approximately 1.5 miles southwest of the site, State Route 74 approximately 6.5 miles to the east, and Interstate 5 approximately 2.75 miles to the east.

Local Regulations

The City addresses aesthetic considerations for development in the City in various City documents. Specifically, the Laguna Niguel General Plan (LNGP) contains goals and policies relevant to the visual quality and character of the proposed Project and the Laguna Niguel Zoning Code (LNZC) contains detailed standards and requirements to implement these goals and policies.

Laguna Niguel General Plan

Land Use Element

Goal 3. Compatible relationships between land uses in the community.

- **Policy 3.1.** Ensure that effective buffers between residential and non-residential uses are established and maintained.
- **Policy 3.4.** Ensure that residential densities are compatible with the surrounding land uses and buildings are in scale with the neighborhood character.

Goal 4. Urban design that provides community gathering areas and other pedestrian spaces.

- **Policy 4.1.** Emphasizes attractive and functional urban design in new development.

- **Policy 4.2.** Enhance the landscape theme throughout public right-of-way and at major City entrance points.
- **Policy 4.4.** Provide, where feasible, pedestrian walkways and linkages between residential, commercial, office, open space/recreation facilities, and other public places.

Goal 5. Preservation and enhancement of the natural setting of the City.

- **Policy 5.2.** Ensure that adequate recreational and open space areas are provided.

Goal 6. Enhanced community identity for residents, visitors, and commuters.

- **Policy 6.1.** Provide for the development of pedestrian gathering areas to promote social interaction.

Open Space/Parks/Conservation Element

Goal 1. Well-maintained public and private open space.

- **Policy 1.1.** Preserve and protect the scenic and visual quality of areas designated for Open Space areas as a resource of public importance.
- **Policy 1.2.** When siting a proposed development project, locate the project in areas containing less sensitive landforms and preserve the most sensitive landforms and natural resources of the project site as open space.

Goal 2. A system of public and private parks and recreation facilities achieved in cooperation with private community associations.

- **Policy 2.1.** Provide park and recreational facilities that meet the needs of senior citizens, young adults, children, disabled individuals, and families.
- **Policy 2.2.** Plan for new high quality recreation facilities and programs.

Goal 5. Conservation of natural resource areas of community and regional significance.

- **Policy 5.1.** Conserve sensitive species and plant communities and wildlife habitats to maximum extent feasible through open space dedication and easements, creative site design, and other workable mitigation actions.

Goal 6. Carefully review sensitive hillside areas within the community.

- **Policy 6.1.** Provide for the preservation of sensitive hillside and canyon areas in accordance with the City's Hillside Protection Ordinance.
- **Policy 6.2.** Consider significant natural features, including sensitive hillsides and ridgelines as part of the development review process.

4.1.4 Thresholds of Significance

Criteria for determining the significance of impacts related to aesthetics are based on criteria contained in Appendix G of the State CEQA Guidelines and the City's CEQA Manual. The proposed Project could have a significant impact on the environment if it would result in any of the following.

Threshold AES-1 *Have a substantial adverse effect on a scenic vista?*

Threshold AES-2 *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?*

Threshold AES-3 *In an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

Threshold AES-4 *Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?*

Methodology

Characterizing aesthetics can be highly subjective; therefore, the evaluation of aesthetic resources in the built environment and natural landscape requires the application of a process that objectively identifies the visual features of the landscape and their importance, and the sensitivity of receptors that view them.

4.1.5 Project Design Features and Standard Conditions of Approval

PDF AES-1 The Project is to be subdivided into two lots, Lot 1 and Lot "A". Lot 1 includes the 2-acre residential area and Lot "A" includes the 2.2-acre area of open space, which consists of the previous remediated landslide area and includes the 30-foot earthen "buttress" (a design feature previously approved for geotechnical assurance of future landslide), planted erosion control, and installed storm drain system. Since Lot A is a lettered lot on the tentative tract map and no residential development is allowed on lettered lots, no residential development would occur on the remediated hillside.

PDF AES-2 The Project will include architectural design elements indicative of Spanish architecture such as simple asymmetrical forms, arched entries, predominantly stucco wall finishes, and shallow gabled 'S' tile roofs that work together to showcase the building elevations. Similarly, grouping of accent windows and vertical forms of openings will reinforce this characteristic. Additional design elements including material blending of slump stone, simulated wood corbels, shutters, shaped wood trims and posts, decorative metal railings and downspouts were specifically chosen to enhance the overall design character on every side of each building. A representative architectural rendering of the Project is presented in Figure 4.1.A – Architectural Rending, and a sample building elevation is presented in Figure 4.1.B – Building Elevation-Duplex and Figure 4.1.B – Building Elevation-Triplex.

PDF AES-3 Vegetation to be planted within Lot 1 will implement a landscape plan themed with drought tolerant grasses, shrubs and trees. The resulting pallet of vegetation will blend in with the existing vegetation planted in Lot "A," and help to soften

the hardscape design elements of the Project buildings. The landscape plan is presented in Figure 4.1.D Landscape Plan.

PDF AES-4 The Project Lighting Plan has been designed to provide adequate, safe nighttime lighting for residents and guests while minimizing spillover lighting onto adjacent properties. A conceptual lighting plan is presented in Figure 4.1.E Lighting Plan and the final lighting plan shall be approved by the Staff in conformance with City standards.

4.1.6 Environmental Impact Evaluation

The following potential impacts were determined to be less than significant. In each of the following issues, either no impact would occur or adherence to established regulations, standards, and policies would reduce potential impacts to a less than significant level. In either instance, no mitigation would be required.

Threshold AES-1 *Have a substantial adverse effect on scenic vista?*

Less than Significant Impact. A scenic vista possesses visually aesthetic qualities of high value to the community which are natural features or significant structures and buildings. According to the Laguna Niguel CEQA Manual, scenic vistas in the City are viewsheds which include scenic resources such as steep hillsides, ridgelines, and waterways.

The Project site consists of a relatively flat approximately 2 acres pad in the eastern portion of the site and an ascending acacia-covered hillside slope, which was repaired following the landslide in 1998 with the construction of structural elements and grading of the site. Specifically, repair work involved installation of a caisson wall (64 caissons) with 414 tieback anchors and walers, removal of the 41 Crowne Cove condominium buildings and associated structures, partial removal of the landslide mass, re-compacting and re-contouring the slope, installation of subdrains, and construction of a compacted fill buttress. During the remediation, manufactured slopes were created on the Property, at the City's direction, which altered and graded the Property's topography and terrain in the western portion of the site. Therefore, the elements of the Project site do not constitute a scenic vista, nor does the project site have any elements typical of a scenic vista, such as unique rock formations. Additionally, no scenic vistas occur within the vicinity of the Project site that could be blocked by development on the Project site. Scenic vistas are viewsheds that include scenic resources. The open space currently existing on the Project site does not constitute a scenic vista and views of the Project site from private residences are not protected.

In accordance with **PDF AES-1**, the proposed condominiums would be constructed in the eastern, generally level portion of the site within proposed Lot 1. This design allows Lot "A" on the tentative tract map to remain as open space. The open space Lot "A" would be seen from Crown Valley Parkway and other vicinty roadways and properties, providing views of open space.

Although views of this open space are not specifically protected, it would add to the open space in the Project vicinity and provide an aesthetic benefit to the community. No significant impact would occur, and no mitigation is required.

Threshold AES-2 *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

No Impact. The proposed Project is not adjacent to a State scenic highway. Furthermore, the Project site does not contain any scenic resources. The site was previously developed with 41 condominiums and, following the landslide in 1998, the landslide was repaired between 1998 and 2000 with the construction of structural elements and grading of the site, which altered and graded the Property's topography and terrain. No scenic resources such as significant trees, rock outcroppings, or historic buildings occur on the Project site.

The Project site is adjacent to Crown Valley Parkway, which is designated in the General Plan as a local Landscape Corridor. The proposed project includes a setback along Crown Valley Parkway to accommodate enhanced landscaping consistent with the Landscape Corridor designation. No significant impacts would occur and no mitigation is required.

Threshold AES-3 *In an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

Less than Significant Impact. The Project would be constructed in accordance with existing, applicable, development standards of the LNZC. In accordance with **PDF AES-1**, the proposed condominiums would be limited to the eastern, generally level portion of the site within Lot 1 and Lot "A" would remain open space. As noted previously in the response to Threshold B, the open space would be seen from Crown Valley Parkway and other vicinty roadways and properties. The open space would provide Project consistency with the open space policies enumerated in the General Plan, compatible with scenic enhancement and preservation, including Land Use Element Goals 5 and 6 and Open Space/Parks/Conservation Element Goals 1, 2, 5, and 6. A less than significant impact would occur and no mitigation is required.

From a distance, the proposed Project would generally be integrated into the landform. The appearance of the overall development from middle-range and distant viewpoints would not contrast with existing development in the area and would be compatible with the aesthetic setting of the surrounding uses. Viewers from adjacent properties would experience a change in the visual character of a portion of the Project site from open space to developed condition. Since the area surrounding the Project site is currently developed with residential uses, and the site has been historically developed with residential structures, the change in visual character of the Project site does not constitute degradation of the existing visual character or quality of the site or its surroundings. Further, private views are not protected. In the context of the existing setting, the

site is currently disturbed, has paved streets and infrastructure, contains a graded/remediated hillside slope, and has other attributes that can be characterized as a tarnished visual condition and not as scenic resources. Although the proposed Project would change the visual setting at the Project site as noted in **PDF AES-2** (see Figure 4.1.A - Architectural Rendering and Figure 4.1.B and Figure 4.1.C-Building Elevations) and **PDF AES-3** (see Figure 4.1.D - Landscape Concept Plan), it would not significantly degrade the visual character or quality of the site or its surroundings. Therefore, impacts related to the visual quality of the Project site and its surroundings would be less than significant and no mitigation is required.

Threshold AES-4 *Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?*

Less than Significant Impact. The Project is located in a suburban setting surrounded by a developed environment with fixed and mobile sources of exterior light and glare. Fixed sources of light and glare include exterior building-mounted and freestanding light fixtures, illuminated signage on existing land uses, and street lighting along Crown Valley Parkway and local streets near the Project. Additionally, mobile sources of light and glare originate from vehicles along Crown Valley Parkway. These existing light sources contribute to moderate levels of nighttime lighting.

The proposed Project would involve installation of nighttime lighting for roadway visibility and safety in accordance with **PDF AES-4** as presented previously in Figure 4.1.E, Lighting Concept Plan. The Plan depicts the lighting intensity of the proposed fixtures measured in footcandle in compliance with City photometric analysis requirements. However, as described above, the surrounding area is largely developed with existing nighttime lighting, and local roadways include mobile light sources. The Project would be required to comply with the LNZC Section 9-1-35.15 residential lighting standards requiring that light sources be designed and located to minimize spillover of light or glare onto neighboring properties. The proposed Project would not otherwise produce substantial new sources of fixed or mobile sources of lighting and therefore would not adversely affect daytime or nighttime views in the area. Furthermore, street lighting improvements would be required to comply with the design standards outlined in LNZC Section 9-1-279, Street Lighting, which requires street lighting along and at the intersections of all arterial highways and local streets in accordance with the illumination levels specified in the standard plans. Lastly, the presence of intervening vegetation, structures, and hillside topography would diminish or block direct sightlines to the Project site and reduce glare in some locations. With implementation of **PDF AES-4**, impacts related to the creation of new sources of substantial light or glare would be less than significant and no mitigation is required.

4.1.7 Cumulative Impacts

Less Than Significant Impact. As discussed previously, no significant scenic resources have been identified on the Project site or within the area surrounding the Project site. In addition, the cumulative projects identified in Section 1.4, Table 1-2, and Figure 1.C, would contribute to development that is consistent with planned uses in the Project area. The closest cumulative project is the City Center Mixed-Use Project, approximately a quarter mile northwest, which would not result in cumulative impacts because it is not visible from the Project site or the immediately surrounding area. Compliance with the LNGP goals and the LNZC standards would ensure that the proposed Project in combination with other projects in the area would be compatible with scenic enhancement and preservation and would not result in significant impacts upon scenic vistas, scenic resources, and visual character. Past, present, and future projects will be required to develop according to land use plans and regulations, which would help to ensure consistency with surrounding land uses resulting in a less than significant cumulative impact. Because the Project would not result in any significant aesthetic impacts and cumulative aesthetic impacts would be less than significant, the Project's incremental contribution would not be cumulatively considerable and no mitigation is required.

Additional lighting would be produced by the proposed Project and future development. The proposed Project and cumulative lighting-related impacts would not cause a significant cumulative environmental impact through compliance with applicable City lighting standards. Therefore, a less than significant cumulative lighting impact would result from implementation of the proposed Project and cumulative projects and no mitigation is required.

4.1.8 Summary of Mitigation Measures

No impacts related to aesthetics have been found to be potentially significant, therefore, no mitigation measures are required.

4.1.9 Significant Environmental Impacts

The analysis above indicates that the Project will not exceed significance criteria for aesthetic impacts. Therefore, all aesthetic impacts are **less than significant**, and no mitigation measures are required.

4.1.10 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

California State Scenic Highway System Map. Department of Transportation. 2018. https://www.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa. (Accessed June 20, 2021.)

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Source: CVP (11/2021).

Figure 4.1.A Architectural Rendering

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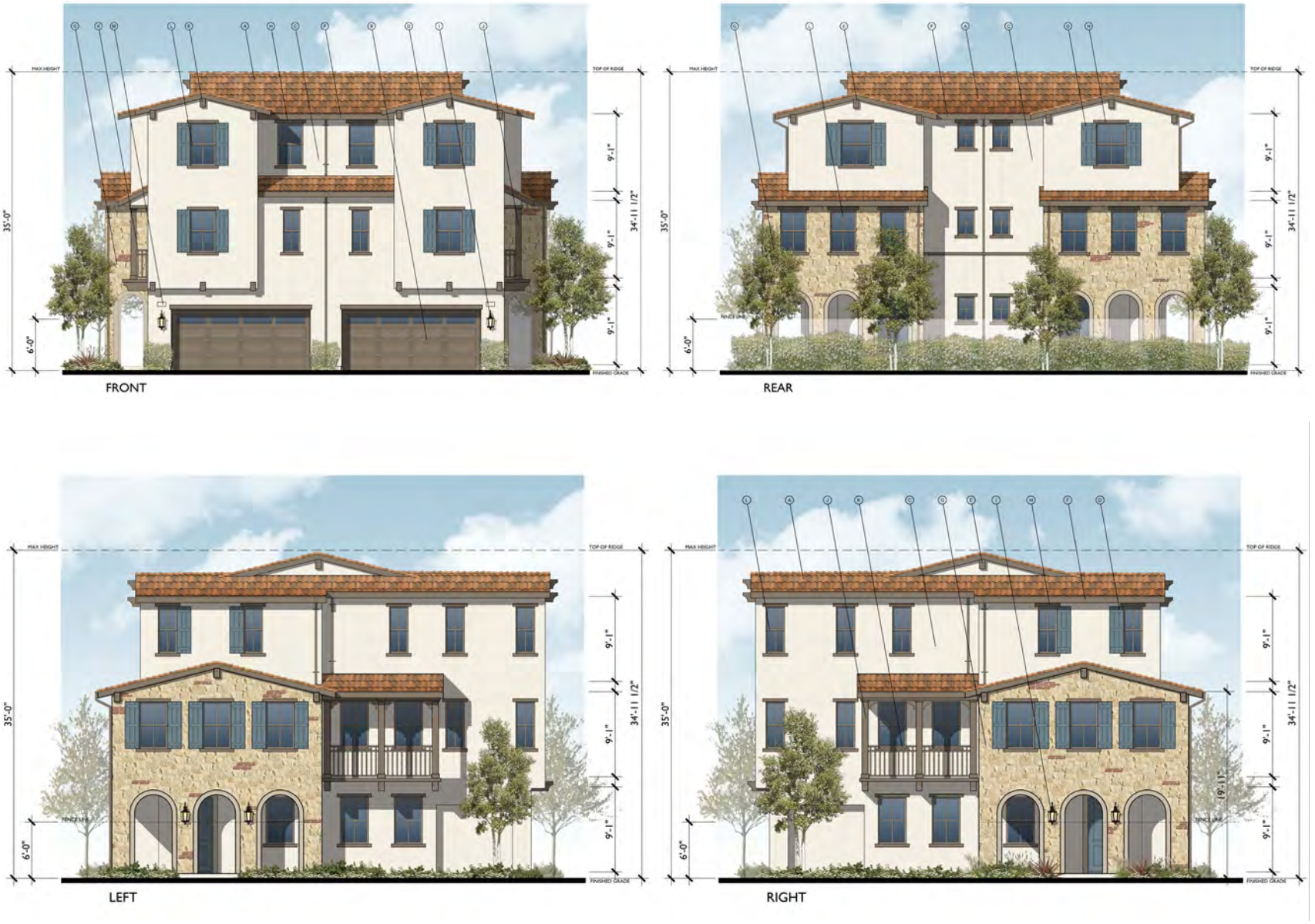

Source: Bassenian|Lagoni (8/26/2021).

Figure 4.1.B Building Elevations- Duplex

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Source: Bassenian|Lagoni (8/26/2021).

Figure 4.1.C Building Elevations-Triplex

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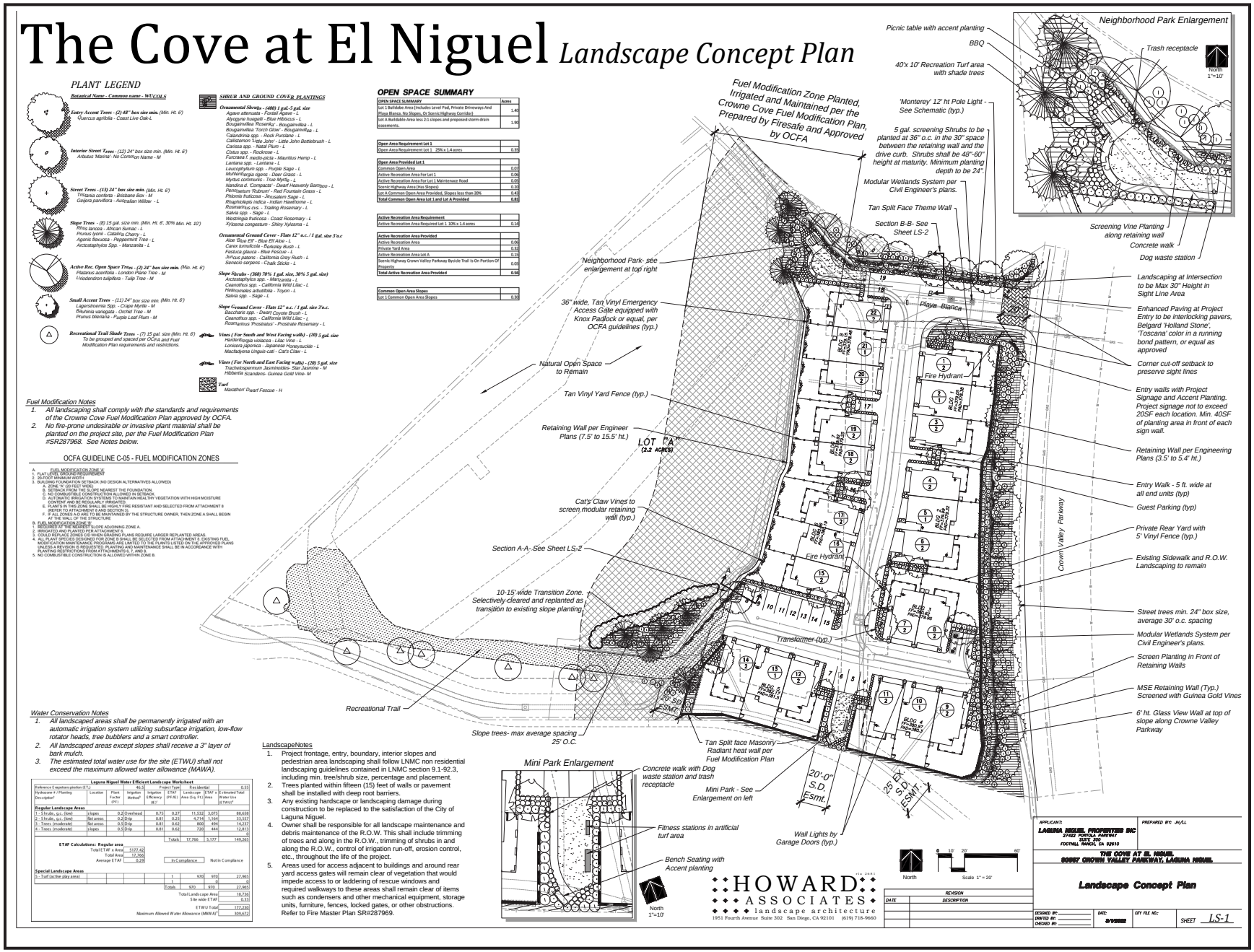

Source: Howard Associates Landscape Architect (3/01/2022).

Figure 4.1.D Landscape Plan

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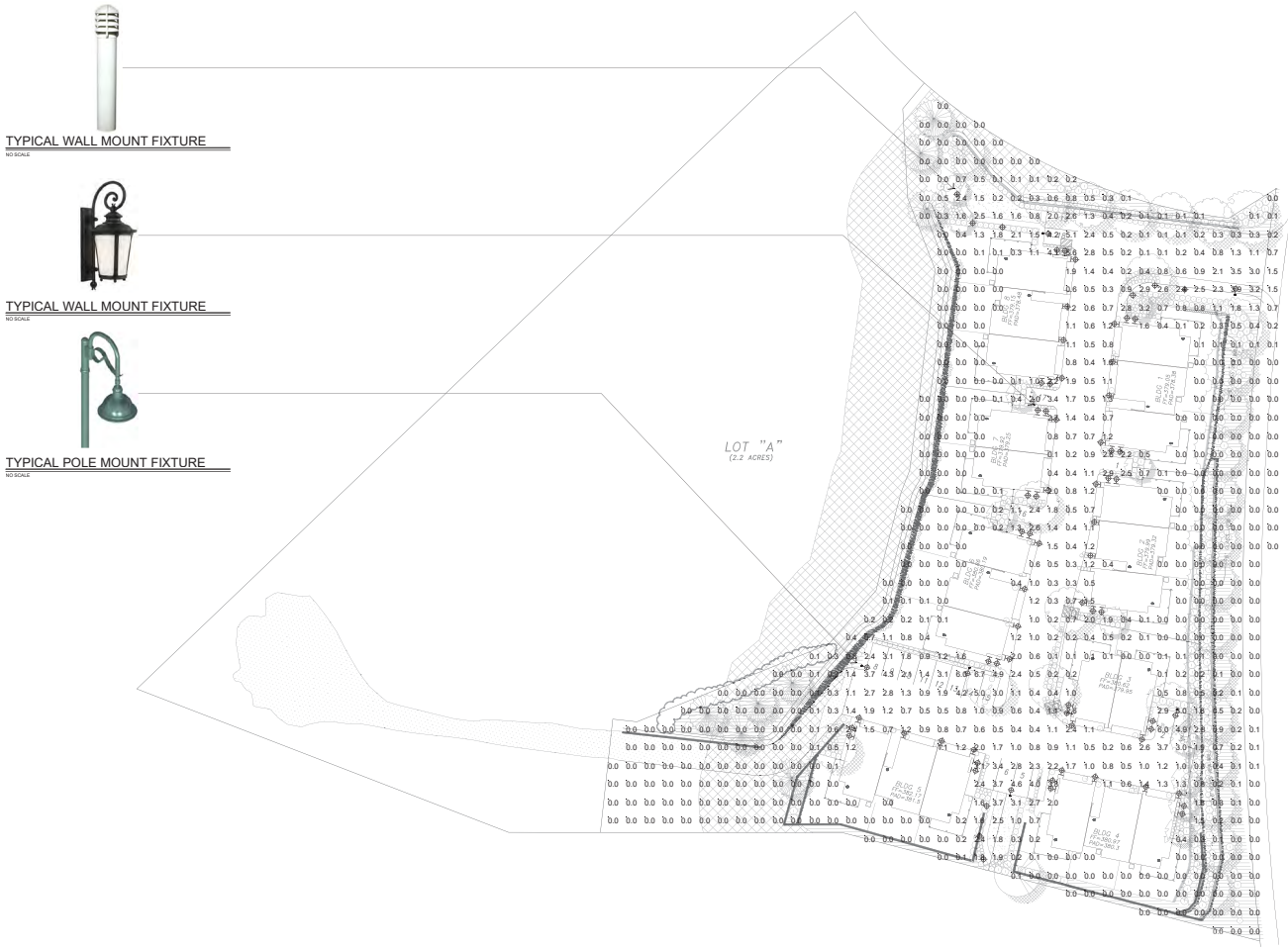
The Cove At El Niguel *Lighting Concept Plan*



1 of 1

Source: Howard Associates Landscape Architect (12/20/2020).

Figure 4.1.E Lighting Concept Plan

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4.2 Air Quality

This section discusses existing air quality, summarizes existing air quality regulations, and evaluates potential air quality impacts associated with the proposed Project. The analysis is based on Project air pollution emissions estimates calculated using the California Emissions Estimator Model (CalEEMod) provided in Appendix C of this Draft Environmental Impact Report (Draft EIR).

4.2.1 Setting

The Project site is within the South Coast Air Basin (Basin), an area covering approximately 6,745 square miles and bounded by the Pacific Ocean to the west and south and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The terrain and geographical location determine the distinctive climate of the Basin, which is a coastal plain with connecting broad valleys and low hills.

The climate in the City is defined by its terrain of coastal mountains and hillsides, and its geographical location in Southern California by the Pacific Ocean. This results in rarely interrupted climate that is mild and tempered by cool ocean breezes year-round with sparse precipitation. On occasion, like most areas in the coastal plain, periods of hot weather, winter storms, and Santa Ana winds do occur.

4.2.2 Existing Conditions

Local Air Quality

The South Coast Air Quality Management District (SCAQMD), which has divided the Basin into air monitoring areas, maintains a network of air quality monitoring stations throughout the Basin. The Project site is located in the Central Orange County Coastal area (Source Receptor Area [SRA] 20). The nearest monitoring station is the Mission Viejo station (ARB 30002), approximately 9 miles north of the proposed Project site. Criteria pollutants at this station include O_3, CO, coarse particulates (PM_{10}), and fine particulates ($PM_{2.5}$). Approximately 25 miles from the Project site are the Anaheim and Costa Mesa (Closed 2017) Monitoring Stations. The Anaheim station monitors the criteria pollutants NO_2 and the Costa Mesa station previously monitored NO_2 and SO_2.

The air quality trends from these three stations are used to represent the ambient air quality in the vicinity of the proposed Project site. Table 4.2-1 lists the ambient air quality data monitored at these stations within the past three years of available data from 2018, 2019, and 2020. It should be noted that there are no available SO_2 data points in Orange County for the past 3 years due to the

closure of the Costa Mesa monitoring station in 2017. Therefore, the maximum one-hour values shown for SO_2 reflect the last data available from 2015 to 2017.

Table 4.2-1. Project Area Air Quality Monitoring Summary 2018–2020

Pollutant	Standard	2018	2019	2020
Carbon Monoxide (CO) – Mission Viejo Monitoring Station (26081 Via Pera)				
Maximum 1-hr concentration (ppm)		1.2	1.0	1.0
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hr concentration (ppm)		0.9	0.8	0.8
Number of days exceeded:	State: ≥ 9.0 ppm	0	0	0
	Federal: ≥ 9.0 ppm	0	0	0
Ozone (O_3) – Mission Viejo Monitoring Station (26081 Via Pera)				
Maximum 1-hr concentration (ppm)		0.121	0.106	0.171
Number of days exceeded:	State: > 0.09 ppm	2	3	20
Maximum 8-hr concentration (ppm)		0.088	0.087	0.122
Number of days exceeded:	State: > 0.07 ppm	9	11	32
	Federal: > 0.07 ppm	9	11	32
Coarse (≤ 10 microns) Particulate Matter (PM_{10}) – Mission Viejo Monitoring Station (26081 Via Pera)				
Maximum 24-hr concentration (µg/m^3)		55.6	45.1	55.1
Number of days exceeding standard:	State: > 50 µg/m^3	1	0	2
	Federal: > 150 µg/m^3	0	0	0
Annual arithmetic mean (µg/m^3)		19.1	16.7	16.8
Exceeded for the year:	State: >20 µg/m^3	No	No	No
Fine (≤ 2.5 microns) Particulate ($PM_{2.5}$) – Mission Viejo Monitoring Station (26081 Via Pera)				
Maximum 24-hr concentration (µg/m^3)		38.9	20.8	44.8
Number of days exceeded:	Federal: > 35 µg/m^3	1	0	2
Annual arithmetic mean (µg/m^3)		8.31	7.1	9.3
Exceeded for the year:	State: > 12 µg/m^3	No	No	No
	Federal: > 15 µg/m^3	No	No	No
Nitrogen Dioxide (NO_2) – Anaheim Monitoring Station (1630 W. Pampas Lane)				
Maximum 1-hr concentration (ppm)		0.066	0.059	0.070
Number of days exceeded:	State: > 0.18 ppm	0	0	0
	Federal: > 0.10 ppm	0	0	0
Annual arithmetic mean concentration (ppm)		0.013	0.013	0.013
Exceeded for the year:	State: > 0.030 ppm	No	No	No
	Federal: > 0.053 ppm	No	No	No

Pollutant	Standard	2018	2019	2020
Sulfur Dioxide (SO_2) – Costa Mesa Monitoring Station Years 2015 to 2017 (2850 Mesa Verde Drive East)				
Maximum 24-hour concentration (ppm)		ND	ND	ND
Number of days exceeded:	State: > 0.04 ppm	ND	ND	ND
Maximum 1-hr concentration (ppm)		0.0045	0.0033	0.0019
Number of days exceeded:	State: > 0.25 ppm	0	0	0
	Federal: > 0.075 ppm	0	0	0

Sources: United States Environmental Protection Agency (EPA), www.epa.gov/airdata/; and California Air Resources Board (CARB), www.arb.ca.gov/adam/welcome.html.
$\mu g/m^3$ = micrograms per cubic meter
ND = no data available
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
ppm = parts per million

Air Pollution Constituents and Attainment Status

The United States Environmental Protection Agency (EPA) has identified and established ground-level concentration criteria for air pollutants known to have detrimental human health impacts. Under the federal Clean Air Act (FCAA), the EPA is charged with establishing National Ambient Air Quality Standards (NAAQS) for each criteria pollutant based on the concentration required to protect public health and welfare. In addition, the State of California has implemented the California Ambient Air Quality Standards (CAAQS). The six criteria pollutants are ozone (O_3) (precursor emissions include NO_x and reactive organic gases (ROG), CO, particulate matter (PM), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead.

The California Air Resources Board (CARB) coordinates and oversees both State and federal air pollution control programs in the State. The CARB oversees activities of local air quality management agencies and maintains air quality monitoring stations throughout the State in conjunction with the EPA and local air quality districts. The CARB has divided the State into 15 air basins based on meteorological and topographical factors of air pollution. Data collected at these stations are used by the CARB and EPA to classify air basins as attainment, nonattainment, nonattainment-transitional, or unclassified, based on air quality data for the most recent three calendar years compared with the ambient air quality standards (NAAQS and CAAQS).

The air quality data collected from monitoring stations are also used to monitor progress in attaining air quality standards. Table 4.2-2 lists the attainment status for the criteria pollutants in the Basin. The Orange County portion of the South Coast Air Basin (SCAB) is designated as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, PM_{10}, and $PM_{2.5}$.

Table 4.2-2. Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
1-hour Ozone (O_3)	Non-attainment	Not Applicable
8-hour Ozone (O_3)	Non-attainment	Extreme Non-attainment
PM_{10}	Non-attainment	Attainment/Maintenance
$PM_{2.5}$	Non-attainment	Non-attainment
Carbon Monoxide (CO)	Attainment	Attainment/Maintenance
Nitrogen Dioxide (NO_2)	Attainment	Attainment/Maintenance
Sulfur Dioxide (SO_2)	Attainment	Attainment
Lead (Pb)	Attainment	Attainment

Source: California Air Resources Board (CARB), www.arb.ca.gov/adam/welcome.html.

Sensitive Receptors and Locations

SCAQMD defines sensitive receptor locations as residential or other locations where sensitive populations may be located. Other sensitive receptor locations include schools, hospitals, convalescent homes, day care centers, and other locations where children, chronically ill individuals, or other sensitive persons could be exposed (SCAQMD 2005). The Project is in an area that is primarily residential, with open space to the west and northwest. Existing residences are located around the Project site to the north, east, south, and west.

4.2.3 Related Policies and Regulations

Federal Regulations

Clean Air Act and United States Environmental Protection Agency

At the federal level, the EPA has been charged with implementing and enforcing national air quality programs. EPA's air quality mandates are drawn primarily from the Federal Clean Air Act (FCAA), which was first enacted in 1955. The FCAA was amended in 1963, 1965, 1970, 1977, and 1990. The FCAA required EPA to establish primary and secondary NAAQS and required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). Federal standards include both primary and secondary standards. Primary standards set limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

Under the FCAA, state and local agencies in areas that exceed the NAAQS are required to develop SIPs to show how they will achieve the NAAQS by specific dates. The FCAA requires that projects receiving federal funds demonstrate conformity to the approved SIP and local air quality attainment Plan for the region. Conformity with the SIP requirements would satisfy the FCAA requirements.

State Regulations

California Clean Air Act

Assembly Bill (AB) 2595, the California Clean Air Act (CCAA), was signed into law in 1988 and requires all areas of the State to achieve and maintain the CAAQS. The CCAA mandates achievement of the maximum degree of emission reductions possible from vehicular and other mobile sources in order to attain the CAAQS by the earliest practical date. The CARB, which became part of the California Environmental Protection Agency (Cal/EPA) in 1991, is responsible for ensuring implementation of the CCAA and federal CAA and for regulating emissions from consumer products and motor vehicles within California. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. However, at this time, hydrogen sulfide and vinyl chloride are not measured at any monitoring stations in the Basin because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS. All air basins have been formally designated as attainment or non-attainment for each CAAQS.

Non-attainment areas are required to prepare Air Quality Management Plans (AQMP) that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g., motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emission vehicles by fleet operators; and
- Sufficient control strategies to achieve a 5 percent or more annual reduction in emissions or 15 percent or more in a period of 3 years for ROGs, NOX, CO, and PM_{10}. However, air basins may use an alternative emission reduction strategy that achieves a reduction of less than 5 percent per year under certain circumstances.

California Title 24 Energy Efficiency Standards and California Green Building Standards

California Code of Regulations (CCR) Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on January 1, 2011, and is administered by the California Building Standards Commission. CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2019 California Green Building Code Standards that became effective January 1, 2020. Local jurisdictions are permitted to adopt more stringent requirements,

as State law provides methods for local enhancements. CALGreen recognizes that many jurisdictions have developed existing construction and demolition ordinances and defers to them as the ruling guidance provided, they establish a minimum 65 percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. The State Building Code provides the minimum standard that buildings must meet in order to be certified for occupancy, which is generally enforced by the local building official.

Local Regulations

South Coast Air Quality Management District

The SCAQMD is the air pollution control agency for Orange County, as well as the urban portions of Los Angeles, Riverside, and San Bernardino Counties. The agency's primary responsibility is ensuring that the federal and state ambient air quality standards are attained and maintained in the Basin. The SCAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, and conducting public education campaigns, as well as many other activities. All projects within the Basin are subject to SCAQMD rules and regulations in effect at the time of construction.

As stated previously, the AQMP is the SIP for the Basin. The AQMP is a regional blueprint for implementing air quality standards within the Basin and some portions of the Salton Sea Air Basin that are under SCAQMD's jurisdiction. The AQMP asserts that the most effective way to reduce air pollution impacts is to reduce emissions from mobile sources. Additionally, the AQMP relies on partnerships between governmental agencies at the federal, state, regional, and local level. These agencies, which are comprised of USEPA, CARB, local governments, Southern California Association of Governments (SCAG) and the SCAQMD, are the primary agencies that implement the AQMP programs. The AQMP incorporates the latest scientific and technical information and planning assumptions, including SCAG's Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts, as well as includes integrated strategies and measures to meet the NAAQS.

During construction activities, the proposed Project would be subject to applicable rules established by the SCAQMD including, but not limited to:

- Rule 402 (Nuisance): This rule prohibits the discharge from any source whatsoever such quantities of air contaminant or other materials which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such person or the public, or which cause, or have a natural tendency to cause, injury, or damage to business or property.

- Rule 403 (Fugitive Dust): This rule requires fugitive dust sources to implement Best Available Control Measures (BACMs) for all sources and all forms of visible particulate matter are prohibited from crossing any property line. SCAQMD Rule 403 is intended to reduce PM10 emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM10 suppression techniques are summarized below.
    a. Portions of the construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized in a manner acceptable to the City.
    b. All on-site roads will be paved as soon as feasible or watered periodically or chemically stabilized.
    c. All material transported off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.
    d. The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.
    e. Where vehicles leave the construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the workday to remove soil tracked onto the paved surface.
- Rule 1113 (Architectural Coatings): This rule requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce Reactive Organic Gas (ROG)/Volatile Organic Compounds (VOC) emissions from the use of these coatings, primarily by placing limits on the ROG/VOC content of various coating categories.

Laguna Niguel General Plan

The Laguna Niguel General Plan (LNGP) was adopted in 1992 to set forth objectives, policies, standards, and programs for land use and new development, Circulation and Public access, and Service Systems for the Community as a whole. The following goals and policies are applicable to air quality:

Land Use Element

Goal 1. A well-balanced mixture of land uses that meet the residential, commercial, open space, and public service needs of residents.

- **Policy 1**. Encourage the development of land uses that contribute to the goal of a well-balanced community.

Goal 3. Compatible relationships between land uses in the community.

- **Policy 3.1.** Ensure that effective buffers between residential and nonresidential uses are established and maintained.
- **Policy 3.3.** Reduce land use conflicts between residential and nonresidential uses.
- **Policy 3.4.** Ensure that residential densities are compatible with the surrounding land uses and buildings are in scale with the neighborhood character.

Goal 4. Urban design that provides community gathering areas and other pedestrian spaces.

- **Policy 4.3.** Require, where feasible, the development of open spaces and places for people to gather within commercial and office complexes.
- **Policy 4.4.** Provide, where feasible, pedestrian walkways and linkages between residential, commercial, office, open space/recreation facilities, and other public places.

Goal 5. Preservation and enhancement of the natural setting of the City.

- **Policy 5.3.** Strive to maintain or improve the City's existing environmental quality.

Goal 6. Enhanced community identity for residents, visitors, and commuters.

- **Policy 6.1.** Provide for the development of pedestrian gathering areas to promote social interaction.

Open Space/Parks/Conservation Element

Goal 3. A trail system that meets the bicycling, hiking, and equestrian needs of residents.

- **Policy 3.1.** Implement the Bikeway, and Hiking and Equestrian Plans.
- **Policy 3.3.** Expand existing regional trail facilities where attractive opportunities exist or can be created.

Circulation Element

Goal 3. A circulation system that maximizes efficiency through the use of transportation system management and demand management strategies.

- **Policy 3.3.** Implement intersection capacity improvements where feasible and justified by traffic demand.

Goal 4. An efficient public transportation system that provides mobility to all City residents, employees, and visitors.

- **Policy 4.1.** Support the efforts of the Orange County Transit Authority (OCTA) to provide additional local and express bus service to Laguna Niguel.
- **Policy 4.5.** Encourage developers to work with agencies providing transit service with the objective of maximizing the potential for transit use by residents and/or visitors.
- **Policy 4.6.** Encourage the provision of safe, attractive, and clearly identifiable transit stops and related high-quality pedestrian facilities throughout the community.

Goal 5. An efficient bicycle, equestrian and pedestrian circulation system that encourages these alternative forms of transportation.

- **Policy 5.1.** Require proposed developments, whenever feasible, to dedicate easements for Class I bikeways and to provide additional right-of-way for Class II bike lanes in the project vicinity on all major or primary roadways or other roadways where deemed appropriate.
- **Policy 5.5.** Encourage the provision of showers, changing rooms, and an accessible and secure area for bicycle storage at all new and existing developments and public places.
- **Policy 5.6.** Require developers, whenever feasible, to provide facilities for pedestrian travel such as sidewalks, and to design developments to provide pedestrian access to the

development on sidewalks and not require that pedestrians use driveways to access development.

4.2.4 Thresholds of Significance

Criteria for determining the significance of impacts related to air quality are based on criteria contained in Appendix G of the State CEQA Guidelines and the City's CEQA Manual. The City's CEQA Manual screens out small residential projects of less than 50 dwelling units that involve no demolition, no overlapping grading and construction phases, construction duration of less than one year, and no sensitive receptors within 100 meters of the site. The Project site is located within 100 meters of existing homes to the north, and therefore the City determined an analysis of construction and operational air pollution emissions would be performed for the Project as contained in this Section. Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) indicates that, where available, the significance criteria established by the applicable air quality management district or pollution control district may be relied upon to determine whether the proposed project would have a significant impact on air quality. The proposed Project could have a significant impact on the environment if it would result in any of the following.

Threshold AQ-1 *Conflict with or obstruct implementation of the applicable air quality plan?*

Threshold AQ-2 *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?*

Threshold AQ-3 *Expose sensitive receptors to substantial pollutant concentrations?*

Threshold AQ-4 *Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

Methodology

Air quality impacts were assessed in accordance with methodologies recommended by CARB and the SCAQMD. The latest version of CalEEMod (v2020.4.0), which was released by the SCAQMD in conjunction with CAPCOA and other California air quality districts in May 2021, was used to determine construction and operational air quality emissions of the proposed Project. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Project construction-generated air pollutant emissions were calculated using CalEEMod model defaults for Orange County. Construction of the proposed Project is anticipated to start in the first quarter of 2023 and would be completed and operational by 2024. Operational air pollutant emissions were based on the Project site plans and the estimated traffic trip generation rates from

the *Revised Traffic Assessment: The Cove at El Niguel Project, Laguna Niguel, Orange County, California* (Traffic Impact Analysis) (Linscott Law & Greenspan 2021) (Appendix L).

The SCAQMD has established daily emissions thresholds for construction and operation for the evaluation of proposed projects in the Basin. The emissions thresholds were established based on the attainment status of the Basin with regard to air quality standards for specific criteria pollutants. Because the concentration standards were set by the EPA at a level that protects public health with an adequate margin of safety, these emissions thresholds are regarded as conservative and would overstate an individual project's contribution to health risks. The following SCAQMD emissions thresholds presented in Table 4.2-3 were utilized to evaluate the proposed Project's air quality impacts.

Table 4.2-3. Maximum Daily Regional Emissions Thresholds

Air Pollutant	Construction Phase (lbs/day)	Operational Phase (lbs/day)
VOCs	75	55
CO	550	550
NO_x	100	55
SO_x	150	150
PM_{10}	150	150
$PM_{2.5}$	55	55

The SCAQMD *CEQA Air Quality Handbook* is utilized to identify potentially significant impacts on air quality. For the purposes of this analysis, an impact is considered significant if a project:

1. Generates total emissions (direct and indirect) in excess of the thresholds given in Table 4.2-3above.
2. Generates a violation of any ambient air quality standard when added to the local background.
3. Does not conform with the applicable attainment or maintenance plan(s).
4. Exposes sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in a million, and/or a health index (non-cancerous) greater than or equal to one.

Projects in the Basin with temporary construction emissions or operational emissions that exceed any of these emission thresholds are considered to be significant under SCAQMD guidelines. These thresholds, which apply throughout the Basin and were developed by the SCAQMD, apply as both project and cumulative thresholds. If a project exceeds these standards, it is considered to have a project-specific and cumulative impact.

4.2.5 Project Design Features and Standard Conditions of Approval

SCA AQ-1 The Project would adhere to applicable SCAQMD rules during construction including: Rule 402 prohibiting the discharge of air contaminants or other materials which cause a nuisance; Rule 403 requiring best available control measures be applied to earth moving and grading activities to reduce the amount of particulate matter emitted into the air as a result of human-made fugitive dust sources; and Rule 1113 requiring compliance with current standards to limit the content of VOC in architectural coatings.

SCA AQ-2 The Project would adhere to existing, applicable, CALGreen building code standards as they relate to reducing Project operational energy use, indirectly reducing impacts to air quality.

4.2.6 Environmental Impact Evaluation

The following potential impacts were determined to be less than significant. In each of the following issues, either no impact would occur or adherence to established regulations, standards, and policies would reduce potential impacts to a less than significant level. In either instance, no mitigation would be required.

Threshold AQ-1 *Conflict with or obstruct implementation of the applicable air quality plan?*

Less than Significant Impact. SCAQMD is required, pursuant to the FCAA and CCAA, to reduce emissions of criteria pollutants for which the Basin is in nonattainment. The 2016 AQMP outlines comprehensive control strategies to meet $PM_{2.5}$ and O_3 standards and maintain lead, CO, NO_2, and PM_{10} standards. These strategies are based, in part, on regional population, housing, and employment projections prepared by the region's cities and counties and incorporated by the Southern California Association of Governments (SCAG). As such, projects that propose development that is consistent with the growth anticipated in the relevant land use plans that were used in the formulation of the AQMP are therefore considered to be consistent with the AQMP. The governing land use document relevant to the project area is the LNGP. Therefore, projects that propose development consistent with the growth anticipated in the current LNGP (and that implement all applicable AQMP control measures) are considered consistent with the AQMP.

Pursuant to the methodology provided in Chapter 12 of the SCAQMD *CEQA Air Quality Handbook* (1993), consistency with the 2016 AQMP is affirmed when a project (1) does not increase the frequency or severity of an air quality standards violation or cause a new violation, and (2) is consistent with the growth assumptions in the AQMP. Consistency review is based on the following criteria:

1. The proposed Project would result in short-term construction and long-term operational pollutant emissions that are all less than the CEQA significance emissions thresholds established by the SCAQMD, as demonstrated below under 4.2.5 Threshold B. Consequently, the proposed project could not result in an increase in the frequency or severity of any air quality standards violation and will not cause a new air quality standard violation. Therefore, proposed project would be consistent with the AQMP under the first criterion.

2. The *CEQA Air Quality Handbook* (1993) indicates that consistency with AQMP growth assumptions must be analyzed for new or amended General Plan elements, Specific Plans, and significant projects. Significant projects include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and offshore drilling facilities. Based on this definition, the proposed project is not a significant project. In addition, the proposed project does not require a General Plan or Specific Plan amendment. Therefore, proposed project would be consistent with the AQMP under the second criterion.

The proposed Project's land use designation and zoning classifications are consistent with the LNGP. As such, the proposed Project is not anticipated to exceed the AQMP assumptions for the Project site and is found to be consistent with the AQMP for the Basin. Based on the consistency analysis presented above, the proposed Project would be consistent with the current SCAQMP and would not result in a new or worsening impact related to implementation of the AQMP. Therefore, impacts related to the conflict with or obstruction of implementation of the applicable air quality plan would be less than significant, and no mitigation is required.

Threshold AQ-2 *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.

Construction

Short-term construction activities produce combustion emissions from various sources (e.g., clear and grub, demolition, site preparation, grading, trenching, utility engines, tenant improvements, and motor vehicles transporting the construction crew). Exhaust emissions from construction activities envisioned on the site would vary daily as construction activity levels change. The use of construction equipment on site would result in localized exhaust emissions. Air pollutant emission sources during Project construction would include the following:

- Exhaust and particulate emissions generated from construction equipment;

- Fugitive dust from soil disturbance during site preparation, grading, and excavation activities; and
- Volatile compounds that evaporate during site paving and painting of the structures.

Based on the information provided by the Project Applicant, the proposed project would consist of varying construction phases. The construction phases would include scheduled site preparation, grading and wall construction, building construction, paving, landscaping, and architectural coating (painting) activities. The anticipated site preparation and grading would take place over approximately 50 workdays (10 weeks) and vertical construction of the proposed condominium style homes would occur over an additional approximately 220 workdays (10 months). [1]

This construction analysis includes construction equipment default assumptions generated by CalEEMod with minor adjustments for the grading phase to extend the duration due to the large quantity (approximately 7.5 feet) of over excavation, soil remediation/recompacting required, and construction of the MSE and CMU walls. This analysis also includes the estimated 5-day work week, construction equipment hours of use, the quantities of soil and debris disturbed, and on-road vehicle trips (e.g., worker and vendor trips) reflecting anticipated construction efforts at the Project site. The proposed Project requires excavation and fill for typical foundation method and reinforcement of the proposed condominiums. Under the worst-case scenario, the proposed Project would require 19,960 cubic yards (cy) of soil to be cut and excavated, and replacement of 19,830 cy of fill material after completion of the subterranean foundation. This would result in a net overage of 130 cy of soil, which is anticipated to compensate for shrinkage of fill material. No export of soil is planned. The grading activities also refer to areas surrounding the project site that include cutting curbs and gutters, sidewalks, and landscaping during construction.

As specified previously in Section 4.2.4, in Standard Conditions SCA AQ-1 and SCA AQ-2, construction of the proposed Project would comply with SCAQMD standard conditions, including Rule 402 (Nuisance) to control nuisance emissions, Rule 403 (Fugitive Dust) to control fugitive dust, and Rule 1113 (Architectural Coatings) to control VOC emissions from paint. Compliance with SCAQMD standard conditions are regulatory requirements, not mitigation, and were considered in the analysis of construction emissions.

As noted previously, CalEEMod calculations and defaults are assumed for construction activities, select off-road equipment, on-road construction fleet mix, and trip lengths. Table 4.2-4 shows the approximate number of days of each respective construction phase, based on a probable start date in January 2023 and completion of construction twelve months later in January 2024. Table 4.2-5 shows the type of on-site construction equipment used during each phase, quantity, and hours of

[1] An aggressive construction schedule was used to provide a conservative air quality analysis, since a longer construction schedule tends to reduce daily emissions.

use per workday. The number of off-site (i.e., on-road) trips during each phase of construction and associated air pollution emissions are also calculated by CalEEMod. The off-site trips and emissions are an inherent calculation embedded into CalEEMod based on trip and emissions data derived from the Sacramento Metropolitan Air Quality District (SMAQMD) construction trip surveys and include the range of off-site trips such as vendors, cement trucks, water trucks, etc.

Table 4.2-4. Tentative Project Construction Schedule

Construction Phases	Approximate Number of Workdays (days)
Site Preparation	10
Grading	40
Building Construction	200
Paving	10
Architectural Coating	10

Source: Construction activity based upon information provided by the Project applicant**.**

Table 4.2-5. Construction Equipment Utilized by Construction Phase

Activity	Equipment	Number	Hours per day
Site Preparation	Rubber-Tired Dozers	1	7
	Tractors/Loaders/Backhoes	1	8
	Skid Steer Loaders	1	8
Grading	Graders	1	8
	Rubber-Tired Dozers	1	8
	Tractors/Loaders/Backhoes	2	8
	Roller	1	4
Building Construction	Tractors/Loaders/Backhoes	1	6
	Welders	1	8
	Crane	1	8
	Forklifts	2	7
	Generator Sets	1	8
Architectural Coatings	Air Compressors	1	6
Paving	Pavers	1	8
	Cement Mortar Mixers	1	8
	Paving Equipment	1	8
	Rollers	1	8
	Tractors/Loaders/Backhoes	1	8

Based on the CalEEMod default assumptions as modified to reflect a longer grading phase due to a longer duration of earthwork required, construction equipment/vehicle emissions during construction periods are summarized in Table 4.2-6. As shown in the table, the Project would not exceed SCAQMD established daily emissions thresholds. Therefore, with adherence to SCAQMD's existing rules and regulations regarding construction nuisance (Rule 402), dust (Rule 403), and VOCs (Rule 1113), the proposed Project would not exceed the SCAQMD construction emissions thresholds, and short-term (construction) air quality impacts would be less than significant. No mitigation is required.

Table 4.2-6. Regional Construction Emissions

Construction Phase	Pollutant Emissions (lbs/day)					
	VOC(ROG)	**NOx**	**CO**	**SOx (SO_2)**	**PM10**	**PM2.5**
Site Preparation	0.84	8.74	6.58	<0.1	2.85	1.67
Grading	1.30	9.28	8.22	<0.1	2.19	1.34
Building Construction	1.25	10.94	11.32	<0.1	0.69	0.52
Architectural Coating	54.69	1.21	1.87	<0.1	0.1	<0.1
Paving	0.77	7.01	10.15	<0.1	0.49	0.35
SCAQMD Thresholds	75	100	550	150	150	55
Exceeds?	**No**	**No**	**No**	**No**	**No**	**No**

[1] Value shown reflects construction phase that generates the maximum daily emission by pollutant.

Operation

Long-term air pollutant emission impacts are those associated with changes to the Project site related to stationary sources and mobile sources. The proposed Project would result in a net increase in both stationary and mobile-source emissions. The stationary-source emissions would come from area and energy sources.

Operational emissions associated with the proposed Project (including energy use for appliances, landscaping equipment, use of consumer products, solid waste generation, and motor vehicles) were calculated using CalEEMod defaults. In calculating mobile-source emissions, the vehicle fleet mix and trip length values were based on the defaults provided in CalEEMod. The Traffic Assessment (LLG, June 2021, provided in Appendix L) determined that the proposed Project would generate 161 average daily trips. Table 4.2-7 presents the estimated source operational emissions of the proposed Project.

Table 4.2-7. Regional Operational Emissions

Source	Pollutant Emissions (lbs/day)					
	VOC(ROG)	NOx	CO	SOx (SO_2)	PM10	PM2.5
Project Area Sources	1.93	<0.1	1.81	<0.1	<0.1	<0.1
Project Energy Sources	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Project Mobile Sources	0.49	0.56	5.07	<0.1	1.29	0.35
Total Project Emissions	**2.44**	**0.68**	**6.92**	**<0.1**	**1.31**	**0.37**
SCAQMD Thresholds	55.0	55.0	550.0	150.0	150.0	55.0
Exceeds?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by Enplanners 2021.

Table 4.2-7 shows the net increased emission results of the proposed Project would not exceed the corresponding SCAQMD daily emission thresholds for any criteria pollutants. The proposed Project would have a less than significant impact on air quality during Project construction and operations, and no mitigation is required.

Threshold AQ-3 *Expose sensitive receptors to substantial pollutant concentrations?*

Less than Significant Impact.

Construction

The SCAQMD recommends addressing impacts to sensitive receptors using localized significance thresholds (LSTs) they developed for construction and operational impact screening. Screening-level analysis of LSTs is recommended for construction activities at project sites that are approximately 5 acres or less. The Project site has a construction surface area of 2.0 acres located within Lot 1, which includes the area needed to construct and backfill the MSE wall at the toe of slope on the west side of Lot 1. Therefore, screening-level analysis of LSTs for 2 acres was used for construction and operational activities in determining the applicability of SCAQMD's LST look-up tables.

Table 4.2-8 shows that the construction emission rates would not exceed the LSTs for any of the sensitive receptors near the Project site. Therefore, impacts from localized construction-related emissions would be less than significant, and no mitigation is required.

Table 4.2-8. Construction Localized Impact Analysis

Emissions Source	Pollutant Emissions (lbs/day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
On-Site Emissions	13.17	11.33	5.75	3.27
SRA 21 LST Thresholds -2 Acres	131	993	6	4
Significant Emissions?	No	No	No	No

Source: Compiled by Enplanners 2021.

Note: Source Receptor Area 21– Capistrano Valley, 2-acres, receptors at 25-meter distance.

CO = carbon monoxide
lbs/day = pounds per day
LST = localized significance thresholds
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size

Operation

Table 4.2-9 shows the calculated emissions for the proposed Project compared with the appropriate LSTs.

Table 4.2-9. Long-Term Operational Localized Impact Analysis

Emissions Source	Pollutant Emissions (lbs/day)			
	NO_x	**CO**	**PM_{10}**	**$PM_{2.5}$**
Total On-Site Emissions	0.64	6.99	1.31	0.36
SRA 21 LST Thresholds -2 Acres	131	993	2	1
Significant Emissions?	No	No	No	No

Source: Compiled by Enplanners 2021.

Note: Source Receptor Area 21– Capistrano Valley, 2-acres, receptors at 25-meter distance.

CO = carbon monoxide
lbs/day = pounds per day
LST = localized significance thresholds
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size

Table 4.2-9 shows that the operational emission rates would not exceed the LSTs for the nearest sensitive receptors at 25 meters. Therefore, impacts from localized operation-related emissions would be less than significant, and no mitigation is required.

Threshold AQ-4 *Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

Less than Significant Impact. The proposed residential Project is not anticipated to result in objectionable odors. Substantial odor-generating sources include land uses such as agricultural activities, feedlots, wastewater treatment facilities, landfills, or heavy manufacturing uses. The Project does not propose any such uses or activities that would result in potentially significant odor impacts. Therefore, impacts from other emissions such as odors would be less than significant, and no mitigation is required.

4.2.7 Cumulative Impacts

Less than Significant Impact. The cumulative impact area for air quality related to the proposed Project is the South Coast Air Basin. Air pollution is inherently a cumulative impact measured across an air basin. The analysis provided above includes an analysis of the proposed Project's contribution to cumulative air impacts. The incremental effect of projects that individually do not

exceed the project-specific thresholds are generally not considered to be cumulatively considerable per SCAQMD guidelines. The proposed project's construction- and operation-related regional daily emissions are less than the SCAQMD significance thresholds for all criteria pollutants. In addition, adherence to SCAQMD rules and regulations on a project-by-project basis, including the proposed Project, would substantially reduce potential impacts associated with the related cumulative projects and basin-wide air pollutant emissions. Therefore, the proposed Project would not have a cumulatively considerable increase in emissions, and the proposed Project's cumulative air quality impacts would be less than significant. No mitigation is required.

4.2.8 Summary of Mitigation Measures

No air quality impacts have been found to be potentially significant, no mitigation measures are required.

The analysis above indicates that the Project will not exceed significance criteria for air quality impacts. Therefore, all air quality impacts are less than significant, and no mitigation measures are required.

4.2.9 Significant Environmental Impacts

The analysis above indicates the Project will not exceed significance criteria for air quality impacts on a project-specific and cumulative basis. Therefore, air quality impacts are **less than significant**, and no mitigation measures are required.

4.2.10 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

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4.3 Biological Resources

The analysis contained in this section is based on the *Biological Resources Assessment* prepared by Carlson Strategic Land Solutions (CSLS) dated May 12, 2021. Details on these assessments are provided in the subsections below and in Appendix D.

4.3.1 Setting

The Project site is located off Crown Valley Parkway and Playa Blanca in the City of Laguna Niguel. The Project site is located generally north of Coast Highway and west of Interstate 5 (I-5) and south of the State Route 73 (SR-73), between Club House Drive and Alicia Parkway (Figures 1.A through 1.C).

4.3.2 Existing Conditions

The Project site is heavily vegetated with ornamental species such as acacia (*Acacia sp.*) and scattered laurel sumac (*Malosma laurina*). The Project site contains paved streets and associated infrastructure, as well as concrete terrace drains. The Project site is currently vacant.

Vegetation Communities

Field surveys were conducted in 2019 and 2021 and based on those surveys the Project site is heavily vegetated with acacia (*Acacia sp.*) and scattered laurel sumac (*Malosma laurina*). The acacia is non-native ornamental species often planted for erosion control. The laurel sumac, while a California native species, is not considered sensitive or protected.

Species Observed

Wildlife species observed during the field surveys include: California quail (*Callipepla californica*), turkey vulture (*Cathartes aura*), red tailed Hawk (*Buteo jamaicensis*), American crow (*Corvus brachyrhynchos*), black phoebe (*Sayornis nigricans*), mourning dove (*Zenaida macroura*), northern mockingbird (*Mimus polyglottos*), and song sparrow (*Melospiza melodia*). The wildlife observed is not considered federal or state sensitive or protected.

4.3.3 Related Policies and Regulations

Federal Regulations

Federal Endangered Species Act of 1973

The Federal Endangered Species Act of 1973 (16 U.S.C. §§ 1531, et seq.) and subsequent amendments (FESA), provide for the conservation of endangered and threatened species and the habitats on which they depend. A federally endangered species is one facing extinction throughout all or a significant portion of its geographical range. A federally threatened species is one likely to become endangered within the foreseeable future throughout all or a significant portion of its range. The presence of any federally threatened or endangered species on a site generally imposes

severe constraints on development; particularly if development would result in a "take" of the species or its habitat. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct. Harm in this sense can include any disturbance to habitats used by the species during any portion of its life history.

Federal Clean Water Act (33 USC §§ 1251 through 1376)

The Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters.

Section 401 of the CWA requires that a project proponent obtain a federal permit for activities resulting in a discharge to Waters of the United States (WoUS). The project proponent must obtain a state certification that the discharge complies with other provisions of CWA. The Regional Water Quality Control Board (RWQCB) administers the certification program in California.

Section 402 of the CWA establishes a permitting system for the discharge of any pollutant (except dredge or fill material) into WoUS.

Section 404 of the CWA establishes a permit program administered by US Army Corps of Engineers (USACE) to regulate the discharge of dredged or fill material into WoUS, including wetlands. Implementing regulations by USACE are found at 33 CFR Parts 320–330. Guidelines for implementation are referred to as the Section 404(b)(1) Guidelines and were developed by the Environmental Protection Agency in conjunction with USACE. (40 CFR Part 230). The guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

Wetlands and Other Waters of the United States

Aquatic resources, including riparian areas, wetlands, and certain aquatic vegetation communities, are considered sensitive biological resources and can fall under the jurisdiction of several regulatory agencies.

The USACE exerts jurisdiction over WoUS, including all waters that are subject to the ebb and flow of tide; wetlands and other waters such as lakes, rivers, streams (including intermittent or ephemeral streams), mudflats, sandflats, sloughs, prairie potholes, vernal pools, wet meadows, playa lakes, or natural ponds; and tributaries of the above features. The extent of WoUS is generally defined as that portion that falls within the limits of the ordinary high-water mark. Typically, the ordinary high-water mark corresponds to the 2-year flood event.

Wetlands, including swamps, bogs, seasonal wetlands, seeps, marshes, and similar areas, are defined by USACE as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR Part

328.3(b); 40 CFR Part 230.3(t)). Indicators of three wetland parameters (hydric soils, hydrophytic vegetation, and wetlands hydrology) as determined by field investigation must be present for a site to be classified as a wetland by USACE.

Migratory Bird Treaty Act

According to the Migratory Bird Treaty Act (MBTA) administered by the United States Fish and Wildlife Service (USFWS), the removal of active nests, eggs, or nestlings is unlawful. A violation of the MBTA may occur on, but is not limited to, projects that involve clearing or grubbing of migratory bird nest habitat during the nesting season, and demolition or reconstruction where bird nests are present. The nesting season time period is especially important due to the heightened presence of eggs or young that are essential to the survival of the species.

State Regulations

California Endangered Species Act

California Endangered Species Act (CESA) (Fish and Game Code §§2050, et seq.) establishes that it is the policy of the State to conserve, protect, restore, and enhance threatened or endangered species and their habitats. CESA mandates that State agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. CESA requires State lead agencies to consult with the California Department of Fish and Wildlife (CDFW) during the CEQA process to avoid jeopardy to threatened or endangered species. CESA prohibits any person from taking or attempting to take a species listed as endangered or threatened. (Fish and Game Code, § 2080). Section 2080 of the Fish and Game Code provides the permitting structure for CESA. The "take" of a State-listed endangered or threatened species or candidate species will require incidental take permits as authorized by the CDFW.

California Fish and Game Code

Various sections of the California Fish and Game Code provide protection to nesting birds, birds of prey, and species protected under the MBTA. Section 3503 of the Fish and Game Code prohibits the destruction of the nest or eggs of any bird as otherwise provided for in the Fish and Game Code. Fish and Game Code Section 3503.5 specifically extends this protection to the nests or eggs of any bird of prey (species of the Orders *Falconiformes* [falcons, hawks, eagles, ospreys] *or Strigiformes* [owls]). The unlawful take, sale, or purchase (whole or in part) of any aigrette or egret, osprey, bird of paradise, goura, or numidi is prohibited under Fish and Game Code Section 3505. Fish and Game Code Section 3513 prohibits the unlawful to take or possession of any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Local Regulations

Orange County Natural Community Conservation Plan, Central and Coastal Subregion

The Natural Community Conservation Act, codified at Fish and Game Code Sections 2800–2840, authorizes the preparation of National Community Conservation Plans (NCCP) to protect natural communities and species while allowing a reasonable amount of economic development. The NCCP/HCP, which was reviewed and approved by CDFW (at that time, California Department of Fish and Game) and USFWS in 1996, addresses the protection and management of coastal sage scrub habitat and coastal sage scrub-obligate species, as well as other covered habitats and species, and mitigates anticipated impacts on those habitats and species on a programmatic, subregional level rather than on a project-by-project, single-species basis. A habitat reserve in excess of 37,000 acres was established for the protection of coastal sage scrub, other upland habitats, and primarily coastal sage scrub-dependent species identified in the NCCP/HCP. Specifically, through take authorization granted with the adoption of the NCCP/HCP, USFWS and CDFW authorized take of 39 identified species of plants and wildlife (including covered and conditionally covered species; i.e., coastal California gnatcatcher). Furthermore, the NCCP/HCP contains requirements for adaptive management, interim management, and funding management for the reserve as well as procedures and minimization measures related to the take of identified species and habitat. Thus, the NCCP/HCP provides for the protection and management of a broad range of plant and wildlife populations while providing certainty to the public and affected landowners regarding the location of future development and open space in the sub-region. The City is not a participating entity of the NCCP/HCP.

Laguna Niguel General Plan

The Laguna Niguel General Plan (LNGP) contains goals, policies, and plans that are intended to guide land use and development decisions. The Open Space/Parks/Conservation Element was designed to ensure the conservation of important biological resources. Relevant policies are listed below.

Open Space/Parks/Conservation Element

Goal 5. Conservation of Natural resource areas of community and regional significance.

- **Policy 5.1.** Conserve sensitive species and plant communities and wildlife habitats to the maximum extent feasible through open space dedication and easements, creative site design and other workable mitigation actions.
- **Policy 5.3.** Review the Plant Communities Map for all new development proposals.

4.3.4 Thresholds of Significance

Criteria for determining the significance of impacts related to biological resources are based on criteria contained in Appendix G of the State CEQA Guidelines and the City's CEQA Manual. The proposed Project could have a significant impact on the environment if it would result in any of the following.

Threshold BIO-1 *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?*

Threshold BIO-2 *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

Threshold BIO-3 *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?*

Threshold BIO-4 *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

Threshold BIO-5 *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

Threshold BIO-6 *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?*

Methodology

Biological Survey

Prior to the field survey, available literature, historical aerials, and databases were reviewed regarding sensitive habitats, special status plants, and wildlife species within the vicinity. CSLS reviewed and consulted literature and databases focused on Orange County, California, including the California Natural Diversity Database (CNDDB) and the USFWS Critical Habitat database. The CNDDB is a CDFW species account database that inventories status and locations of rare

plants and wildlife in California. The CNDDB was used to identify any sensitive plant communities and special status plants and wildlife that have potential to occur within the Project site.

The USFWS's online service for information regarding Final Critical Habitat designation within California was reviewed to determine if the Study Area is within any species designated Critical Habitat. The USFWS regulatory mapping process for the designation of critical habitat is an imprecise, broad-based, mapping exercise of areas that may or may not include constituent elements of the critical habitat designation. Due to this approach in mapping, large areas are designated as critical habitat regardless of the existing habitat, and as a result may include developed areas, such as buildings, roads, hardscape, and other such facilities, as well as natural habitats.

Jurisdictional Waters

The Project site was assessed for jurisdictional Waters of the United States and Waters of the State. To determine the presence of a wetland, three indicators are required: (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. The methodology published in the *U.S. Army Corps of Engineers 1987 Wetland Delineation Manual* and the *Arid West Supplement* sets the standards for meeting each of the three indicators, which normally require that 50 percent or more dominant plant species typical of a wetland, soils exhibiting characteristics of saturation, and hydrological indicators be present.

Additionally, jurisdiction over non-wetland Waters of the U.S. is typically determined through the observation of an Ordinary High Water Mark (OHWM), which is defined as the "line on the shore established by the fluctuation of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas." Projects with impacts to Waters of the U.S. are regulated under Sections 401 and 404 of the Clean Water Act.

Waters of the State are regulated by CDFW through Section 1600, et seq., of the California Fish and Game Code. The limits of Waters of the State are defined as the "body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." Therefore, the limits extend from the channel bed to the top of the bank, with the addition of the canopy of any riparian habitat associated with the watercourse.

4.3.5 Project Design Features and Standard Conditions of Approval

PDF BIO-1 The Project is to be subdivided into two lots, Lot 1 and Lot A. Lot 1 includes the 2-acre residential area and Lot A includes the 2.2-acre area of open space which

consists of the previous remediated landslide and includes the 30-foot earthen "buttress" (a design feature approved for geotechnical assurance of future landslide), planted erosion control, and installed storm drain system. Since Lot A is a lettered lot on the tentative tract map and no residential development is allowed on lettered lots, no residential development would occur on the remediated hillside.

4.3.6 Environmental Impact Evaluation

Threshold BIO-1 *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

No Impact. General biological surveys within the Project site and surrounding 300-foot buffer were conducted on July 18, 2019, and then again on May 12, 2021. The Project site is currently characterized by a vacant lot that consists of a graded non-native vegetation slope cover, concrete terrace drains, and paved streets with associated infrastructure. Specifically, the vegetation includes scattered laurel sumac and mature non-native acacia species planted for erosion control.

Special Status Plant and Wildlife Species

The Project site was assessed for sensitive habitats, special status plants and special status wildlife species. Assessment of the Project site began with a review of relevant literature on the biological resources of the site and the surrounding vicinities. The CNDDB, USFWS critical habitat maps, federal register listings, and species data provided by the USFWS, CDFW, and the California Native Plant Society (CNPS) was reviewed for all pertinent information regarding the localities of known observations of sensitive species and habitats in the vicinity of the site.

Based on the two surveys and available literature, the Project site does not contain any suitable habitat for special status plants or wildlife. The Project site is not located within mapped USFWS Critical Habitat. The closest mapped USFWS Critical Habitat is for the coastal California gnatcatcher (*Polioptila californica californica)* located 0.3 miles to the south of the Project site. The Project site consists of non-native vegetation cover and does not contain any suitable habitat for the species. Furthermore, no listed plants or wildlife species occur within the Project boundary based on the CNDDB occurrences as shown on Figure 4.3.A CNDDB Occurrences and Critical Habitat Map.

No special-status species, plant or wildlife, are anticipated to be directly affected by the Project due to the lack of suitable habitat and known occurrences on the Project site. Therefore, no impacts to sensitive or special-status plant or wildlife species would result from the proposed Project, and no mitigation is required.

Furthermore, while the City does not participate in the NCCP/HCP, the Project site is not located within a proposed reserve area and does not contain any sensitive habitat or sensitive plant or wildlife species. The Project site consists of non-native vegetation cover. The closest NCCP/HCP Reserve mapped area is within the Aliso and Wood Canyon Wilderness Park located approximate 0.44 miles to the west of the Project site.

Threshold BIO-2 *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

No Impact. Based on the site visits, database review, and review of historical aerials, the Project site does not contain any waters that meet the definition of WoUS or Waters of the State. Therefore, no impacts would occur on state or federally protected wetlands or waters as a result of the proposed Project, and no mitigation is required.

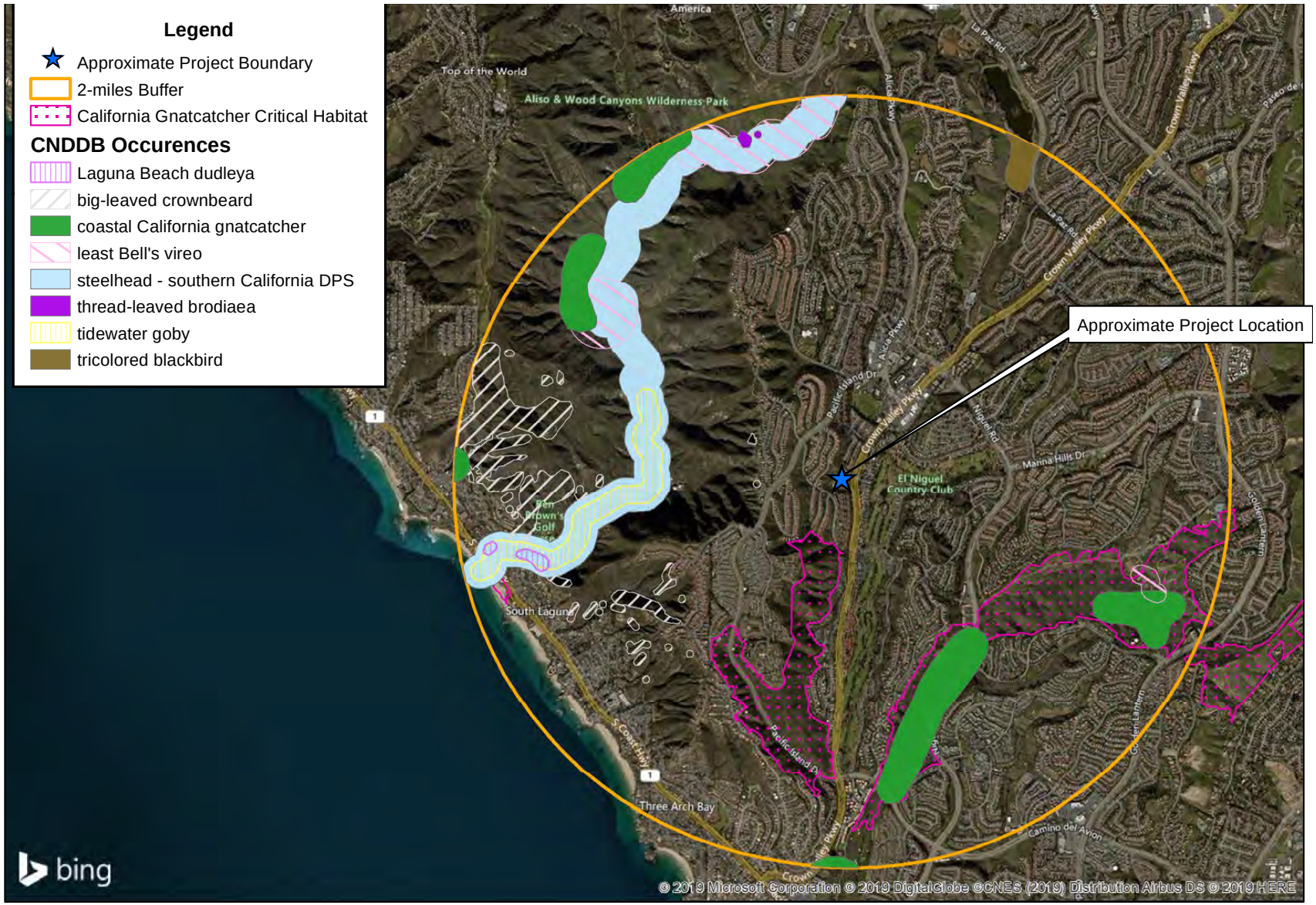
Threshold BIO-3 *Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

No Impact. Based on the site visits, database review, and review of historical aerials, no jurisdictional wetlands meeting the definition of a WoUS or Water of the State were observed within or near the Project site. Therefore, no impacts on state or federally protected wetlands or waters would occur as a result of the proposed Project, and no mitigation is required.

Threshold BIO-4 *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

Less than Significant Impact with Mitigation. The Project site contains suitable habitat for nesting and foraging bird species and with the implementation of Project Design Feature **PDF BIO-1**, Lot A would maintain 2.2 acres of suitable nesting and foraging habitat as Lot A is a lettered lot on the tentative tract map and residential home construction is not allowed on lettered lots. Development of approximately 2 acres of the Project site would impact the suitable nesting and foraging habitat.

The Project site is surrounded by residential homes to the north, west, and south, and Crown Valley Parkway to the east. The Project does not function or provide opportunity for a wildlife corridor. Furthermore, the Project site does not provide opportunity or impede the use of native wildlife nursery sites. No impacts would occur to wildlife corridors and not mitigation is required.



Source: Carlson Strategic Land Solutions (05/2021).

Figure 4.3.A CNDDB Occurrences and Critical Habitat Map

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Nesting Bird Species

Direct impacts associated with vegetation removal may occur to all avian species covered under the Migratory Bird Treaty Act (MBTA) with the removal of potential nesting and foraging habitat causing a potential significant impact. The MBTA protects nesting activities of both native and non-native bird species. Under the MBTA it is unlawful to harm, harass, or take a nest. If Project construction is scheduled to occur during the typical breeding bird season (January 15 through August 31 for raptors and February 15 through August 31 for all other avian species), direct removal of vegetation and indirect short-term noise effects to birds that may forage or nest on-site or within the buffer area may occur. In order to reduce direct and indirect impacts on nesting birds, if vegetation removal and/or construction activities were to occur during nesting bird season, a pre-construction nesting bird survey would be required.

The Project site contains suitable habitat for nesting and foraging bird species, therefore in accordance with the MBTA, if work is to be done during the typical avian breeding season (February 15 to August 31 for songbirds; January 15 to August 31 for raptors), a qualified biologist shall conduct a nesting bird survey within all suitable habitat, on-site and within 300-feet surrounding the site (as feasible), to identify any potential nesting activity within 3 days before start of construction as outlined within **Mitigation Measure MM BIO-1**.

If active nests are identified, the biologist would establish buffers around the vegetation (500 feet for raptors and sensitive species, 200 feet for non-raptors/non-sensitive species). All work within these buffers would be halted until the nesting effort is finished (i.e. the juveniles are surviving independent from the nest). The on-site biologist would review and verify compliance with these nesting boundaries and would verify the nesting effort has finished. Work can resume within these areas when no other active nests are found. Alternatively, a qualified biologist may determine that construction can be permitted within the buffer areas and would develop a monitoring plan to prevent any impacts while the nest continues to be active (eggs, chicks, etc.). Upon completion of the survey and any follow-up construction avoidance management, a report shall be prepared and submitted to City for mitigation monitoring compliance record keeping.

Pre-construction nesting bird surveys as outlined within **Mitigation Measure MM BIO – 1** would ensure protection against direct impacts associated with vegetation removal or indirect impacts associated with construction related noise impacts for avian species covered under the MBTA during the typical nesting bird season.

Implementation of **MM BIO-1** would ensure compliance with the MBTA and California Fish and Game Code and reduce potential impacts to a less than significant level.

Threshold BIO-5 *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

No Impact. Section 9-1-93.3(d) of the City's Zoning Code provides local regulations for tree preservation, requiring that the construction and design of new projects incorporate preservation measures to protect existing trees in place to the greatest extent possible. Additionally, if the decision-making authority determines that significant existing trees cannot be saved, they may require replacement with new specimen-size trees having a cumulative trunk diameter of up to two times the cumulative trunk diameter of the trees to be removed.

The Project site consists primarily of non-native acacia species, scattered laurel sumac, and a mix of nonnative trees along the right of way of Crown Valley Parkway and the northeast corner of the site. Based on the conditions of the Project site, the existing trees species are nonnative, numerous in the City, and are not considered significant; therefore, the tree species do not create a substantial aesthetic for the City per Section 9-1-93.3(d). The proposed Project includes a detailed landscape plan, including the placement of several specimen trees throughout the site. In addition, existing trees and landscaping along Crown Valley Parkway are to remain in place as they are within the right of way. As a result, the Project is consistent with the City's Tree Preservation Code. Therefore, no impacts would occur, and no mitigation is required.

Furthermore, the proposed Project is subject to fuel modification requirements to reduce the potential threat of wildland fire. All required fuel modification located on the Project site is accounted for in the assessment of impacts to existing vegetation. The fuel modification plan has been approved by the Orange County Fire Authority. Therefore, no impacts would occur, and no mitigation is required.

Threshold BIO-6 *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

No Impact. The Project site is within the NCCP/HCP, County of Orange Central and Coastal Subregion. However, the site is not within or adjacent to lands designated as "reserve" within the NCCP/HCP. The nearest designated NCCP/HCP reserve lands are approximately 0.44 miles west of the site at the Aliso and Wood Canyon Wilderness Park. The site is mapped as grassland within the NCCP/HCP. Furthermore, based on the field survey, the Project site consists primarily of non-native acacia species, scattered laurel sumac, and developed roads. Moreover, the City is not a participating entity and is therefore not subject to the established policies of the NCCP/HCP. Therefore, implementation of the proposed Project would not have an impact on an adopted HCP, NCCP, or other approved local, regional, or State habitat conservation plan and no mitigation is required.

4.3.7 Cumulative Impacts

Less than Significant Impact with Mitigation. Cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for biological resources, which is considered the City boundaries. The Project site consists primarily of non-native acacia species, scattered laurel sumac, and developed roads. The Project site does not contain any sensitive plants or wildlife, and none were observed during the field surveys. Based on the survey results, the proposed Project would not result in impacts on nesting birds and mitigation measure **MM BIO-1** is designed to ensure that no nesting birds are occupying the site during construction. The Project site does not contain any jurisdictional features as defined by Waters of the United States and Waters of the State. Therefore, the proposed Project would not contribute to the loss of natural habitat in the City and would not contribute to the cumulative loss of biological resources within the City. Impacts to biological resources would be less than cumulatively significant. No mitigation is required.

4.3.8 Summary of Mitigation Measures

The following mitigation measure has been developed to reduce potentially significant construction impacts related to on-site nesting birds.

MM BIO-1 If construction is started during the typical avian breeding season ((February 15 to August 31 for songbirds; January 15 to August 31 for raptors), a qualified biologist shall conduct a nesting bird survey within all suitable habitat, on-site and within 300-feet surrounding the site (as feasible), to identify any potential nesting activity within 3 days before start of construction.

If active nests are identified, the biologist would establish buffers around the vegetation (500 feet for raptors and sensitive species, 200 feet for non-raptors/non-sensitive species). All work within these buffers would be halted until the nesting effort is finished (i.e. the juveniles are surviving independent from the nest). The on-site biologist would review and verify compliance with these nesting boundaries and would verify the nesting effort has finished. Work can resume within these areas when no other active nests are found. Alternatively, a qualified biologist may determine that construction can be permitted within the buffer areas and would develop a monitoring plan to prevent any impacts while the nest continues to be active (eggs, chicks, etc.). Upon completion of the survey and any follow-up construction avoidance management, a report shall be prepared and submitted to City for mitigation monitoring compliance record keeping.

4.3.9 Significant Environmental Impacts

Impacts to biological resources can be mitigated to less than significant levels by incorporating **Mitigation Measure MM BIO-1** as described in Section 4.3.5. With implementation of **MM BIO-1**, impacts would be reduced to less than significant and no further mitigation is required.

4.3.10 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

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4.4 Cultural Resources

The analysis of cultural resources contained in this section is based on the *Cultural Resources Assessment* dated September 8, 2021, prepared by Duke CRM. The *Cultural Resources Assessment* is contained in Appendix E of the technical appendices for this Draft EIR.

4.4.1 Setting

Historical Resources Records Search

The South Central Coastal Information Center (SCCIC) conducted a records search for the Project site and a 1/2-mile radius and a review of known cultural resources reports. The SCCIC search identified three cultural resources within 1⁄2-mile of the Project. Two of these resources do not have an exact location; however, all three are prehistoric. The SCCIC identified a total of seven previously prepared cultural resource reports for projects within 1⁄2-mile of the Project site. The prior surveys concluded no historic resources occur within the Project vicinity.

Cultural Resources Records Search

As noted previously, the SCCIC records search conducted for the proposed Project identified three prehistoric cultural resources within 1/2-mile of the Project, with two of the resources having no exact location.

4.4.2 Related Policies and Regulations

Federal Regulations

There are no federal regulations that are applicable to cultural resources relevant to the proposed Project.

State Regulations

California Public Resources Code Section 5097.5

Public Resources Code section 5097.5 provides for the protection of cultural and paleontological resources and prohibits the removal, destruction, injury, or defacement of archaeological and paleontological features on any lands under the jurisdiction of State or local authorities.

California Register of Historical Resources Section 5020

State law also protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources in CEQA documents. A cultural resource is an important historical resource if it meets any of the criteria found in Section 15064.5(a) of the State CEQA Guidelines. These criteria are nearly identical to those of the National Register.

The State Historic Preservation Officer (SHPO) maintains the California Register. Properties listed, or formally designated eligible for listing, on the National Register are nominated to the

California Register and then selected to be listed on the California Register, as are the State Landmarks and Points of Interest.

California Penal Code Section 622.5

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

California Health and Safety Code Sections 7050.5 and 7052

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

Local Regulations

Laguna Niguel General Plan

The Laguna Niguel General Plan (LNGP) contains goals, policies, and plans that are intended to guide land use and development decisions. The Open Space/Parks/Conservation Element was designed to ensure the conservation of important historical, archaeological, and paleontological resources. Relevant policies are listed below.

Open Space/Parks/Conservation Element

Goal 7.0. Recognize significant cultural sites or features within the community.

- **Policy 7.1.** Review the technical data on sensitive cultural resources for all new development proposals.
- **Policy 7.2.** Require mitigation of impacts to significant areas of archaeological and paleontological resources.
- **Policy 7.3.** Preserve uncovered resources in their natural state, as much as feasible to assure their preservation and availability for later study. Require that uncovered resources are documented and retained in an appropriate museum or institution.

Development proposals will be assessed for potential impacts on archaeological resources according to CEQA requirements. The City will require that significant impacts either be avoided or mitigated, which may involve further investigation and resource recovery.

4.4.3 Thresholds of Significance

Criteria for determining the significance of impacts related to cultural resources are based on criteria contained in Appendix G of the State CEQA Guidelines and the City's CEQA Manual. The proposed Project could have a significant impact on the environment if it would result in any of the following.

Threshold CUL-1 *Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?*

Threshold CUL-2 *Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?*

Threshold CUL-3 *Disturb any human remains, including those interred outside of formal cemeteries?*

Methodology

Impacts on cultural resources are assessed based on the potential for the Project to significantly affect existing known and unknown historic and archaeological resources. The methodology entails identifying significant cultural resources and whether the Project would cause a substantial adverse change in the significance of the resource. Examples of substantial adverse changes include physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.

4.4.4 Project Design Features and Standard Conditions of Approval

No Project Design Features are proposed with regard to cultural resources.

4.4.5 Environmental Impact Evaluation

Threshold CUL-1 *Cause a Substantial Adverse Change in the Significance of a Historical Resource as Defined in Section 15064.5?*

No Impact. The proposed Project site is currently vacant and not occupied by a historic resource and has never been occupied by an historic resource. Implementation of the proposed Project would not cause a substantial adverse change in the significance of a historical resource. Therefore, no impact to historic resources would occur, and no mitigation is required.

Threshold CUL-2 *Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?*

Less than Significant Impact with Mitigation. As discussed previously, the SCCIC records search conducted for the proposed Project identified three cultural resources within 1⁄2-mile of the

Project site, with two of the resources having no exact location and all three resources being prehistoric. Previous field surveys and the field survey conducted in 2021 did not reveal the presence of archeological resources. Additionally, due to the Project site's history of being previously graded and developed, as well as subjected to a significant landslide and remedial grading including the creation of an earthen buttress, the likelihood of encountering archaeological resources is minimal. In the event that such resources are discovered at the Project site during grading or earthmoving activities, implementation of the **Mitigation Measure MM CUL-1,** as described below, would render impacts to less than significant and no further mitigation is required.

Threshold CUL-3 *Would the project disturb any human remains, including those interred outside of formal cemeteries?*

Less than Significant Impact with Mitigation. Due to the Project site's history of being previously graded and developed, as well as subjected to a significant landslide and remedial grading including the creation of an earthen buttress, and the fact that the site has never been a cemetery, the likelihood of encountering human remains is minimal. In the event that human remains (or remains that may be human) are discovered at the Project site during grading or earthmoving activities, implementation of **Mitigation Measure MM CUL-2,** as described below, would render impacts to be less than significant.

4.4.6 Cumulative Impacts

Less than Significant Impact with Mitigation. As described above, the proposed Project's cultural resources impacts would be limited to the construction phase, when ground disturbance would occur. The possibility of encountering cultural resources and human remains would be remote due to the lack of any evidence that prehistoric or historic-period cultural resources or human remains are present on-site because of the previous grading and development of the project site and the extensive landslide and subsequent remedial grading associated with the landslide repair. Mitigation measures **MM CUL-1** and **MM CUL-2** provide specific monitoring and stop-work requirements to ensure that monitoring is conducted during Project construction and any archaeological resources or human remains that are uncovered are handled appropriately. Although past, present, and future projects such as those identified in Section 1.4, Table 1-2, and Figure 1.C, have the potential to encounter cultural resources in the cumulative Project study area, the Project's contribution to any loss of cultural resources would be less than cumulatively considerable because any archaeological resources encountered would be recovered. Therefore, the Project's incremental contribution to cumulative cultural resources impacts would not be cumulatively considerable.

4.4.7 Summary of Mitigation Measures

CEQA Guidelines Section 15126.4 requires EIRs to describe feasible measures that can minimize significant impacts. The following mitigation measures have been evaluated for feasibility and are incorporated in order to reduce potentially significant impacts related to the discovery of unknown archeological resources.

MM CUL-1 Prior to the issuance of grading permits, the applicant will retain a qualified archaeological monitor who will prepare an Archaeological Resources Mitigation Monitoring Plan. The qualified archaeological monitor will attend all pre-grading meetings to inform the grading and excavation contractors of the archaeological resources mitigation program and will instruct them with respect to its implementation. The qualified archaeological monitor will be on-site during grading within native soil that has the potential to yield archaeological resources. If such resources are discovered and are in danger of loss and/or destruction, the qualified archaeological monitor will recover them. In instances where recovery requires an extended salvage time, the qualified archaeological monitor will be allowed to temporarily direct, divert, or halt grading to allow recovery of resource(s) in a timely manner. Recovered archaeological resources, along with copies of pertinent field notes, photographs, and maps, will be deposited in a certified curation facility that meets the standards of the California Office of Historical Preservation. The resources will be recorded in the California Archaeological Inventory Database. Should archaeological resources with ties to Native Americans be discovered, the archaeological monitor will immediately notify the City and the most likely tribal representative for the area if not already present during monitoring activities. A final monitoring report will be submitted to the City within 30 days of the end of monitoring activities.

MM CUL-2 Human Remains. Consistent with the requirements of CCR Section 15064.5(e), if human remains are encountered during site disturbance, grading, or other construction activities on the Project site, the construction contractor shall halt work within 25 feet of the discovery; all work within 25 feet of the discovery shall be redirected and the Orange County (County) Coroner notified immediately. No further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the City, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native

American burials. Consistent with CCR Section 15064.5(d), if the remains are determined to be Native American and an MLD is notified, the City shall consult with the MLD identified by the NAHC to develop an agreement for the treatment and disposition of the remains. Upon completion of the assessment, the consulting archaeologist shall prepare a report documenting the methods and results and provide recommendations regarding the treatment of the human remains and any associated cultural materials, as appropriate, and in coordination with the recommendations of the MLD. The report shall be submitted to the City Development Services Director, or designee, and the South Central Coastal Information Center. The City Development Services Director, or designee, shall be responsible for reviewing any reports produced by the archaeologist to determine the appropriateness and adequacy of the findings and recommendations.

4.4.8 Significant Environmental Impacts

Impacts to cultural resources can be mitigated to less than significant levels by incorporating **MM CUL-1** and **MM CUL-2** as described in Section 4.4.7. No significant impacts would remain after mitigation.

4.4.9 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

City of Laguna Niguel. February 2022. City of Laguna Niguel CEQA Manual.

City of Laguna Niguel. 1992. General Plan for the City of Laguna Niguel. Available: http://cityoflagunaniguel.org/DocumentCenter/Home/View/1886. (Accessed: August 11, 2021.)

City of Laguna Niguel. 2021. City of Laguna Niguel 2021–2029 Housing Element. Available: https://www.cityoflagunaniguel.org/1352/Housing-Element-Update. Last revised: October 2021. (Accessed February 22, 2022).

City of Laguna Niguel, Laguna Niguel Municipal Code Title 9, Planning and Zoning. https://library.municode.com/ca/laguna_niguel/codes/code_of_ordinances?nodeId=TIT9PLZO (Accessed June 20, 2021).

DUKE CRM. September 8, 2021. Cultural Resources Assessment for the Cove, City of Laguna Niguel, Orange County, California.

4.5 Energy

This section discusses energy use resulting from implementation of the Project and evaluates whether the Proposed Project would result in the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with any applicable plans for renewable energy and energy efficiency. The energy use analysis in this section is based on information from the California Emissions Estimator Model (CalEEModv2020.4.0) modeling results which is contained in Appendix C of this Draft Environmental Impact Report (DEIR).

4.5.1 Setting

The discussion of energy conservation most relevant to the proposed residential Project is focused on Project-generated electricity demand, natural gas demand, and transportation fuel demand.

Electricity

Electricity is a man-made resource. The production of electricity requires the consumption or conversion of renewable and non-renewable energy resources including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources into energy. Electricity is used for a variety of purposes (e.g., lighting, heating, cooling, and refrigeration, and for operating appliances, computers, electronics, machinery, and public transportation systems).

The Project site is within the service territory of Southern California Edison (SCE). SCE provides electricity to more than 15 million people in a 50,000-square-mile (sq mi) area of Central, Coastal, and Southern California. According to the California Energy Commission (CEC), total electricity consumption in the SCE service area in 2019 was 80,900 GWh. (27,300 GWh for the residential sector and 53,600 GWh for the non-residential sector). Total electricity consumption in Orange County in 2019 was 19,500 GWh (6,700 GWh for the residential sector and 12,800 GWh for the nonresidential sector).

Natural Gas

Natural gas is a non-renewable fossil fuel. Natural gas is a combustible mixture of hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas is found in naturally occurring reservoirs in deep underground rock formations. Natural gas is used for a variety of uses including heating buildings, generating electricity, and powering appliances such as stoves, washing machines and dryers, gas fireplaces, and gas grills.

The Southern California Gas Company (SoCalGas) is the natural gas service provider for the Project site. SoCalGas provides natural gas to approximately 21.8 million people in a 24,000 sq mi service area throughout Central and Southern California, from Visalia to the Mexican border. According to the CEC, total natural gas consumption in the SoCalGas service area in 2019 was 5,425 million therms (2,420 million therms for the residential sector). Total natural gas

consumption in Orange County in 2019 was 625 million therms (380 million therms for the residential sector).

Petroleum Transportation Energy

Petroleum is also a non-renewable fossil fuel. According to the U.S. Energy Information Administration (EIA), gasoline is the most used transportation fuel in California, with 95.4 percent of all gasoline being consumed by passenger vehicles including light-duty cars, pickup trucks, and sport utility vehicles. In 2019, total gasoline consumption in California was 360,234 thousand barrels (15.1 billion gallons) or 1,819.9 trillion British Thermal Units (BTU). Of the total gasoline consumption, 343,677 thousand barrels (14.4 billion gallons) or 1,736.6 trillion BTU were consumed for transportation. Based on fuel consumption obtained from the CARB's California Emissions Factor Model (EMFAC2021), 131 million gallons of diesel and 1.2 billion gallons of gasoline are estimated to be consumed from vehicle trips in Orange County in 2021.

4.5.2 Existing Site Conditions

The Project site is primarily undeveloped and vacant with the exception of drainage facilities installed within the remediated hillside that forms the west half of the site, and as a result the does not consume energy as previously mentioned.

4.5.3 Related Policies and Regulations

Federal Regulations

Energy Policy and Conservation Act

Enacted in 1975, this legislation established fuel economy standards for new light-duty vehicles (autos, pickups, vans, and sport-utility vehicles). The law placed responsibility on the National Highway Traffic and Safety Administration, a part of the U.S. Department of Transportation, for establishing and regularly updating vehicle standards. The United States Environmental Protection Agency (EPA) administers the Corporate Average Fuel Economy program, which determines vehicle manufacturers' compliance with existing fuel economy standards to increase the fuel economy of cars and light-duty trucks. CAFE standards are federal regulations that are set to reduce energy consumed by on-road motor vehicles. The National Highway Traffic Safety Administration (NHTSA) regulates the standards and the EPA measures vehicle fuel efficiency. The standards specify minimum fuel consumption efficiency standards for new automobiles sold in the United States.

The law has become more stringent over time and has successfully increased passenger car and light duty truck fuel efficiencies.

Intermodal Surface Transportation Efficiency Act of 1991

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) promoted the development of inter-modal 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.

Energy Star Program

In 1992, the EPA introduced Energy Star as a voluntary labeling program to identify and promote energy-efficient products to reduce GHG emissions. The program applies to major household appliances, lighting, computers, and building components, such as windows, doors, roofs, and heating and cooling systems. Under this program, appliances that meet specification for maximum energy use established under the program are certified to display the Energy Star label. In 1996, the EPA joined with the Energy Department to expand the program, which now includes qualifying commercial and industrial buildings as well as homes.

The Transportation Equity Act for the 21st Century

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.

Energy Independence and Security Act

The Energy Independence and Security Act of 2007 (EISA) facilitates the reduction of national GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) that requires fuel producers to use at least 36 billion gallons of biofuel in 2022;
- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;
- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and
- While superseded by the EPA and NHTSA actions described above, (i) establishing miles per gallon targets for cars and light trucks and (ii) directing the NHTSA to establish a fuel

economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.

Additional provisions of EISA address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."

Safer Affordable Fuel-Efficient Vehicles Rule

Issued on March 31, 2020, by the NHTSA and EPA, The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for model years 2021-2026 passenger cars and light trucks (SAFE Vehicles Rule) amended the CAFE and GHG emission standards established in 2012. The SAFE Vehicles Rule sets standards to increase fuel economy and carbon dioxide standards. Also, it withdrew the California Waiver for the California Advanced Clean Car program, Zero Emissions Vehicle mandate, and GHG emission standards for model years 2021 through 2026.

State Regulations

Senate Bill 1389, Energy: Planning and Forecasting

In 2002, the Legislature passed Senate Bill (SB) 1389 Energy: Planning and Forecasting, which required the California Energy Commission (CEC) to develop an integrated energy plan every two years for electricity, natural gas, and transportation fuels for the California Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero emission (ZE) vehicles and their infrastructure needs, and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

California Energy Action Plan

The CEC, in collaboration with CPUC, is responsible for preparing the California Energy Action Plan (EAP), which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The California EAP calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce Vehicle Miles Traveled (VMT) and accommodate pedestrian and bicycle access.

Renewable Portfolio Standards

SB 1078 established the California Renewable Portfolio Standards program in 2002. SB 1078 initially required that 20 percent of electricity retail sales be served by renewable resources by 2017; however, this standard has become more stringent over time. In 2006, SB 107 accelerated

the standard by requiring that the 20 percent mandate be met by 2010. In April 2011, SB 2 required that 33 percent of electricity retail sales be served by renewable resources by 2020. In 2015, SB 350 established tiered increases to the Renewable Portfolio Standards of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. In 2018, SB 100 increased the requirement to 60 percent by 2030 and required that all State's electricity to come from carbon-free resources by 2045. SB 100 took effect on January 1, 2019.

Title 24, California Building Code

Energy consumption by new buildings in California is regulated by the Building Energy Efficiency Standards, embodied in Title 24 of the California Code of Regulations (CCR), known as the California Building Code (CBC). The CEC first adopted the Building Energy Efficiency Standards for Residential and Nonresidential Buildings in 1978 in response to a legislative mandate to reduce energy consumption in the State. The CBC is updated every 3 years, and the current 2019 CBC went into effect on January 1, 2020. The efficiency standards apply to both new construction and rehabilitation of both residential and non-residential buildings, and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The building efficiency standards are enforced through the local building permit process. Local government agencies may adopt and enforce energy standards for new buildings, provided these standards meet or exceed those provided in CCR Title 24.

California's Energy Efficiency Standards for Residential and Nonresidential Buildings

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. The 2019 version of Title 24 was adopted by the CEC and became effective on January 1, 2020. The CEC anticipates that nonresidential buildings will use approximately 30 percent less energy (CEC 2019). The CalEEMod defaults for Title 24 – Electricity and Lighting Energy were reduced by 30 percent in order to reflect consistency with the 2019 Title 24 standard.

Low Carbon Fuel Standard

California is implementing the world's first Low Carbon Fuel Standard for transportation fuels, pursuant to both Executive Order (EO) S-01-07 (signed January 2007) and Assembly Bill (AB) 32. The standard requires a reduction of at least 10 percent in the CO intensity of the State's transportation fuels by 2020. This reduction is aimed to reduce GHG emissions in 2020 by 17.6 million metric tons (MMT) of carbon dioxide equivalent (CO_2e). Also, in 2007, AB 118 created the Alternative and Renewable Fuel and Vehicle Technology Program. The CEC and the California Air Resources Board (CARB) administer this program, which provides funding for alternative fuel and vehicle technology research, development, and deployment in order to attain the State's climate change goals, achieve the State's petroleum reduction objectives and clean air

and Greenhouse Gas (GHG) emission reduction standards, develop public and private partnerships, and ensure a secure and reliable fuel supply.

Senate Bill 375

In addition to vehicle emissions regulations and the Low Carbon Fuel Standard, the third effort to reduce GHG emissions from transportation is the reduction in the demand for personal vehicle travel (i.e., VMT). This measure was addressed in September 2008 through the Sustainable Communities and Climate Protection Act of 2008, or SB 375. The enactment of SB 375 initiated an important new regional land use planning process to mitigate GHG emissions by integrating and aligning planning for housing, land use, and transportation for California's 18 MPOs. The bill directed the CARB to set regional GHG emission reduction targets for most areas of the State. SB 375 also contained important elements related to federally mandated regional transportation plans and the alignment of State transportation and housing planning processes.

Regional Regulations

There are no regional energy regulations that apply to the proposed Project.

Local Regulations

Laguna Niguel General Plan

The Laguna Niguel General Plan (LNGP) contains goals, policies, and plans that are intended to guide land use and development decisions. The Public Facilities Element was designed to ensure efficient development and the use of modern technologies to minimize energy demand and consumption. Relevant policies are listed below.

Public Facilities Element

Goal 8. Adequate electrical, natural gas, and telecommunications systems to meet the demand of new and existing development.

- **Policy 8.1.** Encourage development that minimizes net energy use and consumption of natural resources.
- **Policy 8.3.** Locate utilities to minimize aesthetic impacts on the surrounding area.

Development proposals will be assessed for potential impacts on energy resources according to CEQA requirements. The City will require that significant impacts either be avoided or mitigated, which may involve further investigation and resource recovery.

4.5.4 Thresholds of Significance

Criteria for determining the significance of impacts related to energy are based on criteria contained in Appendix G of the State CEQA Guidelines and the City's CEQA Manual. The proposed Project could have a significant impact on the environment if it would result in any of the following.

Threshold EN-1 *Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

Threshold EN-2 *Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

With regard to Threshold EN-1, this analysis relies upon Appendix F of the State CEQA Guidelines. Appendix F of the State CEQA Guidelines was prepared in response to the requirement in PRC Section 21100(b)(3), which states that an EIR shall include a detailed statement setting forth "mitigation measures proposed to minimize significant effects of the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy." In addition, Appendix F of the State CEQA Guidelines states that the means of achieving the goal of energy conservation includes the following:

1. Decreasing overall per capita energy consumption,
2. Decreasing reliance on fossil fuels such as coal, natural gas and oil, and
3. Increasing reliance on renewable energy sources.

Methodology

The analysis of electricity/natural gas usage is based on the CalEEMod modeling conducted by Enplanners (October 2021) which quantifies energy use for Project operations. Fuel consumption (diesel fuel and gasoline) from vehicle trips during operation was estimated for the opening year (2023) of the proposed Project based on trip estimates from the CalEEMod model and the Project's Traffic Assessment (TA) and fuel efficiencies from the California Air Resources Board (CARB) EMFAC2017 model. Estimates of fuel consumption (diesel fuel and gasoline) from construction trucks and construction worker vehicles was based on trip estimates from the CalEEMod model and the TA and fuel efficiencies from the CARB EMFAC2021 model.

The analysis focuses on the four sources of energy that would be utilized by the proposed Project: electricity, natural gas, the equipment and vehicle fuel necessary for Project construction, and vehicle fuel necessary for Project operations. For the purposes of this analysis, the amount of electricity, natural gas, construction fuel, and fuel use from operations are quantified and compared to that consumed by residential land uses in Orange County. The electricity/natural gas use of the proposed Project is analyzed as a whole on an annual scale.

4.5.5 Project Design Features and Standard Conditions of Approval

PDF EN-1 The Project would be required to adhere to applicable California Building Code, Title 24, Part 6, energy efficiency standards as described in Section 4.5.2 above.

4.5.6 Environmental Impact Evaluation

Threshold EN-1 *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.

Construction. The proposed Project would require site preparation, grading including export of approximately 130 cubic yards of soil, building construction, paving, and architectural coatings (painting) activities during construction as seen below in Table 4.5-1.

Table 4.5-1. Construction Duration

Phase Name	Start Date	End Date	Days
Site Preparation	10/03/22	10/14/22	10
Grading	10/05/22	11/01/22	20
Building Construction	10/11/22	07/17/23	200
Paving	07/18/23	07/31/23	10
Architectural Coating	08/01/23	08/14/23	10

Source: Construction activity based upon information provided by the Project applicant[1]

Construction of the proposed Project would require energy for the manufacture and transportation of construction materials, preparation of the site for grading and building activities, and construction of the building. All or most of this energy would be derived from nonrenewable resources. Petroleum fuels (e.g., diesel and gasoline) would be the primary sources of energy for these activities. However, construction activities are not anticipated to result in an inefficient use of energy as gasoline and diesel fuel would be supplied by construction contractors who would conserve the use of their supplies to minimize their costs on the project. Energy (i.e., fuel) usage on the Project site during construction would be temporary in nature and would be relatively small in comparison to the State's available energy sources. Construction of the proposed Project would not result in the wasteful, inefficient, or unnecessary consumption of energy resources and construction-related would be less than significant. No mitigation is required.

Construction of the Project would not involve the consumption of natural gas. The construction-related equipment would not be powered by natural gas and no natural gas demand is anticipated during construction.

Transportation energy represents the largest energy use during construction and would occur from the transport and use of construction equipment, delivery vehicles and haul trucks, and

[1] A conservative (compressed) schedule was used to evaluate air quality impacts since a compressed schedule produces greater daily emissions.

construction worker vehicles that would use petroleum fuels (e.g., diesel fuel and/or gasoline). Therefore, the analysis of energy use during construction focuses on fuel consumption. The use of energy resources would fluctuate according to the phase of construction. The majority of construction equipment during grading would be gasoline-powered or diesel-powered, and the later construction phases would be electricity-powered. Construction trucks and vendor trucks hauling materials to and from the project site would be anticipated to use diesel fuel, whereas construction workers traveling to and from the project site would be anticipated to use gasoline-powered vehicles. Fuel consumption from transportation uses depends on the type and number of trips, vehicles miles traveled, fuel efficiency of vehicles, and travel modes.

The following tables represent elements of energy use during project construction-related activities and equipment. Table 4.5-2 lists the equipment used during each phase of construction for the estimated duration in days and total equipment usage in hours.

Phase	Off-road Equipment Type	Amount	Usage Hour/ Day	Total Usage Days	Total Usage Hours/ Equipment
Site Preparation	Skid Steer Loaders	1	8	10	80
	Rubber Tired Dozers	1	7	10	70
	Tractors/Loaders/Backhoes	1	8	10	80
Grading	Graders	1	8	40	640
	Rubber Tired Dozers	1	8	40	320
	Tractors/Loaders/Backhoes	2	8	40	1,280
Building Construction	Cranes	1	6	200	1,200
	Forklifts	1	6	200	1,200
	Generator Sets	1	8	200	1,600
	Tractors/Loaders/Backhoes	1	6	200	1,200
	Welders	3	8	200	4,800
Paving	Cement Mortar Mixers	1	6	10	60
	Pavers	1	6	10	60
	Paving Equipment	1	8	10	80
	Tractors/Loaders/Backhoes	1	8	10	80
	Rollers	1	7	10	70
Architectural Coating	Air Compressors	1	6	10	60

Table 4.5-3 provides EMFAC2017 the horsepower ratings and load factors used to estimate the fuel consumption of construction equipment.

Table 4.5-2. Construction Off-Road Equipment

Phase	Off-road Equipment Type	Amount	Usage Hour/ Day	Total Usage Days	Total Usage Hours/ Equipment
Site Preparation	Skid Steer Loaders	1	8	10	80
	Rubber Tired Dozers	1	7	10	70
	Tractors/Loaders/Backhoes	1	8	10	80
Grading	Graders	1	8	40	640
	Rubber Tired Dozers	1	8	40	320
	Tractors/Loaders/Backhoes	2	8	40	1,280
Building Construction	Cranes	1	6	200	1,200
	Forklifts	1	6	200	1,200
	Generator Sets	1	8	200	1,600
	Tractors/Loaders/Backhoes	1	6	200	1,200
	Welders	3	8	200	4,800
Paving	Cement Mortar Mixers	1	6	10	60
	Pavers	1	6	10	60
	Paving Equipment	1	8	10	80
	Tractors/Loaders/Backhoes	1	8	10	80
	Rollers	1	7	10	70
Architectural Coating	Air Compressors	1	6	10	60

Table 4.5-3. Off-Road Construction Equipment Diesel Fuel Usage

Phase	Off-Road Equipment Type	Horsepower[1]	Load Factor[1]	Total Usage Hours/ Equipment	Horsepower - Hour[2]	Fuel Usage (gallons)[3]
Site Preparation	Skid Steer Loaders	65	0.37	80	7,696	394
	Rubber Tired Dozers	97	0.37	70	107,383	5,498
	Tractors/ Loaders/ Backhoes	247	0.40	80	147,805	7,568
Total Fuel Use: Site Preparation (gallons)						**13,460**
Grading	Graders	187	0.41	640	49,069	2,512
	Rubber Tired Dozers	247	0.40	320	31,616	1,619
	Tractors/ Loaders/ Backhoes	97	0.37	1,280	45,939	2,352
Total Fuel Use: Grading (gallons)						**6,483**
Building Construction	Cranes	231	0.29	1,200	80,388	4,115
	Forklifts	89	0.20	1,200	21,360	1,093

Phase	Off-Road Equipment Type	Horsepower[1]	Load Factor[1]	Total Usage Hours/ Equipment	Horsepower - Hour[2]	Fuel Usage (gallons)[3]
	Welders	46	0.45	4,800	99,360	5,087
	Generator Sets	84	0.74	1,600	99,456	5,092
	Tractors/ Loaders/ Backhoes	97	0.37	1,200	43,068	2,205
Total Fuel Use: Building Construction (gallons)						**17,592**
Paving	Cement and Mortar Mixers	9	0.56	60	302	15
	Pavers	130	0.42	60	4,368	223
	Paving Equipment	132	0.36	80	3,801	194
	Tractors/ Loaders/ Backhoes	97	0.37	80	2,871	174
	Rollers	80	0.38	70	2,128	108
Total Fuel Use: Paving (gallons)						**714**

Source: CalEEMod. Compiled by Enplanners (August 2021).

1. Load factor and horsepower are CalEEMod defaults for the equipment type.
2. Horsepower-Hour is the basis for the fuel calculation. HP-Hour is calculated using the following formula: HP-Hour = Total Hours × LF × HP.
3. Off-road mobile source fuel usage is calculated using a fuel usage rate of 0.0512 gallon of diesel per horsepower (HP)-hour. This is calculated based on diesel.

CalEEMod = California Emissions Estimator Model

Total fuel consumption in Orange County totaled 1.46 billion gallons in 2019. Vehicle consumption accounts for the majority of the total fuel consumption in California. In 2019, 164 million gallons of diesel fuel and 1,278 million gallons of gasoline were consumed from vehicle trips in Orange County based on fuel consumption emission totals (CARB 2020). Compared to the annual fuel consumption from vehicle trips in Orange County, the estimated diesel fuel consumption of 154,294 gallons from off-road construction equipment during construction would be a small fraction of the annual diesel fuel consumption in Orange County.

Fuel use from construction trucks and construction worker vehicles traveling to the project site was based on the estimated number of trips that project construction would generate and the average trip distance using the default CalEEMod assumptions. Table 4.5-4. Construction Worker Vehicle Gasoline Fuel Use shows construction on-road vehicle gasoline fuel consumption for construction worker vehicles traveling to-and-from the project site daily.

As shown in Table 4.5-4, the construction worker trips would consume an estimated 28,612 gallons of gasoline during project construction. This would represent a small percentage of the annual gasoline consumption in Orange County. Impacts related to energy use during construction would be temporary and would be relatively small in comparison to Orange County's overall usage and

the State's available energy sources. For these reasons, project construction would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, project impacts would be less than significant, and no mitigation is required.

Table 4.5-4. Construction Worker Vehicle Gasoline Fuel Use

Phase	Total One-Way Trips/Day	Total Days	Trip Length (miles)	Total Vehicle Miles Traveled (VMT)	Gasoline Fuel Efficiency (miles/gallon)	Fuel Usage (gallons/year)
Site Preparation	8	10	14.70	1,176	22.0	53
Grading	10	20	14.70	2,940	22.0	133
Building Construction	16	200	14.70	47,040	22.0	2,138
Paving	13	10	14.70	1,911	22.0	86
Architectural Coating	3	10	14.70	441	22.0	20
Total Gasoline Fuel Usage						**2,430**

Sources: CalEEMod and EMFAC2017 (CARB 2019).
CalEEMod = California Emissions Estimator Model
CARB = California Air Resources Board

Operation

Energy use consumed during operation of the proposed Project would be associated with electricity consumption and gasoline to fuel project-related vehicle trips. In addition, electricity and natural gas use was estimated for the Project using default energy intensities by land use type in CalEEMod. Table 4.5-5 illustrates the estimated increase in electricity, natural gas, and fuel demand associated with the proposed Project. Although Table 4.5.E shows a significant increase in energy use from the Project sites current vacancy to operation, the Project has been designed and will comply with the County's Green Building Standards and the State's CALGreen Building Code. The Project will include such energy efficient standards of which will reduce energy consumption impacts to less than significant by including energy efficient lighting and appliance fixtures, energy-efficient heaters and air conditioning systems, and/or other appliances. By virtue of compliance with these codes, operation of the Project would not cause wasteful, inefficient, or unnecessary consumption of energy resources.

Table 4.5-5. Existing and Estimated Annual Energy Use at the Proposed Project

Land Use	Electricity Use (kWh/year)	Natural Gas Use (therms/year)	Residents, Employees, and Visitors Vehicles Gasoline (gallons/year)
Existing Energy Usage			
Vacant Lot	0	0	0
Proposed Project Energy Usage			
Dwellings	106,311	363,120	24,906
Net Energy Usage	**106,311**	**363,120**	**24,906**

Source: CalEEMod (California Emissions Estimator Model)

Threshold EN-2 *Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

Less than Significant Impact. Energy usage on the Project site during construction would be temporary in nature as mentioned previously in Threshold EN-1. In addition, energy usage associated with operation of the proposed project would be relatively small in comparison to the State's available energy sources for which a majority of the energy will be consumed once the Project is occupied will be related to lighting, cooling, and ventilation. Also, California's energy conservation planning actions are conducted at a regional level, and such impacts resulting from the project would be negligible and would not conflict with or obstruct California's energy conservation plans as described in the CEC's 2019 Integrated Energy Policy Report.

The proposed Project would be required to comply with the California Building Code (CBC) and the CALGreen Code pertaining to energy and water conservation standards in effect at the time of construction plan check submittal to the City and ultimately construction of the renewable energy and energy efficiency. Impacts would be less than significant, and no mitigation is required.

4.5.7 Cumulative Impacts

Less than Significant Impact. The areas considered for cumulative impacts to electricity and natural gas supplies are the service areas of SCE and SoCalGas, respectively, described above in Section 4.5.5 Threshold EN-1. Other projects would generate increased electricity and natural gas demands. However, all projects within the SCE and SoCalGas service areas would be required to comply with the Building Energy Efficiency Standards and CALGreen, which would contribute to minimizing wasteful energy consumption and promoting renewable energy sources. Therefore, cumulative impacts would be less than significant, and project impacts would not be cumulatively considerable.

4.5.8 Summary of Mitigation Measures

Impacts would be less than significant, and no mitigation is required.

4.5.9 Significant Environmental Impacts

The analysis above indicates that the project will not exceed significance criteria for energy conservation impacts. Therefore, all energy conservation impacts are **less than significant**, and no mitigation measures are required.

4.5.10 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

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California Energy Commission, Energy Consumption Data Management System (CEC ECDMS), California Energy Consumption Database, Electricity Consumption by Entity, interactive web tool. http://www.ecdms.energy.ca.gov/elecbyutil.aspx. (Accessed October 7, 2021).

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4.6 Geology and Soil

This section describes the geologic and seismic conditions within the Project area and evaluates the potential for geologic hazard impacts associated with implementation of the proposed Project. This section is based in part on the following reports included in the Appendix F to this EIR:

F.1 *Response to Questions Regarding Geotechnical Review*, February 3, 2022, American Geotechnical, Inc.
F.2 *Addendum Report – Adding Geology to Current Site Plan*, May 28, 2021, American Geotechnical, Inc.
F.3 *Response to City of Laguna Niguel Geotechnical Review Sheet* Dated February 15, 2021 and *Notice of Incompleteness* Dated February 23, 2021, April 2, 2021, American Geotechnical, Inc.
F.4 *Geotechnical Review of Tentative Tract Map*, January 8, 2021, American Geotechnical, Inc.

The Geotechnical Reports for the Project were reviewed by the City's geotechnical consultant, Goffman, McCormick, and Urban Geotechnical Inc. (GMU) and conditionally approved on June 24, 2021 (Appendix F).

4.6.1 Setting

Geologically, the City and the proposed Project site are within the eastern portion of the San Joaquin Hills, a part of the Peninsular Ranges Geomorphic Province of Southern California. These hills are the product of the environmental conditions that have shifted and shaped the terrain during geologic time. The tectonic forces acting on the Peninsular Ranges over the past 1–2 million years have broadly compressed and warped geologically young marine sediments from the sea to elevations over 1,000 feet in these hills. These bedrock sediments have been continuously worn by erosion into the subtle, rolling hillsides characteristic of southern Orange County.

4.6.2 Existing Conditions

The Project site lies directly west of Crown Valley Parkway in the City of Laguna Niguel, approximately 40 vertical feet above the distal Arroyo Salado Valley (i.e., Salt Creek). From a regional standpoint, the parcel lies within the southwestern portion of the San Juan Capistrano 7.5-Minute Topographic Quadrangle Map (USGS, 1968, photo revised 1981). Elevations along Crown Valley Parkway are on the order of 360 feet above mean sea level (msl). A 2:1 (horizontal:vertical) fill slope on the order of 10 feet in height occurs along the east Project boundary above Crown Valley Parkway. This slope ascends to a relatively flat-lying, nearly rectangular-shaped pad area comprising the east area of the Project (Lot 1). This pad area has elevations of around 370 feet msl on the east and 380 feet msl on the west. An east-facing fill slope of varying steepness extends on the order of around 160 feet in height. It ascends from the western edge of the lower pad to another

gently sloping surface. This upper surface extends between elevation 440 on the east to the western property boundary at around 450 feet in elevation msl.

As detailed in the following subsections, the Project site was previously developed with 41 condominiums in 1979. In 1998, the Via Estoril Landslide occurred damaging many of the condominiums and nine single-family homes further upslope and to the west, along Via Estoril Drive. The landslide was repaired between 1998 and 2000 with the construction of structural elements and grading of the site. Specifically, repair work involved installation of a caisson wall (64 caissons) with 414 tieback anchors and walers, removal of the 41 Crown Cove condominium buildings and associated structures, partial removal of the landslide mass, re-compacting and re-contouring the slope, installation of subdrains, and construction of a compacted fill buttress. During the remediation, manufactured slopes were created on the Property, which altered and graded the Property's natural topography and terrain. The repair work involved a site development permit approved by the City in 1999 and was overseen by a variety of consultants and technical experts, including American Geotechnical, Inc. (American Geotechnical) representing the Niguel Summit Homeowners Association. American Geotechnical developed the plans for construction including refinements, calculations, details, structural analysis and the preparation of the repair plans and provided the field services during the construction of the stabilization measure for the landslide.

Subsequent to the hillside remediation, routine and scheduled monitoring and investigation activities have been conducted on the landslide area to identify further landslides or settlement. Slope inclinometers were installed on the landslide slope to monitor slope displacement caused by expected downhill creep. Overall, minor creep movement has been detected during the 20 years of monitoring and these low rates of movement are consistent and expected with the landslide and buttress reaching equilibrium. The magnitude of the total movement is very small which can be expected in any hillside area consisting of clayey earth materials, particularly in southern California. The previously measured creep movement is expected to continue at a slow and manageable rate as the area continues to reach equilibrium. The slope creep is not an indication of slope instability.

Piezometers were installed to monitor groundwater levels, with readings suggesting groundwater levels are stable. The long-term trend in groundwater elevation is relatively stable, with no significant fluctuation during heavy rain years. The main factor contributing to stable groundwater levels is the in-place subdrain system installed during the landslide remediation, which according to the geotechnical study, is performing and functioning well. As such, piezometer readings in past monitoring sessions show the groundwater levels without significant fluctuation.

The underground and surface storm drain system was also reviewed by American Geotechnical, and it was determined the storm drain system installed as part of the remediation is properly functioning.

Based on American Geotechnical's ongoing monitoring and investigation activities that have taken place subsequent to the landslide, and recently as part of the proposed Project and prior development proposals, the landslide has come to equilibrium. Measured slope creep is typical of other slopes in the City and Orange County containing diatomaceous oriented bedrock.

On-site Geologic Units

The following topics discussed are the bedrock formations, surface deposit units, and two distinct generations of artificial fill which are each described in more detail below. Each are listed in age from oldest to youngest and are referenced below in the geology map Figures 4.6.A, and the detailed cross sections from the geology map in Figures 4.6.B, and 4.6.C.

San Onofre Breccia Formation

The San Onofre Breccia bedrock formation occurs west of a north-trending fault (CDMG) transecting the southwestern corner of the site (Figure 4.6.A, map symbol Tso). Indirect evidence supports its occurrence based on the presence of breccia-type bedrock encountered within the residual Via Estoril Landslide deposit. Its presence within the Via Estoril slide block is expected given its original location offsite and upslope.

At the center of the Project site, the breccia-type bedrock deposits include sandstone, claystone, and interbedded pebble to cobble breccia with clasts mostly composed of quartzite, quartz-schist, blue-green schist and gabbro. The sandstones and breccia are medium hard to hard and massive to crudely-bedded, while the clay stones are soft, plastic, sheared, and damp. In some areas the breccia-type deposits interfinger with the Monterey Formation forming a single undifferentiated unit.

Monterey Formation

The Monterey Formation occurs generally to the east of the CDMG fault trace (Figure 4.6.A, map symbol Tm). It interfingers with the San Onofre Breccia forming an undifferentiated unit within the central portion of the site. It occurs as a stand-alone formation to the east between two fault traces.

Monterey Formation bedrock encountered on site generally consists of thinly bedded diatomaceous siltstone to shale that is soft to moderately firm and locally indurate. The locally diatomaceous nature of the Monterey Formation materials are characterized by low dry unit weight.

Undifferentiated San Onofre Breccia/Monterey Formation (Map Symbol Tso/Tm)

As noted previously, the center of the Project site contains interfingered deposits from the San Onofre and Monterey Formations forming a single undifferentiated unit (Figure 4.6.A, map symbol Tso/Tm).

Capistrano Formation (Map Symbol Tc)

Capistrano Formation bedrock is depicted in regional geologic maps within areas to the north and south of the site. It is known to exist near the Monterey Formation and consists of very similar rock types, suggesting the Capistrano Formation bedrock is nearby. Prior investigations and grading reports reveal this bedrock unit also occurs in fault contact with the Monterey Formation along a north-trending fault beneath the extreme easterly margin of the site.

Within the local area, the Capistrano formation commonly overlies the Monterey Formation creating bedrock that is difficult to distinguish from one another. However, geotechnical map data obtained from the adjacent tract to the north was used to project bedrock types onto the Project site (Figure 4.6.A, map symbol Tc). The Capistrano Formation crosses only a small portion of the northwestern site corner. This unit generally consists of clayey siltstone to silty claystone and local fine-to-medium grained sandstone. Deeper unoxidized parts of the formation tend to be black in color and omit a petroliferous odor. The rock is moderately firm, locally diatomaceous, and poorly bedded to massive.

Older Quaternary Landslide Deposits (Map Symbol Qlso)

Regional geologic maps published in 1974 indicate the presence of several large landslides upslope from the site to the west (Figure 4.6.A, map symbol Qlso). These large landslides occurred within and are underlain by the San Onofre Breccia. The development implications of these slides were addressed long ago during construction of the adjacent tract to the west. The 1974 regional geologic maps did not map any landslides within the area of the 1998 Via Estoril slide. Investigations conducted as part of the Via Estoril slide revealed the presence of an older existing landslide surface with a deeper rupture surface than the Via Estoril slide. The investigations concluded the older, deeper rupture had moved within the area offsite to the northwest. The deeper rupture was accounted for as part of the remedial grading design to stabilize the Via Estoril slide.

Recent Landslide Deposits (Map Symbol Qlsr)

Landslide deposits from the Via Estoril slide are buried beneath engineered fill along the western margins of the site in the steeper areas of Lot A (Figure 4.6.A, map symbol Qlsr). The slide deposits left in place following remedial grading consist of San Onofre Breccia bedrock. The material has the appearance of intact bedrock, apparently due to sliding of a significant portion of the landslide mass. This characteristic of the stabilized landslide material suggests there is little or no settlement risk associated with the existence of the stabilized landslide material in the steeper portions of the site.

Engineered Fill Deposits (Map Symbol Ef1)

Engineered fill deposits classified as Ef1 were placed during construction of the original townhome development at the site in 1979. These fills were placed under the observation and testing of Geosoils, Inc., as documented during final grading. The original limits of this fill were modified by subsequent grading associated with stabilization of the Via Estoril Landslide. In general, deposits of this fill remain in their original configuration within the eastern areas of the property, including the fill slope descending to Crown Valley Parkway (Figure 4.6.A, map symbol Ef1). The fill in this area was originally placed to a maximum depth of 14 feet, not including removals. The deeper fills were concentrated toward the southeasterly corner of the property in the vicinity of the former tributary channel.

Ef1 fill deposits occur along the eastern area of the site and consists of on-site sources of surficial, bedrock and older undocumented fill units. The fill was found to thicken from around 5 feet on the north to 25 feet near the southeastern corner of the site. The differences in fill thickness are attributed to tributary channels that required filling and older deep alluvium deposits that required greater depths of removal in contrast to the near-surface bedrock on the north that required less removal. The approximate subsurface location of the Ef1 fill is noted in cross sections presented in Figures 4.6-B and 4.6-C. The fill consists of variable lifts of clay, silty clay, and gravelly sands that upon investigation were found to be very competent, uniformly moist, and dense/stiff.

Engineered Fill Deposits (Map Symbol Ef2)

New engineered fill deposits placed during remedial grading after the Via Estoril Landslide are designated as Ef2 (Figure 4.6-A, map symbol Ef2). These fills were placed under the observation and testing of American Geotechnical, Inc., and documented during the final landslide repair. These fills are diatomaceous in nature and are characterized by low density and very high moisture. The eastern limits are generally coincident with the toe of an existing east-facing fill slope and a large gravity buttress. The western fill limits extend offsite into the Niguel Summit property abutting the east frontage of Via Estoril. The north and south fill limits generally follow the boundaries of the site. The thickest portions of this fill occur within the area of the gravity buttress along the western site margin where it extends up to around 75 feet below existing grades. The Ef2 fill deposits were also encountered within the central and west areas of the site.

The Ef2 fill was obtained from both on-site and off-site/imported sources. The approximate subsurface location of the fill is presented in cross sections Figure 4.6.B and Figure 4.6.C. The fill consists of variable lifts of clay, silty clay and gravelly sands that upon investigation were found to be very competent, uniformly moist and dense/stiff. Some of these fill areas contain diatomaceous soils characterized by lower density and very high moisture. These fill materials typically possess highly expansive and highly corrosive characteristics.

Subsurface Conditions

Groundwater Conditions

The presence of groundwater beneath the Project site is influenced by subsurface conditions upslope to the west. As previously stated, this area underwent significant grading modifications between 1998 and 2000 during the Via Estoril Landslide repair and construction work. Construction included installation of an extensive network of subdrains to control groundwater. These drains continue to perform as designed, minimizing the quantity of groundwater beneath the Project site.

Groundwater conditions offsite to the west largely occur in a narrow- zone above removal bottoms at the base of the fill. On the western margins of the site in Lot A, the thickness of fills and depth to groundwater is approximately 65 to 80 feet below existing grades.

Within the boundaries of the site, similar groundwater areas exist in narrow zones above the natural bedrock alluvium fill deposits. The depths of water beneath the central and eastern areas of the site range from approximately 35 to 40 feet below existing grades.

The long-term trend in groundwater elevation is relatively stable, with no significant fluctuation during heavy rain years. The main factor contributing to stable groundwater levels is the in-place subdrain system installed during the landslide remediation is performing and functioning well. As such, piezometer readings in past monitoring sessions show the groundwater levels without significant fluctuation.

Non-Seismic Geologic Constraints

Erosion

The erosion potential of soil is governed by the physical properties of the soil along with environmental factors such as rainfall, wind, topography, and vegetative cover. Erosion typically occurs from concentrated runoff on unprotected slopes or along unlined channels underlain by relatively erosion-prone earth materials (e.g., topsoil, soft alluvium, weakly cemented sandstone).

Slopes surrounding the site have been mass graded, constructed at slope ratios around 2:1 (horizontal:vertical), have a thick stabilizing cover of vegetation, and are equipped with a network of surface drains to prevent concentrated erosion. No tributary canyons or natural hillside areas remain on the site or within the adjacent areas.

Expansive Soils

Expansive soils typically contain certain clay minerals that expand in volume when they are wet or hydrated and occupy a larger volume than when they are dry or dehydrated. Volume changes associated with changes in the moisture content of near-surface expansive soils can cause uplift or

heave of the ground when they become wet or, less commonly, cause settlement when they dry out.

The Project site is largely overlain with engineered fill which consist of variable lifts of clay, silty clay, and gravelly sands that were found to be very competent, uniformly moist, and dense/stiff and the expansion potential ranges from very low to medium. The expansion potential of the old fill at a depth of 30 feet is considered to be medium.

Settlement or Subsidence

Settlement or subsidence is the ground surface cracking in response to deep groundwater or petroleum withdrawal. This phenomenon can also occur where loose and/or porous and compressible earth materials are compressed by a body of overlying fill, in areas underlain by artificial fills having low relative densities and/or dryer than optimum moisture contents. Settlement occurs when stressed by the weight of a structure, as well as the weight of the earth materials. Settlement can also be aggravated by the introduction of water to the subsoil. Fill material and natural soil tend to be more compressible than bedrock materials (e.g., many "cut" areas).

Settlement potential usually increases with an increase in the depth of fill and natural soil (e.g., compaction). Where the depth of fill and natural soil vary, such as in areas where transitions and/or contacts exist between earth units having differing settlement potentials, the potential for differential settlement increases. The amount of differential settlement is of most concern since differential movements can result in distress. New fills also commonly undergo a certain degree of settlement both during and for a period of time following its placement. The amount of settlement is generally based on its thickness and other conditions of placement.

The development portion of the Project site is located on top of approximately 70 feet of previously compacted fill from the previous 41-unit development. This fill was never part of the landslide and has never shown any signs of instability. Given the timeframe in which the fill was placed, substantial amounts of further settlement are not expected to occur.

Seismically Induced Hazards

Ground Shaking and Surface Fault Rupture

The southern California region contains a wide variety of active faults. The occurrence of moderate and larger sized earthquakes is common within the region.

The nearest known active fault is the Newport-Inglewood Fault, approximately 4.3 miles to the west of the Project site. Ground shaking at the site generated by an earthquake on one or more of the active faults within the region will produce noticeable ground shaking. Homes throughout most areas of southern California can be expected to experience moderate to strong ground shaking.

The primary seismic effects associated with earthquakes are ground shaking and surface fault rupture. Ground shaking is typically considered the greatest source of potential damage to structures. Seismic shaking is characterized by the physical movement of the land surface during and subsequent to an earthquake which has the potential to cause destruction and damage to buildings and property. This includes damage resulting from damaged or destroyed gas or electrical utility lines; blockage of surface seepage and groundwater flow; changes in groundwater flow; dislocation of street alignments; displacement of drainage channels and drains; and possible loss of life. In addition, ground shaking can induce several kinds of secondary seismic effects, including liquefaction, lateral spreading, differential settlement, and landslides, all of which are described below.

The intensity of seismic shaking during an earthquake depends largely on nature of the geologic units and materials comprising the upper several hundred feet of the earth's surface. The greatest amplitudes and longest durations of ground shaking occur on thick, water-saturated, unconsolidated alluvial sediments. Ground shaking can also cause ground failure or deformation due to lurching and liquefaction.

Surface rupture is the displacement and cracking of the ground surface that occurs along a fault trace. Unlike seismically induced ground shaking, which can affect a wide geographic area, surface rupture is confined to the area very near the fault.

As previously mentioned above, no known active faults are mapped as crossing the site or surrounding regions in close proximity to the site. Nor is the site and surrounding region depicted on any current Alquist-Priolo Earthquake Fault Zone Maps issued by the State of California. The nearest active fault to the site lies around 4.3 miles to the west, consisting of the Newport-Inglewood Structural Zone, a northwesterly trending strike-slip fault that crosses the western onshore margin of the Los Angeles Basin and extends offshore into the Continental Borderland.

Liquefaction and Ground Settlement

Seismic ground shaking of relatively loose granular soils that are saturated or submerged can cause the soils to liquefy and temporarily behave as a dense fluid, causing liquefaction. This loss of support can produce local ground failure such as settlement or lateral spreading that may damage overlying improvements. According to the current seismic hazard zone maps issued by the State of California, the site is not located within the boundaries designated for investigation of earthquake-induced liquefaction. The site earth materials consisting of predominantly clayey soil and rock types mitigate against risk of liquefaction.

Source: American Geotechnical, Inc. (05/2021).

Figure 4.6.A Preliminary Geotechnical/Geologic Map

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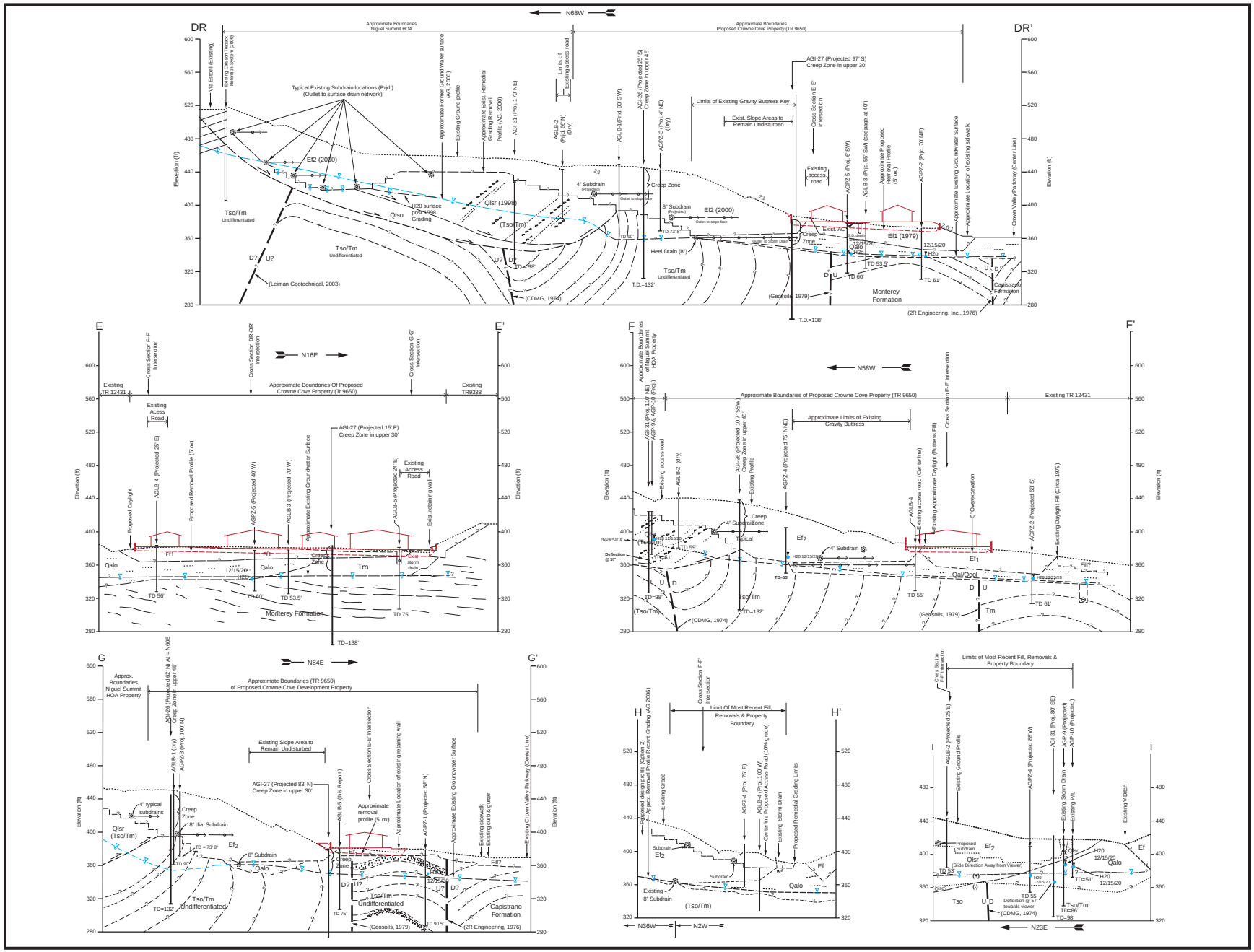

Source: American Geotechnical, Inc. (01/2021).

Figure 4.6.B Geotechnical Cross Sections

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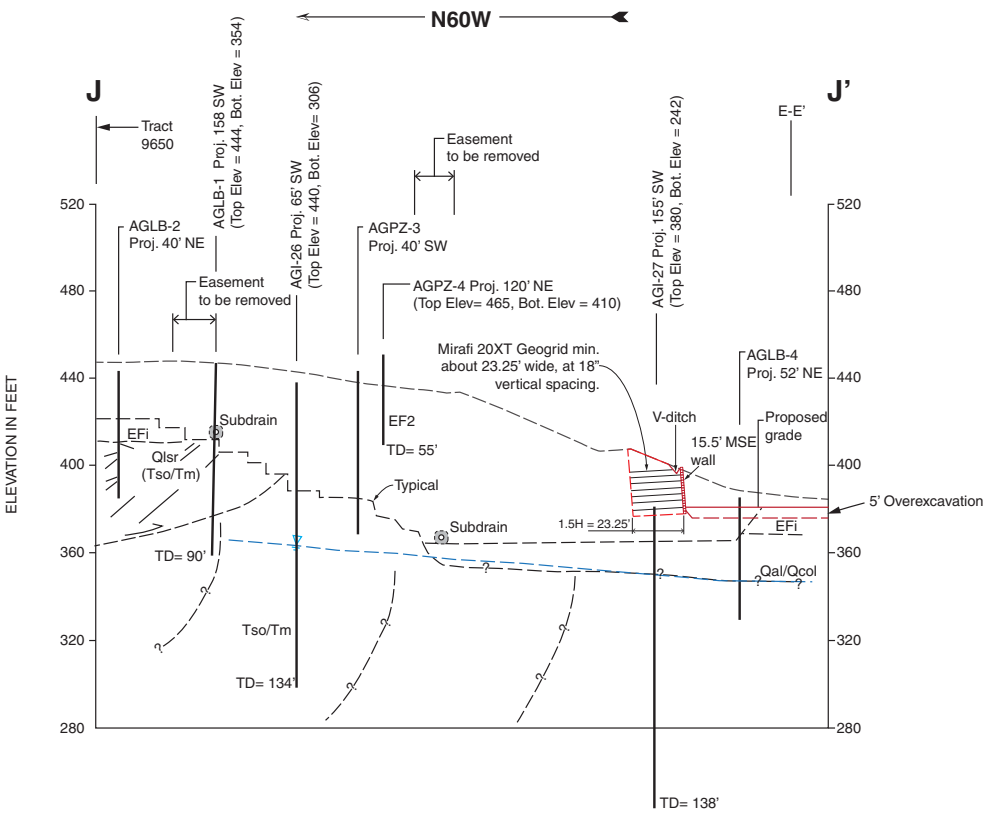

Source: American Geotechnical, Inc. (01/2021).

Figure 4.6.C Geotechnical Cross Section J-J

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Slope Instability and Seismically Induced Landslide

As previously stated, the 1998 landslide has been successfully remediated. Minor low-level downhill creep of the remaining portion of the central landslide, located offsite to the west, has occurred and is possible in the future. Such movements are expected to be of low magnitude, and according to the Project's geotechnical report prepared by American Geotechnical there have been no significant lateral movement or adjustments observed at the Project site.

According to the current seismic hazard zone maps issued by the State of California, a majority of the site is located outside the boundaries designated for investigation of earthquake-induced landsliding.

Paleontological Resources

The Project site bedrock units include the Middle- Miocene age San Onofre Breccia (Tso) and Monterey Formations (Tm), Undifferentiated Tso/Tm, the late Miocene to Pliocene age Capistrano Formation (Tc), Older Quaternary (Qlso).

A small portion of the northeastern corner of the site is underlain by the Capistrano Formation. The Capistrano Formation consists of marine shales and sands dating to the late Miocene and early Pliocene. This formation has provided many highly significant fish and marine mammal fossils. Capistrano Formation has a very high sensitivity for paleontological resources, which means fossils are considered scientifically significant and important for research.

4.6.3 Related Policies and Regulations

Federal Regulations

There are no federal regulations that are applicable to geology and soils resources relevant to the proposed Project.

State Regulations

Alquist-Priolo Earthquake Fault Zoning Act

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

human occupancy cannot be placed over the trace of the fault and must be set back from the fault (generally 50 feet) (California Department of Conservation 2013).

Seismic Hazards Mapping Act of 1990

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

California Building Code

CCR Title 24 (California Building Code [CBC]) applies to all applications for building permits. The CBC (also called the California Building Standards Code) has incorporated the International Building Code, which was first enacted by the International Conference of Building Officials in 1927 and has been updated approximately every 3 years since that time. The current version of the CBC (2019) became effective on January 1, 2020.

Local agencies must ensure that development in their jurisdictions complies with guidelines contained in the CBC. Cities and counties can, however, adopt building standards beyond those provided in the code.

State Water Resources Control Board Construction Storm Water Program

Dischargers whose projects disturb 1 or more acres of soil or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit under Order 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation. The Construction General Permit requires the completion and implementation of a site-specific Storm Water Pollution Prevention Plan (SWPPP).

California Public Resources Code Section 5097.5

Public Resources Code (PRC) Section 5097.5 provides for the protection of cultural and paleontological resources and prohibits the removal, destruction, injury, or defacement of archaeological and paleontological features on any lands under the jurisdiction of State or local authorities.

Local Regulations

Laguna Niguel General Plan

The Laguna Niguel General Plan (LNGP) contains goals, policies, and plans that are intended to guide land use and development decisions. The Open Space/Parks/Conservation Element was designed to ensure the conservation of important historical, archaeological, and paleontological resources. Relevant policies regarding paleontological resources are listed below.

Open Space/Parks/Conservation Element

Goal 6.0. Carefully review sensitive hillside areas within the community.

- **Policy 6.2.** Consider significant natural features, including sensitive hillsides and ridgelines as part of the development process.

Goal 7.0. Recognize significant cultural sites or features within the community.

- **Policy 7.2.** Require mitigation of impacts to significant areas of archaeological and paleontological resources.
- **Policy 7.3.** Preserve uncovered resources in their natural state, as much as feasible to assure their preservation and availability for later study. Require that uncovered resources are documented and retained in an appropriate museum or institution.

Seismic/Public Safety Element

The City is in a seismically active region. The intent of the following goals and policies is to reduce the potential for loss of life, injury, or property damage from flooding, seismic, or other geologic hazards.

Goal 1. A reduction of impacts from natural hazards that may affect the City of Laguna Niguel.

- **Policy 1.1.** Mitigate potential adverse impacts of geologic and seismic hazards.
- **Policy 1.3.** Develop plans and programs to mitigate the effects of natural hazards.

4.6.4 Thresholds of Significance

Criteria for determining the significance of impacts related to geology and soils are based on criteria contained in Appendix G of the State CEQA Guidelines and the City's CEQA Manual. The proposed Project could have a significant impact on the environment if it would result in any of the following.

Threshold GEO-1.i *Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving 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?*

Threshold GEO-1.ii *Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?*

Threshold GEO-1.iii *Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?*

Threshold GEO-1.iv *Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?*

Threshold GEO-2 *Result in substantial soil erosion or the loss of topsoil?*

Threshold GEO-3 *Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?*

Threshold GEO-4 *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?*

Threshold GEO-5 *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?*

Threshold GEO-6 *Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?*

Methodology

To evaluate potential hazards related to the Project pertaining to its geologic and soils conditions, a Geotechnical Report was prepared by American Geotechnical, Inc. (American Geotechnical) (Appendix F), which included field exploration (i.e., an exploratory soil boring), inclinometer readings, and laboratory testing to determine the characteristics of the subsurface conditions at the Project Site. In addition, relevant literature and materials were reviewed as part of the Geotechnical Report. The Project Site was explored by American Geotechnical in December of 2020 to verify site conditions. American Geotechnical was also the Engineer of Record during completion of the late 1998 - 2000 mass grading operations and structural slope system installed within the steep hillsides of the Project site and beyond as part of the 1998 Via Estoril Landslide slope remediation. The Geotechnical Reports were peer reviewed by the City's geotechnical consultant, Goffman, McCormick, and Urban Geotechnical Inc. (GMU) and conditionally approved.

4.6.5 Project Design Features and Standard Conditions of Approval

PDF GEO-1 The Project is to be subdivided into two lots, Lot 1 and Lot A. Lot 1 includes the 2-acre residential area and Lot A includes the 2.2-acre area of open space which consists of the previously remediated landslide and includes the 30-foot earthen "buttress" (a design feature previously approved and installed for geotechnical assurance of future landslide), planted erosion control, and installed storm drain system. Since Lot A is a lettered lot on the tentative tract map and no residential development is allowed on lettered lots, no residential home construction would occur on the remediated hillside.

PDF GEO-2 The residential building pads within Lot 1 will include Mechanically Stabilized Earth (MSE) walls up to 15.5 feet tall along the west perimeter of Lot 1 and 3.5 feet to 6 feet high along the east perimeter of Lot 1. The perimeter MSE walls bounding the west margin of the building pads and the 2:1 (horizontal:vertical) cut slope at the southwest margin of the building pads will be located at the toe of the compacted fill buttress built to stabilize the Via Estoril Landslide remediation.

In addition to the MSE walls, a series of retaining walls is proposed. On the north perimeter of Lot 1, a two-tier retaining wall is proposed. The upper tier retaining wall is up to 5 feet high and the lower tier retaining wall is 3.5 feet to 6 feet high. Up to 6-feet high radiant heat walls with or without retaining walls up to 4.3 feet high are also proposed surrounding Buildings 4 and 5 located on the south portion of Lot 1. An up to 6.5-foot-high retaining wall is also proposed on the west side of Building 5. An up to 2-foot-high retaining wall is proposed to be constructed along the 15-foot-wide access road located on the southeast side of Lot A adjacent to the proposed MSE walls along the west perimeter of Lot 1. All proposed slopes will have a slope ratio of 2:1 (horizontal:vertical) and if supporting a MSE or retaining wall, material must be approved fill.

MSE walls and retaining walls must be designed in accordance with the recommendations included in the Geotechnical Reports.

PDF GEO-3 Prior to the issuance of a grading permit, the Applicant shall prepare a final geotechnical report based on the final rough grading plans and the final geotechnical report shall incorporate all of the recommendations included in the preliminary geotechnical reports included in Appendix F. The preliminary geotechnical reports included in Appendix F have established that the site is geotechnically suitable for development and a final geotechnical report is required to ensure all construction-level geotechnical recommendations and design parameters are included on the final rough grading plans.

SCA GEO-1 Applicant shall comply with the most current City building codes and CBC requirements, which stipulates appropriate seismic design provisions that shall be implemented with Project design and construction such as but not limited to the following:

- Temporary cuts shall be 1:1 (horizontal:verticle) and limited to 4 feet high.
- All buildings shall be designed with structural slabs/mat slabs to account for expansive and other soil influences.
- All walls shall be provided with an adequate backdrain system.
- All retaining walls shall be waterproofed from above the highest point of earth retained to the heel of the foundation or pile grade beam.
- Retaining wall backfill shall be placed in thin lifts (6 to 8 inches) and compacted by mechanical means.

SCA GEO-2 The proposed Project shall prepare and implement a SWPPP, in accordance with the Construction General Permit. The SWPPP shall list best management practices (BMPs) that shall be implemented to protect stormwater runoff and would include monitoring of BMP effectiveness. At a minimum, BMPs shall include practices to minimize the contact of construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, adhesives) with stormwater. The SWPPP shall specify properly designed centralized storage areas that keep these materials out of the rain. If grading must be conducted during the rainy season, the primary BMPs selected shall focus on erosion control (i.e., keeping soil particles from detaching) and sediment control (i.e., keeping sediment on the site after it has been detached). Standard practices to be included in the SWPPP are as follows:

- Protect all storm drain inlets and streams located near the construction site to prevent sediment-laden water from entering the storm drain system.
- Prevent erosion by implementing one or more of the following soil stabilization practices: mulching, surface roughening, permanent or temporary seeding.
- Limit vehicular access to and from the project site. Stabilize construction entrances/exits to minimize the track out of dirt and mud onto adjacent streets. Conduct frequent street sweeping.
- Protect stockpiles and construction materials from winds and rain by storing them under a roof, secured impermeable tarp or plastic sheeting.
- Avoid storing or stockpiling materials near storm drain inlets, gullies or streams.
- Phase grading operations to limit disturbed areas and duration of exposure.
- Perform major maintenance and repairs of vehicles and equipment off site.

- Wash out concrete mixers only in designated washout areas at the construction site.
- Set up and operate small concrete mixers on tarps or heavy plastic drop cloths.
- Keep construction sites clean by removing trash, debris, wastes, etc. on a regular basis.
- Clean up spills immediately using dry clean-up methods (e.g., absorbent materials such as cat litter, sand or rags for liquid spills; sweeping for dry spills such as cement, mortar or fertilizer) and by removing the contaminated soil from spills on dirt areas.
- Maintain all vehicles and equipment in good working condition. Inspect frequently for leaks, and repair promptly.
- Cover open dumpsters with secured tarps or plastic sheeting. Clean out dumpsters only in approved locations on the construction site.
- Arrange for an adequate debris disposal schedule to ensure that dumpsters do not overflow.

SCA GEO-3 Mitigation of potential adverse impacts of geologic and seismic hazards through planning, design, and construction of Project by adhering to applicable City ordinances, policies of the current California Building Code (CCR Title 24), and per the results and recommendations of the geological study as seen in Appendix F.

4.6.6 Environmental Impact Evaluation

Threshold GEO-1.i *Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving 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?*

Less Than Significant Impact. As stated previously, the Project site is not within a State of California defined Alquist-Priolo Earthquake Fault Hazard Zone and no known active faults transect the site. However, similar to much of Southern California, the Project site may be subject to some level of damaging ground shaking as a result of movement along the major active (and potentially active) fault zones that characterize this region. According to the Preliminary Geotechnical Investigation, the site is designated as Site Class C, which states that Geologic evidence is insufficient to demonstrate the existence of tectonic fault, or Quaternary slip or deformation associated with the feature, and more specific describes the Project site to have very dense soil and soft rock soil profiles. Based on the above, the potential threat to the site from a surface rupture hazard is considered low. Therefore, fault rupture is very unlikely at the Project site resulting in a less than significant impact. No mitigation is required.

Threshold GEO-1.ii *Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?*

Threshold GEO-3 *Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?*

Less than Significant Impact. Similar to all of the Southern California region, the Project site would be subject to moderate to strong ground shaking in the event of a major earthquake. Strong seismic shaking effects on the proposed Project resulting from large earthquakes originating from nearby faults could include landslides, ground cracking, and settlement. These effects are dependent on onsite geology and on the distance between the proposed Project area and the causal fault as previously mentioned. These faults include the Newport-Inglewood Fault, the San Joaquin Hills Fault, the Elsinore Fault, the Whittier Fault, and the San Andreas Fault. As a result, the proposed Project could be subject to future seismic shaking and strong ground motion resulting in structural damage.

Construction of the proposed project would be subject to applicable ordinances and requirements of the current California Building Code (CCR Title 24). The CBC provides requirements for foundation strength, tie-downs, shear strength, and other building requirements designed to withstand significant ground-shaking. Standard condition of approval **SCA GEO-1** notes the Project would be required to comply with the building design standards of the state and City. These standards require specific building design and construction practice appropriate for the City's earthquake zone.

Since the landslide that impacted the Project site in 1998, an extensive geotechnical repair was made to the hillside and the project geologists have had 20 years of monitoring of the repair. There are many other examples of repaired landslides in Southern California, but very few, if any, have the benefit of 20 years of monitoring prior to rebuilding.

As previously discussed in Section 4.6.2, during the past 20 years, geologists have been monitoring slope inclinometers. Slope inclinometers are measuring devices installed at depth in drilled wells. These devices can measure very slight movement of a hillside at various depths. The two decades of monitoring provide data that conclude there is no major landslide/hillside stability issues and only slight movement has been detected. This slight movement is indicative of the landslide and buttress settling to equilibrium and expected surficial slope creep, which is consistent with slopes and hillside areas consisting of clayey earth materials throughout Southern California. As a result, the anticipated slow rate of on-going creep movement in combination with the prior slope remediation would not cause a significant impact to the proposed development.

In addition to inclinometers, geologists installed peizometers to monitor groundwater levels. Groundwater is an important component of slope stability and measuring groundwater regularly can give an indication of potential future stability issues. The piezometers have provided data showing stable groundwater levels. The stable groundwater levels are primarily due to the properly functioning surface and subsurface drainage facilities constructed as part of the remediation.

Although a prior proposal included residential development on the upper western portion of the site and was shown to be geotechnically stable, receiving conditional approval from the City's geotechnical consultant in 2013, the proposed Project, unlike the prior proposal, places the upper 2-acre portion of the site in a lettered lot on the tract map as outlined in project design feature **PDF GEO-1**. Since Lot A is a lettered lot on the tentative tract map and no residential development is allowed on lettered lots, no residential home construction would occur on the remediated hillside. Lot A would provide an open space area, access for maintenance, and an area for passive recreational activities.

The proposed Project includes a Mechanically Stabilized Earthen wall (MSE) at the toe of the slope of the landslide remediation area. The MSE wall is designed with geogrid, which extends back into the hillside for additional stability. The MSE wall also has some flexibility to account for slope creep or expansive soils. The Geotechnical Reports have analyzed the MSE wall location and design and determined it would not be detrimental to slope stability.

Factor of safety is a measurement of slope stability in different conditions. There is a long-term static factor of safety, which must be a minimum of 1.5, and a short-term pseudostatic/seismic minimum factor of safety of 1.1. The April 2, 2021, Geotechnical Report (American Geotechnical, Inc. Response to Comment No. 3, April 2, 2021) provides factor of safety calculations based on three different methodologies and cross-sections. The long-term factor of safety calculations are 1.823, 2.203, and 2.308, all of which exceed the minimum 1.5 factor of safety. The short-term pseudostatic/seismic factors of safety are 1.267, 1.601, and 1.264, all of which exceed the minimum 1.1 factor of safety.

In accordance with the project design features to maintain the existing remediated slope as open space (**PDF GEO-1)**, the installation of proposed MSE walls at the toe of the remediated slope (**PDF GEO-2)**, and inclusions of geotechnical recommendations into the rough grading plans (**PDF GEO-3)**, the Project site, including Lot A, would have factors of safety in excess of the minimum standards. Therefore, the Project site, including Lot A, would perform acceptably in response to strong seismic ground shaking from a regional earthquake of major magnitude and poses a less than significant risk from a future landslide or related geologic failure.

With implementation of proper grading and earthwork, slope stability, retaining walls, seismic design, construction materials, geotechnical observation, and testing and plan review in

accordance with standard conditions and Project design, impacts from strong seismic ground shaking from a regional earthquake of major magnitude would be reduced to less-than-significant levels.

As previously discussed in Section 4.6.2, settlement or subsidence is the ground surface cracking, often in response to deep groundwater or petroleum withdrawal. The closest depths of groundwater beneath the central and eastern areas of the site are approximately 35 to 40 feet below existing grades. Due to the lowest recommended cuts during site preparation of five to ten feet, groundwater will not be reached and will not be affected, and therefore groundwater levels will not be impacted. In addition, the development portion of the Project site is located on top of approximately 70 feet of previously compacted fill from the previous 41-unit development. According to the Geotechnical Report prepared by American Geotechnical, this fill was never part of the landslide and has never shown any signs of instability. Given the timeframe in which the fill was placed, substantial amounts of further settlement or subsidence are not expected to occur and the American Geotechnical test results revealed generally low-level collapse responses. As a result, impacts from subsidence or collapse are less than significant.

Further discussed in Section 4.6.2, the Project site is not located within the boundaries designated for investigation of earthquake-induced liquefaction, as a result impacts from liquefaction are less than significant.

Threshold GEO-1.iii *Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?*

Less than Significant Impact. As stated previously, the Project site is not located within the boundaries designated for investigation of earthquake-induced liquefaction and groundwater levels beneath the entire site are deep and therefore the potential for liquefaction is low. Based on the above, the potential for the occurrence of liquefaction beneath the site with impact to the development is considered less than significant and no mitigation is required.

Threshold GEO-1.iv *Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?*

Less than Significant Impact. As stated previously, the Via Estoril Landslide was successfully repaired between 1998 and early 2000 with the construction of the fill buttress along with permanent erosion control measures previously discussed. Review of installed inclinometers (permanent measuring devices installed within the hillside to measure movement) over the past 20 years within the remediated hillside indicate a consistently slow and a small magnitude of movement which is typical of slopes and hillsides with similar clayey earth materials within

Southern California. As previously discussed in Threshold GEO-1.ii and 3, such surficial slope movement is not indicative of greater slope instability. The Geotechnical Report has demonstrated adequate factors of safety to support residential development on Lot 1. Therefore, impacts associated with the prior landslide are less than significant with implementation of PDFs GEO-1, GEO-2, and GEO-3.

Based on review of recent slope creep data, the remediated Via Estoril hillside slope has shown no significant movement when compared to previous readings and the rates of movement have been found to be of low magnitude and incredibly slow. The geotechnical report concluded the recent low magnitude and slow creep is consistent with the landslide mass settling to equilibrium and ordinary surficial slope creep.

Based on the data measurements and site investigations, the geologic report concluded no significant movement of the slope should occur during the construction life and only typical slope creep influence will continue over time. As indicated previously, factor of safety is a measurement of slope stability in different conditions. Long-term static factor of safety must be a minimum of 1.5, and a short-term pseudostatic/seismic minimum factor of safety must be a minimum of 1.1. The April 2, 2021, Geotechnical Report (American Geotechnical, Inc. Response to Comment No. 3, April 2, 2021) provides factor of safety calculations based on three different methodologies and cross-sections. The long-term factor of safety calculations are 1.823, 2.203, and 2.308, all of which exceed the minimum 1.5 factor of safety. The short-term pseudostatic/seismic factors of safety are 1.267, 1.601, and 1.264, all of which exceed the minimum 1.1 factor of safety.

With implementation of standard conditions and Project design, impacts associated with slope stability and from a future landslide would be reduced to less-than-significant levels.

Threshold GEO-2 *Result in substantial soil erosion or the loss of topsoil?*

Less than Significant Impact. Erosion is a condition that could adversely affect development on any site. Site grading could temporarily exacerbate erosion conditions, but implementation of erosion control measures would limit such effects. The Construction General Permit, adopted by the State Water Resources Control Board (SWRCB) as Water Quality Order 2009-0009-DWQ (effective July 1, 2010), is required for soil disturbance activities that would be greater than 1 acre. The Project is expected to disturb an area greater than 1 acre and is subject to the requirements of the Construction General Permit. Also, several BMPs would be implemented during construction, including sediment and erosion control measures to prevent pollutants from leaving the site. Furthermore, LNGP Policy 1.1 requiring the mitigation of potential adverse impacts of geologic and seismic hazards would be adhered to per **SCA GEO-3**, resulting in a properly maintained, graded, and geologically stabilized site. With construction of MSE (**PDF GEO-2**) and retaining walls, and the installation of landscape and irrigation systems, implementation of applicable

existing standards and requirements for grading and construction (**PDF GEO-3**) will reduce erosion potential. With implementation of **SCA GEO-1**, **SCA GEO-2**, and **SCA GEO-3**, impacts from soil erosion and loss of topsoil would be rendered less than significant and no mitigation is required.

Threshold GEO-4 *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?*

Less than Significant Impact. Expansion index testing conducted as part of the geotechnical investigation report indicated that onsite soils have a very-low to medium expansion potential, but should be treated as having a high expansion potential due to the unknown source of materials consisting of fill from the 1979 development and native soils. With proper treatment, the on-site soils are considered suitable for use as compacted fill provided it is free of organic material and debris and the moisture content is adjusted to within a compactable range. Implementation of previously referenced **PDF GEO-3** requiring preparation of a final geotechnical report that shall incorporate all of the construction-level geotechnical recommendations and design parameters contained in the preliminary geotechnical reports included in Appendix F. The resulting construction-level geotechnical recommendations and design parameters contained in the final geotechnical report shall be incorporated into the final rough grading plans and implemented during removal and fill operations to verify such recommendations and design parameters are incorporated. When incorporated, impacts from expansive soils would be less than significant and no further mitigation is required.

Threshold GEO-5 *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?*

Less than Significant Impact. No septic tanks or alternative wastewater disposal systems are proposed as part of the Project. Therefore, soils would not be required to support septic tanks once the project is implemented. As a result, there would be no impact and no mitigation is required.

Threshold GEO-6 *Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?*

Less than Significant Impact with Mitigation. As previously stated, the Project site was developed in 1979 as a 10-building townhome project with 41 condominium units. The catastrophic Via Estoril landslide destroyed part of the development on the site, as well single-family homes located above the site.

Following the landslide, the entire site was demolished to perform remedial grading necessary to stabilize the former landslide. The landslide was repaired which involved installation of a caisson wall with tieback anchors, removal of the 10 condominium buildings and associated structures, partial removal of the landslide mass, installation of subdrains, and construction of a compacted fill buttress.

Due to the Project site currently consisting of predominately engineered artificial fill and only a small portion protruding into fossil rich bedrock, the site does not contain any unique geological features and the likelihood of unearthing subsurface paleontological resources during construction is considered to be very unlikely.

However, it is possible that undiscovered paleontological resources could be encountered during ground-disturbing activities in native material within the bedrock that may contain such resources. Damage to or destruction of a paleontological resource would be considered a potentially significant impact under local, state, or federal criteria and mitigation is required. Implementation of **MM GEO-1** would ensure steps are taken to reduce impacts to paleontological resources in the event that they are discovered during construction, reducing this impact to a less than significant level and no further mitigation is required.

4.6.7 Cumulative Impacts

Less than Significant Impact with Mitigation. Cumulative development results in an increase in population and structures that could be exposed to hazardous geological conditions, depending on the projects location. Geologic and soil conditions are typically site specific and can be addressed through appropriate engineering practices, uniform site development, and construction standards designed to protect public safety and structures and to reduce adverse effects to soils. Cumulative impacts on geologic resources would be considered significant if a project would be impacted by geologic hazard(s) and if the impact could combine with off-site geologic hazards to be cumulatively considerable.

As identified in Figure 2.A and Table 2.A, there are no cumulative projects that are in close proximity to the proposed Project that would have the potential for intermingling geologic impacts that would create a cumulative geologic impact. According to the Geotechnical Report, implementation of the Project would not create any reasonably foreseeable risks to the existing residential properties to the west and north. Conversely, the existing development would not create any reasonably foreseeable risks to the Project. Therefore, no cumulatively considerable effects are identified for geology/soils, and cumulative impacts would be less than significant.

In addition, development in a seismically active region can put people and structures at risk from a wide range of earthquake-related effects. The existing level of seismic risk exposure represents a significant cumulative impact. However, various mechanisms are in place to reduce risks at the

Project level, including project-specific hazards evaluation processes mandated by the Seismic Hazards Mapping Act and City procedures, as well as the implementation of the CMC's seismic design construction standards.

A comprehensive analysis of slope stability was performed on the existing remediated hillside and the Project site. Long-term static factor of safety, which must be a minimum of 1.5, and short-term pseudostatic/seismic factor of safety, which must be a minimum of 1.1, were both calculated. The April 2, 2021, Geotechnical Report (American Geotechnical, Inc. Response to Comment No. 3, April 2, 2021) provides factor of safety calculations based on three different methodologies and cross-sections. The long-term factor of safety calculations are 1.823, 2.203, and 2.308, all of which exceed the minimum 1.5 factor of safety. The short-term pseudostatic/seismic factors of safety are 1.267, 1.601, and 1.264, all of which exceed the minimum 1.1 factor of safety.

As outlined in **PDF GEO-1,** the upper 2-acre portion of the Project site is designated a lettered lot, Lot A, on the tentative tract map. Since Lot A is a lettered lot on the tentative tract map and no residential development is allowed on lettered lots, no residential development would occur on the remediated hillside. In addition, **PDF GEO-2** and **PDF GEO-3** provide specifications of an MSE wall of varying heights at the toe of the hillside and geotechnical recommendations to be included on the rough grading plans.

Potentially adverse environmental effects associated with seismic and geologic hazards usually are site-specific and generally do not combine with similar effects that could occur with other projects in the City. Although there would be some residual level of risk because seismic and geologic hazards on a Project site cannot be entirely avoided, the proposed Project would not contribute considerably to a cumulative impact related to seismic and geologic hazards.

Similar to seismic and geologic hazards, potentially adverse environmental effects associated with paleontological resources are site-specific and generally do not combine with similar effects that could occur with other projects in the City. Furthermore, with implementation of **MM GEO-1**, any paleontological resources found on site would be evaluated and to the extent necessary, curated. The proposed Project would not contribute considerably to a cumulative impact related to paleontological resources.

4.6.8 Summary of Mitigation Measures

MM GEO-1 If paleontological resources are found during grading and construction within the Project, all work shall be halted immediately within a 200-foot radius of the discovery until a qualified paleontologist has evaluated the find.

Work shall not continue at the discovery site until the paleontologist evaluates the find and makes a determination regarding the significance of the resource and

identifies recommendations for conservation of the resource, including preserving in place or collecting the resource to the extent feasible and documenting the find with an appropriate museum or university collection.

4.6.9 Significant Environmental Impacts

There are no significant environmental impacts associated with geology and soils with implementation of project design features **PDF GEO-1**, **PDF GEO-2**, **PDF GEO-3**, standard conditions of approval **SCA GEO-1**, and **SCA GEO-2**. Similarly, there are no significant environmental impacts associated with paleontological resources with implementation of mitigation measure **MM GEO-1**.

4.6.10 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

American Geotechnical, Inc. February 3, 2022. Response to Questions Regarding Geotechnical Review.

American Geotechnical, Inc. May 28, 2021. Addendum Report – Adding Geology to Current Site Plan.

American Geotechnical, Inc. April 2, 2021. Response to City of Laguna Niguel Geotechnical Review Sheet Dated February 15, 2021 and Notice of Incompleteness Dated February 23, 2021.

American Geotechnical, Inc. January 8, 2021. Geotechnical Review of Tentative Tract Map.

City of Laguna Niguel. February 2022. City of Laguna Niguel CEQA Manual.

City of Laguna Niguel. 1992. General Plan for the City of Laguna Niguel. Available: http://cityoflagunaniguel.org/DocumentCenter/Home/View/1886. (Accessed: August 11, 2021.)

City of Laguna Niguel. 2021. City of Laguna Niguel 2021–2029 Housing Element. Available: https://www.cityoflagunaniguel.org/1352/Housing-Element-Update. Last revised: October 2021. (Accessed February 22, 2022).

City of Laguna Niguel, Laguna Niguel Municipal Code Title 9, Planning and Zoning. https://library.municode.com/ca/laguna_niguel/codes/code_of_ordinances?nodeId=TIT9PLZO(Accessed June 20, 2021).

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4.7 Greenhouse Gases

This section identifies the environmental setting, regulatory context, and the potential of the proposed Project to result in impacts related to greenhouse gas (GHG) emissions. The analysis is based on Project GHG emissions estimates calculated using the California Emissions Estimator Model (CalEEMod) provided in Appendix C of this Draft Environmental Impact Report (Draft EIR).

4.7.1 Existing Site Conditions

A GHG is any gas that absorbs infrared radiation in the atmosphere. This absorption traps heat within the atmosphere, altering the Earth's surface temperature. Increased surface temperatures caused by increased absorption of the sun's infrared radiation from GHGs is commonly referred to as the greenhouse gas effect. GHG emissions resulting from human activities have increased levels of most naturally occurring GHGs in the atmosphere and the continued release of these GHGs will result in an increase in the temperature of the Earth's lower atmosphere. This increase in atmospheric temperature from increased GHGs is a phenomenon commonly referred to as global warming. Warming of the Earth's lower atmosphere induces a suite of additional changes, including changes in global precipitation patterns; ocean circulation, temperature, and acidity; global mean sea level; species distribution and diversity; and the timing of biological processes. These large-scale changes are collectively referred to as global climate change.

The GHGs listed by the Intergovernmental Panel on Climate Change (IPCC) include carbon dioxide (CO_2), hydrofluorocarbons, methane, nitrous oxide, perfluorocarbons, nitrogen trifluoride, chlorofluorocarbons, hydrochlorofluorocarbons bromofluorocarbons, and sulfur hexafluoride (Intergovernmental Panel on Climate Change 2007). California law and the State CEQA Guidelines contain a similar definition of GHGs (Health and Safety Code Section 38505(g); 14 CCR Section 15364.5).

The Global Warming Potential (GWP) was developed to simplify quantification, reporting, analysis, and comparison of the global warming impacts of different GHGs. IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of CO_2 equivalents (CO_2e). The GWP of CO_2 is, by definition, 1. GHG emissions are quantified and presented in terms of metric tons (MT) of CO_2e emitted per year.

4.7.2 Related Policies and Regulations

Federal Regulations

The Federal Clean Air Act

The Federal Clean Air Act (FCAA) enables the United States Environmental Protection Agency (EPA) to regulate key GHG emissions sources (mobile emissions), establish mandatory

emissions reporting for large stationary emitters, and implement vehicle fuel efficiency standards. The GHG emissions regulations work in conjunction with the EPA's other mandated goals to reach and maintain acceptable air quality levels throughout California's air basins as discussed in Section 4.2 *Air Quality*.

State Regulations

California has a long history of enacting legislation and implementing programs that reduce GHGs by way of statewide building energy efficiency requirements, electric utility renewable portfolio standards, and clean fuel and car standards. With the 2006 passage of Assembly Bill (AB) 32, the California Global Warming Solutions Act, California embarked on its first direct efforts to establish and implement GHG reduction goals and regulations.

Since the passage of AB 32, the State has enacted numerous strategies consistent with and parallel to AB 32 to further the reduction of air pollution and GHG emissions though more restrictive clean fuel/standards and building energy efficiency requirements, as well as numerous vehicle miles traveled (VMT) reduction strategies. These VMT reduction strategies include promoting alternative modes of transportation (i.e., transit, carpool, rideshare, bike, pedestrian) and promoting land use strategies enabling the creation of sustainable communities through proper residential location and density near transit and fostering mixed- and multi-use land use development projects. The most notable land use regulation is Senate Bill 375 – California's Sustainable Communities and Climate Protection Act of 2008 – that supports the State's GHG reduction goals by coordinating transportation and land use planning.

Assembly Bill 32 – California Global Warming Solutions Act

The passage of AB 32 in 2006, the California Global Warming Solutions Act, started California's first direct efforts to control greenhouse gas emissions. AB 32 required overall GHG emissions in California be reduced to their 1990 levels by 2020. Pursuant to AB 32, the California Air Resources Board (CARB) was directed to develop a Scoping Plan and adopt regulations to achieve this goal by implementing maximum technologically feasible and cost-effective GHG emission reductions. (CARB, 2020b). The Scoping Plan was first approved in 2008, was updated in 2013, then again in 2017. The 2017 Scoping Plan update identified how the State can reach the current 2030 target of reducing GHG emissions by 40 percent from 1990 levels and advancing toward the 2050 goal to reduce GHG emissions by 80 percent below 1990 levels.

Senate Bill 375 – California's Regional Transportation and Land Use Planning Efforts

Under the Sustainable Communities and Climate Protection Act of 2008, referred to as Senate Bill 375, CARB sets regional targets for GHG emissions reductions from automobiles and light trucks. Each of California's metropolitan planning organizations (MPOs) must prepare a "Sustainable Communities Strategy" (SCS) as part of its regional transportation plan (RTP) to meet reduction targets using regional land use and transportation policies.

Regional Regulations

Southern California Association of Governments - Sustainable Communities Strategy

The Southern California Association of Governments (SCAG) is the MPO for the southern California region. SCAG approved the first RTP/SCS in 2012, followed by an update to the RTP/SCS in 2016, and approved the most current plan in 2020 known as Connect SoCal. The Connect SoCal is a long-range visioning plan that builds upon and expands land use and transportation strategies established over prior planning cycles to increase mobility options and achieve a more sustainable growth pattern. Connect SoCal notes the 2020 goal of per capita automobile and light duty truck GHG emission reductions relative to 2005 levels of eight percent was achieved, and projects a 19 percent reduction in 2035, thereby meeting the GHG reduction targets established by the California Air Resources Board (ARB) for the SCAG region.

Local Regulations

There are no local regulations directly related to GHGs or climate change that apply to the proposed Project. However, the City evaluates a project's level of significance based on the City's CEQA Manual as described in *Methodology* below.

4.7.3 Thresholds of Significance

Criteria for determining the significance of impacts related to GHGs are based on criteria contained in Appendix G of the State CEQA Guidelines and the City's CEQA Manual. The proposed Project could have a significant impact on the environment if it would result in any of the following.

Threshold GHG-1 *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Threshold GHG-2 *Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

Methodology

The California Emissions Estimate Model (CalEEMod, version 2020.4.0) was used to quantify GHG emissions during Project construction and operation. Consistent with SCAQMD guidance, construction-period emissions were amortized over a 30-year period and added to the operational emissions to obtain annual GHG emissions.

The City's CEQA Manual establishes the process for analyzing GHG emissions from proposed projects. As presented in the Manual, the City has adopted the interim GHG emissions thresholds established in 2008 by the South Coast Air Quality Management District (SCAQMD) Working Group formed to identify GHG emissions thresholds for land use projects that could be used by local lead agencies in the South Coast Air Basin (SCAB). The five-tiered approach for analyzing

GHG impacts from development projects recommended by the Working Group and adopted by the City include:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether the project is consistent with a GHG reduction plan. If a project is consistent with a qualifying local GHG reduction plan, it does not have significant GHG emissions.
- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to the project's operational emissions. If a project's emissions are below one of the following screening thresholds, then the project is less than significant:
    - Residential and commercial land use: 3,000 MTCO2e/yr
    - Industrial land use: 10,000 MTCO2e/yr
    - Based on land use type: residential: 3,500 MTCO2e/yr; commercial: 1,400 MTCO2e/yr; or mixed use: 3,000 MTCO2e/yr
- Tier 4 has the following options:
    - Option 1: Reduce Business-as-Usual (BAU) emissions by a certain percentage (this percentage is currently undefined)
    - Option 2: Early implementation of applicable AB 32 Scoping Plan measures
    - Option 3: 2020 target for service populations (SP), which includes residents and employees: 4.8 MTC2e per SP per year for projects and 6.6 MTCO2e per SP per year for plans;
    - Option 4: 2035 target of 3.0 MTCO2e per SP per year for projects and 4.1 MTCO2e per SP per year for plans
- Tier 5 involves mitigation offsets to achieve target significance threshold.

Consistent with Tier 3, the City has set a value of 3,000 $MTCO_2e$/year as the screening threshold for small, simple projects. Projects that generate GHG emissions of 3,000 $MTCO_2e$/year or less are considered to generated a less than significant quantity of GHGs in accordance with Tier 3.

4.7.4 Project Design Features and Standard Conditions of Approval

SCA GHG-1 The Project would adhere to existing, applicable, CALGreen building code standards as they relate to reducing Project operational energy use, indirectly reducing GHG emissions and impacts.

4.7.5 Environmental Impact Evaluation

Threshold GHG-1 *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Less Than Significant Impact. As noted previously, GHG emissions for the proposed Project were calculated using CalEEMod. Project GHG emissions are summarized in Table 4.7-1.

Table 4.7-1. Project Greenhouse Gas Emissions

Emission Source	Emissions (MT/yr)			
	CO_2	**CH_4**	**N_2O**	**Total CO_2e**
Annual construction-related emissions amortized over 30 years	7.89	<0.01	<0.01	7.94
Area Source	0.37	<0.01	<0.01	0.37
Energy Source	47.48	<0.01	<0.01	47.71
Mobile Source	177.66	0.01	0.00	177.93
Water	7.48	0.04	<0.01	9.01
Total CO_2e (All Sources)	**313.25**			

MT/yr = metric tons per year
Source: (Enplaners, February 2022)

As shown in Table 4.7-1, the Project is estimated to generate 313.25 $MTCO_2e$/year of GHGs. As noted previously, the City's established significance threshold of 3,000 $MTCO_2e$/year for small, simple projects. The proposed Project's GHG emissions of 313.25 $MTCO_2e$/year is less than the threshold. Project GHG impacts are therefore less than significant.

Threshold GHG-2 *Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

Less Than Significant Impact. The City has not adopted a qualified GHG reduction plan or climate action plan. Projects in local jurisdictions without such a plan are generally considered consistent with applicable GHG reduction plans, policies, and regulations if it is consistent with applicable policies contained in the current version of SCAG's RTP/SCS and impacts are considered less than significant.

As discussed in Section 4.2, *Air Quality*, the proposed Project was determined to be consistent the current air quality management plan (AQMP). Determination of AQMP consistency was based on the Project's consistency with underlying land use assumptions for the Project site provided by the City, used in the growth projections developed by SCAG and in turn used by South Coast Air

Quality Management District (SCAQMD) in development of its AQMP. The proposed Project's land use designation and zoning classifications are consistent with the LNGP and therefore also consistent with the applicable land use assumptions developed by SCAG.

According to SCAG, The Connect SoCal plan (2020-2045 RTP/SCS adopted in September 2020) represents the vision for Southern California's future, including policies, strategies, and projects for advancing the region's mobility, economy, and sustainability through 2040. The plan details how the region will address its transportation and land use challenges and opportunities in order to achieve its regional emissions standards and greenhouse gas (GHG) reduction targets. However, the Connect SoCal Plan does not require that local general plans, specific plans, or zoning be consistent with the SCS. The proposed Project is a multi-family residential development and one of its objectives is to provide amenities unique to housing in Laguna Niguel. For example, the Project floor plans are intended to accommodate work from home occupants, and each unit contains an oversized garage space providing residents adequate area for in-home exercise and recreation equipment. As a result, the Project amenities and floor plans accommodating a work from home environment provides more options for residents to live and work locally ultimately reducing Project VMT, thereby reducing transportation related GHG emissions. Furthermore, as seen in Section 4.12, *Transportation*, projects generating less than 500 vehicle trips per day are presumed to have a less than significant CEQA transportation impact and are screened out from requiring a detailed VMT Analysis. Due to the proposed Project generating less than 161 daily trips per day, the proposed Project is considered to be a small project and its CEQA transportation impacts associated with VMT are presumed to be less than significant. Therefore, the Project is consistent with the objectives of the Connect SoCal Plan and would not interfere with SCAG's ability to implement the regional strategies outlined in the Connect SoCal.

The Project would not conflict with the Connect SoCal Plan adopted to achieve numerous goals including reducing the emissions of GHGs, and the Project's GHG emissions were determined to be less than significant. Consequently, impacts from conflicts with applicable GHG reduction plans, policies, or regulations would be less than significant, and no mitigation is required.

4.7.6 Cumulative Impacts

Less than Significant Impact. As discussed above under Threshold GHG-1, there is no evidence to indicate the GHG emissions from the proposed Project would result in a significant impact directly or indirectly. Project impacts due to GHG emissions are inherently cumulative in nature, because the collective effect of GHGs in the atmosphere from past, present, and future projects is the focus of GHG reduction strategies.

As discussed under the analysis of Threshold GHG-2, the Project would be consistent with the RTP/SCS. For this reason, it was determined the Project would not conflict with applicable GHG reduction plans, policies, or regulations.

As such, the Project would result in a less-than-cumulatively-considerable impact from GHG emissions as well as from conflicts with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

4.7.7 Summary of Mitigation Measures

As described above, there are no significant impacts associated with GHG emissions or conflicts with applicable GHG reduction plans, policies, or regulations, and no mitigation measures are required.

4.7.8 Significant Environmental Impacts

The analysis above indicates the Project will not exceed significance criteria for GHG impacts on a project-specific and cumulative basis. Therefore, GHG impacts are **less than significant**, and no mitigation measures are required.

4.7.9 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

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City of Laguna Niguel, Laguna Niguel Municipal Code Title 9, Planning and Zoning. https://library.municode.com/ca/laguna_niguel/codes/code_of_ordinances?nodeId=TIT9PLZO (Accessed June 20, 2021).

Enplanners. October 2021. CalEEMod Air Pollution Emissions Calculations.

South Coast Air Quality Management District (SCAQMD). 2017. CEQA Air Quality Handbook website: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook, (Accessed June 20, 2021).

United States Environmental Protection Agency (EPA). *Air Quality Data.* https://www.epa.gov/outdoor-air-quality-data, (Accessed June 20, 2021).

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4.8 Hazards and Hazardous Materials

This Section addresses potential impacts to human health and the environment that may be exacerbated by the proposed Project or result from exposure to hazardous materials or hazardous conditions during the construction or operation of the proposed Project. The analysis is based in part on the proposed Project's *Fire Safety Plan* prepared by FireSafe Planning Solutions on October 2021 (Appendix G-1), *Fuel Modification Plan* prepared by FireSafe Planning Solutions on December 2021 (Appendix G-2), and *Phase 1 Environmental Assessment Report* prepared by Transaction Management Corporation, Inc. on March 4, 2022 (Appendix H).

4.8.1 Existing Site Conditions

The 4.2-acre Project site was part of a residential development built in 1975 that was destroyed in 1989 during the Via Estoril landslide. After the landslide, residential structures were removed, and remediation earthwork was performed to stabilize the landslide. The site is currently vacant and lies on an east facing hillside with a remediated/graded slope, installed terrace drains, and dense vegetation for erosion control. The Project site also contains remnant streets and associated infrastructure. It is noted that no Recognized Environmental Conditions (REC) were identified on-site, and no buildings exist; therefore, no hazardous materials are being stored on-site.

Hazardous Materials Database Results

On-Site

The proposed Project site was not listed in any Environmental Risk Information Services (ERIS) record researched.

Off-Site

Nearby Schools

The closest school to the proposed Project site is Laguna Niguel KinderCare, which is located on Pacific Island Drive, approximately 1 mile to the northeast. Other schools in the area include Moulton Elementary School located approximately 1.25 miles to the north, and Laguna Niguel Jr. Academy located 1.5 miles approximately to the northeast.

Nearby Airports

The proposed Project is not within an airport land use plan area or within 2 miles of a public airport or public use airport or in the vicinity of a private airstrip. The closest airport is John Wayne Airport, approximately 20 miles to the northwest.

Emergency Planning

The Orange County Sheriff Department (OCSD) is contracted by the City to provide police protection service. OCSD's Emergency Management Division also provides emergency management and preparedness services to the unincorporated areas of Orange County and supports the efforts of the Orange County Operational Area. The Operational Area encompasses all County

departments and agencies, public and private organizations, and the general population within the boundaries of Orange County. The Sheriff-Coroner Department is the lead agency in matters of emergency preparedness and disaster response.

Wildfire Risk

According to the figure "Fire Hazards Severity Zones in LRA – Orange County" from the Fire and Resource Assessment Program, California Department of Forestry and Fire Protection (CAL FIRE), the proposed Project is within a High Fire Risk Area (CAL FIRE 2011). The wildfire risk is further discussed in Section 4.14 *Wildfire*.

4.8.2 Related Policies and Regulations

Hazardous materials and hazardous wastes are regulated by various federal, State, and local regulations to protect public health and the environment. The following is a brief description of the federal, State, and local environmental laws and related regulations governing issues related to hazards and hazardous materials.

Federal Regulations

United States Environmental Protection Agency

The U.S. EPA is the agency primarily responsible for enforcement and implementation of Federal laws and regulations pertaining to hazardous materials. Applicable Federal regulations pertaining to hazardous materials are contained in the CFR Titles 29, 40, and 49. Hazardous materials, as defined in the CFR, are listed in 49 CFR 172.101. The management of hazardous materials is governed by the following laws:

- Resource Conservation and Recovery Act of 1976 (RCRA) (42 USC 6901 et seq.)
- Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA, also called the Superfund Act) (42 USC 9601 et seq.), as amended by the Superfund Amendments and Reauthorization Act (1986)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (7 USC 136 et seq.)
- Toxic Substances Control Act (15 USC 2601 et seq.)

These laws and associated regulations include specific requirements for facilities that generate, use, store, treat, and/or dispose of hazardous materials. U.S. EPA provides oversight and supervision for Federal Superfund investigation/remediation projects, evaluates remediation technologies, and develops hazardous materials disposal restrictions and treatment standards.

Occupational Safety and Health Administration, Title 29 Code of Federal Regulations

Occupational Safety and Health Administration (OSHA) is the federal agency responsible for ensuring worker safety. These regulations provide standards for safe workplaces and work practices, including those relating to hazardous materials handling.

United States Department of Transportation Regulations, Title 49 Code of Federal Regulations

United States Department of Transportation (USDOT), in conjunction with the United States Environmental Protection Agency (EPA), is responsible for enforcement and implementation of federal laws and regulations pertaining to safe storage and transportation of hazardous materials. The Code of Federal Regulations (CFR) 49, 171–180, regulates the transportation of hazardous materials, types of material defined as hazardous, and the marking of vehicles transporting hazardous materials.

Federal Air Regulations, Part 77

The Federal Aviation Administration (FAA) is responsible for the review of construction activities that occur in the vicinity of airports. Its role in reviewing these activities is to ensure that new structures do not result in a hazard to navigation. The regulations in the Federal Air Regulations (14 CFR, Part 77) are designed to ensure that no obstructions in navigable air space are allowed to exist that would endanger the public. Federal Air Regulations Part 77 identifies the maximum height at which a structure would be considered an obstacle at any given point around an airport. The extent of the off-airport coverage that needs to be evaluated for tall structure impacts can extend miles from an airport facility. In addition, Federal Air Regulations Part 77 establishes standards for determining whether objects constructed near airports will be considered obstructions in navigable airspace, sets forth notice requirements of certain types of proposed construction or alterations, and provides for aeronautical studies to determine the potential impacts of a structure on the flight of aircraft through navigable airspace.

State Regulations

State Assembly Bill 2948

In response to the growing statewide concern of hazardous waste management, State Assembly Bill 2948 (Tanner 1986) enacted legislation authorizing local governments to develop comprehensive hazardous waste management plans. The intent of each plan is to ensure that adequate treatment and disposal capacity is available to manage the hazardous wastes generated within its jurisdiction.

California Occupational Safety and Health Administration Regulations

California Occupational Safety and Health Administration (Cal/OSHA) is responsible for developing and enforcing workplace safety standards and ensuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA requires many entities to prepare injury and illness prevention plans and chemical hygiene plans and provides specific regulations to limit exposure of construction workers to lead.

Cortese List Statute (California Government Code, §65962.5)

This regulation requires the California Department of Toxic Substances Control to compile and maintain lists of potentially contaminated sites throughout the State and includes the Hazardous Waste and Substances Sites List. The overall list is called the "Cortese" List.

Safe Drinking Water and Toxic Enforcement Act (Proposition 65, California Health and Safety Code, §25249.5 et seq.)

The Safe Drinking Water and Toxic Enforcement Act is similar to the federal Safe Drinking Water Act and Clean Water Act in that it regulates the discharge of contaminants to groundwater.

California Department of Forestry and Fire Protection Fire Prevention Program

The program encompasses multiple facets of fire prevention techniques, including fire engineering, vegetation management, fire planning, education, and law enforcement. These techniques can include fire break construction and other fire fuel reduction activities that lessen the risk of wildfire to communities and evacuation routes, and brush clearance around communities, along roadways, and evacuation routes. The fire prevention program also includes defensible space compliance inspections by the local agency, emergency evacuation planning, fire prevention education, fire hazard severity mapping, implementation of the State Fire Plan, and fire-related law enforcement activities such as arson investigation. A comprehensive discussion of the applicable laws can be found in Section 4.14 *Wildfire*.

State Water Resources Control Board Construction Storm Water Program

Dischargers whose projects disturb 1 or more acres of soil or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres are required to obtain coverage under the Construction General Permit under Order 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation. The Construction General Permit requires the completion and implementation of a site-specific Storm Water Pollution Prevention Plan (SWPPP).

Local Regulations

Orange County Certified Unified Program Agency

The Environmental Health Division was designated by the State Secretary for Environmental Protection on January 1, 1997, as the ― Orange County Certified Unified Program Agency (CUPA) for the County of Orange. CUPA is the local administrative agency that coordinates six programs (Hazardous Waste, Underground Storage Tanks (UST), Aboveground Storage Tanks (AST), Hazardous Materials Disclosure (HMD), Business Plan, and California Accidental Release Program (CalARP)) regulating hazardous materials and hazardous wastes in Orange County. County and City Fire Agencies within Orange County have joined the CUPA as Participating Agencies, administering one or more of the six CUPA programs in their jurisdictions. In most cities, Environmental Health administers the Hazardous Waste, Underground Storage Tank, and Aboveground Storage Tank programs while the Fire Agencies administer the other three elements listed above. Fire services for the City are provided by the Orange County Fire Authority (OCFA), in which the CUPA program is also provided by the OCFA.

Laguna Niguel General Plan

The Laguna Niguel General Plan (LNGP) was adopted in 1992 to set forth objectives, policies, standards, and programs within the Seismic/Public Safety Element to protect the community from natural and manmade hazards.

Seismic/Public Safety Element

Goal 2. Protection of the public and sensitive environmental resources from exposure to hazardous materials and waste

- **Policy 2.1.** Reduce risks of exposure to hazardous materials and waste through careful land use and hazardous materials management planning.
- **Policy 2.2**. Reduce risk of exposure by improving the safety of hazardous materials/waste transportation.
- **Policy 2.3.** Encourage sound management practices for the handling and disposal of household hazardous waste.

Goal 3. A safe and secure community free from the threat of personal injury and loss of property.

- **Policy 3.1.** Provide fire protection to ensure the public's health and safety.
- **Policy 3.2.** Reduce the risk of wildland fire through fuel modification programs.

4.8.3 Thresholds of Significance

Criteria for determining the significance of impacts related to hazards and hazardous materials are based on criteria contained in Appendix G of the State CEQA Guidelines and the City's CEQA Manual. The proposed Project could have a significant impact on the environment if it would result in any of the following.

Threshold HAZ-1 *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

Threshold HAZ-2 *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?*

Threshold HAZ-3 *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

Threshold HAZ-4 *Be located on a site that is included on a list of hazardous materials sites that is compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

Threshold HAZ-5 *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 for people residing or working in the project area?*

Threshold HAZ-6 *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

Threshold HAZ-7 *Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?*

Methodology

Within each significance criteria area, specific thresholds of significance are identified under the appropriate federal, state, and/or local jurisdictional authority where applicable to the Project. The thresholds of significance are used to determine whether or not the proposed Project would have a significant effect on the environment. The following indicate that a Project may be deemed to have a significant effect on the environment if the project is likely to impact the environment as outlined below.

4.8.4 Project Design Features and Standard Conditions of Approval

PDF HAZ-1 The Project is to be subdivided into two lots, Lot 1 and Lot A. Lot 1 includes a 2-acre residential area and Lot A includes a 2.2-acre area of open space. The open space lot and the adjacent area next to Lot 1 will be modified as part of a Fuel Modification Plan (see Appendix G-2 Fuel Modification Plan). The plan prescribes Fuel Modification Zones including non-combustible material areas, a wet zone, and a 20-foot setback from MSE wall to the structures in Lot 1.

PDF HAZ-2 The Project is to construct 6-foot-high radiant heat walls tied on top of retaining walls ranging in heights from 2.5 feet to 6 feet high. Such walls will protect two structures on the southern portion of the Project site. This OCFA requirement protects these structures that cannot obtain a 20-foot fuel modification setback. The purpose of the setback zone is to provide a defensible space for fire suppression forces and to protect structures from radiant and convective heat. The setback distance will be a 20-foot minimum width. The setback zone will be located on a level, graded area at the top or base of the slope or retaining wall.

4.8.5 Environmental Impact Evaluation

Threshold HAZ-1 *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

Less Than Significant Impact. Construction activities would involve the use of typical materials, such as vehicle fuels, paints, oils, transmission fluids, and solvents. The types and amounts of hazardous materials that would be used in connection with occupancy of the 22 proposed condominium dwellings would be typical of residential uses, such as cleaning solutions, solvents, pesticides for landscaping, painting supplies, and petroleum products used in normal vehicles operations. These substances can be hazardous in high concentrations; however, the routine and proper use of these standard construction and household products would not result in significant hazards due to small quantities of use. Impacts would be less than significant, and no mitigation is required.

Threshold HAZ-2 *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. Construction personnel maintain supplies on-site for containing and cleaning small spills of hazardous materials such as diesel and gasoline fuels, paints, solvents cement, and asphalt. Furthermore, construction activities would be conducted in accordance with the Storm Water Pollution Prevention Plan (SWPPP) as part of the National Pollution Discharge Elimination System (NPDES) permit. The primary objective of the SWPPP is to identify, construct, implement, and maintain best management practices (BMPs) to reduce or eliminate pollutants in stormwater discharges and authorized non stormwater discharges from the construction site. BMPs for hazardous materials may include, but are not limited to, off- site refueling, placement of generators on impervious surfaces, establishing cleanout areas for cement, etc. While the risk of exposure to hazardous materials cannot be eliminated, adherence to existing regulations would ensure compliance with safety standards related to the use and storage of hazardous materials and with the safety procedures mandated by applicable federal, state, and local laws and regulations. Compliance with these regulations would ensure that risks resulting from the routine transportation, use, storage, or disposal of hazardous materials or hazardous wastes associated with the proposed Project and the potential for accident or upset are less than significant, and no mitigation is required.

Threshold HAZ-3 *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

No Impact. As noted previously, the closest schools to the proposed Project site are Laguna Niguel KinderCare approximately 1 mile to the northeast, Moulton Elementary School approximately

1.25 miles to the north, and Laguna Niguel Jr. Academy approximately 1.5 miles to the northeast. Therefore, implementation of the proposed Project would not create any significant impacts associated with hazardous emissions or handling of acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. No hazard impacts to existing or proposed schools within 0.25 miles of the Project would occur, and no mitigation measures are required.

Threshold HAZ-4 *Be located on a site that is included on a list of hazardous materials sites that is 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. Implementation of the Proposed project would not create any significant impacts associated with being included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. The proposed Project site was not identified in any of the ERIS databases researched (Appendix H: Phase 1 Report). Therefore, implementation of the proposed Project would not create significant impacts associated with being included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. No impact would occur during either construction or operation, and no mitigation is required.

Threshold HAZ-5 *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 for people residing or working in the project area?*

No Impact. The proposed Project site is not within an airport land use plan area or within 2 miles of a public airport or public use airport. The closest airport is John Wayne Airport, approximately 20 miles to the northwest. Project implementation would neither adversely affect nor be affected by aviation activities. As a result, no impacts would occur during construction or operation, and no mitigation measures are required.

Threshold HAZ-6 *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

Less Than Significant Impact. As discussed in Section 4.12, *Transportation*, emergency access to the Project site would be from the entry at Playa Blanca off Crown Valley Parkway. Playa Blanca will be widened to 28 feet curb-to-curb. Proposed Private Drive "A" (24 ½ feet from curb to curb) will run north-south connecting Playa Blanca to the north with Private Drive "B" (24 ½ feet from curb to curb) on the south. These drives will provide access to the residences. Easement roads for maintenance access and shared active recreation roads will be 15 feet wide. The Project plans, including a fuel modification and fire master plan, have been reviewed and conditionally approved by the OCFA in regards to sufficient street width for emergency services and emergency

access. Moreover, the Project would not include any characteristics (e.g., permanent road closures, long-term blocking of road access) that would physically impair or otherwise interfere with emergency response or evacuation in the Project vicinity. During construction, the proposed Project would not result in any substantial traffic queuing at the Play Blanca entrance from Crown Valley Parkway and would not allow any construction vehicles or equipment to park or remain stationary within the roadway. Furthermore, all large construction vehicles entering and exiting the site would be guided by personnel using signs and flags to direct traffic.

During both construction and operational activities, the proposed Project would be required to comply with applicable requirements set forth by the OCSD's Emergency Management Division, the County's Emergency Operations Center (Orange County Sheriff's Department 2014), the Orange County Fire Authority, the Orange County Environmental Health Division, and the LNGP. Evacuation instructions and routes are provided by the County's Emergency Operations Center and are facilitated by the responding agencies such as OCFA and OCSD. Furthermore, the proposed Project has been reviewed by the OCFA through the tentative tract map plan review process. Such review resulted in the OCFA's approval of the Project's fire management plan and emergency access. Therefore, implementation of the proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts during both construction and operation would be less than significant, and no mitigation measures are required.

Regarding the potential for a landslide impairing emergency response activities, Section 4.6 Geology and Soils, notes the remediated hillside within Lot A achieves a factor of safety consistent with the standards for residential development. In addition, the Project includes project design features that would maintain the remediated slope as open space (**PDF GEO-1)**, install MSE walls at the toe of the remediated slope (**PDF GEO-2)**, and implement geotechnical recommendations into the rough grading plans (**PDF GEO-3)**. The combination of a remediated landslide that exceeds the required factor of safety for residential development and an approved fire master plan results in a less than significant impact.

Threshold HAZ-7 *Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?*

Less Than Significant Impact. The proposed Project site is located within a Very High Fire Hazard Severity Zone (VHFHSZ) per the Fire Hazard Severity maps from CALFIRE and Local Response Area (LRA) per OCFA and generally surrounded by residential uses. Given the existing wildfire environment and mapping for existing or designated residential uses in the area, expected wildfire behavior, availability of nearby firefighting resources (discussed further in Section 4.14 Wildfire), and the approved Fuel Modification Plan (**PDF HAZ-1 and PDF HAZ-2),** impacts would be less than significant. Implementation of the measures detailed in the proposed Project's

Fire Safety Plan (Appendix G-1) and Fuel Modification Plan (Appendix G-2), combined with proposed ingress and egress routes, emergency response times, would reduce the risk of impacts from wildfire to less than significant levels, and no mitigation measures are required.

4.8.6 Cumulative Impacts

Less than Significant Impact. The proposed Project does not result in significant impacts related to hazards or hazardous materials. Hazards and hazardous materials tend not to be cumulatively considerable unless the projects are adjacent or cause potential releases of hazardous materials. Instead, all projects are responsible on an individual basis to mitigate potential hazards on a given property. Since the proposed Project results in less-than-significant impacts, and the cumulative projects in the surrounding area are primarily residential in nature and not uses that would result in the routine use or transport of hazardous materials, the proposed Project would not contribute to a cumulative impact associated with hazards or hazardous materials.

4.8.7 Summary of Mitigation Measures

As no impacts related to hazards and hazardous materials have been found to be significant, no mitigation measures are required.

4.8.8 Significant Environmental Impacts

The analysis above indicates that the Project will not exceed significance criteria for hazards and hazardous materials impacts. Therefore, all hazards and hazardous materials impacts are **less than significant**, and no mitigation measures are required.

4.8.9 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

California Department of Conservation, Division of Land Resources Protection. A Guide to the Farmland Mapping and Monitoring Program. 2004 Edition.

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FireSafe Planning Solutions. December 2021. Fuel Modification Plan

Transaction Management Corporation, Inc. March 4, 2022. Phase 1 Environmental Assessment Report

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4.9 Hydrology and Water Quality

This section describes the hydrologic conditions on and adjacent to the Project site and evaluates potential impacts to surface and groundwater resources associated with the proposed Project. This section is based in part on the *Hydrology Analysis* prepared by Hunsaker & Associates Irvine, Inc. on August 16, 2021 and *Conceptual Water Quality Management Plan* prepared by Hunsaker & Associates Irvine, Inc. on August 24, 2021 included as Appendices I and J to this Draft EIR.

4.9.1 Setting

Surface water flows in the City drain into three major watersheds within the Orange County's South Watershed Management Area established by the San Diego Regional Water Quality Board (RWQCB). These are: Sulphur Creek in the north part of the City, a tributary to Aliso Creek, and part of the Aliso Watershed Management Area; Salt Creek in the south part of the City and within the Dana Point Coastal Streams Watershed Management Area; and Oso Creek in the east part of the City which is tributary to San Juan Creek and is part of the San Juan Watershed Management Area.

Water bodies nearest to the Project site are Sulphur Creek approximately 1.5 miles to the north and Laguna Niguel Lake approximately 2 miles to the north. No water bodies occur on the site.

4.9.2 Existing Site Conditions

The 4.2-acre Project site was part of a residential development built in 1975 that was destroyed in 1989 during the Via Estoril landslide. After the landslide, residential structures were removed as part of an extensive remediation, restoration and reconstruction effort that occurred in the late 1990s. The Project site is vacant and vegetated with ground cover and shrubs. The site has been partially improved with a storm drain system and paved streets. The site is located on a hillside that slopes to the east, with its highest point to the west approximately 453 feet above mean sea level (msl) and lowest point to the east approximately 362 feet above msl. Currently, the overall site encompasses 3.45 acres (82%) of pervious surfaces and 0.75 acres (18%) of impervious surfaces.

An existing onsite drainage system conveys runoff flows west to east toward Crown Valley Parkway along the southern border of the site. The storm drain varies from 36 inches to 48 inches. The 36-inch storm drain is located along Club House Drive and conveys upstream residential runoffs, and the 48-inch storm drain continues easterly and discharges into a concrete lined channel at El Niguel Country Club. An existing 30-inch to 36-inch storm drain that conveys runoffs north to south across the leveled Project area crosses the Project site where proposed Lot 1 will be located. The existing 30-inch storm drain conveys runoff from a portion of the upper-north end of the site with terrace drains and a headwall. The 36-inch existing storm drain joins the existing 48-inch storm drain crossing under Crown Valley Parkway.

Runoff from the flatter portion of the site sheet flows easterly to a V-ditch paralleling Crown Valley Parkway. The V-ditch ends at a 5-foot diameter riser structure and then runoff flows to the southerly 48-inch storm drain. Runoff at the remnant, paved driveway entrance at Playa Blanca Drive sheet flows easterly down the paved driveway, over the sidewalk, and into the Crown Valley Parkway street gutter. Runoff flows 370 feet southerly on the west side of Crown Valley Parkway in the street gutter to a street-side catch basin. The onsite storm drain system ultimately conveys onsite flows and off-site flows under Crown Valley Parkway, prior to discharging to an existing open channel within El Niguel Golf Course. Runoff is then conveyed northerly to County Facility No. J03P01 to J03D01 (Siphon Creek Reservoir), which is tributary to Aliso Creek (County Facility No. J01).

The Project site does not contain any environmentally sensitive areas (ESA), as defined in the Basin Plan and the County of Orange Drainage Area Management Plan (DAMP). Although the site does not discharge directly to areas defined as ESA or Areas of Special Biological Significance (ASBS), the site is tributary to impaired water bodies, which are designated as ESAs under DAMP guidelines. These impaired water bodies are San Juan Creek, Aliso Creek, and the Pacific Ocean.

4.9.3 Related Policies and Regulations

Federal Regulations

Clean Water Act

The Clean Water Act (CWA) is the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. The CWA prohibits any discharge of pollutants into the nation's waters unless specifically authorized by a permit. The applicable sections of the CWA are further discussed below.

CWA Section 102 requires the planning agency of each state to prepare a Basin Plan to set forth regulatory requirements for protection of surface water quality, which include designated beneficial uses for surface water bodies, as well as specified water quality objectives to protect those uses. A project's impact on existing surface water quality is measured by the degree to which its discharges affect a receiving water body's designated beneficial use and attainment. Beneficial uses and water quality objectives have been established by the Regional Water Boards for their respective jurisdictions.

Section 303(d) requires each state to provide a list of impaired surface waters that do not meet or are not expected to meet state water quality standards as defined by that section. It also requires each state to develop total maximum daily loads (TMDL) of pollutants for impaired water bodies. The TMDL must account for the pollution sources causing the water to be listed. Impaired waters with potential to be affected by the project are described in the Water Quality section above.

CWA Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) permit program, which is the primary federal program that regulates point-source and non-point-source discharges to WoUS. NPDES permits are issued by the State Water Resources Control Board (SWRCB) and the nine geographically separated Regional Water Boards in California. There are both general and individual NPDES permits. General NPDES permits cover industrial, construction, and municipal stormwater discharges, and some point-source discharges for specific activities. Individual NPDES permits cover point-source discharges from wastewater facilities.

National Pollutant Discharge Elimination System Permits: Construction General Permit

Pursuant to CWA Section 402(p) and as related to the goals of the Porter-Cologne Water Quality Control Act, SWRCB has issued a statewide NPDES General Permit for Stormwater Discharges Associated with Construction Activity (Order No. 2009-0009-DWQ, NPDES No. CAS000002, as amended by Order 2010-0014-DWQ and 2012-006-DWQ) (Construction General Permit), adopted September 2, 2009 (SWRCB 2012). Every construction project that disturbs 1 or more acres of land surface or that is part of a common plan of development or sale that disturbs more than 1 acre of land surface would require coverage under this Construction General Permit. To obtain coverage under this Construction General Permit, the landowner or other applicable entity must file Permit Registration Documents prior to the commencement of construction activity, which include a Notice of Intent (NOI) and Stormwater Pollution Prevention Plan (SWPPP) prepared by a Qualified SWPPP Developer and mail the appropriate permit fee to SWRCB.

Construction activities subject to the Construction General Permit include clearing, grading, and disturbances to the ground, such as stockpiling or excavation, that result in soil disturbances of at least 1 acre of total land area. The SWPPP has two major objectives: (1) to help identify the sources of sediment and other pollutants that affect the quality of stormwater discharges; and (2) to describe and ensure the implementation of best management practices (BMPs) to reduce or eliminate sediment and other pollutants in stormwater and non-stormwater discharges. BMPs are intended to reduce impacts to the maximum extent practicable (MEP), which is a standard created by Congress to allow regulators the flexibility necessary to tailor programs to the site-specific nature of municipal stormwater discharges. The SWPPP is required to be implemented and monitored regularly by a Qualified SWPPP Practitioner. Reducing impacts to the MEP generally relies on BMPs that emphasize pollution prevention and source control, with additional structural controls as needed. The Construction General Permit requires that specific minimum BMPs are incorporated into the SWPPP, depending on the project's sediment risk to receiving waters based on the project's erosion potential and receiving water sensitivity to sediment.

State Regulations

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act requires the regulation of all pollutant discharges, including wastes in project runoff that could affect the quality of the state's water. The act also

provides for the development and periodic reviews of Basin Plans that designate beneficial uses of California's major rivers and groundwater basins and establish water quality objectives for those waters. Beneficial uses and water quality objectives are specified for the Project area in the Basin Plan for the San Diego Region and are regulated by the San Diego RWQCB.

Municipal Separate Storm Sewer System

CWA Section 402 mandates permits for municipal stormwater discharges, which are regulated under the NPDES General Permit for Municipal Separate Storm Sewer Systems (MS4 Permit). Phase I MS4 Permit regulations cover medium (serving between 100,000 and 250,000 people) and large (serving more than 250,000 people) municipalities. Phase II (Small MS4 Permit) regulations require that stormwater management plans/programs be developed by municipalities with populations smaller than 100,000, including non-traditional Small MS4s, which are facilities such as military bases, public campuses, and prison and hospital complexes.

MS4 Permits require that cities and counties develop and implement programs and measures, including BMPs, control techniques, system design and engineering methods, and other measures as appropriate, to reduce the discharge of pollutants in stormwater to the maximum extent possible. As part of permit compliance, these permit holders have created stormwater management plans for their respective locations. These plans outline the requirements for municipal operations, industrial and commercial businesses, construction sites, and planning and land development. These requirements may include multiple measures to control pollutants in stormwater discharge. During implementation of specific projects under the program, project applicants are required to follow the guidance contained in the stormwater management plans as defined by the permit holder in that location.

SWRCB is advancing Low-Impact Development (LID) in California as a means of complying with municipal stormwater permits. LID incorporates site design, including among other things the use of vegetated swales and retention basins and minimization of impermeable surfaces, to manage stormwater to maintain a site's predevelopment runoff rates and volumes.

Local Regulations

South Orange County Municipal Stormwater NPDES Permit (MS4 Permit)

On May 8, 2013, the San Diego RWQCB approved a regional MS4 Permit for San Diego, southern Orange, and southwestern Riverside counties (Order No. R9-2013-0001). San Diego RWQCB, adopted Order No. R9-2015-0001, an Order Amending Order No. R9-2013-0001, NPDES Permit and Waste Discharge Requirements For Discharges From The Municipal Separate Storm Sewer Systems (MS4s) Draining The Watersheds Within The San Diego Region at its February 11, 2015 Board Meeting. The region-wide NPDES Permit (commonly referred to as the Regional MS4 Permit) sets the framework for municipalities, such as the City of Laguna Niguel, to implement a collaborative watershed-based approach to restore and maintain the health of surface waters. The

Regional MS4 Permit requires development of Water Quality Improvement Plans (WQMP) that will allow permittees to prioritize and address pollutants through an appropriate suite of BMPs in each watershed.

To implement the requirements of the Regional MS4 Permit, the co-permittees developed a Drainage Area Master Plan (DAMP) that includes a Model New Development and Redevelopment Program. Per the requirements in the DAMP and the Regional MS4 Permit, the permittees are required to adopt a Local Implementation Plan (LIP) to implement the DAMP and Regional MS4 Permit in their jurisdictions. Using the LIP as a guide, the permittees will approve WQMPs for new development and redevelopment projects within their jurisdictions as part of the development plan and entitlement approval process. WQMPs for new development and significant redevelopment projects that fall under specific priority project categories must include Site Design, Routine Structural and Nonstructural, and Treatment Control BMPs; include an Operations and Maintenance Plan; and address LID retention/biofiltration and hydromodification criteria. The priority project categories are those determined by the San Diego RWQCB to have the greatest potential to affect receiving waters with polluted runoff.

A Priority Development Project is defined as a redevelopment project that creates and/or replaces 5,000 square feet or more of impervious surface (collectively over the entire project site on an existing site of 10,000 square feet or more of impervious surfaces). This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land. The proposed project is considered a Priority Redevelopment Project subject to permittee conditioning and approval for the design and implementation of post-construction controls to mitigate stormwater pollution.

A Project WQMP is a plan for minimizing the adverse effects of urbanization on site hydrology, runoff flow rates, and pollutant loads. Hunsaker & Associates Irvine, Inc. prepared the proposed Project's Conceptual Water Quality Management Plan dated August 2021 (Appendix J).

South Orange County Hydromodification Management Plan

The Orange County Stormwater Program developed a Hydromodification Management Plan (HMP) in response to MS4 Permit requirements from the San Diego RWQCB. The permit requires the incorporation of low impact development and hydromodification requirements in new development and significant redevelopment projects. Priority Development Projects are required to implement hydrologic control measures and on-site management controls so that post-project runoff flow rates and durations do not exceed pre-development, i.e. naturally occurring conditions, flow rates, and durations where they would result in an increased potential for erosion or significant impacts to beneficial uses. Priority Development Projects may be exempt from HMP criteria based on specific channel conditions, including those that discharge runoff into conveyance channels whose bed and bank are concrete lined all the way from the point of discharge to ocean waters, enclosed bays, estuaries, or water storage reservoirs and lakes.

General Waste Discharge Requirements for Discharges from Groundwater Extraction and Similar Discharges to Surface Waters

On March 12, 2008, the San Diego RWQCB issued the General Waste Discharge Requirements (WDR) for Discharges from Groundwater Extraction and Similar Discharges to Surface Waters within the San Diego Region Except for San Diego Bay (Order No. R9-2008-0002, Permit No. CAG919002) (Groundwater Discharge Permit). This permit regulates discharges of treated and untreated groundwater from construction to surface waters. It specifies the discharge prohibitions, receiving water limitations, monitoring and reporting program requirements, and general compliance determination criteria for groundwater dewatering during construction activities and drilling, construction, and purging of wells. Dischargers are required to collect and analyze representative groundwater samples for all constituents listed in the Groundwater Discharge Permit. Based on the results, dischargers would be required to provide treatment for any toxic compounds detected above the applicable screening levels. To obtain coverage under the Groundwater Discharge Permit, each permittee must submit an NOI to begin the application process.

Laguna Niguel Local Implementation Plan/Jurisdictional Runoff Management Program

The Local Implementation Plan/Jurisdictional Runoff Management Program (LIP/JRMP) is the City's specific document that details how the stormwater programs are implemented within their local jurisdiction. The LIP/JRMP describes the programs and activities that the City is implementing to meet MS4 Permit requirements, with the goal of making meaningful improvement in water quality.

4.9.4 Thresholds of Significance

Criteria for determining the significance of impacts related to hydrology and water quality are based on criteria contained in Appendix G of the State CEQA Guidelines and the City's CEQA Manual. The proposed Project could have a significant impact on the environment if it would result in any of the following.

Threshold HYD-1 *Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?*

Threshold HYD-2 *Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?*

Threshold HYD-3.i *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 result in substantial erosion or siltation on- or off-site?*

Threshold HYD-.3ii *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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?*

Threshold HYD-3.iii *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 create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?*

Threshold HYD-3.iv *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 impede or redirect flood flows?*

Threshold HYD-4 *In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?*

Threshold HYD-5 *Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

Methodology

A water quality management plan and hydrology study were prepared in conformance with procedure and criteria outlined in the Orange County Hydrology Manual dated 1986, using Advance Engineering Software's (AES's) Version 23.0. The Project, under Tract Map No. 17721, received conditional WQMP approval by the City on June 17, 2021. The WQMP is prepared pursuant to the requirements of the County of Orange MS4 Permit, the Laguna Niguel Municipal Code and the LIP/JRMP.

4.9.5 Project Design Features and Standard Conditions of Approval

PDF HYD-1 Existing storm drains installed on the site as part of prior remediation activities will be re-routed and connected to the proposed Project's storm drains and connected to the existing 36-inch storm drain in Crown Valley Parkway for off -site discharge. Specific locations are indicated in Figure 4.9.A of the Utility Plan.

PDF HYD-2 The Project will install a 200 foot long and 48-inch diameter upsized storm drainpipe along Private Drive A to detain and slow water flow to meet

Hydromodification Low Impact Development (LID) requirements as seen below in Figure 4.9.A.

PDF HYD-3 The Project will install two Modular Wetland Systems (MWS) to capture on-site storm water pollutants. As seen below in Figure 4.9.A, the two MWS locations are at the north end of Project under near the site entrance at Playa Blanca and under parking stall 2, at the southeast end of Private Drive "B". These systems are designed to filter, treat, and release. The system is required and therefore will be required to treat 1.5 times the BMP design flow for the Project.

4.9.6 Environmental Impact Evaluation

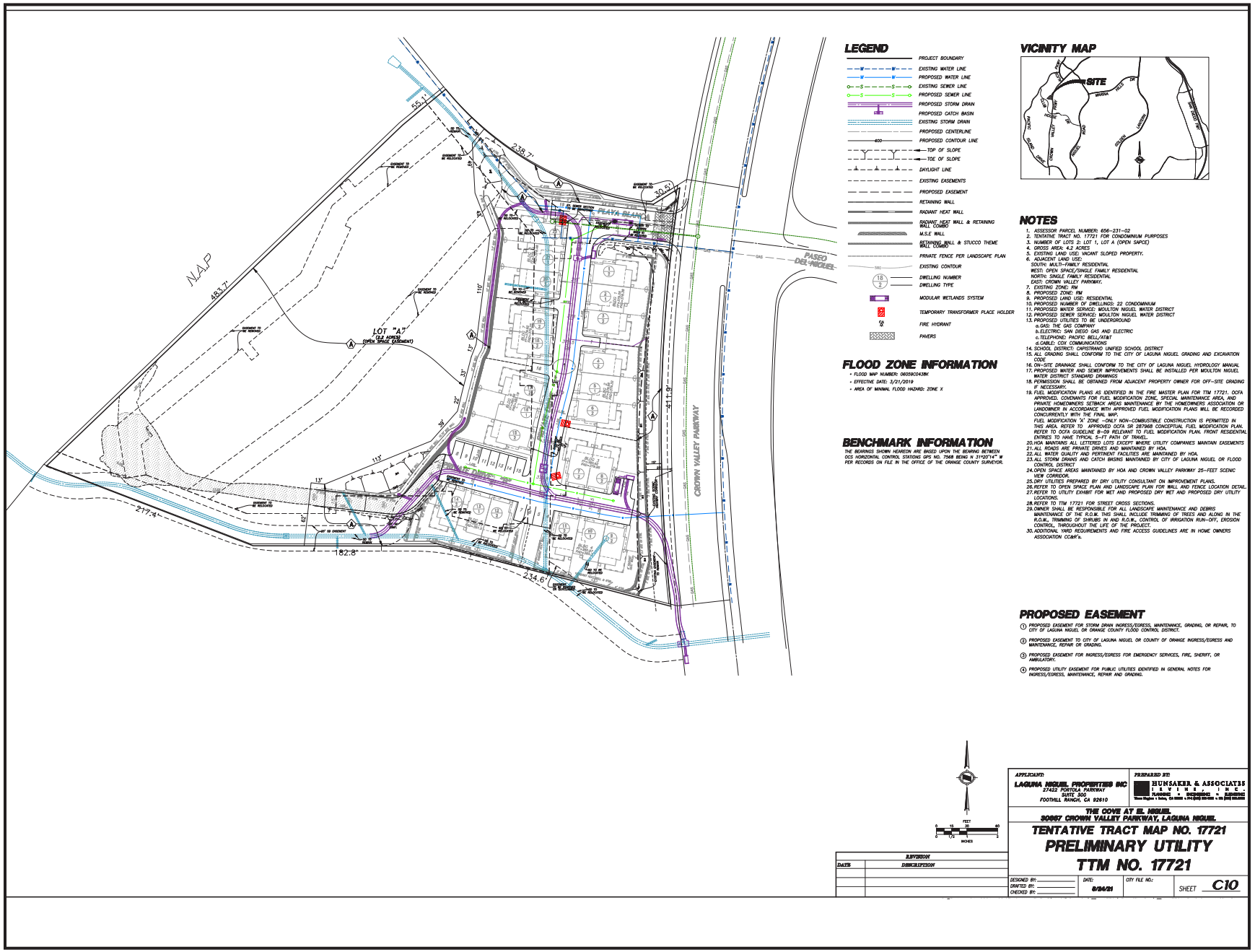
Threshold HYD-1 *Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?*

Less Than Significant Impact.

Construction Impacts

The Project could result in an increase in surface water pollutants such as sediment, oil and grease, and miscellaneous wastes during construction activities. Concrete used for structures, footings, and other paving materials could be potential sources of water quality pollution if any of these materials were spilled or deposited on unprotected surfaces. The delivery, handling, and storage of construction materials and wastes, as well as use of construction equipment, could also introduce the risk of stormwater contamination if not properly handled and contained. Staging areas or building sites can be sources of pollution because of the use and storage of equipment and materials during construction. Impacts associated with metals in stormwater include toxicity to aquatic organisms, such as bioaccumulation. Vegetation removal associated with site preparation work can result in erosion and surface water contamination from runoff. Construction impacts on water quality are potentially significant and could lead to exceedance of water quality objectives or criteria specified in the San Diego RWQCB's Basin Plan.

However, compliance with the NPDES Construction General Permit would require implementation of the BMPs included in a project-specific SWPPP to address these types of concerns and provide preventive measures that reduce the risk of having potential significant water quality impacts. Therefore, with implementation of the required erosion and sediment control BMPs identified in the SWPPP that would be regularly monitored and re-enforced to reduce water quality impacts, impacts during construction would be reduced to less-than-significant levels and no mitigation is required.



Source: Hunsaker&Associates (8/24/2021).

Figure 4.9.A Utility Plan

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Operation Impacts

The Project would include the relocation and installation of a permanent storm drain system (**PDF HYD-1**) consisting of an oversized 200-foot-long storm drainpipe (to detain storm flows seen in **PDF HYD-2**), 2 catch basins, a v-ditch atop the MSE wall, and 2 modular wetland systems (MWS)(**PDF HYD-3**). The stormwater would feed into the onsite storm drain system, then flow into the MWS for first flush filtration, prior to discharge into the City storm drain connection near the southeast corner of the Project site on Crown Valley Parkway as seen above in Figure 4.8.A Utility Plan. Additionally, implementation of the project design features would effectively reduce non-storm water discharges from leaving the site and reduce the discharge of untreated pollutants in storm waters from reaching the offsite storm water conveyance systems. Therefore, with regulatory compliance and implementation of **PDF HYD-1** through 3, operation-related impacts to water quality and waste discharge requirements would be reduced to less than significant, and no mitigation is required.

Threshold HYD-2 *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. Implementation of the proposed Project would not directly deplete groundwater supplies or interfere substantially with groundwater recharge that would result in a net deficit in aquifer volume or a lowering of the local groundwater table level. Pervious surface area pre-project is 3.50 acres, or 83.3%, and post-project pervious surface area would be 3.12 acres, or 74%. Based on information found in the Conceptual WQMP, onsite soils consist primarily of Cropley clay, Bosanko clay and Botella clay loam, which are classified as a Hydrologic Soil Group D soil. These soils are characterized as having slow infiltration rates when thoroughly wet. Therefore, the Project site does not substantially contribute to groundwater recharge due to the poor infiltration rates associated with the clayey soils onsite. No substantial change would occur in the post developed condition. Furthermore, the Project site is not located within an area known for hydrogeologic groundwater. As a result, impacts would be less than significant, and no mitigation measures are required.

Threshold HYD-3.i *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 result in substantial erosion or siltation on or off site?*

Less Than Significant Impact. The proposed Project drainage system has 2 drainage management areas (DMA) to capture and slow down runoff. Captured flows are first routed under Private Drive "A" through an oversized 200-foot long 48-inch detention storm drainpipe (**PDF HYD-2**) and filtered through two MWSs (**PDF HYD-3**) before draining toward the Crown Valley Parkway storm drain connection point in the southeast corner of the Project site.

Runoff for the majority of the slope on proposed Lot A will flow to the east toward the v-ditch that runs along the top of the proposed MSE wall before connecting into the storm drain system at three points. Two drainage locations will flow to the lowest northern part of the storm drain and one will connect flowing to the south. The remaining runoff from the slope on Lot A will flow down the recreation trail to the east and will tie in the storm drain system under Private Drive "B". Runoff within proposed Lot 1 from residential units, parking areas, and private drives would be conveyed as sheet flow, gutter flow, and area drain flow to the Project's proposed 2 MWSs.

Runoff is then conveyed to the Project's discharge point at the southeastern corner of the site, prior to discharging into to the existing 48-inch storm drain line located approximately 50 feet to the south. All runoff then continues easterly under Crown Valley Parkway and down to a headwall and discharged into an open concrete channel within El Niguel Golf Course.

Although the proposed Project would result in alteration of the existing onsite drainage, the Project maintains existing drainage patterns and accounts for the increased impervious surface by detaining flows to prevent downstream erosion. As a result, the Project would not create a substantial erosion or siltation on or off site, and impacts would be less than significant and would not require mitigation measures.

Threshold HYD-3.ii	*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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site?*

Less Than Significant Impact. The existing 36-inch storm drain main conveying runoff north to south and 48-inch storm drain main conveying runoff west to east will be re-routed within the Project drive aisles. A proposed 48-inch storm drain will continue along Private Drive "B" and follow the Crown Valley Parkway sidewalk before connecting into the existing 48-inch storm drain.

Inlet structures will be installed to collect off-site runoffs, runoff on the top of the proposed MSE walls, and Project site runoffs (roads, buildings, and level landscaped areas on the Project site). The captured runoff will be connected to the re-routed storm drain systems (**PDF HYD-1**). The storm drain system includes a 200-foot long 48-inch diameter upsized pipe (**PDF HYD-2**) within Private Drive "A" to slow and detain storm water flows in accordance with Hydromodification LID requirements and two MWS units (**PDF HYD-3**) for water quality treatment that to a limited extent will slow and infiltrate captured water.

The proposed Project would increase impervious surfaces on the site, resulting in a decrease in total pervious cover from 3.45 acres to 3.12 acres (82% to 74%) and an increase in impervious cover from 0.75 acres to 1.08 acres (18% to 26%). This would increase the amount of runoff generated on the Project site.

The hydrology study prepared for the proposed Project was prepared based on the methodology contained in the *Orange County Hydrology Manual*. The hydrology study area includes the tributary area to the existing storm drain along Club House Drive. The storm events analyzed were a 10-year and 100-year storm. Table 4.9-1 summarizes the results of the hydrology analysis, providing a comparison of drainage for the hydrology study area and stormflow estimates in both the existing and developed conditions.

Table 4.9-1. Hydrology Analysis Summary Construction Duration

	Existing Condition			**Proposed Condition**			**Difference (Proposed-Existing**		
Area	Acre	10-yr (cfs)	100-yr (cfs)	Acre	10-yr (cfs)	100-yr (cfs)	Acre	10-yr (cfs)	100-yr (cfs)
Overall Project	109.7	191.1	302.3	109.7	190.2	300.9	**0.00**	**-0.90**	**-1.40**

As shown in Table 4.9-1, during the 10- year and 100-year event, the overall Project shows a decrease in storm runoff for both events. The estimated decrease in runoff is attributable to the proposed Project design features including the re-routing of existing storm drain system (**PDF HYD-1**), the upsized 200-footr detention storm drainpipe (**PDF HYD-2**), and the two MWS units (**PDF HYD-3**). Flows during storm events are captured in this proposed system and released over time. As a result, the peak storm flow during the 100-year event would be reduced from 302.3 cubic feet per second (cfs) to 300.9 cfs, which is 1.40 cfs less than the existing condition. Therefore, the proposed Project would not include the alteration of the course of a stream or river and would not cause the rate or amount of surface runoff to result in flooding on or off site. Impacts would be less than significant, and no mitigation measures are required.

Threshold HYD-3.iii *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 create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?*

Less Than Significant Impact. As described in Threshold HYD-3.i and Threshold HYD-3.ii above, implementation of the proposed Project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide

substantial additional sources of polluted runoff. The runoff from the proposed Project during the 10-year and 100-year storm events would be less in the developed condition than in the existing condition primarily through the capture of storm flows in an underground upsized storm drainpipe (**PDF HYD-2**) with a storage capacity of 0.06 acre-feet of volume. Furthermore, the planned two MWS units (**PDF HYD-3**) would treat stormwater before discharge and prevent additional sources of polluted runoff from entering the stormwater drainage system. Therefore, the proposed Project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts would be less than significant, and no mitigation measures are required.

Threshold HYD-3.iv *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 impede or redirect flood flows?*

Less Than Significant Impact. As described in Threshold HYD-3.ii above, implementation of the proposed Project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite. As described in Threshold HYD-3.i and Threshold HYD-3.iii, implementation of the proposed Project would not create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff. With implementation of **PDFs HYD-1, HYD-2, and HYD-3**, the proposed Project would be in compliance with existing stormwater regulations and would not otherwise substantially degrade water quality or create drainage or flooding impacts. Impacts would be less than significant, and no mitigation measures are required.

Threshold HYD-4 *In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?*

No Impact. The Project site is not in a flood hazard zone and not within the vicinity of a large reservoir and thus is not subject to seiche. This Project is located approximately 2 miles inland from the Pacific Ocean, but is considered to be outside of the tsunami inundation area mapped by the California Geological Survey. Therefore, the proposed Project would not contribute to the release of pollutants from inundation by flooding, seiche, tsunami. No impacts would occur, and no mitigation measures are required.

Threshold HYD-5 *Conflict with or obstruct implementation of water quality control plan or sustainable groundwater management plan?*

Less Than Significant Impact. As described in Threshold HYD-1 through Threshold HYD-3.iii above, the proposed Project would result in less than significant impacts on water quality. In addition, the Project would adhere to the Construction General Permit, City's LID and municipal

code requirements and comply with its implementation of the SWPPP to ensure that surface and groundwater quality are not adversely affected during construction. Furthermore, the Project's implementation of the LID and BMP measures at the site, installed as project design features **PDF HYD-1** through **PDF HYD-3** would ensure that water quality is not impacted during operation of the project. As a result, the Project will not obstruct or conflict with the implementation of the South Orange County Water Quality Improvement Plan (WQIP) and the Water Quality Control Plan (WQCP) for the San Diego Basin (Basin Plan).

Furthermore, as discussed in Section 3.2.6, *Utilities and Service Systems*, the City relies on imported water and local recycled water, and no groundwater management plan exists for the region. The Project site is not located on any regulated groundwater basins.

Therefore, implementation of the proposed Project would be in compliance with WQIP and WQCP regulations and would not otherwise substantially degrade water quality or groundwater. Impacts would be less than significant, and no mitigation measures are required.

4.9.7 Cumulative Impacts

Less than Significant Impact. The geographic scope for cumulative impacts on hydrology and water quality includes the Aliso Creek Watershed. Implementation of the proposed Project would include compliance with all required laws, permits, ordinances, and plans, such as the MS4 Permit, South Orange County Hydromodification Plan, and Construction General Permit requirements, that would reduce incremental effects to hydrology and water quality. The proposed Project would result in an increase of impervious surfaces within the watershed and is required to include pervious surfaces to retain storm water drainage on site. This increase in impervious surfaces with implementation of the proposed BMPs (two MWS units, **PDF HYD-3**) as required by the MS4 Permit and Hydromodification Plan would not lead to an increase in surface runoff or significant pollutant loadings.

Other future developments within the urban and developed subwatershed would have similar effects as the proposed Project. The areas surrounding the proposed Project area are of similar urban nature, and any future development would also include compliance with all required laws, permits, ordinances, and plans, such as the MS4 Permit, South Orange County Hydromodification Plan, and Construction General Permit requirements, in order to meet runoff requirements. This would help reduce impacts to water quality and retain runoff and ensure that the incremental effects of individual projects do not cause a substantial cumulative impact related to water quality. For example, each related project would be required to develop a SWPPP (for construction), a WQMP (for operation), and a hydrology report, and would be evaluated individually to determine appropriate BMPs and treatment measures to reduce impacts to surface water quality and hydrology. In addition, cities review all development projects on a case-by-case basis to ensure that sufficient local and regional drainage capacity is available. Furthermore, the analysis in a

Project's hydrology report is cumulative in nature due to the project and existing developments impact on storm drainage within the watershed area.

Combined impacts to water quality, to the storm drain system, and from the creation of flooding hazards from past, present, and future projects would be less than significant cumulatively. Therefore, because water quality, drainage, and flooding would not be adversely affected by the proposed Project, the proposed Project's contribution to cumulative hydrology and water quality impacts would not be cumulatively considerable.

4.9.8 Summary of Mitigation Measures

As no impacts related to hydrology and water quality have been found to be significant, no mitigation measures are required.

4.9.9 Significant Environmental Impacts

The analysis above indicates that the Project will not exceed significance criteria for hydrology and water quality impacts. Therefore, all hydrology and water quality impacts are **less than significant**, and no mitigation measures are required.

4.9.10 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

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Federal Emergency Management Agency (FEMA). 2021, March 21. National Flood Insurance Program Flood Insurance Rate Map, Orange County, California and Incorporated Areas, Panel 438 of 539, Map Number 06059C0438K.

Hunsaker & Associates Irvine, Inc. August 16, 2021. Hydrology Analysis.

Hunsaker & Associates Irvine, Inc. August 24, 2021. Conceptual Water Quality Management Plan.

4.10 Land Use and Planning

This Section describes the existing land uses at the Project site and surrounding vicinity based on the land use and zoning designations established by City planning documents. This section also discusses the proposed Project's consistency with applicable land uses policies and development regulations that control allowable land uses, development intensity, and development standards contained in the City's General Plan and Zoning Code. The analysis in this section is a qualitative assessment of the potential impacts that would occur as part of the proposed Project.

4.10.1 Setting

The Laguna Niguel General Plan (LNGP) in Chapter 2, Land Use, found in Community Profile Areas Figure LU-5 shows that the approximately 4.2-acre proposed Project site is located within the Community Profile Area 8, subgroup (f), Crown Cove/ Country Club Villas/ El Niguel Terrace. The LNGP describes the Community Profile Area 8(f) as built out, with 429 residential dwelling units (dus), which includes the 41 units demolished as a result of the Via Estoril landslide.[1] Of the 429 dus, 389 dus are attached units and 40 are detached units.

The proposed Project site is designated in the LNGP land use map as Residential Attached, which applies to townhomes, apartments, and condominium projects that allow for attached dwelling units constructed on individual and common lots. The surrounding land use designations include similarly designated Residential Attached to the south and Residential Detached to the north, west, and east, which applies to single-family dwellings on individual lots.

Existing zoning for the Project site is Multi-family District (RM). The purpose of the RM zone is to provide for the development and preservation of developments containing multiple dwelling units on each lot, with ample common open space and recreation facilities. The RM zone provides for low- and medium-density neighborhoods with multi-family residences or attached dwelling units constructed on common lots. The RM residential development standards are detailed in Section 9-1-33 of the Laguna Niguel Zoning Code (LNZC). The existing zoning designations for the site and surrounding area include Single-Family District 3 (RS-3) to the north, west, and east. Another RM designation is on the adjacent lot to the south and a Single-Family District 4 (RS-4) designation to the west. The proposed Project is consistent with existing RM zoning for the site.

4.10.2 Existing Site Conditions

The Project site is located on 4.2 acres of land in the southwest portion of the City. As previously stated in Chapter 2.0 *Project Description*, the Project site is situated on an east-facing hillside and is surrounded by residential uses, including single family homes to the north and west, La Vista Condominiums to the south, and Crown Valley Parkway on the east with single family homes

[1] LNGP, Chapter 2 Land Use, Figure LU-5 - Community Profile Areas

further east. As previously stated, the Project site contains a Residential Attached LNGP land use designation and has an existing zoning of RM as seen in Chapter 2, Figure 2.C and Figure 2.D.

4.10.3 Related Policies and Regulations

Federal Regulations

There are no federal regulations regarding Land Use and Planning.

State Regulations

The Housing Accountability Act (Government Code sections 65589.5, et seq.)

In the Housing Accountability Act (HAA), the Legislature declares that "California has a housing supply and affordability crisis of historic proportions. The consequences of failing to effectively and aggressively confront this crisis are hurting millions of Californians, robbing future generations of the chance to call California home, stifling economic opportunities for workers and businesses, worsening poverty and homelessness, and undermining the state's environmental and climate objectives." (Gov. Code, § 65589.5, subd. (a)(2)(A).) According to the Legislature, "California's housing picture has reached a crisis of historic proportions despite the fact that, for decades, the Legislature has enacted statutes intended to significantly increase the approval, development, and affordability of housing of all income levels." (*Id*., subd. (a)(2)(J).)

According to the HAA, the excessive cost of the state's housing supply is partially caused by activities and policies of many local governments that may limit the approval of housing. The consequences of those actions result in discrimination against low-income and minority households, lack of housing to support employment growth, imbalance in jobs and housing, reduced mobility, urban sprawl, excessive commuting, and air quality deterioration. (Gov. Code, § 65589.5, subd. (a)(1)(C).) Because the purpose of the HAA is to promote the construction of more desperately-needed housing in the State of California, among other restrictions and requirements, if a housing project is to be denied, a city must base its denial on "written findings supported by a preponderance of the evidence on the record that both of the following conditions exist (A) the housing development project would have a specific, adverse impact upon the public health or safety unless the project is disapproved or approved upon the condition that the project be developed at a lower density," and (B) there is no feasible method to mitigate or avoid the adverse impact other than denying the project or forcing it to be built at a lower density. (Id., at, subd. (j)(1) [emphasis added].) The HAA further places the burden of proof on the local agency with respect to these findings. (Gov. Code, § 65589.6)

Since its original adoption, the Legislature has made changes to the HAA to, among other things, bolster its enforcement provisions and increase local governments' liability for violations. The most recent changes are reflected in Senate Bill 330 (SB 330), also known as the Housing Crisis Act of 2019 and further detailed below.

State Bill 330 (Housing Crisis Act of 2019)

On October 9, 2019, the Housing Crisis Act of 2019 was signed into law, commonly known as Senate Bill 330 (Chapter 654, Statutes of 2019) (SB 330), as part of the ongoing effort to respond to the State of California's housing crisis. Effective January 1, 2020, SB330 aims to increase residential unit development, protect existing housing inventory, and expedite residential permit processing. This new law makes a number of modifications to existing legislation, such as the Permit Streamlining Act and the Housing Accountability Act and institutes the Housing Crisis Act of 2019. Many of the proposed changes last for a 5-year period and sunset on January 1, 2025.

Under this legislation, municipal and county agencies are restricted in ordinances and polices that can be applied to residential development. The revised definition of "Housing Development" now contains residential projects of two or more units, mixed-use projects (with two-thirds of the floor area designated for residential use), and transitional, supportive, and emergency housing projects.

Local Regulations

The surrounding Project vicinity is within the City and land use decisions fall within the jurisdiction of the City. The primary land use development guidelines, policies, and standards are contained in the Laguna Niguel General Plan and the Laguna Niguel Municipal Code. The existing planning and zoning programs that are applicable to the Project site are discussed below.

Laguna Niguel General Plan

The Laguna Niguel General Plan (LNGP) was adopted in 1992 to set forth objectives, policies, standards, and programs for land use and new development, Circulation and Public access, and Service Systems for the Community as a whole. The following land use and planning goals and policies are applicable to the proposed Project:

Land Use Element

Goal 1. A well-balanced mixture of land uses that meet the residential, commercial open space and public service needs of residents.

- **Policy 1.1.** Encourage the development of land uses that contribute to the goal of a well-balanced community.

Goal 5. Preservation and enhancement of the natural setting of the City

- **Policy 5.1.** Ensure that adequate recreational and open space areas are provided.
- **Policy 5.3.** Strive to maintain or improve the City's existing environmental setting.

Laguna Niguel Zoning Code

Title 9 of the Laguna Niguel Zoning Code (LNZC) is titled Planning and Zoning, and functions as the LNZC. The LNZC was created to carry out the policies of the LNGP. It is the intent of the LNZC to promote health, safety, and the general welfare of the City and its citizens.

Sec. 9-1-31.6. - RM Multi-family District

To provide for the development and preservation of developments containing multiple dwelling units on each lot, consisting of either rental apartments or condominiums with individual ownership of units. Each project will have ample common open space and recreation facilities.

Sec. 9-1-35.13. - Landscaping and open area

All projects within the RM and RP districts shall include common open area equal to at least 25 percent of the buildable project area. "Buildable project area" means the horizontal area within the boundaries of a development project, less slope areas with a ratio of 2:1 or steeper and less perimeter rights-of-way and easements and areas set aside for public schools, parks, and other public uses.

- *Active Recreation*. At least 10 percent of the buildable project area shall be devoted to active recreational uses. This may be part of the required project common open area. *Recreation facilities* may include swimming pools, spas, and related facilities; clubhouses; tot lots with play equipment; court game facilities such as tennis, basketball, or racquetball; or similar facilities for active recreational use.

4.10.4 Thresholds of Significance

Criteria for determining the significance of impacts related to land use and planning are based on criteria contained in Appendix G of the State CEQA Guidelines and the City's CEQA Manual. The proposed Project could have a significant impact on the environment would the project:

Threshold LU-1 *Physically divide an established community?*

Threshold LU-2 *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?*

Methodology

The potential land use and planning impacts associated with the proposed Project were evaluated through a qualitative comparison of the anticipated project effects with existing site conditions and characteristics of surrounding land uses. The proposed Project was evaluated for consistency with existing land use plans, regulations, and policies applicable to the Project site and its vicinity. Inconsistency with plans and policies alone would not necessarily constitute a significant impact, unless the inconsistency results in what would be considered an adverse physical change to the environment. Significant impacts would occur if the proposed Project would result in adverse physical environmental affects in accordance with the thresholds described below.

4.10.5 Project Design Features and Standard Conditions of Approval

PDF LU-1 The 4.2-acre Project site is designated as APN 656-321-02. The property is to be subdivided into two lots, Lot 1 and Lot A. Lot 1 includes a 2-acre area for the

proposed residential use and Lot A includes a 2.2-acre area for open space. The open space consists of the previous remediated landslide and includes the 30-foot earthen "buttress" (an existing design feature installed for geotechnical purposes to stabilize the former landslide), vegetation planted for the purposes of surface erosion control, and an installed storm drain system. Since Lot A is a lettered lot on the tentative tract map and no residential development is allowed on lettered lots, no residential development would occur on the remediated hillside.

Furthermore, permanent maintenance of the remediated hillside will maximize the space between the residents upslope and to the west who were impacted by the landslide in 1998 and who expressed concerns about prior development proposals on the Project site.

4.10.6 Environmental Impact Evaluation

The following impact analysis addresses thresholds of significance for disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Threshold LU-1 *Physically divide an established community?*

Less Than Significant Impact. The Project site is located within the Community Profile Area 8, sub-profile (f), Crown Cove/Country Club Villas/El Niguel Terrace of the LNGP. The site is surrounded by compatible residential land uses including single family homes to the west and north, La Vista Condominiums to the south, and Crown Valley Parkway on the east with single family homes further east.

The proposed condominiums would likewise reflect a Spanish architectural theme as commonly seen throughout the City. The basic design elements are simple asymmetrical forms, arched entries, predominantly stucco wall finishes, and shallow gabled 'S' tile roofs that animate building elevations. Grouping of accent windows and vertical forms of openings would reinforce this design character. Material blending of slump stone, simulated wood corbels, shutters, shaped wood trims and posts, decorative metal railings and downspouts are purposefully composed to enhance the overall design character on all sides of every building. Moreover, the Project will work to redevelop the previously existing residential site with a residential project consistent with existing General Plan and Zoning designations that provides an updated housing product to meet the City's growing population and further address the City's and state's housing needs.

No changes to surrounding land uses and no barriers that would divide the community are proposed. The existing site is within an existing neighborhood that has been approved for residential development since the 1960s. All proposed construction and operation activities would take place within the existing site boundaries. No existing or proposed transportation routes would be interrupted as a result of the proposed Project. Therefore, implementation of the proposed

Project would not physically divide an established community, and impacts are considered less than significant, and no mitigation is required.

Threshold LU-2 *Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?*

Less Than Significant Impact. The proposed Project is consistent with the existing General Plan land use designation and zoning designation for the property. The current land use regulations allow attached residential development up to 41 dwelling units for the 4.2-acre Project site. The Project's proposed 22 attached dwelling units are less than the maximum number of dwelling units and therefore, consistent with the General Plan limits. However, the proposed 22 units on 2 acres (i.e., Lot 1) provides the same density of development as the 41 units identified in the General Plan applied to the entire 4.2-acre site. Therefore, the proposed Project does not constitute a loss of density and does not conflict with SB 330.

The LNGP contains goals and policies to promote land use compatibility. Table 4.10-1. Laguna Niguel General Plan Consistency Analysis contains a summary of the consistency of the proposed Project with applicable land use compatibility goals and policies of the LNGP.

Table 4.10-1. Laguna Niguel General Plan Consistency Analysis

Policy	Consistency Analysis
General Plan Land Use Element	
Goal 1.0: A well-balanced mixture of land uses that meet the residential, commercial, open space and public service needs of residents.	**Consistent.** The proposed Project would maintain 2.2 acres of open space. Moreover, the Project would include community features not typically found in Laguna Niguel. For example, the product floor plans would accommodate work from home occupants and each unit would contain an oversized garage enabling in-home exercise and recreation equipment. The Project includes private fenced yard space larger than typically found with townhomes to provide residents additional outdoor living and recreation area. The proposed Project would result in the development of 22 condominium, multi-family residences on 2.0 acres of the 4.2 acres site currently zoned RM. These dwellings are expected to help the City meet residential needs of the City.
Goal 3.0: Compatible relationships between land uses in the community.	**Consistent.** The proposed Project would result in the development of 22 condominium, multi-family residences on 2.0 acres of the 4.2 acres site currently zoned RM. The Project

Policy	Consistency Analysis
	site is located on an east-facing hillside and is surrounded by residential uses, including single family homes to the west and north, La Vista Condominiums to the south, and Crown Valley Parkway on the east with single family homes further east. The proposed Project would re-introduce residential uses on the lower portion of the site The site has been previously re-graded to remediate the 1998 Via Estoril landslide, which included installation of an earthen buttress, storm drain system and shrubs for erosion control in the upper, steep portion of the site. The entire 4.2-acre site remains planned for multi-family residential uses. The proposed Lot 1 would be developed with the residential uses similar to and complimentary to the residential uses already established in the area. Lot "A" includes the 2.2-acre area of open space, which consists of the previous remediated landslide and includes the 30-foot earthen "buttress" (a design feature previously approved for geotechnical assurance of future landslide), planted erosion control, and installed storm drain system. Since Lot A is a lettered lot on the tentative tract map and no residential development is allowed on lettered lots, no residential development would occur on the remediated hillside.
Policy 3.3: Reduce land use conflicts between residential and nonresidential uses.	**Consistent.** The LNGP assigns specific land uses to each property. The Project site is bordered by residential and open space uses. The Project would provide connection to existing nearby land uses through street connectivity and maintenance of open space.
Policy 3.4: Ensure that residential densities are compatible with the surrounding land uses and buildings are in scale with the neighborhood character.	**Consistent.** The proposed Project density of 11 du/ac is lower than the average multi-family density of 14.6 du/ac in the City. Multi-family developments have a wide range of densities, and therefore the Project is consistent. Furthermore, the proposed buildings are compatible in scale to the scale of the residential buildings in the surrounding neighborhoods. The maximum building height would be three stories measured 35 feet, and condominium sizes would range from approximately 2,600 square feet to 2,900 square feet which is comparable to the single-family homes, and consistent with adjoining neighborhoods with similar mixture of amenities such as garages, patios, and decks.

Policy	Consistency Analysis
Goal 4.0: Urban design that provides community gathering areas and other pedestrian spaces.	**Consistent.** The proposed Project includes two neighborhood parks one with a picnic table and BBQ area and both with open play lawns.
Policy 6.1: Provide for the development of pedestrian gathering areas to promote social interaction.	**Consistent.** See responses to Land Use Element Goal 4.0 above. The Project includes two neighborhood parks one with a picnic table and BBQ area and both with open play lawns.
General Plan Open Space/Parks/Conservation Element	
Goal 1: Well-maintained public and private open space.	**Consistent**: See response to Land Use Element Goal 4.0 above.
Policy 1.1: Preserve and protect the scenic and visual quality of areas designated for Open Space areas as a resource of public importance.	**Consistent.** See response to Land Use Element Goal 3.0 above. The Project site is designated Residential Attached by the LNGP, which allows for attached multi-family dwellings. The proposed site design would allow for a large portion of the Project site to remain open space. Lot "A" includes the 2.2-acre area of open space, which consists of the previous remediated landslide and includes the 30-foot earthen "buttress" (a design feature previously approved for geotechnical assurance of future landslide), planted erosion control, and installed storm drain system. Since Lot A is a lettered lot on the tentative tract map and no residential development is allowed on lettered lots, no residential development would occur on the remediated hillside. The visual character of the Project site would be similar to the adjacent northwest undeveloped hillside property. Furthermore, the existing visual character and quality of the site and surrounding areas would not be impacted. The existing vacant visual character of the site would be developed with residential uses similar to the residential uses already established in the area and enhance the visual quality of the surrounding area.
Policy 2.1: Provide park and recreational facilities that meet the needs of senior citizens, young adults, children, disabled individuals and families.	**Consistent.** See response to Land Use Element Goal 4.0 above.

Policy	Consistency Analysis
Goal 5: Conservation of natural resource areas of community and regional significance.	**Consistent.** See response to Open Space/Parks/Conservation Element Policy 1.1.
Policy 5.1: Conserve sensitive species and plant communities and wildlife habitats to the maximum extent feasible through open space dedication and easements, creative site design and other workable mitigation actions.	**Consistent.** See response to Open Space/Parks/Conservation Element Policy 1.1 above. In addition, as discussed in Section 4.3, *Biological Resources*, the Project site does not have suitable habitat for sensitive species, plant communities, and wildlife habitats and these biological resources were not found to be present during site surveys. However, because nesting birds protected under the Migratory Bird Treaty Act (MBTA) and Fish and Game Code (FGC) have the potential to nest in and around the study area, **Mitigation Measure MM BIO-1** would be implemented to ensure compliance with the MBTA and FGC and thus reduce the potential impacts to a less-than-significant level.
Policy 5.3: Review the Plant Communities Map for all new development proposals.	**Consistent.** See response to Open Space/Parks/ Conservation Element Policy 5.1 above.
Goal 6: Carefully review sensitive hillside areas within the community.	**Consistent.** Since Lot A is a lettered lot on the tentative tract map and no residential development is allowed on lettered lots, no residential development would occur on the remediated hillside.
Policy 6.1: Provide for the preservation of sensitive hillside and canyon areas in accordance with the City's Hillside Protection Ordinance.	**Consistent.** See response to Goal 6 above.
Policy 6.2: Consider significant natural features, including sensitive hillsides and ridgelines as part of the development review process.	**Consistent.** See response to Goal 6 above.
Goal 7: Recognize significant cultural sites or features within the community.	**Consistent.** A review of the results of the cultural resources record search and studies conducted in the area showed three cultural resources within 1/2 mile of the Project, all prehistoric. The Project is considered to have a low potential to impact prehistoric and historic cultural resources because results from the two prior surveys performed on the site and the study prepared for the proposed Project were negative for cultural resources. In addition, there will be minor disturbance of native

Policy	Consistency Analysis
	soils. Therefore, it is not likely that cultural resources will be impacted by the Project. However, if the proposed Project requires grading in native soils to accomplish its proposed geotechnical work, impacts to potential unknown paleontological resources could be affected. In addition, the Project area sits in the late Miocene Capistrano Formation deposits, within which significant vertebrate fossil material may be encountered during excavations. Any fossils present could be damaged or destroyed as a result of earthwork during Project construction, and a potentially significant impact would occur. Implementation of **Mitigation Measure MM GEO-1** would require the presence of a qualified paleontological monitor to reduce potential impacts to a less-than-significant level. Therefore, with implementation of mitigation measure **MM GEO-1,** the proposed Project would be consistent with this goal.
Policy 7.1 Review the technical data on sensitive cultural resources for all new development proposals.	**Consistent.** See response to Open Space/Parks/ Conservation Element Goal 7 above.
Policy 7.2: Require mitigation of impacts to significant areas of archaeological and paleontological resources.	**Consistent.** See response to General Plan Open Space/Parks/ Conservation Element Goal 7 above.
Policy 7.3: Preserve uncovered resources in their natural state, as much as feasible to assure their preservation and availability for later study. Require that uncovered resources are documented and retained in an appropriate museum or institution.	**Consistent.** See response to General Plan Open Space/Parks/ Conservation Element Goal 7 above.
Goal 10. Effective utilization and Management of Water Resources.	**Consistent.** The proposed Project would comply with the requirements of the CalGreen building code and water-saving restrictions, including those requiring drought-tolerant landscaping. In addition, the proposed Project would provide landscaped areas with low-flow irrigation heads operated by a smart controller to minimize the on-site water usage to exceed

Policy	Consistency Analysis
	maximum allowed water allowance (MAWA) per City guidelines.
Policy 10.1: Require appropriate water conservation and mitigation measures on all development projects.	**Consistent.** See response to General Plan Open Space, Parks, Conservation Element Goal 10 above.
Policy 10.2 Future land development and redevelopment must adhere to the standards set forth in the City of Laguna Niguel Local Implementation Plan for the National Pollution Discharge Elimination System Storm Water Program to ensure that new development incorporates measures, to the extent practicable, that reduce the quantity of storm flow and discharge of pollutants in urban runoff to protect the water quality and biological habitats of downstream receiving waters.	**Consistent.** Compliance with MS4 Permit and Construction General Permit requirements, the installation and maintenance of biofiltration BMPs, and compliance with other applicable stormwater management requirements would ensure that the proposed Project would have a less-than-significant impact on water quality standards during Project operation. Additionally, as described in Section 4.9, *Hydrology and Water Quality*, the Proposed grading and drainage infrastructure has been designed to maximize the flat buildable area while reducing the amount of runoff flowing directly into Crown Valley Parkway. This is achieved by connecting into the existing storm drain system and installing two modular wetland systems that act as an underground detention facility. As a result, the peak storm flow during the 100-year event would be reduced which complies with current hydromodification requirements consistent with the City's MS4 permit. Therefore, the proposed Project would result in less-than-significant impacts related to storm flows and runoff and would be consistent with this policy.
General Plan and Public Facilities	
Policy 4.2: Require all buildings located within the City to adhere to fire safety codes.	**Consistent.** The Project would adhere to and meet all access, water, and fire protection systems per the CAL Fire Prevention Program, California Building Code, and Fire Code as well as other City Municipal Codes. Furthermore, OCFA would require a Secured Fire Protection Agreement prior to approval of the Project to specify the pro-rata fair share funding of capital improvements necessary to establish adequate fire protection facilities, equipment, and personnel. Therefore, the proposed Project would result in a less-than-significant impact related to fire safety and would be consistent with this policy.

Policy	Consistency Analysis
Policy 8.1: Encourage development that minimizes net energy use and consumption of natural resources.	**Consistent.** The Project would comply with the energy conservation measures contained in Title 24, which would reduce the amount of energy needed for Project operation. The proposed Project would also incorporate the following energy-efficient features that would minimize energy consumption. • Provision of energy-efficient lighting, plumbing, HVAC, appliances, windows, doors, and insulation. • Installation of drought-tolerant plant material from approved material lists of the City, MNWD, and OCFA. • Provision of recycle containers as a part of the weekly trash pickup.
Goal 4. The control of noise from significant noise generators in the community.	**Consistent.** The Project itself is a multi-family development that is not anticipated to generate significant noise levels onto surrounding properties. However, the proposed Project site could also be affected by traffic noise from the adjacent Crown Valley Parkway. With implementation of **SCA NOI-2**, which calls for the construction of noise barriers around affected noise-sensitive locations, with actual barrier heights and locations to be determined by a detailed noise study based on final site, grading, and architectural plans for the Project, impacts at proposed onsite noise-sensitive receivers would be less than significant. Furthermore, with implementation of **SCA NOI-3**, which requires HVAC systems at all residential units and a detailed noise assessment (based on final site, grading, and architectural plans) to determine specific building design features required for compliance with the City's interior standard of 45 dB CNEL, interior traffic noise impacts would be less than significant. Therefore, with implementation of standard conditions of approval, Project impacts from noise generators would be minimized and consistent with this goal.
Policy 4.1 Regulate noise from construction activities.	**Consistent.** Implementation of **SCA NOI-1** would limit noise-generating construction activity to the permitted daytime hours and implement standard noise-reduction methods to minimize potential annoyance at nearby noise-sensitive receptors.
Goal 5. The consideration of noise issues in the planning process.	**Consistent.** See responses to General Plan Noise Goal 4 and Policy 4.1 above.

Policy	Consistency Analysis
Policy 5.1 Evaluate potential noise conflicts for individual sites and projects.	**Consistent.** See responses to General Plan Noise Goal 4 and Policy 4.1 above.
General Plan Seismic and Public Safety	
Goal 1: A reduction of impacts from natural hazards that may affect the City of Laguna Niguel.	**Consistent.** The Project would adhere to applicable ordinances, goals, and policies of the current California Building Code (CCR Title 24); recommendations contained in the geology investigation study contained in Appendix F; and requirements of the LNGP, which would reduce anticipated impacts of geologic and seismic hazards by requiring the Project to be built to withstand seismic ground shaking. The *Geologic Feasibility Investigation* has determined the proposed Project would meet minimum factor of safety requirements for slope stability and development of the Project site is feasible from a geotechnical perspective with incorporation of recommendations. **PDF-GEO-1** would designate Lot "A", which includes the 2.2-acre area of open space consisting of the previous remediated landslide and the 30-foot earthen "buttress" (a design feature previously approved for geotechnical assurance of future landslide), planted erosion control, and installed storm drain system. Since Lot A is a lettered lot on the tentative tract map and no residential development is allowed on lettered lots, no residential development would occur on the remediated hillside. **PDF GEO-2 and GEO-3** are required to ensure that the recommendations contained in the project's *Geologic Feasibility Investigation.* Therefore, with mitigation, impacts would be less than significant.
Policy 1.1: Mitigate potential adverse impacts of geologic and seismic hazards.	**Consistent.** See response to General Plan Seismic and Public Safety Goal 1 above.
Policy 1.3: Develop plans and programs to mitigate the effects of natural hazards.	**Consistent.** See response to General Plan Seismic and Public Safety Goal 1 above.
Goal 2: Protection of the public and sensitive environmental resources	**Consistent.** Implementation of the proposed Project is not expected to create a significant hazard to the public or the environment through reasonably foreseeable upset and

Policy	Consistency Analysis
from exposure to hazardous materials and waste	accident conditions involving the release of hazardous materials into the environment. Although development of the proposed Project would involve handling of hazardous materials typical of a construction project, it is expected that construction of the proposed Project would be conducted in compliance with federal, state, and local regulations. Additionally, any potential construction-related hazardous releases or emissions would be from commonly used materials such as fossil fuels, solvents, and paints that would not be considered acutely hazardous materials. Any spills would be localized and immediately contained and cleaned.
Policy 2.1: Reduce risks of exposure to hazardous materials and waste through careful land use and hazardous materials management planning.	**Consistent.** See response to General Plan Seismic and Public Safety Goal 2 above.
Policy 2.2: Reduce risk of exposure by improving the safety of hazardous materials/waste transportation.	**Consistent.** See response to General Plan Seismic and Public Safety Goal 2 above.
Goal 3: A safe and secure community free from the threat of personal injury and loss of property.	**Consistent.** The proposed Project would represent an approximate population increase of less than 1%. Therefore, the proposed Project is not expected to result in an additional strain on police and fire protection services such that new or expanded facilities would be required. Public services to ensure the safety of the community would not be significantly affected.
Policy 3.1: Provide fire protection to ensure the public's health and safety	**Consistent.** See response to General Plan Seismic and Public Safety Goal 3 above and response to Public Facilities Policy 4.2 above.
Policy 3.2: Reduce the risk of wildland fire through fuel modification programs.	**Consistent.** A fuel modification plan has been prepared and conditionally approved by OCFA, which incorporates both vegetation management and alternate means and methods. That fuel modification plan is included in Appendix K, and incorporated into the plan include a fuel modification area with two zones with permanent irrigation, fire resistant landscaping, and proper setbacks. Therefore, implementation of the fuel modification plan as part of project construction would reduce the risk of impacts from wildfire to less-than-significant levels.

Policy	Consistency Analysis
General Plan Housing Plan	
Policy 1.1: Ensure that housing is safe and sanitary with adequate public services to accommodate the needs of City residents.	**Consistent.** See responses to General Plan Seismic and Public Safety Goal 3 and General Plan Public Facilities Policy 4.2 above. Additionally, as discussed in Section 3.2.6, *Utilities and Service Systems*, the Project would be accommodated by the three existing landfills in Orange County. Furthermore, the proposed Project would not exceed wastewater treatment requirements or require the construction of new wastewater treatment facilities.
General Plan Circulation Element	
Goal 1: An adequate transportation/circulation system that supports regional and local land uses at adopted level of service (LOS) standards and complies with requirements of the Countywide Traffic Improvement and Growth Management Program (Measure M) (GME Goal1A).	**Consistent.** The proposed Project trips are estimated to be less than 50 trips during both the weekday AM and PM peak hours. Based on City scoping criteria, this quantity of trips screens out the need for an offsite LOS analysis because the quantity of trip additions would have no impact on the surrounding street network and no further LOS analysis is needed. The proposed Project trips are expected to generate less than 500 daily trips during the weekday, and therefore the Project would be screened out from further VMT analysis and the Project would have a less than significant VMT impact. Review of the Project Driveway located on Crown Valley Parkway indicates that the existing sight lines at the driveway are considered adequate for right-turning vehicles, but insufficient for left-turning vehicles. An acceleration lane to assist motorist with right-turn egress from the site is not required, and left turn egress should be prohibited. Review of the proposed site plan indicates that on-site circulation is adequate and therefore a deceleration lane into the site is not required. A queueing evaluation of the northbound left-turn pocket at the project driveway indicates that the existing storage is adequate to accommodate the projected Project traffic. Recommended improvements to prohibit left turn egress include the installation of a median diverter on Crown Valley Parkway at the project driveway as a safety enhancement.

Policy	Consistency Analysis
	Recommended improvements also include modifying the northbound left-turn on Crown Valley Parkway at the project driveway to provide an adequate storage length of 100-feet. These two improvements are contained in **MM TRA-2** and **MM TRA-3**.
Policy 1.8: All new development shall be required to participate in the City's transportation fee program(s). These fee programs shall be designed to ensure that all development projects fund their pro-rata share of the necessary long-term transportation improvements identified in this Element or its Technical Appendix.	**Consistent.** A condition of approval will be placed on the proposed Project requiring participation in the City's adopted fee programs.
Policy 5.1 Require proposed developments, whenever feasible, to dedicate easements for Class I bikeways and to provide additional right-of-way for Class II bike lanes in the project vicinity on all major or primary roadways or other roadways where deemed appropriate.	**Consistent.** The Project plans show the maintenance of an eight-foot meandering pedestrian/bicycle sidewalk along the Crown Valley Parkway.

As presented in Table 4.10-1, the proposed Project is consistent with applicable goals and policies contained in the LNGP. In the discussion of consistency with the LNGP goals and policies, several mitigation measures for other topical sections are identified. However, as it pertains to Threshold LU-2, the Project is consistent with land use policies without the need for mitigation to achieve that consistency and impacts are less than significant.

4.10.7 Cumulative Impacts

Less than Significant Impact. The cumulative study area for potential land use and planning impacts is the City of Laguna Niguel, which is the geographical area covered by the City's General Plan, including its Goals and Policies included therein. As shown in Section 1.4, illustrated in Table 2-2 and Figure 1.C, several cumulative projects are planned within the City. Construction of the proposed Project, when considered in conjunction with these cumulative projects in the Project vicinity as well as other development citywide, would contribute to continued development of vacant and underutilized parcels within the City.

As discussed in this section, the proposed Project would not have significant impacts related to dividing an existing community or conflicting with applicable land use plans, policies, or regulations approved for the purposes of reducing environmental impacts. In addition, the proposed Project would not represent a shift in land use designation for the Project site. As the proposed Project and any future development including the cumulative projects identified in Table 4.10-1 would be consistent with all applicable land use designations and zoning, implementation of the proposed Project and cumulative projects would not result in a significant cumulative land use impact under CEQA.

4.10.8 Summary of Mitigation Measures

No mitigation measures for Thresholds LU-1 and LU-2 are required.

4.10.9 Significant Environmental Impacts

No significant impacts would occur to land use and planning from the proposed Project.

4.10.10 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

City of Laguna Niguel. February 2022. City of Laguna Niguel CEQA Manual.

City of Laguna Niguel. 1992. General Plan for the City of Laguna Niguel. Available: http://cityoflagunaniguel.org/DocumentCenter/Home/View/1886. (Accessed: September 10, 2021.)

City of Laguna Niguel. 2021. City of Laguna Niguel 2021–2029 Housing Element. Available: https://www.cityoflagunaniguel.org/1352/Housing-Element-Update. Last revised: October 2021. (Accessed February 22, 2022).

City of Laguna Niguel, Laguna Niguel Municipal Code, Planning and Zoning. https://library.municode.com/ca/laguna_niguel/codes/code_of_ordinances?nodeId=TIT9PLZO(Accessed June 20, 2021).

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4.11 Noise

This Section describes the potential noise and vibration impacts of the proposed Project. It includes a discussion of noise and vibration fundamentals, existing regulatory requirements, the existing noise setting within the Project area, and noise and vibration impacts that would result from implementation of the proposed Project. The analysis is based on the *Noise and Vibration Analysis Report, The Cove at El Niguel, Laguna Niguel, California*, prepared by A/E Tech LLC, dated February 7, 2022, provided in Appendix K of this Draft Environmental Impact Report (Draft EIR).

4.11.1 Setting

Measurement of Noise

The standard unit of measurement of the loudness of sound is the decibel (dB). Decibels are based on a logarithmic scale. The logarithmic scale compresses the wide range in sound levels resulting in a more usable range of sound level values (similar to the Richter scale used to measure earthquakes). To humans, a sound 10 dB higher than another is considered to be twice as loud; a sound 20 dB higher than another is considered four times as loud; etc. Typical daily sounds in the environmental range from 30 dB (very quiet) to 100 dB (very loud). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale is utilized to relate noise to human sensitivity. The A-weighted decibel (dBA) scale performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear. Community noise levels are measured in terms of the dBA.

A-weighting is the measure most commonly used for traffic and environmental noise. Most community noise standards utilize A-weighting because, as described above, it accurately reflects human hearing and thereby provides for a high degree of correlation with human annoyance and health effects.

Table 4.11-1, seen below, shows the noise levels of common sounds measured in the environment and their effects. The actual impact of noise is not a function of loudness alone. The time-of-day noise occurs and duration of the noise are also important. In addition, frequency content (pitch) of the noise, and its onset rate (i.e., whether it is impulsive) affect people's reactions to the noise. Higher pitch sounds are typically more easily audible to an average human, and therefore, tend to be more annoying. A pure tone sound can be perceived more easily by humans than a variable-pitch sound of the same intensity. Furthermore, an impulsive noise with a very quick onset rate, such as a hammer drop or pile driving noise, can be more disturbing than a regular noise because of its startle effect.

Most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors, such as L_{eq}, L_{min}, L_{max}, L_n, and CNEL (or L_{dn}), are used to quantify noise

levels. While the existing background noise measurements conducted in and around the Project area have been conducted in term of various metrics, the primary noise descriptors used for this study are the average noise level (L_{eq}) and the Community Noise Equivalent Level (CNEL).

The L_{eq} is the equivalent steady-state sound level that, within a stated period of time, would contain the same acoustical energy as the time-varying sound level during the same period. The L_{eq} (h) is the energy-average of the A-weighted sound levels, occurring during a 1-hour period, in decibels (i.e., a 1-hour L_{eq}). CNEL is the average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 p.m. to 10:00 p.m. and addition of 10 decibels to sound levels measured in the night between 10:00 p.m. and 7:00 a.m.

From the source to the receiver, noise changes both in level and frequency spectrum. The most obvious is the decrease in noise as the distance from the source increases. The manner in which noise decreases with distance depends on:

- Geometric spreading from point and line sources
- Ground absorption
- Atmospheric effects and refraction
- Shielding by natural and man-made features, noise barriers, diffraction, and reflection

Sounds from a small, localized source (approximating a "point" source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level decreases or drops-off at a rate of 6 dBA for each doubling of the distance (6 dBA/DD). However, highway traffic noise is not a single, stationary point source of sound. The movement of the vehicles makes the source of the sound appear to emanate from a line (line source) rather than a point when viewed over some time interval.

Changes in noise levels are typically perceived by the human ear as follows:

- A 3-dBA change is barely perceptible.
- A 5-dBA change is readily perceptible.
- A 10-dBA change is perceived as a doubling or halving of noise.

For determination of significance of noise impacts in a given environment, noise level changes brought about by a specific project (or set of projects) are often evaluated in the context of preexisting noise conditions in that environment. For quieter existing noise environments, as opposed to already noisy environments, project-induced noise level changes are allowed to be higher before the project causes a significant impact.

Table 4.11-1. Typical Sound Levels Measured in the Environment

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock Band
Jet Flyover at 1,00 Feet		
	100	
Gas Lawnmower at 3 Feet		
	90	
Diesel Truck at 50 Feet at 50 mph		Food Blender at 3 Feet
	80	Garbage Disposal at 3 Feet
Noisy Urban Area, Daytime		
Gas Lawnmower at 100 Feet	**70**	Vacuum Cleaner at 10 Feet
Commercial Area		Normal Speech at 3 Feet
Heavy Traffic at 300 Feet	**60**	
		Large Business Office
Quiet Urban Daytime	**50**	Dishwasher Next Room
Quiet Urban Nighttime	**40**	Theater (Background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night
	20	
		Broadcast/Recording Studio
	10	
	0	

Source: A/E Tech LLC

Measurement of Vibration

When the ground is subject to vibration from a source, such as heavy construction machinery, a disturbance propagates away from the vibration source. The ground vibration waves created are similar to those that propagate in water when a stone is dropped into the water.

When the ground is subject to vibratory impact, vibration waves propagate outward from the source of impact. These waves encounter an increasingly large volume of material in the ground as they travel outward, and the energy density in each wave decreases with distance from the source. This decrease in energy density and the associated decrease in displacement amplitude is called spreading loss, otherwise known as vibration attenuation.

The quantities that are used to describe vibratory motion include displacement, velocity, and acceleration. In describing vibration in the ground and in structures, the concepts of particle

displacement, velocity, and acceleration are used to describe how the ground or structure responds to excitation. Vibratory motion is commonly described by identifying the peak particle velocity (PPV) or peak particle acceleration (PPA). Velocity is measured in inches per second (in/sec) or millimeters per second (mm/sec). Acceleration is measured in in/sec per second (in/sec^2), mm/sec per second (mm/sec^2), or relative to the acceleration of gravity (g) (32.2 feet [ft.]/sec^2).

Soil and subsurface conditions are known to have a strong influence on the levels of groundborne vibration. Among the most important factors are the stiffness and internal damping of the soil and the depth to bedrock. Experience with groundborne vibration is that vibration propagation is more efficient in stiff clay soils, and shallow rock seems to concentrate the vibration energy close to the surface and can result in groundborne vibration problems at large distances from the source. Factors such as layering of the soil and depth to water table can have significant effects on the propagation of groundborne vibration.

When the ground surfaces of the excitation source and the receiver are at different elevations, much of the vibration energy carried through waves causing surface displacement of the ground dissipates. This results in weaker vibratory motion at the receiver than if the receiver were at the same elevation as the source.

4.11.2 Existing Site Conditions

The main source of noise currently affecting the Project area is local vehicular traffic on Crown Valley Parkway located along the east side of the Project site. Other noise sources include occasional distant aircraft overflights, occasional landscape maintenance activities, and other natural sounds, such as those from chirping birds. The Project site is vacant and does not produce existing short-term or long-term on-site noise levels of which will be further analyzed in this chapter.

Ambient Noise

To determine existing ambient noise levels on and surrounding the Project site, two long-term (24 hour) and five short-term (15 minute) noise level measurements were taken. The two 24-hour measurements were taken in two different locations: near the backyard of the residence at 30581 North Hampton Road (LT 1) and in the southwest corner of the Project site (LT 2). The five short-term (15 minute) measurements were taken in the following areas surrounding the Project site: ST1) near the outdoor area of 30562 Via Estoril; ST2) near the outdoor area of 30652 Via Estoril; ST3) north of Building 1 within the La Vista Condominiums; ST4) north of Building 22 within the La Vista Condominiums; and ST5) on the public sidewalk next to 30652 Paseo Del Niguel.

Short-term background noise measurements indicate that existing daytime noise levels at exterior of single- and multi-family land uses west and southwest of the Project site, away from Crown Valley Parkway, are 46 to 48 dBA. At outdoor locations of condominiums south of the Project site

and closer to Crown Valley Parkway, exterior average daytime noise levels are approximately 58 dBA. Within the single-family residential neighborhoods beyond the first row of homes east of the Project site across Crown Valley Parkway, outdoor daytime noise levels are between 48 to 52 dBA. All the measured daytime background noise levels are typical of residential settings and considered relatively quiet.

The long-term measurements are reported in CNEL, which is a 24-hour weighted average and used to determine land use compatibility. The two long-term measurements were 50 dBA CNEL for LT 1 and 47.5 dBA CNEL for LT2.

During construction and operation of the proposed Project, the existing noise-sensitive receivers in the vicinity of the proposed Project include single-family residences to the north, east, and west of the Project site, and multi-family residences to the south. Figure 4.11.A shows the locations of the sensitive residential noise receivers and Table 4.11-2 shows the distance to proposed construction and the closest residences surrounding the site.

Table 4.11-2. Existing Sensitive Receivers Distance and Sound Levels

Receiver Location	Range of Distance to Construction (Feet)	Existing Sound Level (dBA)
C1: 30562 Via Estoril	455 -1,000	48
C2: 30652 Via Estoril	325 - 900	47
C3: Building 22, The Vista Condominiums	135 - 625	58
C4: First-Row Homes, Paseo Del Niguel	140 - 735	50
C5: Single-Family Homes, N Hampton Rd	70 - 610	46

Source: A/E Tech LLC

4.11.3 Related Policies and Regulations

Federal Regulations

The Occupational Safety and Health Act of 1970 (OSHA) governs worker exposure to noise levels. This regulation applies to all phases of the proposed project and is designed to limit worker exposure to noise levels of 85 dBA or lower over an eight-hour period. The U.S. Department of Transportation has also developed regulations that govern noise standards for designing highways.

State Regulations

Government Code Section 65302(g)

California Government Code Section 65302(g) requires the preparation of a Noise Element, which shall identify and appraise the noise problems in the community. The Noise Element shall recognize the guidelines adopted by the Office of Noise Control in the State Department of Health

Services and shall quantify, to the extent practicable, current and projected noise levels for the following sources:

- Highways and freeways;
- Primary arterials and major local streets;
- Passenger and freight on-line railroad operations and ground rapid transit systems;
- Aviation and airport-related operations;
- Local industrial plants; and
- Other ground stationary noise sources contributing to the community noise environment.

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Noise Measurement Locations
The Cove at El Niguel

LT# 24-hour Noise Measurement Location

ST# Short-term Noise Measurement Location

AE TECH Noise & Vibration

Source: AE Tech (02/2022).

Figure 4.11.A Sensitive Receivers and Noise Measurement Locations

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Local Regulations

Laguna Niguel Zoning Code

Article 1 of Division 6 of the Laguna Niguel Zoning Code (LNZC) contains the City's noise regulations. Section 6.6 of the LNZC provides the City's noise ordinance. The noise ordinance is intended to protect sensitive land uses from stationary (i.e., non-transportation) noise sources such as commercial and industrial activities, music, and mechanical equipment. Sections 6.6.5 and 6.6.6 of the noise ordinance set limits on the level and duration of noise that may affect the exterior and interior areas of residential properties, as summarized in Table 4.11-3. As shown in the table, the ordinance provides stricter noise limits at nighttime to reflect that people are typically more sensitive to noise during these hours.

Table 4.11-3. Laguna Niguel Noise Ordinance Standards at Residential Properties

		Noise Level (dBA) That May Not Exceed For More Than…				
Location	**Time Period**	**30 minutes per hour (L_{50})**	**15 minutes per hour (L_{25})**	**5 minutes per hour ($L_{8.33}$)**	**1 minute per hour ($L_{1.67}$)**	**Anytime (L_{MAX})**
Exterior	Daytime (7 a.m.-10 p.m.)	55	60	65	70	75
	Nighttime (10 p.m.-7 a.m.)	50	50	60	65	70
Interior	Daytime (7 a.m.-10 p.m.)	--	--	55	60	65
	Nighttime (10 p.m.-7 a.m.)	--	--	45	50	55

Source: City of Laguna Niguel, Zoning Code: Noise Control. Section 6.6.5: Exterior Noise Standards and Section 6.6.6: Interior Noise Standards.

If the alleged offensive noise consists entirely of impact noise, simple tone noise, speech or music, or any combination thereof, each of the noise levels specified in the table shall be reduced by 5 dBA.

If the ambient noise level exceeds any of the first four noise limit categories above (i.e., the 30-, 15-, 5-, or 1-minute limits), the cumulative period applicable to that category will be increased to reflect the ambient noise level. In the event the ambient noise level exceeds the fifth (i.e., anytime) noise limit category, the maximum allowable noise level under said category will be increased to reflect the maximum ambient noise level.

dBA = A-weighted decibels L_{max} = maximum sound level

Referring to Section 6.6.7(5) of the LNZC, construction noise is exempt from provisions in the noise ordinance provided that construction activities do not occur between the hours of 8:00 p.m. and 7:00 a.m. on weekdays or Saturdays, or at any time on Sundays or federal holidays.

Laguna Niguel General Plan

Noise Element

The Laguna Niguel General Plan (LNGP) includes a Noise Element, which is a comprehensive program to identify and temper environmental factors that potentially threaten community health and safety. The Noise Element requires consideration of potential noise impacts early in the planning process and provides interior and exterior noise standards for various land uses as summarized in Table 4.11-4. These noise standards are typically applied to transportation (i.e., non-stationary) noise standards.

Table 4.11-4. Laguna Niguel General Plan - Interior and Exterior Noise Standards

	Noise Standards (CNEL) (dBA)	
Land Use	**Interior**	**Exterior**
Residential Detached, Residential Attached	45	65
Neighborhood Commercial, Community Commercial	--	70
Professional Office	50	70
Industrial/Business Park	55[1]	75
Community Commercial/Professional Office	--	70
Professional Office/Industrial/Business Park/Community Commercial	--	75
Public/Institutional, Public Institutional/Professional Office	50	70
Schools	50[2]	65[2]
Parks and Recreation	--	70

Source: Laguna Niguel, General Plan: Noise Element. Chapter 6, Section VIII: Goals, Policies, and Actions (Table N-9). August 4, 1992.

Notes:

1. Where quiet is a basis for use
2. In interior or exterior Classroom Areas during school operating hours

dBA = A-weighted decibel

L_{max} = Community Equivalent Noise Level

4.11.4 Thresholds of Significance

Criteria for determining the significance of impacts related to noise are based on criteria contained in Appendix G of the State CEQA Guidelines and the City's CEQA Manual. The proposed Project could have a significant impact on the environment if it would result in any of the following.

Threshold NOI-1 *Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Threshold NOI-2 *Generation of excessive groundborne vibration or groundborne noise levels?*

Threshold NOI-3 *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?*

According to the City's CEQA Manual, construction activities lasting more than ten (10) days in a three (3)-month period would cause a significant noise impact at residential land use if they result in the ambient exterior 8-hour average noise level (L_{eq}) to exceed 80 dBA during daytime hours of 7:00 a.m. to 7:00 p.m.

As related to operational noise, if baseline noise levels at nearest noise-sensitive land uses without a project are below 55 dBA CNEL, Project operation would result in a significant noise impact if it causes noise level increases of 10 dBA CNEL or more in ambient noise levels.

The City has established its CEQA thresholds of significance for vibration impacts from the California Department of Transportation (Caltrans) as shown in Table 4.11-5 and Error! **Not a valid bookmark self-reference.** lists the vibration damage criteria for four general categories of buildings. These criteria are expressed in terms of PPV, which is the maximum instantaneous positive or negative peak of the vibration signal, often used in monitoring of construction vibration (such as blasting) since it is related to the stresses that are experienced by buildings.
below.

Error! Not a valid bookmark self-reference. lists the vibration damage criteria for four general categories of buildings. These criteria are expressed in terms of PPV, which is the maximum instantaneous positive or negative peak of the vibration signal, often used in monitoring of construction vibration (such as blasting) since it is related to the stresses that are experienced by buildings.

Methodology

Construction Noise

The City's CEQA Manual provides guidance for assessing a project's construction noise impacts as follows. Typically, construction noise does not cause substantial noise at distances beyond 500 feet from construction activities or when construction is limited to allowed days and times. Therefore, the following noise screening criteria may be used for a new project construction:

- Would construction activities occur within 500 feet of a noise sensitive use?

- Would construction occur between the hours of 8:00 p.m. and 7:00 a.m. Monday through Saturday, or anytime on Sunday or federal holidays?

A "yes" response to either of the preceding questions indicates further study is required. Based on the above criteria, projects that do not qualify for an exemption from a construction noise assessment shall prepare a detailed analysis of construction noise impacts on sensitive receptors according to the methodology and criteria contained in the Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* dated September 2018 (FTA Manual) or most current version. Specifically, the construction noise assessment shall be prepared in accordance with "Option B: Detailed Analysis" included in the FTA Manual. The thresholds of significance applied to construction projects within the City are the FTA standards found in Table 7-3 of the FTA Manual titled, *Table 7-3 Detailed Analysis Construction Noise Criteria*. For a development project adjacent to residential receptors the daytime construction noise threshold is 80 dBA L_{eq} 8 hour. Nighttime construction activities are generally prohibited by the Laguna Niguel Municipal Code, however if an exemption is provided, the construction noise thresholds found in Table 7-3 of the FTA Manual would also apply to nighttime construction. The Nighttime threshold of significance for construction noise at residential properties is 70 dBA L_{eq} 8 hour.

Operations Noise

The City's CEQA Manual provides guidance for assessing a project's operational noise impacts as follows. Project operational impacts are generally due to the project including single or multiple noise sources within the project site (stationary sources) or causing increases in vehicular traffic on city streets (mobile sources), or both. A project would cause a significant noise impact if (1) the project causes ambient exterior noise levels at nearby noise-sensitive uses to increase above 65 dBA CNEL; or (2) baseline noise levels at nearest noise-sensitive land uses without the project are below 55 dBA CNEL and the project results in noise level increases of 10 dBA CNEL or more in ambient noise levels; or (3) baseline noise levels at nearest noise-sensitive land uses without the project are in the range of 55-60 dBA CNEL and the project results in ambient noise levels that are 5 dBA CNEL or more above baseline noise levels; or (4) baseline noise levels at nearest noise-sensitive land uses without the project are above 60 dBA CNEL and the project results in a noise level increase of 3 dBA CNEL or more above baseline noise levels.

A noise measurement survey consisting of long-term (24-hour) and short-term (15-minute) noise measurements was conducted at seven locations representative of noise-sensitive receivers nearest to the Project site (see above Figure 4.11.A). The noise measurements consisted of 24-hour measurements at two of the monitoring sites (LT1 and LT2, located near the north and west parts of the Project site), and short-term measurements at the remaining sites (ST1 through ST5) representing other noise-sensitive uses surrounding the Project site. The purpose of the 24-hour measurements was to capture variations in background noise levels during the day and night hours and capture CNEL values typical of the adjoining existing homes in the Project area. The short-term noise levels were conducted in order to quantify existing background noise levels at

representative noise-sensitive locations around the Project site during the daytime hours when future construction activities would occur. Short-term Crown Valley Parkway traffic noise measurements and concurrent traffic counts were also conducted at one additional location within the Project site (ST6) in order to validate the noise model developed for Crown Valley Parkway traffic.

Characteristic noise sources are typically identified with land use intensification such as that proposed for the development of the proposed Project. Construction activities, especially construction heavy equipment and traffic, will create short-term noise increases near the Project site. Such impacts would be important for nearby noise-sensitive receptors, such as any existing residential uses. Upon completion of Project construction, Project-related traffic will cause an incremental increase in area-wide noise levels throughout the Project area. Traffic noise impacts are analyzed to ensure that the Project does not adversely impact the acoustic environment of the surrounding community.

For assessment of potential future noise impacts due to the proposed Project, temporary noise exposure during the construction phase and permanent noise effects due to existing traffic on area roadways and additional traffic generated by the project are evaluated.

Noise levels due to construction of the proposed project are estimated based upon available reference noise level data from construction equipment (FHWA, 2006), distance between construction activities and nearest representative noise-sensitive receiver locations, and shielding effects of local terrain, where applicable.

Traffic noise levels were evaluated using the Federal Highway Administration (FHWA) Traffic Noise Model (TNM) version 2.5 computer program. TNM is the latest analytical method developed for roadway traffic noise prediction. The model is based upon reference energy emission levels for automobiles, medium trucks (2 axles), heavy trucks (3 or more axles), buses and motorcycles, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, atmospheric conditions, and the acoustical characteristics of the site. TNM was developed to predict hourly L_{eq} values for free-flowing and interrupted-flow traffic conditions.

Traffic data used in the noise model were developed from the Project construction and operation traffic study data provided by the Project traffic consultant (LLG, 2021) and included in Appendix L. Peak-hour and daily traffic volumes with and without the Project for existing (2020) conditions were utilized in TNM to assess changes in noise exposure of noise-sensitive uses due to traffic changes induced by the proposed Project.

Construction Vibration

The City's CEQA Manual provides guidance for assessing a project's construction vibration impacts. Table 4.11-5 and Table 4.11-6 are thresholds of vibration levels that pertain to both

building damage and human annoyance from groundborne vibration. These levels are expressed in terms of Peak Particle Velocity (PPV), which is often used in construction vibration (such as blasting) monitoring because it is related to the stresses that are experienced by buildings.

Table 4.11-5. Construction Vibration Damage Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.10
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5
Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.		

Source: City's CEQA Manual (Caltrans Transportation and Construction Vibration Guidance Manual, 2013)

Criteria listed in Table 4.11-6 are thresholds of vibration levels that would result in annoyance or interference with activities of people. These levels are also expressed in terms of the PPV. The City has adopted the "distinctly perceptible" levels as its threshold of significance for people's sensitivity to vibration.

Table 4.11-6. Groundborne Vibration Potential Annoyance Criteria

Human Response	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4
Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.		

Source: City's CEQA Manual (Caltrans Transportation and Construction Vibration Guidance Manual, 2013)

For estimation of groundborne vibration levels at the nearest residential structures in the vicinity of the Project site due to Project construction, reference vibration levels were obtained from the Caltrans *Transportation and Construction Vibration Guidance Manual* (Caltrans, 2013). Local ground vibration attenuation rate was determined based on the type of soil within the Project site.

Ground vibration attenuation rate was then applied to reference vibration levels from construction machinery to predict the levels of construction vibration at the nearest residential structures to the Project site. Estimated construction vibration levels are compared with applicable building damage and human perceptibility criteria to determine Project vibration impacts at neighboring receivers.

4.11.5 Project Design Features and Standard Conditions of Approval

SCA NOI-1 Limit construction hours and employ noise-reducing construction practices. The following noise control measures shall be incorporated into the project contract specifications in order to minimize construction noise effects.

- Construction activities shall be limited to the hours of 7:00 a.m. to 8:00 p.m. on weekdays and Saturdays, and shall not occur at any time on Sundays or federal holidays. Construction personnel shall not be permitted on the job site, and material or equipment deliveries and collections shall not be permitted, outside of these hours.

- All mobile or fixed construction equipment used on the project that is regulated for noise output by a local, state, or federal agency shall comply with such regulations while in the course of project activity.

- All construction equipment shall be properly maintained. (Poor maintenance of equipment may cause excessive noise levels.)

- All construction equipment shall be operated only when necessary and shall be switched off when not in use.

- Construction employees shall be trained in the proper operation and use of the equipment. (Careless or improper operation or inappropriate use of equipment can increase noise levels. Poor loading, unloading, excavation, and hauling techniques are examples of how a lack of adequate guidance and training may lead to increased noise levels.)

- Electrically powered equipment shall be used instead of pneumatic or internal combustion– powered equipment, where feasible.

- Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors.

- Construction site and access road speed limits shall be established and enforced during the construction period.

- The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only.

- To minimize potential public objections to unavoidable noise, the contractor shall maintain good communication with the surrounding community regarding the schedule, duration, and progress of the construction. Notification shall be provided advising that there will be loud noise associated with construction and providing a telephone contact number for affected parties to ask questions and report any unexpected noise levels. The on-site construction supervisor shall have the responsibility and authority to receive and resolve noise complaints.

- Prior to issuance of a grading and/or a building permit, the name and phone number of the on-site construction supervisor shall be submitted to the Community Development and Public Works Departments. In addition, clearly visible signs shall be posted on the perimeter of the site indicating who shall be contacted for information regarding this development and any construction/grading-related concerns. This contact person shall be available immediately to address any concerns or issues raised by adjacent property owners during the construction activity. The contact person will be responsible for ensuring compliance with the City imposed Mitigation Measures and Conditions of Approval (e.g., grading activities, truck routes, construction hours, noise, etc.).

SCA NOI-2 To minimize construction equipment noise, the Applicant or designee shall implement the following construction noise reducing practices:

- All construction equipment and vehicles using internal combustion engines shall be equipped with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specifications.

- Place construction staging and equipment storage areas at locations as far away from noise-sensitive locations as possible.

4.11.6 Environmental Impact Evaluation

Threshold NOI-1	*Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Less than Significant. As indicated previously, all the measured daytime background noise levels are typical of residential settings and considered relatively quiet. Exterior of single- and multi-

family land uses west and southwest of the Project site, away from Crown Valley Parkway range from 46 to 48 dBA and closer to Crown Valley Parkway exterior average daytime noise levels are about 58 dBA.

Construction Noise

During the construction of the proposed Project, overall noise levels would vary based on the construction activity, the types of equipment used, when the equipment is being operated, and the distance from construction activities to neighboring noise-sensitive receivers. Grading and excavating generates the highest noise levels and would potentially impact surrounding noise-sensitive receivers.

Grading and excavating would take place over a period of two to six working weeks. Equipment estimated to be utilized during peak grading activities include two scrapers, one dozer, one motor grader, and one water truck. The noise levels at exterior areas of the nearest neighboring noise-sensitive receivers (see Figure 4.11.A), were estimated for grading and excavation activities by using equipment reference noise levels, equipment utilization rates, and estimated distances to each receiver.

Typical construction equipment noise level data were obtained from the Roadway Construction Noise Model developed by the Federal Highway Administration (FHWA, 2006). The noise database utilized for estimating construction noise levels includes maximum noise level from each piece of machinery at a reference distance of 50 feet. Noise attenuation due to distance is assumed to be 6 dBA per doubling of distance from the equipment. Approximate local shielding effects due to topography and property walls were also taken into account in the calculations.

Table 4.11-7 summarizes estimated ranges of grading/excavation noise levels in terms of hourly L_{eq} and compares the overall resultant noise levels to the existing background noise levels at each representative receiver location. These noise levels are based on a conservative assumption of non-stop grading activities by multiple construction equipment in each area during a full construction day. Therefore, because of variations in intensity of grading activities, it is unlikely that such noise levels would be generated for the full scheduled duration of grading/excavation.

Comparison of the combined construction and background noise levels to those existing at each location shows that grading and excavation operations would increase noise levels during construction, however the temporary increase in noise levels would remain below the threshold of significance of 80 dBA L_{eq} 8-hour and therefore result in a less than significant impact.

Table 4.11-7. Combined Construction and Existing Noise Levels (L_{eq}, dBA)

Receiver Location	Existing Sound Level	Range of Distances to Construction (feet)	Estimated Construction Noise Level	Combined Construction + Existing Noise Level	Significant Noise Impact?
C1: 30562 Via Estoril	48	455–1,000	55–62	56–62	No
C2: 30652 Via Estoril	47	325–900	56–65	57–65	No
C3: Building 22, The Vista Condominiums	58	135–625	59–72	62–72	No
C4: First-Row Homes, Paseo Del Niguel	50	140–735	53–67	55–67	No
C5: Single-Family Homes, N Hampton Rd	46	70–610	54–73	55–73	No

Source: A/E Tech LLC

Regulatory compliance with Laguna Niguel Municipal Code Section 6.6.5(b) as described in **SCA NOI-1** would limit construction to the hours of 7 a.m. and 8 p.m. on weekdays and Saturdays. Furthermore, noise reducing practices outlined in **SCA NOI-2** would further reduce temporary construction noise levels.

With windows and doors closed, standard residential building construction achieves outdoor-to-indoor noise reductions of 25 dBA or more. Therefore, interior noise levels at the homes immediately adjacent to the Project site would have interior noise levels of 48 dBA (73 dBA - 25 dBA = 48 dBA) or less. Such levels would be below the City's daytime interior noise level limit of 55 dBA (see Table 4.11-3) resulting in a less than significant impact and no mitigation is required.

Construction Traffic Noise

In addition to the increase in noise from on-site grading and excavation activities, vehicular traffic on local roadways will increase due to use of personal vehicles by construction employees and hauling trucks transporting materials and equipment to and from the Project site. Employee traffic during these most intensive construction activities would total five employee automobiles to the Project site in the AM peak-hour, two truck arrivals, and one truck departure from the Project site. As seen below in Table 4.11-8, this increase in traffic volume would be negligible and result in minimal increase in traffic noise levels along the local roadways utilized by traffic associated with the Project. Construction traffic increases during the PM peak hour would be even less, given construction operations typically shut down daily around 3:00 to 4:00 PM and outside of the typical daily evening peak hour.

Table 4.11-8. Comparison of AM Peak-Hour Traffic L_{eq} (dBA) Between Existing and Existing with Construction Conditions

Roadway Segment	AM Peak-hour Traffic Volume		Predicted Peak-hour Traffic Noise Level at 100 ft from Roadway Centerline		
	Existing	Existing With Construction	Existing	Existing With Construction	Noise Level Change
SB Crown Valley Pkwy – North of Project site	1,029	1,036	62.6	62.8	+0.2
NB Crown Valley Pkwy – North of Project site	749	750			
Based on the construction traffic assumptions, a total of 5 employee automobiles would travel to the project site in the AM peak-hour, two trucks would arrive at and one truck would depart from the Project site during this hour. Construction traffic is assumed to travel on Crown Valley Parkway north of the Project site.					

Sources: LLG, 2021
A/E Tech LLC, 2022

The increase of 0.2 dBA $_{Leq}$ would not be an audible change and is therefore a less than significant impact and no mitigation is required.

Operational Traffic Noise

Operational traffic would be minimal due to the Project's projected traffic volumes. During the AM and PM peak hours, the Project would generate 10 and 12 vehicle trips, respectively. Over a 24-hour period, the Project would generate a total of 161 vehicle trips. Based on the FHWA TNM version 2.5 model, the addition of 161 average daily trips to the existing traffic volumes on Crown Valley Parkway would cause an increase of 0.1 dBA CNEL, resulting in a less than significant impact. No mitigation is required.

Threshold NOI-2 *Generate an of excessive groundborne vibration or groundborne noise levels?*

Less Than Significant Impact

Building Damage Vibration Impact

Construction of the Project would require large steel-tracked earthmoving equipment such as bulldozers that produce vibration noise affecting surrounding land use. A large bulldozer can produce vibration levels of 0.089 inches per second and a small bulldozer can produce 0.003 inches per second of vibration at a reference distance of 25 feet (Caltrans 2013). The soil type at the Project site may be categorized as competent soil type, which generally includes sandy clays, silty clays, gravel, silts, or weathered rock (American Geotechnical, 2021), for which the dampening effects have been considered.

As seen below in Table 4.11-9, compared to the established City vibration criteria, the highest groundborne vibration level of 0.023 in/sec due to a large bulldozer is far below the damage criteria for all building categories. In terms of perceptibility to the people living near the Project site, the estimated vibration levels generated by a large dozer would be below the limit of 0.04 in/sec significance threshold for frequent intermittent events at all the residential buildings nearest to the Project site. Vibration levels due to a small dozer would be well below all the sensitivity criteria at any of the neighboring structures

Table 4.11-9. Calculated Groundborne Vibration Levels (PPV, in/sec)

Receiver	Distance (feet)	Large Dozer	Small Dozer
1: 30562 Via Estoril	479	0.001	0.00005
2: 30652 Via Estoril	340	0.002	0.0001
3: Building 22 at The Vista Condos	164	0.006	0.0002
4: 30631 Paseo Del Niguel	199	0.005	0.0002
5: 30582 N Hampton Rd	97	0.013	0.0004
6: 30585 N Hampton Rd	65	0.023	0.0008
7: 30581 N Hampton Rd	76	0.019	0.0006

Source: A/E Tech LLC

Therefore, groundborne vibration would not result in building damage or exceed the vibration sensitivity criterion at all neighboring properties, resulting in less than significant impacts and no mitigation is required.

Off-Site Construction Sources

As discussed earlier, construction of the Project would generate trips from large trucks including concrete mixing trucks, concrete pumping trucks, and vendor delivery trucks. Given the Project access is over 50 feet to the south from adjacent residence, heavy trucks accessing the Project could generate groundborne vibrations that are readily perceptible at nearby residences. However, the potential for annoyance for temporary, intermittent haul truck travel would be minimal, the Project's truck trips would be prohibited from occurring during late night or early morning hours when the potential to negatively affect quality sleeping environments is much greater with the implementation of **SCA NOI-1**. In the absence of criteria specific to vibration from short-term activities, human annoyance with truck travel would be limited given the limited number of truck trips. As such, impacts would be less than significant.

Operational Vibration Sources

During Project operations, there would be no significant stationary sources of groundborne vibration, such as heavy equipment or industrial operations. The Project's long-term vibration

impact from operational sources would be nominal and less than significant, and no mitigation is required.

Threshold NOI-3	*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 would not expose people to excessive noise levels related to the operation of a public airport or private airstrip due to the nearest airport, John Wayne Airport, which 21 miles away. As a result, the Project would have no impact, requiring no mitigation.

4.11.7 Cumulative Impacts

Less than Significant Impact. The related projects in the general Project vicinity are all located more than 1,000 feet away from the Project site, and therefore would not contribute substantially to cumulative noise impacts at receptors near the Project site during short-term construction or long-term operational activities. Noise naturally attenuates at 6 dB every doubling of distance of the reference noise source. Most construction equipment has a reference noise source of 50 feet. Therefore, at 500 feet noise will have naturally attenuated over 20 dB, which also does not account for other natural attenuation such as topography, vegetation, or other structures. As a result, the Project's potential to contribute to any noise or vibration- related cumulative impacts would be considered less than significant.

4.11.8 Summary of Mitigation Measures

No mitigation measures are required.

4.11.9 Significant Environmental Impacts

No significant noise and vibration impacts will occur from the proposed Project.

4.11.10 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

A/E Tech LLC. February 7, 2022. Noise and Vibration Analysis Report, The Cove at El Niguel, Laguna Niguel, California.

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City of Laguna Niguel. 1992. General Plan for the City of Laguna Niguel. Available: http://cityoflagunaniguel.org/DocumentCenter/Home/View/1886. (Accessed: August 11, 2021.)

City of Laguna Niguel. 2021. City of Laguna Niguel 2021–2029 Housing Element. Available: https://www.cityoflagunaniguel.org/1352/Housing-Element-Update. Last revised: October 2021. (Accessed February 22, 2022).

City of Laguna Niguel, Laguna Niguel Municipal Code Title 9, Planning and Zoning. https://library.municode.com/ca/laguna_niguel/codes/code_of_ordinances?nodeId=TIT9PLZO (Accessed June 20, 2021).

Linscott, Law & Greenspan Engineers. June 9, 2021. Revised Traffic Assessment – The Cove at El Niguel.

U.S. Department of Transportation Federal Highway Administration, Construction Noise. https://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/(Accessed September 20, 2021).

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4.12 Transportation

This section analyzes potential impacts to the existing and planned transportation and circulation system and vehicle miles traveled (VMT). The analysis contained in this section is based on the *Revised Traffic Assessment: The Cove at El Niguel Project, Laguna Niguel, Orange County, California* (Traffic Impact Analysis) prepared by Linscott Law & Greenspan, Engineers (LLG) in June 2021 (Appendix L).

4.12.1 Setting

Regional circulation facilities that connect the City to surrounding areas of Orange County and Southern California include Interstate 5 (I-5) and State Route 73 (SR-73), which are located at the City's eastern boundary. A road network comprising arterial roads and local and collector streets makes up the local circulation in the City. These roadways are classified in the Laguna Niguel General Plan (LNGP) and are described in detail below.

Regional Roads

I-5 – The I-5 freeway is a north-south facility spanning over 1,300 miles through the states of California, Oregon, and Washington. The freeway begins south of San Diego, California, and ends north of Bellingham, Washington. Near the study area, I-5 has ten lanes with a posted speed limit of 65 miles per hour.

SR-73 – The SR-73 freeway is a north-south facility, beginning in Laguna Niguel and terminating in Costa Mesa. The freeway spans the Cities of Laguna Niguel, Aliso Viejo, Irvine, and Costa Mesa. SR-73 has six lanes with a posted speed limit of 65 miles per hour.

Local Roads

Crown Valley Parkway. Crown Valley Parkway is a six-lane, divided roadway oriented in the north-south direction that borders the Project site to the east. On-street parking is not permitted on either side of this roadway. The posted speed limit on Crown Valley Parkway is 50 miles per hour (mph). Daily traffic volumes on the section of Crown Valley Parkway adjacent to the Project site total approximately 23,000 vehicles per day based on traffic volumes collected on Thursday, December 3, 2020.

Paseo Del Niguel. Paseo Del Niguel is a two-lane 25 mph residential street across from the Project entrance at Playa Blanca. Access is from Crown Valley Parkway, with ingress only to the residential community (i.e., southbound left turns and northbound right turns). Outlet can only be made using northbound Paseo Del Valle to Hillhurst Drive, then to Crown Valley Parkway. This one-way access on to Paseo Del Niguel from Crown Valley Parkway can be made southbound turning left by use of a left-hand turn lane and northbound turning right using the far right third lane. Based on the traffic volumes collected for the Project Traffic Impact Analysis in 2020, Paseo Del Niguel carries approximately 3,000 vehicles per day.

Playa Blanca. Playa Blanca is the Project's only ingress and egress point utilizing Crown Valley Parkway either traveling north or south. It forms the fourth leg of the Crown Parkway/Paseo Del Niguel/Playa Blanca intersection. It is currently a paved unmarked two-lane residential roadway with no posted signage. Because the Project site is currently vacant, the road currently has no traffic volume. Historically, Playa Blanca served as the residential roadway for the 41 homes that existed at the Project site prior to the Via Estoril landslide.

4.12.2 Existing Site Conditions

Existing Traffic Volumes

The COVID-19 virus state-wide "stay at home" resulted in a decrease in traffic volume. For the Project traffic study, the ability to collect traffic counts to establish baseline conditions that would be reflective of traffic conditions without "stay at home" orders in effect was not possible. As such, the Project traffic engineer researched historical data and obtained Year 2019 Average Daily Traffic (ADT) counts on Crown Valley Parkway, between Hillhurst Drive and Clubhouse Drive. Baseline traffic volumes were developed using the 2019 ADT counts, 2020 traffic counts to establish turning movements, and a growth factor as detailed in the Traffic Impact Analysis (Appendix L).

Transit Facilities

Public transportation is provided by the Orange County Transportation Authority (OCTA). Several routes pass by the Project site including two local fixed routes, one community and shuttle route, two intra-county express routes, and one Metrolink rail feeder route.

The local fixed routes include Route 85 (Laguna Niguel to Mission Viejo to Rancho Santa Margarita) and Route 87 (Laguna Niguel to Laguna Hills to Rancho Santa Margarita). Route 85 travels north/south via Marguerite Parkway and Crown Valley Parkway. Near the Project site, Route 85 runs along Crown Valley Parkway to Alicia Parkway. The route operates on 60-minute headways during weekdays with no weekend service. Route 87 travels north/south via Alicia Parkway. Near the Project site, Route 87 makes it southernmost stop at Crown Valley Parkway. The route operates with approximately hour headways on weekdays with no weekend service.

Rail Network

Northeast of the Project site is the Metrolink Laguna Niguel/Mission Viejo station. The Metrolink trains serve the Orange County, Inland Empire, and Los Angeles areas, traveling as far south as Oceanside and as far north as Los Angeles. The Metrolink Inland Empire line operates with 10-minute headways on weekdays and weekends and travels between Oceanside and San Bernardino. The Orange County line operates on 10-minute headways on weekdays and weekends and travels between Oceanside and Los Angeles.

Bicycle and Pedestrian Network

Along Crown Valley Parkway adjacent to the Project site the pedestrian network consists of a meandering sidewalk along the west side of the street. Additional pedestrian facilities such as crosswalks and signalized pedestrian crossings exist along Crown Valley Parkway within 1 mile of the Project, north to Alicia Parkway and south to Club House Drive. Crown Valley Parkway is a marked and signed, Class II, bikeway.

4.12.3 Related Policies and Regulations

Federal Regulations

No federal policies or regulations pertaining to transportation are applicable to the proposed Project.

State Regulations

Senate Bill 743

In January 2019, the Natural Resources Agency and the Governor's Office of Planning and Research codified Senate Bill 743, and a new metric for determining transportation impacts, into the Public Resources Code and the State CEQA Guidelines (Pub. Resources Code, §§ 21083, 21099; CEQA Guidelines, § 15064.3.). On July 1, 2020, the new metric applied statewide, transitioning from the long-standing delay and level of service methodology (LOS) to vehicle miles traveled (VMT) (CEQA Guidelines, § 15064.3, subd. (c)). Automobile delay or traffic congestion, as described by LOS or similar measures of vehicular capacity or traffic congestion, are no longer considered a significant impact on the environment under CEQA under Public Resources Code section 21099 and related case law (Pub. Resources Code, § 21099, subd. (b)(2) [LOS and similar measures "shall not be considered a significant impact on the environment" under CEQA]; *Citizens for Positive Growth & Preservation v. City of Sacramento* (2019) 43 Cal.App.5th 609). However, the City continues to require LOS analysis as part of the project review and entitlement process outside of the CEQA process. For land development projects, VMT is generally the product of the daily trips generated by a new development and the distance those trips travel to their destinations. VMT works in coordination with other measures that promote "the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." The VMT metric is now used as the basis for determining significant transportation impacts in the State.

Local Regulations

Laguna Niguel General Plan

Circulation Element

The Circulation Element of the Laguna Niguel General Plan (LNGP) guides development of the City's circulation system in a manner compatible with the Land Use Element. The Circulation

Element is based on a set of circulation-related goals which reflect and are designed to support the citywide objectives of the General Plan. The goals acknowledge the changing economic, social, and environmental conditions in the City and surrounding regions, and the anticipated needs of the community.

The City's *Transportation Assessment Guidelines* state that while SB 743 requires that delay or LOS no longer be used for transportation impact assessments under CEQA, the LNGP Circulation Element has adopted vehicle LOS policies that set standards for which local roadways and intersections will strive to maintain. LOS based studies will continue to be required for certain land use projects to ensure consistency with these City standards. Outside of the scope of CEQA, this requirement for LOS assessment for qualifying projects will remain unchanged. Therefore, the information below regarding LOS goals is provided for informational purposes and is for the City's discretionary review and approval process outside of CEQA.

Goal 1: An adequate transportation/circulation system that supports regional and local land uses at adopted level of service (LOS) standards and complies with requirements of the Countywide Traffic Improvement and Growth Management Program (Measure M).

- **Policy 1.6:** Measure traffic LOS using the current guidance regarding traffic LOS policy implementation established by the Local Transportation Authority.
- **Policy 1.7:** Require necessary conditions of approval on development projects to achieve traffic LOS standards prescribed in this Element.
    - **Action 1.7.1 -** Require that proposals for major new developments include a traffic impact analysis which identifies measures to mitigate any identified project impacts according to the traffic LOS standards prescribed in this Element.
- **Policy 1.8:** All new development shall be required to participate in the City's transportation fee program(s). These fee programs shall be designed to ensure that all development projects fund their prorata share of the necessary long-term transportation improvements identified in this Element or its Technical Appendix.
- **Policy 1.9:** All development projects contributing one percent or more to the critical movement at an intersection that is either projected to operate, or currently operates below the target LOS as a result of project implementation, shall fund all required feasible transportation improvements necessary to achieve the target LOS or, if the intersection exceeds the target LOS prior to project approval, mitigate the impacts of the project so that the intersection ICU is returned to its level of operation prior to project approval. Even for intersection where the target LOS is "D", in the interim, prior to buildout, the City may require mitigation to maintain a LOS of "C".

  Necessary feasible improvements to mitigate an intersection to its level of operation prior to project approval shall be targeted for completion prior to issuance of Certificate of Use and Occupancy for the approved project. If the City determines that the cost of

improvement(s) is not feasible, the City shall require that any feasible short-term improvements be made prior to Certificates of Use and Occupancy and all permanent transportation improvements made within three years of the issuance of the first building permit, or within five years of the first grading permit.

Any project which has compiled with this policy by funding a specific transportation improvement project, which is included in the City's transportation fee program, shall be given credit for the fees required as part of the transportation fee program as established in Policy 1.8 (GME Policy 2.3).

Goal 5: An efficient bicycle, equestrian and pedestrian circulation system that encourages these alternative forms of transportation.

- **Policy 5.4:** Preserve existing pedestrian walkways, Class II bicycle lanes, and wide curb lanes by not modifying, altering, or restriping, any roadway, which currently has either a pedestrian walkway, Class II bike lane, or enough right-of-way to accommodate a pedestrian walkway or Class II bicycle lane, in a manner which would not provide for pedestrian walkways, Class II bike lanes, or a minimum curb-lane width of 17 feet, except in cases of emergency or an extraordinary case.

Goal 7: Well-designed and convenient parking facilities.

- **Policy 7.1:** Provide sufficient on- and off-street parking.

Laguna Niguel *Transportation Assessment Guidelines*

In order to comply with State law mandating a transition from the long-standing LOS methodology to VMT, the City developed new *Transportation Assessment Guidelines*, which align with State goals for reducing emissions, investing in multimodal transportation networks and encouraging higher density in-fill development without reliance on LOS metrics based in traffic congestion and delay. Under the City's *Transportation Assessment Guidelines,* the City evaluates whether a project meets a VMT screening criteria, and if a proposed land use project does not meet any of the screening criteria, then a VMT analysis is required. The guidelines provide as follows:

- **Section 3.2:** Small projects generating less than 500 vehicle trips per day based on the latest version of Institute of Transportation Engineers (ITE) *Trip Generation Manual* are presumed to have a less than significant CEQA transportation impact and are exempt from a detailed VMT Analysis.

Therefore, projects with less than 500 daily trips are considered small projects and screened from VMT analysis. A project with approximately 69 multifamily housing low rise units or could trigger this threshold and require further VMT analysis but could still lead to a conclusion of less than significant impacts.

4.12.4 Thresholds of Significance

Criteria for determining the significance of impacts related to transportation are based on criteria contained in Appendix G of the State CEQA Guidelines, the City's CEQA Manual, and the City's *Transportation Assessment Guidelines*. The proposed Project could have a significant impact on the environment if it would result in any of the following.

Threshold TRA-1 *Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?*

Threshold TRA-2 *Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*

Threshold TRA-3 *Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

Threshold TRA-4 *Result in inadequate emergency access?*

4.12.5 Project Design Features and Standard Conditions of Approval

There are no Project Design Features or Standard Conditions of Approval required for the Project as no impact was indicated.

4.12.6 Environmental Impact Evaluation

Threshold TRA-1 *Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?*

Less Than Significant Impact. The proposed Project would construct 22 condominium units on approximately 2.0 acres already zoned for multi-family residential use with approximately 2.2 acres of multi-family residential land use area to be used as open space. The Project site fronts Crown Valley Parkway to the east and is surrounded by local residential streets and residential properties to the north, south and west. The Project site was developed in 1979 with multi-family units that were destroyed or damaged by the 1998 Via Estoril Landslide and demolished between 1998 and 2000. The entire 4.2-acre Project site has a Residential Attached land use designation in the LNGP.

The LNGP includes a Circulation Element that describes the circulation system within the City. Most of the policies pertain to the broader circulation system that the proposed Project would not impact. However, within the Project site, the plans are consistent with the policies to accommodate

all forms for circulation. The Project provides sidewalks on all driveways, adequate parking both within private garages and for guests in designated guest parking stalls, and street sections that meet City design criteria. Therefore, impacts associated with conflicts with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities are less than significant.

Although the LNGP Circulation Element requires that development projects prepare a traffic study to determine if the project requires traffic improvements to maintain the City's LOS standard, the State-mandated a shift to VMT, and LOS, traffic congestion or automobile delay is no longer considered to be a significant environmental effect under CEQA as discussed above. The City's adopted vehicle LOS policies set standards for which local roadways and intersections will strive to maintain, and LOS based studies continue to be required for new land use projects to ensure consistency with these City standards outside of the scope of CEQA.

Per Section 4.0 of the City's *Transportation Assessment Guidelines*, projects that are expected to generate less than 50 trips during both the AM and PM peak hours based on the latest version of the ITE Trip Generation Manual are presumed to have a less than significant LOS impact on the surrounding street network and are screened out from requiring a detailed LOS analysis. A project with approximately 69 multifamily housing low rise units could trigger this threshold and require further LOS analysis outside of the CEQA process but could still lead to a conclusion of less than significant impacts.

The proposed Project trip estimate is 161 average daily trips, with 10 trips during the AM peak hour and 12 trips during the PM peak hour as shown in Table 4.12-1, which is less than the 50 peak hour trip threshold and at 22 units the project is also less than the 69 units that would trigger further analysis. Therefore, the proposed Project is considered to be consistent with the General Plan LOS policy, screened out from detailed LOS analysis, and not responsible for traffic improvements the construction of which could create an impact to the environment. Impacts are considered to be less than significant, and no mitigation is required.

Table 4.12-1. Project Trip Generation

Project Description	Daily 2-way	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Trip Generation Rates Multifamily Housing Low Rise (TE/DU)*	7.32	23%	77%	0.46	63%	37%	0.56
Trip Generation Forecast The Cove at El Niguel (22 DU)	161	2	8	10	8	4	12

*Institute of Engineers Trip Generation Manual 10th Edition – Trip Ends per Dwelling Units

Threshold TRA-2 *Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*

Less Than Significant Impact. The City's *Transportation Assessment Guidelines* also provide guidance for analysis of VMT assessments in addition to LOS assessments. The *Transportation Assessment Guidelines* provide screening thresholds to assess whether further VMT and LOS analyses are required for projects based on project location, size, or other specified criteria.

As shown in previously referenced Table 4.12-1, the proposed Project would generate 161 daily trips during the weekday.

Per section 3.2 (1) of the City's Transportation Assessment Guidelines, projects generating less than 500 vehicle trips per day based on the latest version of the ITE Trip Generation Manual are presumed to have a less than significant CEQA transportation impact and are screened out from requiring a detailed VMT Analysis. Given the results of the proposed Project's trip generation forecast as seen above in Table 4.12-1, the proposed Project would generate 161 daily trips which is less than 500 daily trips during the weekday. Therefore, the proposed Project is considered to be a small project and its CEQA transportation impacts are presumed to be less than significant, and no mitigation is required.

Threshold TRA-3 *Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

Less Than Significant Impact with Mitigation. Construction of the Project will generate less than 50 trips during both the weekday AM and PM peak hours due to the limited amount of construction workers on site at any given time, which is estimated to be less than 20. Therefore, the added construction trips would have minimal impacts on the surrounding street network. However, there is the potential for construction-related traffic hazards and impacts upon the local circulation system in the area and during ingress/egress to the construction site, resulting in a less than significant impact requiring mitigation. Implementation of a Construction Traffic Management Plan, described in detail below in **MM TRA-1**, is recommended to minimize such hazards and impacts to less than significant.

Currently, access to the Project site is accommodated by the existing full-access driveway that currently serves the site, located along Crown Valley Parkway and Playa Blanca. However, the proposed Project would create a potentially dangerous intersection at the entrance into the Project from Crown Valley Parkway due to inadequate sight lines and high rates of speed. The Project Traffic Impact Analysis determined that motorist attempting to turn left from the driveway onto Crown Valley Parkway (i.e., the outbound left turn) would have inadequate visibility to see

oncoming southbound motorists, and the southbound motorists would have inadequate stopping distance to stop in time when outbound left turns are made. Because outbound left turns have a limited site distance to see southbound oncoming traffic traveling at a high rate of speed there is a potential of creating a safety hazard. Similarly, southbound traffic along Crown Valley Parkway traveling at the high rate of speed will not have enough site distance to brake in time to see exiting left turns and therefore potentially creating safety hazard. As a result of these potential safety hazards, a significant impact would occur and mitigation is required to render impacts to less than significant. Implementation of mitigation measure **MM TRA-2,** described below, would reduce such impacts less than significant by constructing a median that prohibits outbound left-turns from the Project site.

The existing northbound left-turn pocket at the Project Driveway along Crown Valley Parkway provides 115-feet of storage with a transition area of 60-feet. While the northbound left-turn pocket is designed appropriately per Section 400-34 of the Caltrans HDM, the transition area of the turn pocket needs to be modified to accommodate the analyzed speed of 60 mph on Crown Valley Parkway. Although the posted speed on Crown Valley Parkway is 50 mph, the analyzed 60 mph is the design speed (logical operating speed),which is consistent with Orange County Public Works Department Standard Plan 1117. This is considered a significant impact and mitigation is required. To accommodate such speeds, in conjunction with **MM TRA-2**, implementation of mitigation measure **MM TRA-3** is designed to lengthen the left-turn pocket to 100-feet with a transition area of 120-feet by restriping the area. This will provide a longer transition area for vehicles to slow (increased braking distance) prior to turning left. With the implementation of mitigation measures **MM TRA-1, MM TRA-2,** and **MM TRA-3**, Project specific traffic hazard impacts would be reduced to less than significant.

Threshold TRA-4 *Result in inadequate emergency access?*

Less Than Significant Impact. Emergency access to the Project site would be from the driveway entry at Playa Blanca off Crown Valley Parkway, which measures 22 feet curb-to-curb. Once on Playa Blanca, access to Private Drives "A" and "B" start at Private Drive "A" which is 24.5-feet wide curb to curb. This 24.5 feet wide is retained to Private Drive "B." The proposed Project is consistent with Section 9-1-271 (2) of the Laguna Niguel Zoning Code (LNZC), which requires private streets serving 4 parcels or less to provide a minimum pavement width of 16 feet within a minimum 20-feet wide right of way. The proposed Project is also consistent with Section 8-4-12 of the LNZC, which requires easements to be a minimum of 15 feet wide. The proposed recreation trail off Private Drive "B" is 15 feet wide. In addition, each structure would meet the requirement that fire hoses of 150 feet long can reach all parts of the structure. Furthermore, the proposed Project's fire management plan and emergency access has been reviewed and approved by the Orange County Fire Authority (OCFA) through the tentative tract map plan review process.

Because emergency vehicles can easily access and travel within the site, impacts related to emergency access on the Project site would be less than significant, and no mitigation is required.

4.12.7 Cumulative Impacts

Less than Significant Impact with Mitigation. Because the Project is small, generating less than 500 daily trips and less than 50 trips during both the AM and PM peak hours, and therefore screened out from detailed VMT and LOS analyses, the proposed Project would not contribute to a cumulative transportation impact.

The proposed Project has the potential for transportation impacts associated with potential traffic hazards in the form of traffic interference during construction and project access concerns. Implementation of **MMs TRA-1**, **TRA-2**, and **TRA-3** would reduce project specific traffic impacts to less than significant. Since traffic interference during construction and project access are impacts specific to the Project site and would not impact other cumulative projects, and since the mitigation measures would reduce the impacts to less than significant, the proposed Project would not cause a cumulative impact associated with construction traffic or site access impacts.

Project traffic impacts are not cumulatively significant, and no mitigation is required.

4.12.8 Summary of Mitigation Measures

Project-level impacts with regard to transportation would be significant. Thus, the following mitigation measures would be necessary to reduce such impacts to less than significant.

MM TRA-1 Construction Traffic Management Plan Prior to the issuance of demolition, grading, or any construction permits, the Applicant shall submit a Construction Traffic Management Plan for review and approval by the both the City Community Development Department and Traffic Engineer. The Construction Traffic Management Plan shall address the following:

- Equipment mobilization and demobilization to and from the Project site, including truck route, delivery timing, traffic control, and demobilization routes.

- Daily site circulation ingress and egress for construction personnel for the duration of construction at the Project site, including parking since all construction parking shall occur on the project site, unless otherwise approved by the City.

- Traffic control for any street closure, detour, or other disruption to traffic circulation during construction within the public right-of-way or equipment mobilization/demobilization.

- Prohibit left turns out of the Project site for all construction personnel and delivery trucks, including temporary food trucks. The Plan shall identify the physical means in which left turns will be prohibited from the Project site.

- Routes that construction vehicles will utilize for the delivery of construction materials (i.e., lumber, tiles piping, windows, etc.) to access the site, traffic controls and detours, and proposed construction phasing plan for the Project.

- Specify the hours during which transport activities can occur and methods to mitigate construction-related impacts to adjacent streets.

- Require the Applicant to keep all haul routes clean and free of debris including but not limited to gravel and dirt as a result of its operations. The Applicant shall clean adjacent streets, as directed by the City Engineer (or representative of the City Engineer) of any material which may have been spilled, tracked, or blown onto adjacent streets or areas.

- Hauling or transport of oversize loads will be coordinated with the City as to the haul route as well as the hours allowed. Hauling or transport may be permitted/required during nighttime hours, weekends, or Federal holidays, at the discretion of the City Engineer. All hauling/delivery access to and from the site will be from Crown Valley Parkway. An approved Haul Route Permit will be required from the City.

- If hauling operations cause any damage to existing pavement, street, curb and/or gutter along the haul route, the applicant will be fully responsible for repairs. The repairs shall be completed to the satisfaction of the City Engineer.

- This Plan shall meet standards established in the current *California Manual on Uniform Traffic Control Device (MUTCD)* as well as City's requirements.

MM TRA-2 Median Diverter for Left-Turn Egress at Project Driveway Prior to the issuance of a grading permit, the Applicant shall install a temporary physical median diverter on Crown Valley Parkway or the driveway entrance to prohibit outbound left-turn movements onto Crown Valley Parkway during construction activities. The design of the temporary barrier shall be approved by the City's Traffic Engineer.

Prior to the first certificate of occupancy, the installation of a permanent physical median diverter on Crown Valley Parkway is required to restrict outbound left-turn movements from the Project driveway at Playa Blanca. The median diverter along with the left-turn pocket shall be designed in a manner consistent with Figure

4.12.A. The median diverter shall be submitted for review and approved by the City Traffic Engineer prior to issuance of grading permits.

MM TRA-3 Modification of Northbound Left-Turn Pocket on Crown Valley Parkway at Project Driveway Prior to the first certificate of occupancy and in conjunction with the installation of **MM TRA-2**, the northbound left-turn pocket shall be modified to provide a 100-foot left-turn lane with a transition area of 120-feet. The modification would include restriping of the existing left-turn pocket to better accommodate queuing and high speeds along Crown Valley Parkway. The northbound left-turn pocket shall be designed in a manner consistent with Figure 4.12.A. The left-turn pocket along with the median diverter shall be submitted for review and approved by the City Traffic Engineer prior to issuance of grading permits.

4.12.9 Significant Environmental Impacts

Implementation of **MM TRA-1**, **MM TRA-2**, and **TRA-3** would reduce project specific traffic impacts to less than significant. No cumulative impacts would occur, and no cumulative mitigation is required.

4.12.10 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

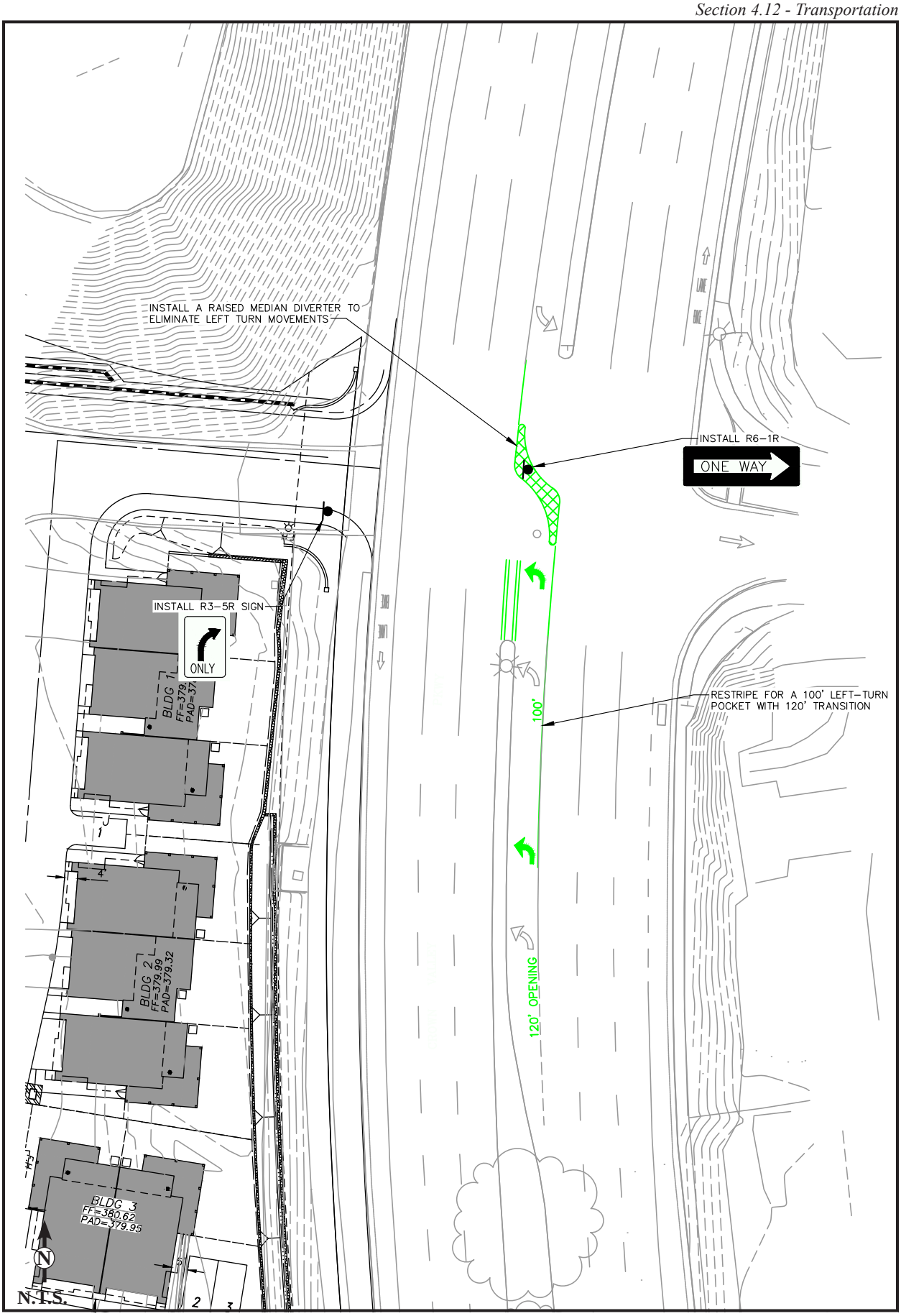
City of Laguna Niguel. February 2022. City of Laguna Niguel CEQA Manual.

City of Laguna Niguel. 1992. General Plan for the City of Laguna Niguel. Available: http://cityoflagunaniguel.org/DocumentCenter/Home/View/1886. Accessed: October 11, 2021.

City of Laguna Niguel, Laguna Niguel Municipal Code Title 9, Planning and Zoning. https://library.municode.com/ca/laguna_niguel/codes/code_of_ordinances?nodeId=TIT9PLZO (Accessed June 20, 2021).

City of Laguna Niguel. November 2020. Transportation Assessment Guidelines.

Linscott, Law & Greenspan Engineers. June 9, 2021. Revised Traffic Assessment – The Cove at El Niguel.



Source: LLG (05/2021).

Figure 4.12.A Median Diverter and Northbound Left-Turn Pocket

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4.13 Tribal Cultural Resources

This section of the Draft Environmental Impact Report (Draft EIR) evaluates the potential for the proposed Project to impact tribal cultural resources in the City. Other potential impacts to cultural resources, including historic and archaeological resources, are evaluated in Section 4.4, Cultural Resources, of this Draft EIR. The analysis in this section summarizes pertinent information and findings in the *Cultural Resources Assessment* dated September 8, 2021, prepared by Duke CRM provided in Appendix E of this Draft EIR, and Assembly Bill (AB) 52 (Pub. Resources Code, §§ 5097.94, 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, 21084.3) consultation between the City and tribes. As discussed further below, on June 19, 2021, the City notified the Native American Heritage Commission (NAHC) and California Native American Tribes who have registered with the City to be notified in accordance with AB 52. The two registered tribes include the Juaneño Band of Mission Indians Acjachenmen Nation; Belardes and Romero. Both tribes have requested consultation as presented in Appendix E. Consultation with the Juaneño Band of Mission Indians Acjachenmen Nation; Belardes and Romero began on August 17, 2021 and concluded on March 1, 2022. The parties agreed to measures to mitigate or avoid potentially significant effects, if significant effects exist, on a tribal cultural resource, thereby concluding consultation. (Pub. Resources Code, § 21080.3.2, subd. (b)(1).)

4.13.1 Setting

Tribal cultural resources are defined as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the California Register of Historical Resources or included in a local register of historical resources as defined in subdivision (k) of Section 5020.1." (Pub. Resources Code, § 21074.) Additionally, a lead agency can, at its discretion and supported by substantial evidence, choose to treat a resource as a tribal resource. AB 52 requires lead agencies to begin formal consultations with California Native American tribes who have registered with the City to be notified and who have timely requested consultation in accordance with AB 52 before releasing a draft EIR and to identify tribal cultural resources that may be subject to significant impacts by a proposed Project.

4.13.2 Existing Site Conditions

The Project site was previously part of a larger landslide area and is currently vacant. In order to stabilize and remediate the landslide area, the slope was graded, terrace drains installed, and Acacia species and scattered laurel sumac (*Malosma laurina*) planted for erosion control. The Project site also contains remnant streets and associated infrastructure.

Contact with Interested Parties

On behalf of the City, DUKE CRM contacted appropriate tribes as part of the AB 52 consultation process. The AB 52 letters were sent out on June 19, 2021 to 10 tribes. As a result of the consultation offer, the two tribes listed below requested consultation on the Project:

- Juaneno Band of Mission Indians Acjachemen Nation - Belardes
- Juaneno Band of Mission Indians Acjachemen Nation - Romero

Consultation with the Juaneño Band of Mission Indians Acjachenmen Nation; Belardes and Romero concluded on March 1, 2022. Documentation of consult offers to Native American tribes is presented in Appendix E of this EIR.

Tribal Cultural Resources

Archaeological investigations along coastal Southern California have produced a diverse range of human occupation, extending from approximately 10,000 years ago beginning with the early Holocene into the ethnohistoric and historic periods. The Project site is approximately 1 mile east of Aliso Creek, traditionally noted as an ethnographic transition zone between the Gabrieleño and Juaneño Native American groups. Traditional definitions of Gabrieleño territory include the watersheds of the San Gabriel, Santa Ana, and Los Angeles Rivers; portions of the Santa Monica and the Santa Ana Mountains; the Los Angeles Basin; the coast from Aliso Creek to Topanga Creek; and San Clemente, San Nicolas, and Santa Catalina Islands.

The Project site was originally developed in 1979 as a 41-unit townhome project that was severely damaged as part of the Via Estoril Landslide in 1998 and subsequently demolished. In addition to demolition of the residential structures, remedial mass grading of the site and installation of proper buttresses and erosion control facilities were installed.

4.13.3 Related Policies and Regulations

Federal Regulations

Archaeological Resources Protection Act

The Archaeological Resources Protection Act was enacted in 1979 with the purpose of securing the protection of archaeological resources and sites on public lands and Native American lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) was passed in 1990 with the purpose of outlining a process for museums and federal agencies to return certain Native American cultural items, such as human remains, funerary objects, sacred objects, or objects of cultural patrimony, to lineal descendants, and culturally affiliated Native American tribes.

NAGPRA also establishes procedures for the inadvertent discovery or planned excavation of Native American cultural items on federal or tribal lands. While these provisions do not apply to discovery or excavations on private or State lands, the collections portions of NAGPRA may apply to cultural items if they are under the control of an institution that receives federal funding. NAGPRA also makes it a criminal offense to traffic in either Native American human remains without right of possession or cultural items obtained in violation of NAGPRA.

State Regulations

Native American Heritage Commission

In 1976, the California State Government passed AB 4239, creating the Native American Heritage Commission (NAHC). The NAHC is responsible for identifying and categorizing Native American cultural resources as well as preventing damage to designated sacred sites and associated artifacts and remains. Legislation passed in 1982 authorized the NAHC to identify a Most Likely Descendant (MLD) when Native American remains are found outside the boundaries of a designated cemetery. An MLD has the authority to make recommendations in regard to the treatment and disposition of the discovered remains.

California Public Resources Code Sections 5097.9–5097.991

California Public Resources Code (PRC) Sections 5097.9–5097.991 provide protection to Native American historical and cultural resources (including sanctified cemeteries, places of worship, religious sites, or sacred shrines) and sacred sites and gives the NAHC enforcement authority.

Specifically, California PRC Section 5097.98 outlines procedures that must be followed in the event that human remains are discovered. The County Coroner shall make a determination within two working days from the time the person responsible for the excavation, or designee, notifies the County Coroner of the discovery or recognition of the human remains. If the County Coroner identifies the remains to be of Native American origin or has reason to believe that the remains are those of Native American origin, the County Coroner must contact the California NAHC within 24 hours. The NAHC representative will then alert a Native American MLD to conduct an inspection of the site and to determine the ensuing course of treatment and action. Additionally, State CEQA Guidelines Section 15064.5 sets forth a procedure if human remains are found on land outside of federal jurisdiction.

Health and Safety Code Section 7050.5

Section 7050.5 of the California Health and Safety Code protects Native American burials, remains, and associated grave artifacts in the event that they are discovered in any location other than a designated cemetery. The Health and Safety Code mandates the immediate stop of excavation in the site as well as any adjacent or overlying area where the remains or associated items are found, and provides for the sensitive disposition of those remains. Should remains be discovered, the County Coroner must determine that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning

investigation of the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or designee, in the manner provided in PRC Section 5097.98.

The Native American Historic Resource Protection Act (AB 52)

The Native American Historic Resource Protection Act, or AB 52 (Pub. Resources Code, §§ 5097.94, 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, 21084.3), defines guidelines for reducing conflicts between Native Americans and development projects and activities. Projects are subject to AB 52 if a notice of preparation for an EIR is filed or a notice of intent to adopt a Negative Declaration or Mitigated Negative Declaration is filed on or after July 1, 2016. "Tribal cultural resources" are protected under CEQA and are defined as a site, feature, place, cultural landscape (must include the size and scope of landscape), sacred place, or object with a cultural value to a California Native American tribe that is either included or eligible for inclusion in the California Register of Historical Resources (California Register), or included in a local register of historical resources. At the lead agency's discretion, a resource can be treated as a tribal cultural resource if a Native American Tribe provides substantial evidence. Additionally, AB 52 allows tribes to engage in consultation with lead agencies and sets guidelines for such consultation. Consultation is considered concluded when the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource, or when a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code, § 21080.3.2, subd. (b).)

Local Regulations

Laguna Niguel General Plan

Open Space/Parks/Conservation Element

The Laguna Niguel General Plan (LNGP) contains goals, policies, and plans that are intended to guide land use and development decisions. The Open Space/Parks/Conservation Element was designed to ensure the conservation of important historical, archaeological, and paleontological resources. Relevant policies are listed below.

Goal 7.0: Recognize significant cultural sites or features within the community.

- **Policy 7.1:** Review the technical data on sensitive cultural resources for all new development proposals.
- **Policy 7.2:** Require mitigation of impacts to significant areas of archaeological and paleontological resources.
- **Policy 7.3:** Preserve uncovered resources in their natural state, as much as feasible to assure their preservation and availability for later study. Require that uncovered resources are documented and retained in an appropriate museum or institution.

Development proposals will be assessed for potential impacts on archaeological resources according to CEQA requirements. The City will require that significant impacts either be avoided or mitigated, which may involve further investigation and resource recovery.

4.13.4 Thresholds of Significance

Criteria for determining the significance of impacts related to tribal cultural resources are based on criteria contained in Appendix G of the State CEQA Guidelines and the City's CEQA Manual. The proposed Project could have a significant impact on the environment if it would result in any of the following.

Threshold TRC-1 *Result in a significant impact if the Project would cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is either:*

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); or*

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

Methodology

In accordance with AB 52, Native American consultation has been conducted to assist in the identification of potential impacts to tribal cultural resources as described in this chapter. Such impacts are assessed based on the potential to significantly affect existing known and unknown tribal cultural resources. The process entails identifying significant tribal cultural resources and whether the Project would cause a substantial adverse change in the significance of the resource. Examples of substantial adverse changes include physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the resource would be materially impaired.

4.13.5 Project Design Features and Standard Conditions of Approval

There are no Project Design Features or Standard Conditions of Approval required for the Project and as no impact was indicated.

4.13.6 Environmental Impact Evaluation

Threshold TRC-1 *Result in a significant impact if the Project would cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is either:*

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

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

Less Than Significant Impact with Mitigation. The Project site is not listed or eligible for listing in the California Register, or in a local register of historical resources. As previously discussed in Section 4.4, *Cultural Resources,* detailed information regarding the record search indicates that no listed properties or resources exist on the Project site. Therefore, the Project would not impact tribal cultural resources as addressed in Threshold TRC-1(a), and no mitigation is required.

As noted above, a cultural resource record search through SCCIC and an AB 52 Native American consultation were conducted for the proposed Project. The purpose of these efforts was to identify known tribal cultural resources on or near the Project site.

Three cultural resources were identified by SCCIC as part of the records search. All were prehistoric, with two having no exact location. These resources are shown in Table 4.13-2.

Table 4.13-1. Cultural Resources within 1/2-Mile of the Project Boundary

Resource No.	Resource Type	Description	Eligibility Status	Distance and Direction
P-30-000033	Prehistoric	Shell Midden	Unknown	Unknown
P-30-000131	Prehistoric	Bedrock Mortar Site	Unknown	980 Northwest
P-36-000539	Prehistoric	One Quartzite Metate	Unknown	Unknown

The SCCIC also identified a total of seven cultural resource reports completed for projects within 1⁄2-mile of the Project site. Although two of the reports cover a portion of the Project site, neither of the surveys conducted as part of the reports revealed any archaeological resources. Table 4.13-2 summarizes the reports recorded near the Project site.

Table 4.13-2. Cultural Reports within 1⁄2-Mile of the Project Boundary

Report No.	Year	Report Title	Authors	Year
OR-00108	1976	Archaeological Survey Report on 4.78 Acres of Land Located in the Laguna Niguel Area of the County of Orange, California	Roger J. Desautels	1976
OR-00237	1976	Report of the Results of an Archaeological Survey for a Project Located in Laguna Niguel, California.	John T. Craib	1976
OR-00255	1977	Archaeological Report on the Aliso Creek Corridor- Planning Units 2 & 3 Orange County, California	Anonymous	1977
OR-00549	1976	Archaeological Survey and Resource Assessment of a Portion of Laguna Niguel, Orange County, California	Clay A. Singer	1976
OR-00580	1977	The Aliso Creek Watershed, Orange County, California a Proposal for Creating an Archaeological District for the National Register of Historic Places and a Suggested Research and Study Design	Anonymous	1977
OR-01183	1991	A Cultural Resources Reconnaissance of the Hon Property O Approximately 60.9 Acres Located in Laguna Niguel, Orange County, California	Juanita R. Shinn	1991
OR-01712	1963	Archaeological Investigations at Laguna Niguel, Orange County	Alma C. Lytton	1963

Per AB 52 requirements, the City asked the NAHC to conduct a record search of the Sacred Lands File (SLF) and identify known tribal cultural resources and recommended tribal contacts applicable to the Project. The NAHC recommended contact with 10 Native American groups/individuals. Of the 10 contacted, the following two requested further consultation:

- Juaneno Band of Mission Indians Acjachemen Nation - Belardes
- Juaneno Band of Mission Indians Acjachemen Nation - Romero

As discussed in Chapter 4.6, *Geology and Soils*, grading of the Project site will result in minimal disturbance to native soils. This is due to a substantial amount of earthwork was conducted on the site as part of the original development in 1979 and during the grading activities that took place between 1998 and 2000 after the Via Estoril Landslide to secure the slope. Results from prior surveys and archaeological reports conducted on the Project site were negative for cultural resources. As a result, the Project is considered to have a low potential to impact prehistoric and historic cultural resources, including tribal cultural resources. The Juaneno Band of Mission Indians, Acjachemen Nation-Belardes request that a representative from the Juaneno Band of Mission Indians, Acjachemen Nation-Belardes be retained to provide cultural resources awareness training and spot check monitoring up to 10 hours per week during ground disturbing activities, which are included as **Mitigation Measure MM TCR-1 and Mitigation Measure MM TRC-2** as described below. As a result, impacts to tribal cultural resources are considered less than significant with mitigation implemented.

Even though it is extremely unlikely that tribal cultural resources would be impacted, there is a potential for unknown tribal cultural resources to be unearthed if ground disturbing activities change, resulting in a potential impact requiring mitigation. **Mitigation Measure MM TCR-3** would be required in order to halt activities, assess the significance of the unearthed resources, and determine final disposition of the resource as appropriate. With the implementation of **MM TCR-1** through **MM TCR-3** impacts to tribal cultural resources would be less than significant.

4.13.7 Cumulative Impacts

Less than Significant Impact with Mitigation. Defined in Section 15130 of the State CEQA Guidelines, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects in the City.

Potential impacts of the proposed Project to unknown tribal cultural resources, when combined with the impacts of past, present, and reasonably foreseeable projects in the City, could contribute to a cumulatively significant impact due to the overall loss of archaeological artifacts and cultural resources unique to the region. However, each development proposal received by the City is required to undergo environmental review pursuant to CEQA. If there were any potential for significant impacts to archaeological or tribal cultural resources, an investigation would be required to determine the nature and extent of the resources and identify appropriate mitigation measures. When resources are assessed and/or protected as they are discovered, impacts to these resources are less than significant.

As such, implementation of **MM TCR-1** through **MM TCR-3** would ensure that the proposed Project, in conjunction with other development in the City would not result in a significant cumulative impact to unique tribal cultural resources and previously undiscovered buried human remains.

4.13.8 Summary of Mitigation Measures

CEQA Guidelines Section 15126.4 requires EIRs to describe feasible measures that can minimize significant impacts. The following mitigation measure has been evaluated for feasibility and is incorporated in order to reduce potentially significant impacts related to tribal cultural resources.

MM TCR-1 An archaeologist shall be retained by the Applicant to conduct cultural resources awareness training prior to any ground disturbance related to construction.

MM TRC-2 An archaeological monitor shall conduct spot-check monitoring, up to 10 hours per week, during ground disturbing activities related to construction. If any artifacts are discovered, a member of the Juaneno Band of Mission Indians, Acjachemen Nation- Belardes shall be contacted immediately. The archaeologist and Acjachemen Nation shall consult to determine the nature and significance of the discovery and make recommendations to the Applicant and City for further cultural resource efforts.

MM TCR-3 If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the County Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

4.13.9 Significant Environmental Impacts

The proposed Project would result in **less than significant** impacts with respect to tribal cultural resources.

4.13.10 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

City of Laguna Niguel. February 2022. City of Laguna Niguel CEQA Manual.

City of Laguna Niguel. 1992. General Plan for the City of Laguna Niguel. Available: http://cityoflagunaniguel.org/DocumentCenter/Home/View/1886. (Accessed: August 11, 2021.)

City of Laguna Niguel. 2021. City of Laguna Niguel 2021–2029 Housing Element. Available: https://www.cityoflagunaniguel.org/1352/Housing-Element-Update. Last revised: October 2021. (Accessed February 22, 2022).

Correspondences with Juaneño Band of Mission Indians, Acjachemen Nation.

DUKE CRM. September 8, 2021. Cultural Resources Assessment for the Cove, City of Laguna Niguel, Orange County, California.

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4.14 Wildfire

This Section addresses potential Project impacts associated with interference to adopted emergency response or evacuation plans, exacerbation of wildfire risks and exposure of Project residents to unhealthy pollution from wildfire, installation or maintenance of infrastructure that would exacerbate wildfire risk and expose people or structures to risks from post-fire flooding or landslides. The analysis is based in part on the proposed Project's *Fire Safety Plan* prepared by FireSafe Planning Solutions on October 2021 (Appendix G-1), *Fuel Modification Plan* prepared by FireSafe Planning Solutions on December 2021 (Appendix G-2).

4.14.1 Setting

A wildfire is a nonstructural fire that occurs in vegetative fuels, excluding prescribed fire. A wildfire can spread to urban areas where the landscape and structures are not designed and maintained to be ignition resistant. Wildfires burn in many types of vegetation such as forests, woodlands, scrub, and grasslands. Many species of native California plants are adapted to fire (CALFIRE 1999). The City's undeveloped hillsides can provide fuel for a wildfire and can be prone to mudslides in heavy rains on slopes stripped of vegetation from a wildfire. Structural and automobile fires represent the most common types of fire in urbanized areas and can be caused by a variety of human, mechanical and natural factors. Urban fires have the potential to spread to other structures or areas, particularly if not extinguished promptly. Proactive efforts, such as fire sprinkler systems, fire alarms, fire resistant roofing and construction methods, can collectively lessen the likelihood and reduce the severity of urban fires.

Areas of dense, dry vegetation, particularly in canyon areas and on hillsides, pose the greatest potential for wildfire risks. An urban/wildland interface is an area where urban development is in proximity to open space or "wildland" areas. The potential for wildland fires represents a hazard where development is adjacent to open space or within close proximity to wildland fuels or designated fire severity zones. The major urban/wildland interface areas closest to the Project site are the hills and canyons nearest the site which include, the remediated hillside in proposed Lot A, the San Joaquin Hills, and Aliso Canyon to the west; and Niguel Hills to the southwest, which is why the Project site is within a Very High Fire Hazard Severity Zone (VHFHSZ). While located within a VHFHSZ, the Project site is surrounded by residential development to the north, south, and partially to the west, and Crown Valley Parkway to the east. The vegetation surrounding the Project site is non-native, primarily acacia, which is not the typical vegetation associated with wildland fires.

The level of hazard to life and property is affected not only by a wildfire in itself, but also by road access for evacuation, the number of available firefighters, vegetation clearance around properties, availability of water and water pressure, the effectiveness of building/fire codes, and inspection of developments in areas of higher fire hazard.

4.14.2 Existing Site Conditions

As shown in Figure 4.14.A, the proposed Project is within a VHFHSZ, as defined by the California Department of Forestry and Fire Protection (CALFIRE). Fire protection service in the City is provided by the Orange County Fire Authority (OCFA). The proposed Project is within OCFA Operations Division 5. Of the nine fire stations within Division 5, Fire Station No. 5 is located nearest to the Project site 0.46 miles away to the north on Pacific Island Drive.

The current California Fire Code (CFC) and California Building Code (CBC) require planning and building practices that reduce structural fire hazards throughout the City, including specific practices for projects located within a VHFHSZ. These proactive measures lay out a blueprint to reduce the risks from all types of fires that may impact the Project and the City.

Wildfire Regional Trends

In the past decades, wildfire season in the West lengthened from an average of five months to an average of seven months, and the number of large wildfires (>1,000 acres) has increased from 140 to 250 per year. And more recently, wildfires now burn year-round in California (SBFFP and CALFIRE 2019). This is occurring as average annual temperatures in the West have risen by nearly two degrees Fahrenheit since the 1970s, and the winter snowpack has declined.

The latest large wildfire near the Project site was the 2020 Silverado Fire approximately 15 miles north/northeast on the south slopes of the Santa Ana Mountains. The fire was wind-driven resulting in the fire being designated as a wildfire. The fire burned an estimated 12,466 acres before containment resulting in the evacuation pf 90,000 residents, injury of 3 firefighters, and destroying 3 structures. Due to Santa Ana gusts of 80 mph, flammable brush, and low humidity, the fire burned rapidly similar to the 2007 Santiago Fire in the same area.

Historical wildland fire activity in the Project area has not been recorded because smaller fires under 100 acres were seldom mapped unless they caused significant damage or loss of life. According to historical data from CALFIRE and the United States Geological Survey (USGS), the majority of the Orange County large fires have occurred in the Santa Ana Mountains that trend northwest/southeast approximately 15 to 20 miles to the north/northeast of the Project site.

Topography

The Project site lies directly west of Crown Valley Parkway. Elevations along Crown Valley Parkway near the Project site are on the order of 360 feet above mean sea level (AMSL). A 2:1 (horizontal:vertical) fill slope on the order of 10 feet in height occurs along the east side of the property adjacent to Crown Valley Parkway. This slope ascends to a relatively flat-lying, nearly rectangular-shaped pad area comprising the developable area of the property (proposed Lot 1). This pad area has elevations of around 370 feet AMSL on the east and 380 feet on the west. An east-facing fill slope of varying steepness extends on the order of around 160 feet in height,

including undevelopable portion of the Project site (proposed Lot A) and the remainder of the slope further west to existing homes on Via Estoril.

Weather

Weather conditions influence the potential for fire ignition and rates of spread, intensity, and the direction(s) toward which a fire burn. Wind, temperature of the wind and humidity levels are the variables used to predict fire behavior. According to CALFIRE, the fire season is starting earlier and ending later each year. Climate Change has been considered an important influence on the California fire season in the form of warmer spring and summer temperatures, reduced snowpack, and earlier spring snowmelt creating longer and more intense dry seasons. This changed dynamic is believed to increase moisture stress on vegetation and make forests and wildlands more susceptible to severe wildfire (CALFIRE 2020).

Vegetation

Vegetation usually provides most of the fuel that feeds wildfire, along with other flammable materials on-site (such as human-built structures none of which are on-site). The volume, character, distribution, and arrangement of vegetation, the relative presence of volatile oils, and the moisture content of fuels all greatly influence fire behavior. The Project site is heavily vegetated with Acacia species and scattered laurel sumac (*Malosma laurina*). The Acacia species are non-native ornamental species often planted for erosion control and the laurel sumac is a California native species that is not considered sensitive or protected. Acacia species is considered a fire-resistant shrub; however, the laurel sumac is not considered a fire-resistant shrub. The Project site also contains nonflammable infrastructure in the form of streets and concrete terrace drains for proper water drainage.

Wind

Wind plays a role in the flammability of fuels by removing moisture through evaporation, preheating fuels in a fire's path, and increasing spotting distances (the distance at which a spot fire might be ignited by a flying ember). Winds blowing more than 20 feet above the ground can carry embers downwind, causing spot fires.

According to the Western Regional Climate Center (WRCC), the Remote Automated Weather Station (RAWS) historical data, the typical prevailing summertime wind pattern is out of the west/southwest and normally is of a much lower velocity (5-10 MPH with occasional gusts to 20 MPH) and is associated with relative humidity readings ranging between 50 percent and occasionally more than 70 percent due to the site's proximity to the ocean. All other (northwest, southeast, and south) wind directions may be occasionally strong and gusty; however, they are generally associated with cooler moist air and have higher relative humidity (greater than 40 percent). These winds are considered a serious wildland fire weather condition when wind speeds reach greater than 20 miles per hour (mph).

The most critical weather pattern to the Project area is a hot, dry, offshore north wind, typically called a Santa Ana. Such wind conditions are usually associated with strong (greater than 50 mph), hot, dry winds with very low (less than 15 percent) relative humidity. Santa Ana winds originate over the dry desert land and can occur anytime of the year; however, they generally occur in the late fall (September through November). This is also when non-irrigated vegetation is at its lowest moisture content.

4.14.3 Related Policies and Regulations

Federal Regulations

There are no relevant federal regulations in regard to wildfires.

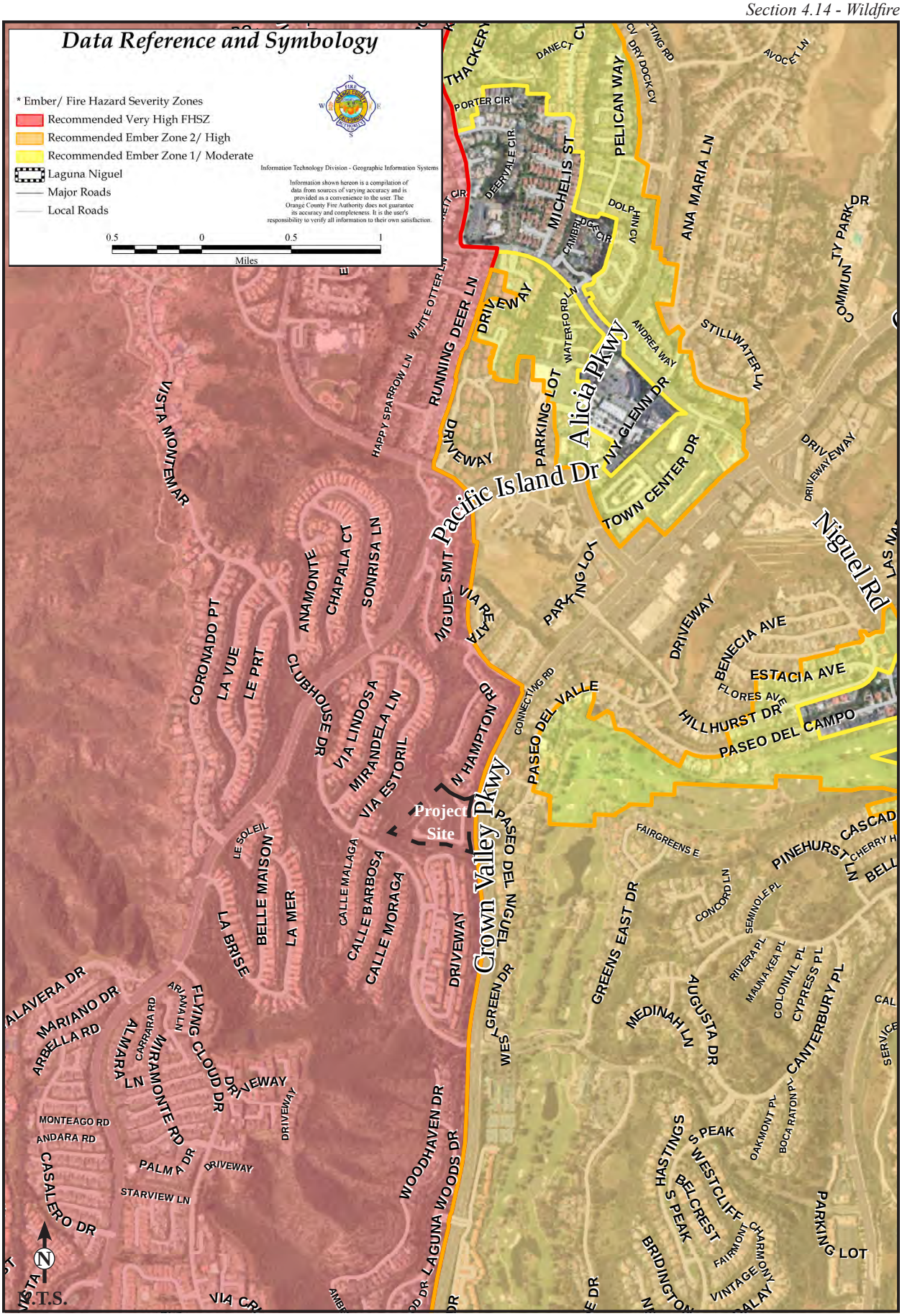
State Regulations

California Department of Forestry and Fire Protection

CALFIRE is dedicated to the fire protection and stewardship of over 31 million acres of California's wildlands. The Office of the State Fire Marshal supports the CALFIRE mission to protect life and property through fire prevention engineering programs, law and code enforcement, and education. The State Fire Marshal provides for fire prevention by enforcing fire-related laws in state-owned or -operated buildings, investigating arson fires in California, licensing those who inspect and service fire protection systems, approving fireworks as safe and sane for use in California, regulating the use of chemical flame retardants, evaluating building materials against fire safety standards, regulating hazardous liquid pipelines, and tracking incident statistics for local and state government emergency response agencies. Classifications of a Fire Hazard Severity Zone (FHSZ) include moderate, high, or very high and are based on a combination of how a fire will behave and the probability of flames and embers threatening buildings. Each area of the map gets a score for flame length, embers, and the likelihood of the area burning. Scores are then averaged over the zone areas. Final zone class (moderate, high, and very high) is based on the average scores for the zone (CALFIRE 2012).

The Board of Forestry and Fire Protection (Board) is a government-appointed body within the CALFIRE. It is responsible for developing the general forest policy of the state, determining the guidance policies of the CALFIRE, and representing the state's interest in federal forestland in California. Together, the Board and the CALFIRE work to carry out the California Legislature's mandate to protect and enhance the state's unique forest and wildland resources.

The Board is charged with protecting all wildland forest resources in California that are not under federal jurisdiction. These resources include major commercial and non-commercial stands of timber, areas reserved for parks and recreation, woodlands, brush-range watersheds, and all private and state lands that contribute to California's forest resource wealth.



Source: OCFA (12/2021). **Figure 4.12.A Laguna Niguel Very High Fire Hazard Severity Zone Map**

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2019 Strategic Fire Plan for California

The Board of Forestry and Fire Protection (Board) has adopted the Strategic Fire Plan intended to reduce the risk of wildfire through planning and prevention with the ultimate goals of reducing firefighting costs and property losses, increasing firefighter safety, and contributing to ecosystem health. The Strategic Fire Plan is adopted to better respond to the changes of the environmental, social, and economic landscape of California's wildlands and to provide the CALFIRE with appropriate guidance for adequate statewide fire protection of state responsibility areas. The latest Strategic Fire Plan is dated January 22, 2019.

CALFIRE Urban & Community Forestry Program

The CALFIRE Urban and Community Forestry (U&CF) Program is a large and complex program promoting innovative fire prevention and fire response activities.[1] The U&CF Program coordinates federal and State grants, provides technical assistance, education and outreach, and encourages use of best practices by local governments and fire industry practitioners. Emphasis is also provided to serve under-resourced, low-income communities with the objective of increasing the urban forest canopy and associated benefits for all Californians.

California Office of Emergency Services

The California Governor's Office of Emergency Services (Cal OES) is responsible for the coordination of overall state agency response to major disasters in support of local government. The agency is responsible for ensuring the state's readiness to respond to and recover from all hazards—natural, man-made, emergencies, and disasters—and for assisting local governments in their emergency preparedness, response, recovery, and hazard mitigation efforts.

The Cal OES Fire and Rescue Division coordinates statewide response of fire and rescue mutual aid resources to all types of emergencies. The Operations Section in the Fire and Rescue Division coordinates the California Fire and Rescue Mutual Aid System, and coordinated response through the Mutual Aid System includes responses to major fires, earthquakes, tsunamis, hazardous materials, and other disasters.

California Building Code

The CBC, in Part 2 of Title 24 of the California Code of Regulations (CCR), identifies building design standards, including those for fire safety. The CBC is based on the International Building Code but has been amended for California conditions. The CBC is updated every three years, and the current 2019 CBC went into effect January 1, 2020. It is effective statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions under specific amendment rules prescribed by the State Building Standards Commission. Commercial and residential buildings are plan-checked by local city and county building officials for compliance

[1] CALFire website, https://www.fire.ca.gov/media/10515/cufac_strategic_plan_summary_1620.pdf, accessed February 2022.

with the CBC. Typical fire safety requirements of the CBC include the installation of fire sprinklers in all new residential, high-rise, and hazardous materials buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas.

California Fire Code

The California Fire Code (CFC), contained in Part 9 of CCR Title 24, incorporates by adoption the International Fire Code of the International Code Council, with California amendments. The CFC is updated every three years, and the current 2019 CFC went into effect January 1, 2020. It is effective statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions under specific amendment rules prescribed by the State Building Standards Commission. The CFC regulates building standards in the CBC, fire department access, fire protection systems and devices, fire and explosion hazards safety, hazardous materials storage and use, and standards for building inspection.

Very High Fire Hazard Severity Zone

Public Resource Code Sections 4201 to 4204 and Government Code Title 5, Part 1, Chapter 6.8, 51178 to 51179 and 51181 direct CALFIRE to identify areas of very high fire hazard within State or Federal Responsibility Areas as well as Local Responsibility Areas (LRA). Mapping of Very High Fire Hazard Severity Zones (VHFHSZ) is based on data and models of potential fuels over a 30- to 50-year time horizon and their associated expected fire behavior and expected burn probabilities in order to quantify the likelihood and nature of vegetation fire exposure (including firebrands) to buildings. LRA VHFHSZ maps were initially developed in the mid-1990s and are now being updated based on improved science, mapping techniques, and data.

VHFHSZs are delineated and used to identify property whose owners must comply with natural hazards disclosure requirements at time of property sale as well as a 100-foot defensible space clearance and/or other alternative means and methods to reduce fire hazards. The Project's Fire Master Plan includes the Project's request for Alternative Materials & Methods (AM&M) of Design and Construction. The AM&M application and its alternate methods are discussed further in Section 4.14.4, *Project Design Features and Standard Conditions of Approval*.

Local Regulations

The City recommends that new construction of structures in the VHFHSZ be done in accordance with Chapter 7A (Materials and Construction Methods for Exterior Wildfire Exposure) of the 2019 California Building Code.

On October 28, 2011, the City received from the Director of CALFIRE a recommendation for a VHFHSZ (2011) in the City.

Government Code Section 51179(a) requires the City to designate, by ordinance, the VHFHSZ in the City within 120 days of receiving the recommendation from the Director of CALFIRE. The VHFHSZ defines where ignition resistant building standards (Chapter 7A of the 2019 California Building Code) are to be implemented for new construction. Chapter 7A requirements do not apply to room additions or remodels. The City has adopted the VHFHSZ as recommended by CALFIRE and therefore implements Chapter 7A.

The intent of Chapter 7A is to provide additional building features increasing the ability of a structure to resist the intrusion of flames and wind-blown embers in the event of a wildland fire. Some of the more notable building standards contained in Chapter 7A is the use of:

- Boxed/Closed Roof Eaves
- Ember Protection on Class A Roof Tile Ends
- Tempered Windows
- Fire Rated Exterior Doors
- Smaller Roof and Attic Vents & Screens
- Ignition Resistant Construction Materials on Balconies, Decks, and other Accessory Structures

4.14.4 Thresholds of Significance

Criteria for determining the significance of impacts related to wildfire are based on criteria contained in Appendix G of the State CEQA Guidelines and the City's CEQA Manual. The proposed Project could have a significant impact on the environment if it would result in any of the following.

Threshold FIRE-1 *Substantially impair an adopted emergency response plan or emergency evacuation plan?*

Threshold FIRE-2 *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?*

Threshold FIRE-3 *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?*

Threshold FIRE-4 *Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

4.14.5 Project Design Features and Standard Conditions of Approval

SCA FIRE-1 The Project is within a Local Responsibility Area VHFHSZ and will comply with the applicable regulations as determined by the City, OCFA, and/or CALFIRE in order to maintain the effectiveness of emergency response and firefighting operations. The Project's Fire Master Plan was prepared as a requirement of California Fire Code Section 104.9 and is based on OCFA requirements seen in the *Fire Safe Development Guideline B-09a*. The following is a list from the Fire Prevention Plan referenced in the Fire Master Plan in Appendix G-1 and the Conceptual Fuel Modification Plan in G-2, which includes the ignition resistant construction requirements for buildings located in a Wildland Urban Interface Area under the California Fire Code (CFC), Chapter 7A of the California Building Code (CBC), and the California Residential Code (CRC) R327 and R337. These requirements are referenced as Zones and Areas and will be Project conditions of approval. See Figure 4.14.B Conceptual Fuel Modification Plan below.

Private Homeowner Setback Area:

A. Automatic irrigation systems shall be installed to regularly irrigate landscape to maintain healthy vegetation with high moisture content.
B. Foliage shall be pruned regularly to reduce vegetation density, maintain vertical continuity, plant litter and dead wood must be removed regularly.
    a. Ground cover shall not exceed 2 feet in height
    b. Trees can be in groups of 3 specimens or less. No spacing required.
    c. Groups of shrubs shall be spaced by the greater of the following two measurements: A distance of 15 feet minimum or 3 times the mature height of the tallest specimen in any group.
    d. Groups of trees shall be spaced by a minimum of 30 feet apart regardless of height.
C. Undesirable plant species are prohibited in the setback area
D. Three species within the setback area are not allowed within 10 feet of combustible structures.
E. Maintenance shall include thinning and removal of over-growth, replacement of dead/dying plant material.
F. Devices that burn solid fuels are not permitted within the setback area.
G. Combustible construction within the setback area is prohibited.
H. The Homeowners' Association (HOA) shall enforce the design of the setback area requirements throughout the design review committee prior to installation of the homeowner. On-going enforcement of the setback area shall be enforced each calendar year.

Zone A (Non-Combustible Construction):

- A 20-foot setback zone shall be maintained for non-combustible construction only. Zone A shall be maintained by the HOA or private homeowner.

Zone B (Wet zone):

- An 80 to 85-foot area extending out from Zone A or the private homeowner setback area shall be provided. Zone B shall be permanently irrigated, fully landscaped with approved drought tolerant, deep rooted, moisture retentive material. Zone B area shall be maintained by the HOA.

Special Maintenance Area With Restricted Plant Palette (SMA) (Wet zone):

- The special maintenance areas shall have maintenance requirements to reduce the chances of ignition from wildfires. Maintenance within these areas is needed in the same manner as the fuel modification zones and shall be maintained on a year-round basis, with removal of all dead plant material, replacement of dead or diseased species with the same growth characteristics from the approved landscape plans. Irrigation shall be verified on a regular basis to ensure it is in a working condition and the plants shall be irrigated as necessary to keep them healthy with their appropriate moisture content.

Private Homeowner Landscape Area:

- Landscaped areas within the private homeowner unit shall be devoid of species from the "Undesirable and Invasive Plant Species" list seen in Attachment 7 of the OCFA *Vegetation Management Guideline: Technical Design for New Construction Fuel Modification Plans and Maintenance Program, Guideline C-05.* Planting restriction shall be recorded as part of the recorded Covenants, Conditions and Restrictions (CC&Rs).

Special Maintenance Area With No-Combustible Material:

- Where indicated, the special maintenance area between the radiant heat wall and the southern project boundary at units 9 through 11 shall be comprised of non-combustible material (Rock/Concrete Only). Any rock/gravel used shall be a minimum 8 inches in diameter.

PDF FIRE-1 Radiant Heat Wall – 6 feet minimum height on both sides of the wall. Noncombustible solid block and /or glass fencing.

PDF FIRE-2 Low Profile Venting – Structures adjoining the fuel modification shall have low profile roof venting on the side of the structure facing the fuel modification (Units 9-22).

PDF FIRE-3 Enhanced Automatic Fire Sprinkler System Features – All buildings (Units 1 through 22) shall have automatic fire sprinklers installed in attics and small spaces, as well as covered balcony/patio areas. Additionally, exterior bells shall be provided for the Fire Sprinkler Systems.

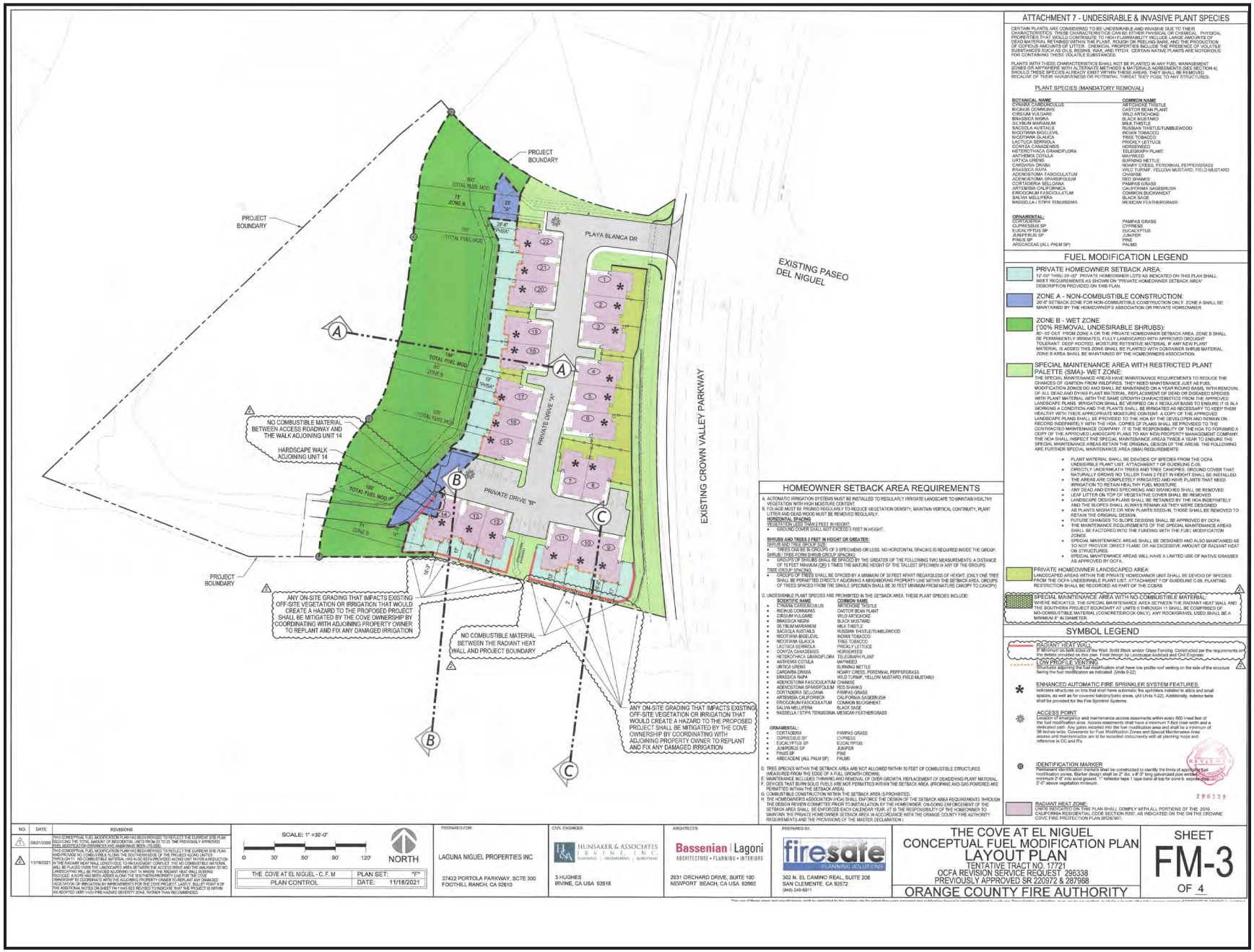
4.14.6 Environmental Impact Evaluation

The following impact analysis addresses thresholds of significance for disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Threshold FIRE-1 *Substantially impair an adopted emergency response plan or emergency evacuation plan?*

Less Than Significant Impact. The Emergency Management Division of the Orange County Sheriff's Department (OCSD) is the lead agency for County emergency preparedness and disaster response. Evacuation instructions and routes are provided by the County's Emergency Operations Center and then are facilitated by the responding agencies such as OCFA and OCSD. Evacuation instructions are to be followed by those on the Project site during construction and operation and are represented on the City's Evacuation Zone Map which includes routes to be taken per zone. The Project site is within Zone 8 and depending on the location of an emergency, routes to the north or south would be used via Crown Valley Parkway. As discussed in Threshold TRA-4, Section 4.12, *Transportation*, emergency vehicles can easily access and travel within the site, along with guests and residents, and impacts related to emergency access on the Project site would be less than significant. In addition, mitigation measure **MM TRA-1**, *Construction Traffic Management Plan*, is required for safe ingress, egress, and circulation on-site during construction. Also discussed in Section 4.12, *Transportation*, operation of the Project proposes an additional 57 residents introducing approximately 161 daily trips and approximately 10 and 12 trips during the AM and PM peak hours, respectively. Furthermore, as discussed in Threshold HAZ-6, Section 4.8, *Hazards and Hazardous Materials*, construction and operation of the Project would not interfere with an adopted emergency response plan or emergency evacuation plan.

The proposed Project has been conditionally approved by the OCFA through the tentative tract map plan review process, including conditional approval of the Fire Master Plan. The Fire Master Plan implements fire prevention and fire response related measures tailored specifically for the Project as specified in **SCA FIRE-1** and **PDFs FIRE-1, -2, and -3** to reduce fire hazard occurrences and risks to existing residents in the surrounding area and future residents occupying the proposed townhomes. As a result, implementation of the Project would not impair an adopted emergency response plan or emergency evacuation plan and impacts would be less than significant, and no mitigation is required.



Source: FireSafe Planning (11/18/2021).

Figure 4.14.A Conceptual Fuel Modification Map

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Threshold FIRE-2 *Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*

Less Than Significant Impact. Although wildfires are a rare event in the City, small fires have burned during moderate winds. Also, a fire will generally spread uphill due to the preheating of the fuel and the up-slope draft unless the general wind is strong enough to overcome these two forces. The flames are closer to the fuel on the uphill side and they receive more radiant heat. This results in more preheating and faster igniting of the fuel. The heated air rises along the slope increasing the draft that further increases the rate of spread. As a result of winds blowing up-slope, more convective heat also reaches the fuel in front of the fire and it is pre-heated more quickly to the ignition temperature. The opposite is true at night. When the slope becomes shaded, the surface generally loses heat rapidly and becomes cool. The air adjacent to the surface also cools and becomes denser thus heavier and it can begin to flow down-slope. Because the Project site is located on a hillside impacted by moderate winds, and more importantly being located within a VHFHSZ (Figure 4.14.A), the risk for the Project site to exacerbate wildfire spreading is a potentially significant impact.

Of the 4.2-acre Project site, 2.2 acres (Lot A) is a west to east slope of predominately vegetated open space that would remain generally undeveloped, and the remaining 2 acres (Lot 1) is relatively flat and would be developed with the proposed 22 condominiums introducing 57 residents to the area. The greatest threat of wildfire to the Project is Lot A, a vegetated slope that connects adjacent open space further west and upslope and the partially undeveloped hillsides with similar vegetation. Another threat is the downward hillside to the south which contains similar vegetation. Although the surrounding area is generally built out with residential development, these areas present potential fuel that could exacerbate wildfire spreading from the south on to the site and to the west upslope from the site, thus exposing structures and surrounding residential properties to wildfire and radiant heat. The Project's Fire Master Plan and Conceptual Fuel Modification Plan shown previously in Figure 4.14.B, were reviewed and conditionally approved by OCFA. OCFA's approval of the Fire Master Plan and Fuel Modification Plan require implementation of standard conditions of approval and project design features listed above in Section 4.14.5.

SCA FIRE-1 implements the Project's Fuel Modification Plan that defines fuel modification zones that will surround the proposed residential structures for wildfire prevention. These zones incorporate permanent irrigation with approved plants for landscaping to the north, east, south, and west. Special maintenance areas reduce ignition from wildfires and are located to the north, east, south, and between each structure. Also, setback requirements with approved non-combustible construction are required for units 9 through 22 which border the hillsides from the south and west. These units are also required to install low profile venting in order to prevent

combustion of exterior and attic spaces from ember and flame intrusion per **PDF FIRE-2**. Structures with similar threats are Residential Lots 9 through 14, which include the construction of 6-foot-tall noncombustible solid block and glass radiant heat walls surrounding the limits of these lots to deflect heat and interrupt the natural pattern of wildfire from the adjacent upward southerly slope per **PDF FIRE-1.**

The Project will incorporate **PDF FIRE-3** which includes installation of automatic fire sprinklers in all structure attics and small spaces, due to the potential of ember showers impacting all structures. This is referred to as the Radiant Heat Zone. Installation of fire suppression equipment such as exterior alarm bells is also included in the fire prevention plans. Furthermore, compliance with the CFC with regard to emergency fire access and use of building materials that would limit the spread of wildfire to the greatest extent possible. The Project's compliance with emergency fire access includes adequate turning radiuses (20'), minimum streets widths (24') between buildings and the distance between those buildings (28'). Construction of the Project will comply with the CFC by using noncombustible, fire resistive, and ignition-resistant building materials. This would reduce the potential spread of a wildfire from the Project site to areas outside the Project site boundary and reduce the Project's potential to exacerbate wildfire risks.

Overall, the Project would be constructed in compliance with the CFC and CBC, along with being compliant with OCFA requirements as reflected in the Project's Fire Master Plan and Fuel Modification Plan. Additionally, with the implementation of standard condition of approval **SCA FIRE-1**, and project design features **PDF FIRE-1** through **PDF FIRE-3**, the Project would not expose Project occupants to pollutant concentrations from wildfire or the uncontrolled spread of a wildfire by exacerbating wildfire risks. Impacts would be less than significant, and no mitigation is required.

Threshold FIRE-3	*Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*

Less Than Significant Impact. The Project site is in the VHFHSZ and as part of the project design, includes improvements outlined in the Fire Master Plan and Fuel Modification Plan approved by the OCFA to reduce fire risk. As previously stated in Threshold FIRE-2, the Project site would incorporate fuel modification zones, which include the augmentation and long-term maintenance of surrounding vegetation to reduce risks from wildfires to life and property. The fuel modification zones implement the requirement for 1) fuel breaks such as private homeowner setbacks from structures to slow or control a fire; 2) permanent irrigation within the vegetated slope (80' to 85' zone setback from Lot 1 into Lot A) to maintain vegetation moisture levels to reduce fire ignition; 3) and landscaping guidelines and maintenance requirements for homeowners

and the HOA to guide maintenance of fuel modification areas to ensure they will function properly. As a result, implementation of the Proposed Project would not require installation of new or increased level of infrastructure maintenance that could exacerbate fire risk or result in temporary or ongoing impacts to the environment. Impacts would be less than significant, and no mitigation is required.

Threshold FIRE-4 *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?*

Less Than Significant Impact. Zone B, consisting of the sloped landscaped area within Lot A as defined in the Fuel Modification Plan, poses the greatest threat from such risk. This area would largely remain undeveloped with existing dense vegetation and ground cover adequate for soil stabilization and erosion control. As stated in Threshold FIRE-2, only approved landscaping and irrigation is to be implemented per the conditionally approved Fire Master Plan and Fuel Modification Plan as these fire-safe features are designed to improve community safety and reduce property loss.

As described in **SCA FIRE-1,** the 80 to 85 feet Zone B (from Lot 1 into Lot A) shall be permanently irrigated, fully landscaped with approved drought tolerant, deep rooted, moisture retentive vegetation to improve soil stabilization and prevent fire ignition. Approved landscaping species within Zone B are outlined within the Attachment 8 of the OCFA *Vegetation Management Guideline: Technical Design for New Construction Fuel Modification Plans and Maintenance Program, Guideline C-05*. Species found on this list are approved by the OCFA due to their low flammability because they produce low amounts of dead material retained within the plant, do not have rough or peeling bark, and have minimal production of leaf litter. In addition, their chemical properties do not contain volatile substances such as oils, resins, wax, and pitch. Furthermore, Zone B area shall be maintained regularly by the HOA following OCFA landscaping guidelines to prevent ignition and topsoil runoff.

As discussed in Section 4.9, *Hydrology and Water Quality,* existing and proposed stormwater drainage on the slope will adequately capture runoff in a v-ditch at the top of the MSE wall conveyed into 3 drainage points, minimizing flooding risk to the Project from downslope flooding post fire.

As discussed in Section 4.6, *Geology and Soils*, the remediation of the prior landslide has resulted in factors of safety that exceed minimum standards. In the event of a fire, the structural components of the remediation, specifically the installation of a caisson wall (64 caissons) with 414 tieback anchors and walers, partial removal of the landslide mass, re-compacting and re-contouring the slope, installation of subdrains, and construction of a compacted fill buttress, would remain in

place and not be affected by a wildfire. While the slope could experience surficial erosion following a fire, the information provided in the Geology Reports indicates that overside slope stability would remain above standard and landslide risk is less than significant.

As a result, implementation of the proposed Project would not expose people or structures to post-fire downslope or downstream flooding or landslides risks from runoff, slope instability, or drainage changes. Impacts would be less than significant, and no mitigation is required.

4.14.7 Cumulative Impacts

Less than Significant Impact. The Project will have a less than significant impact directly or indirectly to an emergency response or evacuation plan and mitigation is not required. The nearest Fire Station is less than a mile from the Project site and would adequately provide emergency services during construction and once in operation. As discussed in Threshold A (i), Section 3.2.4, *Public Services*, the Project's incremental impacts on fire protection services would be less than significant due to the proposed Project's approximate population increase of less than one-tenth of one percent of the City's current population. The Project includes design features, such as a Fuel Modification Plan and Fire Prevention Plan conditionally approved by OCFA. Those design features minimize the Project's potential to exacerbate fire danger within the surrounding area, as well as flooding or landslides. Although the surrounding area is generally built out and was developed under different provisions of the CFC, CBC OCFA, all future cumulative projects within the VHFHSZ would be required to adhere to similar provisions of the CFC, CBC and OCFA to reduce impacts from wildfire. By virtue of the Project's design features and compliance by cumulative projects with the CFC, CBC, and OCFA requirements, the Project would have a less than significant cumulative wildfire impact.

4.14.8 Summary of Mitigation Measures

No mitigation measures for Thresholds FIRE-1 through FIRE-4 are required. Mitigation measures for other topical sections are referenced in this Section, however no impacts related to wildfires have been found to be significant and no mitigation measures are required.

4.14.9 Significant Environmental Impacts

The analysis above indicates that the Project will not exceed significance criteria for wildfire impacts. Therefore, all wildfire impacts are **less than significant**, and no mitigation measures are required.

4.14.10 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

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SECTION 5.0 Additional Topics Required by CEQA

Section 15126 of CEQA Guidelines requires consideration of all Project impacts on the environment, including planning, acquisition, development, and operation. An EIR must identify (1) significant environmental effects of the proposed Project; (2) significant environmental effects that cannot be avoided if the proposed Project is implemented; (3) significant irreversible changes that would be in involved if the proposed Project is implemented; (4) growth-inducing impacts; (5) mitigation measures to minimize significant effects; and (6) alternatives to the proposed Project. Significant effects and proposed mitigation measures are discussed in Section 4.0; alternatives are discussed in Section 6.0. This section discusses the significant and unavoidable impacts of significant irreversible changes involved, and growth inducing impacts in the proposed Project.

5.1 Significant Unavoidable Environmental Impacts

The proposed Project would not result in any significant unavoidable impacts.

5.2 Significant Irreversible Changes

Section 15126(c) of the CEQA Guidelines mandates that an EIR address significant irreversible environmental changes that would occur should the proposed Project be implemented. An impact would fall into this category if it resulted in any of the following:

- The project would involve a large commitment of non-renewable resources;
- The primary and secondary impacts of the project would generally commit future generations of people to similar uses;
- The project involves uses in which irreversible damage could result from any potential environmental incidents associated with the project; and/or
- The proposed consumption of resources is not justified (i.e., the project could waste energy).

Project construction and operation would utilize non-renewable resources. Construction of the proposed Project would include the use of non-renewable fossil fuels, mineral aggregates, and other construction materials. Project operation would include the use of non-renewable resources such as natural gas and various fuels for the production of electricity. The use of these non-renewable resources to construct the Project and during Project operations is typical and expected for a residential project, and therefore justified.

The Laguna Niguel General Plan (LNGP) designates the Project site as Residential Attached for residential attached uses. Whether the proposed Project is developed or not, it is likely the Project site would be developed sometime in the future with uses similar to those proposed because

infrastructure exists in the immediate vicinity of the site and therefore no impediment to development exists. For this reason, the proposed Project does not rely on adjacent or off-site improvements that would be required in the future. Therefore, approval of this proposed Project would not require that any other properties be developed.

As described in Section 4.8, *Hazards and Hazardous Materials*, the proposed Project does not propose any hazardous use that could cause irreversible damage to the environment.

The 22 condominium units proposed by the Project would have the effect of replacing the 41-unit condominiums constructed on the site in 1979 that were damaged and demolished after the Via Estoril Landslide in 1998. Resources used and consumed during construction and operation by this Project are appropriate and justified because the Project would replace a portion of the units demolished after the landslide, and the Project is consistent with the planned growth in the City as described in the LNGP.

5.3 Growth-Inducing Impacts

Section 15126.2(d) of the CEQA Guidelines mandates that the EIR must address whether the proposed Project could cause growth-inducing impacts. An impact would fall into this category if it resulted in any of the following:

- The Project would cause economic or population growth or construct new housing;
- The Project would remove obstacles to population growth;
- The Project would tax existing community service facilities; and/or
- The Project would encourage or facilitate other activities that could significantly affect the environment.

The proposed Project does not include expansion of a utility facility or major roadway into undeveloped land that would provide an impetus for population growth in the City. Based on the LNGP land use designations and zoning, the proposed Project is consistent with the intended and planned use for the Project site.

As described in Sections 3.2.4 and 3.2.6 (*Public Services and Utilities and Service Systems*, respectively,) the proposed Project will not significantly increase the need for public services such as police, fire, and schools or require new or expanded water, wastewater, drainage, or solid waste facilities. The payment of required Developer Impact Fees (DIF), assessments, taxes, and other fees will appropriately fund required public services and contribute to the maintenance of public infrastructure serving the proposed Project.

The impact analyses included in Section 4.0 of the EIR include discussions of the proposed Project's potential cumulative environmental impacts. These analyses have determined that the proposed Project would not encourage or facilitate any activities that would result in significant cumulative impacts to the environment.

The proposed Project is expected to accommodate approximately 57 residents. Additionally, the 22-units proposed by the Project would only partially replace the 41-units formerly on the site that were demolished after the 1998 landslide. The site was previously developed and occupied by residential uses, and therefore any growth inducement associated with the Project is further reduced over and above the discussion in the paragraphs above.

Although the proposed Project would directly contribute to population growth from existing conditions by adding housing, the permanent increase in residents would be negligible and would not represent substantial population growth from what was projected in the City's General Plan.

Construction of the proposed Project would induce economic growth by introducing temporary employment opportunities associated with Project construction activities. These temporary construction jobs are expected to be filled by the local and regional labor force and would be considered a source of direct economic growth to the City and region. While minimal, permanent long-term jobs could be created by the proposed Project in the form of a property management company, home-owners association, and private maintenance jobs to service the site and buildings. However, this growth is expected and planned in City and regional planning documents because the proposed Project is consistent with existing LNGP land use designations and zoning. Therefore, the proposed Project would not have any growth-inducing impacts.

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SECTION 6.0 ALTERNATIVES

6.1 Introduction

The CEQA Guidelines provide that an Environmental Impact Report (EIR) must identify ways to mitigate or avoid a Project's significant effects on the environment. In compliance with CEQA Guidelines Section 15126.6(a), the EIR must describe "... a range of reasonable alternatives to the Project, or to the location of the Project which would feasibly attain most of the basic objectives of the Project but would avoid or substantially lessen any of the significant effects of the Project." The EIR need not consider every conceivable alternative; rather it must consider a reasonable range of potentially feasible alternatives to the Project, or to the location of the Project, which would avoid or substantially lessen significant effects of the Project, even if "… these alternatives would impede to some degree the attainment of the Project objectives, or would be more costly" (*CEQA Guidelines* Section 15126.6(b)). An EIR is not required to consider alternatives which are infeasible (*CEQA Guidelines* Section 15126.6(a)). Among the factors that may be used to eliminate alternatives from consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts An EIR is not required to consider alternative which are infeasible (*CEQA Guidelines* Section 15126.6(c)). The discussion of Project alternatives must "… include sufficient information about each (to) allow meaningful evaluation, analysis, and comparison with the proposed Project." An EIR must evaluate a "No Project" alternative in order to allow decision-makers to compare the effect of approving the Project to the effect of not approving the Project (*CEQA Guidelines* Section 15126.6(e)). An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative (*CEQA Guidelines* Section 15126.6(f)).

The City, acting as the CEQA Lead Agency, is responsible for selecting a range of Project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. The range of alternatives addressed in an EIR is governed by a "rule of reason," which requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. Of the alternatives considered, the EIR need examine in detail only those the Lead Agency determines could feasibly attain most of the basic objectives of the Project but would avoid or substantially lessen any of the significant effects of the proposed Project. Per *CEQA Guidelines* Section 15364, "feasible" has been defined as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, and environmental, legal, social, and technological factors" and per Section 15126.6, the factors that may be taken into account when addressing feasibility are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site.

6.2 Project Objectives

The following project objectives have been developed for the proposed Project:

- Provide new for-sale housing that is responsive to market conditions and provides a uniquely designed product type that is currently limited elsewhere in the City.
- Design the grading and geotechnical stabilization to ensure site stability consistent with City codes and minimize grading into the existing previously stabilized landslide mass.
- Design the grading and geotechnical stabilization to minimize off-site grading and balance the earthwork on site to minimize import/export, which would reduce air quality, noise, and traffic impacts from truck traffic on adjacent residential uses and City roadways.
- Redevelop the previously existing residential site with a residential project consistent with existing General Plan and Zoning designations that provides an updated housing product to meet the City's growing population and further address the City's and state's housing needs.
- Create a financially successful development that is fiscally responsible by equitably contributing to the expansion and operation of the public services and facilities impacted by the project through the payment of fees.
- Improve the aesthetic character along Crown Valley Parkway through enhanced landscaping consistent with General Plan policies.

6.3 Summary of the Proposed Project's Environmental Effects

The analysis provided in Sections 3.0 and 4.0 determined that by complying with standard conditions of approval, implementing project design features, and implementing mitigation measures, no significant unavoidable impacts would occur. To satisfactorily provide the CEQA-mandated alternatives analysis, the alternatives considered must reduce or eliminate significant impacts from a project. Because the Project does not cause any significant unavoidable impacts, no project alternative would eliminate a significant unavoidable impact and therefore the alternatives presented may incrementally reduce or increase the intensity of impacts. Table 6-1 summarizes the proposed Project's environmental effects analyzed in Sections 3.0 and 4.0.

Table 6-1. Environmental Effects of Proposed Project

Environmental Factor		No Impact or Less than Significant Impact	Less than Significant Impact with Mitigation	Significant and Unavoidable Impact
Aesthetics	Scenic Vistas	X	—	—
	Scenic Highways	X	—	—
	Scenic Quality	X	—	—
	Light and Glare	X	—	—

Environmental Factor		No Impact or Less than Significant Impact	Less than Significant Impact with Mitigation	Significant and Unavoidable Impact
	Cumulative	X	—	—
Agricultural and Forestry Resources	Conversion of Prime, Unique, or Statewide Important Farmland to Non-Agricultural Use	X	—	—
	Conflict with Agricultural Zoning or Williamson Act	X	—	—
	Conflict with Existing Forest Land Zoning or Cause Rezoning of Forest Land	X	—	—
	Conversion of Forest Land to Non-Forest Use	X	—	—
	Other Changes that would Convert Farmland or Forest Land	X	—	—
	Cumulative	X	—	—
Air Quality	Conflict with or Obstruct an Air Quality Plan	X	—	—
	Result in Cumulatively Considerable Net Increase in any Criteria Pollutant	X	—	—
	Expose Sensitive Receptors to Substantial Pollutant Concentrations	X	—	—
	Create Objectionable Odors	X	—	—
	Cumulative	X	—	—
Biological Resources	Candidate, Non-listed Sensitive, or Special-Status Species	X	—	—
	Riparian Habitat or Other Sensitive Natural Communities	X	—	—

Environmental Factor		No Impact or Less than Significant Impact	Less than Significant Impact with Mitigation	Significant and Unavoidable Impact
	Jurisdictional Waters/Wetlands	X	—	—
	Wildlife Movement and Migratory Species	—	X	—
	Adopted Policies and/or Ordinances	X	—	—
	Adopted Habitat Conservation Plans	X	—	—
	Cumulative	X	—	—
Cultural Resources	Historic Resources	X	—	—
	Archaeological Resources	—	X	—
	Human Remains	—	X	—
	Cumulative	X	—	—
Energy	Wasteful, Inefficient, or Unnecessary Consumption of Energy	X	—	—
	Conflict with Renewable Energy or Energy Efficiency Plan	X	—	—
	Cumulative	X	—	—
Geology and Soils	Alquist-Priolo Fault Rupture	X	—	—
	Ground Shaking	—	X	—
	Seismic-Related Ground Failure	X	—	—
	Landslides	—	X	—
	Soil Erosion or Loss of Topsoil	X	—	—
	Unstable Soils	—	X	—
	Expansive Soils	—	X	—
	Inadequate Soils for Septic Tanks	X	—	—
	Destroy unique Paleontological Resource	—	X	—

Environmental Factor		No Impact or Less than Significant Impact	Less than Significant Impact with Mitigation	Significant and Unavoidable Impact
	Cumulative	X	—	—
Greenhouse Gas Emissions	Greenhouse Gas Emissions	X	—	—
	Conflict with Applicable Plan Policy, or Regulation	X	—	—
	Cumulative	X	—	—
Hazards and Hazardous Materials	Routine Transport, use, or Disposal of Hazardous Materials	X	—	
	Reasonably Foreseeable Upset and Accident Conditions	X	—	
	Emissions or Hazardous Materials Near Existing or Proposed School	X	—	
	Located on a Listed Hazardous Materials Site	X	—	
	Within an Airport Land Use Plan or Within Two Miles of a Public Airport	X	—	—
	Within Airport Land Use Plan or Near Vicinity of a Public Airport	X	—	—
	Interfere with Emergency Response Plan	X	—	—
	Wildland Fire Risks	X	—	—
	Cumulative	X	—	—
Hydrology and Water Quality	Violate Water Quality Standards or Waste Discharge Requirements	X	—	—
	Decrease Groundwater Supplies	X	—	—
	Alter Drainage Resulting in Erosion or Siltation Offsite	X	—	—

Environmental Factor		No Impact or Less than Significant Impact	Less than Significant Impact with Mitigation	Significant and Unavoidable Impact
	Increase Surface Runoff Causing Flooding	X	—	—
	Create Runoff Water Exceeding Storm Drain Capacity	X	—	—
	Impede or Redirect Flood Flows	X	—	—
	Risk Release of Pollutants Due to Project Inundation	X	—	—
	Conflict with or Obstruct Water Quality Control or Sustainable Groundwater Management Plan	X	—	—
	Cumulative	X	—	—
Land Use and Planning	Physically Divide an Established Community	X	—	—
	Conflict with Applicable Land Use Plans, Policies, or Regulations	X	—	—
	Cumulative	X	—	—
Mineral Resources	Loss of Statewide or Regional Important Mineral Resources	X	—	—
	Loss of Locally Important Mineral Resources	X	—	—
	Cumulative	X	—	—
Noise	Generation of Construction Noise in Excess of Standards Established by the General Plan or Noise Ordinance	X	—	—
	Generation of Operational Noise in Excess of Standards Established by the General Plan or Noise Ordinance	X	—	—

Environmental Factor		No Impact or Less than Significant Impact	Less than Significant Impact with Mitigation	Significant and Unavoidable Impact
	Groundborne Vibration or Noise	X	—	—
	Exposure to Excessive Noise from Private or Public Airport	X	—	—
	Cumulative	X	—	—
Population and Housing	Population Growth	X	—	—
	Displace People or Housing	X	—	—
	Cumulative	X	—	—
Public Services	Fire Protection Facilities	X	—	—
	Police Protection Facilities	X	—	—
	School Facilities	X	—	—
	Library Facilities	X	—	—
	Other Facilities	X	—	—
	Cumulative	X	—	—
Recreation	Existing Recreational and Park Facilities	X	—	—
	New or Physically Altered Recreation and Park Facilities	X	—	—
	Cumulative	X	—	—
Transportation and Traffic	Conflict with Program, Plan, Ordinance, or Policy Addressing the Circulation System, Including Transit, Roadway, Bicycle and Pedestrian Facilities	X	—	—
	Conflict with CEQA Guidelines 15064.3, Subdivision (b)	X	—	—
	Hazard Due to Design Features or incompatible Uses	—	X	—
	Inadequate Emergency Access	X	—	—

Environmental Factor		No Impact or Less than Significant Impact	Less than Significant Impact with Mitigation	Significant and Unavoidable Impact
	Cumulative	X	—	—
Tribal Cultural Resources	Substantial Adverse Change to Listed or Eligible Tribal Cultural Resources	X	—	—
	Substantial Adverse Change to Lead Agency Defined Tribal Cultural Resources	—	X	—
	Cumulative	X	—	—
Utilities and Service Systems	Construction of New or Expanded Water, Wastewater Treatment or Storm Water Drainage, Electric Power, Natural Gas, or Telecommunications Facilities Causing Significant Environmental Effects	X	—	—
	Sufficient Water Supplies	X	—	—
	Wastewater Treatment Capacity	X	—	—
	Generate Excess Solid Waste, Exceed Landfill Capacity, Impair Solid Waste Reduction Goals	X	—	—
	Compliance with Solid Waste Regulations	X	—	—
	Cumulative	X	—	—
Wildfire	Impair Adopted Emergency Response or Evacuation Plan	X	—	—
	Exacerbate Wildfire Risks and Expose Occupants to Pollutant Concentrations from a Wildfire or the Uncontrolled Spread of a Wildfire	X	—	—

Environmental Factor		No Impact or Less than Significant Impact	Less than Significant Impact with Mitigation	Significant and Unavoidable Impact
	Install or Maintain Infrastructure Exacerbating Fire Risk or Result in Temporary or Ongoing Impacts	X	—	—
	Expose People or Structures to Risks from Runoff, Post-fire Slope Instability, or Drainage Changes	X	—	—
	Cumulative	X	—	—

6.4 Alternatives Considered But Not Analyzed Further

Factors considered in selecting project alternatives include site suitability, availability of infrastructure, applicable plans or regulatory limitations, economic viability, and whether the Project proponent can reasonably acquire, control, or otherwise have access to alternative sites, redesignate land use, etc. In addition, an EIR is not required to consider an alternative whose impact cannot be reasonably ascertained and whose implementation is remote or speculative (*CEQA Guidelines* Section 15126.6 (f)(3)). Alternatives considered in an EIR are selected by a "rule of reason," requiring those alternatives necessary to avoid or substantially lessen significant effects of the proposed project, while attaining most of the basic objectives of the project. Among the factors that may be used to eliminate alternatives from consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts. An EIR is not required to consider alternative which are infeasible (*CEQA Guidelines* Section 15126.6(c)). Based on these factors, the following alternatives have been considered but eliminated from further consideration.

6.4.1 Offsite Location

State CEQA Guidelines Section 15126.6(f)(2) requires consideration of alternative locations. The question CEQA intends to answer is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. To provide a consistent analysis for a similar 22-lot subdivision with a similar product type, an equivalent off-site location would need to contain approximately two acres of developable area, zoned for multi-family residential, and adequately served by available utilities. In addition, an alternative site would have to add approximately two acres of area or half of the property's acreage that, like Lot A, is a lettered where no residential development is allowed. Based on these attributes of the proposed Project,

the City has determined that such an alternative site location is not available and therefore no further consideration of this alternative is provided in this EIR.

6.4.2 GPA to a Single-Family Land Use

This alternative would change the General Plan land use designation of proposed Lot 1 from Residential Attached to Residential Detached to allow development of a small single-family residential development of one home per lot, resulting in approximately 10 dwelling units. This alternative would also require a zone change from Multi-family District (RM) to Single-Family District 3 (RS-3) or 4 (RS-4). This alternative would be in direct conflict with SB330, which restricts the adoption of land use or zoning amendments that would result in the reduction of allowed residential density or intensity of land uses compared to what is allowed under the regulations in effect on January 1, 2018. The Housing Accountability Act also prohibits an agency from disapproving a project or imposing conditions that the project be developed at a lower density if the project is consistent with applicable, objective general plan, zoning, and subdivision standards and criteria, absent specific, narrow findings. (Gov. Code 65589.5.) Additionally, under CEQA Guidelines Section 15126.6, the factors that may be taken into account for feasibility include general plan consistency. Furthermore, while this alternative would generate fewer dwelling units, this alternative would not eliminate any other significant impacts. For these reasons, the GPA to single-family land use alternative was rejected from further consideration.

6.4.3 GPA to a Non-Residential Land Use

This alternative would change the General Plan land use designation of proposed Lot 1 from Residential Attached to Neighborhood Commercial, Community Commercial, Professional Office, or some other non-residential land use designation. This alternative would also require a zone change from Multi-family District (RM) to the appropriate non-residential zoning district. This alternative would also be in direct conflict with SB330, which restricts the adoption of land use or zoning amendments that would result in the reduction of allowed residential density or intensity of land uses than what is allowed under the regulations in effect on January 1, 2018. The Housing Accountability Act also prohibits an agency from disapproving a project or imposing conditions that the project be developed at a lower density if the project is consistent with applicable, objective general plan, zoning, and subdivision standards and criteria, absent specific, narrow findings. (Gov. Code 65589.5.) Additionally, under CEQA Guidelines Section 15126.6, the factors that may be taken into account for feasibility include general plan consistency. Furthermore, this alternative would likely increase operational noise impacts, potentially inconsistent with surrounding residential uses. For these reasons, the GPA to a non-residential land use alternative was rejected from further consideration.

6.5 Alternatives Under Consideration

6.5.1 Alternative Descriptions

The following alternatives have been identified and evaluated to provide decision-makers with a reasonable range of Project alternatives that would eliminate or reduce the impacts of the proposed Project. Factors considered in selecting the alternatives include site suitability, availability of infrastructure, general plan consistency, other applicable plans or regulatory limitations, jurisdictional boundaries, and economic viability. An EIR is not required to consider an alternative whose impact cannot be reasonably ascertained and whose implementation is remote or speculative (CEQA Guidelines Section 15126.6 (f(3)).

In accordance with the CEQA Guidelines, the alternatives considered in this EIR include those that (1) could accomplish most of the basic objectives of the Project, (2) are reasonably feasible given the nature of the Project and surrounding land uses, and (3) could avoid or substantially lessen one or more of the significant impacts of the Project.

6.5.1.1 Alternative 1: No Project No Build

This alternative assumes that no new development would occur on the 4.2-acre parcel. No ground-disturbing activities would take place, nor would any multi-family structures be erected. Under this alternative, the potential impacts associated with development of the proposed Project would not occur. This alternative provides for an analysis of the existing baseline conditions at the time the Notice of Preparation (NOP) was published, as well as what would be reasonably expected to occur in the foreseeable future if the proposed Project were not approved. The discussion compares the environmental effects of the Project site remaining in its existing state against environmental effects which would occur if the proposed Project were approved.

Maintaining the site's existing improvements and uses would not fulfill any of the Project objectives. This alternative would be the environmentally superior alternative compared to the proposed Project, however under CEQA the No Build alternative cannot be the environmentally superior alternative.

6.5.1.2 Alternative 2: Maximum Development Density Identified in the General Plan

This alternative allows for the maximum number of residential attached dwelling units permitted by the General Plan on the 4.2-acre Project site. This alternative would result in the development of 41 dwelling units, which is the number of units previously developed on the Project site prior to the landslide. This alternative assumes all of the dwelling units would be placed on Lot 1, the 2-acre portion of the Project site proposed for development. The remaining 2.2 acres would be placed in a letter lot that does not permit the construction of residential units, similar to the proposed Project. Alternative 2 is graphically depicted in Figure 6.5.A.

6.5.1.3 Alternative 3: Reduced Density

This Reduced Density alternative assumes construction of 8 duplex structures, 16 dwelling units, on the 4.2-acre subdivided parcel comprised of Lot 1, the 2-acre area proposed for Project development, and Lot A, the 2.2-acre area of open space similar to the proposed Project. This alternative provides 16 units. Total parking spaces provided would be 63, comprised of 24 garage parking spaces, 8 shared parking spaces, and 11 guest parking spaces. The additional space on the site would remain for landscaping, building setbacks, active recreation space, storm water infiltration, and open space. This alternative would reduce the total number of residents from 57 to 42 compared to the proposed Project. Alternative 3 is graphically depicted in Figure 6.5.B.

6.5.1.4 Alternative 4: Higher Density Larger Footprint 38-units

The Higher Density Larger Footprint 38 Units alternative would construct a denser residential product similar to a multi-family project that was proposed for the site in 2014. This Alternative eliminates the open space proposed by the Project in order to spread out development of the structures over a larger portion of the site. Alternative 4 would utilize the entire 4.2-acre parcel to construct 19 duplexes and 38 dwelling units. This alternative would eliminate the 2.2 acres of open space included in the proposed Project and instead construct 11 additional duplexes on the site over and above the proposed Project. As a result, this would increase the number of residents from 57 to 99 in comparison to the proposed Project. Additionally, parking would increase to 76 total garage spaces and 30 guest parking spaces. Three terraced six-foot high retaining walls would be constructed in the southwest part of the site to build pads on the upper west portion of the site (proposed Lot A of the Project). Access to the site would remain at Playa Blanca, and private Drive B would be lengthened to gain access to the additional dwellings on the west side of the site. Additional terraced retaining walls are introduced at the west end of the site to increase the buildable area. Furthermore, the additional space on the alternative site would be used for landscaping, building setbacks, active recreation space, and storm water infiltration. Alternative 4 is graphically depicted in Figure 6.5.C.

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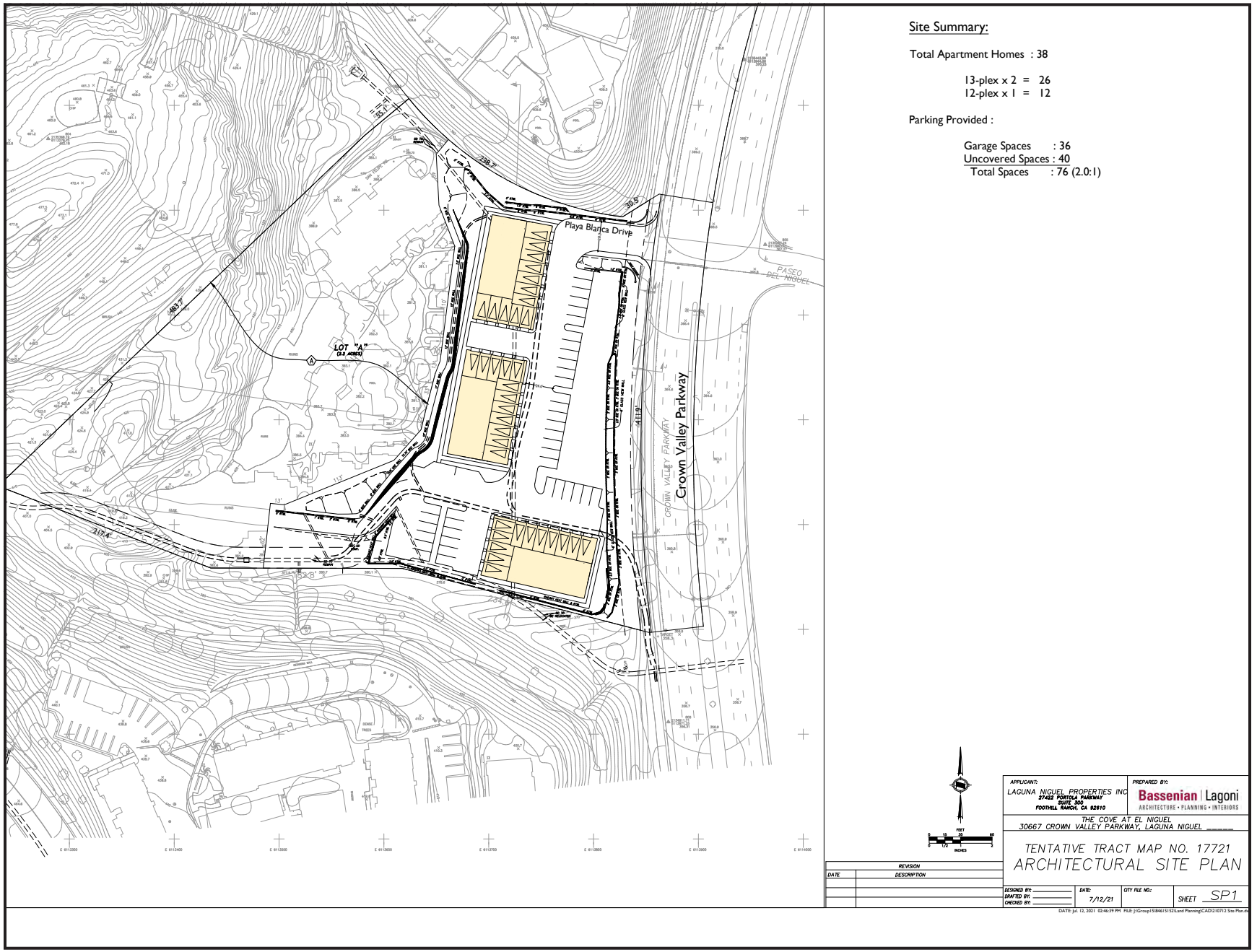

Source: Bassenian|Lagoni (7/12/2021).

Figure 6.5.A Alternative 2 - Maximum Development Density

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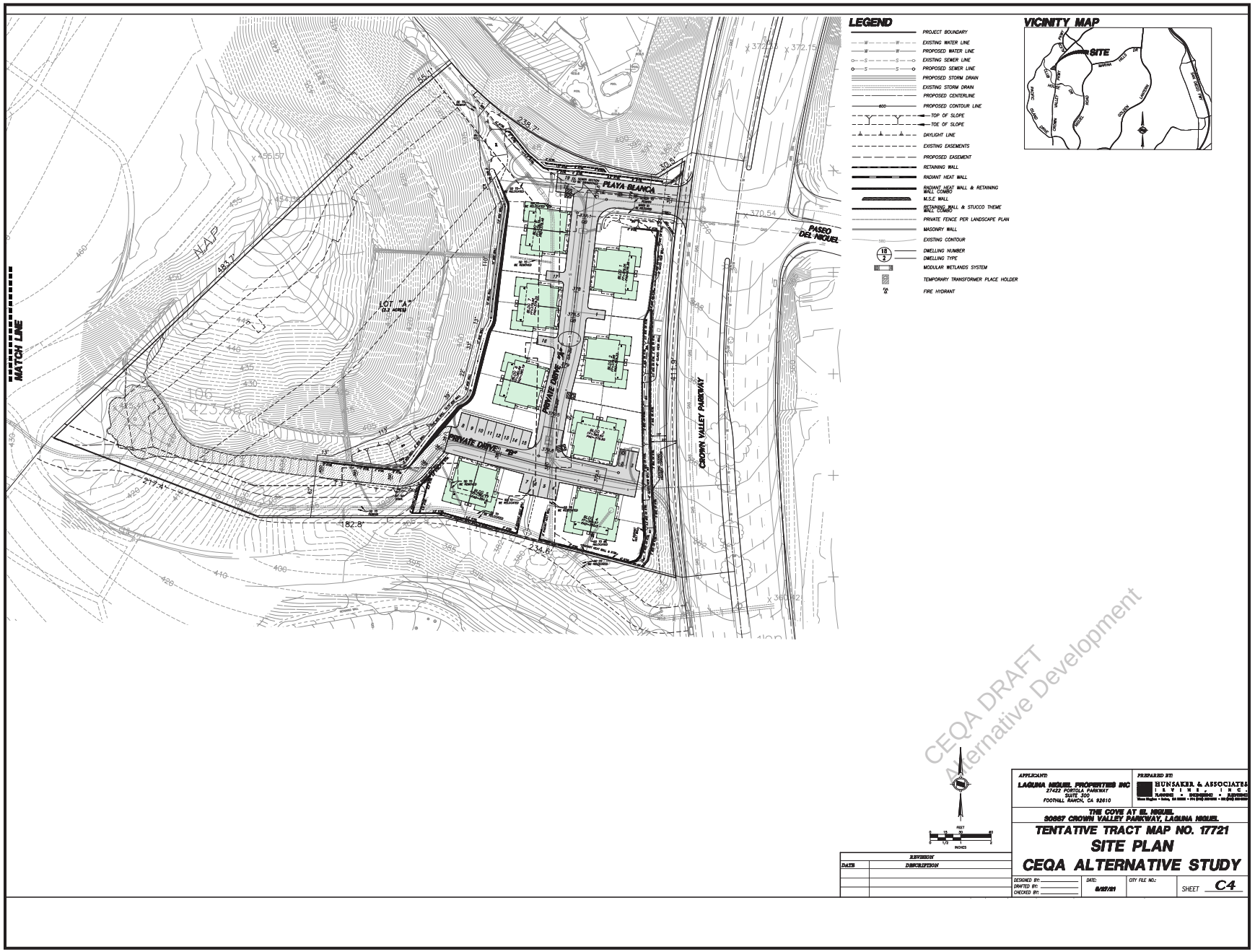

Source: Hunsaker&Associates (5/27/2021).

Figure 6.5.B Alternative 3 – Reduced Density

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Source: RBF Consulting (1/29/2014).

Figure 6.5.C Alternative 4 – Higher Density

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6.5.2 Environmental Impacts that are Similar to the Proposed Project

The No Project No Build Alterative would result in reduced impacts in comparison to the proposed Project. For the three alternatives considered that envision development on the site, eight of the twenty environmental factors would either not be impacted or would be impacted in the same or approximately the same manner and degree as the proposed Project. Rather than repeat a discussion of these non-significant impacts under Alternatives 2 through 4, a discussion of the following environmental issues that are common to each alternative and the proposed Project is presented below.

- Agriculture and Forestry Resources
- Cultural Resources
- Greenhouse Gases
- Mineral Resources
- Population and Housing
- Public Services
- Tribal Cultural Resources
- Utilities and Service Systems

The proposed Project and the alternatives would have a similar level of impact associated with these areas. A discussion is provided in Section 6.5.3 for each alternative related to the environmental factors that differ between project alternatives or require mitigation to reduce an impact to a less than significant level.

6.5.2.1 Agriculture and Forestry Resources

As discussed in Section 3.2.1, there are no mapped Prime Farmlands, Unique Farmlands, or Farmlands of Statewide importance within the City. The LNGP and LNMC do not identify any areas with an agricultural or forestry land use designation or zone, and there are no operating agricultural or forestry operations. Consequently, impacts to farmland or forest land resources resulting from Alternatives 1 through 4 would also be less than significant and no mitigation would be required in the same manner as the proposed Project.

6.5.2.2 Cultural Resources

As discussed in Section 4.4, the proposed Project site is currently vacant, is not occupied by an historic resource, and has never been occupied by an historic resource. Implementation of the proposed Project would not cause a substantial adverse change in the significance of a historical resource. Although Alternative 4 would result in development within proposed Lot A, historic resources do not exist on the entire 4.2-acre Project site. Implementation of Alternatives 1 through 4 would not impact historic resources, resulting in a less than significant with no mitigation required in the same manner as the proposed Project.

As discussed in Section 4.4, the records search revealed three cultural resources within ½ mile of the Project site. However, the previous field surveys and the field survey conducted for the proposed Project did not reveal the presence of archeological resources. In the unlikely event archaeological resources are encountered during site grading or earthmoving activities, implementation of **Mitigation Measure MM CUL-1** would render impacts to less than significant. Although Alternative 4 would result in development within proposed Lot A, archaeological resources are unlikely to be encountered due to the prior disturbances onsite including construction of the original residential development in 1979, the Via Estoril Landslide in 1998, and slope remediation that occurred between 1998 and 2000. Implementation of Alternatives 1 through 4 would not impact archaeological resources, resulting in a less than significant impact with the same mitigation measure (**MM CUL-1**) that is required for the proposed Project implemented for Alternatives 2-4.

As discussed in Section 4.4, the likelihood of encountering human remains during site grading or earthmoving activities is minimal because the site was previously developed, a significant portion was disturbed during the Via Estoril Landslide and subsequent slope remediation, and the site has never been a cemetery. In the unlikely event archaeological resources are encountered during site grading or earthmoving activities, implementation of **Mitigation Measure MM CUL-1** would render impacts to less than significant. Although Alternative 4 would result in development within proposed Lot A, human remains are unlikely to be disturbed due to the prior site disturbances. Implementation of Alternatives 1 through 4 would not impact human remains, resulting in a less than significant impact with the same mitigation measure (**MM CUL-1**) that is required for the proposed Project implemented for Alternatives 2-4.

6.5.2.3 Greenhouse Gases

As discussed in Section 4.7, the City's CEQA Manual establishes threshold criteria for screening out small development projects from detailed GHG analysis. The City has established a threshold of 3,000 MTCO2e/year for smaller residential projects such as 50 dwelling units with no demolition, no overlapping grading and building construction, which are screened out from detailed GHG analysis and GHG emissions are considered less than significant. Alternatives 2, 3 and 4 would result in development of 41, 16, and 38 dwelling units, respectively. All the alternatives are below the 50 dwelling unit screening threshold, and would be screened out from detailed GHG analysis. GHG emissions for all alternatives would be considered less than significant and no mitigation would be required in the same manner as the proposed Project.

6.5.2.4 Minerals

As discussed in Section 3.2.2, the Project site is designated MRZ-1. MRZ-1 is defined as an area containing no significant mineral deposits, or an area not likely to contain significant mineral deposits. Consequently, impacts to mineral resources resulting from Alternatives 1 through 4

would be less than significant and no mitigation would be required in the same manner as the proposed Project.

6.5.2.5 Population and Housing

As discussed in Section 3.2.3, the Project site is designated Residential Attached in the Laguna Niguel General Plan (LNGP) and is zoned Multi-family District (RM), and the Project is consistent with existing land use and zoning. The proposed Project would accommodate approximately 63 residents, a less than one-tenth of one percent increase in population in comparison to the City's 2020 estimated population of 67,285. The increase in population from the proposed Project is de minimis, resulting in less than significant impacts and no mitigation is required. Alternative 2 would accommodate 117 residents, Alternative 3 would accommodate 46 residents, and Alternative 4 would accommodate 109 residents. Although Alternatives 2 and 4 would result in an increase in the number of residents, the population increase would still represent a less than one-tenth of one percent increase in population in comparison to the City's 2020 estimated population. This increase in population from the Alternatives would be de minimis and not cause physical impacts to the environment associated with accommodating the additional residents.

As discussed in Section 3.2.3, construction activities associated with the proposed Project would not indirectly stimulate the need for additional housing or services. The proposed Project would not extend new roads and supporting infrastructure in areas where infrastructure does not currently exist. Connections to existing infrastructure would be made to service the Project site as opposed to servicing the surrounding areas. Therefore, the proposed Project would not induce indirect population growth by extending infrastructure to previously undeveloped areas.

Consequently, impacts from direct or indirect induced population and housing growth resulting from Alternatives 2 through 4 would be less than significant and no mitigation would be required in the same manner as the proposed Project.

6.5.2.6 Public Services

As discussed in Section 3.2.4, the Project is not expected to result in an additional strain on fire and police protection services such that new or expanded facilities would be required. The Project would be required to pay statutory school impact fees to fully mitigate the addition of students to CUSD facilities. The Project would provide a total of 0.51 acres of common and active recreation areas, surpassing the zoning code minimum requirement of 0.49 acres, and therefore reduce a potential strain on parks and park services. The increase in library services from the Project would not be substantial, and new or expanded facilities would not be required as a result of the Project. In addition, the County of Orange stopped levying their impact fee for the County Branch Libraries in 2013, stating necessary library facilities have been constructed and fees are no longer needed since additional libraries are no longer needed. Impacts related to other public facilities would be less than significant, and no mitigation is required.

Impacts from development of Alternatives 2 through 4 on fire, police, schools, and library services would be the same as the proposed Project because even though Alternatives 2 and 4 generate more residents, the number of new residents is so small compared to the population of the City that the additional residents would not trigger the need for additional police, fire, or library services. Consequently, impacts to public services resulting from Alternatives 2 through 4 would be less than significant and no mitigation would be required in the same manner as the proposed Project.

6.5.2.7 Tribal Cultural Resources

As discussed in Section 4.13, the Project site is not listed or eligible for listing in the California Register, or in a local register of historical resources. As previously discussed in Section 4.4, Cultural Resources, the records search obtained for the proposed Project indicates that no listed properties or resources exist on the Project site. Results from prior surveys and archaeological reports conducted on the Project site were negative for cultural resources. As discussed in Chapter 4.6, *Geology and Soils*, grading of the Project site will result in minimal disturbance to native soils. This is due to a substantial amount of earthwork was conducted on the site as part of the original development in 1979 and during the grading activities that took place between 1998 and 2000 after the Via Estoril Landslide to secure the slope. Results from prior surveys and archaeological reports conducted on the Project site were negative for cultural resources. As a result, the Project is considered to have a low potential to impact prehistoric and historic cultural resources, including tribal cultural resources. The Juaneno Band of Mission Indians, Acjachemen Nation-Belardes request that a representative from the Juaneno Band of Mission Indians, Acjachemen Nation-Belardes be retained to provide cultural resources awareness training and spot check monitoring up to 10 hours per week during ground disturbing activities, which are included as **Mitigation Measure MM TCR-1 and Mitigation Measure MM TRC-2**.

Even though it is extremely unlikely that tribal cultural resources would be impacted, there is a potential for unknown tribal cultural resources to be unearthed if ground disturbing activities change, resulting in a potential impact requiring mitigation. **Mitigation Measure MM TCR-3** would be required in order to halt activities, assess the significance of the unearthed resources, and determine final disposition of the resource as appropriate. With the implementation of **MM TCR-1** through **MM TCR-3** impacts to tribal cultural resources would be less than significant.

Impacts from development of Alternatives 2 through 4 on listed or eligible for listing tribal cultural resources would be the same as the proposed Project. Although Alternative 4 would result in development within proposed Lot A, tribal cultural resources are unlikely to be encountered due to the prior disturbances onsite and remediation of the prior landslide. Consequently, impacts to listed or eligible for listing tribal cultural resources resulting from Alternatives 2 through 4 would be less than significant with implementation of the same mitigation measures (**Mitigation Measure MM TCR-1** through **MM TCR-3)** as the proposed Project.

6.5.2.8 Utilities and Service Systems

As discussed in Section 3.2.6, connections to existing utilities and services are readily available onsite, in adjacent property, and in Crown Valley Parkway. Minimal abandonment of existing utilities and service systems would be required to accommodate the Project. The increase in demand on utilities and service systems from the Project is considered to be minimal, and the Project will be adequately served by water, wastewater, natural gas, electricity, storm water, and telecommunications service providers. The proposed Project would not require the relocation, expansion, or construction of any physical improvements related to the provision of these utilities that would result in impacts to the environment. Project impacts would be less than significant, and no mitigation is required. Increased demand on these utilities from development of Alternatives 2 through 4 would be the same or similar as the proposed Project because the additional dwelling units and consequently residents would be so small and not trigger the need for additional utility facilities or services. The alternatives would not require the relocation, expansion, or construction of any physical improvements related to the provision of these utilities that would result in impacts to the environment. Consequently, impacts from increased water, wastewater, natural gas, electricity, storm water, and telecommunications service demands resulting from development of Alternatives 2 through 4 would be less than significant and no mitigation would be required in the same manner as the proposed Project.

As discussed in Section 3.2.6, water supplies are adequate to accommodate the Project during normal, dry and multiple dry years. Impacts are less than significant, and no mitigation measures are required. Due to the small quantity of dwelling units resulting from Alternatives 2 through 4, impacts from development of the alternatives on water supplies would be the same as the proposed Project. Consequently, impacts on water supplies resulting from Alternatives 2 through 4 would be less than significant and no mitigation would be required in the same manner as the proposed Project.

As discussed in Section 3.2.6, Moulton Niguel Water District (MNWD) has adequate and available wastewater treatment capacity to accommodate increased wastewater flows from the proposed Project. Due to the small quantity of dwelling units resulting from Alternatives 2 through 4, impacts from development of the alternatives on wastewater treatment facilities would be the same as the proposed Project. Consequently, impacts to wastewater treatment facilities resulting from Alternatives 2 through 4 would be less than significant and no mitigation would be required in the same manner as the proposed Project.

As discussed in Section 3.2.6, local landfills would be able to accommodate solid waste generation from the Project and the Project would comply with solid waste reduction goals and regulations. Due to the small quantity of dwelling units resulting from Alternatives 2 through 4, impacts from development of the alternatives on landfills and solid waste regulations would be the same as the proposed Project. Consequently, impacts to waste management resulting from Alternatives 2

through 4 would be less than significant and no mitigation would be required in the same manner as the proposed Project.

6.6 Alternative Impact Analysis

The No Project No Build Alterative would result in reduced impacts in comparison to the proposed Project. For the three alternatives considered that envision development on the site, eight of the twenty environmental factors would either not be impacted or would be impacted in the same or approximately the same manner and degree as the proposed Project. Rather than repeat a discussion of these non-significant impacts under Alternatives 2 through 4, a discussion of the following environmental issues that are common to each alternative and the proposed Project is presented below.

6.6.1 Alternative 1: No Project Alternative

Under the No Project No Build Alternative, no development would occur on the Project site. No site preparation, grading, or building construction would occur and no environmental impacts would occur. This alternative would not meet any of the Project objectives as identified in Table 6.A. In addition, under CEQA the No Build alternative cannot be the environmentally superior alternative. As result, this alternative is rejected from further analysis.

6.6.2 Alternative 2: Maximum Development Density Identified in the General Plan

As presented in 6.5.1, this alternative allows for the maximum residential attached development of 41 dwelling units permitted by the General Plan on the 4.2-acre subdivided parcel. This Alternative assumes Lot 1 (2-acres) is the developable portion of the Project site and Lot A (2.2-acres) would be open space similar to the proposed Project.

6.6.2.1 Aesthetics

As discussed in Section 4.1, *Aesthetics*, the proposed Project includes project design features **PDF AES-1** through **AES-4** and, the Project would result in a less than significant impact regarding scenic vistas, scenic resources within State scenic highways, compliance with applicable scenic quality zoning and regulations, and light and glare. Alternative 2 would result in more development on the Project site but within the same lower, flatter, eastern portion of the site covered by proposed Lot 1. This Alternative would contain the same or similar project design features as those identified by **PDF AES-1** through **AES-4** for the proposed Project regarding open space (proposed Lot A), architecture design elements, vegetation and landscaping, and lighting. Impacts to aesthetics resulting from Alternative 2, Maximum Development Density Identified in the General Plan, would be less than significant and no mitigation is required, in the same manner as the proposed Project.

6.6.2.2 Air Quality

As discussed in Section 4.2, *Air Quality*, the proposed Project would not conflict with or obstruct implementation of the applicable air quality plan, violate any air quality standards, result in cumulatively considerable net increase in any criteria pollutant, expose sensitive receptors to substantial pollutant concentrations, or create objectionable odors. Construction of the proposed Project would comply with applicable rules and regulations reducing air pollution emissions including SCAQMD Rule 402, 403 and 1113 prohibiting air discharge nuisance, reduce dust emissions during earthmoving activates, and reduce VOC remissions from the application of architectural coatings. The Project would generate short-term construction and long-term operational emissions, which would all be at levels below applicable air quality standards. Although development of Alternative 2 would result in more development on the Project site, the development footprint would be contained within Lot 1 in the same way as the proposed Project and generate the same level of short-term construction emissions as the proposed Project. Daily construction emissions for any given increment of development would be the same or only incrementally larger due to the increased number of dwelling units. Operational emissions would also be incrementally higher under this Alternative due to the increased number of dwelling units. Even though the quantity of construction and operational emissions would incrementally increase, this increase would be nominal and emissions would remain less than the SCAQMD daily significance thresholds. Impacts associated with regional emissions, criteria pollutants, exposure to sensitive receptors, and other emissions such as odors would be slightly increased in comparison to the proposed Project. However, air quality impacts from Alternative 2, Maximum Development Density Identified in the General Plan, would be less than significant and no mitigation is required, in the same manner as the proposed Project.

6.6.2.3 Biological Resources

As described in Section 4.3, *Biological Resources*, the proposed Project would produce a less than significant impact regarding sensitive species, riparian or other sensitive habitats, jurisdictional waters/wetlands, adopted policies and/or ordinances, and adopted habitat conservation plans. Impacts to wildlife movement and migratory species were determined to be less than significant considering the proposed 2.2 acres of open space (**PDF BIO-1**) and with implementation of mitigation (**MM BIO-1**) regarding protection of nesting birds. Alternative 2 would result in more dwelling units, in a denser format, but within the same development footprint on the Project site. The potential direct impacts to sensitive species, riparian or other sensitive habitats, jurisdictional waters/wetlands, adopted policies and/or ordinances, and adopted habitat conservation plans under Alternative 2 would be less than significant and no mitigation required, in the same manner as the proposed Project. Impacts to wildlife movement and migratory species would be less than significant, considering the same 2.2 acres of open space would be created and with implementation of nesting bird protection mitigation (**MM BIO-1**), in the same way as the proposed Project.

6.6.2.4 Energy

As discussed in Section 4.5, *Energy*, the proposed Project would produce a less than significant impact regarding consumption of energy during Project construction, Project operations, and conflicts with renewable energy or energy efficiency plans. Alternative 2 would result in a denser development with incrementally more dwelling units within the same footprint on the Project site, and a slightly increased demand for energy would occur. Similar to the proposed Project, Alternative 2 would comply with applicable Title 24 and other CBC standards regarding energy efficiency and would not result in wasteful, inefficient, unnecessary use of energy, conflicts with energy standards and regulations, or excessive energy demand that would tax local or regional supplies. Impacts regarding energy conservation resulting from Alternative 2, Maximum Development Density Identified in the General Plan, would be less than significant and no mitigation required, the same as for the proposed Project.

6.6.2.5 Geology and Soils

As described in Section 4.6, *Geology and Soils*, the proposed Project would subdivide the parcel to create a buildable area, Lot 1, and Lot A. Since Lot A is a lettered lot on the tentative tract map and no residential development is allowed on lettered lots, no residential development would occur on the remediated hillside (**PDF GEO-1**). Additionally, the proposed Project would include a mechanically stabilized earth (MSE) wall along the western border of the buildable space to create the building pad within Lot 1. The Project would produce a less than significant impact regarding seismic-related ground failure, fault rupture, rockfalls, soil erosion or loss of topsoil, unstable soils, and septic tanks. Furthermore, impacts regarding landslides and seismic-related ground shaking, expansive soils, slope stability, and paleontological were determined to be less than significant with implementation of project design features PDF GEO-2 and GEO-3 and mitigation measure MM GEO-1 pertaining to recovery of paleontological resources. Alternative 2 would result in development on the Project site contained within Lot 1 in the same manner as the proposed Project, with more dwelling units due to a higher vertical design to achieve maximum density. The potential direct impacts regarding geology and soils would also occur under Alternative 2, Maximum Development Density Identified in the General Plan, and the same project design features would be included and same mitigation measures would be required. Impacts to geology and soils under this Alternative would be less than significant with mitigation, in the same way as the proposed Project.

6.6.2.6 Hazards and Hazardous Materials

As discussed in Section 4.8, *Hazards and Hazardous Materials*, the proposed Project would produce a less than significant impact regarding: routine transport, use, or disposal of hazardous materials; emitting hazards near existing or proposed school; and conflicts with emergency response plans. Impacts regarding reasonably foreseeable upset and accident conditions, hazardous materials, location within an airport land use plan or within two miles of a public airport, and proximity to a private airport were determined to be less than significant. Impacts regarding

wildland fire risk is rendered less than significant with the OCFA approval of a Fire Management Plan, which includes installation of a fuel modification zone (**PDF HAZ-1**) and radiant heat walls (**PDF HAZ-2**). Alternative 2 would construct 41 dwelling units within the same developable area, therefore it is unlikely revisions to the Fire Master Plan and Fuel Modification Plans would be necessary to accommodate this alternative. If changes were necessary, such features would be reviewed as part OCFA's Fire Management Plan approval process to render wildfire risk impacts to less than significant. Alternative 2, Maximum Development Density Identified in the General Plan, would result in a less than significant impact regarding hazards and no mitigation is required, in the same way as the proposed Project.

6.6.2.7 Hydrology and Water Quality

As discussed in Section 4.9, *Hydrology and Water Quality*, the proposed Project would produce a less than significant impact regarding: water quality standards or waste discharge requirements; groundwater; alter drainage resulting in erosion or siltation offsite; alter drainage or increase of surface runoff resulting in flooding on- or off-site; runoff exceeding capacity of existing or planned facilities; otherwise degrade water quality; place housing in flood hazard areas; place structures that impede or redirect flood flows; dam inundation impacts; and inundation by seiche, tsunami, or mudflow. Because the proposed project design features would result in relocation and installation of a permanent storm drain system (**PDF HYD-1**) including an oversized 200-foot-long storm drainpipe to detain storm flows (see **PDF HYD-2**), installation of two catch basins, installation of a v-ditch atop the MSE wall, and installation of two modular wetland systems (MWS) (**PDF HYD-3**), hydrology and water quality impacts would be rendered less than significant and no mitigation required. Under Alternative 2, Maximum Development Density Identified in the General Plan, there would be increased development within the same developable area. Similar project design features would be included and applicable to handle hydrology concerns and protect water quality. As a result, impacts associated with hydrology and water quality would be less than significant under this Alternative with no mitigation required, the same as for the proposed Project.

6.6.2.8 Land Use and Planning

As discussed in Section 4.10, *Land Use and Planning*, the proposed Project would subdivide the site into two lots, Lot 1 and Lot A. Lot 1 would form a 2-acre developable area for the proposed residential structures and Lot A would form a 2.2-acre area for open space. These project design features (**PDF LU-1**) would limit development to Lot 1 which is the flatter, lower portion of the site adjacent to Crown Valley Parkway. **PDF LU-1** would also prohibit construction of residential units on Lot A by creating a lettered lot on the subdivision map, which does not permit residential development. As discussed in Section 4.10, the proposed Project would produce a less than significant impact regarding: dividing an established community; conflicts with applicable land use plans, policies, or regulations; and conflict with any applicable habitat or natural community conservation plan. Under Alternative 2, Maximum Development Density Identified in the General

Plan, development on the site would be permitted by the General Plan at a denser level. This alternative would include the same project design feature **PDF LU-1**, limiting development to Lot 1. Impacts under this Alternative associated with land use and planning would be less than significant and no mitigation is required, the same as for the proposed Project.

6.6.2.9 Noise

As discussed in Section 4.11, *Noise*, the proposed Project would produce a less than significant impact regarding construction noise, operational noise, operational groundborne vibration, substantial permanent increase in operational noise, and exposure to excessive public or private airport noise. Alternative 2, Maximum Development Density Identified in the General Plan, would result in a denser development on the Project site within the same developable area. As a result, similar impacts would be produced during the grading phase of construction. Impacts under this Alternative associated with noise and vibration would be less than significant and no mitigation is required, the same as for the proposed Project.

6.6.2.10 Recreation

As discussed in Section 3.2.5, *Recreation*, the proposed Project would produce a less than significant impact regarding new or renovated recreational and park facilities. The proposed Project includes sufficient open space and active recreational areas to satisfy the Project's local park code requirements. The construction of open space and active recreation facilities would occur on site and the potential impacts of constructing such facilities would be less than significant as they are to be built and approved per code. Alternative 2, Maximum Development Density Identified in the General Plan, would result in a denser development on the Project site and therefore additional recreation demand. This Alternative is assumed to include open space and active recreational areas on site to satisfy the local park code requirements in the same manner as the Project to account for the increased demand on parks. However, while not a fully engineered alternative, it appears this alternative may also not meet the City's open space and recreation requirements, resulting in the need for Alternative Development Standards. As a result, impacts regarding recreation would be less than significant and no mitigation required, which is the same as for proposed Project.

6.6.2.11 Transportation/Traffic

As described in Section 4.12, *Transportation/Traffic*, the proposed Project would generate 161 daily trips during the weekday and is considered to be a small project as the proposed Project generates less than 500 vehicle trips per day and screened from requiring detailed VMT Analysis. As a result of these trip estimates, the proposed Project would produce a less than significant impact related to a conflict with applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system or related to a conflict with CEQA Guidelines 15064.3. The proposed Project's impacts regarding dangerous design features would be reduced to less than significant with implementation of mitigation measures to enact a

Construction Management Plan (**MM TRA-1**), restrict outbound left turns (**MM TRA-2**), and modify the inbound left turn lane on Crown Valley Parkway to safely accommodate Project traffic (**MM TRA-3**). Alternative 2, Maximum Development Density Identified in the General Plan, would result in a denser development design on the Project site approximately doubling in the dwelling unit count from 22 to 41. The trip generation estimate for Alternative 2 would be approximately double that of the proposed Project (320 trips per day), and the Alternative would also be considered a small project and screened from detailed VMT analyses. Similar to the proposed Project, traffic impacts regarding dangerous design features would be fully mitigated by implementation of the mitigation measures identified in Section 4.12 (**MM TRA-1**, **MM TRA-2**, **MM TRA-3**). Although trip generation would increase under this Alternative, impacts would remain less than significant with implementation of mitigation, in the same way as the Project.

6.6.2.12 Wildfire

As discussed in Section 4.14, Wildfire, the proposed Project is within a VHFHSZ. The Project's Fire Management Plan has been reviewed and approved by the OCFA, including a Conceptual Fuel Modification Plan. Construction of the Project in accordance with the Fire Management Plan and Conceptual Fuel Modification Plan results in a less than significant impact regarding: impairment of an adopted emergency response or evacuation plan; exposure of occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire; installation or maintenance of associated infrastructure that may exacerbate fire risk or may result in temporary or ongoing impacts to the environment; and exposure of 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. Project design features for the proposed Project include 6-foot-high radiant heat walls (PDF FIRE-1), low profile venting (PDF FIRE-2), and an enhanced fire sprinkler system (PDF FIRE-3). Alternative 2, Maximum Development Density Identified in the General Plan, would occur on the same site and therefore in a VHFHSZ. Alternative 2's development plans would go through the same Fire Management Plan approval by OCFA. The Fire Management Plan would include a similar Fuel Modification Plan, and similar project design features (PDF FIRE-1, PDF FIRE-2, and PDF FIRE-3) to address risks associated with wildfire. Similar to the proposed Project, wildfire resources under Alternative 2, Maximum Development Density Identified in the General Plan, would not result in the need for new or expanded infrastructure or the construction of which would produce a significant impact on the environment. However, OCFA approval may request alterations to plans and design features if substantial building design changes occur with this alternative. Impacts regarding wildfire under this Alternative would be less than significant, the same as for the proposed Project.

6.6.2.13 Project Objectives Conclusion

Under the Permitted by General Plan Alternative, the objectives regarding residential development would generally be met. As detailed in Table 6-2, the Permitted by General Plan Alternative would not meet the Project objectives to the same degree as the proposed Project.

Table 6-2. Comparison of Alternative 2: Maximum Development Identified in the General Plan to the Project Objectives

Project Objectives	Does the Alternative Meet the Project Objectives?
Provide new for-sale housing that is responsive to market conditions and provides a uniquely designed product type that is currently limited elsewhere in the City.	Yes, to a similar degree[1]
Design the grading and geotechnical stabilization to ensure site stability consistent with City codes and minimize grading into the existing previously stabilized landslide mass.	Yes, to a similar degree
Design the grading and geotechnical stabilization to minimize off-site grading and balance the earthwork on site to minimize import/export, which would reduce air quality, noise, and traffic impacts from truck traffic on adjacent residential uses and City roadways.	Yes, to a similar degree
Redevelop the previously existing residential site with a residential project consistent with existing General Plan and Zoning designations that provides an updated housing product to meet the City's growing population and further address the City's and state's housing needs.	Yes, to a similar degree
Create a financially successful development that is fiscally responsible by equitably contributing to the expansion and operation of the public services and facilities impacted by the project through the payment of fees.	Yes, to a similar degree
Improve the aesthetic character along Crown Valley Parkway through enhanced landscaping consistent with General Plan policies.	Yes, to a similar degree

6.6.3 Alternative 3: Reduced Density

The Reduced Density Alternative would construct 8 duplex structures, 16 dwelling units, on the 4.2-acre site. In the same way as the Project, Alternative 3 would subdivide the parcel to create the same 2-acre buildable parcel (Lot 1) and 2.2-acre open space area (Lot A).

[1] The Applicant has indicated this alternative would consist of rental units, however for-sale units also appear feasible, therefore, this alternative is considered to meet the first objective.

6.6.3.1 Aesthetics

As discussed in Section 4.1, *Aesthetics*, the proposed Project includes project design features **PDF AES-1** through **AES-4**. The Project would result in a less than significant impact regarding scenic vistas, scenic resources within State scenic highways, compliance with applicable scenic quality zoning and regulations, and light and glare. Alternative 3 would result in less development on the Project site but within the same lower, flatter, eastern portion of the site covered by proposed Lot 1. This Alternative would contain the same or similar project design features as those identified by **PDF AES-1** through **AES-4** for the proposed Project regarding open space (proposed Lot A), architecture design elements, vegetation and landscaping, and lighting. Impacts to aesthetics resulting from Alternative 3, Reduced Density, would be less than significant and no mitigation is required, in the same manner as the proposed Project.

6.6.3.2 Air Quality

As discussed in Section 4.2, *Air Quality*, the proposed Project would not conflict with or obstruct implementation of the applicable air quality plan, violate any air quality standards, result in cumulatively considerable net increase in any criteria pollutant, expose sensitive receptors to substantial pollutant concentrations, or create objectionable odors. Construction of the proposed Project would comply with applicable rules and regulations reducing air pollution emissions including SCAQMD Rule 402, 403 and 1113 prohibiting air discharge nuisance, reduce dust emissions during earthmoving activities, and reduce VOC remissions from the application of architectural coatings. The Project would generate short-term construction and long-term operational emissions at levels below applicable air quality standards. Development of Alternative 3 would result in slightly less development on the Project site, however the development footprint contained within Lot 1 would be similar to the proposed Project and generate the same level of short-term construction emissions as the proposed Project. Daily construction emissions for any given increment of development would be the same or only incrementally smaller due to the decreased number of dwelling units. Operational emissions would also be incrementally lower under this Alternative due to the decreased number of dwelling units. Even though the quantity of construction and operational emissions would incrementally decrease, this decrease would be nominal, and emissions would be less than the SCAQMD daily significance thresholds. Impacts associated with regional emissions, criteria pollutants, exposure to sensitive receptors, and other emissions such as odors would also slightly decrease in comparison to the proposed Project from the reduction in the number of units. Air quality impacts from Alternative 3, Reduced Density, would be less than significant and no mitigation is required, in the same manner as the proposed Project.

6.6.3.3 Biological Resources

As described in Section 4.3, *Biological Resources*, the proposed Project would produce a less than significant impact regarding sensitive species, riparian or other sensitive habitats, jurisdictional waters/wetlands, adopted policies and/or ordinances, and adopted habitat conservation plans.

Impacts to wildlife movement and migratory species were determined to be less than significant considering the proposed 2.2 acres of open space (**PDF BIO-1**) and implementation of mitigation (**MM BIO-1**) regarding protection of nesting birds. Alternative 3 would result in less dwelling units, in a similar format, and within the same development footprint on the Project site. The potential direct impacts to sensitive species, riparian or other sensitive habitats, jurisdictional waters/wetlands, adopted policies and/or ordinances, and adopted habitat conservation plans under Alternative 3 would be less than significant and no mitigation required, in the same manner as the proposed Project. Impacts to wildlife movement and migratory species would be less than significant considering the creation of the same 2.2 acres of open space and with implementation of nesting bird protection mitigation (**MM BIO-1**), in the same way as the proposed Project.

6.6.3.4 Energy

As discussed in Section 4.5, *Energy*, the proposed Project would produce a less than significant impact regarding consumption of energy during Project construction, Project operations, and conflicts with renewable energy or energy efficiency plans. Alternative 3 would result in a less dense development with incrementally fewer dwelling units within the same footprint on the Project site, and a slightly decreased demand for energy would occur. Similar to the proposed Project, Alternative 3 would comply with applicable Title 24 and other CBC standards regarding energy efficiency and would not result in wasteful, inefficient, unnecessary use of energy, conflicts with energy standards and regulations, or excessive energy demand that would tax local or regional supplies. Impacts regarding energy conservation resulting from Alternative 3, Reduced Density, would be less than significant and no mitigation is required, the same as for the proposed Project.

6.6.3.5 Geology and Soils

As described in Section 4.6, *Geology and Soils*, the proposed Project would subdivide the parcel to create a buildable area (Lot 1) and to create an open space area (Lot A) to avoid development on previously remediated hillside (**PDF GEO-1**). Additionally, the proposed Project would include a mechanically stabilized earth (MSE) wall along the western border of the buildable space to create the building pad within Lot 1. These features would produce a less than significant impact regarding seismic-related ground failure, fault rupture, rockfalls, soil erosion or loss of topsoil, unstable soils, and septic tanks. Furthermore, impacts regarding landslides and seismic-related ground shaking, expansive soils, slope stability, and paleontological were determined to be less than significant with implementation of mitigation for soil testing during grading (**MM GEO-1**), inclinometer site monitoring (**MM GEO-2**), and paleontologist evaluation of resources if unearthed during grading (**MM GEO-3**). Alternative 3 would result in development on the Project site contained within Lot 1 in the same manner as the proposed Project with the assumption that the development footprint for Alternative 3 would be similar to the proposed Project even though Alternative 3 has fewer dwelling units. The potential direct impacts regarding geology and soils would also occur under Alternative 3, Reduced Density, and the same project design features would be included and mitigations would be required. Impacts to geology and soils under this

Alternative would be less than significant with implementation of mitigation, the same as the proposed Project.

6.6.3.6 Hazards and Hazardous Materials

As discussed in Section 4.8, *Hazards and Hazardous Materials*, the proposed Project would produce a less than significant impact regarding: routine transport, use, or disposal of hazardous materials; emitting hazards near existing or proposed school; and conflicts with emergency response plans. Impacts regarding reasonably foreseeable upset and accident conditions, hazardous materials, location within an airport land use plan or within two miles of a public airport, and proximity to a private airport were determined to be less than significant. Impacts regarding wildland fire risk is rendered less than significant with the OCFA approval of the Fire Management Plan, which includes installation of a fuel modification zone (**PDF HAZ-1**) and radiant heat walls (**PDF HAZ-2**). Alternative 3 would construct 16 dwelling units within a similar development footprint and would require similar fire attenuation features to reduce wildfire risks. However, such features would be reviewed as part OCFA's Fire Management Plan approval process to address wildfire risk. Alternative 3, Reduced Density, would result in a less than significant impact regarding hazards and no mitigation is required, in the same way as the proposed Project.

6.6.3.7 Hydrology and Water Quality

As discussed in Section 4.9, *Hydrology and Water Quality*, the proposed Project would produce a less than significant impact regarding: water quality standards or waste discharge requirements; groundwater; alter drainage resulting in erosion or siltation offsite; alter drainage or increase of surface runoff resulting in flooding on- or off-site; runoff exceeding capacity of existing or planned facilities; otherwise degrade water quality; place housing in flood hazard areas; place structures that impede or redirect flood flows; dam inundation impacts; and inundation by seiche, tsunami, or mudflow. Because the proposed project design features would result in relocation and installation of a permanent storm drain system (**PDF HYD-1**) including an oversized 200-foot-long storm drainpipe (to detain storm flows, see **PDF HYD-2**), installation of two catch basins, installation of a v-ditch atop the MSE wall, and installation of two modular wetland systems (MWS)(**PDF HYD-3**), hydrology and water quality impacts would be rendered less than significant and no mitigation required. Under Alternative 3, Reduced Density, there would be fewer dwelling units, however similar project design features would be included and applicable to handle hydrology concerns and protect water quality even though this alternative would have incrementally more pervious surface compared to the proposed Project. As a result, impacts associated with hydrology and water quality would be less than significant under this Alternative with no mitigation required, the same as for the proposed Project.

6.6.3.8 Land Use and Planning

As discussed in Section 4.10, *Land Use and Planning*, the proposed Project would subdivide the site into two lots, Lot 1 and Lot A. Lot 1 would form a 2-acre developable area for the proposed

residential structures and Lot A would form a 2.2-acre area for open space. These project design features **(PDF LU-1)** would limit development to Lot 1 which is the flatter, lower portion of the site adjacent to Crown Valley Parkway. **PDF LU-1** would also prohibit future development on Lot A by creating a lettered lot on the subdivision map, which does not permit residential development, avoiding development on the remediated hillside. As discussed in Section 4.10, the proposed Project would produce a less than significant impact regarding: dividing an established community; conflicts with applicable land use plans, policies, or regulations; and conflict with any applicable habitat or natural community conservation plan. Under Alternative 3, Reduced Density, development on the site would be permitted by the General Plan at a less dense level by converting the proposed Project's six triplex structures into duplexes, resulting in a reduction in dwelling units from 22 to 16. This alternative would include the same project design feature **PDF LU-1**, limiting development to Lot 1 and prohibiting residential home construction on the remediated hillside (Lot A). Impacts under this Alternative associated with land use and planning would be less than significant and no mitigation is required, the same as for the proposed Project.

6.6.3.9 Noise

As discussed in Section 4.11, *Noise*, the proposed Project would produce a less than significant impact regarding construction noise, operational noise, operational groundborne vibration, substantial permanent increase in operational noise, and exposure to excessive public or private airport noise. Alternative 3, Reduced Density, would result in a less dense development on the Project site, however similar construction activities would be necessary to create a similar sized building pad, resulting in similar construction noise impacts. As a result, similar impacts would be perceived during the grading phase of construction. Impacts under this Alternative associated with noise and vibration would be less than significant and no mitigation is required, the same as for the proposed Project.

6.6.3.10 Recreation

As discussed in Section 3.2.5, *Recreation*, the proposed Project would produce a less than significant impact regarding the need for new or renovated recreational and park facilities. The proposed Project includes sufficient open space and active recreational areas to satisfy the Project's local park code requirements. The construction of open space and active recreation facilities would occur on site and the potential impacts of constructing such facilities would be less than significant as they are to be built and approved per code. Alternative 3, Reduced Density, would result in a less dense development on the Project site. The Alternative would include open space and active recreational areas on site to satisfy the local park code requirements in the same manner as the Project although the demand on public parks would be incrementally less than the proposed Project. As a result, impacts regarding recreation would be less than significant and no mitigation required, the same as for proposed Project.

6.6.3.11 Transportation/Traffic

As described in Section 4.12, *Transportation/Traffic*, the proposed Project would generate 161 daily trips during the weekday and is considered to be a small project as the proposed Project generates less than 500 vehicle trips per day and is screened from requiring detailed VMT Analysis. As a result, the proposed Project would produce a less than significant impact related to a conflict with applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system or related to a conflict with CEQA Guidelines 15064.3. The proposed Project's impacts regarding dangerous design features would be reduced to less than significant with implementation of mitigation measures to enact a Construction Management Plan (**MM TRA-1**), restrict outbound left turns (**MM TRA-2**), and modify the inbound left turn lane on Crown Valley Parkway to safely accommodate Project traffic (**MM TRA-3**). Alternative 3, Reduced Density, would result in less development on the Project site, reducing the dwelling unit count from 22 to 16. The trip generation estimate for Alternative 3 would be approximately 70% of the proposed Project (110 trips per day), and the Alternative would also be considered a small project and screened from detailed VMT analyses. Similar to the proposed Project, traffic impacts regarding dangerous design features would be fully mitigated by implementation of the mitigation measures identified in Section 4.12 (**MM TRA-1**, **MM TRA-2**, and **MM TRA-3**). Impacts under this Alternative would remain less than significant with implementation of mitigation, in the same manner as the Project.

6.6.3.12 Wildfire

As discussed in Section 4.14, *Wildfire*, the proposed Project is within a VHFHSZ. The Project's Fire Management Plan has been reviewed and approved by the OCFA, including a Conceptual Fuel Modification Plan. Construction of the Project in accordance with the Fire Management Plan and Conceptual Fuel Modification Plan results in a less than significant impact regarding: impairment of an adopted emergency response or evacuation plan; exposure of occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire; installation or maintenance of associated infrastructure that may exacerbate fire risk or may result in temporary or ongoing impacts to the environment; and exposure of 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. Project design features included in the proposed Project include 6-foot-high radiant heat walls (**PDF FIRE-1**), low profile venting (**PDF FIRE-2**), and an enhanced fire sprinkler system (**PDF FIRE-3**). Alternative 3, Reduced Density, would occur on the same site and therefore in a VHFHSZ. Alternative 3's development plans would go through the same Fire Management Plan approval by OCFA. The Fire Management Plan would include a similar Fuel Modification Plan, and similar project design features (**PDF FIRE-1**, **PDF FIRE-2**, **PDF FIRE-3**) would be included. Impacts from risks associated with wildfire are less than significant. Similar to the proposed Project, wildfire resources under Alternative 3 would not result in the need for new or expanded infrastructure or the construction of which would produce a

significant impact on the environment. Impacts regarding wildfire under this Alternative would be less than significant, the same as for the proposed Project.

6.6.3.13 Project Objectives Conclusion

Under the Reduced Density Alternative, the objectives regarding the development of a less dense residential development would generally be met. As detailed in Table 6-3, the Reduced Density Alternative would not meet the Project objectives to the same degree as the proposed Project.

Table 6-3. Comparison of Alternative 3: Reduced Density to the Project Objectives

Project Objectives	Does the Alternative Meet the Project Objectives?
Provide new for-sale housing that is responsive to market conditions and provides a uniquely designed product type that is currently limited elsewhere in the City.	Yes, but to a lesser degree
Design the grading and geotechnical stabilization to ensure site stability consistent with City codes and minimize grading into the existing previously stabilized landslide mass.	Yes, to a similar degree
Design the grading and geotechnical stabilization to minimize off-site grading and balance the earthwork on site to minimize import/export, which would reduce air quality, noise, and traffic impacts from truck traffic on adjacent residential uses and City roadways.	Yes, to a similar degree
Redevelop the previously existing residential site with a residential project consistent with existing General Plan and Zoning designations that provides an updated housing product to meet the City's growing population and further address the City's and state's housing needs.	Yes, but to a lesser degree
Create a financially successful development that is fiscally responsible by equitably contributing to the expansion and operation of the public services and facilities impacted by the project through the payment of fees.	No
Improve the aesthetic character along Crown Valley Parkway through enhanced landscaping consistent with General Plan policies.	Yes, to a similar degree

6.6.4 Alternative 4: Higher Density Larger Footprint 38 Units

The Higher Density Larger Footprint 38 Units Alternative provides 19 duplexes and 38 units over the entire 4.2-acre parcel. This alternative eliminates the open space proposed by the Project in order to spread out development over a larger footprint. The construction of 16 additional units would result in an increase of residents from 57 to 99. A detailed description of this alternative is provided above in 6.5.1, Alternative Descriptions.

6.6.4.1 Aesthetics

As discussed in Section 4.1, *Aesthetics*, the proposed Project includes project design features **PDF AES-1** through **AES-4**. The Project would result in a less than significant impact regarding scenic vistas, scenic resources within State scenic highways, compliance with applicable scenic quality zoning and regulations, and light and glare. Alternative 4 would result in more development spread out over a larger portion of the site, utilizing the western sloping portion in addition to the flatter eastern portion. This Alternative would contain similar project design features as those identified by **PDF AES-1** through **AES-4** for the proposed Project regarding architecture design elements, vegetation and landscaping, and lighting. However, Alternative 4 eliminates the proposed Projects two lot design, with one lot for development and the other lot for open space. As result, impacts to aesthetics and in particular visual quality of the site resulting from Alternative 4, Higher Density Larger Footprint 38 Units, would be increased slightly in comparison to the proposed Project. However, impacts would remain less than significant, and no mitigation is required in the same manner as the proposed Project.

6.6.4.2 Air Quality

As discussed in Section 4.2, *Air Quality*, the proposed Project would not conflict with or obstruct implementation of the applicable air quality plan, violate any air quality standards, result in cumulatively considerable net increase in any criteria pollutant, expose sensitive receptors to substantial pollutant concentrations, or create objectionable odors. Construction of the proposed Project would comply with applicable rules and regulations reducing air pollution emissions including SCAQMD Rule 402, 403 and 1113 prohibiting air discharge nuisance, reduce dust emissions during earthmoving activates, and reduce VOC remissions from the application of architectural coatings. The Project would generate short-term construction and long-term operational emissions at levels below applicable air quality standards. Development of Alternative 4 would result in more development across a larger portion of the Project site, generating incrementally higher short-term construction emissions in comparison to the proposed Project. Daily construction emissions for any given increment of development would be incrementally larger, or extend for a longer period of time, due to the increased number of dwelling units being constructed and the larger development footprint. Operational emissions would also be incrementally higher under Alternative 4 due to the increased number of dwelling units. Even though the quantity of construction and operational emissions would incrementally increase, this increase would be minor and emissions would be less than the SCAQMD daily significance thresholds. Impacts associated with regional emissions, criteria pollutants, exposure to sensitive receptors, and other emissions such as odors would be slightly increased in comparison to the proposed Project from the additional number of dwelling units. However, air quality impacts from Alternative 4, Higher Density Larger Footprint 38 Units, would be less than significant and no mitigation is required, in the same manner as the proposed Project.

6.6.4.3 Biological Resources

As described in Section 4.3, *Biological Resources*, the proposed Project would produce a less than significant impact regarding sensitive species, riparian or other sensitive habitats, jurisdictional waters/wetlands, adopted policies and/or ordinances, and adopted habitat conservation plans. Impacts to wildlife movement and migratory species were determined to be less than significant considering the proposed 2.2 acres of open space (**PDF BIO-1**) and with implementation of mitigation (**MM BIO-1**) regarding protection of nesting birds. Alternative 4, Higher Density Larger Footprint 38 Units, would result in more dwelling units on a larger development footprint on the Project site. Although the development footprint would expand into the 2.2 acres of open space proposed by the Project, the 2.2 acres of open space is not being set aside to preserve biological resources. The project site, including the 2.2 acres of open space, does not contain valuable or significant biological resources that require preservation. Therefore, this Alternative would not create new biological impacts by expanding the development footprint over a larger area on the Project site. Therefore, potential direct impacts to sensitive species, riparian or other sensitive habitats, jurisdictional waters/wetlands, adopted policies and/or ordinances, and adopted habitat conservation plans under Alternative 4 would be less than significant with implementation of nesting bird protection mitigation (**MM BIO-1**), in the same manner as the proposed Project.

6.6.4.4 Energy

As discussed in Section 4.5, *Energy*, the proposed Project would produce a less than significant impact regarding consumption of energy during Project construction, Project operations, and conflicts with renewable energy or energy efficiency plans. Alternative 4 would result in a lager dwelling unit count and development would occur on a larger portion of the 4.2-acre Project site, resulting in a slightly increased demand for energy. Similar to the proposed Project, Alternative 4 would comply with applicable Title 24 and other CBC standards regarding energy efficiency and would not result in wasteful, inefficient, unnecessary use of energy, conflicts with energy standards and regulations, or excessive energy demand that would tax local or regional supplies. Impacts regarding energy conservation resulting from Alternative 4, Higher Density Larger Footprint 38 Units, would be slightly increased in comparison to the Project; however, impacts would remain less than significant, and no mitigation is required, the same as for the proposed Project.

6.6.4.5 Geology and Soils

As described in Section 4.6, *Geology and Soils*, the proposed Project would subdivide the parcel to create a buildable area (Lot 1) and to create an open space area (Lot A) to avoid development on previously remediated hillside (**PDF GEO-1**). Additionally, the proposed Project would include a mechanically stabilized earth (MSE) wall along the western border of the buildable space to create the building pad within Lot 1. The Project has a less than significant impact regarding seismic-related ground failure, fault rupture, rockfalls, soil erosion or loss of topsoil, unstable soils, and septic tanks. Furthermore, impacts regarding landslides and seismic-related ground shaking, expansive soils, slope stability, and paleontological were determined to be less than significant

with implementation of mitigation for soil testing during grading (**MM GEO-1**), inclinometer site monitoring (**MM GEO-2**), and paleontologist evaluation of resources if unearthed during grading (**MM GEO-3**). Alternative 4, Higher Density Larger Footprint 38 Units, would result in development across a larger portion of the 4.2-acre site and including portions of the remediated landslide and buttress fill area. The larger footprint associated with this Alternative would introduce the potential for additional grading, retaining walls, and engineered slopes. However, increasing the development footprint and grading within the remediated landslide and buttress fill area would not create a new significant impact. The development footprint associated with this Alternative was the subject of prior geotechnical reports, which concluded development of this alternative was geotechnically feasible. These reports were peer reviewed by GMU Geotechnical, Inc. (GMU), the City's geotechnical consultant. GMU concluded that the findings and recommendations in these reports were consistent with industry accepted standards and provided their conditional approval. Design features and geotechnical recommendations may need to be altered and/or increased to a greater extent than the proposed Project; however, impacts would be less than significant with implementation of mitigation, the same as the proposed Project.

6.6.4.6 Hazards and Hazardous Materials

As discussed in Section 4.8, *Hazards and Hazardous Materials*, the proposed Project would produce a less than significant impact regarding: routine transport, use, or disposal of hazardous materials; emitting hazards near existing or proposed school; and conflicts with emergency response plans. Impacts regarding reasonably foreseeable upset and accident conditions, hazardous materials, location within an airport land use plan or within two miles of a public airport, and proximity to a private airport were determined to be less than significant. Impacts regarding wildland fire risk would be less than significant with the OCFA approval of the Fire Management Plan, which includes installation of a fuel modification zone (**PDF HAZ-1**) and radiant heat walls (**PDF HAZ-2**). Alternative 4 would develop more dwelling units on a larger footprint, and the expanded layout would require modifications to project design features **PDF HAZ-1** and **PDF HAZ-2**. However, such features would be reviewed as part OCFA's Fire Management Plan approval process resulting in less than significant wildfire risks. Impacts regarding hazards under Alternative 4 would be greater as compared to the proposed Project; however, impacts would be less than significant and no mitigation is required, in the same way as the proposed Project.

6.6.4.7 Hydrology and Water Quality

As discussed in Section 4.9, *Hydrology and Water Quality*, the proposed Project would produce a less than significant impact regarding: water quality standards or waste discharge requirements; groundwater; alter drainage resulting in erosion or siltation offsite; alter drainage or increase of surface runoff resulting in flooding on- or off-site; runoff exceeding capacity of existing or planned facilities; otherwise degrade water quality; place housing in flood hazard areas; place structures that impede or redirect flood flows; dam inundation impacts; and inundation by seiche, tsunami, or mudflow. Because the proposed project design features would result in relocation and

installation of a permanent storm drain system (**PDF HYD-1**) including an oversized 200-foot-long storm drainpipe to detain storm flows (**PDF HYD-2**), installation of two catch basins, installation of a v-ditch atop the MSE wall, and installation of two modular wetland systems (MWS)(**PDF HYD-3**), hydrology and water quality impacts would be rendered less than significant and no mitigation required. Under Alternative 4, Higher Density Larger Footprint 38 Units, there would be increased dwelling units and a larger development footprint. Because the upper western portion of the site would be developed, additional or revised project design features would need to be introduced to account for the changed hydrology and water quality conditions. However, similar project design features would handle hydrology concerns and protect water quality. As a result, impacts associated with hydrology and water quality would slightly increase; however, impacts would be less than significant and no mitigation required, the same as for the proposed Project.

6.6.4.8 Land Use and Planning

As discussed in Section 4.10, *Land Use and Planning*, the proposed Project would subdivide the site into two lots, Lot 1 and Lot A. Lot 1 would form a 2-acre developable area for the proposed residential structures and Lot A would form a 2.2-acre area for open space. These project design features **(PDF LU-1)** would limit development to Lot 1 which is the flatter, lower portion of the site adjacent to Crown Valley Parkway. **PDF LU-1** would also prohibit future development on Lot A by creating a lettered lot on the subdivision map, which does not permit residential development, avoiding development on the remediated hillside. As discussed in Section 4.10, the proposed Project would produce a less than significant impact regarding: dividing an established community; conflicts with applicable land use plans, policies, or regulations; and conflict with any applicable habitat or natural community conservation plan. Under Alternative 4, Higher Density Larger Footprint 38 Units, development on the site would be permitted in accordance with the LNGP and across a larger portion of the site. This alternative would remove the creation of the 2.2-acre open space area described as **PDF LU-1**. However, this Alternative would remain consistent with the City's General Plan and Zoning Code, resulting in less than significant impacts and no mitigation required, the same as for the proposed Project.

6.6.4.9 Noise

As discussed in Section 4.11, *Noise*, the proposed Project would produce a less than significant impact regarding construction noise, operational noise, operational groundborne vibration, substantial permanent increase in operational noise, and exposure to excessive public or private airport noise. Alternative 4, Higher Density Larger Footprint 38 Units, would result in an increase in dwelling units over a larger development footprint and closer to additional sensitive receptors (i.e., homes). As a result, noise impacts would be produced during the grading phase of construction exposing additional homes to short-term construction noises. As a result, greater impacts would be perceived during the grading phase of construction, however it is anticipated

impacts under this Alternative associated with noise and vibration would be less than significant and no mitigation is required, the same as for the proposed Project.

6.6.4.10 Recreation

As discussed in Section 3.2.5, *Recreation*, the proposed Project would produce a less than significant impact regarding new or renovated recreational and park facilities. The proposed Project includes sufficient open space and active recreational areas to satisfy the Project's local park code requirements. The construction of open space and active recreation facilities would occur on site and the potential impacts of constructing such facilities would be less than significant as they are to be built and approved per code. Alternative 4, Higher Density Larger Footprint 38 Units, would result in development with a larger footprint on the 4.2-acre Project site. This Alternative would be required to include incrementally more open space and/or recreational areas on site in compliance with City's Park Code requirements due to the increase in the number of dwelling units. As a result, impacts regarding recreation would be less than significant, the same as for proposed Project.

6.6.4.11 Transportation/Traffic

As described in Section 4.12, *Transportation/Traffic*, the proposed Project trip estimate is 161 daily trips during the weekday, which is considered to be a small project since the proposed Project generates less than 500 vehicle trips per day and is screened from requiring detailed VMT Analysis. As a result of the trip estimate, the proposed Project would produce a less than significant impact related to a conflict with applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system or related to a conflict with CEQA Guidelines 15064.3. The proposed Project's impacts regarding dangerous design features would be reduced to less than significant with implementation of mitigations to enact a Construction Management Plan (**MM TRA-1**), restrict outbound left turns (**MM TRA-2**), and modify the inbound left turn lane on Crown Valley Parkway to safely accommodate Project traffic (**MM TRA-3**). Alternative 4, Higher Density Larger Footprint 38 Units, would result in more dwelling units across a larger portion of the Project site. The trip generation estimate for Alternative 4 would be approximately 380 trips per day, which would also be considered a small project and screened from detailed VMT analysis. Similar to the proposed Project, traffic impacts regarding dangerous design features would be fully mitigated by implementation of the mitigation measures identified in Section 4.12 (**MM TRA-1**, **MM TRA-2**, **MM TRA-3**). Although trip generation would increase under this Alternative, impacts would remain less than significant with implementation of mitigation, in the same way as the Project.

6.6.4.12 Wildfire

As discussed in Section 4.14, Wildfire, the proposed Project is within a VHFHSZ. The Project's Fire Management Plan has been reviewed and approved by the OCFA, including a Conceptual Fuel Modification Plan. Construction of the Project in accordance with the Fire Management Plan

and Conceptual Fuel Modification Plan results in a less than significant impact regarding: impairment of an adopted emergency response or evacuation plan; exposure of occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire; installation or maintenance of associated infrastructure that may exacerbate fire risk or may result in temporary or ongoing impacts to the environment; and exposure of 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. Project design features included in the proposed Project include 6-foot-high radiant heat walls (**PDF FIRE-1**), low profile venting (**PDF FIRE-2**), and an enhanced fire sprinkler system (**PDF FIRE-3**). Alternative 4, Higher Density Larger Footprint 38 Units, would result in a development with a larger footprint over a larger portion of the 4.2-acre Project site, and therefore in a VHFHSZ. This Alternative's development plans would go through the same Fire Management Plan approval by OCFA. The Fire Management Plan would include a similar Fuel Modification Plan, and similar project design features (**PDF FIRE-1**, **PDF FIRE-2**, **PDF FIRE-3**). Impacts from risks associated with wildfire are less than significant. However, alterations to the fire attenuation project design features would be needed to account for the larger development footprint into the western portion of the site and different site plan layout. Similar to the proposed Project, wildfire resources under Alternative 4, Higher Density Larger Footprint 38 Units, would not result in the need for new or expanded infrastructure or the construction of which would produce a significant impact on the environment. Impacts regarding wildfire would be slightly increased due to the expanded footprint; however, impacts would be less than significant, and no mitigation required, the same as for the proposed Project.

6.6.4.13 Project Objectives Conclusion

Under the Higher Density Larger Footprint 38 Units alternative, the objectives regarding the development of a denser residential development creating a larger footprint would generally be met. As detailed in Table 6-4, the Higher Density Larger Footprint 38 Units alternative would not meet the Project objectives to the same degree as the proposed Project.

Table 6-4. Comparison of Alternative 4: Higher Density Larger Footprint 38 Units to the Project Objectives

Project Objectives	Does the Alternative Meet the Project Objectives?
Provide new for-sale housing that is responsive to market conditions and provides a uniquely designed product type that is currently limited elsewhere in the City.	Yes, but to a greater degree
Design the grading and geotechnical stabilization to ensure site stability consistent with City codes and minimize grading into the existing previously stabilized landslide mass.	Yes, to a similar degree

Project Objectives	Does the Alternative Meet the Project Objectives?
Design the grading and geotechnical stabilization to minimize off-site grading and balance the earthwork on site to minimize import/export, which would reduce air quality, noise, and traffic impacts from truck traffic on adjacent residential uses and City roadways.	Yes, but to a lesser degree
Redevelop the previously existing residential site with a residential project consistent with existing General Plan and Zoning designations that provides an updated housing product to meet the City's growing population and further address the City's and state's housing needs.	Yes, but to a greater degree
Create a financially successful development that is fiscally responsible by equitably contributing to the expansion and operation of the public services and facilities impacted by the project through the payment of fees.	Yes
Improve the aesthetic character along Crown Valley Parkway through enhanced landscaping consistent with General Plan policies.	Yes

6.7 Comparison of Project Alternatives

The following sections evaluate and compare the impacts of the Alternatives to the proposed Project by each environmental topic presented in Sections 3.0 and 4.0 of this Draft EIR. Table 6-5 compares the impacts of the alternatives with those of the proposed Project and identifies whether the alternative results in (1) a reduction of the impact; (2) a greater impact than the Project; or (3) the same impact as the Project. It should be noted that the No Project Alternative has no impacts compared to the proposed Project representing existing onsite conditions and cannot be selected as the environmentally superior alternative. For these reasons it is not included in Table 6-5.

Table 6-5. Impact Comparison of Project Alternatives

Environmental Factor		Proposed Project	Maximum Development Density Identified in the General Plan Alternative 2	Reduced Density Alternative 3	Higher Density Larger Footprint 38 Unit Alternative 4
Impact Abbreviations NI: No Impact LTS: Less than Significant Impact LTS (MM): Less than Significant Impact with Mitigation SIG (MM): Significant Impact with Mitigation **Project Alternatives** = Compared with the proposed Project, no change in the quantity of impact or significance of the impact. = - Compared with the proposed Project, the volume or extent of the impact is reduced but the significance remains the same. = + Compared with the proposed Project, the volume or extent of the impact is increased but the significance remains the same. ➔ Compared with the proposed Project, the significance of the impact is increased. ← Compared with the proposed Project, the significance of the impact is reduced. ←SIG Compared with the proposed Project, the volume or extent of the impact is reduced, yet still significant. ➔SIG Compared with the proposed Project, the volume or extent of the impact is increased and still significant.					
Aesthetics	Scenic Vistas	LTS	=	=-	=+
	Scenic Highways	NI	=	=	=
	Scenic Quality	LTS	=	=-	=+
	Light and Glare	LTS	=	=	=
	Cumulative	LTS	=	=	=
Agricultural and Forestry Resources	Conversion of Prime, Unique, or Statewide Important Farmland to Non-Agricultural Use	NI	=	=	=
	Conflict with Agricultural Zoning or Williamson Act	NI	=	=	=
	Conflict with Existing Forest Land Zoning or Cause Rezoning of Forest Land	NI	=	=	=

Environmental Factor		Proposed Project	Maximum Development Density Identified in the General Plan Alternative 2	Reduced Density Alternative 3	Higher Density Larger Footprint 38 Unit Alternative 4
	Conversion of Forest Land to Non-Forest Use	NI	=	=	=
	Other Changes that would Convert Farmland or Forest Land	NI	=	=	=
	Cumulative	NI	=	=	=
Air Quality	Conflict with or Obstruct an Air Quality Plan	LTS	=	=	=
	Result in Cumulatively Considerable Net Increase in any Criteria Pollutant	LTS	= +	= -	= +
	Expose Sensitive Receptors to Substantial Pollutant Concentrations	LTS	= +	= -	= +
	Create Objectionable Odors	LTS	= +	= -	= +
	Cumulative	LTS	= +	=	= +
Biological Resources	Candidate, Non-listed Sensitive, or Special-Status Species	NI	=	=	=
	Riparian Habitat or Other Sensitive Natural Communities	NI	=	=	=

Environmental Factor		Proposed Project	Maximum Development Density Identified in the General Plan Alternative 2	Reduced Density Alternative 3	Higher Density Larger Footprint 38 Unit Alternative 4
	Jurisdictional Waters/Wetlands	NI	=	=	=
	Wildlife Movement and Migratory Species	LTS (MM)	=	=	= +
	Adopted Policies and/or Ordinances	LTS	=	=	=
	Adopted Habitat Conservation Plans	NI	=	=	=
	Cumulative	LTS (MM)	=	=	=
Cultural Resources	Historic Resources	NI	=	=	=
	Archaeological Resources	LTS (MM)	=	=	= +
	Human Remains	LTS (MM)	=	=	= +
	Cumulative	LTS (MM)	=	=	=
Energy	Wasteful, Inefficient, or Unnecessary Consumption of Energy	LTS	= +	= -	= +
	Conflict with Renewable Energy or Energy Efficiency Plan	LTS	= +	= -	= +
	Cumulative	LTS	=	=	=
Geology and Soils	Alquist-Priolo Fault Rupture	LTS	=	=	=
	Ground Shaking	LTS	=	=	=

Environmental Factor		Proposed Project	Maximum Development Density Identified in the General Plan Alternative 2	Reduced Density Alternative 3	Higher Density Larger Footprint 38 Unit Alternative 4
	Seismic-Related Ground Failure	LTS	=	=	=
	Landslides	LTS	=	=	=
	Soil Erosion or Loss of Topsoil	LTS	=	=	=
	Unstable Soils	LTS	=	=	=
	Expansive Soils	LTS	=	=	=
	Inadequate Soils for Septic Tanks	LTS	=	=	=
	Destroy unique Paleontological Resource	LTS (MM)	=	= -	= +
	Cumulative	LTS (MM)	=	=	=
Greenhouse Gas Emissions	Greenhouse Gas Emissions	LTS	= +	= -	= +
	Conflict with Applicable Plan Policy, or Regulation	LTS	=	=	=
	Cumulative	LTS	=	=	=
Hazards and Hazardous Materials	Routine Transport, use, or Disposal of Hazardous Materials	LTS	= +	= -	= +
	Reasonably Foreseeable Upset and Accident Conditions	LTS	=+	=-	=+

Environmental Factor		Proposed Project	Maximum Development Density Identified in the General Plan Alternative 2	Reduced Density Alternative 3	Higher Density Larger Footprint 38 Unit Alternative 4
	Emissions or Hazardous Materials Near Existing or Proposed School	NI	=	=	=
	Located on a Listed Hazardous Materials Site	NI	=	=	=
	Within an Airport Land Use Plan or Within Two Miles of a Public Airport	NI	=	=	=
	Interfere with Emergency Response Plan	LTS	=	=	=
	Wildland Fire Risks	LTS	=	=	=
	Cumulative	LTS	=	=	=+
Hydrology and Water Quality	Violate Water Quality Standards or Waste Discharge Requirements	LTS	=	=	=+
	Decrease Groundwater Supplies	LTS	=	=	=
	Alter Drainage Resulting in Erosion or Siltation Offsite	LTS	=	=	=+
	Increase Surface Runoff Causing Flooding	LTS	=	=	=

Environmental Factor		Proposed Project	Maximum Development Density Identified in the General Plan Alternative 2	Reduced Density Alternative 3	Higher Density Larger Footprint 38 Unit Alternative 4
	Create Runoff Water Exceeding Storm Drain Capacity	LTS	=	=	=
	Impede or Redirect Flood Flows	LTS	=	=	=
	Inundation by Seiche, Tsunami, or Mudflow	NI	=	=	=
	Conflict with or Obstruct Water Quality Control or Sustainable Groundwater Management Plan	LTS	=	=	=
	Cumulative	LTS	=	=	=
Land Use and Planning	Physically Divide an Established Community	LTS	=	=	=
	Conflict with Applicable Land Use Plans, Policies, or Regulations	LTS	=	=	=
	Cumulative	LTS	=	=	=
Mineral Resources	Loss of Statewide or Regional Important Mineral Resources	NI	=	=	=
	Loss of Locally Important Mineral Resources	NI	=	=	=
	Cumulative	NI	=	=	=

Environmental Factor		Proposed Project	Maximum Development Density Identified in the General Plan Alternative 2	Reduced Density Alternative 3	Higher Density Larger Footprint 38 Unit Alternative 4
Noise	Generation of Construction Noise in Excess of Standards Established by the General Plan or Noise Ordinance	LTS	=	=	=+
	Generation of Operational Noise in Excess of Standards Established by the General Plan or Noise Ordinance	LTS	=	=	= +
	Groundborne Vibration or Noise	LTS	=	=	= +
	Exposure to Excessive Noise from Private or Public Airport	NI	=	=	=
	Cumulative	LTS	=	=	=
Population and Housing	Population Growth	NI	= +	= -	= +
	Displace People or Housing	NI	=	=	=
	Cumulative	NI	=	=	=
Public Services	Fire Protection Facilities	NI	=+	=-	=+
	Police Protection Facilities	NI	=+	=-	=+
	School Facilities	NI	=+	=-	=+
	Library Facilities	NI	=+	=-	=+
	Other Facilities	NI	=+	=-	=+

Environmental Factor		Proposed Project	Maximum Development Density Identified in the General Plan Alternative 2	Reduced Density Alternative 3	Higher Density Larger Footprint 38 Unit Alternative 4
	Cumulative	NI	=	=	=
Recreation	Existing Recreational and Park Facilities	NI	= +	=	= +
	New or Physically Altered Recreation and Park Facilities	NI	=	=	=
	Cumulative	NI	=	=	=
Transportation and Traffic	Conflict with Program, Plan, Ordinance, or Policy Addressing the Circulation System, Including Transit, Roadway, Bicycle and Pedestrian Facilities	LTS	=	=	=
	Conflict with CEQA Guidelines 15064.3, Subdivision (b)	LTS	=	=	=
	Hazard Due to Design Features or incompatible Uses	LTS (MM)	=	=	=
	Inadequate Emergency Access	LTS	=	=	=
	Cumulative	LTS (MM)	=	=	=
Tribal Cultural Resources	Substantial Adverse Change to Listed or Eligible Tribal Cultural Resources	LTS (MM)	=	=	=

Environmental Factor		Proposed Project	Maximum Development Density Identified in the General Plan Alternative 2	Reduced Density Alternative 3	Higher Density Larger Footprint 38 Unit Alternative 4
	Substantial Adverse Change to Lead Agency Defined Tribal Cultural Resources	LTS (MM)	=	=	=
	Cumulative	LTS (MM)	=	=	=
Utilities and Service Systems	Construction of New or Expanded Water, Wastewater Treatment or Storm Water Drainage, Electric Power, Natural Gas, or Telecommunications Facilities Causing Significant Environmental Effects	NI	=+	=-	=+
	Sufficient Water Supplies	NI	=+	=-	=+
	Wastewater Treatment Capacity	NI	=+	=-	=+
	Generate Excess Solid Waste, Exceed Landfill Capacity, Impair Solid Waste Reduction Goals	NI	= +	=-	= +
	Compliance with Solid Waste Regulations	NI	=	=-	=
	Cumulative	NI	=	=	=

Environmental Factor		Proposed Project	Maximum Development Density Identified in the General Plan Alternative 2	Reduced Density Alternative 3	Higher Density Larger Footprint 38 Unit Alternative 4
Wildfire	Impair Adopted Emergency Response or Evacuation Plan	LTS	=	=	=
	Exacerbate Wildfire Risks and Expose Occupants to Pollutant Concentrations from a Wildfire or the Uncontrolled Spread of a Wildfire	LTS	=	=	=+
	Install or Maintain Infrastructure Exacerbating Fire Risk or Result in Temporary or Ongoing Impacts	LTS	=	=	=
	Expose People or Structures to Risks from Runoff, Post-fire Slope Instability, or Drainage Changes	LTS	=	=	=+
	Cumulative	LTS	=	=	=
Impact Comparison to Proposed Project		**-**	**Greater Impact**	**Greater Impact**	**Greater Impact**

6.8 Environmentally Superior Alternative

An EIR must identify the environmentally superior alternative to the proposed Project. As discussed above, the No Project/No Build Alternative would be environmentally superior to the proposed Project because all physical environmental impacts identified for Project would be avoided. However, according to the State CEQA Guidelines, if the environmentally superior

alternative is the No Project Alternative, the EIR shall identify an environmentally superior alternative among the other alternatives (Section 15126.6(c)).

An alternative deemed feasible, and a candidate for the environmentally superior alternative, must not create new or more severe impacts. Under the Rule of Reason, Section 15126.6(f) states, "The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the Project."

As shown in Table 6-5, Alternatives 2 and 4 would incrementally cause greater impact than the proposed Project because of the increase in the number of dwelling units. While no new significant impacts would be caused, both Alternatives 2 and 4 would be incrementally more impactful. Conversely, Alternative 3 would incrementally reduce impacts as a result of fewer dwelling units. Alternative 3 would not eliminate significant impacts, because the Project does not cause significant impacts, but Alternative 3 would incrementally reduce impacts.

Alternative 2, Maximum Development Density Identified in the General Plan, would increase the number of dwelling units from 22 to 41 within the same 2-acre development area while maintaining the 2.2-acres of open space in the same way as the Project. While this alternative would meet all of the Project Objectives, this alternative would cause incrementally greater impacts than the proposed Project.

Alternative 3, Reduced Density, would decrease the number of dwelling units from 22 to 16 within same 2-acre development area while maintaining the 2.2-acres of open space in the same way as the Project. However, one Project Objective would not be met as follows:

- Create a financially successful development that is fiscally responsible by equitably contributing to the expansion and operation of the public services and facilities impacted by the project through the payment of fees.

Two Project Objectives would be met to a lesser degree as follows:

- Provide new for-sale housing that is responsive to market conditions and provides a uniquely designed product type that is currently limited elsewhere in the City.
- Redevelop the previously existing residential site with a residential project consistent with existing General Plan and Zoning designations that provides an updated housing product to meet the City's growing population and further address the City's and state's housing needs.

Alternative 4, Higher Density Larger Footprint 38 Units, would increase the number of dwelling units from 22 to 38. This Alternative would expand the development footprint further uphill into

the western portion of the site. This Alternative would introduce new units in areas further uphill and near the prior landside area. The 2.2-acres of open space would be removed. Two of the Project Objectives would be met to a lesser degree as follows:

- Design the grading and geotechnical stabilization to ensure site stability consistent with City codes and minimize grading into the existing previously stabilized landslide mass.
- Design the grading and geotechnical stabilization to minimize off-site grading and balance the earthwork on site to minimize import/export, which would reduce air quality, noise, and traffic impacts from truck traffic on adjacent residential uses and City roadways.

Alternative 3, Reduced Density, would be considered the Environmentally Superior Alternative. This conclusion is reached because direct impacts to the site (i.e., biological, cultural, geology, hydrology/water quality, land use/planning, minerals, tribal cultural resources, wildfire) would be the same as the proposed Project while several impacts attributable to use of the site would be reduced in comparison to the proposed Project (i.e., aesthetics, air quality, energy, GHGs, hazards, noise, population/housing, public services, recreation, transportation, utilities).

However, the reduction in impacts would be minimal and this alternative would conflict with SB330, which restricts the adoption of land use or zoning amendments that would result in the reduction of allowed residential density or intensity of land uses compared to what is allowed under the regulations in effect on January 1, 2018. The Housing Accountability Act also prohibits an agency from disapproving a project or imposing conditions that the project be developed at a lower density if the project is consistent with applicable, objective general plan, zoning, and subdivision standards and criteria, absent specific, narrow findings. (Gov. Code 65589.5.).

The current land use regulations allow attached residential development up to 41 dwelling units for the 4.2-acre Project site. The Project's proposed 22 attached dwelling units are less than the maximum number of dwelling units and therefore, consistent with the General Plan limits. However, the proposed 22 units on 2 acres (i.e., Lot 1) provides the same density of development as the 41 units identified in the General Plan applied to the entire 4.2-acre site. Therefore, the proposed Project does not constitute a loss of density and does not conflict with SB 330. Alternative 2, which proposes 41 dwelling units, does so on 2 acres and not over the entire 4.2 acre site. Therefore, Alternative 2 doubles the density of development compared to what was previously developed under the General Plan. Since Alternative 3, the Reduced Density Alternative, would reduce the number of dwelling units compared to the proposed Project and reduce the density compared to the General Plan, even though this Alternative is the environmentally superior alternative, it would conflict with State's legislative policies to not reduce residential densities.

Remainder of this page left intentionally blank.

SECTION 7.0 GLOSSARY OF ACRONYMS

AAQS	*ambient air quality standards*
AB	*Assembly Bill*
ADT	*Average Daily Traffic*
AES's	*Advance Engineering Software's*
AM&M	*Alternative Materials & Methods*
American Geotechnical	*American Geotechnical, Inc.*
APN	*Assessor's Parcel Number*
AQMD	*Air Quality Management District*
AQMP	*Air Quality Management Plans*
ASBS	*Areas of Special Biological Significance*
AST	*Aboveground Storage Tanks*
BMP	*Best Management Practices*
Board	*Board of Forestry and Fire Protection*
BTU	*British Thermal Units*
CAA	*Clean Air Act*
CAAQS	*California Ambient Air Quality Standards*
Cal OES	*California Governor's Office of Emergency Services*
CAL/EPA	*California Environmental Protection Agency*
Cal/OSHA	*California Occupational Safety and Health Administration*
CalARP	*California Accidental Release Program*
CALEEMod	*California Emissions Estimator Model*
CALGreen	*California Green Building Standards Code*
Caltrans	*The State Department of Transportation*
CARB	*California Air Resources Board*
CBC	*California Building Code*
CCAA	*California Clean Air Act*
CCR	*California Code of Regulations*
CCR	*California Code of Regulations*
CDFW	*California Department of Fish and Wildlife*
CEC	*California Energy Commission*
CEQA	*California Environmental Quality Act*
CESA	*California Endangered Species Act*
CFC	*California Fire Code*
CFR	*Code of Federal Regulations*

cfs	*cubic feet per second*
City	*City of Laguna Niguel*
CNDDB	*California Natural Diversity Database*
CNEL	*Community Noise Equivalent Level*
CO	*Carbon Monoxide*
CO_2e	*carbon dioxide equivalent*
CSLS	*Carlson Strategic Land Solutions*
CUPA	*Orange County Certified Unified Program Agency*
CWA	*Clean Water Act*
DAMP	*County of Orange Drainage Area Management Plan*
dB	*decibel*
dBA	*A-weighted decibel*
Draft EIR	*Draft Environmental Impact Report*
DUKE CRM	*Duke Cultural Resources Management*
dus	*dwelling units*
EAP	*California Energy Action Plan*
EIA	*U.S. Energy Information Administration*
EIR	*Environmental Impact Report*
EO	*Executive Order*
EPA	*United States Environmental Protection Agency*
ERIS	*Environmental Risk Information Services*
ESA	*environmentally sensitive areas*
FAA	*Federal Aviation Administration*
FCAA	*Federal Clean Air Act*
FESA	*Federal Endangered Species Act*
FHSZ	*Fire Hazard Severity Zone*
FHWA	*Federal Highway Administration*
FMMP	*Farmland Mapping and Monitoring Program*
GHG	*Greenhouse Gas*
GMU	*Goffman, McCormick, and Urban Geotechnical Inc.*
GWP	*Global Warming Potential*
HAA	*Housing Accountability Act*
HMD	*Hazardous Materials Disclosure*

HMP	*Hydromodification Management Plan*
I-5	*Interstate 5*
in/sec	*inches per second*
in/sec^2	*in/sec per second*
IPCC	*Intergovernmental Panel on Climate Change*
ISTEA	*Intermodal Surface Transportation Efficiency Act*
ITE	*Institute of Transportation Engineers*
L_{eq}	*average noise level*
LID	*Low-Impact Development*
LIP	*Local Implementation Plan*
LIP/JRMP	*Local Implementation Plan/Jurisdictional Runoff Management Program*
LLG	*Linscott Law & Greenspan, Engineers*
LNGP	*Laguna Niguel General Plan*
LNZC	*Laguna Niguel Zoning Code*
LOS	*level of service*
LRA	*Local Response Area*
LRA	*Local Responsibility Areas*
MAWA	*maximum allowed water allowance*
MBTA	*Migratory Bird Treaty Act*
MEP	*maximum extent practicable*
MLD	*Most Likely Descendant*
mm/sec	*millimeters per second*
mm/sec^2	*mm/sec per second*
MMT	*million metric tons*
MNWD	*Moulton Niguel Water District*
mph	*miles per hour*
MPOs	*Metropolitan Planning Organizations*
MS4 Permit	*Municipal Separate Storm Sewer Systems*
MSE	*Mechanically Stabilized Earth*
msl	*mean sea level*
MT	*metric tons*
MWS	*modular wetland systems*
NAAQS	*National Ambient Air Quality Standards*

NAGPRA	*Native American Graves Protection and Repatriation Act*
NAHC	*Native American Heritage Commission*
NCCP	*National Community Conservation Plans*
NHTSA	*National Highway Traffic Safety Administration*
NO_2	*Nitrogen Dioxide*
NOA	*Notice of Availability*
NOC	*Notice of Completion*
NOI	*Notice of Intent*
NOP	*Notice of Preparation*
NPDES	*National Pollutant Discharge Elimination System*
O_3	*Ozone*
OCFA	*Orange County Fire Authority*
OCSD	*Orange County Sheriff's Department*
OCTA	*Orange County Transportation Authority*
OSHA	*Occupational Safety and Health Administration*
Pb	*Lead*
PM	*Particulate Matter*
PPA	*peak particle acceleration*
PPV	*peak particle velocity*
PRC	*California Public Resources Code*
Project	*Project Site*
RAWS	*Remote Automated Weather Station*
REC	*Recognized Environmental Conditions*
RM	*Multi-family District*
ROG	*Reactive organic gases*
RS-3	*Single-Family District 3*
RS-4	*Single-Family District 4*
RTP	*Regional Transportation Plan*
RWQCB	*Regional Water Quality Control Board*
SAFE	*Safer Affordable Fuel-Efficient*
SB	*Senate Bill*
SCAB	*South Coast Air Basin*
SCAG	*Southern California Association of Governments*
SCAQMD	*South Coast Air Quality Management District*

SCCIC	*South Central Coastal Information Center*
SCE	*Southern California Edison*
SCS	*Sustainable Communities Strategy*
SIP	*State Implementation Plan*
SO_2	*Sulfur Dioxide*
SoCalGas	*Southern California Gas Company*
sq mi	*square mile*
SR-73	*State Route 73*
SRA	*Source Receptor Area*
SWPPP	*Storm Water Pollution Prevention Plan*
SWRCB	*State Water Resources Control Board*
TMDL	*total maximum daily loads*
TNM	*Traffic Noise Model*
TTM	*Tentative Tract Map*
U&CF	*Urban and Community Forestry*
USACE	*US Army Corps of Engineers*
USDOT	*United States Department of Transportation*
USFWS	*United States Fish and Wildlife Service*
USGS	*United States Geological Survey*
UST	*Underground Storage Tanks*
VHFHSZ	*Very High Fire Hazard Severity Zone*
VMT	*vehicle miles traveled*
VOC	*Volatile Organic Compounds*
WDR	*Waste Discharge Requirements*
WoUS	*Waters of the United States*
WQMP	*Water Quality Management Plan*
WRCC	*Western Regional Climate Center*
ZE	*zero emission*