County of San Diego

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February 14, 2022

MITIGATED NEGATIVE DECLARATION

Project Name: Calavo Park

This Document is Considered Draft Until it is Adopted by the County of San Diego Board of Supervisors.

This Mitigated Negative Declaration is composed of this form along with the Environmental Initial Study that includes the following:

a. Initial Study Form
b. Attached extended studies for air quality and greenhouse gases, biological resources, cultural resources, geological resources, hazardous materials, traffic and noise.

1. California Environmental Quality Act Negative Declaration Findings:

   Find that this Mitigated Negative Declaration reflects the decision-making body's independent judgment and analysis and that the decision-making body has reviewed and considered the information contained in this Mitigated Negative Declaration and the comments received during the public review period and, on the basis of the whole record before the decision-making body (including this Mitigated Negative Declaration), that there is no substantial evidence that the project will have a significant effect on the environment.

2. Required Mitigation Measures:

   Refer to the attached Environmental Initial Study for the rationale forrequiring the following measures:

   A. Biological Resources

   BIO-1: Nesting Season Avoidance or Pre-Construction Survey. If construction initiation occurs during the general bird breeding season, January

15 through August 31, a pre-construction nesting bird and raptor survey of the project area shall be completed by a qualified biologist prior to vegetation removal. The pre-construction survey shall be conducted within 72 hours prior to the start of construction activities, including removal or trimming of vegetation. If any active nests are detected, a qualified biologist will determine an appropriate buffer of up to 500 feet, and the area shall be flagged and mapped on construction plans, along with a buffer. The buffer area(s) established by the qualified biologist shall be avoided until the nesting cycle is complete, or it is determined that the nest is no longer active. The qualified biologist shall be a person familiar with bird breeding behavior and capable of identifying the bird species of San Diego County by sight and sound and determining alterations of behavior as a result of human interaction. Buffers shall be based on local topography and line of sight, species behavior and tolerance to disturbance, and existing disturbance levels, as determined appropriate by the qualified biologist.

BIO-2: Permanent Impacts to Disturbed Diegan Coastal Sage Scrub. Permanent impacts to 0.04 acre of disturbed Diegan coastal sage scrub shall be mitigated at a ratio of 1.5:1 through the preservation of 0.06 acre of Tier II habitat through the purchase of credits and/or land acquisition.

B. Noise

NOI-1: Construction Noise Best Management Practices. For construction activities within 145 feet of sensitive receptors, the construction contractor shall implement the following measures to the extent necessary to meeting the standards of Section 36.409 of the County of San Diego Noise Ordinance:

- The construction contractor shall provide written notification to the noise-sensitive land uses within 145 feet of normal construction activities at least 3 weeks before the start of construction activities, informing them of the estimated start date and duration of construction activities.
- Construction activities that generate high noise levels at residences shall be scheduled during times that would have the least impact on sensitive receptor locations. This shall include restricting construction activities in the areas of potential impact to the middle hours of the workday, such as from 10:00 a.m. to 4:00 p.m., Monday through Friday, when residents are least likely to be home.
- Stationary construction noise sources, such as temporary generators, shall be as far from nearby noise-sensitive receptors as necessary to be compliant with County Noise Ordinance standards.
- Trucks shall be prohibited from idling along streets serving the construction site where noise-sensitive residences are located.
- Construction equipment shall be outfitted with properly maintained, manufacturer-approved, or recommended sound abatement means on air intakes, combustion exhausts, heat dissipation vents, and interior surfaces of engine hoods and power train enclosures.

- Construction laydown and vehicle staging areas shall be positioned (to the extent practical) as far from noise-sensitive land uses as necessary to be compliant with County Noise Ordinance standards.
- Simultaneous operation of construction equipment shall be limited or construction time shall be limited to within an hour to reduce the hourly average noise level.
- Temporary noise barriers shall be installed around the perimeter of the construction area to minimize construction noise.

NOI-2: Hours of Operation. The hours of the active uses at Calavo Park (play areas, dog park, skate park, and sports fields and courts) shall be limited to between the hours of 7:00 a.m. and 10:00 p.m. in compliance with the nighttime standards of the County of San Diego's Noise Ordinance. Operational hours shall be posted on fencing at entrances to active use amenities and shall include a phone number for residents to call in case of use violations. Exceptions may be permitted for special events with a Sound Amplification Plan prepared in accordance with the Noise Regulation Policy for County Parks and County of San Diego Noise Ordinance Standards and approved by the County of San Diego Department of Parks and Recreation.

NOI-3: Vibration Best Management Practices. Before the start of construction activities that would involve use of a vibratory roller (or equivalent equipment) within 155 feet of a residence or operation of any heavy equipment within 90 feet of a residence, the project applicant shall retain a qualified acoustician to identify best management practices to be implemented by the construction contractor to reduce vibration levels to below 0.014 inch per second at the nearest residence. The best management practices shall be included in project construction documents, including the grading plan and contract with the construction contractor. Practices may include but are not limited to the following:

- Use only properly maintained equipment with vibratory isolators
- Operate equipment as far from sensitive receptors as possible
- Use rubber-tired vehicles as opposed to tracked vehicles

3. Critical Project Design Elements:

The following project design elements were the result of compliance with specific environmental laws and regulations and were essential in reaching the conclusions in the attached Environmental Initial Study. While the following are not technically mitigation measures, their implementation must be assured to avoid potentially significant environmental effects.

ADOPTION STATEMENT: This Draft Mitigated Negative Declaration and the above California Environmental Quality Act findings were made by the San Diego County Department of Parks and Recreation on February 14, 2022. This document is considered draft until it is adopted by the appropriate County of San Diego decision-making body.

Deborah Mosley, Chief Resource Management Division County of San Diego, Department of Parks and Recreation

Attachments:
CEQA Environmental Initial Study

County of San Diego

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February 14, 2022

CEQA Initial Study – Environmental Checklist Form
(Based on the State CEQA Guidelines, Appendix G)

- Project Name:
  Calavo Park

- Lead agency name and address:
  County of San Diego, Department of Parks and Recreation
  5500 Overland Avenue, Suite 410
  San Diego, California 92123

- a. Contact: Nicole Ornelas, Land Use/Environmental Planner
  b. Phone number: (858) 243-7185
  c. E-mail: Nicole.Ornelas@sdcounty.ca.gov

- Project location:
  The project is on an approximately 9-acre property northeast of the intersection of Calavo Drive and Jamacha Boulevard in the unincorporated community of Spring Valley in San Diego County, California (see Figure 1, Regional Location).

- Project Coordinates: 32°43'58.8"N/116° 57'34.9"W

- Project Applicant name and address:
  County of San Diego, Department of Parks and Recreation
  5500 Overland Avenue, Suite 410
  San Diego, California 92123

- General Plan
  Community Plan: Spring Valley
  Land Use Designation: Public/Semi-Public Facilities

- Zoning
  Use Regulation: Special Purpose (S90) Holding Area Use
  Minimum Lot Size: 6,000 square feet

  - Description of project:

  The proposed Calavo Park (project) includes development of a community park. The proposed project is on an approximately 9-acre, County of San Diego (County)-owned property in the unincorporated community of Spring Valley in the County. The County General Plan land use designation is Public/Semi-Public Facilities. Zoning for the site is Special Purpose (S90) Holding Area Use (County of San Diego 2011a).

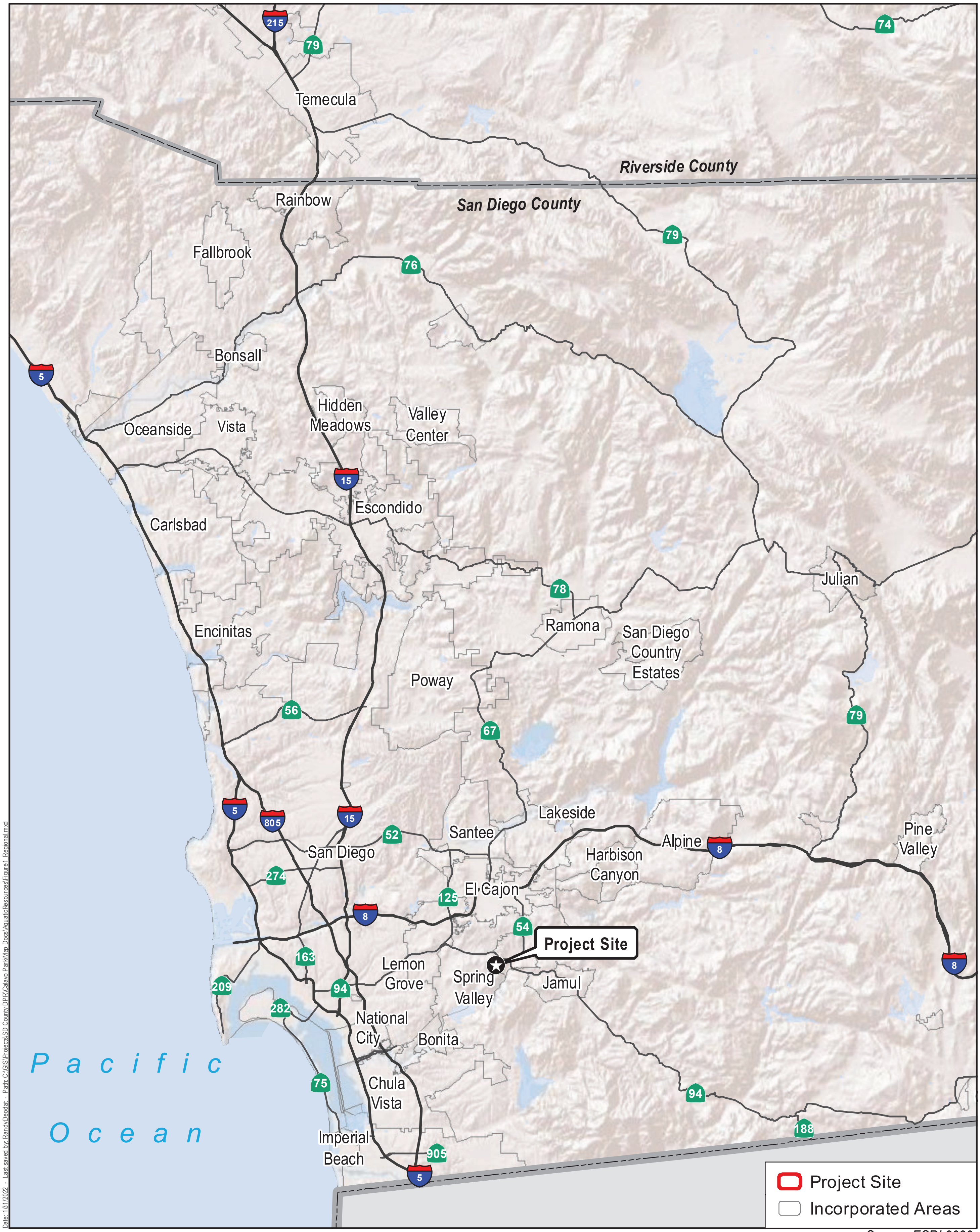
  The project site is northeast of the Calavo Drive and Jamacha Boulevard intersection and is currently vacant, undeveloped land (see Figure 2, Project Site). Proposed park amenities include associated walking paths, play areas, restrooms and a maintenance facility, a skate park, a community garden, a nature play area, a basketball court, a game table plaza, a picnic area, a soccer field, pickleball courts, a dog park, and a baseball field. The project proposes access through a single driveway via Calavo Drive, which would lead to designated parking containing approximately 85 parking spaces (see Figure 3, Proposed Site Plan).

- Surrounding land uses and setting:

  The project site is in the unincorporated community of Spring Valley in the County and is bounded by Calavo Drive to the southwest. Surrounding land uses include single- and multi-family residential to the northwest, east, and south and the San Diego National Wildlife Refuge to the north and northeast. Vegetation communities and land cover types on the project site include disturbed coastal sage scrub and disturbed habitat.

- Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

Permit Type/Action	**Agency**
General Construction Stormwater Permits	Regional Water Quality Control Board
Building Permit	County of San Diego



Source: ESRI 2020.

Harris & Associates

N

0 5 10

Miles

Figure 1

Regional Location

Calavo Park

Source: SanGIS Imagery 2017.

Harris & Associates

N

0 100 200
Feet

Figure 2
Project Site
Calavo Park

Date: 1/31/2022 - Last saved by: RandyDeodat - Path: C:\GIS\Projects\SD County DPR\Calavo Park\Map Docs\AquaticResources\Figure2_ProjectSite.mxd

Source: MW Peltz + Associates 2020.

Harris & Associates

Figure 3

Proposed Site Plan

Calavo Park

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- Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to California Public Resources Code, Section 21080.3.1? If so, has consultation begun?

YES	NO
☒	☐

Note: Conducting consultation early in the California Environmental Quality Act (CEQA) process allows tribal governments, public 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 California Public Resources Code, Section 21083.3.2). Information is also available from the Native American Heritage Commission's Sacred Lands File per California 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 California Public Resources Code, Section 21082.3(e), contains provisions specific to confidentiality.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: The environmental factors checked below would be potentially affected by this project and involve at least one impact that is a "Potentially Significant Impact" or a "Less Than Significant With Mitigation Incorporated," as indicated by the checklist on the following pages.

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

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ On the basis of this Initial Study, Department of Parks and Recreation finds that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ On the basis of this Initial Study, Department of Parks and Recreation finds that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ On the basis of this Initial Study, Department of Parks and Recreation finds that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

Signature	Date
Deborah Mosley	Chief of Resource Management
Printed Name	Title

INSTRUCTIONS ON 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 incorporated, 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 Environmental Impact Report (EIR) is required.

4. "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.

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 Incorporated," describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., General Plans, Zoning Ordinances). Reference to a previously prepared or outside document should,

where appropriate, include a reference to the page or pages where the statement is substantiated.

7. 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

I. AESTHETICS — Except as provided in Public Resources Code Section 21099 Would the project:

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

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: Scenic corridors are considered an enclosed area of landscape viewed as a single entity that includes the total field of vision visible from a specific point or series of points along a linear transportation route. Public view corridors are areas in which short-, medium-, and long-range views are available from publicly accessible viewpoints, such as from city streets. However, scenic vistas are generally interpreted as long-range views of a specific scenic feature (e.g., open space lands, mountain ridges, a bay, or ocean views). The project is on an approximately 9-acre property northeast of the Calavo Drive and Jamacha Boulevard intersection in the unincorporated community of Spring Valley in the County. The project site is immediately surrounded by residential uses to the north, east, south, and west. The San Diego National Wildlife Refuge is north and northwest. Goal COS-12, Preservation of Ridgelines and Hillsides, of the County General Plan (County of San Diego 2011a) and associated policies outline protection of ridgelines and steep hillsides for their scenic value. The proposed project would follow these policies, and views of the hillsides would not be adversely affected. Although the proposed project would introduce development where it does not currently exist, it would not affect views of scenic value along streets or highways.

Additionally, the proposed project would follow the provisions of the goals and policies specific to preservation of scenic resources in Chapter 5, Conservation and Open Space Element, of the County General Plan (County of San Diego 2011a). Impacts would be less than significant.

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

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: Chapter 5 of the County General Plan addresses scenic corridors in the County (County of San Diego 2011a). A highway corridor generally includes the land adjacent to and visible from a vehicular right-of-way. A scenic highway can pertain to any freeway, highway, road, or other vehicular right-of-way along a corridor with considerable natural or otherwise scenic landscape. State scenic highways are highways that are either officially designated or eligible for designation by the California Department of Transportation. This statewide system of scenic highways is part of the Master Plan of State Highways Eligible for Official State Designation as Scenic Highways (County of San Diego 2011a). Impacts would be less than significant.

The project is not in a state scenic highway. State scenic highways are classified as either officially listed or eligible. Two County routes are designated as state scenic highways: State Route (SR-) 78 and SR-125 from SR-94 in Spring Valley to Interstate 8 in the City of La Mesa (County of San Diego 2011a). The nearest eligible state scenic highway is SR-125 from SR-94 in Spring Valley, which is approximately 0.6 mile northeast of the project site. However, no views of the project site are from SR-94. The closest officially designated state scenic highway is SR-94 in Spring Valley to Interstate 8 in the City of La Mesa, approximately 4.5 miles northwest of the project site. As such, the project would not impact scenic resources in a state-designated scenic highway, and a less than significant impact would occur.

c) In non-urbanized areas, substantially degrade the existing visual character or quality 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?

☐	Potentially Significant Impact	☒	Less Than Significant Impact
☐	Less Than Significant With Mitigation Incorporated	☐	No Impact

Discussion/Explanation:

Less Than Significant Impact: New land uses would be introduced to the project site because the proposed project would result in development on a currently vacant lot. However, intensity would be consistent with surrounding uses and would not cause degradation to the existing visual character of the area.

The proposed project would allow for construction of a community park on an approximately 9-acre, County-owned property in the unincorporated community of Spring Valley in the County. The proposed project would follow the provisions of the goals and policies outlined in Chapter 5 of the County General Plan (County of San Diego 2011a). The project site is surrounded by residential on all sides, with a hillside to the northwest and the San Diego National Wildlife Refuge to the north and northeast. The County General Plan land use designation for the project site is Public/Semi-Public Facilities, and zoning is Special Purpose (S90) Holding Area Use (County of San Diego 2011a). The development of a community park would be consistent with the uses outlined in the County General Plan. The site is currently vacant and undisturbed. Additionally, the development would be consistent with the provisions in the goals and policies outlined in Chapter 5 of the County General Plan specific to development siting and design, which require development within visually sensitive areas to minimize visual impacts and to preserve unique or special visual features (County of San Diego 2011a). Therefore, a less than significant impact would occur.

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

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: Development of the proposed project would result in the development of a community park on an approximately 9-acre, County-owned property in the unincorporated community of Spring Valley in the County. The park would include associated walking paths; play areas, including one for children ages 2 to 5 and one for children ages 5 to 12; restrooms and a maintenance facility; a skate park; a community garden; a nature play area; a basketball court; a game table plaza; a picnic area; a soccer field; pickleball courts; a dog park; a baseball field; and approximately 85 parking spaces central to the project site. As a result, development intensity would increase beyond what currently exists because the site is a vacant lot causing new sources of light and glare.

During the day, lighting would have limited potential to impact views. Potential impacts from glare would primarily occur from the sun reflecting off reflective surfaces from play structures and parked cars. However, shade structures are proposed as part of the development, and the proposed project would include landscaping around the entire perimeter of the park that would buffer any potentially significant light and glare impacts. Therefore, the proposed project would not result in substantial glare that would adversely affect daytime views in the area.

Sensitive views of the night sky could be impacted from new light and glare in the previously vacant and undeveloped area. This would be caused by the associated security lighting on site and from vehicle headlights. However, as previously discussed, the proposed landscaping would create a buffer that would lessen impacts. Additionally, the proposed project would be required to comply with Chapter 2, Light Pollution of the County Code of Regulatory Ordinances to minimize light pollution to allow County citizens to view and enjoy the night environment (County of San Diego 2009a). Therefore, a less than significant impact would occur.

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 Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead

agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and 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 or Local 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?

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☒ No Impact

Discussion/Explanation:

No Impact: Currently, the project site is a vacant lot in an urbanized, residential area, and the proposed project would not convert any special-status farmland to non-agricultural use. Therefore, no impact would occur.

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

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☒ No Impact

Discussion/Explanation:

No Impact: The project site is not zoned for agricultural use, and no Williamson Act contract exists for the site (DOC 2017). Thus, the proposed project would not conflict with existing zoning for agricultural use or with a Williamson Act contract. Therefore, no impact would occur.

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))?

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☒ No Impact

Discussion/Explanation:

No Impact: The project site is zoned for Special Purpose (S90) Holding Area Use and is not zoned as forest land, timberland, or timberland zoned timberland production (DOC 2019). No land zoned as forest land or timberland exists within the project site boundaries. Therefore, no impact would occur.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☒ No Impact

Discussion/Explanation:

No Impact: The project site is a vacant lot in an urbanized area, and no forest land would be lost due to project implementation. Therefore, no impact would occur.

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

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☒ No Impact

Discussion/Explanation:

No Impact: Implementation of the proposed project would have no impact on agriculture or forestry resources. No agricultural land, forest land, or timberland exists on or in the vicinity of the project site. The proposed project would not involve changes to the existing environment that, because of their location or nature, could result in the conversion of farmland to non-agricultural use or forest land to non-forest use. Therefore, no impact would occur.

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?

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: The applicable air quality planning documents for the San Diego Air Pollution Control District (SDAPCD) are the 2016 Regional Air Quality Strategy (RAQS) (SDAPCD 2016) and the Ozone Attainment Plan (SDAPCD 2020), which is the SDAPCD portion of the State Implementation Plan. The SDAPCD prepared the RAQS and Ozone Attainment Plan for the California Air Resources Board (CARB) to include as part of the State Implementation Plan. These plans demonstrate how the San Diego Air Basin would either maintain or strive to attain the National Ambient Air Quality Standards. Both documents were developed in conjunction by the SDAPCD to reduce regional ozone (O_3) emissions.

The SDAPCD relies on information, including projected growth in the County and resulting mobile, area, and other source emissions, from CARB and the San Diego Association of Governments (SANDAG) to project future emissions and to develop appropriate strategies for the reduction of source emissions through regulatory controls. The CARB mobile source emissions projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the incorporated cities and the County. As such, as determined in the County Guidelines for Determining Significance – Air Quality (2007), projects that propose development that is consistent with the growth anticipated by SANDAG would be consistent with the RAQS and the State Implementation Plan.

The project site is currently designated in the County General Plan for Public/Semi-Public Facilities and zoned for Special Purpose (S90) Holding Area Use (County of San Diego 2011a). The project proposes a community park with associated active and passive use amenities on the site, which is consistent with the existing General Plan regional category, land use designation, and Special Purpose (S90) Holding Area Use zoning designation. Therefore, implementation of the proposed project would not exceed the County General Plan growth projections for the site, and the project would not conflict with the RAQS or State Implementation Plan. Impacts would be less than significant.

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

☐ Potentially Significant Impact	☒ Less Than Significant Impact
☐ Less Than Significant With Mitigation Incorporated	☐ No Impact

San Diego County is currently in non-attainment for the National Ambient Air Quality Standards and California Ambient Air Quality Standards for O_3. The County is also currently in non-attainment for concentrations of particulate matter less than or equal to 10 microns (PM_{10}) and particulate matter less than or equal to 2.5 microns ($PM_{2.5}$) under the California Ambient Air Quality Standards. O_3 is formed when volatile organic compounds (VOCs) and oxides of nitrogen (NO_X) react in the presence of sunlight. VOC sources include any source that burns fuels (e.g., gasoline, natural gas, wood, oil), solvents, petroleum processing and storage, and pesticides. Sources of PM_{10} and $PM_{2.5}$ in both urban and rural areas include motor vehicles, wood-burning stoves and fireplaces, dust from construction, landfills, agriculture, wildfires, brush and waste burning, and industrial sources of windblown dust from open lands.

The proposed project would have a significant impact if it would exceed the thresholds identified in the County Guidelines for Determining Significance – Air Quality (2007), as listed in Table 1.

Table 1. Construction Daily Maximum Air Pollutant Emissions

Construction Phase	Maximum Daily Emissions (pounds/day)					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Site Preparation	3.95	40.55	21.63	0.04	20.26	11.85
Grading	2.77	39.38	19.83	0.08	8.87	4.79
Building Construction	4.12	45.64	37.30	0.10	3.03	2.04
Paving	1.26	11.15	14.95	0.02	0.69	0.55
Architectural Coating	3.96	1.41	1.88	<0.011	0.10	0.08
Significance Threshold	**75**	**250**	**550**	**250**	**100**	**55**
Significant Impact?	*No*	*No*	*No*	*No*	No	*No*

Notes: CO = carbon monoxide; NO_x = oxides of nitrogen; PM_{10} = particulate matter less than or equal to 10 microns; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns; SO_x = sulfur oxide; VOC = volatile organic compound

Discussion/Explanation:

Construction

Less than Significant Impact. Construction activities would result in temporary increases in air pollutant emissions. These emissions would be generated as fugitive dust emissions from earth disturbance during fine site grading and exhaust emissions from operation of heavy equipment and vehicles during construction. Paving activities would emit VOCs during off-gassing.

Daily air pollutant emissions during construction were estimated using data provided by the County and default assumptions and emission factors included in the California Emissions Estimator Model (CalEEMod), version 2016.3.2. Table 1 presents a summary of estimated maximum daily air pollutant emissions during project construction.

As shown in Table 1, the project would not exceed the significance thresholds for any criteria pollutant during construction. Additionally, grading activities associated with construction of the project would be subject to the County Grading Ordinance and the SDAPCD Rule 55, which requires the implementation of dust control measures. The proposed project would result in a less than cumulatively considerable impact related to criteria pollutant emissions during construction.

Operation

Operational emissions associated with the proposed project were also calculated using CalEEMod software. Emissions are produced as a result of fuel combustion from vehicles, landscape maintenance equipment, and VOC emissions from periodic maintenance. Trip generation, trip length, and rates for primary trips were estimated using the Local Mobility Analysis prepared by Linscott, Law & Greenspan, Engineers (LLG) (2022) (Appendix A), and SANDAG assumptions for similar facilities (2002). CalEEMod defaults for energy demand and area sources are assumed. Modeling output files are provided in Appendix B. The total estimated operational emissions from the project are provided in Table 2.

Table 2. Maximum Daily Operational Emissions (pounds/day)

Source	VOC	NO_x	CO	SO_x	Total PM_{10}	Total $PM_{2.5}$
Area	0.1	<1	<1	0	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile	0.25	0.86	2.5	<1	0.77	0.21
Total	**0.35**	**0.86**	**2.5**	**<1**	**0.77**	**0.21**
Daily Threshold	**75**	**250**	**550**	**250**	**100**	**55**
Significant?	*No*	*No*	*No*	*No*	*No*	*No*

Source: CalEEMod, Version 2016.3.2. See Appendix B for model output.
Notes: CO = carbon monoxide; NO_x = oxides of nitrogen; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter; SO_x = sulfur oxide; VOC = volatile organic compound

As shown in Table 2, operational emissions from the project would not exceed the significance thresholds for maximum daily emissions. Therefore, air quality impacts associated with operation of the project would be less than significant and are not expected to create a cumulatively considerable impact or a considerable net increase in any criteria pollutant.

d) Expose sensitive receptors to substantial pollutant concentrations?

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: Air quality regulators typically define sensitive receptors as schools (preschool–12th grade), hospitals, resident care facilities, daycare centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. The County also considers residences as sensitive receptors because they house children and older adults (adults 65 years of age and over).

The nearest sensitive receptors to the project site include single-family residences and condominiums approximately 60 feet to the north and west. Emissions of potentially harmful pollutants, including diesel particulate matter and fugitive dust, would be generated on site during construction activities. The project would be required to comply with the County Grading Ordinance and the SDAPCD Rule 55, which would reduce potential emissions of fugitive dust. In addition, construction emissions from the project would be below the County significance thresholds, as shown in Table 1. Construction emissions would be temporary and would not expose sensitive receptors to harmful concentrations of air pollutants.

The County Guidelines for Determining Significance – Air Quality (2007) call for a carbon monoxide (CO) hotspot analysis if the project would cause an intersection to operate at a level of service (LOS) E or F with peak-hour trips exceeding 3,000. The project would generate approximately 184 average daily trips (ADT) during operation (Appendix A). The project-generated trips would not degrade the operation of any intersections in the project vicinity from an acceptable LOS to LOS E or F. The project's traffic generation would not warrant a CO hotspot analysis and, therefore, is not anticipated to expose sensitive receptors to substantial CO concentrations from vehicles. Impacts would be less than significant.

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

☐	Potentially Significant Impact	☒	Less Than Significant Impact
☐	Less Than Significant With Mitigation Incorporated	☐	No Impact

Discussion/Explanation:

Less Than Significant Impact: Construction associated with the proposed project could result in minor amounts of odor compounds associated with diesel-heavy equipment exhaust. In addition, the project could produce objectionable odors during construction from paving, painting, and equipment operation; however, these substances, if present, would be minimal and temporary. Impacts associated with odors during construction would not result in nuisance odors that would result in a significant impact.

CARB's Air Quality and Land Use Handbook (2005) includes a list of the most common sources of odor complaints received by local air districts for ongoing operational impacts. Typical sources of odor complaints include facilities such as sewage treatment plants, landfills, recycling facilities, petroleum refineries, and livestock operations. The proposed community park would not include any substantial odor-causing sources. Trash receptacles would be provided throughout the park and regularly maintained to collect waste that could potentially contribute to localized odors. Therefore, the project would not result in significant odors during operation, and impacts would be less than significant.

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 Game or U.S. Fish and Wildlife Service?

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☒ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant With Mitigation Incorporated: Potential impacts to sensitive plant and wildlife species are discussed in the following subsections.

Sensitive Plant Species

Two rare plant surveys were conducted on March 17, 2020, and May 5, 2020. No rare plants were observed during these surveys. Therefore, impacts to sensitive plant species would be less than significant.

Sensitive Wildlife Species

Western bluebird (*Sialia mexicana*) was observed foraging in the central portion of the project site during the habitat assessment and rare plant surveys. Low-quality Diegan coastal sage scrub habitat occurs on the project site, and a stand of eucalyptus (*Eucalyptus* sp.) surrounded by development is directly south of the project site. The San Diego National Wildlife Refuge, north and northeast of the project site, provides high-quality foraging and nesting habitat for western bluebird. Western bluebird was documented approximately 1 mile southeast of the project site in the San Diego National Wildlife Refuge and the Sweetwater River riparian corridor from 2015 through 2019 (eBird 2022). The project site is highly disturbed and does not provide high-quality nesting habitat for western bluebird; it does provide a limited area of foraging habitat. Higher-quality and larger areas of foraging habitat occur north and northeast of the project site in the San Diego National Wildlife Refuge. As part of the project design, any lights needed to illuminate the park amenities and parking lots shall be directed away from the San Diego National Wildlife Refuge north and northeast of the project site. Fencing, native vegetation, or other natural barriers would be constructed at the northern site boundary to prevent indirect impacts to sensitive wildlife habitat in the San Diego National Wildlife Refuge. Landscaping will act as a buffer between the park and the San Diego National Wildlife Refuge to minimize impacts from the public in terms of noise and disturbance.

Implementation of the project would impact a small, disturbed area of foraging and nesting habitat for western bluebird. Impacts to nesting habitat would be potentially significant. Implementation of Mitigation Measure BIO-1 would require nest surveys to reduce potential direct and indirect impacts to western bluebird and other nesting birds to a less than significant level.

One adult monarch butterfly (*Danaus plexippus*) was observed flying through the project site during the rare plant surveys on March 17, 2020, and May 5, 2020; however, no milkweed (*Asclepias* sp.) that would support monarch butterfly reproduction occurs on the project site. High-quality potential habitat for monarch butterfly occurs north and northeast of the project site in the San Diego National Wildlife Refuge. Therefore, impacts to monarch butterfly would be less than significant.

Nesting Birds

Project implementation has the potential to impact bird species that are protected under the Migratory Bird Treaty Act and California Fish and Game Code, Section 3504. As discussed in the Results section in Appendix C, several adult red-tailed hawks (*Buteo jamaicensis*) were observed flying over the project site during the habitat assessment and rare plant surveys, potentially nesting in mature trees north of the project site. One pair of killdeer (*Charadrius vociferus*) was observed in the center of the project site, potentially nesting in the disturbed, rocky habitat in the central portion of the project site. Although no active nests were observed during the habitat assessment and rare plant surveys, the upland habitat on site and mature trees on and surrounding the project site provide nesting habitat for many bird species. If construction is conducted during the bird-breeding season (January 15 through August 31), temporary direct impacts from disturbance and displacement of nesting birds during vegetation removal could result in significant direct impacts to bird species protected under the Migratory Bird Treaty Act. Indirect impacts from construction noise and vibration during clearing, grubbing, and trenching activities, if conducted during the bird-breeding season, could result in significant indirect impacts to bird species protected under the Migratory Bird Treaty Act. Implementation of Mitigation Measure BIO-1 would require general nest surveys to reduce potential direct and indirect impacts to nesting birds to a less than significant level.

Mitigation Measures

BIO-1: Nesting Season Avoidance or Pre-Construction Survey. If construction initiation occurs during the general bird breeding season, January 15 through August 31, a pre-construction nesting bird and raptor survey of the project area shall be completed by a qualified biologist prior to vegetation removal. The pre-construction survey shall be conducted within 72 hours prior to the start of construction activities, including removal or trimming of vegetation. If any active nests are detected, a qualified biologist will determine an appropriate buffer of up to 500 feet, and the area shall be flagged and mapped on construction plans, along with a buffer. The buffer area(s) established by the qualified biologist shall be avoided until the nesting cycle is complete, or it is determined that the nest is no longer active. The qualified biologist shall be a person familiar with bird breeding behavior and capable of identifying the bird species of San Diego County by sight and sound and determining alterations of behavior as a result of human interaction. Buffers shall be based on local topography and line of sight, species behavior and tolerance to disturbance, and existing disturbance levels, as determined appropriate by the qualified biologist.

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 Game or U.S. Fish and Wildlife Service?

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☒ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant With Mitigation Incorporated: Permanent impacts to 0.04 acre of sensitive disturbed Diegan coastal sage scrub vegetation would occur from implementation of the project (Figure 4, Impacts to Vegetation Communities). In accordance with the County's 100-foot fuel modification impact neutral guidelines, the area within 100 feet of an existing permitted and occupied structure shall be considered "impact neutral." The term "structure" is defined as a residence and attached garage, building, or related facility that is designed primarily for human habitation or buildings designed specifically to house farm animals. Decks, fences, sheds, gazebos, and detached garages less than 250 square feet are not considered structures (County of San Diego 2010). The fuel modification zones for the residences north and south of the project site extend onto the project site. Table 3 presents the disturbed Diegan coastal sage scrub impact acreage, impact neutral acreage, mitigation ratio, and mitigation acreage.

Table 3. Sensitive Vegetation Community Impacts and Mitigation

Vegetation Community	Impacts (acres)	Impact Neutral (acres)[1]	Mitigation Ratio	Mitigation Required (acres)	Off-Site Mitigation (acres)
Diegan coastal sage scrub (disturbed)	0.04	0.36	1.5:1	0.06	0.06[2]

Notes:

1 The area within 100 feet of an existing permitted and occupied structure shall be considered "impact neutral." The term "structure" is defined as a residence and attached garage, building, or related facility that is designed primarily for human habitation or buildings designed specifically to house farm animals. Decks, fences, sheds, gazebos, and detached garages less than 250 square feet are not considered structures (County of San Diego 2010).

2 Location to be determined.

Implementation of Mitigation Measure BIO-2 would require impacts to disturbed Diegan coastal sage scrub to be mitigated using a mitigation ratio of 1.5:1 through the preservation of Tier II habitat through the purchase of credits and/or land acquisition.

Source: SanGIS Imagery 2017.

Harris & Associates

N

0 100 200

Feet

Figure 4

Impacts to Vegetation Communities

Calavo Park

Mitigation Measures

BIO-2: Permanent Impacts to Disturbed Diegan Coastal Sage Scrub. Permanent impacts to 0.04 acre of disturbed Diegan coastal sage scrub shall be mitigated at a ratio of 1.5:1 through the preservation of 0.06 acre of Tier II habitat through the purchase of credits and/or land acquisition.

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

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☒ No Impact

Discussion/Explanation:

No Impact: On March 17, 2020, two Harris & Associates biologists conducted an aquatic resources assessment, and no sensitive aquatic resources were observed (Appendix C, Attachment 4). Therefore, no impact would occur.

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

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☒ No Impact

Discussion/Explanation:

No Impact: Although the San Diego National Wildlife Refuge is north and northeast of the project site, the project site is surrounded on three sides by residential development and is unlikely to function as a wildlife corridor or habitat linkage. While the disturbed project site provides live-in habitat for common reptile, bird, invertebrate, and mammal species, the project site does not support regional wildlife corridors or linkages. Therefore, no impact would occur.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☒ No Impact

Discussion/Explanation:

No Impact: The project would comply with the local policies and ordinances protecting biological resources identified in the County General Plan (County of San Diego 2011a) and the Spring Valley Community Plan (County of San Diego 2011b). Therefore, no impact would occur.

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

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☒ No Impact

Discussion/Explanation:

No Impact: The project would comply with the conservation policies identified in the County Subarea Plan. Therefore, no impact would occur.

V. CULTURAL RESOURCES — Would the project:

a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☒ No Impact

Discussion/Explanation:

No Impact: Based on an analysis of records, previous studies, review of historical maps and aerials, and survey of the project site on February 10, 2020, by a County-approved archaeologist, it has been determined that no impact to historical resources would occur as a result of the proposed project (Appendix D). Historic-period uses of the project site and surrounding area were limited and generally focused on cattle grazing or other agricultural activities. No specific activities could be gleaned from currently available historic archival material. No previously recorded or newly identified locations of historic activities, objects, or infrastructure were found on the project site. Therefore, no impact would occur.

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

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: A records search of the project site was conducted on February 24, 2020, at the South Coastal Information Center. A total of 78 cultural resources studies have been conducted for the project site, with 3 of these occurring on the project site. In addition, a systematic intensive pedestrian survey of the project site was conducted on February 10, 2020, by a County-approved archaeologist with a Native American monitor present. No archaeological resources were identified on the project site during this pedestrian survey. Based on the records search and pedestrian survey, no previously recorded or newly identified archaeological resources have been found on the project site. The full results are documented in the Cultural Resources Study (Appendix D), and no management recommendations were identified. Therefore, impacts to archaeological resources would be less than significant.

c) Disturb any human remains, including those interred outside of formal cemeteries?

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: As discussed in Section V(b), a records search and pedestrian survey were conducted for the proposed project to determine the presence or potential presence of cultural resources, including human remains, on the project site. No previously recorded sites with human remains were identified on the project site, and no management recommendations were identified (Appendix D). Therefore, impacts would be less than significant.

<u>VI. ENERGY</u> — 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?

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: The project, like all development, would be responsible for an incremental increase in the consumption of energy resources during construction due to on-site use of construction equipment and vehicle and truck trips. Construction activities that include the use of natural gas, petroleum, or electricity would be temporary and negligible and would not have an adverse effect. Construction equipment would be required to comply with CARB emissions requirements for construction equipment, which includes measures to reduce fuel-consumption, such as imposing limits on idling and requiring older engines and equipment to be retired, replaced, or repowered. In addition, the project would comply with the County General Plan, including Conservation and Open Space Element Policy 14.7, which encourages development projects to use alternative energy sources; Policy 14.10, which requires County contractors and encourages other developers to use low-emissions construction vehicles and equipment; Policy 15.4, which requires new development to meet or exceed Title 24 energy efficiency standards; and Policy 17.2, which requires construction and demolition debris be reduced, reused, and recycled (County of San Diego 2011a). The project would also be designed according to the most recent 2016 Title 24 or future, more stringent versions of Title 24 that are applicable as the project is built out.

The project would involve minimal new nighttime street, pathway, and sports fields and courts lighting; skate park lighting; and lighting associated with the two restrooms. Indirect energy use would include wastewater treatment from the proposed restrooms and solid waste removal at off-site facilities. Nominal impacts are expected from project implementation. The project does not include any features that would encourage the wasteful, inefficient, or unnecessary consumption of utilities. The project would result in an increase in vehicle trips to and from the site but would generate less than 3,000 ADT and would be below the screening-level criteria established by the guidelines, as discussed in Section III, Air Quality. Therefore, the project would not result in wasteful, inefficient, or unnecessary consumption of energy resources. Impacts would be less than significant.

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

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: The project would include the development of a community park with associated amenities. As stated in Section VI(a), the project would be required to meet the Title 24 energy efficiency standards. Furthermore, the project would be consistent with the County General Plan, including Conservation and Open Space Element Policies 14.7, 14.10, 15.4, and 17.2, which require the incorporation of alternative energy sources, use of low-emission construction vehicles, implementation of energy-efficient building design features, and reduction of solid waste during construction and operation (County of San Diego 2011a). Thus, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, impacts would be less than significant.

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?

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: The County is within Seismic Zone 4 (California Building Code [CBC], Section 1629.4.1), which is the highest seismic zone and, like most of Southern California, is subject to ground shaking. Active faults in the region include segments of the San Jacinto, Elsinore, and Rose Canyon fault zones. The Alquist-Priolo Earthquake Fault Zoning Act was passed to prevent construction of buildings used for human occupancy on the surface of active faults. Before cities and counties can permit development within Alquist-Priolo earthquake fault zones, geologic investigations are required to show that the sites are not threatened by surface rupture from future earthquakes. An active fault is a fault that has had surface displacement within the last

11,000 years. The project site is not within or near a currently established Alquist-Priolo earthquake fault zone (CGS 1990). The closest fault to the site is the Newport-Inglewood-Rose Canyon Fault Zone approximately 11 miles west of the site. Additionally, the project would not introduce any habitable buildings or structures because the project consists of a community park. The proposed project must conform to the seismic requirements outlined in the CBC to ensure the structural integrity of all buildings and structures. Title 5, Buildings and Building Regulations, Division 1, of the County Building Code requires a Soils Compaction Report with proposed foundation recommendations to be approved before the issuance of a building permit. Therefore, compliance with the CBC and the County Code would ensure the project would not result in a potentially significant impact from the exposure of people or structures to potential adverse effects from strong seismic ground shaking. Therefore, no impact from a fault rupture would occur.

ii) Strong seismic ground shaking?

☐	Potentially Significant Impact	☒	Less Than Significant Impact
☐	Less Than Significant With Mitigation Incorporated	☐	No Impact

Discussion/Explanation:

Less Than Significant Impact: As mentioned previously, the closest fault zone is the Newport-Inglewood-Rose Canyon Fault Zone approximately 11 miles from the project site and, therefore, is not immediately near or adjacent to the site. If a major earthquake occurs, the result could range from moderate to severe ground shaking. As with most areas in the Southern California region, damage to development and infrastructure associated with the surrounding areas could be expected as a result of ground shaking. However, because the proposed project includes implementation of a park and does not propose to develop the site with any buildings or habitable structures, impacts to the proposed park facilities from strong ground shaking are expected to be less than significant.

iii) Seismic-related ground failure, including liquefaction?

☐	Potentially Significant Impact	☒	Less Than Significant Impact
☐	Less Than Significant With Mitigation Incorporated	☐	No Impact

Discussion/Explanation:

Less Than Significant Impact: Liquefaction occurs primarily in saturated, loose, fine to medium-grained soils in areas where the groundwater table is generally 50 feet or less below the surface. When these sediments are shaken during an earthquake, a sudden increase in pore water pressure can cause the soils to lose strength and behave as a liquid. Liquefaction is not known to have occurred historically in the County, and the project site is not designated in the County General Plan as an area with potential for liquefaction (County of San Diego 2011a). Additionally, because the proposed project includes implementation of a park and does not propose to develop the site with any buildings or habitable structures, impacts to the proposed park facilities from seismically induced liquefaction are expected to be less than significant.

iv) Landslides?

☐ Potentially Significant Impact	☒ Less Than Significant Impact
☐ Less Than Significant With Mitigation Incorporated	☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: Landslides can be caused by ground shaking from an earthquake or water from rainfall, septic systems, landscaping, or other origins that infiltrate slopes with unstable material. Boulder-strewn hillsides can pose a boulder-rolling hazard from ground shaking, blasting, or a gradual loosening of their contact with the surface. Previous landslides and landslide-prone sedimentary formations are mostly in the western portion of the unincorporated County. Landslides have also occurred in the granitic terrain in the eastern portion of the County, although they are less prevalent there than in the western portion. Reactivations of existing landslides can be triggered by seismic shaking. The project site is surrounded by land uses, including single- and multi-family residential to the northwest, east, and south and the San Diego National Wildlife Refuge to the north and northeast. Additionally, the proposed project does not require any significant grading activities. Therefore, impacts related to landslides would be less than significant.

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

☐ Potentially Significant Impact	☒ Less Than Significant Impact
☐ Less Than Significant With Mitigation Incorporated	☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: The project site is currently vacant and is characterized by a pervious surface. During construction activities involving the import and export of soil, an increased potential for soil erosion would occur. During storm events, erosion and siltation could occur at an accelerated rate. Soil erosion potential would be increased; however, the proposed project would be required to comply with local, state, and federal regulations or laws that serve to reduce impacts related to hydrology and water quality. This includes compliance with the Construction General Permit and Stormwater Pollution Prevention Plan, which would identify best management practices (BMPs). Additionally, although the proposed project would result in an increase in impervious surfaces, erosion and siltation would be minimal. Therefore, impacts would be less than significant.

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

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: See responses to Sections VII(a)(iii), VII(a)(iv), and Section VII(d).

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?

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: Certain types of clay soils expand when they are saturated and shrink when dried. These are called expansive soils and can pose a threat to the integrity of structures built on them without proper engineering. Expansive soils are derived primarily from weathering of feldspar minerals and volcanic ash. The expansion and contraction of the soil varies with the soil moisture content (wet or dry) and can be aggravated by the way a property is maintained or irrigated. Human activities can increase the moisture content of the soils and the threat of expansive soil damage. The project site has been designated in the County General Plan as an area with potentially expansive soils (County of San Diego 2011a). However, the proposed project would be required to comply with all applicable federal, state, and local regulations, including the International Building Code and CBC. Compliance with such regulations would reduce potentially significant impacts to less than significant.

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

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☒ No Impact

Discussion/Explanation:

No Impact: The proposed project would not use septic tanks or alternative methods for disposal of wastewater into subsurface soils. The proposed project would connect to existing public wastewater infrastructure. Therefore, no impact would occur.

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

☐	Potentially Significant Impact	☒	Less Than Significant Impact
☐	Less Than Significant With Mitigation Incorporated	☐	No Impact

Discussion/Explanation:

Less Than Significant Impact: In the inventory included in the County General Plan, no unique geologic features are identified on the project site (County of San Diego 2011a). Additionally, compliance with the County Guidelines for Determining Significance – Geology/Geological Hazards/Soils (2007) would occur, which could require the completion of a Geological Reconnaissance Report to evaluate the significance of unique geologic features on a given project site. Therefore, impacts would be less than significant.

<u>VIII. GREENHOUSE GAS EMISSIONS</u> — Would the project:

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

☐	Potentially Significant Impact	☒	Less Than Significant Impact
☐	Less Than Significant With Mitigation Incorporated	☐	No Impact

Discussion/Explanation:

Less Than Significant Impact: To implement state mandates to address climate change in local land use planning, local land use jurisdictions are preparing greenhouse gas (GHG) emission inventories and reduction plans and incorporating climate change policies into local General Plans to ensure development is guided by a land use plan that reduces GHG emissions. The County General Plan incorporates various climate change goals and policies. These policies provide direction for individual development projects to reduce GHG emissions (County of San Diego 2011a).

The County prepared a comprehensive Climate Action Plan (CAP) to demonstrate how the County may achieve statewide mandates (County of San Diego 2018). The County CAP has been set aside as a qualified CAP meeting the requirements of the CEQA Guidelines and is not available to provide an appropriate threshold for project compliance. However, the County CAP may provide guidance regarding the County's long-term GHG emissions reduction goals, including the identification of required GHG emissions reduction measures. A CAP Update that will identify necessary actions for the County based on anticipated future GHG emissions from the current General Plan Land Use Element is in progress. As such, a project that is consistent with the County General Plan and would implement applicable GHG emissions reduction strategies would generate less than significant GHG emissions and comply with the County's efforts to achieve state reduction targets.

Construction GHG Emissions

GHG emissions would be associated with the construction phases of the project through use of heavy equipment, truck trips, and vehicle trips by the construction crew commuting to the project site. GHG emissions related to the construction of the project would be temporary. Construction emissions were calculated using CalEEMod with assumptions consistent with the air quality analysis described in Section III. Estimated construction emissions amortized over a 30-year period are provided by phase in Table 4.

Table 4. Estimated Construction Emissions

Construction Phase	CO_2e Emissions (metric tons)
Site Preparation	18
Grading	71
Building Construction	475
Paving	21
Architectural Coating	3
Total Construction Emissions	**588**
Amortized Construction Emissions	*19.6*

Source: CalEEMod, Version 2016.3.2. See Appendix B.

Notes: CO_2e = carbon dioxide equivalent

Operational GHG Emissions

Table 5 summarizes the estimated annual emissions from operation of the project calculated using CalEEMod with assumptions consistent with the air quality analysis described in Section III. These include GHG emissions associated with mobile sources, purchased electricity, water consumption (energy embodied in potable water), solid waste management (including transport and landfill gas generation), and area sources (landscape equipment). Vehicle trips are included in these emissions, but as described below, they are not considered new emissions. As shown in Table 5, the total CO_2e emissions from the project would be approximately 206.1 metric tons of CO_2e ($MTCO_2e$).

Table 5. Estimated Annual Operational Emissions

Emissions Source	CO_2e Emissions (metric tons)
Electricity	7
Natural Gas	0.2
Solid Waste	1.4
Water Use	37.1
Area Sources	<1
Mobile Sources	140.8
Total Operation	186.5
Amortized Construction Emissions	19.6
Total Annual Emissions	**206.1**

Source: CalEEMod, Version 2016.3.2. See Appendix B.

Notes: CO_2e = carbon dioxide equivalent

As shown previously, the project would result in an increase in GHG emissions above existing conditions. However, GHG emissions associated with mobile sources are not considered new emissions because the proposed project does not include any components that would result in growth on the project site. The project would serve existing residents, and it is assumed that vehicle trips to the park would have otherwise gone to another, likely farther away, recreational facility in the region. In addition, the project is not considered a new trip generator that would warrant a vehicle miles traveled (VMT) assessment. The Local Mobility Analysis prepared by LLG (Appendix A) states that, based on the Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA, the project is local serving by nature, meaning that it would redistribute trips and not create new trips and, therefore, has been screened out from needing to provide a VMT analysis. Therefore, net new emissions associated with the operation of the park would be limited to energy, solid waste, and area sources. As shown in Table 5, the new contribution of emissions from the proposed community park would be minimal (206.1 $MTCO_2e$).

Even though the County CAP consistency checklist threshold does not apply currently, new development projects should strive to achieve the goals and strategies of the County CAP. The proposed project is not a development project as defined in the County CAP. The County CAP is organized to focus on five primary GHG emission categories, the category of focus being Built Environment and Transportation, which centers on reducing the number and length of vehicle trips of single-occupancy-vehicle-heavy land uses. Parks are identified in the County CAP as a component of the goal to reduce VMT by achieving “Complete Streets” within County communities (County of San Diego 2018). As previously stated, the proposed park would serve existing residents who are currently served by other recreational facilities that residents currently drive to and from. Additionally, parks are an important component of the County CAP's strategy to increase carbon sequestration through the planting of trees. The County CAP includes a measure (see Measure A-2.2) to implement a tree planting program to plant a minimum of 3,500 trees per year throughout the unincorporated County (County of San Diego 2018). The proposed project would contribute to this measure by planting various trees on the project site. As such, parks are considered VMT-reducing land uses that support County CAP strategies and goals implementation. Therefore, the project would not generate significant GHG emissions, and impacts would be less than significant.

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

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: In 2006, the state passed the Global Warming Solutions Act of 2006, commonly referred to as Assembly Bill 32, which set the GHG emissions reduction goal for the State of California into law. The law requires that, by 2020, state emissions must be reduced to 1990 levels by reducing GHG emissions from significant sources through regulation, market mechanisms, and other actions. Assembly Bill 32 directed CARB to prepare and approve a Scoping Plan to achieve the maximum technologically feasible and cost-effective GHG emissions reductions from sources or categories of sources of GHGs by 2020 and to update the Scoping Plan every 5 years. The most recent update, the 2017 Scoping Plan, outlines the framework for achieving the 2030 reductions as established in Executive Order B-30-15 and Senate Bill 32. The 2017 Scoping Plan identifies GHG emissions reductions by emissions sector to achieve a statewide emissions level that is 40 percent below 1990 levels by 2030. CARB recommends statewide targets of no more than 6 $MTCO_2e$ per capita by 2030 and no more than 2 $MTCO_2e$ per capita by 2050 (CARB 2017). Therefore, the 2017 Scoping Plan is the applicable plan the project must demonstrate consistency regarding state goals.

Senate Bill 375, passed in 2008, links transportation and land use planning with global warming. It requires CARB to set regional targets to reduce GHG emissions from passenger vehicles. Under this law, if regions develop integrated land use, housing, and transportation plans that meet Senate Bill 375 targets, new projects in these regions can be relieved of certain review requirements under CEQA. Pursuant to Senate Bill 375, SANDAG prepared the region’s Sustainable Communities Strategy, which is a new element of the 2050 Regional Transportation Plan. The strategy identifies how regional GHG emissions reduction targets, as established by CARB, will be achieved through development patterns, transportation infrastructure investments, and/or transportation measures or policies determined to be feasible. Therefore, the Sustainable Communities Strategy is the applicable plan for the project to support regional goals for transportation emissions.

The proposed project would comply with statewide targets and regional regulations for GHG emissions reductions because it would be a community park serving existing residents who are currently served by other recreational parks in the County. As stated in Section VIII(b), it is assumed that vehicle trips to the proposed park would have otherwise gone to another, likely farther away, recreational facility in the region. In addition, the project is not considered a new trip generator that would warrant a VMT assessment and, therefore, would not conflict with the Sustainable Communities Strategy. The project would be consistent with goals set by the 2017 Scoping Plan because the project proposes green space, which the 2017 Scoping Plan states is an important component for net sinks of carbon and GHG emissions reduction. In addition, the new contribution of emissions from the proposed community park would be minimal. Therefore, the project would not conflict with an applicable plan, policy, or regulation adopted to reduce GHG emissions, and impacts would be less than significant.

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?

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: The term “hazardous material” can be defined in different ways. For this environmental document, the definition of “hazardous material” is the one outlined in the California Health and Safety Code, Section 25501:

> Hazardous materials that, because of their quantity, concentration, or physical or chemical characteristics, pose a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the unified program agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

“Hazardous waste” is a subset of hazardous materials, and the definition is essentially the same as in the California Health and Safety Code, Section 25117, and in the California Code of Regulations, Title 22, Section 66261.2:

> Hazardous wastes are those that, because of their quantity, concentration, or physical, chemical, or infectious characteristics, may either cause, or significantly contribute to an increase in mortality or an increase in serious illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

Hazardous materials can be categorized as hazardous nonradioactive chemical materials, radioactive materials, and biohazardous materials (infectious agents such as microorganisms, bacteria, molds, parasites, viruses, and medical waste).

Exposure of the public or the environment to hazardous materials could occur through the following: improper handling or use of hazardous materials or hazardous wastes, particularly by untrained personnel; transportation accidents; environmentally unsound disposal methods; and/or fire, explosion, or other emergencies. The severity of potential effects varies with the activity conducted, the concentration and type of hazardous material or waste present, and the proximity of sensitive receptors.

Following is a discussion of the proposed project's potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials during the construction and operational phases.

Construction of the proposed project would involve the use of limited amounts of potentially hazardous materials, including but not limited to solvents, paints, fuels, oils, and transmission fluids. However, materials used during construction would be contained, stored, and handled in compliance with applicable standards and regulations established by the Department of Toxic Substances Control (DTSC), the U.S. Environmental Protection Agency, and the Occupational Safety and Health Administration. Any associated risk would be adequately reduced to a less than significant level through compliance with these standards and regulations.

Project operation would involve the use of common hazardous maintenance and landscape materials typically associated with park uses (e.g., fertilizers, pesticides, and herbicides, cleaning solutions) that could be potentially hazardous if handled improperly or ingested. However, these products are not considered acutely hazardous and are not generally considered unsafe. Storage, handling, and disposal of hazardous materials during project construction and operation would comply with applicable standards and regulations. In addition, the proposed park use would not generate significant amounts of hazardous materials. Therefore, the proposed project would have a less than significant impact associated with the routine transport, use, or disposal of hazardous materials.

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

☐ Potentially Significant Impact	☒ Less Than Significant Impact
☐ Less Than Significant With Mitigation Incorporated	☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: The proposed project would include the construction and operation of a park use. As previously discussed in Section IX(a), construction of the proposed project would involve the use of potentially hazardous materials, including but not limited to solvents, paints, fuels, oils, and transmission fluids. Project operation is anticipated to involve limited use of hazardous materials typical of park uses, such as pesticides and other landscaping materials. Storage, handling, and disposal of hazardous materials during project construction and operation would comply with applicable standards and regulations established by the DTSC, the U.S. Environmental Protection Agency, and the Occupational Safety and Health Administration. Any associated risk would be adequately reduced to a less than significant level through compliance with these standards and regulations. Therefore, the proposed project would not result in a significant hazard to the public or the environment through a reasonably foreseeable upset or accident condition related to the release of hazardous materials.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☒ No Impact

Discussion/Explanation:

No Impact: The proposed project would result in the development of a new community park. Loma Elementary School is the closest school to the project site, approximately 0.5 mile northwest of the project site at 10355 Loma Lane in Spring Valley. As discussed previously, the proposed project would not result in a significant hazard affecting the public during project construction and operation. Furthermore, the proposed project would not result in significant impacts associated with hazardous materials because materials would be handled, stored, and disposed of in accordance with applicable standards and regulations established by the DTSC, the U.S. Environmental Protection Agency, and the Occupational Safety and Health Administration. Any associated risk would be adequately reduced to a less than significant level through compliance with these standards and regulations. Additionally, no project-related impacts would occur because no schools are within 0.25 mile of the project site. Therefore, the proposed project does not involve activities that would result in the emission of hazardous materials or acutely hazardous substances within 0.25 mile of an existing or proposed school.

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

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: California Government Code, Section 65962.5, requires the compiling of lists of the following types of hazardous materials sites: hazardous waste facilities, hazardous waste discharges for which the State Water Quality Control Board has issued certain types of orders, public drinking water wells containing detectable levels of organic contaminants, underground storage tanks with reported unauthorized releases, and solid waste disposal facilities from which hazardous waste has migrated. According to the DTSC EnviroStor database (2022), the project site is not on a federal Superfund site, state response site, voluntary cleanup site, school cleanup site, corrective action site, or tiered permit site. Therefore, implementation of the proposed project would not result in an impact related to a known hazardous materials site pursuant to California Government Code, Section 65962.5, and would not create a significant hazard to the public or the environment. No mitigation would be required.

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 or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☒ No Impact

Discussion/Explanation:

No Impact: The project site is not within 2 miles of a public or public use airport. The nearest airport is Gillespie Field approximately 6 miles north of the project site in the City of El Cajon. The next closest airport is San Diego International Airport approximately 12 miles west of the project site in the City of San Diego. Therefore, the proposed project would not result in safety hazards or excessive noise for people residing or working on the project site. No impact would occur.

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

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: The County’s Operational Area Emergency Operations Plan (2018) outlines the County’s emergency response organization and policies. The Operational Area Emergency Operations Plan (2018) describes a comprehensive emergency management system that provides for a planned response to disaster situations associated with natural disasters, technological incidents, terrorism, and nuclear-related incidents. It delineates operational concepts relating to various emergency situations, identifies components of the Emergency Management Organization, and describes the overall responsibilities for protecting life and property and ensuring the overall wellbeing of the population. The Operational Area Emergency Operations Plan (2018) also identifies the sources of outside support that might be provided (through mutual aid and specific statutory authorities) by other jurisdictions, state and federal agencies, and the private sector.

The proposed project does not include any characteristics (e.g., permanent road closures or long-term blocking of road access) that would physically impair or otherwise conflict with an Emergency Response Plan or Emergency Evacuation Plan. During short-term construction activities, the proposed project is not anticipated to result in any substantial traffic queuing on nearby streets, and all construction equipment would be staged within or directly adjacent to the project site. Therefore, impacts related to Emergency Response Plans and Emergency Evacuation Plans associated with construction of the proposed project would be less than significant. No mitigation would be required. The proposed project does not include any changes to any public or private roadways that would interfere with the County Emergency Operations Plan or another adopted Emergency Response Plan or Emergency Evacuation Plan. Further, the proposed project would not obstruct or alter any transportation routes that could be used as evacuation routes during emergency events. Access to and from the project site for emergency vehicles would be reviewed and approved by the San Miguel Fire & Rescue as part of the project approval process to ensure the proposed project is compliant with applicable codes and ordinances for emergency vehicle access. Impacts related to interference with an emergency response plan are considered less than significant.

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

☐ Potentially Significant Impact	☒ Less Than Significant Impact
☐ Less Than Significant With Mitigation Incorporated	☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: The project site is in a Very High Fire Hazard Severity Zone according to the California Department of Forestry and Fire Protection (2022). Fire hazard designations are based on topography, vegetation, and weather, among other factors, with more hazardous sites including steep terrain, unmaintained fuels/vegetation, and wildland urban interface locations. Development within or adjacent to areas designated as Very High Fire Hazard Severity Zones and/or wildland-urban interface areas has the potential to exacerbate wildfire risk, particularly if it occurs in areas with steep topography and/or prevailing winds because these conditions contribute to the spread of and make it more difficult to contain wildfires. However, the project would meet or exceed applicable code requirements. Additionally, the project site is in a largely urbanized area, it is surrounded by land uses, including single- and multi-family residential to the northwest, east, and south and the San Diego National Wildlife Refuge to the north and northeast. The project would comply with the International Fire Code; California Fire Code; regulations set forth in Sections 13000 et seq. of the California Health and Safety Code; and Title 14, Division 1.5, of the California Code of Regulations. The project would comply with County ordinances and the County Consolidated Fire Code. Therefore, impacts would be less than significant.

X. HYDROLOGY AND WATER QUALITY — Would the project:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: Construction of the proposed park and its amenities would require grading and excavation of soils, which would loosen sediment and have the potential to mix with surface water runoff and degrade water quality. Additionally, construction would require the use of heavy equipment and construction-related chemicals, such as concrete, cement, asphalt, fuels, oils, antifreeze, transmission fluid, grease, solvents, and paints. These potentially harmful materials could be accidentally spilled or improperly disposed of during construction and, if mixed with surface water runoff, could wash into and pollute receiving waters.

Compliance with the County Watershed Protection, Stormwater Management, and Discharge Control Ordinance and the County Grading Ordinance and preparation of a site-specific Stormwater Pollution Prevention Plan and a Stormwater Quality Management Plan would reduce potential water quality impacts from construction of the project. The plans would include construction BMPs, such as the following:

- Silt fence, fiber rolls, or gravel bag
- Street sweeping and vacuuming
- Sedimentation basin
- Storm drain inlet protection
- Stabilized construction entrance/exit
- Vehicle and equipment maintenance, cleaning, and fueling
- Hydroseeding

- Material washout
- Stockpile management
- Spill prevention and control
- Solid waste management
- Concrete waste management

Adherence to applicable requirements and implementation of the appropriate BMPs would ensure that potential water quality degradation associated with construction activities would be minimized, and impacts would be less than significant.

Operation of the parking areas, picnic areas, and other active uses as part of the project may be sources of polluted stormwater runoff that may result in the degradation of water quality in the hydraulic unit. The Stormwater Quality Management Plan would contain site design measures, source control BMPs, and/or treatment control BMPs that would be employed during operations to reduce potential pollutants in runoff to the maximum extent practicable such that the proposed project would not cause or contribute to an exceedance of applicable surface or groundwater receiving water quality objectives or degradation of beneficial uses.

In addition, the proposed BMPs are consistent with regional surface water, stormwater, and groundwater planning and permitting processes that have been established to improve the overall water quality in County watersheds.

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

☐ Potentially Significant Impact	☐ Less Than Significant Impact
☐ Less Than Significant With Mitigation Incorporated	☒ No Impact

Discussion/Explanation:

No Impact: The project would obtain all potable water from the Otay Water District, which acquires water from surface reservoirs or other imported water sources. Irrigation during project operation would also be provided by a potable water meter issued through the Otay Water District. In addition, the project would not involve operations that would interfere substantially with groundwater recharge, including but not limited to the following: The project would not involve regional diversion of water to another groundwater basin or diversion or channelization of a stream course or waterway with impervious layers, such as concrete lining or culverts, for substantial distances (e.g., 0.25 mile). These activities and operations could substantially affect rates of groundwater recharge. Therefore, no impact to groundwater resources would occur.

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

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

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

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

iv) Impede or redirect flood flows?

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: The project proposes a community park that would include a skate park, a dog park, children's play areas, sports courts and fields, and other associated park amenities. Construction of the proposed park would involve construction activities that may temporarily alter drainage patterns, such as grading and trenching. However, these activities would be temporary, and construction BMPs would be implemented as part of the Stormwater Pollution Prevention Plan required for the project to reduce potential impacts on drainage patterns.

As previously discussed, a Stormwater Quality Management Plan would be prepared for the project site, which would contain site-specific design measures, source control, and/or treatment control BMPs to reduce potential pollutants, including sediment from erosion or siltation, to the maximum extent practicable from entering stormwater runoff. These measures would control erosion and sedimentation and satisfy waste discharge requirements from the Land Use Planning for New Development and Redevelopment Component of the San Diego Municipal Permit (San Diego Regional Water Quality Control Board Order No. R9-2013-0001) as implemented by the County Jurisdictional Runoff Management Program and County BMP Design Manual. The Stormwater Quality Management Plan would specify and describe the implementation process of BMPs that would address equipment operation and materials management, prevent the erosion process from occurring, and prevent sedimentation in any on-site and downstream drainage swales.

Therefore, the project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site.

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

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☒ No Impact

Discussion/Explanation:

No Impact: According to the Federal Emergency Management Agency's National Flood Hazard Layer Viewer (2021), the project site is in Zone X, which is an area of minimal flood hazard. In addition, the Safety Element of the County General Plan does not identify the project site as being in a 100-year floodway or floodplain (County of San Diego 2011a). The project site is approximately 12 miles from the Pacific Ocean and approximately 2 miles from Sweetwater Reservoir, the nearest body of water. The project site is not at risk for seiche or tsunamis because it is not close enough to the ocean or other water bodies to be affected by a tsunami or seiche. Therefore, no impact would occur related to flood hazards, tsunamis, or seiche zones.

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

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: As described in Section X(a), the project would implement a combination of site design and source control BMPs to prevent potential pollutants from entering stormwater runoff. The proposed BMPs would be consistent with regional surface water, stormwater, and groundwater planning and permitting processes that have been established to improve the overall water quality in County watersheds. Moreover, the project would obtain its potable water supply, including water used for irrigation purposes, from the Otay Water District. The project would not impact a Sustainable Groundwater Management Plan.

<u>XI. LAND USE AND PLANNING</u> — Would the project:

a) Physically divide an established community?

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☒ No Impact

Discussion/Explanation:

No Impact: The project site is currently undeveloped and vacant and is surrounded by land uses, including single- and multi-family residential to the northwest, east, and south and the San Diego National Wildlife Refuge to the north and northeast. Development of the proposed project would not physically divide a community and would increase cohesiveness for the adjacent residential sites. No impact would occur.

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

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☒ No Impact

Discussion/Explanation:

No Impact: The proposed project would be consistent with the zoning designation of Special Purpose (S90) Holding Area Use and with the County General Plan land use designation of Public/Semi-Public Facilities and, therefore, would not conflict with the County General Plan. Implementation of the proposed project would not require a zone change or a General Plan Amendment. No impact would occur.

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?

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☒ No Impact

Discussion/Explanation:

No Impact: The Spring Valley Community Plan created criteria for selecting resources worthy of conservation, one of which being areas containing mineral resources. The Spring Valley Community Plan does not designate the project site as a conservation area for mineral resources. The Spring Valley Community Plan also states that no issues regarding mineral resources and resource conservation and management exist (County of San Diego 2011b). Additionally, the site exists in an urbanized area surrounded by residential uses with no mineral resource recovery sites. No impact would occur.

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

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☒ No Impact

Discussion/Explanation:

No Impact: The project site is not a locally important mineral resource recovery site. Implementation of the proposed project would not result in the loss of availability of a locally important mineral resource. Therefore, no impact would occur.

XIII. 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?

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☒ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant with Mitigation Incorporated: The following analysis of temporary construction noise and permanent operational noise is based on the Noise Technical Report prepared by Harris & Associates (2021) for the project (Appendix E).

Construction

Construction noise associated with the proposed project would be temporary and vary depending on the nature of the activities performed. Noise generated would primarily be associated with the operation of off-road equipment for on-site construction activities and construction vehicle traffic on area roadways. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading, excavation, paving). The magnitude of the impact would depend on the type of construction activity, equipment, duration of the construction phase, distance between the noise source and the receiver, and intervening structures.

The proposed project would have the potential to result in the exposure of on- or off-site areas to noise in excess of the standards listed in the County Code of Regulatory Ordinances, Sections 36.408 and 36.409. Construction equipment associated with project-related development activities would include but are not limited to site grading, truck/construction equipment movement, engine noise, and rock excavation. Typical construction equipment noise levels are provided in Table 6.

Table 6. Typical Construction Equipment Noise Levels

Equipment	Typical Noise Level (dBA) at 50 Feet From Source
Air Compressor	81
Backhoe	80
Compactor	82
Concrete Mixer	85
Crane, Derrick	88
Dozer	85
Grader	85
Jack Hammer	88
Loader	85
Paver	89
Roller	74
Scraper	89
Truck	88

Source: Appendix E.
Note: dBA = A-weighted decibel

Based on the analysis in Appendix E, the three noisiest pieces of construction equipment that could be required for on-site construction (scraper, grader, and excavator) were assumed to operate in the same location and would have the potential to generate noise levels up to approximately 84.2 A-weighted decibels (dBA) equivalent continuous sound level (L_{eq}) at 50 feet from the construction site (FHWA 2008). Noise from construction equipment generally exhibits point-source acoustical characteristics. Strictly speaking, a point-source sound decays at a rate of 6 dBA per doubling of distance from the source. This rule applies to the propagation of sound waves with no ground interaction.

Construction equipment noise from the proposed project would be considered significant if it would exceed an average sound level of 75 dBA for an 8-hour period between 7:00 a.m. and 7:00 p.m. when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received, as established in the County Noise Ordinance (2000). Residences immediately surround the project site. Construction activities would take place across the project site; thus, noise exposure at individual residences would vary. However, construction that would take place within 145 feet of the surrounding residences would potentially exceed the County sound level average of 75 dBA at the property line of the closest residences. Therefore, this impact would be potentially significant.

Operation

Transportation

The following analysis is based on traffic data provided in the project-specific Local Mobility Analysis prepared by LLG (Appendix A). A substantial permanent increase in traffic noise would occur if implementation of the proposed project were to result in an increase in ambient noise levels at 50 feet from the roadway centerline that exceeds the significance criteria outlined in Section 2.1, Guidelines for the Determination of Significance, in the Noise Technical Report (Appendix E). The project would generate

184 ADT to and from the project driveway. Table 7 shows street segment noise levels with and without the proposed project.

Table 7. Existing + Project Traffic Noise Levels

Roadway	Segment	Existing ADT	Existing (dBA L_{dn})	Existing + Project ADT	Existing + Project (dBA L_{dn})	Increase in Noise Level from Existing	Significant Impact?
Jamacha Boulevard	Campo Road to Calavo Drive	13,430	70	13,467	70	+0	No
	Calavo Drive to Folex Way	12,860	70	12,970	70	+0	No
Calavo Drive	Jamacha Boulevard to Project Driveway	3,480	57	3,627	57	+0	No
	Project Driveway to Del Rio Road	3,480	57	3,517	57	+0	No

Source: Appendix A.
Notes: ADT = average daily trip; dBA = A-weighted decibel; L_{dn} = day-night average sound level

As shown in Table 7, implementation of the proposed project would not result in an increase in vehicle noise over existing conditions and, therefore, would not have a potentially significant impact related to traffic noise.

Park Operation

Potential project-related noise impacts from proposed park amenities are discussed below. A significant impact would occur if noise from proposed park uses would exceed the County Noise Ordinance daytime limit for 50 dBA.

Passive Park Amenities

The proposed project would include a variety of passive recreational amenities, including a nature play area, a picnic area, an open lawn area, a game table plaza, a community garden, a walking path, and restrooms. Passive recreational activities, such as walking, reading, and dining in open grass and picnic areas, typically generate lower noise levels compared to active sports play. Equipment used in community gardens would be limited to hand tools. These amenities would generally not support activities that generate noise levels higher than normal conversation. Therefore, these facilities would not generate noise levels that would exceed the County Noise Ordinance at surrounding receptors.

Children's Play Areas

The proposed project would include two children's play areas, one for 2- to 5-year-old children and another for 5- to 12-year-old children, both in the northwestern area of the project site. Play areas typically generate incidental recreational noise, such as children at play, children and adult laughter, and occasional shouting or crying. The noise impact analysis for Beyer Community Park, a community park project, in the City of San Diego (2019) also proposed children's play areas for 2- to 5-year-olds and 5- to 12-year-olds and stated that that noise levels from the children's play areas would generate noise levels of approximately 52.5 dBA to 54.7 dBA at 50 feet. The nearest residence to the proposed play areas is approximately 60 feet west at the property line and there would be an approximately 25 foot difference in elevation between the play areas and the nearest receptors. Playground noise would be reduced to approximately 48 dBA at the nearest receptors. Therefore, use of the children's play areas would not exceed the applicable County Noise Ordinance daytime standard of 50 dBA at the nearby residences. The play areas are intended for younger children and would not be expected to be in active use during nighttime hours. Therefore, impacts from the children's play areas would be less than significant.

Dog Park

The proposed project would include a neighborhood dog park in the southwestern portion of the project site near Calavo Drive and abutting residences to the north. Typical noise from a dog park includes dogs barking, rough-housing, and running and conversations from park visitors. A 15-minute noise measurement was taken at an existing active dog park at Lamar County Park. The sampled dog park is approximately twice the size of the proposed dog park. The purpose of this measurement was to compare ambient noise levels on the project site with the addition of noise from a dog park. This measurement was taken approximately 20 feet from the dog park fence in the late afternoon (approximately 5:15 p.m.). Four to five dogs were present with their owners throughout the measurement period. The average 15-minute noise level during this measurement was 48.6 dBA L_{eq} at 20 feet (Appendix E). Use of the dog park would vary; however, based on observations at the dog park and discussion with County staff regarding typical use of a dog park this size, four to five dogs is an average, representative use of the park. A dog park measurement was not obtained during the August 26, 2021, noise survey because no dogs were present at the park during the early evening observation time. Additionally, a similar project in the City of Beverly Hills (2015) measured dog park noise with approximately eight dogs present over a 15-minute period at generating 51.8 dBA L_{eq} between 10 to 50 feet. Therefore, average dog park noise would be expected to range from approximately 49 to 52 dBA at 20 feet. Dog park use is expected to occur between dawn and dusk throughout the week, with varying levels of activity during the day and within a given hour. The nearest residence to the proposed dog park is approximately 60 feet north of the dog park area. At this distance, the noise levels would be expected to range from approximately 40 to approximately 43 dBA L_{eq} at the property line of this residence and would generally not exceed the applicable County Noise Ordinance daytime standard of 55 dBA or evening standard of 50 dBA. This impact would be less than significant.

Skate Park

The proposed project would include a skate park in the southeastern corner of the project site, with Calavo Drive directly south and condominiums directly east. The maximum noise output from skate parks is primarily associated with thumps and bangs as skaters land on the horizontal platform sections. The noise measurement taken at an existing active skate park in the City of Lemon Grove, including six skaters consistently participating in skating activities, measured a noise level of 61.7 dBA L_{eq} approximately 20 feet from the skate park boundary (Appendix E). The nearest residence to the proposed skate park is approximately 120 feet southeast of the project site. At this distance, the noise level would attenuate to approximately 46.1 dBA L_{eq} at residence. The noise impact analysis for Beyer Community Park, a community park project, in the City of San Diego (2019) stated that noise levels from a skate park with approximately 25 to 30 skateboarders in the park and between 5 and 12 actively skating at a given moment would generate approximately 55 dBA L_{eq} at 75 feet. Therefore, average skate park noise would be expected to range from 46 to 51 dBA L_{eq} at the nearest residences. Average skate park noise levels would generally not exceed the applicable County Noise Ordinance daytime standard of 55 dBA at the nearby residences. However, noise from the skate park could potentially exceed the County Noise Ordinance nighttime standards during longer days for activity that could occur before 7:00 a.m. and after 10:00 p.m. This impact would be potentially significant.

Sports Fields and Courts

The proposed project would include a soccer field, a baseball field, a basketball court, and pickleball courts. Noise levels typically generated by similar active fields and courts were reviewed to estimate typical noise levels from daily use on the project site. The existing Hilton Head Park was selected for noise measurements because it includes sports amenities similar to the proposed project and was in active use for organized sports. Measurements were obtained for active use of the baseball field and multi-use/soccer field individually, and a measurement between both uses was obtained for combined use. Noises were typical of expected recreational activities, including coaches giving direction, children yelling and playing, contact with balls, and bystanders talking on the sidelines of activities. Multiple events, including soccer and football, were in progress at both fields. Measured noise levels were 59.3 dBA at 30 feet from activity at the baseball field, 54.5 dBA at 20 feet from the multi-use field/soccer, and 56.3 dBA between the fields at approximately 20 feet from active uses. Therefore, average hourly noise levels from use of sports facilities would be approximately 55 to 63 dBA at 20 feet from either field during simultaneous use.

In addition, electronic amplification equipment may be used in conjunction with permitted active sports leagues or events that may result in intermittently higher than average noise levels. However, amplified noise would be limited to special events and subject to permitting requirements. The baseball field would be in the northernmost section of the project site, while the soccer field, basketball court, and pickleball courts would be in the center and southeastern areas of the project site. The baseball field and soccer field and the sports facilities are anticipated to result in the greatest amount of noise from organized sports events. The nearest residences to the baseball field would be approximately 80 feet to the northwest and 60 to the southeast. At this distance, average noise levels from sports facilities during active use would be approximately 51 dBA at the residences to the northwest and 54 dBA at the residences to the southeast. The nearest residences to the soccer field would be approximately 95 feet northwest of the field. At this distance, average noise levels from sports facilities during active use would be approximately 50 dBA at the property line of these residences. Average noise levels would generally not exceed the applicable County Noise Ordinance daytime standard of 55 dBA. However, the noise from sports fields and courts could potentially exceed the County Noise Ordinance nighttime standards during longer days for activity that would occur before 7:00 a.m. and after 10:00 p.m. This impact would be potentially significant.

Parking Lot

The proposed project would include a designated parking area for park visitors containing approximately 85 spaces. Noise sources from parking areas include car alarms, door slams, radios, and tire squeals. These sources typically range from approximately 51 to 66 dBA at a distance of 10 feet (Gordon Bricken & Associates 2012) and are generally short term and intermittent. Parking lots have the potential to generate noise levels that are audible above ambient levels depending on the location of the source; however, noise sources from a parking lot would be different from each other in kind, duration, and location. Thus, the overall effects would be separate and, in most cases, would not affect noise-sensitive receptors at the same time. The parking lot is linear, which would avoid a concentration of parking noise in one location. Therefore, noise from the parking lot would not result in excessive noise levels that would exceed hourly noise level limits, and impacts would be less than significant.

Operational Park Noise Summary

Operation of the proposed park uses would occur intermittently throughout the day depending on the level of use. Noise levels from these uses would vary throughout the project site but could combine to result in noise levels higher than the individual sources. For example, assuming simultaneous use of all active uses (skate park, dog park, play areas, and sports facilities), the average noise level at the receptor closest to the dog park could range from 44 to 49 dBA compared to 40 to 43 dBA with the dog park use only. For the nearest receptor northwest of the soccer field, the average noise level could range from 45 to 52 dBA compared to 43 to 51 with field use only. Due to distance between uses and fluctuations in usage, combined project operational noise would generally not exceed the applicable County Noise Ordinance daytime standard of 55 dBA. As described previously, individual uses could potentially exceed the County Noise Ordinance nighttime standards at the nearest receptors during longer days for activity that would occur before 7:00 a.m. and after 10:00 p.m. This impact would be potentially significant.

Mitigation Measures

Construction

Implementation of Mitigation Measure NOI-1 would minimize noise from construction equipment on nearby receptors by implementing construction best management practices to comply with the County Noise Ordinance standards. Mitigation Measure NOI-1 would reduce construction impacts to a less than significant level.

NOI-1: Construction Noise Best Management Practices. For construction activities within 145 feet of sensitive receptors, the construction contractor shall implement the following measures to the extent necessary to meeting the standards of Section 36.409 of the County of San Diego Noise Ordinance:

- The construction contractor shall provide written notification to the noise-sensitive land uses within 145 feet of normal construction activities at least 3 weeks before the start of construction activities, informing them of the estimated start date and duration of construction activities.
- Construction activities that generate high noise levels at residences shall be scheduled during times that would have the least impact on sensitive receptor locations. This shall include restricting construction activities in the areas of potential impact to the middle hours of the workday, such as from 10:00 a.m. to 4:00 p.m., Monday through Friday, when residents are least likely to be home.
- Stationary construction noise sources, such as temporary generators, shall be as far from nearby noise-sensitive receptors as necessary to be compliant with County Noise Ordinance standards.
- Trucks shall be prohibited from idling along streets serving the construction site where noise-sensitive residences are located.
- Construction equipment shall be outfitted with properly maintained, manufacturer-approved, or recommended sound abatement means on air intakes, combustion exhausts, heat dissipation vents, and interior surfaces of engine hoods and power train enclosures.
- Construction laydown and vehicle staging areas shall be positioned (to the extent practical) as far from noise-sensitive land uses as necessary to be compliant with County Noise Ordinance standards.
- Simultaneous operation of construction equipment shall be limited or construction time shall be limited to within an hour to reduce the hourly average noise level.
- Temporary noise barriers shall be installed around the perimeter of the construction area to minimize construction noise.

Operation

Implementation of Mitigation Measures NOI-2 would reduce operational impacts of the proposed project by limiting hours of operation for active uses. Implementation of Mitigation Measure NOI-2 would reduce nighttime noise impacts to less than significant.

NOI-2: Hours of Operation. The hours of the active uses at Calavo Park (play areas, dog park, skate park, and sports fields and courts) shall be limited to between the hours of 7:00 a.m. and 10:00 p.m. in compliance with the nighttime standards of the County of San Diego's Noise Ordinance. Operational hours shall be posted on fencing at entrances to active use amenities and shall include a phone number for residents to call in case of use violations. Exceptions may be permitted for special events with a Sound Amplification Plan prepared in accordance with the Noise Regulation Policy for County Parks and County of San Diego Noise Ordinance Standards and approved by the County of San Diego Department of Parks and Recreation.

b) Generation of excessive groundborne vibration or groundborne noise levels?

☐	Potentially Significant Impact	☐	Less Than Significant Impact
☒	Less Than Significant With Mitigation Incorporated	☐	No Impact

Discussion/Explanation:

Less Than Significant with Mitigation Incorporated: Information below is based on a Noise Technical Report prepared by Harris & Associates for the project (Appendix E).

The main concerns associated with groundborne vibration from this type of project are annoyance and damage; however, vibration-sensitive instruments and operations can be disrupted at much lower levels than would typically affect other uses. No existing sources of groundborne vibration surround the project site. Therefore, this analysis focuses on the potential for the project to generate vibration at surrounding land uses. Groundborne vibration occurring as part of the project would result from construction equipment. Following construction, operation of a community park is not a land use that would typically generate groundborne vibration, and project operation is not addressed below.

Typical vibration levels for construction equipment required for the proposed project are provided in Table 8. In accordance with the County Noise Ordinance, construction would generally occur during the daytime and would not disturb sleep. However, residences may be occupied during daytime construction, and construction may result in a nuisance to daily activities. Therefore, for the purposes of the construction analysis, the surrounding residences are considered a Category 3 use based on the County Guidelines for Determining Significance – Noise (2009b). Construction activities would result in significant vibration if vibration would exceed 0.014 inch per second (in/sec).

Table 8. Vibration Levels for Typical Construction Equipment

Construction Equipment	Approximate PPV (in/sec) at 25 Feet[1]	Approximate PPV (in/sec) at 90 Feet	Approximate PPV (in/sec) at 155 Feet
Large Bulldozer	0.089	0.013	0.006
Caisson Drilling	0.089	0.013	0.006
Loaded Trucks	0.076	0.011	0.005
Small Bulldozer	0.003	0.0004	0.0002
Jackhammer	0.035	0.005	0.002
Vibratory Roller	0.210	0.031	0.0136

Source: Appendix E.
Notes: in/sec = inches per second; PPV = peak particle velocity
[1] Based on the formula $PPV_{equip} = PPV_{ref}*(25/D)^{1.5}$ provided by the Federal Transit Administration (2018).

As shown in Table 8, vibration levels from construction equipment would be reduced to 0.014 in/sec or below at 155 feet or beyond from construction. The residences closest to the boundary of the project site are approximately 50 feet north. Therefore, construction of the proposed project has the potential to exceed the Federal Transit Administration threshold of 0.014 in/sec for Category 3 uses, and impacts would be potentially significant.

Implementation of Mitigation Measure NOI-3 would reduce nuisance exposure to groundborne vibration during construction by implementing vibration BMPs. Implementation of Mitigation Measure NOI-3 would reduce impacts to less than significant.

Mitigation Measures

NOI-3: Vibration Best Management Practices. Before the start of construction activities that would involve use of a vibratory roller (or equivalent equipment) within 155 feet of a residence or operation of any heavy equipment within 90 feet of a residence, the project applicant shall retain a qualified acoustician to identify best management practices to be implemented by the construction contractor to reduce vibration levels to below 0.014 inch per second at the nearest residence. The best management practices shall be included in project construction documents, including the grading plan and contract with the construction contractor. Practices may include but are not limited to the following:

- Use only properly maintained equipment with vibratory isolators
- Operate equipment as far from sensitive receptors as possible
- Use rubber-tired vehicles as opposed to tracked vehicles

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

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: No airports or private air strips are in the community of Spring Valley. The nearest airport is Gillespie Field approximately 6 miles north of the project site in the City of El Cajon. The next closest airport is San Diego International Airport approximately 12 miles west of the project site in the City of San Diego. Routine flyovers occur over West Spring Valley; however, the project site is not within the 60 dBA Community Noise Equivalent Level (CNEL) contour for either airport (SDCRA 2010, 2014), and no impact would occur.

<u>XIV. POPULATION AND HOUSING</u> — 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)?

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☒ No Impact

Discussion/Explanation:

No Impact: No residential development is proposed under the project; therefore, the proposed project would not directly induce population growth in the area. Additionally, the proposed project would not require or result in the extension of utilities or roadways. The proposed project would generate a small number of short-term construction jobs and jobs for park maintenance; however, construction employment would be absorbed from the local labor force rather than attract new workers to the region. Therefore, no impact would occur.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☒ No Impact

Discussion/Explanation:

No Impact: The project site is currently a vacant lot that would be developed with a community park. Implementation of the proposed project would not result (either directly or indirectly) in the displacement of housing or people. No impact would occur.

<u>XV. PUBLIC SERVICES</u> — Would the project:

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

i) Fire protection?

ii) Police protection?

iii) Schools?

iv) Parks?

v) Other public facilities?

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Fire Protection?

Less Than Significant Impact: The San Miguel Fire & Rescue Consolidated Fire Protection District provides fire suppression and rescue services that are paid for through higher property taxes. The District maintains a Class 3 rating (ratings are granted by the Insurance Services Office based on response times, equipment available, and daily staffing levels). The fire station closest to the project site is the San Miguel Fire & Rescue Station 15, which is approximately 0.7 mile west of the project site.

According to the San Miguel Fire & Rescue 2019–2020 Annual Report (2019), it responded to over 13,218 calls with an average response time of 7 minutes and 37 seconds. The majority of these calls were for rescue and emergency medical service (11,407 calls). During the 2019–2020 fiscal year, the nearest station to the project site (Station 15) had several projects completed to address the needs of the aging station, including removing and replacing carpet with durable vinyl plank flooring and upgrading the dayroom.

Although the proposed project would develop the currently vacant project site, the project is intended to serve the existing population within the project vicinity and would not significantly increase visitors to the site. Consequently, the San Miguel Fire & Rescue would be able to maintain current levels of service provided to the project site following project implementation. Therefore, the proposed project would result in less than significant impacts to fire demand and would not necessitate the need for new police facilities.

Police Protection?

Less Than Significant Impact: The San Diego County Sheriff's Department provides police protection to the project site and surrounding area. Although the proposed project would develop a currently vacant area, the project is intended to serve the existing population in the project vicinity and would not significantly increase visitors to the site. Consequently, the San Diego County Sheriff's Department would be able to maintain current levels of service provided to the project site following project implementation. Therefore, the proposed project would result in less than significant impacts to policing demand and would not necessitate the need for new police facilities.

Schools?

No Impact: The project site and surrounding area are served by the La Mesa-Spring Valley School District, which ranges in grade level from kindergarten to eighth grade and has 24 schools in the district with 12,400 students enrolled. The closest district elementary school to the project site is Loma Elementary School approximately 0.5 mile to the northwest (California Department of Education 2022a). The project site is also served by the Grossmont Union High School District with 21,342 students enrolled. The closest district high school to the project site is Monte Vista High School, approximately 1 mile to the northwest (California Department of Education 2022b). The proposed project would not include any residential or business uses that would increase population growth, generate an increased demand for school facilities, or require the construction of school facilities. Therefore, the proposed project would not have an impact regarding schools.

Parks?

Less Than Significant Impact: The project site is in the County Service Area (CSA-128) for parks and recreation where the community taxes themselves to improve parks and services. The County Service Area continues to add more facilities because the funding levels provide the ability to maintain these facilities. Building facilities are approved with stringent plans and the means to maintain them. The County Service Area continues to meet the growing needs of neighborhoods, and County Department of Parks and Recreation continues to benefit from Park Land Dedication Ordinance fees. Spring Valley, working through the County, has an upgraded park and trail system and a new regional park along the northern shore of the Sweetwater Reservoir.

The proposed project, which would include the development of a community park on currently vacant land, would result in a positive impact on the County's existing park acreage and would help the County meet established standards for parkland-to-resident ration. Therefore, the proposed project would result in less than significant impacts.

Other public facilities?

Less Than Significant Impact: The project site is served by the County library system with the closest branch to the project site being the Casa de Oro Branch Library, which is approximately 2.5 miles northwest of the project site. The proposed project would not develop the site with any residential uses and, as such, would not result in population growth that would generate an increased demand for public facilities, such as libraries. While it is possible that visitors to the project site may be drawn to local library facilities when in the area, users are anticipated to be existing residents, and the impact would not significantly affect County library system performance and would not require the expansion of libraries in the County. Therefore, the proposed project would have a less than significant impact on other public facilities.

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?

☐ Potentially Significant Impact

☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: Community facilities and infrastructure in the Spring Valley Community Planning Area include the Spring Valley Community Park, Sweetwater Lane County Park, Goodland Acres County Park, and Lamar County Park (County of San Diego 2011b). The park would include associated walking paths, play areas, restrooms and a maintenance facility, a skate park, a community garden, a nature play area, a basketball court, a game table plaza, a picnic area, a soccer field, pickleball courts, a dog park, a baseball field, and 85 parking spaces central to the project site. The proposed project is a recreational facility and would create a proximate community park to the adjacent residential area, lessening stress on other parks in the area. Impacts would be less than significant.

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

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☒ No Impact

Discussion/Explanation:

No Impact: The proposed project is a recreational facility and would not require the construction or expansion of other recreational facilities that may have adverse physical effects; therefore, no impact would occur.

<u>XVII. TRANSPORTATION</u> — Would the project:

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: A Local Mobility Analysis was prepared by LLG (Appendix A) for the proposed project to determine and evaluate traffic impacts on the local circulation system. As shown in Table 9, the analysis determined that the proposed project would result in 184 ADT with 12 inbound and 12 outbound trips during the AM peak-hour and 9 inbound and 8 outbound trips during the PM peak hour.

Table 9. Trip Generation Summary

		Daily Trip Ends (ADTs)		AM Peak Hour				PM Peak Hour			
					In Out	Volume		%	In Out	Volume	
Use	Quantity	Rate[1]	Vol.	%ADT	Split	In	Out	ADT	Split	In	Out
Regional Developed Park	9.2 acres	20/ acre	184	13	50:50	21	12	9	50:50	9	8

Source: Appendix A.
Notes: ADT = average daily trips
[1] Trip generation rate from SANDAG's Not So Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region (2002).

An LOS analysis was conducted on study area intersections surrounding the project site for two near-term scenarios: Opening Year (2022) without Project and Opening Year (2022) with Project. As shown in Table 10, with the addition of project and cumulative projects traffic, the study intersections were calculated to operate at an LOS B or better during the AM and PM peak hours.

Table 10. Existing Plus Project Intersection LOS Summary

Intersection	Control Type	Peak Hour	Existing		Opening Year (2022) without Project		Opening Year (2022) with Project		Δ[2]	Impact?
			Delay	LOS	Delay[1]	LOS	Delay	LOS		
1. Jamacha Boulevard/ Calavo Drive	Signalized	AM PM	9.2 11.6	A B	9.5 12.6	A B	9.8 12.9	A B	0.3 0.3	No
2. Calavo Drive/ Project Driveway	OWSC[3]	AM PM	DNE[4]	—	DNE	—	9.7 11.0	A B	—	No

Source: Appendix A.
Notes:
[1] Average delay expressed in seconds per vehicle.
[2] Δ denotes a project-induced increase in the delay.
[3] OWSC – One Way Stop Controlled Intersection, minor street left turn delay reported.
[4] DNE = Does not exist

Based on the County's significance criteria, the addition of project traffic on the study intersections would not cause a significant impact on the circulation system. In addition, the project would not conflict with policies related to non-motorized travel, such as mass transit, pedestrian, or bicycle facilities. The project would include project design features to increase multi-modal transportation, including a bus turnout along Calavo Drive, a new streetlight at the project entrance on the northern side of the driveway, provision of a no parking "red curb" zone along the entire project's frontage to provide enhanced mobility and sight distance, and inclusion of bicycle racks in the proposed park. Therefore, the project would not have a significant impact related to a conflict with policies establishing measures of the effectiveness for the performance of the circulation system.

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

☐ Potentially Significant Impact
☐ Less Than Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ No Impact

Discussion/Explanation:

No Impact: In December 2018, the California Resources Agency certified and adopted revised CEQA Guidelines, including a new Section 15064.3. Under the new Section 15064.3, VMT, which includes the amount and distance of automobile traffic attributable to a project, is identified as the "most appropriate measure of transportation impacts." As of July 1, 2020, all CEQA lead agencies must analyze a project's transportation impacts using VMT.

Based on the Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA, the proposed project is considered a local service public facility by nature. Local-serving public facilities would redistribute trips and would not create new trips. Thus, trips are generally shortened as longer trips from a regional facility are redistributed to the local-serving public facility. Based on Google search results, 11 parks are in the Spring Valley community. However, these parks are on the outer edge of the community. Therefore, the proposed project would provide a much-needed park space for the Spring Valley Community, reducing the distance nearby residents have to travel to get to a park or recreational space. As such, it is anticipated that the proposed project would redistribute existing park trips and, thus, reduce VMT at both the local and regional level. According to Section 15064.3, Determining the Significance of Transportation Impacts, of the CEQA Guidelines, projects that decrease VMT in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.

Therefore, the project is screened out from needing to provide a VMT analysis. Construction of the project would allow local residents to be served by a new park in proximity to their homes so they can travel less of a distance to reach a park. Trip lengths would be reduced, which translates to fewer total VMT. Therefore, the project would not have a significant VMT impact.

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

☐ Potentially Significant Impact	☒ Less Than Significant Impact
☐ Less Than Significant With Mitigation Incorporated	☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: The proposed project consists of the construction of a community park with active and passive uses. No new infrastructure, such as sharp curves or dangerous intersections, are proposed for the project. Additionally, the Local Mobility Analysis (Appendix A) determined that the proposed project's ADT would not result in significant operational impacts to adjacent road segments or intersections. Moreover, the active and passive uses would not conflict with the surrounding development of rural residential and residential urban uses. Therefore, the project would not directly increase hazards due to a geometric design feature or incompatible uses, and impacts would be less than significant.

d) Result in inadequate emergency access?

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: As discussed in Section IX(f), the proposed project would not include any characteristics (e.g., permanent road closures or long-term blocking of road access) that would physically impair or otherwise conflict with an Emergency Response Plan, Emergency Evacuation Plan, or emergency access. During short-term construction activities, the proposed project is not anticipated to result in any substantial traffic queuing on nearby streets, and construction equipment would be staged on or directly adjacent to the project site. The proposed project does not include any changes to public or private roadways that would interfere with the County Emergency Operations Plan or another adopted Emergency Response Plan or Emergency Evacuation Plan. Further, the proposed project would not obstruct or alter any transportation routes that could be used as evacuation routes during emergency events. Prior to opening the park, a certification that corner sight distance meets County standards would be provided for the entrance driveway. Access to and from the project site for emergency vehicles would be reviewed and approved by the San Miguel Fire & Rescue as part of the project approval process to ensure the proposed project complies with applicable codes and ordinances for emergency vehicle access. Therefore, impacts would be less than significant.

<u>XVIII. TRIBAL CULTURAL RESOURCES</u> — Would the project:

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

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

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

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: Pursuant to Assembly Bill 52, consultation was initiated for the proposed project with culturally affiliated tribes. On March 4, 2020, a letter was sent to the Native American Heritage Commission requesting review of the Sacred Lands Files as part of the records search. The Native American Heritage Commission responded on March 12, 2020, stating that the results of the Sacred Lands File review was positive and recommended contacting the Ewiiaapaayp Band of Kumeyaay Indians and Viejas Band of Kumeyaay Indians. Four tribes, San Pasqual Band of Mission Indians, Viejas Band of Kumeyaay Indians, Jamul Indian Village, and the Barona Group of the Capitan Grande, responded and requested consultation. All tribes except the Barona Group of the Capitan Grande requested to be included in the selection of the Kumeyaay Native American monitor. Tribal consultation was concluded for all tribes on August 16 and 17, 2021. Impacts would be less than significant.

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 stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: All potable water and irrigation for the project would be supplied by Otay Water District, which serves the majority of the community of Spring Valley. The Otay Water District uses large capacity water tanks on hilltops around its service area to provide water and pressure. Water is pumped up to the tanks and then gravity fed to customers (County of San Diego 2013). The project would also connect to the County sewer system that crosses through the project site as approved by the County of San Diego, Department of Public Works. Wastewater would be conveyed through a network of collector pipes, trunk lines, and pump stations to the City of San Diego's Point Loma Wastewater Treatment Plant for treatment and disposal. Necessary off-site connections would be in existing road rights-of-way. Before building permit sign-off and use of the site in relation to electric power, natural gas, and telecommunications facilities, approval from San Diego Gas & Electric and the applicable telecommunication company would be required. As such, the proposed project would not include or require the construction or expansion of utility and service system facilities, which would cause significant environmental effects. Impacts would be less than significant.

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

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: As stated previously, the project would require water service from the Otay Water District. Potable water would be needed primarily for irrigation, drinking fountains, and the proposed restrooms. No residences are proposed on site. The Otay District Water Facilities Master Plan (2016) identifies several potable water and recycled water projects through year 2035 to keep up with growing population and increased demand in the unincorporated County, including the proposed project. In addition, the County received a will serve letter from the Otay Water District confirming adequate water service is available to serve the project site. Therefore, sufficient water supplies would be available to serve the project, and impacts would be less than significant.

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

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: The project would require wastewater treatment service from the County Sanitation District. Wastewater treatment would be needed for disposal from the proposed restrooms and runoff from irrigation. The Spring Valley Sewer Area Sewer Master Plan (County of San Diego 2013) used the SANDAG 2030 Regional Growth Forecast for buildout of land uses in Spring Valley to project existing and future demand. The Spring Valley Sewer Area Sewer Master Plan projected that, assuming buildout of the entire Spring Valley area, the system would have adequate capacity to serve the project site, including the proposed project. In addition, the County has submitted a sewer utility to County Department of Public Works to coordinate sewer service for the project in the San Diego County Sanitation District. Therefore, the project would not interfere with the wastewater treatment provider's service capacity, and impacts would be less than significant.

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

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: Solid waste from the proposed project would be collected on site using trash and recycling receptacles placed throughout the park. Due to the recycling mandate of the County, a substantial portion of waste generated by the project would be diverted from local landfills and recycled. All solid waste facilities, including landfills, require solid waste facility permits to operate. In the County, the County Department of Environmental Health, Solid Waste Local Enforcement Agency, issues solid waste facility permits with concurrence from the California Department of Resources Recycling and Recovery under the authority of the California Public Resources Code, Sections 44001–44018, and Title 27, Division 2, Subdivision 1, Chapter 4, Section 21440 et seq., of the California Code of Regulations. Five permitted, active landfills with remaining capacity are in the County. Therefore, sufficient existing permitted solid waste capacity exists to accommodate the project's solid waste disposal needs, and impacts would be less than significant.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: The proposed project would be required to comply with federal, state, and local regulations pertaining to the disposal of solid waste. These regulations include Assembly Bills 939 and 1826, which require at least 50 percent waste diversion from landfills and organic waste recycling. Senate Bill 1374 assists jurisdictions with diverting their construction and demolition waste material with a primary focus on the California Department of Resources Recycling and Recovery developing and adopting a model construction and demolition diversion ordinance for voluntary use by California jurisdictions. Furthermore, the County General Plan goals and policies related to solid waste disposal would ensure compliance with applicable laws and regulations. Therefore, impacts would be less than significant.

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

The proposed project is in a Very High Fire Hazard Severity Zone according to the California Department of Forestry and Fire Protection (2022). Fire hazard designations are based on topography, vegetation, and weather, among other factors, with more hazardous sites including steep terrain, unmaintained fuels/vegetation, and wildland-urban interface areas. Development within or adjacent to areas designated as Very High Fire Hazard Severity Zones and/or wildland-urban interface areas has the potential to exacerbate wildfire risk, particularly if it occurs in areas with steep topography or prevailing winds because these conditions contribute to the spread of wildfires and make it more difficult to contain wildfires. However, the project would meet or exceed all applicable code requirements. Additionally, the project site is in an urbanized area and is surrounded by residential on all sides, with a hillside to the northwest and the San Diego National Wildlife Refuge to the north and northeast. The project would comply with the International Fire Code; California Fire Code; regulations in Sections 13000 et seq. of the California Health and Safety Code; and Title 14, Division 1.5, of the California Code of Regulations. The project would also comply with County ordinances and the County Consolidated Fire Code.

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

☐	Potentially Significant Impact	☒	Less Than Significant Impact
☐	Less Than Significant With Mitigation Incorporated	☐	No Impact

Discussion/Explanation:

Less Than Significant Impact: As discussed in Section IX, Hazards and Hazardous Materials, the proposed project would not include any characteristics that would physically impair or otherwise conflict with an adopted Emergency Response Plan or Emergency Evacuation Plan. The proposed project would be required to comply with applicable codes and ordinances for emergency vehicle access, which would ensure adequate access to, from, and on the site for emergency vehicles. Adherence to these codes and ordinances would ensure that construction and operation of the proposed project would not impair implementation of or physically interfere with an adopted Emergency Response Plan or Emergency Evacuation Plan. As stated previously, the site is in a Very High Fire Hazard Severity Zone and would be required to comply with the codes and ordinances applicable to the project site. Impacts would be less than significant.

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?

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: Refer to Section IX and the previous discussion. The proposed project would meet or exceed applicable code requirements. Additionally, the project site is in an urbanized area surrounded by residential on all sides. The project would comply with the International Fire Code; California Fire Code; regulations set forth in Sections 13000 et seq. of the California Health and Safety Code; and Title 14, Division 1.5, of the California Code of Regulations. The project would also comply with County ordinances and the County Consolidated Fire Code. A less than significant impact would occur.

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

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☒ No Impact

Discussion/Explanation:

No Impact: The proposed project would not include or require the installation or maintenance of associated infrastructure, including roads, fuel breaks, emergency water sources, power lines, or other utilities that would exacerbate fire risks. Thus, the project would not exacerbate fire risks that would result in temporary or ongoing impacts to the environment. Therefore, no impact would occur.

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

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: Refer to Sections VII, Geology and Soils, and X, Hydrology and Water Quality, for a summary of impacts related to flooding, landslides, runoff, slope instability, and drainage changes.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE — Would the project:

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?

☐ Potentially Significant Impact ☐ Less Than Significant Impact

☒ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant With Mitigation Incorporated: As discussed in this Initial Study, the proposed project's 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 wildlife community, reduce the number or restrict the range of a rare or endangered plant or wildlife species, or eliminate important examples of the major periods of California history or prehistory were considered in the response to each question of this Initial Study. Resources that have been evaluated as potentially significant impacts by the project are biological resources. However, mitigation has been included that reduces these effects to a less than significant level. Therefore, the project has been determined not to meet this Mandatory Findings of Significance.

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)?

☐ Potentially Significant Impact ☒ Less Than Significant Impact

☐ Less Than Significant With Mitigation Incorporated ☐ No Impact

Discussion/Explanation:

Less Than Significant Impact: Cumulative effects were considered as part of this Initial Study. It was found that the proposed project would not result in cumulatively considerable impacts. No substantial evidence exists showing that, after mitigation, cumulative effects associated with the project would occur. Therefore, the project has been determined not to meet this Mandatory Findings of Significance.

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

☐ Potentially Significant Impact	☐ Less Than Significant Impact
☒ Less Than Significant With Mitigation Incorporated	☐ No Impact

Discussion/Explanation:

Less Than Significant With Mitigation Incorporated: As discussed in this Initial Study, the proposed project's potentially significant impacts to biological resources and noise would be mitigated to a less than significant level. All other impacts were deemed less than significant and are discussed in this Initial Study. Therefore, the proposed project would not cause substantial adverse effects on human beings, either directly or indirectly, and the project has been determined not to meet this Mandatory Findings of Significance.

XXII. REFERENCES USED IN THE COMPLETION OF THE INITIAL STUDY CHECKLIST

All references to federal, state, and local regulation are available on the internet. For federal regulations, refer to http://www4.law.cornell.edu/uscode/. For state regulations, refer to www.leginfo.ca.gov. For County regulations, refer to www.amlegal.com. All other references are available upon request.

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Appendix A. Local Mobility Analysis

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LOCAL MOBILITY ANALYSIS

CALAVO PARK

County of San Diego, California
February 3, 2022

LLG Ref. 3-20-3224

Prepared by:
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LOCAL MOBILITY ANALYSIS

CALAVO PARK

County of San Diego, California
February 3, 2022

1.0 INTRODUCTION

The following local mobility analysis has been prepared to determine and evaluate the traffic impacts on the local circulation system due to the proposed Calavo Park project which proposes the development of a 9.2-acre site as a County of San Diego recreational park. This transportation impact study analyzes intersections in the vicinity and also includes a VMT assessment.

Included in this transportation impact study are the following:

- Project description
- Existing conditions description
- Analysis approach and methodology
- Analysis of existing conditions
- Trip generation/distribution/assignment
- Analysis of opening year (2022) conditions
- Active Transportation Assessment
- Site Access Assessment
- VMT Assessment
- Improvements and Recommendations

2.0 PROJECT DESCRIPTION

The proposed project is on an approximately 9.2-acre property northeast of the intersection of Calavo Drive and Jamacha Boulevard in the unincorporated community of Spring Valley in San Diego County, California. The project includes development of a community park; the County is developing the project design. The project site lies within the adopted County Subarea Plan and outside of the lands designated as County MSCP Pre-Approved Mitigation Area. The project site is undeveloped and surrounded by residential development on three sides and the U.S Fish and Wildlife Service (USFWS) San Diego National Wildlife Refuge on the northeastern side.

The project proposes access through a single driveway via Calavo Drive.

Figure 2-1 shows the general location of the project, while ***Figure 2-2*** shows a more detailed project area map. ***Figure 2-3*** shows the project's site plan. The park amenities are shown on this figure.

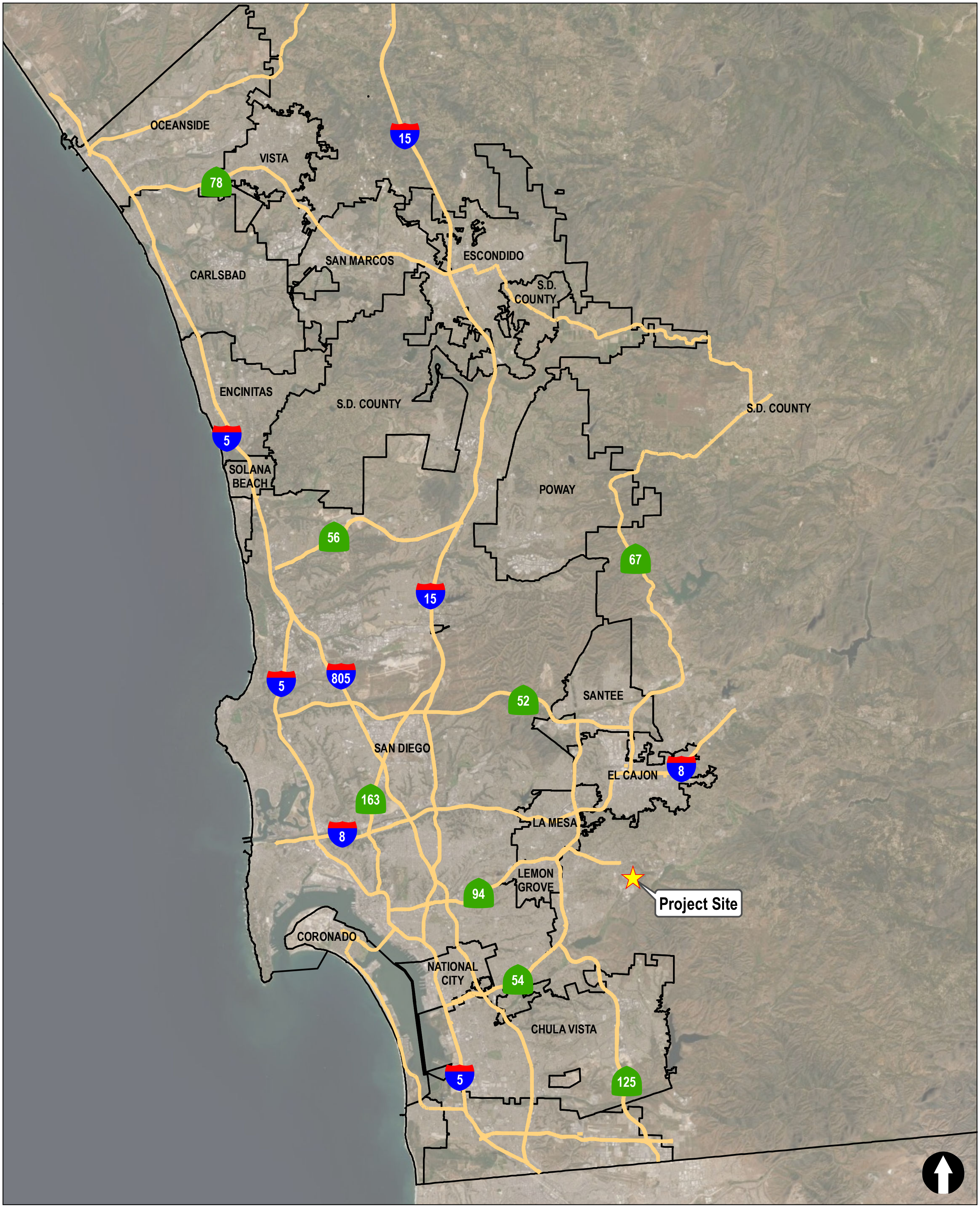

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Figure 2-1

Vicinity Map

Calavo Park

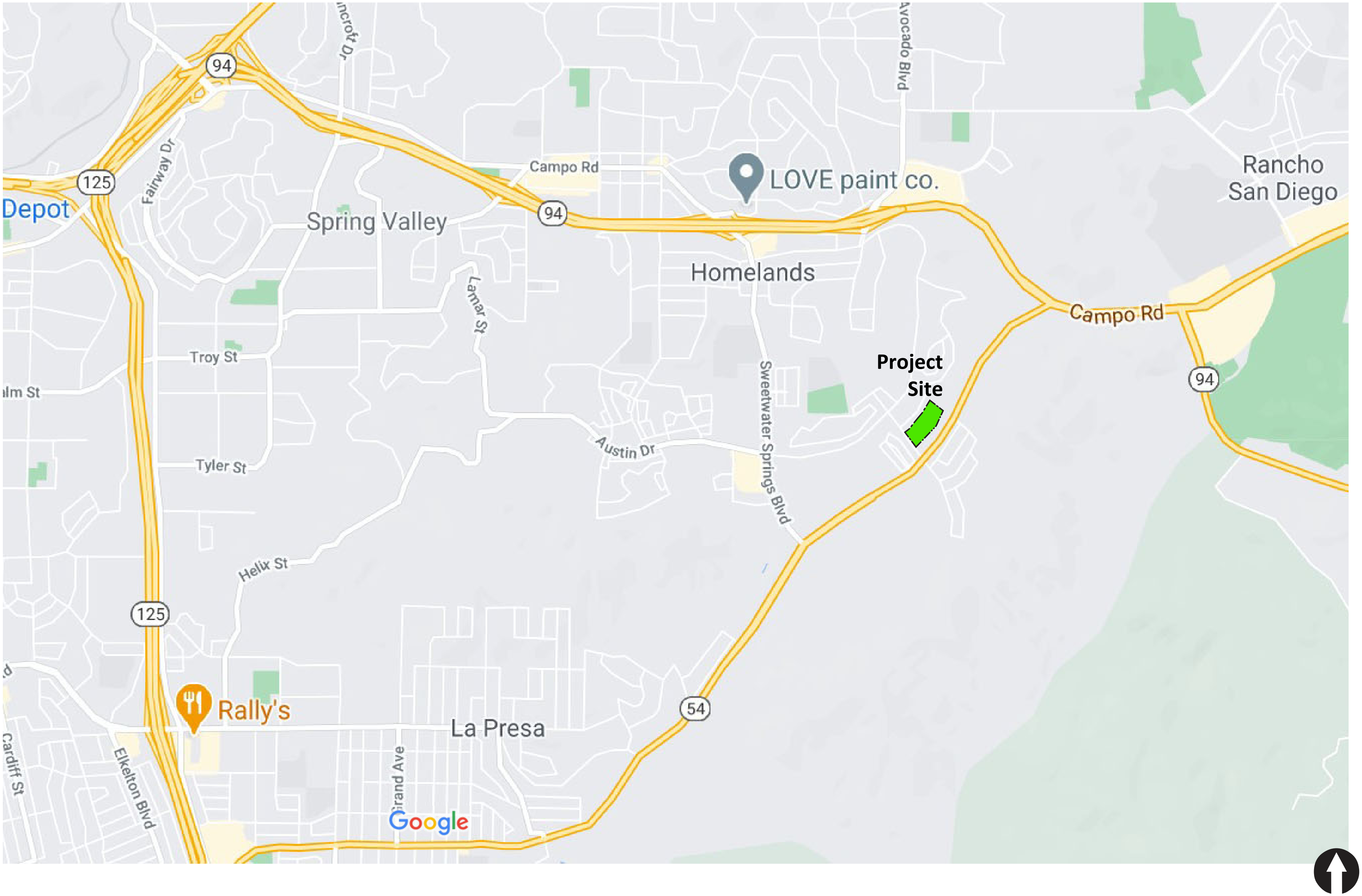

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Figure 2-2

Project Area Map

Calavo Park

SITE ELEMENT KEY

1. WALKING PATH
2. RESTROOM/MAINTENANCE
3. SHADE SHELTER
4. SHADE SAIL
5. SKATE PARK GATEWAY (ADD. ALT.)
6. COMMUNITY GARDEN (ADD. ALT.)
7. NATURE PLAY AREA (ADD. ALT.)
8. 2-5 PLAY AREA
9. 5-12 PLAY AREA
10. BASKETBALL COURT
11. GAME TABLE PLAZA (ADD. ALT.)
12. PICNIC AREA
13. BUS TURNOUT
14. SKATE PARK
15. SOCCER FIELD OUTLINE
16. PARK ENTRANCE (Lockable Gate)
17. PARKING (85 SPACES)
18. PARK MONUMENT SIGN
19. OPEN LAWN AREA
20. PICKLE BALL COURTS
21. DG SURFACING
22. NOT USED
23. DOG PARK
24. VOLUNTEER PAD
25. DOG PARK GATEWAY (ADD. ALT.)
26. BASEBALL FIELD
27. CHAIN LINK FENCE @ PERIMETER
28. TUBE STEEL FENCE AND GATE ON CALAVO FRONTAGE

SCALE 1" = 50'

0' 25' 50' 100'

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Figure 2-3

Site Plan

Calavo Park

3.0 EXISTING CONDITIONS

3.1 Study Area

The study area for this project encompasses areas of potential impact related to the project. The intersections included in the study area are listed below:

Intersections:

1. Jamacha Boulevard / Calavo Drive
2. Calavo Drive / Project Driveway

3.2 Existing Street Network

The following is a description of the existing street network in the study area. ***Figure 3-1*** shows an existing conditions diagram.

Jamacha Boulevard is classified as a *4.1A Major Road* from Campo Road to Sweetwater Road on the *County of San Diego General Plan Mobility Element.* Jamacha Boulevard is currently constructed as a 4-lane divided roadway with a center two-way left turn lane (TWLTL) within our study area. The posted speed limit is 50 mph. Class II Bike lanes are provided on both sides of the roadway. On-street parking is permitted along certain parts of Jamacha Boulevard. Pedestrians and bus transit facilities are provided within the project area.

Calavo Drive is a local public road on the *County of San Diego General Plan Mobility Element.* Calavo Drive is currently constructed as a 2-lane undivided roadway. The posted speed limit is 25 mph. On-street parking and bike lanes are not provided on either side of the roadway. Pedestrian and bus transit facilities are provided within the project area.

3.3 Existing Traffic Volumes

Weekday AM/PM peak period intersection turning movement was conducted in August 2020 at Jamacha Boulevard / Calavo Drive intersection. The intersection counts were conducted between the hours of 7:00-9:00 AM and 4:00-6:00 PM. ***Appendix A*** contains the count sheets.

However, given the changes in travel patterns and lower activity due to the CoVid-19 pandemic, existing traffic counts were adjusted by comparing them to historical traffic count data. Historical traffic count data was unavailable at the Jamacha Boulevard / Calavo Drive intersection. Therefore, traffic volumes at this intersection were adjusted by an adjustment factor as explained below.

Historical data was obtained from Caltrans (2017 traffic volumes) on three (3) street segments. The ADT counts for these three segments were also conducted in August 2020. The counts for these three segments were used to calculate an adjusted factor by comparing them with the existing counts (2020) as shown Table 3-1. Based on a comparison for three segments, ADTs were 16% less in 2020. The ADT reduction of 20% was used as an adjustment factor and applied to the study intersection to reflect a Year 2020 non CoVid-19 traffic volume baseline.

Figure 3–2 depicts the Existing traffic volumes. ***Appendix A*** contains the manual count sheets.

TABLE 3–1
ADT SEGMENT COMPARISON

Segments	Pre Covid-19	During Covid-19	% Less in 2020
	Year-2017[a]	Year-2020[b]	
Jamacha Road			
• Jamacha Boulevard to Campo Road	72,000	51,900	39%
• Campo Road to Willow Glen Drive	41,500	33,750	23%
Campo Road			
• Jamacha Road to Millar Ranch Road	19,800	22,810	-13%
		Average	16%

Source:

a- Caltrans 2017 Traffic Volume.

b- LLG Traffic Counts.

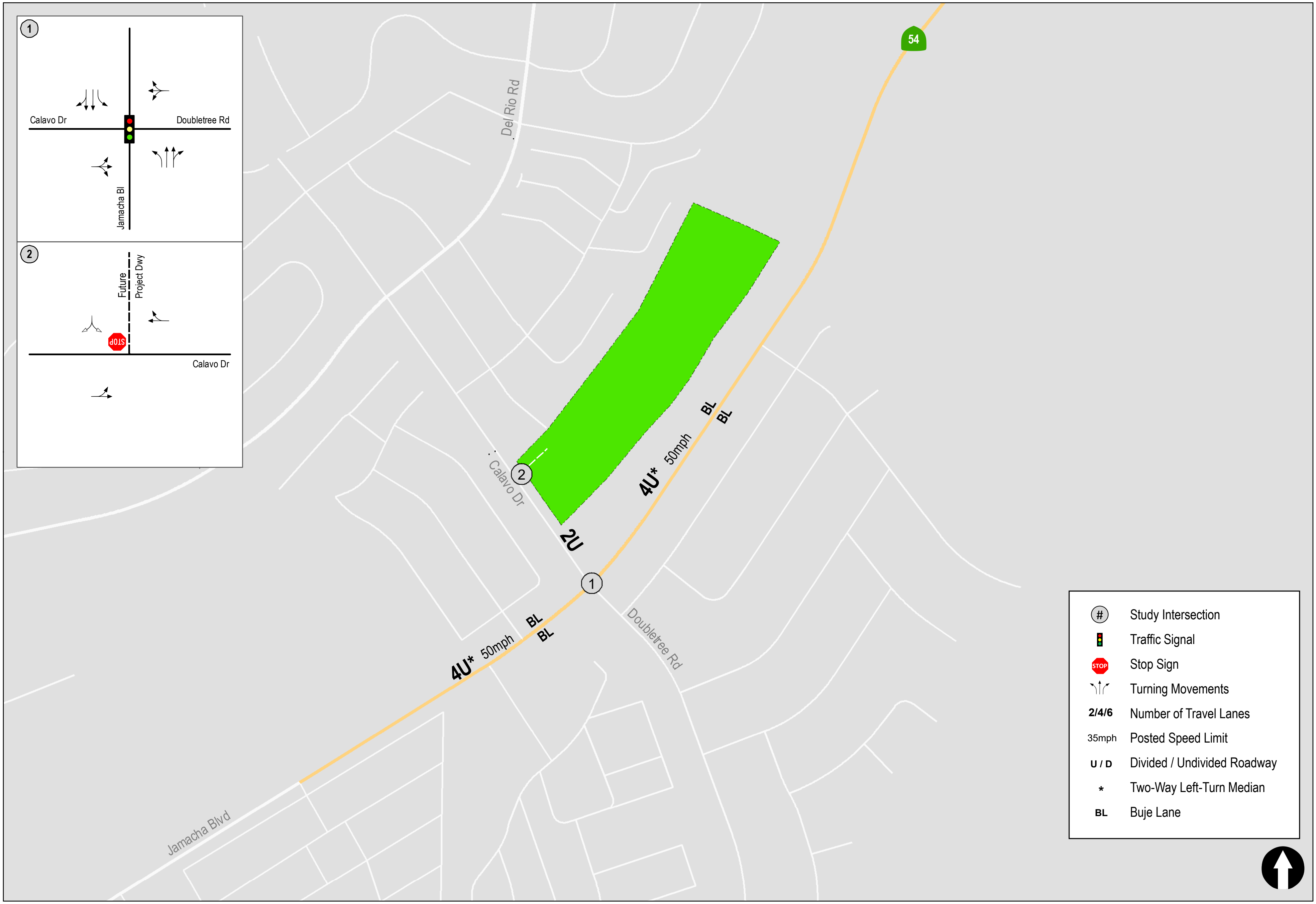

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Figure 3-1

Existing Conditions Diagram

Calavo Park

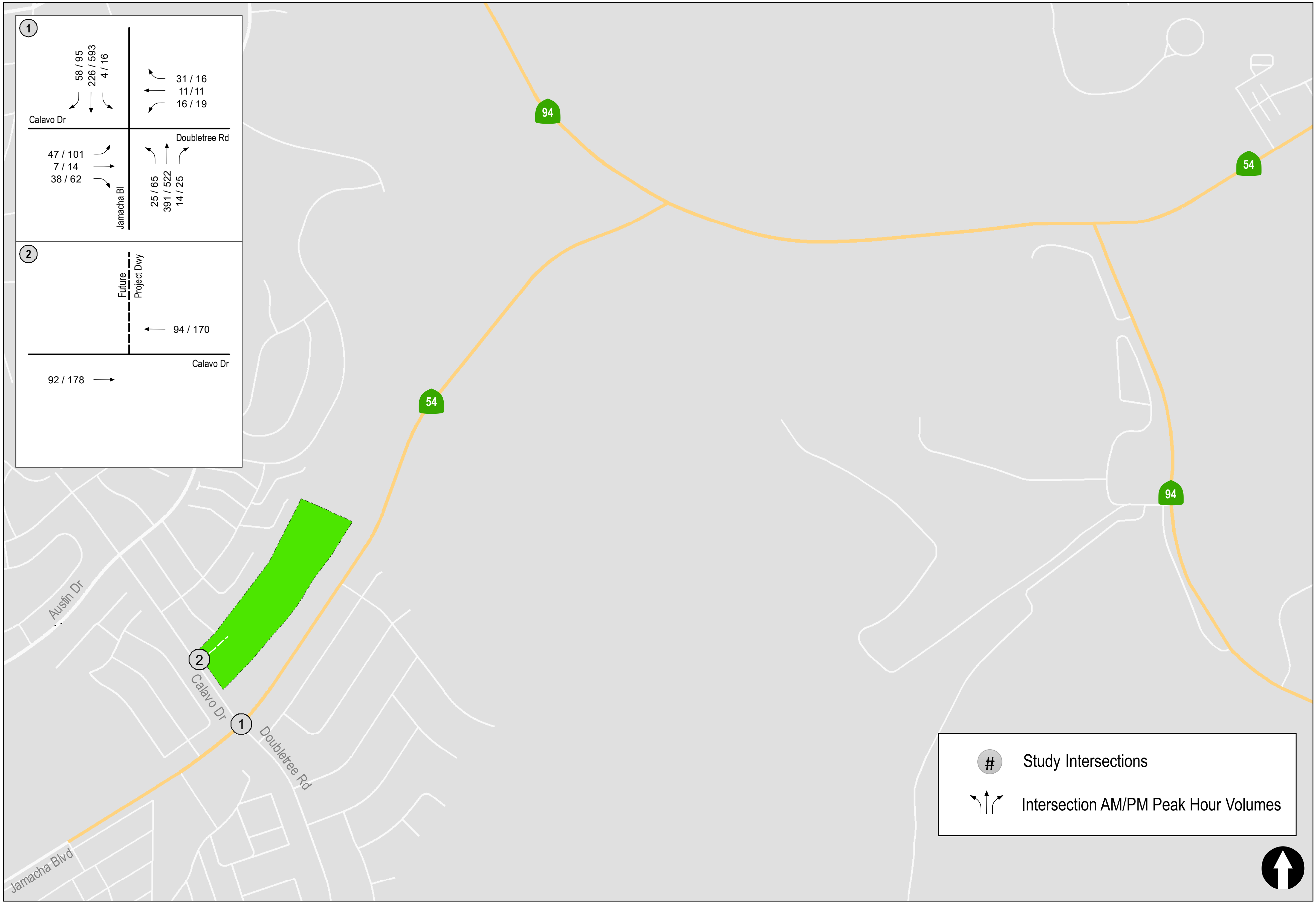

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Figure 3-2

Existing Traffic Volumes

Calavo Park

4.0 ANALYSIS APPROACH AND METHODOLOGY

4.1 Analysis Approach

The peak hour intersection analyses presented in this report were conducted for *Existing, Opening Year (2022) without Project, and Opening Year (2022) with Project* conditions.

Table 4–1 lists the scenarios analyzed in this report.

TABLE 4–1
ANALYSIS SCENARIOS

- Existing
- Opening Year (2022) without Project
- Opening Year (2022) with Project

4.2 Methodology

Level of service (LOS) is the term used to denote the different operating conditions which occur on a given intersection under various traffic volume loads. It is a qualitative measure used to describe a quantitative analysis taking into account factors such as roadway geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety. Level of service provides an index to the operational qualities of an intersection. Level of service designations ranges from A to F, with LOS A representing the best-operating conditions and LOS F representing the worst operating conditions. Level of service designation is reported differently for signalized intersections and unsignalized intersections.

Signalized intersections were analyzed under AM and PM peak hour conditions. Average vehicle delay was determined to utilize the methodology found in Chapter 19 of the *Highway Capacity Manual 6th Edition (HCM 6),* with the assistance of the *Synchro* (version 10) computer software. The delay values (represented in seconds) were qualified with a corresponding intersection Level of Service (LOS).

Unsignalized intersections were analyzed under AM and PM peak hour conditions. Average vehicle delay and LOS was determined based upon the procedures found in Chapter 19 and Chapter 20 of the *HCM 6,* with the assistance of *Synchro* (version 10) computer software.

4.3 Thresholds

The study area intersections were analyzed using on the San Diego Traffic Engineers Council (SANTEC) / Institute of Transportation Engineers (ITE) March 2000 regionwide guidelines. The guidelines are included in ***Appendix C***. The SANTEC table that determines when a deficiency would occur is shown below.

TABLE 4-2
TRAFFIC DEFICIENCY THRESHOLDS

Level of Service with Project [a]	Allowable Increase Due to Project Impacts [b]		
	Roadway Segments		Intersections
	V/C	Speed (mph)	Delay (sec.)
E & F	0.02	1	2

Footnotes:

a. All level of service measurements are based upon HCM procedures for peak-hour conditions. However, V/C ratios for Roadway Segments may be estimated on an ADT/24-hour traffic volume basis (using Table 5-1 or a similar LOS chart for each jurisdiction). The acceptable LOS for freeways, roadways, and intersections is generally "D" ("C" for undeveloped or not densely developed locations per jurisdiction definitions).

b. If a proposed project's traffic causes the values shown in the table to be exceeded, the impacts are deemed to be significant. These impact changes may be measured from appropriate computer programs or expanded manual spreadsheets. The project applicant shall then identify feasible mitigations (within the Traffic Impact Study [TIS] report) that will maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable (see note a above), or if the project adds a significant amount of peak hour trips to cause any traffic queues to exceed on- or off-ramp storage capacities, the project applicant shall be responsible for mitigating significant impact changes.

General Notes:

1. V/C = Volume to Capacity Ratio
2. Speed = Arterial speed measured in miles per hour
3. Delay = Average stopped delay per vehicle measured in seconds for intersections
4. LOS = Level of Service

Source: SANTEC / ITE Guidelines for Traffic Impact Studies (TIS) in the San Diego Region, March 2000.

5.0 ANALYSIS OF EXISTING CONDITIONS

5.1 Intersection Analysis

Table 5–1 summarizes the peak hour intersection operations under Existing conditions. As shown, the study area intersection is calculated to currently operate acceptably at LOS B or better during the AM and PM peak hours.

Appendix B contains the intersection analysis worksheets.

TABLE 5–1
EXISTING INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing	
			Delay [a]	LOS [b]
1. Jamacha Boulevard / Calavo Drive	Signalized	AM PM	9.2 11.6	A B

Footnotes:
a. Average delay expressed in seconds per vehicle.
b. Level of Service.

SIGNALIZED

DELAY/LOS THRESHOLDS

Delay	LOS
0.0 ≤ 10.0	A
10.1 to 20.0	B
20.1 to 35.0	C
35.1 to 55.0	D
55.1 to 80.0	E
≥ 80.1	F

6.0 TRIP GENERATION / DISTRIBUTION / ASSIGNMENT

The following is a discussion of the project trip generation calculations and the project traffic distribution and assignment on the local network.

6.1 Trip Generation

Trip generation estimates for the proposed development were calculated based on SANDAG rates provided in the *Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002*. The "Regional Developed Park" rates was utilized***. Table 6-1*** shows the project is calculated to generate 184 ADT with 12 inbound / 12 outbound trips during the AM peak hour and 9 inbound / 8 outbound trips during the PM peak hour.

6.2 Project Traffic Distribution /Assignment

The generated project traffic was distributed and assigned to the street system primarily based on the existing traffic counts and other factors such as project access and the proximity of the project to SR-94, SR-125 and other major arterials.

Figure 6-1 presents the estimated project traffic distribution. The assignment of project traffic to the surrounding circulation system was based on this estimated distribution and is illustrated in ***Figure 6-2***.

TABLE 6–1
TRIP GENERATION SUMMARY

Use	Quantity	Daily Trip Ends (ADTS)[a]		AM Peak Hour				PM Peak Hour			
		Rate [b]	Volume	% of ADT	In:Out Split	Volume		% of ADT	In:Out Split	Volume	
						In	Out			In	Out
Regional Developed Park	9.2 ACRES	20 / ACRE	184	13%	50%:50%	12	12	9%	50%:50%	9	8

Footnotes:

a. Average Daily Trips

b. Trip Generation Rate from the SANDAG's *Not So Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region,* 2002.

LINSCOTT LAW & GREENSPAN engineers

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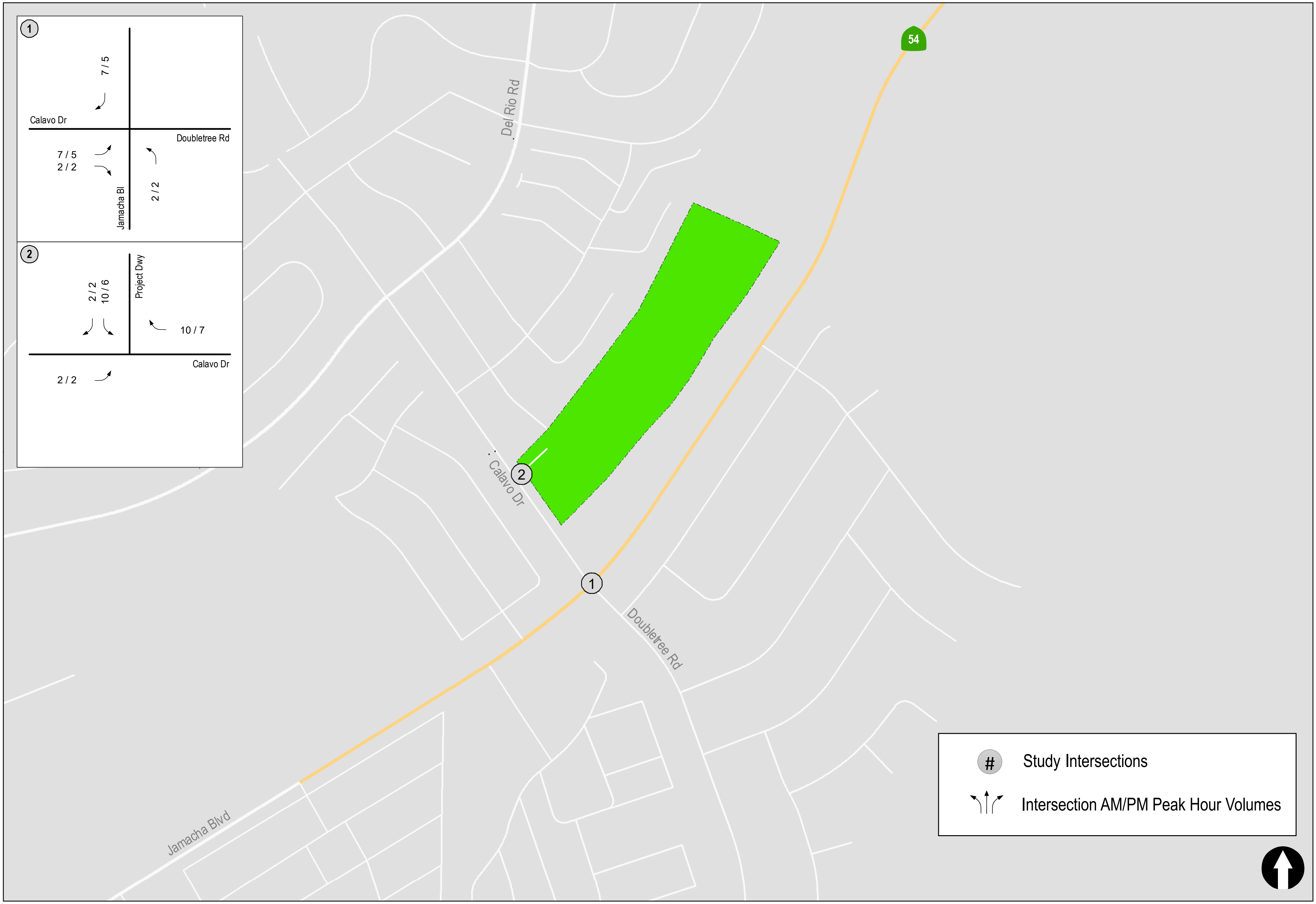
Figure 6-1

Project Traffic Distribution

Calavo Park



LINSCOTT LAW & GREENSPAN engineers

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Figure 6-2

Project Traffic Volumes

Calavo Park

7.0 OPENING YEAR (2022) CONDITIONS

7.1 Opening Year (2022) without Project

7.1.1 *Traffic Volumes*

Based on the discussion with applicant, the forecasted opening year is 2022. In order to forecast Opening Year (2022) volumes, a growth factor was applied to the existing traffic to account for future development. A growth factor of 10% for two (2) years from 2020 to 2022, was applied.

Figure 7–1 depicts the Opening Year (2022) Without Project Traffic Volumes.

7.2 Opening Year (2022) with Project

7.2.1 *Traffic Volumes*

Discussion of the Project trip generation calculations, and the Project traffic distribution and assignment is described in *Section 6.0.*

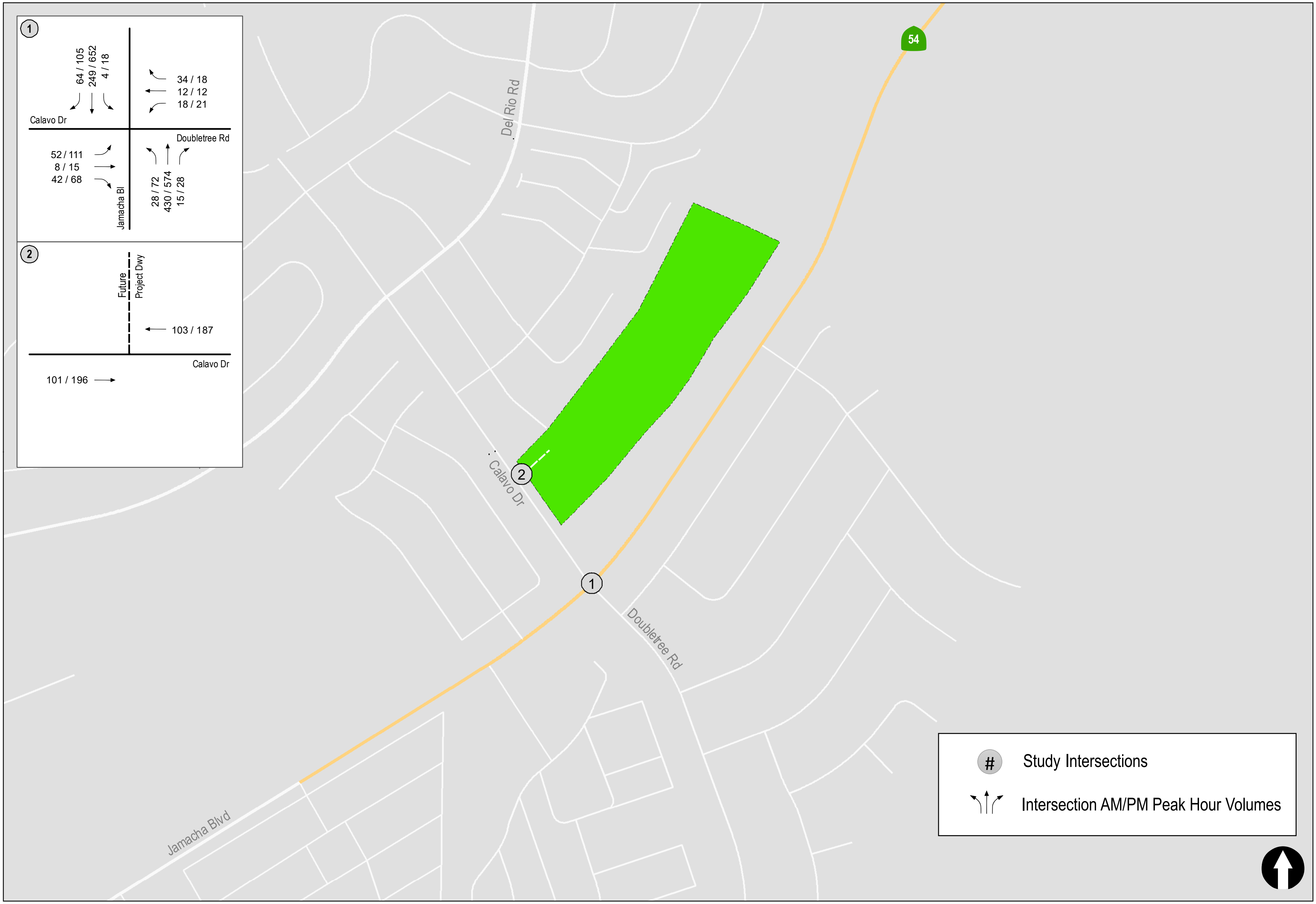

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Figure 7-1

Opening Year (2022) without Project Traffic Volumes

Calavo Park

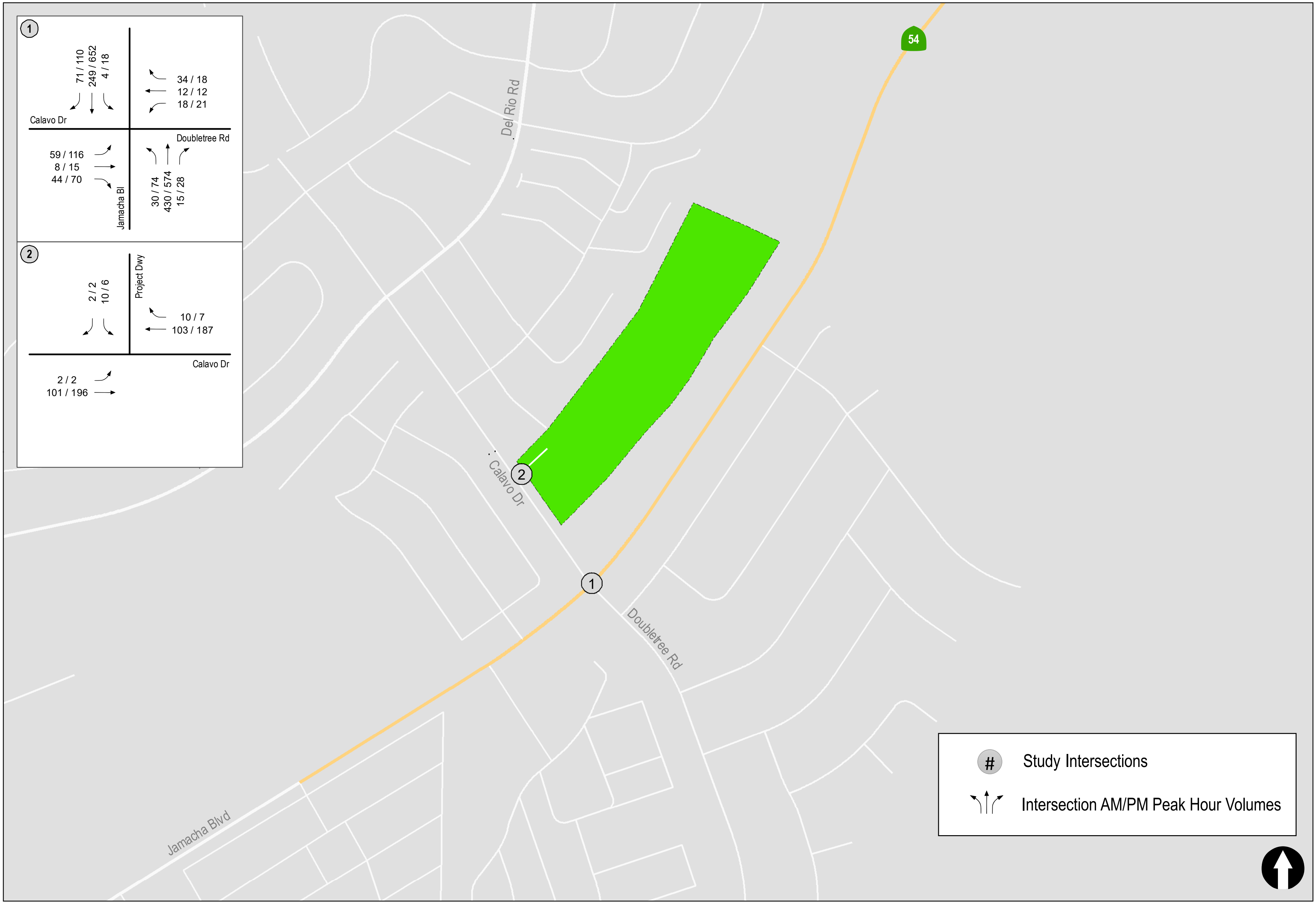

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Figure 7-2

Opening Year (2022) + Project Traffic Volumes

Calavo Park

8.0 ANALYSIS OF NEAR-TERM (YEAR-2022) SCENARIOS

The following section discusses the intersection operations for the following near-term scenarios: Opening Year (2022) without Project and Opening Year (2022) with Project.

8.1 Opening Year (2022) without Project

Table 8–1 summarizes the peak hour intersection operations under Opening Year without Project conditions. As seen in *Table 8–1*, with the addition of project traffic, the study intersection is calculated to operate at LOS B or better during the AM and PM peak hours. ***Appendix B*** contains the intersection analysis worksheets.

8.2 Opening Year (2022) with Project

Table 8–1 summarizes the peak hour intersection operations under Opening Year with Project conditions. As seen in *Table 8–1*, with the addition of project and cumulative projects traffic, the study intersections are calculated to operate at LOS B or better during the AM and PM peak hours. ***Appendix B*** contains the intersection analysis worksheets.

Since LOS B or better operations are calculated, ***no deficiency*** was identified.

TABLE 8–1
NEAR-TERM INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing		Opening Year (2022) without Project		Opening Year (2022) with Project		Δ[d]
			Delay	LOS	Delay	LOS	Delay	LOS	
1. Jamacha Boulevard / Calavo Drive	Signalized	AM PM	9.2 11.6	A B	9.5 12.6	A B	9.8 12.9	A B	0.3 0.3
2. Calavo Drive / Project Driveway	OWSC[c]	AM PM	DNE		DNE		9.7 11.0	A B	

Footnotes:

a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. OWSC – One Way Stop Controlled Intersection, minor street left turn delay reported.
d. Δ denotes a project-induced increase in the delay.

General Note:

DNE = Does not exist

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

9.0 ACTIVE TRANSPORTATION REVIEW

9.1 Pedestrian Traffic Review

Pedestrian facilities are present within the project area. There is a paved sidewalk present along the north side of Jamacha Boulevard, east and west of Calavo Drive. There is a paved sidewalk present along the south side of Jamacha Boulevard, west of Calavo Drive. There are no pedestrian facilities provided east of Calavo Drive on Jamacha Boulevard, on the south side of the roadway. There are paved sidewalks present along the west and east side of Calavo Drive, south of Jamacha Boulevard. There is a paved sidewalk present along the east side of Calavo Drive, north of Jamacha Boulevard. There are no pedestrian facilities present on the west side of Calavo Drive, north of Jamacha Boulevard.

9.2 Bicycle Traffic Review

A class II bike lane is provided along both sides of Jamacha Boulevard between Sweetwater Springs Boulevard and Campo Road. There are no bicycle facilities currently provided or planned along Calavo Drive.

9.3 Transit Traffic Review

There is transit service within the County of San Diego which is provided by the Metropolitan Transit System (MTS). Bus routes near the project site include routes 855 and 856. The two routes run along Jamacha Boulevard and Calavo Drive, adjacent to the project site. A summary of the routes is provided below.

Route 855 of the Metropolitan Transit System (MTS) travels from the Spring Street Trolley Station to Calavo/Doubletree & Jamacha Boulevard via Campo Road, Sweetwater Springs Boulevard, Calavo Drive, and Jamacha Boulevard. Route 855 has a destination to Campo Road, Casa de Oro Plaza, Monte Vista High School, and Sweetwater Springs Boulevard. Route 855 has 20 stops. On weekdays, the route schedule begins at 6:04 AM and ends at 10:35 PM. On Saturdays, the route schedule begins at 7:05 AM and ends at 9:05 PM. On Sundays, the route schedule begins at 8:05 AM and ends at 6:05 PM. Route 855 runs at approximately 30-minute frequency on weekdays, and 1-hour frequency on weekends.

Route 856 of the Metropolitan Transit System (MTS) travels from Cuyamaca College to San Diego State University via College Avenue, Broadway, Sweetwater Road, and Jamacha Boulevard. Route 856 has a destination to College Grove Center, Cuyamaca College, Lemon Grove Depot, San Diego State University, Spring Valley, and the Spring Valley Swap Meet. Route 856 has 44 stops. On weekdays, the route schedule begins at 5:56 AM and ends at 9:12 PM. On Saturdays, the route schedule begins at 5:27 AM and ends at 8:41 PM. On Sundays, the route schedule begins at 6:26 AM and ends at 5:37 PM. Route 856 runs at approximately 30-minute frequency on weekdays, and 1-hour frequency on weekends.

10.0 SITE ACCESS

Access to the site is proposed via a full access single driveway on Calavo Drive. The proposed driveway requires a certification that there is sufficient corner sight distance provided in conformance with County of San Diego standards. Based on the low trip generation one driveway is sufficient. In addition, based on the low forecasted volumes on Calavo Drive, a dedicated southbound left turn pocket on Calavo Drive is not needed.

11.0 VEHICLE MILES TRAVELED (VMT) ASSESSMENT

Based on the local serving nature of the park, the project is screened out from needing to provide a VMT analysis.

The assessment/analysis is consistent with the Technical Advisory on Evaluating Transportation Impacts in CEQA published by the state's Office of Planning & Research (OPR), December 2018. While the local serving public facilities category is not included in the OPR technical advisory, the OPR technical advisory does state the following for local serving land uses, such as local serving retail:

"Because new retail development typically redistributes shopping trips rather than creating new trips, estimating the total change in VMT (i.e., the difference in total VMT in the area affected with and without the project) is the best way to analyze a retail project's transportation impacts. By adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce VMT. Thus, lead agencies generally may presume such development creates a less-than-significant transportation impact."

Similar to local serving retail, local serving public facilities would redistribute trips and would not create new trips. Thus, similar to local serving retail, trips are generally shortened as longer trips from a regional facility are redistributed to the local serving public facility. Based on Google search results, there are a total of 11 parks within the Spring Valley community. However, these parks are located on the outer edge of the community. Therefore, the Proposed Project would provide a much-needed park space for the Spring Valley Community, reducing the distance nearby residents have to travel to get to a park or recreational space. As such, it is anticipated that the Proposed Project would redistribute existing park trips and thus reduce VMT at both the local and regional level.

According to Section 15064.3 "Determining the Significance of Transportation Impacts" of the 2021 CEQA Statute & Guidelines, projects that decrease VMT in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.

12.0 IDENTIFICATION OF DEFICIENCY AND IMPROVEMENTS

Per the low trip generation and very good operations of the nearby intersections, project related traffic is calculated to not result in a deficiency within the study area.

The project is screened out from needing to provide a VMT analysis, based on its local serving nature. This assessment/analysis is consistent with the Technical Advisory on Evaluating Transportation Impacts in CEQA published by the state's Office of Planning & Research (OPR), December 2018. Based on the analysis results documented above, the Proposed Project is presumed to have a less than significant VMT impact, and no additional analysis would be required.

12.1 Access and Other Recommendations

The following access-related improvements should be considered:

- Provide a stop sign for drivers exiting the park driveway.
- Prior to opening the park project, a certification that corner sight distance meets County of San Diego standards should be provided.
- Provide a new streetlight at the project entrance on the north side of the driveway.
- Provide a no parking "red curb" zone along the entire project's frontage in order to provide enhanced mobility and sight distance.

LINSCOTT
LAW &
GREENSPAN
engineers

TECHNICAL APPENDICES

CALAVO PARK

County of San Diego, California
February 3, 2022

LLG Ref. 3-20-3224

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APPENDIX A

MANUAL TRAFFIC COUNT SHEETS

Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers			
Location:	#01	File Name:	ITM-20-023-01
Intersection:	Jamacha Boulevard & Calavo Drive & Doubletree Road	Project:	LLG Ref. 3-20-3224
Date of Count:	Tuesday, August 11, 2020		Spring Valley

AM	Jamacha Boulevard Southbound			Doubletree Road Westbound			Jamacha Boulevard Northbound			Calavo Drive Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	0	38	8	4	6	2	3	61	0	7	1	7	137
7:15	2	51	7	3	3	2	4	91	3	4	1	4	175
7:30	0	47	10	2	2	6	4	90	3	4	1	7	176
7:45	2	43	15	4	1	9	5	81	3	9	3	3	178
8:00	1	54	15	5	3	5	3	80	4	13	0	9	192
8:15	0	44	8	2	3	6	9	75	2	13	2	13	177
8:30	0	49	8	1	3	4	5	86	2	12	0	4	174
8:45	3	46	13	1	3	8	2	80	1	5	3	2	167
Total	8	372	84	22	24	42	35	644	18	67	11	49	1376
Approach%	1.7	80.2	18.1	25.0	27.3	47.7	5.0	92.4	2.6	52.8	8.7	38.6	
Total%	0.6	27.0	6.1	1.6	1.7	3.1	2.5	46.8	1.3	4.9	0.8	3.6	

AM Intersection Peak Hour: **07:30 to 08:30**

Volume	3	188	48	13	9	26	21	326	12	39	6	32	723
Approach%	1.3	78.7	20.1	27.1	18.8	54.2	5.8	90.8	3.3	50.6	7.8	41.6	
Total%	0.4	26.0	6.6	1.8	1.2	3.6	2.9	45.1	1.7	5.4	0.8	4.4	
PHF			0.85			0.86			0.93			0.69	0.00

PM	Jamacha Boulevard Southbound			Doubletree Road Westbound			Jamacha Boulevard Northbound			Calavo Drive Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	6	104	17	4	1	5	14	110	8	15	8	5	297
16:15	0	142	23	5	3	2	12	108	5	24	1	16	341
16:30	5	112	16	1	2	6	14	106	4	17	3	17	303
16:45	5	103	20	3	2	2	14	122	5	18	4	8	306
17:00	3	137	20	7	2	3	14	99	7	25	4	11	332
17:15	4	99	13	4	7	6	7	113	4	20	1	8	286
17:30	2	113	28	2	0	4	12	125	6	15	3	17	327
17:45	7	96	18	3	5	4	5	118	5	15	2	9	287
Total	32	906	155	29	22	32	92	901	44	149	26	91	2479
Approach%	2.9	82.9	14.2	34.9	26.5	38.6	8.9	86.9	4.2	56.0	9.8	34.2	
Total%	1.3	36.5	6.3	1.2	0.9	1.3	3.7	36.3	1.8	6.0	1.0	3.7	

PM Intersection Peak Hour: **16:15 to 17:15**

Volume	13	494	79	16	9	13	54	435	21	84	12	52	1,282
Approach%	2.2	84.3	13.5	42.1	23.7	34.2	10.6	85.3	4.1	56.8	8.1	35.1	
Total%	1.0	38.5	6.2	1.2	0.7	1.0	4.2	33.9	1.6	6.6	0.9	4.1	
PHF			0.89			0.79			0.90			0.90	0.00

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers			
Location:	#01	File Name:	ITM-20-023-01
Intersection:	Jamacha Boulevard & Calavo Drive & Doubletree Road	Project:	LLG Ref. 3-20-3224
Date of Count:	Tuesday, August 11, 2020		Spring Valley

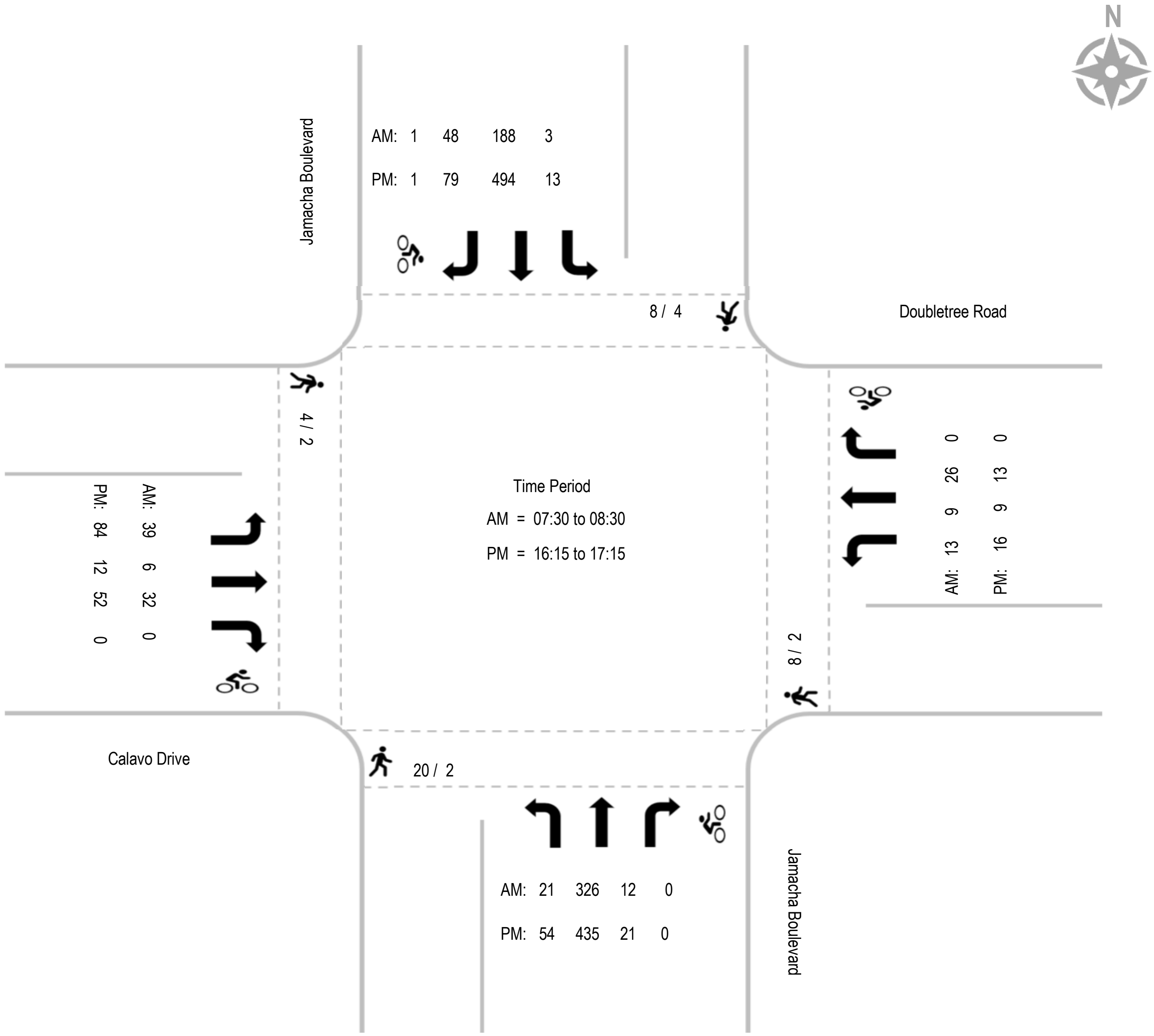
AM	Jamacha Boulevard Southbound				Doubletree Road Westbound				Jamacha Boulevard Northbound				Calavo Drive Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:15	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2	0
7:30	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
7:45	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	3	0
8:00	2	0	0	0	1	0	0	0	8	0	0	0	0	0	0	0	11	0
8:15	4	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	12	0
8:30	0	0	0	0	3	0	0	0	2	0	0	0	1	0	0	0	6	0
8:45	1	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	4	0
Ped Total	8				8				20				4				40	
Bike Total		0	1	0		0	0	0		0	0	0		0	0	0		1

PM	Jamacha Boulevard Southbound				Doubletree Road Westbound				Jamacha Boulevard Northbound				Calavo Drive Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	3	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0
17:00	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	3	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	4				2				2				2				10	
Bike Total		0	1	0		0	0	0		0	0	0		0	0	0		1

Intersection Turning Movement - Peak Hour Summary

LINSCOTT LAW & GREENSPAN engineers

Location:	#01	File Name:	ITM-20-023-01
Intersection:	Jamacha Boulevard & Calavo Drive & Doubletree Road	Project:	LLG Ref. 3-20-3224
Date of Count:	Tuesday, August 11, 2020		Spring Valley



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4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **Jamacha Road, between Jamacha Boulevard and Campo Road**

Date: **Tuesday, August 11, 2020** Total Daily Volume: **51903** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
401	367	384	351	550	1233	2027	2374	2722	2808	2869	3087	3346	3373	3560	3696	3867	3695	3096	2529	2093	1499	1109	867
106	109	102	76	103	216	421	548	645	636	686	745	834	814	800	908	993	958	853	668	613	392	277	248
92	81	97	91	114	269	427	579	646	733	731	794	809	875	883	867	993	962	813	602	561	424	253	220
124	84	94	85	150	354	567	607	738	747	737	756	861	829	944	975	927	917	754	628	475	382	325	210
79	93	91	99	183	394	612	640	693	692	715	792	842	855	933	946	954	858	676	631	444	301	254	189

Date: **Tuesday, August 11, 2020** Total Daily Volume: **25656** Description: **Eastbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
80	107	147	102	170	452	835	1063	1198	1363	1376	1504	1655	1742	1784	2017	2147	2067	1763	1294	1045	772	568	405
23	36	41	23	30	74	137	234	297	314	306	363	414	421	370	496	534	523	497	337	302	190	133	123
18	22	35	26	37	82	171	270	230	346	355	374	422	438	453	455	558	569	463	327	293	223	134	107
26	16	44	25	47	130	244	277	344	352	357	382	415	426	469	551	518	488	421	318	223	200	153	91
13	33	27	28	56	166	283	282	327	351	358	385	404	457	492	515	537	487	382	312	227	159	148	84

Date: **Tuesday, August 11, 2020** Total Daily Volume: **26247** Description: **Westbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
321	260	237	249	380	781	1192	1311	1524	1445	1493	1583	1691	1631	1776	1679	1720	1628	1333	1235	1048	727	541	462
83	73	61	53	73	142	284	314	348	322	380	382	420	393	430	412	459	435	356	331	311	202	144	125
74	59	62	65	77	187	256	309	416	387	376	420	387	437	430	412	435	393	350	275	268	201	119	113
98	68	50	60	103	224	323	330	394	395	380	374	446	403	475	424	409	429	333	310	252	182	172	119
66	60	64	71	127	228	329	358	366	341	357	407	438	398	441	431	417	371	294	319	217	142	106	105

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4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **Jamacha Road, between Jamacha Boulevard and Campo Road**

Date: **Wednesday, August 12, 2020** Total Daily Volume: **52946** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
604	414	336	349	514	1214	1963	2512	2631	2758	2904	3256	3463	3448	3770	3837	3894	3678	3130	2543	2144	1612	1118	854
159	118	92	81	111	241	407	567	595	626	683	736	892	874	846	872	951	950	844	664	628	454	302	249
156	121	92	81	107	252	452	597	654	680	737	834	838	846	923	949	974	899	778	639	540	429	293	205
147	90	69	94	136	327	558	725	711	722	727	834	846	889	1020	1020	955	946	771	627	482	379	261	207
142	85	83	93	160	394	546	623	671	730	757	852	887	839	981	996	1014	883	737	613	494	350	262	193

Date: **Wednesday, August 12, 2020** Total Daily Volume: **26300** Description: **Eastbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
252	150	120	125	158	430	772	1117	1220	1286	1395	1656	1730	1694	1953	2074	2250	2073	1696	1332	1034	818	560	405
67	39	36	30	35	88	132	244	278	270	330	382	432	415	432	447	536	536	476	363	290	204	149	119
69	48	35	28	29	74	165	263	280	319	347	416	418	439	481	516	545	494	434	316	262	223	151	93
60	35	26	37	40	120	238	309	338	356	324	450	424	433	551	552	536	534	402	355	229	194	129	103
56	28	23	30	54	148	237	301	324	341	394	408	456	407	489	559	633	509	384	298	253	197	131	90

Date: **Wednesday, August 12, 2020** Total Daily Volume: **26646** Description: **Westbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
352	264	216	224	356	784	1191	1395	1411	1472	1509	1600	1733	1754	1817	1763	1644	1605	1434	1211	1110	794	558	449
92	79	56	51	76	153	275	323	317	356	353	354	460	459	414	425	415	414	368	301	338	250	153	130
87	73	57	53	78	178	287	334	374	361	390	418	420	407	442	433	429	405	344	323	278	206	142	112
87	55	43	57	96	207	320	416	373	366	403	384	422	456	469	468	419	412	369	272	253	185	132	104
86	57	60	63	106	246	309	322	347	389	363	444	431	432	492	437	381	374	353	315	241	153	131	103

Linscott, Law & Greenspan, Engineers

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Average Daily Traffic

Location: **Jamacha Road, between Jamacha Boulevard and Campo Road**

Date: **Thursday, August 13, 2020** Total Daily Volume: **53483** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
596	427	359	346	517	1282	2014	2630	2564	2689	2908	3207	3412	3450	3784	3822	3929	3796	3166	2731	2164	1595	1166	929
168	119	90	94	80	221	379	616	633	647	740	742	866	855	871	931	998	972	830	763	606	443	315	264
155	120	84	72	136	292	449	645	616	653	718	784	812	858	938	933	966	973	812	705	556	435	295	238
151	104	91	81	150	343	522	671	654	722	720	825	854	857	974	992	998	961	754	632	497	372	287	228
122	84	94	99	151	426	664	698	661	667	730	856	880	880	1001	966	967	890	770	631	505	345	269	199

Date: **Thursday, August 13, 2020** Total Daily Volume: **26708** Description: **Eastbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
239	180	132	116	156	457	852	1171	1114	1317	1421	1587	1695	1716	1954	2097	2255	2159	1735	1472	1036	816	579	452
64	50	38	35	26	54	128	246	282	325	339	370	422	425	445	508	557	544	462	423	277	213	160	132
65	49	35	18	46	116	167	295	265	305	359	361	404	416	498	508	530	570	460	401	278	229	157	117
66	47	33	30	35	138	223	305	288	353	364	440	416	423	498	542	580	536	398	337	240	184	131	111
44	34	26	33	49	149	334	325	279	334	359	416	453	452	513	539	588	509	415	311	241	190	131	92

Date: **Thursday, August 13, 2020** Total Daily Volume: **26775** Description: **Westbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
357	247	227	230	361	825	1162	1459	1450	1372	1487	1620	1717	1734	1830	1725	1674	1637	1431	1259	1128	779	587	477
104	69	52	59	54	167	251	370	351	322	401	372	444	430	426	423	441	428	368	340	329	230	155	132
90	71	49	54	90	176	282	350	351	348	359	423	408	442	440	425	436	403	352	304	278	206	138	121
85	57	58	51	115	205	299	366	366	369	356	385	438	434	476	450	418	425	356	295	257	188	156	117
78	50	68	66	102	277	330	373	382	333	371	440	427	428	488	427	379	381	355	320	264	155	138	107

Linscott, Law & Greenspan, Engineers

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Average Daily Traffic

Location: **Jamacha Road, between Campo Road and Willow Glen Drive**

Date: **Tuesday, August 11, 2020** Total Daily Volume: **33745** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
333	273	208	194	279	567	1056	1395	1544	1756	1929	2081	2379	2324	2427	2456	2571	2431	2064	1806	1475	1007	697	493
103	76	44	37	49	105	204	287	362	404	465	491	590	566	629	627	645	611	518	486	419	293	174	153
91	72	57	49	68	121	213	342	344	419	451	541	617	606	547	614	624	614	565	438	415	264	163	131
70	63	59	54	69	160	300	377	407	461	489	499	588	581	665	609	645	620	540	441	340	232	199	113
69	62	48	54	93	181	339	389	431	472	524	550	584	571	586	606	657	586	441	441	301	218	161	96

Date: **Tuesday, August 11, 2020** Total Daily Volume: **16519** Description: **Eastbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
142	97	84	54	92	196	470	593	687	830	898	1031	1154	1183	1203	1231	1337	1276	1120	898	747	570	385	241
44	21	18	13	11	33	79	125	160	176	211	233	279	307	299	350	329	310	289	246	209	170	98	69
38	25	21	10	20	37	81	151	145	202	206	265	307	306	270	293	324	332	302	233	217	138	90	69
29	23	28	16	32	47	137	146	184	218	232	253	285	293	327	273	335	312	296	218	169	133	112	57
31	28	17	15	29	79	173	171	198	234	249	280	283	277	307	315	349	322	233	201	152	129	85	46

Date: **Tuesday, August 11, 2020** Total Daily Volume: **17226** Description: **Westbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
191	176	124	140	187	371	586	802	857	926	1031	1050	1225	1141	1224	1225	1234	1155	944	908	728	437	312	252
59	55	26	24	38	72	125	162	202	228	254	258	311	259	330	277	316	301	229	240	210	123	76	84
53	47	36	39	48	84	132	191	199	217	245	276	310	300	277	321	300	282	263	205	198	126	73	62
41	40	31	38	37	113	163	231	223	243	257	246	303	288	338	336	310	308	244	223	171	99	87	56
38	34	31	39	64	102	166	218	233	238	275	270	301	294	279	291	308	264	208	240	149	89	76	50

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Average Daily Traffic

Location: **Jamacha Road, between Campo Road and Willow Glen Drive**

Date: **Wednesday, August 12, 2020** Total Daily Volume: **33556** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
377	208	194	177	271	569	986	1379	1582	1637	1856	2215	2300	2299	2446	2481	2488	2392	2065	1797	1526	1096	685	530
111	60	53	35	51	105	193	299	359	365	424	500	535	562	588	590	638	622	564	487	439	323	197	161
97	65	55	39	51	120	211	361	392	448	447	587	525	572	642	629	625	624	541	439	403	291	165	143
90	44	45	49	76	166	253	348	425	414	465	512	605	589	602	645	582	588	518	439	352	243	170	110
79	39	41	54	93	178	329	371	406	410	520	616	635	576	614	617	643	558	442	432	332	239	153	116

Date: **Wednesday, August 12, 2020** Total Daily Volume: **16450** Description: **Eastbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
159	94	81	69	92	198	411	597	712	711	865	1098	1189	1135	1256	1253	1321	1281	1009	903	770	599	371	276
51	26	27	11	13	33	72	116	148	157	192	237	265	267	295	288	351	326	269	250	212	169	104	88
46	30	20	17	19	33	92	163	174	187	211	295	275	290	345	321	301	351	298	216	212	168	96	69
37	22	17	19	26	53	107	131	199	195	203	249	319	310	318	332	330	299	250	243	183	138	94	57
25	16	17	22	34	79	140	187	191	172	259	317	330	268	298	312	339	305	192	194	163	124	77	62

Date: **Wednesday, August 12, 2020** Total Daily Volume: **17106** Description: **Westbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
218	114	113	108	179	371	575	782	870	926	991	1117	1111	1164	1190	1228	1167	1111	1056	894	756	497	314	254
60	34	26	24	38	72	121	183	211	208	232	263	270	295	293	302	287	296	295	237	227	154	93	73
51	35	35	22	32	87	119	198	218	261	236	292	250	282	297	308	324	273	243	223	191	123	69	74
53	22	28	30	50	113	146	217	226	219	262	263	286	279	284	313	252	289	268	196	169	105	76	53
54	23	24	32	59	99	189	184	215	238	261	299	305	308	316	305	304	253	250	238	169	115	76	54

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Average Daily Traffic

Location: **Jamacha Road, between Campo Road and Willow Glen Drive**

Date: **Thursday, August 13, 2020** Total Daily Volume: **34953** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
353	245	238	175	301	580	1037	1513	1480	1663	1955	2219	2388	2329	2483	2594	2602	2568	2231	2014	1566	1068	789	562
113	71	61	42	56	124	174	333	378	394	479	513	605	606	607	666	634	647	571	572	463	291	236	160
79	65	60	41	74	117	236	370	341	398	482	543	554	614	603	612	651	705	598	493	439	294	216	166
91	60	55	40	72	153	266	391	384	460	450	572	573	548	644	662	669	627	503	480	331	248	185	122
70	49	62	52	99	186	361	419	377	411	544	591	656	561	629	654	648	589	559	469	333	235	152	114

Date: **Thursday, August 13, 2020** Total Daily Volume: **17228** Description: **Eastbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
162	117	99	67	94	215	479	693	661	744	920	1104	1209	1180	1258	1345	1314	1359	1124	1015	783	568	418	300
45	31	27	19	16	33	70	155	179	179	229	246	320	288	294	338	320	331	297	292	218	148	132	92
35	29	24	9	23	42	107	170	172	177	228	262	269	316	346	319	323	404	301	239	213	157	113	84
47	34	26	15	24	57	114	180	159	206	212	283	290	273	325	352	340	312	242	242	165	131	97	58
35	23	22	24	31	83	188	188	151	182	251	313	330	303	293	336	331	312	284	242	187	132	76	66

Date: **Thursday, August 13, 2020** Total Daily Volume: **17725** Description: **Westbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
191	128	139	108	207	365	558	820	819	919	1035	1115	1179	1149	1225	1249	1288	1209	1107	999	783	500	371	262
68	40	34	23	40	91	104	178	199	215	250	267	285	318	313	328	314	316	274	280	245	143	104	68
44	36	36	32	51	75	129	200	169	221	254	281	285	298	257	293	328	301	297	254	226	137	103	82
44	26	29	25	48	96	152	211	225	254	238	289	283	275	319	310	329	315	261	238	166	117	88	64
35	26	40	28	68	103	173	231	226	229	293	278	326	258	336	318	317	277	275	227	146	103	76	48

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Average Daily Traffic

Location: **Campo Road, between Jamacha Road and Miller Ranch Road**

Date: **Tuesday, August 11, 2020** Total Daily Volume: **22813** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
143	185	220	166	293	649	1039	1095	1307	1318	1177	1364	1351	1377	1450	1555	1657	1604	1284	1066	894	690	517	412
32	43	55	35	50	113	219	299	355	281	310	342	325	332	330	376	396	431	340	266	266	195	126	116
43	54	60	41	59	145	251	265	312	365	295	313	345	366	374	342	470	394	368	271	240	173	129	96
37	47	56	42	88	180	285	243	354	348	278	352	342	346	364	430	418	405	290	276	206	192	141	110
31	41	49	48	96	211	284	288	286	324	294	357	339	333	382	407	373	374	286	253	182	130	121	90

Date: **Tuesday, August 11, 2020** Total Daily Volume: **11668** Description: **Northbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
103	132	148	120	219	467	698	657	811	762	682	764	692	639	739	639	661	597	505	445	409	321	247	211
23	31	35	27	41	76	158	189	233	163	194	200	171	165	184	143	168	151	154	98	123	92	62	55
29	35	38	25	36	110	179	135	215	212	177	171	171	173	185	157	179	145	126	109	104	83	60	43
26	34	37	33	66	132	184	143	206	210	143	182	180	156	190	187	163	151	117	126	94	88	80	59
25	32	38	35	76	149	177	190	157	177	168	211	170	145	180	152	151	150	108	112	88	58	45	54

Date: **Tuesday, August 11, 2020** Total Daily Volume: **11145** Description: **Southbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
40	53	72	46	74	182	341	438	496	556	495	600	659	738	711	916	996	1007	779	621	485	369	270	201
9	12	20	8	9	37	61	110	122	118	116	142	154	167	146	233	228	280	186	168	143	103	64	61
14	19	22	16	23	35	72	130	97	153	118	142	174	193	189	185	291	249	242	162	136	90	69	53
11	13	19	9	22	48	101	100	148	138	135	170	162	190	174	243	255	254	173	150	112	104	61	51
6	9	11	13	20	62	107	98	129	147	126	146	169	188	202	255	222	224	178	141	94	72	76	36

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Average Daily Traffic

Location: **Campo Road, between Jamacha Road and Miller Ranch Road**

Date: **Wednesday, August 12, 2020** Total Daily Volume: **23942** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
258	222	174	189	263	655	986	1226	1246	1369	1345	1386	1461	1477	1626	1716	1717	1610	1362	1116	932	725	508	373
65	57	57	45	60	125	213	258	290	332	327	338	367	353	367	387	420	381	382	323	262	216	129	115
70	61	40	50	65	147	231	312	330	322	363	357	368	382	414	418	435	413	353	262	245	193	126	92
64	54	31	47	72	173	301	352	297	346	308	350	328	380	435	460	434	397	304	272	206	159	123	95
59	50	46	47	66	210	241	304	329	369	347	341	398	362	410	451	428	419	323	259	219	157	130	71

Date: **Wednesday, August 12, 2020** Total Daily Volume: **12190** Description: **Northbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
146	157	118	128	197	481	684	748	719	788	750	718	792	740	783	736	640	637	510	477	468	334	236	203
36	43	36	29	45	83	172	163	151	216	187	180	226	191	189	166	163	117	144	134	133	107	66	66
36	37	25	34	49	111	172	193	209	172	201	193	200	176	187	183	164	188	121	113	126	98	54	46
38	38	20	29	51	132	191	213	170	210	170	173	158	207	203	214	160	154	116	116	90	76	57	50
36	39	37	36	52	155	149	179	189	190	192	172	208	166	204	173	153	178	129	114	119	53	59	41

Date: **Wednesday, August 12, 2020** Total Daily Volume: **11752** Description: **Southbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
112	65	56	61	66	174	302	478	527	581	595	668	669	737	843	980	1077	973	852	639	464	391	272	170
29	14	21	16	15	42	41	95	139	116	140	158	141	162	178	221	257	264	238	189	129	109	63	49
34	24	15	16	16	36	59	119	121	150	162	164	168	206	227	235	271	225	232	149	119	95	72	46
26	16	11	18	21	41	110	139	127	136	138	177	170	173	232	246	274	243	188	156	116	83	66	45
23	11	9	11	14	55	92	125	140	179	155	169	190	196	206	278	275	241	194	145	100	104	71	30

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4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **Campo Road, between Jamacha Road and Miller Ranch Road**

Date: **Thursday, August 13, 2020** Total Daily Volume: **22743** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
269	198	159	171	265	702	1037	1210	1265	1163	1209	1257	1355	1351	1589	1646	1618	1552	1348	1047	836	633	465	398
75	54	36	47	43	107	222	305	337	261	305	301	335	334	404	410	373	399	329	290	238	177	122	110
65	57	35	31	69	171	258	287	299	257	293	298	328	363	414	379	429	417	357	250	237	159	116	97
65	38	40	42	87	189	252	296	299	343	303	349	372	334	377	450	403	362	372	278	189	165	113	114
64	49	48	51	66	235	305	322	330	302	308	309	320	320	394	407	413	374	290	229	172	132	114	77

Date: **Thursday, August 13, 2020** Total Daily Volume: **11562** Description: **Northbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
176	123	106	122	196	524	718	746	802	681	670	646	716	673	759	666	607	560	524	439	394	279	233	202
48	32	23	33	30	82	170	192	213	156	178	143	203	169	218	181	145	148	139	113	131	71	59	54
37	35	21	22	46	121	202	188	200	160	163	164	165	190	190	154	169	142	127	93	107	74	56	49
40	22	26	29	68	134	171	170	187	182	158	178	193	147	192	186	154	122	155	129	85	73	56	60
51	34	36	38	52	187	175	196	202	183	171	161	155	167	159	145	139	148	103	104	71	61	62	39

Date: **Thursday, August 13, 2020** Total Daily Volume: **11181** Description: **Southbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
93	75	53	49	69	178	319	464	463	482	539	611	639	678	830	980	1011	992	824	608	442	354	232	196
27	22	13	14	13	25	52	113	124	105	127	158	132	165	186	229	228	251	190	177	107	106	63	56
28	22	14	9	23	50	56	99	99	97	130	134	163	173	224	225	260	275	230	157	130	85	60	48
25	16	14	13	19	55	81	126	112	161	145	171	179	187	185	264	249	240	217	149	104	92	57	54
13	15	12	13	14	48	130	126	128	119	137	148	165	153	235	262	274	226	187	125	101	71	52	38

APPENDIX B

INTERSECTION ANALYSIS WORKSHEETS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	7	38	16	11	31	25	391	14	4	226	58
Future Volume (veh/h)	47	7	38	16	11	31	25	391	14	4	226	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	0.98		0.99	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	10	55	19	13	36	27	420	15	5	266	68
Peak Hour Factor	0.69	0.69	0.69	0.86	0.86	0.86	0.93	0.93	0.93	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	49	107	156	88	146	58	1698	61	12	1287	322
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.03	0.49	0.49	0.01	0.46	0.46
Sat Flow, veh/h	594	285	620	242	512	848	1781	3499	125	1781	2800	700
Grp Volume(v), veh/h	133	0	0	68	0	0	27	213	222	5	167	167
Grp Sat Flow(s),veh/h/ln	1499	0	0	1602	0	0	1781	1777	1847	1781	1777	1723
Q Serve(g_s), s	1.7	0.0	0.0	0.0	0.0	0.0	0.6	2.8	2.8	0.1	2.3	2.3
Cycle Q Clear(g_c), s	3.1	0.0	0.0	1.4	0.0	0.0	0.6	2.8	2.8	0.1	2.3	2.3
Prop In Lane	0.51		0.41	0.28		0.53	1.00		0.07	1.00		0.41
Lane Grp Cap(c), veh/h	394	0	0	391	0	0	58	862	896	12	817	792
V/C Ratio(X)	0.34	0.00	0.00	0.17	0.00	0.00	0.47	0.25	0.25	0.42	0.20	0.21
Avail Cap(c_a), veh/h	791	0	0	810	0	0	221	862	896	221	817	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.0	0.0	0.0	14.4	0.0	0.0	19.1	6.1	6.1	19.9	6.5	6.5
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.2	0.0	0.0	5.8	0.7	0.7	21.3	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.0	0.5	0.0	0.0	0.3	0.9	0.9	0.1	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.5	0.0	0.0	14.6	0.0	0.0	24.9	6.7	6.7	41.2	7.0	7.1
LnGrp LOS	B	A	A	B	A	A	C	A	A	D	A	A
Approach Vol, veh/h		133			68			462			339	
Approach Delay, s/veh		15.5			14.6			7.8			7.6	
Approach LOS		B			B			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	24.0		11.4	5.8	23.0		11.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	18.5		18.0	5.0	18.5		18.0				
Max Q Clear Time (g_c+I1), s	2.1	4.8		5.1	2.6	4.3		3.4				
Green Ext Time (p_c), s	0.0	2.1		0.5	0.0	1.6		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			9.2									
HCM 6th LOS			A									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	14	62	19	11	16	65	522	25	16	593	95
Future Volume (veh/h)	101	14	62	19	11	16	65	522	25	16	593	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	112	16	69	24	14	20	72	580	28	18	666	107
Peak Hour Factor	0.90	0.90	0.90	0.79	0.79	0.79	0.90	0.90	0.90	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	272	42	98	206	118	108	120	1643	79	40	1318	212
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.07	0.48	0.48	0.02	0.43	0.43
Sat Flow, veh/h	757	227	530	471	638	584	1781	3450	166	1781	3055	490
Grp Volume(v), veh/h	197	0	0	58	0	0	72	298	310	18	387	386
Grp Sat Flow(s),veh/h/ln	1514	0	0	1693	0	0	1781	1777	1840	1781	1777	1768
Q Serve(g_s), s	3.9	0.0	0.0	0.0	0.0	0.0	1.7	4.5	4.5	0.4	6.7	6.8
Cycle Q Clear(g_c), s	5.1	0.0	0.0	1.2	0.0	0.0	1.7	4.5	4.5	0.4	6.7	6.8
Prop In Lane	0.57		0.35	0.41		0.34	1.00		0.09	1.00		0.28
Lane Grp Cap(c), veh/h	412	0	0	432	0	0	120	846	876	40	767	763
V/C Ratio(X)	0.48	0.00	0.00	0.13	0.00	0.00	0.60	0.35	0.35	0.45	0.50	0.51
Avail Cap(c_a), veh/h	761	0	0	790	0	0	213	846	876	209	767	763
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.2	0.0	0.0	14.7	0.0	0.0	19.3	7.0	7.0	20.6	8.8	8.8
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.1	0.0	0.0	4.8	1.2	1.1	7.7	2.4	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.0	0.4	0.0	0.0	0.8	1.5	1.5	0.2	2.4	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.0	0.0	0.0	14.8	0.0	0.0	24.1	8.2	8.1	28.2	11.2	11.2
LnGrp LOS	B	A	A	B	A	A	C	A	A	C	B	B
Approach Vol, veh/h		197			58			680			791	
Approach Delay, s/veh		17.0			14.8			9.9			11.6	
Approach LOS		B			B			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.5	24.8		12.4	7.4	22.9		12.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	18.5		18.0	5.1	18.4		18.0				
Max Q Clear Time (g_c+I1), s	2.4	6.5		7.1	3.7	8.8		3.2				
Green Ext Time (p_c), s	0.0	2.9		0.8	0.0	3.4		0.2				

Intersection Summary			
HCM 6th Ctrl Delay			11.6
HCM 6th LOS			B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	8	42	18	12	34	28	430	15	4	249	64
Future Volume (veh/h)	52	8	42	18	12	34	28	430	15	4	249	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	0.98		0.99	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	75	12	61	21	14	40	30	462	16	5	293	75
Peak Hour Factor	0.69	0.69	0.69	0.86	0.86	0.86	0.93	0.93	0.93	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	241	53	113	157	92	156	63	1685	58	12	1265	318
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.04	0.48	0.48	0.01	0.45	0.45
Sat Flow, veh/h	596	288	620	243	507	857	1781	3503	121	1781	2797	702
Grp Volume(v), veh/h	148	0	0	75	0	0	30	234	244	5	184	184
Grp Sat Flow(s),veh/h/ln	1503	0	0	1607	0	0	1781	1777	1847	1781	1777	1723
Q Serve(g_s), s	1.9	0.0	0.0	0.0	0.0	0.0	0.7	3.2	3.2	0.1	2.6	2.7
Cycle Q Clear(g_c), s	3.5	0.0	0.0	1.5	0.0	0.0	0.7	3.2	3.2	0.1	2.6	2.7
Prop In Lane	0.51		0.41	0.28		0.53	1.00		0.07	1.00		0.41
Lane Grp Cap(c), veh/h	407	0	0	406	0	0	63	854	888	12	804	779
V/C Ratio(X)	0.36	0.00	0.00	0.18	0.00	0.00	0.48	0.27	0.27	0.42	0.23	0.24
Avail Cap(c_a), veh/h	779	0	0	798	0	0	218	854	888	218	804	779
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.0	0.0	0.0	14.3	0.0	0.0	19.4	6.3	6.3	20.2	6.8	6.9
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.2	0.0	0.0	5.5	0.8	0.8	21.3	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.0	0.5	0.0	0.0	0.3	1.0	1.0	0.1	0.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.6	0.0	0.0	14.5	0.0	0.0	24.9	7.1	7.1	41.5	7.5	7.6
LnGrp LOS	B	A	A	B	A	A	C	A	A	D	A	A
Approach Vol, veh/h		148			75			508			373	
Approach Delay, s/veh		15.6			14.5			8.2			8.0	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.8	24.2		12.0	5.9	23.0		12.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	18.5		18.0	5.0	18.5		18.0
Max Q Clear Time (g_c+I1), s	2.1	5.2		5.5	2.7	4.7		3.5
Green Ext Time (p_c), s	0.0	2.3		0.6	0.0	1.8		0.3

Intersection Summary			
HCM 6th Ctrl Delay			9.5
HCM 6th LOS			A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	15	68	21	12	18	72	574	28	18	652	105
Future Volume (veh/h)	111	15	68	21	12	18	72	574	28	18	652	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	123	17	76	27	15	23	80	638	31	20	733	118
Peak Hour Factor	0.90	0.90	0.90	0.79	0.79	0.79	0.90	0.90	0.90	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	280	43	105	214	120	119	127	1615	78	44	1287	207
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.07	0.47	0.47	0.02	0.42	0.42
Sat Flow, veh/h	762	219	533	490	605	600	1781	3449	167	1781	3054	491
Grp Volume(v), veh/h	216	0	0	65	0	0	80	328	341	20	426	425
Grp Sat Flow(s),veh/h/ln	1514	0	0	1696	0	0	1781	1777	1840	1781	1777	1768
Q Serve(g_s), s	4.4	0.0	0.0	0.0	0.0	0.0	1.9	5.3	5.3	0.5	8.0	8.0
Cycle Q Clear(g_c), s	5.7	0.0	0.0	1.3	0.0	0.0	1.9	5.3	5.3	0.5	8.0	8.0
Prop In Lane	0.57		0.35	0.42		0.35	1.00		0.09	1.00		0.28
Lane Grp Cap(c), veh/h	429	0	0	452	0	0	127	832	861	44	749	745
V/C Ratio(X)	0.50	0.00	0.00	0.14	0.00	0.00	0.63	0.39	0.40	0.46	0.57	0.57
Avail Cap(c_a), veh/h	743	0	0	774	0	0	208	832	861	204	749	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.2	0.0	0.0	14.6	0.0	0.0	19.7	7.6	7.6	21.0	9.6	9.6
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.1	0.0	0.0	5.1	1.4	1.4	7.2	3.1	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.0	0.5	0.0	0.0	0.9	1.8	1.8	0.3	3.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	0.0	0.0	14.7	0.0	0.0	24.8	9.0	8.9	28.2	12.7	12.8
LnGrp LOS	B	A	A	B	A	A	C	A	A	C	B	B
Approach Vol, veh/h		216			65			749			871	
Approach Delay, s/veh		17.2			14.7			10.7			13.1	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.6	24.9		13.1	7.6	22.9		13.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	18.5		18.0	5.1	18.4		18.0
Max Q Clear Time (g_c+I1), s	2.5	7.3		7.7	3.9	10.0		3.3
Green Ext Time (p_c), s	0.0	3.2		0.8	0.0	3.5		0.2

Intersection Summary			
HCM 6th Ctrl Delay			12.6
HCM 6th LOS			B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	8	44	18	12	34	30	430	15	4	249	71
Future Volume (veh/h)	59	8	44	18	12	34	30	430	15	4	249	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	0.98		0.99	1.00		0.99	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	86	12	64	21	14	40	32	462	16	5	293	84
Peak Hour Factor	0.69	0.69	0.69	0.86	0.86	0.86	0.93	0.93	0.93	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	255	51	113	157	98	164	66	1669	58	12	1214	341
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.04	0.48	0.48	0.01	0.45	0.45
Sat Flow, veh/h	637	269	592	238	515	860	1781	3503	121	1781	2722	764
Grp Volume(v), veh/h	162	0	0	75	0	0	32	234	244	5	189	188
Grp Sat Flow(s),veh/h/ln	1497	0	0	1613	0	0	1781	1777	1847	1781	1777	1710
Q Serve(g_s), s	2.3	0.0	0.0	0.0	0.0	0.0	0.7	3.3	3.3	0.1	2.7	2.8
Cycle Q Clear(g_c), s	3.9	0.0	0.0	1.6	0.0	0.0	0.7	3.3	3.3	0.1	2.7	2.8
Prop In Lane	0.53		0.40	0.28		0.53	1.00		0.07	1.00		0.45
Lane Grp Cap(c), veh/h	419	0	0	419	0	0	66	847	880	12	793	763
V/C Ratio(X)	0.39	0.00	0.00	0.18	0.00	0.00	0.48	0.28	0.28	0.42	0.24	0.25
Avail Cap(c_a), veh/h	769	0	0	789	0	0	215	847	880	215	793	763
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.1	0.0	0.0	14.2	0.0	0.0	19.6	6.5	6.5	20.5	7.1	7.1
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.2	0.0	0.0	5.4	0.8	0.8	21.3	0.7	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.0	0.5	0.0	0.0	0.4	1.0	1.1	0.1	0.9	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.6	0.0	0.0	14.4	0.0	0.0	24.9	7.4	7.3	41.8	7.8	7.9
LnGrp LOS	B	A	A	B	A	A	C	A	A	D	A	A
Approach Vol, veh/h		162			75			510			382	
Approach Delay, s/veh		15.6			14.4			8.4			8.3	
Approach LOS		B			B			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	24.3		12.4	6.0	23.0		12.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	18.5		18.0	5.0	18.5		18.0				
Max Q Clear Time (g_c+I1), s	2.1	5.3		5.9	2.7	4.8		3.6				
Green Ext Time (p_c), s	0.0	2.3		0.7	0.0	1.9		0.3				
Intersection Summary												
HCM 6th Ctrl Delay			9.8									
HCM 6th LOS			A									

Intersection						
Int Delay, s/veh	0.6					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	101	103	10	10	2
Future Vol, veh/h	2	101	103	10	10	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	110	112	11	11	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	123	0	-	0	232	118
Stage 1	-	-	-	-	118	-
Stage 2	-	-	-	-	114	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1464	-	-	-	756	934
Stage 1	-	-	-	-	907	-
Stage 2	-	-	-	-	911	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1464	-	-	-	755	934
Mov Cap-2 Maneuver	-	-	-	-	755	-
Stage 1	-	-	-	-	906	-
Stage 2	-	-	-	-	911	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1464	-	-	-	780
HCM Lane V/C Ratio	0.001	-	-	-	0.017
HCM Control Delay (s)	7.5	0	-	-	9.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	15	70	21	12	18	74	574	28	18	652	110
Future Volume (veh/h)	116	15	70	21	12	18	74	574	28	18	652	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	129	17	78	27	15	23	82	638	31	20	733	124
Peak Hour Factor	0.90	0.90	0.90	0.79	0.79	0.79	0.90	0.90	0.90	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	286	43	107	217	122	122	128	1605	78	44	1266	214
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.07	0.47	0.47	0.02	0.42	0.42
Sat Flow, veh/h	774	211	526	497	600	601	1781	3449	167	1781	3029	512
Grp Volume(v), veh/h	224	0	0	65	0	0	82	328	341	20	430	427
Grp Sat Flow(s),veh/h/ln	1510	0	0	1699	0	0	1781	1777	1840	1781	1777	1764
Q Serve(g_s), s	4.6	0.0	0.0	0.0	0.0	0.0	2.0	5.3	5.3	0.5	8.2	8.2
Cycle Q Clear(g_c), s	6.0	0.0	0.0	1.3	0.0	0.0	2.0	5.3	5.3	0.5	8.2	8.2
Prop In Lane	0.58		0.35	0.42		0.35	1.00		0.09	1.00		0.29
Lane Grp Cap(c), veh/h	436	0	0	461	0	0	128	827	856	44	743	737
V/C Ratio(X)	0.51	0.00	0.00	0.14	0.00	0.00	0.64	0.40	0.40	0.46	0.58	0.58
Avail Cap(c_a), veh/h	737	0	0	769	0	0	206	827	856	202	743	737
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.3	0.0	0.0	14.5	0.0	0.0	19.9	7.7	7.7	21.2	9.8	9.8
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.1	0.0	0.0	5.2	1.4	1.4	7.2	3.3	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	0.0	0.5	0.0	0.0	0.9	1.8	1.9	0.3	3.1	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	0.0	0.0	14.6	0.0	0.0	25.1	9.1	9.1	28.4	13.1	13.1
LnGrp LOS	B	A	A	B	A	A	C	A	A	C	B	B
Approach Vol, veh/h		224			65			751			877	
Approach Delay, s/veh		17.2			14.6			10.9			13.5	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	25.0		13.5	7.7	22.9		13.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	18.5		18.0	5.1	18.4		18.0				
Max Q Clear Time (g_c+I1), s	2.5	7.3		8.0	4.0	10.2		3.3				
Green Ext Time (p_c), s	0.0	3.1		0.9	0.0	3.4		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			12.9									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	196	187	7	10	2
Future Vol, veh/h	2	196	187	7	10	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	213	203	8	11	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	211	0	-	0	424	207
Stage 1	-	-	-	-	207	-
Stage 2	-	-	-	-	217	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1360	-	-	-	587	833
Stage 1	-	-	-	-	828	-
Stage 2	-	-	-	-	819	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1360	-	-	-	586	833
Mov Cap-2 Maneuver	-	-	-	-	586	-
Stage 1	-	-	-	-	826	-
Stage 2	-	-	-	-	819	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	11
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1360	-	-	-	616
HCM Lane V/C Ratio	0.002	-	-	-	0.021
HCM Control Delay (s)	7.7	0	-	-	11
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

APPENDIX C

SANTEC / ITE GUIDELINES

SANTEC / ITE GUIDELINES FOR TRAFFIC IMPACT STUDIES [TIS] IN THE SAN DIEGO REGION

MARCH 2, 2000 FINAL DRAFT

PREFACE

These guidelines are subject to continual update, as future technology and documentation become available. Always check with local jurisdictions for their preferred or applicable procedures.

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SANTEC / ITE GUIDELINES FOR TRAFFIC IMPACT STUDIES [TIS] IN THE SAN DIEGO REGION

SANTEC / ITE GUIDELINES FOR TRAFFIC IMPACT STUDIES [TIS] IN THE SAN DIEGO REGION

I. BACKGROUND

In September 1998, the San Diego Regional Traffic Standards Task Force gathered for the first time to promote "cooperation among the Cities, Caltrans, and the County of San Diego to create a region-wide standard for determining traffic impacts in environmental reports." Ultimately the San Diego Traffic Engineers' Council (SANTEC) and the Institute of Transportation Engineers (ITE – California Border Section) were requested to prepare guidelines for traffic impact studies [TIS] that could be reviewed by the Task Force and other appropriate groups. The primary documents used to help prepare these guidelines were SANDAG's Congestion Management Program and Traffic Generators manual, City of San Diego's Traffic Impact Study Manual and Trip Generation Manual, and Caltrans' Draft Guide for the Preparation of Traffic Impact Studies.

II. PURPOSE OF TRAFFIC IMPACT STUDIES [TIS]

Traffic impact studies forecast, describe, and analyze the traffic and transit effects a development will have on the existing and future circulation infrastructure. The purpose of the TIS is to assist engineers in both the development community and public agencies when making land use and other development decisions. A TIS quantifies the changes in traffic levels and translates these changes into transportation system impacts in the vicinity of a project.

TIS requirements are usually outlined as part of any environmental (CEQA) project review process; and, in order to monitor effects by these requirements, Notices of Preparation must be submitted to all affected agencies.

III. OBJECTIVES OF TIS GUIDELINES

The following guidelines were prepared to assist local agencies throughout the San Diego Region in promoting consistency and uniformity in traffic impact studies. All Circulation/Community Element roadways, all State routes and freeways (including metered and unmetered ramps), and all transit facilities that are impacted should be included in each study.

In general, the region-wide goal for an acceptable level-of-service (LOS) on all freeways, roadway segments, and intersections is "D." For undeveloped or not densely developed locations, as determined by any local jurisdiction, the goal may be to achieve a level-of-service of "C." Individual local jurisdictions, as well as Caltrans, have slightly different

LOS objectives. For example, the Regional Growth Management Strategy for San Diego has a level-of-service objective of "D;" while the Congestion Management Program has established a minimum level-of-service of "E", or "F" if that is the existing 1990 base year LOS. In other words, if the existing LOS is "D" or worse, preservation of the existing LOS must be maintained or acceptable mitigation must be identified.

These guidelines do not establish a legal standard for these functions, but are intended to supplement any individual TIS manuals or level-of-service objectives for the various jurisdictions. These guidelines attempt to consolidate regional efforts to identify when a TIS is needed, what professional procedures should be followed, and what constitutes a significant traffic impact.

The instructions outlined in these guidelines are subject to update as future conditions and experience become available. Special situations may call for variation from these guidelines. Caltrans and lead agencies should agree on the specific methods used in traffic impact studies involving any State Route facilities, including metered and unmetered freeway ramps.

IV. NEED FOR A STUDY

A TIS should be prepared for all projects which generate traffic greater than 1,000 total average daily trips (ADT) or 100 peak-hour trips. If a proposed project is not in conformance with the land use and/or transportation element of the general or community plan, use threshold rates of 500 ADT or 50 peak-hour trips. Early consultation with any affected jurisdictions is strongly encouraged since a "focused" or "abbreviated" TIS may still be required – even if the above threshold rates are not met.

Currently, a Congestion Management Program (CMP) analysis is required for all large projects, which are defined as generating 2,400 or more average daily trips or 200 or more peak-hour trips. This size of study would usually include computerized long-range forecasts and select zone assignments. Please refer to the following flow chart (Figure 1) for TIS requirements.

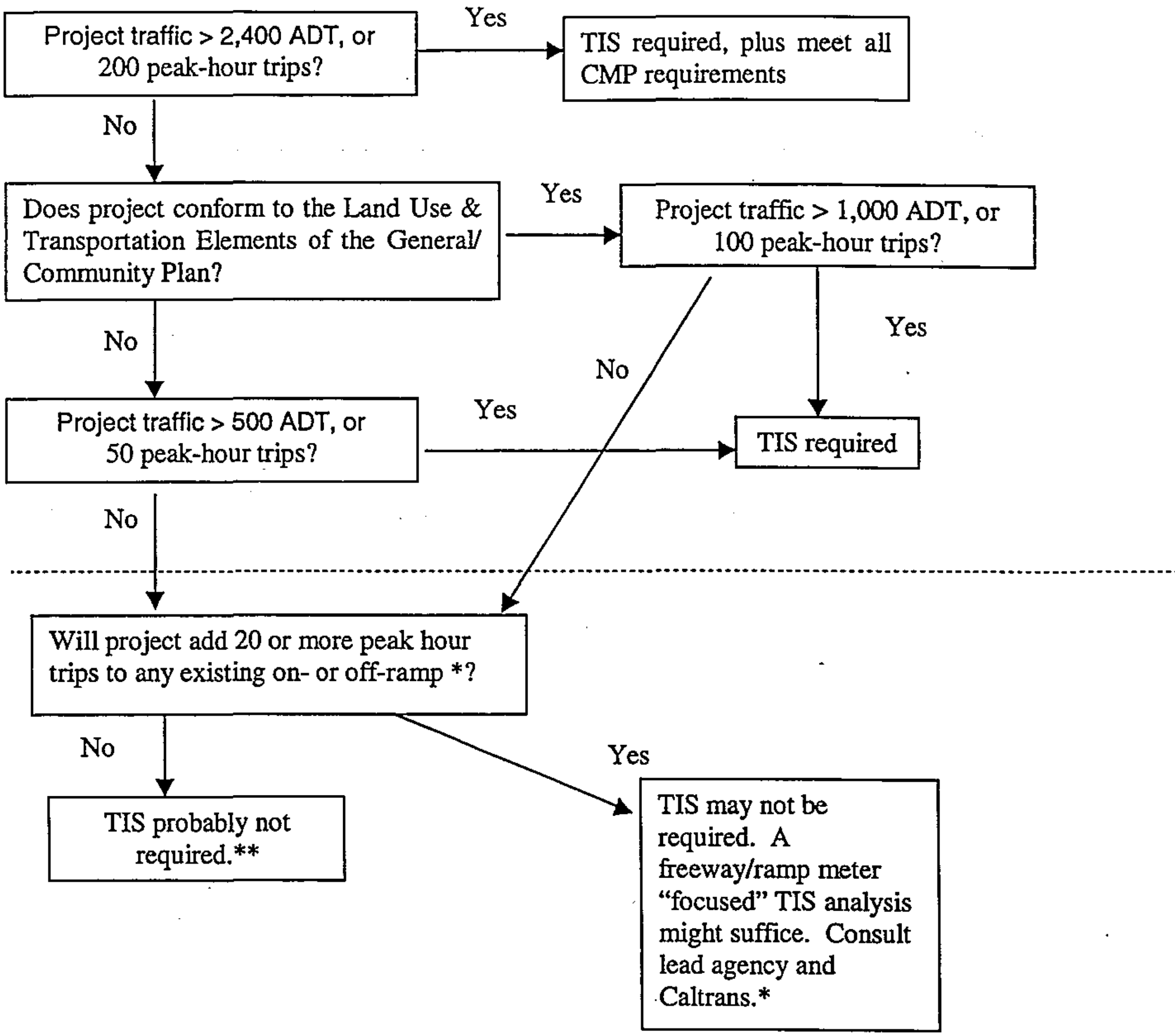
The geographic area examined in the TIS must include the following:

- All local roadway segments (including all State surface routes), intersections, and mainline freeway locations where the proposed project will add 50 or more peak-hour trips in either direction to the existing roadway traffic.

- All freeway entrance and exit ramps where the proposed project will add a significant number of peak-hour trips to cause any traffic queues to exceed ramp storage capacities (see Figure 1). (NOTE: Care must be taken to include <u>other</u> ramps and intersections that may receive project traffic <u>diverted</u> as a result of already existing, or project causing congestion at freeway entrances and exits.)

Figure 1

FLOW CHART FOR TRAFFIC IMPACT STUDY REQUIREMENTS



* Check with Caltrans for current ramp metering rates and ramp storage capacities. (See Attachment B – Ramp Metering Analysis)

** However, for health and safety reasons, and/or local and residential street issues, an "abbreviated" or "focused" TIS may still be requested by a local agency. (For example, this may include traffic backed up beyond an off-ramp's storage capacity, or may include diverted traffic through an existing neighborhood.)

The data used in the TIS should generally not be more than 2 years old, and should not reflect a temporary interruption (special events, construction detour, etc.) in the normal traffic patterns unless that is the nature of the project itself. If recent traffic data is not available, current counts must be made by the project applicant/consultant.

V. PROJECT COORDINATION VIA STAFF CONSULTATION

Early consultation between the development community, local and lead agencies, and Caltrans is strongly recommended to establish the base input parameters, assumptions, and analysis methodologies for the TIS.

It is critical that the TIS preparer discuss the project with the lead reviewing agency's staff engineer/planner at an early stage in the planning process. An understanding of the level of detail and the assumptions required for the analysis should be reached. While a pre-submittal conference is highly encouraged, it may not be a requirement. For straight-forward studies prepared by consultants familiar with these TIS procedures, a telephone call or e-mail, followed by a fax verifying key assumptions, may suffice. Always check with the local jurisdictions for their concerns.

VI. SCENARIOS TO BE STUDIED

After documenting existing conditions, both near-term (within approximately the next five years) and long-term (usually for a 20-year planning horizon or build-out of the area), analyses are needed.

All of the following scenarios should be addressed in the TIS (unless there is concurrence with the lead agency[ies] that one or more of these scenarios may be omitted):

- Existing {roadway infrastructure}
- Existing + Near-term Cumulative Projects {approved and pending}
- Existing + Near-term Cumulative Projects + Proposed Project {each phase when applicable}
- Horizon Year {typically Year 2020 or twenty years in the future}
- Horizon Year + Proposed Project {if different from General/Community Plan}

Scenario definitions:

<u>Existing</u> conditions – Document existing traffic volumes and peak-hour levels of service in the study area. The existing deficiencies and potential mitigation should be identified.

<u>Existing + Near-term</u> – Analyze the cumulative condition impacts from "other" approved and "reasonably foreseeable" pending projects (application on file or definitely in the pipeline) that are expected to influence the study area. This is the baseline against which project impacts are assessed. The lead agency should provide copies of the traffic studies for the "other" projects. If data is not available for near-term cumulative projects, an ambient growth factor should be used.

Existing + Near-term + Proposed Project – Analyze the impacts of the proposed project on top of existing conditions and near-term projects (along with their committed or funded mitigation measures, if any).

Horizon Year – Identify Year 2020 traffic forecasts or 20-year future conditions through the output of a SANDAG model forecast (currently TRANPLAN) or other computer model approved by the local agency. If the proposed project is consistent with the land uses represented in the model, the TIS may only need to use this condition.

Horizon Year + Proposed Project – If the project land uses are more traffic intense than what was assumed in the horizon year model forecasts, analyze the additional project traffic impacts to the horizon year condition. When justified, and particularly in the case of very large developments or new general/community plans, a transportation model should be run with, and without, the additional development to show the net impacts on all parts of the area's transportation system.

In order to use LOS criteria to measure traffic impact significance (see Table 1), proposed model or manual forecast adjustments must be made to address scenarios both with and without the project. Model data should be carefully verified to ensure accurate project and "other" cumulative project representation. In these cases, regional or subregional models conducted by SANDAG need to be reviewed for appropriateness.

Note: Project trips can be assigned and distributed either manually or by the computer model based upon review and approval of the local agency Traffic Engineer. The magnitude of the proposed project will usually determine which method is employed.

If the manual method is used, the trip distribution percentages should be derived from a computer generated "select zone assignment" or optionally (local agency approval) by professional judgement.

If the computer model is used, the centroid connectors should accurately represent project access to the street network. Preferably the project would be represented by its own traffic zone. Some adjustments to the output volumes may be needed (especially at intersections) to smooth out volumes, quantify peak volumes, adjust for pass-by and diverted trips, and correct illogical output.

VII. TRAFFIC GENERATION

Use of SANDAG [Traffic Generators manual and (Not So) Brief Guide....]or City of San Diego [both of the City's Traffic Impact Study Manual and Trip Generation Manual] rates should first be considered. Next, consider rates from ITE's latest Trip Generation manual or ITE Journal articles. If local and sufficient national data do not exist, conduct trip generation studies at sites with characteristics similar to those of the proposed project. If this is not feasible due to the uniqueness of the land use, it may be acceptable to estimate defensible trip rates – only if appropriate documentation is provided.

Reasonable reductions to trip rates may also be considered: (a) with proper analysis of pass-by and diverted traffic on adjacent roadways, (b) for developments near transit stations, and (c) for mixed-use developments. (Note: Caltrans and local agencies may use different trip reduction rates. Early consultation with the reviewing agencies is strongly recommended.)

Site traffic distribution, assignment, necessary model adjustments, and Congestion Management Program (CMP) concerns should all follow current SANDAG and City of San Diego procedures.

VIII. TIS ANALYSIS

The TIS analysis shall determine the effect that a project will have for each of the previously outlined study scenarios. Peak-hour capacity analyses for freeways, roadway segments (ADTs may be used here to estimate V/C ratios), intersections, and freeway ramps must be conducted for both the near-term and long-term conditions. The methodologies used in determining the traffic impact are not only critical to the validity of the analysis, they are pertinent to the credibility and confidence the decision-makers have in the resulting findings, conclusions, and recommendations.

The following methodologies for TIS analysis should be used (unless early consultation with the lead agency and Caltrans has established other methods), along with some suggested software packages and options:

1. Arterials, Multi-lane and Two-lane Highways, and all other Local Streets - current Highway Capacity Manual [HCM]: w/Highway Capacity Software [HCS]
2. Signalized Intersections – HCM: w/HCS, TRAFFIX, SigCinema, and SYNCHRO acceptable to Caltrans; and, HCS, TRAFFIX, SIGNAL 94, and NCAP acceptable to local jurisdictions
3. Unsignalized Intersections – HCM
4. Freeway Segments – HCM or Caltrans District 11 freeway LOS definitions (see Attachment C): w/HCS
5. Freeway Weaving Areas – Caltrans Highway Design Manual (Chapter 500)
6. Freeway Ramps – Caltrans District 11 Ramp Metering Analysis (Attachment B), and Caltrans Ramp Meter Design Guidelines (August 1995), HCS (for ramp design only)
7. Freeway Interchanges – HCM: for diamond interchanges where the timing and phasing of the two signals must be coordinated to ensure queue clearances, consider Passer III-90
8. Transit, Pedestrians, and Bicycles – HCM
9. Warrants for Traffic Signals, Stop Signs, School Crossings, Freeway Lighting, etc. – Caltrans' Traffic Manual

10. Channelization and Intersection Geometry - Caltrans' Traffic Manual and Guidelines for Reconstruction of Intersections, City of San Diego's Traffic Impact Study Manual - Appendix 4

Note: Neither local jurisdictions nor Caltrans officially advocate the use of any special software packages, especially since new ones are being developed all the time. However, consistency with the Highway Capacity Manual (HCM) is advocated in most cases. The above-mentioned software packages have been utilized locally. Because it is so important to have consistent end results, always consult with all affected jurisdictions, including Caltrans, regarding the analytical techniques and software being considered (especially if they differ from above) for the TIS.

IX. SIGNIFICANCE OF TRAFFIC IMPACTS TO CONSIDER MITIGATION

The following Table 1 indicates when a project's impact is significant – and mitigation measures are to be identified. That is, if a project's traffic impact causes the values in this table to be exceeded, it is determined to be a significant project impact. (Mitigation for all identified significant impacts should be provided for any project requiring CEQA analysis.)

Note: It is the responsibility of Caltrans, on Caltrans initiated projects, to mitigate the effect of ramp metering, for initial as well as future operational impacts, on local streets that intersect and feed entrance ramps to the freeway. Developers and/or local agencies, however, should be required to mitigate any impact to existing ramp meter facilities, future ramp meter installations, or local streets, when those impacts are attributable to new development and/or local agency roadway improvement projects.

Not all mitigation measures can feasibly be "hard" (new lanes or new capacity) improvements. A sample mitigation measure might include financing toward a regional ITS [Intelligent Transportation System] project, such as improved or "dynamic" ramp metering with real-time delay information available to motorists. The information can be accessed on either home or in-vehicle computers, or even by telephone (each ramp could have its own phone number with delay information) so the motorist can make a driving decision long before she or he arrives at a congested on-ramp. This sample mitigation would allow a project applicant (especially with a relatively small project) to meet mitigation by paying into a regional ramp meter fee, providing the fee can be established in the near future.

Other mitigation measures may include Transportation Demand Management recommendations – transit facilities, bike facilities, walkability, telecommuting, traffic rideshare programs, flex-time, carpool incentives, parking cash-out, etc. Additional mitigation measures may become acceptable as future technologies and policies evolve.

Table 1

MEASURE OF SIGNIFICANT PROJECT TRAFFIC IMPACTS

Level of Service with Project*	Allowable Change due to Project Impact**					
	Freeways		Roadway Segments		Intersections	Ramp*** Metering
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec.)	Delay(min.)
D, E, & F (or ramp meter delays above 15 min.)	0.01	1	0.02	1	2	2

NOTES:

* All level of service measurements are based upon HCM procedures for peak-hour conditions. However, V/C ratios for Roadway Segments may be estimated on an ADT/24-hour traffic volume basis (using Table 2 or a similar LOS chart for each jurisdiction). The acceptable LOS for freeways, roadways, and intersections is generally "D" ("C" for undeveloped or not densely developed locations per jurisdiction definitions). For metered freeway ramps, LOS does not apply. However, ramp meter delays above 15 minutes are considered excessive.

** If a proposed project's traffic causes the values shown in the table to be exceeded, the impacts are determined to be significant.. These impact changes may be measured from appropriate computer programs or expanded manual spreadsheets. The project applicant shall then identify feasible mitigation (within the Traffic Impact Study [TIS] report) that will maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable (see above * note), or if the project adds a significant amount of peak-hour trips to cause any traffic queues to exceed on- or off-ramp storage capacities, the project applicant shall be responsible for mitigating significant impact changes.

*** See Attachment B for ramp metering analysis.

KEY:
- V/C = Volume to Capacity ratio
- Speed = Speed measured in miles per hour
- Delay = Average stopped delay per vehicle measured in seconds for intersections, or minutes for ramp meters
- LOS = Level of Service

Table 2

ROADWAY CLASSIFICATIONS, LEVELS OF SERVICE (LOS) AND AVERAGE DAILY TRAFFIC (ADT)

			LEVEL OF SERVICE W/ADT**				
STREET CLASSIFICATION	LANES	CROSS SECTIONS* (APPROX.)	A	B	C	D	E
Expressway	6 lanes	102-160/122-200	30,000	42,000	60,000	70,000	80,000
Prime Arterial	6 lanes	102-108/122-128	25,000	35,000	50,000	55,000	60,000
Major Arterial	6 lanes	102/122	20,000	28,000	40,000	45,000	50,000
Major Arterial	4 lanes	78-82/98-102	15,000	21,000	30,000	35,000	40,000
Secondary Arterial/ Collector	4 lanes	64-72/84-92	10,000	14,000	20,000	25,000	30,000
Collector (no center lane) (continuous left-turn lane)	4 lanes 2 lanes	64/84 50/70	5,000	7,000	10,000	13,000	15,000
Collector (no fronting property)	2 lanes	40/60	4,000	5,500	7,500	9,000	10,000
Collector (commercial-industrial fronting)	2 lanes	50/70	2,500	3,500	5,000	6,500	8,000
Collector (multi-family)	2 lanes	40/60	2,500	3,500	5,000	6,500	8,000
Sub-Collector (single-family)	2 lanes	36/56	---	---	2,200	---	---

LEGEND:

* Curb to curb width (feet)/right of way width (feet): based upon the City of San Diego Street Design Manual and other jurisdictions within the San Diego region.

** Approximate recommended ADT based upon the City of San Diego Street Design Manual.

NOTES:

1. The volumes and the average daily level of service listed above are only intended as a general planning guideline.
2. Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.

X. SCREEN CHECK

As part of the first draft of a TIS, the preparer must ensure that all required elements have been included. This screen check procedure will help reduce the number of submittals, and will encourage early dialog between the reviewer and the preparer. The local agency reviewer will check the study for completeness, and strive to return all incomplete submittals within seven working days. A presubmittal conference is encouraged to determine which elements are not required for the TIS.

Attachment A contains the TIS Screen Check.

ATTACHMENT A

To be completed by Staff:
Date Received ____________
Reviewer ____________
Date Screen Check ____________

TRAFFIC IMPACT STUDY SCREEN CHECK

To be completed by consultant (including page #):
Name of Traffic Study ______________________
Consultant ______________________
Date Submitted ______________________

Indicate Page # in report:			Satisfactory YES	Satisfactory NO	NOT REQUIRED
pg. ____	1.	Table of contents, list of figures and list of tables.	☐	☐	
pg. ____	2.	Executive summary.	☐	☐	
pg. ____	3.	Map of the proposed project location.	☐	☐	
	4.	General project description and background information:			
pg. ____		a. Proposed project description (acres, dwelling units....)	☐	☐	
pg. ____		b. Total trip generation of proposed project.	☐	☐	
pg. ____		c. Community plan assumption for the proposed site.	☐	☐	
pg. ____		d. Discuss how project affects the Congestion Management Program, if applicable	☐	☐	
pg. ____	5.	Parking, transit and on-site circulation discussions are included.	☐	☐	
pg. ____	6.	Map of the Transportation Impact Study Area and specific intersections studied in the traffic report.	☐	☐	
pg. ____	7.	Existing Transportation Conditions:			
		a. Figure identifying roadway conditions including raised medians, median openings, separate left and right turn lanes, roadway and intersection dimensions, bike lanes, parking, number of travel lanes, posted speed, intersection controls, turn restrictions and intersection lane configurations.	☐	☐	
		b. Figure indicating the daily (ADT) and peak-hour volumes.	☐	☐	
		c. Figure or table showing level of service (LOS) for intersections during peak hours and roadway sections within the study area (include analysis sheets in an appendix).	☐	☐	
	8.	Project Trip Generation:			
pg. ____		Table showing the calculated project generated daily (ADT) and peak hour volumes.	☐	☐	
pg. ____	9.	Project Trip Distribution using the current TRANPLAN Computer Traffic Model (provide a computer plot) or manual assignment if previously approved. (Identify which method was used.)	☐	☐	
	10.	Project Traffic Assignment:			
pg. ____		a. Figure indicating the daily (ADT) and peak-hour volumes.	☐	☐	
pg. ____		b. Figure showing pass-by-trip adjustments, and, if cumulative trip rates are used.	☐	☐	☐
	11.	Existing Near-term Cumulative Conditions:			
pg. ____		a. Figure indicating the daily (ADT) and peak-hour volumes.	☐	☐	
pg. ____		b. Figure or table showing the projected LOS for intersections during peak hours and roadway sections within the study area (analysis sheets included in the appendix).	☐	☐	
pg. ____		c. Traffic signal warrant analysis (Caltrans Traffic Manual) for appropriate locations.	☐	☐	

12. Existing Near-term Cumulative Conditions + Proposed Project (each phase

Indicate Page # in report:			Satisfactory YES	NO	NOT REQUIRED
		when applicable)			
pg. ____	a.	Figure or table showing the projected LOS for intersections during peak hours and roadway sections with the project (analysis sheets included in the appendix).	☐	☐	
pg. ____	b.	Figure showing other projects that were included in the study, and the assignment of their site traffic.	☐	☐	
pg. ____	c.	Traffic signal warrant analysis for appropriate locations.	☐	☐	
	13.	Horizon Year Transportation Conditions (if project conforms to the General/ Community Plan):			
pg. ____	a.	Horizon Year ADT and street classification that reflect the Community Plan.	☐	☐	☐
pg. ____	b.	Figure or table showing the horizon LOS for intersections during peak hours and roadway sections <u>with</u> and <u>without</u> the project (analysis sheets included in the appendix).	☐	☐	☐
pg. ____	c.	Traffic signal warrant analysis at appropriate locations.	☐	☐	☐
	14.	Horizon Year Transportation Conditions + Proposed Project (if project does not conform to the General/Community Plan):			
pg. ____	a.	Horizon Year ADT and street classification as shown in the Community Plan.	☐	☐	☐
pg. ____	b.	Horizon Year ADT and street classification for two scenarios: with the proposed project and with the land use assumed in the Community Plan.	☐	☐	☐
pg. ____	c.	Figure or table showing the horizon LOS for intersections during peak hours and roadway sections for two scenarios: <u>with</u> and <u>without</u> the proposed project and with the land use assumed in the Community Plan (analysis sheets included in the appendix).	☐	☐	☐
pg. ____	d.	Traffic signal warrant analysis at appropriate locations with the land use assumed in the General/Community Plan.	☐	☐	☐
pg. ____	15.	A summary table showing the comparison of Existing, Existing + Near-term Cumulative, Existing + Near-term Cumulative + Proposed Project, Horizon Year, and Horizon Year + Proposed Project (if different from General/Community Plan), LOS on roadway sections and intersections during peak hours.	☐	☐	
pg. ____	16.	A summary table showing the project's "significant traffic impacts."	☐	☐	
	17.	Transportation Mitigation Measures:			
pg. ____	a.	Table identifying the mitigations required that are the responsibility of the developer and others. A phasing plan is required if mitigations are proposed in phases.	☐	☐	
pg. ____	b.	Figure showing all proposed mitigations that include: intersection lane configurations, lane widths, raised medians, median openings, roadway and intersection dimensions, right-of-way, offset, etc.	☐	☐	
pg. ____	18.	The Highway Capacity Manual Operation Method or other approved method is used at appropriate locations within the study area.	☐	☐	
pg. ____	19.	Analysis complies with Congestion Management Program requirements.	☐	☐	☐
pg. ____	20.	Appropriate freeway analysis is included.	☐	☐	☐
pg. ____	21.	Appropriate freeway ramp metering analysis is included.	☐	☐	☐
pg. ____	22.	The traffic study is signed by a California Registered Traffic Engineer.	☐	☐	

THE TRAFFIC STUDY SCREEN CHECK FOR THE SUBJECT PROJECT IS:

____________ Approved

____________ Not approved because the following items are missing:

____

____

____

ATTACHMENT B

RAMP METERING ANALYSIS

Ramp metering analysis should be performed for each horizon year scenario in which ramp metering is expected. The following table shows relevant information that should be included in the ramp meter analysis "Summary of Freeway Ramp Metering Impacts."

LOCATION	DEMAND (veh/hr)[1]	METER RATE (veh/hr)[2]	EXCESS DEMAND (veh/hr)[3]	DELAY (min)[4]	QUEUE (feet)[5]

NOTES:

[1] DEMAND is the peak hour demand expected to use the on-ramp.

[2] METER RATE is the peak hour capacity expected to be processed through the ramp meter. This value should be obtained from Caltrans. Contact Carolyn Rumsey at (619) 467-3029.

[3] EXCESS DEMAND = (DEMAND) – (METER RATE) or zero, whichever is greater.

[4] $$\text{DELAY} = \frac{\text{EXCESS DEMAND}}{\text{METER RATE}} \times 60 \text{ MINUTES/HOUR}$$

[5] QUEUE = (EXCESS DEMAND) X 29 feet/vehicle

NOTE: Delay will be less at the beginning of metering. However, since peaks will almost always be more than one hour, delay will be greater after the first hour of metering. (See discussion on next page.)

SUMMARY OF FREEWAY RAMP METERING IMPACTS
(Lengthen as necessary to include all impacted meter locations)

LOCATION(S)	PEAK HOUR	PEAK HOUR DEMAND D	FLOW (METER RATE) F	EXCESS DEMAND E	DELAY (MINUTES)	QUEUE Q (feet)
	AM PM					
	AM PM					
	AM PM					

DISCUSSION OF RAMP METER ANALYSIS

A. CAUTION: The ramp metering analysis shown in Attachment B may lead to grossly understated results for delay and queue length, since important aspects of queue growth are ignored. Also, the draft guidelines method derives average values instead of maximum values for delay and queue length. Utilizing average values instead of maximum values can lead to obscuring important effects, particularly in regard to queue length.

Predicting ramp meter delays and queues requires a storage-discharge type of analysis, where a pattern of arriving traffic at the meter is estimated by the analyst, and the discharge, or meter rate, is a somewhat fixed value set by Caltrans for each individual metered ramp.

Since a ramp meter queue continues to grow longer during all times that the arrival rate exceeds the discharge rate, the maximum queue length (and hence, the maximum delay) usually occurs after the end of the peak (or highest) one hour. This leads to the need for an analysis for the entire time period during which the arrival rate exceeds the meter rate, not just the peak hour. For a similar reason, the analysis needs to consider that a substantial queue may have already formed by the beginning of the "peak hour." Traffic arriving during the peak hour is then stacked onto an existing queue, not just starting from zero as the draft analysis suggests.

Experience shows that the theoretical queue length derived by this analysis often does not materialize. Motorists, after a brief time of adjustment, seek alternate travel paths or alternate times of arrival at the meter. The effect is to approximately minimize total trip time by seeking out the best combinations of route and departure time at the beginning of the trip. This causes at least two important changes in the pattern or arriving traffic at ramp meters. First, the peak period is spread out, with some traffic arriving earlier and some traffic arriving later than predicted. Second, a significant proportion of the predicted arriving traffic will use another ramp, use another freeway, or stay on surface streets.

It is acceptable to make reasonable estimates of these temporal and spatial (time and occupying space) diversions as long as all assumptions are stated and that the unmodified, or theoretical values are shown for comparison.

B. Additional areas for study include being able to define acceptable levels of service (LOS) and "significant" thresholds (e.g., a maximum ramp meter delay of 15 minutes) for metered freeway entrance ramps.

Currently there are no acceptable software programs for measuring project impacts on metered freeway ramps nor does the Highway Capacity Manual (HCM) adequately address this issue. Hopefully in the near future a regionwide study will be initiated to determine what metering rate (at each metered ramp) would be required in order to guarantee that traffic will flow (even at LOS "E") on the entire freeway system during peak-hour conditions. From this, the ramp delays and resultant queue lengths might then be calculated. Overall, this is a very complex issue that needs considerable research and refinement in cooperation with Caltrans.

ATTACHMENT C

LEVEL OF SERVICE (LOS) DEFINITIONS (generally used by Caltrans)

The concept of Level of Service (LOS) is defined as a qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers. A Level of Service[s] definition generally describes these conditions in terms of such factors as speed, travel time, freedom to maneuver, comfort and convenience, and safety. Levels of Service definitions can generally be categorized as follows:

LOS	D/C*	Congestion/Delay	Traffic Description
		(Used for freeways, expressways and conventional highways[A])	
"A"	<0.41	None	Free flow.
"B"	0.42-0.62	None	Free to stable flow, light to moderate volumes.
"C"	0.63-0.79	None to minimal	Stable flow, moderate volumes, freedom to maneuver noticeably restricted.
"D"	0.80-0.92	Minimal to substantial	Approaches unstable flow, heavy volumes, very limited freedom to maneuver.
"E"	0.93-1.00	Significant	Extremely unstable flow, maneuverability and psychological comfort extremely poor.
		(Used for conventional highways)	
"F"	>1.00	Considerable	Forced or breakdown. Delay measured in average flow, travel speed (MPH). Signalized segments experience delays >60.0 seconds/vehicle.
		(Used for freeways and expressways)	
"F0"	1.01-1.25	Considerable 0-1 hour delay	Forced flow, heavy congestion, long queues form behind breakdown points, stop and go.
"F1"	1.26-1.35	Severe 1-2 hour delay	Very heavy congestion, very long queues.
"F2"	1.36-1.45	Very severe 2-3 hour delay	Extremely heavy congestion, longer queues, more numerous breakdown points, longer stop periods.
"F3"	>1.46	Extremely severe 3+ hours of delay	Gridlock.

[s] Level of Service can generally be calculated using "Table 3.1. LOS Criteria for Basic Freeway Sections" from the latest Highway Capacity Manual. However, contact Caltrans for more specific information on determining existing "free-flow" freeway speeds.

* Demand/Capacity ratio used for forecasts (V/C ratio used for operational analysis, where V = volume)

[A] Arterial LOS is based upon average "free-flow" travel speeds, and should refer to definitions in Table 11.1 in the HCM.

Appendix B. Air Quality Model Outputs

Calavo Park

San Diego Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	2.15	1000sqft	0.05	2,150.00	0
Parking Lot	36.46	1000sqft	0.84	36,460.00	0
City Park	7.91	Acre	7.91	344,717.98	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2023
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - researched location info

Land Use - SFs from schematic estimate doc 9.2.2020

Construction Phase - deleted demo since no structures on site; left rest as defaults

Trips and VMT - Revised BC and Arch coating to be in line with other phases

Grading - Added CY of export from schematic design doc; revised acreage to whole site

Vehicle Trips - Adjusted trip rates to match ADT in TIA; adjusted trip lengths to not so brief guide

Calavo Park - San Diego Air Basin, Annual

Table Name	Column Name	Default Value	New Value
tblGrading	AcresOfGrading	10.00	8.80
tblGrading	MaterialExported	0.00	9,117.00
tblLandUse	LandUseSquareFeet	344,559.60	344,717.98
tblTripsAndVMT	WorkerTripNumber	161.00	23.00
tblTripsAndVMT	WorkerTripNumber	32.00	3.00
tblVehicleTrips	CC_TL	7.30	5.40
tblVehicleTrips	CC_TL	7.30	5.40
tblVehicleTrips	CC_TL	7.30	5.40
tblVehicleTrips	CNW_TL	7.30	5.40
tblVehicleTrips	CNW_TL	7.30	5.40
tblVehicleTrips	CNW_TL	7.30	5.40
tblVehicleTrips	CW_TL	9.50	5.40
tblVehicleTrips	CW_TL	9.50	5.40
tblVehicleTrips	CW_TL	9.50	5.40
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	22.75	23.26
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	16.74	23.26
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	1.89	23.26
tblVehicleTrips	WD_TR	1.68	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1367	1.5818	1.0810	2.8100e-003	0.1922	0.0622	0.2545	0.0935	0.0581	0.1516	0.0000	256.9724	256.9724	0.0459	0.0000	258.1202
2022	0.1976	1.7376	1.5395	3.6300e-003	0.0460	0.0673	0.1134	0.0129	0.0633	0.0762	0.0000	327.4871	327.4871	0.0568	0.0000	328.9080
Maximum	**0.1976**	**1.7376**	**1.5395**	**3.6300e-003**	**0.1922**	**0.0673**	**0.2545**	**0.0935**	**0.0633**	**0.1516**	**0.0000**	**327.4871**	**327.4871**	**0.0568**	**0.0000**	**328.9080**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1367	1.5818	1.0810	2.8100e-003	0.1922	0.0622	0.2545	0.0935	0.0581	0.1516	0.0000	256.9722	256.9722	0.0459	0.0000	258.1201
2022	0.1976	1.7376	1.5395	3.6300e-003	0.0460	0.0673	0.1134	0.0129	0.0633	0.0762	0.0000	327.4869	327.4869	0.0568	0.0000	328.9078
Maximum	**0.1976**	**1.7376**	**1.5395**	**3.6300e-003**	**0.1922**	**0.0673**	**0.2545**	**0.0935**	**0.0633**	**0.1516**	**0.0000**	**327.4869**	**327.4869**	**0.0568**	**0.0000**	**328.9078**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**7-1-2021**	**9-30-2021**	0.8487	0.8487
2	**10-1-2021**	**12-31-2021**	0.8569	0.8569
3	**1-1-2022**	**3-31-2022**	0.7614	0.7614
4	**4-1-2022**	**6-30-2022**	0.7697	0.7697
5	**7-1-2022**	**9-30-2022**	0.4064	0.4064
		Highest	0.8569	0.8569

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0178	0.0000	4.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.3000e-004	8.3000e-004	0.0000	0.0000	8.9000e-004
Energy	2.0000e-005	1.8000e-004	1.5000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.9266	6.9266	2.7000e-004	6.0000e-005	6.9513
Mobile	0.0420	0.1614	0.4489	1.5200e-003	0.1363	1.2000e-003	0.1375	0.0365	1.1200e-003	0.0376	0.0000	140.5933	140.5933	7.4300e-003	0.0000	140.7790
Waste						0.0000	0.0000		0.0000	0.0000	0.5481	0.0000	0.5481	0.0324	0.0000	1.3578
Water						0.0000	0.0000		0.0000	0.0000	0.1577	36.3351	36.4928	0.0177	6.9000e-004	37.1385
Total	**0.0598**	**0.1616**	**0.4495**	**1.5200e-003**	**0.1363**	**1.2100e-003**	**0.1375**	**0.0365**	**1.1300e-003**	**0.0376**	**0.7058**	**183.8558**	**184.5617**	**0.0578**	**7.5000e-004**	**186.2275**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0178	0.0000	4.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.3000e-004	8.3000e-004	0.0000	0.0000	8.9000e-004
Energy	2.0000e-005	1.8000e-004	1.5000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.9266	6.9266	2.7000e-004	6.0000e-005	6.9513
Mobile	0.0420	0.1614	0.4489	1.5200e-003	0.1363	1.2000e-003	0.1375	0.0365	1.1200e-003	0.0376	0.0000	140.5933	140.5933	7.4300e-003	0.0000	140.7790
Waste						0.0000	0.0000		0.0000	0.0000	0.5481	0.0000	0.5481	0.0324	0.0000	1.3578
Water						0.0000	0.0000		0.0000	0.0000	0.1577	36.3351	36.4928	0.0177	6.9000e-004	37.1385
Total	**0.0598**	**0.1616**	**0.4495**	**1.5200e-003**	**0.1363**	**1.2100e-003**	**0.1375**	**0.0365**	**1.1300e-003**	**0.0376**	**0.7058**	**183.8558**	**184.5617**	**0.0578**	**7.5000e-004**	**186.2275**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/29/2021	8/11/2021	5	10	
2	Grading	Grading	8/12/2021	9/8/2021	5	20	
3	Building Construction	Building Construction	9/9/2021	7/27/2022	5	230	
4	Paving	Paving	7/28/2022	8/24/2022	5	20	
5	Architectural Coating	Architectural Coating	8/25/2022	9/21/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 8.8

Acres of Paving: 0.84

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,225; Non-Residential Outdoor: 1,075; Striped Parking Area: 2,188 (Architectural Coating – sqft)

<u>OffRoad Equipment</u>

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	1,140.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	23.00	63.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2025	0.1058	1.9000e-004		0.0102	0.0102		9.4000e-003	9.4000e-003	0.0000	16.7179	16.7179	5.4100e-003	0.0000	16.8530
Total	**0.0194**	**0.2025**	**0.1058**	**1.9000e-004**	**0.0903**	**0.0102**	**0.1006**	**0.0497**	**9.4000e-003**	**0.0591**	**0.0000**	**16.7179**	**16.7179**	**5.4100e-003**	**0.0000**	**16.8530**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.2000e-004	2.2500e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6305	0.6305	2.0000e-005	0.0000	0.6309
Total	**3.1000e-004**	**2.2000e-004**	**2.2500e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6305**	**0.6305**	**2.0000e-005**	**0.0000**	**0.6309**

3.2 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2025	0.1058	1.9000e-004		0.0102	0.0102		9.4000e-003	9.4000e-003	0.0000	16.7178	16.7178	5.4100e-003	0.0000	16.8530
Total	**0.0194**	**0.2025**	**0.1058**	**1.9000e-004**	**0.0903**	**0.0102**	**0.1006**	**0.0497**	**9.4000e-003**	**0.0591**	**0.0000**	**16.7178**	**16.7178**	**5.4100e-003**	**0.0000**	**16.8530**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.2000e-004	2.2500e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6305	0.6305	2.0000e-005	0.0000	0.6309
Total	**3.1000e-004**	**2.2000e-004**	**2.2500e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6305**	**0.6305**	**2.0000e-005**	**0.0000**	**0.6309**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0229	0.2474	0.1586	3.0000e-004		0.0116	0.0116		0.0107	0.0107	0.0000	26.0537	26.0537	8.4300e-003	0.0000	26.2644
Total	**0.0229**	**0.2474**	**0.1586**	**3.0000e-004**	**0.0655**	**0.0116**	**0.0771**	**0.0337**	**0.0107**	**0.0444**	**0.0000**	**26.0537**	**26.0537**	**8.4300e-003**	**0.0000**	**26.2644**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.2800e-003	0.1489	0.0367	4.4000e-004	9.7500e-003	4.5000e-004	0.0102	2.6800e-003	4.3000e-004	3.1100e-003	0.0000	43.4124	43.4124	3.9200e-003	0.0000	43.5104
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.7000e-004	3.7500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0508	1.0508	3.0000e-005	0.0000	1.0515
Total	**4.8000e-003**	**0.1492**	**0.0405**	**4.5000e-004**	**0.0110**	**4.6000e-004**	**0.0114**	**3.0000e-003**	**4.4000e-004**	**3.4400e-003**	**0.0000**	**44.4632**	**44.4632**	**3.9500e-003**	**0.0000**	**44.5619**

3.3 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0229	0.2474	0.1586	3.0000e-004		0.0116	0.0116		0.0107	0.0107	0.0000	26.0537	26.0537	8.4300e-003	0.0000	26.2643
Total	**0.0229**	**0.2474**	**0.1586**	**3.0000e-004**	**0.0655**	**0.0116**	**0.0771**	**0.0337**	**0.0107**	**0.0444**	**0.0000**	**26.0537**	**26.0537**	**8.4300e-003**	**0.0000**	**26.2643**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.2800e-003	0.1489	0.0367	4.4000e-004	9.7500e-003	4.5000e-004	0.0102	2.6800e-003	4.3000e-004	3.1100e-003	0.0000	43.4124	43.4124	3.9200e-003	0.0000	43.5104
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.7000e-004	3.7500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0508	1.0508	3.0000e-005	0.0000	1.0515
Total	**4.8000e-003**	**0.1492**	**0.0405**	**4.5000e-004**	**0.0110**	**4.6000e-004**	**0.0114**	**3.0000e-003**	**4.4000e-004**	**3.4400e-003**	**0.0000**	**44.4632**	**44.4632**	**3.9500e-003**	**0.0000**	**44.5619**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0779	0.7147	0.6796	1.1000e-003		0.0393	0.0393		0.0370	0.0370	0.0000	94.9713	94.9713	0.0229	0.0000	95.5441
Total	**0.0779**	**0.7147**	**0.6796**	**1.1000e-003**		**0.0393**	**0.0393**		**0.0370**	**0.0370**	**0.0000**	**94.9713**	**94.9713**	**0.0229**	**0.0000**	**95.5441**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.9900e-003	0.2655	0.0708	6.9000e-004	0.0171	5.6000e-004	0.0177	4.9500e-003	5.4000e-004	5.4900e-003	0.0000	67.5300	67.5300	5.0100e-003	0.0000	67.6553
Worker	3.2800e-003	2.3400e-003	0.0236	7.0000e-005	7.5600e-003	5.0000e-005	7.6200e-003	2.0100e-003	5.0000e-005	2.0600e-003	0.0000	6.6059	6.6059	1.9000e-004	0.0000	6.6107
Total	**0.0113**	**0.2678**	**0.0944**	**7.6000e-004**	**0.0247**	**6.1000e-004**	**0.0253**	**6.9600e-003**	**5.9000e-004**	**7.5500e-003**	**0.0000**	**74.1359**	**74.1359**	**5.2000e-003**	**0.0000**	**74.2659**

3.4 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0779	0.7147	0.6796	1.1000e-003		0.0393	0.0393		0.0370	0.0370	0.0000	94.9712	94.9712	0.0229	0.0000	95.5440
Total	**0.0779**	**0.7147**	**0.6796**	**1.1000e-003**		**0.0393**	**0.0393**		**0.0370**	**0.0370**	**0.0000**	**94.9712**	**94.9712**	**0.0229**	**0.0000**	**95.5440**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.9900e-003	0.2655	0.0708	6.9000e-004	0.0171	5.6000e-004	0.0177	4.9500e-003	5.4000e-004	5.4900e-003	0.0000	67.5300	67.5300	5.0100e-003	0.0000	67.6553
Worker	3.2800e-003	2.3400e-003	0.0236	7.0000e-005	7.5600e-003	5.0000e-005	7.6200e-003	2.0100e-003	5.0000e-005	2.0600e-003	0.0000	6.6059	6.6059	1.9000e-004	0.0000	6.6107
Total	**0.0113**	**0.2678**	**0.0944**	**7.6000e-004**	**0.0247**	**6.1000e-004**	**0.0253**	**6.9600e-003**	**5.9000e-004**	**7.5500e-003**	**0.0000**	**74.1359**	**74.1359**	**5.2000e-003**	**0.0000**	**74.2659**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1263	1.1556	1.2109	1.9900e-003		0.0599	0.0599		0.0563	0.0563	0.0000	171.4767	171.4767	0.0411	0.0000	172.5037
Total	**0.1263**	**1.1556**	**1.2109**	**1.9900e-003**		**0.0599**	**0.0599**		**0.0563**	**0.0563**	**0.0000**	**171.4767**	**171.4767**	**0.0411**	**0.0000**	**172.5037**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0134	0.4524	0.1210	1.2400e-003	0.0309	8.7000e-004	0.0318	8.9300e-003	8.3000e-004	9.7700e-003	0.0000	120.7291	120.7291	8.7600e-003	0.0000	120.9482
Worker	5.6000e-003	3.8500e-003	0.0395	1.3000e-004	0.0137	9.0000e-005	0.0137	3.6300e-003	9.0000e-005	3.7100e-003	0.0000	11.4858	11.4858	3.1000e-004	0.0000	11.4937
Total	**0.0190**	**0.4563**	**0.1604**	**1.3700e-003**	**0.0446**	**9.6000e-004**	**0.0456**	**0.0126**	**9.2000e-004**	**0.0135**	**0.0000**	**132.2149**	**132.2149**	**9.0700e-003**	**0.0000**	**132.4418**

3.4 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1263	1.1556	1.2109	1.9900e-003		0.0599	0.0599		0.0563	0.0563	0.0000	171.4765	171.4765	0.0411	0.0000	172.5035
Total	**0.1263**	**1.1556**	**1.2109**	**1.9900e-003**		**0.0599**	**0.0599**		**0.0563**	**0.0563**	**0.0000**	**171.4765**	**171.4765**	**0.0411**	**0.0000**	**172.5035**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0134	0.4524	0.1210	1.2400e-003	0.0309	8.7000e-004	0.0318	8.9300e-003	8.3000e-004	9.7700e-003	0.0000	120.7291	120.7291	8.7600e-003	0.0000	120.9482
Worker	5.6000e-003	3.8500e-003	0.0395	1.3000e-004	0.0137	9.0000e-005	0.0137	3.6300e-003	9.0000e-005	3.7100e-003	0.0000	11.4858	11.4858	3.1000e-004	0.0000	11.4937
Total	**0.0190**	**0.4563**	**0.1604**	**1.3700e-003**	**0.0446**	**9.6000e-004**	**0.0456**	**0.0126**	**9.2000e-004**	**0.0135**	**0.0000**	**132.2149**	**132.2149**	**9.0700e-003**	**0.0000**	**132.4418**

3.5 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0276	20.0276	6.4800e-003	0.0000	20.1895
Paving	1.1000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0121**	**0.1113**	**0.1458**	**2.3000e-004**		**5.6800e-003**	**5.6800e-003**		**5.2200e-003**	**5.2200e-003**	**0.0000**	**20.0276**	**20.0276**	**6.4800e-003**	**0.0000**	**20.1895**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.9000e-004	3.4000e-004	3.4800e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0123	1.0123	3.0000e-005	0.0000	1.0130
Total	**4.9000e-004**	**3.4000e-004**	**3.4800e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.0123**	**1.0123**	**3.0000e-005**	**0.0000**	**1.0130**

3.5 Paving - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0275	20.0275	6.4800e-003	0.0000	20.1895
Paving	1.1000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0121**	**0.1113**	**0.1458**	**2.3000e-004**		**5.6800e-003**	**5.6800e-003**		**5.2200e-003**	**5.2200e-003**	**0.0000**	**20.0275**	**20.0275**	**6.4800e-003**	**0.0000**	**20.1895**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.9000e-004	3.4000e-004	3.4800e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0123	1.0123	3.0000e-005	0.0000	1.0130
Total	**4.9000e-004**	**3.4000e-004**	**3.4800e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.0123**	**1.0123**	**3.0000e-005**	**0.0000**	**1.0130**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0376					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**0.0396**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	7.0000e-005	7.0000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2025	0.2025	1.0000e-005	0.0000	0.2026
Total	**1.0000e-004**	**7.0000e-005**	**7.0000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2025**	**0.2025**	**1.0000e-005**	**0.0000**	**0.2026**

3.6 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0376					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**0.0396**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	7.0000e-005	7.0000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2025	0.2025	1.0000e-005	0.0000	0.2026
Total	**1.0000e-004**	**7.0000e-005**	**7.0000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2025**	**0.2025**	**1.0000e-005**	**0.0000**	**0.2026**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0420	0.1614	0.4489	1.5200e-003	0.1363	1.2000e-003	0.1375	0.0365	1.1200e-003	0.0376	0.0000	140.5933	140.5933	7.4300e-003	0.0000	140.7790
Unmitigated	0.0420	0.1614	0.4489	1.5200e-003	0.1363	1.2000e-003	0.1375	0.0365	1.1200e-003	0.0376	0.0000	140.5933	140.5933	7.4300e-003	0.0000	140.7790

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	183.99	183.99	183.99	361,660	361,660
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	183.99	183.99	183.99	361,660	361,660

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	5.40	5.40	5.40	33.00	48.00	19.00	100	0	0
Parking Lot	5.40	5.40	5.40	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No Rail	5.40	5.40	5.40	59.00	0.00	41.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056
Parking Lot	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056
Unrefrigerated Warehouse-No Rail	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	6.7350	6.7350	2.7000e-004	6.0000e-005	6.7585
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	6.7350	6.7350	2.7000e-004	6.0000e-005	6.7585
NaturalGas Mitigated	2.0000e-005	1.8000e-004	1.5000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1916	0.1916	0.0000	0.0000	0.1927
NaturalGas Unmitigated	2.0000e-005	1.8000e-004	1.5000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1916	0.1916	0.0000	0.0000	0.1927

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	3590.5	2.0000e-005	1.8000e-004	1.5000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1916	0.1916	0.0000	0.0000	0.1927
Total		**2.0000e-005**	**1.8000e-004**	**1.5000e-004**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.1916**	**0.1916**	**0.0000**	**0.0000**	**0.1927**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	3590.5	2.0000e-005	1.8000e-004	1.5000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1916	0.1916	0.0000	0.0000	0.1927
Total		**2.0000e-005**	**1.8000e-004**	**1.5000e-004**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.1916**	**0.1916**	**0.0000**	**0.0000**	**0.1927**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	12761	4.1704	1.7000e-004	3.0000e-005	4.1850
Unrefrigerated Warehouse-No Rail	7847.5	2.5646	1.0000e-004	2.0000e-005	2.5736
Total		**6.7350**	**2.7000e-004**	**5.0000e-005**	**6.7585**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	12761	4.1704	1.7000e-004	3.0000e-005	4.1850
Unrefrigerated Warehouse-No Rail	7847.5	2.5646	1.0000e-004	2.0000e-005	2.5736
Total		**6.7350**	**2.7000e-004**	**5.0000e-005**	**6.7585**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0178	0.0000	4.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.3000e-004	8.3000e-004	0.0000	0.0000	8.9000e-004
Unmitigated	0.0178	0.0000	4.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.3000e-004	8.3000e-004	0.0000	0.0000	8.9000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.7600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0140					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.3000e-004	8.3000e-004	0.0000	0.0000	8.9000e-004
Total	**0.0178**	**0.0000**	**4.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**8.3000e-004**	**8.3000e-004**	**0.0000**	**0.0000**	**8.9000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.7600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0140					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.3000e-004	8.3000e-004	0.0000	0.0000	8.9000e-004
Total	**0.0178**	**0.0000**	**4.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**8.3000e-004**	**8.3000e-004**	**0.0000**	**0.0000**	**8.9000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	36.4928	0.0177	6.9000e-004	37.1385
Unmitigated	36.4928	0.0177	6.9000e-004	37.1385

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 9.42462	34.2193	1.3800e-003	2.8000e-004	34.3387
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.497188 / 0	2.2735	0.0163	4.0000e-004	2.7999
Total		**36.4928**	**0.0177**	**6.8000e-004**	**37.1385**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 9.42462	34.2193	1.3800e-003	2.8000e-004	34.3387
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.497188 / 0	2.2735	0.0163	4.0000e-004	2.7999
Total		**36.4928**	**0.0177**	**6.8000e-004**	**37.1385**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.5481	0.0324	0.0000	1.3578
Unmitigated	0.5481	0.0324	0.0000	1.3578

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.68	0.1380	8.1600e-003	0.0000	0.3420
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	2.02	0.4100	0.0242	0.0000	1.0159
Total		**0.5481**	**0.0324**	**0.0000**	**1.3578**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.68	0.1380	8.1600e-003	0.0000	0.3420
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	2.02	0.4100	0.0242	0.0000	1.0159
Total		**0.5481**	**0.0324**	**0.0000**	**1.3578**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Calavo Park

San Diego Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	2.15	1000sqft	0.05	2,150.00	0
Parking Lot	36.46	1000sqft	0.84	36,460.00	0
City Park	7.91	Acre	7.91	344,717.98	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2023
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - researched location info

Land Use - SFs from schematic estimate doc 9.2.2020

Construction Phase - deleted demo since no structures on site; left rest as defaults

Trips and VMT - Revised BC and Arch coating to be in line with other phases

Grading - Added CY of export from schematic design doc; revised acreage to whole site

Vehicle Trips - Adjusted trip rates to match ADT in TIA; adjusted trip lengths to not so brief guide

Table Name	Column Name	Default Value	New Value
tblGrading	AcresOfGrading	10.00	8.80
tblGrading	MaterialExported	0.00	9,117.00
tblLandUse	LandUseSquareFeet	344,559.60	344,717.98
tblTripsAndVMT	WorkerTripNumber	161.00	23.00
tblTripsAndVMT	WorkerTripNumber	32.00	3.00
tblVehicleTrips	CC_TL	7.30	5.40
tblVehicleTrips	CC_TL	7.30	5.40
tblVehicleTrips	CC_TL	7.30	5.40
tblVehicleTrips	CNW_TL	7.30	5.40
tblVehicleTrips	CNW_TL	7.30	5.40
tblVehicleTrips	CNW_TL	7.30	5.40
tblVehicleTrips	CW_TL	9.50	5.40
tblVehicleTrips	CW_TL	9.50	5.40
tblVehicleTrips	CW_TL	9.50	5.40
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	22.75	23.26
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	16.74	23.26
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	1.89	23.26
tblVehicleTrips	WD_TR	1.68	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.9504	40.5376	21.6317	0.0748	18.2141	2.0455	20.2596	9.9699	1.8819	11.8517	0.0000	7,814.4723	7,814.4723	1.3581	0.0000	7,848.4256
2022	3.9733	21.7254	18.4790	0.0456	0.6154	0.8219	1.4373	0.1729	0.7734	0.9463	0.0000	4,553.0491	4,553.0491	0.7440	0.0000	4,571.6487
Maximum	**3.9733**	**40.5376**	**21.6317**	**0.0748**	**18.2141**	**2.0455**	**20.2596**	**9.9699**	**1.8819**	**11.8517**	**0.0000**	**7,814.4723**	**7,814.4723**	**1.3581**	**0.0000**	**7,848.4256**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.9504	40.5375	21.6317	0.0748	18.2141	2.0455	20.2596	9.9699	1.8819	11.8517	0.0000	7,814.4723	7,814.4723	1.3581	0.0000	7,848.4256
2022	3.9733	21.7254	18.4790	0.0456	0.6154	0.8219	1.4373	0.1729	0.7734	0.9463	0.0000	4,553.0491	4,553.0491	0.7440	0.0000	4,571.6487
Maximum	**3.9733**	**40.5375**	**21.6317**	**0.0748**	**18.2141**	**2.0455**	**20.2596**	**9.9699**	**1.8819**	**11.8517**	**0.0000**	**7,814.4723**	**7,814.4723**	**1.3581**	**0.0000**	**7,848.4256**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0977	4.0000e-005	4.7500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0102	0.0102	3.0000e-005		0.0109
Energy	1.1000e-004	9.6000e-004	8.1000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		1.1573	1.1573	2.0000e-005	2.0000e-005	1.1642
Mobile	0.2457	0.8647	2.5048	8.7300e-003	0.7668	6.6100e-003	0.7734	0.2049	6.1500e-003	0.2111		888.9389	888.9389	0.0450		890.0650
Total	**0.3435**	**0.8657**	**2.5103**	**8.7400e-003**	**0.7668**	**6.7000e-003**	**0.7735**	**0.2049**	**6.2400e-003**	**0.2112**		**890.1064**	**890.1064**	**0.0451**	**2.0000e-005**	**891.2400**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0977	4.0000e-005	4.7500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0102	0.0102	3.0000e-005		0.0109
Energy	1.1000e-004	9.6000e-004	8.1000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		1.1573	1.1573	2.0000e-005	2.0000e-005	1.1642
Mobile	0.2457	0.8647	2.5048	8.7300e-003	0.7668	6.6100e-003	0.7734	0.2049	6.1500e-003	0.2111		888.9389	888.9389	0.0450		890.0650
Total	**0.3435**	**0.8657**	**2.5103**	**8.7400e-003**	**0.7668**	**6.7000e-003**	**0.7735**	**0.2049**	**6.2400e-003**	**0.2112**		**890.1064**	**890.1064**	**0.0451**	**2.0000e-005**	**891.2400**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/29/2021	8/11/2021	5	10	
2	Grading	Grading	8/12/2021	9/8/2021	5	20	
3	Building Construction	Building Construction	9/9/2021	7/27/2022	5	230	
4	Paving	Paving	7/28/2022	8/24/2022	5	20	
5	Architectural Coating	Architectural Coating	8/25/2022	9/21/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 8.8

Acres of Paving: 0.84

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,225; Non-Residential Outdoor: 1,075; Striped Parking Area: 2,188 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	1,140.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	23.00	63.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.656 9	3,685.656 9	1.1920		3,715.457 3
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.656 9**	**3,685.656 9**	**1.1920**		**3,715.457 3**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0623	0.0405	0.4774	1.4700e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		146.5994	146.5994	4.1800e-003		146.7040
Total	**0.0623**	**0.0405**	**0.4774**	**1.4700e-003**	**0.1479**	**1.0200e-003**	**0.1489**	**0.0392**	**9.4000e-004**	**0.0402**		**146.5994**	**146.5994**	**4.1800e-003**		**146.7040**

3.2 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0623	0.0405	0.4774	1.4700e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		146.5994	146.5994	4.1800e-003		146.7040
Total	**0.0623**	**0.0405**	**0.4774**	**1.4700e-003**	**0.1479**	**1.0200e-003**	**0.1489**	**0.0392**	**9.4000e-004**	**0.0402**		**146.5994**	**146.5994**	**4.1800e-003**		**146.7040**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5528	0.0000	6.5528	3.3703	0.0000	3.3703			0.0000			0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599		1.0671	1.0671		2,871.9285	2,871.9285	0.9288		2,895.1495
Total	**2.2903**	**24.7367**	**15.8575**	**0.0296**	**6.5528**	**1.1599**	**7.7127**	**3.3703**	**1.0671**	**4.4374**		**2,871.9285**	**2,871.9285**	**0.9288**		**2,895.1495**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4231	14.6110	3.5745	0.0440	0.9960	0.0446	1.0406	0.2730	0.0427	0.3156		4,820.3776	4,820.3776	0.4258		4,831.0229
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0519	0.0337	0.3979	1.2300e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		122.1661	122.1661	3.4900e-003		122.2533
Total	**0.4750**	**14.6447**	**3.9723**	**0.0452**	**1.1192**	**0.0454**	**1.1647**	**0.3056**	**0.0434**	**0.3491**		**4,942.5438**	**4,942.5438**	**0.4293**		**4,953.2761**

3.3 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5528	0.0000	6.5528	3.3703	0.0000	3.3703			0.0000			0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599		1.0671	1.0671	0.0000	2,871.9285	2,871.9285	0.9288		2,895.1495
Total	**2.2903**	**24.7367**	**15.8575**	**0.0296**	**6.5528**	**1.1599**	**7.7127**	**3.3703**	**1.0671**	**4.4374**	**0.0000**	**2,871.9285**	**2,871.9285**	**0.9288**		**2,895.1495**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4231	14.6110	3.5745	0.0440	0.9960	0.0446	1.0406	0.2730	0.0427	0.3156		4,820.3776	4,820.3776	0.4258		4,831.0229
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0519	0.0337	0.3979	1.2300e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		122.1661	122.1661	3.4900e-003		122.2533
Total	**0.4750**	**14.6447**	**3.9723**	**0.0452**	**1.1192**	**0.0454**	**1.1647**	**0.3056**	**0.0434**	**0.3491**		**4,942.5438**	**4,942.5438**	**0.4293**		**4,953.2761**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1905	6.4153	1.6349	0.0171	0.4265	0.0135	0.4400	0.1228	0.0129	0.1357		1,835.5173	1,835.5173	0.1312		1,838.7961
Worker	0.0796	0.0517	0.6101	1.8800e-003	0.1889	1.3100e-003	0.1902	0.0501	1.2000e-003	0.0513		187.3214	187.3214	5.3500e-003		187.4551
Total	**0.2701**	**6.4670**	**2.2449**	**0.0189**	**0.6154**	**0.0148**	**0.6302**	**0.1729**	**0.0141**	**0.1870**		**2,022.8387**	**2,022.8387**	**0.1365**		**2,026.2512**

3.4 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1905	6.4153	1.6349	0.0171	0.4265	0.0135	0.4400	0.1228	0.0129	0.1357		1,835.5173	1,835.5173	0.1312		1,838.7961
Worker	0.0796	0.0517	0.6101	1.8800e-003	0.1889	1.3100e-003	0.1902	0.0501	1.2000e-003	0.0513		187.3214	187.3214	5.3500e-003		187.4551
Total	**0.2701**	**6.4670**	**2.2449**	**0.0189**	**0.6154**	**0.0148**	**0.6302**	**0.1729**	**0.0141**	**0.1870**		**2,022.8387**	**2,022.8387**	**0.1365**		**2,026.2512**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1772	6.0627	1.5484	0.0169	0.4265	0.0116	0.4381	0.1228	0.0111	0.1339		1,818.2668	1,818.2668	0.1271		1,821.4452
Worker	0.0752	0.0471	0.5673	1.8100e-003	0.1889	1.2800e-003	0.1902	0.0501	1.1800e-003	0.0513		180.4487	180.4487	4.9000e-003		180.5713
Total	**0.2524**	**6.1098**	**2.1156**	**0.0187**	**0.6154**	**0.0129**	**0.6283**	**0.1729**	**0.0123**	**0.1852**		**1,998.7155**	**1,998.7155**	**0.1320**		**2,002.0165**

3.4 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1772	6.0627	1.5484	0.0169	0.4265	0.0116	0.4381	0.1228	0.0111	0.1339		1,818.2668	1,818.2668	0.1271		1,821.4452
Worker	0.0752	0.0471	0.5673	1.8100e-003	0.1889	1.2800e-003	0.1902	0.0501	1.1800e-003	0.0513		180.4487	180.4487	4.9000e-003		180.5713
Total	**0.2524**	**6.1098**	**2.1156**	**0.0187**	**0.6154**	**0.0129**	**0.6283**	**0.1729**	**0.0123**	**0.1852**		**1,998.7155**	**1,998.7155**	**0.1320**		**2,002.0165**

3.5 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.1100					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2129**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0491	0.0307	0.3700	1.1800e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		117.6840	117.6840	3.2000e-003		117.7639
Total	**0.0491**	**0.0307**	**0.3700**	**1.1800e-003**	**0.1232**	**8.3000e-004**	**0.1241**	**0.0327**	**7.7000e-004**	**0.0335**		**117.6840**	**117.6840**	**3.2000e-003**		**117.7639**

3.5 Paving - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.1100					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2129**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0491	0.0307	0.3700	1.1800e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		117.6840	117.6840	3.2000e-003		117.7639
Total	**0.0491**	**0.0307**	**0.3700**	**1.1800e-003**	**0.1232**	**8.3000e-004**	**0.1241**	**0.0327**	**7.7000e-004**	**0.0335**		**117.6840**	**117.6840**	**3.2000e-003**		**117.7639**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.7590					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**3.9635**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	9.8100e-003	6.1500e-003	0.0740	2.4000e-004	0.0246	1.7000e-004	0.0248	6.5400e-003	1.5000e-004	6.6900e-003		23.5368	23.5368	6.4000e-004		23.5528
Total	**9.8100e-003**	**6.1500e-003**	**0.0740**	**2.4000e-004**	**0.0246**	**1.7000e-004**	**0.0248**	**6.5400e-003**	**1.5000e-004**	**6.6900e-003**		**23.5368**	**23.5368**	**6.4000e-004**		**23.5528**

3.6 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.7590					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**3.9635**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	9.8100e-003	6.1500e-003	0.0740	2.4000e-004	0.0246	1.7000e-004	0.0248	6.5400e-003	1.5000e-004	6.6900e-003		23.5368	23.5368	6.4000e-004		23.5528
Total	**9.8100e-003**	**6.1500e-003**	**0.0740**	**2.4000e-004**	**0.0246**	**1.7000e-004**	**0.0248**	**6.5400e-003**	**1.5000e-004**	**6.6900e-003**		**23.5368**	**23.5368**	**6.4000e-004**		**23.5528**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2457	0.8647	2.5048	8.7300e-003	0.7668	6.6100e-003	0.7734	0.2049	6.1500e-003	0.2111		888.9389	888.9389	0.0450		890.0650
Unmitigated	0.2457	0.8647	2.5048	8.7300e-003	0.7668	6.6100e-003	0.7734	0.2049	6.1500e-003	0.2111		888.9389	888.9389	0.0450		890.0650

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	183.99	183.99	183.99	361,660	361,660
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	183.99	183.99	183.99	361,660	361,660

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	5.40	5.40	5.40	33.00	48.00	19.00	100	0	0
Parking Lot	5.40	5.40	5.40	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No Rail	5.40	5.40	5.40	59.00	0.00	41.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056
Parking Lot	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056
Unrefrigerated Warehouse-No Rail	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.1000e-004	9.6000e-004	8.1000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		1.1573	1.1573	2.0000e-005	2.0000e-005	1.1642
NaturalGas Unmitigated	1.1000e-004	9.6000e-004	8.1000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		1.1573	1.1573	2.0000e-005	2.0000e-005	1.1642

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	9.83699	1.1000e-004	9.6000e-004	8.1000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		1.1573	1.1573	2.0000e-005	2.0000e-005	1.1642
Total		**1.1000e-004**	**9.6000e-004**	**8.1000e-004**	**1.0000e-005**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**		**1.1573**	**1.1573**	**2.0000e-005**	**2.0000e-005**	**1.1642**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.00983699	1.1000e-004	9.6000e-004	8.1000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		1.1573	1.1573	2.0000e-005	2.0000e-005	1.1642
Total		**1.1000e-004**	**9.6000e-004**	**8.1000e-004**	**1.0000e-005**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**		**1.1573**	**1.1573**	**2.0000e-005**	**2.0000e-005**	**1.1642**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0977	4.0000e-005	4.7500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0102	0.0102	3.0000e-005		0.0109
Unmitigated	0.0977	4.0000e-005	4.7500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0102	0.0102	3.0000e-005		0.0109

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0206					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0767					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.4000e-004	4.0000e-005	4.7500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0102	0.0102	3.0000e-005		0.0109
Total	**0.0977**	**4.0000e-005**	**4.7500e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0102**	**0.0102**	**3.0000e-005**		**0.0109**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0206					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0767					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.4000e-004	4.0000e-005	4.7500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0102	0.0102	3.0000e-005		0.0109
Total	**0.0977**	**4.0000e-005**	**4.7500e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0102**	**0.0102**	**3.0000e-005**		**0.0109**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix C. Biological Resources Letter Report

Harris & Associates

November 5, 2021

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Subject: Biological Resources Letter Report for the Calavo Park

Summary

At the request of the County of San Diego (County), Department of Parks and Recreation, Harris & Associates (Harris) has completed a biological resources letter report for the proposed Calavo Park (project) on an approximately 9.2-acre property (project site) in the unincorporated community of Spring Valley in San Diego County, California (Attachment 1, Figures, Figures 1, Regional Location, and 2, Project Site). The project includes development of a community park; the County is developing the project design. The project site occurs in the adopted County Multiple Species Conservation Program (MSCP) Subarea Plan (County Subarea Plan) and outside of the lands designated as County MSCP Pre-Approved Mitigation Area.

The project site supports four vegetation communities and land cover types. In the context of the County MSCP, the sensitive upland vegetation on the site includes 0.4 acre of disturbed Diegan coastal sage scrub (Tier II). The non-sensitive vegetation community and land cover type on the project site include 0.3 acre of eucalyptus woodland (Tier IV), 0.6 acre of urban/developed land (Tier IV), and 7.9 acres of disturbed habitat (Tier IV).

No rare plants were observed during the two rare plant surveys conducted on March 17, 2020, and May 5, 2020. Two non-listed sensitive wildlife species, western bluebird (*Sialia mexicana*) and monarch butterfly (*Danaus plexippus*), were observed on the project site. At least three adult red-tailed hawks (*Buteo jamaicensis*) were observed flying over the project site during the habitat assessment conducted on February 11, 2020, and rare plant surveys and potentially nesting in mature trees north of the project site. One pair of killdeer (*Charadrius vociferus*) was observed potentially nesting in the disturbed, rocky habitat in the central portion of the project site.

Potential significant impacts would occur to nesting birds and sensitive natural communities. If construction is conducted during the bird-breeding season (January 15 through August 31), temporary direct impacts from disturbance and displacement of nesting birds during vegetation removal could result in significant direct impacts to bird species protected under the Migratory Bird Treaty Act (MBTA). If clearing, grubbing, and trenching activities are conducted during the bird-breeding season, indirect impacts from construction noise and vibration could result in significant indirect impacts to bird species protected under the MBTA. The project would result in direct permanent impacts to sensitive upland habitat, including 0.04 acre of disturbed Diegan coastal sage scrub (Tier II), requiring compensatory mitigation.

Mitigation measures are proposed to fully mitigate potential impacts to nesting birds and sensitive Diegan coastal sage scrub from implementation of the project. Successful implementation of these measures would mitigate potential project and cumulative impacts to a less than significant level.

Introduction, Project Description, and Location

The project is on an approximately 9.2-acre property northeast of the intersection of Calavo Drive and Jamacha Boulevard in the unincorporated community of Spring Valley in San Diego County, California (Figures 1 and 2). The project includes development of a community park; the County is developing the project design.

The project site occurs in the adopted County Subarea Plan and outside of the lands designated as County MSCP Pre-Approved Mitigation Area (Figure 1). The project site is undeveloped and surrounded by residential development on three sides and the U.S. Fish and Wildlife Service (USFWS) San Diego National Wildlife Refuge on the northeastern side (Figure 2). Vegetation communities and land cover types on the project site include disturbed Diegan coastal sage scrub, eucalyptus woodland, urban/developed land, and disturbed habitat.

Setting

Following is a description of the existing conditions on the project site.

Land Use

The project site is in the unincorporated community of Spring Valley situated between residential development northeast of the intersection of Calavo Drive and Jamacha Boulevard. Surrounding land uses include single- and multi-family residential to the northwest, east, and south and the San Diego National Wildlife Refuge to the northeast.

Topography and Soils

The topography of the site is relatively flat, ranging in elevation from 495 to 535 feet above mean sea level (Figure 3, USGS Topographical Map). The U.S. Department of Agriculture Natural Resources Conservation Service soil series identified the soils on the project site as dominated by Diablo clay soils, which are classified as well drained (USDA 2019) (Figure 4, Soils).

Hydrology

The project site is in the Sweetwater River Watershed (SRW) (Hydrologic Unit 909) (Project Clean Water 2021). The SRW is in the southern portion of the County and is bordered by the Tijuana and Otay Watersheds to the south and by the Pueblo San Diego and San Diego Watersheds to the north. The SRW expands for approximately 230 square miles from the Cuyamaca Mountains to the San Diego Bay and serves the Port of San Diego and the Cities of San Diego, National City, Chula Vista, La Mesa, and Lemon Grove. The SRW is part of the San Diego Bay Watershed Management Area, which is estimated to be home to approximately one-third of the County's population. It is the largest watershed management area entirely within the boundaries of the County and includes three major subwatersheds: Pueblo San Diego, Sweetwater, and Otay.

The SRW is composed of three main drainage areas, the Lower (909.1), Middle (909.2), and Upper (909.3) Sweetwater Hydrologic Areas, and is the largest of the three San Diego Bay hydrologic units, encompassing more than 145,000 acres. Over half (60 percent) of the watershed is undeveloped and open space lands. On a hydrologic area basis, the Lower Sweetwater Hydrologic Area is the most urbanized, with residential areas at 44 percent of land area and transportation at 18 percent of land area in the hydrologic area. Undeveloped and open space lands dominate the majority of the Middle and Upper Sweetwater Hydrologic Areas, making up 63 percent and 82 percent, respectively. The project site is in the middle hydrologic area of the SRW.

Climate

Meteorological data for the project site are gathered at the La Mesa weather station, approximately 3.5 miles north of the project site. On the project site, the normal daily maximum temperature is 88 degrees Fahrenheit (°F) in

September, and the normal daily minimum temperature is 42°F in January. The average annual temperature is approximately 65°F (U.S. Climate Data 2021; NOAA 2021).

The average precipitation on the project site is approximately 12.3 inches annually, occurring primarily from October through April. Based on data from the La Mesa weather station, the vicinity of the project site receives the greatest amount of rain—an average of 2.6 inches—in February (U.S. Climate Data 2021; NOAA 2021).

Regional Context

Natural Community Conservation Planning Act of 1991

The Natural Community Conservation Planning (NCCP) Program is a cooperative effort to protect habitats and species. It began under the state's NCCP Act of 1991, legislation that is broader in its orientation and objectives than the California Endangered Species Act or federal Endangered Species Act. The California Department of Fish and Wildlife (CDFW) is the principal state agency implementing the NCCP Program. The NCCP Act, California Endangered Species Act, and federal Endangered Species Act are designed to identify and protect individual species that have already declined significantly in number. The NCCP Act of 1991 and the associated Southern California Coastal Sage Scrub NCCP Process Guidelines (1993), Southern California Coastal Sage Scrub NCCP Conservation Guidelines (1993), and NCCP General Process Guidelines (1998) have been superseded by the NCCP Act of 2003, which was amended in 2003, 2011, 2012, and 2016 (California Fish and Game Code, Section 2800–2835).

The primary objective of the NCCP Program is to conserve natural communities at the ecosystem level while accommodating compatible land uses. The program seeks to anticipate and prevent the controversies and gridlock caused by species listings by focusing on the long-term stability of wildlife and plant communities and including key interests in the process.

This voluntary program allows the state to enter into planning agreements with landowners, local governments, and other stakeholders to prepare plans that identify the most important areas for a threatened or endangered species and the areas that may be less important. These NCCP plans may become the basis for a state permit to take threatened and endangered species in exchange for conserving the species' habitats. The CDFW and USFWS combined the NCCP Program with the federal habitat conservation plan process to provide take permits for state and federally listed species. Under the NCCP Program, local governments, such as the County, can lead the development of NCCP plans and become the recipients of state and federal take permits.

County of San Diego Multiple Species Conservation Program

The County MSCP is a long-term, regional habitat conservation program focused on balancing two unique aspects of the County: high biological diversity and rapid urban growth. Under this program, large blocks of interconnected habitat are conserved through acquisition of land by private and public entities and mitigation from development.

The County MSCP is composed of three separate plan areas covering unincorporated regions of San Diego in South County, North County, and East County. The MSCP plans associated with the plan areas are the South County Plan (County Subarea Plan), North County Plan, and East County Plan, respectively. Each plan area's unique geography requires each MSCP plan to be tailored to meet the needs of the unique habitats and species in the respective area.

The County Subarea Plan for the southwestern portion of the County was adopted by the County Board of Supervisors in October 1997, was approved in 1998, and covers 85 species. The City of San Diego, portions of the unincorporated County, and 10 additional city jurisdictions make up the San Diego MSCP Plan Area.

As a joint habitat conservation plan/natural community conservation plan, the County Subarea Plan meets the requirements of the federal Endangered Species Act and California's NCCP Act. The County Subarea Plan provides for large, connected preserve areas that address a number of species at the habitat level rather than species-to-species or area-by-area, which creates a more efficient and effective preserve system and better protection for the rare, threatened, and endangered species in the region. Mitigation from development and local, state, and federal funding protect land that has been set aside for preservation. This preservation may take the form of an open space or conservation easement that dedicates the land in perpetuity or actual purchase of fee title by a public agency or environmental land trust. Out of the 582,000-acre area examined under the County MSCP, the goal of the County Subarea Plan is to acquire or permanently protect 98,379 acres in the unincorporated area. The County Subarea Plan establishes the conditions under which the County will receive federal and state long-term take authorizations to "cover" specific wildlife and plant species (covered species). This allows the incidental take permit to be extended to future development projects that comply with the County MSCP; therefore, these projects do not need to receive their own separate incidental take permit from the USFWS and the CDFW. Through this permitting mechanism, the County Subarea Plan can help conserve covered species, streamline permitting, and facilitate economic growth in the County (County of San Diego 1998).

The community of Spring Valley is included in the County Subarea Plan (Figure 1). The County prepared a Spring Valley Community Plan (County of San Diego 2011a) as a part of the County's General Plan (County of San Diego 2011b), and it is the community's policy to comply with the conservation policies identified in the County Subarea Plan. The project site is in the San Diego MSCP Plan Area, an adopted NCCP plan area. The project site is not in the County MSCP Pre-Approved Mitigation Area.

Jurisdictional Waterways and Watersheds

Jurisdictional waterways and watersheds in the vicinity of the project site include the Sweetwater River, approximately 1 mile east of the project site; the Sweetwater Reservoir, approximately 3 miles southwest of the project site; and Lake Murray, approximately 6 miles northwest of the project site (Figure 1). No jurisdictional waterways occur on the project site, as discussed in the Jurisdictional Wetlands and Waterways section.

County of San Diego General Plan

The Conservation and Open Space Element of the County's General Plan (County of San Diego 2011b) provides the following goals and policies that apply to vegetation and wildlife habitat:

- **Goal COS-1: Inter-Connected Preserve System.** A regionally managed, inter-connected preserve system that embodies the regional biological diversity of San Diego County.
    - **Policy COS-1.1: Coordinated Preserve System.** Identify and develop a coordinated biological preserve system that includes Pre-Approved Mitigation Areas, Biological Resource Core Areas, wildlife corridors, and linkages to allow wildlife to travel throughout their habitat ranges.
    - **Policy COS-1.2: Minimize Impacts.** Prohibit private development within established preserves. Minimize impacts within established preserves when the construction of public infrastructure is unavoidable.
    - **Policy COS-1.3: Management.** Monitor, manage, and maintain the regional preserve system facilitating the survival of native species and the preservation of healthy populations of rare, threatened, or endangered species.
    - **Policy COS-1.6: Assemblage of Preserve Systems.** Support the proactive assemblage of biological preserve systems to protect biological resources and to facilitate development through mitigation banking opportunities.
    - **Policy COS-1.8: Multiple-Resource Preservation Areas.** Support the acquisition of large tracts of land that have multiple resource preservation benefits, such as biology, hydrology, cultural, aesthetics, and community character. Establish funding mechanisms to serve as an alternative when mitigation requirements would not result in the acquisition of large tracts of land.
    - **Policy COS-1.9: Invasive Species.** Require new development adjacent to biological preserves to use non-invasive plants in landscaping. Encourage the removal of invasive plants within preserves.
- **Goal COS-2: Sustainability of the Natural Environment.** Sustainable ecosystems with long-term viability to maintain natural processes, sensitive lands, and sensitive as well as common species, coupled with sustainable growth and development.

- **Policy COS-2.1: Protection, Restoration and Enhancement.** Protect and enhance natural wildlife habitat outside of preserves as development occurs according to the underlying land use designation. Limit the degradation of regionally important natural habitats within the Semi-Rural and Rural Lands regional categories, as well as within Village lands where appropriate.
- **Policy COS-2.2: Habitat Protection through Site Design.** Require development to be sited in the least biologically sensitive areas and minimize the loss of natural habitat through site design.

- **Goal COS-3: Protection and Enhancement of Wetlands.** Wetlands that are restored and enhanced and protected from adverse impacts.
  - **Policy COS-3.1: Wetland Protection.** Require development to preserve existing natural wetland areas and associated transitional riparian and upland buffers and retain opportunities for enhancement.
  - **Policy COS-3.2: Minimize Impacts of Development.** Require development projects to:
    - Mitigate any unavoidable losses of wetlands, including its habitat functions and values; and
    - Protect wetlands, including vernal pools, from a variety of discharges and activities, such as dredging or adding fill material, exposure to pollutants such as nutrients, hydromodification, land and vegetation clearing, and the introduction of invasive species.

Spring Valley Community Plan

The Conservation and Open Space Element of the Spring Valley Community Plan (County of San Diego 2011a) provides the following goals and policies that apply to vegetation and wildlife habitat:

- **Resource Conservation and Management:** No specific issues to address; refer to goals and policies in the General Plan.
  - **Plant and animal habitats and wildlife corridor:** Managers need to work closely with wildlife refuge, fish and wildlife to maintain the quality of our wildland refuge.
- **Community and Open Space Plan:**
  - **Goal 1:** Maintain and improve the trails in Spring Valley.
    - **Policy 1:** Enforce the current requirements for trails. Submitted plans from developers will be reviewed by the CSA [Community Service Area]. Even though some of these trail pieces may be fragmented, they will all be eventually linked into one continuous trail for Spring Valley.
  - **Goal 2:** Provide recreation areas for adults and children through an agreement with Sweetwater Authority to use various areas for water recreation and provide trails around the lake.
    - **Policy 2:** Coordinate with and explore opportunities to provide recreation areas for adults and children through an agreement with the Sweetwater Authority to use various areas for water recreation and provide trails around the lake.

Methods

This biological resources analysis includes an environmental document review, a database review, a habitat assessment, and rare plant surveys to document the existing biological conditions of the project site. The results of the environmental document review, database review, habitat assessment, and rare plant surveys provide information on the potential constraints to project development due to the presence of special-status biological resources.

Environmental Document Review

The following documents were reviewed prior to the habitat assessment:

- County Subarea Plan (County of San Diego 1998)
- County Resource Protection Ordinances (County of San Diego 2012)

Database Review

Review of online databases including the CDFW California Natural Diversity Database (CNDDB), USFWS Information for Planning and Consultation (USFWS 2021a), USFWS National Wetlands Inventory (NWI) Wetlands Mapper (USFWS 2021b), California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2021), Calflora database (Calflora 2021), eBird (2021), and iNaturalist (2021) was conducted for the project.

California Department of Fish and Wildlife California Natural Diversity Database

CNDDB searches were conducted for 0.25-, 1-, and 3-mile radii of the project site to identify previously mapped resources in these areas (CDFW 2021a). The results of the CNDDB searches are presented in the Results section.

U.S. Fish and Wildlife Service Information for Planning and Consultation

The USFWS Information for Planning and Consultation report was created by drawing a perimeter around the project site (USFWS 2021a). The results of the location search are provided in the Results section.

U.S. Fish and Wildlife Service National Wetland Inventory

USFWS NWI maps were reviewed to identify any wetlands and waters that were mapped on the project site (USFWS 2021b). The USFWS NWI search was conducted by drawing a perimeter around the project site in the web map that identified the location of any U.S. Army Corps of Engineers jurisdictional wetlands and waters surrounding the project site. The results of the NWI search are provided in the Results section.

California Native Plant Society Inventory of Rare and Endangered Plants of California

The CNPS Inventory of Rare and Endangered Plants of California (online version) provides information for determining the potential of special-status plant species to be present within a given area. CNPS status codes are defined by the CNPS California Rare Plant Rank (CRPR) system described as follows: CRPR 1A plants are presumed extirpated in California and either rare or extinct elsewhere; CRPR 1B plants are rare, threatened, or endangered in California and elsewhere; CRPR 2A plants are presumed extirpated in California but common elsewhere; CRPR 2B plants are rare, threatened, or endangered in California but more common elsewhere; CRPR 3 plants lack the necessary information needed to assign them to one of the other ranks or to reject them; and CRPR 4 plants are of limited distribution or infrequent throughout a broader area in California, and their status requires more regular monitoring (CNPS 2021).

The CNPS CRPR also includes threat ranks, which are defined as follows: 0.1, seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat); 0.2, moderately threatened in California (20–80 percent occurrences threatened/moderate degree and immediacy of threat); and 0.3, not very threatened in California (less than 20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known) (CNPS 2021).

Calflora

The Calflora database, a database of native and non-native plant species that occur in California, was reviewed. The Calflora database is a collection of names, locations, and natural history information of currently recognized vascular plants in California provided by public agencies, non-profits, and other scientists (Calflora 2021).

eBird

The eBird database, managed by the Cornell Lab of Ornithology, is the world’s largest biodiversity-related citizen science project, with more than 100 million bird sightings contributed each year. The eBird database is a collaborative enterprise with partner organizations, regional experts, and users. The eBird database documents bird distribution, abundance, habitat use, and trends through checklist data collected within a scientific framework (eBird 2021).

iNaturalist

The iNaturalist database is a joint citizen science initiative by the California Academy of Sciences and the National Geographic Society. The iNaturalist database provides a platform for wildlife and plant identification, connecting scientists and citizens with observation and records sharing that creates research-quality data for scientists working in conservation fields (iNaturalist 2021).

Habitat Assessment

A habitat assessment of the project site was conducted by Harris Biologists Melissa Tu and Katie Laybourn on February 11, 2020. The habitat assessment was conducted by walking transects throughout the project site and mapping vegetation communities, documenting plant and wildlife species, and evaluating the potential for occurrence of sensitive plant and wildlife species (Attachment 2, Plant and Wildlife Species Observed on the Project Site, and Attachment 3, Sensitive Plant and Wildlife Species Potential to Occur). The results of the habitat assessment are discussed in detail in the Results section. No sensitive wildlife species protocol surveys were conducted.

Rare Plant Surveys

Two rare plant surveys were conducted on March 17, 2020, and May 5, 2020, to maximize the detection of sensitive plant species that bloom during different periods. Results of the rare plant surveys are included in the Results section.

Results

The results presented in the following sections provide data from the habitat assessment and rare plant surveys conducted on the project site.

Vegetation Communities and Land Cover Types

The project site is in the southwestern California region of the California Floristic Province (Jepson eFlora 2021). Specifically, the project site occurs approximately 250 feet northwest of the intersection of Jamacha Boulevard and Calavo Drive.

Vegetation communities and land cover types identified on the project site include disturbed Diegan coastal sage scrub, eucalyptus woodland, urban/developed land, and disturbed habitat (Oberbauer et al. 2008) (Figure 5, Vegetation Communities) (Table 1). The County MSCP and Biological Resources Guidelines have designated certain vegetation communities as sensitive using Tiers I through IV, with Tier I being the most sensitive and Tier III (as mapped in the County MSCP database) being the least sensitive (County of San Diego 1998). Tier IV designates non-sensitive vegetation communities that do not require mitigation for impacts. The sensitive vegetation communities on the project site include those listed as Tier I through Tier III in the County MSCP.

Table 1. Vegetation Communities and Land Cover Types on the Project Site

Vegetation Community and Land Cover Type	Project Site (acres)[1]	County MSCP Sensitive Vegetation Tier
Upland Scrub		
Disturbed Diegan coastal sage scrub (32500)	0.4	II
Subtotal	*0.4*	*NA*
Upland Woodland		
Eucalyptus woodland (79100)	0.3	IV
Subtotal	**0.3**	NA

Table 1. Vegetation Communities and Land Cover Types on the Project Site

Vegetation Community and Land Cover Type	Project Site (acres)[1]	County MSCP Sensitive Vegetation Tier
Developed/Disturbed		
Urban/developed land (12000)	0.6	IV
Disturbed habitat (11300)	7.9	IV
Subtotal	*8.5*	*NA*
Total	**9.2**	NA

Sources: County of San Diego 1998, 2010; Holland 1986; Oberbauer et al. 2008.
Notes: MSCP = Multiple Species Conservation Program; NA = not applicable
[1] Acreage rounded to one-tenth of an acre

Upland Scrub Vegetation Community

Disturbed Diegan Coastal Sage Scrub (32500)

Diegan coastal sage scrub consists of low soft-woody shrubs typically measuring 1.5 to 6.5 feet tall (Holland 1986). Species composition generally consists of California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), white sage (*Salvia apiana*), and laurel sumac (*Malosma laurina*) (Oberbauer et al. 2008). Diegan coastal sage scrub is present in coastal Southern California from Los Angeles to Baja California, Mexico, and supports a rich diversity of sensitive plants and wildlife. It is estimated that Diegan coastal sage scrub has been reduced by 75 to 80 percent of its historical coverage throughout Southern California. Because of this, Diegan coastal sage scrub is the focus of the current California NCCP Program (California Fish and Game Code, Section 2800–2835).

Disturbed Diegan coastal sage scrub occurs in the northwestern portion of the project site, comprising approximately 0.4 acre (Figure 5). The disturbed Diegan coastal sage scrub on the project site is dominated by non-native invasive onion-leafed asphodel (*Asphodelus fistulosus*) and includes California buckwheat and brittlebush (*Encelia farinosa*). The area also includes weedy grass species and patches of bare and rocky ground.

Upland Woodland Vegetation Community

Eucalyptus Woodland (79100)

Eucalyptus woodland habitat ranges from single-species thickets with little or no shrubby understory to scattered trees over a well-developed herbaceous and shrubby understory. Eucalyptus woodland often forms a dense stand with a closed canopy. *Eucalyptus* species produce a large amount of leaf and bark litter, the chemical and physical characteristics of which limit the ability of other species to grow in the understory, decreasing floristic diversity. Overstory composition is typically limited to one species of the genus or mixed stands composed of several *Eucalyptus* species; few native overstory species are present in eucalyptus-planted areas except in small cleared pockets. Eucalyptus woodland in the County typically has a naturalized understory (not maintained or otherwise landscaped or developed) or occurs in association with native vegetation communities.

Approximately 0.3 acre of eucalyptus woodland occurs along the southeastern edge of the project site (Figure 5). On the project site, eucalyptus woodland is dominated by red iron bark (*Eucalyptus sideroxylon*) and non-native weeds and grass species in the understory. Approximately 21 red iron bark trees occur on the southeastern side of the project site.

Developed/Disturbed Vegetation Community

Urban/Developed Land (12000)

Developed land consists of areas that have been constructed on or otherwise physically altered to an extent that native vegetation is no longer supported. Developed land is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that often require irrigation. Areas where no natural land is evident due to a large amount of debris or other materials being placed on it may also be considered developed (e.g., car recycling plant, quarry).

Approximately 0.6 acre of developed land occurs along the northeastern edge of the project site, including the paved parking lot for the apartment complex directly southeast of the project site (Figure 5).

Disturbed Habitat (11300)

Disturbed habitat consists of previously disturbed areas that either are devoid of vegetation (dirt roads/trails) or support scattered non-native species. Plant species common in disturbed habitats include mustard (*Brassica* sp.), thistles (*Centaurea* spp.), and some grass species, including pampas grass (*Cortaderia* spp.) and fountain grass (*Pennisetum* spp.).

Approximately 7.9 acres of disturbed habitat occur on the majority of the project site (Figure 5). These disturbed habitat areas are primarily mowed, non-native grassland vegetation that include mustard, tocalote (*Centaurea melitensis*), artichoke thistle (*Cynara cardunculus*), telegraph weed (*Heterotheca grandiflora*), redstem stork's bill (*Erodium cicutarium*), and ripgut brome (*Bromus diandrus*).

Sensitive Species

Based on a list compiled through the CNDDB (CDFW 2021a), USFWS Information for Planning and Consultation report (USFWS 2021a), CNPS (CNPS 2021), San Diego Management and Monitoring Program online database (SDMMP 2021), Biogeographic Information and Observation System (CDFW 2021b), and County MSCP (County of San Diego 2008), 28 sensitive plant species and 39 sensitive wildlife species have been documented within a 3-mile radius of the project site (Attachment 3). No critical habitat for sensitive plant or wildlife species occurs on the project site. Critical habitat for sensitive plant and wildlife species, including Otay tarplant (*Deinandra conjugens*), San Diego ambrosia (*Ambrosia pumila*), coastal California gnatcatcher (*Polioptila californica californica*), least Bell's vireo (*Vireo bellii pusillus*), and southwestern willow flycatcher (*Empidonax traillii extimus*), occurs in the San Diego National Wildlife Refuge northeast of the project site (Figure 6, Critical Habitat).

Plant Species

Based on the environmental document and database reviews, 28 sensitive plant species were considered for potential to occur on the project site (Attachment 3). Eight sensitive plant species including San Diego thornmint (*Acanthomintha ilicifolia*), Otay manzanita (*Arctostaphylos otayensis*), Dunn's mariposa lily (*Calochortus dunnii*), Otay Mountain ceanothus (*Ceanothus otayensis*), summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*), Laguna mountain jewelflower (*Streptanthus bernardinus*), estuary seablite (*Suaeda esteroa*), and Parry's tetracoccus (*Tetracoccus dioicus*) were determined to have no potential to occur on the project site due to a lack of suitable habitat for these species. No sensitive plant species were determined to have a high potential to occur on the project site. No sensitive plant species were present on the project site. The remaining 20 sensitive plant species with potential to occur on the project site are discussed in detail in Attachment 3.

Wildlife Species

Based on the environmental document and database reviews, 39 sensitive wildlife species were considered for potential to occur on the project site. Three sensitive species, arroyo toad (*Anaxyrus californicus*), Southwestern willow flycatcher, and double-crested cormorant (*Phalacrocorax auritus*), were determined to have no potential to occur on the project site due to a lack of suitable habitat for these species. The remaining 36 sensitive wildlife species with potential to occur on the project site are discussed in detail in Attachment 3.

Sensitive species that are present on the project site are described in detail in the following subsection.

Sensitive Wildlife Species Present on the Project Site

Western Bluebird

Western bluebird is a County Group 2 sensitive species (County of San Diego 2010). Western bluebird inhabits woodlands, grasslands, scrub, deserts, and agricultural habitats throughout California. This species nests in cavities in live trees, snags, and artificial substrates.

Western bluebird was observed foraging in the central portion of the project site during the habitat assessment and rare plant surveys. The majority of the project site provides foraging habitat for western bluebird. The small eucalyptus woodland surrounded by development along the southeastern edge of the project site provides potential nesting habitat.

Monarch Butterfly

The monarch butterfly is under review for protection under the federal Endangered Species Act as of March 2020 (USFWS 2021c). Monarch butterflies in North America are divided into two main groups: the western monarchs, which breed west of the Rocky Mountains and overwinter in Southern California, and the eastern monarchs, which breed in the Great Plains and Canada and overwinter in Central Mexico. Female monarch butterflies lay each egg individually on a leaf of a milkweed (*Asclepias* sp.) plant. Once monarch butterfly caterpillars are hatched, the caterpillars feed exclusively on milkweed for approximately 2 weeks before they begin the metamorphosis stage.

One adult monarch butterfly was observed flying through the project site during the rare plant surveys. No milkweed patches suitable for monarch butterfly caterpillars to occupy occur on the project site.

Nesting Birds

The project site provides nesting habitat for several bird species, including raptors, which are protected under the California Fish and Game Code and the MBTA.

As discussed in previous sections, at least three adult red-tailed hawks were observed flying over the project site during the habitat assessment and rare plant surveys and potentially nesting in mature trees north of the project site. One pair of killdeer was observed potentially nesting in the disturbed, rocky habitat in the central portion of the project site. Although no active nests were observed during the habitat assessment and rare plant surveys, the upland habitat on the site and the mature trees on and surrounding the project site provide nesting habitat for many bird species. In addition, the abundance of species and overall number of birds observed during the breeding season suggests the project site is highly used as nesting habitat.

Jurisdictional Wetlands and Waterways

The USFWS NWI search conducted for the project site and surrounding area identified four riverine and one freshwater emergent wetland approximately 0.1 mile northeast of the project site (USFWS 2021b). No aquatic resources were identified on the project site during the NWI search.

Between March 8 and March 16, 2020, the San Diego region received 1.3 inches of rain. On March 14, 2020, San Diego received 0.4 inch of rain. On March 17, 2020, two Harris biologists conducted an aquatic resources assessment. The results of the aquatic resources assessment are included in Attachment 4, Aquatic Resources Memorandum. No sensitive aquatic resources were observed.

Other Unique Features/Resources

Plant Species

A total of 62 plant species were observed on the project site during the habitat assessment and rare plant surveys, 43 (69 percent) of which were native and 19 (31 percent) of which were non-native. Attachment 2 presents the list of plant species observed.

Several invasive, non-native plant species, including artichoke thistle, castor bean (*Ricinus communis*), fountain grass (*Pennisetum setaceum*), onion-leafed asphodel, and salt cedar (*Tamarix chinensis*), were observed on the project site. The California Invasive Plant Council ranks California non-native, invasive plant species as having high, moderate, or limited invasiveness based on an assessment of the ecological impacts of each plant species (Cal-IPC 2021). The following species have the following ranks:

- Artichoke thistle – moderate
- Castor bean – limited
- Fountain grass – moderate
- Onion-leafed asphodel – moderate
- Salt cedar – high

Castor bean and salt cedar in the northwestern portion of the project site were removed between the first rare plant survey on March 17, 2020, and the second rare plant survey on May 5, 2020.

One non-native Mexican fan palm (*Washingtonia robusta*) and 21 non-native red iron bark occur in the southwestern portion of the project site.

Wildlife Species

A total of 32 wildlife species were observed on the project site during the habitat assessment and rare plant surveys, 30 were native and 2, Eurasian collared dove (*Streptopelia decaocto*) and Italian white snail (*Theba pisana*), were non-native. In total, 19 bird species, 7 invertebrate species, 4 mammal species, and 2 reptile species were observed (Attachment 2).

Dominant bird species observed included Anna's hummingbird (*Calypte anna*), American crow *(Corvus brachyrhynchos*), black phoebe (*Sayornis nigricans*), bushtit (*Psaltriparus minimus*), California towhee (*Melozone crissalis*), western kingbird (*Tyrannus verticalis*), mourning dove (*Zenaida macroura*), and Say's phoebe (*Sayornis saya*). Western bluebird, a County Group 2 sensitive species, was observed on the project site.

Common butterfly species, including cabbage white (*Pieris rapae*) and cloudless sulphur (*Phoebis sennae*), were observed on the project site. One monarch butterfly was also observed. Native harvester ants (*Pogonomyrmex* sp.) were observed in the central disturbed portion of the project site. Common mammal species, California ground squirrel (*Spermophilus beecheyi*), desert cottontail (*Sylvilagus audubonii*), and Botta's pocket gopher (*Thomomys bottae*), were observed on the project site. Reptile species observed included the western fence lizard (*Sceloporus occidentalis*) and western side-blotched lizard (*Uta stansburiana elegans*). Several residents and their domestic dogs were observed walking through the project site during the habitat assessment and rare plant surveys.

Wildlife Corridors and Linkages

Wildlife corridors and habitat linkages are essential in geographically diverse settings to maintain healthy and genetically viable wildlife communities. Habitat linkages can be defined as large areas of natural open space that provide connectivity to regional biological resources wide enough to allow relatively free movement of wildlife species along multiple paths between important resources.

Although a portion of the San Diego National Wildlife Refuge is northeast of the project site, the project site is surrounded on three sides by residential development and is unlikely to function as a wildlife corridor or habitat linkage. While the project site does not support regional wildlife corridors or linkages, the upland and woodland habitat areas on and surrounding the site provide live-in habitat for several common reptile, bird, invertebrate, and mammal species.

Significance of Project Impacts and Proposed Mitigation

Significance Criteria

Direct impacts occur when biological resources are altered or destroyed during the course of or as a result of project implementation. Examples of such impacts include removing or grading vegetation, filling wetland habitats, or severing or physically restricting the width of wildlife corridors. Other direct impacts may include loss of foraging or nesting habitat and loss of individual species as a result of habitat clearing. Indirect impacts may include elevated levels of noise or lighting, change in surface water hydrology in a floodplain, and increased erosion or sedimentation. These types of indirect impacts can affect vegetation communities or their potential use by sensitive species. Permanent impacts may result in irreversible damage to biological resources. Temporary impacts are interim changes in the local environment due to construction and would not extend beyond project-associated construction, including revegetation of temporarily disturbed areas adjacent to native habitats.

Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.) defines "significant effect on the environment" as a "substantial, or potentially substantial adverse change in the environment." Appendix G of the CEQA Guidelines further indicates that there may be a significant effect on biological resources if the project would:

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 Game[1] 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 Game or U.S. Fish and Wildlife Service.
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Threshold A

Guidelines for Determination of Significance

A significant impact would result if the project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or sensitive species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.

[1] As of January 1, 2012, the California Department of Fish and Game became the California Department of Fish and Wildlife.

This guideline for significance is taken directly from Appendix G of the CEQA Guidelines and is based on the CEQA Guidelines definition of mandatory findings of significance (Section 15065) and of endangered, rare, or threatened species (Section 15380).

Analysis

Potential impacts to sensitive plant and wildlife species are discussed in the following subsections.

Sensitive Plant Species

Two rare plant surveys were conducted on March 17, 2020, and May 5, 2020. No rare plants were observed during these surveys. Therefore, impacts to sensitive plant species would be less than significant.

Sensitive Wildlife Species

Western bluebird was observed foraging in the central portion of the project site during the habitat assessment and rare plant surveys. Low-quality Diegan coastal sage scrub habitat occurs on the project site, and a stand of eucalyptus woodland surrounded by development occurs along the southeastern edge of the project site. The San Diego National Wildlife Refuge, directly northeast of the project site, provides high-quality foraging and nesting habitat for western bluebird. Western bluebird has been documented approximately 1 mile southeast of the project site in the San Diego National Wildlife Refuge and the Sweetwater River riparian corridor in 2015 through 2019 (eBird 2021). The project site is highly disturbed and does not provide high-quality nesting habitat for western bluebird. The project site provides a limited area of foraging habitat. Higher quality and larger areas of foraging habitat occur north and northeast of the project site in the San Diego National Wildlife Refuge. As part of the project design, any lights needed to illuminate the park amenities and parking lots would be directed away from the San Diego National Wildlife Refuge to the north. Fencing, native vegetation, or other natural barriers would be constructed on the northern site boundary to prevent indirect impacts to sensitive wildlife habitat in the San Diego National Wildlife Refuge. Signs would be erected in appropriate locations to inform park visitors of the need to stay in designated use areas and of appropriate behaviors and noise levels when near the sensitive biological areas to the north.

Implementation of the project would impact a small disturbed area of foraging and nesting habitat for western bluebird. Impacts to nesting habitat would be potentially significant. Implementation of Mitigation Measure BIO-1 would require nest surveys to reduce potential direct and indirect impacts to western bluebird and other nesting birds to a less than significant level.

One adult monarch butterfly was observed flying through the project site during the rare plant surveys on March 17, 2020, and May 5, 2020; however, no milkweed that would support monarch butterfly reproduction occurs on the project site. High-quality potential habitat for monarch butterfly occurs north and northeast of the project site in the San Diego National Wildlife Refuge. Therefore, impacts to monarch butterfly would be less than significant.

Nesting Birds

Project implementation has the potential to impact bird species that are protected under the MBTA and California Fish and Game Code, Section 3504. As discussed in the Results section, several adult red-tailed hawks were observed flying over the project site during the habitat assessment and rare plant surveys, potentially nesting in mature trees north of the project site. One pair of killdeer was observed in the center of the project site, potentially nesting in the disturbed, rocky habitat in the central portion of the project site. Although no active nests were observed during the habitat assessment and rare plant surveys, the upland habitat on the site and mature trees on and surrounding the project site provide nesting habitat for many bird species. If construction is conducted during the bird-breeding season (January 15 through August 31), temporary direct impacts from disturbance and displacement of nesting birds during vegetation removal could result in significant direct impacts to bird species protected under the MBTA. Indirect impacts from construction noise and vibration during clearing, grubbing, and trenching activities, if conducted during the bird-breeding season, could result in significant indirect impacts to bird species protected under the MBTA. Implementation of Mitigation Measure BIO-1 would require general nest surveys to reduce potential direct and indirect impacts to nesting birds to a less than significant level.

Threshold B

Guidelines for Determination of Significance

A significant impact would result if the project would have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFW or USFWS.

Permanent impacts to 0.04 acre of sensitive disturbed Diegan coastal sage scrub vegetation would occur from implementation of the project (Figure 7, Impacts to Vegetation Communities). In accordance with the County's 100-foot fuel modification impact neutral guidelines, the area within 100 feet of an existing permitted and occupied structure shall be considered "impact neutral." The term "structure" is defined as a residence and attached garage, building, or related facility that is designed primarily for human habitation or buildings designed specifically to house farm animals. Decking, fences, sheds, gazebos, and detached garages less than 250 square feet are not considered structures (County of San Diego 2010). The fuel modification zones for the residences north and south of the project site extend onto the project site. Table 2 presents the disturbed Diegan coastal sage scrub impact acreage, impact neutral acreage, mitigation ratio, and mitigation acreage.

Table 2. Sensitive Vegetation Community Impacts and Mitigation

Vegetation Community	Impacts (acres)	Impact Neutral (acres)[1]	Mitigation Ratio	Mitigation Required (acres)	Off-Site Mitigation (acres)
Diegan coastal sage scrub (disturbed) (32500)	0.04	0.36	1.5:1	0.06	0.06[2]

Notes:

1 The area within 100 feet of an existing permitted and occupied structure shall be considered "impact neutral." The term "structure" is defined as a residence and attached garage, building, or related facility that is designed primarily for human habitation or buildings designed specifically to house farm animals. Decking, fences, sheds, gazebos, and detached garages less than 250 square feet are not considered structures (County of San Diego 2010).

2 Location to be determined.

Implementation of Mitigation Measure BIO-2 would require impacts to disturbed Diegan coastal sage scrub to be mitigated using a mitigation ratio of 1.5:1 through the preservation of Tier II habitat through the purchase of credits and/or land acquisition.

Threshold C

Guidelines for Determination of Significance

A significant impact would result if the project would have a substantial adverse impact on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means. Impacts to state or federally jurisdictional aquatic resources would be considered significant and would require permits from the U.S. Army Corps of Engineers and the Regional Water Quality Control Board. Aquatic resources delineations would be required for any impacts to potentially jurisdictional aquatic resources.

On March 17, 2020, two Harris biologists conducted an aquatic resources assessment, and no sensitive aquatic resources were observed (Attachment 4). Therefore, no impacts to aquatic resources would occur from implementation of the project, and no mitigation is required.

Threshold D

Guidelines for Determination of Significance

The project would have a significant impact on wildlife movement and nursery sites if its development interferes substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedes the use of native wildlife nursery sites.

Although the San Diego National Wildlife Refuge is northeast of the project site, the project site is surrounded on three sides by residential development and is unlikely to function as a wildlife corridor or habitat linkage. While the disturbed project site provides live-in habitat for common reptile, bird, invertebrate, and mammal species, the project site does not support regional wildlife corridors or linkages. Therefore, implementation of the project would not result in significant impacts to wildlife corridors or nursery sites, and no mitigation is required.

Threshold E

Guidelines for Determination of Significance

A significant impact would result if the project would conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

The project would comply with the local policies and ordinances protecting biological resources identified in the County's General Plan and the Spring Valley Community Plan. Therefore, no impacts would occur to local policies or ordinances from implementation of the project, and no mitigation is required.

Threshold F

Guidelines for Determination of Significance

A significant impact would result if the project would conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

The project would comply with the conservation policies identified in the County Subarea Plan. Therefore, no impacts to local conservation plans would occur from the implementation of the project, and no mitigation is required.

Proposed Mitigation

The following biological resources mitigation measures will be implemented during construction.

Nesting Birds

BIO-1: **Nesting Season Avoidance or Pre-Construction Survey.** If construction initiation occurs during the general bird breeding season, January 15 through August 31, a pre-construction nesting bird and raptor survey of the project area shall be completed by a qualified biologist prior to vegetation removal. The pre-construction survey shall be conducted within 72 hours prior to the start of construction activities, including removal or trimming of vegetation. If any active nests are detected, a qualified biologist will determine an appropriate buffer of up to 500 feet, and the area shall be flagged and mapped on construction plans, along with a buffer. The buffer area(s) established by the qualified biologist shall be avoided until the nesting cycle is complete, or it is determined that the nest is no longer active. The qualified biologist shall be a person familiar with bird breeding behavior and capable of identifying the bird species of San Diego County by sight and sound and determining alterations of behavior as a result of human interaction. Buffers shall be based on local topography and line of sight, species behavior and tolerance to disturbance, and existing disturbance levels, as determined appropriate by the qualified biologist.

Upland Habitat

BIO-2: Permanent Impacts to Disturbed Diegan Coastal Sage Scrub. Permanent impacts to 0.04 acre of disturbed Diegan coastal sage scrub shall be mitigated at a ratio of 1.5:1 through the preservation of 0.06 acre of Tier II habitat through the purchase of credits and/or land acquisition.

Cumulative Impacts

The potential impacts to nesting birds and disturbed Diegan coastal sage scrub that may contribute to a cumulatively significant impact when combined with nearby projects have been mitigated to a less than significant level with implementation of Mitigation Measures BIO-1 and BIO-2 as detailed in the previous section. Therefore, cumulative impacts would be less than significant.

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If you have any questions regarding this letter report, please do not hesitate to contact me at (619) 643-0808 or Katie.Laybourn@WeAreHarris.com.

Sincerely,

Katie Laybourn
Biologist

Ryan Binns, PMP, ENV SP
Director, Environmental Planning + Compliance

Attachments

1, Figures
2, Plant and Wildlife Species Observed on the Project Site
3, Sensitive Plant and Wildlife Species Potential to Occur
4, Aquatic Resources Memorandum

Attachment 1. Figures

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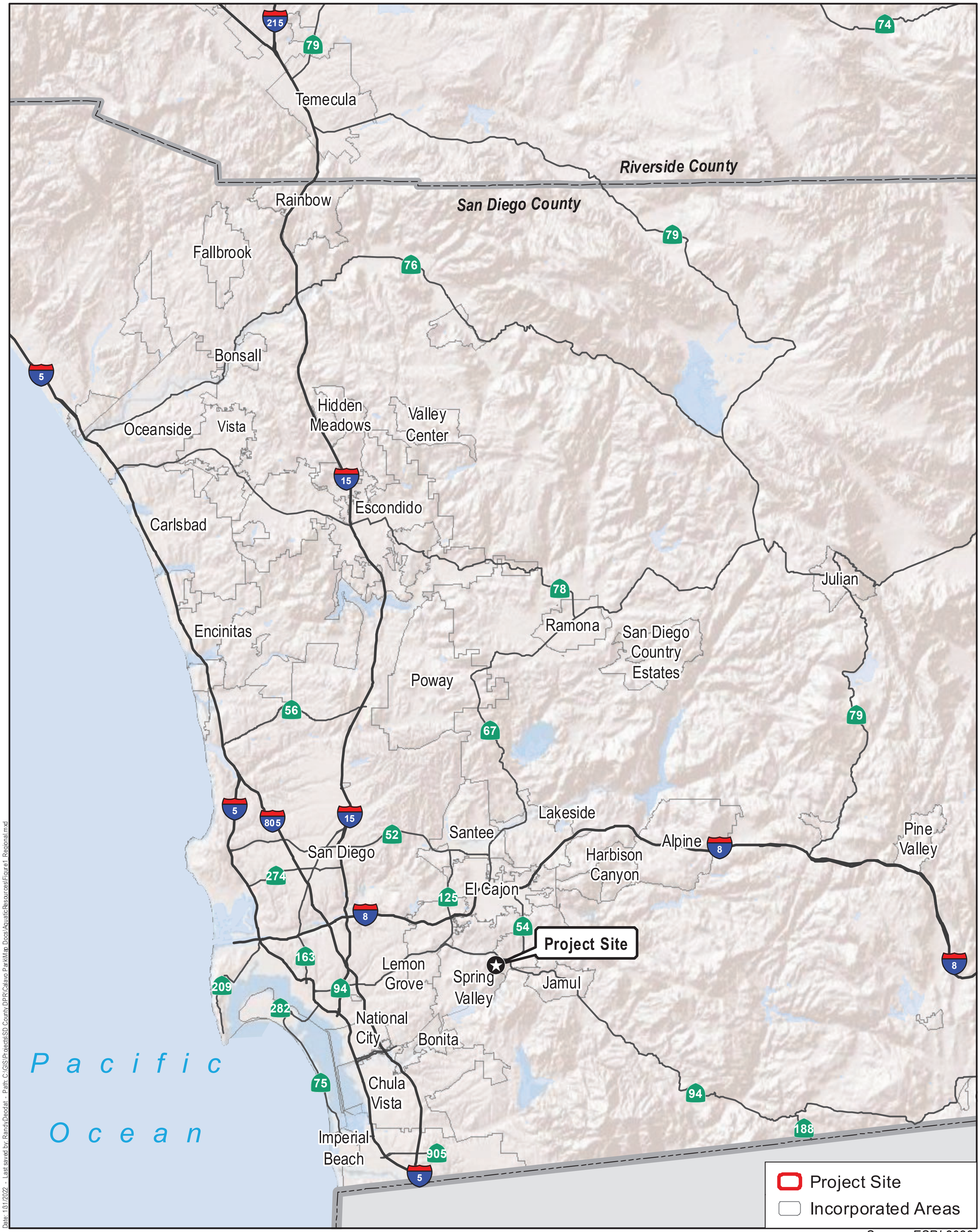

Source: ESRI 2020.

Harris & Associates

Figure 1
Regional Location
Calavo Park

Source: SanGIS Imagery 2017.

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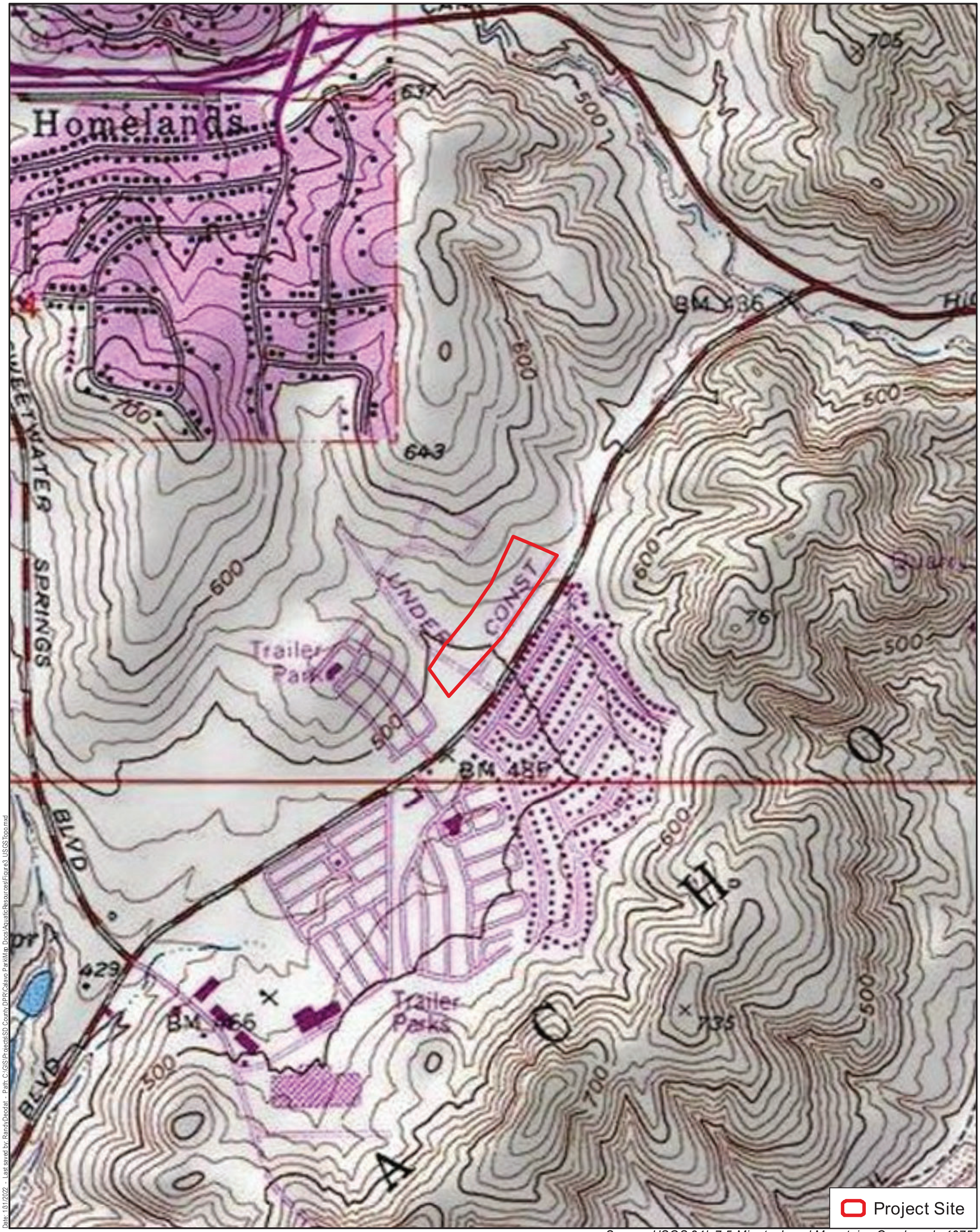
Harris & Associates

Figure 2

Project Site

Calavo Park



Source: USGS 24k 7.5-Minute Jamul Mountains Quadrangle 1975.

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Figure 3

USGS Topographical Map

Calavo Park

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Attachment 2. Plant and Wildlife Species Observed on the Project Site

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Plant Species Observed

Scientific Name	Common Name
Dicots	
Amaranthaceae	**Amaranth Family**
Amaranthus blitoides	Prostrate pigweed
Anacardiaceae	**Cashew or Sumac Family**
Schinus terebinthifolius[1]	Brazilian peppertree
Apiaceae	**Carrot, Celery, or Parsley Family**
Foeniculum vulgare[1]	Sweet fennel
Asteraceae	**Sunflower Family**
Ambrosia psilostachya	Western ragweed
Artemisia californica	California sagebrush
Baccharis sarothroides	Broom baccharis
Centaurea melitensis[1]	Tocalote
Corethrogyne filaginifolia	San Diego sand aster
Cynara cardunculus[1]	Artichoke thistle
Encelia farinosa	Brittlebush
Erigeron bonariensis[1]	Flax-leaved horseweed
Gazania linearis[1]	Gazania
Glebionis coronaria[1]	Crown daisy
Grindelia camporum	Common gumplant
Gutierrezia californica	California matchweed
Hedypnois cretica[1]	Crete weed
Helminthotheca echioides[1]	Bristly ox-tongue
Heterotheca grandiflora	Telegraph weed
Isocoma menziesii	Menzies' goldenbush
Lactuca serriola[1]	Prickly lettuce
Logfia gallica[1]	Narrowleaf filago
Senecio vulgaris[1]	Common groundsel
Sonchus asper[1]	Spiny sow thistle
Xanthium strumarium	Rough cocklebur
Brassicaceae	**Mustard Family**
Hirschfeldia incana[1]	Shortpod mustard
Cactaceae	**Cactus Family**
Opuntia littoralis	Prickly pear cactus
Chenopodiacaceae	**Chenopod Family**
Chenopodium murale	Nettle-leaved goosefoot
Salsola tragus[1]	Russian thistle
Convolvulaceae	**Morning Glory Family**
Calystegia macrostegia	Morning glory

Plant Species Observed

Scientific Name	Common Name
Crassulaceae	**Stonecrop Family**
Crassula connata	Sand pygmy weed
Euphorbiaceae	**Spurge Family**
Euphorbia maculata[1]	Spotted spurge
Euphorbia peplus[1]	Petty spurge
Ricinus communis[1]	Castor bean
Fabaceae	**Legume Family**
Acacia cyclops[1]	Coastal wattle
Acmispon glaber	Deerweed
Astragalus sp.	Milkvetch
Medicago polymorpha[1]	Burclover
Melilotus indicus[1]	Annual yellow sweetclover
Geraniaceae	**Geranium Family**
Erodium botrys[1]	Big heron’s bill
Erodium cicutarium[1]	Coastal heron’s bill
Lamiaceae	**Mint Family**
Marrubium vulgare[1]	Horehound
Lythraceae	**Loosestrife Family**
Lythrum hyssopifolia[1]	Grass-poly
Malvaceae	**Mallow Family**
Malva parviflora[1]	Cheeseweed
Myrsinaceae	**Myrsine Family**
Anagallis arvensis[1]	Scarlet pimpernel
Myrtaceae	**Myrtle Family**
Eucalyptus sideroxylon[1]	Red iron bark
Polygonaceae	**Buckwheat Family**
Eriogonum fasciculatum	California buckwheat
Rumex crispus[1]	Curly dock
Solanaceae	**Nightshade Family**
Nicotiana glauca[1]	Tree tobacco
Tamaricaceae	**Tamarisk Family**
Tamarix ramosissima[1]	Salt cedar
Monocots	
Agavaceae	**Agave Family**
Yucca sp.[1]	Ornamental agave
Arecaceae	**Palm Family**
Washingtonia robusta[1]	Mexican fan palm
Asphodelaceae	**Asparagale Family**
Asphodelus fistulosus[1]	Onionweed

Plant Species Observed

Scientific Name	Common Name
Poaceae	**Grass Family**
Arundo donax[1]	Giant reed
Avena sp.[1]	Oats
Brachypodium distachyon[1]	Purple false brome
Bromus diandrus[1]	Ripgut grass
Bromus madritensis[1]	Red brome/foxtail chess
Cynodon dactylon[1]	Bermuda grass
Hordeum murinum[1]	Smooth barley
Pennisetum setaceum[1]	Fountain grass
Schismus barbatus[1]	Old han schismus
Stipa sp.	Purple needlegrass

Notes:
[1] Non-native

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Wildlife Species Observed

Family	Common Name	Scientific Name
Birds		
Accipitriformes (Hawks, Kites, Eagles, and Allies)		
Accipitridae Hawks, Eagles, Kites, and Allies	Red-tailed hawk	*Buteo jamaicensis*
Falconiformes (Falcons)		
Falconidae Falcons	American kestrel	*Falco sparverius*
Caprimulgiformes (Nightjars)		
Trochilidae Hummingbirds	Anna's hummingbird	*Calypte anna*
Passeriformes (Perching Birds)		
Aegithalidae Bushtits	Bushtit	*Psaltriparus minimus*
Cardinalidae Cardinals	Blue grosbeak	*Passerina caerulea*
Charadriidae Plovers and Lapwings	Killdeer	*Charadrius vociferus*
Columbiformidae Doves	Mourning dove	*Zenaida macroura*
	Eurasian collared dove[1]	*Streptopelia decaocto*
Corvidae Jays, Magpies, and Crows	American crow	*Corvus brachyrhynchos*
Fringillidae Finches	House finch	Haemorhous mexicanus
	Lesser goldfinch	*Spinus psaltria*
Icteridae Orioles	Hooded oriole	*Icterus cucullatus*
Mimidae Mockingbirds	Northern mockingbird	*Mimus polyglottos*
Passerellidae Passerines	California towhee	*Melozone crissalis*
Parulidae Wood Warblers	Yellow-rumped warbler	*Setophaga coronata*
Turdidae Songbirds	Western bluebird[2]	*Sialia mexicana*
Tyrannidae Tyrant Flycatchers	Black phoebe	*Sayornis nigricans*
	Say's phoebe	*Sayornis saya*
	Western kingbird	*Tyrannus verticalis*

Wildlife Species Observed

Family	Family	Family
Invertebrates		
Gastropoda (Snails and Slugs)		
Helicidae Typical Snails	Italian white snail[1]	*Theba pisana*
Lepidoptera (Butterflies)		
Nymphalidae Brush-Footed Butterflies	Monarch butterfly[3]	*Danaus plexippus*
	Mourning cloak	*Nymphalis antiopa*
	Painted lady	*Vanessa cardui*
Pieridae True Butterflies	Cabbage white	*Pieris rapae*
	Cloudless sulfur	*Phoebis sennae*
Hymenoptera (Ants, Bees, Wasps, and Sawflies)		
Formicidae Ants	Harvester ant	*Pogonomyrmex* sp.
Mammals		
Rodentia (Rodents)		
Geomyidae Gophers	Botta's pocket gopher	*Thomomys bottae*
Sciuridae Squirrels, Chipmunks, and Marmots	California ground squirrel	*Spermophilus beecheyi*
Lagomorpha (Rabbits)		
Leporidae Rabbits	Desert cottontail rabbit	*Sylvilagus audubonii*
Carnivora (Carnivores)		
Canidae Coyotes, Dogs, and Wolves	Domestic dog	*Canis lupus familiaris*
Reptiles		
Squamata (Lizards and Snakes)		
Iguanidae American Arboreal Lizards, Chuckwallas, and Iguanas	Western fence lizard	*Sceloporus occidentalis*
Phrynosomatidae North American Spiny Lizards	Western side-blotched lizard	*Uta stansburiana elegans*

Notes:

1 Non-native

2 Group 2 species on the County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources – Sensitive Animal List

3 Under review for protection under the federal Endangered Species Act

Attachment 3. Sensitive Plant and Wildlife Species Potential to Occur

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Sensitive Plant Species Potential to Occur

Scientific Name	Common Name	Status[1] Federal/State/ CRPR/County	Habit, Ecology, and Life History[1]	Potential to Occur[1]
Acanthomintha ilicifolia	San Diego thornmint	FT/SE/1B.1/List A	Small annual herb endemic to San Diego County Habitat: Clay soils near vernal pools and in grassy openings in coastal sage scrub and chaparral Blooming period: April through June Elevation range: 100 to 3,150 feet	No potential. No suitable clay soils occur on the project site. Additionally, no vernal pools were observed in the survey area during the 2020 surveys. San Diego thornmint was documented in 2011 more than 3 miles northeast of the project site.
Adolphia californica	California adolphia	None/None/2B.1/List B	Perennial deciduous shrub that occurs in coastal San Diego County and northern Baja California, Mexico Habitat: Chaparral, coastal scrub, and grasslands in clay soil Blooming period: December through May Elevation range: 30 to 2,400 feet	Moderate. A small area of disturbed Diegan coastal sage scrub occurs on the project site. This species would have been observed if present on site during the 2020 surveys. This species was observed approximately 200 feet northeast of the project site in 2020.
Ambrosia pumila	San Diego ambrosia	FE/None/1B.1/List A	Perennial rhizomatous herb that occurs in San Diego County, Riverside County, and northern Baja California, Mexico Habitat: Chaparral, coastal scrub, valley and foothill grassland, and vernal pools; found in sandy loam or clay, often in disturbed areas, sometimes alkaline areas Blooming period: April through October Elevation range: 60 to 1,360 feet	Moderate. Suitable habitat is present on the project site. This species was documented in 2016 approximately 0.5 mile southeast of the project site in the USFWS San Diego National Wildlife Refuge.
Arctostaphylos otayensis	Otay manzanita	None/None/1B.2/List A	Perennial shrub endemic to California (San Diego and Riverside Counties) Habitat: Chaparral and cismontane woodlands; found in metavolcanic soils Blooming period: January through April Elevation range: 900 to 5,500 feet	No potential. No chaparral habitat occurs on the project site. The project site is below the elevation range of the species. If present on site, this shrub would have been observed during the 2020 surveys. It occurs approximately 1.3 miles southeast on San Miguel Mountain.

Sensitive Plant Species Potential to Occur

Scientific Name	Common Name	Status[1] Federal/State/ CRPR/County	Habit, Ecology, and Life History[1]	Potential to Occur[1]
Astragalus deanei	Dean's milkvetch	None/None/1B.1/List A	Perennial herb endemic to California (San Diego and Riverside Counties) Habitat: Chaparral, coastal sage scrub, and riparian forest Blooming period: February through May Elevation range: 250 to 2,300 feet	Moderate. A small area of disturbed Diegan coastal sage scrub occurs on the project site. If present on site, this species would have been observed during 2020 surveys. The historical occurrence within 3 miles does not include a date or location data. This species was documented in Dehesa more than 3 miles northeast of the project site in 2004.
Bahiopsis (Viguiera) laciniata	San Diego sunflower	None/None/None/List D	Perennial shrub that occurs in Southern California and Mexico Habitat: Chaparral and coastal sage scrub Blooming period: February through June Elevation range: 0 to 2,460 feet	Moderate. If present on site, this shrub would have been observed during 2020 surveys. This species was observed in 2020 and occurs approximately 100 feet northeast of the eastern edge of the project site in the USFWS San Diego National Wildlife Refuge.
Bloomeria clevelandii	San Diego goldenstar	None/None/1B.1/List A	Annual bulb that occurs in California and northern Baja California, Mexico Habitat: Chaparral, coastal sage scrub, valley and foothill grassland, and vernal pools Blooming period: April through May Elevation range: 150 to 1,500 feet	Moderate. Suitable habitat occurs on the project site. If present on site, this species would have been observed during 2020 surveys. This species was documented within 3 miles north/northeast of the project site in 2016 in an SDG&E easement on private property. In 2003, this species was documented approximately 1.5 miles west of the project site.
Calochortus dunnii	Dunn's mariposa lily	None/None/1B.2/List A	Perennial bulb that occurs in California and northern Baja California, Mexico Habitat: Closed-cone coniferous forest, chaparral on rocky, gabbroic, or metavolcanic soils Blooming period: April to June Elevation range: 600 to 6,000 feet	No potential. The project site is below this species' elevation range. This species has been documented approximately 1 mile southeast of the project site. This species was documented 1.3 miles southeast of the project site in 2016 in the USFWS San Diego National Wildlife Refuge.

Sensitive Plant Species Potential to Occur

Scientific Name	Common Name	Status[1] Federal/State/ CRPR/County	Habit, Ecology, and Life History[1]	Potential to Occur[1]
Ceanothus otayensis	Otay Mountain ceanothus	None/None/1B.2/None	Perennial evergreen shrub endemic to San Diego County Habitat: Chaparral Blooming period: January through April Elevation range: 2,000 to 3,600 feet	No potential. No chaparral or coniferous forest occurs on the project site. If present on site, this species would have been observed during 2020 surveys. This species was documented just over 1 mile east of the project site in 2012 in the USFWS San Diego National Wildlife Refuge.
Clinopodium chandleri	San Miguel savory	None/None/1B.2/List A	Perennial herb that occurs in Southern California and northern Baja California, Mexico Habitat: Chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland; found in rocky, gabbroic, or metavolcanic soils Blooming period: March through July Elevation range: 400 to 3,500 feet	Low. A small area of disturbed coastal sage scrub occurs on the project site. This species was documented in 2012 approximately 1 mile southeast of the project site on San Miguel Mountain.
Comarostaphylis diversifolia ssp. *diversifolia*	Summer holly	None/None/1B.2/List A	Perennial evergreen shrub that occurs in Southern California and Baja California, Mexico Habitat: Chaparral and cismontane woodland Blooming period: April through June Elevation range: 100 to 2,600 feet	No potential. No suitable habitat occurs on the project site. This species is a shrub and, if present on site, would have been observed during 2020 surveys. This species was documented in 2012 approximately 1.3 miles southeast north of the project site on San Miguel Mountain.
Cylindropuntia californica var. *californica*	Snake cholla	None/None/1B.1/List A	Perennial stem succulent that occurs in Southern California and northern Baja California, Mexico Habitat: Chaparral and coastal scrub habitats Blooming period: April through May Elevation range: 0 to 500 feet	Low. If present on site, this cactus would have been observed during 2020 surveys. This species has been documented 0.8 mile northeast of the project site in the USFWS San Diego Wildlife Refuge.
Deinandra conjugens	Otay tarplant	FT/SE/1B.1/List A	Annual endemic to San Diego County and northern Baja California, Mexico Habitat: Coastal scrub and grassland; generally, found in clay soils Blooming period: May through June Elevation range: 80 to 1,000 feet	Moderate. Suitable habitat for this species occurs on the project site. This species was documented approximately 150 feet northeast of the project site in 2016 in the USFWS San Diego National Wildlife Refuge.

Sensitive Plant Species Potential to Occur

Scientific Name	Common Name	Status[1] Federal/State/ CRPR/County	Habit, Ecology, and Life History[1]	Potential to Occur[1]
Dudleya variegata	variegated dudleya	None/None/1B.1/List A	Succulent endemic to San Diego County and northern Baja California, Mexico Habitat: Chaparral, coastal scrub, grassland, woodlands, and vernal pools in clay soils Blooming period: April through June Elevation range: 0 to 2,000 feet	Low. Limited suitable habitat occurs on the project site. This species was documented approximately 1.1 miles southeast of the project site in 2006 in the USFWS San Diego National Wildlife Refuge.
Ericameria palmeri var. *palmeri*	Palmer's goldenbush	None/None/1B.1/List B, NE	Perennial evergreen shrub that occurs in Southern California and Baja California, Mexico Habitat: Chaparral and coastal scrub. Found in mesic soils Blooming period: July through November Elevation range: 100 to 2,000 feet	Moderate. This species is a shrub and, if present on site, would have been observed during 2020 surveys. This species was observed in 2020 approximately 0.3 mile north of the project site.
Ferocactus viridescens	San Diego barrel cactus	None/None/2B.1/List B	Perennial stem succulent that occurs in San Diego County and Baja California, Mexico Habitat: Chaparral, coastal scrub, vernal pools, and grasslands Blooming period: May through June Elevation range: 10 to 1,500 feet	Low. This species would have been observed during 2020 surveys if present on site. This species was documented in 2013 approximately 1.3 miles southeast of the project site in the USFWS San Diego National Wildlife Refuge.
Grindelia hallii	San Diego gumplant	None/None/1B.2/List D	Perennial herb endemic to San Diego County Habitat: Chaparral, coastal sage scrub, coniferous forest, grasslands, and meadows Blooming period: July through October Elevation range: 600 to 5,700 feet	Low. Limited suitable habitat occurs on the project site. This species was observed in 1949 within 3 miles of the project site.
Isocoma menziesii var. *decumbens*	Decumbent goldenbush	None/None/1B.2/List A	Perennial shrub that occurs in Southern California and Baja California, Mexico Habitat: Chaparral and coastal scrub Blooming period: April through November Elevation range: 0 to 450 feet	Moderate. Limited suitable Diegan coastal scrub habitat occurs on the project site. This species was documented in 2012 approximately 1 mile southwest of the project site.
Iva hayesiana	San Diego marsh-elder	None/None/2B.2/List B	Perennial herb that occurs in Southern California and Baja California, Mexico Habitat: Marshes, swamps, and playas Blooming period: April through October Elevation range: 0 to 1,500 feet	Low. No suitable habitat occurs on site. This species was documented in 2010 approximately 1 mile northeast of the project site in the USFWS San Diego National Wildlife Refuge.

Sensitive Plant Species Potential to Occur

Scientific Name	Common Name	Status[1] Federal/State/ CRPR/County	Habit, Ecology, and Life History[1]	Potential to Occur[1]
Lepechinia ganderi	Gander's pitcher sage	None/None/1B.3/List A	Perennial shrub that occurs in San Diego County and Baja California, Mexico Habitat: Closed-cone coniferous forests, chaparral, coastal scrub, and grasslands; found in gabbroic or metavolcanic soils Blooming period: June through July Elevation range: 1,000 to 3,200 feet	Low. A small area of disturbed Diegan coastal sage scrub habitat occurs in the northern portion of the project site. This species was documented in 2012 approximately 2 miles southeast of the project site in the USFWS San Diego National Wildlife Refuge.
Lepidium virginicum var. *robinsonii*	Robinson's peppergrass	None/None/4.3/List A	Annual herb that occurs in California and Baja California, Mexico Habitat: Chaparral and coastal scrub Booming period: January to July Elevation range: 0 to 2,900 feet	Low. A small area of disturbed Diegan coastal sage scrub occurs on the project site. This species was documented in 2008 approximately 2 miles southeast of the project site.
Monardella hypoleuca ssp. *lanata*	Felt-leaved rock mint	None/None/1B.2/List A	Perennial rhizomatous herb that is endemic to San Diego County and northern Baja California, Mexico Habitat: Chaparral and woodlands Blooming period: June through August Elevation range: 1,000 to 5,000 feet	Low. No suitable habitat occurs on project site. Historically, this species has been documented within 3 miles of the project site, but no data are provided (CDFW 2020). In 1978, it was documented more than 3 miles northeast of the project site on McGinty Mountain.
Nama stenocarpa	Mud nama	None/None/2B.2/List B	Annual or perennial herb that occurs in the southwestern United States and in Mexico Habitat: Marshes, swamps, and riverbanks Blooming period: January through July Elevation range: 0 to 1,600 feet	No Potential No suitable wetland habitat occurs on the project site. This species was documented in 2007 approximately 1 mile east of the project site near Sweetwater River.
Salvia munzii	Munz's Sage	None/None/2B.2/List B	Perennial evergreen shrub that occurs in Southern California and Mexico Habitat: Chaparral and coastal scrub Blooming period: February to April Elevation range: 400 to 3,500 feet	Low. Limited coastal sage scrub habitat occurs on the project site. This species was documented approximately 0.9 mile southwest of the project site.
Senecio aphanactis	Chaparral ragwort	None/None/2B.2/List B	Annual herb that occurs in California and Baja California, Mexico Habitat: Chaparral, cismontane woodland, and coastal scrub Blooming period: January through April Elevation range: 0 to 2,500 feet	Low. This species is uncommon in San Diego County. It was observed southeast of the project site in 1935.

Sensitive Plant Species Potential to Occur

Scientific Name	Common Name	Status[1] Federal/State/ CRPR/County	Habit, Ecology, and Life History[1]	Potential to Occur[1]
Streptanthus bernardinus	Laguna Mountains jewelflower	None/None/4.3/List D	Perennial herb that occurs in Southern California and Baja California, Mexico Habitat: Chaparral and coniferous forest Blooming period: May through August Elevation range: 2,200 to 8,200 feet	No potential. The project site is below this species' elevation range. It was observed southeast of the project site in 1939.
Suaeda esteroa	Estuary seablite	None/None/1B.2/List A	Perennial herb that occurs in Southern California and Mexico Habitat: Salt marsh Blooming period: May through October Elevation range: Occurs at sea level (0 to 20 feet)	No potential. No suitable habitat occurs on the project site. This species was observed southwest of the project site in 2007.
Tetracoccus dioicus	Parry's tetracoccus	None/None/1B.2/List A	Perennial deciduous shrub that occurs in Southern California and Baja California, Mexico Habitat: Chaparral and coastal scrub Blooming period: April through May Elevation range: 540 to 3,280 feet	No potential. The project site is below the species' elevation range. Parry's tetracoccus was documented in 2011 more than 3 miles northeast of the project site on McGinty Mountain.

Notes: .1 = seriously endangered;.2 = moderately endangered;.3 = not very endangered; 1B = Species rare, threatened, or endangered in California and elsewhere; 2B = Species rare, threatened, or endangered in California but more common elsewhere; 4 = A watch list of species of limited distribution; CRPR = California Rare Plant Rank; FE = Federally listed as endangered; FT = Federally listed as threatened; List A = County of San Diego Sensitive Plant List – rare, threatened, or endangered in California and elsewhere; List B = County of San Diego Sensitive Plant List – rare, threatened, or endangered in California but more common elsewhere; List D = County of San Diego Sensitive Plant List – watch list for species of limited distribution; NE = Narrow endemic; None = No status indicated for species; SDG&E = San Diego Gas & Electric; SE = State listed as endangered; USFWS = U.S. Fish and Wildlife Service

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Sensitive Wildlife Species Potential to Occur

Scientific Name	Common Name	Status[1] Federal/State/County	Habit, Ecology, and Life History[1]	Potential to Occur[1]
Amphibians				
Anaxyrus californicus	Arroyo toad	FE/SSC/Group 1	Occurs throughout California, from Monterey County southward into northern Baja California. Primarily inhabits rivers and streams of coastal Southern California. Known to occupy aquatic, riparian, and upland habitats in the remaining suitable drainages within its range. Breeding habitat specialists and require slow-moving streams that are composed of sandy soils with sandy streamside terraces.	No potential. No suitable habitat for arroyo toad occurs on the project site. Arroyo toad was documented approximately 1 mile southeast of the project site in the Sweetwater River riparian corridor in 2003.
Spea hammondii	Western spadefoot	None/SSC/Group 2	Occurs throughout Central and Southern California, primarily in grasslands. Requires vernal pools or similar shallow, temporary pools for breeding. Adults spend the rest of the year aestivating in burrows.	Low. No suitable vernal pool habitat occurs on the project site. Western spadefoot was documented within 1 mile of the project site in the USFWS San Diego National Wildlife Refuge in 2017.
Birds				
Accipiter cooperii	Cooper's hawk	None/WL/Group 1	Occurs year-round throughout San Diego County's coastal slope where stands of trees are present. Found in oak groves, mature riparian woodlands, and eucalyptus stands or other mature forests.	Moderate. Low-quality suitable foraging and nesting habitat occurs on the project site. Cooper's hawk was documented approximately 1 mile southeast of the project site in the Sweetwater River riparian corridor in 2017.
Agelaius tricolor	Tricolored blackbird	BCC/SE/Group 1	Occurs in freshwater wetlands, in agricultural fields, and at the edges of urban areas. Foraging habitats include cultivated fields, feedlots associated with dairy farms, and wetlands. Species is a colonial nester, typically requiring open water, protected nesting substrate, and foraging area with insect prey within a few miles of the colony.	Low. No suitable habitat for tricolored blackbird occurs on the project site. Tricolored blackbird was documented approximately 1 mile southeast of the project site in the Sweetwater River riparian corridor in 1991 and 1992. More recently, tricolored blackbird was documented approximately 1.5 miles northwest of the project site nearby Casa de Oro Elementary School in 2017.

Sensitive Wildlife Species Potential to Occur

Scientific Name	Common Name	Status[1] Federal/State/County	Habit, Ecology, and Life History[1]	Potential to Occur[1]
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	None/WL/Group 1	Occurs in coastal sage scrub and sparse mixed chaparral on rocky hillsides and in canyons; also found in open sage scrub/grassy areas of successional growth. Found in San Diego County year-round.	Moderate. Low-quality suitable foraging and nesting habitat occurs on the project site. Southern California rufous-crowned sparrow was documented directly east of the project site in the USFWS San Diego National Wildlife Refuge in 2019. Several sightings were documented approximately 1 mile southeast of the project site along the Sweetwater River riparian corridor in 2013 through 2017.
Buteo lineatus	Red-shouldered hawk	None/None/Group 1	Occurs year-round in low-elevation riparian woodlands. Nests in dense riparian habitats and forages in open spaces and on the edges of mesic habitats.	Moderate. Low-quality suitable foraging and nesting habitat occurs on the project site. Red-shouldered hawk was documented several times approximately 1 mile southeast of the project site in the Sweetwater River riparian corridor in 2017 through 2020.
Buteo swainsoni	Swainson's hawk	None/ST/Group 1	Occurs in open prairies and grassland habitats throughout most of North America and parts of South America. Mainly consumes small mammals such as mice, squirrels, bats, voles, and rabbits. Males choose nesting site, which is generally near the tops of solitary trees or small tree groves.	Low. Low-quality suitable foraging and nesting habitat occurs on the project site. Swainson's hawk was documented approximately 1.5 mile southeast of the project site in the Sweetwater River riparian corridor in 2017.
Campylorhynchus brunneicapillus sandiegensis	Coastal cactus wren	None/SSC/Group 1	Occurs in coastal sage scrub with large cacti for nesting.	Low. The disturbed Diegan coastal sage scrub on the project site is not suitable for coastal cactus wren due to the lack of large cacti thickets. Potential suitable habitat occurs within 1 mile north and southeast of the project site in the USFWS San Diego National Wildlife Refuge. Coastal cactus wren was documented approximately 2 miles southeast of the project site in the Sweetwater River riparian corridor. However, this sighting was documented more than 10 years ago.

Sensitive Wildlife Species Potential to Occur

Scientific Name	Common Name	Status[1] Federal/State/County	Habit, Ecology, and Life History[1]	Potential to Occur[1]
Cathartes aura	Turkey vulture	None /None /Group 1	Present in a wide variety of habitats including open rangeland, agricultural land, and undeveloped areas. Nests in crevices in rock outcrops away from human development.	<u>Moderate.</u> Low-quality suitable foraging habitat occurs on the project site. No suitable nesting habitat occurs on the project site. Turkey vulture was documented several times approximately 1 mile southeast of the project site in the Sweetwater River riparian corridor in 2012 through 2019.
Empidonax traillii extimus	Southwestern willow flycatcher	FE/SCE/Group 1, NE	Breeds in patchy to dense riparian habitats with water present. Usually found in riparian woodlands with a well-developed canopy and a thick understory but not uniformly dense. Restricted to few known breeding sites in San Diego County.	<u>No potential.</u> No suitable habitat occurs on the project site. No sightings of southwestern willow flycatcher have been documented within 3 miles of the project site.
Eremophila alpestris actia	California horned lark	None/SSC/Group 2	Inhabits prairies, fields, airports, shores, and open ground. Diet consists of seeds and insects including spiders and snails. Nesting occurs in late spring, on open ground, generally near clumps of grass.	<u>Low.</u> Low-quality suitable foraging and nesting habitat occurs on the project site. California horned lark was documented approximately 1 mile northeast of the project site in the Sweetwater River riparian corridor. However, this sighting was documented more than 10 years ago. The most recent sighting of California horned lark was documented approximately 2 miles southwest of the project site in the Dictionary Hill Open Space in 2013.
Falco mexicanus	Prairie falcon	None/SSC/Group 1	Located in the western part of the United States and can survive in alpine climate up to 11,000 feet in elevation. Breeding habitats include grasslands or alpine tundra that supports abundant ground squirrel or pika populations. Diet consists of mostly small mammals.	<u>Low.</u> Low-quality suitable foraging and nesting habitat occurs on the project site. Prairie falcon was documented approximately 2.5 miles northeast of the project site in the USFWS San Diego National Wildlife Refuge in 2014.
Icteria virens	Yellow-breasted chat	None/SSC/Group 1	Breeds in areas of dense shrubbery, including farm fields, clear cuts, power line corridors, and forest edges. Diet consists of mainly spiders and insects, as well as fruits and berries, such as blueberries, raspberries, elderberries, and wild grapes. Nesting occurs 1 to 8 feet above the ground in low, dense vegetation.	<u>Low.</u> No suitable nesting or foraging habitat occurs on the project site. Yellow-breasted chat has been documented in large numbers approximately 1 mile southeast of the project site in the Sweetwater River riparian corridor in 1998 through 2020.

Sensitive Wildlife Species Potential to Occur

Scientific Name	Common Name	Status[1] Federal/State/County	Habit, Ecology, and Life History[1]	Potential to Occur[1]
Phalacrocorax auritus	Double-crested cormorant	None/SSC/Group 2	Water bird that needs aquatic water bodies big enough to support a fish diet. Diet also includes some insects, crustaceans, or amphibians. Nesting occurs on the ground, on rocks, in reefs with no vegetation, or atop trees.	No potential. No suitable habitat occurs on the project site. Double-crested cormorant has been documented approximately 1 mile southeast of the project site in the Sweetwater River riparian corridor in 2017 and 2018.
Polioptila californica californica	Coastal California gnatcatcher	FT/SSC/Group 1	Obligate, permanent resident of coastal sage scrub below 2,500 feet in Southern California. The breeding season extends from February through August, with peak nesting activities occurring from mid-March through May.	Low. Low-quality disturbed Diegan coastal sage scrub habitat surrounded by development occurs on the project site. Coastal California gnatcatcher has been documented approximately 0.5 mile east of the project site in the USFWS San Diego National Wildlife Refuge in 2016 and approximately 1 mile southeast of the project site in the Sweetwater River riparian corridor in 2017 through 2019.
Setophaga petechia	Yellow warbler	None/SSC/Group 2	Generally, found in the northern part of the U.S. and Canada, but migrate to southern parts of the United States. In California, they inhabit dry scrub, marshes, and forests typically in lowlands but can live in elevations up to 8,500 feet.	Low. Suitable habitat does not occur on the project site. Yellow warbler has been documented approximately 1 mile southeast of the project site in the Sweetwater River riparian corridor in 2017 through 2020.
Sialia mexicana	**Western bluebird**	**None/None/Group 2**	**Inhabits woodlands, grasslands, scrub, deserts, and agricultural habitats throughout California. Nests in cavities in live trees, snags, and artificial substrates.**	**Present. Western bluebird was observed foraging in the central portion of the project site during the 2020 surveys. The majority of the project site provides foraging habitat for western bluebird. The small eucalyptus woodland surrounded by development on the project site provides potential nesting habitat.**
Vireo belli pusillus	Least Bell's vireo	FE/SCE/Group 1	Occurs in riparian scrub and riparian forest and is a summer resident in Southern California below 2,000 feet. Least Bell's vireo is known to feed primarily on insects and spiders.	Low. No suitable riparian habitat occurs on the project site. Least Bell's vireo has been documented approximately 1 mile southeast of the project site in the Sweetwater River riparian corridor in 2012 through 2017.

Sensitive Wildlife Species Potential to Occur

Scientific Name	Common Name	Status[1] Federal/State/County	Habit, Ecology, and Life History[1]	Potential to Occur[1]
		Invertebrates		
Danaus plexippus	**Monarch butterfly[2]**	**FC/None/Group 2**	**Lays eggs on milkweed (*Asclepias* sp.), the species' host plant, primarily found in shrub and grassland habitat. Monarch butterflies are found across North America wherever suitable feeding, breeding, and overwintering habitat exists. This species has been found in urban areas laying eggs on non-native milkweed and foraging/nectaring on native and non-native flowering plants.**	**Present. One adult monarch butterfly was observed flying through the project site during the 2020 surveys. No milkweed occurs on the project site.**
Euphydryas editha quino	Quino checkerspot butterfly	FE/None/Group 1, NE	Inhabits sunny openings within chaparral and coastal sage schrublands. Quino checkerspot butterfly is restricted to Riverside and San Diego Counties in California and northern areas of Baja California in Mexico. Host plants include California plantain (*Plantago erecta*), rigid bird's beak (*Cordylanthus rigidus*), *Collinsia* spp., Patagonia plantain (*Plantago patagonica*), Coulter's snapdragon (*Antirrhinum coulterianum*), and Owl's clover (*Castilleja exserta*).	Low. Low-quality disturbed Diegan coastal sage scrub habitat surrounded by development occurs on the project site. Quino checkerspot butterfly has been documented approximately 1 mile east of the project site in the USFWS San Diego National Wildlife Refuge in 2010. Quino checkerspot butterfly host plants were not observed on the project site.
Lycaena hermes	Hermes copper butterfly	FC/None/Group 1	Occurs in patches of spiny redberry (*Rhamnus crocea*) in the vicinity of California buckwheat (*Eriogonum fasciculatum*) that grows in southern mixed chaparral and coastal sage scrub. Hermes copper butterfly is endemic to San Diego County and northern Baja California, Mexico. This species' adult flight period is from mid-May through early July.	Low. Low-quality disturbed Diegan coastal sage scrub habitat surrounded by development occurs on the project site. No spiny redberry occurs on the project site. Hermes copper butterfly has been documented approximately 1 mile east of the project site in the USFWS San Diego National Wildlife Refuge in 2004.

Sensitive Wildlife Species Potential to Occur

Scientific Name	Common Name	Status[1] Federal/State/County	Habit, Ecology, and Life History[1]	Potential to Occur[1]
Mammals				
Corynorhinus townsendii	Townsend's big-eared bat	FC/SSC/Group 2	Inhabits habitats with limited desert scrub vegetation but stops short of living in extreme desert environments. Roosting sites commonly in caves, cliffs, and rock ledges but have been found in abandoned mines and other human-made structures.	Low. No caves, cliffs, or rock ledges suitable roosting habitat occur on the project site. Townsend's big-eared bat has been documented approximately 1 mile east of the project site in the USFWS San Diego National Wildlife Refuge in 2002.
Eumops perotis californicus	Western mastiff bat	None/SSC/Group 2	Inhabits coniferous and deciduous woodlands, coastal scrub, grasslands, chaparral, desert scrub, palm oases, and urban land from Monterey County south into Baja California. Roosts in crevices on cliff faces, high buildings, trees, and tunnels.	Moderate. Low-quality suitable foraging habitat occurs on the project site. Large trees suitable for roosting by western mastiff bat occur on the southwestern edge and surrounding the project site. Western mastiff bat was documented approximately 1 mile east of the project site in the USFWS San Diego National Wildlife Refuge in 2002.
Lasiurus cinereus	Hoary bat	None/SSC/None	Found in wooded areas from Canada to Mexico. Mainly eats small insects. Roosts in trees.	Low. Large trees suitable for roosting by hoary bat occur on the southwestern edge and surrounding the project site. Hoary bat was documented approximately 1 mile east of the project site in the USFWS San Diego National Wildlife Refuge in 2003.
Lasiurus xanthinus	Western yellow bat	None/SSC/None	Found in riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	Low. No suitable habitat occurs on the project site. Potentially suitable roosting habitat occurs in the large trees on the southwestern edge and surrounding the project site; however, this area is surrounded by development, and no foraging habitat occurs on the project site. Western yellow bat was documented in approximately 1 mile southwest of the project site nearby the Dictionary Hill open space in 2019.

Sensitive Wildlife Species Potential to Occur

Scientific Name	Common Name	Status[1] Federal/State/County	Habit, Ecology, and Life History[1]	Potential to Occur[1]
Lepus californicus bennettii	San Diego black-tailed jackrabbit	FC/SSC/Group 2	Inhabits desert scrubland, prairies, farmlands, and dunes. Favors arid regions and areas of short grass rangeland from sea level to approximately 12,000 feet. Many different vegetation types are used, including sagebrush-creosote bush, mesquite-snakeweed, and juniper-big sagebrush. They also frequent agricultural areas where they can impact fruit and grain crops.	Low. No suitable habitat occurs on the project site. San Diego black-tailed jackrabbit was documented approximately 1.5 miles southwest of the project site in the Dictionary Hill open space in 2003.
Myotis ciliolabrum	Western small-footed myotis	FC/None/Group 2	Commonly found near sources of water with a large insect population. Elevation of selected habitats ranges from 980 to 10,800 feet above mean sea level. These bats are unique in that they do not roost in trees, inhabiting cliff faces and rocky outcroppings no farther than 6,500 feet away from their foraging grounds. In the summer, western small-footed bats will change their roost sites to crevices and cavities in cliff faces to escape the sun and heat. They also use human-made structures like buildings (e.g., abandoned houses), bridges, caves, and mines.	Low. No caves, cliffs, mines, or rock ledges suitable roosting habitat occur on the project site. Western small-footed myotis has been documented approximately 1 mile east of the project site in the USFWS San Diego National Wildlife Refuge in 2003.
Myotis evotis	Long-eared myotis	FC/None/Group 2	Distribution ranges from British Columbia, Canada to Southern California and into Baja California. Feeds on small insects. Can live in a variety of vegetation communities. Selection of roosts, regardless of bat sex or type, is strongly influenced by proximity to water.	Low. Large trees suitable for roosting by long-eared myotis occur on the southwestern edge and surrounding the project site. Long-eared myotis was documented approximately 1 mile east of the project site within the USFWS San Diego National Wildlife Refuge in 2003.
Myotis yumanensis	Yuma myotis	FC/SSC/Group 2	Inhabits open woodlands adjacent to water for foraging. Occurs throughout California but is uncommon in the deserts and elevations above 8,000 feet above mean sea level. Nocturnal insectivore that roosts in crevices, caves, mines, and underneath bridges.	Low. No caves, cliffs, mines, or rock ledges suitable roosting habitat occur on the project site. Yuma myotis has been documented approximately 1 mile east of the project site in the USFWS San Diego National Wildlife Refuge in 2002.

Sensitive Wildlife Species Potential to Occur

Scientific Name	Common Name	Status[1] Federal/State/County	Habit, Ecology, and Life History[1]	Potential to Occur[1]
Nyctinomops femorosaccus	Pocketed free-tailed bat	None/SSC/Group 2	Roosts colonially in crevices on steep cliffs, on rocky outcrops, and in caves and buildings. Feeds on insects nocturnally.	Low. No caves, cliffs, or rock ledges suitable roosting habitat occur on the project site. Pocketed free-tailed bat has been documented approximately 1 mile east of the project site in the USFWS San Diego National Wildlife Refuge in 2002.
Odocoileus hemionus	Southern mule deer	None/None/Group 2	Found in grasslands, woodlands, and sparse shrub communities throughout California.	Moderate. Low-quality suitable habitat exists on the project site. Southern mule deer sign has been documented approximately 1 mile east of the project site in the USFWS San Diego National Wildlife Refuge in 2019.
Reptiles				
Anniella stebbinsi	San Diegan (Southern California) legless lizard	None/SSC/Group 2	Occurs throughout cismontane California in coastal dune, valley-foothill, chaparral, and coastal scrub habitats. Burrows in shallow soil or leaf litter near the base of shrubs.	Low. Low-quality suitable Diegan coastal sage scrub habitat occurs on the project site; however, the site is surrounded by development. San Diegan legless lizard was documented approximately 1.5 miles east of the project site in the USFWS San Diego National Wildlife Refuge in 2015.
Aspidoscelis hyperythrus	Orange-throated whiptail	None/WL/ Group 2	Coastal sage scrub, chaparral, edges of riparian woodlands, and washes. Also, found in weedy, disturbed areas adjacent to these habitats. Important habitat requirements include open, sunny areas, shaded areas, and abundant insect prey base, particularly termites (*Reticulitermes* sp.).	Moderate. Low-quality suitable Diegan coastal sage scrub habitat occurs on project site; however, the project site is surrounded by development. Orange-throated whiptail was documented in large numbers approximately 1 mile east of the project site in the Sweetwater River riparian corridor in 2014 through 2019.

Sensitive Wildlife Species Potential to Occur

Scientific Name	Common Name	Status[1] Federal/State/County	Habit, Ecology, and Life History[1]	Potential to Occur[1]
Aspidoscelis tigris stejnegeri	Coastal whiptail	None/SSC/Group 2	Open coastal sage scrub, chaparral, and woodlands. Frequently found along the edges of dirt roads traversing its habitats. Important habitat components include open, sunny areas, shrub cover with accumulated leaf litter, and an abundance of insects, spiders, or scorpions.	Moderate. Low-quality suitable Diegan coastal sage scrub habitat occurs on project site; however, the project site is surrounded by development. Coastal whiptail was documented approximately 1 mile east of the project site in the Sweetwater River riparian corridor in 2017 through 2019.
Coleonyx variegatus abbotti	San Diego banded gecko	None/SSC/None	Occurs in rocky areas and grassing openings in coastal sage scrub.	Low. Suitable rocky areas and low-quality Diegan coastal sage scrub habitat occurs on project site; however, the project site is surrounded by development. San Diego banded gecko was documented approximately 1.5 miles northeast of the project site in 2019.
Crotalus ruber	Red-diamond rattlesnake	None/SSC/Group 2	Inhabits dense coastal sage scrub, chaparral, woodlands, and desert habitats from sea level to 3,000 feet above mean sea level in San Diego, Riverside, and San Bernardino Counties. It usually occurs in rocky areas or areas with abundant rodent burrows or other forms of cover.	Moderate. Suitable rocky areas and low-quality Diegan coastal sage scrub habitat occurs on project site; however, the project site is surrounded by development. Red-diamond rattlesnake was documented in large numbers approximately 1 mile east and southeast of the project site in the Sweetwater River riparian corridor in 2017 through 2020.
Diadophis punctatus similis	San Diego ringneck snake	None/None/Group 2	Inhabits moist habitats such as oak woodlands and canyon bottoms, occasionally grassland, chaparral, and coastal sage scrub.	Low. Low-quality suitable Diegan coastal sage scrub habitat occurs on the project site; however, the site is surrounded by development. San Diegan ringneck snake was documented approximately 1 mile east of the project site in the USFWS San Diego National Wildlife Refuge in 2006.

Sensitive Wildlife Species Potential to Occur

Scientific Name	Common Name	Status[1] Federal/State/County	Habit, Ecology, and Life History[1]	Potential to Occur[1]
Masticophis fuliginosus	Baja California coachwhip	None/SSC/Group 2	Inhabits Baja California and Southern San Diego County. Prefer hot, dry, open areas. Tail is very long and thin and appears braided.	Low. Suitable rocky open areas occur on the project site; however, the site is surrounded by development. Baja California coachwhip was documented approximately 1.5 miles southeast of the project site in the Sweetwater River riparian corridor in 2015 and 2018.
Phrynosoma blainvillii	Blainville's (Coast) horned lizard	None/SSC/Group 2	Occurs in coastal sage scrub, chaparral, and grasslands in primarily loose soils in San Diego County. Forages primarily on harvester ants (*Pogonomyrmex* sp).	Moderate. Suitable low-quality Diegan coastal sage scrub habitat occurs on project site; however, the project site is surrounded by development. Harvester ants were observed on the project site. Blainville's (coast) horned lizard was documented approximately 1 mile east and southeast of the project site in the Sweetwater River riparian corridor in 2018 through 2020.

Notes: BCC = Bird of Conservation Concern; FC = Federal Candidate; FE = Federally Endangered; FT = Federally Threatened; Group 1 = Group 1 Species on County of San Diego Multiple Species Conservation Program (MSCP) Subarea Plan Sensitive Animal List; Group 2 = Group 2 Species on County of San Diego Biological Resources Guidelines Sensitive Animal List; NE = Narrow endemic; None = No status indicated for species; SCE = State candidate for listing as endangered; SE = State Endangered; SSC = California Species of Special Concern; ST = State Threatened; USFWS = U.S. Fish and Wildlife Service; WL = California watch list species

Bold indicates that the species occurs on site.

[1] Sources: CDFW (California Department of Fish and Wildlife). 2020. California Natural Diversity Database (CNDDB). Accessed May 2020. https://wildlife.ca.gov/Data/CNDDB.

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[2] Under review for protection under the Federal Endangered Species Act.

Attachment 4. Aquatic Resources Memorandum

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Harris & Associates

November 5, 2021

Nicole Ornelas
Land Use/Environmental Planner
Resource Management Division
County of San Diego, Department of Parks and Recreation
5500 Overland Avenue, Suite 410
San Diego, California 92123

CALAVO PARK AQUATIC RESOURCES ASSESSMENT

Dear Ms. Whitty:

The purpose of this letter is to provide the County of San Diego (County) Department of Parks and Recreation the results of the aquatic resources assessment that was conducted at the proposed Calavo Park (project) site on March 17, 2020. No sensitive aquatic resources were documented on site.

The project is on an approximately 9-acre property (project site) in the unincorporated community of Spring Valley in San Diego County, California (Attachment 1, Figures, Figures 1, Regional Location, and 2, Project Site). The project site is between residential development northeast of the intersection of Calavo Drive and Jamacha Boulevard. Surrounding land uses include single- and multi-family residential to the northwest, east, and south and the U.S. Fish and Wildlife Service's San Diego National Wildlife Refuge to the northeast (Figure 2).

The project includes development of a community park; the County is developing the park design. The project site is undeveloped. Vegetation communities and land cover types on the project site include disturbed habitat, disturbed Diegan coastal sage scrub, eucalyptus woodland, and developed land. The project site is relatively flat (Figure 3, USGS Topographical Map).

Due to proximity of the site to residential units, it is highly disturbed and regularly mowed by the County (Attachment 2, Photographs 1 and 2). Other human disturbances include tire tracks that traverse the middle section of the parcel from south to north, small human-made depressions in the middle and northern portion of the site dug by humans, people walking dogs, and some trash.

On February 11, 2020, two Harris biologists conduced the habitat assessment. During the habitat assessment, the biologists noted a few small depressions and a linear area that had previously been accessed by vehicles. Photograph 3 in Attachment 2 shows one of the disturbed depressions.

The biologists recommended visiting the site after a significant precipitation or rain event (greater than 0.25 inch of rain in a 24-hour period) to determine if any sensitive aquatic resources occurred on site.

Meteorological data for the project site is gathered at the La Mesa weather station, approximately 3.5 miles north of the project site. The average precipitation on the project site is approximately 12.3 inches annually, occurring primarily from October through April. Based on data from the La Mesa weather station, the vicinity of the project site receives the greatest amount of rain, an average of 2.58 inches during February (U.S. Climate Data 2021; NOAA 2021).

Between March 8 and March 16, 2020, the San Diego region received 1.3 inches of rain. On March 14, 2020, San Diego received 0.4 inch of rain. On March 17, 2020, two Harris biologists conduced the aquatic resources assessment and first rare plant survey. No sensitive aquatic resources or rare plants were observed.

Sensitive aquatic resources include drainage channels with an ordinary high water mark and three-parameter wetlands (USACE 1987, 2008a, 2008b). The three parameters for a federally regulated wetland include the following:

- **Hydrophytic vegetation** – Species that, due to morphological, physiological, and/or reproductive adaptation(s), have the ability to grow, effectively compete, reproduce, and/or persist in anaerobic soil conditions created by extended periods of soil saturation
- **Hydric soil** – Soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions
- **Wetland hydrology** – Hydrologic characteristics of areas that are periodically inundated or have soils saturated to the surface at some time during the growing season

During the site visit on March 17, 2020, none of the disturbed depressions contained hydrophytic vegetation or surface water. One isolated mulefat (*Baccharis salicifolia*) shrub, a facultative wet[1] hydrophytic species, occurs in the disturbed coastal sage in the northeastern portion of the project site. One non-native Mexican fan palm (*Washingtonia robusta*), a facultative wet hydrophytic species, occurs in the western portion of the project site (Photograph 2 in Attachment 2). Both species were surrounded by upland non-hydrophytic species, and no other wetland indicators were observed in the area. East of the project site is a concrete stormwater swale that directs water from a developed area north of the site to a developed area south of the site (Photograph 4 in Attachment 2).

Please contact me at your convenience if you have any questions.

Sincerely,

Harris & Associates, Inc.

Katie Laybourn
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Attachments
1, Figures
2, Photographic log

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USACE. 2008b. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual. ERDC/CRREL TR-08-12. Prepared by Robert W. Lichvar and Shawn M. McColley. Cold Regions Research and Engineering Laboratory, U.S. Army Engineer Research and Development Center. August. Accessed November 2021. https://www.spl.usace.army.mil/Portals/17/docs/regulatory/JD/FinalOHWMManual_2008.pdf.

[1] A facultative wet species is a species that occurs in wetlands more often than in uplands; it is a species that occurs in wetlands more than 50 percent of the time.

Attachment 1. Figures

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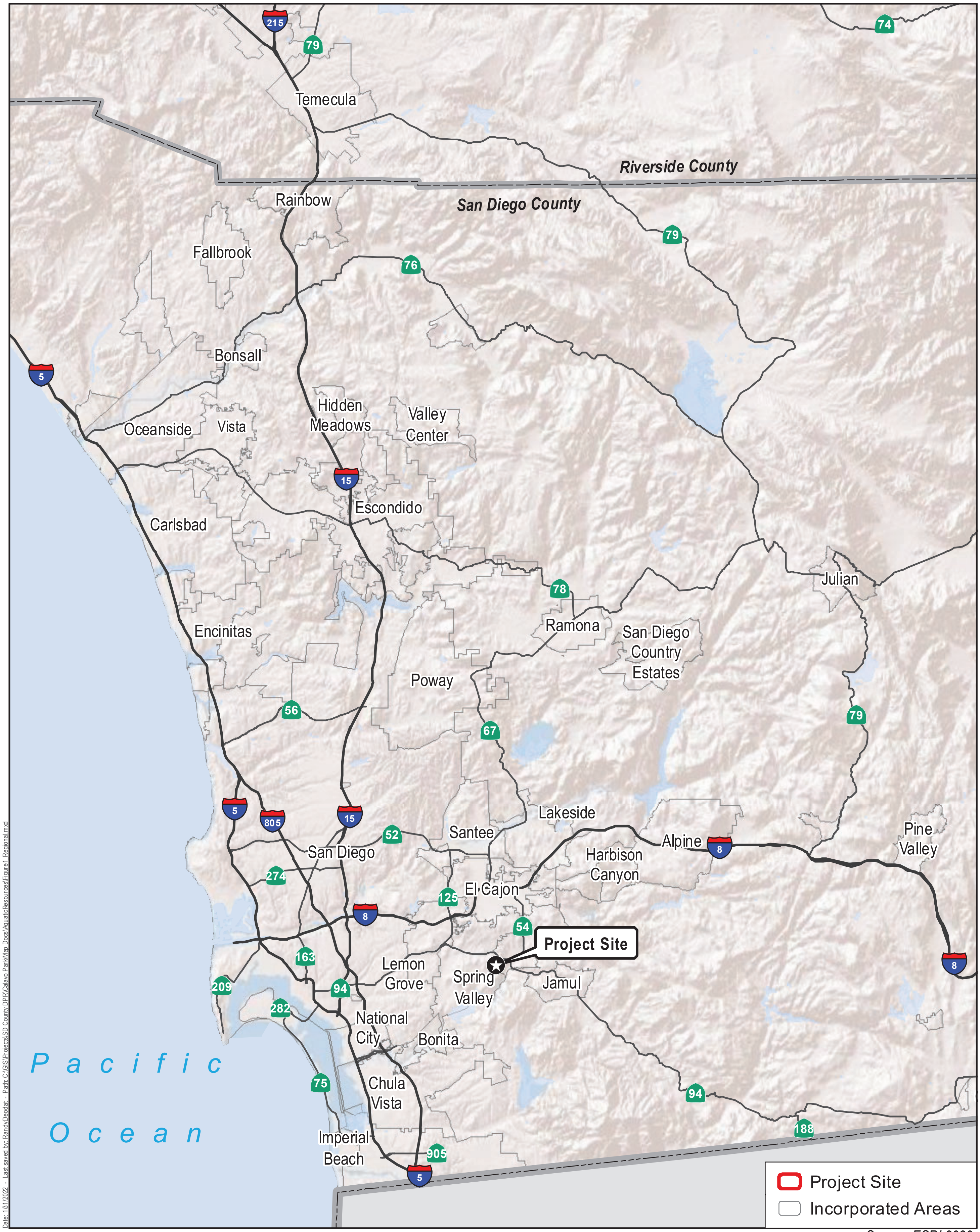

Source: ESRI 2020.

Harris & Associates

N

0 5 10

Miles

Figure 1

Regional Location

Calavo Park

Source: SanGIS Imagery 2017.

Harris & Associates

N

0 100 200

Feet

Figure 2

Project Site

Calavo Park

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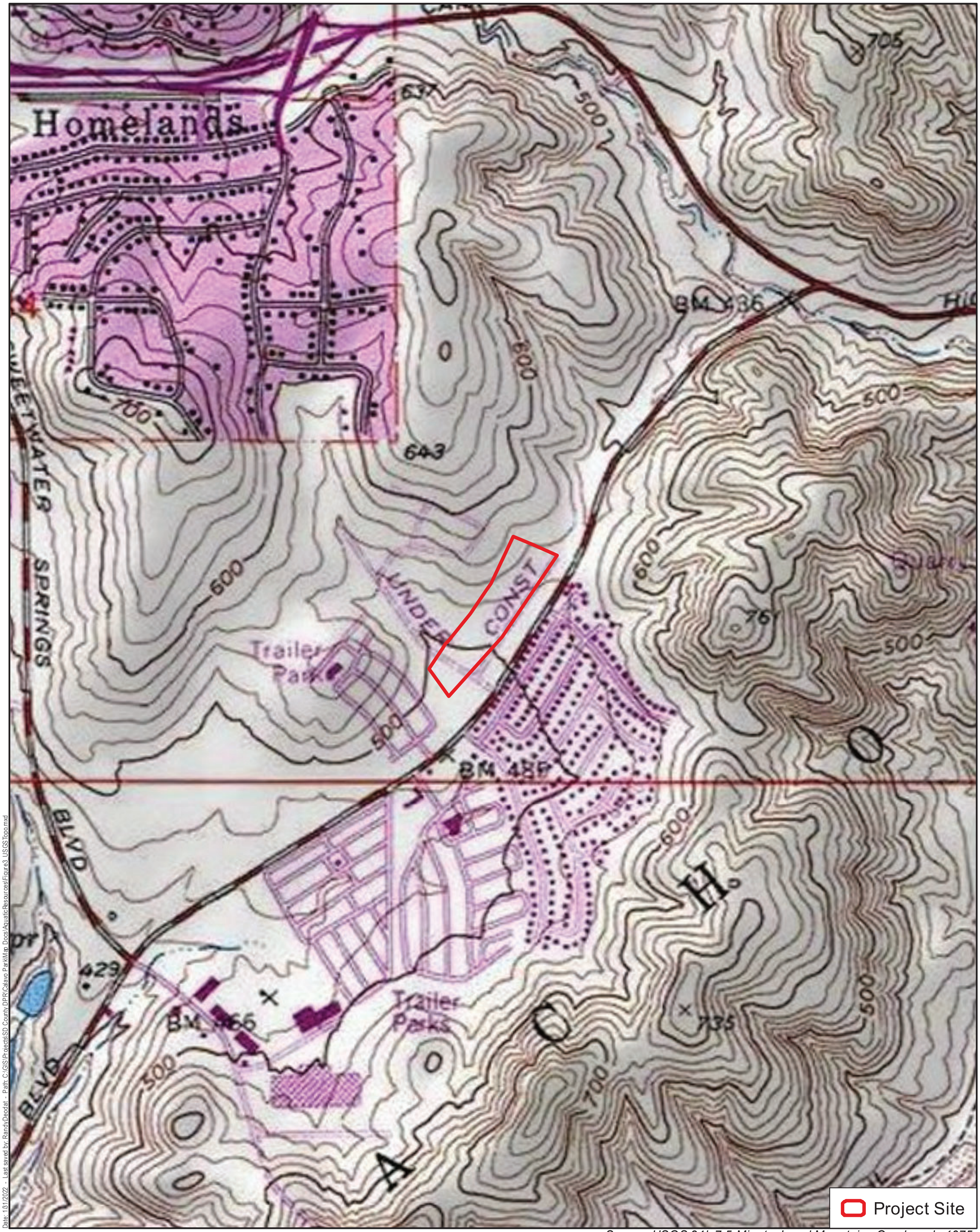

Source: *USGS 24k 7.5-Minute Jamul Mountains Quadrangle 1975.*

N

0 500 1,000

Feet

Figure 3

USGS Topographical Map

Calavo Park

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Attachment 2. Photographic Log

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Source: SanGIS Imagery 2017.

Harris & Associates

N

0 100 200

Feet

Attachment 2

Photographic Log Locations

Calavo Park

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Photograph 1: Northeast-facing view of the project site looking from the north.

Photograph 2: South-facing view of the project site looking from the northeast.

Photograph 3: North-facing view of disturbed bare ground in the western portion of the project site.

Photograph 4: West-facing view of a concrete stormwater swale outside and north of the project site.

Appendix D. Cultural Resources Study

Cultural Resources Study for the County of San Diego Department of Parks and Recreation Calavo Park, Spring Valley, San Diego County, California

Prepared for:

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Submitted to:

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March 2020 (Revised August 2021)
PN 32990.03

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1.0 INTRODUCTION

The County of San Diego (County) Department of Parks and Recreation (DPR) retained ASM Affiliates (ASM) to perform a Phase I cultural resources survey of approximately 9 acres (project area) proposed for development as part of the Proposed Calavo Park Project (project). The objective of the study was to relocate existing cultural resources and identify undocumented resources within the project area. ASM cultural resources staff performed a records search at the South Coastal Information Center (SCIC), archival research, a Sacred Lands File Search, and a pedestrian survey of the parcel. This report summarizes the results of the cultural resources study, identifies potentially significant impacts, and proposes management recommendations for the cultural resources identified in the project area.

1.1 Project Description

In 2019, the County of San Diego Department of Parks and Recreation (DPR) acquired the approximately 9-acre property from the California Department of Transportation to develop into a recreational park for the Spring Valley community. No final plans have been formalized as environmental constraints are still being analyzed; final plans will be determined after public input meetings.

1.2 Project Location

The approximately 9-acre Property is in the community of Spring Valley, northeast of the intersection of Calavo Drive and Jamacha Boulevard. The project is within unsectioned portions of the Jamacho Mexican Land Grant in Township 16S, Range 1W (San Bernardino Base Meridian) and is shown on the USGS Jamul Mountains, California 7.5-minute quadrangle (Figure 1).

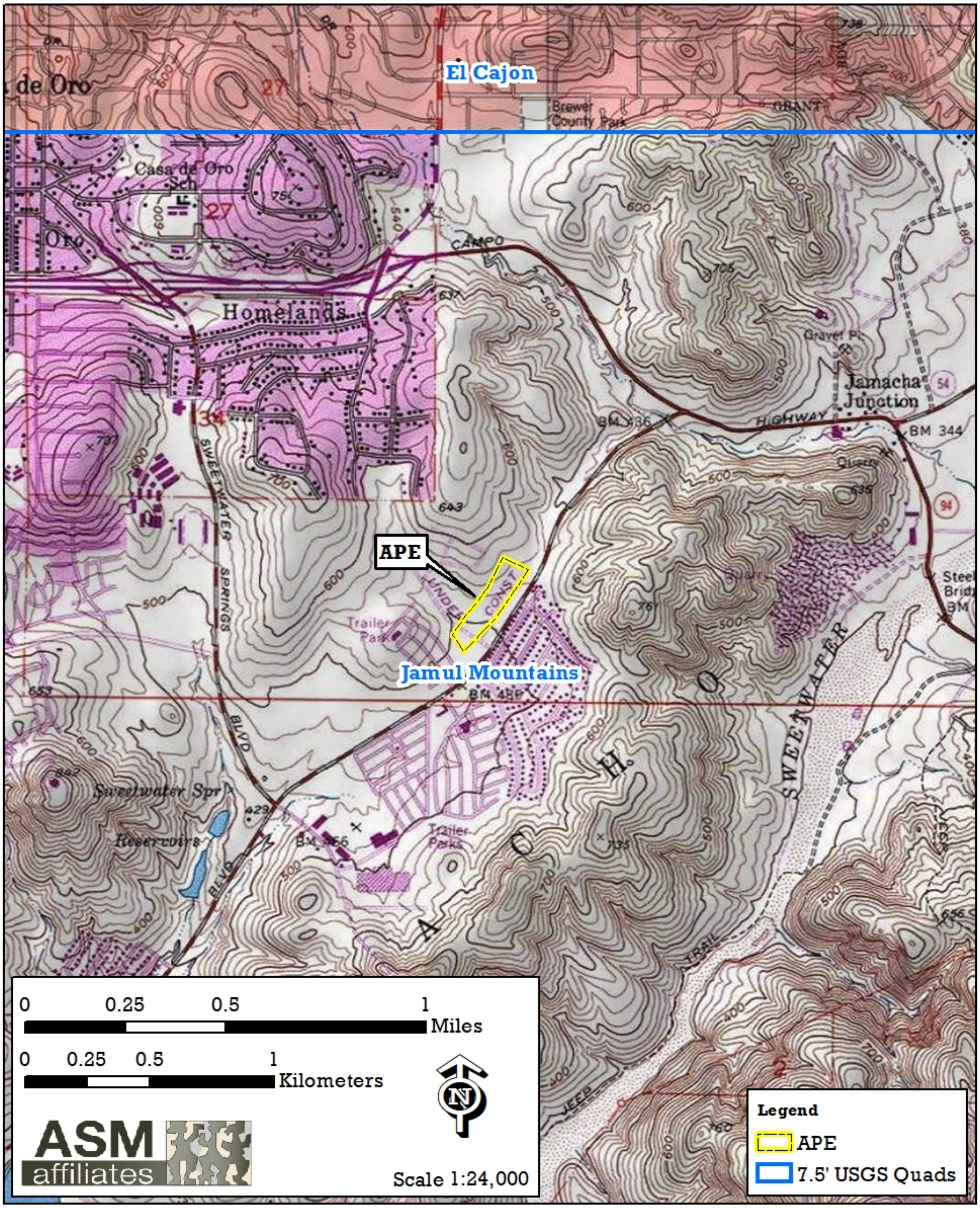

Figure 1. Project location map.

2.0 BACKGROUND

2.1 Existing Conditions

The project area is at the border of dense, urban development at the edge of the San Diego metropolitan area and low density, wildland-urban interface at the foot of San Miguel Mountain. The rugged and steep terrain of eastern San Diego County limits development and that terrain begins south of the project. The existing environmental and cultural settings are described below.

Historic aerials show the area surrounding and including the project area was graded for residential development in 1971. The project area was never developed and has lain fallow for the last 50 years.

2.1 Existing Conditions

The project is in Spring Valley, surrounded by dense urban development on three sides and the San Diego National Wildlife Refuge on the northeast. The project area is currently covered in low lying non-native grasses and small shrubs.

2.1.1 Geography

The project area is a valley between Jamacho Peak and Dictionary Hill and is surrounded by urban development. The elevation is 155 m (500 ft) above mean sea level. The project is approximately 1.75 miles (2.8 km) northeast of the Sweetwater Reservoir. Ephemeral streams feeding Sweetwater River are less than one mile to the north and south; Sweetwater River is one mile (1.6 km) to the east.

2.1.2 Geology and Soils

The project lies at the border of Southern California Batholith and Peninsular Ranges. Bedrock is primarily Mesozoic (245-65 million years ago) and is comprised of volcanic and metavolcanic rocks including andesite, rhyolite, flow rocks, greenstone, and minor pyroclastic rocks (Rogers 1965; Wagner and Maldonado 2000). The granitic and gabbroic rocks were formed in the Cretaceous period during the latter part of the Mesozoic era. They are part of the western zone of the Peninsular Ranges Batholith.

The soils in the project are Diablo clays, which are typically well-drained clay up to 40 inches overlaying bedrock (Web Soil Survey 2020).

2.1.3 Biology

The climate of the coastal mesa region is sub-Mediterranean with a mean annual temperature of 85° F and a mean minimum temperature of 40° F. Precipitation varies greatly from year to year with cycles of drought. Annual rainfall ranges from 25 to 35 cm, occurring primarily during the months of December through April (Bowman 1973). In general, the microclimates within the region are influenced by elevation and distance from the coast. Incidental moisture from morning fogs and coastal squalls decreases rapidly with distance from the coast and has been relatively stable over the last 2,200 years (Heussen 1978).

The project is within the Southern California Diegan Coastal Hills and Valley Ecoregion which is characterized by coastal shrub and chaparral (Griffith et al. 2016). Twentieth Century land use patterns have also radically altered the local vegetative communities in the area, specifically the introduction of non-native grasses and other invasive species. Plant species that typify these communities include California sagebrush (*Artemesia californica*), laurel sumac (*Malosma laurinia*), white sage (*Salvia apiana),* California buckwheat (*Eriogonum fasciculatum*), bush mallow *(Malacothamnus fasciculatus),* port sumac (*Rhus laurinea*), yellow star thistle (*Centaurea melitensis*), cardoon (*Cynara cardunculus*), blue-eyed grass

(Sisyrinchium bellum), wild oats (*Avena fatua*), dove weed *(Eremocarpus estigerus*), deer weed (*Lotus scoparius*), and curly dock *(Rumex crispus*). Oaks (*Quercus sp.)* and small thickets of lemonade berry bushes *(Rhus integrifolia*) were once common in the valley floors and lower drainage courses. These were probably much more numerous prior to the development of the region.

Today typical fauna in the area would include the western diamond rattlesnake (*Crotalus atrox*), gopher snake (*Pituophis melanoleucus*), turkey vulture (*Cathartes aura*), red-shouldered hawk *(Buteo jamaicensis)*, mourning dove (*Zenaida macroura),* scrub jay *(Aphelocoma coerulescens*), common raven (*Corvus corax*), greater roadrunner (*Geococcyx californianus*), California ground squirrel (*Spermophilus beecheyi*), gopher (*Thomomys sp*.), jackrabbit (*Lepus sp*.), cotton-tailed rabbit *(Lepus sp*.), mule deer (*Odocoileus hermionus*), and western tanager (*Piranga ludoviciana*). Additional fauna common to the area include coyote (*Canis latrans*), striped skunk (*Mephitits mephitis*), Virginia opossum (*Didelphi virginiana*), bushtit (*Psaltriparus minimus*), and the California towhee (*Pipilo crissalis).*

2.2 Cultural Setting

2.2.1 Prehistoric Period

Archaeological investigations in southern California have documented a diverse range of human adaptations extending from the late Pleistocene up to the time of European contact (e.g., Erlandson and Colten 1991; Erlandson and Glassow 1997; Erlandson and Jones 2002; Jones and Klar 2007; Moratto 1984). To describe and discuss this diversity, local investigators have proposed a variety of different chronologies and conceptual categories (periods, horizons, stages, phases, traditions, cultures, peoples, industries, complexes, and patterns), often with confusingly overlapping or vague terminology.

The prehistory of San Diego County is most frequently divided chronologically into three or four major periods. An Early Man stage, perhaps dating back tens of thousands of years, has been proposed. More generally accepted divisions include a Terminal Pleistocene/Early Holocene period (ca. 12,000-6000 B.C.) (Paleo-Indian stage; Clovis and San Dieguito patterns), a Middle/Late Holocene period (ca. 6000 B.C.-A.D. 800) (Archaic stage; La Jolla, Millingstone, Encinitas, and Pauma patterns), and a Late Prehistoric period (ca. A.D. 800-1769) (Archaic stage; San Luis Rey, Palomar, and Peninsular patterns).

2.2.2 Early Prehistoric Period Complexes (pre c. 12,000 BP-6000 BP)

The antiquity of human occupation in the New World has been the subject of considerable interest and debate for more than a century. At present, the most widely accepted model is that humans first entered portions of the western hemisphere lying to the south of Alaska between about 15,000 and 12,000 B.C., either along the Pacific coastline or through an ice-free corridor between the retreating Cordilleran and Laurentide segments of the continental glacier in Canada, or along both routes. While there is no generally accepted evidence of human occupation in coastal southern California prior to about 11,000 B.C., ages estimated at 48,000 years and even earlier sometimes have been reported (e.g., Bada et al. 1974; Carter 1980). However, despite intense interest and the long history of research, no widely accepted evidence of human occupation of North America dating prior to about 12,000 B.C. has emerged.

Local claims for Early Man discoveries have generally been based either on the apparent crudeness of the lithic assemblages that were encountered or on the finds' apparent Pleistocene geological contexts (Carter 1957, 1980; Minshall 1976, 1989; Reeves et al. 1986). The amino acid racemization technique was used in the 1970s and early 1980s to assign Pleistocene ages to coastal southern California sites (Bada et al. 1974), but the technique's findings have been discredited by more recent accelerator mass spectrometry (AMS) radiocarbon dating (Taylor et al. 1985).

The earliest chronologically distinctive archaeological pattern recognized in most of North America is the Clovis pattern. Dated to around 11,500 B.C., Clovis assemblages are distinguished by fluted projectile points and other large bifaces, as well as extinct large mammal remains. At least three isolated fluted points have been reported within San Diego County, but their occurrence is very sparse and their dating and contexts are uncertain (Davis and Shutler 1969; Kline and Kline 2007; Rondeau et al. 2007).

The most widely recognized archaeological pattern within this period is termed San Dieguito and has been dated from at least as early as 8500 B.C. to perhaps around 6000 B.C. (Rogers 1966; True and Bouey 1990; Warren 1966; Warren et al. 2008). The San Dieguito pattern was originally defined near the central coast of San Diego County, and its presence has been reported through extensive areas to the east, but few traces are recognized on or near the northern coast of San Diego County. Proposed characteristics to distinguish San Dieguito flaked lithic assemblages include large projectile points (Lake Mojave, Silver Lake, and other, less diagnostic forms), bifaces, crescents, scraper planes, scrapers, hammers, and choppers. The San Dieguito technology involved well-controlled percussion flaking and some pressure flaking.

Malcolm Rogers (1966) suggested that three successive phases of the San Dieguito pattern (San Dieguito I, II, and III) could be distinguished in southern California, based on evolving aspects of lithic technology. However, subsequent investigators have generally not been able to confirm such changes, and the phases are not now generally accepted.

A key issue has concerned ground stone, which was originally suggested as having been absent from San Dieguito components but has subsequently been recognized as occurring infrequently within them. It was initially suggested that San Dieguito components, like other Paleo-Indian manifestations, represented the products of highly mobile groups that were organized as small bands and focused on the hunting of large game. However, in the absence of supporting faunal evidence, this interpretation has increasingly been called into question, and it has been suggested that the San Dieguito pattern represented a more generalized, Archaic-stage lifeway, rather than a true Paleo-Indian adaptation.

A vigorous debate has continued for several decades concerning the relationship between the San Dieguito pattern and the La Jolla pattern that succeeded it and that may have also been contemporaneous with or even antecedent to it (e.g., Gallegos 1987; Warren et al. 2008). The initial view was that San Dieguito and La Jolla represented the products of distinct ethnic groups and/or cultural traditions (e.g., Rogers 1945; Warren 1967, 1968). However, as early Holocene radiocarbon dates have been obtained for site components with apparent La Jolla characteristics (shell middens, milling tools, and simple cobble-based flaked lithic technology), an alternative interpretation has gained some favor: that the San Dieguito pattern represented a functional pose related in particular to the production of bifaces, and that it represents activities by same people who were responsible for the La Jolla pattern (e.g., Bull 1987; Hanna 1983).

2.2.3 Archaic Period Complexes (6000 BP-1200 BP)

Archaeological evidence from this period in the San Diego region has been characterized as belonging to the Archaic stage, Millingstone horizon, Encinitas tradition, or La Jolla and Pauma patterns (Moratto 1984; Rogers 1945; Sutton and Gardner 2010; True 1958, 1980; True and Beemer 1982; True and Pankey 1985; Wallace 1955; Warren 1968; Warren et al. 1961). Adaptations during this period apparently emphasized gathering, in particular the harvesting of hard plant seeds, as well as small-game hunting. Distinctive characteristics of the La Jolla pattern include extensive shell middens, portable ground stone metates and manos, crudely flaked cobble tools, occasional large expanding-stemmed projectile points (Pinto and Elko forms), and flexed human burials. The inland Pauma pattern has variously been interpreted as a separate culture that was broadly similar to the contemporaneous La Jolla pattern on the coast or as a different functional pose of the same culture.

Investigators have called attention to the apparent stability and conservatism of the La Jolla pattern throughout this long period, as contrasted with less conservative patterns observed elsewhere in coastal southern California (Hale 2009; Sutton and Gardner 2010; Warren 1968). However, distinct chronological phases within the pattern have also been suggested, based on changes in the flaked lithic and ground stone technologies, the shellfish species targeted, and burial practices (Harding 1951; Moriarty 1966; Rogers 1945; Shumway et al. 1961; Sutton and Gardner 2010; Warren 1964; Warren et al. 2008).

2.2.4 Late Prehistoric Period Complexes (800 BP-250 BP)

A Late Prehistoric period in San Diego County has been distinguished, primarily on the basis of three major innovations: the use of small projectile points (Desert Side-notched, Cottonwood triangular, and Dos Cabezas forms), associated with the adoption of the bow and arrow in place of the atlatl as a primary hunting tool and weapon; brownware pottery, presumably supplementing the continued use of basketry and other containers; and the practice of human cremation in place of inhumation. Uncertainty remains concerning the exact timing of these innovations, and whether they appeared simultaneously or sequentially (e.g., Griset 1996; Yohe 1992).

Labels applied to the archaeological manifestations of this period include San Luis Rey, Palomar, and Peninsular (Meighan 1954; Sutton 2011; True 1970; True et al. 1974, 1991; Waugh 1986). These remains have generally been associated with the ethnohistorically known Luiseño, Cupeño, and Cahuilla and have been seen as perhaps marking the initial local appearance of those groups in a migration from the north. Traits characterizing the Late Prehistoric period include greater reliance on acorns as an abundant but labor-expensive food resource, a greater emphasis on hunting of both large and small game (particularly deer and rabbits), a greater amount of interregional exchange (seen notably in more use of obsidian), more elaboration of nonutilitarian culture (manifested in more frequent use of shell beads, decorated pottery and rock art), and possibly denser regional populations. Settlement may have become more sedentary during this period, as compared with the preceding period.

Two proto-historic Kumeyaay villages were near Spring Valley. The village of Meti/ Neti/ Njeti was at the current Bancroft Ranch House and its eponymous spring; this village was approximately two miles northwest of the project area (Carrico and Ainsworth 1974). The village of Jamacha was reported approximately two miles northeast of the project area (Carrico 1997).

2.2.5 Historic Period

The historic period in California began in the late 1500s with the claim of Spanish dominion over much of North and South America. California experienced colonial rule first by Spain, then Mexico, before being entered into the Unites States union. These periods are briefly described below.

2.2.6 Spanish Period

Spanish explorer Juan Rodríguez Cabrillo first discovered California in 1542, claiming it for the King of Spain. More than two centuries later, Christian missionaries and soldiers arrived both by sea and overland from Baja California and founded Mission San Diego de Alcalá in 1769, the first of 21 Spanish missions (1769-1823). Charged with converting pagan Indians to Christianity, the mission system and its soldiers would protect Spain’s interest in California. Soldiers protected the mission from Presidio Hill, and the Franciscans first served the new mission by overseeing its operations and assumed control over the land as trustees for the Indians. The mission system operated under the expectation that once the Indians had been Christianized and “civilized,” land would become a pueblo. In 1774, the presidio became a Royal Presidio, and the mission was relocated 10 km up the San Diego River. Some Indians had already been baptized, but others revolted in 1775 by burning the mission and killing a friar. The attack did not prompt any long-term changes to the mission system, but it heightened insecurities. According to mission records, many of the

Native Americans involved in the attack came from the villages of Neti and Jamacha, in modern Spring Valley (Carrico 1979).

2.2.7 Mexican Period

After a long struggle in Mexico, the Mexican War of Independence ended in 1821, severing the Spanish hold on the Californias. The San Diego area began transitioning from a religious and military outpost to a town. The mission movement was dwindling as 17 of the oldest missions no longer had resident priests and the native population had drastically declined from the impact of Spanish occupation (Engstand 2005:56-57; MacPhail 1971; Mills 1968; Padilla-Corona 1997; Pourade 1960; Robinson 1948:23-72).

Land grants or ranchos largely characterized the Mexican period (1821-1848). Although some land had been granted to Indians, most of the land went to military men or merchants. A majority of ranchos were demarcated after secularization of mission land beginning in 1833, which prompted a rush for land grants. Land granted to Mexicans between 1833 and 1846 amounted to 500 ranchos, primarily granted near the coast from San Francisco to San Diego. Hand-drawn maps or *diseños* indicated the often-vague boundaries of the grants where *dons* and *doñas* constructed adobe houses on their vast lands, cultivating the land, and grazing cattle, often with the aid of *vaqueros*. Mexican Governor Pío Pico granted a great number of those ranchos, quickly carving up Alta California to ensure Mexican land titles survived a U.S. victory in the Mexican-American War (1846-1848) (Christenson and Sweet 2008:7; Engstrand 2005:64-66; Robinson 1948:23-72).

The project area was part of the Rancho Jamacho Land Grant, an 8,881-acre parcel that was granted to Apolinaria Lorenzana by California governor Juan Alvarado in 1840. She also received the Rancho Canada de los Coches land grant to the northeast. (Brackett 1939:39-41; Moyer 1969:18)

2.2.8 American Period

The conquest and annexation of California by the United States in the Mexican American War between 1846 and 1848 ushered in many more changes (Pourade 1963, 1964, 1965, 1967, 1977; Pryde 2004). Faced with debts and difficulties in confirming land grants, many Californio families lost their lands to outsiders. Cultural patterns that were brought by immigrants from the eastern U.S. gradually supplanted old Californio customs. Native American reservations were established at Pala, Mission Reserve, Pauma-Yuima, Los Coyotes, La Jolla Rincon, and San Pasqual (Shipek 1978).

After the Mexican American War, land ownership in California became hotly contentious despite protection under the Treaty of Guadalupe Hildalgo of February 1848. Proof of rancho land ownership with the new government often meant years of effort to obtain a federal patent, and many rancheros had difficulty maneuvering through the process. Capitalizing on the uncertainty of those transitional years, Anglo settlers increasingly squatted on land that belonged to *Californios* and began challenging the validity of Spanish-Mexican claims through the Board of Land Commissioners (1851) (Garcia 1975:15-16, 22-24). Meanwhile, William Heath Davis' 1850 experiment to restart San Diego as a coastal New Town failed after a short period of time. Alonzo E. Horton's second attempt at New Town in 1867 became the successful foundation for present-day downtown San Diego (MacPhail 1971; Mills 1968; Padilla-Corona 1997). An influx of Anglo squatters outside of New Town and new government taxes severely hindered *Californio* rancho owners, and by 1860, most did not retain their original land holdings. Unimproved farmland and substantial, often unconfirmed, ranchos characterized the largely uninhabited San Diego County (Garcia 1975:15-16, 22-24).

The confirmation of rancho's boundaries in the late 1860s and early 1870s drew additional settlers as land became officially conveyable. Small farming communities were quickly established throughout San Diego County, and a completed transcontinental railroad in November 1885 helped to initiate an unprecedented real estate boom for New Town that spilled over the county. Settlers poured into San Diego, lured by real estate promotions offering a salubrious climate, cheap land, and the potential to realize great profits in agriculture and real estate. Speculators formed land companies and subdivided town sites throughout the county, and settlers took up homestead claims on government land for both speculation and permanent settlement (Pourade 1964:167-191).

The development of Spring Valley was intimately tied to three men. In 1863, Augustus S. Ensworth built what was then the first house belonging to a white man and what is now known as the Bancroft Ranch House. The adobe house was built of timbers salvaged from the Clarissa Andrews, a ship wrecked in San Diego harbor. Ensworth built his adobe next to a spring and called the area “Spring Valley.” Ensworth died in 1865, shortly after he sold the property to Rufus King Porter. Rufus King Porter was the son of the founder of *Scientific American,* and distant relative of Founding Father Rufus King. Porter ran the first post office out of his living room in the adobe. Porter sold the property to noted California historian Hubert Howe Bancroft in 1885. Bancroft consolidated multiple properties into a large, 500 acre farm known as Helix Farms. Bancroft and family lived in a larger house than the old adobe that currently bears his name. Helix Farms was the area’s largest olive producer by the time of Bancroft’s death in 1918. (Spring Valley Historical Society n.d.)

In addition to Ensworth, Porter, and Bancroft, Alfred Isham was also instrumental to bringing early development to Spring Valley. Isham developed the region’s first resort at Isham’s Springs. This was a mineral springs, bottling plant, and hotel, about one mile southwest of the project area. Alfred Isham opened the hotel and resort in 1888 at a natural spring location. He also bottled the water on site and sold it as a natural cure-all. Isham’s success diminished after 1906 due to a scathing editorial against him in the national magazine *Collier’s* and his land and water rights were eventually sold to Fred Hansen. Hansen developed the springs into watering ponds for his livestock operation (Van Wormer 1986).

In general, Spring Valley was a rural, agricultural settlement dependent on livestock and tree crops until the mid-twentieth century. The first two decades of the twentieth century brought both continuity and change to San Diego, with a continued U.S. Navy and Army presence, and the continued trend of populating the burgeoning New Town (Heilbron 1936:370, 431; U.S. Census Bureau 1920:82). Automobiles became increasingly popular as they became affordable, prompting San Diego County to grade roads to open up the backcountry (Etulain and Malone 1989:40; Kyvig 2004:27).

Flourishing agricultural communities existed across the county with federal and state water development projects, harbor improvements, and high levels of construction curbing some of the effects of the Great Depression. Construction projects for the Navy and Army helped sustain the area. Social changes such as the construction of San Diego State College (1931), transition from coal-derived gas to natural gas, and the planning and hosting of the World’s Fair (1935) also aided in sustaining the San Diego area (Engstrand 2005:147-155).

San Diego County’s greatest numerical growth period in the first half of the twentieth century was between 1940 and 1950 when the county grew to 556,808 inhabitants (U.S. Census Bureau 1940, 1950). It is also a period characterized by more people moving to rural areas instead of the city, as the rural population increase by 170.8 percent (U.S. Census Bureau 1950:5-12, 5-16, 5-21). At more than half a million people, San Diego had become a metropolis with attractive rural areas transitioning into new suburban communities.

2.2.9 Historic Overview of the Park Property

The project is within two miles of two known proto-historic Kumeyaay village locations. While no archaeological sites have been recorded within the project, it is likely that the area was utilized by Native Americans in the past.

Historically, the project was within the Rancho Jamacho Land Grant, originally granted to Apolinaria Lorenzana in 1840. Lorenzana was a single woman who assisted the mission. Her devotion to the Catholic fathers earned her Rancho Jamacho and Canada de los Coches land grants. After the American annexation of California in 1848, the legality of the Mexican land grants was under question. Many of the Californios sold or lost their rights to Anglo-American settlers before their cases were settled in the US courts. The Rancho Jamacho land grant passed into the hands of US soldiers, including Colonel John Magruder who subdivided and sold portions of the land grant to Asher Eddy, Robert Kelly, and Eugene Pendleton. The land was further subdivided in the 1860s when the cattle market collapsed. The land was primarily used for grazing cattle until the mid-twentieth century. (Brackett 1939:39–41, Moyer 1969:18)

Prior to World War II, the surrounding area was relatively undeveloped agricultural land with a low density population. Historic aerials show little development in the surrounding area until the mid-twentieth century. Residential subdivisions appear to the northwest of the project area by 1953. Development southwest of the project area occurs by 1966. The project area and the land adjacent to the north was in the process of being graded for houses and development north of Jamacha Blvd and to the west of the project is evident on the 1971 aerial. By 1989, the land immediately to the northwest of the project area and to the southeast along Jamacha Blvd had been fully developed. After grading in 1971, no additional development appears to have occurred in the project area.

2.3 Ethnographic Period

In ethnohistoric times, central and southern San Diego County was occupied by speakers of a Yuman language or languages, variously referred to as Kumeyaay, Diegueño, Tipai, and Ipai.

2.3.1 Central and Southern San Diego County

Kumeyaay territory extended from south of Agua Hedionda Lagoon, Escondido, and Lake Henshaw to some distance south of Ensenada in northern Baja California, and east nearly as far as the lower Colorado River. Linguistic evidence (e.g., Golla 2007; Laylander 2010) suggests that the Yuman-Cochimí families of languages may have been affiliated with a widespread Hokan phylum, represented by scattered languages and families around the periphery of California and extending south into Mexico, and probably dating back at least as far as the early Holocene. Subsequent separations within the Yuman-Cochimí group may represent territorial expansions or migrations: the separation of Yuman and central Baja California's Cochimí (ca. 2000 B.C.E?); the differentiation of Core Yuman from Kiliwa (ca. 1000 B.C.E?); of Core Yuman into Delta-California, River, and Pai branches (ca. C.E 1?); of Delta-California Yuman into Diegueño and Cocopa (ca. C.E 500?); and of Diegueño into Kumeyaay proper, Ipai, Tipai, and Ku'ahl languages or dialects (ca. post-C.E 1000?). The boundary between Ipai and Kumeyaay proper (or Tipai) languages or dialects on the San Diego coast has generally been put just south of the San Diego River (Luomala 1978).

While Kumeyaay cultural patterns, as recorded after European contact, cannot necessarily be equated with Late Prehistoric patterns, at a minimum they provide indispensable clues to cultural elements that would be difficult or impossible to extract unaided from the archaeological record alone. A few important ethnohistoric accounts are available from Hispanic-period explorers and travelers, Spanish administrators, and Franciscan missionaries, primarily in coastal areas (Fages 1937; Geiger and Meighan 1976; Laylander 2000). Many accounts by ethnographers, primarily recorded during the early twentieth century, are available (Almstedt 1982; Drucker 1937, 1941; Gifford 1918, 1931; Hicks 1963; Hohenthal 2001; Kroeber 1925; Laylander 2004; Luomala 1978; Shipek 1982, 1991; Spier 1923; Waterman 1910).

The Kumeyaay inhabited a diverse environment that included littoral, valley, foothill, mountain, and desert resource zones. Because of the early incorporation of coastal Kumeyaay into the mission system, most of the available ethnographic information relates to inland groups that lived in the Peninsular Range or the Colorado Desert. There may have been considerable variability among the Kumeyaay in settlement and subsistence strategies and in social organization (Laylander 2000; Luomala 1978; Spier 1923; but cf. Shipek 1982). Acorns were a key resource, but a wide range of other mineral, plant, and animal resources were exploited (Hedges 1986; Shipek 1991; Wilken 2012). Pre-contact practices of land management and agriculture west of the Colorado Desert have been suggested but not confirmed (Shipek 1993; cf. Laylander 1995). Some degree of residential mobility seems to have been practiced, although its extent and nature (e.g., within patterns of community fission and fusion) may have varied considerably among different communities and settings. The fundamental Kumeyaay social unit above the family was the *šimuł* (patrilineage) and the residential community or band, to the extent that those two units were not identical. Leaders performed ceremonial, advisory, and diplomatic functions, rather than judicial, redistributive, or military ones. There seems to have been no national level of political unity and perhaps little sense of commonality within the language group (but cf. Shipek 1982).

Kumeyaay material culture was effective, but it was not highly elaborated. Structures included houses with excavated floors, ramadas, sweathouses, ceremonial enclosures, and acorn granaries. Hunting equipment included bows and arrows, curved throwing sticks, nets, and snares. Processing and storage equipment included a variety of flaked stone tools, milling implements, ceramic vessels, and baskets.

Nonutilitarian culture was not neglected. A range of community ceremonies were performed, with emphases placed on making individuals' coming of age and on death and mourning. Oral literature included an elaborate creation myth that was shared with other Yuman groups as well as with Takic speakers (Luiseño, Cupeño, Cahuilla, and Serrano) to the north (Kroeber 1925; Laylander 2001; Waterman 1909).

2.4 Previous Research in the Area

2.4.1 Prominent Studies in the Area and Park/ Preserve Vicinity

A total of 79 studies have been conducted in the vicinity of the project area since 1974. The most relevant studies are relating to the development of the old Isham's Springs/ Hansen's Ranch property (e.g., Wade and Hector 1988, Eckhardt 1979, Hector 1981, HCH & Associates 1979, WESTEC 1979), the development of the Skyline Wesleyan Church and associated properties (e.g. Gallegos et al. 1988; Kyle 1995; WESTEC 1988a, 1988b), and the Rancho San Diego Project (e.g., Heuett 1981, Fink 1974, County of San Diego Department of Planning and Land Use 1988, Mooney-Lettieri and Associates 1987).

2.4.2 Research Context

The criteria for determining potential eligibility for inclusion in the National Register of Historic Places (NRHP) (National Park Service 1982) pursuant to the National Historic Preservation Act (NHPA) are the basis for evaluating significance. The significance, or scientific importance, of archaeological sites is assessed with respect to their potential contribution to regional issues pertaining to southwestern California. General issues pertinent to these assessments include determination of the extent and integrity of cultural deposits, age and probable cultural affiliation, site function and subsistence strategies, overall insight into settlement organization, and the presence of any artifacts or remains having special Native American heritage value.

2.4.2.1 Prehistoric Site Research Issues

2.4.2.1.1 Prehistoric Site Formation Processes

Delineation of the horizontal distribution and vertical depth of a site is necessary for an assessment of research potential. Of particular importance is the integrity of deposits, preservation of features, and the potential for identifying, through analysis, horizontal and vertical spatial patterning from which to infer the behavior patterns of prehistoric peoples.

A variety of post-depositional disturbance processes can greatly alter the original character of prehistoric sites (e.g., Gross 1993; Schiffer 1987; Waters 1992). Formation processes such as deposition, erosion, bioturbation, and modern disturbance can considerably affect the integrity of archaeological sites.

2.4.2.2 Prehistoric Chronology and Dating

Although the basic framework of the southern California coastal occupation already exists, there are substantial gaps in the chronology. These research questions are concerned with long-term continuity in occupation and the nature of change between cultural periods.

Another important research question involves chronological information that could assist in examining the San Dieguito/La Jolla transition debate (e.g., Gallegos 1987, 1991). This debate entails determining whether such a transition occurred, and if so, if it was due to population replacement, acculturation, or transformation. Those who argue against an actual transition posit that the San Dieguito and La Jolla assemblages were actually produced by the same populations and reflect functional, seasonal, or work group distinctions.

The transition from the Archaic to the Late Prehistoric period is not currently well documented. At present, this transition is considered to be associated with the Shoshonean intrusion/influence in the area, although the precise timing of the process is unclear (e.g., Koerper 1979; Kroeber 1925; Meighan 1959; Rice and Cottrell 1976; Warren 1968). Additional information on this topic would be useful.

Finally, archaeological evidence of Ethnohistoric/Historic occupation is lacking and most information is assumed from historic records. Evidence of continuity (or disruption) in occupation between the Late Prehistoric and the Ethnohistoric periods would be informative.

Data needed to address these issues require the collection of material for absolute and relative dating. These include radiocarbon samples for absolute dating (e.g., charcoal including very small samples for accelerator mass spectroscopy [AMS] dating or shell), the recovery of obsidian from identified sources for use in hydration analysis, and the seriation of temporally diagnostic artifacts such as ceramics and projectile points.

2.4.2.2.1 Prehistoric Subsistence-Settlement Organization and Site Function

At present, the changing dynamics of prehistoric settlement organization in the southern coastal area are not well known (Jones 1992; Lightfoot 1993). This is due largely to the nature of previous studies and the extant archaeological record. The early periods of occupation in the southern California coastal area appear to have been characterized by a foraging settlement strategy (Erlandson and Colten 1991; Moratto 1984; Warren 1964). The development of the La Jolla complex may well represent a shift to a collector type subsistence strategy based on the concentrated resources associated with coastal lagoons. La Jollan sites during the middle Holocene were often large and intensively occupied sites and were probably semi-sedentary. By 4000 Before Present (B.P.), the normative interpretation is that populations expanded from the coast as a result of depletion of coastal/lagoon resources and moved into a much broader range of landforms and environmental zones than before.

During the Late Prehistoric period, residential bases may have been sedentary villages or extensively occupied seasonal settlements (Byrd and Serr 1993; True 1970). Other sites were related to these larger residential bases, including a variety of specialized sites such as field camps and caches. With adequate storable resources, such as acorns, people in the Late Prehistoric period may have exploited inland oak groves during the fall and winter months, and focused on coastal resources during other times of the year (Bean and Shipek 1978; Craib 1982; Rice and Cottrell 1976).

Ethnographic reconstruction of Luiseño settlement/subsistence indicate that “sedentary and autonomous village groups, each with specific hunting, collecting, and fishing areas, were located in diverse ecological zones” (Bean and Shipek 1978:551). Each village territory contained a number of named stations, locations, and field camps associated with subsistence products, raw materials, or sacred beings. These included trails, field camps, hunting sites, rabbit or deer drive areas, quarry sites, and ceremonial sites. The territory was owned and permission was needed to procure raw materials. Most inland groups had fishing and gathering sites on the coast that were visited annually from January to March when inland foods were scarce.

The issues related to subsistence orientation are interwoven with the previous discussion of settlement organization. Among the questions of interest are: What specific resources were the focuses of exploitation? How heavily oriented were the subsistence systems toward marine versus terrestrial resources? Can changes in subsistence emphasis over time be identified? Were floral resources preserved, as is documented at an increasing number of coastal sites in the general region (e.g., Brooks and Johnson 1991; Klug 1992; Miksicek 1993)? If so, are storable resources present, such as grass seeds and acorns? Finally, can changes in resource emphasis be tied to alterations in settlement organization, extractive technologies, and the availability of local resources due to coastal environmental changes including rising seas levels (Inman 1983)?

2.4.2.3 Historic Site Research Issues

The historic ranches and homesteads of Spring Valley are representative of an important era in the social and economic development of southern California and the West. A great land boom accompanied the arrival of the transcontinental railroad in the mid-1880s. Part of the boom was spurred by the ability of working class people from the eastern states and abroad to reach the west coast cheaply and safely. Public lands were available for free as 160-acre parcels while prices of private land went through wild swings in the boom and bust speculative economy of that time. A national recession, and realization that San Diego would only receive a spur of the transcontinental railroad terminus in Los Angeles, had ended the boom cycle by 1890. By this time most of the best lands in the drought-prone San Diego region had already been purchased or homesteaded. Latecomers therefore had to be content with marginal lands watered only by direct rainfall. Many of these farmsteads eventually failed, but not before establishing a distinctive rural community of widely spaced farming and ranching households, linked together by participation in rural school districts and agricultural associations (Van Wormer 1986).

Research designs for the treatment of such rural sites, developed by Schaefer (1982) and Schaefer and Van Wormer (2008), explore the cultural dynamics of these households and their place in San Diego regional history. Already a considerable database has been developed with which to compare these household remains in other rural contexts in San Diego County (Hector and Van Wormer 1987; Philips and Van Wormer 1991; Van Wormer and Hector 1988; Schaefer and Van Wormer 2008). These studies provide a basis for testing hypothesized patterns of adaptation by these rural households based on socio-economic and cultural variability. Some fundamental research approaches and questions are discussed below.

Members of rural school district communities shared a common lifestyle and cultural values making them a distinct social group. Research has indicated that a distinct rural artifact pattern may characterize assemblages of rural school district communities between 1870 and 1940 (Phillips and Van Wormer 1991;

Van Wormer and Schaefer 1991). This pattern is defined by the following characteristics: 1) kitchen item frequencies are higher than or equal to those of consumer items; 2) bottled product consumer items constitute 20 percent or less of the assemblage; 3) beverage bottles constitute less than 30 percent of the bottled products; 4) ceramic index values are less than 2; and 5) hardware and munitions frequencies are higher than in urban assemblages.

As a testing approach, cross-site comparison of functional profiles, bottled product consumption patterns, and ceramic index values from rural and urban sites can address the validity of this pattern. Data needs for this approach include documentary data such as additional archival research to determine the identity, family structure, socio-economic class, title history, and national origins of the people who occupied the sites. These include census records, maps, photographs, tax records, newspaper accounts, court records, and land title documents. Architectural data include standing structures or substantial structural remains, as well as remains of landscape features. Artifactual data include temporally discrete kitchen/household refuse and materials from barns, equipment sheds, and storage areas.

Another important research issue concerns how successful rural farm families defined wealth and spent money compared to middle- and upper-middle class urban dwellers. Although differences existed between rural and urban lifestyles, the parameters for each have not been well defined. Research has indicated that after achieving a basic standard of living that included inexpensive ceramics and few luxury items, successful farm families invested in equipment, land, livestock, and outbuildings rather than in such status symbols of urban dwellers as fine furniture, table settings, and clothes (Friedlander 1991).

It appears that as the nineteenth century progressed, the rise of the Victorian “cult of domesticity” in urban areas changed the role of wives within the family. Within the cult of domesticity, a woman’s status was reflected in her success as a homemaker. This was reflected materially in well-kept stylish homes with neat yards (Hill 1880:177), nice furnishings, decorated wallpaper, and tables properly set with attractive tableware (Ames 1992; Gordon and McArthur 1985:5; Hill 1880:151). This led to an urban culture of conspicuous consumption dominated by middle-class wives that was well established by the 1870s (Gordon and McArthur 1985:5; Howe 1975:523). By the end of the nineteenth century, domestic consumption was no longer the exclusive sphere of middle-class women but had also become an aspect of working-class households. As wages increased, working-class wives became significant consumers in their own right. By the beginning of the twentieth century, more prosperous working-class households could afford fancy wallpaper, lace curtains, inexpensive ornamented furniture, and sets of decorated, or even porcelain, tableware, thereby achieving their own versions of opulence reflecting the value of working-class women as homemakers (Gordon and McArthur 1985:4).

Rural agrarian society evolved differently from urban Victorian culture during this period. In spite of the increased mechanization of farm work and the participation of farmers in a market economy after the Civil War, agrarian household values and consumption habits remained more faithful to their eighteenth-century roots and less influenced by developments of the cult of domesticity and the increased role of the woman as most significant parent and chief purchaser for the household. A rural society with values more reminiscent of colonial times existed alongside the more modern Victorian culture of the city (Howe 1975:515).

Agrarian consumption priorities were focused toward the establishment and preservation of a stable way of life as opposed to urban Victorian consumption patterns designed to express the wife’s success as homemaker and the appearance of upward mobility (Gordon and McArthur 1985:3). Economic gain was important to farm families. However, it did not dominate their spending priorities. Two other goals, yearly subsistence and the long-term financial security of the family unit, dominated economic priorities so that maximization of profit was less important than meeting household needs and the maintenance of established social relationships (Henretta 1978:7). Elements that increased productivity such as machinery, livestock, adequate and well-maintained outbuildings, and the acquisition of more land were farm family priorities. Agrarian families consumed as a household unit. Successful farms and the attainment of rural propertied status were seen as the result of one or more decades of work (Henretta 1978:24-25). To comply with these long-term goals, minimal consumption of purchased items and a heavy emphasis on recycling were often a way of life. Expenditures on what seemed to be purely luxury items were looked down upon as extravagant and wasteful (Gordon and McArthur 1985:3).

A farm wife's value continued to be judged on her ability to be an active producer within the family unit rather than chief consumer and preferred parent. Whereas an urban household's status and the success of the wife as homemaker could be judged on the stylishness of the house and how well the table was set at dinner parties, farm values emphasized well-kept buildings and machinery, healthy livestock, and the quality of the wife's preserves, canned fruits and vegetables, butter, bread, vegetable garden, and perhaps even the potato crop. These differing values and definitions of wealth between urban and rural household during the late nineteenth and early twentieth centuries resulted in different purchasing patterns for these two reference groups and lower ceramic index scale values and longer ceramic and bottle assemblage manufacture-deposition lag times for rural sites when compared to urban assemblages.

This difference in values between successful farm families and middle- and upper-middle-class urban residents manifests itself through cross-site comparisons of functional profiles and economic indexing data. Profiles of rural assemblages show higher frequencies of hardware, livery items, and equipment and machinery parts than those representing urban sites (Van Wormer 1996). In addition, rural site assemblages tend to exhibit reduced ceramic index values that remain unaffected by fluctuating economic trends as well as excessive ceramic and bottle manufacture-deposition lag time, when compared to urban assemblages from the same period. Ceramic economic index values tend to fall below 2.0 while manufacture-deposition lag time analyses indicate ranges of from 8 to 22 years between the average purchase and deposition date for artifacts from rural sites (Van Wormer 1997). These patterns indicate that rural households exhibited a different style of consumption from urban residents by spending less money on ceramic tableware and being more conservative about disposing of items only a few years old. Larger sample sizes of urban and rural sites are needed to validate these patterns and additional research in rural lifeways is needed to explain cultural values and lifestyles.

Ranches and farmsteads were more than rural habitation sites; they were also centers of agricultural production and they have the potential to inform us as to practices of livestock production and crop cultivation (Fontana 1967). Archaeological studies of ranch and farmstead sites should focus on the spatial layout of farm buildings, activity areas, and trash disposal patterns and how these may have changed over time. The modernization of agricultural production is a concept that can be applied to rural farmsteads of the early twentieth century when the transition from traditional technologies and animal-based labor to scientific technologies and mechanization took place. For example, the distribution and density of sheet refuse at modern farms is considerably smaller and less dense than in nineteenth-century farms as more activities are mechanized and occur indoors (Cabak et al. 1999). It was also during the early decades of the twentieth century that the transition from small family ranches and farmsteads to corporate agriculture took place.

2.4.2.4 Historic Research Questions

Historic sites within the study area, which have the potential to address research questions important to the study of rural settlement in San Diego County between the 1880s and 1930s, should be considered significant. The research potential of any archaeological site depends primarily on the presence of artifacts in sufficient quantity and diversity from discrete deposits to address substantive research issues. Sufficient artifact recovery is needed to establish specific activity patterns and chronology for individual features, and for the site as a whole. The assemblage should include whole or restorable consumer goods that can be identified as to original contents and date of manufacture. Ideally, the site should have good temporal focus, although in sites occupied over several decades, it may be possible to date individual features or deposits to shorter time periods. Assemblages dominated by poorly preserved cans, fragmentary remains, and construction debris are generally not considered of sufficient quality or integrity to possess the potential to provide data needed to address these research issues. The integrity of the site is of prime importance in assessing research potential and therefore eligibility of the sites.

Provided below are some specific research questions developed for rural settlement sites in San Diego County. Data needs for each are also provided.

2.4.2.4.1 Chronology

Prior to US annexation of California, cattle ranching dominated the land use in the area. Homesteading in the Spring Valley area began in the mid-1870s. Research questions associated with this topic include: When were the agricultural sites in the study area initially settled and when were they abandoned? Do these sites conform to the pattern of early abandonment documented for homesteads within the region?

Assessing the age of archaeological deposits will be addressed through a dating of diagnostic artifacts including glass and ceramics. Documentary sources such as maps and aerial photographs will also aid in dating occupation of the sites.

2.4.2.4.2 Economy

Ranching, cultivation of a limited number of crops such as olives, and mixed farming were all practiced by farmers in the area with varying success. Research questions related to this topic include: What was the range of agricultural activities documented? Is there evidence for an increase or decrease in agricultural production during the period of occupation? To what extent was agricultural production mechanized? What was the role of irrigation at the site?

Archival sources such as aerial photographs, tax rolls, and General Land Office (GLO) Homestead records may be examined for information relating to the number and function of buildings on site. Analysis of relative quantities of functional artifact groups from the site will also provide data relating to site function.

The degree to which there was investment in agricultural machinery, irrigation infrastructure, buildings and outbuildings should reflect either an increase or decrease in investment in the property over time.

The presence or absence of machine parts and livery items and the proportion of these within artifact deposits and over the entire site will be analyzed in an effort to trace the transition to mechanization over time.

2.4.2.4.3 Rural Consumer Patterns

Rural school district communities shared a common lifestyle and cultural values, making them a distinct group. Research questions associated with rural consumer patterns include: To what extent, if any, does the artifact assemblage conform to the rural consumer pattern model proposed by Van Wormer?

This question may be addressed by a cross-site comparison of functional profiles, bottled product consumption, and ceramic index values from other rural sites within the region. These can also be compared to patterns from urban sites.

3.0 RECORDS SEARCH RESULTS

A records search of the project area was conducted on February 24, 2020, at the South Coastal Information Center (SCIC), San Diego, California, by ASM GIS Manager Nick Doose. The purpose of the records search was to identify archaeological sites and built environment resources and previously conducted cultural resources studies within one mile of the project area. The confirmation of the record search can be found in Appendix A.

3.1 Previous Studies

A total of 78 cultural resources studies have been conducted within the project area or within one mile of the project area (Table 1). Of these, three occurred within the project area and the remaining 76 studies were within one mile of the project area. The earliest study was conducted in 1974 and the most recent in 2017. The entirety of the project area has been previously surveyed.

Table 1. Previously Conducted Cultural Resources Studies within One Mile of Project Area.

Report Number/ NADB Number	Year	Report Title	Report Author(s) / Agency/ CO
		Within Proposed Project Area	
SD-06080 NADB 1126080	**1996**	**Draft Biological Survey Report for the Jamacha Blvd Road Widening Project**	**Egoroff, Amy** Woodward-Kyle Consultants
SD-06189 NADB 1126189	**1977**	**An Archaeological Survey Report for Two Excess Parcels on 11-SD-54 Calavo Drive Area P.M. 7.0-11.3**	**Meacham, Charla M.** DOT Office of Environmental Planning
SD-06425 NADB 1126425	**1990**	**Historic Resources Inventory Sweetwater Valley**	**Carrico, Richard, Susan H. Carrico, Kathleen A. Crawford, and S. Kathleen Flanigan** Brian F. Mooney and Associates
		Within 1-mile of Proposed Project Area	
SD-00193 NADB 1120193	1978	Archaeological Investigation of the McShane Lot Split, Jamul, California	Berryman, Stanley R. Toups Corporation
SD-00656 NADB 1120656	1977	Archaeological - Historical Survey Report for Avocado Village Lot No. 4	Carrico, Richard WESTEC Services, Inc.
SD-00754 NADB 1120754	1977	Archaeological Investigation at SDi-4781 and SDM-W-1309 Avocado Village Lot No.4 San Diego County, California	Eckhardt, William T. and Richard Carrico WESTEC Services, Inc.
SD-00895 NADB 1120895	1983	An Archaeological Survey of the Honey Springs Off-Site Water Line Appendix VI to the Archaeology of Honey Springs, San Diego County (1980) (EAD Log #81-19-24)	Chace, Paul G. Paul G. Chace & Associates
SD-00952 NADB 1120952	1988	Cultural Resource Survey and Testing for the Skyline Wesleyan Church Project, San Diego, California	Gallegos, Dennis, Carolyn Kyle, and Richard Carrico WESTEC Services, Inc.
SD-00978 NADB 1120978	1974	A Report of Cultural Impact Survey Project: An Archaeological Survey of Three Areas of Rancho San Diego	Gross, Tim San Diego State University
SD-00988 NADB 11209885	1975	A Report of Cultural Impact Survey Phase I Project: P.M. 13.5-15.5 11-SD-94 Avocado Blvd. to 0.5 Mi. South of Jamacha Junction	Gross, Tim San Diego State University
SD-01193 NADB 1121193	1981	The Rancho San Diego Project I (Monte Vista Village) Archaeological Testing and Historic Research	Heuett, Mary Lou Archaeological Consulting & Technology

Report Number/ NADB Number	Year	Report Title	Report Author(s) / Agency/ CO
SD-01214 NADB 1121214	1983	First Addendum Archaeological Survey Report for the Proposed Biological Mitigation Parcel for the Sweetwater River Bridge Replacement 11-SD-94 P.M. T15.2/515.5 11203-193370.	Crotteau, Karen L. CalTrans
SD-01286 NADB 1121286	1977	Archaeological Survey Report 11-SD-94 P.M. 13.3 to P.M. 75.1 11203-184211 Phase I.	McManus, James A. CalTrans
SD-01383 NADB 1121383	1974	Archaeological Survey for the Proposed Monte Vista Borrow Pit, Casa De Oro, California Project No. 670033	Fink, Gary R. County of San Diego Public Works Agency
SD-01594 NADB 1121594	1985	Cultural Resource Survey Report on McBride Parcel in San Diego County	Whitney-Desautels, Nancy A., Martha L. Hemphill, and Kevin J. Peter Scientific Resource Surveys, Inc.
SD-01674 NADB 1121674	1988	An Archaeological Test of the Prehistoric and Historic Components of a Portion of Site SDi-185-Isham Springs County of San Diego, California	Wade, Sue A. and Susan M. Hector RECON
SD-01812 NADB 1121812	1977	An Archaeological Survey of Selected Portions of 11-SD-94 P.M. 13.3/15.1	Meacham, Charles M. Caltrans
SD-01814 NADB 1121814	1988	GPA 88-03, SPA 88-001 Pointe Resort Specific Plan	May, Ronald V. County of San Diego, Department of Planning and Land Use
SD-01832 NADB 1121832	1984	Third Addendum Archaeological Survey Report for a Proposed Material Site and Biological Mitigation Parcel Sweetwater River Bridge Replacement	Crotteau, Karen L. Karen L. Crotteau
SD-01877 NADB 1121877	1979	Archaeological/Historical Survey of the Hanson Ranch Property	Eckhardt, Leslie C. WESTEC Services, Inc.
SD-01908 NADB 1121908	1981	Archaeological Investigations at Hansen's Ranch San Diego County, California	Hector, Susan RECON
SD-02046 NADB 1122046	1979	Hansen Ranch Draft Environmental Impact Report for the Department of Planning and Land Use County of San Diego	HCH & Associates HCH & Associates
SD-02074 NADB 1122074	1988	Extended Initial Study for the Monte Vista Borrow Pit (P 87-073, P 87-005, Log #87-19-51)	County of San Diego Department of Planning & Land Use San Diego Department of Public Works, Environmental Service
SD-02077 NADB 1122077	1988	Draft Environmental Impact Report Sweetwater Community Plan Update GPA 88-03	County of San Diego Department of Planning & Land Use County of San Diego Department of Planning & Land Use
SD-02175 NADB 1122175	1987	Draft Environmental Impact Report for Rancho San Diego Specific Plan SPA87-001 R87-006 LOG#87-19-6	Mooney-Lettieri and Associates, Inc Mooney-Lettieri and Associates, Inc
SD-02356 NADB 1122356	1992	Results OF A Cultural Resource Survey of the 42 Inch Transmission Main and Regulatory Site Improvement Project for the Otay Water District	Smith, Brian F. Brian F. Smith and Associates
SD-02439 NADB 1122439	1990	Appendices for Supplemental Draft Environmental Impact Report for Rancho San Diego Tentative Map	Jacks, Paula and Stephen Lacy Brian F. Mooney and Associates
SD-02530 NADB 1122530	1992	Archaeological Investigations of SDI-185, Isham's Spring	Van Wormer, Stephen RECON

Report Number/ NADB Number	Year	Report Title	Report Author(s) / Agency/ CO
SD-02976 NADB 1122976	1994	Archaeological Survey Report for Proposed Improvements to Portions of State Route 94, P.M. 14.1 TO P.M. 16.7 and State Route 54, P.M. T-11.0 TO P.M.12.7 Charge Unit NO./EA NO. 11221-182050/11221-182020.	Clevenger, Joyce M. Ogden Environmental
SD-03100 NADB 1123100	1995	Cultural Resource Extended Test and Survey Report for the Skyline Wesleyan Church Project, San Diego County, California	Kyle, Carolyn Gallegos & Associates
SD-03266 NADB 1123266	1996	Archaeological Survey for the Joint Task Force-Six Border Road Repair Project, Otay Mountain, California	Gross, Timothy, Ruth Alter, and Mary Robbins-Wade Affinis
SD-03334 NADB 1123334	1995	Archaeological Testing at CA-SDI-4763, Locus 2 for the Jamacha Boulevard Improvements Project, El Cajon, San Diego County, California	Robbins-Wade, Mary and John L.R. Whitehouse Affinis
SD-03626 NADB 1123626	1996	Archaeological Test and Significance Evaluation for CA-SDI-4774 and CA-SDI-12,299 Within the Proposed Urban Runoff Diversion System Phase II, San Diego County, California	Cook, J. R. and Carol Schultze Sweetwater Authority
SD-03757 NADB 1123757	1995	State Route 94 and State Route 54 Widening Project County of San Diego	Crawford, Kathleen and Joyce Clevenger Ogden Environmental
SD-04258 NADB 1124258	1975	Archaeological Investigations at Sweetwater Village Rancho San Diego	Kaldenberg, Russell Kaldenberg, Russell
SD-04329 NADB 1124329	1988	Cultural Resource Survey & Testing for the Skyline Wesleyan Church Project, San Diego	WESTEC WESTEC
SD-04382 NADB 1124382	1988	Cultural Resource Survey of the Skyline Wesleyan Church Project, San Diego CA	WESTEC Services, INC. WESTEC
SD-04584 NADB 1124584	1989	Draft Environmental Impact Report State Clearinghouse NO.88030915, the Pointe San Diego	Brandman, Michael Michael Brandman Associates, Inc.
SD-04650 NADB 1124650	1986	Hansen's Ranch Supplemental Draft Environmental Impact Report	WESTEC WESTEC
SD-04727 NADB 1124727	1994	Historic Resources Evaluation Report Piper Ranch Reservoirs	Herbert, Rand Rand Herbert
SD-04845 NADB 1124845	1984	Third Addendum Archaeological Survey Report for a Proposed Material Site and Biological Mitigation Parcel Sweetwater River Bridge Replacement 11-SD-94 P.M. T15.0/15.5	Crotteau, Karen CalTrans
SD-04894 NADB 1124894	1976	Draft EIR for Crestwood	RECON RECON
SD-04904 NADB 1124904	1984	Extended Phase I Investigation at CA-SDi-4782	Rosen, Martin Rosen, Martin
SD-05108 NADB 1125108	1980	State Highways 54 and 94 Survey Reports	US Department of Transportation US Department of Transportation
SD-05345 NADB 1125345	1979	Environmental Impact Report Rancho San Diego Specific Plan San Diego County, California Appendices Volume II	PRC TOUPS CORPORATION PRC Toups Corporation
SD-05779 NADB 1125779	1994	Historic Properties Survey Report for Proposed Improvements to Portions of State Route 94, P.M. 14.1 TO P.M. 16.7 and State Route 54, P.M. T-11.0 TO P.M. 12.7	Clevenger, Joyce M. and Kathleen A. Crawford, Ogden Environmental and Energy Services Co., Inc.
SD-05887 NADB 1125887	1983	First Addendum Archaeological Survey Report for A Proposed Material Site for the Sweetwater River Bridge Replacement 11-SD-94 P.M. T15.2/T15.5	Crotteau, Karen CalTrans

Report Number/ NADB Number	Year	Report Title	Report Author(s) / Agency/ CO
SD-06243 NADB 1126243	1995	Draft Otay Mesa Road Widening Project Cultural Resources Technical Report	Kyle, Carolyn E., Roxana Phillips, Adella Schroth, Sinead NiGhabhlain, and Dennis R. Gallegos Gallegos & Associates
SD-06423 NADB 1126423	1991	Final Environmental Impact Report Phase II of the Sweetwater Reservoir Urban Runoff Diversion System	A.D.Hinshaw Associates Brian Mooney and Associates
SD-07135 NADB 1127135	2004	Cultural Resource Survey for the Otay Water District 640-1 Reservoir Project	Kyle, Carolyn Kyle, Carolyn
SD-07273 NADB 1127273	1993	Archaeological Survey Report for Proposed Improvements to Portions of State Route 94, P.M. 14.1 to P.M. 16.7 and State Route 54, P.M. T-11.0 to P.M. 12.7	Clevenger, Joyce M. Ogden Environmental and Energy Services Co., Inc.
SD-07393 NADB 1127393	2000	Preliminary Archaeological Survey Report of the Eastern Alignment Alternatives for State Route 125-South	Crafts, Karen CalTrans
SD-07492 NADB 1127492	2002	Cultural Resource Assessment AT&T Wireless Services Facility No. 10057A-05 San Diego Count, CA	Duke, Curt LSA Associates, Inc.
SD-07811 NADB 1127811	2002	AT&T Wireless	Duke, Curt LSA Associates, Inc.
SD-08035 NADB 1128035	2002	Cultural Resource Assessment Cingular Wireless Facility No. SD891-03, San Diego County, California	Duke, Curt LSA Associates, Inc.
SD-08610 NADB 1128610	1979	Archaeological/ Historical Survey of the Hansen Ranch Property	WESTEC WESTEC
SD-08613 NADB 1128613	1988	An Archaeological Test of the Prehistoric and Historic Components of a Portion of Site SDI-185- Isham Springs County of San Diego, California	Wade, Sue Wade, Sue
SD-08618 NADB 1128618	1979	Draft Environmental Impact Report for Crestwood	RECON RECON
SD-08620 NADB 1128620	1979	Preliminary Archaeological Investigations OF W-1146 Spring Valley, California	Heuett, Mary Lou Archaeological Consulting & Technology
SD-08622 NADB 1128622	1984	Proposed 36" Main From La Pressa Pump Station to Regulatory Reservoir: An Archaeological Survey	Barbolla-Roland, Diana Barbolla-Roland, Diana
SD-08624 NADB 1128624	1975	Archaeological Investigations at Sweetwater Village Rancho San Diego	Kaldenberg, Russell Kaldenberg, Russell
SD-09827 NADB 1129827	1992	Preliminary Report for the Archaeological Data Recovery Program at CA-SDI-4765 Rancho San Diego - Jamacha Village West, San Diego County, California	Schaefer, Jerry, John R. Cook, and Drew Pallette Brian F. Mooney and Associates
SD-09985 NADB 1129985	1986	Site Boundary Definition for SDI-4782 (W-1146) "Jamacha Village"	Berryman, Judy TMI Environmental Services
SD-10938 NADB 1130938	1987	Supplement and Draft Environmental Impact Report for the Sweetwater Reservoir Urban Runoff Diversion System	Hector, Susan M. and William R. Graham RECON
SD-11213 NADB 1131213	2007	Cultural Resource Survey for the CIP: P2009 Jamacha Road 36-inch Potable Water Pipeline and CIP P2038: 12-inch Potable Water Pipeline Replacement, San Diego, California	Kyle, Carolyn E. Kyle Consulting
SD-11626 NADB 1131626	1995	Draft Environmental Assessment for the Proposed Acquisition of Rancho San Diego, Sweetwater II, and Lot 707 Properties from the Resolution Trust Corporation for the Proposed San Diego National Wildlife Refuge Otay-Sweetwater Refuge Unit	U.S. Department of the Interior U.S. Department of the Interior, Fish and Wildlife
SD-11841 NADB 1131841	2008	Rancho San Diego Sheriff Substation Negative Cultural Resources Survey Report	Iverson, Dave ASM Affiliates

Report Number/ NADB Number	Year	Report Title	Report Author(s) / Agency/ CO
SD-11914 NADB 1131914	2008	Cultural Resource Records Search and Site Visit Results for AT&T Mobility, LLC Facility Candidate SS-624-02 (Dixieline/Blockbuster), 3607 "B" Avocado Boulevard, La Mesa, San Diego County, California	Bonner, Wayne H., Marnie Aislin-Kay, and Sarah Williams Michael Brandman Associates, Inc.
SD-12816 NADB 1132816	2010	Cultural Resources Survey for 25 Wood to Steel Pole Replacements Along TL6911, TL624, TL627, TL643 and Staging Yard Areas for Jamacha Getaways, Rancho San Diego Area, San Diego County, California	Bowden-Renna, Cheryl AECOM
SD-13198 NADB 1133198	2011	Archaeological Survey Report for the County of San Diego Sheriff's Station Access Road, San Diego County, California	Rosen, Martin D. ICF International
SD-13767 NADB 1133767	2010	Letter Report: ETS 20688 Cultural Resources Monitoring for a Staging Area at the Skyline Wesleyan Church for the Jamacha Getaways Wood-to-Steel Project, Rancho San Diego Area, San Diego County, California 1O-200415072	Bowden-Renna, Cheryl AECOM
SD-14780 NADB 1134780	2013	Cultural Resource Records Search and Site Survey AT&T Site SD0430 Sweetwater LTE 10786 US Elevator Road Spring Valley, San Diego County, California 92121	Loftus, Shannon ACE Environmental, LLC
SD-15094 NADB 1135094	1993	Multi-component Archaic and Late Prehistoric Residential Camps Along the Sweetwater River, Rancho San Diego, California	Brian F. Byrd, Carol Serr, Lynne Christenson, John Beezley, Margaret Newman, M. Steven Shackley, and Thomas Origer Brian F. Mooney Associates
SD-15204 NADB 1135204	2012	ETS #23109, Cultural Resources Monitoring for the Intrusive Inspections, 12 Poles, Jama Subarea Project, San Diego County, California (HDR #188054)	Kristin Tennesen HDR
SD-15761 NADB 1135761	2014	Cultural Resource Records Search and Site Survey, AT&T Site SS0624, Dixieline LTE Optimal, 3607 Avocado Boulevard, La Mesa, San Diego County, California 91949, CASPR # 3601345958	Shannon Loftus ACE Environmental
SD-16821 NADB 1136821	2017	Cultural Resources Inventory: Sweetwater Vistas San Diego County, California PDS2015-GPA-15-006, PDS2015-TM-5608, PDS2015-REZ-15-008, PDS2015-MUP-89-015W4, PDS2015-STP-15-016, PDS2015-ER-89-19-015I	Robbins-Wade, Mary and Nicole Falvey HELIX Environmental
SD-17313 NADB 1137313	2016	Cultural Resources Survey and Archaeological Testing for the Cathodic Protection and Blow-Off Rehab Project, San Diego County, California	Elder, J. Tait, Karolina Chimiel, and Nara Cox ICF International
SD-17848 NADB 1137848	2016	Cultural Resource Records Search and Site Visit Results for Cellco Partnership and Their Controlled Affiliates Doing Business as Verizon Wireless Candidate 'Monte Vista', 3230 Sweetwater Springs Boulevard, Spring Valley, San Diego County, California	Wills, Carrie D. and Bonnie Bruce Helix Environmental Planning, Inc.

3.2 Previously Recorded Sites Within and Adjacent to Study Area

No cultural resources have previously been recorded within the project area. A total of 23 cultural resources have been previously recorded within one mile of the project area (Table 2). Of these, there are 19 prehistoric archaeological sites, including bedrock milling features, lithic scatters, ceramic scatters, and one village site; two multicomponent archaeological sites, including a lithic scatter with worked glass shards and a historic house foundation with artifacts embedded in the foundation; and three historic resources including State Route 94, a bridge, and a possible check dam.

Table 2. Previously Recorded Archaeological Sites within 1 Mile of Project Areas

Primary Number	Trinomial	Time Period	Year Recorded/ updated	Site Description
P-37-000185	CA-SDI-000185	Prehistoric	n.d	Isham Springs/ Sweetwater village site with habitation debris and lithic scatter
P-37-000186	CA-SDI-000186	Prehistoric	1972 2017	Bedrock milling, lithic scatter
P-37-004759	CA-SDI-004759	Prehistoric	1972 2015	Lithic scatter, shell, faunal remains
P-37-004763	CA-SDI-004763	Prehistoric	1972 2008	Lithic and ceramic scatter, habitation debris
P-37-004764	CA-SDI-004764	Prehistoric	1972	Bedrock milling, lithic and ceramic scatter
P-37-004766	CA-SDI-004766	Prehistoric	1972	Lithic and ceramic scatter
P-37-004775	CA-SDI-004775	Prehistoric	1972	Lithic scatter
P-37-004780	CA-SDI-004780	Prehistoric	1974	Lithic and ceramic scatter
P-37-004781	CA-SDI-004781	Prehistoric	1972	Lithic scatter
P-37-004783	CA-SDI-004783	Prehistoric	1974	Lithic scatter
P-37-005064	CA-SDI-005064	Prehistoric	1977	Bedrock milling
P-37-005065	CA-SDI-005065	Prehistoric	1977	Bedrock milling
P-37-005066	CA-SDI-005066	Prehistoric	1977 2010	Lithic and ceramic scatter
P-37-006875	CA-SDI-006875	Multi-component	1978	Lithic scatter, worked glass
P-37-006876	CA-SDI-006876	Prehistoric	1978	Lithic scatter
P-37-006877	CA-SDI-006877	Prehistoric	1978	Lithic scatter
P-37-006878	CA-SDI-006878	Prehistoric	1978	Lithic scatter
P-37-006981	CA-SDI-006981	Historic	1978 2011	State Route 94, late 19th century travel corridor, mid-20th century state route
P-37-008326	CA-SDI-008326	Multi-component	n.d.	Prehistoric lithic and ceramic scatter, historic house foundation and associated refuse
P-37-010962	CA-SDI-010962	Prehistoric	1978	Bedrock milling
P-37-017453		Historic	1995	Bridge #57-110, State Route 94 bridge over rural creek at mp 14.89
P-37-030966	CA-SDI-019654	Historic	2009	Check dam
P-37-033559	CA-SDI-021089	Prehistoric	1974 2014	Bedrock milling, lithic scatter

3.3 Other Historical Research

Historical topographic maps (USGS 1943, 1956, 1958, 1959, 1963, 1973,1978, 1987, 1998), GLO plats and land patents (GLO 1859, 1876; USDI 1996, 2020), and historical aerials (USDA 1953, 1964, 1968, 1971, 1980, 1989, 1994, 1996, 2002, 2003, 2005, 2009) were also reviewed.

4.0 FIELD METHODS

The field survey method was a systematic intensive pedestrian survey. The systematic intensive survey consisted of a team of two people walking parallel transects (15 m- 30 m). Team members checked any areas that had been cleared of vegetation or disturbed by rodents.

The ArcGIS Collector application was used in conjunction with an Apple iPhone XR with integrated GPS to record any identified cultural material. Additional information was noted in field notes. All information was collected in accordance with guidelines outlined in the California Archaeological Inventory Handbook for Completing Archaeological Site Records (OHP 1995).

On February 10, 2020, ASM archaeologist Michelle Hamilton along with Grey Wolf Native American monitor Daniel Gonzalez performed a systematic intensive pedestrian survey of the project area under the supervision of ASM Senior Archaeologist Amy Jordan, RPA (University of Washington, PhD). Ground surface visibility was poor due to vegetation cover (Figure 2 and Figure 3). Although the vegetation cover was short and easy to traverse, it did obscure potential artifacts. In general, the project area was flat and relatively clear of modern trash and debris. No cultural resources were identified.

Figure 2. Overview of project area, from southwestern edge, looking northeast.

Figure 3. Overview of project area, from northeastern edge, looking southwest.

5.0 ARCHAEOLOGICAL RESOURCES

There are no previously recorded resources in the project area. No previously unidentified cultural resources were recorded in the project area during this survey.

5.1 Prehistoric Archaeological Sites

No prehistoric archaeological sites had been previously recorded in the project area. No previously unrecorded prehistoric cultural resources were identified during this survey.

5.2 Historic Archaeological Sites

No historic archaeological resources have been recorded within the project area. No previously unrecorded prehistoric cultural resources were identified during this survey.

5.3 Prehistoric Isolates

No prehistoric isolates have been recorded within the project area. No previously unrecorded prehistoric isolates were identified during this survey.

5.4 Resources of Unknown Age

No previously recorded cultural resources of unknown age were in the project area. No newly identified cultural resources of unknown age were in the project area.

5.5 Prehistoric and Historic Multi-Component Sites

No previously recorded multi-component cultural resources were in the project area. No newly identified multi-component cultural resources were in the project area.

5.6 Other Locations of Historic Activities, Objects, or Infrastructure

No previously recorded locations of historic activities, objects, or infrastructure were in the project area. No newly identified locations of historic activities, objects, or infrastructure were in the project area.

5.7 Prehistoric Synthesis

The chronology of prehistoric activity within the project areas remains largely undefined, based on the scarcity of recorded sites. It is likely that the occupation of prehistoric habitation sites or other activities took place within and adjacent to the project area, but that they were unidentifiable during the current survey because the area had previously been graded and disturbed. A large village site (CA-SDI-185) is less than one mile from the project area along a valley bottom. It is likely that the project area was along a prehistoric travel corridor to access the village. The grading of the property in the 1970s likely negatively impacted any intact archaeological resources. However, excavations at the nearby village of Neti/ Bancroft Ranch House did yield prehistoric artifacts at a depth of over 3 feet. It is possible that archaeological resources may still exist at the project site.

5.8 Historic Synthesis

Historic-period uses of the project area were limited and generally focused on cattle grazing or other agricultural activities. No specific activities could be gleaned from currently available historic archival material.

6.0 NATIVE AMERICAN PARTICIPATION/CONSULTATION

On March 4, 2020, ASM archaeologist Amy Jordan sent a letter to the Native American Heritage Commission (NAHC) on behalf of DPR to request a review of its Sacred Land Files as part of the record search.

The Jamul Indian Village responded to a draft of this report via email on July 23, 2021. The Jamul Indian Village requested to receive project updates, reports, or any documentation which may be generated regarding previously recorded or newly discovered archaeological sites. The Jamul Indian Village further requested that an approved Kumeyaay Cultural Monitor be present on-site during ground disturbing activities.

Correspondence with the NAHC and Jamul Indian Village is included in Appendix C.

7.0 IMPACTS, SIGNIFICANCE, AND MANAGEMENT RECOMMENDATIONS

7.1 Applicable Regulations and Guidelines for Determining Significance

The project area currently encompasses only county-owned lands. However, future development may require federal permits, thus requiring compliance with regulations set forth in the NHPA governing the discovery and treatment of cultural resources, as well as CEQA. Districts, sites, buildings, structures, and objects are assigned significance based on their exceptional value or quality illustrating or interpreting the heritage of San Diego County, California, or the United States in history, architecture, archaeology, engineering, and culture. A number of criteria are used in demonstrating resource importance. Specifically, criteria outlined by the NRHP, CRHR, and CEQA provide the guidance for making such a determination. San Diego County has a local register for evaluation of unincorporated areas of the county; resources in this project are in unincorporated San Diego County. The following sections detail the criteria that a resource must meet to be determined important.

7.1.1 National Historic Preservation Act (NHPA)

The NHPA established the NRHP and the President's Advisory Council on Historic Preservation (ACHP), and provided that states may establish State Historic Preservation Officers (SHPOs) to carry out some of the functions of the NHPA. Most significantly for federal agencies responsible for managing cultural resources, Section 106 of the NHPA directs that "[t]he head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the NRHP." Section 106 also affords the ACHP a reasonable opportunity to comment on the undertaking (54 USC 306108).

36 Code of Federal Regulations, Part 800 (36 CFR 800) implements Section 106 of the NHPA. It defines the steps necessary to identify historic properties (those cultural resources listed in or eligible for listing in the NRHP), including consultation with federally recognized Native American tribes to identify resources of concern to them; to determine whether or not they may be adversely affected by a proposed undertaking; and the process for eliminating, reducing, or mitigating adverse effects.

7.1.1.1 NHPA Historic Property

The NHPA defines a "historic property" as "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on the National Register," such term includes "artifacts, records, and remains which are related to such district, site, building, structure, or object" as stated in 16 U.S.C. Section 470(w)(5).

7.1.1.2 National Register of Historic Places Significance Criteria

Authorized by the NHPA, the National Park Service's NRHP is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America's historic and archeological resources. The NRHP is the official list of the nation's historic places worthy of preservation.

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and

A. that are associated with events that have made a significant contribution to the broad patterns of our history; or

B. that are associated with the lives of persons significant in our past; or

C. that embody distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. that have yielded, or may be likely to yield, information important in prehistory or history.

Ordinarily cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years are not considered eligible for the NRHP. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories:

a) a religious property deriving primary significance from architectural or artistic distinction or historical importance; or

b) a building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or

c) a birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building directly associated with his productive life; or

d) a cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or

e) a reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or

f) a property primarily commemorative in intent, if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or

g) a property achieving significance within the past 50 years if it is of exceptional importance.

7.1.2 California Register of Historical Resources

The CRHR program encourages public recognition and protection of resources of architectural, historical, archaeological, and cultural significance; identifies historical resources for state and local planning purposes; determines eligibility for state historic preservation grant funding; and affords certain protections under CEQA. The criteria established for eligibility for the CRHR are directly comparable to the national criteria established for the NRHP.

To be eligible for listing in the CRHR, an archaeological site, building, object, or structure must satisfy at least one of the following four criteria:

1) It is associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the U.S.
2) It is associated with the lives of persons important to local, California, or national history.

3) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values.
4) It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Historical resources eligible for listing in the CRHR must also retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. For the purposes of eligibility for the CRHR, integrity is defined as "the authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance" (California Office of Historic Preservation 2001). This general definition is generally strengthened by the more specific definition offered by the NRHP—the criteria and guidelines upon which the CRHR criteria and guidelines are based.

7.1.3 California Environmental Quality Act

CEQA Section 15064.5 *Determining the Significance of Impacts to Archeological and Historical Resources* requires that all private and public activities not specifically exempted be evaluated against the potential for environmental damage, including effects to historical resources. Historical resources are recognized as part of the environment under CEQA. It defines historical resources as "any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California."

Lead agencies have a responsibility to evaluate historical resources against the CRHR criteria prior to making a finding as to a proposed project's impacts to historical resources. Mitigation of adverse impacts is required if the proposed project will cause substantial adverse change to a historical resource. Substantial adverse change includes demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired. While demolition and destruction are fairly obvious significant impacts, it is more difficult to assess when change, alteration, or relocation crosses the threshold of substantial adverse change. The CEQA Guidelines provide that a project that demolishes or alters those physical characteristics of an historical resource that convey its historical significance (i.e., its character-defining features) can be considered to materially impair the resource's significance.

The CRHR is used in the consideration of historical resources relative to significance for purposes of CEQA. The CRHR includes resources listed in, or formally determined eligible for listing in, the NRHP, as well as some California State Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts), or that have been identified in a local historical resources inventory, may be eligible for listing in the CRHR and are presumed to be significant resources for purposes of CEQA unless a preponderance of evidence indicates otherwise.

Generally, a resource shall be considered by the lead agency to be a "historical resource" if it:

1. Is listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Public Resources Code [PRC] Section 5024.1, Title 14 CCR, Section 4850 et seq.).
2. Is included in a local register of historical resources, or is identified as significant in an historical resource survey meeting the requirements Section 5024.1(g) of the PRC.
3. Is a building or structure determined to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.

CEQA requires that all private and public activities not specifically exempted be evaluated for the potential to impact the environment, including effects to historical resources. Historical resources are recognized as part of the environment under CEQA. It defines historical resources as “any object, building, structure, site, area, or place, which is historically significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California” (Division I, Public Resources Code, Section 5021.1(b)).

7.2 Interpretation of Resource Significance and Impact Identification

7.2.1 Resource Significance

No cultural resources were identified within the project area. There are no potentially significant cultural resources within the project.

7.2.2 Impact Identification

No cultural resources were identified within the project area. No potentially significant cultural resources will be impacted by the proposed project.

7.3 Management Recommendations

No cultural resources were identified within the project area as part of the record search and cultural resources survey. There are no management recommendations for cultural resources at this time. Due to a concern for potentially encountering sensitive tribal cultural resources during the project, an approved Kumeyaay Cultural Monitor should be present for all ground disturbing activities.

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2010 Aerial photograph. Courtesy of HistoricAerials.com.

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1958 Jamul Mountains 7.5-Minute Quadrangle.
1959 Jamul Mountains 7.5-Minute Quadrangle.
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APPENDICES

A. Records Search Confirmation

South Coastal Information Center
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-5320
Office: (619) 594-5682
www.scic.org
scic@mail.sdsu.edu

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM
CLIENT IN-HOUSE RECORDS SEARCH

Company: ASM Affiliates

Company Representative: Nick Doose

Date: 2/24/2020

Project Identification: Calavo Park #32990.03

Search Radius: 1 mile

Historical Resources: SELF

Trinomial and Primary site maps have been reviewed. All sites within the project boundaries and the specified radius of the project area have been plotted. Copies of the site record forms have been included for all recorded sites.

Previous Survey Report Boundaries: SELF

Project boundary maps have been reviewed. National Archaeological Database (NADB) citations for reports within the project boundaries and within the specified radius of the project area have been included.

Historic Addresses: SELF

A map and database of historic properties (formerly Geofinder) has been included.

Historic Maps: SELF

The historic maps on file at the South Coastal Information Center have been reviewed, and copies have been included.

Copies: 26

Hours: 1

This is not an invoice. Please pay from the monthly billing statement

B. Confidential Figures—Site Location Maps

C. Native American Consultation

Local Government Tribal Consultation List Request

Native American Heritage Commission

1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Type of List Requested

☒ **CEQA Tribal Consultation List (AB 52)** ***– Per Public Resources Code § 21080.3.1, subs. (b), (d), (e) and 21080.3.2***

☐ **General Plan (SB 18)** ***- Per Government Code § 65352.3.***

Local Action Type:

___ **General Plan** ___ **General Plan Element** ___ **General Plan Amendment**

___ **Specific Plan** ___ **Specific Plan Amendment** ___ **Pre-planning Outreach Activity**

Required Information

Project Title: Cultural Resources Study for the County of San Diego Department of Parks and Recreation Calavo Park, Spring Valley, San Diego County, California
Local Government/Lead Agency: County of San Diego Department of Parks and Recreation
Contact Person: Amy Jordan
Street Address: 8555 Aero Dr, Suite 206
City: San Diego **Zip:** 92123
Phone: 619-740-1318 **Fax:**
Email: **ajordan@asmaffiliates.com**

Specific Area Subject to Proposed Action

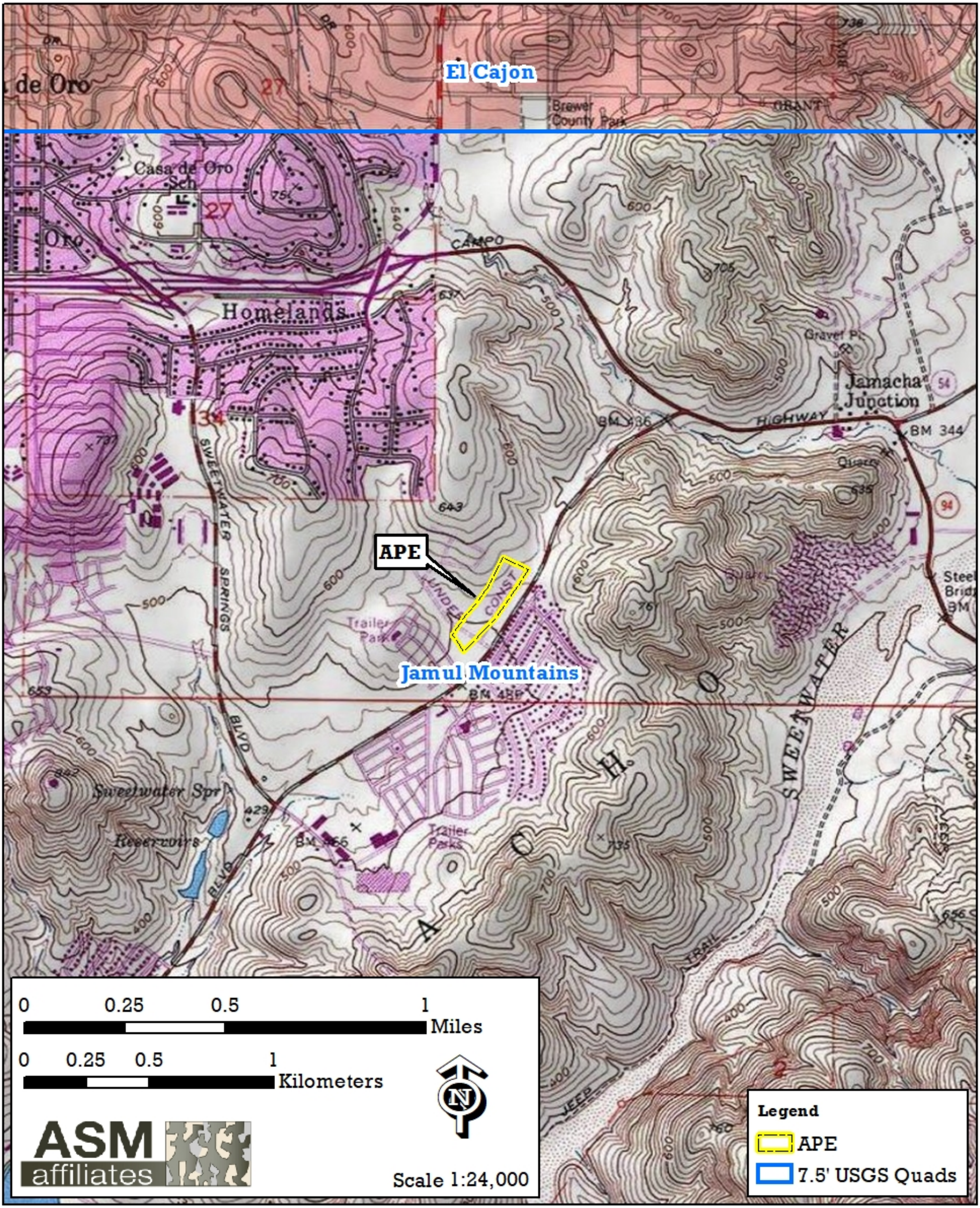
County: San Diego **City/Community:** Spring Valley

Project Description: In 2019, the County of San Diego Department of Parks and Recreation (DPR) acquired the approximately 9-acre property from the California Department of Transportation to develop into a recreational park for the Spring Valley community. No final plans have been formalized as environmental constraints are still being analyzed; final plans will be determined after public input meetings.

Additional Request

☒ **Sacred Lands File Search -** ***Required Information:***

USGS Quadrangle Name(s): Jamul Mountains
Township: 16S **Range:** 1W **Section(s):**unsectioned Rancho Jamacho


El Cajon
Jamul Mountains
APE
Homelands
Casa de Oro Sch
Jamacha Junction
Sweetwater Spr Reservoirs
Trailer Park
Trailer Parks
Brewer County Park
CAMPO
HIGHWAY
SWEETWATER SPRINGS BLVD
SWEETWATER
UNDER CONST
Gravel Pit
Quarry
BM 486
BM 344
BM 466
JEEP TRAIL
0 0.25 0.5 1 Miles
0 0.25 0.5 1 Kilometers
ASM affiliates
Scale 1:24,000
Legend
APE
7.5' USGS Quads

____

From: Lisa Cumper <lcumper@jiv-nsn.gov>
Sent: Friday, July 23, 2021 3:29 PM
To: Whitty, Eira <Eira.Whitty@sdcounty.ca.gov>
Subject: [External] Re: Calavo Park: AB-52 Consultation

Eira,

Thank you for providing the DRAFT Cultural Resources Study for JIV, we request as a courtesy to be kept in the information loop as the project progresses and would appreciate being maintained on the receiving list for project updates, reports of investigations, and/or any documentation that might be generated regarding previously reported or newly discovered sites. Further, if the project boundaries are modified to extend beyond the currently proposed limits, we do request updated information and the opportunity to respond to your changes.

Finally, we recommend that Approved Kumeyaay Cultural Monitors be present on-site during all surveys and all ground-disturbing activities. If you do not have access to an Approved Cultural Resource Monitor, contact us and we will work with you to identify appropriately trained individuals. The Jamul Indian Village has appropriate monitors available if needed.

Lastly, since monitors will be required I think we should implement a management plan, and update section 7.0 Impacts, Significance and Management Recommendations, JIV can assist in this if needed. Please let me know your thoughts and we can work on this together.

We appreciate involvement with your initiative and look forward to working with you on future efforts. If you have questions or need additional information, please do not hesitate to contact me by telephone at 619-928-8689 or by e-mail at lcumper@jiv-nsn.gov.

Kindest Regards,

Lisa K. Cumper, THPO
Tribal Historic Preservation Officer
Cultural Resources Manager,
The Jamul Indian Village of California
Secretary, Kumeyaay Cultural Repatriation Committee
KCRC, Kumeyaay Nation

P.O. Box 612, Jamul CA 91935
desk: 619.669.4855
cell: 619.928.8689
fax: 619.669.4817

email: lcumper@jiv-nsn.gov
web: www.jamulindianvillage.com

The ground on which we stand is sacred ground, it is the blood of our ancestors. Chief Plenty Coups, Crow.

Appendix E. Noise Technical Report

Noise Technical Report

Calavo Park

Lead Agency:

County of San Diego
Department of Parks and Recreation
Contact: Nicole Ornelas
5500 Overland Avenue, Suite 410
San Diego, California 92123
Phone Number: (858) 243-7185

Preparer:

Harris & Associates
600 B Street, Suite 2000
San Diego, California 92101

November 5, 2021

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GLOSSARY OF TERMS AND ACRONYMS

The following terms and acronyms are used in this report.

ADT	average daily trip
CEQA	California Environmental Quality Act
CNEL	community noise equivalent level
County	County of San Diego
County General Plan	County of San Diego General Plan
County Guidelines	County of San Diego Guidelines for Determining Significance for Noise
County Noise Ordinance	County of San Diego Noise Ordinance
dB	decibel
dBA	A-weighted decibel
DNL or L_{dn}	day-night average sound level
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
Hz	hertz
in/sec	inches per second
L_{eq}	equivalent sound level
$L_{eq(h)}$	1-hour equivalent sound level
LLG	Linscott, Law & Greenspan, Engineers
L_{max}	maximum sound level
NSLU	noise-sensitive land use
PPV	peak particle velocity
project	Calavo Park

RCNM	Road Construction Noise Model
RMS	root mean square

EXECUTIVE SUMMARY

The proposed Calavo Park (project) includes the development of a community park on an approximately 9-acre site; the County of San Diego (County) is developing the project design. Implementation of the project would have potentially significant impacts related to project-generated noise during construction and operation and groundborne vibration during construction. Mitigation measures have been implemented to reduce impacts to less than significant. This report was prepared in accordance with the County Guidelines for Determining Significance (County of San Diego 2009a) and Report Format and Content Requirements (County of San Diego 2009b).

1.0 INTRODUCTION

1.1 Project Description

The proposed project would be on an approximately 9-acre property northeast of the intersection of Calavo Drive and Jamacha Boulevard in the unincorporated community of Spring Valley in San Diego County, California (see Figure 1, Regional Location, and Figure 2, Project Site). The project includes development of a community park. Proposed park amenities would include a baseball field, pickleball courts, a basketball court, a soccer field, children’s play areas, a dog park, a skate park, a community garden, restrooms, a picnic area, and open green space. The project proposes access through a single driveway via Calavo Drive, which would lead to designated parking containing approximately 85 parking spaces (see Figure 3, Proposed Site Plan).

1.2 Environmental Settings and Existing Conditions

1.2.1 Settings and Locations

The project site is in the unincorporated community of Spring Valley in San Diego County, California. Surrounding land uses include single- and multi-family residential to the northwest, east, and south and the San Diego National Wildlife Refuge to the northeast. Vegetation communities and land cover types on the project site include disturbed coastal sage scrub and disturbed habitat.

1.2.2 Noise Terminology

As described in the County Guidelines (County of San Diego 2009a), environmental noise is composed of infinite combinations of sound intensities of varying frequency and duration. The following weighted and averaging terms are used in this analysis to reasonably characterize environmental noise as defined in the County Guidelines.

1.2.2.1 A-Weighted Sound Pressure Level

Some frequencies of noise are more noticeable than others. To compensate for this fact, different sound frequencies are weighted more heavily (A-weighted decibel [dBA]) so that the response of the average human ear is simulated.

1.2.2.2 Equivalent Sound Level

Environmental noise often fluctuates over time. To be able to describe this in a practicable manner, the equivalent sound level (L_{eq}) was developed. L_{eq} is the A-weighted, steady sound level that contains the same total acoustical energy as the actual fluctuating sound level.

1.2.2.3 1-Hour Equivalent Noise Level

A 1-hour equivalent noise level ($L_{eq(h)}$) is a measurement of noise intensity, which is the equivalent sound level (L_{eq}) over a 1-hour averaging period.

1.2.2.4 Community Noise Equivalent Level

Community noise equivalent level (CNEL) applies weights to noise during evening and nighttime hours to compensate for the increased sensitivity of people to noise at those times. CNEL is the equivalent sound level for a 24-hour period with a +5 decibel (dB) weighting applied to all sound occurring between 7:00 p.m. and 10:00 p.m. and a +10 dB weighting applied to all sound occurring between 10:00 p.m. and 7:00 a.m. CNEL is expressed in the A-weighting frequency scale. In the case of airport or aircraft noise, CNEL is often expressed as a 365-day average.

1.2.2.5 Day-Night Average Sound Level

Day-night average sound level (DNL or L_{dn}) is similar to CNEL except it does not apply any weights to the evening hours to compensate for the increased sensitivity to noise. DNL is a 24-hour weighted average and also uses an A-weighted frequency scale. DNL is normally within 1 dB of CNEL using the same 24-hour data.

1.2.2.6 Noise-Sensitive Land Use

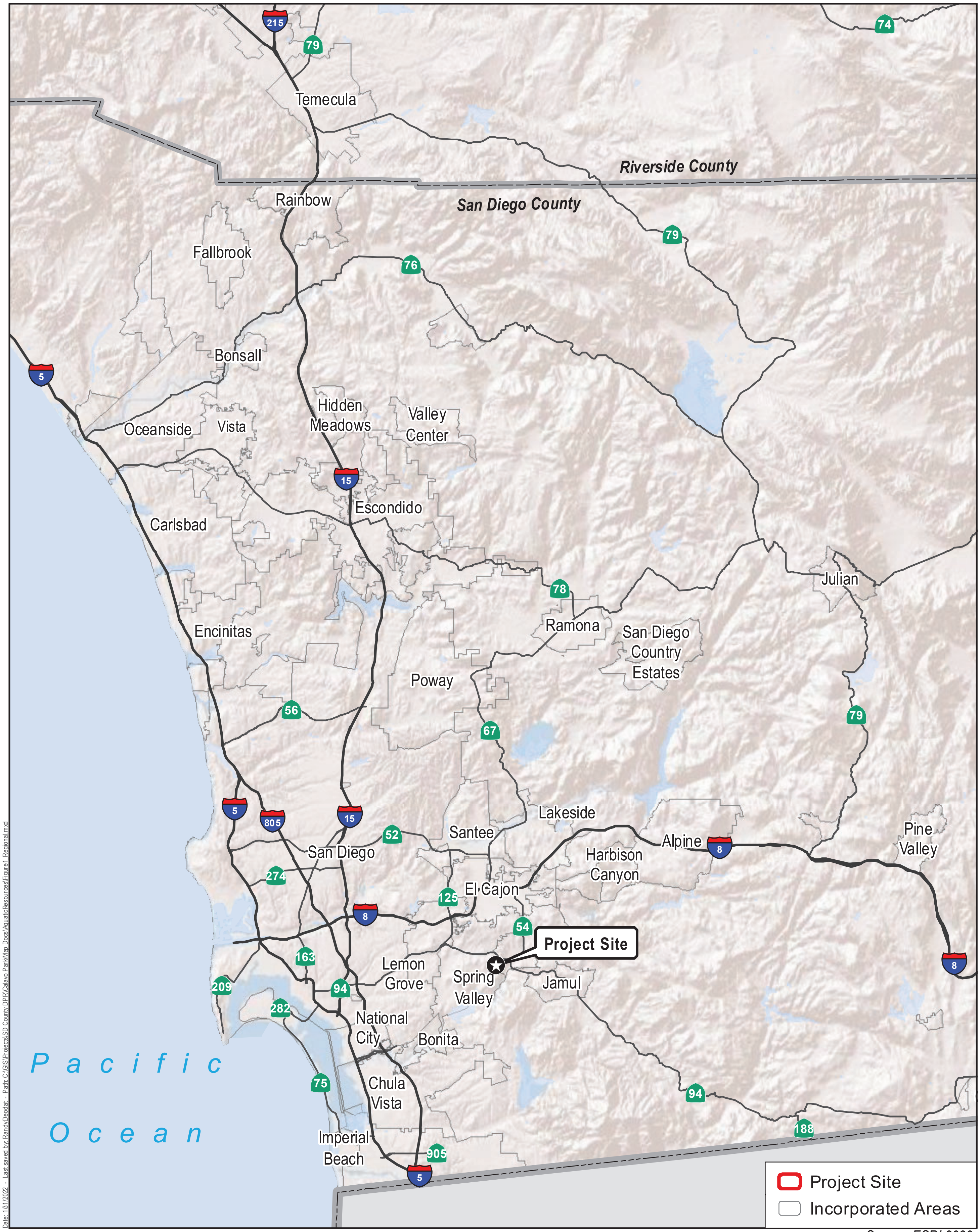
Noise-sensitive land uses (NSLUs) are land uses where an excessive amount of noise would interfere with normal operations or activities. An NSLU is any residence, hospital, school, hotel, resort, library, nature preserve, or similar facility where quiet is an important attribute of the environment.

1.2.2.7 Maximum Sound Level

The maximum sound level is highest sound level reached when measuring noise with a sound level meter using the A-weighted network and slow time weighting. The maximum sound level is equal to the industry standard known as L_{max}.

1.2.2.8 Groundborne Vibration

Groundborne vibration propagates from a source through the ground to adjacent receptors by surface waves that are transmitted through solid material. The frequency of a vibrating object, measured in hertz (Hz), describes how rapidly it is oscillating. The rumbling sound caused by the vibration of building structures is referred to as groundborne noise.



Source: ESRI 2020.

Harris & Associates

N

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Miles

Figure 1

Regional Location

Calavo Park

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Source: SanGIS Imagery 2017.

Date: 1/31/2022 - Last saved by: RandyDeodat - Path: C:\GIS\Projects\SD County DPR\Calavo Park\Map Docs\AquaticResources\Figure2_ProjectSite.mxd

Harris & Associates

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Feet

Figure 2

Project Site

Calavo Park

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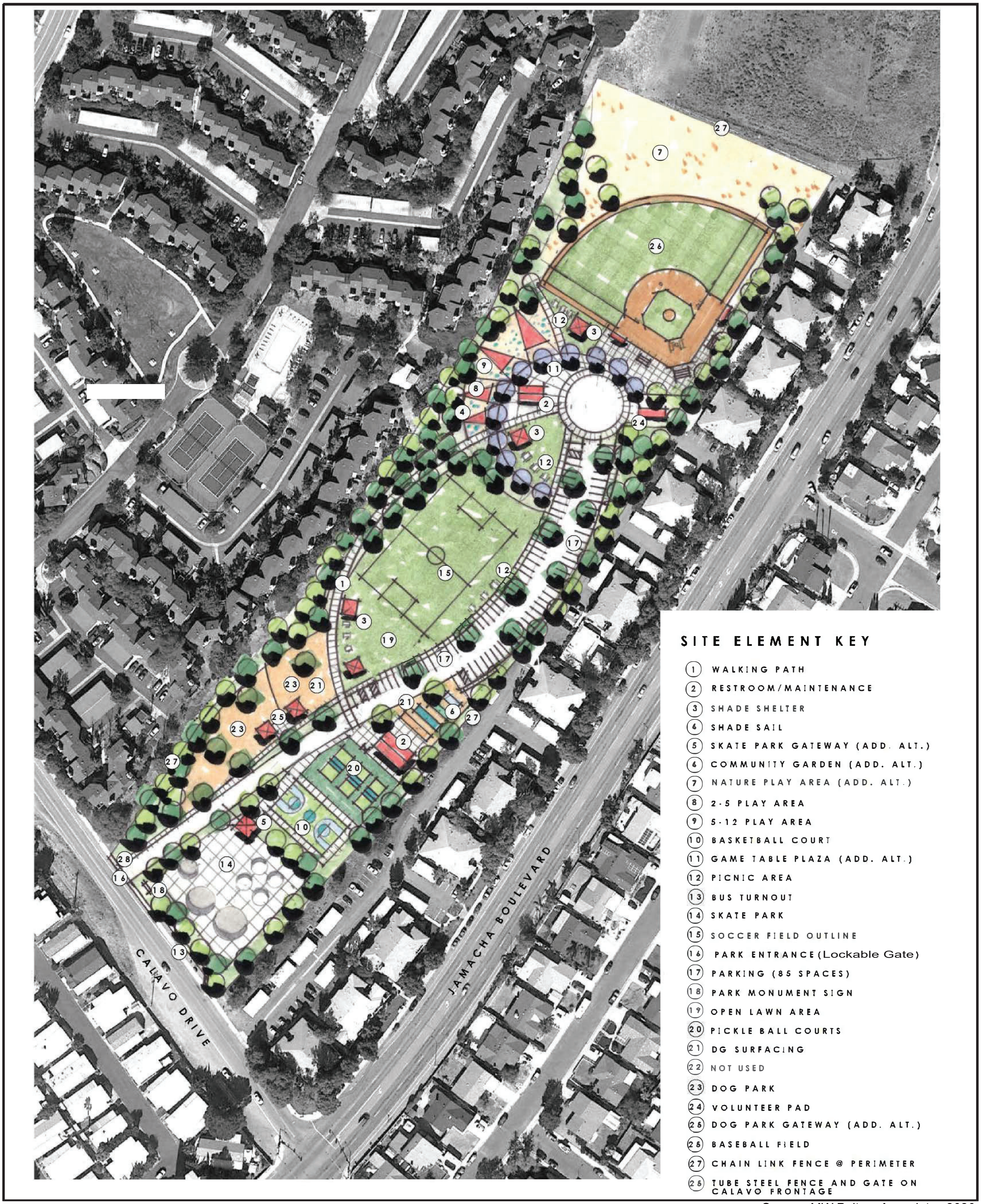

Source: MW Peltz + Associates 2020.

Harris & Associates

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Figure 3
Proposed Site Plan

Calavo Park

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1.2.2.9 Vibration-Sensitive Land Uses

Vibration-sensitive land uses include buildings where vibration would interfere with operations within the building, such as vibration-sensitive research and manufacturing, hospitals with vibration-sensitive equipment, and university research operations. Residential uses are also sensitive to excessive levels of vibration of either a regular or intermittent nature.

1.2.3 General Noise Principles

Noise is typically defined as unwanted sound. The main characteristics of sound are intensity, frequency, and duration. The dB is the typical measurement of sound intensity. A sound level of 0 dB approximates the threshold of hearing for people. The average person can perceive a change of +/-3 dB. A change of +/-5 dB is readily perceptible, and a change of +10 dB is perceived as twice as loud. Noise can have both human health and quality-of-life effects. At 130 to 140 dB, sound becomes extremely painful to the average person. Data show that long exposure to noise levels exceeding 85 dB can result in hearing loss and other health-related problems. The community noise environment is normally unacceptable for residential sites that are exposed to noise where the average sound level exceeds 75 dB LDN. From a quality-of-life standpoint, noise can interfere with speech, disturb sleep, and cause annoyance. Studies on the relationship between noise exposure and percentage of community highly annoyed by noise demonstrate that approximately 4 percent of a community is highly annoyed by community noise levels equal to 55 dB CNEL, and approximately 14 percent of a community can be highly annoyed by community noise levels equal to 65 dB CNEL. Additionally, an increase in the ambient or periodic noise level can cause quality-of-life impacts even when the average noise level does not exceed 55–65 dB CNEL. A study by the International Standard Organization found that sound level changes of 5–10 dB generated sporadic complaints from existing residents. Changes of 10 dB or more generated widespread complaints (County of San Diego 2009a).

Frequency of sound is measured in Hz or cycles per second. The generally accepted range of human hearing is from approximately a low of 20 Hz to a high of 20,000 Hz. Some frequencies are more noticeable and unpleasant than others (County of San Diego 2009a).

1.2.4 Existing Regulations and Standards

Federal, state, and local agencies have established limits for community noise and occupational noise. These standards are generally the result of socioeconomic studies that balance quality-of-life issues with reasonable development needs. The County of San Diego has two principal noise regulations: the Noise Element of the County of San Diego General Plan (County General Plan) and the County of San Diego Noise Ordinance (County Noise Ordinance). The following summarizes the regulations described in the County Guidelines that typically apply to projects in the unincorporated area of the County (County of San Diego 2009a).

1.2.4.1 Federal Regulations and Standards

Federal Aviation Administration Standards (Regulations Part 150, Section 150.21). The Federal Aviation Administration establishes 65 dB CNEL as the noise standard associated with aircraft noise. The standard is also generally applied to railroad noise.

Federal Transit Administration Standards (FTA) (Transit Noise and Vibration Impact Assessment Manual, September 2018, https://www.transit.dot.gov/sites/fta.dot.gov/files /docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf). For federally funded mass transit projects, the FTA has guidance on how to assess noise and vibration impacts. These standards preempt County standards for federally funded projects. The County currently relies on the vibration standards listed in this manual.

1.2.4.2 State Regulations and Standards

California Environmental Quality Act (CEQA) (California Code of Regulations, Guidelines for Implementation of CEQA, Appendix G, Title 14, Chapter 3, Sections 15000–15387, and California Public Resources Code, Sections 21000–21178, https://leginfo.legislature.ca.gov/ faces/codes_displaySection.xhtml?sectionNum=21001.&lawCode=PRC/). CEQA requires lead agencies to consider noise impacts. Under CEQA, lead agencies are directed to assess conformance to locally established noise standards or other agencies' noise standards, measure and identify the potentially significant exposure of people to or generation of excessive groundborne vibration or noise levels, measure and identify potentially significant permanent or temporary increases in ambient noise levels, and measure and identify potentially significant impacts associated with air traffic.

California Noise Control Act (California Health and Safety Code, Sections 46000–46080, https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=HSC&sectionNum=46000#:~:text=The%20Legislature%20hereby%20finds%20and,the%20public%20health%20and%20welfare.&text=(f)%20All%20Californians%20are%20entitled,to%20their%20health%20or%20welfare.). This act, included in the California Health and Safety Code, finds that excessive noise is a serious hazard to public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also finds that there is a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the state to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

California Noise Insulation Standards (California's Title 24 Noise Standards; California Code of Regulations, Title 24, Part 2, Chapter 2-35, http://ccr.oal.ca.gov/). In 1974, the California Commission on Housing and Community Development adopted noise insulation standards for multi-family residential buildings (California Code of Regulations, Title 24, Part 2). Title 24 establishes standards for interior room noise (attributable to outside noise sources). The regulations specify that acoustical studies must be prepared whenever a residential building or structure is proposed to be near an existing or adopted freeway route, expressway, parkway, major street, thoroughfare, rail line, rapid transit line, or industrial noise source and where such noise source or sources create an exterior CNEL (or L_{dn}) of 60 dB or greater. Such an acoustical analysis must demonstrate that the residence has been designed to limit intruding noise to an interior CNEL (or L_{dn}) of at least 45 dB.

1.2.4.3 Local Regulations and Standards

County of San Diego General Plan, Noise Element (Part VIII) (http://www.sandiegocounty.gov/pds/generalplan.html). The Noise Element of the County General Plan establishes limitations on sound levels to be received by NSLUs. New development may cause an existing NSLU to be affected by noise caused by the new development, or it may create or locate an NSLU in such a place that it is affected by noise. The County General Plan Noise Element identifies airports and traffic on public roadways as the major sources of noise.

The County General Plan Noise Element states that an acoustical study is required if it appears that an NSLU would be subject to noise levels of CNEL equal to 60 dBA or greater. If the acoustical study confirms that greater than 60 dB CNEL would be experienced, modifications that reduce the exterior noise level to less than 60 dB CNEL and the interior noise levels to less than 45 dB CNEL must be made to the development. If these modifications are not made, the development shall not be approved unless a finding is made that specific social or economic considerations warrant project approval, provided that, if the noise level would exceed 75 dB CNEL, even with such modifications, the development shall not be approved irrespective of such social or economic considerations.

“Development” is defined as any physical development including but not limited to residences, commercial or industrial facilities, roads, civic buildings, hospitals, schools, and airports. “NSLU” is defined in the County General Plan Noise Element as any residence, hospital, school, hotel, resort, library, or any other facility where quiet is an important attribute of the environment. “Exterior Noise” is defined in the County General Plan Noise Element as noise measured at an outdoor living area that meets specified minimum area requirements for single-family detached dwelling projects. For other projects, it means noise measured at all exterior areas that are provided for group or private usable open space.

The County General Plan Noise Element includes special provisions for County road construction projects and interior noise levels in rooms that are usually occupied only a part of the day (e.g., schools, libraries).

County of San Diego Noise Ordinance (San Diego County Code of Regulatory Ordinances, Title 3, Division 6, Chapter 4, Section 36.401 www.sandiegocounty.gov/cob/ordinances/ord9962.doc). The County Noise Ordinance establishes prohibitions for disturbing, excessive, or offensive noise, and provisions such as sound level limits for the purpose of securing and promoting the public health, comfort, safety, peace, and quiet for its citizens. Planned compliance with sound level limits and other specific parts of the ordinance allows presumption that the noise is not disturbing, excessive, or offensive. Limits are specified depending on the zoning placed on a property (e.g., varying densities and intensities of residential, industrial, and commercial zones). Where two adjacent properties have different zones, the sound level limit at a location on a boundary between two properties is the arithmetic mean of the respective limits for the two zones, except for extractive industries. It is unlawful for any person to cause or allow the creation of any noise that exceeds the applicable limits of the County Noise Ordinance at any point on or beyond the boundaries of the property on which the sound is produced. Furthermore, the County Noise Ordinance allows the County to grant variances from the noise limitations for temporary on-site noise sources, subject to terms and conditions intended to achieve compliance.

Finally, the County Noise Ordinance establishes additional noise limitations for operation of construction equipment. Section 36.409 of the County Noise Ordinance controls construction equipment noise and establishes a 75 dBA L_{eq} standard averaged over a period of 8 hours between 7:00 a.m. and 7:00 p.m. at the boundary line of the property where the noise source is being generated or any occupied property where noise is received during construction.

In addition to the general limitations on sound levels in Section 36.404 of the County Noise Ordinance, and excluding emergency work, Section 36.410 sets sound level limitations on “impulsive” or “single event” noise of 82 dBA L_{max} at residential uses and 85 dBA L_{max} for agricultural, commercial, or industrial uses. For public road projects, the sound level limitations are 85 dBA L_{max} and 90 dBA L_{max}, respectively.

County of San Diego Department of Parks and Recreation Noise Regulation in County Parks. The County of San Diego Department of Parks and Recreation adopted a policy (Noise Regulation Policy) that specifically applies the County Noise Ordinance to the operation of County Parks. The Noise Regulation Policy specifically includes prohibition of disturbing, excessive, or offensive noise; prohibition of disturbing amplified sound; and application of the noise level limits adopted in the County Noise Ordinance. If adopted, Calavo Park would be added to the list of parks in Section II.B of the Noise Regulation Policy and noise level limits identified. The Noise Regulation Policy also requires group reservations to include agreements to maintain amplified sound within adopted noise level limits. For large events, Sound Amplification Plans may be required.

1.2.5 Existing Noise Conditions

The unincorporated community of Spring Valley is a heavily populated, suburban environment primarily characterized by single-family residential uses that covers approximately 11 square miles (County of San Diego 2014). The project site is currently undeveloped and does not include sources of noise. Major sources of noise surrounding the project site in Spring Valley include transportation and non-transportation-related activities, as discussed below.

Ambient sound level surveys were conducted on February 10, August 26, and August 31, 2021, to quantify the existing noise environment within the project boundary and surrounding neighborhood and to establish baseline noise levels of similar community park amenities. A total of seven short-term, 15-minute measurements were conducted to provide a “snapshot” of baseline or typical noise levels at a given point in time. In February 2021, one measurement was taken on the project site, and a second measurement was taken in the neighborhood directly north of the site. A third measurement was taken at a neighborhood skate park in the City of Lemon Grove. In August 2021, three measurements were taken during active use of fields at Hilton Head County Park, and one measurement was taken at the dog park at Lamar County Park.

Figure 4, Noise Survey Locations, shows the location of the short-term measurements. Results of the noise measurements are shown in Table 1.

Source: SanGIS Imagery 2017.

Harris & Associates

Figure 4

Noise Survey Locations

Calavo Park

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Table 1. Noise Survey Locations

Site Location	Date	Observed Noise Sources	L_{eq}
Calavo Park project site	02/10/21	Faint consistent traffic from Jamacha Boulevard, trees rustling from wind, birds chirping.	49.6
Neighborhood adjacent to Calavo Park project site	02/10/21	Children at play, birds chirping, trees rustling from a decent wind, helicopter flyover, occasional cars driving by.	46.0
Lemon Grove Skate Park	02/10/21	Approximately six skaters continuously skating up, down, and grinding on the ramps; occasional chatter from park users; transportation noise including cars, a fire engine, and a trolley.	61.7
Hilton Head County Park – baseball field	08/26/21	Use of field for Soccer Shots activity, including coaches giving direction, children yelling, and throwing and kicking of balls. Field also in use for flag football drills.	59.3
Hilton Head County Park – between baseball field and multi-use field	08/26/21	Children participating in various organized sports drills and games, including soccer, football, and flag football. Consistent noise from coaching, children, and ball kicking.	56.3
Hilton Head County Park – multi-use field	08/26/21	Children participating in various organized sports drills and games, including soccer, football, and flag football. Consistent noise from coaching, children, ball kicking, and bystander chatter.	54.5
Lamar County Park – off-leash dog park	08/31/21	Dog owners chatting, 4–5 dogs playing, intermittent barking, and noise from the nearby playground.	48.6

Source: Appendix B.
Notes: L_{eq} = equivalent sound level

1.2.5.1 Transportation Noise Sources

The most common source of noise surrounding the project site is transportation, specifically vehicle, related. The following sections describe existing noise from roadways and airports.

Roadways

Traffic noise sources include automobiles, trucks, and other motor vehicles. Traffic on County roadways is the most substantial and pervasive source of noise the County (County of San Diego 2011). No existing roadways are on the project site. Vehicular traffic along roadways in the vicinity of the project site contributes to the overall noise environment on the project site. The project site is bounded by Calavo Drive to the southwest and Jamacha Boulevard to the east.

Table 2 shows the existing noise levels generated by the roadways surrounding the project site. The 60 dBA threshold is the applicable noise level limit because the project site is predominantly surrounded by residential uses. As shown in Table 2, the Jamacha Boulevard segments from Campo Road to Folex Way exceed the acceptable noise compatibility standard. The Calavo Drive segments from Jamacha Boulevard to Del Rio Road are below the acceptable noise compatibility standard.

Table 2. Existing Off-Site Roadway Noise Levels

Roadway	Segment	Existing ADT	Noise Level at 50 Feet From Roadway Centerline (dBA CNEL)
Jamacha Boulevard	Campo Road to Calavo Drive	13,430	70
	Calavo Drive to Folex Way	12,860	70
Calavo Drive	Jamacha Boulevard to Project Driveway	3,480	57
	Project Driveway to Del Rio Road	3,480	57
Source: LLG 2020 (traffic data); FHWA Noise Model (noise level estimates). See Appendix C for noise model assumptions and output. Notes: ADT = average daily trip; CNEL = community noise equivalent level; dBA = A-weighted decibel			

Airports

Another transportation-related noise source in Spring Valley is aviation operation. Noise generated from aviation operations is concentrated around airport buildings, runways, and along approach and departure routes. The nearest airport to Spring Valley is Gillespie Field approximately 6 miles north of the project site in the City of El Cajon. The next closest airport is San Diego International Airport approximately 12 miles west of the project site in the City of San Diego. Routine fly overs occur over West Spring Valley; however, the project site is not within the 60 dBA CNEL contour for either airport (SDCRA 2010, 2014).

1.2.5.2 Non-Transportation Noise Sources

Non-transportation-related noise generators are commonly called “stationary,” “fixed,” “area,” or “point” sources of noise. Industrial processing; mechanical equipment; pumping stations; and heating, ventilating, and air conditioning equipment are examples of fixed-location, non-transportation noise sources in the County. Some non-transportation sources are not stationary but are typically assessed as point or area sources due to the limited area in which they operate, such as truck deliveries (County of San Diego 2009c). The project site is currently undeveloped, and the area surrounding the site is characterized by residential development. No major sources of stationary noise are present surrounding the project site.

1.3 Methodology and Equipment

1.3.1 Noise Measuring Methodology and Procedures

Ambient sound level surveys were conducted on February 10, August 26, and August 31, 2021, to quantify the existing noise environment within the project boundary and surrounding neighborhood and to establish baseline noise levels of similar community park amenities. The measurements were taken in the afternoon and early evening (2:00 p.m. to 7:00 p.m.), when existing County amenities are typically busier on weekdays. The skate park measurement was taken in the afternoon hours (2:15 p.m. to 2:30 p.m.). Approximately six skaters were consistently participating in skating activities during the measurement. Predominant noise sources included skaters skating up and down and grinding the various ramps with their skateboards and occasional conversation of park users. Other noise sources included a constant flow of cars on surrounding streets and trolley horns. The sport field measurements were taken 20 to 30 feet from active uses in the early evening based on a review of park reservations (5:00 p.m. to 6:45 p.m.). Noise levels consisted of consistent use of both fields for sports games and drills, including soccer, football, and flag football. Noise sources included coaches giving directions, children yelling and playing, ball throwing and kicking, and bystanders chatting on the sidelines. Vehicle noise and one helicopter flyover were also audible. The dog park measurement was taken approximately 20 feet from the dog park fence in the late afternoon (5:15 p.m. to 5:30 p.m.). It is assumed that later afternoon would typically be when the most activity would be expected for the dog park as dog owners exercise their dogs after work. Predominant noise sources at this location were four to five dogs barking and running, conversations from dog owners, and noise from a nearby playground. A Larson Davis SoundExpert LxT Type I integrating sound level meter calibrated with a Larson Davis CAL200 calibrator was used to record ambient sound levels. Weather conditions during the measurements were slightly windy with a mild temperature and mostly cloudy skies. Noise measurement data is provided in Appendix B. Noise measurements locations are provided on Figure 4.

1.3.2 Noise Modeling Software

The potential for implementation of the proposed project to permanently increase ambient noise levels as a result of increased traffic noise is assessed using standard noise modeling equations adapted from the Federal Highway Administration (FHWA) noise prediction model. The modeling calculations take into account the posted vehicle speed, median width, average daily trip (ADT) volume, and estimated vehicle mix. Existing traffic volumes and roadway characteristics were obtained from Linscott, Law & Greenspan, Engineers (LLG) (2020). Estimated CNEL values from vehicular noise are calculated at 50 feet from the centerline of each roadway segment. Generally, noise from heavily traveled roadways would experience a decrease of approximately 3 dBA for every doubling of distance. The actual sound level at any receptor location depends on such factors as the source-to-receptor distance and the presence of intervening structures, barriers, vegetation, and topography; therefore, the result of the calculations is the worst-case scenario. The analysis estimates future noise levels under two scenarios as defined in the project-specific Local Mobility Analysis (LLG 2020):

- Existing
- Existing + Project

Peak-hour traffic volumes at study area intersections included in the Local Mobility Analysis (LLG 2020) were used to estimate ADT on street segments surrounding the project site. Peak-hour traffic was assumed to be 10 percent of total daily traffic (Caltrans 2013). The selected roadways would experience the greatest direct and relative increases in traffic volumes under the proposed project. Model input and output is provided in Attachment A of the Local Mobility Analysis (LLG 2020).

Impacts related to temporary increases in ambient noise levels from construction of the proposed project were calculated using sound level estimates from typical construction equipment provided by the FHWA in the Road Construction Noise Model (RCNM) (FHWA 2008).

1.3.3 Noise Formulas and Calculations

The decibel level of a sound decreases (or attenuates) as the distance from the source of that sound increases. For a single-point source, such as a piece of mechanical equipment, the sound level normally decreases by approximately 6 dBA for each doubling of distance from the source, as calculated by the following formula (Caltrans 2013):

$$dBA_2 = dBA_1 + 10\log_{10}[(D_1/D_2)]2 = dBA_1 + 20\log_{10}(D_1/D_2)$$

Where:

dBA_1 = noise level at distance D_1

dBA_2 = noise level at distance D_2

Sound that originates from a linear, or “line,” source, such as vehicular traffic, attenuates by approximately 3 dBA per doubling of distance, as calculated by the following formula (Caltrans 2013):

$$dBA_2 = dBA_1 + 10\log_{10}(D_1/D_2)$$

Where:

dBA_1 = noise level at distance D_1

dBA_2 = noise level at distance D_2

2.0 NOISE-SENSITIVE LAND USES AFFECTED BY AIRBORNE NOISE

2.1 Guidelines for the Determination of Significance

Based on the County Guidelines (County of San Diego 2009a), development under the proposed project would have a significant impact if it would result in the exposure of any on- or off-site, existing, or reasonably foreseeable future NSLUs to exterior or interior noise (including noise generated from the project, together with noise from roads [existing and planned roadways], railroads, airports, heliports, and all other noise sources) in excess of any of the following:

- For exterior locations:

  (a) 60 dB CNEL

  (b) An increase of 10 dBA CNEL over pre-existing noise

In the case of single-family residential detached NSLUs, exterior noise shall be measured at an outdoor living area that adjoins and is on the same lot as the dwelling and that contains at least the following minimum area:

- Net lot area up to 4,000 square feet: 400 square feet
- Net lot area 4,000 square feet to 10 acres: 10 percent of net lot area
- Net lot area over 10 acres: 1 acre

For all other projects, exterior noise shall be measured at all exterior areas provided for group or private usable open space.

- For interior locations:

  45 dB CNEL except for the following cases:

  (c) Rooms that are usually occupied for only part of the day (schools, libraries, or similar facilities); the interior 1-hour average sound level due to noise outside should not exceed 50 dBA.

  (d) Corridors, hallways, stairwells, closets, bathrooms, or any room with a volume less than 490 cubic feet.

For transportation-related noise, development under the proposed project would be considered to have a significant impact if, in areas where the existing noise level without the project is above 60 dBA but below 65 dBA, the proposed project would result in an increase of more than 3 dBA in accordance with the FTA noise impact criteria. Where the existing noise exposure is between 65 dBA and 70 dBA, a significant impact would occur if the proposed project would result in traffic noise levels that exceed the existing noise level by more than 1 dBA. Where the existing noise exposure exceeds 70 dBA, any increase in the noise level would be considered significant (County of San Diego 2016).

2.2 Potential Noise Impacts

2.2.1 Potential Noise Conditions and Impacts

2.2.1.1 Transportation Noise

The following analysis is based on traffic data provided in the project-specific Local Mobility Analysis prepared by LLG (2020). A substantial permanent increase in traffic noise would occur if implementation of the proposed project were to result in an increase in ambient noise levels at 50 feet from the roadway centerline that exceeds the significance criteria outlined in Section 2.1, Guidelines for the Determination of Significance. The project would generate a total of 184 ADT to and from the project driveway (LLG 2020). Table 3 shows street segment noise levels with and without the proposed project.

Table 3. Existing + Project Traffic Noise Levels

Roadway	Segment	Existing ADT	Existing (dBA L_{dn})	Existing + Project ADT	Existing + Project (dBA L_{dn})	Increase in Noise Level from Existing	Significant Impact?
Jamacha Boulevard	Campo Road to Calavo Drive	13,430	70	13,467	70	+0	No
	Calavo Drive to Folex Way	12,860	70	12,970	70	+0	No
Calavo Drive	Jamacha Boulevard to Project Driveway	3,480	57	3,627	57	+0	No
	Project Driveway to Del Rio Road	3,480	57	3,517	57	+0	No
Sources: LLG 2020; Appendix C. Notes: ADT = average daily trip; dBA = A-weighted decibel; L_{dn} = day-night average sound level							

As shown in Table 3, implementation of the proposed project would not result in an increase in vehicle noise over existing conditions and, therefore, would not have a potentially significant impact related to traffic noise.

2.2.2 Design Considerations and Mitigation Measures

Compared to the existing conditions, the proposed project would not have the potential to expose NSLUs to noise impacts from roadways. Mitigation measures would not be required.

2.3 Cumulative Noise Impacts

2.3.1 Cumulatively Significant Noise Impacts

A cumulative noise impact would occur if development associated with cumulative regional land use projects together would result in an increase in vehicle traffic that would exceed the standards of the County General Plan Noise Element and County Noise Ordinance. Cumulative regional development would have the potential to result in a significant cumulative impact associated with roadway noise. However, as shown in Table 3, development of the proposed project would not result in an increase in vehicle noise levels, and the proposed project's contribution would not be cumulatively considerable.

2.3.2 Design Considerations and Mitigation Measure Calculations

Compared to existing conditions, the proposed project would not have the potential to expose NSLUs to noise impacts from roadways, and no mitigation measures would not be required. Impacts would be less than significant.

3.0 PROJECT-GENERATED AIRBORNE NOISE

3.1 Guidelines for the Determination of Significance

Based on the County Guidelines and the County of San Diego Code of Regulatory Ordinances, development under the proposed project would have a significant impact if it would generate airborne noise that, together with noise from all sources, would be in excess of the following limits. Exemptions are listed in San Diego County Code of Regulatory Ordinances, Section 36.417, and apply to certain cases of emergency work, school activities, public events, emergency generators, agricultural operations, and property maintenance:

- **For non-construction noise:** The limit is specified in the San Diego County Code of Regulatory Ordinances, Section 36.404, General Sound Level Limits, and is at the property line of the property on which the noise is produced or at any location on a property that is receiving the noise. Table 4 summarizes the limits identified in Section 36.404.
- **For construction noise:** The limit is specified in the San Diego County Code of Regulatory Ordinances, Section 36.408, Hours of Operation of Construction Equipment, and Section 36.409, Sound Level Limitations on Construction Equipment. Sections 36.408 and 36.409 state that, except for emergency work, it shall be unlawful for any person to operate construction equipment or cause construction equipment to be operated that exceeds an average sound level of 75 dBA for an 8-hour period between 7:00 a.m. and 7:00 p.m. when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received. Furthermore, it shall be unlawful for any person to operate construction equipment or cause construction equipment to be operated on Sundays and holidays or on any other day between 7:00 p.m. and 7:00 a.m. unless that construction is operated at a person’s residence or for the purpose of constructing a residence for himself on a Sunday or holiday between the hours of 10:00 a.m. and 5:00 p.m.

Table 4. San Diego County Code of Regulatory Ordinances, Section 36.404 (County Noise Ordinance), Sound Level Limits

Zone	Time	1-Hour Average Sound Level Limits (dBA)
(1) R-S, R-D, R-R, R-MH, A-70, A-72, S-80, S-81, S-87, S-90, S-92, and R-V and R-U with a density of less than 11 dwelling units per acre	7:00 a.m. to 10:00 p.m. 10:00 p.m. to 7:00 a.m.	50 45
(2) R-RO, R-C, R-M, S-86, V5, R-V, and R-U with a density of 11 or more dwelling units per acre	7:00 a.m. to 10:00 p.m. 10:00 p.m. to 7:00 a.m.	55 50
(3) S-94, V4, and all other commercial zones	7:00 a.m. to 10:00 p.m. 10:00 p.m. to 7:00 a.m.	60 55
(4) V1, V2 V1, V2 V1 V2	7:00 a.m. to 7:00 p.m. 7:00 p.m. to 10:00 p.m. 10:00 p.m. to 7:00 a.m. 10:00 p.m. to 7:00 a.m.	60 55 55 50
V3	7:00 a.m. to 10:00 p.m. 10:00 p.m. to 7:00 a.m.	70 65
(5) M-50, M-52, and M-54	Anytime	70
(6) S-82, M-56, and M-58	Anytime	75
(7) S88 (see subsection [c] below)		

(a) If the measured ambient level exceeds the applicable limit noted above, the allowable 1-hour average sound level shall be the ambient noise level, plus 3 dBA. The ambient noise level shall be measured when the alleged noise violation source is not operating.
(b) The sound level limit at a location on a boundary between two zones is the arithmetic mean of the respective limits for the two zones, provided that the 1-hour average sound level limit applicable to extractive industries, including but not limited to borrow pits and mines, shall be 75 dBA at the property line regardless of the zone in which the extractive industry is actually located.
(c) S88 zones are Specific Planning Areas, which allow for different uses. The sound level limits in Table 4 that apply in an S88 zone depend on the use being made of the property. The limits in Table 4, subsection (1), apply to property with a residential, agricultural or civic use. The limits in subsection (3) apply to property with a commercial use. The limits in subsection (5) apply to property with an industrial use that would only be allowed in an M50, M52, or M54 zone. The limits in subsection (6) apply to all property with an extractive use or a use that would only be allowed in an M56 or M58 zone.
(d) A fixed-location public utility distribution or transmission facility on or adjacent to a property line shall be subject to the sound level limits of this section, measured at or beyond 6 feet from the boundary of the easement upon which the facility is located.

Source: County of San Diego 2000.
Notes: dBA = A-weighted decibel

- **For disturbing, excessive and offensive noises:** San Diego County Code of Regulatory Ordinances, Section 36.414, General Noise Prohibitions, specifies additional general limitations for disturbing, excessive, and offensive noises, including noise from vehicle horns, radios, televisions, verbal communication, animals, steam whistles, and motor vehicles.

3.2 Potential Operational Noise Impacts

3.2.1 Potential Noise Conditions Without Mitigation

The proposed project would result in a significant impact if it would substantially increase ambient noise levels above existing conditions. Operation noise from proposed park uses may result in permanent increases in noise that may affect surrounding land uses.

3.2.1.1 Operational Noise Sources

Potential project-related noise impacts from proposed park amenities are discussed below.

Passive Park Amenities

The proposed project would include a variety of passive recreational amenities, including a nature play area, a picnic area, an open lawn area, a game table plaza, a community garden, a walking path, and a restroom. Passive recreational activities, such as walking, reading, and dining in open grass and picnic areas, typically generate lower noise levels compared to active sports play. Equipment used in community gardens would be limited to hand tools. These amenities would generally not support activities that generate noise levels higher than normal conservation. Therefore, these facilities would not generate noise levels that would exceed the County Noise Ordinance at surrounding receptors.

Children's Play Areas

The proposed project would include two children's play areas, one for 2- to 5-year-old children, and another for 5- to 12-year-old children, both in the northwestern area of the project site. Play areas typically generate incidental recreational noise, such as children at play, children and adult laughter, and occasional shouting or crying. The noise impact analysis for Beyer Community Park, a community park project, in the City of San Diego (2019) also proposed children's play areas for 2- to 5-year-olds and 5- to 12-year-olds and stated that that noise levels from the children's play areas would generate noise levels of approximately 52.5 dBA to 54.7 dBA at 50 feet. The nearest residence to the proposed play areas is approximately 60 feet west at the property line and there would be an approximately 25 foot difference in elevation between the play areas and the nearest receptors. Playground noise would be reduced to approximately 48 dBA at the nearest receptors. Therefore, use of the children's play areas would not exceed the applicable County Noise Ordinance daytime standard of 55 dBA at the nearby residences. The play area are intended for younger children and would not be expected to be in active use during nighttime hours. Therefore, impacts from the children's play areas would be less than significant.

Dog Park

The proposed project would include a neighborhood dog park in the southwestern portion of the project site near Calavo Drive and would abut residences to the north. Typical noise from a dog park includes dogs barking, rough-housing, and running and conversations from park visitors. A 15-minute noise measurement was taken at an existing active dog park at Lamar County Park. The sampled dog park is approximately twice the size of the proposed dog park. The purpose of this measurement was to compare ambient noise levels on the project site with the addition of noise from a dog park. This measurement was taken approximately 20 feet from the dog park fence in the late afternoon (approximately 5:15 p.m.). Four to five dogs were present with their owners throughout the measurement period. The average 15-minute noise level during this measurement was 48.6 dBA L_{eq} at 20 feet (Appendix B). Use of the dog park would vary; however, based on observations at the dog park and discussion with County staff regarding typical use of a dog park this size, four to five dogs is an average, representative use of the park. A dog park measurement was not obtained during the August 26, 2021, noise survey because no dogs were present at the park during the early evening observation time. Additionally, a similar project in the City of Beverly Hills (2015) measured dog park noise with approximately eight dogs present over a 15-minute period at generating 51.8 dBA L_{eq} between 10 to 50 feet. Therefore, average dog park noise would be expected to range from approximately 49 to 52 dBA at 20 feet. Dog park use is expected to occur between dawn and dusk throughout the week, with varying levels of activity during the day and within a given hour. The nearest residence to the proposed dog park is approximately 60 feet north of the dog park area. At this distance, the noise levels would be expected to range from approximately 40 to 43 dBA L_{eq} at the property line of this residence and would generally not exceed the applicable County Noise Ordinance daytime standard of 55 dBA or evening standard of 50 dBA. This impact would be less than significant.

Skate Park

The proposed project would include a skate park in the southeastern corner of the project site, with Calavo Drive directly south and condominiums directly east. The maximum noise output from skate parks is primarily associated with thumps and bangs as skaters land on the horizontal platform sections. The noise measurement taken at an existing active skate park in the City of Lemon Grove, including six skaters consistently participating in skating activities, measured a noise level of 61.7 dBA L_{eq} approximately 20 feet from the skate park boundary (Appendix B). The nearest residence to the proposed skate park is approximately 120 feet southeast of the project site. At this distance, the noise level would attenuate to approximately 46.1 dBA L_{eq} at the residence. The noise impact analysis for Beyer Community Park, a community park project, in the City of San Diego (2019) stated that noise levels from a skate park with approximately 25 to 30 skateboarders in the park and between 5 and 12 actively skating at a given moment would generate approximately 55 dBA L_{eq} at 75 feet. Therefore, average skate park noise would be expected to range from 46 to 51 dBA L_{eq} at the nearest residences. Average skate park noise levels would generally not exceed the applicable County Noise Ordinance daytime standard of 55 dBA at the nearby residences. However, noise from the skate park could potentially exceed the County Noise Ordinance nighttime standards during longer days for activity that could occur before 7:00 a.m. and after 10:00 p.m. This impact would be potentially significant.

Sports Fields and Courts

The proposed project would include a soccer field, a baseball field, a basketball court, and pickleball courts. Noise levels typically generated by similar active fields and courts at existing County facilities were reviewed to estimate typical noise levels from daily use on the project site. The existing Hilton Head Park was selected for noise measurements because it includes sports amenities similar to the proposed project and was in active use for organized sports. Measurements were obtained for active use of the baseball field and multi-use/soccer field individually, and a measurement between both uses was obtained for combined use. Noises were typical of expected recreational activities, including coaches giving direction, children yelling and playing, contact with balls, and bystanders talking on the sidelines of activities. Multiple events, including soccer and football, were in progress at both fields. Measured noise levels were 59.3 dBA at 30 feet from activity at the baseball field, 54.5 dBA at 20 feet from the multi-use field, and 56.3 dBA between the fields at approximately 20 feet from active uses. Therefore, average hourly noise levels from use of sports facilities would be approximately 55 to 63 dBA at 20 feet from either field during simultaneous use. In addition, electronic amplification equipment may be used in conjunction with permitted active sports leagues or events that may result in intermittently higher than average noise levels. However, amplified noise would be limited to special events and subject to permitting requirements. The baseball field would be in the northernmost section of the project site, while the soccer field, basketball court, and pickleball courts would be in the center and southeastern areas of the project site. The baseball field and soccer field and the sports facilities are anticipated to result in the greatest amount of noise from organized sports events. The nearest residences to the baseball field would be approximately 80 feet to the northwest and 60 feet to the southeast. At this distance, average noise levels from sports facilities during active use would be approximately 51 dBA at the residences to the northwest and 54 dBA at residences to the southeast. The nearest residences to the soccer field would be approximately 95 feet northwest of the field. At this distance, average noise levels from sports facilities during active use would be approximately 50 dBA at the property line of these residences. Average noise levels would generally not exceed the applicable County Noise Ordinance daytime standard of 55 dBA. However, the noise from sports fields and courts could potentially exceed the County Noise Ordinance nighttime standards during longer days for activity that would occur before 7:00 a.m. and after 10:00 p.m. This impact would be potentially significant.

Parking Lot

The proposed project would include a designated parking area for park visitors containing approximately 85 spaces. Noise sources from parking areas include car alarms, door slams, radios, and tire squeals. These sources typically range from approximately 51 to 66 dBA at a distance of 10 feet (Gordon Bricken & Associates 2012) and are generally short-term and intermittent. Parking lots have the potential to generate noise levels that are audible above ambient levels depending on the location of the source; however, noise sources from a parking lot would be different from each other in kind, duration, and location. Thus, the overall effects would be separate and, in most cases, would not affect noise-sensitive receptors at the same time. The parking lot is linear, which would avoid a concentration of parking noise in one location. Therefore, noise from the parking lot would not result in excessive noise levels that would exceed hourly noise level limits, and impacts would be less than significant.

Operational Park Noise Summary

Operation of the proposed park uses would occur intermittently throughout the day depending on the level of use. Noise levels from these uses would vary throughout the project site but could combine to result in noise levels higher than the individual sources. For example, assuming simultaneous use of all active uses (skate park, dog park, play areas, and sports facilities), the average noise level at the receptor closest to the dog park could range from 44 to 49 dBA compared to 40 to 43 with the dog park use only. For the nearest receptor northwest of the soccer field, the average noise level could range from 45 to 52 dBA compared to 43 to 51 with field use only. Due to distance between uses and fluctuations in usage, combined project operational noise would generally not exceed the applicable County Noise Ordinance daytime standard of 55 dBA. As described above, individual uses could potentially exceed the County Noise Ordinance nighttime standards at the nearest receptors during longer days for activity that would occur before 7:00 a.m. and after 10:00 p.m. This impact would be potentially significant.

3.2.2 Design Considerations and Mitigation Measures

Implementation of Mitigation Measure NOI-1 would reduce operational impacts of the proposed project by limiting hours of operation for active uses. Implementation of Mitigation Measure NOI-1 would reduce nighttime noise impacts to all receptors to a less than significant level.

NOI-1: Hours of Operation. The hours of the active uses at Calavo Park (play areas, dog park, skate park, and sports fields and courts) shall be limited to between the hours of 7:00 a.m. and 10:00 p.m. in compliance with the nighttime standards of the County of San Diego Noise Ordinance. Operational hours shall be posted on fencing at entrances to active use amenities and shall include a phone number for residents to call in case of use violations. Exceptions may be permitted for special events with a Sound Amplification Plan prepared in accordance with the Noise Regulation Policy for County Parks and County of San Diego Noise Ordinance Standards and approved by the County of San Diego Department of Parks and Recreation.

3.3 Potential General Construction Noise Impacts

3.3.1 Potential Temporary Construction Noise Impacts Without Mitigation

Construction noise associated with the proposed project would be temporary and vary depending on the nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for on-site construction activities and construction vehicle traffic on area roadways. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading, excavation, paving). The magnitude of the impact would depend on the type of construction activity, equipment, duration of the construction phase, distance between the noise source and receiver, and intervening structures.

The proposed project would have the potential to result in the exposure of on- or off-site areas to noise in excess of the standards listed in the San Diego County Code of Regulatory Ordinances, Sections 36.408 and 36.409. Construction equipment associated with project-related development activities would include but are not limited to site grading, truck/construction equipment movement, engine noise, rock excavation. Typical construction equipment noise levels are provided in Table 5.

Table 5. Typical Construction Equipment Noise Levels

Equipment	Typical Noise Level (dBA) at 50 Feet From Source
Air Compressor	81
Backhoe	80
Compactor	82
Concrete Mixer	85
Crane, Derrick	88
Dozer	85
Grader	85
Jack Hammer	88
Loader	85
Paver	89
Roller	74
Scraper	89
Truck	88
Source: County of San Diego 2009c. Note: dBA = A-weighted decibel	

Standard equipment for construction of the proposed project is based on an analysis of a similar park project in the County (Pisano, pers. comm. 2020). Noise levels from construction on the project site were determined based on typical equipment noise levels determined by the RCNM (FHWA 2008) (Appendix D). The three noisiest pieces of construction equipment that could be required for on-site construction (scraper, grader, and excavator) were assumed to operate in the same location and would have the potential to generate noise levels up to approximately 84.2 dBA L_{eq} at 50 feet from the construction site (FHWA 2008). Noise from construction equipment generally exhibits point-source acoustical characteristics. Strictly speaking, a point-source sound decays at a rate of 6 dBA per doubling of distance from the source. This rule applies to the propagation of sound waves with no ground interaction.

Construction equipment noise from the proposed project would be considered significant if it would exceed an average sound level of 75 dBA for an 8-hour period between 7:00 a.m. and 7:00 p.m. when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received, as established in the County Noise Ordinance. Residences immediately surround the project site. Construction activities would take place across the project site; thus, noise exposure at individual residences would vary. However, construction that would take place within 145 feet of the surrounding residences would potentially exceed the County sound level average of 75 dBA at the property line of the closest residences. Therefore, this impact would be potentially significant.

3.3.2 Design Considerations and Mitigation Measures

Implementation of Mitigation Measure NOI-2 would minimize noise from construction equipment on nearby receptors by implementing construction best management practices to comply with the County Noise Ordinance standards. Mitigation Measure NOI-2 would reduce construction impacts to a less than significant level.

NOI-2: Construction Noise Best Management Practices. For construction activities within 145 feet of sensitive receptors, the construction contractor shall implement the following measures to the extent necessary to meeting the standards of Section 36.409 of the County of San Diego Noise Ordinance:

- The construction contractor shall provide written notification to the noise-sensitive land uses within 145 feet of normal construction activities at least 3 weeks before the start of construction activities, informing them of the estimated start date and duration of construction activities.
- Construction activities that generate high noise levels at residences shall be scheduled during times that would have the least impact on sensitive receptor locations. This shall include restricting construction activities in the areas of potential impact to the middle hours of the workday, such as from 10:00 a.m. to 4:00 p.m., Monday through Friday, when residents are least likely to be home.
- Stationary construction noise sources, such as temporary generators, shall be as far from nearby noise-sensitive receptors as necessary to be compliant with County Noise Ordinance standards.
- Trucks shall be prohibited from idling along streets serving the construction site where noise-sensitive residences are located.
- Construction equipment shall be outfitted with properly maintained, manufacturer-approved, or recommended sound abatement means on air intakes, combustion exhausts, heat dissipation vents, and interior surfaces of engine hoods and power train enclosures.
- Construction laydown and vehicle staging areas shall be positioned (to the extent practical) as far from noise-sensitive land uses as necessary to be compliant with County Noise Ordinance standards.
- Simultaneous operation of construction equipment shall be limited or construction time shall be limited to within an hour to reduce the hourly average noise level.
- Temporary noise barriers shall be installed around the perimeter of the construction area to minimize construction noise.

3.4 Cumulative Noise Impacts

3.4.1 Potential Combined Noise Impacts

A cumulative noise impact would occur if construction or operation associated with cumulative projects together would result in new permanent noise sources that exceed the standards of the County Noise Ordinance. As discussed previously, development of the proposed park would result in potentially significant impacts related to new active park uses on the project site and temporary noise during construction. However, the area is primarily built out surrounding the site, and a permanent preserve habitat lies to the north. Therefore, it is unlikely that new stationary sources would be introduced or that simultaneous construction activities would occur close enough to the project site to result in combine noise exposure. Therefore, the proposed project, in combination with other cumulative projects, would not have the potential to result in a significant cumulative impact associated with noise from temporary and permanent noise sources. The proposed project's contribution would not be cumulatively considerable.

3.4.2 Design Considerations and Mitigation Measure Calculations

Implementation of the proposed project would have the potential to exceed the County Noise Ordinance standards if active uses would occur between 10:00 p.m. and 7:00 a.m. Mitigation Measure NOI-1 would be implemented to reduce impacts to nearby residences to a less than significant level by enforcing specific park hours. In addition, construction of the proposed project would have the potential to result in exposure to noise in excess of the standards listed in the San Diego County Code of Regulatory Ordinances, Sections 36.408 and 36.409. Mitigation Measure NOI-2 would be implemented by enforcing construction best management practices to minimize noise impacts from construction equipment on nearby receptors. Impacts would be reduced to less than significant.

4.0 GROUNDBORNE VIBRATION AND NOISE IMPACTS

4.1 Guidelines for the Determination of Significance

Based on the County Guidelines, development under the proposed project would have a significant impact if it would expose existing receptors to groundborne vibration or noise levels equal to or in excess of the applicable levels shown in Table 6.

Table 6. Significance Threshold for Groundborne Vibration and Noise Impacts

Land Use Category	Groundborne Vibration Impact Levels (in/sec RMS)		Groundborne Noise Impact Levels (dB re 20 micropascals)	
	Frequent Events[1]	Occasional or Infrequent Events[2]	Frequent Events[1]	Occasional or Infrequent Events[2]
Category 1: Buildings where low ambient vibration is essential for interior operations (research and manufacturing facilities with special vibration constraints)	0.0018[3]	0.0018[3]	Not applicable[5]	Not applicable[5]
Category 2: Residences and buildings where people normally sleep (hotels, hospitals, residences, and other sleeping facilities)	0.0040	0.010	35 dBA	43 dBA
Category 3: Institutional land uses with primarily daytime use (schools, churches, libraries, other institutions, and quiet offices)	0.0056	0.014	40 dBA	48 dBA

Source: FTA 2006.
Notes: dB = decibel; dBA = A-weighted decibel; in/sec = inches per second; RMS = root mean square

[1] "Frequent events" are defined as more than 70 vibration events per day. Most rapid transit projects fall into this category.

[2] "Occasional or infrequent events" are defined as fewer than 70 vibration events per day. This combined category includes most commuter rail systems.

[3] This criterion limit is based on levels that are acceptable for most moderately sensitive equipment, such as optical microscopes. Vibration-sensitive manufacturing or research will require detailed evaluation to define acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the heating, ventilating, and air conditioning systems and stiffened floors.

[4] Vibration-sensitive equipment is not sensitive to groundborne noise.

[5] There are some buildings, such as concert halls, television and recording studios, and theaters, that can be very sensitive to vibration and noise but do not fit into any of the three categories. Table 6 gives criteria for acceptable levels of groundborne vibration and noise for these various types of special uses.

[6] For Categories 2 and 3 with occupied facilities, isolated events, such as blasting, are significant when the peak particle velocity (PPV) exceeds 1 inch per second. Non-transportation vibration sources, such as impact pile drivers or hydraulic breakers, are significant when their PPV exceeds 0.1 inch per second. More specific criteria for structures and potential annoyance were developed by the California Department of Transportation (2013) and will be used to evaluate these continuous or transient sources in the County.

4.2 Potential and Mitigated Noise Impacts

The main concerns associated with groundborne vibration from this type of project are annoyance and damage; however, vibration-sensitive instruments and operations can be disrupted at much lower levels than would typically affect other uses. In extreme cases, vibration can cause damage to buildings, particularly those that are old or otherwise fragile. There are no existing sources of groundborne vibration surrounding the project site. Therefore, this analysis focuses on the potential for the project to generate vibration at surrounding land uses. Groundborne vibration occurring as part of the project would result from construction equipment. Following construction, operation of a community park is not a land use that would typically generate groundborne vibration, and project operation is not addressed below.

Typical vibration levels for construction equipment required for the proposed project are provided in Table 7. Construction vibration is subject to the infrequent event criteria because operation of vibration-generating equipment is anticipated to be intermittent throughout the day in the vicinity of an individual receptor. In accordance with the County Noise Ordinance, construction would generally occur during the daytime and would not disturb sleep. However, residences may be occupied during daytime construction, and construction may result in a nuisance to daily activities. Therefore, for the purposes of the construction analysis, the surrounding residences are considered a Category 3 use. Construction activities would result in significant vibration if vibration would exceed 0.014 inches per second (in/sec).

Table 7. Vibration Levels for Typical Construction Equipment

Construction Equipment	Approximate PPV (in/sec) at 25 Feet[1]	Approximate PPV (in/sec) at 90 Feet	Approximate PPV (in/sec) at 155 Feet
Large Bulldozer	0.089	0.013	0.006
Caisson Drilling	0.089	0.013	0.006
Loaded Trucks	0.076	0.011	0.005
Small Bulldozer	0.003	0.0004	0.0002
Jackhammer	0.035	0.005	0.002
Vibratory Roller	0.210	0.031	0.0136

Source: FTA 2018.
Notes: in/sec = inches per second; PPV = peak particle velocity
[1] Based on the formula $PPV_{equip} = PPV_{ref}*(25/D)^{1.5}$ provided by the FTA (2018).

As shown in Table 7, vibration levels from all construction equipment would be reduced to 0.014 in/sec or below at 155 feet or beyond from construction. The residences closest to the boundary of the project site are approximately 50 feet north. Therefore, construction of the proposed project has the potential to exceed the FTA threshold of 0.014 in/sec for Category 3 uses, and impacts would be potentially significant.

4.3 Design Considerations and Mitigation Measures for Groundborne Vibration Impacts

Implementation of Mitigation Measure NOI-3 would reduce nuisance exposure to groundborne vibration during construction by implementing vibration best management practices.

NOI-3: Vibration Best Management Practices. Before the start of construction activities that would involve use of a vibratory roller (or equivalent equipment) within 155 feet of a residence or operation of any heavy equipment within 90 feet of a residence, the project applicant shall retain a qualified acoustician to identify best management practices to be implemented by the construction contractor to reduce vibration levels to below 0.014 in/sec at the nearest residence. The best management practices shall be included in project construction documents, including the grading plan and contract with the construction contractor. Practices may include but are not limited to the following:

- Use only properly maintained equipment with vibratory isolators
- Operate equipment as far from sensitive receptors as possible
- Use rubber-tired vehicles as opposed to tracked vehicles

4.4 Cumulative Groundborne Vibration Impacts

A cumulative groundborne vibration impact would occur if one or more projects in the area would result in combined groundborne vibration impacts that would increase vibration levels beyond the standards in the County significance thresholds. Similar to noise effects, vibration is a localized phenomenon and is progressively reduced as the distance from the source increases. Therefore, projects that would be considered for the vibration cumulative analysis would be projects close to the project site. The project site is developed, and it is unlikely that construction would occur adjacent to the project site that would generate similar vibration. Therefore, vibration generated by construction on the project site and other sites would not combine to generate cumulative vibration impacts. Once constructed, the proposed park would not generate a significant source of vibration during normal operation. Therefore, a significant cumulative vibration impact would not occur.

5.0 SUMMARY OF PROJECT IMPACTS, DESIGN CONSIDERATIONS, NOISE MITIGATION, AND CONCLUSIONS

Compared to existing conditions, the proposed project would not have the potential to expose NSLUs to noise impacts from roadways, and no mitigation measures would be required. However, implementation of the proposed project would have the potential to exceed the County Noise Ordinance nighttime standards if active uses would occur between 10:00 p.m. and 7:00 a.m. Mitigation Measure NOI-1 would be implemented to reduce impacts to nearby residences to a less than significant level by enforcing specific park hours. In addition, construction of the proposed project would have the potential to result in exposure to noise in excess of the standards listed in the San Diego County Code of Regulatory Ordinances, Sections 36.408 and 36.409. Mitigation Measure NOI-2 would be implemented by enforcing construction best management practices to minimize noise from construction equipment on nearby receptors. Impacts would be reduced to less than significant. Implementation of Mitigation Measure NOI-3 would reduce groundborne vibration during construction by implementing vibration best management practices and would reduce impacts to less than significant.

6.0 CERTIFICATION

This section provides a list of preparers, people, and organizations involved with the above noise assessment and report certification.

6.1 Preparers

6.1.1 Harris & Associates

Ryan Binns, PMP, ENV SP, Project Manager

Sharon Toland, Technical Lead

Kelsey Hawkins, Technical Analyst

Lindsey Messner, Technical Editor

Randy Deodat, GIS Analyst

6.1.2 Persons and Organizations

County of San Diego – Planning and Development Services

Eira Whitty, Land Use/Environmental Planner

Nicole Ornelas, Land Use/Environmental Planner

Linscott, Law, & Greenspan, Engineers

John Boarman, PE, Principal

Alejandro Alonso, Transportation Engineering Technician II

6.2 Certification

The contents of this report represent an accurate depiction of the future acoustical environment and impacts resulting from the proposed Calavo Park. The report was prepared by Sharon Toland, a County-approved CEQA Consultant for Acoustics.

Sharon Toland Technical Lead Harris & Associates	November 5, 2021 Date

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APPENDIX A. REFERENCES

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APPENDIX B. NOISE MEASUREMENT DATA SHEETS

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Summary

File Name on Meter	calavo1_.001.s
File Name on PC	LxTse_0004861-20210210 151426-calavo1_.001.ldbin
Serial Number	0004861
Model	SoundExpert® LxT
Firmware Version	2.301
User	
Location	
Job Description	
Note	

Measurement

Description	skate..
Start	2021-02-10 15:14:26
Stop	2021-02-10 15:29:26
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2014-12-05 00:20:44
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	A Weighting		
Detector	Slow		
Preamplifier	PRMLxT1L		
Microphone Correction	Off		
Integration Method	Linear		
OBA Range	Normal		
OBA Bandwidth	None		
OBA Frequency Weighting	C Weighting		
OBA Max Spectrum	Bin Max		
Overload	123.2 dB		
	A	**C**	**Z**
Under Range Peak	**79.5**	76.5	81.5 dB
Under Range Limit	**26.8**	24.9	32.8 dB
Noise Floor	15.7	15.8	22.3 dB

Results

LAeq	61.7	
LAE	91.3	
EA	148.608 µPa²h	
LApeak (max)	2021-02-10 15:19:04	112.4 dB
LASmax	2021-02-10 15:19:04	79.2 dB
LASmin	2021-02-10 15:19:35	51.2 dB
SEA	-99.9 dB	

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

Community Noise	**Ldn**	**LDay 07:00-22:00**	**LNight 22:00-07:00**	**Lden**	**LDay 07:00-19:00**	**LEvening 19:00-22:00**
	61.7	61.7	-99.9	61.7	61.7	-99.9

LCeq	70.5 dB
LAeq	61.7 dB
LCeq - LAeq	8.8 dB
LAIeq	71.3 dB
LAeq	61.7 dB
LAIeq - LAeq	9.6 dB

	A		**C**		**Z**	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
Leq	61.7		70.5			
LS(max)	79.2	2021/02/10 15:19:04				
LS(min)	51.2	2021/02/10 15:19:35				
LPeak(max)	112.4	2021/02/10 15:19:04				

Overload Count	0
Overload Duration	0.0 s

Statistics

LAI5.00	67.1 dB
LAI10.00	63.5 dB
LAI33.30	59.6 dB
LAI50.00	58.1 dB
LAI66.60	56.7 dB
LAI90.00	54.1 dB

Calibration History

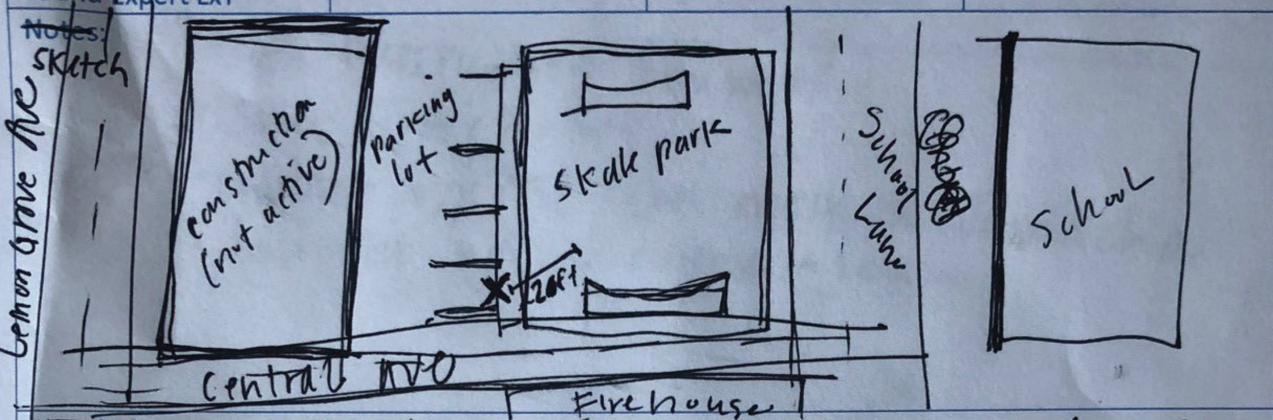
Preamp	**Date**	**dB re. 1V/Pa**	**6.3**	**8.0**	**10.0**
PRMLxT1L	2014-12-05 00:20:44	-29.55			
PRMLxT1L	2014-12-05 06:37:56	-28.74			
PRMLxT1L	2014-12-05 00:08:07	-29.45			
PRMLxT1L	2019-03-29 07:28:50	-30.02			
PRMLxT1L	2019-02-01 03:17:55	-29.16			
PRMLxT1L	2019-02-01 03:17:33	-30.18			
PRMLxT1L	2014-12-05 08:02:25	-30.06			
PRMLxT1L	2018-12-07 14:30:34	-29.85			
PRMLxT1L	2018-04-07 14:02:21	-29.37			
PRMLxT1L	2018-04-06 16:13:45	-29.43			
PRMLxT1L	2018-04-06 10:54:04	-29.44			

Site Noise Survey

Project #: 170-0195	Project Name: Calavo Park
Date: February 10, 2021	Site #: Lemon Grove Skate Park
Analyst(s): K Hawkins; K. Laybourn	
Address: Lemon Grove	

Meter: Larson Davis Sound Expert LxT	Serial#: 0004861	Calibrator: CAL200	Serial #: 13296

~~Notes:~~ Sketch



~~Sketch:~~ notes:

- decent wind blowing
- can hear some cars on Lemon Grove Ave.
- skaters skating up + down ramp; grinding on ramp
- occasional chatter between skaters
- 6 min in → fire engine exits firehouse + turns on siren
- 7:45 in → train siren → trolley horns
- lots of continuous moving up + down ramp

Temp: 61°F	Wind Speed: 12 mph	Humidity: 58%
Start of Measurement: 2:15pm AM / PM		End of Measurement: 2:30pm AM / PM

dBA L_{EQ}

Cars (tally per 5 cars)	People ~~OR Dogs at Play~~	Medium Trucks	Heavy Trucks
卌 卌 卌 卌 ||	卌 |		|

on central ave.

Noise Measurement for Information Only

No Through Roadways

No Calibration Analysis will be provided

Summary

File Name on Meter	calavo1_.002.s
File Name on PC	LxTse_0004861-20210210 160609-calavo1_.002.ldbin
Serial Number	0004861
Model	SoundExpert® LxT
Firmware Version	2.301
User	
Location	
Job Description	
Note	

Measurement

Description	skate..
Start	2021-02-10 16:06:09
Stop	2021-02-10 16:21:09
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2014-12-05 00:20:44
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	A Weighting		
Detector	Slow		
Preamplifier	PRMLxT1L		
Microphone Correction	Off		
Integration Method	Linear		
OBA Range	Normal		
OBA Bandwidth	None		
OBA Frequency Weighting	C Weighting		
OBA Max Spectrum	Bin Max		
Overload	123.2 dB		
	A	**C**	**Z**
Under Range Peak	**79.5**	76.5	81.5 dB
Under Range Limit	**26.8**	24.9	32.8 dB
Noise Floor	15.7	15.8	22.3 dB

Results

LAeq	46.0	
LAE	75.5	
EA	3.939 µPa²h	
LApeak (max)	2021-02-10 16:06:13	84.4 dB
LASmax	2021-02-10 16:06:09	65.8 dB
LASmin	2021-02-10 16:12:42	34.3 dB
SEA	-99.9 dB	

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

Community Noise	**Ldn**	**LDay 07:00-22:00**	**LNight 22:00-07:00**	**Lden**	**LDay 07:00-19:00**	**LEvening 19:00-22:00**
	46.0	46.0	-99.9	46.0	46.0	-99.9

LCeq	59.1 dB
LAeq	46.0 dB
LCeq - LAeq	13.2 dB
LAIeq	52.8 dB
LAeq	46.0 dB
LAIeq - LAeq	6.9 dB

	A		**C**		**Z**	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
Leq	46.0		59.1			
LS(max)	65.8	2021/02/10 16:06:09				
LS(min)	34.3	2021/02/10 16:12:42				
LPeak(max)	84.4	2021/02/10 16:06:13				

Overload Count	0
Overload Duration	0.0 s

Statistics

LAI5.00	53.1 dB
LAI10.00	49.1 dB
LAI33.30	42.0 dB
LAI50.00	40.1 dB
LAI66.60	38.9 dB
LAI90.00	37.2 dB

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**	**6.3**	**8.0**	**10.0**
PRMLxT1L	2014-12-05 00:20:44	-29.55			
PRMLxT1L	2014-12-05 06:37:56	-28.74			
PRMLxT1L	2014-12-05 00:08:07	-29.45			
PRMLxT1L	2019-03-29 07:28:50	-30.02			
PRMLxT1L	2019-02-01 03:17:55	-29.16			
PRMLxT1L	2019-02-01 03:17:33	-30.18			
PRMLxT1L	2014-12-05 08:02:25	-30.06			
PRMLxT1L	2018-12-07 14:30:34	-29.85			
PRMLxT1L	2018-04-07 14:02:21	-29.37			
PRMLxT1L	2018-04-06 16:13:45	-29.43			
PRMLxT1L	2018-04-06 10:54:04	-29.44			

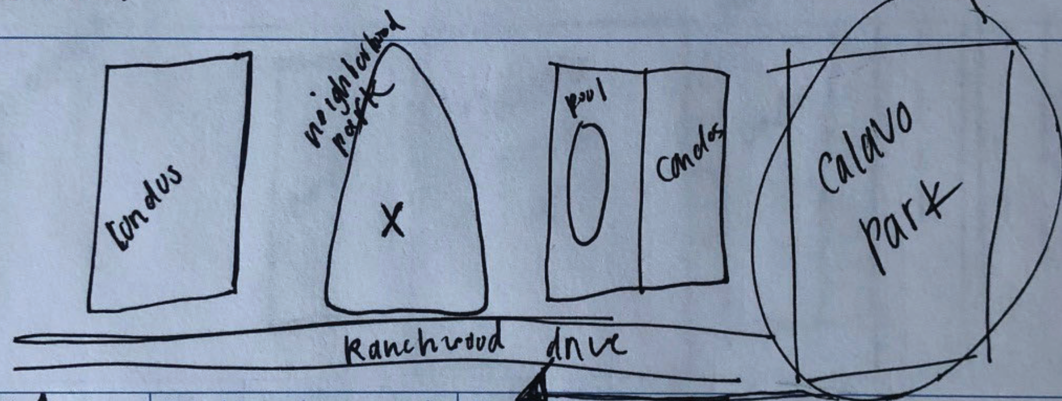
Site Noise Survey

Project #: 170-0195		Project Name: Calavo Park	
Date: February 10, 2021	Site #: Calavo 2 neighborhood	Analyst(s): K Hawkins; K. Laybourn	
Address: neighborhood park next to calavo Park			
Meter: Larson Davis Sound Expert LxT	Serial#: 0004861	Calibrator: CAL200	Serial #: 13296

Notes:

- some dogs barking in distance
- decent wind blowing
- some birds chirping
- helicopter drive by @ 3 min in
- some occasional kids yelling/talking
- car horn
- large plumbing truck goes by a couple times
- distant rawing noise

Sketch:



Temp: 61°F	Wind Speed: 11 mph	Humidity: 59%	
Start of Measurement: 3:06 AM / PM		End of Measurement: AM / PM	
		dBA L_{EQ}	
Cars (tally per 5 cars)	People ~~OR Dogs at Play~~	Medium Trucks	Heavy Trucks
~~IIII~~ ~~IIII~~ II	I	II	

Noise Measurement for Information Only

No Through Roadways

No Calibration Analysis will be provided

Summary

File Name on Meter	calavo1_.003.s
File Name on PC	LxTse_0004861-20210210 163815-calavo1_.003.ldbin
Serial Number	0004861
Model	SoundExpert® LxT
Firmware Version	2.301
User	
Location	
Job Description	
Note	

Measurement

Description	skate..
Start	2021-02-10 16:38:15
Stop	2021-02-10 16:53:15
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2014-12-05 00:20:44
Post-Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	A Weighting		
Detector	Slow		
Preamplifier	PRMLxT1L		
Microphone Correction	Off		
Integration Method	Linear		
OBA Range	Normal		
OBA Bandwidth	None		
OBA Frequency Weighting	C Weighting		
OBA Max Spectrum	Bin Max		
Overload	123.2 dB		
	A	**C**	**Z**
Under Range Peak	**79.5**	76.5	81.5 dB
Under Range Limit	**26.8**	24.9	32.8 dB
Noise Floor	15.7	15.8	22.3 dB

Results

LAeq	49.6	
LAE	79.1	
EA	9.058 µPa²h	
LApeak (max)	2021-02-10 16:39:29	84.5 dB
LASmax	2021-02-10 16:43:44	58.9 dB
LASmin	2021-02-10 16:47:31	36.3 dB
SEA	-99.9 dB	

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

Community Noise	**Ldn**	**LDay 07:00-22:00**	**LNight 22:00-07:00**	**Lden**	**LDay 07:00-19:00**	**LEvening 19:00-22:00**
	49.6	49.6	-99.9	49.6	49.6	-99.9

LCeq	64.5 dB
LAeq	49.6 dB
LCeq - LAeq	14.9 dB
LAIeq	51.9 dB
LAeq	49.6 dB
LAIeq - LAeq	2.3 dB

	A		**C**		**Z**	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
Leq	49.6		64.5			
LS(max)	58.9	2021/02/10 16:43:44				
LS(min)	36.3	2021/02/10 16:47:31				
LPeak(max)	84.5	2021/02/10 16:39:29				

Overload Count	0
Overload Duration	0.0 s

Statistics

LAI5.00	55.1 dB
LAI10.00	53.4 dB
LAI33.30	49.4 dB
LAI50.00	47.0 dB
LAI66.60	45.3 dB
LAI90.00	42.0 dB

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**	**6.3**	**8.0**	**10.0**
PRMLxT1L	2014-12-05 00:20:44	-29.55			
PRMLxT1L	2014-12-05 06:37:56	-28.74			
PRMLxT1L	2014-12-05 00:08:07	-29.45			
PRMLxT1L	2019-03-29 07:28:50	-30.02			
PRMLxT1L	2019-02-01 03:17:55	-29.16			
PRMLxT1L	2019-02-01 03:17:33	-30.18			
PRMLxT1L	2014-12-05 08:02:25	-30.06			
PRMLxT1L	2018-12-07 14:30:34	-29.85			
PRMLxT1L	2018-04-07 14:02:21	-29.37			
PRMLxT1L	2018-04-06 16:13:45	-29.43			
PRMLxT1L	2018-04-06 10:54:04	-29.44			

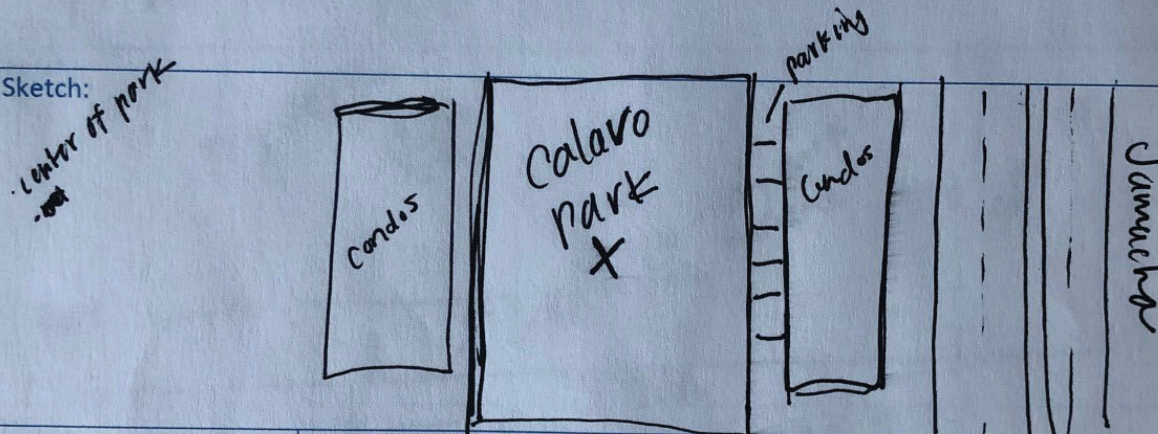
Site Noise Survey

Project #: 170-0195	Project Name: Calavo Park
Date: February 10, 2021 — Site #: calavo 3	Analyst(s): K Hawkins; K. Laybourn
Address: Calavo Park — Onsite	
Meter: Larson Davis Sound Expert LxT — Serial#: 0004861	Calibrator: CAL200 — Serial #: 13296

Notes:

- trees rustling from wind
- some birds chirping
- constant traffic/car noise on Jamacha
- helicopter noise in distance ~ 5 min in

Sketch:



Temp: 61°F	Wind Speed: 11 mph
Humidity: 60%	
Start of Measurement: 3:38 AM / PM	End of Measurement: 3:41 AM / PM

dBA LEQ

Cars (tally per 5 cars)	People OR Dogs at Play	Medium Trucks	Heavy Trucks
III	/		

cars going thru parking lot

Noise Measurement for Information Only

No Through Roadways

No Calibration Analysis will be provided

Summary

File Name on Meter	calavov2.001.s	
File Name on PC	LxTse_0004861-20210826 080736-calavov2	
Serial Number	0004861	
Model	SoundExpert® LxT	
Firmware Version	2.301	
User		
Location		
Job Description		
Note		

Measurement

Description	sports.	
Start	2021-08-26 08:07:36	
Stop	2021-08-26 08:22:36	
Duration	00:15:00.0	
Run Time	00:15:00.0	
Pause	00:00:00.0	
Pre-Calibration	2014-12-05 00:18:40	
Post-Calibration	None	
Calibration Deviation	---	

Overall Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamplifier	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Linear	
OBA Range	Normal	
OBA Bandwidth	None	
OBA Frequency Weighting	C Weighting	
OBA Max Spectrum	Bin Max	
Overload	124.2 dB	
	A	**C**
Under Range Peak	**80.5**	77.5
Under Range Limit	**27.2**	25.2
Noise Floor	16.0	16.1

Results

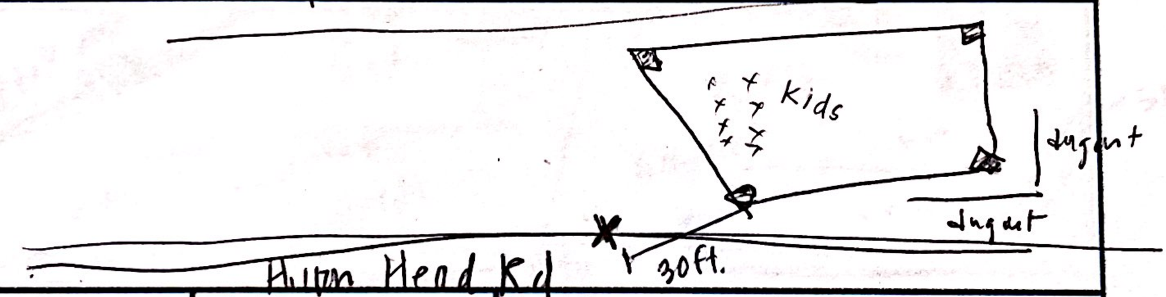
LAeq	59.3	
LAE	88.8	
EA	85.032 µPa²h	
LApeak (max)	2021-08-26 17:08:57	93.4
LASmax	2021-08-26 17:09:04	77.5
LASmin	2021-08-26 17:16:13	43.7

Site Noise Survey			
Project #: 170-0195		Project Name: Calavo Park	
Date: August 26, 2021	Site #: 1	Analyst(s): K Hawkins; C. Yi	
Address: Hilton Head Park — Baseball / soccer shots			
Meter: Larson Davis Sound Expert LxT	Serial#: 0004861	Calibrator: CAL200	Serial #: 13296

Notes:

- baseball practice when first get here
- little kids starting to warm up for soccer
- Kids yelling / crying
- Flag footballers doing drills
- throwing + catching balls back + forth
- helicopter flyover ~ 1:30 in
- ~~coachs~~ coaches giving directions to kids
- decent wind
- constant cars passing on Hilton Head Rd.
- whistle blows
- balls hitting fence

Sketch:



Temp: 95°	Wind Speed: mph 11	Humidity: 19%	
Start of Measurement: AM / PM 5:07pm		End of Measurement: AM / PM 5:22pm	
Cars (tally per 5 cars)	People ~~OR Dogs~~ + adults at Play	dBA L_{EQ} [illegible]	
||||| ||||| ||||| ||||	||||| |||||	Medium Trucks |||	~~Heavy Trucks~~

Noise Measurement for Information Only

No Through Roadways

No Calibration Analysis will be provided

Summary

File Name on Meter	calavov2.002.s	
File Name on PC	LxTse_0004861-20210826 085323-calavov2	
Serial Number	0004861	
Model	SoundExpert® LxT	
Firmware Version	2.301	
User		
Location		
Job Description		
Note		

Measurement

Description	sports.	
Start	2021-08-26 17:53:23	
Stop	2021-08-26 18:08:23	
Duration	00:15:00.0	
Run Time	00:15:00.0	
Pause	00:00:00.0	
Pre-Calibration	2014-12-05 00:18:40	
Post-Calibration	None	
Calibration Deviation	---	

Overall Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamplifier	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Linear	
OBA Range	Normal	
OBA Bandwidth	None	
OBA Frequency Weighting	C Weighting	
OBA Max Spectrum	Bin Max	
Overload	124.2 dB	
	A	**C**
Under Range Peak	**80.5**	77.5
Under Range Limit	**27.2**	25.2
Noise Floor	16.0	16.1

Results

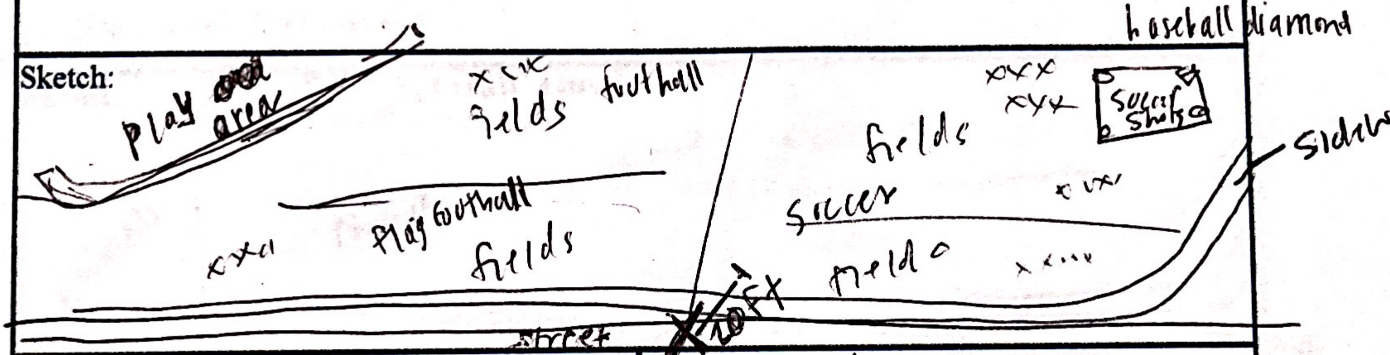
L_{Aeq}	56.3	
LAE	85.8	
EA	42.246 µPa²h	
$L_{Apeak\ (max)}$	2021-08-26 18:03:45	95.6
L_{ASmax}	2021-08-26 18:03:45	79.1
L_{ASmin}	2021-08-26 18:05:19	47.0

× Site Noise Survey ×

Project #: 170-0195		Project Name: Calavo Park	
Date: August 26, 2021	Site #: 2	Analyst(s): K Hawkins; C. Yi	
Address: Hilton Head Park — baseball + open field			
Meter: Larson Davis Sound Expert LxT	Serial#: 0004861	Calibrator: CAL200	Serial #: 13296

Notes:
- lots of kids playing at once → four soccer practices, one flag football practice, soccer shots practice on baseball field; football practice
- coach constantly yelling drills
- kids chatting + kicking balls
- consistent cars on Hilton Head Rd.

Sketch:



Temp: 93'	Wind Speed: mph 10	Humidity: 21%	
Start of Measurement: AM / PM 5:52		End of Measurement: AM / PM 6:07 (pm)	
Cars (tally per 5 cars)	People ~~OR Dogs~~ at Play	dBA L_{EQ}	
	~50 kids	Medium Trucks	Heavy Trucks
卌 卌 卌 卌 卌 ||||	in various states of play		

Noise Measurement for Information Only

No Through Roadways

No Calibration Analysis will be provided

Summary		
File Name on Meter	calavov2.003.s	
File Name on PC	LxTse_0004861-20210826 094029-calavov2	
Serial Number	0004861	
Model	SoundExpert® LxT	
Firmware Version	2.301	
User		
Location		
Job Description		
Note		

Measurement		
Description	sports.	
Start	2021-08-26 18:40:29	
Stop	2021-08-26 18:55:29	
Duration	00:15:00.0	
Run Time	00:15:00.0	
Pause	00:00:00.0	
Pre-Calibration	2014-12-05 00:18:40	
Post-Calibration	None	
Calibration Deviation	---	

Overall Settings		
RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamplifier	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Linear	
OBA Range	Normal	
OBA Bandwidth	None	
OBA Frequency Weighting	C Weighting	
OBA Max Spectrum	Bin Max	
Overload	124.2 dB	
	A	**C**
Under Range Peak	**80.5**	77.5
Under Range Limit	**27.2**	25.2
Noise Floor	16.0	16.1

Results		
LAeq	54.5	
LAE	84.1	
EA	28.362 µPa²h	
LApeak (max)	2021-08-26 18:46:43	90.1
LASmax	2021-08-26 18:51:23	67.0
LASmin	2021-08-26 18:41:32	46.1

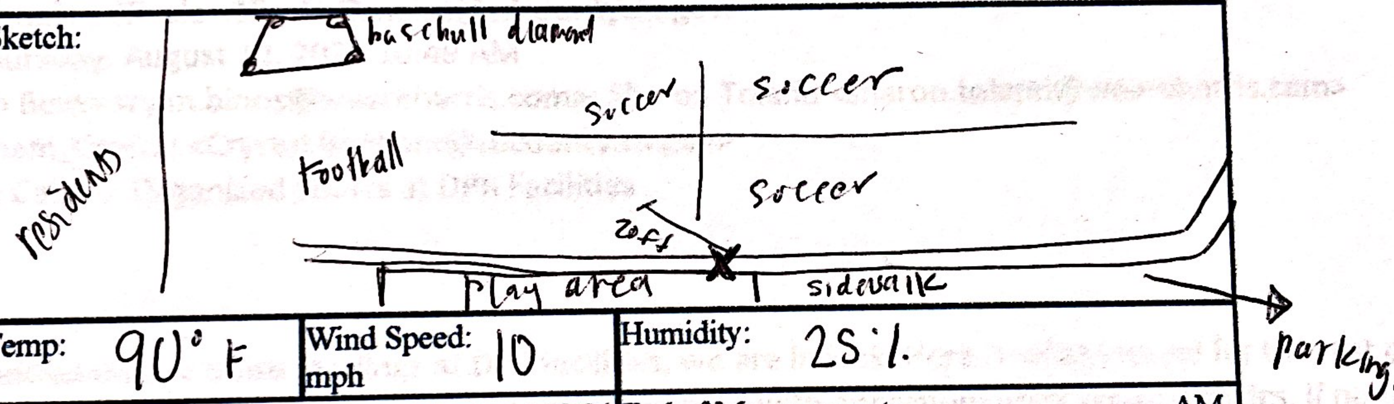
Site Noise Survey

Project #: 170-0195	Project Name: Calavo Park
Date: August 26, 2021 · Site #: 3	Analyst(s): K Hawkins; C. Yi
Address: Hilton Head — Open Field	
Meter: Larson Davis Sound Expert LxT · Serial#: 0004861	Calibrator: CAL200 · Serial #: 13296

Notes:

- practices → Football, 3 soccer practices
- coach yelling orders/drills
- kids hitting balls / talking / screaming
- throwing balls
- a couple whistle blows
- parents chatting
- car alarm
- little kids screaming

Sketch:



Temp: 90° F	Wind Speed: mph 10	Humidity: 25%	
Start of Measurement: AM / PM 6:39		End of Measurement: AM / PM 6:54 pm	
Cars (tally per 5 cars)	People ~~OR Dogs at~~ Play	dBA L_{EQ}	
		Medium Trucks	Heavy Trucks
	~ 40 kids		

Noise Measurement for Information Only

No Through Roadways

No Calibration Analysis will be provided

Summary

File Name on Meter	calavov2.004.s	
File Name on PC	LxTse_0004861-20210831 060440-calavov2	
Serial Number	0004861	
Model	SoundExpert® LxT	
Firmware Version	2.301	
User		
Location		
Job Description		
Note		

Measurement

Description	sports.	
Start	2021-08-31 17:17:40	
Stop	2021-08-31 17:32:40	
Duration	00:15:00.0	
Run Time	00:15:00.0	
Pause	00:00:00.0	
Pre-Calibration	2021-08-28 05:03:48	
Post-Calibration	None	
Calibration Deviation	---	

Overall Settings

RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamplifier	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Linear	
OBA Range	Normal	
OBA Bandwidth	None	
OBA Frequency Weighting	C Weighting	
OBA Max Spectrum	Bin Max	
Overload	123.4 dB	
	A	**C**
Under Range Peak	**79.7**	76.7
Under Range Limit	**26.9**	25.0
Noise Floor	15.7	15.8

Results

LA_{eq}	48.6	
LAE	78.1	
EA	7.182 µPa²h	
$LA_{peak\ (max)}$	2021-08-31 17:17:41	83.8
LAS_{max}	2021-08-31 17:20:55	66.6
LAS_{min}	2021-08-31 17:28:55	41.8

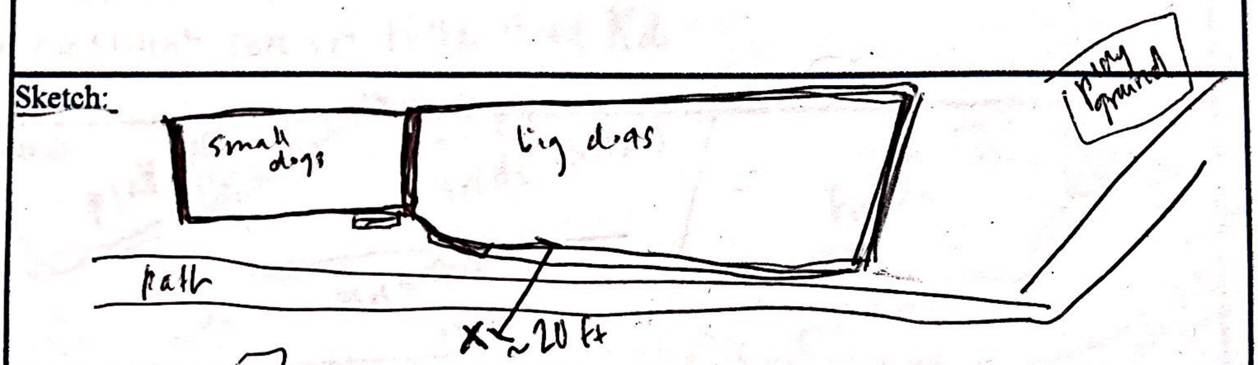
Site Noise Survey

Project #: 170-0195	Project Name: Calavo Park
Date: August ~~25~~, 2021 30 — Site #: 4	Analyst(s): K Hawkins; ~~[illegible]~~
Address: Lamar Off Leash Dog Park, Spring Valley, CA	
Meter: Larson Davis Sound Expert LxT — Serial#: 0004861	Calibrator: CAL200 — Serial #: 13296

Notes:

- dog owners chatting with their dogs
- mild dog play / wrestling
- people running by / jogging
- a couple dogs intermittent barking
- kids playing thru park
- four constant dogs and a fifth was there @ beginning

Sketch:



Temp: 73°F	Wind Speed: mph 7 mph	Humidity: 63%
Start of Measurement: AM / PM 5:17		End of Measurement: AM / PM 5:32 pm

Cars (tally per 5 cars)	~~People OR~~ Dogs at Play	dBA L_{EQ}	
X	𝍸	Medium Trucks	Heavy Trucks
		X	X

Noise Measurement for Information Only

No Through Roadways

No Calibration Analysis will be provided

APPENDIX C. FHWA NOISE MODEL RESULTS

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TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Project Number:
Project Name: Calavo Park

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Source of Traffic Volumes: Linscott, Law, and Greenspan, December 2020
Community Noise Descriptor: L_{dn}: ______ CNEL: X

"-" = contour is located within the roadway right-of-way.
Distance is from the centerline of the roadway segment
to the receptor location.

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Analysis Condition Roadway, Segment	Lanes	Median Width	ADT Volume	Design Speed (mph)	Alpha Factor	Vehicle Mix Medium Trucks	Vehicle Mix Heavy Trucks	**CNEL at 50 Feet**	**Distance from Centerline of Roadway** Distance to Contour 70 CNEL	65 CNEL	60 CNEL	55 CNEL	Calc Dist
Jamacha Boulevard													
Campo Road to Calavo Drive, existing	4	12	13,430	50	0.5	3.0%	2.0%	**70.3**	52	112	242	521	50
Campo Road to Calavo Drive existing + project	4	12	13,467	50	0.5	3.0%	2.0%	**70.3**	52	113	242	522	50
Jamacha Boulevard													
Calavo Drive to Folex Way, existing	4	12	12,860	50	0.5	3.0%	2.0%	**70.1**	51	109	235	506	50
Calavo Drive to Folex Way, existing + project	4	12	12,970	50	0.5	3.0%	2.0%	**70.1**	51	110	236	509	50
Calavo Drive													
Jamacha Boulevard to Project Driveway, existing	2	0	3,480	25	0.5	2.0%	1.0%	**56.8**	-	-	-	66	50
Jamacha Boulevard to Project Driveway, existing + project	2	0	3,627	25	0.5	2.0%	1.0%	**56.9**	-	-	-	67	50
Calavo Drive													
Project Driveway to Del Rio Road, existing	2	0	3,480	25	0.5	2.0%	1.0%	**56.8**	-	-	-	66	50
Project Driveway to Del Rio Road, existing + project	2	0	3,517	25	0.5	2.0%	1.0%	**56.8**	-	-	-	66	50

Roadway, Segment	Traffic Volumes Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn
Jamacha Boulevard	0	0	0	0	0	0	0	0	0
Campo Road to Calavo Drive, existing	10,435	1,706	1,289	352	239	20	8	30	22
Campo Road to Calavo Drive existing + project	10,464	1,710	1,293	353	240	20	8	30	22
Jamacha Boulevard	0	0	0	0	0	0	0	0	0
Calavo Drive to Folex Way, existing	9,992	1,633	1,235	337	229	19	7	29	21
Calavo Drive to Folex Way, existing + project	10,078	1,647	1,245	340	231	20	7	29	21
Calavo Drive	0	0	0	0	0	0	0	0	0
Jamacha Boulevard to Project Driveway, existing	2,704	442	334	61	31	4	1	5	3
Jamacha Boulevard to Project Driveway, existing + project	2,818	461	348	63	32	4	1	5	3
Calavo Drive	0	0	0	0	0	0	0	0	0
Project Driveway to Del Rio Road, existing	2,704	442	334	61	31	4	1	5	3
Project Driveway to Del Rio Road, existing + project	2,733	447	338	61	31	4	1	5	3

Roadway, Segment	Ref. Energy Leve A	MT	HT	Dist Adj	Ld A	MT	HT	Total
Jamacha Boulevard	####	####	####	####	####	####	####	####
Campo Road to Calavo Drive, existing	71.1	78.8	83.0	0.8	68.7	61.9	64.5	70.7
Campo Road to Calavo Drive existing + project	71.1	78.8	83.0	0.8	68.7	61.9	64.5	70.7
Jamacha Boulevard	####	####	####	####	####	####	####	####
Calavo Drive to Folex Way, existing	71.1	78.8	83.0	0.8	68.5	61.7	64.3	70.5
Calavo Drive to Folex Way, existing + project	71.1	78.8	83.0	0.8	68.6	61.8	64.3	70.6
Calavo Drive	####	####	####	####	####	####	####	####
Jamacha Boulevard to Project Driveway, existing	59.4	71.1	78.7	-0.1	53.5	48.8	53.5	57.2
Jamacha Boulevard to Project Driveway, existing + project	59.4	71.1	78.7	-0.1	53.6	49.0	53.7	57.4
Calavo Drive	####	####	####	####	####	####	####	####
Project Driveway to Del Rio Road, existing	59.4	71.1	78.7	-0.1	53.5	48.8	53.5	57.2
Project Driveway to Del Rio Road, existing + project	59.4	71.1	78.7	-0.1	53.5	48.8	53.6	57.2

Roadway, Segment	Le A	MT	HT	Total	Ln A	MT	HT	Total	DISTANCE TO CONTOUR (2) 70 CNEL	65 CNEL	60 CNEL	55 CNEL
Jamacha Boulevard	####	####	####	####	####	####	####	####	0	0	0	0
Campo Road to Calavo Drive, existing	65.8	54.3	54.3	66.4	54.8	52.5	55.2	59.1	52	112	242	521
Campo Road to Calavo Drive existing + project	65.8	54.3	54.3	66.4	54.8	52.5	55.2	59.1	52	113	242	522
Jamacha Boulevard	####	####	####	####	####	####	####	####	0	0	0	0
Calavo Drive to Folex Way, existing	65.6	54.1	54.1	66.2	54.6	52.3	55.0	58.9	51	109	235	506
Calavo Drive to Folex Way, existing + project	65.7	54.2	54.1	66.2	54.6	52.3	55.1	58.9	51	110	236	509
Calavo Drive	####	####	####	####	####	####	####	####	0	0	0	0
Jamacha Boulevard to Project Driveway, existing	50.5	41.2	43.3	51.7	37.7	39.3	44.3	46.2	7	14	30	66
Jamacha Boulevard to Project Driveway, existing + project	50.7	41.4	43.5	51.9	37.9	39.5	44.5	46.3	7	15	31	67
Calavo Drive	####	####	####	####	####	####	####	####	0	0	0	0
Project Driveway to Del Rio Road, existing	50.5	41.2	43.3	51.7	37.7	39.3	44.3	46.2	7	14	30	66
Project Driveway to Del Rio Road, existing + project	50.6	41.3	43.4	51.7	37.8	39.4	44.3	46.2	7	14	31	66

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APPENDIX D. ROAD CONSTRUCTION NOISE MODEL RESULTS

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Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 2/19/2021
Case Descr Calavo Park

---- Receptor #1 ----

Descriptior	Land Use	Baselines (dBA) Daytime	Evening	Night
Condos	Residential	60	55	50

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Scraper	No	40		83.6	50	0
Grader	No	40	85		50	0
Excavator	No	40		80.7	50	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Scraper	83.6	79.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	85	81	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85	84.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

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