MITIGATED NEGATIVE DECLARATION

LOWER CURTIS PARK - DIRT IMPORT AND STOCKPILE PROJECT

Lead Agency:

City of Mission Viejo
Planning Division
200 Civic Center
Mission Viejo, CA 92691
(949) 470-3053

Project Proponent:

City of Mission Viejo
Public Works Department
200 Civic Center
Mission Viejo, CA 92691
949-470-3056

Environmental Consultant:

Phil Martin & Associates
1809 E. Dyer Road, Suite 301
Santa Ana, California 92705
(949) 454-1800

August 11, 2020

TABLE of CONTENTS

Appendices

Appendix A – Air Quality Report
Appendix B – Biology Reports
Appendix C – Cultural Resource Assessment
Appendix D – Greenhouse Gas Analysis
Appendix E – Noise Report
Appendix F – Traffic Report

LIST of FIGURES

Figure **Page**

LIST of TABLES

Table **Page**

PLANNING DEPARTMENT

A. Project Title: Lower Curtis Park – Dirt Import

B. Lead Agency Name and Address:
City of Mission Viejo
Planning Division
200 Civic Center
Mission Viejo, CA 92691
(949) 470-3053

C. Contact Person and Phone Number:
Elaine Lister, Director of Community Development
(949) 470-3053
cd@cityofmissionviejo.org

D. Project Location: The project is located in the City of Mission Viejo (City) as shown in Figure 1, Regional Map. More specifically, the project is located east and adjacent to Robert A. Curtis Park (Curtis Park) that is located at 24460 Olympiad Road as shown in Figure 2, Vicinity Map. An aerial photograph of the site and the surrounding area is shown in Figure 3, Aerial Photo.

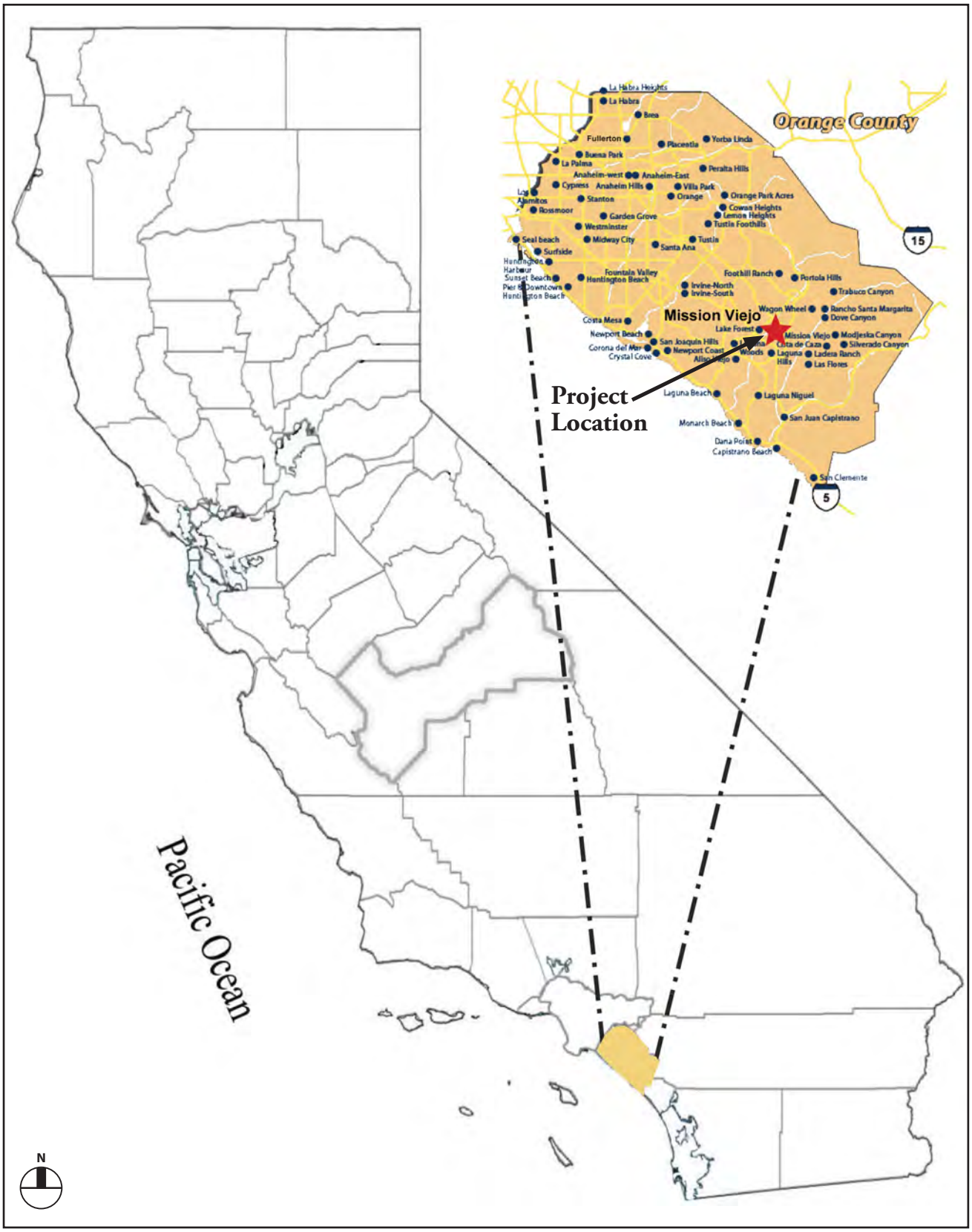
E. Project Sponsor's Name and Address:
City of Mission Viejo
Public Works Department
200 Civic Center
Mission Viejo, CA 92691
949-470-3056

F. General Plan Designation: The project site totals approximately 40.26-gross acres. The westerly 27.18-acres of the project site are within the City of Mission Viejo and designated Recreation/Open Space land use by the Mission Viejo General Plan. The easterly 13.08-acres are in Orange County and designated O'Neill Regional Park, which is owned and maintained by Orange County Harbors Beaches and Parks. The project would not require a general plan amendment.

G. Zoning: Approximately 27.18-acres of the site are within the City of Mission Viejo and zoned Recreation and the approximately 13.08-acres of the site that are within Orange County are zoned O'Neill Regional Park (ONP). The project would not require a zone change.

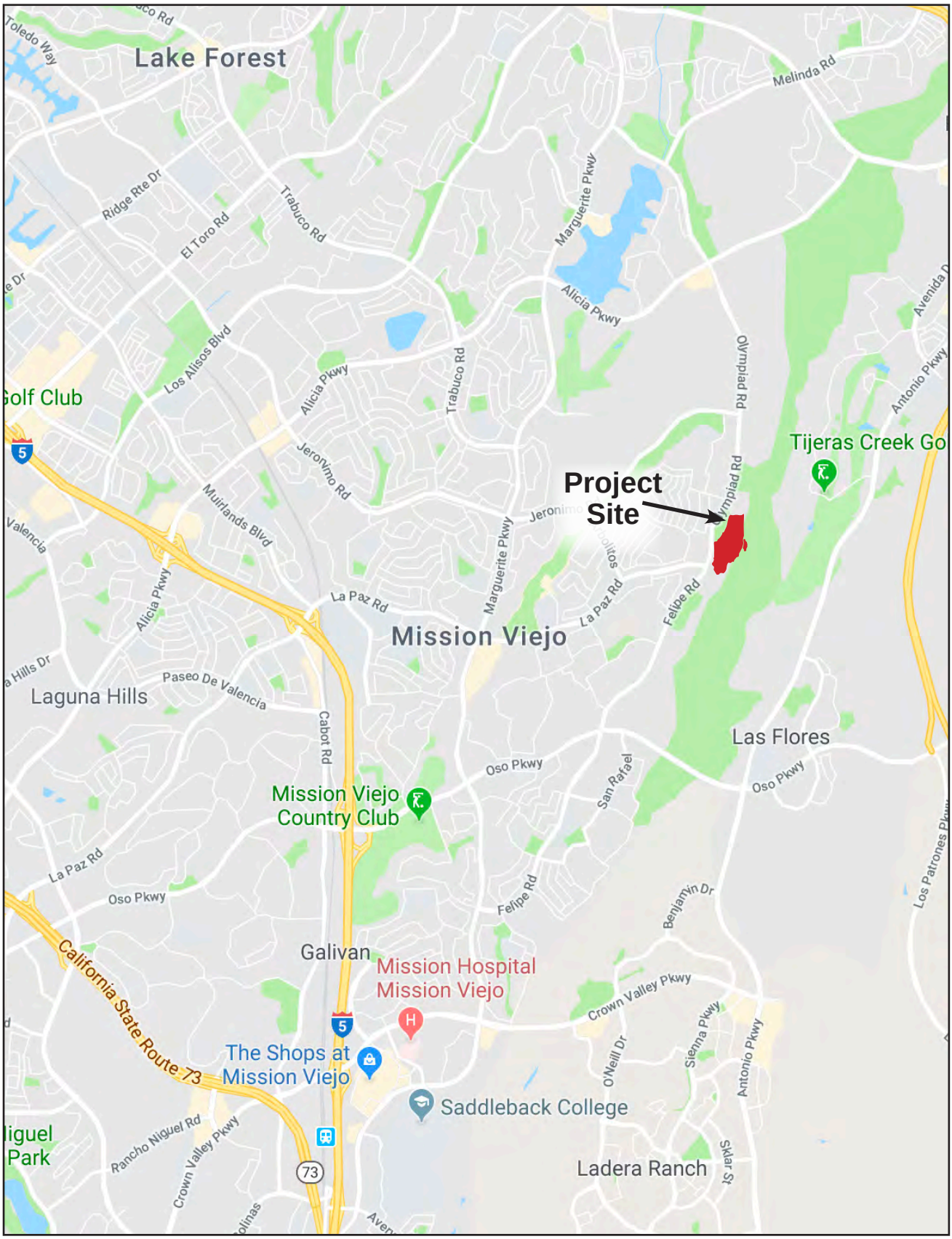
H. Description of Project: The City of Mission Viejo proposes to import approximately 760,000 cubic yards of dirt from freeway improvements that are currently underway to Interstate 5 (I-5) by the California Department of Transportation (Caltrans). I-5 extends in a north-south direction along the west edge of the City. The I-5 freeway improvement project extends from El Toro Road on the north to the San Joaquin Hills Toll Road (SR-73) on the south. Excess dirt from the freeway improvement project would be hauled by trucks to the project site that is located approximately three miles east of I-5. The imported dirt would be graded into a pad that could be used in the future for recreational use.

The existing 40.26-gross acre site is vacant and would require approximately 187,000 cubic yards of cut and remedial grading to prepare a pad site and provide access roads to the site to allow approximately 760,000 cubic yards of dirt to be imported to the site. The 187,000 cubic yards of remedial cut would remain on the site and be incorporated into the grading for the future building pad.



Source: Phil Martin & Associates, Inc.

Figure 1
Regional Map



Source: Google Maps

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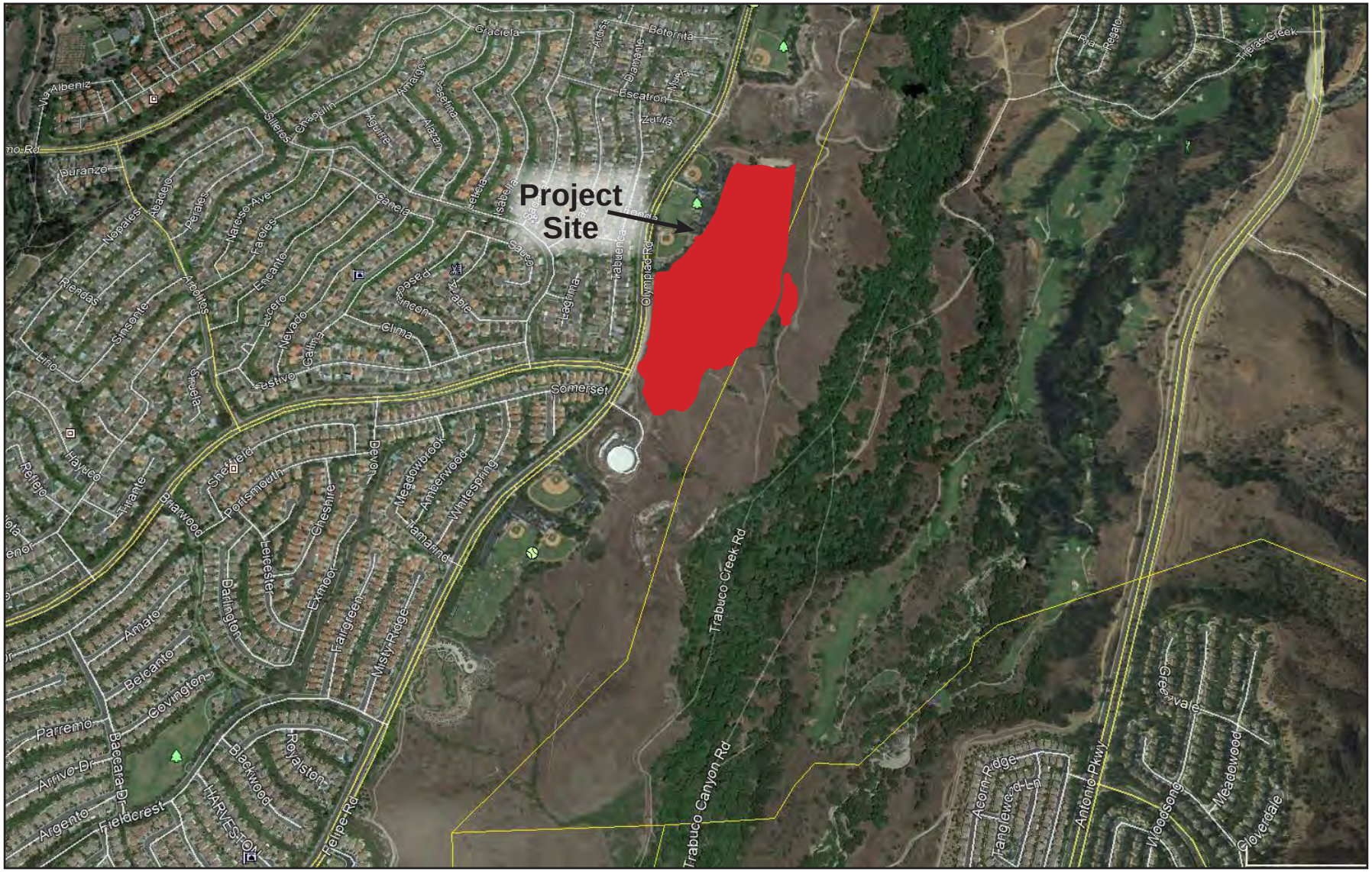
Figure 2
Local Vicinity Map



Source: Google Earth

Figure 3

Aerial Photograph

The 760,000 cubic yards of dirt would be hauled to the site over a period of three (3) years starting in the first quarter of 2020 and ending in 2022. Because it is unknown at this time the amount of dirt that would be hauled throughout the three-year period, the following dirt import schedule is proposed and the basis for the environmental analysis in this MND.

- 2020 – 300,000 cubic yards.
- 2021 – 300,000 cubic yards.
- 2022 – 160,000 cubic yards.

At this time, the exact location of the dirt that would be hauled from the I-5 construction area is unknown. For the purpose of this MND, the City selected three designated truck haul routes that trucks would be restricted to travel to haul dirt from I-5 to Lower Curtis Park. The three truck haul routes are listed below and shown in Figure 4.

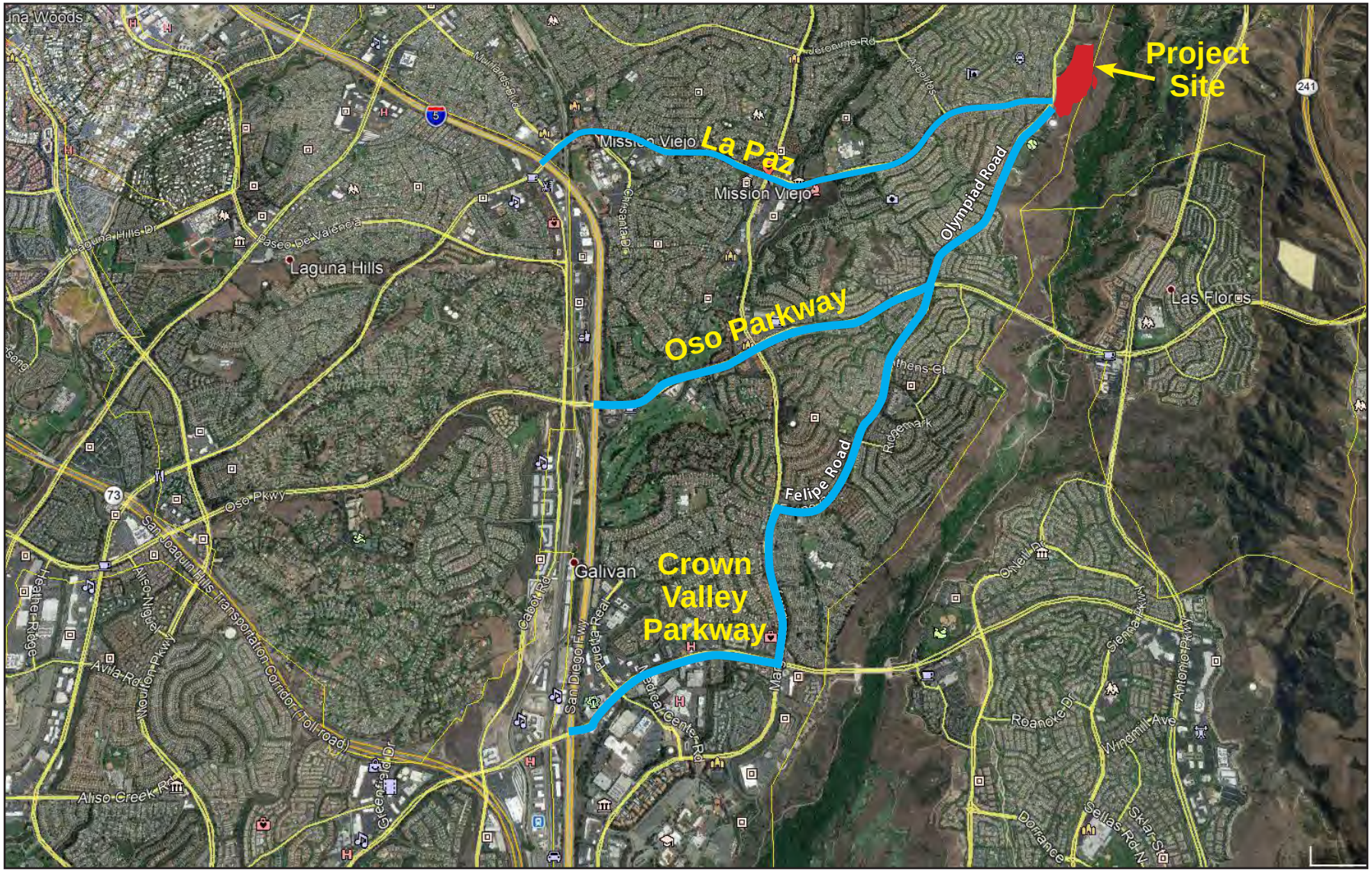
- Route 1 - La Paz Road - Olympiad Road – Lower Curtis Park.
- Route 2 - Oso Parkway - Felipe/Olympiad Road – Lower Curtis Park.
- Route 3 - Crown Valley - Marguerite Parkway – Felipe Road – Lower Curtis Park.

The project site is vacant and mostly covered with native and non-native vegetation. There are three storage containers on the site that are used by the City to store landscape maintenance equipment and small motorized landscape vehicles. The landscaping equipment is used by City park maintenance personnel to maintain City parks. The on-site storage containers and park maintenance equipment site would be moved to other City facilities with implementation of the project.

The project site would be graded to accept the imported dirt from the I-5 freeway. In order to access the site, two points of site access would be provided. A new access point is proposed at the existing signalized intersection of La Paz Road and Olympiad Road and a second access point is proposed at the existing cul-de-sac in Curtis Park to the project site below. Once the site is rough graded the trucks that would haul dirt to the site would enter the site at one of the two proposed access points. Once the imported dirt is dumped on the site the haul trucks would return to I-5 via one of the three designated truck haul routes. The imported dirt would be graded into a pad that could be developed with recreational use sometime in the future. The proposed grading plan is shown in Figure 5.

A soil erosion plan would be implemented prior to the start of grading and maintained throughout the project to reduce on- and off-site soil erosion. Once grading is completed semi-permanent sediment traps and desilting basins are proposed throughout the site to capture surface water and trap soil sediment on the site. On-site dust would be controlled during project grading with water and/or other measures in compliance with South Coast Air Quality Management District Rule 403, Fugitive Dust. Once grading is completed the site would be landscaped and maintained to minimize dust. A bio-retention basin is proposed at the east side of the site to collect surface water runoff from a portion of the site prior to discharge to the east.

Approximately 27.18-acres of the 40.26-acre site is in the City of Mission Viejo and the remaining 13.08-acres are in Orange County and part of O'Neill Regional Park that is owned by Orange County Harbors Beaches and Parks. The County property is also within Subarea 4 of the Orange County Southern Subregion Habitat Conservation Plan (SSHCP). The City proposes to dedicate approximately 13.08-acres of City property that is located adjacent to and north of the project site to the County SSHCP Reserve for long-term conservation as mitigation of potential biological resource impacts by the project.



Source: Google Earth

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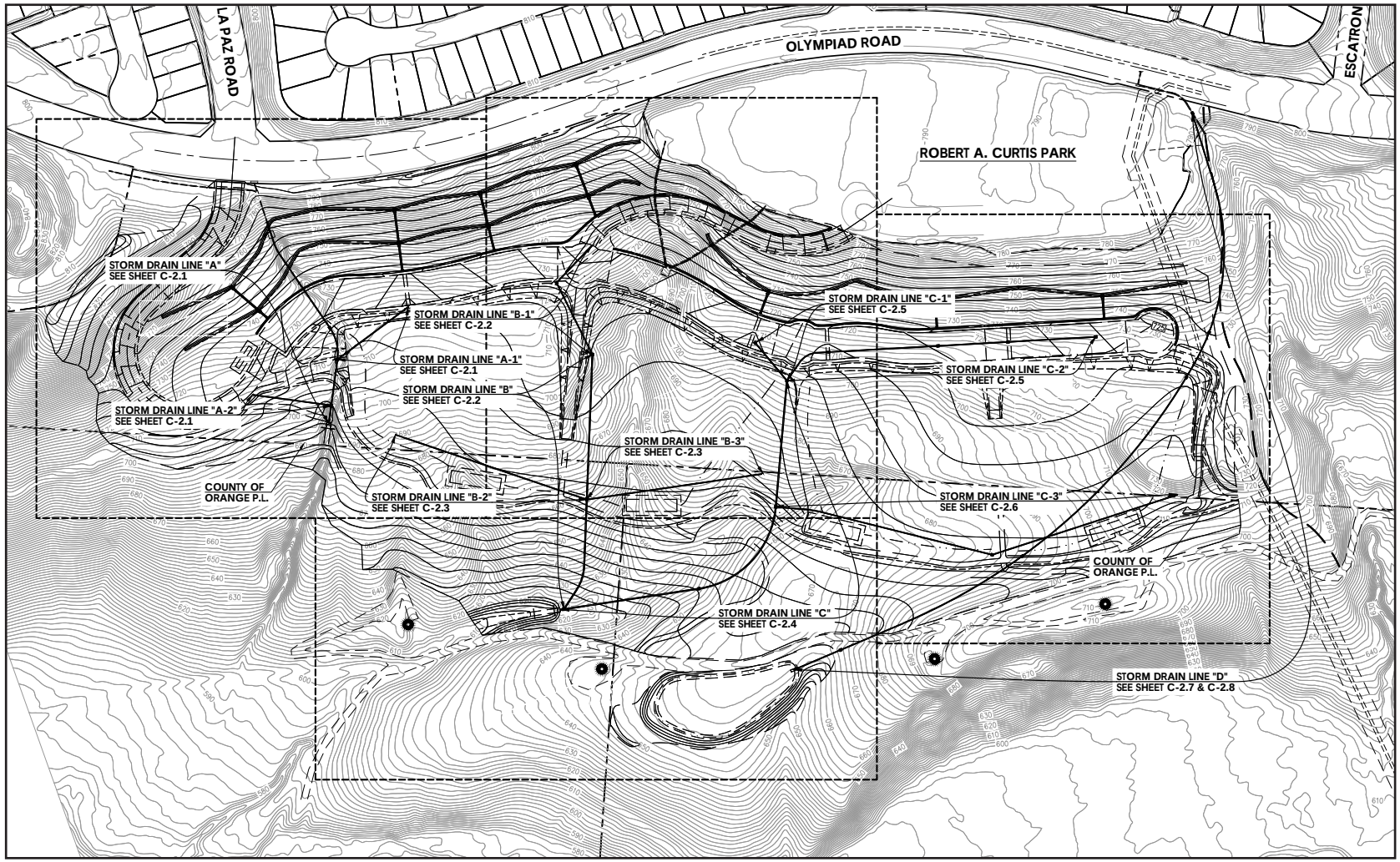
Figure 4

Truck Haul Routes



Source: CivTEC

Figure 5

Proposed Grading Plan

I. Surrounding Land Uses and Setting: The existing on-site land uses on the site include three storage containers, park maintenance equipment and vacant land. The land uses surrounding the project include Curtis Park to the west, vacant land in the City of Mission Viejo to the south, O'Neill Park to the east and vacant land in the City of Mission Viejo to the north. Figure 6 shows photographs of the on-site land uses and Figure 7 show the surrounding land uses. Figure 8 is a photo orientation map showing the location of the on-site and surrounding land use photos.

J. Other Public Agencies Whose Approval is Required: The discretionary action required from the City of Mission Viejo includes approval of the Mitigated Negative Declaration and the issuance of a grading permit. The project would require a Notice of Intent to comply with the General Construction Activity NPDES Permit from the State Water Resources Control Board – San Diego Region. A land dedication agreement would be required between the City of Mission Viejo and Orange County for land dedication to Orange County SSHCP and consultation with the U.S. Fish and Wildlife Service. The project would not require any other public agency approvals.

K. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.? Tribal letters were mailed August 20, 2019 to twelve tribes that formally invited consultation with the City in compliance with 21080.3.1. To date, none of the tribes that were contacted have requested consultation. The tribes that were contacted include:

1. Bo Mazzetti, Chairperson
   Rincon Band of Luiseño Indians
   One Government Center Lane
   Valley Center, CA 92082

2. Fred Nelson, Chairperson
   La Jolla Band of Luiseño Indians
   22000 Highway 76
   Pauma Valley, CA 92061

3. Jeff Grubbe, Chairperson
   Agua Caliente Band of Cahuilla Indians
   5401 Dinah Shore Drive
   Palm Springs, CA 92264

4. Jim McPherson, Tribal Historic Preservation Officer
   Rincon Band of Luiseño Indians
   One Government Center Lane
   Valley Center, CA 92082

5. Mark Macarro, Chairperson
   Pechanga Band of Luiseño Indians
   P.O. Box 1477
   Temecula, CA 92593

A. *Looking at the site from Curtis Park*

B. *Looking at the area of the site where landscape materials are stored*

C. *Looking at the metal containers on-site that house landscape equipment*

D. *Looking at future site access at La Paz Road and Olympiad Road*

Figure 6

On Site Photographs

E. *Vacant land north of site - potential mitigation area*

F. *Land use east of the site*

G. Land use south of the site

H. Curtis Park west of the site

Figure 7

Off-Site Photographs

Figure 8
Photo Orientation Map

6. Matias Belardes, Chairperson
   Juaneño Band of Mission Indians Acjachemen Nation
   32161 Avenida Los Amigos
   San Juan Capistrano, CA 92675

7. Robert Smith, Chairperson
   Pala Band of Mission Indians
   35008 Pala Temecula Road
   Pala, CA 92059

8. San Luis Rey Tribal Council
   San Luis Rey Band of Mission Indians
   1889 Sunset Drive
   Vista, CA 92081

9. Scott Cozart, Chairperson
   Soboba Band of Luiseño Indians
   P.O. Box 487
   San Jacinto, CA 92583

10. Sonia Johnston, Chairperson
    Juaneño Band of Mission Indians
    P.O. Box 25628
    Santa Ana, CA 92799

11. Temet Aguilar, Chairperson
    Pauma Band of Luiseño Indians
    P.O. Box 369
    Pauma Valley, CA 92061

12. Teresa Romero, Chairperson
    Juaneño Band of Mission Indians Acjachemen Nation – Romero
    31411-A La Matanza Street
    San Juan Capistrano, CA 92675

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

L. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

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

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

M. DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

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

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

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

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

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

_____ _____

Signature: Date

Evaluation of Environmental Impacts:

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

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

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

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less-than-significant Impact". The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below may be cross-referenced).

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

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

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

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

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

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

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

9) The explanation of each issue should identify:

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

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

N. ISSUES:

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS: Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare that will adversely affect day or nighttime views in the area?	☐	☐	☐	☒

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

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural	☐	☐	☐	☒

use?				
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment, which due to their location or nature, could individually or cumulatively result in the loss of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

IV. BIOLOGICAL RESOURCES: Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through	☐	☒	☐	☐

direct removal, filing, hydrological interruption, or other means?				
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☒	☐	☐

V. CULTURAL RESOURCES: Would the project:

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of a unique archaeological resource as defined in §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

VI. ENERGY: Would the project:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

VII. GEOLOGY AND SOILS: Would the project:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	☒	☐
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including	☐	☐	☒	☐

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

VIII. GREENHOUSE GAS EMISSIONS Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

IX. HAZARDS AND HAZARDOUS MATERIALS: Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
c) 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?	☐	☐	☐	☒
d) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
e) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan, or where such a plan has not been adopted,	☐	☐	☐	☒

within two miles of a public airport, will the project result in a safety hazard or excessive noise for people working or residing in the project area?				
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

IX. HYDROLOGY AND WATER QUALITY. Would the project:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner, which would:				
(i) result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or off-site;	☐	☐	☒	☐
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
(iv) impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

X. LAND USE AND PLANNING: Would the project:

a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigation an environmental effect?	☐	☐	☒	☐

XI. MINERAL RESOURCES: Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

XII. NOISE: Would the project result in:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport, will the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

XIII. POPULATION AND HOUSING: Would the project:

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

XIV. PUBLIC SERVICES:

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

Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

XV. RECREATION:

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

XVI. TRANSPORTATION: Would the project:

a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☐	☒
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

XVIII. TRIBAL CULTURAL RESOURCES:

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1 (k), or	☐	☐	☒	☐
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section	☐	☐	☐	☒

5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

XIX. UTILITIES AND SERVICE SYSTEMS: Would the project:

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?	☐	☐	☐	☒
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☐	☒
e) Comply with federal, state and local management and reduction statues and regulations related to solid waste?	☐	☐	☐	☒

XX. WILDFIRE – If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Reguire the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result or runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

XXI. MANDATORY FINDINGS OF SIGNIFICANCE:

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☒	☐
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

O. Explanation of Issues

I. AESTHETICS: Would the project:

a) ***Have a substantial adverse effect on a scenic vista?*** **Less Than Significant Impact.** There are no State or County designated scenic vistas either adjacent to or within direct view of the project site that would be impacted by the project. Furthermore, there are no city designed scenic resources, including scenic corridors, secondary corridors, ridgelines, city entries, or scenic views adjacent to or visible from the site based on the Conservation/Open Space Element of the Mission Viejo General Plan. Antonio Parkway that is located approximately one mile east of the site is a designated Landscape Corridor by the Orange County Scenic Highway Plan. "A landscape corridor traverses developed or developing areas and has been designated for special treatment to provide a pleasant driving environment as well as community enhancement. Development within the corridor should serve to complement the scenic highway."[1] Because the project is not within the corridor of the Antonio Parkway the project would not impact Antonio Parkway as a County designated landscape corridor.

The Conservation/Open Space element of the City of Rancho Santa Margarita General Plan also designates Antonio Parkway a landscape corridor. There are no other designated scenic corridors or resources in Rancho Santa Margarita that are visible from the project site. The same as the County,

[1] Chapter IV. Transportation Element, page IV-40.

because the project is not within the corridor of the Antonio Parkway the project would not impact Antonio Parkway as a Rancho Santa Margarita designated landscape corridor.

Direct views of the site from the residential areas in Mission Viejo that are within close proximity to the site are limited due to the topographic location of the site below Curtis Park. The project site is approximately 80 feet lower in elevation than Curtis Park. As a result, the project site is not directly visible from the residential areas west of Curtis Park due to the elevation difference. Furthermore, the existing trees and vegetation at Curtis Park screen the project site from the residents west of the site. Therefore, the project site out of direct-view of most Mission Viejo residents.

Similarly, the project site's visibility is limited from areas in the County and the City of Rancho Mission Viejo due to the distance from the nearest residential communities in Rancho Santa Margarita. The closest Rancho Santa Margarita residences to the project site are adjacent to and north of Tijeras Creek Golf Club, approximately one-half mile northeast of the site, east of Trabuco Creek. While some residents in Rancho Santa Margarita north of the Tijeras Creek Golf Club would have direct views of the site they are approximately one-half mile or more northeast of the project site.

The project would not have any significant scenic vista impacts to Rancho Santa Margarita residents or City of Mission Viejo residents.

b) ***Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?*** **No Impact.** There are no state designated scenic highways and no scenic resources such as trees, rock outcroppings, or historic buildings within a state scenic highway either on or adjacent to the site that would be removed or altered by the project. The closest state designated scenic route to the project site is a section of the 91 Freeway in the eastern area of the City of Anaheim, which is approximately twenty miles northwest of the project. The project site is not visible from the section of the 91 Freeway that is a state designated scenic highway. The project would not impact a state scenic resource.

c) ***In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings?*** **(Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? Less Than Significant Impact.** The project site is located in an urbanized area. The project would change the visual character of the 42.9 gross acre site from vacant open space to a graded site and dirt pad.

The following goals and policies of the Mission Viejo General Plan Conservation/Open Space Element are applicable to the project.

GOAL 1: Protect and enhance the significant ecological and biological resources within and surrounding the community.

Policy 1.1: Preserve and protect important natural plant and animal communities and their associated habitats, such as areas supporting rare and endangered species, riparian areas, wildlife movement corridors, wetlands, and significant tree stands through appropriate site planning and grading techniques, revegetation, and soil management practices and other resource management techniques.

Policy 1.2: Utilize a development proposal review process to mitigate the impacts of development on sensitive lands such as steep slopes, wetlands, cultural resources, oak woodlands and sensitive habitats.

Policy 1.5: Establish and manage wildlife habitat corridors within public parks and natural resource protection areas where appropriate to allow for wildlife use.

GOAL 2: Protect open space areas to preserve natural resources.

Policy 2.2: Support preservation of portions of the Arroyo Trabuco as a prime bird nesting/foraging habitat and major wildlife movement corridor.

Policy 2.3: Support the preservation of the remaining prime bird nesting/foraging habitats in the City, particularly in the canyon areas and ridgelines.

Policy 2.6: Ensure long term preservation of identified open spaces through the use of conservation easements, or land purchases by community organizations that assist in land acquisitions for conservation purposes, or land purchases by the City for similar purposes.

GOAL 3: Provide for the orderly development of exceptional recreation programs, recreation facilities, parks, and open space areas in the City.

Policy 3.4: Coordinate and cooperate with adjacent jurisdictions to develop and enhance adjacent open space lands, regional parks, and access to parkland.

Policy 3.5: Participate and assist in the implementation of the regional parks / open space/ trails corridors such as the Aliso Creek, Arroyo Trabuco Creek, and San Juan Creek corridors.

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

Policy 3.10: Preserve public and private open space lands for active / passive recreational opportunities.

GOAL 4: Establish a long-term funding mechanism for the acquisition, development, and maintenance of future city park facilities.

Policy 4.1: Actively pursue all available sources of financing for parkland acquisition, development, and maintenance.

The project meets and is consistent with the city's goals and policies to protect its natural resources and open space areas. Consistent with Goal 1, the project would protect and enhance the significant ecological and biological resources of the general project area with the dedication of approximately 13.08-acres of City-owned land to the County SSHCP for preservation. As discussed in section "IV.a)" of this MND, the 13.08-acres the City proposes to dedicate to the County SSHCP would protect and preserve the biological resources that would be impacted by the project. In compliance with Policy 1.2,

the City has prepared a Mitigated Negative Declaration in compliance with the California Environmental Quality Act and through the public review process would mitigate any potential significant impacts to any sensitive lands and steep slopes associated with the project. As discussed in section "IV.d)" of this MND, there are no wildlife corridors on the project site. Therefore, consistent with Policy 1.5 the project would not impact any wildlife corridors.

Consistent with Goal 2, through the land dedication to the County SSHCP, the project would preserve land in the City of Mission Viejo adjacent to Arroyo Trabuco that is suitable bird nesting/foraging habitat. Again, as discussed in section "IV.a)" of this MND, the 13.08-acres of City-owned land that is proposed to be dedicated to the County SSHCP contains prime bird nesting/foraging habitat and this prime habitat that is adjacent to the Arroyo Trabuco canyon area and would be preserved. The County SSHCP would ensure long term preservation of identified open spaces through the use of a conservation easement consistent with Policy 2.2, 2.3 and 2.6.

Consistent with Goal 3, the project would provide for the orderly development of recreation facilities with the future development of recreational sports facilities on the site for Mission Viejo residents and also preserve open space in the City with the dedication of approximately 13.08-acres of property to the County SSHCP. Consistent with Policy 3.4 and 3.5, the dedication of approximately 13.08-acres of City-owned land to the County SSHCP would preserve open space. Consistent with Policy 3.10, the dedication of City-owned land to the County SSHCP would preserve public open space land near Trabuco Creek.

In terms of meeting Goal 4, the City has the opportunity to obtain approximately 760,000 cubic yards of dirt from Caltrans for the future development of recreational facilities for city residents at minimal cost. Acquiring the dirt for minimal cost meets the intent of Goal 4 and is consistent with Policy 4.1 to actively pursue a funding mechanism to develop the project site for future city parkland facilities.

The project is consistent and meets the applicable goals and policies of the Mission Viejo General Plan Conservation/Open Space Element and would not have any significant visual impacts.

d) ***Create a new source of substantial light or glare that will adversely affect day or nighttime views in the area?*** **No Impact**. All grading activity would occur during the daytime and would not generate any light or substantial glare. Once graded, the pad would be vacant and not generate any light or glare.

II. AGRICULTURE AND FORESTRY RESOURCES: Would the project:

a) ***Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*** **No Impact.** The project site is vacant except for three metal storage containers that store park landscape maintenance equipment. There is no agricultural use either on or adjacent to the site. The portion of the site that is located in the City of Mission Viejo is designated "Urban and Built-Up Land" by the State of California Department of Conservation Orange County Important Farmland 2016 map. The portion of the site that is located in the County is designated Other Land.[2] Because there is no agricultural use on the site and the project does not propose agricultural use for the site, the project would not convert prime, unique, or farmland of statewide importance to non-agricultural use and impact farmland.

[2] ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2016/ora16.pdf

b) ***Conflict with existing zoning for agricultural use, or a Williamson Act contract?*** **No Impact.** The project site is not in a Williamson Act contract. The existing Recreation zoning for the site does not allow agricultural use and the project does not propose to change the zoning to allow agricultural use. The project would not conflict with any existing agricultural use or a Williamson Act contract.

c) ***Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?*** **No Impact.** There is no timber or forests on the project site. The City does not have any zoning that allows timber or forest production. The project would not impact any forest or timber production.

d) ***Result in the loss of forest land or conversion of forest land to non-forest use?*** **No Impact.** See Response to section "II.c)" of this MND above.

e) ***Involve other changes in the existing environment, which due to their location or nature, could individually or cumulatively result in the loss of Farmland, to non-agricultural use?*** **No Impact.** The project would not result in the loss of any farmland, either individually or cumulatively, and would not impact any farmland.

III. AIR QUALITY: Would the project:

a) ***Conflict with or obstruct implementation of the applicable air quality plan? Less Than Significant Impact.*** An air quality report[3] was prepared for the project and a copy is attached in Appendix A.

Local, State and Federal Air Quality Agencies

The project is located in the South Coast Air Basin (SCAB). The SCAB is comprised of parts of Los Angeles, Riverside and San Bernardino counties and all of Orange County. The basin is bounded on the west by the Pacific Ocean and surrounded on the other sides by mountains, including the San Gabriel Mountains to the north, the San Bernardino Mountains to the north and east, the San Jacinto Mountains to the southeast and the Santa Ana Mountains to the south. The basin forms a low plain and the mountains channel and confine airflow, which trap air pollutants.

The primary agencies responsible for regulations to improve air quality in the SCAB are the South Coast Air Quality Management District (SCAQMD) and the California Air Resources Board (CARB). The Southern California Association of Governments (SCAG) is an important partner to the SCAQMD, as it is the designated metropolitan planning authority for the area and produces estimates of anticipated future growth and vehicular travel in the basin that are used for air quality planning. The SCAQMD sets and enforces regulations for non-vehicular sources of air pollution in the basin.

The U.S. Environmental Protection Agency (U.S. EPA) is the primary federal agency for regulating air quality. The EPA implements the provisions of the Federal Clean Air Act (FCAA). This Act establishes national ambient air quality standards (NAAQS) that are applicable nationwide. The EPA designates areas with pollutant concentrations that do not meet the NAAQS as non-attainment areas for each criteria pollutant. States are required by the FCAA to prepare State Implementation Plans (SIP) for designated non-attainment areas. The SIP is required to demonstrate how the areas will attain the

[3] Air Quality Report for the Lower Curtis Park Expansion, Greve & Associates, September 27, 2019.

NAAQS by the prescribed deadlines and what measures will be required to attain the standards. The EPA also oversees implementation of the prescribed measures.

The California Clean Air Act (CCAA) requires all air pollution control districts in the state to prepare plans to reduce pollutant concentrations exceeding the California Ambient Air Quality Standards (CAAQS) and ultimately achieve the CAAQS. The state air districts are required to review and revise the plans every three years. The SCAQMD satisfies this requirement through the publication of an Air Quality Management Plan (AQMP). The AQMP is developed by SCAQMD and SCAG in coordination with local governments and the private sector. The AQMP is incorporated into the SIP by CARB to satisfy the FCAA requirements discussed above.

Criterial Pollutants, Health Effects and Standards

Under the FCAA, the U.S. EPA established National Ambient Air Quality Standards (NAAQS) for six major pollutants: ozone (O3); respirable particulate matter (PM10); fine particulate matter (PM2.5); carbon monoxide (CO); nitrogen dioxide (NO2); sulfur dioxide (SO2) and lead. These six air pollutants are referred to as criteria pollutants.

Under the CCAA, the CARB established California Ambient Air Quality Standards (CAAQS) to protect the health and welfare of Californians. State standards have been established for six criteria pollutants as well as four additional pollutants that include visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. Figure 9 shows the state and national ambient air quality standards.

Attainment Designations

Table 1 below shows the current non-attainment designations for the SCAB. The last column of the table shows the attainment date for the Federal standard. The SCAB is Extreme Non-attainment for ozone, Moderate Non-attainment for PM2.5, and attainment/maintenance for CO and NO2. The SCAB is in attainment of the Federal SO2 and lead NAAQS as well as the state CO, NO2, SO2, lead, hydrogen sulfide, and vinyl chloride CAAQS.

Table 1
Designations of Criterial Pollutants for the SCAB

Standard	Concentration	Classification	Latest Attainment Year
2008 8-hour Ozone	75 ppb	Extreme	2031
2012 Annual PM2.5	12 ug/m3	Moderate Serious	2021 2025
2006 24-hour PM2.5	35 ug/m3	Serious	2019
1997 8-hour Ozone	80 ppb	Extreme	2023
1979 1-hour Ozone	120 ppb	Extreme	2022

Source: Table ES-1, "Executive Summary, Draft Final Air Quality Management Plan," SCAQMD.

Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

California Air Resources Board (5/4/16)

Figure 9
Ambient Air Quality Standards

Air Quality Management Plan

The CAA requires plans to demonstrate attainment of the NAAQS for an area that is designated as nonattainment. In the SCAB, SCAQMD and SCAG, in coordination with local governments and the private sector, develop the AQMP for the air basin to satisfy these CAA requirement. The AQMP is the most important air management document for the basin because it provides the blueprint for meeting state and federal ambient air quality standards.

On March 3, 2017, the 2016 AQMP was adopted by the SCAQMD Governing Board. The primary task of the 2016 AQMP is to bring the basin into attainment. The document states that to have any reasonable expectation of meeting the 2023 ozone deadline, the scope and pace of continued air quality improvement must greatly intensify. In response to court decisions, some elements included in the 2016 AQMP required updates. CARB prepared the 2018 Updates to the California State Implementation Plan (2018 SIP Update) to update SIP elements for nonattainment areas throughout the State as needed. CARB adopted the 2018 SIP Update on October 25, 2018.

An air quality assessment must discuss any inconsistencies between a proposed project and any applicable General Plans and regional plans (California Environmental Quality Act (CEQA) guidelines Section 15125. The regional plans that apply to the proposed project include the South Coast AQMP.

The purpose of the consistency discussion is to set forth the issues regarding consistency with the assumptions and objectives of the AQMP and discuss whether the project would interfere with the region's ability to comply with Federal and State air quality standards. If the decision-maker determines that the project is inconsistent, the lead agency may consider project modifications or inclusion of mitigation to eliminate the inconsistency.

The SCAQMD's CEQA Handbook states "New or amended GP Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP." Strict consistency with all aspects of the plan is usually not required. A proposed project should be considered to be consistent with the plan if it furthers one or more policies and does not obstruct other policies. The Handbook identifies two key indicators of consistency:

(1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.

(2) Whether the project will exceed the assumptions in the AQMP or increments based on the year of project buildout and phase.

Both criteria are evaluated below.

Criterion 1 - Increase in the Frequency or Severity of Violations?

Based on the air quality modeling analysis in this air quality report, neither regional nor local air impacts would occur. The air quality analysis indicates that total project construction emissions would not exceed any regional thresholds that have been established by the SCAQMD. Similarly, the Localized Significance Thresholds (LST) analysis indicates the project would not have any significant local air quality impacts. Therefore, the project would not impact the air quality and is determined to be consistent with the AQMP for the first criterion.

Criterion 2 - Exceed Assumptions in the AQMP?

Consistency with the AQMP assumptions is determined by performing an analysis of the project with the assumptions in the AQMP. The emphasis of this criterion is to ensure that the analysis conducted for the project is based on the same forecasts as the AQMP. The Regional Comprehensive Plan and Guide (RCP&G) consist of three sections: Core Chapters, Ancillary Chapters, and Bridge Chapters. The Growth Management, Regional Mobility, Air Quality, Water Quality, and Hazardous Waste Management chapters constitute the Core Chapters of the document. These chapters currently respond directly to federal and state requirements placed on SCAG. Local governments are required to use these as the basis of their plans for purposes of consistency with applicable regional plans under CEQA.

Since the SCAG forecasts are not detailed, the test for consistency of this project is not specific. The AQMP assumptions are based upon projections from local general plans. Projects that are consistent with the local general plan are consistent with the AQMP assumptions. The project does not require a general plan amendment to the Mission Viejo General Plan, therefore, the project is consistent with other regional plans. The project meets the second criterion for consistency with the AQMP.

City of Mission Viejo

The City of Mission Viejo is responsible to assess and mitigate air emissions by its land use decisions. The City is also responsible to implement transportation control measures as outlined in the 2016 AQMP. The City assesses the air quality impacts of new development, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of the mitigation. Because the City does not have the expertise to develop plans, programs, procedures, and methodologies to ensure that air quality within the City meets federal and state standards, the City relies on the expertise of the SCAQMD and utilizes the SCAQMD CEQA Handbook as the guidance document for the environmental review of plans and development proposals within its jurisdiction.

The Conservation/Open Space Element of the Mission Viejo General Plan contains the following air quality-related goal and policy that are applicable to the proposed project:

GOAL 8: Cooperate with local, regional, and state agencies to improve air quality and reduce greenhouse gas emissions.

Policy 8.1: Cooperate with South Coast Air Quality Management District and Southern California Association of Governments in their efforts to implement the regional Air Quality Management Plan.

Based on the above analysis related to the AQMP, the project is consistent with the AQMP. Because the project is consistent with the AQMP, the project is consistent with and meets Goal 8 and Policy 8.1 of the Conservation/Open Space element to cooperate with SCAQMD and SCAG to implement the AQMP.

b) ***Result in a cumulatively considerable net increase of any criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard?*** **Less Than Significant Impact.** Cumulative projects include local development as well as general growth within the project area. However, as with most development, the greatest source of

emissions is from mobile sources that travel well out of the local area. Therefore, from an air quality standpoint, the cumulative analysis would extend beyond any local projects and when wind patterns are considered, would cover an even larger area.

The project site is located within the SCAB, which is non-attainment for ozone and PM_{10} particulate matter. The emissions generated with the construction and operation of the one cumulative project would further degrade the local air quality, as well as the air quality of the SCAB. The greatest cumulative impact on the regional air quality is the incremental addition of pollutants mainly from increased traffic by the Mission Viejo Medical Center project and the use of heavy equipment and trucks to construct this project. Air quality would be temporarily degraded during construction that may occur separately or simultaneously with the proposed project and the Mission Viejo Medical Center project. However, in accordance with the SCAQMD methodology, projects that do not exceed the SCAQMD criteria or can be mitigated to less than criteria levels are not significant and do not add to the overall cumulative impact.

As stated in section "III.c)" of this MND, the project would not generate any short-term air emissions that would exceed SCAQMD emission thresholds. Therefore, the project would not have any significant cumulative criteria pollutant impacts.

c) ***Expose sensitive receptors to substantial pollutant concentrations?*** **Less Than Significant Impact.** A sensitive receptor is a person in the population who is particularly susceptible to health effects due to exposure to an air contaminant. The following are land uses (sensitive sites) where sensitive receptors are typically located:

- Schools, playgrounds and childcare centers
- Long-term health care facilities
- Rehabilitation centers
- Convalescent centers
- Hospitals
- Retirement homes
- Residences[4]

The closest sensitive receptors to the project site are the people that are present at Curtis Park that is adjacent to and west of the site and the residents west of Curtis Park, west of Olympiad Road.

Regional Air Quality

SCAQMD's "1993 CEQA Air Quality Handbook" establishes significance thresholds to assess the impact of project related air pollutant emissions. SCAQMD's construction emission significance thresholds are shown in Table 2. A project with daily emissions below these thresholds are considered to have a less than significant effect on air quality.

[4] South Coast Air Quality Management District, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, May 6, 2005, Chapter 2, page 2-1.

Table 2
SCAQMD Regional Pollutant Emission Thresholds of Significance

	Pollutant Emissions (lbs./day)					
	CO	**ROG**	**NOx**	**PM10**	**PM2.5**	**SOx**
Construction	550	75	100	150	55	150

Localized Significant Thresholds

As part of the SCAQMD's environmental justice program, attention was focused on localized effects of air quality. In accordance with Governing Board direction, SCAQMD staff developed localized significance threshold (LST) methodology and mass rate look-up tables by Source Receptor Area (SRA) that can be used to determine if a project may generate significant adverse localized air quality impacts. LSTs represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area.

The SCAQMD LST mass rate look-up tables allow one to determine if the daily emissions for proposed construction or operational activities could result in significant localized air quality impacts. If the calculated on-site emissions for the proposed construction or operational activities are below the LST emission levels in the LST mass rate look-up tables and no potentially significant air quality impacts are associated with other environmental issues, then the proposed construction or operation activity is not significant for local air quality.

The LST mass rate look-up tables are applicable to the following pollutants only: oxides of nitrogen (NO_x), carbon monoxide (CO), particulate matter less than 10 microns in aerodynamic diameter (PM_{10}), and particulate matter less than 2.5 microns ($PM_{2.5}$). LSTs are derived based on the location of the activity (i.e., the source/receptor area); the emission rates of NO_x, CO, $PM_{2.5}$ and PM_{10}; and the distance to the nearest exposed individual.

The LST methodology presents mass emission rates for each SRA, project sizes of 1, 2, and 5 acres, and the closest receptor distances of 25, 50, 100, 200, and 500 meters. The threshold levels vary depending on the size of the project and the distance to the closest receptor. Therefore, threshold levels are calculated on a project-by-project basis.

The project is located in SCAQMD Source Receptor Area (SRA) 19. The closest residence west of the project is approximately 125 feet from the nearest work area of the project. The athletic fields in Curtis Park that are considered to be sensitive receptors are adjacent to and west of the project site. Table 3 summarizes the LSTs for the proposed construction activities at the sensitive receptors closest to the project site. The thresholds listed in Table 30 are based on a 5-acre site. Although the project site is approximately 42.9-acres, in this case the grading equipment would operate within one area on a daily basis, which for this analysis is restricted to 5-acres. This represents a worst-case condition since it concentrates all of the construction equipment air emissions to a 5-acre area.

Table 3
Localized Significance Thresholds at the Nearest Receptors

	Localized Significance Threshold (lbs./day)			
Description	**NOx**	**CO**	**PM10**	**PM2.5**
Construction Activities				
At nearest residence	193	1,960	25	10
At nearest edge of athletic fields	197	1,804	12	8

Localized Construction Air Impacts

The on-site construction emissions were calculated utilizing CalEEMod. The calculated air emissions are shown in Table 4. The total construction emissions in Table 4 are compared to the Localized Significance Thresholds (LSTs) shown in Table 2. As shown in Table 4, none of the calculated air emissions exceed the LST thresholds. Therefore, nearby residents and users of the athletic fields in Curtis Park would not be adversely impacted by project grading emissions. Local air quality impacts during project grading would be less than significant.

Table 4
On-Site Emissions By Construction Activity

	Daily Emissions (lbs./day)			
Activity	**NOx**	**CO**	**PM10**	**PM2.5**
Site Preparation	17.7	16.7	10.2	5.3
Grading	16.8	16.1	3.8	2.4
Final Grading	21.6	18.3	5.5	2.7
For Nearest Residences				
LST Thresholds	193	1,960	25	10
Exceed Threshold?	*No*	*No*	*No*	*No*
For Athletic Fields				
LST Thresholds	197	1,804	12	8
Exceed Threshold?	*No*	*No*	*No*	*No*

Monitored Air Quality

The SCAQMD has divided the SCAB into 38 air-monitoring areas with a designated ambient air monitoring station in most areas. The project is located in the Saddleback Valley Source-Receptor Area (SRA) 19 and the Mission Viejo monitoring station is the representative facility for SRA 19. The data collected at this station is considered representative of the air quality in the vicinity of the project. The air pollutants measured at the Mission Viejo station include ozone, PM2.5, and PM10. The air quality data monitored at the Mission Viejo station from 2016 to 2018 is shown in Table 5.

Table 5
Air Quality Levels Measured at the Mission Viejo Air Station

Pollutant	California Standard	National Standard	Year	Max. Level	Days State Standard Exceeded	Days National Standard Exceeded
Ozone 1 Hour Average	0.09 ppm	None	2018	0.121	2	0
			2017	0.103	3	0
			2016	0.122	5	0
Ozone 8 Hour Average	0.070 ppm	0.070 ppm	2018	0.088	10	9
			2017	0.083	27	25
			2016	0.093	13	13
Fine Particulates $PM_{2.5}$ (24 Hour)	None	35 µg/m^3	2018	38.9	n/a	1
			2017	19.5	n/a	0
			2016	24.7	n/a	0
Fine Particulates $PM_{2.5}$ (Annual)	13 µg/m^3	12 µg/m^3	2018	n/a	n/a	n/a
			2017	n/a	n/a	n/a
			2016	7.3	0	0
Respirable Particulates PM_{10} 24 Hour Average	50 µg/m^3	150 µg/m^3	2018	55.6	1	0
			2017	58.2	1	0
			2016	59.3	1	0
Respirable Particulates PM_{10} AAM	20 µg/m^3	35 µg/m^3	2018	18.8	0	0
			2017	18.8	0	0
			2016	21.0	0	Exceeded

n/a – data not available
* Insufficient data available to determine the value
Source: CARB Air Quality Data Statistics web site www.arb.ca.gov/adam/ accessed 9/25/19

Construction Emissions

The project proposes three phases of construction that includes initial site grading and preparation, importing soil and site grading after the soil is imported to the site. The potential air emissions for each phase of construction were calculated and evaluated for potential regional and local impacts.

Regional Construction Impacts

The air emissions that would be generated during each phase of construction were calculated using the latest version of the California Emissions Estimator Model (CalEEMod version 2016.3.2). CalEEMod is a computer program developed by the SCAQMD in conjunction with CARB that calculates emissions for construction of various projects. For on-road vehicular emissions, the CalEEMod model utilizes the latest emission rates that have also been developed by CARB.

CalEEMod was used to model the three phases of construction. The number of acres, duration of each construction phase, the construction equipment used during each phase and other key elements were input into the CalEEMod to calculate the estimate air emissions. The air emissions from the trucks that would haul dirt to the site from I-5 were also included in the analysis.

The SCAQMD regional thresholds are presented in terms of pounds of emissions per day. Therefore, the highest daily construction emissions are of most concern. The calculated air emissions per construction phase are shown below in Table 6. The calculated air emissions are compared to the significance thresholds shown previously in Table 2. As shown, none of the pollutants would exceed the SCAQMD regional thresholds. Therefore, the project would not have any significant regional air quality impacts.

Table 6
Peak Air Emissions for Each Construction Phase

	Pollutant Emissions (Pounds Per Day)					
Activity	**ROG**	**NOx**	**CO**	**SOx**	**PM10**	**PM2.5**
Site Preparation	3.2	17.7	17.3	0.0	10.4	5.4
Grading	4.1	62.6	25.3	0.1	83.9	22.2
Final Grading	3.3	21.7	19.1	0.1	5.7	2.8
SCAQMD Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Phase Exceed Threshold?	*No*	*No*	*No*	*No*	*No*	*No*

SCAQMD's Rule 403

The project would be required to comply with SCAQMD rules to reduce fugitive dust emissions during project construction. Project compliance with Rule 403 is achieved through the application of standard best management practices during construction, which include the application of water or chemical stabilizers to disturbed soils, manage haul road dust by the use of water, cover haul vehicles, restrict vehicle speeds on on-site unpaved roads to 15 mph, sweep loose dirt from paved site access roadways, stop construction activity when wind speeds exceed 25 mph and establish a permanent ground cover on finished areas. Project compliance with Rule 403 would reduce fugitive dust emissions during project grading.

d) ***Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*** **Less Than Significant Impact.** Potential sources for odors during project construction include the diesel exhaust emissions of the trucks importing dirt to the site and the diesel exhaust emissions from the operation of on-site diesel powered grading equipment. The objectionable odors that would be generated during the construction process would be short-term and any odor emissions would cease upon the final grading on the site. Diesel exhaust and VOCs would be emitted during construction of the project, which are objectionable to some. However, emissions would disperse rapidly from the project site and therefore would not reach an objectionable level at the nearest sensitive receptors, which are a minimum of 125 feet west of the site. Due to the short-term grading of the site and imported material and limited amounts of odor producing construction equipment no significant odor impacts are anticipated during project grading. The project would not have any significant odor impacts.

IV. BIOLOGICAL RESOURCES: Would the project:

a) ***Have substantial adverse effects, 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 the U.S. Fish and Wildlife Service?*** **Less Than Significant With Mitigation.** Biology reports[5] were prepared for the project site and copies are attached in Appendix B.

Initial biological surveys of the project site were conducted by Gonzales Environmental Consulting, LLC (GEC) on September 8, September 15, September 22, and October 6, 2019. An additional biological and a jurisdictional survey of the site were conducted by Glenn Lukos Associates (GLA) on January 27, February 19, and June 18, 2020. The focus of the biological surveys conducted by GLA was determined through the review of the previous data that was collected by GEC and the review of the CNDDB [CDFW 2020], CNPS 8th edition online inventory (CNPS 2020), Natural Resource Conservation Service soil data (NRCS 2020), other pertinent literature, and GLA's knowledge and experience of the region, Mission Viejo and Trabuco Creek.

The on-site soils were mapped based on information from the Soil Conservation Service (SCS), which is known as the National Resource Conservation Service. As shown in Figure 10, the on-site soils include Bosanko Clay with 9 to 15 percent slopes, Bosanko Clay with 15 to 30 percent slopes, Bosanko-Balcom complex with 15 to 30 percent slopes, Botella clay loam with 9 to 15 percent slopes, Calleguas clay loam with 50 to 75 percent slopes, Cieneba sandy loam with 15 to 30 percent slopes, Corralitos loamy sand, Cropley clay with 2 to 9 percent slopes, Myford sandy loam, thick surface, with 2 to 9 percent slopes and Soboba cobbly loamy sand with 0 to 15 percent slopes.

Botanical Resources

General botanical surveys and vegetation mapping were conducted on the project site. The plant species that were encountered during the field surveys are shown in Figure 11 and listed in Table 7.

[5] Biological Technical Report for the Lower Curtis Park Expansion, Mission Viejo, Ca., Glenn Lukos Associates, Inc., July 2020; General Biological Resource Assessment and Habitat Assessment, City of Mission Viejo, Ca., Gonzales Environmental Consulting, LLC, November 3, 2019.

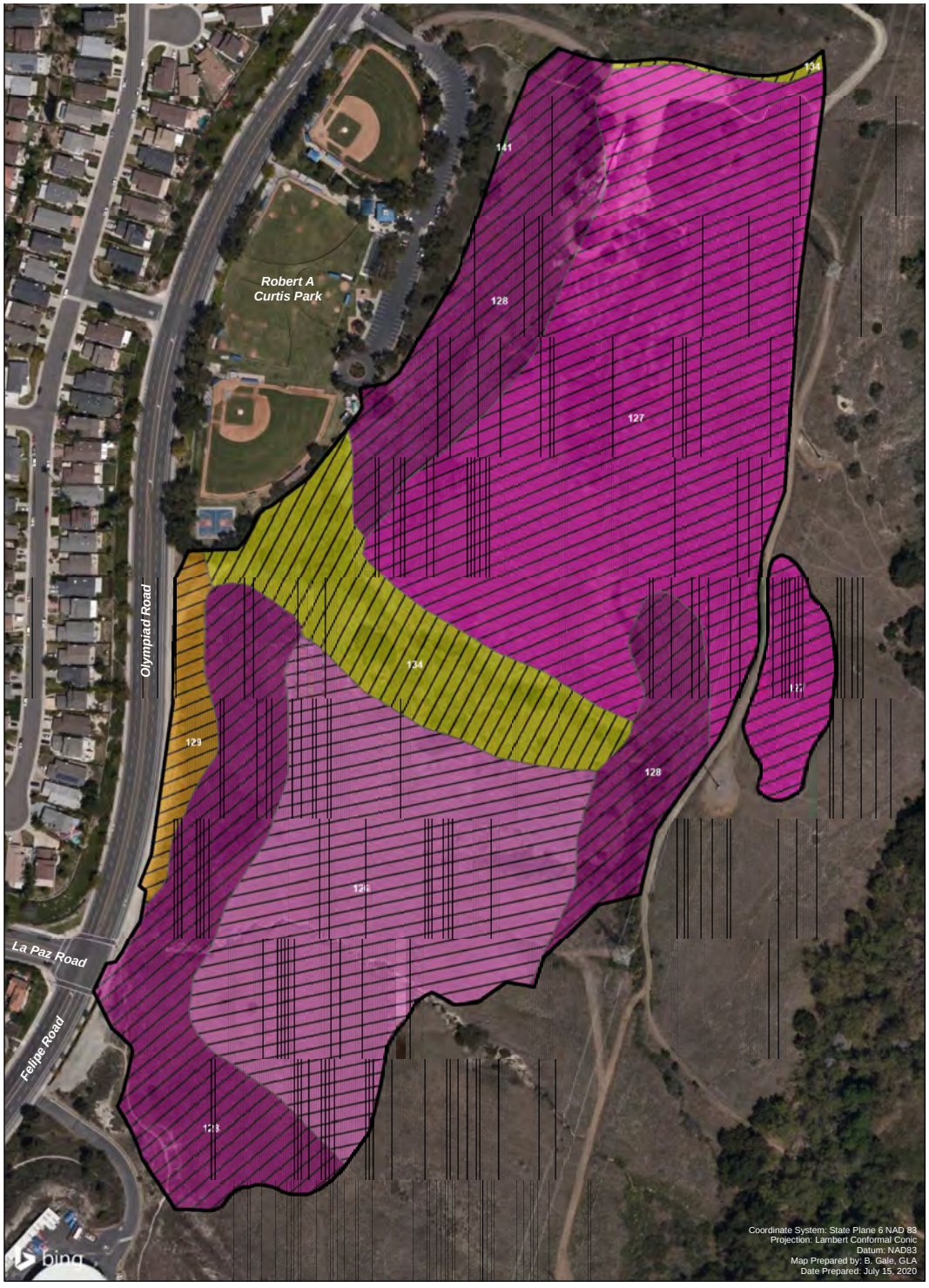


Figure 10
On-Site Soils

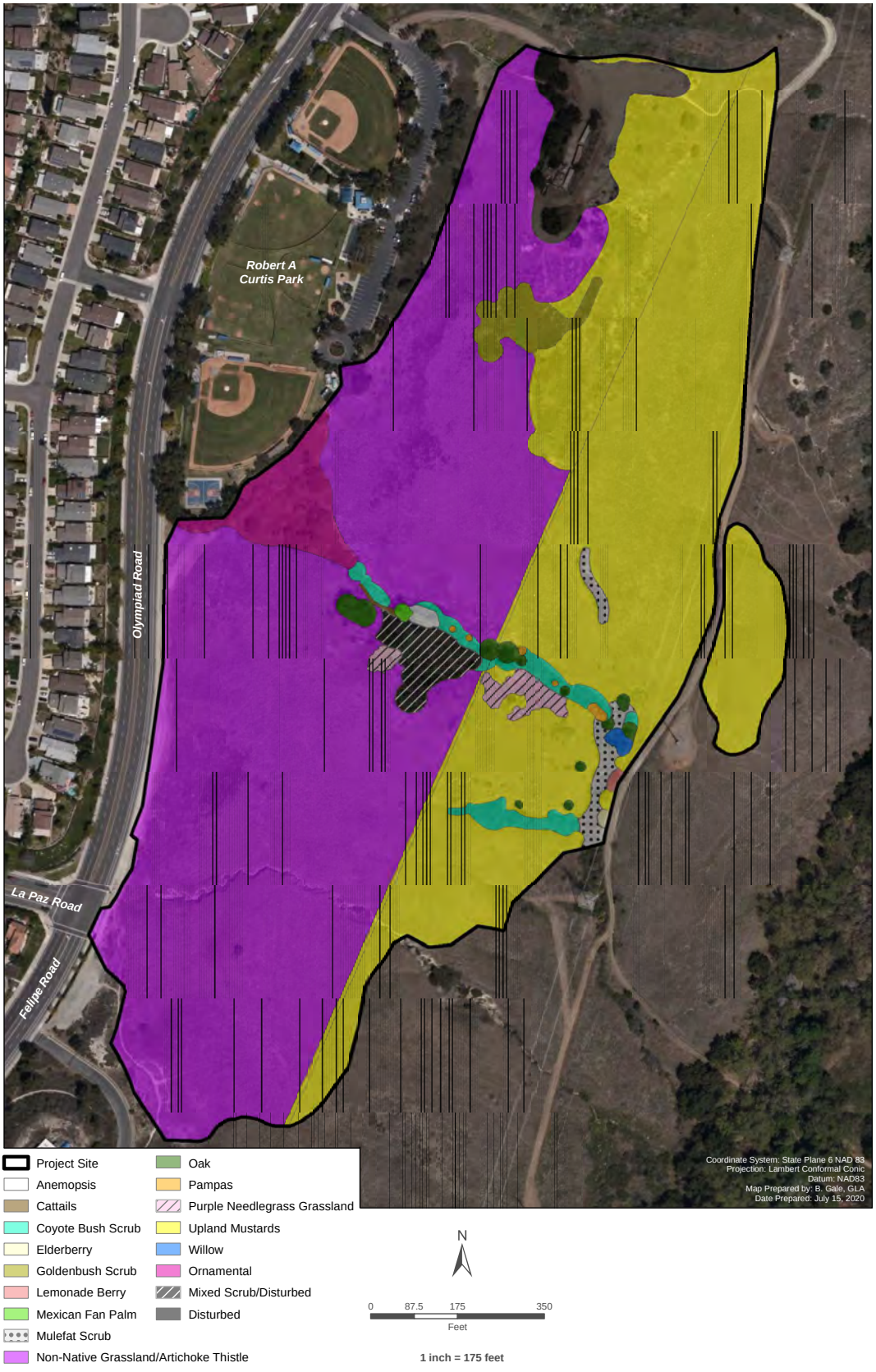


Figure 11

On-Site Vegetation

Table 7
Summary of Vegetation Alliances and On-Site Land Cover

Vegetation Type	City Land	County Land	Total (acres)
Anemopsis californica Herbaceous Alliance – Yerba mansa meadows (MCV II S2?)	0.05	0.0	0.05
Baccharis pilularis Shrubland Alliance – Coyote brush scrub (MCV II S5)	0.14	0.39	0.53
Baccharis salicifolia Shrubland Alliance – Mulefat thickets (MCV II S4)	0.0	0.29	0.29
Brassica (*nigra*) and Other Mustards Semi-Natural Herbaceous Stands – Upland mustards	3.07	11.94	15.01
Cortaderia (*jubata, selloana*) Semi-Natural Herbaceous Stands – Pampas grass patches	0.01	0.03	0.04
Cynara cardunculus Semi-Natural Herbaceous Stands – artichoke thistle stands	20.36	0.0	20.36
Disturbed	1.43	0.0	1.43
Isocoma menziesii Shrubland Alliance – Menzie's golden bush scrub (MCV II S4?)	0.49	0.0	0.49
Mixed Scrub/Disturbed	0.48	0.0	0.48
Nasella pulchra Herbaceous Alliance – Purple needle grass grassland (MCV II S3?)	0.06	0.22	0.28
Ornamental	0.95	0.0	0.95
Quercus agrifolia Woodland Alliance – Coast live oak woodland (MCV II S4)	0.11	0.12	0.23
Rhus integrifolia Shrubland Alliance – Lemonade berry scrub (MCV II S3)	0.0	0.02	0.02
Salix lasiolepis Shrubland Alliance – Arroyo willow thickets (MCV II S4)	0.0	0.04	0.04
Sambucus nigra Shrubland Alliance – Blue elderberry stands (MCV II S3)	0.0	0.02	0.02
Typha (*domingensis, latifolia*) Herbaceous Alliance – Cattail marshes (MCV II S5)	0.02	0.0	0.02
Washingtonia robusta Semi-Natural Woodland Alliance – Mexican fan palm	0.02	0.0	0.02
Total	**20.70**	**13.07**	**40.27**

Special-Status Plants

The project site was evaluated for the presence and the potential for the presence of special status plants based on the potential for suitable habitat on the site. Based on the site survey no special-status plant species were detected on the site and none are expected to occur.

The project would disturb approximately 39.52-acres of the 40.26-acre site. Approximately 0.74-acres at the north end of the site would not be disturbed and impacted by the project as shown in Figure 12, Of the 39.52-acres that would be disturbed, 34.83 acres (86.5-percent) consist of non-native grassland, mustard, artichoke thistle, Mexican fan palm and pampas grass. An additional 2.24-acres that would be disturbed includes already disturbed areas and areas with ornamental vegetation for a total of 37.07 acres of non-native vegetation that covers approximately 92 percent of the site. Table 8 shows the vegetation on the site and the acreage of each vegetation type that would be impacted by the project.

Table 8
Summary of Vegetation Alliances and Land Cover On-Site

Vegetation Type	MCV II	Total (acres)	Impacts
Anemopsis californica Herbaceous Alliance – Yerba mansa meadows	S2?	0.05	0.05
Baccharis pilularis Shrubland Alliance – Coyote brush scrub	S5	0.53	0.53
Baccharis salicifolia Shrubland Alliance – Mulefat thickets	S4	0.29	0.29
Brassica (*nigra*) and Other Mustards Semi-Natural Herbaceous Stands – Upland mustards	NA	15.01	14.57
Cortaderia (*jubata, selloana*) Semi-Natural Herbaceous Stands – Pampas grass patches	NA	0.04	0.04
Cynara cardunculus Semi-Natural Herbaceous Stands – artichoke thistle stands	NA	20.36	20.20
Disturbed	NA	1.43	1.31
Isocoma menziesii Shrubland Alliance – Menzie's golden bush scrub	S4?	0.49	0.49
Mixed Scrub/Disturbed	NA	0.48	0.48
Nasella pulchra Herbaceous Alliance – Purple needle grass grassland	S3?	0.28	0.28
Ornamental	NA	0.95	0.93
Quercus agrifolia Woodland Alliance – Coast live oak woodland	S4	0.23	0.23
Rhus integrifolia Shrubland Alliance – Lemonade berry scrub	S3	0.02	0.02
Salix lasiolepis Shrubland Alliance – Arroyo willow thickets	S4	0.04	0.04
Sambucus nigra Shrubland Alliance – Blue elderberry stands	S3	0.02	0.02
Typha (*angustifolia, domingensis, latifolia*) Herbaceous Alliance – Cattail marshes	S5	0.02	0.02
Washingtonia robusta Semi-Natural Woodland Alliance – Mexican fan palm	NA	0.02	0.02
	Total	40.26	39.52

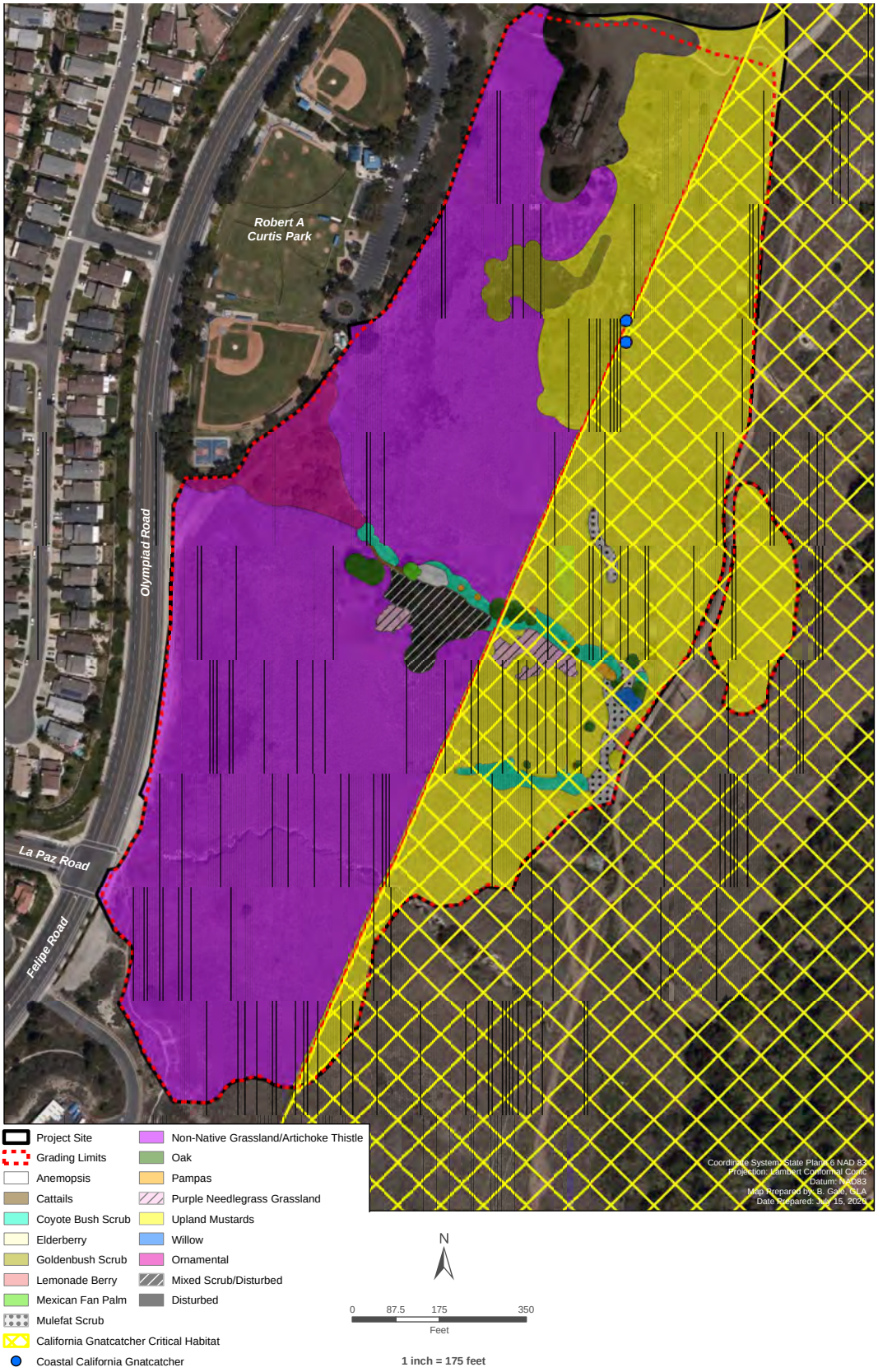


Figure 12

Impacted Vegetation

The project would impact the following special-status vegetation alliances: *Anemopsis californica* Herbaceous Alliance – Yerba mansa meadows; *Nasella pulchra* Herbaceous Alliance – Purple needle grass grassland; *Rhus integrifolia* Shrubland Alliance – Lemonade berry scrub; and *Sambucus nigra* Shrubland Alliance – Blue elderberry stands. Due to the low Rarity Ranking (S3) and the limited amount of Lemonade berry scrub and Blue elderberry on the site the removal of these two plant species by the project would not require mitigation. However, the project would have a significant impact to approximately 0.05 acres of *Anemopsis californica* Herbaceous Alliance – Yerba mansa meadows and approximately 0.28 acres of *Nasella pulchra* Herbaceous Alliance – Purple needle grass grassland. Therefore, the following mitigation measures are recommended for the removal and impact to Yerba mansa meadows and Purple needle grass grassland by the project.

Mitigation Measure No. 1 Prior to the start of grading, the City shall establish 0.05 acres of yerba mansa meadow within the City designated land. The City shall have a resource specialist familiar with restoration of wetland habitat prepare a Habitat Mitigation and Monitoring Plan (Plan) that includes the following components: 1) site selection, 2) site preparation, 3) plant palette, 4) maintenance methods, 5) monitoring methods, 6) performance standards, and 7) contingency measures. The Plan shall be submitted to the City, County, and the U.S. Fish & Wildlife Service (USFWS) for approval prior to the start of the restoration.

Mitigation Measure No. 2 The land that is dedicated in Mitigation Measure No. 1 shall be transferred to the Orange County SSHCP Reserve for long-term conservation.

Mitigation Measure No. 3 Prior to the start of grading, the City shall establish approximately 0.28 acres of purple needlegrass grassland within the City designated land. The City shall have a resource specialist familiar with restoration of wetland habitat prepare a Habitat Mitigation and Monitoring Plan (Plan) that includes the following components: 1) site selection, 2) site preparation, 3) plant palette, 4) maintenance methods, 5) monitoring methods, 6) performance standards, and 7) contingency measures. The Plan shall be submitted to the City, County, and USFWS for approval prior to the start of the restoration.

Wildlife Resources

The project site was also surveyed for wildlife resources. The wildlife that were present on the site at the time of the survey were detected by sight, call, tracks, and scat. A list of the wildlife species that were either observed or expected to occur on the site is in the biological reports in Appendix B.

Special-Status Animals Observed or Expected to Occur on the Site

Coastal California gnatcatcher (Polioptila californica californica)

Approximately 12.0- acres of the project site is located in the County of Orange and designated Critical Habitat for the coastal California gnatcatcher by the USFWS. The Critical Habitat in the County includes Goldenbush scrub vegetation as shown previously in Figure 13. GEC observed three CAGN during one of four site surveys in September and October in 2019 that were foraging on the area of the

project site that is within 0.49-acres of Menzies Goldenbush scrub on City property. Because the observation was outside the breeding season it cannot be determined if the species are a resident family group from earlier in the season or were dispersing across the site at the time of observation.

A habitat assessment for the coastal California gnatcatcher (CAGN) was conducted for the entire project site by GLA during a site visit on June 18, 2020 and within the designated CAGN breeding season. Suitable CAGN habitat includes coastal sage scrub communities dominated by California sagebrush (Artemisia californica), California buckwheat (Eriogonum fasciculatum), white sage (Salvia apiana), and black sage (Salvia mellifera) with flat to moderately sloping topography. Based on the vegetation composition within the project site and the existing topography on the site it was determined by GLA the project site does not exhibit the potential to support the CAGN.

Although GLA did not observe any CAGN on the project site during their its site visit on June 18, 2020 during the CAGN breeding season, the loss of 0.49-acres of Menzie's golden bush scrub on City-owned land by the project where three coastal California gnatcatchers were observed foraging in September of 2019 and outside the CAGN breeding season would be considered significant.

The project would impact approximately 12.80-acres of County-owned land within the SSHCP Reserve that are also designated as Critical Habitat. The loss of approximately 12.80-acres of County SSHCP land would be a significant impact and require mitigation in the form of replacement land of equal or greater value than the 12.80-acres that would be lost. This would be implemented through a Minor Amendment of the SSHCP wherein suitable replacement City-owned land would be determined with coordination by the City, County and USFWS.

The City of Mission Viejo owns approximately 25-acres of open space land adjacent to and north of the project site as shown in Figure 13. This area includes approximately 10.7 acres of high quality coastal sage scrub habitat, approximately 3.06 acres of southern coast live oak forest for a total of 13.79-acres of high quality habitat, which is substantially greater in value compared to the 12.80 acres of City-owned land on the project site that includes 11.67 acres of non-native mustard fields and limited areas of native habitat, including 0.39-acres of coyote brush scrub, 0.29-acres of mulefat scrub, 0.22-acres of purple needlegrass grassland, 0.02-acres of lemonade berry scrub, 0.12-acres of coast live oak, 0.03-acres of pampas grass and 0.02-acres of elderberry scrub. The 25-acre site also includes a drainage course along the southern boundary of the site that provides an opportunity to preserve, enhance and establish off-site wetland and riparian restoration impacted by the project.

The following measures are recommended to reduce potential project impacts to the Coastal California gnatcatcher to less than significant.

Mitigation Measure No. 4 Prior to the start of grading and upon approval by Orange County SSHCP and USFWS, the City of Mission Viejo shall dedicate City-owned land that is adjacent to and north of the project site to the Orange County SSHCP Habitat Reserve.

Mitigation Measure No. 5 Prior to the start of grading and upon dedication of City-owned land that is adjacent to and north of the project site to the Orange County SSHCP Habitat Reserve, the City shall implement one of following measures:

Figure 13
City Mitigation Site

a. Establish 0.98-acres of suitable coastal sage scrub habitat within the 30-acre City-owned land adjacent to and north of the project site and dedicate the 0.98-acres to the Orange County SSHCP Habitat Reserve.

b. Dedicate 1.47-acres of suitable coastal sage scrub habitat to the Orange County SSHCP Habitat Reserve.

Under both "a" and "b" above, the land shall be transferred to the Orange County SSHCP Habitat Reserve for long-term conservation. The City shall have a resource specialist familiar with restoration of coastal sage scrub prepare a Habitat Mitigation and Monitoring Plan that includes the following components: 1) site selection, 2) site preparation, 3) plant palette, 4) maintenance methods, 5) monitoring methods, 6) performance standards, and 7) contingency measures and submit the Plan to the City of Mission Viejo, County of Orange, and the USFWS for approval prior to initiation of the establishment of the habitat.

General Surveys

Along with the botanical and wildlife surveys birds, reptiles and amphibians on the project site were also observed and noted. Birds were identified by both direct observation and vocalizations. Mammals were identified both by direct observation and the presence of diagnostic signs (i.e. tracks, burrows, scat, etc.). Reptile and amphibians were identified by their habitat that included shed skin, scat, tracks, snake prints and lizard tail drag marks. Based on the site surveys the project is not anticipated to have any significant impacts to reptiles or amphibians.

Cooper's hawk (Accipiter cooperi)

The Cooper's hawk is a CDFG Watch List species. Cooper's hawks are found in woodland habitats. The Cooper's hawk is a wide-ranging species in North America that breeds from British Columbia eastward to Nova Scotia and southward to northern Mexico and Florida. This species preys primarily on birds, but are known to eat small mammals, reptiles, amphibians, insects and fish. The Cooper's hawk is expected to forage on the site and the scattered oaks along Drainage A provides potential nesting habitat, although no nests were observed during GLA's on-site survey. While the project would impact potential Cooper's hawk nesting and foraging habitat, the Cooper's hawk is wide-spread and common, therefore, the project would not have any potentially significant impacts to the Cooper's hawk.

Nesting Birds Protected Under the Migratory Bird Treaty Act (MBTA)

The project site includes vegetation (trees, shrubs, etc.) that is suitable for nesting birds. Because there is the potential for migratory birds to nest ion the site the removal of the existing vegetation during project grading could impact any birds that are nesting on the site, which would have a potential significant impact. The following measures are recommended to reduce potential impacts to the removal of on-site vegetation during nesting season to less than significant.

Mitigation Measure No. 6 If feasible, all vegetation shall be removed outside of the nesting season, which is generally recognized from February 15 to August 31 (potentially earlier for raptors). If vegetation is removed during the recognized nesting season, a qualified biologist shall conduct a nesting bird survey no more than three (3) days prior to the removal of any vegetation. If active nests are identified, the biologist shall flag the vegetation that contains active nests. The biologist shall establish appropriate buffers around all active nests to be avoided until the nests are no longer active and the young have fledged or the biologist determines the nest has failed. Buffers shall be based on the species identified, but generally shall be a minimum of 50 feet for non-raptors and 300 feet for raptors and California gnatcatchers.

b) ***Have substantial adverse impact on any riparian habitat or other natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?*** **Less Than Significant With Mitigation.** The project would result in impacts to approximately 0.33-acres of non-wetland riparian habitat, including 0.29-acres of arroyo willow and 0.29-acres of mulefat scrub that is under the jurisdiction of the U.S. Army Corp of Engineers (Corps), California Department of Fish and Wildlife (CDFW) and the State of California Regional Water Quality Control Board as discussed below.

Jurisdictional Resources

Corps Jurisdiction

The project site includes two drainage areas that were created during the construction of Olympiad Road west of the site. Storm drains were constructed to discharge stormwater from Olympiad Road onto the site during the construction of Olympiad Road. Figure 14 shows the two drainage areas on the site that are considered to be Corps jurisdictional waters. Drainage A is an intermittent drainage and tributary to Arroyo Trabuco Creek that is east of the project. Drainage A is an intermittent drainage course that is tributary to San Juan Creek, which is tributary to the Pacific Ocean and thus, a Water of the U.S. Drainage B is an ephemeral drainage that only flows in direct response to rainfall and does not meet the definition of Waters of the U.S. under the Navigable Waters Protection Rule.

Drainage A

Drainage A originates from a storm drain that discharges near the south-central portion of the site and includes 0.215-acres of Corps jurisdiction waters. Of the 0.215-acres, approximately 0.063-acres is jurisdictional wetland. The drainage flows east from the site and ultimately discharges into Arroyo Trabuco Creek approximately 600 feet southeast of the project. This drainage receives nuisance water that enters the site from the storm drain outfall and portions of the drainage exhibit standing or flowing water. Approximately 50 feet downstream of the outfall, a stand of southern cattail (*Typha domingensis*, OBL) starts and extends to where yerba mansa (*Anemopsis californica*, OBL) becomes dominant in the understory with a canopy of non-native Mexican fan palms (*Washingtonia robusta*, FACW). Soils in the area exhibit hydric characteristics including Hydrogen Sulfide (A4), and Redox Dark Surface (F6). Indicators for wetland hydrology include standing water and saturation in the upper 12 inches. The wetland varies in width from 4 feet to 40 feet. Downstream of the wetland the drainage ranges in width from 4 feet to 12 feet and the presence of an OHWM is indicated by the shelving and debris wrack.

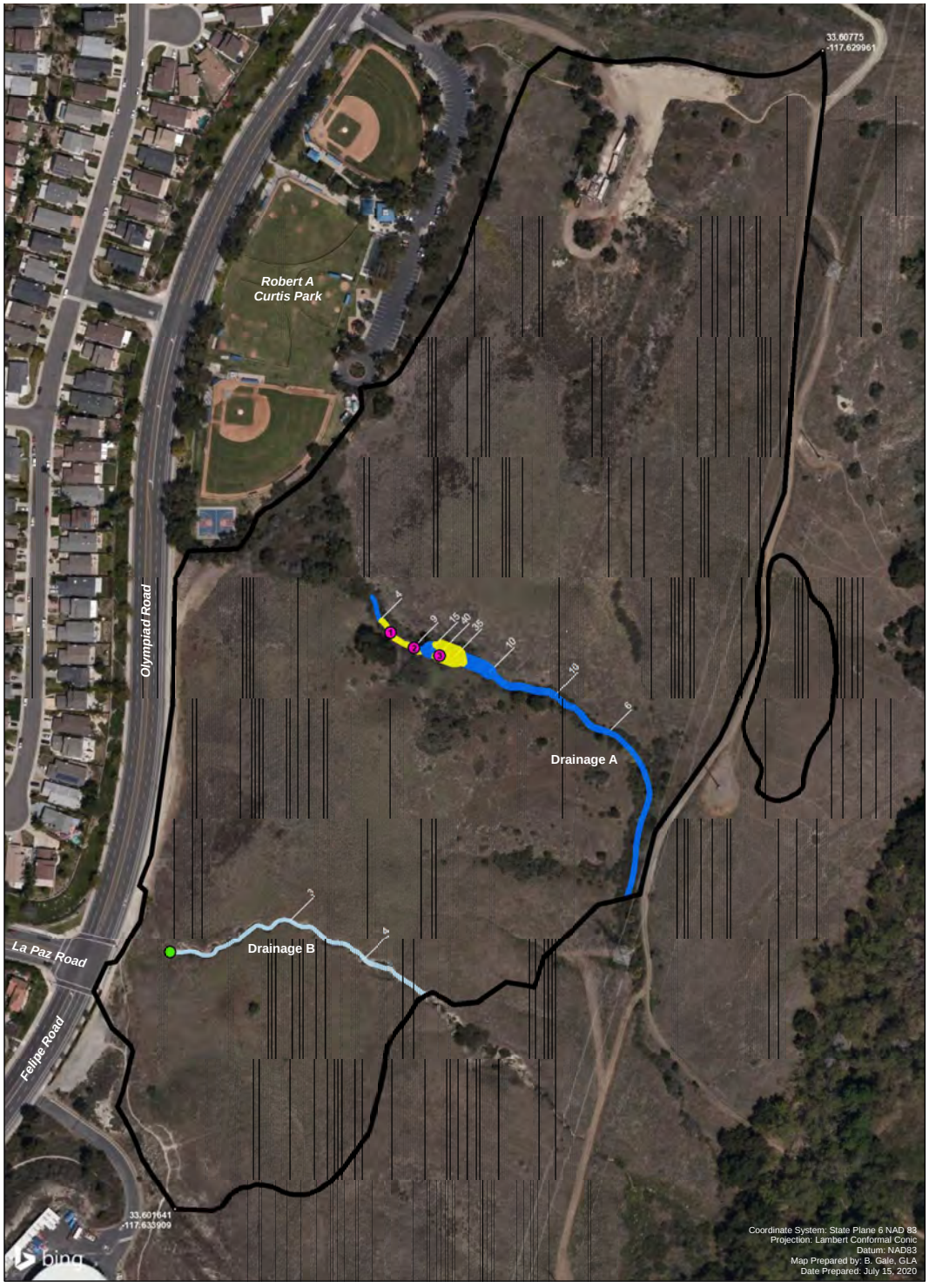


Figure 14

Corps Jurisdictional Map

Below the wetland the channel includes Spanish sunflower (*Pulicaria paludosa*), upland non-native grasses and forbs or is unvegetated. Below the wetland the drainage banks support upland shrubs including a predominance of coyote brush (*Baccharis pilularis*, UPL).

Drainage B

Drainage B is a deep erosional gully that extends approximately 564 feet from near the west project boundary to the point where the feature exits the site at the east project boundary. Intermittent flows in this drainage ultimately discharge into Arroyo Trabuco Creek approximately 900 feet east of the project site. Drainage B is not under the Navigable Waters Protection Rule of the Corps due to its ephemeral flows. Drainage B has a depth of up to approximately 30 feet and indicators for an Ordinary High Water Mark (OHWM) are limited to the very bottom of the gully and range from 3 feet to 5 feet in width. The gully bottom is not vegetated and indicators for the presence of an OHWM consists of shelving and changes in the character of the soil.

Table 9 shows the US Army Corp of jurisdiction of the two on-site drainage areas.

Table 9
Summary of Corps Jurisdiction of Drainage A and B

Name	Type	Acres	Linear Feet
Drainage A	Wetland	0.063	151
Drainage A	Non-Wetland Waters	0.152	748
Drainage B	Not Jurisdictional	NA	NA
	Total	0.215	899

California Department of Fish and Wildlife (CDFW) Jurisdiction

Drainage A

CDFW jurisdiction includes all areas of Corps jurisdiction and extends to the top of the drainage banks, or the edge of the riparian canopy and totals approximately 0.540-acres, which approximately 0.217-acres consists of vegetated riparian habitat as shown in Figure 15. Riparian vegetation includes the southern cattail (*Typha domingensis*, OBL), yerba mansa (*Anemopsis californica*, OBL) and includes non-native Mexican fan palms (*Washingtonia robusta*, FACW) a few coast live oaks (*Quercus agrifolia*, UPL), and mulefat scrub in the lower portions of the drainage.

Drainage B

Drainage B is a deep erosional gully that ranges from 10 to 20 feet in depth and totals 0.182-acres. The gully is not vegetated and indicators for flow consist of shelving and changes in the character of the soil.

Figure 15

California Department of Fish & Wildlife Jurisdictional Map

Table 10 shows the CDFW jurisdiction of the two on-site drainage areas.

Table 10
Summary of California Department of Fish & Wildlife Jurisdiction of Drainage A and B

Name	Type	Acres	Linear Feet
Drainage A	Riparian	0.323	364
Drainage A	Non-Riparian Stream	0.217	535
Drainage B	Non-Riparian Stream	0.182	564
	Total	0.215	1,463

Regional Water Quality Control Board Jurisdiction (RWQCB)

Drainage A

Drainage A originates from a storm drain that discharges near the south-central portion of the site and includes approximately 0.277-acres of RWQCB jurisdiction, which approximately 0.06-acres consist of jurisdictional wetland as shown in Figure 16. Approximately 50 feet downstream of the outfall, a stand of southern cattail (*Typha domingensis*, OBL) starts and extends to where yerba mansa (*Anemopsis californica*, OBL) becomes dominant in the understory with a canopy of non-native Mexican fan palms (*Washingtonia robusta*, FACW). Soils in the area exhibit hydric characteristics, including Hydrogen Sulfide (A4), and Redox Dark Surface (F6). Indicators for wetland hydrology include standing water, and saturation in the upper 12 inches. The wetland varies in width from 4 to 40 feet. Downstream of the wetland, the drainage ranges in width from 4 to 12 feet and the presence of an OHWM is indicated by the shelving and debris wrack.

Drainage B

Drainage B is a deep erosional gully that extends 564 feet from near the western site boundary to where it exits the site and ultimately discharges into the Arroyo Trabuco Creek. The gully is up to approximately 30 feet deep and the depth at top of the bank ranges from 10 to 20 feet and approximately 0.182-acres of RWQCB jurisdiction water. The gully is not vegetated and indicators for flow consist of shelving and changes in the character of the soil.

Table 11 shows the RWQCB jurisdiction of the two on-site drainage areas.

Table 11
Summary of Regional Water Quality Control Board Jurisdiction of Drainage A and B

Name	Type	Acres	Linear Feet
Drainage A	Wetland	0.063	151
Drainage A	Non-Wetland Stream	0.217	748
Drainage B	Non-Riparian Stream	0.182	564
	Total	0.462	1,463

Figure 16

Regional Water Quality Control Board Jurisdictional Map

The project would impact approximately 0.33-acres of non-wetland riparian habitat, including approximately 0.29-acres of arroyo willow and approximately 0.29-acres of mulefat scrub, subject to CDFW Section 1602 jurisdiction. The following measure is recommended to reduce project impacts to 0.33 acre of woody riparian to less than significant.

Mitigation Measure No. 7 Prior to the start of grading, the City of Mission Viejo shall establish approximately 0.29-acres of mulefat scrub and approximately 0.04-acres of willow scrub within the City-owned 30.0-acres of land adjacent to and north of the project site. The land would be transferred to the SSHCP Reserve for long-term conservation. The City shall have a resource specialist familiar with restoration of riparian habitat prepare a Habitat Mitigation and Monitoring Plan that includes the following components: 1) site selection, 2) site preparation, 3) plant palette, 4) maintenance methods, 5) monitoring methods, 6) performance standards, and 7) contingency measures. The Plan shall be submitted to the City of Mission Viejo, County of Orange, and USFWS for approval prior to initiation of the habitat establishment.

c) ***Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filing, hydrological interruption, or other means?*** **Less Than Significant With Mitigation.** A detailed discussion of the potential impacts to wetlands on the project site is included in the discussion in section "IV.b)" of this MND. Based on the analysis, the project would impact approximately 0.07-acres of State and federal wetlands that total approximately 0.07-acres (0.05-acres of yerba mansa meadow and 0.02-acres of southern cattail). The following measure is recommended to reduce potential wetland impacts to less than significant.

Mitigation Measure No. 8 Prior to the start of grading, the City of Mission Viejo shall establish approximately 0.07-acres of wetland habitat, including 0.05-acres of yerba mansa meadow and 0.02-acres of southern cattail on City-owned lands resulting in a 1:1 replacement. The land would be transferred to the SSHCP Reserve for long-term conservation. The City shall have a resource specialist familiar with restoration of wetlands prepare a Habitat Mitigation and Monitoring Plan that includes the following components: 1) site selection, 2) site preparation, 3) plant palette, 4) maintenance methods, 5) monitoring methods, 6) performance standards, and 7) contingency measures. The Plan shall be submitted to the City of Mission Viejo, County of Orange, and USFWS for approval prior to initiation of the habitat establishment.

d) ***Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*** **Less Than Significant Impact.** Arroyo Trabuco Creek is located approximately 350 east of the project site at its closest point. Arroyo Trabuco Creek is identified in the Orange County SSHCP as part of a linkage system from Casper's Regional Park that is located approximately six miles east of the project to O'Neill Regional Park that is located approximately 350 feet east of the project. Riparian corridors are typically used by wildlife as movement corridors and the Arroyo Trabuco Creek drainage links inland areas of Orange County with the Pacific Ocean. The limits of the project are approximately 400 feet or more from the edge of the riparian habitat associated with

Trabuco Creek with the closest area of the project site approximately 350 feet west of Trabuco Creek. The project site is also topographically separated from Trabuco Creek by steep slopes that provide a vertical separation from the creek. As a result, the project would not significantly impact or impede the movement of wildlife or wildlife nursery sites associated with Arroyo Trabuco Creek.

e) ***Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?*** **No Impact.** There are no City or County ordinances or policies that would protect any biological resources on the site, including trees. The project would not conflict with any City or County biological resource policies or ordinances.

f) ***Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*** **Less Than Significant With Mitigation.** As discussed in section "IV.a)" of this MND, the project would impact approximately 13.07-acres of land that is owned by the County of Orange and part of the SSHCP Habitat Reserve. The County land is also designated as Critical Habitat for the coastal California gnatcatcher. The 13.07-acres includes a predominance of non-native vegetation alliances, including approximately 11.94-acres of non-native mustard fields and very limited areas of native habitat, including approximately 0.39-acres of coyote brush scrub, approximately 0.29-acres of mulefat scrub, approximately 0.22-acres of purple needlegrass grassland, approximately 0.02-acres of lemonade berry scrub, approximately 0.12-acres of coast live oak, approximately 0.03-acres of pampas grass and approximately 0.02-acres of elderberry scrub as shown in Table 12 below.

Table 12
Summary of Vegetation Impacts on County/HCP/Critical Habitat Land

Vegetation Type	MCV II	Total (acres)	Impacts
Baccharis pilularis Shrubland Alliance – Coyote brush scrub	S5	0.39	0.39
Baccharis salicifolia Shrubland Alliance – Mulefat thickets	S4	0.29	0.29
Brassica (*nigra*) and Other Mustards Semi-Natural Herbaceous Stands – Upland mustards	NA	11.93	11.67
Cortaderia (*jubata, selloana*) Semi-Natural Herbaceous Stands – Pampas grass patches	NA	0.03	0.03
Nasella pulchra Herbaceous Alliance – Purple needle grass grassland	S3?	0.22	0.22
Quercus agrifolia Woodland Alliance – Coast live oak woodland	S4	0.12	0.12
Rhus integrifolia Shrubland Alliance – Lemonade berry scrub	S3	0.02	0.02
Salix lasiolepis Shrubland Alliance – Arroyo willow thickets	S4	0.04	0.04
Sambucus nigra Shrubland Alliance – Blue elderberry stands	S3	0.02	0.02
	Total	13.07	12.80

The loss of land, including a predominance of non-native mustard fields in the SSHCP Habitat Reserve and designated Critical Habitat would be a significant impact. The implementation of Mitigation Measure No. 4 would reduce potential impacts to the SSHCP Habitat Reserve to less than significant.

V. CULTURAL RESOURCES: Would the project:

a) ***Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?*** **No Impact.** A cultural resource assessment[6] was prepared for the project site and a copy is included in Appendix C.

There are no buildings on the project site. A records search and site survey did not identify any historic period buildings on the site.[7] Therefore, the project would not have a historical resource impact.

b) ***Cause a substantial adverse change in the significance of a unique archaeological resource as defined in §15064.5?*** **Less Than Significant With Mitigation Incorporated.** A cultural resources records search, field survey, subsurface test excavation, Sacred Lands File search with the Native American Heritage Commission, and a paleontological overview were conducted for the project site. The records search revealed that six cultural resource studies have been conducted that resulted in the recording of 22 cultural resources within a one-mile radius of the project site. All of the previous cultural resource studies assessed the project site and one cultural resource was previously identified and is partially within the project site.

During the field survey on the project site and subsurface test excavation, the cultural consultant did not identify any cultural resources on the site. However, since a prehistoric resource has been previously identified within the boundary of the site, the project site is considered sensitive for buried archaeological resources. Therefore, the following mitigation measure is recommended to reduce potential cultural resource impacts to less than significant.

Mitigation Measure No. 9 An archeologist shall be retained to observe grading and construction activities and conduct salvage excavation of any archeological resources deemed necessary by the archaeologist. The archeologist shall be present at a pre-grading conference, establish procedures for archeological resource surveillance during grading and construction, and establish, in cooperation with the City, procedures to temporarily halt or redirect all work to allow the sampling, identification and evaluation of all resources as deemed necessary by the archaeologist. If additional or unexpected archeological features are discovered, the archeologist shall report such findings to the Mission Viejo Community Development Director. If the archeological resources are found to be significant, the archeologist shall determine the appropriate actions, in cooperation with the City that shall be taken for exploration and/or salvage. These actions, as well as final mitigation and disposition of the resources, shall be subject to the approval of the Community Development Director.

c) ***Disturb any human remains, including those interred outside of formal cemeteries?*** **Less Than Significant With Mitigation.** The project site is not presently used as a formal cemetery and has not been used as a cemetery in the past. There is no information in either the City of Mission Viejo or

[6] Cultural Resources Assessment, The Lower Curtis Park Mass Grading Project, BCR Consulting, LLC, November 18, 2019.
[7] Ibid, page ii.

County of Orange General Plans that indicates a cemetery existed or could exist on the site. Although no human remains are anticipated to be present, should human remains be encountered the following measure is recommended to reduce human remain impacts to less than significant.

Mitigation Measure No. 10 If human remains are encountered during project grading, 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 shall be notified of the find immediately. If the remains are determined to be prehistoric, the 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.

VI. ENERGY: Would the project:

a) ***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.** Information found in this section, as well as other aspects of the project's energy implications, are discussed in greater detail elsewhere in this MND, including section "VIII" (Greenhouse Gas Emissions) and section "XVII" (Transportation) of this MND.

Construction-Related Energy Consumption

Estimated Energy Consumption

Heavy-duty construction equipment associated with on-site grading and importing dirt from the freeway to the project site would include, excavators, graders, dozers, scrapers, and semi-trucks. For the purposes of this assessment, it is assumed that the construction equipment would be diesel-fueled due to the speculative nature of specifying the amounts and types of non-diesel equipment that might be used and the difficulties in calculating the energy that would be consumed by the non-diesel equipment.

The number of construction workers required to grade the site would vary based on the phase of construction and the amount of dirt being imported. The transportation fuel required by construction workers to travel to and from the site would depend on the number of work trips estimated for the duration of the construction activity. A 2007 study by the California Department of Transportation (Caltrans) estimates the statewide average fuel economy for all vehicle types (automobiles, trucks, and motorcycles) in the year 2020 is 18.78 miles per gallon.[8] Assuming construction worker vehicles have an average fuel economy consistent with the Caltrans study and each construction worker commutes an average of 20 miles a day to and from the site, the maximum 10 workers on-site during each phase of the project is estimated to consume approximately 53 gallons of gasoline a day. Assuming all 10 construction workers are employed at the site for a year (52 weeks), the fuel used by construction workers commuting to the site is approximately 345 barrels (13,780 gallons) of gasoline and represents

[8] 2007 California Motor Vehicle Stock, Travel and Fuel Forecast, California Department of Transportation, Table 1, (2008).

less than 0.00010 percent of the statewide transportation gasoline consumption in 2016, which is the latest year that data is available.[9]

Construction equipment fuels (e.g., diesel, gasoline, natural gas) would be provided by local or regional suppliers and vendors. A temporary water supply, primarily for fugitive dust suppression and street sweeping, would also be supplied by the Santa Margarita Water District. No electricity would be consumed by the project.

Energy Conservation: Regulatory Compliance

The project would utilize construction contractors that must comply with all applicable CARB regulations governing the accelerated retrofitting, repowering, or replacement of heavy-duty diesel on- and off-road equipment. CARB has adopted an Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other TACs. Compliance with the above anti-idling and emissions regulations would result in a more efficient use of construction-related energy and minimize or eliminate wasteful and unnecessary consumption of energy.

With respect to solid waste, CALGreen requires 65% of most construction and demolition waste be diverted from a landfill. The project would generate minimal, if any, debris during site grading. The dirt that is moved to grade the site to accept the imported dirt would be retained and incorporated with the imported dirt to develop the dirt pad.

Anticipated Energy Consumption

The project would not consume any electricity or natural gas during project grading.

Estimated Energy Consumption

Once the dirt is imported and a pad is graded as shown in Figure 5, the project would be completed and would not consume any energy while it is vacant. The project would not have any significant energy consumption impacts.

b) ***Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*** **No Impact.** The project would not conflict with or obstruct state or local renewable energy or energy efficiency requirements.

VII. GEOLOGY AND SOILS: Would the project:

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

i. ***Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)*** **Less Than Significant Impact.** The project site, like the majority of southern California, is located in a seismically active area. While the project site is in a seismically active area

[9]California 2015 Transportation gasoline consumption – 348,830 thousand barrels; https://www.eia.gov/state/seds/sep_fuel/html/pdf/fuel_mg.pdf

it is not located within a designated Alquist-Priolo Earthquake Fault Zone. The nearest known active fault is the San Joaquin Hills Blind Thrust that is located approximately 3.9 kilometers (2.4 miles) west of the site. The site is also within approximately 17.7 kilometers (11 miles) of the Newport-Inglewood fault. The project site would be subject to earthquake ground motions in the future given the proximity of the site to the active and potentially active faults in the region, but there are no known faults on the site.

While there are faults in the region that could generate moderate to significant ground shaking at the site, the project would not be exposed to any greater risks of an earthquake fault rupture than other property in the immediate vicinity of the project. The project would not be significantly impacted by faulting.

ii. ***Strong seismic ground shaking?*** **Less Than Significant Impact.** Because the project site is located in southern California and an active seismic area, there is the potential for ground motion at the site. As discuss in section "VII.a)i." of this MND, seismic ground shaking at the site would not significantly impact the graded pad. The project would not be significantly impacted by seismic ground shaking.

iii. ***Seismic-related ground failure, including liquefaction?*** **Less Than Significant Impact.** The project site is located in a state designated liquefaction zone. Sandy soil below the ground surface is susceptible to liquefaction during major earthquakes. Therefore, the project could be impacted by liquefaction. Although the site could be subject to liquefaction, the graded pad would not be significantly impacted due to liquefaction. Should the graded pad be impacted due to liquefaction, the pad could be regraded to correct any physical changes to the pad. The project would not be significantly impacted by liquefaction or other seismic ground failure.

iv. ***Landslides?*** **Less Than Significant Impact.** The project site is located on a hillside with approximately 7:1 to 2.5:1 slopes with an average slope of less than 30 percent. Some remedial grading to the existing hillsides on the site would be required to provide access to the site from Olympiad Road at La Paz Road and Curtis Park to provide an area for imported dirt to be dumped and graded into a pad. Once the existing hillsides are graded and stabilized the site would not have any significant landslide impacts.

b) ***Result in substantial soil erosion or loss of topsoil?*** **Less Than Significant Impact.** The City would require the grading contractor to install and maintain all applicable City required short-term construction soil erosion control measures to reduce and minimize soil erosion impacts throughout project grading. The contractor would be required to submit a Storm Water Pollution Prevention Plan (SWPPP) to identify all Best Management Practices (BMPs) that would be incorporated into the project prior to the start of grading and maintained to completion of all construction activities to reduce and minimize soil erosion. The City has standard soil erosion protection measures that the contractor would be required to install and maintain throughout grading to minimize off-site soil erosion. The City also proposes semi-permanent sediment traps and desilting basins throughout the site and a bio-retention at the east side of the site as long-term soil erosion control measures to minimize and reduce potential soil erosion impacts to less than significant.

c) ***Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?*** **Less Than Significant Impact.** There are no known unstable geologic or soil conditions either on or adjacent to the site that would impact the project, other than liquefaction that

is discussed in section "VI.a.iii" of this MND. As discussed, the project would not be significantly impacted by liquefaction. The project would have any significant unstable soil impacts.

d) ***Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?*** **Less Than Significant Impact.** Expansive soils are known to exist in the project vicinity. If expansive soils are present on the site, the grading that would be necessary to grade the imported dirt into a pad would not be significantly impacted. The project would not be significantly impacted by expansive soil, if present.

e) ***Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?*** **No Impact.** The grading contractor would be required by the City to provide portable toilets during project grading. Therefore, the project would not require a septic tank or any other type of on-site wastewater disposal system. The project would not impact a wastewater disposal system.

f) ***Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*** **Less Than Significant Impact.** Based on the Mission Viejo General Plan and the County of Orange General Plan[10], paleontological resources could be present on the site. A records search was conducted to determine if any paleontological sites have been recorded on the project site.[11] While no paleontological sites have been recorded within the project site or one mile radius of the site, areas with similarly mapped Pleistocene allluvial sediments throughout southern California are known to have paleontological resources. Therefore, any fossil specimens recovered from the alluvial sediments on the project site would be scientifically significant.[12] The requirement for an archaeologist to be present during project excavation activities required by Mitigation Measure No. 9 above would reduce potential paleontological impacts by the project to less than significant.

VIII. GREENHOUSE GAS EMISSIONS: Would the project:

a) ***Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*** **Less Than Significant Impact.** A greenhouse gas report[13] was prepared for the project and a copy attached in Appendix D.

The earth's climate has always been in the process of changing, due to many different natural factors. These factors include changes in the earth's orbit, volcanic eruptions, and varying amounts of energy released from the sun. Differences such as these have caused fluctuations in the temperature of the climate, ranging from ice ages to long periods of warmth. However, since the late 18th century, humans have had an increasing impact of the rate of climate change, beginning with the Industrial Revolution.

The process of heating is referred to as 'global warming,' although the National Academy of Sciences prefers the terms 'climate change', which includes global warming as well as other environmental changes, in addition to increasing temperatures. Some of these effects include changes to rainfall, wind, and current weather patterns, as well as snow and ice cover, and sea level.

[10] Mission Viejo General Plan, Conservation/Open Space Element, Figure COS-1, page 17 and County of Orange Chapter VI Resources Element, Figure VI-9.
[11] Cultural Resources Assessment, The Lower Curtis Park Mass Grading Project, BCR Consulting, LLC, November 18, 2019, Western Science Center, letter dated September 3, 2019, Appendix C.
[12] Ibid.
[13] Greenhouse Gas Assessment for the Lower Curtis Park Expansion, City of Mission Viejo, Greve & Associates, September 27, 2019.

"Greenhouse gases" (so called because of their role in trapping heat near the surface of the earth) emitted by human activity are implicated in global climate change, commonly referred to as "global warming." Greenhouse gases contribute to an increase in the temperature of the earth's atmosphere by transparency to short wavelength visible sunlight, but near opacity to outgoing terrestrial long wavelength heat radiation in some parts of the infrared spectrum. The principal greenhouse gases (GHGs) are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. For purposes of planning and regulation, section 15364.5 of the California Code of Regulations defines GHGs to include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride.

Global GHG emissions are measured in million metric tons of carbon dioxide equivalent ("MMTCO2EQ") units. A metric ton is approximately 2,205 lbs. Some GHGs emitted into the atmosphere are naturally occurring, while others are caused solely by human activities. The principal GHGs that enter the atmosphere due to human activities include:

- Carbon dioxide (CO2) enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), agriculture, irrigation, and deforestation, as well as the manufacturing of cement.
- Methane (CH4) is emitted through the production and transportation of coal, natural gas, and oil, as well as from livestock. Other agricultural activities influence methane emissions as well as the decay of waste in landfills.
- Nitrous oxide (N2O) is released most often during the burning of fossil fuel at high temperatures. This greenhouse gas is caused mostly by motor vehicles, which also include non-road vehicles, such as those used for agriculture.
- Fluorinated gases are emitted primarily from industrial sources, which often include hydrofluorocarbons (HRC), perfluorocarbons (PFC), and sulfur hexafluoride (SF6). Though they are often released in smaller quantities, they are referred to as High Global Warming Potential Gases because of their ability to cause global warming. Fluorinated gases are often used as substitutes for ozone depleting substances.

These gases have different potentials for trapping heat in the atmosphere, called global warming potential ("GWP"). For example, one pound of methane has 25 times more heat capturing potential than one pound of carbon dioxide. When dealing with an array of emissions, the gases are converted to carbon dioxide equivalents (CO2EQ) for comparison purposes. The GWPs for common greenhouse gases are shown in Table 13.

Table 13
Global Warming Potentials (GWP)

Gas	Global Warming Potential
Carbon Dioxide	1
Methane	25
Nitrous Oxide	198

Source: IPCC, "Fourth Assessment Report, Climate Change 2007, AR4".

Federal Plans, Policies, Regulations, and Laws

The federal government began studying the phenomenon of global warming as early as 1978 with the National Climate Protection Act, 92 Stat. 601, which required the President to establish a program to "assist the nation and the world to understand and respond to natural and man-induced climate processes and their implications." The 1987 Global Climate Protection Act, Title XI of Pub. L. 100-204, directed the U.S. EPA to propose a "coordinated national policy on global climate change," and ordered the Secretary of State to work "through the channels of multilateral diplomacy" to coordinate efforts to address global warming.

California State Plans, Policies, Regulations, and Laws

The cornerstone of California's actions to address global climate change is Assembly Bill 32, the California Global Warming Solutions Act of 2006 (Health and Safety Code § 38500 et seq.). In September 2006, Governor Arnold Schwarzenegger signed AB 32, the California Global Warming Solutions Act of 2006. The law created a comprehensive, multi-year program to reduce greenhouse gas (GHG) emissions in California.

Executive Order B-30-15. Governor Edmund G. Brown Jr. on April 29, 2015 issued an executive order to establish a California greenhouse gas reduction target of 40 percent below 1990 levels by 2030. This is the most aggressive benchmark enacted by any government in North America to reduce dangerous carbon emissions over the next decade and a half. "With this order, California sets a very high bar for itself and other states and nations, but it's one that must be reached - for this generation and generations to come," said Governor Brown.

California is on track to meet or exceed the current target of reducing greenhouse gas emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32). California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent under 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius - the warming threshold at which scientists say there will likely be major climate disruptions such as super droughts and rising sea levels.

SCAQMD Plans, Policies, Regulations and Laws

The SCAQMD has promoted a number of programs to combat climate change over the past 20 years. For instance, SCAQMD has promoted energy conservation, low-carbon fuel technologies (natural gas vehicles; electric-hybrids, hydraulic-hybrids, and battery-electric vehicles), renewable energy, vehicle miles traveled (VMT) reduction programs, and market incentive programs.

City of Mission Viejo Plans, Policies, Regulations, and Laws

The City adopted the "Mission Viejo Sustainability Action Plan (SAP)," (March 2013). The SAP, also known as a Climate Action Plan or GHG Reduction Plan, is a tool that cities throughout California use to help reduce dependency on fossil fuels and nonrenewable energy and to decrease GHG emissions. In Mission Viejo, most GHG emissions are generated from the combustion of gasoline in motor vehicles. Energy used to heat and cool buildings, distribute water supply and solid waste related

emissions also contribute to the City's GHG emissions. The SAP offers strategies to provide local residents and businesses tools to help them move toward a lower-carbon future.

The SAP identifies only voluntary GHG reduction measures that would apply to different types of future projects. To use GHG reduction measures to enable CEQA streamlining for GHG environmental assessment, the City must incorporate them as mitigation measures in future discretionary projects found to be consistent with the General Plan. If the City elects to facilitate this process, the City may develop a checklist of potential mitigation measures based on voluntary SAP measures. At this time the City has not developed a checklist for project to reduce GHG emissions and projects must show that the GHG emissions that are generated would be less than significant.

Significance Thresholds

The significance thresholds used for this project are based on SCAQMD's suggested tiered approach, which is consistent with CARB's recommendations. The significance of the project is be determined based on compliance with Tier 3 and 4 requirements of AB 32. The project would be considered to have a significant impact if total annual GHG emissions exceed 3,000 MT CO_2EQ. If the 3,000 threshold is exceeded then the annual emissions per service population (the number of residents for residential projects and persons employed for commercial projects) should not exceed 4.6 MT CO_2EQ/yr/person, or a significant impact will be determined. Note that the methodology recommends that total construction emissions be amortized over a 30-year period or the project's expected lifetime if it is less than 30 years.

Construction Emissions

The primary source of GHG emissions generated by construction activities is from the use of diesel-powered construction equipment. Typical emission rates for construction equipment were obtained from CalEEMod (California Emissions Estimator Model). CalEEMod is a computer program that can be used to estimate emissions from construction and operational activities. Since the project only includes importing dirt and grading the dirt into a pad and the future use of the site is unknown at this time, operational greenhouse gas emissions are not included in this analysis.

Using CalEEMod, the project construction emissions are shown in 0. The emissions represent the total level of emissions based on the construction schedule. According to the SCAQMD's CEQA Handbook (Greenhouse Gas CEQA Significance Threshold Stakeholder Working Group #5, August 27, 2008), construction emissions are amortized over the life of the project, defined by SCAQMD as 30 years. Therefore, the project's annualized construction emissions are compared to the applicable GHG significance threshold of 3,000 MT CO_2EQ.

As shown in Table 14, the GHG emissions for the project would be approximately 55.7 MTCO2EQ per year and less than the SCAQMD Tier 3 screening threshold of 3,000 MTCO2EQ per year. Therefore, the project would not have any significant greenhouse gas impacts.

Table 14
Construction GHG Emissions (Metric Tons Per Year)

	CO2	CH4	N2O	CO2EQ
Total Construction Emissions (Metric Tons)	1663.5	0.3	0.0	1671.0
Averaged Over 30 Years (Metric Tons Per Year)	55.5	0.0	0.0	55.7

MTCO2EQ = metric tons equivalent carbon dioxide (CO2).

b) ***Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*** **Less Than Significant Impact.** As stated previously, the City has an adopted SAP. The SAP identifies only voluntary GHG reduction measures that would apply to different types of future projects and at this time the City has not developed a checklist for projects to reduce GHG emissions and must show that the GHG emissions that are generated would be less than significant.

The California Governor issued Executive Order S-3-05, GHG Emission, in June 2005, which established the following reduction targets:

- 2010: Reduce greenhouse gas emissions to 2000 levels
- 2020: Reduce greenhouse gas emissions to 1990 levels
- 2050: Reduce greenhouse gas emissions to 80 percent below 1990 levels.

In 2006, the California State Legislature adopted AB 32, the California Global Warming Solutions Act of 2006 that requires CARB to adopt rules and regulations that would achieve GHG emissions equivalent to statewide levels in 1990 by 2020 through an enforceable statewide emission cap, which were phased in starting in 2012.

The project's estimated GHG emissions meet the threshold for compliance with Executive Order S-3-05. The project's emissions also comply with the goals of AB 32. Because the project meets the current interim emissions targets/thresholds established by SCAQMD the project would also be meet the reduction target of 40 percent below 1990 levels by 2030 mandated by SB-32. Furthermore, the majority of the post 2020 reductions in GHG emissions are addressed via regulatory requirements at the State level and the project would be required to comply with the regulations as they come into effect.

At a level of 55.7 MTCO3EQ per year, the project's GHG emissions are below the SCAQMD Tier 3 draft screening threshold of 3,000 $MTCO_2e$ per year for all land use types and in compliance with applicable goals of the City's SAP and AB32. Therefore, the project would not impact and conflict with any applicable plan, policy, or regulations to reduce GHG emissions.

IX. HAZARDS AND HAZARDOUS MATERIALS: Would the project:

a) ***Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*** **No Impact.** The project proposes to grade the site and import dirt to construct an earthen pad for future recreational use. Project grading and hauling dirt to the site from the I-5 freeway would not create a significant hazard to the public. The project does not propose the use or disposal of any hazardous materials. The project would not have any significant impacts due to the transport or use of hazardous materials.

b) ***Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*** **No Impact.** There are no uses or activities associated with the project that would create or release hazardous materials into the environment. The project would not have any hazard impacts to the public or environment involving the release of a hazardous material.

c) ***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.** Philip J. Reilly Elementary, located at 24171 Pavion is located approximately one-half mile northwest of the site and the closest existing school to the project site. There are no schools proposed for development within one-quarter mile of the project. The project would not emit any hazardous materials during project grading and impact any existing or proposed school within one-quarter mile of the project.

d) ***Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, will create a significant hazard to the public or environment?*** **No Impact.** The project site is not listed as a hazardous material site on the "Cortese" list pursuant to Government Code Section 65962.5. The project would not have a hazardous impact to the public or environment with the development of the site per Government Code Section 65962.5.

e) ***For a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport, will the project result in a safety hazard or excessive noise for people working or residing in the project area?*** **No Impact.** The closest airport to the site is John Wayne Airport (JWA), which is approximately fourteen miles northwest of the project. Because the project is more than two miles from JWA, the project construction workers would not be impacted by a safety hazard or excessive noise at JWA.

f) ***Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*** **No Impact.** All on-site construction activity would be located on city property and away from any adopted emergency access route. Although Olympiad Road, which is adjacent to and west of the project, is used by city emergency response vehicles for an emergency route it is not an adopted emergency route. The project would not interfere with or impact the ability of Olympiad Road to continue to serve as an emergency route for emergency personnel. Trucks hauling dirt to the project site from I-5 would, in the event of an emergency, pull over to the side of the road as required by California Motor Vehicle Code Division 11 Rules of the Road, Chapter 4 Right-of-Way, Section 21806. The project would not impact any emergency evacuation routes in Mission Viejo.

g) ***Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?*** **Less Than Significant Impact.** Based on the analysis in section "XX.a)" of this MND, the project site is located in a Local Responsibility Area (LRA) Very High Fire

Hazard Severity Zone. The project site is not located in a Moderate, High or Very High Fire Hazard Severity Zone in a State Responsibility Area (SRA). Because the project site is located within a LRA Very High Fire Hazard Severity Zone, any development is required to provide improved development standards for fire protection. Since the project only includes grading and does not propose any development, the project is not subject to or required to provide any special fire protection design features in addition to any fire protection requirements by the Fire Code. However, the project would be required to provide all applicable fire safety measures required by the Fire Code.

X. HYDROLOGY AND WATER QUALITY: Would the project:

a) ***Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*** **Less Than Significant Impact.** Silt could be generated from the site during site demolition, project grading and the construction of the project, especially if construction occurs during the winter months when rainfall typically occurs. The City would be required by the state to prepare a Storm Water Pollution Prevention Plan (SWPPP) in accordance with California State Water Resources Control Board (State Water Board), Construction General Permit Order 2009-0009-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS618030 (Permit). The SWPPP would require the grading contractor to implement Best Available Technology Economically Achievable measures to reduce and eliminate storm water pollution from all construction activity through the implementation of Best Management Practices (BMPs).
The purpose of the SWPPP is to identify pollutant sources that may affect the quality of the storm water that would be discharged from the site during all construction activity. The SWPPP would require the grading contractor to identify, construct, and implement the storm water pollution prevention measures and BMPs that are necessary to reduce pollutants that are present in the storm water that is discharged from the site during construction. The SWPPP would include specific BMPs that must be installed and implemented prior to the start of any on-site grading. The installation and maintenance of all required BMPs by the grading contractor during construction would reduce potential water quality impacts to less than significant.

The City would prepare a Water Quality Management Plan (WQMP) prior to the start of grading. The WQMP would identify the BMPs that would be used on-site to control anticipated pollutants during the life of the project from entering the storm water runoff from the site. The types of pollutants that are anticipated to be generated during the life of the project include suspended solids, sediment, nutrients, oil and grease and trash and debris.

In conjunction with on-site grading, the City proposes to provide semi-permanent sediment traps and desilting basins throughout the site and a bio-retention at the east side of the site as long-term soil erosion control measures to minimize and reduce potential soil erosion impacts.

Currently there are two catch basins in Olympiad Road that collect surface water runoff from Olympiad Road and discharge the runoff through underground stormdrains at two outfalls on the project site. One outfall is located approximately 200 feet south of Escatron in the northwest corner of the site and the second outfall is located east of Olympiad Road opposite La Paz Road. The outfall at La Paz Road and would be extended by the project to near the east boundary of the site where an energy dissipator and rip-rap to minimize soil erosion would be constructed. The outfall at the northwest corner of the site would be extended and discharge into the proposed bio-retention basin at the east side of the project site. A third outfall with an energy dissipator and rip-rap structure is proposed near the middle of the site and would collect surface water from Curtis Park and the slope along the east side of Curtis Park and discharge water near the east project boundary and west of the bio-retention basin.

The installation of and the regular maintenance of the required SWPPP and WQMP, including sediment traps, desilting basins and a proposed bio-filtration basin would reduce storm water runoff pollutants generated from the project site and Olympiad Road to less than significant.

b) ***Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?*** **No Impact.** The project would require the use of water for dust suppression during project grading in compliance with SCAQMD Rule 403 Fugitive Dust. The amount of water that would be required to control dust during grading and construction would be minimal and not significantly impact existing groundwater supplies. Upon completion of the pad, the project site would continue to be available for water percolation the same as the current condition. Therefore, the project would have no impact to groundwater supplies or groundwater recharge.

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

i. ***Result in substantial erosion or siltation on- or off-site?*** **Less Than Significant Impact.** As discussed in section "X.a)" of this MND, silt could be generated from the site during site grading, especially if construction occurs during the winter months when rainfall typically occurs. The City would prepare a Storm Water Pollution Prevention Plan (SWPPP) in accordance with California State Water Resources Control Board (State Water Board), Order No. 99-08-DWQ and National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS004001 (Permit). The SWPPP would require the contractor to implement Best Available Technology Economically Achievable measures to reduce and eliminate storm water pollution from all construction activity through the implementation of Best Management Practices (BMPs). Implementation of the required SWPPP prior to and throughout project construction would reduce and minimize potential siltation impacts.

As also discussed in section "X.a)" of this MND, the City would be required by state law to prepare a WQMP for approval by the City prior to the start of grading. The WQMP would identify the BMPs that would be used on-site to control anticipated pollutants during the life of the project from entering the storm water runoff from the site. The state required WQMP identifies the measures that would be included in the project.

The implementation by the developer of the required SWPPP and WQMP would reduce potential erosion or siltation impacts to less than significant.

ii ***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.** As discussed in section "IX.c)" of this MND, the project would not alter the existing drainage patterns on the site. The existing drainage patterns on the site would be maintained and project generated surface water flows would continue to the east. Maintaining the existing on-site drainage pattern along with the construction of proposed sediment traps, desilting basins and bio-filtration basin would reduce capture storm water and allow runoff to percolate and evaporate to minimize flooding impacts on and off the site. The project would not have any significant on or off-site flooding.

iii ***Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*** **Less Than Significant Impact.** As discussed in section "IX.c)" of this MND, the project would not alter the existing drainage patterns on the site. The existing drainage patterns on the site would be maintained and project generated surface water flows would continue to be to the east. Maintaining the existing on-site drainage pattern along with the proposed construction of on-site desilting basins, sediment traps and a bio-filtration basin would prevent flooding impacts on and off the site. The project would not have any significant on or off-site flooding. The project would not increase the amount of runoff that is currently generated from site because the site would remain vacant after the earthen pad is graded and allow stormwater to continue to percolate into the soil. The project would not significantly impact any downstream storm water drainage facilities.

As discussed in section "X.a)" of this MND, the City would be required by state law to prepare a WQMP and a SWPPP prior to the start of any on-site grading to reduce erosion and siltation impacts. The implementation of the required SWPPP and WQMP by the grading contractor prior to the start of grading along with the construction of the sediment traps, desilting basins and bio-retention basin would reduce and minimize the potential discharge of polluted runoff. The project would not have any significant surface water quality impacts.

iv ***Impede or redirect flood flows?*** **Less Than Significant Impact.** The project is not located within a designated flood hazard zone and would not alter the existing drainage patterns on the site or any other flows that would impede or redirect flood flows. The existing drainage patterns on the site would be maintained and project generated stormwater flows would continue east towards Trabuco Creek.

d) ***In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?*** **No impact.** There are no bodies of water adjacent to or in close proximity to the site that could impact the project due to flooding or a seiche. The project site is not in the 100-year flood zone of Trabuco Creek that is located approximately 800 feet east of the site.[14] The closest water body that could potentially impact the site is an existing above ground water tank that is located adjacent to and at the east side of Olympiad Road approximately one-half mile south of the site. Due to the distance of the water tank from the site the project site would not be impacted the rupture of the water tank due to a seiche. The site is approximately ten miles northeast of the Pacific Ocean and approximately 700' above mean sea level and would not be impacted by a tsunami. As discussed in section "IX.a)" of this MND, the project does not propose to use or store any hazardous materials on the site other than fuels and lubricants that would be used to maintain the grading equipment that would be used to grade the site. The project site would not be exposed to any potential flood hazard that could release pollutants to the area adjacent to or downstream of the site.

e) **Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? Less Than Significant Impact.** As discussed in section "X.a)" of this MND, the City would be required by state law to prepare a WQMP and a SWPPP to reduce and eliminate storm water pollution from all construction activity through the implementation of BMPs. In addition, the project proposes to construct desilting basins, sediment traps and a bio-filtration basin to capture on and off-site surface water runoff for percolation and evaporation. As a result, the construction and maintenance of the state required WQMP, SWPPP and the on-site water quality desilting basins, sediment traps and bio-filtration basin would meet and not conflict or obstruct with

[14] https://msc.fema.gov/portal/search?AddressQuery=mission%20viejo%2C%20ca#searchresultsanchor

Regional Water Quality Control Board water quality control or sustainable groundwater management plans. The project would not have any significant water quality impacts.

XI. LAND USE AND PLANNING: Would the project:

a) ***Physically divide an established community?*** **No Impact.** The 42.9-acre project site is vacant and surrounded by vacant land to the north, east and south. Curtis A. Park is located adjacent to and west of the site. There are no established communities adjacent to the site. The project would not divide or impact an established community.

b) ***Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?*** **Less Than Significant Impact.** The portion of the project site that is in the City of Mission Viejo is designated Recreation/Open Space land use by the Mission Viejo General Plan and zoned Recreation (R). The portion of the site in Orange County is designated O'Neill Regional Park and in the Orange County and in the Orange County SSHCP Reserve.

The Mission Viejo General Plan identifies the intent of the Recreation/Open Space land use[15] as follows:

> "The Recreation/Open Space designation includes both public and private recreational uses necessary to meet the active and passive recreational needs of City residents. Active recreation activities include golf courses,/driving ranges, equestrian centers, community recreational facilities, public parklands, and indoor and outdoor sports athletic facilities. Passive recreation uses include museums, galleries, nature preserves, outdoor theater, designated open space and similar uses. These activities should be widely distributed throughout the city and have a maximum floor area ration of .50:1.

The project proposes to grade an earthen pad that in the future could be developed with either active or passive recreational uses consistent with and allowed by the Recreation/Open Space land use designation. However, at this time the project does not propose any recreational use for the site. The project only proposes to grade the site and import dirt to develop a pad for future recreational use. The project is consistent with the City of Mission Viejo General Plan Recreation/Open Space land use designation and Recreation zoning.

The land use designation for the east portion of the site that is in the County of Orange is Open Space Reserve and zoned Open Space (OS). The 12.0-acres of County land would be annexed into the City of Mission Viejo and designated Recreation/Open Space land use and zoned Recreation (R). The City proposes to swap the 13.08-acres of County land within a portion of the approximately 25.0-acres of land north of the project site that would be dedicated to the County SSHCP for biological mitigation land. The project would not require a general plan amendment or zone change to grade the site.

As an allowed use by the Mission Viejo General Plan and zoning, the proposed grading would not have any land use conflicts with the existing land uses that surround the site. The project would not have any significant land use or zoning impacts.

[15] City of Mission Viejo General Plan, Land Use Element, page 28.

XII. MINERAL RESOURCES: Would the project:

a) ***Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*** **No Impact.** There are no mining activities either on or adjacent to the project site. Neither the Mission Viejo General Plan nor the Orange County General Plan identify any locally important minerals on or adjacent to the site. In terms of generalized aggregate resource classification, the project site is designated MRZ-1 by the California Department of Conservation.[16] The MRZ-1 classification are areas where adequate information indicates that no significant construction aggregate deposits are present, or where it is judged that little likelihood exists for their presence.[17] The project would not result in the loss of a locally important mineral resource or impact mineral resources.

b) ***Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*** **No Impact.** See Response to section "XII.a)" of this MND.

XIII. NOISE: Would the project result in:

a) ***Generation of substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?*** **Less Than Significant With Mitigation.** A noise report[18] was prepared for the project and a copy is attached in Appendix E.

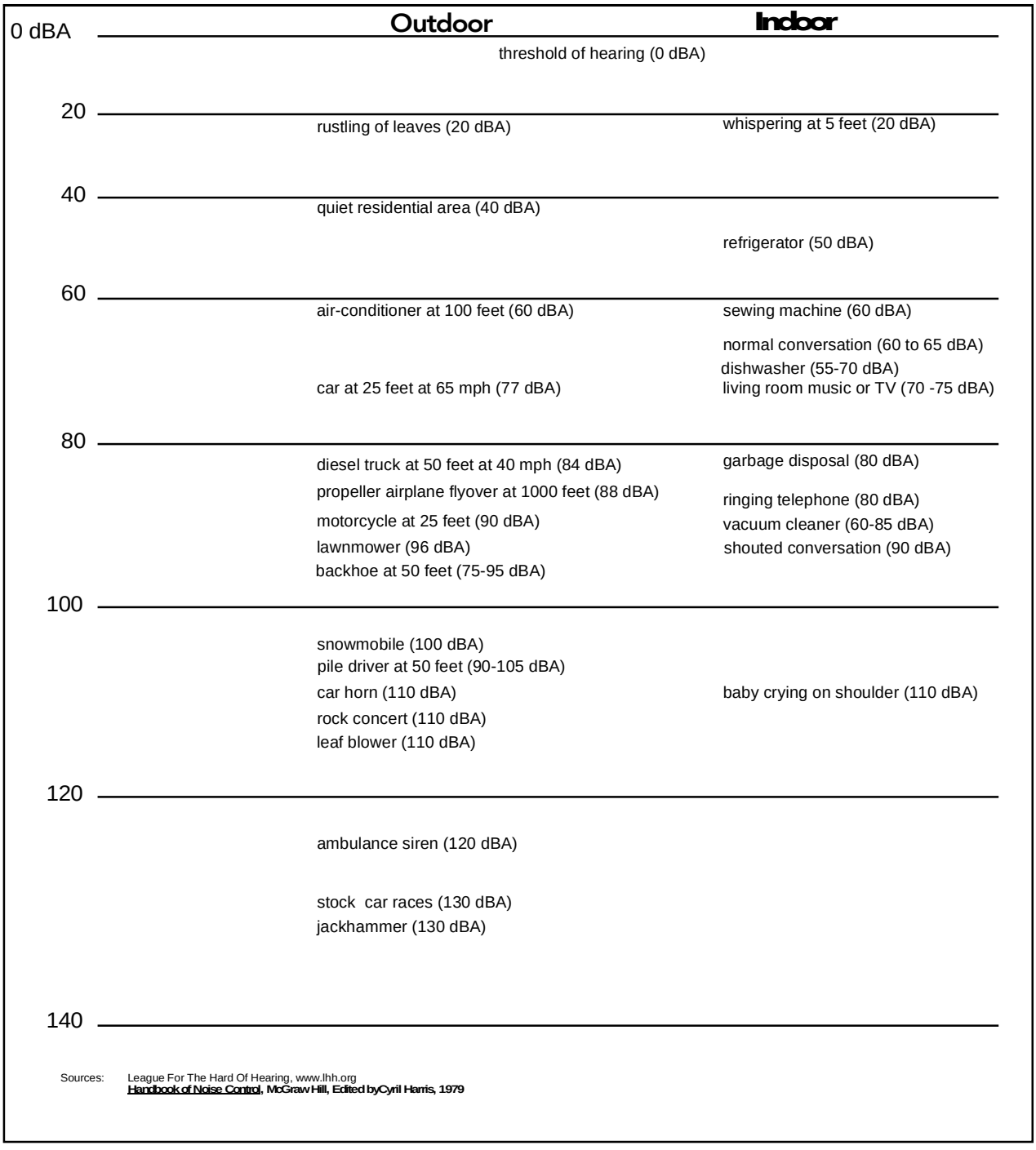
Noise Criteria Background

Sound is technically described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB) and decibels are based on the logarithmic scale. In terms of human response to noise, a sound 10 dB higher than another is judged to be twice as loud; and 20 dB higher four times as loud; and so forth. Everyday sounds normally 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 has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) 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 "A-weighted decibel," abbreviated dBA. Figure 17 shows examples of various noises and their typical A-weighted noise level.

Sound levels decrease as a function of distance from the source as a result of wave divergence, atmospheric absorption and ground attenuation. As the sound wave form travels away from the source, the sound energy is dispersed over a greater area, thereby dispersing the sound power of the wave. Atmospheric absorption also influences the levels that are received by the observer. The greater the distance traveled, the greater the influence and the resultant fluctuations. The degree of absorption is a function of the frequency of the sound as well as the humidity and temperature of the air. Turbulence and gradients of wind, temperature and humidity also play a significant role in

[16] ftp://ftp.consrv.ca.gov/pub/dmg/pubs/sr/SR_143/PartIII/Plate_3-1.pdf
[17] ftp://ftp.consrv.ca.gov/pub/dmg/pubs/sr/SR_143/PartIII/Plate_3-1.pdf
[18] Noise Analysis for the Lower Curtis Park Expansion, Greve & Associates, November 11, 2019.



Sources: League For The Hard Of Hearing, www.lhh.org
Handbook of Noise Control, McGraw Hill, Edited by Cyril Harris, 1979

Figure 17
Typical Noise Levels

determining the degree of attenuation. Intervening topography can also have a substantial effect on the effective perceived noise levels.

Noise Assessment Metrics

Noise metrics can be divided into two categories: single event and cumulative. Single-event metrics describe the noise levels from an individual event such as an aircraft fly over or perhaps a heavy equipment pass-by. Cumulative metrics average the total noise over a specific time period, which is typically 1 or 24-hours for community noise problems. For this type of analysis, cumulative noise metrics will be used.

Several rating scales have been developed for measurement of community noise. These account for: (1) the parameters of noise that have been shown to contribute to the effects of noise on man, (2) the variety of noises found in the environment, (3) the variations in noise levels that occur as a person moves through the environment, and (4) the variations associated with the time of day. They are designed to account for the known effects of noise on people described previously. Based on these effects, the observation has been made that the potential for a noise to impact people is dependent on the total acoustical energy content of the noise. A number of noise scales have been developed to account for this observation. Two of the predominate noise scales are the: Equivalent Noise Level (Leq) and the Community Noise Equivalent Level (CNEL). These scales are described in the following paragraphs.

Leq is the sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period. Leq is the "energy" average noise level during the time period of the sample. Leq can be measured for any time period, but is typically measured for 1 hour. It is the energy sum of all the events and background noise levels that occur during that time period.

CNEL, Community Noise Equivalent Level, is the predominant rating scale now in use in California for land use compatibility assessment. The CNEL scale represents a time weighted 24-hour average noise level based on the A-weighted decibel. Time weighted refers to the fact that noise that occurs during certain sensitive time periods is penalized for occurring at these times. The evening time period (7 p.m. to 10 p.m.) penalizes noises by 5 dBA, while nighttime (10 p.m. to 7 a.m.) noises are penalized by 10 dBA. These time periods and penalties were selected to reflect people's increased sensitivity to noise during these time periods. A CNEL noise level may be reported as a "CNEL of 60 dBA," "60 dBA CNEL," or simply "60 CNEL."

L(%) (also sometimes represented as L(n) is a statistical method of describing noise which accounts for variance in noise levels throughout a given measurement period. L(%) is a way of expressing the noise level exceeded for a percentage of time in a given measurement period. For example, since 15 minutes is 25% of one hour, L(25) is the noise level that is equal to or exceeded for 15 minutes in a one-hour period. It is L(%) that is commonly used in Noise Ordinance standards. For example, many daytime County and City Noise Ordinances use an ordinance standard of 55 dBA for 30 minutes per hour or an L(50) level of 55 dBA. Lmax, which is L(0), is the maximum sound level during a measurement period.

Noise Criteria

The noise element of a general plan and noise ordinance usually contain the city's policies on noise. The noise ordinance applies to noise on one property impacting a neighboring property. Typically, it sets limits on noise levels that can be experienced at the neighboring property. The noise ordinance is part of the city's municipal code and is enforceable throughout the city. The City of Mission Viejo has a Noise Ordinance and the relevant areas of the ordinance to the project are discussed below.

Land Use Compatibility

The noise element establishes a land use/noise compatibility matrix that is designed to guide new developments. The City of Mission Viejo adopted a compatibility matrix to determine the compatibility of various land uses with associated noise levels. The primary goal of the compatibility matrix is to guide future development, and does not represent standards for existing development. The guidelines are summarized in Figure 18. As shown, the guidelines rate compatibility in terms of "normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable."

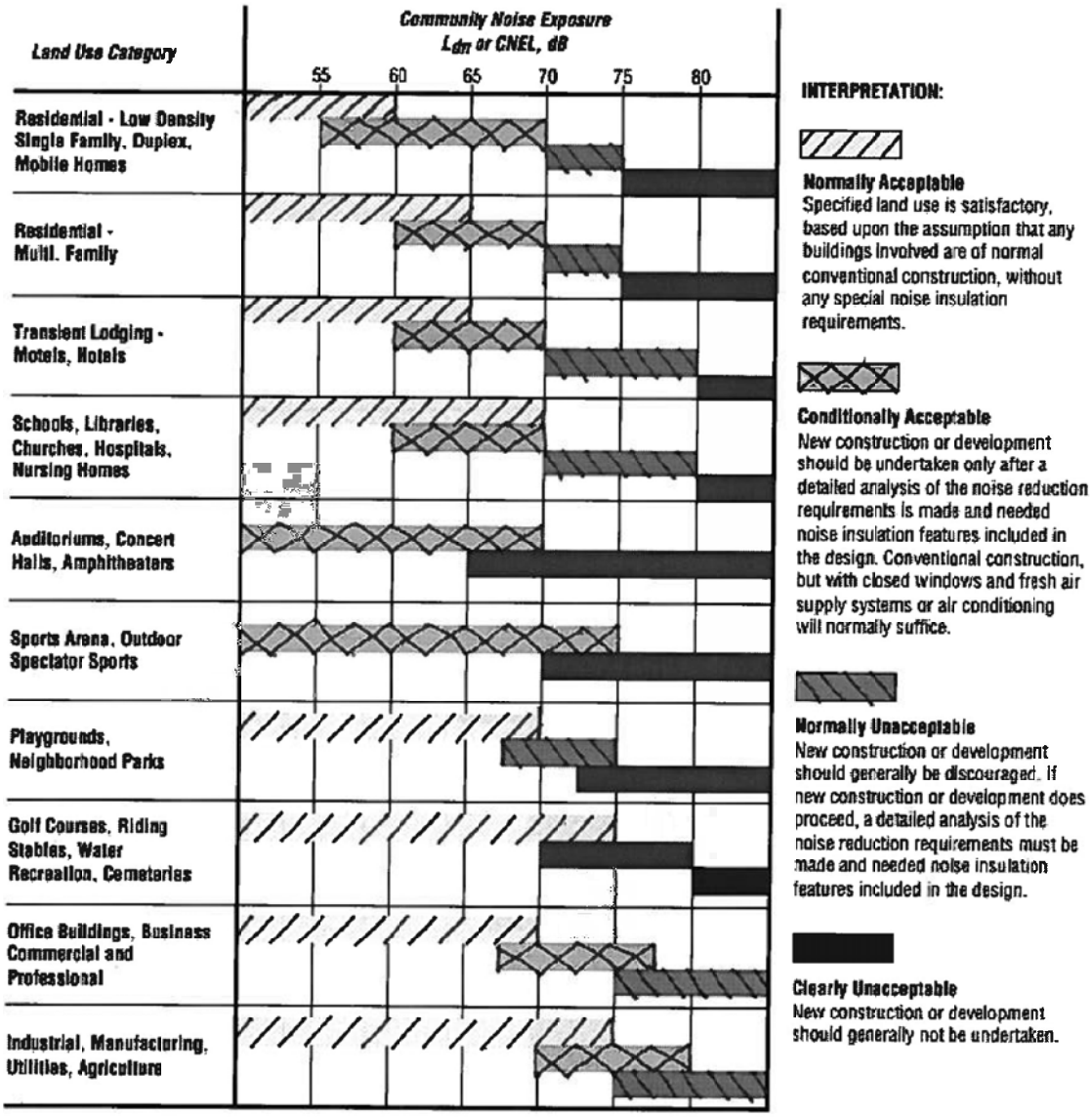
Existing Noise Measurements

The existing noise levels in the vicinity of the project site and along the designated truck haul routes were required to establish the current baseline noise levels. The primary criteria that was used to determine the appropriate sites for noise level measurements were sites that represent a noise sensitive land use, are in the potential noise impact area, and along designated truck haul routes. Based on this criteria, seven (7) sites were identified for noise level measurements. The seven noise measurement locations are shown in Figure 19. Noise measurements were taken June 6, 2019 during daytime hours and the measured noise levels at each location are shown in Table 15.

Table 15
Existing Off-Site Noise Measurement Levels (dBA)

Site	Start Time	Leq	Lmax	L1.7	L8	L25	L50	Lmin
MV 1	10:52 a.m.	44.9	60.0	55.3	49.5	43.1	37.7	33.0
MV 2	11:27 a.m.	48.6	63.9	56.4	53.0	48.8	45.1	35.4
MV 3	11:49 a.m.	46.7	63.6	54.9	48.7	46.2	44.6	38.7
MV 4	12:45 p.m.	64.4	78.4	72.4	68.8	65.4	60.8	38.9
MV 5	1:12 p.m.	64.0	80.2	70.5	67.7	65.3	61.5	42.7
MV 6	2:09 p.m.	66.6	76.9	72.6	70.3	68.1	65.3	42.7
MV 7	2:33 p.m.	65.8	79.1	74.9	69.8	66.8	60.6	42.0

As shown in Table 15, noise measurement sites 1, 2, and 3 represent quiet residential areas that are in close proximity to the project site and reflect low ambient noise levels that are typically associated with quiet suburban residential areas and are in the mid to upper 40 dBA range.



Source: Table N-3 of the City of Mission Viejo Noise Element Technical Report

Figure 18

Mission Viejo Compatibility Matrix

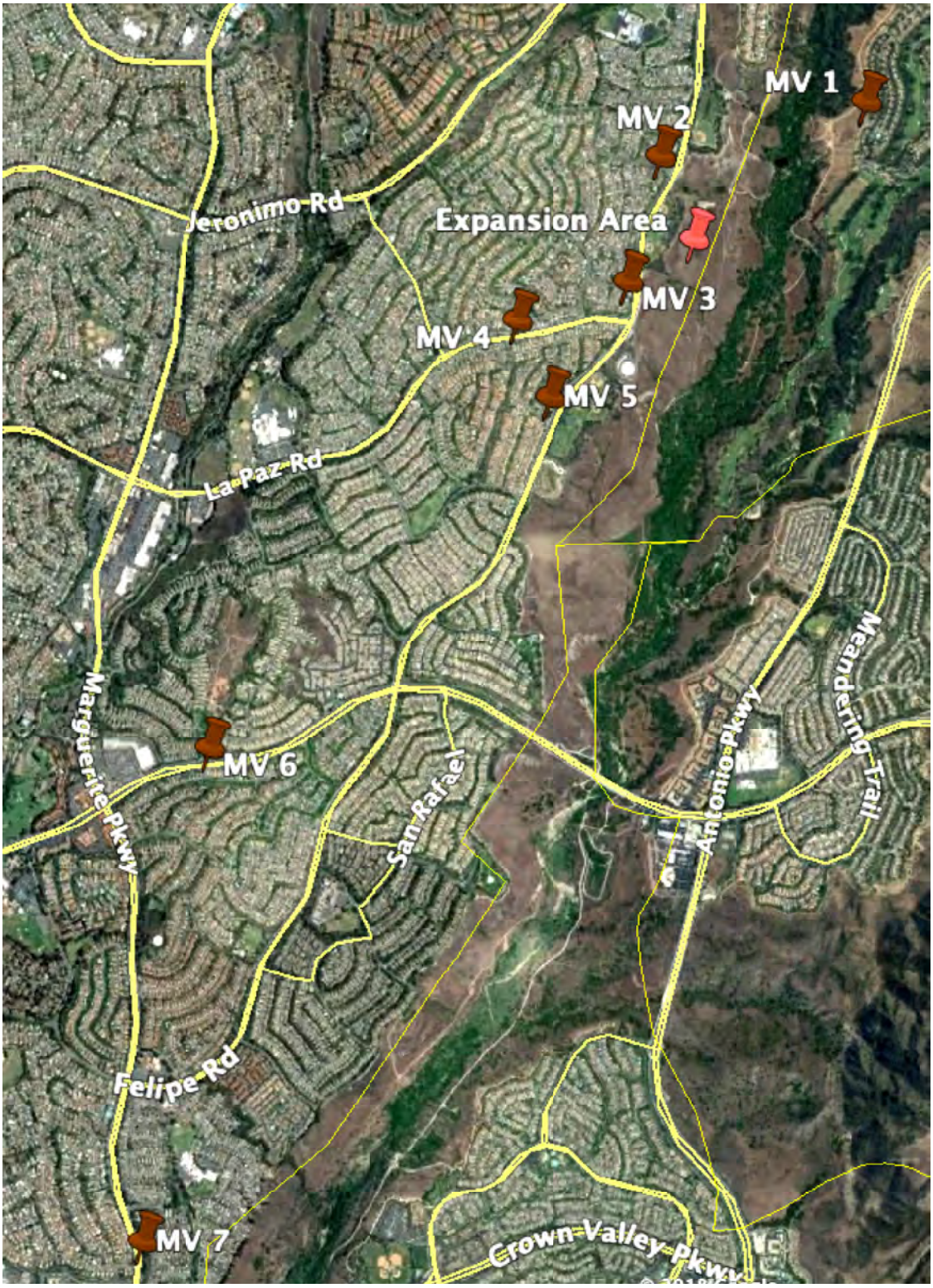


Figure 19
Noise Measurement Location Map

Noise measurements for sites 4, 5, 6, and 7 are located along the three truck haul routes and on major roadways. Thus, the noise levels along these truck haul routes reflect the high levels of traffic on these roadways and are in the mid 60 dBA range.

Existing Roadway Noise Levels

The highway noise levels were calculated using the Highway Noise Model published by the Federal Highway Administration ("FHWA Highway Traffic Noise Prediction Model," FHWA-RD-77-108, December, 1978). The FHWA Model uses traffic volume, vehicle mix, vehicle speed, and roadway geometry to compute the "equivalent noise level." CNEL contours were determined by iterating over many distances until the distances to the 60, 65, 70, and 75 CNEL contours were identified.

Existing average daily traffic (ADT) volumes were provided by the traffic report. Posted speed limits and ADTs were used with the FHWA Model to calculate the noise levels in terms of CNEL along the designated truck haul routes. The distances to the CNEL contours along the truck haul routes are shown in Table 16. The numbers represent the distance from the centerline of the road to the contour value shown. Note that the values do not take into account or account for the effect of any noise barriers or topography difference that may affect the resulting ambient noise levels.

Table 16
Existing Traffic Noise Levels

Roadway Segment	Extent of Segment	CNEL @ 100' *	Distance To CNEL Contour from Centerline of Roadway (feet)		
			70 CNEL	65 CNEL	60 CNEL
Haul Route 1					
La Paz Road	I-5 Freeway to Marguerite	65.7	51	111	239
La Paz Road	Marguerite Pkwy to Felipe Rd	62.8	33	72	155
Haul Route 2					
Oso Parkway	I-5 Freeway to Felipe Rd	68.1	74	160	345
Felipe Road	Oso Pkwy to Fieldcrest	63.8	39	83	179
Felipe Road	Fieldcrest to La Paz Rd	63.8	39	83	179
Haul Route 3					
Crown Valley Pkwy	I-5 Freeway to Marguerite	68.1	74	160	345
Marguerite Pkwy	Crown Valley Pkwy to Felipe	67.4	67	144	310
Felipe Road	Marguerite Pkwy to Oso Pkwy	63.8	39	83	179
Felipe Road	Oso Pkwy to Fieldcrest	63.8	39	83	179
Felipe Road	Fieldcrest to La Paz Rd	63.8	39	83	179

* From roadway centerline

As shown, the noise levels along Oso Parkway and Crown Valley Parkway are the highest due to the traffic volumes on these roadways. The noise levels along the other roadways reflect noise that is typical for a suburban area.

Noise Thresholds

Grading activities for the project would be required to meet the city's noise ordinance standards. Off-site noise impacts from truck traffic are measured against two criteria. Both criteria must be met for a significant noise impact to occur. First, project traffic must cause a substantial noise level increase (i.e., greater than 3 dB) on a roadway segment adjacent to a noise sensitive land use. Second, the noise level that would exist during construction must exceed the criteria level for the noise sensitive land use. In this case, the criteria level is 65 CNEL for residential land use, schools and other noise sensitive land uses. The project would have a significant noise impact if it causes a 3 dB increase and the resulting noise level is 65 CNEL or higher for a sensitive land use.

Project Noise Impacts

Construction noise represents a short-term impact to the ambient noise levels. The City of Mission Viejo exempts construction noise as long as it occurs between 7:00 a.m. and 8:00 p.m. on a weekday and Saturday with no construction allowed on Sunday or national holidays.

The grading equipment that would be used for the project would be typical of the type of equipment that would be used to grade a similar project site. For the purpose of this noise report it is assumed a compactor, two water trucks, a moto-grader and a dozer would be used to grade the site and construct a dirt pad.

Two residential areas west of the project site, west of Olympiad Road, were studied as representative of noise sensitive land uses along Felipe Road. The two sites are shown as Sites MV 2 and MV 3 on Figure 20. These two sites represent worst-case locations in that they could be exposed to the highest levels of construction noise on the project site. Noise monitoring site MV 1 was also analyzed to evaluate the closest sensitive noise receptor east of the site, which is in the City of Rancho Santa Margarita.

The Roadway Noise Construction Model (RNCM) developed by the Federal Highway Administration (FHWA) was used to estimate future project generated noise levels. The results of the noise analysis for sites MV 1, MV 2 and MV 3 are shown in Table 17. As shown, potential noise impacts were evaluated for a construction area closest to each of the noise sensitive receptors. Additionally, potential noise impacts were also evaluated for all of the noise sensitive receptors from a mid-site construction area. For the mid-site construction area analysis, existing topography from the project site to the residents at sites MV 2 and MV 3 was taken into account.

Table 17
Construction Noise Levels

	Closest Construction		Mid-Site Construction		Ambient Noise (dBA)	
	Leq	Lmax	Leq	Lmax	Leq	Lmax
Site MV 1	50.9	51.9	48.6	49.6	44.9	60.0
Site MV 2	68.7	69.7	51.2	52.2	46.7	63.6
Site MV 3	67.7	68.8	47.8	48.9	48.6	63.9

The ambient noise levels are also shown in 0. When construction is close to sites MV 2 and MV 3 the construction noise (Leq) would be above the ambient noise levels. When construction is mid-site the noise levels would be approximately the same as the ambient conditions. For all three sites, construction would be audible and increase when construction is close to the three noise measurement sites. When construction occurs near mid-site, which would be the majority of time, the noise levels at the adjacent three noise measurement sites would be close to the ambient noise levels and would not be disruptive to area residents.
The following measures are recommended to reduce construction noise levels to less than significant.

Mitigation Measure No. 11 During all project site excavation and grading on-site, construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturer standards.

Mitigation Measure No. 12 The contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the project site.

Mitigation Measure No. 13 Equipment shall be shut off and not left to idle when not in use.

Off-Site Traffic Noise Impacts Due to Haul Trucks

The FHWA (Federal Highway Administration) noise model was referenced to determine the potential noise impacts associated with trucks hauling dirt from the I-5 freeway to the project site. The FHWA noise model utilizes various traffic-flow parameters (e.g. traffic volume, speed, mix, etc.) to predict noise levels that result from the operation of motor vehicles on roadways.

The change in CNEL (dB) noise levels on the three designated truck haul routes with existing traffic compared to project truck trips is shown in Table 18.

Table 18
CNEL Increases (dB) - Existing Versus Existing Plus Haul Trucks

Roadway Segment	Extent of Segment	Change in Noise Level (dB)
Haul Route 1		
La Paz Road	I-5 Freeway to Marguerite	0.7
La Paz Road	Marguerite Pkwy to Felipe Rd	1.3
Haul Route 2		
Oso Parkway	I-5 Freeway to Felipe Rd	0.4
Felipe Road	Oso Pkwy to Fieldcrest	1.1
Felipe Road	Fieldcrest to La Paz Rd	1.1
Haul Route 3		
Crown Valley Pkwy	I-5 Freeway to Marguerite	0.4
Marguerite Pkwy	Crown Valley Pkwy to Felipe	0.5
Felipe Road	Marguerite Pkwy to Oso Pkwy	1.1
Felipe Road	Oso Pkwy to Fieldcrest	1.1
Felipe Road	Fieldcrest to La Paz Rd	1.1

As shown, the haul trucks would not contribute more than a 3 dB noise level increase along any of the three designated truck haul routes. As discussed earlier, a 3 dB noise level increase is part of the noise significance threshold determination. The greatest noise level increase due to truck hauling traffic is 1.3 dB along La Paz Road between Marguerite Parkway and Felipe Road. Therefore, the noise level impact due to trucks hauling dirt from the freeway to the project site along any of the designated haul routes would be less than significant.

b) ***Generation of excessive ground borne vibration or ground borne noise levels?*** **Less Than Significant.** The way that vibration is transmitted through the earth is called propagation. There are three main types of vibration propagation: surface; compression; and shear waves. Surface waves, or Raleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. Compression waves, or P-waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. Shear waves, or S-waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse or "side-to-side and perpendicular to the direction of propagation".

As vibration waves propagate from a source, the energy is spread over an ever-increasing area such that the energy level striking a given point is reduced with the distance from the energy source. This geometric spreading loss is inversely proportional to the square of the distance. Wave energy is also reduced with distance as a result of material damping in the form of internal friction, soil layering, and void spaces. The amount of attenuation provided by material damping varies with soil type and condition as well as the frequency of the wave.

Vibration amplitudes are usually expressed as either peak particle velocity (PPV) or the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous peak of the vibration signal in inches per second. The RMS of a signal is the average of the squared amplitude of the signal in vibration decibels (VdB), ref one micro-inch per second. The Federal Railroad Administration uses the abbreviation "VdB" for vibration decibels to reduce the potential for confusion with sound decibel.

PPV is appropriate for evaluating the potential of building damage and VdB is commonly used to evaluate human response. Decibel notation acts to compress the range of numbers required in measuring vibration. Similar to the noise descriptors, L_{eq} and L_{max} can be used to describe the average vibration and the maximum vibration level observed during a single vibration measurement interval. Figure 21 illustrates common vibration sources and the human and structural responses to ground-borne vibration. As shown, the threshold of perception for human response is approximately 65 VdB; however, human response to vibration is not usually substantial unless the vibration exceeds 70 VdB.

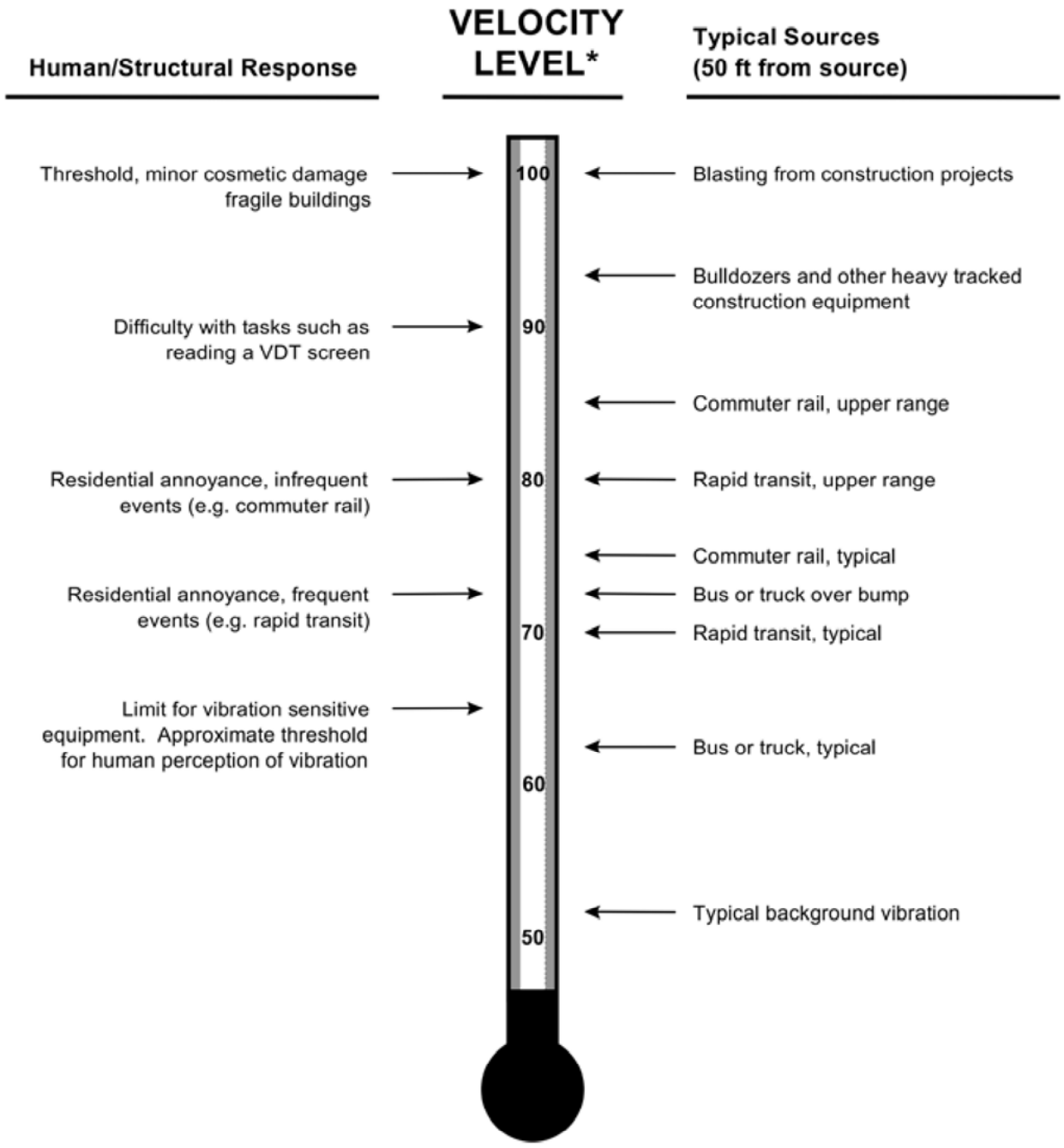
Vibration Impacts

There are several types of construction equipment that can cause vibration levels high enough to annoy persons in the vicinity and/or result in architectural or structural damage to nearby structures and improvements. As shown in Table 19, a vibratory roller could generate up to 0.21 PPV at a distance of 25 feet; and operation of a large bulldozer (0.089 PPV) at a distance of 25 feet (two of the most vibratory pieces of construction equipment). Groundborne vibration at sensitive receptors associated with this equipment would drop off as the equipment moves away from a receptor. For example, as the vibratory roller moves further than 100 feet from a sensitive receptor the vibration associated with it would drop below 0.046 PPV, depending upon the soil type and specific usage of the piece of equipment.

Table 19
Construction Equipment Vibration Source Levels

Equipment	Peak Particle Velocity in inches per second[2]		
	at 25 feet	at 50 feet	at 100 feet
Clam Shovel Drop (slurry wall)	**0.202**	0.071	0.025
Vibratory Roller	**0.210**	0.074	0.026
Hoe Ram	**0.089**	0.031	0.011
Large Bulldozer	**0.089**	0.031	0.011
Caisson Drilling	**0.089**	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Jackhammer	0.035	0.012	0.004
Small Bulldozer	0.003	0.001	0.0004

(1) Source: Federal Transit Administration: Transit Noise and Vibration Impact Assessment, 2006.
(2) Bold values are considered annoying to people.



Source: FRA, 2012. Federal Railroad Administration High-Speed Ground Transportation Noise and Vibration Impact Assessment. Office of Railroad Policy Development, Washington, D.C. DOT/FRA/ORD-12/15. September.

Figure 20
Vibration Levels

Annoyance to Persons

The primary effect of perceptible vibration is often a concern. However, secondary effects, such as the rattling of a china cabinet, can also occur, even when vibration levels are well below perception. Any effect (primary perceptible vibration, secondary effects, or a combination of the two) can lead to vibration annoyance. The degree that a person is annoyed depends on the activity they are participating at the time of the disturbance. For example, someone sleeping or reading would be more sensitive than someone who is running on a treadmill. Reoccurring primary and secondary vibration effects often lead people to believe that the vibration is damaging their home, although vibration levels are well below minimum thresholds for damage potential.

As shown in Table 20, vibration is annoying at a peak particle velocity (PPV) of 0.20. The closest structures to the project are the existing residences located west of Olympiad Road approximately 200 feet west of the site. At the closest point of 200 feet, the use of a large bulldozer would generate a PPV of much less than 0.011. Therefore, residents west of Olympiad Road would not be impacted by any groundborne vibration by the project.

Table 20
Typical Human Reaction and Effect on Buildings Due to Groundborne Vibration

Vibration Level Peak Particle Velocity (PPV)	Human Reaction	Effect on Buildings
0.006–0.019 in/sec	Threshold of perception, possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08 in/sec	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10 in/sec	Level at which continuous vibration begins to annoy people	Virtually no risk of “architectural” (i.e., not structural) damage to normal buildings
0.20 in/sec	Vibrations annoying to people in buildings	Threshold at which there is a risk to “architectural” damage to normal dwelling – houses with plastered walls and ceilings
0.4–0.6 in/sec	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause “architectural” damage and possibly minor structural damage

Source: California Department of Transportation. Transportation and Construction Vibration Guidance Manual, Chapter 6 Tables 5 and 12, September 2013.

Based on the type of construction equipment that would be used at the site and the distance of the closest residents to the site, which are approximately 200 feet to the west, the project would not have any ground borne or vibration impacts.

c) ***For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport, would the project expose people residing or working in the project area to excessive noise levels?*** **No Impact.** John Wayne Airport is the closest airport to the site and located approximately fourteen miles northwest of the project. The project site is not located within the land use plan of John Wayne Airport. Thus, the project would not be impacted by noise levels at John Wayne Airport.

XIV. POPULATION AND HOUSING: Would the project:

a) ***Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example through extension of roads or other infrastructure)?*** **No Impact.** The proposal to import dirt to the site and grade a dirt pad for future use would not induce any population growth. The project does not propose any use that would induce growth in the city's population either directly or indirectly. The project would not have any impact on the city's population or growth.

b)

b) ***Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*** **No Impact.** The project site is vacant and there no residences on the site. The project would not displace any existing people or housing units.

XV. PUBLIC SERVICES:

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

i. ***Fire protection?*** **Less Than Significant Impact.** The Orange County Fire Authority (OCFA) provides fire protection services for the City of Mission Viejo. The closest fire station to the site is Fire Station 31 that is located at 22426 Olympiad Road and approximately two miles north of the site. This second closest fire station is Fire Station 24 at 25862 Marguerite Parkway and is located approximately 2.5 miles southwest of the site. OCFA standard is for the first responding unit to be on the scene within 7 minutes and 20 seconds of the call 80% of the time.

The project could require fire protection services during project grading for on-site construction emergencies. Once the site is graded the project would not require any fire protection services. While the project could require fire protection services during grading, the need for fire protection services would be minimal. OCFA has sufficient personnel to serve the project without any significant impact to OCFA's ability to continue to provide an adequate level of fire protection service to the community. The impact by the project to fire protection services would be less than significant.

ii. ***Police protection?*** **Less Than Significant Impact.** The City contracts with the Orange County Sheriff's Department for police protection services. The sheriff headquarters are located at 200 Civic Center and approximately two miles west of the site. The project could require police services during project grading to respond to vandalism, accidents and other construction related police emergencies. Once the site is graded, the project would not require any police services. While the project could require police services during project grading, the need for police services would be

minimal and not impact the Department's ability to continue to provide an adequate level of police protection to the community. The impact by the project to police services would be less than significant.

*iii. **Schools?*** **No Impact.** The project is within the Capistrano Unified School District. The project would not generate any students and would not impact schools.

*iv. **Parks?*** **No Impact.** The project is located adjacent to and east of Curtis Park. Other city parks in the immediate area include Beebe Park that is approximately one-quarter mile to the north and Gilleran Park that is approximately one-half mile to the south. The project proposes to import dirt and grade a pad that could be used as a park in the future. However, the city does not have any plans for a park at the site at this time. There are no activities associated with the project that would impact parks in Mission Viejo.

*v. **Other public facilities?*** **No Impact.** There are no public facilities or services that would be impacted by the project.

XVI. RECREATION

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?*** **No Impact.** The project would not impact recreation facilities. Please see section "XV.a.iv)" of this MND.

b) ***Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?*** **No Impact.** As discussed in section "XV.a.iv)" of this MND, the project does not propose to construct any recreational facilities or expand any existing recreational facilities. Therefore, the project would not have a physical effect on the environment.

XVII. TRANSPORTATION: Would the project:

a) ***Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*** **Less Than Significant.** A traffic study was prepared for the project.[19] A copy of the traffic study is included in Appendix F.

The project proposes to haul approximately 760,000 cubic yards of dirt from the I-5 Freeway to the project site along three truck haul routes that include La Paz Road, Oso Parkway and Crown Valley Parkway. The proposed truck haul routes were shown previously in Figure 4.

The dirt would be hauled in three phases. Two phases would haul approximately 300,000 cubic yards and a third phase that would haul approximately 160,000 cubic yards. Up to 3,000 cubic yards of dirt would be hauled each workday with the first two phases requiring approximately 100 days to move the dirt from the freeway to the site and approximately 54 days to haul the remaining 160,000 cubic yards of dirt to the site. Trucks could use a single truck haul route, or all three routes concurrently to move the material. In either case, trucks would not haul more than 3,000 cubic yards a day.

[19] Truck Haul Route I-5 Freeway to Lower Curtis Park, Mission Viejo, CA, Stantec, November 4, 2019.

Trucks would operate up to 6 hours per workday from 9 am to 3 pm on weekdays and outside of the am and pm peak hours. Truck volumes during each of the six hours are estimated at 25 loads (20 cubic yards average truck capacity) and 25 empty trucks per hour. Using a passenger car equivalent (PCE) factor of 2.0 for trucks, the project would generate 100 two-way PCE trips per hour and 600 PCE trips per workday.

To evaluate potential traffic impacts along each haul route during the six hours of daily operation, traffic counts were taken between 11 am and 1 pm at twenty-nine (29) signalized haul route intersections along the truck haul routes to determine the existing weekday midday peak hour volumes. The intersections that were studied in the traffic analysis are listed below:

1. Crown Valley Parkway and Kaleidoscope
2. Crown Valley Parkway and Puerte Real
3. Crown Valley Parkway and Medical Center
4. Crown Valley Parkway and Los Altos
5. Crown Valley Parkway and Bellogente
6. Crown Valley Parkway and Marguerite Parkway
7. Marguerite Parkway and Felipe Road
8. El Retiro and Felipe Road
9. Camden and Felipe Road
10. Felipe Road and Barbadanes
11. Felipe Road and Buscador
12. Felipe Road and Oso Parkway
13. Felipe Road and Fieldcrest
14. Montanoso Drive and Oso Parkway
15. Oso Parkway and Country Club Drive
16. Marguerite Parkway and Oso Parkway
17. Marketplace and Oso Parkway
18. Alpera/Pacific Hills and Oso Parkway
19. Mirasol and Oso Parkway
20. Muirlands Boulevard and La Paz Road
21. Chrisanta Drive and La Paz Road
22. Mosquero Lane and La Paz Road
23. Pradera and La Paz Road
24. Spadra and La Paz Road
25. Marguerite Parkway and La Paz Road
26. La Paz Center Driveway and La Paz Road
27. Commerce Center and La Paz Road
28. Pacific Hills Drive and La Paz Road
29. Felipe Road and La Paz Road

Figure 21 shows the existing intersection that were studied along with the geometrics and controls and the number of through lanes. The calculated truck volumes by the project were added to the existing traffic volumes along with traffic generated by two cumulative projects to determine the potential traffic impacts of the project.

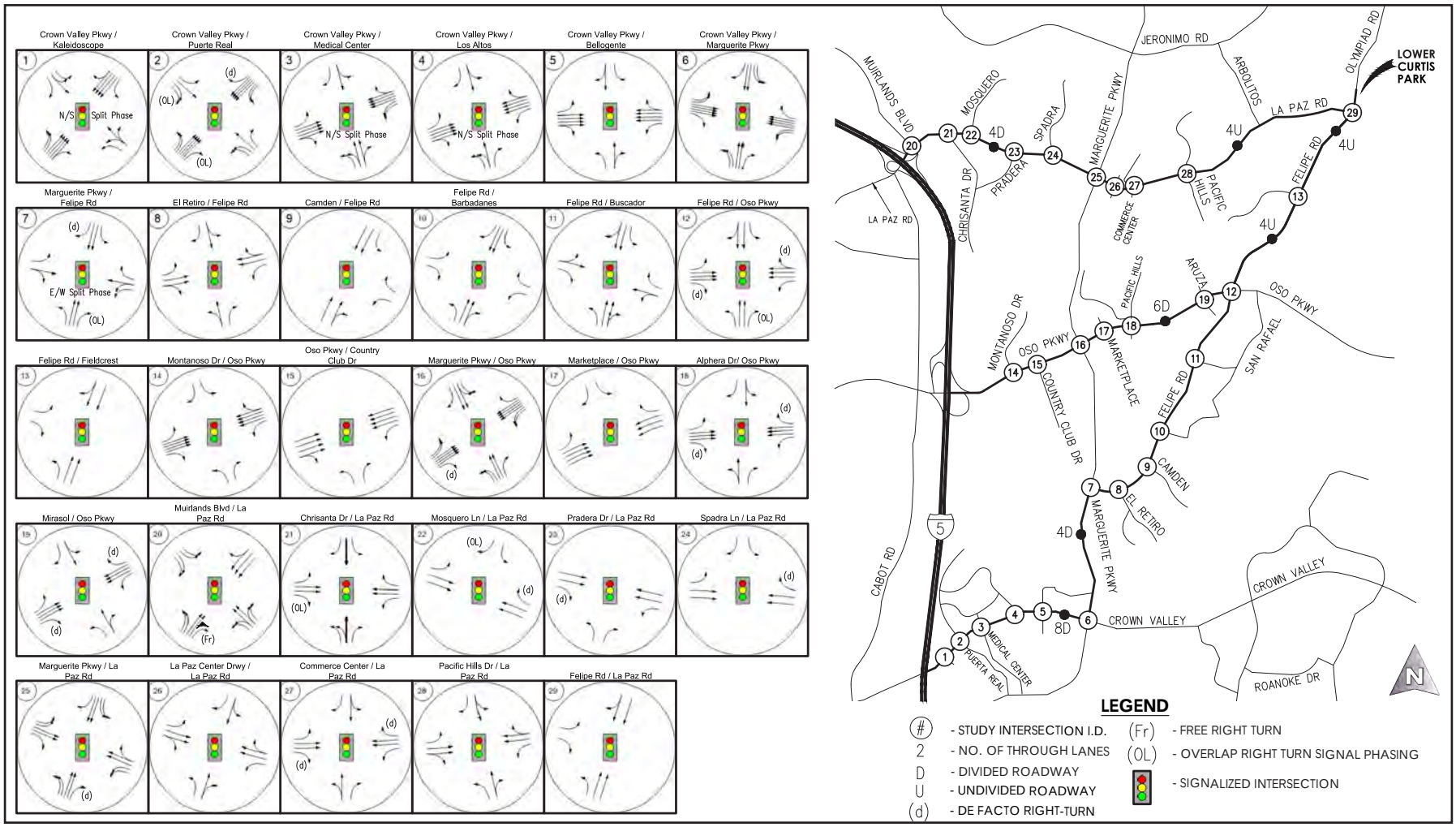


Figure 21

Study Area Intersections

Level of Service

The Level of Service (LOS) was calculated for each studied intersection to determine the existing weekday midday peak hour to determine a baseline for the existing LOS. The LOS was determined using the Intersection Capacity Utilization (ICU) method. The ICU methodology estimates the volume-to-capacity (V/C) ratio for a signalized intersection based on the individual V/C ratios for the conflicting traffic movements. ICU's are calculated for the peak hours of traffic and include the unique features of the intersection such as turning movement volumes, intersection lane configurations, and traffic signal phasing. The existing LOS of the intersections is shown in Table 21.

Table 21
Existing 2019 – Study Area Intersections Level of Service

Signalized Intersections	Midday Peak	
	V/C	LOS
1. Crown Valley Parkway and Kaleidoscope	0.55	A
2. Crown Valley Parkway and Puerte Real	0.57	A
3. Crown Valley Parkway and Medical Center	0.61	B
4. Crown Valley Parkway and Los Altos	0.43	A
5. Crown Valley Parkway and Bellogente	0.34	A
6. Crown Valley Parkway and Marguerite Parkway	0.62	B
7. Marguerite Parkway and Felipe Road	0.52	A
8. El Retiro and Felipe Road	0.24	A
9. Camden and Felipe Road	0.20	A
10. Felipe Road and Barbadanes	0.21	A
11. Felipe Road and Buscador	0.19	A
12. Felipe Road and Oso Parkway	0.50	A
13. Felipe Road and Fieldcrest	0.22	A
14. Montanoso Drive and Oso Parkway	0.39	A
15. Oso Parkway and Country Club Drive	0.35	A
16. Marguerite Parkway and Oso Parkway	0.61	B
17. Marketplace and Oso Parkway	0.38	A
18. Alphera/Pacific Hills and Oso Parkway	0.35	A
19. Mirasol and Oso Parkway	0.30	A
20. Muirlands Boulevard and La Paz Road	0.47	A
21. Chrisanta Drive and La Paz Road	0.50	A
22. Mosquero Lane and La Paz Road	0.36	A
23. Pradera and La Paz Road	0.35	A
24. Spadra and La Paz Road	0.35	A
25. Marguerite Parkway and La Paz Road	0.55	A
26. La Paz Center Driveway and La Paz Road	0.35	A
27. Commerce Center and La Paz Road	0.25	A
28. Pacific Hills Drive and La Paz Road	0.31	A
29. Felipe Road and La Paz Road	0.30	A

As shown, all of the studied intersections currently operate at either LOS A or B during the midday peak hour. LOS A and B are acceptable LOS based on the City's level of service criteria.

Intersection Threshold of Significance

The City of Mission Viejo follows the Orange County Traffic Impact Analysis Study Guidelines and per City of Mission Viejo criteria. The minimum acceptable LOS for the City of Mission Viejo is "D", with the exception of the (I-5) interchange with Crown Valley Parkway where LOS "E" is acceptable. The significance of the potential impacts of the haul routes was evaluated using the City of Mission Viejo's LOS standards and impact criteria, which is:

- For signalized intersections, a project traffic increase demand at the study intersection by 1.0% of the capacity (ICU increase ≥ 0.010), causing or worsening LOS E or F (ICU > 0.900).

Roadway Segment Threshold of Significance

The existing weekday 24-hour traffic volumes on the study area haul route segments are shown in Figure 22. As shown, all segments are below the theoretical daily capacities. Many of the roadways have additional turn lanes at major intersections that increase their daily capacities and are not reflected in the volume-to-capacity ratios that are shown. Therefore, the capacity volumes of the roadway segments are conservative and consistent with the high levels of service (LOS A and B) at the intersections on these roadway segments for the midday peak hour.

The City has a goal to maintain a least a LOS D for roadway segments, except along Crown Valley Parkway, which is a Principal Arterial on the Orange County CMP Highway System, where the goal is to maintain a LOS E.[20]

Figures 23 thru 25 show the truck haul routes that trucks would be restricted to haul dirt from the freeway to the project site. Also shown in the figure are the intersections along each truck haul route that was studied. Tables 22 thru 24 show the LOS of the intersections associated with each of the three truck haul routes with the project truck trips assigned to each specific route. As shown, all studied intersections would continue to operate at acceptable levels of service with the project. The project would not have any significant traffic design or circulation hazards.

b) **Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? Less Than Significant Impact.** The project is a short-term construction project and does not propose any development. Therefore, the project would not generate any traffic was the project is completed. Therefore, the project would not be in conflict or inconsistent with CEQA Guidelines section 15064.3, subdivision (b).

c) ***Result in inadequate emergency access?*** **Less Than Significant Impact.** The project proposes to improve access to the site at the intersections of Olympiad Road at La Paz Road and Olympiad Road at Escatron. The proposed improvements at these two intersections would provide adequate access to the site for police, fire, paramedic/ambulance and other emergency vehicles in the event of an on-site emergency. The project would provide suitable emergency site access and not impact the ability of emergency personnel to access in an emergency. The project would not significantly impact emergency access to the site.

[20] City of Mission Viejo General Plan Circulation Element (Policy 1.3).

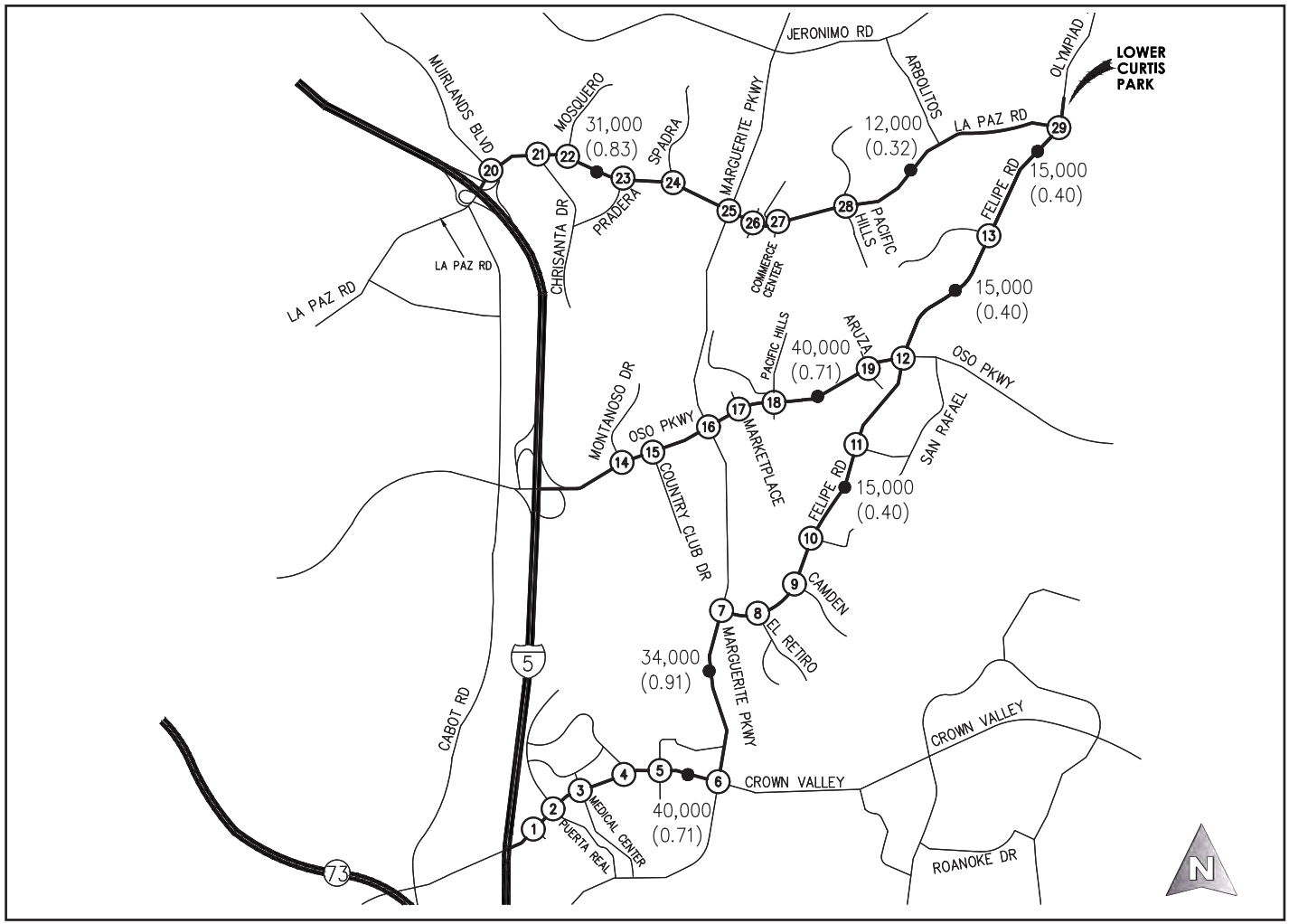


Figure 22

Existing Daily Link Volumes

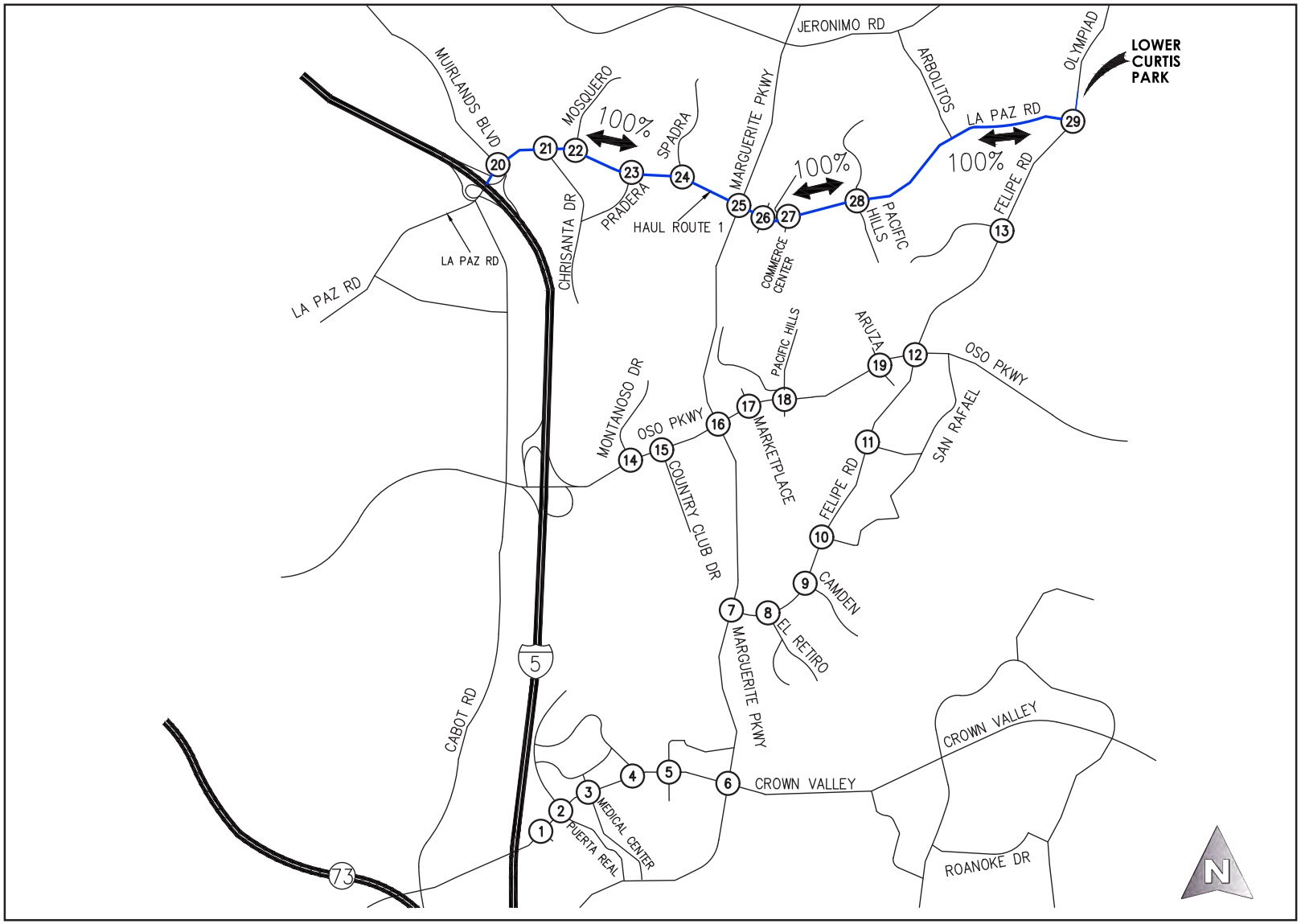


Figure 23

Truck Haul Route 1

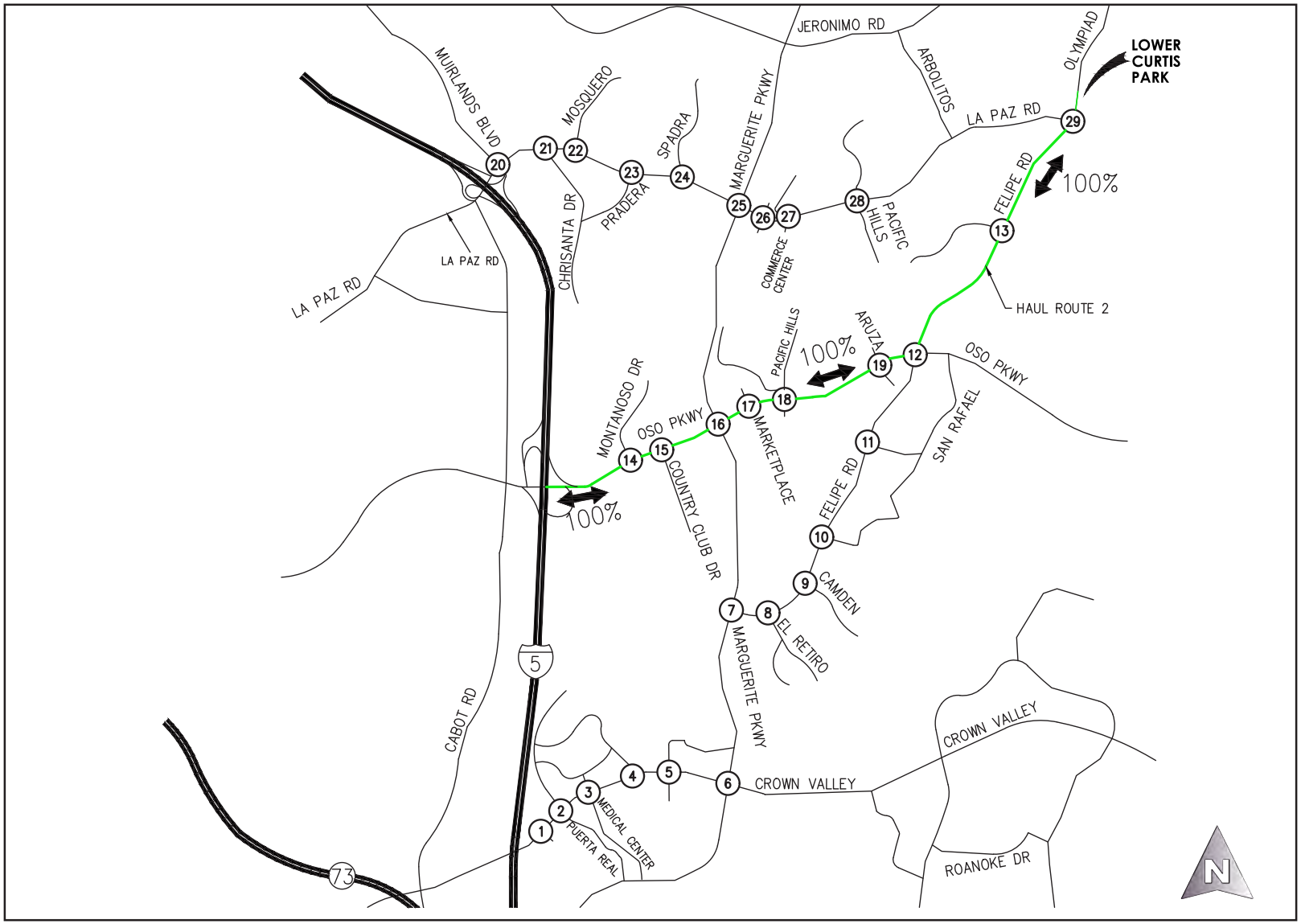


Figure 24

Truck Haul Route 2

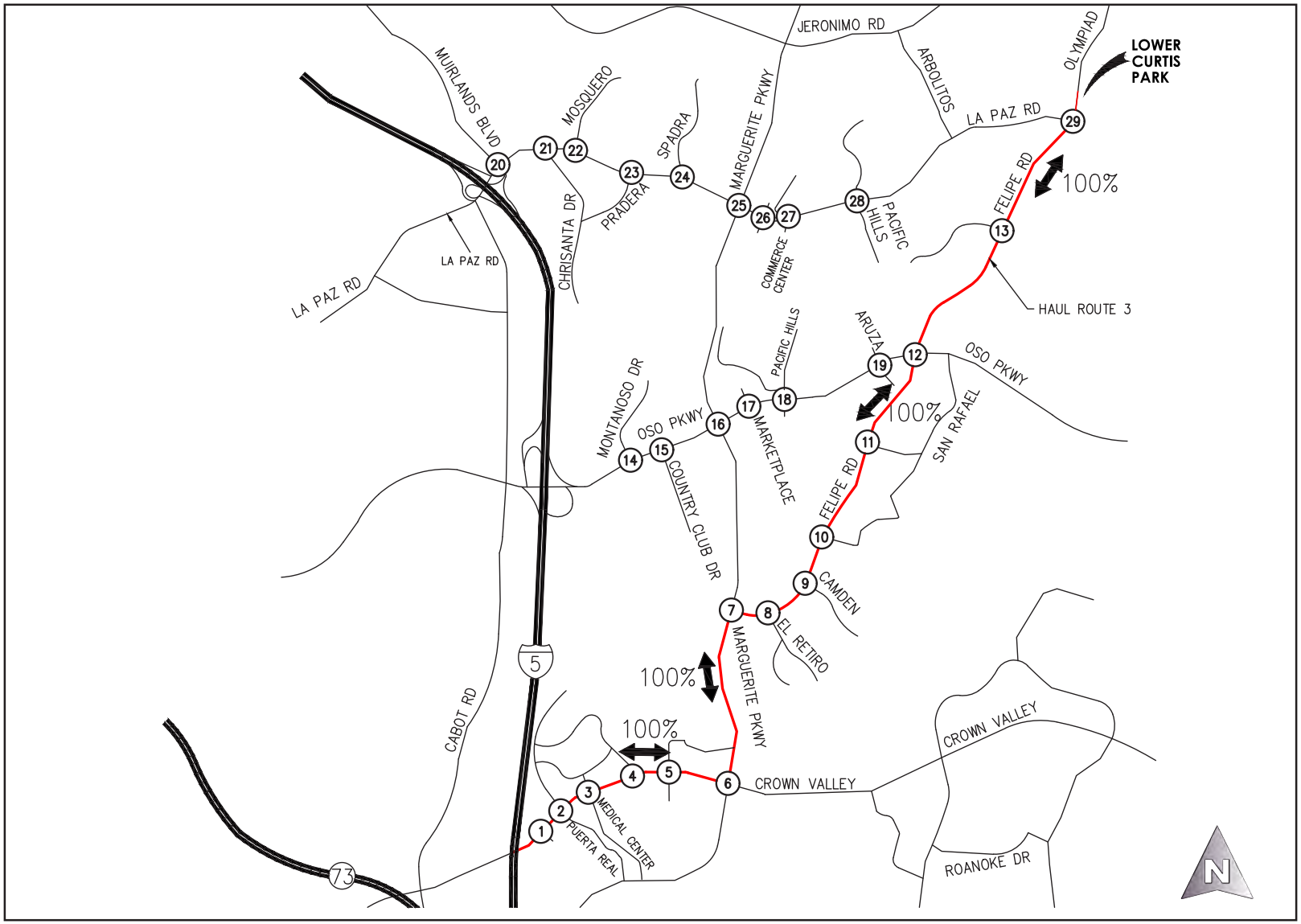


Figure 25

Truck Haul Route 3

Table 22
Route 1 – Study Area Intersections LOS

Signalized Intersections	Midday Peak		Midday Peak Plus Route 1			
	V/C	LOS	V/C	LOS	Δ	IMPACT
1. Crown Valley Parkway and Kaleidoscope	0.55	A	-	-	-	-
2. Crown Valley Parkway and Puerte Real	0.57	A	-	-	-	-
3. Crown Valley Parkway and Medical Center	0.61	B	-	-	-	-
4. Crown Valley Parkway and Los Altos	0.43	A	-	-	-	-
5. Crown Valley Parkway and Bellogente	0.34	A	-	-	-	-
6. Crown Valley Parkway and Marguerite Parkway	0.62	B	-	-	-	-
7. Marguerite Parkway and Felipe Road	0.52	A	-	-	-	-
8. El Retiro and Felipe Road	0.24	A	-	-	-	-
9. Camden and Felipe Road	0.20	A	-	-	-	-
10. Felipe Road and Barbadanes	0.21	A	-	-	-	-
11. Felipe Road and Buscador	0.19	A	-	-	-	-
12. Felipe Road and Oso Parkway	0.50	A	-	-	-	-
13. Felipe Road and Fieldcrest	0.22	A	-	-	-	-
14. Montanoso Drive and Oso Parkway	0.39	A	-	-	-	-
15. Oso Parkway and Country Club Drive	0.35	A	-	-	-	-
16. Marguerite Parkway and Oso Parkway	0.61	B	-	-	-	-
17. Marketplace and Oso Parkway	0.38	A	-	-	-	-
18. Alphera/Pacific Hills and Oso Parkway	0.35	A	-	-	-	-
19. Mirasol and Oso Parkway	0.30	A	-	-	-	-
20. Muirlands Boulevard and La Paz Road	0.47	A	0.50	A	0.03	NO
21. Chrisanta Drive and La Paz Road	0.50	A	0.51	A	0.01	NO
22. Mosquero Lane and La Paz Road	0.36	A	0.38	A	0.02	NO
23. Pradera and La Paz Road	0.35	A	0.37	A	0.02	NO
24. Spadra and La Paz Road	0.35	A	0.36	A	0.01	NO
25. Marguerite Parkway and La Paz Road	0.55	A	0.56	A	0.01	NO
26. La Paz Center Driveway and La Paz Road	0.35	A	0.36	A	0.01	NO
27. Commerce Center and La Paz Road	0.25	A	0.26	A	0.01	NO
28. Pacific Hills Drive and La Paz Road	0.31	A	0.32	A	0.01	NO
29. Felipe Road and La Paz Road	0.30	A	0.35	A	0.05	NO

Table 23
Route 2 – Study Area Intersections LOS

Signalized Intersections	Midday Peak		Midday Peak Plus Route 2			
	V/C	LOS	V/C	LOS	Δ	IMPACT
1. Crown Valley Parkway and Kaleidoscope	0.55	A	-	-	-	-
2. Crown Valley Parkway and Puerte Real	0.57	A	-	-	-	-
3. Crown Valley Parkway and Medical Center	0.61	B	-	-	-	-
4. Crown Valley Parkway and Los Altos	0.43	A	-	-	-	-
5. Crown Valley Parkway and Bellogente	0.34	A	-	-	-	-
6. Crown Valley Parkway and Marguerite Parkway	0.62	B	-	-	-	-
7. Marguerite Parkway and Felipe Road	0.52	A	-	-	-	-
8. El Retiro and Felipe Road	0.24	A	-	-	-	-
9. Camden and Felipe Road	0.20	A	-	-	-	-
10. Felipe Road and Barbadanes	0.21	A	-	-	-	-
11. Felipe Road and Buscador	0.19	A	-	-	-	-
12. Felipe Road and Oso Parkway	0.50	A	0.53	A	0.03	NO
13. Felipe Road and Fieldcrest	0.22	A	0.24	A	0.02	NO
14. Montanoso Drive and Oso Parkway	0.39	A	0.40	A	0.01	NO
15. Oso Parkway and Country Club Drive	0.35	A	0.35	A	0.00	NO
16. Marguerite Parkway and Oso Parkway	0.61	B	0.61	B	0.00	NO
17. Marketplace and Oso Parkway	0.38	A	0.39	A	0.01	NO
18. Alphera/Pacific Hills and Oso Parkway	0.35	A	0.36	A	0.01	NO
19. Mirasol and Oso Parkway	0.30	A	0.31	A	0.01	NO
20. Muirlands Boulevard and La Paz Road	0.47	A	-	-	-	-
21. Chrisanta Drive and La Paz Road	0.50	A	-	-	-	-
22. Mosquero Lane and La Paz Road	0.36	A	-	-	-	-
23. Pradera and La Paz Road	0.35	A	-	-	-	-
24. Spadra and La Paz Road	0.35	A	-	-	-	-
25. Marguerite Parkway and La Paz Road	0.55	A	-	-	-	-
26. La Paz Center Driveway and La Paz Road	0.35	A	-	-	-	-
27. Commerce Center and La Paz Road	0.25	A	-	-	-	-
28. Pacific Hills Drive and La Paz Road	0.31	A	-	-	-	-
29. Felipe Road and La Paz Road	0.30	A	0.32	A	0.02	NO

Table 24
Route 3 – Study Area Intersections LOS

Signalized Intersections	Midday Peak		Midday Peak Plus Route 3			
	V/C	LOS	V/C	LOS	Δ	IMPACT
1. Crown Valley Parkway and Kaleidoscope	0.55	A	0.56	A	0.01	NO
2. Crown Valley Parkway and Puerte Real	0.57	A	0.57	A	0.00	NO
3. Crown Valley Parkway and Medical Center	0.61	B	0.62	B	0.01	NO
4. Crown Valley Parkway and Los Altos	0.43	A	0.44	A	0.01	NO
5. Crown Valley Parkway and Bellogente	0.34	A	0.35	A	0.01	NO
6. Crown Valley Parkway and Marguerite Parkway	0.62	B	0.62	B	0.00	NO
7. Marguerite Parkway and Felipe Road	0.52	A	0.54	A	0.02	NO
8. El Retiro and Felipe Road	0.24	A	0.25	A	0.01	NO
9. Camden and Felipe Road	0.20	A	0.21	A	0.01	NO
10. Felipe Road and Barbadanes	0.21	A	0.22	A	0.01	NO
11. Felipe Road and Buscador	0.19	A	0.21	A	0.02	NO
12. Felipe Road and Oso Parkway	0.50	A	0.52	A	0.02	NO
13. Felipe Road and Fieldcrest	0.22	A	0.24	A	0.02	NO
14. Montanoso Drive and Oso Parkway	0.39	A	-	-	-	-
15. Oso Parkway and Country Club Drive	0.35	A	-	-	-	-
16. Marguerite Parkway and Oso Parkway	0.61	B	-	-	-	-
17. Marketplace and Oso Parkway	0.38	A	-	-	-	-
18. Alphera/Pacific Hills and Oso Parkway	0.35	A	-	-	-	-
19. Mirasol and Oso Parkway	0.30	A	-	-	-	-
20. Muirlands Boulevard and La Paz Road	0.47	A	-	-	-	-
21. Chrisanta Drive and La Paz Road	0.50	A	-	-	-	-
22. Mosquero Lane and La Paz Road	0.36	A	-	-	-	-
23. Pradera and La Paz Road	0.35	A	-	-	-	-
24. Spadra and La Paz Road	0.35	A	-	-	-	-
25. Marguerite Parkway and La Paz Road	0.55	A	-	-	-	-
26. La Paz Center Driveway and La Paz Road	0.35	A	-	-	-	-
27. Commerce Center and La Paz Road	0.25	A	-	-	-	-
28. Pacific Hills Drive and La Paz Road	0.31	A	-	-	-	-
29. Felipe Road and La Paz Road	0.30	A	0.32	A	0.02	NO

c) ***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.** Access to the project is proposed at the signalized intersection of La Paz Road at Olympiad Road and a road extension from the existing cul-de-sac in Curtis Park. These two site access roads would be reviewed by the City to ensure their design and construction meets city roadway design criteria and does not create any sharp curves or dangerous intersections. The project would have any significant traffic design or circulation hazards or impacts.

XVIII. TRIBAL CULTURAL RESOURCES: Would the project:

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). Less Than Significant Impact.** As required by AB 52, the City mailed letters to seventeen Native American Indians tribes that are on record with the city and may have cultural resources associated with the site. None of the tribes that were contacted requested consultation with the City regarding potential tribal resources on the site. Therefore, no significant tribal cultural resource impacts are anticipated.

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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. No Impact.** As discussed in section "XVII.a)" of this MND, the project would not have any known or suspected significant Native American cultural resource impacts.

XIX. UTILITIES AND SERVICE SYSTEMS: Would the project:

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 telecommunication facilities, the construction of which could cause significant environmental effects?*** **No Impact.** The project would require water for dust control and soil compaction during project grading and water trucks would provide the temporary source of water for dust control and soil compaction. The project would not generate any wastewater or require other utilities such as electricity, natural gas or telecommunications. Project impact to storm drain facilities are discussed in section "X.c.iii" of this MND. The project would not have any impact on water supply and no impact to wastewater or other utilities.

b) ***Have sufficient water supplies available to serve the project and reasonable foreseeable future development during normal, dry and multiple dry years?*** **Less Than Significant Impact.** The project would require water for dust control and soil compaction during project grading. However, the amount of water that would be consumed would not be significant and significantly impact existing water supplies. The project would have a less than significant impact on water supply.

c) ***Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*** **No Impact.** The project would not generate any wastewater. Therefore, the project would not have any wastewater treatment plant capacity impact.

d) ***Generate solid waste in excess of State or local standards, or in excess othe capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*** **No Impact.** The project would not generate any solid waste. Therefore, the project would not have any solid waste impact.

e) ***Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*** **No Impact.** As discussed in section "XIX. d)" of this MND, the project would not have any solid waste impact. The City of Mission Viejo complies with all federal, state, and local statutes and regulations related to solid waste and any solid waste that is generated by the project would meet and comply with all solid waste disposal requirements by the city.

XX. WILDFIRE: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

a) **Substantially impair an adopted emergency response plan or emergency evacuation plan? Less Than Significant.** The project site is located in a Very High Fire Hazard Severity Zone in Local Responsibility Areas (LRA).[21] The project site is not located in a Moderate, High or Very High fire hazard zone in a State or Federal Responsibility Area (SRA).[22] Although the site is located in a LRA, no development is proposed. Therefore, the project is not required to provide any special fire protection measures in addition to the fire protection requirements that are required by the Fire Code. The project would not impair or impact any emergency response or emergency evacuation plan for a fire hazard.

b) ***Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*** **Less Than Significant Impact.** As discussed in section "XIX.a)" of this MND, the project is located in a Very High Fire Hazard Severity Zone in a LRA, but not in a Moderate, High or Very High fire hazard zone in a SRA. The project site is located adjacent to the east slope of Curtis Park with introduced landscaping and adjacent to vacant land with native vegetation on the north, east and south that could expose the site to fire risks. Although the project site could expose workers to wildfire hazards and pollutants associated with a wildfire, all workers would have direct emergency access from the site to Olympiad Road for a safe exit. Santa Ana winds could expose construction workers to smoke and other pollutants associated with wildfires north, east and south of the site. However, that exposure would not be site specific because much of the city and general geographic area would also be exposed to the same smoke and pollutants and not the project site specifically. Once project grading is completed there would not be any people or occupants on the site. The project would not expose construction workers to pollutant concentrations from a wildfire due to slope, prevailing winds or other factors that would significantly impact workers.

c) ***Reguire the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*** **No Impact.** The project proposes to construct an earthen pad and no development is proposed. Therefore, the project would not be required to install and maintain any roads, fuel breaks, emergency water sources, power lines or other utilities that would result in temporary or ongoing impacts to the environment.

d) ***Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result or runoff, post-fire slope instability, or drainage changes?*** **No Impact.** The project proposes the construction of an earthen pad and no structures are proposed. Therefore, the project would not expose people or structures to any risks due to downstream flooding or landslides due to post-fire slope instabilities.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE:

a) ***Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or***

[21] https://osfm.fire.ca.gov/media/5890/c30_missionviejo_vhfhsz.pdf
[22] https://osfm.fire.ca.gov/media/5890/c30_missionviejo_vhfhsz.pdf

restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory? **No Impact.** The project site is mostly vacant with the exception of metal storage containers that are used to store city landscape maintenance equipment on-site. The existing vegetation on the site consists mostly of non-native grassland with smaller areas of disturbed habitat, shrubs, trees, thistles, and scrub. Based on the biology reports the project would impact biological resources that are present on the site. Mitigation measures are recommended to reduce potential biological resource impacts to less than significant that includes the dedication of City-owned property adjacent to and north of the site to the Orange County SSHCP for the preservation and protection of impacted biological resources. The recommended mitigation measures would reduce potential biological resource impacts to less than significant. There are no examples of California history or prehistory on the site that would be impacted by the project.

b) ***Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)*** **Less Than Significant Impact.** The City of Mission Viejo has identified two projects that, along with the proposed project, could have cumulative impacts. The cumulative projects are shown in Table 25.

Table 25
Cumulative Projects[23]

Cumulative Project	Location/Address	Description
Mission Viejo Medical Center	East of the Shops at Mission Viejo Mall	Four-story 110,000 sq. ft. medical office building with five level parking structure on 3.76 acres
Fast Food Restaurant with Drive Thru	25892 Muirlands Boulevard	2,800 sq. ft.

Air Quality

Cumulative projects include local development as well as general growth within the project area. However, as with most development, the greatest source of air emissions is from mobile sources, which travel well out of the local area. Therefore, from an air quality standpoint, the cumulative analysis would extend beyond any local projects and when wind patterns are taken into account, air emissions would cover an even larger area. Therefore, the analysis for the project's cumulative air quality impacts must be generic by nature.

The project area is out of attainment for ozone and suspended particulates (PM10 and PM2.5). Construction and operation of cumulative projects would further degrade the local air quality, as well as the air quality of the South Coast Air Basin. The greatest cumulative impact on the quality of the air in the region would be the incremental addition of pollutants mainly from increased traffic volumes from cumulative development, including residential, commercial, and industrial, and the operation of heavy equipment and trucks associated with the construction of these projects. Air quality would be temporarily degraded during construction activities of the cumulative projects that occur separately or simultaneously. However, in accordance with the SCAQMD methodology, projects that do not exceed

[23] Source: City of Mission Viejo Planning Division.

the SCAQMD criteria or can be mitigated to less than criteria levels are not significant and do not contribute to the overall cumulative air quality impact. With respect to long-term emissions, this project would create a less than significant cumulative impact.

Biological Resources

The removal of existing vegetation on the site would result in a cumulative biological impact to both the plant species that would be removed and impacted along with the wildlife that is associated with the vegetation. The City proposes to dedicate City-owned land that is located adjacent to and north of the project site to the Orange County SSHCP to replace and mitigate the impact of the removal of the existing on-site vegetation and associated wildlife. The land that would be dedicated to the County would be at a ratio that is acceptable to the Orange County SSHCP and the USFWS to compensate for the loss of habitat and wildlife and would reduce potential cumulative biological resource impacts to less than significant.

Noise

Cumulative traffic noise increases also use a significance threshold of 3 dB. The FHWA (Federal Highway Administration) noise model was referenced to determine the potential cumulative traffic noise impact of the project. Traffic associated with the project along with traffic from the cumulative projects was evaluated to determine the cumulative traffic noise impact. The cumulative traffic noise increases with the project and the cumulative projects are shown in Table 26. As shown, the greatest cumulative noise level increase is 0.7 dB along La Paz Road between Marguerite Parkway and Felipe Road. This noise level increase is below the 3 dB significance threshold and therefore, there would not be a significant cumulative noise level impact by the project.

Table 26
Cumulative Traffic Noise CNEL Increases (dB)
(Future with Project Versus Existing)

Roadway Segment	Extent of Segment	Change in Level (dB)
Haul Route 1		
La Paz Road	I-5 Freeway to Marguerite	0.7
La Paz Road	Marguerite Pkwy to Felipe Rd	1.3
Haul Route 2		
Oso Parkway	I-5 Freeway to Felipe Rd	0.4
Felipe Road	Oso Pkwy to Fieldcrest	1.1
Felipe Road	Fieldcrest to La Paz Rd	1.1
Haul Route 3		
Crown Valley Pkwy	I-5 Freeway to Marguerite	0.4
Marguerite Pkwy	Crown Valley Pkwy to Felipe	0.5
Felipe Road	Marguerite Pkwy to Oso	1.1

	Pkwy	
Felipe Road	Oso Pkwy to Fieldcrest	1.1
Felipe Road	Fieldcrest to La Paz Rd	1.1

Traffic

The cumulative traffic along with the project truck trips are shown in Tables 27 thru 29. As shown, all studied intersections would continue to operate at an acceptable LOS with both project and cumulative traffic trips. The project would not have any significant cumulative traffic impacts.

c) ***Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly? Less Than*** **Significant Impact.** There are no impacts associated with the project that would cause substantial adverse effects and significantly impact human beings either directly or indirectly. All potentially significant impacts can be reduced to less than significant with the implementation of recommended mitigation measures.

Table 27
Existing (2019) with Route 1 Plus Cumulative Traffic – Study Area Intersections Level of Service

Signalized Intersections	Existing (2019)		Existing (2019) with Route 1				Existing (2019) with Route 1 with Cumulative			
	Mid-Day Peak Hour		Mid-Day Peak Hour				Mid-Day Peak Hour			
	V/C	LOS	V/C	LOS	Δ	IMPACT	V/C	LOS	Δ	IMPACT
1. Crown Valley Parkway and Kaleidoscope	0.55	A	-	-	-	-	-	-	-	-
2. Crown Valley Parkway and Puerte Real	0.57	A	-	-	-	-	-	-	-	-
3. Crown Valley Parkway and Medical Center	0.61	B	-	-	-	-	-	-	-	-
4. Crown Valley Parkway and Los Altos	0.43	A	-	-	-	-	-	-	-	-
5. Crown Valley Parkway and Bellogente	0.34	A	-	-	-	-	-	-	-	-
6. Crown Valley Parkway and Marguerite Parkway	0.62	B	-	-	-	--	-	-	-	--
7. Marguerite Parkway and Felipe Road	0.52	A	-	-	-	-	-	-	-	-
8. El Retiro and Felipe Road	0.24	A	-	-	-	-	-	-	-	-
9. Camden and Felipe Road	0.20	A	-	-	-	-	-	-	-	-
10. Felipe Road and Barbadanes	0.21	A	-	-	-	-	-	-	-	-
11. Felipe Road and Buscador	0.19	A	-	-	-	-	-	-	-	-
12. Felipe Road and Oso Parkway	0.50	A	-	-	-	-	-	-	-	-
13. Felipe Road and Fieldcrest	0.22	A	-	-	-	-	-	-	-	-
14. Montanoso Drive and Oso Parkway	0.39	A	-	-	-	-	-	-	-	-
15. Oso Parkway and Country Club Drive	0.35	A	-	-	-	-	-	-	-	-
16. Marguerite Parkway and Oso Parkway	0.61	B	-	-	-	-	-	-	-	-
17. Marketplace and Oso Parkway	0.38	A	-	-	-	-	-	-	-	-
18. Alphera/Pacific Hills and Oso Parkway	0.35	A	-	-	-	-	-	-	-	-
19. Mirasol and Oso Parkway	0.30	A	-	-	-	-	-	-	-	-
20. Muirlands Boulevard and La Paz Road	0.47	A	0.50	A	0.03	NO	0.5	A	0.03	NO
21. Chrisanta Drive and La Paz Road	0.50	A	0.51	A	0.01	NO	0.5	A	0.01	NO
22. Mosquero Lane and La Paz Road	0.36	A	0.38	A	0.02	NO	0.4	A	0.02	NO
23. Pradera and La Paz Road	0.35	A	0.37	A	0.02	NO	0.4	A	0.02	NO
24. Spadra and La Paz Road	0.35	A	0.36	A	0.01	NO	0.4	A	0.01	NO
25. Marguerite Parkway and La Paz Road	0.55	A	0.56	A	0.01	NO	0.56	A	0.01	NO
26. La Paz Center Driveway and La Paz Road	0.35	A	0.36	A	0.01	NO	0.36	A	0.01	NO
27. Commerce Center and La Paz Road	0.25	A	0.26	A	0.01	NO	0.26	A	0.01	NO
28. Pacific Hills Drive and La Paz Road	0.31	A	0.32	A	0.01	NO	0.32	A	0.01	NO
29. Felipe Road and La Paz Road	0.30	A	0.35	A	0.05	NO	0.35	A	0.05	NO

Table 28
Existing (2019) with Route 2 Plus Cumulative Traffic – Study Area Intersections Level of Service

Signalized Intersections	Existing (2019)		Existing (2019) with Route 2				Existing (2019) with Route 2 with Cumulative			
	Mid-Day Peak Hour		Mid-Day Peak Hour				Mid-Day Peak Hour			
	V/C	LOS	V/C	LOS	Δ	IMPACT	V/C	LOS	Δ	IMPACT
1. Crown Valley Parkway and Kaleidoscope	0.55	A	-	-	-	-	-	-	-	-
2. Crown Valley Parkway and Puerte Real	0.57	A	-	-	-	-	-	-	-	-
3. Crown Valley Parkway and Medical Center	0.61	B	-	-	-	-	-	-	-	-
4. Crown Valley Parkway and Los Altos	0.43	A	-	-	-	-	-	-	-	-
5. Crown Valley Parkway and Bellogente	0.34	A	-	-	-	-	-	-	-	-
6. Crown Valley Parkway and Marguerite Parkway	0.62	B	-	-	-	--	-	-	-	--
7. Marguerite Parkway and Felipe Road	0.52	A	-	-	-	-	-	-	-	-
8. El Retiro and Felipe Road	0.24	A	-	-	-	-	-	-	-	-
9. Camden and Felipe Road	0.20	A	-	-	-	-	-	-	-	-
10. Felipe Road and Barbadanes	0.21	A	-	-	-	-	-	-	-	-
11. Felipe Road and Buscador	0.19	A	-	-	-	-	-	-	-	-
12. Felipe Road and Oso Parkway	0.50	A	0.53	A	0.03	NO	0.53	A	0.03	NO
13. Felipe Road and Fieldcrest	0.22	A	0.24	A	0.02	NO	0.24	A	0.02	NO
14. Montanoso Drive and Oso Parkway	0.39	A	0.40	A	0.01	NO	0.40	A	0.01	NO
15. Oso Parkway and Country Club Drive	0.35	A	0.35	A	0.00	NO	0.35	A	0.00	NO
16. Marguerite Parkway and Oso Parkway	0.61	B	0.61	B	0.00	NO	0.61	B	0.00	NO
17. Marketplace and Oso Parkway	0.38	A	0.39	A	0.01	NO	0.39	A	0.01	NO
18. Alphera/Pacific Hills and Oso Parkway	0.35	A	0.36	A	0.01	NO	0.36	A	0.01	NO
19. Mirasol and Oso Parkway	0.30	A	0.31	A	0.01	NO	0.31	A	0.01	NO
20. Muirlands Boulevard and La Paz Road	0.47	A	-	-	-	-	-	-	-	-
21. Chrisanta Drive and La Paz Road	0.50	A	-	-	-	-	-	-	-	-
22. Mosquero Lane and La Paz Road	0.36	A	-	-	-	-	-	-	-	-
23. Pradera and La Paz Road	0.35	A	-	-	-	-	-	-	-	-
24. Spadra and La Paz Road	0.35	A	-	-	-	-	-	-	-	-
25. Marguerite Parkway and La Paz Road	0.55	A	-	-	-	-	-	-	-	-
26. La Paz Center Driveway and La Paz Road	0.35	A	-	-	-	-	-	-	-	-
27. Commerce Center and La Paz Road	0.25	A	-	-	-	-	-	-	-	-
28. Pacific Hills Drive and La Paz Road	0.31	A	-	-	-	-	-	-	-	-
29. Felipe Road and La Paz Road	0.30	A	0.32	A	0.02	NO	0.32	A	0.02	NO

Table 29
Existing (2019) with Route 2 Plus Cumulative Traffic – Study Area Intersections Level of Service

Signalized Intersections	Existing (2019)		Existing (2019) with Route 3				Existing (2019) with Route 3 with Cumulative			
	Mid-Day Peak Hour		Mid-Day Peak Hour				Mid-Day Peak Hour			
	V/C	LOS	V/C	LOS	Δ	IMPACT	V/C	LOS	Δ	IMPACT
1. Crown Valley Parkway and Kaleidoscope	0.55	A	0.6	A	0.01	NO	0.56	A	0.01	NO
2. Crown Valley Parkway and Puerte Real	0.57	A	0.57	A	0.00	NO	0.60	A	0.00	NO
3. Crown Valley Parkway and Medical Center	0.61	B	0.62	B	0.01	NO	0.62	B	0.01	NO
4. Crown Valley Parkway and Los Altos	0.43	A	0.44	A	0.01	NO	0.44	A	0.01	NO
5. Crown Valley Parkway and Bellogente	0.34	A	0.35	A	0.01	NO	0.35	A	0.01	NO
6. Crown Valley Parkway and Marguerite Parkway	0.62	B	0.62	B	0.00	NO	0.62	B	0.00	NO
7. Marguerite Parkway and Felipe Road	0.52	A	0.54	A	0.02	NO	0.54	A	0.02	NO
8. El Retiro and Felipe Road	0.24	A	0.25	A	0.01	NO	0.25	A	0.01	NO
9. Camden and Felipe Road	0.20	A	0.21	A	0.01	NO	0.21	A	0.01	NO
10. Felipe Road and Barbadanes	0.21	A	0.22	A	0.01	NO	0.22	A	0.01	NO
11. Felipe Road and Buscador	0.19	A	0.21	A	0.02	NO	0.21	A	0.02	NO
12. Felipe Road and Oso Parkway	0.50	A	0.52	A	0.02	NO	0.52	A	0.02	NO
13. Felipe Road and Fieldcrest	0.22	A	0.24	A	0.02	NO	0.24	A	0.02	NO
14. Montanoso Drive and Oso Parkway	0.39	A	-	-	-	-	-	-	-	-
15. Oso Parkway and Country Club Drive	0.35	A	-	-	-	-	-	-	-	-
16. Marguerite Parkway and Oso Parkway	0.61	B	-	-	-	-	-	-	-	-
17. Marketplace and Oso Parkway	0.38	A	-	-	-	-	-	-	-	-
18. Alphera/Pacific Hills and Oso Parkway	0.35	A	-	-	-	-	-	-	-	-
19. Mirasol and Oso Parkway	0.30	A	-	-	-	-	-	-	-	-
20. Muirlands Boulevard and La Paz Road	0.47	A	-	-	-	-	-	-	-	-
21. Chrisanta Drive and La Paz Road	0.50	A	-	-	-	-	-	-	-	-
22. Mosquero Lane and La Paz Road	0.36	A	-	-	-	-	-	-	-	-
23. Pradera and La Paz Road	0.35	A	-	-	-	-	-	-	-	-
24. Spadra and La Paz Road	0.35	A	-	-	-	-	-	-	-	-
25. Marguerite Parkway and La Paz Road	0.55	A	-	-	-	-	-	-	-	-
26. La Paz Center Driveway and La Paz Road	0.35	A	-	-	-	-	-	-	-	-
27. Commerce Center and La Paz Road	0.25	A	-	-	-	-	-	-	-	-
28. Pacific Hills Drive and La Paz Road	0.31	A	-	-	-	-	-	-	-	-
29. Felipe Road and La Paz Road	0.30	A	0.32	A	0.02	NO	0.32	A	0.02	NO