U.S. Department of Housing and Urban Development

451 Seventh Street, SW

Washington, DC 20410

www.hud.gov

espanol.hud.gov

Environmental Assessment
Determinations and Compliance Findings for HUD-assisted Projects
24 CFR Part 58

Project Information

Project Name: Orchard View Gardens

Responsible Entity: OC Housing and Community Development
Grant Recipient (if different than Responsible Entity):

State/Local Identifier: CA/059

Preparer: Jaclyn Canzone, OC Housing & Community Development

Certifying Officer Name and Title: Julia Bidwell, Director, OC Housing and Community Development

Grant Recipient (if different than Responsible Entity): Same

Consultant (if applicable): Chambers Group, Inc.

Direct Comments to: Jaclyn Canzone, jaclyn.canzone@occr.ocgov.com

Project Location:

The project site is located at 8300 Valley View Street, on the eastern frontage of Valley View Street between Los Molinos Drive and Crescent Avenue in Buena Park, California as shown in Figure 1. The project site is approximately 3.2 acres and is currently occupied by St. Joseph's Episcopal Church and surrounded by mostly residential uses as shown in Figure 2.

Description of the Project [24 CFR 50.12 & 58.32; 40 CFR 1508.25]**:**

The project site is one contiguous, irregular-shaped parcel with the southern portion of the site currently occupied by St. Joseph's Church. The church is housed in a single building and surrounded by surface parking. The northern portion of the site is currently vacant. The project proposes to subdivide the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres. The newly created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with a primary residential apartment building with a 3,000-square-foot community center and nine single-story casitas that would be located within three single-story buildings, accommodating 66 residential units in total.
On Parcel 2, a total of 66 residential apartment homes are proposed for seniors aged 62 and older. These apartment homes consist of 62 one-bedroom units and four two-bedroom units, in one larger and three smaller buildings; one of the units is for a manager. The maximum building height would be 35 feet. In total, the project proposes 25,308 square feet of building area, 23,627 square feet of paved parking and driveways, and 26,021 square feet of open space/landscaped area. The overall lot coverage for the development is 35%. The Buena Park Municipal Code section 19.536.040, Parking Spaces Required, requires a Church to use a parking requirement of one space per three fixed seats (or 4.5 feet of bench) plus one space per 40 square feet of other net assembly area in the one largest assembly room. To comply with the City Municipal Code, an estimated 80 parking spaces are required for the Church. With the development of the Orchard View Gardens, a portion of the Church's existing parking area in the northeast corner will be demolished to accommodate the proposed residential units. The onsite parking available for the Church would be reduced from 121 spaces to 80 spaces. The proposed amount of parking for the Church is sufficient to accommodate the Church operations and meets the City's Code requirement. Furthermore, based on the currently utilization rates reported above, if the number of spaces is reduced to 80, even at its peak occupancy, the utilization rate is still only 55%. Based on the demographic of the residents that would be living on site, the high percentage of one bedroom units, parking utilization rates for similar senior rental projects within the region, and the availability of public transportation options at the site, the project applicant believes that the proposed parking ratio is appropriate for an income-restricted senior rental project. With the development of the proposed project, the existing church and proposed residential facility would share a total of 123 parking spaces. The existing church currently contains 110 parking spaces and plans to reduce their parking lot to 80 spaces with the development of the project. The project proposes the development of 48 parking spaces to accommodate residents, visitors, and staff (Fehr and Peers, 2020, p. 6).
The General Plan land use designation for the project site is Low Density Residential and the Project Site is zoned One-Family Residential (RS-6), allowing a base density of up to 7.26 dwelling units per acre (du/ac).

A General Plan Amendment to High Density Residential and Zone Change to Medium-Density Multifamily Residential (RM-20) is required to accommodate the proposed project. The project would also necessitate a Tentative Parcel Map to divide the single parcel into two parcels. The project would consist of: (1) utilities improvements; (2) construction of three new residential buildings; (3) construction of a parking lot; (4) construction of a 3,000-square-foot community center (on the first floor of Building 1); (5) construction of a green lawn and hardscape game area; and (6) project site amenities and landscaping. Table 1 summarizes the proposed project features and Figure 3 shows the site plan for the proposed project.

Table 1: Project Summary

New Construction	Proposed Uses/Features	Square Feet	No. of Stories	Building Height
Building 1 (this building is divided into two groupings connected by a breezeway)	62 one-bedroom units and four two-bedroom units	54,201[1]	2-3	35 feet maximum
Casitas	Nine one-bedroom single story casitas	6,093	1	13 feet, 1 inch maximum
Community Center	Senior-oriented community center for use by residents and guests (located in Building 1)	3,000	N/A[3]	N/A[2]
Total Building Area	**N/A**	**60,294**	**N/A**	**N/A**
Paved parking and Driveways	48 Parking Spaces[2]	23,627	N/A	N/A
Open Area	Recreational uses (bench seating, lawn games, decomposed granite path, decomposed granite courtyard with fire pit and lounge seating)	22,236	N/A	N/A
Demolition				
Demolition of the "The Barn" Building	"The Barn" building will be demolished to accommodate the proposed development on site.	Unknown estimated to be approximately 2,000 square feet	1	Unknown estimated to be approximately 15-20 feet

Note:

[1] The 3,000 square foot community center is included in the total square footage of 54,201 for Building 1.

[2] The project is requesting a reduction in parking based on the demographic of residents being seniors living alone or non-car owning households, access to existing bus routes, and the provision of alternative strategies to reduce vehicle trips including car sharing and van pooling.

[3] The community center is located within Building 1.

A Draft and Final MND were prepared for the proposed project pursuant to California Environmental Quality Act (CEQA) (Appendix A). The project was approved by the City in October 2020.

Statement of Purpose and Need for the Proposal [40 CFR 1508.9(b)]:

The purpose of the Proposed Action is to provide low- and moderate-income housing for seniors and senior households who are experiencing homelessness or were formerly homeless. The proposed project would develop 65 affordable units for senior citizens and one exempt (i.e., market-rate) manager's unit. These units would assist senior citizens with low and moderate incomes, by providing affordable housing. The project would also help the City meet their Regional Housing Needs Allocation (RHNA).

Existing Conditions and Trends [24 CFR 58.40(a)]:

The project site consists of one parcel, APN 069-283-25. The project site is developed with the St. Joseph's Episcopal Church, in a developed and urbanized area in the City of Buena Park. The project site is surrounded by development, including residential land uses to the north, south, and east and Valley View Street, beyond which are homes to the west. Access to the site is provided at one point along Valley View street with an exit from the site just slightly further north. The area surrounding the site is fully developed with single family residences to the north, east, and south, and more single family across Valley View Street.

Federal housing data defines a household type as 'elderly family' if it consists of two persons with either or both age 62 or over. Of Buena Park's 4,615 such households, 26.4% earn less than 30% of the surrounding area income, (compared to 24.2% in the SCAG region), 47.5% earn less than 50% of the surrounding area income (compared to 30.9% in the SCAG region). As of August 2020, Buena Park had a total of 8,899 units needed to meet their RHNA of which, 2,910 units are either low or moderate income (SCAG 2020).

Funding Information

Grant Number	HUD Program	Funding Amount
	HOME	$453,600
	8 OCHA Project-Based Vouchers	$2,461,440 (estimated 20-year amount)

Estimated Total HUD Funded Amount: $2,915,040

Estimated Total project Cost (HUD and non-HUD funds) [24 CFR 58.32(d)]**: $22,126,219**

Figure 1
REGIONAL LOCATION

Disclaimer: Representations on this map or illustration are intended only to indicate locations of project parameters reported in the legend. Project parameter information supplied by others (see layer credits) may not have been independently verified for accuracy by UltraSystems Environmental, Inc. This map or illustration should not be used for, and does not replace, final grading plans or other documents that should be professionally certified for development purposes.

Path: \\Gissvr\gis\Projects\7037_NCR_Affordable_Housing_Buena Park_IS_MND\MXDs\7037_NCR_Buena_Park_Fig2_0_Regional_Location_2020_01_07.mxd
January 08, 2020
Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community; UltraSystems Environmental, Inc., 2020

Scale: 1:633,600

N

0 5 10 Miles

0 5 10 Kilometers

Legend

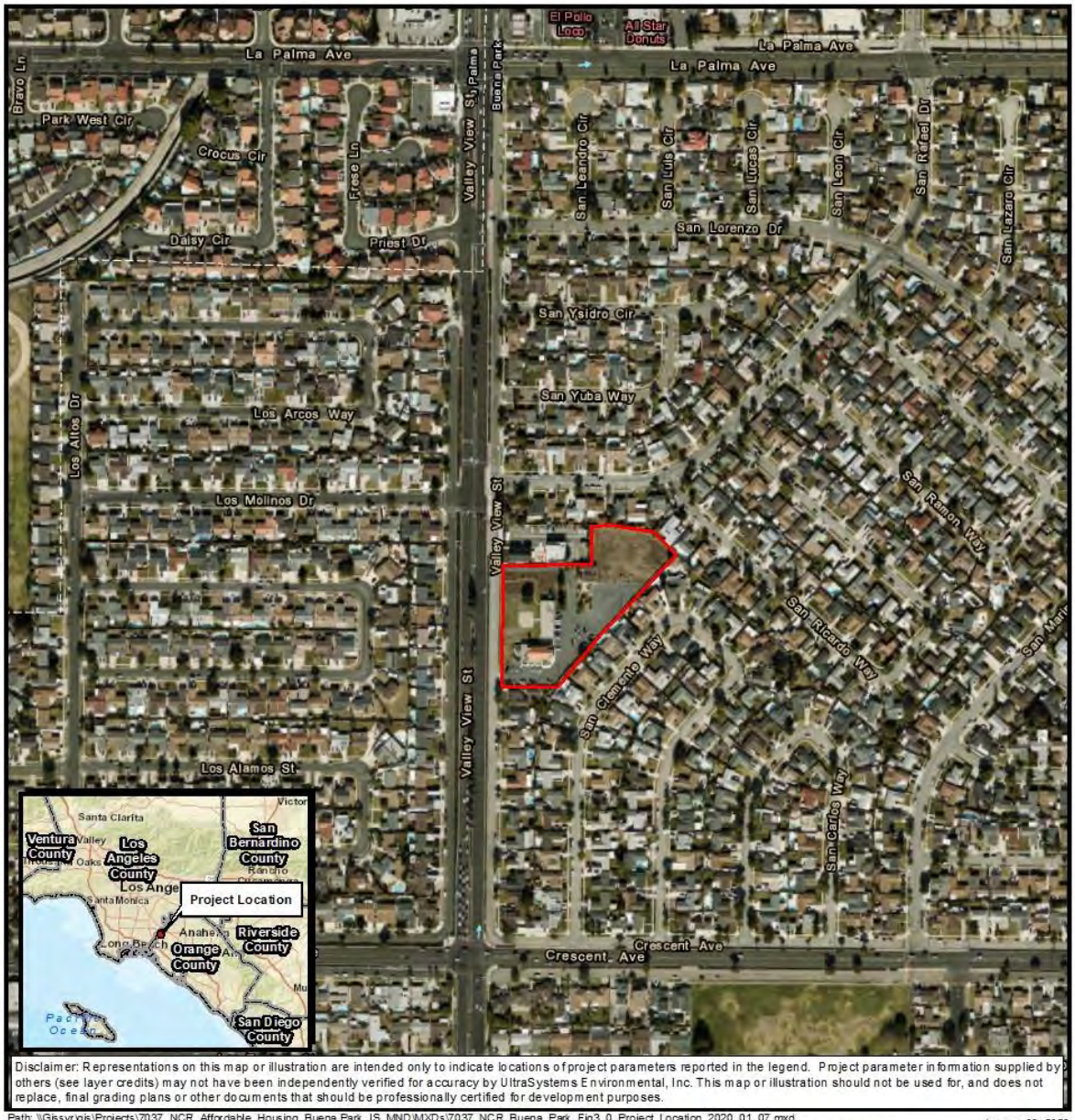
- Project Location
- County Boundary

Orchard View Gardens Senior Apartment Homes

Regional Location

UltraSystems

Figure 2
PROJECT LOCATION



Disclaimer: Representations on this map or illustration are intended only to indicate locations of project parameters reported in the legend. Project parameter information supplied by others (see layer credits) may not have been independently verified for accuracy by UltraSystems Environmental, Inc. This map or illustration should not be used for, and does not replace, final grading plans or other documents that should be professionally certified for development purposes.

Path: \\Gissvr\gis\Projects\7037_NCR_Affordable_Housing_Buena Park_IS_MND\MXDs\7037_NCR_Buena_Park_Fig3_0_Project_Location_2020_01_07.mxd
January 08, 2020

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community, Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community; UltraSystems Environmental, Inc., 2020

Scale: 1:4,800

N

Legend

Project Boundary

Orchard View Gardens Senior Apartment Homes

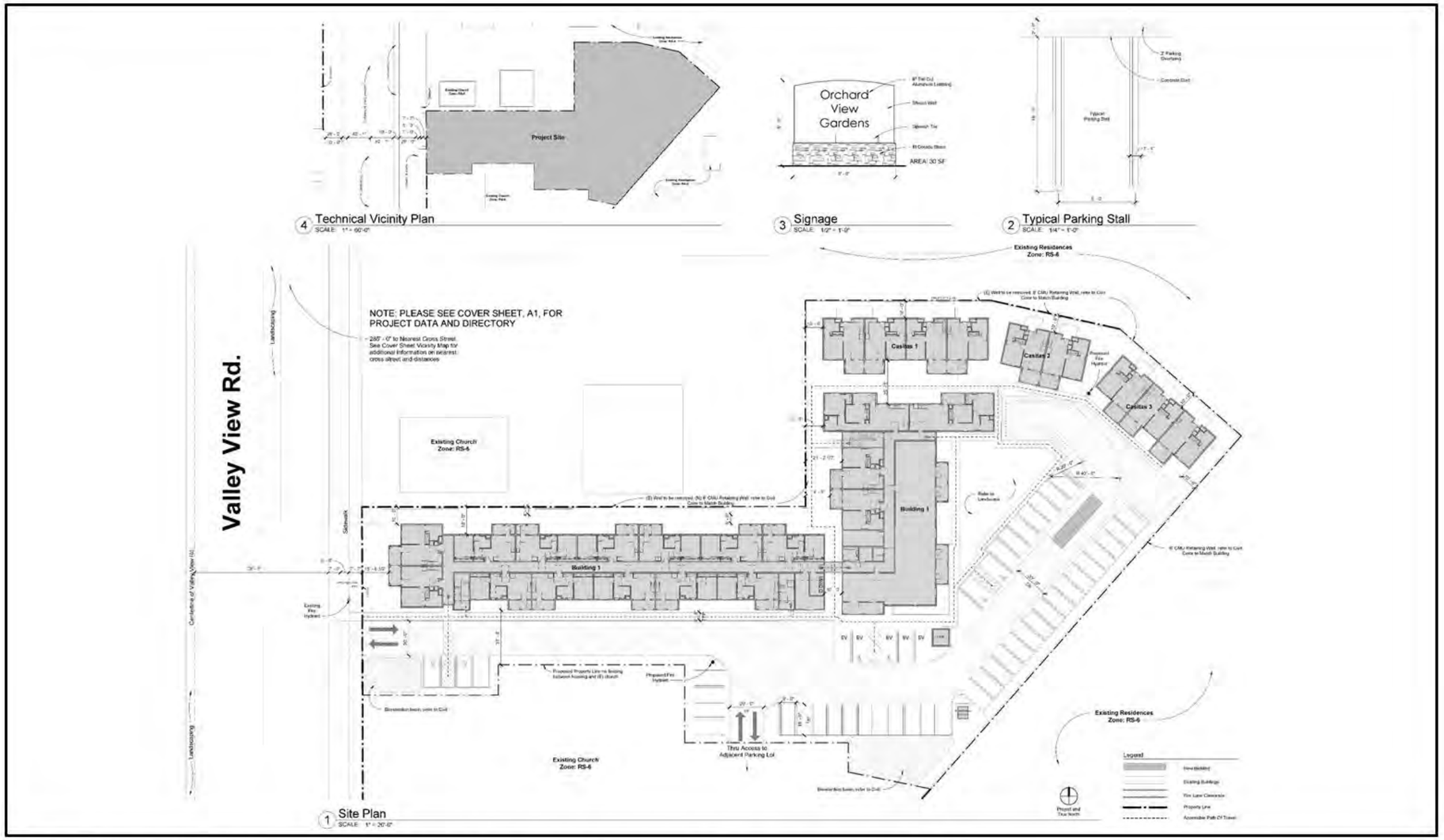
Project Location

0 200 400 Feet

0 50 100 Meters

UltraSystems

Figure 3
SITE PLAN



Disclaimer: Illustration provided by RRM Design Group, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Source: RRM Design Group, March 30, 2020.

UltraSystems

Orchard View Gardens
Senior Apartment Homes
Site Plan

Compliance with 24 CFR 50.4, 58.5, and 58.6 Laws and Authorities

Record below the compliance or conformance determinations for each statute, executive order, or regulation. Provide credible, traceable, and supportive source documentation for each authority. Where applicable, complete the necessary reviews or consultations and obtain or note applicable permits of approvals. Clearly note citations, dates/names/titles of contacts, and page references. Attach additional documentation as appropriate.

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 and 58.6		
Airport Hazards 24 CFR Part 51 Subpart D	Yes ☐ No ☒	The nearest airport is the Joint Forces Training Base (JFTB) Los Alamitos, located approximately 2.8 miles southwest of the project site. The project is located within JFTB's Notification Area. However, the project site is not within JFTB's Height Restriction or Impact Zones. Although the project site is within JFTB's influence area, the project applicant needs only to notify the airport about project construction and operation. Therefore, with compliance to notifying JFTB and the project's distance from the nearest active airports, the project would not expose people to safety hazards due to proximity to a public airport, and no impacts would occur. Documentation: Airport Land Use Commission Airport Environs Land Use Plan – Joint Forces Training Base Los Alamitos Amended 2016, http://www.ocair.com/commissions/aluc/docs/JFTB-AELUP2016ProposedFINAL.pdf. Accessed November 2020.
Coastal Barrier Resources Coastal Barrier Resources Act, as amended by the Coastal Barrier	Yes ☐ No ☒	The Project is over 8 miles from the coast and is not located in a coastal zone. Additionally, there are no coastal barrier

Improvement Act of 1990 [16 USC 3501]		resources on the western coast of the United States. <u>Documentation:</u> Coastal Barrier Resources System Mapper. United States Fish and Wildlife Service. https://www.fws.gov/CBRA/Maps/Mapper.html. Accessed November 2020.
Flood Insurance Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]	Yes ☐ No ☒	The project site is located in Zone X, *Areas determined to be outside the 0.2% annual chance* [500-year] *floodplain*, as shown on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) Map Number 06059C0109J.Flood insurance is not required for properties in this zone. Site development is not expected to have an impact on flooding or effect on-or offsite properties; appropriate drainage features are designed into the Project that comply with overall City-wide storm drain facilities. An increase in any base flood elevation is not expected with the development of this project. <u>Documentation:</u> National Flood Hazard Layer Viewer. Federal Emergency Management Association. https://www.fema.gov/national-flood-hazard-layer-nfhl. Accessed November 2020.
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 & 58.5		
Clean Air Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	Yes ☐ No ☒	Potential air quality and greenhouse gas-related impacts associated with the Project were addressed in a noise impact analysis prepared for the Project site in the MND (Appendix A). The Project site is located within the South Coast Air Basin (Air Basin), and air quality regulation is administered by the South Coast Air Quality Management District (SCAQMD). The Air Basin has been designated by the federal Environmental Protection Agency (USEPA) as a nonattainment area for Ozone,

		PM10 (particulate matter) and PM2.5 (fine particulate pollution). Construction activities would temporarily create emissions of dusts, fumes, equipment exhaust, and other air contaminants. Mobile sources (such as diesel-fueled equipment onsite and traveling to and from the project site) would primarily generate NOX emissions. The amount of emissions generated daily would vary, depending on the amount and types of construction activities occurring at the same time. Estimated criteria pollutant emissions from the Orchard View Gardens project's onsite and offsite project construction activities were calculated using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2 (CAPCOA, 2017). construction emissions would not exceed SCAQMD regional thresholds. Therefore, the Orchard View Gardens project's short-term regional air quality impacts would be less than significant. Operational emissions generated by area sources, motor vehicles and energy demand would result from normal day-to-day activities of the project. CalEEMod 2016.3.2 was used to estimate these emissions. for each criteria pollutant, operational emissions would be below the pollutant's SCAQMD significance threshold. Based on the technical analyses prepared, the Project is compliant with 40 CFR Parts 6,51, and 93, and does not exceed the applicable NEPA de minimis thresholds, and therefore, does not require mitigation measures. <u>Documentation:</u> Orchard View Gardens Senior Apartment Homes Initial Study and Mitigated Negative Declaration (IS/MND), September 2020, UltraSystems. (Appendix A) CalEEMod Input and Results for Air Quality Analysis and CalEEMod Input and Results

		for Greenhouse Gas Emissions Analysis, prepared July 28, 2020, UltraSystems. (Appendix B)
Coastal Zone Management Coastal Zone Management Act, sections 307(c) & (d)	Yes ☐ No ☒	The Project is over 8 miles from the Pacific Ocean and is therefore not within a designated Coastal Management Zone. Documentation: Google Earth, 2020.
Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)	Yes ☒ No ☐	The Phase I determined that there are no RECs on the project site. Although the project site was used for agricultural purposes in the past, it should not be of concern based on passage of time since the last possible agricultural application. The Phase I ESA concluded that the project site was not listed in any regulatory database as a hazardous site. The proposed project would include the transport, storage, and use of chemical agents, solvents, paints, and other hazardous materials commonly associated with construction activities. Chemical transport, storage, and use would comply with Resource Conservation and Recovery Act (RCRA); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); California Hazardous Waste Control Law26; Occupational Safety and Health Administration (OSHA), and City of Buena Park Fire Department requirements. During construction, there would be a limited risk of spills and/or accidental release of hazardous materials that are used for the operation and maintenance of construction equipment. The onsite temporary handling, storage, and usage of these materials would be subject to applicable local, state, and/or federal regulations, including Best Management Practices (BMPs) required by the City of Buena Park. Compliance with state and local construction requirements would reduce the risk of any damage or injury from any

		potential spill hazards to a less than significant level. A structure called "The Barn" is located on the northern part of the project site and is a small stand-alone building, located northeast of the existing church and administration buildings on site. "The Barn" would be demolished as part of the proposed project. Based on aerial photographs "The Barn" was present sometime after 1994 and prior to 2002. Therefore, it is unlikely but unconfirmed as to whether or not "The Barn" was constructed with Asbestos Containing Materials (ACMs) and Lead-Based Paint (LBP) that can cause adverse health effects when airborne. As detailed in the Phase I report prepared for the project, the project site in not located on the Cortese List. The nearest active site to the project site, Tosco – 76 #5398, is located at 5014 Orangethorpe Avenue in La Palma, California, approximately 1.5 miles northwest of the project site. Thus, because the project site is not located on or near a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5. San Marino Elementary School is located approximately 0.2 mile southeast of the project site. Project personnel would ensure that all hazardous materials during construction would adhere to any applicable local, state, and/or federal regulations including BMPs required by the City of Buena Park. Mitigation Measure HAZ – 1 would be implemented to address impacts related to demolition and construction related hazardous materials related to potential impacts from ACM and LBP. <u>Documentation:</u> Phase I Environmental Site Assessment Report 8300 Valley View Street Buena Park,

		California 2019, Converse Consultants. (Appendix C)
Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	Yes ☒ No ☐	Potential biological-related impacts associated with the Project were addressed in a biological impact analysis prepared for the Project site in the MND (Appendix A). Due to several biological and physical disturbances within the Biological Study Area (BSA), it was determined that all 25 of the special-status plant species identified in the 10-mile radius database query do not have the potential to occur in the BSA. The 24 reported special-status wildlife species (including mammals, birds, insects and reptiles) identified in the search that were determined to have no potential to occur within the project BSA are discussed briefly below because the BSA lacks suitable habitat for foraging, nesting or breeding, or the BSA does not lie within the species reported distribution or elevation range, or a combination of all of those factors. The project site contains ornamental vegetation and building structures that could potentially provide cover and nesting habitat for bird species that have adapted to urban areas, such as rock pigeons (Columba livia) and mourning doves (Zenaida macroura). Native bird species such as mourning doves are protected by the MBTA and the California Fish and Game Code (Sections 3503, 3503.5, and 3513), which render it unlawful to take native breeding birds, their nests, eggs, and young. Indirect impacts on breeding birds could occur from increased noise, vibration and dust during construction, which could adversely affect the breeding behavior of some birds, and lead to the loss (take) of eggs and chicks, or nest abandonment. Therefore, the project has the potential to impact migratory non-game breeding birds and their nests, young and eggs. Several special-status bird species could use the project site for foraging and may be adversely impacted by construction activities. With the implementation of

		mitigation measure MM BIO-1, the project would have less than significant impacts to native bird species protected under the MBTA and the California Fish and Game Code. Mitigation Measure: A standard project mitigation measure has been included in this project to protect potential nesting birds on site. Refer to Mitigation Measure BIO-1. Documentation: Orchard View Gardens Senior Apartment Homes Initial Study and Mitigated Negative Declaration (IS/MND), September 2020, UltraSystems. (Appendix A)
Explosive and Flammable Hazards 24 CFR Part 51 Subpart C	Yes ☐ No ☒	The Phase I determined that there are no RECs on the project site. Although the project site was used for agricultural purposes in the past, it should not be of concern based on passage of time since the last possible agricultural application. The Phase I ESA concluded that the project site was not listed in any regulatory database as a hazardous site. Documentation: Phase I Environmental Site Assessment Report 8300 Valley View Street Buena Park, California 2019, Converse Consultants. (Appendix C)
Farmlands Protection Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658	Yes ☐ No ☒	The California Department of Conservation (DOC) established the Farmland Mapping and Monitoring Program (FMMP) in 1982 to identify critical agricultural lands and track the conversion of these lands to other uses. The FMMP is a non-regulatory program and provides a consistent and impartial analysis of agricultural land use and land use changes throughout California. The project site and surrounding uses are designated by the FMMP as “Urban and Built-Up Land,” which means that no agricultural uses occupy the site. The project is located within an urbanized area. Therefore, no farmland

		would be converted to non-agricultural use and no impacts would occur. Documentation: Important Farmland Finder. California Department of Conservation. http://maps.conservation.ca.gov/dlrp/ciff/. Accessed November 2020.
Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55	Yes ☐ No ☒	The project site is located in Zone X, Areas determined to be outside the 0.2% annual chance [500-year] floodplain, as shown on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) Map Number 06059C0109J. The 500-year Flood Zone describes a flood event that has a 0.2 percent chance of occurring in any year. The proposed project would not impede or redirect flood flows because the project site is not adjacent to any open bodies of water. The nearest body of water is Moody Creek, approximately 0.35-mile northwest of the project site. Development at the Project site is not subject to additional evaluations under Executive Order 11988. Documentation: National Flood Hazard Layer Viewer. Federal Emergency Management Association. https://www.fema.gov/national-flood-hazard-layer-nfhl. Accessed November 2020.
Historic Preservation National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800	Yes ☒ No ☐	A cultural resources inventory was conducted for the Orchard View Gardens project site that included a California Historic Resources Inventory System (CHRIS) records and literature search at the South Central Coastal Information Center (SCCIC) located at California State University, Fullerton. Based on the cultural resources records search, it was determined that one cultural resource has been previously recorded within the project site boundary: the St. Joseph's Episcopal Church, designated 30-177528. Within the half-mile buffer zone around the project site,

		there are two previously recorded historical cultural resources, and no prehistoric resources. The primary historic feature in the vicinity of the project site is the St. Joseph's Episcopal Church, built circa 1965, which is located on the project site. Saint Joseph's Episcopal Church, 30-177528, is located at 8300 Valley View Street, in the city of Buena Park, in Orange County, California. It was constructed circa 1965 in what is now a residential neighborhood but originally was open dairy farm land. It was built in the Spanish Eclectic style in an asymmetrical, irregular shape. It has a concrete foundation, stucco exterior and a front gable roof with Spanish tile; wings on each side of the church contain shed roofs also with Spanish tile. It has a square bell tower with a Spanish tiled gable roof situated in the northwest front corner. The church building was evaluated for inclusion in the National Register of Historic Places (NRHP) and determined not to meet the criteria to qualify; it was not assessed for eligibility under the California Register of Historical Resources or the local Buena Park Register. There are two additional resources in the project area recorded with the Office of Historic Preservation Directory of Properties in the Historic Properties Data File Historic Resources Inventory (HRI). These are a 1955 residence at 7890 La Casa Way (HRI # 184420) and another 1955 residence at 5948 Lois Ranchos Drive (HRI # 155453). Neither of these properties was filed with the SCCIC. Both properties are single-family residences and have been determined ineligible for the NRHP by consensus through the National Historic Preservation Act Section 106 process. Additionally, MM CUL-1 would ensure that any unexpected discovery of historical resources would be properly handled. <u>Tribal Consultation Correspondences:</u>

		A NAHC SLF search was conducted on and within a half-mile buffer around the project site. The NAHC letter of November 26, 2019 indicated that no records exist documenting the presence of traditional cultural properties within this area. Twenty-two representatives of 16 Native American tribes were contacted requesting a reply if they have knowledge of cultural resources in the area that they wished to share and asking if they had any questions or concerns regarding the project. These tribes included: • Agua Caliente Band of Cahuilla Indians • Gabrieleno Band of Mission Indians – Kizh Nation • Gabrieleno/Tongva San Gabriel Band of Mission Indians • Gabrielino/Tongva Nation • Gabrielino Tongva Indians of California Tribal Council • Gabrielino-Tongva Tribe • Juaneño Band of Mission Indians (Johnson) • Juaneño Band of Mission Indians – Acjachemen Nation (Belardes) • Juaneño Band of Mission Indians – Acjachemen Nation (Romero) • La Jolla Band of Luiseño Indians • Pals Band of Mission Indians • Pauma Band of Luiseño Indians • Pechanga Band of Luiseño Indians • Rincon Band of Luiseño Indians • San Luis Rey Band of Mission Indians • Soboba Band of Luiseño Indians On December 18th and 30th of 2019, Arysa Gonzales Romero, Historic Preservation Technician for the Agua Caliente Band of Cahuilla Indians, replied by email stating that the project site is not located within the Tribe's Traditional Use Area and therefore they defer to other tribes closer to the area. The Administrative Specialist for the Gabrieleño Band of Mission Indians – Kizh Nation, replied for Chairperson Andrew Salas by email on December 18, 2019 stating

		that they wished to have AB 52 consultation on the project; UltraSystems replied explaining that such consultation would be between the tribe and the project's Lead Agency, the City of Buena Park's Planning Department. On January 9, 2020, Deneen Pelton, Administrative Assistant representing the Rincon Band of Luiseño Indians responded that the project area is not within the Tribe's Traditional Use Area and that they defer to other tribes in the area. On January 14, 2020, Joyce Perry representing the Juaneño Band of Mission Indians (Belardes), replied by email asking if any buildings on the site will be demolished and if our survey would include test excavations. UltraSystems responded we would not be conducting testing, that one of the buildings will be demolished, and we don't believe that any monitoring had been conducted on the site. Ms. Perry responded asking about past monitoring and how deep excavations are expected to go; UltraSystems responded that due to the buildings' ages we did not believe that past monitoring took place and that we do not at present have current plans to suggest how deep excavations will go. During the telephone calls of January 21, 2020, Chairperson Anthony Morales with the Gabrielino/Tongva San Gabriel Band of Mission Indians requested that cultural and tribal monitors to be notified if any cultural material is found; he also stated that he would like to be notified if any cultural material is found. Chairperson Robert Dorame of the Gabrielino Tongva Indians of California Tribal Council indicated that human remains were found to the north of the project area and that UltraSystems contact the City about this and then notify him with the information that is learned. The San Luis Rey Band of Mission Indians' receptionist stated that cultural resources questions be directed to "Cami" and provided Cami's telephone number, but there was no answer and a message was left.

		She called back on January 22, 2020 and indicated that the project area is outside of the Tribe's Traditional Use Area and that they defer to other tribes in the area. The Cultural Resources Coordinator for the Pechanga Band of Luiseño Indians, Paul Macarro indicated that the project is outside of the tribe's area and that they would defer response to closer tribes. There have been no further responses from these tribes to date. Additionally, the Orange County Housing and Community Development conducted Section 106 consultation for the project. Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to consider the effects of federally funded projects on historic properties. The Gabrieleno Band of Mission Indians – Kizh Nation responded to the Section 106 Letter that they would be satisfied with the inclusion of mitigation measure TCR-1. The Jamul Indian Village of California also responded noting that the project as described is not within the Tribal boundaries and therefore they defer to other Tribes to respond. No other responses were received. MM TCR -1 would ensure that an approved Native American Monitor would be on-site for any ground disturbing activities. <u>Mitigation Measures:</u> Standard project mitigation measures have been included in this project to ensure no impacts to cultural resources would occur and proper consultation with the appropriate Tribes takes place when needed. Refer to Mitigation Measures CUL-1 and TCR-1. <u>Documentation:</u> Phase I Cultural Resources Inventory for the Orchard View Gardens Senior Apartment Homes City of Buena Park, Orange County, California, May 21, 2020, UltraSystems. (Appendix D)
Noise Abatement and Control	Yes ☒ No ☐	Potential noise-related impacts associated with the Project were addressed in a noise

Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B		impact analysis prepared for the Project site in the MND (Appendix A). That assessment conducted noise studies to determine the impacts of noise on the site from the development of the Project and included ambient noise measurements (Appendix E.1). Section 51.101(a)(7) of the HUD guidelines encourages use of quieter construction equipment and methods. Construction equipment would be required throughout construction of the project including demolition, site improvements, site preparation, grading, and building construction. The proposed Project would follow the following best management practices (BMPs) to ensure the use of quieter construction equipment: • Ensure that construction equipment is properly muffled according to industry standards and be in good working condition. • Place noise-generating construction equipment and locate construction staging areas away from sensitive uses, where feasible. • Schedule high noise-producing activities between the hours of 8:00 AM and 7:00 PM to minimize disruption on sensitive uses. • Implement noise attenuation measures, than diesel equipment, where feasible. • Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than 30 minutes. • Construction hours, allowable workdays, and the phone number which may include, but are not limited to, temporary noise barriers or noise blankets around stationary construction noise sources. • Use electric air compressors and similar power tools rather of the job superintendent shall be clearly posted at all construction entrances to allow for

		surrounding owners and residents to contact the job superintendent. If the City or the job superintendent receives a complaint, the superintendent shall investigate, take appropriate corrective action, and report the action taken to the reporting party. Contract specifications shall be included in the proposed project construction documents, which shall be reviewed by the City prior to issuance of a grading permit. • Project applicants shall require contract specifications that heavily loaded trucks used during construction would be routed away from residential streets to the extent feasible. Contract specifications shall be included in the proposed project construction documents, which shall be reviewed by the City prior to issuance of a grading permit. With implementation of these BMPs, the project would adhere to HUD's guidelines. Existing and future noise levels have been calculated for various roadway segments within the City of Buena Park. Twenty-five of the roadway segments modeled (along Valley View Street, Knott Avenue, Western Avenue, Beach Boulevard, Crescent Avenue, La Palma Avenue, Orangethorpe Avenue, and La Mirada Boulevard) would generate noise levels above 70 dBA DNL at 100 feet from centerline. HUD provides a road noise calculator that was utilized to assess roadway noise at the Project location from Valley View Street. The calculator indicated that the noise level at the proposed structures would be 70 dBA DNL which would exceed the HUD exterior noise standard of 65 dBA DNL (Appendix E.2). Therefore, mitigation measure MM N-1 would require features such as double-pane acoustic windows, 24" high single-paned, minimum 3/8'' thick tempered or laminated glass above solid 42" high walls for a total height of 66" or 5.5 feet at

		patios of impacted units, and 12" high single-paned, minimum 3/8'' thick tempered or laminated glass above solid 42" high walls for a total height of 54" or 4.5 feet on balconies of impacted units to attenuate noise to at or below 65 dBA DNL. All residential units would be equipped with a forced air heating ventilation air condition (HVAC) units that allow for a "windows closed" condition (i.e. windows do not need to be left open for ventilation). Typical new construction of multi-family homes with windows closed provided a minimum of 25 dBA exterior to interior noise reduction. As such the interior of the proposed homes would be 45 dBA DNL (70 dBA exterior – 25 dBA attenuation = 45 dBA interior), which is within the HUD 45 dBA DNL noise standard. The project site's existing conditions and estimated roadway noise would exceed 24 CFR Part 51 Exterior Noise Goals. However, with compliance of the proposed Mitigation Measure, the project would not contribute to any further increase in noise levels. Therefore, the project would be compliant with 24 CFR Part 51 Subpart B. <u>Mitigation Measure:</u> A standard project mitigation measure has been included in this project to ensure exterior noise generated from the existing roadway would remain less than significant. Refer to Mitigation Measure N-1. <u>Documentation:</u> Orchard View Gardens Senior Apartment Homes Initial Study and Mitigated Negative Declaration (IS/MND), September 2020, UltraSystems. (Appendix A) Ambient Noise Measurement Data, January 24, 2020, UltraSystems. (Appendix E.1) Roadway Noise (Appendix E.2)
Sole Source Aquifers	Yes ☐ No ☒	Sole Source Aquifers (SSA) are mapped by the U.S. Environmental Protection Agency

Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149		(USEPA). Evaluation of USEPA's data shows that no SSAs are in the vicinity of the Project site. The nearest SSA is the Campo/Cottonwood Creek Aquifer SSA (ID#SSA54). This SSA is approximately 100 miles south of the Project. Documentation: Sole Source Aquifers. U.S. Environmental Protection Agency. https://www.epa.gov/dwssa. Accessed November 2020.
Wetlands Protection Executive Order 11990, particularly sections 2 and 5	Yes ☐ No ☒	Based on the lack of wetlands and/or wetland conditions observed during the site visit by a staff biologist and the results of a literature query showing a lack of recorded historic wetlands, no wetlands occur within the Biological Study Area (BSA). Therefore, no direct or indirect impacts to federally-protected wetlands as defined by Section 404 of the Clean Water Act would occur. Documentation: Orchard View Gardens Senior Apartment Homes Initial Study and Mitigated Negative Declaration (IS/MND), September 2020, UltraSystems. (Appendix A) Field evaluation by UltraSystems biologist for existing biological resources of the BSA on February 10 and 12, 2020.
Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)	Yes ☐ No ☒	This project is not located near any water course or river that is included under the Wild and Scenic Rivers Act and no Section 7 Report is required. The closest designated river is Deep Creek over 62 miles northeast of the Project site. Documentation: National Wild and Scenic Rivers System. https://www.rivers.gov/map.php. Accessed November 2020.
ENVIRONMENTAL JUSTICE		
Environmental Justice Executive Order 12898	Yes ☐ No ☒	This project will not have any negative impacts on low-income and minority persons. The Project is being developed as

		affordable housing for seniors with the purpose of providing economically disadvantaged groups access to affordable housing. The Project will not displace or otherwise negatively impact low-income or minority persons. The Project does not require the removal of any housing for its development. This project is seen as an overall benefit to economically disadvantaged groups.

Environmental Assessment Factors [24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27] Recorded below is the qualitative and quantitative significance of the effects of the proposal on the character, features and resources of the Project area. Each factor has been evaluated and documented, as appropriate and in proportion to its relevance to the proposed action. Verifiable source documentation has been provided and described in support of each determination, as appropriate. Credible, traceable, and supportive source documentation for each authority has been provided. Where applicable, the necessary reviews or consultations have been completed and applicable permits of approvals have been obtained or noted. Citations, dates/names/titles of contacts, and page references are clear. Additional documentation is attached, as appropriate. **All conditions, attenuation or mitigation measures have been clearly identified.**

Impact Codes: Use an impact code from the following list to make the determination of impact for each factor.

(1) Minor beneficial impact

(2) No impact anticipated

(3) Minor Adverse Impact – May require mitigation

(4) Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement

Environmental Assessment Factor	Impact Code	Impact Evaluation
LAND DEVELOPMENT		
Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design	2	The General Plan land use designation for the project site is Low Density Residential. The project is zoned Residential Single Family 6 (RS-6), allowing a base density of up to 7.26 dwelling units per acre. Based on the demographic of the residents that would live on site, the high percentage of one-bedroom units, parking utilization rates for similar senior rental projects within the region, and the availability of public transportation

		options at the site, the project applicant believes that the proposed parking ratio is appropriate for an income-restricted senior rental project. A General Plan amendment to High Density Residential and Zone change to Medium-Density Multifamily Residential (RM-20) is required to accommodate the proposed project. The project would also necessitate a Tentative Parcel Map to divide the one parcel into two. The project proposes modification to Use Permit U-272 to reflect the updated property lines and parking spaces required to accommodate the proposed project. The project would be developed in compliance with the development standards and provisions under the proposed RM-20 zone. As a result, the project would have less than significant impacts in relation to consistency with local land use plans, policies, or regulations. <u>Documentation:</u> RBF Consulting, 2010. City of Buena Park 2035 General Plan. Accessed online at http://www.buenapark.com/city-departments/community-development/planningdivision/general-plan/2035-general-plan, accessed November 2020.
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	3	The Project site is in an urbanized area occupied by residential and commercial buildings. The Project will require grading and excavation. A Preliminary Geotechnical Investigation Report and Preliminary Water Quality Management Plan were prepared for the Project site (Appendices F and G). **Soil Suitability:** The site is underlain by soil strata that are susceptible to liquefaction. MM GEO-1 is recommended to address the potential for liquefaction associated with the project site. Lateral spreading is the downslope movement of surface sediment due to liquefaction in a subsurface layer. The downslope movement is due to gravity and earthquake shaking combined. Lateral spreading of the ground surface during a seismic activity usually occurs along the weak shear zones within a liquefiable soil layer and has been observed to generally take place toward a free face (i.e., retaining wall, slope, or channel) and to lesser extent on ground surfaces with a very gentle slope.

		The geotechnical report for the project states that the potential for lateral spreading is very low, because the general gradient of the proposed project site is nearly level with that of the general vicinity (0.2 degrees and 0.3 degrees, respectively). The project would be constructed in accordance with the requirements of the City of Buena Park, CBC, which are designed to assure safe construction and include building foundation requirements appropriate to site conditions. Subsidence due to reprocessing of removal bottoms is anticipated to be approximately 0.1 feet. The estimates of shrinkage and subsidence are intended as an aid for project engineers in determining earthwork quantities. However, these estimates should be used with some caution since they are not absolute values. Contingencies should be made for balancing earthwork quantities based on actual shrinkage and subsidence that occurs during the grading process. Selected samples of representative earth materials from borings were tested in a laboratory. Tests consisted of soils classification, in-situ moisture content and dry density, maximum dry density and optimum moisture content, consolidation/collapse, direct shear strength. Collapsible soils were not identified as an issue for the proposed project. **Slope:** The project site is located in a flat, developed urban area that does not contain steep slopes or hills. Therefore, the probability of slope stability hazards affecting the site is considered very low. **Drainage and Erosion:** Construction During project construction the drainage pattern of the site would be altered; however, due to the location and nature of the proposed project, this alteration would be temporary. The project would be required to obtain coverage under the Statewide General Construction Permit through preparation and implementation of a SWPPP specifying construction stormwater BMPs to be implemented to control erosion and protect the quality of surface water runoff from the project site. The SWPPP must be prepared before the project owner receives a grading or building permit and must be implemented year-round throughout construction. Project

		compliance with regulatory requirements would reduce potential erosion/siltation impacts during the construction phase. Operation Operation of the proposed project would increase the amount of impervious surface, which would reduce the amount of erosion or siltation on and off the project site. Additionally, the proposed Low Impact Design (LID) Best Management Practices (BMPs) as further discussed in the Storm Water Runoff discussion below, would capture sediment-laden stormwater and filter sediment before the stormwater enters the municipal storm water system and therefore no result in any impacts during operation. **Storm Water Runoff:** Development of the project has the potential to result in two types of water quality impacts: (1) short-term impacts due to construction-related discharges; and (2) long-term impacts from operation. Soil disturbance would temporarily occur during project construction, due to earth-moving activities such as excavation and trenching for foundations and utilities, soil compaction and moving, cut and fill activities, and grading. Disturbed soils are susceptible to high rates of erosion from wind and rain, resulting in sediment transport via stormwater runoff from the project area. Erosion and sedimentation affect water quality through interference with photosynthesis, oxygen exchange and respiration, growth, and reproduction of aquatic species. Under existing conditions, stormwater runoff generated on the proposed project site is discharged as sheet flow west of the site into the gutter on the east side of Valley View Street, flowing south and entering the storm drain system via a curb inlet north of the intersection of Valley View Street and Crescent Avenue. Water entering this curb inlet flows west beneath Crescent Avenue for approximately one mile and discharges into an existing Orange County Flood Control Department rectangular concrete flood control channel which, in turn, discharges into Moody Creek. Moody Creek is a tributary of Coyote Creek; Coyote Creek discharges into the San Gabriel River, which empties into the Pacific Ocean, making these tributaries waters of the U.S. and State of California.

		The Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer (QSD). The SWPPP would contain site-specific construction stormwater BMPs which would be implemented as part of project design, and maintained or replaced as necessary. These BMPs would minimize or avoid erosion through wind or stormwater, and would also minimize or avoid sediment- or pollutant-laden stormwater from leaving the construction site and entering receiving waters (e.g., Moody Creek, Coyote Creek). The Preliminary WQMP (Appendix G) describes non-structural LID BMPs (e.g., common area litter control and landscape management; education for property owners, tenants, and occupants) and structural LID BMPs (e.g., trash/waste storage areas which reduce introduction of pollution, use of efficient irrigation systems, water conservation) for the proposed project. The project would consist of three drainage management areas (DMAs): DMA-A drains the north and west portions of the project (a drainage area of 0.46 acre), DMA-B drains the southwest section of the project (drainage area of 0.30 acre) and DMA-C drains the south-central section of the project (drainage area of 0.48 acre. Bioretention without underdrains have been chosen for the site due to the shallow groundwater depth and lack of nearby storm drain connections. Runoff from each DMA would flow overland and drain into their respective BMP. Bioretention stormwater treatment facilities are landscaped shallow depressions that capture and filter stormwater runoff. These facilities function as a soil and plant-based filtration device that removes pollutants through a variety of physical, biological, and chemical treatment processes. The facilities normally consist of a ponding area, mulch layer, planting soils, and plants. As stormwater passes down through the planting soil, pollutants are filtered, adsorbed, and biodegraded by the soil and plants. Due to the limited available area and shallow groundwater depth at the site, the proposed bioretention facilities do not provide sufficient capture volume. Supplemental gravel storage has been designed to meet the required Design Capture Volume for the entire site. • Runoff from DMA ‘A’ will flow into a bio-retention area (INF-3) for treatment. Overflow from the basin

		will outlet through the curb on Valley View Street and enter the municipal storm drain system through inlets located at the intersection of Valley View Street and Crescent Avenue. • Runoff from DMA 'B' will flow south-west into a bioretention area (INF-3) for treatment. Overflow from the basin will flow out through the curb on Valley View Street and enter the municipal storm drain system through inlets located at the intersection of Valley View Street and Crescent Avenue. • Runoff from DMA 'C' will flow south-east into a bioretention area (INF-3) for treatment. Overflow from the basin will flow onto the adjacent parking lot to the south and enter the curb and gutter along Valley View Street as it did historically. Eventually runoff will enter the municipal storm drain system through inlets located at the intersection of Valley View Street and Crescent Avenue. <u>Mitigation Measure:</u> A specific mitigation measure has been included in this project to prevent unforeseen future impacts associated with soil suitability. Refer to Mitigation Measure GEO-1. <u>Documentation:</u> Orchard View Gardens Senior Apartment Homes Initial Study and Mitigated Negative Declaration (IS/MND), September 2020, UltraSystems. (Appendix A) Preliminary Geotechnical Investigation, Proposed Senior Housing Development, 8300 Valley View Street, Buena Park, California, January 20, 2020, Albus-Keefe & Associates, Inc. (Appendix F) Preliminary Water Quality Management Plan (WQMP), August 5, 2020, RRM Design Group. (Appendix G)
Hazards and Nuisances including Site Safety and Noise	3	**Hazards:** The Project site would not be affected by natural hazards such as fault zones, bluffs, waterbodies, terrains, or wildfire. The Project site would not be affected by built hazards because the Project would not involve intersections, rail roads, cargo transports, transmission lines, and other industrial operations. No hazards would be constructed as part of the Project, however, as previously discussed, a structure called "The Barn" is located on the northern part of the project site and is a

		small stand-alone building, located northeast of the existing church and administration buildings on site. "The Barn" would be demolished as part of the proposed project. Based on aerial photographs "The Barn" was present sometime after 1994 and prior to 2002. Therefore, it is unlikely but unconfirmed as to whether or not "The Barn" was constructed with Asbestos Containing Materials (ACMs) and Lead-Based Paint (LBP) that can cause adverse health effects when airborne. MM HAZ-1 would ensure that any impacts from ACMs and LBP would remain less than significant. **Nuisance**: Nuisances would be present due to construction activities such as the presence of construction equipment. Potential odor sources may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction; and emissions would be temporary, short-term, and intermittent in nature, ceasing upon completion. Operational uses, such as project-generated refuse would be covered in containers and removed at regular intervals in compliance with the City's solid waste regulations. The Project would comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. **Noise:** As previously discussed, potential noise-related impacts associated with the Project were addressed in a noise impact analysis prepared for the Project site in the MND (Appendix A). That assessment conducted noise studies to determine the impacts of noise on the site from the development of the Project and included ambient noise measurements (Appendix E.1). Section 51.101(a)(7) of the HUD guidelines encourages use of quieter construction equipment and methods. Construction equipment would be required throughout construction of the project including demolition, site improvements, site preparation, grading, and building construction. The proposed Project would follow best management practices (BMPs) to ensure the use of quieter construction equipment. With implementation of

		these BMPs, construction impacts would be less than significant. The roadway noise calculator indicated that the noise level at the proposed structures would be 70 dBA DNL which would exceed the HUD exterior noise standard of 65 dBA DNL (Appendix E.2). Therefore, mitigation measure MM N-1 would require features such as double-pane acoustic windows, 24" high single-paned, minimum 3/8'' thick tempered or laminated glass above solid 42" high walls for a total height of 66" or 5.5 feet at patios of impacted units, and 12" high single-paned, minimum 3/8'' thick tempered or laminated glass above solid 42" high walls for a total height of 54" or 4.5 feet on balconies of impacted units to attenuate noise to at or below 65 dBA DNL. All residential units would be equipped with a forced air heating ventilation air condition (HVAC) units that allow for a "windows closed" condition (i.e. windows do not need to be left open for ventilation). Typical new construction of multi-family homes with windows closed provided a minimum of 25 dBA exterior to interior noise reduction. As such the interior of the proposed homes would be 45 dBA DNL (70 dBA exterior – 25 dBA attenuation = 45 dBA interior), which is within the HUD 45 dBA DNL noise standard. The project site's existing conditions and estimated roadway noise would exceed 24 CFR Part 51 Exterior Noise Goals. However, with compliance of the proposed Mitigation Measure, the project would not contribute to any further increase in noise levels. Therefore, the project would be compliant with 24 CFR Part 51 Subpart B. <u>Mitigation Measures:</u> A standard project mitigation measure has been included in this project to ensure no impacts from potentially hazardous materials and impacts due to exterior noise would remain less than significant. Refer to Mitigation Measures HAZ-1 and N-1. <u>Documentation:</u> Orchard View Gardens Senior Apartment Homes Initial Study and Mitigated Negative Declaration (IS/MND), September 2020, UltraSystems. (Appendix A) Phase I Environmental Site Assessment Report 8300 Valley View Street Buena Park, California 2019. Converse Consultants. (Appendix C)

		Ambient Noise Measurement Data, January 24, 2020, UltraSystems. (Appendix E.1) Roadway Noise (Appendix E.2)
Energy Consumption	2	Both construction and operation of the project would lead to the consumption of limited, slowly renewable, and non-renewable resources, committing such resources to uses that future generations would be unable to reverse. The proposed project would require the commitment of resources that include (1) building materials, (2) fuel and operational materials and/or resources and (3) the transportation of goods and people to and from the project. During project construction, energy would be consumed in the form of electricity associated with the conveyance of water used for dust control and, on a limited basis, powering lights, electronic equipment, or other construction activities necessitating electrical power. Construction activities, including the construction of the proposed buildings, typically do not involve the consumption of natural gas. Project construction would also consume energy in the form of petroleum-based fuels associated with the use of off-road construction vehicles and equipment on the project site, construction worker travel to and from the project site, and delivery and haul truck trips hauling solid waste from and delivering building materials to the project site. During project operation, energy would be consumed for multiple purposes, including heating, air conditioning, appliances, and use of electronics. Energy would also be consumed during project operations related to water usage, solid waste disposal, and vehicle trips. The existing site is served by an 800A, 208V 3-phase electrical service located on the northwest end of the site and one 1200A, 208V, 3-phase service located on the southeast corner of the site. These services will be consolidated and replaced with a 1600A 480V 3-phase service to be located on the southeast corner of the site. The total average monthly electrical consumption is 18,000 kilowatt hours (kWh) for non-summer months, and 22,000 kWh for the summer months. It is expected that the new project would provide for energy efficient lighting and, HVAC to result in overall reduction of energy usage.

		The commitment of resources required for the construction and operation of the project would limit the availability of such resources for future generations or for other uses during the life of the project. However, the use of such resources would be reduced when compared to what they would be in the absence of complying with the CALGreen Code. Therefore, energy consumption would not result in a substantial increase in energy production for energy providers and the energy demand associated with the project would be less than significant. <u>Documentation:</u> CalEEMod Input and Results for Air Quality Analysis and CalEEMod Input and Results for Greenhouse Gas Emissions Analysis, prepared July 28, 2020, UltraSystems. (Appendix B).

Environmental Assessment Factor	Impact Code	Impact Evaluation
SOCIOECONOMIC		
Employment and Income Patterns	1	The Project would provide affordable housing to the area. The availability of affordable housing would provide its eligible residents closer access to public facilities and commercial businesses. Since the housing would be for senior citizens, it is unlikely they would be seeking employment, however, if they were, the location could provide employment opportunities. The Project construction activities may provide temporary short-term employment for construction workers in the City.
Demographic Character Changes, Displacement	2	The Project would develop affordable housing for senior citizens to meet the needs of the City of Buena Park. Currently, the City has a shortage of housing, including available affordable income housing. This project will assist the City to meet its RHNA requirements for affordable housing. The Project requires a submittal of a General Plan Amendment, Zone Change, Development Agreement, Tentative Parcel Map and Modification to Use Permit. This would allow the residential development on the site. Following the submittal and approval of the necessary plans and permits, the Project would be in conformance with the City's zoning and land use requirements.

		The Project site contains a church and a parking lot. The church would remain, therefore, no displacement of persons will be associated with the Project. In choosing an architectural style for the Project, the character and scale of the surrounding neighborhood has been taken into consideration to ensure that the Project design and massing blend in with the existing surrounding uses.

Environmental Assessment Factor	Impact Code	Impact Evaluation
COMMUNITY FACILITIES AND SERVICES		
Educational and Cultural Facilities	2	**Educational:** The project is located within the boundaries of the Buena Park School District, which serves 4,700 students at six elementary schools and one junior high school in the City of Buena Park. The closest public school to the project site is San Marino Elementary School, located about 0.2 mile southeast of the project site. As the project would be age restricted and limited to senior-age residents (62 years and older), it is anticipated that the proposed project would generate no new students at the project site. **Cultural:** As previously discussed in the Historical Resources section above, the church building was evaluated for inclusion in the National Register of Historic Places (NRHP) and determined not to meet the criteria to qualify; it was not assessed for eligibility under the California Register of Historical Resources or the local Buena Park Register. There are two additional resources in the project area recorded with the Office of Historic Preservation Directory of Properties in the Historic Properties Data File Historic Resources Inventory (HRI). These are a 1955 residence at 7890 La Casa Way (HRI # 184420) and another 1955 residence at 5948 Lois Ranchos Drive (HRI # 155453). Neither of these properties was filed with the SCCIC. Both properties are single-family residences and have been determined ineligible for the NRHP by consensus through the National Historic Preservation Act Section 106 process. Additionally, MM CUL-1 would ensure that any unexpected discovery of historical resources would be properly handled. <u>Mitigation Measure:</u>

		A standard project mitigation measure has been included in this project to protect against any potential unforeseen historic resources. Refer to Mitigation Measure CUL-1. <u>Documentation:</u> Orchard View Gardens Senior Apartment Homes Initial Study and Mitigated Negative Declaration (IS/MND), September 2020, UltraSystems. (Appendix A) Phase I Cultural Resources Inventory for the Orchard View Gardens Senior Apartment Homes City of Buena Park, Orange County, California, May 21, 2020, UltraSystems. (Appendix D)
Commercial Facilities	2	The Project is in proximity to existing commercial facilities; and the General Plan Amendment and Zone Change associated with the Project would allow for the development of the proposed residential buildings on site. No additional commercial facilities would be constructed as part of the Project. The submittal and approval of the plans and permits would result in the Project complying with the City's zoning and land use requirements. <u>Documentation:</u> RBF Consulting, 2010. City of Buena Park 2035 General Plan. Accessed online at http://www.buenapark.com/city-departments/community-development/planningdivision/general-plan/2035-general-plan, accessed November 2020.
Health Care and Social Services	2	Health care services are provided by a variety of private profit and not-for-profit entities in the City and surrounding communities within Orange County. The Project site is located approximately 0.60 miles southeast of several medical centers. Social services are provided by both State, County, and local non-profit agencies. These services, if required by the residents of the Project, are available within the City and Orange County. The development of the Project is not expected to impact the access to health care facilities or the ability to serve the population of the Project.
Solid Waste Disposal / Recycling	2	The city contracts with Park Disposal for collection and disposal of the city's solid waste. The waste stream generated by the City of Buena Park is processed and sorted at the CR&R, Inc. Materials Recovery Facility located at 11292 Western Avenue in the City of Stanton. The majority of the city's solid waste is disposed at one of

		Orange County's three active landfills: Frank R. Bowerman Landfill in Irvine; Olinda Alpha Landfill in Brea; Prima Deshecha Landfill in San Juan Capistrano the current permitted solid waste disposal includes 11,500 tons per day at the Frank R. Bowerman Landfill, 8,000 tons per day at Olinda Alpha Landfill and 4,000 tons per day at the Prima Deshecha Landfill. The project's estimated generation of approximately 12.23 pounds per dwelling unit per day (or a total of approximately 808 pounds per day) during project operation represents a fraction of the total daily capacity at the three landfills. Since sufficient permitted landfill capacity exists to support the project, no adverse impact on either solid waste collection service or the landfill disposal system would occur. The project would comply with the City's Source Reduction and Recycling Element (SRRE) program for waste reduction procedures and other applicable local, state, and federal solid waste disposal standards, thereby ensuring that the solid waste stream to regional landfills is reduced in accordance with existing regulations. <u>Documentation:</u> RBF Consulting, 2010. City of Buena Park 2035 General Plan. Accessed online at http://www.buenapark.com/city-departments/community-development/planningdivision/general-plan/2035-general-plan, accessed November 2020.
Waste Water / Sanitary Sewers	2	The proposed project would connect to the existing ten-inch vitrified clay pipe sewer main line in Valley View Boulevard. As detailed in the city's General Plan EIR, the Buena Park Public Works Department provides sewer services within the city through a network of local sewer mains. The city's local sewer system connects to regional trunk sewer systems for the Orange County Sanitation District (OCSD), with a small portion going to County Sanitation Districts of Los Angeles County for conveyance, treatment and disposal by these agencies. The entire Buena Park collection system is comprised of approximately 165 miles of sewer lines ranging in size from six to 21 inches in diameter. All sewage flow from Buena Park to the OCSD Treatment Plant No. 2 in the City of Huntington Beach. This facility has a total primary treatment capacity of 168 million gallons per day (mgd), with an average daily treatment of approximately 127 mgd. Therefore, the plant has an additional treatment capacity of

		approximately 41 mgd. Treatment Plant No. 2 also has 90 mgd of secondary treatment capacity. The project proposes 66 residential units. The proposed project would generate an estimated 8,080 gallons per day (gpd) of wastewater. The amount of wastewater estimated to be generated by the project would constitute a small fraction of the treatment plant's remaining primary treatment capacity of 41 mgd. Therefore, there would be sufficient capacity available at Treatment Plant No. 2 to meet the needs of the project. The site is served by an existing sanitary sewer network. New connections to the existing sewer main in Valley View Boulevard would be installed. All sewer line sizes and connections are subject to review by the city. No new treatment facilities or expanded entitlements would be required. <u>Documentation:</u> RBF Consulting, 2010. City of Buena Park 2035 General Plan. Accessed online at http://www.buenapark.com/city-departments/community-development/planningdivision/general-plan/2035-general-plan, accessed November 2020.
Water Supply	2	The City relies on two major water supply sources, including imported water from the Metropolitan Water District (MWD) and local groundwater from the Orange County Groundwater Basin, managed by the Orange County Water District (OCWD). As of 2015, the city relies on approximately 73 percent groundwater and 27 percent imported water for drinking water supply. The City's 2015 Urban Water Management Plan (UWMP) states that the City of Buena Park will be able to have adequate water supplies for all users, including multi-family residences, through the year 2040. The proposed project would connect to the existing six-inch water main in Valley View Boulevard. As discussed in the Waste Water section above, the project would result in a nominal increase in water demand compared to existing conditions. <u>Documentation:</u> Arcadis U.S., Inc. (Arcadis), 2015. City of Buena Park Final 2015 Urban Water Management Plan. Accessed online at: http://www.buenapark.com/home/showdocument?id=9566. Accessed November 2020.

Public Safety - Police, Fire, and Emergency Medical	2	**Police:** The Buena Park Police Department (BPPD) provides police protection to the City of Buena Park; its headquarters is located next to Buena Park City Hall at 6650 Beach Boulevard, about 2.3 miles northwest of the project site. An information request letter was sent to the Buena Park Police Department asking about the potential impacts of the project to law enforcement services (Appendix H). As detailed in the response from BPPD Operations Captain Gary Worrall, the proposed project is under the jurisdiction of the Buena Park Police Department, which would respond to calls for service from the project site (Worrall, 2020). Captain Worrall stated that the proposed project would not require construction of new law enforcement facilities to meet existing law enforcement demands or project demands. Additionally, the Police Department does not anticipate any potential environmental impacts from the proposed project related to providing police services to the project site and the proposed project would likely not have potentially significant impacts on the Police Department's level of service and/or response times (Worrall, 2020). **Fire:** Fire Services for the City of Buena Park are provided by Orange County Fire Authority (OCFA) through an agreement with the city, including primary response for fire suppression and emergency medical services. The nearest station to the project site is OCFA Fire Station 63, located about 0.9 mile southeast of the project site at 9120 Holder Street. Other OCFA fire stations in Buena Park include Station 62 at 7780 Artesia Boulevard, approximately 1.4 miles northeast of the site, and Station 61 at 744 La Palma Avenue, approximately 2.8 miles northeast of the site. The proposed project would not adversely affect demand for fire services as described below. An information request letter was sent to the Orange County Fire Authority asking about the potential impacts of the project to fire service (Appendix H). OCFA Management Assistant William Blumberg stated that the project site would be served by OCFA Fire Stations 13 and 63 (Blumberg, 2020). Mr. Blumberg stated that the proposed project should not require construction of new fire department facilities and that the project should have a less than significant impact on OCFA's level of service

		and/or response times. However, to reduce impacts on fire service, the OCFA recommends the following (Blumberg, 2020): 1) Ensure that proposed project meets California Fire Code, OCFA Fire Master Plans for Commercial & Residential Development (B-O9) Guideline, and OCFA Architectural Review (E-04) Guideline (For example, access on the proposed plan may not meet current requirements), 2) Participate with the City of Buena Park through developer agreements for future fire facility mitigation. Based on the response from the OCFA, the proposed project would not require the construction of new fire department facilities and the project should have a less than significant impact on OCFA's level of service and/or response times. **Emergency Medical:** The closest hospital to the project site is the La Palma Intercommunity Hospital, located approximately 0.65-mile northwest of the project site at 7901 Walker Street. The La Palma Intercommunity Hospital is a 141-bed, not for profit, acute-care community hospital that provides medical, emergency and community services (La Palma Intercommunity Hospital, 2020). The proposed project would increase the city's population by between 70 to 206 residents. It is unlikely that the entire project's population would need medical assistance at the same time, but in the case that La Palma Intercommunity Hospital reaches its patient capacity, other medical services are available in the city. The construction of the proposed project would adhere to fire codes to ensure that emergency vehicle, personnel and levels of service will be adequately met. <u>Documentation:</u> Orchard View Gardens Senior Apartment Homes Initial Study and Mitigated Negative Declaration (IS/MND), September 2020, UltraSystems. (Appendix A) Public Service Request Response Letters Received from BPPD and OCFA (Appendix H)
Parks, Open Space, and Recreation	2	The Project includes a 3,000-square foot community center that would offset the demand on the existing city recreational facilities. Furthermore, the project would not

		require the construction or expansion of recreational facilities outside the limits of the project site.
Transportation and Accessibility	3	A Transportation Assessment Memo was prepared for the proposed Project by Fehr and Peers on July 23, 2020 (Appendix I). Due to resident concerns, the City of Buena Park requested a focused traffic study to review circulation, specifically at the intersection of Valley View Street and San Rafael Drive, and the effects of project traffic in the study area. The Transportation Assessment Memo concluded that the Orchard View Gardens project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system. The project would generate approximately 244 daily trips, which would result in less than significant traffic impact and the project would provide adequate parking to serve the needs of its residents. The project site is located within an existing church property. The proposed activities include demolition of an existing onsite structure, and construction of new residential buildings and a community center. During the construction phase, the project could temporarily impact street traffic adjacent to the project due to construction activities in the right-of-way (ROW). Project construction could reduce the number of lanes or temporarily close a portion of Valley View Street at San Rafael Drive and the frontage roads along Valley View Street. Implementation of MM TRANS-1 would address any potential hazards during the construction phase. It should be noted that the proposed project would have less than significant operational traffic impacts because the project would not increase the level of service during existing plus project conditions. The treatment options presented in the traffic analysis for the proposed project would be provided by the project applicant as part of the project's conditions of approval by the City of Buena Park. The treatment options are as follows: • Convert Frontage Road to One-Way Streets • Restrict U-turn Movements with Signage Only • Restrict U-Turn Movements with Signage and Median Extension • Modify Existing Median to include a Right-Turn Lane

		• Split Phasing on the Minor Legs (Los Molinos Drive and San Rafael Drive) Each treatment option has various construction requirements associated with the development of that project feature. The City of Buena Park will have the final decision as to which treatment options will be implemented following the completion of environmental documentation. The project's circulation system, including driveways and parking areas, would be designed to meet the development standards of the city and would not result in uses or design features that would create traffic hazards. Additionally, as described above, the project applicant would construction treatment options which would improve the traffic circulation in the project area, compared to existing conditions. <u>Mitigation Measure:</u> A project mitigation measure has been included in this project to ensure no impacts to transportation during construction would occur. Refer to Mitigation Measure TRANS-1. <u>Documentation:</u> Transportation Assessment Memorandum, July 23, 2020, Fehr and Peers (Appendix I)

Environmental Assessment Factor	Impact Code	Impact Evaluation
NATURAL FEATURES		
Unique Natural Features, Water Resources	2	Development of the project has the potential to result in two types of water quality impacts: (1) short-term impacts due to construction-related discharges; and (2) long-term impacts from operation. Soil disturbance would temporarily occur during project construction, due to earth-moving activities such as excavation and trenching for foundations and utilities, soil compaction and moving, cut and fill activities, and grading. Disturbed soils are susceptible to high rates of erosion from wind and rain, resulting in sediment transport via stormwater runoff from the project area. Erosion and sedimentation affect water quality through interference with photosynthesis, oxygen exchange and respiration, growth, and reproduction of aquatic species.

		However, the SWPPP would contain site-specific construction stormwater BMPs which would be implemented as part of project design and maintained or replaced as necessary. The Preliminary WQMP (Appendix G) describes non-structural LID BMPs (e.g., common area litter control and landscape management; education for property owners, tenants, and occupants) and structural LID BMPs (e.g., trash/waste storage areas which reduce introduction of pollution, use of efficient irrigation systems, water conservation) for the proposed project. Impacts from runoff during construction and operation would therefore not be significant. Documentation: Orchard View Gardens Senior Apartment Homes Initial Study and Mitigated Negative Declaration (IS/MND), September 2020, UltraSystems. (Appendix A) Preliminary Water Quality Management Plan (WQMP), August 5, 2020, RRM Design Group. (Appendix G)
Vegetation, Wildlife	3	As previously discussed, potential biological-related impacts associated with the Project were addressed in a biological impact analysis prepared for the Project site in the MND (Appendix A). Due to several biological and physical disturbances within the BSA, it was determined that all 25 of the special-status plant species identified in the 10-mile radius database query do not have the potential to occur in the BSA. The 24 reported special-status wildlife species (including mammals, birds, insects and reptiles) identified in the search that were determined to have no potential to occur within the project BSA are discussed briefly below because the BSA lacks suitable habitat for foraging, nesting or breeding, or the BSA does not lie within the species reported distribution or elevation range, or a combination of all of those factors. The project site contains ornamental vegetation and building structures that could potentially provide cover and nesting habitat for bird species that have adapted to urban areas, such as rock pigeons (Columba livia) and mourning doves (Zenaida macroura). Native bird species such as mourning doves are protected by the MBTA and the California Fish and Game Code (Sections 3503, 3503.5, and 3513), which render it unlawful to take native breeding birds, their nests, eggs, and young. Indirect impacts on breeding birds could

		occur from increased noise, vibration and dust during construction, which could adversely affect the breeding behavior of some birds, and lead to the loss (take) of eggs and chicks, or nest abandonment. Therefore, the project has the potential to impact migratory non-game breeding birds and their nests, young and eggs. Several special-status bird species could use the project site for foraging and may be adversely impacted by construction activities. With the implementation of mitigation measure MM BIO-1, the project would have less than significant impacts to native bird species protected under the MBTA and the California Fish and Game Code. Mitigation Measure: A standard project mitigation measure has been included in this project to protect potential nesting birds on site. Refer to Mitigation Measure BIO-1. Documentation: Orchard View Gardens Senior Apartment Homes Initial Study and Mitigated Negative Declaration (IS/MND), September 2020, UltraSystems. (Appendix A)
Other Factors	2	No "other factors" of unique natural features are considered for this project.

Additional Studies Performed:

The following additional studies or investigations were performed for this project and are attached in the appendices:

Appendix A - Orchard View Gardens Senior Apartment Homes Initial Study and Mitigated Negative Declaration (IS/MND), September 2020, UltraSystems.

Appendix B - CalEEMod Input and Results for Air Quality Analysis and CalEEMod Input and Results for Greenhouse Gas Emissions Analysis, prepared July 28, 2020, UltraSystems.

Appendix C - Phase I Environmental Site Assessment Report 8300 Valley View Street Buena Park, California 2019, Converse Consultants.

Appendix D - Phase I Cultural Resources Inventory for the Orchard View Gardens Senior Apartment Homes City of Buena Park, Orange County, California, May 21, 2020, UltraSystems.

Appendix E.1 – Ambient Noise Measurement Data, January 24, 2020, UltraSystems.

Appendix E.2 – Roadway Noise

Appendix F - Preliminary Geotechnical Investigation, Proposed Senior Housing Development, 8300 Valley View Street, Buena Park, California, January 20, 2020, Albus-Keefe & Associates, Inc.

Appendix G - Preliminary Water Quality Management Plan (WQMP), August 5, 2020, RRM Design Group.

Appendix H – Public Service Request Response Letters Received from BPPD and OCFA.

Appendix I – Transportation Assessment Memorandum, July 23, 2020, Fehr and Peers.

Field Inspection (Date and completed by)**:**

November 25, 2019 – Converse Consultants

December 19, 2019 – UltraSystems

January 24, 2020 – UltraSystems

February 10 and 12, 2020 – UltraSystems

List of Sources, Agencies and Persons Consulted [40 CFR 1508.9(b)]**:**

Each individual report (listed in Additional Studies Performed) has a list of sources, references and persons/agencies consulted, as appropriate for that report. In addition, the following sources were consulted in the development of this EA.

Sources

Airport Land Use Commission Airport Environs Land Use Plan – Joint Forces Training Base Los Alamitos Amended 2016, http://www.ocair.com/commissions/aluc/docs/JFTB-AELUP2016ProposedFINAL.pdf. Accessed November 2020.

Albus-Keefe & Associates, Inc. January 20, 2020. Preliminary Geotechnical Investigation, Proposed Senior Housing Development, 8300 Valley View Street, Buena Park, California.

Arcadis U.S., Inc. (Arcadis), 2015. City of Buena Park Final 2015 Urban Water Management Plan. Accessed online at: http://www.buenapark.com/home/showdocument?id=9566. Accessed November 2020.

Coastal Barrier Resources System Mapper. United States Fish and Wildlife Service. https://www.fws.gov/CBRA/Maps/Mapper.html. Accessed November 2020.

Converse Consultants. 2019. Phase I Environmental Site Assessment Report 8300 Valley View Street Buena Park, California.

Email Conversation with Gary Worrall with BPPD on April 22, 2020.

Email Conversation with William Blumberg with OCFA on April 24, 2020.

Fehr and Peers. July 23, 2020. Transportation Assessment Memorandum.

Google Earth, 2020.

Important Farmland Finder. California Department of Conservation. http://maps.conservation.ca.gov/dlrp/ciff/. Accessed November 2020.

National Flood Hazard Layer Viewer. Federal Emergency Management Association. https://www.fema.gov/national-flood-hazard-layer-nfhl. Accessed November 2020.

National Flood Hazard Layer Viewer. Federal Emergency Management Association. https://www.fema.gov/national-flood-hazard-layer-nfhl. Accessed November 2020.

National Wild and Scenic Rivers System. https://www.rivers.gov/map.php. Accessed November 2020.

RBF Consulting, 2010. City of Buena Park 2035 General Plan. Accessed online at http://www.buenapark.com/city-departments/community-development/planningdivision/general-plan/2035-general-plan, accessed November 2020.

RRM Design Group. August 5, 2020. Preliminary Water Quality Management Plan (WQMP).

SCAG, Pre-Certified Local Housing Data for the City of Buena Park, August 2020, http://www.scag.ca.gov/programs/Documents/LHD/BuenaPark_HE_0920.pdf. Accessed November 2020.

Sole Source Aquifers. U.S. Environmental Protection Agency. https://www.epa.gov/dwssa. Accessed November 2020.

UltraSystems. January 24, 2020. Ambient Noise Measurement Data.

UltraSystems. July 28, 2020. CalEEMod Input and Results for Air Quality Analysis and CalEEMod Input and Results for Greenhouse Gas Emissions Analysis.

UltraSystems. May 21, 2020. Phase I Cultural Resources Inventory for the Orchard View Gardens Senior Apartment Homes City of Buena Park, Orange County, California.

UltraSystems. September 2020. Orchard View Gardens Senior Apartment Homes Initial Study and Mitigated Negative Declaration (IS/MND).

Consultations:

Juaneno Band of Mission Indians

Gabrieleño Band of Mission Indians – Kizh Nation

List of Permits Obtained:

No permits are required for the development of the NEPA documentation, and no permits have been obtained for the Project as of the date of the development of this EA. Subsequent permits will be required from the City of Buena Park for development of the Project and its components as listed: General Plan Amendment, Zone Change, Development Agreement, Tentative Parcel Map, Modification to Use Permit, Site Plan Review and Approval and Issuance of Building Permits.

Public Outreach [24 CFR 50.23 & 58.43]**:**

The project applicant has conducted multiple community meetings and has undergone a preliminary review with City Staff to inform the design of the project. Additionally, the Project performed public outreach through the City of Buena Park during the final approval stage of the Project in compliance with state and local regulations. Additional public outreach meeting the

requirements of the Department of Housing and Urban Development (HUD) will be conducted during the public notice of the Project and the Finding of No Significant Impact.

Cumulative Impact Analysis [24 CFR 58.32]**:**

This project is a single and discrete project, not linked with other ongoing or planned future projects. As such, its impacts are definable to the time and location of their implementation. As a discrete project, no cumulative impacts from associated or future projects are related to this site. Additionally, the City of Buena Park has evaluated cumulative development impacts as part of the preparation of the City's General Plan and have accounted for incremental cumulative impacts related to development at this and adjacent sites within the City. As a result of those evaluations, the City has outlined in the Housing Element of the General Plan to set forth the City's goals, policies, and programs to address the identified housing needs and issues for the 2013-2021 planning period. Compliance with the City's goals, policies, and programs will be required for approval and completion of the Project.

Alternatives [24 CFR 58.40(e); 40 CFR 1508.9]

No alternatives beyond the No Action Alternative were considered during evaluation of the Proposed Action.

No Action Alternative [24 CFR 58.40(e)]:

The No Action Alternative would not construct any residential development on the site and would keep the property as a single parcel with a Church and vacant area. Under this alternative, no affordable housing would be developed; and the City would continue to require affordable housing developments to meet the RHNA requirements. The selection of the No Action Alternative would not meet the stated Purpose and Need, which is to provide affordable housing for low- and moderate-income senior citizens.

Summary of Findings and Conclusions:

The Orchard View Gardens Project is a new affordable housing project that provides senior citizens access to an apartment home and a community center. The Project site has existing City of Buena Park services on site, including water, sewer, police, fire services, and power; existing transportation infrastructure; and existing public transportation services. The Project requires approval of a General Plan Amendment, Zone Change, Development Agreement, Tentative Parcel Map, Modification to Use Permit, Site Plan Review and Approval and Issuance of Building Permits to allow for the proposed uses within the site.

Environmental analysis has been completed for air quality and greenhouse gases, phase I environmental site assessment, cultural resources, geotechnical investigation, water quality analysis, noise, and transportation. These studies have been summarized below:

<u>Air Quality and Greenhouse Gas Emissions Analysis</u>

The Project site is located within the South Coast Air Basin (Air Basin), and air quality regulation is administered by the South Coast Air Quality Management District (SCAQMD).

The Air Basin has been designated by the federal Environmental Protection Agency (USEPA) as a nonattainment area for Ozone, PM10 (particulate matter) and PM2.5 (fine particulate pollution).

Construction activities would temporarily create emissions of dusts, fumes, equipment exhaust, and other air contaminants. Mobile sources (such as diesel-fueled equipment onsite and traveling to and from the project site) would primarily generate NOX emissions. The amount of emissions generated daily would vary, depending on the amount and types of construction activities occurring at the same time.

Estimated criteria pollutant emissions from the Orchard View Gardens project's onsite and offsite project construction activities were calculated using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2 (CAPCOA, 2017). construction emissions would not exceed SCAQMD regional thresholds. Therefore, the Orchard View Gardens project's short-term regional air quality impacts would be less than significant.

Operational emissions generated by area sources, motor vehicles and energy demand would result from normal day-to-day activities of the project. CalEEMod 2016.3.2 was used to estimate these emissions. for each criteria pollutant, operational emissions would be below the pollutant's SCAQMD significance threshold.

Based on the technical analyses prepared, the Project is compliant with 40 CFR Parts 6,51, and 93, and does not exceed the applicable NEPA de minimis thresholds, and therefore, does not require mitigation measures.

Phase I Environmental Site Assessment

The Phase I determined that there are no RECs on the project site. Although the project site was used for agricultural purposes in the past, it should not be of concern based on passage of time since the last possible agricultural application. The Phase I ESA concluded that the project site was not listed in any regulatory database as a hazardous site.

The proposed project would include the transport, storage, and use of chemical agents, solvents, paints, and other hazardous materials commonly associated with construction activities. Chemical transport, storage, and use would comply with Resource Conservation and Recovery Act (RCRA); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); California Hazardous Waste Control Law26; Occupational Safety and Health Administration (OSHA), and City of Buena Park Fire Department requirements.

During construction, there would be a limited risk of spills and/or accidental release of hazardous materials that are used for the operation and maintenance of construction equipment. The onsite temporary handling, storage, and usage of these materials would be subject to applicable local, state, and/or federal regulations, including Best Management Practices (BMPs) required by the City of Buena Park. Compliance with state and local construction requirements would reduce the risk of any damage or injury from any potential spill hazards to a less than significant level.

A structure called "The Barn" is located on the northern part of the project site and is a small stand-alone building, located northeast of the existing church and administration buildings on site. "The Barn" would be demolished as part of the proposed project. Based on aerial photographs "The Barn" was present sometime after 1994 and prior to 2002. Therefore, it is unlikely but unconfirmed as to whether or not "The Barn" was constructed with Asbestos Containing Materials (ACMs) and Lead-Based Paint (LBP) that can cause adverse health effects when airborne.

As detailed in the Phase I report prepared for the project, the project site in not located on the Cortese List. The nearest active site to the project site, Tosco – 76 #5398, is located at 5014

Orangethorpe Avenue in La Palma, California, approximately 1.5 miles northwest of the project site. Thus, because the project site is not located on or near a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5.

San Marino Elementary School is located approximately 0.2 mile southeast of the project site. Project personnel would ensure that all hazardous materials during construction would adhere to any applicable local, state, and/or federal regulations including BMPs required by the City of Buena Park.

Mitigation Measure HAZ – 1 would be implemented to address impacts related to demolition and construction related hazardous materials related to potential impacts from ACM and LBP.

Cultural Resources Inventory

A cultural resources inventory was conducted for the Orchard View Gardens project site that included a California Historic Resources Inventory System (CHRIS) records and literature search at the South Central Coastal Information Center (SCCIC) located at California State University, Fullerton. Based on the cultural resources records search, it was determined that one cultural resource has been previously recorded within the project site boundary: the St. Joseph's Episcopal Church, designated 30-177528. Within the half-mile buffer zone around the project site, there are two previously recorded historical cultural resources, and no prehistoric resources.

The primary historic feature in the vicinity of the project site is the St. Joseph's Episcopal Church, built circa 1965, which is located on the project site. Saint Joseph's Episcopal Church, 30-177528, is located at 8300 Valley View Street, in the city of Buena Park, in Orange County, California. It was constructed circa 1965 in what is now a residential neighborhood but originally was open dairy farm land. It was built in the Spanish Eclectic style in an asymmetrical, irregular shape. It has a concrete foundation, stucco exterior and a front gable roof with Spanish tile; wings on each side of the church contain shed roofs also with Spanish tile. It has a square bell tower with a Spanish tiled gable roof situated in the northwest front corner. The church building was evaluated for inclusion in the National Register of Historic Places (NRHP) and determined not to meet the criteria to qualify; it was not assessed for eligibility under the California Register of Historical Resources or the local Buena Park Register. There are two additional resources in the project area recorded with the Office of Historic Preservation Directory of Properties in the Historic Properties Data File Historic Resources Inventory (HRI). These are a 1955 residence at 7890 La Casa Way (HRI # 184420) and another 1955 residence at 5948 Lois Ranchos Drive (HRI # 155453). Neither of these properties was filed with the SCCIC. Both properties are single-family residences and have been determined ineligible for the NRHP by consensus through the National Historic Preservation Act Section 106 process. Additionally, MM CUL-1 would ensure that any unexpected discovery of historical resources would be properly handled.

Preliminary Geotechnical Report

The site is underlain by soil strata that are susceptible to liquefaction. MM GEO-1 is recommended to address the potential for liquefaction associated with the project site.

Lateral spreading is the downslope movement of surface sediment due to liquefaction in a subsurface layer. The downslope movement is due to gravity and earthquake shaking combined. Lateral spreading of the ground surface during a seismic activity usually occurs along the weak shear zones within a liquefiable soil layer and has been observed to generally take place toward a

free face (i.e., retaining wall, slope, or channel) and to lesser extent on ground surfaces with a very gentle slope.

The geotechnical report for the project states that the potential for lateral spreading is very low, because the general gradient of the proposed project site is nearly level with that of the general vicinity (0.2 degrees and 0.3 degrees, respectively). The project would be constructed in accordance with the requirements of the City of Buena Park, CBC, which are designed to assure safe construction and include building foundation requirements appropriate to site conditions.

Subsidence due to reprocessing of removal bottoms is anticipated to be approximately 0.1 feet. The estimates of shrinkage and subsidence are intended as an aid for project engineers in determining earthwork quantities. However, these estimates should be used with some caution since they are not absolute values. Contingencies should be made for balancing earthwork quantities based on actual shrinkage and subsidence that occurs during the grading process. Selected samples of representative earth materials from borings were tested in a laboratory. Tests consisted of soils classification, in-situ moisture content and dry density, maximum dry density and optimum moisture content, consolidation/collapse, direct shear strength. Collapsible soils were not identified as an issue for the proposed project.

Preliminary Water Quality Management Plan

Development of the project has the potential to result in two types of water quality impacts: (1) short-term impacts due to construction-related discharges; and (2) long-term impacts from operation. Soil disturbance would temporarily occur during project construction, due to earth-moving activities such as excavation and trenching for foundations and utilities, soil compaction and moving, cut and fill activities, and grading. Disturbed soils are susceptible to high rates of erosion from wind and rain, resulting in sediment transport via stormwater runoff from the project area. Erosion and sedimentation affect water quality through interference with photosynthesis, oxygen exchange and respiration, growth, and reproduction of aquatic species.

Under existing conditions, stormwater runoff generated on the proposed project site is discharged as sheet flow west of the site into the gutter on the east side of Valley View Street, flowing south and entering the storm drain system via a curb inlet north of the intersection of Valley View Street and Crescent Avenue. Water entering this curb inlet flows west beneath Crescent Avenue for approximately one mile and discharges into an existing Orange County Flood Control Department rectangular concrete flood control channel which, in turn, discharges into Moody Creek. Moody Creek is a tributary of Coyote Creek; Coyote Creek discharges into the San Gabriel River, which empties into the Pacific Ocean, making these tributaries waters of the U.S. and State of California.

The Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer (QSD). The SWPPP would contain site-specific construction stormwater BMPs which would be implemented as part of project design, and maintained or replaced as necessary. These BMPs would minimize or avoid erosion through wind or stormwater, and would also minimize or avoid sediment- or pollutant-laden stormwater from leaving the construction site and entering receiving waters (e.g., Moody Creek, Coyote Creek). The Preliminary WQMP (Appendix G) describes non-structural LID BMPs (e.g., common area litter control and landscape management; education for property owners, tenants, and occupants) and structural LID BMPs (e.g., trash/waste storage areas which

reduce introduction of pollution, use of efficient irrigation systems, water conservation) for the proposed project.

The project would consist of three drainage management areas (DMAs): DMA-A drains the north and west portions of the project (a drainage area of 0.46 acre), DMA-B drains the southwest section of the project (drainage area of 0.30 acre) and DMA-C drains the south-central section of the project (drainage area of 0.48 acre. Bioretention without underdrains have been chosen for the site due to the shallow groundwater depth and lack of nearby storm drain connections. Runoff from each DMA would flow overland and drain into their respective BMP. Bioretention stormwater treatment facilities are landscaped shallow depressions that capture and filter stormwater runoff. These facilities function as a soil and plant-based filtration device that removes pollutants through a variety of physical, biological, and chemical treatment processes. The facilities normally consist of a ponding area, mulch layer, planting soils, and plants. As stormwater passes down through the planting soil, pollutants are filtered, adsorbed, and biodegraded by the soil and plants. Due to the limited available area and shallow groundwater depth at the site, the proposed bioretention facilities do not provide sufficient capture volume. Supplemental gravel storage has been designed to meet the required Design Capture Volume for the entire site.

- Runoff from DMA 'A' will flow into a bio-retention area (INF-3) for treatment. Overflow from the basin will outlet through the curb on Valley View Street and enter the municipal storm drain system through inlets located at the intersection of Valley View Street and Crescent Avenue.
- Runoff from DMA 'B' will flow south-west into a bioretention area (INF-3) for treatment. Overflow from the basin will flow out through the curb on Valley View Street and enter the municipal storm drain system through inlets located at the intersection of Valley View Street and Crescent Avenue.
- Runoff from DMA 'C' will flow south-east into a bioretention area (INF-3) for treatment. Overflow from the basin will flow onto the adjacent parking lot to the south and enter the curb and gutter along Valley View Street as it did historically. Eventually runoff will enter the municipal storm drain system through inlets located at the intersection of Valley View Street and Crescent Avenue.

<u>Noise Analysis</u>

Potential noise-related impacts associated with the Project were addressed in a noise impact analysis prepared for the Project site in the MND (Appendix A). That assessment conducted noise studies to determine the impacts of noise on the site from the development of the Project and included ambient noise measurements (Appendix E.1).

Section 51.101(a)(7) of the HUD guidelines encourages use of quieter construction equipment and methods. Construction equipment would be required throughout construction of the project including demolition, site improvements, site preparation, grading, and building construction. The proposed Project would follow best management practices (BMPs) to ensure the use of quieter construction equipment. With implementation of these BMPs, construction impacts would be less than significant.

Existing and future noise levels have been calculated for various roadway segments within the City of Buena Park. Twenty-five of the roadway segments modeled (along Valley View Street, Knott Avenue, Western Avenue, Beach Boulevard, Crescent Avenue, La Palma Avenue,

Orangethorpe Avenue, and La Mirada Boulevard) would generate noise levels above 70 dBA DNL at 100 feet from centerline. HUD provides a road noise calculator that was utilized to assess roadway noise at the Project location from Valley View Street. The calculator indicated that the noise level at the proposed structures would be 70 dBA DNL which would exceed the HUD exterior noise standard of 65 dBA DNL (Appendix E.2). Therefore, mitigation measure MM N-1 would require features such as double-pane acoustic windows, 24" high single-paned, minimum 3/8'' thick tempered or laminated glass above solid 42" high walls for a total height of 66" or 5.5 feet at patios of impacted units, and 12" high single-paned, minimum 3/8'' thick tempered or laminated glass above solid 42" high walls for a total height of 54" or 4.5 feet on balconies of impacted units to attenuate noise to at or below 65 dBA DNL.

All residential units would be equipped with a forced air heating ventilation air condition (HVAC) units that allow for a "windows closed" condition (i.e. windows do not need to be left open for ventilation). Typical new construction of multi-family homes with windows closed provided a minimum of 25 dBA exterior to interior noise reduction. As such the interior of the proposed homes would be 45 dBA DNL (70 dBA exterior – 25 dBA attenuation = 45 dBA interior), which is within the HUD 45 dBA DNL noise standard.

The project site's existing conditions and estimated roadway noise would exceed 24 CFR Part 51 Exterior Noise Goals. However, with compliance of the proposed Mitigation Measure, the project would not contribute to any further increase in noise levels. Therefore, the project would be compliant with 24 CFR Part 51 Subpart B.

Transportation Assessment

The Transportation Assessment determined that the Project would not generate enough traffic to result in an impact. The project's circulation system, including driveways and parking areas, would be designed to meet the development standards of the city and would not result in uses or design features that would create traffic hazards. Additionally, the project applicant would construct treatment options which would improve the traffic circulation in the project area, compared to existing conditions.

Conclusion

Based on the findings in the Environmental Assessment, and through the implementation of the mitigation measures described, this project will have no significant impact.

Mitigation Measures and Conditions [40 CFR 1505.2(c)]

Summarized below are all mitigation measures adopted by the Responsible Entity to reduce, avoid, or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements, and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

Nesting Bird Protection

Mitigation Measure BIO-1:

If feasible during project construction, the project applicant shall ensure that vegetation removal shall be restricted to the period between February 1 to September 31, to avoid the breeding

season of any migratory species that could be using the area, and to discourage nesting in the vicinity of an upcoming construction area.

- If it is not feasible to remove trees outside this window, then, prior to the beginning of vegetation removal and/or earthmoving activities during the period between February 1 and September 31, all vegetation within 250 feet of any grading or earthmoving activity shall be surveyed for active nests by a qualified biologist no more than 30 days prior to disturbance. If active nests are found, and the site is within 250 feet of potential construction activity, a temporary fence shall be erected, where appropriate, around the vegetated nest site at a distance of up to 250 feet, depending on the species, from the edge of the canopy, to prevent construction disturbance and intrusions on the nest area.

- No construction vehicles shall be permitted within restricted areas (i.e., protection zones), unless directly related to the management or protection of the legally protected species.

- If a legally protected species nest is located in vegetation designated for removal, the removal shall be deferred until after September 31, or until the avian biologist can determine that the young have fledged or the nest has become inactive.

This mitigation measure will also protect nesting birds from noise and dust impacts potentially caused by project operations.

Responsible Entity: **City of Buena Park** for inclusion of mitigation measure in City Grading/ Building Permits for residential development and other construction authorizations related to demolition and/or vegetation removal activities.

Applicant for contracting a qualified biologist to perform the nesting bird pre-construction surveys and provide recommendations to the City for proceeding with site development activities.

Historical Resource Protection:

Mitigation Measure CUL-1:

In the event of an unexpected discovery of an historical resource as defined by CEQA Guidelines § 15064.5, during any project related earth disturbing activities, all earth disturbing activities within 30 feet of the find shall be halted and the City of Buena Park shall be notified. The project applicant shall retain an archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards for Archaeology to assess the significance of the find. Impacts on any significant resources shall be mitigated to a less than significant level through data recovery or other methods determined adequate by the archaeologist and that are consistent with the Secretary of the Interior's Standards for Archaeological Documentation. Any identified cultural resources shall be recorded on the appropriate DPR 523 (A L) form and filed with the SCCIC. Construction activities may continue on other parts of the project site while evaluation and treatment of historic archaeological resources takes place.

Responsible Entity: **City of Buena Park** for inclusion of mitigation measure in City Grading/Building Permits for residential development and other construction authorizations related to excavations.

Applicant to retain an archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards for Archaeology to assess the significance of the find.

Liquefaction Hazard Zone

Mitigation Measure GEO-1:

During grading and construction of the proposed project, the project applicant shall follow all recommendations in Section 6.0, Recommendations, on pages 10-22 of the geotechnical report prepared for the project (Albus-Keefe & Associates, Inc., Preliminary Geotechnical Investigation, Proposed Senior Housing Development, 8300 Valley View Street, Buena Park, California, dated January 20, 2020).

Responsible Entity: **City of Buena Park** for inclusion of mitigation measure in City Grading/Building Permits for residential development and other construction authorizations related to liquefaction.

Applicant to submit plans and drawings that comply with the recommendations with the Geotechnical Report.

Contamination and Toxic Substances

Mitigation Measure HAZ-1:

Prior to demolition, the existing structure called "The Barn" shall be assessed for the presence of asbestos-containing materials (ACMs) and lead-based paint (LBP). If ACMs and/or LBP are found, the resulting construction debris shall be removed and disposed of at a landfill that can accept hazardous materials, including asbestos and lead-based paint. All ACMs and LBP shall be removed prior to demolition, as required, and in accordance with all applicable laws, including guidelines of the Occupational Safety and Health Administration (OSHA).

Responsible Entity: **City of Buena Park** for inclusion of mitigation measure in City Grading/Building Permits for residential development and other construction authorizations related to hazardous materials.

Applicant to conduct the investigation of the site by utilizing licensed contractors.

Exterior Noise

Mitigation Measure N-1:

The Applicant would be required to implement features such as double-pane acoustic windows, 24" high single-paned, minimum 3/8'' thick tempered or laminated glass above solid 42" high walls for a total height of 66" or 5.5 feet at patios of impacted units, and 12" high single-paned, minimum 3/8'' thick tempered or laminated glass above solid 42" high walls for a total height of 54" or 4.5 feet on balconies of impacted units to attenuate noise to at or below 65 dBA DNL at 2 meters from the proposed structure in compliance with Section 51.103(c).

Responsible Entity: **City of Buena Park** for inclusion of mitigation measure in City Grading/Building Permits for residential development and other construction authorizations related to construction noise.

Applicant to provide noise attenuation to meet the 65 dBA DNL exterior noise limit.

Transportation Hazards During Construction

Mitigation Measure TRANS-1:

Prior to the start of construction activity in the public right-of-way, the General Contractor shall submit a detailed Construction Management Plan to be reviewed and approved by the City of Buena Park Traffic Engineer. The Construction Management Plan shall specify that the Construction Manager will schedule truck traffic and employee shifts to avoid creating trips during the peak traffic periods, as is feasible for construction operations. All measures including identified truck routes and designated employee parking areas shall be included in the Construction Management Plan. The Plan shall include but is not limited to the following provisions:

a) Identification of permitted hours for construction related deliveries and removal of heavy equipment and material;

b) Identification of where construction workers would park their personal vehicles during project construction with a requirement that at no time shall construction worker vehicles block any driveways. If complaints are received by the project applicant or City of Buena Park regarding issues with construction worker vehicle parking, the project applicant shall identify alternative parking options for construction workers so as not to interfere with adjacent parking availability;

c) Identification of how emergency access to and around the project site will be maintained during project construction;

d) Identification of haul routes for delivery or removal of heavy and/or oversized equipment or material loads. Where feasible, delivery or removal of oversized equipment or material loads shall be conducted during off-peak hour traffic periods;

e) Maintain pedestrian and bicycle connections around the project site and safe crossing locations shall be considered for all pedestrian and bicyclist detours; and

f) Maintain the security of the project site by erecting temporary fencing during the construction phase of the project. Any onsite night lighting used during the construction phase of the project shall be in compliance with City of Buena Park lighting requirements.

Responsible Entity: **City of Buena Park** for inclusion of mitigation measure in City Grading/Building Permits for residential development and other construction authorizations related to transportation. Review and approval of the Construction Management Plan.

Applicant to ensure that the General Contractor shall submit a detailed Construction Management Plan that details all of the required information.

Native American Monitoring

Mitigation Measure TCR-1:

Prior to the commencement of any ground-disturbing activity at the project site, the project applicant shall retain a Native American Monitor approved by the Gabrieleño Band of Mission Indians-Kizh Nation – the tribe that consulted on this project pursuant to Assembly Bill 52 (the "Tribe" or the "Consulting Tribe"). A copy of the executed contract shall be submitted to the City of Buena Park Planning and Building Department prior to the issuance of any permit necessary to commence a ground disturbing activity. The applicant will be required to retain the services of a qualified Native American Monitor(s) during construction related ground disturbance activities. The Tribal Representative from the Gabrieleno Band of Mission Indians – Kizh Nation defines ground disturbance to include, but not limited to, pavement removal, potholing, grubbing, weed abatement, boring, grading, excavation, or trenching within the project area. The monitor must be approved by the Tribal Representative and will be present on-site during the construction phases that involve ground disturbance activities. The on-site monitoring shall end when the project site grading and excavation activities are completed, or when the monitor has indicated that the site has a low potential for archaeological resources. If archaeological or cultural resources are encountered, they will be documented by the Native American monitor and collected for preservation.

If a non-Native American resource is determined by the qualified archaeologist to constitute a "historical resource" or "unique archaeological resource," time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan, prepared by the consulting archaeologist, established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and PRC Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any historic archaeological material that is not Native American in origin shall be curated at a public, non-profit institution with a research interest in the materials, such as the Cooper Center (OC Parks) or the Fowler Museum (University of California, Los Angeles), if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes.

Responsible Entity: **City of Buena Park** for inclusion of mitigation measure in City Grading/Building Permits for residential development and other construction authorizations related to excavations.

Applicant to contract with a Native American monitor during construction related ground disturbance.

Determination:

☒ **Finding of No Significant Impact** [24 CFR 58.40(g)(1); 40 CFR 1508.27]

The Project will not result in a significant impact on the quality of the human environment.

☐ **Finding of Significant Impact** [24 CFR 58.40(g)(2); 40 CFR 1508.27]

The Project may significantly affect the quality of the human environment.

Preparer Signature: Jaclyn Canzone Date: 12/11/2020

Name/Title/Organization: Jaclyn Canzone / Staff Specialist / OC Housing & Community Development

Certifying Officer Signature: Julia Bidwell Date: 12/11/2020

Name/Title: Julia Bidwell / Director OC Housing & Community Development

This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environmental Review Record (ERR) for the activity/project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).

OMB No. 2506-0177
(exp. 9/30/2021)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet is designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. This document should be submitted along with the Related Law and Authority worksheets documenting compliance with the environmental requirements listed at 24 CFR 50.4 and 58.5-6.

Environmental Review Project Information

This format may be used by Partners to submit information for Part 50 or Part 58 reviews

Project Information

**Required fields are marked with an asterisk.*

***Project Name:** Orchard View Gardens

***Applicant/Grant Recipient:** OC Housing and Community Development
***Point of Contact:** Click here to enter text.

Consultant (if applicable): Chambers Group Inc
Point of Contact (if applicable)**:** Kelene Strain, kstrain@chambersgoupinc.com

**HUD Program Information*

Add as many rows as necessary to include all sources of HUD assistance.

Grant or Project Number	**HUD Program** (e.g. CDBG, 223(f) Refinance, Public Housing Capital Fund, RAD)
	HOME - $453,600
	8 OCHA Project-Based Vouchers - $2,461,440 (estimated 20-year amount)

***Estimated Total HUD Funded, Assisted, or Insured Amount:** See above.
***Estimated Total Project Cost** (HUD and non-HUD funds)**:** Click here to enter text.

***Project Location:**

Provide a street address or intersection for your project. Provide additional information on the project located beyond the address as necessary for the scope of the project in a narrative in the provided textbox. For example, any new construction and projects affecting a larger area may require more context than simply a street address. If the project affects a large area, such as an infrastructure or community services project, select a representative address and describe the project location.

The project site is located at 8300 Valley View Street, on the eastern frontage of Valley View Street between Los Molinos Drive and Crescent Avenue in Buena Park, California. The project site is approximately 3.2 acres and is currently occupied by St. Joseph's Episcopal Church and surrounded by mostly residential uses.

***Description of the Proposed Project** [24 CFR 50.12 & 58.32; 40 CFR 1508.25]**:**

Provide a project description that captures the maximum anticipated scope of the proposal. It should include all contemplated actions which logically are, either geographically or functionally, a composite part of the project, regardless of the source of funding. Describe all physical aspects of the project, such as plans for multiple phases of development, size and number of buildings, and activities to be undertaken. Include details of the physical impacts of the project, including whether there will be ground disturbance. If applicable, indicate whether the project site will require acquisition or if the sponsor already has ownership.

Provide a detailed project description that describes the scope of any planned critical and non-critical repairs including clear descriptions of any proposed physical changes which are included as part of the Capital Needs Assessment e-Tool submission. Attach any maps, photographs, or other documents that will assist HUD in understanding the nature and scope of this refinancing proposal.

For 223(f) projects, you must also submit evidence that the scope of work identified in conjunction with the refinance does not rise to a level above maintenance. For purposes of environmental review, maintenance is defined in Notice CPD-16-02 as activities that slow or halt deterioration of a building, but which do not materially add to its value or adapt it to new uses. General examples of maintenance activities include cleaning activities, protective or preventative measures to keep a building in working order, replacement of appliances that are not permanently affixed to the building, periodic replacement of a limited number of component parts of a building feature or system that is subject to normal wear and tear, and replacement of a damaged or malfunctioning component part of a building feature or system. Refer to Notice CPD-16-02 for more information, including specific examples of maintenance activities as compared to rehabilitation activities.

The project site is one contiguous, irregular-shaped parcel with the southern portion of the site currently occupied by St. Joseph's Church. The church is housed in a single building and surrounded by surface parking. The northern portion of the site is currently vacant. The project proposes to subdivide the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres. The newly created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with a primary residential apartment building with a 3,000-square-foot community center and nine single-story casitas that would be located within three single-story buildings, accommodating 66 residential units in total.

On Parcel 2, a total of 66 residential apartment homes are proposed for seniors aged 62 and older. These apartment homes consist of 62 one-bedroom units and four two-bedroom units, in one larger and three smaller buildings; one of the units is for a manager. The maximum building height would be 35 feet. In total, the project proposes 25,308 square feet of building area, 23,627 square feet of paved parking and driveways, and 26,021 square feet of open space/landscaped area. The overall lot coverage for the development is 35%. The Buena Park Municipal Code section 19.536.040, Parking Spaces Required, requires a Church to use a parking requirement of one space per three fixed seats (or 4.5 feet of bench) plus one space per 40 square feet of other net assembly area in the one largest assembly room. To comply with the City Municipal Code, an estimated 80 parking spaces are required for the Church. With the development of the Orchard View Gardens, a portion of the Church's existing parking area in the northeast corner will be demolished to accommodate the proposed residential units. The onsite parking available for the Church would be reduced from 121 spaces to 80 spaces. The proposed amount of parking for the Church is sufficient to accommodate the Church operations and meets the City's Code

requirement. Furthermore, based on the currently utilization rates reported above, if the number of spaces is reduced to 80, even at its peak occupancy, the utilization rate is still only 55%. Based on the demographic of the residents that would be living on site, the high percentage of one bedroom units, parking utilization rates for similar senior rental projects within the region, and the availability of public transportation options at the site, the project applicant believes that the proposed parking ratio is appropriate for an income-restricted senior rental project. With the development of the proposed project, the existing church and proposed residential facility would share a total of 123 parking spaces. The existing church currently contains 110 parking spaces and plans to reduce their parking lot to 80 spaces with the development of the project. The project proposes the development of 48 parking spaces to accommodate residents, visitors, and staff (Fehr and Peers, 2020, p. 6).
The General Plan land use designation for the project site is Low Density Residential and the Project Site is zoned One-Family Residential (RS-6), allowing a base density of up to 7.26 dwelling units per acre (du/ac).

A General Plan Amendment to High Density Residential and Zone Change to Medium-Density Multifamily Residential (RM-20) is required to accommodate the proposed project. The project would also necessitate a Tentative Parcel Map to divide the single parcel into two parcels. The project would consist of: (1) utilities improvements; (2) construction of three new residential buildings; (3) construction of a parking lot; (4) construction of a 3,000-square-foot community center (on the first floor of Building 1); (5) construction of a green lawn and hardscape game area; and (6) project site amenities and landscaping. Table 1 summarizes the proposed project features and Figure 3 shows the site plan for the proposed project.

Table 1: Project Summary

New Construction	Proposed Uses/Features	Square Feet	No. of Stories	Building Height
Building 1 (this building is divided into two groupings connected by a breezeway)	62 one-bedroom units and four two-bedroom units	54,201[1]	2-3	35 feet maximum
Casitas	Nine one-bedroom single story casitas	6,093	1	13 feet, 1 inch maximum
Community Center	Senior-oriented community center for use by residents and guests (located in Building 1)	3,000	N/A[3]	N/A[2]
Total Building Area	**N/A**	**60,294**	**N/A**	**N/A**
Paved parking and Driveways	48 Parking Spaces[2]	23,627	N/A	N/A
Open Area	Recreational uses (bench seating, lawn games, decomposed granite path, decomposed granite courtyard with fire pit and lounge seating)	22,236	N/A	N/A
Demolition				
Demolition of the "The Barn" Building	"The Barn" building will be demolished to	Unknown estimated to be	1	Unknown estimated to be

	accommodate the proposed development on site.	approximately 2,000 square feet		approximately 15-20 feet

Note:
[1] The 3,000 square foot community center is included in the total square footage of 54,201 for Building 1.
[2] The project is requesting a reduction in parking based on the demographic of residents being seniors living alone or non-car owning households, access to existing bus routes, and the provision of alternative strategies to reduce vehicle trips including car sharing and van pooling.
[3] The community center is located within Building 1.

A Draft and Final MND were prepared for the proposed project pursuant to California Environmental Quality Act (CEQA). The project was approved by the City in October 2020.

***Does this project involve over 200 lots, dwelling units, or beds?**

☐ Yes
☒ No

**Compliance with 24 CFR 50.4, 58.5, and 58.6 Laws and Authorities*

Record the compliance or conformance determinations for each statute, executive order, or regulation using the Related Law and Authority Worksheets available at https://www.hudexchange.info/resource/5119/environmental-review-record-related-federal-laws-and-authorities-partner-worksheets/. Provide credible, traceable, and supportive source documentation for each authority. Attach all Partner worksheets as well as additional documentation as appropriate.

OMB No. 2506-0177
(exp.9/30/2021)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Airport Hazards (CEST and EA) – PARTNER

https://www.hudexchange.info/environmental-review/airport-hazards

1. **To ensure compatible land use development, you must determine your site's proximity to civil and military airports. Is your project within 15,000 feet of a military airport or 2,500 feet of a civilian airport?**

   ☒No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within the applicable distances to a military or civilian airport.*

   ☐Yes → *Continue to Question 2.*

2. **Is your project located within a Runway Potential Zone/Clear Zone (RPZ/CZ) or Accident Potential Zone (APZ)?**

   ☐Yes, project is in an APZ → *Continue to Question 3.*

   ☐Yes, project is an RPZ/CZ → *Project cannot proceed at this location.*

   ☐No, project is not within an APZ or RPZ/CZ

   → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within either zone.*

3. **Is the project in conformance with DOD guidelines for APZ?**

   ☐Yes, project is consistent with DOD guidelines without further action.

   → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documentation supporting this determination.*

   ☐No, the project cannot be brought into conformance with DOD guidelines and has not been approved. → *Project cannot proceed at this location.*

If mitigation measures have been or will be taken, explain in detail the proposed measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

Click here to enter text.

→ *Work with the RE/HUD to develop mitigation measures. Continue to the Worksheet Summary below. Provide any documentation supporting this determination.*

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

Include all documentation supporting your findings in your submission to HUD.

The nearest airport is the Joint Forces Training Base (JFTB) Los Alamitos, located approximately 2.8 miles southwest of the project site. The project is located within JFTB's Notification Area. However, the project site is not within JFTB's Height Restriction or Impact Zones. Although the project site is within JFTB's influence area, the project applicant needs only to notify the airport about project construction and operation. Therefore, with compliance to notifying JFTB and the project's distance from the nearest active airports, the project would not expose people to safety hazards due to proximity to a public airport, and no impacts would occur.

Documentation:

Airport Land Use Commission Airport Environs Land Use Plan – Joint Forces Training Base Los Alamitos Amended 2016, http://www.ocair.com/commissions/aluc/docs/JFTB-AELUP2016ProposedFINAL.pdf. Accessed November 2020.

OMB No. 2506-0177
(exp.9/30/2021)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Airport Runway Clear Zones (CENST) – PARTNER

https://www.hudexchange.info/environmental-review/airport-hazards

1. **Does the project involve the sale or acquisition of developed property?**

   ☒No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

   ☐Yes → *Continue to Question 2.*

2. **Is the project in the Runway Protection Zone/Clear Zone (RPZ/CZ)[1]?**

   ☐No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within either zone.*

   ☐Yes → Written notice must be provided to prospective buyers to inform them of the potential hazards from airplane accidents as well as the potential for the property to be purchased as part of an airport expansion project. A sample notice is available through the HUD Exchange.

   Provide a map showing that the site within RPZ/CZ. Work with the RE/HUD to provide written notice to the prospective buyers. Continue to the Worksheet Summary below.

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

Include all documentation supporting your findings in your submission to HUD.

[1] Runway Protection Zone/Clear Zones are defined as areas immediately beyond the ends of runways. The standards are established by FAA regulations. The term in 24 CFR Part 51, Runway Clear Zones, was redefined in FAA's Airport Design Advisory Circular (AC) 150/5300-13 to refer to Runway Protection Zones for civil airports. See link above for additional information.

The nearest airport is the Joint Forces Training Base (JFTB) Los Alamitos, located approximately 2.8 miles southwest of the project site. The project is located within JFTB's Notification Area. However, the project site is not within JFTB's Height Restriction or Impact Zones. Although the project site is within JFTB's influence area, the project applicant needs only to notify the airport about project construction and operation. Therefore, with compliance to notifying JFTB and the project's distance from the nearest active airports, the project would not expose people to safety hazards due to proximity to a public airport, and no impacts would occur.

Documentation:

Airport Land Use Commission Airport Environs Land Use Plan – Joint Forces Training Base Los Alamitos Amended 2016, http://www.ocair.com/commissions/aluc/docs/JFTB-AELUP2016ProposedFINAL.pdf. Accessed November 2020.

OMB No. 2506-0177
(exp.9/30/2021)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Air Quality (CEST and EA) – PARTNER

https://www.hudexchange.info/environmental-review/air-quality

1. **Does your project include new construction or conversion of land use facilitating the development of public, commercial, or industrial facilities OR five or more dwelling units?**

   ☒ Yes → *Continue to Question 2.*

   ☐ No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Provide any documents used to make your determination.*

2. **Is your project's air quality management district or county in non-attainment or maintenance status for any criteria pollutants?**
   Follow the link below to determine compliance status of project county or air quality management district:
   https://www.epa.gov/green-book

   ☐ No, project's county or air quality management district is in attainment status for all criteria pollutants
   → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.*

   ☒ Yes, project's management district or county is in non-attainment or maintenance status for one or more criteria pollutants. → *Continue to Question 3.*

3. **Determine the <u>estimated emissions levels of your project for each of those criteria pollutants</u> that are in non-attainment or maintenance status on your project area. Will your project exceed any of the *de minimis or threshold* emissions levels of non-attainment and maintenance level pollutants or exceed the screening levels established by the state or air quality management district?**

   ☒ No, the project will not exceed *de minimis* or threshold emissions levels or screening levels
   → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Explain how you determined that the project would not exceed de minimis or threshold emissions.*

☐ Yes, the project exceeds *de minimis* emissions levels or screening levels.

→ *Continue to Question 4. Explain how you determined that the project would not exceed de minimis or threshold emissions in the Worksheet Summary.*

4. **For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Explain in detail the exact measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.**
   Click here to enter text.

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

Include all documentation supporting your findings in your submission to HUD.

Potential air quality and greenhouse gas-related impacts associated with the Project were addressed in a noise impact analysis prepared for the Project site in the MND (Appendix A). The Project site is located within the South Coast Air Basin (Air Basin), and air quality regulation is administered by the South Coast Air Quality Management District (SCAQMD).

The Air Basin has been designated by the federal Environmental Protection Agency (USEPA) as a nonattainment area for Ozone, PM10 (particulate matter) and PM2.5 (fine particulate pollution). The SCAQMD thresholds are as follows.

Pollutant	Construction Thresholds (lbs/day)	Operational Thresholds (lbs/day)
Volatile Organic Compounds	75	55
Nitrogen Oxides	100	55
Carbon Monoxide	550	550
Sulfur Oxides	150	150
Particulate Matter	150	150
Fine Particulate Matter	55	55

Construction activities would temporarily create emissions of dusts, fumes, equipment exhaust, and other air contaminants. Mobile sources (such as diesel-fueled equipment onsite and traveling to and from the project site) would primarily generate NOX emissions. The amount of emissions generated daily would vary, depending on the amount and types of construction activities occurring at the same time.

Estimated criteria pollutant emissions from the Orchard View Gardens project's onsite and offsite project construction activities were calculated using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2 (CAPCOA, 2017). construction emissions would not exceed SCAQMD

regional thresholds as shown in the table below. Therefore, the Orchard View Gardens project's short-term regional air quality impacts would be less than significant.

Construction Activity	Maximum Emissions (pounds/day)				
	ROG	NOx	CO	PM_{10}	$PM_{2.5}$
Maximum Emissions, 2022	3.2	42.7	26.9	3.0	1.5
Maximum Emissions, 2023	0.49	3.7	5.9	0.74	0.30
SCAQMD Significance Thresholds	75	100	550	150	55
Significant?	No	No	No	No	No

Operational emissions generated by area sources, motor vehicles and energy demand would result from normal day-to-day activities of the project. CalEEMod 2016.3.2 was used to estimate these emissions. for each criteria pollutant, operational emissions would be below the pollutant's SCAQMD significance threshold as shown in the table below.

Emissions Source	Pollutant (pounds/day)				
	ROG	NOx	CO	PM_{10}	$PM_{2.5}$
Area Source Emissions	1.58	0..06	5.4	0.03	0.03
Energy Source Emissions	0.02	0.21	0.09	0.02	0.02
Mobile Source Emissions	0.32	1.16	4.37	1.78	0.48
Total Operational Emissions	1.9	1.4	9.9	1.8	0.5
SCAQMD Significance Thresholds	75	100	550	150	55
Significant?	No	No	No	No	No

Based on the technical analyses prepared, the Project is compliant with 40 CFR Parts 6,51, and 93, and does not exceed the applicable NEPA de minimis thresholds, and therefore, does not require mitigation measures.

Documentation:

CalEEMod Input and Results for Air Quality Analysis and CalEEMod Input and Results for Greenhouse Gas Emissions Analysis, prepared July 28, 2020, UltraSystems.

OMB No. 2506-0177
(exp.9/30/2021)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Coastal Zone Management Act (CEST and EA) – PARTNER

https://www.hudexchange.info/environmental-review/coastal-zone-managementh

Projects located in the following states must complete this form.

Alabama	Florida	Louisiana	Mississippi	Ohio	Texas
Alaska	Georgia	Maine	New Hampshire	Oregon	Virgin Islands
American Samoa	Guam	Maryland	New Jersey	Pennsylvania	Virginia
California	Hawaii	Massachusetts	New York	Puerto Rico	Washington
Connecticut	Illinois	Michigan	North Carolina	Rhode Island	Wisconsin
Delaware	Indiana	Minnesota	Northern Mariana Islands	South Carolina	

1. Is the project located in, or does it affect, a Coastal Zone as defined in your state Coastal Management Plan?

☐Yes → *Continue to Question 2.*
☒No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within a Coastal Zone.*

2. Does this project include activities that are subject to state review?

☐Yes → *Continue to Question 3.*
☐No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination.*

3. Has this project been determined to be consistent with the State Coastal Management Program?

☐Yes, with mitigation. → *The RE/HUD must work with the State Coastal Management Program to develop mitigation measures to mitigate the impact or effect of the project.*

☐Yes, without mitigation. → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination.*

☐No → Project cannot proceed at this location.

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

Include all documentation supporting your findings in your submission to HUD.

The Project is over 8 miles from the Pacific Ocean and is therefore not within a designated Coastal Management Zone.

Documentation:

Google Earth, 2020.

OMB No. 2506-0177
(exp. 9/30/2021)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Contamination and Toxic Substances (Multifamily and Non-Residential Properties) – PARTNER

https://www.hudexchange.info/programs/environmental-review/site-contamination

1. **How was site contamination evaluated?** [1] **Select all that apply.**

   ☒ ASTM Phase I ESA
   ☐ ASTM Phase II ESA
   ☐ Remediation or clean-up plan
   ☐ ASTM Vapor Encroachment Screening
   ☐ None of the above

   → *Provide documentation and reports and include an explanation of how site contamination was evaluated in the Worksheet Summary.*
   Continue to Question 2.

2. **Were any on-site or nearby toxic, hazardous, or radioactive substances found that could affect the health and safety of project occupants or conflict with the intended use of the property? (Were any recognized environmental conditions or RECs identified in a Phase I ESA and confirmed in a Phase II ESA?)**

   ☒ No → **Explain below.**

   Click here to enter text.

   → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

   ☐ Yes → *Describe the findings, including any recognized environmental conditions (RECs), in Worksheet Summary below. Continue to Question 3.*

3. **Can adverse environmental impacts be mitigated?**

[1] HUD regulations at 24 CFR § 58.5(i)(2)(ii) require that the environmental review for multifamily housing with five or more dwelling units or non-residential property include the evaluation of previous uses of the site or other evidence of contamination on or near the site. For acquisition and new construction of multifamily and nonresidential properties HUD strongly advises the review include an ASTM Phase I Environmental Site Assessment (ESA) to meet real estate transaction standards of due diligence and to help ensure compliance with HUD's toxic policy at 24 CFR §58.5(i) and 24 CFR §50.3(i). Also note that some HUD programs require an ASTM Phase I ESA.

☐ Adverse environmental impacts cannot feasibly be mitigated → HUD assistance may not be used for the project at this site. Project cannot proceed at this location.

☐ Yes, adverse environmental impacts can be eliminated through mitigation.
→ *Provide all mitigation requirements*[2] *and documents. Continue to Question 4.*

4. **Describe how compliance was achieved. Include any of the following that apply: State Voluntary Clean-up Program, a No Further Action letter, use of engineering controls**[3]**, or use of institutional controls**[4]**.**
Click here to enter text.

If a remediation plan or clean-up program was necessary, which standard does it follow?
☐ Complete removal
☐ Risk-based corrective action (RBCA)
→ *Continue to the Worksheet Summary.*

Worksheet Summary
Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

Include all documentation supporting your findings in your submission to HUD.
The Phase I determined that there are no RECs on the project site. Although the project site was used for agricultural purposes in the past, it should not be of concern based on passage of time since the last possible agricultural application. The Phase I ESA concluded that the project site was not listed in any regulatory database as a hazardous site.

Documentation:
Phase I Environmental Site Assessment Report 8300 Valley View Street Buena Park, California 2019, Converse Consultants.

[2] Mitigation requirements include all clean-up actions required by applicable federal, state, tribal, or local law. Additionally, provide, as applicable, the long-term operations and maintenance plan, Remedial Action Work Plan, and other equivalent documents.
[3] Engineering controls are any physical mechanism used to contain or stabilize contamination or ensure the effectiveness of a remedial action. Engineering controls may include, without limitation, caps, covers, dikes, trenches, leachate collection systems, signs, fences, physical access controls, ground water monitoring systems and ground water containment systems including, without limitation, slurry walls and ground water pumping systems.
[4] Institutional controls are mechanisms used to limit human activities at or near a contaminated site, or to ensure the effectiveness of the remedial action over time, when contaminants remain at a site at levels above the applicable remediation standard which would allow for unrestricted use of the property. Institutional controls may include structure, land, and natural resource use restrictions, well restriction areas, classification exception areas, deed notices, and declarations of environmental restrictions.

OMB No. 2506-0177
(exp.9/30/2021)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Endangered Species Act (CEST and EA) – PARTNER

https://www.hudexchange.info/environmental-review/endangered-species

1. Does the project involve any activities that have the potential to affect species or habitats?

☐No, the project will have No Effect due to the nature of the activities involved in the project.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.*

☐No, the project will have No Effect based on a letter of understanding, memorandum of agreement, programmatic agreement, or checklist provided by local HUD office.

Explain your determination:

Click here to enter text.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.*

☒Yes, the activities involved in the project have the potential to affect species and/or habitats.

→ *Continue to Question 2.*

2. Are federally listed species or designated critical habitats present in the action area?

Obtain a list of protected species from the Services. This information is available on the FWS Website.

☐No, the project will have No Effect due to the absence of federally listed species and designated critical habitat.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination. Documentation may include letters from the Services, species lists from the Services' websites, surveys or other documents and analysis showing that there are no species in the action area.*

☒Yes, there are federally listed species or designated critical habitats present in the action area.

→ *Continue to Question 3.*

3. Recommend one of the following effects that the project will have on federally listed species or designated critical habitat:

☐No Effect: Based on the specifics of both the project and any federally listed species in the action area, you have determined that the project will have absolutely no effect on listed species or critical habitat.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination. Documentation should include a species list and explanation of your conclusion, and may require maps, photographs, and surveys as appropriate.*

☒May Affect, Not Likely to Adversely Affect: Any effects that the project may have on federally listed species or critical habitats would be beneficial, discountable, or insignificant.

→ Partner entities should not contact the Services directly. *If the RE/HUD agrees with this recommendation, they will have to complete Informal Consultation. Provide the RE/HUD with a biological evaluation or equivalent document. They may request additional information, including surveys and professional analysis, to complete their consultation.*

☐Likely to Adversely Affect: The project may have negative effects on one or more listed species or critical habitat.

→ Partner entities should not contact the Services directly. *If the RE/HUD agrees with this recommendation, they will have to complete Formal Consultation. Provide the RE/HUD with a biological evaluation or equivalent document. They may request additional information, including surveys and professional analysis, to complete their consultation.*

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

Include all documentation supporting your findings in your submission to HUD.

Potential biological-related impacts associated with the Project were addressed in a biological impact analysis prepared for the Project site in the MND. Due to several biological and physical disturbances within the Biological Study Area (BSA), it was determined that all 25 of the special-status plant species identified in the 10-mile radius database query do not have the potential to occur in the BSA. The 24 reported special-status wildlife species (including mammals, birds, insects and reptiles) identified in the search that were determined to have no potential to occur within the project BSA are discussed briefly below because the BSA lacks suitable habitat for foraging, nesting or breeding, or the BSA does not lie within the species reported distribution or elevation range, or a combination of all of those factors. The project site contains ornamental vegetation and building structures that could potentially provide cover and nesting habitat for bird species that have adapted to urban areas, such as rock pigeons (Columba livia) and mourning doves (Zenaida macroura).

Native bird species such as mourning doves are protected by the MBTA and the California Fish and Game Code (Sections 3503, 3503.5, and 3513), which render it unlawful to take native breeding birds, their nests, eggs, and young. Indirect impacts on breeding birds could occur from increased noise, vibration and dust during construction, which could adversely affect the breeding behavior of some birds, and lead to the loss (take) of eggs and chicks, or nest abandonment. Therefore, the project has the potential to impact migratory non-game breeding birds and their nests, young and eggs. Several special-status bird species could use the project site for foraging and may be adversely impacted by construction activities. With the implementation of mitigation measure MM BIO-1, the project would have less than significant impacts to native bird species protected under the MBTA and the California Fish and Game Code.

Mitigation Measure:

If feasible during project construction, the project applicant shall ensure that vegetation removal shall be restricted to the period between February 1 to September 31, to avoid the breeding season of any migratory species that could be using the area, and to discourage nesting in the vicinity of an upcoming construction area.

- If it is not feasible to remove trees outside this window, then, prior to the beginning of vegetation removal and/or earthmoving activities during the period between February 1 and September 31, all vegetation within 250 feet of any grading or earthmoving activity shall be surveyed for active nests by a qualified biologist no more than 30 days prior to disturbance. If active nests are found, and the site is within 250 feet of potential construction activity, a temporary fence shall be erected, where appropriate, around the vegetated nest site at a distance of up to 250 feet, depending on the species, from the edge of the canopy, to prevent construction disturbance and intrusions on the nest area.
- No construction vehicles shall be permitted within restricted areas (i.e., protection zones), unless directly related to the management or protection of the legally protected species.
- If a legally protected species nest is located in vegetation designated for removal, the removal shall be deferred until after September 31, or until the avian biologist can determine that the young have fledged or the nest has become inactive.

This mitigation measure will also protect nesting birds from noise and dust impacts potentially caused by project operations.

Documentation:

Orchard View Gardens Senior Apartment Homes Initial Study and Mitigated Negative Declaration (IS/MND), September 2020, UltraSystems.

OMB No. 2506-0177
(exp. 9/30/2021)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet is designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. This document should be submitted along with the Related Law and Authority worksheets documenting compliance with the environmental requirements listed at 24 CFR 50.4 and 58.5-6.

Environmental Assessment Factors and Analysis

This format may be used to submit information for Part 50 or Part 58 reviews.
Complete this form only if an Environmental Assessment[1] is anticipated.

**Environmental Assessment Factors* [Ref. 40 CFR 1508.8 &1508.27]

In the table below, describe the effects of the proposal on the character, features and resources of the project area. Evaluate and document each factor as appropriate and in proportion to its relevance to the proposed action. Provide credible, traceable, and supportive source documentation as appropriate. Identify any conditions, attenuation, or mitigation measures.

Environmental Assessment Factor	Impact Evaluation
LAND DEVELOPMENT	
Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design	The General Plan land use designation for the project site is Low Density Residential. The project is zoned Residential Single Family 6 (RS-6), allowing a base density of up to 7.26 dwelling units per acre. Based on the demographic of the residents that would live on site, the high percentage of one-bedroom units, parking utilization rates for similar senior rental projects within the region, and the availability of public transportation options at the site, the project applicant believes that the proposed parking ratio is appropriate for an income-restricted senior rental project. A General Plan amendment to High Density Residential and Zone change to Medium-Density Multifamily Residential (RM-20) is required to accommodate the proposed project. The project would also necessitate a Tentative Parcel Map to divide the one parcel into two. The project proposes modification to Use Permit U-272 to reflect the updated property lines and parking spaces required to accommodate the proposed project.

[1] Environmental Assessments are required for projects that are not categorically excluded under 24 CFR 50.19-50.20 or 24 CFR 58.34-58.35. These are typically required for larger projects including new construction, major rehabilitation, or conversion. The responsible entity (for Part 58 reviews) or HUD (for Part 50 reviews) will determine the level of review for the proposed project. Projects that are categorically excluded or exempt from the National Environmental Policy Act need not complete any of this form from Environmental Assessment Factors on.

	The project would be developed in compliance with the development standards and provisions under the proposed RM-20 zone. As a result, the project would have less than significant impacts in relation to consistency with local land use plans, policies, or regulations. Documentation: RBF Consulting, 2010. City of Buena Park 2035 General Plan. Accessed online at http://www.buenapark.com/city-departments/community-development/planningdivision/general-plan/2035-general-plan, accessed November 2020.
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	The Project site is in an urbanized area occupied by residential and commercial buildings. The Project will require grading and excavation. A Preliminary Geotechnical Investigation Report and Preliminary Water Quality Management Plan were prepared for the Project site (Appendices F and G). **Soil Suitability:** The site is underlain by soil strata that are susceptible to liquefaction. MM GEO-1 is recommended to address the potential for liquefaction associated with the project site. Lateral spreading is the downslope movement of surface sediment due to liquefaction in a subsurface layer. The downslope movement is due to gravity and earthquake shaking combined. Lateral spreading of the ground surface during a seismic activity usually occurs along the weak shear zones within a liquefiable soil layer and has been observed to generally take place toward a free face (i.e., retaining wall, slope, or channel) and to lesser extent on ground surfaces with a very gentle slope. The geotechnical report for the project states that the potential for lateral spreading is very low, because the general gradient of the proposed project site is nearly level with that of the general vicinity (0.2 degrees and 0.3 degrees, respectively). The project would be constructed in accordance with the requirements of the City of Buena Park, CBC, which are designed to assure safe construction and include building foundation requirements appropriate to site conditions. Subsidence due to reprocessing of removal bottoms is anticipated to be approximately 0.1 feet. The estimates of shrinkage and subsidence are intended as an aid for project engineers in determining earthwork quantities. However, these estimates should be used with some caution since they are not absolute values. Contingencies should be made for balancing earthwork quantities based on actual shrinkage and subsidence that occurs during the grading process. Selected samples of representative earth materials from borings were tested in a laboratory. Tests consisted of soils classification, in-situ moisture content and dry density, maximum dry density and optimum moisture content, consolidation/collapse, direct shear strength. Collapsible soils were not identified as an issue for the proposed project.

	Slope: The project site is located in a flat, developed urban area that does not contain steep slopes or hills. Therefore, the probability of slope stability hazards affecting the site is considered very low. **Drainage and Erosion:** Construction During project construction the drainage pattern of the site would be altered; however, due to the location and nature of the proposed project, this alteration would be temporary. The project would be required to obtain coverage under the Statewide General Construction Permit through preparation and implementation of a SWPPP specifying construction stormwater BMPs to be implemented to control erosion and protect the quality of surface water runoff from the project site. The SWPPP must be prepared before the project owner receives a grading or building permit and must be implemented year-round throughout construction. Project compliance with regulatory requirements would reduce potential erosion/siltation impacts during the construction phase. Operation Operation of the proposed project would increase the amount of impervious surface, which would reduce the amount of erosion or siltation on and off the project site. Additionally, the proposed Low Impact Design (LID) Best Management Practices (BMPs) as further discussed in the Storm Water Runoff discussion below, would capture sediment-laden stormwater and filter sediment before the stormwater enters the municipal storm water system and therefore no result in any impacts during operation. **Storm Water Runoff:** Development of the project has the potential to result in two types of water quality impacts: (1) short-term impacts due to construction-related discharges; and (2) long-term impacts from operation. Soil disturbance would temporarily occur during project construction, due to earth-moving activities such as excavation and trenching for foundations and utilities, soil compaction and moving, cut and fill activities, and grading. Disturbed soils are susceptible to high rates of erosion from wind and rain, resulting in sediment transport via stormwater runoff from the project area. Erosion and sedimentation affect water quality through interference with photosynthesis, oxygen exchange and respiration, growth, and reproduction of aquatic species. Under existing conditions, stormwater runoff generated on the proposed project site is discharged as sheet flow west of the site into the gutter on the east side of Valley View Street, flowing south and entering the storm drain system via a curb inlet north of the intersection of Valley View Street and Crescent Avenue. Water entering this curb inlet flows west beneath Crescent Avenue for approximately one mile and discharges into an

	existing Orange County Flood Control Department rectangular concrete flood control channel which, in turn, discharges into Moody Creek. Moody Creek is a tributary of Coyote Creek; Coyote Creek discharges into the San Gabriel River, which empties into the Pacific Ocean, making these tributaries waters of the U.S. and State of California. The Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer (QSD). The SWPPP would contain site-specific construction stormwater BMPs which would be implemented as part of project design, and maintained or replaced as necessary. These BMPs would minimize or avoid erosion through wind or stormwater, and would also minimize or avoid sediment- or pollutant-laden stormwater from leaving the construction site and entering receiving waters (e.g., Moody Creek, Coyote Creek). The Preliminary WQMP describes non-structural LID BMPs (e.g., common area litter control and landscape management; education for property owners, tenants, and occupants) and structural LID BMPs (e.g., trash/waste storage areas which reduce introduction of pollution, use of efficient irrigation systems, water conservation) for the proposed project. The project would consist of three drainage management areas (DMAs): DMA-A drains the north and west portions of the project (a drainage area of 0.46 acre), DMA-B drains the southwest section of the project (drainage area of 0.30 acre) and DMA-C drains the south-central section of the project (drainage area of 0.48 acre. Bioretention without underdrains have been chosen for the site due to the shallow groundwater depth and lack of nearby storm drain connections. Runoff from each DMA would flow overland and drain into their respective BMP. Bioretention stormwater treatment facilities are landscaped shallow depressions that capture and filter stormwater runoff. These facilities function as a soil and plant-based filtration device that removes pollutants through a variety of physical, biological, and chemical treatment processes. The facilities normally consist of a ponding area, mulch layer, planting soils, and plants. As stormwater passes down through the planting soil, pollutants are filtered, adsorbed, and biodegraded by the soil and plants. Due to the limited available area and shallow groundwater depth at the site, the proposed bioretention facilities do not provide sufficient capture volume. Supplemental gravel storage has been designed to meet the required Design Capture Volume for the entire site. • Runoff from DMA 'A' will flow into a bio-retention area (INF-3) for treatment. Overflow from the basin will outlet through the curb on Valley View Street and enter the municipal storm drain system through inlets located at the intersection of Valley View Street and Crescent Avenue.

	• Runoff from DMA 'B' will flow south-west into a bioretention area (INF-3) for treatment. Overflow from the basin will flow out through the curb on Valley View Street and enter the municipal storm drain system through inlets located at the intersection of Valley View Street and Crescent Avenue. • Runoff from DMA 'C' will flow south-east into a bioretention area (INF-3) for treatment. Overflow from the basin will flow onto the adjacent parking lot to the south and enter the curb and gutter along Valley View Street as it did historically. Eventually runoff will enter the municipal storm drain system through inlets located at the intersection of Valley View Street and Crescent Avenue. Mitigation Measure: **Mitigation Measure GEO-1:** During grading and construction of the proposed project, the project applicant shall follow all recommendations in Section 6.0, Recommendations, on pages 10-22 of the geotechnical report prepared for the project (Albus-Keefe & Associates, Inc., Preliminary Geotechnical Investigation, Proposed Senior Housing Development, 8300 Valley View Street, Buena Park, California, dated January 20, 2020). Documentation: Orchard View Gardens Senior Apartment Homes Initial Study and Mitigated Negative Declaration (IS/MND), September 2020, UltraSystems. Preliminary Geotechnical Investigation, Proposed Senior Housing Development, 8300 Valley View Street, Buena Park, California, January 20, 2020, Albus-Keefe & Associates, Inc. Preliminary Water Quality Management Plan (WQMP), August 5, 2020, RRM Design Group.
Hazards and Nuisances including Site Safety and Noise	**Hazards:** The Project site would not be affected by natural hazards such as fault zones, bluffs, waterbodies, terrains, or wildfire. The Project site would not be affected by built hazards because the Project would not involve intersections, rail roads, cargo transports, transmission lines, and other industrial operations. No hazards would be constructed as part of the Project, however, as previously discussed, a structure called "The Barn" is located on the northern part of the project site and is a small stand-alone building, located northeast of the existing church and administration buildings on site. "The Barn" would be demolished as part of the proposed project. Based on aerial photographs "The Barn" was present sometime after 1994 and prior to 2002. Therefore, it is unlikely but unconfirmed as to whether or not "The Barn" was constructed with Asbestos Containing Materials (ACMs) and Lead-Based Paint (LBP) that

	can cause adverse health effects when airborne. MM HAZ-1 would ensure that any impacts from ACMs and LBP would remain less than significant. **Nuisance**: Nuisances would be present due to construction activities such as the presence of construction equipment. Potential odor sources may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction; and emissions would be temporary, short-term, and intermittent in nature, ceasing upon completion. Operational uses, such as project-generated refuse would be covered in containers and removed at regular intervals in compliance with the City's solid waste regulations. The Project would comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. **Noise:** As previously discussed, potential noise-related impacts associated with the Project were addressed in a noise impact analysis prepared for the Project site in the MND. That assessment conducted noise studies to determine the impacts of noise on the site from the development of the Project and included ambient noise measurements. Section 51.101(a)(7) of the HUD guidelines encourages use of quieter construction equipment and methods. Construction equipment would be required throughout construction of the project including demolition, site improvements, site preparation, grading, and building construction. The proposed Project would follow best management practices (BMPs) to ensure the use of quieter construction equipment. With implementation of these BMPs, construction impacts would be less than significant. The roadway noise calculator indicated that the noise level at the proposed structures would be 70 dB DNL which would exceed the HUD exterior noise standard of 65 dB DNL. Therefore, mitigation measure MM N-1 would require features such as double-pane acoustic windows, 24" high single-paned, minimum 3/8'' thick tempered or laminated glass above solid 42" high walls for a total height of 66" or 5.5 feet at patios of impacted units, and 12" high single-paned, minimum 3/8'' thick tempered or laminated glass above solid 42" high walls for a total height of 54" or 4.5 feet on balconies of impacted units to attenuate noise to at or below 65 dBA DNL. All residential units would be equipped with a forced air heating ventilation air condition (HVAC) units that allow for a "windows closed" condition (i.e. windows do not need to be left open for

	ventilation). Typical new construction of multi-family homes with windows closed provided a minimum of 25 dB exterior to interior noise reduction. As such the interior of the proposed homes would be 45 dB DNL (70 dB exterior – 25 dB attenuation = 45 dB interior), which is within the HUD 45 dB DNL noise standard. The project site's existing conditions and estimated roadway noise would exceed 24 CFR Part 51 Exterior Noise Goals. However, with compliance of the proposed Mitigation Measure, the project would not contribute to any further increase in noise levels. Therefore, the project would be compliant with 24 CFR Part 51 Subpart B. <u>Mitigation Measures:</u> **Mitigation Measure HAZ-1:** Prior to demolition, the existing structure called "The Barn" shall be assessed for the presence of asbestos-containing materials (ACMs) and lead-based paint (LBP). If ACMs and/or LBP are found, the resulting construction debris shall be removed and disposed of at a landfill that can accept hazardous materials, including asbestos and lead-based paint. All ACMs and LBP shall be removed prior to demolition, as required, and in accordance with all applicable laws, including guidelines of the Occupational Safety and Health Administration (OSHA). **Mitigation Measure N-1:** The Applicant would be required to implement features such as double-pane acoustic windows, 24" high single-paned, minimum 3/8'' thick tempered or laminated glass above solid 42" high walls for a total height of 66" or 5.5 feet at patios of impacted units, and 12" high single-paned, minimum 3/8'' thick tempered or laminated glass above solid 42" high walls for a total height of 54" or 4.5 feet on balconies of impacted units to attenuate noise to at or below 65 dBA DNL at 2 meters from the proposed structure in compliance with Section 51.103(c). <u>Documentation:</u> Orchard View Gardens Senior Apartment Homes Initial Study and Mitigated Negative Declaration (IS/MND), September 2020, UltraSystems. Phase I Environmental Site Assessment Report 8300 Valley View Street Buena Park, California 2019. Converse Consultants. Ambient Noise Measurement Data, January 24, 2020, UltraSystems.
Energy Consumption	Both construction and operation of the project would lead to the consumption of limited, slowly renewable, and non-renewable resources, committing such resources to uses that future generations would be unable to reverse. The proposed project would require the commitment of resources that include (1)

	building materials, (2) fuel and operational materials and/or resources and (3) the transportation of goods and people to and from the project. During project construction, energy would be consumed in the form of electricity associated with the conveyance of water used for dust control and, on a limited basis, powering lights, electronic equipment, or other construction activities necessitating electrical power. Construction activities, including the construction of the proposed buildings, typically do not involve the consumption of natural gas. Project construction would also consume energy in the form of petroleum-based fuels associated with the use of off-road construction vehicles and equipment on the project site, construction worker travel to and from the project site, and delivery and haul truck trips hauling solid waste from and delivering building materials to the project site. During project operation, energy would be consumed for multiple purposes, including heating, air conditioning, appliances, and use of electronics. Energy would also be consumed during project operations related to water usage, solid waste disposal, and vehicle trips. The existing site is served by an 800A, 208V 3-phase electrical service located on the northwest end of the site and one 1200A, 208V, 3-phase service located on the southeast corner of the site. These services will be consolidated and replaced with a 1600A 480V 3-phase service to be located on the southeast corner of the site. The total average monthly electrical consumption is 18,000 kilowatt hours (kWh) for non-summer months, and 22,000 kWh for the summer months. It is expected that the new project would provide for energy efficient lighting and, HVAC to result in overall reduction of energy usage. The commitment of resources required for the construction and operation of the project would limit the availability of such resources for future generations or for other uses during the life of the project. However, the use of such resources would be reduced when compared to what they would be in the absence of complying with the CALGreen Code. Therefore, energy consumption would not result in a substantial increase in energy production for energy providers and the energy demand associated with the project would be less than significant. <u>Documentation:</u> CalEEMod Input and Results for Air Quality Analysis and CalEEMod Input and Results for Greenhouse Gas Emissions Analysis, prepared July 28, 2020, UltraSystems.
SOCIOECONOMIC	
Employment and Income Patterns	The Project would provide affordable housing to the area. The availability of affordable housing would provide its eligible

	residents closer access to public facilities and commercial businesses. Since the housing would be for senior citizens, it is unlikely they would be seeking employment, however, if they were, the location could provide employment opportunities. The Project construction activities may provide temporary short-term employment for construction workers in the City.
Demographic Character Changes, Displacement	The Project would develop affordable housing for senior citizens to meet the needs of the City of Buena Park. Currently, the City has a shortage of housing, including available affordable income housing. This project will assist the City to meet its RHNA requirements for affordable housing. The Project requires a submittal of a General Plan Amendment, Zone Change, Development Agreement, Tentative Parcel Map and Modification to Use Permit. This would allow the residential development on the site. Following the submittal and approval of the necessary plans and permits, the Project would be in conformance with the City's zoning and land use requirements. The Project site contains a church and a parking lot. The church would remain, therefore, no displacement of persons will be associated with the Project. In choosing an architectural style for the Project, the character and scale of the surrounding neighborhood has been taken into consideration to ensure that the Project design and massing blend in with the existing surrounding uses.
COMMUNITY FACILITIES AND SERVICES	
Educational and Cultural Facilities	**Educational:** The project is located within the boundaries of the Buena Park School District, which serves 4,700 students at six elementary schools and one junior high school in the City of Buena Park. The closest public school to the project site is San Marino Elementary School, located about 0.2 mile southeast of the project site. As the project would be age restricted and limited to senior-age residents (62 years and older), it is anticipated that the proposed project would generate no new students at the project site. **Cultural:** As previously discussed in the Historical Resources section above, the church building was evaluated for inclusion in the National Register of Historic Places (NRHP) and determined not to meet the criteria to qualify; it was not assessed for eligibility under the California Register of Historical Resources or the local Buena Park Register. There are two additional resources in the project area recorded with the Office of Historic Preservation Directory of Properties in the Historic Properties Data File Historic Resources Inventory (HRI). These are a 1955 residence at 7890 La Casa Way (HRI # 184420) and another 1955 residence at 5948 Lois Ranchos Drive (HRI # 155453). Neither of these properties was filed with the SCCIC. Both properties are single-

	family residences and have been determined ineligible for the NRHP by consensus through the National Historic Preservation Act Section 106 process. Additionally, MM CUL-1 would ensure that any unexpected discovery of historical resources would be properly handled. Mitigation Measure: **Mitigation Measure CUL-1:** In the event of an unexpected discovery of an historical resource as defined by CEQA Guidelines § 15064.5, during any project related earth disturbing activities, all earth disturbing activities within 30 feet of the find shall be halted and the City of Buena Park shall be notified. The project applicant shall retain an archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards for Archaeology to assess the significance of the find. Impacts on any significant resources shall be mitigated to a less than significant level through data recovery or other methods determined adequate by the archaeologist and that are consistent with the Secretary of the Interior's Standards for Archaeological Documentation. Any identified cultural resources shall be recorded on the appropriate DPR 523 (A L) form and filed with the SCCIC. Construction activities may continue on other parts of the project site while evaluation and treatment of historic archaeological resources takes place. Documentation: Orchard View Gardens Senior Apartment Homes Initial Study and Mitigated Negative Declaration (IS/MND), September 2020, UltraSystems. Phase I Cultural Resources Inventory for the Orchard View Gardens Senior Apartment Homes City of Buena Park, Orange County, California, May 21, 2020, UltraSystems.
Commercial Facilities	The Project is in proximity to existing commercial facilities; and the General Plan Amendment and Zone Change associated with the Project would allow for the development of the proposed residential buildings on site. No additional commercial facilities would be constructed as part of the Project. The submittal and approval of the plans and permits would result in the Project complying with the City's zoning and land use requirements. Documentation: RBF Consulting, 2010. City of Buena Park 2035 General Plan. Accessed online at http://www.buenapark.com/city-departments/community-development/planningdivision/general-plan/2035-general-plan, accessed November 2020.
Health Care and Social Services	Health care services are provided by a variety of private profit and not-for-profit entities in the City and surrounding communities within Orange County. The Project site is located approximately 0.60 miles southeast of several medical centers. Social services are provided by both State, County, and local non-

	profit agencies. These services, if required by the residents of the Project, are available within the City and Orange County. The development of the Project is not expected to impact the access to health care facilities or the ability to serve the population of the Project.
Solid Waste Disposal / Recycling	The city contracts with Park Disposal for collection and disposal of the city's solid waste. The waste stream generated by the City of Buena Park is processed and sorted at the CR&R, Inc. Materials Recovery Facility located at 11292 Western Avenue in the City of Stanton. The majority of the city's solid waste is disposed at one of Orange County's three active landfills: Frank R. Bowerman Landfill in Irvine; Olinda Alpha Landfill in Brea; Prima Deshecha Landfill in San Juan Capistrano the current permitted solid waste disposal includes 11,500 tons per day at the Frank R. Bowerman Landfill, 8,000 tons per day at Olinda Alpha Landfill and 4,000 tons per day at the Prima Deshecha Landfill. The project's estimated generation of approximately 12.23 pounds per dwelling unit per day (or a total of approximately 808 pounds per day) during project operation represents a fraction of the total daily capacity at the three landfills. Since sufficient permitted landfill capacity exists to support the project, no adverse impact on either solid waste collection service or the landfill disposal system would occur. The project would comply with the City's Source Reduction and Recycling Element (SRRE) program for waste reduction procedures and other applicable local, state, and federal solid waste disposal standards, thereby ensuring that the solid waste stream to regional landfills is reduced in accordance with existing regulations. <u>Documentation:</u> RBF Consulting, 2010. City of Buena Park 2035 General Plan. Accessed online at http://www.buenapark.com/city-departments/community-development/planningdivision/general-plan/2035-general-plan, accessed November 2020.
Waste Water / Sanitary Sewers	The proposed project would connect to the existing ten-inch vitrified clay pipe sewer main line in Valley View Boulevard. As detailed in the city's General Plan EIR, the Buena Park Public Works Department provides sewer services within the city through a network of local sewer mains. The city's local sewer system connects to regional trunk sewer systems for the Orange County Sanitation District (OCSD), with a small portion going to County Sanitation Districts of Los Angeles County for conveyance, treatment and disposal by these agencies. The entire Buena Park collection system is comprised of approximately 165 miles of sewer lines ranging in size from six to 21 inches in diameter. All sewage flow from Buena Park to the OCSD Treatment Plant No. 2 in the City of Huntington Beach. This facility has a total primary treatment capacity of 168 million gallons per day (mgd), with an average daily treatment of

	approximately 127 mgd. Therefore, the plant has an additional treatment capacity of approximately 41 mgd. Treatment Plant No. 2 also has 90 mgd of secondary treatment capacity. The project proposes 66 residential units. The proposed project would generate an estimated 8,080 gallons per day (gpd) of wastewater. The amount of wastewater estimated to be generated by the project would constitute a small fraction of the treatment plant's remaining primary treatment capacity of 41 mgd. Therefore, there would be sufficient capacity available at Treatment Plant No. 2 to meet the needs of the project. The site is served by an existing sanitary sewer network. New connections to the existing sewer main in Valley View Boulevard would be installed. All sewer line sizes and connections are subject to review by the city. No new treatment facilities or expanded entitlements would be required. <u>Documentation:</u> RBF Consulting, 2010. City of Buena Park 2035 General Plan. Accessed online at http://www.buenapark.com/city-departments/community-development/planningdivision/general-plan/2035-general-plan, accessed November 2020.
Water Supply	The City relies on two major water supply sources, including imported water from the Metropolitan Water District (MWD) and local groundwater from the Orange County Groundwater Basin, managed by the Orange County Water District (OCWD). As of 2015, the city relies on approximately 73 percent groundwater and 27 percent imported water for drinking water supply. The City's 2015 Urban Water Management Plan (UWMP) states that the City of Buena Park will be able to have adequate water supplies for all users, including multi-family residences, through the year 2040. The proposed project would connect to the existing six-inch water main in Valley View Boulevard. As discussed in the Waste Water section above, the project would result in a nominal increase in water demand compared to existing conditions. <u>Documentation:</u> Arcadis U.S., Inc. (Arcadis), 2015. City of Buena Park Final 2015 Urban Water Management Plan. Accessed online at: http://www.buenapark.com/home/showdocument?id=9566. Accessed November 2020.
Public Safety - Police, Fire and Emergency Medical	**Police:** The Buena Park Police Department (BPPD) provides police protection to the City of Buena Park; its headquarters is located next to Buena Park City Hall at 6650 Beach Boulevard, about 2.3 miles northwest of the project site. An information request letter was sent to the Buena Park Police Department asking about the potential impacts of the project to law enforcement services. As detailed in the response from BPPD Operations Captain Gary Worrall, the proposed project is under the jurisdiction of the Buena Park Police Department, which would respond to calls for

service from the project site (Worrall, 2020). Captain Worrall stated that the proposed project would not require construction of new law enforcement facilities to meet existing law enforcement demands or project demands. Additionally, the Police Department does not anticipate any potential environmental impacts from the proposed project related to providing police services to the project site and the proposed project would likely not have potentially significant impacts on the Police Department's level of service and/or response times (Worrall, 2020).

Fire:

Fire Services for the City of Buena Park are provided by Orange County Fire Authority (OCFA) through an agreement with the city, including primary response for fire suppression and emergency medical services. The nearest station to the project site is OCFA Fire Station 63, located about 0.9 mile southeast of the project site at 9120 Holder Street. Other OCFA fire stations in Buena Park include Station 62 at 7780 Artesia Boulevard, approximately 1.4 miles northeast of the site, and Station 61 at 744 La Palma Avenue, approximately 2.8 miles northeast of the site. The proposed project would not adversely affect demand for fire services as described below. An information request letter was sent to the Orange County Fire Authority asking about the potential impacts of the project to fire service. OCFA Management Assistant William Blumberg stated that the project site would be served by OCFA Fire Stations 13 and 63 (Blumberg, 2020). Mr. Blumberg stated that the proposed project should not require construction of new fire department facilities and that the project should have a less than significant impact on OCFA's level of service and/or response times. However, to reduce impacts on fire service, the OCFA recommends the following (Blumberg, 2020):

1) Ensure that proposed project meets California Fire Code, OCFA Fire Master Plans for Commercial & Residential Development (B-O9) Guideline, and OCFA Architectural Review (E-04) Guideline (For example, access on the proposed plan may not meet current requirements),

2) Participate with the City of Buena Park through developer agreements for future fire facility mitigation.

Based on the response from the OCFA, the proposed project would not require the construction of new fire department facilities and the project should have a less than significant impact on OCFA's level of service and/or response times.

Emergency Medical:

The closest hospital to the project site is the La Palma Intercommunity Hospital, located approximately 0.65-mile northwest of the project site at 7901 Walker Street. The La Palma Intercommunity Hospital is a 141-bed, not for profit, acute-care community hospital that provides medical, emergency and community services (La Palma Intercommunity Hospital, 2020).

	The proposed project would increase the city's population by between 70 to 206 residents. It is unlikely that the entire project's population would need medical assistance at the same time, but in the case that La Palma Intercommunity Hospital reaches its patient capacity, other medical services are available in the city. The construction of the proposed project would adhere to fire codes to ensure that emergency vehicle, personnel and levels of service will be adequately met. Documentation: Orchard View Gardens Senior Apartment Homes Initial Study and Mitigated Negative Declaration (IS/MND), September 2020, UltraSystems. Public Service Request Response Letters Received from BPPD and OCFA
Parks, Open Space and Recreation	The Project includes a 3,000-square foot community center that would offset the demand on the existing city recreational facilities. Furthermore, the project would not require the construction or expansion of recreational facilities outside the limits of the project site.
Transportation and Accessibility	A Transportation Assessment Memo was prepared for the proposed Project by Fehr and Peers on July 23, 2020. Due to resident concerns, the City of Buena Park requested a focused traffic study to review circulation, specifically at the intersection of Valley View Street and San Rafael Drive, and the effects of project traffic in the study area. The Transportation Assessment Memo concluded that the Orchard View Gardens project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system. The project would generate approximately 244 daily trips, which would result in less than significant traffic impact and the project would provide adequate parking to serve the needs of its residents. The project site is located within an existing church property. The proposed activities include demolition of an existing onsite structure, and construction of new residential buildings and a community center. During the construction phase, the project could temporarily impact street traffic adjacent to the project due to construction activities in the right-of-way (ROW). Project construction could reduce the number of lanes or temporarily close a portion of Valley View Street at San Rafael Drive and the frontage roads along Valley View Street. Implementation of MM TRANS-1 would address any potential hazards during the construction phase. It should be noted that the proposed project would have less than significant operational traffic impacts because the project would not increase the level of service during existing plus project

	conditions. The treatment options presented in the traffic analysis for the proposed project would be provided by the project applicant as part of the project's conditions of approval by the City of Buena Park. The treatment options are as follows: • Convert Frontage Road to One-Way Streets • Restrict U-turn Movements with Signage Only • Restrict U-Turn Movements with Signage and Median Extension • Modify Existing Median to include a Right-Turn Lane • Split Phasing on the Minor Legs (Los Molinos Drive and San Rafael Drive) Each treatment option has various construction requirements associated with the development of that project feature. The City of Buena Park will have the final decision as to which treatment options will be implemented following the completion of environmental documentation. The project's circulation system, including driveways and parking areas, would be designed to meet the development standards of the city and would not result in uses or design features that would create traffic hazards. Additionally, as described above, the project applicant would construction treatment options which would improve the traffic circulation in the project area, compared to existing conditions. <u>Mitigation Measure:</u> **Mitigation Measure TRANS-1:** Prior to the start of construction activity in the public right-of-way, the General Contractor shall submit a detailed Construction Management Plan to be reviewed and approved by the City of Buena Park Traffic Engineer. The Construction Management Plan shall specify that the Construction Manager will schedule truck traffic and employee shifts to avoid creating trips during the peak traffic periods, as is feasible for construction operations. All measures including identified truck routes and designated employee parking areas shall be included in the Construction Management Plan. The Plan shall include but is not limited to the following provisions: a) Identification of permitted hours for construction related deliveries and removal of heavy equipment and material; b) Identification of where construction workers would park their personal vehicles during project construction with a requirement that at no time shall construction worker vehicles block any driveways. If complaints are received by the project applicant or City of Buena Park regarding issues with construction worker vehicle parking, the project applicant shall identify alternative parking

	options for construction workers so as not to interfere with adjacent parking availability; c) Identification of how emergency access to and around the project site will be maintained during project construction; d) Identification of haul routes for delivery or removal of heavy and/or oversized equipment or material loads. Where feasible, delivery or removal of oversized equipment or material loads shall be conducted during off-peak hour traffic periods; e) Maintain pedestrian and bicycle connections around the project site and safe crossing locations shall be considered for all pedestrian and bicyclist detours; and f) Maintain the security of the project site by erecting temporary fencing during the construction phase of the project. Any onsite night lighting used during the construction phase of the project shall be in compliance with City of Buena Park lighting requirements. Documentation: Transportation Assessment Memorandum, July 23, 2020, Fehr and Peers.
NATURAL FEATURES	
Unique Natural Features, Water Resources	Development of the project has the potential to result in two types of water quality impacts: (1) short-term impacts due to construction-related discharges; and (2) long-term impacts from operation. Soil disturbance would temporarily occur during project construction, due to earth-moving activities such as excavation and trenching for foundations and utilities, soil compaction and moving, cut and fill activities, and grading. Disturbed soils are susceptible to high rates of erosion from wind and rain, resulting in sediment transport via stormwater runoff from the project area. Erosion and sedimentation affect water quality through interference with photosynthesis, oxygen exchange and respiration, growth, and reproduction of aquatic species. However, the SWPPP would contain site-specific construction stormwater BMPs which would be implemented as part of project design and maintained or replaced as necessary. The Preliminary WQMP describes non-structural LID BMPs (e.g., common area litter control and landscape management; education for property owners, tenants, and occupants) and structural LID BMPs (e.g., trash/waste storage areas which reduce introduction of pollution, use of efficient irrigation systems, water conservation) for the proposed project. Impacts from runoff during construction and operation would therefore not be significant. Documentation: Orchard View Gardens Senior Apartment Homes Initial Study and Mitigated Negative Declaration (IS/MND), September 2020, UltraSystems.

	Preliminary Water Quality Management Plan (WQMP), August 5, 2020, RRM Design Group.
Vegetation, Wildlife	As previously discussed, potential biological-related impacts associated with the Project were addressed in a biological impact analysis prepared for the Project site in the MND Due to several biological and physical disturbances within the BSA, it was determined that all 25 of the special-status plant species identified in the 10-mile radius database query do not have the potential to occur in the BSA. The 24 reported special-status wildlife species (including mammals, birds, insects and reptiles) identified in the search that were determined to have no potential to occur within the project BSA are discussed briefly below because the BSA lacks suitable habitat for foraging, nesting or breeding, or the BSA does not lie within the species reported distribution or elevation range, or a combination of all of those factors. The project site contains ornamental vegetation and building structures that could potentially provide cover and nesting habitat for bird species that have adapted to urban areas, such as rock pigeons (Columba livia) and mourning doves (Zenaida macroura). Native bird species such as mourning doves are protected by the MBTA and the California Fish and Game Code (Sections 3503, 3503.5, and 3513), which render it unlawful to take native breeding birds, their nests, eggs, and young. Indirect impacts on breeding birds could occur from increased noise, vibration and dust during construction, which could adversely affect the breeding behavior of some birds, and lead to the loss (take) of eggs and chicks, or nest abandonment. Therefore, the project has the potential to impact migratory non-game breeding birds and their nests, young and eggs. Several special-status bird species could use the project site for foraging and may be adversely impacted by construction activities. With the implementation of mitigation measure MM BIO-1, the project would have less than significant impacts to native bird species protected under the MBTA and the California Fish and Game Code. <u>Mitigation Measure:</u> **Mitigation Measure BIO-1:** If feasible during project construction, the project applicant shall ensure that vegetation removal shall be restricted to the period between February 1 to September 31, to avoid the breeding season of any migratory species that could be using the area, and to discourage nesting in the vicinity of an upcoming construction area. • If it is not feasible to remove trees outside this window, then, prior to the beginning of vegetation removal and/or earthmoving activities during the period between February 1 and September 31, all vegetation within 250 feet of any

	grading or earthmoving activity shall be surveyed for active nests by a qualified biologist no more than 30 days prior to disturbance. If active nests are found, and the site is within 250 feet of potential construction activity, a temporary fence shall be erected, where appropriate, around the vegetated nest site at a distance of up to 250 feet, depending on the species, from the edge of the canopy, to prevent construction disturbance and intrusions on the nest area. • No construction vehicles shall be permitted within restricted areas (i.e., protection zones), unless directly related to the management or protection of the legally protected species. • If a legally protected species nest is located in vegetation designated for removal, the removal shall be deferred until after September 31, or until the avian biologist can determine that the young have fledged or the nest has become inactive. This mitigation measure will also protect nesting birds from noise and dust impacts potentially caused by project operations. <u>Documentation:</u> Orchard View Gardens Senior Apartment Homes Initial Study and Mitigated Negative Declaration (IS/MND), September 2020, UltraSystems.
Other Factors	No "other factors" of unique natural features are considered for this project.

***Statement of Purpose and Need for the Proposal** [40 CFR 1508.9(b)]:

The underlying purpose and need to which the agency is responding in proposing the action and its alternatives. Describe how the proposed action is intended to address housing and/or community development needs.

The purpose of the Proposed Action is to provide low- and moderate-income housing for seniors and senior households who are experiencing homelessness or were formerly homeless. The proposed project would develop 65 affordable units for senior citizens and one exempt (i.e., market-rate) manager's unit. These units would assist senior citizens with low and moderate incomes, by providing affordable housing. The project would also help the City meet their Regional Housing Needs Allocation (RHNA).

***Existing Conditions and Trends**:

Determine existing conditions and describe the character, features, and resources of the project area and its surroundings; identify the trends that are likely to continue in the absence of the project.

The project site consists of one parcel, APN 069-283-25. The project site is developed with the St. Joseph's Episcopal Church, in a developed and urbanized area in the City of Buena Park. The project site is surrounded by development, including residential land uses to the north, south, and east and Valley View Street, beyond which are homes to the west. Access to the site is provided at one point along Valley View street with an exit from the site just slightly further north. The

area surrounding the site is fully developed with single family residences to the north, east, and south, and more single family across Valley View Street.

Federal housing data defines a household type as 'elderly family' if it consists of two persons with either or both age 62 or over. Of Buena Park's 4,615 such households, 26.4% earn less than 30% of the surrounding area income, (compared to 24.2% in the SCAG region), 47.5% earn less than 50% of the surrounding area income (compared to 30.9% in the SCAG region). As of August 2020, Buena Park had a total of 8,899 units needed to meet their RHNA of which, 2,910 units are either low or moderate income (SCAG 2020).

***Cumulative Impact Analysis:**

Identify below the cumulative impact on the environment that will result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over time.

This project is a single and discrete project, not linked with other ongoing or planned future projects. As such, its impacts are definable to the time and location of their implementation. As a discrete project, no cumulative impacts from associated or future projects are related to this site. Additionally, the City of Buena Park has evaluated cumulative development impacts as part of the preparation of the City's General Plan and have accounted for incremental cumulative impacts related to development at this and adjacent sites within the City. As a result of those evaluations, the City has outlined in the Housing Element of the General Plan to set forth the City's goals, policies, and programs to address the identified housing needs and issues for the 2013-2021 planning period. Compliance with the City's goals, policies, and programs will be required for approval and completion of the Project.

Alternatives:

Identify below other reasonable courses of action that were considered and not selected, such as other sites, design modifications, or other uses of the subject site. Include the benefits and adverse impacts to the environment of each alternative, and the reasons (e.g., economic, engineering, or others) for rejecting it.

No alternatives beyond the No Action Alternative were considered during evaluation of the Proposed Action

***No Action Alternative:**

Identify below the "no action" alternative, describing the most likely conditions expected to exist in the future in the absence of the implementation of any action.

The No Action Alternative would not construct any residential development on the site and would keep the property as a single parcel with a Church and vacant area. Under this alternative, no affordable housing would be developed; and the City would continue to require affordable housing developments to meet the RHNA requirements. The selection of the No Action Alternative would not meet the stated Purpose and Need, which is to provide affordable housing for low- and moderate-income senior citizens.

Additional Studies Performed:

Orchard View Gardens Senior Apartment Homes Initial Study and Mitigated Negative Declaration (IS/MND), September 2020, UltraSystems.

CalEEMod Input and Results for Air Quality Analysis and CalEEMod Input and Results for Greenhouse Gas Emissions Analysis, prepared July 28, 2020, UltraSystems.

Phase I Environmental Site Assessment Report 8300 Valley View Street Buena Park, California 2019, Converse Consultants.

Phase I Cultural Resources Inventory for the Orchard View Gardens Senior Apartment Homes City of Buena Park, Orange County, California, May 21, 2020, UltraSystems.

Ambient Noise Measurement Data, January 24, 2020, UltraSystems.

Preliminary Geotechnical Investigation, Proposed Senior Housing Development, 8300 Valley View Street, Buena Park, California, January 20, 2020, Albus-Keefe & Associates, Inc.

Preliminary Water Quality Management Plan (WQMP), August 5, 2020, RRM Design Group.

Public Service Request Response Letters Received from BPPD and OCFA.

Transportation Assessment Memorandum, July 23, 2020, Fehr and Peers.

Field Inspection (Date and completed by)**:**
November 25, 2019 – Converse Consultants
December 19, 2019 – UltraSystems
January 24, 2020 – UltraSystems
February 10 and 12, 2020 – UltraSystems

List of Sources, Agencies and Persons Consulted:
Airport Land Use Commission Airport Environs Land Use Plan – Joint Forces Training Base Los Alamitos Amended 2016, http://www.ocair.com/commissions/aluc/docs/JFTB-AELUP2016ProposedFINAL.pdf. Accessed November 2020.

Albus-Keefe & Associates, Inc. January 20, 2020. Preliminary Geotechnical Investigation, Proposed Senior Housing Development, 8300 Valley View Street, Buena Park, California.
Arcadis U.S., Inc. (Arcadis), 2015. City of Buena Park Final 2015 Urban Water Management Plan. Accessed online at: http://www.buenapark.com/home/showdocument?id=9566. Accessed November 2020.
Coastal Barrier Resources System Mapper. United States Fish and Wildlife Service. https://www.fws.gov/CBRA/Maps/Mapper.html. Accessed November 2020.

Converse Consultants. 2019. Phase I Environmental Site Assessment Report 8300 Valley View Street Buena Park, California.
Email Conversation with Gary Worrall with BPPD on April 22, 2020.
Email Conversation with William Blumberg with OCFA on April 24, 2020.

Fehr and Peers. July 23, 2020. Transportation Assessment Memorandum.
Google Earth, 2020.

Important Farmland Finder. California Department of Conservation. http://maps.conservation.ca.gov/dlrp/ciff/. Accessed November 2020.
National Flood Hazard Layer Viewer. Federal Emergency Management Association. https://www.fema.gov/national-flood-hazard-layer-nfhl. Accessed November 2020.
National Flood Hazard Layer Viewer. Federal Emergency Management Association. https://www.fema.gov/national-flood-hazard-layer-nfhl. Accessed November 2020.
National Wild and Scenic Rivers System. https://www.rivers.gov/map.php. Accessed November 2020.
RBF Consulting, 2010. City of Buena Park 2035 General Plan. Accessed online at http://www.buenapark.com/city-departments/community-development/planningdivision/general-plan/2035-general-plan, accessed November 2020.

RRM Design Group. August 5, 2020. Preliminary Water Quality Management Plan (WQMP).
SCAG, Pre-Certified Local Housing Data for the City of Buena Park, August 2020, http://www.scag.ca.gov/programs/Documents/LHD/BuenaPark_HE_0920.pdf. Accessed November 2020.
Sole Source Aquifers. U.S. Environmental Protection Agency. https://www.epa.gov/dwssa. Accessed November 2020.

UltraSystems. January 24, 2020. Ambient Noise Measurement Data.

UltraSystems. July 28, 2020. CalEEMod Input and Results for Air Quality Analysis and CalEEMod Input and Results for Greenhouse Gas Emissions Analysis.

UltraSystems. May 21, 2020. Phase I Cultural Resources Inventory for the Orchard View Gardens Senior Apartment Homes City of Buena Park, Orange County, California.

UltraSystems. September 2020. Orchard View Gardens Senior Apartment Homes Initial Study and Mitigated Negative Declaration (IS/MND).

List of Permits Obtained:

Provide a list of permits, reviews, and approvals that are required for project construction.

No permits are required for the development of the NEPA documentation, and no permits have been obtained for the Project as of the date of the development of this EA. Subsequent permits will be required from the City of Buena Park for development of the Project and its components as listed: General Plan Amendment, Zone Change, Development Agreement, Tentative Parcel Map, Modification to Use Permit, Site Plan Review and Approval and Issuance of Building Permits.

OMB No. 2506-0177
(exp.9/30/2021)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Environmental Justice (CEST and EA) – PARTNER

https://www.hudexchange.info/environmental-review/environmental-justice

HUD strongly encourages starting the Environmental Justice analysis only after all other laws and authorities, including Environmental Assessment factors if necessary, have been completed.

1. **Were any adverse environmental impacts identified in any other compliance review portion of this project's total environmental review?**

   ☐Yes → *Continue to Question 2.*

   ☒No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

2. **Were these adverse environmental impacts disproportionately high for low-income and/or minority communities?**

   ☐Yes

   Explain:

   Click here to enter text.

   → *The RE/HUD must work with the affected low-income or minority community to decide what mitigation actions, if any, will be taken. Provide any supporting documentation.*

   ☐No

   Explain:

   Click here to enter text.

   → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

Include all documentation supporting your findings in your submission to HUD.

This project will not have any negative impacts on low-income and minority persons. The Project is being developed as affordable housing for seniors with the purpose of providing economically disadvantaged groups access to affordable housing.

The Project will not displace or otherwise negatively impact low-income or minority persons. The Project does not require the removal of any housing for its development.

This project is seen as an overall benefit to economically disadvantaged groups.

OMB No. 2506-0177
(exp. 9/30/2021)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet is designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Housing Requirements – PARTNER

Many Housing Division programs have additional requirements beyond those listed at 50.4. Some of these relate to compliance with 50.3(i) and others relate to site nuisances and hazards.

Requirements for evaluating additional housing requirements vary by program. Refer to the appropriate guidance for your program area (i.e. the Multifamily Accelerated Processing (MAP) guide, Chapter 7 of the Healthcare Mortgage Insurance Handbook, etc.) for specific requirements.

Lead-based paint

Lead-based paint may be present in buildings built prior to 1978. Guidance materials related to lead-based paint, including a helpful online Lead Rule Compliance Advisor, may found by following on HUD's website. Buildings constructed in 1978 or later do not require lead-based paint testing. Refer to specific program guidance for additional exemptions and requirements.

Was a lead-based paint inspection or survey performed by the appropriate certified lead professional?

☐ Yes. → *Continue to next question.*
☐ No, because the project was previously deemed to be lead free. → *Provide all lead free certificates.*
☒ No, because the project does not involve any buildings constructed prior to 1978. → *Provide documentation of construction date(s).*
☐ No, because program guidance does not require testing for this type of project. (For example: HUD's lead-based paint requirements at 24 CFR Part 35 do not apply to housing designated exclusively for the elderly or persons with disabilities, unless a child of less than 6 years of age resides or is expected to reside in such housing. In addition, the requirements do not apply to 0-bedroom dwelling units.) → *Explain determination below.*

Was lead-based paint identified on site?

☐ Yes. → *Refer to program guidance for remediation requirements. Describe the testing procedure and findings in the textbox below and any necessary mitigation measures in the Mitigation textbox at the bottom of this screen. Upload all documentation below.*
☐ No. → *Provide all testing documents demonstrating that no lead-based paint was found.*

Describe how exemption or compliance was met and provide any relevant documents such as reports, surveys, and letters.

A Phase I Site Assessment was prepared for the project. A structure called "The Barn" is located on the northern part of the project site and is a small stand-alone building, located northeast of the existing church and administration buildings on site. "The Barn" would be demolished as part of the proposed project. Based on aerial photographs "The Barn" was present sometime after 1994 and prior to 2002.

Therefore, it is unlikely but unconfirmed as to whether or not "The Barn" was constructed with Asbestos Containing Materials (ACMs) and Lead-Based Paint (LBP) that can cause adverse health effects when airborne.

Radon

Many Housing Programs require radon testing and mitigation. Radon is a colorless, odorless gas that can enter the air inside of buildings. Refer to specific program guidance for testing and mitigation requirements.

Was radon testing performed following the appropriate and latest ANSI-AARST standard?

☐ Yes → *Continue to next question.*

☒ No, because program guidance does not require testing for this type of project. → *Note that radon testing is encouraged for all HUD projects, even where it is not required. Explain why radon testing was not completed below.*

Did testing identify one or more units with radon levels above the EPA action level for mitigation?

☐ Yes → *Refer to program guidance for remediation requirements. Describe the testing procedure, findings, and mitigation measures below and provide all documentation.*

☐ No → *Provide all testing documents demonstrating that radon was not found above EPA action levels for mitigation.*

Describe how exemption or compliance was met and provide any relevant documents such as reports, surveys, and letters.

Click or tap here to enter text.

Asbestos

Asbestos may be present in buildings built prior to 1978. Buildings constructed in 1978 or later do not require an asbestos survey. Refer to specific program guidance for additional exemptions and requirements.

Was a comprehensive asbestos building survey performed pursuant to the relevant requirements of the latest ASTM standard?

☐ Yes

☒ No, because the project does not involve any buildings constructed prior to 1978. → *Provide documentation of construction date(s).*

☐ No, because program guidance does not require testing for this type of project. → *Explain in textbox below.*

Was asbestos identified on site?

☐ Yes, friable or damaged asbestos was identified. → *Refer to program guidance for remediation requirements. Describe the testing procedure, findings, and mitigation measures below and provide all documentation.*

☐ Yes, asbestos was identified, but it was not friable or damaged. → *Refer to program guidance for remediation requirements. Describe the testing procedure, findings, and mitigation measures below and provide all documentation.*

☐ No → *Provide all testing documents demonstrating that no asbestos was found.*

Describe how exemption or compliance was met and provide any relevant documents such as reports, surveys, and letters.

A Phase I Site Assessment was prepared for the project. A structure called "The Barn" is located on the northern part of the project site and is a small stand-alone building, located northeast of the existing church and administration buildings on site. "The Barn" would be demolished as part of the proposed project. Based on aerial photographs "The Barn" was present sometime after 1994 and prior to 2002. Therefore, it is unlikely but unconfirmed as to whether or not "The Barn" was constructed with Asbestos Containing Materials (ACMs) and Lead-Based Paint (LBP) that can cause adverse health effects when airborne.

Additional Nuisances and Hazards

Many Housing Programs have additional requirements with respect to common nuisances and hazards. These include High Pressure Pipelines; Fall Hazards (High Voltage Transmission Lines and Support Structures); Oil or Gas Wells, Sour Gas Wells and Slush Pits; and Development planned on filled ground. There may also be additional regional or local requirements.

Describe how compliance was met for any relevant nuisance, hazard or local requirement and provide any relevant documents such as reports, surveys, and letters.

The Phase I determined that there are no RECs on the project site. Although the project site was used for agricultural purposes in the past, it should not be of concern based on passage of time since the last possible agricultural application. The Phase I ESA concluded that the project site was not listed in any regulatory database as a hazardous site.

The proposed project would include the transport, storage, and use of chemical agents, solvents, paints, and other hazardous materials commonly associated with construction activities. Chemical transport, storage, and use would comply with Resource Conservation and Recovery Act (RCRA); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); California Hazardous Waste Control Law26; Occupational Safety and Health Administration (OSHA), and City of Buena Park Fire Department requirements.

During construction, there would be a limited risk of spills and/or accidental release of hazardous materials that are used for the operation and maintenance of construction equipment. The onsite temporary handling, storage, and usage of these materials would be subject to applicable local, state, and/or federal regulations, including Best Management Practices (BMPs) required by the City of Buena Park. Compliance with state and local construction requirements would reduce the risk of any damage or injury from any potential spill hazards to a less than significant level.

A structure called "The Barn" is located on the northern part of the project site and is a small stand-alone building, located northeast of the existing church and administration buildings on site. "The Barn" would be demolished as part of the proposed project. Based on aerial photographs "The Barn" was present sometime after 1994 and prior to 2002. Therefore, it is unlikely but unconfirmed as to whether or not "The Barn" was constructed with Asbestos Containing Materials (ACMs) and Lead-Based Paint (LBP) that can cause adverse health effects when airborne.

As detailed in the Phase I report prepared for the project, the project site in not located on the Cortese List. The nearest active site to the project site, Tosco – 76 #5398, is located at 5014 Orangethorpe Avenue in La Palma, California, approximately 1.5 miles northwest of the project site. Thus, because the project site is not located on or near a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5.

San Marino Elementary School is located approximately 0.2 mile southeast of the project site. Project personnel would ensure that all hazardous materials during construction would adhere to any applicable local, state, and/or federal regulations including BMPs required by the City of Buena Park.

Mitigation Measure HAZ – 1 would be implemented to address impacts related to demolition and construction related hazardous materials related to potential impacts from ACM and LBP.

Mitigation Measure HAZ-1:
Prior to demolition, the existing structure called “The Barn” shall be assessed for the presence of asbestos-containing materials (ACMs) and lead-based paint (LBP). If ACMs and/or LBP are found, the resulting construction debris shall be removed and disposed of at a landfill that can accept hazardous materials, including asbestos and lead-based paint. All ACMs and LBP shall be removed prior to demolition, as required, and in accordance with all applicable laws, including guidelines of the Occupational Safety and Health Administration (OSHA).

Documentation:

Phase I Environmental Site Assessment Report 8300 Valley View Street Buena Park, California 2019, Converse Consultants.

OMB No. 2506-0177
(exp.9/30/2021)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Explosive and Flammable Hazards (CEST and EA) – PARTNER

https://www.hudexchange.info/environmental-review/explosive-and-flammable-facilities

1. **Is the proposed HUD-assisted project itself the development of a hazardous facility (a facility that mainly stores, handles or processes flammable or combustible chemicals such as bulk fuel storage facilities and refineries)?**

   ☒ No
   → *Continue to Question 2.*

   ☐ Yes
   Explain:
   Click here to enter text.
   → *Go directly to Question 5.*

2. **Does this project include any of the following activities: development, construction, rehabilitation that will increase residential densities, or conversion?**

   ☐ No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

   ☒ Yes → *Continue to Question 3.*

3. **Within 1 mile of the project site, are there any current *or planned* stationary aboveground storage containers that are covered by 24 CFR 51C? Containers that are NOT covered under the regulation include:**
   - **Containers 100 gallons or less in capacity, containing common liquid industrial fuels OR**
   - **Containers of liquified petroleum gas (LPG) or propane with a water volume capacity of 1,000 gallons or less that meet the requirements of the 2017 or later version of National Fire Protection Association (NFPA) Code 58.**

   If all containers within the search area fit the above criteria, answer "no." For any other type of aboveground storage container within the search area that holds one of the flammable or explosive materials listed in Appendix I of 24 CFR part 51 subpart C, answer "yes."

   ☒ No
   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide all documents used to make your determination.*

   ☐ Yes
   → *Continue to Question 4.*

4. **Visit HUD's website to identify the appropriate tank or tanks to assess and to calculate the required separation distance using the electronic assessment tool. To document this step in the analysis, please attach the following supporting documents to this screen:**
    - **Map identifying the tank selected for assessment, and showing the distance from the tank to the proposed HUD-assisted project site; and**
    - **Electronic assessment tool calculation of the required separation distance.**

   Based on the analysis, is the proposed HUD-assisted project site located at or beyond the required separation distance from all covered tanks?

   ☐ Yes

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

   ☐ No

   → *Go directly to Question 6.*

5. **Is the hazardous facility located at an acceptable separation distance from residences and any other facility or area where people may congregate or be present?**

   Please visit HUD's website for information on calculating Acceptable Separation Distance.

   ☐ Yes

   → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

   Provide map(s) showing the location of the project site relative to residences and any other facility or area where people congregate or are present and your separation distance calculations.

   ☐ No

   → *Continue to Question 6.*

   Provide map(s) showing the location of the project site relative to residences and any other facility or area where people congregate or are present and your separation distance calculations.

6. **For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Mitigation measures may include both natural and manmade barriers, modification of the project design, burial or removal of the hazard, or other engineered solutions. Describe selected mitigation measures, including the timeline for implementation, and attach an implementation plan. If negative effects cannot be mitigated, cancel the project at this location.**

   Note that only licensed professional engineers should design and implement blast barriers. If a barrier will be used or the project will be modified to compensate for an unacceptable separation distance, provide approval from a licensed professional engineer.

   Click here to enter text.

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates

- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

Include all documentation supporting your findings in your submission to HUD.

The Phase I determined that there are no RECs on the project site. Although the project site was used for agricultural purposes in the past, it should not be of concern based on passage of time since the last possible agricultural application. The Phase I ESA concluded that the project site was not listed in any regulatory database as a hazardous site.

Documentation:

Phase I Environmental Site Assessment Report 8300 Valley View Street Buena Park, California 2019, Converse Consultants.

OMB No. 2506-0177
(exp.9/30/2021)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Farmlands Protection (CEST and EA) - PARTNER

https://www.hudexchange.info/environmental-review/farmlands-protection

1. **Does your project include any activities, including new construction, acquisition of undeveloped land or conversion, that could convert agricultural land to a non-agricultural use?**
   ☐ Yes → *Continue to Question 2.*
   ☒ No
   → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

2. **Does "important farmland," including prime farmland, unique farmland, or farmland of statewide or local importance regulated under the Farmland Protection Policy Act, occur on the project site?**
   You may use the links below to determine important farmland occurs on the project site:
   - Utilize USDA Natural Resources Conservation Service's (NRCS) Web Soil Survey http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm
   - Check with your city or county's planning department and ask them to document if the project is on land regulated by the FPPA (zoning important farmland as non-agricultural does not exempt it from FPPA requirements)
   - Contact NRCS at the local USDA service center http://offices.sc.egov.usda.gov/locator/app?agency=nrcs or your NRCS state soil scientist https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951 for assistance

   ☐ No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.*

   ☐ Yes → *Continue to Question 3.*

3. **Consider alternatives to completing the project on important farmland and means of avoiding impacts to important farmland.**
   - Complete form **AD-1006**, "Farmland Conversion Impact Rating" and contact the state soil scientist before sending it to the local NRCS District Conservationist.
   - Work with NRCS to minimize the impact of the project on the protected farmland. When you have finished with your analysis, return a copy of form AD-1006 to the USDA-NRCS State Soil Scientist or his/her designee informing them of your determination.

Work with the RE/HUD to determine how the project will proceed. Document the conclusion:

☐Project will proceed with mitigation.

Explain in detail the proposed measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

Click here to enter text.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide form AD-1006 and all other documents used to make your determination.*

☐Project will proceed without mitigation.

Explain why mitigation will not be made here:

Click here to enter text.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide form AD-1006 and all other documents used to make your determination.*

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

Include all documentation supporting your findings in your submission to HUD.

The California Department of Conservation (DOC) established the Farmland Mapping and Monitoring Program (FMMP) in 1982 to identify critical agricultural lands and track the conversion of these lands to other uses. The FMMP is a non-regulatory program and provides a consistent and impartial analysis of agricultural land use and land use changes throughout California. The project site and surrounding uses are designated by the FMMP as "Urban and Built-Up Land," which means that no agricultural uses occupy the site. The project is located within an urbanized area. Therefore, no farmland would be converted to non-agricultural use and no impacts would occur.

Documentation:

Important Farmland Finder. California Department of Conservation. http://maps.conservation.ca.gov/dlrp/ciff/. Accessed November 2020.

OMB No. 2506-0177
(exp. 9/30/2021)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Flood Insurance (CEST and EA) – PARTNER

https://www.hudexchange.info/environmental-review/flood-insurance

1. **Does this project involve mortgage insurance, refinance, acquisition, repairs, rehabilitation, or construction of a structure, mobile home, or insurable personal property**?

   ☐No. This project does not require flood insurance or is excepted from flood insurance.
   → *Continue to the Worksheet Summary.*

   ☒Yes → *Continue to Question 2.*

2. **Provide a FEMA/FIRM map showing the site.**
   The Federal Emergency Management Agency (FEMA) designates floodplains. The FEMA Map Service Center provides this information in the form of FEMA Flood Insurance Rate Maps (FIRMs).

   Is the structure, part of the structure, or insurable property located in a FEMA-designated Special Flood Hazard Area?

   ☒ No → *Continue to the Worksheet Summary.*

   ☐ Yes → *Continue to Question 3.*

3. **Is the community participating in the National Flood Insurance Program *or* has less than one year passed since FEMA notification of Special Flood Hazards?**

   ☐ Yes, the community is participating in the National Flood Insurance Program.
   Flood insurance is required. Provide a copy of the flood insurance policy declaration or a paid receipt for the current annual flood insurance premium and a copy of the application for flood insurance.
   → *Continue to the Worksheet Summary.*

   ☐ Yes, less than one year has passed since FEMA notification of Special Flood Hazards.
   If less than one year has passed since notification of Special Flood Hazards, no flood Insurance is required.
   → *Continue to the Worksheet Summary.*

   ☐ No. The community is not participating, or its participation has been suspended.
   Federal assistance may not be used at this location. Cancel the project at this location.

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

Include all documentation supporting your findings in your submission to HUD.

The project site is located in Zone X, Areas determined to be outside the 0.2% annual chance [500-year] floodplain, as shown on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) Map Number 06059C0109J. The 500-year Flood Zone describes a flood event that has a 0.2 percent chance of occurring in any year. The proposed project would not impede or redirect flood flows because the project site is not adjacent to any open bodies of water. The nearest body of water is Moody Creek, approximately 0.35-mile northwest of the project site. Development at the Project site is not subject to additional evaluations under Executive Order 11988.

Documentation:

National Flood Hazard Layer Viewer. Federal Emergency Management Association. https://www.fema.gov/national-flood-hazard-layer-nfhl. Accessed November 2020.

OMB No. 2506-0177
(exp. 9/30/2021)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Floodplain Management (CEST and EA) – PARTNER

https://www.hudexchange.info/environmental-review/floodplain-management

1. **Does 24 CFR 55.12(c) exempt this project from compliance with HUD's floodplain management regulations in Part 55?**

   ☐ Yes

   Provide the applicable citation at 24 CFR 55.12(c) here. If project is exempt under 55.12(c)(6) or (8), provide supporting documentation.

   Click here to enter text.

   → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Continue to the Worksheet Summary.*

   ☒ No → *Continue to Question 2.*

2. **Provide a FEMA/FIRM map showing the site.**

   The Federal Emergency Management Agency (FEMA) designates floodplains. The FEMA Map Service Center provides this information in the form of FEMA Flood Insurance Rate Maps (FIRMs).

   Does your project occur in a floodplain?

   ☐ No → *Continue to the Worksheet Summary below.*

   ☐ Yes

   Select the applicable floodplain using the FEMA map or the best available information:

   ☐ Floodway → *Continue to Question 3, Floodways*

   ☐ Coastal High Hazard Area (V Zone) → *Continue to Question 4, Coastal High Hazard Areas*

   ☒ 500-year floodplain (B Zone or shaded X Zone) → *Continue to Question 5, 500-year Floodplains*

   ☐ 100-year floodplain (A Zone) → *The 8-Step Process is required. Continue to Question 6, 8-Step Process*

3. **Floodways**

   Is this a functionally dependent use?

   ☐ Yes

The 8-Step Process is required. Work with HUD or the RE to assist with the 8-Step Process.
→ *Continue to Worksheet Summary.*

☐ No → *Federal assistance may not be used at this location unless an exception in 55.12(c) applies. You must either choose an alternate site or cancel the project.*

4. **Coastal High Hazard Area**

Is this a critical action such as a hospital, nursing home, fire station, or police station?

☐ Yes → *Critical actions are prohibited in coastal high hazard areas unless an exception in 55.12(c) applies. You must either choose an alternate site or cancel the project.*

☐ No

Does this action include new construction that is not a functionally dependent use, existing construction (including improvements), or reconstruction following destruction caused by a disaster?

☐ Yes, there is new construction of something that is not a functionally dependent use. New construction must be designed to FEMA standards for V Zones at 44 CFR 60.3(e) (24 CFR 55.1(c)(3)(i)).
→ *Continue to Question 6, 8-Step Process*

☐ No, this action concerns only existing construction.
Existing construction must have met FEMA elevation and construction standards for a coastal high hazard area or other standards applicable at the time of construction.
→ *Continue to Question 6, 8-Step Process*

5. **500-year Floodplain**

Is this a critical action?

☒ No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

☐Yes → *Continue to Question 6, 8-Step Process*

6. **8-Step Process**.

Is this 8-Step Process required? Select one of the following options:

☐ 8-Step Process applies.
This project will require mitigation and may require elevating structure or structures. See the link to the HUD Exchange above for information on HUD's elevation requirements.
→ *Work with the RE/HUD to assist with the 8-Step Process. Continue to Worksheet Summary.*

☐ 5-Step Process is applicable per 55.12(a)(1-3).
Provide the applicable citation at 24 CFR 55.12(a) here.
Click here to enter text.
→ *Work with the RE/HUD to assist with the 5-Step Process. Continue to Worksheet Summary.*

☐ 8-Step Process is inapplicable per 55.12(b)(1-4).
Provide the applicable citation at 24 CFR 55.12(b) here.
Click here to enter text.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

Include all documentation supporting your findings in your submission to HUD.

The project site is located in Zone X, *Areas determined to be outside the 0.2% annual chance* [500-year] *floodplain*, as shown on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) Map Number 06059C0109J.Flood insurance is not required for properties in this zone. Site development is not expected to have an impact on flooding or effect on-or offsite properties; appropriate drainage features are designed into the Project that comply with overall City-wide storm drain facilities. An increase in any base flood elevation is not expected with the development of this project.

Documentation:

National Flood Hazard Layer Viewer. Federal Emergency Management Association. https://www.fema.gov/national-flood-hazard-layer-nfhl. Accessed November 2020.

OMB No. 2506-0177
(exp. 9/30/2021)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Historic Preservation (CEST and EA) – PARTNER

https://www.hudexchange.info/environmental-review/historic-preservation

Threshold

Is Section 106 review required for your project?

☐ No, because a Programmatic Agreement states that all activities included in this project are exempt. (See the PA Database to find applicable PAs.)
Either provide the PA itself or a link to it here. Mark the applicable exemptions or include the text here:
Click here to enter text.

→ *Continue to the Worksheet Summary.*

☐ No, because the project consists solely of activities included in a No Potential to Cause Effects memo or other determination [36 CFR 800.3(a)(1)].
Either provide the memo itself or a link to it here. Explain and justify the other determination here:
Click here to enter text.

→ *Continue to the Worksheet Summary.*

☒Yes, because the project includes activities with potential to cause effects (direct or indirect). → *Continue to Step 1.*

The Section 106 Process
After determining the need to do a Section 106 review, HUD or the RE will initiate consultation with regulatory and other interested parties, identify and evaluate historic properties, assess effects of the project on properties listed on or eligible for the National Register of Historic Places, and resolve any adverse effects through project design modifications or mitigation.
Step 1: Initiate consultation
Step 2: Identify and evaluate historic properties
Step 3: Assess effects of the project on historic properties
Step 4: Resolve any adverse effects

Only RE or HUD staff may initiate the Section 106 consultation process. Partner entities may gather information, including from SHPO records, identify and evaluate historic properties, and make initial assessments of effects of the project on properties listed in or eligible for the National Register of Historic Place. Partners should then provide their RE or HUD with all of their analysis and documentation so that they may initiate consultation.

Step 1 - Initiate Consultation

The following parties are entitled to participate in Section 106 reviews: Advisory Council on Historic Preservation; State Historic Preservation Officers (SHPOs); federally recognized Indian tribes/Tribal Historic Preservation Officers (THPOs); Native Hawaiian Organizations (NHOs); local governments; and project grantees. The general public and individuals and organizations with a demonstrated interest in a project may participate as consulting parties at the discretion of the RE or HUD official. Participation varies with the nature and scope of a project. Refer to HUD's website for guidance on consultation, including the required timeframes for response. Consultation should begin early to enable full consideration of preservation options.

Use the When To Consult With Tribes checklist within Notice CPD-12-006: Process for Tribal Consultation to determine if the RE or HUD should invite tribes to consult on a particular project. Use the Tribal Directory Assessment Tool (TDAT) to identify tribes that may have an interest in the area where the project is located. Note that only HUD or the RE may initiate consultation with Tribes. Partner entities may prepare a draft letter for the RE or HUD to use to initiate consultation with tribes, but may not send the letter themselves.

List all organizations and individuals that you believe may have an interest in the project here:

- Agua Caliente Band of Cahuilla Indians
- Gabrieleno Band of Mission Indians – Kizh Nation
- Gabrieleno/Tongva San Gabriel Band of Mission Indians
- Gabrielino/Tongva Nation
- Gabrielino Tongva Indians of California Tribal Council
- Gabrielino-Tongva Tribe
- Juaneño Band of Mission Indians (Johnson)
- Juaneño Band of Mission Indians – Acjachemen Nation (Belardes)
- Juaneño Band of Mission Indians – Acjachemen Nation (Romero)
- La Jolla Band of Luiseño Indians
- Pals Band of Mission Indians
- Pauma Band of Luiseño Indians
- Pechanga Band of Luiseño Indians
- Rincon Band of Luiseño Indians
- San Luis Rey Band of Mission Indians
- Soboba Band of Luiseño Indians

→ *Continue to Step 2.*

Step 2 - Identify and Evaluate Historic Properties

Provide a preliminary definition of the Area of Potential Effect (APE), either by entering the address(es) or providing a map depicting the APE. Attach an additional page if necessary.
The APE consists of an area a half mile buffer from the project site.

Gather information about known historic properties in the APE. Historic buildings, districts and archeological sites may have been identified in local, state, and national surveys and registers, local historic

districts, municipal plans, town and county histories, and local history websites. If not already listed on the National Register of Historic Places, identified properties are then evaluated to see if they are eligible for the National Register. Refer to HUD's website for guidance on identifying and evaluating historic properties.

In the space below, list historic properties identified and evaluated in the APE.
Every historic property that may be affected by the project should be listed. For each historic property or district, include the National Register status, whether the SHPO has concurred with the finding, and whether information on the site is sensitive. Attach an additional page if necessary.

The primary historic feature in the vicinity of the project site is the St. Joseph's Episcopal Church, built circa 1965, which is located on the project site. Saint Joseph's Episcopal Church, 30-177528, is located at 8300 Valley View Street, in the city of Buena Park, in Orange County, California. It was constructed circa 1965 in what is now a residential neighborhood but originally was open dairy farm land. It was built in the Spanish Eclectic style in an asymmetrical, irregular shape. It has a concrete foundation, stucco exterior and a front gable roof with Spanish tile; wings on each side of the church contain shed roofs also with Spanish tile. It has a square bell tower with a Spanish tiled gable roof situated in the northwest front corner. The church building was evaluated for inclusion in the National Register of Historic Places (NRHP) and determined not to meet the criteria to qualify; it was not assessed for eligibility under the California Register of Historical Resources or the local Buena Park Register. There are two additional resources in the project area recorded with the Office of Historic Preservation Directory of Properties in the Historic Properties Data File Historic Resources Inventory (HRI). These are a 1955 residence at 7890 La Casa Way (HRI # 184420) and another 1955 residence at 5948 Lois Ranchos Drive (HRI # 155453). Neither of these properties was filed with the SCCIC. Both properties are single-family residences and have been determined ineligible for the NRHP by consensus through the National Historic Preservation Act Section 106 process.

Provide the documentation (survey forms, Register nominations, concurrence(s) and/or objection(s), notes, and photos) that justify your National Register Status determination.

Was a survey of historic buildings and/or archeological sites done as part of the project?
If the APE contains previously unsurveyed buildings or structures over 50 years old, or there is a likely presence of previously unsurveyed archeological sites, a survey may be necessary. For Archeological surveys, refer to HP Fact Sheet #6, Guidance on Archeological Investigations in HUD Projects.

☒ Yes → *Provide survey(s) and report(s) and continue to Step 3.*
Additional notes:
Click here to enter text.

☐ No → *Continue to Step 3.*

Step 3 - Assess Effects of the Project on Historic Properties

Only properties that are listed on or eligible for the National Register of Historic Places receive further consideration under Section 106. Assess the effect(s) of the project by applying the Criteria of Adverse Effect. (36 CFR 800.5) Consider direct and indirect effects as applicable as per HUD guidance.

Choose one of the findings below to recommend to the RE or HUD.

Please note: this is a recommendation only. It is **not** the official finding, which will be made by the RE or HUD, but only your suggestion as a Partner entity.

☒ No Historic Properties Affected

Document reason for finding:

☐ No historic properties present.

☒ Historic properties present, but project will have no effect upon them.

☐ No Adverse Effect

Document reason for finding and provide any comments below.

Comments may include recommendations for mitigation, monitoring, a plan for unanticipated discoveries, etc.

Click here to enter text.

☐ Adverse Effect

Document reason for finding:

Copy and paste applicable Criteria into text box with summary and justification.

Criteria of Adverse Effect: 36 CFR 800.5]

Click here to enter text.

Provide any comments below:

Comments may include recommendations for avoidance, minimization, and/or mitigation.

Click here to enter text.

Remember to provide all documentation that justifies your National Register Status determination and recommendations along with this worksheet.

OMB No. 2506-0177
(exp. 9/30/2021)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Noise (EA Level Reviews) – PARTNER

https://www.hudexchange.info/programs/environmental-review/noise-abatement-and-control

1. **What activities does your project involve? Check all that apply:**

☒ New construction for residential use

NOTE: HUD assistance to new construction projects is generally prohibited if they are located in an Unacceptable zone, and HUD discourages assistance for new construction projects in Normally Unacceptable zones. See 24 CFR 51.101(a)(3) for further details.

→ *Continue to Question 2.*

☐ Rehabilitation of an existing residential property

NOTE: For major or substantial rehabilitation in Normally Unacceptable zones, HUD encourages mitigation to reduce levels to acceptable compliance standards. For major rehabilitation in Unacceptable zones, HUD strongly encourages mitigation to reduce levels to acceptable compliance standards. See 24 CFR 51 Subpart B for further details.

→ *Continue to Question 2.*

☐ None of the above

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

2. **Complete the Preliminary Screening to identify potential noise generators in the vicinity (1000' from a major road, 3000' from a railroad, or 15 miles from an airport).**
Indicate the findings of the Preliminary Screening below:

☐ There are no noise generators found within the threshold distances above.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing the location of the project relative to any noise generators.*

☒ Noise generators were found within the threshold distances.

→ *Continue to Question 3.*

3. **Complete the Noise Assessment Guidelines to quantify the noise exposure. Indicate the findings of the Noise Assessment below:**

☐ Acceptable (65 decibels or less; the ceiling may be shifted to 70 decibels in circumstances described in §24 CFR 51.105(a))

Indicate noise level here: Click here to enter text.
→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide noise analysis, including noise level and data used to complete the analysis.*

☒ Normally Unacceptable: (Above 65 decibels but not exceeding 75 decibels; the floor may be shifted to 70 decibels in circumstances described in 24 CFR 51.105(a))

Indicate noise level here: Click here to enter text.

If project is rehabilitation:
→ *Continue to Question 4. Provide noise analysis, including noise level and data used to complete the analysis.*

If project is new construction:
Is the project in a largely undeveloped area[1]?

☒ No

☐ Yes → ***The project requires completion of an Environmental Impact Statement (EIS) pursuant to 51.104(b)(1)(i).***

→ *Continue to Question 4. Provide noise analysis, including noise level and data used to complete the analysis.*

☐ Unacceptable: (Above 75 decibels)

Indicate noise level here: Click here to enter text.

If project is rehabilitation:
HUD strongly encourages conversion of noise-exposed sites to land uses compatible with high noise levels. Consider converting this property to a non-residential use compatible with high noise levels.
→ *Continue to Question 4. Provide noise analysis, including noise level and data used to complete the analysis, and any other relevant information.*

If project is new construction:
The project requires completion of an Environmental Impact Statement (EIS) pursuant to 51.104(b)(1)(i). *Work with HUD or the RE to either complete an EIS or obtain a waiver signed by the appropriate authority.*
→ *Continue to Question 4.*

4. **HUD strongly encourages mitigation be used to eliminate adverse noise impacts. Work with the RE/HUD on the development of the mitigation measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.**

☒ Mitigation as follows will be implemented:

Mitigation Measure N-1:

[1] A largely undeveloped area means the area within 2 miles of the project site is less than 50 percent developed with urban uses or does not have water and sewer capacity to serve the project.

The Applicant would be required to implement features such as double-pane acoustic windows, 24" high single-paned, minimum 3/8'' thick tempered or laminated glass above solid 42" high walls for a total height of 66" or 5.5 feet at patios of impacted units, and 12" high single-paned, minimum 3/8'' thick tempered or laminated glass above solid 42" high walls for a total height of 54" or 4.5 feet on balconies of impacted units to attenuate noise to at or below 65 dBA DNL at 2 meters from the proposed structure in compliance with Section 51.103(c).

→ *Provide drawings, specifications, and other materials as needed to describe the project's noise mitigation measures.*
Continue to the Worksheet Summary.

☐ No mitigation is necessary.
Explain why mitigation will not be made here:
Click here to enter text.
→ *Continue to the Worksheet Summary.*

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

Include all documentation supporting your findings in your submission to HUD.

Potential noise-related impacts associated with the Project were addressed in a noise impact analysis prepared for the Project site in the MND. That assessment conducted noise studies to determine the impacts of noise on the site from the development of the Project and included ambient noise measurements.

Section 51.101(a)(7) of the HUD guidelines encourages use of quieter construction equipment and methods. Construction equipment would be required throughout construction of the project including demolition, site improvements, site preparation, grading, and building construction. The proposed Project would follow the following best management practices (BMPs) to ensure the use of quieter construction equipment:

- Ensure that construction equipment is properly muffled according to industry standards and be in good working condition.
- Place noise-generating construction equipment and locate construction staging areas away from sensitive uses, where feasible.
- Schedule high noise-producing activities between the hours of 8:00 AM and 7:00 PM to minimize disruption on sensitive uses.
- Implement noise attenuation measures, than diesel equipment, where feasible.
- Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than 30 minutes.
- Construction hours, allowable workdays, and the phone number which may include, but are not limited to, temporary noise barriers or noise blankets around stationary construction noise sources.
- Use electric air compressors and similar power tools rather of the job superintendent shall be clearly posted at all construction entrances to allow for surrounding owners and residents to contact the

job superintendent. If the City or the job superintendent receives a complaint, the superintendent shall investigate, take appropriate corrective action, and report the action taken to the reporting party. Contract specifications shall be included in the proposed project construction documents, which shall be reviewed by the City prior to issuance of a grading permit.

- Project applicants shall require contract specifications that heavily loaded trucks used during construction would be routed away from residential streets to the extent feasible. Contract specifications shall be included in the proposed project construction documents, which shall be reviewed by the City prior to issuance of a grading permit.

With implementation of these BMPs, the project would adhere to HUD's guidelines.

Existing and future noise levels have been calculated for various roadway segments within the City of Buena Park. Twenty-five of the roadway segments modeled (along Valley View Street, Knott Avenue, Western Avenue, Beach Boulevard, Crescent Avenue, La Palma Avenue, Orangethorpe Avenue, and La Mirada Boulevard) would generate noise levels above 70 dBA DNL at 100 feet from centerline. HUD provides a road noise calculator that was utilized to assess roadway noise at the Project location from Valley View Street. The calculator indicated that the noise level at the proposed structures would be 70 dBA DNL which would exceed the HUD exterior noise standard of 65 dBA DNL. Therefore, mitigation measure MM N-1 would require features such as double-pane acoustic windows, 24" high single-paned, minimum 3/8'' thick tempered or laminated glass above solid 42" high walls for a total height of 66" or 5.5 feet at patios of impacted units, and 12" high single-paned, minimum 3/8'' thick tempered or laminated glass above solid 42" high walls for a total height of 54" or 4.5 feet on balconies of impacted units to attenuate noise to at or below 65 dBA DNL.

All residential units would be equipped with a forced air heating ventilation air condition (HVAC) units that allow for a "windows closed" condition (i.e. windows do not need to be left open for ventilation). Typical new construction of multi-family homes with windows closed provided a minimum of 25 dBA exterior to interior noise reduction. As such the interior of the proposed homes would be 45 dBA DNL (70 dBA exterior – 25 dBA attenuation = 45 dBA interior), which is within the HUD 45 dBA DNL noise standard.

The project site's existing conditions and estimated roadway noise would exceed 24 CFR Part 51 Exterior Noise Goals. However, with compliance of the proposed Mitigation Measure, the project would not contribute to any further increase in noise levels. Therefore, the project would be compliant with 24 CFR Part 51 Subpart B.

Mitigation Measure:

The Applicant would be required to implement features such as double-pane acoustic windows, 24" high single-paned, minimum 3/8'' thick tempered or laminated glass above solid 42" high walls for a total height of 66" or 5.5 feet at patios of impacted units, and 12" high single-paned, minimum 3/8'' thick tempered or laminated glass above solid 42" high walls for a total height of 54" or 4.5 feet on balconies of impacted units to attenuate noise to at or below 65 dBA DNL at 2 meters from the proposed structure in compliance with Section 51.103(c).

Documentation:

Orchard View Gardens Senior Apartment Homes Initial Study and Mitigated Negative Declaration (IS/MND), September 2020, UltraSystems.

Ambient Noise Measurement Data, January 24, 2020, UltraSystems.

OMB No. 2506-0177
(exp.9/30/2021)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Sole Source Aquifers (CEST and EA) - PARTNER

https://www.hudexchange.info/environmental-review/sole-source-aquifers

1. **Is the project located on a sole source aquifer (SSA)[1]?**
   ☒No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination, such as a map of your project or jurisdiction in relation to the nearest SSA.*

   ☐Yes → *Continue to Question 2.*

2. **Does the project consist solely of acquisition, leasing, or rehabilitation of an existing building(s)?**
   ☐Yes → *The review is in compliance with this section. Continue to the Worksheet Summary below.*

   ☐No → *Continue to Question 3.*

3. **Does your region have a memorandum of understanding (MOU) or other working agreement with EPA for HUD projects impacting a sole source aquifer?**
   Contact your Field or Regional Environmental Officer or visit the HUD webpage at the link above to determine if an MOU or agreement exists in your area.
   ☐Yes → *Continue to Question 4.*

   ☐No → *Continue to Question 5.*

4. **Does your MOU or working agreement exclude your project from further review?**
   ☐Yes → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination and document where your project fits within the MOU or agreement.*

   ☐No → *Continue to Question 5.*

5. **Will the proposed project contaminate the aquifer and create a significant hazard to public health?**
   Consult with your Regional EPA Office. Your consultation request should include detailed information about your proposed project and its relationship to the aquifer and associated streamflow source area. EPA will also want to know about water, storm water and waste water at the proposed project. Follow

[1] A sole source aquifer is defined as an aquifer that supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer. This includes streamflow source areas, which are upstream areas of losing streams that flow into the recharge area.

your MOU or working agreement or contact your Regional EPA office for specific information you may need to provide. EPA may request additional information if impacts to the aquifer are questionable after this information is submitted for review.

☐No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide your correspondence with the EPA and all documents used to make your determination*.

☐Yes → *The RE/HUD will work with EPA to develop mitigation measures. If mitigation measures are approved, attach correspondence with EPA and include the mitigation measures in your environmental review documents and project contracts. If EPA determines that the project continues to pose a significant risk to the aquifer, federal financial assistance must be denied. Continue to Question 6.*

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

Include all documentation supporting your findings in your submission to HUD.

Sole Source Aquifers (SSA) are mapped by the U.S. Environmental Protection Agency (USEPA). Evaluation of USEPA's data shows that no SSAs are in the vicinity of the Project site. The nearest SSA is the Campo/Cottonwood Creek Aquifer SSA (ID#SSA54). This SSA is approximately 100 miles south of the Project.

Documentation:

Sole Source Aquifers. U.S. Environmental Protection Agency. https://www.epa.gov/dwssa. Accessed November 2020.

OMB No. 2506-0177
(exp.9/30/2021)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Wetlands (CEST and EA) – Partner

https://www.hudexchange.info/environmental-review/wetlands-protection

1. **Does this project involve new construction as defined in Executive Order 11990, expansion of a building's footprint, or ground disturbance?**
   The term "new construction" includes draining, dredging, channelizing, filling, diking, impounding, and related activities and construction of any structures or facilities.

   ☐ No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

   ☒ Yes → *Continue to Question 2.*

2. **Will the new construction or other ground disturbance impact a wetland as defined in E.O. 11990?**

   ☒ No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map or any other relevant documentation to explain your determination.*

   ☐ Yes → *Work with HUD or the RE to assist with the 8-Step Process. Continue to Question 3.*

3. **Does Section 55.12 state that the 8-Step Process is not required?**

   ☐ No, the 8-Step Process applies.
   This project will require mitigation and may require elevating structure or structures. See the link to the HUD Exchange above for information on HUD's elevation requirements.
   → *Work with the RE/HUD to assist with the 8-Step Process. Continue to Worksheet Summary.*

   ☐ 5-Step Process is applicable per 55.12(a).
   Provide the applicable citation at 24 CFR 55.12(a) here.
   Click here to enter text.
   → *Work with the RE/HUD to assist with the 5-Step Process. This project may require mitigation or alternations. Continue to Worksheet Summary.*

   ☐ 8-Step Process is inapplicable per 55.12(b).
   Provide the applicable citation at 24 CFR 55.12(b) here.
   Click here to enter text.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to Worksheet Summary.*

☐ 8-Step Process is inapplicable per 55.12(c).
Provide the applicable citation at 24 CFR 55.12(c) here.
Click here to enter text.
→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to Worksheet Summary.*

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

Include all documentation supporting your findings in your submission to HUD.

Based on the lack of wetlands and/or wetland conditions observed during the site visit by a staff biologist and the results of a literature query showing a lack of recorded historic wetlands, no wetlands occur within the Biological Study Area (BSA). Therefore, no direct or indirect impacts to federally-protected wetlands as defined by Section 404 of the Clean Water Act would occur.

Documentation:

Orchard View Gardens Senior Apartment Homes Initial Study and Mitigated Negative Declaration (IS/MND), September 2020, UltraSystems.

Field evaluation by UltraSystems biologist for existing biological resources of the BSA on February 10 and 12, 2020.

OMB No. 2506-0177
(exp. 9/30/2021)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Wild and Scenic Rivers (CEST and EA) – PARTNER

https://www.hudexchange.info/environmental-review/wild-and-scenic-rivers

1. Is your project within proximity of a Wild and Scenic River, Study River, or Nationwide Rivers Inventory River?

☒ No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Provide documentation used to make your determination.*

☐ Yes → *Continue to Question 2.*

2. Could the project do *any* of the following?

- Have a direct and adverse effect within Wild and Scenic River Boundaries,
- Invade the area or unreasonably diminish the river outside Wild and Scenic River Boundaries, or
- Have an adverse effect on the natural, cultural, and/or recreational values of a NRI segment.

Consult with the appropriate federal/state/local/tribal Managing Agency(s), pursuant to Section 7 of the Act, to determine if the proposed project may have an adverse effect on a Wild & Scenic River or a Study River and, if so, to determine the appropriate avoidance or mitigation measures.

Select one:

☐ The Managing Agency has concurred that the proposed project will not alter, directly, or indirectly, any of the characteristics that qualifies or potentially qualifies the river for inclusion in the NWSRS.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Provide documentation of the consultation (including the Managing Agency's concurrence) and any other documentation used to make your determination.*

☐ The Managing Agency was consulted and the proposed project may alter, directly, or indirectly, any of the characteristics that qualifies or potentially qualifies the river for inclusion in the NWSRS.

→ *The RE/HUD must work with the Managing Agency to identify mitigation measures to mitigate the impact or effect of the project on the river.*

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

Include all documentation supporting your findings in your submission to HUD.

This project is not located near any water course or river that is included under the Wild and Scenic Rivers Act and no Section 7 Report is required. The closest designated river is Deep Creek over 62 miles northeast of the Project site.

Documentation:

National Wild and Scenic Rivers System. https://www.rivers.gov/map.php. Accessed November 2020.

APPENDIX B – Orchard View Gardens Senior Apartment Homes Draft and Final Initial Study and Mitigated Negative Declaration (IS/MND)

ORCHARD VIEW GARDENS SENIOR APARTMENT HOMES

Initial Study and Mitigated Negative Declaration (IS/MND)

CEQA Analysis Prepared for:

City of Buena Park Planning Division
6650 Beach Blvd.
Buena Park, CA 90621

Prepared by:

UltraSystems Environmental Inc.
16431 Scientific Way
Irvine, CA 92618-4355
Telephone: 949-788-4900
FAX: 949-788-4901

September 2020

Project No. 7037

PROJECT INFORMATION SHEET

1. Project Title	Orchard View Gardens Senior Apartment Homes
2. CEQA Lead Agency	**City of Buena Park** 6650 Beach Boulevard Buena Park, CA 90621
3. Contact and Phone Number	Swati Meshram, PhD, AICP Planning Manager Community Development Department (714) 562-3620 smeshram@buenapark.com
4. Project Applicant	Sarah Walker **National Community Renaissance of California** 9421 Haven Avenue Rancho Cucamonga, CA 91730
5. Project Location	8300 Valley View Street Buena Park, CA 90620
6. Assessor's Parcel Number	069-283-25
7. Project Site General Plan Designation(s)	Low Density Residential
8. Project Site Zoning Designation(s)	Residential - Single Family 6 (RS-6)
9. Surrounding Land Uses and Setting	Surrounding land uses include detached single-family homes to the east, south, and west across Valley View Street. The Ban Suk Methodist Church and detached single-family houses homes are located north of the project site.
10. Description of Project	The project is proposed on an approximately 3.2-acre site located at 8300 Valley View Street in Buena Park, California. The site is currently developed with the St. Joseph's Episcopal Church. The Project proposes to subdivide the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres. The newly created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with a primary residential apartment building and 9 single story casitas accommodating 66 residential units and a 3,000 square foot community center.

On Parcel 2, 66 residential apartment homes for seniors aged 62+, including 62 one-bedroom units and 4 two-bedroom units, are proposed in one larger and three smaller buildings.

Building 1 would be divided into two groupings connected by a breezeway. Building 1 West, facing Valley View Street, would be a two-story building transitioning to a linear three-story double-loaded corridor toward the interior of the site. Building 1 East would be a three-story double-loaded bar building located interior to the site with a two-story element at the northern end of the proposed building transitioning toward the single-family neighborhood along the northern property line. Along the northern property line nine attached single-story casitas are proposed in three clusters.

The project proposes 66 residential apartment homes for seniors aged 62 and up. The project would provide 65 units affordable to households earning less than 60 percent of the Area Median Income (AMI) along with one manager's unit, for a total of 66 units. Eight of the units will be for permanent supportive housing to house formerly homeless seniors.

To accommodate residents, visitors and staff, a total of forty-eight (48) parking stalls are proposed for a total ratio of 0.71 spaces per unit.

The Applicant is seeking a General Plan Amendment to High Density Residential, and a Zone Change to Medium-Density Multifamily Residential (RM-20) is required to accommodate the Proposed Project. The Project will also necessitate a Tentative Parcel Map to divide the one parcel into two.

The project applicant is requesting the following discretionary actions, which are discussed in detail in **Section 3.0** of this document:

- General Plan Amendment
- Zone Change
- Development Agreement
- Tentative Parcel Map
- Modification to Use Permit
- Site Plan approval and issuance of building permits

11. Selected Agencies whose Approval is Required	• City of Buena Park
12. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code § 21080.3.1? If so, has consultation begun?	Letters were sent by the City of Buena Park (the Lead Agency), to local Native American tribes asking if they wished to participate in AB 52 consultation concerning the Orchard View Gardens Senior Apartment Homes development in the City of Buena Park. Tribes have up to 30 days in which to respond to this notification. For the proposed project, those tribes that the City of Buena Park receives a request for consultation from will be contacted per Public Resources Code § 21074, and the AB 52 consultation process will begin. See **Section 4.18** of this document.
13. Other Public Agencies whose Approval is Required	Agencies that will review the proposed project include the following: • California Regional Water Quality Control Board – Santa Ana • South Coast Air Quality Management District

TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Term
AAQS	ambient air quality standards
AB 32	California Global Warming Solutions Act of 2006 (Assembly Bill 32)
AB 52	Assembly Bill 52
AB 939	California Integrated Waste Management Act of 1989
ACM(s)	Asbestos-Containing Material(s)
ADT	Average Daily Trips
ARB	California Air Resources Board
afy	acre-feet per year
APE	Area of Potential Effect
APN	Assessor's Parcel Number
AR4	Fourth Assessment Report
ARB	California Air Resources Board
AMI	Area Median Income
amsl	above mean sea level
AQMP	Air Quality Management Plan
BAU	business as usual
BMPs	Best Management Practices
BPPD	Buena Park Police Department
BPSD	Buena Park School District
BSA	Biological Study Area
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Cal/EPA	California Environmental Protection Agency
CALGreen	California Green Building Standards
CAPCOA	California Air Pollution Control Officers Association
CBC	California Building Code
CGS	California Geological Survey
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CAT	Climate Action Team
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFCs	chlorofluorocarbons
CGS	California Geological Survey
CH_4	methane
CHRIS	California Historic Resources Inventory System
City	City of Buena Park
CMP	Congestion Management Program
CMU	concrete masonry unit
CMPHS	CMP Highway System

Acronym/Abbreviation	Term
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CRC	California Residential Code
CRPR	California Rare Plant Rank
CSDLAC	County Sanitation Districts of Los Angeles County
CWA	Clean Water Act
DAMP	Drainage Area Management Plan
dB	decibel
dBA	A-weighted decibel scale
°F	degrees Fahrenheit
DMA	drainage management areas
DOC	California Department of Conservation
DTSC	Department of Toxic Substances Control
du/ac	dwelling units per acre
EIR	Environmental Impact Report
EO	Executive Order
ESA	Environmental Site Assessment
ESRL	Earth System Research Laboratory
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FHSZ	Fire Hazard Severity Zones
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
GHG	greenhouse gases
GIS	Geographic Information System
GMI	Greenhouse Gas Management Institute
GPD	gallons per day
gpm	gallons per minute
GWP	global warming potential
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan
HERS	Home Energy Rating System
HFCs	hydrofluorocarbons
HHWE	Household Hazardous Waste Element
HRI	Historic Resources Inventory
HVAC	heating, ventiliation and air conditioning
IPaC	Information, Planning and Conservation
ICU	Intersection Capacity Utilitzation
INF-3	bioretention without underdrains
IND	Industrial Service Supply water designation
IPCC	Intergovernmental Panel on Climate Change
IS/MND	Initial Study/Mitigated Negative Declaration

Acronym/Abbreviation	Term
ITE	Institute of Transportation Engineers
L_{90}	noise level that is exceeded 90% of the time
L_{eq}	equivalent noise level
LBP	Lead-Based Paint
LED	light-emitting diode
LEED	Leadership in Energy and Environmental Design
LID	Low Impact Development
L_{max}	root mean square maximum noise level
LOS	Level of Service
LRA	Local Responsibility Area
LSTs	Localized Significance Thresholds
LUST	Leaking Underground Storage Tank
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
MLD	Most Likely Descendant
MM(s)	mitigation measure(s)
MMRP	Mitigation Monitoring and Reporting Program
$MMTCO_2e$	million metric tons of CO2e
MND	Mitigated Negative Declaration
MPAH	Master Plan of Arterial Highways
MRZ	Mineral Resource Zone
MS4	Municiple Separate Storm Sewer permit
MT	Metric tons
MUN	Municipal and Domestic Water Supply designation
MWD	Metropolitan Water District
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NASA	National Aeronautics and Space Administration
NCCP	Natural Communities Conservation Plan
ND	Negative Declaration
NO	nitric oxide
NOx	nitrogen oxides
NO_2	nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
O_3	Ozone
OCFA	Orange County fire Authority
OCFCD	Orange County Flood Control District
OCSD	Orange County Sanitation District
OCTA	Orange County Transportation Agency
OCWD	Orange County Water District
OPR	Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration

Acronym/Abbreviation	Term
Pb	lead
PCB	polychlorinated biphenyl
PFCs	perfluorocarbons
PM	particulate matter
PM_{10}	respirable particulate matter
$PM_{2.5}$	fine particulate matter
ppm	Parts per million
PPV	peak particle velocity
PROC	Industrial Process Supply water designation
RARE	waters that support habitats
RM-20	Medium Density Multifamily Residential zoning designation
RMS	root mean square
ROG	Reactive organic gases
ROW	Right-of-way
RPS	Renewables Portfolio Standard
RS-6	Residential Single Family 6 zoning designation
RWQCB	Regional Water Quality Control Board
§	section
SARWQCB	Santa Ana Regional Water Quality Control Board
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison Company
SF_6	sulfur hexafluoride
SLF	Sacred Lands File
SMARA	Surface Mining and Reclamation Act
SO_2	sulfur dioxide
SoCalGas	Southern California Gas Company
SR	State Route
SR-57	State Route 57
SR-91	State Route 91
SRRE	Source Reduction and Recycling Element
SRA	State Responsibility Area
SRAs	source receptor areas
STIP	Statewide Transportation Improvement Program
SUSMP	Standard Urban Stormwater Mitigation Plan
SWITRS	Statewide Integrated Traffic Records System
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TCRs	Tribal Cultural Resources
TIS	Traffic Impact Study
TMP	Traffic Management Plan
U.S.	United States
USDA	United States Department of Agriculture

Acronym/Abbreviation	Term
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UWMP	Urban Water Management Plan
VdB	vibration decibels
VCP	vitrified clay pipe
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
VOC	volatile organic compound
WARM	warm freshwater habitat
WEG	Wind erodibility groups
WILD	waters that support wildlife habitat
WOS	Waters of State
WOUS	Waters of United States
WQMP	Water Quality Management Plan

1.0 INTRODUCTION

1.1 Proposed Project

The City of Buena (City) is processing a request to construct and operate the Orchard View Gardens Senior Apartment Homes project (hereafter referred to as the "proposed project" or "project"). The project site is located at 8300 Valley View Street in the City of Buena Park. The project site is one contiguous, irregular-shaped parcel, with the southern portion of the site currently occupied by St. Joseph's Episcopal Church. The church is housed in a single building and surrounded by surface parking. The northern portion of the site is currently vacant. The project proposes to subdivide the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres. The newly created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with a primary residential apartment building and nine single-story casitas accommodating 66 residential units and a 3,000-square-foot community center.

A General Plan Amendment to High Density Residential and Zone Change to Medium-Density Multifamily Residential (RM-20) is required to accommodate the proposed project. The project would also necessitate a Tentative Parcel Map to divide the one parcel into two.

1.1.1 Project Components

The proposed project would consist of:

- One residential apartment building and nine single-story casitas accommodating 66 residential units.
- A parking lot.
- A 3,000-square-foot community center.
- Landscaped open space areas.
- Outdoor amenities for residents (bench seating, lawn games, fire pit, and lounge seating).

1.2 Lead Agencies – Environmental Review Implementation

The City of Buena Park is the Lead Agency for the proposed project. Pursuant to the California Environmental Quality Act (CEQA) and its implementing regulations,[1] the Lead Agency has the principal responsibility for implementing and approving a project that may have a significant effect on the environment.

1.3 CEQA Overview

1.3.1 Purpose of CEQA

All discretionary projects within California are required to undergo environmental review under CEQA. A Project is defined in CEQA Guidelines § 15378 as the whole of the action having the potential

1 Public Resources Code §§ 21000 - 21177 and California Code of Regulations Title 14, Division 6, Chapter 3.

to result in a direct physical change or a reasonably foreseeable indirect change to the environment and is any of the following:

- An activity directly undertaken by any public agency including but not limited to public works construction and related activities, clearing or grading of land, improvements to existing public structures, enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements.
- An activity undertaken by a person which is supported in whole or in part through public agency contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies.
- An activity involving the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies.

CEQA Guidelines § 15002 lists the basic purposes of CEQA as follows:

- Inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures (MMs) when the governmental agency finds the changes to be feasible.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

1.3.2 Authority to Mitigate under CEQA

CEQA establishes a duty for public agencies to avoid or minimize environmental damage where feasible. Under CEQA Guidelines § 15041 a Lead Agency for a project has authority to require feasible changes in any or all activities involved in the project in order to substantially lessen or avoid significant effects on the environment, consistent with applicable constitutional requirements such as the "nexus"[2] and "rough proportionality"[3] standards.

CEQA allows a Lead Agency to approve a project even though the project would cause a significant effect on the environment if the agency makes a fully informed and publicly disclosed decision that there is no feasible way to lessen or avoid the significant effect. In such cases, the Lead Agency must specifically identify expected benefits and other overriding considerations from the project that outweigh the policy of reducing or avoiding significant environmental impacts of the project.

1.4 Purpose of Initial Study

The CEQA process begins with a public agency making a determination as to whether the project is subject to CEQA at all. If the project is exempt, the process does not need to proceed any farther. If the project is not exempt, the Lead Agency takes the second step and conducts an Initial Study to determine whether the project may have a significant effect on the environment.

2 A nexus (i.e., connection) must be established between the mitigation measure and a legitimate governmental interest.

3 The mitigation measure must be "roughly proportional" to the impacts of the Project.

The purposes of an Initial Study as listed in § 15063(c) of the CEQA Guidelines are to:

- Provide the Lead Agency with information necessary to decide if an Environmental Impact Report (EIR), Negative Declaration (ND), or Mitigated Negative Declaration (MND) should be prepared.
- Enable a Lead Agency to modify a project to mitigate adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a ND or MND.
- Assist in the preparation of an EIR, if required, by focusing the EIR on adverse effects determined to be significant, identifying the adverse effects determined not to be significant, explaining the reasons for determining that potentially significant adverse effects would not be significant, and identifying whether a program EIR, or other process, can be used to analyze adverse environmental effects of the project.
- Facilitate an environmental assessment early during project design.
- Provide documentation in the ND or MND that a project would not have a significant effect on the environment.
- Eliminate unnecessary EIRs.
- Determine if a previously prepared EIR could be used for the Project.

In cases where no potentially significant impacts are identified, the Lead Agency may issue a ND, and no MMs would be needed. Where potentially significant impacts are identified, the Lead Agency may determine that MMs would adequately reduce these impacts to less than significant levels. The Lead Agency would then prepare an MND for the proposed project. If the Lead Agency determines that individual or cumulative effects of the proposed project would cause a significant adverse environmental effect that cannot be mitigated to less than significant levels, then the Lead Agency would require an EIR to further analyze these impacts.

1.5 Review and Comment by Other Agencies

Other public agencies are provided the opportunity to review and comment on the IS/MND. Each of these agencies is described briefly below.

- A Responsible Agency (14 CCR § 15381) is a public agency, other than the Lead Agency, that has discretionary approval power over the Project, such as permit issuance or plan approval authority.
- A Trustee Agency[4] (14 CCR § 15386) is a state agency having jurisdiction by law over natural resources affected by a project that are held in trust for the people of the State of California.
- Agencies with Jurisdiction by Law (14 CCR § 15366) are any public agencies who have authority (1) to grant a permit or other entitlement for use; (2) to provide funding for the project in question; or (3) to exercise authority over resources which may be affected by the project. Furthermore, a city or county will have jurisdiction by law with respect to a project when the city or county having primary jurisdiction over the area involved is: (1) the site of the project; (2) the area in which the major environmental effects will occur; and/or (3) the area in which reside those citizens most directly concerned by any such environmental effects.

4 The four Trustee Agencies in California listed in CEQA Guidelines § 15386 are California Department of Fish and Wildlife, State Lands Commission, State Department of Parks and Recreation, and University of California.

1.6 Impact Terminology

The following terminology is used to describe the level of significance of potential impacts:

- A finding of ***no impact*** is appropriate if the analysis concludes that the project would not affect the particular environmental threshold in any way.
- An impact is considered ***less than significant*** if the analysis concludes that the project would cause no substantial adverse change to the environment and requires no mitigation.
- An impact is considered ***less than significant with mitigation incorporated*** if the analysis concludes that the project would cause no substantial adverse change to the environment with the inclusion of environmental commitments, or other enforceable measures, that would be adopted by the lead agency.
- An impact is considered ***potentially significant*** if the analysis concludes that the project could have a substantial adverse effect on the environment.

An EIR is required if an impact is identified as ***potentially significant***.

1.7 Organization of Initial Study

This document is organized to satisfy CEQA Guidelines § 15063(d), and includes the following sections:

- **Section 1.0 - Introduction**, which identifies the purpose and scope of the IS/MND.
- **Section 2.0 - Environmental Setting**, which describes location, existing site conditions, land uses, zoning designations, topography, and vegetation associated with the project site and surroundings.
- **Section 3.0 - Project Description**, which provides an overview of the project, a description of the proposed development, project phasing during construction, and discretionary actions necessary for project approval.
- **Section 4.0 - Environmental Checklist**, which presents checklist responses for each resource topic to identify and assess impacts associated with the proposed project, and proposes MMs, as needed, to reduce potential environmental impacts to less than significant.
- **Section 5.0 - References**, which includes a list of documents cited in the IS/MND.
- **Section 6.0 - List of Preparers**, which identifies the primary authors and technical experts that prepared the IS/MND.
- **Section 7.0 – Mitigation Monitoring and Reporting Program (MMRP)**, which provides a table showing all of the recommended mitigation measures for the project.

Technical studies and other documents, which include supporting information or analyses used to prepare this IS/MND, are included in the following appendices:

- Appendix A Project Plans
- Appendix B1 CalEEMod Input and Results for Air Quality Analysis
- Appendix B2 CalEEMod Input and Results for Greenhouse Gas Emissions Analysis
- Appendix C1 Phase I Cultural Resources Inventory
- Appendix C2 Paleontological Records Search
- Appendix D Preliminary Geotechnical Investigation
- Appendix E Phase I Environmental Site Assessment
- Appendix F Preliminary Water Quality Management Plan

- Appendix G Ambient Noise Measurement Data
- Appendix H Traffic Assessment Memo
- Appendix I Information Request Letters

1.8 Findings from the Initial Study

1.8.1 No Impact or Impacts Considered Less than Significant

Based on IS findings, the project would have no impact or a less than significant impact on the following environmental categories listed from Appendix G of the CEQA Guidelines.

- Agriculture and Forestry Resources
- Air Quality
- Energy
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Utilities and Service Systems
- Wildfire

1.8.2 Impacts Considered Less than Significant with Mitigation Measures

Based on IS findings, the project would have a less than significant impact on the following environmental categories listed in Appendix G of the CEQA Guidelines when proposed mitigation measures are implemented.

- Aesthetics
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Noise
- Transportation
- Tribal Cultural Resources
- Mandatory Findings of Significance

2.0 ENVIRONMENTAL SETTING

2.1 Project Location

The proposed project would be located at 8300 Valley View Street, on the eastern frontage of Valley View Street between Los Molinos Drive and Crescent Avenue in Buena Park, California. The project site is approximately 3.2 acres and is currently occupied by St. Joseph's Episcopal Church. Refer to **Figure 2.1-1** which shows the project's location in a regional context. The project site is located in a portion of the City that is predominately residential. See **Figure 2.1-2**, which shows the project boundaries and current conditions onsite and in the immediate vicinity.

2.2 Project Setting

The project site is comprised of one parcel, APN 069-283-25. The project site is developed with the St. Joseph's Episcopal Church, in a developed and urbanized area in the City of Buena Park. The project site is surrounded by development, including residential land uses to the north, south, and east and Valley View Street, beyond which are homes to the west.

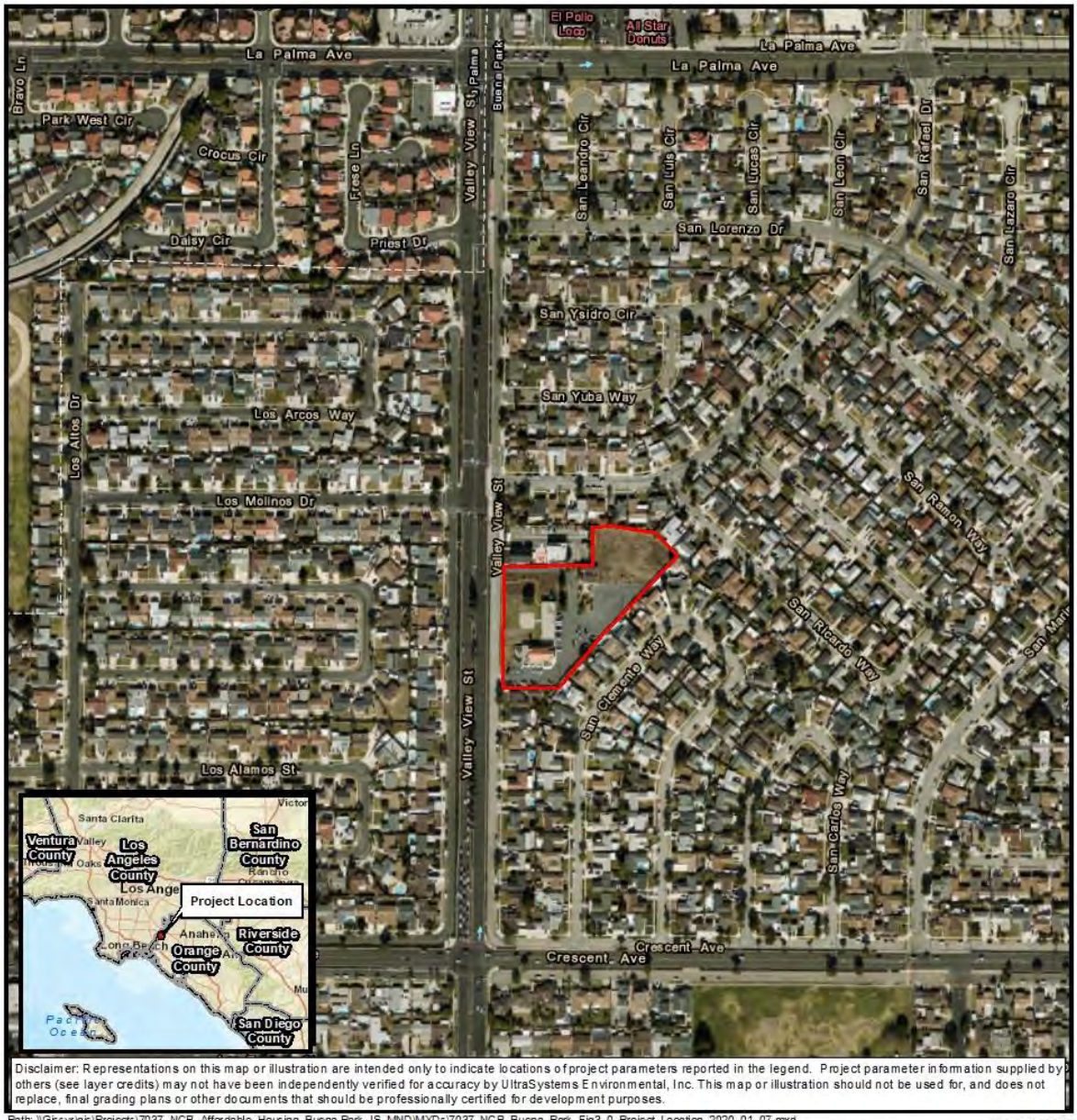
The project site is located on United States Geological Survey, 7.5-Minute Series, Topographic Map, Los Alamitos Quadrangle, California. **Figure 2.2-1** depicts the topography of the site and the area within a half-mile radius of the project site. Topography within the project site is relatively flat. The elevation of the site ranges from approximately 45 to 48 feet (Google Earth Pro, 2020). Photographs depicting the project site are provided in **Figures 2.2-2** to **2.2-4**.

2.2.1 Land Use and Zoning

The land use designation and zoning of the project site and its immediate vicinity are listed in **Table 2.2-1**. The General Plan designation for the project site and all adjacent properties is Low Density Residential. The project site and adjacent properties are zoned as One-Family Residential (RS-6).

Figure 2.1-1
REGIONAL LOCATION

Figure 2.1-2
PROJECT LOCATION



Disclaimer: Representations on this map or illustration are intended only to indicate locations of project parameters reported in the legend. Project parameter information supplied by others (see layer credits) may not have been independently verified for accuracy by UltraSystems Environmental, Inc. This map or illustration should not be used for, and does not replace, final grading plans or other documents that should be professionally certified for development purposes.

Path: \\Gissvr\gis\Projects\7037_NCR_Affordable_Housing_Buena Park_IS_MND\MXDs\7037_NCR_Buena_Park_Fig3_0_Project_Location_2020_01_07.mxd
Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community, Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community; UltraSystems Environmental, Inc., 2020

January 08, 2020

Scale: 1:4,800

N

0 200 400 Feet

0 50 100 Meters

Legend

Project Boundary

Orchard View Gardens Senior Apartment Homes

Project Location

UltraSystems

Figure 2.2-1
TOPOGRAPHIC MAP

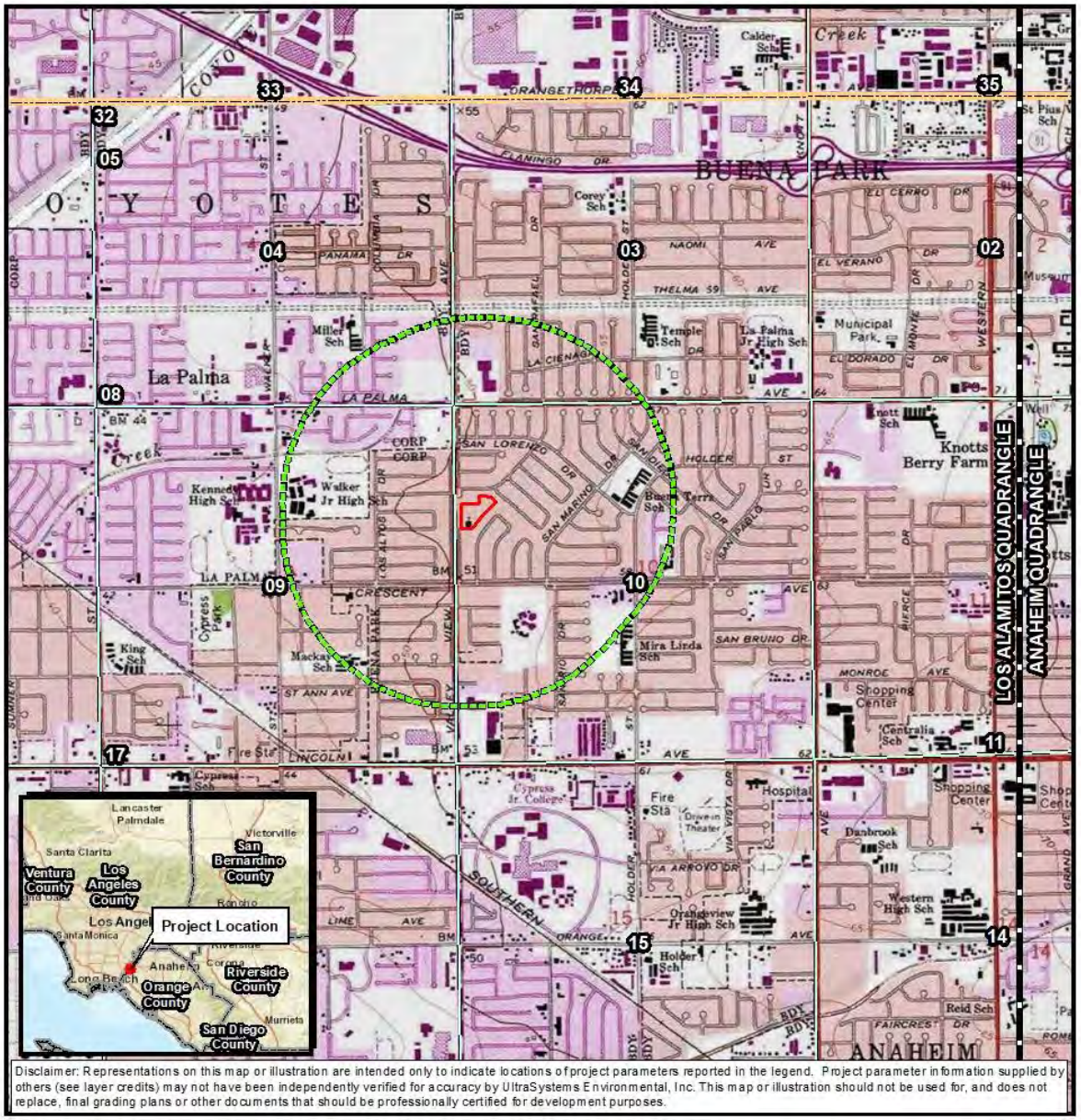


Figure 2.2-2
PROJECT SITE PHOTOGRAPHS

Photo 1: View of church on project site from the Valley View St. eastern frontage road.

Photo 2: View of church parking lot on project site from Valley View St. eastern frontage road.

Photo 3: View looking north onto the project site from the southwest corner of the project site.

Photo 4: View looking south onto the project site from the northwest corner of the project site.

Figure 2.2-3
PROJECT SITE PHOTOGRAPHS

Photo 5: View of northeastern portion of the project site from the south.

Photo 6: View of northeastern portion of the project site from the center of the project site.

Photo 7: View looking northwest onto the project site from the southeast.

Photo 8: View looking west onto the project site from the southeast .

Figure 2.2-4
PROJECT SITE PHOTOGRAPHS

Photo 9: View looking southeast onto project site from the northwest corner of the project site.

Photo 10: View looking south onto project site from the northwest corner of the project site.

Photo 11: View looking south from the western boundary of the project site.

Photo 12: View looking north from the western boundary of the project site.

Table 2.2-1
SUMMARY OF EXISTING LAND USE AND ZONING DESIGNATIONS

Location	General Plan	Zoning	Existing Use
Project Site	Low Density Residential	One-Family Residential (RS-6)	Developed with church buildings and a large surface parking lot
Surrounding Areas			
North	Low Density Residential	One-Family Residential (RS-6)	Single family homes
East	Low Density Residential	One-Family Residential (RS-6)	Single family homes
West	Low Density Residential	One-Family Residential (RS-6)	Single family homes
South	Low Density Residential	One-Family Residential (RS-6)	Single family homes

2.3 Existing Characteristics of the Site

2.3.1 Climate and Air Quality

The project site is located within the South Coast Air Basin (SCAB), a 6,600-square-mile area encompassing all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. A persistent high-pressure area that commonly resides over the eastern Pacific Ocean largely dominates regional meteorology. The distinctive climate of this area is determined primarily by its terrain and geographic location. Local climate is characterized by warm summers, mild winters, infrequent rainfall, moderate daytime onshore breezes, and moderate humidity. Ozone (O_3) and pollutant concentrations tend to be lower along the coast, where the constant onshore breeze disperses pollutants toward the inland valley of the SCAB and adjacent deserts. However, as a whole, the SCAB fails to meet National Ambient Air Quality Standards (NAAQS) for O_3 and fine particulate matter ($PM_{2.5}$), and is classified as a "nonattainment area" for those pollutants.

2.3.2 Geology and Soils

Soil materials encountered at the subject site consisted of alluvial soils to the maximum depth explored, 51.5 feet below ground surface. Although not encountered, localized artificial fill materials could be present within the site. The alluvial soils encountered are comprised of a grayish-brown to brown silty sand overlying a light gray sand that is slightly moist to moist and loose to medium dense. Deeper portions of the alluvium consist of interlayers of grayish-brown to gray clay with variable amounts of sand and grayish-brown sand. These materials were typically wet and medium dense to dense and very moist and stiff to very stiff (Albus-Keefe & Associates, Inc., 2020 p. 4). The nearest Alquist-Priolo Earthquake Fault Zones are located south of the proposed project and include the Reservoir Hill Fault, Northeast Flank Fault, and Cherry Hill Fault (which cumulatively comprise part of the south Los Angeles Basin section of the Newport-Inglewood Fault Zone).

2.3.3 Hydrology

The City relies on two major water supply sources, which include imported water from the Metropolitan Water District (MWD) and local groundwater from the Orange County Groundwater Basin, managed by the Orange County Water District (OCWD) (RBF Consulting, 2010b, p. 5.8-1).

The project site is currently occupied by an existing building, a surface parking lot, and an undeveloped area. Under existing conditions drainage sheet flows from the parking lot in a westerly direction toward the Valley View Street frontage road. Drainage flows out of the existing driveway into the curb and gutter on Valley View Street. Eventually, runoff enters the municipal storm drain system through a curb inlet at the intersection of Valley View Street and Crescent Avenue. Some runoff from the building flows overland in a westerly direction toward Raymond Way where it enters the municipal storm drain system through an inlet near the easterly corner of the Raymond Way and Packer Place intersection. Ultimately, runoff flows from the municipal storm drain system to the Coyote Creek, San Gabriel River Estuary, and San Pedro Bay (Walker, 2020)

2.3.4 Biology

The project site is developed with a church, a classroom building, a storage building, a parking lot, and also has undeveloped land. The project site is surrounded by development on all sides and contains ornamental vegetation. The vegetation within the project area is characterized as urban ornamental.

2.3.5 Public Services

The City is served by a full range of public services and utilities. Fire and emergency medical services for the City of Buena Park are provided by Orange County Fire Authority (OCFA). The nearest station to the project site is OCFA Fire Station 63, located about 0.9 mile southeast of the site at 9120 Holder Street. Other OCFA fire stations in Buena Park include Station 62 at 7780 Artesia Boulevard (1.4 miles northeast from the site) and Station 61 at 7440 La Palma Avenue (2.8 miles northeast from the site) (Google Earth Pro, 2019).

The Buena Park Police Department (BPPD) provides police services in the City of Buena Park and would provide law enforcement services to the project site (City of Buena Park, 2019c).

The project is located within the boundaries of the Buena Park School District (BPSD), which serves 4,700 students at six elementary schools and one junior high school in the City of Buena Park (Buena Park School District, 2019). The closest public school to the project site is Arthur F. Corey Elementary School, located approximately one mile to the northeast. The Fullerton Joint Union High School District (FJUHSD) serves grades 9-12. Six four-year comprehensive high schools are operated by the District, including Buena Park, Fullerton, La Habra, Sonora, Sunny Hills, and Troy (FJUHSD, 2020). Buena Park High School is a public high school located at 8833 Academy Drive in Buena Park.

2.3.6 Utilities

City of Buena Park water supplies consist primarily of imported water from the Metropolitan Water District (MWD) and local groundwater from the Orange County Groundwater Basin, managed by the Orange County Water District (OCWD) (RBF Consulting, 2010b, p. 5.11-16).

The City of Buena Park Public Works Department provides sewer services within the City through a network of local sewer mains. The City's local sewer system connects to regional trunk sewer systems for the Orange County Sanitation District (OCSD), with a small portion going to Los Angeles County Sanitation Districts of (LACSD) for conveyance, treatment and disposal by these agencies. The entire Buena Park collection system is comprised of approximately 165 miles of sewer lines ranging in size from six to 21 inches in diameter. All sewage flow from Revenue Area 3 goes to OCSD Treatment Plant No. 2 in Huntington Beach. This facility has a total primary treatment capacity of 168 million

gallons daily (mgd), with an average daily treatment of approximately 127 mgd, indicating approximately 41 mgd of excess treatment capacity. Plant No. 2 also has 90 mgd of secondary treatment capacity (RBF Consulting, 2010b, p. 5.12-1 and 5.12-9).

The City of Buena Park storm drain system is comprised of the Orange County Flood Control District (OCFCD) regional channels and pipelines, and the city's local drainage facilities that connect to the OCFCD facilities. Under current conditions, stormwater sheet flows from the project site into Valley View Street into City storm drains.

The City contracts with Park Disposal (EDCO) for collection and disposal of the City's solid waste. Electric power for the City of Buena Park is provided by Southern California Edison (SCE). Natural gas is provided by Southern California Gas Company (SoCalGas), which maintains a local system of transmission lines, distribution lines and supply regulation stations (City of Buena Park, 2019a).

3.0 PROJECT DESCRIPTION

3.1 Project Background

The City of Buena Park (City) is processing a request to implement a series of discretionary actions that would ultimately allow for the development of a senior affordable housing project (project) located at 8300 Valley View Street in the City of Buena Park.

The proposed project would develop 65 affordable units for senior citizens and one exempt (i.e., market-rate) manager's unit. The City is the Lead Agency for the purposes of CEQA.

The approximately 3.2-acre project site is developed with the St. Joseph's Episcopal Church, which was constructed circa 1965 in what is now a residential neighborhood but originally was open dairy farm land. The City's General Plan Land Use Map designates the project site as Low Density Residential (RBF, 2010a). The project site is zoned One-Family Residential (RS-6) (City of Buena Park, 2013).

3.2 Project Overview

The project site is one contiguous, irregular-shaped parcel with the southern portion of the site currently occupied by St. Joseph's Church. The church is housed in a single building and surrounded by surface parking. The northern portion of the site is currently vacant. The project proposes to subdivide the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres. The newly created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with a primary residential apartment building with a 3,000-square-foot community center and nine single-story casitas that would be located within three single-story buildings, accommodating 66 residential units in total.

On Parcel 2, 66 residential apartment homes are proposed for seniors aged 62+, including 62 one-bedroom units and four two-bedroom units, in one larger and three smaller buildings; one of the units is for a manager. The maximum building height would be 35 feet. In total, the project proposes 25,308 square feet of building area, 23,627 square feet of paved parking and driveways, and 26,021 square feet of open space/landscaped area. The overall lot coverage for the development is 35%. Refer to Section 3.3 below for details.

The Buena Park Municipal Code Section 19.536.040, Parking Spaces Required requires a Church use a parking requirement of one space per three fixed seats (or 4.5 feet of bench) plus one space per 40 square feet of other net assembly area in the one largest assembly room. To comply with the City Municipal Code, an estimated 80 parking spaces are required for the Church. With the development of the Orchard View Gardens Senior Housing Community, a portion of the Church's existing parking area in the northeast corner will be demolished to accommodate the proposed residential units. The onsite parking available for the Church would be reduced from 121 spaces to 80 spaces. The proposed amount of parking for the Church is sufficient to accommodate the Church operations and meets the City's Code requirement. Furthermore, based on the currently utilization rates reported above, if the number of spaces is reduced to 80, even at its peak occupancy, the utilization rate is still only 55%.

Based on the demographic of the residents living on site, the high percentage of one bedroom units, parking utilization rates for similar senior rental projects within the region, and the availability of

public transportation options at the site, the project applicant believes that the proposed parking ratio is appropriate for an income-restricted senior rental project. With the development of the proposed project, the existing church and proposed residential facility would share a total of 123 parking spaces. The existing church currently contains 110 parking spaces and plans to reduce their parking lot to 80 spaces with the development of the project. The project proposes the development of 48 parking spaces to accommodate residents, visitors, and staff (Fehr and Peers, 2020, p. 6). The project applicant has conducted multiple community meetings and has undergone a preliminary review with City Staff to inform the design of the project.

The General Plan land use designation for the project site is Low Density Residential (refer to **Figure 4.11-1**). The project is zoned One-Family Residential (RS-6), allowing a base density of up to 7.26 dwelling units per acre (du/ac).

A General Plan Amendment to High Density Residential and Zone Change to Medium-Density Multifamily Residential (RM-20) is required to accommodate the proposed project. The project would also necessitate a Tentative Parcel Map to divide the single parcel into two parcels. The project would consist of: (1) utilities improvements; (2) construction of three new residential buildings; (3) construction of a parking lot; (4) construction of a 3,000-square-foot community center (on the first floor of Building 1); (5) construction of a green lawn and hardscape game area; and (6) project site amenities and landscaping. **Table 3.2-1** summarizes the proposed project features. **Figure 3.2-1** shows the site plan for the proposed project.

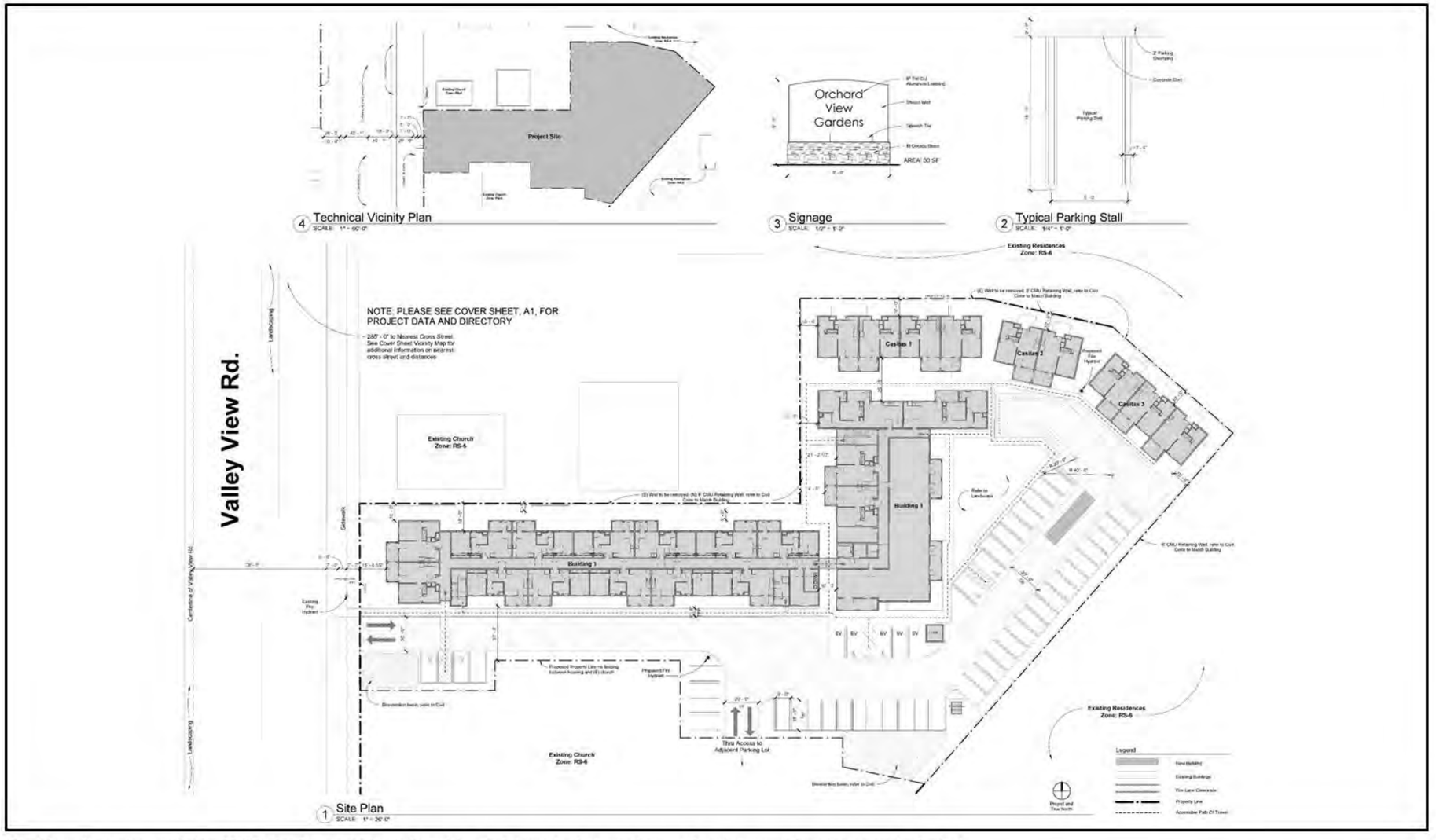
Table 3.2-1
PROJECT SUMMARY

New Construction	Proposed Uses/Features	Square Feet	No. of Stories	Building Height
Building 1 (this building is divided into two groupings connected by a breezeway)	62 one-bedroom units and four two-bedroom units	54,201[1]	2-3	35 feet maximum
Casitas	Nine one-bedroom single-story casitas	6,093	1	13 feet, 1 inch maximum
Community Center	Senior-oriented community center for use by residents and guests (located in Building 1)	3,000	N/A[3]	N/A[2]
Total Building Area	N/A	**60,294**	N/A	N/A
Paved parking and Driveways	48 Parking Spaces[2]	23,627	N/A	N/A
Open Area	Recreational uses (bench seating, lawn games, decomposed granite path, decomposed granite courtyard with fire pit and lounge seating)	23,236	N/A	N/A
Demolition				
Demolition of "The Barn" Building	"The Barn" building will be demolished to accommodate the proposed development on site.	Unknown, estimated to be approximately 2,000 square feet	1	Unknown, estimated to be approximately 15-20 feet

[1] The 3,000 square foot community center is included in the total square footage of 54,201 for Building 1.
[2] The project is requesting a reduction in parking based on the demographic of residents being seniors living alone or non-car owning households, access to existing bus routes, and the provision of alternative strategies to reduce vehicle trips including car sharing and van pooling.
[3] The community center is located within Building 1.

Source: Project Applicant Project Description dated March 13, 2020 and RRM Design Group, Entitlement Plan Set dated March 13, 2020.

Figure 3.2-1
SITE PLAN



Disclaimer: Illustration provided by RRM Design Group, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Source: RRM Design Group, March 30, 2020.

UltraSystems

Orchard View Gardens
Senior Apartment Homes
Site Plan

Table 3.2-2 below provides project statistics compared to the requirements of the RM-20 zone:

Table 3.2-2
PROJECT STATISTICS

Project Characteristic	Required	Provided
Density[1]	Maximum: 24 dwelling units per acre	37.5 dwelling units per acre
Front Setback from Valley View Street	Required: 15 feet	Provided: 6.5-15 feet
Side Setbacks		
Internal (north)	Required: 10 feet	Provided: 10 feet
Internal (south)	Required: 10 feet	Provided: 10 feet
Rear Setback from single-family homes	Required: 10 feet	Provided: 10 feet
Parking	Required: 134 spaces	Provided: 48 spaces[5]
Height/Stories	Maximum: 35 feet	Provided: 35 feet or less
Lot Coverage	Maximum: 40%	Proposed: 34%
Open Space	Required: 40%	Proposed: 35%

Source: Project Applicant Project Description dated March 13, 2020
[1]Based on RM-20 zoning

Table 3.2-3 below shows the anticipated range in population for the proposed project.

Table 3.2-3
ESTIMATED RANGE IN PROJECT POPULATION

Unit Size	Number of Units	Range of Persons based on unit size	Estimated Population
One-bedroom	62	1-3 people	62-186 persons
Two-bedroom	4	2-5 people	8-20 persons
Total	**66**	--	**70-206 persons**

Source: Email correspondence between Sarah Walker of National Community Core and Margaret Partridge of UltraSystems on January 2, 2020.

3.3 Proposed Project Features

3.3.1 New Residential Buildings

Careful consideration of the character and scale of surrounding properties was made to ensure that the project architecture and massing blends in with the existing surrounding uses.

The maximum building height of the proposed project is 35 feet for the buildings at the interior of the site. The proposed project would provide 65 units affordable to households earning less than 60 percent of the AMI, along with one manager's unit, for a total of 66 units. Eight of the units would be for permanent supportive housing to house formerly homeless seniors.

5 With the development of the proposed project, the existing church and proposed residential facility will share a total of 123 parking spaces (Walker, 2020).

Parcel 2 will be developed at an overall density of 37.5 units per acre and will provide a total of 62 one-bedroom units that average 566 gross square feet in size and four two-bedroom units that average 896 gross square feet in size[6]. In total, in terms of lot coverage, the project proposes 25,308 square feet of building area, 23,627 square feet of paved parking and driveways, and 26,021 square feet of open space/landscaped area. The overall lot coverage for the development is 35 percent.

Parcel 2 would be developed with a primary residential apartment building and nine single-story casitas accommodating 66 residential units (including a manager's unit) and a 3,000-square-foot community center. The 66 apartment homes would include 62 one-bedroom units and four two--bedroom units, in one larger and three smaller buildings.

Building 1 would be divided into two groupings connected by a breezeway, as described below:

Building 1 West: Building 1West, facing Valley View Street, would be a two-story building transitioning to a linear three-story double-loaded corridor toward the interior of the site. Building 1 West is proposed to include 37 one--bedroom units.

Building 1 East: Building 1 East would be a three-story double-loaded bar building located in the interior of site with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Building 1 East would include 16 one--bedroom and four two-bedroom units. **Figure 3.3-1** shows the elevations of Building 1.

Casitas: In addition, nine attached single-story one-bedroom casitas in three buildings are proposed along the northern property line. **Figure 3.3-2** shows the elevations of the casitas.

6 These unit sizes are smaller than permitted by the Zoning Code.

Figure 3.3-1
BUILDING 1 ELEVATIONS

Disclaimer: Illustration provided by RRM Design Group, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Source: RRM Design Group, March 30, 2020.

UltraSystems
environmental • management • planning

Orchard View Gardens
Senior Apartment Homes
Building 1 Elevations

Figure 3.3-2
CASITAS ELEVATIONS

Casitas Building A South Elevation
1/8" = 1'-0"

Casitas Building B South Elevation
1/8" = 1'-0"

Casitas Building C South Elevation
1/8" = 1'-0"

Casitas Building A North Elevation
1/8" = 1'-0"

Casitas Building B North Elevation
1/8" = 1'-0"

Casitas Building C North Elevation
1/8" = 1'-0"

Casitas East Elevation
1/8" = 1'-0"

Casitas West Elevation
1/8" = 1'-0"

Disclaimer: Illustration provided by RRM Design Group, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Source: RRM Design Group, March 30, 2020.

UltraSystems
environmental • management • planning

Orchard View Gardens
Senior Apartment Homes
Casitas Elevations

3.3.2 New Community Center

A 3,000-square-foot senior-oriented community center is proposed for use by project residents/visitors exclusively. The community center would be located on the first floor of Building 1.

3.3.3 Demolition of "The Barn" Building

"The Barn" is a stand-alone structure abutting the north property line wall with garden on the west and south sides. As detailed in the Phase I Environmental Site Assessment prepared for the proposed project, "The Property appeared to be in agricultural use, and was developed with a possible barn building as early as 1938. By 1947, the building currently located along the northern Property boundary was constructed and the barn structure remained on the Property. By 1959, the barn structure had been razed, the existing church building had been constructed, and the Property was no longer developed for agricultural use" (Converse, 2019. p. 14).

This building was constructed approximately forty years ago to replace a possible actual dairy barn that had been in the same location and was used as the parish hall; the name was kept in memory of the original structure (Rev. Lucinda Voien, personal communication, 2019). This structure would be demolished and removed as part of the proposed project.

3.3.4 Solar Panels

The proposed project would include onsite photovoltaic energy system solar panels to comply with Title 24, which reduces the building's overall dependence on the energy grid and reduces the likelihood of power interruptions during heat waves (Walker, 2020).

3.3.5 Site Access, Circulation and Parking

Primary vehicular access to the project site would be provided via a 20-foot-wide driveway off Valley View Street near the northwest corner of the project site, south of Building 1. In addition, a fire truck turnaround has been incorporated into the onsite circulation system at the northwest corner of the project site. The project proposes 23,627 square feet of paved parking and driveways.

To accommodate residents, visitors and staff, a total of 48 parking stalls are proposed for a total ratio of 0.71 spaces per unit. Multifamily residential projects in the City are required to provide 2.0 parking spaces for one-bedroom units, and 2.5 parking spaces for two-bedroom units. This translates into a parking requirement of 134 parking spaces for the 66-unit project.

The project is requesting a reduction in parking requirements based on the demographic of residents being seniors living alone or in non-car owning households, access to existing bus routes, and the provision of alternative strategies to reduce vehicle trips including car sharing and van pooling. With the development of the proposed project, the existing church and proposed residential facility will share a total of 123 parking spaces. The existing church parking lot currently contains 110 parking spaces and would reduce the parking lot to 75 spaces with the development of the project. The project would create 48 new parking spaces to accommodate residents, visitors, and staff (Walker, 2020).

3.3.6 Architecture

The project proposes a California Mission architectural style to be complementary with the church and the surrounding neighborhoods. The project includes both wall and roof plane articulation and carries the design elements to each elevation, including the inner portions of the site and all detached structures such as trash enclosures. The maximum building height proposed is 35 feet.

3.3.7 Landscaping

The layout of the buildings creates several unique landscaped areas that include both passive and active spaces - raised planters, green lawn/turf areas, drought-tolerant and native ground covers, decomposed granite walkways for residents to access community spaces and an outdoor lounge area with a fireplace and planter beds at the northeast corner of the site. **Figure 3.3-3** depicts the landscaping plan for the proposed project. Total open area on site would be approximately 26,000 square feet (i.e., 35% of the total lot area).

3.3.8 Exterior Lighting

The project proposes new lighting on the project site, including various styles and types of luminaires. The project proposes light-emitting diode (LED) lighting throughout the project site as well as occupancy sensors in common areas, parking areas and corridors to reduce energy use. (Refer to sheets E1 and E2 of **Appendix A** which provide additional details regarding lighting on site.) As depicted on sheet E1 of **Appendix A**, the project proposes exterior area lights, exterior bollards, and exterior wall-mounted luminaires. Lighting for the project would comply with the requirements of the City's Municipal Code. Specifically, the project would be required to comply with City of Buena Park Municipal Code § 19.444.030, Lighting, which states, "lighting on any premises shall be directed, controlled, screened, or shaded in such a manner as not to shine directly on surrounding premises." (City of Buena Park Municipal Code, 2020)

3.3.9 Perimeter Fencing and Exterior Walls

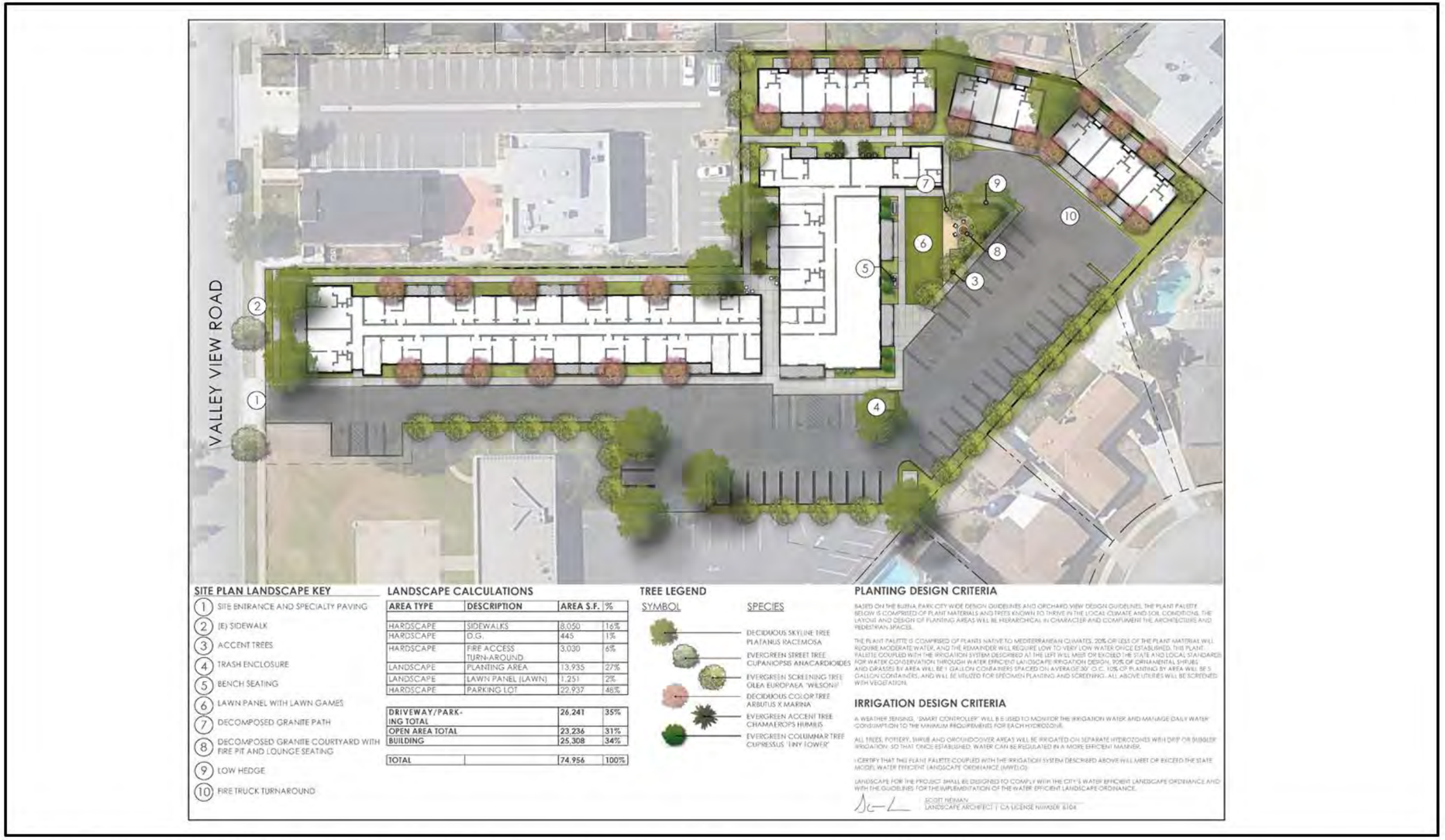
The project would construct a six-foot high concrete masonry unit (CMU) retaining wall along the northern and southeast boundary of the project site. The color of the wall would match the proposed buildings on site. No fencing would be placed between the proposed housing and the existing church.

3.3.10 Utilities

As described below, the proposed project will require sewer, domestic water, fire water, irrigation and dry utilities connections to existing utility infrastructure in Valley View Boulevard.

Sanitary Sewer – The site is served by an existing sanitary sewer network. New sewer laterals connections to existing sewer mains located near the project site would be installed. These improvements would require trenching and exposing sewer lines for connections to existing mainlines and manholes. The proposed project would connect to the existing 10-inch vitrified clay pipe (VCP) sewer main line in Valley View Boulevard.

Figure 3.3-3
LANDSCAPE PLAN



SITE PLAN LANDSCAPE KEY

1. SITE ENTRANCE AND SPECIALTY PAVING
2. (E) SIDEWALK
3. ACCENT TREES
4. TRASH ENCLOSURE
5. BENCH SEATING
6. LAWN PANEL WITH LAWN GAMES
7. DECOMPOSED GRANITE PATH
8. DECOMPOSED GRANITE COURTYARD WITH FIRE PIT AND LOUNGE SEATING
9. LOW HEDGE
10. FIRE TRUCK TURNAROUND

LANDSCAPE CALCULATIONS

AREA TYPE	DESCRIPTION	AREA S.F.	%
HARDSCAPE	SIDEWALKS	8,050	16%
HARDSCAPE	D.G.	445	1%
HARDSCAPE	FIRE ACCESS TURN-AROUND	3,030	6%
LANDSCAPE	PLANTING AREA	13,935	27%
LANDSCAPE	LAWN PANEL (LAWN)	1,251	2%
HARDSCAPE	PARKING LOT	22,937	46%
DRIVEWAY/PARKING TOTAL		26,241	35%
OPEN AREA TOTAL		23,236	31%
BUILDING		25,308	34%
TOTAL		74,956	100%

TREE LEGEND

SYMBOL	SPECIES
	DECIDUOUS SKYLINE TREE PLATANUS RACEMOSA
	EVERGREEN STREET TREE CUPANIOPSIS ANACARDIOIDES
	EVERGREEN SCREENING TREE OLEA EUROPAEA 'WILSONII'
	DECIDUOUS COLOR TREE ARBUTUS X MARINA
	EVERGREEN ACCENT TREE CHAMAEROPS HUMILIS
	EVERGREEN COLUMNAR TREE CUPRESSUS 'TINY TOWER'

PLANTING DESIGN CRITERIA

BASED ON THE BUTTE PARK CITY WIDE DESIGN GUIDELINES AND ORCHARD VIEW DESIGN GUIDELINES, THE PLANT PALETTE BELOW IS COMPRISED OF PLANT MATERIALS AND MIXES KNOWN TO THRIVE IN THE LOCAL CLIMATE AND SOIL CONDITIONS. THE LAYOUT AND DESIGN OF PLANTING AREAS WILL BE HIERARCHICAL IN CHARACTER AND COMPLIMENT THE ARCHITECTURE AND PEDESTRIAN SPACES.

THE PLANT PALETTE IS COMPRISED OF PLANTS NATIVE TO MEDITERRANEAN CLIMATES. 20% OR LESS OF THE PLANT MATERIAL WILL REQUIRE MODERATE WATER, AND THE REMAINDER WILL REQUIRE LOW TO VERY LOW WATER ONCE ESTABLISHED. THIS PLANT PALETTE COUPLED WITH THE IRRIGATION SYSTEM DESCRIBED AT THE LEFT WILL MEET OR EXCEED THE STATE AND LOCAL STANDARDS FOR WATER CONSERVATION THROUGH WATER EFFICIENT LANDSCAPE IRRIGATION DESIGN. 90% OF ORNAMENTAL SHRUBS AND GRASSES BY AREA WILL BE 1 GALLON CONTAINERS SPACED ON AVERAGE 36" O.C. 10% OF PLANTING BY AREA WILL BE 5 GALLON CONTAINERS, AND WILL BE UTILIZED FOR SPECIMEN PLANTING AND SCREENING. ALL ABOVE UTILITIES WILL BE SCREENED WITH VEGETATION.

IRRIGATION DESIGN CRITERIA

A WEATHER SENSING, "SMART CONTROLLER" WILL BE USED TO MONITOR THE IRRIGATION WATER AND MANAGE DAILY WATER CONSUMPTION TO THE MINIMUM REQUIREMENTS FOR EACH HYDROZONE.

ALL TREES, POTTERY, SHRUB AND GROUNDCOVER AREAS WILL BE IRRIGATED ON SEPARATE HYDROZONES WITH DRIP OR BUBBLER IRRIGATION, SO THAT ONCE ESTABLISHED, WATER CAN BE REGULATED IN A MORE EFFICIENT MANNER.

I CERTIFY THAT THIS PLANT PALETTE COUPLED WITH THE IRRIGATION SYSTEM DESCRIBED ABOVE WILL MEET OR EXCEED THE STATE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO).

LANDSCAPE FOR THE PROJECT SHALL BE DESIGNED TO COMPLY WITH THE CITY'S WATER EFFICIENT LANDSCAPE ORDINANCE AND WITH THE GUIDELINES FOR THE IMPLEMENTATION OF THE WATER EFFICIENT LANDSCAPE ORDINANCE.

SCOTT HERMAN
LANDSCAPE ARCHITECT | CA LICENSE NUMBER 6104

Disclaimer: Illustration provided by RRM Design Group, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Source: RRM Design Group, March, 2020.

UltraSystems
environmental • management • planning

Orchard View Gardens
Senior Apartment Homes
Landscape Plan

Domestic Water – New domestic water meters would be installed as required to meet the demands calculated by the plumber for the project and in compliance with the requirements of the City's Public Works Department. Water would be provided by the Metropolitan Water District and the City of Buena Park (City of Buena Park, 2019a). The proposed project would connect to the existing six-inch water main in Valley View Boulevard.

Fire Water – A water connection is required to provide water to the proposed fire hydrants on the project site (to be located between Casitas 2 and 3 and south of Building 1, near the existing church). The fire water line would be connected to the new hydrants from the existing six-inch water line in Valley View Boulevard.

Irrigation Line – A new line would be connected from the existing six-inch water line in Valley View boulevard to the project site to provide irrigation to the proposed project.

Dry Utilities – A new natural gas connection is proposed to serve the project site. The project would install a new two-inch gas line from the project site to an existing gas line in Valley View Boulevard. Natural gas service would be provided to the project site by the Southern California Gas Company (SoCalGas). Southern California Edison Company (SCE) would provide electricity to the project site (City of Buena Park, 2019a). The project proposes an eight-foot by 10-foot SCE transformer pad at the southeast corner of the project site.

Stormwater – The proposed development would maintain existing drainage patterns and discharge locations. Stormwater runoff would be collected via bioretention areas, as described in detail in the hydrology section of this document. The project includes three proposed bioretention basins on site. The project proposes a 830-square-foot bioretention basin along the western boundary of the project site, along the project site's frontage with Valley View Street. A second 2,275-square-foot bioretention basin is proposed adjacent to the existing church parking lot, south of Building 1 as well as an adjacent 1,600-square-foot gravel storage area. A third 800-square-foot bioretention basin is proposed adjacent to the northern project boundary, north of Building 1. Refer **to Figure 3.3-4** below, which shows the proposed hydrology for the project.

Trash Service – Trash service would be provided by Park Disposal (EDCO) (City of Buena Park, 2019a).

Cable Television – New cable television connections would be needed to serve the project. Spectrum (formerly Time Warner) provides television service to the project site (City of Buena Park, 2019a). Alternatively, connections to AT&T U-verse could be established via a tie-in for SCE, Charter, and AT&T at the northeast corner of the project site or there may be the potential need to relocate the existing pole to meet overhead clearance from the proposed buildings onsite.

3.4 Off-Site Improvements

3.4.1 Utility Improvements

For domestic, water, fire water, irrigation, and natural gas, connections would be required to existing water mains, water line, and gas lines in Valley View Boulevard. Therefore, construction would need to occur in Valley View Boulevard to connect the utility lines for the proposed project to the existing main lines in Valley view Boulevard.

3.4.2 Intersection Treatments

The irregularly designed intersection of San Rafael Drive and Valley View Street presents some challenges for drivers maneuvering through it. Fehr & Peers developed four intersection treatment options that can improve circulation. Implementation of each treatment depends on available funding sources and the City's discretion (Fehr & Peers, 2020, p. 9). The four treatment options are described below (Fehr & Peers, 2020, pp. 9-15). Refer to **Section 4.17** of this document and **Appendix H** (Traffic Assessment Memo) for additional details.

Treatment Option 1 - Convert Frontage Roads to One-Way Streets:
This option includes converting the frontage roads on either side of Valley View Street to one-way streets and diverting the flow of traffic along the frontage roads away from the signalized intersection. The frontage roads would only provide ingress access from San Rafael Drive, making the stop signs unnecessary as traffic would not be permitted towards San Rafael Drive. This would result in the rerouting of project traffic and existing neighborhood traffic. However, the project is anticipated to generate a low number of trips per day and the traffic generated by the existing houses and churches affected by the rerouting is also minimal. The rerouted traffic should not result in any traffic operation impacts to the surrounding network.

This treatment would improve traffic flow, reduce conflict areas, and eliminate difficult turning maneuvers. Vehicles making a northbound right U-turn onto the frontage road will have the area necessary to complete the turn, reducing the conflict observed on the frontage road. One drawback to this recommendation is that it cannot be implemented along the Los Molinos Drive southbound frontage road. This roadway terminates in a cul-de-sac without any additional access for vehicles. However, the implementation of this treatment along Valley View Street could benefit the project and improve circulation near the site. Treatment option 1 (one-way treatment) precludes the need to restrict U-turn movements.

Treatment Option 2 - Restrict U-Turn Movements:

Vehicles making a northbound right U-turn onto Valley View frontage road require both lanes to complete the turn which could result in a head-on collision. Vehicles stopped along the frontage road were observed entering the middle of an intersection to avoid conflicts with traffic attempting to make a right U-turn**.** This option is split into Option 2a and 2b, as follows:

> **Treatment Option 2a:** If Treatment Option 1 is not selected, Treatment Option 2a could be implemented restricting right U-turn movements from Valley View Street onto the frontage roads. Installation of this improvement would require adding no U-turn signs on Valley View Street.
>
> **Treatment Option 2b:** As an extra measure to discourage right U-turn movements, Fehr & Peers also propose this treatment option, which includes extending the median on the frontage road to make the turning movement difficult for vehicles to complete. Treatment Option 2b can be implemented along with Treatment Option 2a, but it should not be implemented by itself. Restricting right U-turns would not be necessary if the frontage road was converted to one-way ingress only. These treatment options would reduce conflicts for vehicles stopped along the frontage road and vehicles blocking the intersection. Drivers who were forecast to make the northbound right U-turn on the Valley View frontage road would still be provided access to the project site via intersections along Crescent Avenue. Similar to Option 2a, the number of trips affected by the rerouting is also minimal and would likely not

result in any traffic operation impacts to the surrounding network. Restricting right U-turns would not be necessary if the frontage road was converted to one-way ingress only.

Treatment Option 3- Modify Existing Median to include a Right-Turn Lane:

This option provides another solution to help alleviate the difficult northbound right U-turn at the intersection of San Rafael Drive and Valley View Street, similar to Treatment Option 2. This option includes modifying the existing median to accommodate a right-turn lane that would provide access to the Valley View frontage road near the project site. The right-turn lane would align with the project's southern driveway. Drivers would only be allowed to make a left-turn onto the frontage road or proceed straight into the project from the turning lane.

Implementation of this treatment would require narrowing lane widths along Valley View Street or the Valley View frontage road. A "Do Not Enter" sign should be installed to discourage drivers from entering the turn lane from the Valley View frontage road. A stop sign would be required at the right-turn lane to encourage drivers to yield to traffic along the frontage road. Right-turns would be restricted for drivers utilizing the right-turn lane. The skewed intersection could create visibility challenges for drivers.

The rightmost northbound through lane along Valley View Street could be reduced from 14 feet to 12 feet to accommodate the right-turn lane. This reduction may require that the entire median between San Rafael Drive and Crescent Avenue be widened to 10 feet for a consistent right edge line for through traffic along Valley View Street. Lane widths along the Valley View frontage road could be reduced to accommodate 10-foot travel lanes. On-street parking along the frontage road may need to be restricted near the right-turn lane to accommodate this improvement.

Implementation of this treatment option would reduce right U-turns at the signalized intersection. Treatment Option 2 could be implemented along with Treatment Option 3. This improvement helps improve circulation and provides direct access to the project driveway.

Treatment Option 4- Traffic Signal Split Phasing on Minor Legs:

Current traffic signal phasing at the intersection is permissive east-west and allows both minor legs to proceed through the intersection simultaneously. Due to the offset and irregular configuration of the intersection, it is difficult to predict the opposing vehicles' path of travel (a vehicle making a left-turn could be accessing Valley View Street or the frontage road). A driver exiting from San Rafael Drive has three options for completing a left-turn: the driver could turn onto the Valley View frontage road, Valley View Street, or Los Molinos frontage road.

Treatment Option 4 includes modifying the signal phasing to provide split phasing for the eastbound and westbound legs of the intersection. With this recommendation, the minor leg movements would enter the intersection separately. This can reduce conflict movements created by the offset and irregular intersection configuration. Implementation of this treatment would require replacing four of the existing signal heads along the minor legs and updating the signal timing at the intersection. However, this signal modification could retain the existing traffic signal poles and mast arms. One drawback to this recommendation is that it would affect signal timing coordination along the Valley View corridor because it requires more green time for the minor legs. This would require timing changes throughout the coordinated corridor. Pedestrian traffic along the intersection can also increase delay at an intersection.

Table 3.4-2 summarizes the intersection treatments. Treatment Option 1 (One-way street conversion) and Treatment Option 2 (Restrict right U-turn movements) are not recommended to be implemented together as the installation of Treatment Option 1 precludes the need for Treatment Option 2. The other treatment options could be implemented by themselves or implemented together as complementary treatment options. Implementation and possible phasing of these treatments depend on available funding (Fehr & Peers, 2020, p. 18),

Table 3.4-2
INTERSECTION TREATMENTS SUMMARY

Improvements	Descriptions	Issue Addressed	Drawbacks
1. Convert Frontage Road to One Way Streets	• Restricts two-way movement along frontage streets • Add one-way streets signs • Requires additional infrastructure/treatments throughout one-way street for compliance	• Improves traffic flow • Reduces conflict areas • Eliminates difficult turn movements	• Improvement cannot be installed along both sides of Los Molinos Frontage Road
2a. Restrict U-turn Movements with Signage Only	• Restrict right U-turn movement • Add No U-turn signs	• Reduce conflicting movements	• Concerns with eastbound and westbound traffic not addressed
2b. Restrict U-Turn Movements with Signage and Median Extension	• Restrict right U-turn movement • Add No U-turn signs • Extend frontage road median to discourage U-turns	• Reduce conflicting movements	• Concerns with eastbound and westbound traffic not addressed
3. Modify Existing Median to include a Right-Turn Lane	• Add 10-foot right-turn lane to existing median on Valley View that aligns with the project driveway • Reduce the rightmost northbound through lane from14 feet to 12 feet or reduce lane widths along Valley View frontage Road	• Eliminates difficult turn movement	• Concerns with eastbound and westbound traffic not addressed
4. Split Phasing on the Minor Legs (Los Molinos Dr and San Rafael Dr)	• Updates Signal timing at intersections • Add signal heads to minor legs	• Addresses concerns with EB and WB traffic • Reduces conflict areas	• Signal coordination along the corridor may need to be adjusted

Source: Fehr & Peers, 2020, Table 9.

3.5 Construction Activities

For safety reasons, the project may erect barricades for safety and security prior to construction activities, and will maintain safe access for construction workers throughout construction.

Construction activities may include the following:

- Site grading-during grading, there would be a raw cut of 85 cubic yards and a raw fill (import of soil) of 6,035 cubic yards.

- New construction, as described below.

After site preparation is completed, infrastructure such as sewer and drainage lines would be installed and connected to existing facilities. The building foundations would be poured with concrete, and framing of the buildings would begin. The final stage of construction would involve interior furnishings, detail work, and completion of common areas and outside landscaping. The only offsite improvements would be street improvements where the point of utility connections would occur. The general contractor would utilize heavy equipment during grading. The types and number of pieces of equipment and length of use are shown below in **Table 3.5-1**.

Construction staging would be limited to the project site; no offsite areas would be used. Project construction workers would park their vehicles on the project site. Employees will be able to park onsite during the construction/demolition phase in the existing paved parking areas; once the new parking lots are constructed employees would use this area to park. The project applicant would strongly encourage/incentivize construction employees to carpool and take public transit to the project site (Walker, 2020). Below is the anticipated number of construction employees by construction phase:

- Demolition: 10-12 employees

- Grading: 10-12 employees

- Site work: 5-10 employees

- Vertical construction: 75 employees

3.5.1 Construction Schedule and Equipment

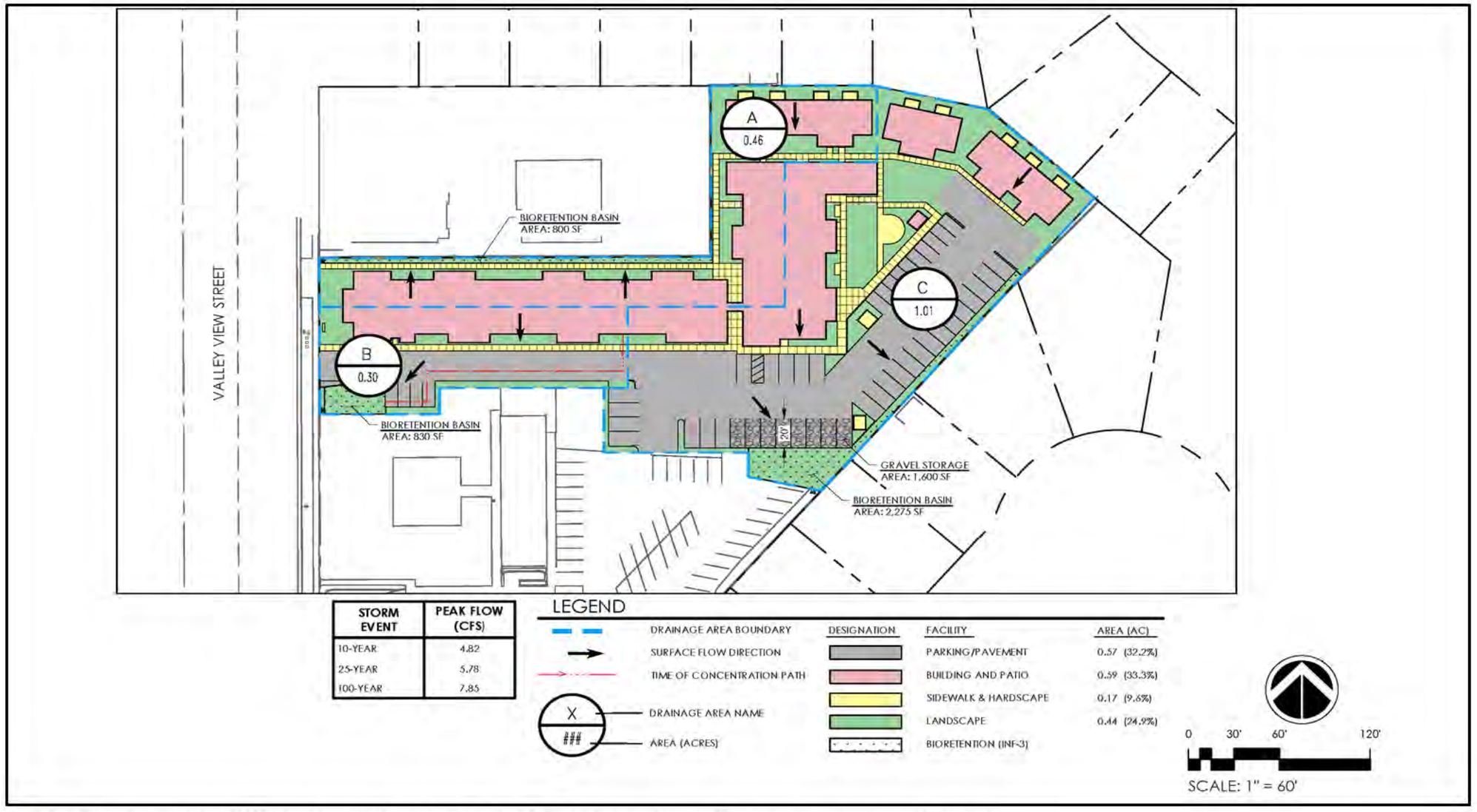
Construction would occur in one phase but is broken down into different parts, as detailed in **Table 3.5-1** below. Project construction is anticipated to begin in January 2022 and would last approximately 16 months, ending in April 2023. It is anticipated that residents would move in by the 2nd quarter of 2023. The total construction schedule would be 16 months long starting in winter (January) 2022 (Walker, 2020).

Table 3.5-1
CONSTRUCTION PHASING AND EQUIPMENT DETAILS

Phase/Months	Number of pieces of equipment	Equipment	Number of working days
Demo Phase: 1 month	2	Large Excavators	10 working days
	2	Standard Backhoes	10 working days
	1	Asphalt Grinder	2 working days
	1	Large Loader	15 working days
Grading Phase: 1 month	2	Standard Scrapers	20 working days
	1	Larger Loader	15 working days
	1	Standard Blade	15 working days
	1	Standard Skiploader	20 working days
Site Work Phase: 2 Months	1	Large Excavator	20 working days
	3	Standard Backhoes	70 working days
	2	Standard Skiploaders	4 working days
	1	Paving Machine	4 working days
Vertical Phase: 12 Months	1	Large Pettibone (forklift)	75 working days
	1	Bobcat (Skid-steer)	40 working days
	1	Standard Skiploader	20 working days

Source: Sarah Walker of National Community Core, email correspondence on May 11, 2020.

Figure 3.3-4
PROPOSED HYDROLOGY MAP



Disclaimer: Illustration provided by RRM Design Group, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Source: RRM Design Group, August 5, 2020.

UltraSystems

Orchard View Gardens
Senior Apartment Homes
Proposed Hydrology Map

3.6 Discretionary Actions

General Plan Amendment. As currently proposed, the project site would be developed at an overall density of 37.5 dwelling units per acre (66 dwelling units/1.76 acres). For the proposed project, under low density residential, the base development density standard is up to 7.2 du/ac. Densities up to 14.4 du/ac are allowed with an Affordable Senior Housing Bonus. Therefore, to develop the project site, the applicant is requesting approval of a General Plan Amendment from Low Density Residential to High Density Residential.

Zone Change. The project requires a Zone Change from Residential Single Family 6 (RS-6) to Medium-Density Multifamily Residential (RM-20) to accommodate the density (including the Affordable Senior Housing Bonus) of the proposed project.

Development Agreement. The Development Agreement would set unique development standards for the project which differ from the underlying zoning developments standards, including density, unit sizes, and open space area.

Tentative Parcel Map. The project requires a Tentative Parcel Map to divide one parcel into two.

Modification to Use Permit. The project proposes modification to Use Permit U-272 to reflect the updated property lines and parking spaces required to accommodate the proposed project.

Other Permits and Approvals

Following the Lead Agency's approval of the Initial Study/Mitigated Negative Declaration, the following permits and approvals would be required prior to construction, as shown in **Table 3.6-1** below.

Table 3.6-1
PERMITS AND APPROVALS

Agency	Permit or Approval
City of Buena Park Building & Safety Division	Site Plan review and approval and issuance of Building Permits
City of Buena Park Planning Division	General Plan Amendment Zone Change Development Agreement Tentative Parcel Map Modification to Use Permit
Orange County Fire Authority	Building plan check and approval. Review for compliance with the current California Fire Code, current California Building Code, California Health & Safety Code and City of Buena Park Municipal Code. Plans for fire detection and alarm systems, and automatic sprinklers.
Metropolitan Water District and the City of Buena Park	Letter of authorization/consent for proposed improvements to provide water supply connection to new development.
Southern California Gas Company	Letter of authorization/consent for proposed improvements to provide natural gas connection to new development.
Southern California Edison Company	Letter of authorization/consent for proposed improvements to provide electrical connection to new development.

4.0 ENVIRONMENTAL CHECKLIST

Environmental Factors Potentially Affected

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

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

Determination (To Be Completed by the Lead Agency)

On the basis of this initial evaluation:

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

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

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

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

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

Signature _____ Date 09.08.2020

Swati Meshram City of Buena Park

Printed Name

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 would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

(2) All answers must take into account the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

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

(4) "Negative Declaration: Less than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to less than significant level.

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

(a) Earlier Analyses Used. Identify and state where the earlier analysis available for review.

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

(c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures 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. A source list should be attached and other sources used or individuals contacted should be cited in the discussion.

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

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

(9) The explanation of each issue should identify:

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

(b) The mitigation measure identified, if any, to reduce the impact to less than significant.

4.1 Aesthetics

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

A "visual environment" includes the built environment (development patterns, buildings, parking areas, and circulation elements) and natural environment (such as hills, vegetation, rock outcroppings, drainage pathways, and soils) features. Visual quality, viewer groups and sensitivity, duration, and visual resources characterize views. Visual quality refers to the general aesthetic quality of a view, such as vividness, intactness, and unity. Viewer groups identify who is most likely to experience the view. High-sensitivity land uses include residences, schools, playgrounds, religious institutions, and passive outdoor spaces such as parks, playgrounds, and recreation areas. Duration of a view is the amount of time that a particular view can be seen by a specific viewer group. Visual resources refer to unique views, and views identified in local plans, from scenic highways, or of specific unique structures or landscape features.

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

No Impact

Scenic vistas generally include extensive panoramic views of natural features, unusual terrain, or unique urban or historic features, for which the field of view can be wide and extend into the distance, and focal views that focus on a particular object, scene or feature of interest. The City of Buena Park's General Plan does not include discussion of any scenic vistas or other important visual resources that are important to the City (RBF Consulting, 2010a). Additionally, the city's General Plan EIR states: "Because the City's topography is relatively flat and the City is densely developed, distant views are obstructed by existing development. Buildings (including existing residences) and the adjacent

roadways are essentially the dominant visual elements in the City's environment" (RBF Consulting, 2010b, p. 5.3-1).

The project area is characterized by flat topography and urban development. There are no significant scenic views from public thoroughfares and open spaces in the vicinity of the project. Views of and within the project area are generally limited to immediately adjacent uses/structures. Views to the north, south and consist of adjacent developed uses of varying scale, including residential and institutional (church) uses. Views to the west consists of views of residential developments across Valley View Street. Therefore, the project would have no impact on a scenic vista.

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

No Impact

The California Department of Transportation (Caltrans) provides information regarding officially designated or eligible state scenic highways, designated as part of the California Scenic Highway Program. According to Caltrans, there are no officially designated scenic highways within or adjacent to the project area, and no roadways near the project site are currently eligible for scenic highway designation (Caltrans, 2014). As shown in **Figure 4.1-1**, the closest officially designated state scenic highway is State Route 91 (SR-91), which is located more than 10 miles east from the project site. Due to the large distance between the project site and SR-91, construction and implementation of the project will have no impacts on state scenic highways. The nearest eligible highway is a portion of State Route 57 (SR-57), approximately 10 miles northeast of the project site; although this portion is eligible to become an official state scenic highway, it is not currently classified as such and is not considered in this analysis. Therefore, the project would have no impacts on trees, rock outcroppings and historic buildings within a state scenic highway.

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

Less than Significant Impact

The project site is located in an urban setting characterized by a mix of single-family residential buildings and a church abutting the north side of the project. Views of the existing streetscape are characterized by single-story buildings, utilities infrastructure (including utility lines, poles and street lights) and minimal landscaping. Refer to **Table 4.11**, which describes the existing visual character in the vicinity of the project site. **Figure 4.12** includes photographs of development in the vicinity of the project site.

Figure 4.1-1
STATE SCENIC HIGHWAYS AND NATIONAL BYWAYS

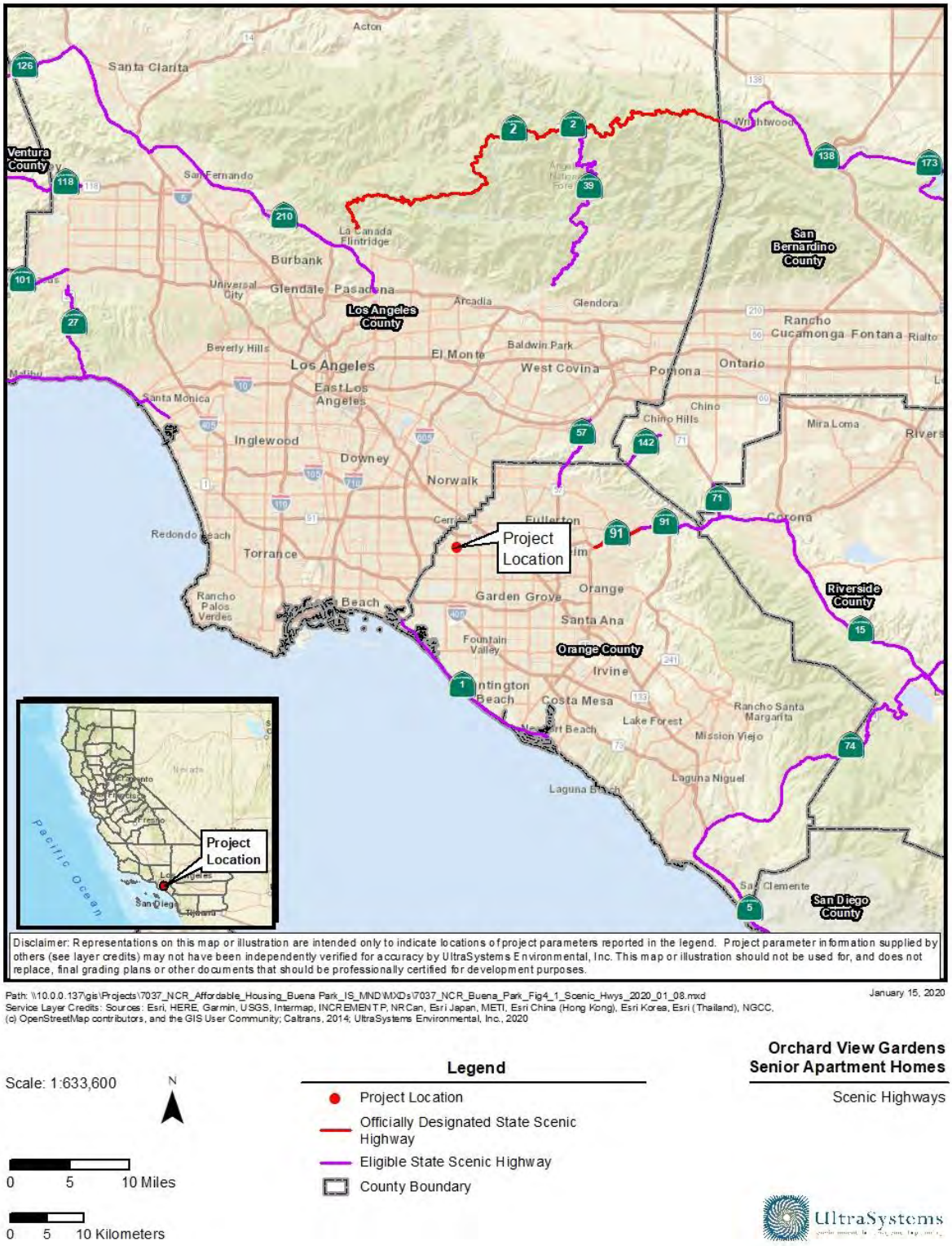


Table 4.1-1
EXISTING VISUAL CHARACTER AND LAND USES IN THE PROJECT AREA

Location	General Characteristics	Existing Lighting	Building Height and Design	Landscaping
Project Site	Developed with two church buildings, a large surface parking lot, and an open field.	Exterior lighting associated with the church buildings, parking lot lighting, street lighting.	One- to two-story buildings with a tiled sloping roof, a flat roof, and white plastered exterior walls.	Mature trees and ornamental shrubs and grasses.
Surrounding Areas				
North	A church and single-family homes.	Exterior lighting associated with the church buildings, parking lot lighting, residential developments and street lighting.	The church has tall one-story buildings, a tiled sloping roof, a flat roof and white and tan exterior walls. Residents have one-story to two-story buildings with no specific architectural design.	Ornamental trees, shrubs and grasses.
East	Single-family homes.	Exterior lighting associated with the residential developments and street lighting.	Residents have one-story to two-story buildings with no specific architectural design.	Ornamental trees, shrubs and grasses.
West	Single-family homes across Valley View Street.	Exterior lighting associated with the residential developments and street lighting.	Residents have one-story buildings with no specific architectural design.	Ornamental trees, shrubs and grasses.
South	Single-family homes.	Exterior lighting associated with the residential developments and street lighting.	Residents have one-story to two-story buildings with no specific architectural design.	Ornamental trees, shrubs and grasses.

Source: UltraSystems, 2020 and Google Earth Pro, 2019.

Figure 4.1-2
EXISTING VISUAL CHARACTER IN THE VICINITY OF THE PROJECT SITE

PHOTO 1: View of one-story and two-story homes located north of the project site.

PHOTO 2: View of one-story and two-story homes located south of the project site.

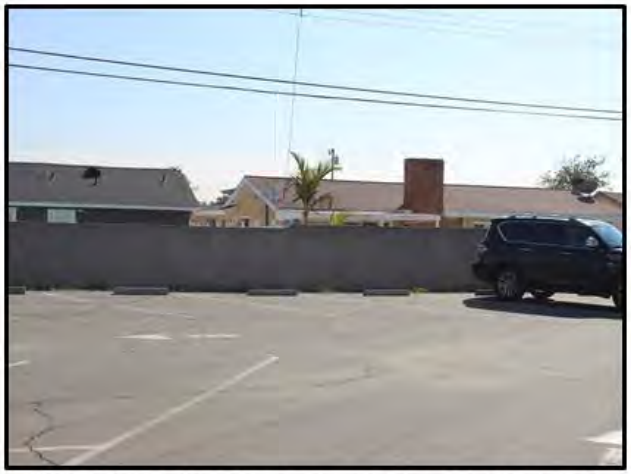


PHOTO 3: View of one-story and two-story homes located east of the project site.

PHOTO 4: View of one-story homes located to the west, across Valley View Street from the project site.

Construction

During project construction, there would be certain elements on the project site that are not compatible with the project vicinity. These may include construction equipment (e.g., small cranes, pickup trucks), stockpiled materials, and construction-area barriers and fencing. While these elements would be removed following construction, they would nonetheless result in a temporary impact. However, during project construction, work areas would be screened from public view by temporary barriers/fencing. Therefore, short-term visual impacts during the construction phase would be less than significant.

Operation

The project site is one contiguous, irregular-shaped parcel with the southern portion of the site currently occupied by Saint Joseph's Church. The church is housed in a single building and surrounded by surface parking. The northern portion of the site is currently vacant. The project proposes to subdivide the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres. The newly created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with a primary residential apartment building and nine single-story casitas accommodating 66 residential units and a 3,000-square-foot community center.

The City of Buena Park does not have General Plan or Municipal Code policies that regulate scenic quality that would be applicable to the proposed project. As a result, the project would have less than significant impacts in relation to consistency with local land use plans, policies, or regulations.

Implementation of the project would not degrade the existing visual character of the site. Under the proposed project, new buildings would be consistent with the general character of existing buildings in the surrounding neighborhood, in terms of architectural style, density, height, bulk, and setback.

On Parcel 2, 66 residential apartment homes (65 for seniors aged 62+ and one manager's unit), including 62 one-bedroom units and four two-bedroom units, are proposed in four buildings - one larger and three smaller. Building 1 is divided into two groupings connected by a breezeway. Building 1 West, facing Valley View Street, is a two-story building transitioning to a linear three-story double-loaded corridor toward the interior of the site. Building 1 East is a three-story double-loaded bar building located in the interior of the site with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Along the northern property line, there are nine attached single-story casitas in three clusters. Careful consideration of the character and scale of surrounding properties was made to ensure that the project architecture and massing blends in with the existing surrounding uses. The maximum building height of the proposed project is 35 feet for the buildings at the interior of the site. The buildings would have tilted roof tiles, wood paneled patio railings, white stucco for exterior walls, and utilize accent shutters. The project applicant conducted multiple community meetings and has undergone a preliminary review with City of Buena park staff to inform the design of the project.

The project proposes a California Mission architectural style to be complementary with the church and the surrounding neighborhoods. The project includes both wall and roof plane articulation and carries the design elements to each elevation, including the inner portions of the site and all detached structures such as trash enclosures. The layout of the buildings creates several unique landscaped areas that includes both passive and active spaces – raised planters, green lawn/turf areas, drought-tolerant and native ground covers, decomposed granite walkways for residents to access

community spaces and an outdoor lounge area with a fireplace and planter beds at the northeast corner of the site. The proposed project also includes a 3,000-square-foot community center. The project would increase the density, scale, and height of development on the project site compared to existing conditions. However, as discussed above, the project would not be out of character with the surrounding area, which contains a mix of land uses, primarily single-family residential, at various scales of development, as detailed in **Table 4.1-1** above. Refer to **Figure 4.1-3** through **Figure 4.1-6**, which provide conceptual renderings of what the proposed project would look like.

The project would improve an existing underutilized piece of land with well-designed buildings, commercial street frontage and landscaping, thereby resulting in a beneficial change to existing site conditions and would not represent an adverse impact or degradation in the existing visual character of the site and its surroundings.

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

Less than Significant Impact with Mitigation Incorporated

Construction

The project would not operate construction equipment outside of the permitted hours set forth in Section 8.28. 040 of the City of Buena Park Noise Ordinance. The Noise Ordinance prohibits noise generated by construction activities between the hours of 8:00 PM and 7:00 AM Monday through Saturday, and at any time on Sundays (City of Buena Park, 202, p. 8-6). During project construction there would be additional sources of light that would be used to provide security lighting for the construction staging area(s) on the project site. Construction equipment used onsite may produce glare. To ensure that construction lighting and glare do not have a significant impact on surrounding residences, mitigation measure **MM AES-1** is recommended to reduce potential temporary construction lighting and glare impacts to a less than significant level.

Mitigation Measure

MM AES-1 During project construction the project applicant shall place construction staging areas as far away as possible from adjacent residences so as to minimize, to the maximum extent possible, any potential lighting and/or glare impacts to nearby residences. The lighting used during project construction shall consist of the minimum amount of light necessary for safety and security on the project site.

Level of Significance After Mitigation

With implementation of **MM AES-1** and given that project construction would be temporary, the proposed project would have a less than significant impact regarding temporary construction lighting and glare.

Figure 4.1-3
BUILDING 1 ELEVATIONS

Disclaimer: Illustration provided by RRM Design Group, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Source: RRM Design Group, March, 2020.

UltraSystems
environmental • management • planning

Orchard View Gardens
Senior Apartment Homes
Building 1 Elevations

Figure 4.1-4
CASITAS ELEVATIONS

Casitas Building A South Elevation
1/8" = 1'-0"

Casitas Building B South Elevation
1/8" = 1'-0"

Casitas Building C South Elevation
1/8" = 1'-0"

Casitas Building A North Elevation
1/8" = 1'-0"

Casitas Building B North Elevation
1/8" = 1'-0"

Casitas Building C North Elevation
1/8" = 1'-0"

Casitas East Elevation
1/8" = 1'-0"

Casitas West Elevation
1/8" = 1'-0"

Disclaimer: Illustration provided by RRM Design Group, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Source: RRM Design Group, March, 2020.

UltraSystems
environmental • management • planning

Orchard View Gardens
Senior Apartment Homes
Casitas Elevations

Figure 4.1-5
PROJECT PERSPECTIVES

Perspective from Valley View St.

Perspective at Entry from Valley View St.

Disclaimer: Illustration provided by RRM Design Group, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Source: RRM Design Group, March, 2020

UltraSystems

Orchard View Gardens
Senior Apartment Homes
Project Perspectives

Figure 4.1-6
PROJECT COLOR AND MATERIAL BOARD

ROOF
CONCRETE S TILE
EAGLE ROOFING: SMC 8404 SAN JUAN

EXTERIOR PLASTER
16/20 SAND FINISH
EXTERIOR WALLS
LA HABRA: EGGSHELL

WINDOWS
MILGUARD: TUSCANY SERIES
ESPRESSO

SHUTTERS
DUNN EDWARDS:
DET 631COCOA POWDER

DOORS
PAINTED FIBERGLASS/ WOOD
DUNN EDWARDS:
DET680 ESPRESSO MACCHIATO

LIGHTING
EXTERIOR WALLS
SEA GULL LIGHINTING: SEVIER LANTERN

ENTRY AWNING
WROUGHT IRON
DUNN EDWARDS:
BLACK BAY DEA188

Disclaimer: Illustration provided by RRM Design Group, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Source: RRM Design Group, March, 2020.

UltraSystems
environmental • engineering • planning

Orchard View Gardens
Senior Apartment Homes
Project Color and Materials Board

Operation

The project proposes new exterior lighting throughout the site. Installation of exterior lighting would be necessary for safety and nighttime visibility throughout the proposed residential development. The new project lighting would be visible from the surrounding area. Therefore, the project's proposed exterior lighting is expected to contribute to ambient nighttime illumination in the project vicinity.

The project site is located in an urban area, which is characterized by low to medium nighttime ambient light levels. Street lights, traffic on local streets, and exterior lighting in surrounding developments are the primary sources of light that contribute to the ambient light levels in the project area. Light-sensitive uses in the project vicinity are limited to residences.

According to the Institution of Lighting Engineers (ILE, 2005), now called the Institution of Lighting Professionals, and the Electric Power Research Institute (EPRI, 2000), light trespass[7] varies according to surrounding environmental characteristics. Areas that are more rural in character, and therefore have few existing artificial sources of light, are more susceptible to impacts resulting from the installation of new artificial lighting sources. In contrast, urbanized areas are characterized by a large number of existing artificial lighting sources and are thus less susceptible to adverse effects associated with new artificial lighting sources.

To determine appropriate lighting standards that represent the existing lighting conditions, land uses are typically categorized into one of four environmental zones, as depicted in **Table 4.1-2** below. The project site and surrounding area can be characterized as an area of medium ambient brightness (E3 environmental zone).

Table 4.1-2
ENVIRONMENTAL ZONES

Zone	Surrounding	Lighting Environment	Examples
E0	Protected	Dark	UNESCO Starlight Reserves, IDA Dark Sky Parks
E1	Natural	Intrinsically dark	National Parks, Areas of Outstanding Natural Beauty etc.
E2	Rural	Low district brightness	Village or relatively dark outer suburban locations
E3	Suburban	Medium district brightness	Small town centres or suburban locations
E4	Urban	High district brightness	Town/city centres with high levels of nighttime activity

Source: Table 1- Environmental Zones (ILE, 2005)

Based on these environmental zones, the ILE and EPRI have established recommendations for limiting light trespass onto adjacent properties. The recommendations established by the ILE are summarized in **Table 4.1-3** below.

7 Light trespass (also known as obtrusive light or spill light) is the condition where poorly shielded or poorly aimed light fixtures cast light onto areas where it is unwanted or not needed

Table 4.1-3
OBTRUSIVE LIGHT LIMITATIONS FOR EXTERIOR LIGHTING INSTALLATIONS

Environmental Zone	Light Trespass Illuminance			
	Pre-Curfew (Dusk – 11:00 p.m.)		Post Curfew (11:00 p.m. – 7:00 a.m.)	
ILE				
E1	2 lx	0.2 fc	1 lx	0.1 fc
E2	5 lx	0.5 fc	1 lx	0.1 fc
E3	**10 lx**	**0.9 fc**	**2 lx**	**0.2 fc**
E4	25 lx	2.3 fc	5 lx	0.5 fc
EPRI				
E1	1 lx	0.1 fc	1 lx	0.1 fc
E2	3 lx	0.3 fc	1 lx	0.1 fc
E3	**9 lx**	**0.8 fc**	**3 lx**	**0.3 fc**
E4	16 lx	1.5 fc	7 lx	0.6 fc

lx = lux
fc = foot-candles
Source: Adopted from ILE (2003) and EPRI (2000)

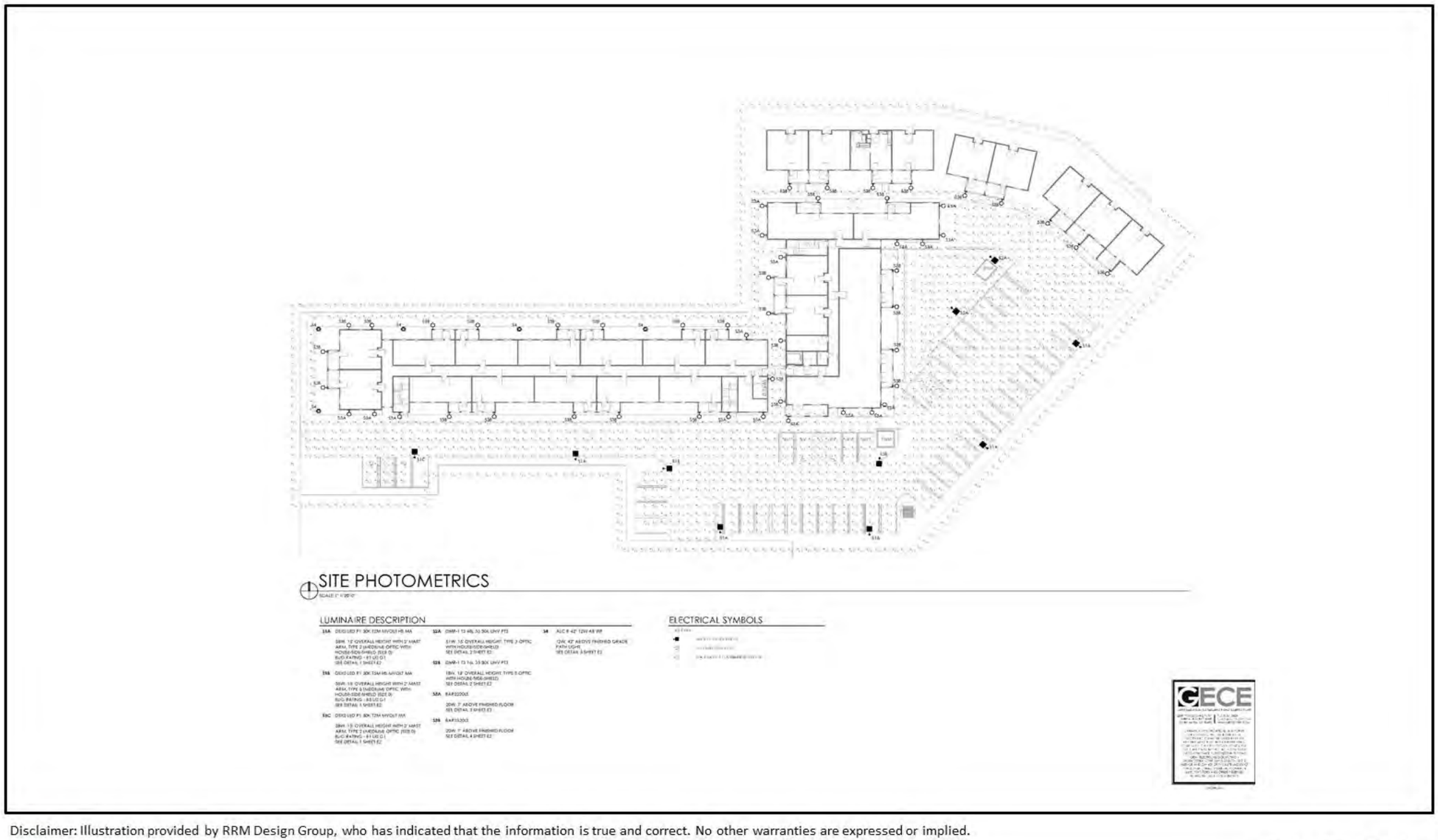
Curfew hours listed in the table are from the Institution of Lighting Engineers, Guidance Notes for the Reduction of Obtrusive Light, 2005 (ILE, 2005, p. 5), which states, "Curfew = the time after which stricter requirements (for the control of obtrusive light) will apply; often a condition of use of lighting applied by the local planning authority. If not otherwise stated - 23.00 hrs [11:00 p.m.] is suggested."

In the project area, light trespass impacts would be considered potentially significant if illuminance[8] produced by the project would impact sensitive receptors with lighting levels that exceed 0.8 foot-candles during pre-curfew hours (dusk to 11:00 p.m.) and 0.2 foot-candles during the post curfew hours (11:00 p.m. to 7:00 a.m.), as measured on the vertical and horizontal planes.[9]

The project proposes light-emitting diode (LED) lighting throughout the project site as well as occupancy sensors in common areas, parking areas and corridors to reduce energy use. Refer to **Figure 4.1-7**, which provides additional details regarding lighting onsite. As shown in the figure below, the project proposes exterior area lights, exterior bollards, and exterior wall-mounted luminaires. Exterior area lights are proposed throughout the project site. Exterior bollards are proposed along the western and northern boundary of Building 1. Exterior wall-mounted luminaires are proposed on the exterior of Building 1 on all sides and on the exterior of the casitas facing Building 1 and the proposed parking lot.

8 Measured in foot-candles, illuminance is the intensity of light falling on a surface.
9 A full moonlit night in rural areas with negligible ambient light would equal approximately 0.02-0.03 foot- candle, while a typical 30-foot tall streetlamp would have an illumination of 1.3 foot-candles at a distance of 10 feet (NLPIP, 2007).

Figure 4.1-7
SITE PHOTOMETRICS



Disclaimer: Illustration provided by RRM Design Group, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Source: RRM Design Group, March, 2020.

UltraSystems

Orchard View Gardens
Senior Apartment Homes
Site Photometrics

Light Trespass

As depicted in **Figure 4.1-7** (as well as sheet E1 in **Appendix A**), the project would result in minimal light leaving the project site. Light levels onsite would range from 0.0 lumens to 4.5 lumens at wall-mounted luminaire S3A. The project would emit 0.2 lumens along the western boundary of the project site, adjacent to the Valley View Street and along the southern edge of the project site. The project would emit 0.0 lumens along the southeast and northeast edges of the project site, adjacent to the existing residential land uses. Given the urban and built up nature of the project's surroundings and that the project is located in an area with existing night time lighting, the proposed project would have a less than significant impact regarding new sources of light and glare.

Sky Glow[10]

The project site is located approximately 24 miles southeast of the closest observatory (Griffith Observatory in Los Angeles), in an urbanized area in the City of Buena Park, and would therefore have less potential to impact operations at the observatory than more closely-situated properties. The proposed project would result in the construction of a two- to three-story apartment building with a maximum height of 35 feet and with exterior lighting. The proposed lighting onsite would comply with the requirements of the City's Municipal Code, including Chapter 19.444.030, Lighting, which states that lighting on any premises shall be directed, controlled, screened, or shaded in such a manner as not to shine directly on surrounding premises. Based on the physical characteristics of the area surrounding the project site and the design of the proposed light fixtures, implementation of the project would result in no significant impact associated with sky glow.

Glare[11]

The proposed project would introduce new outdoor artificial lighting elements, which have the potential to result in glare if the main beams of proposed lighting elements (i.e., the portion of the lamp with the greatest illuminance) are visible from offsite locations, resulting in excessive, uncontrolled brightness. However, the project would comply with the requirements of the City's Municipal Code, including Chapter 19.444.030, Lighting, which states that lighting on any premises shall be directed, controlled, screened, or shaded in such a manner as not to shine directly on surrounding premises. This section of the municipal code further states that lighting on any premises shall be controlled so as to prevent glare on driveways, walkways, and public thoroughfares (City of Buena Park, Municipal Code, 2020). Adherence to applicable city municipal codes would ensure that new sources of light or glare would not adversely affect day or nighttime views in the area. Additionally, as detailed in **Figure 4.1-4**, the project would utilize light-colored building materials such as eggshell colored stucco and no highly reflective materials. Therefore, impacts from a new source of substantial light or glare would be less than significant.

Shade/Shadow

Shadow-sensitive uses include all residential uses and routinely usable outdoor spaces associated with recreational or institutional uses, commercial uses such as pedestrian-oriented outdoor spaces or restaurants with outdoor eating areas, nurseries, and existing solar collectors. These uses are

10 Sky Glow is the brightening of the sky that occurs as a result of outdoor lighting fixtures emitting a portion of their light directly into the sky. Sky glow is of particular concern near observatories and in rural areas where there is low ambient light.

11 Glare is the objectionable brightness caused by over-illumination, as well as poorly shielded or poorly aimed light fixtures.

considered sensitive because sunlight is important to function, physical comfort, or commerce. Shade-sensitive uses in the project vicinity include the residences surrounding the project site to the north, south and east.

Although shade-sensitive uses are located to the north, south, and east, the project applicant consulted with the neighbors and surrounding residents about the proposed building heights and setbacks. The closest buildings to the adjacent residences to the north and northeast would be the Casitas, to be located with a ten-foot distance between the buildings and the property line. Through consultation, the applicant modified the project site plan to move the proposed new buildings away from the adjacent homes to the north, south, and east. The applicant modified the site plan to increase the setbacks between the proposed buildings. The proposed project design proposes two-story buildings that transition to three-story buildings as the building extends further into the interior of the project site, away from existing residences. Therefore, due to the distance from sensitive shade receptors and the modified building design, impacts regarding shade and shadow would be less than significant.

4.2 Agriculture and Forestry Resources

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				**X**
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				**X**
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code § 12220(g)), timberland (as defined by Public Resources Codes § 4526), or timberland zoned Timberland Production (as defined by Government Code § 51104(g))?				**X**
d) Result in the loss of forest land or conversion of forest land to non-forest use?				**X**
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?				**X**

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

No Impact

The California Department of Conservation (DOC) established the Farmland Mapping and Monitoring Program (FMMP) in 1982 to identify critical agricultural lands and track the conversion of these lands to other uses. The FMMP is a non-regulatory program and provides a consistent and impartial analysis of agricultural land use and land use changes throughout California. The project site and surrounding uses are designated by the FMMP as "Urban and Built-Up Land," which means that no agricultural uses occupy the site (DOC, 2016). The project is located within an urbanized area. Therefore, no farmland would be converted to non-agricultural use and no impacts would occur.

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

No Impact

The project site is developed with urban uses and there are no current agricultural operations existing on or in the vicinity of the project site. Therefore, the project would not conflict with existing zoning for agricultural use or a Williamson Act contract and no impact would occur.

c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code § 12220(g)), timberland (as defined by Public Resources Codes § 4526), or timberland zoned Timberland Production (as defined by Government Code § 51104(g))?

No Impact

The project site is located in a highly-urbanized setting. The site is zoned One-Family Residential (RS-6) does not support the definitions provided by PRC § 42526 for timberland, PRC § 12220(g) for forestland, or California Government Code § 51104(g) for timberland zoned for production. PRC § 12220(g) defines forest land as "land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." Since the project site is located in an urban setting, and is developed with a church, project-related changes would not conflict with zoning for forest land or timberland, and no impact would occur.

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

No Impact

The project site and surrounding land uses do not contain forest land. Therefore, project implementation would not result in the loss of forest land or conversion of forest land to non-forest use, and no impact would occur.

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

No Impact

The project site is a developed property located within a highly-urbanized setting. No existing farmland or forest land is located in the vicinity of the project. Therefore, implementation of the project would not result in changes to the environment, due to its location or nature which could result in the conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. No impact would occur.

4.3 Air Quality

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?			**X**	
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?			**X**	
c) Expose sensitive receptors to substantial pollutant concentrations?			**X**	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			**X**	

4.3.1 Pollutants of Concern

Criteria pollutants are air pollutants for which acceptable levels of exposure can be determined and an ambient air quality standard has been established by the U.S. Environmental Protection Agency (USEPA) and/or the California Air Resources Board (ARB). The criteria air pollutants of concern are nitrogen dioxide (NO_2), carbon monoxide (CO), particulate matter (PM_{10} and $PM_{2.5}$), sulfur dioxide (SO_2), lead (Pb), and ozone, and their precursors. Since the Orchard View Gardens project would not generate appreciable SO_2[12] or Pb emissions, it is not necessary for the analysis to include those two pollutants. Presented below is a description of the air pollutants of concern and their known health effects.

The Orchard View Gardens project is in the Orange County portion of the South Coast Air Basin (SCAB), for which air pollution control the South Coast Air Quality Management District (SCAQMD) is substantially responsible. **Table 4.3-1** shows the attainment status of the SCAB for each criteria pollutant for both the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). Presented below is a description of the air pollutants of concern and their known health effects.

12 Sulfur dioxide emissions will be below 0.07 pound per day during construction and operations.

Table 4.3-1
FEDERAL AND STATE ATTAINMENT STATUS

Pollutants	Federal Classification	State Classification
Ozone (O_3)	Nonattainment (Extreme)	Nonattainment
Particulate Matter (PM_{10})	Maintenance (Serious)	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	Nonattainment (Moderate)	Nonattainment
Carbon Monoxide (CO)	Maintenance (Serious)	Attainment
Nitrogen Dioxide (NO_2)	Maintenance	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Sulfates	No Federal Standards	Attainment
Lead (Pb)		Attainment
Hydrogen Sulfide (H_2S)		Attainment
Visibility Reducing Particles		Unclassified

Sources: USEPA, 2020a; USEPA, 2020b; USEPA, 2020c; USEPA, 2020d; USEPA, 2020e; ARB, 2019.

Nitrogen oxides (NO_X) serve as integral participants in the process of photochemical smog production and are precursors for certain particulate compounds that are formed in the atmosphere and for ozone. A precursor is a directly emitted air contaminant that, when released into the atmosphere, forms, causes to be formed, or contributes to the formation of a secondary air contaminant for which an ambient air quality standard (AAQS) has been adopted, or whose presence in the atmosphere will contribute to the violation of one or more AAQSs. When NO_X and reactive organic gases (ROG) are released in the atmosphere, they can chemically react with one another in the presence of sunlight to form ozone. The two major forms of NO_X are nitric oxide (NO) and NO_2. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. NO_2 is a reddish-brown pungent gas formed by the combination of NO and oxygen. NO_2 acts as an acute respiratory irritant and eye irritant and increases susceptibility to respiratory pathogens.

Carbon monoxide (CO) is a colorless, odorless non-reactive pollutant produced by incomplete combustion of fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, such as the project location, automobile exhaust accounts for most CO emissions. CO is a non-reactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions; primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, a typical situation at dusk in urban areas between November and February. The highest levels of CO typically occur during the colder months of the year when inversion conditions are more frequent. In terms of health, CO competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can be dizziness, fatigue, and impairment of central nervous system functions.

Particulate matter (PM) consists of finely divided solids or liquids, such as soot, dust, aerosols, fumes and mists. Primary PM is emitted directly into the atmosphere from activities such as agricultural operations, industrial processes, construction and demolition activities, and entrainment of road dust into the air. Secondary PM is formed in the atmosphere from predominantly gaseous combustion byproduct precursors, such as sulfur oxides, NO_X, and ROGs.

Particle size is a critical characteristic of PM that primarily determines the location of PM deposition along the respiratory system (and associated health effects) as well as the degradation of visibility through light scattering. In the United States, federal and state agencies have focused on two types of PM. PM_{10} corresponds to the fraction of PM no greater than 10 micrometers in aerodynamic diameter and is commonly called respirable particulate matter, while $PM_{2.5}$ refers to the subset of PM_{10} of aerodynamic diameter smaller than 2.5 micrometers, which is commonly called fine particulate matter.

PM_{10} and $PM_{2.5}$ deposition in the lungs results in irritation that triggers a range of inflammation responses, such as mucus secretion and bronchoconstriction, and exacerbates pulmonary dysfunctions, such as asthma, emphysema, and chronic bronchitis. Sufficiently small particles may penetrate the bloodstream and impact functions such as blood coagulation, cardiac autonomic control, and mobilization of inflammatory cells from the bone marrow. Individuals susceptible to higher health risks from exposure to PM_{10} airborne pollution include children, the elderly, smokers, and people of all ages with low pulmonary/cardiovascular function. For these individuals, adverse health effects of PM_{10} pollution include coughing, wheezing, shortness of breath, phlegm, bronchitis, and aggravation of lung or heart disease, leading, for example, to increased risks of hospitalization and mortality from asthma attacks and heart attacks.

Reactive organic gases (ROG) are defined as any compound of carbon, excluding CO, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions. It should be noted that there are no state or national ambient air quality standards for ROG because ROGs are not classified as criteria pollutants. They are regulated, however, because a reduction in ROG emissions reduces certain chemical reactions that contribute to the formation of ozone. ROGs are also transformed into organic aerosols in the atmosphere, which contribute to higher PM_{10} and lower visibility. The term "ROG" is used by the ARB for this air quality analysis and is defined the same as the federal term "volatile organic compound" (VOC).

Ozone is a secondary pollutant produced through a series of photochemical reactions involving ROG and NO_X. Ozone creation requires ROG and NO_X to be available for approximately three hours in a stable atmosphere with strong sunlight. Because of the long reaction time, peak ozone concentrations frequently occur downwind of the sites where the precursor pollutants are emitted. Thus, ozone is considered a regional, rather than a local, pollutant. The health effects of ozone include eye and respiratory irritation, reduction of resistance to lung infection and possible aggravation of pulmonary conditions in persons with lung disease. Ozone is also damaging to vegetation and untreated rubber.

4.3.2 Climate/Meteorology

Air quality is affected by both the rate and location of pollutant emissions, and by meteorological conditions that influence movement and dispersal of pollutants. Atmospheric conditions such as wind speed, wind direction, and air temperature gradients, along with local topography, provide the link between air pollutant emissions and air quality.

The Orchard View Gardens project site is located wholly within the SCAB, which includes all of Orange County, as well as the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The distinctive climate of the SCAB is determined by its terrain and geographical location. The SCAB is in a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. Thus, the climate is mild, tempered by cool sea breezes. This usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds.

The annual average temperature varies little throughout the 6,600-square mile SCAB, ranging from the low 60s to the high 80s. However, with a less pronounced oceanic influence, the inland portion shows greater variability in the annual minimum and maximum temperatures. The mean annual maximum and minimum temperatures in the project area—as determined from the nearest weather station in the City of Anaheim (WRCC, 2020), which has a period of record from 1989 to 2016—are 77.4 degrees Fahrenheit (°F) and 55.4°F, respectively. The hottest month is August with an average maximum temperature of 87.1°F and the coldest month is December with an average minimum temperature of 46.9°F.

During the period of record, the average annual rainfall measured 14.09 inches, which occurs mostly during the winter and relatively infrequently during the summer. Monthly precipitation averages approximately 2.94 inches during the winter (December, January, and February), approximately 1.07 inches during the spring (March, April, and May), approximately 0.60 inch during the fall (September, October, and November), and approximately 0.08 inch during the summer (June, July, and August).

4.3.3 Local Air Quality

The SCAQMD has divided the SCAB into source receptor areas (SRAs), based on similar meteorological and topographical features. The project site is in SCAQMD's North Orange County air monitoring area (SRA 16), which is served by Anaheim/Pampas, 5.5 miles southwest on Pampas Lane in Anaheim, monitoring ozone, PM_{10}, $PM_{2.5}$, and NO_2. All stations in the SCAB ceased monitoring CO in 2012. The ambient air quality data in the project vicinity as recorded from 2016 through 2018 and applicable standards are shown in **Table 4.3-2**.

Table 4.3-2
AMBIENT AIR QUALITY MONITORING DATA

Air Pollutant	Standard/Exceedance	2016	2017	2018
Ozone – Anaheim/ Pampas	Max. 1-hour Concentration (ppm)	**0.103**	0.090	**0.112**
	Max. 8-hour Concentration (ppm)	**0.074**	**0.076**	**0.071**
	# Days > Federal 8-hour Std. of 0.070 ppm	4	4	1
	# Days > California 1-hour Std. of 0.09 ppm	2	0	1
	# Days > California 8-hour Std. of 0.070 ppm	4	4	1
PM_{10} - Anaheim/ Pampas	Max. 24-hour Concentration (µg/m³)	74.0	95.7	94.6
	Est. # Days > Fed. 24-hour Std. of 150 µg/m³	0	0	0
	State Annual Average (20 µg/m³)	**27.5**	**26.9**	**27.9**
$PM_{2.5}$ - Anaheim/ Pampas	Max. 24-hour Concentration (µg/m³)	**44.4**	**53.9**	**63.1**
	# Days > Fed. 24-hour Std. of 35 µg/m³	1	7	7
	State Annual Average (12 µg/m³)	9.4	ND	11.4
NO_2 – Anaheim/ Pampas	Max. 1-hour Concentration (ppm)	0.064	0.081	0.066
	State Annual Average (0.030 ppm)	0.014	0.014	0.013
	# Days > California 1-hour Std. of 0.18 ppm	0	0	0

Source: ARB, 2020.
ND - There was insufficient (or no) data available to determine the value.
Bold - exceedance

4.3.4 Air Quality Management Plan (AQMP)

The SCAQMD is required to produce plans to show how air quality would be improved in the region. The California Clean Air Act (CCAA) requires that these plans be updated triennially to incorporate the most recent available technical information.[13] A multi-level partnership of governmental agencies at the federal, state, regional, and local levels implement the programs contained in these plans. Agencies involved include the EPA, ARB, local governments, Southern California Association of Governments (SCAG), and SCAQMD. The SCAQMD and the SCAG are responsible for formulating and implementing the Air Quality Management Plan (AQMP) for the SCAB. The SCAQMD updates its AQMP every three years.

The 2016 AQMP (SCAQMD, 2017) was adopted by the SCAQMD Board on March 3, 2017, submitted to the ARB and on March 10, 2017 was made part of the State Implementation Plan (SIP), which was submitted to the USEPA (ARB, 2017). It focuses largely on reducing NO_X emissions as a means of attaining the 1979 1-hour ozone standard by 2022, the 1997 8-hour ozone standard by 2023, and the 2008 8-hour standard by 2031. The AQMP prescribes a variety of current and proposed new control measures, including a request to the USEPA for increased regulation of mobile source emissions. The NO_X control measures would also help the Basin attain the 24-hour standard for $PM_{2.5}$.

4.3.5 Sensitive Receptors

Some people, such as individuals with respiratory illnesses or impaired lung function because of other illnesses, persons over 65 years of age, and children under 14, are particularly sensitive to certain pollutants. Facilities and structures where these sensitive people live or spend considerable

13 CCAA of 1988.

amounts of time are known as sensitive receptors. For the purposes of a CEQA analysis, the SCAQMD considers a sensitive receptor to be a receptor such as a residence, hospital, or convalescent facility where it is possible that an individual could remain for 24 hours. Commercial and industrial facilities are not included in the definition of sensitive receptor, because employees typically are present for shorter periods of time, such as eight hours. Therefore, applying a 24-hour standard for PM_{10} is appropriate not only because the averaging period for the state standard is 24 hours, but because the sensitive receptor would be present at the location for the full 24 hours.

The project site, at 8300 Valley View Street, is an irregularly shaped parcel comprising approximately 3.2 acres and is currently developed with St. Joseph's Episcopal Church. Surrounding land uses include the Ban Suk Methodist Church and detached single-family homes to the immediate north, and detached single-family residences to the east and south, and across Valley View Street to the west.

The nearest sensitive receptors to the Orchard View Gardens project site are single-family residences adjacent to the project site to the north and southeast. Additionally, three schools are 0.5 mile or closer to the Orchard View Gardens project site, as seen in **Table 4.3-3**.

Table 4.3-3
SCHOOLS WITHIN 0.5 MILE OF ORCHARD VIEW GARDENS PROJECT SITE

School	Address	Distance (miles)
Buena Terra Elementary School	8299 Holder Street, Buena Park	0.3
San Marino Elementary School	6215 San Rolando Way, Buena Park	0.5
Walker Junior High School	8132 Walker Street. La Palma	0.5

4.3.6 South Coast Air Quality Management District Fugitive Dust Rule (Rule 403)

During construction, the project would be subject to SCAQMD Rule 403 (fugitive dust). SCAQMD Rule 403 does not require a permit for construction activities; rather, it sets forth general and specific requirements for all construction sites (as well as other fugitive dust sources) in the SCAB. The general requirement prohibits a person from causing or allowing emissions of fugitive dust from construction (or other fugitive dust source) such that the presence of such dust remains visible in the atmosphere beyond the property line of the emissions source. SCAQMD Rule 403 also prohibits construction activity from causing an incremental PM_{10} concentration impact, measured as the difference between upwind and downwind samples at the property line of more than 50 micrograms per cubic meter as determined through PM_{10} high-volume sampling. The concentration standard and associated PM_{10} sampling do not apply if specific measures identified in the rules are implemented and appropriately documented.

Other requirements of Rule 403 include not causing or allowing emissions of fugitive dust that would remain visible beyond the property line; no track-out extending 25 feet or more in cumulative length and all track-out to be removed at conclusion of each workday; and must use the applicable best available control measures included in Table 1 of Rule 403.

4.3.7 Impact Analysis

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

Less than Significant Impact

The South Coast 2016 AQMP, discussed above, incorporates land use assumptions from local General Plans (GP) and regional growth projections developed by the SCAG to estimate stationary and mobile air emissions associated with projected population and planned land uses. If the proposed land use is consistent with the local GP, then the impact of the project is presumed to have been accounted for in the AQMP. This is because the land use and transportation control sections of the AQMP are based on the SCAG regional growth forecasts, which incorporates projections from local GPs. The proposed project will not change the GP designation; therefore, the land use will continue to be consistent with the local GP and the impacts of the project are still accounted for in the AQMP.

Another measurement tool in evaluating consistency with the AQMP is to determine whether a project would generate population and employment growth and, if so, whether that growth would exceed the growth rates forecasted in the AQMP and how the project would accommodate the expected increase in population or employment. The Orchard View Gardens project would create minimal increase in population and overall VMT, which would be included in the growth rates forecasted in the AQMP.

Additionally, to assist the implementation of the AQMP, projects must not create regionally significant emissions of regulated pollutants from either short-term construction or long-term operations. Refer to **Table 4.3-4** below which shows the SCQAMD thresholds of significance for various pollutants.

Table 4.3-4
SCAQMD THRESHOLDS OF SIGNIFICANCE

Pollutant	Construction Thresholds (lbs/day)	Operational Thresholds (lbs/day)
Volatile Organic Compounds (VOC)	75	55
Nitrogen Oxides (NO_x)	100	55
Carbon Monoxide (CO)	550	550
Sulfur Oxides (SO_x)	150	150
Particulate Matter (PM_{10})	150	150
Fine Particulate Matter ($PM_{2.5}$)	55	55

Note: lbs = pounds.
Source: SCAQMD, 2018.

Regional Construction Emissions

For the purpose of this analysis, construction activities for the Orchard View Gardens project are anticipated to last 16 months and would begin in early January 2022 and end in late April 2023. There would be four construction phases:

- Demolition.
- Offsite Improvements (Options 1 & 3).[14]
- Grading.
- Site Preparation.[15]
- Building Construction.

Options 1 (or 2b) and option 3 would overlap with the demolition phase. There would be no overlap of construction activities among the other phases. **Table 4.3-5** shows the Orchard View Gardens project schedule used for the air quality, GHG emissions and noise analyses.

Table 4.3-5
CONSTRUCTION SCHEDULE

Construction Phase	Start	End
Demolition	January 1, 2022	January 31, 2022
Offsite Improvements Option 1 [16]	January 1, 2022	January 14, 2022
Offsite Improvements Option 3	January 15, 2022	January 31, 2022
Grading	February 1, 2022	February 28, 2022
Site Preparation	March 1, 2022	April 29, 2022
Building Construction	May 12, 2022	April 28, 2023

These construction activities would temporarily create emissions of dusts, fumes, equipment exhaust, and other air contaminants. Mobile sources (such as diesel-fueled equipment onsite and traveling to and from the project site) would primarily generate NO_X emissions. The amount of emissions generated daily would vary, depending on the amount and types of construction activities occurring at the same time.

Estimated criteria pollutant emissions from the Orchard View Gardens project's onsite and offsite project construction activities were calculated using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2 (CAPCOA, 2017). CalEEMod is a planning tool for estimating emissions related to land use projects. Model-predicted Orchard View Gardens project emissions are compared with applicable thresholds to assess regional air quality impacts. CalEEMod defaults were used for offroad construction equipment and onroad construction trips and direct and indirect operational emissions.

14 Offsite improvement options are described in **Section 3.4.2**.
15 "Site preparation" for this project was assumed to consist of installation of utilities and construction of concrete sidewalks, curbs and gutters.
16 The Option 2b and 3 combination was also analyzed using the same schedule, but the Option 1 and 3 combination was determined to have higher emissions and therefore, for conservative purposes, is being presented here and in Tables 4.3-6 and 4.3-8.

As shown in **Table 4.3-6**, construction emissions would not exceed SCAQMD regional thresholds. Therefore, the Orchard View Gardens project's short-term regional air quality impacts would be less than significant. Refer to **Appendix B1** of this document for air quality calculations.

Table 4.3-6
MAXIMUM DAILY REGIONAL CONSTRUCTION EMISSIONS

Construction Activity	Maximum Emissions (pounds/day)				
	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
Maximum Emissions, 2022	**3.2**	**42.7**	**26.9**	**3.0**	**1.5**
Maximum Emissions, 2023	0.49	3.7	5.9	0.74	0.30
SCAQMD Significance Thresholds	*75*	*100*	*550*	*150*	*55*
Significant? (Yes or No)	**No**	**No**	**No**	**No**	**No**

Source: Calculated by UltraSystems with CalEEMod (Version 2016.3.2).

Regional Operational Emissions

The Orchard View Gardens project comprises 65 residential units affordable to senior citizens, one exempt manager's unit, and a 3,000-square-foot community center. Since the community center would be exclusively for the use of project residents and their visitors, no traffic generation was specifically assigned to the community center. Operational emissions generated by area sources, motor vehicles and energy demand would result from normal day-to-day activities of the project. CalEEMod 2016.3.2 was used to estimate these emissions. Trip rates were adjusted to match data supplied by the traffic analysis (Fehr & Peers, 2020). The results of these calculations are presented in **Table 4.3-7**. As seen in the table, for each criteria pollutant, operational emissions would be below the pollutant's SCAQMD significance threshold. Therefore, operational criteria pollutant emissions would be less than significant**.**

Table 4.3-7
MAXIMUM DAILY PROJECT OPERATIONAL EMISSIONS

Emission Source	Pollutant (pounds/day)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Area Source Emissions	1.58	0.06	5.4	0.03	0.03
Energy Source Emissions	0.02	0.21	0.09	0.02	0.02
Mobile Source Emissions	0.32	1.16	4.37	1.78	0.48
Total Operational Emissions	**1.9**	**1.4**	**9.9**	**1.8**	**0.5**
SCAQMD Significance Thresholds	*55*	*55*	*550*	*150*	*55*
Significant? (Yes or No)	**No**	**No**	**No**	**No**	**No**

Source: Calculated by UltraSystems with CalEEMod (Version 2016.3.2).

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

Less Than Significant Impact

Because the SCAB is currently in nonattainment for ozone and $PM_{2.5}$, related projects may exceed an air quality standard or contribute to an existing or projected air quality exceedance. The SCAQMD neither recommends quantified analyses of construction and/or operational emissions from multiple development projects nor does it provide methodologies or thresholds of significance to be used to assess the cumulative emissions generated by multiple cumulative projects. Instead, SCAQMD recommends that a project's potential contribution to cumulative impacts be assessed by utilizing the same significance criteria as those for project-specific impacts. Furthermore, the SCAQMD states that if an individual development project generates less-than-significant construction or operational emissions impacts, then the development project would not contribute to a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment.

As discussed above, the mass daily construction and operational emissions generated by the Orchard View Gardens project would not exceed any of the SCAQMD's significance thresholds. Also, as discussed below, localized emissions generated by the project would not exceed the SCAQMD's Localized Significance Thresholds (LSTs). Therefore, the project would not contribute a cumulatively considerable increase in emissions for the pollutants which the SCAB is in nonattainment. Thus, cumulative air quality impacts associated with the proposed project would be less than significant.

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

Less than Significant Impact

Construction of the Orchard View Gardens project would generate short-term and intermittent emissions. Following SCAQMD guidance (SCAQMD, 2008), only onsite construction emissions were considered in the localized significance analysis. The residences immediately north, northeast, and southeast of the Orchard View Gardens project site are the nearest sensitive receptors (less than five meters away).[17] LSTs for projects in Source Receptor Area 16 (North Orange County) were obtained from tables in Appendix C of the SCAQMD's *Final Localized Significance Threshold Methodology* (Chico and Koizumi, 2003). **Table 4.3-8** shows the results of the localized significance analysis for the Orchard View Gardens project. As shown in the table below, localized short-term air quality impacts from construction of the Orchard View Gardens project would be less than significant.

17 According to SCAQMD guidance, a receptor closer than 25 meters to the source may be assumed to be 25 meters away (Chico and Koizumi, 2003, p. 3-3).

Table 4.3-8
RESULTS OF LOCALIZED SIGNIFICANCE ANALYSIS

Nearest Sensitive Receptor	Maximum Onsite Emissions (pounds/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum daily emissions	29.17	22.13	1.78	1.14
SCAQMD LST for 2 acres @ 25 meters	*147*	*762*	*6*	*4*
Significant (Yes or No)	**No**	**No**	**No**	**No**

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

Less than Significant Impact

A project-related significant adverse effect could occur if construction or operation of the proposed project would result in generation of odors that would be perceptible in adjacent sensitive areas. According to the SCAQMD *CEQA Air Quality Handbook*, land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. Potential sources that may emit odors during construction activities include equipment exhaust. Odors from these sources would be localized and generally confined to the immediate area surrounding the Orchard View Gardens project. The Orchard View Gardens project would use typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. Localized odor impacts from construction of the Orchard View Gardens project would be less than significant.

4.4 Biological Resources

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		**X**		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?				**X**
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?				**X**
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 nursery sites?				**X**
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				**X**
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?				**X**

4.4.1 Methodology

UltraSystems biologist Matthew Sutton researched readily available information, including relevant literature, databases, agency web sites, various previously completed reports and management plans, GIS data, maps, aerial imagery from public domain sources, and in-house records to identify

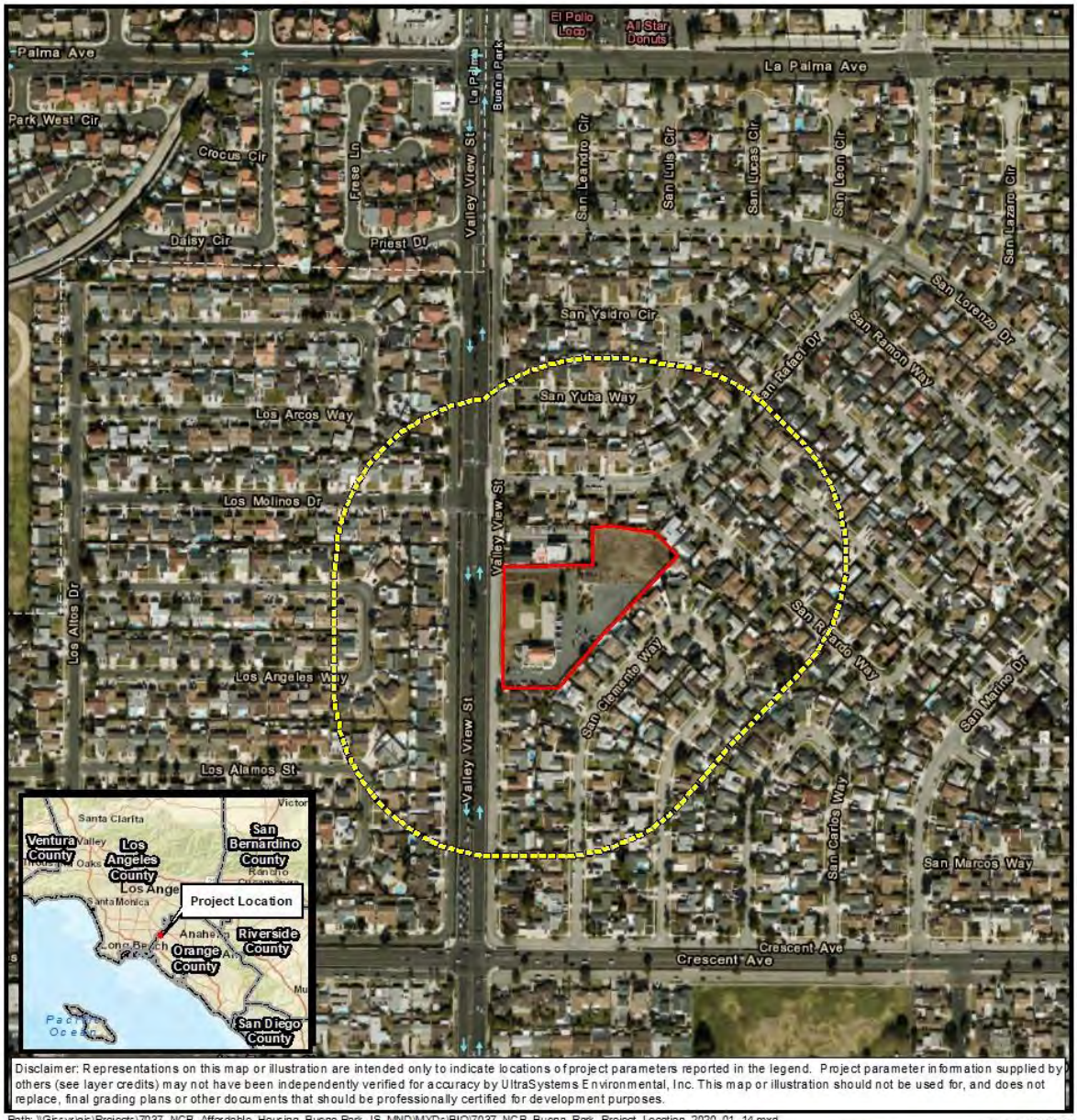
the following: 1) habitats, special-status plant and wildlife species, jurisdictional waters, critical habitats, and wildlife corridors that may occur in and near the project site; and 2) local or regional plans, policies, and regulations that may apply to the project. Plant and wildlife species protected by federal agencies, state agencies, and nonprofit resource organizations, such as the California Native Plant Society (CNPS), are collectively referred to as "special-status species".[18] Some of these plant and wildlife species are afforded special legal or management protection because they are limited in population size, and typically have a limited geographic range and/or habitat. The following data sources were accessed by UltraSystems for synthesis of data within this report.

- United States Geological Survey (USGS) 7.5-Minute Topographic Map Quadrangle (USGS, 2020) and current aerial imagery (Google Earth, 2020).
- The Web Soil Survey, provided by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS, 2019).
- California Natural Diversity Database (CNDDB), provided by the California Department of Fish and Wildlife (CDFW, 2020).
- Information, Planning and Conservation (IPaC), provided by the USFWS (USFWS, 2020a).
- Inventory of Rare and Endangered Plants of California, 8th Edition, provided by the California Native Plant Society (CNPS, 2020).
- National Wetlands Inventory (NWI), provided by the USFWS (USFWS, 2020e).
- National Hydrography Dataset, provided by the USGS (USGS, 2020).
- Critical Habitat Portal, provided by the USFWS (USFWS, 2020b).
- eBird online database of bird distribution and abundance, provided by Cornell Lab of Ornithology (eBird, 2017).
- Sawyer, J.O., T. Keeler-Wolf, J.M. Evens, 2009. *A Manual of California Vegetation, Second Edition,* provided by California Native Plant Society Press.
- EPA Waters GeoViewer, provided by USEPA (USEPA, 2020).

Aerial imagery from the above-mentioned sources was overlaid with geospatial data by utilizing Geographic Information System (GIS) software (ArcGIS 10.1) to identify documented observations of the following biological or environmental components within the project vicinity: 1) Previously recorded observations within the project vicinity and geographic range of special-status species and potentially suitable habitats; 2) special-status vegetation communities; 3) protected management lands; 4) proposed and final critical habitats; 5) wetlands, waters of the State (WOS), and waters of the United States (WOUS); and, 5) wildlife corridors. An analysis was then made to plan either the avoidance of or to minimize project impacts to any of those biological resources. A Biological Study Area (BSA) was defined for the project and includes the church site and a 500-foot buffer zone around the perimeter of the church property (refer to **Figure 4.4-1)**.

18 Avian species protected by the Migratory Bird Treaty Act (MBTA) are not considered "special-status species."

Figure 4.4-1
BIOLOGICAL STUDY AREA



In addition, Mr. Sutton conducted a field evaluation for existing biological resources of the BSA on February 10 and 12, 2020. In this survey the biologist documented habitat types, potential threats to ecosystem health and plant and wildlife species in the BSA.

a) Would the project have a substantial adverse impact, 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?

Less Than Significant with Mitigation Incorporated

The proposed project would disturb soils and vegetation within the project site. Similarly, the project would generate noise and dust that could impact areas with the BSA. Considering that the project is located in a highly urbanized area with developed and landscaped substrates, optimal habitat for special-status plant and wildlife species is lacking. The project site is located in a highly-urbanized area, which provides low habitat value for special-status plant and wildlife species. The project site is bordered by residential homes to the north, east and south and fronts on a heavily trafficked city street to the west. The BSA contains structures, sidewalks, and multiple impervious, paved surfaces, and lacks suitable soils, biological resources, and physical features to support a healthy ecosystem with a diversity of plant and wildlife species. Thus, with the implementation of mitigation measure **MM BIO-1** below (to protect nesting bird species from noise and dust disturbances) this project would have less than significant impacts on special-status species.

An existing church, parish hall, small storage facility and accompanying parking lot are located on the project site. The project site contains several landscaped areas around the buildings and parking lot. There is an ornamental lawn along the frontage road bordered with rose bushes on the street side and other ornamental shrubs and decorative flowering plants along the walkways and church building perimeters. There is also an area of fruit tree saplings with a serpentine walking path adjacent to the exit driveway on the northwest section of the property. Other landscaping includes four large ornamental trees, a few smaller trees in the landscaped areas around the buildings and a garden consisting of succulents, cactus and other drought-tolerant plants by the storage facility building. There is a weedy fallow area in the northeast corner. There is no critical habitat in the BSA. No special-status plants were observed within the project site. Due to the lack of suitable habitat to support special-status plant species, project activities will have no direct or indirect impacts on these species.

Plants

Based on a literature review and query from publicly available databases for reported occurrences, within a 10-mile radius of the project site, a total of 25 special-status species resulted from the query. Of these, five special-status plant species have recorded observations within two miles of the project site; however, there is not suitable habitat present within the BSA for any of those species (refer to **Figure 4.4-2,** *CNDDB Species Map*). Therefore, the 25 special-status plant species were determined not to have a potential to occur within the project BSA because the BSA lacks suitable habitat for the establishment of those species, or the BSA does not lie within the species' reported distribution or elevation range, or a combination of all of those factors. All federal, state and other agencies special-status species designations for plants and animals are represented in **Table 4.4-1**.

Upon completing a habitat assessment survey on February 10 and 12, 2020, Mr. Sutton concluded that all of the BSA consists of developed and landscaped areas. Many non-native ornamental trees

were documented in the project area such as Canary Island date palm (*Phoenix canariensis*), Scots pine (*Pinus sylvestris*), totara (*Podocarpus totara*), crape myrtle (*Lagerstroemia indica*), olive (*Olea europaea*), palo verde (*Parkinsonia aculeata*), Brazilian pepper (*Schinus terebinthifolia*), and saplings of fruit trees including citrus, fig and cherry varieties (Jepson, 2020). In addition, the biologist observed several decorative plants in the landscaped areas such as rose (*Rosa* spp.), rosemary (*Salvia rosmarinus*), jade (*Crassula* spp.), agave (*Agave* spp.), sea lavender (*Limonium perezii*), candelabra aloe (*Aloe arborescens*), and red yucca (*Hesperaloe parviflora*). There is also a weedy area in the northeast section consisting of ruderal species such as non-native annual grasses, mustard and other weedy forb species.

Due to several biological and physical disturbances within the BSA (which are listed below), it was determined that all 25 of the special-status plant species identified in the 10-mile radius database query do not have the potential to occur in the BSA. First, there is a high level of soil compaction due to development and foot traffic. Many species cannot establish in compacted soils. Second, there is high cover of non-native ornamental landscaping species that outcompete and thus preclude the establishment of plant species that need contiguous native habitat to establish. Third, habitat fragmentation from development reduces the size of habitat patches containing contiguous stands of native vegetation. Fourth, the hydrology of the region has been altered from its historical pattern and it no longer operates as a floodplain. Some of the special-status species in this list require periodic flooding events in order for their germination and establishment to occur. For all of the abovementioned reasons, all 25 special-status plant species were determined not to have the potential to occur within the BSA and will not be discussed further.

There are several special-status plant and wildlife species that occur in the vicinity of the project site. Their statuses as determined by various state, federal, regional and local regulatory agencies and the ranking notations from the most relevant agencies are listed below in **Table 4.4-1,** which follows **Figure 4.4-2**.

Figure 4.4-2
CNDDB SPECIES MAP

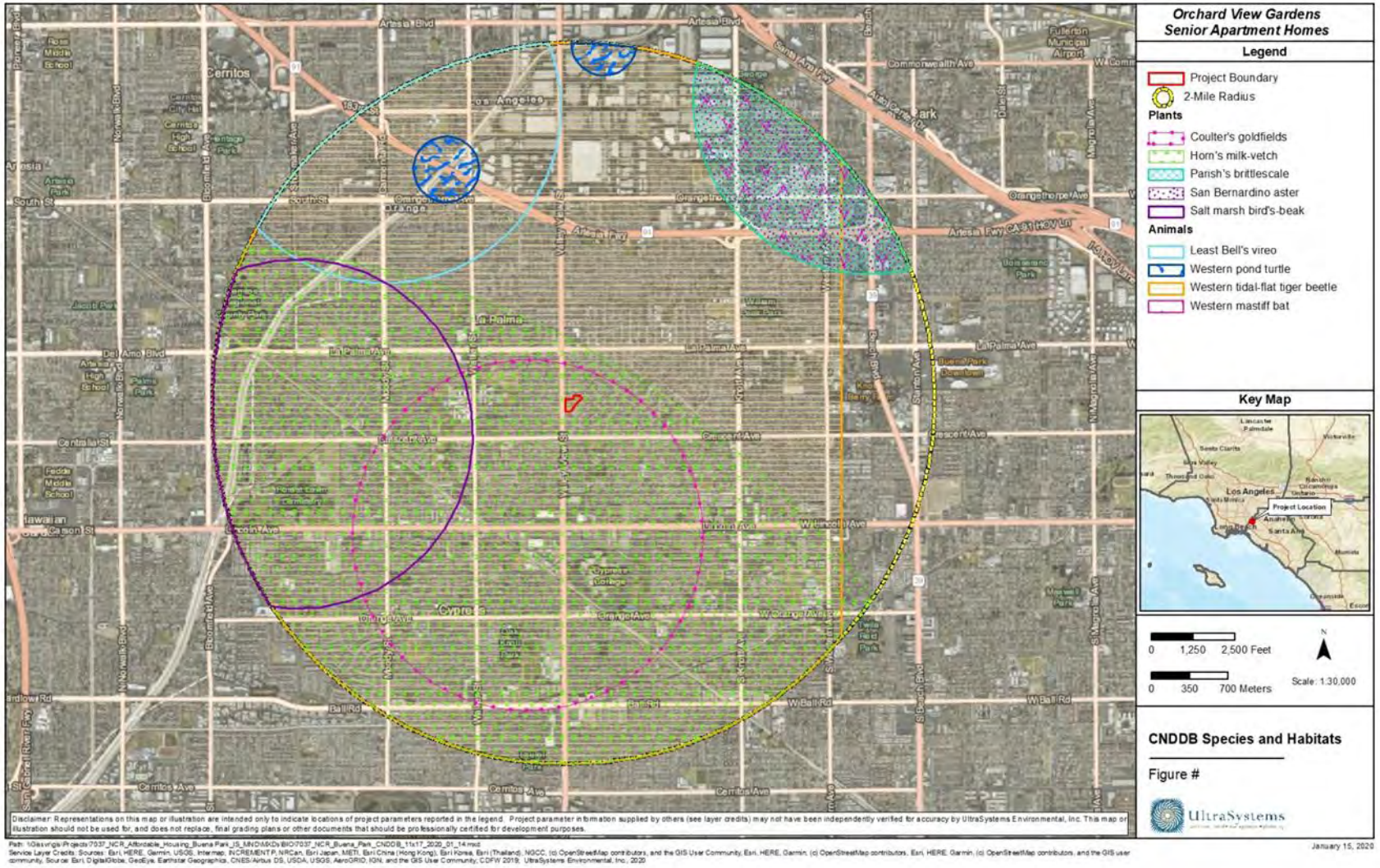


Table 4.4-1
SPECIAL-STATUS PLANT AND WILDLIFE SPECIES RANKING NOTATIONS

California Endangered Species Act Listing Codes		Federal Endangered Species Act Listing Codes	
SE	State listed as Endangered	FE	Federal listed as Endangered
ST	State listed as Threatened	FT	Federal listed as Threatened
SCE	State candidate for listing as Endangered	FPE	Federal candidate for listing as Endangered
SCT	State candidate for listing as Threatened	FPT	Federal candidate for listing as Threatened
		FC	Federal candidate species (former Category 1 species)

USFWS Designations

BCC = **bird of conservation concern**: a bird of conservation concern is listed in the USFWS' 2008 Birds of Conservation Concern report. The report identifies species, subspecies and populations of all migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that, without additional conservation actions are likely to become candidates for listing under the Endangered Species Act (ESA). While all of the bird species included in the report are prioritized for conservation action, the list makes no finding with regard to whether they warrant consideration for ESA listing.

CDFW Designations

SSC = species of special concern: a species of special concern is a species, subspecies, or distinct population of an animal (fish, amphibian, reptile, bird and mammal) native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria: is extirpated from the state or, in the case of birds, in its primary seasonal or breeding role; is listed as federally-, but not state-, threatened or endangered; meets the state definition of threatened or endangered, but has not formally been listed; is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for state threatened or endangered status; has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for state threatened or endangered status.

FP = fully protected: this animal species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock. Lists were created for fish (Fish and Game Code § 5515), amphibians and reptiles (Fish and Game Code § 5050), birds (Fish and Game Code § 3511) and mammals (Fish and Game Code § 4700).

WL = watch list: this list includes birds identified in the *California Bird Species of Special Concern* (Shuford and Gardali, 2008) report and are not on the current CDFW species of special concern list, but were on previous lists and they have not been state-listed under CESA; were previously state or federally listed and now are on neither list; or are on the list of fully protected species.

NatureServe Element Ranking: Global Ranking	NatureServe Element Ranking: State Ranking
G1 Critically Imperiled – At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.	S1 Critically Imperiled – Critically imperiled in the state because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the state.
G2 Imperiled – At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.	S2 Imperiled – Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state.
G3 Vulnerable – At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.	S3 Vulnerable – Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the state.
G4 Apparently Secure – Uncommon but not rare; some cause for long-term concern due to declines or other factors.	
G5 Secure – Common; widespread and abundant.	

Subspecies Level – Taxa which are subspecies or varieties receive a taxon rank (T-rank) attached to their G-rank.	S4 Apparently Secure – Uncommon but not rare in the state; some cause for long-term concern due to declines or other factors. S5 Secure – Common, widespread, and abundant in the state.

California Rare Plant Ranks (Based on ranking system developed by the California Native Plant Society [CNPS])

CRPR: 1A – California Rare Plant Rank 1A - plants presumed extirpated in California and either rare or extinct elsewhere: the plants with a CRPA of 1A are presumed extirpated because they have not been seen or collected in the wild in California for many years. This rank includes plants that are both presumed extinct as well as those plants which are presumed extirpated in California. All of the plants constituting CRPR 1A meet the definitions of § 2062 and § 2067 (CESA) of the Fish and Game Code, and are eligible for state listing. Should these taxa be rediscovered, it is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.

CRPR: 1B – California Rare Plant Rank 1B - plants rare, threatened, or endangered in California and elsewhere: plants with a CRPR of 1B are rare throughout their range with the majority of them endemic to California. Most of the plants that are ranked 1B have declined significantly over the last century. All of the plants constituting CRPR 1B meet the definitions of § 2062 and § 2067 (CESA) of the Fish and Game Code, and are eligible for state listing. It is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.

CRPR: 2A – California Rare Plant Rank 2A - plants presumed extirpated in California, but more common elsewhere: the plant taxa of CRPR 2A are presumed extirpated because they have not been observed or documented in California for many years. This list includes only those plant taxa that are presumed extirpated in California, but more common elsewhere in their range. All of the plants on List 2A meet the definitions of § 2062 and § 2067 (CESA) of the Fish and Game Code, and are eligible for state listing. Should these taxa be rediscovered, it is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.

CRPR: 2B – California Rare Plant Rank 2B - plants rare, threatened, or endangered in California, but more common elsewhere: except for being common beyond the boundaries of California, plants with a CRPR of 2B would have been ranked 1B. From the federal perspective, plants common in other states or countries are not eligible for consideration under the provisions of the ESA. All of the plants constituting CRPR 2B meet the definitions of § 2062 and § 2067 (CESA) of the Fish and Game Code, and are eligible for state listing. It is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.

CRPR: 3 – California Rare Plant Rank 3 - plants about which more information is needed - a review list: the plants that comprise CRPR 3 are united by one common theme – CNPS and CDFW lack the necessary information to assign them to one of the other ranks or to reject them. Nearly all of the plants constituting CRPR 3 are taxonomically problematic. Some of the plants constituting CRPR 3 meet the definitions of § 2062 and § 2067 (CESA) of the Fish and Game Code, and are eligible for state listing. CNPS strongly recommends that CRPR 3 plants be evaluated for consideration during preparation of environmental documents relating to CEQA.

CRPR: 4 – California Rare Plant Rank 4 - plants of limited distribution - a watch list: the plants in this category are of limited distribution or infrequent throughout a broader area in California. While CNPS and CDFW cannot call these plants "rare" from a statewide perspective, they are uncommon enough that their status should be monitored regularly. Should the degree of endangerment or rarity of a CRPR 4 plant change, CNPS and CDFW will transfer it to a more appropriate rank. Some of the plants constituting CRPR 4 meet the definitions of § 2062 and § 2067 (CESA) of the Fish and Game Code, and few, if any, are eligible for state listing. Nevertheless, many of them are significant locally, and CNPS strongly recommends that CRPR 4 plants be evaluated for consideration during preparation of environmental documents relating to CEQA.

CNPS Threat Ranks – The CNPS Threat Rank is an extension added onto the California Rare Plant Rank (CRPR) (as a decimal code) and designates the level of threats by a 1 to 3 ranking with 1 being the most threatened and 3 being the least threatened. A Threat Rank is present for all CRPR 1B's, 2B's, 4's, and the majority of CRPR 3's. CRPR 4 plants are seldom assigned a Threat Rank of .1, as they generally have large enough populations to not have significant threats to their continued existence in California; however, certain conditions exist to make the plant a species of concern and hence be assigned a CRPR. In addition, all CRPR

1A and 2A (presumed extirpated in California), and some CRPR 3 (need more information) plants, which lack threat information, do not have a Threat Rank extension.

.1 – seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 – moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
.3 – not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Below is a list of 25 special-status plant species that occur in the project vicinity (CDFW, 2019a; CDFW, 2019b; CNPS, 2020; USFWS, 2020a; USFWS, 2020b; USFWS, 2020c) but lack the potential to occur in the BSA due to lack of suitable habitat conditions:

- Braunton's milk-vetch (*Astragalus brauntonii* FE, 1B.1)
- Horn's milk-vetch (*Astragalus hornii* var. *hornii* 1B.1)
- Ventura marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus* FE, SE, 1B.1)
- Parish's brittlescale (*Atriplex parishii* 1B.1)
- Davidson's saltscale (*Atriplex serenana* var. *davidsonii* 1B.1)
- Nevin's barberry (*Berberis nevinii* FE, SE, 1B.1)
- Plummer's mariposa lily (*Calochortus plummerae* 4.2)
- intermediate mariposa lily (*Calochortus weedii* var. *intermedius* 1B.2)
- lucky morning-glory (*Calystegia felix* 3.1)
- southern tarplant (*Centromadia parryi* ssp. *australis* 1B.1)
- salt marsh bird's-beak (*Chloropyron maritimum* ssp. *maritimum* FE, SE, 1B.1)
- San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina* FE, SE, 1B.1)
- slender-horned spineflower (*Dodecahema leptoceras* FE, SE, 1B.1)
- many-stemmed dudleya (*Dudleya multicaulis* 1B.2)
- Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum* FE, SE, 1B.1)
- Los Angeles sunflower (*Helianthus nuttallii* ssp. *parishii* 1A)
- Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri* 1B.1)
- mud nama (*Nama stenocarpa* 2B.2)
- Gambel's water cress (*Nasturtium gambelii* FE, ST, 1B.1)
- prostrate vernal pool navarretia (*Navarretia prostrata* 1B.1)
- coast woolly-heads (*Nemacaulis denudata* var. *denudata* 1B.2)
- Brand's star phacelia (*Phacelia stellaris* FC, 1B.1)
- salt spring checkerbloom (*Sidalcea neomexicana* 2B.2)
- estuary seablite (*Suaeda esteroa* 1B.2)
- San Bernardino aster (*Symphyotrichum defoliatum* 1B.2)

Wildlife

A literature review and site habitat assessment were conducted by UltraSystems biologist Matthew Sutton. He concluded that the project site does not support habitat that is suitable to a diverse community of wildlife species. Thus, very few special-status wildlife species have the potential to occur in the BSA.

Based on a literature review and query from publicly available databases for reported occurrences within a ten-mile radius of the project site, 28 special-status wildlife species were reported as recent occurrences (≤ 20 years), or had historical observations within two miles of the BSA, or are recognized as occurring based on previous surveys or knowledge of the area. Of those 28 species, four were determined to have a potential to occur within the project BSA as represented in **Table 4.4-2,** *Wildlife Literature Review Results – Potential to Occur* (refer to **Figure 4.4-2**), and they are discussed further below in more detail than the other special-status species generated from this query.

The 24 reported special-status wildlife species (including mammals, birds, insects and reptiles) identified in the search that were determined to have no potential to occur within the project BSA are discussed briefly below because the BSA lacks suitable habitat for foraging, nesting or breeding, or the BSA does not lie within the species reported distribution or elevation range, or a combination of all of those factors (CDFW, 2019a; CDFW, 2019b; Cornell, 2015; eBird, 2017; Google Earth, 2020; Nafis, 2020; NRCS, 2019; Soil Survey Staff, 2019; USDA, 2006; USEPA, 2020; USFWS, 2020a; USFWS, 2020b; USFWS, 2020c; USFWS, 2020d; USFWS, 2020e). These 24 species comprised the following classes of wildlife species with number of species represented in parenthesis; birds (14), mammals (3), reptiles and amphibians (5), and insect (2).

Table 4.4-2
WILDLIFE LITERATURE REVIEW RESULTS – POTENTIAL TO OCCUR

Scientific Name	Common Name	Status	General Habitat	Suitable Habitat Present?	Potential for Occurrence in the BSA
Special-Status Wildlife: These animals have either official status under the ESA and/or the CESA or they are designated as sensitive or locally important by federal agencies, state agencies, and/or local conservation agencies and organizations.					
Accipiter cooperii	Cooper's hawk	WL	In woodland openings and edges of deciduous, conifer and mixed woodland habitats and urban settings with forested areas.	Yes	Low
Calypte costae	Costa's hummingbird	BCC, G5, S4	Desert wash, desert riparian, valley foothill riparian, coastal scrub, desert scrub, desert succulent shrub, chaparral, palm oasis.	Yes	Low
Selasphorus rufus	rufous hummingbird	BCC, G5, S1S2	Riparian, open woodlands, chaparral, gardens, orchards.	Yes	Low
Selasphorus sasin	Allen's hummingbird	BCC	Sparse to dense scrub habitats. Sparse to open woodlands. Nest on twig or fork of tree or shrub.	Yes	Low

***Notes**

- The BSA contains approximate elevations of 45 to 48 feet above mean sea level (amsl).
- The BSA comprises landscaped/developed land types with a small patch of ruderal habitat and a few ornamental trees.
- **Yes** = the BSA is located within the plant species' known distribution, elevation range, and/or the BSA contains suitable habitats and/or soils to support the plant species. The plant species has a potential to occur within the BSA. Further evaluation is needed.
- **Low =** the BSA contains suitable habitat and is within the species' distribution; however, there is a low probability of occurrence due to lack of optimal foraging and/or nesting habitat.
- See Table 4.4-1 for explanation of listing statuses.

Due to several biological and physical disturbances within the BSA, it was determined that there is a lack of suitable habitat conditions to support the following 24 special-status wildlife species identified in the 10-mile radius database query (CDFW, 2019a; CDFW, 2019b; Nafis, 2020; USFWS, 2020a; USFWS, 2020d USFWS, 2020e):

- northern western pond turtle (*Actinemys marmorata* SSC, G3G4, S3)
- tricolored blackbird (*Agelaius tricolor* ST, SSC, BCC, G2G3, S1S2)
- southern California legless lizard (*Anniella stebbinsi* SSC, G3, S3)
- San Diegan whiptail (*Aspidoscelis tigris stejnegeri* SSC, G5T5, S3)
- Swainson's hawk (*Buteo swainsoni* ST, BCC, G5, S3)
- coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis* SSC, BCC, G5T3Q, S3)
- wrentit (*Chamaea fasciata* BCC)
- western snowy plover (*Charadrius alexandrinus nivosus* FT, SSC, BCC, G3T3, S2S3)
- western tidal-flat tiger beetle (*Cicindela gabbii* G2G4, S1)
- monarch butterfly (*Danaus plexippus*)
- western mastiff bat (*Eumops perotis californicus* SSC, G5T4, S3S4)
- American peregrine falcon (*Falco peregrinus anatum* FP, BCC, G4T4, S3S4)
- yellow-breasted chat (*Icteria virens* SSC, G5, S3)
- long-billed curlew (*Numenius americanus* BCC, G5, S2)
- whimbrel (*Numenius phaeopus* BCC)
- Belding's savannah sparrow (*Passerculus sandwichensis beldingi* SE, G5T3, S3)
- Pacific pocket mouse (*Perognathus longimembris pacificus* FE, SSC, G5T1, S1)
- Blainville's horned lizard (*Phrynosoma blainvillii* SSC, G3G4, S3S4)
- coastal California gnatcatcher (*Polioptila californica californica* FT, SSC, G4G5T2Q, S2)
- light-footed rail (*Rallus obsoletus levipes* FE, SE, FP, G5T1T2, S1)
- western spadefoot (*Spea hammondii* SSC, G3, S3)
- California least tern (*Sternula antillarum browni* FE, SE, FP, G4T2T3Q, S2)
- American badger (*Taxidea taxus* G5, S3)
- least Bell's vireo (*Vireo bellii pusillus* FE, SE, G5T2, S2)

Birds

During the survey, common urban-adapted bird species such as American crow (*Corvus brachyrhynchos*), house finch (*Haemorhous mexicanus*), and black phoebe (*Sayornis nigricans*) were observed on the site. Several bird species are protected by the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code, which render it unlawful to take native breeding birds, and their nests, eggs, and young. Indirect impacts on breeding birds could occur from increased noise, vibration, and dust during construction, which could adversely affect the breeding behavior of some birds, and lead to the loss (take) of eggs and chicks, or nest abandonment. Migratory avian species that may use portions of the area for nesting during the breeding season are protected under the MBTA. Construction-related activities that may include, but are not necessarily limited to, building demolition and/or relocation, grading, materials laydown, access and infrastructure improvements, and building construction, could result in the disturbance of nesting migratory species covered under the MBTA.

The project site contains ornamental vegetation and building structures that could potentially provide cover and nesting habitat for bird species that have adapted to urban areas, such as rock pigeons (*Columba livia*) and mourning doves (*Zenaida macroura*) (Cornell, 2015; USFWS, 2020e). Native bird species such as mourning doves are protected by the MBTA and the California Fish and

Game Code (Sections 3503, 3503.5, and 3513), which render it unlawful to take native breeding birds, their nests, eggs, and young. Indirect impacts on breeding birds could occur from increased noise, vibration and dust during construction, which could adversely affect the breeding behavior of some birds, and lead to the loss (take) of eggs and chicks, or nest abandonment. Therefore, the project has the potential to impact migratory non-game breeding birds and their nests, young and eggs.

Special-Status Bird Species

In total, there were four special-status bird species –three hummingbirds and one raptor, determined to have a low potential to occur in the BSA. Those species are Allen's hummingbird (*Selasphorus sasin* BCC), Costa's hummingbird (*Calypte costae* BCC), rufous hummingbird *Selasphorus sasin* BCC), and Cooper's hawk (*Accipiter cooperii*).

Since all of the hummingbirds occupy similar habitats and have similar foraging and nesting behaviors, they will all be discussed together. Individuals of all three species have been reported recently within 1.5 miles of the project site (eBird, 2017). These species occupy scrub and woodland habitats: rufous prefer more mesic forested habitats; Costa's prefer more arid habitats such as desert scrub; and Allen's, the likeliest to occur in the BSA, prefer scrub and chaparral habitats near the coast (Cornell, 2015). Hummingbirds are dependent on an abundant insect and nectar supply. Considering that several flowering ornamental plants such as palm, cactus and agave species are located on the project site and within the BSA, there is a low potential for these species to occur in the BSA. Allen's and Costa's breed between January and July and Rufous does not breed in this region. No nests were observed in the BSA during the survey.

Another special-status bird species that was determined to have a potential to occur in the BSA is Cooper's hawk (*Accipiter cooperii*). This determination was based on common professional knowledge that Cooper's hawks occur in urbanized habitats such as this where there are numerous larger trees available for perching and abundant prey sources such as rodents and smaller birds. However, they prefer more densely wooded areas than occur in the BSA, such as woodland openings and edges of riparian and oak habitats (Cornell, 2015). Furthermore, they prefer to nest where there is a grove of six or more contiguous trees providing dense canopy cover, and no such grove occurs in the BSA. Thus, there is a low potential for Cooper's hawks to occur in the BSA.

Several special-status bird species could use the project site for foraging and may be adversely impacted by construction activities. With the implementation of mitigation measure **MM BIO-1**, the project would have less than significant impacts to native bird species protected under the MBTA and the California Fish and Game Code.

Mitigation Measure

MM BIO-1 **Nesting Bird Protection.** If feasible during project construction, the project applicant shall ensure that vegetation removal shall be restricted to the period between February 1 to August 15, to avoid the breeding season of any migratory species that could be using the area, and to discourage nesting in the vicinity of an upcoming construction area.

If it is not feasible to remove trees outside this window, then, prior to the beginning of vegetation removal and/or earthmoving activities during the period between February 1 and August 15, all vegetation within 100 feet of any grading or earthmoving activity shall be surveyed for active nests by a qualified biologist no

more than 30 days prior to disturbance. If active nests are found, and the site is within 100 feet of potential construction activity, a temporary fence shall be erected, where appropriate, around the vegetated nest site at a distance of 100 feet, or as deemed appropriate by a qualified biologist based on the species, from the edge of the canopy, to prevent construction disturbance and intrusions on the nest area.

No construction vehicles shall be permitted within restricted areas (i.e., protection zones), unless directly related to the management or protection of the legally protected species.

If a legally protected species nest is located in vegetation designated for removal, the removal shall be deferred until after August 15, or until the avian biologist can determine that the young have fledged or the nest has become inactive.

Level of Significance After Mitigation

With implementation of mitigation measure **MM BIO-1**, the proposed project would not have substantial adverse effects, either directly or through habitat modifications, to habitat, plant and wildlife species and less than significant impacts would occur.

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

No Impact

The project site is vegetated with mostly non-native grasses and ornamental trees, decorative succulents, and cacti. Both the literature review and results of the reconnaissance-level field survey indicate that riparian habitat or other sensitive natural communities do not exist on or adjacent to the project site. The BSA is either developed or disturbed and contains no riparian habitat. Therefore, no direct or indirect impacts to riparian habitat or other sensitive natural communities would occur.

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

No Impact

Based on the lack of wetlands and/or wetland conditions observed during the site visit by a staff biologist and the results of a literature query showing a lack of recorded historic wetlands, no wetlands occur within the BSA. Therefore, no direct or indirect impacts to federally-protected wetlands as defined by Section 404 of the Clean Water Act would occur. The project would have no impact in this regard.

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

No Impact

The project site and surrounding areas do not support resident or migratory fish species or wildlife nursery sites. No established resident or migratory wildlife corridors occur on the project site or in the surrounding areas. As a result, the project would not interfere substantially with or impede: 1) the movement of any resident or migratory fish or wildlife species; 2) established resident or migratory wildlife corridors; or 3) the use of wildlife nursery sites. Therefore, the project would have no impact in this regard.

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

No Impact

The City of Buena Park recognizes that it is located in an urban setting, and has tailored the goals of its Conservation Element (City of Buena Park, 2010), Water Efficient Landscape Ordinance (City of Buena Park, 2020a) and Urban Forest Management Plan (City of Buena Park, 2020b) accordingly. To obtain its overall conservation goals with respect to development, the City has established objectives that focus on protecting biological resources. One way in which the City encourages conservation of resources is through its Water Efficient Landscape Ordinance. This ordinance promotes the design, installation, and maintenance of landscaping in a manner that conserves regional water resources by ensuring that landscaping projects are not unduly water-needy and that irrigation systems are appropriately designed and installed to minimize water waste.

Another way in which the City encourages protection of biological resources is through its Urban Forest Management Plan (City of Buena Park, 2020b). This plan promotes selecting and installing trees in public areas such as along streets that enhance the aesthetics and ecosystem health of the city. This ordinance is specific to street trees and does not enforce private homeowners' selection of trees. However, the City advocates the use of water-efficient and attractive landscaping on private property to be consistent with its overall conservation goals.

As there are no street trees in the existing landscaping of the project site, the City ordinances relating to street tree removal (City of Buena Park, 2020c) do not apply to any of the tree removals scheduled for this project. Due to the fact that no street trees will be affected by this project, the project would not conflict with any local policies or ordinances protecting biological resources.

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

No Impact

The project site is not located in a Habitat Conservation Plan (HCP), Natural Communities Conservation Plan (NCCP), or other approved HCP area. For this reason, the project would not conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP. Therefore, the project would have no impact in this regard.

4.5 Cultural Resources

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?		**X**		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?		**X**		
c) Disturb any human remains, including those interred outside of formal cemeteries?		**X**		

Information from the *Cultural Resources Inventory Report* dated January 17, 2020 (see **Appendix C1**), prepared by UltraSystems for the Orchard View Gardens Senior Apartment Homes project has been included within this section.

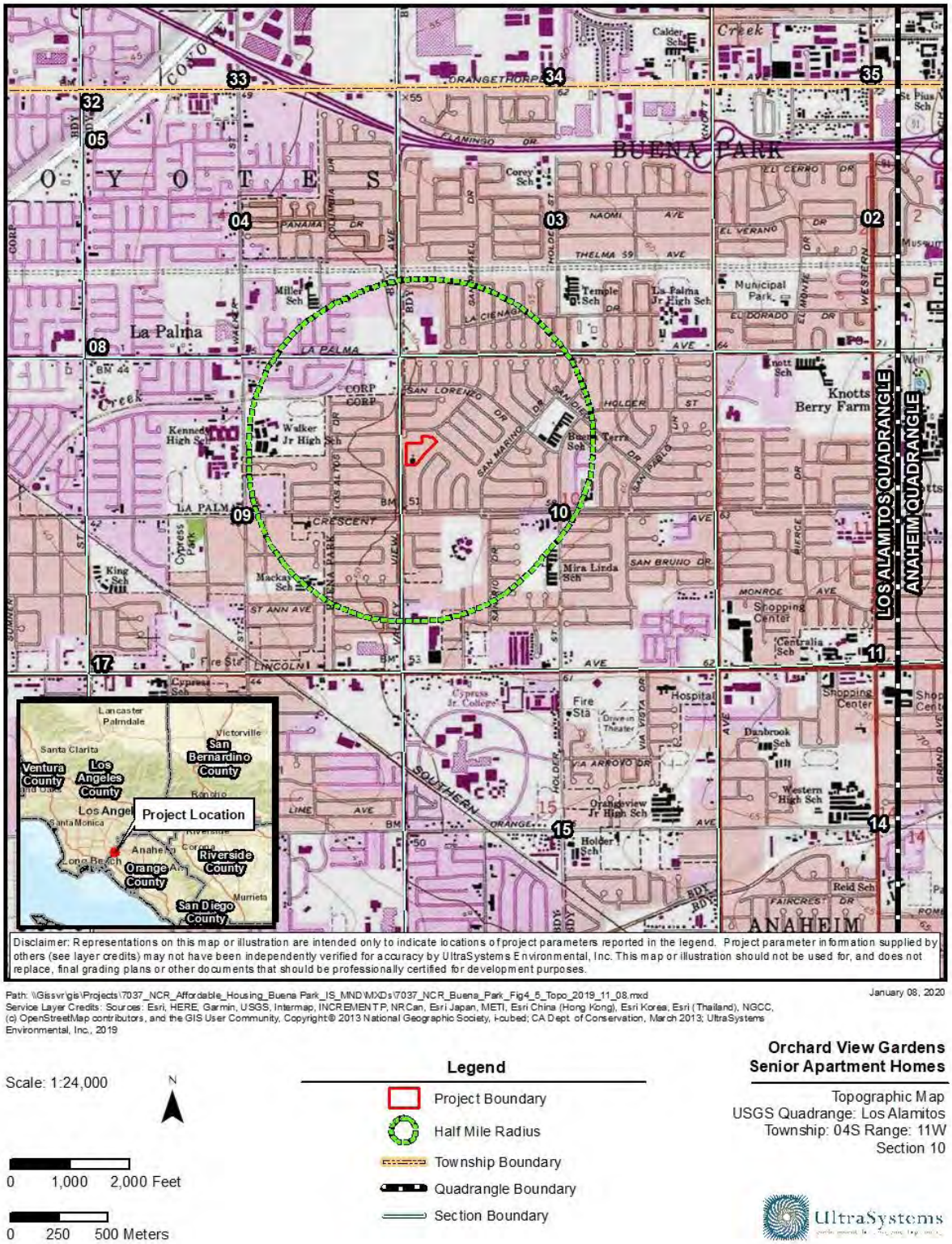
4.5.1 Methodology

A cultural resources inventory was conducted for the Orchard View project site (**Figure 4.5-1**) that included a California Historic Resources Inventory System (CHRIS) records and literature search at the South Central Coastal Information Center (SCCIC) located at California State University, Fullerton. Additionally, a request was made to the Native American Heritage Commission (NAHC) to conduct a search of their Sacred Lands File (SLF) for potential traditional cultural properties as well as to provide a list of local Native American tribes and tribal representatives to contact. Finally, a pedestrian survey of the project site was completed. The SCCIC records search was conducted on November 13, 2019. The NAHC request was made on November 8, 2019, and a reply was received on November 26, 2019; letters were sent to the listed tribes on December 18, 2019 and follow-up telephone calls were conducted following conclusion of the 30-day response period on January 20, 2020. The pedestrian field survey was conducted on December 19, 2019.

4.5.2 Existing Conditions

Based on the cultural resources records search, it was determined that one cultural resource has been previously recorded within the project site boundary: the St. Joseph's Episcopal Church, designated 30-177528. Within the half-mile buffer zone around the project site, there are two previously recorded historical cultural resources, and no prehistoric resources. **Table 4.11** in **Appendix C1** of this document summarizes these resources.

Figure 4.5-1
TOPOGRAPHIC MAP



The primary historic feature in the vicinity of the project site is the St. Joseph's Episcopal Church, built circa 1965, which is located on the project site (see Sections 2.2.3 and 4.1.1 in **Appendix C1**).

Saint Joseph's Episcopal Church, 30-177528, is located at 8300 Valley View Street, in the city of Buena Park, in Orange County, California. It was constructed circa 1965 in what is now a residential neighborhood but originally was open dairy farm land. It was built in the Spanish Eclectic style in an asymmetrical, irregular shape. It has a concrete foundation, stucco exterior and a front gable roof with Spanish tile; wings on each side of the church contain shed roofs also with Spanish tile. It has a square bell tower with a Spanish tiled gable roof situated in the northwest front corner. The church building was evaluated for inclusion in the National Register of Historic Places (NRHP) and determined not to meet the criteria to qualify; it was not assessed for eligibility under the California Register of Historical Resources or the local Buena Park Register.

There are two additional resources in the project area recorded with the Office of Historic Preservation Directory of Properties in the Historic Properties Data File Historic Resources Inventory (HRI). These are a 1955 residence at 7890 La Casa Way (HRI # 184420) and another 1955 residence at 5948 Lois Ranchos Drive (HRI # 155453). Neither of these properties was filed with the SCCIC (Table 4.1-2 in **Appendix C1**). Both properties are single-family residences and have been determined ineligible for the NRHP by consensus through the National Historic Preservation Act Section 106 process.[19]

4.5.3 Impact Analysis

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

Less Than Significant Impact with Mitigation Incorporated

A historical resource is defined in § 15064.5(a)(3) of the *CEQA Guidelines* as any object, building, structure, site, area, place, record, or manuscript determined to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. Historical resources are further defined as being associated with significant events, important persons, or distinctive characteristics of a type, period or method of construction; representing the work of an important creative individual; or possessing high artistic values. Resources listed in or determined eligible for the California Register, included in a local register, or identified as significant in a historic resource survey are also considered as historical resources under CEQA.

Similarly, the National Register criteria (contained in 36 CFR 60.4) are used to evaluate resources when complying with Section 106 of the National Historic Preservation Act. Specifically, the National Register criteria state that eligible resources comprise districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that (a) 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 the distinctive characteristics of a type, period, or method of construction, or that possess high artistic values, or that represent a significant distinguishable entity whose

19 United States Code Title 16 Section 470

components may lack individual distinction; or (d) that have yielded or may be likely to yield, information important to history or prehistory.

A substantial adverse change in the significance of a historical resource, as a result of a project or development, is considered a significant impact on the environment. Substantial adverse change is defined as physical demolition, relocation, or alteration of a resource or its immediate surroundings such that the significance of the historical resource would be materially impaired. Direct impacts are those that cause substantial adverse physical change to a historic property. Indirect impacts are those that cause substantial adverse change to the immediate surroundings of a historic property, such that the significance of a historical resource would be materially impaired.

Crawford (2014:3) evaluated the St. Joseph's Episcopal Church for the NRHP and determined that it did not meet the criteria to qualify under any of the four categories. In terms of architectural, engineering, or aesthetic qualities, the building is not known to be an important example of any architectural style, property type, period, region, or method of construction, nor is it known to embody the work of architects, designers, or builders who have achieved historic distinction in their field. Crawford did not assess the church for eligibility under the California Register of Historical Resources or the local Buena Park Register. The proposed project would not directly affect the church or the parish hall on the project site. However, grading activities associated with development of the project would cause new subsurface disturbance and could result in the unanticipated discovery of unique historic archeological resources. Implementation of mitigation measure **CUL-1** will be available should there be such an unanticipated discovery.

Mitigation Measure

MM CUL-1 In the event of an unexpected discovery of an historical resource as defined by CEQA Guidelines § 15064.5, during any project-related earth-disturbing activities, all earth-disturbing activities within 30 feet of the find shall be halted and the City of Buena Park shall be notified. The project applicant shall retain an archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards for Archaeology to assess the significance of the find. Impacts on any significant resources shall be mitigated to a less-than-significant level through data recovery or other methods determined adequate by the archaeologist and that are consistent with the Secretary of the Interior's Standards for Archaeological Documentation. Any identified cultural resources shall be recorded on the appropriate DPR 523 (A-L) form and filed with the SCCIC. Construction activities may continue on other parts of the project site while evaluation and treatment of historic archaeological resources takes place.

Level of Significance After Mitigation

With the implementation of mitigation measure **MM CUL-1** above, potential project impacts on historical resources would be less than significant.

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

Less than Significant Impact with Mitigation Incorporated

An archaeological resource is defined in § 15064.5(c) of the CEQA Guidelines as a site, area or place determined to be historically significant as defined in § 15064(a) of the CEQA Guidelines, or as a unique archaeological resource defined in § 21083.2 of the Public Resources Code as an artifact, object, or site that contains information needed to answer important scientific research questions of public interest or that has a special and particular quality such as being the oldest or best example of its type, or that is directly associated with a scientifically-recognized important prehistoric or historic event or person. The past agricultural use on the project site and level elevation relative to adjacent roads suggests that ground here has been minimally disturbed, with the native surface soil remaining. It is unlikely that undisturbed unique archeological resources exist on the project site as determined by the cultural resources investigation conducted by UltraSystems, which included a CHRIS records search of the project site and buffer zone, a search of the SLF by the NAHC, and pedestrian field survey.

The cultural resources records search conducted at the SCCIC determined that there are no prehistoric cultural resource sites or isolates recorded within the half-mile radius buffer area around the project footprint and areas of direct and indirect impacts. The result of the pedestrian survey was negative for both prehistoric and historic sites and isolates on the project site.

According to records at the SCCIC, there has been one previous cultural resource survey that included a portion of the project area, with two further surveys within or intersecting the half-mile radius project buffer but not within the project footprint and areas of direct and indirect impacts (refer to **Table 4.5-2** in **Appendix C1**). As noted above, the surveys at the St. Joseph's Episcopal Church did record the church itself. There were no other prehistoric or historic cultural resources recorded within the project boundary.

A NAHC SLF search was conducted on and within a half-mile buffer around the project site. The NAHC letter of November 26, 2019 indicated that no records exist documenting the presence of traditional cultural properties within this area. Twenty-two representatives of 16 Native American tribes were contacted requesting a reply if they have knowledge of cultural resources in the area that they wished to share and asking if they had any questions or concerns regarding the project. These tribes included:

- Agua Caliente Band of Cahuilla Indians
- Gabrieleno Band of Mission Indians – Kizh Nation
- Gabrieleno/Tongva San Gabriel Band of Mission Indians
- Gabrielino/Tongva Nation
- Gabrielino Tongva Indians of California Tribal Council
- Gabrielino-Tongva Tribe
- Juaneño Band of Mission Indians (Johnson)
- Juaneño Band of Mission Indians – Acjachemen Nation (Belardes)
- Juaneño Band of Mission Indians – Acjachemen Nation (Romero)
- La Jolla Band of Luiseño Indians
- Pals Band of Mission Indians
- Pauma Band of Luiseño Indians
- Pechanga Band of Luiseño Indians
- Rincon Band of Luiseño Indians
- San Luis Rey Band of Mission Indians
- Soboba Band of Luiseño Indians

On December 18th and 30th of 2019, Arysa Gonzales Romero, Historic Preservation Technician for the Agua Caliente Band of Cahuilla Indians, replied by email stating that the project site is not located

within the Tribe's Traditional Use Area and therefore they defer to other tribes closer to the area. The Administrative Specialist for the Gabrieleño Band of Mission Indians – Kizh Nation, replied for Chairperson Andrew Salas by email on December 18, 2019 stating that they wished to have AB 52 consultation on the project; UltraSystems replied explaining that such consultation would be between the tribe and the project's Lead Agency, the City of Buena Park's Planning Department. On January 9, 2020, Deneen Pelton, Administrative Assistant representing the Rincon Band of Luiseño Indians responded that the project area is not within the Tribe's Traditional Use Area and that they defer to other tribes in the area. On January 14, 2020, Joyce Perry representing the Juaneño Band of Mission Indians (Belardes), replied by email asking if any buildings on the site will be demolished and if our survey would include test excavations. UltraSystems responded we would not be conducting testing, that one of the buildings will be demolished, and we don't believe that any monitoring had been conducted on the site. Ms. Perry responded asking about past monitoring and how deep excavations are expected to go; UltraSystems responded that due to the buildings' ages we did not believe that past monitoring took place and that we do not at present have current plans to suggest how deep excavations will go.

During the telephone calls of January 21, 2020, Chairperson Anthony Morales with the Gabrielino/Tongva San Gabriel Band of Mission Indians requested that cultural and tribal monitors to be notified if any cultural material is found; he also stated that he would like to be notified if any cultural material is found. Chairperson Robert Dorame of the Gabrielino Tongva Indians of California Tribal Council indicated that human remains were found to the north of the project area and that UltraSystems contact the City about this and then notify him with the information that is learned. The San Luis Rey Band of Mission Indians' receptionist stated that cultural resources questions be directed to "Cami" and provided Cami's telephone number, but there was no answer and a message was left. She called back on January 22, 2020 and indicated that the project area is outside of the Tribe's Traditional Use Area and that they defer to other tribes in the area. The Cultural Resources Coordinator for the Pechanga Band of Luiseño Indians, Paul Macarro indicated that the project is outside of the tribe's area and that they would defer response to closer tribes. There have been no further responses from these tribes to date (see **Attachment C** in **Appendix C1**).

The result of the pedestrian survey was negative for both prehistoric and historic sites and isolates on the project site. Based on the results of the records search and the onsite field survey, it is unlikely that cultural resources or tribal resources would be adversely affected by construction of the project. However, grading activities associated with development of the project would cause new subsurface disturbance and may result in the unanticipated discovery of unique historic and/or prehistoric archeological resources. In the event of an unanticipated discovery, implementation of **MM CUL-1** described above would ensure that impacts on archeological resources would be less than significant.

Level of Significance After Mitigation

With implementation of **MM CUL-1** above, the proposed project would result in less than significant impacts to archeological resources.

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

Less than Significant Impact with Mitigation Incorporated

As discussed in Section 4.5 b) above**,** the project would be built on relatively undisturbed land, with existing buildings that likely caused only minor disturbance to flat land that had previously been in

agricultural use that had not been previously graded. No human remains have been previously identified or recorded onsite. Therefore, it is unlikely that undiscovered human remains exist on the project site.

The project proposes grading activities for the construction of infrastructure that includes water, sewer, and utility lines. Grading activities associated with development of the project would cause new subsurface disturbance and could result in the unanticipated discovery of unknown human remains, including those interred outside of formal cemeteries. In the unlikely event of an unexpected discovery, implementation of **MM CUL-2** would ensure that impacts related to the accidental discovery of human remains would be less than significant.

Mitigation Measure

MM CUL-2 If human remains are encountered during excavations associated with this project, all work will stop within a 30-foot radius of the discovery and the Orange County Coroner will be notified (§ 5097.98 of the Public Resources Code). The Coroner will determine whether the remains are recent human origin or older Native American ancestry. If the coroner, with the aid of the supervising archaeologist, determines that the remains are prehistoric, they will contact the NAHC. The NAHC will be responsible for designating the Most Likely Descendant (MLD). The MLD (either an individual or sometimes a committee) will be responsible for the ultimate disposition of the remains, as required by § 7050.5 of the California Health and Safety Code. The MLD will make recommendations within 24 hours of their notification by the NAHC. These recommendations may include scientific removal and nondestructive analysis of human remains and items associated with Native American burials (§ 7050.5 of the Health and Safety Code).

Level of Significance After Mitigation

With implementation of **MM CUL-2** above, the proposed project would result in less than significant impacts to human remains.

4.6 Energy

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

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

and

b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less than Significant Impact

According to the CEQA Guidelines, "uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement that provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified." Therefore, the purpose of this analysis is to identify any significant irreversible environmental effects of project implementation that cannot be avoided.

Both construction and operation of the project would lead to the consumption of limited, slowly renewable, and non-renewable resources, committing such resources to uses that future generations would be unable to reverse. The proposed project would require the commitment of resources that include (1) building materials, (2) fuel and operational materials and/or resources and (3) the transportation of goods and people to and from the project.

During project construction, energy would be consumed in the form of electricity associated with the conveyance of water used for dust control and, on a limited basis, powering lights, electronic equipment, or other construction activities necessitating electrical power. Construction activities, including the construction of the proposed buildings, typically do not involve the consumption of natural gas. Project construction would also consume energy in the form of petroleum-based fuels associated with the use of off-road construction vehicles and equipment on the project site, construction worker travel to and from the project site, and delivery and haul truck trips hauling solid waste from and delivering building materials to the project site.

During project operation, energy would be consumed for multiple purposes, including heating, air conditioning, appliances, and use of electronics. Energy would also be consumed during project operations related to water usage, solid waste disposal, and vehicle trips. The existing site is served by an 800A, 208V 3-phase electrical service located on the northwest end of the site and one 1200A, 208V, 3-phase service located on the southeast corner of the site. These services will be consolidated and replaced with a 1600A 480V 3-phase service to be located on the southeast corner of the site. The total average monthly electrical consumption is 18,000 kilowatt hours (kWh) for non-summer months, and 22,000 kWh for the summer months. It is expected that the new project would provide for energy efficient lighting and, HVAC to result in overall reduction of energy usage.

Estimated project operational energy usage, which was estimated by CalEEMod as part of the greenhouse gas emissions analysis,[20] is shown in **Table 4.6-1.** Vehicle miles traveled (VMT) were used as a surrogate for energy from consumption of transportation fuels. While a variety of factors govern the relationship between VMT and fuel energy, in general, an increase in VMT results from an increase in motor vehicle energy use. Note that the table does not include energy use by existing buildings and activities; to obtain a conservative estimate of energy use impact, existing use was assumed to be zero. **Table 4.6-1 also shows** per-capita energy use, assuming 70 occupants, the minimum estimated for the project; using the minimum yields the highest per-capita value.[21]

The project would comply with the 2020 California Green Building Code and has been designed to address energy use in the following ways (Walker, 2020):

- Implement the California Energy Commission's Quality Insulation Installation standards, Third-Party Home Energy Rating System (HERS) Rater validated, to ensure that installed insulation meets both thermal and air tightness performance goals.

- Implement blower door testing during construction to ensure that the constructed building envelope meets and exceeds identified goals for leakage.

- Utilize cool roof materials, minimizing attic temperatures, and reducing cooling loads.

- Utilize energy-efficient heat pump water heaters to reduce the required solar offset required for the project and energy use generally.

- Install HERS-verified HVAC ducted mini splits with seasonal energy efficiency ratio (SEER) ratings between 19 and 21 at residential units (up to 40% more efficient than the code minimum). The HVAC systems will be sized to match the calculated building envelope loads, using Air Conditioning Contractors of America (ACCA) Manuals J, S, and D methodologies, as prescribed by Energy Star Homes.

- Install LED-lighting throughout the project and occupancy sensors in common areas, parking areas and corridors, to reduce energy use.

- Configure rooftops to meet the City's aesthetic requirements, while carefully creating flat, unshaded roof space suitable for renewable energy systems, while using the backs of parapets to mount condensers for mini-split air conditioning systems.

20 See Section 4.2 (Air Quality), Section 4.8 (Greenhouse Gas Emissions), and **Appendix B2**.
21 See Section 4.14.

- Deploy an onsite photovoltaic energy system, to comply with Title 24, which reduces the building's overall dependence on the energy grid and reduces the likelihood of power interruptions during heat waves.

- Investigate the use of onsite battery storage to help create resiliency, provide power to the community center (in the event of a power outage), and to help minimize peak demand charges associated with Time of Use Energy rates.

The proposed buildings would be designed and built in compliance with the California Green Building Standards (CALGreen) Code (California Code of Regulations, Title 24, Part 11), which includes mandatory measures for residential site development, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality (CBSC, 2017, p. 2). Additionally, the project would comply with all applicable regulations and codes which require achievement of various levels of energy efficiency in building construction, design and operation.

The commitment of resources required for the construction and operation of the project would limit the availability of such resources for future generations or for other uses during the life of the project. However, the use of such resources would be reduced when compared to what they would be in the absence of complying with the CALGreen Code. Therefore, energy consumption would not result in a substantial increase in energy production for energy providers and the energy demand associated with the project would be less than significant.

Table 4.6-1
ESTIMATED PROJECT OPERATIONAL ENERGY USE

Energy Type	Units	Value	Maximum Per Capita
Onroad Motor Vehicle Travel	Vehicle Miles Traveled per Year	800,798	11,400
Natural Gas Use	1,000 BTU per year	842,133	12,030
Electricity Use	Kilowatt-hours per year	92,169.6	1,317

4.7 Geology and Soils

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
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.				**X**
ii) Strong seismic ground shaking?			**X**	
iii) Seismic-related ground failure, including liquefaction?		**X**		
iv) Landslides?				**X**
b) Result in substantial soil erosion or the loss of topsoil?			**X**	
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?		**X**		
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?		**X**		
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?				**X**
f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?		**X**		

a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

No Impact

The Alquist-Priolo Zones Special Studies Act defines active faults as those that have experienced surface displacement or movement during the last 11,000 years (CGS, 2019). The project site is not located within a designated Alquist-Priolo Earthquake Fault Zone. As shown in **Figure 4.7-1**, the nearest Alquist-Priolo Earthquake Fault Zones south of the proposed project are the Reservoir Hill Fault, Northeast Flank Fault, and Cherry Hill Fault (which cumulatively comprise part of the south Los Angeles Basin section of the Newport-Inglewood Fault Zone; Bryant 1985, p. 3; 1985b, Dolan et.al. 2001, p. 28, CGS 1986a, 1986b, Treiman and Lundberg 1999), located between seven to nine miles southwest of the proposed project site. The Newport-Inglewood fault zone is a deep-seated, northwesterly trending zone of folds and faults, accompanied by dome-shaped hills and low mesas, which are the only surface expressions of geologic deformations since the mid-Tertiary (20–30 million years before present [ybp]; Trifunac 2003, p. 550). Due to these characteristics, the fault zone is extremely unlikely to produce a surface rupture that would pose a hazard to the proposed project.

A small Alquist-Priolo Earthquake Fault Zone is located approximately six miles northeast of the project site. This fault zone, designated "1968" (the year in which the surface rupture occurred) is approximately 985 feet in length, generally parallels South Idaho Street from West Risner Way on the south to Sandalwood Avenue in the city of La Habra. This rupture occurred in October 1968 along the bottom of a north-trending canyon, largely occupying the stream bottom of the canyon. Formation of the fault and surface rupture is believed to have been caused by high-pressure water injection being conducted in an oil field that was then south of the rupture. Although this fault satisfies the criteria for zoning under the Alquist-Priolo Act (Smith 1977, p. 10), no activity along this fault has been recorded since the rupture appeared in October 1968, and it is not anticipated that rupture of the fault 1968 would pose a hazard to the proposed project.

The fault nearest to the project site is the Coyote Hills section of the Puente Hills Blind Thrust System (USGS, 2017; see **Figure 4.7-2**), located approximately 2.8 miles north of the project site. The Coyote Hills section generally parallels the south-facing bases of the West and East Coyote Hills; the only known surface expression of this section was a fault scarp at a site on Trojan Way (Shaw et.al. 2002, p. 2,950). The area where Trojan Way crosses the Coyote Hills section is now a completely developed industrial and general commercial district (City of La Mirada, 2012), and geomorphic evidence of the fault is no longer visible (Google Earth, 2018). Due to the location and path of this fault, is not anticipated that rupture of the Coyote Hills section of the Puente Hills Blind Thrust System would pose a hazard to the proposed project.

The Los Alamitos fault is located approximately 4.5 miles southwest of the project site. Limited data about this fault was available other than the Los Alamitos fault may be part of a larger fault system; specifically, the Compton-Los Alamitos fault. The type and age of this fault are uncertain, although the most recent surface rupture of the Los Alamitos fault has been determined to have been during the Late Quaternary (up to 700,000 ybp; SCEDC, 2020). As with the other faults in the project area

Figure 4.7-1
ALQUIST-PRIOLO EARTHQUAKE FAULT ZONES

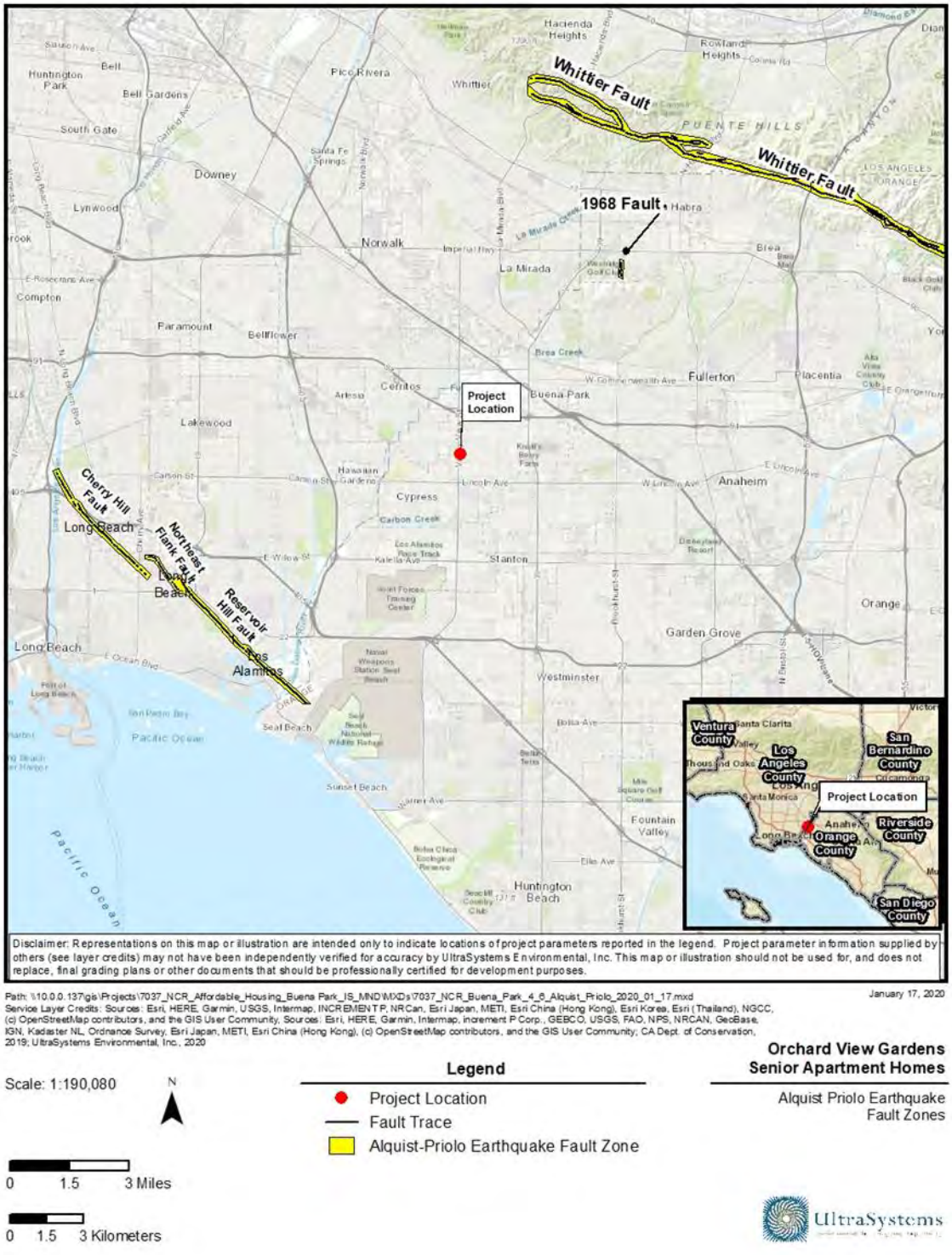


Figure 4.7-2
REGIONALLY ACTIVE FAULTS

the location and trend of this fault make it extremely unlikely to produce a surface rupture that would pose a hazard to the proposed project.

As shown in **Figure 4.7-1**, the proposed project would not be located within an Alquist-Priolo Earthquake Fault Zone, and as seen in **Figure 4.7-2**, no active faults are known to traverse the project site. For these reasons, the project site will not expose people or structures to potentially substantial adverse effects from rupture of a known earthquake fault, including faults that are delineated on an Alquist-Priolo Earthquake Fault Zoning Map, and no impact would occur.

ii) Strong seismic ground shaking?

Less than Significant Impact

The project is located within a seismically active region of Southern California, and is susceptible to collapse of structures, buckling of walls, and damage to foundations from strong seismic ground shaking. the closest Alquist-Priolo Fault Zones are portions of the Newport-Inglewood Fault Zone located between seven and nine miles southwest of the project site (see **Figure 4.7-1**).

Soil bores obtained at the proposed project site encountered alluvial soils to 51.1 feet, the maximum depth explored (Albus-Keefe & Associates 2020, p. 3), and the bore samples were used to perform general analyses of the soil on the proposed project site.

The site is located in a seismically active area that has historically been affected by moderate to occasionally high levels of ground motion. The site lies in relatively close proximity to several active faults (see **Figure 4.7-2**); therefore, during the life of the proposed development, the property will probably experience moderate to occasionally high ground shaking from these fault zones, as well as some shaking from other seismically active areas of the southern California region. Design of proposed structures in accordance with the current California Building Code (CBC) is anticipated to adequately mitigate concerns with ground shaking.

The project would be constructed in accordance with the applicable CBC standards (California Code of Regulations, 2019). In addition, the CBC is included in the City's Municipal Code (City of Buena Park Municipal Code, 2019) and provides minimum standards to protect property and for public welfare by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of seismic activities and adverse soil conditions. The CBC contains provisions for earthquake safety based on factors including occupancy type, the types of soil and rock onsite, and the strength of ground motion with specified probability of occurring at the site.

Although the project site is susceptible to occasional very strong to severe ground shaking from seismically active fault zones in the Southern California region, design and construction in accordance with the CBC would reduce impacts related to potential seismic ground shaking at the site. For these reasons, impacts from strong seismic ground shaking would be less than significant. Mitigation is not proposed.

iii) Seismic-related ground failure, including liquefaction?

Less than Significant Impact with Mitigation Incorporated

General types of ground failures that might occur as a consequence of severe ground shaking typically include landslides, ground subsidence, ground lurching and shallow ground rupture. The probability of occurrence of each type of ground failure depends on the severity of the earthquake, distance from the faults, topography, subsoils and relatively shallow groundwater tables (approximately 50 feet or less below ground surface), in addition to other factors.

Liquefaction typically occurs when saturated or partially saturated soils behave like a liquid, as a result of losses in strength and stiffness in response to an applied stress caused by earthquake shaking or other sudden change in stress conditions. As presented in the Preliminary Geotechnical Report for the project, groundwater was encountered at 10 feet below existing ground surface within all of the borings made during the subsurface exploration. Moreover, the highest historical groundwater depth for the project area is mapped at 10 feet below ground surface (Albus-Keefe & Associates, Inc. 2020, p. 4). Additionally, as shown in **Figure 4.7-3**, the project site is located within a liquefaction hazard zone delineated by the California Geological Survey (CGS; 1986a).

Analysis of soil borings taken on the proposed project site indicated that liquefaction could lead to a total seismic settlement (saturated and dry) of the ground surface of up to approximately 4.2 inches due to seismic consolidation during liquefaction. The differential settlement due to seismic settlement would likely be on the order of half of the total seismic settlement or approximately 2.1 inches over 30 feet (Albus-Keefe & Associates, Inc. 2020, p. 8).

The CBC (2019) provides construction and building design standards, such as the use of well-reinforced foundations, such as post-tensioned slabs, grade beams with structural slabs, or mat foundations, which have been demonstrated to provide adequate basal support for structures during comparable liquefaction events. The project would be constructed in accordance with the applicable CBC adopted by the legislature and used throughout the state (California Code of Regulations, 2019) as well as in the City's Municipal Code (City of Buena Park Municipal Code, 2019). The CBC provides minimum standards to protect property and public welfare by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of seismic shaking and adverse soil conditions. The CBC contains provisions for earthquake safety based on multiple factors including liquefaction potential on the proposed project site.

Compliance with recommendations of the geotechnical survey report (Albus-Keefe & Associates, Inc., 2020, pp. 10-22), and with state and local regulations would minimize the potential risk from liquification. Mitigation measure **GEO-1** below is proposed to ensure that the project complies with the recommendations of the geotechnical report prepared for the project and to reduce potential impacts from the project's location in a liquefaction hazard zone delineated by the California Geological Survey.

Mitigation Measure

MM GEO-1 During grading and construction of the proposed project, the project applicant shall follow all recommendations in Section 6.0, Recommendations, on pages 10-22 of the geotechnical report prepared for the project (Albus-Keefe & Associates, Inc.,

Preliminary Geotechnical Investigation, Proposed Senior Housing Development, 8300 Valley View Street, Buena Park, California, dated January 20, 2020).

Level of Significance After Mitigation

Potential impacts from seismic-related ground failure, including liquefaction would be reduced to a less than significant level with implementation of **MM GEO-1** above.

iv) Landslides?

No Impact

Landslides occur when a slope becomes unstable. A change in the stability of a slope can be caused by a number of factors, acting together or alone. Natural causes of landslides include groundwater (pore water) pressure acting to destabilize the slope, loss of vegetative structure, erosion of the toe of a slope by rivers or ocean waves, weakening of a slope through saturation by snow melt or heavy rains, earthquakes adding loads to barely stable slope, earthquake-caused liquefaction destabilizing slopes, and volcanic eruptions.

Topography within the project site is relatively flat (Google Earth Pro, 2019). According to **Figure 4.7-3**, the project site is not located within or adjacent to a zone of required investigation for earthquake-induced landslides. Additionally, the project site is located in a flat, developed urban area that does not contain steep slopes or hills. Therefore, the probability of slope stability hazards affecting the site is considered very low and no impacts are anticipated.

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

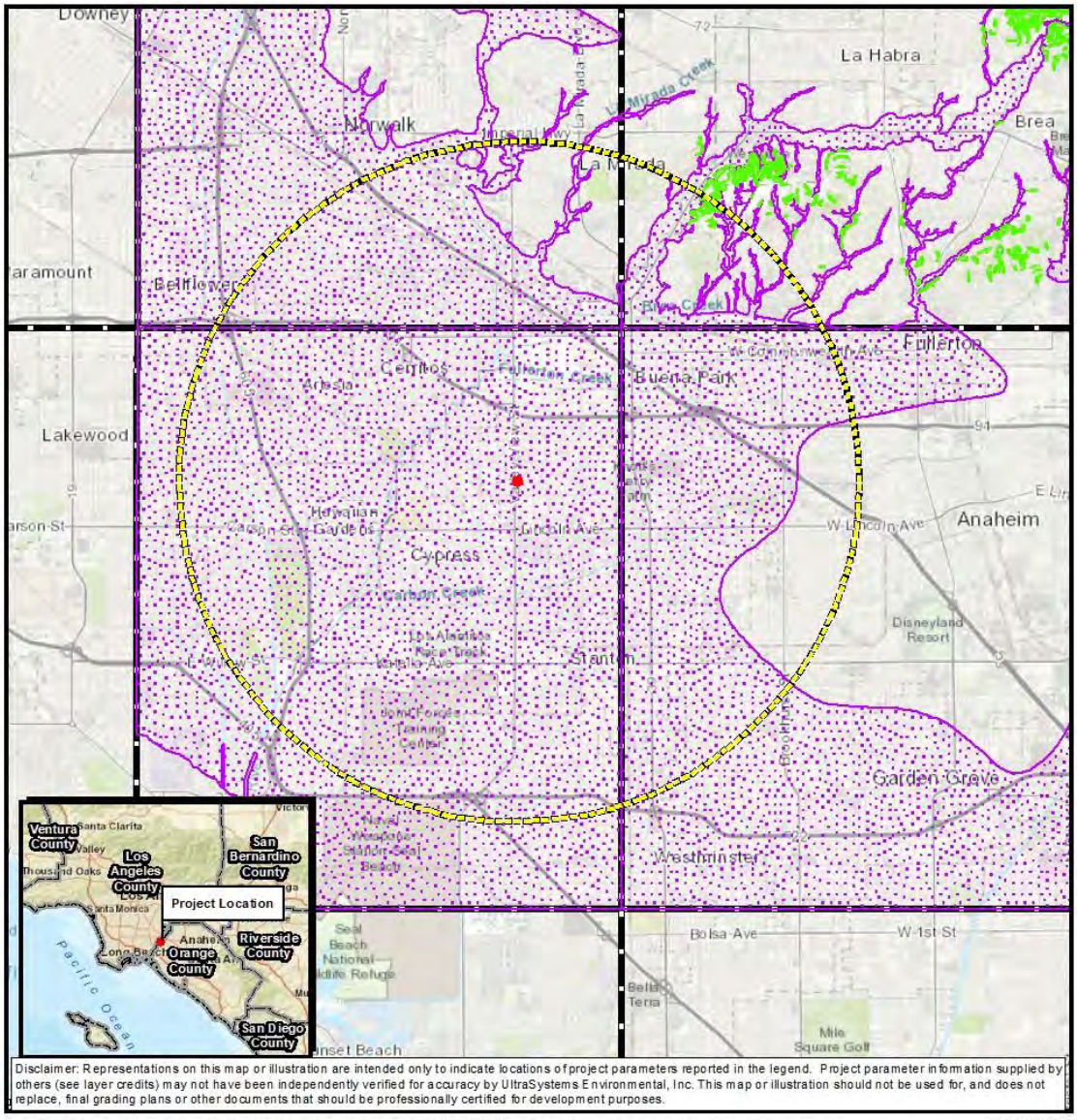
Less Than Significant Impact

Under current conditions approximately 27 percent of the 1.7-acre project site is covered by impervious surfaces including paved areas and buildings (RRM Design Group, 2020, p. 5). The remainder of the project site (approximately 73 percent) is comprised of small areas of landscaping including: palm tree, scotch pine trees, crape myrtle tree, palo verde tree, podocarpus trees, olive tree, citrus and cherry saplings, rose and rosemary bushes and various shrubs and cacti species. There is also a non-landscaped area comprising non-native annual grasses and other ruderal species.

The project would develop approximately 76 percent (58,497 square feet) with impervious surfaces and approximately 24 percent (18,454 square feet) with pervious surfaces. Ways to measure soil erosion include wind erodibility groups and erosion factors, both of which are discussed below.

- **Wind erodibility groups** (WEG) consist of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. Soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The soils mapped on the proposed project site, Metz loamy sand, has a WEG rating of 2, indicating that this soil is highly susceptible to erosion by wind (Soil Survey Staff 2019, pp. 34-38).

Figure 4.7-3
LANDSLIDE AND LIQUEFACTION HAZARDS ZONES



- **Erosion factor K** indicates the susceptibility of a soil to sheet and rill erosion by water. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity. Values of K range from 0.02 to 0.69 (median [*a*] = 0.355). Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water. *Erosion factor Kw* indicates the erodibility of the whole soil: the value of Kw is modified by the presence of rock fragments. The soil mapped on the project site, Metz loamy sand, has an erosion factor Kw of 0.28, indicating that soil on the project site has a moderate potential for sheet and rill erosion by water (Soil Survey Staff 2020, pp. 34-38).

Because the proposed project would disturb an area greater than one acre of soil, the project would be required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ (Construction General Permit). Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. Dischargers whose projects disturb one or more acre of soil are required to obtain coverage under this permit through the California State Water Resources Control Board (SWRCB); in addition, the Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP; SWRCB, 2020)). The SWPPP would mandate site-specific construction best management practices (BMPs) that would minimize or avoid soil erosion through stormwater or wind. These BMPs would be implemented prior to ground-disturbing activities and would remain in place until construction is complete.

As detailed in the grading plan, the proposed project would disturb approximately 1.7 acres of land. During grading, there would be a raw cut of 85 cubic yards and a raw fill of 6,035 cubic yards (Walker, 2020). As part of project design, the project proposes the development of grass and landscaped areas, including landscaping along the site boundary, thus reducing the potential for post-construction soil erosion. Moreover, the project would adopt construction BMPs in accordance with the County of Orange Drainage Management Plan (DAMP). The DAMP requires construction site to implement control practices that address soil erosion/sedimentation to avoid and minimize the transport of soil or contaminants offsite (DAMP 2003, Section 8.0). For these reasons, the project would have less than significant impacts related to soil erosion or loss of topsoil, and mitigation is not proposed.

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

Less than Significant Impact with Mitigation Incorporated

Impacts related to liquefaction and landslides are discussed above in **Section 4.7.a** above. The site is underlain by soil strata that are susceptible to liquefaction. Mitigation measure **GEO-1** is recommended to address the potential for liquefaction associated with the project site.

Lateral spreading is the downslope movement of surface sediment due to liquefaction in a subsurface layer. The downslope movement is due to gravity and earthquake shaking combined. Lateral spreading of the ground surface during a seismic activity usually occurs along the weak shear zones within a liquefiable soil layer and has been observed to generally take place toward a free face (i.e., retaining wall, slope, or channel) and to lesser extent on ground surfaces with a very gentle slope. The geotechnical report for the project states that the potential for lateral spreading is very low,

because the general gradient of the proposed project site is nearly level with that of the general vicinity (0.2 degrees and 0.3 degrees, respectively) (Albus-Keefe & Associates, Inc. 2020, p. 7).

The project would be constructed in accordance with the requirements of the City of Buena Park, CBC, which are designed to assure safe construction and include building foundation requirements appropriate to site conditions.

Subsidence due to reprocessing of removal bottoms is anticipated to be approximately 0.1 feet. The estimates of shrinkage and subsidence are intended as an aid for project engineers in determining earthwork quantities. However, these estimates should be used with some caution since they are not absolute values. Contingencies should be made for balancing earthwork quantities based on actual shrinkage and subsidence that occurs during the grading process (Albus-Keefe & Associates, 2020, p. 9). Selected samples of representative earth materials from borings were tested in a laboratory. Tests consisted of soils classification, in-situ moisture content and dry density, maximum dry density and optimum moisture content, consolidation/collapse, direct shear strength (Albus-Keefe & Associates 2020, p. 4). Collapsible soils were not identified as an issue for the proposed project.

Mitigation Measure

Refer to mitigation measure **MM GEO-1** above.

Level of Significance After Mitigation

With implementation of **MM GEO-1** above (i.e. compliance with the recommendations of the geotechnical survey report for the proposed project), as well as compliance with local, state, and federal building and construction regulations, potential impacts regarding on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse would be less than significant.

d) Would the project be located on expansive soil, as defined in Table 18-1 B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less than Significant Impact with Mitigation Incorporated

The soil on the project site is designated Metz loamy sand (Soil Survey Staff, 2019). Metz loamy sands are formed on alluvial fans from alluvium derived from mixed sources. Geotechnical borings onsite determined that soils encountered at the site consisted of alluvial soils to the maximum depth explored, 51.5 feet below ground surface, and that the onsite alluvial soils generally possess a very low expansion potential. Although not encountered, localized artificial fill materials could be present within the site, and the geotechnical report recommends that additional testing for expansive soils be conducted subsequent to rough grading and prior to construction of foundations and other concrete flatwork (Albus-Keefe & Associates, Inc., 2020, p. 9). With implementation of Mitigation measure **GEO-1** above, to follow the recommendations of the project's geotechnical report, there would be less than significant impacts regarding expansive soil.

Expansive soils shrink and swell with changes in soil moisture. Soil moisture may change from landscape irrigation, rainfall, and utility leakage. Soil in one of the borehole samples collected during the geotechnical investigation was tested for expansion potential and plastic index: from the surface to five feet the expansion potential was determined to be negligible; from 15 to 25 feet the expansion potential was low, and at 30 feet the expansion potential was medium (Albus-Keefe & Associates

2020, Appendix B, Table B; Day 2000, p. 12.6). Additional testing for soil expansion is required per recommendations of the geotechnical investigation report during grading and prior to foundation work for confirmation of the conditions (Albus-Keefe & Associates, Inc, 2018, Appendix B, Table B). With implementation of **MM GEO-1** above, to follow the recommendations of the project's geotechnical report, there would be less than significant impacts regarding expansive soil.

Mitigation Measure

Refer to mitigation measure **MM GEO-1** above.

Level of Significance After Mitigation

With implementation of mitigation measure **GEO-1** above (i.e. compliance with the recommendations of the geotechnical survey report for the proposed project), as well as compliance with local, state, and federal building and construction regulations, potential impacts resulting from expansive soils would be less than significant.

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

No Impact

The project site is currently connected to the City of Buena Park's sewer system, and the project would also connect to existing sewers. Therefore, the project would not use septic tanks or alternative wastewater disposal systems. For this reason, no impacts associated with septic tanks or alternative waste water disposal systems would occur.

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

Less than Significant Impact with Mitigation Incorporated

The project site is entirely encompassed by a single geological deposit (Saucedo et al., 2016). The project site is underlain by early Holocene Young Alluvium Deposits, Unit 2 (Qya2). This deposit consists of unconsolidated deposits of gravel, sand, and silt with some instances of boulders and dates to the early Holocene (12,000 to 7,000 ybp) (Saucedo et al., 2016).

The soil at the project site is also described as "younger Quaternary Alluvium, with older Quaternary sediments occurring at various depths, as part of the floodplain deposits from Coyote Creek that currently flows just to the west and from Carbon Creek that currently flows to the south." (McLeod 2019:1). Deposits of younger Quaternary Alluvium "... typically do not contain significant vertebrate fossils, at least in the uppermost layers…" (McLeod 2019:1). Excavations or grading that extend into the uppermost layers of soil and younger Quaternary Sediments in the proposed project area are unlikely to encounter significant fossil vertebrate remains.

Grading and excavation activities associated with development of the project would cause new subsurface disturbance and could result in the unanticipated discovery of paleontological resources. Mitigation measure **GEO-2** is required to ensure the project would have a less than significant impact regarding paleontological resources.

Mitigation Measure

MM GEO-2: If paleontological resources are uncovered during construction activities, the contractor shall halt construction activities in the immediate area and notify the City of Buena Park. The on-call paleontologist shall be notified and afforded the necessary time and funds to recover, analyze, and curate the find(s). Subsequently, the monitor shall remain onsite for the duration of the ground disturbance to ensure the protection of any other resources that may be in the area.

Level of Significance After Mitigation

With implementation of **MM GEO-2**, potential impacts to paleontological resources would be reduced to a less than significant level.

4.8 Greenhouse Gas Emissions

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			**X**	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			**X**	

4.8.1 Background Information on Greenhouse Gas Emissions

Life on earth depends on energy coming from the sun. About half the light reaching Earth's atmosphere passes through the air and clouds to the surface, where it is absorbed and then radiated upward in the form of infrared heat. About 90% of this heat is then absorbed by carbon dioxide (CO_2) and other greenhouse gases (GHG) and radiated back toward the surface, which is warmed to a life-supporting average of 59 degrees Fahrenheit (°F) (NASA, 2018).

Human activities are changing the natural greenhouse. Over the last century, the burning of fossil fuels such as coal and oil has increased the concentration of atmospheric CO_2. This happens because the coal or oil burning process combines carbon in the fuel with oxygen in the air to make CO_2. To a lesser extent, the clearing of land for agriculture, industry, and other human activities has increased concentrations of GHGs (NASA, 2018).

GHGs are defined under the California Global Warming Solutions Act of 2006 (AB 32) as CO_2, methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF_6). Associated with each GHG species is a "global warming potential" (GWP), which is a value used to compare the abilities of different GHGs to trap heat in the atmosphere. GWPs are based on the heat-absorbing ability of each gas relative to that of CO_2, as well as the decay rate of each gas (the amount removed from the atmosphere over a given number of years). The GWPs of CH_4 and N_2O are 25 and 298, respectively (GMI, 2018). "Carbon dioxide equivalent" (CO_2e) emissions are calculated by weighting each GHG compound's emissions by its GWP and then summing the products. HFCs, PFCs, and SF_6 are not emitted in significant amounts by Orchard View Gardens project sources, so they are not discussed further.

Carbon Dioxide (CO_2) is a colorless, odorless gas consisting of molecules made up of two oxygen atoms and one carbon atom. CO_2 is produced when an organic carbon compound (such as wood) or fossilized organic matter (such as coal, oil, or natural gas) is burned in the presence of oxygen. Since the industrial revolution began in the mid-1700s, industrial activities have increased in scale and distribution. Prior to the industrial revolution, CO_2 concentrations were stable at a range of 275 to 285 parts per million (ppm) (IPCC, 2007a). The National Oceanic and Atmospheric Administration (NOAA's) Earth System Research Laboratory (ESRL) indicates that global concentration of CO_2 was

409.09 ppm in October 2019. (ESRL, 2020). These concentrations of CO_2 exceed by far the natural range over the last 650,000 years (180 to 300 ppm) as determined from ice cores.

Methane (CH_4) is a colorless, odorless non-toxic gas consisting of molecules made up of four hydrogen atoms and one carbon atom. CH_4 is combustible, and is the main constituent of natural gas, a fossil fuel. CH_4 is released when organic matter decomposes in low-oxygen environments. Natural sources include wetlands, swamps and marshes, termites, and oceans. Anthropogenic sources include the mining of fossil fuels and transportation of natural gas, digestive processes in ruminant animals such as cattle, rice paddies, and the buried waste in landfills. Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of CH_4. Other anthropogenic sources include fossil-fuel combustion and biomass burning.

Nitrous Oxide (N_2O) is a colorless, non-flammable gas with a sweetish odor, commonly known as "laughing gas," and sometimes used as an anesthetic. N_2O is naturally produced in the oceans and in rainforests. Manmade sources of N_2O include the use of fertilizers in agriculture, nylon and nitric acid production, cars with catalytic converters and the burning of organic matter. Concentrations of N_2O also began to rise at the beginning of the industrial revolution.

Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in CH_4 or ethane with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically un-reactive in the troposphere (the level of air at the Earth's surface). CFCs have no natural source but were first synthesized in 1928. They were used for refrigerants, aerosol propellants, and cleaning solvents. Because of the discovery that they can destroy stratospheric ozone, an ongoing global effort to halt their production was undertaken and has been extremely successful, so much so that levels of the major CFCs are now remaining steady or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years. The project is not expected to emit any CFCs.

Hydrofluorocarbons (HFCs) are synthesized chemicals that are used as a substitute for CFCs. Out of all the GHGs, HFCs are one of three groups with the highest GWP. HFCs are synthesized for applications such as automobile air conditioners and refrigerants. The project is not expected to emit any HFCs.

Perfluorocarbons (PFCs) have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface can destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. The two main sources of PFCs are primary aluminum production and semiconductor manufacture. The project is not expected to emit any PFCs.

Sulfur Hexafluoride (SF_6) is an extremely potent greenhouse gas. SF_6 is very persistent, with an atmospheric lifetime of more than a thousand years. Thus, a relatively small amount of SF_6 can have a significant long-term impact on global climate change. SF_6 is human-made, and the primary user of SF_6 is the electric power industry. Because of its inertness and dielectric properties, it is the industry's preferred gas for electrical insulation, current interruption, and arc quenching (to prevent fires) in the transmission and distribution of electricity. SF_6 is used extensively in high voltage circuit breakers and switchgear, and in the magnesium metal casting industry. The project is not expected to emit SF_6.

4.8.2 Regulatory Setting

GHGs are regulated at the national, state, and air basin level; each agency has a different degree of control. The United States. Environmental Protection Agency (USEPA) regulates at the national level; the California Air Resources Board (ARB) regulates at the state level; and the South Coast Air Quality Management District (SCAQMD) regulates at the air basin level in the Orchard View Gardens project area.

4.8.2.1 Federal Regulations

The USEPA collects several types of GHG emissions data. These data help policy makers, businesses, and the USEPA track GHG emissions trends and identify opportunities for reducing emissions and increasing efficiency. The USEPA has been maintaining a national inventory of GHG emissions since 1990 and in 2009 established mandatory reporting of GHG emissions from large GHG emissions sources.

Previous USEPA efforts documented through historical website material reflecting the USEPA website as it existed on January 19, 2017 (USEPA, 2017a) include regulatory initiatives such as mobile source GHG emission standards and the Clean Power Plan; partnering with the private sector through voluntary energy and climate programs; and reducing USEPA's carbon footprint with the federal GHG requirements and USEPA's Strategic Sustainability Performance Plan. The current administration has a different strategy in relation to climate change and is taking the USEPA in a new direction (USEPA, 2017b). Executive Order (EO) on Energy Independence (White House, 2017) specifically addresses revisions in the Clean Power Plan and standards of performance for GHGs for new stationary sources; CH_4 standards for the oil and gas sector; and light-duty vehicle GHG standards.

4.8.2.2 State Regulations

Executive Order S 3-05

On June 1, 2005, the governor issued EO S 3-05, which set the following GHG emission reduction targets:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels;
- By 2050, reduce GHG emissions to 80% below 1990 levels.

To meet these targets, the Climate Action Team (CAT)[22] prepared a report to the Governor in 2006 that contains recommendations and strategies to help ensure that the targets in EO S-3-05 are met.

Assembly Bill 32 (AB 32)

In 2006, the California State Legislature enacted the California Global Warming Solutions Act of 2006, also known as AB 32. AB 32 focuses on reducing GHG emissions in California. GHGs, as defined under

22 The Climate Action Team (CAT) members are state agency secretaries and the heads of agencies, boards, and departments, led by the Secretary of the California Environmental Protection Agency (Cal/EPA). They coordinate statewide efforts to implement global warming emission reduction programs and the state's Climate Adaptation Strategy.

AB 32, include CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6. AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. The ARB is the state agency charged with monitoring and regulating sources of emissions of GHGs that cause global warming. AB 32 also requires that by January 1, 2008, the ARB must determine what the statewide GHG emissions level was in 1990, and it must approve a statewide GHG emissions limit, so it may be applied to the 2020 benchmark. The ARB approved a 1990 GHG emissions level of 427 million metric tons of CO_2e ($MMTCO_2e$), on December 6, 2007 in its Staff Report. Therefore, in 2020, emissions in California are required to be at or below 427 $MMTCO_2e$.

Under the "business as usual or (BAU)" scenario established in 2008, statewide emissions were increasing at a rate of approximately one percent per year as noted below. It was estimated that the 2020 estimated BAU of 596 $MMTCO_2e$ would have required a 28% reduction to reach the 1990 level of 427 $MMTCO_2e$.

Climate Change Scoping Plan

The Scoping Plan released by the ARB in 2008 (ARB, 2008) outlined the state's strategy to achieve the AB 32 goals. This Scoping Plan, developed by ARB in coordination with the CAT, proposed a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health. It was adopted by ARB at its December 2008 meeting. According to the Scoping Plan, the 2020 target of 427 $MMTCO_2e$ requires the reduction of 169 $MMTCO_2e$, or approximately 28.3%, from the state's projected 2020 BAU emissions level of 596 $MMTCO_2e$.

In August 2011, the Scoping Plan was re-approved by the Board and includes the Final Supplement to the Scoping Plan Functional Equivalent Document (ARB, 2011). This document includes expanded analysis of project alternatives and updates the 2020 emission projections by considering updated economic forecasts. The updated 2020 BAU estimate of 507 $MMTCO_2e$ yielded that only a 16% reduction below the estimated new BAU levels would be necessary to return to 1990 levels by 2020. The 2011 Scoping Plan expands the list of nine Early Action Measures into a list of 39 Recommended Actions contained in Appendices C and E of the Plan.

In May 2014, ARB developed, in collaboration with the CAT, the First Update to California's Climate Change Scoping Plan (Update) (ARB, 2014), which shows that California is on track to meet the near-term 2020 GHG limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32. In accordance with the United Nations Framework Convention on Climate Change, ARB has mostly transitioned to the use of the Intergovernmental Panel on Climate Change's (IPCC's) Fourth Assessment Report (AR4)'s 100-year GWP (IPCC, 2007b) in its climate change programs. ARB recalculated the 1990 GHG emissions level with the AR4 GWPs to be 431 $MMTCO_2e$; therefore the 2020 GHG emissions limit established in response to AB 32 is now slightly higher than the 427 $MMTCO_2e$ in the initial Scoping Plan.

In November 2017, ARB published the 2017 Scoping Plan (ARB, 2017) which builds upon the former Scoping Plan and Update by outlining priorities and recommendations for the state to achieve its target of a 40% reduction in GHGs by 2030, compared to 1990 levels. The major elements of the framework proposed are enhancement of the Renewables Portfolio Standard (RPS) and the Low Carbon Fuel Standard; a Mobile Source Strategy, Sustainable Freight Action Plan, Short-Lived Climate Pollutant Reduction Strategy, Sustainable Communities Strategies, and a Post-2020 Cap-and-Trade Program; a 20% reduction in GHG emissions from the refinery sector; and an Integrated Natural and Working Lands Action Plan.

Renewables Portfolio Standard (Scoping Action E-3)

The California Energy Commission estimates that in 2000 about 12% of California's retail electric load was met with renewable resources. Renewable energy includes (but is not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas. California's current RPS is intended to increase that share to 33% by 2020. Increased use of renewables will decrease California's reliance on fossil fuels, thus reducing emissions of GHGs from the electricity sector. Most recently, former Governor Brown signed into legislation Senate Bill (SB) 350 in October 2015, which requires retail sellers and publicly-owned utilities to procure 50% of their electricity from eligible renewable energy resources by 2030.

Senate Bill 375 (SB 375)

SB 375 was signed by the governor on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of GHG emissions and is responsible for over 40% of the GHG emissions in California, with automobiles and light trucks alone contributing almost 30%. SB 375 indicates that GHGs from automobiles and light trucks can be reduced by new vehicle technology. However, significant reductions from changed land use patterns and improved transportation also are necessary. SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 does the following: (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

Executive Order B-30-15

On April 29, 2015, the governor issued EO B-30-15, which added an interim target of GHG emissions reductions to help ensure that the state meets its 80% reduction by 2050, as set in EO S-3-05. The interim target is reducing GHG emissions by 40% by 2030. It also directs state agencies to update the Scoping Plan, update the Adaptation Strategy every three years, and take climate change into account in agency planning and investment strategies. Additionally, it requires the state's Five-Year Infrastructure Plan to take current and future climate change impacts into account in all infrastructure projects.

4.8.2.3 Local Regulations

The City of Buena Park's latest General Plan (City of Buena Park, 2010) addresses climate change primarily in the Conservation and Sustainability Element, which "provides direction regarding conservation, development, and utilization of manmade and natural resources, as well as sustainability including green building, source reduction, and air quality." This Element also sets forth several programs to reduce current pollutant emissions and requires "new development include measures to comply with . . . new air quality requirements related to GHG emissions." General Plan goals and policies related to climate change and GHG emissions reduction are:

- **Goal CS-6:** Integration of green building requirements into the building permit process.
    - Policy CS-6.1: Consider incentives to encourage new nonresidential development and remodels to utilize the U.S. Green Building Council's LEED rating system.

- **Goal CS-7:** Use of green techniques in new buildings, new building sites, and building remodels and retrofits.

  - Policy CS-7.1: Consider incentives such as expedited permitting process or reduced fees for new development or redevelopment projects that incorporate green building practices, Build it Green, and Leadership in Energy and Environmental Design (LEED) certified buildings.

- **Goal CS-8:** Use of environmentally preferable products for new and existing developments.

  - Policy CS-8.1: Encourage green building efforts in single-family homes as well as in municipal, commercial, mixed-use, or multifamily residential projects.

  - Policy CS-8.2: Consider advertising and/or providing incentives for green building techniques in existing building retrofits as well as new buildings.

- **Goal CS-10:** Reduction in total waste diverted to treatment or disposal at the waste source and through re-use and recycling.

  - Policy CS-10.1: Ensure the Source Reduction and Recycling Element (SRRE) is updated as necessary to serve as an effective tool in the reduction of solid waste diverted to landfills.

  - Policy CS-10.2: Continue to implement and improve the Construction and Demolition Waste Recovery Ordinance, requiring building projects to recycle or reuse a minimum of 50 percent of unused or leftover building materials.

  - Policy CS-10.3: Encourage business material reuse through waste exchange.

  - Policy CS-10.4: Encourage the use of materials with minimal impacts to the environment for new development or redevelopment projects in the City.

  - Policy CS-10.5: Encourage materials recycling during renovation or demolition of old buildings.

  - Policy CS-10.6: Encourage the use of recycled or rapidly renewable materials, and building reuse and renovation over new construction, where feasible.

- **Goal CS-11:** Maximum public participation in source reduction, recycling, and composting activities.

  - Policy CS-11.1: Encourage professional services contracts to incorporate reused and recycled contents into new development and re-use of raw materials.

  - Policy CS-11.2: Encourage the use of recycled mulch and soil products in City parks and landscaping projects whenever practicable and include the same direction in City landscaping contracts.

- Policy CS-11.3: Continue to operate and expand all public information and education programs to complement source reduction, recycling and composting efforts, and participation.

- **Goal CS-12:** Reduction of the volume of solid waste generated and raw materials used by the City.

  - Policy CS-12.1: Use recycled-content materials for building, streetscaping, and roadway construction, whenever feasible.

  - Policy CS-12.2: Purchase and use recycled-content for City office products, where practicable and to the extent feasible.

  - Policy CS-12.3: Include environmentally preferable purchasing requirements in janitorial contracts and direct City custodians to purchase and use environmentally preferable products to be consistent with the City goal to provide a safe work environment and minimize environmental damage.

  - Policy CS-12.4: Use recycled content playground equipment, park landscape surfacing, and other park and recreational equipment, whenever feasible.

- **Goal CS-13:** Reduction of per-capita nonrenewable energy usage and citywide peak electricity demand through energy efficiency and conservation.

  - Policy CS-13.1: Consider adopting renewable energy building standards. The standards would incorporate technically and financially feasible renewable energy requirements into development and building standards.

  - Policy CS-13.2: Explore methods to facilitate renewable technologies through streamlined planning and development rules, codes, processing, and other incentives.

  - Policy CS-13.3: Explore and, if appropriate, adopt energy efficiency standards for existing residential and commercial buildings upon substantial remodel. Consider requiring energy efficiency inspections, disclosure, and retrofits at change of ownership based on cost-effective and commercially available energy efficiency measures.

  - Policy CS-13.4: Encourage new developments, redevelopments, and retro-fit buildings to have solar energy panels, co-generation energy systems, and/or other energy efficient systems installed to reduce the unnecessary consumption of energy.

  - Policy CS-13.5: Encourage the installation of energy efficient appliances in new development and redevelopment projects.

  - Policy CS-13.6: Encourage new developments and redevelopments to layout or organize buildings to maximize the potential for passive solar panels.

  - Policy CS-13.7: Encourage residents and business owners to upgrade insulation in older or energy inefficient homes to reduce the need to operate heating, ventilating, and air conditioning (HVAC) systems.

- Policy CS-13.8: Encourage the use of natural daylight instead of artificial lighting in the design of buildings to minimize electricity use.

- Policy CS-13.9: Encourage the use of roof materials that reflect sun light rather than absorb sun light in order to reduce the need for using mechanical air conditioning systems.

- Policy CS-13.10: Encourage the use of shading devices and awnings on window fronts in order to reduce the need for mechanical air conditioning systems.

- Policy CS-13.11: Encourage the use of operable windows and skylights for commercial and retail uses in order to reduce the need for mechanical air conditioning systems.

- Policy CS-13.12: Encourage use of low or no Volatile Organic Compounds (VOC) paints in interior spaces of new development and redevelopment projects.

4.8.3 Impact Thresholds

The following thresholds of significance are based on criteria in Appendix G of the State CEQA Guidelines. A project has the potential to create a significant environmental impact if it would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or

- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing emissions of GHG.

4.8.4 Impact Analysis

a) Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than Significant Impact

California has enacted several pieces of legislation that relate to GHG emissions and climate change, much of which set aggressive goals for GHG reductions within the state. Per Senate Bill 97, the California Natural Resources Agency adopted amendments to the CEQA Guidelines, which address the specific obligations of public agencies when analyzing GHG emissions under CEQA to determine a project's effects on the environment. However, neither a threshold of significance nor any specific mitigations are included or provided in these CEQA Guideline amendments.

GHG Significance Threshold

Neither the City of Buena Park, the SCAQMD, nor the State CEQA Guidelines Amendments has adopted quantitative thresholds of significance for addressing a project's GHG emissions. Nonetheless, § 15064.4 of the CEQA Guidelines serves to assist lead agencies in determining the significance of the impacts of GHGs. As required in § 15064.4 of the CEQA Guidelines, this analysis includes an impact determination based on the following: (1) an estimate of the amount of GHG emissions resulting from the Orchard View Gardens project; (2) a qualitative analysis or performance based standards; (3) a

quantification of the extent to which the Orchard View Gardens project increases GHG emissions as compared to the existing environmental setting; and (4) the extent to which the Orchard View Gardens project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

SCAQMD's guidance uses a tiered approach rather than a single numerical emissions threshold. If a project's GHG emissions "fail" the non-significance of a given tier, then one goes to the next one.

The threshold selected for this analysis is Tier 3, which establishes a screening significance threshold level to determine significance using a 90% emission capture rate. For Tier 3, the SCAQMD estimated that at a threshold of approximately 3,000 metric tons CO_2e per year emissions would capture 90% of the GHG emissions from new residential or commercial projects. Thus, this analysis uses 3,000 $MTCO_2e$ per year as the significance threshold under the first impact criterion in Section 4.8.3.

Construction GHG Emissions

Construction is an episodic, temporary source of GHG emissions. Emissions are generally associated with the operation of construction equipment and the disposal of construction waste. To be consistent with the guidance from the SCAQMD for calculating criteria pollutants from construction activities, only GHG emissions from onsite construction activities and offsite hauling and construction worker commuting are considered as project-generated. As explained by the California Air Pollution Control Officers Association (CAPCOA) in its 2008 white paper (CAPCOA, 2008), the information needed to characterize GHG emissions from manufacture, transport, and end-of-life of construction materials would be speculative at the CEQA analysis level. CEQA does not require an evaluation of speculative impacts (*CEQA Guidelines* § 15145). Therefore, the construction analysis does not consider such GHG emissions, but does consider non-speculative onsite construction activities, and offsite hauling and construction worker trips. All GHG emissions are identified on an annual basis.

Estimated criteria pollutant emissions from the Orchard View Gardens project's onsite and offsite project construction activities were calculated using CalEEMod, Version 2016.3.2, which was described in Section 4.3.7. The results of this analysis are presented in **Table 4.8-1**. The greatest annual increase in GHG emissions from Orchard View Gardens project construction activities would be 203 metric tons in 2022 and 2 metric tons in 2023 for total construction GHG emissions of 275 metric tons. Consistent with SCAQMD recommendations and to ensure that construction emissions are assessed in a quantitative sense, construction GHG emissions have been amortized over a 30-year period. The amortized value, **6.8 $MTCO_2e$**, has been added to the Orchard View Gardens project's annual operational GHG emissions. (See below.) Modeling results are in **Appendix B2**.

Table 4.8-1
PROJECT CONSTRUCTION-RELATED GHG EMISSIONS

Year	Annual Emissions (MT)			
	CO_2	CH_4	N_2O	CO_2e
2022	202.2 [23]	0.0401	0	203.3
2023	1.69	0.0034	0	1.70
Total	**204**	**0.043**	**0**	**206**

Operational GHG Emissions

For a reasonable maximum emissions case, it was assumed that GHG emissions from the Orchard View Gardens project site are currently zero. Operational GHG emissions calculated by CalEEMod are shown in **Table 4.8-2**. Total annual unmitigated emissions from the Orchard View Gardens project would be 416 MTCO2e per year. Energy production and mobile sources account for about 86% of these emissions.[24]

Table 4.8-2
PROJECT OPERATIONAL GHG EMISSIONS

Emissions Source	Estimated Project Generated CO_2e Emissions (Metric Tons per Year)
Area Sources	1.14
Energy Demand (Electricity & Natural Gas)	74.68
Mobile (Motor Vehicles)	282.46
Solid Waste Generation	15.27
Water Demand	33.39
Construction Emissions [a]	9.17
Total	**416.1**

[a] *Total construction GHG emissions were amortized over 30 years and added to those resulting from the operation of the project.*

Therefore, under the first significance criterion, GHG emissions would be less than significant, and no mitigation is necessary.

23 The Option 2b and 3 combination was also analyzed, but the Option 1 and 3 combination was determined to have more emissions impact and therefore, for conservative purposes, is being presented.
24 Calculations are provided in **Appendix B2**.

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

Less than Significant Impact

Since the City of Buena Park does not have a Climate Action Plan to specifically address GHG reductions, this analysis uses another approach to identifying potential conflict with GHG reduction plans, policies, or regulations by examining General Plan provisions that prescribe or enable GHG emissions control. The Current Buena Park General Plan lists policies that reduce GHG emissions. The policies prescribe actions to be taken by the City, and not measures to be implemented by an Orchard View Gardens project proponent.

4.9 Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?		**X**		
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?			**X**	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one quarter mile of an existing or proposed school?		**X**		
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?				**X**
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?				**X**
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			**X**	
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				**X**

The analysis in this section is based in part upon the Phase I Environmental Site Assessment (Phase I ESA) prepared by Converse Consultants (herein referred to as Converse) dated December 12, 2019 (Refer to **Appendix E**). The Phase I ESA presents information conducted from a site reconnaissance

of the project area, historical developments of the project site, and a comprehensive database search to determine if the project site contains Recognized Environmental Conditions (RECs).[25]

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

Less than Significant Impact with Mitigation Incorporated

The Phase I determined that there are no RECs on the project site (Converse, 2019, p. 27). Although the project site was used for agricultural purposes in the past, it should not be of concern based on passage of time since the last possible agricultural application (Converse, 2019, p. 28). The Phase I ESA concluded that the project site was not listed in any regulatory database as a hazardous site (Converse, 2019, p. 26).

Construction

The proposed project would include the transport, storage, and use of chemical agents, solvents, paints, and other hazardous materials commonly associated with construction activities. Chemical transport, storage, and use would comply with Resource Conservation and Recovery Act (RCRA); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); California Hazardous Waste Control Law[26]; Occupational Safety and Health Administration (OSHA), and City of Buena Park Fire Department requirements.

During construction, there would be a limited risk of spills and/or accidental release of hazardous materials that are used for the operation and maintenance of construction equipment. The onsite temporary handling, storage, and usage of these materials would be subject to applicable local, state, and/or federal regulations, including Best Management Practices (BMPs) required by the City of Buena Park. Compliance with state and local construction requirements would reduce the risk of any damage or injury from any potential spill hazards to a less than significant level.

A structure called "The Barn" is located on the northern part of the project site and is a small stand-alone building, located northeast of the existing church and administration buildings on site. "The Barn" would be demolished as part of the proposed project. Based on aerial photographs "The Barn" was present sometime after 1994 and prior to 2002. Therefore, it is unlikely but unconfirmed as to whether or not "The Barn" was constructed with Asbestos Containing Materials (ACMs) and Lead-Based Paint (LBP) that can cause adverse health effects when airborne. Mitigation measure **HAZ-1** below is recommended to reduce potential impacts from ACM and LBP.

Mitigation Measure

MM HAZ-1 Prior to demolition, the existing structure called "The Barn" shall be assessed for the presence of asbestos-containing materials (ACMs) and lead-based paint (LBP). If ACMs and/or LBP are found, the resulting construction debris shall be removed and disposed of at a landfill that can accept hazardous materials, including asbestos and

25 The term Recognized Environmental Conditions is defined in Section 1.1.1 of the American Society of Testing and Materials (ASTM) Standard Practice as the presence or likely presence of any hazardous substances or petroleum products in, at or on a property due to any release to the environment; under conditions indicative of a release to the environment; under conditions that pose a material threat of a future release to the environment (Converse Consultants, 2019. p. 1).

26 Codified in California Health and Safety Code, Division 20, Chapter 6.5, Hazardous Waste Control.

lead-based paint. All ACMs and LBP shall be removed prior to demolition, as required, and in accordance with all applicable laws, including guidelines of the Occupational Safety and Health Administration (OSHA).

Level of Significance After Mitigation

With removal of ACMs and LBP prior to demolition, as required, and in accordance with all applicable laws, impacts from ACMs and LBP would be less than significant. After the implementation of Mitigation Measure **HAZ-1** above, the project would have a less than significant impact regarding the creation of a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials.

Operation

The project would require the transport, storage, use, and disposal of certain chemicals typically used for cleaning and landscaping supplies, such as commercial cleansers, paints, and lubricants for maintenance and upkeep of the proposed buildings and landscaping. These materials would be stored, handled, and disposed of in accordance with applicable regulations. The proposed project would not involve the routine transport, use, or disposal of quantities of hazardous materials that may create a significant hazard to the public or environment. Therefore, impacts regarding hazardous operations would be less than significant.

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

Less than Significant Impact

Construction

As discussed in threshold 4.9 a) above, during construction, the project would entail the use and handling of limited volumes of commonly used hazardous materials. Project personnel would ensure that all hazardous materials during construction would adhere to any applicable local, state, and/or federal regulations including BMPs required by the city including, but not limited to, a Storm Water Prevention Program (SWPPP). Compliance with applicable pollution regulations during project construction would reduce potential impacts in this regard to less than significant levels.

Operation

The project would result in the handling and storage of materials such as commercial cleansers, solvents and other janitorial or industrial-use materials, paints, and landscape fertilizers/pesticides during project operations. However, these materials would be stored, handled, and disposed of in accordance with applicable regulations and would not be stored in amounts that would create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions. The project would have a less than significant impact in this regard.

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

Less than Significant Impact with Mitigation Incorporated

Construction

San Marino Elementary School is located approximately 0.2 mile southeast of the project site. As discussed in thresholds 4.9 a) and 4.9 b) above, during construction, the project would entail the use and handling of limited volumes of commonly used hazardous materials. Project personnel would ensure that all hazardous materials during construction would adhere to any applicable local, state, and/or federal regulations including BMPs required by the City of Buena park. Due to the potential presence of ACMs and LBP, as described in threshold 4.9 a) above, mitigation measure **HAZ-1** is recommended to reduce potential impacts.

Mitigation Measure

Refer to **MM HAZ-1** above.

Level of Significance After Mitigation

With the implementation of Mitigation Measure **HAZ-1** above, the project would have a less than significant impact regarding emitting hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one quarter mile of an existing or proposed school.

Operation

During project operations, the project would result in the handling and storage of materials such as commercial cleansers, solvents and other janitorial or industrial-use materials, paints, and landscape fertilizers/pesticides during project operations. However, these materials would be stored, handled, and disposed of in accordance with applicable regulations and would not be stored in amounts that would pose a hazard to existing or proposed schools in the project vicinity. The project would have less than significant impacts in this regard.

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

No Impact

Government Code § 65962.5 requires the Department of Toxic Substances Control (DTSC) to compile and update, at least annually, lists of the following:

- Hazardous waste and substances sites from the DTSC EnviroStor database.
- Leaking Underground Storage Tank (LUST) sites by county and fiscal year in the State Water Resources Control Board (SWRCB) GeoTracker database.
- Solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside waste management units.
- SWRCB Cease and Desist Orders (CDOs), and Cleanup and Abatement Orders (CAOs).
- Hazardous waste facilities subject to corrective action pursuant to § 25187.5 of the Health and Safety Code, identified by DTSC.

These lists are collectively referred to as the "Cortese List." (EPA, 2019b).

As detailed in the Phase I report prepared for the project, the project site in not located on the Cortese List. The nearest active site to the project site, Tosco – 76 #5398, is located at 5014 Orangethorpe Avenue in La Palma, California, approximately 1.5 miles northwest of the project site. Thus, because the project site is not located on or near a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5, the project would have no impact in this regard.

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?

No Impact

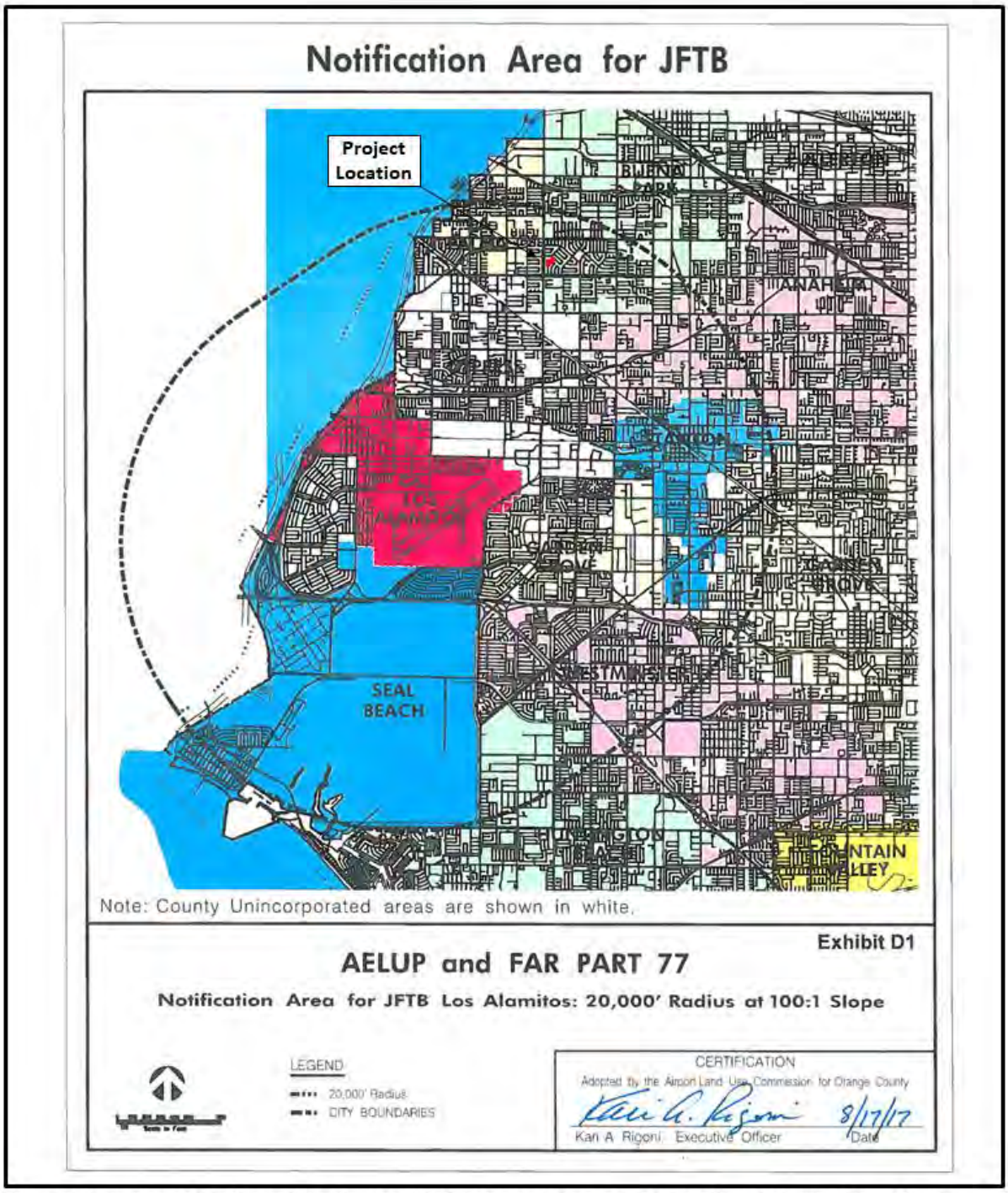
The nearest airport is the Joint Forces Training Base (JFTB) Los Alamitos, located approximately 2.8 miles southwest of the project site. As shown in **Figure 4.9-1,** the project is located within JFTB's Notification Area. However, the project site is not within JFTB's Height Restriction or Impact Zones. Although the project site is within JFTB's influence area, the project applicant needs only to notify the airport about project construction and operation. Therefore, with compliance to notifying JFTB and the project's distance from the nearest active airports, the project would not expose people to safety hazards due to proximity to a public airport, and no impacts would occur.

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

Less than Significant Impact

The City of Buena Park does not have an adopted emergency response plan or emergency evacuation plan. However, the project could temporarily impact street traffic adjacent to the project site during the construction phase due to construction activities encroaching into the right-of-way (ROW). Project construction could reduce the number of lanes or temporarily close a portion of Valley View Street. The city requires preparation and implementation of a Traffic Management Plan (TMP) for all projects that require construction in the public ROW. The TMP must be reviewed and approved by the city's Traffic Engineer prior to the start of construction activity in the public ROW. The typical TMP requires such things as the installation of K-Rail between the construction area and open traffic lanes, the use of flagmen and directional signage to direct traffic where only one travel lane is available or when equipment movement creates temporary hazards, and the installation of steel plates to cover trenches under construction. Emergency access must be maintained. Compliance with City requirements for traffic management during construction in the public ROW would ensure that the project would have a less than significant impact in this regard.

Figure 4.9-1
AIRPORT INFLUENCE AREA MAP FOR THE JOINT FORCES TRAINING BASE



Disclaimer: Illustration provided by Orange County Airport Land Use Commission, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Source: Orange County Airport Land Use Commission, 2017

UltraSystems

Orchard View Gardens
Senior Apartment Homes
Joint Forces Training Base, Los Alamitos
Airport Notification Area

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

No Impact

The California Department of Forestry and Fire Protection (CAL FIRE) developed Fire Hazard Severity Zones (FHSZ) for State Responsibility Areas (SRA) and Local Responsibility Areas (LRA). The project site is not in a SRA (CAL FIRE SRA, 2018). (see **Figure 4.9-2**)**.** As shown in **Figure 4.9-3**, the project site is located in a LRA area but is outside a Very High Fire Hazard area**.** The City of Buena Park would provide fire services to the project site.

Very High Fire Hazard designation refers to either:

> a) wildland areas supporting high-to-extreme fire behavior resulting from climax fuels typified by well-developed surface fuel profiles (e.g., mature chaparral) or forested systems where crown fire is likely. Additional site elements include steep and mixed topography and climate/fire weather patterns that include seasonal extreme weather conditions of strong winds and dry fuel moistures. Burn frequency is typically high, and should be evidenced by numerous historical large fires in the area. Firebrands from both short- (<200 yards) and long-range sources are often abundant.

OR

> b) developed/urban areas typically with high vegetation density (>70% cover) and associated high fuel continuity, allowing for frontal flame spread over much of the area to progress impeded by only isolated non-burnable fractions. Often where tree cover is abundant, these areas look very similar to adjacent wildland areas. Developed areas may have less vegetation cover and still be in this class when in the immediate vicinity (0.25 mile) of wildland areas zoned as Very High.

The project site is not located in a Very High Fire Hazard in either LRA or SRA and is not located in an area with an urban/wildland interface. The project would include required fire suppression design features (i.e., fire-resistant building materials, where appropriate, smoke detection and fire alarm systems, automatic sprinkler systems, portable fire extinguishers, emergency signage in all buildings, and fuel modification/brush clearance) identified in the latest edition of the California Building Code. Therefore, the project would have no impact regarding exposure of people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

Figure 4.9-2
FIRE HAZARD SEVERITY ZONES – STATE RESPONSIBILITY AREA

Figure 4.9-3
FIRE HAZARD SEVERITY ZONES – LOCAL RESPONSIBILITY AREA

4.10 Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			**X**	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			**X**	
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 offsite;			**X**	
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;			**X**	
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			**X**	
iv) impede or redirect flood flows?			**X**	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				**X**
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			**X**	

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

Less than Significant Impact

The project site is currently developed with a mixture of asphalt pavement, landscape vegetation, structures, and approximately 0.75 acre of disturbed/bare ground (Google Earth Pro, 2019). Under existing conditions, stormwater runoff generated on the proposed project site is discharged as sheet

flow west of the site into the gutter on the east side of Valley View Street, flowing south and entering the storm drain system via a curb inlet north of the intersection of Valley View Street and Crescent Avenue. Water entering this curb inlet flows west beneath Crescent Avenue for approximately one mile and discharges into an existing Orange County Flood Control Department rectangular concrete flood control channel which, in turn, discharges into Moody Creek. Moody Creek is a tributary of Coyote Creek; Coyote Creek discharges into the San Gabriel River, which empties into the Pacific Ocean (OCFD, 2012), making these tributaries waters of the U.S. and State of California.

Section 303(d) of the federal Clean Water Act (33 U.S.C. § 1313) defines water quality standards as consisting of the uses of the surface (navigable) waters involved, the water quality criteria which are applied to protect those uses, and an antidegradation policy. Under the Porter-Cologne Water Quality Control Act (California Water Code, Division 7, Chapter 2 § 13050) the uses of waters and water quality criteria are separately considered as beneficial uses and water quality objectives. Beneficial uses and water quality objectives are to be established for all waters of the state, both surface and groundwater (SARWQCB, 1995, p. 3-1). The listing of waters within a basin attempts to include all significant surface streams and bodies of water, as well as receiving waters. Specific waters which are not listed have the same beneficial uses as the streams, lakes or reservoirs to which they are tributary or the groundwater basins or subbasin to which they are tributary or overlie (SARWQCB, 1995, p. 3-23). For example, Moody Creek is not listed within the Basin Plan as having designated beneficial uses; however, because Moody Creek is tributary to Coyote Creek, Moody Creek shares the beneficial uses designated for Coyote Creek.

Coyote Creek meanders across the boundary of two RWQCBs: The Santa Ana RWQCB (SARWQCB) and the Los Angeles RWQCB (LARWQCB). Within the boundary of the SARWQCB, Coyote Creek (and by extension, Moody Creek) has the designated existing beneficial uses of:

- **Municipal and Domestic Supply (MUN) -** waters which are used for community, military, municipal or individual water supply systems. These uses may include, but are not limited to, drinking water supply.

- **Water Contact Recreation (REC1: Primary Contact Recreation)** - waters which are used for recreational activities involving body contact with water where ingestion of water is reasonably possible. These uses may include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, whitewater activities, fishing, and use of natural hot springs.

- **Non-contact Water Recreation (REC2: Secondary Contact Recreation)** - waters which are used for recreational activities involving proximity to water, but not normally involving body contact with water where ingestion of water would be reasonably possible. These uses may include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing and aesthetic enjoyment in conjunction with the above activities.

- **Warm Freshwater Habitat (WARM)** - waters which support warmwater ecosystems that may include, but are not limited to, preservation and enhancement of aquatic habitats, vegetation, fish and wildlife, including invertebrates.

- **Wildlife Habitat (WILD)** - waters which support wildlife habitats that may include, but are not limited to, the preservation and enhancement of vegetation and prey species used by waterfowl and other wildlife.

- **Rare, Threatened or Endangered Species (RARE)** - waters which support the habitats necessary for the survival and successful maintenance of plant or animal species designated under state or federal law as rare, threatened or endangered (SARWQCB, 1995, pp. 3-3 and 3-4).

Within the boundary of the LARWQCB, Coyote Creek has the designated existing beneficial use of RARE, and the designated potential beneficial uses of MUN, WARM, WILD (LARWQCB, 1994, p. 2-14). The LARWQCB has also designated the following potential beneficial uses for Coyote Creek within their boundary:

- **Industrial Service Supply (IND)** includes uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well re-pressurization.

- **Industrial Process Supply (PROC)** includes uses of water for industrial activities that depend primarily on water quality (LARWQCB, 1994, pp. 2.-4 and 2-14).

Development of the project has the potential to result in two types of water quality impacts: (1) short-term impacts due to construction-related discharges; and (2) long-term impacts from operation. Soil disturbance would temporarily occur during project construction, due to earth-moving activities such as excavation and trenching for foundations and utilities, soil compaction and moving, cut and fill activities, and grading. Disturbed soils are susceptible to high rates of erosion from wind and rain, resulting in sediment transport via stormwater runoff from the project area. Erosion and sedimentation affect water quality through interference with photosynthesis, oxygen exchange and respiration, growth, and reproduction of aquatic species.

Runoff from construction sites may include sediments and contaminants such as oils, fuels, paints, solvents, suspended solids, sediments, nutrients, heavy metals, pathogens, and trash and debris. Pollutants such as nutrients, trace metals, hydrocarbons, and bacteria can attach to sediment and be carried by stormwater into local storm drains which ultimately discharge into the Pacific Ocean.

Construction Pollutants Control

Temporary impacts to water quality, such as those described above, could occur during construction of the project. Project construction would require ground-disturbing activities and clearing of existing vegetation and paving (see **Section 3.0,** *Project Description*), and grading for construction of building foundations. Disturbed soils accelerate erosion and increase sediment in stormwater runoff to receiving waters, causing increased turbidity and sedimentation. Additionally, fuel, oil, and other fluids used in construction vehicles, equipment, and heavy machinery could leave the site, enter the storm drain system and create or add to contaminant loads in Coyote Creek and the San Gabriel River.

The project proposes to subdivide the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres. The newly created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with the proposed project. Dischargers whose projects disturb one (1) or more acres of soil are required to obtain coverage under the General Permit for Discharges of

Storm Water Associated with Construction Activity, Construction General Permit Order 2009-0009-DWQ (as amended; Construction General Permit). Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility (SWRCB, 2020).

The Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer (QSD). The SWPPP would site-specific construction stormwater BMPs which would be implemented as part of project design, and maintained or replaced as necessary. These BMPs would minimize or avoid erosion through wind or stormwater, and would also minimize or avoid sediment- or pollutant-laden stormwater from leaving the construction site and entering receiving waters (e.g., Moody Creek, Coyote Creek). For these reasons, potential violations of water quality standards or waste discharge requirements during construction would be less than significant.

Operational Pollutant Controls

In 2009 the SARWQCB issued Order No. R8-2009-0030/NPDES No. CAS618030 (as amended by Order No. R8-2010-0062), Waste Discharge Requirements for the County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County within the Santa Ana Region Areawide Urban Storm Water Runoff for Orange County (MS4); the City of Buena Park is a signatory to this MS4. The MS4 regulates the discharge of pollutants in urban storm water runoff from anthropogenic (generated from human activities) sources and/or activities within the jurisdiction and control of the permittees own and operate storm drains, including flood control facilities (SARWQCB, 2009, p. 3).

Pursuant to the MS4, MS4 requires new development and significant redevelopment projects to develop a Water Quality Management Plan (WQMP) that incorporates post-construction low-impact development (LID) BMPs to reduce the quantity of rainfall runoff and improve the quality of water that leaves a site. LID is a leading stormwater management strategy that seeks to mitigate the impacts of runoff and stormwater pollution as close to its source as possible. LID comprises a set of site design approaches and structural BMPs that are designed to address runoff and pollution at the source. Structural LID BMPs can effectively remove nutrients, bacteria, and metals while reducing the volume and intensity of stormwater flows.

The Preliminary WQMP (RRM Design Group, 2020; see **Appendix F**) describes non-structural LID BMPs (e.g., common area litter control and landscape management; education for property owners, tenants, and occupants) and structural LID BMPs (e.g., trash/waste storage areas which reduce introduction of pollution, use of efficient irrigation systems, water conservation) for the proposed project (RRM Design Group, 2020, p. 14)

The project would consist of three drainage management areas (DMAs): DMA-A drains the north and west portions of the project (a drainage area of 0.46 acre), DMA-B drains the southwest section of the project (drainage area of 0.30 acre) and DMA-C drains the south-central section of the project (drainage area of 0.48 acre) (RRM Design Group, 2020, Attachment C). Bioretention without underdrains have been chosen for the site due to the shallow groundwater depth and lack of nearby storm drain connections. Runoff from each DMA would flow overland and drain into their respective BMP (refer to Attachment C of the Preliminary WQMP, located in **Appendix F** of this document).

Bioretention stormwater treatment facilities are landscaped shallow depressions that capture and filter stormwater runoff. These facilities function as a soil and plant-based filtration device that removes pollutants through a variety of physical, biological, and chemical treatment processes. The facilities normally consist of a ponding area, mulch layer, planting soils, and plants. As stormwater passes down through the planting soil, pollutants are filtered, adsorbed, and biodegraded by the soil and plants (RRM Design Group, 2020, Attachment B). Due to the limited available area and shallow groundwater depth at the site, the proposed bioretention facilities do not provide sufficient capture volume. Supplemental gravel storage has been designed to meet the required Design Capture Volume for the entire site (RRM Design Group, 2020, p. 19).

- Runoff from DMA 'A' will flow into a bio-retention area (INF-3) for treatment. Overflow from the basin will outlet through the curb on Valley View Street and enter the municipal storm drain system through inlets located at the intersection of Valley View Street and Crescent Avenue.

- Runoff from DMA 'B' will flow south-west into a bioretention area (INF-3) for treatment. Overflow from the basin will flow out through the curb on Valley View Street and enter the municipal storm drain system through inlets located at the intersection of Valley View Street and Crescent Avenue.

- Runoff from DMA 'C' will flow south-east into a bioretention area (INF-3) for treatment. Overflow from the basin will flow onto the adjacent parking lot to the south and enter the curb and gutter along Valley View Street as it did historically. Eventually runoff will enter the municipal storm drain system through inlets located at the intersection of Valley View Street and Crescent Avenue.

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

Less than Significant Impact

Construction

Construction of the proposed project would use only a minimal amount of water, for purposes such as dust control, from readily available public sources. This water use would be temporary and would not require the substantial use of groundwater. Once construction is completed, the project would be connected to municipal water lines. Project construction would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge. Therefore, impacts would be less than significant.

Operation

The City's main source of water supply is groundwater from the Coastal Plain of Orange County Groundwater Basin (Basin 8-001). As of 2015, the city relies on approximately 73 percent groundwater and 27 percent imported water (Arcadis, 2016, p. 3-14) for drinking water supply. The City's projected water supply from 2020 through 2040 is provided in **Table 4.19-1**, in the Utilities and Service Systems section of this document. The City's 2015 Urban Water Management Plan (UWMP) states that the City of Buena Park will be able to have adequate water supplies for all users, including multi-family residences, through the year 2040 (Arcadis, 2016, p. 2-8). In addition, the LID

BMPs described in Section 4.10 (a) would retain most stormwater runoff generated onsite and allow it to percolate through the soil and add to the volume of the aquifer. Therefore, impacts would be less than significant.

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

i) Result in substantial erosion or siltation on or offsite;

Less Than Significant Impact

Construction

During project construction the drainage pattern of the site would be altered; however, due to the location and nature of the proposed project, this alteration would be temporary. The project would be required to obtain coverage under the Statewide General Construction Permit through preparation and implementation of a SWPPP specifying construction stormwater BMPs to be implemented to control erosion and protect the quality of surface water runoff from the project site. The SWPPP must be prepared before the project owner receives a grading or building permit and must be implemented year-round throughout construction. Project compliance with regulatory requirements would reduce potential erosion/siltation impacts during the construction phase. Construction of the project would not result in substantial erosion or siltation, and potential impacts would be less than significant.

Operation

Operation of the proposed project would increase the amount of impervious surface, which would reduce the amount of erosion or siltation on and off the project site. Additionally, the proposed LID BMPs [refer to Section 4.10 a)] would capture sediment-laden stormwater and filter sediment before the stormwater enters the municipal storm water system.

With implementation of site-specific stormwater BMPs described in the required SWPPP and installation of LID BMPs as described in the WQMP (see **Appendix F**), potential impacts resulting in substantial erosion or siltation on or offsite would be less than significant and mitigation is not required.

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

and

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

Less Than Significant Impact

The proposed project would increase the area of impervious surfaces compared to existing conditions. As described in the WQMP (see **Appendix F**), 27.1 percent of the project site is comprised

of impervious areas under existing conditions. With implementation of the proposed project, the impervious area would increase to 75 percent of the site (RRM Design Group 2020, p. 5).

The project design would include structural LID BMPs that would capture and retain stormwater generated on the project site; only precipitation events that exceed the 85th percentile event would overflow the retention and infiltration systems and directly enter the municipal storm drain system. The structural LID BMPs have been designed to capture stormwater generated by the 24-hour storm event (0.9 inches) for the project area (refer to the Preliminary WQMP in **Appendix F**).

Installation and maintenance of the structural LID BMPs described in the WQMP would reduce the volume of stormwater runoff leaving the project site. Therefore, the potential for the proposed project to 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 is less than significant and mitigation is not required.

iv) Impede or redirect flood flows?

Less than Significant Impact

The project site is located in Zone X, *Areas determined to be outside the 0.2% annual chance* [500-year] *floodplain*, as shown on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) Map Number 06059C0109J (FEMA, 2009; see **Figure 4.10-1**). The 500-year Flood Zone describes a flood event that has a 0.2 percent chance of occurring in any year. The proposed project would not impede or redirect flood flows because the project site is not adjacent to any open bodies of water. The nearest body of water is Moody Creek, approximately 0.35-mile northwest of the project site. The potential for the project to impede or redirect flood flows is less than significant and mitigation is not required.

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

No Impact

Flood Hazard

As discussed above, the project site is outside of the 500-year flood zone and is not anticipated to become inundated due to flood. Additionally, the project site is not adjacent to an open body of water. Therefore, there would be no impact in this regard.

Tsunami

A tsunami is a sea wave (or series of waves) of local or distant origin that results from large-scale seafloor displacements associated with large earthquakes, major submarine slides, or exploding volcanic islands (California Seismic Safety Commission, 2020). The project is not located within a tsunami inundation zone (CGS, 2020). The closest tsunami inundation zone is in Long Beach, approximately 7.75 miles to the southwest. Therefore, there would be no impact in this regard.

Seiche Zones

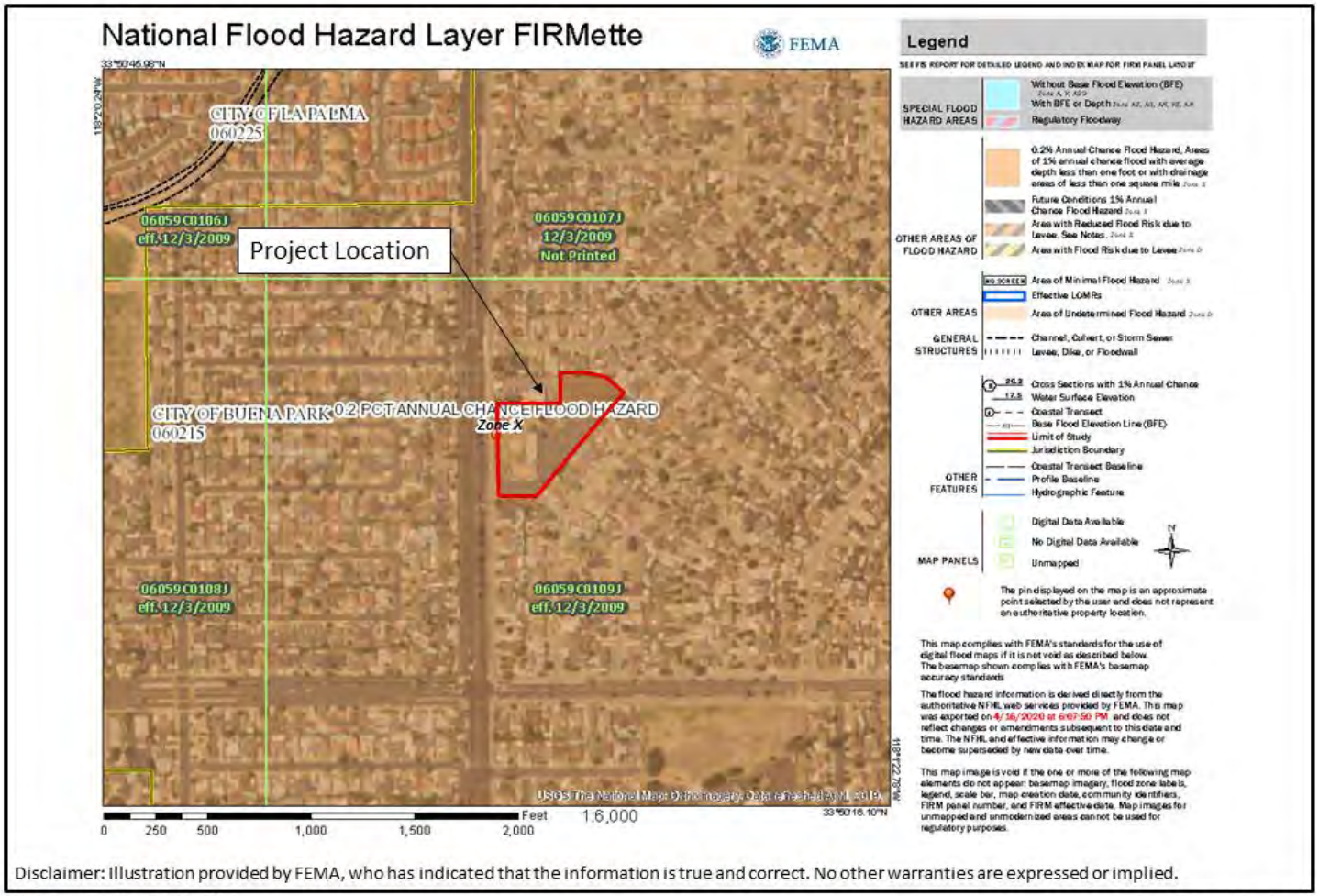
A seiche is an oscillating wave caused by wind, tidal forces, earthquakes, landslides and other phenomena in a closed or partially closed water body such as a river, lake, reservoir, pond, and other large inland water body. As mentioned above, the closest open body of water would be Moody Creek, approximately 0.35-mile northwest of the project site. Therefore, there would be no impact in this regard.

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

Less than Significant Impact

The California Porter-Cologne Water Quality Control Act (Porter-Cologne) defines water quality objectives as the "allowable limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area". Thus, water quality objectives are intended to protect the public health and welfare, and to maintain or enhance water quality in relation to the existing and/or potential beneficial uses of the water. Water quality objectives apply to both waters of the United States and waters of the State.

Figure 4.10-1
FEMA FLOOD INSURANCE RATE MAP



Disclaimer: Illustration provided by FEMA, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Sources: FEMA, April 16, 2020.

UltraSystems

Orchard View Gardens
Senior Apartment Homes

FEMA FIRM Map

As required by Porter-Cologne, the State Water Resources Control Board (SWRCB) requires individual Regional Water Quality Control Boards (RWQCBs) to develop Water Quality Control Plans (Basin Plans), which are "designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. Specifically, the Basin Plan[s] (i) designates beneficial uses for surface and ground waters, (ii) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's antidegradation policy, and (iii) describes implementation programs to protect all waters in the Region[s]. In addition, the Basin Plan incorporates (by reference) all applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations" (LARWQCB, 2019).

The proposed project is under the jurisdiction of the Basin Plan of the SARWQCB. As discussed in Sections 4.10 a) and 4.10 b), the proposed project would not conflict with or obstruct implementation of the water quality control plans or sustainable groundwater management plans of the SARWQCB. Impacts would be less than significant, and mitigation is not required.

4.11 Land Use and Planning

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Physically divide an established community?				**X**
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?			**X**	

a) Would the project physically divide an established community?

No Impact

The project site is one contiguous, irregular shaped parcel with the southern portion of the site currently occupied by St. Joseph's Episcopal Church. The church is housed in a single building and surrounded by surface parking. The northern portion of the site is currently vacant. The project proposes to subdivide the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres. The newly-created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with a primary residential apartment building and nine single story casitas accommodating 66 residential units and a 3,000 square foot community center. The project constitutes infill development on land currently developed with St. Joseph's Episcopal Church.

As a result of careful planning, the residential project would not be out of character with the surrounding area, which is comprised primarily of single-family residences. Development of the project site with residential buildings would be compatible with the established land use patterns in the area and would not physically divide an established community. The site currently has a wall along the norther, southern and eastern property lines and thus is not used for travel between surrounding areas.

The proposed development would not divide existing public spaces in the vicinity of the site or extend beyond the project site's boundaries. Furthermore, no streets or sidewalks would be permanently closed. The project would utilize existing roadways; thus, there would be no change in roadway patterns. No separation of uses or disruption of access between land use types would occur as a result of the project. Therefore, the project would not physically divide an established community and no impact would occur.

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

Less than Significant Impact

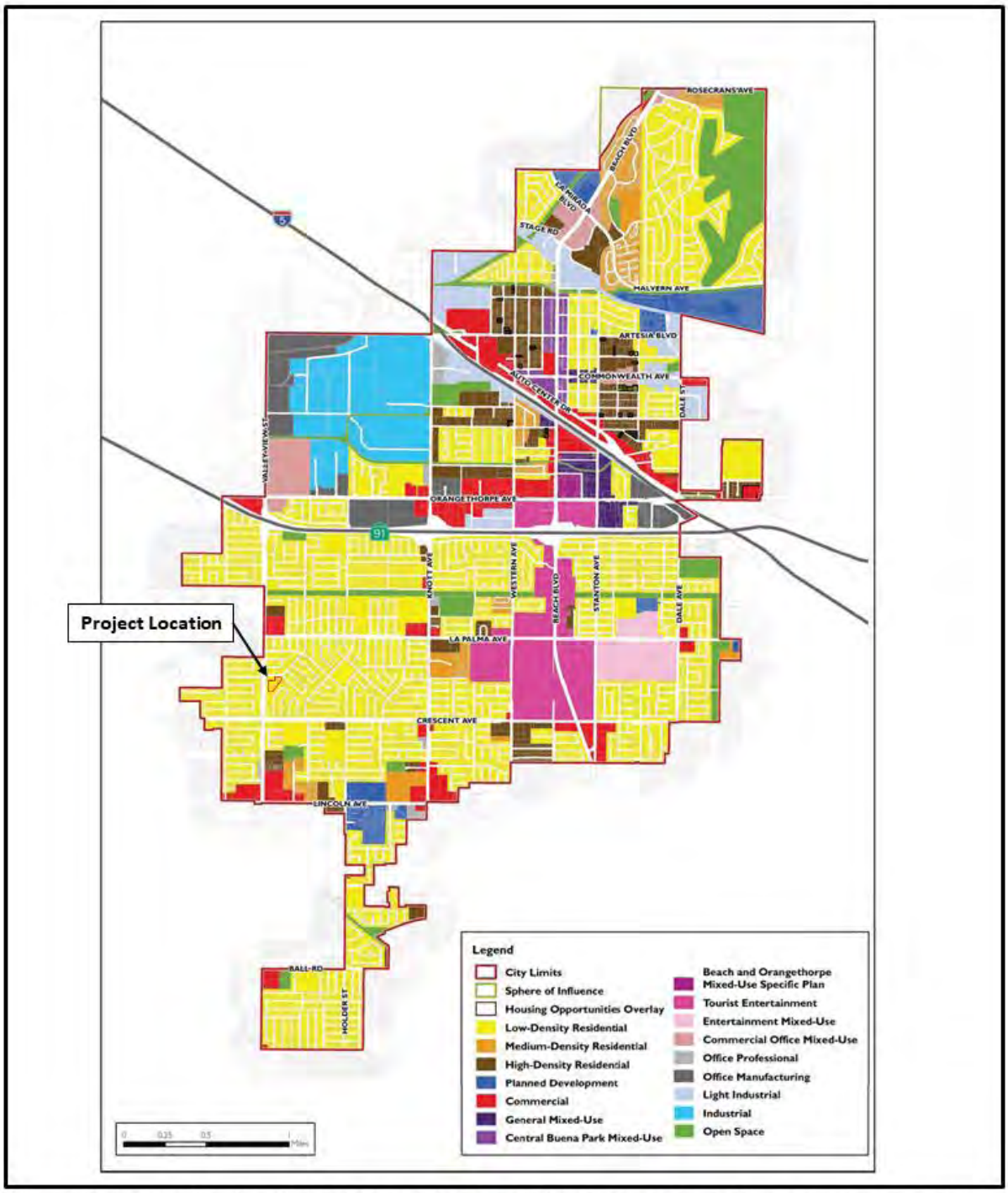
The General Plan land use designation for the project site is Low Density Residential (refer to **Figure 4.11-1**). The project is zoned Residential Single Family 6 (RS-6), allowing a base density of up to 7.26 dwelling units per acre (refer to **Figure 4.11-2)**.

Based on the demographic of the residents that would live on site, the high percentage of one-bedroom units, parking utilization rates for similar senior rental projects within the region, and the availability of public transportation options at the site, the project applicant believes that the proposed parking ratio is appropriate for an income-restricted senior rental project.

The General Plan land use designation for the project site is Low Density Residential (refer to **Figure 4.11-1**). The project is zoned Residential Single Family 6 (RS-6), allowing a base density of up to 7.26 dwelling units per acre (refer to **Figure 4.11-2)**.A General Plan amendment to High Density Residential and Zone change to Medium-Density Multifamily Residential (RM-20) is required to accommodate the proposed project. The project would also necessitate a Tentative Parcel Map to divide the one parcel into two. The project proposes modification to Use Permit U-272 to reflect the updated property lines and parking spaces required to accommodate the proposed project.

The project would be developed in compliance with the development standards and provisions under the proposed RM-20 zone. As a result, the project would have less than significant impacts in relation to consistency with local land use plans, policies, or regulations.

Figure 4.11-1
PROJECT SITE CURRENT GENERAL PLAN LAND USE DESIGNATIONS



Disclaimer: Illustration provided by City of Buena Park, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Source: City of Buena Park, 2010.

UltraSystems

Orchard View Gardens Senior Apartment Homes
General Plan Land Use Designation

Figure 4.11-2
PROJECT SITE ZONING DESIGNATION

4.12 Mineral Resources

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
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?				**X**
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?				**X**

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

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

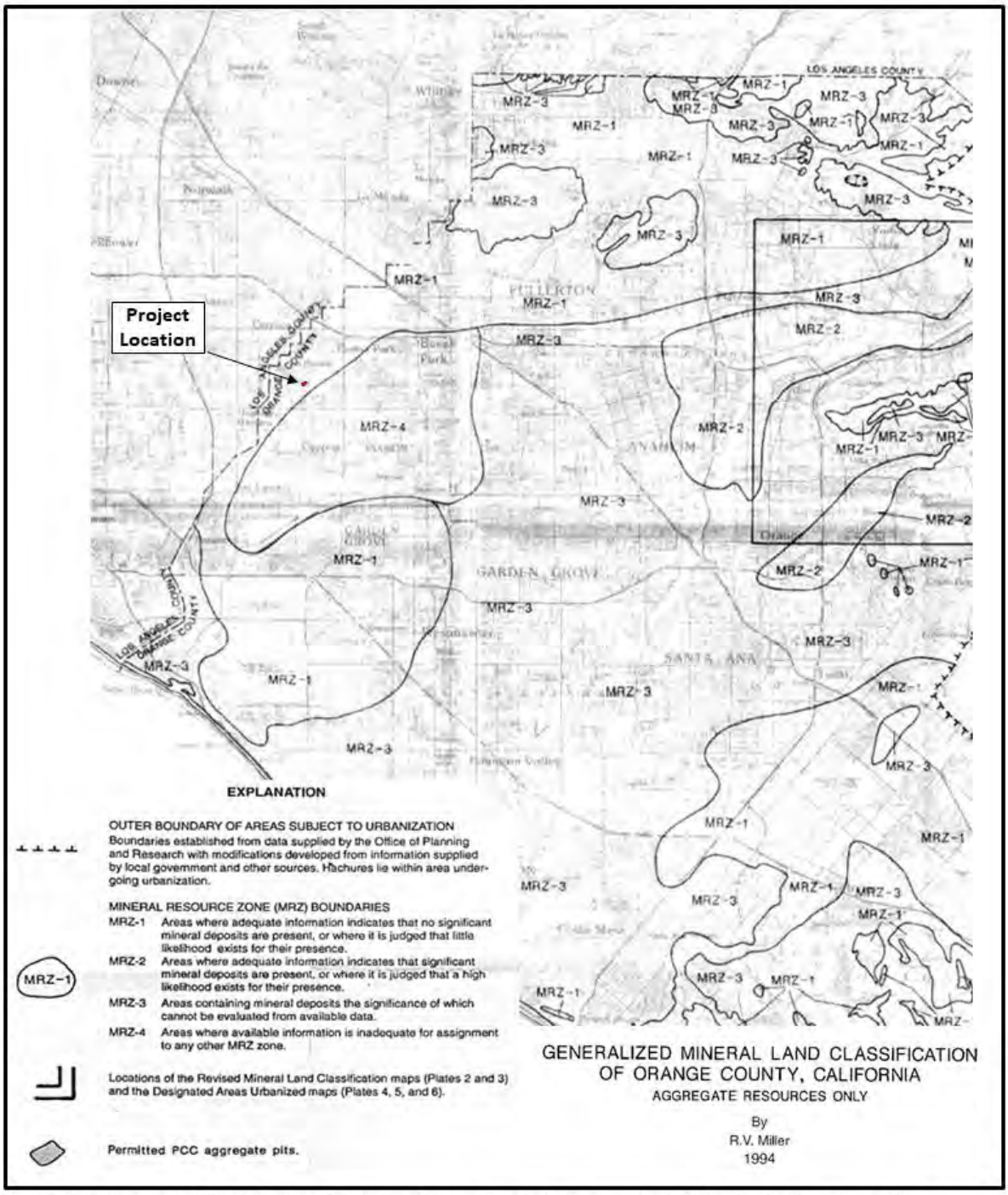
No Impact

Assessment of mineral resources is based on the State of California's Mineral Land Classification/Designation Program established after the adoption of the Surface Mining and Reclamation Act (SMARA) in 1975. The primary objectives of SMARA are the assurance of adequate supplies of mineral resources important to California's economy and the reclamation of mined lands. These objectives are implemented through land use planning and regulatory programs administered by local government with the assistance of the Department of Conservation's California Geological Survey (CGS). Information on the location of important mineral deposits is developed by the CGS through a land use planning process termed mineral land classification.

As detailed on the SMARA Mineral Land Classification of the Greater Los Angeles Area: Classification of Sand and Gravel Resource Areas, Orange County-Temescal Valley Production-Consumption Region (DOC, 1995), the project site is classified within SMARA-designated Mineral Resource Zone-1. MRZ-1 is defined as area where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. (Refer to **Figure 4.12-1**.) According the Buena Park General Plan EIR, there are no significant mineral resources in the City (RBF Consulting, 2010b). Moreover, according to the Department of Conservation Division of Oil, Gas, & Geothermal Resources Well Finder (DOC, 2019), the only oil and gas well within one mile of the project site is a plugged well approximately 0.6 mile to the southwest (Refer to **Figure 4.12-2**). No oil or gas wells were identified on the project site.

For these reasons the project would have no impact on: (1) the availability of known mineral resources of value to the region or state residents; or (2) a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

Figure 4.12-1
MINERAL RESOURCES



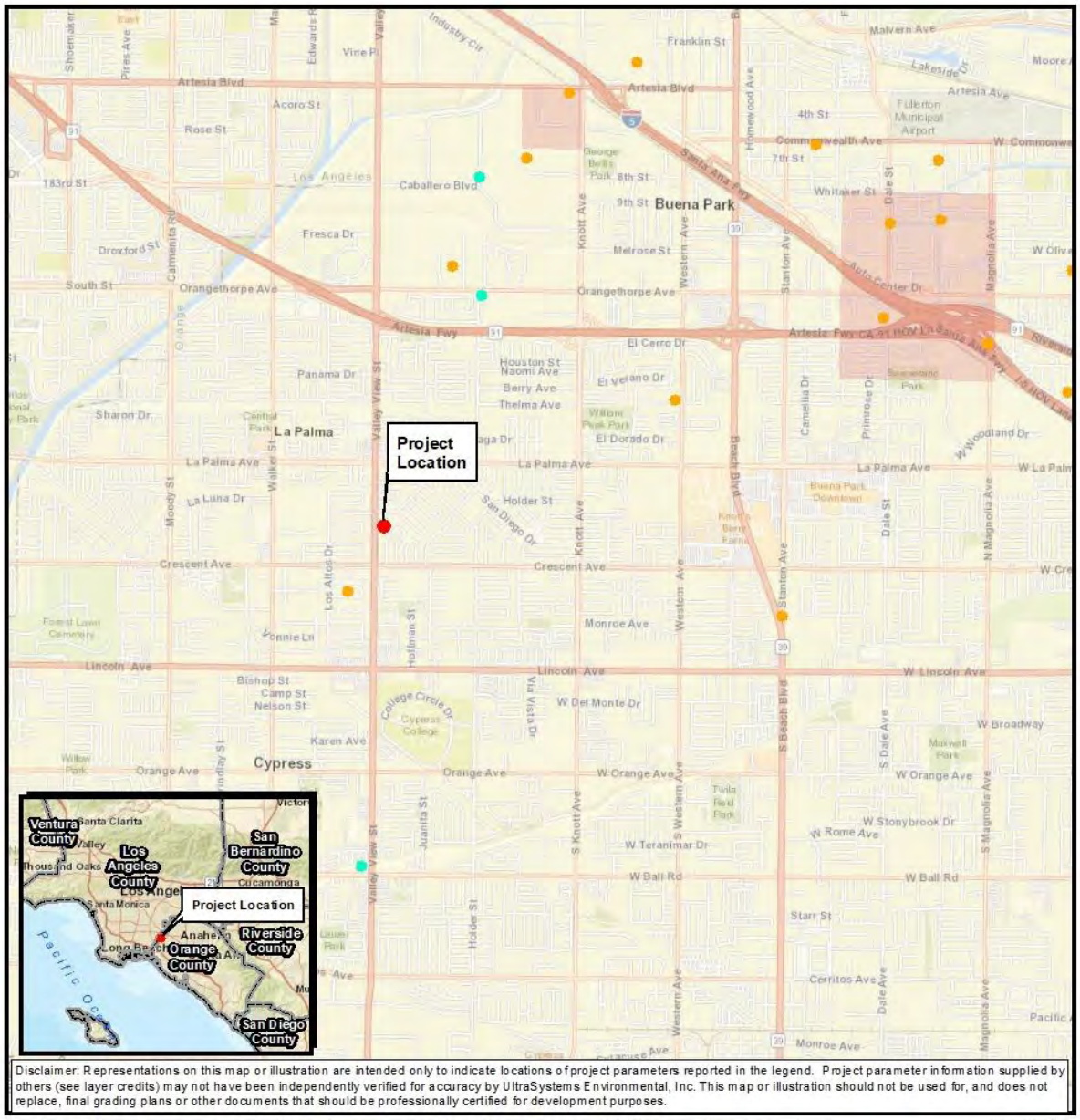
Disclaimer: Illustration provided by the California Department of Conservation, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Source: Miller, Russel V. 1994.

UltraSystems

Orchard View Gardens Senior Apartment Homes
Mineral Land Classification

Figure 4.12-2
OIL AND GAS WELLS



Disclaimer: Representations on this map or illustration are intended only to indicate locations of project parameters reported in the legend. Project parameter information supplied by others (see layer credits) may not have been independently verified for accuracy by UltraSystems Environmental, Inc. This map or illustration should not be used for, and does not replace, final grading plans or other documents that should be professionally certified for development purposes.

Path: \\10.0.0.137\gis\Projects\7037_NCR_Affordable_Housing_Buena Park_IS_MND\MXDs\7037_NCR_Buena_Park_4_8_Oil_Gas_Wells_Fields_2020_01_13.mxd
January 15, 2020

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community; CA Dept. of Conservation, 2018; UltraSystems Environmental, Inc., 2020

Scale: 1:42,000

N

0 1,750 3,500 Feet

0 500 1,000 Meters

Legend

- Project Location

Oil and Gas Well Status

- Buried Well
- Plugged Well
- Oil and Gas Field Boundary

Orchard View Gardens Senior Apartment Homes

Oil and Gas Wells and Fields

UltraSystems

4.13 Noise

Would the project result in:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
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?		**X**		
b) Generation of excessive groundborne vibration or groundborne noise levels?			**X**	
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?				**X**

4.13.1 Characteristics of Sound

Sound is a pressure wave transmitted through the air. It is described in terms of loudness or amplitude (measured in decibels), frequency or pitch (measured in hertz or cycles per second), and duration (measured in seconds or minutes). The decibel (dB) scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound. The pitch of the sound is related to the frequency of the pressure vibration. Because the human ear is not equally sensitive to all frequencies, a special frequency-dependent rating scale is used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against upper and lower frequencies in a manner approximating the sensitivity of the human ear. The scale is based on a reference pressure level of 20 micropascals (zero dBA). The scale ranges from zero (for the average least perceptible sound) to about 130 (for the average human pain level).

4.13.2 Noise Measurement Scales

Several rating scales have been developed to analyze adverse effects of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise on people depends largely upon the total acoustical energy content of the noise, as well as the time of day when the noise occurs. Those that are applicable to this analysis are as follows:

- L_{eq}, the equivalent noise level, is an average of sound level over a defined time period (such as 1 minute, 15 minutes, 1 hour or 24 hours). Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure.

- L_{90} is a noise level that is exceeded 90 percent of the time at a given location; it is often used as a measure of "background" noise.
- L_{max} is the root mean square (RMS) maximum noise level during the measurement interval. This measurement is calculated by taking the RMS of all peak noise levels within the sampling interval. L_{max} is distinct from the peak noise level, which only includes the single highest measurement within a measurement interval.
- CNEL, the Community Noise Equivalent Level, is a 24-hour average L_{eq} with a 4.77-dBA "penalty" added to noise during the hours of 7:00 p.m. to 10:00 p.m., and a 10-dBA penalty added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime (Caltrans, 2013). The logarithmic effect of these additions is that a 60-dBA 24-hour L_{eq} would result in a calculation of 66.7 dBA CNEL.
- L_{dn}, the day-night average noise, is a 24-hour average L_{eq} with an additional 10-dBA "penalty" added to noise that occurs between 10:00 p.m. and 7:00 a.m. The L_{dn} metric yields values within 1 dBA of the CNEL metric. As a matter of practice, L_{dn} and CNEL values are considered to be equivalent and are treated as such in this assessment.

4.13.3 Existing Noise

The City of Buena Park's General Plan lists sensitive receptors as locations where human populations (especially children, senior citizens, and sick persons) are present, and where there is a reasonable expectation of continuous human exposure to noise such as schools, playgrounds, athletic facilities, hospitals, rest homes, rehabilitation centers, long-term care, and mental care facilities, day care centers, single-family dwellings, mobile home parks, churches, and libraries (RBF Consulting, 2010a, p. 8-27). Additionally, the City's Municipal Code has noise controls that are applicable to the proposed project, which require residential acoustical designs to not exceed significant noise exposure. The nearest sensitive receivers to the project are St. Joseph's Episcopal Church on the project site; the single-family residences that surround the project site to the north, south, east, and west; and the Ban Suk Methodist Church to the north of the project site. In most places where residential properties abut the project site there is an intervening 5.25- to 5.75-foot-high concrete block wall. Sensitive receivers are shown in **Figure 4.13-1**. **Table 4.13-1** summarizes information about them.

Figure 4.13-1
SENSITIVE RECEIVERS AND AMBIENT NOISE MONITORING LOCATIONS

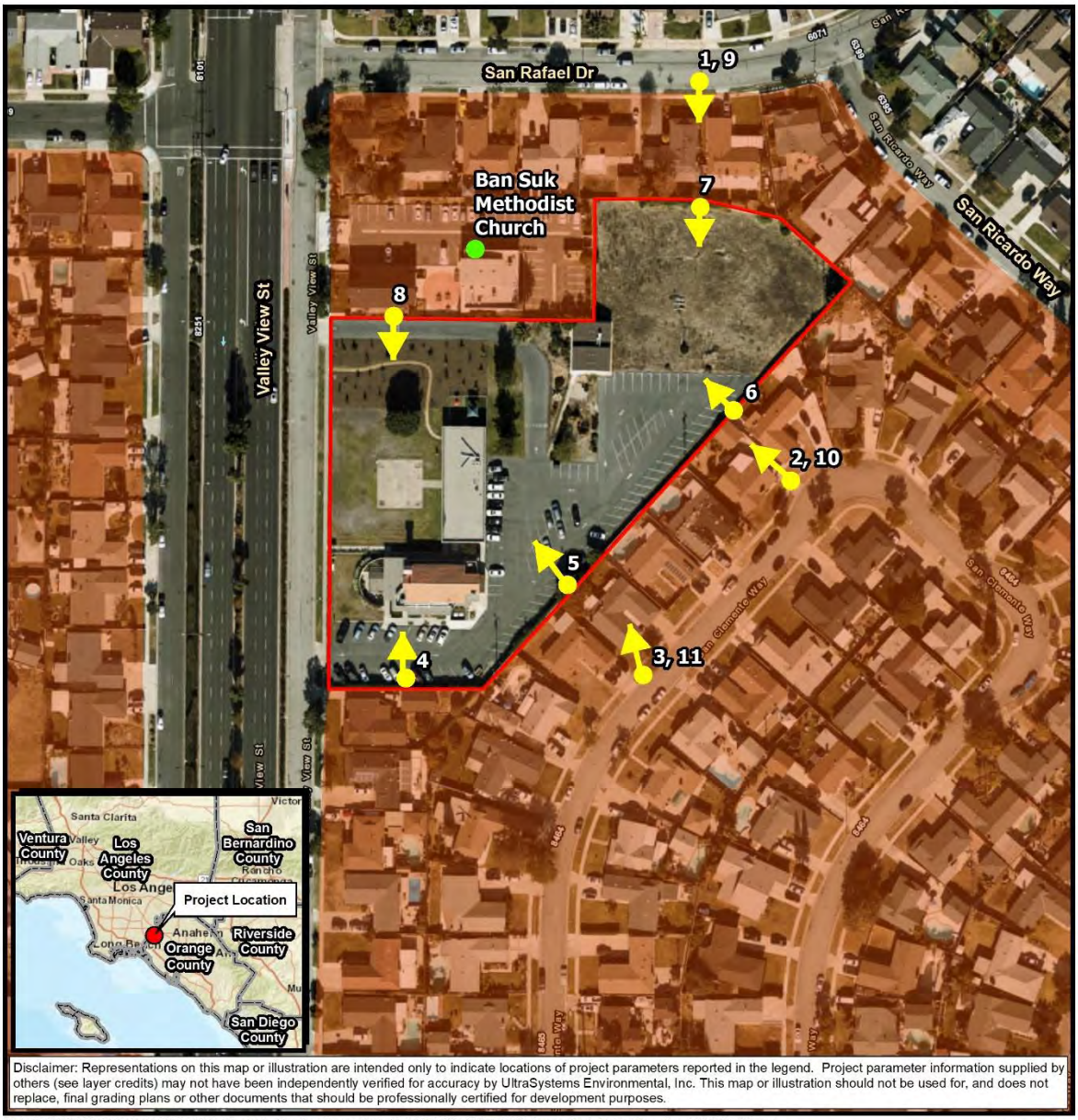


Table 4.13-1
SENSITIVE RECEIVERS IN PROJECT AREA

Description	Location	Distance From Site Boundary (feet)	Nearest Ambient Sampling Point[a]	ID for Noise Impact Analysis[b]
St. Joseph's Episcopal Church	8300 Valley View Street	0	4	
Ban Suk Methodist Church	8246 Valley View Street	20	8	**A**
Single-family Residence (North)	6002 San Rafael Drive	125	8	**B**
Single-family Residence (North)	6042 San Rafael Drive	0	7	**C**
Single-family Residence (South)	8382 Valley View Street	20	4	
Single-family Residence (East)	8427 San Clemente Way	0	6	**D**
Single-family Residence (West)	8317 Valley View Street	200	8	
San Marino Elementary	6215 San Rolando Way	1,050	N/A	
San Marino Park	8700 Hoffman Street	1,800	N/A	
Assisted Living	6351 San Ruben Circle	2,360	N/A	

[a]See **Figure 4.13-1** for locations of ambient noise sampling points.
[b]See **Table 4.13-8**.

The predominant source of noise in the project area is traffic on local surface streets. The City's General Plan Noise Element reports results of traffic noise modeling of 24-hour average noise levels (as dBA CNEL) at 100 feet from the centerlines of roadway segments throughout the city in 2010 and in the buildout year of 2035. The project is along the modeled road segment of Valley View Street, between Crescent Avenue and La Palma Avenue. Modeled noise levels are shown in **Table 4.13-2**.

Table 4.13-2
MODELED 24-HOUR AVERAGE NOISE LEVELS IN PROJECT AREA

Year	Valley View Street from Crescent Avenue to La Palma Avenue				
	ADT	dBA @100 Feet from Roadway Center	Distance from Roadway Centerline to: (Feet)		
			60 dBA CNEL Noise Contour	65 dBA CNEL Noise Contour	70 dBA CNEL Noise Contour
2010	40,000	70.2	1,245	394	125
2035	52,408	71.4	1,630	515	163

ADT= average daily trips; dBA= A-weighted decibels; CNEL= community noise equivalent level.
Source: RBF Consulting 2010a, City of Buena Park Noise Element, Table N-4, p. 8-10 and Table N-5, p. 8-15.

On January 24, 2020, 15-minute ambient noise level samples were obtained at 11 locations in the general area of the project, which are also shown in **Figure 4.131**. (See **Appendix G**.) Measurements were made between 8:58 a.m. and 2:56 p.m. As shown in **Table 4.13-3,** average short-term ambient noise levels (L_{eq}) ranged from 44.7 to 64.6 dBA L_{eq}. The highest average noise level (64.6 dBA) was along San Clemente Way, a residential thoroughfare. All monitored noise levels were within the range considered typical for the nearby land uses.

Table 4.13-3
AMBIENT NOISE MEASUREMENT RESULTS

Point	Data Set	Sampling Time	Address	Sound Level (dBA)			Notes
				L_{eq}	L_{max}	L_{90}	
1	S137	0859-0914	6062 San Rafael Drive	53.9	69.4	43.5	In front of single-family residence north of project site.
2	S138	0921-0936	8427 San Clemente Way	48.8	65.4	41.2	In front of single-family residence southeast of project site.
3	S139	0941-0956	8443 San Clemente Way	64.6	85.1	41.7	In front of single-family residence southeast of project site.
4	S140	1047-1102	8300 Valley View Street	55.9	72.6	45.0	Inside project boundary along south side project site.
5	S141	1109-1124	8300 Valley View Street	49.6	59.1	43.4	Inside project boundary, behind single-family residence southeast of project site.
6	S142	1133-1148	8300 Valley View Street	44.7	52.5	40.4	Inside project boundary, behind single-family residence southeast of project site.
7	S143	1152-1207	8300 Valley View Street	46.5	58.1	41.8	Inside project boundary, behind single-family residence north of project site.
8	S144	1213-1228	8246 Valley View Street	60.5	76.7	50.0	Inside project boundary, adjacent to Ban Suk Church north of project site.
9	S145	1403-1418	6062 San Rafael Drive	54.9	66.4	47.6	In front of single-family residence north of project site.
10	S146	1425-1440	8427 San Clemente Way	49.1	60.4	43.0	In front of single-family residence southeast of project site.
11	S147	1442-1457	8443 San Clemente Way	50.3	64.7	45.3	In front of single-family residence southeast of project site.

4.13.4 Regulatory Setting

State of California

The California Department of Health Services (DHS) Office of Noise Control has studied the correlation of noise levels with effects on various land uses. (The Office of Noise Control no longer exists). The most current guidelines prepared by the state noise officer are contained in the "General Plan Guidelines" issued by the Governor's Office of Planning and Research in 2003 and reissued in

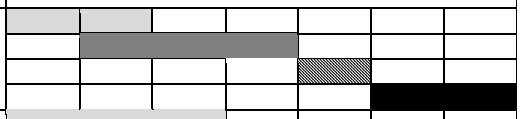
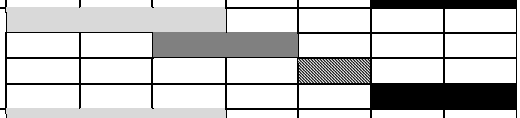
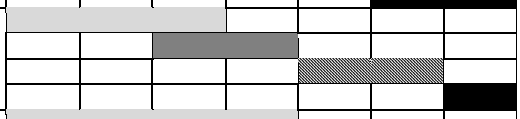
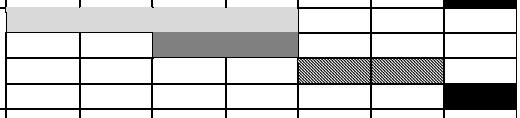
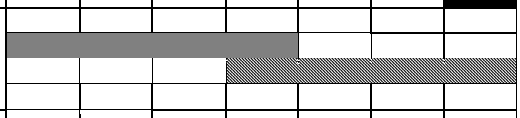
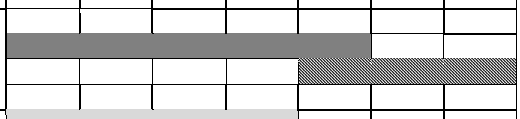
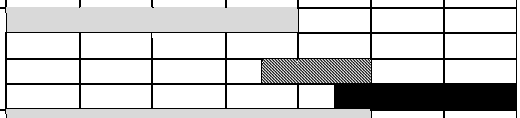
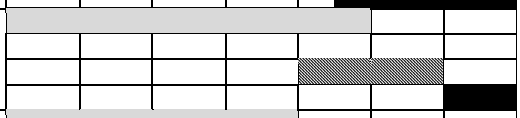
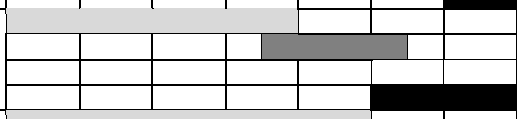
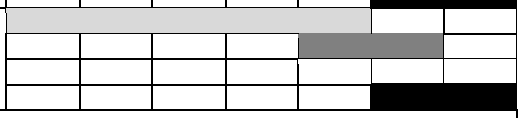
2017 (Governor's Office of Planning and Research, 2017). These guidelines establish four categories for judging the severity of noise intrusion on specified land uses:

- **Normally Acceptable**: Is generally acceptable, with no mitigation necessary.
- **Conditionally Acceptable**: May require some mitigation, as established through a noise study.
- **Normally Unacceptable**: Requires substantial mitigation.
- **Clearly Unacceptable**: Probably cannot be mitigated to a less-than-significant level.

The types of land uses addressed by the state standards, and the acceptable noise categories for each, are presented in **Table 4.13-4**. There is some overlap between categories, which indicates that some judgment is required in determining the applicability of the numbers in a given situation.

Title 24 of the California Code of Regulations requires performing acoustical studies before constructing dwelling units in areas that exceed 60 dBA L_{dn}. Given the General Plan modeling results shown in **Table 4.13-2**, the entire project site is within a 60 dBA CNEL contour. Most of the site is already within the 65 dBA CNEL, and all will be by 2035. In addition, the California Noise Insulation Standards identify an interior noise standard of 45 dBA CNEL for new multi-family residential units. Local governments frequently extend this requirement to single-family housing.

Table 4.13-4
CALIFORNIA LAND USE COMPATIBILITY FOR COMMUNITY NOISE SOURCES

Land Use Category	Noise Exposure (dBA, CNEL)
	55 60 65 70 75 80
Residential – Low-Density Single-Family, Duplex, Mobile Homes	
Residential – Multiple Family	
Transient Lodging – Motel, Hotels	
Schools, Libraries, Churches, Hospitals, Nursing Homes	
Auditoriums, Concert Halls, Amphitheaters	
Sports Arena, Outdoor Spectator Sports	
Playgrounds, Neighborhood Parks	
Golf Courses, Riding Stables, Water Recreation, Cemeteries	
Office Buildings, Business Commercial and Professional	
Industrial, Manufacturing, Utilities, Agriculture	

	Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.
	Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply system or air conditioning will normally suffice.
	Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
	Clearly Unacceptable: New construction or development should generally not be undertaken.

Source: Governor's Office of Planning and Research, 2017.

City of Buena Park

General Plan Noise Element

The Noise Element of the City of Buena Park General Plan (RBF Consulting, 2010a) identifies sources of noise in the City and provides objectives and policies that ensure that noise from various sources would not create an unacceptable noise environment. **Table 4.13-5** shows the City's guidelines for interior and exterior noise exposure, by land use.

Table 4.13-5
CITY OF BUENA PARK GENERAL PLAN INTERIOR AND EXTERIOR NOISE STANDARDS

Land Use	Noise Level (dBA) at Property Line	Time Period
Exterior Noise Limits		
Residential	55	7:00 a.m. – 10:00 p.m.
	50	10:00 p.m. – 7:00 a.m.
Interior Noise Limits		
Residential	50	7:00 a.m. – 10:00 p.m.
	45	10:00 p.m. – 7:00 a.m.

Source: RBF Consulting, 2010a, p. 8-7.

For a multi-family housing development such as the proposed project, exterior noise levels of 65 dBA CNEL or less are desirable. As mentioned in the General Plan, the City sets forth requirements for the insulation of multiple-family residential dwelling units from excessive and potentially harmful noise. Whenever multiple-family residential dwelling units are proposed in areas with excessive noise exposure, the developer must incorporate construction features into the building's design that reduce interior noise levels to 45 dBA CNEL (RBF Consulting 2010a, p. 8-5).

The General Plan Noise Element has the following applicable goals and associated policies for addressing noise issues in the community (RBF Consulting, 2010a, p. 8-29):

Goal N-1: Appropriate Federal, State, and City Standards, guidelines, and ordinances for noise control implemented and enforced throughout the City.

Policy N-1.3 Adhere to the City's Municipal Code Standards and planning guidelines that include noise control for the interior space of residential developments.

Policy N-1.6 Conform to the noise attenuation standards sets forth in the Airport Environs Land Use Plan (AELUP) for residential, commercial, and industrial development within the Fullerton Municipal Airport and Los Alamitos Joint Forces Training Center planning areas.

Goal N-2: Minimized noise levels from construction and maintenance equipment, vehicles, and activities.

Policy N-2.1: Regulate construction activities to ensure all noise associated with construction activities [complies] with the City's Noise Ordinance.

Policy N-2.2: Employ construction noise reduction methods to the maximum extent feasible. These measures may include, but [are] not limited to, shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources,

maximizing the distance between construction equipment staging areas and occupied sensitive receptor areas, and use of electric air compressors and similar power tools, rather than diesel equipment.

Policy N-2.3: Require municipal vehicles and noise-generating mechanical equipment purchased or used by the City to comply with noise standards specified in the City's Municipal Code, or other applicable codes.

Policy N-2.5: Ensure acceptable noise levels are maintained near schools, hospitals, convalescent homes, churches, and other noise sensitive areas.

Goal N-3: Consideration of noise [effects] in the land use planning process.

Policy N-3.1: Fully integrate noise considerations into land use planning decisions to prevent new noise/land use conflicts.

Policy N-3.2: Consider the compatibility of proposed land uses with the noise environment when preparing, revising, or reviewing development proposals.

Policy N-3.3: Adhere to the City's Municipal Code Standards and planning guidelines that include noise control for the interior space of new residential developments within noise impacted areas (noise control practices include installing thick glass windows, restricting the hours of construction, double glazing, façade treatment, installing and maintaining mufflers, erecting noise barriers, etc.).

Policy N-3.4: Permit only those new development or redevelopment projects that have incorporated appropriate mitigation measures, so that standards contained in the Noise Element or adopted ordinance are met.

Policy N-3.5: Encourage proper site planning and architecture to reduce noise impacts.

Policy N-3.6: Discourage the development of sensitive uses in areas in excess of 65 dBA CNEL without appropriate mitigation.

Policy N-3.7: Require all residential units be attenuated to comply with the City's Noise Ordinance.

Policy N-3.9: Incorporate noise reduction features for items such as but not limited to parking and loading areas, ingress/egress point, HVAC units, and refuse collection areas, during site planning to mitigate anticipated noise impacts on affected noise sensitive land uses.

Policy N-3.14: Conform to the noise attenuation standards set forth in the Airport Environs Land Use Plan (AELUP) for residential, commercial, and industrial development, within the Orange County Airport Land Use Commission's planning area boundaries for the Fullerton Municipal Airport and Los Alamitos Joint Forces Training Base.

Goal N-4: Ambient noise conditions in sensitive land use are maintained and/or improved.

Policy N-4.1: Identify and reduce or eliminate unnecessary noise near noise sensitive areas (such as parks, residential areas, hospitals, libraries, convalescent homes, etc.) to meet established regulations outlined in the City's Municipal Code.

Policy N-4.2: Encourage the use of noise absorbing materials in existing and new development to reduce interior noise impacts to sensitive land uses.

To the extent that the foregoing applies to the proposed project, the project design and operational characteristics are compatible with the Noise Element's goal, objectives and policies.

City of Buena Park Municipal Code

The City of Buena Park's regulations with respect to noise are included in Municipal Code Chapter 8.28 (Noise) and 19.444 (Development Standards-Environmental Effect), Article X (Noise Control).[27] The regulations include regulations for noise levels within multi-family residential places as shown below.

Chapter 8.28 of the Municipal Code states the following:

A. It is unlawful for any person to make or continue to make, or cause to be made or continued, within the city, any loud or unnecessary noise or any noise which may reasonably be anticipated to annoy, disturb, injure or endanger the comfort, repose, peace, health or safety of others, whether due to volume or duration, or both.

B. Without limitation as to the types of noise-producing acts which are in violation of this section, noise produced by the following acts are declared to be loud, disturbing and unnecessary noise in violation of this section:[28]

1. Radios and Other Amplified Music. Use or operation of, or permitting the use or operation of, any radio, CD player, television set, musical instrument, phonograph or other machine or device designed or intended to reproduce sound in such manner as to disturb the peace, quiet and comfort of residential inhabitants or at any time with louder volume than is necessary for convenient hearing by the person or persons who are in the room, vehicle, or chamber in which such machine or device is operating and who are voluntary listeners thereto. The operating of any such machine or device between the hours of ten p.m. and six a.m. in such a manner as to be plainly audible at a distance of fifty feet from the residential property line, or vehicle, in which it is located shall be prima facie evidence of a violation of this section;

2. Loudspeakers and/or Amplifiers Upon Public Streets. Use or operation of, or permitting the use or operation of, any radio, CD player, television set, musical instrument, phonograph, loudspeaker, sound amplifier or other machine or device designed or intended to produce or reproduce sound which is audible upon the public streets for the purpose of commercial advertising or attracting the attention of the public to any thing or activity, or to any building or structure;

3. Yelling, Shouting, Etc. Yelling, shouting, whistling or singing on the public streets between the hours of ten p.m. and six a.m., or at any time or place so as to annoy or disturb the quiet, comfort or repose of persons in any office or in any dwelling or residence, or of any persons in the vicinity;

4a. Construction or Repair Activities. The performance of any construction or repair work of any kind upon, or excavating for, any building or structure, where any such work entails the use of any air compressor, jackhammer, power-driven drill, riveting machine, excavator, hand hammer on steel or iron, or any other machine, tool, device or equipment which makes loud noises to the disturbance of persons occupying sleeping quarters in a

27 http://qcode.us/codes/buenapark/
28 Buena Park Municipal Code § 8.28.040.

dwelling, hotel, or apartment or other place of residence. The above use of machinery or equipment that produces such unnecessary noise shall be prohibited on any Sunday or any other day between the hours of eight p.m. and seven a.m. The provisions of this section do not apply to any person who performs any construction, repair or excavation pursuant to the express written permission of the city engineer. Upon receipt of an application in writing therefor, stating the reasons for the request and the facts upon which such reasons are based, the city engineer may grant such permission if the activity is not otherwise prohibited by this code and he or she finds that:

a. The work proposed to be done is in the public interest, or

b. Hardship, or injustice or unreasonable delay would result from the interruption thereof during the hours and days specified above, or

c. The building or structure involved is devoted or intended to be devoted to a use immediately incidental to the public defense. Any person dissatisfied with the decision of the city engineer may forthwith appeal to the city manager by filing a written request for a hearing within seven calendar days of the city engineer's decision;

4b. The provisions of this subsection do not apply to the construction, repair, or excavation during prohibited hours as may be necessary for the preservation of life or property when such necessity arises during such hours as the offices of the city are closed or where such necessity requires immediate action prior to the time at which it would be possible to obtain required permits; provided, that the persons doing such construction, repair or excavation obtain a permit therefor within one day after the office of the city engineer is first opened subsequent to the undertaking of such construction, repair or excavation;

4c. The provisions of this subsection do not apply to construction, repair, or excavation by a public utility which is subject to the jurisdiction of the public utilities commission, provided such work is necessary for the immediate preservation of the public health, safety or welfare and where such necessity makes it necessary to construct, repair or excavate during the prohibited hours.

4d. The provisions of this subsection do not apply in any area of the city which is classified by the city's zoning ordinance as a manufacturing zone and which is not less than five hundred feet from any residential zone.

5. Rubbish Collection. The performance of any rubbish collection utilizing any mechanical equipment in any residential zone or within five hundred feet of any residential zone between the hours of eight p.m. and six a.m.;

6. Use of weedblowers, powered lawnmowers and/or other powered landscape maintenance equipment between the hours of eight p.m. to eight a.m. on any day.

C. The provisions of this section are intended to supplement all other provisions of this chapter. Nothing in Section 8.28.010, 8.28.020 or 8.28.030 shall be deemed to preempt or preclude application of any of the provisions of this section. (Ord. 1369, 1998)

Chapter 19.444 of the Municipal Code states the following:

In addition to the requirements of Title 8,[29] the following noise standards shall be met where applicable:

A. Residential Acoustical Design

1. For all dwelling and group quarters, the development shall be designed to achieve:

   a. Within each main building, a community noise equivalent level (CNEL) not exceeding 45 decibels;

   b. In outdoor areas, a community noise equivalent level (CNEL) not exceeding 65 decibels, except that where it is not reasonably possible to achieve this objective, the development shall be designed to provide the lowest noise level reasonably possible within private open areas and/or common usable open areas of at least one hundred square feet per unit, with access to such area available to the residents of each unit.

2. Acoustical design and analysis shall be based upon the projected noise contours as shown in the noise element of the General Plan. For all new residential developments, an acoustical analysis shall be submitted to the City as follows:

   a. For any residential development within a 60-dBA CNEL contour, an analysis by a professional architect, engineer, or building designer shall demonstrate that the required noise levels will be achieved.

   b. For any residential development within a 65-dBA CNEL contour, or within either the moderate noise impact area or the significant noise impact area of the Fullerton Municipal Airport as shown in the noise element of the Buena Park General Plan, an analysis by a professional mechanical or acoustical engineer shall demonstrate that the required noise levels will be achieved. Prior to issuing a certificate of occupancy, the Building Official may require tests by a qualified acoustical technician to confirm that the noise reduction achieved is sufficient to meet the requirements of this section.

B. Air Conditioning Equipment. Exterior air conditioning equipment, other than self-contained window-mounted units in single-family dwellings, shall have a sound rating number (SRN) no greater than 8.2 decibels, in accordance with ARI (Air Conditioning and Refrigeration Institute) Standard 270, or the equivalent.

4.13.5 Significance Thresholds

This analysis incorporated is based upon the noise thresholds prescribed in Appendix G of the CEQA Guidelines, as amended (AEP, 2018), and shown as checklist questions a) through c) at the beginning of this section. There are normally two criteria for judging noise impacts. First, noise levels generated by the proposed project must comply with all relevant federal, state and local standards and regulations. The second measure of impact used in this analysis is the significant increase in noise levels above existing ambient noise levels as a result of the introduction of a new noise source. An increase in noise level due to a new noise source has a potential to adversely impact people.

29 Title 8 (Health, Safety and Welfare) of the City of Buena Park Municipal Code.

Based on the applicable noise regulations stated above, the proposed project would have a significant noise impact if it would:

- Conflict with applicable noise restrictions or standards imposed by regulatory agencies. Note that the City of Buena Park Municipal Code does not include specific noise level limits for construction activities.

- Cause the **permanent** ambient noise level at the property line of an affected land use to increase by 5 dBA CNEL or more.

- Contribute to a significant cumulative noise impact.

4.13.6 Impact Analysis

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

Less than Significant Impact with Mitigation Incorporated

Noise impacts associated with housing projects include short-term and long-term impacts. Construction activities, especially heavy equipment operation, would create noise effects on and adjacent to the construction site. Long-term noise impacts include project-generated onsite and offsite operational noise sources. Onsite (stationary) noise sources from the apartment homes would include operation of mechanical equipment such as air conditioners, landscape and building maintenance. Offsite noise would be attributable to project-induced traffic, which would cause an incremental increase in noise levels within and near the project vicinity.

Short-Term Construction Noise

The construction of the proposed project may generate temporary increases in ambient noise levels that exceed the thresholds of significance for this analysis. Noise impacts from construction activities are a function of the noise generated by the operation of construction equipment and onroad delivery and worker commuter vehicles, the location of equipment, and the timing and duration of the noise-generating activities.

For the purpose of this analysis, it was estimated that the proposed project would be built in six phases,[30] which are listed in **Table 4.13-6**. Construction is anticipated to run from early January 2022 to early January 2023.

The types and numbers of pieces of equipment to be deployed during each construction phase were determined as part of the air quality and greenhouse gas emissions analyses for this project.[31] For each equipment type, the table shows an average noise emission level (in dB at 50 feet, unless otherwise specified) and a "usage factor," which is an estimated fraction of operating time that the

30 A seventh phase, indoor painting, was not included in the noise analysis because of its low probability of adverse noise impact.

31 See Section 4.3 and Section 4.8.

equipment would be producing noise at the stated level. Equipment characteristics for the six phases are shown in **Table 4.13.6**.

Table 4.13-6
CONSTRUCTION EQUIPMENT CHARACTERISTICS

Construction Phase	Equipment Type	Horse-power	No. of Pieces	Usage Factor	dBA @ 50 Feet
1 - Demolition	Excavators	158	2	0.4	80
	Other Construction Equipment[a]	172	1	0.4	90
	Rubber-Tired Loaders	255	1	0.4	79
	Tractor/Loader/Backhoe	97	2	0.37	85
2 – Offsite Improvements, Option 1	Cement and Mortar Mixers	9	1	0.4	85
	Pavers	130	1	0.5	77
	Rollers	80	1	0.1	74
	Tractor/Loader/Backhoe	97	1	0.37	85
3 – Offsite Improvements, Option 3	Cement and Mortar Mixers	9	1	0.4	85
	Cranes	231	1	0.08	83
	Pavers	130	1	0.5	77
	Rollers	80	1	0.1	74
	Tractor/Loader/Backhoe	97	1	0.37	85
4- Site Preparation	Excavators	158	1	0.4	80
	Paving Equipment	132	1	0.5	85
	Rubber-Tired Loaders	255	2	0.4	79
	Tractor/Loader/Backhoe	97	3	0.37	85
5 - Grading	Graders	187	1	0.41	85
	Rubber-Tired Loaders	255	1	0.4	79
	Scrapers	367	2	0.14	88
	Tractor/Loader/Backhoe	97	3	0.37	85
6 – Building Construction	Forklifts	89	1	0.3	67
	Skid Steer Loaders	65	1	0.4	80
	Tractor/Loader/Backhoe	97	1	0.37	85

Sources:
Knauer et al., 2006 unless otherwise noted.
Crane, cement and mortar mixer, and roller noise emissions data from County of Ventura, 2010.
Usage factors for cranes, cement and mortar mixers, pavers, and rollers from County of Ventura, 2010.
Forklift data and trencher usage factor from Port of Long Beach, 2009.
Skid steer loader noise data from Nugent, 2015.
[a]Assumed to be asphalt grinder; data from Devcon Construction, 2018.

Using calculation methods published by the Federal Transit Administration (FTA, 2018), UltraSystems estimated the average hourly exposures at four sensitive receivers: a church and three single-family houses. The distances used for the calculation were measured from the receivers to the approximate center of activity of each construction phase, since that would be the average location of construction equipment most of the time. **Table 4.13-7** shows the relationships between the receivers, the noise sources, and the nearest ambient measurement points.

Table 4.13-7
NOISE ANALYTICAL FRAMEWORK

Receiver	Description	Construction Phase(s)[a]	Nearest Ambient Sampling Point(s)
A	Single-family residence	Offsite Option 1, Offsite Option 2B	8
B	Single-family residence	Building Construction-2	7
C	Ban Suk Methodist Church	Demolition, Offsite Option 3, Grading-1, Building Construction-1	7, 8
D	Single-family residence	Site Preparation, Grading-2	6

[a]See **Table 4.13-6**. The suffix "-1" or "-2" indicates that the construction activity in the stated phase occurs in two widely separated portions of the project site.

A 5.25-foot to 5.75-foot-high concrete wall runs along several portions of the site's boundary. For all the construction phases except for the offsite improvements, this wall lies between construction equipment and the nearest sensitive receivers. The Fresnel number method (Foss, 1978) was used to estimate the walls' noise attenuation. The Fresnel number (N_o) is a dimensionless parameter calculated from the following formula:

$$N_O = \pm 2f\delta_o/c$$

where

f = Frequency of the sound radiated by the source (hertz).

δ_o = Path length difference determined from site geometry (feet).

c = Speed of sound (feet/second).

N_o is positive when the line of sight between the source and receiver is lower than the top of the barrier. It was assumed that f = 1,000 hertz (representative of heavy construction equipment)[32] and that c = 1115.49 feet per second. Using a graph[33] of attenuation as a function of N_o, it was determined that the existing walls would provide between 8 and 15 dB of attenuation, depending on site geometry. Noise exposures due to construction equipment in all the phases except site improvements were reduced by the attenuation values calculated for each combination of noise source and receiver.

Table 4.13-8 summarizes the estimated construction-related short--term noise exposures at the nearest sensitive receiver for each construction phase. Short-term noise exposures due to construction activities would be about 63 to 81 dBA -L_{eq}. These relatively high values are due mainly to the fact that the sensitive receivers are quite close to the construction activity. [34]

32 Noise frequency spectra for typical bulldozers and front-end loaders are presented in Vardhan et al., 2005.

33 Propagation of Outdoor Sound - Partial Barriers. Available at https://www.engineeringtoolbox.com/outdoor-sound-partial-barriers-d_65.html. Verified June 13, 2019.

34 Both offsite improvement options analyzed here would occur during the demolition phase. The combined exposures from demolition and offsite improvements would be higher than the values reported here. Combined emissions were not analyzed in detail because it is already evident that the increase threshold of 70 dBA would be exceeded.

Table 4.13-8
ESTIMATED ONE-HOUR CONSTRUCTION NOISE EXPOSURES AT NEAREST SENSITIVE RECEIVERS

Phase	Receiver	Distance (feet)	Ambient (dBA L_{eq})	Construction (dBA L_{eq})[a]	New Total (dBA L_{eq})	Increase (dBA L_{eq})
Demolition	C	85	57.7	75.1	75.2	17.5
Offsite Improvements, Option 1	A	85	60.5	79.7	79.8	19.3
Offsite Improvements, Option 3	C	72	57.7	81.4	81.4	23.7
Site Preparation	D	118	44.7	68.4	58.4	23.7
Grading-1	C	77	57.7	76.6	76.7	19
Grading-2	D	61	44.7	74.7	74.7	30
Building Construction-1	C	32	57.7	73.9	74.0	16.3
Building Construction-2	B	81	46.5	62.8	62.9	16.4

[a]Walls taken into account for all phases except for offsite improvements.

As noted in Section 4.13.5, the City has no noise exposure limits for construction. In addition, construction outside of 8:00 p.m. to 7:00 a.m. is not subject to Municipal Code §8.28.44**.** However, the unmitigated noise increase due to construction would exceed 5 dBA in all construction phases, for all sensitive receivers analyzed. This increase would not be permanent, but nevertheless would be significant if unmitigated. be significant. Construction noises would be less than significant after implementation of the following mitigation measures, which are based upon the EIR for the City of Buena Park (RBF Consulting, 2010b, pp. 5.6-26 and 5.6-27):

MM N-1 Project applicants shall require by contract specifications that the following construction best management practices (BMPs) be implemented by contractors to reduce construction noise levels:

- Ensure that construction equipment is properly muffled according to industry standards and be in good working condition.
- Place noise-generating construction equipment and locate construction staging areas away from sensitive uses, where feasible.
- Schedule high noise-producing activities between the hours of 8:00 AM and 7:00 PM to minimize disruption on sensitive uses.
- Implement noise attenuation measures which may include, but are not limited to, temporary noise barriers or noise blankets around stationary construction noise sources.
- Use electric air compressors and similar power tools rather than diesel equipment, where feasible.

- Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than 30 minutes.
- Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted at all construction entrances to allow for surrounding owners and residents to contact the job superintendent. If the City or the job superintendent receives a complaint, the superintendent shall investigate, take appropriate corrective action, and report the action taken to the reporting party. Contract specifications shall be included in the proposed project construction documents, which shall be reviewed by the City prior to issuance of a grading permit.

MM N-2 Project applicants shall require by contract specifications that heavily loaded trucks used during construction would be routed away from residential streets to the extent feasible. Contract specifications shall be included in the proposed project construction documents, which shall be reviewed by the City prior to issuance of a grading permit.

Level of Significance After Mitigation

With implementation of **MM N-1** and **MM N-2** above, the proposed project would result in less than significant impacts to sensitive receivers.

Operational Noise

Mobile Sources

As detailed in the City's General Plan EIR, existing and future noise levels have been calculated for various roadway segments within the City of Buena Park. Twenty-five of the roadway segments modeled (along Valley View Street, Knott Avenue, Western Avenue, Beach Boulevard, Crescent Avenue, La Palma Avenue, Orangethorpe Avenue, and La Mirada Boulevard) would generate noise levels above 70 dBA CNEL at 100 feet from centerline. This includes the street that the project site is located, on Valley View Street between its intersections of Crescent Avenue and La Palma Avenue. Given current traffic conditions, a small portion of the proposed housing would be exposed to more than 70 dBA CNEL. (See **Table 4.13-2**.) With implementation of the proposed General Plan Update, a relatively small number of additional housing units on the project site would experience noise levels that would exceed the City's Noise and Land Use Criteria Compatibility Criteria due to the increase in roadway noise. With adherence to the provisions of Municipal Code § 19.444, the effects of roadway noise on the project would be less than significant, and no mitigation would be needed.

According to the traffic impact memorandum prepared for this project (Fehr & Peers, 2020; see **Appendix H**), the project would generate a maximum of 244 new trips per day in the operational phase. The current average daily traffic on Valley View Street is about 40,000 vehicles per day. The increase due to the project would be about 0.6%. Given the logarithmic nature of the decibel, traffic volume needs to be doubled in order for the noise level to increase by 3 dBA (ICF Jones & Stokes, 2009), the minimum level perceived by the average human ear. A doubling is equivalent to a 100% increase. Because the maximum increase in traffic in any road segment would be far below 100%, the increase in roadway noise experienced at sensitive receivers would not be perceptible to the human ear. Therefore, roadway noise associated with project operation would not expose a land use

to noise levels that are considered incompatible with or in excess of adopted standards, and impacts would be less than significant.

Onsite

Onsite noise sources from the proposed housing project would include operation of mechanical equipment such as air conditioners, lawnmowers, leaf blowers, and building maintenance equipment; and motor vehicles accessing, driving on, and exiting the parking lot. Noise levels associated with operation of the project are expected to be comparable to those of nearby residential areas. Noise from onsite sources would be less than significant.

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

Less than Significant Impact

Vibration is sound radiated through the ground. Vibration can result from a source (e.g., subway operations, vehicles, machinery equipment, etc.) causing the adjacent ground to move, thereby creating vibration waves that propagate through the soil to the foundations of nearby buildings. This effect is referred to as groundborne vibration. The peak particle velocity (PPV) or the RMS velocity is usually used to describe vibration levels. PPV is defined as the maximum instantaneous peak of the vibration level, while RMS is defined as the square root of the average of the squared amplitude of the level. PPV is typically used for evaluating potential building damage, while RMS velocity in dB is typically more suitable for evaluating human response.

The background vibration velocity level in residential areas is usually around 50 vibration decibels (VdB). The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for most people. Most perceptible indoor vibration is caused by sources within buildings such as operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible. The range of interest is from approximately 50 VdB to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings.

Construction Vibration

Construction activities for the project have the potential to generate low levels of groundborne vibration. The operation of construction equipment generates vibrations that propagate though the ground and diminish in intensity with distance from the source. Vibration impacts can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage of buildings at the highest levels. The construction activities associated with the project could have an adverse impact on both sensitive structures (i.e., building damage) and populations (i.e., annoyance).

Pile drivers or other major vibration sources will not be used for construction of the Orchard View Gardens Senior Apartment Homes project. The question is whether the equipment that will be deployed will have significant vibration impacts. The FTA (2018) has published standard vibration levels for construction equipment operations, at a distance of 25 feet. The construction-related vibration levels for the nearest sensitive receivers for major construction phases are shown in

Table 4.13-9. These calculations were based on the distances from the construction activity to the closest sensitive receivers.

Table 4.13-9
VIBRATION LEVELS OF TYPICAL CONSTRUCTION EQUIPMENT

Equipment	Demolition (85 feet)		Offsite Improvements (60 feet)		Site Preparation (118 feet)		Grading-2 (61 feet)	
	RMS (in/sec)	VdB	RMS (in/sec)	VdB	RMS (in/sec)	VdB	RMS (in/sec)	VdB
Loaded trucks	0.0121	70.1	0.0204	74.6	0.0074	65.8	0.0199	74.4
Jackhammer	0.0056	63.1	0.0094	67.6	0.0034	58.8	0.0092	67.4
Small bulldozer	0.0005	42.1	0.0008	46.6	0.0003	37.8	0.0008	46.4
Large bulldozer	0.0142	71.1	0.0239	75.6	0.0087	66.8	0.0234	75.4

As shown in **Table 4.13-7**, the PPV of construction equipment at the nearest sensitive receiver (61 feet) is at most 0.0199 inch per second, which is less than the FTA damage threshold of 0.12 inch per second PPV for fragile historic buildings. The maximum VdB are 75.4 VdB, which are below the FTA threshold for human annoyance of 80 VdB. Unmitigated vibration impacts would therefore be less than significant.

Operational Vibration

The project involves the operation of residential uses and would not involve the use of stationary equipment that would result in high vibration levels, which are more typical for large manufacturing and industrial projects. Groundborne vibrations at the project site and immediate vicinity currently result from heavy-duty vehicular travel (e.g., refuse trucks and transit buses) on the nearby local roadways, and the project would not result in a substantive increase of these heavy-duty vehicles on the public roadways. Therefore, vibration impacts associated with operation of the project would be less than significant.

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

No Impact

The nearest active public airport is the Joint Forces Training Base (JFTB) Los Alamitos, located approximately 3.0 miles southwest of the project site and Fullerton Municipal Airport, the only municipal airport in Orange County, located approximately 3.0 miles northeast of the project. Further, the project is located outside of the 60 dBA CNEL noise contour for Joint Forces Training Base. Thus, no impact related to the exposure of people residing or working in the proposed project area to excessive airport-related noise levels is anticipated.

4.14 Population and Housing

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
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)?			X	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

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

Less than Significant Impact

The project proposes the construction of a development consisting of 66 residential units (65 for senior residents and one manager's unit), including a 3,000-square-foot community center. The Project proposes to subdivide the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres. The newly-created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with a primary residential apartment building and nine single story casitas accommodating 66 residential units and a 3,000 square foot community center. The proposed project would provide 65 units affordable to households earning less than 60 percent of the Area Median Income (AMI), along with one manager's unit, for a total of 66 units. Eight of the units would be for permanent supportive housing to house formerly homeless seniors.

A General Plan amendment to High Density Residential and Zone change to Medium-Density Multifamily Residential (RM-20) is required to accommodate the proposed project. The project would also necessitate a Tentative Parcel Map to divide the one parcel into two.

The proposed project would construct 66 residential developments consisting of 62 one-bedroom apartments and four two-bedroom apartments. The project applicant estimates that the one-bedroom apartments would have between one and three residents and the two-bedroom apartments would have between two and five residents. Therefore, the estimated population increase from the project would be between 70 to 206 residents.[35] As of January 1, 2019, the City had an estimated population of 83,384 residents (DOF, 2019). The projected 2040 population for the

35 Minimum Residents= (62 one-bedroom apartments x 1 resident) + 4 two-bedroom apartments x (2) residents) = 70 residents
Maximum Residents= (62 one-bedroom apartments x 3 residents) + (4 two-bedroom apartments x 5 residents) = 206 residents

City is 92,500 people (SCAG, 2016), a net increase of approximately 9,116 or approximately 11 percent. The proposed project would account for approximately 0.76 percent to 2.3 percent of the forecast net increase in population between 2019 and 2040.

Implementation of the project is consistent with the overall intent of the City's goals to provide adequate housing opportunities to meet its fair share of projected housing needs and accommodate the projected growth increases. Additionally, the estimated increase in population caused by the project has been anticipated by the City and the region. Therefore, a less than significant impact would occur.

The increased population and housing resulting from the project would not necessarily cause direct adverse physical environmental effects; however, indirect physical environmental effects such as population-driven traffic or air quality impacts could occur. These indirect physical environmental effects associated with population increases are analyzed in **Section 4.2**, *Air Quality*, and **Section 4.16**, *Transportation*, of this IS/MND. The project would constitute infill development. Therefore, no indirect impacts associated with the extension of roads and other infrastructure would occur.

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

No Impact

The project site is currently developed with existing church buildings and a large surface parking lot. No housing exists onsite and no persons currently reside on the project site. Therefore, the project would not displace any housing or people and the project would not necessitate the construction of replacement housing. No impact would occur.

4.15 Public Services

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?			**X**	
b) Police protection?			**X**	
c) Schools?				**X**
d) Parks?			**X**	
e) Other public facilities?			**X**	

a) Fire protection?

Less than Significant Impact

Fire Services for the City of Buena Park are provided by Orange County Fire Authority (OCFA) through an agreement with the city, including primary response for fire suppression and emergency medical services (City of Buena Park, 2019b). Buena Park is in OCFA Operations Division 7, which also includes the cities of Cypress, La Palma and Stanton (OCFA, Operations Division 7, 2019). The nearest station to the project site is OCFA Fire Station 63, located about 0.9 mile southeast of the project site at 9120 Holder Street. Other OCFA fire stations in Buena Park include Station 62 at 7780 Artesia Boulevard, approximately 1.4 miles northeast of the site, and Station 61 at 744 La Palma Avenue, approximately 2.8 miles northeast of the site (Google Earth Pro, 2019).

The proposed project would not adversely affect demand for fire services as described below. An information request letter was sent to the Orange County Fire Authority asking about the potential impacts of the project to fire service (refer to **Appendix I**). OCFA Management Assistant William Blumberg stated that the project site would be served by OCFA Fire Stations 13 and 63 (Blumberg, 2020). Mr. Blumberg stated that the proposed project should not require construction of new fire department facilities and that the project should have a less than significant impact on OCFA's level of service and/or response times. However, to reduce impacts on fire service, the OCFA recommends the following (Blumberg, 2020):

1) Ensure that proposed project meets California Fire Code, OCFA Fire Master Plans for Commercial & Residential Development (B-09) Guideline, and OCFA Architectural Review (E-04) Guideline (For example, access on the proposed plan may not meet current requirements),
2) Participate with the City of Buena Park through developer agreements for future fire facility mitigation.

Based on the response from the OCFA, the proposed project would not require the construction of new fire department facilities and the project should have a less than significant impact on OCFA's level of service and/or response times. Therefore, the project would have a less than significant impact to OCFA facilities and services and no mitigation is required.

b) Police protection?

Less than Significant Impact

The Buena Park Police Department (BPPD) provides police protection to the City of Buena Park; its headquarters is located next to Buena Park City Hall at 6650 Beach Boulevard, about 2.3 miles northwest of the project site. The BPPD is organized into three divisions: Administration; Operations; and Support Services (City of Buena Park, 2019c).

The proposed project would not adversely affect demand for law enforcement services as described below. An information request letter was sent to the Buena Park Police Department asking about the potential impacts of the project to law enforcement services (refer to **Appendix I** of this document). As detailed in the response from BPPD Operations Captain Gary Worrall, the proposed project is under the jurisdiction of the Buena Park Police Department, which would respond to calls for service from the project site (Worrall, 2020). Captain Worrall stated that the proposed project would not require construction of new law enforcement facilities to meet existing law enforcement demands or project demands. Additionally, the Police Department does not anticipate any potential environmental impacts from the proposed project related to providing police services to the project site and the proposed project would likely not have potentially significant impacts on the Police Department's level of service and/or response times (Worrall, 2020). Therefore, the project would have a less than significant impact in this regard and no mitigation is required.

c) Schools?

No Impact

The project is located within the boundaries of the Buena Park School District, which serves 4,700 students at six elementary schools and one junior high school in the City of Buena Park (Buena Park School District, 2019). The closest public school to the project site is San Marino Elementary School, located about 0.2 mile southeast of the project site. As the project would be age restricted and limited to senior-age residents (62 years and older), it is anticipated that the proposed project would generate no new students at the project site. Thus, the project would have no impact on schools and no mitigation is needed.

d) Parks?

Less than Significant Impact

The Community Services Department of the City of Buena Park operates one Mini Park and 10 city parks, located throughout the city (City of Buena Park, 2019d). San Marino Park, located at 6200 San Roland Circle, is the closest park to the project site and is located approximately 0.4 mile to the southeast. Facilities at San Marino Park include basketball courts, picnic area with barbecue, handball courts, children's play area and restrooms.

The addition of between 70 to 206 persons from the proposed project could marginally increase the use of existing neighborhood and regional parks, however the project would have a de minimus impact in this regard. Any increased use of city park facilities would be partially offset by the proposed open space on the project site, which would include green lawn/turf areas, community spaces, green lawn game area, and a hardscape game area. Therefore, with the provision of onsite open space and recreational uses, project-related impacts on parks would be less than significant and no mitigation is required.

e) Other Public Facilities?

Less than Significant Impact

The Buena Park Public Library is operated by the Buena Park Library District, an independent special district organized in 1919. The library is located at 7150 La Palma Avenue, about 1.1 miles northeast of the project site (Buena Park Library District, 2019). The City of Buena Park has a current population of 84,241. The increase of between 70 to 206 residents is well under one percent of the city's existing population; therefore, the increase in residents associated with the project would have a negligible effect on the demand for library services. As a result, impacts from the proposed project on libraries would be less than significant and no mitigation is required.

The closest hospital to the project site is the La Palma Intercommunity Hospital, located approximately 0.65-mile northwest of the project site at 7901 Walker Street. The La Palma Intercommunity Hospital is a 141-bed, not for profit, acute-care community hospital that provides medical, emergency and community services (La Palma Intercommunity Hospital, 2020). As detailed in **Section 4.14**, Population and Housing, the proposed project would increase the city's population by between 70 to 206 residents. It is unlikely that the entire project's population would need medical assistance at the same time, but in the case that La Palma Intercommunity Hospital reaches its patient capacity, other medical services are available in the city. The construction of the proposed project would adhere to fire codes to ensure that emergency vehicle, personnel and levels of service will be adequately met. Therefore, there would be less than significant impacts in regard to hospitals and no mitigation is needed.

4.16 Recreation

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			**X**	
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?			**X**	

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

Less than Significant Impact

The project involves the construction of a total of 66 residential units and a 3,000 square foot senior-oriented community center, for the use of project residents, on the ground floor of Building 1. The project proposes bench seating, a lawn area with lawn games, a decomposed granite path, and a decomposed granite courtyard with fire pit and lounge seating. The project proposes 26,021 square feet of open space/landscaped area. The layout of the buildings on the site would create several unique landscaped areas that include both passive and active spaces – raised planters, green lawn/turf areas, drought-tolerant and native ground covers, decomposed granite walkways for residents to access community spaces and an outdoor lounge area with a fireplace and planter beds at the northeast corner of the site.

The City of Buena Park has approximately 96.1 acres of public park and recreation facilities (RBF Consulting, 2010a, p. 6-2). The city has a standard of three acres of open space per 1,000 residents (RBF Consulting, 2010a, p. 6-7). As detailed in the General Plan, the city requires 50 more acres of parks to meet this standard. The project is estimated to have a population between 70 persons and 206 persons.[36] Based on the City's standard three acres of open space per 1,000 residents, the project's estimated population would need to provide 9,148 to 26,920 square feet (0.21 to 0.618 acres) of open space; 26,021 square feet is provided in project plans.

The nearest park, San Marino Park, is approximately 0.4 mile from the project site and San Antonio Park is approximately 0.8 mile from the project site. The addition of 70 to 206 persons to the City is expected to marginally increase the use of existing neighborhood and regional parks, but this increased use would be partially offset by the proposed open space on the project site as described

36 Refer to Section 4.14, Population and Housing, of this document for details on how the project's population was estimated.

above. The project's proposed 3,000-square-foot community center would also offset demand on existing city recreational facilities. **Figure 4.16-1** shows the landscape plan for the project. The provision of open space and amenities onsite would reduce impacts to existing recreational facilities. Therefore, the project would have a less than significant impact on parks or other recreational facilities.

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

Less Than Significant Impact

As described above, the project includes recreational facilities for residents. Furthermore, the project would not require the construction or expansion of recreational facilities outside the limits of the project site. Therefore, there would be no significant adverse physical effect on the environment, and less than significant impacts would occur with project implementation.

Figure 4.16-1
LANDSCAPE PLAN

SITE PLAN LANDSCAPE KEY

1. SITE ENTRANCE AND SPECIALTY PAVING
2. (E) SIDEWALK
3. ACCENT TREES
4. TRASH ENCLOSURE
5. BENCH SEATING
6. LAWN PANEL WITH LAWN GAMES
7. DECOMPOSED GRANITE PATH
8. DECOMPOSED GRANITE COURTYARD WITH FIRE PIT AND LOUNGE SEATING
9. LOW HEDGE
10. FIRE TRUCK TURNAROUND

LANDSCAPE CALCULATIONS

AREA TYPE	DESCRIPTION	AREA S.F.	%
HARDSCAPE	SIDEWALKS	8,050	16%
HARDSCAPE	D.G.	445	1%
HARDSCAPE	FIRE ACCESS TURN-AROUND	3,030	6%
LANDSCAPE	PLANTING AREA	13,935	27%
LANDSCAPE	LAWN PANEL (LAWN)	1,251	2%
HARDSCAPE	PARKING LOT	22,937	46%
DRIVEWAY/PARKING TOTAL		26,241	35%
OPEN AREA TOTAL		23,236	31%
BUILDING		25,308	34%
TOTAL		74,956	100%

TREE LEGEND

SYMBOL	SPECIES
	DECIDUOUS SKYLINE TREE PLATANUS RACEMOSA
	EVERGREEN STREET TREE CUPANIOPSIS ANACARDIOIDES
	EVERGREEN SCREENING TREE OLEA EUROPAEA 'WILSONII'
	DECIDUOUS COLOR TREE ARBUTUS X MARINA
	EVERGREEN ACCENT TREE CHAMAEROPS HUMILIS
	EVERGREEN COLUMNAR TREE CUPRESSUS 'TINY TOWER'

PLANTING DESIGN CRITERIA

BASED ON THE BUENA PARK CITY WIDE DESIGN GUIDELINES AND ORCHARD VIEW DESIGN GUIDELINES, THE PLANT PALETTE BELOW IS COMPRISED OF PLANT MATERIALS AND TREES KNOWN TO THRIVE IN THE LOCAL CLIMATE AND SOIL CONDITIONS. THE LAYOUT AND DESIGN OF PLANTING AREAS WILL BE HIERARCHICAL IN CHARACTER AND COMPLIMENT THE ARCHITECTURE AND PEDESTRIAN SPACES.

THE PLANT PALETTE IS COMPRISED OF PLANTS NATIVE TO MEDITERRANEAN CLIMATES. 20% OR LESS OF THE PLANT MATERIAL WILL REQUIRE MODERATE WATER, AND THE REMAINDER WILL REQUIRE LOW TO VERY LOW WATER ONCE ESTABLISHED. THIS PLANT PALETTE COUPLED WITH THE IRRIGATION SYSTEM DESCRIBED AT THE LEFT WILL MEET OR EXCEED THE STATE AND LOCAL STANDARDS FOR WATER CONSERVATION THROUGH WATER EFFICIENT LANDSCAPE IRRIGATION DESIGN. 70% OF ORNAMENTAL SHRUBS AND GRASSES BY AREA WILL BE 1 GALLON CONTAINERS SPACED ON AVERAGE OF 30" O.C. 10% OF PLANTING BY AREA WILL BE 5 GALLON CONTAINERS, AND WILL BE UTILIZED FOR SPECIMEN PLANTING AND SCREENING. ALL ABOVE UTILITIES WILL BE SCREENED WITH VEGETATION.

IRRIGATION DESIGN CRITERIA

A WEATHER SENSING, "SMART CONTROLLER" WILL BE USED TO MONITOR THE IRRIGATION WATER AND MANAGE DAILY WATER CONSUMPTION TO THE MINIMUM REQUIREMENTS FOR EACH HYDROZONE.

ALL TREES, POTTERY, SHRUB AND GROUNDCOVER AREAS WILL BE IRRIGATED ON SEPARATE HYDROZONES WITH DRIP OR BUBBLER IRRIGATION, SO THAT ONCE ESTABLISHED, WATER CAN BE REGULATED IN A MORE EFFICIENT MANNER.

I CERTIFY THAT THIS PLANT PALETTE COUPLED WITH THE IRRIGATION SYSTEM DESCRIBED ABOVE WILL MEET OR EXCEED THE STATE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO).

LANDSCAPE FOR THE PROJECT SHALL BE DESIGNED TO COMPLY WITH THE CITY'S WATER EFFICIENT LANDSCAPE ORDINANCE AND WITH THE GUIDELINES FOR THE IMPLEMENTATION OF THE WATER EFFICIENT LANDSCAPE ORDINANCE.

SCOTT NEWMAN
LANDSCAPE ARCHITECT | CA LICENSE NUMBER 6104

Disclaimer: Illustration provided by RRM Design Group, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Source: RRM Design Group, March 30, 2020.

UltraSystems
environmental • management • planning

Orchard View Gardens
Senior Apartment Homes
Landscape Plan

4.17 Transportation

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

The following analysis is based upon the Transportation Assessment Memo prepared by Fehr and Peers dated July 23, 2020 for the proposed project (Fehr and Peers, 2020), included as **Appendix H** to this document. Residents in areas surrounding the project site expressed concerns regarding existing circulation. The City of Buena Park requested a focused traffic study to review circulation, specifically at the intersection of Valley View Street and San Rafael Drive, and the effects of project traffic in the study area. The purpose of the transportation assessment is to summarize an evaluation of the proposed project's potential transportation impacts, parking demand, and circulation within the area. Intersection treatments are proposed at the end of the memorandum to improve circulation and safety. (Fehr & Peers, 2020, p. 1).

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

Less than Significant Impact

Applicable Plans, Ordinances, and Policies

Statewide Transportation Improvement Program (STIP)

The Statewide Transportation Improvement Program (STIP) is a multi-year capital improvement program of transportation projects on and off the State Highway System, funded with revenues from the State Highway Account and other funding sources. The proposed project development is not a transportation project and would not conflict with the STIP.

Orange County Congestion Management Plan

The Congestion Management Plan (CMP) requires that a traffic impact analysis be conducted for any project generating 2,400 or more daily trips, or 1,600 or more daily trips for projects that directly access the CMP Highway System (CMPHS). The CMPHS includes specific roadways, which include State Highways and Super Streets, which are now known as Smart Streets, and CMP arterial monitoring locations/intersections). As discussed below, the proposed project would generate approximately 244 daily trips, which is far fewer than the 2,400 daily trips and fewer than 1,600 daily trips that directly access the CMPHS. Furthermore, none of the study intersections are part of the 2019 Orange County Congestion Management Program (OCTA, 2019a, p. 37).

The Orange County Master Plan of Arterial Highways (MPAH)

The Orange County Master Plan of Arterial Highways (MPAH) establishes a countywide surface roadway network intended to provide a guideline for the development of an inter-community arterial highway system to effectively serve existing and future land uses in the County. The MPAH provides a tool for coordination of the transportation and land use planning and implementation processes engaged in by the various cities, the County, and adjacent jurisdictions. Consistency with the MPAH ensures that each city and the County implement the same base transportation network using similar standards and assumptions. The proposed project would not permanently alter or affect arterial highway systems. Therefore, there would not conflict with the OC MPAH (OCTA, 2019b).

Measure M/OC Go

Measure M, approved by Orange County voters in November 1990, and re approved in 2006, authorizes a sales tax to fund a variety of transportation projects in the County. The measure, which is now called OC Go, would create transportation improvement projects in regard to freeways, streets and roads, transit, and environmental programs (OCTA, 2020). The proposed project would not impede any OC Go projects and would not conflict with OC Go.

City of Buena Park General Plan— Mobility Element

The General Plan Mobility Element (RBF Consulting, 2010a, pp. 3-51 through 3-58) contains goals and policies that are applicable to the proposed Orchard View Gardens Senior Apartment Homes project. Applicable goals and policies are summarized below:

Goal M-3 ***A balance between development of the Land Use Plan and completion of the circulation network.***

Policy 3.2 Ensure the timely provision of adequate transportation infrastructure and standards consistent with the location, intensity and timing of new development as defined in the Land Use Element.

Project Compliance: The proposed project would not conflict with Policy 3.2 because as described in the analysis in this section, the project would have minimal and less than significant traffic impacts. Additionally, as described in **Section 3.0** of this document, the project would implement one or more intersection treatment(s) to alleviate existing traffic issues in the project area.

Goal M-5 ***A circulation system that supports existing, approved, and planned land uses throughout the City, while maintaining a desired level of service.***

Policy 5.4 Require that new development mitigate its impact on City streets in order to maintain an adequate level of service.

Project Compliance: the proposed project would not conflict with Policy 5.4 because, as detailed in this section, the project would have less than significant traffic impacts.

Goal M-9 ***Minimized conflict points among automobile traffic, pedestrians, and bicycle traffic.***

Policy 6.1 Contribute to the safety of bicyclists and pedestrians by adhering to national standards and uniform practices, including but not limited to, Caltrans and City-wide standards.

Project Compliance: The proposed project would not conflict with Policy 6.1 because the project would comply with all applicable Caltrans and City-wide standards, which would contribute to the safety of bicyclists and pedestrians.

City of Buena Park Municipal Code

The city's municipal code does not contain any transportation-related provisions that apply to the proposed project.

Parking

With the development of the proposed project, the existing church and proposed residential facility will share a total of 128 parking spaces. The existing church currently contains 121 parking spaces and plans to reduce their parking lot to 80 spaces with the development of the project. The project proposes the development of 48 parking spaces to accommodate residents, visitors, and staff. Fehr & Peers conducted a survey of the existing church site to establish the existing parking demand. A 24-hour parking survey was conducted on Sunday, December 15, 2019 to account for the peak business day for the church. The maximum demand for the site was 53 vehicles at 11 AM (Fehr and Peers, 2020, p.6).

ITE Parking Generation Manual 5th Edition (2017) parking generation rates for senior affordable housing (ITE Code 232) were used to estimate the future parking demand for the project. At peak parking demand, the proposed project is expected to utilize 25 parking spaces on a weekday and 28 spaces on a Sunday. Based on these estimates, approximately 30% of the project's parking supply will still be available if the project provides 48 parking stalls. Based on this estimate, the project site can efficiently serve the proposed project's parking demand with the proposed parking supply (Fehr and Peers, 2020, p.6).

To estimate future parking demand and utilization for the project site and church, to be conservative, the analysis assumed that project's estimated demand would remain the same between 8 AM and 5 PM. The project's estimated demand was added to existing parking demand for the church to estimate the future parking demand for the site. At peak demand on Sunday, it is estimated that approximately 37% of the total parking supply is still available. Based on this analysis, it is estimated

that the parking demand for the entire site can be accommodated with the proposed parking supply (Fehr and Peers, 2020, p. 7).

St. Joseph's offers church services on Sundays from 9:00-10:30am and Thursdays 10:30am-12:00pm. St. Joseph's also rents space to the Calvary Chapel "La Palma" who hold church services on Sundays from 11:00am to 12:30pm, Thursdays from 6:00-7:30pm, and Fridays from 6:00-7:30pm. The average attendance for weekly services pre-COVID-19 was typically around 35 individuals per service. The maximum allowed number of attendees is limited to 75 individuals. The Church offices operate from 9:00am to 1:00pm Monday through Thursday and 8:00-11:00am on Fridays. There are three employees/staff members that are employed by the Church.

The Buena Park Municipal Code Section 19.536.040, Parking Spaces Required requires for a Church use a parking requirement of 1 space per 3 fixed seats (or 4.5 feet of bench) plus 1 space per 40 square feet of other net assembly area in the one largest assembly room. St. Joseph's campus is currently comprised of a 2,312 square foot Sanctuary Hall with 21 pews that are 11'8" in length and 1 wheelchair accessible pew that is 11'0" in length. There is also a Classroom/Office building that is roughly 2,500 square feet in size. The largest assembly space in the Classroom/Office building, known as the Parish Hall, is approximately 928 square feet. Based on the bench space in the Sanctuary Hall approximately 57 parking spaces are required. Based on the square footage of the Parish Hall approximately 23 parking spaces are required. To comply with the City Municipal Code an estimated 80 parking spaces are required.

To better understand the need for parking based on the current Church operations, a parking count was completed by St. Joseph's Staff on August 18, 2019 at 10:30am and 12:00pm and August 25, 2019 at 12:15pm. These counts were taken pre-COVID and reflect the typical parking utilization during Sunday services, which is considered to be a peak usage time for the Church. For the August 18th counts, there were 25 cars at 10:30am and 44 cars at 12:00pm. For the August 25th count there were a reported 42 cars. This is an average of 37 cars. Based on a total number of 121 parking spaces this is an average utilization of 30%. Utilizing the highest count of 44 cars on August 18th the utilization rises to 36%. During the weekdays the Church maintains a count around 12 cars during the day and roughly 8 cars on a given night dependent on whether there is a group meeting (i.e. book club, etc.) This count suggests that there is an abundance of parking to need the needs of the Church.

With the development of the Orchard View Gardens Senior Housing Community, a portion of the Church's existing parking area in the northeast corner will be demolished to accommodate the proposed residential units. The onsite parking available for the Church would be reduced from 121 spaces to 80 spaces. As discussed previously, the proposed amount of parking for the Church is sufficient to accommodate the Church operations and meets the City's Code requirement. Furthermore, based on the currently utilization rates reported above, if the number of spaces is reduced to 80, even at its peak occupancy, the utilization rate is still only 55%. Therefore, the proposed project would provide adequate parking for the project site and would not conflict with any city parking regulations.

In conclusion, the Orchard View Gardens Senior Apartment Homes project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system. The project would generate approximately 244 daily trips, which would result in less than significant traffic impact and the project would provide adequate parking to serve the needs of its residents. Impacts regarding conflict with a program plan, ordinance or policy addressing circulation system, would be less than significant.

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

Less than Significant Impact

The project is not within 0.5 mile of a major transit corridor or along an existing high-quality transit corridor, so impacts cannot be presumed to be less than significant under CEQA Guidelines §15064.3(b)(1). Projects that decrease vehicle miles traveled (VMT) in the project area compared to existing conditions, on the other hand, are considered to have a less than significant transportation impact. As noted in **Table 4.17-1** below, the project is expected to generate approximately 244 daily trips on a weekday, including approximately 13 trips (5 inbound/8 outbound) during the AM peak hour, and approximately 17 trips (9 inbound/8 outbound) during the PM peak hour. To provide a conservative scenario, no trip credits were applied to the trip generation estimates. The project is anticipated to generate approximately 207 daily trips on Sundays, including approximately 24 trips (15 inbound/9 outbound) during the Sunday peak hour. ITE does not include a trip generation rate for weekday midday peak hours for Senior Adult Housing so this analysis conservatively assumes the PM peak hour trip generation estimates for the midday peak hour.

Table 4.17-1
PROJECT TRIP GENERATION ESTIMATES

Land Use	Quantity	Weekday							Sunday Peak Hour			
		Daily	AM Peak Hour			PM Peak Hour						
			In	Out	Total	In	Out	Total	Daily	In	Out	Total
Senior Adult Housing[1]	66 dwelling units	244	5	8	13	9	8	17	207	15	9	24

Source: Fehr and Peers, 2020, p. Table 2
[1] Trip Generation, 10th Edition (Institute of Transportation Engineers [ITE], 2017), ITE Code 252 for Senior Housing

The trips from the proposed project would contribute less than 50 peak-hour (two way) trips after full development (refer to **Appendix H**). Therefore, the project would have a less than significant impact regarding conflict or inconsistency with CEQA Guidelines section 15064.3.

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

Less Than Significant Impact with Mitigation Incorporated

Construction

The project site is located within an existing church property. The proposed activities include demolition of an existing onsite structure, and construction of new residential buildings and a community center. During the construction phase, the project could temporarily impact street traffic adjacent to the project due to construction activities in the right-of-way (ROW). Project construction could reduce the number of lanes or temporarily close a portion of Valley View Street at San Rafael Drive and the frontage roads along Valley View Street. Mitigation measure **TRANS-1** is recommended to address potential hazards impacts during the construction phase.

Mitigation Measure

MM TRANS-1 Prior to the start of construction activity in the public right-of-way, the General Contractor shall submit a detailed Construction Management Plan to be reviewed and approved by the City of Buena Park Traffic Engineer. The Construction Management Plan shall specify that the Construction Manager will schedule truck traffic and employee shifts to avoid creating trips during the peak traffic periods, as is feasible for construction operations. All measures including identified truck routes and designated employee parking areas shall be included in the Construction Management Plan. The Plan shall include but is not limited to the following provisions:

a) Identification of permitted hours for construction related deliveries and removal of heavy equipment and material;

b) Identification of where construction workers would park their personal vehicles during project construction with a requirement that at no time shall construction worker vehicles block any driveways. If complaints are received by the project applicant or City of Buena Park regarding issues with construction worker vehicle parking, the project applicant shall identify alternative parking options for construction workers so as not to interfere with adjacent parking availability;

c) Identification of how emergency access to and around the project site will be maintained during project construction;

d) Identification of haul routes for delivery or removal of heavy and/or oversized equipment or material loads. Where feasible, delivery or removal of oversized equipment or material loads shall be conducted during off-peak hour traffic periods;

e) Maintain pedestrian and bicycle connections around the project site and safe crossing locations shall be considered for all pedestrian and bicyclist detours; and

f) Maintain the security of the project site by erecting temporary fencing during the construction phase of the project. Any onsite night lighting used during the construction phase of the project shall be in compliance with City of Buena Park lighting requirements.

Level of Significance After Mitigation

After implementation of mitigation measure **TRANS-1** above, the project would have less than significant construction-phase impacts regarding a substantial increase in hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses.

Operation

Trip Distribution

The geographic distribution of trips generated by the proposed project is dependent on characteristics of the street system serving the project site and the level of accessibility of routes to

and from the project site. Based on the likely origins and destinations of project traffic, which includes residents, visitors and employees, the majority of project traffic is anticipated to utilize the intersection of Valley View Street and San Rafael Drive to access the project site. Other routes have limited access or connectivity to the surrounding street network (Fehr & Peers, 2020, p. 3). The forecasted traffic to be generated by the proposed Project was assigned to the street network using the distribution pattern depicted in **Figure 4.17-1**.

Intersection Analysis -Study Area

Three intersections were selected for intersection analysis based on the project trip assignment, knowledge of the study area, and input from staff at the City of Buena Park. Weekday traffic counts were collected on Tuesday, December 17, 2019 during the AM peak (7:00-9:00 AM), PM school afternoon peak (1:30-3:30PM), and PM peak (4:00-6:00PM). Weekend counts were collected on Sunday, December 15, 2019 during the church ingress and egress (10:00AM-2:00PM). The following three intersections, as shown on **Figure 4.17-2**, were analyzed in this transportation assessment:

1. Valley View Street & San Rafael Drive/Los Molinos Road (signalized)
2. Valley View Frontage Street & Project Driveway 1 (unsignalized)
3. Valley View Frontage Street & Project Driveway 2 (unsignalized)

Figure 4.17-1
TRIP DISTRIBUTION

Disclaimer: Illustration provided by Fehr & Peers, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Sources: Fehr & Peers, July 23, 2020.

UltraSystems

Orchard View Gardens
Senior Apartment Homes

Trip Distribution

Figure 4.17-2
STUDY AREA

Analysis Scenarios

The following two scenarios were analyzed (Fehr & Peers, p. 4):

- **Existing (2019) Conditions**: Existing traffic volumes and lane geometries were used to evaluate Existing (2019) Conditions.

- **Existing (2019) Plus Project Conditions**: Project traffic generated by the proposed project was added to existing traffic volumes to evaluate Existing (2019) Plus Project Conditions.

Level of Service Analysis-Existing Conditions

Table 4.17-2 summarizes the intersection operations for the Existing Conditions, which currently operate acceptably at level of service (LOS) A.

Table 4.17-2
EXISTING CONDITIONS INTERSECTION ANALYSIS

Intersection	Weekday						Weekend	
	AM Peak		Midday Peak		PM Peak		Midday Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Valley View Street/ San Rafael Drive/Los Molinos Road	0.386	A	0.383	A	0.332	A	0.341	A
2. Valley View Frontage Road/ Project Driveway North	<3.0	A	8.4	A	8.4	A	8.7	A
3. Valley View Frontage Road/ Project Driveway South	<3.0	A	8.8	A	8.7	A	9.2	A

Notes:
1. ICU methodology was used for the signalized intersection.
2. HCM 6th Edition methodology was used for unsignalized intersections.

Source: Fehr & Peers, 2020, Table 3.

Level of Service- Existing Plus Project Conditions

Table 4.17-3 below summarizes the Existing Plus Project conditions intersection LOS. As shown below, all intersections operate acceptably at LOS A. This analysis indicates that there is capacity available to accommodate additional traffic generated by the project site and implementation of the Project will not degrade traffic operations to an unacceptable LOS.

Table 4.17-3
EXISTING PLUS PROJECT CONDITIONS INTERSECTION ANALYSIS

Intersection	Weekday						Weekend	
	AM Peak		Noon Peak		PM Peak		Noon Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Valley View St/San Rafael Drive/Los Molinos Road	0.389	A	0.335	A	0.383	A	0.354	A
2. Valley View Frontage Road/Project Driveway North	8.5	A	8.7	A	8.4	A	8.8	A
3. Valley View Frontage Road/Project Driveway South	8.8	A	8.8	A	8.7	A	9.2	A

Notes:
1. ICU methodology was used for the signalized intersection.
2. HCM 6th Edition methodology was used for unsignalized intersections.

Source: Fehr & Peers, 2020, Table 4

Vehicle Miles Traveled (VMT) Analysis

Senate Bill (SB)743, signed by the Governor in 2013, changed the way transportation impacts are identified. Specifically, the legislation has directed the Office of Planning and Research (OPR) to look at different metrics for identifying transportation as a CEQA impact. The Final OPR guidelines, released in November 2017, identify vehicle miles of travel (VMT) as the preferred metric for traffic impact analysis moving forward. The City of Buena Park adopted Traffic Impact Study (TIS) guidelines in June 2020 that address VMT impact criteria and analysis methodology. These guidelines were applied to project's transportation assessment (Fehr & Peers, 2020, p. 7).

Projects are evaluated under a screening process as the first step of VMT assessment. The screening process determines if full VMT analysis is required for a project. Specific project types, such as affordable housing projects, are presumed to have a less-than-significant impact and can be screened from VMT analysis. Based on the City's guidelines, the proposed project can be screened out from a full VMT assessment as it is assumed to result in a less-than-significant transportation impact (Fehr & Peers, 2020, p. 7).

Collision Summary

Collision data was reviewed for the intersection of San Rafael Drive and Valley View Street. California law enforcement updates the Statewide Integrated Traffic Records System (SWITRS) records with collision data. The latest SWITRS data between January 1, 2015 and December 31, 2019 was used to analyze collisions within the area. Seven traffic collision have occurred near the intersection within the last five years. The primary collision type in the study area is broadside collision (43%), followed by vehicle/pedestrian collisions (29%) (Fehr & Peers, p. 8).

Intersection Treatment Options

The City of Buena Park received comments from the community regarding existing circulation at the intersection of Valley View Street at San Rafael Drive and the frontage roads along Valley View Street.

Most concerns centered around the intersection's operation and safety issues, especially during peak hours (typical commute hours, school let out, and church service on weekends). Though the proposed project would not result in a significant traffic impact during the project's operational phase, the City requested evaluation of circulation within the project area and options to address existing community concerns. Fehr & Peers has observed the circulation at the intersection and. collision data was reviewed for the intersection of San Rafael Drive and Valley View Street At the request of the City of Buena Park, recommendations were developed to improve circulation within the area (Fehr & Peers, 2020, pp. 7-8).

It should be noted that the proposed project would have less than significant operational traffic impacts because, as shown in **Table 4.17-3** above, the project would not increase the level of service during existing plus project conditions. The treatment options presented in the traffic analysis for the proposed project would be provided by the project applicant as part of the project's conditions of approval by the City of Buena Park. The treatment options are described in detail in the project description section of this document and they are briefly described in **Table 4.17-4** below.

Table 4.17-4
SUMMARY OF TREATMENT OPTIONS

Treatment Option	Description	Issue Addressed
1. Convert Frontage Road to One-Way Streets	• Restricts two-way movement along frontage streets • Add one-way street signs • Requires additional infrastructure/treatments throughout one-way street for compliance	• Improves traffic flow • Reduces conflict areas • Eliminates difficult turn movements
2a. Restrict U-turn Movements with Signage Only	• Restrict right U-turn movement • Add No U-turn signs	• Reduce conflicting movements
2b. Restrict U-Turn Movements with Signage and Median Extension	• Restrict right U-turn movement • Add No U-turn signs • Extend frontage road median to discourage U-turns	• Reduce conflicting movements
3. Modify Existing Median to include a Right-Turn Lane	• Add 10-foot right-turn lane to existing median on Valley View that aligns with the project driveway • Reduce the rightmost northbound through lane from14 feet to 12 feet or reduce lane widths along Valley View frontage Road	• Eliminates difficult turn movement
4. Split Phasing on the Minor Legs (Los Molinos Drive and San Rafael Drive)	• Updates Signal timing at intersections • Add signal heads to minor legs	• Addresses concerns with EB and WB traffic • Reduces conflict areas

Source: Fehr & Peers, 2020, Table 9.

Each treatment option has various construction requirements associated with the development of that project feature. The City of Buena Park will have the final decision as to which treatment options will be implemented following the completion of environmental documentation. Reconfiguration of

the intersection of Valley View Road and San Rafael Drive and the surrounding roadways could require the following construction activity (Fehr & Peers, 2020, p. 18):

- **Treatment Option 1 (Convert frontage road to one-way street)**
  - Convert frontage road to one-way street by constructing median extensions
  - Assumes excavation of 800 square-foot area and construction of 800 square-foot area
- **Treatment Option 2b (Restrict U-Turn Movements with Signage and Median Extension)**
  - Extension of existing median to discourage northbound right U-turns
  - Assumes excavation of 480 square-foot area and construction of 480 square-foot area
- **Treatment Option 3 (Modify Existing Median to include a Right-Turn Lane)**
  - Excavation and removal of existing median; relocation of the existing lighting pole; and concrete and asphalt installation of right-turn lane into frontage road
  - Assumes excavation of 1,920 cubic-foot volume and construction of 3,120 cubic foot volume

The worst-case design alternatives were identified for the CEQA analysis based on construction activity and the highest anticipated truck traffic. The combination of treatment options 1 and 3 or treatment options 2b and 3 represent the worst-case design alternatives at the intersection of Valley View Road and San Rafael Drive and the surrounding roadways. Note that the proposed options presented in the Transportation Assessment Memo are conceptual in nature and specific design of these elements has not been completed. The construction activities noted above represent worst-case (maximum) construction scenario for environmental documentation purposes. Option 2a and Option 4 would require negligible construction activity that is similar to standard maintenance. These treatment options, as described above, could be paired with the worst-case scenario with no assumed additional construction related activity (Fehr & Peers, 2020, pp. 18-19).

The project's circulation system, including driveways and parking areas, would be designed to meet the development standards of the city and would not result in uses or design features that would create traffic hazards. Additionally, as described above, the project applicant would construction treatment options which would improve the traffic circulation in the project area, compared to existing conditions. Therefore, impacts regarding increases in hazards due to geometric design features or incompatible uses during project operations would be less than significant.

d) Would the project result in inadequate emergency access?

Less Than Significant Impact with Mitigation Incorporated

Construction

Project construction could temporarily close sidewalks and street lane(s) along Valley View Street, San Rafael Drive, and the frontage roads along Valley View Street, which could temporarily impact

emergency access. Mitigation measure **TRANS-1** is recommended to reduce potential project impacts regarding emergency access during the construction phase of the proposed project.

Mitigation Measure

Refer to Mitigation Measure **TRANS-1** above.

Level of Significance after Mitigation

Mitigation measure **TRANS-1** would reduce potential impacts regarding emergency access to a less than significant level because this mitigation measure requires identification of how emergency access to and around the project site will be maintained during project construction. After implementation of mitigation measure **TRANS-1**, potential impact to emergency access during project construction would be reduced to a less than significant level.

Operation

The project would comply with applicable city regulations, such as the requirement to comply with the city's fire code to provide adequate emergency access, as well as the California Building Standards Code. Prior to the issuance of building permits, the City of Buena Park would review project site plans, including location of all buildings, fences, access driveways and other features that may affect emergency access. The site design includes access and fire lanes that would accommodate emergency ingress and egress by fire trucks, police units, and ambulance/paramedic vehicles. All onsite access and sight distance requirements would be in accordance with all applicable design requirements. The city's review process and compliance with applicable regulations and standards would ensure that adequate emergency access would be provided. Therefore, the project would not result in inadequate emergency access and there would be less than significant impacts.

4.18 Tribal Cultural Resources

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a tribal cultural resource that is 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 § 5020.1(k)?				**X**
b) Cause a substantial adverse change in the significance of a tribal cultural resource that is determined to be a significant resource to a California Native American tribe pursuant to the criteria set forth in subdivision (c) of Public Resource Code § 5024.1(c)?			**X**	

Information from the Phase I Cultural Resources Inventory Report, dated January 17, 2020 (see **Appendix C1**), prepared by UltraSystems for the Orchard View Gardens Senior Apartment Homes project has been included in this section.

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is 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 § 5020.1(k)?

No Impact

No Tribal Cultural Resource (TCR) sites were documented in the Native American Heritage Commission's Sacred Lands File (SLF) search (refer to **Attachment C**: "Native American Heritage Commission Records Search and Native American Contacts" in **Appendix C1** to this IS/MND). No resources as defined by Public Resources Code § 21074 have been identified. Additionally, the project site has not been recommended for historic designation for prehistoric and TCRs. No specific tribal resources were identified during outreach to local tribal organizations.

No prehistoric or historic archaeological resources were observed during the field survey. The previous cultural resources surveys within the half-mile buffer zone resulted in no archaeological sites or isolates being recorded. The cultural resource study findings at the South Central Coastal Information Center indicate that there is a low potential for finding tribal resources.

None of the contacted tribes have noted the presence of TCRs at or near the project site. There is no substantial evidence that TCRs are present on the project site. No potential TCR sites within the project area are listed on the SLF.

b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is determined to be a significant resource to a California Native American tribe pursuant to the criteria set forth in subdivision (c) of Public Resource Code § 5024.1(c)?

Less than Significant Impact with Mitigation Incorporated

Assembly Bill 52 (AB 52) requires meaningful consultation with California Native American Tribes on potential impacts on tribal cultural resources (TCRs), as defined in Public Resources Code § 21074. TCRs are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either eligible or listed in the California Register of Historical Resources or local register of historical resources (CNRA, 2007).

As part of the AB 52 process, Native American tribes must submit a written request to the lead agency to be notified of projects within their traditionally and culturally affiliated area. The lead agency must provide written, formal notification to those tribes within 14 days of deciding to undertake a project. The tribe must respond to the lead agency within 30 days of receiving this notification if they want to engage in consultation on the project, and the lead agency must begin the consultation process within 30 days of receiving the tribe's request. Consultation concludes when either (1) the parties agree to mitigation measures to avoid a significant effect on a tribal cultural resource, or (2) one of the parties, acting in good faith and after reasonable effort, concludes mutual agreement cannot be reached.

The City of Buena Park (the lead agency) has initiated AB 52 outreach to local tribes for the Orchard View Gardens Senior Apartment Homes Project. The City prepared letters to the six tribes on their list for AB 52 contact, informing them of the project. The letters were sent by Swati Meshram, Acting Planner Manager, City of Buena Park, on June 22 2020. The letters were sent via certified mail to: Tribal Manager, Joyce Perry, Juaneño Band of Mission Indians – Acjachemen Nation (Belardes); Chairperson Sonia Johnston, Juaneño Band of Mission Indians – Acjachemen Nation; Chairperson Anthony Morales, Gabrielino/Tongva San Gabriel Band of Mission Indians; Sam Dunlap, Cultural Resources Director, Gabrielino-Tongva Tribe; Chairperson Sandonne Goad, Gabrielino-Tongva Tribe; and Joseph Ontiveros, Cultural Resources Director, Soboba Band of Luiseño Indians. The letters conveyed that the recipient had 30 days from the receipt of the letter to request AB 52 consultation regarding the project.

On July 1, 2020, Ms. Perry replied to the City by email for the Juaneño Band of Mission Indians requesting consultation and asking for information on the St. Joseph's Church's date of construction and for results of any Native American Heritage Commission's SLF records search and a CHRIS records search. Mr. Meshram respond to Ms. Perry July 8, 2020 a negative SLF search had been conducted, and that three historic structures had been recorded within a half-mile buffer zone all dating to the 1950s. Ms. Perry replied July 9 stating that AB 52 consultation was concluded (Swati Meshram, personal communication July 1 and July 9, 2020).

On July 1, 2020 Brandy Salas of the Gabrielino-Kizh Nation replied to the City by email requesting to conduct consultation on the project. On July 14, 2020 the Gabrielino-Kizh Nation proposed a consultation meeting on September 9, 2020, which the City confirmed (Swati Meshram, personal communication July 14 and July 29, 2020). This meeting was subsequently rescheduled to September 10, 2020. There have been no responses from the remaining four tribes.

Representatives of the City and the Gabrielino-Kizh Nation (Andrew Salas and Matthew Tumamait) conducted consultation for the project on September 10, 2020. The project was described to the tribe, particularly details of the soils present, and planned construction methods. The tribe recommended the presence of a Native American monitor representing the AB 52 consulting tribe to be present during subsurface excavation of the construction site. The City agreed to this recommendation – see **MM TCR-1** below.

No sites were documented in the Native American Heritage Commission's SLF search. No resources as defined by Public Resources Code § 21074 have been identified (refer to **Attachment C**: "Native American Heritage Commission Records Search and Native American Contacts" in **Appendix C1** to this IS/MND). Additionally, the project site has not been recommended for historic designation for prehistoric and TCRs. No specific tribal resources were identified during outreach to local tribal organizations.

No prehistoric or historic archaeological resources were observed during the field survey. The previous cultural resources surveys within the half-mile buffer zone resulted in no archaeological sites or isolates being recorded. The cultural resource study findings at the South Central Coastal Information Center indicate that there is a low potential for finding tribal resources.

A mitigation measure for minimizing impacts on potential TCRs was recommended by the Gabrielino-Kizh Nation. Also, it is applicable to the project site because the land at the site remained relatively undisturbed due to use for orchard farming into the mid-20th century, and the immediate area has been urban with residential and commercial buildings since the 1960s. Therefore, while the potential for subsurface prehistoric cultural deposits is considered to be low, most construction work on the church campus was completed prior to implementation of CEQA guidelines.

Mitigation measure **TCR-1** described below requires consultation of a local Native American representative and a qualified archaeologist, if unanticipated discoveries are made during construction activities. With implementation of **MM TCR-1,** potential project impacts on TCRs would be less than significant.

Mitigation Measures

MM TCR-1: Prior to the commencement of any ground-disturbing activity at the project site, the project applicant shall retain a Native American Monitor approved by the Gabrieleño Band of Mission Indians-Kizh Nation – the tribe that consulted on this project pursuant to Assembly Bill 52 (the "Tribe" or the "Consulting Tribe"). A copy of the executed contract shall be submitted to the City of Buena Park Planning Department prior to the issuance of any permit necessary to commence a ground-disturbing activity. The Tribal Monitor will only be present onsite during the construction phases that involve ground-disturbing activities. Ground-disturbing activities are defined by the Tribe as activities that may include, but are not limited to, pavement removal, potholing or auguring, tree removals, boring, grading, excavation, drilling, and trenching, within the project area. The Tribal Monitor will complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The onsite monitoring shall end when all ground-disturbing activities on the project site are completed, or when the Tribal Representatives and Tribal Monitor have indicated that all upcoming ground-disturbing activities at the project site have little to no potential for impacting Tribal Cultural Resources. Upon discovery of any Tribal

Cultural Resources, construction activities shall cease in the immediate vicinity of the find (not less than the surrounding 100 feet) until the find can be assessed. All Tribal Cultural Resources unearthed by project activities shall be evaluated by the qualified archaeologist and Tribal monitor approved by the Consulting Tribe. If the resources are Native American in origin, following excavation, analysis and reporting by the consulting archaeologist, the Consulting Tribe may retain it/them in the form and/or manner the Tribe deems appropriate, for educational, cultural and/or historic purposes.

MM TCR-2 If human remains and/or grave goods are discovered or recognized at the project site, all ground disturbance shall immediately cease, and the Orange County Coroner shall be notified per Public Resources Code Section 5097.98, and Health & Safety Code Section 7050.5. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2). Work may continue on other parts of the project site while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5[f]). If the coroner, with the aid of the supervising archaeologist, determines that the remains are prehistoric, they will contact the NAHC. The NAHC will be responsible for designating the Most Likely Descendant (MLD). The MLD (either an individual or sometimes a committee) will be responsible for the ultimate disposition of the remains, as required by § 7050.5 of the California Health and Safety Code. The MLD will make recommendations within 24 hours of their notification by the NAHC. If a non-Native American resource is determined by the qualified archaeologist to constitute a "historical resource" or "unique archaeological resource," time and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan prepared by the consulting archaeologist established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and PRC Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any historic archaeological material that is not Native American in origin shall be curated at a public, non-profit institution with a research interest in the materials, such as the Cooper Center (OC Parks) or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes.

Level of Significance After Mitigation

Mitigation measure **TCR-1** requires consultation of the local Native American representative and a qualified archaeologist if unanticipated discoveries are made during construction activities. With implementation of **MM TCR-1,** potential project impacts on potential TCRs would be less than significant.

Mitigation measure **TCR-2** requires that human remains be examined by the Orange County Coroner and that human remains and associated grave goods be properly handled. With implementation of **MM TCR-1,** potential project impacts on potential TCRs would be less than significant.

There is no substantial evidence that TCRs are present on the project site, including no sites listed with the SLF. Therefore, at this time the project is determined to have less than significant impacts related to TCRs, with implementation of **MMs TCR-1** and **TCR-2**.

4.19 Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			**X**	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			**X**	
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?			**X**	
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??			**X**	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			**X**	

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

Less than Significant Impact

As discussed in **Section 3.0** the proposed project would require offsite improvements including sewer, domestic water, fire water, irrigation and dry utilities connection to existing utility infrastructure in Valley View Boulevard.

Sanitary Sewer –The proposed project would connect to the existing ten-inch vitrified clay pipe sewer main line in Valley View Boulevard. As detailed in the city's General Plan EIR, the Buena Park Public Works Department provides sewer services within the city through a network of local sewer mains. The city's local sewer system connects to regional trunk sewer systems for the Orange County

Sanitation District (OCSD), with a small portion going to County Sanitation Districts of Los Angeles County for conveyance, treatment and disposal by these agencies. The entire Buena Park collection system is comprised of approximately 165 miles of sewer lines ranging in size from six to 21 inches in diameter. All sewage flow from Buena Park to the OCSD Treatment Plant No. 2 in the City of Huntington Beach. This facility has a total primary treatment capacity of 168 million gallons per day (mgd), with an average daily treatment of approximately 127 mgd. Therefore, the plant has an additional treatment capacity of approximately 41 mgd. Treatment Plant No. 2 also has 90 mgd of secondary treatment capacity[37] (RBF Consulting, 2010b, pp. 5.12-1 and 5.12-9).

The project proposes 66 residential units. As shown in **Table 4.19-1**, the proposed project would generate an estimated 8,080 gallons per day (gpd) of wastewater. The amount of wastewater estimated to be generated by the project would constitute a small fraction of the treatment plant's remaining primary treatment capacity of 41 mgd. Therefore, there would be sufficient capacity available at Treatment Plant No. 2 to meet the needs of the project.

Table 4.19-1
ESTIMATED PROJECT WASTEWATER GENERATION

Unit Size	Wastewater Generation Rate (GPD)*	Number of Units	Wastewater Generated (GPD)
One Bedroom	120	62	7,440
Two Bedroom	160	4	640
PROJECT TOTAL		**66**	**8,080**

*City of Los Angeles, LA CEQA Threshold Guide 2006, Exhibit M 2-24, Sewage Generation Factors.

The site is served by an existing sanitary sewer network. New connections to the existing sewer main in Valley View Boulevard would be installed. All sewer line sizes and connections are subject to review by the city. No new treatment facilities or expanded entitlements would be required. Therefore, the project would have a less than significant impact on existing wastewater treatment facilities.

Domestic Water –The City relies on two major water supply sources, including imported water from the Metropolitan Water District (MWD) and local groundwater from the Orange County Groundwater Basin, managed by the Orange County Water District (OCWD). As of 2015, the city relies on approximately 73 percent groundwater and 27 percent imported water (Arcadis, 2016, p. 3-14) for drinking water supply. The City's projected water supply from 2020 through 2040 is provided in **Table 4.19-1**.

37 Secondary treatment capacity refers to the amount of waste water that can be treated during the secondary process that consists of aeration and a filter to remove solids within the wastewater.

Table 4.19-1
CITY OF BUENA PARK PROJECTED WATER SUPPLY AND DEMAND ASSESSMENT

	2020	2025	2030	2035	2040
Supply Totals (afy)	13,770	14,782	14,883	14,879	14,900
Demand Totals (afy)	13,770	14,782	14,883	14,879	14,900
Difference	0	0	0	0	0

Source: City of Buena Park Urban Water Management Plan 2015 (Arcadis 2016, p. 3.21)
afy: acre-feet per year

The City's 2015 Urban Water Management Plan (UWMP) states that the City of Buena Park will be able to have adequate water supplies for all users, including multi-family residences, through the year 2040 (Arcadis, 2016, p. 2-8). The proposed project would connect to the existing six-inch water main in Valley View Boulevard. As analyzed in threshold 4.19 b), the project would result in a nominal increase in water demand compared to existing conditions.

Fire Water – Water connections are required to provide water to the proposed fire hydrants on the project site (to be located between Casitas 2 and 3 and south of Building 1, near the existing church). The fire water line would be connected to the new hydrants from the existing six-inch water line in Valley View Boulevard.

Irrigation Line – A new line would be connected from the existing six-inch water line in Valley View Boulevard to the project site to provide irrigation to the proposed project.

Stormwater - The proposed development would maintain existing drainage patterns and discharge locations. The project includes three proposed bioretention basins on site. The project proposes a 830-square-foot bioretention basin along the western boundary of the project site, along the project site's frontage with Valley View Street. A second 2,275-square-foot bioretention basin is proposed adjacent to the existing church parking lot, south of Building 1 as well as an adjacent 1,600-square-foot gravel storage area. A third 800-square-foot bioretention basin is proposed adjacent to the northern project boundary, north of Building 1. Therefore, impacts regarding stormwater would be less than significant. Refer to **Section 4.10** of this document for a discussion of the proposed project impacts regarding hydrology and water quality.

Electric Power: Electric power for the City of Buena Park is provided by SCE (City of Buena Park, 2019d). The proposed project is located in a developed area, and infrastructure for providing electric power to the area is well established. SCE typically utilizes existing utility corridors to reduce environmental impacts, and has energy-efficiency programs to reduce energy usage and maintain reliable service throughout the year (Southern California Edison, 2018, p. 45). The project would be constructed in accordance with all applicable California Building Standards Code (California Code of Regulations, Title 24), and would not necessitate the construction or relocation of electric power facilities. Therefore, a less than significant impact would occur.

Natural Gas: SoCalGas is the primary distributor of retail and wholesale natural gas across Southern California, including the City of Buena Park. SoCalGas provides services to residential, commercial, and industrial consumers, and also provides gas for electric generation customers.

In its 2018 California Gas Report, SoCalGas analyzed an 18-year demand period, from 2018-2035, to determine its ability to meet projected demand (California Gas and Electric Utilities, 2018, p. 63). SoCalGas expects total gas demand to decline 0.74 percent annually from 2018 to 2035 as a result of energy-efficiency standards and programs, renewable electricity goals, modest economic growth in its service region, and advanced metering infrastructure (California Gas and Electric Utilities, 2018, p. 66). Moreover, SoCalGas plans on implementing aggressive energy-efficiency programs that will result in natural gas savings across all sectors that will ensure longevity of its natural gas supplies and adequate generation rates (California Gas and Electric Utilities, 2018, p. 78). Therefore, anticipated natural gas supply is adequate to meet demand in the SoCalGas region, and the proposed project is not expected to impact this determination. Thus, no natural gas facilities would have to be constructed or relocated, and a less than significant impact would occur.

Telecommunications Facilities: Cable services, including internet, phone, and television, are provided in the city of Buena Park by Spectrum Cable and AT&T U-Verse (City of Buena Park, 2019a). The proposed project would not interfere with operation of Spectrum or AT&T's facilities, and a less than significant impact would occur.

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

Less than Significant Impact

As detailed in threshold 4.19 a) above, the city relies on imported water and local groundwater. The project would result in the construction of 66 residential units. **Table 4.19-2** shows the estimated water demand for the project.

Table 4.19-2
ESTIMATED RANGE IN PROJECT WATER DEMAND

Unit Water Demand Factor Gallons Per Day (GDP)/per person[1]	Total Project Estimated Water Demand (gallons per year) [2]	Total Project Estimated Water Demand (acre-feet per year)
198	5,058,900-14,887,620	15.53-45.69

[1] City of Buena Park baseline water use is 198 gallons per capita per day (i.e. per person) (Arcadis, 2015 City of Buena Park Urban Water Management Plan, p. 2-11)

[2] Based on estimated project population of 70 to 206, 198 gallons per day water demand per person, and 365 days per year.

Although an increase in the demand for domestic water would occur as a result of the project, the increase would not be significant because adequate water supplies and facilities are available to serve the project. The project's estimated water demand of between approximately 5,058,900-14,887,620 gallons per year (13,860 to 40,788 gallons per day) would be less than 0.01 percent of the city's current (2020) water supply, which is approximately 13,770 acre feet per year or 12,293,062gallons per day. Therefore, less than significant impacts would occur.

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

Less than Significant Impact

As detailed under threshold 4.19a) above, the volume of wastewater anticipated to be generated by the proposed project would comprise a fraction of the existing capacity of OCSD Treatment Plant No. 2. Therefore, the project's wastewater generation would be within the existing capacity of the wastewater treatment provider and less than significant impacts would occur.

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

Less than Significant Impact

The city contracts with Park Disposal for collection and disposal of the city's solid waste. The waste stream generated by the City of Buena Park is processed and sorted at the CR&R, Inc. Materials Recovery Facility located at 11292 Western Avenue in the City of Stanton. (RBF Consulting, 2010b, p. 5.17-2). The majority of the city's solid waste is disposed at one of Orange County's three active landfills: Frank R. Bowerman Landfill in Irvine; Olinda Alpha Landfill in Brea; Prima Deshecha Landfill in San Juan Capistrano (RBF Consulting, 2010b, p. 5.17-1).

The Frank R. Bowerman landfill is 725 acres, with a maximum permitted capacity of 11,500 tons per day (CalRecycle, 2019a). This landfill expected to close in December 2053. Olinda Alpha has 420 acres dedicated for disposal use with a maximum permitted capacity of 8,000 tons per day and it is expected to close in December 2021 (CalRecycle, 2019b). Prima Deshecha has 697 acres dedicated for waste disposal with a maximum permitted capacity of 4,000 tons per day and is expected to close at the year end of 2102 (CalRecycle, 2019c).

Construction

Project construction would generate solid waste requiring disposal at local landfills. Materials generated during construction of the project would include paper, cardboard, metal, plastics, glass, concrete, lumber scraps and other materials. During construction, bulk solid waste, excess building material, fill, etc., would be disposed of in a manner consistent with State of California Integrated Waste Management Act of 1989.

Operation

The City of Buena Park Source Reduction and Recycling Element (SRRE) regulates recycling during project operation. Pursuant to the California Integrated Waste Management Act (AB 939), which was passed in 1989, the California Integrated Waste Management Board required all cities and counties within the State to prepare integrated waste management plans to attain solid waste reduction of 50 percent by the end of year 2000. In May 1995, the City of Buena Park adopted a SRRE and a Household Hazardous Waste Element (HHWE), in compliance with the requirements of AB 939. The SRRE describes policies and programs that will be implemented by the city to achieve the State's mandate of 50 percent waste disposal reductions by the year 2000. The HHWE is required to be prepared by every city, county and regional agency. This document must specify how the jurisdiction will safely collect and dispose of household hazardous wastes generated by its residents. (RBF Consulting, 2010b, p. 5.17-4). As shown in **Table 4.19-3**, occupancy of the 66 residential units would generate an estimated 147.31 tons of waste annually. This estimate does not account for diversion from landfills.

Table 4.19-3
ESTIMATED PROJECT-GENERATED SOLID WASTE

Land Use	Generation Rate*	Approximate Waste (pounds/year)	Approximate Waste (tons/year)
Residential	12.23 pounds per dwelling unit per day	294,621	147.31

*(RBF Consulting, 2010b, p. 5.17-6)

As discussed above, the current permitted solid waste disposal includes 11,500 tons per day at the Frank R. Bowerman Landfill, 8,000 tons per day at Olinda Alpha Landfill and 4,000 tons per day at the Prima Deshecha Landfill. The project's estimated generation of approximately 12.23 pounds per dwelling unit per day (or a total of approximately 808 pounds per day) during project operation represents a fraction of the total daily capacity at the three landfills. Since sufficient permitted landfill capacity exists to support the project, no adverse impact on either solid waste collection service or the landfill disposal system would occur. Therefore, project impacts on existing solid waste disposal facilities would be less than significant.

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

Less than Significant Impact

In 1989, the California Legislature enacted the California Integrated Waste Management Act (AB 939), in an effort to address solid waste problems and capacities in a comprehensive manner. The law required each city and county to divert 50 percent of its waste from landfills by the year 2000.

OC Waste and Recycling outlines the goals, policies, and programs the county and its cities would implement to create an integrated and cost-effective waste management system that complies with the provisions of AB 939 and its diversion mandates. As a result, the city has developed a SRRE, started in 1992, that aims at recycling, composting, special waste disposal, and education and public information programs. This program's objective was to divert 50 percent of the solid waste generated by the city by the year 2000. The most recent California Integrated Waste Management Board (CIWMB) approved solid waste diversion rate available for the City of Buena Park was 53 percent in 2006 (RBF Consulting, 2010b, p. 5.17-4).

The project would comply with the City's SRRE program for waste reduction procedures and other applicable local, state, and federal solid waste disposal standards, thereby ensuring that the solid waste stream to regional landfills is reduced in accordance with existing regulations. Therefore, less than significant impacts are anticipated.

4.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				**x**
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?				**X**
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?				**X**
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?				**X**

As depicted in **Figure 4.9-3** and **Figure 4.9-4** in **Section 4.9**, *Hazards and Hazardous Materials*, the project site is not located in a Very High Fire Hazard Severity Zone (VHFHSZ) for either Local Responsibility Area (LRA) or State Responsibility Area (SRA), respectively. The nearest VHFHSZ is located in the City of Fullerton, California, over 4.5 miles northeast of the project site.

a) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact

As noted above, the project site is not located in or near an area classified as Very High Fire Hazard Severity Zones. The city's 2010 General Plan Update EIR states, "There are currently no wilderness areas within Buena Park or in the surrounding areas. Thus, the risk of wildland fires within the city is not present. Buena Park and surrounding jurisdictions are predominately urbanized. Therefore, fire hazards within the city are primarily related to structural fires" (RBF Consulting, 2010b, p. 5.13-3). The city's Emergency Operations Plan anticipates that all major streets within the City would serve as evacuation routes. However, because the project site is not located in or near an area classified as Very High Fire Hazard Severity Zones, the project would have no impact in this regard.

b) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project due to slope, prevailing winds, and other

factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No Impact

The project site is not located in a VHFHSZ in either LRA or SRA. No slopes are located on the project site which could exacerbate wildfire risks. The project would not expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Therefore, the project would have no impact in this regard.

c) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

No Impact

The project site is not located in a VHFHSZ in either a LRA or SRA. The project would not require the installation or maintenance of associated infrastructure that may exacerbate fire risk. Neither construction nor operation of the project would result in significant temporary or ongoing impacts to the environment. The project would be constructed in compliance with applicable building and fire codes. Therefore, the project would have no impact in this regard.

d) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact

The project site is not located in a VHFHSZ in either a LRA or SRA. The proposed project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. The project site is flat, is not located in an area with high slopes or unstable ground conditions, and is not within a landslide hazard zone (RBF Consulting, 2010a, Exhibit SAF-2). Therefore, the proposed project would have no impact in this regard.

4.21 Mandatory Findings of Significance

Would the project have:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		**X**		
b) 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)?		**X**		
c) Environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		**X**		

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

Less Than Significant Impact with Mitigation Incorporated

Considering that the project is located in a highly urbanized area with developed and landscaped substrates, optimal habitat for special-status plant and wildlife species is lacking. Thus, with the implementation of mitigation measure **BIO-1** (to protect nesting bird species from noise and dust disturbances) the proposed project would have less than significant impacts on species. As detailed in **Section 4.5**, grading activities associated with development of the project would cause new subsurface disturbance and could result in the unanticipated discovery of unique archeological resources. With the implementation of mitigation measure **CUL-1**, potential project impacts on historical resources would be less than significant.

b) Would the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Less than Significant Impact with Mitigation Incorporated

Regarding cumulative projects, the City of Buena Park website does not list any current or upcoming projects for 2020 (City of Buena Park Current Construction, 2020); therefore, it is not anticipated that any significant cumulative impacts would occur with construction of the proposed project. The proposed project includes mitigation, as warranted to reduce potentially significant environmental impacts. Therefore, a less than significant impact is anticipated regarding cumulatively considerable impacts.

The project would generate new short-term construction jobs in the project area. Due to the relatively small size of this project, and its location within an existing urban area, the project is not expected to induce substantial growth in the region. The project would utilize existing infrastructure for its operation. Therefore, indirect population growth resulting solely from the project would be less than significant.

Because the project would not increase environmental impacts after mitigation measures are incorporated, any incremental contribution to cumulative impacts would be negligible and would be less than significant.

The proposed project would be consistent with regional plans and programs that address environmental factors such as air quality, water quality, and other applicable regulations that have been adopted by public agencies with jurisdiction over the project for the purpose of avoiding or mitigating environmental effects.

Sections 4.3 and **4.13** of this document address potential impacts related to Air Quality and Noise, respectively. The proposed project would have less than significant air quality and greenhouse gas impacts. With the incorporation of mitigation, project impacts associated with noise levels during project construction would be reduced to less than significant levels. As detailed in **Section 4.3**, construction and operational air quality impacts would be less than significant and do not warrant mitigation. As detailed in **Section 4.13**, operational noises associated with the project site were found to be less than significant and do not warrant mitigation.

The project would generate new short-term construction jobs in the project area. Due to the relatively small size of this project, and its location within an existing urban area, the project would not induce substantial population growth in the region. The project would utilize existing infrastructure for its operation and it has been specifically designed to house seniors. Therefore, indirect population growth resulting solely from the project is expected to be less than significant.

Because the project would not increase environmental impacts after mitigation measures are incorporated, the incremental contribution to cumulative impacts is anticipated to be less than significant with mitigation incorporated.

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

Less than Significant Impact with Mitigation Incorporated

A structure called "The Barn" is located on the northern part of the project site and is a small stand-alone building, located northeast of the existing church and administration buildings onsite. "The Barn" would be demolished as part of the proposed project. Based on aerial photographs "The Barn" was present sometime after 1994 and prior to 2002. Therefore, it is unlikely but unconfirmed as to whether or not "The Barn" was constructed with Asbestos-Containing Materials (ACMs) and Lead-Based Paint (LBP) that can cause adverse health effects when airborne. Mitigation measure **HAZ-1** is recommended to reduce potential impacts from ACM and LBP. With implantation of **MM HAZ-1** the project would have less than significant impacts regarding create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials and regarding handing hazardous or acutely hazardous materials, substances, or waste within one quarter mile of a school.

Regarding Noise, as detailed in **Section 4.13**, with implementation of mitigation measures **N-1** and **N-2**, the proposed project would result in less than significant construction noise impacts to sensitive receivers. Roadway noise associated with project operation would not expose a land use to noise levels that are considered incompatible with or in excess of adopted standards, and impacts would be less than significant. Noise levels associated with operation of the project are expected to be comparable to those of nearby residential areas. Noise from onsite sources would be less than significant.

Regarding emergency services such a police and fire, based on the response from the OCFA, the proposed project would not require the construction of new fire department facilities and the project should have a less than significant impact on OCFA's level of service and/or response times. The Police Department does not anticipate any potential environmental impacts from the proposed project related to providing police services to the project site and the proposed project would likely not have potentially significant impacts on the Police Department's level of service and/or response times (Worrall, 2020). Therefore, the project would have a less than significant impact on police services and no mitigation is required.

During the construction phase, the project could temporarily impact street traffic adjacent to the project due to construction activities in the right-of-way (ROW). Project construction could reduce the number of lanes or temporarily close a portion of Valley View Street at San Rafael Drive and the frontage roads along Valley View Street. Mitigation measure **TRANS-1** is recommended to address potential hazards impacts during the construction phase. With implementation of mitigation measure **TRANS-1**, the project would have less than significant construction-phase impacts regarding a substantial increase in hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses and a less than significant impact regarding emergency access during the project construction phase.

As discussed in **Sections 4.1** through **4.20** of this document, after the implementation of mitigation measures, potential adverse environmental effects were found to be less than significant on human beings, either directly or indirectly. Therefore, less than significant impacts would occur.

5.0 REFERENCES

Albus-Keefe & Associates, Inc. 2020. Preliminary Geotechnical Investigation, Proposed Senior Housing Development, 8300 Valley View Street, Buena Park, California. Prepared for National Community Renaissance. January 20, 2020.

ARB, 2008. Climate Change Scoping Plan: a framework for change. California Air Resources Board. December 2008.

ARB, 2011. Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document. California Air Resources Board. August 19, 2011.

ARB, 2014. First Update to the Climate Change Scoping Plan, Building on the Framework. California Air Resources Board. May 2014.

ARB, 2017. California's 2017 Climate Change Scoping Plan. California Air Resources Board. November 2017. URL: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf.

ARB, 2017. Letter from ARB (Richard Corey) to USEPA (Alexis Strauss) regarding submittal of South Coast 2016 Air Quality Management Plan. California Air Resources Board. March 10, 2017.

ARB, 2019. Ambient Air Quality Standards. California Air Resources Board. https://ww3.arb.ca.gov/research/aaqs/aaqs2.pdf. Accessed November 2019.

ARB, 2020. iADAM Air Quality Data Statistics. California Air Resources Board. http://www.arb.ca.gov/adam. Accessed February 2020.

Arcadis U.S., Inc. (Arcadis), 2015. City of Buena Park Final 2015 Urban Water Management Plan. Accessed online at: http://www.buenapark.com/home/showdocument?id=9566. Accessed on December 23, 2019.

Blumberg, William. OCFA Management Assistant. 2020 email correspondence between William Blumberg and Victor Paitimusa of UltraSystems on April 24, 2020.

Bryant, William A. 1985a. Fault Evaluation Report (FER-172) for the Southern Newport-Inglewood Fault Zone, Southern Los Angeles and Northern Orange Counties, California. Prepared for the California Department of Mines and Geology, October 30, 1985. Revised on June 17, 1986. Available at https://maps.conservation.ca.gov/cgs/informationwarehouse/regulatorymaps/. Downloaded on December 2, 2019.

Bryant, William A. 1985b. Fault Evaluation Report (FER 173) for the Northern Newport-Inglewood Fault Zone, Los Angeles County, California. Prepared for the California Division of Mines and Geology, November 15, 1985. Available at https://maps.conservation.ca.gov/cgs/informationwarehouse/regulatorymaps/. Downloaded on January 16, 2020.

Buena Park Library District, 2019. Accessed online at https://buenapark.lib.ca.us/ in December 2019.

Buena Park School District, 2019. Accessed online at https://www.bpsd.us/apps/pages/index.jsp?uREC_ID=838535&type=d&pREC_ID=1220560 in December 2019.

CalEPA, 2006. Climate Action Team Report to Governor Schwarzenegger and the California Legislature. California Environmental Protection Agency, Climate Action Team. March 2006.

California Seismic Safety Commission, 2020. Accessed online at https://ssc.ca.gov/disasters/tsunami.html , accessed on April 20, 2020.

CalRecycle, 2019a. Accessed online at https://www2.calrecycle.ca.gov/SWFacilities/Directory/30-AB-0360/Detail , accessed on December 23, 2019.

CalRecycle, 2019b. Accessed online at https://www2.calrecycle.ca.gov/swfacilities/Directory/30-AB-0035/Inspection/356942 , accessed on December 23, 2019.

CalRecycle, 2019c. Accessed online at https://www2.calrecycle.ca.gov/SWFacilities/Directory/30-AB-0019/Detail , accessed on December 23, 2019.

CAPCOA, 2008. CEQA & Climate Change. California Air Pollution Control Officers Association. January 2008.

CDFW (California Department of Fish and Wildlife), 2019b. Natural Diversity Database. August 2019. Special Animals List, Periodic publication. 67 pp. Accessed on February 11, 2020.

CDFW (California Department of Fish and Wildlife). 2019a. California Natural Diversity Database (CNDDB). Available at https://map.dfg.ca.gov/rarefind/view/RareFind.aspx. Accessed on January 15, 2020.

CDFW, 2020. California Natural Diversity Database. Available online at https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data. Accessed on January 22, 2020.

CGS (California Geological Survey), 1986a. Earthquake Zones of Required Investigation, Los Alamitos Quadrangle [map]. Scale 1:24,000. Revised 1999. Available at https://maps.conservation.ca.gov/cgs/informationwarehouse/regulatorymaps/. Downloaded on January 16, 2020.

CGS (California Geological Survey). 2019. Alquist-Priolo Earthquake Fault Zones. Available at https://www.conservation.ca.gov/cgs/alquist-priolo. Accessed on December 2, 2019.

CGS. 1986b. Earthquake Zones of Required Investigation, Long Beach Quadrangle [map]. Scale 1:24,000. Available at https://maps.conservation.ca.gov/cgs/informationwarehouse/regulatorymaps/. Revised 1999. Downloaded on December 2, 2019.

CGS, 2020. Tsunami Zones. Accessed online at https://www.conservation.ca.gov/cgs/tsunami/maps/orange , accessed on April 20, 2020.

Chico, T. and Koizumi, J., 2003. Final Localized Significance Threshold Methodology. South Coast Air Quality Management District, Diamond Bar, California. June 2003. Revised June 2008.

City of Buena Park, 2010. Buena Park's 2035 General Plan. Available at: http://www.buenapark.com/city-departments/community-development/planning-division/general-plan/2035-general-plan. Accessed on April 17, 2020.

City of Buena Park, 2013. Zoning Map. Accessed online at http://www.buenapark.com/home/showdocument?id=10124, on December 17, 2019.

City of Buena Park, 2019a. Utility Services. Accessed online at http://www.buenapark.com/residents/utility-companies , accessed on December 24, 2019.

City of Buena Park, 2019b. Fire Services. Accessed online at: http://www.buenapark.com/city-departments/fire-services , accessed on December 20, 2019.

City of Buena Park, 2019c. Police Department. Accessed online at http://www.buenapark.com/city-departments/police/about-us/divisions/operations in December 2019.

City of Buena Park, 2019d. Community Services. Accessed online at http://www.buenapark.com/city-departments/community-services/parks/park-descriptions in December 2019

City of Buena Park, 2020. Buena Park 2035 General Plan. City of Buena Park. December 2010. Available at: http://www.buenapark.com/city-departments/community-development/planning-division/general-plan/2035-general-plan. Accessed on April 17, 2020.

City of Buena Park. 2010. Buena Park's 2035 General Plan. Chapter 5: Conservation & Sustainability Element. Available at http://www.buenapark.com/home/showdocument?id=2762. Accessed on February 14, 2020.

City of Buena Park Current Construction, 2020. Website: http://www.buenapark.com/city-departments/public-works/projects/current-construction, accessed July 8, 2020.

City of Buena Park Municipal Code, 2020. Accessed online at http://qcode.us/codes/buenapark/, accessed on January 20, 2020.

City of Buena Park, 2020. http://www.buenapark.com/home/showdocument?id=10319

City of Buena Park. 2020a. Buena Park Municipal Code. Title 13: Utilities (Chapter 13.30 Water Efficient Landscaping. Available at http://qcode.us/codes/buenapark/. Accessed on February 14, 2020.

City of Buena Park. 2020b. Urban Forest Management Plan. Available at http://www.buenapark.com/home/showdocument?id=11047. Accessed on February 14, 2020.

City of Buena Park. 2020c. Buena Park Municipal Code. Title 12: Streets, Sidewalks and Public Property. Available at http://qcode.us/codes/buenapark/. Accessed on February 14, 2020.

CNPS (California Native Plant Society), Rare Plant Program. 2020. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Available at http://www.rareplants.cnps.org. Accessed on February 11, 2020.

CNRA (California Natural Resources Agency), 2007. The California Environmental Quality Act (CEQA). Guidelines for Implementation of the California Environmental Quality Act. Electronic document.

Converse Consultants (Converse) 2019. Phase I Environmental Site Assessment Report. December 12.

Cornell Lab of Ornithology. 2015. All About Birds. Available at http://www.allaboutbirds.org/guide. Accessed on February 11, 2020.

Crawford, K.A., 2014. St. Joseph's Episcopal Church. Primary Record 30-177528. On file, South Central Coastal Information Center, California State University Fullerton.

Day, Robert W. 2000. Geotechnical Engineer's Portable Handbook. McGraw-Hill, USA.

Devcon Construction. 2018. Google Caribbean Campus Construction Noise Evaluation. Available at https://files.ceqanet.opr.ca.gov/38889-7/attachment/DSP0fr8qNg9enDhdrHbkeK2m9n5MNDqsl0DYQSCqUpMUWgEhjPq-TOIGJPdOU3twv4g_l_VYSdnpSOZ-0. Accessed on August 3, 2020.

DOC, 1995. Accessed online at file:///C:/Users/vpaitimusa/Downloads/OFR_94-15_Text.pdf, accessed on December 20, 2019.

DOC, 2016. Important Farmland Finder. Accessed online at http://maps.conservation.ca.gov/dlrp/ciff/, accessed at December 20, 2019.

DOC, 2019. Accessed online at https://maps.conservation.ca.gov/doggr/wellfinder/#openModal/-118.02671/33.87075/17 , accessed on December 20, 2019.

DOF (Department of Finance), 2019. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2019 with 2010. Accessed online at http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/ , on December 20, 2019.

Dolan, James F., Eldon M. Gath, Lisa B. Grant, Mark Legg, Scott Lindvall, Karl Mueller, Michael Oskin, Daniel F. Ponti, Charles M. Rubin, Thomas K. Rockwell, John H. Shaw, Jerome A. Treiman, Chris Walls, and Robert S. Yeats. 2001. Active faults in the Los Angeles metropolitan region, SCEC Special Publication Series Southern California Earthquake Center, 1, Los Angeles. Available at https://www.researchgate.net. Downloaded on December 2, 2019.

eBird. 2017. eBird: An online database of bird distribution and abundance [web application]. eBird, Cornell Lab of Ornithology, Ithaca, New York. Available at http://www.ebird.org. Accessed on February 11, 2020.

EPA, 2019a. Household Hazardous Waste. Accessed online at https://www.epa.gov/hw/household-hazardous-waste-hhw , accessed on January 13, 2020.

EPA, 2019b. Cortese List. Accessed online at https://calepa.ca.gov/sitecleanup/corteselist/, accessed on January 13, 2020.

EPRI (Electric Power Research Institute), 2000. Light Trespass Research (TR-114914). April 2000.

ERSL, 2020. Recent Global Monthly Mean CO_2. Trends in Atmospheric Carbon Dioxide. Earth System Research Laboratory. National Oceanic and Atmospheric Administration. https://www.esrl.noaa.gov/gmd/ccgg/trends/global.html. Accessed April 2020.

Fehr & Peers – Proposed Focused Traffic Study Scope of Services for the Orchard View Gardens Project – 8300 Valley View Street, Buena Park, CA 90620. Fehr & Peers. December 12, 2019.

FEMA (Federal Emergency Management Agency), 2009. Flood Map Service Center. Available at https://msc.fema.gov/portal/advanceSearch. Accessed on April 20, 2020.

FTA (Federal Transit Administration). 2018. Transit Noise and Vibration Impact Assessment Manual. Office of Planning and Environment, Washington, DC, FTA Report No. 0123. September 2018. Internet: 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.

Joint Union High School District (FJUHSD), 2020. District Overview. Accessed online at: https://www.fjuhsd.org/Page/569, accessed on July 31, 2020.

Google Earth v. 7.3.2.5776 (March 5, 2019). Buena Park, Orange County, California. 33.881473° -118.016074°. Eye alt. 3,847 feet. Google and Europa Technologies 2018. https://www.google.com/earth/. Accessed on January 16 and 31, 2020.

ICF Jones & Stokes, 2009. Technical Noise Supplement. Prepared by ICF Jones & Stokes, Sacramento, California for California Department of Transportation, Division of Environmental Analysis, Sacramento, California. November 2009.

ILE (Institution of Lighting Engineers), 2005. Guidance Notes for the Reduction of Obtrusive Light. Accessed online at: https://www.theilp.org.uk/documents/obtrusive-light/. Accessed on January 24, 2020.

IPCC, 2007. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. 2007.

IPCC, 2007a. Historical Overview of Climate Change. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B., Avery, M., Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

IPCC, 2007b. Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Intergovernmental Panel on Climate Change. Core Writing Team; Pachauri, R.K; Reisinger, A., eds., 2007. ISBN 92-9169-122-4.

Jepson Flora Project (eds.). 2020. *Jepson eFlora*, Available at http://ucjeps.berkeley.edu/eflora/. Accessed on February 11, 2020.

La Palma Intercommunity Hospital, 2020. Accessed online at https://www.lapalmaintercommunityhospital.com/ , accessed on April 29, 2020.

LARWQCB (Los Angeles Regional Water Quality Control Board). 1994 (as amended). Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties. Available at https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/basin_plan_documentation.html. Downloaded on December 23, 2019.

LARWQCB (Los Angeles Regional Water Quality Control Board). 2019. Basin Plan Documentation: Basin Plan for the Coastal Watersheds of Los Angeles and Orange Counties. Available at https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/. Accessed on December 23, 2019.

McLeod, Samuel A, Ph. D, 2019. Paleontological Records Search for the proposed Affordable Housing Project, UltraSystems Environmental Project No. 7037, in the City of Buena Park, Orange County, project area. Natural History Museum Los Angeles County.

Nafis, Gary. 2020. A guide to the Amphibians and Reptiles of California. http://www.californiaherps.com/. Accessed on February 13, 2020.

NASA, 2018. Global Climate Change: Vital Signs of the Planet. National Air and Space Administration. Accessed online at: https://climate.nasa.gov/evidence/. Accessed in January 2019.

NRCS (Natural Resources Conservation Service), 2019. State Soil Data Access (SDA) Hydric Soils List for California. Available at https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcseprd1316619.html#top. Accessed on January 15, 2020.

Nugent, Ramon E. 2015. Mesa 500 Kilovolt (kV) Substation Project Technical Noise Report. Prepared by Acentech Incorporated for Insignia Environmental. Report No. 4403. Available at https://www.cpuc.ca.gov/Environment/info/ene/mesa/attachment/DraftEIR/38AppendixJNoiseBackgroundReports.pdf. Accessed August 3, 2020.

Orange County Fire Authority (OCFA), Operations Division 7, 2019. Accessed online at: https://www.ocfa.org/AboutUs/Departments/OperationsDirectory/Division7.aspx, accessed on December 20, 2019.

Orange County Flood Control District (OCFCD). 2012, Base Map of Drainage Facilities in Orange County. Sheet 12. https://www.ocgov.com/civicax/filebank/blobdload.aspx?BlobID=26090. Accessed on July 17, 2020.

Orange County Transportation Authority (OCTA), 2019a. Congestion Management Program Preparation Manual. Orange County Transportation Authority. Accessed online at https://www.octa.net/pdf/2019CMP.pdf?n=201911, accessed on December 12, 2019.

OCTA, 2019b. Orange County Master Plan Arterial Highways. Accessed online at https://www.octa.net/News-and-Resources/Open-Data/MPAH-Overview/, accessed on June 1, 2020.

OCTA, 2020. OC GO. Accessed online at http://www.octa.net/About-OC-Go/OC-Go-(2011-2041)/, accessed on June 1, 2020.

Orange County Sanitation District (OCSD), 2019. Accessed online at: https://www.ocsd.com/services/regional-sewer-service, accessed on December 24, 2019.

Orange County Transportation Authority (OCTA), 2019. Congestion Management Program Preparation Manual. Orange County Transportation Authority. Revised November 2019. https://www.octa.net/pdf/2019CMP.pdf?n=201911 .

RBF Consulting, 2010a. City of Buena Park 2035 General Plan. Accessed online at http://www.buenapark.com/city-departments/community-development/planning-division/general-plan/2035-general-plan, accessed on January 13, 2020.

RBF Consulting, 2010b. City of Buena Park Final and Draft 2035 General Plan EIR. Accessed online at http://www.buenapark.com/city-departments/community-development/planning-division/general-plan/2035-general-plan-eir, accessed on January 13, 2020.

RRM Design Group. 2020. Preliminary Water Quality Management Plan for 8300 Valley View Street Buena Park. Prepared for National CORE, Rancho Cucamonga California. August 5, 2020.

RWQCB (California Regional Water Quality Control Board, Santa Ana Region), 2009 (as amended). Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and The Incorporated Cities of Orange County within the Santa Ana Region Areawide Urban Storm Water Runoff, Orange County (MS4 Permit). Order No. R8-2009-0030, NPDES No. CAS618030.

SARWQCB (Santa Ana Regional Water Quality Control Board. 1995 (as amended). Water Quality Control Plan [Basin Plan] for the Santa Ana River Basin. Available at https://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/. Downloaded on December 23, 2019.

Saucedo, George J., H. Gary Greene, Michael P Kennedy, and Stephen P Bezore, 2016. Geologic Map of the Long Beach 30'x 60' Quadrangle, California.

Sawyer, J.O., T. Keeler-Wolf, J.M. Evens, 2009. *A Manual of California Vegetation, Second Edition*. California Native Plant Society Press. Sacramento, CA.

SCAG, 2016. Demographics & Growth Forecast: The 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy. Southern California Association of Governments. 2016. Accessed on http://www.scag.ca.gov/Documents/2016_2040RTPSCS_FinalGrowthForecastbyJurisdiction.pdf , on December 20, 2019.

SCAQMD, 2008. Final Localized Significance Threshold Methodology. South Coast Air Quality Management District. Revised July 2008.

SCAQMD, 2017. Final 2016 Air Quality Management Plan. South Coast Air Quality Management District. March 10, 2017.

SCAQMD 2008a - Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold. South Coast Air Quality Management District. October 2008.

SCAQMD 2008b - Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #15. September 28, 2010. South Coast Air Quality Management Board. September 28, 2010.

SCEDC (Southern California Earthquake Data Center). 2020. Los Alamitos Fault. Available at https://scedc.caltech.edu/significant/losalamitos.html. Accessed on January 16, 2020.

Shaw, John H., Andreas Plesch, James F. Dolan, Thomas L. Pratt, and Patricia Fiore. 2002. Puente Hills Blind-Thrust System, Los Angeles, California. Bulletin of the Seismological Society of America, Vol. 92, No. 8, pp. 2946–2960, December 2002.

Smith, Drew P. 1977. Fault Evaluation Report (FER) 42. Prepared for the California Division of Mines and Geology, November 30, 1977. Available at https://maps.conservation.ca.gov/cgs/informationwarehouse/regulatorymaps/. Downloaded on January 17, 2020.

Soil Survey Staff (USDA Natural Resources Conservation Service). 2019. Web Soil Survey: Custom Soil Resource Report for Orange County and Part of Riverside County, California. Available at https://websoilsurvey.sc.egov.usda.gov/. Downloaded on December 2, 2019.

Soil Survey Staff (USDA Natural Resources Conservation Service). 2020. Web Soil Survey: Custom Soil Resource Report for Orange County and Part of Riverside County, California. Available at https://websoilsurvey.sc.egov.usda.gov/. Downloaded on January 21, 2020.

Soil Survey Staff, 2019. Natural Resources Conservation Service, United States Department of Agriculture Web Soil Survey. Available at https://websoilsurvey.sc.egov.usda.gov/. Accessed on February 11, 2020.

Southern California Edison, 2018. 2018 Sustainability Report. Accessed online at https://www.edison.com/content/dam/eix/documents/sustainability/eix-2018-sustainability-report.pdf , accessed on December 24, 2019.

SWRCB (California State Water Resources Control Board), 2020. Construction Stormwater Program. Available at https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html. Accessed on January 22, 2020.

Treiman, J.A., and M. Lundberg, compilers. 1999, Fault number 127b, Newport-Inglewood-Rose Canyon fault zone, south Los Angeles Basin section, in Quaternary fault and fold database of the United States: U.S. Geological Survey website. Available at https://earthquakes.usgs.gov/hazards/qfaults. Accessed on 01/17/2020.

Trifunac, M.D., 2003. Nonlinear soil response as a natural passive isolation mechanism. Paper II: The 1933, Long Beach, California earthquake. Soil Dynamics and Earthquake Engineering 23 (2003) 549–562.

USDA (United States Department of Agriculture), Natural Resources Conservation Service (NRCS). 2006. Land Resource Regions and Major Land Resource Areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296.

USEPA 2011 - "Methane." Climate Change Web Site. U.S. Environmental Protection Agency. http://www.epa.gov/methane/. Updated April 1, 2011.

USEPA (U.S. Environmental Protection Agency), 2020. EPA Waters GeoViewer. Available at https://www.epa.gov/waterdata/waters-geoviewer. Accessed on February 14, 2020.

USEPA, 2017a. What EPA Is Doing about Climate Change. EPA's Web Archive. United States Environmental Protection Agency. https://archive.epa.gov/epa/climatechange/what-epa-doing-about-climate-change.html. January 19, 2017

USEPA, 2017b. News Release: EPA Kicks Off Website Updates. United States Environmental Protection Agency. https://www.epa.gov/newsreleases/epa-kicks-website-updates. April 28, 2017

USEPA, 2020a. 8-Hour Ozone (2015) Nonattainment Area State/Area/County Report: Green Book. U.S. Environmental Protection Agency. Current Data as of December 31, 2019. [https://www3.epa.gov/airquality/greenbook/jncs.html#CA]. Accessed January 2020.

USEPA, 2020b. PM-10 (1987) Maintenance Area (Redesignated from Nonattainment) State/Area/County Report: Green Book. U.S. Environmental Protection Agency Current [https://www3.epa.gov/airquality/greenbook/pmcs.html#CA]. Data as of December 31, 2019. Accessed January 2020.

USEPA, 2020c. PM-2.5 (2012) Designated Area State/Area/County Report: Green Book. U.S. Environmental Protection Agency. Current Data as of October 31, 2019. [https://www3.epa.gov/airquality/greenbook/kbcs.html#CA]. Accessed January 2020.

USEPA, 2020d. Carbon Monoxide (1971) Maintenance Area (Redesignated from Nonattainment) State/Area/County Report: Green Book. U.S. Environmental Protection Agency Current [https://www3.epa.gov/airquality/greenbook/cmcs.html#CA]. Data as of December 31, 2019. Accessed January 2020.

USEPA, 2020e - Nitrogen Dioxide (1971) Maintenance Area (Redesignated from Nonattainment) State/Area/County Report.: Green Book. U.S. Environmental Protection Agency Current [https://www3.epa.gov/airquality/greenbook/nmcs.html]. Data as of December 31, 2019. Accessed January 2020.

USFWS (U.S. Fish and Wildlife Service), 2020c. National Wetlands Inventory. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Available at https://www.fws.gov/wetlands/Data/Mapper.html. Accessed on January 15, 2020.

USFWS (U.S. Fish and Wildlife Service), Carlsbad Fish and Wildlife Office. 2020d. Official Species List: Consultation Code: 08ECAR00-2020-SLI-0579. Carlsbad, California. February 11, 2020.

USFWS (U.S. Fish and Wildlife Service), Environmental Conservation Online System (ECOS). 2020b. Critical Habitat Mapper. Available at https://ecos.fws.gov/ecp/report/table/critical-habitat.html. Accessed on February 14, 2020.

USFWS (U.S. Fish and Wildlife Service), Environmental Conservation Online System (ECOS). 2020e. Species Profile. Available at https://ecos.fws.gov/ecp/species-reports. Accessed on February 11, 2020.

USFWS (U.S. Fish and Wildlife Service), Information for Planning and Consultation (IPaC). 2020a. IPaC Resource List. Available at https://ecos.fws.gov/ipac/. Accessed on February 11, 2020.

USGS (U.S. Department of the Interior, United States Geological Survey), 1974. Los Alamitos Quadrangle, California, 7.5-Minute Series [map]. Scale 1:24,000. Prepared for U.S. Topo: The National Map. Available at https://ngmdb.usgs.gov/topoview/. Downloaded on January 15, 2020.

USGS (U.S. Geological Survey), 1981. Long Beach, California 30 x 60-Minute Quadrangle [map]. Scale 1:100,000 (metric). Available at https://ngmdb.usgs.gov/topoview/. Downloaded on January 15, 2020.

USGS, 2020. National Hydrography Dataset. Available at http://nhd.usgs.gov/. Accessed January 22, 2020.

Vardhan, H., Karmakar, N.C. and Rao, Y.V. 2015. Experimental Study of Sources of Noise from Heavy Earth-Moving Machinery. Noise Control Engineering Journal 53(2). Available at https://www.researchgate.net/publication/243585125_Experimental_study_of_sources_of_noise_from_heavy_earth-moving_machinery. Accessed August 5, 2020.

Voien, Lucinda. 2019. Personal communication from Rev. Lucinda "Cindy" Voien, pastor, St. Joseph's Episcopal Church. December 19, 2019. At St. Joseph's Episcopal Church, Buena Park, California.

Walker, Sarah. 2020 Email correspondence (Data Needs Matrix) between Sarah Walker, Planning Project Manager for National Community Renaissance and Margaret Partridge, Senior Project Manager at UltraSystems on April 20, 2020.

White House, 2017. Executive Order 13783, "Promoting Energy Independence and Economic Growth. 82 FR 16093. March 31, 2017.

Worrall, Gary. Operations Captain. 2020 email correspondence between Gary Worrall and Victor Paitimusa of UltraSystems on April 22, 2020.

WRCC, 2019. Western U.S. Climate Historical Summaries, Western Regional Climate Center. http://www.wrcc.dri.edu/Climsum.html. Accessed November 2019.

6.0 LIST OF PREPARERS

6.1 CEQA Lead Agency

Swati Meshram, PhD, AICP, LEED AP
Acting Planning Manager
City of Buena Park
Community Development Department
6650 Beach Boulevard
Buena Park, CA 90621
Phone: (714) 562-3614

6.2 Project Applicant

Sarah Walker, Planning Project Manager
National Community Renaissance of California
9421 Haven Avenue
Rancho Cucamonga, CA 91730
Phone: (909) 394-7996

6.3 UltraSystems Environmental, Inc.

6.3.1 Environmental Planning Team

Betsy Lindsay, MURP, ENV SP, Project Director
Margaret Partridge, MURP, AICP, LEED Green Associate, ENV SP, Senior Project Manager

6.3.2 Technical Team

Allison Carver, B.S./B.A., Senior Biologist
Billye Breckenridge, B.A., Assistant Project Manager
David Luhrsen, B.S., Word Processing/Administrative Assistant
Hugo Flores, B.S., Staff Biologist
Joe O'Bannon, B.S., Senior Engineer
Margaret Partridge, M.A., MURP, AICP, LEED Green Associate, ENV SP, Project Manager
Michael Lindsay, B.S., Operations Director
Michael Milroy, M.S., Senior Planner
Michael Rogozen, D., Env, Senior Principal Engineer
Stephen O'Neil, M.A., RPA, Cultural Resources Manager
Megan Black Doukakis, M.A., Archaeological Technician
Pam Burgett, A.A., Word Processing/Technical Editing
Robert Reicher, MBA, QA/QC
Victor Paitimusa, B.A., Associate Planner
Sukhmani Brar, B.S., Environmental Intern

7.0 MITIGATION MONITORING AND REPORTING PROGRAM

The Mitigation Monitoring and Reporting Program (MMRP) has been prepared in conformance with § 21081.6 of the Public Resources Code and § 15097 of the CEQA Guidelines, which requires all state and local agencies to establish monitoring or reporting programs whenever approval of a project relies upon a MND or an EIR. The MMRP ensures implementation of the measures being imposed to mitigate or avoid the significant adverse environmental impacts identified through the use of monitoring and reporting. Monitoring is generally an ongoing or periodic process of project oversight; reporting generally consists of a written compliance review that is presented to the decision-making body or authorized staff person.

It is the intent of the MMRP to: (1) provide a framework for document implementation of the required mitigation; (2) identify monitoring/reporting responsibility; (3) provide a record of the monitoring/reporting; and (4) ensure compliance with those MM that are within the responsibility of the City and/or Applicant to implement.

The following table lists impacts, mitigation measures adopted by the City of Buena Park in connection with approval of the proposed project, level of significance after mitigation, responsible and monitoring parties, and the project phase in which the measures are to be implemented.

Only those environmental topics for which mitigation is required are listed in this Mitigation Monitoring and Reporting Program.

Table 7.0-1
MITIGATION MONITORING AND REPORTING PROGRAM

TOPICAL AREA IMPACT	MITIGATION MEASURE	RESPONSIBLE PARTY	MONITORING ACTION	1. ENFORCEMENT AGENCY 2. MONITORING AGENCY 3. MONITORING PHASE
4.1 Aesthetics				
Threshold 4.1d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	**MM AES-1:** During project construction the project applicant shall place construction staging areas as far as possible away from adjacent residences so as to minimize to the maximum extent possible any potential lighting and/or glare impacts to nearby residences. The lighting used during project construction shall consist of the minimum amount of light necessary for safety and security on the project site.	Project Applicant	Construction Staging	1. City of Buena Park 2. City of Buena Park 3. During Project Construction
4.4 Biological Resources				
Threshold 4.2a) 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?	**MM BIO-1:** Nesting Bird Protection. If feasible during project construction, the project applicant shall ensure that vegetation removal shall be restricted to the period between February 1 to September 31, to avoid the breeding season of any migratory species that could be using the area, and to discourage nesting in the vicinity of an upcoming construction area. • If it is not feasible to remove trees outside this window, then, prior to the beginning of vegetation removal and/or earthmoving activities during the period between February 1 and September 31, all vegetation within 250 feet of any grading or earthmoving activity shall be surveyed for active nests by a qualified biologist no more than 30 days prior to disturbance. If active nests are found, and the site is within 250 feet of potential construction activity, a temporary fence shall be erected, where appropriate, around the vegetated nest site at a distance of up to 250 feet, depending on the species, from the edge of the canopy, to prevent construction disturbance and intrusions on the nest area. • No construction vehicles shall be permitted within restricted areas (i.e., protection zones), unless directly related to the management or protection of the legally protected species. • If a legally protected species nest is located in vegetation designated for removal, the removal shall be deferred until after September 31, or until the avian biologist can determine that the young have fledged or the nest has become inactive.	Project Applicant	Field Verification	1. City of Buena Park 2. City of Buena Park 3. During construction

TOPICAL AREA IMPACT	MITIGATION MEASURE	RESPONSIBLE PARTY	MONITORING ACTION	1. ENFORCEMENT AGENCY 2. MONITORING AGENCY 3. MONITORING PHASE
	This mitigation measure will also protect nesting birds from noise and dust impacts potentially caused by project operations.			
4.5 Cultural Resources				
Threshold 4.2a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	**MM CUL 1**: In the event of an unexpected discovery of an historical resource as defined by CEQA Guidelines § 15064.5, during any project related earth disturbing activities, all earth disturbing activities within 30 feet of the find shall be halted and the City of Buena Park shall be notified. The project applicant shall retain an archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards for Archaeology to assess the significance of the find. Impacts on any significant resources shall be mitigated to a less than significant level through data recovery or other methods determined adequate by the archaeologist and that are consistent with the Secretary of the Interior's Standards for Archaeological Documentation. Any identified cultural resources shall be recorded on the appropriate DPR 523 (A L) form and filed with the SCCIC. Construction activities may continue on other parts of the project site while evaluation and treatment of historic archaeological resources takes place.	Project Applicant	Field Verification	1. City of Buena Park 2. City of Buena Park 3. During construction
Threshold 4.2b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	Refer to **MM CUL-1** above.	Project Applicant	Field Verification	1. City of Buena Park 2. City of Buena Park 3. During construction

TOPICAL AREA IMPACT	MITIGATION MEASURE	RESPONSIBLE PARTY	MONITORING ACTION	1. ENFORCEMENT AGENCY 2. MONITORING AGENCY 3. MONITORING PHASE
Threshold 4.2c) Would the project disturb any human remains, including those interred outside of formal cemeteries?	**MM CUL 2:** If human remains are encountered during excavations associated with this project, all work will stop within a 30 foot radius of the discovery and the Orange County Coroner will be notified (§ 5097.98 of the Public Resources Code). The Coroner will determine whether the remains are recent human origin or older Native American ancestry. If the coroner, with the aid of the supervising archaeologist, determines that the remains are prehistoric, they will contact the NAHC. The NAHC will be responsible for designating the Most Likely Descendant (MLD). The MLD (either an individual or sometimes a committee) will be responsible for the ultimate disposition of the remains, as required by § 7050.5 of the California Health and Safety Code. The MLD will make recommendations within 24 hours of their notification by the NAHC. These recommendations may include scientific removal and nondestructive analysis of human remains and items associated with Native American burials (§ 7050.5 of the Health and Safety Code).	Project Applicant	Field Verification	1. City of Buena Park 2. City of Buena Park 3. During construction
4.7 Geology and Soils				
Threshold 4.7a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: seismic-related ground failure, including liquefaction?	**MM GEO-1:** During grading and construction of the proposed project, the project applicant shall follow all recommendations in Section 6.0, Recommendations, on pages 10-22 of the geotechnical report prepared for the project (Albus-Keefe & Associates, Inc., Preliminary Geotechnical Investigation, Proposed Senior Housing Development, 8300 Valley View Street, Buena Park, California, dated January 20, 2020).	Project Applicant	Follow Geotechnical Report Recommendations	1. City of Buena Park 2. City of Buena Park 3. During construction

TOPICAL AREA IMPACT	MITIGATION MEASURE	RESPONSIBLE PARTY	MONITORING ACTION	1. ENFORCEMENT AGENCY 2. MONITORING AGENCY 3. MONITORING PHASE
Threshold 4.7c) 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?	Refer to **MM GEO-1** above.	Project Applicant	Follow Geotechnical Report Recommendations	1. City of Buena Park 2. City of Buena Park 3. During construction
Threshold 4.7d) 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?	Refer to **MM GEO-1** above.	Project Applicant	Follow Geotechnical Report Recommendations	1. City of Buena Park 2. City of Buena Park 3. During construction
Threshold 4.7f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	**MM GEO-2:** If paleontological resources are uncovered during construction activities, the contractor shall halt construction activities in the immediate area and notify the City of Buena Park. The on-call paleontologist shall be notified and afforded the necessary time and funds to recover, analyze, and curate the find(s). Subsequently, the monitor shall remain onsite for the duration of the ground disturbance to ensure the protection of any other resources that may be in the area.	Project Contractor	Field Verification	1. City of Buena Park 2. City of Buena Park 3. During construction

TOPICAL AREA IMPACT	MITIGATION MEASURE	RESPONSIBLE PARTY	MONITORING ACTION	1. ENFORCEMENT AGENCY 2. MONITORING AGENCY 3. MONITORING PHASE
4.9 Hazards and Hazardous Materials				
Threshold 4.9a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	**MM HAZ-1:** Prior to demolition, the existing structure called "The Barn" shall be assessed for the presence of asbestos-containing materials (ACMs) and lead-based paint (LBP). If ACMs and/or LBP are found, the resulting construction debris shall be removed and disposed of at a landfill that can accept hazardous materials, including asbestos and lead-based paint. All ACMs and LBP shall be removed prior to demolition, as required, and in accordance with all applicable laws, including guidelines of the Occupational Safety and Health Administration (OSHA).	Project Applicant	Field Verification	1. City of Buena Park 2. City of Buena Park 3. Prior to demolition
Threshold 4.9c) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Refer to **MM HAZ-1** above.	Project Applicant	Field Verification	1. City of Buena Park 2. City of Buena Park 3. Prior to demolition
4.12 Noise				
Threshold 4.12 a): Exposure of persons to or generation of noise level in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	**MM N-1**: Project applicants shall require by contract specifications that the following construction best management practices (BMPs) be implemented by contractors to reduce construction noise levels: • Ensure that construction equipment is properly muffled according to industry standards and be in good working condition. • Place noise-generating construction equipment and locate construction staging areas away from sensitive uses, where feasible. • Schedule high noise-producing activities between the hours of 8:00 AM and 7:00 PM to minimize disruption on sensitive uses. • Implement noise attenuation measures, which may include, but are not limited to, temporary noise barriers or noise blankets around stationary construction noise sources. • Use electric air compressors and similar power tools rather than diesel equipment, where feasible. • Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than 30 minutes.	Project Applicant	Field Verification	1. City of Buena Park 2. City of Buena Park 3. During construction

TOPICAL AREA IMPACT	MITIGATION MEASURE	RESPONSIBLE PARTY	MONITORING ACTION	1. ENFORCEMENT AGENCY 2. MONITORING AGENCY 3. MONITORING PHASE
	• Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted at all construction entrances to allow for surrounding owners and residents to contact the job superintendent. If the City or the job superintendent receives a complaint, the superintendent shall investigate, take appropriate corrective action, and report the action taken to the reporting party. Contract specifications shall be included in the proposed project construction documents, which shall be reviewed by the City prior to issuance of a grading permit.			
Threshold 4.12 a): Exposure of persons to or generation of noise level in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	**MM N-2:** Project applicants shall require by contract specifications that heavily loaded trucks used during construction would be routed away from residential streets to the extent feasible. Contract specifications shall be included in the proposed project construction documents, which shall be reviewed by the City prior to issuance of a grading permit.	Project Applicant	Field Verification	1. City of Buena Park 2. City of Buena Park 3. Prior to demolition
4.17 Transportation				
Threshold 4.17c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or	**MM TRANS-1:** Prior to the start of construction activity in the public right-of-way, the General Contractor shall submit a detailed Construction Management Plan to be reviewed and approved by the City of Buena Park Traffic Engineer. The Construction Management Plan shall specify that the Construction Manager will schedule truck traffic and employee shifts to avoid creating trips during the peak traffic periods, as is feasible for construction operations. All measures including identified truck routes and designated employee parking areas shall be included in the Construction Management Plan. The Plan shall include but is not limited to the following provisions: a) Identification of permitted hours for construction related deliveries and removal of heavy equipment and material; b) Identification of where construction workers would park their personal vehicles during project construction with a requirement that at no time shall construction worker vehicles block any driveways. If complaints are received by the project applicant or City of Buena Park regarding issues with construction worker vehicle	Project Applicant	Field Verification	1. City of Buena Park 2. City of Buena Park 3. During construction

TOPICAL AREA IMPACT	MITIGATION MEASURE	RESPONSIBLE PARTY	MONITORING ACTION	1. ENFORCEMENT AGENCY 2. MONITORING AGENCY 3. MONITORING PHASE
endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	parking, the project applicant shall identify alternative parking options for construction workers so as not to interfere with adjacent parking availability; c) Identification of how emergency access to and around the project site will be maintained during project construction; d) Identification of haul routes for delivery or removal of heavy and/or oversized equipment or material loads. Where feasible, delivery or removal of oversized equipment or material loads shall be conducted during off-peak hour traffic periods; e) Maintain pedestrian and bicycle connections around the project site and safe crossing locations shall be considered for all pedestrian and bicyclist detours; and f) Maintain the security of the project site by erecting temporary fencing during the construction phase of the project. Any onsite night lighting used during the construction phase of the project shall be in compliance with City of Buena Park lighting requirements.			
Threshold 4.17d) Would the project result in inadequate emergency access.	Refer to **MM TRANS-1** above.	Project Applicant	Field Verification	1. City of Buena Park 2. City of Buena Park 3. During construction

TOPICAL AREA IMPACT	MITIGATION MEASURE	RESPONSIBLE PARTY	MONITORING ACTION	1. ENFORCEMENT AGENCY 2. MONITORING AGENCY 3. MONITORING PHASE
4.18 Tribal Cultural Resources				
Threshold 4.18 b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is determined to be a significant resource to a California Native American tribe pursuant to the criteria set forth in subdivision (c) of Public Resource Code § 5024.1(c)?	**MM TCR 1:** Prior to the commencement of any ground-disturbing activity at the project site, the project applicant shall retain a Native American Monitor approved by the Gabrieleño Band of Mission Indians-Kizh Nation – the tribe that consulted on this project pursuant to Assembly Bill 52 (the "Tribe" or the "Consulting Tribe"). A copy of the executed contract shall be submitted to the City of Buena Park Planning Department prior to the issuance of any permit necessary to commence a ground disturbing activity. The Tribal Monitor will only be present onsite during the construction phases that involve ground-disturbing activities. Ground-disturbing activities are defined by the Tribe as activities that may include, but are not limited to, pavement removal, potholing or auguring, tree removals, boring, grading, excavation, drilling, and trenching, within the project area. The Tribal Monitor will complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The onsite monitoring shall end when all ground-disturbing activities on the project site are completed, or when the Tribal Representatives and Tribal Monitor have indicated that all upcoming ground-disturbing activities at the project site have little to no potential for impacting Tribal Cultural Resources. Upon discovery of any Tribal Cultural Resources, construction activities shall cease in the immediate vicinity of the find (not less than the surrounding 100 feet) until the find can be assessed. All Tribal Cultural Resources unearthed by project activities shall be evaluated by the qualified archaeologist and Tribal monitor approved by the Consulting Tribe. If the resources are Native American in origin, following excavation, analysis and reporting by the consulting archaeologist, the Consulting Tribe may retain it/them in the form and/or manner the Tribe deems appropriate, for educational, cultural and/or historic purposes.	Project Applicant	Field Verification	1. City of Buena Park 2. City of Buena Park 3. Prior to commencement of any ground disturbing activity

TOPICAL AREA IMPACT	MITIGATION MEASURE	RESPONSIBLE PARTY	MONITORING ACTION	1. ENFORCEMENT AGENCY 2. MONITORING AGENCY 3. MONITORING PHASE
Threshold 4.18 b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is determined to be a significant resource to a California Native American tribe pursuant to the criteria set forth in subdivision (c) of Public Resource Code § 5024.1(c)?	**MM TCR-2**: If human remains and/or grave goods are discovered or recognized at the project site, all ground disturbance shall immediately cease, and the Orange County Coroner shall be notified per Public Resources Code Section 5097.98, and Health & Safety Code Section 7050.5. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2). Work may continue on other parts of the project site while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5[f]). If the coroner, with the aid of the supervising archaeologist, determines that the remains are prehistoric, they will contact the NAHC. The NAHC will be responsible for designating the Most Likely Descendant (MLD). The MLD (either an individual or sometimes a committee) will be responsible for the ultimate disposition of the remains, as required by § 7050.5 of the California Health and Safety Code. The MLD will make recommendations within 24 hours of their notification by the NAHC. If a non-Native American resource is determined by the qualified archaeologist to constitute a "historical resource" or "unique archaeological resource," time and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan prepared by the consulting archaeologist established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and PRC Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any historic archaeological material that is not Native American in origin shall be curated at a public, non-profit institution with a research interest in the materials, such as the Cooper Center (OC Parks) or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes.	Project Applicant	Field Verification	1. City of Buena Park 2. City of Buena Park 3. During project construction

RESPONSES TO COMMENTS
ORCHARD VIEW GARDENS SENIOR APARTMENT HOMES

Initial Study and Mitigated Negative Declaration (IS/MND)

Prepared for:

City of Buena Park Planning Division
6650 Beach Blvd.
Buena Park, CA 90621

Prepared by:

UltraSystems Environmental Inc.
16431 Scientific Way
Irvine, CA 92618-4355
Telephone: (949) 788-4900
FAX: (949) 788-4901

October 2020

Project No. 7037

TABLE OF CONTENTS

ATTACHMENTS

1.0 INTRODUCTION

This Responses to Comments (RTC) document, in conjunction with the Draft Initial Study/Mitigated Negative Declaration (IS/MND) responds to comments on the proposed Legacy Square Project (project). While the State of California Environmental Quality Act (CEQA) Guidelines do not require a final initial study or the preparation of formal responses to comments received during the public review period for an Initial Study/Mitigated Negative Declaration,[1] the City of Buena Park (City) is making available responses to the comments it received during the public review process, to provide further disclosure about the proposed project.

1.1 Background of Environmental Review Process for the Project

The IS/MND, along with a Notice of Intent to Adopt a Mitigated Negative Declaration (NOI, see **Attachment A**), was released for public and agency review on September 11, 2020 to, with a 33-day review period ending on October 13, 2020. In addition, the NOI was posted at the project site (8300 Valley View Street, Buena Park, CA 90620) on September 11, 2020. See **Attachment B**.

The NOI was also posted at the Orange County Clerk-Recorder on September 14, 2020 (see **Attachment C**), and copies of the IS/MND were made available for review at the following locations:

- City of Buena Park Website: www.buenapark.com/city-departments/community-development/planning-division/keynote-projects
- City of Buena Park Planning Division, 6650 Beach Boulevard, Buena Park, CA 90621

A hard copy of the NOI was mailed to:

- 64 residents and property owners, located within 500 feet of the project site.

A hard copy of the NOI was sent via certified mail (see **Attachment D**) on September 11, 2020 to the following:

- Buena Park School District
- Golden State Water Company
- City of Buena Park Community Development Department
- City of Buena Park Public Works
- Southern California Edison
- Southern California Gas Company
- Orange County Fire Authority
- Orange County Public Works
- Orange County Transportation Authority
- Orange County Water District
- Orange County Sanitation District
- City of Anaheim
- Caltrans District 12
- Fullerton Joint Union High School District
- EDCO

1 CEQA only requires the lead agency to respond to comments that are received in response to an environmental impact report (Title 14, California Code of Regulations, § 15088, Evaluation of and Response to Comments).

- City of Fullerton
- Southern California Association of Governments
- State Regional Water Quality Control Board
- Metropolitan Water District of Southern California
- South Coast Air Quality Management District
- State Department of Water Resources

A hard copy of the NOI was sent via certified mail to the Native American Indian Tribes listed below. Copies of AB 52 Tribal Consultation Letters from the City of Buena Park to the Native American Tribes are included as **Attachment E**.

- Gabrieleno Band of Mission Indians - Kizh Nation
- Gabrieleno/Tongva San Gabriel Band of Mission Indians
- Gabrielino Tongva Indians of California Tribal Council
- Juaneno Band of Mission Indians Acjachemen Nation

1.2 Tribal Consultation

The City of Buena Park (the lead agency) initiated AB 52 outreach to local tribes for the Orchard View Gardens Senior Apartment Homes Project. The City prepared letters to the six tribes on their list for AB 52 contact, informing them of the project. The letters were sent by Swati Meshram, Acting Planner Manager, City of Buena Park, on June 22 2020. The letters were sent via certified mail to the following tribes:

- Juaneño Band of Mission Indians;
- Juaneño Band of Mission Indians Acjachemen Nation;
- Gabrielino/Tongva San Gabriel Band of Mission Indians;
- Gabrielino-Tongva Tribe;
- Gabrielino/Tongva Nation
- Gabrielino Band of Mission Indians; and
- Soboba Band of Luiseno Indians

On July 1, 2020, Ms. Perry replied to the City by email for the Juaneño Band of Mission Indians requesting consultation and asking for information on the St. Joseph's Church's date of construction and for results of any Native American Heritage Commission's SLF records search and a CHRIS records search. Mr. Meshram respond to Ms. Perry July 8, 2020 a negative SLF search had been conducted, and that three historic structures had been recorded within a half-mile buffer zone all dating to the 1950s. Ms. Perry replied July 9 stating that AB 52 consultation was concluded.

On July 1, 2020 Brandy Salas of the Gabrielino-Kizh Nation replied to the City by email requesting to conduct consultation on the project. On July 14, 2020 the Gabrielino-Kizh Nation proposed a consultation meeting on September 9, 2020, which the City confirmed. This meeting was subsequently rescheduled to September 10, 2020.

1.3 Responses to Comments

This document provides a response to comments received on the IS/MND. **Three** comment letters were received during the public review period. These letters are in **Section 2.0**, Public Comment Letters.

1.4 Intended Uses of this IS/MND

The IS/MND will be used by the City in considering approval of the proposed project. In accordance with CEQA Guidelines § 15074, the IS/MND will be used as the primary environmental document in consideration of all subsequent planning and permitting actions associated with the proposed project, to the extent such actions require CEQA compliance and as otherwise permitted under applicable law.

15074. CONSIDERATION AND ADOPTION OF A NEGATIVE DECLARATION OR MITIGATED NEGATIVE DECLARATION.

(a) Any advisory body of a public agency making a recommendation to the decision-making body shall consider the proposed negative declaration or mitigated negative declaration before making itsrecommendation.

(b) Prior to approving a project, the decision-making body of the lead agency shall consider the proposed negative declaration or mitigated negative declaration together with any comments received during the public review process. The decision-making body shall adopt the proposed negative declaration or mitigated negative declaration only if it finds on the basis of the whole record before it (including the initial study and any comments received), that there is no substantial evidence that the project will have a significant effect on the environment and that the negative declaration or mitigated negative declaration reflects the lead agency's independent judgment and analysis.

(c) When adopting a negative declaration or mitigated negative declaration, the lead agency shall specify the location and custodian of the documents or other material which constitute the record of proceedings upon which its decision is based.

(d) When adopting a mitigated negative declaration, the lead agency shall also adopt a program for reporting on or monitoring the changes which it has either required in the project or made a condition of approval to mitigate or avoid significant environmental effects.

(e) A lead agency shall not adopt a negative declaration or mitigated negative declaration for a project within the boundaries of a comprehensive airport land use plan or, if a comprehensive airport land use plan has not been adopted, for a project within two nautical miles of a public airport or public use airport, without first considering whether the project will result in a safety hazard or noise problem for persons using the airport or for persons residing or working in the project area.

(f) When a non-elected official or decision-making body of a local lead agency adopts a negative declaration or mitigated negative declaration, that adoption may be appealed to the agency's elected decision-making body, if one exists. For example, adoption of a negative declaration for a project by a city's planning commission may be appealed to the city council. A local lead agency may establish procedures governing such appeals.

Upon review and consideration of the IS/MND, the City may take action to adopt, revise, or reject the proposed project. A decision to approve the proposed project would be made in a resolution recommending certification of the IS/MND as part of the consideration of the proposed project. The City has prepared this IS/MND and has determined that the environmental impacts of the proposed project have been reduced to a less than significant level through mitigation measures.

2.0 PUBLIC COMMENT LETTERS

The following agencies and entitles submitted written comments on the IS/MND, during the public review period. The comment letters are provided in **Attachment F** of this document.

Letter	Agency, Organization, or Individual	Date
A	**Gabrieleno Band of Mission Indians- Kizh Nation**	**September 17, 2020**
Comment A-1:	**We have received your Notice of Intent to adopt a Negative Declaration for the Orchard View Gardens Senior Apartment Homes the City of Buena Park. Our Tribal Government is requesting the retention of a Native American Tribal Consultant to monitor all ground disturbance conducted for this project.**	
Response A-1:	This comment is noted. Assembly Bill 52 (AB 52) requires meaningful consultation with California Native American Tribes on potential impacts on tribal cultural resources (TCRs), as defined in Public Resources Code § 21074. TCRs are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either eligible or listed in the California Register of Historical Resources or local register of historical resources. Representatives of the City and the Gabrielino-Kizh Nation (Andrew Salas and Matthew Tumamait) conducted consultation for the project on September 10, 2020. The project was described to the tribe, particularly details of the soils present, and planned construction methods. The tribe recommended the presence of a Native American monitor representing the AB 52 consulting tribe to be present during subsurface excavation of the construction site. The City agreed to this recommendation. The mitigation language agreed upon during the AB 52 consultation process has been included in the IS/MND as mitigation measures **MM TCR-1**, reproduced in **Section 4.0**, Mitigation Monitoring and Reporting Program, of this document. **MM TCR-1** requires consultation of the local Native American representative and a qualified archaeologist if unanticipated discoveries are made during construction activities. With implementation of **MM TCR-1**, potential project impacts on potential tribal cultural resources would be less than significant. Mitigation measure **TCR-2**, reproduced in **Section 4.0**, Mitigation Monitoring and Reporting Program, of this document requires that human remains be examined by the Orange County Coroner and that human remains and associated grave goods be properly handled. With implementation of **MM TCR-2**, potential project impacts on potential TCRs would be less than significant. Subsequent to the agreement of mitigation measures **TCR-1** and **TCR-2** during the AB 52 process, via email on October 19, 2020, Brandy Salas, Admin Specialist, of the Gabrieleno Band of Mission Indians - Kizh Nation, provided minor modifications to the language for **MMs TCR-1** and **TCR-2**. Refer to	

Letter	Agency, Organization, or Individual	Date
	Section 3.0 of this Responses to Comments document for details. These minor modifications to the text do not alter the less than significant conclusion found in the IS/MND regarding tribal cultural resources.	
B	**Caltrans**	**October 13, 2020**
Comment B-1	**Dear Ms. Meshram,** **Thank you for including the California Department of Transportation (Caltrans) in the review of the Initial Study and Mitigated Negative Declaration for the Orchard View Gardens Project in the City of Buena Park. The mission of Caltrans is to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability.**	
Response B-1	This comment is noted. No changes to the IS/MND are warranted as a result of this comment.	
Comment B-2	**The Project proposes to subdivide the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres. The newly created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with a primary residential apartment building and 9 single story casitas accommodating 66 residential units and a 3,000 square foot community center. On Parcel 2, 66 residential apartment homes for seniors aged 62+, including 62 one-bedroom units and 4 two-bedroom units, are proposed in one larger and three smaller buildings. The project proposes 66 residential apartment homes for seniors aged 62 and up. The project would provide 65 units affordable to households earning less than 60 percent of the Area Median Income (AMI) along with one manager's unit, for a total of 66 units. Eight of the units will be for permanent supportive housing to house formerly homeless seniors.**	
Response B-2	This comment summarizes the proposed project. No changes to the IS/MND are warranted as a result of this comment.	
Comment B-3	**The proposed project would be located at 8300 Valley View Street, on the eastern frontage of Valley View Street between Los Molinos Drive and Crescent Avenue in Buena Park, California. The project site is approximately 3.2 acres and is currently occupied by St. Joseph's Episcopal Church. The project site is located in a portion of the City that is predominately residential and close to State Route (SR) 39 and SR 91. SR 39 and SR 91 are owned and operated by Caltrans. Caltrans is a responsible agency and has the following comments:**	
Response B-3	This comment summarizes the proposed project's location. No changes to the IS/MND are warranted as a result of this comment.	
Comment B-4	**Systems Planning:** **1. Consider including safe bicycle and pedestrian features as part of the project. The document notes that there may be more non-car owning households due to the demographics of the proposed project – therefore,**	

Letter	Agency, Organization, or Individual	Date
	residents may be more reliant on Active Transportation. Bicycle and pedestrian improvements ensure that residents will be able to utilize alternative forms of transportation.	
Response B-4	This comment is noted. As detailed on page 4.17-6 of the IS/MND, the following is included as part of Mitigation Measure TRANS-1: "e) Maintain pedestrian and bicycle connections around the project site and safe crossing locations shall be considered for all pedestrian and bicyclist detours." No changes to the IS/MND are warranted as a result of this comment.	
Comment B-5	**Freight:** **2. Please consider incorporating designated areas/parking for freight delivery, package and transportation network companies pick up and drop off in the site plan design for this project.**	
Response B-5	This comment is noted. No changes to the IS/MND are warranted as a result of this comment.	
Comment B-6	**Transit Planning** **3. Please consider providing adequate wayfinding signage to nearby transit stops within the proposed project. Connectivity of first and last mile mobility options and transit services help integrate a complete multimodal transportation network.**	
Response B-6	This comment is noted. No changes to the IS/MND are warranted as a result of this comment.	
Comment B-7	**Permits:** **4. Any project work proposed in the vicinity of the State right of way will require an encroachment permit, and all environmental concerns must be adequately addressed. Please coordinate with Caltrans in order to meet the requirements for any work within or near State Right-of-Way. A fee may apply. If the cost of work within the State right of way is below one Million Dollars, the Encroachment Permit process will be handled by our Permits Branch; otherwise the permit should be authorized through the Caltrans's Project Development Department. When applying for Encroachment Permit, please incorporate all Environmental Documentation, SWPPP/ WPCP, Hydraulic Calculations, R/W certification and all relevant design details including design exception approvals. For specific details for Encroachment Permits procedure, please refer to the Caltrans's Encroachment Permits Manual. The latest edition of the Manual is available on the web site:** **http://www.dot.ca.gov/hq/traffops/developserv/permits/**	
Response B-7	This comment is noted. No changes to the IS/MND are warranted as a result of this comment.	
Comment B-8	**Please continue to coordinate with Caltrans for any future developments that could potentially impact State transportation facilities. If you have any questions, please do not hesitate to contact Julie Lugaro at Julie.lugaro@dot.ca.gov.**	
Response B-8	This comment is noted. No changes to the IS/MND are warranted as a result of this comment.	

Letter	Agency, Organization, or Individual	Date
C	**William Blumberg, Orange County Fire Authority**	**October 13, 2020**
Comment C-1	**Dear Swati Meshram:** **Thank you for the opportunity to review the subject document. The Orange County Fire Authority (OCFA) provides fire protection and emergency medical services response to the project area. Services include: structural fire protection, emergency medical and rescue services, education and hazardous material response. OCFA also participates in disaster planning as it relates to emergency operations, which includes high occupant areas and school sites and may participate in community disaster drills planned by others. Resources are deployed based upon a regional service delivery system, assigning personnel and equipment to emergency incidents without regard to jurisdictional boundaries. The equipment used by the department has the versatility to respond to both urban and wildland emergency conditions.**	
Response C-1	This comment is noted. No changes to the IS/MND are warranted as a result of this comment.	
Comment C-2	**The following are our comments:** **We believe this project will have Less Than Significant Impact with the following Measures:** **• The project is subject to review by the City and the OCFA for various construction document plan checks for the applicable fire life safety codes and regulations. The project will be subject to the current editions of the CBC, CFC and related codes.** **• Structures of this size and occupancy are required to have automatic fire sprinkler systems designed per NFP A 13 as required in the current CBC, CFC.** **• A water supply system to supply fire hydrants and automatic fire sprinkler systems is required. Fire flow and hydrant spacing shall meet the minimums identified in the codes. Please refer to the California Fire Code Appendix section. These tables are also located in OCFA Guideline B09, Attachment 23.** **• Attic spaces shall be fully sprinklered.** **• It is unlawful to occupy any portions of this building until City building department and OCFA have conducted final inspection and sign off.** **• Ensure that proposed project meet current California Fire Code, OCFA Fire Master Plans for Commercial & Residential Development (B-09) Guideline, and OCFA Architectural Review (E-04) Guideline.**	

Letter	Agency, Organization, or Individual	Date
	• Any project which increases population can potentially increase workload. All projects are cumulative and OCFA uses a fair share approach to mitigate fire service response impacts and facility/equipment needs. o **Mitigation: Participate with the City of Buena Park through developer agreements for future fire facility mitigation.**	
Response C-2	This comment is noted. As detailed on pages 4.15-2 and 4.15-2 of the IS/MND prepared for the proposed project: "An information request letter was sent to the Orange County Fire Authority asking about the potential impacts of the project to fire service (refer to Appendix I). OCFA Management Assistant William Blumberg stated that the project site would be served by OCFA Fire Stations 13 and 63 (Blumberg, 2020). Mr. Blumberg stated that the proposed project should not require construction of new fire department facilities and that the project should have a less than significant impact on OCFA's level of service and/or response times. However, to reduce impacts on fire service, the OCFA recommends the following (Blumberg, 2020): 1) Ensure that proposed project meets California Fire Code, OCFA Fire Master Plans for Commercial & Residential Development (B-09) Guideline, and OCFA Architectural Review (E 04) Guideline (For example, access on the proposed plan may not meet current requirements), 2) Participate with the City of Buena Park through developer agreements for future fire facility mitigation. Based on the response from the OCFA, the proposed project would not require the construction of new fire department facilities and the project should have a less than significant impact on OCFA's level of service and/or response times. Therefore, the project would have a less than significant impact to OCFA facilities and services and no mitigation is required." The project would comply with all applicable Measures listed in the comment above. No changes to the IS/MND are warranted as a result of this comment.	
Comment C-3	**In addition, we would like to point out that all standard conditions with regard to development, including water supply, built in fire protection systems, road grades and width, access, building materials, and the like will be applied to this project at the time of plan submittal. Thank you for providing us with this information. Please contact me at 714-573-6177 if you have any questions.**	
Response C-3	This comment is noted. No changes to the IS/MND are warranted as a result of this comment.	

ATTACHMENT A: NOTICE OF INTENT

City of Buena Park

Notice of Intent to Adopt a Mitigated Negative Declaration

To: Agencies, Organizations, and Interested Parties

From: City of Buena Park

Subject: Notice of Intent to Adopt an Initial Study/Mitigated Negative Declaration (IS/MND) for the Orchard View Gardens Senior Apartment Homes Project

The City of Buena Park ("City") is the Lead Agency under the California Environmental Quality Act (CEQA) for the proposed project identified below. The City has prepared an Initial Study to determine the environmental effects of the proposed project and finds issuance of a Mitigated Negative Declaration is the appropriate level of CEQA environmental review.

AGENCIES: The City requests that your agency review the scope and content of the environmental information relevant to your agency's statutory responsibilities in connection with the proposed project, in accordance with California Code of Regulations, Title 14, Section 15086(a).

ORGANIZATIONS AND INTERESTED PARTIES: The City requests your comments and concerns regarding the environmental issues associated with the proposed project.

Project Title: Orchard View Gardens Senior Apartment Homes

Project Description: The City of Buena Park (City) is processing a request to implement a series of discretionary actions that would ultimately allow for the subdivision of the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres. The newly created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with a primary residential apartment building and 9 single-story casitas accommodating 66 residential units and a 3,000-square-foot community center. The residential apartment homes, including 62 one-bedroom units and 4 two-bedroom units, will be reserved for seniors aged 62 and over, with one of the 66 units being an exempt manager's unit. The Applicant is seeking a General Plan Amendment to High Density Residential, a Zone Change to Medium-Density Multifamily Residential (RM-20), a modification to use permit, and a Development Agreement to accommodate the Proposed Project. The Project will also necessitate a Tentative Parcel Map to divide the one parcel into two.

Project Location: 8300 Valley View Street, Buena Park, California, 90620

Significant Environmental Effects: The IS/MND concludes that no significant unavoidable environmental effects would occur as a result of the proposed project. Potentially significant impacts related to aesthetics, biological resources, cultural resources, geology and soils, hazards and hazardous materials, noise, transportation, tribal cultural resources, and mandatory findings of significance would be mitigated to a less than significant level.

Public Review Period/Responses and Comments: The IS/MND will be available for public review and comment pursuant to California Code of Regulations, Title 14, Section 15087. The City will accept responses and comments for 33 days, starting on **September 11, 2020 to October 13, 2020**. All comments must be submitted in writing; either in a letter or email. Please indicate a contact person for your agency or organization and send your responses or comments to:

City of Buena Park, Planning Division
Attn: Swati Meshram, PhD, AICP, Planning Manager
6650 Beach Boulevard
Buena Park, CA 90621
Email: smeshram@buenapark.com

DOCUMENT AVAILABILITY: This IS/MND and associated materials are available for review during regular business hours at the following location:

- City of Buena Park Planning Division, 6650 Beach Boulevard, Buena Park, CA 90621

The document is available online on the City's website at: www.buenapark.com/city-departments/community-development/planning-division/keynote-projects

ATTACHMENT B: NOI POSTING AT THE PROJECT SITE

ATTACHMENT B: NOI POSTING AT THE PROJECT SITE

ATTACHMENT B: NOI POSTING AT THE PROJECT SITE

ATTACHMENT B: NOI POSTING AT THE PROJECT SITE

ATTACHMENT C: ORANGE COUNTY CLERK/RECORDER NOI POSTING/RECORDING SEPTEMBER 14, 2020

POSTED

SEP 14 2020

ORANGE COUNTY CLERK-RECORDER DEPARTMENT

BY: _____ DEPUTY

City of Buena Park

Notice of Intent to Adopt a Mitigated Negative Declaration

To: Agencies, Organizations, and Interested Parties

From: City of Buena Park

Subject: Notice of Intent to Adopt an Initial Study/Mitigated Negative Declaration (IS/MND) for the Orchard View Gardens Senior Apartment Homes Project

The City of Buena Park ("City") is the Lead Agency under the California Environmental Quality Act (CEQA) for the proposed project identified below. The City has prepared an Initial Study to determine the environmental effects of the proposed project and finds issuance of a Mitigated Negative Declaration is the appropriate level of CEQA environmental review.

AGENCIES: The City requests that your agency review the scope and content of the environmental information relevant to your agency's statutory responsibilities in connection with the proposed project, in accordance with California Code of Regulations, Title 14, Section 15086(a).

ORGANIZATIONS AND INTERESTED PARTIES: The City requests your comments and concerns regarding the environmental issues associated with the proposed project.

Project Title: Orchard View Gardens Senior Apartment Homes

Project Description: The City of Buena Park (City) is processing a request to implement a series of discretionary actions that would ultimately allow for the subdivision of the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres. The newly created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with a primary residential apartment building and 9 single-story casitas accommodating 66 residential units and a 3,000-square-foot community center. The residential apartment homes, including 62 one-bedroom units and 4 two-bedroom units, will be reserved for seniors aged 62 and over, with one of the 66 units being an exempt manager's unit. The Applicant is seeking a General Plan Amendment to High Density Residential, a Zone Change to Medium-Density Multifamily Residential (RM-20), a modification to use permit, and a Development Agreement to accommodate the Proposed Project. The Project will also necessitate a Tentative Parcel Map to divide the one parcel into two.

Project Location: 8300 Valley View Street, Buena Park, California, 90620

Significant Environmental Effects: The IS/MND concludes that no significant unavoidable environmental effects would occur as a result of the proposed project. Potentially significant impacts related to aesthetics, biological resources, cultural resources, geology and soils, hazards and hazardous materials, noise, transportation, tribal cultural resources, and mandatory findings of significance would be mitigated to a less than significant level.

Public Review Period/Responses and Comments: The IS/MND will be available for public review and comment pursuant to California Code of Regulations, Title 14, Section 15087. The City will accept responses and comments for 33 days, starting on **September 11, 2020 to October 13, 2020.** All comments must be submitted in writing; either in a letter or email. Please indicate a contact person for your agency or organization and send your responses or comments to:

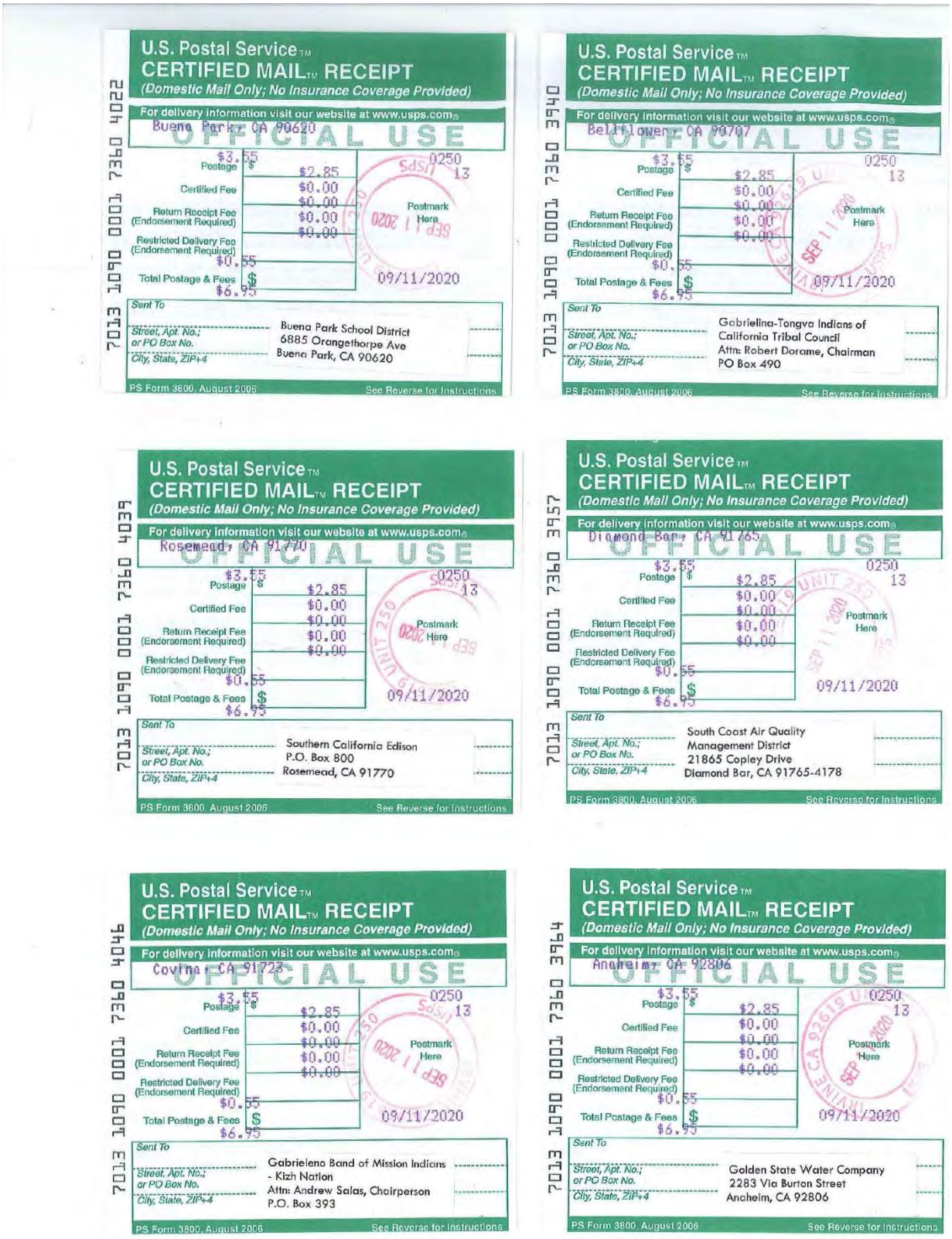
City of Buena Park, Planning Division
Attn: Swati Meshram, PhD, AICP, Planning Manager
6650 Beach Boulevard
Buena Park, CA 90621
Email: smeshram@buenapark.com

DOCUMENT AVAILABILITY: This IS/MND and associated materials are available for review during regular business hours at the following location:

- City of Buena Park Planning Division, 6650 Beach Boulevard, Buena Park, CA 90621

The document is available online on the City's website at: www.buenapark.com/city-departments/community-development/planning-division/keynote-projects

ATTACHMENT D: CERTIFIED MAIL RECEIPTS



U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
Buena Park, CA 90620
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.95
0250 13
Postmark Here
SEP 11 2020
09/11/2020
7013 1090 0001 7360 4022
Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4
Buena Park School District
6885 Orangethorpe Ave
Buena Park, CA 90620
PS Form 3800, August 2006 See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
Bellflower, CA 90707
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.95
0250 13
Postmark Here
SEP 11 2020
09/11/2020
7013 1090 0001 7360 3640
Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4
Gabrielina-Tongva Indians of
California Tribal Council
Attn: Robert Dorame, Chairman
PO Box 490
PS Form 3800, August 2006 See Reverse for Instructions

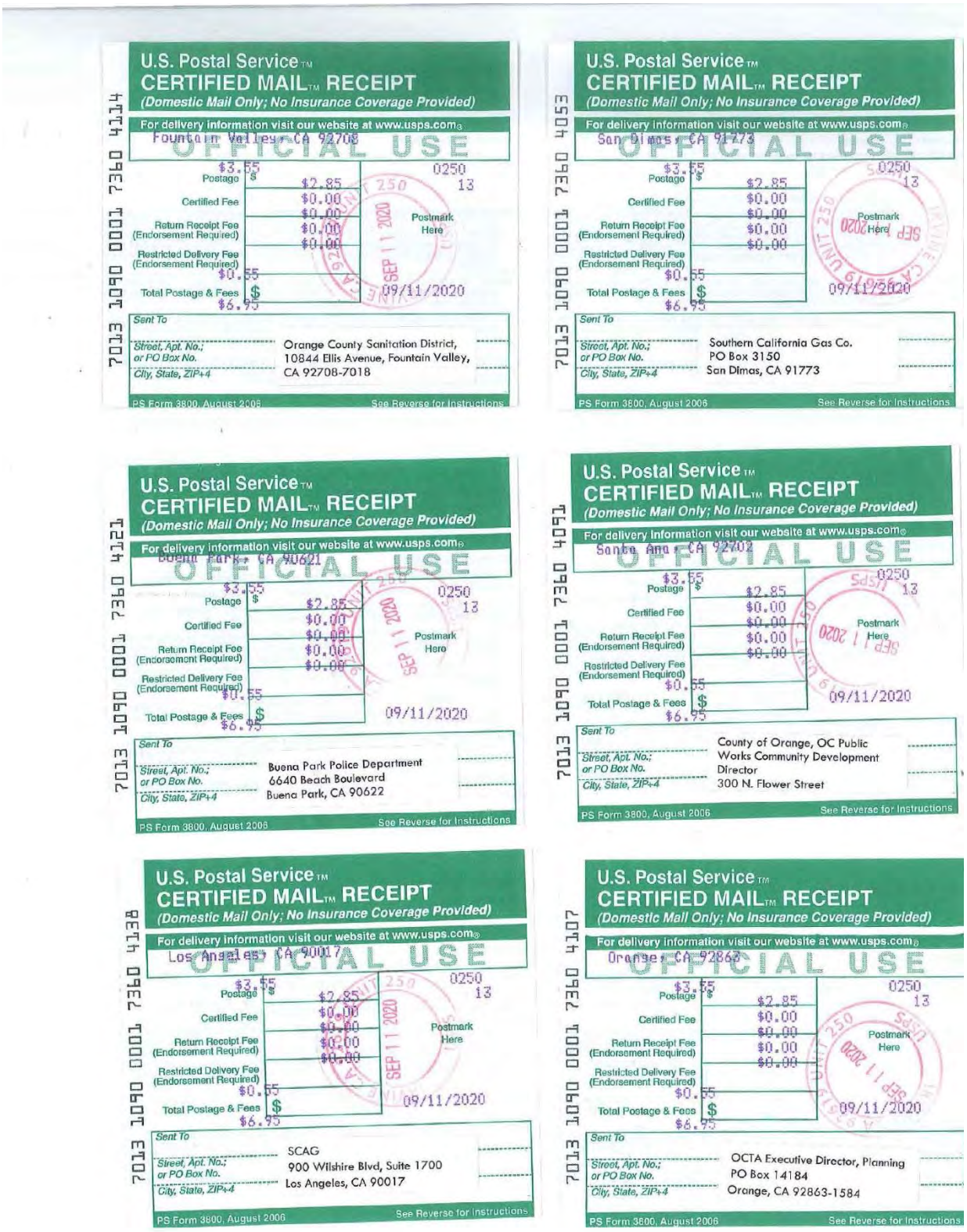
U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
Rosemead, CA 91770
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.95
0250 13
Postmark Here
SEP 11 2020
09/11/2020
7013 1090 0001 7360 4039
Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4
Southern California Edison
P.O. Box 800
Rosemead, CA 91770
PS Form 3800, August 2006 See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
Diamond Bar, CA 91765
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.95
0250 13
Postmark Here
SEP 11 2020
09/11/2020
7013 1090 0001 7360 3957
Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4
South Coast Air Quality
Management District
21865 Copley Drive
Diamond Bar, CA 91765-4178
PS Form 3800, August 2006 See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
Covina, CA 91723
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.95
0250 13
Postmark Here
SEP 11 2020
09/11/2020
7013 1090 0001 7360 4046
Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4
Gabrieleno Band of Mission Indians
- Kizh Nation
Attn: Andrew Salas, Chairperson
P.O. Box 393
PS Form 3800, August 2006 See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
Anaheim, CA 92806
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.95
0250 13
Postmark Here
SEP 11 2020
09/11/2020
7013 1090 0001 7360 3964
Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4
Golden State Water Company
2283 Via Burton Street
Anaheim, CA 92806
PS Form 3800, August 2006 See Reverse for Instructions

ATTACHMENT D: CERTIFIED MAIL RECEIPTS



U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
Fountain Valley, CA 92708
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.95
Postmark Here
SEP 11 2020
0250 13
09/11/2020
7013 1090 0001 7360 4114
Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4
Orange County Sanitation District, 10844 Ellis Avenue, Fountain Valley, CA 92708-7018
PS Form 3800, August 2006
See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
San Dimas, CA 91773
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.95
Postmark Here
SEP 2020
0250 13
09/11/2020
7013 1090 0001 7360 4053
Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4
Southern California Gas Co. PO Box 3150 San Dimas, CA 91773
PS Form 3800, August 2006
See Reverse for Instructions

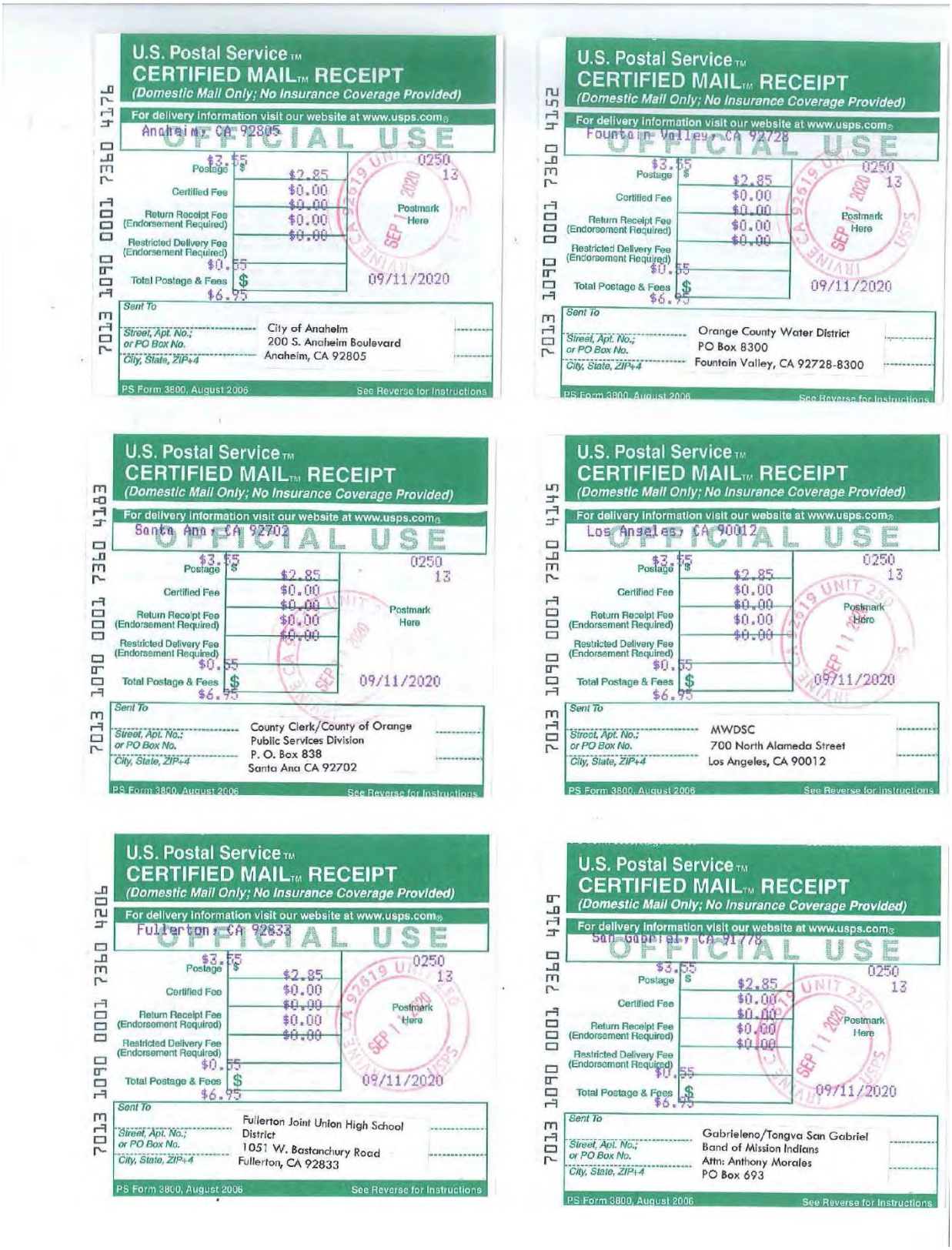
U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
Buena Park, CA 90621
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.95
Postmark Here
SEP 11 2020
0250 13
09/11/2020
7013 1090 0001 7360 4121
Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4
Buena Park Police Department 6640 Beach Boulevard Buena Park, CA 90622
PS Form 3800, August 2006
See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
Santa Ana, CA 92702
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.95
Postmark Here
SEP 11 2020
0250 13
09/11/2020
7013 1090 0001 7360 4091
Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4
County of Orange, OC Public Works Community Development Director 300 N. Flower Street
PS Form 3800, August 2006
See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
Los Angeles, CA 90017
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.95
Postmark Here
SEP 11 2020
0250 13
09/11/2020
7013 1090 0001 7360 4138
Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4
SCAG 900 Wilshire Blvd, Suite 1700 Los Angeles, CA 90017
PS Form 3800, August 2006
See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
Orange, CA 92863
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.95
Postmark Here
SEP 11 2020
0250 13
09/11/2020
7013 1090 0001 7360 4107
Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4
OCTA Executive Director, Planning PO Box 14184 Orange, CA 92863-1584
PS Form 3800, August 2006
See Reverse for Instructions

ATTACHMENT D: CERTIFIED MAIL RECEIPTS



U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
Anaheim, CA 92805
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.75
0250 13
Postmark Here
SEP 11 2020
09/11/2020
7013 1090 0001 7360 4176
Sent To
Street, Apt. No.; or PO Box No. City of Anaheim
200 S. Anaheim Boulevard
City, State, ZIP+4 Anaheim, CA 92805
PS Form 3800, August 2006 See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
Fountain Valley, CA 92728
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.75
0250 13
Postmark Here
SEP 11 2020
09/11/2020
7013 1090 0001 7360 4152
Sent To
Street, Apt. No.; or PO Box No. Orange County Water District
PO Box 8300
City, State, ZIP+4 Fountain Valley, CA 92728-8300
PS Form 3800, August 2006 See Reverse for Instructions

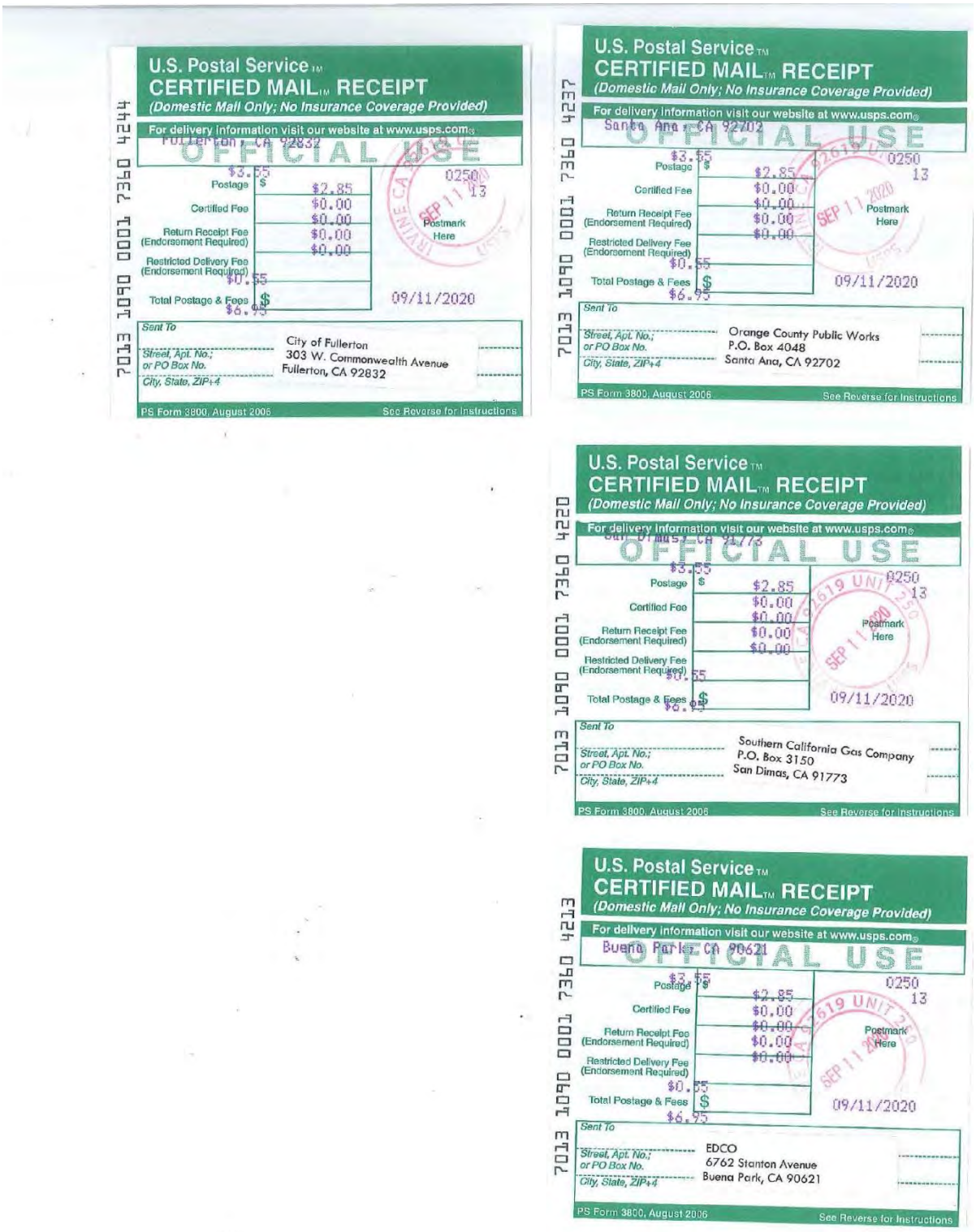
U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
Santa Ana, CA 92702
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.75
0250 13
Postmark Here
SEP 11 2020
09/11/2020
7013 1090 0001 7360 4183
Sent To
Street, Apt. No.; or PO Box No. County Clerk/County of Orange
Public Services Division
City, State, ZIP+4 P. O. Box 838
Santa Ana CA 92702
PS Form 3800, August 2006 See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
Los Angeles, CA 90012
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.75
0250 13
Postmark Here
SEP 11 2020
09/11/2020
7013 1090 0001 7360 4145
Sent To
Street, Apt. No.; or PO Box No. MWDSC
700 North Alameda Street
City, State, ZIP+4 Los Angeles, CA 90012
PS Form 3800, August 2006 See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
Fullerton, CA 92833
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.75
0250 13
Postmark Here
SEP 11 2020
09/11/2020
7013 1090 0001 7360 4206
Sent To
Street, Apt. No.; or PO Box No. Fullerton Joint Union High School
District
City, State, ZIP+4 1051 W. Bastanchury Road
Fullerton, CA 92833
PS Form 3800, August 2006 See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
San Gabriel, CA 91778
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.75
0250 13
Postmark Here
SEP 11 2020
09/11/2020
7013 1090 0001 7360 4169
Sent To
Street, Apt. No.; or PO Box No. Gabrieleno/Tongva San Gabriel
Band of Mission Indians
City, State, ZIP+4 Attn: Anthony Morales
PO Box 693
PS Form 3800, August 2006 See Reverse for Instructions

ATTACHMENT D: CERTIFIED MAIL RECEIPTS



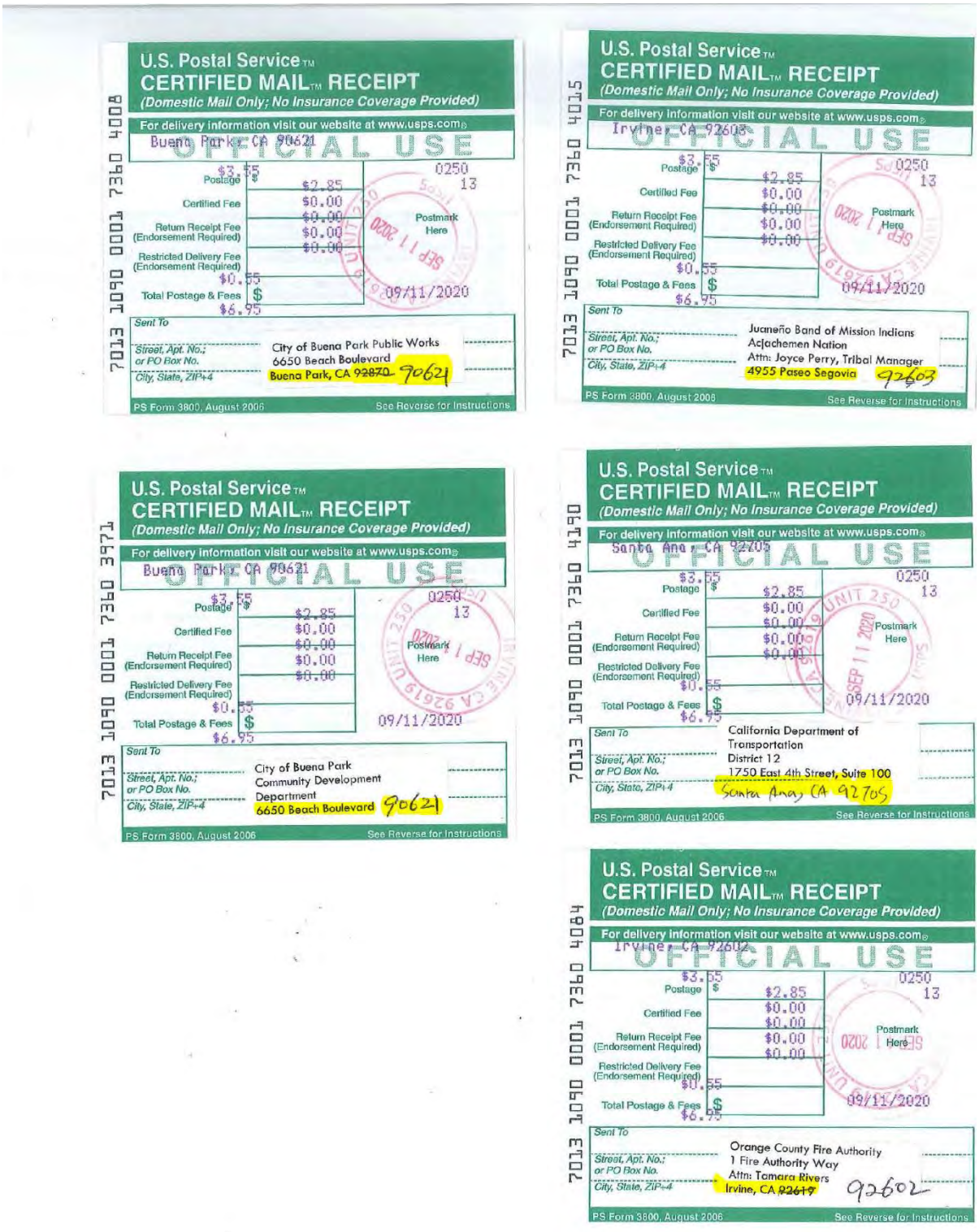
U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.95
Postmark Here
SEP 11 2020
0250 13
09/11/2020
7013 1090 0001 7360 4244
Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4
City of Fullerton
303 W. Commonwealth Avenue
Fullerton, CA 92832
PS Form 3800, August 2006
See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
Santa Ana, CA 92702
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.95
Postmark Here
SEP 11 2020
0250 13
09/11/2020
7013 1090 0001 7360 4237
Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4
Orange County Public Works
P.O. Box 4048
Santa Ana, CA 92702
PS Form 3800, August 2006
See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.95
Postmark Here
SEP 11 2020
0250 13
09/11/2020
7013 1090 0001 7360 4220
Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4
Southern California Gas Company
P.O. Box 3150
San Dimas, CA 91773
PS Form 3800, August 2006
See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
Buena Park, CA 90621
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.95
Postmark Here
SEP 11 2020
0250 13
09/11/2020
7013 1090 0001 7360 4213
Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4
EDCO
6762 Stanton Avenue
Buena Park, CA 90621
PS Form 3800, August 2006
See Reverse for Instructions

ATTACHMENT D: CERTIFIED MAIL RECEIPTS



U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
Buena Park, CA 90621
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.95
0250 13
Postmark Here
SEP 11 2020
09/11/2020
7013 1090 0001 7360 4008
Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4
City of Buena Park Public Works
6650 Beach Boulevard
Buena Park, CA 92870 90621
PS Form 3800, August 2006 See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
Irvine, CA 92603
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.95
0250 13
Postmark Here
SEP 11 2020
09/11/2020
7013 1090 0001 7360 4015
Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4
Juaneño Band of Mission Indians
Acjachemen Nation
Attn: Joyce Perry, Tribal Manager
4955 Paseo Segovia 92603
PS Form 3800, August 2006 See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
Buena Park, CA 90621
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.95
0250 13
Postmark Here
SEP 11 2020
09/11/2020
7013 1090 0001 7360 3971
Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4
City of Buena Park
Community Development
Department
6650 Beach Boulevard 90621
PS Form 3800, August 2006 See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
Santa Ana, CA 92705
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.95
0250 13
Postmark Here
SEP 11 2020
09/11/2020
7013 1090 0001 7360 4190
Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4
California Department of
Transportation
District 12
1750 East 4th Street, Suite 100
Santa Ana, CA 92705
PS Form 3800, August 2006 See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®
Irvine, CA 92602
OFFICIAL USE
Postage $3.55
Certified Fee $2.85
Return Receipt Fee (Endorsement Required) $0.00
Restricted Delivery Fee (Endorsement Required) $0.00
Total Postage & Fees $6.95
0250 13
Postmark Here
SEP 11 2020
09/11/2020
7013 1090 0001 7360 4084
Sent To
Street, Apt. No.; or PO Box No.
City, State, ZIP+4
Orange County Fire Authority
1 Fire Authority Way
Attn: Tamara Rivers
Irvine, CA 92619 92602
PS Form 3800, August 2006 See Reverse for Instructions

ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE JUANENO BAND OF MISSION INDIANS ACJACHEMEN NATION

City of BUENA PARK

COMMUNITY DEVELOPMENT DEPARTMENT

June 23, 2020

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

Subject: **Assembly Bill 52 Notice for the Orchard View Gardens Senior Apartment Homes Project, in the City of Buena Park, Orange County, California.**

Dear Chairperson Belardes,

In conformance with the tribal consultation requirements of Assembly Bill (AB) 52 Public Resources Code 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 5097.94 (AB 52) notification of projects, the purpose of this letter is to notify you that the City of Buena Park (City) (the project lead agency) will undertake the proposed project described below and is requesting the initiation of AB 52 consultation on the project. Pursuant to AB 52, the tribe has the right to consult on a proposed public or private project prior to the release of a negative declaration, mitigated negative declaration or environmental impact report.

Project Description: The Orchard View Gardens Senior Apartment Homes Project (herein referred to as project or proposed project) is proposed on an approximately 3.2 acre site located at 8300 Valley View Street in Buena Park, California. The site is currently developed with the St. Joseph's Episcopal Church. The project proposes to subdivide the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres. The newly created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with a primary residential apartment building (Building 1) and three clusters of single story casitas. These would accommodate 66 residential units and a 3,000 square foot community center. The residential units would be apartment homes for seniors aged 62+, and comprise of 62 one-bedroom units and 4 two-bedroom units.

Building 1 would be divided into two groupings connected by a breezeway. Building 1 West, facing Valley View Street, would be a two-story building transitioning to a linear three-story double-loaded corridor toward the interior of the site. Building 1 East would be a three-story double-loaded bar building located interior to the site with a two-story element at the northern end of the proposed building transitioning toward the single-family neighborhood along the northern property line. Along the northern property line nine attached single-story casitas are proposed in three clusters.

The project would provide 65 units affordable to households earning less than 60 percent of the Area Median Income (AMI) along with one manager's unit. Eight of the units will be for permanent supportive housing to house formerly homeless seniors. To accommodate residents, visitors and staff, a total of forty-eight (48) parking stalls are proposed for a total ratio of 0.71 spaces per unit.

The Applicant is seeking a General Plan Amendment to High Density Residential, and a Zone Change to Medium-Density Multifamily Residential (RM-20) is required to accommodate the proposed project. The project would also necessitate a Tentative Parcel Map to divide the one parcel into two.

6650 Beach Boulevard | P.O. Box 5009 | Buena Park, CA | 90622-5009 | [714] 562-3620 | Fax [714] 562-3770 | BuenaPark.com

ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE JUANENO BAND OF MISSION INDIANS ACJACHEMEN NATION - CONTINUED

The project applicant is requesting the following discretionary actions:

- General Plan Amendment
- Zone Change
- Design Review Approval
- Parking Variance
- Tentative Parcel Map
- Reduction in open space requirement
- Site Plan approval and issuance of building permits

Project Location: The project site is located in the city of Buena Park, and is specifically located at 8300 Valley View Street. It may be seen on the *Los Alamitos, Calif.*, USGS topographical quadrangle, R 11W, T 04S, in an unsectioned area. The project site is situated midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project site. This is shown on the enclosed map and the project area is depicted with a half-mile buffer zone.

You are a traditionally and culturally affiliated California Native American tribal representative that may request notice of projects where AB 52 applies within the City. We are requesting any information you may have that you wish to share regarding tribal cultural resources (as defined by Public Resources Code 21074) regarding the project site so that this information can be incorporated into the planning phase of the project. Please inform the City if you wish to conduct consultation with the City regarding this project. Pursuant to AB 52, the City, as the lead agency, is requesting your input within 30 days of receiving this letter. However, due to COVID 19 restrictions, the Governor Newsom issued Executive Order N-54-20 (EO), which modifies CEQA's noticing provisions and suspends tribal consultation timelines under AB 52 for 60 days, though it is up to the tribe to determine if they want to respond earlier than that.

The City's contact person for this project is:

Swati Meshram, PhD., AICP, LEED AP
Planning Division, Community Development Department
6650 Beach Boulevard, Buena Park, CA 90622
Tel. (714) 562-3614; Email: SMeshram@buenapark.com

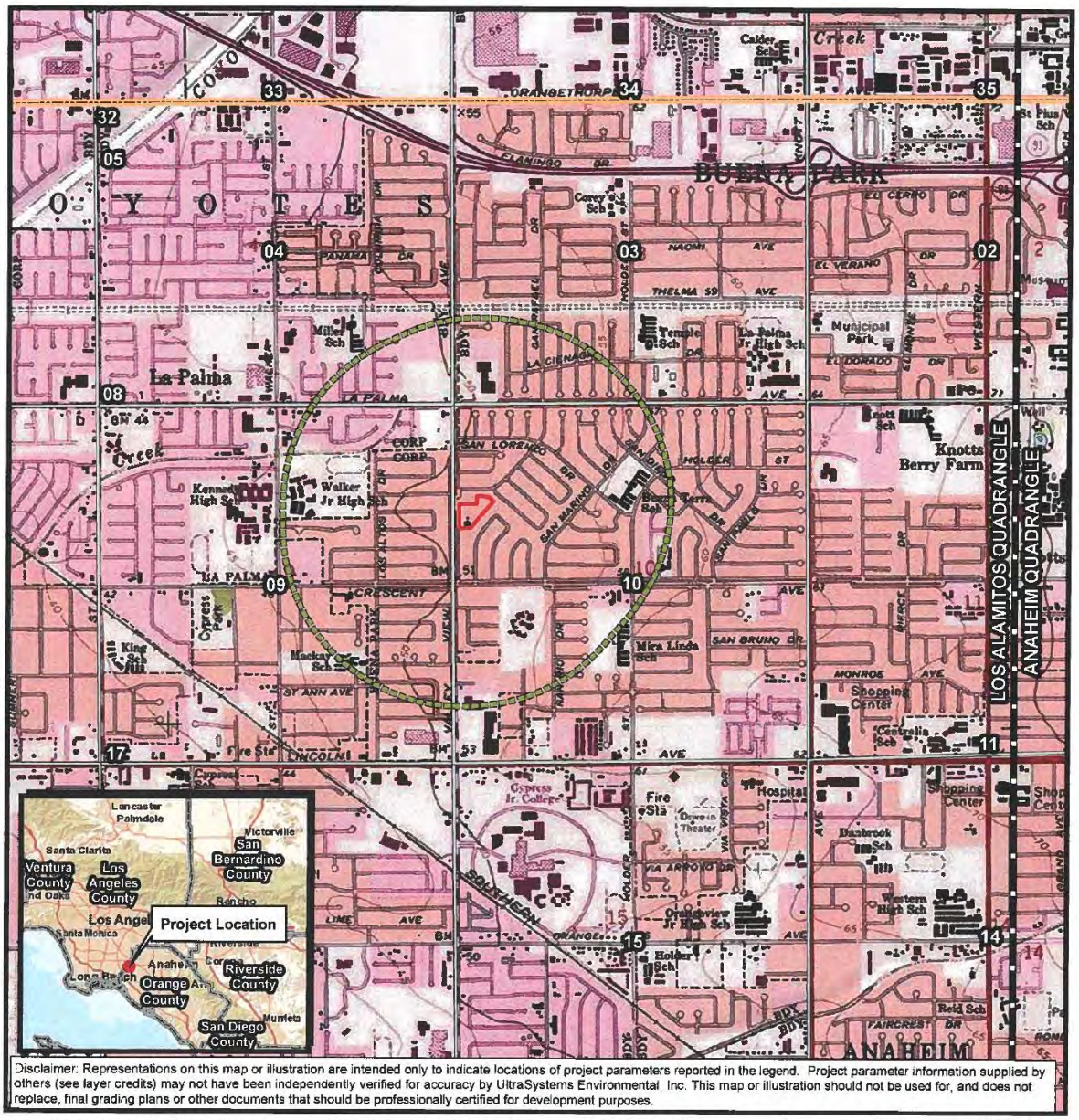
Your comments and concerns are important to the City and we welcome the opportunity to consult, upon your request. If you have any questions regarding the project, please do not hesitate to contact Swati Meshram at the contact information noted above.

Respectfully yours,

Swati Meshram
Acting Planning Manager

Enclosures:
Project Location Map

ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE JUANENO BAND OF MISSION INDIANS ACJACHEMEN NATION - CONTINUED



ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE GABRIELINO-TONGVA TRIBE

City of BUENA PARK

COMMUNITY DEVELOPMENT DEPARTMENT

June 22, 2020

Linda Candelaria, Co-Chairperson
Gabrielino – Tongva Tribe
1999 Avenue of the Stars, Suite 1100
Los Angeles, CA 90027

Subject: **Assembly Bill 52 Notice for the Orchard View Garden Senior Apartment Homes Project, in the City of Buena Park, Orange County, California.**

Dear Co-Chairperson Candelaria:

In conformance with the tribal consultation requirements of Assembly Bill (AB) 52 Public Resources Code 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 5097.94 (AB 52) notification of projects, the purpose of this letter is to notify you that the City of Buena Park (City) (the project lead agency) will undertake the proposed project described below and is requesting the initiation of AB 52 consultation on the project. Pursuant to AB 52, the tribe has the right to consult on a proposed public or private project prior to the release of a negative declaration, mitigated negative declaration or environmental impact report.

Project Description: The Orchard View Gardens Senior Apartment Homes Project (herein referred to as project or proposed project) is proposed on an approximately 3.2 acre site located at 8300 Valley View Street in Buena Park, California. The site is currently developed with the St. Joseph's Episcopal Church. The project proposes to subdivide the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres. The newly created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with a primary residential apartment building (Building 1) and three clusters of single story casitas. These would accommodate 66 residential units and a 3,000 square foot community center. The residential units would be apartment homes for seniors aged 62+, and comprise of 62 one-bedroom units and 4 two-bedroom units.

Building 1 would be divided into two groupings connected by a breezeway. Building 1 West, facing Valley View Street, would be a two-story building transitioning to a linear three-story double-loaded corridor toward the interior of the site. Building 1 East would be a three-story double-loaded bar building located interior to the site with a two-story element at the northern end of the proposed building transitioning toward the single-family neighborhood along the northern property line. Along the northern property line nine attached single-story casitas are proposed in three clusters.

The project would provide 65 units affordable to households earning less than 60 percent of the Area Median Income (AMI) along with one manager's unit. Eight of the units will be for permanent supportive housing to house formerly homeless seniors. To accommodate residents, visitors and staff, a total of forty-eight (48) parking stalls are proposed for a total ratio of 0.71 spaces per unit.

The Applicant is seeking a General Plan Amendment to High Density Residential, and a Zone Change to Medium-Density Multifamily Residential (RM-20) is required to accommodate the proposed project. The project would also necessitate a Tentative Parcel Map to divide the one parcel into two.

6650 Beach Boulevard | P.O. Box 5009 | Buena Park, CA | 90622-5009 | (714) 562-3620 | Fax (714) 562-3770 | BuenaPark.com

ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE GABRIELINO-TONGVA TRIBE - CONTINUED

The project applicant is requesting the following discretionary actions:

- General Plan Amendment
- Zone Change
- Design Review Approval
- Parking Variance
- Tentative Parcel Map
- Reduction in open space requirement
- Site Plan approval and issuance of building permits

Project Location: The project site is located in the city of Buena Park, and is specifically located at 8300 Valley View Street. It may be seen on the *Los Alamitos, Calif.*, USGS topographical quadrangle, R 11W, T 04S, in an unsectioned area. The project site is situated midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project site. This is shown on the enclosed map and the project area is depicted with a half-mile buffer zone.

You are a traditionally and culturally affiliated California Native American tribal representative that may request notice of projects where AB 52 applies within the City. We are requesting any information you may have that you wish to share regarding tribal cultural resources (as defined by Public Resources Code 21074) regarding the project site so that this information can be incorporated into the planning phase of the project. Please inform the City if you wish to conduct consultation with the City regarding this project. Pursuant to AB 52, the City, as the lead agency, is requesting your input within 30 days of receiving this letter. However, due to COVID 19 restrictions, the Governor Newsom issued Executive Order N-54-20 (EO), which modifies CEQA's noticing provisions and suspends tribal consultation timelines under AB 52 for 60 days, though it is up to the tribe to determine if they want to respond earlier than that.

The City's contact person for this project is:

Swati Meshram, PhD., AICP, LEED AP
Planning Division, Community Development Department
6650 Beach Boulevard, Buena Park, CA 90622
Tel. (714) 562-3614; Email: SMeshram@buenapark.com

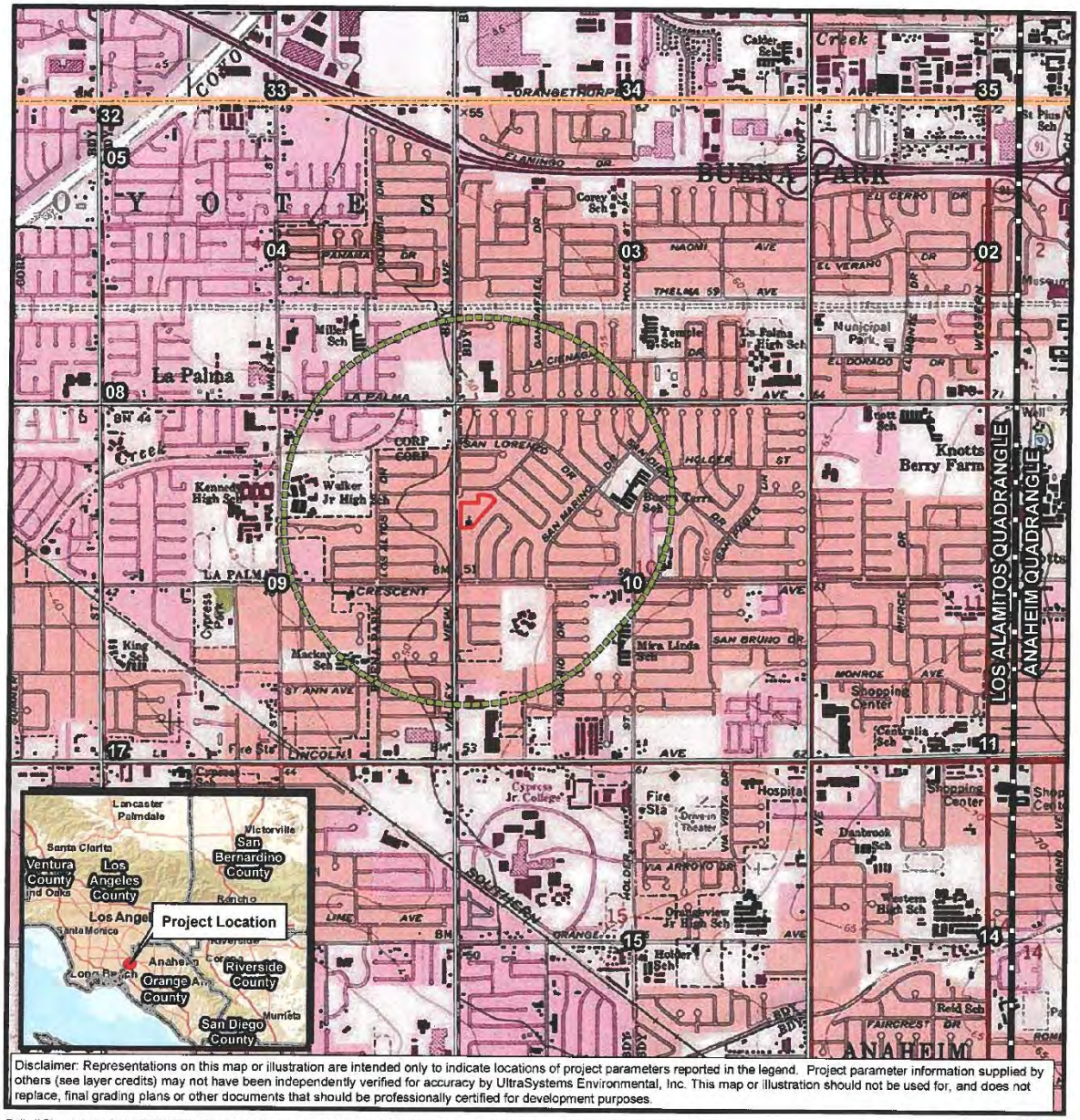
Your comments and concerns are important to the City and we welcome the opportunity to consult, upon your request. If you have any questions regarding the project, please do not hesitate to contact Swati Meshram at the contact information noted above.

Respectfully yours,

Swati Meshram,
Acting Planning Manager

Enclosures:
Project Location Map

ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE GABRIELINO-TONGVA TRIBE - CONTINUED



ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE GABRIELINO/TONGVA NATION

City of BUENA PARK

COMMUNITY DEVELOPMENT DEPARTMENT

June 22, 2020

Sam Dunlap, Cultural Resources Director
Gabrielino/Tongva Nation
P.O. Box 86908
Los Angeles, CA. 90086

Subject: **Assembly Bill 52 Notice for the Orchard View Garden Senior Apartment Homes Project, in the City of Buena Park, Orange County, California.**

Dear Director Dunlap,

In conformance with the tribal consultation requirements of Assembly Bill (AB) 52 Public Resources Code 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 5097.94 (AB 52) notification of projects, the purpose of this letter is to notify you that the City of Buena Park (City) (the project lead agency) will undertake the proposed project described below and is requesting the initiation of AB 52 consultation on the project. Pursuant to AB 52, the tribe has the right to consult on a proposed public or private project prior to the release of a negative declaration, mitigated negative declaration or environmental impact report.

Project Description: The Orchard View Gardens Senior Apartment Homes Project (herein referred to as project or proposed project) is proposed on an approximately 3.2 acre site located at 8300 Valley View Street in Buena Park, California. The site is currently developed with the St. Joseph's Episcopal Church. The project proposes to subdivide the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres. The newly created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with a primary residential apartment building (Building 1) and three clusters of single story casitas. These would accommodate 66 residential units and a 3,000 square foot community center. The residential units would be apartment homes for seniors aged 62+, and comprise of 62 one-bedroom units and 4 two-bedroom units.

Building 1 would be divided into two groupings connected by a breezeway. Building 1 West, facing Valley View Street, would be a two-story building transitioning to a linear three-story double-loaded corridor toward the interior of the site. Building 1 East would be a three-story double-loaded bar building located interior to the site with a two-story element at the northern end of the proposed building transitioning toward the single-family neighborhood along the northern property line. Along the northern property line nine attached single-story casitas are proposed in three clusters.

The project would provide 65 units affordable to households earning less than 60 percent of the Area Median Income (AMI) along with one manager's unit. Eight of the units will be for permanent supportive housing to house formerly homeless seniors. To accommodate residents, visitors and staff, a total of forty-eight (48) parking stalls are proposed for a total ratio of 0.71 spaces per unit.

The Applicant is seeking a General Plan Amendment to High Density Residential, and a Zone Change to Medium-Density Multifamily Residential (RM-20) is required to accommodate the proposed project. The project would also necessitate a Tentative Parcel Map to divide the one parcel into two.

6650 Beach Boulevard | P.O. Box 5009 | Buena Park, CA | 90622-5009 | (714) 562-3620 | Fax (714) 562-3770 | BuenaPark.com

ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE GABRIELINO/TONGVA NATION - CONTINUED

The project applicant is requesting the following discretionary actions:

- General Plan Amendment
- Zone Change
- Design Review Approval
- Parking Variance
- Tentative Parcel Map
- Reduction in open space requirement
- Site Plan approval and issuance of building permits

Project Location: The project site is located in the city of Buena Park, and is specifically located at 8300 Valley View Street. It may be seen on the *Los Alamitos, Calif.*, USGS topographical quadrangle, R 11W, T 04S, in an unsectioned area. The project site is situated midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project site. This is shown on the enclosed map and the project area is depicted with a half-mile buffer zone.

You are a traditionally and culturally affiliated California Native American tribal representative that may request notice of projects where AB 52 applies within the City. We are requesting any information you may have that you wish to share regarding tribal cultural resources (as defined by Public Resources Code 21074) regarding the project site so that this information can be incorporated into the planning phase of the project. Please inform the City if you wish to conduct consultation with the City regarding this project. Pursuant to AB 52, the City, as the lead agency, is requesting your input within 30 days of receiving this letter. However, due to COVID 19 restrictions, the Governor Newsom issued Executive Order N-54-20 (EO), which modifies CEQA's noticing provisions and suspends tribal consultation timelines under AB 52 for 60 days, though it is up to the tribe to determine if they want to respond earlier than that.

The City's contact person for this project is:

Swati Meshram, PhD., AICP, LEED AP
Planning Division, Community Development Department
6650 Beach Boulevard, Buena Park, CA 90622
Tel. (714) 562-3614; Email: SMeshram@buenapark.com

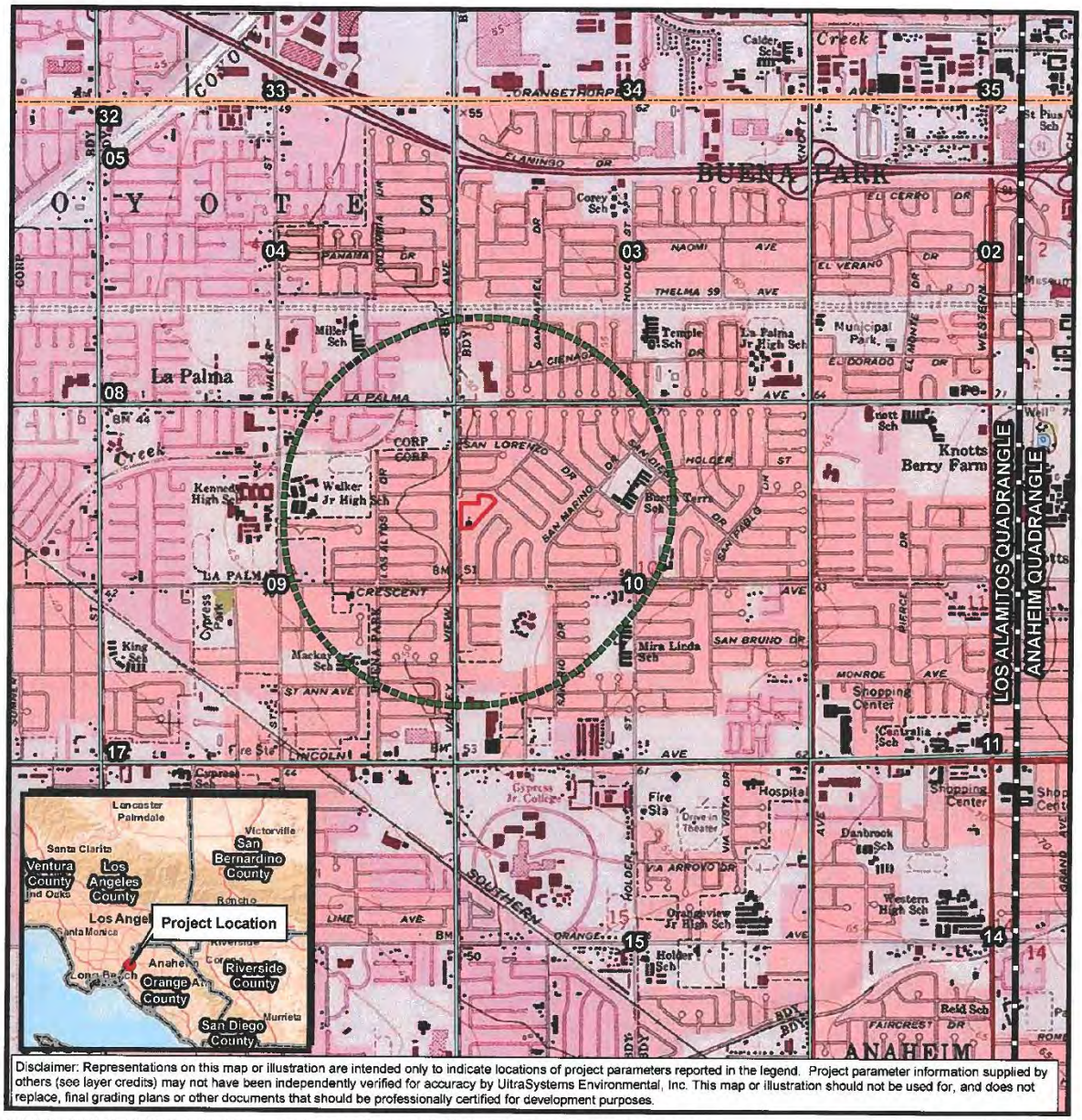
Your comments and concerns are important to the City and we welcome the opportunity to consult, upon your request. If you have any questions regarding the project, please do not hesitate to contact Swati Meshram at the contact information noted above.

Respectfully yours,

Swati Meshram,
Senior Planner, Acting Planning Manager

Enclosures:
Project Location Map

ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE GABRIELINO/TONGVA NATION – CONTINUED



ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE JUANENO BAND OF MISSION INDIANS

City of BUENA PARK

COMMUNITY DEVELOPMENT DEPARTMENT

June 22, 2020

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

Subject: **Assembly Bill 52 Notice for the Orchard View Garden Senior Apartment Homes Project, in the City of Buena Park, Orange County, California.**

Dear Chairperson Johnston,

In conformance with the tribal consultation requirements of Assembly Bill (AB) 52 Public Resources Code 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 5097.94 (AB 52) notification of projects, the purpose of this letter is to notify you that the City of Buena Park (City) (the project lead agency) will undertake the proposed project described below and is requesting the initiation of AB 52 consultation on the project. Pursuant to AB 52, the tribe has the right to consult on a proposed public or private project prior to the release of a negative declaration, mitigated negative declaration or environmental impact report.

Project Description: The Orchard View Gardens Senior Apartment Homes Project (herein referred to as project or proposed project) is proposed on an approximately 3.2 acre site located at 8300 Valley View Street in Buena Park, California. The site is currently developed with the St. Joseph's Episcopal Church. The project proposes to subdivide the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres. The newly created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with a primary residential apartment building (Building 1) and three clusters of single story casitas. These would accommodate 66 residential units and a 3,000 square foot community center. The residential units would be apartment homes for seniors aged 62+, and comprise of 62 one-bedroom units and 4 two-bedroom units.

Building 1 would be divided into two groupings connected by a breezeway. Building 1 West, facing Valley View Street, would be a two-story building transitioning to a linear three-story double-loaded corridor toward the interior of the site. Building 1 East would be a three-story double-loaded bar building located interior to the site with a two-story element at the northern end of the proposed building transitioning toward the single-family neighborhood along the northern property line. Along the northern property line nine attached single-story casitas are proposed in three clusters.

The project would provide 65 units affordable to households earning less than 60 percent of the Area Median Income (AMI) along with one manager's unit. Eight of the units will be for permanent supportive housing to house formerly homeless seniors. To accommodate residents, visitors and staff, a total of forty-eight (48) parking stalls are proposed for a total ratio of 0.71 spaces per unit.

The Applicant is seeking a General Plan Amendment to High Density Residential, and a Zone Change to Medium-Density Multifamily Residential (RM-20) is required to accommodate the proposed project. The project would also necessitate a Tentative Parcel Map to divide the one parcel into two.

6650 Beach Boulevard | P.O. Box 9099 | Buena Park, CA | 90622-9099 | (714) 562-3620 | Fax (714) 562-3770 | BuenaPark.com

ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE JUANENO BAND OF MISSION INDIANS - CONTINUED

The project applicant is requesting the following discretionary actions:

- General Plan Amendment
- Zone Change
- Design Review Approval
- Parking Variance
- Tentative Parcel Map
- Reduction in open space requirement
- Site Plan approval and issuance of building permits

Project Location: The project site is located in the city of Buena Park, and is specifically located at 8300 Valley View Street. It may be seen on the *Los Alamitos, Calif.*, USGS topographical quadrangle, R 11W, T 04S, in an unsectioned area. The project site is situated midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project site. This is shown on the enclosed map and the project area is depicted with a half-mile buffer zone.

You are a traditionally and culturally affiliated California Native American tribal representative that may request notice of projects where AB 52 applies within the City. We are requesting any information you may have that you wish to share regarding tribal cultural resources (as defined by Public Resources Code 21074) regarding the project site so that this information can be incorporated into the planning phase of the project. Please inform the City if you wish to conduct consultation with the City regarding this project. Pursuant to AB 52, the City, as the lead agency, is requesting your input within 30 days of receiving this letter. However, due to COVID 19 restrictions, the Governor Newsom issued Executive Order N-54-20 (EO), which modifies CEQA's noticing provisions and suspends tribal consultation timelines under AB 52 for 60 days, though it is up to the tribe to determine if they want to respond earlier than that.

The City's contact person for this project is:

Swati Meshram, PhD., AICP, LEED AP
Planning Division, Community Development Department
6650 Beach Boulevard, Buena Park, CA 90622
Tel. (714) 562-3614; Email: SMeshram@buenapark.com

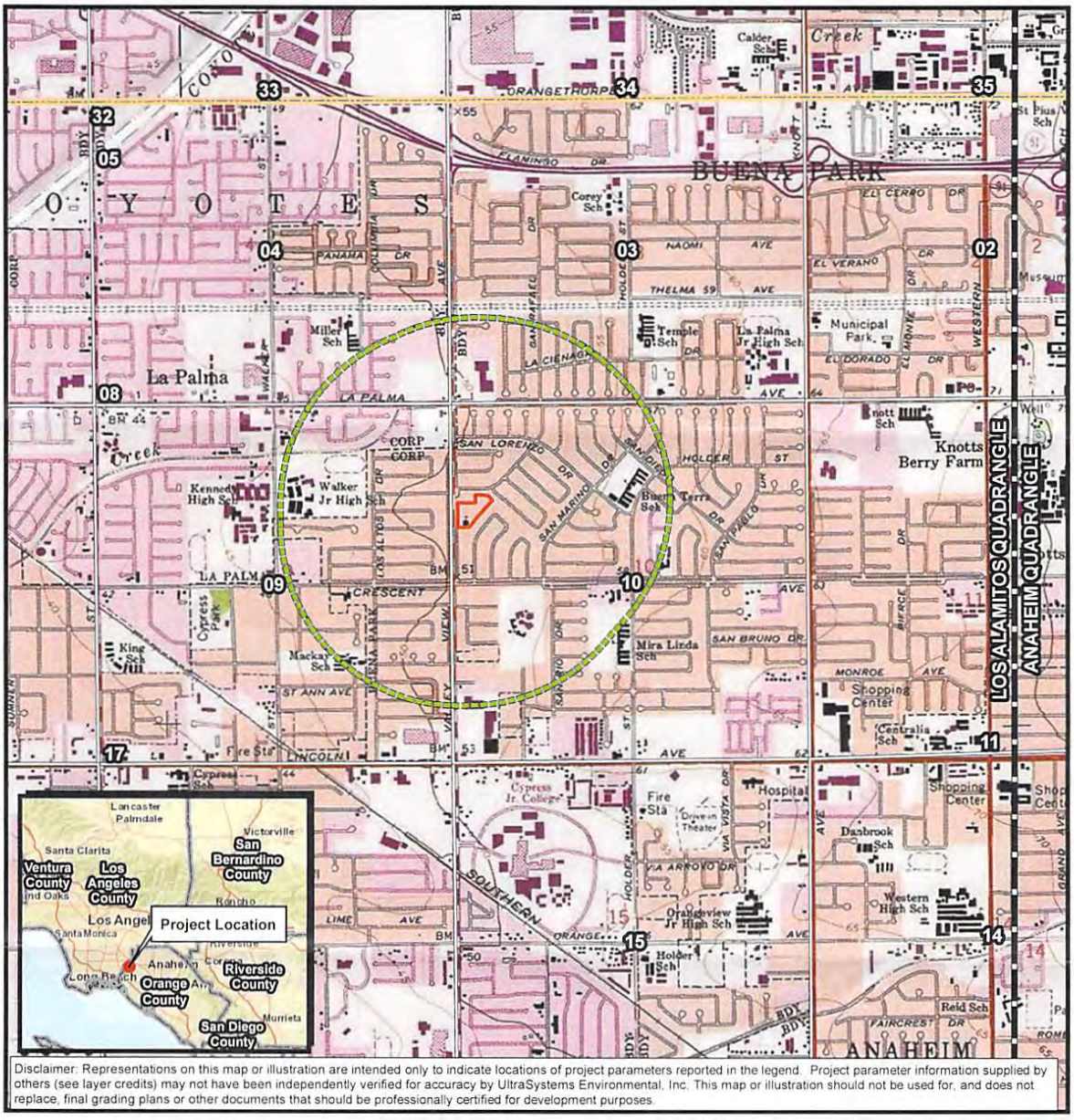
Your comments and concerns are important to the City and we welcome the opportunity to consult, upon your request. If you have any questions regarding the project, please do not hesitate to contact Swati Meshram at the contact information noted above.

Respectfully yours,

Swati Meshram,
Acting Planning Manager

Enclosures:
Project Location Map

ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE JUANENO BAND OF MISSION INDIANS - CONTINUED



ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE GABRIELENO-TONGVA SAN GABRIEL BAND OF MISSION INDIANS

City of BUENA PARK

COMMUNITY DEVELOPMENT DEPARTMENT

June 22, 2020

Anthony Morales, Chairperson
Gabrieleno-Tongva San Gabriel Band of Mission Indians
P.O. Box 693
San Gabriel, CA 91778

Subject: **Assembly Bill 52 Notice for the Orchard View Garden Senior Apartment Homes Project, in the City of Buena Park, Orange County, California.**

Dear Chairperson Morales,

In conformance with the tribal consultation requirements of Assembly Bill (AB) 52 Public Resources Code 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 5097.94 (AB 52) notification of projects, the purpose of this letter is to notify you that the City of Buena Park (City) (the project lead agency) will undertake the proposed project described below and is requesting the initiation of AB 52 consultation on the project. Pursuant to AB 52, the tribe has the right to consult on a proposed public or private project prior to the release of a negative declaration, mitigated negative declaration or environmental impact report.

Project Description: The Orchard View Gardens Senior Apartment Homes Project (herein referred to as project or proposed project) is proposed on an approximately 3.2 acre site located at 8300 Valley View Street in Buena Park, California. The site is currently developed with the St. Joseph's Episcopal Church. The project proposes to subdivide the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres. The newly created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with a primary residential apartment building (Building 1) and three clusters of single story casitas. These would accommodate 66 residential units and a 3,000 square foot community center. The residential units would be apartment homes for seniors aged 62+, and comprise of 62 one-bedroom units and 4 two-bedroom units.

Building 1 would be divided into two groupings connected by a breezeway. Building 1 West, facing Valley View Street, would be a two-story building transitioning to a linear three-story double-loaded corridor toward the interior of the site. Building 1 East would be a three-story double-loaded bar building located interior to the site with a two-story element at the northern end of the proposed building transitioning toward the single-family neighborhood along the northern property line. Along the northern property line nine attached single-story casitas are proposed in three clusters.

The project would provide 65 units affordable to households earning less than 60 percent of the Area Median Income (AMI) along with one manager's unit. Eight of the units will be for permanent supportive housing to house formerly homeless seniors. To accommodate residents, visitors and staff, a total of forty-eight (48) parking stalls are proposed for a total ratio of 0.71 spaces per unit.

The Applicant is seeking a General Plan Amendment to High Density Residential, and a Zone Change to Medium-Density Multifamily Residential (RM-20) is required to accommodate the proposed project. The project would also necessitate a Tentative Parcel Map to divide the one parcel into two.

6650 Beach Boulevard | P.O. Box 5009 | Buena Park, CA | 90622-5009 | [714] 562-3620 | Fax [714] 562-3770 | BuenaPark.com

ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE GABRIELENO-TONGVA SAN GABRIEL BAND OF MISSION INDIANS - CONTINUED

The project applicant is requesting the following discretionary actions:

- General Plan Amendment
- Zone Change
- Design Review Approval
- Parking Variance
- Tentative Parcel Map
- Reduction in open space requirement
- Site Plan approval and issuance of building permits

Project Location: The project site is located in the city of Buena Park, and is specifically located at 8300 Valley View Street. It may be seen on the *Los Alamitos, Calif.*, USGS topographical quadrangle, R 11W, T 04S, in an unsectioned area. The project site is situated midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project site. This is shown on the enclosed map and the project area is depicted with a half-mile buffer zone.

You are a traditionally and culturally affiliated California Native American tribal representative that may request notice of projects where AB 52 applies within the City. We are requesting any information you may have that you wish to share regarding tribal cultural resources (as defined by Public Resources Code 21074) regarding the project site so that this information can be incorporated into the planning phase of the project. Please inform the City if you wish to conduct consultation with the City regarding this project. Pursuant to AB 52, the City, as the lead agency, is requesting your input within 30 days of receiving this letter. However, due to COVID 19 restrictions, the Governor Newsom issued Executive Order N-54-20 (EO), which modifies CEQA's noticing provisions and suspends tribal consultation timelines under AB 52 for 60 days, though it is up to the tribe to determine if they want to respond earlier than that.

The City's contact person for this project is:

Swati Meshram, PhD., AICP, LEED AP
Planning Division, Community Development Department
6650 Beach Boulevard, Buena Park, CA 90622
Tel. (714) 562-3614; Email: SMeshram@buenapark.com

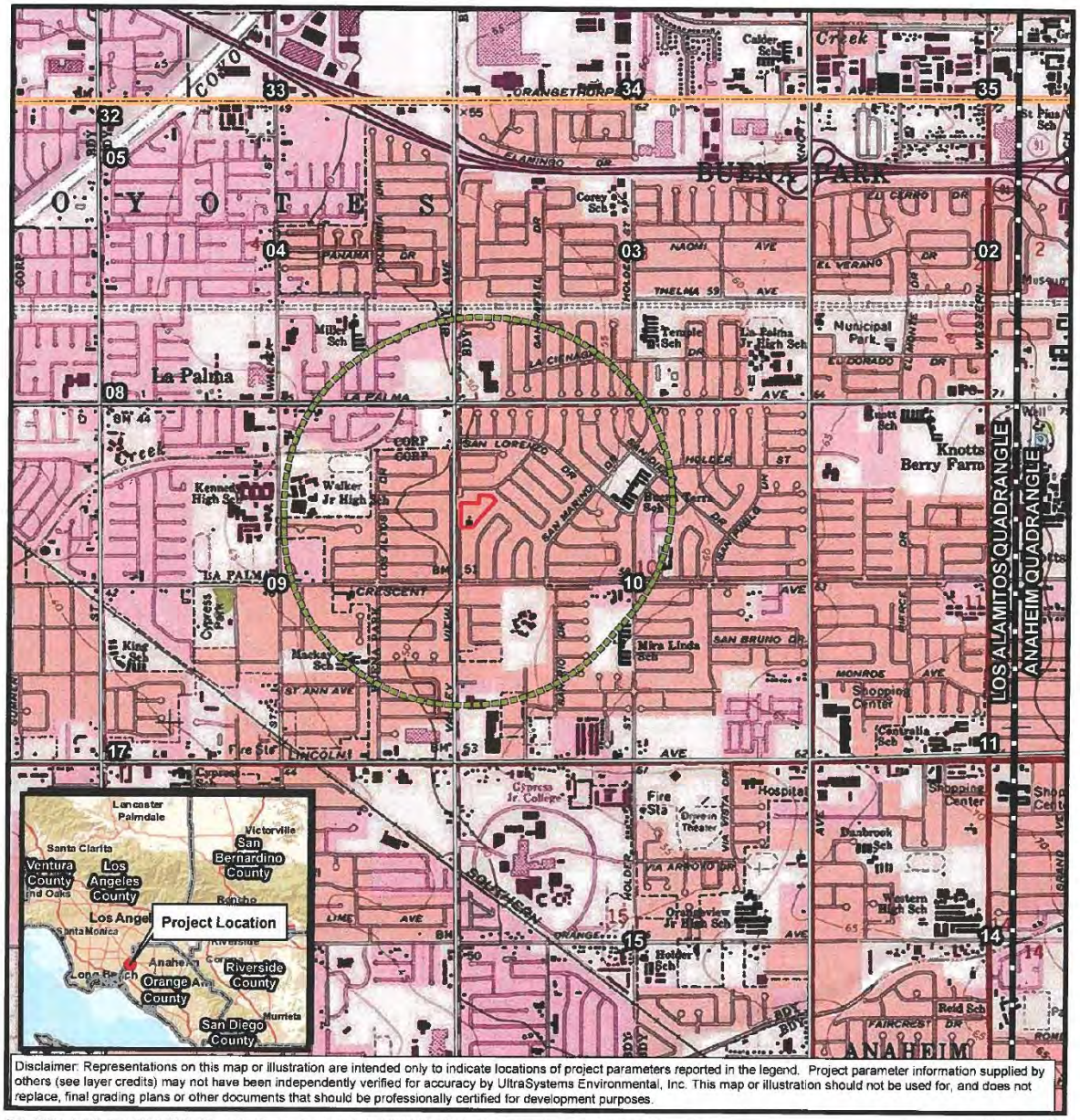
Your comments and concerns are important to the City and we welcome the opportunity to consult, upon your request. If you have any questions regarding the project, please do not hesitate to contact Swati Meshram at the contact information noted above.

Respectfully yours,

Swati Meshram,
Acting Planning Manager

Enclosures:
Project Location Map

ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE GABRIELENO-TONGVA SAN GABRIEL BAND OF MISSION INDIANS - CONTINUED



ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE SOBOBA BAND OF LUISENO INDIANS

City of BUENA PARK

COMMUNITY DEVELOPMENT DEPARTMENT

June 22, 2020

Joseph Ontiveros, Cultural Resource Director
Soboba Band of Luiseno Indians
P.O. Box 487
San Jacinto, CA. 92581

Subject: **Assembly Bill 52 Notice for the Orchard View Garden Senior Apartment Homes Project, in the City of Buena Park, Orange County, California.**

Dear Director Ontiveros,

In conformance with the tribal consultation requirements of Assembly Bill (AB) 52 Public Resources Code 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 5097.94 (AB 52) notification of projects, the purpose of this letter is to notify you that the City of Buena Park (City) (the project lead agency) will undertake the proposed project described below and is requesting the initiation of AB 52 consultation on the project. Pursuant to AB 52, the tribe has the right to consult on a proposed public or private project prior to the release of a negative declaration, mitigated negative declaration or environmental impact report.

Project Description: The Orchard View Gardens Senior Apartment Homes Project (herein referred to as project or proposed project) is proposed on an approximately 3.2 acre site located at 8300 Valley View Street in Buena Park, California. The site is currently developed with the St. Joseph's Episcopal Church. The project proposes to subdivide the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres. The newly created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with a primary residential apartment building (Building 1) and three clusters of single story casitas. These would accommodate 66 residential units and a 3,000 square foot community center. The residential units would be apartment homes for seniors aged 62+, and comprise of 62 one-bedroom units and 4 two-bedroom units.

Building 1 would be divided into two groupings connected by a breezeway. Building 1 West, facing Valley View Street, would be a two-story building transitioning to a linear three-story double-loaded corridor toward the interior of the site. Building 1 East would be a three-story double-loaded bar building located interior to the site with a two-story element at the northern end of the proposed building transitioning toward the single-family neighborhood along the northern property line. Along the northern property line nine attached single-story casitas are proposed in three clusters.

The project would provide 65 units affordable to households earning less than 60 percent of the Area Median Income (AMI) along with one manager's unit. Eight of the units will be for permanent supportive housing to house formerly homeless seniors. To accommodate residents, visitors and staff, a total of forty-eight (48) parking stalls are proposed for a total ratio of 0.71 spaces per unit.

The Applicant is seeking a General Plan Amendment to High Density Residential, and a Zone Change to Medium-Density Multifamily Residential (RM-20) is required to accommodate the proposed project. The project would also necessitate a Tentative Parcel Map to divide the one parcel into two.

6650 Beach Boulevard | P.O. Box 5009 | Buena Park, CA | 90622-5009 | (714) 562-3620 | Fax (714) 562-3770 | BuenaPark.com

ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE SOBOBA BAND OF LUISENO INDIANS - CONTINUED

The project applicant is requesting the following discretionary actions:

- General Plan Amendment
- Zone Change
- Design Review Approval
- Parking Variance
- Tentative Parcel Map
- Reduction in open space requirement
- Site Plan approval and issuance of building permits

Project Location: The project site is located in the city of Buena Park, and is specifically located at 8300 Valley View Street. It may be seen on the *Los Alamitos, Calif.*, USGS topographical quadrangle, R 11W, T 04S, in an unsectioned area. The project site is situated midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project site. This is shown on the enclosed map and the project area is depicted with a half-mile buffer zone.

You are a traditionally and culturally affiliated California Native American tribal representative that may request notice of projects where AB 52 applies within the City. We are requesting any information you may have that you wish to share regarding tribal cultural resources (as defined by Public Resources Code 21074) regarding the project site so that this information can be incorporated into the planning phase of the project. Please inform the City if you wish to conduct consultation with the City regarding this project. Pursuant to AB 52, the City, as the lead agency, is requesting your input within 30 days of receiving this letter. However, due to COVID 19 restrictions, the Governor Newsom issued Executive Order N-54-20 (EO), which modifies CEQA's noticing provisions and suspends tribal consultation timelines under AB 52 for 60 days, though it is up to the tribe to determine if they want to respond earlier than that.

The City's contact person for this project is:

Swati Meshram, PhD., AICP, LEED AP
Planning Division, Community Development Department
6650 Beach Boulevard, Buena Park, CA 90622
Tel. (714) 562-3614; Email: SMeshram@buenapark.com

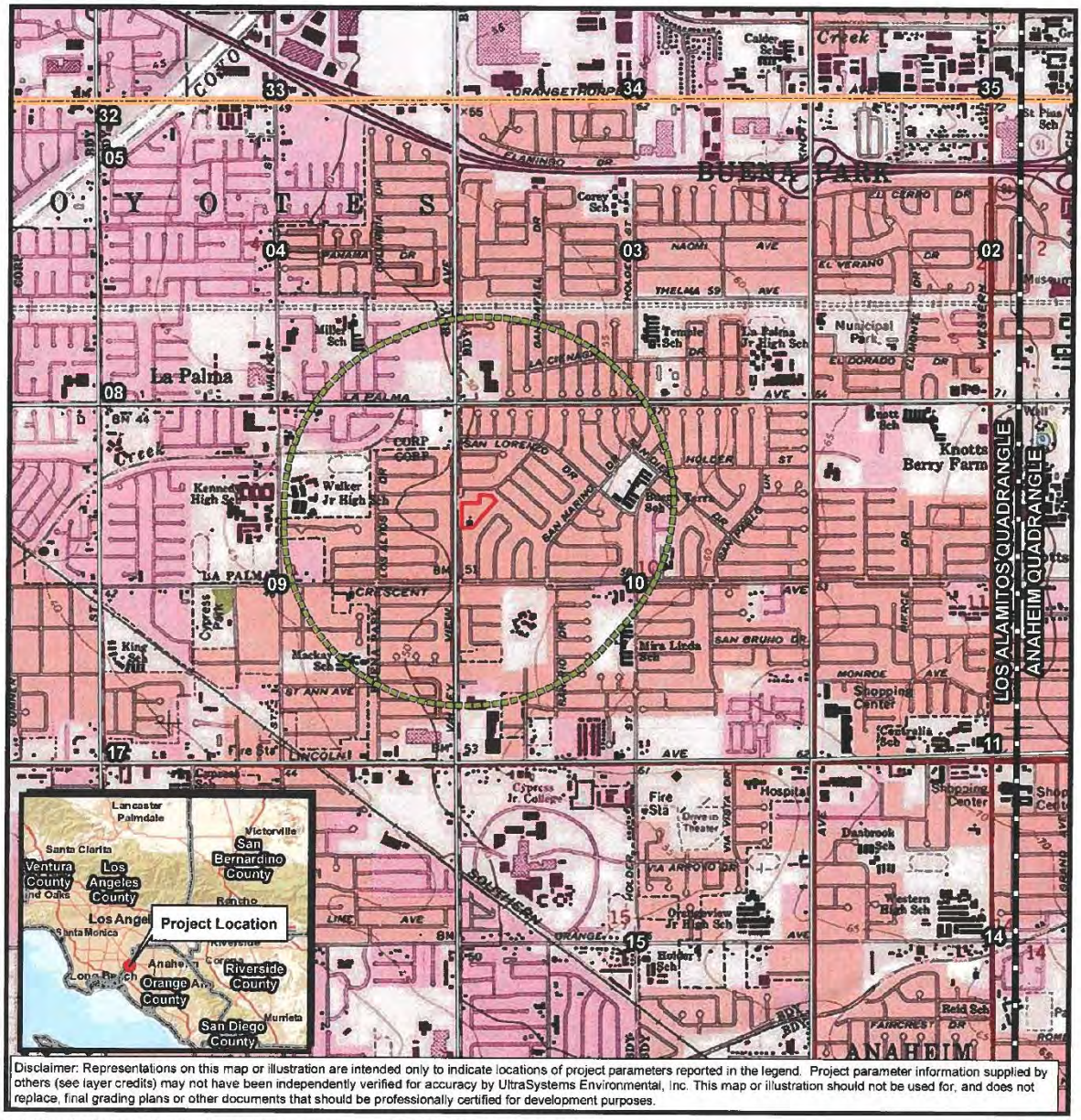
Your comments and concerns are important to the City and we welcome the opportunity to consult, upon your request. If you have any questions regarding the project, please do not hesitate to contact Swati Meshram at the contact information noted above.

Respectfully yours,

Swati Meshram,
Acting Planning Manager

Enclosures:
Project Location Map

ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE SOBOBA BAND OF LUISENO INDIANS - CONTINUED



ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE JUANENO BAND OF MISSION INDIANS ACJACHEMEN NATION

City of BUENA PARK

COMMUNITY DEVELOPMENT DEPARTMENT

June 22, 2020

Joyce Perry, Representing Tribal Chairperson
Juaneno Band of Mission Indians Acjachemen Nation
4955 Paseo Segovia
Irvine, Ca. 92612

Subject: Assembly Bill 52 Notice for the Orchard View Garden Senior Apartment Homes Project, in the City of Buena Park, Orange County, California.

Dear Chairperson Perry,

In conformance with the tribal consultation requirements of Assembly Bill (AB) 52 Public Resources Code 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 5097.94 (AB 52) notification of projects, the purpose of this letter is to notify you that the City of Buena Park (City) (the project lead agency) will undertake the proposed project described below and is requesting the initiation of AB 52 consultation on the project. Pursuant to AB 52, the tribe has the right to consult on a proposed public or private project prior to the release of a negative declaration, mitigated negative declaration or environmental impact report.

Project Description: The Orchard View Gardens Senior Apartment Homes Project (herein referred to as project or proposed project) is proposed on an approximately 3.2 acre site located at 8300 Valley View Street in Buena Park, California. The site is currently developed with the St. Joseph's Episcopal Church. The project proposes to subdivide the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres. The newly created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with a primary residential apartment building (Building 1) and three clusters of single story casitas. These would accommodate 66 residential units and a 3,000 square foot community center. The residential units would be apartment homes for seniors aged 62+, and comprise of 62 one-bedroom units and 4 two-bedroom units.

Building 1 would be divided into two groupings connected by a breezeway. Building 1 West, facing Valley View Street, would be a two-story building transitioning to a linear three-story double-loaded corridor toward the interior of the site. Building 1 East would be a three-story double-loaded bar building located interior to the site with a two-story element at the northern end of the proposed building transitioning toward the single-family neighborhood along the northern property line. Along the northern property line nine attached single-story casitas are proposed in three clusters.

The project would provide 65 units affordable to households earning less than 60 percent of the Area Median Income (AMI) along with one manager's unit. Eight of the units will be for permanent supportive housing to house formerly homeless seniors. To accommodate residents, visitors and staff, a total of forty-eight (48) parking stalls are proposed for a total ratio of 0.71 spaces per unit.

The Applicant is seeking a General Plan Amendment to High Density Residential, and a Zone Change to Medium-Density Multifamily Residential (RM-20) is required to accommodate the proposed project. The project would also necessitate a Tentative Parcel Map to divide the one parcel into two.

6650 Beach Boulevard | P.O. Box 5009 | Buena Park, CA | 90622-5009 | (714) 562-3620 | Fax (714) 562-3770 | BuenaPark.com

ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE JUANENO BAND OF MISSION INDIANS ACJACHEMEN NATION - CONTINUED

The project applicant is requesting the following discretionary actions:

- General Plan Amendment
- Zone Change
- Design Review Approval
- Parking Variance
- Tentative Parcel Map
- Reduction in open space requirement
- Site Plan approval and issuance of building permits

Project Location: The project site is located in the city of Buena Park, and is specifically located at 8300 Valley View Street. It may be seen on the *Los Alamitos, Calif.*, USGS topographical quadrangle, R 11W, T 04S, in an unsectioned area. The project site is situated midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project site. This is shown on the enclosed map and the project area is depicted with a half-mile buffer zone.

You are a traditionally and culturally affiliated California Native American tribal representative that may request notice of projects where AB 52 applies within the City. We are requesting any information you may have that you wish to share regarding tribal cultural resources (as defined by Public Resources Code 21074) regarding the project site so that this information can be incorporated into the planning phase of the project. Please inform the City if you wish to conduct consultation with the City regarding this project. Pursuant to AB 52, the City, as the lead agency, is requesting your input within 30 days of receiving this letter. However, due to COVID 19 restrictions, the Governor Newsom issued Executive Order N-54-20 (EO), which modifies CEQA's noticing provisions and suspends tribal consultation timelines under AB 52 for 60 days, though it is up to the tribe to determine if they want to respond earlier than that.

The City's contact person for this project is:

Swati Meshram, PhD., AICP, LEED AP
Planning Division, Community Development Department
6650 Beach Boulevard, Buena Park, CA 90622
Tel. (714) 562-3614; Email: SMeshram@buenapark.com

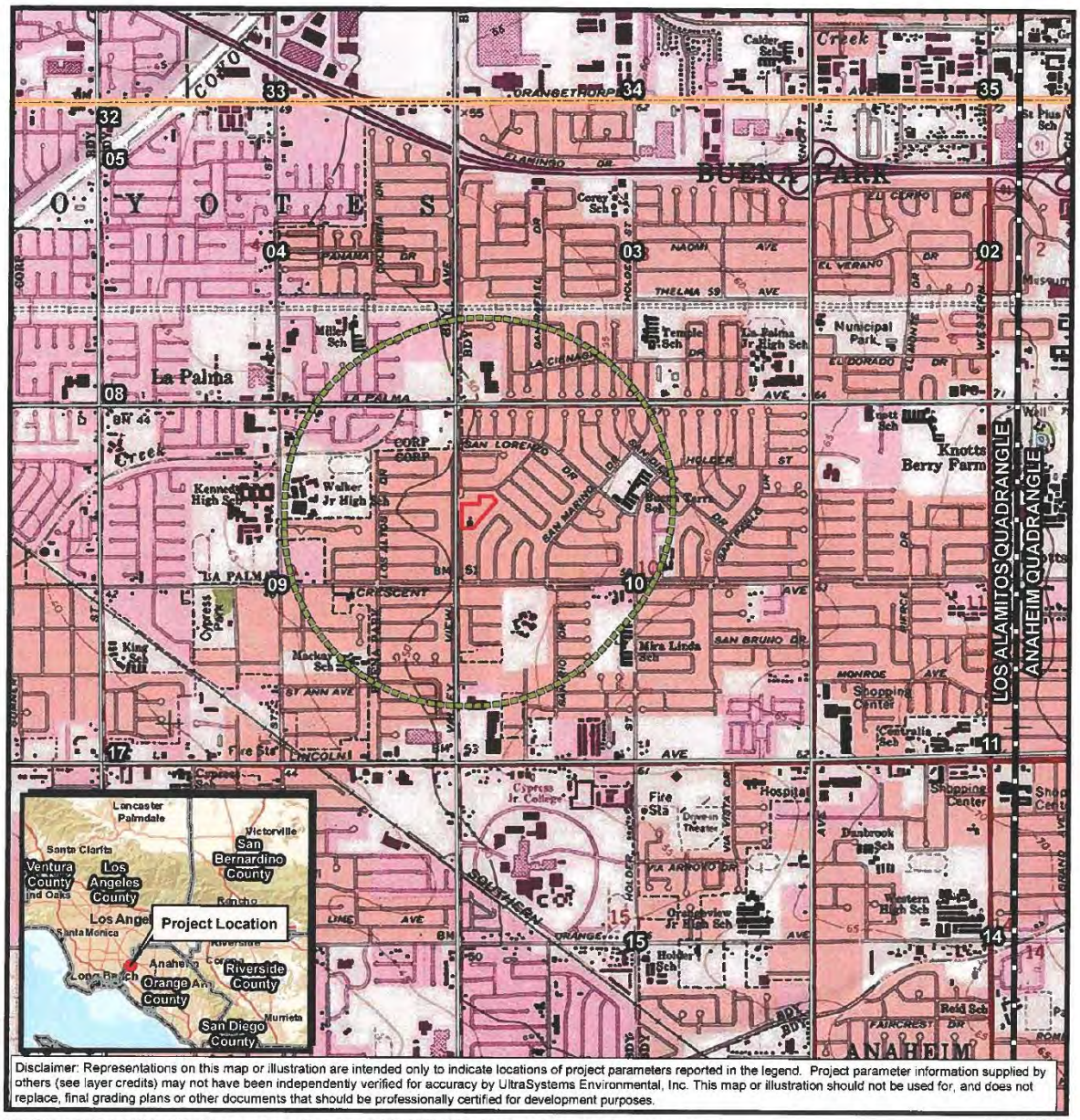
Your comments and concerns are important to the City and we welcome the opportunity to consult, upon your request. If you have any questions regarding the project, please do not hesitate to contact Swati Meshram at the contact information noted above.

Respectfully yours,

Swati Meshram,
Acting Planning Manager

Enclosures:
Project Location Map

ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE JUANENO BAND OF MISSION INDIANS ACJACHEMEN NATION - CONTINUED



ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE JUANENO BAND OF MISSION INDIANS ACJACHEMEN NATION

City of BUENA PARK

COMMUNITY DEVELOPMENT DEPARTMENT

June 22, 2020

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

Subject: **Assembly Bill 52 Notice for the Orchard View Garden Senior Apartment Homes Project, in the City of Buena Park, Orange County, California.**

Dear Chairperson Romero:

In conformance with the tribal consultation requirements of Assembly Bill (AB) 52 Public Resources Code 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 5097.94 (AB 52) notification of projects, the purpose of this letter is to notify you that the City of Buena Park (City) (the project lead agency) will undertake the proposed project described below and is requesting the initiation of AB 52 consultation on the project. Pursuant to AB 52, the tribe has the right to consult on a proposed public or private project prior to the release of a negative declaration, mitigated negative declaration or environmental impact report.

Project Description: The Orchard View Gardens Senior Apartment Homes Project (herein referred to as project or proposed project) is proposed on an approximately 3.2 acre site located at 8300 Valley View Street in Buena Park, California. The site is currently developed with the St. Joseph's Episcopal Church. The project proposes to subdivide the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres. The newly created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with a primary residential apartment building (Building 1) and three clusters of single story casitas. These would accommodate 66 residential units and a 3,000 square foot community center. The residential units would be apartment homes for seniors aged 62+, and comprise of 62 one-bedroom units and 4 two-bedroom units.

Building 1 would be divided into two groupings connected by a breezeway. Building 1 West, facing Valley View Street, would be a two-story building transitioning to a linear three-story double-loaded corridor toward the interior of the site. Building 1 East would be a three-story double-loaded bar building located interior to the site with a two-story element at the northern end of the proposed building transitioning toward the single-family neighborhood along the northern property line. Along the northern property line nine attached single-story casitas are proposed in three clusters.

The project would provide 65 units affordable to households earning less than 60 percent of the Area Median Income (AMI) along with one manager's unit. Eight of the units will be for permanent supportive housing to house formerly homeless seniors. To accommodate residents, visitors and staff, a total of forty-eight (48) parking stalls are proposed for a total ratio of 0.71 spaces per unit.

The Applicant is seeking a General Plan Amendment to High Density Residential, and a Zone Change to Medium-Density Multifamily Residential (RM-20) is required to accommodate the proposed project. The project would also necessitate a Tentative Parcel Map to divide the one parcel into two.

6650 Beach Boulevard | P.O. Box 5009 | Buena Park, CA | 90622-5009 | (714) 562-3620 | Fax (714) 562-3770 | BuenaPark.com

ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE JUANENO BAND OF MISSION INDIANS ACJACHEMEN NATION - CONTINUED

The project applicant is requesting the following discretionary actions:

- General Plan Amendment
- Zone Change
- Design Review Approval
- Parking Variance
- Tentative Parcel Map
- Reduction in open space requirement
- Site Plan approval and issuance of building permits

Project Location: The project site is located in the city of Buena Park, and is specifically located at 8300 Valley View Street. It may be seen on the *Los Alamitos, Calif.*, USGS topographical quadrangle, R 11W, T 04S, in an unsectioned area. The project site is situated midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project site. This is shown on the enclosed map and the project area is depicted with a half-mile buffer zone.

You are a traditionally and culturally affiliated California Native American tribal representative that may request notice of projects where AB 52 applies within the City. We are requesting any information you may have that you wish to share regarding tribal cultural resources (as defined by Public Resources Code 21074) regarding the project site so that this information can be incorporated into the planning phase of the project. Please inform the City if you wish to conduct consultation with the City regarding this project. Pursuant to AB 52, the City, as the lead agency, is requesting your input within 30 days of receiving this letter. However, due to COVID 19 restrictions, the Governor Newsom issued Executive Order N-54-20 (EO), which modifies CEQA's noticing provisions and suspends tribal consultation timelines under AB 52 for 60 days, though it is up to the tribe to determine if they want to respond earlier than that.

The City's contact person for this project is:

Swati Meshram, PhD., AICP, LEED AP
Planning Division, Community Development Department
6650 Beach Boulevard, Buena Park, CA 90622
Tel. (714) 562-3614; Email: SMeshram@buenapark.com

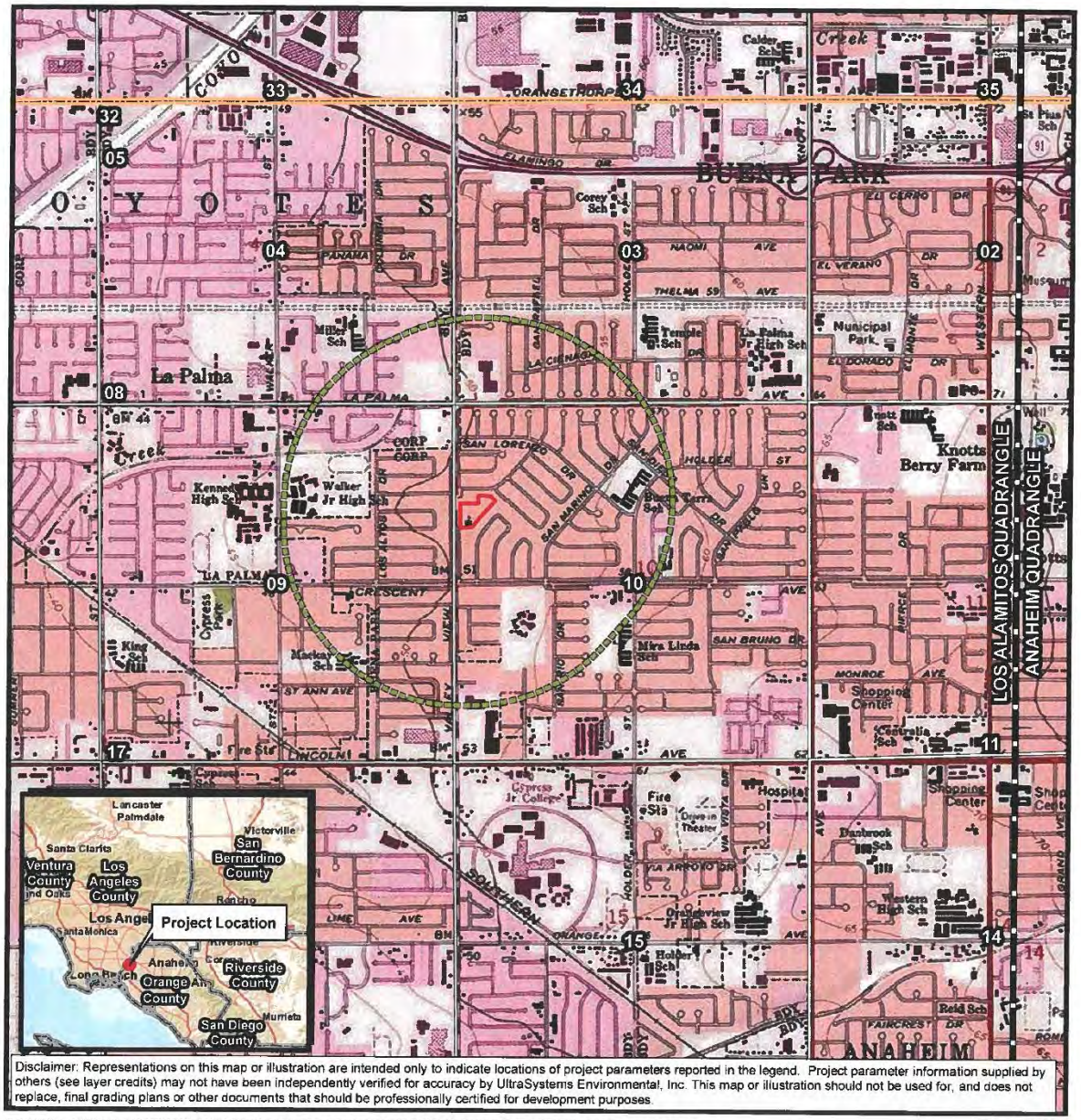
Your comments and concerns are important to the City and we welcome the opportunity to consult, upon your request. If you have any questions regarding the project, please do not hesitate to contact Swati Meshram at the contact information noted above.

Respectfully yours,

Swati Meshram,
Acting Planning Manager

Enclosures:
Project Location Map

ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE JUANENO BAND OF MISSION INDIANS ACJACHEMEN NATION - CONTINUED



ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE GABRIELENO BAND OF MISSION INDIANS

City of BUENA PARK

COMMUNITY DEVELOPMENT DEPARTMENT

June 22, 2020

Andrew Salas, Chairperson
Gabrieleno Band of Mission Indians
P. O. Box 393
Covina, CA 91723

Subject: **Assembly Bill 52 Notice for the Orchard View Gardens Senior Apartment Homes Project, in the City of Buena Park, Orange County, California.**

Dear Chairperson Salas,

In conformance with the tribal consultation requirements of Assembly Bill (AB) 52 Public Resources Code 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 5097.94 (AB 52) notification of projects, the purpose of this letter is to notify you that the City of Buena Park (City) (the project lead agency) will undertake the proposed project described below and is requesting the initiation of AB 52 consultation on the project. Pursuant to AB 52, the tribe has the right to consult on a proposed public or private project prior to the release of a negative declaration, mitigated negative declaration or environmental impact report.

Project Description: The Orchard View Gardens Senior Apartment Homes Project (herein referred to as project or proposed project) is proposed on an approximately 3.2 acre site located at 8300 Valley View Street in Buena Park, California. The site is currently developed with the St. Joseph's Episcopal Church. The project proposes to subdivide the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres. The newly created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with a primary residential apartment building (Building 1) and three clusters of single story casitas. These would accommodate 66 residential units and a 3,000 square foot community center. The residential units would be apartment homes for seniors aged 62+, and comprise of 62 one-bedroom units and 4 two-bedroom units.

Building 1 would be divided into two groupings connected by a breezeway. Building 1 West, facing Valley View Street, would be a two-story building transitioning to a linear three-story double-loaded corridor toward the interior of the site. Building 1 East would be a three-story double-loaded bar building located interior to the site with a two-story element at the northern end of the proposed building transitioning toward the single-family neighborhood along the northern property line. Along the northern property line nine attached single-story casitas are proposed in three clusters.

The project would provide 65 units affordable to households earning less than 60 percent of the Area Median Income (AMI) along with one manager's unit. Eight of the units will be for permanent supportive housing to house formerly homeless seniors. To accommodate residents, visitors and staff, a total of forty-eight (48) parking stalls are proposed for a total ratio of 0.71 spaces per unit.

The Applicant is seeking a General Plan Amendment to High Density Residential, and a Zone Change to Medium-Density Multifamily Residential (RM-20) is required to accommodate the proposed project. The project would also necessitate a Tentative Parcel Map to divide the one parcel into two.

6650 Beach Boulevard | P.O. Box 5009 | Buena Park, CA | 90622-5009 | (714) 562-3620 | Fax (714) 562-3770 | BuenaPark.com

ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE GABRIELENO BAND OF MISSION INDIANS - CONTINUED

The project applicant is requesting the following discretionary actions:

- General Plan Amendment
- Zone Change
- Design Review Approval
- Parking Variance
- Tentative Parcel Map
- Reduction in open space requirement
- Site Plan approval and issuance of building permits

Project Location: The project site is located in the city of Buena Park, and is specifically located at 8300 Valley View Street. It may be seen on the *Los Alamitos, Calif.*, USGS topographical quadrangle, R 11W, T 04S, in an unsectioned area. The project site is situated midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project site. This is shown on the enclosed map and the project area is depicted with a half-mile buffer zone.

You are a traditionally and culturally affiliated California Native American tribal representative that may request notice of projects where AB 52 applies within the City. We are requesting any information you may have that you wish to share regarding tribal cultural resources (as defined by Public Resources Code 21074) regarding the project site so that this information can be incorporated into the planning phase of the project. Please inform the City if you wish to conduct consultation with the City regarding this project. Pursuant to AB 52, the City, as the lead agency, is requesting your input within 30 days of receiving this letter. However, due to COVID 19 restrictions, the Governor Newsom issued Executive Order N-54-20 (EO), which modifies CEQA's noticing provisions and suspends tribal consultation timelines under AB 52 for 60 days, though it is up to the tribe to determine if they want to respond earlier than that.

The City's contact person for this project is:

Swati Meshram, PhD., AICP, LEED AP
Planning Division, Community Development Department
6650 Beach Boulevard, Buena Park, CA 90622
Tel. (714) 562-3614; Email: SMeshram@buenapark.com

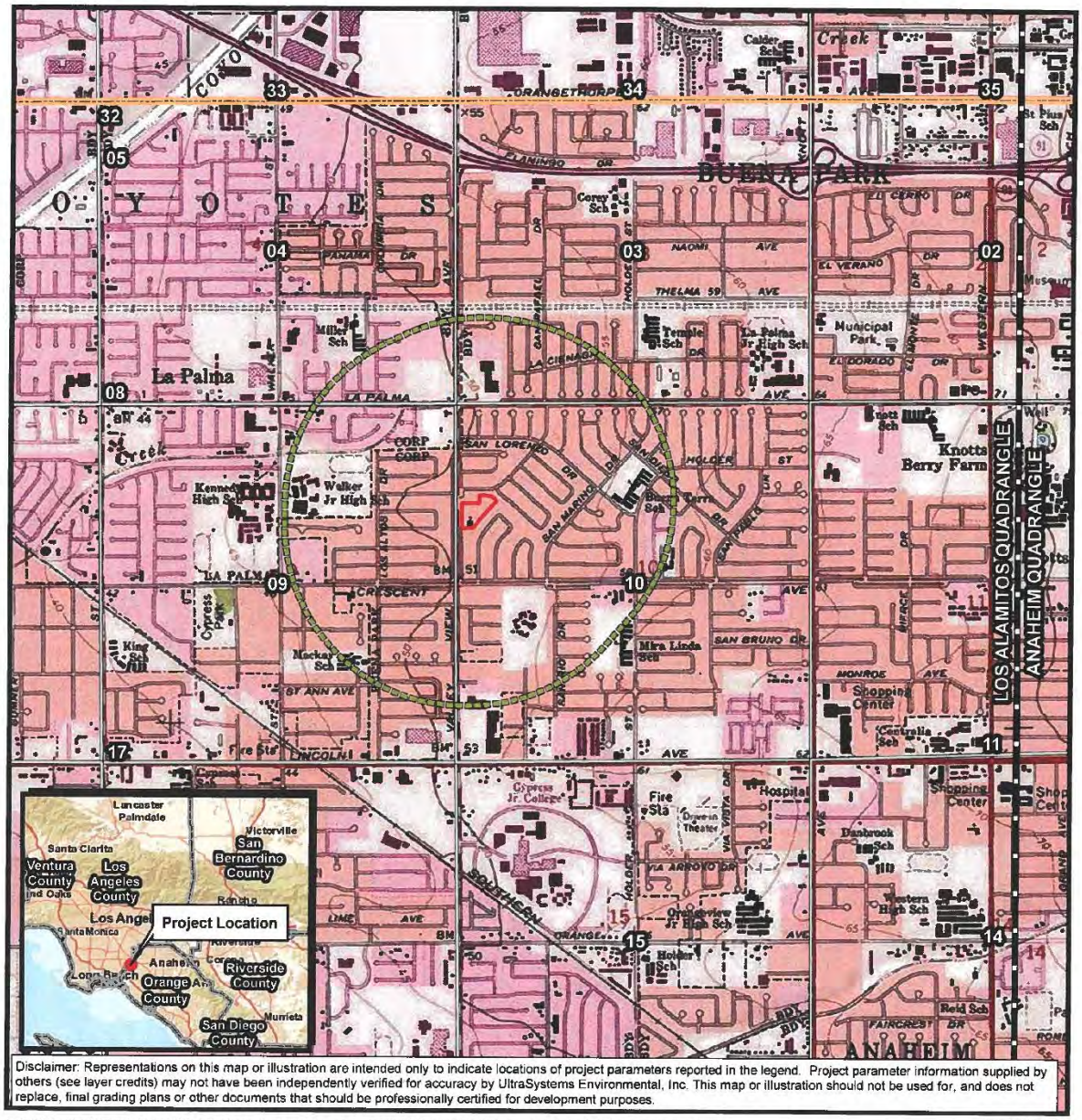
Your comments and concerns are important to the City and we welcome the opportunity to consult, upon your request. If you have any questions regarding the project, please do not hesitate to contact Swati Meshram at the contact information noted above.

Respectfully yours,

Swati Meshram,
Acting Planning Manager

Enclosures:
Project Location Map

ATTACHMENT E: AB 52 TRIBAL CONSULTATION LETTER FROM THE CITY OF BUENA PARK TO THE GABRIELENO BAND OF MISSION INDIANS - CONTINUED



Path: \\Gissvr\gis\Projects\7037_NCR_Affordable_Housing_Buena Park_IS_MND\MXDs\7037_NCR_Buena_Park_Fig4_5_Topo_2019_11_08.mxd January 08, 2020

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community, Copyright © 2013 National Geographic Society, i-cubed; CA Dept. of Conservation, March 2013; UltraSystems Environmental, Inc., 2019

Scale: 1:24,000

N

0 1,000 2,000 Feet

0 250 500 Meters

Legend

- Project Boundary
- Half Mile Radius
- Township Boundary
- Quadrangle Boundary
- Section Boundary

Orchard View Gardens Senior Apartment Homes

Topographic Map
USGS Quadrange: Los Alamitos
Township: 04S Range: 11W
Section 10

UltraSystems environmental • management • planning

ATTACHMENT F: PUBLIC AGENCY COMMENT LETTER A

Comment Letter A

GABRIELENO BAND OF MISSION INDIANS - KIZH NATION
Historically known as The San Gabriel Band of Mission Indians
recognized by the State of California as the aboriginal tribe of the Los Angeles basin

Notice of Intent to Adopt An Initial Study/ Mitigated Negative Declaration

September 17, 2020

Project Name: Orchard View Gardens Senior Apartment Homes 8300 Valley Buena Park , CA 90620

Dear Swati Meshram,

We have received your Notice of Intent to adopt a Negative Declaration for the Orchard View Gardens Senior Apartment Homes the City of Buena Park. Our Tribal Government is requesting the retention of a Native American Tribal Consultant to monitor all ground disturbance conducted for this project. A-1

Sincerely,
Gabrieleno Band of Mission Indians/Kizh Nation
(1844) 390-0787 Office

Andrew Salas, Chairman
Nadine Salas, Vice-Chairman
Dr. Christina Swindall Martinez, secretary
Albert Perez, treasurer I
Martha Gonzalez Lemos, treasurer II
Richard Gradias, Chairman of the council of Elders
PO Box 393 Covina, CA 91723
www.gabrielenoindians@yahoo.com
gabrielenoindians@yahoo.com

ATTACHMENT F: PUBLIC AGENCY COMMENT LETTER B

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 12
1750 EAST 4TH STREET, SUITE 100
SANTA ANA, CA 92705
PHONE (657) 328-6000
FAX (657) 328-6522
TTY 711
www.dot.ca.gov/caltrans-near-me/district12

Comment Letter B

Making Conservation a California Way of Life.

October 13, 2020

Ms. Swati Meshram
City of Buena Park
6650 Beach Blvd.
Buena Park, CA 90621

File: IGR/CEQA
IGR# 2020-01463
SCH#: 2020090221
SR 39 PM 12.959
SR 91 PM 0.85

Dear Ms. Meshram,

Thank you for including the California Department of Transportation (Caltrans) in the review of the Initial Study and Mitigated Negative Declaration for the Orchard View Gardens Project in the City of Buena Park. The mission of Caltrans is to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. B-1

The Project proposes to subdivide the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres. The newly created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with a primary residential apartment building and 9 single story casitas accommodating 66 residential units and a 3,000 square foot community center. On Parcel 2, 66 residential apartment homes for seniors aged 62+, including 62 one-bedroom units and 4 two-bedroom units, are proposed in one larger and three smaller buildings. The project proposes 66 residential apartment homes for seniors aged 62 and up. The project would provide 65 units affordable to households earning less than 60 percent of the Area Median Income (AMI) along with one manager's unit, for a total of 66 units. Eight of the units will be for permanent supportive housing to house formerly homeless seniors. B-2

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"

ATTACHMENT F: PUBLIC AGENCY COMMENT LETTER B - CONTINUED

The proposed project would be located at 8300 Valley View Street, on the eastern frontage of Valley View Street between Los Molinos Drive and Crescent Avenue in Buena Park, California. The project site is approximately 3.2 acres and is currently occupied by St. Joseph's Episcopal Church. The project site is located in a portion of the City that is predominately residential and close to State Route (SR) 39 and SR 91. SR 39 and SR 91 are owned and operated by Caltrans. Caltrans is a responsible agency and has the following comments: B-3

Systems Planning:

1. Consider including safe bicycle and pedestrian features as part of the project. The document notes that there may be more non-car owning households due to the demographics of the proposed project – therefore, residents may be more reliant on Active Transportation. Bicycle and pedestrian improvements ensure that residents will be able to utilize alternative forms of transportation. B-4

Freight:

2. Please consider incorporating designated areas/parking for freight delivery, package and transportation network companies pick up and drop off in the site plan design for this project. B-5

Transit Planning

3. Please consider providing adequate wayfinding signage to nearby transit stops within the proposed project. Connectivity of first and last mile mobility options and transit services help integrate a complete multimodal transportation network. B-6

Permits:

4. Any project work proposed in the vicinity of the State right of way will require an encroachment permit, and all environmental concerns must be adequately addressed. Please coordinate with Caltrans in order to B-7

ATTACHMENT F: PUBLIC AGENCY COMMENT LETTER B - CONTINUED

meet the requirements for any work within or near State Right-of-Way. A fee may apply. If the cost of work within the State right of way is below one Million Dollars, the Encroachment Permit process will be handled by our Permits Branch; otherwise the permit should be authorized through the Caltrans's Project Development Department. When applying for Encroachment Permit, please incorporate all Environmental Documentation, SWPPP/ WPCP, Hydraulic Calculations, R/W certification and all relevant design details including design exception approvals. For specific details for Encroachment Permits procedure, please refer to the Caltrans's Encroachment Permits Manual. The latest edition of the Manual is available on the web site: http://www.dot.ca.gov/hq/traffops/developserv/permits/

B-7, cont.

Please continue to coordinate with Caltrans for any future developments that could potentially impact State transportation facilities. If you have any questions, please do not hesitate to contact Julie Lugaro at Julie.lugaro@dot.ca.gov.

B-8

Sincerely,

Scott Shelley
Branch Chief, Regional-IGR-Transit Planning
District 12

ATTACHMENT F: PUBLIC AGENCY COMMENT LETTER C

ORANGE COUNTY FIRE AUTHORITY
P. O. Box 57115, Irvine, CA 92619-7115 • 1 Fire Authority Road, Irvine, CA 92602-0125
Brian Fennessy, Fire Chief (714) 573-6000 www.ocfa.org

Comment Letter C

October 13, 2020

City of Buena Park
Planning Division
Attn: Swati Meshram, PhD, AICP, Planning Manager
6650 Beach Blvd.
Buena Park, CA 90621

Ref: Notice of Intent to Adopt a Mitigated Negative Declaration – Orchard View Garden

Dear Swati Meshram:

Thank you for the opportunity to review the subject document. The Orange County Fire Authority (OCFA) provides fire protection and emergency medical services response to the project area. Services include: structural fire protection, emergency medical and rescue services, education and hazardous material response. OCFA also participates in disaster planning as it relates to emergency operations, which includes high occupant areas and school sites and may participate in community disaster drills planned by others. Resources are deployed based upon a regional service delivery system, assigning personnel and equipment to emergency incidents without regard to jurisdictional boundaries. The equipment used by the department has the versatility to respond to both urban and wildland emergency conditions. The following are our comments: C-1

We believe this project will have Less Than Significant Impact with the following Measures: C-2

- The project is subject to review by the City and the OCFA for various construction document plan checks for the applicable fire life safety codes and regulations. The project will be subject to the current editions of the CBC, CFC and related codes.
- Structures of this size and occupancy are required to have automatic fire sprinkler systems designed per NFPA 13 as required in the current CBC, CFC.
- A water supply system to supply fire hydrants and automatic fire sprinkler systems is required. Fire flow and hydrant spacing shall meet the minimums identified in the codes. Please refer to the California Fire Code Appendix section. These tables are also located in OCFA Guideline B09, Attachment 23.
- Attic spaces shall be fully sprinklered.
- It is unlawful to occupy any portions of this building until City building department and OCFA have conducted final inspection and sign off.

Serving the Cities of: Aliso Viejo • Buena Park • Cypress • Dana Point • Garden Grove • Irvine • Laguna Hills • Laguna Niguel • Laguna Woods
Lake Forest • La Palma • Los Alamitos • Mission Viejo • Rancho Santa Margarita •San Clemente • San Juan Capistrano • Santa Ana
Seal Beach • Stanton • Tustin • Villa Park • Westminster • Yorba Linda • and Unincorporated Areas of Orange County

RESIDENTIAL SPRINKLERS AND SMOKE ALARMS SAVE LIVES

ATTACHMENT F: PUBLIC AGENCY COMMENT LETTER C - CONTINUED

- Ensure that proposed project meet current California Fire Code, OCFA Fire Master Plans for Commercial & Residential Development (B-O9) Guideline, and OCFA Architectural Review (E-04) Guideline.
- Any project which increases population can potentially increase workload. All projects are cumulative and OCFA uses a fair share approach to mitigate fire service response impacts and facility/equipment needs.
    - Mitigation: Participate with the City of Buena Park through developer agreements for future fire facility mitigation.

C-2, cont.

In addition, we would like to point out that all standard conditions with regard to development, including water supply, built in fire protection systems, road grades and width, access, building materials, and the like will be applied to this project at the time of plan submittal. Thank you for providing us with this information. Please contact me at 714-573-6177 if you have any questions.

C-3

Sincerely,

William Blumberg
Management Assistant
Planning and Development
williamblumberg@ocfa.org

3.0 ERRATA

As a result of comments received during the Assembly Bill 52 (AB 52) consultation process for the proposed project, this errata section is included in this Response to Comments document to indicate changes in ~~strike out~~ to show deleted text and underline to show added text for the IS/MND.

- As a result of consultation with the Gabrieleño Band of Mission Indians-Kizh Nation, the following minor modifications have been made to Mitigation Measures **TCR-1** and **TCR-2**. These modifications are reflected in the Final Mitigation Monitoring and Reporting Program (MMRP) in Section 4.0 of this document. These minor modifications to the text do not alter the less than significant conclusion found in the IS/MND regarding tribal cultural resources. Text regarding Native American resources was moved from **MM TCR-2** (which is regarding human remains) to the more appropriate **MM TCR-1**. The reference to the Natural History Museum of Los Angeles County has been updated with the Cooper Center (OC Parks) because the project is located in Orange County, not Los Angeles County.

Section 4.18 Tribal Cultural Resources. Text update for the mitigation measures **TCR-1** and **TCR-2** on pages 4.18-3 and 4.18-4:

MM TCR-1: Prior to the commencement of any ground-disturbing activity at the project site, the project applicant shall retain a Native American Monitor approved by the Gabrieleño Band of Mission Indians-Kizh Nation – the tribe that consulted on this project pursuant to Assembly Bill 52 (the "Tribe" or the "Consulting Tribe"). A copy of the executed contract shall be submitted to the City of Buena Park Planning and Building Department prior to the issuance of any permit necessary to commence a ground-disturbing activity. The Tribal Monitor will only be present onsite during the construction phases that involve ground-disturbing activities. Ground-disturbing activities are defined by the Tribe as activities that may include, but are not limited to, pavement removal, potholing or auguring, tree removals, boring, grading, excavation, drilling, and trenching, within the project area. The Tribal Monitor will complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The onsite monitoring shall end when all ground-disturbing activities on the project site are completed, or when the Tribal Representatives and Tribal Monitor have indicated that all upcoming ground-disturbing activities at the project site have little to no potential for impacting Tribal Cultural Resources. Upon discovery of any Tribal Cultural Resources, construction activities shall cease in the immediate vicinity of the find (not less than the surrounding 100 feet) until the find can be assessed. All Tribal Cultural Resources unearthed by project activities shall be evaluated by the qualified archaeologist and Tribal M~~m~~onitor approved by the Consulting Tribe. If the resources are Native American in origin, ~~following excavation, analysis and reporting by the consulting archaeologist,~~ the Consulting Tribe ~~may~~ will retain it/them in the form and/or manner the Tribe deems appropriate, for educational, cultural and/or historic purposes.

If a non-Native American resource is determined by the qualified archaeologist to constitute a "historical resource" or "unique archaeological resource," time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan prepared by the

consulting archaeologist established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and PRC Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any historic archaeological material that is not Native American in origin shall be curated at a public, non-profit institution with a research interest in the materials, such as the ~~Natural History Museum of Los Angeles County~~ Cooper Center (OC Parks) or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes.

MM TCR-2: If human remains and/or grave goods are discovered or recognized at the project site, all ground disturbance shall immediately cease, and the Orange County Coroner shall be notified per Public Resources Code Section 5097.98, and Health & Safety Code Section 7050.5. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2). Work may continue on other parts of the project site while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5[f]). If the coroner, with the aid of the supervising archaeologist, determines that the remains are prehistoric, they will contact the NAHC. The NAHC will be responsible for designating the Most Likely Descendant (MLD). The MLD (either an individual or sometimes a committee) will be responsible for the ultimate disposition of the remains, as required by § 7050.5 of the California Health and Safety Code. The MLD will make recommendations within 24 hours of their notification by the NAHC. ~~If a non-Native American resource is determined by the qualified archaeologist to constitute a "historical resource" or "unique archaeological resource," time and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan prepared by the consulting archaeologist established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and PRC Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any historic archaeological material that is not Native American in origin shall be curated at a public, non-profit institution with a research interest in the materials, such as the Cooper Center (OC Parks) or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes.~~

4.0 FINAL MITIGATION MONITORING AND REPORTING PROGRAM

The Final Mitigation Monitoring and Reporting Program (MMRP) has been prepared in conformance with § 21081.6 of the Public Resources Code and § 15097 of the CEQA Guidelines, which requires all state and local agencies to establish monitoring or reporting programs whenever approval of a project relies upon a MND or an EIR. The MMRP ensures implementation of the measures being imposed to mitigate or avoid the significant adverse environmental impacts identified through the use of monitoring and reporting. Monitoring is generally an ongoing or periodic process of project oversight; reporting generally consists of a written compliance review that is presented to the decision-making body or authorized staff person.

It is the intent of the MMRP to: (1) provide a framework for document implementation of the required mitigation; (2) identify monitoring/reporting responsibility; (3) provide a record of the monitoring/reporting; and (4) ensure compliance with those MMs that are within the responsibility of the City and/or Applicant to implement.

The following table lists impacts, mitigation measures adopted by the City of Buena Park in connection with approval of the proposed project, level of significance after mitigation, responsible and monitoring parties, and the project phase in which the measures are to be implemented.

Only those environmental topics for which mitigation is required are listed in this Mitigation Monitoring and Reporting Program.

Table 4.0-1
FINAL MITIGATION MONITORING AND REPORTING PROGRAM

TOPICAL AREA IMPACT	MITIGATION MEASURE	RESPONSIBLE PARTY	MONITORING ACTION	1. ENFORCEMENT AGENCY 2. MONITORING AGENCY 3. MONITORING PHASE
4.1 Aesthetics				
Threshold 4.1d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	**MM AES-1:** During project construction the project applicant shall place construction staging areas as far as possible away from adjacent residences so as to minimize to the maximum extent possible any potential lighting and/or glare impacts to nearby residences. The lighting used during project construction shall consist of the minimum amount of light necessary for safety and security on the project site.	Project Applicant	Construction Staging	1. City of Buena Park 2. City of Buena Park 3. During Project Construction
4.4 Biological Resources				
Threshold 4.2a) 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?	**MM BIO-1:** Nesting Bird Protection. If feasible during project construction, the project applicant shall ensure that vegetation removal shall be restricted to the period between February 1 to September 31, to avoid the breeding season of any migratory species that could be using the area, and to discourage nesting in the vicinity of an upcoming construction area. • If it is not feasible to remove trees outside this window, then, prior to the beginning of vegetation removal and/or earthmoving activities during the period between February 1 and September 31, all vegetation within 250 feet of any grading or earthmoving activity shall be surveyed for active nests by a qualified biologist no more than 30 days prior to disturbance. If active nests are found, and the site is within 250 feet of potential construction activity, a temporary fence shall be erected, where appropriate, around the vegetated nest site at a distance of up to 250 feet, depending on the species, from the edge of the canopy, to prevent construction disturbance and intrusions on the nest area. • No construction vehicles shall be permitted within restricted areas (i.e., protection zones), unless directly related to the management or protection of the legally protected species. • If a legally protected species nest is located in vegetation designated for removal, the removal shall be deferred until after September 31, or until	Project Applicant	Field Verification	1. City of Buena Park 2. City of Buena Park 3. During construction

TOPICAL AREA IMPACT	MITIGATION MEASURE	RESPONSIBLE PARTY	MONITORING ACTION	1. ENFORCEMENT AGENCY 2. MONITORING AGENCY 3. MONITORING PHASE
	the avian biologist can determine that the young have fledged or the nest has become inactive. This mitigation measure will also protect nesting birds from noise and dust impacts potentially caused by project operations.			
4.5 Cultural Resources				
Threshold 4.2a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	**MM CUL 1**: In the event of an unexpected discovery of an historical resource as defined by CEQA Guidelines § 15064.5, during any project related earth disturbing activities, all earth disturbing activities within 30 feet of the find shall be halted and the City of Buena Park shall be notified. The project applicant shall retain an archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards for Archaeology to assess the significance of the find. Impacts on any significant resources shall be mitigated to a less than significant level through data recovery or other methods determined adequate by the archaeologist and that are consistent with the Secretary of the Interior's Standards for Archaeological Documentation. Any identified cultural resources shall be recorded on the appropriate DPR 523 (A L) form and filed with the SCCIC. Construction activities may continue on other parts of the project site while evaluation and treatment of historic archaeological resources takes place.	Project Applicant	Field Verification	1. City of Buena Park 2. City of Buena Park 3. During construction
Threshold 4.2b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	Refer to **MM CUL-1** above.	Project Applicant	Field Verification	1. City of Buena Park 2. City of Buena Park 3. During construction
Threshold 4.2c) Would the project disturb any human remains, including those interred outside of formal cemeteries?	**MM CUL 2:** If human remains are encountered during excavations associated with this project, all work will stop within a 30 foot radius of the discovery and the Orange County Coroner will be notified (§ 5097.98 of the Public Resources Code). The Coroner will determine whether the remains are recent human origin or older Native American ancestry. If the coroner, with the aid of the supervising archaeologist, determines that the remains are prehistoric, they will contact the NAHC. The NAHC will be responsible for designating the Most Likely Descendant (MLD). The MLD (either an individual or sometimes a committee) will be responsible for the ultimate disposition of the remains, as required by § 7050.5 of	Project Applicant	Field Verification	1. City of Buena Park 2. City of Buena Park 3. During construction

TOPICAL AREA IMPACT	MITIGATION MEASURE	RESPONSIBLE PARTY	MONITORING ACTION	1. ENFORCEMENT AGENCY 2. MONITORING AGENCY 3. MONITORING PHASE
	the California Health and Safety Code. The MLD will make recommendations within 24 hours of their notification by the NAHC. These recommendations may include scientific removal and nondestructive analysis of human remains and items associated with Native American burials (§ 7050.5 of the Health and Safety Code).			
4.7 Geology and Soils				
Threshold 4.7a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: seismic-related ground failure, including liquefaction?	**MM GEO-1:** During grading and construction of the proposed project, the project applicant shall follow all recommendations in Section 6.0, Recommendations, on pages 10-22 of the geotechnical report prepared for the project (Albus-Keefe & Associates, Inc., Preliminary Geotechnical Investigation, Proposed Senior Housing Development, 8300 Valley View Street, Buena Park, California, dated January 20, 2020).	Project Applicant	Follow Geotechnical Report Recommendations	1. City of Buena Park 2. City of Buena Park 3. During construction
Threshold 4.7c) 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?	Refer to **MM GEO-1** above.	Project Applicant	Follow Geotechnical Report Recommendations	1. City of Buena Park 2. City of Buena Park 3. During construction
Threshold 4.7d) 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?	Refer to **MM GEO-1** above.	Project Applicant	Follow Geotechnical Report Recommendations	1. City of Buena Park 2. City of Buena Park 3. During construction

TOPICAL AREA IMPACT	MITIGATION MEASURE	RESPONSIBLE PARTY	MONITORING ACTION	1. ENFORCEMENT AGENCY 2. MONITORING AGENCY 3. MONITORING PHASE
Threshold 4.7f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	**MM GEO-2:** If paleontological resources are uncovered during construction activities, the contractor shall halt construction activities in the immediate area and notify the City of Buena Park. The on-call paleontologist shall be notified and afforded the necessary time and funds to recover, analyze, and curate the find(s). Subsequently, the monitor shall remain onsite for the duration of the ground disturbance to ensure the protection of any other resources that may be in the area.	Project Contractor	Field Verification	1. City of Buena Park 2. City of Buena Park 3. During construction
4.9 Hazards and Hazardous Materials				
Threshold 4.9a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	**MM HAZ-1:** Prior to demolition, the existing structure called "The Barn" shall be assessed for the presence of asbestos-containing materials (ACMs) and lead-based paint (LBP). If ACMs and/or LBP are found, the resulting construction debris shall be removed and disposed of at a landfill that can accept hazardous materials, including asbestos and lead-based paint. All ACMs and LBP shall be removed prior to demolition, as required, and in accordance with all applicable laws, including guidelines of the Occupational Safety and Health Administration (OSHA).	Project Applicant	Field Verification	1. City of Buena Park 2. City of Buena Park 3. Prior to demolition
Threshold 4.9c) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Refer to **MM HAZ-1** above.	Project Applicant	Field Verification	1. City of Buena Park 2. City of Buena Park 3. Prior to demolition
4.12 Noise				
Threshold 4.12 a): Exposure of persons to or generation of noise level in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	**MM N-1**: Project applicants shall require by contract specifications that the following construction best management practices (BMPs) be implemented by contractors to reduce construction noise levels: • Ensure that construction equipment is properly muffled according to industry standards and be in good working condition. • Place noise-generating construction equipment and locate construction staging areas away from sensitive uses, where feasible. • Schedule high noise-producing activities between the hours of 8:00 AM and 7:00 PM to minimize disruption on sensitive uses.	Project Applicant	Field Verification	1. City of Buena Park 2. City of Buena Park 3. During construction

TOPICAL AREA IMPACT	MITIGATION MEASURE	RESPONSIBLE PARTY	MONITORING ACTION	1. ENFORCEMENT AGENCY 2. MONITORING AGENCY 3. MONITORING PHASE
	• Implement noise attenuation measures, which may include, but are not limited to, temporary noise barriers or noise blankets around stationary construction noise sources. • Use electric air compressors and similar power tools rather than diesel equipment, where feasible. • Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than 30 minutes. • Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted at all construction entrances to allow for surrounding owners and residents to contact the job superintendent. If the City or the job superintendent receives a complaint, the superintendent shall investigate, take appropriate corrective action, and report the action taken to the reporting party. Contract specifications shall be included in the proposed project construction documents, which shall be reviewed by the City prior to issuance of a grading permit.			
Threshold 4.12 a): Exposure of persons to or generation of noise level in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	**MM N-2:** Project applicants shall require by contract specifications that heavily loaded trucks used during construction would be routed away from residential streets to the extent feasible. Contract specifications shall be included in the proposed project construction documents, which shall be reviewed by the City prior to issuance of a grading permit.	Project Applicant	Field Verification	1. City of Buena Park 2. City of Buena Park 3. Prior to demolition
4.17 Transportation				
Threshold 4.17c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or	**MM TRANS-1:** Prior to the start of construction activity in the public right-of-way, the General Contractor shall submit a detailed Construction Management Plan to be reviewed and approved by the City of Buena Park Traffic Engineer. The Construction Management Plan shall specify that the Construction Manager will schedule truck traffic and employee shifts to avoid creating trips during the peak traffic periods, as is feasible for construction operations. All measures including identified truck routes and designated employee parking areas shall be included in the Construction	Project Applicant	Field Verification	1. City of Buena Park 2. City of Buena Park 3. During construction

TOPICAL AREA IMPACT	MITIGATION MEASURE	RESPONSIBLE PARTY	MONITORING ACTION	1. ENFORCEMENT AGENCY 2. MONITORING AGENCY 3. MONITORING PHASE
incompatible uses (e.g., farm equipment)? 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?	Management Plan. The Plan shall include but is not limited to the following provisions: a) Identification of permitted hours for construction related deliveries and removal of heavy equipment and material; b) Identification of where construction workers would park their personal vehicles during project construction with a requirement that at no time shall construction worker vehicles block any driveways. If complaints are received by the project applicant or City of Buena Park regarding issues with construction worker vehicle parking, the project applicant shall identify alternative parking options for construction workers so as not to interfere with adjacent parking availability; c) Identification of how emergency access to and around the project site will be maintained during project construction; d) Identification of haul routes for delivery or removal of heavy and/or oversized equipment or material loads. Where feasible, delivery or removal of oversized equipment or material loads shall be conducted during off-peak hour traffic periods; e) Maintain pedestrian and bicycle connections around the project site and safe crossing locations shall be considered for all pedestrian and bicyclist detours; and f) Maintain the security of the project site by erecting temporary fencing during the construction phase of the project. Any onsite night lighting used during the construction phase of the project shall be in compliance with City of Buena Park lighting requirements.			
Threshold 4.17d) Would the project result in inadequate emergency access.	Refer to **MM TRANS-1** above.	Project Applicant	Field Verification	1. City of Buena Park 2. City of Buena Park 3. During construction
4.18 Tribal Cultural Resources				
Threshold 4.18 b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is	**MM TCR-1:** Prior to the commencement of any ground-disturbing activity at the project site, the project applicant shall retain a Native American Monitor approved by the Gabrieleño Band of Mission Indians-Kizh Nation – the tribe that consulted on this project pursuant to Assembly Bill 52 (the "Tribe" or the "Consulting Tribe"). A copy of the executed contract shall be submitted to the City of Buena Park Planning and Building Department prior to the issuance of any permit necessary to	Project Applicant	Field Verification	1. City of Buena Park 2. City of Buena Park 3. Prior to commencement

TOPICAL AREA IMPACT	MITIGATION MEASURE	RESPONSIBLE PARTY	MONITORING ACTION	1. ENFORCEMENT AGENCY 2. MONITORING AGENCY 3. MONITORING PHASE
determined to be a significant resource to a California Native American tribe pursuant to the criteria set forth in subdivision (c) of Public Resource Code § 5024.1(c)?	commence a ground disturbing activity. The Tribal Monitor will only be present onsite during the construction phases that involve ground-disturbing activities. Ground-disturbing activities are defined by the Tribe as activities that may include, but are not limited to, pavement removal, potholing or auguring, tree removals, boring, grading, excavation, drilling, and trenching, within the project area. The Tribal Monitor will complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The onsite monitoring shall end when all ground-disturbing activities on the project site are completed, or when the Tribal Representatives and Tribal Monitor have indicated that all upcoming ground-disturbing activities at the project site have little to no potential for impacting Tribal Cultural Resources. Upon discovery of any Tribal Cultural Resources, construction activities shall cease in the immediate vicinity of the find (not less than the surrounding 100 feet) until the find can be assessed. All Tribal Cultural Resources unearthed by project activities shall be evaluated by the qualified archaeologist and Tribal Monitor approved by the Consulting Tribe. If the resources are Native American in origin, the Consulting Tribe will retain it/them in the form and/or manner the Tribe deems appropriate, for educational, cultural and/or historic purposes. If a non-Native American resource is determined by the qualified archaeologist to constitute a "historical resource" or "unique archaeological resource," time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan, prepared by the consulting archaeologist, established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and PRC Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any historic archaeological material that is not Native American in origin shall be curated at a public, non-profit institution with a research interest in the materials, such as the Cooper Center (OC Parks) or the Fowler Museum (University of California, Los Angeles), if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes.			of any ground-disturbing activity

TOPICAL AREA IMPACT	MITIGATION MEASURE	RESPONSIBLE PARTY	MONITORING ACTION	1. ENFORCEMENT AGENCY 2. MONITORING AGENCY 3. MONITORING PHASE
Threshold 4.18 b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is determined to be a significant resource to a California Native American tribe pursuant to the criteria set forth in subdivision (c) of Public Resource Code § 5024.1(c)?	**MM TCR-2**: If human remains and/or grave goods are discovered or recognized at the project site, all ground disturbance shall immediately cease, and the Orange County Coroner shall be notified per Public Resources Code Section 5097.98, and Health & Safety Code Section 7050.5. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2). Work may continue on other parts of the project site while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5[f]).	Project Applicant	Field Verification	1. City of Buena Park 2. City of Buena Park 3. During project construction

APPENDIX B – CalEEMod Input and Results for Air Quality Analysis and CalEEMod Input and Results for Greenhouse Gas Emissions Analysis

Orchard View Gardens Senior Housing (Ops 1 & 3)

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	66.00	Dwelling Unit	4.13	66,000.00	189

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Orchard View Gardens Senior Housing (Ops 1 & 3) - Orange County, Summer

Project Characteristics -

Land Use -

Construction Phase - Construction schedule supplied by client

Off-road Equipment - Equipment list provided by client

Off-road Equipment - Equipment list provided by client

Off-road Equipment - Equipment list provided by client

Off-road Equipment - Equpment list suggested by operation description
Rubber tired dozers needed to be zero due to error in CalEEMod

Off-road Equipment - Equpment list suggested by operation description
Rubber tired dozers needed to be zero due to error in CalEEMod

Off-road Equipment - Equipment list provided by client

Trips and VMT - grading - 5950 yd3 / 13 yd3 per truck = 458 trucks
Op 1 - 178 yd3 / 13 yd3 per truck = 14 trucks
Op 3 - 133 yd3 / 13 yd3 per truck = 11 trucks

Demolition -

Grading - Parcel is 4 acres

Vehicle Trips - Represents Senior Adult Housing per Traffic Study by Fehr & Peers

Woodstoves - No units have NG fireplaces

Construction Off-road Equipment Mitigation - From SCAQMD TAble XI-C Mitigation Measures for arterial roads

Energy Mitigation - CEC PV Report supplied by client

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	26
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	5.00	11.00
tblFireplaces	NumberGas	56.10	0.00
tblFireplaces	NumberNoFireplace	6.60	66.00
tblFireplaces	NumberWood	3.30	0.00

Orchard View Gardens Senior Housing (Ops 1 & 3) - Orange County, Summer

tblGrading	AcresOfGrading	19.00	4.00
tblGrading	MaterialExported	0.00	178.00
tblGrading	MaterialImported	0.00	5,950.00
tblGrading	MaterialImported	0.00	133.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	0.00

tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripNumber	744.00	458.00
tblTripsAndVMT	HaulingTripNumber	22.00	14.00
tblTripsAndVMT	HaulingTripNumber	17.00	11.00
tblVehicleTrips	HO_TTP	40.60	41.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	7.16	3.23
tblVehicleTrips	SU_TR	6.07	3.14
tblVehicleTrips	WD_TR	6.59	3.70
tblWoodstoves	NumberCatalytic	3.30	0.00
tblWoodstoves	NumberNoncatalytic	3.30	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					
2022	3.1321	42.5850	26.7224	0.0946	1.8346	1.2070	3.0416	0.4021	1.1119	1.5140	0.0000	9,812.5253	9,812.5253	2.0664	0.0000	9,864.1854
2023	0.4685	3.7232	5.9121	0.0127	0.5813	0.1588	0.7401	0.1552	0.1461	0.3013	0.0000	1,260.6828	1,260.6828	0.2203	0.0000	1,266.1893
Maximum	**3.1321**	**42.5850**	**26.7224**	**0.0946**	**1.8346**	**1.2070**	**3.0416**	**0.4021**	**1.1119**	**1.5140**	**0.0000**	**9,812.5253**	**9,812.5253**	**2.0664**	**0.0000**	**9,864.1854**

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					
2022	3.1321	42.5850	26.7224	0.0946	1.2125	1.2070	2.4195	0.2987	1.1119	1.4106	0.0000	9,812.5253	9,812.5253	2.0664	0.0000	9,864.1854
2023	0.4685	3.7232	5.9121	0.0127	0.4517	0.1588	0.6105	0.1234	0.1461	0.2695	0.0000	1,260.6828	1,260.6828	0.2203	0.0000	1,266.1893
Maximum	**3.1321**	**42.5850**	**26.7224**	**0.0946**	**1.2125**	**1.2070**	**2.4195**	**0.2987**	**1.1119**	**1.4106**	**0.0000**	**9,812.5253**	**9,812.5253**	**2.0664**	**0.0000**	**9,864.1854**

	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**	**31.11**	**0.00**	**19.88**	**24.26**	**0.00**	**7.45**	**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	1.5836	0.0627	5.4428	2.9000e-004		0.0302	0.0302		0.0302	0.0302	0.0000	9.8045	9.8045	9.4100e-003	0.0000	10.0396
Energy	0.0249	0.2126	0.0905	1.3600e-003		0.0172	0.0172		0.0172	0.0172		271.4369	271.4369	5.2000e-003	4.9800e-003	273.0499
Mobile	0.3178	1.1269	4.3660	0.0181	1.7691	0.0122	1.7813	0.4731	0.0113	0.4844		1,838.7169	1,838.7169	0.0700		1,840.4672
Total	**1.9263**	**1.4023**	**9.8993**	**0.0197**	**1.7691**	**0.0596**	**1.8287**	**0.4731**	**0.0587**	**0.5318**	**0.0000**	**2,119.9583**	**2,119.9583**	**0.0846**	**4.9800e-003**	**2,123.5567**

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	1.5836	0.0627	5.4428	2.9000e-004		0.0302	0.0302		0.0302	0.0302	0.0000	9.8045	9.8045	9.4100e-003	0.0000	10.0396
Energy	0.0249	0.2126	0.0905	1.3600e-003		0.0172	0.0172		0.0172	0.0172		271.4369	271.4369	5.2000e-003	4.9800e-003	273.0499
Mobile	0.3178	1.1269	4.3660	0.0181	1.7691	0.0122	1.7813	0.4731	0.0113	0.4844		1,838.7169	1,838.7169	0.0700		1,840.4672
Total	**1.9263**	**1.4023**	**9.8993**	**0.0197**	**1.7691**	**0.0596**	**1.8287**	**0.4731**	**0.0587**	**0.5318**	**0.0000**	**2,119.9583**	**2,119.9583**	**0.0846**	**4.9800e-003**	**2,123.5567**

	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	Demolition	Demolition	1/1/2022	1/28/2022	5	20	
2	Offsite Improvements Op 1	Site Preparation	1/1/2022	1/14/2022	5	10	
3	Offsite Improvements Op 3	Site Preparation	1/15/2022	1/31/2022	5	11	
4	Site Preparation	Site Preparation	1/29/2022	2/4/2022	5	5	
5	Grading	Grading	2/5/2022	2/16/2022	5	8	
6	Building Construction	Building Construction	2/17/2022	1/4/2023	5	230	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	0.00	81	0.73
Demolition	Excavators	2	6.00	158	0.38
Demolition	Other Construction Equipment	1	6.00	172	0.42
Demolition	Rubber Tired Dozers	0	0.00	247	0.40

Demolition	Rubber Tired Loaders	1	6.00	203	0.36
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Excavators	1	6.00	158	0.38
Site Preparation	Paving Equipment	1	4.00	132	0.36
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Rubber Tired Loaders	2	4.00	203	0.36
Site Preparation	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Excavators	0	0.00	158	0.38
Grading	Graders	1	6.00	187	0.41
Grading	Paving Equipment	1	6.00	132	0.36
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Rubber Tired Loaders	1	6.00	203	0.36
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	3	6.00	97	0.37
Building Construction	Cranes	0	0.00	231	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	0	0.00	84	0.74
Building Construction	Skid Steer Loaders	1	8.00	65	0.37
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	0	0.00	46	0.45
Offsite Improvements Op 1	Cement and Mortar Mixers	1	6.00	9	0.56
Offsite Improvements Op 1	Pavers	1	6.00	130	0.42
Offsite Improvements Op 1	Rollers	1	6.00	80	0.38
Offsite Improvements Op 1	Rubber Tired Dozers	0	0.00	247	0.40
Offsite Improvements Op 1	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Offsite Improvements Op 3	Cement and Mortar Mixers	1	6.00	9	0.56
Offsite Improvements Op 3	Cranes	1	2.00	231	0.29

Offsite Improvements Op 3	Pavers	1	4.00	130	0.42
Offsite Improvements Op 3	Rollers	1	4.00	80	0.38
Offsite Improvements Op 3	Rubber Tired Dozers	0	0.00	247	0.40
Offsite Improvements Op 3	Tractors/Loaders/Backhoes	1	6.00	97	0.37

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
Demolition	6	15.00	0.00	9.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	458.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	3	48.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Offsite Improvements Op 1	4	10.00	0.00	14.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Offsite Improvements Op 3	5	13.00	0.00	11.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 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					
Fugitive Dust					0.0925	0.0000	0.0925	0.0140	0.0000	0.0140			0.0000			0.0000
Off-Road	1.1336	11.1468	13.5222	0.0233		0.5345	0.5345		0.4918	0.4918		2,255.4975	2,255.4975	0.7295		2,273.7343
Total	**1.1336**	**11.1468**	**13.5222**	**0.0233**	**0.0925**	**0.5345**	**0.6270**	**0.0140**	**0.4918**	**0.5058**		**2,255.4975**	**2,255.4975**	**0.7295**		**2,273.7343**

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	3.0800e-003	0.1051	0.0316	3.3000e-004	7.8300e-003	3.1000e-004	8.1400e-003	2.1400e-003	3.0000e-004	2.4400e-003		37.4184	37.4184	3.8800e-003		37.5155
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	0.0512	0.0297	0.4252	1.5200e-003	0.1677	1.0600e-003	0.1687	0.0445	9.8000e-004	0.0455		151.9802	151.9802	3.0700e-003		152.0569
Total	**0.0543**	**0.1348**	**0.4568**	**1.8500e-003**	**0.1755**	**1.3700e-003**	**0.1769**	**0.0466**	**1.2800e-003**	**0.0479**		**189.3986**	**189.3986**	**6.9500e-003**		**189.5724**

3.2 Demolition - 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					
Fugitive Dust					0.0361	0.0000	0.0361	5.4600e-003	0.0000	5.4600e-003			0.0000			0.0000
Off-Road	1.1336	11.1468	13.5222	0.0233		0.5345	0.5345		0.4918	0.4918	0.0000	2,255.4975	2,255.4975	0.7295		2,273.7343
Total	**1.1336**	**11.1468**	**13.5222**	**0.0233**	**0.0361**	**0.5345**	**0.5706**	**5.4600e-003**	**0.4918**	**0.4972**	**0.0000**	**2,255.4975**	**2,255.4975**	**0.7295**		**2,273.7343**

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	3.0800e-003	0.1051	0.0316	3.3000e-004	6.2900e-003	3.1000e-004	6.6000e-003	1.7600e-003	3.0000e-004	2.0600e-003		37.4184	37.4184	3.8800e-003		37.5155
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	0.0512	0.0297	0.4252	1.5200e-003	0.1298	1.0600e-003	0.1308	0.0352	9.8000e-004	0.0361		151.9802	151.9802	3.0700e-003		152.0569
Total	**0.0543**	**0.1348**	**0.4568**	**1.8500e-003**	**0.1361**	**1.3700e-003**	**0.1374**	**0.0369**	**1.2800e-003**	**0.0382**		**189.3986**	**189.3986**	**6.9500e-003**		**189.5724**

3.3 Offsite Improvements Op 1 - 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					
Fugitive Dust					2.0100e-003	0.0000	2.0100e-003	3.0000e-004	0.0000	3.0000e-004			0.0000			0.0000
Off-Road	0.4475	4.4015	5.4680	8.3600e-003		0.2277	0.2277		0.2104	0.2104		795.8378	795.8378	0.2491		802.0645
Total	**0.4475**	**4.4015**	**5.4680**	**8.3600e-003**	**2.0100e-003**	**0.2277**	**0.2297**	**3.0000e-004**	**0.2104**	**0.2107**		**795.8378**	**795.8378**	**0.2491**		**802.0645**

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	9.5700e-003	0.3270	0.0983	1.0400e-003	0.0244	9.7000e-004	0.0253	6.6700e-003	9.2000e-004	7.6000e-003		116.4128	116.4128	0.0121		116.7147
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	0.0341	0.0198	0.2835	1.0200e-003	0.1118	7.1000e-004	0.1125	0.0296	6.5000e-004	0.0303		101.3201	101.3201	2.0500e-003		101.3713
Total	**0.0437**	**0.3468**	**0.3818**	**2.0600e-003**	**0.1362**	**1.6800e-003**	**0.1378**	**0.0363**	**1.5700e-003**	**0.0379**		**217.7329**	**217.7329**	**0.0141**		**218.0860**

3.3 Offsite Improvements Op 1 - 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					
Fugitive Dust					7.9000e-004	0.0000	7.9000e-004	1.2000e-004	0.0000	1.2000e-004			0.0000			0.0000
Off-Road	0.4475	4.4015	5.4680	8.3600e-003		0.2277	0.2277		0.2104	0.2104	0.0000	795.8378	795.8378	0.2491		802.0645
Total	**0.4475**	**4.4015**	**5.4680**	**8.3600e-003**	**7.9000e-004**	**0.2277**	**0.2285**	**1.2000e-004**	**0.2104**	**0.2105**	**0.0000**	**795.8378**	**795.8378**	**0.2491**		**802.0645**

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	9.5700e-003	0.3270	0.0983	1.0400e-003	0.0196	9.7000e-004	0.0205	5.4900e-003	9.2000e-004	6.4200e-003		116.4128	116.4128	0.0121		116.7147
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	0.0341	0.0198	0.2835	1.0200e-003	0.0865	7.1000e-004	0.0872	0.0234	6.5000e-004	0.0241		101.3201	101.3201	2.0500e-003		101.3713
Total	**0.0437**	**0.3468**	**0.3818**	**2.0600e-003**	**0.1061**	**1.6800e-003**	**0.1078**	**0.0289**	**1.5700e-003**	**0.0305**		**217.7329**	**217.7329**	**0.0141**		**218.0860**

3.4 Offsite Improvements Op 3 - 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					
Fugitive Dust					1.3700e-003	0.0000	1.3700e-003	2.1000e-004	0.0000	2.1000e-004			0.0000			0.0000
Off-Road	0.4474	4.4913	4.7550	7.9700e-003		0.2214	0.2214		0.2045	0.2045		758.2049	758.2049	0.2369		764.1274
Total	**0.4474**	**4.4913**	**4.7550**	**7.9700e-003**	**1.3700e-003**	**0.2214**	**0.2227**	**2.1000e-004**	**0.2045**	**0.2047**		**758.2049**	**758.2049**	**0.2369**		**764.1274**

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	6.8400e-003	0.2336	0.0702	7.4000e-004	0.0174	6.9000e-004	0.0181	4.7700e-003	6.6000e-004	5.4300e-003		83.1520	83.1520	8.6300e-003		83.3677
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	0.0443	0.0257	0.3685	1.3200e-003	0.1453	9.2000e-004	0.1462	0.0385	8.5000e-004	0.0394		131.7162	131.7162	2.6600e-003		131.7827
Total	**0.0512**	**0.2593**	**0.4387**	**2.0600e-003**	**0.1627**	**1.6100e-003**	**0.1643**	**0.0433**	**1.5100e-003**	**0.0448**		**214.8681**	**214.8681**	**0.0113**		**215.1503**

3.4 Offsite Improvements Op 3 - 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					
Fugitive Dust					5.3000e-004	0.0000	5.3000e-004	8.0000e-005	0.0000	8.0000e-005			0.0000			0.0000
Off-Road	0.4474	4.4913	4.7550	7.9700e-003		0.2214	0.2214		0.2045	0.2045	0.0000	758.2049	758.2049	0.2369		764.1274
Total	**0.4474**	**4.4913**	**4.7550**	**7.9700e-003**	**5.3000e-004**	**0.2214**	**0.2219**	**8.0000e-005**	**0.2045**	**0.2046**	**0.0000**	**758.2049**	**758.2049**	**0.2369**		**764.1274**

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	6.8400e-003	0.2336	0.0702	7.4000e-004	0.0140	6.9000e-004	0.0147	3.9200e-003	6.6000e-004	4.5800e-003		83.1520	83.1520	8.6300e-003		83.3677
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	0.0443	0.0257	0.3685	1.3200e-003	0.1125	9.2000e-004	0.1134	0.0305	8.5000e-004	0.0313		131.7162	131.7162	2.6600e-003		131.7827
Total	**0.0512**	**0.2593**	**0.4387**	**2.0600e-003**	**0.1264**	**1.6100e-003**	**0.1281**	**0.0344**	**1.5100e-003**	**0.0359**		**214.8681**	**214.8681**	**0.0113**		**215.1503**

3.5 Site Preparation - 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					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.0264	10.2535	11.9594	0.0215		0.4786	0.4786		0.4404	0.4404		2,081.6268	2,081.6268	0.6732		2,098.4578
Total	**1.0264**	**10.2535**	**11.9594**	**0.0215**	**0.0000**	**0.4786**	**0.4786**	**0.0000**	**0.4404**	**0.4404**		**2,081.6268**	**2,081.6268**	**0.6732**		**2,098.4578**

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	0.0614	0.0356	0.5103	1.8300e-003	0.2012	1.2800e-003	0.2025	0.0534	1.1800e-003	0.0545		182.3762	182.3762	3.6800e-003		182.4683
Total	**0.0614**	**0.0356**	**0.5103**	**1.8300e-003**	**0.2012**	**1.2800e-003**	**0.2025**	**0.0534**	**1.1800e-003**	**0.0545**		**182.3762**	**182.3762**	**3.6800e-003**		**182.4683**

3.5 Site Preparation - 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					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.0264	10.2535	11.9594	0.0215		0.4786	0.4786		0.4404	0.4404	0.0000	2,081.6268	2,081.6268	0.6732		2,098.4578
Total	**1.0264**	**10.2535**	**11.9594**	**0.0215**	**0.0000**	**0.4786**	**0.4786**	**0.0000**	**0.4404**	**0.4404**	**0.0000**	**2,081.6268**	**2,081.6268**	**0.6732**		**2,098.4578**

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	0.0614	0.0356	0.5103	1.8300e-003	0.1557	1.2800e-003	0.1570	0.0422	1.1800e-003	0.0434		182.3762	182.3762	3.6800e-003		182.4683
Total	**0.0614**	**0.0356**	**0.5103**	**1.8300e-003**	**0.1557**	**1.2800e-003**	**0.1570**	**0.0422**	**1.1800e-003**	**0.0434**		**182.3762**	**182.3762**	**3.6800e-003**		**182.4683**

3.6 Grading - 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					
Fugitive Dust					0.6144	0.0000	0.6144	0.0700	0.0000	0.0700			0.0000			0.0000
Off-Road	2.6725	29.1724	22.1362	0.0501		1.1661	1.1661		1.0728	1.0728		4,849.4342	4,849.4342	1.5684		4,888.6443
Total	**2.6725**	**29.1724**	**22.1362**	**0.0501**	**0.6144**	**1.1661**	**1.7805**	**0.0700**	**1.0728**	**1.1428**		**4,849.4342**	**4,849.4342**	**1.5684**		**4,888.6443**

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	0.3914	13.3731	4.0193	0.0425	0.9967	0.0395	1.0362	0.2728	0.0378	0.3107		4,760.4509	4,760.4509	0.4939		4,772.7985
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	0.0682	0.0396	0.5670	2.0300e-003	0.2236	1.4200e-003	0.2250	0.0593	1.3100e-003	0.0606		202.6403	202.6403	4.0900e-003		202.7426
Total	**0.4596**	**13.4127**	**4.5862**	**0.0446**	**1.2202**	**0.0409**	**1.2612**	**0.3321**	**0.0391**	**0.3712**		**4,963.0912**	**4,963.0912**	**0.4980**		**4,975.5411**

3.6 Grading - 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					
Fugitive Dust					0.2396	0.0000	0.2396	0.0273	0.0000	0.0273			0.0000			0.0000
Off-Road	2.6725	29.1724	22.1362	0.0501		1.1661	1.1661		1.0728	1.0728	0.0000	4,849.4342	4,849.4342	1.5684		4,888.6443
Total	**2.6725**	**29.1724**	**22.1362**	**0.0501**	**0.2396**	**1.1661**	**1.4057**	**0.0273**	**1.0728**	**1.1001**	**0.0000**	**4,849.4342**	**4,849.4342**	**1.5684**		**4,888.6443**

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	0.3914	13.3731	4.0193	0.0425	0.7999	0.0395	0.8394	0.2245	0.0378	0.2623		4,760.4509	4,760.4509	0.4939		4,772.7985
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	0.0682	0.0396	0.5670	2.0300e-003	0.1730	1.4200e-003	0.1744	0.0469	1.3100e-003	0.0482		202.6403	202.6403	4.0900e-003		202.7426
Total	**0.4596**	**13.4127**	**4.5862**	**0.0446**	**0.9729**	**0.0409**	**1.0139**	**0.2714**	**0.0391**	**0.3105**		**4,963.0912**	**4,963.0912**	**0.4980**		**4,975.5411**

3.7 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	0.3273	3.4497	4.4991	6.3200e-003		0.1832	0.1832		0.1686	0.1686		612.0062	612.0062	0.1979		616.9545
Total	**0.3273**	**3.4497**	**4.4991**	**6.3200e-003**		**0.1832**	**0.1832**		**0.1686**	**0.1686**		**612.0062**	**612.0062**	**0.1979**		**616.9545**

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	0.0176	0.6213	0.1720	1.7100e-003	0.0447	1.1900e-003	0.0459	0.0129	1.1300e-003	0.0140		186.3068	186.3068	0.0143		186.6641
Worker	0.1637	0.0950	1.3607	4.8800e-003	0.5365	3.4100e-003	0.5399	0.1423	3.1400e-003	0.1454		486.3366	486.3366	9.8200e-003		486.5822
Total	**0.1813**	**0.7163**	**1.5327**	**6.5900e-003**	**0.5813**	**4.6000e-003**	**0.5858**	**0.1552**	**4.2700e-003**	**0.1594**		**672.6434**	**672.6434**	**0.0241**		**673.2463**

3.7 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	0.3273	3.4497	4.4991	6.3200e-003		0.1832	0.1832		0.1686	0.1686	0.0000	612.0062	612.0062	0.1979		616.9545
Total	**0.3273**	**3.4497**	**4.4991**	**6.3200e-003**		**0.1832**	**0.1832**		**0.1686**	**0.1686**	**0.0000**	**612.0062**	**612.0062**	**0.1979**		**616.9545**

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	0.0176	0.6213	0.1720	1.7100e-003	0.0364	1.1900e-003	0.0376	0.0108	1.1300e-003	0.0120		186.3068	186.3068	0.0143		186.6641
Worker	0.1637	0.0950	1.3607	4.8800e-003	0.4153	3.4100e-003	0.4187	0.1125	3.1400e-003	0.1157		486.3366	486.3366	9.8200e-003		486.5822
Total	**0.1813**	**0.7163**	**1.5327**	**6.5900e-003**	**0.4517**	**4.6000e-003**	**0.4563**	**0.1234**	**4.2700e-003**	**0.1276**		**672.6434**	**672.6434**	**0.0241**		**673.2463**

3.7 Building Construction - 2023

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	0.3001	3.1681	4.4826	6.3300e-003		0.1549	0.1549		0.1425	0.1425		612.3965	612.3965	0.1981		617.3480
Total	**0.3001**	**3.1681**	**4.4826**	**6.3300e-003**		**0.1549**	**0.1549**		**0.1425**	**0.1425**		**612.3965**	**612.3965**	**0.1981**		**617.3480**

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	0.0134	0.4689	0.1605	1.6500e-003	0.0447	5.6000e-004	0.0453	0.0129	5.4000e-004	0.0134		180.6466	180.6466	0.0133		180.9787
Worker	0.1551	0.0862	1.2690	4.6900e-003	0.5365	3.3500e-003	0.5399	0.1423	3.0800e-003	0.1454		467.6398	467.6398	8.9100e-003		467.8625
Total	**0.1684**	**0.5552**	**1.4295**	**6.3400e-003**	**0.5813**	**3.9100e-003**	**0.5852**	**0.1552**	**3.6200e-003**	**0.1588**		**648.2863**	**648.2863**	**0.0222**		**648.8412**

3.7 Building Construction - 2023

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	0.3001	3.1681	4.4826	6.3300e-003		0.1549	0.1549		0.1425	0.1425	0.0000	612.3965	612.3965	0.1981		617.3480
Total	**0.3001**	**3.1681**	**4.4826**	**6.3300e-003**		**0.1549**	**0.1549**		**0.1425**	**0.1425**	**0.0000**	**612.3965**	**612.3965**	**0.1981**		**617.3480**

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	0.0134	0.4689	0.1605	1.6500e-003	0.0364	5.6000e-004	0.0370	0.0108	5.4000e-004	0.0114		180.6466	180.6466	0.0133		180.9787
Worker	0.1551	0.0862	1.2690	4.6900e-003	0.4153	3.3500e-003	0.4186	0.1125	3.0800e-003	0.1156		467.6398	467.6398	8.9100e-003		467.8625
Total	**0.1684**	**0.5552**	**1.4295**	**6.3400e-003**	**0.4517**	**3.9100e-003**	**0.4556**	**0.1234**	**3.6200e-003**	**0.1270**		**648.2863**	**648.2863**	**0.0222**		**648.8412**

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	0.3178	1.1269	4.3660	0.0181	1.7691	0.0122	1.7813	0.4731	0.0113	0.4844		1,838.7169	1,838.7169	0.0700		1,840.4672
Unmitigated	0.3178	1.1269	4.3660	0.0181	1.7691	0.0122	1.7813	0.4731	0.0113	0.4844		1,838.7169	1,838.7169	0.0700		1,840.4672

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	244.20	213.18	207.24	800,798	800,798
Total	244.20	213.18	207.24	800,798	800,798

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
Apartments Low Rise	14.70	5.90	8.70	40.00	19.00	41.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.565244	0.042904	0.209304	0.108392	0.014546	0.005773	0.026273	0.017831	0.001792	0.001509	0.004953	0.000602	0.000877

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

	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	0.0249	0.2126	0.0905	1.3600e-003		0.0172	0.0172		0.0172	0.0172		271.4369	271.4369	5.2000e-003	4.9800e-003	273.0499
NaturalGas Unmitigated	0.0249	0.2126	0.0905	1.3600e-003		0.0172	0.0172		0.0172	0.0172		271.4369	271.4369	5.2000e-003	4.9800e-003	273.0499

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					
Apartments Low Rise	2307.21	0.0249	0.2126	0.0905	1.3600e-003		0.0172	0.0172		0.0172	0.0172		271.4369	271.4369	5.2000e-003	4.9800e-003	273.0499
Total		**0.0249**	**0.2126**	**0.0905**	**1.3600e-003**		**0.0172**	**0.0172**		**0.0172**	**0.0172**		**271.4369**	**271.4369**	**5.2000e-003**	**4.9800e-003**	**273.0499**

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					
Apartments Low Rise	2.30721	0.0249	0.2126	0.0905	1.3600e-003		0.0172	0.0172		0.0172	0.0172		271.4369	271.4369	5.2000e-003	4.9800e-003	273.0499
Total		**0.0249**	**0.2126**	**0.0905**	**1.3600e-003**		**0.0172**	**0.0172**		**0.0172**	**0.0172**		**271.4369**	**271.4369**	**5.2000e-003**	**4.9800e-003**	**273.0499**

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	1.5836	0.0627	5.4428	2.9000e-004		0.0302	0.0302		0.0302	0.0302	0.0000	9.8045	9.8045	9.4100e-003	0.0000	10.0396
Unmitigated	1.5836	0.0627	5.4428	2.9000e-004		0.0302	0.0302		0.0302	0.0302	0.0000	9.8045	9.8045	9.4100e-003	0.0000	10.0396

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	0.1131					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3068					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	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
Landscaping	0.1637	0.0627	5.4428	2.9000e-004		0.0302	0.0302		0.0302	0.0302		9.8045	9.8045	9.4100e-003		10.0396
Total	**1.5836**	**0.0627**	**5.4428**	**2.9000e-004**		**0.0302**	**0.0302**		**0.0302**	**0.0302**	**0.0000**	**9.8045**	**9.8045**	**9.4100e-003**	**0.0000**	**10.0396**

6.2 Area by SubCategory

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	0.1131					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3068					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	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
Landscaping	0.1637	0.0627	5.4428	2.9000e-004		0.0302	0.0302		0.0302	0.0302		9.8045	9.8045	9.4100e-003		10.0396
Total	**1.5836**	**0.0627**	**5.4428**	**2.9000e-004**		**0.0302**	**0.0302**		**0.0302**	**0.0302**	**0.0000**	**9.8045**	**9.8045**	**9.4100e-003**	**0.0000**	**10.0396**

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

Orchard View Gardens Senior Housing (Ops 1 & 3)

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	66.00	Dwelling Unit	4.13	66,000.00	189

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Orchard View Gardens Senior Housing (Ops 1 & 3) - Orange County, Winter

Project Characteristics -

Land Use -

Construction Phase - Construction schedule supplied by client

Off-road Equipment - Equipment list provided by client

Off-road Equipment - Equipment list provided by client

Off-road Equipment - Equipment list provided by client

Off-road Equipment - Equpment list suggested by operation description
Rubber tired dozers needed to be zero due to error in CalEEMod

Off-road Equipment - Equpment list suggested by operation description
Rubber tired dozers needed to be zero due to error in CalEEMod

Off-road Equipment - Equipment list provided by client

Trips and VMT - grading - 5950 yd3 / 13 yd3 per truck = 458 trucks
Op 1 - 178 yd3 / 13 yd3 per truck = 14 trucks
Op 3 - 133 yd3 / 13 yd3 per truck = 11 trucks

Demolition -

Grading - Parcel is 4 acres

Vehicle Trips - Represents Senior Adult Housing per Traffic Study by Fehr & Peers

Woodstoves - No units have NG fireplaces

Construction Off-road Equipment Mitigation - From SCAQMD TAble XI-C Mitigation Measures for arterial roads

Energy Mitigation - CEC PV Report supplied by client

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	26
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	5.00	11.00
tblFireplaces	NumberGas	56.10	0.00
tblFireplaces	NumberNoFireplace	6.60	66.00
tblFireplaces	NumberWood	3.30	0.00

Orchard View Gardens Senior Housing (Ops 1 & 3) - Orange County, Winter

tblGrading	AcresOfGrading	19.00	4.00
tblGrading	MaterialExported	0.00	178.00
tblGrading	MaterialImported	0.00	5,950.00
tblGrading	MaterialImported	0.00	133.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	0.00

tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripNumber	744.00	458.00
tblTripsAndVMT	HaulingTripNumber	22.00	14.00
tblTripsAndVMT	HaulingTripNumber	17.00	11.00
tblVehicleTrips	HO_TTP	40.60	41.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	7.16	3.23
tblVehicleTrips	SU_TR	6.07	3.14
tblVehicleTrips	WD_TR	6.59	3.70
tblWoodstoves	NumberCatalytic	3.30	0.00
tblWoodstoves	NumberNoncatalytic	3.30	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					
2022	3.1510	42.7340	26.8670	0.0939	1.8346	1.2078	3.0424	0.4021	1.1126	1.5147	0.0000	9,729.0859	9,729.0859	2.0766	0.0000	9,780.9996
2023	0.4907	3.7290	5.8230	0.0124	0.5813	0.1588	0.7401	0.1552	0.1462	0.3013	0.0000	1,231.2990	1,231.2990	0.2203	0.0000	1,236.8068
Maximum	**3.1510**	**42.7340**	**26.8670**	**0.0939**	**1.8346**	**1.2078**	**3.0424**	**0.4021**	**1.1126**	**1.5147**	**0.0000**	**9,729.0859**	**9,729.0859**	**2.0766**	**0.0000**	**9,780.9996**

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					
2022	3.1510	42.7340	26.8670	0.0939	1.2125	1.2078	2.4203	0.2987	1.1126	1.4113	0.0000	9,729.0859	9,729.0859	2.0766	0.0000	9,780.9996
2023	0.4907	3.7290	5.8230	0.0124	0.4517	0.1588	0.6105	0.1234	0.1462	0.2695	0.0000	1,231.2990	1,231.2990	0.2203	0.0000	1,236.8068
Maximum	**3.1510**	**42.7340**	**26.8670**	**0.0939**	**1.2125**	**1.2078**	**2.4203**	**0.2987**	**1.1126**	**1.4113**	**0.0000**	**9,729.0859**	**9,729.0859**	**2.0766**	**0.0000**	**9,780.9996**

	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**	**31.11**	**0.00**	**19.87**	**24.26**	**0.00**	**7.44**	**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	1.5836	0.0627	5.4428	2.9000e-004		0.0302	0.0302		0.0302	0.0302	0.0000	9.8045	9.8045	9.4100e-003	0.0000	10.0396
Energy	0.0249	0.2126	0.0905	1.3600e-003		0.0172	0.0172		0.0172	0.0172		271.4369	271.4369	5.2000e-003	4.9800e-003	273.0499
Mobile	0.3119	1.1583	4.1579	0.0173	1.7691	0.0122	1.7814	0.4731	0.0114	0.4844		1,758.6936	1,758.6936	0.0698		1,760.4374
Total	**1.9203**	**1.4337**	**9.6912**	**0.0189**	**1.7691**	**0.0596**	**1.8287**	**0.4731**	**0.0587**	**0.5318**	**0.0000**	**2,039.9350**	**2,039.9350**	**0.0844**	**4.9800e-003**	**2,043.5269**

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	1.5836	0.0627	5.4428	2.9000e-004		0.0302	0.0302		0.0302	0.0302	0.0000	9.8045	9.8045	9.4100e-003	0.0000	10.0396
Energy	0.0249	0.2126	0.0905	1.3600e-003		0.0172	0.0172		0.0172	0.0172		271.4369	271.4369	5.2000e-003	4.9800e-003	273.0499
Mobile	0.3119	1.1583	4.1579	0.0173	1.7691	0.0122	1.7814	0.4731	0.0114	0.4844		1,758.6936	1,758.6936	0.0698		1,760.4374
Total	**1.9203**	**1.4337**	**9.6912**	**0.0189**	**1.7691**	**0.0596**	**1.8287**	**0.4731**	**0.0587**	**0.5318**	**0.0000**	**2,039.9350**	**2,039.9350**	**0.0844**	**4.9800e-003**	**2,043.5269**

	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	Demolition	Demolition	1/1/2022	1/28/2022	5	20	
2	Offsite Improvements Op 1	Site Preparation	1/1/2022	1/14/2022	5	10	
3	Offsite Improvements Op 3	Site Preparation	1/15/2022	1/31/2022	5	11	
4	Site Preparation	Site Preparation	1/29/2022	2/4/2022	5	5	
5	Grading	Grading	2/5/2022	2/16/2022	5	8	
6	Building Construction	Building Construction	2/17/2022	1/4/2023	5	230	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	0.00	81	0.73
Demolition	Excavators	2	6.00	158	0.38
Demolition	Other Construction Equipment	1	6.00	172	0.42
Demolition	Rubber Tired Dozers	0	0.00	247	0.40

Orchard View Gardens Senior Housing (Ops 1 & 3) - Orange County, Winter

Demolition	Rubber Tired Loaders	1	6.00	203	0.36
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Excavators	1	6.00	158	0.38
Site Preparation	Paving Equipment	1	4.00	132	0.36
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Rubber Tired Loaders	2	4.00	203	0.36
Site Preparation	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Excavators	0	0.00	158	0.38
Grading	Graders	1	6.00	187	0.41
Grading	Paving Equipment	1	6.00	132	0.36
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Rubber Tired Loaders	1	6.00	203	0.36
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	3	6.00	97	0.37
Building Construction	Cranes	0	0.00	231	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	0	0.00	84	0.74
Building Construction	Skid Steer Loaders	1	8.00	65	0.37
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	0	0.00	46	0.45
Offsite Improvements Op 1	Cement and Mortar Mixers	1	6.00	9	0.56
Offsite Improvements Op 1	Pavers	1	6.00	130	0.42
Offsite Improvements Op 1	Rollers	1	6.00	80	0.38
Offsite Improvements Op 1	Rubber Tired Dozers	0	0.00	247	0.40
Offsite Improvements Op 1	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Offsite Improvements Op 3	Cement and Mortar Mixers	1	6.00	9	0.56
Offsite Improvements Op 3	Cranes	1	2.00	231	0.29

Offsite Improvements Op 3	Pavers	1	4.00	130	0.42
Offsite Improvements Op 3	Rollers	1	4.00	80	0.38
Offsite Improvements Op 3	Rubber Tired Dozers	0	0.00	247	0.40
Offsite Improvements Op 3	Tractors/Loaders/Backhoes	1	6.00	97	0.37

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
Demolition	6	15.00	0.00	9.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	458.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	3	48.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Offsite Improvements Op 1	4	10.00	0.00	14.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Offsite Improvements Op 3	5	13.00	0.00	11.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 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					
Fugitive Dust					0.0925	0.0000	0.0925	0.0140	0.0000	0.0140			0.0000			0.0000
Off-Road	1.1336	11.1468	13.5222	0.0233		0.5345	0.5345		0.4918	0.4918		2,255.4975	2,255.4975	0.7295		2,273.7343
Total	**1.1336**	**11.1468**	**13.5222**	**0.0233**	**0.0925**	**0.5345**	**0.6270**	**0.0140**	**0.4918**	**0.5058**		**2,255.4975**	**2,255.4975**	**0.7295**		**2,273.7343**

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	3.1500e-003	0.1063	0.0331	3.3000e-004	7.8300e-003	3.2000e-004	8.1500e-003	2.1400e-003	3.0000e-004	2.4500e-003		36.8478	36.8478	3.9600e-003		36.9469
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	0.0581	0.0326	0.3918	1.4400e-003	0.1677	1.0600e-003	0.1687	0.0445	9.8000e-004	0.0455		143.8468	143.8468	2.9000e-003		143.9194
Total	**0.0612**	**0.1389**	**0.4249**	**1.7700e-003**	**0.1755**	**1.3800e-003**	**0.1769**	**0.0466**	**1.2800e-003**	**0.0479**		**180.6946**	**180.6946**	**6.8600e-003**		**180.8663**

3.2 Demolition - 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					
Fugitive Dust					0.0361	0.0000	0.0361	5.4600e-003	0.0000	5.4600e-003			0.0000			0.0000
Off-Road	1.1336	11.1468	13.5222	0.0233		0.5345	0.5345		0.4918	0.4918	0.0000	2,255.4975	2,255.4975	0.7295		2,273.7343
Total	**1.1336**	**11.1468**	**13.5222**	**0.0233**	**0.0361**	**0.5345**	**0.5706**	**5.4600e-003**	**0.4918**	**0.4972**	**0.0000**	**2,255.4975**	**2,255.4975**	**0.7295**		**2,273.7343**

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	3.1500e-003	0.1063	0.0331	3.3000e-004	6.2900e-003	3.2000e-004	6.6000e-003	1.7600e-003	3.0000e-004	2.0700e-003		36.8478	36.8478	3.9600e-003		36.9469
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	0.0581	0.0326	0.3918	1.4400e-003	0.1298	1.0600e-003	0.1308	0.0352	9.8000e-004	0.0361		143.8468	143.8468	2.9000e-003		143.9194
Total	**0.0612**	**0.1389**	**0.4249**	**1.7700e-003**	**0.1361**	**1.3800e-003**	**0.1374**	**0.0369**	**1.2800e-003**	**0.0382**		**180.6946**	**180.6946**	**6.8600e-003**		**180.8663**

3.3 Offsite Improvements Op 1 - 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					
Fugitive Dust					2.0100e-003	0.0000	2.0100e-003	3.0000e-004	0.0000	3.0000e-004			0.0000			0.0000
Off-Road	0.4475	4.4015	5.4680	8.3600e-003		0.2277	0.2277		0.2104	0.2104		795.8378	795.8378	0.2491		802.0645
Total	**0.4475**	**4.4015**	**5.4680**	**8.3600e-003**	**2.0100e-003**	**0.2277**	**0.2297**	**3.0000e-004**	**0.2104**	**0.2107**		**795.8378**	**795.8378**	**0.2491**		**802.0645**

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	9.8100e-003	0.3306	0.1029	1.0200e-003	0.0244	9.8000e-004	0.0254	6.6700e-003	9.4000e-004	7.6100e-003		114.6375	114.6375	0.0123		114.9458
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	0.0387	0.0217	0.2612	9.6000e-004	0.1118	7.1000e-004	0.1125	0.0296	6.5000e-004	0.0303		95.8979	95.8979	1.9400e-003		95.9463
Total	**0.0485**	**0.3523**	**0.3641**	**1.9800e-003**	**0.1362**	**1.6900e-003**	**0.1379**	**0.0363**	**1.5900e-003**	**0.0379**		**210.5354**	**210.5354**	**0.0143**		**210.8921**

3.3 Offsite Improvements Op 1 - 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					
Fugitive Dust					7.9000e-004	0.0000	7.9000e-004	1.2000e-004	0.0000	1.2000e-004			0.0000			0.0000
Off-Road	0.4475	4.4015	5.4680	8.3600e-003		0.2277	0.2277		0.2104	0.2104	0.0000	795.8378	795.8378	0.2491		802.0645
Total	**0.4475**	**4.4015**	**5.4680**	**8.3600e-003**	**7.9000e-004**	**0.2277**	**0.2285**	**1.2000e-004**	**0.2104**	**0.2105**	**0.0000**	**795.8378**	**795.8378**	**0.2491**		**802.0645**

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	9.8100e-003	0.3306	0.1029	1.0200e-003	0.0196	9.8000e-004	0.0206	5.4900e-003	9.4000e-004	6.4300e-003		114.6375	114.6375	0.0123		114.9458
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	0.0387	0.0217	0.2612	9.6000e-004	0.0865	7.1000e-004	0.0872	0.0234	6.5000e-004	0.0241		95.8979	95.8979	1.9400e-003		95.9463
Total	**0.0485**	**0.3523**	**0.3641**	**1.9800e-003**	**0.1061**	**1.6900e-003**	**0.1078**	**0.0289**	**1.5900e-003**	**0.0305**		**210.5354**	**210.5354**	**0.0143**		**210.8921**

3.4 Offsite Improvements Op 3 - 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					
Fugitive Dust					1.3700e-003	0.0000	1.3700e-003	2.1000e-004	0.0000	2.1000e-004			0.0000			0.0000
Off-Road	0.4474	4.4913	4.7550	7.9700e-003		0.2214	0.2214		0.2045	0.2045		758.2049	758.2049	0.2369		764.1274
Total	**0.4474**	**4.4913**	**4.7550**	**7.9700e-003**	**1.3700e-003**	**0.2214**	**0.2227**	**2.1000e-004**	**0.2045**	**0.2047**		**758.2049**	**758.2049**	**0.2369**		**764.1274**

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	7.0000e-003	0.2361	0.0735	7.3000e-004	0.0174	7.0000e-004	0.0181	4.7700e-003	6.7000e-004	5.4400e-003		81.8840	81.8840	8.8100e-003		82.1042
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	0.0503	0.0283	0.3395	1.2500e-003	0.1453	9.2000e-004	0.1462	0.0385	8.5000e-004	0.0394		124.6672	124.6672	2.5200e-003		124.7301
Total	**0.0573**	**0.2644**	**0.4130**	**1.9800e-003**	**0.1627**	**1.6200e-003**	**0.1643**	**0.0433**	**1.5200e-003**	**0.0448**		**206.5512**	**206.5512**	**0.0113**		**206.8343**

3.4 Offsite Improvements Op 3 - 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					
Fugitive Dust					5.3000e-004	0.0000	5.3000e-004	8.0000e-005	0.0000	8.0000e-005			0.0000			0.0000
Off-Road	0.4474	4.4913	4.7550	7.9700e-003		0.2214	0.2214		0.2045	0.2045	0.0000	758.2049	758.2049	0.2369		764.1274
Total	**0.4474**	**4.4913**	**4.7550**	**7.9700e-003**	**5.3000e-004**	**0.2214**	**0.2219**	**8.0000e-005**	**0.2045**	**0.2046**	**0.0000**	**758.2049**	**758.2049**	**0.2369**		**764.1274**

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	7.0000e-003	0.2361	0.0735	7.3000e-004	0.0140	7.0000e-004	0.0147	3.9200e-003	6.7000e-004	4.5900e-003		81.8840	81.8840	8.8100e-003		82.1042
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	0.0503	0.0283	0.3395	1.2500e-003	0.1125	9.2000e-004	0.1134	0.0305	8.5000e-004	0.0313		124.6672	124.6672	2.5200e-003		124.7301
Total	**0.0573**	**0.2644**	**0.4130**	**1.9800e-003**	**0.1264**	**1.6200e-003**	**0.1281**	**0.0344**	**1.5200e-003**	**0.0359**		**206.5512**	**206.5512**	**0.0113**		**206.8343**

3.5 Site Preparation - 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					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.0264	10.2535	11.9594	0.0215		0.4786	0.4786		0.4404	0.4404		2,081.6268	2,081.6268	0.6732		2,098.4578
Total	**1.0264**	**10.2535**	**11.9594**	**0.0215**	**0.0000**	**0.4786**	**0.4786**	**0.0000**	**0.4404**	**0.4404**		**2,081.6268**	**2,081.6268**	**0.6732**		**2,098.4578**

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	0.0697	0.0391	0.4701	1.7300e-003	0.2012	1.2800e-003	0.2025	0.0534	1.1800e-003	0.0545		172.6162	172.6162	3.4800e-003		172.7033
Total	**0.0697**	**0.0391**	**0.4701**	**1.7300e-003**	**0.2012**	**1.2800e-003**	**0.2025**	**0.0534**	**1.1800e-003**	**0.0545**		**172.6162**	**172.6162**	**3.4800e-003**		**172.7033**

3.5 Site Preparation - 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					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.0264	10.2535	11.9594	0.0215		0.4786	0.4786		0.4404	0.4404	0.0000	2,081.6268	2,081.6268	0.6732		2,098.4578
Total	**1.0264**	**10.2535**	**11.9594**	**0.0215**	**0.0000**	**0.4786**	**0.4786**	**0.0000**	**0.4404**	**0.4404**	**0.0000**	**2,081.6268**	**2,081.6268**	**0.6732**		**2,098.4578**

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	0.0697	0.0391	0.4701	1.7300e-003	0.1557	1.2800e-003	0.1570	0.0422	1.1800e-003	0.0434		172.6162	172.6162	3.4800e-003		172.7033
Total	**0.0697**	**0.0391**	**0.4701**	**1.7300e-003**	**0.1557**	**1.2800e-003**	**0.1570**	**0.0422**	**1.1800e-003**	**0.0434**		**172.6162**	**172.6162**	**3.4800e-003**		**172.7033**

3.6 Grading - 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					
Fugitive Dust					0.6144	0.0000	0.6144	0.0700	0.0000	0.0700			0.0000			0.0000
Off-Road	2.6725	29.1724	22.1362	0.0501		1.1661	1.1661		1.0728	1.0728		4,849.4342	4,849.4342	1.5684		4,888.6443
Total	**2.6725**	**29.1724**	**22.1362**	**0.0501**	**0.6144**	**1.1661**	**1.7805**	**0.0700**	**1.0728**	**1.1428**		**4,849.4342**	**4,849.4342**	**1.5684**		**4,888.6443**

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	0.4010	13.5182	4.2084	0.0419	0.9967	0.0403	1.0370	0.2728	0.0385	0.3114		4,687.8559	4,687.8559	0.5043		4,700.4628
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	0.0774	0.0435	0.5224	1.9200e-003	0.2236	1.4200e-003	0.2250	0.0593	1.3100e-003	0.0606		191.7958	191.7958	3.8700e-003		191.8925
Total	**0.4784**	**13.5617**	**4.7308**	**0.0438**	**1.2202**	**0.0417**	**1.2619**	**0.3321**	**0.0398**	**0.3719**		**4,879.6517**	**4,879.6517**	**0.5081**		**4,892.3553**

3.6 Grading - 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					
Fugitive Dust					0.2396	0.0000	0.2396	0.0273	0.0000	0.0273			0.0000			0.0000
Off-Road	2.6725	29.1724	22.1362	0.0501		1.1661	1.1661		1.0728	1.0728	0.0000	4,849.4342	4,849.4342	1.5684		4,888.6443
Total	**2.6725**	**29.1724**	**22.1362**	**0.0501**	**0.2396**	**1.1661**	**1.4057**	**0.0273**	**1.0728**	**1.1001**	**0.0000**	**4,849.4342**	**4,849.4342**	**1.5684**		**4,888.6443**

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	0.4010	13.5182	4.2084	0.0419	0.7999	0.0403	0.8402	0.2245	0.0385	0.2631		4,687.8559	4,687.8559	0.5043		4,700.4628
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	0.0774	0.0435	0.5224	1.9200e-003	0.1730	1.4200e-003	0.1744	0.0469	1.3100e-003	0.0482		191.7958	191.7958	3.8700e-003		191.8925
Total	**0.4784**	**13.5617**	**4.7308**	**0.0438**	**0.9729**	**0.0417**	**1.0146**	**0.2714**	**0.0398**	**0.3112**		**4,879.6517**	**4,879.6517**	**0.5081**		**4,892.3553**

3.7 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	0.3273	3.4497	4.4991	6.3200e-003		0.1832	0.1832		0.1686	0.1686		612.0062	612.0062	0.1979		616.9545
Total	**0.3273**	**3.4497**	**4.4991**	**6.3200e-003**		**0.1832**	**0.1832**		**0.1686**	**0.1686**		**612.0062**	**612.0062**	**0.1979**		**616.9545**

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	0.0184	0.6194	0.1884	1.6700e-003	0.0447	1.2300e-003	0.0460	0.0129	1.1800e-003	0.0141		181.7125	181.7125	0.0150		182.0866
Worker	0.1859	0.1043	1.2537	4.6100e-003	0.5365	3.4100e-003	0.5399	0.1423	3.1400e-003	0.1454		460.3098	460.3098	9.2900e-003		460.5420
Total	**0.2043**	**0.7237**	**1.4421**	**6.2800e-003**	**0.5813**	**4.6400e-003**	**0.5859**	**0.1552**	**4.3200e-003**	**0.1595**		**642.0223**	**642.0223**	**0.0243**		**642.6286**

3.7 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	0.3273	3.4497	4.4991	6.3200e-003		0.1832	0.1832		0.1686	0.1686	0.0000	612.0062	612.0062	0.1979		616.9545
Total	**0.3273**	**3.4497**	**4.4991**	**6.3200e-003**		**0.1832**	**0.1832**		**0.1686**	**0.1686**	**0.0000**	**612.0062**	**612.0062**	**0.1979**		**616.9545**

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	0.0184	0.6194	0.1884	1.6700e-003	0.0364	1.2300e-003	0.0377	0.0108	1.1800e-003	0.0120		181.7125	181.7125	0.0150		182.0866
Worker	0.1859	0.1043	1.2537	4.6100e-003	0.4153	3.4100e-003	0.4187	0.1125	3.1400e-003	0.1157		460.3098	460.3098	9.2900e-003		460.5420
Total	**0.2043**	**0.7237**	**1.4421**	**6.2800e-003**	**0.4517**	**4.6400e-003**	**0.4563**	**0.1234**	**4.3200e-003**	**0.1277**		**642.0223**	**642.0223**	**0.0243**		**642.6286**

3.7 Building Construction - 2023

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	0.3001	3.1681	4.4826	6.3300e-003		0.1549	0.1549		0.1425	0.1425		612.3965	612.3965	0.1981		617.3480
Total	**0.3001**	**3.1681**	**4.4826**	**6.3300e-003**		**0.1549**	**0.1549**		**0.1425**	**0.1425**		**612.3965**	**612.3965**	**0.1981**		**617.3480**

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	0.0140	0.4662	0.1731	1.6100e-003	0.0447	6.0000e-004	0.0453	0.0129	5.7000e-004	0.0134		176.2665	176.2665	0.0138		176.6123
Worker	0.1765	0.0947	1.1673	4.4400e-003	0.5365	3.3500e-003	0.5399	0.1423	3.0800e-003	0.1454		442.6360	442.6360	8.4200e-003		442.8465
Total	**0.1906**	**0.5610**	**1.3404**	**6.0500e-003**	**0.5813**	**3.9500e-003**	**0.5852**	**0.1552**	**3.6500e-003**	**0.1588**		**618.9025**	**618.9025**	**0.0223**		**619.4588**

3.7 Building Construction - 2023

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	0.3001	3.1681	4.4826	6.3300e-003		0.1549	0.1549		0.1425	0.1425	0.0000	612.3965	612.3965	0.1981		617.3480
Total	**0.3001**	**3.1681**	**4.4826**	**6.3300e-003**		**0.1549**	**0.1549**		**0.1425**	**0.1425**	**0.0000**	**612.3965**	**612.3965**	**0.1981**		**617.3480**

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	0.0140	0.4662	0.1731	1.6100e-003	0.0364	6.0000e-004	0.0370	0.0108	5.7000e-004	0.0114		176.2665	176.2665	0.0138		176.6123
Worker	0.1765	0.0947	1.1673	4.4400e-003	0.4153	3.3500e-003	0.4186	0.1125	3.0800e-003	0.1156		442.6360	442.6360	8.4200e-003		442.8465
Total	**0.1906**	**0.5610**	**1.3404**	**6.0500e-003**	**0.4517**	**3.9500e-003**	**0.4556**	**0.1234**	**3.6500e-003**	**0.1270**		**618.9025**	**618.9025**	**0.0223**		**619.4588**

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	0.3119	1.1583	4.1579	0.0173	1.7691	0.0122	1.7814	0.4731	0.0114	0.4844		1,758.6936	1,758.6936	0.0698		1,760.4374
Unmitigated	0.3119	1.1583	4.1579	0.0173	1.7691	0.0122	1.7814	0.4731	0.0114	0.4844		1,758.6936	1,758.6936	0.0698		1,760.4374

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	244.20	213.18	207.24	800,798	800,798
Total	244.20	213.18	207.24	800,798	800,798

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
Apartments Low Rise	14.70	5.90	8.70	40.00	19.00	41.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.565244	0.042904	0.209304	0.108392	0.014546	0.005773	0.026273	0.017831	0.001792	0.001509	0.004953	0.000602	0.000877

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

	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	0.0249	0.2126	0.0905	1.3600e-003		0.0172	0.0172		0.0172	0.0172		271.4369	271.4369	5.2000e-003	4.9800e-003	273.0499
NaturalGas Unmitigated	0.0249	0.2126	0.0905	1.3600e-003		0.0172	0.0172		0.0172	0.0172		271.4369	271.4369	5.2000e-003	4.9800e-003	273.0499

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					
Apartments Low Rise	2307.21	0.0249	0.2126	0.0905	1.3600e-003		0.0172	0.0172		0.0172	0.0172		271.4369	271.4369	5.2000e-003	4.9800e-003	273.0499
Total		**0.0249**	**0.2126**	**0.0905**	**1.3600e-003**		**0.0172**	**0.0172**		**0.0172**	**0.0172**		**271.4369**	**271.4369**	**5.2000e-003**	**4.9800e-003**	**273.0499**

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					
Apartments Low Rise	2.30721	0.0249	0.2126	0.0905	1.3600e-003		0.0172	0.0172		0.0172	0.0172		271.4369	271.4369	5.2000e-003	4.9800e-003	273.0499
Total		**0.0249**	**0.2126**	**0.0905**	**1.3600e-003**		**0.0172**	**0.0172**		**0.0172**	**0.0172**		**271.4369**	**271.4369**	**5.2000e-003**	**4.9800e-003**	**273.0499**

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	1.5836	0.0627	5.4428	2.9000e-004		0.0302	0.0302		0.0302	0.0302	0.0000	9.8045	9.8045	9.4100e-003	0.0000	10.0396
Unmitigated	1.5836	0.0627	5.4428	2.9000e-004		0.0302	0.0302		0.0302	0.0302	0.0000	9.8045	9.8045	9.4100e-003	0.0000	10.0396

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	0.1131					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3068					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	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
Landscaping	0.1637	0.0627	5.4428	2.9000e-004		0.0302	0.0302		0.0302	0.0302		9.8045	9.8045	9.4100e-003		10.0396
Total	**1.5836**	**0.0627**	**5.4428**	**2.9000e-004**		**0.0302**	**0.0302**		**0.0302**	**0.0302**	**0.0000**	**9.8045**	**9.8045**	**9.4100e-003**	**0.0000**	**10.0396**

6.2 Area by SubCategory

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	0.1131					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3068					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	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
Landscaping	0.1637	0.0627	5.4428	2.9000e-004		0.0302	0.0302		0.0302	0.0302		9.8045	9.8045	9.4100e-003		10.0396
Total	**1.5836**	**0.0627**	**5.4428**	**2.9000e-004**		**0.0302**	**0.0302**		**0.0302**	**0.0302**	**0.0000**	**9.8045**	**9.8045**	**9.4100e-003**	**0.0000**	**10.0396**

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

Orchard View Gardens Senior Housing (Ops 2b & 3)

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	66.00	Dwelling Unit	4.13	66,000.00	189

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Orchard View Gardens Senior Housing (Ops 2b & 3) - Orange County, Summer

Project Characteristics -

Land Use -

Construction Phase - Construction schedule supplied by client

Off-road Equipment - Equipment list provided by client

Off-road Equipment - Equipment list provided by client

Off-road Equipment - Equipment list provided by client

Off-road Equipment - Equpment list suggested by operation description
Rubber tired dozers needed to be zero due to error in CalEEMod

Off-road Equipment - Equpment list suggested by operation description
Rubber tired dozers needed to be zero due to error in CalEEMod

Off-road Equipment - Equpment list suggested by operation description
Rubber tired dozers needed to be zero due to error in CalEEMod

Off-road Equipment - Equipment list provided by client

Trips and VMT - grading - 5950 yd3 / 13 yd3 per truck = 458 trucks
Op 2b - 107 yd3 / 13 yd3 per truck = 9 trucks
Op 3 - 133 yd3 / 13 yd3 per truck = 11 trucks

Demolition -

Grading - Parcel is 4 acres

Vehicle Trips - Represents Senior Adult Housing per Traffic Study by Fehr & Peers

Woodstoves - No units have NG fireplaces

Construction Off-road Equipment Mitigation - From SCAQMD TAble XI-C Mitigation Measures for arterial roads

Energy Mitigation - CEC PV Report supplied by client

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	26
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	5.00	11.00
tblFireplaces	NumberGas	56.10	0.00
tblFireplaces	NumberNoFireplace	6.60	66.00

tblFireplaces	NumberWood	3.30	0.00
tblGrading	AcresOfGrading	19.00	4.00
tblGrading	MaterialExported	0.00	107.00
tblGrading	MaterialImported	0.00	5,950.00
tblGrading	MaterialImported	0.00	133.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00

tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripNumber	744.00	458.00
tblTripsAndVMT	HaulingTripNumber	13.00	9.00
tblTripsAndVMT	HaulingTripNumber	17.00	11.00
tblVehicleTrips	HO_TTP	40.60	41.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	7.16	3.23
tblVehicleTrips	SU_TR	6.07	3.14
tblVehicleTrips	WD_TR	6.59	3.70
tblWoodstoves	NumberCatalytic	3.30	0.00
tblWoodstoves	NumberNoncatalytic	3.30	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					
2022	3.1321	42.5850	26.7224	0.0946	1.8346	1.2070	3.0416	0.4021	1.1119	1.5140	0.0000	9,812.5253	9,812.5253	2.0664	0.0000	9,864.1854
2023	0.4685	3.7232	5.9121	0.0127	0.5813	0.1588	0.7401	0.1552	0.1461	0.3013	0.0000	1,260.6828	1,260.6828	0.2203	0.0000	1,266.1893
Maximum	**3.1321**	**42.5850**	**26.7224**	**0.0946**	**1.8346**	**1.2070**	**3.0416**	**0.4021**	**1.1119**	**1.5140**	**0.0000**	**9,812.5253**	**9,812.5253**	**2.0664**	**0.0000**	**9,864.1854**

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					
2022	3.1321	42.5850	26.7224	0.0946	1.2125	1.2070	2.4195	0.2987	1.1119	1.4106	0.0000	9,812.5253	9,812.5253	2.0664	0.0000	9,864.1854
2023	0.4685	3.7232	5.9121	0.0127	0.4517	0.1588	0.6105	0.1234	0.1461	0.2695	0.0000	1,260.6828	1,260.6828	0.2203	0.0000	1,266.1893
Maximum	**3.1321**	**42.5850**	**26.7224**	**0.0946**	**1.2125**	**1.2070**	**2.4195**	**0.2987**	**1.1119**	**1.4106**	**0.0000**	**9,812.5253**	**9,812.5253**	**2.0664**	**0.0000**	**9,864.1854**

	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**	**31.11**	**0.00**	**19.88**	**24.26**	**0.00**	**7.45**	**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	1.5836	0.0627	5.4428	2.9000e-004		0.0302	0.0302		0.0302	0.0302	0.0000	9.8045	9.8045	9.4100e-003	0.0000	10.0396
Energy	0.0249	0.2126	0.0905	1.3600e-003		0.0172	0.0172		0.0172	0.0172		271.4369	271.4369	5.2000e-003	4.9800e-003	273.0499
Mobile	0.3178	1.1269	4.3660	0.0181	1.7691	0.0122	1.7813	0.4731	0.0113	0.4844		1,838.7169	1,838.7169	0.0700		1,840.4672
Total	**1.9263**	**1.4023**	**9.8993**	**0.0197**	**1.7691**	**0.0596**	**1.8287**	**0.4731**	**0.0587**	**0.5318**	**0.0000**	**2,119.9583**	**2,119.9583**	**0.0846**	**4.9800e-003**	**2,123.5567**

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	1.5836	0.0627	5.4428	2.9000e-004		0.0302	0.0302		0.0302	0.0302	0.0000	9.8045	9.8045	9.4100e-003	0.0000	10.0396
Energy	0.0249	0.2126	0.0905	1.3600e-003		0.0172	0.0172		0.0172	0.0172		271.4369	271.4369	5.2000e-003	4.9800e-003	273.0499
Mobile	0.3178	1.1269	4.3660	0.0181	1.7691	0.0122	1.7813	0.4731	0.0113	0.4844		1,838.7169	1,838.7169	0.0700		1,840.4672
Total	**1.9263**	**1.4023**	**9.8993**	**0.0197**	**1.7691**	**0.0596**	**1.8287**	**0.4731**	**0.0587**	**0.5318**	**0.0000**	**2,119.9583**	**2,119.9583**	**0.0846**	**4.9800e-003**	**2,123.5567**

	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	Demolition	Demolition	1/1/2022	1/28/2022	5	20	
2	Site Preparation	Site Preparation	1/29/2022	2/4/2022	5	5	
3	Grading	Grading	2/5/2022	2/16/2022	5	8	
4	Building Construction	Building Construction	2/17/2022	1/4/2023	5	230	
5	Offsite Improvements Op 2b	Site Preparation	1/1/2022	1/14/2022	5	10	
6	Offsite Improvements Op 3	Site Preparation	1/15/2022	1/31/2022	5	11	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	0.00	81	0.73
Demolition	Excavators	2	6.00	158	0.38
Demolition	Other Construction Equipment	1	6.00	172	0.42
Demolition	Rubber Tired Dozers	0	0.00	247	0.40

Demolition	Rubber Tired Loaders	1	6.00	203	0.36
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Excavators	1	6.00	158	0.38
Site Preparation	Paving Equipment	1	4.00	132	0.36
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Rubber Tired Loaders	2	4.00	203	0.36
Site Preparation	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Excavators	0	0.00	158	0.38
Grading	Graders	1	6.00	187	0.41
Grading	Paving Equipment	1	6.00	132	0.36
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Rubber Tired Loaders	1	6.00	203	0.36
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	3	6.00	97	0.37
Building Construction	Cranes	0	0.00	231	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	0	0.00	84	0.74
Building Construction	Skid Steer Loaders	1	8.00	65	0.37
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	0	0.00	46	0.45
Offsite Improvements Op 2b	Cement and Mortar Mixers	1	4.00	9	0.56
Offsite Improvements Op 2b	Pavers	1	4.00	130	0.42
Offsite Improvements Op 2b	Rollers	1	4.00	80	0.38
Offsite Improvements Op 2b	Rubber Tired Dozers	0	0.00	247	0.40
Offsite Improvements Op 2b	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Offsite Improvements Op 3	Cement and Mortar Mixers	1	6.00	9	0.56
Offsite Improvements Op 3	Cranes	1	2.00	231	0.29

Offsite Improvements Op 3	Pavers	1	4.00	130	0.42
Offsite Improvements Op 3	Rollers	1	4.00	80	0.38
Offsite Improvements Op 3	Rubber Tired Dozers	0	0.00	247	0.40
Offsite Improvements Op 3	Tractors/Loaders/Backhoes	1	6.00	97	0.37

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
Demolition	6	15.00	0.00	9.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	458.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	3	48.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Offsite Improvements Op 2b	4	10.00	0.00	9.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Offsite Improvements Op 3	5	13.00	0.00	11.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 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					
Fugitive Dust					0.0925	0.0000	0.0925	0.0140	0.0000	0.0140			0.0000			0.0000
Off-Road	1.1336	11.1468	13.5222	0.0233		0.5345	0.5345		0.4918	0.4918		2,255.4975	2,255.4975	0.7295		2,273.7343
Total	**1.1336**	**11.1468**	**13.5222**	**0.0233**	**0.0925**	**0.5345**	**0.6270**	**0.0140**	**0.4918**	**0.5058**		**2,255.4975**	**2,255.4975**	**0.7295**		**2,273.7343**

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	3.0800e-003	0.1051	0.0316	3.3000e-004	7.8300e-003	3.1000e-004	8.1400e-003	2.1400e-003	3.0000e-004	2.4400e-003		37.4184	37.4184	3.8800e-003		37.5155
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	0.0512	0.0297	0.4252	1.5200e-003	0.1677	1.0600e-003	0.1687	0.0445	9.8000e-004	0.0455		151.9802	151.9802	3.0700e-003		152.0569
Total	**0.0543**	**0.1348**	**0.4568**	**1.8500e-003**	**0.1755**	**1.3700e-003**	**0.1769**	**0.0466**	**1.2800e-003**	**0.0479**		**189.3986**	**189.3986**	**6.9500e-003**		**189.5724**

3.2 Demolition - 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					
Fugitive Dust					0.0361	0.0000	0.0361	5.4600e-003	0.0000	5.4600e-003			0.0000			0.0000
Off-Road	1.1336	11.1468	13.5222	0.0233		0.5345	0.5345		0.4918	0.4918	0.0000	2,255.4975	2,255.4975	0.7295		2,273.7343
Total	**1.1336**	**11.1468**	**13.5222**	**0.0233**	**0.0361**	**0.5345**	**0.5706**	**5.4600e-003**	**0.4918**	**0.4972**	**0.0000**	**2,255.4975**	**2,255.4975**	**0.7295**		**2,273.7343**

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	3.0800e-003	0.1051	0.0316	3.3000e-004	6.2900e-003	3.1000e-004	6.6000e-003	1.7600e-003	3.0000e-004	2.0600e-003		37.4184	37.4184	3.8800e-003		37.5155
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	0.0512	0.0297	0.4252	1.5200e-003	0.1298	1.0600e-003	0.1308	0.0352	9.8000e-004	0.0361		151.9802	151.9802	3.0700e-003		152.0569
Total	**0.0543**	**0.1348**	**0.4568**	**1.8500e-003**	**0.1361**	**1.3700e-003**	**0.1374**	**0.0369**	**1.2800e-003**	**0.0382**		**189.3986**	**189.3986**	**6.9500e-003**		**189.5724**

3.3 Site Preparation - 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					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.0264	10.2535	11.9594	0.0215		0.4786	0.4786		0.4404	0.4404		2,081.6268	2,081.6268	0.6732		2,098.4578
Total	**1.0264**	**10.2535**	**11.9594**	**0.0215**	**0.0000**	**0.4786**	**0.4786**	**0.0000**	**0.4404**	**0.4404**		**2,081.6268**	**2,081.6268**	**0.6732**		**2,098.4578**

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	0.0614	0.0356	0.5103	1.8300e-003	0.2012	1.2800e-003	0.2025	0.0534	1.1800e-003	0.0545		182.3762	182.3762	3.6800e-003		182.4683
Total	**0.0614**	**0.0356**	**0.5103**	**1.8300e-003**	**0.2012**	**1.2800e-003**	**0.2025**	**0.0534**	**1.1800e-003**	**0.0545**		**182.3762**	**182.3762**	**3.6800e-003**		**182.4683**

3.3 Site Preparation - 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					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.0264	10.2535	11.9594	0.0215		0.4786	0.4786		0.4404	0.4404	0.0000	2,081.6268	2,081.6268	0.6732		2,098.4578
Total	**1.0264**	**10.2535**	**11.9594**	**0.0215**	**0.0000**	**0.4786**	**0.4786**	**0.0000**	**0.4404**	**0.4404**	**0.0000**	**2,081.6268**	**2,081.6268**	**0.6732**		**2,098.4578**

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	0.0614	0.0356	0.5103	1.8300e-003	0.1557	1.2800e-003	0.1570	0.0422	1.1800e-003	0.0434		182.3762	182.3762	3.6800e-003		182.4683
Total	**0.0614**	**0.0356**	**0.5103**	**1.8300e-003**	**0.1557**	**1.2800e-003**	**0.1570**	**0.0422**	**1.1800e-003**	**0.0434**		**182.3762**	**182.3762**	**3.6800e-003**		**182.4683**

3.4 Grading - 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					
Fugitive Dust					0.6144	0.0000	0.6144	0.0700	0.0000	0.0700			0.0000			0.0000
Off-Road	2.6725	29.1724	22.1362	0.0501		1.1661	1.1661		1.0728	1.0728		4,849.4342	4,849.4342	1.5684		4,888.6443
Total	**2.6725**	**29.1724**	**22.1362**	**0.0501**	**0.6144**	**1.1661**	**1.7805**	**0.0700**	**1.0728**	**1.1428**		**4,849.4342**	**4,849.4342**	**1.5684**		**4,888.6443**

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	0.3914	13.3731	4.0193	0.0425	0.9967	0.0395	1.0362	0.2728	0.0378	0.3107		4,760.4509	4,760.4509	0.4939		4,772.7985
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	0.0682	0.0396	0.5670	2.0300e-003	0.2236	1.4200e-003	0.2250	0.0593	1.3100e-003	0.0606		202.6403	202.6403	4.0900e-003		202.7426
Total	**0.4596**	**13.4127**	**4.5862**	**0.0446**	**1.2202**	**0.0409**	**1.2612**	**0.3321**	**0.0391**	**0.3712**		**4,963.0912**	**4,963.0912**	**0.4980**		**4,975.5411**

3.4 Grading - 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					
Fugitive Dust					0.2396	0.0000	0.2396	0.0273	0.0000	0.0273			0.0000			0.0000
Off-Road	2.6725	29.1724	22.1362	0.0501		1.1661	1.1661		1.0728	1.0728	0.0000	4,849.4342	4,849.4342	1.5684		4,888.6443
Total	**2.6725**	**29.1724**	**22.1362**	**0.0501**	**0.2396**	**1.1661**	**1.4057**	**0.0273**	**1.0728**	**1.1001**	**0.0000**	**4,849.4342**	**4,849.4342**	**1.5684**		**4,888.6443**

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	0.3914	13.3731	4.0193	0.0425	0.7999	0.0395	0.8394	0.2245	0.0378	0.2623		4,760.4509	4,760.4509	0.4939		4,772.7985
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	0.0682	0.0396	0.5670	2.0300e-003	0.1730	1.4200e-003	0.1744	0.0469	1.3100e-003	0.0482		202.6403	202.6403	4.0900e-003		202.7426
Total	**0.4596**	**13.4127**	**4.5862**	**0.0446**	**0.9729**	**0.0409**	**1.0139**	**0.2714**	**0.0391**	**0.3105**		**4,963.0912**	**4,963.0912**	**0.4980**		**4,975.5411**

3.5 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	0.3273	3.4497	4.4991	6.3200e-003		0.1832	0.1832		0.1686	0.1686		612.0062	612.0062	0.1979		616.9545
Total	**0.3273**	**3.4497**	**4.4991**	**6.3200e-003**		**0.1832**	**0.1832**		**0.1686**	**0.1686**		**612.0062**	**612.0062**	**0.1979**		**616.9545**

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	0.0176	0.6213	0.1720	1.7100e-003	0.0447	1.1900e-003	0.0459	0.0129	1.1300e-003	0.0140		186.3068	186.3068	0.0143		186.6641
Worker	0.1637	0.0950	1.3607	4.8800e-003	0.5365	3.4100e-003	0.5399	0.1423	3.1400e-003	0.1454		486.3366	486.3366	9.8200e-003		486.5822
Total	**0.1813**	**0.7163**	**1.5327**	**6.5900e-003**	**0.5813**	**4.6000e-003**	**0.5858**	**0.1552**	**4.2700e-003**	**0.1594**		**672.6434**	**672.6434**	**0.0241**		**673.2463**

3.5 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	0.3273	3.4497	4.4991	6.3200e-003		0.1832	0.1832		0.1686	0.1686	0.0000	612.0062	612.0062	0.1979		616.9545
Total	**0.3273**	**3.4497**	**4.4991**	**6.3200e-003**		**0.1832**	**0.1832**		**0.1686**	**0.1686**	**0.0000**	**612.0062**	**612.0062**	**0.1979**		**616.9545**

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	0.0176	0.6213	0.1720	1.7100e-003	0.0364	1.1900e-003	0.0376	0.0108	1.1300e-003	0.0120		186.3068	186.3068	0.0143		186.6641
Worker	0.1637	0.0950	1.3607	4.8800e-003	0.4153	3.4100e-003	0.4187	0.1125	3.1400e-003	0.1157		486.3366	486.3366	9.8200e-003		486.5822
Total	**0.1813**	**0.7163**	**1.5327**	**6.5900e-003**	**0.4517**	**4.6000e-003**	**0.4563**	**0.1234**	**4.2700e-003**	**0.1276**		**672.6434**	**672.6434**	**0.0241**		**673.2463**

3.5 Building Construction - 2023

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	0.3001	3.1681	4.4826	6.3300e-003		0.1549	0.1549		0.1425	0.1425		612.3965	612.3965	0.1981		617.3480
Total	**0.3001**	**3.1681**	**4.4826**	**6.3300e-003**		**0.1549**	**0.1549**		**0.1425**	**0.1425**		**612.3965**	**612.3965**	**0.1981**		**617.3480**

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	0.0134	0.4689	0.1605	1.6500e-003	0.0447	5.6000e-004	0.0453	0.0129	5.4000e-004	0.0134		180.6466	180.6466	0.0133		180.9787
Worker	0.1551	0.0862	1.2690	4.6900e-003	0.5365	3.3500e-003	0.5399	0.1423	3.0800e-003	0.1454		467.6398	467.6398	8.9100e-003		467.8625
Total	**0.1684**	**0.5552**	**1.4295**	**6.3400e-003**	**0.5813**	**3.9100e-003**	**0.5852**	**0.1552**	**3.6200e-003**	**0.1588**		**648.2863**	**648.2863**	**0.0222**		**648.8412**

3.5 Building Construction - 2023

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	0.3001	3.1681	4.4826	6.3300e-003		0.1549	0.1549		0.1425	0.1425	0.0000	612.3965	612.3965	0.1981		617.3480
Total	**0.3001**	**3.1681**	**4.4826**	**6.3300e-003**		**0.1549**	**0.1549**		**0.1425**	**0.1425**	**0.0000**	**612.3965**	**612.3965**	**0.1981**		**617.3480**

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	0.0134	0.4689	0.1605	1.6500e-003	0.0364	5.6000e-004	0.0370	0.0108	5.4000e-004	0.0114		180.6466	180.6466	0.0133		180.9787
Worker	0.1551	0.0862	1.2690	4.6900e-003	0.4153	3.3500e-003	0.4186	0.1125	3.0800e-003	0.1156		467.6398	467.6398	8.9100e-003		467.8625
Total	**0.1684**	**0.5552**	**1.4295**	**6.3400e-003**	**0.4517**	**3.9100e-003**	**0.4556**	**0.1234**	**3.6200e-003**	**0.1270**		**648.2863**	**648.2863**	**0.0222**		**648.8412**

3.6 Offsite Improvements Op 2b - 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					
Fugitive Dust					1.2100e-003	0.0000	1.2100e-003	1.8000e-004	0.0000	1.8000e-004			0.0000			0.0000
Off-Road	0.2983	2.9343	3.6453	5.5700e-003		0.1518	0.1518		0.1402	0.1402		530.5585	530.5585	0.1661		534.7097
Total	**0.2983**	**2.9343**	**3.6453**	**5.5700e-003**	**1.2100e-003**	**0.1518**	**0.1530**	**1.8000e-004**	**0.1402**	**0.1404**		**530.5585**	**530.5585**	**0.1661**		**534.7097**

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	6.1500e-003	0.2102	0.0632	6.7000e-004	0.0157	6.2000e-004	0.0163	4.2900e-003	5.9000e-004	4.8800e-003		74.8368	74.8368	7.7600e-003		75.0309
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	0.0341	0.0198	0.2835	1.0200e-003	0.1118	7.1000e-004	0.1125	0.0296	6.5000e-004	0.0303		101.3201	101.3201	2.0500e-003		101.3713
Total	**0.0403**	**0.2300**	**0.3467**	**1.6900e-003**	**0.1275**	**1.3300e-003**	**0.1288**	**0.0339**	**1.2400e-003**	**0.0352**		**176.1569**	**176.1569**	**9.8100e-003**		**176.4022**

3.6 Offsite Improvements Op 2b - 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					
Fugitive Dust					4.7000e-004	0.0000	4.7000e-004	7.0000e-005	0.0000	7.0000e-005			0.0000			0.0000
Off-Road	0.2983	2.9343	3.6453	5.5700e-003		0.1518	0.1518		0.1402	0.1402	0.0000	530.5585	530.5585	0.1661		534.7097
Total	**0.2983**	**2.9343**	**3.6453**	**5.5700e-003**	**4.7000e-004**	**0.1518**	**0.1523**	**7.0000e-005**	**0.1402**	**0.1403**	**0.0000**	**530.5585**	**530.5585**	**0.1661**		**534.7097**

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	6.1500e-003	0.2102	0.0632	6.7000e-004	0.0126	6.2000e-004	0.0132	3.5300e-003	5.9000e-004	4.1200e-003		74.8368	74.8368	7.7600e-003		75.0309
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	0.0341	0.0198	0.2835	1.0200e-003	0.0865	7.1000e-004	0.0872	0.0234	6.5000e-004	0.0241		101.3201	101.3201	2.0500e-003		101.3713
Total	**0.0403**	**0.2300**	**0.3467**	**1.6900e-003**	**0.0991**	**1.3300e-003**	**0.1004**	**0.0270**	**1.2400e-003**	**0.0282**		**176.1569**	**176.1569**	**9.8100e-003**		**176.4022**

3.7 Offsite Improvements Op 3 - 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					
Fugitive Dust					1.3700e-003	0.0000	1.3700e-003	2.1000e-004	0.0000	2.1000e-004			0.0000			0.0000
Off-Road	0.4474	4.4913	4.7550	7.9700e-003		0.2214	0.2214		0.2045	0.2045		758.2049	758.2049	0.2369		764.1274
Total	**0.4474**	**4.4913**	**4.7550**	**7.9700e-003**	**1.3700e-003**	**0.2214**	**0.2227**	**2.1000e-004**	**0.2045**	**0.2047**		**758.2049**	**758.2049**	**0.2369**		**764.1274**

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	6.8400e-003	0.2336	0.0702	7.4000e-004	0.0174	6.9000e-004	0.0181	4.7700e-003	6.6000e-004	5.4300e-003		83.1520	83.1520	8.6300e-003		83.3677
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	0.0443	0.0257	0.3685	1.3200e-003	0.1453	9.2000e-004	0.1462	0.0385	8.5000e-004	0.0394		131.7162	131.7162	2.6600e-003		131.7827
Total	**0.0512**	**0.2593**	**0.4387**	**2.0600e-003**	**0.1627**	**1.6100e-003**	**0.1643**	**0.0433**	**1.5100e-003**	**0.0448**		**214.8681**	**214.8681**	**0.0113**		**215.1503**

3.7 Offsite Improvements Op 3 - 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					
Fugitive Dust					5.3000e-004	0.0000	5.3000e-004	8.0000e-005	0.0000	8.0000e-005			0.0000			0.0000
Off-Road	0.4474	4.4913	4.7550	7.9700e-003		0.2214	0.2214		0.2045	0.2045	0.0000	758.2049	758.2049	0.2369		764.1274
Total	**0.4474**	**4.4913**	**4.7550**	**7.9700e-003**	**5.3000e-004**	**0.2214**	**0.2219**	**8.0000e-005**	**0.2045**	**0.2046**	**0.0000**	**758.2049**	**758.2049**	**0.2369**		**764.1274**

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	6.8400e-003	0.2336	0.0702	7.4000e-004	0.0140	6.9000e-004	0.0147	3.9200e-003	6.6000e-004	4.5800e-003		83.1520	83.1520	8.6300e-003		83.3677
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	0.0443	0.0257	0.3685	1.3200e-003	0.1125	9.2000e-004	0.1134	0.0305	8.5000e-004	0.0313		131.7162	131.7162	2.6600e-003		131.7827
Total	**0.0512**	**0.2593**	**0.4387**	**2.0600e-003**	**0.1264**	**1.6100e-003**	**0.1281**	**0.0344**	**1.5100e-003**	**0.0359**		**214.8681**	**214.8681**	**0.0113**		**215.1503**

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	0.3178	1.1269	4.3660	0.0181	1.7691	0.0122	1.7813	0.4731	0.0113	0.4844		1,838.7169	1,838.7169	0.0700		1,840.4672
Unmitigated	0.3178	1.1269	4.3660	0.0181	1.7691	0.0122	1.7813	0.4731	0.0113	0.4844		1,838.7169	1,838.7169	0.0700		1,840.4672

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	244.20	213.18	207.24	800,798	800,798
Total	244.20	213.18	207.24	800,798	800,798

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
Apartments Low Rise	14.70	5.90	8.70	40.00	19.00	41.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.565244	0.042904	0.209304	0.108392	0.014546	0.005773	0.026273	0.017831	0.001792	0.001509	0.004953	0.000602	0.000877

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

	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	0.0249	0.2126	0.0905	1.3600e-003		0.0172	0.0172		0.0172	0.0172		271.4369	271.4369	5.2000e-003	4.9800e-003	273.0499
NaturalGas Unmitigated	0.0249	0.2126	0.0905	1.3600e-003		0.0172	0.0172		0.0172	0.0172		271.4369	271.4369	5.2000e-003	4.9800e-003	273.0499

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					
Apartments Low Rise	2307.21	0.0249	0.2126	0.0905	1.3600e-003		0.0172	0.0172		0.0172	0.0172		271.4369	271.4369	5.2000e-003	4.9800e-003	273.0499
Total		**0.0249**	**0.2126**	**0.0905**	**1.3600e-003**		**0.0172**	**0.0172**		**0.0172**	**0.0172**		**271.4369**	**271.4369**	**5.2000e-003**	**4.9800e-003**	**273.0499**

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					
Apartments Low Rise	2.30721	0.0249	0.2126	0.0905	1.3600e-003		0.0172	0.0172		0.0172	0.0172		271.4369	271.4369	5.2000e-003	4.9800e-003	273.0499
Total		**0.0249**	**0.2126**	**0.0905**	**1.3600e-003**		**0.0172**	**0.0172**		**0.0172**	**0.0172**		**271.4369**	**271.4369**	**5.2000e-003**	**4.9800e-003**	**273.0499**

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	1.5836	0.0627	5.4428	2.9000e-004		0.0302	0.0302		0.0302	0.0302	0.0000	9.8045	9.8045	9.4100e-003	0.0000	10.0396
Unmitigated	1.5836	0.0627	5.4428	2.9000e-004		0.0302	0.0302		0.0302	0.0302	0.0000	9.8045	9.8045	9.4100e-003	0.0000	10.0396

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	0.1131					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3068					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	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
Landscaping	0.1637	0.0627	5.4428	2.9000e-004		0.0302	0.0302		0.0302	0.0302		9.8045	9.8045	9.4100e-003		10.0396
Total	**1.5836**	**0.0627**	**5.4428**	**2.9000e-004**		**0.0302**	**0.0302**		**0.0302**	**0.0302**	**0.0000**	**9.8045**	**9.8045**	**9.4100e-003**	**0.0000**	**10.0396**

6.2 Area by SubCategory

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	0.1131					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3068					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	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
Landscaping	0.1637	0.0627	5.4428	2.9000e-004		0.0302	0.0302		0.0302	0.0302		9.8045	9.8045	9.4100e-003		10.0396
Total	**1.5836**	**0.0627**	**5.4428**	**2.9000e-004**		**0.0302**	**0.0302**		**0.0302**	**0.0302**	**0.0000**	**9.8045**	**9.8045**	**9.4100e-003**	**0.0000**	**10.0396**

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

Orchard View Gardens Senior Housing (Ops 2b & 3)

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	66.00	Dwelling Unit	4.13	66,000.00	189

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Orchard View Gardens Senior Housing (Ops 2b & 3) - Orange County, Winter

Project Characteristics -

Land Use -

Construction Phase - Construction schedule supplied by client

Off-road Equipment - Equipment list provided by client

Off-road Equipment - Equipment list provided by client

Off-road Equipment - Equipment list provided by client

Off-road Equipment - Equpment list suggested by operation description
Rubber tired dozers needed to be zero due to error in CalEEMod

Off-road Equipment - Equpment list suggested by operation description
Rubber tired dozers needed to be zero due to error in CalEEMod

Off-road Equipment - Equpment list suggested by operation description
Rubber tired dozers needed to be zero due to error in CalEEMod

Off-road Equipment - Equipment list provided by client

Trips and VMT - grading - 5950 yd3 / 13 yd3 per truck = 458 trucks
Op 2b - 107 yd3 / 13 yd3 per truck = 9 trucks
Op 3 - 133 yd3 / 13 yd3 per truck = 11 trucks

Demolition -

Grading - Parcel is 4 acres

Vehicle Trips - Represents Senior Adult Housing per Traffic Study by Fehr & Peers

Woodstoves - No units have NG fireplaces

Construction Off-road Equipment Mitigation - From SCAQMD TAble XI-C Mitigation Measures for arterial roads

Energy Mitigation - CEC PV Report supplied by client

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	26
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	5.00	11.00
tblFireplaces	NumberGas	56.10	0.00
tblFireplaces	NumberNoFireplace	6.60	66.00

tblFireplaces	NumberWood	3.30	0.00
tblGrading	AcresOfGrading	19.00	4.00
tblGrading	MaterialExported	0.00	107.00
tblGrading	MaterialImported	0.00	5,950.00
tblGrading	MaterialImported	0.00	133.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00

tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripNumber	744.00	458.00
tblTripsAndVMT	HaulingTripNumber	13.00	9.00
tblTripsAndVMT	HaulingTripNumber	17.00	11.00
tblVehicleTrips	HO_TTP	40.60	41.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	7.16	3.23
tblVehicleTrips	SU_TR	6.07	3.14
tblVehicleTrips	WD_TR	6.59	3.70
tblWoodstoves	NumberCatalytic	3.30	0.00
tblWoodstoves	NumberNoncatalytic	3.30	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					
2022	3.1510	42.7340	26.8670	0.0939	1.8346	1.2078	3.0424	0.4021	1.1126	1.5147	0.0000	9,729.0859	9,729.0859	2.0766	0.0000	9,780.9996
2023	0.4907	3.7290	5.8230	0.0124	0.5813	0.1588	0.7401	0.1552	0.1462	0.3013	0.0000	1,231.2990	1,231.2990	0.2203	0.0000	1,236.8068
Maximum	**3.1510**	**42.7340**	**26.8670**	**0.0939**	**1.8346**	**1.2078**	**3.0424**	**0.4021**	**1.1126**	**1.5147**	**0.0000**	**9,729.0859**	**9,729.0859**	**2.0766**	**0.0000**	**9,780.9996**

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					
2022	3.1510	42.7340	26.8670	0.0939	1.2125	1.2078	2.4203	0.2987	1.1126	1.4113	0.0000	9,729.0859	9,729.0859	2.0766	0.0000	9,780.9996
2023	0.4907	3.7290	5.8230	0.0124	0.4517	0.1588	0.6105	0.1234	0.1462	0.2695	0.0000	1,231.2990	1,231.2990	0.2203	0.0000	1,236.8068
Maximum	**3.1510**	**42.7340**	**26.8670**	**0.0939**	**1.2125**	**1.2078**	**2.4203**	**0.2987**	**1.1126**	**1.4113**	**0.0000**	**9,729.0859**	**9,729.0859**	**2.0766**	**0.0000**	**9,780.9996**

	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**	**31.11**	**0.00**	**19.87**	**24.26**	**0.00**	**7.44**	**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	1.5836	0.0627	5.4428	2.9000e-004		0.0302	0.0302		0.0302	0.0302	0.0000	9.8045	9.8045	9.4100e-003	0.0000	10.0396
Energy	0.0249	0.2126	0.0905	1.3600e-003		0.0172	0.0172		0.0172	0.0172		271.4369	271.4369	5.2000e-003	4.9800e-003	273.0499
Mobile	0.3119	1.1583	4.1579	0.0173	1.7691	0.0122	1.7814	0.4731	0.0114	0.4844		1,758.6936	1,758.6936	0.0698		1,760.4374
Total	**1.9203**	**1.4337**	**9.6912**	**0.0189**	**1.7691**	**0.0596**	**1.8287**	**0.4731**	**0.0587**	**0.5318**	**0.0000**	**2,039.9350**	**2,039.9350**	**0.0844**	**4.9800e-003**	**2,043.5269**

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	1.5836	0.0627	5.4428	2.9000e-004		0.0302	0.0302		0.0302	0.0302	0.0000	9.8045	9.8045	9.4100e-003	0.0000	10.0396
Energy	0.0249	0.2126	0.0905	1.3600e-003		0.0172	0.0172		0.0172	0.0172		271.4369	271.4369	5.2000e-003	4.9800e-003	273.0499
Mobile	0.3119	1.1583	4.1579	0.0173	1.7691	0.0122	1.7814	0.4731	0.0114	0.4844		1,758.6936	1,758.6936	0.0698		1,760.4374
Total	**1.9203**	**1.4337**	**9.6912**	**0.0189**	**1.7691**	**0.0596**	**1.8287**	**0.4731**	**0.0587**	**0.5318**	**0.0000**	**2,039.9350**	**2,039.9350**	**0.0844**	**4.9800e-003**	**2,043.5269**

	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	Demolition	Demolition	1/1/2022	1/28/2022	5	20	
2	Site Preparation	Site Preparation	1/29/2022	2/4/2022	5	5	
3	Grading	Grading	2/5/2022	2/16/2022	5	8	
4	Building Construction	Building Construction	2/17/2022	1/4/2023	5	230	
5	Offsite Improvements Op 2b	Site Preparation	1/1/2022	1/14/2022	5	10	
6	Offsite Improvements Op 3	Site Preparation	1/15/2022	1/31/2022	5	11	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	0.00	81	0.73
Demolition	Excavators	2	6.00	158	0.38
Demolition	Other Construction Equipment	1	6.00	172	0.42
Demolition	Rubber Tired Dozers	0	0.00	247	0.40

Demolition	Rubber Tired Loaders	1	6.00	203	0.36
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Excavators	1	6.00	158	0.38
Site Preparation	Paving Equipment	1	4.00	132	0.36
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Rubber Tired Loaders	2	4.00	203	0.36
Site Preparation	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Excavators	0	0.00	158	0.38
Grading	Graders	1	6.00	187	0.41
Grading	Paving Equipment	1	6.00	132	0.36
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Rubber Tired Loaders	1	6.00	203	0.36
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	3	6.00	97	0.37
Building Construction	Cranes	0	0.00	231	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	0	0.00	84	0.74
Building Construction	Skid Steer Loaders	1	8.00	65	0.37
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	0	0.00	46	0.45
Offsite Improvements Op 2b	Cement and Mortar Mixers	1	4.00	9	0.56
Offsite Improvements Op 2b	Pavers	1	4.00	130	0.42
Offsite Improvements Op 2b	Rollers	1	4.00	80	0.38
Offsite Improvements Op 2b	Rubber Tired Dozers	0	0.00	247	0.40
Offsite Improvements Op 2b	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Offsite Improvements Op 3	Cement and Mortar Mixers	1	6.00	9	0.56
Offsite Improvements Op 3	Cranes	1	2.00	231	0.29

Offsite Improvements Op 3	Pavers	1	4.00	130	0.42
Offsite Improvements Op 3	Rollers	1	4.00	80	0.38
Offsite Improvements Op 3	Rubber Tired Dozers	0	0.00	247	0.40
Offsite Improvements Op 3	Tractors/Loaders/Backhoes	1	6.00	97	0.37

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
Demolition	6	15.00	0.00	9.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	458.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	3	48.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Offsite Improvements Op 2b	4	10.00	0.00	9.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Offsite Improvements Op 3	5	13.00	0.00	11.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 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					
Fugitive Dust					0.0925	0.0000	0.0925	0.0140	0.0000	0.0140			0.0000			0.0000
Off-Road	1.1336	11.1468	13.5222	0.0233		0.5345	0.5345		0.4918	0.4918		2,255.4975	2,255.4975	0.7295		2,273.7343
Total	**1.1336**	**11.1468**	**13.5222**	**0.0233**	**0.0925**	**0.5345**	**0.6270**	**0.0140**	**0.4918**	**0.5058**		**2,255.4975**	**2,255.4975**	**0.7295**		**2,273.7343**

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	3.1500e-003	0.1063	0.0331	3.3000e-004	7.8300e-003	3.2000e-004	8.1500e-003	2.1400e-003	3.0000e-004	2.4500e-003		36.8478	36.8478	3.9600e-003		36.9469
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	0.0581	0.0326	0.3918	1.4400e-003	0.1677	1.0600e-003	0.1687	0.0445	9.8000e-004	0.0455		143.8468	143.8468	2.9000e-003		143.9194
Total	**0.0612**	**0.1389**	**0.4249**	**1.7700e-003**	**0.1755**	**1.3800e-003**	**0.1769**	**0.0466**	**1.2800e-003**	**0.0479**		**180.6946**	**180.6946**	**6.8600e-003**		**180.8663**

3.2 Demolition - 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					
Fugitive Dust					0.0361	0.0000	0.0361	5.4600e-003	0.0000	5.4600e-003			0.0000			0.0000
Off-Road	1.1336	11.1468	13.5222	0.0233		0.5345	0.5345		0.4918	0.4918	0.0000	2,255.4975	2,255.4975	0.7295		2,273.7343
Total	**1.1336**	**11.1468**	**13.5222**	**0.0233**	**0.0361**	**0.5345**	**0.5706**	**5.4600e-003**	**0.4918**	**0.4972**	**0.0000**	**2,255.4975**	**2,255.4975**	**0.7295**		**2,273.7343**

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	3.1500e-003	0.1063	0.0331	3.3000e-004	6.2900e-003	3.2000e-004	6.6000e-003	1.7600e-003	3.0000e-004	2.0700e-003		36.8478	36.8478	3.9600e-003		36.9469
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	0.0581	0.0326	0.3918	1.4400e-003	0.1298	1.0600e-003	0.1308	0.0352	9.8000e-004	0.0361		143.8468	143.8468	2.9000e-003		143.9194
Total	**0.0612**	**0.1389**	**0.4249**	**1.7700e-003**	**0.1361**	**1.3800e-003**	**0.1374**	**0.0369**	**1.2800e-003**	**0.0382**		**180.6946**	**180.6946**	**6.8600e-003**		**180.8663**

3.3 Site Preparation - 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					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.0264	10.2535	11.9594	0.0215		0.4786	0.4786		0.4404	0.4404		2,081.6268	2,081.6268	0.6732		2,098.4578
Total	**1.0264**	**10.2535**	**11.9594**	**0.0215**	**0.0000**	**0.4786**	**0.4786**	**0.0000**	**0.4404**	**0.4404**		**2,081.6268**	**2,081.6268**	**0.6732**		**2,098.4578**

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	0.0697	0.0391	0.4701	1.7300e-003	0.2012	1.2800e-003	0.2025	0.0534	1.1800e-003	0.0545		172.6162	172.6162	3.4800e-003		172.7033
Total	**0.0697**	**0.0391**	**0.4701**	**1.7300e-003**	**0.2012**	**1.2800e-003**	**0.2025**	**0.0534**	**1.1800e-003**	**0.0545**		**172.6162**	**172.6162**	**3.4800e-003**		**172.7033**

3.3 Site Preparation - 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					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.0264	10.2535	11.9594	0.0215		0.4786	0.4786		0.4404	0.4404	0.0000	2,081.6268	2,081.6268	0.6732		2,098.4578
Total	**1.0264**	**10.2535**	**11.9594**	**0.0215**	**0.0000**	**0.4786**	**0.4786**	**0.0000**	**0.4404**	**0.4404**	**0.0000**	**2,081.6268**	**2,081.6268**	**0.6732**		**2,098.4578**

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	0.0697	0.0391	0.4701	1.7300e-003	0.1557	1.2800e-003	0.1570	0.0422	1.1800e-003	0.0434		172.6162	172.6162	3.4800e-003		172.7033
Total	**0.0697**	**0.0391**	**0.4701**	**1.7300e-003**	**0.1557**	**1.2800e-003**	**0.1570**	**0.0422**	**1.1800e-003**	**0.0434**		**172.6162**	**172.6162**	**3.4800e-003**		**172.7033**

3.4 Grading - 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					
Fugitive Dust					0.6144	0.0000	0.6144	0.0700	0.0000	0.0700			0.0000			0.0000
Off-Road	2.6725	29.1724	22.1362	0.0501		1.1661	1.1661		1.0728	1.0728		4,849.4342	4,849.4342	1.5684		4,888.6443
Total	**2.6725**	**29.1724**	**22.1362**	**0.0501**	**0.6144**	**1.1661**	**1.7805**	**0.0700**	**1.0728**	**1.1428**		**4,849.4342**	**4,849.4342**	**1.5684**		**4,888.6443**

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	0.4010	13.5182	4.2084	0.0419	0.9967	0.0403	1.0370	0.2728	0.0385	0.3114		4,687.8559	4,687.8559	0.5043		4,700.4628
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	0.0774	0.0435	0.5224	1.9200e-003	0.2236	1.4200e-003	0.2250	0.0593	1.3100e-003	0.0606		191.7958	191.7958	3.8700e-003		191.8925
Total	**0.4784**	**13.5617**	**4.7308**	**0.0438**	**1.2202**	**0.0417**	**1.2619**	**0.3321**	**0.0398**	**0.3719**		**4,879.6517**	**4,879.6517**	**0.5081**		**4,892.3553**

3.4 Grading - 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					
Fugitive Dust					0.2396	0.0000	0.2396	0.0273	0.0000	0.0273			0.0000			0.0000
Off-Road	2.6725	29.1724	22.1362	0.0501		1.1661	1.1661		1.0728	1.0728	0.0000	4,849.4342	4,849.4342	1.5684		4,888.6443
Total	**2.6725**	**29.1724**	**22.1362**	**0.0501**	**0.2396**	**1.1661**	**1.4057**	**0.0273**	**1.0728**	**1.1001**	**0.0000**	**4,849.4342**	**4,849.4342**	**1.5684**		**4,888.6443**

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	0.4010	13.5182	4.2084	0.0419	0.7999	0.0403	0.8402	0.2245	0.0385	0.2631		4,687.8559	4,687.8559	0.5043		4,700.4628
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	0.0774	0.0435	0.5224	1.9200e-003	0.1730	1.4200e-003	0.1744	0.0469	1.3100e-003	0.0482		191.7958	191.7958	3.8700e-003		191.8925
Total	**0.4784**	**13.5617**	**4.7308**	**0.0438**	**0.9729**	**0.0417**	**1.0146**	**0.2714**	**0.0398**	**0.3112**		**4,879.6517**	**4,879.6517**	**0.5081**		**4,892.3553**

3.5 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	0.3273	3.4497	4.4991	6.3200e-003		0.1832	0.1832		0.1686	0.1686		612.0062	612.0062	0.1979		616.9545
Total	**0.3273**	**3.4497**	**4.4991**	**6.3200e-003**		**0.1832**	**0.1832**		**0.1686**	**0.1686**		**612.0062**	**612.0062**	**0.1979**		**616.9545**

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	0.0184	0.6194	0.1884	1.6700e-003	0.0447	1.2300e-003	0.0460	0.0129	1.1800e-003	0.0141		181.7125	181.7125	0.0150		182.0866
Worker	0.1859	0.1043	1.2537	4.6100e-003	0.5365	3.4100e-003	0.5399	0.1423	3.1400e-003	0.1454		460.3098	460.3098	9.2900e-003		460.5420
Total	**0.2043**	**0.7237**	**1.4421**	**6.2800e-003**	**0.5813**	**4.6400e-003**	**0.5859**	**0.1552**	**4.3200e-003**	**0.1595**		**642.0223**	**642.0223**	**0.0243**		**642.6286**

3.5 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	0.3273	3.4497	4.4991	6.3200e-003		0.1832	0.1832		0.1686	0.1686	0.0000	612.0062	612.0062	0.1979		616.9545
Total	**0.3273**	**3.4497**	**4.4991**	**6.3200e-003**		**0.1832**	**0.1832**		**0.1686**	**0.1686**	**0.0000**	**612.0062**	**612.0062**	**0.1979**		**616.9545**

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	0.0184	0.6194	0.1884	1.6700e-003	0.0364	1.2300e-003	0.0377	0.0108	1.1800e-003	0.0120		181.7125	181.7125	0.0150		182.0866
Worker	0.1859	0.1043	1.2537	4.6100e-003	0.4153	3.4100e-003	0.4187	0.1125	3.1400e-003	0.1157		460.3098	460.3098	9.2900e-003		460.5420
Total	**0.2043**	**0.7237**	**1.4421**	**6.2800e-003**	**0.4517**	**4.6400e-003**	**0.4563**	**0.1234**	**4.3200e-003**	**0.1277**		**642.0223**	**642.0223**	**0.0243**		**642.6286**

3.5 Building Construction - 2023

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	0.3001	3.1681	4.4826	6.3300e-003		0.1549	0.1549		0.1425	0.1425		612.3965	612.3965	0.1981		617.3480
Total	**0.3001**	**3.1681**	**4.4826**	**6.3300e-003**		**0.1549**	**0.1549**		**0.1425**	**0.1425**		**612.3965**	**612.3965**	**0.1981**		**617.3480**

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	0.0140	0.4662	0.1731	1.6100e-003	0.0447	6.0000e-004	0.0453	0.0129	5.7000e-004	0.0134		176.2665	176.2665	0.0138		176.6123
Worker	0.1765	0.0947	1.1673	4.4400e-003	0.5365	3.3500e-003	0.5399	0.1423	3.0800e-003	0.1454		442.6360	442.6360	8.4200e-003		442.8465
Total	**0.1906**	**0.5610**	**1.3404**	**6.0500e-003**	**0.5813**	**3.9500e-003**	**0.5852**	**0.1552**	**3.6500e-003**	**0.1588**		**618.9025**	**618.9025**	**0.0223**		**619.4588**

3.5 Building Construction - 2023

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	0.3001	3.1681	4.4826	6.3300e-003		0.1549	0.1549		0.1425	0.1425	0.0000	612.3965	612.3965	0.1981		617.3480
Total	**0.3001**	**3.1681**	**4.4826**	**6.3300e-003**		**0.1549**	**0.1549**		**0.1425**	**0.1425**	**0.0000**	**612.3965**	**612.3965**	**0.1981**		**617.3480**

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	0.0140	0.4662	0.1731	1.6100e-003	0.0364	6.0000e-004	0.0370	0.0108	5.7000e-004	0.0114		176.2665	176.2665	0.0138		176.6123
Worker	0.1765	0.0947	1.1673	4.4400e-003	0.4153	3.3500e-003	0.4186	0.1125	3.0800e-003	0.1156		442.6360	442.6360	8.4200e-003		442.8465
Total	**0.1906**	**0.5610**	**1.3404**	**6.0500e-003**	**0.4517**	**3.9500e-003**	**0.4556**	**0.1234**	**3.6500e-003**	**0.1270**		**618.9025**	**618.9025**	**0.0223**		**619.4588**

3.6 Offsite Improvements Op 2b - 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					
Fugitive Dust					1.2100e-003	0.0000	1.2100e-003	1.8000e-004	0.0000	1.8000e-004			0.0000			0.0000
Off-Road	0.2983	2.9343	3.6453	5.5700e-003		0.1518	0.1518		0.1402	0.1402		530.5585	530.5585	0.1661		534.7097
Total	**0.2983**	**2.9343**	**3.6453**	**5.5700e-003**	**1.2100e-003**	**0.1518**	**0.1530**	**1.8000e-004**	**0.1402**	**0.1404**		**530.5585**	**530.5585**	**0.1661**		**534.7097**

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	6.3000e-003	0.2125	0.0662	6.6000e-004	0.0157	6.3000e-004	0.0163	4.2900e-003	6.1000e-004	4.8900e-003		73.6956	73.6956	7.9300e-003		73.8937
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	0.0387	0.0217	0.2612	9.6000e-004	0.1118	7.1000e-004	0.1125	0.0296	6.5000e-004	0.0303		95.8979	95.8979	1.9400e-003		95.9463
Total	**0.0450**	**0.2343**	**0.3273**	**1.6200e-003**	**0.1275**	**1.3400e-003**	**0.1288**	**0.0339**	**1.2600e-003**	**0.0352**		**169.5934**	**169.5934**	**9.8700e-003**		**169.8400**

3.6 Offsite Improvements Op 2b - 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					
Fugitive Dust					4.7000e-004	0.0000	4.7000e-004	7.0000e-005	0.0000	7.0000e-005			0.0000			0.0000
Off-Road	0.2983	2.9343	3.6453	5.5700e-003		0.1518	0.1518		0.1402	0.1402	0.0000	530.5585	530.5585	0.1661		534.7097
Total	**0.2983**	**2.9343**	**3.6453**	**5.5700e-003**	**4.7000e-004**	**0.1518**	**0.1523**	**7.0000e-005**	**0.1402**	**0.1403**	**0.0000**	**530.5585**	**530.5585**	**0.1661**		**534.7097**

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	6.3000e-003	0.2125	0.0662	6.6000e-004	0.0126	6.3000e-004	0.0132	3.5300e-003	6.1000e-004	4.1400e-003		73.6956	73.6956	7.9300e-003		73.8937
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	0.0387	0.0217	0.2612	9.6000e-004	0.0865	7.1000e-004	0.0872	0.0234	6.5000e-004	0.0241		95.8979	95.8979	1.9400e-003		95.9463
Total	**0.0450**	**0.2343**	**0.3273**	**1.6200e-003**	**0.0991**	**1.3400e-003**	**0.1004**	**0.0270**	**1.2600e-003**	**0.0282**		**169.5934**	**169.5934**	**9.8700e-003**		**169.8400**

3.7 Offsite Improvements Op 3 - 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					
Fugitive Dust					1.3700e-003	0.0000	1.3700e-003	2.1000e-004	0.0000	2.1000e-004			0.0000			0.0000
Off-Road	0.4474	4.4913	4.7550	7.9700e-003		0.2214	0.2214		0.2045	0.2045		758.2049	758.2049	0.2369		764.1274
Total	**0.4474**	**4.4913**	**4.7550**	**7.9700e-003**	**1.3700e-003**	**0.2214**	**0.2227**	**2.1000e-004**	**0.2045**	**0.2047**		**758.2049**	**758.2049**	**0.2369**		**764.1274**

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	7.0000e-003	0.2361	0.0735	7.3000e-004	0.0174	7.0000e-004	0.0181	4.7700e-003	6.7000e-004	5.4400e-003		81.8840	81.8840	8.8100e-003		82.1042
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	0.0503	0.0283	0.3395	1.2500e-003	0.1453	9.2000e-004	0.1462	0.0385	8.5000e-004	0.0394		124.6672	124.6672	2.5200e-003		124.7301
Total	**0.0573**	**0.2644**	**0.4130**	**1.9800e-003**	**0.1627**	**1.6200e-003**	**0.1643**	**0.0433**	**1.5200e-003**	**0.0448**		**206.5512**	**206.5512**	**0.0113**		**206.8343**

3.7 Offsite Improvements Op 3 - 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					
Fugitive Dust					5.3000e-004	0.0000	5.3000e-004	8.0000e-005	0.0000	8.0000e-005			0.0000			0.0000
Off-Road	0.4474	4.4913	4.7550	7.9700e-003		0.2214	0.2214		0.2045	0.2045	0.0000	758.2049	758.2049	0.2369		764.1274
Total	**0.4474**	**4.4913**	**4.7550**	**7.9700e-003**	**5.3000e-004**	**0.2214**	**0.2219**	**8.0000e-005**	**0.2045**	**0.2046**	**0.0000**	**758.2049**	**758.2049**	**0.2369**		**764.1274**

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	7.0000e-003	0.2361	0.0735	7.3000e-004	0.0140	7.0000e-004	0.0147	3.9200e-003	6.7000e-004	4.5900e-003		81.8840	81.8840	8.8100e-003		82.1042
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	0.0503	0.0283	0.3395	1.2500e-003	0.1125	9.2000e-004	0.1134	0.0305	8.5000e-004	0.0313		124.6672	124.6672	2.5200e-003		124.7301
Total	**0.0573**	**0.2644**	**0.4130**	**1.9800e-003**	**0.1264**	**1.6200e-003**	**0.1281**	**0.0344**	**1.5200e-003**	**0.0359**		**206.5512**	**206.5512**	**0.0113**		**206.8343**

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	0.3119	1.1583	4.1579	0.0173	1.7691	0.0122	1.7814	0.4731	0.0114	0.4844		1,758.6936	1,758.6936	0.0698		1,760.4374
Unmitigated	0.3119	1.1583	4.1579	0.0173	1.7691	0.0122	1.7814	0.4731	0.0114	0.4844		1,758.6936	1,758.6936	0.0698		1,760.4374

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	244.20	213.18	207.24	800,798	800,798
Total	244.20	213.18	207.24	800,798	800,798

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
Apartments Low Rise	14.70	5.90	8.70	40.00	19.00	41.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.565244	0.042904	0.209304	0.108392	0.014546	0.005773	0.026273	0.017831	0.001792	0.001509	0.004953	0.000602	0.000877

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

	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	0.0249	0.2126	0.0905	1.3600e-003		0.0172	0.0172		0.0172	0.0172		271.4369	271.4369	5.2000e-003	4.9800e-003	273.0499
NaturalGas Unmitigated	0.0249	0.2126	0.0905	1.3600e-003		0.0172	0.0172		0.0172	0.0172		271.4369	271.4369	5.2000e-003	4.9800e-003	273.0499

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					
Apartments Low Rise	2307.21	0.0249	0.2126	0.0905	1.3600e-003		0.0172	0.0172		0.0172	0.0172		271.4369	271.4369	5.2000e-003	4.9800e-003	273.0499
Total		**0.0249**	**0.2126**	**0.0905**	**1.3600e-003**		**0.0172**	**0.0172**		**0.0172**	**0.0172**		**271.4369**	**271.4369**	**5.2000e-003**	**4.9800e-003**	**273.0499**

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					
Apartments Low Rise	2.30721	0.0249	0.2126	0.0905	1.3600e-003		0.0172	0.0172		0.0172	0.0172		271.4369	271.4369	5.2000e-003	4.9800e-003	273.0499
Total		**0.0249**	**0.2126**	**0.0905**	**1.3600e-003**		**0.0172**	**0.0172**		**0.0172**	**0.0172**		**271.4369**	**271.4369**	**5.2000e-003**	**4.9800e-003**	**273.0499**

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	1.5836	0.0627	5.4428	2.9000e-004		0.0302	0.0302		0.0302	0.0302	0.0000	9.8045	9.8045	9.4100e-003	0.0000	10.0396
Unmitigated	1.5836	0.0627	5.4428	2.9000e-004		0.0302	0.0302		0.0302	0.0302	0.0000	9.8045	9.8045	9.4100e-003	0.0000	10.0396

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	0.1131					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3068					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	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
Landscaping	0.1637	0.0627	5.4428	2.9000e-004		0.0302	0.0302		0.0302	0.0302		9.8045	9.8045	9.4100e-003		10.0396
Total	**1.5836**	**0.0627**	**5.4428**	**2.9000e-004**		**0.0302**	**0.0302**		**0.0302**	**0.0302**	**0.0000**	**9.8045**	**9.8045**	**9.4100e-003**	**0.0000**	**10.0396**

6.2 Area by SubCategory

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	0.1131					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3068					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	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
Landscaping	0.1637	0.0627	5.4428	2.9000e-004		0.0302	0.0302		0.0302	0.0302		9.8045	9.8045	9.4100e-003		10.0396
Total	**1.5836**	**0.0627**	**5.4428**	**2.9000e-004**		**0.0302**	**0.0302**		**0.0302**	**0.0302**	**0.0000**	**9.8045**	**9.8045**	**9.4100e-003**	**0.0000**	**10.0396**

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 B2

CalEEMod INPUT AND RESULTS FOR GREENHOUSE GAS EMISSIONS ANALYSIS

Orchard View Gardens Senior Housing (Ops 1 & 3)

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	66.00	Dwelling Unit	4.13	66,000.00	189

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Orchard View Gardens Senior Housing (Ops 1 & 3) - Orange County, Annual

Project Characteristics -

Land Use -

Construction Phase - Construction schedule supplied by client

Off-road Equipment - Equipment list provided by client

Off-road Equipment - Equipment list provided by client

Off-road Equipment - Equipment list provided by client

Off-road Equipment - Equpment list suggested by operation description
Rubber tired dozers needed to be zero due to error in CalEEMod

Off-road Equipment - Equpment list suggested by operation description
Rubber tired dozers needed to be zero due to error in CalEEMod

Off-road Equipment - Equipment list provided by client

Trips and VMT - grading - 5950 yd3 / 13 yd3 per truck = 458 trucks
Op 1 - 178 yd3 / 13 yd3 per truck = 14 trucks
Op 3 - 133 yd3 / 13 yd3 per truck = 11 trucks

Demolition -

Grading - Parcel is 4 acres

Vehicle Trips - Represents Senior Adult Housing per Traffic Study by Fehr & Peers

Woodstoves - No units have NG fireplaces

Construction Off-road Equipment Mitigation - From SCAQMD TAble XI-C Mitigation Measures for arterial roads

Energy Mitigation - CEC PV Report supplied by client

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	26
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	5.00	11.00
tblFireplaces	NumberGas	56.10	0.00
tblFireplaces	NumberNoFireplace	6.60	66.00
tblFireplaces	NumberWood	3.30	0.00

tblGrading	AcresOfGrading	19.00	4.00
tblGrading	MaterialExported	0.00	178.00
tblGrading	MaterialImported	0.00	5,950.00
tblGrading	MaterialImported	0.00	133.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	0.00

tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripNumber	744.00	458.00
tblTripsAndVMT	HaulingTripNumber	22.00	14.00
tblTripsAndVMT	HaulingTripNumber	17.00	11.00
tblVehicleTrips	HO_TTP	40.60	41.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	7.16	3.23
tblVehicleTrips	SU_TR	6.07	3.14
tblVehicleTrips	WD_TR	6.59	3.70
tblWoodstoves	NumberCatalytic	3.30	0.00
tblWoodstoves	NumberNoncatalytic	3.30	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					
2022	0.0904	0.8358	1.0124	2.2300e-003	0.0768	0.0351	0.1119	0.0201	0.0323	0.0524	0.0000	202.2314	202.2314	0.0410	0.0000	203.2567
2023	7.1000e-004	5.6100e-003	8.7700e-003	2.0000e-005	8.6000e-004	2.4000e-004	1.0900e-003	2.3000e-004	2.2000e-004	4.5000e-004	0.0000	1.6882	1.6882	3.0000e-004	0.0000	1.6956
Maximum	**0.0904**	**0.8358**	**1.0124**	**2.2300e-003**	**0.0768**	**0.0351**	**0.1119**	**0.0201**	**0.0323**	**0.0524**	**0.0000**	**202.2314**	**202.2314**	**0.0410**	**0.0000**	**203.2567**

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					
2022	0.0904	0.8358	1.0124	2.2300e-003	0.0585	0.0351	0.0936	0.0158	0.0323	0.0481	0.0000	202.2312	202.2312	0.0410	0.0000	203.2566
2023	7.1000e-004	5.6100e-003	8.7700e-003	2.0000e-005	6.7000e-004	2.4000e-004	9.0000e-004	1.8000e-004	2.2000e-004	4.0000e-004	0.0000	1.6882	1.6882	3.0000e-004	0.0000	1.6956
Maximum	**0.0904**	**0.8358**	**1.0124**	**2.2300e-003**	**0.0585**	**0.0351**	**0.0936**	**0.0158**	**0.0323**	**0.0481**	**0.0000**	**202.2312**	**202.2312**	**0.0410**	**0.0000**	**203.2566**

	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**	**23.80**	**0.00**	**16.36**	**21.14**	**0.00**	**8.12**	**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	1-1-2022	3-31-2022	0.4804	0.4804
2	4-1-2022	6-30-2022	0.1519	0.1519
3	7-1-2022	9-30-2022	0.1536	0.1536
4	10-1-2022	12-31-2022	0.1546	0.1546
5	1-1-2023	3-31-2023	0.0060	0.0060
		Highest	0.4804	0.4804

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	0.2796	7.8400e-003	0.6804	4.0000e-005		3.7700e-003	3.7700e-003		3.7700e-003	3.7700e-003	0.0000	1.1118	1.1118	1.0700e-003	0.0000	1.1385
Energy	4.5400e-003	0.0388	0.0165	2.5000e-004		3.1400e-003	3.1400e-003		3.1400e-003	3.1400e-003	0.0000	132.4229	132.4229	4.4700e-003	1.5700e-003	133.0029
Mobile	0.0530	0.2056	0.7372	3.0500e-003	0.3037	2.1300e-003	0.3059	0.0813	1.9800e-003	0.0833	0.0000	282.1820	282.1820	0.0110	0.0000	282.4578
Waste						0.0000	0.0000		0.0000	0.0000	6.1628	0.0000	6.1628	0.3642	0.0000	15.2681
Water						0.0000	0.0000		0.0000	0.0000	1.3642	27.4369	28.8012	0.1413	3.5400e-003	33.3883
Total	**0.3371**	**0.2523**	**1.4341**	**3.3400e-003**	**0.3037**	**9.0400e-003**	**0.3128**	**0.0813**	**8.8900e-003**	**0.0902**	**7.5271**	**443.1535**	**450.6806**	**0.5220**	**5.1100e-003**	**465.2555**

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	0.2796	7.8400e-003	0.6804	4.0000e-005		3.7700e-003	3.7700e-003		3.7700e-003	3.7700e-003	0.0000	1.1118	1.1118	1.0700e-003	0.0000	1.1385
Energy	4.5400e-003	0.0388	0.0165	2.5000e-004		3.1400e-003	3.1400e-003		3.1400e-003	3.1400e-003	0.0000	74.3066	74.3066	2.0700e-003	1.0700e-003	74.6787
Mobile	0.0530	0.2056	0.7372	3.0500e-003	0.3037	2.1300e-003	0.3059	0.0813	1.9800e-003	0.0833	0.0000	282.1820	282.1820	0.0110	0.0000	282.4578
Waste						0.0000	0.0000		0.0000	0.0000	6.1628	0.0000	6.1628	0.3642	0.0000	15.2681
Water						0.0000	0.0000		0.0000	0.0000	1.3642	27.4369	28.8012	0.1413	3.5400e-003	33.3883
Total	**0.3371**	**0.2523**	**1.4341**	**3.3400e-003**	**0.3037**	**9.0400e-003**	**0.3128**	**0.0813**	**8.8900e-003**	**0.0902**	**7.5271**	**385.0373**	**392.5644**	**0.5196**	**4.6100e-003**	**406.9314**

	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**	**13.11**	**12.90**	**0.46**	**9.78**	**12.54**

3.0 Construction Detail

Construction Phase

Orchard View Gardens Senior Housing (Ops 1 & 3) - Orange County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	1/28/2022	5	20	
2	Offsite Improvements Op 1	Site Preparation	1/1/2022	1/14/2022	5	10	
3	Offsite Improvements Op 3	Site Preparation	1/15/2022	1/31/2022	5	11	
4	Site Preparation	Site Preparation	1/29/2022	2/4/2022	5	5	
5	Grading	Grading	2/5/2022	2/16/2022	5	8	
6	Building Construction	Building Construction	2/17/2022	1/4/2023	5	230	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	0.00	81	0.73
Demolition	Excavators	2	6.00	158	0.38
Demolition	Other Construction Equipment	1	6.00	172	0.42
Demolition	Rubber Tired Dozers	0	0.00	247	0.40
Demolition	Rubber Tired Loaders	1	6.00	203	0.36
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Excavators	1	6.00	158	0.38
Site Preparation	Paving Equipment	1	4.00	132	0.36
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Rubber Tired Loaders	2	4.00	203	0.36

Site Preparation	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Excavators	0	0.00	158	0.38
Grading	Graders	1	6.00	187	0.41
Grading	Paving Equipment	1	6.00	132	0.36
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Rubber Tired Loaders	1	6.00	203	0.36
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	3	6.00	97	0.37
Building Construction	Cranes	0	0.00	231	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	0	0.00	84	0.74
Building Construction	Skid Steer Loaders	1	8.00	65	0.37
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	0	0.00	46	0.45
Offsite Improvements Op 1	Cement and Mortar Mixers	1	6.00	9	0.56
Offsite Improvements Op 1	Pavers	1	6.00	130	0.42
Offsite Improvements Op 1	Rollers	1	6.00	80	0.38
Offsite Improvements Op 1	Rubber Tired Dozers	0	0.00	247	0.40
Offsite Improvements Op 1	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Offsite Improvements Op 3	Cement and Mortar Mixers	1	6.00	9	0.56
Offsite Improvements Op 3	Cranes	1	2.00	231	0.29
Offsite Improvements Op 3	Pavers	1	4.00	130	0.42
Offsite Improvements Op 3	Rollers	1	4.00	80	0.38
Offsite Improvements Op 3	Rubber Tired Dozers	0	0.00	247	0.40
Offsite Improvements Op 3	Tractors/Loaders/Backhoes	1	6.00	97	0.37

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
Demolition	6	15.00	0.00	9.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	458.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	3	48.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Offsite Improvements Op 1	4	10.00	0.00	14.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Offsite Improvements Op 3	5	13.00	0.00	11.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 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					
Fugitive Dust					9.3000e-004	0.0000	9.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0113	0.1115	0.1352	2.3000e-004		5.3500e-003	5.3500e-003		4.9200e-003	4.9200e-003	0.0000	20.4615	20.4615	6.6200e-003	0.0000	20.6270
Total	**0.0113**	**0.1115**	**0.1352**	**2.3000e-004**	**9.3000e-004**	**5.3500e-003**	**6.2800e-003**	**1.4000e-004**	**4.9200e-003**	**5.0600e-003**	**0.0000**	**20.4615**	**20.4615**	**6.6200e-003**	**0.0000**	**20.6270**

3.2 Demolition - 2022

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	3.0000e-005	1.0800e-003	3.2000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3373	0.3373	4.0000e-005	0.0000	0.3382
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	3.3000e-004	4.0200e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3249	1.3249	3.0000e-005	0.0000	1.3255
Total	**5.5000e-004**	**1.4100e-003**	**4.3400e-003**	**1.0000e-005**	**1.7300e-003**	**1.0000e-005**	**1.7400e-003**	**4.6000e-004**	**1.0000e-005**	**4.7000e-004**	**0.0000**	**1.6621**	**1.6621**	**7.0000e-005**	**0.0000**	**1.6637**

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					3.6000e-004	0.0000	3.6000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0113	0.1115	0.1352	2.3000e-004		5.3500e-003	5.3500e-003		4.9200e-003	4.9200e-003	0.0000	20.4615	20.4615	6.6200e-003	0.0000	20.6270
Total	**0.0113**	**0.1115**	**0.1352**	**2.3000e-004**	**3.6000e-004**	**5.3500e-003**	**5.7100e-003**	**5.0000e-005**	**4.9200e-003**	**4.9700e-003**	**0.0000**	**20.4615**	**20.4615**	**6.6200e-003**	**0.0000**	**20.6270**

3.2 Demolition - 2022

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	3.0000e-005	1.0800e-003	3.2000e-004	0.0000	6.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3373	0.3373	4.0000e-005	0.0000	0.3382
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	3.3000e-004	4.0200e-003	1.0000e-005	1.2800e-003	1.0000e-005	1.2900e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.3249	1.3249	3.0000e-005	0.0000	1.3255
Total	**5.5000e-004**	**1.4100e-003**	**4.3400e-003**	**1.0000e-005**	**1.3400e-003**	**1.0000e-005**	**1.3600e-003**	**3.7000e-004**	**1.0000e-005**	**3.8000e-004**	**0.0000**	**1.6621**	**1.6621**	**7.0000e-005**	**0.0000**	**1.6637**

3.3 Offsite Improvements Op 1 - 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					
Fugitive Dust					1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2400e-003	0.0220	0.0273	4.0000e-005		1.1400e-003	1.1400e-003		1.0500e-003	1.0500e-003	0.0000	3.6099	3.6099	1.1300e-003	0.0000	3.6381
Total	**2.2400e-003**	**0.0220**	**0.0273**	**4.0000e-005**	**1.0000e-005**	**1.1400e-003**	**1.1500e-003**	**0.0000**	**1.0500e-003**	**1.0500e-003**	**0.0000**	**3.6099**	**3.6099**	**1.1300e-003**	**0.0000**	**3.6381**

3.3 Offsite Improvements Op 1 - 2022

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	5.0000e-005	1.6800e-003	5.0000e-004	1.0000e-005	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.5247	0.5247	6.0000e-005	0.0000	0.5260
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	1.7000e-004	1.1000e-004	1.3400e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4416	0.4416	1.0000e-005	0.0000	0.4418
Total	**2.2000e-004**	**1.7900e-003**	**1.8400e-003**	**1.0000e-005**	**6.7000e-004**	**0.0000**	**6.7000e-004**	**1.8000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.9663**	**0.9663**	**7.0000e-005**	**0.0000**	**0.9679**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2400e-003	0.0220	0.0273	4.0000e-005		1.1400e-003	1.1400e-003		1.0500e-003	1.0500e-003	0.0000	3.6099	3.6099	1.1300e-003	0.0000	3.6381
Total	**2.2400e-003**	**0.0220**	**0.0273**	**4.0000e-005**	**0.0000**	**1.1400e-003**	**1.1400e-003**	**0.0000**	**1.0500e-003**	**1.0500e-003**	**0.0000**	**3.6099**	**3.6099**	**1.1300e-003**	**0.0000**	**3.6381**

3.3 Offsite Improvements Op 1 - 2022

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	5.0000e-005	1.6800e-003	5.0000e-004	1.0000e-005	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.5247	0.5247	6.0000e-005	0.0000	0.5260
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	1.7000e-004	1.1000e-004	1.3400e-003	0.0000	4.3000e-004	0.0000	4.3000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.4416	0.4416	1.0000e-005	0.0000	0.4418
Total	**2.2000e-004**	**1.7900e-003**	**1.8400e-003**	**1.0000e-005**	**5.3000e-004**	**0.0000**	**5.3000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.9663**	**0.9663**	**7.0000e-005**	**0.0000**	**0.9679**

3.4 Offsite Improvements Op 3 - 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					
Fugitive Dust					1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4600e-003	0.0247	0.0262	4.0000e-005		1.2200e-003	1.2200e-003		1.1200e-003	1.1200e-003	0.0000	3.7831	3.7831	1.1800e-003	0.0000	3.8126
Total	**2.4600e-003**	**0.0247**	**0.0262**	**4.0000e-005**	**1.0000e-005**	**1.2200e-003**	**1.2300e-003**	**0.0000**	**1.1200e-003**	**1.1200e-003**	**0.0000**	**3.7831**	**3.7831**	**1.1800e-003**	**0.0000**	**3.8126**

3.4 Offsite Improvements Op 3 - 2022

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	4.0000e-005	1.3200e-003	3.9000e-004	0.0000	9.0000e-005	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.4122	0.4122	4.0000e-005	0.0000	0.4133
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	2.5000e-004	1.6000e-004	1.9100e-003	1.0000e-005	7.8000e-004	1.0000e-005	7.9000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6315	0.6315	1.0000e-005	0.0000	0.6318
Total	**2.9000e-004**	**1.4800e-003**	**2.3000e-003**	**1.0000e-005**	**8.7000e-004**	**1.0000e-005**	**8.9000e-004**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**1.0437**	**1.0437**	**5.0000e-005**	**0.0000**	**1.0452**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4600e-003	0.0247	0.0262	4.0000e-005		1.2200e-003	1.2200e-003		1.1200e-003	1.1200e-003	0.0000	3.7831	3.7831	1.1800e-003	0.0000	3.8126
Total	**2.4600e-003**	**0.0247**	**0.0262**	**4.0000e-005**	**0.0000**	**1.2200e-003**	**1.2200e-003**	**0.0000**	**1.1200e-003**	**1.1200e-003**	**0.0000**	**3.7831**	**3.7831**	**1.1800e-003**	**0.0000**	**3.8126**

3.4 Offsite Improvements Op 3 - 2022

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	4.0000e-005	1.3200e-003	3.9000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.4122	0.4122	4.0000e-005	0.0000	0.4133
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	2.5000e-004	1.6000e-004	1.9100e-003	1.0000e-005	6.1000e-004	1.0000e-005	6.1000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.6315	0.6315	1.0000e-005	0.0000	0.6318
Total	**2.9000e-004**	**1.4800e-003**	**2.3000e-003**	**1.0000e-005**	**6.9000e-004**	**1.0000e-005**	**6.9000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**1.0437**	**1.0437**	**5.0000e-005**	**0.0000**	**1.0452**

3.5 Site Preparation - 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					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5700e-003	0.0256	0.0299	5.0000e-005		1.2000e-003	1.2000e-003		1.1000e-003	1.1000e-003	0.0000	4.7211	4.7211	1.5300e-003	0.0000	4.7592
Total	**2.5700e-003**	**0.0256**	**0.0299**	**5.0000e-005**	**0.0000**	**1.2000e-003**	**1.2000e-003**	**0.0000**	**1.1000e-003**	**1.1000e-003**	**0.0000**	**4.7211**	**4.7211**	**1.5300e-003**	**0.0000**	**4.7592**

3.5 Site Preparation - 2022

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	1.6000e-004	1.0000e-004	1.2100e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3975	0.3975	1.0000e-005	0.0000	0.3977
Total	**1.6000e-004**	**1.0000e-004**	**1.2100e-003**	**0.0000**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3975**	**0.3975**	**1.0000e-005**	**0.0000**	**0.3977**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5700e-003	0.0256	0.0299	5.0000e-005		1.2000e-003	1.2000e-003		1.1000e-003	1.1000e-003	0.0000	4.7210	4.7210	1.5300e-003	0.0000	4.7592
Total	**2.5700e-003**	**0.0256**	**0.0299**	**5.0000e-005**	**0.0000**	**1.2000e-003**	**1.2000e-003**	**0.0000**	**1.1000e-003**	**1.1000e-003**	**0.0000**	**4.7210**	**4.7210**	**1.5300e-003**	**0.0000**	**4.7592**

3.5 Site Preparation - 2022

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	1.6000e-004	1.0000e-004	1.2100e-003	0.0000	3.8000e-004	0.0000	3.9000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3975	0.3975	1.0000e-005	0.0000	0.3977
Total	**1.6000e-004**	**1.0000e-004**	**1.2100e-003**	**0.0000**	**3.8000e-004**	**0.0000**	**3.9000e-004**	**1.0000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3975**	**0.3975**	**1.0000e-005**	**0.0000**	**0.3977**

3.6 Grading - 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					
Fugitive Dust					2.4600e-003	0.0000	2.4600e-003	2.8000e-004	0.0000	2.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0107	0.1167	0.0885	2.0000e-004		4.6600e-003	4.6600e-003		4.2900e-003	4.2900e-003	0.0000	17.5973	17.5973	5.6900e-003	0.0000	17.7396
Total	**0.0107**	**0.1167**	**0.0885**	**2.0000e-004**	**2.4600e-003**	**4.6600e-003**	**7.1200e-003**	**2.8000e-004**	**4.2900e-003**	**4.5700e-003**	**0.0000**	**17.5973**	**17.5973**	**5.6900e-003**	**0.0000**	**17.7396**

3.6 Grading - 2022

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	1.5800e-003	0.0551	0.0164	1.7000e-004	3.9200e-003	1.6000e-004	4.0800e-003	1.0800e-003	1.5000e-004	1.2300e-003	0.0000	17.1638	17.1638	1.8100e-003	0.0000	17.2090
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	2.8000e-004	1.8000e-004	2.1400e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.8000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.7066	0.7066	1.0000e-005	0.0000	0.7069
Total	**1.8600e-003**	**0.0553**	**0.0186**	**1.8000e-004**	**4.8000e-003**	**1.7000e-004**	**4.9600e-003**	**1.3100e-003**	**1.6000e-004**	**1.4700e-003**	**0.0000**	**17.8704**	**17.8704**	**1.8200e-003**	**0.0000**	**17.9160**

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					9.6000e-004	0.0000	9.6000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0107	0.1167	0.0885	2.0000e-004		4.6600e-003	4.6600e-003		4.2900e-003	4.2900e-003	0.0000	17.5973	17.5973	5.6900e-003	0.0000	17.7396
Total	**0.0107**	**0.1167**	**0.0885**	**2.0000e-004**	**9.6000e-004**	**4.6600e-003**	**5.6200e-003**	**1.1000e-004**	**4.2900e-003**	**4.4000e-003**	**0.0000**	**17.5973**	**17.5973**	**5.6900e-003**	**0.0000**	**17.7396**

3.6 Grading - 2022

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	1.5800e-003	0.0551	0.0164	1.7000e-004	3.1500e-003	1.6000e-004	3.3100e-003	8.9000e-004	1.5000e-004	1.0400e-003	0.0000	17.1638	17.1638	1.8100e-003	0.0000	17.2090
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	2.8000e-004	1.8000e-004	2.1400e-003	1.0000e-005	6.8000e-004	1.0000e-005	6.9000e-004	1.8000e-004	1.0000e-005	1.9000e-004	0.0000	0.7066	0.7066	1.0000e-005	0.0000	0.7069
Total	**1.8600e-003**	**0.0553**	**0.0186**	**1.8000e-004**	**3.8300e-003**	**1.7000e-004**	**4.0000e-003**	**1.0700e-003**	**1.6000e-004**	**1.2300e-003**	**0.0000**	**17.8704**	**17.8704**	**1.8200e-003**	**0.0000**	**17.9160**

3.7 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	0.0372	0.3915	0.5107	7.2000e-004		0.0208	0.0208		0.0191	0.0191	0.0000	63.0155	63.0155	0.0204	0.0000	63.5250
Total	**0.0372**	**0.3915**	**0.5107**	**7.2000e-004**		**0.0208**	**0.0208**		**0.0191**	**0.0191**	**0.0000**	**63.0155**	**63.0155**	**0.0204**	**0.0000**	**63.5250**

3.7 Building Construction - 2022

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	2.0400e-003	0.0715	0.0205	1.9000e-004	5.0000e-003	1.4000e-004	5.1400e-003	1.4400e-003	1.3000e-004	1.5700e-003	0.0000	18.9845	18.9845	1.5000e-003	0.0000	19.0220
Worker	0.0189	0.0122	0.1459	5.3000e-004	0.0598	3.9000e-004	0.0602	0.0159	3.6000e-004	0.0162	0.0000	48.1186	48.1186	9.7000e-004	0.0000	48.1428
Total	**0.0209**	**0.0837**	**0.1664**	**7.2000e-004**	**0.0648**	**5.3000e-004**	**0.0653**	**0.0173**	**4.9000e-004**	**0.0178**	**0.0000**	**67.1030**	**67.1030**	**2.4700e-003**	**0.0000**	**67.1649**

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	0.0372	0.3915	0.5107	7.2000e-004		0.0208	0.0208		0.0191	0.0191	0.0000	63.0154	63.0154	0.0204	0.0000	63.5249
Total	**0.0372**	**0.3915**	**0.5107**	**7.2000e-004**		**0.0208**	**0.0208**		**0.0191**	**0.0191**	**0.0000**	**63.0154**	**63.0154**	**0.0204**	**0.0000**	**63.5249**

3.7 Building Construction - 2022

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	2.0400e-003	0.0715	0.0205	1.9000e-004	4.0800e-003	1.4000e-004	4.2200e-003	1.2200e-003	1.3000e-004	1.3500e-003	0.0000	18.9845	18.9845	1.5000e-003	0.0000	19.0220
Worker	0.0189	0.0122	0.1459	5.3000e-004	0.0463	3.9000e-004	0.0467	0.0126	3.6000e-004	0.0129	0.0000	48.1186	48.1186	9.7000e-004	0.0000	48.1428
Total	**0.0209**	**0.0837**	**0.1664**	**7.2000e-004**	**0.0504**	**5.3000e-004**	**0.0509**	**0.0138**	**4.9000e-004**	**0.0143**	**0.0000**	**67.1030**	**67.1030**	**2.4700e-003**	**0.0000**	**67.1649**

3.7 Building Construction - 2023

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	4.5000e-004	4.7500e-003	6.7200e-003	1.0000e-005		2.3000e-004	2.3000e-004		2.1000e-004	2.1000e-004	0.0000	0.8333	0.8333	2.7000e-004	0.0000	0.8401
Total	**4.5000e-004**	**4.7500e-003**	**6.7200e-003**	**1.0000e-005**		**2.3000e-004**	**2.3000e-004**		**2.1000e-004**	**2.1000e-004**	**0.0000**	**0.8333**	**0.8333**	**2.7000e-004**	**0.0000**	**0.8401**

3.7 Building Construction - 2023

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	2.0000e-005	7.1000e-004	2.5000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.2433	0.2433	2.0000e-005	0.0000	0.2438
Worker	2.4000e-004	1.5000e-004	1.8000e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6115	0.6115	1.0000e-005	0.0000	0.6118
Total	**2.6000e-004**	**8.6000e-004**	**2.0500e-003**	**1.0000e-005**	**8.6000e-004**	**1.0000e-005**	**8.7000e-004**	**2.3000e-004**	**0.0000**	**2.3000e-004**	**0.0000**	**0.8548**	**0.8548**	**3.0000e-005**	**0.0000**	**0.8556**

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	4.5000e-004	4.7500e-003	6.7200e-003	1.0000e-005		2.3000e-004	2.3000e-004		2.1000e-004	2.1000e-004	0.0000	0.8333	0.8333	2.7000e-004	0.0000	0.8401
Total	**4.5000e-004**	**4.7500e-003**	**6.7200e-003**	**1.0000e-005**		**2.3000e-004**	**2.3000e-004**		**2.1000e-004**	**2.1000e-004**	**0.0000**	**0.8333**	**0.8333**	**2.7000e-004**	**0.0000**	**0.8401**

3.7 Building Construction - 2023

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	2.0000e-005	7.1000e-004	2.5000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.2433	0.2433	2.0000e-005	0.0000	0.2438
Worker	2.4000e-004	1.5000e-004	1.8000e-003	1.0000e-005	6.1000e-004	1.0000e-005	6.2000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.6115	0.6115	1.0000e-005	0.0000	0.6118
Total	**2.6000e-004**	**8.6000e-004**	**2.0500e-003**	**1.0000e-005**	**6.6000e-004**	**1.0000e-005**	**6.7000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.8548**	**0.8548**	**3.0000e-005**	**0.0000**	**0.8556**

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	0.0530	0.2056	0.7372	3.0500e-003	0.3037	2.1300e-003	0.3059	0.0813	1.9800e-003	0.0833	0.0000	282.1820	282.1820	0.0110	0.0000	282.4578
Unmitigated	0.0530	0.2056	0.7372	3.0500e-003	0.3037	2.1300e-003	0.3059	0.0813	1.9800e-003	0.0833	0.0000	282.1820	282.1820	0.0110	0.0000	282.4578

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	244.20	213.18	207.24	800,798	800,798
Total	244.20	213.18	207.24	800,798	800,798

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
Apartments Low Rise	14.70	5.90	8.70	40.00	19.00	41.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.565244	0.042904	0.209304	0.108392	0.014546	0.005773	0.026273	0.017831	0.001792	0.001509	0.004953	0.000602	0.000877

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

	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	29.3672	29.3672	1.2100e-003	2.5000e-004	29.4723
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	87.4834	87.4834	3.6100e-003	7.5000e-004	87.7964
NaturalGas Mitigated	4.5400e-003	0.0388	0.0165	2.5000e-004		3.1400e-003	3.1400e-003		3.1400e-003	3.1400e-003	0.0000	44.9394	44.9394	8.6000e-004	8.2000e-004	45.2065
NaturalGas Unmitigated	4.5400e-003	0.0388	0.0165	2.5000e-004		3.1400e-003	3.1400e-003		3.1400e-003	3.1400e-003	0.0000	44.9394	44.9394	8.6000e-004	8.2000e-004	45.2065

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					
Apartments Low Rise	842133	4.5400e-003	0.0388	0.0165	2.5000e-004		3.1400e-003	3.1400e-003		3.1400e-003	3.1400e-003	0.0000	44.9394	44.9394	8.6000e-004	8.2000e-004	45.2065
Total		**4.5400e-003**	**0.0388**	**0.0165**	**2.5000e-004**		**3.1400e-003**	**3.1400e-003**		**3.1400e-003**	**3.1400e-003**	**0.0000**	**44.9394**	**44.9394**	**8.6000e-004**	**8.2000e-004**	**45.2065**

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					
Apartments Low Rise	842133	4.5400e-003	0.0388	0.0165	2.5000e-004		3.1400e-003	3.1400e-003		3.1400e-003	3.1400e-003	0.0000	44.9394	44.9394	8.6000e-004	8.2000e-004	45.2065
Total		**4.5400e-003**	**0.0388**	**0.0165**	**2.5000e-004**		**3.1400e-003**	**3.1400e-003**		**3.1400e-003**	**3.1400e-003**	**0.0000**	**44.9394**	**44.9394**	**8.6000e-004**	**8.2000e-004**	**45.2065**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	274569	87.4834	3.6100e-003	7.5000e-004	87.7964
Total		**87.4834**	**3.6100e-003**	**7.5000e-004**	**87.7964**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	92169.6	29.3672	1.2100e-003	2.5000e-004	29.4723
Total		**29.3672**	**1.2100e-003**	**2.5000e-004**	**29.4723**

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	0.2796	7.8400e-003	0.6804	4.0000e-005		3.7700e-003	3.7700e-003		3.7700e-003	3.7700e-003	0.0000	1.1118	1.1118	1.0700e-003	0.0000	1.1385
Unmitigated	0.2796	7.8400e-003	0.6804	4.0000e-005		3.7700e-003	3.7700e-003		3.7700e-003	3.7700e-003	0.0000	1.1118	1.1118	1.0700e-003	0.0000	1.1385

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	0.0207					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2385					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	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
Landscaping	0.0205	7.8400e-003	0.6804	4.0000e-005		3.7700e-003	3.7700e-003		3.7700e-003	3.7700e-003	0.0000	1.1118	1.1118	1.0700e-003	0.0000	1.1385
Total	**0.2796**	**7.8400e-003**	**0.6804**	**4.0000e-005**		**3.7700e-003**	**3.7700e-003**		**3.7700e-003**	**3.7700e-003**	**0.0000**	**1.1118**	**1.1118**	**1.0700e-003**	**0.0000**	**1.1385**

6.2 Area by SubCategory

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	0.0207					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2385					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	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
Landscaping	0.0205	7.8400e-003	0.6804	4.0000e-005		3.7700e-003	3.7700e-003		3.7700e-003	3.7700e-003	0.0000	1.1118	1.1118	1.0700e-003	0.0000	1.1385
Total	**0.2796**	**7.8400e-003**	**0.6804**	**4.0000e-005**		**3.7700e-003**	**3.7700e-003**		**3.7700e-003**	**3.7700e-003**	**0.0000**	**1.1118**	**1.1118**	**1.0700e-003**	**0.0000**	**1.1385**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	28.8012	0.1413	3.5400e-003	33.3883
Unmitigated	28.8012	0.1413	3.5400e-003	33.3883

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	4.30017 / 2.71097	28.8012	0.1413	3.5400e-003	33.3883
Total		**28.8012**	**0.1413**	**3.5400e-003**	**33.3883**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	4.30017 / 2.71097	28.8012	0.1413	3.5400e-003	33.3883
Total		**28.8012**	**0.1413**	**3.5400e-003**	**33.3883**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	6.1628	0.3642	0.0000	15.2681
Unmitigated	6.1628	0.3642	0.0000	15.2681

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	30.36	6.1628	0.3642	0.0000	15.2681
Total		**6.1628**	**0.3642**	**0.0000**	**15.2681**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	30.36	6.1628	0.3642	0.0000	15.2681
Total		**6.1628**	**0.3642**	**0.0000**	**15.2681**

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

Orchard View Gardens Senior Housing (Ops 2b & 3)

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	66.00	Dwelling Unit	4.13	66,000.00	189

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Construction schedule supplied by client

Off-road Equipment - Equipment list provided by client

Off-road Equipment - Equipment list provided by client

Off-road Equipment - Equipment list provided by client

Off-road Equipment - Equpment list suggested by operation description
Rubber tired dozers needed to be zero due to error in CalEEMod

Off-road Equipment - Equpment list suggested by operation description
Rubber tired dozers needed to be zero due to error in CalEEMod

Off-road Equipment - Equpment list suggested by operation description
Rubber tired dozers needed to be zero due to error in CalEEMod

Off-road Equipment - Equipment list provided by client

Trips and VMT - grading - 5950 yd3 / 13 yd3 per truck = 458 trucks
Op 2b - 107 yd3 / 13 yd3 per truck = 9 trucks
Op 3 - 133 yd3 / 13 yd3 per truck = 11 trucks

Demolition -

Grading - Parcel is 4 acres

Vehicle Trips - Represents Senior Adult Housing per Traffic Study by Fehr & Peers

Woodstoves - No units have NG fireplaces

Construction Off-road Equipment Mitigation - From SCAQMD TAble XI-C Mitigation Measures for arterial roads

Energy Mitigation - CEC PV Report supplied by client

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	26
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	5.00	11.00
tblFireplaces	NumberGas	56.10	0.00
tblFireplaces	NumberNoFireplace	6.60	66.00

tblFireplaces	NumberWood	3.30	0.00
tblGrading	AcresOfGrading	19.00	4.00
tblGrading	MaterialExported	0.00	107.00
tblGrading	MaterialImported	0.00	5,950.00
tblGrading	MaterialImported	0.00	133.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00

tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripNumber	744.00	458.00
tblTripsAndVMT	HaulingTripNumber	13.00	9.00
tblTripsAndVMT	HaulingTripNumber	17.00	11.00
tblVehicleTrips	HO_TTP	40.60	41.00
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	40.00
tblVehicleTrips	ST_TR	7.16	3.23
tblVehicleTrips	SU_TR	6.07	3.14
tblVehicleTrips	WD_TR	6.59	3.70
tblWoodstoves	NumberCatalytic	3.30	0.00
tblWoodstoves	NumberNoncatalytic	3.30	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					
2022	0.0897	0.8279	1.0031	2.2200e-003	0.0767	0.0347	0.1114	0.0201	0.0319	0.0520	0.0000	200.8407	200.8407	0.0406	0.0000	201.8562
2023	7.1000e-004	5.6100e-003	8.7700e-003	2.0000e-005	8.6000e-004	2.4000e-004	1.0900e-003	2.3000e-004	2.2000e-004	4.5000e-004	0.0000	1.6882	1.6882	3.0000e-004	0.0000	1.6956
Maximum	**0.0897**	**0.8279**	**1.0031**	**2.2200e-003**	**0.0767**	**0.0347**	**0.1114**	**0.0201**	**0.0319**	**0.0520**	**0.0000**	**200.8407**	**200.8407**	**0.0406**	**0.0000**	**201.8562**

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					
2022	0.0897	0.8279	1.0031	2.2200e-003	0.0585	0.0347	0.0932	0.0158	0.0319	0.0478	0.0000	200.8406	200.8406	0.0406	0.0000	201.8560
2023	7.1000e-004	5.6100e-003	8.7700e-003	2.0000e-005	6.7000e-004	2.4000e-004	9.0000e-004	1.8000e-004	2.2000e-004	4.0000e-004	0.0000	1.6882	1.6882	3.0000e-004	0.0000	1.6956
Maximum	**0.0897**	**0.8279**	**1.0031**	**2.2200e-003**	**0.0585**	**0.0347**	**0.0932**	**0.0158**	**0.0319**	**0.0478**	**0.0000**	**200.8406**	**200.8406**	**0.0406**	**0.0000**	**201.8560**

	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**	**23.80**	**0.00**	**16.41**	**21.15**	**0.00**	**8.16**	**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	1-1-2022	3-31-2022	0.4717	0.4717
2	4-1-2022	6-30-2022	0.1519	0.1519
3	7-1-2022	9-30-2022	0.1536	0.1536
4	10-1-2022	12-31-2022	0.1546	0.1546
5	1-1-2023	3-31-2023	0.0060	0.0060
		Highest	0.4717	0.4717

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	0.2796	7.8400e-003	0.6804	4.0000e-005		3.7700e-003	3.7700e-003		3.7700e-003	3.7700e-003	0.0000	1.1118	1.1118	1.0700e-003	0.0000	1.1385
Energy	4.5400e-003	0.0388	0.0165	2.5000e-004		3.1400e-003	3.1400e-003		3.1400e-003	3.1400e-003	0.0000	132.4229	132.4229	4.4700e-003	1.5700e-003	133.0029
Mobile	0.0530	0.2056	0.7372	3.0500e-003	0.3037	2.1300e-003	0.3059	0.0813	1.9800e-003	0.0833	0.0000	282.1820	282.1820	0.0110	0.0000	282.4578
Waste						0.0000	0.0000		0.0000	0.0000	6.1628	0.0000	6.1628	0.3642	0.0000	15.2681
Water						0.0000	0.0000		0.0000	0.0000	1.3642	27.4369	28.8012	0.1413	3.5400e-003	33.3883
Total	**0.3371**	**0.2523**	**1.4341**	**3.3400e-003**	**0.3037**	**9.0400e-003**	**0.3128**	**0.0813**	**8.8900e-003**	**0.0902**	**7.5271**	**443.1535**	**450.6806**	**0.5220**	**5.1100e-003**	**465.2555**

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	0.2796	7.8400e-003	0.6804	4.0000e-005		3.7700e-003	3.7700e-003		3.7700e-003	3.7700e-003	0.0000	1.1118	1.1118	1.0700e-003	0.0000	1.1385
Energy	4.5400e-003	0.0388	0.0165	2.5000e-004		3.1400e-003	3.1400e-003		3.1400e-003	3.1400e-003	0.0000	74.3066	74.3066	2.0700e-003	1.0700e-003	74.6787
Mobile	0.0530	0.2056	0.7372	3.0500e-003	0.3037	2.1300e-003	0.3059	0.0813	1.9800e-003	0.0833	0.0000	282.1820	282.1820	0.0110	0.0000	282.4578
Waste						0.0000	0.0000		0.0000	0.0000	6.1628	0.0000	6.1628	0.3642	0.0000	15.2681
Water						0.0000	0.0000		0.0000	0.0000	1.3642	27.4369	28.8012	0.1413	3.5400e-003	33.3883
Total	**0.3371**	**0.2523**	**1.4341**	**3.3400e-003**	**0.3037**	**9.0400e-003**	**0.3128**	**0.0813**	**8.8900e-003**	**0.0902**	**7.5271**	**385.0373**	**392.5644**	**0.5196**	**4.6100e-003**	**406.9314**

	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**	**13.11**	**12.90**	**0.46**	**9.78**	**12.54**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2022	1/28/2022	5	20	
2	Site Preparation	Site Preparation	1/29/2022	2/4/2022	5	5	
3	Grading	Grading	2/5/2022	2/16/2022	5	8	
4	Building Construction	Building Construction	2/17/2022	1/4/2023	5	230	
5	Offsite Improvements Op 2b	Site Preparation	1/1/2022	1/14/2022	5	10	
6	Offsite Improvements Op 3	Site Preparation	1/15/2022	1/31/2022	5	11	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	0.00	81	0.73
Demolition	Excavators	2	6.00	158	0.38
Demolition	Other Construction Equipment	1	6.00	172	0.42
Demolition	Rubber Tired Dozers	0	0.00	247	0.40
Demolition	Rubber Tired Loaders	1	6.00	203	0.36
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Excavators	1	6.00	158	0.38
Site Preparation	Paving Equipment	1	4.00	132	0.36
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Rubber Tired Loaders	2	4.00	203	0.36

Site Preparation	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Excavators	0	0.00	158	0.38
Grading	Graders	1	6.00	187	0.41
Grading	Paving Equipment	1	6.00	132	0.36
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Rubber Tired Loaders	1	6.00	203	0.36
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	3	6.00	97	0.37
Building Construction	Cranes	0	0.00	231	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	0	0.00	84	0.74
Building Construction	Skid Steer Loaders	1	8.00	65	0.37
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	0	0.00	46	0.45
Offsite Improvements Op 2b	Cement and Mortar Mixers	1	4.00	9	0.56
Offsite Improvements Op 2b	Pavers	1	4.00	130	0.42
Offsite Improvements Op 2b	Rollers	1	4.00	80	0.38
Offsite Improvements Op 2b	Rubber Tired Dozers	0	0.00	247	0.40
Offsite Improvements Op 2b	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Offsite Improvements Op 3	Cement and Mortar Mixers	1	6.00	9	0.56
Offsite Improvements Op 3	Cranes	1	2.00	231	0.29
Offsite Improvements Op 3	Pavers	1	4.00	130	0.42
Offsite Improvements Op 3	Rollers	1	4.00	80	0.38
Offsite Improvements Op 3	Rubber Tired Dozers	0	0.00	247	0.40
Offsite Improvements Op 3	Tractors/Loaders/Backhoes	1	6.00	97	0.37

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
Demolition	6	15.00	0.00	9.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	458.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	3	48.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Offsite Improvements On 2b	4	10.00	0.00	9.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Offsite Improvements On 3	5	13.00	0.00	11.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 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					
Fugitive Dust					9.3000e-004	0.0000	9.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0113	0.1115	0.1352	2.3000e-004		5.3500e-003	5.3500e-003		4.9200e-003	4.9200e-003	0.0000	20.4615	20.4615	6.6200e-003	0.0000	20.6270
Total	**0.0113**	**0.1115**	**0.1352**	**2.3000e-004**	**9.3000e-004**	**5.3500e-003**	**6.2800e-003**	**1.4000e-004**	**4.9200e-003**	**5.0600e-003**	**0.0000**	**20.4615**	**20.4615**	**6.6200e-003**	**0.0000**	**20.6270**

3.2 Demolition - 2022

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	3.0000e-005	1.0800e-003	3.2000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3373	0.3373	4.0000e-005	0.0000	0.3382
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	3.3000e-004	4.0200e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3249	1.3249	3.0000e-005	0.0000	1.3255
Total	**5.5000e-004**	**1.4100e-003**	**4.3400e-003**	**1.0000e-005**	**1.7300e-003**	**1.0000e-005**	**1.7400e-003**	**4.6000e-004**	**1.0000e-005**	**4.7000e-004**	**0.0000**	**1.6621**	**1.6621**	**7.0000e-005**	**0.0000**	**1.6637**

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					3.6000e-004	0.0000	3.6000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0113	0.1115	0.1352	2.3000e-004		5.3500e-003	5.3500e-003		4.9200e-003	4.9200e-003	0.0000	20.4615	20.4615	6.6200e-003	0.0000	20.6270
Total	**0.0113**	**0.1115**	**0.1352**	**2.3000e-004**	**3.6000e-004**	**5.3500e-003**	**5.7100e-003**	**5.0000e-005**	**4.9200e-003**	**4.9700e-003**	**0.0000**	**20.4615**	**20.4615**	**6.6200e-003**	**0.0000**	**20.6270**

3.2 Demolition - 2022

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	3.0000e-005	1.0800e-003	3.2000e-004	0.0000	6.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3373	0.3373	4.0000e-005	0.0000	0.3382
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	3.3000e-004	4.0200e-003	1.0000e-005	1.2800e-003	1.0000e-005	1.2900e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.3249	1.3249	3.0000e-005	0.0000	1.3255
Total	**5.5000e-004**	**1.4100e-003**	**4.3400e-003**	**1.0000e-005**	**1.3400e-003**	**1.0000e-005**	**1.3600e-003**	**3.7000e-004**	**1.0000e-005**	**3.8000e-004**	**0.0000**	**1.6621**	**1.6621**	**7.0000e-005**	**0.0000**	**1.6637**

3.3 Site Preparation - 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					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5700e-003	0.0256	0.0299	5.0000e-005		1.2000e-003	1.2000e-003		1.1000e-003	1.1000e-003	0.0000	4.7211	4.7211	1.5300e-003	0.0000	4.7592
Total	**2.5700e-003**	**0.0256**	**0.0299**	**5.0000e-005**	**0.0000**	**1.2000e-003**	**1.2000e-003**	**0.0000**	**1.1000e-003**	**1.1000e-003**	**0.0000**	**4.7211**	**4.7211**	**1.5300e-003**	**0.0000**	**4.7592**

3.3 Site Preparation - 2022

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	1.6000e-004	1.0000e-004	1.2100e-003	0.0000	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3975	0.3975	1.0000e-005	0.0000	0.3977
Total	**1.6000e-004**	**1.0000e-004**	**1.2100e-003**	**0.0000**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3975**	**0.3975**	**1.0000e-005**	**0.0000**	**0.3977**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5700e-003	0.0256	0.0299	5.0000e-005		1.2000e-003	1.2000e-003		1.1000e-003	1.1000e-003	0.0000	4.7210	4.7210	1.5300e-003	0.0000	4.7592
Total	**2.5700e-003**	**0.0256**	**0.0299**	**5.0000e-005**	**0.0000**	**1.2000e-003**	**1.2000e-003**	**0.0000**	**1.1000e-003**	**1.1000e-003**	**0.0000**	**4.7210**	**4.7210**	**1.5300e-003**	**0.0000**	**4.7592**

3.3 Site Preparation - 2022

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	1.6000e-004	1.0000e-004	1.2100e-003	0.0000	3.8000e-004	0.0000	3.9000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3975	0.3975	1.0000e-005	0.0000	0.3977
Total	**1.6000e-004**	**1.0000e-004**	**1.2100e-003**	**0.0000**	**3.8000e-004**	**0.0000**	**3.9000e-004**	**1.0000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3975**	**0.3975**	**1.0000e-005**	**0.0000**	**0.3977**

3.4 Grading - 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					
Fugitive Dust					2.4600e-003	0.0000	2.4600e-003	2.8000e-004	0.0000	2.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0107	0.1167	0.0885	2.0000e-004		4.6600e-003	4.6600e-003		4.2900e-003	4.2900e-003	0.0000	17.5973	17.5973	5.6900e-003	0.0000	17.7396
Total	**0.0107**	**0.1167**	**0.0885**	**2.0000e-004**	**2.4600e-003**	**4.6600e-003**	**7.1200e-003**	**2.8000e-004**	**4.2900e-003**	**4.5700e-003**	**0.0000**	**17.5973**	**17.5973**	**5.6900e-003**	**0.0000**	**17.7396**

3.4 Grading - 2022

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	1.5800e-003	0.0551	0.0164	1.7000e-004	3.9200e-003	1.6000e-004	4.0800e-003	1.0800e-003	1.5000e-004	1.2300e-003	0.0000	17.1638	17.1638	1.8100e-003	0.0000	17.2090
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	2.8000e-004	1.8000e-004	2.1400e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.8000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.7066	0.7066	1.0000e-005	0.0000	0.7069
Total	**1.8600e-003**	**0.0553**	**0.0186**	**1.8000e-004**	**4.8000e-003**	**1.7000e-004**	**4.9600e-003**	**1.3100e-003**	**1.6000e-004**	**1.4700e-003**	**0.0000**	**17.8704**	**17.8704**	**1.8200e-003**	**0.0000**	**17.9160**

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					9.6000e-004	0.0000	9.6000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0107	0.1167	0.0885	2.0000e-004		4.6600e-003	4.6600e-003		4.2900e-003	4.2900e-003	0.0000	17.5973	17.5973	5.6900e-003	0.0000	17.7396
Total	**0.0107**	**0.1167**	**0.0885**	**2.0000e-004**	**9.6000e-004**	**4.6600e-003**	**5.6200e-003**	**1.1000e-004**	**4.2900e-003**	**4.4000e-003**	**0.0000**	**17.5973**	**17.5973**	**5.6900e-003**	**0.0000**	**17.7396**

3.4 Grading - 2022

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	1.5800e-003	0.0551	0.0164	1.7000e-004	3.1500e-003	1.6000e-004	3.3100e-003	8.9000e-004	1.5000e-004	1.0400e-003	0.0000	17.1638	17.1638	1.8100e-003	0.0000	17.2090
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	2.8000e-004	1.8000e-004	2.1400e-003	1.0000e-005	6.8000e-004	1.0000e-005	6.9000e-004	1.8000e-004	1.0000e-005	1.9000e-004	0.0000	0.7066	0.7066	1.0000e-005	0.0000	0.7069
Total	**1.8600e-003**	**0.0553**	**0.0186**	**1.8000e-004**	**3.8300e-003**	**1.7000e-004**	**4.0000e-003**	**1.0700e-003**	**1.6000e-004**	**1.2300e-003**	**0.0000**	**17.8704**	**17.8704**	**1.8200e-003**	**0.0000**	**17.9160**

3.5 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	0.0372	0.3915	0.5107	7.2000e-004		0.0208	0.0208		0.0191	0.0191	0.0000	63.0155	63.0155	0.0204	0.0000	63.5250
Total	**0.0372**	**0.3915**	**0.5107**	**7.2000e-004**		**0.0208**	**0.0208**		**0.0191**	**0.0191**	**0.0000**	**63.0155**	**63.0155**	**0.0204**	**0.0000**	**63.5250**

3.5 Building Construction - 2022

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	2.0400e-003	0.0715	0.0205	1.9000e-004	5.0000e-003	1.4000e-004	5.1400e-003	1.4400e-003	1.3000e-004	1.5700e-003	0.0000	18.9845	18.9845	1.5000e-003	0.0000	19.0220
Worker	0.0189	0.0122	0.1459	5.3000e-004	0.0598	3.9000e-004	0.0602	0.0159	3.6000e-004	0.0162	0.0000	48.1186	48.1186	9.7000e-004	0.0000	48.1428
Total	**0.0209**	**0.0837**	**0.1664**	**7.2000e-004**	**0.0648**	**5.3000e-004**	**0.0653**	**0.0173**	**4.9000e-004**	**0.0178**	**0.0000**	**67.1030**	**67.1030**	**2.4700e-003**	**0.0000**	**67.1649**

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	0.0372	0.3915	0.5107	7.2000e-004		0.0208	0.0208		0.0191	0.0191	0.0000	63.0154	63.0154	0.0204	0.0000	63.5249
Total	**0.0372**	**0.3915**	**0.5107**	**7.2000e-004**		**0.0208**	**0.0208**		**0.0191**	**0.0191**	**0.0000**	**63.0154**	**63.0154**	**0.0204**	**0.0000**	**63.5249**

3.5 Building Construction - 2022

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	2.0400e-003	0.0715	0.0205	1.9000e-004	4.0800e-003	1.4000e-004	4.2200e-003	1.2200e-003	1.3000e-004	1.3500e-003	0.0000	18.9845	18.9845	1.5000e-003	0.0000	19.0220
Worker	0.0189	0.0122	0.1459	5.3000e-004	0.0463	3.9000e-004	0.0467	0.0126	3.6000e-004	0.0129	0.0000	48.1186	48.1186	9.7000e-004	0.0000	48.1428
Total	**0.0209**	**0.0837**	**0.1664**	**7.2000e-004**	**0.0504**	**5.3000e-004**	**0.0509**	**0.0138**	**4.9000e-004**	**0.0143**	**0.0000**	**67.1030**	**67.1030**	**2.4700e-003**	**0.0000**	**67.1649**

3.5 Building Construction - 2023

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	4.5000e-004	4.7500e-003	6.7200e-003	1.0000e-005		2.3000e-004	2.3000e-004		2.1000e-004	2.1000e-004	0.0000	0.8333	0.8333	2.7000e-004	0.0000	0.8401
Total	**4.5000e-004**	**4.7500e-003**	**6.7200e-003**	**1.0000e-005**		**2.3000e-004**	**2.3000e-004**		**2.1000e-004**	**2.1000e-004**	**0.0000**	**0.8333**	**0.8333**	**2.7000e-004**	**0.0000**	**0.8401**

3.5 Building Construction - 2023

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	2.0000e-005	7.1000e-004	2.5000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.2433	0.2433	2.0000e-005	0.0000	0.2438
Worker	2.4000e-004	1.5000e-004	1.8000e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6115	0.6115	1.0000e-005	0.0000	0.6118
Total	**2.6000e-004**	**8.6000e-004**	**2.0500e-003**	**1.0000e-005**	**8.6000e-004**	**1.0000e-005**	**8.7000e-004**	**2.3000e-004**	**0.0000**	**2.3000e-004**	**0.0000**	**0.8548**	**0.8548**	**3.0000e-005**	**0.0000**	**0.8556**

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	4.5000e-004	4.7500e-003	6.7200e-003	1.0000e-005		2.3000e-004	2.3000e-004		2.1000e-004	2.1000e-004	0.0000	0.8333	0.8333	2.7000e-004	0.0000	0.8401
Total	**4.5000e-004**	**4.7500e-003**	**6.7200e-003**	**1.0000e-005**		**2.3000e-004**	**2.3000e-004**		**2.1000e-004**	**2.1000e-004**	**0.0000**	**0.8333**	**0.8333**	**2.7000e-004**	**0.0000**	**0.8401**

3.5 Building Construction - 2023

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	2.0000e-005	7.1000e-004	2.5000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.2433	0.2433	2.0000e-005	0.0000	0.2438
Worker	2.4000e-004	1.5000e-004	1.8000e-003	1.0000e-005	6.1000e-004	1.0000e-005	6.2000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.6115	0.6115	1.0000e-005	0.0000	0.6118
Total	**2.6000e-004**	**8.6000e-004**	**2.0500e-003**	**1.0000e-005**	**6.6000e-004**	**1.0000e-005**	**6.7000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.8548**	**0.8548**	**3.0000e-005**	**0.0000**	**0.8556**

3.6 Offsite Improvements Op 2b - 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					
Fugitive Dust					1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4900e-003	0.0147	0.0182	3.0000e-005		7.6000e-004	7.6000e-004		7.0000e-004	7.0000e-004	0.0000	2.4066	2.4066	7.5000e-004	0.0000	2.4254
Total	**1.4900e-003**	**0.0147**	**0.0182**	**3.0000e-005**	**1.0000e-005**	**7.6000e-004**	**7.7000e-004**	**0.0000**	**7.0000e-004**	**7.0000e-004**	**0.0000**	**2.4066**	**2.4066**	**7.5000e-004**	**0.0000**	**2.4254**

3.6 Offsite Improvements Op 2b - 2022

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	3.0000e-005	1.0800e-003	3.2000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3373	0.3373	4.0000e-005	0.0000	0.3382
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	1.7000e-004	1.1000e-004	1.3400e-003	0.0000	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4416	0.4416	1.0000e-005	0.0000	0.4418
Total	**2.0000e-004**	**1.1900e-003**	**1.6600e-003**	**0.0000**	**6.3000e-004**	**0.0000**	**6.3000e-004**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.7789**	**0.7789**	**5.0000e-005**	**0.0000**	**0.7800**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4900e-003	0.0147	0.0182	3.0000e-005		7.6000e-004	7.6000e-004		7.0000e-004	7.0000e-004	0.0000	2.4066	2.4066	7.5000e-004	0.0000	2.4254
Total	**1.4900e-003**	**0.0147**	**0.0182**	**3.0000e-005**	**0.0000**	**7.6000e-004**	**7.6000e-004**	**0.0000**	**7.0000e-004**	**7.0000e-004**	**0.0000**	**2.4066**	**2.4066**	**7.5000e-004**	**0.0000**	**2.4254**

3.6 Offsite Improvements Op 2b - 2022

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	3.0000e-005	1.0800e-003	3.2000e-004	0.0000	6.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3373	0.3373	4.0000e-005	0.0000	0.3382
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	1.7000e-004	1.1000e-004	1.3400e-003	0.0000	4.3000e-004	0.0000	4.3000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.4416	0.4416	1.0000e-005	0.0000	0.4418
Total	**2.0000e-004**	**1.1900e-003**	**1.6600e-003**	**0.0000**	**4.9000e-004**	**0.0000**	**5.0000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.7789**	**0.7789**	**5.0000e-005**	**0.0000**	**0.7800**

3.7 Offsite Improvements Op 3 - 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					
Fugitive Dust					1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4600e-003	0.0247	0.0262	4.0000e-005		1.2200e-003	1.2200e-003		1.1200e-003	1.1200e-003	0.0000	3.7831	3.7831	1.1800e-003	0.0000	3.8126
Total	**2.4600e-003**	**0.0247**	**0.0262**	**4.0000e-005**	**1.0000e-005**	**1.2200e-003**	**1.2300e-003**	**0.0000**	**1.1200e-003**	**1.1200e-003**	**0.0000**	**3.7831**	**3.7831**	**1.1800e-003**	**0.0000**	**3.8126**

3.7 Offsite Improvements Op 3 - 2022

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	4.0000e-005	1.3200e-003	3.9000e-004	0.0000	9.0000e-005	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.4122	0.4122	4.0000e-005	0.0000	0.4133
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	2.5000e-004	1.6000e-004	1.9100e-003	1.0000e-005	7.8000e-004	1.0000e-005	7.9000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6315	0.6315	1.0000e-005	0.0000	0.6318
Total	**2.9000e-004**	**1.4800e-003**	**2.3000e-003**	**1.0000e-005**	**8.7000e-004**	**1.0000e-005**	**8.9000e-004**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**1.0437**	**1.0437**	**5.0000e-005**	**0.0000**	**1.0452**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4600e-003	0.0247	0.0262	4.0000e-005		1.2200e-003	1.2200e-003		1.1200e-003	1.1200e-003	0.0000	3.7831	3.7831	1.1800e-003	0.0000	3.8126
Total	**2.4600e-003**	**0.0247**	**0.0262**	**4.0000e-005**	**0.0000**	**1.2200e-003**	**1.2200e-003**	**0.0000**	**1.1200e-003**	**1.1200e-003**	**0.0000**	**3.7831**	**3.7831**	**1.1800e-003**	**0.0000**	**3.8126**

3.7 Offsite Improvements Op 3 - 2022

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	4.0000e-005	1.3200e-003	3.9000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.4122	0.4122	4.0000e-005	0.0000	0.4133
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	2.5000e-004	1.6000e-004	1.9100e-003	1.0000e-005	6.1000e-004	1.0000e-005	6.1000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.6315	0.6315	1.0000e-005	0.0000	0.6318
Total	**2.9000e-004**	**1.4800e-003**	**2.3000e-003**	**1.0000e-005**	**6.9000e-004**	**1.0000e-005**	**6.9000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**1.0437**	**1.0437**	**5.0000e-005**	**0.0000**	**1.0452**

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	0.0530	0.2056	0.7372	3.0500e-003	0.3037	2.1300e-003	0.3059	0.0813	1.9800e-003	0.0833	0.0000	282.1820	282.1820	0.0110	0.0000	282.4578
Unmitigated	0.0530	0.2056	0.7372	3.0500e-003	0.3037	2.1300e-003	0.3059	0.0813	1.9800e-003	0.0833	0.0000	282.1820	282.1820	0.0110	0.0000	282.4578

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	244.20	213.18	207.24	800,798	800,798
Total	244.20	213.18	207.24	800,798	800,798

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
Apartments Low Rise	14.70	5.90	8.70	40.00	19.00	41.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.565244	0.042904	0.209304	0.108392	0.014546	0.005773	0.026273	0.017831	0.001792	0.001509	0.004953	0.000602	0.000877

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

	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	29.3672	29.3672	1.2100e-003	2.5000e-004	29.4723
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	87.4834	87.4834	3.6100e-003	7.5000e-004	87.7964
NaturalGas Mitigated	4.5400e-003	0.0388	0.0165	2.5000e-004		3.1400e-003	3.1400e-003		3.1400e-003	3.1400e-003	0.0000	44.9394	44.9394	8.6000e-004	8.2000e-004	45.2065
NaturalGas Unmitigated	4.5400e-003	0.0388	0.0165	2.5000e-004		3.1400e-003	3.1400e-003		3.1400e-003	3.1400e-003	0.0000	44.9394	44.9394	8.6000e-004	8.2000e-004	45.2065

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					
Apartments Low Rise	842133	4.5400e-003	0.0388	0.0165	2.5000e-004		3.1400e-003	3.1400e-003		3.1400e-003	3.1400e-003	0.0000	44.9394	44.9394	8.6000e-004	8.2000e-004	45.2065
Total		**4.5400e-003**	**0.0388**	**0.0165**	**2.5000e-004**		**3.1400e-003**	**3.1400e-003**		**3.1400e-003**	**3.1400e-003**	**0.0000**	**44.9394**	**44.9394**	**8.6000e-004**	**8.2000e-004**	**45.2065**

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					
Apartments Low Rise	842133	4.5400e-003	0.0388	0.0165	2.5000e-004		3.1400e-003	3.1400e-003		3.1400e-003	3.1400e-003	0.0000	44.9394	44.9394	8.6000e-004	8.2000e-004	45.2065
Total		**4.5400e-003**	**0.0388**	**0.0165**	**2.5000e-004**		**3.1400e-003**	**3.1400e-003**		**3.1400e-003**	**3.1400e-003**	**0.0000**	**44.9394**	**44.9394**	**8.6000e-004**	**8.2000e-004**	**45.2065**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	274569	87.4834	3.6100e-003	7.5000e-004	87.7964
Total		**87.4834**	**3.6100e-003**	**7.5000e-004**	**87.7964**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	92169.6	29.3672	1.2100e-003	2.5000e-004	29.4723
Total		**29.3672**	**1.2100e-003**	**2.5000e-004**	**29.4723**

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	0.2796	7.8400e-003	0.6804	4.0000e-005		3.7700e-003	3.7700e-003		3.7700e-003	3.7700e-003	0.0000	1.1118	1.1118	1.0700e-003	0.0000	1.1385
Unmitigated	0.2796	7.8400e-003	0.6804	4.0000e-005		3.7700e-003	3.7700e-003		3.7700e-003	3.7700e-003	0.0000	1.1118	1.1118	1.0700e-003	0.0000	1.1385

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	0.0207					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2385					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	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
Landscaping	0.0205	7.8400e-003	0.6804	4.0000e-005		3.7700e-003	3.7700e-003		3.7700e-003	3.7700e-003	0.0000	1.1118	1.1118	1.0700e-003	0.0000	1.1385
Total	**0.2796**	**7.8400e-003**	**0.6804**	**4.0000e-005**		**3.7700e-003**	**3.7700e-003**		**3.7700e-003**	**3.7700e-003**	**0.0000**	**1.1118**	**1.1118**	**1.0700e-003**	**0.0000**	**1.1385**

6.2 Area by SubCategory

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	0.0207					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2385					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	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
Landscaping	0.0205	7.8400e-003	0.6804	4.0000e-005		3.7700e-003	3.7700e-003		3.7700e-003	3.7700e-003	0.0000	1.1118	1.1118	1.0700e-003	0.0000	1.1385
Total	**0.2796**	**7.8400e-003**	**0.6804**	**4.0000e-005**		**3.7700e-003**	**3.7700e-003**		**3.7700e-003**	**3.7700e-003**	**0.0000**	**1.1118**	**1.1118**	**1.0700e-003**	**0.0000**	**1.1385**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	28.8012	0.1413	3.5400e-003	33.3883
Unmitigated	28.8012	0.1413	3.5400e-003	33.3883

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	4.30017 / 2.71097	28.8012	0.1413	3.5400e-003	33.3883
Total		**28.8012**	**0.1413**	**3.5400e-003**	**33.3883**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	4.30017 / 2.71097	28.8012	0.1413	3.5400e-003	33.3883
Total		**28.8012**	**0.1413**	**3.5400e-003**	**33.3883**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	6.1628	0.3642	0.0000	15.2681
Unmitigated	6.1628	0.3642	0.0000	15.2681

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	30.36	6.1628	0.3642	0.0000	15.2681
Total		**6.1628**	**0.3642**	**0.0000**	**15.2681**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	30.36	6.1628	0.3642	0.0000	15.2681
Total		**6.1628**	**0.3642**	**0.0000**	**15.2681**

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 – Phase I Environmental Site Assessment Report

CONVERSE CONSULTANTS

Phase I Environmental Site Assessment Report

8300 Valley View Street
Buena Park, California

Converse Project No. 19-42-205-01
December 12, 2019

Prepared For:

National Community Renaissance of CA
9421 Haven Avenue
Rancho Cucamonga, California 91730

Prepared By:

Converse Consultants
717 South Myrtle Avenue
Monrovia, California 91016

Converse Consultants
Geotechnical Engineering, Environmental and Groundwater Science, Inspection and Testing Services

December 12, 2019

Ms. Sarah Walker
National Community Renaissance of CA
9421 Haven Avenue
Rancho Cucamonga, California 91730

Subject: **PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT**
8300 Valley View Street
Buena Park, California
Converse Project No. 19-42-205-01

Ms. Walker:

Converse Consultants (Converse) is pleased to submit the attached report that summarizes the activities and the results of a Phase I Environmental Site Assessment (Phase I ESA) that was conducted at the referenced property.

A summary of the assessment is presented in the Executive Summary, as well as in Sections 8.0, 9.0, and 10.0 of the report. No Recognized Environmental Conditions were identified during this assessment.

We appreciate the opportunity to be of service. Should you have any questions or comments regarding this report, please contact Norman S. Eke at 626-930-1260 .

CONVERSE CONSULTANTS

Spencer Wagner
Senior Staff Environmental Scientist

Norman S. Eke
Senior Vice President/Managing Officer

Executive Summary

The following is an Executive Summary of the Phase I Environmental Site Assessment (Phase I ESA) that was conducted by Converse Consultants (Converse). Please refer to the appropriate sections of the report for a complete discussion of these issues. In the event of a conflict between this Executive Summary and the report, or an omission in the Executive Summary, the report shall prevail.

This report presents the results of the Converse Phase I ESA performed at 8300 Valley View Street in the City of Buena Park, Orange County County, California, referred to as the Property in this report. Converse was retained by National Community Renaissance of CA to conduct this Phase I ESA. Our study has been conducted in order to identify, to the extent practical within the scope of an ESA, Recognized Environmental Conditions (RECs) in connection with the Property.

Converse has compiled and reviewed information that was obtained from interviews, document research, and on-site and area reconnaissance to identify potential environmental conditions at the Property, in conformance with the ASTM Standard E: 1527-13 Environmental Site Assessment Standard Practice (ASTM Standard: E1527- 13). This Phase I ESA was conducted during the period of October 3, 2019 to December 12, 2019.

No Recognized Environmental Conditions were identified during this assessment.

However, the following environmental concern was noted:

- Historical agricultural use in the undeveloped northeastern portion of the Property.

Based on the passage of time since agricultural operations occurred at the Property, no further assessment is recommended.

Report Section		No Further Action	REC	CREC	HREC	Other Environmental Considerations	Recommended Action / Comments
3.0	USER PROVIDED INFORMATION & RESPONSIBILITIES	✔					
5.2.5	Summary of Historical Property Use	✔				✔	Agricultural use from 1938 to 1959. Northeast portion of the Property has not been redeveloped. Based on passage of time, no

Report Section		No Further Action	REC	CREC	HREC	Other Environmental Considerations	Recommended Action / Comments
							additional assessment is recommended.
5.2.6	Summary of Past Uses of Adjoining Properties	✔					
5.2.7	Summary of Past Uses of the Surrounding Area	✔					
5.3.1	Property Listings	✔					
5.3.2	Adjoining Properties	✔					
5.3.3	Other Off-site Locations of Concern	✔					
5.4	Additional Environmental Record Sources	✔					
6.3	Interior Observations of Property	✔					
6.4	Exterior Observations of Property	✔					
6.5	Current Uses of Adjoining Properties	✔					
6.6	Current Uses of Surrounding Area	✔					
7.0	INTERVIEWS	✔					

TABLE OF CONTENTS

TABLE OF APPENDICES

1.0 INTRODUCTION

1.1 Purpose and Scope of Services

This report presents the results of the Converse Consultants (Converse) Phase I Environmental Site Assessment (ESA) performed at 8300 Valley View Street in the City of Buena Park, Orange County County, California, referred to as the Property in this report. Converse was retained by National Community Renaissance of CA (National CORE) to conduct this Phase I ESA. Our study has been conducted in order to identify, to the extent practical, Recognized Environmental Conditions (RECs) in connection with the Property. The term Recognized Environmental Conditions is defined in Section 1.1.1 of the American Society of Testing and Materials (ASTM) Standard Practice as the presence or likely presence of any hazardous substances or petroleum products in, at or on a property due to any release to the environment; under conditions indicative of a release to the environment; under conditions that pose a material threat of a future release to the environment.

This Phase I ESA was completed in accordance with our proposal dated October 3, 2019. Our work consisted of the following and was completed in general conformance with the scope and limitations of the ASTM Practice E1527-13 and complies with standards and practices set forth in 40 Code of Federal Regulations (CFR) Part 312 for AAI.

- Interviews with the Property owner representatives
- Property and vicinity reconnaissance
- Review of regulatory agency records
- Description of physical setting
- Historical review
- Interviews with public agency personnel
- Preparation of this report

1.2 Non-Scope Considerations

There are a number of non-scope issues which are sometimes assessed concurrently with a Phase I ESA. Unless specifically agreed in the contract proposal documents, these non-scope considerations are not included as part of the Phase I ESA. Examples of non-scope issues include:

- Asbestos-containing Building Materials
- Biological Agents
- Cultural & Historic Resources
- Diffuse Anthropogenic Pollution
- Ecological Resources
- Endangered Species
- Health & Safety
- Indoor Air Quality
- Industrial Hygiene
- Lead-base Paints
- Lead in Drinking Water
- Mold
- Non-liquid Polychlorinated Biphenyls
- Radon
- Regulatory Compliance
- Wetlands

No Non-Scope issues were addressed in this report.

1.3 Significant Assumptions

No assumptions were made for this assessment that need to be noted as significant.

1.4 Limitations and Exceptions

There were no limitations or exceptions during this assessment.

1.5 Special Terms and Conditions

No special terms or conditions were identified by the User.

1.6 Reliance

This report is for the sole benefit and exclusive use of National Community Renaissance of CA in accordance with the terms and conditions attached to our proposal under which these services have been provided. Its preparation has been

in accordance with generally accepted environmental practices. No other warranty, either express or implied, is made. The Scope of Services associated with the report was designed solely in accordance with the objectives, schedule, budget, and risk-management preferences of National Community Renaissance of CA.

This report should not be regarded as a guarantee that no further contamination, beyond that which could be detected within the scope of this assessment, is present at the Property. Converse makes no warranties or guarantees as to the accuracy or completeness of information provided or compiled by others. It is possible that information exists beyond the scope of this assessment. It is not possible to absolutely confirm that no hazardous materials and/or substances exist at the Property. If none are identified as part of a limited scope of work, such a conclusion should not be construed as a guaranteed absence of such materials, but merely the results of the evaluation of the property at the time of the assessment. Also, events may occur after the Property visit, which may result in contamination of the Property. Additional information, which was not found or available to Converse at the time of report preparation, may result in a modification of the conclusions and recommendations presented.

Any reliance on this report by Third Parties shall be at the Third Party's sole risk. Should National Community Renaissance of CA wish to identify any additional relying parties not previously identified, a completed Application of Authorization to Use (see Appendix A of this report) must be submitted to Converse Consultants.

2.0 PROPERTY DESCRIPTION

Item	Comment
Current Use(s) of the Property	The Property is owned and occupied by St. Joseph Episcopal Church. A Property location map and a field generated Property plan are provided in Appendix B. Pertinent Property photographs are provided in Appendix C.
Location and Legal Description	The Property is located at 8300 Valley View Street, Buena Park, California. The Property is located on the east side of Valley View Street, between San Rafael Drive and Crescent Avenue. The Property is located approximately 1.0-mile south of the Artesia (91) Freeway. The Property consists of one (1) parcel and is approximately 3.23-acres. The Orange County County Assessor's Parcel Number (APN) for the Property is 069-283-25. Per the Orange County Assessor's Office Website, the address associated with this APN is 8246 Valley View Street; however, this address is for the north contiguous site.
Zoning Information	According to the City of Buena Park, Planning Department, the zoning for the Property is RS-6 for residential use.
Property Characteristics	The Property is an irregular-shaped parcel containing approximately 3.23-acres. The Property is generally level and the majority of the Property is covered with an asphalt-paved parking lot, landscaped areas, and a large undeveloped area. The remainder of the Property is developed with a church, church administrative building, and a third building leased to an offsite church. The Property fronts onto Valley View Street to the west. Properties in the general area are used for residential purposes.

Item	Comment
Description of Property Structure(s)	There are three (3), single-story buildings located on the Property, and the buildings consist of approximately 10,000 square-feet, Interior building materials consist of vinyl floor sheeting and/or carpet, painted drywall interior walls, and open-beamed, acoustic sprayed, and/or acoustic ceiling tile ceilings. Exterior building materials consist of asphalt-paved parking areas, landscaped areas, and an undeveloped area consisting of bare ground.
The following services were present at the Property at the time of the assessment.	
Electricity:	Southern California Edison (SCE)
Gas:	Southern California Gas (Company
Potable Water:	City of Buena Park
Sanitary Sewer:	City of Buena Park
Heating, Ventilation, Air Conditioning (HVAC):	Roof-mounted/pad-mounted HVAC units
Solid Waste:	EDCO

3.0 USER PROVIDED INFORMATION & RESPONSIBILITIES

3.1 Requested Documents and Information

The ASTM E1527-13 specifies that the User, National Community Renaissance of CA provide any helpful documents that may be available, as listed below.

- Environmental site assessment or environmental compliance audit reports
- Environmental permits or hazardous waste generator notices/reports
- Registrations for aboveground and underground storage tanks
- Septic systems, oil wells, or water wells
- Registrations for underground injection systems
- Material Safety Data Sheets; Community Right to Know Plans; or Safety, Preparedness and prevention Plans; Spill Protection Countermeasures and Control Plans
- Reports regarding hydrologic conditions on the Property or surrounding area
- Notices or other correspondence form any government agency relating to past or current violations of environmental laws with respect to the Property or relating to environmental liens encumbering the Property.
- Hazardous waste generator notices or reports
- Geotechnical studies
- Risk assessments
- Recorded Activity Use Limitations (AULs)
- Proceedings regarding hazardous substances and petroleum products including any pending, threatened or past: litigation; administrative proceedings; or notices from any governmental entity regarding possible violations of environmental laws or other possible liability related to hazardous substances or petroleum products.

The following information/documentation was provided by National Community Renaissance of CA (National CORE).

- Site Plan - The site plan identified the Property boundaries and future planned development.

3.2 User Provided Information

Section 6 of ASTM E1527-13 outlines specific User's responsibilities. This information will help identify the possibility of RECs in connection with the Property. The ASTM Standard provides a questionnaire to help the User to comply with the statutory requirements to perform tasks which would help identify RECs. Converse included the questionnaire as Attachment A to our proposal. In general, any Users should make Converse aware of information they have regarding the following:

- Environmental Cleanup Liens filed or recorded against the Property
- Activity and land use limitations that are in place on the Property or have been filed or recorded in a registry.
- Specialized knowledge or experience of the person seeking to qualify for the Legal Liability Protections (LLP)
- Relationship of the purchase price to fair market value of the Property if it were not contaminated
- Commonly known or reasonably ascertainable information about the Property
- The degree or obviousness of the presence or likely presence of contamination at the Property, and the ability to detect this contamination by appropriate investigation.

The following information was requested from the User, National CORE.

3.2.1 Environmental Cleanup Liens

The User provided no information regarding environmental cleanup liens or title records.

3.2.2 Activity and Use Limitations

The User did not provide any information indicating they were aware of any AULs.

3.2.3 Specialized Knowledge or Experience

The User stated that the Property has been occupied by churches from as early as 1872.

3.2.4 Reason for Significantly Lower Purchase Price

Converse has no information regarding the purchase price of the Property or comparable properties. The User has not indicated to Converse that there is any conclusion that there was a lower purchase price because of known or suspected contamination at the Property.

3.2.5 Commonly Known or Reasonably Ascertainable Information

The User did not provide any information about past uses, specific chemicals at the Property, past spills, environmental cleanup or other reasonably ascertainable information regarding the Property.

3.2.6 Obviousness of Contamination

The User did not provide any information based on their knowledge or experience that would be obvious indicators of contamination on the Property.

Unless specifically stated otherwise in the Scope of Services, the purpose of this Phase I ESA was to qualify for the landowner liability protections to CERCLA Liability as described in ASTM E1527-13.

Business risk unrelated to the CERCLA innocent landowners defense are only assessed as specifically agreed in the Scope of Services and discussed in Section 12.0, Additional Non-Scope Services, of this report.

3.3 Continuing Obligations

In order to assert a LLP, the User must satisfy a number of statutory requirements that are generally referred to as Continuing Obligations, which are outside the Scope of Services of the Phase I ESA. Examples of Continuing Obligations include providing legally required notices, stopping continuing releases and complying with land use restrictions. Failure to comply with these and other statutory post-acquisition requirements will jeopardize liability protection.

It is the responsibility of the User to comply with the Continuing Obligations requirements of ASTM E1527-13 and AAI. Anyone seeking LLP protections should take independent action beyond this Phase I ESA to perfect their position.

4.0 OWNER PROVIDED INFORMATION

The ASTM E1527-13 specifies that the Property owner and the Key Site Manager provide any helpful documents that may be available as listed below.

- Environmental site assessment or environmental compliance audit reports
- Environmental permits or hazardous waste generator notices/reports

- Registrations for aboveground and underground storage tanks
- Septic systems, oil wells, or water wells
- Registrations for underground injection systems
- Material Safety Data Sheets; Community Right to Know Plans; or Safety, Preparedness and Prevention Plans; Spill Protection Countermeasures and Control Plans
- Reports regarding hydrologic conditions on the Property or surrounding area
- Notices or other correspondence from any government agency relating to past or current violations of environmental laws with respect to the Property or relating to environmental liens encumbering the Property.
- Hazardous waste generator notices or reports
- Geotechnical studies
- Risk assessments
- Recorded AULs
- Proceedings regarding hazardous substances and petroleum products including any pending, threatened or past: litigation; administrative proceedings; or notices from any governmental entity regarding possible violations of environmental laws or other possible liability related to hazardous substances or petroleum products.

The owner did not provided any of the requested documents or information.

5.0 RECORDS REVIEW

5.1 Physical Setting

Item	Comments
Physical Setting:	The Property is located approximately 55 feet above mean sea level with surface topography sloping towards the east (United States Geological Survey [USGS] Topographic Map, Los Alamitos, California, 2015).
Geology:	The Property is underlain by unconsolidated and semi-consolidated alluvium, lake, playa, and terrace deposits (Division of Mines and Geology, Geologic Map of California, 2010).
Groundwater:	According to information obtained from the State Water Resources Control Board's Geotracker database for a site located approximately 0.3-miles north of the Property, depth to groundwater was approximately 8.0-8.5 feet below ground surface (bgs) and groundwater flow direction was to the south/ southwest.
Potable Water Supply:	Potable water is supplied by the City of Buena Park.

5.2 Historical Review

5.2.1 Aerial Photograph and Map Review

Available historical aerial photographs and historical maps, which were provided by Environmental Risk Information Services (ERIS), were reviewed.

According to ERIS, there was no Fire Insurance Map coverage of the Property.

The 1923, 1925, and 1945 Topographic Maps did not cover the Property.

A summary of the review is provided in the following table. Copies of the aerial photographs and maps are provided in an appendix to this report.

Table 1 – Historical Resource Review

Property	Adjoining Properties	General Vicinity
1896, 1899, 1902, 1935 Topographic Maps		
Undeveloped	The adjoining properties appear primarily undeveloped with the exception of the northern adjoining property is developed with a small structure.	Undeveloped; Sporadic residential
1938 and 1942 Aerial Photographs, 1942 and 1943 Topographic Maps,		
A structure is visible near the center of the Property. The remainder of the Property appears developed for agricultural use.	Agricultural and/or residential	Agricultural and/or residential
1947 Aerial Photograph, 1949 and 1950 Topographic Maps, 1952 Aerial Photograph		
A second structure (existing building) is visible north of the original structure. The remainder of the Property is still in agricultural use.	Agricultural and/or residential	Agricultural and/or residential
1960 and 1963 Aerial Photographs, 1964 Topographic Map		

Property	Adjoining Properties	General Vicinity
The original structure constructed on the Property has been razed. The existing structure in the northern portion of the Property remains. The church building in the southwestern portion of the Property has been constructed. The remainder of the Property is no longer in agricultural use.	The adjoining properties to the northeast, east, southeast, south, southwest, west, and northwest are developed with the existing residential dwellings. The northern adjoining property remains developed with a single structure.	Residential; Commercial
1972 Aerial Photograph and Topographic Map, 1974 Topographic Map, 1981 Topographic Map and Aerial Photograph, 1988, 1994, 2005, 2009 Aerial Photographs		
The Property has been developed with the third existing building.	The northern adjoining property has been developed with a commercial structure. The original structure on the site was razed. The remaining adjoining properties are developed for residential use.	Residential; Commercial
2010, 2012, and 2014 Aerial Photographs, 2015 Topographic Map, 2016 and 2018 Aerial Photographs		
There are no significant identifiable changes in use on the Property.	There are no significant identifiable changes in uses on the adjoining properties with the exception of the northern	Residential; Commercial

Property	Adjoining Properties	General Vicinity
	adjoining property which has been developed in the existing configuration.	

5.2.2 Building Permit Review

Available building permits were reviewed at the City of Buena Park, Department of Building & Safety. A chronological summary is provided below.

- 1959 - Building permit was issued for construction of a church and parish hall
- 1967 - Building permit was issued for construction of a 3,150 square-foot, seven-room school building
- 1967 - A certificate of occupancy was issued to St. Joseph Episcopal Church

5.2.3 City Directories

A city directory search was completed on the Property. The complete city directory is provided in the historical research appendix to this report.

The Property was identified as St. Joseph Episcopal Church in 1970, St. Joseph Episcopal Church and Montessori School in 1974, St. Joseph Episcopal Church in 1980, 1987, 1991, 1995, 1998, 2002, 2006, 2010, 2014, and 2018.

The northern adjoining property was identified as being occupied by a dental office from as early as 1974 to 1991, and by a church from 1995 to the present.

The remaining adjoining properties either were not listed in the city directory report or were identified under residential listings.

5.2.4 Data Failure

Historical information regarding the Property indicated the Property was undeveloped land as early as 1896. Therefore, no historical data failure occurred during this assessment.

5.2.5 Summary of Historical Property Use

Based on the information obtained during this assessment, the Property appeared undeveloped as early as 1896. The Property appeared to be in agricultural use, and was developed with a possible barn building as early as 1938. By 1947, the building currently located along the northern Property boundary was constructed and the barn structure remained on the Property. By 1959, the barn structure had been razed, the existing church building had been constructed, and the Property was no longer developed for agricultural use. The Property was further developed with the existing administrative building in 1967.

5.2.6 Summary of Past Uses of Adjoining Properties

The adjoining properties to the northeast, east, southeast, south, southwest, west, and northwest were typically undeveloped as early as 1896. The properties were developed for agricultural uses by 1938. The properties were developed with the existing residential uses by 1960.

The northern adjoining property (8246 Valley View Street) appeared developed with a residential structure as early as 1896. The Property was also developed for agricultural use from as early as 1938 to 1960. The site was further developed for commercial use by 1972. The commercial building was razed and the property was developed with the existing church facility by 2010.

5.2.7 Summary of Past Uses of the Surrounding Area

The surrounding area was primarily undeveloped with sporadic residential structures as early as 1896. By the 1930s, the surrounding area was developed for residential and agricultural uses. By 1960, the surrounding area was primarily developed with residential neighborhoods and sporadic commercial developments. The surrounding area has remained primarily in residential and commercial use since that time.

5.3 Results of Environmental Records Sources Review

An ERIS Database Report prepared specifically for the Property, adjoining properties and other off-site locations of concern. The search included queries to the following databases for cases within specified ASTM search distances. A copy of the database report is provided in an appendix to this report.

5.3.1 Property Listings

The Property was not identified on the databases in the ERIS report.

5.3.2 Adjoining Properties

The following adjoining property was identified in the regulatory database report:

- 8246 Valley View Street - The site is located north of the Property and is listed in the Hazardous Waste Manifest Data (HAZNET) database for the disposal of asbestos containing waste in 2011.

Surrounding Properties Summary

Database	Site Name	Address	Dist. (mi) / Dir.	Elev. diff. (ft)	Comments
HAZNET	JAY NAHM	8246 VALLEY VIEW ST, BUENA PARK, CA, 906202747	0.00/W	-2.0	North - See write-up above.

5.3.3 Other Off-site Locations of Concern

Other off-site locations of concern identified by ERIS within a maximum one-mile radius from the Property included registered UST sites, LUST sites, hazardous waste generators, and permitted hazardous materials handlers.

The potential for environmental concern to the Property from these off-site locations of concern appear to be low due to one or more of the following: type of regulatory listing; type of resource (soil) affected; location with respect to the direction of regional groundwater; distance from the Property; status of the case; remedial efforts being directed by a regulatory agency; and/or potential responsible parties have been identified.

5.3.4 Orphan Listings

The database report identified seven (7) orphan listings. The locations of sites were identified only by street name. These street names were found in the general vicinity of the Property; however, the specific site locations could not be determined. These orphan sites appeared to have a low potential for environmental impact to the Property due to one or more of the following: type of regulatory listing; type of resource (soil) affected; and/or potential responsible parties have been identified.

5.4 Additional Environmental Record Sources

Federal Agencies

Federal Agencies	
Source	**Comments**
U.S. Department of Transportation, Pipeline and	PHMSA online mapping system for gas transmission pipelines and hazardous liquid pipelines on the Property or adjacent properties was reviewed (https://www.npms.phmsa.dot.gov/PublicViewer/).

Federal Agencies	
Source	**Comments**
Hazardous Material Safety Administration (PHMSA)	No pipelines were identified on the Property or adjacent properties.

State Agencies

State Agencies	
Source	**Comments**
California Environmental Protection Agency (Cal/EPA) Department of Toxic Substances Control (DTSC)	No information regarding the Property was on file with DTSC. The Envirostor website (http://www.envirostor.dtsc.ca.gov/public/) was reviewed for information, and the Property was not listed in the database.
Cal/EPA, Regional Water Quality Control Board (RWQCB)	The RWQCB had no records on file regarding underground storage tank (UST) or well investigation program (WIP) issues at the Property. The Geotracker website (http://geotracker.waterboards.ca.gov/) was reviewed for information, and the Property was not listed in the database.
California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR)	According to the DOGGR Online Database (http://maps.conservation. ca.gov/doms/doms-app.html), there are no oil or gas wells located on the Property or adjacent properties.

Local Agencies

Source	Comments
South Coast Air Quality Management District (SCAQMD)	There were no agency records pertaining to the Property on file with this agency.
Orange County Health Care Agency (OCHCA)	There were no agency records pertaining to the Property on file with this agency.

6.0 PROPERTY RECONNAISSANCE

6.1 Methodology

On November 25, 2019, Converse visited the Property to evaluate present use and to identify observable environmental conditions at the Property. Our methodology involved walking the perimeters, center lines, and accessible interior areas of the buildings while noting observed evidence of present and potential environmental concerns

A field-generated map is provided in Appendix B. Pertinent Property photographs are provided in Appendix C.

6.2 Limiting Conditions

Converse's findings are based on the Property conditions observed on Monday, November 25, 2019.

6.3 Interior Observations of Property

During our Property visit, Converse made the following observations of the interior of the Property's building(s):

Table 3 – Interior Observations of Property

Item or Condition	Observed Evidence	No Evidence Observed	Comments
Hazardous Substances & Petroleum Products:		✔	

Item or Condition	Observed Evidence	No Evidence Observed	Comments
Storage Tanks & Related Equipment:		✔	
Odors:		✔	
Standing Surface Water or Other Pools of Liquid:		✔	
Drums & Other Containers of Hazardous Substances, Petroleum Products, or Other Unidentified Contents:		✔	
Transformers or Equipment containing Polychlorinated Biphenyls (PCBs):		✔	
Heating/Cooling System:	✔		HVAC vents were observed in each of the three buildings.
Stains or Corrosion on Floors, Walls or Ceilings:		✔	
Drains and Sumps		✔	

6.4 Exterior Observations of Property

During our Property visit, Converse made the following observations of the exterior of the Property:

Table 4 – Exterior Observations of Property

Item or Condition	Observed Evidence	No Evidence Observed	Comments
Hazardous Substances & Petroleum Products:		✔	
Storage Tanks & Related Equipment:		✔	
Odors:		✔	
Standing Surface Water or Other Pools of Liquid:		✔	
Drums & Other Containers of Hazardous Substances, Petroleum Products, or Other Unidentified Contents:		✔	

Item or Condition	Observed Evidence	No Evidence Observed	Comments
Transformers or Equipment containing Polychlorinated Biphenyls (PCBs):		✔	
Pits, Ponds, or Lagoons:		✔	
Stained Soil or Pavement:		✔	
Stressed Vegetation (other than from insufficient water):		✔	
Evidence of Mounds, Depressions or Filled or Graded Areas Suggesting Trash or Other Solid Waste Disposal:		✔	
Waste Water or any discharge (including storm water) into a Drain, Ditch, or Stream on or Adjacent to the Property:		✔	

Item or Condition	Observed Evidence	No Evidence Observed	Comments
Wells (active, inactive, or abandoned):		✔	
Septic Systems or Cesspools:		✔	
Prior Structures:	✔		Remnants of planter beds were observed in the undeveloped portion of the Property.
Roads, Tracks, Railroad Tracks or Spurs:	✔		The Property fronts onto a service street that parallels Valley View Street.

6.5 Current Uses of Adjoining Properties

Based on our research and observations during our Property visit, the Property is bordered by the following:

Table 5 – Adjoining Property Use

Direction	Current Development
North:	Ban Suk Church (8246 Valley View Street)
Northeast:	Residential
Northwest:	Service Street followed by Valley View Street and residential neighborhood.
South:	Residential

Direction	Current Development
Southeast:	Residential
Southwest:	Service Street followed by Valley View Street and residential neighborhood.
East:	Residential
West:	Service Street followed by Valley View Street and residential neighborhood.

6.6 Current Uses of Surrounding Area

Based on our research and observations during our Property visit, the surrounding area of the Property consists of residential and commercial uses.

7.0 INTERVIEWS

Interview:	Comments:
Property Owner:	Ms. Birgit Tedford, Administrative Assistant of St. Joseph Episcopal Church, was interviewed during the Property reconnaissance. Ms. Tedford stated that she has worked at the Property for 10 years. During that period of time, Ms. Tedford stated that the Property has been occupied by a church. Ms. Tedford stated that St. Joseph Episcopal Church occupies the church building and administrative building, and that the third building is leased to a small church for Sunday services. Ms. Tedford stated that the northeastern portion of the property has been undeveloped since she has worked at the Property. Ms. Tedford stated that she was unaware of any past development of that portion of the Property. Ms. Tedford stated that there were previously several planter beds for growing vegetable that were located on the undeveloped portion of the Property. Ms. Tedford stated that there were no hazardous materials used or stored on the Property. Ms. Tedford stated that she was unaware of any environmental issues pertaining to the Property or any adjoining properties. Ms. Tedford also pointed out the Property boundaries and stated that the adjacent church at 8246 Valley View Street was not located on the Property.
Tenant/ Occupant:	See Owner interview.
State or Local Government Officials:	Other than the information in Section 5.4, no additional information could be provided.
Owners and Occupants of Neighboring Sites:	No interviews of owners or occupants of neighboring sites were conducted.

8.0 FINDINGS

A cursory summary of findings is provided below. However, details were not included or fully developed in this section, and the report must be read in its entirety for a comprehensive understanding of the items contained herein.

The Property, St Joseph Episcopal Church, is located at 8300 Valley View Street, Buena Park, California. The Property is located on the east side of Valley View Street, between San Rafael Drive and Crescent Avenue. The Property is located approximately 1.0-mile south of the Artesia (91) Freeway.

The Orange County County Assessor's Parcel Number (APN) for the Property is 069-283-25. Per the Orange County Assessor's Office Website, the address associated with this APN is 8246 Valley View Street; however, this address is for the north contiguous site.

The Property appeared undeveloped as early as 1896. The Property appeared to be in agricultural use, and was developed with a possible barn building as early as 1938. By 1947, the building currently located along the northern Property boundary was constructed and the barn structure remained on the Property. By 1959, the barn structure had been razed, the existing church building had been constructed, and the Property was no longer developed for agricultural use. The Property was further developed with the existing administrative building in 1967.

The Property was not listed in the regulatory database report.

The northern adjoining property (8246 Valley View Street) was listed in the database report for the generation of asbestos containing waste.

9.0 OPINION

The historical agricultural use at the Property is not considered a REC. However, since the northeastern portion of the Property was used for agricultural purposes, and has yet to be redeveloped; this is considered an environmental concern as potential historic residues from past agricultural uses may remain in this portion of the Property. This is not considered a REC based on passage of time since last possible application.

No significant data gaps were identified during this assessment that affect the ability of the Environmental Professional (EP) to identify RECs.

There are no unusual circumstances where greater certainty is required regarding RECs. No additional assessment appears warranted.

10.0 CONCLUSIONS AND RECOMMENDATIONS

Converse has performed a Phase I Environmental Site Assessment in general conformance with the scope and limitations of ASTM Practice E1527-13 for 8300 Valley View Street, City of Buena Park, Orange County County, California. Any exceptions to or deletions from this practice are described in the Limitations and Exceptions of Assessment section of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the Property.

The following environmental concern was noted:

- Historical agricultural use in the undeveloped northeastern portion of the Property

Based on the passage of time since agricultural operations occurred at the Property, no further assessment is recommended.

11.0 DEVIATIONS AND LIMITATIONS

No deviation(s) from the ASTM Standard Practice were encountered during this assessment.

12.0 ADDITIONAL NON-SCOPE SERVICES

There are environmental issues outside the scope of the ASTM E1527-13 that can be assessed in connection with a commercial real estate transaction. These are dealt with as non-scope considerations since they do not typically present a Superfund Liability. The specific level of inquiry (if any) is defined in the Proposal which contains a Scope of Work. These non-scope services are very client specific and not covered by the ASTM standard. They are frequently related to the business environmental risk which is defined in the standard as “risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate…”

No non-scope issues were addressed in this report.

13.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312.

I have the specific qualifications based on education, training and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standard and practices set forth in 40 CFR Part 312.

Spencer Wagner
Senior Staff Environmental Scientist

This Phase I ESA was completed by the above Environmental Professional. A complete list of preparers, and their responsibilities for this assessment, is provided in the following section (Section 14.0, List of Preparers).

14.0 LIST OF PREPARERS

Norman S. Eke

Senior Vice President/Managing Officer

B.A., Liberal Studies, Environmental Studies Emphasis, University of California, Santa Barbara, 1988.
Cal/OSHA Certified Asbestos Consultant, #96-2093
NIOSH 582 Equivalent Training

Senior Vice President and Managing Officer of Converse's California Environmental offices. Mr. Eke has served as the Principal-in-Charge and Contract Administrator to deliver services to our public agency and private clients. Mr. Eke has 30 years of experience in the fields of Environmental Due Diligence including Phase I and Phase II Environmental Site Assessments, Asbestos surveys/specifications/abatement monitoring, Preliminary Endangerment Assessments and associated Supplemental Site Investigations and Removal Action Work Plans/Implementation, various forms of Remediation, Human Health Risk Assessment and Indoor Air Quality. Mr. Eke is the former Subcommittee Chairman for E.50-02 Real Assessment and Management of the ASTM E.50 Committee on Environmental Assessment, Risk Management, Corrective Action, which includes Phase I ESA standards (2008 to 2016).

Principal area of responsibility for this ESA report: Project Management, Client Point of Contact, and Quality Assurance/Quality Control and Technical Review.

Spencer Wagner

B.A., Environmental Science and Policy, California State University, Long Beach, 2006
B.A., Geography, California State University, Long Beach, 2006
40-Hour HAZWOPER Certified
Certified Wood Destroying Organism (WDO) Inspector

Mr. Wagner has over 13 years of experience conducting Phase I and II Environmental Site Assessments throughout California. Mr. Wagner has completed Phase I ESAs on undeveloped land, residential properties, commercial/retail facilities, industrial facilities, and school sites. His Phase II ESA experience includes collection of soil matrix, soil

vapor, indoor air and groundwater samples. Phase II projects worked on have included residential properties, commercial warehousing sites, school sites, dry cleaning facilities, automotive service sites, metal plating facilities and multi-tenant commercial properties.

Principal area of responsibility for this ESA report: Project Management, Client Point of Contact, Historical Research, Regulatory Agency Interaction, Property Reconnaissance, Interviews, Report Generation, and Report Review.

15.0 REFERENCES

Buena Park, City of, Building Department, Building Permit Review, November 2019.

California Department of Conservation, Division of Mines and Geology, Geologic Map of California, 2010.

California Department of Conservation, Division of Oil and Gas and Geothermal Resources, DOGGR Online Database, November 2019.

California Environmental Protection Agency (Cal/EPA), Department of Toxic Substances Control, Cypress Office, Request for Information, November 2019.

Cal/EPA, Envirostor Website (http://www.envirostor.dtsc.ca.gov/public/, November 2019.

Cal/EPA, Santa Ana Regional Water Quality Control Board, Request for Information, November 2019.

Cal/EPA, Geotracker Website (http://geotracker.waterboards.ca.gov/), November 2019.

Environmental Risk Information Services (ERIS), Inc., Aerial Photographs, November 2019.

ERIS, Inc., City Directory Abstract, November 2019.

ERIS, Inc., EDR-Radius Map Report, November 2019.

ERIS, Inc., Request for Fire Insurance Map, November 2019.

ERIS, Inc. Topographic Map, November 2019.

Orange County Health Care Agency, Request For Information, November 2019.

South Coast Air Quality Management District, Request for Information, November 2019.

Tedford, Brigid, Interview, November 2019.

United States Geological Survey, 7.5-Minute Topographic Quadrangle, Los Alamitos, 2015.

United States Department of Transportation, Pipeline and Hazardous Material Safety Administration (PHMSA), Pipeline Location Website (https://www.npms.phmsa.dot.gov/default.htm), November 2019.

Appendix A - Application for Authorization to Use

Converse Consultants

Geotechnical Engineering, Environmental & Groundwater Science, Inspection & Testing Services

Application for Authorization to Use

TO: Converse Consultants
3176 Pullman Street, Suite 108
Costa Mesa, California 92626

Project Title & Date: _____

Project Address: _____

FROM: (Please identify name & address of person/entity applying for permission to use the referenced report.)

_____

_____

_____

Applicant _____ hereby applies for permission to use the referenced report in order to:

_____

_____

_____

Applicant wishes or needs to use the referenced report because:

_____

_____

_____

Applicant also understands and agrees that the referenced document is a copyrighted document and shall remain the sole property of Converse Consultants. Unauthorized use or copying of the report is strictly prohibited without the express written permission of Converse Consultants. *Applicant* understands and agrees that Converse Consultants may withhold such permission at its sole discretion, or grant such permission upon agreement to Terms and Conditions, such as the payment of a re-use fee, amongst others.

Applicant Signature: _____

Applicant Name (print): _____

Title: _____

Date: _____

Appendix B - Property Plans

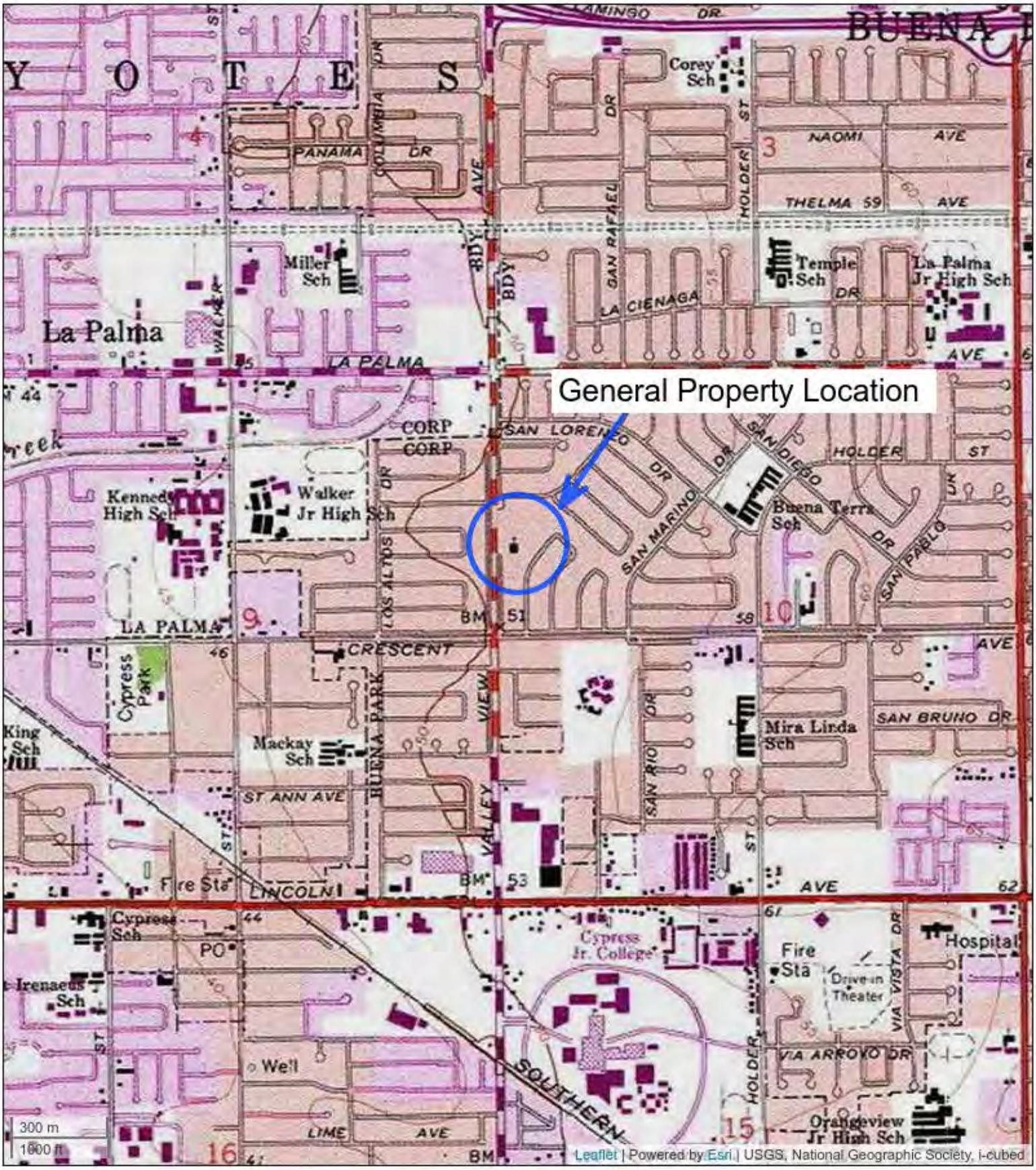


Figure 1 - Property Location Map

National Community Renaissance of CA
8300 Valley View Street
Buena Park, California
Converse Project No. 19-42-205-01

Figure 2 - Property Map

National Community Renaissance of CA
8300 Valley View Street
Buena Park, California
Converse Project No. 19-42-205-01

Appendix C - Pertinent Property Photographs

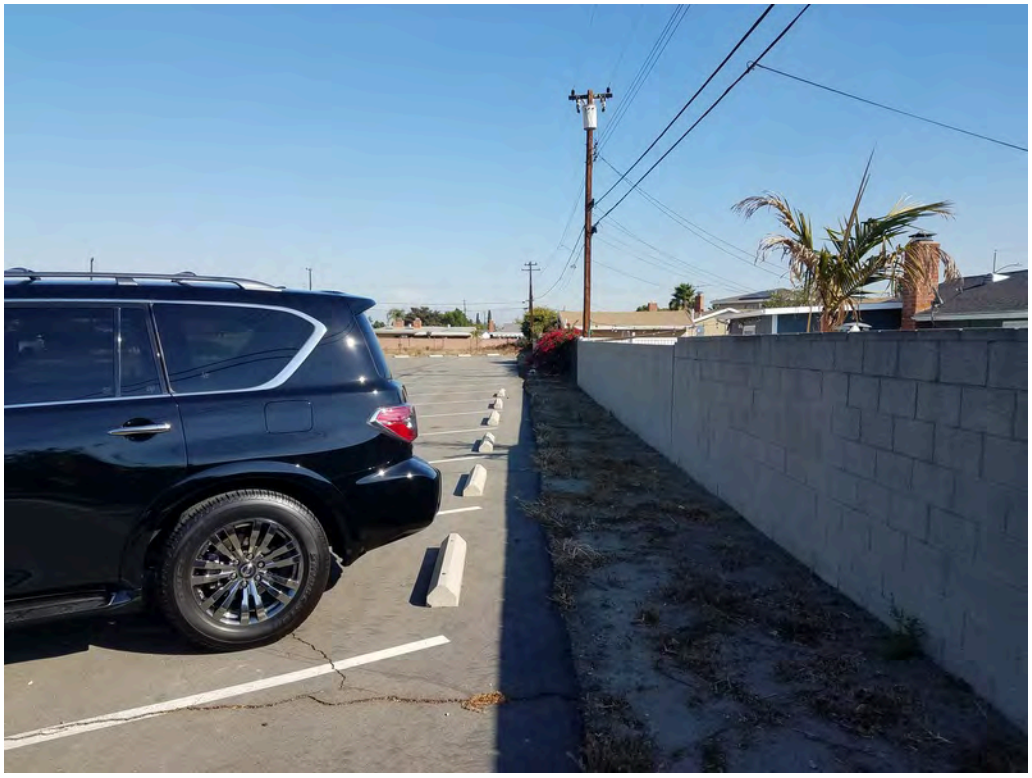
1

View of Property (looking southeast).

2

View of northern Property boundary (looking west).

3



View of eastern Property boundary (looking north).

4

View of western Property boundary (looking south).

5

View of church building in southern portion of Property.

6

View of interior of church building.

7

View of interior of church building.

8

View of administrative building near center of Property.

9

View of interior of administrative building.

10

View of interior of administrative building.

11

View of interior of administrative building.

12

View of third building located along northern Property boundary.

13

View of interior of third building.

14

View of interior of third building.

15

View of undeveloped area in northeastern portion of Property.

16

View of planter bed remnants in undeveloped area of Property.

View of northern adjoining church (8246 Valley View Street).

Appendix D - Historical Information: Aerials, Maps & City Directory

ENVIRONMENTAL RISK INFORMATION SERVICES

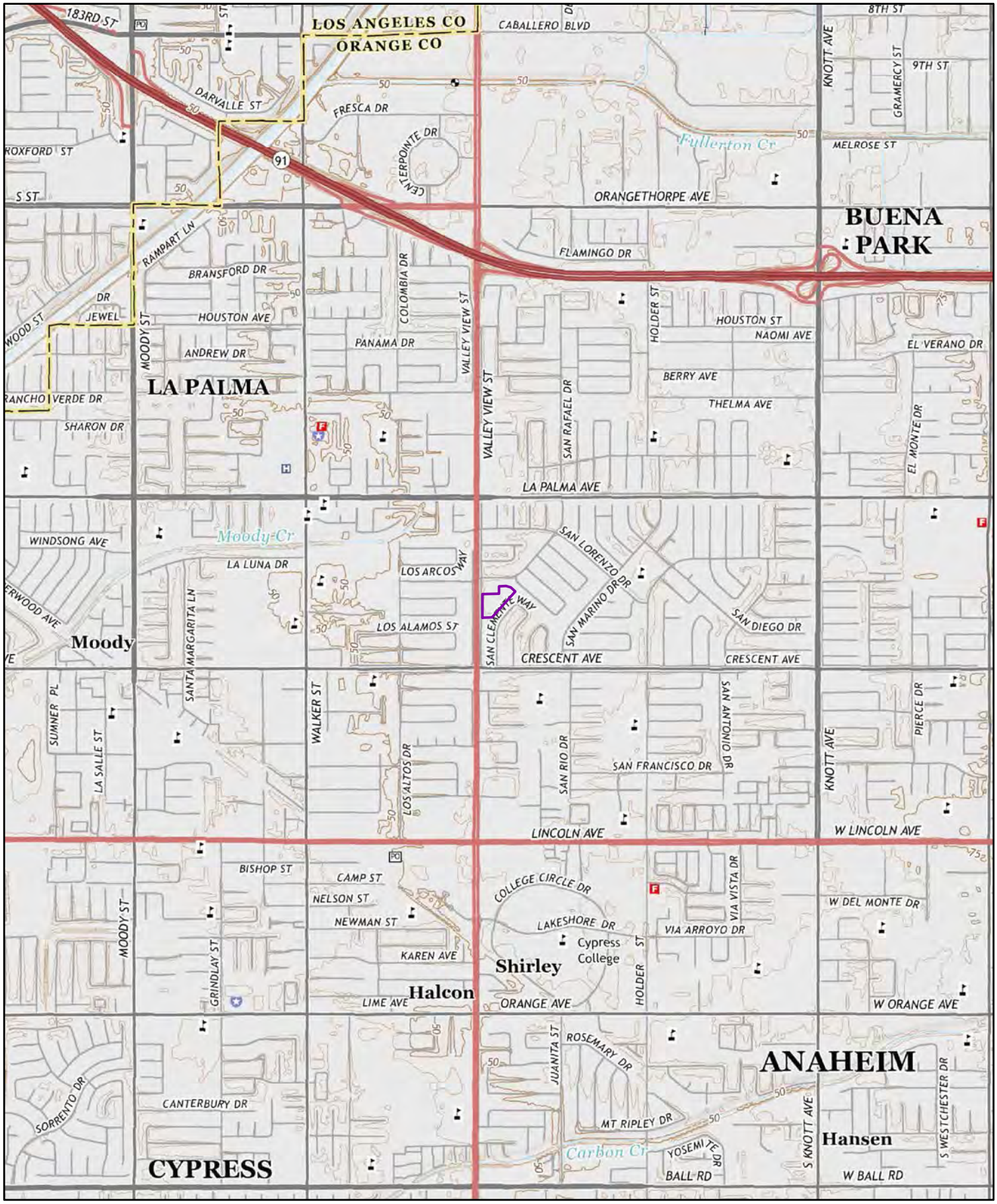
TOPOGRAPHIC MAPS

Project Property:	National CORE - Valley View Street 8300 Valley View Street Buena Park CA 90620
Project No:	19-42-205-01
Requested By:	Converse Consultants
Order No:	20191115287
Date Completed:	November 17, 2019

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

We have searched USGS collections of current topographic maps and historical topographic maps for the project property. Below is a list of maps found for the project property and adjacent area. Maps are from 7.5 and 15 minute topographic map series, if available.

Year	Map Series
2015	7.5
1981	7.5
1974	7.5
1972	7.5
1964	7.5
1950	7.5
1949	7.5
1945	7.5
1935	7.5
1925	7.5
1923	7.5
1943	15
1942	15
1902	15
1899	15
1896	15



2015

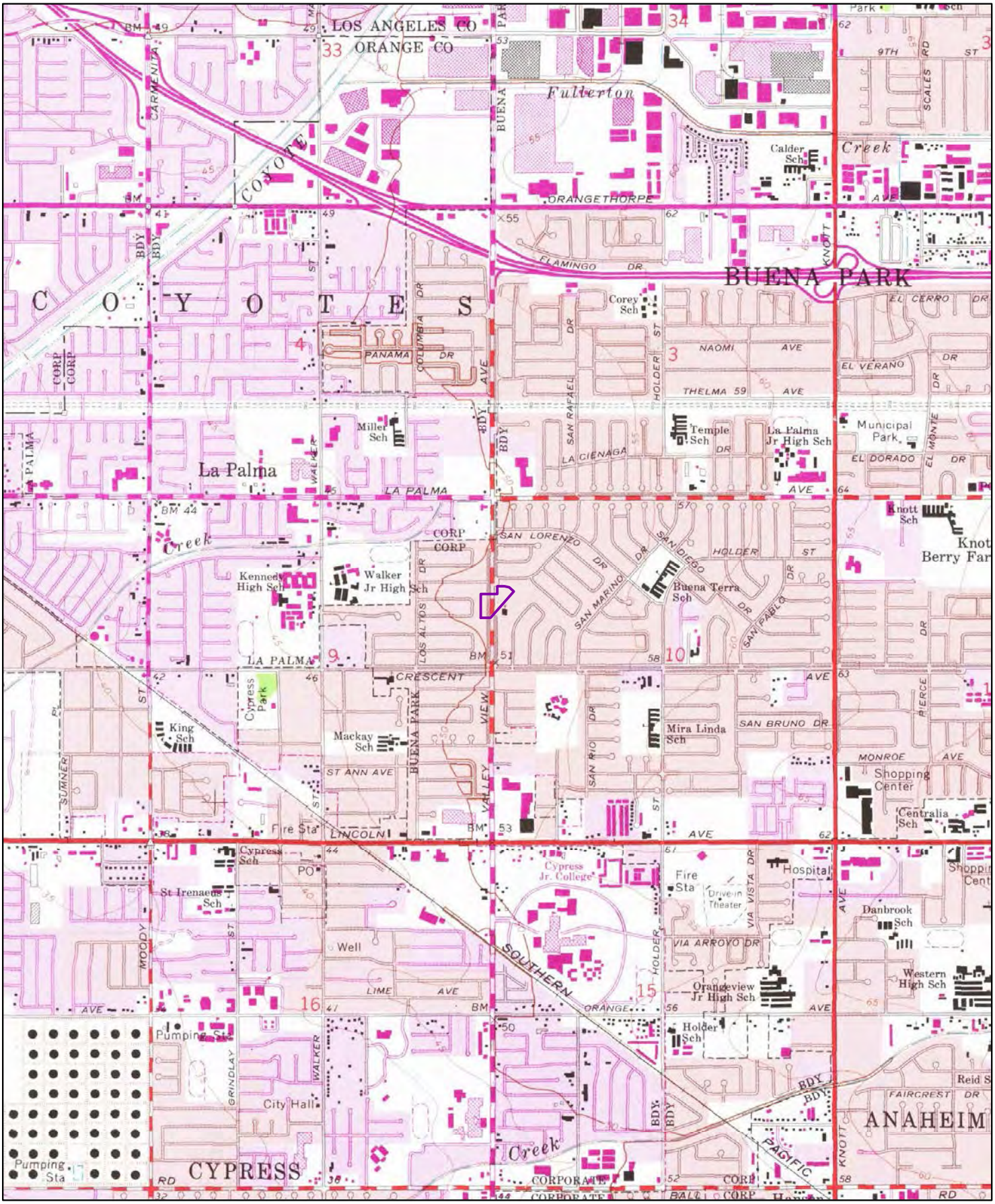
0 0.2 0.4 0.8 Miles

Order No. 20191115287

Quadrangle(s): Los Alamitos,CA

Source: USGS 7.5 Minute Topographic Map

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES



1981

0 0.2 0.4 0.8 Miles

Order No. 20191115287

Quadrangle(s): Los Alamitos,CA

Source: USGS 7.5 Minute Topographic Map

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

1974

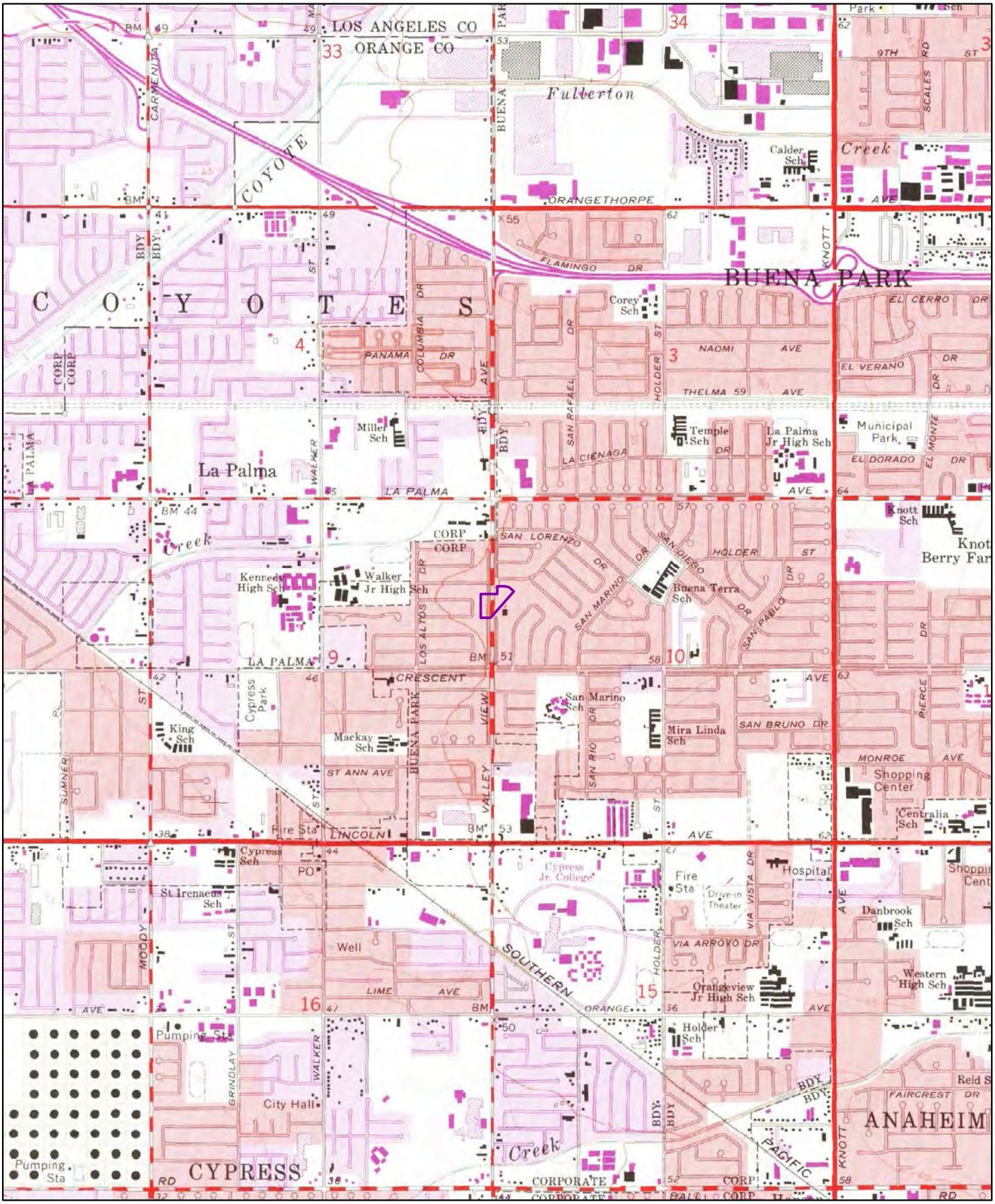
0 0.2 0.4 0.8 Miles

Order No. 20191115287

Quadrangle(s): Los Alamitos,CA

Source: USGS 7.5 Minute Topographic Map

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES



1972

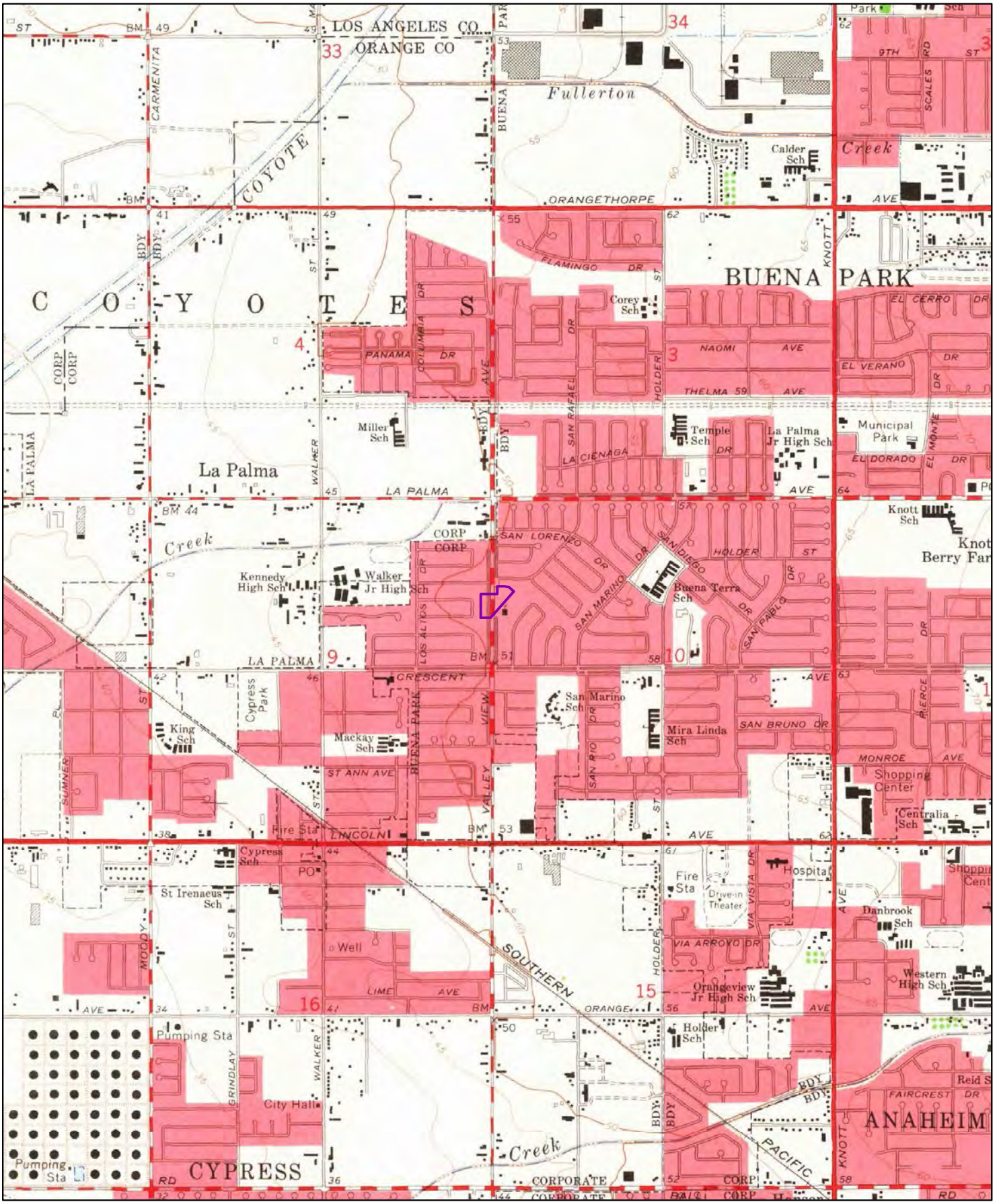
0 0.2 0.4 0.8 Miles

Order No. 20191115287

Quadrangle(s): Los Alamitos,CA

Source: USGS 7.5 Minute Topographic Map

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES



1964

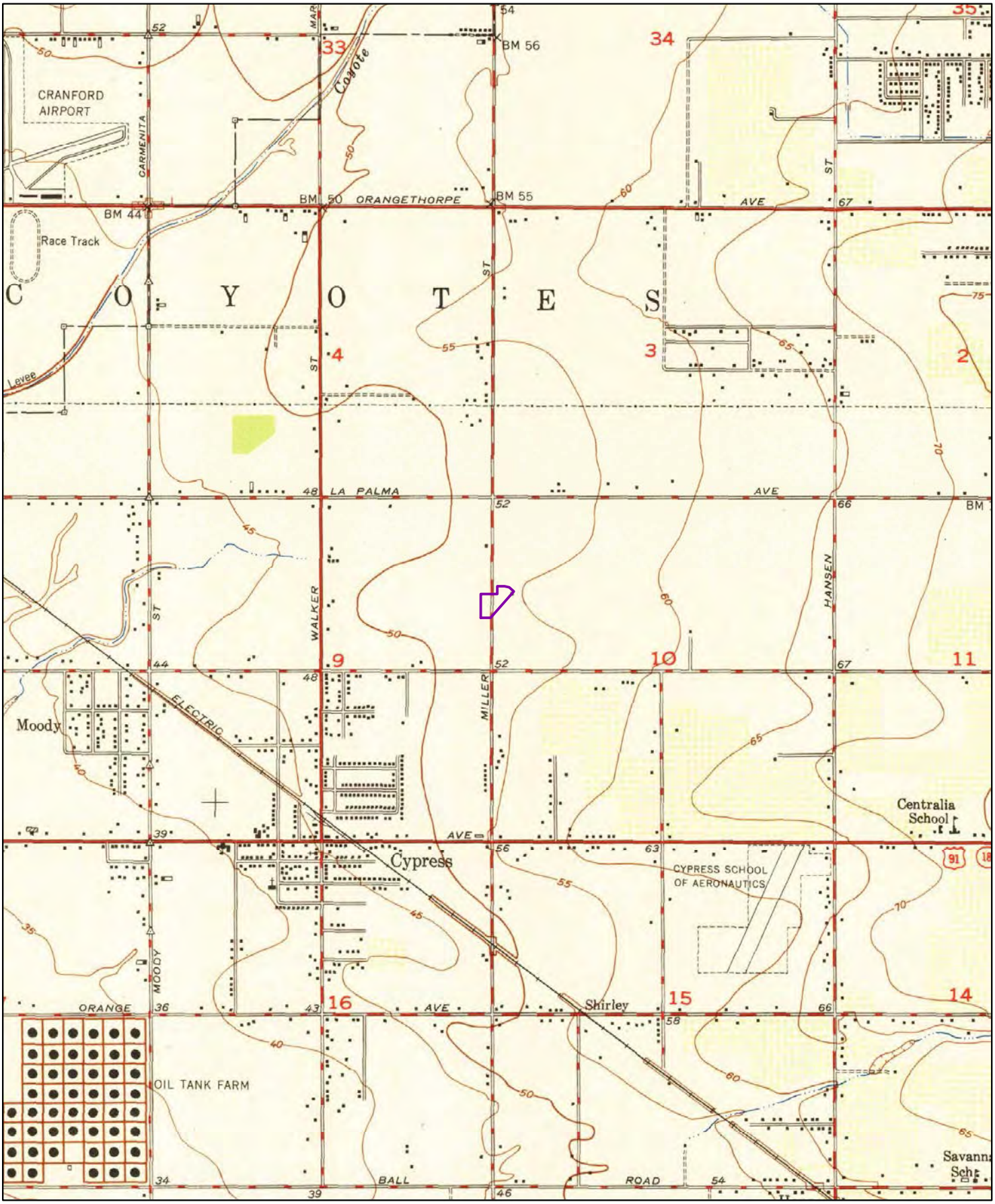
0 0.2 0.4 0.8 Miles

Order No. 20191115287

Quadrangle(s): Los Alamitos,CA

Source: USGS 7.5 Minute Topographic Map

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES



1950

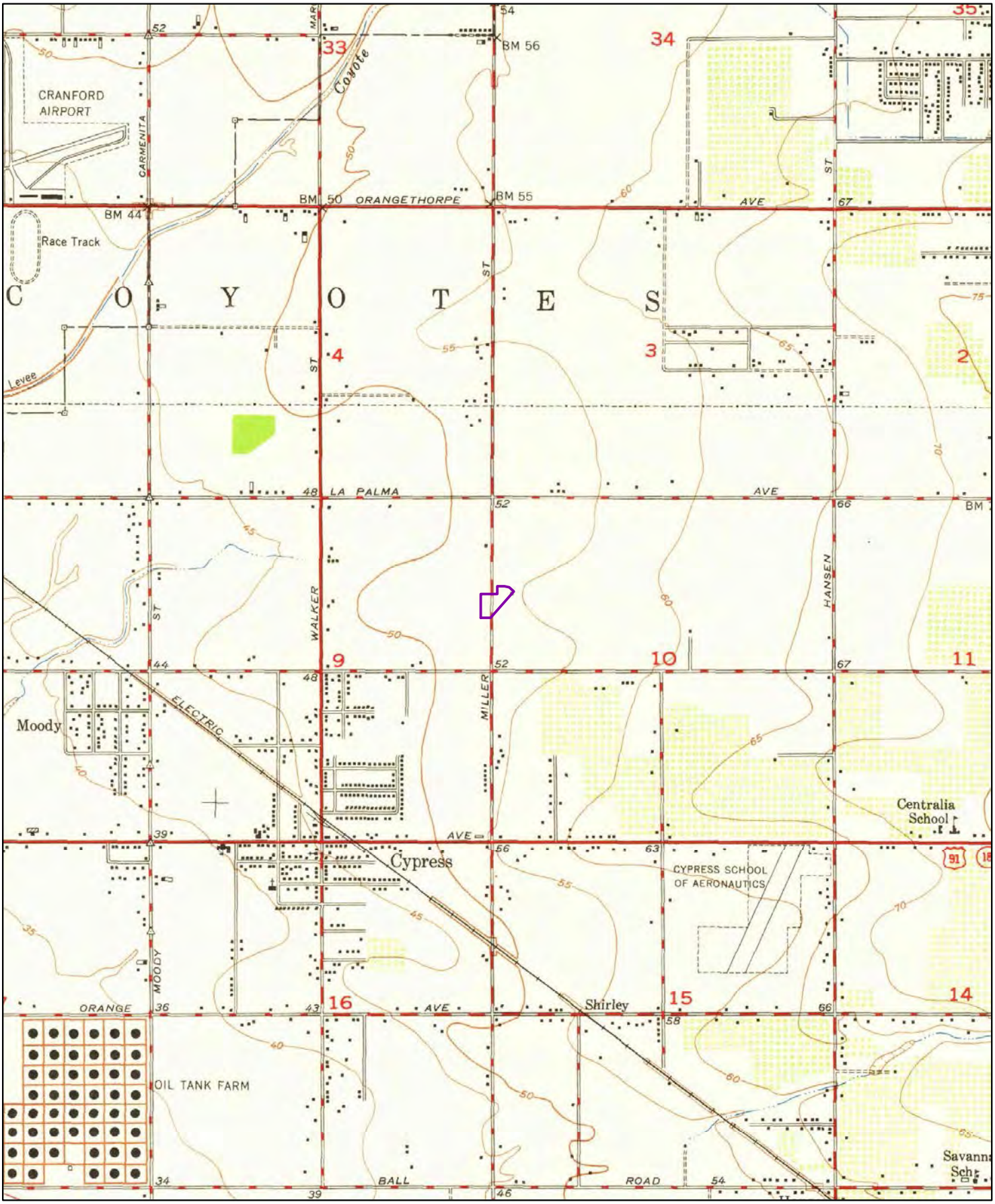
0 0.2 0.4 0.8 Miles

Order No. 20191115287

Quadrangle(s): Los Alamitos,CA

Source: USGS 7.5 Minute Topographic Map

ERIS ENVIRONMENTAL RISK INFORMATION SERVICES



1949

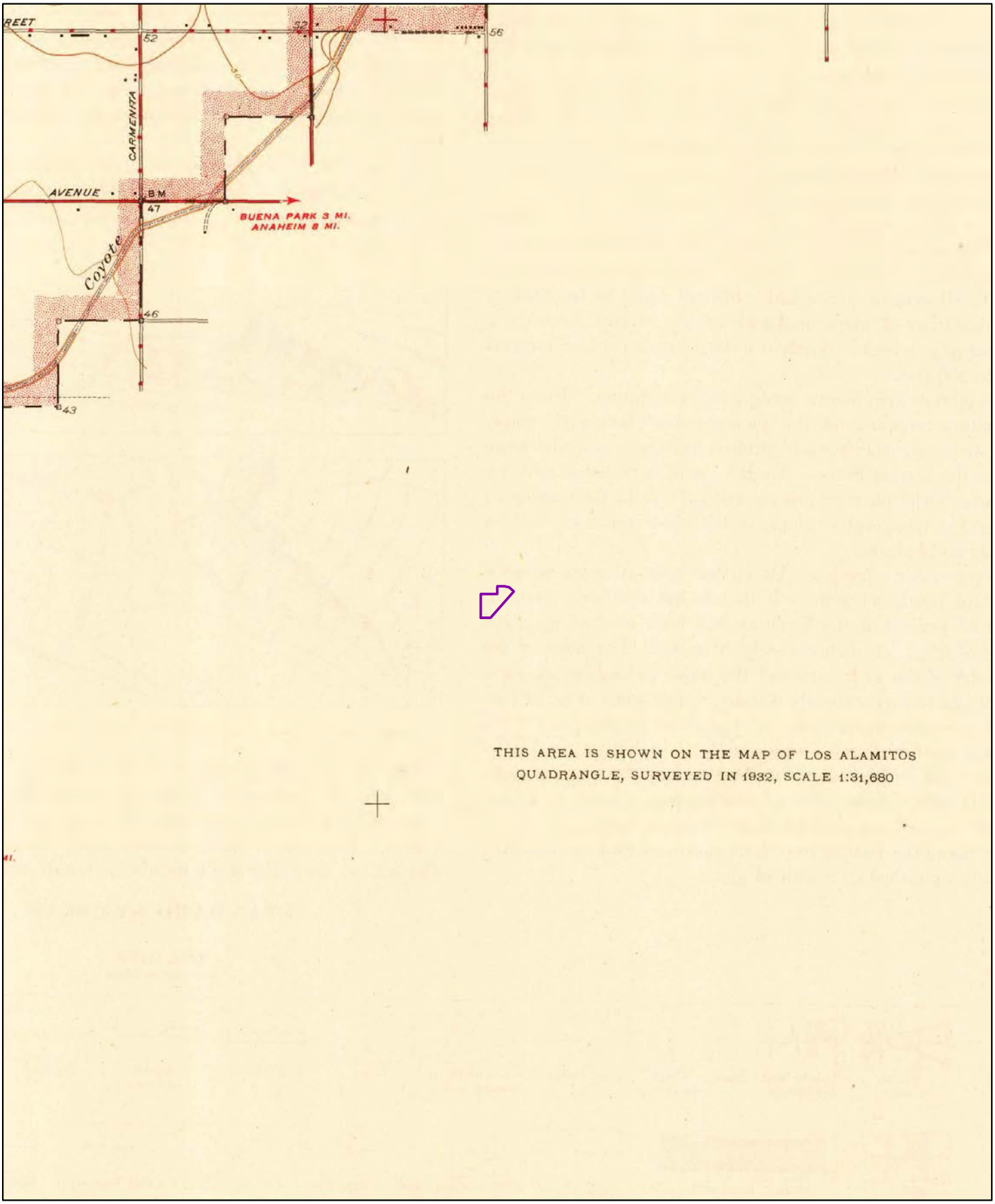
0 0.2 0.4 0.8 Miles

Order No. 20191115287

Quadrangle(s): Los Alamitos,CA

Source: USGS 7.5 Minute Topographic Map

ERIS ENVIRONMENTAL RISK INFORMATION SERVICES



1945

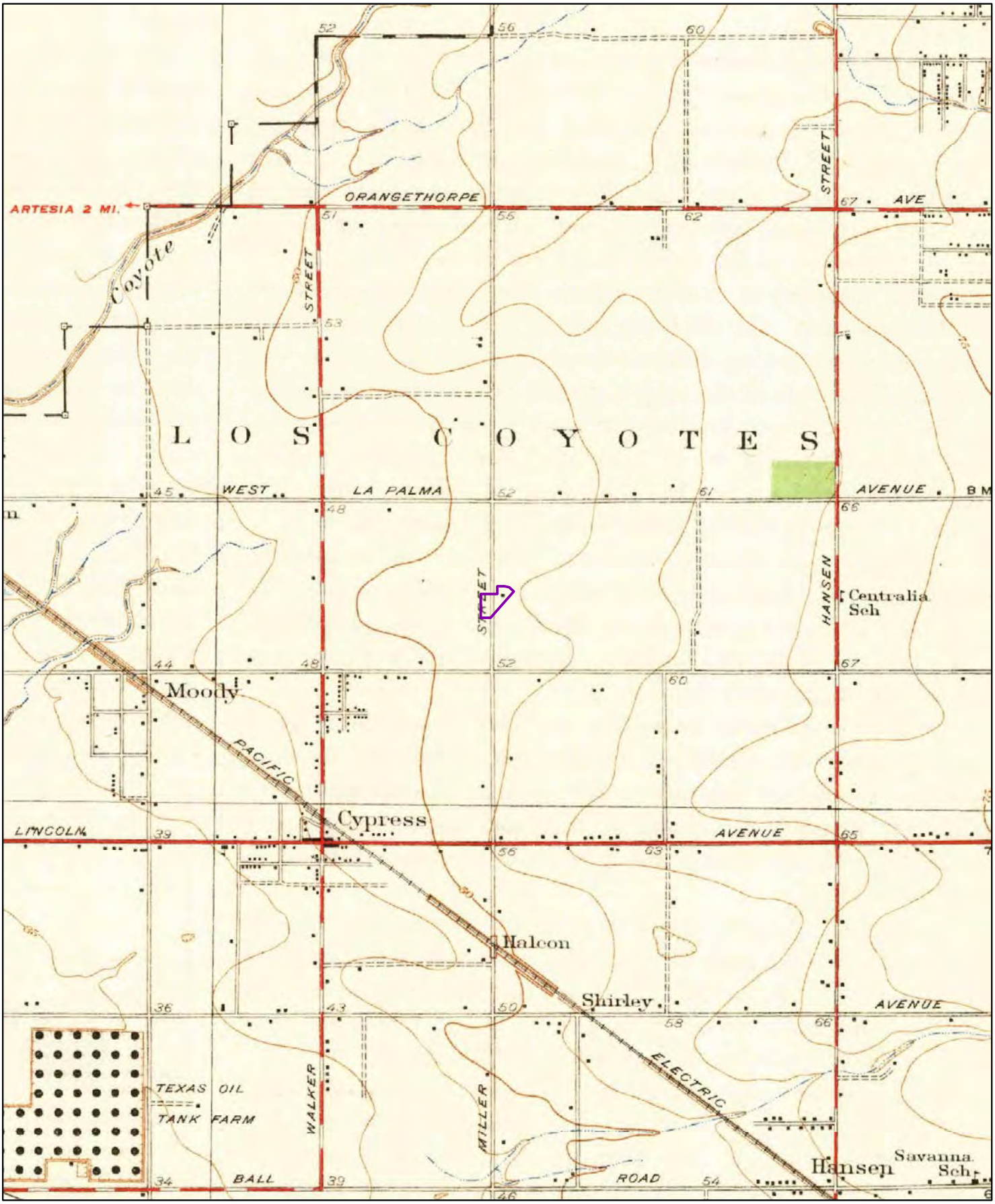
0 0.2 0.4 0.8 Miles

Order No. 20191115287

Quadrangle(s): Artesia,CA

Source: USGS 7.5 Minute Topographic Map

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES



1935

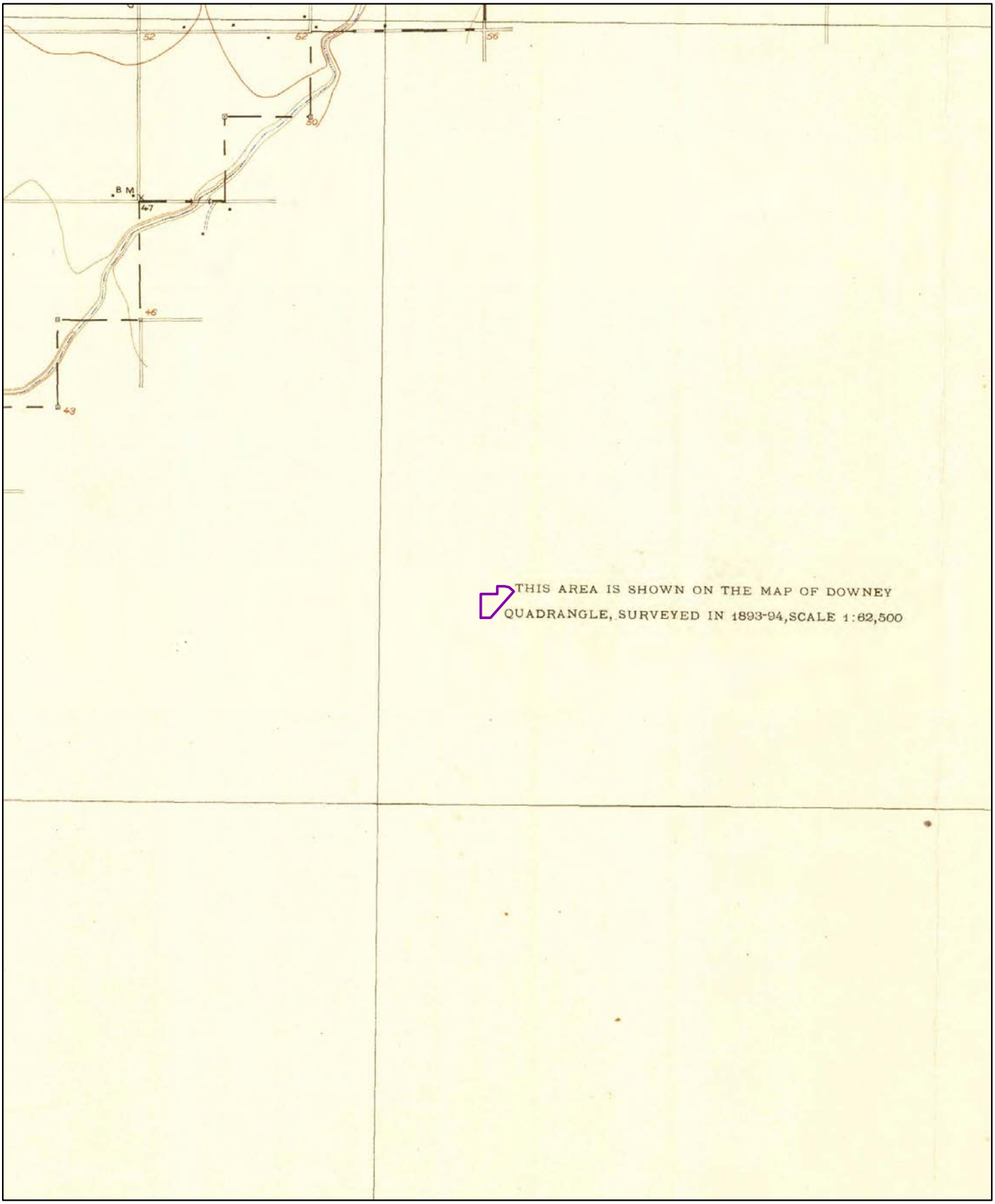
0 0.2 0.4 0.8 Miles

Order No. 20191115287

Quadrangle(s): Los Alamitos,CA

Source: USGS 7.5 Minute Topographic Map

ERIS ENVIRONMENTAL RISK INFORMATION SERVICES



1925

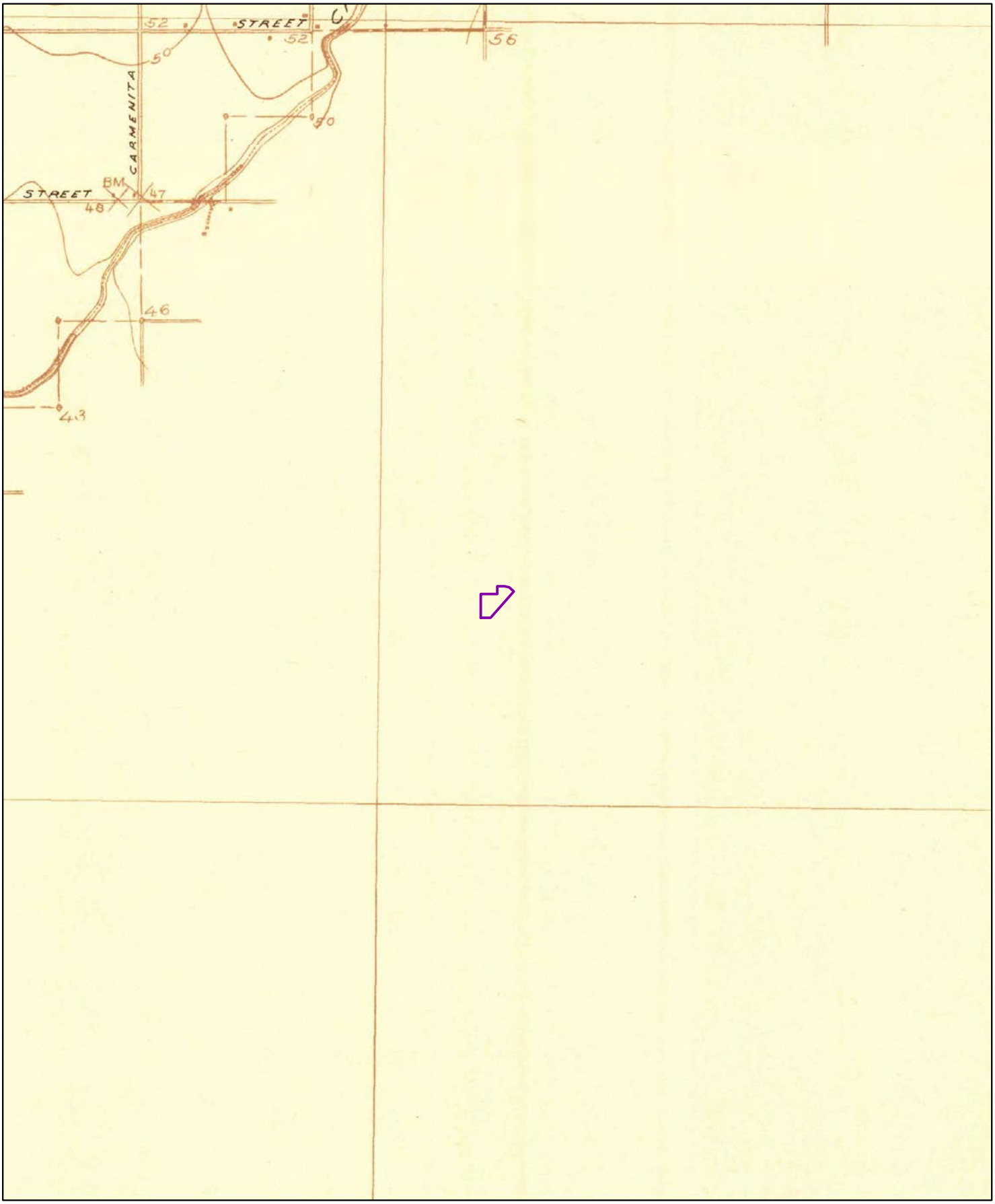
0 0.2 0.4 0.8 Miles

Order No. 20191115287

Quadrangle(s): Artesia,CA

Source: USGS 7.5 Minute Topographic Map

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES



1923

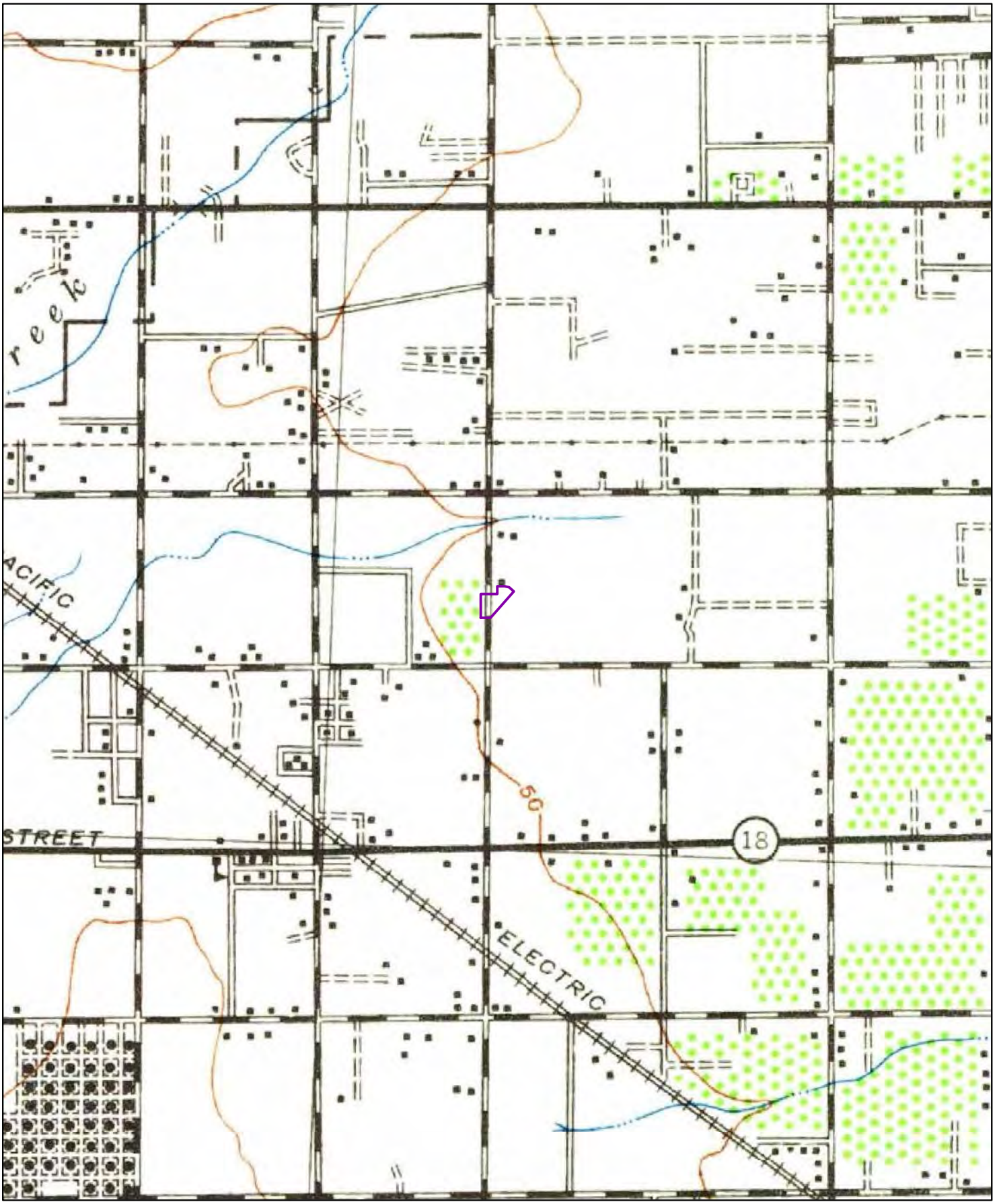
0 0.2 0.4 0.8 Miles

Order No. 20191115287

Quadrangle(s): Artesia,CA

Source: USGS 7.5 Minute Topographic Map

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES



1943

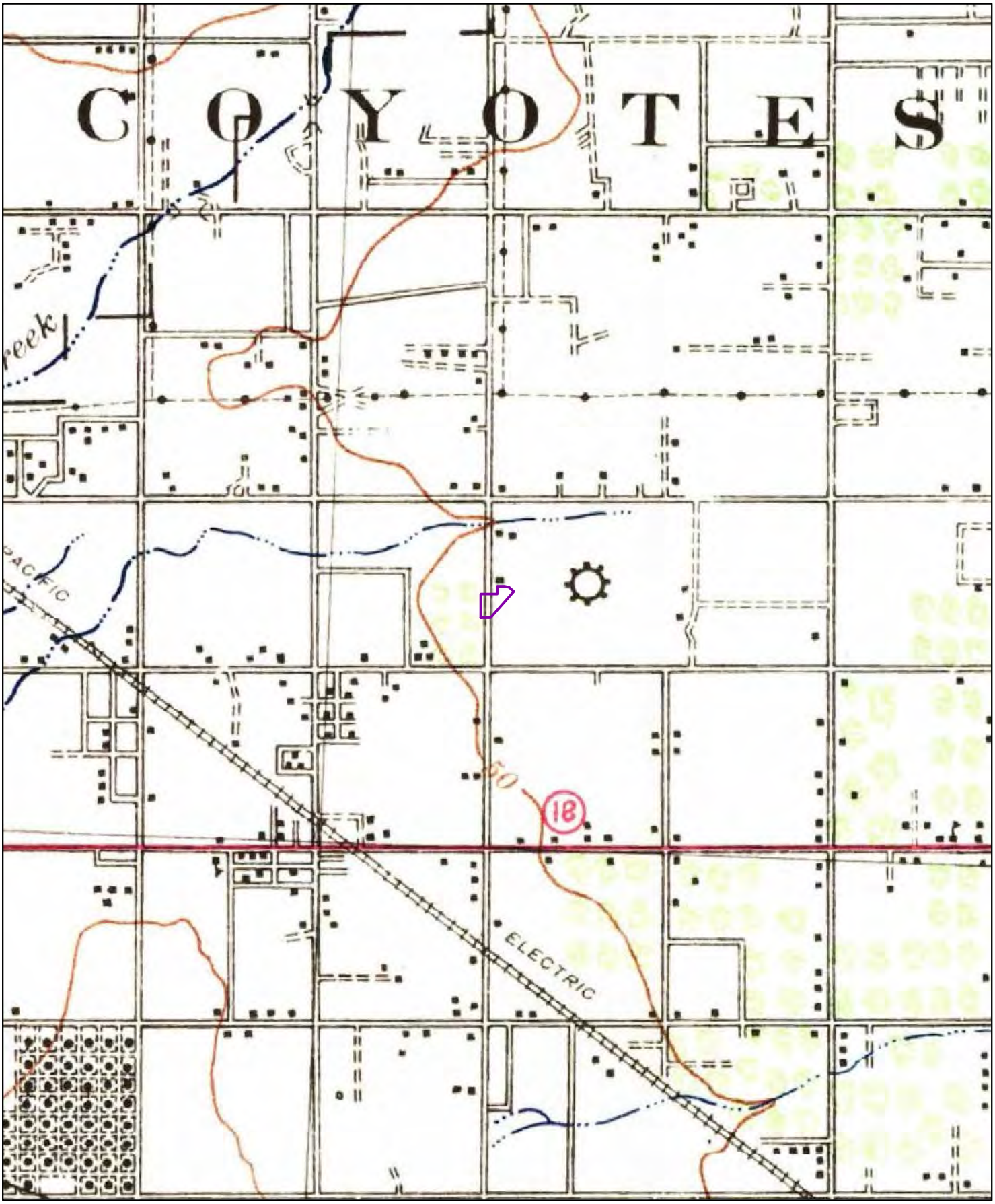
0 0.2 0.4 0.8 Miles

Order No. 20191115287

Quadrangle(s): Downey,CA

Source: USGS 15 Minute Topographic Map

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES



1942

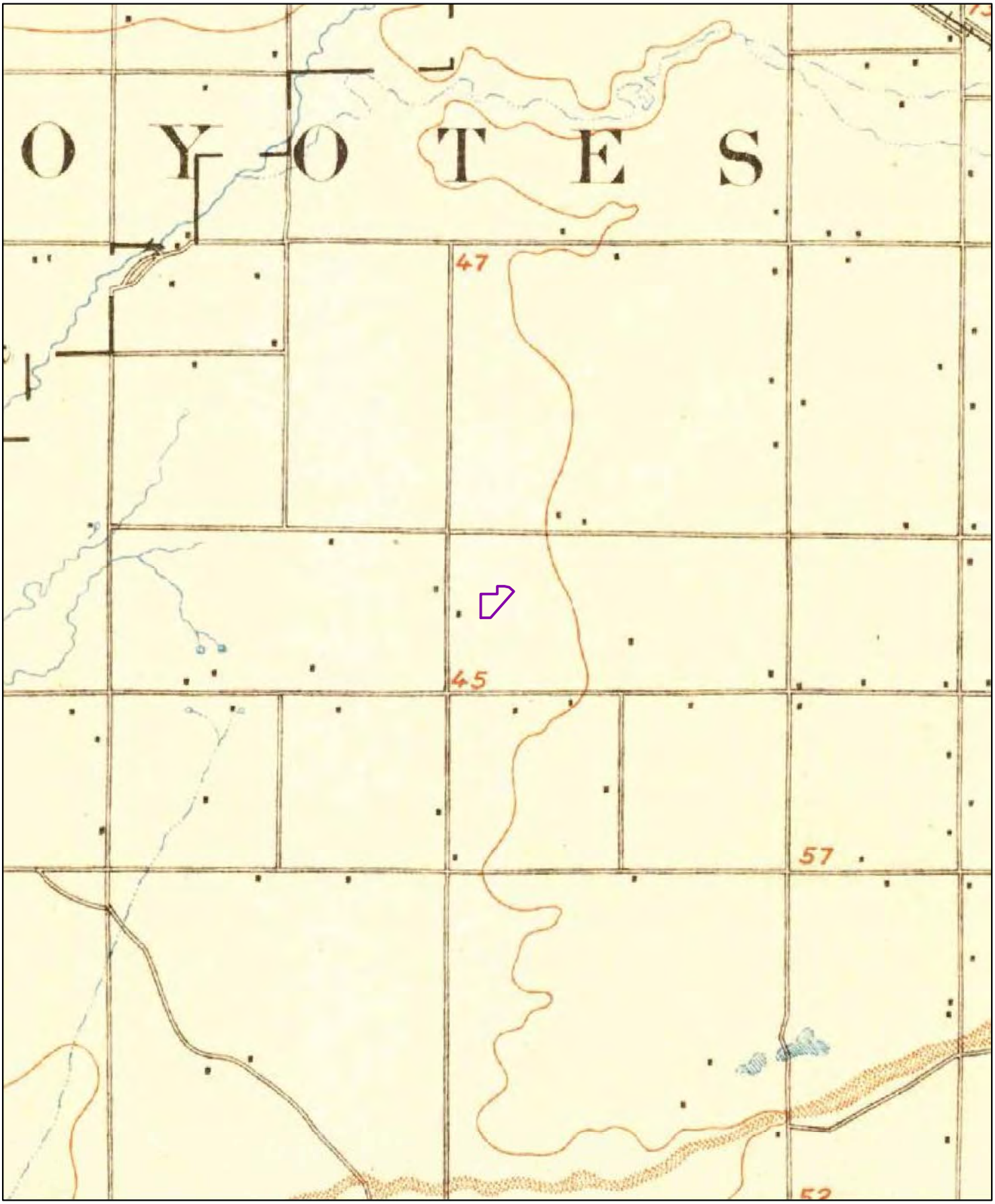
0 0.2 0.4 0.8 Miles

Order No. 20191115287

Quadrangle(s): Downey,CA

Source: USGS 15 Minute Topographic Map

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES



1902

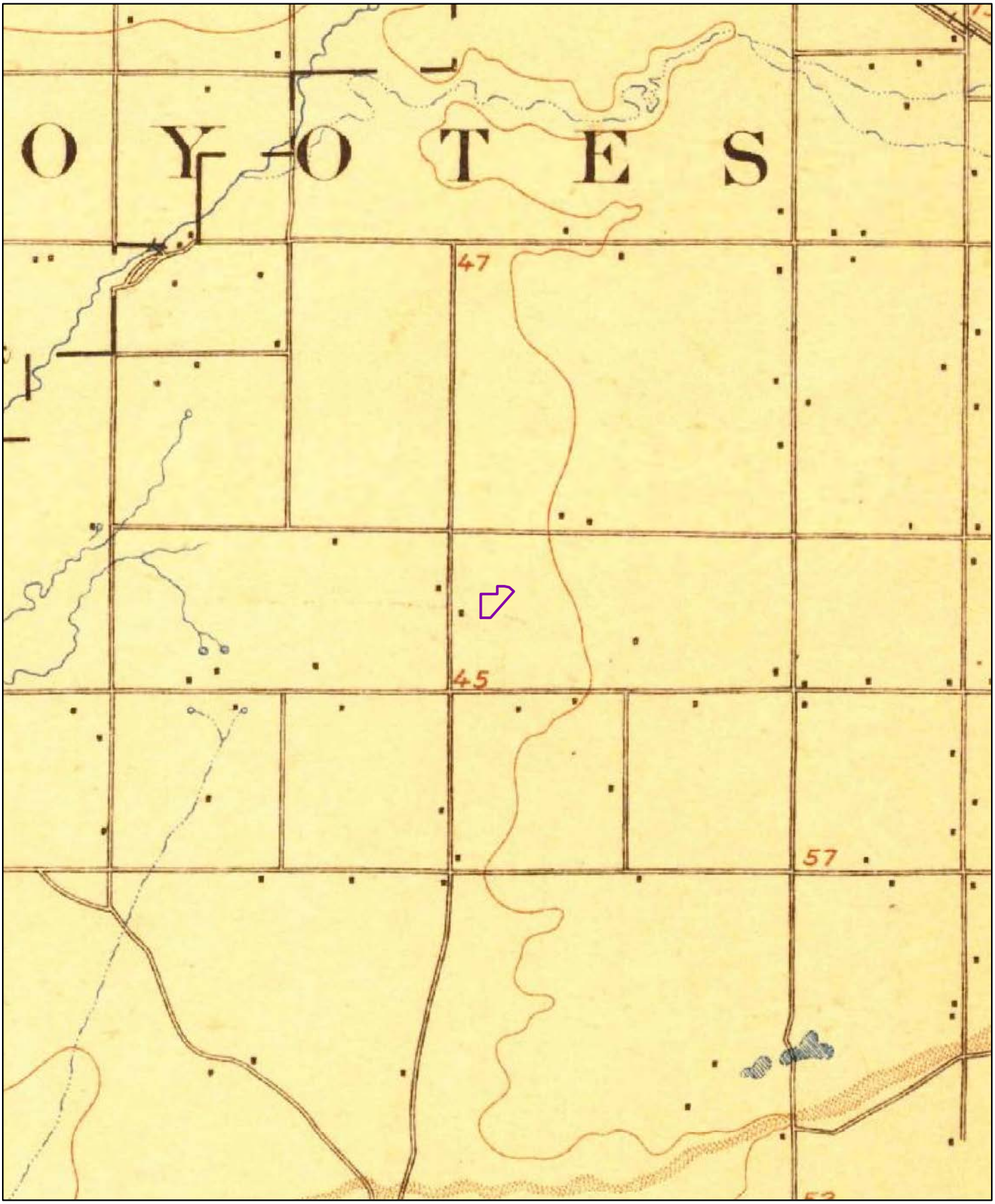
0 0.2 0.4 0.8 Miles

Order No. 20191115287

Quadrangle(s): Downey,CA

Source: USGS 15 Minute Topographic Map

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES



1899

0 0.2 0.4 0.8 Miles

Order No. 20191115287

Quadrangle(s): Downey,CA

Source: USGS 15 Minute Topographic Map

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

1896

0 0.2 0.4 0.8 Miles

Order No. 20191115287

Quadrangle(s): Downey,CA

Source: USGS 15 Minute Topographic Map

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

ENVIRONMENTAL RISK INFORMATION SERVICES

FIRE INSURANCE MAPS

Project Property:	National CORE - Valley View Street 8300 Valley View Street Buena Park CA 90620
Project No:	19-42-205-01
Requested By:	Converse Consultants
Order No:	20191115287
Date Completed:	November 17, 2019

Please note that no information was found for your site or adjacent properties.

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

ENVIRONMENTAL RISK INFORMATION SERVICES

CITY DIRECTORY

Project Property:	*National CORE - Valley View Street* *8300 Valley View Street* *Buena Park, CA 90620*
Project No:	*19-42-205-01*
Requested By:	*Converse Consultants*
Order No:	*20191115287*
Date Completed:	*November 20, 2019*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

November 20, 2019
RE: CITY DIRECTORY RESEARCH
National CORE - Valley View Street
8300 Valley View Street Buena Park, CA

Thank you for contacting ERIS for an City Directory Search for the site described above. Our staff has conducted a reverse listing City Directory search to determine prior occupants of the subject site and adjacent properties. We have provided the nearest addresses(s) when adjacent addresses are not listed. If we have searched a range of addresses, all addresses in that range found in the Directory are included.

Note: Reverse Listing Directories generally are focused on more highly developed areas. Newly developed areas may be covered in the more recent years, but the older directories will tend to cover only the "central" parts of the city. To complete the search, we have either utilized the ACPL, Library of Congress, State Archives, and/or a regional library or history center as well as multiple digitized directories. These do not claim to be a complete collection of all reverse listing city directories produced.

ERIS has made every effort to provide accurate and complete information but shall not be held liable for missing, incomplete or inaccurate information. To complete this search we used the general range(s) below to search for relevant findings. If you believe there are additional addresses or streets that require searching please contact us at 866-517-5204.

Search Criteria:
8200-8400 of Valley View Street

Search Results Summary

Date	Source	Comment
2018	DIGITAL BUSINESS DIRECTORY	
2014	DIGITAL BUSINESS DIRECTORY	
2010	DIGITAL BUSINESS DIRECTORY	
2006	DIGITAL BUSINESS DIRECTORY	
2002	DIGITAL BUSINESS DIRECTORY	
1998	DIGITAL BUSINESS DIRECTORY	
1995	HAINES	
1991	HAINES	
1987	HAINES	
1981	HAINES	
1974	HAINES	
1970	STREET ADDRESS DIRECTORY	
1964	STREET ADDRESS DIRECTORY	
1959	STREET ADDRESS DIRECTORY	
1955	STREET ADDRESS DIRECTORY	

2018
SOURCE: DIGITAL BUSINESS DIRECTORY

VALLEY VIEW STREET

8300 **ST JOSEPH'S EPISCOPAL CHURCH**...*Churche*
8377 **CARRILLO'S TOWING**...*Motor Vehicle Towi*

2014
SOURCE: DIGITAL BUSINESS DIRECTORY

VALLEY VIEW STREET

8300 **ST JOSEPH'S EPISCOPAL CHURCH**...*Religio*
8392 **ECA DENTAL**...*Offices Of Dentists*
8392 **GUEVARA, GABRIEL L DDS**...*Offices Of De*

2010
SOURCE: DIGITAL BUSINESS DIRECTORY

VALLEY VIEW STREET

8246 **BAN SULK METHODIST CHURCH**...*Religious*
8300 **ST JOSEPHS EPISCOPAL CHURCH**...*Religiou*

2006
SOURCE: DIGITAL BUSINESS DIRECTORY

VALLEY VIEW STREET

8246 **BAN SULK METHODIST CHURCH**...*Religious*
8300 **ST JOSEPHS EPISCOPAL CHURCH**...*Religiou*

2002
SOURCE: DIGITAL BUSINESS DIRECTORY

VALLEY VIEW STREET

8246 **BAN SULK METHODIST CHURCH**...
8300 **ST JOSEPH'S EPISCOPAL CHURCH**...

1998
SOURCE: DIGITAL BUSINESS DIRECTORY

VALLEY VIEW STREET

8246 **CHURCH IN CYPRESS THE**...
8300 **EPISCOPAL CHURCH OF ST JOSEPH**...*Religi*
8300 **ST JOSEPHS EPISCOPAL CHURCH**...*Religiou*
8300 **TRINITY CHINESE MENNONITE CHURCH**...*Rel*

1995
SOURCE: HAINES

VALLEY VIEW STREET

8195 XXXX
8207 HATHAWAY WILLIAM
8219 TOWNSEND J E
8246 CHURCH IN CYPRESS
8270 XXXX
8281 REYNA SABAS
8293 RUCK J ROBERT
8300 EPISCOPAL CH
8300 ST JOSEPHS EPISCOPL
8300 TRINITY CHINESE
8305 PAYUMOM
8317 GOMEZ FLORENCIO
8329 DAVIS BOB
8341 XXXX
8353 LEE KYU OCK
8365 HANTULA KENNETH
8377 CARRILLO CARLOS
8382 EHLERS WALTER
8389 PULIDO DANIEL
8392 TATE JACK
8401 ROMINES JOE
8402 GRAY ARTHUR

1991
SOURCE: HAINES

VALLEY VIEW STREET

8195 XXXX
8219 TOWNSEND J E
8246 CALDWELL SUSAN DOS
8246 CALDWELL TYD DOS
8270 XXXX
8281 XXXX
8293 HUCK J ROBERT
8300 EPISCOPAL CH
8300 ST JOSEPHS EPISCOPL
8305 PAYUMO M
8317 GOMEZ FLORENCIO
8329 DAVIS BOB
8341 BOATRIGHT D
8353 LEE KYU OCK
8377 CARRILLO CARLOS
8401 MERRICK JOSEPH
8413 WEIS HANH T

1987
SOURCE: HAINES

VALLEY VIEW STREET

8195 KAUFMAN PERAY
8219 TOWNSEND J E
8246 CALDWELL S 6 DDS
8246 CALDWELL TY D DDS
8246 SAYAGE RICHARD DDS
8270 XXXX
8281 XXXX
8293 HUCK J ROBERT
8300 EPISCPL CH ST JOS
8300 ST ANSELMS IMMIGRNT
8300 ST JOSEPHS EPISCOPL
8305 KRAFT EDW
8317 GOMEZ FLORENCIO
8329 DAVIS BOB
8341 WELCH RANDY
8353 LEE KYU OCK
8365 TAYLOR MICHAEL F
8377 XXXX
8401 BARNETT CHAS

1981
SOURCE: HAINES

VALLEY VIEW STREET

8169 YENALAVITCH LEO J
8219 TOWNSEND J E
8246 BRANDT ELDON E DDS
8246 LOOMIS ANDREW C
8246 SAVAGE RICHARD DDS
8270 XXXX
8281 DABBS ANTHONY J
8281 DABBS LEE
8293 HUCK J ROBERT
8300 EPISCPL CH ST JOS
8300 ST JOSEPH EPSCPL
8305 KRAFT EDW
8317 GOMEZ FLORENCIO
8329 DAVIS BOB
8341 XXXX
8353 LEE KYU OCK
8365 TAYLOR MICHAEL F
8389 STOUT MAX
8401 BARNETT CHAS

1974
SOURCE: HAINES

VALLEY VIEW STREET

8169 YENALAVITCH LEO J
8219 TOWNSEND J E
8246 BRANDT ELOON E DOS
8246 SAVAGE RICHARD DDS
8281 JINKS CHAS P
8293 HUCK J ROBERT
8300 EPISCOPAL CH ST JOS
8300 MONTESSRI SCHOOL
8300 ST JOSEPHS EPSCPL
8305 KRAFT EDH
8317 GOMEZ FLORENCIO
8329 DAVIS BOB
8341 NELSON BOYD E
8365 MCVICKER JAS
8389 STOUT MAX
8392 ROBERTSON HERBERT
8402 XXXX

1970
SOURCE: STREET ADDRESS DIRECTORY

VALLEY VIEW STREET

8169 YENALAVITCH LEO J
8219 TOWNSEND J E
8293 HUCK J ROBT
8300 ST JOSEPH ' S EPISCOP CHURCH
8305 KRAFT EDW
8317 GOMEZ FLORENCIO
8329 DAVIS BOB
8341 HILBERT J L
8365 MC VICKER JAS
8389 EDMONDSON LUTHER E
8392 ROBERTSON HERBERT A
8402 BRIDGES JULLE

1964
SOURCE: STREET ADDRESS DIRECTORY

VALLEY VIEW STREET

7795 **WESTRA ED J**
7805 **WESTRA JAKE J**
7990 **FAUGHT T CHEVRN SERV**

1959
SOURCE: STREET ADDRESS DIRECTORY

VALLEY VIEW STREET

NO LISTINGS IN RANGE

1955
SOURCE: STREET ADDRESS DIRECTORY

VALLEY VIEW STREET

NO LISTINGS IN RANGE

--- END REPORT ---

ENVIRONMENTAL RISK INFORMATION SERVICES

HISTORICAL AERIALS

Project Property: National CORE - Valley View Street
8300 Valley View Street
Buena Park CA 90620

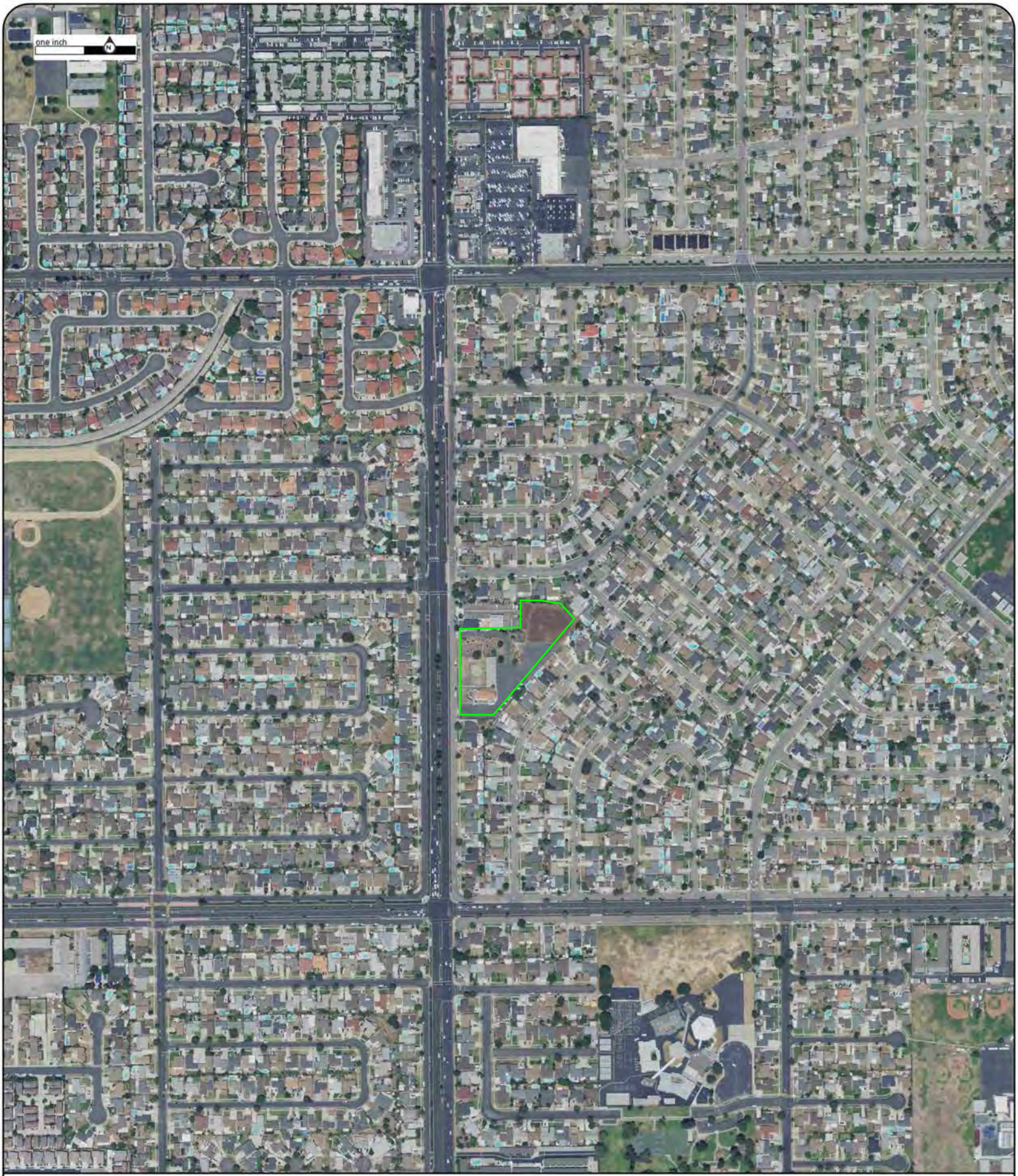
Requested By: Converse Consultants

Order No: 20191115287

Data Completed: November 20,2019

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

Date	Source	Source Scale	Comments
2018	National Agriculture Information Program	1" to 500'	
2016	National Agriculture Information Program	1" to 500'	
2014	National Agriculture Information Program	1" to 500'	
2012	National Agriculture Information Program	1" to 500'	
2010	National Agriculture Information Program	1" to 500'	
2009	National Agriculture Information Program	1" to 500'	
2005	National Agriculture Information Program	1" to 500'	
2002	US Geological Survey	1" to 500'	
1994	US Geological Survey	1" to 500'	
1988	National High Altitude Photography	1" to 500'	
1981	US Department of Agriculture	1" to 500'	
1972	US Geological Survey	1" to 500'	
1963	US Geological Survey	1" to 500'	
1960	Private Company	1" to 500'	
1952	Agriculture and Soil Conservation Service	1" to 500'	
1947	Private Company	1" to 500'	
1942	Private Company	1" to 500'	
1938	Agriculture and Soil Conservation Service	1" to 500'	

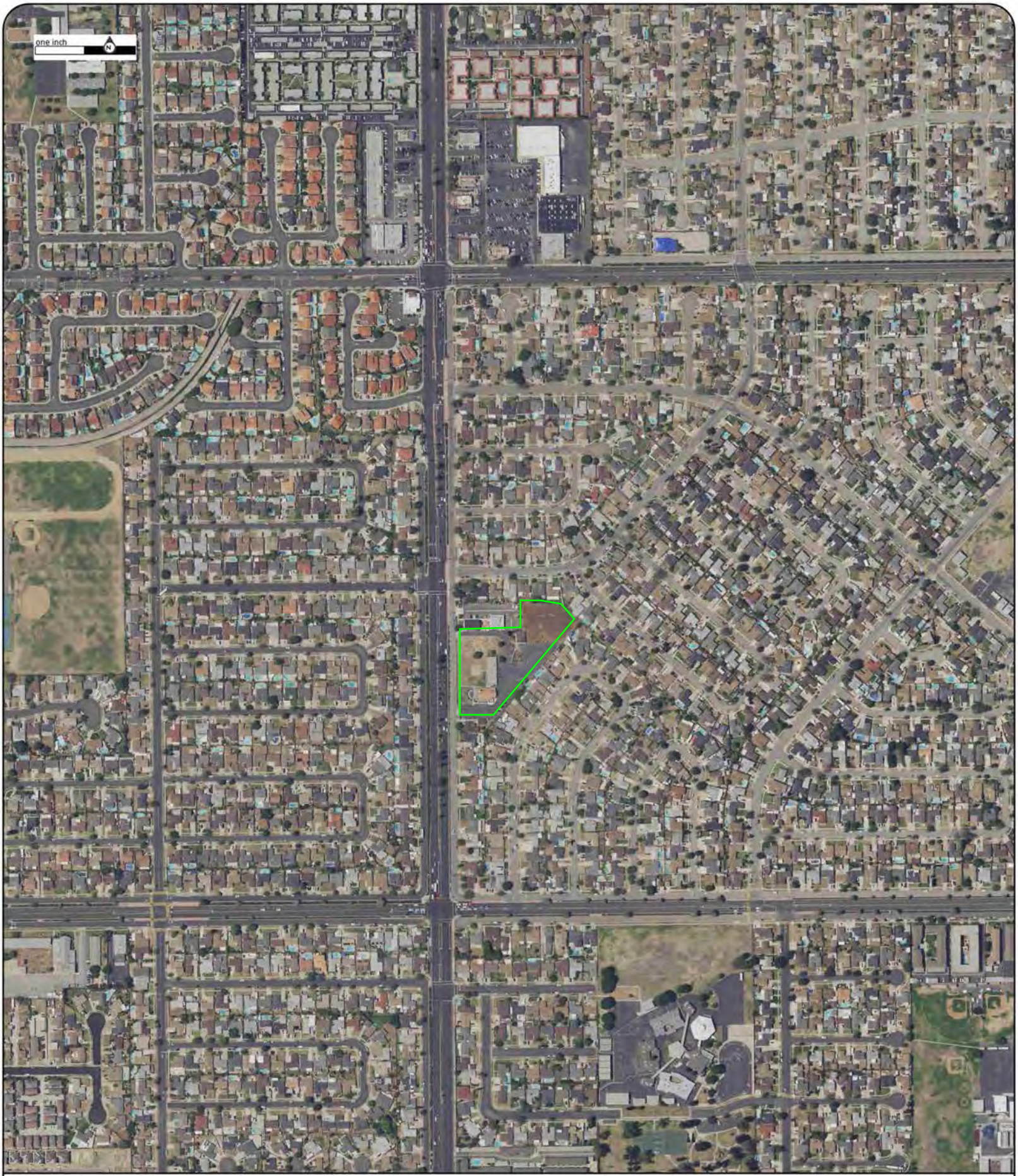


Year:2018
Source:NAIP
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

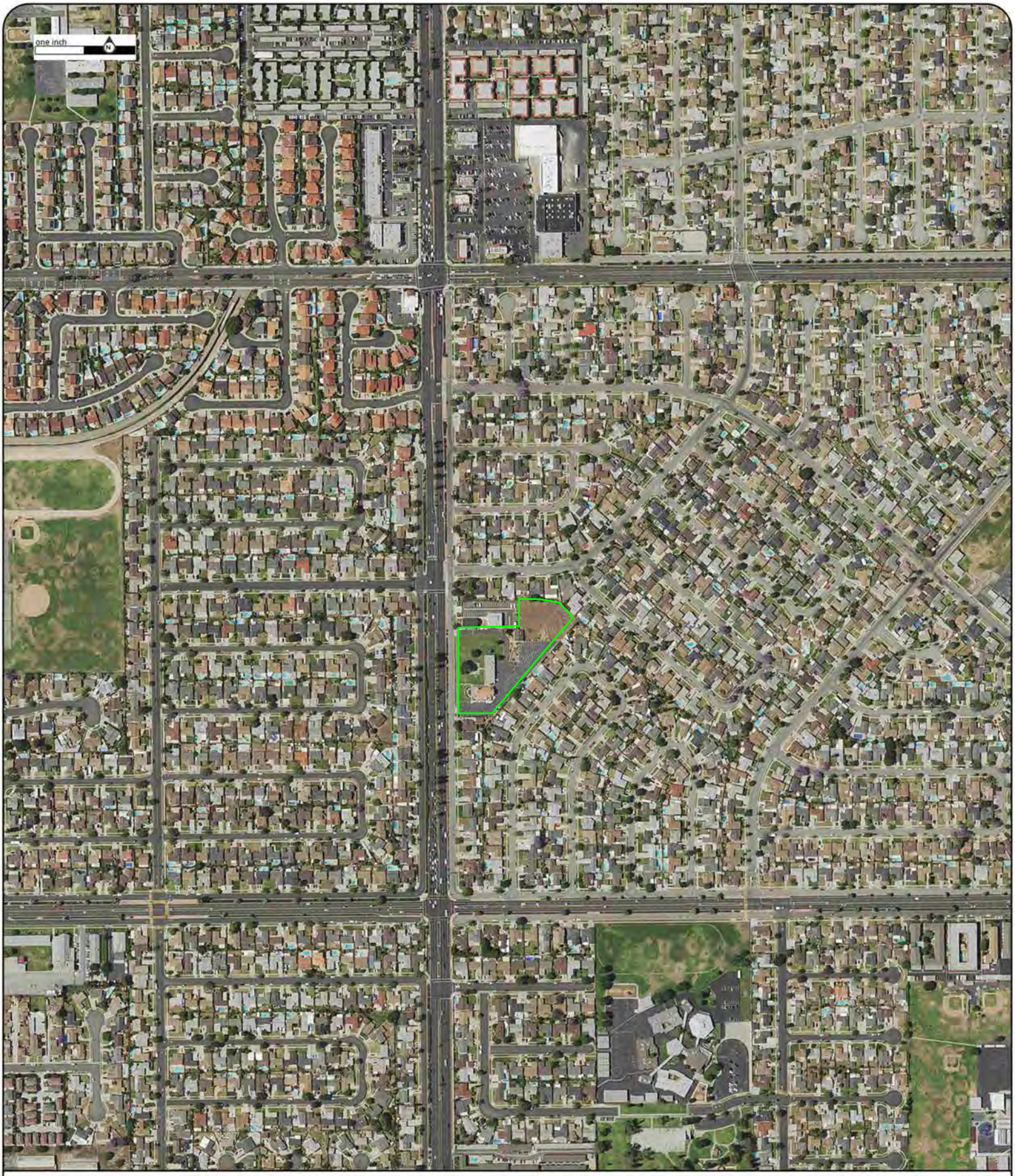


Year:2016
Source:NAIP
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ENVIRONMENTAL RISK INFORMATION SERVICES

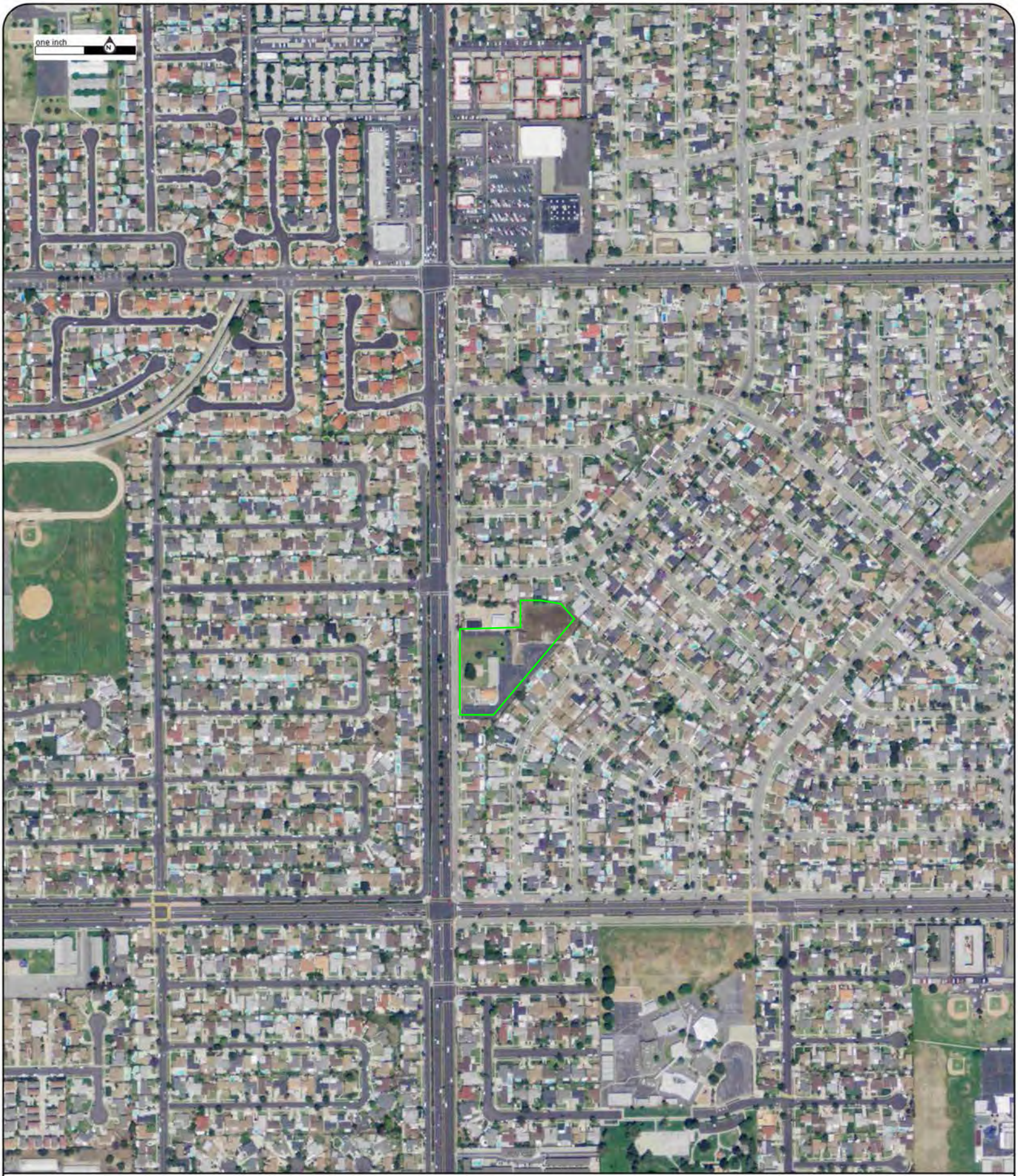


Year:2014
Source:NAIP
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

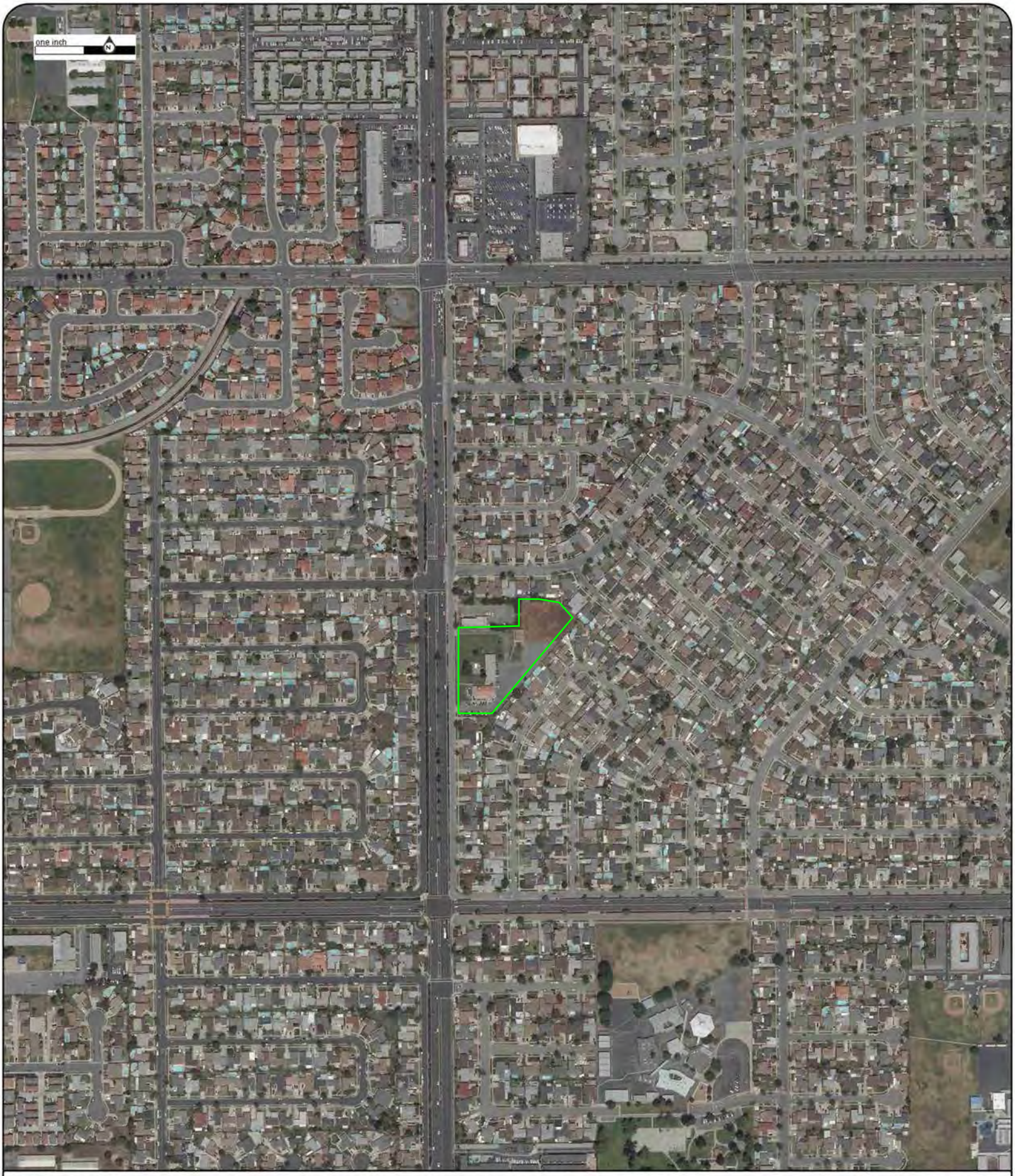


Year:2012
Source:NAIP
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ENVIRONMENTAL RISK INFORMATION SERVICES



Year:2010
Source:NAIP
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

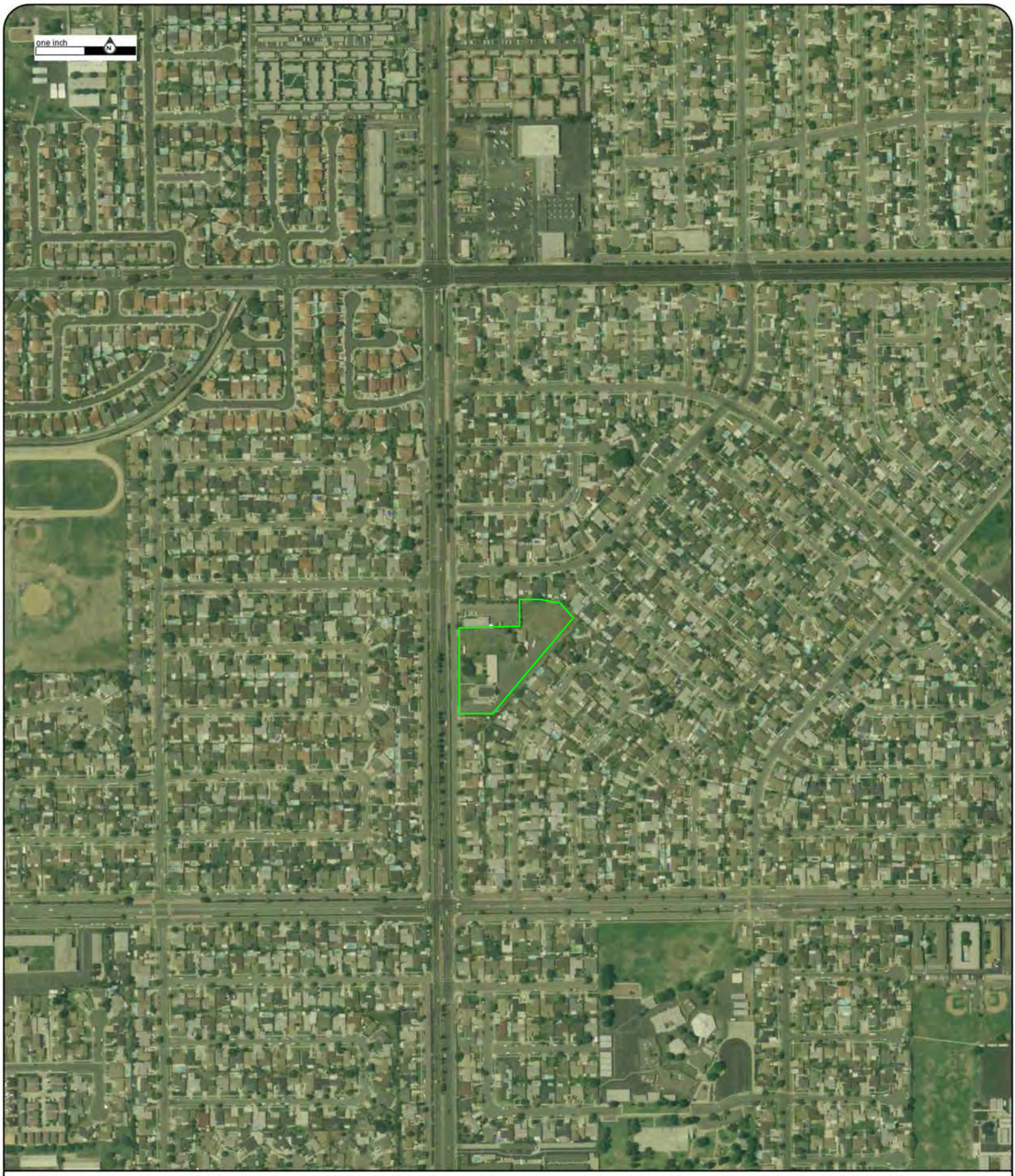
ENVIRONMENTAL RISK INFORMATION SERVICES

Year:2009
Source:NAIP
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ENVIRONMENTAL RISK INFORMATION SERVICES



Year:2005
Source:NAIP
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Year:2002
Source:USGS
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ENVIRONMENTAL RISK INFORMATION SERVICES

Year:1994
Source:USGS
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ENVIRONMENTAL RISK INFORMATION SERVICES

Year:1988
Source:NHAP
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Year:1981
Source:USDA
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ENVIRONMENTAL RISK INFORMATION SERVICES

Year:1972
Source:USGS
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Year:1963
Source:USGS
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ENVIRONMENTAL RISK INFORMATION SERVICES

Year:1960
Source:FAIRCHILD
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ENVIRONMENTAL RISK INFORMATION SERVICES

Year:1952
Source:ASCS
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ENVIRONMENTAL RISK INFORMATION SERVICES

Year:1947
Source:FAIRCHILD
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

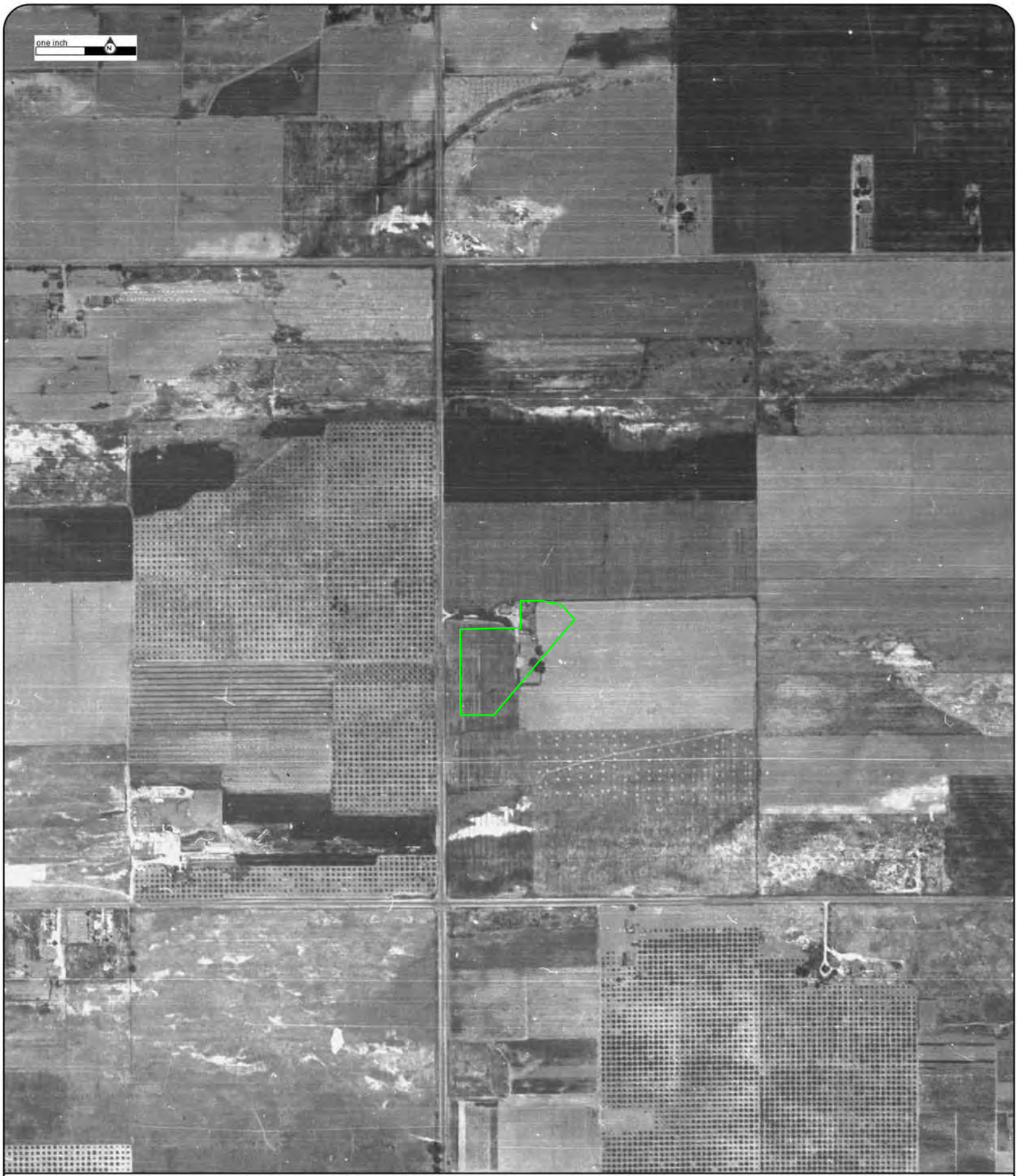
ENVIRONMENTAL RISK INFORMATION SERVICES

Year:1942
Source:FAIRCHILD
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ENVIRONMENTAL RISK INFORMATION SERVICES



Year:1938
Source:ASCS
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ENVIRONMENTAL RISK INFORMATION SERVICES

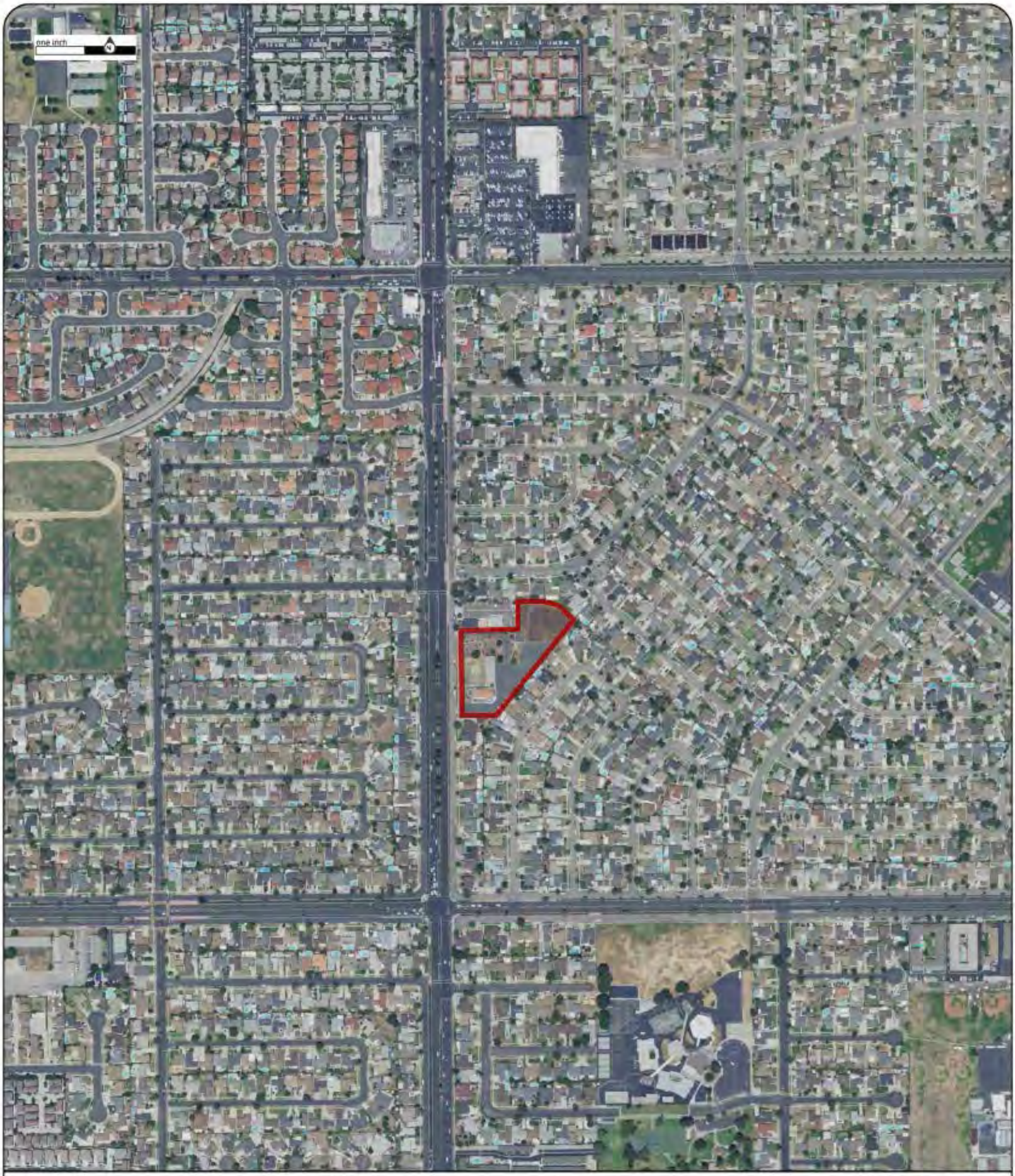
ENVIRONMENTAL RISK INFORMATION SERVICES

HISTORICAL AERIALS

Project Property:	National CORE - Valley View Street 8300 Valley View Street Buena Park CA 90620
Requested By:	Converse Consultants
Order No:	20191115287
Data Completed:	November 20,2019

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

Date	Source	Source Scale	Comments
2018	National Agriculture Information Program	1" to 500'	
2016	National Agriculture Information Program	1" to 500'	
2014	National Agriculture Information Program	1" to 500'	
2012	National Agriculture Information Program	1" to 500'	
2010	National Agriculture Information Program	1" to 500'	
2009	National Agriculture Information Program	1" to 500'	
2005	National Agriculture Information Program	1" to 500'	
2002	US Geological Survey	1" to 500'	
1994	US Geological Survey	1" to 500'	
1988	National High Altitude Photography	1" to 500'	
1981	US Department of Agriculture	1" to 500'	
1972	US Geological Survey	1" to 500'	
1963	US Geological Survey	1" to 500'	
1960	Private Company	1" to 500'	
1952	Agriculture and Soil Conservation Service	1" to 500'	
1947	Private Company	1" to 500'	
1942	Private Company	1" to 500'	
1938	Agriculture and Soil Conservation Service	1" to 500'	



Year:2018
Source:NAIP
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

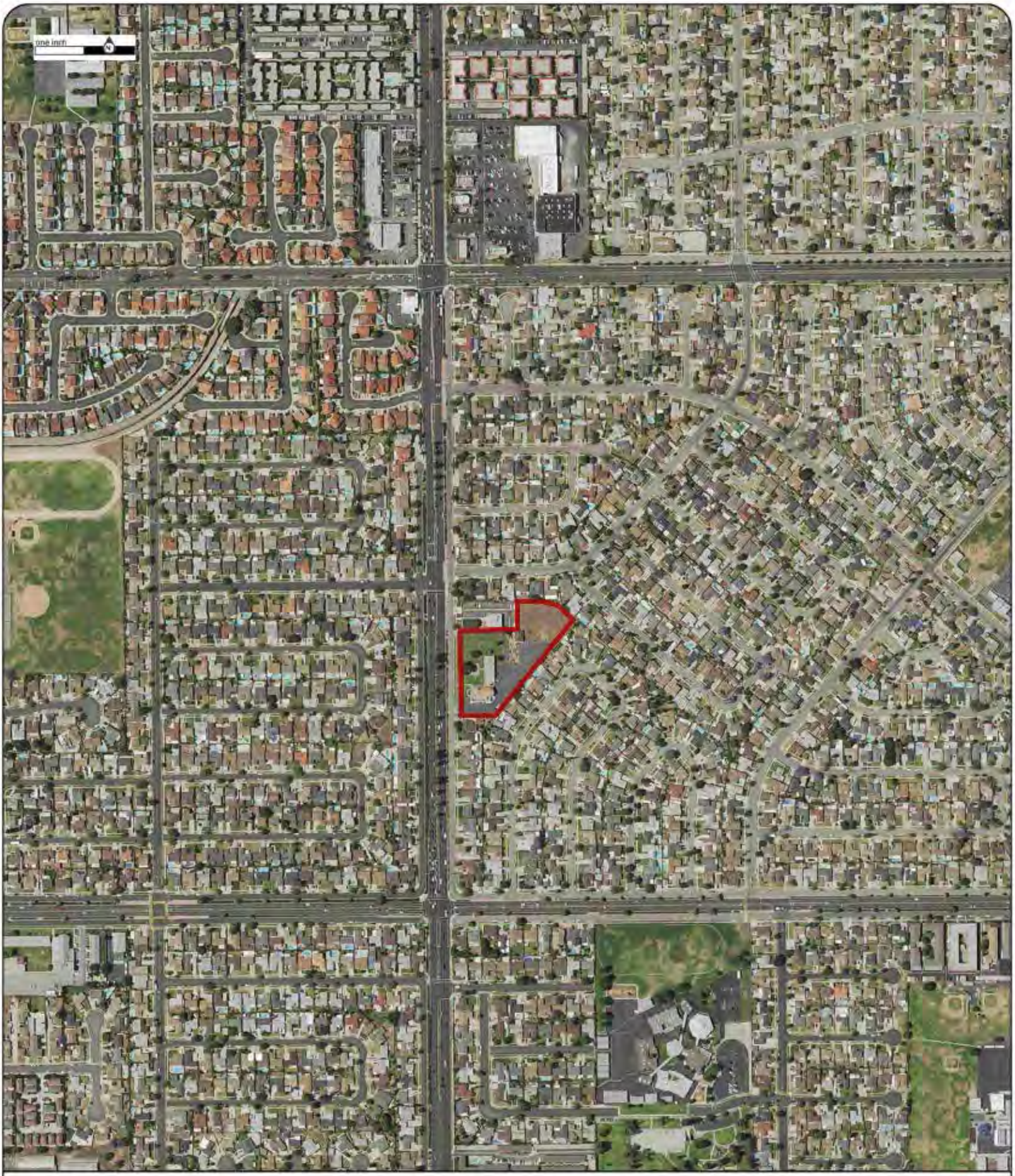
ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Year:2016
Source:NAIP
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES



Year:2014
Source:NAIP
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Year:2012
Source:NAIP
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Year:2010
Source:NAIP
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

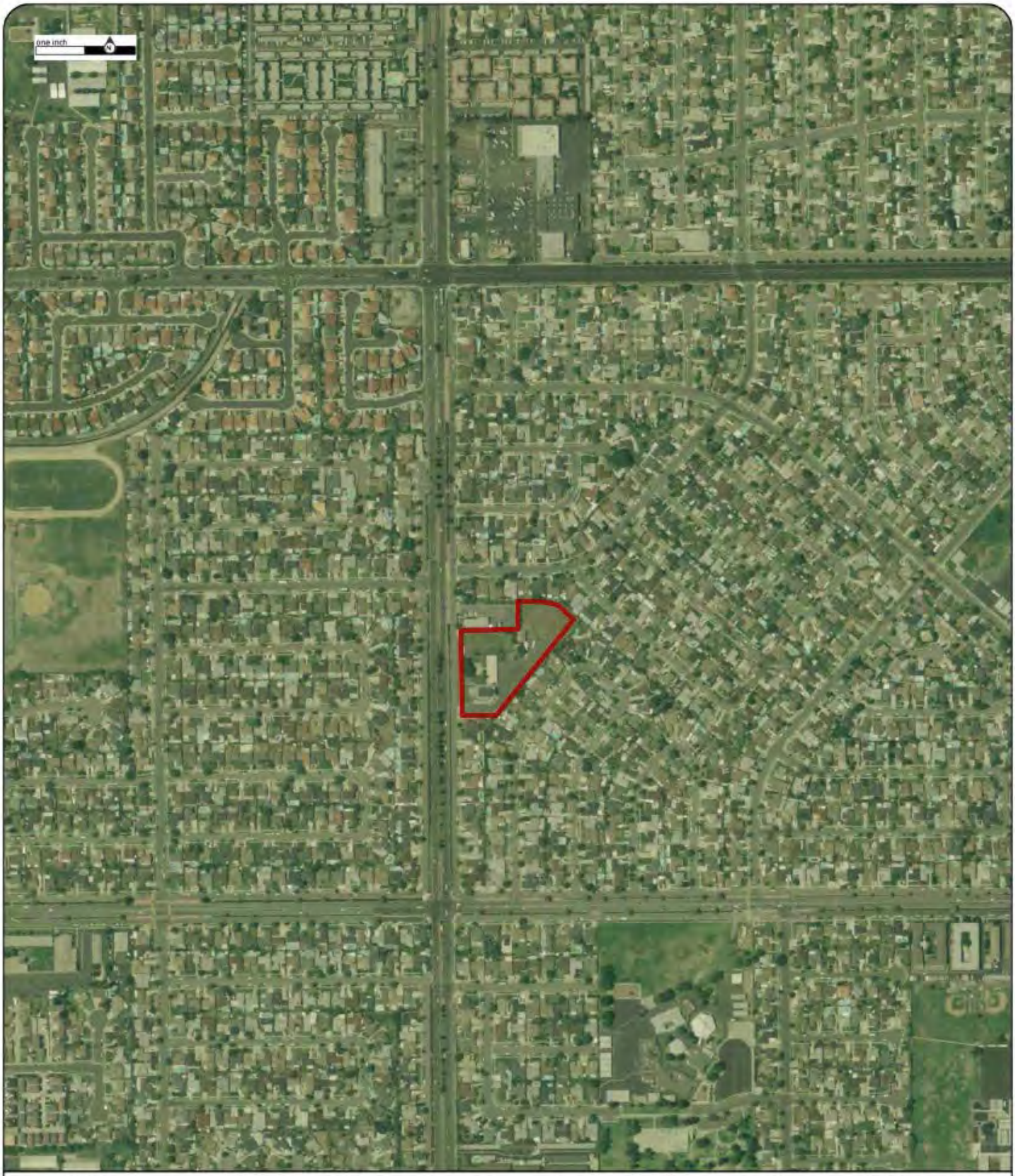
ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Year:2009
Source:NAIP
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES



Year:2005
Source:NAIP
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Year:2002
Source:USGS
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Year:1994
Source:USGS
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Year:1988
Source:NHAP
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Year:1981
Source:USDA
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Year:1972
Source:USGS
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Year:1963
Source:USGS
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Year:1960
Source:FAIRCHILD
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Year:1952
Source:ASCS
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Year:1947
Source:FAIRCHILD
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Year:1942
Source:FAIRCHILD
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Year:1938
Source:ASCS
Scale:1" to 500'
Comment:

Address:8300 Valley View Street,Buena Park,CA
Approx Center:33.84201353/-118.02749526

Order No:20191115287

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Appendix E - Regulatory Database Report

ENVIRONMENTAL RISK INFORMATION SERVICES

DATABASE REPORT

Project Property:	*National CORE - Valley View Street* *8300 Valley View Street* *Buena Park CA 90620*
Project No:	*19-42-205-01*
Report Type:	*Database Report*
Order No:	*20191115287*
Requested by:	*Converse Consultants*
Date Completed:	*November 18, 2019*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

Table of Contents

Executive Summary

Property Information:

Project Property:		*National CORE - Valley View Street* *8300 Valley View Street Buena Park CA 90620*
Project No:		*19-42-205-01*
Coordinates:		
	Latitude:	*33.842014*
	Longitude:	*-118.027495*
	UTM Northing:	*3,745,113.71*
	UTM Easting:	*404,935.79*
	UTM Zone:	*UTM Zone 11S*
Elevation:		*56 FT*

Order Information:

Order No:	*20191115287*
Date Requested:	*November 15, 2019*
Requested by:	*Converse Consultants*
Report Type:	*Database Report*

Historicals/Products:

Aerial Photographs	*Historical Aerials (Boundaries)*
City Directory Search	*CD - 2 Street Search*
ERIS Xplorer	*ERIS Xplorer*
Excel Add-On	*Excel Add-On*
Fire Insurance Maps	*US Fire Insurance Maps*
Physical Setting Report (PSR)	*Physical Setting Report (PSR)*
Topographic Map	*Topographic Maps*

Executive Summary: Report Summary

Database	Searched	Search Radius	Project Property	Within 0.12mi	.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
Standard Environmental Records								
Federal								
NPL	Y	1	0	0	0	0	0	0
PROPOSED NPL	Y	1	0	0	0	0	0	0
DELETED NPL	Y	.5	0	0	0	0	-	0
SEMS	Y	.5	0	0	0	0	-	0
SEMS ARCHIVE	Y	.5	0	0	0	0	-	0
ODI	Y	.5	0	0	0	0	-	0
CERCLIS	Y	.5	0	0	0	0	-	0
IODI	Y	.5	0	0	0	0	-	0
CERCLIS NFRAP	Y	.5	0	0	0	0	-	0
CERCLIS LIENS	Y	PO	0	-	-	-	-	0
RCRA CORRACTS	Y	1	0	0	0	0	0	0
RCRA TSD	Y	.5	0	**2**	0	**2**	-	**4**
RCRA LQG	Y	.25	0	0	0	-	-	0
RCRA SQG	Y	.25	0	0	0	-	-	0
RCRA CESQG	Y	.25	0	0	0	-	-	0
RCRA NON GEN	Y	.25	0	**3**	**10**	-	-	**13**
FED ENG	Y	.5	0	0	0	0	-	0
FED INST	Y	.5	0	0	0	0	-	0
ERNS 1982 TO 1986	Y	PO	0	-	-	-	-	0
ERNS 1987 TO 1989	Y	PO	0	-	-	-	-	0
ERNS	Y	PO	0	-	-	-	-	0
FED BROWNFIELDS	Y	.5	0	0	0	0	-	0
FEMA UST	Y	.25	0	0	0	-	-	0
REFN	Y	.25	0	0	0	-	-	0
BULK TERMINAL	Y	.25	0	0	0	-	-	0
SEMS LIEN	Y	PO	0	-	-	-	-	0
SUPERFUND ROD	Y	1	0	0	0	0	0	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
State								
RESPONSE	Y	1	0	0	0	0	0	0
ENVIROSTOR	Y	1	0	0	0	**1**	**3**	**4**
DELISTED ENVS	Y	1	0	0	0	0	0	0
SWF/LF	Y	.5	0	0	0	0	-	0
HWP	Y	1	0	0	0	0	0	0
SWAT	Y	.5	0	0	0	0	-	0
LDS	Y	.5	0	0	0	0	-	0
LUST	Y	.5	0	0	0	**3**	-	**3**
DELISTED LST	Y	.5	0	0	0	0	-	0
SWRCB SWF	Y	.5	0	0	0	0	-	0
UST	Y	.25	0	0	0	-	-	0
UST CLOSURE	Y	.5	0	0	0	**1**	-	**1**
HHSS	Y	.25	0	0	0	-	-	0
AST	Y	.25	0	0	0	-	-	0
DELISTED TNK	Y	.25	0	0	0	-	-	0
CERS TANK	Y	.25	0	0	0	-	-	0
LUR	Y	.5	0	0	0	0	-	0
HLUR	Y	.5	0	0	0	0	-	0
DEED	Y	.5	0	0	0	0	-	0
VCP	Y	.5	0	0	0	0	-	0
CLEANUP SITES	Y	.5	0	0	0	**1**	-	**1**
DELISTED COUNTY	Y	.25	0	0	0	-	-	0
DELISTED CTNK	Y	.25	0	0	0	-	-	0
HIST TANK	Y	.25	0	0	0	-	-	0
Tribal								
INDIAN LUST	Y	.5	0	0	0	0	-	0
INDIAN UST	Y	.25	0	0	0	-	-	0
DELISTED ILST	Y	.5	0	0	0	0	-	0
DELISTED IUST	Y	.25	0	0	0	-	-	0
County								
BURBANK CUPA	Y	.25	0	0	0	-	-	0
UST ELSEGUNDO	Y	.25	0	0	0	-	-	0
UST SANTAFESP	Y	.25	0	0	0	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
SANTAMON AST	Y	.25	0	0	0	-	-	0
SANTAMON CUPA	Y	.25	0	0	0	-	-	0
UST SANTA MONICA	Y	.25	0	0	0	-	-	0
UST TORRANCE	Y	.25	0	0	0	-	-	0
VERNON CUPA	Y	.25	0	0	0	-	-	0
UST VERNON	Y	.25	0	0	0	-	-	0
LA HMS	Y	.25	0	0	0	-	-	0
UST LONGB	Y	.25	0	0	0	-	-	0
LA SWF	Y	.5	0	0	0	0	-	0
UST CLEANUP	Y	.5	0	0	0	0	-	0
ANAHEIM AST	Y	.25	0	0	0	-	-	0
ANAHEIM UST	Y	.25	0	0	0	-	-	0
ORANGE AST	Y	.25	0	0	0	-	-	0
ORANGE LOP	Y	.5	0	0	0	**3**	-	**3**
UST ORANGE CNTY	Y	.25	0	0	0	-	-	0
UST LA CITY	Y	.25	0	0	0	-	-	0
AST LA CITY	Y	.25	0	0	0	-	-	0
LA CITY HAZMAT	Y	.125	0	0	-	-	-	0

Additional Environmental Records

Federal

PFAS NPL	Y	.5	0	0	0	0	-	0
FINDS/FRS	Y	PO	0	-	-	-	-	0
TRIS	Y	PO	0	-	-	-	-	0
PFAS TRI	Y	.5	0	0	0	0	-	0
HMIRS	Y	.125	0	0	-	-	-	0
NCDL	Y	.125	0	0	-	-	-	0
TSCA	Y	.125	0	0	-	-	-	0
HIST TSCA	Y	.125	0	0	-	-	-	0
FTTS ADMIN	Y	PO	0	-	-	-	-	0
FTTS INSP	Y	PO	0	-	-	-	-	0
PRP	Y	PO	0	-	-	-	-	0
SCRD DRYCLEANER	Y	.5	0	0	0	0	-	0
ICIS	Y	PO	0	-	-	-	-	0
FED DRYCLEANERS	Y	.25	0	0	0	-	-	0
DELISTED FED DRY	Y	.25	0	0	0	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
FUDS	Y	1	0	0	0	0	0	0
MLTS	Y	PO	0	-	-	-	-	0
HIST MLTS	Y	PO	0	-	-	-	-	0
MINES	Y	.25	0	0	0	-	-	0
ALT FUELS	Y	.25	0	0	0	-	-	0
SSTS	Y	.25	0	0	0	-	-	0
PCB	Y	.5	0	0	0	0	-	0
State								
DRYCLEANERS	Y	.25	0	0	0	-	-	0
DELISTED DRYCLEANERS	Y	.25	0	0	0	-	-	0
DRYC GRANT	Y	.25	0	0	0	-	-	0
PFAS	Y	.5	0	0	0	0	-	0
PFAS GW	Y	.5	0	0	0	0	-	0
HWSS CLEANUP	Y	.5	0	0	0	0	-	0
DTSC HWF	Y	.5	0	0	0	0	-	0
INSP COMP ENF	Y	1	0	0	0	0	0	0
SCH	Y	1	0	0	0	0	0	0
CHMIRS	Y	PO	0	-	-	-	-	0
HAZNET	Y	PO	0	**1**	-	-	-	**1**
HIST CHMIRS	Y	PO	0	-	-	-	-	0
HIST MANIFEST	Y	PO	0	-	-	-	-	0
HIST CORTESE	Y	.5	0	0	0	0	-	0
CDO/CAO	Y	.5	0	0	0	**1**	-	**1**
CERS HAZ	Y	.125	0	0	-	-	-	0
DELISTED HAZ	Y	.5	0	0	0	0	-	0
GEOTRACKER	Y	.125	0	0	-	-	-	0
WASTE DISCHG	Y	.25	0	0	0	-	-	0
EMISSIONS	Y	.25	0	0	0	-	-	0
CDL	Y	.125	0	**1**	-	-	-	**1**
Tribal	***No Tribal additional environmental record sources available for this State.***							
County								
ORANGE ICP	Y	.25	0	0	0	-	-	0
LA SML	Y	.5	0	0	0	0	-	0
SANTAMON HAZ	Y	.125	0	0	-	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
SANTAMON HW	Y	.125	0	0	-	-	-	0
ORANGE HW	Y	.125	0	0	-	-	-	0
Total:			0	**7**	**10**	**12**	**3**	**32**

**** PO – Property Only***
**** 'Property and adjoining properties' database search radii are set at 0.25 miles.***

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number

No records found in the selected databases for the project property.

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	HAZNET	JAY NAHM	8246 VALLEY VIEW ST BUENA PARK CA 906202747	W	0.00 / 16.36	-2	23
2	RCRA NON GEN	ROBERT JOHNSON	6022 SAN RAFAEL DR. BUENA PARK CA 90620 ***EPA Handler ID:*** CAC002999048	N	0.03 / 154.52	-1	23
3	RCRA NON GEN	CEPEDA, NICOLAS	6172 SAN RICARDO WAY BUENA PARK CA 90620 ***EPA Handler ID:*** CAC003008274	NE	0.07 / 373.48	0	24
3	RCRA TSD	CEPEDA, NICOLAS	6172 SAN RICARDO WAY BUENA PARK CA 90620 ***EPA Handler ID:*** CAC003008274	NE	0.07 / 373.48	0	25
4	CDL		8442 VALLEY VIEW ST BUENA PARK CA 90620	SSW	0.09 / 451.11	-3	26
5	RCRA NON GEN	EDWARD BRUHN	6196 SAN RICARDO WAY BUENA PARK CA 90620 ***EPA Handler ID:*** CAC003009130	ENE	0.09 / 473.10	0	27
5	RCRA TSD	EDWARD BRUHN	6196 SAN RICARDO WAY BUENA PARK CA 90620 ***EPA Handler ID:*** CAC003009130	ENE	0.09 / 473.10	0	28
6	RCRA NON GEN	DAWN GALLIGER	5890 LOS ARCOS WAY BUENA PARK CA 90620 ***EPA Handler ID:*** CAC002985592	NW	0.13 / 664.98	-4	29
7	RCRA NON GEN	BRENDSEL, ILA	6091 SAN YSIDRO CIRCLE BUENA PARK CA 90620 ***EPA Handler ID:*** CAC002977592	NNE	0.13 / 678.39	-1	30
8	RCRA NON GEN	MESSINA, JIM & KATHERINE	5831 LOS ARCOS WAY BUENA PARK CA 90620 ***EPA Handler ID:*** CAC002994045	NW	0.17 / 905.27	-4	31
9	RCRA NON GEN	LEE WILLIAMS	5857 LOS AMIGOS ST BUENA PARK CA 90620 ***EPA Handler ID:*** CAC002981957	SW	0.18 / 972.34	-6	32
10	RCRA NON GEN	JIM ALIA	6203 SAN RAMON WY BUENA PARK CA 90620 ***EPA Handler ID:*** CAC002976051	ENE	0.19 / 978.94	0	33
11	RCRA NON GEN	ROBERT MONTANO	5933 LOS ARCOS WAY BUENA PARK CA 90620	WNW	0.19 / 1,007.99	-5	34

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
			EPA Handler ID: CAC002999519				
12	RCRA NON GEN	CHO, JEFF	5869 CRESCENT AVENUE BUENA PARK CA 90620 ***EPA Handler ID:*** CAC002983078	SW	0.20 / 1,067.85	-5	35
13	RCRA NON GEN	ORIMOGUINJI, OLAWOLE	5772 LOS ANGELES WAY BUENA PARK CA 90620 ***EPA Handler ID:*** CAC002964887	W	0.22 / 1,138.82	-5	36
14	RCRA NON GEN	SUZANNE MELENDEZ	6090 SAN REMO WY BUENA PARK CA 90620 ***EPA Handler ID:*** CAC002993004	S	0.22 / 1,170.08	-3	37
15	RCRA NON GEN	STEVE & YVETTE LIVINGSTONE	8001 SAN LEANDRA CIRCLE BUENA PARK CA 90620 ***EPA Handler ID:*** CAC002984167	N	0.24 / 1,280.47	-3	38
16	LUST	MOBIL #18-FXW	5962 LA PALMA LA PALMA CA 90623 ***Global ID | Status | Status Date:*** T0605900661 | COMPLETED - CASE CLOSED | 2015-09-01 00:00:00	NNW	0.27 / 1,402.75	-4	39
17	CDO/CAO	GW CLEANUP-LA PALMA,LA PALMA	5962 LA PALMA LA PALMA CA	NNW	0.27 / 1,421.55	-4	63
17	ORANGE LOP	MOBIL #18-FXW	5962 LA PALMA AVE LA PALMA CA 90623 ***Record ID | Case Closed Date | Type of Closure:*** RO0002351 | 9/11/2015 | Closure certification issued	NNW	0.27 / 1,421.55	-4	65
17	UST CLOSURE	Mobil #18-FXW	5962 La Palma Avenue, La Palma, CA 90623 CA 90623 ***Claim Case No:*** Case No. 88UT062	NNW	0.27 / 1,421.55	-4	65
18	LUST	CHEVRON #9-2250	7990 VALLEY VIEW BUENA PARK CA 90620 ***Global ID | Status | Status Date:*** T0605900068 | COMPLETED - CASE CLOSED | 2015-04-10 00:00:00	N	0.27 / 1,439.64	-4	65
19	ORANGE LOP	EXXON	5961 LA PALMA AVE LA PALMA CA 90623 ***Record ID | Case Closed Date | Type of Closure:*** RO0001585 | 4/29/2003 | Closure certification issued	NNW	0.28 / 1,479.40	-4	78
20	ORANGE LOP	CHEVRON #9-2250	7990 S VALLEY VIEW ST BUENA PARK CA 90620 ***Record ID | Case Closed Date | Type of Closure:*** RO0001074 | 4/10/2015 | Closure certification issued	N	0.28 / 1,486.69	-2	78
21	LUST	EXXON	5961 LA PALMA LA PALMA CA 90623 ***Global ID | Status | Status Date:*** T0605901360 | COMPLETED - CASE CLOSED | 2003-04-29 00:00:00	NNW	0.29 / 1,507.41	-4	79
22	RCRA TSD	ASAPH YANG	6372 SAN LORENZO DR. BUENA PARK CA 90620 ***EPA Handler ID:*** CAC003012088	E	0.32 / 1,677.64	1	86

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
23	CLEANUP SITES	TOP HAT CLEANERS	7892 VALLEY VIEW STREET BUENA PARK CA 90620-2353	N	0.35 / 1,827.23	-1	87
			***Site Facility Type*	*Status:*** CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED		
24	RCRA TSD	RENE GONZALEZ	8012 SAN MIGUEL CIR. BUENA PARK CA 90620	NE	0.38 / 1,988.89	2	103
			EPA Handler ID: CAC003016003				
25	ENVIROSTOR	ANAHEIM AIRPORT	BUENA PARK CA	NE	0.39 / 2,066.21	0	104
			***Estor/EPA ID*	*Cleanup Status:*** 80000967	INACTIVE - NEEDS EVALUATION AS OF 8/14/2018		
26	ENVIROSTOR	JOHN F. KENNEDY HIGH SCHOOL	8281 WALKER STREET LA PALMA CA 90623	W	0.65 / 3,415.03	-8	105
			***Estor/EPA ID*	*Cleanup Status:*** 30820016	CERTIFIED AS OF 1/21/2004		
27	ENVIROSTOR	BUENA PARK STRAWBERRY FIELD	8932 HOLDER AVENUE BUENA PARK CA 90620	SE	0.75 / 3,960.65	7	107
			***Estor/EPA ID*	*Cleanup Status:*** 70000162	REFER: OTHER AGENCY AS OF 8/24/2007		
28	ENVIROSTOR	LA PALMA PLAZA	6883 LA PALMA AVENUE BUENA PARK CA 90620	ENE	0.84 / 4,426.26	11	108
			***Estor/EPA ID*	*Cleanup Status:*** 60002369	ACTIVE AS OF 6/10/2016		

Executive Summary: Summary by Data Source

Standard

Federal

RCRA TSD - RCRA non-CORRACTS TSD Facilities

A search of the RCRA TSD database, dated Aug 26, 2019 has found that there are 4 RCRA TSD site(s) within approximately 0.50 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
EDWARD BRUHN	6196 SAN RICARDO WAY BUENA PARK CA 90620 ***EPA Handler ID**: CAC003009130*	ENE	0.09 / 473.10	5
ASAPH YANG	6372 SAN LORENZO DR. BUENA PARK CA 90620 ***EPA Handler ID**: CAC003012088*	E	0.32 / 1,677.64	22
RENE GONZALEZ	8012 SAN MIGUEL CIR. BUENA PARK CA 90620 ***EPA Handler ID**: CAC003016003*	NE	0.38 / 1,988.89	24

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
CEPEDA, NICOLAS	6172 SAN RICARDO WAY BUENA PARK CA 90620 ***EPA Handler ID**: CAC003008274*	NE	0.07 / 373.48	3

RCRA NON GEN - RCRA Non-Generators

A search of the RCRA NON GEN database, dated Aug 26, 2019 has found that there are 13 RCRA NON GEN site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
EDWARD BRUHN	6196 SAN RICARDO WAY BUENA PARK CA 90620 ***EPA Handler ID**: CAC003009130*	ENE	0.09 / 473.10	5

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
ROBERT JOHNSON	6022 SAN RAFAEL DR. BUENA PARK CA 90620 ***EPA Handler ID**: CAC002999048*	N	0.03 / 154.52	2
CEPEDA, NICOLAS	6172 SAN RICARDO WAY BUENA PARK CA 90620 ***EPA Handler ID**: CAC003008274*	NE	0.07 / 373.48	3

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
DAWN GALLIGER	5890 LOS ARCOS WAY BUENA PARK CA 90620	NW	0.13 / 664.98	6
	***EPA Handler ID**: CAC002985592*			
BRENDSEL, ILA	6091 SAN YSIDRO CIRCLE BUENA PARK CA 90620	NNE	0.13 / 678.39	7
	***EPA Handler ID**: CAC002977592*			
MESSINA, JIM & KATHERINE	5831 LOS ARCOS WAY BUENA PARK CA 90620	NW	0.17 / 905.27	8
	***EPA Handler ID**: CAC002994045*			
LEE WILLIAMS	5857 LOS AMIGOS ST BUENA PARK CA 90620	SW	0.18 / 972.34	9
	***EPA Handler ID**: CAC002981957*			
JIM ALIA	6203 SAN RAMON WY BUENA PARK CA 90620	ENE	0.19 / 978.94	10
	***EPA Handler ID**: CAC002976051*			
ROBERT MONTANO	5933 LOS ARCOS WAY BUENA PARK CA 90620	WNW	0.19 / 1,007.99	11
	***EPA Handler ID**: CAC002999519*			
CHO, JEFF	5869 CRESCENT AVENUE BUENA PARK CA 90620	SW	0.20 / 1,067.85	12
	***EPA Handler ID**: CAC002983078*			
ORIMOGUINJI, OLAWOLE	5772 LOS ANGELES WAY BUENA PARK CA 90620	W	0.22 / 1,138.82	13
	***EPA Handler ID**: CAC002964887*			
SUZANNE MELENDEZ	6090 SAN REMO WY BUENA PARK CA 90620	S	0.22 / 1,170.08	14
	***EPA Handler ID**: CAC002993004*			
STEVE & YVETTE LIVINGSTONE	8001 SAN LEANDRA CIRCLE BUENA PARK CA 90620	N	0.24 / 1,280.47	15
	***EPA Handler ID**: CAC002984167*			

State

ENVIROSTOR - EnviroStor Database

A search of the ENVIROSTOR database, dated Oct 1, 2019 has found that there are 4 ENVIROSTOR site(s) within approximately 1.00 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
BUENA PARK STRAWBERRY FIELD	8932 HOLDER AVENUE BUENA PARK CA 90620	SE	0.75 / 3,960.65	27
	***Estor/EPA ID | Cleanup Status**: 70000162 | REFER: OTHER AGENCY AS OF 8/24/2007*			

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
LA PALMA PLAZA	6883 LA PALMA AVENUE BUENA PARK CA 90620	ENE	0.84 / 4,426.26	28
	***Estor/EPA ID** | **Cleanup Status**: 60002369 | ACTIVE AS OF 6/10/2016*			

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
ANAHEIM AIRPORT	BUENA PARK CA	NE	0.39 / 2,066.21	25
	***Estor/EPA ID** | **Cleanup Status**: 80000967 | INACTIVE - NEEDS EVALUATION AS OF 8/14/2018*			
JOHN F. KENNEDY HIGH SCHOOL	8281 WALKER STREET LA PALMA CA 90623	W	0.65 / 3,415.03	26
	***Estor/EPA ID** | **Cleanup Status**: 30820016 | CERTIFIED AS OF 1/21/2004*			

LUST - Leaking Underground Fuel Tank Reports

A search of the LUST database, dated Jul 17, 2019 has found that there are 3 LUST site(s) within approximately 0.50 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
MOBIL #18-FXW	5962 LA PALMA LA PALMA CA 90623	NNW	0.27 / 1,402.75	16
	***Global ID** | **Status** | **Status Date**: T0605900661 | COMPLETED - CASE CLOSED | 2015-09-01 00:00:00*			
CHEVRON #9-2250	7990 VALLEY VIEW BUENA PARK CA 90620	N	0.27 / 1,439.64	18
	***Global ID** | **Status** | **Status Date**: T0605900068 | COMPLETED - CASE CLOSED | 2015-04-10 00:00:00*			
EXXON	5961 LA PALMA LA PALMA CA 90623	NNW	0.29 / 1,507.41	21
	***Global ID** | **Status** | **Status Date**: T0605901360 | COMPLETED - CASE CLOSED | 2003-04-29 00:00:00*			

UST CLOSURE - Proposed Closure of Underground Storage Tank Cases

A search of the UST CLOSURE database, dated Oct 8, 2019 has found that there are 1 UST CLOSURE site(s) within approximately 0.50 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
Mobil #18-FXW	5962 La Palma Avenue, La Palma, CA 90623 CA 90623 ***Claim Case No**: Case No. 88UT062*	NNW	0.27 / 1,421.55	17

CLEANUP SITES - GeoTracker Cleanup Program Sites

A search of the CLEANUP SITES database, dated Jul 17, 2019 has found that there are 1 CLEANUP SITES site(s) within approximately 0.50 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
TOP HAT CLEANERS	7892 VALLEY VIEW STREET BUENA PARK CA 90620-2353	N	0.35 / 1,827.23	23
	***Site Facility Type** | **Status**: CLEANUP PROGRAM SITE | COMPLETED - CASE CLOSED*			

County

ORANGE LOP - Orange County - LOP Lead Cases List

A search of the ORANGE LOP database, dated Oct 4, 2019 has found that there are 3 ORANGE LOP site(s) within approximately 0.50 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
MOBIL #18-FXW	5962 LA PALMA AVE LA PALMA CA 90623	NNW	0.27 / 1,421.55	17
	***Record ID | Case Closed Date | Type of Closure**: RO0002351 | 9/11/2015 | Closure certification issued*			
EXXON	5961 LA PALMA AVE LA PALMA CA 90623	NNW	0.28 / 1,479.40	19
	***Record ID | Case Closed Date | Type of Closure**: RO0001585 | 4/29/2003 | Closure certification issued*			
CHEVRON #9-2250	7990 S VALLEY VIEW ST BUENA PARK CA 90620	N	0.28 / 1,486.69	20
	***Record ID | Case Closed Date | Type of Closure**: RO0001074 | 4/10/2015 | Closure certification issued*			

Non Standard

State

HAZNET - Hazardous Waste Manifest Data

A search of the HAZNET database, dated Oct 24, 2016 has found that there are 1 HAZNET site(s) within approximately 0.02 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
JAY NAHM	8246 VALLEY VIEW ST BUENA PARK CA 906202747	W	0.00 / 16.36	1

CDO/CAO - Cease and Desist Orders and Cleanup and Abatement Orders

A search of the CDO/CAO database, dated Feb 16, 2012 has found that there are 1 CDO/CAO site(s) within approximately 0.50 miles of the project property.

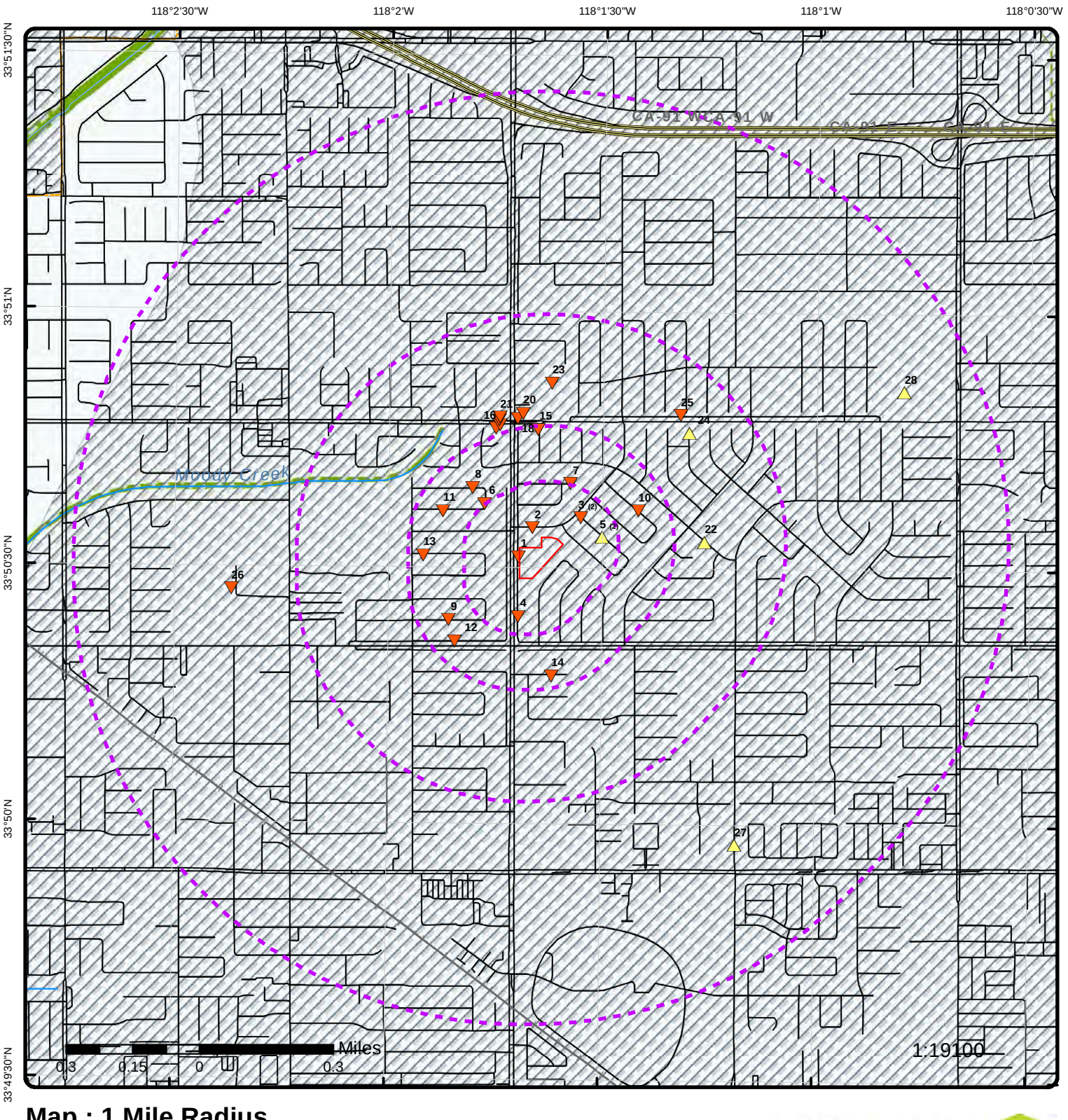
Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
GW CLEANUP-LA PALMA,LA PALMA	5962 LA PALMA LA PALMA CA	NNW	0.27 / 1,421.55	17

CDL - Clandestine Drug Lab Sites

A search of the CDL database, dated Jun 30, 2018 has found that there are 1 CDL site(s) within approximately 0.12 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
	8442 VALLEY VIEW ST BUENA PARK CA 90620	SSW	0.09 / 451.11	4

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key



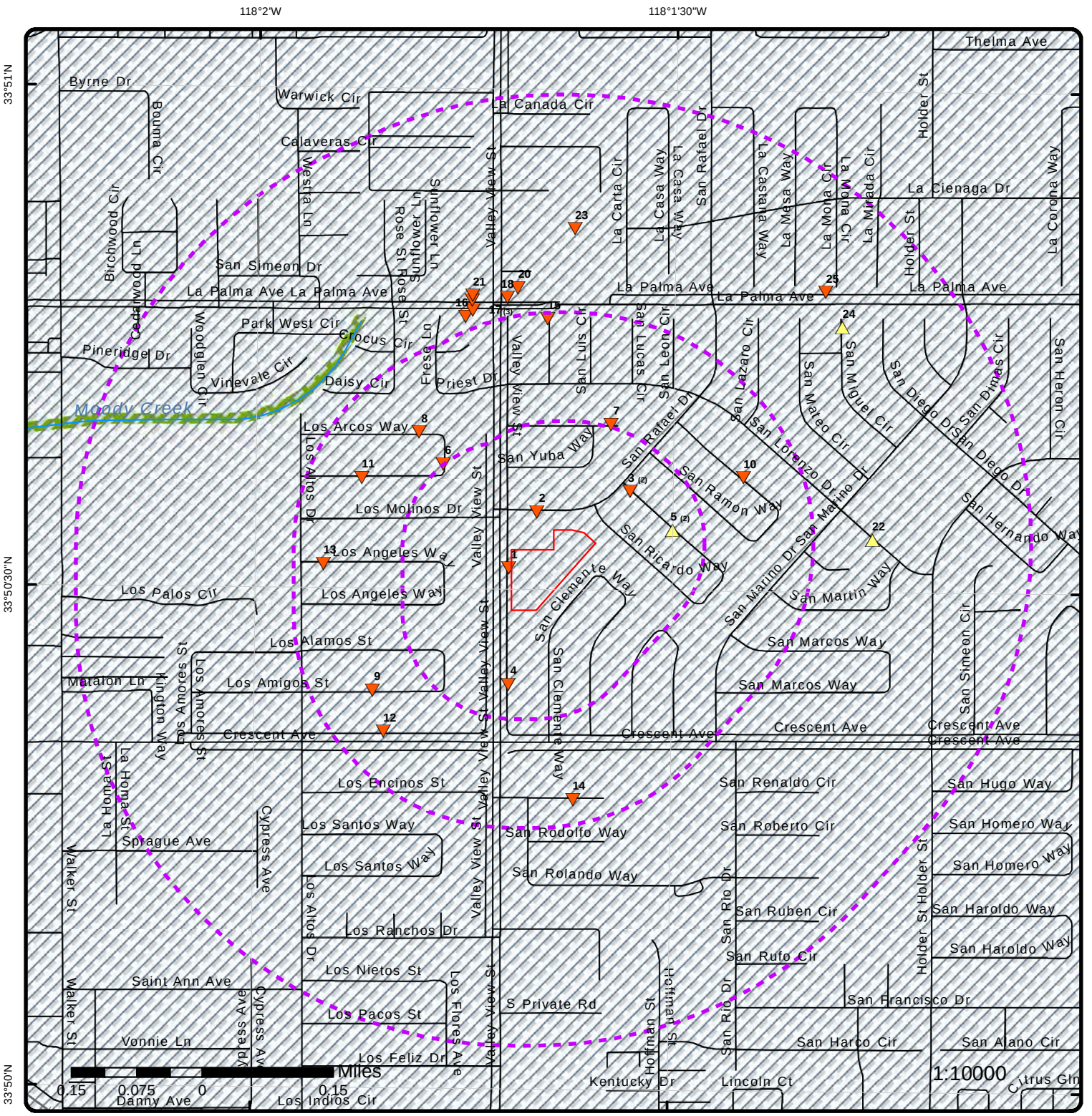
Map : 1 Mile Radius

Order No: 20191115287

Address: 8300 Valley View Street, Buena Park, CA, 90620

ENVIRONMENTAL RISK INFORMATION SERVICES

- Project Property
- **Buffer Outline**
- Eris Sites with Higher Elevation
- Eris Sites with Same Elevation
- Eris Sites with Lower Elevation
- Eris Sites with Unknown Elevation
- County Boundary
- Rails
- Major Highways
- Major Highways Ramps
- Major Roads
- Major Roads Ramps
- Secondary Roads
- Secondary Roads Ramps
- Local Roads and Ramps
- State Boundary
- National Priority List Sites
- National Wetland
- Indian Reserve Land
- Historic Fill
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- State Brownfield Sites
- State Brownfield Areas
- State Superfund Areas:Dept. of Defense
- State Superfund Areas:NPL
- WQARF Areas
- Federal Lands: Dept. of Defense (owned/administered areas)



Map : 0.5 Mile Radius

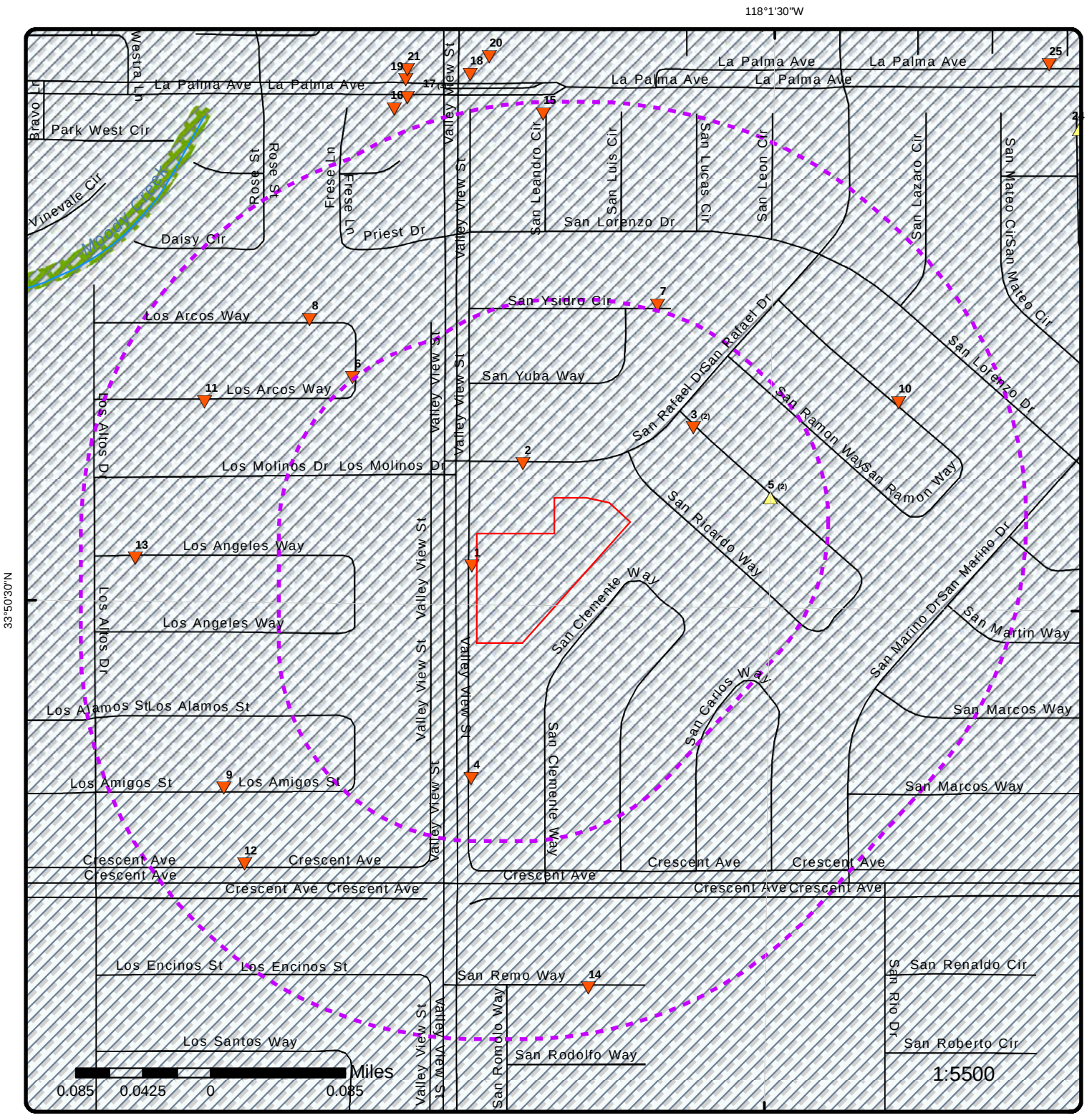
Order No: 20191115287

Address: 8300 Valley View Street, Buena Park, CA, 90620

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

- Project Property
- **Buffer Outline**
- Eris Sites with Higher Elevation
- Eris Sites with Same Elevation
- Eris Sites with Lower Elevation
- Eris Sites with Unknown Elevation
- County Boundary
- Rails
- Major Highways
- Major Highways Ramps
- Major Roads
- Major Roads Ramps
- Secondary Roads
- Secondary Roads Ramps
- Local Roads and Ramps
- State Boundary
- National Priority List Sites
- National Wetland
- Indian Reserve Land
- Historic Fill
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- State Brownfield Sites
- State Brownfield Areas
- State Superfund Areas:Dept. of Defense
- State Superfund Areas:NPL
- WQARF Areas
- Federal Lands: Dept. of Defense (owned/administered areas)

Source: © 2016 ESRI



Map : 0.25 Mile Radius

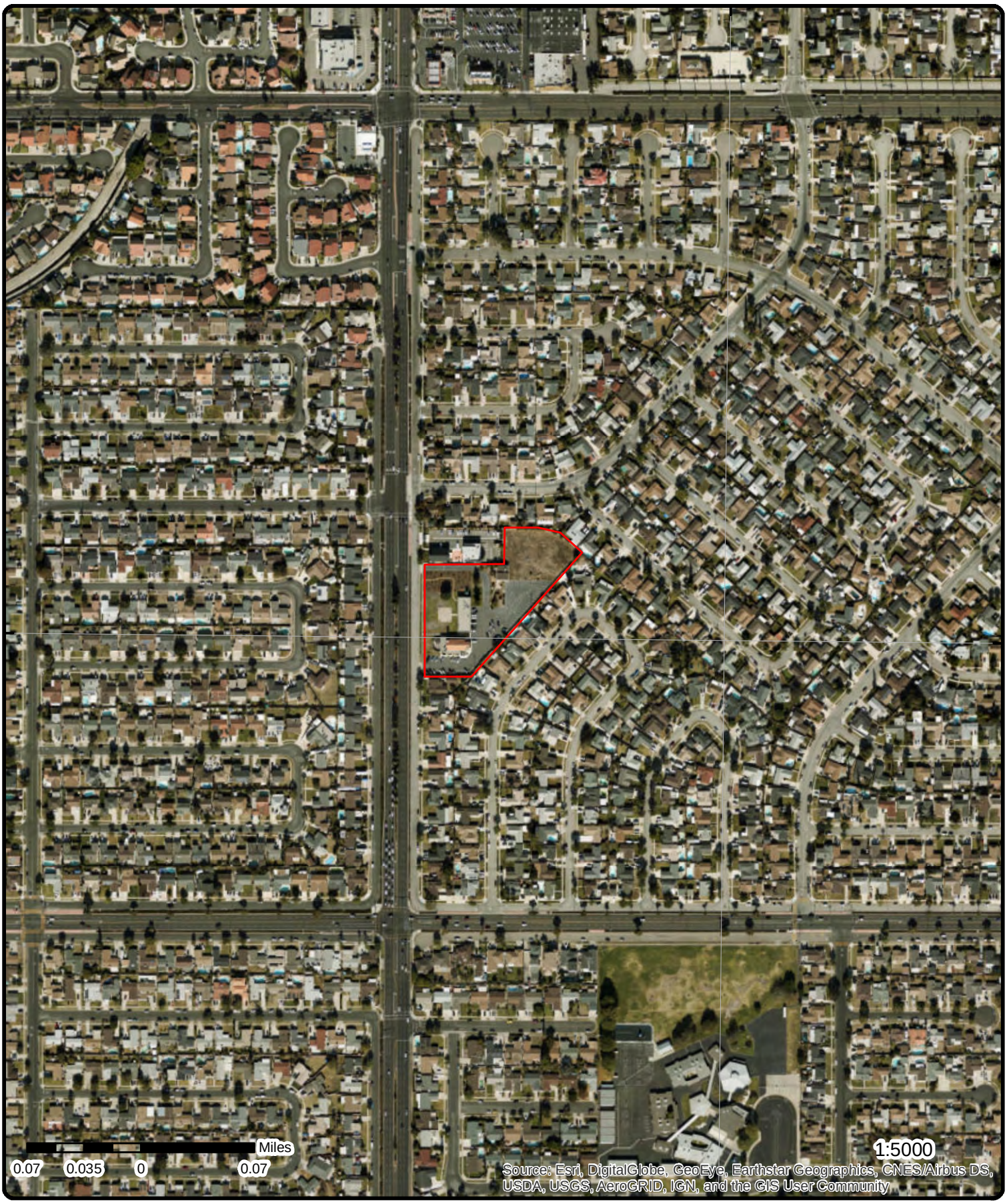
Order No: 20191115287

Address: 8300 Valley View Street, Buena Park, CA, 90620

ERIS ENVIRONMENTAL RISK INFORMATION SERVICES

Project Property	Rails	State Boundary	FWS Special Designation Areas
Buffer Outline	Major Highways	National Priority List Sites	State Brownfield Sites
Eris Sites with Higher Elevation	Major Highways Ramps	National Wetland	State Brownfield Areas
Eris Sites with Same Elevation	Major Roads	Indian Reserve Land	State Superfund Areas:Dept. of Defense
Eris Sites with Lower Elevation	Major Roads Ramps	Historic Fill	State Superfund Areas:NPL
Eris Sites with Unknown Elevation	Secondary Roads	100 Year Flood Zone	WQARF Areas
County Boundary	Secondary Roads Ramps	500 Year Flood Zone	Federal Lands: Dept. of Defense (owned/administered areas)
	Local Roads and Ramps		

Source: © 2016 ESRI



Aerial (2017)

Order No: 20191115287

Address: 8300 Valley View Street, Buena Park, CA, 90620

Source: ESRI World Imagery

ENVIRONMENTAL RISK INFORMATION SERVICES

Topographic Map (2015)

Order No: 20191115287

Address: 8300 Valley View Street, Buena Park, CA, 90620

Quadrangle(s): Los Alamitos,CA

Source: USGS Topographic Map

ERIS ENVIRONMENTAL RISK INFORMATION SERVICES

Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	1 of 1	W	0.00 / 16.36	54.30 / -2	JAY NAHM 8246 VALLEY VIEW ST BUENA PARK CA 906202747	HAZNET

SIC Code:		**Mailing City:**	BUENA PARK
NAICS Code:		**Mailing State:**	CA
EPA ID:	CAC002672257	**Mailing Zip:**	906202747
Create Date:	7/26/2011	**Region Code:**	4
Fac Act Ind:	No	**Owner Name:**	JAY NAHM
Inact Date:	1/23/2012	**Owner Addr 1:**	8246 VALLEY VIEW ST
County Code:	30	**Owner Addr 2:**	
County Name:	Orange	**Owner City:**	BUENA PARK
Mail Name:		**Owner State:**	CA
Mailing Addr 1:	8246 VALLEY VIEW ST	**Owner Zip:**	906202747
Mailing Addr 2:		**Owner Phone:**	2135002220
Owner Fax:			

Contact Information

--	--
Contact Name:	JAY NAHM
Street Address 1:	8246 VALLEY VIEW ST
Street Address 2:	
City:	BUENA PARK
State:	CA
Zip:	906202747
Phone:	2135002220
--	--
--	--

Tanner Information

--	--
Generator EPA ID:	CAC002672257
Generator County Code:	30
Generator County:	Orange
TSD EPA ID:	AZC950823111
TSD County Code:	99
TSD County:	Unknown
State Waste Code:	151
State Waste Code Desc.:	Asbestos containing waste
Method Code:	H132
Method Description:	LANDFILL OR SURFACE IMPOUNDMENT THAT WILL BE CLOSED AS LANDFILL(TO INCLUDE ON-SITE TREATMENT AND/OR STABILIZATION)
Tons:	8
Year:	2011
--	--

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	1 of 1	N	0.03 / 154.52	54.79 / -1	ROBERT JOHNSON 6022 SAN RAFAEL DR. BUENA PARK CA 90620	RCRA NON GEN

EPA Handler ID:	CAC002999048
Gen Status Universe:	No Report
Contact Name:	ROBERT JOHNSON
Contact Address:	6022 SAN RAFAEL DR. , , BUENA PARK , CA, 90620 ,
Contact Phone No and Ext:	714-585-7628
Contact Email:	KC@AQHIINC.COM
Contact Country:	
County Name:	ORANGE
EPA Region:	09
Land Type:	

Receive Date: 20190131

Violation/Evaluation Summary

Note: NO RECORDS: As of August 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility: No
Onsite Burner Exemption: No
Furnace Exemption: No
Underground Injection Activity: No
Commercial TSD: No
Used Oil Transporter: No
Used Oil Transfer Facility: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20190131
Handler Name: ROBERT JOHNSON
Generator Status Universe: No Report
Source Type: Implementer

Owner/Operator Details

Owner/Operator Ind: Current Operator
Type: Other
Name: ROBERT JOHNSON
Date Became Current:
Date Ended Current:
Phone: 714-585-7628
Source Type: Implementer
Street No:
Street 1: 6022 SAN RAFAEL DR.
Street 2:
City: BUENA PARK
State: CA
Country:
Zip Code: 90620

Owner/Operator Ind: Current Owner
Type: Other
Name: ROBERT JOHNSON
Date Became Current:
Date Ended Current:
Phone: 714-585-7628
Source Type: Implementer
Street No:
Street 1: 6022 SAN RAFAEL DR.
Street 2:
City: BUENA PARK
State: CA
Country:
Zip Code: 90620

3	1 of 2	NE	0.07 / 373.48	55.32 / 0	CEPEDA, NICOLAS 6172 SAN RICARDO WAY BUENA PARK CA 90620	RCRA NON GEN

EPA Handler ID: CAC003008274
Gen Status Universe: No Report
Contact Name: CEPEDA, NICOLAS
Contact Address: 6172 SAN RICARDO WAY , , BUENA PARK , CA, 90620 ,
Contact Phone No and Ext: 415-606-8535
Contact Email: ANDREWC@PWSEI.COM
Contact Country:
County Name: ORANGE

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

EPA Region: 09
Land Type:
Receive Date: 20190402

Violation/Evaluation Summary

Note: NO RECORDS: As of August 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: Yes
Transfer Facility: No
Onsite Burner Exemption: No
Furnace Exemption: No
Underground Injection Activity: No
Commercial TSD: No
Used Oil Transporter: No
Used Oil Transfer Facility: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20190402
Handler Name: CEPEDA, NICOLAS
Generator Status Universe: No Report
Source Type: Implementer

Owner/Operator Details

Owner/Operator Ind: Current Operator
Type: Other
Name: CEPEDA, NICOLAS
Date Became Current:
Date Ended Current:
Phone: 415-606-8535
Source Type: Implementer
Street No:
Street 1: 6172 SAN RICARDO WAY
Street 2:
City: BUENA PARK
State: CA
Country:
Zip Code: 90620

Owner/Operator Ind: Current Owner
Type: Other
Name: CEPEDA, NICOLAS
Date Became Current:
Date Ended Current:
Phone: 415-606-8535
Source Type: Implementer
Street No:
Street 1: 6172 SAN RICARDO WAY
Street 2:
City: BUENA PARK
State: CA
Country:
Zip Code: 90620

3	2 of 2	NE	0.07 / 373.48	55.32 / 0	CEPEDA, NICOLAS 6172 SAN RICARDO WAY BUENA PARK CA 90620	RCRA TSD

EPA Handler ID: CAC003008274
Gen Status Universe: No Report
Contact Name: CEPEDA, NICOLAS
Contact Address: 6172 SAN RICARDO WAY , , BUENA PARK , CA, 90620 ,
Contact Phone No and Ext: 415-606-8535
Contact Email: ANDREWC@PWSEI.COM

Contact Country:
Land Type:
County Name: ORANGE
EPA Region: 09
Receive Date: 20190402

Violation/Evaluation Summary

Note: NO RECORDS: As of August 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: Yes
Transfer Facility: No
Onsite Burner Exemption: No
Smelting, Melting and Refining: No
Underground Injection Control: No
Commercial TSD: No
Used Oil Transporter: No
Used Oil Transfer Facility: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20190402
Handler Name: CEPEDA, NICOLAS
Generator Status Universe: No Report
Source Type: Implementer

Owner/Operator Details

Owner/Operator Ind: Current Operator
Type: Other
Name: CEPEDA, NICOLAS
Date Became Current:
Date Ended Current:
Phone: 415-606-8535
Source Type: Implementer
Street No:
Street 1: 6172 SAN RICARDO WAY
Street 2:
City: BUENA PARK
State: CA
Country:
Zip Code: 90620

Owner/Operator Ind: Current Owner
Type: Other
Name: CEPEDA, NICOLAS
Date Became Current:
Date Ended Current:
Phone: 415-606-8535
Source Type: Implementer
Street No:
Street 1: 6172 SAN RICARDO WAY
Street 2:
City: BUENA PARK
State: CA
Country:
Zip Code: 90620

---

4 ***1 of 1*** ***SSW*** ***0.09 / 451.11*** ***52.36 / -3*** ***8442 VALLEY VIEW ST BUENA PARK CA 90620*** ***CDL***

Clue: 1996-04-002
Date: 4/2/1996
County: ORANGE
Lab Type: L

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Lab Type Description:	Illegal Drug Lab - location where an illegal drug lab was operated or drug lab equipment and/or materials were stored.					

5	1 of 2	ENE	0.09 / 473.10	56.09 / 0	EDWARD BRUHN 6196 SAN RICARDO WAY BUENA PARK CA 90620	RCRA NON GEN

EPA Handler ID: CAC003009130
Gen Status Universe: No Report
Contact Name: EDWARD BRUHN
Contact Address: 6196 SAN RICARDO WAY , , BUENA PARK , CA, 90620 ,
Contact Phone No and Ext: 714-575-7789
Contact Email: KARLA@SUPERIORENV.COM
Contact Country:
County Name: ORANGE
EPA Region: 09
Land Type:
Receive Date: 20190408

Violation/Evaluation Summary

Note: NO RECORDS: As of August 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: Yes
Transfer Facility: No
Onsite Burner Exemption: No
Furnace Exemption: No
Underground Injection Activity: No
Commercial TSD: No
Used Oil Transporter: No
Used Oil Transfer Facility: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20190408
Handler Name: EDWARD BRUHN
Generator Status Universe: No Report
Source Type: Implementer

Owner/Operator Details

Owner/Operator Ind: Current Owner
Type: Other
Name: EDWARD BRUHN
Date Became Current:
Date Ended Current:
Phone: 714-575-7789
Source Type: Implementer
Street No:
Street 1: 6196 SAN RICARDO WAY
Street 2:
City: BUENA PARK
State: CA
Country:
Zip Code: 90620

Owner/Operator Ind: Current Operator
Type: Other
Name: EDWARD BRUHN
Street No:
Street 1: 6196 SAN RICARDO WAY
Street 2:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Date Became Current:		**City:**	BUENA PARK
Date Ended Current:		**State:**	CA
Phone:	714-575-7789	**Country:**	
Source Type:	Implementer	**Zip Code:**	90620

5 **2 of 2** **ENE** **0.09 / 473.10** **56.09 / 0**

EDWARD BRUHN
6196 SAN RICARDO WAY
BUENA PARK CA 90620

RCRA TSD

EPA Handler ID:	CAC003009130
Gen Status Universe:	No Report
Contact Name:	EDWARD BRUHN
Contact Address:	6196 SAN RICARDO WAY , , BUENA PARK , CA, 90620 ,
Contact Phone No and Ext:	714-575-7789
Contact Email:	KARLA@SUPERIORENV.COM
Contact Country:	
Land Type:	
County Name:	ORANGE
EPA Region:	09
Receive Date:	20190408

Violation/Evaluation Summary

Note: NO RECORDS: As of August 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	Yes
Transfer Facility:	No
Onsite Burner Exemption:	No
Smelting, Melting and Refining:	No
Underground Injection Control:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	20190408
Handler Name:	EDWARD BRUHN
Generator Status Universe:	No Report
Source Type:	Implementer

Owner/Operator Details

Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	Other	**Street 1:**	6196 SAN RICARDO WAY
Name:	EDWARD BRUHN	**Street 2:**	
Date Became Current:		**City:**	BUENA PARK
Date Ended Current:		**State:**	CA
Phone:	714-575-7789	**Country:**	
Source Type:	Implementer	**Zip Code:**	90620
Owner/Operator Ind:	Current Operator	**Street No:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Type:	Other	**Street 1:**	6196 SAN RICARDO WAY
Name:	EDWARD BRUHN	**Street 2:**	
Date Became Current:		**City:**	BUENA PARK
Date Ended Current:		**State:**	CA
Phone:	714-575-7789	**Country:**	
Source Type:	Implementer	**Zip Code:**	90620

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
6	1 of 1	NW	0.13 / 664.98	51.76 / -4	DAWN GALLIGER 5890 LOS ARCOS WAY BUENA PARK CA 90620	RCRA NON GEN

EPA Handler ID:	CAC002985592
Gen Status Universe:	No Report
Contact Name:	DAWN GALLIGER
Contact Address:	5890 LOS ARCOS WAY , , BUENA PARK , CA, 90620 ,
Contact Phone No and Ext:	310-944-7464
Contact Email:	KC@AQHIINC.COM
Contact Country:	
County Name:	ORANGE
EPA Region:	09
Land Type:	
Receive Date:	20181019

Violation/Evaluation Summary

Note:	NO RECORDS: As of August 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	20181019
Handler Name:	DAWN GALLIGER
Generator Status Universe:	No Report
Source Type:	Implementer

Owner/Operator Details

Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	Other	**Street 1:**	5890 LOS ARCOS WAY
Name:	DAWN GALLIGER	**Street 2:**	
Date Became Current:		**City:**	BUENA PARK
Date Ended Current:		**State:**	CA
Phone:	310-944-7464	**Country:**	
Source Type:	Implementer	**Zip Code:**	90620

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	Other	**Street 1:**	5890 LOS ARCOS WAY
Name:	DAWN GALLIGER	**Street 2:**	
Date Became Current:		**City:**	BUENA PARK
Date Ended Current:		**State:**	CA
Phone:	310-944-7464	**Country:**	
Source Type:	Implementer	**Zip Code:**	90620

7	1 of 1	NNE	0.13 / 678.39	54.35 / -1	**BRENDSEL, ILA** **6091 SAN YSIDRO CIRCLE** **BUENA PARK CA 90620**	**RCRA NON GEN**

EPA Handler ID:	CAC002977592
Gen Status Universe:	No Report
Contact Name:	BRENDSEL, ILA
Contact Address:	6091 SAN YSIDRO CIRCLE , , BUENA PARK , CA, 90620 ,
Contact Phone No and Ext:	714-717-6452
Contact Email:	ANDREWC@PWSEI.COM
Contact Country:	
County Name:	ORANGE
EPA Region:	09
Land Type:	
Receive Date:	20180827

Violation/Evaluation Summary

Note:	NO RECORDS: As of August 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	20180827
Handler Name:	BRENDSEL, ILA
Generator Status Universe:	No Report
Source Type:	Implementer

Owner/Operator Details

Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	Other	**Street 1:**	6091 SAN YSIDRO CIRCLE
Name:	BRENDSEL, ILA	**Street 2:**	
Date Became Current:		**City:**	BUENA PARK
Date Ended Current:		**State:**	CA

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Phone:	714-717-6452	**Country:**	
Source Type:	Implementer	**Zip Code:**	90620
Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	Other	**Street 1:**	6091 SAN YSIDRO CIRCLE
Name:	BRENDSEL, ILA	**Street 2:**	
Date Became Current:		**City:**	BUENA PARK
Date Ended Current:		**State:**	CA
Phone:	714-717-6452	**Country:**	
Source Type:	Implementer	**Zip Code:**	90620

8	1 of 1	NW	0.17 / 905.27	52.01 / -4	MESSINA, JIM & KATHERINE 5831 LOS ARCOS WAY BUENA PARK CA 90620	RCRA NON GEN

EPA Handler ID:	CAC002994045
Gen Status Universe:	No Report
Contact Name:	MESSINA, JIM & KATHERINE
Contact Address:	5831 LOS ARCOS WAY , , BUENA PARK , CA, 90620 ,
Contact Phone No and Ext:	714-501-3805
Contact Email:	ANDREWC@PWSEI.COM
Contact Country:	
County Name:	ORANGE
EPA Region:	09
Land Type:	
Receive Date:	20181221

Violation/Evaluation Summary

Note:	NO RECORDS: As of August 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	20181221
Handler Name:	MESSINA, JIM & KATHERINE
Generator Status Universe:	No Report
Source Type:	Implementer

Owner/Operator Details

Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	Other	**Street 1:**	5831 LOS ARCOS WAY
Name:	MESSINA, JIM & KATHERINE	**Street 2:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Date Became Current:		**City:**	BUENA PARK
Date Ended Current:		**State:**	CA
Phone:	714-501-3805	**Country:**	
Source Type:	Implementer	**Zip Code:**	90620
Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	Other	**Street 1:**	5831 LOS ARCOS WAY
Name:	MESSINA, JIM & KATHERINE	**Street 2:**	
Date Became Current:		**City:**	BUENA PARK
Date Ended Current:		**State:**	CA
Phone:	714-501-3805	**Country:**	
Source Type:	Implementer	**Zip Code:**	90620

9 | **1 of 1** | **SW** | **0.18 / 972.34** | **50.06 / -6** | **LEE WILLIAMS**
5857 LOS AMIGOS ST
BUENA PARK CA 90620 | **RCRA NON GEN**

EPA Handler ID:	CAC002981957
Gen Status Universe:	No Report
Contact Name:	LEE WILLIAMS
Contact Address:	5857 LOS AMIGOS ST , , BUENA PARK , CA, 90620 ,
Contact Phone No and Ext:	562-756-2025
Contact Email:	OCABATEMENT@GMAIL.COM
Contact Country:	
County Name:	ORANGE
EPA Region:	09
Land Type:	
Receive Date:	20180925

Violation/Evaluation Summary

Note: NO RECORDS: As of August 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	20180925
Handler Name:	LEE WILLIAMS
Generator Status Universe:	No Report
Source Type:	Implementer

Owner/Operator Details

Owner/Operator Ind: Current Owner **Street No:**

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Type:	Other	**Street 1:**	5857 LOS AMIGOS ST
Name:	LEE WILLIAMS	**Street 2:**	
Date Became Current:		**City:**	BUENA PARK
Date Ended Current:		**State:**	CA
Phone:	562-756-2025	**Country:**	
Source Type:	Implementer	**Zip Code:**	90620
Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	Other	**Street 1:**	5857 LOS AMIGOS ST
Name:	LEE WILLIAMS	**Street 2:**	
Date Became Current:		**City:**	BUENA PARK
Date Ended Current:		**State:**	CA
Phone:	562-756-2025	**Country:**	
Source Type:	Implementer	**Zip Code:**	90620

10	1 of 1	ENE	0.19 / 978.94	55.74 / 0	JIM ALIA 6203 SAN RAMON WY BUENA PARK CA 90620	RCRA NON GEN

EPA Handler ID:	CAC002976051
Gen Status Universe:	No Report
Contact Name:	JIM ALIA
Contact Address:	6203 SAN RAMON WY , , BUENA PARK , CA, 90620 ,
Contact Phone No and Ext:	714-906-6382
Contact Email:	KC@AQHIINC.COM
Contact Country:	
County Name:	ORANGE
EPA Region:	09
Land Type:	
Receive Date:	20180816

Violation/Evaluation Summary

Note:	NO RECORDS: As of August 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	20180816
Handler Name:	JIM ALIA
Generator Status Universe:	No Report
Source Type:	Implementer

Owner/Operator Details

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	Other	**Street 1:**	6203 SAN RAMON WY
Name:	JIM ALIA	**Street 2:**	
Date Became Current:		**City:**	BUENA PARK
Date Ended Current:		**State:**	CA
Phone:	714-906-6382	**Country:**	
Source Type:	Implementer	**Zip Code:**	90620

Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	Other	**Street 1:**	6203 SAN RAMON WY
Name:	JIM ALIA	**Street 2:**	
Date Became Current:		**City:**	BUENA PARK
Date Ended Current:		**State:**	CA
Phone:	714-906-6382	**Country:**	
Source Type:	Implementer	**Zip Code:**	90620

11	1 of 1	WNW	0.19 / 1,007.99	50.94 / -5	ROBERT MONTANO 5933 LOS ARCOS WAY BUENA PARK CA 90620	RCRA NON GEN

EPA Handler ID:	CAC002999519
Gen Status Universe:	No Report
Contact Name:	ROBERT MONTANO
Contact Address:	5933 LOS ARCOS WAY , , BUENA PARK , CA, 90620 ,
Contact Phone No and Ext:	714-325-5578
Contact Email:	TAMY@PEASOLUTIONS.COM
Contact Country:	
County Name:	ORANGE
EPA Region:	09
Land Type:	
Receive Date:	20190204

Violation/Evaluation Summary

Note:	NO RECORDS: As of August 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	20190204
Handler Name:	ROBERT MONTANO
Generator Status Universe:	No Report
Source Type:	Implementer

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Owner/Operator Details

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Other	***Street 1:***	5933 LOS ARCOS WAY
Name:	ROBERT MONTANO	***Street 2:***	
Date Became Current:		***City:***	BUENA PARK
Date Ended Current:		***State:***	CA
Phone:	714-325-5578	***Country:***	
Source Type:	Implementer	***Zip Code:***	90620
Owner/Operator Ind:	Current Operator	***Street No:***	
Type:	Other	***Street 1:***	5933 LOS ARCOS WAY
Name:	ROBERT MONTANO	***Street 2:***	
Date Became Current:		***City:***	BUENA PARK
Date Ended Current:		***State:***	CA
Phone:	714-325-5578	***Country:***	
Source Type:	Implementer	***Zip Code:***	90620

12	*1 of 1*	*SW*	*0.20 / 1,067.85*	*50.90 / -5*	***CHO, JEFF*** ***5869 CRESCENT AVENUE*** ***BUENA PARK CA 90620***	***RCRA NON GEN***

EPA Handler ID:	CAC002983078
Gen Status Universe:	No Report
Contact Name:	CHO, JEFF
Contact Address:	5869 CRESCENT AVENUE , , BUENA PARK , CA, 90620 ,
Contact Phone No and Ext:	562-552-2201
Contact Email:	ANDREWC@PWSEI.COM
Contact Country:	
County Name:	ORANGE
EPA Region:	09
Land Type:	
Receive Date:	20181002

Violation/Evaluation Summary

Note:	NO RECORDS: As of August 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	20181002
Handler Name:	CHO, JEFF
Generator Status Universe:	No Report
Source Type:	Implementer

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Owner/Operator Details

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Other	***Street 1:***	5869 CRESCENT AVENUE
Name:	CHO, JEFF	***Street 2:***	
Date Became Current:		***City:***	BUENA PARK
Date Ended Current:		***State:***	CA
Phone:	562-552-2201	***Country:***	
Source Type:	Implementer	***Zip Code:***	90620

Owner/Operator Ind:	Current Operator	***Street No:***	
Type:	Other	***Street 1:***	5869 CRESCENT AVENUE
Name:	CHO, JEFF	***Street 2:***	
Date Became Current:		***City:***	BUENA PARK
Date Ended Current:		***State:***	CA
Phone:	562-552-2201	***Country:***	
Source Type:	Implementer	***Zip Code:***	90620

13	*1 of 1*	*W*	*0.22 / 1,138.82*	*51.06 / -5*	***ORIMOGUINJI, OLAWOLE*** ***5772 LOS ANGELES WAY*** ***BUENA PARK CA 90620***	***RCRA NON GEN***

EPA Handler ID:	CAC002964887
Gen Status Universe:	No Report
Contact Name:	ORIMOGUINJI, OLAWOLE
Contact Address:	5772 LOS ANGELES WAY , , BUENA PARK , CA, 90620 ,
Contact Phone No and Ext:	310-621-6936
Contact Email:	ANDREWC@PWSEI.COM
Contact Country:	
County Name:	ORANGE
EPA Region:	09
Land Type:	
Receive Date:	20180605

Violation/Evaluation Summary

Note:	NO RECORDS: As of August 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	20180605
Handler Name:	ORIMOGUINJI, OLAWOLE

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Generator Status Universe: No Report
Source Type: Implementer

Owner/Operator Details

Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	Other	**Street 1:**	5772 LOS ANGELES WAY
Name:	ORIMOGUINJI, OLAWOLE	**Street 2:**	
Date Became Current:		**City:**	BUENA PARK
Date Ended Current:		**State:**	CA
Phone:	310-621-6936	**Country:**	
Source Type:	Implementer	**Zip Code:**	90620

Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	Other	**Street 1:**	5772 LOS ANGELES WAY
Name:	ORIMOGUINJI, OLAWOLE	**Street 2:**	
Date Became Current:		**City:**	BUENA PARK
Date Ended Current:		**State:**	CA
Phone:	310-621-6936	**Country:**	
Source Type:	Implementer	**Zip Code:**	90620

14	1 of 1	S	0.22 / 1,170.08	52.96 / -3	SUZANNE MELENDEZ 6090 SAN REMO WY BUENA PARK CA 90620	RCRA NON GEN

EPA Handler ID: CAC002993004
Gen Status Universe: No Report
Contact Name: SUZANNE MELENDEZ
Contact Address: 6090 SAN REMO WY , , BUENA PARK , CA, 90620 ,
Contact Phone No and Ext: 909-944-5111
Contact Email: SARAH@PWSEI.COM
Contact Country:
County Name: ORANGE
EPA Region: 09
Land Type:
Receive Date: 20181213

Violation/Evaluation Summary

Note: NO RECORDS: As of August 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility: No
Onsite Burner Exemption: No
Furnace Exemption: No
Underground Injection Activity: No
Commercial TSD: No
Used Oil Transporter: No
Used Oil Transfer Facility: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No

Hazardous Waste Handler Details

Sequence No: 1

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Receive Date: 20181213
Handler Name: SUZANNE MELENDEZ
Generator Status Universe: No Report
Source Type: Implementer

Owner/Operator Details

Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	Other	**Street 1:**	6090 SAN REMO WY
Name:	SUZANNE MELENDEZ	**Street 2:**	
Date Became Current:		**City:**	BUENA PARK
Date Ended Current:		**State:**	CA
Phone:	909-944-5111	**Country:**	
Source Type:	Implementer	**Zip Code:**	90620

Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	Other	**Street 1:**	6090 SAN REMO WY
Name:	SUZANNE MELENDEZ	**Street 2:**	
Date Became Current:		**City:**	BUENA PARK
Date Ended Current:		**State:**	CA
Phone:	909-944-5111	**Country:**	
Source Type:	Implementer	**Zip Code:**	90620

15	1 of 1	N	0.24 / 1,280.47	52.98 / -3	**STEVE & YVETTE LIVINGSTONE** **8001 SAN LEANDRA CIRCLE** **BUENA PARK CA 90620**	**RCRA NON GEN**

EPA Handler ID: CAC002984167
Gen Status Universe: No Report
Contact Name: STEVE & YVETTE
Contact Address: 8001 SAN LEANDRA CIRCLE , , BUENA PARK , CA, 90620 ,
Contact Phone No and Ext: 714-273-8225
Contact Email: ADMIN@VIKINGENVIRO.COM
Contact Country:
County Name: ORANGE
EPA Region: 09
Land Type:
Receive Date: 20181009

Violation/Evaluation Summary

Note: NO RECORDS: As of August 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility: No
Onsite Burner Exemption: No
Furnace Exemption: No
Underground Injection Activity: No
Commercial TSD: No
Used Oil Transporter: No
Used Oil Transfer Facility: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20181009
Handler Name: STEVE & YVETTE LIVINGSTONE
Generator Status Universe: No Report
Source Type: Implementer

Owner/Operator Details

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Other	***Street 1:***	8001 SAN LEANDRA CIRCLE
Name:	STEVE & YVETTE	***Street 2:***	
Date Became Current:		***City:***	BUENA PARK
Date Ended Current:		***State:***	CA
Phone:	714-273-8225	***Country:***	
Source Type:	Implementer	***Zip Code:***	90620

Owner/Operator Ind:	Current Operator	***Street No:***	
Type:	Other	***Street 1:***	8001 SAN LEANDRA CIRCLE
Name:	STEVE & YVETTE	***Street 2:***	
Date Became Current:		***City:***	BUENA PARK
Date Ended Current:		***State:***	CA
Phone:	714-273-8225	***Country:***	
Source Type:	Implementer	***Zip Code:***	90620

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
16	1 of 1	NNW	0.27 / 1,402.75	51.75 / -4	MOBIL #18-FXW 5962 LA PALMA LA PALMA CA 90623	LUST

Global ID: T0605900661
Status: COMPLETED - CASE CLOSED
Status Date: 2015-09-01 00:00:00
Case Type: LUST CLEANUP SITE
Date Source: LUST Cleanup Sites from GeoTracker Search; LUST Cleanup Sites from GeoTracker Cleanup Sites Data Download
County: ORANGE
Latitude: 33.8462059
Longitude: -118.0291356

LUST Cleanup Sites from GeoTracker Cleanup Sites Data Download - Facilities Detail

RB Case No:	083000840T	***Potential COC:***	Gasoline
Local Case No:	88UT062	***How Discovered:***	Tank Closure
Begin Date:	1988-04-01 00:00:00	***Stop Method:***	Close and Replace Tank
Lead Agency:	ORANGE COUNTY LOP	***Stop Description:***	
Local Agency:	ORANGE COUNTY LOP	***Case Worker:***	JW
CUF Case:	YES	***File Location:***	Local Agency

Potential Media of Concern: Other Groundwater (uses other than drinking water)
How Discovered Description:
Calwater Watershed Name: San Gabriel River - Anaheim (845.61)
DWR GW Subbasin Name: Coastal Plain Of Orange County (8-001)
Disadvantaged Community:
Site History:

Please refer to recent Site Documents or Monitoring Reports in GeoTracker for site history. Orange County is not responsible for the accuracy of any professional interpretations provided in reports submitted by consultants for the responsible party.

Regulatory Activity

Action Type: ENFORCEMENT
Date : 2015-09-01 00:00:00
Action: Closure/No Further Action Letter

Action Type: ENFORCEMENT
Date : 2015-06-30 00:00:00
Action: State Water Board - Closure Order

Action Type: ENFORCEMENT
Date : 2015-06-16 00:00:00
Action: Email Correspondence

Action Type: ENFORCEMENT
Date : 2015-03-06 00:00:00
Action: Notification - Public Participation Document

Action Type: ENFORCEMENT
Date : 2014-06-17 00:00:00
Action: File review

Action Type: ENFORCEMENT
Date : 2012-07-23 00:00:00
Action: Staff Letter

Action Type: ENFORCEMENT
Date : 2012-04-23 00:00:00
Action: Staff Letter

Action Type: ENFORCEMENT
Date : 2011-03-23 00:00:00
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Action Type: ENFORCEMENT
Date : 2011-01-10 00:00:00
Action: File review

Action Type: REMEDIATION
Date : 2010-08-01 00:00:00
Action: In Situ Physical/Chemical Treatment (other than SVE)

Action Type: ENFORCEMENT
Date : 2010-05-05 00:00:00
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Action Type: ENFORCEMENT
Date : 2009-07-01 00:00:00
Action: Staff Letter

Action Type: ENFORCEMENT
Date : 2009-06-29 00:00:00
Action: Staff Letter

Action Type: ENFORCEMENT
Date : 2009-04-27 00:00:00
Action: Staff Letter

Action Type: ENFORCEMENT
Date : 2009-03-25 00:00:00
Action: Staff Letter

Action Type: REMEDIATION
Date : 2009-01-01 00:00:00
Action: Soil Vapor Extraction (SVE)

Action Type: ENFORCEMENT
Date : 2008-12-19 00:00:00
Action: Staff Letter

Action Type: ENFORCEMENT
Date : 2008-08-19 00:00:00
Action: Staff Letter

Action Type: ENFORCEMENT
Date : 2007-12-27 00:00:00
Action: Staff Letter

Action Type: ENFORCEMENT

Date : 2007-12-26 00:00:00
Action: Staff Letter

Action Type: ENFORCEMENT
Date : 2007-03-12 00:00:00
Action: Staff Letter

Action Type: REMEDIATION
Date : 2006-11-15 00:00:00
Action: Other (Use Description Field)

Action Type: REMEDIATION
Date : 2006-06-26 00:00:00
Action: Soil Vapor Extraction (SVE)

Action Type: REMEDIATION
Date : 2002-02-05 00:00:00
Action: Pump & Treat (P&T) Groundwater

Action Type: REMEDIATION
Date : 2002-01-01 00:00:00
Action: Soil Vapor Extraction (SVE)

Action Type: REMEDIATION
Date : 2000-08-01 00:00:00
Action: Excavation

Action Type: REMEDIATION
Date : 2000-08-01 00:00:00
Action: Other (Use Description Field)

Action Type: REMEDIATION
Date : 1993-05-01 00:00:00
Action: Soil Vapor Extraction (SVE)

Action Type: REMEDIATION
Date : 1991-08-15 00:00:00
Action: Free Product Removal

Action Type: ENFORCEMENT
Date : 1991-02-08 00:00:00
Action: Meeting

Action Type: ENFORCEMENT
Date : 1991-01-24 00:00:00
Action: Meeting

Action Type: ENFORCEMENT
Date : 1990-03-06 00:00:00
Action: Staff Letter

Action Type: ENFORCEMENT
Date : 1990-01-18 00:00:00
Action: Staff Letter

Action Type: ENFORCEMENT
Date : 1989-09-26 00:00:00
Action: Staff Letter

Action Type: REMEDIATION
Date : 1989-03-01 00:00:00
Action: Pump & Treat (P&T) Groundwater

Action Type: Other
Date : 1988-04-01 00:00:00
Action: Leak Discovery

Action Type: Other
Date : 1988-04-01 00:00:00

Action: Leak Reported

Action Type: Other
Date : 1988-04-01 00:00:00
Action: Leak Stopped

Regulatory Contacts

Contact Type: Local Agency Caseworker
Contact Name: JULIE WOZENCRAFT
City: SANTA ANA
Organization Name: ORANGE COUNTY LOP
Address: 1241 EAST DYER ROAD SUITE 120
Email: jwozencraft@ochca.com
Phone No: 7144336252

Contact Type: Regional Board Caseworker
Contact Name: ROSE SCOTT
City: RIVERSIDE
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500
Email: rose.scott@waterboards.ca.gov
Phone No: 9513206375

Status History

Status: Completed - Case Closed
Status Date: 2015-09-01 00:00:00

Status: Open - Eligible for Closure
Status Date: 2013-04-23 00:00:00

Status: Open - Verification Monitoring
Status Date: 2003-01-29 00:00:00

Status: Open - Remediation
Status Date: 1999-06-21 00:00:00

Status: Open - Case Begin Date
Status Date: 1988-04-01 00:00:00

LUST Cleanup Sites from GeoTracker Search - Regulatory Profile(as of Apr 9, 2019)

Site Facility Name: MOBIL #18-FXW
Site Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Project Status:
Potential COC: GASOLINE
WDR Place Type:
WDR File:
WDR Order:
Address: 5962 LA PALMA
City: LA PALMA
Zip: 90623
County: ORANGE
CUF Claim: 5631
CUF Priority Assig: D
CUF Amount Paid:
File Location: LOCAL AGENCY
Designated Beneficial Use: MUN, AGR, IND, PROC
Project Oversight Agencies:
Report Link: http://geotracker.waterboards.ca.gov/profile_report?global_id=T0605900661
Cleanup Status Detail: COMPLETED - CASE CLOSED AS OF 9/1/2015
Cleanup History Link: http://geotracker.waterboards.ca.gov/profile_report_include?global_id=T0605900661&tabname=regulatoryhistory
Potential Media of Concern: OTHER GROUNDWATER (USES OTHER THAN DRINKING WATER)
User Defined Beneficial Use:
DWR GW Sub Basin: Coastal Plain Of Orange County (8-001)
Calwater Watershed Name: San Gabriel River - Anaheim (845.61)
Post Closure Site Management:
Future Land Use:
Cleanup Oversight Agencies: ORANGE COUNTY LOP (LEAD) - CASE #: 88UT062
CASEWORKER: JULIE WOZENCRAFT
SANTA ANA RWQCB (REGION 8) - CASE #: 083000840T
CASEWORKER: ROSE SCOTT
Site History:

Please refer to recent Site Documents or Monitoring Reports in GeoTracker for site history. Orange County is not responsible for the accuracy of any professional interpretations provided in reports submitted by consultants for the responsible party.

LUST Cleanup Sites from GeoTracker Search - Cleanup Status History(as of Apr 9, 2019)

Status: Completed - Case Closed
Date : 9/1/2015

Status: Open - Eligible for Closure
Date : 4/23/2013

Status: Open - Verification Monitoring
Date : 1/29/2003

Status: Open - Remediation
Date : 6/21/1999

Status: Open - Case Begin Date
Date : 4/1/1988

LUST Cleanup Sites from GeoTracker Search - Cleanup Action(as of Apr 9, 2019)

Action Type: IN SITU PHYSICAL/CHEMICAL TREATMENT (OTHER THAN SVE) ***Begin Date:*** 8/1/2010
Phase: Other (See Description), Water ***End Date:*** 8/2/2010
Contaminant Mass Removed: 0 Pounds
Description:

Action Type: SOIL VAPOR EXTRACTION (SVE) ***Begin Date:*** 1/1/2009
Phase: ***End Date:*** 6/30/2009
Contaminant Mass Removed:
Description: AS/SVE

Action Type: OTHER (USE DESCRIPTION FIELD) ***Begin Date:*** 11/15/2006
Phase: ***End Date:*** 7/26/2007
Contaminant Mass Removed:
Description: ORC Sock (MW-16)

Action Type: SOIL VAPOR EXTRACTION (SVE) ***Begin Date:*** 6/26/2006
Phase: Other (See Description) ***End Date:*** 4/4/2008
Contaminant Mass Removed: 1,521 Pounds
Description: AS/SVE

Action Type: PUMP & TREAT (P&T) GROUNDWATER ***Begin Date:*** 2/5/2002
Phase: Water ***End Date:*** 6/1/2002
Contaminant Mass Removed:
Description:

Action Type: SOIL VAPOR EXTRACTION (SVE) ***Begin Date:*** 1/1/2002
Phase: Other (See Description) ***End Date:*** 7/18/2002
Contaminant Mass Removed: 390 Pounds
Description:

Action Type: OTHER (USE DESCRIPTION FIELD) ***Begin Date:*** 8/1/2000
Phase: Water ***End Date:*** 8/31/2000
Contaminant Mass Removed:
Description: Groundwater pumpouts during tank removal activities

Action Type: EXCAVATION ***Begin Date:*** 8/1/2000
Phase: Soil ***End Date:*** 8/31/2000
Contaminant Mass Removed: 772 Tons
Description:

Action Type: SOIL VAPOR EXTRACTION (SVE) ***Begin Date:*** 5/1/1993
Phase: Other (See Description) ***End Date:*** 12/30/1999
Contaminant Mass Removed: 17,766 Pounds
Description: source TRC 4/13/2000 Environmental Background Report

Action Type: FREE PRODUCT REMOVAL ***Begin Date:*** 8/15/1991

Phase: ***End Date:*** 9/9/9999
Contaminant Mass Removed:
Description:

Action Type: PUMP & TREAT (P&T) GROUNDWATER ***Begin Date:*** 3/1/1989
Phase: Water ***End Date:*** 7/1/2000
Contaminant Mass Removed:
Description:

LUST Cleanup Sites from GeoTracker Search - Regulatory Activities(as of Apr 9, 2019)

Action Type: Other Regulatory Actions
Action Date: 9/1/2015
Received Issue Date: 9/1/2015
Action: Closure/No Further Action Letter
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6259189&tmptable=ENFORCEMENT
Title Description Comments:

State Water Board - Uniform Closure Letter

Action Type: Other Regulatory Actions
Action Date: 6/30/2015
Received Issue Date: 6/30/2015
Action: State Water Board - Closure Order
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6252902&tmptable=ENFORCEMENT
Title Description Comments:

State Water Board - Closure Order

Action Type: Other Regulatory Actions
Action Date: 6/16/2015
Received Issue Date: 6/16/2015
Action: Email Correspondence
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6248972&tmptable=ENFORCEMENT
Title Description Comments:

Well destruction Notice - Mobil #18-FXW, 5962 La Palma, La Palma, 88UT062

Action Type: Notices
Action Date: 3/6/2015
Received Issue Date: 3/6/2015
Action: Notification - Public Participation Document
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6237994&tmptable=ENFORCEMENT
Title Description Comments:

Notification

Action Type: Other Regulatory Actions
Action Date: 6/17/2014
Received Issue Date: 6/17/2014
Action: File review
Doc Link:
Title Description Comments:

Action Type: Other Regulatory Actions
Action Date: 7/23/2012
Received Issue Date: 7/23/2012
Action: Staff Letter
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6130925&tmptable=ENFORCEMENT

Title Description Comments:

CLOSURE RECIEPT

Action Type: Other Regulatory Actions
Action Date: 4/23/2012
Received Issue Date: 4/23/2012
Action: Staff Letter
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6119652&temptable=ENFORCEMENT
Title Description Comments:

WELL ABANDONMENT APPROVAL

Action Type: Other Regulatory Actions
Action Date: 3/23/2011
Received Issue Date: 3/23/2011
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6391990&temptable=ENFORCEMENT
Title Description Comments:

Preliminary USTCF Review

Action Type: Other Regulatory Actions
Action Date: 1/10/2011
Received Issue Date: 1/10/2011
Action: File review
Doc Link:
Title Description Comments:

Reviewed Fourth Quarter 2010 GWMR dated December 13, 2010

Action Type: Other Regulatory Actions
Action Date: 5/5/2010
Received Issue Date: 5/5/2010
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)
Doc Link:
Title Description Comments:

USTCF Review

Action Type: Other Regulatory Actions
Action Date: 7/1/2009
Received Issue Date: 7/1/2009
Action: Staff Letter
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6019500&temptable=ENFORCEMENT
Title Description Comments:

QUARTERLY GROUNDWATER MONITORING REQUIREMENTS

Action Type: Other Regulatory Actions
Action Date: 6/29/2009
Received Issue Date: 6/29/2009
Action: Staff Letter
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6018552&temptable=ENFORCEMENT
Title Description Comments:

WORK PLAN TO CONDUCT SOIL VAPOR ASSESSMENT

Action Type: Other Regulatory Actions
Action Date: 4/27/2009

Received Issue Date: 4/27/2009
Action: Staff Letter
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6011309&temptable=ENFORCEMENT
Title Description Comments:

CORRECTIVE ACTION PLAN

Action Type: Other Regulatory Actions
Action Date: 3/25/2009
Received Issue Date: 3/25/2009
Action: Staff Letter
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6007788&temptable=ENFORCEMENT
Title Description Comments:

Receipt of CAP and Requirements to Cerify Notification of Current Record Owners of Fee Title

Action Type: Other Regulatory Actions
Action Date: 12/19/2008
Received Issue Date: 12/19/2008
Action: Staff Letter
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=5997194&temptable=ENFORCEMENT
Title Description Comments:

REPORT FOR DRILLING OF EIGHT CONFIRMATION SOIL BORINGS

Action Type: Other Regulatory Actions
Action Date: 8/19/2008
Received Issue Date: 8/19/2008
Action: Staff Letter
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=5996409&temptable=ENFORCEMENT
Title Description Comments:

WORK PLAN FOR CONFIRMATION BORINGS

Action Type: Other Regulatory Actions
Action Date: 12/27/2007
Received Issue Date: 12/27/2007
Action: Staff Letter
Doc Link:
Title Description Comments:

REPONSE TO WORK PLAN FOR REBOUND TEST

Action Type: Other Regulatory Actions
Action Date: 12/26/2007
Received Issue Date: 12/26/2007
Action: Staff Letter
Doc Link:
Title Description Comments:

REPONSE TO 2Q07 3Q07 AND 4Q07 REPORTS

Action Type: Other Regulatory Actions
Action Date: 3/12/2007
Received Issue Date: 3/12/2007
Action: Staff Letter
Doc Link:
Title Description Comments:

REPONSE TO 4Q06 REPORT

Action Type: Other Regulatory Actions
Action Date: 2/8/1991
Received Issue Date: 2/8/1991
Action: Meeting
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6294750&temptable=ENFORCEMENT
Title Description Comments:

Meeting and Summary

Action Type: Other Regulatory Actions
Action Date: 1/24/1991
Received Issue Date: 1/24/1991
Action: Meeting
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6294751&temptable=ENFORCEMENT
Title Description Comments:

Meeting and Meeting Summary

Action Type: Other Regulatory Actions
Action Date: 3/6/1990
Received Issue Date: 3/6/1990
Action: Staff Letter
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6294749&temptable=ENFORCEMENT
Title Description Comments:

Regional Board Letter

Action Type: Other Regulatory Actions
Action Date: 1/18/1990
Received Issue Date: 1/18/1990
Action: Staff Letter
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6294748&temptable=ENFORCEMENT
Title Description Comments:

Regional Board Letter

Action Type: Other Regulatory Actions
Action Date: 9/26/1989
Received Issue Date: 9/26/1989
Action: Staff Letter
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6294755&temptable=ENFORCEMENT
Title Description Comments:

Regional Board Letter

Action Type: Cleanup Action
Action Date: 8/1/2010
Received Issue Date:
Action: In Situ Physical/Chemical Treatment (other than SVE)
Doc Link:
Title Description Comments:

Action Type: Cleanup Action
Action Date: 1/1/2009
Received Issue Date:
Action: Soil Vapor Extraction (SVE)
Doc Link:
Title Description Comments:

AS/SVE

Action Type: Cleanup Action
Action Date: 11/15/2006
Received Issue Date:
Action: Other (Use Description Field)
Doc Link:
Title Description Comments:

ORC Sock (MW-16)

Action Type: Cleanup Action
Action Date: 6/26/2006
Received Issue Date:
Action: Soil Vapor Extraction (SVE)
Doc Link:
Title Description Comments:

AS/SVE

Action Type: Cleanup Action
Action Date: 2/5/2002
Received Issue Date:
Action: Pump & Treat (P&T) Groundwater
Doc Link:
Title Description Comments:

Action Type: Cleanup Action
Action Date: 1/1/2002
Received Issue Date:
Action: Soil Vapor Extraction (SVE)
Doc Link:
Title Description Comments:

Action Type: Cleanup Action
Action Date: 8/1/2000
Received Issue Date:
Action: Other (Use Description Field)
Doc Link:
Title Description Comments:

Groundwater pumpouts during tank removal activities

Action Type: Cleanup Action
Action Date: 8/1/2000
Received Issue Date:
Action: Excavation
Doc Link:
Title Description Comments:

Action Type: Cleanup Action
Action Date: 5/1/1993
Received Issue Date:
Action: Soil Vapor Extraction (SVE)
Doc Link:
Title Description Comments:

source TRC 4/13/2000 Environmental Background Report

Action Type: Cleanup Action
Action Date: 8/15/1991
Received Issue Date:
Action: Free Product Removal

Doc Link:
Title Description Comments:

Action Type: Cleanup Action
Action Date: 3/1/1989
Received Issue Date:
Action: Pump & Treat (P&T) Groundwater
Doc Link:
Title Description Comments:

Action Type: Leak Action
Action Date: 4/1/1988
Received Issue Date:
Action: Leak Discovery
Doc Link:
Title Description Comments:

Action Type: Leak Action
Action Date: 4/1/1988
Received Issue Date:
Action: Leak Stopped
Doc Link:
Title Description Comments:

Action Type: Leak Action
Action Date: 4/1/1988
Received Issue Date:
Action: Leak Reported
Doc Link:
Title Description Comments:

LUST Cleanup Sites from GeoTracker Search - Site Maps(as of Apr 9, 2019)

Title: GEO_MAP
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_map/9338751256/T0605900661.PDF
Size : 110 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 2/25/2015

Title: GEO_MAP
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_map/4004839062/T0605900661.PDF
Size : 198 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 6/12/2013

Title: GEO_MAP
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_map/8340148210/T0605900661.PDF
Size : 48 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 6/6/2012

Title: GEO_MAP
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_map/8650544166/T0605900661.PDF
Size : 1,696 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 8/12/2011

Title: GEO_MAP
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_map/8109497547/T0605900661.PDF
Size : 208 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 8/31/2009

Title: B11 (B11)

Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/6611711800/T0605900661.PDF
Size : 40 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 8/28/2009

Title: B12 (B12)
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/8531683683/T0605900661.PDF
Size : 41 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 8/28/2009

Title: B13 (B13)
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/5760931730/T0605900661.PDF
Size : 41 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 8/28/2009

Title: B16 (B16)
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/2008767545/T0605900661.PDF
Size : 41 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 8/28/2009

Title: B18 (B18)
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/5695235311/T0605900661.PDF
Size : 41 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 8/28/2009

Title: B14 (B14)
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/9058367073/T0605900661.PDF
Size : 41 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 8/28/2009

Title: B9 (B9)
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/1125192105/T0605900661.PDF
Size : 41 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 8/28/2009

Title: B10 (B10)
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/6105215787/T0605900661.PDF
Size : 41 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 8/28/2009

Title: B15 (B15)
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/8240212857/T0605900661.PDF
Size : 41 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 8/28/2009

Title: B17 (B17)
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/4860719084/T0605900661.PDF
Size : 41 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 8/28/2009

Title: CB10 (CB10)
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/5705501735/T0605900661.PDF
Size : 47 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 11/7/2008

Title: CB14 (CB14)
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/1431139886/T0605900661.PDF
Size : 53 KB
Submitted By: CARDNO (AUTH_RP)

Submitted: 11/7/2008

Title: CB11 (CB11)
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/4314083278/T0605900661.PDF
Size : 48 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 11/7/2008

Title: CB12 (CB12)
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/3715740382/T0605900661.PDF
Size : 53 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 11/7/2008

Title: GEO_MAP
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_map/7903265714/T0605900661.PDF
Size : 526 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 11/7/2008

Title: CB8 (CB8)
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/9000039219/T0605900661.PDF
Size : 51 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 11/7/2008

Title: CB9 (CB9)
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/2966198146/T0605900661.PDF
Size : 56 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 11/7/2008

Title: CB7 (CB7)
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/6300686061/T0605900661.PDF
Size : 54 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 11/7/2008

Title: CB13 (CB13)
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/5247933506/T0605900661.PDF
Size : 51 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 11/7/2008

Title: GEO_MAP
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_map/4635480582/T0605900661.pdf
Size : 51 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 12/30/2005

Title: GEO_BORE (B2)
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/8034650504/T0605900661.pdf
Size : 284 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 12/30/2005

Title: GEO_BORE (B6)
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/6718704044/T0605900661.pdf
Size : 125 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 12/30/2005

Title: GEO_BORE (B7)
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/8369949162/T0605900661.pdf
Size : 87 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 12/30/2005

Title: GEO_BORE (B1)

Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/8347760856/T0605900661.pdf
Size : 326 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 12/30/2005

Title: GEO_BORE (B3)
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/7921294987/T0605900661.pdf
Size : 244 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 12/30/2005

Title: GEO_BORE (B5)
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/2234634220/T0605900661.pdf
Size : 165 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 12/30/2005

Title: GEO_BORE (B4)
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/7519941031/T0605900661.pdf
Size : 204 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 12/30/2005

Title: GEO_BORE (B8)
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/5658170402/T0605900661.pdf
Size : 46 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 12/30/2005

Title: GEO_MAP
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_map/6806379020/T0605900661.pdf
Size : 60 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 3/21/2002

LUST Cleanup Sites from GeoTracker Search - Documents(as of Apr 9, 2019)

Document Type: Site Documents ***Size :***
Document Date: 9/1/2015 ***Submitted By:*** (REGULATOR)
Type: CLOSURE/NO FURTHER ACTION LETTER ***Submitted:***
Title: STATE WATER BOARD - UNIFORM CLOSURE LETTER
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6259189

Document Type: Site Documents ***Size :***
Document Date: 6/30/2015 ***Submitted By:*** (REGULATOR)
Type: STATE WATER BOARD - CLOSURE ORDER ***Submitted:***
Title: STATE WATER BOARD - CLOSURE ORDER
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6252902

Document Type: Site Documents ***Size :***
Document Date: 6/16/2015 ***Submitted By:*** GEORGE W. LOCKWOOD (REGULATOR)
Type: EMAIL CORRESPONDENCE ***Submitted:***
Title: WELL DESTRUCTION NOTICE - MOBIL #18-FXW, 5962 LA PALMA, LA PALMA, 88UT062
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6248972

Document Type: Site Documents ***Size :***
Document Date: 3/6/2015 ***Submitted By:*** VIVIAN GOMEZ-LATINO (REGULATOR)
Type: NOTIFICATION - PUBLIC PARTICIPATION DOCUMENT ***Submitted:***
Title: NOTIFICATION
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6237994

Document Type: Site Documents ***Size :*** 2,147 KB
Document Date: 2/25/2015 ***Submitted By:*** CARDNO (AUTH_RP)
Type: WELL DESTRUCTION REPORT ***Submitted:***
Title: 3087C.R40 18FXW WELL DESTRUCTION REPORT. 02-25-15
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8183679938/T0605900661.PDF

Document Type: Site Documents **Size :** 463 KB
Document Date: 12/18/2014 **Submitted By:** CARDNO (AUTH_RP)
Type: STATUS / PROGRESS REPORTS **Submitted:**
Title: 3087 18FXW 4TH QUARTER 2014 STATUS REPORT. 12-18-14
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1017656445/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 10,418 KB
Document Date: 9/8/2014 **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - SEMI-ANNUALLY **Submitted:**
Title: 3087 18FXW 2ND QUARTER 2014 - 3RD QUARTER 2014 SEMIANNUAL GROUNDWATER MONITORINGF AND STATUS REPORT. 09-08-14
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9348451733/T0605900661.PDF

Document Type: Site Documents **Size :** 110 KB
Document Date: 8/28/2014 **Submitted By:** CARDNO (AUTH_RP)
Type: CORRESPONDENCE **Submitted:**
Title: 3087 18FXW (3094C.L75 18378) TRANSFER OF EXXONMOBIL ENVIRONMENTAL SERVICES PROJECT MANAGEMENT. 08-28-14
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5770775973/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 9,411 KB
Document Date: 3/21/2014 **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - SEMI-ANNUALLY **Submitted:**
Title: 3087 18FXW 4TH QUARTER 2013 - 1ST QUARTER 2014 SEMIANNUAL GROUNDWATER MONITORING AND STATUS REPORT. 03-21-14
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2632083952/T0605900661.PDF

Document Type: Site Documents **Size :** 130 KB
Document Date: 12/9/2013* **Submitted By:** CARDNO (AUTH_RP)
Type: CORRESPONDENCE **Submitted:**
Title: 3087 18FXW (3559C.L02 18HDR) TRANSFER OF EMES PROJECT MANAGEMENT. 12-09-13
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1036492526/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 11,772 KB
Document Date: 8/30/2013 **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - SEMI-ANNUALLY **Submitted:**
Title: 3087 18FXW 2ND QUARTER 2013 -3RD QUARTER 2013 SEMIANNUAL GROUNDWATER MONITORING AND STATUS REPORT. 08-30-13
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5337755322/T0605900661.PDF

Document Type: Site Documents **Size :** 7,557 KB
Document Date: 6/19/2013 **Submitted By:** CARDNO (AUTH_RP)
Type: WELL DESTRUCTION REPORT **Submitted:**
Title: 3087C.R39 18FXW WELL DESTRUCTION REPORT. 06-19-13
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8018113613/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 11,702 KB
Document Date: 2/14/2013 **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - SEMI-ANNUALLY **Submitted:**
Title: 3087 18FXW 4TH QUARTER 2012 -1ST QUARTER 2013 SEMIANNUAL GROUNDWATER MONITORING AND STATUS REPORT. 02-14-13
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7210540711/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 11,097 KB
Document Date: 8/23/2012 **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 3087 18FXW 3RD QUARTER 2012 GROUNDWATER MONITORING AND STATUS REPORT. 08-23-12
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8754489958/T0605900661.PDF

Document Type: Site Documents **Size :** 4,427 KB
Document Date: 8/1/2012 **Submitted By:** CARDNO (AUTH_RP)
Type: WELL DESTRUCTION REPORT **Submitted:**
Title: 308714.R38 18FXW WELL DESTRUCTION REPORT. 08-01-12
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8489898622/T0605900661.PDF

Document Type: Site Documents **Size :**
Document Date: 7/23/2012 **Submitted By:** TAMARA ESCOBEDO (REGULATOR)
Type: STAFF LETTER **Submitted:**
Title: CLOSURE RECIEPT

Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6130925

Document Type: Site Documents
Document Date: 6/22/2012*
Type: CORRESPONDENCE
Title: 308714TE.L43 18FXW TRANSFER OF EXXONMOBIL ENVIRONMENTAL SERVICES PROJECT MANAGEMENT. 06-22-12
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1693756043/T0605900661.PDF
Size : 14 KB
Submitted By: CARDNO (AUTH_RP)
Submitted:

Document Type: Monitoring Reports
Document Date: 5/11/2012
Type: MONITORING REPORT - QUARTERLY
Title: 3087 18FXW 2ND QUARTER 2012 GROUNDWATER MONITORING AND STATUS REPORT. 05-11-12
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2728993237/T0605900661.PDF
Size : 4,847 KB
Submitted By: CARDNO (AUTH_RP)
Submitted:

Document Type: Site Documents
Document Date: 4/23/2012
Type: STAFF LETTER
Title: WELL ABANDONMENT APPROVAL
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6119652
Size :
Submitted By: TAMARA ESCOBEDO (REGULATOR)
Submitted:

Document Type: Site Documents
Document Date: 3/27/2012
Type: WELL DESTRUCTION WORKPLAN
Title: 308714.W10 18FXW WORK PLAN FOR THE DESTRUCTION OF ON-SITE GROUNDWATER MONITORING SOIL VAPOR AND REMEDIATION WELLS AND THE OBSERVATION OF 3RD PARTY SITE REDEVELOPMENT ACTIVITIES. 03-27-12
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1154019951/T0605900661.PDF
Size : 8,000 KB
Submitted By: CARDNO (AUTH_RP)
Submitted:

Document Type: Site Documents
Document Date: 2/28/2012
Type: REQUEST FOR CLOSURE
Title: 308714.R36 18FXW REQUEST FOR CASE CLOSURE REPORT. 02-28-12.PDF
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5141031920/T0605900661.PDF
Size : 7,970 KB
Submitted By: CARDNO (AUTH_RP)
Submitted:

Document Type: Monitoring Reports
Document Date: 2/21/2012
Type: MONITORING REPORT - QUARTERLY
Title: 3087 18FXW 1ST QUARTER 2012 GROUNDWATER MONITORING AND STATUS REPORT. 02-21-12
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7836013078/T0605900661.PDF
Size : 8,265 KB
Submitted By: CARDNO (AUTH_RP)
Submitted:

Document Type: Monitoring Reports
Document Date: 11/21/2011
Type: MONITORING REPORT - QUARTERLY
Title: 308718FXW 4TH QUARTER 2011 GROUNDWATER MONITORING AND STATUS REPORT. 11-21-11
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9727823913/T0605900661.PDF
Size : 7,553 KB
Submitted By: CARDNO (AUTH_RP)
Submitted:

Document Type: Monitoring Reports
Document Date: 9/12/2011
Type: MONITORING REPORT - QUARTERLY
Title: 3087 18FXW 3RD QUARTER 2011 GROUNDWATER MONITORING AND STATUS REPORT. 09-12-11
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4881681084/T0605900661.PDF
Size : 16,878 KB
Submitted By: CARDNO (AUTH_RP)
Submitted:

Document Type: Site Documents
Document Date: 8/30/2011
Type: RISK ASSESSMENT REPORT
Title: 308714.R35 18FXW REPORT FOR A SOIL VAPOR SURVEY. 08-30-11
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6619414567/T0605900661.PDF
Size : 15,663 KB
Submitted By: CARDNO (AUTH_RP)
Submitted:

Document Type: Site Documents
Document Date: 6/14/2011
Type: OTHER WORKPLAN
Title: 308714.W09 18FXW NOTICE OF INTENT TO CONDUCT A SOIL VAPOR SURVEY AND PRELIMINARY VAPOR INTRUSION RISK ASSESSMENT. 06-14-11
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3312906920/T0605900661.PDF
Size : 9,910 KB
Submitted By: CARDNO (AUTH_RP)
Submitted:

Document Type: Site Documents
Document Date: 5/31/2011*
Type: SITE INVESTIGATION
Size : 5,003 KB
Submitted By: CARDNO (AUTH_RP)
Submitted:

Title: 308714.R37 GEOTECHNICAL INVESTIGATION AND LIQUEFACTION EVALUATION PROPOSED CHASE BANK 5-31-2011
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2512601733/T0605900661.PDF

Document Type: Monitoring Reports — **Size :** 15,732 KB
Document Date: 5/19/2011 — **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - QUARTERLY — **Submitted:**
Title: 3087 18FXW SECOND QUARTER 2011 GROUNDWATER MONITORING AND STATUS REPORT. 5-19-11
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4870011329/T0605900661.PDF

Document Type: Site Documents — **Size :**
Document Date: 3/23/2011 — **Submitted By:** PAT G. CULLEN (REGULATOR)
Type: CLEAN UP FUND - CASE CLOSURE REVIEW SUMMARY REPORT (RSR) — **Submitted:**
Title: PRELIMINARY USTCF REVIEW
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6391990

Document Type: Monitoring Reports — **Size :** 15,855 KB
Document Date: 2/23/2011 — **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - QUARTERLY — **Submitted:**
Title: 3087 18FXW 1ST QUARTER 2011 GROUNDWATER MONITORING AND STATUS REPORT. 02-23-11
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3563669860/T0605900661.PDF

Document Type: Monitoring Reports — **Size :** 8,951 KB
Document Date: 12/13/2010 — **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - QUARTERLY — **Submitted:**
Title: 3087 18FXW 4TH QUARTER 2010 GROUNDWATER MONITORING AND STATUS REPORT. 12-13-10
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1104241907/T0605900661.PDF

Document Type: Monitoring Reports — **Size :** 6,415 KB
Document Date: 8/25/2010 — **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - QUARTERLY — **Submitted:**
Title: 3087 18FXW 3RD QUARTER 2010 GROUNDWATER MONITORING AND STATUS REPORT. 08-25-10
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1817254602/T0605900661.PDF

Document Type: Site Documents — **Size :** 6,480 KB
Document Date: 8/17/2010 — **Submitted By:** CARDNO (AUTH_RP)
Type: CORRESPONDENCE — **Submitted:**
Title: 308714TE.L34 18FXW NOTIFICATION OF INTENT TO CONDUCT A DUAL-PHASE EXTRACTION HIT EVENT. 08-17-10
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7046685636/T0605900661.PDF

Document Type: Monitoring Reports — **Size :** 13,305 KB
Document Date: 5/26/2010 — **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - QUARTERLY — **Submitted:**
Title: 3087 18FXW SECOND QUARTER 2010 GROUNDWATER MONITORING AND STATUS REPORT. 5-26-10.PDF
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9029504358/T0605900661.PDF

Document Type: Site Documents — **Size :** 39 KB
Document Date: 3/19/2010* — **Submitted By:** CARDNO (AUTH_RP)
Type: CORRESPONDENCE — **Submitted:**
Title: 308714TE.L30 18FXW CHANGE IN EXXONMOBIL OIL CORPORATION PROJECT MANAGEMENT. 03-19-10.PDF
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3517053067/T0605900661.PDF

Document Type: Monitoring Reports — **Size :** 8,280 KB
Document Date: 2/25/2010 — **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - QUARTERLY — **Submitted:**
Title: 3087 18FXW 1ST QUARTER 2010 GROUNDWATER MONITORING AND STATUS REPORT. 02-25-10.PDF
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4156241178/T0605900661.PDF

Document Type: Monitoring Reports — **Size :** 994 KB
Document Date: 11/19/2009 — **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - QUARTERLY — **Submitted:**
Title: 3087 18FXW 4TH QUARTER 2009 GROUNDWATER MONITORING AND STATUS REPORT.11-19-09 PART 2 OF 2
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7857751309/T0605900661.PDF

Document Type: Monitoring Reports — **Size :** 14,255 KB

Document Date: 11/19/2009 **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 3087 18FXW 4TH QUARTER 2009 GROUNDWATER MONITORING AND STATUS REPORT.11-19-09 PART 1 OF 2
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6268801033/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 6,697 KB
Document Date: 10/8/2009 **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 3087 18FXW 3RD QUARTER 2009 GROUNDWATER MONITORING AND STATUS REPORT. 10-08-09 PART 2 OF 2.PDF
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1399771451/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 12,913 KB
Document Date: 10/8/2009 **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 3087 18FXW 3RD QUARTER 2009 GROUNDWATER MONITORING AND STATUS REPORT. 10-08-09 PART 1 OF 2.PDF
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9819830656/T0605900661.PDF

Document Type: Site Documents **Size :** 5,882 KB
Document Date: 9/10/2009 **Submitted By:** CARDNO (AUTH_RP)
Type: RISK ASSESSMENT REPORT **Submitted:**
Title: 308714.R33 18FXW SOIL VAPOR SURVEY AND VAPOR INTRUSION RISK ASSESSMENT REPORT. 09-10-09.PDF
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4144433557/T0605900661.PDF

Document Type: Site Documents **Size :**
Document Date: 7/1/2009 **Submitted By:** (REGULATOR)
Type: STAFF LETTER **Submitted:**
Title: QUARTERLY GROUNDWATER MONITORING REQUIREMENTS
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6019500

Document Type: Site Documents **Size :**
Document Date: 6/29/2009 **Submitted By:** (REGULATOR)
Type: STAFF LETTER **Submitted:**
Title: WORK PLAN TO CONDUCT SOIL VAPOR ASSESSMENT
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6018552

Document Type: Monitoring Reports **Size :** 8,376 KB
Document Date: 6/17/2009 **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 3087 18FXW 2ND QUARTER 2009 GROUNDWATER MONITORING AND STATUS REPORT.06-17-09 PART 2 OF 2.PDF
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7168206334/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 10,540 KB
Document Date: 6/17/2009 **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 3087 18FXW 2ND QUARTER 2009 GROUNDWATER MONITORING AND STATUS REPORT.06-17-09 PART 1 OF 2.PDF
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7665437996/T0605900661.PDF

Document Type: Site Documents **Size :** 9,650 KB
Document Date: 5/29/2009 **Submitted By:** CARDNO (AUTH_RP)
Type: OTHER WORKPLAN **Submitted:**
Title: 308714.W08 18FXW WORK PLAN TO CONDUCT A SOIL VAPOR ASSESSMENT.05-29-09.PDF
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8321084141/T0605900661.PDF

Document Type: Site Documents **Size :**
Document Date: 4/27/2009 **Submitted By:** (REGULATOR)
Type: STAFF LETTER **Submitted:**
Title: CORRECTIVE ACTION PLAN
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6011309

Document Type: Site Documents **Size :**
Document Date: 3/25/2009 **Submitted By:** (REGULATOR)
Type: STAFF LETTER **Submitted:**
Title: RECEIPT OF CAP AND REQUIREMENTS TO CERIFY NOTIFICATION OF CURRENT RECORD OWNERS OF

FEE TITLE
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6007788

Document Type: Monitoring Reports **Size :** 7,983 KB
Document Date: 3/19/2009 **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 3087 18FXW 1ST QUARTER 2009 GROUNDWATER MONITORING AND STATUS REPORT. 03-18-09 PART 1 OF 2.PDF
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2503948390/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 9,675 KB
Document Date: 3/19/2009 **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 3087 18FXW 1ST QUARTER 2009 GROUNDWATER MONITORING AND STATUS REPORT. 03-18-09 PART 2 OF 2.PDF
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5693554103/T0605900661.PDF

Document Type: Site Documents **Size :** 12,773 KB
Document Date: 3/13/2009 **Submitted By:** CARDNO (AUTH_RP)
Type: CAP/RAP - FEASIBILITY STUDY REPORT **Submitted:**
Title: 308705.R32 18FXW CORRECTIVE ACTION PLAN 03-13-09.PDF
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5863292872/T0605900661.PDF

Document Type: Site Documents **Size :** 58 KB
Document Date: 12/19/2008* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: CORRESPONDENCE **Submitted:**
Title: AGENCY REQUEST FOR CAP
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2998704910/T0605900661.PDF

Document Type: Site Documents **Size :**
Document Date: 12/19/2008 **Submitted By:** (REGULATOR)
Type: STAFF LETTER **Submitted:**
Title: REPORT FOR DRILLING OF EIGHT CONFIRMATION SOIL BORINGS
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=5997194

Document Type: Monitoring Reports **Size :** 9,810 KB
Document Date: 12/18/2008 **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 3087 18FXW 4TH QUARTER 2008 GROUNDWATER MONITORING AND STATUS REPORT. 12-18-08 PART 1 OF 2
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5579758167/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 8,825 KB
Document Date: 12/18/2008 **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 3087 18FXW 4TH QUARTER 2008 GROUNDWATER MONITORING AND STATUS REPORT. 12-18-08 PART 2 OF 2
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9326176524/T0605900661.PDF

Document Type: Site Documents **Size :** 14,108 KB
Document Date: 11/7/2008 **Submitted By:** CARDNO (AUTH_RP)
Type: SOIL AND WATER INVESTIGATION REPORT **Submitted:**
Title: 308714.R31 18FXW REPORT FOR THE DRILLING OF EIGHT CONFIRMATION SOIL BORINGS.11-07-08 PART 1 OF 2
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9743389308/T0605900661.PDF

Document Type: Site Documents **Size :** 11,817 KB
Document Date: 11/7/2008 **Submitted By:** CARDNO (AUTH_RP)
Type: SOIL AND WATER INVESTIGATION REPORT **Submitted:**
Title: 308714.R31 18FXW REPORT FOR THE DRILLING OF EIGHT CONFIRMATION SOIL BORINGS.11-07-08 PART 2 OF 2
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9259041905/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 13,488 KB
Document Date: 9/18/2008 **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 3087 18FXW 3RD QUARTER 2008 GROUNDWATER MONITORING AND STATUS REPORT. 09-18-08

Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3122609019/T0605900661.PDF

Document Type: Site Documents
Document Date: 8/19/2008
Type: STAFF LETTER
Title: WORK PLAN FOR CONFIRMATION BORINGS
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=5996409
Size :
Submitted By: (REGULATOR)
Submitted:

Document Type: Site Documents
Document Date: 6/27/2008
Type: CORRESPONDENCE - OTHER
Title: 308703TP.L23 18FXW CHANGE IN EXXONMOBIL CORPORATION PROJECT MANAGEMENT 06-26-08
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9512023031/T0605900661.PDF
Size : 43 KB
Submitted By: CARDNO (AUTH_RP)
Submitted:

Document Type: Site Documents
Document Date: 6/24/2008
Type: REPORTS - OTHER
Title: 308714.R30 18FXW REPORT FOR AN AIR SPARGE - SOIL VAPOR EXTRACTION SYSTEM REBOUND TEST AND WORK PLAN FOR CONFIRMATION SOIL BORINGS.06-24-08.PDF
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7283675968/T0605900661.PDF
Size : 12,894 KB
Submitted By: CARDNO (AUTH_RP)
Submitted:

Document Type: Site Documents
Document Date: 6/18/2008
Type: REPORTS - QUARTERLY STATUS REPORT
Title: 3087 18FXW 2ND QUARTER 2008 GROUNDWATER MONITORING AND STATUS REPORT 06-17-08 PART 1 OF 2.PDF
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9170914173/T0605900661.PDF
Size : 13,411 KB
Submitted By: CARDNO (AUTH_RP)
Submitted:

Document Type: Site Documents
Document Date: 6/18/2008
Type: REPORTS - QUARTERLY STATUS REPORT
Title: 3087 18FXW 2ND QUARTER 2008 GROUNDWATER MONITORING AND STATUS REPORT 06-17-08 PART 2 OF 2.PDF
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8922895133/T0605900661.PDF
Size : 11,722 KB
Submitted By: CARDNO (AUTH_RP)
Submitted:

Document Type: Site Documents
Document Date: 3/20/2008
Type: REPORTS - QUARTERLY STATUS REPORT
Title: 3087 18FXW 1ST QUARTER 2008 GROUNDWATER MONITORING AND STATUS REPORT. 03-19-08
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2287098765/T0605900661.PDF
Size : 11,107 KB
Submitted By: CARDNO (AUTH_RP)
Submitted:

Document Type: Site Documents
Document Date: 12/26/2007*
Type: CORRESPONDENCE
Title: AGENCY REQUEST FOR TECHNICAL DATA
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8636718988/T0605900661.PDF
Size : 73 KB
Submitted By: PINNACLE EMS (CONTRACTOR)
Submitted:

Document Type: Site Documents
Document Date: 12/6/2007
Type: REPORTS - QUARTERLY STATUS REPORT
Title: 3087 18FXW 4TH QUARTER 2007 GROUNDWATER MONITORING AND STATUS REPORT. 12-06-07
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8636230289/T0605900661.PDF
Size : 13,397 KB
Submitted By: CARDNO (AUTH_RP)
Submitted:

Document Type: Site Documents
Document Date: 11/16/2007
Type: WORKPLANS - OTHER WP
Title: 308703.W07 18FXW WORK PLAN TO CONDUCT A REBOUND TEST OF THE AIR SPARGE- SOIL VAPOR EXTRACTION SYSTEM. 11-16-07
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6485578238/T0605900661.PDF
Size : 4,049 KB
Submitted By: CARDNO (AUTH_RP)
Submitted:

Document Type: Site Documents
Document Date: 11/9/2007
Type: REPORTS - QUARTERLY STATUS REPORT
Title: 3087 18FXW 3RD QUARTER 2007 GROUNDWATER MONITORING AND STATUS REPORT. 11-09-07 PART 2 OF 2
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6272841513/T0605900661.PDF
Size : 6,832 KB
Submitted By: CARDNO (AUTH_RP)
Submitted:

Document Type: Site Documents
Document Date: 11/9/2007
Size : 8,548 KB
Submitted By: CARDNO (AUTH_RP)

Type: REPORTS - QUARTERLY STATUS REPORT **Submitted:**
Title: 3087 18FXW 3RD QUARTER 2007 GROUNDWATER MONITORING AND STATUS REPORT. 11-09-07 PART 1 OF 2
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5518644571/T0605900661.PDF

Document Type: Site Documents **Size :** 13,920 KB
Document Date: 7/31/2007 **Submitted By:** CARDNO (AUTH_RP)
Type: REPORTS - QUARTERLY STATUS REPORT **Submitted:**
Title: 3087 18FXW 2ND QUARTER 2007 GROUNDWATER MONITORING AND STATUS REPORT 07-30-07 PART 1 OF 2
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1648788273/T0605900661.PDF

Document Type: Site Documents **Size :** 3,502 KB
Document Date: 7/31/2007 **Submitted By:** CARDNO (AUTH_RP)
Type: REPORTS - QUARTERLY STATUS REPORT **Submitted:**
Title: 3087 18FXW 2ND QUARTER 2007 GROUNDWATER MONITORING AND STATUS REPORT 07-30-07 PART 2 OF 2
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9978622257/T0605900661.PDF

Document Type: Site Documents **Size :** 9,505 KB
Document Date: 4/30/2007 **Submitted By:** CARDNO (AUTH_RP)
Type: REPORTS - QUARTERLY STATUS REPORT **Submitted:**
Title: 3087 18FXW 1ST QUARTER 2007 GROUNDWATER MONITORING AND STATUS REPORT. 04-30-07
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9530672967/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 6,840 KB
Document Date: 2/9/2007 **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 3087 18FXW 3RD QUARTER 2006 GROUNDWATER MONITORING AND STATUS REPORT. 10-04-06
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2017973959/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 10,160 KB
Document Date: 1/30/2007 **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 3087 18FXW 4TH QUARTER 2006 GROUNDWATER MONITORING AND STATUS REPORT. 01-30-07
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9030232310/T0605900661.PDF

Document Type: Site Documents **Size :** 5,415 KB
Document Date: 1/15/2007 **Submitted By:** CARDNO (AUTH_RP)
Type: WORKPLANS - REMEDIAL ACTION PLAN **Submitted:**
Title: 308705.R28 18FXW INTERIM REMEDIAL ACTION PLAN. 10-4-05.PDF
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9856554925/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 5,536 KB
Document Date: 8/9/2006* **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 3087 18FXW 2ND QUARTER 2006 GROUNDWATER MONITORING AND STATUS REPORT. 07-13-06.PDF
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6495603263/T0605900661.PDF

Document Type: Site Documents **Size :** 5,013 KB
Document Date: 5/5/2006* **Submitted By:** CARDNO (AUTH_RP)
Type: REPORTS - QUARTERLY STATUS REPORT **Submitted:**
Title: 3087 18FXW 1ST QUARTER 2006 GROUNDWATER MONITORING AND STATUS REPORT. 04-20-06
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6669050455/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 5,925 KB
Document Date: 1/4/2006 **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 3087QRTR0405
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9797681510/T0605900661.PDF

Document Type: Site Documents **Size :** 3,597 KB
Document Date: 12/30/2005 **Submitted By:** CARDNO (AUTH_RP)
Type: REPORTS - INVESTIGATION RPT. **Submitted:**
Title: 308704.R29
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9667219400/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 6,122 KB
Document Date: 9/26/2005 **Submitted By:** CARDNO (AUTH_RP)

Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 3087QRTR0305
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2787580728/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 5,801 KB
Document Date: 7/8/2005 **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 3087QRTR0205
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3136670768/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 4,573 KB
Document Date: 5/11/2005 **Submitted By:** CARDNO (AUTH_RP)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 3087.18FXW 1ST QUARTER 2005 STATUS REPORT. 04-15-05
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3596448600/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 3,414 KB
Document Date: 12/16/2004* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: Q4 2004 STATUS REPORT (AUGUST 21 - NOVEMBER 5, 2004)
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3228384613/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 4,250 KB
Document Date: 4/2/2004* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: Q1 2004 STATUS REPORT (NOVEMBER 20, 2003 - FEBRUARY 18, 2004)
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4726135492/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 4,882 KB
Document Date: 12/31/2003* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: Q4 2003 STATUS REPORT (SEPTEMBER 12 - NOVEMBER 19, 2003)
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4709408700/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 4,702 KB
Document Date: 10/24/2003* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: Q3 2003 STATUS REPORT (JUNE 13 - SEPTEMBER 11, 2003)
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6418881356/T0605900661.PDF

Document Type: Site Documents **Size :** 13,671 KB
Document Date: 5/29/2003* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: REQUEST FOR CLOSURE **Submitted:**
Title: CONFIRMATION SOIL BORING REPORT AND REQUEST FOR CASE CLOSURE
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9561628878/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 4,616 KB
Document Date: 5/2/2003* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: Q1 2003 STATUS REPORT (DECEMBER 3, 2002 - MARCH 20, 2003)
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3917541742/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 4,599 KB
Document Date: 3/20/2003* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: Q2 2003 STATUS REPORT (MARCH 20 - JUNE 13, 2003)
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3693178176/T0605900661.PDF

Document Type: Site Documents **Size :** 178 KB
Document Date: 1/16/2003* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: OTHER REPORT / DOCUMENT **Submitted:**
Title: MONTHLYSELF MONITORING AND EFFLUENT METER READING REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5031379461/T0605900661.PDF

Document Type: Site Documents **Size :** 8,438 KB
Document Date: 1/16/2003* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS **Submitted:**
Title: FOURTH QUARTER 2002 STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7101515352/T0605900661.PDF

Document Type: Site Documents | **Size :** 168 KB
Document Date: 12/20/2002* | **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: OTHER REPORT / DOCUMENT | **Submitted:**
Title: SELF MONITORING AND EFFLUENT METER READING REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7155905187/T0605900661.PDF

Document Type: Site Documents | **Size :** 51 KB
Document Date: 12/19/2002* | **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: CORRESPONDENCE | **Submitted:**
Title: 2002-12-19 OCHCA APPROVAL OF CONFIRMATION SOIL BORING WORK PLAN LETTER
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9468245089/T0605900661.PDF

Document Type: Site Documents | **Size :** 142 KB
Document Date: 11/20/2002* | **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: OTHER REPORT / DOCUMENT | **Submitted:**
Title: SELF MONITORING AND EFFLUENT METER READING REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2252436041/T0605900661.PDF

Document Type: Site Documents | **Size :** 148 KB
Document Date: 10/14/2002* | **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: OTHER REPORT / DOCUMENT | **Submitted:**
Title: SELF MONITORING AND EFFLUENT METER READING REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7687293708/T0605900661.PDF

Document Type: Site Documents | **Size :** 8,248 KB
Document Date: 10/4/2002* | **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS | **Submitted:**
Title: THIRD QUARTER 2002 STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3178995490/T0605900661.PDF

Document Type: Site Documents | **Size :** 4,508 KB
Document Date: 7/31/2002* | **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS | **Submitted:**
Title: SECOND QUARTER 2002 STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6560127019/T0605900661.PDF

Document Type: Site Documents | **Size :** 1,041 KB
Document Date: 7/30/2002* | **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: NPDES / WDR REPORTS | **Submitted:**
Title: NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM MONITORING REPORT FOR THE MONTH OF JUNE 2002
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8049384415/T0605900661.PDF

Document Type: Monitoring Reports | **Size :** 7,978 KB
Document Date: 7/29/2002* | **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY | **Submitted:**
Title: SECOND QUARTER 2002 GROUNDWATER MONITORING AND SAMPLING REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6380819737/T0605900661.PDF

Document Type: Site Documents | **Size :** 1,719 KB
Document Date: 7/9/2002* | **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: NPDES / WDR REPORTS | **Submitted:**
Title: NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM MONITORING REPORT FOR THE MONTH OF MAY 2002
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3901710271/T0605900661.PDF

Document Type: Site Documents | **Size :** 90 KB
Document Date: 6/13/2002* | **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: CONCEPTUAL SITE MODEL | **Submitted:**
Title: 2002-06-13 SUMMARY OF CASE REVIEW MEETING
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3898737311/T0605900661.PDF

Document Type: Site Documents | **Size :** 1,860 KB
Document Date: 5/29/2002* | **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS | **Submitted:**
Title: FIRST QUARTER 2002 STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5825735509/T0605900661.PDF

Document Type: Site Documents **Size :** 265 KB
Document Date: 3/30/2002* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: NPDES / WDR REPORTS **Submitted:**
Title: NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM MONITORING REPORT FOR THE FIRST QUARTER 2002
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4119963228/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 5,585 KB
Document Date: 3/22/2002* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: FIRST QUARTER 2002 GROUNDWATER MONITORING AND SAMPLING REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1314329683/T0605900661.PDF

Document Type: Site Documents **Size :** 283 KB
Document Date: 1/30/2002* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS **Submitted:**
Title: FOURTH QUARTER 2001 STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3204950690/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 7,174 KB
Document Date: 1/3/2002* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: FOURTH QUARTER 2001 GROUNDWATER MONITORING AND SAMPLING REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5036497652/T0605900661.PDF

Document Type: Site Documents **Size :** 2,100 KB
Document Date: 12/19/2001* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: OTHER WORKPLAN **Submitted:**
Title: 2001-12-19 WORK PLAN ADDENDUM FOR TEMPORARY SYSTEM INSTALLATION & OPERATION
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1884141921/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 3,246 KB
Document Date: 9/9/2001* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 3Q 2001 GROUNDWATER MONITORING AND SAMPLING REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7212821662/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 3,049 KB
Document Date: 6/14/2001* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: SECOND QUARTER QUARTERLY REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6278256356/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 8,379 KB
Document Date: 3/31/2001* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: FIRST QUARTER QUARTERLY REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1336646735/T0605900661.PDF

Document Type: Monitoring Reports **Size :** 7,393 KB
Document Date: 12/31/2000* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: FOURTH QUARTER QUARTERLY REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5582892060/T0605900661.PDF

Document Type: Site Documents **Size :**
Document Date: 2/8/1991 **Submitted By:** NANCY OLSON-MARTIN (REGULATOR)
Type: MEETING **Submitted:**
Title: MEETING AND SUMMARY
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6294750

Document Type: Site Documents **Size :**
Document Date: 1/24/1991 **Submitted By:** NANCY OLSON-MARTIN (REGULATOR)
Type: MEETING **Submitted:**
Title: MEETING AND MEETING SUMMARY
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6294751

Document Type: Site Documents **Size :**
Document Date: 3/6/1990 **Submitted By:** NANCY OLSON-MARTIN (REGULATOR)

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Type: STAFF LETTER **Submitted:**
Title: REGIONAL BOARD LETTER
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6294749

Document Type: Site Documents **Size :**
Document Date: 1/18/1990 **Submitted By:** NANCY OLSON-MARTIN (REGULATOR)
Type: STAFF LETTER **Submitted:**
Title: REGIONAL BOARD LETTER
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6294748

Document Type: Site Documents **Size :**
Document Date: 9/26/1989 **Submitted By:** NANCY OLSON-MARTIN (REGULATOR)
Type: STAFF LETTER **Submitted:**
Title: REGIONAL BOARD LETTER
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900661&enforcement_id=6294755

17	1 of 3	NNW	0.27 / 1,421.55	51.81 / -4	GW CLEANUP-LA PALMA,LA PALMA 5962 LA PALMA LA PALMA CA	CDO/CAO

Facility ID: 228391
Facility Type: Industrial
Status: Historical
Status Date: 4/19/1991
Place Type: Facility
Place Sub Type:
Agency Type: Privately-Owned Business
No Of Agencies: 1
Program: NPDES
No Of Programs: 1
WD ID: 8 302614001
Reg Measure ID: 205941
Region2: 8
Order NO:
NPDES CA Num:
Major Minor:
Npdes Type:
Reclamation: N - No
Dredge Fill Fee:
A301H:
Effective Date: 4/19/1991
Region: 8
Agency Name: EXXON MOBIL CORPORATION
Application Fee Amt Received:
Assigned Staff:
Status2: Active
Facility Waste Type: Hazardous contaminated ground water
Facility Waste Type 3:
Facility Waste Type 4:
Facility Waste Type 2:
Title: Enforcement - 8 302614001
Description: GW CLEANUP
Threat To Water Quality: 3
Reg Measure Type: Enrollee
Program2: NPDES
No Of Programs2: 1
Enforcement ID EID: 224975
Order Resolution Number: 89-058
Enforcement Action Type: Clean-up and Abatement Order
Effective Date2: 5/12/1989
Year Effective: 1989
Adoption Issuance Date:
Achieve Date:
Year Effective2:
ACL Issuance Date:
EPL Issuance Date:
Latest Milestone Completion

Design Flow: 0.01
Complexity: B
Pretreatment: X - Facility is not a POTW
Fee Code:
Sic Code 1: 4959
Sic Desc 1: Sanitary Services, NEC
Sic Code 2:
Sic Desc 2:
Sic Code 3:
Sic Desc 3:
Naics Code 1:
Naics Desc 1:
Naics Code 2:
Naics Desc 2:
Naics Code 3:
Naics Desc 3:
No Of Places: 1
Staff Assigned: Rose Scott
Place County: Orange
Place Latitude:
Place Longitude:
Source Of Facility: Reg Meas

Da:	
Total Assessment Amount:	0
Initial Assessed Amount:	0
Liability $ Amount:	0
Project $ Amount:	0
Liability $ Paid:	0
Project $ Completed:	0
Total $ Paid Completed Amount:	0
Agency Issuing Enf:	
Date Of Oldest Violation Linke:	
Rank 1 Violations:	0
Rank 2 Violations:	0
Rank 3 Violations:	0
Unclassified Violations:	0
Atox Violations Num:	0
Expiration Review Date:	
Termination Date:	11/26/2002
WDR Review Amend:	
WDR Review Revise Renew:	
WDR Review Resc Ind:	
WDR Review No Action Required:	
WDR Review Pending:	
WDR Review Planned:	
Status Enrollee:	Y
Individual General:	I
No Of Staff Assigned:	1
Supervisor:	Michael Adackapara
No Of Supervisors:	1
Direction Voice:	Passive
Region3:	8
No Of Assigned Staff:	
Supervisor2:	
No Of Supervisors2:	

--Details--

Bmp Violations NO:	0
Basin Plan Prohibition Violation:	0
Cat1 Violations NO:	0
Cat 2 Violations NO:	0
Ctox Violations NO:	0
Deficient Monitoring Violation:	0
Deficient Report Violations No:	0
Enforcement Action Violations NO:	0
Feed Violations NO:	0
Groundwater Violations NO:	0
Hydro Modification Violations NO:	0
Late Report Violations NO:	0
Oev Violations NO:	0
Other Codes Violations NO:	0
Permit Condition Violations NO:	0
Pretreatment Violations NO:	0
Rpting Failure To Notify Violations NO:	0
SSO Violations NO:	0
Surface Water Violations NO:	0
Swppp Vioaltions NO:	0
Unauthorized Discharge Violations NO:	0
Priority Violations:	0
Total Mmp Violations NO:	0
Effluent Mmp Serious:	0
Chronic Mmp:	0

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Reporting Mmp Serious: 0
Total Num Of Violations Lnked To Enf Act: 0
Economic Benefit:
Staff Cost:
Maximum Potential Liability:

---

17 | 2 of 3 | NNW | 0.27 / 1,421.55 | 51.81 / -4 | MOBIL #18-FXW, 5962 LA PALMA AVE, LA PALMA CA 90623 | ORANGE LOP

Record ID: RO0002351
Case ID: 88UT062
Case Closed Date: 9/11/2015
Type of Closure: Closure certification issued
Released Substance: Gasoline-Automotive (motor gasoline and additives), leaded & unleaded

---

17 | 3 of 3 | NNW | 0.27 / 1,421.55 | 51.81 / -4 | Mobil #18-FXW, 5962 La Palma Avenue, La Palma, CA 90623 CA 90623 | UST CLOSURE

Claim Case No: Case No. 88UT062
ID: 88UT062
Deadline to Recv Comments: 2015/05/15
Prop UST Case Closure Type: Closure of Underground Storage Tank (UST) Cases - Closure Denials and Approved Orders

Documents

Doc Type: Notice
Documents Link: https://www.waterboards.ca.gov/water_issues/programs/ustcf/docs/prop_closure_cases/88ut062_notice%20.pdf

Doc Type: Draft Order
Documents Link: https://www.waterboards.ca.gov/water_issues/programs/ustcf/docs/prop_closure_cases/88ut062_do.pdf

Doc Type: Closure Summary
Documents Link: https://www.waterboards.ca.gov/water_issues/programs/ustcf/docs/prop_closure_cases/88ut062_summary.pdf

Closur Denial Approved Orders

Doc Title: WQO 2015-0095-UST (06/30/2015)
Denial Link: https://www.waterboards.ca.gov/water_issues/programs/ustcf/../../../board_decisions/adopted_orders/water_quality/2015/wqo2015_0095_ust.pdf

Closure Letter Signed

Letter Title: Uniform Closure Letter (09/01/15)
Letter Link: https://www.waterboards.ca.gov/water_issues/programs/ustcf/docs/prop_closure_cases/88ut062_ucl.pdf

---

18 | 1 of 1 | N | 0.27 / 1,439.64 | 51.89 / -4 | CHEVRON #9-2250, 7990 VALLEY VIEW, BUENA PARK CA 90620 | LUST

Global ID: T0605900068
Status: COMPLETED - CASE CLOSED
Status Date: 2015-04-10 00:00:00
Case Type: LUST CLEANUP SITE
County: ORANGE
Latitude: 33.8465299
Longitude: -118.0283006
Date Source: LUST Cleanup Sites from GeoTracker Search; LUST Cleanup Sites from GeoTracker Cleanup Sites Data Download

LUST Cleanup Sites from GeoTracker Cleanup Sites Data Download - Facilities Detail

RB Case No:	083000089T	**Potential COC:**	Gasoline
Local Case No:	84UT017	**How Discovered:**	Tank Closure
Begin Date:	1984-11-16 00:00:00	**Stop Method:**	Close and Replace Tank
Lead Agency:	ORANGE COUNTY LOP	**Stop Description:**	
Local Agency:	ORANGE COUNTY LOP	**Case Worker:**	DB
CUF Case:	YES	**File Location:**	Local Agency

Potential Media of Concern: Aquifer used for drinking water supply
How Discovered Description:
Calwater Watershed Name: San Gabriel River - Anaheim (845.61)
DWR GW Subbasin Name: Coastal Plain Of Orange County (8-001)
Disadvantaged Community:
Site History:

Please refer to recent Site Documents or Monitoring Reports in GeoTracker for site history. Orange County is not responsible for the accuracy of any professional interpretations provided in reports submitted by consultants for the responsible party.

Regulatory Activity

Action Type: ENFORCEMENT
Date : 2015-04-10 00:00:00
Action: Closure/No Further Action Letter

Action Type: ENFORCEMENT
Date : 2014-10-21 00:00:00
Action: Staff Letter

Action Type: ENFORCEMENT
Date : 2014-08-21 00:00:00
Action: Notification - Public Notice of Case Closure

Action Type: ENFORCEMENT
Date : 2014-08-21 00:00:00
Action: Notification - Public Participation Document

Action Type: RESPONSE
Date : 2013-03-06 00:00:00
Action: Request for Closure - Regulator Responded

Action Type: ENFORCEMENT
Date : 2011-03-23 00:00:00
Action: File review

Action Type: ENFORCEMENT
Date : 2010-10-13 00:00:00
Action: File review

Action Type: ENFORCEMENT
Date : 2009-07-03 00:00:00
Action: Staff Letter

Action Type: ENFORCEMENT
Date : 2008-10-31 00:00:00
Action: Staff Letter

Action Type: RESPONSE
Date : 2008-06-16 00:00:00
Action: Soil and Water Investigation Workplan

Action Type: ENFORCEMENT
Date : 2008-05-06 00:00:00
Action: Staff Letter

Action Type: RESPONSE
Date : 2007-01-31 00:00:00
Action: Soil and Water Investigation Report

Action Type: ENFORCEMENT

Date : 2006-12-15 00:00:00
Action: Staff Letter

Action Type: REMEDIATION
Date : 1994-06-01 00:00:00
Action: Soil Vapor Extraction (SVE)

Action Type: REMEDIATION
Date : 1987-06-01 00:00:00
Action: Free Product Removal

Action Type: REMEDIATION
Date : 1985-01-01 00:00:00
Action: Excavation

Action Type: Other
Date : 1984-11-16 00:00:00
Action: Leak Reported

Action Type: Other
Date : 1984-11-16 00:00:00
Action: Leak Discovery

Action Type: Other
Date : 1984-11-16 00:00:00
Action: Leak Stopped

Regulatory Contacts

Contact Type: Local Agency Caseworker
Contact Name: DENAMARIE BAKER
City: SANTA ANA
Organization Name: ORANGE COUNTY LOP
Address: 1241 E. DYER ROAD, STE. 120
Email: dbaker@ochca.com
Phone No: 7144336255

Contact Type: Regional Board Caseworker
Contact Name: MIGUEL OVIEDO
City: RIVERSIDE
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 Main Street, Suite 500
Email: miguel.oviedo@waterboards.ca.gov
Phone No: 9517823238

Status History

Status: Completed - Case Closed
Status Date: 2015-04-10 00:00:00

Status: Open - Eligible for Closure
Status Date: 2013-01-31 00:00:00

Status: Open - Verification Monitoring
Status Date: 2000-09-05 00:00:00

Status: Open - Remediation
Status Date: 1995-06-17 00:00:00

Status: Open - Remediation
Status Date: 1990-06-01 00:00:00

Status: Open - Case Begin Date
Status Date: 1984-11-16 00:00:00

LUST Cleanup Sites from GeoTracker Search - Regulatory Profile(as of Apr 9, 2019)

Site Facility Name: CHEVRON #9-2250
Site Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Project Status:
Address: 7990 VALLEY VIEW
City: BUENA PARK
Zip: 90620
County: ORANGE

Potential COC: GASOLINE
WDR Place Type:
WDR File:
WDR Order:
File Location: LOCAL AGENCY
Designated Beneficial Use: MUN, AGR, IND, PROC
Project Oversight Agencies:
Report Link: http://geotracker.waterboards.ca.gov/profile_report?global_id=T0605900068
Cleanup Status Detail: COMPLETED - CASE CLOSED AS OF 4/10/2015
Cleanup History Link: http://geotracker.waterboards.ca.gov/profile_report_include?global_id=T0605900068&tabname=regulatoryhistory
Potential Media of Concern: AQUIFER USED FOR DRINKING WATER SUPPLY
User Defined Beneficial Use:
DWR GW Sub Basin: Coastal Plain Of Orange County (8-001)
Calwater Watershed Name: San Gabriel River - Anaheim (845.61)
Post Closure Site Management:
Future Land Use:
Cleanup Oversight Agencies: ORANGE COUNTY LOP (LEAD) - CASE #: 84UT017
CASEWORKER: DENAMARIE BAKER
SANTA ANA RWQCB (REGION 8) - CASE #: 083000089T
CASEWORKER: MIGUEL OVIEDO
CUF Claim: 4803
CUF Priority Assig: D
CUF Amount Paid: $374,676
Site History:

Please refer to recent Site Documents or Monitoring Reports in GeoTracker for site history. Orange County is not responsible for the accuracy of any professional interpretations provided in reports submitted by consultants for the responsible party.

LUST Cleanup Sites from GeoTracker Search - Cleanup Status History(as of Apr 9, 2019)

Status: Completed - Case Closed
Date : 4/10/2015

Status: Open - Eligible for Closure
Date : 1/31/2013

Status: Open - Verification Monitoring
Date : 9/5/2000

Status: Open - Remediation
Date : 6/17/1995

Status: Open - Remediation
Date : 6/1/1990

Status: Open - Case Begin Date
Date : 11/16/1984

LUST Cleanup Sites from GeoTracker Search - Cleanup Action(as of Apr 9, 2019)

Action Type: SOIL VAPOR EXTRACTION (SVE)
Phase: Other (See Description)
Contaminant Mass Removed: 12,000 Pounds
Description:
Begin Date: 6/1/1994
End Date: 7/30/1996

Action Type: FREE PRODUCT REMOVAL
Phase:
Contaminant Mass Removed:
Description:
Begin Date: 6/1/1987
End Date: 9/9/9999

Action Type: EXCAVATION
Phase: Soil
Contaminant Mass Removed: 720 Tons
Description:
Begin Date: 1/1/1985
End Date: 1/31/1985

LUST Cleanup Sites from GeoTracker Search - Regulatory Activities(as of Apr 9, 2019)

Action Type: Other Regulatory Actions

Action Date: 4/10/2015
Received Issue Date: 4/10/2015
Action: Closure/No Further Action Letter
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900068&enforcement_id=6241479&temptable=ENFORCEMENT
Title Description Comments:

REMEDIAL ACTION COMPLETION CERTIFICATION

Action Type: Other Regulatory Actions
Action Date: 10/21/2014
Received Issue Date: 10/21/2014
Action: Staff Letter
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900068&enforcement_id=6225339&temptable=ENFORCEMENT
Title Description Comments:

NOTIFICATION OF PRE-CLOSURE REQUIREMENTS

Action Type: Notices
Action Date: 8/21/2014
Received Issue Date: 8/21/2014
Action: Notification - Public Participation Document
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900068&enforcement_id=6218254&temptable=ENFORCEMENT
Title Description Comments:

DRAFT CASE CLOSURE SUMMARY

Action Type: Notices
Action Date: 8/21/2014
Received Issue Date: 8/21/2014
Action: Notification - Public Notice of Case Closure
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900068&enforcement_id=6218251&temptable=ENFORCEMENT
Title Description Comments:

PUBLIC NOTIFICATION OF DRAFT CASE CLOSURE SUMMARY

Action Type: Response Requested - Other
Action Date: 3/6/2013
Received Issue Date: 3/6/2013
Action: Request for Closure - Regulator Responded
Doc Link: http://geotracker.waterboards.ca.gov/view_documents_all?global_id=T0605900068&doc_id=5769990
Title Description Comments:

California Low-Threat Closure Request

Action Type: Other Regulatory Actions
Action Date: 3/23/2011
Received Issue Date: 3/23/2011
Action: File review
Doc Link:
Title Description Comments:

CASE FILE REVIEW

Action Type: Other Regulatory Actions
Action Date: 10/13/2010
Received Issue Date: 10/13/2010
Action: File review
Doc Link:
Title Description Comments:

CASE FILE REVIEW

Action Type: Other Regulatory Actions
Action Date: 7/3/2009
Received Issue Date: 7/3/2009
Action: Staff Letter
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900068&enforcement_id=6019692&temptable=ENFORCEMENT
Title Description Comments:

REDUCED GROUNDWATER MONITORING REQUIREMENTS

Action Type: Other Regulatory Actions
Action Date: 10/31/2008
Received Issue Date: 10/31/2008
Action: Staff Letter
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900068&enforcement_id=5992755&temptable=ENFORCEMENT
Title Description Comments:

CONDITIONAL APPROVAL OF OVERPURGE EVENTS FOR WELL MW-6

Action Type: Response Requested - Workplans
Action Date: 6/16/2008
Received Issue Date: 1/1/1965
Action: Soil and Water Investigation Workplan
Doc Link:
Title Description Comments:

Soil and Water Investigation Workplan

Action Type: Other Regulatory Actions
Action Date: 5/6/2008
Received Issue Date: 5/6/2008
Action: Staff Letter
Doc Link:
Title Description Comments:

COMMENTS TO 4Q07 GWM AND STATUS REPORT

Action Type: Response Requested - Reports
Action Date: 1/31/2007
Received Issue Date: 1/1/1965
Action: Soil and Water Investigation Report
Doc Link:
Title Description Comments:

Site Conceptual Model Report

Action Type: Other Regulatory Actions
Action Date: 12/15/2006
Received Issue Date: 12/15/2006
Action: Staff Letter
Doc Link:
Title Description Comments:

CASE STATUS AND COMMENTS TO 3Q06 GWM REPORT

Action Type: Leak Action
Action Date: 11/16/1984
Received Issue Date:
Action: Leak Reported
Doc Link:
Title Description Comments:

Action Type: Cleanup Action
Action Date: 6/1/1994
Received Issue Date:
Action: Soil Vapor Extraction (SVE)
Doc Link:
Title Description Comments:

Action Type: Cleanup Action
Action Date: 6/1/1987
Received Issue Date:
Action: Free Product Removal
Doc Link:
Title Description Comments:

Action Type: Cleanup Action
Action Date: 1/1/1985
Received Issue Date:
Action: Excavation
Doc Link:
Title Description Comments:

Action Type: Leak Action
Action Date: 11/16/1984
Received Issue Date:
Action: Leak Discovery
Doc Link:
Title Description Comments:

Action Type: Leak Action
Action Date: 11/16/1984
Received Issue Date:
Action: Leak Stopped
Doc Link:
Title Description Comments:

LUST Cleanup Sites from GeoTracker Search - Site Maps(as of Apr 9, 2019)

Title: GEO_MAP
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_map/4868940055/T0605900068.pdf
Size : 67 KB
Submitted By: JASON LEE (RP)
Submitted: 2/5/2003

LUST Cleanup Sites from GeoTracker Search - Documents(as of Apr 9, 2019)

Document Type: Site Documents
Document Date: 4/10/2015
Type: CLOSURE/NO FURTHER ACTION LETTER
Title: REMEDIAL ACTION COMPLETION CERTIFICATION
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900068&enforcement_id=6241479
Size :
Submitted By: DENAMARIE BAKER (REGULATOR)
Submitted:

Document Type: Site Documents
Document Date: 3/31/2015
Type: WELL DESTRUCTION REPORT
Title: 92250 BUENA PARK WELL DESTRUCTION REPORT-20150331
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1578012824/T0605900068.PDF
Size : 2,111 KB
Submitted By: AECOM (AUTH_RP)
Submitted:

Document Type: Site Documents
Document Date: 10/21/2014
Type: STAFF LETTER
Title: NOTIFICATION OF PRE-CLOSURE REQUIREMENTS
Size :
Submitted By: DENAMARIE BAKER (REGULATOR)
Submitted:

Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900068&enforcement_id=6225339

Document Type: Site Documents
Document Date: 8/21/2014
Type: NOTIFICATION - PUBLIC PARTICIPATION DOCUMENT
Title: DRAFT CASE CLOSURE SUMMARY
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900068&enforcement_id=6218254
Size :
Submitted By: DENAMARIE BAKER (REGULATOR)
Submitted:

Document Type: Site Documents
Document Date: 8/21/2014
Type: NOTIFICATION - PUBLIC NOTICE OF CASE CLOSURE
Title: PUBLIC NOTIFICATION OF DRAFT CASE CLOSURE SUMMARY
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900068&enforcement_id=6218251
Size :
Submitted By: DENAMARIE BAKER (REGULATOR)
Submitted:

Document Type: Monitoring Reports
Document Date: 1/7/2014
Type: MONITORING REPORT - ANNUALLY
Title: 2013 ANNUAL GWMR_20140107
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1657632052/T0605900068.PDF
Size : 5,553 KB
Submitted By: AECOM (CONTRACTOR)
Submitted:

Document Type: Site Documents
Document Date: 7/1/2013
Type: FACT SHEETS - PUBLIC PARTICIPATION
Title: DISTRIBUTION OF NOTICE FOR PROPOSED NO FURTHER ACTION
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1715996921/T0605900068.PDF
Size : 657 KB
Submitted By: AECOM (CONTRACTOR)
Submitted:

Document Type: Site Documents
Document Date: 3/6/2013
Type: REQUEST FOR CLOSURE
Title: CALIFORNIA LOW-THREAT CLOSURE REQUEST
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1471372485/T0605900068.PDF
Size : 6,175 KB
Submitted By: AECOM (AUTH_RP)
Submitted:

Document Type: Site Documents
Document Date: 3/6/2013
Type: REQUEST FOR CLOSURE
Title: CALIFORNIA LOW-THREAT CLOSURE REQUEST - REGULATOR RESPONSE
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900068&document_id=5769990
Size :
Submitted By: DENAMARIE BAKER (REGULATOR)
Submitted:

Document Type: Monitoring Reports
Document Date: 1/7/2013
Type: MONITORING REPORT - SEMI-ANNUALLY
Title: 4Q12 GWM REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2057540833/T0605900068.PDF
Size : 5,182 KB
Submitted By: AECOM (AUTH_RP)
Submitted:

Document Type: Site Documents
Document Date: 12/10/2012
Type: CORRESPONDENCE
Title: CHANGE IN CONTACT INFORMATION
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4562940239/T0605900068.PDF
Size : 49 KB
Submitted By: AECOM (AUTH_RP)
Submitted:

Document Type: Monitoring Reports
Document Date: 11/21/2012
Type: MONITORING REPORT - SEMI-ANNUALLY
Title: FIRST SEMI-ANNUAL 2012 GROUNDWATER MONITORING AND STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1644448459/T0605900068.PDF
Size : 3,245 KB
Submitted By: GHD (CONTRACTOR)
Submitted:

Document Type: Monitoring Reports
Document Date: 2/13/2012
Type: MONITORING REPORT - SEMI-ANNUALLY
Title: SECOND SEMI-ANNUAL 2011 GROUNDWATER MONITORING AND STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6324189186/T0605900068.PDF
Size : 2,407 KB
Submitted By: GHD (CONTRACTOR)
Submitted:

Document Type: Monitoring Reports
Document Date: 8/5/2011
Type: MONITORING REPORT - SEMI-ANNUALLY
Title: FIRST SEMI-ANNUAL 2011 GROUNDWATER MONITORING AND STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3600209057/T0605900068.PDF
Size : 2,683 KB
Submitted By: GHD (CONTRACTOR)
Submitted:

Document Type: Site Documents **Size :** 43 KB
Document Date: 5/23/2011 **Submitted By:** GHD (CONTRACTOR)
Type: CORRESPONDENCE **Submitted:**
Title: PROJECT MANAGEMENT CHANGE
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2557046473/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 2,876 KB
Document Date: 1/21/2011 **Submitted By:** GHD (CONTRACTOR)
Type: MONITORING REPORT - SEMI-ANNUALLY **Submitted:**
Title: 2ND HALF 2010 SEMI-ANNUAL GROUNDWATER MONITORING AND STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6509717583/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 2,362 KB
Document Date: 8/12/2010 **Submitted By:** GHD (CONTRACTOR)
Type: MONITORING REPORT - SEMI-ANNUALLY **Submitted:**
Title: 1ST HALF 2010 SEMI-ANNUAL GROUNDWATER MONITORING AND STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5736329436/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 1,981 KB
Document Date: 2/11/2010 **Submitted By:** GHD (CONTRACTOR)
Type: MONITORING REPORT - SEMI-ANNUALLY **Submitted:**
Title: 2ND HALF 2009 SEMI-ANNUAL GROUNDWATER MONITORING AND STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6965307950/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 5,768 KB
Document Date: 7/28/2009 **Submitted By:** GHD (CONTRACTOR)
Type: MONITORING REPORT - SEMI-ANNUALLY **Submitted:**
Title: SEMI-ANNUAL GROUNDWATER MONITORING AND STATUS REPORT- JANUARY THROUGH JUNE 2009
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2030824959/T0605900068.PDF

Document Type: Site Documents **Size :**
Document Date: 7/3/2009 **Submitted By:** DENAMARIE BAKER (REGULATOR)
Type: STAFF LETTER **Submitted:**
Title: REDUCED GROUNDWATER MONITORING REQUIREMENTS
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900068&enforcement_id=6019692

Document Type: Monitoring Reports **Size :** 4,709 KB
Document Date: 4/30/2009 **Submitted By:** GHD (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 1Q09 GWM REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9605660557/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 4,260 KB
Document Date: 2/10/2009 **Submitted By:** GHD (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 4Q08 GROUNDWATER MONITORING AND STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4972164332/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 4,112 KB
Document Date: 11/4/2008 **Submitted By:** GHD (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 3Q08 GROUNDWATER MONITORING AND STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3024013698/T0605900068.PDF

Document Type: Site Documents **Size :**
Document Date: 10/31/2008 **Submitted By:** DENAMARIE BAKER (REGULATOR)
Type: STAFF LETTER **Submitted:**
Title: CONDITIONAL APPROVAL OF OVERPURGE EVENTS FOR WELL MW-6
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605900068&enforcement_id=5992755

Document Type: Site Documents **Size :** 1,634 KB
Document Date: 9/30/2008 **Submitted By:** GHD (CONTRACTOR)
Type: OTHER WORKPLAN **Submitted:**
Title: THIRD QUARTER 2008 GROUNDWATER OVER-PURGE WORKPLAN
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6732723414/T0605900068.PDF

Document Type: Site Documents **Size :** 1,586 KB
Document Date: 8/12/2008 **Submitted By:** GHD (CONTRACTOR)

Type: CORRESPONDENCE **Submitted:**
Title: REGULATORY RESPONSE LETTER
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8951144158/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 4,434 KB
Document Date: 7/29/2008 **Submitted By:** GHD (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 2Q08 GROUNDWATER MONITORING AND STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3404408335/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 3,279 KB
Document Date: 5/2/2008 **Submitted By:** GHD (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 1Q08 GROUNDWATER MONITORING AND STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2742522299/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 3,529 KB
Document Date: 2/1/2008 **Submitted By:** GHD (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 4Q07 GROUNDWATER MONITORING AND STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4374281167/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 3,062 KB
Document Date: 11/15/2007 **Submitted By:** GHD (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 3Q07 GROUNDWATER MONITORING AND STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7121495127/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 5,023 KB
Document Date: 5/16/2007 **Submitted By:** GHD (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 9-2250 SCM AND 1Q07 GW MONITORING REPORT 5-11-07
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7286206901/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 2,975 KB
Document Date: 1/31/2007 **Submitted By:** GHD (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 4Q06 QMR 1-30-07
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8620771646/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 3,223 KB
Document Date: 10/20/2006 **Submitted By:** GHD (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 3Q06 QMR
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4172544717/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 3,018 KB
Document Date: 8/14/2006 **Submitted By:** GHD (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 2Q06 GW MONITORING & SAMPLING RPT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4133131265/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 3,536 KB
Document Date: 5/5/2006 **Submitted By:** GHD (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 1Q06 SITE STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3242080509/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 3,540 KB
Document Date: 2/13/2006 **Submitted By:** GHD (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 4Q05 GW MONITORING & SATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8104217350/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 2,080 KB
Document Date: 12/20/2005 **Submitted By:** GHD (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 3Q05 STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4783050358/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 3,529 KB
Document Date: 8/12/2005 **Submitted By:** GHD (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 2Q05 SITE STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2510391056/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 4,343 KB
Document Date: 6/3/2005 **Submitted By:** GHD (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 1Q05 SITE STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7365386784/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 5,811 KB
Document Date: 10/26/2004* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 9-2250 2004.10.26 3RD QTR 2004 QMR
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9870093643/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 5,862 KB
Document Date: 7/22/2004* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 9-2250 2004.07.22 2ND QTR 2004 QMR
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2088004827/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 5,876 KB
Document Date: 4/20/2004* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 9-2250 2004.04.20 1ST QTR 2004 QMR
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7979835271/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 5,094 KB
Document Date: 1/15/2004* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 9-2250 2004.01.15 4TH QTR 2003 QMR
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9483970344/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 4,033 KB
Document Date: 1/15/2003* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 9-2250 2003.01.15 4TH QTR 2002 QMR
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9727667272/T0605900068.PDF

Document Type: Site Documents **Size :** 2,037 KB
Document Date: 6/7/2002* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: WELL INSTALLATION REPORT **Submitted:**
Title: 9-2250 2002.06.07 OFFSITE GWM WELL INSTALLATION RPT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6828330755/T0605900068.PDF

Document Type: Site Documents **Size :** 1,611 KB
Document Date: 10/18/2001* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: SITE ASSESSMENT REPORT **Submitted:**
Title: 9-2250 2001.10.18 ADDITIONAL SAR
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2855781257/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 3,603 KB
Document Date: 10/11/2001* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 9-2250 2001.10.11 3RD QTR 2001 QMR
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2422126531/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 3,510 KB
Document Date: 7/19/2001* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 9-2250 2001.07.19 2ND QTR 2001 QMR
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5630995333/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 2,197 KB
Document Date: 3/30/2001* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 9-2250 2001.03.30 1ST QTR 2001 QMR
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9527433931/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 2,845 KB
Document Date: 1/2/2001* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 9-2250 2001.01.02 4TH QTR 2000 QMR
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7568853795/T0605900068.PDF

Document Type: Site Documents **Size :** 2,572 KB
Document Date: 11/28/2000* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: OTHER REPORT / DOCUMENT **Submitted:**
Title: 9-2250 2000.11.28 SITE ASSESSMENT & REMEDIATION REV
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9400412023/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 2,495 KB
Document Date: 9/30/2000* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 9-2250 2000.09.30 3RD QTR 2000 QMR
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3736963629/T0605900068.PDF

Document Type: Site Documents **Size :** 881 KB
Document Date: 5/27/1999* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: OTHER REPORT / DOCUMENT **Submitted:**
Title: 9-2250 1999.05.27 ENCASEMENT REMOVAL & REPAIR RPT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3524237096/T0605900068.PDF

Document Type: Site Documents **Size :** 215 KB
Document Date: 3/23/1999* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: REMEDIAL PROGRESS REPORT **Submitted:**
Title: 9-2250 1999.03.23 CURRENT PHASE REMEDIATION
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4710441350/T0605900068.PDF

Document Type: Site Documents **Size :** 163 KB
Document Date: 1/15/1999* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: CORRESPONDENCE **Submitted:**
Title: 9-2250 1999.01.15 REVISED COST TO BORING & INSTALL ORC
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6292372286/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 2,317 KB
Document Date: 6/29/1998* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 9-2250 1998.06.29 2ND QTR 1998 QMR
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3453093111/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 2,512 KB
Document Date: 4/21/1998* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 9-2250 1998.04.21 1ST QTR 1998 QMR
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3772208929/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 1,874 KB
Document Date: 1/13/1998* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 9-2250 1998.01.13 4TH QTR1997 QMR
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2255045294/T0605900068.PDF

Document Type: Site Documents **Size :** 1,478 KB
Document Date: 1/7/1997* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: SITE ASSESSMENT REPORT **Submitted:**
Title: 9-2250 1997.01.07 SITE ASSESSMENT RPT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6618288040/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 5,438 KB
Document Date: 1/12/1996* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 9-2250 1996.01.12 4TH QTR1995 QMR
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4201158523/T0605900068.PDF

Document Type: Site Documents **Size :** 2,413 KB
Document Date: 11/9/1995* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: SITE ASSESSMENT REPORT **Submitted:**
Title: 9-2250 1995.11.09 COMPLETION OF SITE ASSESSMENT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9533476412/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 1,670 KB
Document Date: 6/30/1995* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 9-2250 1995.06.30 2ND QTR 1995 QMR
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4928305923/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 1,815 KB
Document Date: 9/30/1994* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 9-2250 1994.09.30 3RD QTR 1994 QMR
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1591192662/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 1,543 KB
Document Date: 12/31/1993* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 9-2250 1993.12.31 4TH QTR 1993 QMR
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7979608893/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 881 KB
Document Date: 9/30/1993* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 9-2250 1993.09.30 3RD QTR 1993 QMR
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2843489229/T0605900068.PDF

Document Type: Site Documents **Size :** 229 KB
Document Date: 7/1/1993* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: OTHER REPORT / DOCUMENT **Submitted:**
Title: 9-2250 1993.07.01 SUMMERY OF EVALUATION DATED 03.10.1993
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4903047561/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 998 KB
Document Date: 6/30/1993* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 9-2250 1993.06.30 2ND QTR 1993 QMR
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2665384650/T0605900068.PDF

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Document Type: Site Documents **Size :** 181 KB
Document Date: 5/4/1993* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: OTHER REPORT / DOCUMENT **Submitted:**
Title: 9-2250 1993.05.04 CRWQCB
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1363092780/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 142 KB
Document Date: 4/15/1993* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 9-2250 1993.04.15 1ST QTR 1993 UPDATE
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5647474825/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 940 KB
Document Date: 3/31/1993* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 9-2250 1993.03.31 1ST QTR 1993 QMR
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5592506170/T0605900068.PDF

Document Type: Monitoring Reports **Size :** 1,055 KB
Document Date: 2/26/1993* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: MONITORING REPORT - QUARTERLY **Submitted:**
Title: 9-2250 1993.02.26 REVISED 3RDQTR 1992 QMR
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7353659093/T0605900068.PDF

Document Type: Site Documents **Size :** 600 KB
Document Date: 2/24/1993* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: CORRESPONDENCE **Submitted:**
Title: 9-2250 1993.02.24 COUNTY OF ORANGE
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3671134710/T0605900068.PDF

Document Type: Site Documents **Size :** 645 KB
Document Date: 2/2/1993* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: CORRESPONDENCE **Submitted:**
Title: 9-2250 1993.02.02 COUNTY OF ORANGE DIRECTIVES
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1400435030/T0605900068.PDF

Document Type: Site Documents **Size :** 559 KB
Document Date: 1/25/1993* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: WELL INSTALLATION REPORT **Submitted:**
Title: 9-2250 1993.01.25 VAPOR WELL INSTALL
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4145052075/T0605900068.PDF

Document Type: Site Documents **Size :** 942 KB
Document Date: 10/5/1992* **Submitted By:** ANTEA GROUP REIMBURSEMENT (CONTRACTOR)
Type: CAP/RAP - OTHER REPORT **Submitted:**
Title: 9-2250 1992.10.05 ADDENDUM TO RAP
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5788099825/T0605900068.PDF

19	1 of 1	NNW	0.28 / 1,479.40	52.23 / -4	EXXON 5961 LA PALMA AVE LA PALMA CA 90623	ORANGE LOP

Record ID: RO0001585 **Case Closed Date:** 4/29/2003
Case ID: 90UT195 **Type of Closure:** Closure certification issued
Released Substance: Gasoline-Automotive (motor gasoline and additives), leaded & unleaded

---

20	1 of 1	N	0.28 / 1,486.69	53.98 / -2	CHEVRON #9-2250 7990 S VALLEY VIEW ST BUENA PARK CA 90620	ORANGE LOP

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Record ID: RO0001074 **Case Closed Date:** 4/10/2015
Case ID: 84UT017 **Type of Closure:** Closure certification issued
Released Substance: Gasoline-Automotive (motor gasoline and additives), leaded & unleaded

---

21	1 of 1	NNW	0.29 / 1,507.41	51.50 / -4	EXXON 5961 LA PALMA LA PALMA CA 90623	LUST

Global ID: T0605901360 **County:** ORANGE
Status: COMPLETED - CASE CLOSED **Latitude:** 33.8465609
Status Date: 2003-04-29 00:00:00 **Longitude:** -118.0289926
Case Type: LUST CLEANUP SITE
Date Source: LUST Cleanup Sites from GeoTracker Search; LUST Cleanup Sites from GeoTracker Cleanup Sites Data Download

LUST Cleanup Sites from GeoTracker Cleanup Sites Data Download - Facilities Detail

RB Case No: 083001820T **Potential COC:** Gasoline
Local Case No: 90UT195 **How Discovered:** Tank Closure
Begin Date: 1990-08-21 00:00:00 **Stop Method:** Close and Remove Tank
Lead Agency: ORANGE COUNTY LOP **Stop Description:**
Local Agency: ORANGE COUNTY LOP **Case Worker:** TE
CUF Case: YES **File Location:** Local Agency Warehouse
Potential Media of Concern: Other Groundwater (uses other than drinking water)
How Discovered Description:
Calwater Watershed Name: San Gabriel River - Anaheim (845.61)
DWR GW Subbasin Name: Coastal Plain Of Orange County (8-001)
Disadvantaged Community:
Site History:

Regulatory Activity

Action Type: ENFORCEMENT
Date : 2003-04-29 00:00:00
Action: Closure/No Further Action Letter

Action Type: ENFORCEMENT
Date : 2003-02-06 00:00:00
Action: LOP Case Closure Summary to RB

Action Type: REMEDIATION
Date : 1997-01-06 00:00:00
Action: In Situ Physical/Chemical Treatment (other than SVE)

Action Type: Other
Date : 1990-08-21 00:00:00
Action: Leak Discovery

Action Type: Other
Date : 1990-08-21 00:00:00
Action: Leak Reported

Regulatory Contacts

Contact Type: Regional Board Caseworker **Address:** 3737 Main Street, Suite 500
Contact Name: MIGUEL OVIEDO **Email:** miguel.oviedo@waterboards.ca.gov
City: RIVERSIDE **Phone No:** 9517823238
Organization Name: SANTA ANA RWQCB (REGION 8)

Contact Type: Local Agency Caseworker **Address:** 1241 EAST DYER ROAD SUITE 120
Contact Name: TAMARA ESCOBEDO **Email:** tescobedo@ochca.com
City: SANTA ANA **Phone No:** 7144336251

Organization Name: ORANGE COUNTY LOP

Status History

Status: Completed - Case Closed
Status Date: 2003-04-29 00:00:00

Status: Open - Case Begin Date
Status Date: 1990-08-21 00:00:00

LUST Cleanup Sites from GeoTracker Search - Regulatory Profile(as of Apr 9, 2019)

Site Facility Name: EXXON
Site Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Project Status:
Potential COC: GASOLINE
WDR Place Type:
WDR File:
WDR Order:
File Location: LOCAL AGENCY WAREHOUSE
Designated Beneficial Use: MUN, AGR, IND, PROC
Project Oversight Agencies:
Report Link: http://geotracker.waterboards.ca.gov/profile_report?global_id=T0605901360
Cleanup Status Detail: COMPLETED - CASE CLOSED AS OF 4/29/2003
Cleanup History Link: http://geotracker.waterboards.ca.gov/profile_report_include?global_id=T0605901360&tabname=regulatoryhistory
Potential Media of Concern: OTHER GROUNDWATER (USES OTHER THAN DRINKING WATER)
User Defined Beneficial Use:
DWR GW Sub Basin: Coastal Plain Of Orange County (8-001)
Calwater Watershed Name: San Gabriel River - Anaheim (845.61)
Post Closure Site Management:
Future Land Use:
Cleanup Oversight Agencies: ORANGE COUNTY LOP (LEAD) - CASE #: 90UT195
CASEWORKER: TAMARA ESCOBEDO
SANTA ANA RWQCB (REGION 8) - CASE #: 083001820T
CASEWORKER: MIGUEL OVIEDO
Site History:

Address: 5961 LA PALMA
City: LA PALMA
Zip: 90623
County: ORANGE
CUF Claim: 5293
CUF Priority Assig: D
CUF Amount Paid: $258,666

No site history available

LUST Cleanup Sites from GeoTracker Search - Cleanup Status History(as of Apr 9, 2019)

Status: Completed - Case Closed
Date : 4/29/2003

Status: Open - Case Begin Date
Date : 8/21/1990

LUST Cleanup Sites from GeoTracker Search - Cleanup Action(as of Apr 9, 2019)

Action Type: IN SITU PHYSICAL/CHEMICAL TREATMENT (OTHER THAN SVE)
Phase:
Contaminant Mass Removed:
Description:

Begin Date: 1/6/1997
End Date: 8/31/1999

LUST Cleanup Sites from GeoTracker Search - Regulatory Activities(as of Apr 9, 2019)

Action Type: Other Regulatory Actions
Action Date: 4/29/2003
Received Issue Date: 4/29/2003
Action: Closure/No Further Action Letter

Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605901360&enforcement_id=5960208&tempt able=ENFORCEMENT
Title Description Comments:

Action Type: Other Regulatory Actions
Action Date: 2/6/2003
Received Issue Date: 2/6/2003
Action: LOP Case Closure Summary to RB
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605901360&enforcement_id=6162590&tempt able=ENFORCEMENT
Title Description Comments:

Action Type: Cleanup Action
Action Date: 1/6/1997
Received Issue Date:
Action: In Situ Physical/Chemical Treatment (other than SVE)
Doc Link:
Title Description Comments:

Action Type: Leak Action
Action Date: 8/21/1990
Received Issue Date:
Action: Leak Discovery
Doc Link:
Title Description Comments:

Action Type: Leak Action
Action Date: 8/21/1990
Received Issue Date:
Action: Leak Reported
Doc Link:
Title Description Comments:

LUST Cleanup Sites from GeoTracker Search - Site Maps(as of Apr 9, 2019)

Title: GEO_MAP
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_map/7494770646/T0605901360.jpg
Size : 223 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 10/18/2002

Title: GEO_MAP
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_map/2929578483/T0605901360.pdf
Size : 62 KB
Submitted By: CARDNO (AUTH_RP)
Submitted: 3/19/2002

LUST Cleanup Sites from GeoTracker Search - Documents(as of Apr 9, 2019)

Document Type: Site Documents
Document Date: 6/4/2003
Type:
Size : 137 KB
Submitted By: (REGULATOR)
Submitted:
Title: REMEDIAL ACTION COMPLETION CERTIFICATION
Title Link: http://geotracker.waterboards.ca.gov/site_documents/7446980118/90UT195%2Epdf

Document Type: Site Documents
Document Date: 5/5/2003
Type:
Size : 2,861 KB
Submitted By: (REGULATOR)
Submitted:
Title: CASE CLOSURE SUMMARY
Title Link: http://geotracker.waterboards.ca.gov/site_documents/6440083146/90UT195%2Epdf

Document Type: Site Documents
Document Date: 4/29/2003
Size :
Submitted By: PAMELA YBARRA (REGULATOR)

Type: CLOSURE/NO FURTHER ACTION LETTER **Submitted:**
Title: UNKNOWN
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605901360&enforcement_id=5960208

Document Type: Site Documents **Size :**
Document Date: 2/6/2003 **Submitted By:** PAMELA YBARRA (REGULATOR)
Type: LOP CASE CLOSURE SUMMARY TO RB **Submitted:**
Title: UNKNOWN
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0605901360&enforcement_id=6162590

Document Type: Site Documents **Size :** 3,323 KB
Document Date: 9/15/2000* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: OTHER REPORT / DOCUMENT **Submitted:**
Title: REMOVAL OF FOUR UNDERGROUND STORAGE TANKS AND SOIL SAMPLING ACTIVITIES
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3286100924/T0605901360.PDF

Document Type: Site Documents **Size :** 1,163 KB
Document Date: 6/30/2000* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS **Submitted:**
Title: 2ND QUARTER 2000 QUARTERLY STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2895845413/T0605901360.PDF

Document Type: Site Documents **Size :** 1,114 KB
Document Date: 3/31/2000* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS **Submitted:**
Title: 1ST QUARTER 2000 QUARTERLY STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5204683423/T0605901360.PDF

Document Type: Monitoring Reports **Size :** 439 KB
Document Date: 3/13/2000* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: MONITORING REPORT - OTHER **Submitted:**
Title: 1ST QUARTER 2000 GROUNDWATER ANALYTICAL RESULTS
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8554869234/T0605901360.PDF

Document Type: Site Documents **Size :** 1,519 KB
Document Date: 12/31/1999* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS **Submitted:**
Title: 4TH QUARTER 1999 QUARTERLY STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9019041597/T0605901360.PDF

Document Type: Site Documents **Size :** 1,331 KB
Document Date: 9/30/1999* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS **Submitted:**
Title: 3RD QUARTER 1999 QUARTERLY STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3299566686/T0605901360.PDF

Document Type: Site Documents **Size :** 2,844 KB
Document Date: 9/23/1999* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: SOIL AND WATER INVESTIGATION REPORT **Submitted:**
Title: CONFIRMATION BORING REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5507948458/T0605901360.PDF

Document Type: Site Documents **Size :** 43 KB
Document Date: 7/27/1999* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: CORRESPONDENCE **Submitted:**
Title: OCHCA APPROVAL OF WORK PLAN FOR CONFIRMATION BORINGS
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5495050787/T0605901360.PDF

Document Type: Site Documents **Size :** 1,326 KB
Document Date: 6/30/1999* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS **Submitted:**
Title: 2ND QUARTER 1999 QUARTERLY STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1145975470/T0605901360.PDF

Document Type: Site Documents **Size :** 659 KB
Document Date: 6/28/1999* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: SOIL AND WATER INVESTIGATION WORKPLAN **Submitted:**

Title: WORK PLAN FOR CONFIRMATION SOIL BORINGS
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5670008063/T0605901360.PDF

Document Type: Site Documents **Size :** 2,062 KB
Document Date: 3/31/1999* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS **Submitted:**
Title: 1ST QUARTER 1999 QUARTERLY STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3105821609/T0605901360.PDF

Document Type: Site Documents **Size :** 868 KB
Document Date: 1/11/1999* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: REQUEST FOR CLOSURE **Submitted:**
Title: REQUEST FOR SITE CLOSURE
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9688005447/T0605901360.PDF

Document Type: Site Documents **Size :** 1,220 KB
Document Date: 12/31/1998* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS **Submitted:**
Title: 4TH QUARTER 1998 QUARTERLY STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5164832770/T0605901360.PDF

Document Type: Site Documents **Size :** 1,150 KB
Document Date: 8/17/1998* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS **Submitted:**
Title: 3RD QUARTER 1998 QUARTERLY STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3861543655/T0605901360.PDF

Document Type: Site Documents **Size :** 1,001 KB
Document Date: 6/30/1998* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS **Submitted:**
Title: 2ND QUARTER 1998 QUARTERLY STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7490257024/T0605901360.PDF

Document Type: Site Documents **Size :** 1,089 KB
Document Date: 2/27/1998* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS **Submitted:**
Title: 1ST QUARTER 1998 QUARTERLY STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8258958816/T0605901360.PDF

Document Type: Site Documents **Size :** 1,346 KB
Document Date: 12/31/1997* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS **Submitted:**
Title: 4TH QUARTER 1997 QUARTERLY STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5546263277/T0605901360.PDF

Document Type: Site Documents **Size :** 43 KB
Document Date: 10/15/1997* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS **Submitted:**
Title: 3RD QUARTER 1997 QUARTERLY STATUS REPORT (COVER ONLY)
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5329294562/T0605901360.PDF

Document Type: Site Documents **Size :** 2,796 KB
Document Date: 6/30/1997* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS **Submitted:**
Title: 2ND QUARTER 1997 QUARTERLY STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7371253311/T0605901360.PDF

Document Type: Site Documents **Size :** 91 KB
Document Date: 5/1/1997* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: OPERATION AND MAINTENANCE PLAN/MONITORING REPORT **Submitted:**
Title: AIR SPARGE SYSTEM OPERATION STATUS
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3960283279/T0605901360.PDF

Document Type: Site Documents **Size :** 1,252 KB
Document Date: 3/31/1997* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS **Submitted:**
Title: 1ST QUARTER 1997 QUARTERLY STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4105852127/T0605901360.PDF

Document Type: Site Documents | **Size :** 804 KB
Document Date: 12/31/1996* | **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS | **Submitted:**
Title: 4TH QUARTER 1996 QUARTERLY STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7097944796/T0605901360.PDF

Document Type: Site Documents | **Size :** 1,230 KB
Document Date: 9/30/1996* | **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS | **Submitted:**
Title: 3RD QUARTER 1996 QUARTERLY STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5841757416/T0605901360.PDF

Document Type: Site Documents | **Size :** 2,047 KB
Document Date: 9/5/1996* | **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: WELL INSTALLATION REPORT | **Submitted:**
Title: AIR SPARGE/SOIL VAPOR EXTRACTION WELL INSTALLATION REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1524202346/T0605901360.PDF

Document Type: Site Documents | **Size :** 847 KB
Document Date: 6/28/1996* | **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS | **Submitted:**
Title: 2ND QUARTER 1996 QUARTERLY STATUS REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5686235427/T0605901360.PDF

Document Type: Site Documents | **Size :** 159 KB
Document Date: 5/7/1996* | **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: CORRESPONDENCE | **Submitted:**
Title: OCHCA CORRECTIVE ACTION PLAN REVISION APPROVAL
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4301386237/T0605901360.PDF

Document Type: Site Documents | **Size :** 808 KB
Document Date: 1/2/1996* | **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS | **Submitted:**
Title: 4TH QUARTER 1995 QUARTERLY REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1051351964/T0605901360.PDF

Document Type: Site Documents | **Size :** 2,634 KB
Document Date: 10/2/1995* | **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS | **Submitted:**
Title: 3RD QUARTER 1995 QUARTERLY REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6398401618/T0605901360.PDF

Document Type: Site Documents | **Size :** 1,209 KB
Document Date: 6/23/1995* | **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: CAP/RAP - OTHER REPORT | **Submitted:**
Title: REMEDIAL ACTION PLAN
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6672087252/T0605901360.PDF

Document Type: Site Documents | **Size :** 780 KB
Document Date: 4/3/1995* | **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS | **Submitted:**
Title: 1ST QUARTER 1995 QUARTERLY REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4176275670/T0605901360.PDF

Document Type: Site Documents | **Size :** 675 KB
Document Date: 1/3/1995* | **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS | **Submitted:**
Title: 4TH QUARTER 1994 QUARTERLY REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3137247443/T0605901360.PDF

Document Type: Site Documents | **Size :** 1,702 KB
Document Date: 11/14/1994* | **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: SITE ASSESSMENT REPORT | **Submitted:**
Title: ADDITIONAL SITE ASSESSMENT REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1261558294/T0605901360.PDF

Document Type: Site Documents | **Size :** 1,048 KB
Document Date: 10/3/1994* | **Submitted By:** PINNACLE EMS (CONTRACTOR)

Type: STATUS / PROGRESS REPORTS **Submitted:**
Title: 3RD QUARTER 1994 QUARTERLY REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1971312105/T0605901360.PDF

Document Type: Site Documents **Size :** 949 KB
Document Date: 7/1/1994* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS **Submitted:**
Title: 2ND QUARTER 1994 QUARTERLY REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2390052139/T0605901360.PDF

Document Type: Site Documents **Size :** 878 KB
Document Date: 3/9/1994* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: OTHER WORKPLAN **Submitted:**
Title: SITE ASSESSMENT WORK PLAN
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7718055427/T0605901360.PDF

Document Type: Site Documents **Size :** 122 KB
Document Date: 2/2/1994* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: CORRESPONDENCE **Submitted:**
Title: CRWQCB RESPONSE TO SITE ASSESSMENT & JOINT GROUNDWATER MONITORING REPORTS
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6082769989/T0605901360.PDF

Document Type: Site Documents **Size :** 1,166 KB
Document Date: 1/12/1994* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS **Submitted:**
Title: 4TH QUARTER 1993 QUARTERLY REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9292200446/T0605901360.PDF

Document Type: Monitoring Reports **Size :** 332 KB
Document Date: 11/16/1993* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: MONITORING REPORT - OTHER **Submitted:**
Title: REVISED JOINT GROUNDWATER MONITORING ACTIVITIES REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2849016189/T0605901360.PDF

Document Type: Site Documents **Size :** 1,115 KB
Document Date: 10/8/1993* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS **Submitted:**
Title: 3RD QUARTER 1993 QUARTERLY REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9035940587/T0605901360.PDF

Document Type: Site Documents **Size :** 2,319 KB
Document Date: 9/1/1993* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: SITE ASSESSMENT REPORT **Submitted:**
Title: ADDITIONAL SITE ASSESSMENT REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2111284255/T0605901360.PDF

Document Type: Site Documents **Size :** 177 KB
Document Date: 5/14/1993* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: CORRESPONDENCE **Submitted:**
Title: OCHCA REQUEST TO IMPLEMENT WELL RELOCATION WORK PLAN
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6056314826/T0605901360.PDF

Document Type: Site Documents **Size :** 267 KB
Document Date: 5/12/1993* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: CORRESPONDENCE **Submitted:**
Title: CRWQCB RESPONSE TO FILE REVIEW REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8085100173/T0605901360.PDF

Document Type: Site Documents **Size :** 169 KB
Document Date: 1/18/1993* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: OTHER WORKPLAN **Submitted:**
Title: RELOCATION OF PROPOSED GROUNDWATER MONITORING WELLS WORK PLAN
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1079047918/T0605901360.PDF

Document Type: Site Documents **Size :** 190 KB
Document Date: 12/22/1992* **Submitted By:** PINNACLE EMS (CONTRACTOR)
Type: STATUS / PROGRESS REPORTS **Submitted:**
Title: 4TH QUARTER 1992 QUARTERLY REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7151566982/T0605901360.PDF

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Document Type: Site Documents
Document Date: 9/30/1992*
Type: STATUS / PROGRESS REPORTS
Title: 3RD QUARTER 1992 QUARTERLY REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3872047185/T0605901360.PDF
Size : 356 KB
Submitted By: PINNACLE EMS (CONTRACTOR)
Submitted:

22	1 of 1	E	0.32 / 1,677.64	56.98 / 1	ASAPH YANG 6372 SAN LORENZO DR. BUENA PARK CA 90620	RCRA TSD

EPA Handler ID: CAC003012088
Gen Status Universe: No Report
Contact Name: ASAPH YANG
Contact Address: 6372 SAN LORENZO DR. , , BUENA PARK , CA, 90620 ,
Contact Phone No and Ext: 909-264-4234
Contact Email: JHYNHRC@GMAIL.COM
Contact Country:
Land Type:
County Name: ORANGE
EPA Region: 09
Receive Date: 20190425

Violation/Evaluation Summary

Note: NO RECORDS: As of August 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: Yes
Transfer Facility: No
Onsite Burner Exemption: No
Smelting, Melting and Refining: No
Underground Injection Control: No
Commercial TSD: No
Used Oil Transporter: No
Used Oil Transfer Facility: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20190425
Handler Name: ASAPH YANG
Generator Status Universe: No Report
Source Type: Implementer

Owner/Operator Details

Owner/Operator Ind: Current Owner
Type: Other
Name: ASAPH YANG
Date Became Current:
Date Ended Current:
Phone: 909-264-4234
Source Type: Implementer
Street No:
Street 1: 6372 SAN LORENZO DR.
Street 2:
City: BUENA PARK
State: CA
Country:
Zip Code: 90620

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	Other	**Street 1:**	6372 SAN LORENZO DR.
Name:	ASAPH YANG	**Street 2:**	
Date Became Current:		**City:**	BUENA PARK
Date Ended Current:		**State:**	CA
Phone:	909-264-4234	**Country:**	
Source Type:	Implementer	**Zip Code:**	90620

23	1 of 1	N	0.35 / 1,827.23	55.26 / -1	**TOP HAT CLEANERS** **7892 VALLEY VIEW STREET** **BUENA PARK CA 90620-2353**	**CLEANUP SITES**

Global ID:	SL0605955616	**Site Facility Type:**	CLEANUP PROGRAM SITE
Status:	COMPLETED - CASE CLOSED	**County:**	ORANGE
Status Date:	2015-10-12 00:00:00	**Latitude:**	33.8476833693916
Longitude:	-118.026965260506		
Data Source:	Cleanup Program Sites from GeoTracker Search; Cleanup Sites from GeoTracker Cleanup Sites Data Download		

Cleanup Sites from GeoTracker Cleanup Sites Data Download - Facilities Detail

RB Case No:		**CUF Case:**	NO
Local Case No:		**Case Worker:**	ANA
Begin Date:	2007-02-06 00:00:00	**File Location:**	
Stop Method:			
Lead Agency:	SANTA ANA RWQCB (REGION 8)		
Local Agency:			
Potential COC:	Trichloroethylene (TCE), Tetrachloroethylene (PCE)		
Potential Media of Concern:	Other Groundwater (uses other than drinking water)		
How Discovered:	* Other Means		
How Discovered Description:			
Stop Description:			
Calwater Watershed Name:	San Gabriel River - Anaheim (845.61)		
DWR GW Subbasin Name:	Coastal Plain Of Orange County (8-001)		
Disadvantaged Community:			
Site History:			

The site is an active dry cleaners which has been operating for the past 4 decades at this location. Site investigations has been ongoing since 2007. Very high concentrations of PCE, TCE, and 1,2-DCE has been detected in soil and soil gas at the site and its adjacent tenant units. Groundwater investigation was also conducted and three groundwater monitoring wells were installed in the parking lot. However, groundwater concentrations of the VOCs, with the exception of DCE in the downgradient well MW-3, are fairly low. A focused FS report was submitted for cleanup of soil which proposed soil excavation as the selected remedy. The selected remedy was approved by the Regional Board on February 18, 2010 and implemented in June 2011. An NFA letter for soil was issued on October 26, 2011.

Cleanup Sites from GeoTracker Cleanup Sites Data Download - Regulatory Acitivity

Action Type:	ENFORCEMENT
Date :	2015-10-09 00:00:00
Action:	Closure/No Further Action Letter
Action Type:	ENFORCEMENT
Date :	2015-05-05 00:00:00
Action:	Technical Correspondence / Assistance / Other
Action Type:	ENFORCEMENT
Date :	2014-09-15 00:00:00
Action:	Technical Correspondence / Assistance / Other
Action Type:	RESPONSE
Date :	2014-07-15 00:00:00
Action:	Request for Closure
Action Type:	ENFORCEMENT
Date :	2013-08-21 00:00:00
Action:	Technical Correspondence / Assistance / Other

Action Type: RESPONSE
Date : 2012-09-25 00:00:00
Action: Other Workplan

Action Type: RESPONSE
Date : 2012-08-30 00:00:00
Action: Other Workplan

Action Type: ENFORCEMENT
Date : 2012-05-04 00:00:00
Action: Technical Correspondence / Assistance / Other

Action Type: ENFORCEMENT
Date : 2011-10-26 00:00:00
Action: Closure/No Further Action Letter

Action Type: RESPONSE
Date : 2011-06-28 00:00:00
Action: Technical Memos

Action Type: RESPONSE
Date : 2011-05-26 00:00:00
Action: Technical Memos

Action Type: RESPONSE
Date : 2011-03-08 00:00:00
Action: Technical Memos

Action Type: RESPONSE
Date : 2011-01-24 00:00:00
Action: Technical Memos

Action Type: ENFORCEMENT
Date : 2010-12-09 00:00:00
Action: Technical Correspondence / Assistance / Other

Action Type: RESPONSE
Date : 2010-11-12 00:00:00
Action: Interim Remedial Action Plan

Action Type: ENFORCEMENT
Date : 2010-10-21 00:00:00
Action: Technical Correspondence / Assistance / Other

Action Type: RESPONSE
Date : 2010-07-21 00:00:00
Action: Fact Sheets - Public Participation

Action Type: ENFORCEMENT
Date : 2010-07-20 00:00:00
Action: Technical Correspondence / Assistance / Other

Action Type: ENFORCEMENT
Date : 2010-02-18 00:00:00
Action: Technical Correspondence / Assistance / Other

Action Type: ENFORCEMENT
Date : 2009-12-03 00:00:00
Action: Technical Correspondence / Assistance / Other

Action Type: ENFORCEMENT
Date : 2009-08-31 00:00:00
Action: Technical Correspondence / Assistance / Other

Action Type: RESPONSE
Date : 2009-08-11 00:00:00
Action: Monitoring Report - Quarterly

Action Type: RESPONSE
Date : 2009-07-31 00:00:00
Action: Site Investigation

Action Type: ENFORCEMENT
Date : 2009-06-02 00:00:00
Action: Technical Correspondence / Assistance / Other

Action Type: RESPONSE
Date : 2009-05-14 00:00:00
Action: Monitoring Report - Quarterly

Action Type: RESPONSE
Date : 2009-05-11 00:00:00
Action: Site Investigation Workplan

Action Type: ENFORCEMENT
Date : 2009-04-13 00:00:00
Action: Technical Correspondence / Assistance / Other

Action Type: ENFORCEMENT
Date : 2008-08-22 00:00:00
Action: Technical Correspondence / Assistance / Other

Action Type: Other
Date : 2008-01-30 00:00:00
Action: Leak Reported

Action Type: Other
Date : 2007-02-06 00:00:00
Action: Leak Discovery

Cleanup Sites from GeoTracker Cleanup Sites Data Download - Status History

Status: Completed - Case Closed
Status Date: 2015-10-12 00:00:00

Status: Open - Verification Monitoring
Status Date: 2011-10-01 00:00:00

Status: Open - Verification Monitoring
Status Date: 2011-06-01 00:00:00

Status: Open - Remediation
Status Date: 2011-06-01 00:00:00

Status: Open - Site Assessment
Status Date: 2008-03-06 00:00:00

Status: Open - Case Begin Date
Status Date: 2007-02-06 00:00:00

Cleanup Sites from GeoTracker Cleanup Sites Data Download - Regulatory Contacts

Contact Type: Regional Board Caseworker
Contact Name: AFSHIN NICK AMINI
Phone No:
Organization Name: SANTA ANA RWQCB (REGION 8)
Email: namini@waterboards.ca.gov
Address: 3737 Main Street, Suite 500
City: Riverside

Cleanup Program Sites from GeoTracker Search - Regulatory Profile(as of Apr 9, 2019)

Project Status:
CUF Claim:
CUF Priority Assign:
WDR Place Type:
WDR File:
WDR Order:

CUF Amount Paid: ***File Location:***
User Defined Beneficial Use:
Designated Beneficial Use: MUN, AGR, IND, PROC
Project Oversight Agencies:
Report Link: http://geotracker.waterboards.ca.gov/profile_report?global_id=SL0605955616
Cleanup Status Detail: COMPLETED - CASE CLOSED AS OF 10/12/2015
Cleanup History Link: http://geotracker.waterboards.ca.gov/profile_report_include?global_id=SL0605955616&tabname=regulatoryhistory
Potential COC: TETRACHLOROETHYLENE (PCE), TRICHLOROETHYLENE (TCE)
Potential Media of Concern: OTHER GROUNDWATER (USES OTHER THAN DRINKING WATER)
DWR GW Sub Basin: Coastal Plain Of Orange County (8-001)
Calwater Watershed Name: San Gabriel River - Anaheim (845.61)
Post Closure Site Management:
Future Land Use:
Cleanup Oversight Agencies: SANTA ANA RWQCB (REGION 8) (LEAD)
CASEWORKER: AFSHIN NICK AMINI
ORANGE COUNTY

Site History:

The site is an active dry cleaners which has been operating for the past 4 decades at this location. Site investigations has been ongoing since 2007. Very high concentrations of PCE, TCE, and 1,2-DCE has been detected in soil and soil gas at the site and its adjacent tenant units. Groundwater investigation was also conducted and three groundwater monitoring wells were installed in the parking lot. However, groundwater concentrations of the VOCs, with the exception of DCE in the downgradient well MW-3, are fairly low. A focused FS report was submitted for cleanup of soil which proposed soil excavation as the selected remedy. The selected remedy was approved by the Regional Board on February 18, 2010 and implemented in June 2011. An NFA letter for soil was issued on October 26, 2011.

Cleanup Program Sites from GeoTracker Search - Regulatory Activities(as of Apr 9, 2019)

Action Type: Other Regulatory Actions
Action Date: 10/9/2015
Received Issue Date: 10/9/2015
Action: Closure/No Further Action Letter
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6263840&temp table=ENFORCEMENT
Title Description Comments:

Determination of No Further Action

Action Type: Other Regulatory Actions
Action Date: 5/5/2015
Received Issue Date: 5/5/2015
Action: Technical Correspondence / Assistance / Other
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6243810&temp table=ENFORCEMENT
Title Description Comments:

Response to Request for a No Further Action (NFA) Determination

Action Type: Other Regulatory Actions
Action Date: 9/15/2014
Received Issue Date: 9/15/2014
Action: Technical Correspondence / Assistance / Other
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6224329&temp table=ENFORCEMENT
Title Description Comments:

Response to Request for Closure

Action Type: Response Requested - Other
Action Date: 7/15/2014
Received Issue Date: 7/15/2014
Action: Request for Closure
Doc Link: http://geotracker.waterboards.ca.gov/view_documents_all?global_id=SL0605955616&doc_id=5819011
Title Description Comments:

Submittal of Additional Information and Request for Case Closure

Action Type: Other Regulatory Actions
Action Date: 8/21/2013
Received Issue Date: 8/21/2013
Action: Technical Correspondence / Assistance / Other
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6183969&temp table=ENFORCEMENT
Title Description Comments:

Response to Request for a No Further Action Determination

Action Type: Response Requested - Workplans
Action Date: 9/25/2012
Received Issue Date: 9/25/2012
Action: Other Workplan
Doc Link: http://geotracker.waterboards.ca.gov/view_documents_all?global_id=SL0605955616&doc_id=5756963
Title Description Comments:

Addendum to the CPT Installation and Reconnaissance Groundwater Sampling Procedure

Action Type: Response Requested - Workplans
Action Date: 8/30/2012
Received Issue Date: 8/30/2012
Action: Other Workplan
Doc Link: http://geotracker.waterboards.ca.gov/view_documents_all?global_id=SL0605955616&doc_id=5756962
Title Description Comments:

Cone Penetration Test Installation and Reconaissance Groundwater Sampling Procedures

Action Type: Other Regulatory Actions
Action Date: 5/4/2012
Received Issue Date: 5/4/2012
Action: Technical Correspondence / Assistance / Other
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6121157&temp table=ENFORCEMENT
Title Description Comments:

Request for Additional Groundwater Investigation in the Downgradient Area

Action Type: Other Regulatory Actions
Action Date: 10/26/2011
Received Issue Date: 10/26/2011
Action: Closure/No Further Action Letter
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6105735&temp table=ENFORCEMENT
Title Description Comments:

Determination of No Further Action for Soil

Action Type: Response Requested - Reports
Action Date: 6/28/2011
Received Issue Date: 6/28/2011
Action: Technical Memos
Doc Link: http://geotracker.waterboards.ca.gov/view_documents_all?global_id=SL0605955616&doc_id=5720549
Title Description Comments:

Soil Gas Sampling Procedures

Action Type: Response Requested - Reports
Action Date: 5/26/2011
Received Issue Date: 5/26/2011
Action: Technical Memos
Doc Link: http://geotracker.waterboards.ca.gov/view_documents_all?global_id=SL0605955616&doc_id=5720548
Title Description Comments:

Response to RWQCB Comments on the Results of Below Water Soil Sampling

Action Type: Response Requested - Reports
Action Date: 3/8/2011
Received Issue Date: 3/8/2011
Action: Technical Memos
Doc Link: http://geotracker.waterboards.ca.gov/view_documents_all?global_id=SL0605955616&doc_id=5720547
Title Description Comments:

COmments on the Results of Below the Water Table Soil Sampling

Action Type: Response Requested - Reports
Action Date: 1/24/2011
Received Issue Date: 1/24/2011
Action: Technical Memos
Doc Link: http://geotracker.waterboards.ca.gov/view_documents_all?global_id=SL0605955616&doc_id=5720546
Title Description Comments:

Soil Sampling Acitivites

Action Type: Other Regulatory Actions
Action Date: 12/9/2010
Received Issue Date: 12/9/2010
Action: Technical Correspondence / Assistance / Other
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6075172&temp table=ENFORCEMENT
Title Description Comments:

Notification of CPT/Hydropunch Sampling

Action Type: Response Requested - Workplans
Action Date: 11/12/2010
Received Issue Date: 11/12/2010
Action: Interim Remedial Action Plan
Doc Link:
Title Description Comments:

Final Interim Remedial Measure - Remedial Action Plan

Action Type: Other Regulatory Actions
Action Date: 10/21/2010
Received Issue Date: 10/21/2010
Action: Technical Correspondence / Assistance / Other
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6075171&temp table=ENFORCEMENT
Title Description Comments:

Finalization of Draft RAP Document

Action Type: Response Requested - Other
Action Date: 7/21/2010
Received Issue Date: 7/21/2010
Action: Fact Sheets - Public Participation
Doc Link: http://geotracker.waterboards.ca.gov/view_documents_all?global_id=SL0605955616&doc_id=5673286
Title Description Comments:

Community Fact Sheet - Reviewed the final fact sheet.

Action Type: Other Regulatory Actions
Action Date: 7/20/2010
Received Issue Date: 7/20/2010
Action: Technical Correspondence / Assistance / Other
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6058650&temp

table=ENFORCEMENT

Title Description Comments:

Review of the Revised Interim Remedial Measure and Draft Remedial Action Plan

Action Type: Other Regulatory Actions
Action Date: 2/18/2010
Received Issue Date: 2/18/2010
Action: Technical Correspondence / Assistance / Other
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6045627&temp table=ENFORCEMENT
Title Description Comments:

Comments on Focused Feasibility Study for SOil and Soil GAs, and Additional Soil Gas Investigation Results

Action Type: Other Regulatory Actions
Action Date: 12/3/2009
Received Issue Date: 12/3/2009
Action: Technical Correspondence / Assistance / Other
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6042113&temp table=ENFORCEMENT
Title Description Comments:

Record of Communication (12/3/09)

Action Type: Other Regulatory Actions
Action Date: 8/31/2009
Received Issue Date: 8/31/2009
Action: Technical Correspondence / Assistance / Other
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6042114&temp table=ENFORCEMENT
Title Description Comments:

Comments on Soil Gas and Sewer Line Investigation Report and Work Plan for Addtional Soil Gas Sampling

Action Type: Response Requested - Reports
Action Date: 8/11/2009
Received Issue Date: 8/11/2009
Action: Monitoring Report - Quarterly
Doc Link: http://geotracker.waterboards.ca.gov/view_documents_all?global_id=SL0605955616&doc_id=5648666
Title Description Comments:

Quarterly Groundwater Monitoring and Sampling Report, 2nd Quarter 2009 - Reviewed the report.

Action Type: Response Requested - Reports
Action Date: 7/31/2009
Received Issue Date: 7/31/2009
Action: Site Investigation
Doc Link: http://geotracker.waterboards.ca.gov/view_documents_all?global_id=SL0605955616&doc_id=5647353
Title Description Comments:

Soil Gas and Sewer Line Investigation Report - Reviewed the report.

Action Type: Other Regulatory Actions
Action Date: 6/2/2009
Received Issue Date: 6/2/2009
Action: Technical Correspondence / Assistance / Other
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6015543&temp table=ENFORCEMENT
Title Description Comments:

Approval of Work Plan for Soil Gas and Sewer Line Investigation

Action Type: Response Requested - Reports

Action Date: 5/14/2009
Received Issue Date: 5/14/2009
Action: Monitoring Report - Quarterly
Doc Link: http://geotracker.waterboards.ca.gov/view_documents_all?global_id=SL0605955616&doc_id=5648665
Title Description Comments:

Quarterly Groundwater Monitoring and Sampling Report, 1st Quarter 2009 - Reviewed the report.

Action Type: Response Requested - Workplans
Action Date: 5/11/2009
Received Issue Date: 5/11/2009
Action: Site Investigation Workplan
Doc Link: http://geotracker.waterboards.ca.gov/view_documents_all?global_id=SL0605955616&doc_id=5641077
Title Description Comments:

Soil Gas and Sewer Line Investigation Work Plan - Reviewed the work plan.

Action Type: Other Regulatory Actions
Action Date: 4/13/2009
Received Issue Date: 4/13/2009
Action: Technical Correspondence / Assistance / Other
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6027424&temp table=ENFORCEMENT
Title Description Comments:

Comments on Additional Soil Gas and Groundwater Investigation Report

Action Type: Other Regulatory Actions
Action Date: 8/22/2008
Received Issue Date: 8/22/2008
Action: Technical Correspondence / Assistance / Other
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=5997754&temp table=ENFORCEMENT
Title Description Comments:

Approval of the June 2008 Work Plan for Additional Investigation Activities

Action Type: Leak Action
Action Date: 1/30/2008
Received Issue Date:
Action: Leak Reported
Doc Link:
Title Description Comments:

Action Type: Leak Action
Action Date: 2/6/2007
Received Issue Date:
Action: Leak Discovery
Doc Link:
Title Description Comments:

Cleanup Program Sites from GeoTracker Search - Documents(as of Apr 9, 2019)

Document Type: Site Documents
Document Date: 11/15/2015*
Size : 14,801 KB
Title: WELL DECOMMISSIONING REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9791250646/SL0605955616.PDF
Type: WELL DESTRUCTION REPORT
Submitted:
Submitted By: GHD (AUTH_RP)

Document Type: Site Documents
Document Date: 10/9/2015
Size :
Submitted:
Submitted By: NICK AMINI (REGULATOR)

Title: DETERMINATION OF NO FURTHER ACTION
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6263840
Type: CLOSURE/NO FURTHER ACTION LETTER

Document Type: Monitoring Reports **Submitted:**
Document Date: 8/15/2015 **Submitted By:** GHD (AUTH_RP)
Size : 8,912 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT, 2Q2015
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5831870794/SL0605955616.PDF
Type: MONITORING REPORT - QUARTERLY

Document Type: Site Documents **Submitted:**
Document Date: 5/28/2015* **Submitted By:** GHD (AUTH_RP)
Size : 2,802 KB
Title: RESPONSE TO SANTA ANA RWQCB FOR NFA
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8067633092/SL0605955616.PDF
Type: REQUEST FOR CLOSURE

Document Type: Site Documents **Submitted:**
Document Date: 5/5/2015 **Submitted By:** NICK AMINI (REGULATOR)
Size :
Title: RESPONSE TO REQUEST FOR A NO FURTHER ACTION (NFA) DETERMINATION
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6243810
Type: TECHNICAL CORRESPONDENCE / ASSISTANCE / OTHER

Document Type: Monitoring Reports **Submitted:**
Document Date: 4/22/2015 **Submitted By:** GHD (AUTH_RP)
Size : 8,834 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT 1Q2015
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5711565136/SL0605955616.PDF
Type: MONITORING REPORT - QUARTERLY

Document Type: Monitoring Reports **Submitted:**
Document Date: 2/12/2015* **Submitted By:** GHD (AUTH_RP)
Size : 11,412 KB
Title: GROUNDWATER MONITORING AND SAMPLING REPORT, 4TH QUARTER 2014
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4884223282/SL0605955616.PDF
Type: MONITORING REPORT - QUARTERLY

Document Type: Monitoring Reports **Submitted:**
Document Date: 11/15/2014 **Submitted By:** GHD (AUTH_RP)
Size : 8,319 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT, 3RD QUARTER 2014
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1281256973/SL0605955616.PDF
Type: MONITORING REPORT - QUARTERLY

Document Type: Site Documents **Submitted:**
Document Date: 9/15/2014 **Submitted By:** NICK AMINI (REGULATOR)
Size :
Title: RESPONSE TO REQUEST FOR CLOSURE
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6224329
Type: TECHNICAL CORRESPONDENCE / ASSISTANCE / OTHER

Document Type: Site Documents **Submitted:**
Document Date: 7/15/2014 **Submitted By:** NICK AMINI (REGULATOR)
Size :
Title: SUBMITTAL OF ADDITIONAL INFORMATION AND REQUEST FOR CASE CLOSURE
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&document_id=5819011
Type: REQUEST FOR CLOSURE

Document Type: Monitoring Reports **Submitted:**
Document Date: 5/15/2014 **Submitted By:** GHD (AUTH_RP)
Size : 4,058 KB
Title: TOP HAT QUARTERLY GWMS REPORT, 1Q2014
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5415961563/SL0605955616.PDF
Type: MONITORING REPORT - QUARTERLY

Document Type: Monitoring Reports **Submitted:**
Document Date: 2/13/2014 **Submitted By:** GHD (AUTH_RP)

Size : 7,558 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT, 4TH QUARTER 2013
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9691068530/SL0605955616.PDF
Type: MONITORING REPORT - QUARTERLY

Document Type: Monitoring Reports **Submitted:**
Document Date: 11/13/2013 **Submitted By:** GHD (AUTH_RP)
Size : 3,909 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT, 3RD QUARTER 2013
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9878470718/SL0605955616.PDF
Type: MONITORING REPORT - QUARTERLY

Document Type: Site Documents **Submitted:**
Document Date: 8/21/2013 **Submitted By:** NICK AMINI (REGULATOR)
Size :
Title: RESPONSE TO REQUEST FOR A NO FURTHER ACTION DETERMINATION
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6183969
Type: TECHNICAL CORRESPONDENCE / ASSISTANCE / OTHER

Document Type: Monitoring Reports **Submitted:**
Document Date: 8/15/2013 **Submitted By:** GHD (AUTH_RP)
Size : 4,151 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT, 2ND QUARTER 2013
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6331162929/SL0605955616.PDF
Type: MONITORING REPORT - QUARTERLY

Document Type: Monitoring Reports **Submitted:**
Document Date: 5/15/2013 **Submitted By:** GHD (AUTH_RP)
Size : 3,634 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT, 1ST QUARTER 2013
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8953067839/SL0605955616.PDF
Type: MONITORING REPORT - QUARTERLY

Document Type: Monitoring Reports **Submitted:**
Document Date: 2/15/2013* **Submitted By:** GHD (AUTH_RP)
Size : 5,916 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT, 4TH QUARTER 2012
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7898010194/SL0605955616.PDF
Type: MONITORING REPORT - QUARTERLY

Document Type: Monitoring Reports **Submitted:**
Document Date: 11/15/2012 **Submitted By:** GHD (AUTH_RP)
Size : 3,357 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT, 3RD QUARTER 2012
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8118787646/SL0605955616.PDF
Type: MONITORING REPORT - QUARTERLY

Document Type: Site Documents **Submitted:**
Document Date: 10/11/2012 **Submitted By:** GHD (AUTH_RP)
Size : 3,364 KB
Title: TECHNICAL MEMORANDUM: RESULTS OF ADDITIONAL CONE PENETRATION TEST AND RECONNAISSANCE "GRAB" GROUNDWATER SAMPLING
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7152814745/SL0605955616.PDF
Type: TECHNICAL MEMOS

Document Type: Site Documents **Submitted:**
Document Date: 9/25/2012 **Submitted By:** NICK AMINI (REGULATOR)
Size :
Title: ADDENDUM TO THE CPT INSTALLATION AND RECONNAISSANCE GROUNDWATER SAMPLING PROCEDURE
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&document_id=5756963
Type: OTHER WORKPLAN

Document Type: Site Documents **Submitted:**
Document Date: 8/30/2012 **Submitted By:** NICK AMINI (REGULATOR)
Size :
Title: CONE PENETRATION TEST INSTALLATION AND RECONAISSANCE GROUNDWATER SAMPLING PROCEDURES
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&document_id=5756962

Type: OTHER WORKPLAN

Document Type: Monitoring Reports **Submitted:**
Document Date: 8/16/2012* **Submitted By:** GHD (AUTH_RP)
Size : 5,553 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT, 2ND QUARTER 2012
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7629531800/SL0605955616.PDF
Type: MONITORING REPORT - QUARTERLY

Document Type: Monitoring Reports **Submitted:**
Document Date: 5/15/2012 **Submitted By:** GHD (AUTH_RP)
Size : 5,549 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT, 1ST QUARTER 2012, TOP HAT CLEANERS, 7892 VALLEY VIEW STREET, BUENA PARK, CALIFORNIA, SCP NO. SL0605955616
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6300598084/SL0605955616.PDF
Type: MONITORING REPORT - QUARTERLY

Document Type: Site Documents **Submitted:**
Document Date: 5/4/2012 **Submitted By:** NICK AMINI (REGULATOR)
Size :
Title: REQUEST FOR ADDITIONAL GROUNDWATER INVESTIGATION IN THE DOWNGRADIENT AREA
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6121157
Type: TECHNICAL CORRESPONDENCE / ASSISTANCE / OTHER

Document Type: Site Documents **Submitted:**
Document Date: 3/2/2012* **Submitted By:** GHD (AUTH_RP)
Size : 6,860 KB
Title: ADDITIONAL GROUNDWATER MONITORING WELL INSTALLATION WORKPLAN, TOP HAT CLEANERS, 7892 VALLEY VIEW STREET, BUENA PARK, CALIFORNIA, SCP NO. SL0605955616
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9648757219/SL0605955616.PDF
Type: WELL INSTALLATION WORKPLAN

Document Type: Site Documents **Submitted:**
Document Date: 2/24/2012* **Submitted By:** GHD (AUTH_RP)
Size : 4,748 KB
Title: ADJACENT SITE GROUNDWATER SAMPLING ACTIVITIES (CHEVRON SERVICE STATION # 9-2250), TOP HAT CLEANERS, 7892 VALLEY VIEW STREET, BUENA PARK, CALIFORNIA, SCP NO. SL0605955616
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4469491541/SL0605955616.PDF
Type: OTHER REPORT / DOCUMENT

Document Type: Monitoring Reports **Submitted:**
Document Date: 2/15/2012* **Submitted By:** GHD (AUTH_RP)
Size : 6,313 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT, 4TH QUARTER 2011, TOP HAT CLEANERS, 7892 VALLEY VIEW STREET, BUENA PARK, CALIFORNIA, SCP NO. SL0605955616
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8829726457/SL0605955616.PDF
Type: MONITORING REPORT - QUARTERLY

Document Type: Site Documents **Submitted:**
Document Date: 1/5/2012 **Submitted By:** GHD (AUTH_RP)
Size : 9,783 KB
Title: TECHNICAL MEMORANDUM: CONE PENETROMETER TESTING AND RECONNAISSANCE
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8374480485/SL0605955616.PDF
Type: TECHNICAL MEMOS

Document Type: Monitoring Reports **Submitted:**
Document Date: 11/15/2011 **Submitted By:** GHD (AUTH_RP)
Size : 4,313 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT 3RD QUARTER 2011
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5248295605/SL0605955616.PDF
Type: MONITORING REPORT - QUARTERLY

Document Type: Site Documents **Submitted:**
Document Date: 10/26/2011 **Submitted By:** NICK AMINI (REGULATOR)
Size :
Title: DETERMINATION OF NO FURTHER ACTION FOR SOIL
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6105735
Type: CLOSURE/NO FURTHER ACTION LETTER

Document Type: Site Documents **Submitted:**
Document Date: 10/21/2011* **Submitted By:** GHD (AUTH_RP)
Size : 17,573 KB
Title: INTERIM REMEDIAL MEASURE - SOIL REMOVAL REPORT - REVISED VOL 2
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6510748624/SL0605955616.PDF
Type: INTERIM REMEDIAL ACTION REPORT

Document Type: Site Documents **Submitted:**
Document Date: 10/21/2011* **Submitted By:** GHD (AUTH_RP)
Size : 6,424 KB
Title: INTERIM REMEDIAL MEASURE - SOIL REMOVAL REPORT - REVISED VOL 1
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8181594789/SL0605955616.PDF
Type: INTERIM REMEDIAL ACTION REPORT

Document Type: Site Documents **Submitted:**
Document Date: 10/21/2011* **Submitted By:** GHD (AUTH_RP)
Size : 26,894 KB
Title: INTERIM REMEDIAL MEASURE - SOIL REMOVAL REPORT - REVISED VOL 3
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7211577653/SL0605955616.PDF
Type: INTERIM REMEDIAL ACTION REPORT

Document Type: Site Documents **Submitted:**
Document Date: 8/24/2011* **Submitted By:** GHD (AUTH_RP)
Size : 5,157 KB
Title: INTERIM REMEDIAL MEASURE - SOIL REMOVAL REPORT, VOLUME 1
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3555018126/SL0605955616.PDF
Type: SITE INVESTIGATION

Document Type: Monitoring Reports **Submitted:**
Document Date: 8/15/2011 **Submitted By:** GHD (AUTH_RP)
Size : 3,218 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT, 2ND QUARTER 2011
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3198785364/SL0605955616.PDF
Type: MONITORING REPORT - OTHER

Document Type: Site Documents **Submitted:**
Document Date: 6/28/2011 **Submitted By:** NICK AMINI (REGULATOR)
Size :
Title: SOIL GAS SAMPLING PROCEDURES
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&document_id=5720549
Type: TECHNICAL MEMOS

Document Type: Site Documents **Submitted:**
Document Date: 5/26/2011 **Submitted By:** NICK AMINI (REGULATOR)
Size :
Title: RESPONSE TO RWQCB COMMENTS ON THE RESULTS OF BELOW WATER SOIL SAMPLING
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&document_id=5720548
Type: TECHNICAL MEMOS

Document Type: Monitoring Reports **Submitted:**
Document Date: 5/13/2011 **Submitted By:** GHD (AUTH_RP)
Size : 3,397 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT, 1ST QUARTER 2011
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9594624340/SL0605955616.PDF
Type: MONITORING REPORT - QUARTERLY

Document Type: Site Documents **Submitted:**
Document Date: 3/8/2011 **Submitted By:** NICK AMINI (REGULATOR)
Size :
Title: COMMENTS ON THE RESULTS OF BELOW THE WATER TABLE SOIL SAMPLING
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&document_id=5720547
Type: TECHNICAL MEMOS

Document Type: Monitoring Reports **Submitted:**
Document Date: 2/15/2011* **Submitted By:** GHD (AUTH_RP)
Size : 3,766 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT, 4TH QUARTER 2010
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5571534514/SL0605955616.PDF
Type: MONITORING REPORT - QUARTERLY

Document Type: Site Documents **Submitted:**
Document Date: 2/8/2011* **Submitted By:** GHD (AUTH_RP)
Size : 1,614 KB
Title: TECHNICAL MEMO: PRE-EXCAVATION SOIL INVESTIGATION, BELOW THE WATER TABLE
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6384202003/SL0605955616.PDF
Type: TECHNICAL MEMOS

Document Type: Site Documents **Submitted:**
Document Date: 2/8/2011* **Submitted By:** GHD (AUTH_RP)
Size : 1,494 KB
Title: TECHNICAL MEMO: PRE-EXCAVATION SOIL INVESTIGATION, VADOSE ZONE
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8297467827/SL0605955616.PDF
Type: TECHNICAL MEMOS

Document Type: Site Documents **Submitted:**
Document Date: 1/24/2011 **Submitted By:** NICK AMINI (REGULATOR)
Size :
Title: SOIL SAMPLING ACITIVITES
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&document_id=5720546
Type: TECHNICAL MEMOS

Document Type: Site Documents **Submitted:**
Document Date: 12/9/2010 **Submitted By:** NICK AMINI (REGULATOR)
Size :
Title: NOTIFICATION OF CPT/HYDROPUNCH SAMPLING
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6075172
Type: TECHNICAL CORRESPONDENCE / ASSISTANCE / OTHER

Document Type: Site Documents **Submitted:**
Document Date: 11/29/2010* **Submitted By:** GHD (AUTH_RP)
Size : 1,269 KB
Title: TECHNICAL MEMORANDUM: PRE-EXCAVATION SOIL INVESTIGATION
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7205636560/SL0605955616.PDF
Type: TECHNICAL MEMOS

Document Type: Monitoring Reports **Submitted:**
Document Date: 11/12/2010* **Submitted By:** GHD (AUTH_RP)
Size : 3,701 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING, 3RD QUARTER 2010
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4309991300/SL0605955616.PDF
Type: MONITORING REPORT - QUARTERLY

Document Type: Site Documents **Submitted:**
Document Date: 11/12/2010* **Submitted By:** GHD (AUTH_RP)
Size : 3,795 KB
Title: INTERIM REMEDIAL MEASURE - REMEDIAL ACTION PLAN, SITE SOIL AND SOIL GAS
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7664792656/SL0605955616.PDF
Type: INTERIM REMEDIAL ACTION PLAN

Document Type: Site Documents **Submitted:**
Document Date: 10/21/2010 **Submitted By:** NICK AMINI (REGULATOR)
Size :
Title: FINALIZATION OF DRAFT RAP DOCUMENT
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6075171
Type: TECHNICAL CORRESPONDENCE / ASSISTANCE / OTHER

Document Type: Monitoring Reports **Submitted:**
Document Date: 8/13/2010 **Submitted By:** GHD (AUTH_RP)
Size : 3,478 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT, 2ND QUARTER 2010
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5065476775/SL0605955616.PDF
Type: MONITORING REPORT - QUARTERLY

Document Type: Site Documents **Submitted:**
Document Date: 7/21/2010 **Submitted By:** NICK AMINI (REGULATOR)
Size :
Title: COMMUNITY FACT SHEET
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&document_id=5673286

Type: FACT SHEETS - PUBLIC PARTICIPATION

Document Type: Site Documents **Submitted:**
Document Date: 7/20/2010 **Submitted By:** GHD (AUTH_RP)
Size : 4,494 KB
Title: REMEDIAL ACTION WORKPLAN, SITE SOIL AND SOIL GAS
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7580887794/SL0605955616.PDF
Type: REMOVAL ACTION WORK PLAN

Document Type: Site Documents **Submitted:**
Document Date: 7/20/2010 **Submitted By:** GHD (AUTH_RP)
Size : 3,956 KB
Title: INTERIM REMEDIAL MEASURE - DRAFT REMEDIAL ACTION PLAN
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/8497842252/SL0605955616.PDF
Type: INTERIM REMEDIAL ACTION REPORT

Document Type: Site Documents **Submitted:**
Document Date: 7/20/2010 **Submitted By:** NICK AMINI (REGULATOR)
Size :
Title: REVIEW OF THE REVISED INTERIM REMEDIAL MEASURE AND DRAFT REMEDIAL ACTION PLAN
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6058650
Type: TECHNICAL CORRESPONDENCE / ASSISTANCE / OTHER

Document Type: Site Documents **Submitted:**
Document Date: 6/15/2010 **Submitted By:** GHD (AUTH_RP)
Size : 319 KB
Title: BASELINE HUMAN HEALTH RISK ASSESSMENT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3489786803/SL0605955616.PDF
Type: RISK ASSESSMENT REPORT

Document Type: Monitoring Reports **Submitted:**
Document Date: 5/17/2010 **Submitted By:** GHD (AUTH_RP)
Size : 4,011 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT, 1ST QUARTER 2010
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3969415128/SL0605955616.PDF
Type: MONITORING REPORT - QUARTERLY

Document Type: Site Documents **Submitted:**
Document Date: 2/18/2010 **Submitted By:** NICK AMINI (REGULATOR)
Size :
Title: COMMENTS ON FOCUSED FEASIBILITY STUDY FOR SOIL AND SOIL GAS, AND ADDITIONAL SOIL GAS INVESTIGATION RESULTS
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6045627
Type: TECHNICAL CORRESPONDENCE / ASSISTANCE / OTHER

Document Type: Site Documents **Submitted:**
Document Date: 12/3/2009 **Submitted By:** NICK AMINI (REGULATOR)
Size :
Title: RECORD OF COMMUNICATION (12/3/09)
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6042113
Type: TECHNICAL CORRESPONDENCE / ASSISTANCE / OTHER

Document Type: Site Documents **Submitted:**
Document Date: 11/13/2009 **Submitted By:** GHD (AUTH_RP)
Size : 6,504 KB
Title: FOCUSED FEASIBILITY STUDY, SOIL AND SOIL GAS
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9489004850/SL0605955616.PDF
Type: FEASIBILITY STUDY REPORT

Document Type: Monitoring Reports **Submitted:**
Document Date: 11/13/2009 **Submitted By:** GHD (AUTH_RP)
Size : 3,258 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT, 3RD QUARTER 2009
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/4438981413/SL0605955616.PDF
Type: MONITORING REPORT - QUARTERLY

Document Type: Site Documents **Submitted:**
Document Date: 10/5/2009 **Submitted By:** GHD (AUTH_RP)
Size : 1,820 KB

Title: TECHNICAL MEMORANDUM 10-05-09
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2342586696/SL0605955616.PDF
Type: TECHNICAL MEMOS

Document Type: Site Documents **Submitted:**
Document Date: 8/31/2009 **Submitted By:** NICK AMINI (REGULATOR)
Size :
Title: COMMENTS ON SOIL GAS AND SEWER LINE INVESTIGATION REPORT AND WORK PLAN FOR ADDTIONAL SOIL GAS SAMPLING
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6042114
Type: TECHNICAL CORRESPONDENCE / ASSISTANCE / OTHER

Document Type: Site Documents **Submitted:**
Document Date: 8/26/2009 **Submitted By:** GHD (AUTH_RP)
Size : 2,981 KB
Title: WORKPLAN FOR ADDITIONAL SOIL GAS SAMPLING - 7922 VALLEY VIEW STREET
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/7081239998/SL0605955616.PDF
Type: SITE INVESTIGATION WORKPLAN

Document Type: Monitoring Reports **Submitted:**
Document Date: 8/11/2009 **Submitted By:** NICK AMINI (REGULATOR)
Size : 3,320 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT, 2ND QUARTER 2009 -
Title Link: http://geotracker.waterboards.ca.gov/regulators/deliverable_documents/1303150773/Top%20Hat%20Cleaners%202nd%20quarter%202009%20qgmsr%2Epdf
Type: MONITORING REPORT - QUARTERLY

Document Type: Monitoring Reports **Submitted:**
Document Date: 8/11/2009 **Submitted By:** GHD (AUTH_RP)
Size : 3,320 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT, 2ND QUARTER 2009
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5673379063/SL0605955616.PDF
Type: MONITORING REPORT - QUARTERLY

Document Type: Site Documents **Submitted:**
Document Date: 7/31/2009 **Submitted By:** GHD (AUTH_RP)
Size : 6,312 KB
Title: SOIL GAS AND SEWER LINE INVESTIGATION REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/9495733976/SL0605955616.PDF
Type: SITE INVESTIGATION

Document Type: Site Documents **Submitted:**
Document Date: 7/31/2009 **Submitted By:** NICK AMINI (REGULATOR)
Size :
Title: SOIL GAS AND SEWER LINE INVESTIGATION REPORT
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&document_id=5647353
Type: SITE INVESTIGATION

Document Type: Site Documents **Submitted:**
Document Date: 6/2/2009 **Submitted By:** NICK AMINI (REGULATOR)
Size :
Title: APPROVAL OF WORK PLAN FOR SOIL GAS AND SEWER LINE INVESTIGATION
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6015543
Type: TECHNICAL CORRESPONDENCE / ASSISTANCE / OTHER

Document Type: Monitoring Reports **Submitted:**
Document Date: 5/14/2009 **Submitted By:** NICK AMINI (REGULATOR)
Size : 2,505 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT, 1ST QUARTER 2009 -
Title Link: http://geotracker.waterboards.ca.gov/regulators/deliverable_documents/1590757071/Top%20Hat%20Cleaners%201st%20qrtr%202009%20qgmsr%2Epdf
Type: MONITORING REPORT - QUARTERLY

Document Type: Monitoring Reports **Submitted:**
Document Date: 5/14/2009 **Submitted By:** GHD (AUTH_RP)
Size : 2,505 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT, 1ST QUARTER 2009
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/1956757903/SL0605955616.PDF
Type: MONITORING REPORT - QUARTERLY

Document Type: Site Documents **Submitted:**
Document Date: 5/11/2009 **Submitted By:** GHD (AUTH_RP)
Size : 2,014 KB
Title: GROUNDWATER MONITORING AND SAMPLING PLAN
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/5766012907/SL0605955616.PDF
Type: OTHER WORKPLAN

Document Type: Site Documents **Submitted:**
Document Date: 5/11/2009 **Submitted By:** GHD (AUTH_RP)
Size : 4,472 KB
Title: WORKPLAN FOR SOIL GAS AND SEWER LINE INVESTIGATION
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/3017559230/SL0605955616.PDF
Type: OTHER WORKPLAN

Document Type: Site Documents **Submitted:**
Document Date: 5/11/2009 **Submitted By:** NICK AMINI (REGULATOR)
Size :
Title: SOIL GAS AND SEWER LINE INVESTIGATION WORK PLAN
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&document_id=5641077
Type: SITE INVESTIGATION WORKPLAN

Document Type: Site Documents **Submitted:**
Document Date: 4/13/2009 **Submitted By:** NICK AMINI (REGULATOR)
Size :
Title: COMMENTS ON ADDITIONAL SOIL GAS AND GROUNDWATER INVESTIGATION REPORT
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=6027424
Type: TECHNICAL CORRESPONDENCE / ASSISTANCE / OTHER

Document Type: Site Documents **Submitted:**
Document Date: 3/20/2009 **Submitted By:** GHD (AUTH_RP)
Size : 2,027 KB
Title: SAMPLING AND ANALYSIS PLAN
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2716345548/SL0605955616.PDF
Type: OTHER WORKPLAN

Document Type: Monitoring Reports **Submitted:**
Document Date: 2/12/2009 **Submitted By:** GHD (AUTH_RP)
Size : 2,805 KB
Title: QUARTERLY GROUNDWATER MONITORING AND SAMPLING REPORT, 4TH QUARTER 2009
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2416833460/SL0605955616.PDF
Type: MONITORING REPORT - QUARTERLY

Document Type: Site Documents **Submitted:**
Document Date: 2/6/2009 **Submitted By:** GHD (AUTH_RP)
Size : 9,412 KB
Title: ADDITIONAL SOIL GAS AND GROUNDWATER INVESTIGATION REPORT
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/6915383458/SL0605955616.PDF
Type: SOIL AND WATER INVESTIGATION REPORT

Document Type: Site Documents **Submitted:**
Document Date: 8/22/2008 **Submitted By:** NICK AMINI (REGULATOR)
Size :
Title: APPROVAL OF THE JUNE 2008 WORK PLAN FOR ADDITIONAL INVESTIGATION ACTIVITIES
Title Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=SL0605955616&enforcement_id=5997754
Type: TECHNICAL CORRESPONDENCE / ASSISTANCE / OTHER

Document Type: Site Documents **Submitted:**
Document Date: 6/10/2008 **Submitted By:** GHD (AUTH_RP)
Size : 5,965 KB
Title: WORKPLAN FOR ADDITIONAL SOIL GAS AND GROUNDWATER INVESTIGATION (JUNE 2008)
Title Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_report/2168721079/SL0605955616.PDF
Type: WORKPLANS - INVESTIGATION WP

Cleanup Program Sites from GeoTracker Search - Site Maps(as of Apr 9, 2019)

Title: GEO_MAP **Submitted By:** GHD (AUTH_RP)
Size : 86 KB **Submitted:** 8/19/2013

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_map/2731452286/SL0605955616.PDF

Title: CPT-10 (CPT-10) **Submitted By:** GHD (AUTH_RP)
Size : 106 KB **Submitted:** 10/12/2012
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/8750901699/SL0605955616.PDF

Title: CPT-11 (CPT-11) **Submitted By:** GHD (AUTH_RP)
Size : 105 KB **Submitted:** 10/12/2012
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/8018537402/SL0605955616.PDF

Title: GEO_MAP **Submitted By:** GHD (AUTH_RP)
Size : 30 KB **Submitted:** 10/12/2012
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_map/8749128222/SL0605955616.PDF

Title: GEO_MAP **Submitted By:** GHD (AUTH_RP)
Size : 30 KB **Submitted:** 8/16/2012*
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_map/5518996477/SL0605955616.PDF

Title: GEO_MAP **Submitted By:** GHD (AUTH_RP)
Size : 70 KB **Submitted:** 2/20/2009
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_map/9723526477/SL0605955616.PDF

Title: MW-2 (MW-2) **Submitted By:** GHD (AUTH_RP)
Size : 124 KB **Submitted:** 2/20/2009
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/8537365138/SL0605955616.PDF

Title: MW-1 (MW-1) **Submitted By:** GHD (AUTH_RP)
Size : 137 KB **Submitted:** 2/20/2009
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/5996377110/SL0605955616.PDF

Title: GEO_MAP **Submitted By:** GHD (AUTH_RP)
Size : 78 KB **Submitted:** 2/20/2009
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_map/3420732796/SL0605955616.PDF

Title: MW-3 (MW-3) **Submitted By:** GHD (AUTH_RP)
Size : 110 KB **Submitted:** 2/20/2009
Link: http://geotracker.waterboards.ca.gov/esi/uploads/geo_bore/1139321446/SL0605955616.PDF

Cleanup Program Sites from GeoTracker Search - Cleanup Action Report(as of Apr 9, 2019)

Status: Completed - Case Closed
Date : 10/12/2015

Status: Open - Verification Monitoring
Date : 10/1/2011

Status: Open - Remediation
Date : 6/1/2011

Status: Open - Verification Monitoring
Date : 6/1/2011

Status: Open - Site Assessment
Date : 3/6/2008

Status: Open - Case Begin Date
Date : 2/6/2007

24	1 of 1	NE	0.38 / 1,988.89	57.43 / 2	RENE GONZALEZ 8012 SAN MIGUEL CIR. BUENA PARK CA 90620	RCRA TSD

EPA Handler ID: CAC003016003
Gen Status Universe: No Report
Contact Name: RENE GONZALEZ
Contact Address: 8012 SAN MIGUEL CIR. , , BUENA PARK , CA, 90620 ,
Contact Phone No and Ext: 323-333-9147

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Contact Email: ANAB@PWSEI.COM
Contact Country:
Land Type:
County Name: ORANGE
EPA Region: 09
Receive Date: 20190521

Violation/Evaluation Summary

Note: NO RECORDS: As of August 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: Yes
Transfer Facility: No
Onsite Burner Exemption: No
Smelting, Melting and Refining: No
Underground Injection Control: No
Commercial TSD: No
Used Oil Transporter: No
Used Oil Transfer Facility: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 20190521
Handler Name: RENE GONZALEZ
Generator Status Universe: No Report
Source Type: Implementer

Owner/Operator Details

Owner/Operator Ind: Current Owner
Type: Other
Name: RENE GONZALEZ
Date Became Current:
Date Ended Current:
Phone: 323-333-9147
Source Type: Implementer
Street No:
Street 1: 8012 SAN MIGUEL CIR.
Street 2:
City: BUENA PARK
State: CA
Country:
Zip Code: 90620

Owner/Operator Ind: Current Operator
Type: Other
Name: RENE GONZALEZ
Date Became Current:
Date Ended Current:
Phone: 323-333-9147
Source Type: Implementer
Street No:
Street 1: 8012 SAN MIGUEL CIR.
Street 2:
City: BUENA PARK
State: CA
Country:
Zip Code: 90620

25	1 of 1	NE	0.39 / 2,066.21	55.37 / 0	ANAHEIM AIRPORT BUENA PARK CA	ENVIROSTOR

Estor/EPA ID: 80000967
Site Code:
Nat Priority List: NO
Permit Renewal Lead:
Project Manager:
Supervisor: PATRICK HSIEH

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Acres: 5 ACRES
Special Program:
Funding: DERA
Assembly District: 65
Senate District: 32
School District:
Public Partici Spclst:
Census Tract: 6059110301
County: ORANGE
Latitude: 33.8466666666667
Longitude: -118.021944444444
APN: NONE SPECIFIED
Cleanup Status: INACTIVE - NEEDS EVALUATION AS OF 8/14/2018
Cleanup Oversight Agencies: DTSC - SITE CLEANUP PROGRAM - LEAD AGENCY
Site Type: FUDS
Office: CLEANUP CYPRESS
Past Use that Caused Contam: NONE SPECIFIED
Potential Media Affected: NONE SPECIFIED
Potential Contamin of Concern:

NONE SPECIFIED

Site History:

Status: INACTIVE - NEEDS EVALUATION
Program Type: MILITARY EVALUATION
CalEnviroScreen Score: 46-50%
Summary Link: http://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=80000967

Completed Activities

Title: USACE INPR Summary J0CA732100 21 Sep 1999
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=80000967&doc_id=5011270
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Inventory Project Report (INPR)
Date Completed: 9/21/1999
Comments:

Title: FUDS Screening Project
Title Link:
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Site Screening
Date Completed: 8/14/2017
Comments: Draft Site Visit Report on R drive for management review, comment and or concurrence.

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
26	1 of 1	W	0.65 / 3,415.03	48.19 / -8	JOHN F. KENNEDY HIGH SCHOOL 8281 WALKER STREET LA PALMA CA 90623	ENVIROSTOR

Estor/EPA ID: 30820016
Site Code: 404434
Nat Priority List: NO
Acres: 2 ACRES
Special Program:
Funding: SCHOOL DISTRICT
Assembly District: 65
Senate District: 29
Permit Renewal Lead:
Project Manager:
Supervisor: SHAHIR HADDAD
Public Partici Spclst:
Census Tract: 6059110102
County: ORANGE
Latitude: 33.8409219334799
Longitude: -118.039410082248
School District: ANAHEIM UNION HIGH SCHOOL DISTRICT
APN: NONE SPECIFIED
Cleanup Status: CERTIFIED AS OF 1/21/2004
Cleanup Oversight Agencies: DTSC - LEAD AGENCY
Site Type: SCHOOL
Office: SOUTHERN CALIFORNIA SCHOOLS & BROWNFIELDS OUTREACH
Past Use that Caused Contam: EDUCATIONAL SERVICES
Potential Media Affected: SOIL

Potential Contamin of Concern:

ARSENIC, LEAD

Site History:

The site was used for agricultural purposes from at least 1947 to 1964. The high school was built in 1964. Adjacent properties include single family residences to the North, Walker Junior High to the East, additional single family residences and Cypress Park, and a Car Wash to the South, and single family residences to the West.

Status: CERTIFIED
Program Type: SCHOOL CLEANUP
CalEnviroScreen Score: 36-40%
Summary Link: http://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=30820016

Completed Activities

Title: * Public Participation
Title Link:
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: * Public Participation
Date Completed: 5/21/2004
Comments:

Title: Removal Action Completion Report
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=30820016&doc_id=6003417
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Removal Action Completion Report
Date Completed: 7/21/2004
Comments:

Title: Certification
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=30820016&enforcement_id=6003412
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Certification
Date Completed: 8/18/2004
Comments:

Title: Removal Action Workplan
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=30820016&doc_id=6003418
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Removal Action Workplan
Date Completed: 5/12/2004
Comments: DTSC conditionally approves RAW for implementation. District revises RAW to conduct removal activities in accordance with La Palma municipal code.

Title: Preliminary Endangerment Assessment Report
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=30820016&doc_id=6003415
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Preliminary Endangerment Assessment Report
Date Completed: 1/12/2004
Comments:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Title: Voluntary Clean-up Agreement
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=30820016&enforcement_id=6003420
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Voluntary Cleanup Agreement
Date Completed: 1/21/2004
Comments:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
27	1 of 1	SE	0.75 / 3,960.65	63.19 / 7	BUENA PARK STRAWBERRY FIELD 8932 HOLDER AVENUE BUENA PARK CA 90620	ENVIROSTOR

Estor/EPA ID: 70000162
Site Code: 401283
Nat Priority List: NO
Acres: 19 ACRES
Special Program: VOLUNTARY CLEANUP PROGRAM
Funding: SITE PROPONENT
Assembly District: 65
Senate District: 32
School District:
Permit Renewal Lead:
Project Manager:
Supervisor:
Public Partici Spclst:
Census Tract: 6059110201
County: ORANGE
Latitude: 33.8327
Longitude: -118.0197
APN: NONE SPECIFIED
Cleanup Status: REFER: OTHER AGENCY AS OF 8/24/2007
Cleanup Oversight Agencies: ORANGE COUNTY - LEAD AGENCY
Site Type: VOLUNTARY CLEANUP
Office: CLEANUP CYPRESS
Past Use that Caused Contam: AGRICULTURAL - ORCHARD
Potential Media Affected: SOIL, SOIL VAPOR
Potential Contamin of Concern:

POLYCHLORINATED BIPHENYLS (PCBS), POLYCHLORINATED BIPHENYLS (PCBS, SEE IRIS), TPH-GAS

Site History:

The Buena Park site is approximately 19 acres and is located within a primarily residential area. The site has been reportedly occupied by a strawberry farm since the 1950s, and was a citrus orchard prior to its conversion to a strawberry farm. The site was divided into two investigation areas, namely, Area A (currently occupied by an approximately 16-acre strawberry field, and Area B (currently occupied by two residences, and a warehouse). Based on the direct push sampling conducted in Area B, groundwater was inferred to be at approximately 13.5 feet below ground surface (bgs).
Soil samples collected from Area A were analyzed for metals and organochlorine pesticides, whereas soil samples collected from Area B were analyzed for metals, organochlorine pesticides, total petroleum hydrocarbons (TPH), and volatile organic compounds (VOCs). The chemicals of potential concern (COPCs) are pesticides, herbicides, polychlorinated biphenyls (PCBs), and metals. The potential for fuels was also identified due to the presence of a former on-site 1,000-gallon gasoline underground storage tank (UST) in the vicinity of the warehouse and the historical operation of a gasoline service station at the adjacent property southwest of the site (Premier, 2005). The project proponent requested to terminate the voluntary cleanup agreement with DTSC. Project proponent will enter into oversight agreement with the County of Orange Health Care Agency to address residual pesticides in the soil. DTSC provided information related to ground water impact to the RWQCB-Santa Ana Region.

Status: REFER: OTHER AGENCY
Program Type: VOLUNTARY CLEANUP
CalEnviroScreen Score: 41-45%
Summary Link: http://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=70000162

Completed Activities

Title: Supplemental Site Assessment Workplan
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=70000162&doc_id=6010988
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Site Characterization Workplan
Date Completed: 4/28/2006
Comments: DTSC approved the Supplemental Site Assessment Workplan and sent the approval letter on 4/26/06.

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Title: Reimbursement Agreement No. 05-T2920
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=70000162&enforcement_id=6008846
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Voluntary Cleanup Agreement
Date Completed: 10/11/2005
Comments:

---

28 | 1 of 1 | ENE | 0.84 / 4,426.26 | 66.51 / 11 | **LA PALMA PLAZA**
6883 LA PALMA AVENUE
BUENA PARK CA 90620 | ENVIROSTOR

Estor/EPA ID: 60002369
Site Code: 401748
Nat Priority List: NO
Acres: 2.66 ACRES
Special Program:
Funding: SITE PROPONENT
Assembly District: , 65
Senate District: , 32
School District:
Permit Renewal Lead:
Project Manager: ANANTARAMAM PEDDADA
Supervisor: ROBERT SENGA
Public Partici Spclst:
Census Tract: 6059110302
County: ORANGE
Latitude: 33.847477
Longitude: -118.01322
APN: NONE SPECIFIED
Cleanup Status: ACTIVE AS OF 6/10/2016
Cleanup Oversight Agencies: DTSC - SITE CLEANUP PROGRAM - LEAD AGENCY
Site Type: VOLUNTARY CLEANUP
Office: CLEANUP CYPRESS
Past Use that Caused Contam: DAY CARE FACILITY, DRY CLEANING
Potential Media Affected: OTHER GROUNDWATER AFFECTED (USES OTHER THAN DRINKING WATER), SOIL
Potential Contamin of Concern:

TETRACHLOROETHYLENE (PCE)

Site History:

La Palma Plaza-Former Dry Cleaners located at 6883 La Palma Avenue, Buena Park California (Site). The Orange County Assessor's Parcel Numbers is 263-421-006. The Site is located within a mixed commercial and residential area of Orange County.

DTSC and W. Peter Just1983 Trust entered into a Voluntary Cleanup Agreement on August 11, 2016 for Site investigation at La Palma Former Dry cleaners. The Site is contaminated with volatile organic compounds (VOCs). Tetrachloroethylene (PCE) and trichloroethene (TCE) have been detected in some of the soil samples collected at the Site. The maximum concentration of PCE and TCE were 148 and 13.5 micrograms per kilogram, respectively. PCE exceeded the residential soil gas screening levels, (SGSLs) but did not exceed industrial SGSLs. The maximum concentration of PCE in soil gas was 970 micrograms per cubic meter (ug/m3). The reported concentrations of vinyl chloride exceeded the residential SGSLs for vinyl chloride. The concentrations in three samples also exceeded the industrial SGSLs for vinyl chloride. The maximum concentration of vinyl chloride detected was 460 ug/m3).

Based on the results of Partner's Phase II Subsurface Investigation (dated July 8, 2015) and Additional Subsurface Investigation and Indoor Air Quality Survey (dated September 2, 2015), groundwater beneath the Site has been impacted by VOCs. Eight VOCs, including toluene, PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, 1,1-DCE, vinyl chloride, and naphthalene have been detected in one or more groundwater samples collected from the Site.
Three additional ground water monitoring wells were installed to further characterize the Site and four quarters of groundwater sampling will be conducted. The remedy for the Site will depend on the results of the groundwater sampling.

Status: ACTIVE
Program Type: VOLUNTARY CLEANUP
CalEnviroScreen Score: 76-80%
Summary Link: http://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=60002369

Currently Scheduled Activities

Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Removal Action Completion Report
Due Date: 6/28/2020
Revised Date:

Completed Activities

Title: 1st Quarter 2019 Groundwater Monitoring Report
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002369&doc_id=60447338
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Monitoring Report
Date Completed: 8/23/2019
Comments:

Title: La palma Dry cleaners
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002369&doc_id=60453957
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Fact Sheets
Date Completed: 8/23/2019
Comments:

Title: Cost estimation letter FY 2016-1017
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002369&doc_id=60418703
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Other Report
Date Completed: 10/11/2016
Comments:

Title: 4th Quarter 2018 Groundwater Monitoring Report
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002369&doc_id=60447336
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Monitoring Report
Date Completed: 3/6/2019
Comments:

Title: Draft Data Gaps Assessment Workplan
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002369&doc_id=60437430
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Site Characterization Workplan
Date Completed: 11/20/2017
Comments:

Title: Soil, Soil Gas and Groundwater Monitoring work plan
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002369&doc_id=60417136
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Site Characterization Workplan
Date Completed: 4/18/2017
Comments:

Title: 401708.La Palma Plaza - VCA
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002369&enforcement_id=60410238
Area Name:
Area Link:
Sub Area:

Sub Area Link:
Document Type: Voluntary Cleanup Agreement
Date Completed: 8/11/2016
Comments:

Title: La Palma Soil Removal Action
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002369&enforcement_id=60453959
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: CEQA - Notice of Exemption
Date Completed: 9/26/2019
Comments:

Title: Site Investigation Soil, Soil Gas and GW monitoring Report
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002369&doc_id=60417138
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Site Characterization Report
Date Completed: 10/16/2017
Comments:

Title: Fy 18-19 Cost Schedule letter
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002369&doc_id=60454654
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Other Report
Date Completed: 11/21/2018
Comments:

Title: SOIL Excavation AND SOIL VAPOR EXTRACTION System INSTALLATION AND PILOT Testing WORK PLAN
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002369&doc_id=60453096
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Remedial Investigation Workplan
Date Completed: 9/26/2019
Comments:

Title: Data Gap Assessment Report-La Palma Plaza Report
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002369&doc_id=60437468
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Site Characterization Report
Date Completed: 12/4/2018
Comments:

Title: 3rd Quarter 2018 Groundwater Monitoring Report
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002369&doc_id=60447334
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Monitoring Report
Date Completed: 11/13/2018
Comments:

Title: Community Survey, La Palma Plaza
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002369&doc_id=60461206
Area Name:
Area Link:

Sub Area:
Sub Area Link:
Document Type: Community Profile
Date Completed: 8/15/2019
Comments:

Title: Indoor Air Quality Sampling Report(Second Round Sampling)
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002369&doc_id=60447340
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Monitoring Report
Date Completed: 4/3/2019
Comments:

Title: FY17/18 Cost Recovery letter
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002369&doc_id=60437683
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Other Report
Date Completed: 11/8/2017
Comments:

Title: Phase 1 Environmental Site Assessment Report and Phase II Subsurface Investigation Report
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002369&doc_id=60413802
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Phase 1
Date Completed: 9/14/2016
Comments:

Unplottable Summary

Total: 7 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID
CHMIRS	BNSF	Between Valley View and Coyote Creek - MPM 157.8 of the San Bernardino Sub-Division.	Buena Park CA		874984684
ERNS		CERRITOS AND VALLEY VIEW RD	CYPRESS CA		858633341
HHSS	LARR UMBARGER	BOX 7-JPOLON RD. SAN LUCAS RD.	NONE CA	93920	822948084
HHSS	LARR UMBARGER	BOX 7 JPOLAN RD. SAN LUCAS RD.	NONE CA	93920	822986566
HMIRS		LOS ANGELES SUBD	LONG BEACH CA		818528189
HMIRS		LOS ANGELES SUB	LONG BEACH CA		818178426
RCRA SQG	SUN EXPLORATION & PROD CO	DOMINGUEZ LEASE LOS ANGELES CO ***EPA Handler ID:*** CAT000617662	LONG BEACH CA	90810	810623757

Unplottable Report

Site: ***BNSF***
Between Valley View and Coyote Creek - MPM 157.8 of the San Bernardino Sub-Division. Buena Park CA

CHMIRS

Clean Control No:	18-6293	***Notified Date:***	9/18/2018 12:27:00 AM
Notified Date Time:		***Year:***	2018
County:	Orange County		
URL:			

California Hazardous Material Incident Report System (2018)

Contained:	Unknown if stopped,Unknown if contained	***Incident Date:***	9/17/2018
1 Substance:	Train vs Unoccupied Vehicle	***Incident Time:***	2345
1 Quantity:	N/A	***Spill Site:***	Rail Road
1 Measure:	N/A	***Injuries?:***	No
1 Type:	RAILROAD	***No of Injuries:***	
1 Pipeline:	No	***Fatals?:***	No
1 Vessel >= 300 Tons:	No	***No of Fatals:***	
1 Other:		***Evacs?:***	No
2 Substance:		***No of Evacs:***	
2 Quantity:		***Cleanup:***	Unknown
2 Measure:		***Site:***	
2 Type:		***Cause:***	Other
2 Other:		***Cause Other:***	See above description
2 Pipeline:	No	***Drnkng Wtr Impacted:***	
2 Ves >= 300 Tons:	No	***Known Impact:***	Other - All train traffic is stopped in both directions in the area of the incident
3 Substance:		***Water:***	No
3 Quantity:		***Water Way:***	
3 Measure:		***City:***	Buena Park
3 Type:		***County:***	Orange County
3 Other:		***Zip:***	
3 Pipeline:	No	***DOG No:***	
3 Vessel >= 300 Tons:	No		

Admin Agency: Buena Park Fire Department
Notification Area: AA/CUPA,DTSC,RWQCB,US EPA,USFWS,PUC
Location: Between Valley View and Coyote Creek - MPM 157.8 of the San Bernardino Sub-Division.
Description: Per RP, a vehicle was stuck on the tracks when it was struck by a train (Train ZLPKLAC715L). The occupant of the vehicle was able to exit the vehicle before it was struck. Incident occurred at MPM 157.8 of the San Bernardino Sub-Division, just west of R/R Crossing 027837E.

Spill Report View

Amount 1:		***Creation Date:***	09/18/2018 12:27 AM
Amount 2:		***Received By:***	
Amount 3:		***Admin Agency:***	
Type:	RAILROAD	***Admin Agency 2:***	
Water:		***Additional County:***	
On Scene:		***Phone No:***	
Other on Scene:		***Ext:***	
Other Notified:		***Pag Cell:***	
Document Title:	SPILL Report		
Spill Site:	Rail Road		
Cause Desc for Other:			
Person Notifying Cal OES:			

Hazardous Materials Spill Report

Control Cal OES:	18-6293	***Type 3:***	

Control NRC:		***Other 3:***	
Date :	09/18/2018	***Pipeline 3:***	No
Incident Date:	09/17/2018	***Ves >= 300 Tons 3:***	No
Time:	0027	***Name:***	
Incident Time:	2345	***Phone:***	
Water Involved:	No	***Ext:***	
Drink Wtr Impact:		***Pag Cell:***	
Qty 1:	=	***PRS Name:***	
Measure 1:	N/A	***PRS Phone:***	
Type 1:	RAILROAD	***PRS Ext:***	
Pipeline 1:	No	***PRS Pag Cell:***	
Ves >= 300 Tons 1:	No	***Received By:***	
Qty 2:	=	***Header Unknown:***	SOUTH COAST AQMD
Amount 2:		***Incident Desc:***	
Measure 2:		***R R Crssing < 50 Ft:***	Yes
Type 2:		***Uprr Rim :***	
Other 2:		***Notification Info:***	
Pipeline 2:	No	***Notification List:***	
Vessel >= 300 Tns 2:	No	***DOG Unit:***	
Qty 3:	=	***RWQCB Unit:***	8
Amount 3:		***Injuries:***	No
Measure 3:		***Fatality:***	No

Incident Location:	Between Valley View and Coyote Creek - MPM 157.8 of the San Bernardino Sub-Division.
Reported Cause:	Other Description for Other : See above description
Amount 1:	N/A
Substance 1:	Train vs Unoccupied Vehicle
Substance 2:	
Substance 3:	
Waterway:	
Contained:	Unknown if stopped, Unknown if contained
Known Impact:	Other Reason for Other : All train traffic is stopped in both directions in the area of the incident
Other 1:	
Detail for Other:	
Site:	Rail Road
On Scene:	
Other on Scene:	
Other Notified:	
Evacuation:	No
Cleanup By:	Unknown
Agency:	BNSF
PRS Agency:	
Admin Agency:	Buena Park Fire Department
Sec Agency:	Orange County Emergency Management Division
Additional County:	
Admin Agency 2:	
Description:	Per RP, a vehicle was stuck on the tracks when it was struck by a train (Train ZLPKLAC715L). The occupant of the vehicle was able to exit the vehicle before it was struck. Incident occurred at MPM 157.8 of the San Bernardino Sub-Division, just west of R/R Crossing 027837E.

Spill Report View

Amount 1:		***Creation Date:***	09/18/2018 01:00 AM
Amount 2:		***Received By:***	
Amount 3:		***Admin Agency:***	
Type:	RAILROAD	***Admin Agency 2:***	
Water:		***Additional County:***	
On Scene:		***Phone No:***	
Other on Scene:		***Ext:***	
Other Notified:		***Pag Cell:***	
Document Title:	Cal OES-Update		
Spill Site:			
Cause Desc for Other:			
Person Notifying Cal OES:			

OES Hazardous Materials Spill Update

Notify Date:	09/18/2018

Notify Time: 0027
Occurrence Date: 09/17/2018
Occurrence Time: 2345
Upd Known Impact:
Update Cause:
Pers Notifying Upd Place:
Pers Notifying Upd Nme:
Phone No:
Ext:
Pag Cell:
Fax Notifi List: AA/CUPA, DTSC, RWQCB, US EPA, USFWS, PUC
Person Notifying Cal OES Agenc: BNSF
Person Reporting Spill Agency:
Op Area: Orange County
Unknown Header: SOUTH COAST AQMD
Substance 1: Train vs Unoccupied Vehicle
Qty Amount 1: N/A
Measure 1: N/A
Type 1: RAILROAD
Other 1:
Pipeline 1: No
Vessel >= 300 Tons 1: No
Substance 2:
Qty Amount 2:
Measure 2:
Type 2:
Other 2:
Pipeline 2: No
Vessel >= 300 Tons 2: No
Substance 3:
Qty Amount 3:
Measure 3:
Type 3:
Other 3:
Pipeline 3: No
Vessel >= 300 Tons 3: No
Administering Agency: Buena Park Fire Department
Secondary Agency: Orange County Emergency Management Division
Additional Counties:
Additional Admin Agency:
Other Notified:
RWQCB Unit: 8
Confirmation Request:
Fax Notification List 2:
Administering Agency 2:
Additional Admin Agency 2:
Secondary Agency 2:
Additional Counties 2:
DOG Unit:
RWQCB Unit 2:
Doc URL: https://w3.calema.ca.gov/operational/malhaz.nsf/f1841a103c102734882563e200760c4a/eb5a22f1795dd77b8825830c002c04af?OpenDocument
NRC: 1224911
Update Description:

Situation Update:

09/18/08, 0047 hrs., NRC Report # 1224911 received. Per NRC Report, "Caller reported that a train struck a unoccupied vehicle. No injuries or spills reported."

Original Description:

Per RP, a vehicle was stuck on the tracks when it was struck by a train (Train ZLPKLAC715L). The occupant of the vehicle was able to exit the vehicle before it was struck. Incident occurred at MPM 157.8 of the San Bernardino Sub-Division, just west of R/R Crossing 027837E.

OES Hazardous Materials Update Quantities

Amount:
Measure: N/A

Site:

CERRITOS AND VALLEY VIEW RD CYPRESS CA

ERNS

NRC Report No:	1131956	***Latitude Degrees:***	
Type of Incident:	PIPELINE	***Latitude Minutes:***	
Incident Cause:	UNKNOWN	***Latitude Seconds:***	
Incident Date:	10/28/2015 1:53:00 PM	***Longitude Degrees:***	
Incident Location:		***Longitude Minutes:***	
Incident Dtg:	DISCOVERED	***Longitude Seconds:***	
Distance from City:		***Lat Quad:***	
Distance Units:		***Long Quad:***	
Potential Flag:	No	***Location Section:***	
Year:	Year 2015 Reports	***Location Township:***	
Direction from City:		***Location Range:***	
Location County:	ORANGE		

Description of Incident: CALLER IS REPORTING A DISCHARGE OF CRUDE OIL FROM AN UNKNOWN PIPELINE FOR UNKNOWN REASONS. THERE ARE SEVERAL IN THE AREA AND SOURCE REMAINS UNKNOWN. A DROP OF MATERIAL MADE IT TO A STORM DRAIN/CATCH BASIN BUT NO WATERWAYS WERE IMPACTED.

Material Spill Information

Chris Code:	OIL	***Unit of Measure:***	GALLON(S)
CAS No:	000000-00-0	***If Reached Water:***	NO
UN No:		***Amount in Water:***	
Name of Material:	OIL: CRUDE	***Unit Reach Water:***	
Amount of Material:	5		

Calls Information

Date Time Received:	10/28/2015 5:28:28 PM	***Responsible City:***	
Date Time Complete:	10/28/2015 5:35:45 PM	***Responsible State:***	XX
Call Type:	INC	***Responsible Zip:***	
Resp Company:		***Source:***	TELEPHONE
Resp Org Type:	UNKNOWN		

Incident Information

Tank ID:		***Building ID:***	
Tank Regulated:	U	***Location Area ID:***	
Tank Regulated By:		***Location Block ID:***	
Capacity of Tank:		***OCSG No:***	
Capacity Tank Units:		***OCSP No:***	
Description of Tank:		***State Lease No:***	
Actual Amount:		***Pier Dock No:***	
Actual Amount Units:		***Berth Slip No:***	
Tank Above Ground:	ABOVE	***Brake Failure:***	U
NPDES:		***Airbag Deployed:***	U
NPDES Compliance:	U	***Transport Contain:***	U
Init Contin Rel No:		***Location Subdiv:***	
Contin Rel Permit:		***Platform Rig Name:***	
Contin Release Type:		***Platform Letter:***	
Aircraft ID:		***Allision:***	U
Aircraft Runway No:		***Type of Structure:***	
Aircraft Spot No:		***Structure Name:***	
Aircraft Type:		***Structure Oper:***	U
Aircraft Model:		***Transit Bus Flag:***	
Aircraft Fuel Cap:		***Date Time Norm Serv:***	
Aircraft Fuel Cap U:		***Serv Disrupt Time:***	
Aircraft Fuel on Brd:		***Serv Disrupt Units:***	
Aircraft Fuel OB U:		***CR Begin Date:***	
Aircraft Hanger:		***CR End Date:***	
Road Mile Marker:		***CR Change Date:***	
Power Gen Facility:	U	***FBI Contact:***	
Generating Capacity:		***FBI Contact Dt Tm:***	
Type of Fixed Obj:		***Passenger Handling:***	
Type of Fuel:		***Passenger Route:***	XXX
DOT Crossing No:		***Passenger Delay:***	XXX

DOT Regulated:	U	***Sub Part C Test Req:***	XXX
Pipeline Type:	UNKNOWN	***Conductor Test:***	
Pipeline Abv Ground:	BELOW	***Engineer Test:***	
Pipeline Covered:	U	***Trainman Test:***	
Exposed Underwater:	N	***Yard Foreman Test:***	
Railroad Hotline:		***RCL Operator Test:***	
Railroad Milepost:		***Brakeman Test:***	
Grade Crossing:	U	***Train Dispat Test:***	
Crossing Device Ty:		***Signalman Test:***	
Ty Vehicle Involved:		***Oth Employee Test:***	
Device Operational:	U	***Unknown Test:***	

Incident Details Information

Release Secured:	U	***State Agen Report No:***	
Release Rate:		***State Agen on Scene:***	
Release Rate Unit:		***State Agen Notified:***	LOCAL FIRE AND CITY
Release Rate Rate:		***Fed Agency Notified:***	
Est Duration of Rel:		***Oth Agency Notified:***	
Desc Remedial Act:	TRAFFIC IS BEING DIVERTED FROM THE ROADWAY. LOCAL FIRE RESPONDED. MATERIAL HAS BEEN CONTAINED AND STORM DRAINS HAVE BEEN PROTECTED.	***Body of Water:***	
Fire Involved:	N	***Tributary of:***	
Fire Extinguished:	U	***Near River Mile Make:***	
Any Evacuations:	N	***Near River Mile Mark:***	
No Evacuated:		***Offshore:***	N
Who Evacuated:		***Weather Conditions:***	
Radius of Evacu:		***Air Temperature:***	
Any Injuries:	N	***Wind Direction:***	
No. Injured:		***Wind Speed:***	
No. Hospitalized:		***Wind Speed Unit:***	
No. Fatalities:		***Water Supp Contam:***	U
Any Fatalities:	N	***Water Temperature:***	
Any Damages:	N	***Wave Condition:***	
Damage Amount:		***Current Speed:***	
Air Corridor Closed:	N	***Current Direction:***	
Air Corridor Desc:		***Current Speed Unit:***	
Air Closure Time:		***EMPL Fatality:***	
Waterway Closed:	N	***Pass Fatality:***	
Waterway Desc:		***Community Impact:***	
Waterway Close Time:		***Passengers Transfer:***	NO
Road Closed:	N	***Passenger Injuries:***	
Road Desc:		***Employee Injuries:***	
Road Closure Time:		***Occupant Fatality:***	
Road Closure Units:		***Sheen Size:***	
Closure Direction:		***Sheen Size Units:***	
Major Artery:	No	***Sheen Size Length:***	
Track Closed:	N	***Sheen Size Length U:***	
Track Desc:		***Sheen Size Width:***	
Track Closure Time:		***Sheen Size Width U:***	
Track Closure Units:		***Sheen Color:***	
Track Close Dir:		***Dir of Sheen Travel:***	
Media Interest:	NONE	***Sheen Odor Desc:***	
Medium Desc:	LAND	***Duration Unit:***	
Addl Medium Info:	CONCRETE/ASPHALT	***Additional Info:***	WILL NOTIFY CAL OES NEXT AND THE FIRE MARSHALL.

Site: ***LARR UMBARGER***
BOX 7-JPOLON RD. SAN LUCAS RD. NONE CA 93920 HHSS

County:
Pdf File Url: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002e299.pdf

---

Site: ***LARR UMBARGER***
BOX 7 JPOLAN RD. SAN LUCAS RD. NONE CA 93920 HHSS

County:
Pdf File Url: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002aa2a.pdf

Site:
LOS ANGELES SUBD LONG BEACH CA HMIRS

Incident County: LOS ANGELES

HMIR Incident Reports

Report No:	I-1998010081	***Fed DOT Agency Nm:***	
Report Type:	A hazardous material incident	***Fed DOT Report No:***	
Date of Incident:	11/16/1997	***Report Submit Src:***	Paper
Time of Incident:	1800	***Inc Multiple Rows:***	No
Haz Class Code:	8	***Inc Non US State:***	
Hazardous Class:	CORROSIVE MATERIAL	***Mode Transport:***	Rail
Commodity Short Nm:	TETRAETHYLENEPENTAMINE	***Transport Phase:***	IN TRANSIT
Commodity Long Nm:	TETRAETHYLENEPENTAMINE	***Incident Occrrnce:***	
Trade Name:		***Mat Ship Approval?:***	No
ID No:	UN2320	***Mat Ship Approv No:***	
Haz Waste Ind:	No	***Undecl Hazmat Ship?:***	No
Haz Waste EPA No:		***Packaging Type:***	Portable Tank
HMIS Tox Inhalation?:	No	***Packing Group:***	
TIH Hazard Zone:		***Carrier Reporter:***	UNION PACIFIC RAILROAD COMPANY INC
Qty Released:	1	***CR Street Name:***	1400 DOUGLAS ST
Unit of Measure:	LGA	***CR City:***	OMAHA
What Failed:		***CR State:***	NE
What Failed Desc:		***CR Postal Code:***	68179-0002
How Failed Code:		***CR Non US State:***	
How Failed Desc:		***CR Fed DOT ID:***	53433
Failure Cause Code:		***CR Hazmat Reg ID:***	
Failure Cause Desc:		***CR Country:***	US
Ident. Markings:		***Shipper Name:***	UNION CARBIDE ALLOYS INC
Cont1 Pkging Type:		***Shipper Street Name:***	39 OLD RIDGEBURY RD
Cont1 Const Mat:		***Shipper City:***	DANBURY
Cont1 Head Type:		***Shipper State:***	CT
Cont1 Pkg Capacity:	6500	***Shipper Postal:***	06810-5103
C1 Capacity UOM:	LGA	***Shipper Non US St:***	
Cont1 Pkg Amt:		***Shipper Country:***	US
C1 Pkg Amt UOM:		***Shipper Waybill:***	UP WB 264525 110
Cont1 Pkg No:	1	***Ship Hazmat Reg ID:***	
C1 Pkg NO Failed:	1	***Origin City:***	TEXAS CITY
Cont1 Pkg Mnfctr:	NOT REPORTED BY CARRIER	***Origin State:***	TEXAS
Cont1 Pkg Mnfct Dt:		***Origin Postal:***	77590
Cont1 Pkg Serial NO:	UPTU660026	***Origin Non US St:***	
C1 Pkg Last Test Dt:		***Origin Country:***	US
C1 Test Const Mat:		***Destination City:***	VERNON
C1 Pkg Dsign Pres.:		***Destination State:***	CALIFORNIA
C1 Dsign Press UOM:		***Destination Postal:***	
C1 Pkg Shell Thick:		***Destination Non US:***	
C1 Shell Thick UOM:		***Destination Country:***	US
C1 Head Thickness:		***Cont2 Package Type:***	
C1 Head Thick UOM:		***Cont2 Const Mat:***	
C1 Pkg Srvc Pres.:		***Cont2 Pkg Capacity:***	
C1 Srvc Press UOM:		***Cont2 Capacity UOM:***	
C1 Valve/Device Fail?:	No	***Cont2 Pkg Amount:***	
C1 Device Type:		***Cont2 Pkg Amt UOM:***	
C1 Device Mnfctr:		***Cont2 Pkg No:***	
C1 Device Model:		***Cont2 Pkg No Failed:***	
NRC No:			

RAM Pkg Category:		***Haz NonHosp Public:***	0
RAM Pkg Cert.:	FALSE	***Haz NonHosp Old:***	0
RAM Pkg Cert. NBR:		***Tot Haz Non Hosp Inj:***	0
RAM Nuclide S:		***Total Hazmat Injuries:***	0
RAM Transport Index:		***Evacuation Indicator:***	No
RAM UOM:		***Public Evacuated:***	0
RAM Activity Rpted:		***Employees Evac:***	0

RAM UOM Rpted:		***Total Evacuated:***	0
RAM Activity:		***Total Evacuation Hrs:***	0
RAM Activity UOM:		***Major Artery Closed:***	No
RAM Mat Safety:		***Mjr Artery Hrs Closed:***	0
Spillage Result:	Yes	***Material Involved:***	No
Fire Result:	No	***Estimated Speed:***	0
Explosion Result:	No	***Weather Conditions:***	
Water Sewer Result:	No	***Vehicle Overturn:***	No
Gas Dispersion:	No	***Vehicle Left Roadway:***	No
Environment Damage:	No	***Passenger Aircraft:***	No
No Release Result:	No	***Cargo Baggage:***	
Fire EMS Report:	No	***Ship Non Transport:***	No
Fire EMS EMS Report:		***Ship Air First Flight:***	No
Police Report:	No	***Ship Air Subflight:***	No
Police Report No:		***Ship Init Transport:***	No
In House Cleanup:	No	***Ship Phase Transfer:***	No
Other Cleanup:	No	***Contact Name:***	KAY A HOUFEK
Damage > 500:	Yes	***Contact Title:***	MGR PROCEDURE COMPLIANCE
Material Loss:	5	***Contact Business:***	
Carrier Damage:	0	***Contact Street:***	
Property Damage:	0	***Contact City:***	
Response Cost:	0	***Contact State:***	
Remediation Cost:	0	***Contact Postal:***	
Damage Old Form:	2500	***Contact Non US St:***	
Total Damages Amt:	2505	***Contact Country:***	US
Hazmat Fatality:	No	***Inc. Report Prepared:***	
Haz Fatal Employees:	0	***HMIS Serious Incidnt:***	No
Haz Fatal Respndrs:	0	***HMIS Serious Fatality:***	No
Haz Fatal Gen Public:	0	***HMIS Serious Injury:***	No
Tot Hazmat Fatalities:	0	***HMIS Flight Plan:***	No
Non Hazmat Fatality:	No	***HMIS Serious Evacs:***	No
Non Hazmat Fatals:	0	***HMIS Major Artery:***	No
Hazmat Injury:	No	***HMIS Bulk Release:***	No
Haz Hospital Empl:	0	***HMIS Marine Pollutnt:***	No
Haz Hospital Resp:	0	***HMIS Radioactive:***	No
Haz Hosp Gen Public:	0	***HMIS Gen Pkg Type:***	OHMIR.Ref_Container.descr_txt
Haz Hosp Old Form:	0	***HMIS Container Code:***	IM101
Total Haz Hosp Inj:	0	***HMIS Container Desc:***	Steel portable tank
Haz Non Hosp Empl:	0	***HMIS Bulk Incident:***	Yes
Haz Non Hosp Resp:	0	***Undeclared Shipment:***	No

Description of Events: REGIONAL MANAGER CHEMICAL TRANSPORTATION SAFETY DEAN L WHITELY SPARKS NV WAS NOTIFIED BY CONTRACTOR BOB WEITZEL ENVIRONMENTAL TRANSLOADING LOS ANGELES CA THAT INTERMODALTANK UPTU 660026 TETRAETHYLENEPENTAMINE WAS NOTED LEAKING AT ICTF FACILITY LONG BEACH CA. INSPECTION NOTED LEAK WAS COMING FROM JACKET OF INTERMODAL TANK AND NOT ANY VALVE FITTING OR CLOSURE. IT WAS OBVIOUS THAT TANK HAD FAILED AND CONTENTS WOULD HAVE TO BE TRANSLOADED. THE IM TANK WAS ISOLATED AND LEAKING CONTENTS ESTIMATED TO BE LESS THAN ONE OUNCE PER HOUR WAS CONTAINED. WHITELY CONTACTED UNION PACIFIC BULKTAINER FORCES WHO ADVISED THEY WOULD ARRANGE TO HAVE A CLEAN IM TANK DELIVERED TO FACILITY. WEITZEL CONTACTED RICK BROWN UNION CARBIDE FURNISHING ALL INFORMATION. THE CONTENTS WERE TRANSLOADED INTO IM TANK UPTU 660160.

Recommend Actions Taken:

Site:

LOS ANGELES SUB LONG BEACH CA HMIRS

Incident County: LOS ANGELES

HMIR Incident Reports

Report No:	I-2000040529	***Fed DOT Agency Nm:***	
Report Type:	A hazardous material incident	***Fed DOT Report No:***	
Date of Incident:	03/15/2000	***Report Submit Src:***	Paper
Time of Incident:	1547	***Inc Multiple Rows:***	No
Haz Class Code:	3	***Inc Non US State:***	
Hazardous Class:	FLAMMABLE - COMBUSTIBLE LIQUID	***Mode Transport:***	Rail
Commodity Short Nm:	FLAMMABLE LIQUIDS N.O.S.	***Transport Phase:***	IN TRANSIT
Commodity Long Nm:	FLAMMABLE LIQUIDS N.O.S.	***Incident Occrrnce:***	
Trade Name:	ALCOHOL	***Mat Ship Approval?:***	No
ID No:	UN1993	***Mat Ship Approv No:***	

Haz Waste Ind:	No	***Undecl Hazmat Ship?:***	No
Haz Waste EPA No:		***Packaging Type:***	Non-Bulk
HMIS Tox Inhalation?:	No	***Packing Group:***	
TIH Hazard Zone:		***Carrier Reporter:***	UNION PACIFIC RAILROAD COMPANY INC
Qty Released:	5	***CR Street Name:***	1400 DOUGLAS ST
Unit of Measure:	LGA	***CR City:***	OMAHA
What Failed:	108	***CR State:***	NE
What Failed Desc:	Chime	***CR Postal Code:***	68179-0002
How Failed Code:	304	***CR Non US State:***	
How Failed Desc:	Cracked	***CR Fed DOT ID:***	53433
Failure Cause Code:	511	***CR Hazmat Reg ID:***	
Failure Cause Desc:	Dropped	***CR Country:***	US
Ident. Markings:		***Shipper Name:***	MOL INTERMODAL INC
Cont1 Pkging Type:		***Shipper Street Name:***	150 N MICHIGAN AVE # 3210
Cont1 Const Mat:		***Shipper City:***	CHICAGO
Cont1 Head Type:		***Shipper State:***	IL
Cont1 Pkg Capacity:	55	***Shipper Postal:***	60601-7553
C1 Capacity UOM:	LGA	***Shipper Non US St:***	
Cont1 Pkg Amt:		***Shipper Country:***	US
C1 Pkg Amt UOM:		***Shipper Waybill:***	654019507
Cont1 Pkg No:	74	***Ship Hazmat Reg ID:***	
C1 Pkg NO Failed:	1	***Origin City:***	CHICAGO
Cont1 Pkg Mnfctr:	CHOKWANG JOTUN	***Origin State:***	ILLINOIS
Cont1 Pkg Mnfct Dt:		***Origin Postal:***	
Cont1 Pkg Serial NO:	CAXU295543	***Origin Non US St:***	
C1 Pkg Last Test Dt:		***Origin Country:***	US
C1 Test Const Mat:		***Destination City:***	LONG BEACH
C1 Pkg Dsign Pres.:		***Destination State:***	CALIFORNIA
C1 Dsign Press UOM:		***Destination Postal:***	
C1 Pkg Shell Thick:		***Destination Non US:***	
C1 Shell Thick UOM:		***Destination Country:***	US
C1 Head Thickness:		***Cont2 Package Type:***	
C1 Head Thick UOM:		***Cont2 Const Mat:***	
C1 Pkg Srvc Pres.:		***Cont2 Pkg Capacity:***	
C1 Srvc Press UOM:		***Cont2 Capacity UOM:***	
C1 Valve/Device Fail?:	No	***Cont2 Pkg Amount:***	
C1 Device Type:		***Cont2 Pkg Amt UOM:***	
C1 Device Mnfctr:		***Cont2 Pkg No:***	
C1 Device Model:		***Cont2 Pkg No Failed:***	
NRC No:			

RAM Pkg Category:		***Haz NonHosp Public:***	0
RAM Pkg Cert.:	FALSE	***Haz NonHosp Old:***	0
RAM Pkg Cert. NBR:		***Tot Haz Non Hosp Inj:***	0
RAM Nuclide S:		***Total Hazmat Injuries:***	0
RAM Transport Index:		***Evacuation Indicator:***	No
RAM UOM:		***Public Evacuated:***	0
RAM Activity Rpted:		***Employees Evac:***	0
RAM UOM Rpted:		***Total Evacuated:***	0
RAM Activity:		***Total Evacuation Hrs:***	0
RAM Activity UOM:		***Major Artery Closed:***	No
RAM Mat Safety:		***Mjr Artery Hrs Closed:***	0
Spillage Result:	Yes	***Material Involved:***	No
Fire Result:	No	***Estimated Speed:***	0
Explosion Result:	No	***Weather Conditions:***	
Water Sewer Result:	No	***Vehicle Overturn:***	No
Gas Dispersion:	No	***Vehicle Left Roadway:***	No
Environment Damage:	No	***Passenger Aircraft:***	No
No Release Result:	No	***Cargo Baggage:***	
Fire EMS Report:	No	***Ship Non Transport:***	No
Fire EMS EMS Report:		***Ship Air First Flight:***	No
Police Report:	No	***Ship Air Subflight:***	No
Police Report No:		***Ship Init Transport:***	No
In House Cleanup:	No	***Ship Phase Transfer:***	No
Other Cleanup:	No	***Contact Name:***	KAY A HOUFEK
Damage > 500:	No	***Contact Title:***	MGR PROCEDURE COMPLIANCE
Material Loss:	0	***Contact Business:***	
Carrier Damage:	0	***Contact Street:***	
Property Damage:	0	***Contact City:***	
Response Cost:	0	***Contact State:***	
Remediation Cost:	0	***Contact Postal:***	

Damage Old Form:	0	***Contact Non US St:***	
Total Damages Amt:	0	***Contact Country:***	US
Hazmat Fatality:	No	***Inc. Report Prepared:***	
Haz Fatal Employees:	0	***HMIS Serious Incidnt:***	No
Haz Fatal Respndrs:	0	***HMIS Serious Fatality:***	No
Haz Fatal Gen Public:	0	***HMIS Serious Injury:***	No
Tot Hazmat Fatalities:	0	***HMIS Flight Plan:***	No
Non Hazmat Fatality:	No	***HMIS Serious Evacs:***	No
Non Hazmat Fatals:	0	***HMIS Major Artery:***	No
Hazmat Injury:	No	***HMIS Bulk Release:***	No
Haz Hospital Empl:	0	***HMIS Marine Pollutnt:***	No
Haz Hospital Resp:	0	***HMIS Radioactive:***	No
Haz Hosp Gen Public:	0	***HMIS Gen Pkg Type:***	OHMIR.Ref_Container.descr_txt
Haz Hosp Old Form:	0	***HMIS Container Code:***	1A1
Total Haz Hosp Inj:	0	***HMIS Container Desc:***	Non-removable head steel drum
Haz Non Hosp Empl:	0	***HMIS Bulk Incident:***	No
Haz Non Hosp Resp:	0	***Undeclared Shipment:***	No

Description of Events: DAVE SECURITY GUARD ICTF LONG BEACH REPORTED CONTAINER CAXU 295543 LEAKED THREE DROPS OF THE LIQUID PRODUCT. THE CONTAINER WAS LOCATED AT THE INTERMODAL YARD. DENNIS JOHNSON CHEMICAL TRANSPORTATION SAFETY MANAGER WAS NOTIFIED. DENNIS JOHNSON CHEMICAL TRANSPORTATION SAFETY MANAGER REPORTED THE MATERIAL RELEASED WAS LESS THAN A PINT OF ETHEL SILICON AND IT WAS ISOLATED IN THE DOCK AREA. TRANSLOADING ENVIRONMENTAL WAS EN ROUTE FOR CLEAN UP. MR. JOHNSON REQUESTED STATE AND CHEMTREC NOTIFICATIONS BE MADE. JEFF CHEMTREC WAS NOTIFIED. CHEMTREC STATED NO RECORD WAS FOUND FOR SHIPPER. DENNIS JOHNSON REPORTED TRANSLOADING ENVIRONMENTAL COMPLETED THE CLEAN UP AND STATED A SMALL CRACK IN A FIFTY-FIVE GALLON DRUM POSSIBLY DENTED DURING LOADING CAUSED PRODUCT TO BE RELEASED. CONTAINER WAS RESECURED AND RELEASED TO THE SHIPPER. THE LEAKING DRUM WAS PLACED IN AN OVERPACK TO BE RETURNED TO THE SHIPPER.

Recommend Actions Taken:

Site: ***SUN EXPLORATION & PROD CO***
DOMINGUEZ LEASE LOS ANGELES CO LONG BEACH CA 90810

RCRA SQG

EPA Handler ID:	CAT000617662
Gen Status Universe:	Small Quantity Generator
Contact Name:	
Contact Address:	US
Contact Phone No and Ext:	
Contact Email:	
Contact Country:	US
County Name:	LOS ANGELES
EPA Region:	09
Land Type:	
Receive Date:	19960901

Violation/Evaluation Summary

Note: NO RECORDS: As of August 2019, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	19800818
Handler Name:	SUN EXPLORATION & PROD CO
Generator Status Universe:	Small Quantity Generator
Source Type:	Notification

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	19960901
Handler Name:	SUN EXPLORATION & PROD CO
Generator Status Universe:	Small Quantity Generator
Source Type:	Implementer

Owner/Operator Details

Owner/Operator Ind:	Current Operator	***Street No:***	
Type:	Private	***Street 1:***	NOT REQUIRED
Name:	NOT REQUIRED	***Street 2:***	
Date Became Current:		***City:***	NOT REQUIRED
Date Ended Current:		***State:***	ME
Phone:	415-555-1212	***Country:***	
Source Type:	Implementer	***Zip Code:***	99999

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Private	***Street 1:***	NOT REQUIRED
Name:	SUN OIL COMPANY (DELAWARE)	***Street 2:***	
Date Became Current:		***City:***	NOT REQUIRED
Date Ended Current:		***State:***	ME
Phone:	415-555-1212	***Country:***	
Source Type:	Notification	***Zip Code:***	99999

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

National Priority List: NPL

National Priorities List (Superfund)-NPL: EPA's (United States Environmental Protection Agency) list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. The NPL, which EPA is required to update at least once a year, is based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action.

Government Publication Date: Aug 20, 2019

National Priority List - Proposed: PROPOSED NPL

Includes sites proposed (by the EPA, the state, or concerned citizens) for addition to the NPL due to contamination by hazardous waste and identified by the Environmental Protection Agency (EPA) as a candidate for cleanup because it poses a risk to human health and/or the environment.

Government Publication Date: Aug 20, 2019

Deleted NPL: DELETED NPL

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Government Publication Date: Aug 20, 2019

SEMS List 8R Active Site Inventory: SEMS

The Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted.

Government Publication Date: Aug 20, 2019

SEMS List 8R Archive Sites: SEMS ARCHIVE

The Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time.

Government Publication Date: Aug 20, 2019

Inventory of Open Dumps, June 1985: ODI

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

Comprehensive Environmental Response, Compensation and Liability Information System - CERCLIS: CERCLIS

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

EPA Report on the Status of Open Dumps on Indian Lands: IODI

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

CERCLIS - No Further Remedial Action Planned: CERCLIS NFRAP

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens: CERCLIS LIENS

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action: RCRA CORRACTS

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Aug 26, 2019

RCRA non-CORRACTS TSD Facilities: RCRA TSD

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites listed as treatment, storage and/or disposal facilities of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Government Publication Date: Aug 26, 2019

RCRA Generator List: RCRA LQG

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste.

Government Publication Date: Aug 26, 2019

RCRA Small Quantity Generators List: RCRA SQG

RCRA Info is the EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month.

Government Publication Date: Aug 26, 2019

RCRA Conditionally Exempt and Very Small Quantity Generators List: RCRA CESQG

RCRA Info is the EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Conditionally Exempt and Very Small Quantity Generators (VSQG and CESQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG and CESQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: Aug 26, 2019

RCRA Non-Generators: RCRA NON GEN

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Aug 26, 2019

Federal Engineering Controls-ECs: FED ENG

Engineering controls (ECs) encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Jun 11, 2019

Federal Institutional Controls- ICs: FED INST

Institutional controls are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's (United States Environmental Protection Agency) expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site.

Government Publication Date: Jun 11, 2019

Emergency Response Notification System: ERNS 1982 TO 1986

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System: ERNS 1987 TO 1989

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System: ERNS

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Mar 21, 2019

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database: FED BROWNFIELDS

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Sep 3, 2019

FEMA Underground Storage Tank Listing: FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Petroleum Refineries: REFN

List of petroleum refineries from the U.S. Energy Information Administration (EIA) Refinery Capacity Report. Includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year located in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other U.S. possessions. Survey locations adjusted using public data.

Government Publication Date: Oct 8, 2019

Petroleum Product and Crude Oil Rail Terminals: BULK TERMINAL

List of petroleum product and crude oil rail terminals made available by the U.S. Energy Information Administration (EIA). Includes operable bulk petroleum product terminals located in the 50 States and the District of Columbia with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil that were active between 2017 and 2018. Petroleum product terminals comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings. Survey locations adjusted using public data.

Government Publication Date: Jan 18, 2019

LIEN on Property: SEMS LIEN

The EPA Superfund Enterprise Management System (SEMS) provides LIEN information on properties under the EPA Superfund Program.

Government Publication Date: Aug 20, 2019

Superfund Decision Documents: SUPERFUND ROD

This database contains a listing of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD), along with other associated memos and files. This information is maintained and made available by the US EPA (Environmental Protection Agency).

Government Publication Date: Aug 20, 2019

State

State Response Sites: RESPONSE

A list of identified confirmed release sites where the Department of Toxic Substances Control (DTSC) is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk. This database is state equivalent NPL.

Government Publication Date: Oct 1, 2019

EnviroStor Database: ENVIROSTOR

The EnviroStor Data Management System is made available by the Department of Toxic Substances Control (DTSC). Includes Corrective Action sites, Tiered Permit sites, Historical Sites and Evaluation/Investigation sites. This database is state equivalent CERCLIS.

Government Publication Date: Oct 1, 2019

Delisted State Response Sites: DELISTED ENVS

Sites removed from the list of State Response Sites made available by the EnviroStor Data Management System, Department of Toxic Substances Control (DTSC).

Government Publication Date: Oct 1, 2019

Solid Waste Information System (SWIS): SWF/LF

The Solid Waste Information System (SWIS) database made available by the Department of Resources Recycling and Recovery (CalRecycle) contains information on solid waste facilities, operations, and disposal sites throughout the State of California. The types of facilities found in this database include landfills, transfer stations, material recovery facilities, composting sites, transformation facilities, waste tire sites, and closed disposal sites.

Government Publication Date: Aug 19, 2019

EnviroStor Hazardous Waste Facilities: HWP

A list of hazardous waste facilities including permitted, post-closure and historical facilities found in the Department of Toxic Substances Control (DTSC) EnviroStor database.

Government Publication Date: Oct 1, 2019

Sites Listed in the Solid Waste Assessment Test (SWAT) Program Report: SWAT

In a 1993 Memorandum of Understanding, the State Water Resources Control Board (SWRCB) agreed to submit a comprehensive report on the Solid Waste Assessment Test (SWAT) Program to the California Integrated Waste Management Board (CIWMB). This report summarizes the work completed to date on the SWAT Program, and addresses both the impacts that leakage from solid waste disposal sites (SWDS) may have upon waters of the State and the actions taken to address such leakage.

Government Publication Date: Dec 31, 1995

Land Disposal Sites: LDS

Land Disposal Sites in GeoTracker, the State Water Resources Control Board (SWRCB)'s data management system. The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units. Waste management units include waste piles, surface impoundments, and landfills.

Government Publication Date: Jul 17, 2019

Leaking Underground Fuel Tank Reports: LUST

List of Leaking Underground Storage Tanks within the Cleanup Sites data in GeoTracker database. GeoTracker is the State Water Resources Control Board's (SWRCB) data management system for managing sites that impact groundwater, especially those that require groundwater cleanup (Underground Storage Tanks, Department of Defense and Site Cleanup Program) as well as permitted facilities such as operating Underground Storage Tanks. The Leak Prevention Program that overlooks LUST sites is the SWRCB in California's Environmental Protection Agency.

Government Publication Date: Jul 17, 2019

Delisted Leaking Storage Tanks: DELISTED LST

List of Leaking Underground Storage Tanks (LUST) cleanup sites removed from GeoTracker, the State Water Resources Control Board (SWRCB)'s database system, as well as sites removed from the SWRCB's list of UST Case closures.

Government Publication Date: Oct 8, 2019

Solid Waste Disposal Sites with Waste Constituents Above Hazardous Waste Levels: SWRCB SWF

This is a list of solid waste disposal sites identified by California State Water Resources Control Board with waste constituents above hazardous waste levels outside the waste management unit.

Government Publication Date: Sep 20, 2006

Permitted Underground Storage Tank (UST) in GeoTracker: UST

List of Permitted Underground Storage Tank (UST) sites made available by the State Water Resources Control Board (SWRCB) in California's Environmental Protection Agency (EPA).

Government Publication Date: Jul 17, 2019

Proposed Closure of Underground Storage Tank Cases: UST CLOSURE

List of UST cases that are being considered for closure by either the California Environmental Protection Agency, State Water Resources Control Board or the Executive Director that have been posted for a 60-day public comment period.

Government Publication Date: Oct 8, 2019

Historical Hazardous Substance Storage Information Database: HHSS

The Historical Hazardous Substance Storage database contains information collected in the 1980s from facilities that stored hazardous substances. The information was originally collected on paper forms, was later transferred to microfiche, and recently indexed as a searchable database. When using this database, please be aware that it is based upon self-reported information submitted by facilities which has not been independently verified. It is unlikely that every facility responded to the survey and the database should not be expected to be a complete inventory of all facilities that were operating at that time. This database is maintained by the California State Water Resources Control Board's (SWRCB) Geotracker.

Government Publication Date: Aug 27, 2015

Aboveground Storage Tanks: AST

A statewide list from 2009 of aboveground storage tanks (ASTs) made available by the Cal FIRE Office of the State Fire Marshal (OSFM). This list is no longer maintained or updated by the Cal FIRE OSFM.

Government Publication Date: Aug 31, 2009

Delisted Storage Tanks: DELISTED TNK

This database contains a list of storage tank sites that were removed by the State Water Resources Control Board (SWRCB) in California's Environmental Protection Agency (EPA) and the Cal FIRE Office of State Fire Marshal (OSFM).

Government Publication Date: Sep 11, 2019

California Environmental Reporting System (CERS) Tanks: CERS TANK

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs. The CalEPA oversees the statewide implementation of the Unified Program which applies regulatory standards to protect Californians from hazardous waste and materials.

Government Publication Date: Aug 19, 2019

Site Mitigation and Brownfields Reuse Program Facility Sites with Land Use Restrictions: LUR

The Department of Toxic Substances Control (DTSC) Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents land use restrictions that are active. Some sites have multiple land use restrictions.

Government Publication Date: Oct 1, 2019

Hazardous Waste Management Program Facility Sites with Deed / Land Use Restrictions: HLUR

The Department of Toxic Substances Control (DTSC) Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Government Publication Date: Sep 23, 2019

Deed Restrictions and Land Use Restrictions: DEED

List of Deed Restrictions, Land Use Restrictions and Covenants in GeoTracker made available by the State Water Resources Control Board (SWRCB) in California's Environmental Protection Agency. A deed restriction (land use covenant) may be required to facilitate the remediation of past environmental contamination and to protect human health and the environment by reducing the risk of exposure to residual hazardous materials.

Government Publication Date: Jul 17, 2019

Voluntary Cleanup Program: VCP

List of sites in the Voluntary Cleanup Program made available by the Department of Toxic Substances and Control (DTSC). The Voluntary Cleanup Program was designed to respond to lower priority sites. Under the Voluntary Cleanup Program, DTSC enters site-specific agreements with project proponents for DTSC oversight of site assessment, investigation, and/or removal or remediation activities, and the project proponents agree to pay DTSC's reasonable costs for those services.

Government Publication Date: Oct 1, 2019

GeoTracker Cleanup Program Sites: CLEANUP SITES

A list of Cleanup Program sites in the state of California made available by The State Water Resources Control Board (SWRCB) of the California Environmental Protection Agency (EPA). SWRCB tracks leaking underground storage tank cleanups as well as other water board cleanups.

Government Publication Date: Jul 17, 2019

Delisted County Records: DELISTED COUNTY

Records removed from county or CUPA databases. Records may be removed from the county lists made available by the respective county departments because they are inactive, or because they have been deemed to be below reportable thresholds.

Government Publication Date: Oct 4, 2019

Delisted California Environmental Reporting System (CERS) Tanks: DELISTED CTNK

This database contains a list of Aboveground Petroleum Storage and Underground Storage Tank sites that were removed from in the California Environmental Protection Agency (CalEPA) Regulated Site Portal.

Government Publication Date: Aug 19, 2019

Historical Hazardous Substance Storage Container Information - Facility Summary: HIST TANK

The State Water Resources Control Board maintained the Hazardous Substance Storage Containers listing and inventory in th 1980s. This facility summary lists historic tank sites where the following container types were present: farm motor vehicle fuel tanks; waste tanks; sumps; pits, ponds, lagoons, and others; and all other product tanks. This set, published in May 1988, lists facility and owner information, as well as the number of containers. This data is historic and will not be updated.

Government Publication Date: May 27, 1988

Tribal

Leaking Underground Storage Tanks (LUSTs) on Indian Lands: INDIAN LUST

LUSTs on Tribal/Indian Lands in Region 9, which includes California.

Government Publication Date: Apr 8, 2019

Underground Storage Tanks (USTs) on Indian Lands: INDIAN UST

USTs on Tribal/Indian Lands in Region 9, which includes California.

Government Publication Date: Apr 8, 2019

Delisted Tribal Leaking Storage Tanks: DELISTED ILST

Leaking Underground Storage Tank facilities which have been removed from the Regional Tribal LUST lists made available by the EPA.

Government Publication Date: May 2, 2019

Delisted Tribal Underground Storage Tanks: DELISTED IUST

Underground Storage Tank facilities which have been removed from the Regional Tribal UST lists made available by the EPA.

Government Publication Date: May 2, 2019

County

Los Angeles County - Burbank City CUPA List: BURBANK CUPA

A list of facilities associated with various Certified Unified Program Agency (CUPA) programs in the City of Burbank. This list is made available by the City of Burbank Fire Department.

Government Publication Date: Aug 21, 2019

Los Angeles County - El Segundo City Underground Storage Tanks List: UST ELSEGUNDO

List of registered Underground Storage Tanks (USTs) in the City of El Segundo of Los Angeles County, made available by El Segundo City Fire Department.

Government Publication Date: Jan 17, 2017

Los Angeles County - Santa Fe Springs Underground Storage Tank: UST SANTAFESP

A list of registered active Underground Storage Tanks (USTs) in the City of Santa Fe Springs. This list is made available by Santa Fe Springs Department of Fire-Rescue.

Government Publication Date: Sep 25, 2019

Los Angeles County - Santa Monica City Aboveground Storage Tank List: SANTAMON AST

List of registered Aboveground Storage Tanks (ASTs) made available by the Santa Monica Fire Department in the City of Santa Monica of Los Angeles County, California.

Government Publication Date: Jul 19, 2019

Los Angeles County - Santa Monica City CUPA Facilities List: SANTAMON CUPA

The Santa Monica Fire Department's office maintains a list of CUPA Facilities located in Santa Monica city.

Government Publication Date: Jul 19, 2019

Los Angeles County - Santa Monica City Underground Storage Tank List: UST SANTA MONICA

A list of registered active Underground Storage Tanks (USTs) in the City of Santa Monica made available by Santa Monica Fire Prevention Division.

Government Publication Date: Jul 25, 2019

Los Angeles County - Torrance City Underground Storage Tanks: UST TORRANCE

A list of registered Underground Storage Tank (UST) sites in Torrance City of Los Angeles County. This list is made available by Torrance City Office of Clerk.

Government Publication Date: Jun 27, 2019

Los Angeles County - Vernon City CUPA List: VERNON CUPA

The Vernon City Fire Department's office maintains a list of CUPA Facilities located in Vernon city.

Government Publication Date: Jul 23, 2019

Los Angeles County - Vernon City UST List: UST VERNON

A list of Underground Storage Tanks (UST) in Vernon City provided by the Vernon City Fire Department.

Government Publication Date: Jul 23, 2019

Los Angeles County - HMS List: LA HMS

List of sites in the Los Angeles County Department of Public Works Hazardous Materials System (HMS) Database which have or have had permits for Industrial Waste, Underground Storage Tanks, or Stormwater in the county of Los Angeles.

Government Publication Date: Sep 26, 2019

Los Angeles County - Long Beach UST List: UST LONGB

List of registered Underground Storage Tanks (USTs) in the City of Long Beach, Los Angeles County, made available by the Long Beach Certified Unified Program Agency (CUPA). The Long Beach CUPA operates under oversight shared by the Long Beach Fire Department and Health Department.

Government Publication Date: Jul 9, 2018

Los Angeles County - Solid Waste Sites: LA SWF

List of permitted solid waste facilities, closed landfills, historical dumpsites and other solid waste sites in Los Angeles County, made available by the Department of Public Works in Los Angeles County.

Government Publication Date: Nov 14, 2019

Orange County - Anaheim City UST Cleanup Cases: UST CLEANUP

A list of UST Cleanup Cases in the City of Anaheim in Orange County. As part of its Groundwater Protection Program, the City of Anaheim managed the UST Cleanup Oversight Program from April 1991 to June 2014. This list is published by the City of Anaheim Underground Storage Tank Cleanup Program.

Government Publication Date: May 26, 2015

Orange County - Anaheim City AST List: ANAHEIM AST

List of Aboveground Storage Tanks (ASTs) in Anaheim City, Orange County made available by Anaheim Fire & Rescue.

Government Publication Date: Sep 17, 2019

Orange County - Anaheim City UST List: ANAHEIM UST

A list of Underground Storage Tanks in Anaheim City, Orange County. This list is made available by Anaheim Fire & Rescue Department.

Government Publication Date: Sep 17, 2019

Orange County - Aboveground Petroleum Storage Tank Listing: ORANGE AST

A list of Aboveground Petroleum Storage Tank (APST) facilities inspected by Orange County Certified Unified Program Agency (CUPA) Under the Aboveground Petroleum Storage Act (APSA). This list is made available by the Environmental Health Division of Orange County Health Care Agency.

Government Publication Date: Oct 4, 2019

Orange County - LOP Lead Cases List: ORANGE LOP

The Local Oversight Program of the County of Orange provides regulatory cleanup oversight for cleanup of leaking underground storage tanks (USTs). This dataset is provided by the Orange County Health Care Agency.

Government Publication Date: Oct 4, 2019

Orange County - Underground Storage Tanks Listing: UST ORANGE CNTY

A list of registered Underground Storage Tank (UST) sites in Orange County. This list is made available by Orange County Health Care Agency (OCHCA), Environmental Health Division which oversees the underground storage tank inspection program in most of the cities of Orange County, with the exception of Anaheim, Fullerton, and Orange.

Government Publication Date: Oct 4, 2019

Los Angeles County - City of Los Angeles UST List: UST LA CITY

A list of active and inactive underground storage tank facilities made available by the Los Angeles Fire Department CUPA.

Government Publication Date: Jun 1, 2019

Los Angeles County - City of Los Angeles AST List: AST LA CITY

A list of active and inactive above ground petroleum storage tanks made available by the Los Angeles Fire Department CUPA.

Government Publication Date: Jun 1, 2019

Los Angeles County - City of Los Angeles Hazardous Materials Facilities: LA CITY HAZMAT

A list of active and inactive hazardous materials facilities made available by the Los Angeles Fire Department CUPA.

Government Publication Date: Jun 1, 2019

Additional Environmental Record Sources

Federal

PFOA/PFOS Contaminated Sites: PFAS NPL

List of sites where PFOA or PFOS contaminants have been found in drinking water or soil. Made available by the Federal Environmental Protection Agency (EPA).

Government Publication Date: Nov 15, 2018

Facility Registry Service/Facility Index: FINDS/FRS

The US Environmental Protection Agency (EPA)'s Facility Registry System (FRS) is a centrally managed database that identifies facilities, sites or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, data collected from EPA's Central Data Exchange registrations and data management personnel.

Government Publication Date: Aug 12, 2019

Toxics Release Inventory (TRI) Program: TRIS

The EPA's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of over 650 toxic chemicals from thousands of U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment.

Government Publication Date: Dec 31, 2017

Perfluorinated Alkyl Substances (PFAS) Releases: PFAS TRI

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a Per- or polyfluorinated alkyl substance (PFAS) included in the Environmental Protection Agency (EPA)'s consolidated PFAS Master List of PFAS Substances. The EPA's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of over 650 toxic chemicals from thousands of U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment.

Government Publication Date: Dec 31, 2017

Hazardous Materials Information Reporting System: HMIRS

US DOT - Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) Incidents Reports Database taken from Hazmat Intelligence Portal, U.S. Department of Transportation.

Government Publication Date: Jan 8, 2019

National Clandestine Drug Labs: NCDL

The U.S. Department of Justice ("the Department") provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

Government Publication Date: Sep 26, 2019

Toxic Substances Control Act: TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.
The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI).

Government Publication Date: Jun 30, 2017

Hist TSCA: HIST TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.
The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.

Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing: FTTS ADMIN

An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing: FTTS INSP

An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List: PRP

Early in the cleanup process, the Environmental Protection Agency (EPA) conducts a search to find the potentially responsible parties (PRPs). EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site.

Government Publication Date: Aug 20, 2019

State Coalition for Remediation of Drycleaners Listing: SCRD DRYCLEANER

The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS): ICIS

The Integrated Compliance Information System (ICIS) is a system that provides information for the Federal Enforcement and Compliance (FE&C) and the National Pollutant Discharge Elimination System (NPDES) programs. The FE&C component supports the Environmental Protection Agency's (EPA) Civil Enforcement and Compliance program activities. These activities include Compliance Assistance, Compliance Monitoring and Enforcement. The NPDES program supports tracking of NPDES permits, limits, discharge monitoring data and other program reports.

Government Publication Date: Nov 18, 2016

Drycleaner Facilities: FED DRYCLEANERS

A list of drycleaner facilities from the Integrated Compliance Information System (ICIS). The Environmental Protection Agency (EPA) tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.

Government Publication Date: May 29, 2018

Delisted Drycleaner Facilities: DELISTED FED DRY

List of sites removed from the list of Drycleaner Facilities (sites in the EPA's Integrated Compliance Information System (ICIS) with NAIC or SIC codes identifying the business as a drycleaner establishment).

Government Publication Date: May 29, 2018

Formerly Used Defense Sites: FUDS

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DoD) is responsible for an environmental restoration. This list is published by the U.S. Army Corps of Engineers.

Government Publication Date: Oct 23, 2018

Material Licensing Tracking System (MLTS): MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: Nov 1, 2018

Historic Material Licensing Tracking System (MLTS) sites: HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File: MINES

The Master Index File (MIF) contains mine identification numbers issued by the Department of Labor Mine Safety and Health Administration (MSHA) for mines active or opened since 1971. Note that addresses may or may not correspond with the physical location of the mine itself.

Government Publication Date: May 3, 2019

Alternative Fueling Stations: ALT FUELS

List of alternative fueling stations made available by the US Department of Energy's Office of Energy Efficiency & Renewable Energy. Includes Biodiesel stations, Ethanol (E85) stations, Liquefied Petroleum Gas (Propane) stations, Ethanol (E85) stations, Natural Gas stations, Hydrogen stations, and Electric Vehicle Supply Equipment (EVSE). The National Renewable Energy Laboratory (NREL) obtains information about new stations from trade media, Clean Cities coordinators, a Submit New Station form on the Station Locator website, and through collaborating with infrastructure equipment and fuel providers, original equipment manufacturers (OEMs), and industry groups.

Government Publication Date: Oct 1, 2019

Registered Pesticide Establishments: SSTS

List of active EPA-registered foreign and domestic pesticide-producing and device-producing establishments based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that facilities producing pesticides, active ingredients, or devices be registered. The list of establishments is made available by the EPA.

Government Publication Date: May 31, 2019

Polychlorinated Biphenyl (PCB) Notifiers: PCB

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: Mar 20, 2019

State

Dry Cleaning Facilities: DRYCLEANERS

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial, linen supply, commercial laundry, dry cleaning and pressing machines - Coin Operated Laundry and Dry Cleaning. This is provided by the Department of Toxic Substance Control.

Government Publication Date: Jul 16, 2019

Delisted Drycleaners: DELISTED DRYCLEANERS

Sites removed from the list of drycleaner related facilities that have EPA ID numbers, made available by the California Department of Toxic Substance Control.

Government Publication Date: Jul 16, 2019

Non-Toxic Dry Cleaning Incentive Program: DRYC GRANT

A list of grant recipients of the Non-Toxic Dry Cleaning Incentive Program made available by the California Air Resources Board (CARB). The program provides grants to eligible dry cleaning businesses to assist them in transitioning away from PERC machines to alternative non-toxic and non-smog forming technologies.

Government Publication Date: Feb 28, 2018

Per- and Polyfluoroalkyl Substances (PFAS): PFAS

List of sites from the State Water Resources Control Board (SWRCB)'s GeoTracker at which one or more of the potential contaminants of concern are in the PFAS Master List of PFAS Substances made available by the Environmental Protection Agency (US EPA).

Government Publication Date: Jul 17, 2019

PFOA/PFOS Groundwater: PFAS GW

A list of water wells from the Groundwater Ambient Monitoring and Assessment Program (GAMA) Groundwater Information System with the groundwater chemical perfluorooctanoic acid (PFOA) (NL = 0.014 UG/L) or perfluorooctanoic sulfonate (PFOS) (NL = 0.013 UG/L). The GAMA Groundwater Information System search is made available by California Water Boards.Y

Government Publication Date: Oct 17, 2019

Hazardous Waste and Substances Site List - Site Cleanup: HWSS CLEANUP

The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies and developers to comply with the California Environmental Quality Act requirements in providing information about the location of hazardous materials release sites. This list is published by California Department of Toxic Substance Control.

Government Publication Date: Aug 27, 2019

List of Hazardous Waste Facilities Subject to Corrective Action: DTSC HWF

This is a list of hazardous waste facilities identified in Health and Safety Code (HSC) § 25187.5. These facilities are those where Department of Toxic Substances Control (DTSC) has taken or contracted for corrective action because a facility owner/operator has failed to comply with a date for taking corrective action in an order issued under HSC § 25187, or because DTSC determined that immediate corrective action was necessary to abate an imminent or substantial endangerment.

Government Publication Date: Jul 18, 2016

EnviroStor Inspection, Compliance, and Enforcement: INSP COMP ENF

A list of permitted facilities with inspections and enforcements tracked in the Department of Toxic Substance Control (DTSC) EnviroStor.

Government Publication Date: Jul 16, 2019

School Property Evaluation Program Sites: SCH

A list of sites registered with The Department of Toxic Substances Control (DTSC) School Property Evaluation and Cleanup (SPEC) Division. SPEC is responsible for assessing, investigating and cleaning up proposed school sites. The Division ensures that selected properties are free of contamination or, if the properties were previously contaminated, that they have been cleaned up to a level that protects the students and staff who will occupy the new school.

Government Publication Date: Oct 1, 2019

California Hazardous Material Incident Report System (CHMIRS): CHMIRS

A list of reported hazardous material incidents, spills, and releases from the California Hazardous Material Incident Report System (CHMIRS). This list has been made available by the California Office of Emergency Services (OES).

Government Publication Date: Jul 15, 2019

Hazardous Waste Manifest Data: HAZNET

A list of hazardous waste manifests received each year by Department of Toxic Substances Control (DTSC). The volume of manifests is typically 900,000 - 1,000,000 annually, representing approximately 450,000 - 500,000 shipments.

Government Publication Date: Oct 24, 2016

Historical California Hazardous Material Incident Report System (CHMIRS): HIST CHMIRS

A list of reported hazardous material incidents, spills, and releases from the California Hazardous Material Incident Report System (CHMIRS) prior to 1993. This list has been made available by the California Office of Emergency Services (OES).

Government Publication Date: Jan 1, 1993

Historical Hazardous Waste Manifest Data: HIST MANIFEST

A list of historic hazardous waste manifests received by the Department of Toxic Substances Control (DTSC) from year the 1980 to 1992. The volume of manifests is typically 900,000 - 1,000,000 annually, representing approximately 450,000 - 500,000 shipments.

Government Publication Date: Dec 31, 1992

Historical Cortese List: HIST CORTESE

List of sites which were once included on the Cortese list. The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies and developers to comply with the California Environmental Quality Act requirements for providing information about the location of hazardous sites.

Government Publication Date: Nov 13, 2008

Cease and Desist Orders and Cleanup and Abatement Orders: CDO/CAO

The California Environment Protection Agency "Cortese List" of active Cease and Desist Orders (CDO) and Cleanup and Abatement Orders (CAO). This list contains many CDOs and CAOs that do NOT concern the discharge of wastes that are hazardous materials. Many of the listed orders concern, as examples, discharges of domestic sewage, food processing wastes, or sediment that do not contain hazardous materials, but the Water Boards' database does not distinguish between these types of orders.

Government Publication Date: Feb 16, 2012

California Environmental Reporting System (CERS) Hazardous Waste Sites: CERS HAZ

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the following regulatory programs: Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, RCRA LQ HW Generator. The CalEPA oversees the statewide implementation of the Unified Program which applies regulatory standards to protect Californians from hazardous waste and materials.

Government Publication Date: Aug 19, 2019

Delisted Environmental Reporting System (CERS) Hazardous Waste Sites: DELISTED HAZ

This database contains a list of sites that were removed from the California Environmental Protection Agency (CalEPA) in the following regulatory programs: Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, RCRA LQ HW Generator.

Government Publication Date: Nov 29, 2018

Sites in GeoTracker: GEOTRACKER

GeoTracker is the State Water Resource Control Boards' data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater. This is a list of sites in GeoTracker that aren't otherwise categorized as LUST, Land Disposal Sites (LDS), Cleanup Sites, or sites having Waste Discharge Requirements (WDR). This listing includes program types such as Underground Injection Control (UIC), Confined Animal Facilities (CAF), Irrigated Lands Regulatory Program, plans, and non-case information.

Government Publication Date: Jul 17, 2019

Waste Discharge Requirements: WASTE DISCHG

List of sites in California State Water Resources Control Board (SWRCB) Waste Discharge Requirements (WDRs) Program in California, made available by the SWRCB via GeoTracker. The WDR program regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Government Publication Date: Jul 17, 2019

Toxic Pollutant Emissions Facilities: EMISSIONS

A list of criteria and toxic pollutant emissions data for facilities in California made available by the California Environmental Protection Agency - Air Resources Board (ARB). Risk data may be based on previous inventory submittals. The toxics data are submitted to the ARB by the local air districts as requirement of the Air Toxics "Hot Spots" Program. This program requires emission inventory updates every four years.

Government Publication Date: Dec 31, 2017

Clandestine Drug Lab Sites: CDL

The Department of Toxic Substances Control (DTSC) maintains a listing of drug lab sites. DTSC is responsible for removal and disposal of hazardous substances discovered by law enforcement officials while investigating illegal/clandestine drug laboratories.

Government Publication Date: Jun 30, 2018

Tribal

No Tribal additional environmental record sources available for this State.

County

Orange County - Industrial Cleanup Program Cases Listing: ORANGE ICP

Orange County Health Care Agency's Environmental Health Division has an Industrial Cleanup (IC) program which oversees the voluntary cleanup of contaminated property. This is a list of cases (by city) which the IC program has overseen in the past, or is currently overseeing.

Government Publication Date: Oct 4, 2019

Los Angeles County - Site Mitigation List: LA SML

A Site Mitigation List in the County of Los Angeles. The list is made available by Los Angeles County Fire Department. Site mitigation is handled by the Site Mitigation Unit (SMU) which facilitates completion of site clean-up projects of contaminated sites in an expeditious manner in all cities of the Los Angeles County except El Segundo, Glendale, Long Beach, Santa Fe Springs, and Vernon.

Government Publication Date: Jul 16, 2019

Los Angeles County - Santa Monica City Hazardous Materials Facilities: SANTAMON HAZ

A list of Hazardous Materials Facilities in the City of Santa Monica, Los Angeles county. This list is made available by Santa Monica Fire Prevention Division which has been designated as the CUPA for the City.

Government Publication Date: Feb 20, 2019

Los Angeles County - Santa Monica City Hazardous Waste Facilities: SANTAMON HW

A list of Hazardous Waste Facilities in Los Angeles County, City of Santa Monica. This list is made available by Santa Monica Fire Prevention Division.

Government Publication Date: Jul 19, 2019

Orange County - Hazardous Waste Facilities: ORANGE HW

A list of Hazardous Waste Facilities in Orange County. This list is made available by Orange County Environmental Health Department.

Government Publication Date: Oct 4, 2019

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

APPENDIX D – Phase I Cultural Resources Inventory

PHASE I
CULTURAL RESOURCES INVENTORY

FOR THE

ORCHARD VIEW GARDENS SENIOR APARTMENT HOMES
CITY OF BUENA PARK,
ORANGE COUNTY, CALIFORNIA

Prepared for:

Brady Woods, Planning Manager
Community Development Department
City of Buena Park
6650 Beach Boulevard
Buena Park, California 90621

Prepared by:

UltraSystems Environmental Inc.
16431 Scientific Way
Irvine, CA 92618

May 2020

Key Words: City of Buena Park; *Los Alamitos, Calif*. USGS 7.5' topo map; survey; negative findings; Saint Joseph's Episcopal Church, 30-177528

PHASE I
CULTURAL RESOURCES INVENTORY

FOR THE

ORCHARD VIEW GARDENS SENIOR APARTMENT HOMES
CITY OF BUENA PARK, ORANGE COUNTY, CALIFORNIA

Brady Woods, Planning Manager
Community Development Department
City of Buena Park
6650 Beach Boulevard
Buena Park, California 90621

Prepared by:
Stephen O'Neil, M.A., RPA
Megan Black Doukakis, M.A.

UltraSystems Environmental Inc.
16431 Scientific Way
Irvine, CA 92618

May 21, 2020

Prepared by: Date: May 21, 2020

Stephen O'Neil, M.A., RPA
UltraSystems Environmental Inc.

TABLE OF CONTENTS

TABLES

FIGURES

ATTACHMENTS

1.0 Introduction

1.1 Overview

This Phase I Cultural Resource Inventory report was prepared by UltraSystems Environmental (UEI) at the request of National Community Renaissance of California and the City of Buena Park for the Orchard View Gardens Senior Apartment Homes Project (herein referred to as "project"). The project proposes to subdivide the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres. The newly created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with a primary residential apartment building and nine single-story "casitas" accommodating 66 residential units and a 3,000-square-foot community center. UEI conducted this cultural resources study to evaluate the potential presence of prehistoric and historic resources within the project boundary. A site record update describing the Saint Joseph's Episcopal Church (30-177528) was also prepared.

The project is located on 3.2 acres on the Saint Joseph's Episcopal Church campus at 8300 Valley View in the city of Buena Park (see **Attachment A, Figure 1**). The project site includes a mix of several structures with both hardscaped and landscaped areas. The project site is located in a fully urbanized area with single-family residences adjacent to the east, south, and west, and the Ban Suk (Korean) Methodist Church to the north. The site is situated midblock along the east side of Valley View Street between La Palma Avenue to the north and Crescent Avenue to the south, in the City of Buena Park, Orange County (see **Attachment A, Figure 2**). The project site is depicted on the *Los Alamitos, Calif.*, USGS 7.5' topographical quadrangle, Range 11 W, Township 04 S, in the southwest ¼ of the northwest ¼ of Section 10. The background research and archival study included a one-half-mile buffer surrounding the project site's Area of Potential Effect (APE) (see **Attachment A, Figure 3**).

The project includes a primary residential apartment building and nine single-story "casitas" accommodating 66 units on approximately 1.76 acres (Parcel 2). On Parcel 2, 66 residential apartment homes for seniors aged 62+, including 62 one-bedroom units and four two-bedroom units, are proposed in one larger and three smaller buildings. Building 1 would be divided into two groupings connected by a breezeway. Building 1 West, facing Valley View Street, would be a two-story building transitioning to a linear three-story double-loaded corridor toward the interior of the site. Building 1 East would be a three-story double-loaded bar building located interior to the site with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Along the northern property line, there would be nine (9) attached single-story "casitas" in three clusters. A total of 48 parking stalls are proposed. A California mission architectural style will be utilized to be complementary with the church and the surrounding neighborhood. The project also includes a 3,000-square-foot community center between Building 1 and the "casitas". The project would not result in the removal of church or hall; however, a stand-alone small building called "The Barn" at the north end of the property would be demolished and removed.

Area of Potential Effect

The APE for the undertaking encompasses the maximum extent of ground disturbance required by the project design (see **Attachment A, Figure 3**).

1.1.1 Methods

A cultural resources records search was completed on November 13, 2019 at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton, which is the local California Historic Resources Information System (CHRIS) facility. The records search was conducted to identify previously recorded cultural resources (prehistoric and historic archaeological sites/isolates, historic buildings, structures, objects, or districts) within the project area and to determine if previous cultural resource surveys were conducted. The project site and a one-half-mile buffer zone are included in the search radius for archival studies. These records included a review of previously recorded prehistoric and historic archaeological resources and a review of listed cultural resource survey reports within that same geographical area.

Stephen O'Neil, M.A., RPA, contacted the Native American Heritage Commission (NAHC) and requested a Sacred Lands File (SLF) search as well as a list of interested local Native American tribal organizations and potentially affiliated Native American individuals. Outreach to the identified parties was contacted requesting cultural resource information. The cultural resources record search was conducted on November 13, 2019 by Mrs. Megan Black Doukakis, M.A., and an intensive pedestrian cultural resources survey was conducted by Mr. O'Neil on December 19, 2019. Mr. O'Neil served at the Principal Investigator, who qualifies as Principal Prehistoric Archaeologist and Historic Archaeologist per United States Secretary of the Interior Standards (see **Attachment B**).

1.1.2 Disposition of Data

This report will be filed with the South Central Coastal Information Center, California State University, Fullerton; the City of Buena Park; and UEI Environmental, Inc., Irvine, California. All field notes and other documentation related to the study will remain on file at the Irvine office of UEI.

2.0 Background Settings

2.1 Natural Setting

The City of Buena Park is located in the northern portion of Orange County, within the Los Angeles Basin which is an open plain. This region is quite flat with the project site's elevation at between 50 and 55 feet average mean sea level (AMSL), with a very gentle slope to the west. The region's environment is characterized by a warm-summer Mediterranean climate, with the average maximum temperature in July reaching 82°F (degrees Fahrenheit) and the average minimum temperature in January at around 66°F. Rainfall is typically less than 14 inches annually (Weatherspark.com, 2020).

The surface geology of the project consists of early Holocene Young Alluvium Deposits, Unit 2 (Qya2). The soils are "…part of the floodplain deposits from Coyote Creek that currently flows just to the west and from Carbon Creek that currently flows to the south" (McLeod, 2019:1).

2.2 Cultural Setting

2.2.1 Prehistoric Context

The term "prehistoric period" refers to the period of pre-contact Native California lifeways and traditions prior to the arrival of Euro-Americans.

It is widely acknowledged that human occupation in the Americas began about 13,000 or more years ago (all dates presented here are calibrated radiocarbon ages or calendar dates). However, recent discoveries in areas outside of California have pushed that age back several thousand years more to about 15,000 or even perhaps up to nearly 20,000 years ago (Smith and Barker, 2017).

To describe and understand the cultural processes that occurred during prehistory, archaeologists have routinely developed a number of chronological frameworks to correlate technological and cultural changes recognized in the archaeological record. These summaries bracket certain time spans into distinct archaeological horizons, traditions, complexes, and phases.

There are many such models even for the various sub-regions of Southern California (cf. Grayson, 2011; Warren, 1984; Jones and Klar, 2007). Given the variety of environments and the mosaic of diverse cultures within California, prehistory is typically divided into specific sub-regions that include: the Interior of Southeastern California and the Mojave Desert (Warren and Crabtree, 1986) and San Diego and the Colorado Desert (Meighan, 1954; True, 1958, 1970).

Many archaeologists tend to follow the regional syntheses adapted from a scheme developed by William J. Wallace in 1955 and modified by others (Wallace, 1978; Warren, 1968; Chartkoff and Chartkoff, 1984; Moratto 1984; Sutton et al., 2007 and others). Although the beginning and ending dates vary, the general framework of prehistory in the Southern California area consists of the following four periods:

- **Paleoindian and Lake Mojave Periods** [Pleistocene and Early Holocene] (ca. 11000 B.C. to 6000 B.C.). This time period is characterized by highly mobile foraging strategies and a broad spectrum of subsistence pursuits. These earliest expressions of aboriginal occupation in America were marked by the use of large dart or spear points (Fluted and Concave Base Points) that are an element of the Western Clovis expression. Following the earliest

portions of this time span there was a change in climate coincident with the retreat of the glaciers. Large bodies of water existed and lakeside aboriginal adaptations were common. Large stemmed points (Western Stemmed Series – Lake Mojave and Silver Lake point types) were accompanied by a wide variety of formalized stone tools and were employed with the aid of atlatls (dart throwing boards). The latter archaeological materials are thought to be representative of an adaptation that was in part focused on lacustrine and riverine environments.

- **Millingstone Horizon** [Middle Holocene] (ca. 6000 B.C. to A.D. 1000). During this time span mobile hunter-gatherers evolved and became more sedentary. Certain plant foods and small game animals came to the forefront of indigenous subsistence strategies. This prehistoric cultural expression is often notable for its large assemblage of millingstones. These are especially well-made, deep-basin metates accompanied by formalized, portable handstones (manos). Additionally, the prehistoric cultural assemblage of this time period is dominated by an abundance of scraping tools (including scraper planes and pounding/pulping implements), with only a slight representation of dart tipped - projectile points (Pinto, Elko and Gypsum types).

- **Late Prehistoric Period** (ca. A.D. 1000 to 1500). Following the Millingstone Horizon were cultures that appeared to have a much more complex sociopolitical organization, more diversified subsistence base and exhibited an extensive use of the bow and arrow. Small, light arrow points (Rose Spring Series), and, later, pottery mark this period along with the full development of regional Native cultures and tribal territories.

- **Protohistoric Period** (ca. A.D. 1500 to 1700s). This final cultural period ushered in long-distance contacts with Europeans, and thereby led to the Historic Period (ca. A.D. 1700 to contemporary times). Small arrow points recognized as Desert Side-notched and Cottonwood forms are a hallmark of this time period.

2.2.2 Ethnohistoric Context

The project lies within the territory of the Gabrielino (Tongva) ethnolinguistic group (Bean and Smith, 1978:538), who speak a language classified as a member of the Uto-Aztecan language family. This language is further affiliated as an element of the Northern Takic Branch of that linguistic group (Golla, 2011:179).

The Gabrielino, with the Chumash, were considered the most populous, wealthiest, and therefore most powerful ethnic nationalities in aboriginal Southern California (Bean and Smith, 1978:538). Unfortunately, most Gabrielino cultural practices had declined before systematic ethnographic studies were instituted. Today, the leading sources on Gabrielino culture are Bean and Smith (1978), Johnson (1962), and McCawley (1996).

According to the recent research, Takic groups were not the first inhabitants of the region. Archaeologists suggest that a Takic in-migration may have occurred as early as 2,000 years ago, replacing or intermarrying with a more ancient indigenous people represented by speakers of a Hokan language (Howard and Raab, 1993; Porcasi, 1998). By the time of European contact, the Gabrielino territory included the southern Channel Islands and the Los Angeles Basin. Their territory reached east into the present-day San Bernardino-Riverside area and south to the San Joaquin Hills in central Orange County.

Different groups of Gabrielino adopted several subsistence strategies, based on gathering, hunting, and fishing. Because of the similarities to other Southern California tribes in economic activities, inland Gabrielino groups' industrial arts, exemplified by basket weaving, exhibited an affinity with those of their neighbors (Kroeber, 1925). Coastal Gabrielino material culture, on the other hand, reflected an elaborately developed artisanship most recognized through the medium of steatite, which was rivaled by few other groups in Southern California.

The intricacies of Gabrielino social organization are not well known. There appeared to have been at least three hierarchically ordered social classes, topped with an elite consisting of the chiefs, their immediate families, and other ceremonial specialists (Bean and Smith, 1978). Clans owned land, and property boundaries were marked by the clan's personalized symbol. Villages were politically autonomous, composed of non-localized lineages, each with its own leader. The dominant lineage's leader was usually the village chief, whose office was generally hereditary through the male line. Occasionally several villages were allied under the leadership of a single chief. The villages frequently engaged in warfare against one another, resulting in what some consider to be a state of constant enmity between coastal and inland groups.

The first Franciscan establishment in Gabrielino territory and the broader region was Mission San Gabriel, founded in A.D. 1772. Priests from the mission proselytized the Tongva throughout the Los Angeles Basin. As early as 1542, however, the Gabrielino were in peripheral contact with the Spanish during the historic expedition of Juan Rodríguez Cabrillo. However, it was not until 1769 that the Spaniards took steps to colonize the territory of aboriginal Californians. Within a few decades, most of the Gabrielino were incorporated into Mission San Gabriel and other missions in Southern California (Engelhardt, 1931). Due to introduced diseases, dietary deficiencies, and forceful *reduccion* (removal of non-agrarian Native populations to the mission compound), Gabrielino population dwindled rapidly from these impacts. By 1900, the Gabrielino community had almost ceased to exist as a culturally identifiable group. In the late 20th century, however, a renaissance of Native American activism and cultural revitalization of Gabrielino descendants took place. Among the results of this movement has been a return to a traditional name for the tribe, the Tongva, which is employed by several of the bands and organizations representing tribal members. Many of the Tongva bands focus on maintaining and teaching traditional knowledge, with special focus on language, place names and natural resources.

The Tongva community of *Povuu'nga* was situated six miles to the southwest along the San Gabriel Ana River in what is now the City of Long Beach (McCawley, 1996:69-70), near what later became the headquarters of the Rancho Alamitos. This was a prominent village of the Tongva and a major trading center. *Povuu'nga* and the other surrounding villages later contributed converts to Missions San Gabriel and San Juan Capistrano. Chester King's map of Takic language speakers' settlements (2017) suggests that the Tongva village of *Jaysobit* was associated with the Rancho Los Coyotes probably along Coyote Creek approximately three miles north of the project site. Residents of this village appear in both the Mission San Gabriel and Mission San Juan Capistrano baptismal registers (Merriam, 1968: 11, 116, 128, and 135) with a combined contribution of 99 neophytes; this number would have been a fraction of the population during the pre-Contact era. This portion of the Los Angeles Basin, with the nearby San Gabriel River and Coyote Creek, would have provided a rich set of both gathering and hunting resources used by the local indigenous communities. Native American settlement in the immediate area lasted well into the late 19th Century. Two "Indian Camps" are shown on the "Map of Part of Los Angeles County" prepared around 1870 located "…along the present course of Coyote Creek northwest of the modern community of Buena Park" (McCawley, 1996:59); one-and-a-half miles west of the project site. These were likely settlements

for Tongva and other southern California Indians who worked in the surround cattle and agricultural farms.

2.2.3 Historic Context

2.2.3.1 Spanish/Mexican Era

The earliest known direct European involvement with the land that became Buena Park occurred in 1784. It was then that Corporal Manuel Nieto, formerly a member of Don Gaspar de Portolá's 1769/70 expedition through Alta California, successfully petitioned the governor of Alta California, Captain Pedro Fages (the two had served together in the Portolá Expedition) for the right to graze on land that included the Buena Park area (Strawther, 2012). The Nieto Tract consisted of all the lands between the San Gabriel and Santa Ana Rivers, and from the Whittier Hills to the Pacific Ocean (Bandy and Bandy, 1998:188); a full 300,000 acres for pasturage of his horses and cattle. The extent was protested by Mission San Gabriel and later reduced to a "mere" 167,000 acres, where he and his family lived, grew, built adobe haciendas through Spanish rule and into the Mexican republic. Following 1832, the Rancho Los Nietos was divided into five smaller ranchos and given to Nietos' heirs, each grant still ranging in tens of thousands of acres. The city of Buena Park sits on the portion that was carved out of what once was the Rancho Los Coyotes, which had been inherited by Juan Jose Nieto, the eldest son (Bandy and Bandy, 1998:192). Rancho Los Coyotes passed from Nieto ownership in 1840 to Juan Bautista Leandri, an Italian immigrant, and then on to subsequent owners and divided into farms during the American era. The modern towns of Cerritos, La Mirada, Stanton, and Buena Park occupy the lands that were the Rancho Los Coyotes, extending across the Los Angeles and Orange County border.

Mexico rebelled against Spain in 1810, and by 1821, Mexico, including its California province, achieved independence. The Mexican Republic began to grant private land to citizens to encourage emigration to California. Huge land grant ranchos took up large sections of land in California. Ranchos surrounded the mission lands in all directions. The Mission San Gabriel lands were used for the support of the mission and provided for the large population of Tongva Native Americans. The mission lands were held in trust for Native peoples by the Franciscan missionaries for eventual redistribution. The lands along the coast, however, were open for early settlement by the colonists from New Spain.

The Mexican-American War of 1846 saw the invasion of California from both land and sea. Following several skirmishes in the San Diego and Los Angeles areas, and the capture of the territorial capital in Monterey, the United States rule was firmly established. Following the rapid influx of population to the north because of the Gold Rush of 1849, California was made a state in 1850. The economic and social order was slow to change in the southern portion of the state, however, and rancheros were left in control of their vast estates through the 1860s. The Los Angeles region, which included the future Orange County area through the 19th century, was a part of the "Cow Counties" and had little representation in the state legislature because of the sparse population. This allowed the predominantly Anglo population of the north to pass laws aimed at breaking up the ranches for settlement by Eastern farmers and, coupled with devastating droughts that crippled many livestock raisers, their dismemberment soon came. This helped pave the way for the "Boom of the Eighties" which saw an influx of people from the rest of the United States and the beginning of many of the towns we see today (Dumke, 1944). This was the first spurt of growth for Los Angeles, and smaller communities in the region started to form to the west, east, and the south such as Anaheim, Tustin, and Santa Ana, serving as residential and commercial enters for the surrounding farms and orchards on the plains. Portions of the remaining ranchos, especially in the

hill terrain, remained used largely for cattle ranching. Orange County, which included the area that became Buena Park, separated from Los Angeles County in 1889.

2.2.3.2 The American Period to Founding of Buena Park

In 1860, Abel Steams, a business man from Massachusetts, had acquired Rancho Los Coyotes along with Rancho La Habra, Rancho San Juan Cajón de Santa Ana, Rancho Las Bolsas, Rancho La Bolsa Chica, Rancho Jurupa and Rancho La Sierra (Buena Park History, 2019). Forming what was briefly known as "the Stearns Rancho," these holdings were purchased with the plan to resell portions as large and small tracts to be turned into farms and subdivisions. James A. Whitaker, a wholesale grocer from Chicago, purchased 690 acres of the Stearns Rancho in 1887. Whitaker intended to create a cattle ranch, but Santa Fe Railway officials convinced him a better use of the land would be for a new town (Orange County.net, 2019). There are multiple stories of how Buena Park got its name. It was said that under the Los Coyotes adobe there was a "spring of good water and grass for animals. It has been called 'Plaza Buena' meaning 'good place' or 'good park'." (Chamberlin, 1971:7). The other possibility is that it is named after the eponymous Chicago suburb that the Whitaker family was from (Brigandi, 2006:13).

Buena Park originally gained recognition as a dairy center and the first industry in the city came with the opening of The Lily Creamery in 1889 (OrangeCounty.net, 2019). The Pacific Condensed Milk, Coffee and Canning Co. established the evaporated milk cannery here and it was the first in California (HMdb.org, 2019). The Bixby family owned and operated the factory from 1896 until it closed in 1907. Later the plant was used as a tomato cannery.

Much of the city's financial and physical growth is attributed to the Knott Family. Walter and Cordelia Knott opened a 20-acre berry farm in 1920 and established a roadside stand to sell their produce along Beach Boulevard (VisitBuenaPark.com, 2019). As their business started growing Cordelia opened a tea room where she served and sold jams and jellies. After hearing about a berry strain that was developed as a cross of blackberries, raspberries and loganberries, Walter Knott sought out the developer, Rudolph Boysen and his berry plants. Knott was able to plant a specimen (VisitBuenaPark.com, 2019) which did well, and he soon expanded the crop. Cordelia soon expanded her tea room by serving biscuits, fried chicken and boysenberry pies. As their popularity grew, Knott developed the Ghost Town with material from his uncle's silver mill and part of the actual Calico ghost town that he acquired in 1951 (VisitBuenaPark.com, 2019). The city of Buena Park was incorporated in 1953 (OrangeCounty.net, 2019).

2.2.3.3 Project Site Land Use History

Historic aerial maps for Buena Park, the earliest dating to 1952, show that the project site continued to be used for farming through the 1950s. Directly to the north and northeast of the project site at this time there were three structures, possibility a farm house and associated outbuildings (NETROnline, 2019). By 1963, however, agricultural use of the land was gone and the surrounding area was full of residential developments. On the project site itself, a single church building and the barn building were present (NETROnline, 2019). By 1972, the original barn and concrete pad to the west were present along with landscaping and the original church structure. The current "Barn" replacement building appears in the 1994 aerial photo (NETROnline, 2019). The northeast portion of the project site has always been unoccupied (NETROnline, 2019).

Topographic maps are also available for the project area with the earliest in 1896 (USGS, 1896). The 1896-1942 topographic maps do not show any buildings present on the immediate project area

(USGS, 1896, 1899, 1902, 1906, 1911, 1916, 1923, 1924, 1925, 1926, 1929, 1932, 1934, 1935, 1942). There is indication of a single building to the north of the project site. The 1966-1982 maps do show the presence of the St. Joseph's church building (USGS, 1966, 1975, 1977, 1982).

The St. Joseph's Episcopal Church was constructed in 1965 as an irregular-shaped, Spanish Eclectic style church building (Crawford, 2014:1). The church has a concrete foundation, stucco exterior and a front gable roof with Spanish tile. Wings on each side of the church contain shed style roofs with Spanish tile. A square bell tower with a front gable roof with Spanish tile is present on the front northwest corner of the main façade. The property has been evaluated and does not qualify for the National Register of Historic Places (NRHP) under any of the NR criteria (Crawford, 2014:3). The property was not evaluated for eligibility under the California Register of Historic Places or local Buena Park Register criteria.

In addition to the church itself the parish campus contains a parish hall, a one-story rectangular building extending north/south on the north side of the church. A third building, "The Barn" is a stand-alone structure abutting the north property line wall with garden on the west and south sides. This building was constructed approximately forty years ago to replace a possible actual dairy barn that had been in the same location and was used as the parish hall; the name was kept in memory of the original structure (Rev. Lucinda Voien, personal communication, 2019).

3.0 Research Methods

This cultural resources inventory and related archival research included a background cultural resources records check (archival research) at the SCCIC, California State University, Fullerton. Additionally, a search of their SLF was requested from the NAHC, as well as a list of local Native American groups and individuals for outreach. Finally, a pedestrian cultural resource survey of the entire project site was conducted.

3.1 Records Search

A cultural resource records search to identify cultural resources on or near the project site was completed by Megan Black Doukakis at the SCCIC on November 13, 2019. The local CHRIS facility for Orange County, maintained at the SCCIC, was also reviewed to identify resources that have been previously evaluated for historic significance, as well as to identify any previous completed cultural resources survey reports for the area.

The official records and maps were searched and reviewed for cultural resources and surveys in Orange County, National Register of Historic Places; Listed Properties and Determined Eligible Properties (2012); and the California Register of Historical Resources (2012).

For the current study, the scope of the records search included a 0.5-mile buffer zone from the project's footprint (see **Attachment A, Figure 3**). The research effort was completed to assess the sensitivity of the project site for both surface and subsurface cultural resources and to assist in determining the potential to encounter such resources, especially prehistoric—i.e., Native American—cultural remains, during earth-moving activities associated with the proposed project.

3.2 Field Survey

On December 19, 2019, archaeologist Stephen O'Neil visited the project site to conduct a pedestrian survey, during which the project site was carefully inspected for any indication of human activities dating to the prehistoric or historic periods (i.e., 50 years or older).

3.3 Native American Outreach

On November 8, 2019, Mr. O'Neil contacted the NAHC via email notifying them of the project activities, requesting a search of their SLF, and requesting a list of local tribal organizations and individuals to contact for project outreach. The NAHC replied on November 26, 2019 with a letter dated the same day reporting on the SLF search findings and a list of 21 individuals to contact representing 16 tribal organizations. Letters to local tribes were sent on December 18, 2019 to all of the tribal organizations and individuals listed in the NAHC November 26, 2019 letter (**Attachment C**).

4.0 Findings

4.1 Records Search

4.1.1 Recorded Archaeological Sites

Based on the cultural resources records search, it was determined that a single cultural resource has been previously recorded within the project site boundary; the St. Joseph's Episcopal Church built circa 1965. Within the half-mile buffer zone, there have been no recorded prehistoric or additional historic-era cultural resources. **Table 4.1-1** summarizes the single resource.

The Saint Joseph's Episcopal Church, 30-177528, is located at 8300 Valley View Street, in the city of Buena Park, Orange County (Crawford, 2014). It was constructed circa 1965 in what is now a residential neighborhood but originally was open dairy farm land. The church was built in the Spanish Eclectic style in an asymmetrical, irregular shape. It has a concrete foundation, stucco exterior and a front gable roof with Spanish tile; wings on each side of the church contain shed roofs also with Spanish tile. It has a square bell tower also with a Spanish tiled gable roof situated in the northwest front corner. The church building was evaluated for the NRHP and determined to not meet the criteria to qualify; it was not assessed for eligibility under the California Register of Historical Resources or the local Buena Park Register (Crawford, 2014:3).

There are two additional resources in the project area recorded with the Office of Historic Preservation Directory of Properties in the Historic Properties Data File Historic Resources Inventory (HRI). These are a 1955 residence at 7890 La Casa Way (HRI # 184420) and another 1955 residence at 5948 Los Ranchos Drive (HRI # 155453). Neither of these properties were filed with the SCCIC (**Table 4.1**). Both properties are single-family residences and have been determined ineligible for the NRHP by consensus through the Section 106 process.

Table 4.1-1
KNOWN CULTURAL RESOURCES WITHIN A 0.5-MILE RADIUS

Site Number	Author(s)	Date	Type	Description
30-177528	K.A. Crawford	2014	Historic	St. Joseph's Episcopal Church, an asymmetrical, irregular-shaped, Spanish Eclectic style, church building. Built circa 1965.

Table 4.1-2
OFFICE OF HISTORIC PRESERVATION DIRECTORY OF PROPERTIES IN THE HISTORIC PROPERTIES DATA FILE

HRI Property #	Property Name	Built Date	NRHP Code
184420	Residence at 7890 La Casa Way	1955	6Y- Determined Ineligible for the National Register
155453	Residence at 5948 Los Ranchos Drive	1955	6Y- Determined Ineligible for the National Register

4.1.2 Previous Cultural Resource Investigations

According to the records at the SCCIC, there have been three previous cultural resource studies within a half-mile buffer of the project site (**Table 4.1-3**) (see **Attachment D**). One of these studies is located outside of the project boundary while two of them, OR-04445 and OR-04445A, concerned the project site itself at the St. Joseph's Episcopal Church property. All of these surveys concerned potential placement of wireless facilities, including the two of the church site itself; one of these resulted in the primary record being prepared.

Table 4.1-3
KNOWN CULTURAL RESOURCE STUDIES WITHIN A 0.5-MILE RADIUS

Report Number	Author(s)	Date	Title	Resources
LA4834/ OR-02094	Ashkar, Shahira	1999	Cultural Resources Inventory Report for Williams Communications, Inc. Proposed Fiber Optic Cable System Installation Project, Los Angeles to Anaheim, Los Angeles and Orange Counties	19-186110, 19-186111, 30-176630
OR-04445	Bonner, Diane, Carrie Wills, and Kathleen Crawford	2014	Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate LA02948C (LA2948 St Joseph's Episcopal Church) 8300 Valley View Avenue, Buena Park, Orange County, California	30-177528

Report Number	Author(s)	Date	Title	Resources
OR-04445A	Bonner, Diane, and Kathleen A. Crawford	2014	Direct APOE Historic Architectural Assessment for T-Mobile West, LLC Candidate LA02948C (LA2948 St Joseph's Episcopal Church) 8300 Valley View Avenue, Buena Park, Orange County, California	NA

4.2 Native American Outreach

On November 8, 2019, Mr. O'Neil contacted the NAHC via email and facsimile notifying them of the project, requesting a search of their SLF and asking for a list of local tribal organizations and individuals to contact for project outreach. The results of the search request were received November 26, 2019, at the office of UEI from Mr. Steven Quinn, Associate Governmental Program Analyst. The NAHC letter stated that "A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative [emphasis in the original]." (See **Attachment C**.)

UEI prepared letters to each of the 21 tribal contacts representing 16 tribal organizations describing the project and a map showing the project's location, requesting a reply if they have knowledge of cultural resources in the area, and asked if they had any questions or concerns regarding the project (see **Attachment C**). On December 18, 2019, Mr. O'Neil mailed the letters with accompanying maps to all 21 tribal contacts, and also emailed identical letters and maps to each of the tribal contacts for which email addresses were known (19), as well as sending facsimiles on December 18, 2019 to the 13 tribes with facsimile capability. There have been four responses to the letters and emails to date.

On December 18th and 30th of 2019, Arysa Gonzales Romero, Historic Preservation Technician for the Agua Caliente Band of Cahuilla Indians, replied by email stating that the project site is not located within the Tribe's Traditional Use Area and therefore they defer to other tribes closer to the area.

The Administrative Specialist for the Gabrieleño Band of Mission Indians – Kizh Nation, replied for Chairperson Andrew Salas by email on December 18, 2019 stating that they wished to have AB 52 consultation on the project; Doukakis replied by email the same day explaining that such consultation would be between the tribe and the project's lead agency, the City of Buena Park, and not with the client's cultural resource consultant.

On January 9, 2020, Deneen Pelton, Administrative Assistant representing the Rincon Band of Luiseño Indians responded that the project area is not within the Tribe's Traditional Use Area and that they defer to other tribes in the area.

On January 14, 2020, Joyce Perry representing the Juaneño Band of Mission Indians (Belardes) replied by email asking about the fieldwork that we will be conducting, if any buildings on the site will be demolished and if monitoring had occurred on the site. O'Neil responded on the same day that we would not be conducting testing, that none of the buildings will be demolished, and we

don't believe that any monitoring had been conducted on the site. Ms. Perry responded asking about past monitoring and how deep excavations are expected to go. O'Neil responded on the same day that due to the buildings' ages we do not believe that monitoring took place and that we do not have current plans to say how deep excavations will go.

Following up on the initial letter and email contacts, telephone calls were conducted on January 21, 2020, to complete the outreach process. These calls were to the 13 tribal contacts who had not already responded to UEI mailing and email. Sonia Johnston, Chairperson of the Juaneño Band of Mission Indians was not contacted over telephone because a phone number was not provided. Ten telephone calls were placed with no answer and so messages were left describing the project and requesting a response. These were to Chairperson Sandonne Goad, Chairperson of the Gabrielino/Tongva Nation; Mr. Charles Alvarez of the Gabrieleno-Tongva Tribe; Chairperson Fred Nelson, Chairperson of the La Jolla Band of Luiseño Indians; Shasta Gaughen, Tribal Historic Preservation Officer of the Pala Band of Mission Indians; Chairperson Temet Aguilar, Chairperson of the Pauma Band of Luiseno Indians; Chairperson Mark Macarro, Chairperson of the Pechanga Band of Luiseño Indians; Scott Cozart, Chairperson of the Soboba Band of Luiseño Indians; Joseph Ontiveros, of Cultural Resource Department of the Soboba Band of Luiseño Indians; and Teresa Romero, Chairperson of the Juaneño Band of Mission Indians Acjachemen Nation.

During the telephone calls of January 21, 2020, Chairperson Anthony Morales, Chairperson of the Gabrielino/Tongva San Gabriel Band of Mission Indians requested for cultural and tribal monitors to be notified if any cultural material is found and requested that his tribe be included in the monitoring. Chairman Morales also stated that he would like to be notified if any cultural material is found. Chairperson Robert Dorame of the Gabrielino Tongva Indians of California Tribal Council indicated that human remains were found to the north of the project area near the intersection of Valley View Street and the I-91 Freeway. Chairperson Dorame requested that UltraSystems contact the City about this and then notify him with the information that is learned. The San Luis Rey Band of Mission Indians' receptionist indicated that all cultural resources questions should be directed to "Cami" and provided Cami's telephone number. Cami was called but there was no answer and a message was left. She called back on January 22, 2020 and indicated that the project area is outside of the Tribe's Traditional Use Area and that they defer to other tribes in the area. The Cultural Resources Coordinator for the Pechanga Band of Luiseño Indians, Paul Macarro indicated that the project is outside of the tribe's area and that they would defer response to closer tribes. There have been no further responses from these tribes to date (see **Attachment C**).

4.3 Pedestrian Survey Results

A pedestrian survey was conducted at the St. Joseph's Episcopal Church campus on December 19, 2019 by Mr. Stephen O'Neil. The survey consisted of walking, visually inspecting, and photographing the exposed ground surface and landscaped areas of the project site using standard archaeological procedures and techniques. Both the church and associated hall and out building on the church campus are actively used; therefore, before proceeding with the survey O'Neil met with the parish secretary and pastor to let them know of his presence and planned activities.

Survey of the ground surface was conducted in an opportunistic manner; walking transects over open space of landscaped grass fields where possible and along the sides of the landscape planters surrounding the buildings. There is one area of large open grass along the western side of the church and hall along the Valley View Street frontage road (**Figure 4.3-1**). On the north side of the parish hall is "the orchard" with a variety of scattered mature fruit trees (**Figure 4.3-2**). The

structure called "The Barn" abuts the north property line wall and has medium-size garden on the west and south sides. "The Barn's" west side planter contains a variety of large shrubs while the south planter was designed as a low-maintenance, low-water (xeriscape) display garden filled with various succulents and cacti as well as rosemary, a palo verde tree and sea lavender, but seemingly has not been maintained for several years (**Figure 4.3-3**). The field in the northeast portion of the campus occupied just less than a quarter of the property is open space filled with various non-native volunteer plants (**Figure 4.3-4**).

The front lawn field consisting of a well-maintained Bermuda and Poa-type grass mix with no exposed soil. There was a lack of burrow tailings by gophers, ground squirrels or other rodents that are normally common in Southern California that might have allowed observation of soil contents immediately below the surface. The "orchard" to the north occupies approximately 20 percent of the campus. It contains upward of 38 trees on open ground covered with thick mulch. It does not appear to represent a remnant of an old farm orchard, but rather, though relatively mature, the fruit trees are of mixed species (fig, citrus, and stone fruit species) and not set in rows. The lawn and orchard were walked in standard ten-meter east/west transects. In the northeast lot, due to several recent rain storms starting in mid-November through December, this land was covered with a dense carpet of low-height weeds including volunteer grasses (*Poa* sp.), cheeseweed (*Malva parviflora*) and a rosemary bush that did not allow direct observation of the ground. A set of large grey cinderblock bricks have been placed in the south central area of the field, visible in the current GoogleEarth aerial photo (NETR Online, 2016), but upon inspection the bricks were found to be loosely set on the ground with no foundation and have no structural design (**Figure 4.3-5**).

Limited amounts of soil surface were visible in the flower beds in front of the church and another bed on the north side of the church. All flower beds were planted with various ornamental shrubs (**Figure 4.3-6**). A memorial garden is located at the back (south end) of the parish hall facing the church that contains a Columbarium wall for the cremated remains of parishioners (**Figure 4.3-7**). The shrub bed in front of the church contains white roses and the sidewalk from the church to street sidewalk has a bed with pink roses; these contain exposed soil surface (**Figure 4.3-8**). All of these planters were inspected. There are no planters in the parking lot.

The result of the pedestrian survey was negative for both historic and prehistoric cultural resources, except for the St. Joseph's church itself which is approximately 55 years old (see **Section 4.4** below). Approximately 10 percent of the ground surface was visible. Photographs of the project site were taken during the cultural resources survey.

4.4 Saint Joseph's Episcopal Church Site Record Update

The Saint Joseph's Episcopal Church was constructed circa 1965, making the building approximately 55 years old. The church was originally recorded in 2014 by K.A. Crawford with Crawford Historic Services. An update to the Primary Record has been prepared and will be submitted to the local CHRIS facility, the SCCIC, for review. Following this review and receiving trinomial and primary number designations, this record will be included in an updated cultural resources inventory report as **Attachment E.**

Figure 4.3-1
ST. JOSEPH'S EPISCOPAL CHURCH AND FRONT LAWN; VIEW TO SOUTHEAST

Figure 4.3-2
THE "ORCHARD" AT ST. JOSEPH'S EPISCOPAL CHURCH; VIEW TO THE EAST

Figure 4.3-3
"THE BARN" AND XERISCAPE GARDEN; VIEW TO THE NORTH

Figure 4.3-4
VIEW OF NORTHEAST FIELD OF THE PROJECT SITE; VIEW TO THE NORTHEAST

Figure 4.3-5
VIEW OF NORTHEAST FIELD OF THE PROJECT AREA WITH CINDERBLOCK FEATURE; VIEW TO THE NORTH

Figure 4.3-6
ST. JOSEPH'S EPISCOPAL CHURCH; VIEW TO THE EAST

Figure 4.3-7
COLUMBARIUM WALL ON PARISH HALL AND GARDEN; VIEW TO NORTH

Figure 4.3-8
EXPOSED SOIL IN CHURCH ROSE PLANTER; VIEW TO THE EAST

5.0 Management Considerations

5.1 Site Evaluation Criteria

Evaluation of significance under the California Environmental Quality Act (CEQA) uses criteria found in eligibility descriptions from the California Register of Historical Resources (CRHR). Generally, a resource is to be considered historically significant if it meets the criteria for listing in the California Register [Public Resources Code § 5024.1; California Code of Regulations § 15064.5(a)(3)]. These criteria provide that a resource may be listed as potentially significant if it:

- Is associated with the events that have made a significant contribution to the broad patterns of California history and cultural heritage.
- Is associated with the lives of persons important in our past.
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic value.
- Has yielded, or may be likely to yield, information important in prehistory or history.

5.2 Potential Effects

No cultural resources will be adversely affected by the project. The St. Joseph's Episcopal Church will not be directly affected but will have indirect visual effects; however, the building is not eligible for the NRHP. However, the presence of buried cultural (prehistoric and/or historic archaeological) resources cannot be ruled out. If prehistoric and/or historic artifacts are observed during subsurface excavation, work should be stopped in that area and a qualified archaeologist monitor should be called to assess the finds.

6.0 Conclusions and Recommendations

No prehistoric or historic archaeological resources were identified during the pedestrian field survey of the project. The potential for subsurface cultural deposits is also minimal.

Six Native American responses have been received to date. The Agua Caliente Band of Cahuilla Indians has stated that the project site is outside their traditional territories and defer to more local tribes. The Gabrieleño Band of Mission Indians – Kizh Nation replied that they wished to have AB 52 consultation on the project. A reply was sent explaining that such consultation would be between the tribe and the project's lead agency, which would be the City of Buena Park. The Gabrielino/Tongva San Gabriel Band of Mission Indians requested cultural and tribal monitors to be notified if any cultural material is found and requested that his tribe be included in the monitoring. The Gabrielino Tongva Indians of California Tribal Council indicated that human remains were found to the north of the project area near the I-91 Freeway. Chairperson Dorame of the Tribal Council requested that UltraSystems contact the City about this and then notify him with the information that is learned. The Pechanga Band of Luiseño Indians indicated that the project is outside of the tribe's area and that they would defer response to closer tribes. The San Luis Rey Band of Mission Indians' has stated that the project site is outside their traditional territories and defer to more local tribes. (See **Section 4.2** and **Attachment C**). The cultural resources study findings suggest that there is a low potential for the presence of prehistoric cultural resources. If prehistoric and/or historic items are observed during subsurface activities, work should be stopped in that area and a qualified archaeologist and Native American monitor should be called to assess the findings and retrieve the material.

One historic property, the St. Joseph's Episcopal Church itself, was identified within the APE. The church, built circa 1965, has been recorded as 30-177528. It has been evaluated for the NRHP and was found to not meet the criteria for eligibility. The church will not be directly affected by the project's construction work. However, the stand-alone structure known as "The Barn," constructed in the 1970s, would be demolished and replaced with the proposed senior apartment homes.

The results of the pedestrian assessment indicate no impacts to prehistoric or historical resources are anticipated during project construction. The cultural resources study findings suggest that there is a low potential for the presence of prehistoric cultural resources. However, the topography of the project site and immediate neighborhood is very flat and suggests that there has been minimal grading in the past for construction projects. The extensive grass landscaping and "orchard" in the north and west portions of the church campus have relatively undisturbed ground surface, and the parking lot occupying approximately the southern and eastern third of the campus would contain minimally-disturbed subsurface soil. All of the open landscaping to the north and the northern half of the parking lot would be converted to structures built with foundations and utility lines that would entail considerable ground disturbing, grading, and trenching. Therefore, it is recommended that archaeological monitoring be conducted during subsurface ground construction work.

If human remains are encountered during excavations associated with this project, work will halt in that area and the Orange County Coroner will be notified (§ 5097.98 of the Public Resources Code). The Coroner will determine whether the remains are of recent human origin or older Native American ancestry. If the coroner, with the aid of the supervising archaeologist, determines that the remains are prehistoric, they will contact the NAHC. The NAHC will be responsible for designating the most likely descendant (MLD), who will make recommendations as to the manner for handling these remains and further provide for the disposition of the remains, as required by

§ 7050.5 of the California Health and Safety Code. Following notification by the NAHC, the MLD will make these recommendations within 48 hours of having access to the project site following notification by the NAHC. These recommendations may include scientific removal and nondestructive analysis of human remains and items associated with Native American burials (§ 7050.5 of the Health and Safety Code).

7.0 References

Bandy, Marcy, and Maurice Bandy
1998 *Saddleback Ancestors: Rancho Families of Orange County, California*. Revised Edition. Orange County Genealogical Society, Orange, California.

Bean, Lowell John, and Charles R. Smith
1978 Gabrielino. In Handbook of North American Indians, William C. Sturtevant, general editor, vol. 8, *California*, edited by Robert F. Heizer, pp. 538-549. Smithsonian Institution, Washington, DC.

Brigandi, Phil
2006 *Orange County Place Names A To Z*. Sunbelt Publications, Inc., San Diego, California.

BuenaParkHistory.org
2019 History. Buena Park Historical Society. http://www.buenaparkhistory.org/wp/history/. Accesses December 30, 2019.

Chamberlain, H. A.
1971 *The Picture Story of Buena Park*. Buena Park: City Council and Historical Society of Buena Park.

Chartkoff, Joseph L., and Kerry Kona Chartkoff
1984 *The Archaeology of California*. Stanford University Press, Stanford, California.

Crawford, K.A.
2014 St. Joseph's Episcopal Church. Primary Record 30-177528. On file, South Central Coastal Information Center, California State University Fullerton.

Dumke, Glenn S.
1944 *The Boom of the Eighties*. Huntington Library, San Marino, California.

Engelhardt, Zephryn, O.F.M.
1931 *San Gabriel Mission and the Beginnings of Los Angeles*. Franciscan Herald Press, Chicago.

Golla, Victor
2007 Linguistic Prehistory. In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 71–82. AltaMira Press, Lanham, Maryland.

Howard, W. J., and L. M. Raab
1993 Olivella Grooved Rectangle Beads as Evidence of an Early Period Southern California Channel Island Interaction Sphere. *Pacific Coast Archaeological Society Quarterly* 29(3):1-11.

HMdb.org
2019 Site of Lily Creamery. The Historical Marker Database. https://www.hmdb.org/m.asp?m=49986. Accesses December 30, 2019.

King, Chester
2017 Takic settlements listed in Franciscan Mission Registers. MS in possession of the author.

Kroeber, Alfred
1925 Handbook of the Indians of California. *Bureau of American Ethnology Bulletin* No. 78, Washington, D.C.

McCawley, William
1996 *The First Angelinos: The Gabrielino Indians of Los Angeles*. Malki Museum Press, Banning, California/Ballena Press, Novato, California.

McLeod, Samuel A.
2019 Letter to Stephen O'Neil "Re: Paleontological Records Search for the proposed Affordable Housing Project, UltraSystems Environmental Project No. 7037, in the City of Buena Park, Orange County, project area." Vertebrate Paleontology Section, Natural History Museum of Los Angeles County. Dated 27 December 2019.

Merriam, C. Hart
1968 Village Names of Twelve California Mission Records. *University of California Archaeological Survey Report* 74. Berkeley.

NETR Online
2019 Aerial photographs of the project vicinity, taken in 1952, 1953, 1954, 1963, 1972, 1994, 2002, 2003, 2004, 2005, 2009, 2010, 2012, 2014 and 2016. http://www.historicaerials.com. Accessed December 30, 2019.

OrangeCounty.net
2019 City Guide-Buena Park. History of Buena Park. https://www.orangecounty.net/cities/BuenaPark_history.html. Accesses December 30, 2019.

Porcasi, Judith F.
1998 Middle Holocene Ceramic Technology on the Southern California Coast: New Evidence from Little Harbor, Santa Catalina Island. *Journal of California and Great Basin Anthropology* 20:270-284.

Strawther, Larry
2012 *A Brief History of Los Alamitos and Rossmoor*. The History Press, Charleston, South Carolina.

Sutton, Mark Q., Mark E. Basgall, Jill K. Gardner, and Mark W. Allen
2007 Advances in Understanding Mojave Desert Prehistory. In *California Prehistory: Colonization, Culture, Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 229-257. AltaMira Press, Lanham, Maryland.

True, Delbert L.
1958 An Early Complex in San Diego County, California. *American Antiquity* 23(3):255-263.

1970 Investigations of a Late Prehistoric Complex in Cuyamaca Rancho State Park, San Diego County, California. *Archaeological Survey Monographs 1*. University of California, Los Angeles.

VisitBuenaPark.com
2019 History of Buena Park, California. https://www.visitbuenapark.com/p/tools/about-us/history-of-buena-park/history. Accesses December 30, 2019.

Voien, Lucinda
2019 Personal communication from Rev. Lucinda "Cindy" Voien, pastor, St. Joseph's Episcopal Church. December 19, 2019. At St. Joseph's Episcopal Church, Buena Park, California.

Wallace, William J.
1978 Post-Pleistocene Archeology, 9,000 to 2,000 BC. In Handbook of North American Indians, William C. Sturtevant, general editor, vol. 8, *California*, edited by Robert F. Heizer, pp. 25-36. Smithsonian Institution, Washington, D.C.

Warren, Claude N.
1968 Cultural Traditions and Ecological Adaptations on the Southern California Coast. In *Archaic Prehistory in Western United States*, Cynthia Irwin-Williams (ed.), pp. 1-14. Eastern New Mexico University Contributions in Anthropology 1(3). Portales, New Mexico.

Warren, Claude N., and Robert H. Crabtree
1986 Prehistory of the Southwestern Area. In Warren L. D'Azevedo (ed.), Handbook of North American Indians, Vol. 11: *Great Basin*, pp. 183-193. Smithsonian Institution, Washington, D.C.

Weather Spark
2020 Average Weather in Buena Park. https://weatherspark.com/y/1831/Average-Weather-in-Buena-Park-California-United-States-Year-Round. Accessed December 30, 2019.

USGS (United States Geological Survey, U.S. Department of the Interior)

1896 *Los Alamitos, Calif*. 7.5', USGS Quadrangle map.

1899 *Los Alamitos, Calif*. 7.5', USGS Quadrangle map.

1902 *Los Alamitos, Calif*. 7.5', USGS Quadrangle map.

1906 *Los Alamitos, Calif*. 7.5', USGS Quadrangle map.

1916 *Los Alamitos, Calif*. 7.5', USGS Quadrangle map.

1923 *Los Alamitos, Calif*. 7.5', USGS Quadrangle map.

1924 *Los Alamitos, Calif*. 7.5', USGS Quadrangle map.

1925 *Los Alamitos, Calif*. 7.5', USGS Quadrangle map.

1926 *Los Alamitos, Calif*. 7.5', USGS Quadrangle map.

1929 *Los Alamitos, Calif*. 7.5', USGS Quadrangle map.

1932 *Los Alamitos, Calif*. 7.5', USGS Quadrangle map.

1934 *Los Alamitos, Calif*. 7.5', USGS Quadrangle map.

1935 *Los Alamitos, Calif*. 7.5', USGS Quadrangle map.

1942 *Los Alamitos, Calif*. 7.5', USGS Quadrangle map.

1966 *Los Alamitos, Calif*. 7.5', USGS Quadrangle map.

1975 *Los Alamitos, Calif*. 7.5', USGS Quadrangle map.

1977 *Los Alamitos, Calif*. 7.5', USGS Quadrangle map.

1982 *Los Alamitos, Calif*. 7.5', USGS Quadrangle map.

ATTACHMENTS

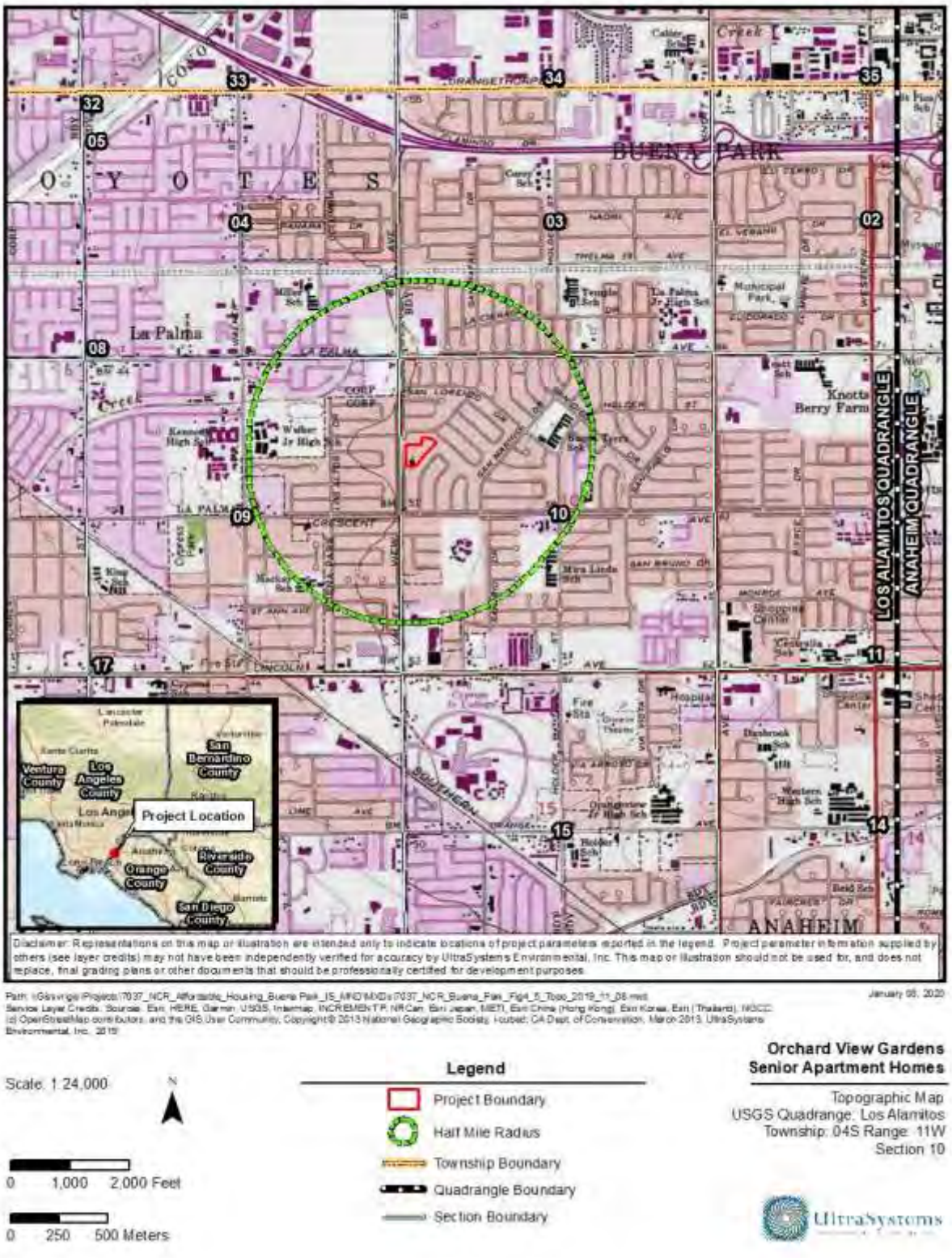
ATTACHMENT A

PROJECT MAPS

Figure 5
PROJECT REGIONAL LOCATION MAP

Figure 6
PROJECT STUDY AREA

Figure 7
USGS TOPO MAP OF PROJECT STUDY AREA



ATTACHMENT B

PERSONNEL BACKGROUND

Stephen O'Neil, M.A., RPA

Cultural Resources Manager, Cultural Anthropology/Archaeology

Education

- M.A., Anthropology (Ethnography emphasis), California State University, Fullerton, CA, 2002
- B.A., Anthropology, California State University, Long Beach, CA, 1979

Professional and Institutional Affiliations

- California Mission Studies Association
- City of Laguna Beach Environmental Sustainability Committee, appointed 2012
- Orange County Natural History Museum; Board Member
- Pacific Coast Archaeological Society; Board Member and Past President
- Society of California Archaeology

Professional Registrations and Licenses

- Register of Professional Archaeologists (No. 16104) (current)
- Riverside County, CA, Cultural Resource Consultant (No. 259) (current)
- Cultural Resource Field Director, BLM Permit (CA-13-19) – California, 2013
- NEPA and CEQ Consultation for Environmental Professionals; course by the National Association of Environmental Professionals, 2013

Professional Experience

Mr. O'Neil has 30 years of experience as a cultural anthropologist in California. He has researched and written on archaeology, ethnography, and history. Mr. O'Neil has archaeological experience in excavation, survey, monitoring, and lab work. Most of this has been on Native American prehistoric sites, but also includes Spanish, Mexican, and American period adobe sites. His supervisory experience includes excavation and survey crew chief and project director of an adobe house excavation. He has a wide range of expertise in Phase I & II Environmental Site Assessments, archaeological resource assessment surveys, salvage operations, and cultural background studies for various EIR projects. Mr. O'Neil has worked for cultural resource management firms as well as government agencies and Native American entities. He has prepared technical reports as well as published journal articles.

Select project experience

Inglewood Avenue Corridor Widening Project, City of Lawndale, Los Angeles County, CA: 2013–2014

Mr. O'Neil directed and conducted archaeological field survey, cultural resource records search, Native American contacts and report writing for this project. The City of Lawndale is widening Inglewood Avenue from Marine Avenue north. The project uses Caltrans funds and the cultural resources report was prepared in Caltrans format. A separate historic properties report was prepared as well. Prepared for Huitt-Zollars Engineering.

Via Ballena Storm Drain Relocation, City of San Clemente, Orange County, CA: 2013

Mr. O'Neil directed and conducted archaeological field survey, cultural resource records search, Native American contacts and report writing for this project. This residential area has a damaged storm drain under Via Ballena that was causing earth movement and erosion. The meet requirements for state funding, and cultural resources inventory report was required. Prepared for the City of San Clemente

Pine Canyon Road – Three Points Road to Lake Hughes Road, Los Angeles County, CA: 2013

Mr. O'Neil directed and conducted archaeological field survey, cultural resource records search, Native American contacts and report writing for this project. This nine-mile portion of Pine Canyon Road lies partially within the Angeles National Forest. A series of widening and culvert repairs is planned by the Los Angeles County Department of Public Works (LACDPW). An assessment was made of possible cultural resources, historic and prehistoric that may be affected by the construction, and four historic sites were recorded. Prepared for LACDPW.

Alton Parkway Extension Project, Cities of Irvine and Lake Forest, Orange County, CA: 2012

Mr. O'Neil directed and conducted archaeological and paleontological monitoring, archaeological excavation, cultural resource records search, Native American contacts and report writing for this project. Alton Parkway was extended 2.1 miles between the cities of Irvine and Lake Forest. For the portion within the City of Irvine, UltraSystems conducted monitoring and excavation services. One prehistoric site was excavated and reported on; a series of living features were discovered and also reported. The final monitoring report described the paleontological and archaeological findings. A separate technical report on the archaeological excavations was also prepared. Mr. O'Neil directed research into historic and prehistoric background, and prepared the final assessment of potential impacts. Prepared for the Orange County Department of Public Works.

NEPA and CEQA Documentation, Los Angeles Regional Interoperable Communications System (LA-RICS), Los Angeles County, CA: 2011–2014

Mr. O'Neil is part of UltraSystems team currently preparing technical studies and NEPA and CEQA documentation toward the construction of LA-RICS, an $800-million emergency communications system due to be operational in 2016. LA-RICS will provide a highly coordinated emergency communications system to all first-responders to natural and man-made disasters throughout Los Angeles County. Mr. O'Neil is the cultural and historical resources studies team leader, directing five researchers. These studies include coordination of field visits to all 260-plus locations for an archaeologist and/or an architectural historian with agency escorts to observe and record any onsite prehistoric and historic features, performing records and literature searches at archaeology information centers and local archives, contacting local agencies for historically listed structures and districts, coordinate public notices of the project throughout Los Angeles County, consultation with the NAHC and all local tribal organizations, and direct consultation with the California State Historic Preservation Officer (SHPO). This information was compiled by Mr. O'Neil and is used to prepare FCC historical resource forms which were submitted to the SHPO for review.

Megan B. Doukakis, M.A.

Archaeological Technician

Education

- M.A. Public Archaeology, California State University, Northridge, 2012–2018
- B.A., Anthropology, California State University, Long Beach, 2011
- University of California, Los Angeles - Pimu Catalina Archaeological Field School, 2010
- International Scholar Laureate Program: Delegation on Anthropology and Archaeology in China, 2009
- Earthwatch Institute, "Unearthing Mallorca's Past" archaeological excavation, Mallorca, Spain, 2005

Professional and Institutional Affiliations

- Phi Kappa Phi National Honor Society, 2011
- Sigma Alpha Lambda, National Leadership and Honor Organization, 2010
- Society for California Archaeology Membership 2012–2015

Professional Experience

Mrs. Doukakis has worked in the field of cultural resource management for seven years at environmental firms. Before this Mrs. Doukakis had participated in multiple field schools in Southern California and abroad. She has experience in survey, excavation, laboratory work, and information searches. Mrs. Doukakis holds the title of Archaeological Technician at UltraSystems Environmental. Prior to this, she completed a CRM internship at UltraSystems. These positions have provided her with the opportunity to contribute to proposals, final reports, project scheduling, archaeological record searches and paleontological, archaeological and Native American monitor organizing for projects.

Select project experience

Results of the Condition Assessment, Site Monitoring, and Effects Treatment Plan (CASMET) Marine Corps Base Camp Pendleton, San Diego County, CA

Client: Marine Corps Base Camp Pendleton, Duration: 5/11 to 9/11

Mrs. Doukakis conducted survey and excavation for the USMC Base Camp Pendleton condition assessment project. Areas were tested around Camp Pendleton for the presence and condition of cultural material previously recorded. She also conducted laboratory work and curation for the material collected within excavations. Mrs. Doukakis contributed to the final report with background records searches and prehistoric and historic background writing for the report.

Archaeological Excavation Results Report for the Alton Parkway Extension Project, Orange County, CA

Client: Orange County Department of Public Works; Contract: $357,170, 10/10 to 6/12

Mrs. Doukakis participated in the Alton Parkway project, City of Irvine, Orange County, CA. She was responsible for cleaning and cataloging the artifacts recovered from the excavation and surface collections. She also contributed to the final report by compiling the historical background information.

Identification and Evaluation of Historic Properties ADA Wheelchair Access Ramp Improvement Project, City of Lake Forest, Orange County, CA

Client: City of Lake Forest/Penco, Contract: $2,981.62, Duration: 6/12 to 7/12

Mrs. Doukakis contributed to the cultural resource records search, field survey, Native American contacts and report writing for this project. This residential area required wheelchair access ramps on every corner in this neighborhood. An assessment of the possible cultural resources that may be affected with this construction was made for the City of Lake Forest. Mrs. Doukakis contributed the historic and prehistoric background, and the assessment of the possible resources in the area.

Tenaska Solar Projects Imperial Solar Energy Center–South; Imperial Solar Energy Center–West; and Wistaria Ranch, Imperial County, CA

Client: Tenaska/CSOLAR Development, Contract: $3,441,809, 10/13 to 8/15.

Mrs. Doukakis conducted Native American contacts for field monitoring, coordinated with subcontractors to initiate cultural and paleontological field surveys, for the several solar energy projects being handled by UltraSystems Environmental in the El Centro area, Imperial County, CA. She contributed different parts of the survey report and monitoring program documents, including historic and prehistoric background, editorial review. At ISEC- West, Mrs. Doukakis was responsible for contacting and organizing Tribal monitors for this project. She contacted tribal organizations and inquired about their interest in providing tribal monitors for this project, directly organized with Native American groups to sign agreements, and fill out tax paperwork. She was also responsible for organizing and keeping track of and gathering field log from monitors from six tribal groups. She also recovered previously recorded artifacts in the field before the start of the project.

NEPA and CEQA Documentation, Los Angeles Regional Interoperable Communications System -Long Term Evolution, Los Angeles County, CA

Client: LARICS Joint Powers Authority, Contract: $3,051,312, 1/12 to 1/15.

UltraSystems' team prepared technical studies and NEPA and CEQA documentation toward the construction of LA-RICS-LTE, an $800-million emergency communications system that will provide a highly coordinated emergency communications system to all first-responders to natural and man-made disasters throughout Los Angeles County. For this project Mrs. Doukakis conducted record searches at the South Central Coastal Information Center for the Department of Commerce on over 300 project sites throughout the County of Los Angeles. She helped prepare letters to the NAHC and tribal organizations associated with the project area. Mrs. Doukakis contributed to contacting, organizing, and scheduling architectural historians to conduct historical research around the project areas. Letters were written for contact to local agencies and cities. A public notice was constructed and published in three local newspapers. Mrs. Doukakis also constructed hundreds of Federal Communications Commission 620 and 621 forms for submission to California State Historic Preservation Office.

Newton Canyon Monitoring Project, CA

Client: County of Los Angeles Department of Public Works, Contract: $2,930.00, Duration: 7/13 to 12/13

Mrs. Doukakis was an archaeological monitor for this project. She monitored all ground disturbing activities as well as lightly surveying the area for cultural material. Mrs. Doukakis also conducted the records center research at the South Central Coastal Information Center at CSUF. Through email, letter, and telephone correspondence, Mrs. Doukakis contacted the NAHC and associated tribal groups.

ATTACHMENT C

NATIVE AMERICAN HERITAGE COMMISSION RECORDS SEARCH AND NATIVE AMERICAN CONTACTS

UltraSystems
environmental • management • planning

November 8, 2019

Government Program Analyst
Native American Heritage Commission
1550 Harbor Blvd., Suite 100
West Sacramento, California 95691

Subject: Cultural Resources Study, Affordable Housing Project, in the City of Buena Park, Orange County, California. UltraSystems Environmental Project No. 7037.

Dear NAHC Staff,

UltraSystems Environmental, Inc. (UEI) has been contracted by National Community Renaissance to conduct a cultural resources inventory in support of the Buena Park Affordable Housing Project (Project). The Project consists of the proposed development of three residential buildings, parking stalls, and a community center in the City of Buena Park, California. I am requesting a Native American contact list of interested tribes, organizations and individuals in the general Project area, and a search of the Sacred Lands File for potential traditional cultural sites.

The proposed Project would include the development of three residential buildings accommodating 66 units on 3.2 acres. Building 1 will be two stories that transitions to a linear three-story corridor. Building 2 will be a three-story building with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Building 3 consists of a series of nine single-story casitas along the northern property line. At present, the Project site is composed of an irregular-shaped parcel with the southern portion of the site occupied by the St. Joseph's Episcopal Church and landscaping while the northern portion has a paved parking lot and a vacant field.

The Project is located in the city of Buena Park, and is specifically located at 8300 Valley View, on the *Los Alamitos, Calif.*, USGS topographical quadrangles, R 11W, T 04S, in Section10. This is located midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The Project site is located in a fully urbanized area with single family residences in all directions, along with a Methodist Church to the immediate north of the project area. This is shown on the enclosed map and the Project area is depicted with a half-mile buffer zone.

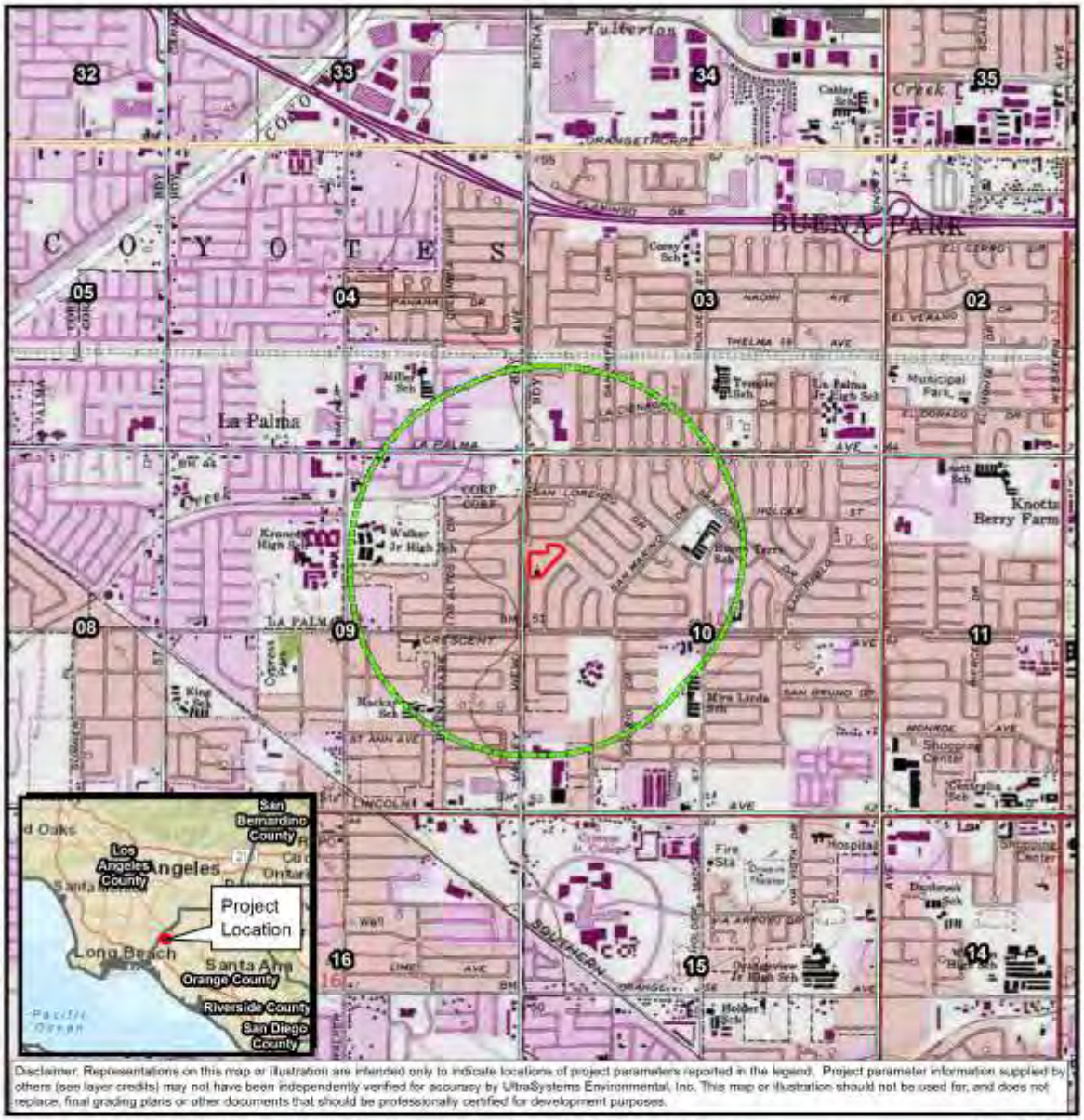
If you require additional information or have any questions, please contact me.

Thank you for your help.

Sincerely,

Stephen O'Neil, M.A., RPA
Cultural Resources Manager
soneil@ultrasystems.com

Corporate Office – Orange County
16431 Scientific Way
Irvine, CA 92618-7443
Telephone: 949.788.4900, ext. 276
Facsimile: 949.788.4901
Website: www.ultrasystems.com


Fullerton
BUENA PARK
COYOTES
La Palma
Creek
Knotts Berry Farm
Project Location
Los Angeles County
San Bernardino County
Orange County
Riverside County
San Diego County
Long Beach
Santa Ana
Pacific Ocean
Disclaimer: Representations on this map or illustration are intended only to indicate locations of project parameters reported in the legend. Project parameter information supplied by others (see layer credits) may not have been independently verified for accuracy by UltraSystems Environmental, Inc. This map or illustration should not be used for, and does not replace, final grading plans or other documents that should be professionally certified for development purposes.
November 08, 2019
Scale: 1:24,000
N
0 1,000 2,000 Feet
0 250 500 Meters
Legend
Project Boundary
Quadrangle Boundary
Half Mile Buffer
Section Boundary
Township Boundary
Buena Park Affordable Housing Project
Topography Map and Buffer
USGS Quadrange: Los Alamitos
UltraSystems

STATE OF CALIFORNIA GAVIN NEWSOM, Governor

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov
Twitter: @CA_NAHC

November 26, 2019

Stephen O'Neil
UltraSystems

VIA Email to: soneil@ultrasystems.com

RE: Affordable Housing in the City of Buena Park Project, Orange County

Dear Mr. O'Neil:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: steven.quinn@nahc.ca.gov.

Sincerely,

Steven Quinn
Associate Governmental Program Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Orange County
11/26/2019

Agua Caliente Band of Cahuilla Indians
Jeff Grubbe, Chairperson
5401 Dinah Shore Drive — Cahuilla
Palm Springs, CA, 92264
Phone: (760) 699 - 6800
Fax: (760) 699-6919

Agua Caliente Band of Cahuilla Indians
Patricia Garcia-Plotkin, Director
5401 Dinah Shore Drive — Cahuilla
Palm Springs, CA, 92264
Phone: (760) 699 - 6907
Fax: (760) 699-6924
ACBCI-THPO@aguacaliente.net

Gabrieleno Band of Mission Indians - Kizh Nation
Andrew Salas, Chairperson
P.O. Box 393 — Gabrieleno
Covina, CA, 91723
Phone: (626) 926 - 4131
admin@gabrielenoindians.org

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693 — Gabrieleno
San Gabriel, CA, 91778
Phone: (626) 483 - 3564
Fax: (626) 286-1262
GTTribalcouncil@aol.com

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St., #231 — Gabrielino
Los Angeles, CA, 90012
Phone: (951) 807 - 0479
sgoad@gabrielino-tongva.com

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson
P.O. Box 490 — Gabrielino
Bellflower, CA, 90707
Phone: (562) 761 - 6417
Fax: (562) 761-6417
gtongva@gmail.com

Gabrielino-Tongva Tribe
Charles Alvarez,
23454 Vanowen Street — Gabrielino
West Hills, CA, 91307
Phone: (310) 403 - 6048
roadkingcharles@aol.com

Juaneno Band of Mission Indians
Sonia Johnston, Chairperson
P.O. Box 25628 — Juaneno
Santa Ana, CA, 92799
sonia.johnston@sbcglobal.net

Juaneno Band of Mission Indians Acjachemen Nation - Belardes
Joyce Perry, Tribal Manager
4955 Paseo Segovia — Juaneno
Irvine, CA, 92603
Phone: (949) 293 - 8522
kaamalam@gmail.com

Juaneno Band of Mission Indians Acjachemen Nation - Belardes
Matias Belardes, Chairperson
32161 Avenida Los Amigos — Juaneno
San Juan Capisttrano, CA, 92675
Phone: (949) 293 - 8522
kaamalam@gmail.com

Juaneno Band of Mission Indians Acjachemen Nation - Romero
Teresa Romero, Chairperson
31411-A La Matanza Street — Juaneno
San Juan Capistrano, CA, 92675
Phone: (949) 488 - 3484
Fax: (949) 488-3294
tromero@juaneno.com

La Jolla Band of Luiseno Indians
Fred Nelson, Chairperson
22000 Highway 76 — Luiseno
Pauma Valley, CA, 92061
Phone: (760) 742 - 3771

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Affordable Housing in the City of Buena Park Project, Orange County.

PROJ-2019-006083 — 11/26/2019 09:24 AM — 1 of 2

UltraSystems
environmental • management • planning

December 18, 2019

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

Subject: Cultural Resources Study, Affordable Housing Project, in the City of Buena Park, Orange County, California. UltraSystems Environmental Project No. 7037.

Dear Chairperson Aguilar,

UltraSystems Environmental, Inc. (UEI) has been contracted by National Community Renaissance to conduct a cultural resources inventory in support of the Buena Park Affordable Housing Project (Project). The Project consists of the proposed development of three residential buildings, parking stalls, and a community center in the City of Buena Park, Orange County, California. UltraSystems is conducting a cultural resources study to evaluate the potential presence of prehistoric and historic resources within the project boundary.

The proposed Project would include the development of three residential buildings accommodating 66 units on 3.2 acres. Building 1 would be two stories that transitions to a linear three-story corridor. Building 2 would be a three-story building with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Building 3 consists of a series of nine single-story casitas along the northern property line. At present, the Project site is occupied by an irregular-shaped parcel with the southern portion of the site occupied by the St. Joseph's Episcopal Church and landscaping while the northern portion is a paved parking lot with a vacant field in the east.

As part of the cultural resources study for the project I am writing to request the Pauma Band of Luiseño Indians' input on potential Native American resources in or near the Area of Potential effect (APE). In a letter dated November 26, 2019, the Native American Heritage Commission stated: "A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative [emphasis in the original]."

The Project is located in the city of Buena Park, and is specifically located at 8300 Valley View, on the *Los Alamitos, Calif.*, USGS topographical quadrangles, R 11W, T 04S, in an unsectioned area. This is located midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The Project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project area. This is shown on the enclosed map and the Project area is depicted with a half-mile buffer zone.

If you require additional information or have any questions, please contact me.

Thank you for your help.

Sincerely,

Stephen O'Neil, M.A., RPA
Cultural Resources Manager
soneil@ultrasystems.com

Corporate Office – Orange County
16431 Scientific Way
Irvine, CA 92618-7443
Telephone: 949.788.4900, ext. 276
Facsimile: 949.788.4901
Website: www.ultrasystems.com

UltraSystems
environmental • management • planning

December 18, 2019

Charles Alvarez
Gabrielino-Tongva Tribe
23454 Vanowen Street
West Hills, CA, 91307

Subject: Cultural Resources Study, Affordable Housing Project, in the City of Buena Park, Orange County, California. UltraSystems Environmental Project No. 7037.

Dear Mr. Alvarez,

UltraSystems Environmental, Inc. (UEI) has been contracted by National Community Renaissance to conduct a cultural resources inventory in support of the Buena Park Affordable Housing Project (Project). The Project consists of the proposed development of three residential buildings, parking stalls, and a community center in the City of Buena Park, Orange County, California. UltraSystems is conducting a cultural resources study to evaluate the potential presence of prehistoric and historic resources within the project boundary.

The proposed Project would include the development of three residential buildings accommodating 66 units on 3.2 acres. Building 1 would be two stories that transitions to a linear three-story corridor. Building 2 would be a three-story building with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Building 3 consists of a series of nine single-story casitas along the northern property line. At present, the Project site is occupied by an irregular-shaped parcel with the southern portion of the site occupied by the St. Joseph's Episcopal Church and landscaping while the northern portion is a paved parking lot with a vacant field in the east.

As part of the cultural resources study for the project I am writing to request the Gabrielino-Tongva Tribes input on potential Native American resources in or near the Area of Potential effect (APE). In a letter dated November 26, 2019, the Native American Heritage Commission stated: "A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative [emphasis in the original]."

The Project is located in the city of Buena Park, and is specifically located at 8300 Valley View, on the *Los Alamitos, Calif.,* USGS topographical quadrangles, R 11W, T 04S, in an unsectioned area. This is located midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The Project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project area. This is shown on the enclosed map and the Project area is depicted with a half-mile buffer zone.

If you require additional information or have any questions, please contact me.

Thank you for your help.

Sincerely,

Stephen O'Neil, M.A., RPA
Cultural Resources Manager
soneil@ultrasystems.com

Corporate Office – Orange County
16431 Scientific Way
Irvine, CA 92618-7443
Telephone: 949.788.4900, ext. 276
Facsimile: 949.788.4901
Website: www.ultrasystems.com

UltraSystems
environmental • management • planning

December 18, 2019

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

Subject: Cultural Resources Study, Affordable Housing Project, in the City of Buena Park, Orange County, California. UltraSystems Environmental Project No. 7037.

Dear Chairperson Belardes,

UltraSystems Environmental, Inc. (UEI) has been contracted by National Community Renaissance to conduct a cultural resources inventory in support of the Buena Park Affordable Housing Project (Project). The Project consists of the proposed development of three residential buildings, parking stalls, and a community center in the City of Buena Park, Orange County, California. UltraSystems is conducting a cultural resources study to evaluate the potential presence of prehistoric and historic resources within the project boundary.

The proposed Project would include the development of three residential buildings accommodating 66 units on 3.2 acres. Building 1 would be two stories that transitions to a linear three-story corridor. Building 2 would be a three-story building with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Building 3 consists of a series of nine single-story casitas along the northern property line. At present, the Project site is occupied by an irregular-shaped parcel with the southern portion of the site occupied by the St. Joseph's Episcopal Church and landscaping while the northern portion is a paved parking lot with a vacant field in the east.

As part of the cultural resources study for the project I am writing to request the Juaneño Band of Mission Indians Acjachemen Nations input on potential Native American resources in or near the Area of Potential effect (APE). In a letter dated November 26, 2019, the Native American Heritage Commission stated: "A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative [emphasis in the original]."

The Project is located in the city of Buena Park, and is specifically located at 8300 Valley View, on the *Los Alamitos, Calif.*, USGS topographical quadrangles, R 11W, T 04S, in an unsectioned area. This is located midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The Project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate North of the project area. This is shown on the enclosed map and the Project area is depicted with a half-mile buffer zone.

If you require additional information or have any questions, please contact me.

Thank you for your help.

Sincerely,

Stephen O'Neil, M.A., RPA
Cultural Resources Manager
soneil@ultrasystems.com

Corporate Office – Orange County
16431 Scientific Way
Irvine, CA 92618-7443
Telephone: 949.788.4900, ext. 276
Facsimile: 949.788.4901
Website: www.ultrasystems.com

UltraSystems
environmental • management • planning

December 18, 2019

Scott Cozart, Chairperson
Soboba Band of Luiseño Indians
P.O. Box 487
San Jacinto, CA, 92581

Subject: Cultural Resources Study, Affordable Housing Project, in the City of Buena Park, Orange County, California. UltraSystems Environmental Project No. 7037.

Dear Chairperson Cozart,

UltraSystems Environmental, Inc. (UEI) has been contracted by National Community Renaissance to conduct a cultural resources inventory in support of the Buena Park Affordable Housing Project (Project). The Project consists of the proposed development of three residential buildings, parking stalls, and a community center in the City of Buena Park, Orange County, California. UltraSystems is conducting a cultural resources study to evaluate the potential presence of prehistoric and historic resources within the project boundary.

The proposed Project would include the development of three residential buildings accommodating 66 units on 3.2 acres. Building 1 would be two stories that transitions to a linear three-story corridor. Building 2 would be a three-story building with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Building 3 consists of a series of nine single-story casitas along the northern property line. At present, the Project site is occupied by an irregular-shaped parcel with the southern portion of the site occupied by the St. Joseph's Episcopal Church and landscaping while the northern portion is a paved parking lot with a vacant field in the east.

As part of the cultural resources study for the project I am writing to request the Soboba Band of Luiseño Indians' input on potential Native American resources in or near the Area of Potential effect (APE). In a letter dated November 26, 2019, the Native American Heritage Commission stated: "A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative [emphasis in the original]."

The Project is located in the city of Buena Park, and is specifically located at 8300 Valley View, on the *Los Alamitos, Calif.,* USGS topographical quadrangles, R 11W, T 04S, in an unsectioned area. This is located midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The Project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project area. This is shown on the enclosed map and the Project area is depicted with a half-mile buffer zone.

If you require additional information or have any questions, please contact me.

Thank you for your help.

Sincerely,

Stephen O'Neil, M.A., RPA
Cultural Resources Manager
soneil@ultrasystems.com

Corporate Office – Orange County
16431 Scientific Way
Irvine, CA 92618-7443
Telephone: 949.788.4900, ext. 276
Facsimile: 949.788.4901
Website: www.ultrasystems.com

UltraSystems
environmental • management • planning

December 18, 2019

Robert Dorame, Chairperson
Gabrielino Tongva Indians of California Tribal Council
P.O. Box 490
Bellflower, CA, 90707

Subject: Cultural Resources Study, Affordable Housing Project, in the City of Buena Park, Orange County, California. UltraSystems Environmental Project No. 7037.

Dear Chairperson Dorame,

UltraSystems Environmental, Inc. (UEI) has been contracted by National Community Renaissance to conduct a cultural resources inventory in support of the Buena Park Affordable Housing Project (Project). The Project consists of the proposed development of three residential buildings, parking stalls, and a community center in the City of Buena Park, Orange County, California. UltraSystems is conducting a cultural resources study to evaluate the potential presence of prehistoric and historic resources within the project boundary.

The proposed Project would include the development of three residential buildings accommodating 66 units on 3.2 acres. Building 1 would be two stories that transitions to a linear three-story corridor. Building 2 would be a three-story building with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Building 3 consists of a series of nine single-story casitas along the northern property line. At present, the Project site is occupied by an irregular-shaped parcel with the southern portion of the site occupied by the St. Joseph's Episcopal Church and landscaping while the northern portion is a paved parking lot with a vacant field in the east.

As part of the cultural resources study for the project I am writing to request the Gabrielino Tongva Indians of California Tribal Councils input on potential Native American resources in or near the Area of Potential effect (APE). In a letter dated November 26, 2019, the Native American Heritage Commission stated: "A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative [emphasis in the original]."

The Project is located in the city of Buena Park, and is specifically located at 8300 Valley View, on the *Los Alamitos, Calif.*, USGS topographical quadrangles, R 11W, T 04S, in an unsectioned area. This is located midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The Project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project area. This is shown on the enclosed map and the Project area is depicted with a half-mile buffer zone.

If you require additional information or have any questions, please contact me.

Thank you for your help.

Sincerely,

Stephen O'Neil, M.A., RPA
Cultural Resources Manager
soneil@ultrasystems.com

Corporate Office – Orange County
16431 Scientific Way
Irvine, CA 92618-7443
Telephone: 949.788.4900, ext. 276
Facsimile: 949.788.4901
Website: www.ultrasystems.com

UltraSystems
environmental • management • planning

December 18, 2019

Shasta Gaughen, Tribal Historic Preservation Officer
Pala Band of Mission Indians
PMB 50, 35008 Pala Temecula Rd.
Pala, CA, 92059

Subject: Cultural Resources Study, Affordable Housing Project, in the City of Buena Park, Orange County, California. UltraSystems Environmental Project No. 7037.

Dear Ms. Gaughen,

UltraSystems Environmental, Inc. (UEI) has been contracted by National Community Renaissance to conduct a cultural resources inventory in support of the Buena Park Affordable Housing Project (Project). The Project consists of the proposed development of three residential buildings, parking stalls, and a community center in the City of Buena Park, Orange County, California. UltraSystems is conducting a cultural resources study to evaluate the potential presence of prehistoric and historic resources within the project boundary.

The proposed Project would include the development of three residential buildings accommodating 66 units on 3.2 acres. Building 1 would be two stories that transitions to a linear three-story corridor. Building 2 would be a three-story building with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Building 3 consists of a series of nine single-story casitas along the northern property line. At present, the Project site is occupied by an irregular-shaped parcel with the southern portion of the site occupied by the St. Joseph's Episcopal Church and landscaping while the northern portion is a paved parking lot with a vacant field in the east.

As part of the cultural resources study for the project I am writing to request the Pala Band of Mission Indians' input on potential Native American resources in or near the Area of Potential effect (APE). In a letter dated November 26, 2019, the Native American Heritage Commission stated: "A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative [emphasis in the original]."

The Project is located in the city of Buena Park, and is specifically located at 8300 Valley View, on the *Los Alamitos, Calif.,* USGS topographical quadrangles, R 11W, T 04S, in an unsectioned area. This is located midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The Project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project area. This is shown on the enclosed map and the Project area is depicted with a half-mile buffer zone.

If you require additional information or have any questions, please contact me.

Thank you for your help.

Sincerely,

Stephen O'Neil, M.A., RPA
Cultural Resources Manager
soneil@ultrasystems.com

Corporate Office – Orange County
16431 Scientific Way
Irvine, CA 92618-7443
Telephone: 949.788.4900, ext. 276
Facsimile: 949.788.4901
Website: www.ultrasystems.com

UltraSystems
environmental • management • planning

December 18, 2019

Sandonne Goad, Chairperson
Gabrielino /Tongva Nation
106 1/2 Judge John Aiso St., #231
Los Angeles, CA, 90012

Subject: Cultural Resources Study, Affordable Housing Project, in the City of Buena Park, Orange County, California. UltraSystems Environmental Project No. 7037.

Dear Chairperson Goad,

UltraSystems Environmental, Inc. (UEI) has been contracted by National Community Renaissance to conduct a cultural resources inventory in support of the Buena Park Affordable Housing Project (Project). The Project consists of the proposed development of three residential buildings, parking stalls, and a community center in the City of Buena Park, Orange County, California. UltraSystems is conducting a cultural resources study to evaluate the potential presence of prehistoric and historic resources within the project boundary.

The proposed Project would include the development of three residential buildings accommodating 66 units on 3.2 acres. Building 1 would be two stories that transitions to a linear three-story corridor. Building 2 would be a three-story building with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Building 3 consists of a series of nine single-story casitas along the northern property line. At present, the Project site is occupied by an irregular-shaped parcel with the southern portion of the site occupied by the St. Joseph's Episcopal Church and landscaping while the northern portion is a paved parking lot with a vacant field in the east.

As part of the cultural resources study for the project I am writing to request the Gabrielino /Tongva Nations input on potential Native American resources in or near the Area of Potential effect (APE). In a letter dated November 26, 2019, the Native American Heritage Commission stated: "A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative [emphasis in the original]."

The Project is located in the city of Buena Park, and is specifically located at 8300 Valley View, on the *Los Alamitos, Calif.,* USGS topographical quadrangles, R 11W, T 04S, in an unsectioned area. This is located midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The Project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project area. This is shown on the enclosed map and the Project area is depicted with a half-mile buffer zone.

If you require additional information or have any questions, please contact me.

Thank you for your help.

Sincerely,

Stephen O'Neil, M.A., RPA
Cultural Resources Manager
soneil@ultrasystems.com

Corporate Office – Orange County
16431 Scientific Way
Irvine, CA 92618-7443
Telephone: 949.788.4900, ext. 276
Facsimile: 949.788.4901
Website: www.ultrasystems.com

UltraSystems
environmental • management • planning

December 18, 2019

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

Subject: Cultural Resources Study, Affordable Housing Project, in the City of Buena Park, Orange County, California. UltraSystems Environmental Project No. 7037.

Dear Chairperson Grubbe,

UltraSystems Environmental, Inc. (UEI) has been contracted by National Community Renaissance to conduct a cultural resources inventory in support of the Buena Park Affordable Housing Project (Project). The Project consists of the proposed development of three residential buildings, parking stalls, and a community center in the City of Buena Park, Orange County, California. UltraSystems is conducting a cultural resources study to evaluate the potential presence of prehistoric and historic resources within the project boundary.

The proposed Project would include the development of three residential buildings accommodating 66 units on 3.2 acres. Building 1 would be two stories that transitions to a linear three-story corridor. Building 2 would be a three-story building with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Building 3 consists of a series of nine single-story casitas along the northern property line. At present, the Project site is occupied by an irregular-shaped parcel with the southern portion of the site occupied by the St. Joseph's Episcopal Church and landscaping while the northern portion is a paved parking lot with a vacant field in the east.

As part of the cultural resources study for the project I am writing to request the Agua Caliente Band of Cahuilla Indians' input on potential Native American resources in or near the Area of Potential effect (APE). In a letter dated November 26, 2019, the Native American Heritage Commission stated: "A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative [emphasis in the original]."

The Project is located in the city of Buena Park, and is specifically located at 8300 Valley View, on the *Los Alamitos, Calif.*, USGS topographical quadrangles, R 11W, T 04S, in an unsectioned area. This is located midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The Project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project area. This is shown on the enclosed map and the Project area is depicted with a half-mile buffer zone.

If you require additional information or have any questions, please contact me.

Thank you for your help.

Sincerely,

Stephen O'Neil, M.A., RPA
Cultural Resources Manager
soneil@ultrasystems.com

Corporate Office – Orange County
16431 Scientific Way
Irvine, CA 92618-7443
Telephone: 949.788.4900, ext. 276
Facsimile: 949.788.4901
Website: www.ultrasystems.com

UltraSystems
environmental • management • planning

December 18, 2019

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

Subject: Cultural Resources Study, Affordable Housing Project, in the City of Buena Park, Orange County, California. UltraSystems Environmental Project No. 7037.

Dear Chairperson Johnston,

UltraSystems Environmental, Inc. (UEI) has been contracted by National Community Renaissance to conduct a cultural resources inventory in support of the Buena Park Affordable Housing Project (Project). The Project consists of the proposed development of three residential buildings, parking stalls, and a community center in the City of Buena Park, Orange County, California. UltraSystems is conducting a cultural resources study to evaluate the potential presence of prehistoric and historic resources within the project boundary.

The proposed Project would include the development of three residential buildings accommodating 66 units on 3.2 acres. Building 1 would be two stories that transitions to a linear three-story corridor. Building 2 would be a three-story building with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Building 3 consists of a series of nine single-story casitas along the northern property line. At present, the Project site is occupied by an irregular-shaped parcel with the southern portion of the site occupied by the St. Joseph's Episcopal Church and landscaping while the northern portion is a paved parking lot with a vacant field in the east.

As part of the cultural resources study for the project I am writing to request the Juaneno Band of Mission Indians' input on potential Native American resources in or near the Area of Potential effect (APE). In a letter dated November 26, 2019, the Native American Heritage Commission stated: "A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative [emphasis in the original]."

The Project is located in the city of Buena Park, and is specifically located at 8300 Valley View, on the *Los Alamitos, Calif.*, USGS topographical quadrangles, R 11W, T 04S, in an unsectioned area. This is located midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The Project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project area. This is shown on the enclosed map and the Project area is depicted with a half-mile buffer zone.

If you require additional information or have any questions, please contact me.

Thank you for your help.

Sincerely,

Stephen O'Neil, M.A., RPA
Cultural Resources Manager
soneil@ultrasystems.com

Corporate Office – Orange County
16431 Scientific Way
Irvine, CA 92618-7443
Telephone: 949.788.4900, ext. 276
Facsimile: 949.788.4901
Website: www.ultrasystems.com

UltraSystems
environmental • management • planning

December 18, 2019

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

Subject: Cultural Resources Study, Affordable Housing Project, in the City of Buena Park, Orange County, California. UltraSystems Environmental Project No. 7037.

Dear Chairperson Macarro,

UltraSystems Environmental, Inc. (UEI) has been contracted by National Community Renaissance to conduct a cultural resources inventory in support of the Buena Park Affordable Housing Project (Project). The Project consists of the proposed development of three residential buildings, parking stalls, and a community center in the City of Buena Park, Orange County, California. UltraSystems is conducting a cultural resources study to evaluate the potential presence of prehistoric and historic resources within the project boundary.

The proposed Project would include the development of three residential buildings accommodating 66 units on 3.2 acres. Building 1 would be two stories that transitions to a linear three-story corridor. Building 2 would be a three-story building with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Building 3 consists of a series of nine single-story casitas along the northern property line. At present, the Project site is occupied by an irregular-shaped parcel with the southern portion of the site occupied by the St. Joseph's Episcopal Church and landscaping while the northern portion is a paved parking lot with a vacant field in the east.

As part of the cultural resources study for the project I am writing to request the Pechanga Band of Luiseño Indians' input on potential Native American resources in or near the Area of Potential effect (APE). In a letter dated November 26, 2019, the Native American Heritage Commission stated: "A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative [emphasis in the original]."

The Project is located in the city of Buena Park, and is specifically located at 8300 Valley View, on the *Los Alamitos, Calif.*, USGS topographical quadrangles, R 11W, T 04S, in an unsectioned area. This is located midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The Project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project area. This is shown on the enclosed map and the Project area is depicted with a half-mile buffer zone.

If you require additional information or have any questions, please contact me.

Thank you for your help.

Sincerely,

Stephen O'Neil, M.A., RPA
Cultural Resources Manager
soneil@ultrasystems.com

Corporate Office – Orange County
16431 Scientific Way
Irvine, CA 92618-7443
Telephone: 949.788.4900, ext. 276
Facsimile: 949.788.4901
Website: www.ultrasystems.com

UltraSystems
environmental • management • planning

December 18, 2019

Paul Macarro, Cultural Resources Coordinator
Pechanga Band of Luiseño Indians
P.O. Box 1477
Temecula, CA, 92593

Subject: Cultural Resources Study, Affordable Housing Project, in the City of Buena Park, Orange County, California. UltraSystems Environmental Project No. 7037.

Dear Mr. Macarro,

UltraSystems Environmental, Inc. (UEI) has been contracted by National Community Renaissance to conduct a cultural resources inventory in support of the Buena Park Affordable Housing Project (Project). The Project consists of the proposed development of three residential buildings, parking stalls, and a community center in the City of Buena Park, Orange County, California. UltraSystems is conducting a cultural resources study to evaluate the potential presence of prehistoric and historic resources within the project boundary.

The proposed Project would include the development of three residential buildings accommodating 66 units on 3.2 acres. Building 1 would be two stories that transitions to a linear three-story corridor. Building 2 would be a three-story building with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Building 3 consists of a series of nine single-story casitas along the northern property line. At present, the Project site is occupied by an irregular-shaped parcel with the southern portion of the site occupied by the St. Joseph's Episcopal Church and landscaping while the northern portion is a paved parking lot with a vacant field in the east.

As part of the cultural resources study for the project I am writing to request the Pechanga Band of Luiseño Indians' input on potential Native American resources in or near the Area of Potential effect (APE). In a letter dated November 26, 2019, the Native American Heritage Commission stated: "A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative [emphasis in the original]."

The Project is located in the city of Buena Park, and is specifically located at 8300 Valley View, on the *Los Alamitos, Calif.*, USGS topographical quadrangles, R 11W, T 04S, in an unsectioned area. This is located midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The Project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project area. This is shown on the enclosed map and the Project area is depicted with a half-mile buffer zone.

If you require additional information or have any questions, please contact me.

Thank you for your help.

Sincerely,

Stephen O'Neil, M.A., RPA
Cultural Resources Manager
soneil@ultrasystems.com

Corporate Office – Orange County
16431 Scientific Way
Irvine, CA 92618-7443
Telephone: 949.788.4900, ext. 276
Facsimile: 949.788.4901
Website: www.ultrasystems.com

UltraSystems
environmental • management • planning

December 18, 2019

Cheryl Madrigal, Tribal Historic Preservation Officer
Rincon Band of Luiseño Indians
One Government Center Lane
Valley Center, CA, 92082

Subject: Cultural Resources Study, Affordable Housing Project, in the City of Buena Park, Orange County, California. UltraSystems Environmental Project No. 7037.

Dear Ms. Madrigal,

UltraSystems Environmental, Inc. (UEI) has been contracted by National Community Renaissance to conduct a cultural resources inventory in support of the Buena Park Affordable Housing Project (Project). The Project consists of the proposed development of three residential buildings, parking stalls, and a community center in the City of Buena Park, Orange County, California. UltraSystems is conducting a cultural resources study to evaluate the potential presence of prehistoric and historic resources within the project boundary.

The proposed Project would include the development of three residential buildings accommodating 66 units on 3.2 acres. Building 1 would be two stories that transitions to a linear three-story corridor. Building 2 would be a three-story building with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Building 3 consists of a series of nine single-story casitas along the northern property line. At present, the Project site is occupied by an irregular-shaped parcel with the southern portion of the site occupied by the St. Joseph's Episcopal Church and landscaping while the northern portion is a paved parking lot with a vacant field in the east.

As part of the cultural resources study for the project I am writing to request the Rincon Band of Luiseño Indians' input on potential Native American resources in or near the Area of Potential effect (APE). In a letter dated November 26, 2019, the Native American Heritage Commission stated: "A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative [emphasis in the original]."

The Project is located in the city of Buena Park, and is specifically located at 8300 Valley View, on the *Los Alamitos, Calif.*, USGS topographical quadrangles, R 11W, T 04S, in an unsectioned area. This is located midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The Project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project area. This is shown on the enclosed map and the Project area is depicted with a half-mile buffer zone.

If you require additional information or have any questions, please contact me.

Thank you for your help.

Sincerely,

Stephen O'Neil, M.A., RPA
Cultural Resources Manager
soneil@ultrasystems.com

Corporate Office – Orange County
16431 Scientific Way
Irvine, CA 92618-7443
Telephone: 949.788.4900, ext. 276
Facsimile: 949.788.4901
Website: www.ultrasystems.com

UltraSystems
environmental • management • planning

December 18, 2019

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

Subject: Cultural Resources Study, Affordable Housing Project, in the City of Buena Park, Orange County, California. UltraSystems Environmental Project No. 7037.

Dear Chairperson Mazzetti,

UltraSystems Environmental, Inc. (UEI) has been contracted by National Community Renaissance to conduct a cultural resources inventory in support of the Buena Park Affordable Housing Project (Project). The Project consists of the proposed development of three residential buildings, parking stalls, and a community center in the City of Buena Park, Orange County, California. UltraSystems is conducting a cultural resources study to evaluate the potential presence of prehistoric and historic resources within the project boundary.

The proposed Project would include the development of three residential buildings accommodating 66 units on 3.2 acres. Building 1 would be two stories that transitions to a linear three-story corridor. Building 2 would be a three-story building with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Building 3 consists of a series of nine single-story casitas along the northern property line. At present, the Project site is occupied by an irregular-shaped parcel with the southern portion of the site occupied by the St. Joseph's Episcopal Church and landscaping while the northern portion is a paved parking lot with a vacant field in the east.

As part of the cultural resources study for the project I am writing to request the Rincon Band of Luiseño Indians' input on potential Native American resources in or near the Area of Potential effect (APE). In a letter dated November 26, 2019, the Native American Heritage Commission stated: "A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative [emphasis in the original]."

The Project is located in the city of Buena Park, and is specifically located at 8300 Valley View, on the *Los Alamitos, Calif.*, USGS topographical quadrangles, R 11W, T 04S, in an unsectioned area. This is located midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The Project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project area. This is shown on the enclosed map and the Project area is depicted with a half-mile buffer zone.

If you require additional information or have any questions, please contact me.

Thank you for your help.

Sincerely,

Stephen O'Neil, M.A., RPA
Cultural Resources Manager
soneil@ultrasystems.com

Corporate Office – Orange County
16431 Scientific Way
Irvine, CA 92618-7443
Telephone: 949.788.4900, ext. 276
Facsimile: 949.788.4901
Website: www.ultrasystems.com

UltraSystems
environmental • management • planning

December 18, 2019

Anthony Morales, Chairperson
Gabrieleno/Tongva San Gabriel Band of Mission Indians
P.O. Box 693
San Gabriel, CA, 91778

Subject: Cultural Resources Study, Affordable Housing Project, in the City of Buena Park, Orange County, California. UltraSystems Environmental Project No. 7037.

Dear Chairperson Morales,

UltraSystems Environmental, Inc. (UEI) has been contracted by National Community Renaissance to conduct a cultural resources inventory in support of the Buena Park Affordable Housing Project (Project). The Project consists of the proposed development of three residential buildings, parking stalls, and a community center in the City of Buena Park, Orange County, California. UltraSystems is conducting a cultural resources study to evaluate the potential presence of prehistoric and historic resources within the project boundary.

The proposed Project would include the development of three residential buildings accommodating 66 units on 3.2 acres. Building 1 would be two stories that transitions to a linear three-story corridor. Building 2 would be a three-story building with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Building 3 consists of a series of nine single-story casitas along the northern property line. At present, the Project site is occupied by an irregular-shaped parcel with the southern portion of the site occupied by the St. Joseph's Episcopal Church and landscaping while the northern portion is a paved parking lot with a vacant field in the east.

As part of the cultural resources study for the project I am writing to request the Gabrieleno/Tongva San Gabriel Band of Mission Indians' input on potential Native American resources in or near the Area of Potential effect (APE). In a letter dated November 26, 2019, the Native American Heritage Commission stated: "A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative [emphasis in the original]."

The Project is located in the city of Buena Park, and is specifically located at 8300 Valley View, on the *Los Alamitos, Calif.*, USGS topographical quadrangles, R 11W, T 04S, in an unsectioned area. This is located midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The Project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project area. This is shown on the enclosed map and the Project area is depicted with a half-mile buffer zone.

If you require additional information or have any questions, please contact me.

Thank you for your help.

Sincerely,

Stephen O'Neil, M.A., RPA
Cultural Resources Manager
soneil@ultrasystems.com

Corporate Office – Orange County
16431 Scientific Way
Irvine, CA 92618-7443
Telephone: 949.788.4900, ext. 276
Facsimile: 949.788.4901
Website: www.ultrasystems.com

UltraSystems
environmental • management • planning

December 18, 2019

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

Subject: Cultural Resources Study, Affordable Housing Project, in the City of Buena Park, Orange County, California. UltraSystems Environmental Project No. 7037.

Dear Chairperson Nelson,

UltraSystems Environmental, Inc. (UEI) has been contracted by National Community Renaissance to conduct a cultural resources inventory in support of the Buena Park Affordable Housing Project (Project). The Project consists of the proposed development of three residential buildings, parking stalls, and a community center in the City of Buena Park, Orange County, California. UltraSystems is conducting a cultural resources study to evaluate the potential presence of prehistoric and historic resources within the project boundary.

The proposed Project would include the development of three residential buildings accommodating 66 units on 3.2 acres. Building 1 would be two stories that transitions to a linear three-story corridor. Building 2 would be a three-story building with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Building 3 consists of a series of nine single-story casitas along the northern property line. At present, the Project site is occupied by an irregular-shaped parcel with the southern portion of the site occupied by the St. Joseph's Episcopal Church and landscaping while the northern portion is a paved parking lot with a vacant field in the east.

As part of the cultural resources study for the project I am writing to request the La Jolla Band of Luiseño Indians' input on potential Native American resources in or near the Area of Potential effect (APE). In a letter dated November 26, 2019, the Native American Heritage Commission stated: "A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative [emphasis in the original]."

The Project is located in the city of Buena Park, and is specifically located at 8300 Valley View, on the *Los Alamitos, Calif.*, USGS topographical quadrangles, R 11W, T 04S, in an unsectioned area. This is located midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The Project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project area. This is shown on the enclosed map and the Project area is depicted with a half-mile buffer zone.

If you require additional information or have any questions, please contact me.

Thank you for your help.

Sincerely,

Stephen O'Neil, M.A., RPA
Cultural Resources Manager
soneil@ultrasystems.com

Corporate Office – Orange County
16431 Scientific Way
Irvine, CA 92618-7443
Telephone: 949.788.4900, ext. 276
Facsimile: 949.788.4901
Website: www.ultrasystems.com

UltraSystems
environmental • management • planning

December 18, 2019

Joseph Ontiveros, Cultural Resource Department
Soboba Band of Luiseño Indians
P.O. Box 487
San Jacinto, CA, 92581

Subject: Cultural Resources Study, Affordable Housing Project, in the City of Buena Park, Orange County, California. UltraSystems Environmental Project No. 7037.

Dear Mr. Ontiveros,

UltraSystems Environmental, Inc. (UEI) has been contracted by National Community Renaissance to conduct a cultural resources inventory in support of the Buena Park Affordable Housing Project (Project). The Project consists of the proposed development of three residential buildings, parking stalls, and a community center in the City of Buena Park, Orange County, California. UltraSystems is conducting a cultural resources study to evaluate the potential presence of prehistoric and historic resources within the project boundary.

The proposed Project would include the development of three residential buildings accommodating 66 units on 3.2 acres. Building 1 would be two stories that transitions to a linear three-story corridor. Building 2 would be a three-story building with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Building 3 consists of a series of nine single-story casitas along the northern property line. At present, the Project site is occupied by an irregular-shaped parcel with the southern portion of the site occupied by the St. Joseph's Episcopal Church and landscaping while the northern portion is a paved parking lot with a vacant field in the east.

As part of the cultural resources study for the project I am writing to request the Soboba Band of Luiseño Indians' input on potential Native American resources in or near the Area of Potential effect (APE). In a letter dated November 26, 2019, the Native American Heritage Commission stated: "A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative [emphasis in the original]."

The Project is located in the city of Buena Park, and is specifically located at 8300 Valley View, on the *Los Alamitos, Calif.*, USGS topographical quadrangles, R 11W, T 04S, in an unsectioned area. This is located midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The Project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project area. This is shown on the enclosed map and the Project area is depicted with a half-mile buffer zone.

If you require additional information or have any questions, please contact me.

Thank you for your help.

Sincerely,

Stephen O'Neil, M.A., RPA
Cultural Resources Manager
soneil@ultrasystems.com

Corporate Office – Orange County
16431 Scientific Way
Irvine, CA 92618-7443
Telephone: 949.788.4900, ext. 276
Facsimile: 949.788.4901
Website: www.ultrasystems.com

UltraSystems
environmental • management • planning

December 18, 2019

Joyce Perry, Tribal Manager
Juaneno Band of Mission Indians Acjachemen Nation
4955 Paseo Segovia
Irvine, CA, 92603

Subject: Cultural Resources Study, Affordable Housing Project, in the City of Buena Park, Orange County, California. UltraSystems Environmental Project No. 7037.

Dear Ms. Perry,

UltraSystems Environmental, Inc. (UEI) has been contracted by National Community Renaissance to conduct a cultural resources inventory in support of the Buena Park Affordable Housing Project (Project). The Project consists of the proposed development of three residential buildings, parking stalls, and a community center in the City of Buena Park, Orange County, California. UltraSystems is conducting a cultural resources study to evaluate the potential presence of prehistoric and historic resources within the project boundary.

The proposed Project would include the development of three residential buildings accommodating 66 units on 3.2 acres. Building 1 would be two stories that transitions to a linear three-story corridor. Building 2 would be a three-story building with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Building 3 consists of a series of nine single-story casitas along the northern property line. At present, the Project site is occupied by an irregular-shaped parcel with the southern portion of the site occupied by the St. Joseph's Episcopal Church and landscaping while the northern portion is a paved parking lot with a vacant field in the east.

As part of the cultural resources study for the project I am writing to request the Juaneno Band of Mission Indians Acjachemen Nations input on potential Native American resources in or near the Area of Potential effect (APE). In a letter dated November 26, 2019, the Native American Heritage Commission stated: "A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative [emphasis in the original]."

The Project is located in the city of Buena Park, and is specifically located at 8300 Valley View, on the *Los Alamitos, Calif.*, USGS topographical quadrangles, R 11W, T 04S, in an unsectioned area. This is located midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The Project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project area. This is shown on the enclosed map and the Project area is depicted with a half-mile buffer zone.

If you require additional information or have any questions, please contact me.

Thank you for your help.

Sincerely,

Stephen O'Neil, M.A., RPA
Cultural Resources Manager
soneil@ultrasystems.com

Corporate Office – Orange County
16431 Scientific Way
Irvine, CA 92618-7443
Telephone: 949.788.4900, ext. 276
Facsimile: 949.788.4901
Website: www.ultrasystems.com

UltraSystems
environmental • management • planning

December 18, 2019

Patricia Garcia-Plotkin, Director
Agua Caliente Band of Cahuilla Indians
5401 Dinah Shore Drive
Palm Springs, CA, 92264

Subject: Cultural Resources Study, Affordable Housing Project, in the City of Buena Park, Orange County, California. UltraSystems Environmental Project No. 7037.

Dear Director Garcia-Plotkin,

UltraSystems Environmental, Inc. (UEI) has been contracted by National Community Renaissance to conduct a cultural resources inventory in support of the Buena Park Affordable Housing Project (Project). The Project consists of the proposed development of three residential buildings, parking stalls, and a community center in the City of Buena Park, Orange County, California. UltraSystems is conducting a cultural resources study to evaluate the potential presence of prehistoric and historic resources within the project boundary.

The proposed Project would include the development of three residential buildings accommodating 66 units on 3.2 acres. Building 1 would be two stories that transitions to a linear three-story corridor. Building 2 would be a three-story building with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Building 3 consists of a series of nine single-story casitas along the northern property line. At present, the Project site is occupied by an irregular-shaped parcel with the southern portion of the site occupied by the St. Joseph's Episcopal Church and landscaping while the northern portion is a paved parking lot with a vacant field in the east.

As part of the cultural resources study for the project I am writing to request the Agua Caliente Band of Cahuilla Indians' input on potential Native American resources in or near the Area of Potential effect (APE). In a letter dated November 26, 2019, the Native American Heritage Commission stated: "A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative [emphasis in the original]."

The Project is located in the city of Buena Park, and is specifically located at 8300 Valley View, on the *Los Alamitos, Calif.*, USGS topographical quadrangles, R 11W, T 04S, in an unsectioned area. This is located midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The Project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project area. This is shown on the enclosed map and the Project area is depicted with a half-mile buffer zone.

If you require additional information or have any questions, please contact me.

Thank you for your help.

Sincerely,

Stephen O'Neil, M.A., RPA
Cultural Resources Manager
soneil@ultrasystems.com

Corporate Office – Orange County
16431 Scientific Way
Irvine, CA 92618-7443
Telephone: 949.788.4900, ext. 276
Facsimile: 949.788.4901
Website: www.ultrasystems.com

UltraSystems
environmental • management • planning

December 18, 2019

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

Subject: Cultural Resources Study, Affordable Housing Project, in the City of Buena Park, Orange County, California. UltraSystems Environmental Project No. 7037.

Dear Chairperson Romero,

UltraSystems Environmental, Inc. (UEI) has been contracted by National Community Renaissance to conduct a cultural resources inventory in support of the Buena Park Affordable Housing Project (Project). The Project consists of the proposed development of three residential buildings, parking stalls, and a community center in the City of Buena Park, Orange County, California. UltraSystems is conducting a cultural resources study to evaluate the potential presence of prehistoric and historic resources within the project boundary.

The proposed Project would include the development of three residential buildings accommodating 66 units on 3.2 acres. Building 1 would be two stories that transitions to a linear three-story corridor. Building 2 would be a three-story building with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Building 3 consists of a series of nine single-story casitas along the northern property line. At present, the Project site is occupied by an irregular-shaped parcel with the southern portion of the site occupied by the St. Joseph's Episcopal Church and landscaping while the northern portion is a paved parking lot with a vacant field in the east.

As part of the cultural resources study for the project I am writing to request the Juaneno Band of Mission Indians Acjachemen Nations input on potential Native American resources in or near the Area of Potential effect (APE). In a letter dated November 26, 2019, the Native American Heritage Commission stated: "A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative [emphasis in the original]."

The Project is located in the city of Buena Park, and is specifically located at 8300 Valley View, on the *Los Alamitos, Calif.*, USGS topographical quadrangles, R 11W, T 04S, in an unsectioned area. This is located midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The Project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project area. This is shown on the enclosed map and the Project area is depicted with a half-mile buffer zone.

If you require additional information or have any questions, please contact me.

Thank you for your help.

Sincerely,

Stephen O'Neil, M.A., RPA
Cultural Resources Manager
soneil@ultrasystems.com

Corporate Office – Orange County
16431 Scientific Way
Irvine, CA 92618-7443
Telephone: 949.788.4900, ext. 276
Facsimile: 949.788.4901
Website: www.ultrasystems.com

UltraSystems
environmental • management • planning

December 18, 2019

Andrew Salas, Chairperson
Gabrieleno Band of Mission Indians - Kizh Nation
P.O. Box 393
Covina, CA, 91723

Subject: Cultural Resources Study, Affordable Housing Project, in the City of Buena Park, Orange County, California. UltraSystems Environmental Project No. 7037.

Dear Chairperson Salas,

UltraSystems Environmental, Inc. (UEI) has been contracted by National Community Renaissance to conduct a cultural resources inventory in support of the Buena Park Affordable Housing Project (Project). The Project consists of the proposed development of three residential buildings, parking stalls, and a community center in the City of Buena Park, Orange County, California. UltraSystems is conducting a cultural resources study to evaluate the potential presence of prehistoric and historic resources within the project boundary.

The proposed Project would include the development of three residential buildings accommodating 66 units on 3.2 acres. Building 1 would be two stories that transitions to a linear three-story corridor. Building 2 would be a three-story building with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Building 3 consists of a series of nine single-story casitas along the northern property line. At present, the Project site is occupied by an irregular-shaped parcel with the southern portion of the site occupied by the St. Joseph's Episcopal Church and landscaping while the northern portion is a paved parking lot with a vacant field in the east.

As part of the cultural resources study for the project I am writing to request the Gabrieleno Band of Mission Indians - Kizh Nations input on potential Native American resources in or near the Area of Potential effect (APE). In a letter dated November 26, 2019, the Native American Heritage Commission stated: "A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative [emphasis in the original]."

The Project is located in the city of Buena Park, and is specifically located at 8300 Valley View, on the *Los Alamitos, Calif.*, USGS topographical quadrangles, R 11W, T 04S, in an unsectioned area. This is located midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The Project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project area. This is shown on the enclosed map and the Project area is depicted with a half-mile buffer zone.

If you require additional information or have any questions, please contact me.

Thank you for your help.

Sincerely,

Stephen O'Neil, M.A., RPA
Cultural Resources Manager
soneil@ultrasystems.com

Corporate Office – Orange County
16431 Scientific Way
Irvine, CA 92618-7443
Telephone: 949.788.4900, ext. 276
Facsimile: 949.788.4901
Website: www.ultrasystems.com

UltraSystems
environmental • management • planning

December 18, 2019

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

Subject: Cultural Resources Study, Affordable Housing Project, in the City of Buena Park, Orange County, California. UltraSystems Environmental Project No. 7037.

Dear Tribal Council,

UltraSystems Environmental, Inc. (UEI) has been contracted by National Community Renaissance to conduct a cultural resources inventory in support of the Buena Park Affordable Housing Project (Project). The Project consists of the proposed development of three residential buildings, parking stalls, and a community center in the City of Buena Park, Orange County, California. UltraSystems is conducting a cultural resources study to evaluate the potential presence of prehistoric and historic resources within the project boundary.

The proposed Project would include the development of three residential buildings accommodating 66 units on 3.2 acres. Building 1 would be two stories that transitions to a linear three-story corridor. Building 2 would be a three-story building with a two-story element at the northern end of the building transitioning toward the single-family neighborhood along the northern property line. Building 3 consists of a series of nine single-story casitas along the northern property line. At present, the Project site is occupied by an irregular-shaped parcel with the southern portion of the site occupied by the St. Joseph's Episcopal Church and landscaping while the northern portion is a paved parking lot with a vacant field in the east.

As part of the cultural resources study for the project I am writing to request the San Luis Rey Band of Mission Indians' input on potential Native American resources in or near the Area of Potential effect (APE). In a letter dated November 26, 2019, the Native American Heritage Commission stated: "A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative [emphasis in the original]."

The Project is located in the city of Buena Park, and is specifically located at 8300 Valley View, on the *Los Alamitos, Calif.*, USGS topographical quadrangles, R 11W, T 04S, in an unsectioned area. This is located midblock along Valley View Street between La Palma Avenue and Crescent Avenue, in the City of Buena Park, Orange County. The Project site is located in an urban area with single family residences in all directions, along with a Methodist Church to the immediate north of the project area. This is shown on the enclosed map and the Project area is depicted with a half-mile buffer zone.

If you require additional information or have any questions, please contact me.

Thank you for your help.

Sincerely,

Stephen O'Neil, M.A., RPA
Cultural Resources Manager
soneil@ultrasystems.com

Corporate Office – Orange County
16431 Scientific Way
Irvine, CA 92618-7443
Telephone: 949.788.4900, ext. 276
Facsimile: 949.788.4901
Website: www.ultrasystems.com

Orchard View Gardens Senior Apartment Homes, Orange County, California. [UEI #7037]
Native American Contact Log

Name	Tribe/Affiliation	Letter and Fax Contacts	E-mail Contacts	Telephone Contact	Comments
Steven Quinn, Associate Governmental Program Analyst	Native American Heritage Commission	November 8, 2019 (Fax)	November 8, 2019; November 26, 2019	N/A	Request for Sacred Lands File search and local Native American representatives contact information. There was a response from Mr. Quinn on November 26, 2019 stating negative findings in the Sacred Lands File and providing a list of 22 local tribal contacts.
Jeff Grubbe, Chairperson	Agua Caliente Band of Cahuilla Indians	December 18, 2019 (letter & fax)	No email available.	N/A	Letter and fax describing project and requesting input on concerns was sent December 18, 2019. An email response was received on December 18th and 30th of 2019 from Ms. Romero, Historic Preservation Technician representing the Agua Caliente Band of Cahuilla Indians that the project area is not within the Tribes Traditional Use Area and that they defer to other tribes in the area.
Patricia Garcia-Plotkin, Director	Agua Caliente Band of Cahuilla Indians	December 18, 2019 (letter& fax)	December 18, 2019; December 30, 2019 (email)	N/A	Letter, fax, and email describing project and requesting input on concerns was sent December 18, 2019. An email response was received on December 18th and 30th of 2019 from Ms. Romero, Historic Preservation Technician representing the Agua Caliente Band of Cahuilla Indians that the project area is not within the Tribes Traditional Use Area and that they defer to other tribes in the area.
Andrew Salas, Chairperson	Gabrieleno Band of Mission Indians - Kizh Nation	December 18, 2019 (letter)	December 18, 2019 (email)	N/A	Letter and email describing project and requesting input on concerns was sent December 18, 2019. An email response was received on December 19, 2019 from the Kizh Nation Admin Specialist stating that they would like to conduct consultation regarding the project. Doukakis replied the same date explaining that AB 52

Name	Tribe/Affiliation	Letter and Fax Contacts	E-mail Contacts	Telephone Contact	Comments
					consultation is conducted between the tribe and the project Lead agency, which in this case would be the City of Buena Park Planning Department.
Anthony Morales, Chairperson	Gabrieleno/ Tongva San Gabriel Band of Mission Indians	December 18, 2019 (letter& fax)	December 18, 2019 (email)	Telephone call made January 21, 2020	Letter and fax describing project and requesting input on concerns was sent December 18, 2019. Phone call was made January 21, 2020, Chairperson Morales requested for cultural and tribal monitors to be called if any cultural material is found and requested that his tribe included in the monitoring. He would also like to be notified if any cultural material is found.
Sandonne Goad, Chairperson	Gabrielino /Tongva Nation	December 18, 2019 (letter)	December 18, 2019 (email)	Telephone call made January 21, 2020	Letter and email describing project and requesting input on concerns was sent December 18, 2019. A phone call was made January 21, 2020. There was no answer; a message was left. There has been no response to date.
Robert Dorame, Chairman	Gabrielino - Tongva Indians of California Tribal Council	December 18, 2019 (letter& fax)	December 18, 2019 (email)	Telephone call made January 21, 2020	Letter, email and fax describing project and requesting input on concerns was sent December 18, 2019. A phone call was made January 21, 2020. There was no answer; a message was left. The Chairman called back and indicated that human remains were found to the north of the site at the 91 Freeway. He requested that we contact the City about this and then get back to him with the information that we learn.
Charles Alvarez, Councilmember	Gabrielino - Tongva Tribe	December 18, 2019 (letter)	December 18, 2019 (email)	Telephone call made January 21, 2020	Letter and email describing project and requesting input on concerns was sent December 18, 2019. A phone call was made January 21, 2020. There was no answer; a message was left. There has been no response to date.

Name	Tribe/Affiliation	Letter and Fax Contacts	E-mail Contacts	Telephone Contact	Comments
Sonia Johnston, Chairperson	Juaneño Band of Mission Indians	December 18, 2019 (letter)	December 18, 2019 (email)	No telephone number provided.	Letter and email describing project and requesting input on concerns was sent December 18, 2019. No telephone call was made as no number was provided. There has been no response to date.
Matias Belardes, Chairperson	Juaneño Band of Mission Indians Acjachemen Nation	December 18, 2019 (letter)	December 18, 2019 (email)	N/A	Letter and email describing project and requesting input on concerns was sent December 18, 2019. An email was received from Joyce Perry representing the Juaneño Band of Mission Indians (Belardes) on January 14, 2020, asking about fieldwork that we will be conducting, if any buildings will be demolished and if monitoring had occurred on the site. UEI responded on the same day that that we would not be conducting testing, that none of the buildings will be demolished, and we don't believe that any monitoring has been conducted on the site. Ms. Perry wrote back again asking about past monitoring and how deep excavations are expected to go. UEI responded on the same day that due to the buildings ages we don't believe that monitoring took place and that we do not have current plans to say how deep excavations will go.
Joyce Perry, Tribal Manager	Juaneño Band of Mission Indians Acjachemen Nation	December 18, 2019 (letter)	December 18, 2019 (email)	N/A	Letter and email describing project and requesting input on concerns was sent December 18, 2019. An email was received from Joyce Perry representing the Juaneño Band of Mission Indians (Belardes) on January 14, 2020, asking about fieldwork that we will be conducting, if any buildings will be demolished and if monitoring had occurred on the site. UEI responded on the same day that that we would not be conducting testing, that none of the

Name	Tribe/Affiliation	Letter and Fax Contacts	E-mail Contacts	Telephone Contact	Comments
					buildings will be demolished, and we don't believe that any monitoring has been conducted on the site. Ms. Perry wrote back again asking about past monitoring and how deep excavations are expected to go. UEI responded on the same day that due to the buildings ages we don't believe that monitoring took place and that we do not have current plans to indicate how deep excavations may go.
Teresa Romero, Chairperson	Juaneño Band of Mission Indians Acjachemen Nation	December 18, 2019 (letter& fax)	December 18, 2019 (email)	Telephone call made January 21, 2020	Letter, email and fax describing project and requesting input on concerns was sent December 18, 2019. A phone call was made January 21, 2020. There was no answer; a message was left. There has been no response to date.
Fred Nelson, Chairperson	La Jolla Band of Luiseño Indians	December 18, 2019 (letter)	No email available.	Telephone call made January 21, 2020	Letter describing project and requesting input on concerns was sent December 18, 2019. Phone call was made January 21, 2020. The receptionist requested that we call back in the afternoon. A phone call was made in the afternoon and there was no answer, a message was left. There has been no response to date.
Shasta Gaughen, Tribal Historic Preservation Officer	Pala Band of Mission Indians	December 18, 2019 (letter& fax)	December 18, 2019 (email)	Telephone call made January 21, 2020	Letter, email and fax describing project and requesting input on concerns was sent December 18, 2019. A phone call was made January 21, 2020. There was no answer; a message was left. There has been no response to date.
Temet Aguilar, Chairperson	Pauma Band of Luiseño Indians	December 18, 2019 (letter& fax)	December 18, 2019 (email)	Telephone call made January 21, 2020	Letter, email and fax describing project and requesting input on concerns was sent December 18, 2019. A phone call was made January 21, 2020. There was no answer; a message was left. There has been no response to date.

Name	Tribe/Affiliation	Letter and Fax Contacts	E-mail Contacts	Telephone Contact	Comments
Paul Macarro, Cultural Resources Coordinator	Pechanga Band of Luiseño Indians	December 18, 2019 (letter& fax)	December 18, 2019 (email)	Telephone call made January 21, 2020	Letter, email and fax describing project and requesting input on concerns was sent December 18, 2019. Phone call was made January 21, 2020. There was no answer; a message was left. Mr. Macarro called back and indicated that the site is outside of their Tribes Traditional Use Area and that they defer to other tribes in the area.
Mark Macarro, Chairperson	Pechanga Band of Luiseño Indians	December 18, 2019 (letter& fax)	December 18, 2019 (email)	Telephone call made January 21, 2020	Letter, email and fax describing project and requesting input on concerns was sent December 18, 2019. Phone call was made January 21, 2020. There was no answer; a message was left. Mr. Macarro called back and indicated that the site is outside of their Tribes Traditional Use Area and that they defer to other tribes in the area.
Cheryl Madrigal, Tribal Historic Preservation Officer	Rincon Band of Luiseño Indians	December 18, 2019 (letter)	December 18, 2019, (email)	N/A	Letter and fax describing project and requesting input on concerns was sent December 18, 2019. An email response was received on January 9, 2020 from, Deneen Pelton, Administrative Assistant representing the Rincon Band of Luiseno Indians that the project area is not within the Tribes Traditional Use Area and that they defer to other tribes in the area.
Bo Mazzetti, Chairperson	Rincon Band of Luiseño Indians	December 18, 2019 (letter& fax)	December 18, 2019 (email)	N/A	Letter and fax describing project and requesting input on concerns was sent December 18, 2019. An email response was received on January 9, 2020 from, Deneen Pelton, Administrative Assistant representing the Rincon Band of Luiseno Indians that the project area is not within the Tribes Traditional Use Area and that they defer to other tribes in the area.
Tribal Council	San Luis Rey Band of Mission Indians	December 18, 2019 (letter& fax)	December 18, 2019 (email)	Telephone call made January 21, 2020	Letter, email and fax describing project and requesting input on concerns was sent December 18, 2019. Phone call was made January 21, 2020. The receptionist requested that we call 'Cami' as

Name	Tribe/Affiliation	Letter and Fax Contacts	E-mail Contacts	Telephone Contact	Comments
					she deals with cultural resources. There was no answer; a message was left. Cami called back on January 22, 2020 and indicated that the project site is outside of their Tribes Traditional Use Area and that they defer to other tribes in the area.
Scott Cozart, Chairperson	Soboba Band of Luiseño Indians	December 18, 2019 (letter& fax)	December 18, 2019 (email)	Telephone call made January 21, 2020	Letter, email and fax describing project and requesting input on concerns was sent December 18, 2019. Phone call was made January 21, 2020. There was no answer; a message was left. No response to date.
Joseph Ontiveros, Cultural Resource Department	Soboba Band of Luiseño Indians	December 18, 2019 (letter& fax)	December 18, 2019 (email)	Telephone call made January 21, 2020	Letter, email and fax describing project and requesting input on concerns was sent December 18, 2019. Phone call was made January 21, 2020. Mr. Ontiveros answered and asked us to call him back. We called back in the afternoon and there was no answer; a message was left. No response to date.

From: Gonzalez Romero, Arysa (TRBL) <aromero@aguacaliente.net> on behalf of Gonzalez Romero, Arysa (TRBL)
Sent: Wednesday, December 18, 2019 2:10 PM
To: megan black
Subject: RE: Affordable Housing Project, in the City of Buena Park- UEI Proj# 7037

Follow Up Flag: Follow up
Flag Status: Flagged

Greetings,

A records check of the Tribal Historic preservation office's cultural registry revealed that this project is not located within the Tribe's Traditional Use Area. Therefore, we defer to the other tribes in the area. This letter shall conclude our consultation efforts.

Thank you,

Arysa Gonzalez Romero
Historic Preservation Technician
Agua Caliente Band of Cahuilla Indians
5401 Dinah Shore Drive Palm Springs, CA 92264
O: 760-883-1327 | C: 760-831-2484

From: megan black
Sent: Thursday, December 19, 2019 2:10 PM
To: 'Gonzalez Romero, Arysa (TRBL)'
Cc: (soneil@ultrasystems.com)
Subject: RE: Affordable Housing Project, in the City of Buena Park- UEI Proj# 7037

Thank you for your response. We will include it in our report.

Best regards,

Megan Black Doukakis | Archaeological Technician | M.A.
UltraSystems Environmental | WBE/DBE/SBE/WOSB
16431 Scientific Way Irvine, CA 92618
Office 949.788.4900 Ext. 228 Fax 949.788.4901
Cell 310.850.8127


please consider the environment before printing this e-mail. Thank you.

From: Gonzalez Romero, Arysa (TRBL) [mailto:aromero@aguacaliente.net]
Sent: Monday, December 30, 2019 9:07 AM
To: soneil@ultrasystems.com
Subject: Affordable Housing Project, in the City of Buena Park, Orange County, California. UltraSystems Environmental Project No. 7037

Greetings,

A records check of the Tribal Historic preservation office's cultural registry revealed that this project is not located within the Tribe's Traditional Use Area. Therefore, we defer to the other tribes in the area. This letter shall conclude our consultation efforts.

Thank you,

Arysa Gonzalez Romero
Historic Preservation Technician
Agua Caliente Band of Cahuilla Indians
5401 Dinah Shore Drive Palm Springs, CA 92264
D: 760-883-1327 | C: 760-831-2484

From: steve oneil <soneil@ultrasystems.com> on behalf of steve oneil
Sent: Monday, December 30, 2019 9:46 AM
To: Gonzalez Romero, Arysa (TRBL)
Cc: Megan Black
Subject: RE: Affordable Housing Project, in the City of Buena Park, Orange County, California. UltraSystems Environmental Project No. 7037

Follow Up Flag: Follow up
Flag Status: Flagged

Ms Gonzalez,

Thank you for Agua Caliente Band's reply concerning the Buena Park affordable housing project. Your statement will be placed in the project's cultural resources report .

Steve

Stephen O'Neil | Cultural Resources Manager | M.A./RPA
UltraSystems Environmental | WBE/DBE/SBE/WOSB
16431 Scientific Way
Irvine, CA 92618
Office **949.788.4900 ext. 276**
Fax 949.788.4901
Cell 949.677.2391

UltraSystems
environmental | management | planning

Please consider the environment before printing this e-mail. Thank you.

From: Administration Gabrieleno [mailto:admin@gabrielenoindians.org]
Sent: Thursday, December 19, 2019 9:44 AM
To: megan black
Subject: Re: Affordable Housing Project, in the City of Buena Park- UEI Proj# 7037

Hello Megan

Thank you for your email. Our tribal government would like to consult with you regarding the above project. Please get back to us to see what times and dates we are available.

Thank you

Sincerely,

Brandy Salas

1994 – 2019 | Celebrating 25 Years in Business!

--

Admin Specialist
Gabrieleno Band of Mission Indians - Kizh Nation
PO Box 393
Covina, CA 91723
Office: 844-390-0787
website: www.gabrielenoindians.org

Attachments area

From: megan black
Sent: Thursday, December 19, 2019 2:16 PM
To: 'Administration Gabrieleno'
Cc: (soneil@ultrasystems.com)
Subject: RE: Affordable Housing Project, in the City of Buena Park- UEI Proj# 7037

Dear Brandy,

Thank you for the tribe's reply to my inquiry concerning the Buena Park Affordable Housing Project.

Please understand that we are preparing the cultural resources inventory report and conducting outreach to you and other tribes. It is only the Lead Agency, here the Buena Park Planning Department, that can conduct AB 52 government-to-government "consultation" with you. If the tribe can provide traditional resources information for my report, that would be greatly appreciated, and any information the tribe wishes to remain confidential will not go into the public record.

Best regards,

Megan Black Doukakis | Archaeological Technician | M.A.
UltraSystems Environmental | WBE/DBE/SBE/WOSB
16431 Scientific Way Irvine, CA 92618
Office **949.788.4900 Ext. 228** Fax 949.788.4901
Cell 310.850.8127


please consider the environment before printing this e-mail. Thank you.

From: Deneen Pelton [mailto:DPelton@rincon-nsn.gov]
Sent: Thursday, January 9, 2020 1:16 PM
To: soneil@ultrasystems.com
Cc: Cheryl Madrigal
Subject: Affordable Housing Project

Please see attached response letter for the above-mentioned project. Thank you.

Deneen Pelton
Administrative Assistant II
Cultural Resources Department
Rincon Band of Luiseño Indians
One Government Center Lane | Valley Center, CA 92082
Office: 760-297-2635
Fax: 760-749-8901

Email: dpelton@rincon-nsn.gov

Rincon Band of Luiseño Indians
www.rincon-nsn.gov

RINCON BAND OF LUISEÑO INDIANS
Cultural Resources Department
One Government Center Lane · Valley Center, California 92082
(760) 297-2330 Fax (760) 749-8901

January 9, 2020

Stephen O'Neil
UltraSystems
16431 Scientific Way
Irvine, CA 92618-7443

Re: Affordable Housing Project

Dear Mr. O' Neil:

This letter is written on behalf of the Rincon Band of Luiseño Indians. Thank you for inviting us to submit comments on the above mention project. Rincon is submitting these comments concerning your projects potential impact on Luiseño cultural resources.

The Rincon Band has concerns for the impacts to historic and cultural resources and the finding of items of significant cultural value that could be disturbed or destroyed and are considered culturally significant to the Luiseño people. This is to inform you; your identified location is not within the Luiseño Aboriginal Territory. We recommend that you locate a tribe within the project area to receive direction on how to handle any inadvertent findings according to their customs and traditions.

If you would like information on tribes within your project area, please contact the Native American Heritage Commission and they will assist with a referral.

Thank you for the opportunity to protect and preserve our cultural assets.

Sincerely,

Deneen Pelton

Deneen Pelton, Administrative Assistant for
Cheryl Madrigal, M.A.
Cultural Resources Manager
Cultural Resources Department
Office:760-297-2635 ext. 318|Cell: 760-648-3000
Email: cmadrigal@rincon-nsn.gov

From: Joyce Perry [mailto:kaamalam@gmail.com]
Sent: Tuesday, January 14, 2020 1:05 PM
To: Steve O'Neil
Subject: Project No. 7037, Affordable Housing Project in the Cit of Buena Park

Good Afternoon Steve,

On behalf of the Juaneño Band of Mission Indians, Acjachemen Nation-Belardes we are responding to your letter dated December 18, 2019. Can you please advise is you've done any STPs? Also, is the church going to be demolished? Is there any evidence that this space has been monitored before? Looking forward to hearing from you.

Hùu'uni 'óomaqati yàamaqati.
Teach peace
Joyce Stanfield Perry
Payomkawichum Kaamalam - President
Juaneño Band of Mission Indians, Acjachemen Nation
Tribal Manager, Cultural Resource Director

From: steve oneil
To: Joyce Perry
Cc: Megan Black
Subject: RE: Project No. 7037, Affordable Housing Project in the City of Buena Park
Date: Tuesday, January 14, 2020 1:21:28 PM

Hi Joyce,

For the Buena Park affordable housing project (at St. Joseph's Episcopal Church on Valley View Street), this only called for a pedestrian survey, no archeological testing. So no excavations.

The church and the hall will not be demolished. There will be a small building constructed, I think, in the 1980s that will be torn down, called "the barn" for an old barn that use to be there. The church itself was recorded in a DPR form in 2014; I will write an update, but can only confirm there have been no changes since that time.

The housing will go on the north third of the church property and this appears to have been undisturbed since farming times except for a flat driveway. And the church was built in the 1960s. So I wouldn't expect there any been any activities to monitor.

Let me know if there is anything else I can help with. Looking forward to hearing back with any comments/recommendations.

Steve

Stephen O'Neil | Cultural Resources Manager | M.A./RPA
UltraSystems Environmental | WBE/DBE/SBE/WOSB
16431 Scientific Way
Irvine, CA 92618
Office **949.788.4900 ext. 276**
Fax 949.788.4901
Cell 949.677.2391

From: Joyce Perry [mailto:kaamalam@gmail.com]
Sent: Tuesday, January 14, 2020 1:36 PM
To: steve oneil
Subject: Re: Project No. 7037, Affordable Housing Project in the City of Buena Park

Hi Steve,

Was there monitoring done for either of these buildings? It appears this is undocumented soil. How deep are they planning to excavate?

Hún'um 'óomaqati yáamaqati
Teach peace

Joyce Stanfield Perry
Payomkawichum Kaamalam - President
Juaneño Band of Mission Indians, Acjachemen Nation
Tribal Manager, Cultural Resource Director

From: steve oneil <soneil@ultrasystems.com> on behalf of steve oneil
Sent: Tuesday, January 14, 2020 1:46 PM
To: Joyce Perry
Cc: Megan Black
Subject: RE: Project No. 7037, Affordable Housing Project in the City of Buena Park

Follow Up Flag: Follow up
Flag Status: Flagged

Joyce,

I can't imagine why there would have been monitoring back then. I don't know the exact construction plans but will be simple one and two story residential buildings for seniors, so nothing special. Just utility lines and foundation. No basements, underground parking, sports lighting poles with deep foundations or such.

Stephen O'Neil | Cultural Resources Manager | M.A./RPA
UltraSystems Environmental | WBE/DBE/SBE/WOSB
16431 Scientific Way
Irvine, CA 92618
Office **949.788.4900 ext. 276**
Fax 949.788.4901
Cell 949.677.2391

APPENDIX E – Noise Data

APPENDIX E.1 – Ambient Noise Measurement Data

UltraSystems
environmental | management | planning

16431 Scientific Way
Irvine, CA 92618
949.788.4900

Noise Measurement Report Form – Part A

Date: 1/24/20 Day of Week: Fri Time: 8:58 am Project No. 7037

Monitoring Site ID: 1 Monitoring Site Address: 6062 San Rafael Dr.

Measurement Taken By: Lisa Ann of UltraSystems Environmental

Approximate Wind Speed: _____mph [km/hr] Approximate Wind Direction: From the _____

Approximate distance of sound level meter from receptor location: 0 ft

Approximate distance of sound level meter from construction site: _____

(Leave Blank for Baseline Ambient)

Receptor Land Use (Check One): ☒ Residential ☐ Institutional ☐ Comm./Ind. ☐ Recreational

Sound Level Meter: Make and Model: Quest SoundPro DL-1-1/3 Serial Number: _____

Meter Setting: ☒ A-Weighted Sound Level (SLOW) ☐ A-Weighted Sound Level (FAST)

Measurement Start Time: 8:58 am Measurement End Time: 9:13 am

Total Measurement Time: ~~9:13 am~~ 15 mins Session File Name (e.g., S012): S137
NA

Check the measurement purpose:

☒ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results (dB):

Measurement Type	Measured Levels	Noise Criteria Threshold	Exceedance
CALIBRATION	Pre: 114.0 Post: 114.0	n/a	n/a
$L_{eq\ (h)}$	Slow: 54.0 Fast:		
L_{max}	Slow: 69.4 Fast:	n/a	n/a
L_{90}	Slow: 43.5 Fast:	n/a	n/a

Field Notes:

1. Homes between meter and project site
2. people walking past meter min. 4
3. _____

Noise Monitor's Signature: _____ Date: 1/24/20

UltraSystems
environmental | management | planning

16431 Scientific Way
Irvine, CA 92618
949.788.4900

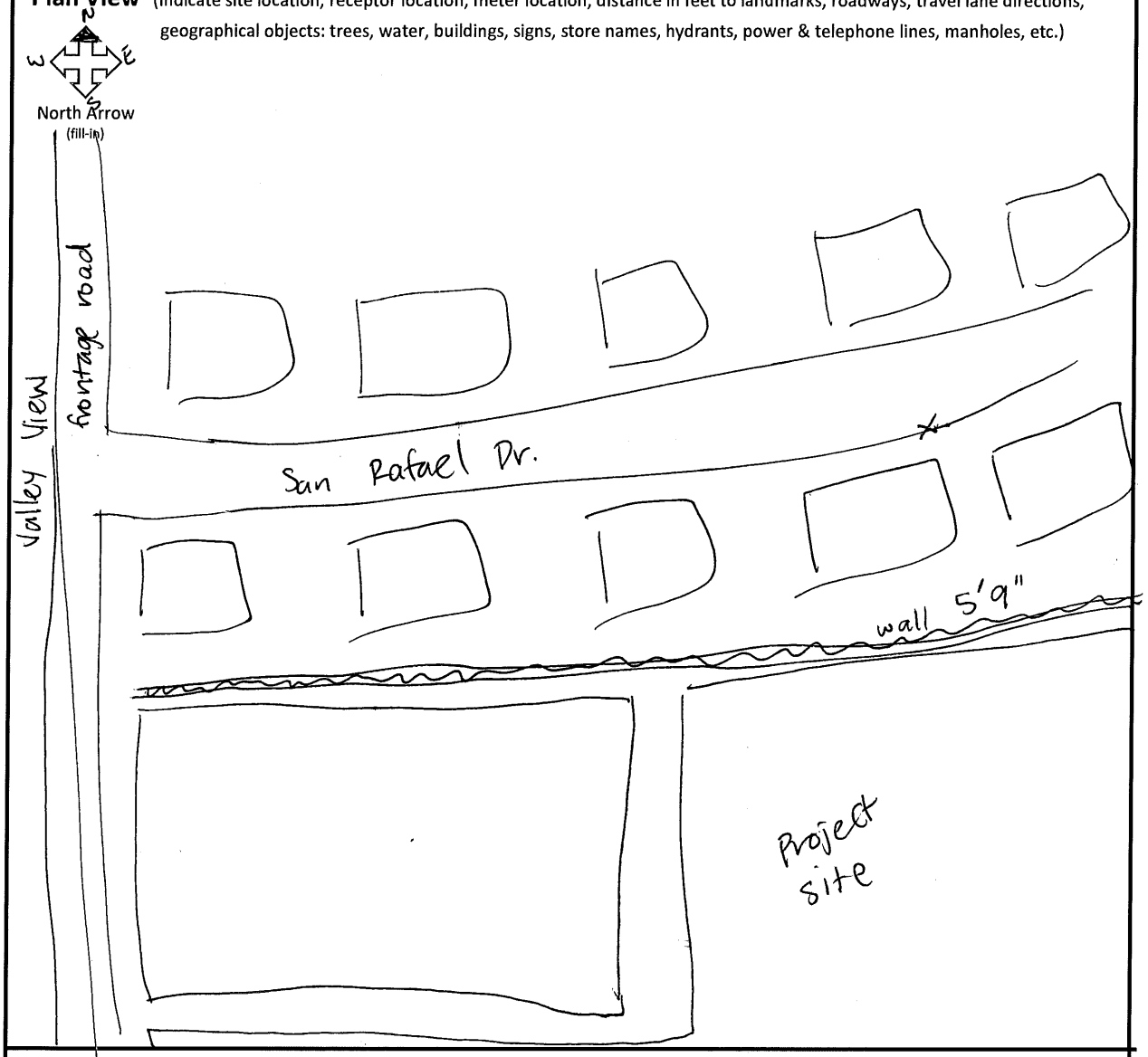
Noise Measurement Report Form – Part B

Date: 1/24/20 Day of Week: Fri Time: 8:58 am

Monitoring Site ID: 1 Monitoring Site Address: 6062 San Rafael Dr.

Site Map

Plan View (Indicate site location, receptor location, meter location, distance in feet to landmarks, roadways, travel lane directions, geographical objects: trees, water, buildings, signs, store names, hydrants, power & telephone lines, manholes, etc.)



Elevation View (Indicate terrain, roadway, height and location of receptor, meter, walls, barriers, buildings, etc.)

Latitude: N 33.84298°	Longitude: W 118.02701°	Elevation: 50ft.

Session Report

1/27/2020

Information Panel

Name	S137_BLH080004_27012020_105310
Start Time	1/24/2020 8:59:27 AM
Stop Time	1/24/2020 9:14:27 AM
Device Name	BLH080004
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	53.9 dB	L90	1	43.5 dB
Lmax	1	69.4 dB	Lmin	1	41.3 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	53.9 dB	Lmax	2	71.6 dB
Lmin	2	40.3 dB			
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	FAST			

Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
40:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41:	0.00	0.00	0.00	0.00	0.05	0.10	0.17	0.22	0.33	0.49	1.38
42:	0.58	0.51	0.68	0.73	0.74	0.74	0.41	0.41	0.60	0.43	5.84
43:	0.34	0.38	0.46	0.44	0.44	0.50	0.55	0.55	0.38	0.43	4.45
44:	0.61	1.08	0.88	0.95	0.75	0.82	0.98	0.79	0.90	1.00	8.76
45:	1.09	0.87	0.59	1.02	0.97	0.90	0.83	0.93	0.84	0.76	8.80
46:	0.75	0.55	0.47	0.53	0.62	0.68	0.61	0.64	0.55	0.58	5.97
47:	0.58	0.70	0.76	0.65	0.80	0.73	0.71	0.80	0.82	0.90	7.44
48:	0.92	1.00	0.68	0.94	1.02	0.99	0.97	0.86	0.98	0.85	9.22
49:	0.69	0.71	0.69	0.64	0.74	0.70	0.92	0.86	0.83	0.71	7.49
50:	0.91	0.93	0.92	0.88	0.81	0.94	0.99	0.83	0.94	1.02	9.17

51:	0.99	0.77	0.48	0.78	0.60	0.66	0.70	0.54	0.56	0.53	6.61
52:	0.42	0.47	0.53	0.53	0.62	0.65	0.68	0.51	0.47	0.47	5.33
53:	0.41	0.46	0.43	0.39	0.41	0.42	0.42	0.48	0.32	0.34	4.10
54:	0.32	0.37	0.21	0.31	0.34	0.34	0.51	0.41	0.34	0.33	3.49
55:	0.25	0.23	0.25	0.21	0.21	0.18	0.20	0.23	0.14	0.11	2.00
56:	0.12	0.13	0.15	0.18	0.16	0.17	0.15	0.17	0.17	0.15	1.55
57:	0.15	0.20	0.08	0.10	0.11	0.09	0.11	0.10	0.11	0.10	1.14
58:	0.09	0.10	0.09	0.09	0.09	0.11	0.09	0.09	0.12	0.13	0.98
59:	0.11	0.10	0.11	0.09	0.10	0.13	0.09	0.07	0.09	0.11	1.01
60:	0.09	0.11	0.07	0.08	0.07	0.08	0.07	0.07	0.07	0.07	0.78
61:	0.07	0.07	0.08	0.09	0.07	0.07	0.08	0.09	0.09	0.07	0.78
62:	0.06	0.07	0.07	0.08	0.07	0.08	0.10	0.11	0.10	0.09	0.83
63:	0.10	0.09	0.06	0.10	0.08	0.10	0.11	0.14	0.09	0.09	0.95
64:	0.07	0.05	0.06	0.07	0.05	0.06	0.04	0.03	0.04	0.03	0.50
65:	0.04	0.03	0.04	0.03	0.04	0.04	0.04	0.03	0.05	0.05	0.39
66:	0.04	0.05	0.04	0.05	0.05	0.05	0.05	0.07	0.05	0.06	0.49
67:	0.02	0.03	0.02	0.03	0.03	0.03	0.04	0.03	0.02	0.02	0.26
68:	0.02	0.02	0.02	0.01	0.03	0.05	0.01	0.01	0.01	0.01	0.19
69:	0.01	0.02	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.07
70:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		65.9	63.8	62.7	61.5	60.1	59.1	58.1	57.1	56.5
10%:	55.8	55.3	54.8	54.6	54.3	54.0	53.7	53.4	53.2	53.0
20%:	52.7	52.5	52.4	52.2	52.0	51.8	51.6	51.5	51.3	51.2
30%:	51.0	50.9	50.8	50.7	50.6	50.5	50.4	50.2	50.1	50.0
40%:	49.9	49.8	49.7	49.6	49.4	49.3	49.2	49.0	48.9	48.7
50%:	48.6	48.5	48.4	48.3	48.2	48.1	48.0	47.9	47.8	47.7
60%:	47.5	47.4	47.3	47.1	47.0	46.8	46.6	46.5	46.3	46.1
70%:	46.0	45.8	45.7	45.6	45.5	45.4	45.3	45.2	45.0	44.9
80%:	44.8	44.7	44.6	44.5	44.4	44.2	44.1	44.0	43.9	43.7
90%:	43.5	43.3	43.1	42.8	42.6	42.4	42.3	42.1	42.0	41.8
100%:	41.2									

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
1/24/2020 8:57:42 AM	Calibration	114.0			

UltraSystems
environmental | management | planning

16431 Scientific Way
Irvine, CA 92618
949.788.4900

Noise Measurement Report Form – Part A

Date: 1/24/20 Day of Week: Fri Time: 9:20 am Project No. 7037

Monitoring Site ID: 2 Monitoring Site Address: 8427 San Clemente Way

Measurement Taken By: Lisa Ahn of UltraSystems Environmental

Approximate Wind Speed: _____mph [km/hr] Approximate Wind Direction: From the _____

Approximate distance of sound level meter from receptor location: 0 ft

Approximate distance of sound level meter from construction site: _____

(Leave Blank for Baseline Ambient)

Receptor Land Use (Check One): ☒ Residential ☐ Institutional ☐ Comm./Ind. ☐ Recreational

Sound Level Meter: Make and Model: Quest SoundPro DL-1-1/3 Serial Number: _____

Meter Setting: ☒ A-Weighted Sound Level (SLOW) ☐ A-Weighted Sound Level (FAST)

Measurement Start Time: 9:20 am Measurement End Time: 9:35 am

Total Measurement Time: 15 mins Session File Name (e.g., S012): S138

Check the measurement purpose:

☒ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results (dB):

Measurement Type	Measured Levels	Noise Criteria Threshold	Exceedance
CALIBRATION	Pre: 114.0 Post: 114.0	n/a	n/a
$L_{eq\ (h)}$	Slow: 48.8 Fast:		
L_{max}	Slow: 65.4 Fast:	n/a	n/a
L_{90}	Slow: 41.2 Fast:	n/a	n/a

Field Notes:

1. _____
2. _____
3. _____

Noise Monitor's Signature: L Ahn Date: 1/24/20

UltraSystems
environmental | management | planning

16431 Scientific Way
Irvine, CA 92618
949.788.4900

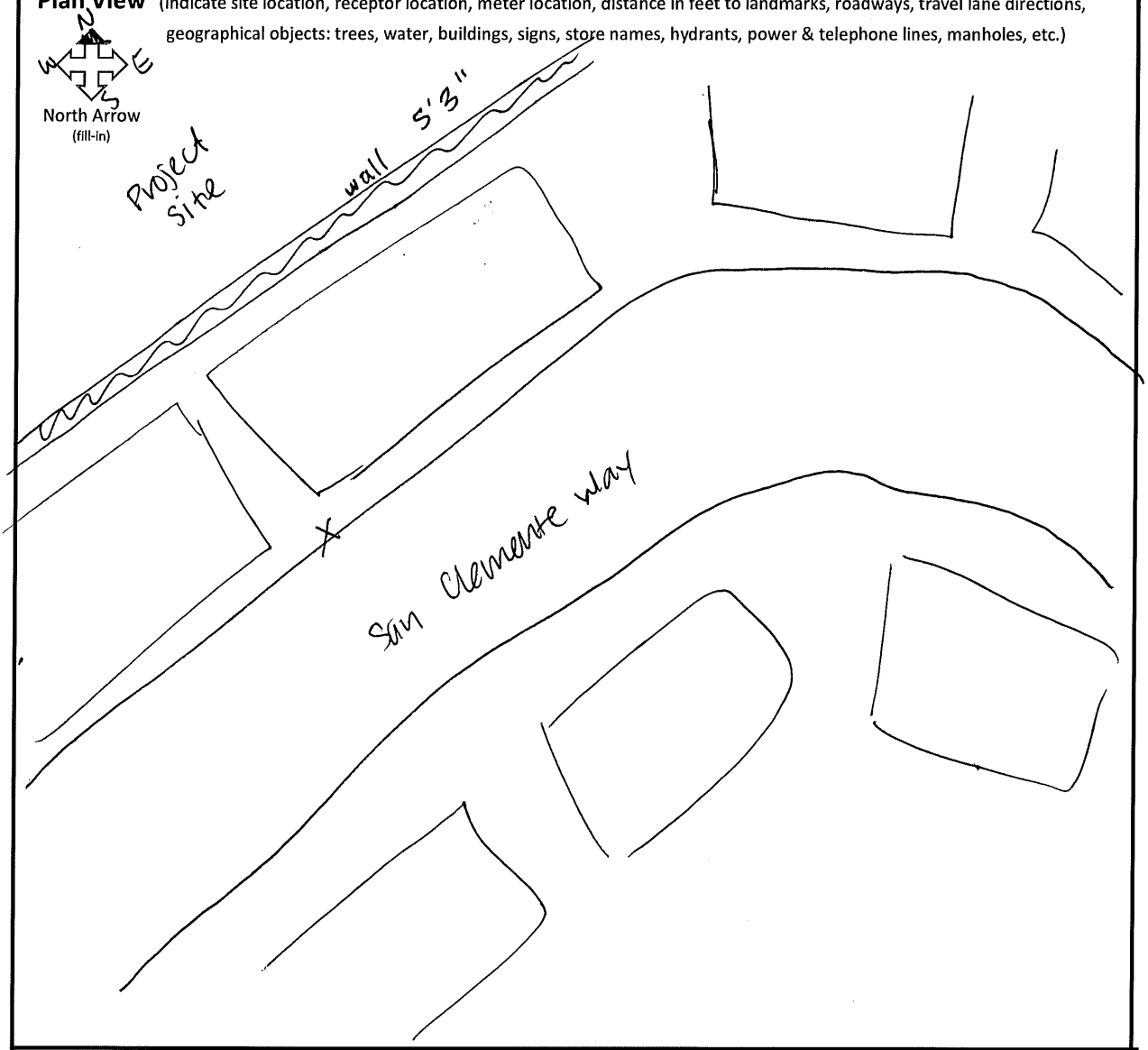
Noise Measurement Report Form – Part B

Date: 1/24/20 Day of Week: Fri Time: 9:20

Monitoring Site ID: 2 Monitoring Site Address: 8427 San Clemente way

Site Map

Plan View (Indicate site location, receptor location, meter location, distance in feet to landmarks, roadways, travel lane directions, geographical objects: trees, water, buildings, signs, store names, hydrants, power & telephone lines, manholes, etc.)



Elevation View (Indicate terrain, roadway, height and location of receptor, meter, walls, barriers, buildings, etc.)

Latitude: N 33.84187°	Longitude: W 118.02668	Elevation: 17 ft

Session Report

1/27/2020

Information Panel

Name	S138_BLH080004_27012020_105312
Start Time	1/24/2020 9:21:08 AM
Stop Time	1/24/2020 9:36:08 AM
Device Name	BLH080004
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	48.8 dB	L90	1	41.2 dB
Lmax	1	65.4 dB	Lmin	1	40 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	48.7 dB	Lmax	2	67.6 dB
Lmin	2	38.7 dB			
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	FAST			

Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
40:	0.03	0.02	0.06	0.14	0.19	0.33	0.43	0.84	1.15	1.42	4.62
41:	1.66	1.59	1.53	1.93	2.01	2.15	2.22	2.64	2.15	1.94	19.81
42:	1.39	0.81	0.74	0.49	0.49	0.70	0.77	0.92	0.92	1.07	8.29
43:	1.34	1.45	1.25	1.32	1.56	1.61	1.48	1.74	1.90	2.13	15.78
44:	1.71	1.47	1.72	1.45	1.11	0.99	0.89	0.73	0.79	0.59	11.45
45:	0.63	0.51	0.73	0.94	0.75	0.64	0.55	0.41	0.56	0.58	6.32
46:	0.65	0.51	0.43	0.52	0.56	0.64	0.47	0.54	0.50	0.47	5.30
47:	0.34	0.51	0.34	0.45	0.53	0.64	0.41	0.51	0.42	0.41	4.54
48:	0.36	0.34	0.25	0.39	0.32	0.57	0.57	0.47	0.30	0.36	3.92
49:	0.19	0.44	0.40	0.41	0.33	0.27	0.25	0.30	0.15	0.25	2.99
50:	0.33	0.36	0.43	0.44	0.31	0.31	0.38	0.36	0.36	0.37	3.66

51:	0.20	0.19	0.17	0.32	0.31	0.24	0.23	0.18	0.33	0.48	2.65
52:	0.47	0.56	0.66	0.59	0.36	0.35	0.48	0.37	0.50	0.49	4.82
53:	0.55	0.40	0.33	0.31	0.26	0.20	0.15	0.14	0.14	0.14	2.62
54:	0.14	0.10	0.08	0.06	0.06	0.05	0.09	0.03	0.03	0.04	0.69
55:	0.03	0.04	0.05	0.05	0.07	0.06	0.05	0.05	0.06	0.17	0.62
56:	0.18	0.06	0.06	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.36
57:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.09
58:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.05	0.16
59:	0.03	0.02	0.03	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.24
60:	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.02	0.01	0.18
61:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.13
62:	0.01	0.02	0.03	0.05	0.02	0.02	0.02	0.03	0.02	0.02	0.25
63:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.18
64:	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.05	0.22
65:	0.03	0.01	0.01	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.10
66:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		60.1	55.8	54.0	53.3	53.0	52.8	52.6	52.4	52.1
10%:	52.0	51.8	51.4	51.0	50.7	50.4	50.1	49.8	49.4	49.1
20%:	48.8	48.6	48.4	48.1	47.8	47.6	47.4	47.2	47.0	46.7
30%:	46.5	46.4	46.2	46.0	45.8	45.6	45.4	45.3	45.2	45.0
40%:	44.9	44.7	44.6	44.5	44.4	44.3	44.2	44.1	44.1	44.0
50%:	43.9	43.9	43.8	43.8	43.7	43.7	43.6	43.6	43.5	43.4
60%:	43.4	43.3	43.2	43.2	43.1	43.0	42.9	42.9	42.8	42.7
70%:	42.6	42.4	42.3	42.1	42.0	41.9	41.8	41.8	41.7	41.7
80%:	41.6	41.6	41.6	41.5	41.5	41.4	41.4	41.3	41.3	41.2
90%:	41.2	41.1	41.1	41.0	40.9	40.9	40.8	40.7	40.6	40.5
100%:	39.9									

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
1/24/2020 8:57:42 AM	Calibration	114.0			

UltraSystems
environmental | management | planning

16431 Scientific Way
Irvine, CA 92618
949.788.4900

Noise Measurement Report Form – Part A

Date: 1/24/20 Day of Week: Fri Time: 9:40 am Project No. 7037

Monitoring Site ID: 3 Monitoring Site Address: 8443 San Clemente Way

Measurement Taken By: Lisa Ann of UltraSystems Environmental

Approximate Wind Speed: _____mph [km/hr] Approximate Wind Direction: From the _____

Approximate distance of sound level meter from receptor location: 0 ft

Approximate distance of sound level meter from construction site: _____

(Leave Blank for Baseline Ambient)

Receptor Land Use (Check One): ☒ Residential ☐ Institutional ☐ Comm./Ind. ☐ Recreational

Sound Level Meter: Make and Model: Quest SoundPro DL-1-1/3 Serial Number: _____

Meter Setting: ☒ A-Weighted Sound Level (SLOW) ☐ A-Weighted Sound Level (FAST)

Measurement Start Time: 9:40 am Measurement End Time: 9:55 am

Total Measurement Time: 15 mins Session File Name (e.g., S012): S139

Check the measurement purpose:

☒ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results (dB):

Measurement Type	Measured Levels	Noise Criteria Threshold	Exceedance
CALIBRATION	Pre: 114.0 Post: 114.0	n/a	n/a
$L_{eq\ (h)}$	Slow: 64.7 Fast:		
L_{max}	Slow: 85.1 Fast:	n/a	n/a
L_{90}	Slow: 41.7 Fast:	n/a	n/a

Field Notes:

1. Street cleaner min 4-6
2. _____
3. _____

Noise Monitor's Signature: Lisa Ann Date: 1/24/20

UltraSystems
environmental | management | planning

16431 Scientific Way
Irvine, CA 92618
949.788.4900

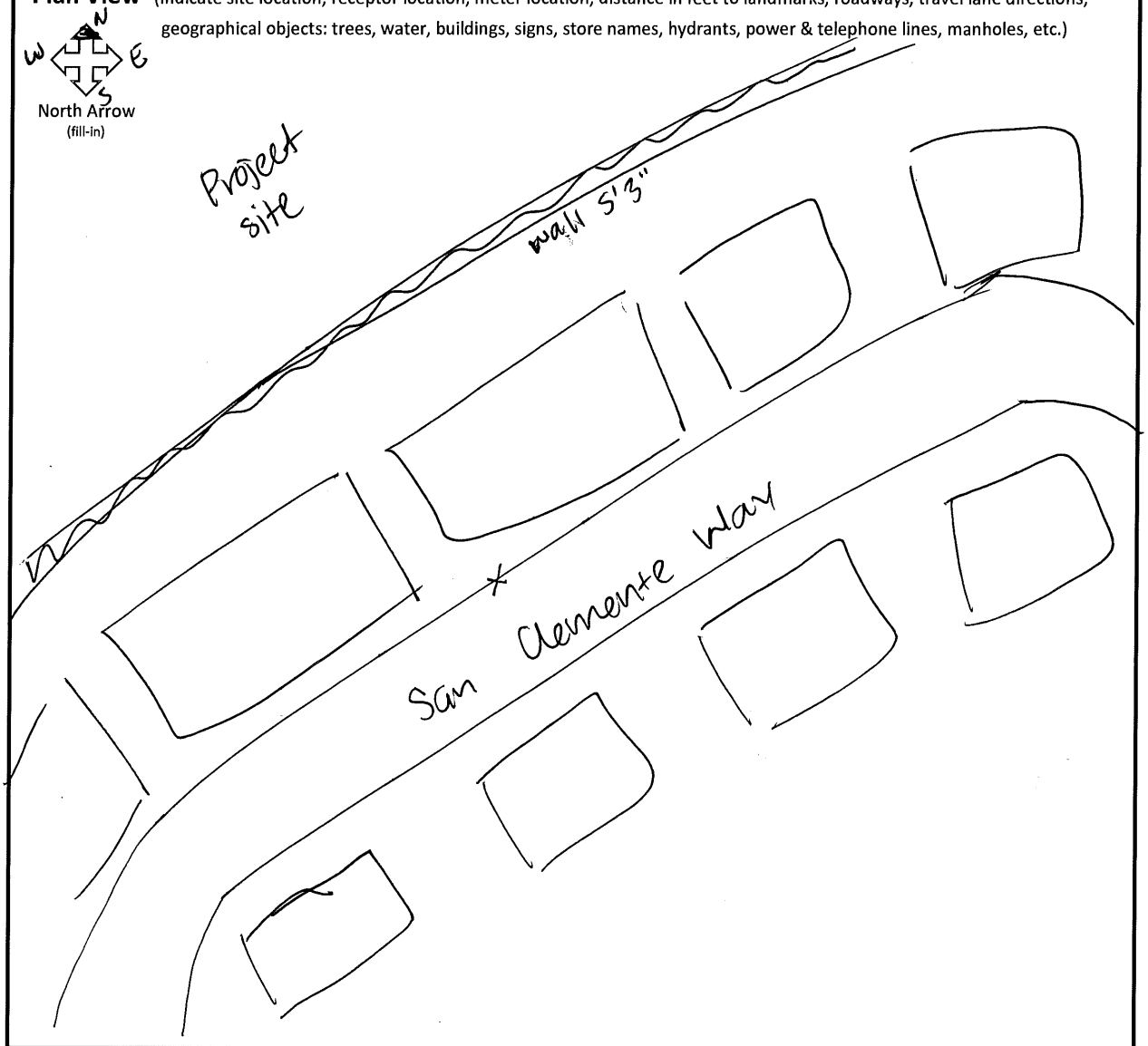
Noise Measurement Report Form – Part B

Date: 1/24/20 Day of Week: Fri Time: 9:40 am

Monitoring Site ID: 3 Monitoring Site Address: 8443 San Clemente Way

Site Map

Plan View (Indicate site location, receptor location, meter location, distance in feet to landmarks, roadways, travel lane directions, geographical objects: trees, water, buildings, signs, store names, hydrants, power & telephone lines, manholes, etc.)



Elevation View (Indicate terrain, roadway, height and location of receptor, meter, walls, barriers, buildings, etc.)

Latitude: N 33.84137°	Longitude: W 118.02716°	Elevation: 13ft

Session Report

1/27/2020

Information Panel

Name	S139_BLH080004_27012020_105314
Start Time	1/24/2020 9:41:21 AM
Stop Time	1/24/2020 9:56:21 AM
Device Name	BLH080004
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	64.6 dB	L90	1	41.7 dB
Lmax	1	85.1 dB	Lmin	1	39.6 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	64.6 dB	Lmax	2	86.8 dB
Lmin	2	38.7 dB			
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	FAST			

Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
30:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39:	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.16	0.16	0.41
40:	0.30	0.37	0.18	0.08	0.11	0.18	0.14	0.12	0.30	0.42	2.19

41:	0.56	0.57	0.59	0.66	0.94	1.32	1.14	1.25	1.07	1.24	9.33
42:	1.46	1.30	1.35	1.30	1.47	1.36	1.52	1.32	1.50	1.27	13.86
43:	1.23	1.57	1.45	1.71	1.50	1.48	1.24	1.24	1.34	1.60	14.36
44:	1.86	1.74	1.98	1.97	2.20	1.65	1.65	1.62	1.34	1.43	17.46
45:	1.70	1.72	1.48	1.39	1.27	1.08	1.05	1.14	0.95	0.76	12.55
46:	0.72	0.57	0.51	0.56	0.45	0.50	0.35	0.31	0.32	0.18	4.46
47:	0.25	0.20	0.20	0.17	0.18	0.18	0.12	0.19	0.21	0.22	1.93
48:	0.18	0.14	0.12	0.17	0.16	0.13	0.18	0.16	0.16	0.17	1.58
49:	0.20	0.17	0.18	0.15	0.16	0.12	0.10	0.13	0.12	0.11	1.43
50:	0.11	0.09	0.10	0.08	0.08	0.10	0.11	0.10	0.07	0.07	0.90
51:	0.06	0.07	0.05	0.13	0.10	0.07	0.09	0.16	0.20	0.14	1.09
52:	0.06	0.07	0.09	0.08	0.06	0.05	0.07	0.07	0.07	0.07	0.69
53:	0.06	0.07	0.08	0.11	0.12	0.19	0.16	0.42	0.19	0.25	1.66
54:	0.26	0.15	0.09	0.09	0.10	0.15	0.11	0.08	0.06	0.06	1.15
55:	0.05	0.06	0.07	0.06	0.08	0.09	0.11	0.09	0.06	0.08	0.75
56:	0.11	0.13	0.14	0.18	0.12	0.11	0.09	0.15	0.08	0.13	1.22
57:	0.11	0.16	0.10	0.12	0.14	0.13	0.21	0.15	0.09	0.09	1.29
58:	0.09	0.07	0.11	0.06	0.09	0.11	0.11	0.09	0.24	0.20	1.16
59:	0.10	0.06	0.09	0.13	0.08	0.04	0.06	0.09	0.05	0.11	0.80
60:	0.23	0.15	0.06	0.08	0.13	0.08	0.10	0.10	0.08	0.09	1.11
61:	0.10	0.04	0.04	0.14	0.10	0.06	0.05	0.04	0.06	0.05	0.69
62:	0.06	0.05	0.07	0.05	0.08	0.23	0.13	0.04	0.05	0.06	0.82
63:	0.05	0.04	0.03	0.06	0.05	0.04	0.05	0.04	0.03	0.03	0.40
64:	0.04	0.02	0.03	0.04	0.03	0.06	0.03	0.04	0.04	0.04	0.39
65:	0.05	0.06	0.08	0.04	0.03	0.03	0.03	0.04	0.04	0.03	0.45
66:	0.06	0.05	0.03	0.04	0.03	0.06	0.04	0.03	0.03	0.02	0.39
67:	0.02	0.03	0.05	0.03	0.03	0.06	0.03	0.04	0.04	0.03	0.37
68:	0.02	0.03	0.04	0.06	0.06	0.03	0.04	0.02	0.02	0.02	0.36
69:	0.08	0.06	0.05	0.03	0.03	0.03	0.02	0.03	0.03	0.03	0.39
70:	0.03	0.02	0.03	0.05	0.02	0.02	0.04	0.07	0.11	0.09	0.48
71:	0.14	0.06	0.02	0.02	0.02	0.07	0.03	0.03	0.05	0.07	0.52
72:	0.05	0.04	0.03	0.01	0.02	0.02	0.03	0.02	0.07	0.12	0.40
73:	0.06	0.05	0.07	0.03	0.04	0.03	0.03	0.04	0.04	0.03	0.41
74:	0.03	0.04	0.05	0.03	0.03	0.02	0.03	0.03	0.03	0.03	0.32
75:	0.03	0.03	0.03	0.02	0.03	0.02	0.03	0.03	0.02	0.03	0.27
76:	0.02	0.03	0.03	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.26
77:	0.04	0.02	0.03	0.06	0.06	0.02	0.03	0.03	0.03	0.03	0.35

78:	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.22
79:	0.02	0.02	0.02	0.02	0.02	0.03	0.10	0.04	0.03	0.03	0.32
80:	0.02	0.03	0.03	0.02	0.03	0.03	0.03	0.03	0.03	0.06	0.30
81:	0.09	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.17
82:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.07
83:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.08
84:	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.02	0.01	0.03	0.15
85:	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
86:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
88:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		79.5	75.8	72.8	70.7	68.2	65.6	63.2	61.7	60.5
10%:	59.5	58.6	57.6	56.8	56.0	54.8	53.9	53.5	52.5	51.5
20%:	50.3	49.4	48.8	48.2	47.6	47.0	46.6	46.4	46.2	46.0
30%:	45.8	45.7	45.6	45.5	45.4	45.3	45.3	45.2	45.1	45.0
40%:	45.0	44.9	44.9	44.8	44.7	44.7	44.6	44.5	44.5	44.4
50%:	44.4	44.3	44.3	44.2	44.2	44.1	44.1	44.0	43.9	43.9
60%:	43.8	43.8	43.7	43.6	43.6	43.5	43.4	43.3	43.3	43.2
70%:	43.1	43.1	43.0	42.9	42.9	42.8	42.7	42.6	42.6	42.5
80%:	42.4	42.4	42.3	42.2	42.1	42.1	42.0	41.9	41.9	41.8
90%:	41.7	41.6	41.5	41.4	41.4	41.3	41.1	40.9	40.7	40.0
100%:	39.5									

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
1/24/2020 8:57:42 AM	Calibration	114.0			

UltraSystems
environmental | management | planning

16431 Scientific Way
Irvine, CA 92618
949.788.4900

Noise Measurement Report Form – Part A

Date: 1/24/20 Day of Week: Fri Time: 10:47 am Project No. 7037

Monitoring Site ID: 4 Monitoring Site Address: 8300 Valley View

Measurement Taken By: Lisa Ahn of UltraSystems Environmental

Approximate Wind Speed: _____mph [km/hr] Approximate Wind Direction: From the _____

Approximate distance of sound level meter from receptor location: 0 ft

Approximate distance of sound level meter from construction site: _____

(Leave Blank for Baseline Ambient)

Receptor Land Use (Check One): ☒ Residential ☐ Institutional ☐ Comm./Ind. ☐ Recreational

Sound Level Meter: Make and Model: Quest SoundPro DL-1-1/3 Serial Number: _____

Meter Setting: ☒ A-Weighted Sound Level (SLOW) ☐ A-Weighted Sound Level (FAST)

Measurement Start Time: 10:47 am Measurement End Time: 11:02 am

Total Measurement Time: 15 mins Session File Name (e.g., S012): S140

Check the measurement purpose:

☒ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results (dB):

Measurement Type	Measured Levels	Noise Criteria Threshold	Exceedance
CALIBRATION	Pre: 114.0 Post: 114.0	n/a	n/a
$L_{eq\ (h)}$	Slow: 55.9 Fast:		
L_{max}	Slow: 72.6 Fast:	n/a	n/a
L_{90}	Slow: 45.0 Fast:	n/a	n/a

Field Notes:

1. Meter inside project boundary against wall
2. 5'9" wall along S side
3. _____

Noise Monitor's Signature: L. Ahn Date: 1/24/20

UltraSystems
environmental | management | planning

16431 Scientific Way
Irvine, CA 92618
949.788.4900

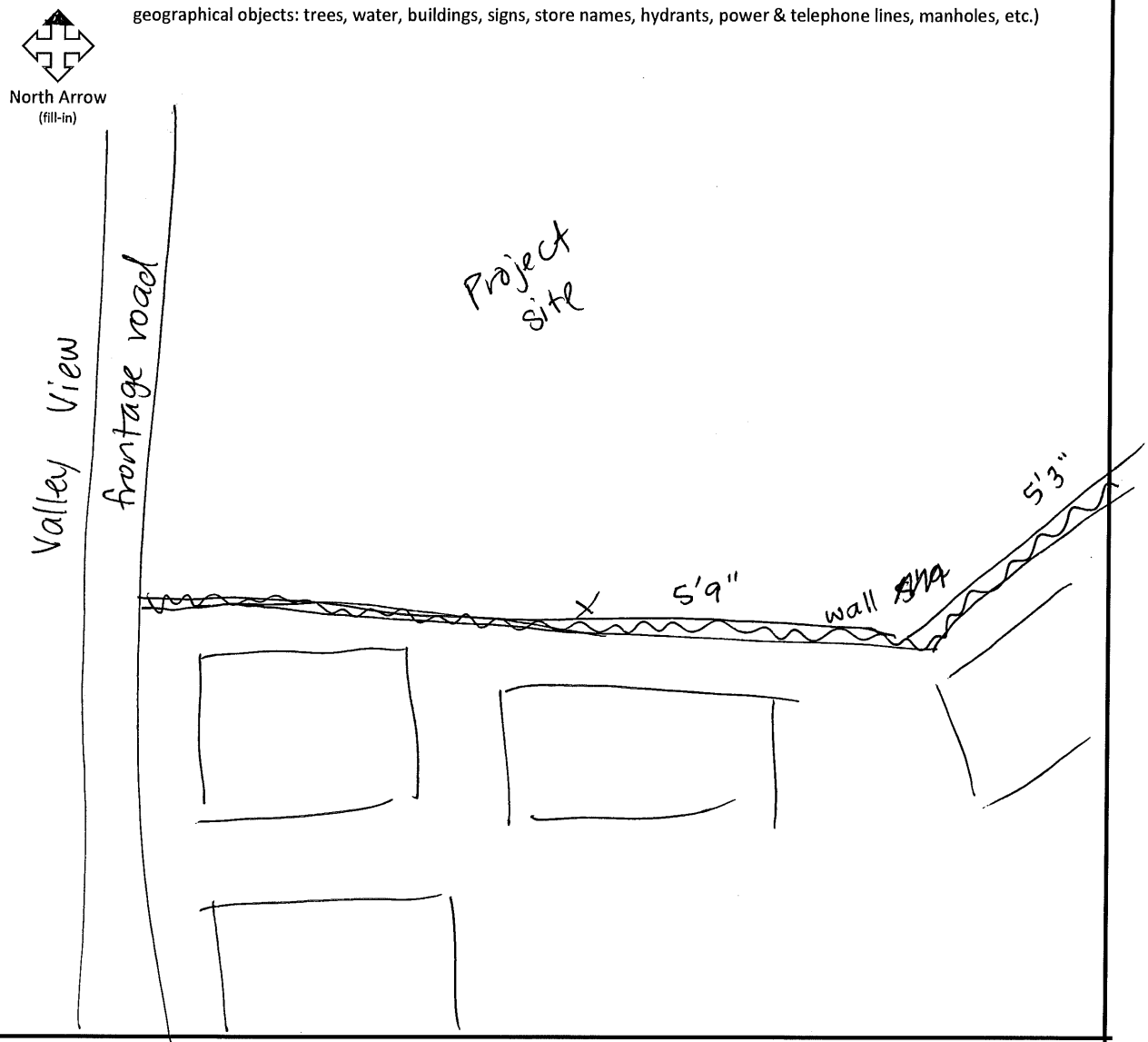
Noise Measurement Report Form – Part B

Date: 1/24/20 Day of Week: Fri Time: 10:47 am

Monitoring Site ID: 4 Monitoring Site Address: 8300 Valley View

Site Map

Plan View (Indicate site location, receptor location, meter location, distance in feet to landmarks, roadways, travel lane directions, geographical objects: trees, water, buildings, signs, store names, hydrants, power & telephone lines, manholes, etc.)



Elevation View (Indicate terrain, roadway, height and location of receptor, meter, walls, barriers, buildings, etc.)

Latitude: N 33.84135°	Longitude: W 118.02793°	Elevation: 29 ft

Session Report

1/27/2020

Information Panel

Name	S140_BLH080004_27012020_105316
Start Time	1/24/2020 10:47:28 AM
Stop Time	1/24/2020 11:02:28 AM
Device Name	BLH080004
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	55.9 dB	L90	1	45 dB
Lmax	1	72.6 dB	Lmin	1	40.3 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	55.8 dB	Lmax	2	74.3 dB
Lmin	2	39.4 dB			
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	FAST			

Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
40:	0.00	0.00	0.00	0.01	0.05	0.07	0.09	0.05	0.05	0.07	0.39
41:	0.06	0.14	0.16	0.14	0.10	0.18	0.14	0.14	0.12	0.26	1.43
42:	0.13	0.16	0.20	0.27	0.31	0.26	0.19	0.22	0.23	0.19	2.17
43:	0.22	0.21	0.20	0.19	0.16	0.12	0.22	0.25	0.35	0.25	2.16
44:	0.33	0.33	0.38	0.38	0.39	0.29	0.30	0.36	0.34	0.34	3.45
45:	0.38	0.28	0.22	0.22	0.23	0.30	0.21	0.29	0.35	0.33	2.81
46:	0.34	0.34	0.39	0.27	0.27	0.27	0.31	0.27	0.22	0.30	2.98
47:	0.31	0.29	0.34	0.30	0.36	0.38	0.36	0.32	0.29	0.41	3.35
48:	0.32	0.28	0.17	0.22	0.20	0.30	0.37	0.39	0.23	0.25	2.73
49:	0.31	0.26	0.22	0.28	0.28	0.36	0.51	0.54	0.41	0.43	3.61
50:	0.48	0.37	0.37	0.39	0.28	0.29	0.35	0.43	0.39	0.50	3.85

51:	0.57	0.66	0.32	0.52	0.56	0.59	0.84	0.92	0.74	0.47	6.18
52:	0.51	0.47	0.60	0.60	0.61	0.47	0.54	0.74	0.76	0.70	6.00
53:	0.73	0.88	0.60	0.63	0.76	0.69	0.79	0.91	1.05	1.03	8.07
54:	0.99	1.01	0.72	1.19	1.13	1.15	1.18	1.32	1.14	1.13	10.96
55:	1.11	0.89	1.06	1.29	1.03	1.05	0.87	0.94	0.84	0.78	9.85
56:	0.84	0.77	0.74	0.76	0.80	0.94	0.97	0.74	1.01	1.30	8.87
57:	1.21	1.01	0.46	0.66	0.60	0.64	0.63	0.64	0.70	0.56	7.13
58:	0.36	0.33	0.48	0.57	0.61	0.48	0.41	0.45	0.57	0.47	4.73
59:	0.41	0.40	0.63	0.49	0.48	0.40	0.19	0.23	0.42	0.19	3.85
60:	0.28	0.29	0.20	0.19	0.27	0.26	0.36	0.40	0.32	0.31	2.88
61:	0.21	0.15	0.14	0.20	0.21	0.11	0.07	0.14	0.05	0.04	1.31
62:	0.04	0.03	0.02	0.03	0.02	0.03	0.02	0.02	0.03	0.02	0.25
63:	0.02	0.04	0.02	0.03	0.05	0.03	0.02	0.04	0.06	0.06	0.35
64:	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.00	0.00	0.01	0.06
65:	0.01	0.00	0.01	0.00	0.01	0.01	0.00	0.01	0.00	0.00	0.04
66:	0.01	0.01	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.01	0.05
67:	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.01	0.05
68:	0.01	0.01	0.01	0.00	0.01	0.00	0.01	0.01	0.01	0.00	0.05
69:	0.01	0.01	0.00	0.01	0.01	0.00	0.01	0.00	0.01	0.01	0.05
70:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.10
71:	0.01	0.02	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0.12
72:	0.02	0.03	0.02	0.01	0.02	0.02	0.02	0.00	0.00	0.00	0.12
73:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
74:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
76:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
77:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
78:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
79:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		62.8	61.2	60.7	60.4	60.0	59.7	59.3	59.1	58.9
10%:	58.7	58.5	58.3	58.1	57.9	57.7	57.5	57.4	57.2	57.0
20%:	56.9	56.9	56.8	56.7	56.6	56.5	56.4	56.2	56.1	56.0
30%:	55.9	55.7	55.6	55.5	55.4	55.3	55.2	55.1	55.0	54.9

40%:	54.8	54.7	54.7	54.6	54.5	54.4	54.3	54.2	54.2	54.0
50%:	53.9	53.8	53.7	53.6	53.5	53.4	53.3	53.1	53.0	52.8
60%:	52.7	52.6	52.4	52.2	52.0	51.8	51.7	51.6	51.4	51.3
70%:	51.0	50.9	50.6	50.4	50.1	49.8	49.6	49.4	49.0	48.7
80%:	48.4	47.9	47.6	47.4	47.1	46.7	46.3	46.0	45.7	45.4
90%:	45.0	44.7	44.4	44.1	43.8	43.4	42.9	42.4	42.0	41.4
100%:	40.2									

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
1/24/2020 8:57:42 AM	Calibration	114.0			

UltraSystems
environmental | management | planning

16431 Scientific Way
Irvine, CA 92618
949.788.4900

Noise Measurement Report Form – Part A

Date: 1/24/20 Day of Week: Fri Time: 11:08 am Project No. 7037

Monitoring Site ID: 5 Monitoring Site Address: 8300 Valley View

Measurement Taken By: Lisa Ahn of UltraSystems Environmental

Approximate Wind Speed: _____mph [km/hr] Approximate Wind Direction: From the _____

Approximate distance of sound level meter from receptor location: 0 ft

Approximate distance of sound level meter from construction site: _____

(Leave Blank for Baseline Ambient)

Receptor Land Use (Check One): ☒ Residential ☐ Institutional ☐ Comm./Ind. ☐ Recreational

Sound Level Meter: Make and Model: Quest SoundPro DL-1-1/3 Serial Number: _____

Meter Setting: ☒ A-Weighted Sound Level (SLOW) ☐ A-Weighted Sound Level (FAST)

Measurement Start Time: 11:08 am Measurement End Time: 11:23 am

Total Measurement Time: 15 mins Session File Name (e.g., S012): S141

Check the measurement purpose:

☒ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results (dB):

Measurement Type	Measured Levels	Noise Criteria Threshold	Exceedance
CALIBRATION	Pre: 114.0 Post: 114.0	n/a	n/a
$L_{eq\ (h)}$	Slow: 49.6 Fast:		
L_{max}	Slow: 59.1 Fast:	n/a	n/a
L_{90}	Slow: 43.4 Fast:	n/a	n/a

Field Notes:

1. Meter inside project boundary against wall
2. People talking min. 8
3. _____

Noise Monitor's Signature: Li Ahn Date: 1/24/20

UltraSystems
environmental | management | planning

16431 Scientific Way
Irvine, CA 92618
949.788.4900

Noise Measurement Report Form – Part B

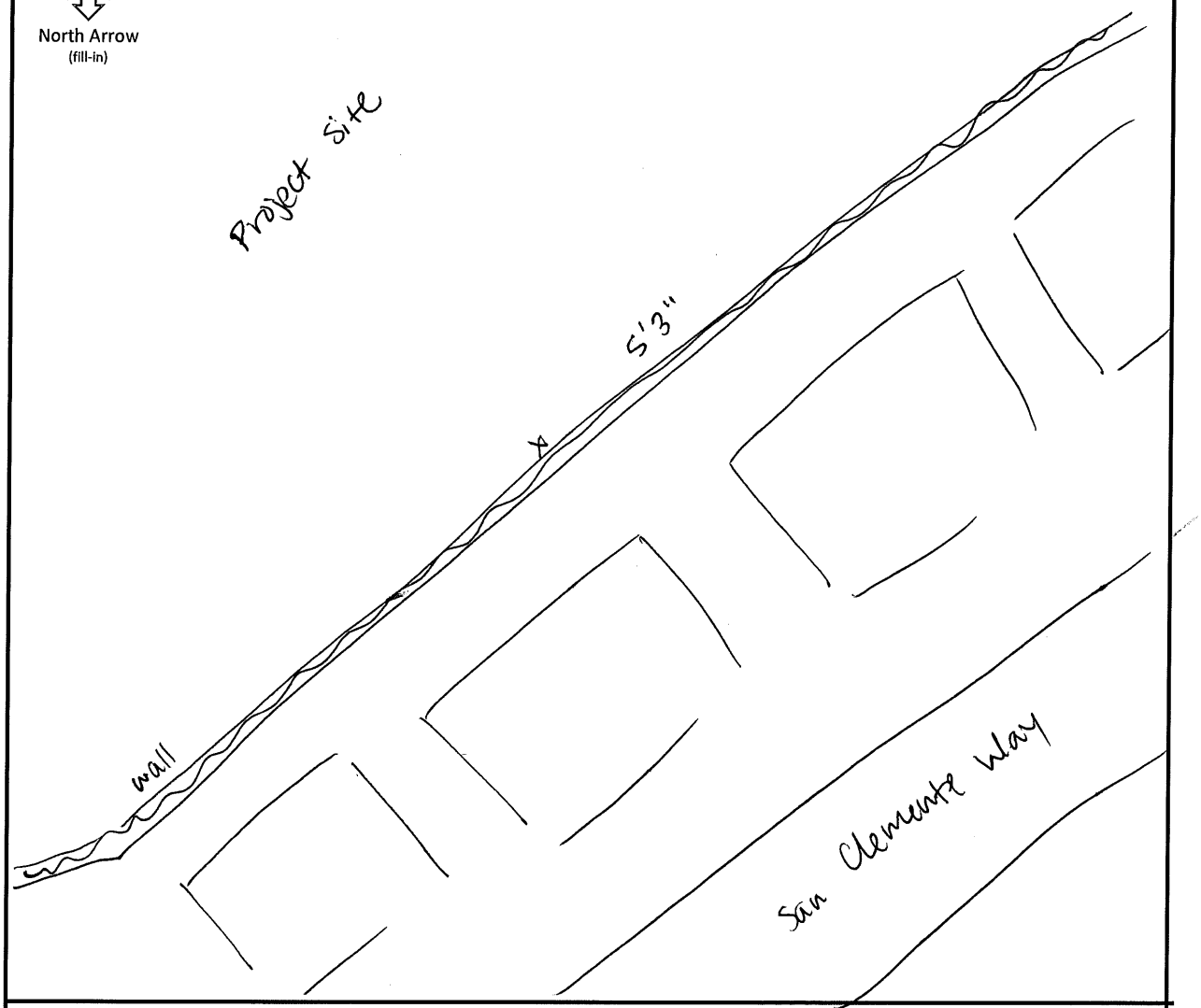
Date: 1/24/20 Day of Week: Fri Time: 11:08 am

Monitoring Site ID: S Monitoring Site Address: 8300 Valley View

Site Map

Plan View (Indicate site location, receptor location, meter location, distance in feet to landmarks, roadways, travel lane directions, geographical objects: trees, water, buildings, signs, store names, hydrants, power & telephone lines, manholes, etc.)

North Arrow
(fill-in)



Elevation View (Indicate terrain, roadway, height and location of receptor, meter, walls, barriers, buildings, etc.)

Latitude: N 33.84161°	Longitude: W 118.02741°	Elevation: 56ft

Session Report

1/27/2020

Information Panel

Name	S141_BLH080004_27012020_105318
Start Time	1/24/2020 11:09:05 AM
Stop Time	1/24/2020 11:24:05 AM
Device Name	BLH080004
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	49.6 dB	L90	1	43.4 dB
Lmax	1	59.1 dB	Lmin	1	39.3 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	49.5 dB	Lmax	2	63.7 dB
Lmin	2	37.9 dB			
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	FAST			

Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
30:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39:	0.00	0.00	0.00	0.01	0.03	0.06	0.02	0.05	0.03	0.05	0.25
40:	0.11	0.10	0.09	0.13	0.32	0.12	0.09	0.09	0.08	0.09	1.21

41:	0.04	0.11	0.17	0.11	0.19	0.18	0.21	0.20	0.36	0.36	1.93
42:	0.28	0.20	0.17	0.17	0.28	0.30	0.23	0.33	0.56	0.52	3.03
43:	0.49	0.47	0.50	0.76	0.80	0.73	0.63	0.57	0.58	0.65	6.18
44:	0.86	0.58	0.55	0.46	0.60	0.69	0.85	0.82	0.82	0.80	7.03
45:	0.81	0.78	0.68	0.94	0.95	0.88	0.68	0.60	0.66	0.78	7.76
46:	0.81	1.00	0.95	0.94	0.66	0.88	0.90	0.92	0.91	0.99	8.97
47:	1.08	0.95	1.03	0.89	0.82	0.86	0.99	1.01	1.39	1.23	10.25
48:	1.36	1.31	0.97	1.34	1.30	1.19	1.07	1.05	1.07	1.10	11.76
49:	1.03	1.10	1.35	1.09	1.06	0.97	1.03	1.13	1.03	1.00	10.78
50:	1.14	1.32	1.08	1.08	1.07	1.00	0.93	1.00	0.85	0.87	10.35
51:	1.02	0.86	0.51	0.80	0.50	0.58	0.56	0.57	0.56	0.53	6.48
52:	0.56	0.64	0.52	0.41	0.38	0.51	0.63	0.65	0.59	0.57	5.45
53:	0.46	0.25	0.30	0.45	0.23	0.29	0.28	0.40	0.33	0.30	3.30
54:	0.29	0.28	0.14	0.17	0.19	0.16	0.15	0.13	0.15	0.21	1.88
55:	0.16	0.17	0.19	0.21	0.15	0.16	0.24	0.18	0.21	0.18	1.85
56:	0.09	0.04	0.04	0.05	0.06	0.04	0.06	0.08	0.08	0.05	0.58
57:	0.06	0.11	0.04	0.05	0.04	0.05	0.04	0.08	0.04	0.07	0.57
58:	0.03	0.02	0.02	0.01	0.03	0.04	0.02	0.02	0.03	0.04	0.28
59:	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
60:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		56.8	55.6	55.1	54.5	53.9	53.6	53.3	53.0	52.8
10%:	52.6	52.5	52.2	52.0	51.9	51.7	51.5	51.3	51.2	51.0
20%:	50.9	50.8	50.7	50.6	50.5	50.4	50.3	50.2	50.1	50.0
30%:	49.9	49.8	49.7	49.6	49.5	49.5	49.3	49.3	49.2	49.1
40%:	49.0	48.9	48.8	48.7	48.6	48.5	48.4	48.4	48.3	48.2
50%:	48.1	48.0	48.0	47.9	47.8	47.7	47.7	47.6	47.5	47.3
60%:	47.2	47.1	47.0	46.9	46.8	46.7	46.6	46.5	46.4	46.2
70%:	46.1	46.0	45.9	45.8	45.7	45.5	45.4	45.3	45.2	45.0
80%:	44.9	44.8	44.6	44.5	44.4	44.2	44.0	43.9	43.8	43.6
90%:	43.4	43.3	43.2	43.0	42.8	42.5	42.1	41.7	41.3	40.4
100%:	39.2									

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
1/24/2020 8:57:42 AM	Calibration	114.0			

UltraSystems
environmental | management | planning

16431 Scientific Way
Irvine, CA 92618
949.788.4900

Noise Measurement Report Form – Part A

Date: 1/24/20 Day of Week: Fri Time: 11:33 am Project No. 7037

Monitoring Site ID: 6 Monitoring Site Address: 8300 Valley View

Measurement Taken By: Lisa Ann of UltraSystems Environmental

Approximate Wind Speed: _____mph [km/hr] Approximate Wind Direction: From the _____

Approximate distance of sound level meter from receptor location: 0 ft

Approximate distance of sound level meter from construction site: _____

(Leave Blank for Baseline Ambient)

Receptor Land Use (Check One): ☒ Residential ☐ Institutional ☐ Comm./Ind. ☐ Recreational

Sound Level Meter: Make and Model: Quest SoundPro DL-1-1/3 Serial Number: _____

Meter Setting: ☒ A-Weighted Sound Level (SLOW) ☐ A-Weighted Sound Level (FAST)

Measurement Start Time: 11:33 am Measurement End Time: 11:47 am

Total Measurement Time: 15 mins Session File Name (e.g., S012): S142

Check the measurement purpose:

☒ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results (dB):

Measurement Type	Measured Levels	Noise Criteria Threshold	Exceedance
CALIBRATION	Pre: 114.0 Post: 114.0	n/a	n/a
$L_{eq\ (h)}$	Slow: 44.8 Fast:		
L_{max}	Slow: 52.5 Fast:	n/a	n/a
L_{90}	Slow: 40.4 Fast:	n/a	n/a

Field Notes:

1. Meter inside project boundary against wall
2. 5' 3" brick wall on east side
3. _____

Noise Monitor's Signature: Lisa Ann Date: 1/24/20

UltraSystems
environmental | management | planning

16431 Scientific Way
Irvine, CA 92618
949.788.4900

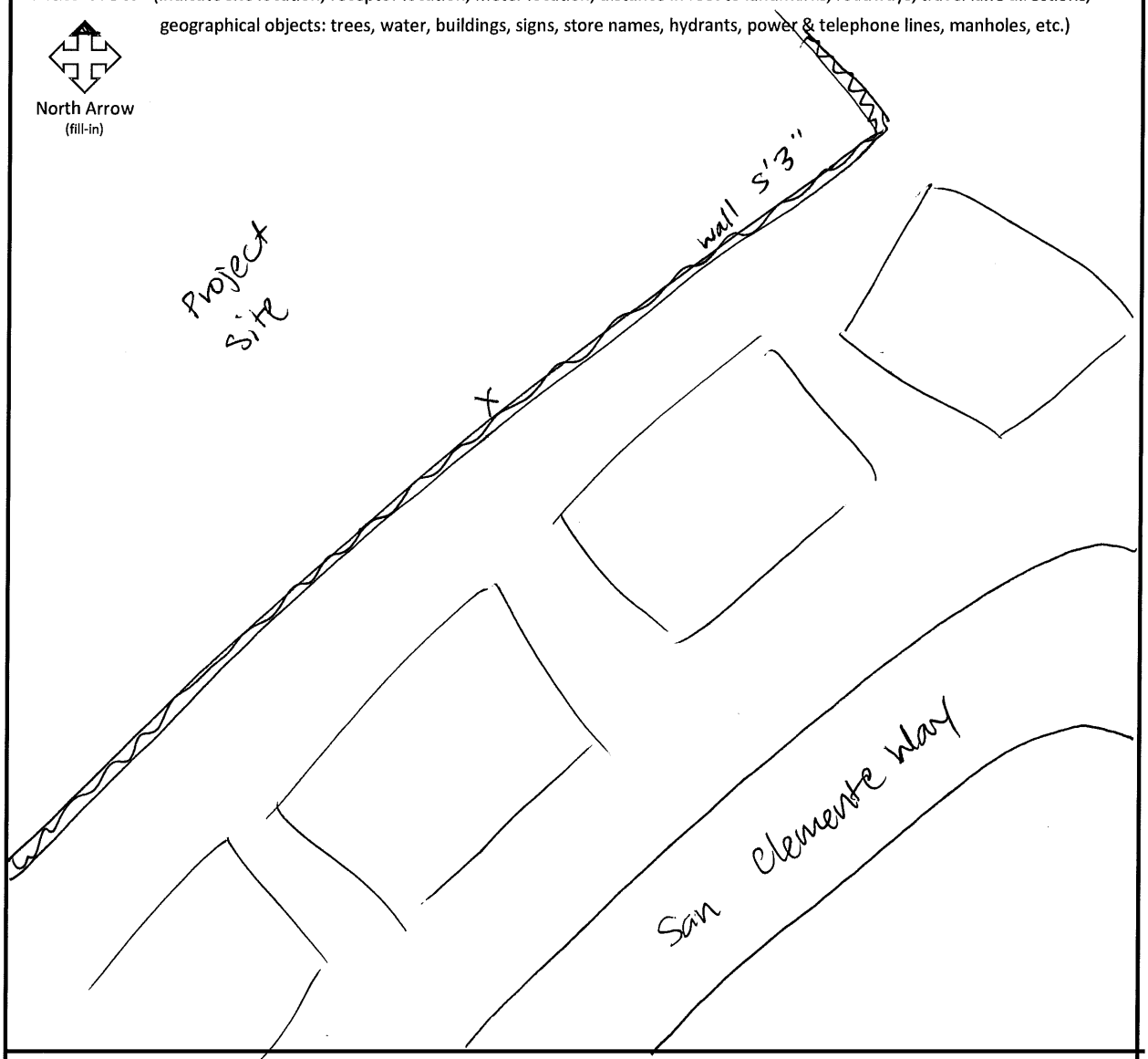
Noise Measurement Report Form – Part B

Date: 1/24/20 Day of Week: Fri Time: 11:33 am

Monitoring Site ID: 6 Monitoring Site Address: 8300 Valley View

Site Map

Plan View (Indicate site location, receptor location, meter location, distance in feet to landmarks, roadways, travel lane directions, geographical objects: trees, water, buildings, signs, store names, hydrants, power & telephone lines, manholes, etc.)



Elevation View (Indicate terrain, roadway, height and location of receptor, meter, walls, barriers, buildings, etc.)

Latitude: N 33.84209°	Longitude: W 118.02688°	Elevation: 46 ft

Session Report

1/27/2020

Information Panel

Name	S142_BLH080004_27012020_105319
Start Time	1/24/2020 11:33:24 AM
Stop Time	1/24/2020 11:48:24 AM
Device Name	BLH080004
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	44.7 dB	L90	1	40.4 dB
Lmax	1	52.5 dB	Lmin	1	37.9 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	44.7 dB	Lmax	2	55.1 dB
Lmin	2	36.8 dB			
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	FAST			

Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
30:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
38:	0.05	0.15	0.14	0.15	0.09	0.12	0.25	0.28	0.35	0.35	1.93
39:	0.33	0.14	0.18	0.23	0.49	0.64	0.74	0.73	0.60	0.61	4.69
40:	0.67	0.60	0.53	0.65	0.66	0.57	0.62	0.98	0.87	0.60	6.75

41:	0.49	0.69	0.49	0.45	0.64	0.97	1.15	1.31	1.19	1.43	8.81
42:	1.66	1.05	0.99	1.08	1.08	1.13	1.17	1.23	1.38	1.25	12.00
43:	1.47	1.37	1.43	1.21	1.30	1.42	1.01	0.97	0.88	0.87	11.92
44:	1.14	0.79	1.32	2.08	1.56	1.49	1.79	1.91	1.79	1.95	15.84
45:	2.21	1.83	1.72	2.09	1.84	1.57	1.77	1.49	1.06	1.23	16.82
46:	1.31	0.95	0.81	0.80	0.93	0.98	0.74	0.96	0.72	0.76	8.94
47:	0.78	0.92	0.84	0.86	0.71	0.81	0.48	0.47	0.50	0.38	6.74
48:	0.31	0.37	0.29	0.22	0.27	0.20	0.20	0.19	0.22	0.37	2.64
49:	0.28	0.13	0.11	0.11	0.09	0.08	0.10	0.11	0.22	0.21	1.43
50:	0.18	0.11	0.10	0.14	0.13	0.07	0.03	0.04	0.05	0.09	0.94
51:	0.16	0.05	0.02	0.03	0.06	0.05	0.04	0.04	0.01	0.01	0.47
52:	0.01	0.01	0.02	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.07
53:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
54:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
56:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
57:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
58:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
59:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		50.2	49.6	48.8	48.4	48.0	47.7	47.5	47.4	47.2
10%:	47.1	47.0	46.9	46.8	46.6	46.5	46.4	46.3	46.2	46.0
20%:	45.9	45.9	45.8	45.7	45.6	45.6	45.5	45.4	45.4	45.3
30%:	45.3	45.2	45.2	45.1	45.1	45.0	44.9	44.9	44.9	44.8
40%:	44.8	44.7	44.6	44.6	44.5	44.5	44.4	44.3	44.3	44.2
50%:	44.2	44.1	44.0	43.9	43.8	43.7	43.6	43.5	43.4	43.4
60%:	43.3	43.2	43.1	43.0	43.0	42.9	42.8	42.8	42.7	42.6
70%:	42.5	42.4	42.3	42.3	42.2	42.1	42.0	41.9	41.8	41.8
80%:	41.7	41.6	41.5	41.4	41.3	41.1	41.0	40.8	40.7	40.6
90%:	40.4	40.2	40.1	39.9	39.7	39.6	39.5	39.3	38.9	38.6
100%:	37.8									

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
1/24/2020 8:57:42 AM	Calibration	114.0			

UltraSystems
environmental | management | planning

16431 Scientific Way
Irvine, CA 92618
949.788.4900

Noise Measurement Report Form – Part A

Date: 1/24/20 Day of Week: Fri Time: 11:52 Project No. 7037

Monitoring Site ID: 7 Monitoring Site Address: 8300 Valley View

Measurement Taken By: Lisa Ahn of UltraSystems Environmental

Approximate Wind Speed: _____mph [km/hr] Approximate Wind Direction: From the _____

Approximate distance of sound level meter from receptor location: 0 ft

Approximate distance of sound level meter from construction site: _____
(Leave Blank for Baseline Ambient)

Receptor Land Use (Check One): ☒ Residential ☐ Institutional ☐ Comm./Ind. ☐ Recreational

Sound Level Meter: Make and Model: Quest SoundPro DL-1-1/3 Serial Number: _____

Meter Setting: ☒ A-Weighted Sound Level (SLOW) ☐ A-Weighted Sound Level (FAST)

Measurement Start Time: 11:52 am Measurement End Time: 12:07 pm

Total Measurement Time: 15 mins Session File Name (e.g., S012): S143

Check the measurement purpose:

☒ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results (dB):

Measurement Type	Measured Levels	Noise Criteria Threshold	Exceedance
CALIBRATION	Pre: 114.0 Post: 114.0	n/a	n/a
$L_{eq\ (h)}$	Slow: 46.6 Fast:		
L_{max}	Slow: 58.1 Fast:	n/a	n/a
L_{90}	Slow: 41.8 Fast:	n/a	n/a

Field Notes:

1. Meter inside project boundary against wall
2. 5'9" wall along N side
3. _____

Noise Monitor's Signature: Li An Date: 1/24/20

UltraSystems
environmental | management | planning

16431 Scientific Way
Irvine, CA 92618
949.788.4900

Noise Measurement Report Form – Part B

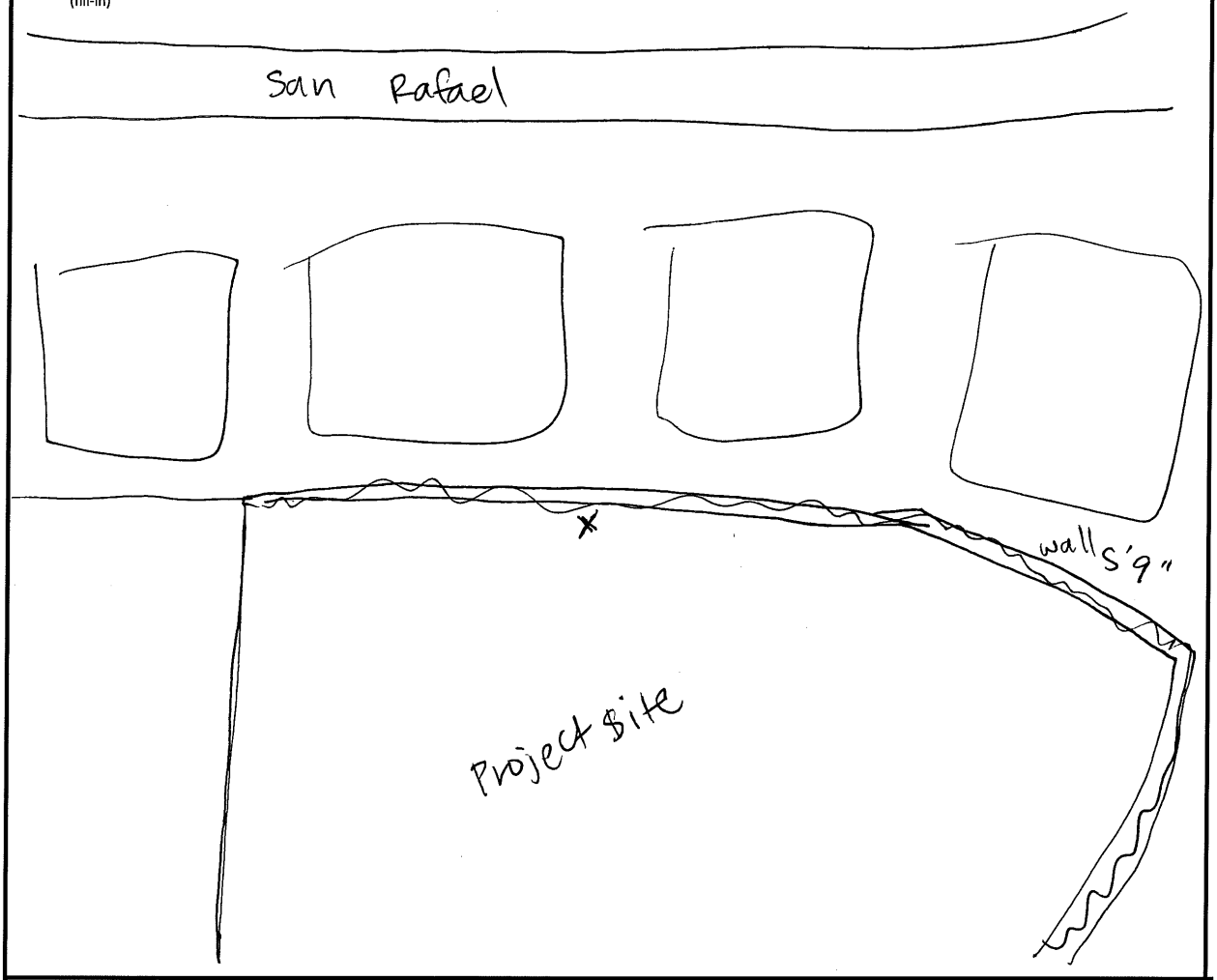
Date: 1/24/20 Day of Week: Fri Time: 11:52 am

Monitoring Site ID: 7 Monitoring Site Address: 8300 Valley View

Site Map

Plan View (Indicate site location, receptor location, meter location, distance in feet to landmarks, roadways, travel lane directions, geographical objects: trees, water, buildings, signs, store names, hydrants, power & telephone lines, manholes, etc.)

North Arrow
(fill-in)



Elevation View (Indicate terrain, roadway, height and location of receptor, meter, walls, barriers, buildings, etc.)

Latitude: N 33.84264°	Longitude: W 118.02700°	Elevation:

Session Report

1/27/2020

Information Panel

Name	S143_BLH080004_27012020_105321
Start Time	1/24/2020 11:52:50 AM
Stop Time	1/24/2020 12:07:50 PM
Device Name	BLH080004
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	46.5 dB	L90	1	41.8 dB
Lmax	1	58.1 dB	Lmin	1	39.5 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	46.5 dB	Lmax	2	60.7 dB
Lmin	2	38.5 dB			
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	FAST			

Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
30:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39:	0.00	0.00	0.00	0.00	0.00	0.06	0.06	0.18	0.25	0.40	0.94
40:	0.16	0.17	0.20	0.28	0.30	0.28	0.26	0.55	0.49	0.45	3.14

41:	0.52	0.52	0.54	0.55	0.43	0.47	0.63	0.56	0.95	1.14	6.30
42:	0.92	0.94	0.95	0.85	0.74	1.07	1.48	0.93	1.21	1.35	10.44
43:	1.17	1.13	1.33	1.25	0.99	1.02	1.16	1.29	1.23	1.12	11.68
44:	1.13	1.40	1.14	1.25	1.11	1.05	1.41	1.45	1.16	1.30	12.40
45:	1.35	1.28	1.14	1.48	1.52	1.28	1.19	1.29	1.09	1.20	12.81
46:	1.18	1.39	1.29	0.95	0.97	1.10	0.89	1.01	1.18	1.15	11.11
47:	1.20	1.38	1.62	1.60	1.66	1.68	1.12	1.16	1.33	1.22	13.98
48:	1.46	1.23	0.71	0.98	0.94	0.76	0.62	0.68	0.55	0.54	8.48
49:	0.34	0.32	0.38	0.46	0.50	0.35	0.30	0.43	0.34	0.28	3.70
50:	0.21	0.12	0.14	0.16	0.18	0.15	0.12	0.16	0.12	0.19	1.55
51:	0.16	0.19	0.13	0.15	0.16	0.18	0.15	0.09	0.09	0.09	1.40
52:	0.04	0.03	0.03	0.02	0.03	0.04	0.05	0.06	0.03	0.02	0.35
53:	0.04	0.03	0.03	0.03	0.02	0.01	0.02	0.03	0.03	0.05	0.29
54:	0.04	0.05	0.02	0.03	0.08	0.07	0.12	0.10	0.10	0.10	0.71
55:	0.04	0.03	0.06	0.04	0.03	0.03	0.02	0.03	0.05	0.05	0.38
56:	0.05	0.01	0.01	0.01	0.02	0.04	0.02	0.01	0.01	0.01	0.18
57:	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.03	0.02	0.10
58:	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
59:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		54.6	52.0	51.1	50.5	49.9	49.6	49.3	49.1	48.8
10%:	48.6	48.5	48.3	48.2	48.1	48.0	47.9	47.9	47.8	47.7
20%:	47.6	47.5	47.5	47.4	47.3	47.3	47.2	47.1	47.1	47.0
30%:	46.9	46.9	46.8	46.7	46.6	46.5	46.4	46.3	46.2	46.1
40%:	46.0	46.0	45.9	45.8	45.7	45.6	45.5	45.5	45.4	45.3
50%:	45.2	45.2	45.1	45.0	44.9	44.9	44.8	44.7	44.6	44.5
60%:	44.5	44.4	44.3	44.2	44.1	44.0	44.0	43.9	43.8	43.7
70%:	43.6	43.6	43.5	43.4	43.3	43.2	43.1	43.0	43.0	42.9
80%:	42.8	42.7	42.6	42.5	42.5	42.4	42.2	42.1	42.0	41.9
90%:	41.8	41.7	41.6	41.4	41.2	41.0	40.8	40.6	40.3	39.9
100%:	39.4									

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
1/24/2020 8:57:42 AM	Calibration	114.0			

UltraSystems
environmental | management | planning

16431 Scientific Way
Irvine, CA 92618
949.788.4900

Noise Measurement Report Form – Part A

Date: 1/24/20 Day of Week: Fri Time: 12:13pm Project No. 7037

Monitoring Site ID: 8 Monitoring Site Address: 8246 Valley View

Measurement Taken By: Lisa Ahn of UltraSystems Environmental

Approximate Wind Speed: _____mph [km/hr] Approximate Wind Direction: From the _____

Approximate distance of sound level meter from receptor location: 0 ft

Approximate distance of sound level meter from construction site: _____
(Leave Blank for Baseline Ambient)

Receptor Land Use (Check One): ☒ Residential ☐ Institutional ☐ Comm./Ind. ☐ Recreational

Sound Level Meter: Make and Model: Quest SoundPro DL-1-1/3 Serial Number: _____

Meter Setting: ☒ A-Weighted Sound Level (SLOW) ☐ A-Weighted Sound Level (FAST)

Measurement Start Time: 12:13 pm Measurement End Time: 12:28 pm

Total Measurement Time: _____ Session File Name (e.g., S012): S144

Check the measurement purpose:

☒ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results (dB):

Measurement Type	Measured Levels	Noise Criteria Threshold	Exceedance
CALIBRATION	Pre: 114.0 Post: 114.0	n/a	n/a
$L_{eq\ (h)}$	Slow: 60.5 Fast:		
L_{max}	Slow: 76.7 Fast:	n/a	n/a
L_{90}	Slow: 50.0 Fast:	n/a	n/a

Field Notes:

1. Meter inside project boundary against N wall
2. 5' 9" wall along N side
3. _____

Noise Monitor's Signature: _____ Date: 1/24/20

UltraSystems
environmental | management | planning

16431 Scientific Way
Irvine, CA 92618
949.788.4900

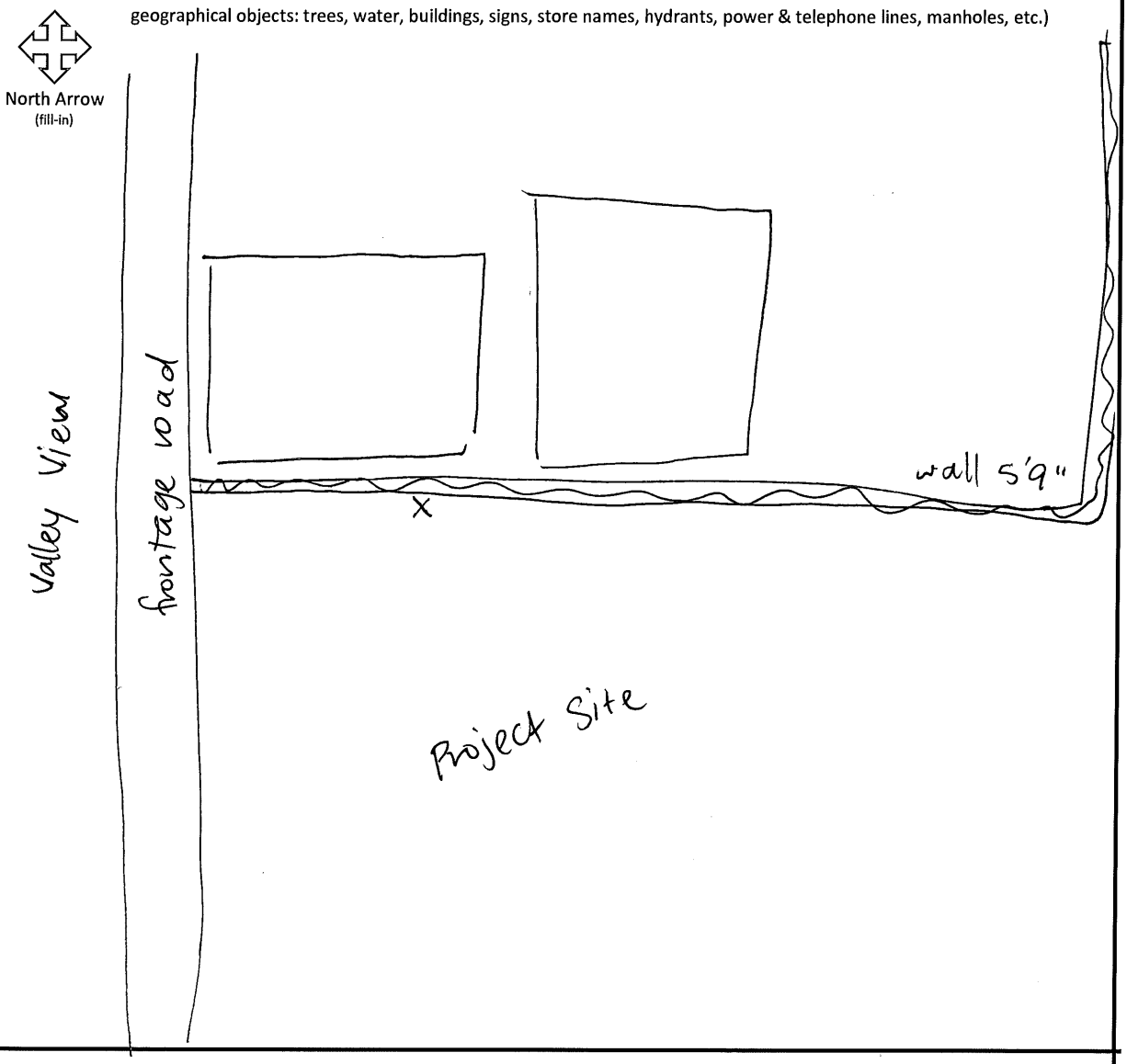
Noise Measurement Report Form – Part B

Date: 1/24/20 Day of Week: Fri Time: 12:13 pm

Monitoring Site ID: 8 Monitoring Site Address: ~~8426~~ 8246 Valley View
VA

Site Map

Plan View (Indicate site location, receptor location, meter location, distance in feet to landmarks, roadways, travel lane directions, geographical objects: trees, water, buildings, signs, store names, hydrants, power & telephone lines, manholes, etc.)



Elevation View (Indicate terrain, roadway, height and location of receptor, meter, walls, barriers, buildings, etc.)

Latitude: N 33.84233°	Longitude: W 118.02799°	Elevation: 437ft

Session Report

1/27/2020

Information Panel

Name	S144_BLH080004_27012020_105323
Start Time	1/24/2020 12:13:55 PM
Stop Time	1/24/2020 12:28:55 PM
Device Name	BLH080004
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	60.5 dB	L90	1	50 dB
Lmax	1	76.7 dB	Lmin	1	40.3 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	60.4 dB	Lmax	2	79.6 dB
Lmin	2	39 dB			
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	FAST			

Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
40:	0.00	0.00	0.00	0.03	0.04	0.04	0.21	0.12	0.05	0.06	0.55
41:	0.08	0.04	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.02	0.29
42:	0.03	0.02	0.06	0.10	0.14	0.13	0.05	0.09	0.10	0.09	0.80
43:	0.04	0.04	0.10	0.14	0.07	0.06	0.05	0.06	0.06	0.06	0.67
44:	0.05	0.05	0.05	0.06	0.09	0.13	0.16	0.10	0.14	0.14	0.98
45:	0.21	0.14	0.09	0.07	0.10	0.10	0.09	0.07	0.06	0.09	1.03
46:	0.10	0.08	0.06	0.08	0.07	0.11	0.09	0.09	0.10	0.13	0.91
47:	0.12	0.15	0.11	0.09	0.08	0.10	0.11	0.07	0.10	0.16	1.09
48:	0.16	0.14	0.12	0.07	0.08	0.12	0.20	0.33	0.31	0.23	1.75
49:	0.19	0.20	0.17	0.18	0.14	0.14	0.19	0.14	0.14	0.18	1.68
50:	0.19	0.18	0.23	0.32	0.38	0.36	0.23	0.28	0.21	0.26	2.64

51:	0.29	0.25	0.11	0.25	0.33	0.40	0.30	0.48	0.27	0.27	2.96
52:	0.27	0.23	0.28	0.25	0.32	0.31	0.52	0.58	0.54	0.45	3.76
53:	0.58	0.47	0.44	0.41	0.46	0.56	0.44	0.57	0.66	0.65	5.24
54:	0.62	0.70	0.34	0.52	0.51	0.72	0.58	0.68	0.87	0.67	6.21
55:	0.65	0.58	0.45	0.44	0.48	0.52	0.54	0.45	0.42	0.47	4.99
56:	0.35	0.45	0.52	0.56	0.51	0.59	0.51	0.48	0.45	0.41	4.85
57:	0.61	0.64	0.45	0.58	0.73	0.66	0.67	0.64	0.69	0.70	6.37
58:	0.68	0.57	0.82	0.70	0.76	0.81	0.77	0.91	1.00	0.83	7.84
59:	0.81	0.68	0.69	0.68	0.63	0.65	0.66	0.84	0.86	0.95	7.45
60:	0.91	1.00	0.77	1.04	1.17	0.92	0.83	0.94	1.13	0.74	9.46
61:	0.64	0.41	0.52	0.43	0.52	0.54	0.63	0.68	0.72	0.69	5.79
62:	0.60	0.77	0.94	1.03	0.75	0.96	0.88	0.78	0.81	0.68	8.21
63:	0.63	0.79	0.49	0.58	0.59	0.57	0.66	0.57	0.49	0.50	5.87
64:	0.58	0.53	0.55	0.49	0.48	0.45	0.32	0.19	0.23	0.20	4.01
65:	0.25	0.24	0.30	0.16	0.19	0.24	0.22	0.14	0.16	0.14	2.05
66:	0.13	0.16	0.10	0.08	0.05	0.06	0.04	0.04	0.05	0.03	0.74
67:	0.04	0.04	0.04	0.04	0.04	0.05	0.06	0.05	0.05	0.09	0.50
68:	0.03	0.04	0.06	0.03	0.03	0.04	0.05	0.07	0.07	0.06	0.48
69:	0.02	0.01	0.02	0.02	0.02	0.01	0.02	0.01	0.02	0.01	0.16
70:	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.13
71:	0.01	0.01	0.02	0.01	0.01	0.01	0.02	0.01	0.02	0.01	0.14
72:	0.02	0.02	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.03	0.17
73:	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.00	0.07
74:	0.01	0.01	0.00	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.05
75:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.06
76:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.06
77:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
78:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
79:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		68.6	66.4	65.5	65.1	64.7	64.3	64.1	64.0	63.8
10%:	63.6	63.4	63.2	63.1	62.9	62.8	62.6	62.5	62.4	62.3
20%:	62.2	62.1	62.0	61.8	61.7	61.5	61.3	61.1	60.9	60.8
30%:	60.7	60.6	60.5	60.4	60.3	60.2	60.1	60.0	59.8	59.7

40%:	59.6	59.5	59.3	59.2	59.0	58.9	58.8	58.7	58.6	58.4
50%:	58.3	58.2	58.0	57.9	57.7	57.6	57.4	57.3	57.1	56.9
60%:	56.8	56.5	56.4	56.2	56.0	55.7	55.5	55.3	55.1	54.9
70%:	54.8	54.6	54.5	54.3	54.2	54.0	53.8	53.6	53.4	53.2
80%:	53.0	52.8	52.6	52.4	52.1	51.7	51.4	51.1	50.7	50.3
90%:	50.0	49.4	48.8	48.5	47.6	46.7	45.5	44.7	43.3	42.2
100%:	40.2									

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
1/24/2020 8:57:42 AM	Calibration	114.0			

UltraSystems
environmental | management | planning

16431 Scientific Way
Irvine, CA 92618
949.788.4900

Noise Measurement Report Form – Part A

Date: 1/24/20 Day of Week: Fri Time: 2:03 pm Project No. 7037

Monitoring Site ID: 9 Monitoring Site Address: 6062 San Rafael Dr

Measurement Taken By: Lisa Ahn of UltraSystems Environmental

Approximate Wind Speed: _____mph [km/hr] Approximate Wind Direction: From the _____

Approximate distance of sound level meter from receptor location: 0 ft

Approximate distance of sound level meter from construction site: _____
(Leave Blank for Baseline Ambient)

Receptor Land Use (Check One): ☒ Residential ☐ Institutional ☐ Comm./Ind. ☐ Recreational

Sound Level Meter: Make and Model: Quest SoundPro DL-1-1/3 Serial Number: _____

Meter Setting: ☒ A-Weighted Sound Level (SLOW) ☐ A-Weighted Sound Level (FAST)

Measurement Start Time: 2:03 pm Measurement End Time: 2:18 pm

Total Measurement Time: 15 mins Session File Name (e.g., S012): S145

Check the measurement purpose:

☒ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results (dB):

Measurement Type	Measured Levels	Noise Criteria Threshold	Exceedance
CALIBRATION	Pre: 114.0 Post: 114.0	n/a	n/a
$L_{eq\ (h)}$	Slow: 55.0 Fast:		
L_{max}	Slow: 66.4 Fast:	n/a	n/a
L_{90}	Slow: 47.6 Fast:	n/a	n/a

Field Notes:

1. Siren at min 4
2. _____
3. _____

Noise Monitor's Signature: L. Ahn Date: 1/24/20

UltraSystems
environmental | management | planning

16431 Scientific Way
Irvine, CA 92618
949.788.4900

Noise Measurement Report Form – Part B

Date: 1/24/20 Day of Week: Fri Time: 2:03 pm

Monitoring Site ID: 9 Monitoring Site Address: 6062 San Rafael Dr

Site Map

Plan View (Indicate site location, receptor location, meter location, distance in feet to landmarks, roadways, travel lane directions, geographical objects: trees, water, buildings, signs, store names, hydrants, power & telephone lines, manholes, etc.)

North Arrow
(fill-in)

See Monitoring Site ID 1

Elevation View (Indicate terrain, roadway, height and location of receptor, meter, walls, barriers, buildings, etc.)

Latitude:	Longitude:	Elevation:

Session Report

1/27/2020

Information Panel

Name	S145_BLH080004_27012020_105325
Start Time	1/24/2020 2:03:17 PM
Stop Time	1/24/2020 2:18:17 PM
Device Name	BLH080004
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	54.9 dB	L90	1	47.6 dB
Lmax	1	66.4 dB	Lmin	1	47 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	54.8 dB	Lmax	2	70.1 dB
Lmin	2	43.3 dB			
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	FAST			

Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
40:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
43:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
46:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
47:	0.12	1.03	1.28	1.64	1.06	0.88	1.73	3.02	2.61	1.41	14.77
48:	1.32	1.90	1.25	1.51	1.21	1.04	1.10	1.07	1.38	1.13	12.92
49:	1.28	1.69	1.35	1.05	1.16	1.08	1.34	1.31	1.12	1.24	12.61
50:	1.31	1.24	1.19	1.06	1.18	1.33	1.30	1.36	1.51	1.43	12.91

51:	1.51	1.39	0.73	0.86	0.98	0.90	0.86	0.99	0.81	0.74	9.77
52:	0.72	0.67	0.75	0.81	0.79	0.69	0.59	0.44	0.43	0.45	6.34
53:	0.46	0.54	0.60	0.52	0.44	0.35	0.38	0.40	0.41	0.38	4.49
54:	0.44	0.56	0.34	0.38	0.44	0.38	0.38	0.36	0.31	0.38	3.97
55:	0.36	0.36	0.33	0.28	0.28	0.31	0.35	0.31	0.31	0.31	3.20
56:	0.28	0.31	0.25	0.23	0.23	0.28	0.32	0.27	0.29	0.26	2.72
57:	0.28	0.28	0.17	0.25	0.24	0.28	0.31	0.39	0.41	0.33	2.94
58:	0.31	0.31	0.22	0.21	0.23	0.21	0.21	0.23	0.23	0.23	2.39
59:	0.23	0.28	0.21	0.21	0.23	0.23	0.25	0.27	0.29	0.24	2.43
60:	0.22	0.21	0.16	0.20	0.21	0.22	0.20	0.18	0.15	0.15	1.90
61:	0.19	0.15	0.17	0.19	0.22	0.22	0.22	0.20	0.23	0.21	1.98
62:	0.26	0.23	0.26	0.30	0.30	0.21	0.24	0.17	0.24	0.22	2.41
63:	0.17	0.16	0.11	0.13	0.12	0.13	0.18	0.11	0.10	0.12	1.34
64:	0.12	0.09	0.15	0.06	0.04	0.03	0.02	0.02	0.02	0.02	0.57
65:	0.02	0.02	0.01	0.02	0.01	0.02	0.02	0.03	0.03	0.04	0.21
66:	0.03	0.02	0.03	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.13
67:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		63.8	63.0	62.5	62.1	61.7	61.2	60.6	60.1	59.7
10%:	59.3	58.8	58.4	58.0	57.7	57.4	57.0	56.6	56.2	55.9
20%:	55.5	55.2	54.9	54.6	54.4	54.1	53.9	53.6	53.4	53.2
30%:	53.0	52.8	52.5	52.4	52.3	52.1	52.0	51.9	51.7	51.6
40%:	51.5	51.4	51.3	51.2	51.0	51.0	50.9	50.8	50.8	50.7
50%:	50.6	50.6	50.5	50.4	50.3	50.2	50.1	50.1	50.0	49.9
60%:	49.8	49.7	49.7	49.6	49.5	49.4	49.3	49.2	49.1	49.1
70%:	49.0	49.0	48.9	48.8	48.7	48.6	48.5	48.4	48.4	48.3
80%:	48.2	48.1	48.1	48.0	47.9	47.9	47.8	47.7	47.7	47.7
90%:	47.6	47.6	47.6	47.5	47.4	47.3	47.2	47.2	47.1	47.0
100%:	46.9									

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
1/24/2020 2:02:10 PM	Calibration	114.0			

UltraSystems
environmental | management | planning

16431 Scientific Way
Irvine, CA 92618
949.788.4900

Noise Measurement Report Form – Part A

Date: 1/24/20 Day of Week: Fri Time: 2:24pm Project No. 7037

Monitoring Site ID: 10 Monitoring Site Address: 8427 San Clemente Way

Measurement Taken By: Lisa Ahn of UltraSystems Environmental

Approximate Wind Speed: _____mph [km/hr] Approximate Wind Direction: From the _____

Approximate distance of sound level meter from receptor location: 0 ft

Approximate distance of sound level meter from construction site: _____

(Leave Blank for Baseline Ambient)

Receptor Land Use (Check One): ☒ Residential ☐ Institutional ☐ Comm./Ind. ☐ Recreational

Sound Level Meter: Make and Model: Quest SoundPro DL-1-1/3 Serial Number: _____

Meter Setting: ☒ A-Weighted Sound Level (SLOW) ☐ A-Weighted Sound Level (FAST)

Measurement Start Time: 2:24 pm Measurement End Time: 2:39 pm

Total Measurement Time: 15 mins Session File Name (e.g., S012): S146

Check the measurement purpose:

☒ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results (dB):

Measurement Type	Measured Levels	Noise Criteria Threshold	Exceedance
CALIBRATION	Pre: 114.0 Post: 114.0	n/a	n/a
$L_{eq\ (h)}$	Slow: 59.2 Fast:		
L_{max}	Slow: 60.4 Fast:	n/a	n/a
L_{90}	Slow: 43.0 Fast:	n/a	n/a

Field Notes:

1. Siren at min. 6
2. _____
3. _____

Noise Monitor's Signature: Li Ahn Date: 1/24/20

UltraSystems
environmental | management | planning

16431 Scientific Way
Irvine, CA 92618
949.788.4900

Noise Measurement Report Form – Part B

Date: 1/24/20 Day of Week: Fri Time: _____

Monitoring Site ID: 10 Monitoring Site Address: 8427 San Clemente Way

Site Map

Plan View (Indicate site location, receptor location, meter location, distance in feet to landmarks, roadways, travel lane directions, geographical objects: trees, water, buildings, signs, store names, hydrants, power & telephone lines, manholes, etc.)

North Arrow
(fill-in)

See Monitoring Site ID 2

Elevation View (Indicate terrain, roadway, height and location of receptor, meter, walls, barriers, buildings, etc.)

Latitude:	Longitude:	Elevation:

Session Report

1/27/2020

Information Panel

Name	S146_BLH080004_27012020_105327
Start Time	1/24/2020 2:25:18 PM
Stop Time	1/24/2020 2:40:18 PM
Device Name	BLH080004
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	49.1 dB	L90	1	43 dB
Lmax	1	60.4 dB	Lmin	1	41.6 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	49.1 dB	Lmax	2	62.4 dB
Lmin	2	40.6 dB			
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	FAST			

Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
40:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41:	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.13	0.09	0.22	0.46
42:	0.53	0.35	0.45	0.41	0.71	0.74	0.58	0.79	1.40	1.63	7.59
43:	1.66	1.46	1.57	1.32	0.85	0.93	1.08	0.83	1.01	1.13	11.85
44:	1.28	1.25	1.33	1.13	1.55	1.91	1.63	1.74	2.14	2.09	16.05
45:	1.92	1.05	0.99	1.15	1.39	1.80	1.84	2.24	2.16	1.69	16.21
46:	1.84	1.81	1.72	1.39	1.31	0.88	0.96	1.07	0.84	0.95	12.76
47:	0.93	0.69	0.72	0.70	0.73	0.91	0.85	0.64	0.47	0.37	6.99
48:	0.37	0.48	0.29	0.43	0.63	0.60	0.65	0.50	0.38	0.28	4.61
49:	0.36	0.34	0.34	0.28	0.40	0.40	0.54	0.49	0.42	0.58	4.16
50:	0.42	0.53	0.78	0.48	0.55	0.59	0.38	0.51	0.41	0.39	5.04

51:	0.41	0.53	0.27	0.45	0.49	0.35	0.40	0.43	0.41	0.47	4.21
52:	0.28	0.27	0.34	0.32	0.22	0.19	0.19	0.15	0.19	0.19	2.32
53:	0.13	0.10	0.11	0.10	0.09	0.12	0.15	0.14	0.13	0.16	1.22
54:	0.11	0.14	0.11	0.23	0.22	0.15	0.14	0.16	0.15	0.11	1.53
55:	0.09	0.09	0.10	0.10	0.09	0.08	0.06	0.07	0.07	0.08	0.82
56:	0.10	0.13	0.16	0.12	0.15	0.12	0.11	0.15	0.19	0.15	1.38
57:	0.14	0.12	0.06	0.08	0.08	0.11	0.14	0.08	0.07	0.10	0.97
58:	0.12	0.09	0.10	0.06	0.09	0.06	0.06	0.09	0.08	0.08	0.82
59:	0.09	0.09	0.08	0.05	0.08	0.09	0.05	0.04	0.04	0.06	0.68
60:	0.08	0.08	0.06	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.31
61:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
62:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
63:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
64:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
65:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
66:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		58.8	57.6	56.7	56.0	54.8	54.2	53.5	52.7	52.2
10%:	51.9	51.6	51.4	51.2	50.9	50.7	50.4	50.3	50.1	49.9
20%:	49.7	49.5	49.3	49.0	48.7	48.5	48.3	48.1	47.9	47.6
30%:	47.5	47.4	47.3	47.1	47.0	46.9	46.8	46.6	46.5	46.4
40%:	46.3	46.3	46.2	46.1	46.1	46.0	46.0	45.9	45.8	45.8
50%:	45.7	45.7	45.6	45.6	45.5	45.5	45.4	45.4	45.3	45.2
60%:	45.2	45.1	45.0	44.9	44.9	44.8	44.8	44.7	44.7	44.6
70%:	44.6	44.5	44.4	44.4	44.3	44.3	44.2	44.1	44.0	43.9
80%:	43.9	43.8	43.7	43.6	43.5	43.4	43.2	43.2	43.1	43.0
90%:	43.0	42.9	42.8	42.8	42.7	42.6	42.5	42.4	42.2	42.0
100%:	41.5									

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
1/24/2020 2:02:10 PM	Calibration	114.0			

UltraSystems
environmental | management | planning

16431 Scientific Way
Irvine, CA 92618
949.788.4900

Noise Measurement Report Form – Part A

Date: 1/24/20 Day of Week: Fri Time: 2:41 pm Project No. 7037

Monitoring Site ID: 11 Monitoring Site Address: 8443 San Clemente Way

Measurement Taken By: Lisa Ahn of UltraSystems Environmental

Approximate Wind Speed: _____mph [km/hr] Approximate Wind Direction: From the _____

Approximate distance of sound level meter from receptor location: 0 ft

Approximate distance of sound level meter from construction site: _____

(Leave Blank for Baseline Ambient)

Receptor Land Use (Check One): ☒ Residential ☐ Institutional ☐ Comm./Ind. ☐ Recreational

Sound Level Meter: Make and Model: Quest SoundPro DL-1-1/3 Serial Number: _____

Meter Setting: ☒ A-Weighted Sound Level (SLOW) ☐ A-Weighted Sound Level (FAST)

Measurement Start Time: 2:41 pm Measurement End Time: 2:56 pm

Total Measurement Time: 15 mins Session File Name (e.g., S012): S147

Check the measurement purpose:

☒ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results (dB):

Measurement Type	Measured Levels	Noise Criteria Threshold	Exceedance
CALIBRATION	Pre: 114.0 Post: 114.0	n/a	n/a
$L_{eq\ (h)}$	Slow: 50.3 Fast:		
L_{max}	Slow: 64.7 Fast:	n/a	n/a
L_{90}	Slow: 45.3 Fast:	n/a	n/a

Field Notes:

1. _____
2. _____
3. _____

Noise Monitor's Signature: Li Ahn Date: 1/24/20

UltraSystems
environmental | management | planning

16431 Scientific Way
Irvine, CA 92618
949.788.4900

Noise Measurement Report Form – Part B

Date: 1/24/20 Day of Week: Fri Time: _____

Monitoring Site ID: 11 Monitoring Site Address: 8443 San Clemente Way

Site Map

Plan View (Indicate site location, receptor location, meter location, distance in feet to landmarks, roadways, travel lane directions, geographical objects: trees, water, buildings, signs, store names, hydrants, power & telephone lines, manholes, etc.)

North Arrow
(fill-in)

See Monitoring Site ID 3

Elevation View (Indicate terrain, roadway, height and location of receptor, meter, walls, barriers, buildings, etc.)

Latitude:	Longitude:	Elevation:

Session Report

1/27/2020

Information Panel

Name	S147_BLH080004_27012020_105329
Start Time	1/24/2020 2:42:23 PM
Stop Time	1/24/2020 2:57:23 PM
Device Name	BLH080004
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	50.3 dB	L90	1	45.3 dB
Lmax	1	64.7 dB	Lmin	1	42.9 dB
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Leq	2	50.2 dB	Lmax	2	68.7 dB
Lmin	2	41.9 dB			
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	FAST			

Statistics Table

dB:	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	%
40:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02
43:	0.10	0.19	0.15	0.25	0.35	0.34	0.23	0.36	0.19	0.15	2.33
44:	0.22	0.21	0.13	0.09	0.37	0.80	0.52	0.89	0.71	0.51	4.45
45:	0.93	0.76	0.51	0.72	0.89	0.71	0.97	0.95	0.86	1.18	8.48
46:	1.22	0.99	1.16	1.14	1.46	1.74	1.33	1.60	2.12	1.90	14.66
47:	1.59	1.95	2.02	2.64	2.58	2.74	3.13	2.45	2.45	2.44	23.97
48:	2.32	2.03	1.52	2.01	1.49	1.35	1.02	1.05	0.89	0.84	14.53
49:	0.86	0.94	0.97	0.90	0.81	0.93	0.75	0.76	0.67	0.65	8.24
50:	0.49	0.37	0.40	0.40	0.39	0.39	0.43	0.56	0.67	0.74	4.82

51:	0.73	0.83	0.40	0.71	0.49	0.40	0.37	0.55	0.70	0.75	5.93
52:	0.68	0.77	0.55	0.46	0.39	0.44	0.52	0.36	0.34	0.22	4.73
53:	0.25	0.19	0.17	0.18	0.21	0.24	0.26	0.18	0.30	0.19	2.17
54:	0.27	0.26	0.12	0.18	0.14	0.13	0.10	0.07	0.07	0.09	1.44
55:	0.09	0.05	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.55
56:	0.07	0.05	0.07	0.05	0.04	0.05	0.05	0.10	0.16	0.16	0.80
57:	0.10	0.09	0.07	0.11	0.10	0.12	0.09	0.10	0.07	0.11	0.98
58:	0.05	0.06	0.07	0.06	0.08	0.11	0.05	0.03	0.07	0.03	0.62
59:	0.04	0.03	0.04	0.10	0.04	0.06	0.04	0.02	0.02	0.03	0.44
60:	0.04	0.03	0.02	0.02	0.02	0.02	0.03	0.02	0.02	0.03	0.25
61:	0.03	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.14
62:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.07
63:	0.01	0.01	0.01	0.01	0.01	0.03	0.02	0.02	0.02	0.02	0.15
64:	0.02	0.02	0.03	0.02	0.03	0.04	0.05	0.03	0.00	0.00	0.24
65:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
66:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Exceedance Table

.	0%	1%	2%	3%	4%	5%	6%	%7	%8	%9
0%:		59.4	57.8	56.8	55.2	54.2	53.7	53.3	52.8	52.5
10%:	52.3	52.1	51.9	51.8	51.7	51.4	51.2	51.0	50.9	50.8
20%:	50.6	50.4	50.2	49.9	49.7	49.6	49.5	49.4	49.2	49.1
30%:	49.0	48.9	48.8	48.7	48.6	48.5	48.4	48.3	48.3	48.2
40%:	48.2	48.1	48.0	48.0	47.9	47.9	47.9	47.8	47.8	47.7
50%:	47.7	47.6	47.6	47.6	47.5	47.5	47.5	47.4	47.4	47.4
60%:	47.3	47.3	47.2	47.2	47.2	47.1	47.1	47.0	47.0	46.9
70%:	46.9	46.8	46.7	46.7	46.7	46.6	46.5	46.5	46.4	46.3
80%:	46.3	46.2	46.1	46.0	45.9	45.8	45.7	45.6	45.5	45.4
90%:	45.3	45.1	45.0	44.9	44.7	44.6	44.4	44.3	43.6	43.3
100%:	42.8									

Calibration History

Date	Calibration Action	Level	Cal. Model Type	Serial Number	Cert. Due Date
1/24/2020 2:02:10 PM	Calibration	114.0			

APPENDIX E.2 – Roadway Noise

Road Noise (major roads within 1,000 feet)

Road name:	Valley View Street			
Vehicle Type	**Cars**	**Med Trucks**	**Heavy Trucks**	
Effective Dist	114	114	114	
Dist to Stop Sign				
Avg Speed	45	45	45	posted speed limit
ADT	50,846	1,005	557	According to User Guide ADT is 10 year projected traffic
Night Fraction of ADT	15	15	15	According to Ch 5 Assessment Guidelines if unknown assume .15
Road Gradient			0	
Vehicle DNL	68	61	65	
Road DNL	**70**			

Table 4.13-2 for year 2035

ADT	52408

Caltrans 2016 Daily Truck Traffic

State Route 39 North of Lincoln Avenue

	Cars	Med Trucks	Heavy Trucks
Percentage	97.0%	1.9%	1.1%

APPENDIX F – Preliminary Geotechnical Investigation

ALBUS-KEEFE & ASSOCIATES, INC.
GEOTECHNICAL CONSULTANTS

January 20, 2020
J.N.: 2853.00

Ms. Sarah Walker
National Community Renaissance
432 2 Piedmont Drive
San Diego, CA 92107

Subject: **Preliminary Geotechnical Investigation, Proposed Senior Housing Development, 8300 Valley View Street, Buena Park, California.**

Dear Ms. Walker,

Pursuant to your request, ***Albus-Keefe & Associates, Inc***. is pleased to present to you our preliminary geotechnical investigation report for the subject development. This report presents the results of our field investigation, laboratory testing, engineering analyses, as well as our preliminary geotechnical recommendations for design and construction of the subject development.

We appreciate this opportunity to be of service to you. If you have any questions regarding the contents of this report, please do not hesitate to call this office.

Sincerely,

ALBUS-KEEFE & ASSOCIATES, INC.

Paul Kim
Associate Engineer

TABLE OF CONTENTS

TABLE OF CONTENTS

FIGURES AND PLATES

APPENDICES

1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

The purposes of our preliminary geotechnical investigation were to evaluate geotechnical conditions within the project area and to provide conclusions and recommendations relevant to the design and construction of the proposed improvements at the subject site. The scope of this investigation included the following:

- Review of the referenced conceptual site plan
- Review of published geologic and seismic data for the site and surrounding area
- Review of historical aerial photographs
- Exploratory drilling and soil sampling
- Laboratory testing of selected soil samples
- Engineering analyses of data obtained from our review, exploration, and laboratory testing
- Evaluation of site seismicity, liquefaction, and settlement potential
- Preparation of this report

1.2 SITE LOCATION AND DESCRIPTION

The site is located at 8300 Valley View, within the city of Buena Park, California. The property is bordered by Valley View Street to the west, single-family homes and a church to the north, single-family homes to the east/southeast and a church to the south. The location of the site and its relationship to the surrounding areas is shown on Figure 1, Site Location Map.

The site is incorporated into an irregular-shaped property containing approximately 3.2 acres of land currently being used as a church. The existing improvements within the site include a one-story structure located at the central portion of the site, a Church structure located along the south portion of the site and a single-story shed building along the north portion of the site. Other improvements include an asphalt-paved driveway and parking lot, concrete sidewalk, playground, garden, and various underground utility lines. Masonry walls are also located along the north and east property lines.

Topographically, the area of the proposed medical building is relatively flat with elevations ranging from approximately 51 feet above mean sea level (MSL) to approximately 54 feet above MSL. Drainage within the developed portion of the site is generally directed as sheet flow to the west into Valley View Street. Vegetation on site primarily consists of scattered small to medium-sized trees, small-shrubs, and grass.

N

SITE LOCATION MAP
National Community Renaissance
Proposed Senior Housing Development
8300 Valley View Street
Buena Park, California

NOT TO SCALE

FIGURE 1

1.3 PROPOSED DEVELOPMENT

Based on the architectural site plans by rrm design group dated on August 8, 2019, the proposed site development will consist of two- to three-story multi-family buildings along the north portion of the existing church site. The existing church facility to the south and existing single-story structure along the central portion of the site are to remain as part of the development. A new driveway with entryway is proposed just to the south of the planned buildings, in addition to parking stalls, perimeter site walls, and underground utilities.

No grading or structural plans were available in preparing of this report. However, we anticipate that minor rough grading of the site will be required to achieve future surface configuration. We expect the proposed residential dwellings will be wood-framed structures with concrete slabs on grade yielding relatively light foundation loads.

2.0 INVESTIGATION

2.1 RESEARCH

We have reviewed the referenced geologic publications and maps (see references). Data from these sources were utilized to develop some of the findings and conclusions presented herein.

We have also reviewed available historical aerial photographs. The aerial photos indicate that as early as 1952, the site was part of a larger site that was utilized for agricultural purposes. A single-family home with associated separate single-story structures were present within the north central portion of the site. It should be noted that the existing single-story structure along the north portion of the site was present at that time. By 1963, the agricultural development was abandoned. The existing church facility was constructed. The adjacent residences were constructed during this time also. In 1972, the site was graded in preparation for the asphalt-paved parking lot. Additionally, the single-story structure along the central portion of the site was constructed. In 1994, the existing asphalt paving is present. The site has remained unchanged since then.

2.2 SUBSURFACE EXPLORATION

Subsurface exploration for this investigation was conducted on November 12, 2019, and consisted of the drilling of three (3) soil borings to depths ranging from approximately 21.5 to 51.5 feet below the existing ground surface (bgs). The borings were drilled using a truck-mounted, continuous flight, hollow-stem-auger drill rig. A representative of Albus-Keefe & Associates, Inc. logged the exploratory borings. Visual and tactile identifications were made of the materials encountered, and their descriptions are presented in the Exploration Logs in Appendix A. The approximate locations of the exploratory excavations completed by this firm are shown on the enclosed Geotechnical Map, Plate 1.

Bulk, relatively undisturbed and Standard Penetration Test (SPT) samples were obtained at selected depths within the exploratory borings for subsequent laboratory testing. Relatively undisturbed samples were obtained using a 3-inch O.D., 2.5-inch I.D., California split-spoon soil sampler lined with brass rings. SPT samples were obtained from the boring using a standard, unlined SPT soil sampler. During each sampling interval, the sampler was driven 18 inches with successive drops of a 140-pound automatic hammer falling 30 inches. The number of blows required to advance the sampler

was recorded for each six inches of advancement. The total blow count for the lower 12 inches of advancement per soil sample is recorded on the exploration log. Samples were placed in sealed containers or plastic bags and transported to our laboratory for analyses. The borings were backfilled with auger cuttings upon completion of sampling.

2.3 LABORATORY TESTING

Selected samples of representative earth materials from our borings were tested in our laboratory. Tests consisted of USCS classification, in-situ moisture content and dry density, maximum dry density and optimum moisture content, consolidation/collapse, direct shear strength, Atterberg limit tests, percent passing No. 200 sieve, expansion index, soluble sulfate content, and corrosivity testing (pH, chloride, and resistivity). Descriptions of laboratory testing and the test results are presented in Appendix B and on the Exploration Logs in Appendix A.

3.0 GEOLOGIC CONDITIONS

3.1 SOIL CONDITIONS

Descriptions of the earth materials encountered during our investigation are summarized below and are presented in detail on the Exploration Logs presented in Appendix A.

Soil materials encountered at the subject site consisted of alluvial soils to the maximum depth explored, 51.5 feet below ground surface. Although not encountered, localized artificial fill materials could be present within the site.

The alluvial soils encountered are comprised of a grayish-brown to brown silty sand overlying a light gray sand that is slightly moist to moist and loose to medium dense. Deeper portions of the alluvium consist of interlayers of grayish-brown to cray clay with variable amounts of sand and grayish-brown sand. These materials were typically wet and medium dense to dense and very moist and stiff to very stiff.

3.2 GROUNDWATER

Groundwater was encountered at 10 feet below existing ground surface within all the borings during this firm's subsurface exploration. Based on a review of the referenced CDMG Special Report, the site is mapped with a historical groundwater depth of 10 feet.

3.3 FAULTING

Geologic literature and field exploration do not indicate the presence of active faulting within the site. The site does not lie within an "Earthquake Fault Zone" as defined by the State of California in the Earthquake Fault Zoning Act. Table 3.1 presents a summary of all the known seismically active faults within 10 miles of the site.

TABLE 3.1
Summary of Active Faults

Name	Distance (miles)	Slip Rate (mm/yr.)	Preferred Dip (degrees)	Slip Sense	Rupture Top (km)	Fault Length (km)
Puente Hills (Coyote Hills)	3.08	0.7	26	thrust	2.8	17
Puente Hills (Santa Fe Springs)	5.72	0.7	29	thrust	2.8	11
Newport Inglewood Connected alt 2	7.26	1.3	90	strike slip	0	208
Newport-Inglewood, alt 1	7.31	1	88	strike slip	0	65
Newport Inglewood Connected alt 1	7.31	1.3	89	strike slip	0	208
Elsinore;W+GI+T+J+CM	9.05	n/a	84	strike slip	0	241
Elsinore;W+GI	9.05	n/a	81	strike slip	0	83
Elsinore;W+GI+T	9.05	n/a	84	strike slip	0	124
Elsinore;W+GI+T+J	9.05	n/a	84	strike slip	0	199
Elsinore;W	9.05	2.5	75	strike slip	0	46

4.0 ANALYSES

4.1 SEISMICITY AND SEISMIC DESIGN PARAMETERS

2019 CBC requires seismic parameters in accordance with ASCE 7-16. Unless noted otherwise, all section numbers cited in the following refer to the sections in ASCE 7-16.

The site is underlain by soil strata that are susceptible to liquefaction. As such, per item 1 in Section 20.3.1 (ASCE7-16), the project site should be designated Site Class F. However, the proposed developments are anticipated to have fundamental period smaller than 0.5 seconds, and according to the "Exception" in referenced item, above, site class can be designated per Section 20.3 (ASCE7-16). Using weighted average SPT blow count N > 15 (across the top 100 ft; with assumed values used for depths greater than the deepest boring log) in Table 20.3-1, Site Class D is assigned.

We used USGS seismic design maps web tool developed by SEAOC and OSHPD to obtain the basic mapped acceleration parameters, including short periods (S_S) and 1-second period (S_1) MCE_R Spectral Response Accelerations. Section 11.4.8 requires site-specific ground hazard analysis for structures on Site Class E with S_S greater than or equal to 1.0 or Site Class D or E with S_1 greater than or equal to 0.2. Based on the mapped values of S_S and S_1 the project site falls within this category, requiring site specific hazard analysis in accordance with Section 21.2.

According to Section 21.2.3 (Supplement 1), the site-specific Risk Targeted Maximum Considered Earthquake (MCE_R) spectral response acceleration at any period is the lesser of the probabilistic and the deterministic response accelerations, subject to the exception specified in the same section. The probabilistic response spectrum was developed using USGS Risk Targeted Ground Motion (RTGM) calculator, which implements Method 2 as described on Section 21.2.1.2. The spectral acceleration and annual frequency of exceedance required by the RTGM calculator were extracted from hazard curves produced by USGS Unified Hazard Tool for the project site.

In accordance with Section 21.2.2 (Supplement 1), the deterministic spectral response acceleration at each period was calculated as the 84th percentile, 5% damped, response acceleration, using the NGA-West2 GMPE Worksheet. For this, the information from at least three causative faults with the greatest contribution per deaggregation analysis were used, and the larger acceleration spectrum among these was selected as the deterministic response spectrum. The deterministic spectrum was adjusted per requirements in Section 21.2.2 (Supplement 1) where applicable. Both probabilistic and deterministic spectra were subjected to the maximum direction scale factors specified in Section 21.2 to produce the maximum acceleration spectra.

Design response spectrum was developed by subjecting the site-specific MCE_R response spectrum to the provisions outlined in Section 21.3. This process included comparison with 80% code-based design spectrum determined in accordance with Section 11.4.6. The short period and long period site coefficient (F_a and F_v, respectively) were determined per Section 21.3 in conjunctions with Table 11.4-1. Site specific design acceleration parameters (S_{MS}, S_{M1}, S_{DS}, and S_{D1}) were calculated according to Section 21.4.

Per Section 11.2 (definitions on Page 79 of ASCE7-16) for evaluation of liquefaction, lateral spreading, seismic settlements, and other soil-related issues, Maximum Considered Earthquake Geometric Mean (MCE_G) peak ground acceleration PGA_M shall be used. The site-specific PGA_M is calculated per Section 21.5.3, as the lesser of the probabilistic PGA_M (Section 21.5.1) and deterministic PGA_M (Section 21.5.2), but no less than 80% site modified peak ground acceleration, PGA_M, obtained from SEAOC/OSHPD web-based seismic hazard tool.

4.2 STATIC SETTLEMENT

Analyses were performed to evaluate potential for static settlement of the alluvial material present within the site. Our analyses were based on the results of consolidation tests performed on selected samples from our borings as well as the recorded blow counts during the exploration. Results of our testing indicate the site materials have low compressibility. Analyses were performed assuming relatively light foundations loads typical for 3-story residences.

4.3 LIQUEFACTION

We have performed engineering analyses to evaluate the potential for liquefaction at the site if the design earthquake event were to occur. Our analyses followed the guidelines presented in the CGS Special Publication 117A (2008) and the procedures by Youd, et al. (2001).

Our liquefaction analyses were based on soil profile from boring B-1. High groundwater was assumed at a depth of 10 feet below the existing ground surface based on our discussion in Section 3.2. Fine-grained soils that do not have a Plasticity Index (PI) less than 12 and field moisture contents greater than 85% of liquid limit (LL) or soils with corrected blow counts greater than 30 per foot were assumed to be not susceptible to liquefaction. Based on our analyses, the layers located between 10 and 25 feet below existing ground surface are susceptible to liquefaction during a seismic event.

Analyses were performed to evaluate the potential magnitude of settlement resulting from seismic shaking of saturated soils with a liquefaction safety factor less than 1.3. The estimated settlement caused by soil liquefaction was evaluated for the site based on the empirical procedures developed by Tokimatsu and Seed (1987) and Ishihara and Yoshimine (1992), which compare the volumetric strain in the soil with the induced cyclic stress ratios/liquefaction safety factors. Taking the average of these three methods, we estimate liquefaction-induced settlements to be 3.4 inches. Liquefaction induced-settlement analyses are provided in Appendix C on Plates C-1 and C-2.

Seismic-induced settlement can occur both above and below the groundwater table during a strong seismic event. We have estimated the dry seismic settlement using the Tokumatsu and Seed (1987) Method. Based on our analyses, dry seismic settlement is approximately 0.8 inch. The results of this analysis are provided in Appendix D on Plate C-3.

The potential of lateral spreading is not likely to occur within the site as the general gradient in the vicinity of the site is less than 0.3 degrees as discussed in SP117A. Based on Google Earth, the gradient of Valley View Street and San Rafael Drive is less than 0.2 degrees.

5.0 CONCLUSIONS

5.1 FEASIBILITY OF PROPOSED DEVELOPMENT

From a geotechnical point of view, the proposed site development is considered feasible provided the recommendations presented in this report are incorporated into the design and construction of the project. Furthermore, it is also our opinion that the proposed development will not adversely impact the stability of adjoining properties if the recommendations presented in this report are incorporated into site development. Key issues that could have significant fiscal impacts on the geotechnical aspects of the proposed site development are discussed in the following sections of this report.

5.2 GEOLOGIC HAZARDS

5.2.1 Ground Rupture

No active faults are known to project through the site nor does the site lie within the bounds of an "Earthquake Fault Zone" as defined by the State of California in the Earthquake Fault Zoning Act. As such, the potential for ground rupture due to fault displacement beneath the site is considered very low.

5.2.2 Ground Shaking

The site is located in a seismically active area that has historically been affected by moderate to occasionally high levels of ground motion. The site lies in relatively close proximity to several seismically active faults; therefore, during the life of the proposed development, the property will probably experience moderate to occasionally high ground shaking from these fault zones, as well as some background shaking from other seismically active areas of the southern California region. Design of proposed structures in accordance with the current CBC is anticipated to adequately mitigate concerns with ground shaking.

5.2.3 Liquefaction

Our analyses indicate liquefaction could lead to a total seismic settlement (saturated and dry) of the ground surface of up to approximately 4.2 inches due to seismic consolidation during liquefaction. The differential settlement due to seismic settlement would likely be on the order of ½ of the total seismic settlement or approximately 2.1 inches over 30 feet. Lateral spreading is not a significant risk at the site.

Based on the State of California Special Publication 117A, hazards from liquefaction should be mitigated to the extent required to reduce seismic risk to "acceptable levels". The acceptable level of risk means, "that level that provides reasonable protection of the public safety" [California Code of Regulations Title 14, Section 3721 (a)]. The use of well-reinforced foundations, such as post-tensioned slabs, grade beams with structural slabs, or mat foundations have been proven to adequately provide basal support for similar structures during comparable liquefaction events.

5.3 STATIC SETTLEMENT

Provided rough grading is performed in accordance with the recommendations provided herein and based on the anticipated relatively light foundation loads, total and differential static settlements are anticipated to be less than approximately 1 inch and ½-inch over 30 feet, respectively, for the proposed structures. The estimated magnitudes of static settlements are considered within tolerable limits for the proposed structures.

5.4 EARTHWORK AND MATERIAL CHARACTERISTICS

All artificial fill is considered unsuitable to support proposed site development. This condition can be mitigated by the removal and re-compaction of the unsuitable soils. Although not encountered during our exploration, artificial fill may exist and likely throughout the site, particularly in the vicinity of the existing structures.

Removal and recompaction of the existing surficial materials are anticipated to result in minor shrinkage. Design of site grading will require consideration of this loss when evaluating earthwork balance issues.

Subsurface soils are anticipated to be relatively easy to excavate with conventional heavy earthmoving equipment. Most of the near-surface alluvial soils are generally below optimum moisture content.

This will require the addition of water prior to reuse as compacted fills depending on weather conditions at the time of grading.

Temporary construction slopes will be required to complete removal of unsuitable soils and for construction of underground utilities. Such excavations will require laybacks where they are surcharged or where they exceed a certain height. Specific recommendations to provide for stable temporary cuts are provided later in this report. The use of appropriate shoring or lay backs will be essential to protect workers and prevent delays due to caving during trenching or temporary backcut activities. These materials will also be very prone to erosion during periods of rain until they are covered by pavement or mature landscaping. Appropriate protection during the rainy season will be required to avoid costly repairs due to erosion.

The demolition of the existing structures and improvements will result is the generation of asphalt and concrete debris. Portions of concrete debris and asphalt can likely be reduced in size (4" minus) and incorporated within fill soils during earthwork operations.

Buried debris, onsite disposal systems, clarifiers and other underground improvements may be present beneath the site. If encountered during future rough grading, these improvements will require proper abandonment or removal.

Off-site improvements exist near the property lines. The presence of the existing improvements may limit removals of unsuitable materials adjacent the property lines. Special grading techniques, such as slot cutting, underpinning, or other acceptable criteria may be required when grading adjacent the property lines. Construction of perimeter site walls may require deepened footings where removals are restricted by property boundaries.

5.5 SHRINKAGE AND SUBSIDENCE

Volumetric changes in earth quantities will occur when excavated onsite soil materials are replaced as properly compacted fill. We estimate that the existing native alluvial soils will shrink less than 10 to 15 percent. Subsidence due to reprocessing of removal bottoms is anticipated to be approximately 0.1 feet. The estimates of shrinkage and subsidence are intended as an aid for project engineers in determining earthwork quantities. However, these estimates should be used with some caution since they are not absolute values. Contingencies should be made for balancing earthwork quantities based on actual shrinkage and subsidence that occurs during the grading process.

5.6 SOIL EXPANSION

Based on our laboratory test results and USCS visual manual classification, the near-surface soils within the site are generally anticipated to possess a **Very Low** expansion potential. Additional testing for soil expansion will be required subsequent to rough grading and prior to construction of foundations and other concrete flatwork to confirm these conditions.

6.0 RECOMMENDATIONS

6.1 EARTHWORK

6.1.1 General Earthwork and Grading Specifications

All earthwork and grading should be performed in accordance with all applicable requirements of the grading codes of the City of Buena Park, California and CAL OSHA, in addition to recommendations presented herein.

6.1.2 Pre-Grade Meeting and Geotechnical Observation

Prior to commencement of earthwork operations and foundation installation, we recommend a meeting be held between the City Inspector, general contractor, civil engineer, and geotechnical consultant to discuss proposed earthwork and logistics.

We also recommend that a geotechnical consultant be retained to provide soil engineering and engineering geologic services during site development. This is to observe compliance with the design specifications and recommendations, and to allow design changes in the event that subsurface conditions differ from those anticipated. If conditions are encountered during construction that appears to be different than those indicated in this report, the project geotechnical consultant should be notified immediately. Design and construction revisions may be required.

6.1.3 Site Clearing

All existing site improvements, including asphaltic concrete paving, structural foundations and underground utilities, should be removed from the areas to be developed prior to any grading activities. Existing underground utility lines within the project area that will be protected in place and that fall within a 1 to 1 (H:V) plane projected down from the edges of footings may be subject to surcharge loads. Under such conditions, this office should be made aware of these conditions for evaluation of potential surcharging. Supplemental recommendations may be required to protect such improvements in place.

In general, seepage pits that are open should be cleared of any fluids and then filled with 2-sack cement slurry up to within 5 feet of proposed grades. Any brick lining that remains in the upper 5 feet should be removed and the remainder of the pit filled with engineered fill in accordance with Section 6.1.5. Seepage pits that are presently backfilled with soil should be removed to a depth of 10 feet below pad grade and be capped with 2-sack cement slurry. The slurry cap should be at least 5 feet thick and should extend at least 12 inches outside the perimeter of the seepage pit. The remaining 5 feet should be filled with engineered fill in accordance with Section 6.1.5.

The project geotechnical consultant should be notified at the appropriate times to provide observation services during clearing operations to verify compliance with the above recommendations. Voids created by clearing and excavation should be left open for observation by the geotechnical consultant. Should any unusual soil conditions or subsurface structures be encountered during site clearing or grading that are not described or anticipated herein, these conditions should be brought to the immediate attention of the project geotechnical consultant for corrective recommendations as needed.

Temporary construction equipment (office trailers, power poles, etc.) should be positioned to allow adequate room for clearing and recommended ground preparation to be performed for proposed structures, pavements, and hardscapes.

6.1.4 Site Preparation (Removals and Overexcavations)

To provide a uniform bearing material for the proposed development, the upper 3 to 4 feet of earth materials should be removed and recompacted. Any additional artificial fill soils should also be removed from proposed building pads and site improvements, and replaced as engineered compacted fill. Removals should be deepened so that a minimum 2 feet of engineered fill is provided below the proposed foundations.

Within the limits of pavement and free-standing/retaining walls, the existing surficial soils should be removed to a minimum to 12 inches deep or to a depth of 12 inches below subgrade or footing, whichever is deeper. The actual depth of removal should be determined by the geotechnical consultant during grading.

Removals should extend laterally beyond the limits of the proposed structures a distance equal to the depth of removal (i.e. 1:1 projection) but not less than 5 feet. Removals within roadways and walls may be limited to the edge of foundations or pavement.

All removal excavations should be evaluated by the geotechnical consultant during grading to confirm the exposed conditions are as anticipated and to provide supplemental recommendations if required.

Where removals are limited by existing structures, protected trees or property lines, special considerations may be required in the construction of affected improvements. Under such conditions, specific recommendations should be provided by this firm based on review of site-specific development plans.

Following removals/overexcavation, the exposed grade should first be scarified to a depth of 6 inches, brought to at least 100 percent of the optimum moisture content, and then compacted to at least 90 percent of the laboratory standard (ASTM D 1557).

6.1.5 Fill Placement

Materials excavated from the site may be reused as fill provided, they are free of deleterious materials and particles greater than 6 inches in maximum dimension (oversized materials). Asphaltic and concrete debris generated during site demolition or encountered within any existing fill can be incorporated within new fill soils during earthwork operations provided they are reduced to no more than 6 inches in maximum dimension. Such materials should be mixed thoroughly with fill soils to prevent nesting. All fill should be placed in lifts no greater than 8 inches in loose thickness, moisture conditioned to at least 100 percent of the optimum moisture content, then compacted in place to at least 90 percent of the laboratory standard. Each lift should be treated in a similar manner. Subsequent lifts should not be placed until the project geotechnical consultant has approved the preceding lift.

6.1.6 Import Materials

If import materials are required to achieve the proposed finish grades, the proposed import soils should have an Expansion Index (EI, ASTM D 4829) less than 21 and possess negligible soluble sulfate concentrations. Import sources should be indicated to the geotechnical consultant prior to hauling the materials to the site so that appropriate testing and evaluation of the fill materials can be performed in advance.

6.1.7 Temporary Excavations

Temporary construction slopes or trench excavations in site materials may be cut vertically up to a height of 3 feet provided that no surcharging of the excavations is present. Temporary slopes over 3 feet in height should be laid back to 1:1 (H:V) or flatter and evaluated by the geotechnical consultant. Sandy materials were observed at deeper depths that are friable and prone to caving. Excavations within these sandy materials may have to be limited gradients of 1½ :1 (H:V) with no allowances of a vertical height.

Excavations should not be left open for prolonged periods of time. The project geotechnical consultant should observe all temporary cuts to confirm anticipated conditions and to provide alternate recommendations if conditions dictate. All excavations should conform to the requirements of CAL OSHA.

Where temporary excavations cannot accommodate a 1:1 layback or where surcharging occurs, shoring, slot cutting, underpinning, or other methods should be used. Specific recommendations for other options if considered should be provided by the geotechnical consultant based on review of the final design plans.

6.2 SEISMICITY

The site is underlain by soil strata that are susceptible to liquefaction. As such, per item 1 in Section 20.3.1 (ASCE7-16), the project site should be designated as Site Class F. However, the proposed developments are anticipated to have fundamental period smaller than 0.5 seconds, and according to the "Exception" in the referenced item, above, site class can be designated per Section 20.3 (ASCE7-16). Using the weighted average of the recorded SPT blow counts, N is greater than 15 (across the top 100 ft; with assumed values used for depths greater than the deepest boring log), therefore, Site Class D is assigned (Table 20.3-1).

Following ASCE7-16, Section 21.5.3, we have estimated site-specific maximum considered earthquake geometric mean (MCE_G) peak ground acceleration PGA_G = 0.660g. This value should be used for all geotechnical calculations. The mean event associated with a probability of exceedance equal to 2% over 50 years has a moment magnitude of 6.77 and the mean distance to the seismic source is 7.7 miles.

6.3 SEISMIC DESIGN PARAMETERS

For design of the project in accordance with Chapter 16 of the 2019 CBC, the table below presents the seismic design factors.

TABLE 6.1
CBC 2019 SEISMIC DESIGN PARAMETERS

Parameter	Value
Site Class	D
Mapped MCE_R Spectral Response Acceleration, short periods, S_S	1.486
Mapped MCE_R Spectral Response Acceleration, at 1-sec. period, S_1	0.526
Site Coefficient, Fa	1.0
Site Coefficient, Fv	**2.5**
Adjusted MCE_R Spectral Response Acceleration, short periods, S_{MS}	**1.562**
Adjusted MCE_R Spectral Response Acceleration, at 1-sec. period, S_{M1}	**1.124**
Design Spectral Response Acceleration, short periods, S_{DS}	**1.042**
Design Spectral Response Acceleration, at 1-sec. period, S_{D1}	**0.749**
Long-Period Transition Period, T_L (sec.)	8
Seismic Design Category for Risk Categories I-IV	**D**

MCE_R = Risk-Targeted Maximum Considered Earthquake
Boldface values: Site-specific values per ASCE7-16; other values are mapped values.

6.4 PRELIMINARY FOUNDATION DESIGN

6.4.1 General

The following recommendations are provided for preliminary design purposes. These recommendations have been based on the site materials exposed during our investigation, our understanding of the proposed development, and the assumption that the recommendations presented herein are incorporated into the design and construction of the project. Final recommendations should be provided by the project geotechnical consultant following review of final foundation plans as well as observation and testing of site materials during grading. Depending upon the design plans and actual site conditions, the recommendations provided herein may require modification.

6.4.2 Soil Expansion

The recommendations presented herein are based on soils with a **Very Low** expansion potential (EI≤20). Following site grading, additional testing of site soils should be performed by the project geotechnical consultant to confirm the basis of these recommendations. If site soils with higher expansion potentials are encountered or imported to the site, the recommendations contained herein may require modification.

6.4.3 Settlement

Under normal static conditions, the foundation system should be designed to tolerate a total settlement of 1 inch and a differential settlement of 1/2-inch over 30 feet. The foundations should also be designed for total and differential seismic settlement of 4.2 inches and 2.1 inches over 30 feet, respectively. The PTI design parameters presented below incorporate the estimated seismic settlements.

6.4.4 Allowable Bearing Value

Provided foundations are bearing into engineered fill, a bearing value of 2,100 pounds per square foot (psf) may be used for continuous and pad footings a minimum width of 12 inches and founded at a minimum depth of 12 inches below the lowest adjacent grade. This value may be increased by 250 psf and 700 psf for each additional foot in width and depth, respectively, up to a maximum value of 3,500 psf. Recommended allowable bearing values include both dead and live loads, and may be increased by one-third for wind and seismic forces.

6.4.5 Lateral Resistance

Provided site grading is performed and that foundations are founded in engineered fill, a passive earth pressure of 230 pounds per square foot per foot of depth (psf/ft) up to a maximum value of 1,200 pounds per square foot (psf) may be used to determine lateral bearing for footings. This value may be increased by one-third when designing for wind and seismic forces. A coefficient of friction of 0.33 times the dead load forces may also be used between concrete and the supporting soils to determine lateral sliding resistance. No increase in the coefficient of friction should be used when designing for wind and seismic forces.

The above values are based on footings placed directly against compacted fill or competent native soils. In the case where footing sides are formed, all backfill against the footings should be compacted to at least 90 percent of the laboratory standard.

6.4.6 Post-Tensioned Slab/Mat on grade

Perimeter edge beams for the post-tensioned slabs should have a minimum effective width of 12 inches and be founded at a minimum depth of 12 inches below the lowest adjacent final ground surface. Interior beams may be founded at a minimum depth of 12 inches below the tops of the finish floor slabs. Where a post-tensioned mat is utilized, the exterior edge of the mat should be embedded at least 8 inches below the lowest adjacent grade. The thickness of the floor slab/mat should be determined by the project structural engineer; however, we recommend a minimum slab thickness of 4.5 inches.

Concrete floor slabs in areas to receive carpet, tile, or other moisture sensitive coverings should be underlain with a minimum of 10-mil moisture vapor retarder conforming to ASTM E 1745, Class A. The membrane should be properly lapped, sealed, and underlain within a layer of sand at least 4 inches thick. One inch of sand may be placed over the membrane to aid in the curing of the concrete. The sand should have a SE no less than 30. This vapor retarder system is anticipated to be suitable for most flooring finishes that can accommodate some vapor emissions. However, this system may emit more than 4 pounds of water per 1000 sq. ft. and therefore, may not be suitable for all flooring finishes. Additional steps should be taken if such vapor emission levels are too high for anticipated flooring finishes. Where a mat is utilized, the sand may be reduced to 1 inch provided the mat is at least 6 inches thick.

Prior to placing concrete, subgrade soils below slab-on-grade/mat areas should be thoroughly moistened to provide moisture contents that are at least 100 percent of the optimum moisture content to a depth of 12 inches.

Based on the guidelines provided in the "Design of Post-Tensioned Slabs-on-Ground" 3rd Edition by Post-Tensioning Institute, the em and ym values are summarized below:

TABLE 6.2
PTI Design Parameters

Parameter	Value
Edge Lift Moisture Variation Distance, e_m	4.2 feet
Edge Lift, y_m	1.442 inches
Center Lift Moisture Variation Distance, e_m	8.1 feet
Center Lift, y_m	0.939 inches

6.4.7 Foundation Observations

Foundation excavation should be observed by the project geotechnical consultant to verify that they have been excavated into competent bearing soils and to the minimum embedment recommended above. These observations should be performed prior to placement of forms or reinforcement. The excavations should be trimmed neat, level and square. Loose, sloughed or moisture-softened materials and debris should be removed prior to placing concrete.

6.5 RETAINING AND SCREENING WALLS

6.5.1 General

The following preliminary design and construction recommendations are provided for general retaining and screen walls supported by engineered compacted fill or competent native soils. Final wall designs specific to the site development should be provided for review once completed. The structural engineer and architect should provide appropriate recommendations for sealing at all joints and applying moisture-proofing material on the back of the walls.

6.5.2 Allowable Bearing Value and Lateral Resistance

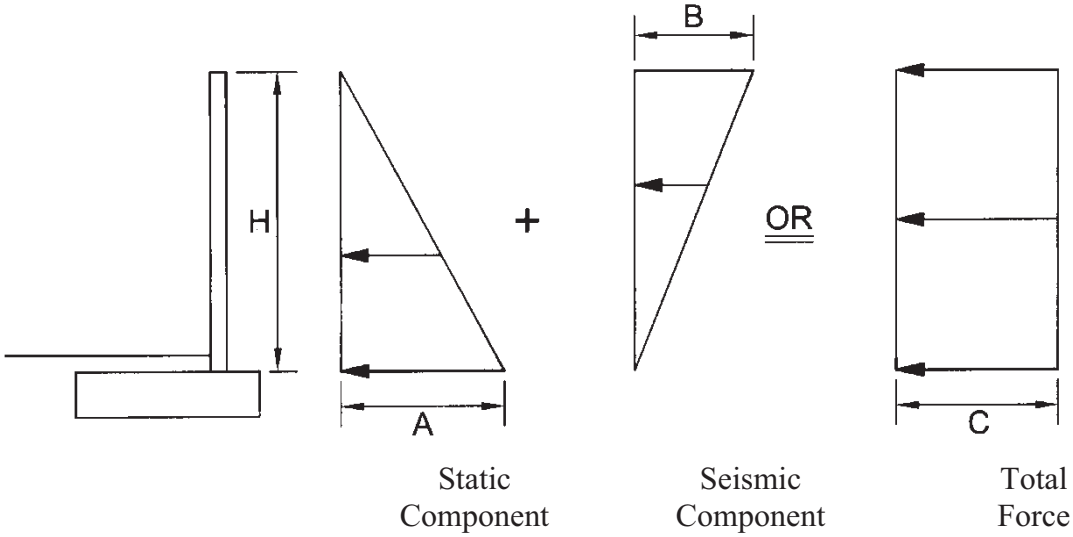
Design of retaining and screen walls may utilize the bearing and lateral resistance values provided in Section 6.4.4 and 6.4.5. Lateral resistance for walls along property lines, where lateral removals are restricted, should be reduced by 50%.

6.5.3 Active Earth Pressures

Static and seismic active earth pressures for level backfill and 2:1 (H:V) backfill conditions are provided in Table 6.3. Based on the 2019 CBC, walls that retain less than 6 feet need not be designed for seismic earth pressures. Seismic earth pressures provided herein are based on the method provided by Seed & Whitman (1970) using a peak ground acceleration (PGA) of 0.41 g, for 10% probability of exceedance in 50 years. The values provided in Table 6.3 are based on drained backfill conditions and do not consider hydrostatic pressure. Furthermore, retaining walls should be designed to support adjacent surcharge loads imposed by other nearby footings or traffic loads in addition to the earth pressure.

TABLE 6.3

SEISMIC EARTH PRESSURES
Pressure Diagram



Pressure Values
Walls Up To 10 Feet High

Value	Backfill Condition	
	Level	2H:1V Slope
A	40H	78H
B	12H	12H
C	26H	45H

Note:
H is in feet and resulting pressure is in psf. Design may utilize either the sum of the static component and the seismic component force diagrams or the total force diagram above. SEAOSC has suggested using a load factor of 1.7 for the static component and 1.0 for the seismic component. The actual load factors should be determined by the structural engineer.

6.5.4 Drainage and Moisture-Proofing

Retaining walls should be constructed with a perforated pipe and gravel subdrain to prevent entrapment of water in the backfill. The perforated pipe should consist of 4-inch-diameter, ABS SDR-35 or PVC Schedule 40 with the perforations laid down. The pipe should be embedded in ¾- to 1½-inch open-graded gravel wrapped in filter fabric. The gravel should be at least one foot wide and extend at least one foot up the wall above the footing and drainage outlet. Drainage gravel and piping should not be placed below outlets and weepholes. Filter fabric should consist of Mirafi 140N, or equal. Outlet pipes should be directed to positive drainage devices.

The use of weepholes may be considered in locations where aesthetic issues from potential nuisance water are not a concern. Weepholes should be 2 inches in diameter and provided at least every 6 feet on center. Where weepholes are used, perforated pipe may be omitted from the gravel subdrain.

Retaining walls supporting backfill should also be coated with a moisture-proofing compound or covered with such material to inhibit infiltration of moisture through the walls. Moisture-proofing material should cover any portion of the back of wall that will be in contact with soil and should lap over and onto the top of footing. A drainage panel should be provided between the soil backfill and water proofing. The panel should extend from the top of the backdrain gravel up to within 12 inches of finish grade. The top of footing should be finished smooth with a trowel to inhibit the infiltration of water through the wall. The project structural engineer should provide specific recommendations for moisture-proofing, water stops, and joint details.

6.5.5 Footing Reinforcement and Wall Jointing

All continuous footings should be reinforced with a minimum of four No. 4 bars, two top and two bottom. Walls should be provided with cold joints spaced no more than 40 feet apart. Wall finishes and capping materials should not extend across the cold joint. The structural engineer may require different reinforcement or jointing and should dictate if greater than the recommendations provided herein. Where recommended removals are limited due to space restrictions, greater reinforcement and closer jointing may be recommended. Specific recommendations should be provided by the geotechnical consultant during grading based on as-built conditions exposed in the field.

6.5.6 Footing Observations

Footing excavations should be observed by the project geotechnical consultant to verify that they have been excavated into competent bearing soils and to the minimum embedment recommended herein. These observations should be performed prior to placement of forms or reinforcement. The excavations should be trimmed neat, level and square. Loose, sloughed or moisture-softened materials and debris should be removed prior to placing concrete.

6.5.7 Retaining Wall Backfill

Onsite soils may generally be used for backfill of retaining walls. The project geotechnical consultant should approve all backfill used for retaining walls. Wall backfill should be moisture-conditioned to slightly over the optimum moisture content; placed in lifts no greater than 12 inches in thickness, and then mechanically compacted with appropriate equipment to at least 90 percent of the laboratory standard. Hand-operated compaction equipment should be used to compact the backfill placed immediately adjacent the wall to avoid damage to the wall. Flooding or jetting of backfill material is not recommended.

6.6 EXTERIOR FLATWORK

Exterior flatwork should be a minimum 4 inches thick. Cold joints or saw cuts should be provided at least every 7 feet in each direction. Flatwork having a minimum dimension more than 7 feet should be reinforced with No. 3 bars spaced 18 inches center to center each way or 6-inch by 6-inch, W4 by W4 welded wire mesh. Special jointing detail should be provided in areas of block-outs, notches, or other irregularities to avoid cracking at points of high stress. Subgrade soils below flatwork should be

thoroughly moistened to at least 100 percent of the optimum moisture content to a depth of 12 inches. Moistening should be accomplished by lightly spraying the area over a period of a few days just prior to pouring concrete. The geotechnical consultant should observe and verify the density and moisture content of subgrade soils prior to pouring concrete to ensure that the required compaction and pre-moistening recommendations have been met.

Drainage from flatwork areas should be directed to local area drains and/or other appropriate collection devices designed to carry runoff water to the street or other approved drainage structures. The concrete flatwork should also be sloped at a minimum gradient of 1 percent away from building foundations and retaining walls.

6.7 CONCRETE MIX DESIGN

Laboratory testing of onsite soil indicates **negligible** soluble sulfate content. Concrete designed to follow the procedures provided in ACI 318, Section 4.3, Table 4.3.1 for **negligible** sulfate exposure are anticipated to be adequate for mitigation of sulfate attack on concrete. Upon completion of rough grading, an evaluation of as-graded conditions and further laboratory testing will be required for the site to confirm or modify the conclusions provided in this section.

6.8 CORROSION

Results of preliminary testing of soils for pH, chloride, and minimum resistivity indicate the site is potentially **Moderately Corrosive** to metals that are in contact or close proximity to onsite soils. As such, specific recommendations should be obtained from a corrosion specialist if construction will include metals that will be near or in direct contact with site soils.

6.9 PRELIMINARY PAVEMENT DESIGN

6.9.1 Preliminary Pavement Structural Sections

Based on the soil conditions present at the site and estimated traffic index, preliminary pavement structural sections are recommended in the table below. An assumed "R-value" of 30 utilized for the near-surface soil in this preliminary pavement design. The sections provided in Table 6.4 are for planning purposes only and should be re-evaluated subsequent to site grading. Final pavement sections should be based on actual R-value testing of in-place soils and analysis of anticipated traffic.

6.9.2 Subgrade Preparation

Prior to placement of pavement elements, subgrade soils should be moisture-conditioned to at least 100 percent of the optimum moisture content then compacted to at least 90 percent of the laboratory determined maximum dry density. Areas observed to pump or yield under vehicle traffic should be removed and replaced with firm and unyielding compacted soil or aggregate base materials.

TABLE 6.4
PRELIMINARY PAVEMENT STRUCTURAL SECTIONS

Location	Traffic Index	AC (inches)	PCC (inches)	Concrete Pavers (mm)	AB (inches)
Entry and Main Driveway	5.0	3.0 4.0 -- --	-- -- 6.0 --	-- -- -- 80.0	6.0 4.0 -- 8.0
Parking Stalls	--	3.0	--	--	4.0

AC - Asphaltic Concrete AB - Aggregate Base

6.9.3 Aggregate Base

Aggregate base should be moisture conditioned to slightly over the optimum moisture content, placed in lifts no greater than 6 inches in thickness, then compacted to at least 95 percent of the laboratory standard (ASTM D 1557). Aggregate base materials should be Class 2 Aggregate Base conforming to Section 26-1 of the latest edition of the Caltrans Standard Specifications, Crushed Aggregate Base conforming to Section 200-2.2 of the latest edition of the Standard Specifications for Public Works Construction (Greenbook) or Crushed Miscellaneous Base conforming to Section 200-2.4 of the Greenbook.

6.9.4 Asphaltic Concrete

Paving asphalt should be PG 64-10. Asphaltic concrete materials should conform to Section 203-6 of the Greenbook and construction should conform to Section 302 of the Greenbook.

6.9.5 Concrete Pavers

Concrete pavers should conform to the requirements of ASTM C 936. Construction of the pavers, including bedding sand, should follow manufacturer's specifications. Typical thickness of bedding sand is about 1 inch. The gradation of bedding sand should meet the requirement in Table 6.5.

Construction of edge restraints should also follow manufacturer's specifications. As a minimum, restraints should be provided along the perimeter of concrete pavers and where there is a change in the paving materials.

TABLE 6.5
Gradation of Bedding for Pavers

Sieve Size	Percent Passing
⅜"	100
No. 4	95 - 100
No. 8	80 - 100
No. 16	50 - 85
No. 30	25 - 60
No. 50	5 - 30
No. 100	0 - 10
No. 200	0 - 1

6.9.6 Portland Cement Concrete

Portland cement concrete used to construct concrete paving should conform to Section 201 of the Greenbook and should have a minimum compressive strength of 3,250 pounds per square inch (psi) at 28 days. Reinforcement and jointing of concrete pavement sections should be designed according to the minimum recommendations provided by the Portland Cement Association (PCA). For rigid pavement, transverse and longitudinal contraction joints should be provided at spacing no greater than 15 feet. Score joints may be constructed by saw cutting to a depth of ¼ of the slab thickness. Expansion/cold joints may be used in lieu of score joints. Such joints should be properly sealed and provided with a key or dowels. Where traffic will traverse over edges of concrete paving (not including joints), the edges should be thickened by 20% of the design thickness toward the edge over a horizontal distance of 5 feet.

Trash pickup areas should be provided with a concrete slab where the bins will be picked up and extend at least 3 feet past the front wheel landing areas. The slab should be at least 8 inches thick and be reinforced with No. 4 bars spaced at 24 inches on centers, both ways. The slabs should be provided transverse and longitudinal joints spacing as specified above. Dowels or a keyway should be provided at all cold joints.

6.10 POST GRADING CONSIDERATIONS

6.10.1 Site Drainage and Irrigation

The ground immediately adjacent to foundations should be provided with positive drainage away from the structures in accordance with 2019 CBC, Section 1804.4. No rain or excess water should be allowed to pond against structures such as walls, foundations, flatwork, etc.

Excessive irrigation water can be detrimental to the performance of the proposed site development. Water applied in excess of the needs of vegetation will tend to percolate into the ground. Such percolation can lead to nuisance seepage and shallow perched groundwater. Seepage can form on slope faces, on the faces of retaining walls, in streets, or other low-lying areas. These conditions could lead to adverse effects such as the formation of stagnant water that breeds insects, distress or damage of trees, surface erosion, slope instability, discoloration and salt buildup on wall faces, and premature

failure of pavement. Excessive watering can also lead to elevated vapor emissions within buildings that can damage flooring finishes or lead to mold growth inside the home.

Key factors that can help mitigate the potential for adverse effects of overwatering include the judicious use of water for irrigation, use of irrigation systems that are appropriate for the type of vegetation and geometric configuration of the planted area, the use of soil amendments to enhance moisture retention, use of low-water demand vegetation, regular use of appropriate fertilizers, and seasonal adjustments of irrigation systems to match the water requirements of vegetation. Specific recommendations should be provided by a landscape architect or other knowledgeable professional.

6.10.2 Utility Trenches

Trench excavations should be constructed in accordance with the recommendations contained in Section 0 of this report. Trench excavations must also conform to the requirements of Cal/OSHA.

Trench backfill materials and compaction criteria should conform to the requirements of the local municipalities. As a minimum, utility trench backfill should be compacted to at least 90 percent of the laboratory standard. Materials placed within the pipe zone (6 inches below and 12 inches above the pipe) should consist of particles no greater than ¾ inches and have a SE of at least 30. The materials within the pipe zone should be moisture-conditioned and compacted by hand-operated compaction equipment. Above the pipe zone (>1 foot above pipe), the backfill may consist of general fill materials. Trench backfill should be moisture-conditioned to slightly over the optimum moisture content, placed in lifts no greater than 12 inches in thickness, and then mechanically compacted with appropriate equipment to at least 90 percent of the laboratory standard. For trenches with sloped walls, backfill material should be placed in lifts no greater than 8 inches in loose thickness, and then compacted by rolling with a sheepsfoot roller or similar equipment. The project geotechnical consultant should perform density testing along with probing to verify that adequate compaction has been achieved.

Within shallow trenches (less than 18 inches deep) where pipes may be damaged by heavy compaction equipment, imported clean sand having a SE of 30 or greater may be utilized. The sand should be placed in the trench, thoroughly watered, and then compacted with a vibratory compactor. For utility trenches located below a 1:1 (H:V) plane projecting downward from the outside edge of the adjacent footing base or crossing footing trenches, concrete or slurry should be used as trench backfill.

6.11 PLAN REVIEW AND CONSTRUCTION SERVICES

We recommend ***Albus-Keefe & Associates, Inc.*** be engaged to review any future development plans, including foundation plans prior to construction. This is to verify that the assumptions of this report are valid and that the preliminary conclusions and recommendations contained in this report have been properly interpreted and are incorporated into the project plans and specifications. If we are not provided the opportunity to review these documents, we take no responsibility for misinterpretation of our preliminary conclusions and recommendations.

We recommend that a geotechnical consultant be retained to provide soil engineering services during construction of the project. These services are to observe compliance with the design, specifications or recommendations, and to allow design changes in the event that subsurface conditions differ from those anticipated prior to the start of construction.

If the project plans change significantly from the assumed development described herein, the project geotechnical consultant should review our preliminary design recommendations and their applicability to the revised construction. If conditions are encountered during construction that appear to be different than those indicated in this report or subsequent design reports, the project geotechnical consultant should be notified immediately. Design and construction revisions may be required.

7.0 LIMITATIONS

This report is based on the proposed development and geotechnical data as described herein. The materials encountered on the project site, described in other literature, and utilized in our laboratory testing for this investigation are believed representative of the total project area, and the conclusions and recommendations contained in this report are presented on that basis. However, soil and bedrock materials can vary in characteristics between points of exploration, both laterally and vertically, and those variations could affect the conclusions and recommendations contained herein. As such, observation and testing by a geotechnical consultant during the grading and construction phases of the project are essential to confirming the basis of this report.

This report has been prepared consistent with that level of care being provided by other professionals providing similar services at the same locale and time period. The contents of this report are professional opinions and as such, are not to be considered a guaranty or warranty. This report should be reviewed and updated after a period of one year or if the site ownership or project concept changes from that described herein.

This report has been prepared for the exclusive use of **National Community Renaissance** and their project consultants in the planning and design of the proposed development. This report has not been prepared for use by parties or projects other than those named or described herein. This report may not contain sufficient information for other parties or other purposes. This report is subject to review by the controlling governmental agency.

Respectfully submitted,

ALBUS-KEEFE & ASSOCIATES, INC

Mark Principe
Staff Engineer

Paul Hyun Jin Kim
Associate Engineer
G.E. 3106

8.0 REFERENCES

Publications

California Geologic Survey, Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California, 2008.

CDMG, "Seismic Hazard Zone Report for the Los Alamitos 7.5-Minute Quadrangles, Los Angeles and Orange Counties, California," Seismic Hazard Zone Report 019, 1998.

Ishihara, K., and Yoshimine, M., "Evaluation of Settlements in Sand Deposits Following Liquefaction During Earthquakes", Soils and Foundations, Vol. 32, No. 1, 1992.

NCEER, "Proceedings of the NCEER Workshop on Evaluation of Liquefaction Resistance of Soils", Technical Report NCEER-97-0022, December 31, 1997.

Seed, HB, and Whitman, RV. "Design of Earth Retaining Structures for Dynamic Loads," ASCE Specialty Conference, Lateral Stresses in the Ground and Design of Earth Retaining Structures, Cornell Univ., Ithaca, New York, 103-147, 1970.

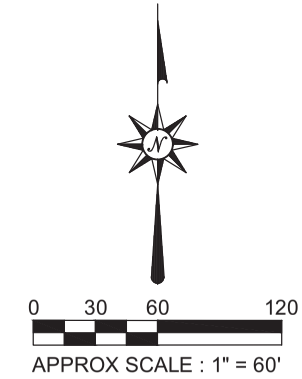
Southern California Earthquake Center (SCEC), University of Southern California, "Recommended Procedures for Implementation of DMG Special Publication 117 Guidelines for Analyzing and Mitigating Liquefaction Hazards in California", March 1999.

U.S. Geologic Survey. Unified Hazard Tool, https://earthquake.usgs.gov/hazards/interactive/

U.S. Geologic Survey. U.S. Seismic Design Maps, https://seismicmaps.org/

Tokimatsu, K. & Seed, H.B., "Evaluation of Settlement in Sands Due to Earthquake Shaking," Journal of Geotechnical Engineering, Vol. 113, No. 8, August, 1987.

Youd, T.L., Idriss, I.M., Andrus, R.D., Arango, I., Castro, G., Christian, J., Dobry, R., Finn, W.D.L., Harder, L.F., Hynes, M.E., Ishihara, K., Koester, J.P., Liao, S.S.C., Marcuson, W.F., Martin, G.R., Mitchell, J.K., Moriwaki, Y., Power, M.S., Robertson, P.K., Seed, R.B., and Stokoe, K.H., "Liquefaction Resistance of Soils: Summary Report from the 1996 NCEER and 1998 NCEER/NSF Workshops on Evaluation of Liquefaction Resistance of Soils", Journal of Geotechnical and Geoenvironmental Engineering, October, 2001.



EXPLANATION

(Locations Approximate)

- Exploratory Boring

ALBUS-KEEFE & ASSOCIATES, INC.
GEOTECHNICAL CONSULTANTS

GEOTECHNICAL MAP

Job No.: 2853.00	Date: 12/12/19	Plate: 1

APPENDIX A

EXPLORATION BORING LOGS

EXPLORATION LOG

Project:		Location:
Address:		Elevation:
Job Number:	Client:	Date:
Drill Method:	Driving Weight:	Logged By:

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
5		**EXPLANATION** Solid lines separate geologic units and/or material types. Dashed lines indicate unknown depth of geologic unit change or material type change. **Solid black rectangle** in Core column represents California Split Spoon sampler (2.5in ID, 3in OD). **Double triangle** in core column represents SPT sampler. **Vertical Lines** in core column represents Shelby sampler. **Solid black rectangle** in Bulk column respresents large bag sample. **Other Laboratory Tests:** Max = Maximum Dry Density/Optimum Moisture Content EI = Expansion Index SO4 = Soluble Sulfate Content DSR = Direct Shear, Remolded DS = Direct Shear, Undisturbed SA = Sieve Analysis (1" through #200 sieve) Hydro = Particle Size Analysis (SA with Hydrometer) 200 = Percent Passing #200 Sieve Consol = Consolidation SE = Sand Equivalent Rval = R-Value ATT = Atterberg Limits							
10									
15									
20									

EXPLORATION LOG

Project: Orchard View Gardens		Location: B-1
Address: 8300 Valley View St, Buena Park, CA 90620		Elevation: 51
Job Number: 2853.00	Client: National Community Renaissance	Date: 11/23/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
		ALLUVIUM (Qal) Silty Sand (SM): Grayish brown, slightly moist, medium dense							Max EI SO4 DS pH Resist Ch
5		@ 5 ft, Light gray		20			3.8	94.9	
		Sand (SP): Light gray, moist to very moist, loose, fine to medium grained sand		11			25.3	93.9	
10		@ 10 ft, Grayish brown, wet, medium dense, medium to coarse grained sand, sample disturbance	▽	17					
		Sandy Clay (CL): Medium grayish brown, very moist, stiff, fine grained sand, trace clay							
15				8			34		200 ATT
		Sand (SP): Light grayish brown, wet, medium dense, fine to medium grained sand, mica present							
20				16					200
		Clay (CL): Gray, very moist, stiff, some fine grained sand							

EXPLORATION LOG

Project: Orchard View Gardens		Location: B-1
Address: 8300 Valley View St, Buena Park, CA 90620		Elevation: 51
Job Number: 2853.00	Client: National Community Renaissance	Date: 11/23/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
				8	▼		35.9		200 ATT
30		@ 30 ft, moist to very moist, few fine grained sand		8	▼		36.8		ATT
35		@ 35 ft, mica present		10	▼		26.6		
40		@ 40 ft, very moist, very stiff, fine grained sand		10	▼		23		ATT
		Sand (SP): Light grayish brown, wet, very dense, medium to coarse grained sand							
45				39	▼				

EXPLORATION LOG

Project: Orchard View Gardens		Location: B-1
Address: 8300 Valley View St, Buena Park, CA 90620		Elevation: 51
Job Number: 2853.00	Client: National Community Renaissance	Date: 11/23/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
		@ 50 ft, increased fines		53					
		End of boring at 51.5 feet. Groundwater encountered at 10 feet. Backfilled with soil cuttings.							

EXPLORATION LOG

Project: Orchard View Gardens		Location: B-2
Address: 8300 Valley View St, Buena Park, CA 90620		Elevation: 53
Job Number: 2853.00	Client: National Community Renaissance	Date: 11/23/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
		ALLUVIUM (Qal) Silty Sand (SM): light grayish brown, slightly moist, loose, fine grained sand, mica present		13	■		1.1	96.4	
		Sand (SP): Light gray, moist, medium dense, fine to coarse grained sand, mica present, trace fine gravel		17	■		3.3	94.5	Consol
5		@ 6 ft, very moist		18	■		11.8	88.6	
10		@ 10 ft, wet, loose, medium to coarse grained sand	▽	12	■		19.5	104.1	
15		@ 15 ft, medium dense		7	■		25.1		
		Clay (ML): Medium grayish brown, very moist, stiff, some fine to medium grained sand							
		Sand (SP): Gray, wet, medium dense, medium to coarse grained sand							

EXPLORATION LOG

Project: Orchard View Gardens		Location: B-2
Address: 8300 Valley View St, Buena Park, CA 90620		Elevation: 53
Job Number: 2853.00	Client: National Community Renaissance	Date: 11/23/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
				14					
		End of boring @ 21.5 feet. Groundwater encountered at 10 feet. Backfilled with soil cuttings.							

EXPLORATION LOG

Project: Orchard View Gardens		Location: B-3
Address: 8300 Valley View St, Buena Park, CA 90620		Elevation: 53
Job Number: 2853.00	Client: National Community Renaissance	Date: 11/23/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
		ALLUVIUM (Qal) Silty Sand (SM): Brown, slightly moist, loose, fine grained sand		14	■		6.1	101.3	
		Sand (SP): Light gray, slightly moist, medium dense, fine to medium grained sand		17	■		1.9	95.9	
5		@ 6 ft, moist to very moist		19	■		5.7	92.5	Consol
			▽						
10		@ 10 ft, Brown, wet, increased fines		23	■		25.7	96.1	
15		@ 15 ft, loose		5	▼		23.1		
		Clay (CL): Brown, moist, medium stiff, iron oxidation			▼		19.2		
		Sand (SP): Light grayish brown, wet, medium dense, medium grained sand							

EXPLORATION LOG

Project: Orchard View Gardens		Location: B-3
Address: 8300 Valley View St, Buena Park, CA 90620		Elevation: 53
Job Number: 2853.00	Client: National Community Renaissance	Date: 11/23/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
				20			20.9		
		End of boring at 21.5 feet. Groundwater encountered at 10 feet. Backfilled with soil cuttings.							

APPENDIX B

LABORATORY TEST PROGRAM

LABORATORY TESTING PROGRAM

Soil Classification

Soils encountered within the exploratory borings were initially classified in the field in general accordance with the visual-manual procedures of the Unified Soil Classification System (ASTM D2488). The samples were re-examined in the laboratory and classifications reviewed and then revised where appropriate. The assigned group symbols are presented in the Boring Logs provided in Appendix A.

In Situ Moisture and Density

Moisture content and dry density of in-place soil materials were determined in representative strata. Test data are summarized on the Boring Logs provided in Appendix A.

Maximum Dry Density and Optimum Moisture Content

Maximum dry density and optimum moisture content of onsite soils were determined for one selected sample in general accordance with Method A of ASTM D1557. Pertinent test values are given on Table B.

Consolidation

Consolidation tests were performed for selected soil samples in general conformance with ASTM D 2435. Axial loads were applied in several increments to a laterally restrained 1-inch-high sample. Loads were applied in geometric progression by doubling the previous load, and the resulting deformations were recorded at selected time intervals. The test samples were inundated at selected loads to evaluate the effects of a sudden increase in moisture content (hydro-consolidation potential). Results of the tests are graphically presented on Plates B-1 to B-2.

Direct Shear

The Coulomb shear strength parameters, angle of internal friction and cohesion, were determined for a bulk sample obtained from one our borings. The tests were performed in general conformance with Test Method ASTM D 3080. The sample was remolded to 90 percent of maximum dry density and at the optimum moisture content. Three specimens were prepared for each test, artificially saturated, and then sheared under varied loads at an appropriate constant rate of strain. Results are graphically presented on Plate B-3.

Expansion Potential

An Expansion Index test was performed on a selected sample in accordance with ASTM D 4829. The test result and expansion potential are presented on Table B.

Atterberg Limits

Atterberg Limits (Liquid Limit, Plastic Limit, and Plasticity Index) were performed in accordance with Test Method ASTM D4318. Pertinent test values are presented within Table B.

Corrosion

Select samples were tested for minimum resistivity, chloride, and pH in accordance with California Test Method 643. Results of these tests are provided in Table B.

Soluble Sulfate Content

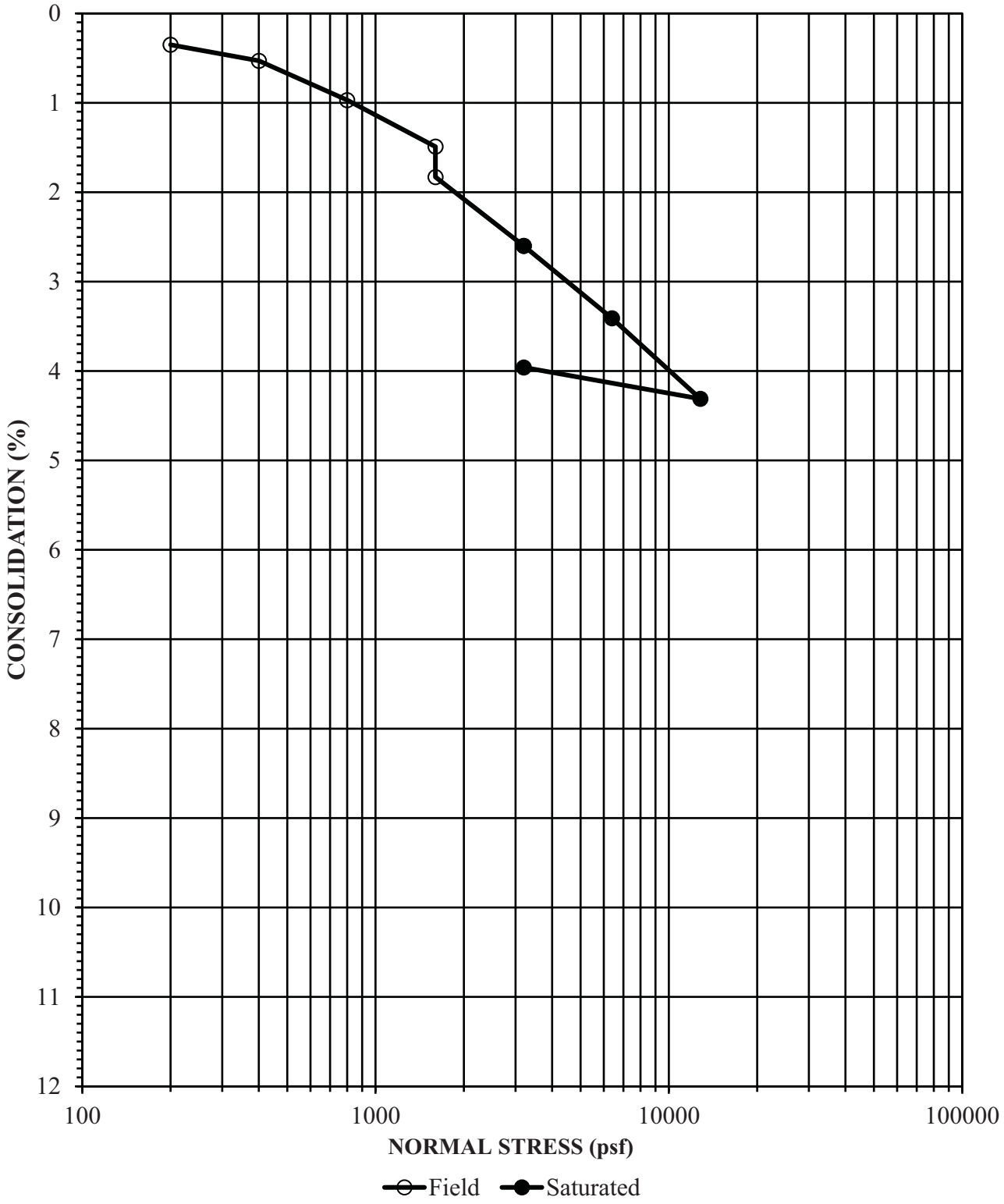
A chemical analysis was performed on a selected soil sample to determine soluble sulfate content. The test was performed in accordance with California Test Method (CTM) 417. The test result is included in Table B.

TABLE B
SUMMARY OF LABORATORY TEST RESULTS

Boring Number	Depth (feet)	Soil Type	Test Results	
B-1	0-5	Silty Sand (SM)	Maximum Dry Density (pcf): Optimum Moisture Content (%): Soluble Sulfate Content (%): Sulfate Exposure: pH: Minimum Resistivity: Chloride: Expansion Index: Expansion Potential:	118.5 11.5 0.001 Negligible 7.56 7300 Ohm-cm 10.3 ppm 0 Negligible
B-1	15	Sandy Clay (CL)	Liquid Limit: Plastic Index: Percent Passing No. 200 Sieve:	31 11 61.4 %
B-1	20	Sand (SP)	Percent Passing No. 200 Sieve:	3.7 %
B-1	25	Sandy Silt (ML)	Percent Passing No. 200 Sieve: Liquid Limit: Plastic Index:	86.7 % 36 14
B-1	30	Clay (CL)	Liquid Limit: Plastic Index:	43 18
B-1	40	Clay (CL)	Liquid Limit: Plastic Index:	33 12

Additional laboratory test results are provided on the boring logs provided in Appendix A and on the Plates that follow.

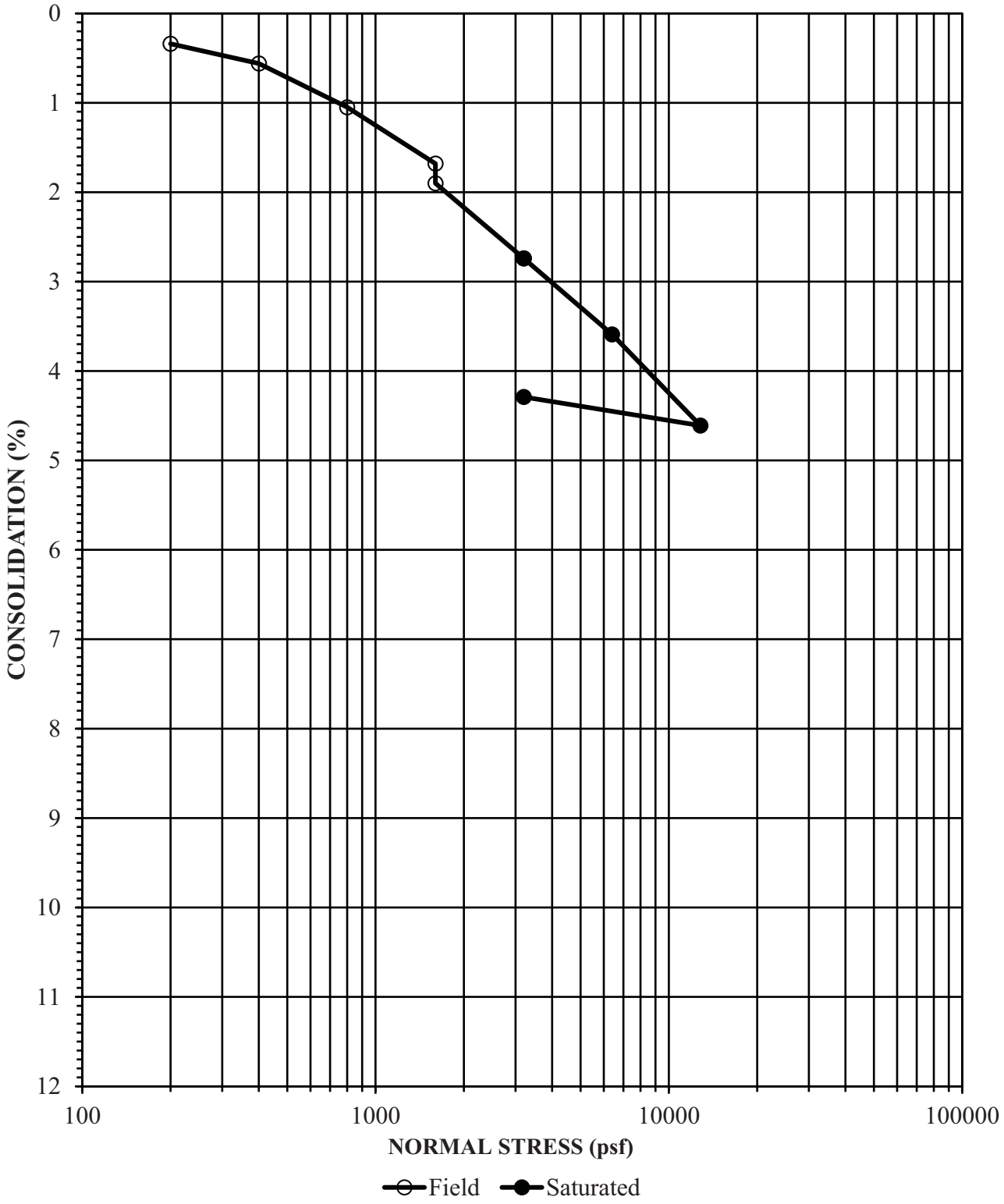
CONSOLIDATION



Job Number	Location	Depth	Description
2853.00	B-2	4	Sand (SP)

Initial Dry Density (pcf)	Initial Moisture Content (%)	Final Moisture Concent (%)
92.8	5.8	23.9

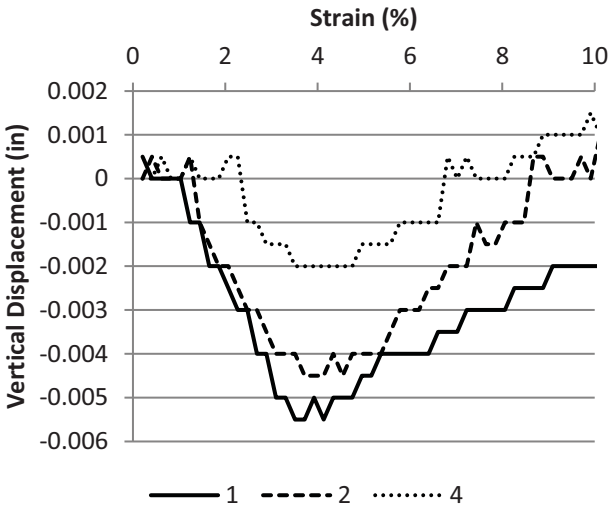
CONSOLIDATION

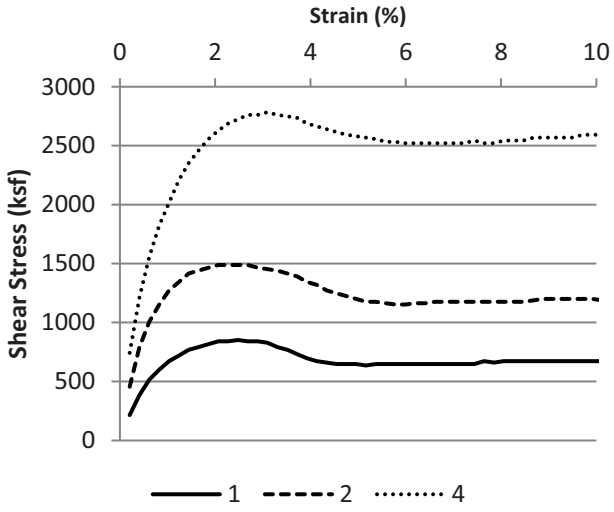


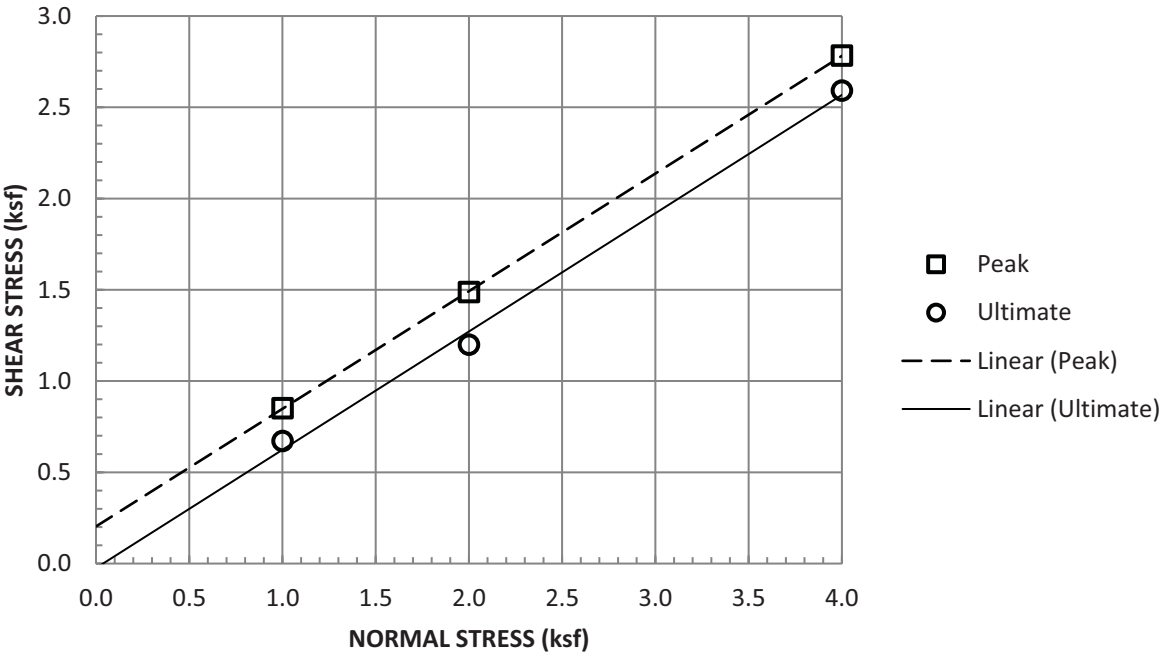
Job Number	Location	Depth	Description
2853.00	B-3	6	Sand (SP)

Initial Dry Density (pcf)	Initial Moisture Content (%)	Final Moisture Concent (%)
95.8	6	21.9

DIRECT SHEAR







Sample Type:	Remolded 90% of 118.5 @ 11.5%, Saturate		
Normal Stress (ksf)	1	2	4
Peak Shear Stress (ksf)	0.852	1.488	2.784
Peak Displacement (in)	0.006	0.005	0.002
Ultimate Shear Stress (ksf)	0.672	1.2	2.592
Ultimate Displacement (in)	0.25	0.25	0.25
Initial Dry Density (pcf)	106.7	106.7	106.7
Initial Moisture Content (%)	12	12	12
Final Moisture Content (%)	16	15.6	15.9
Strain Rate (in/min)	0.01		

Job Number	Location	Depth	Description
2853.00	B-1	0-5	Sand / Silty Sand (SP/SM)

APPENDIX C

LIQUEFACTION ANALYSIS

TABLE C-1
ANALYSIS OF LIQUEFACTION POTENTIAL
BORING: B-1 (2%PE in 50 yrs; FS=1.3)

SM

Client: NCR
J.N. 2853.00
Site: Buena Park

Hammer Type (D,S,A)	A			
Boring Diameter, ID (in)	4			
Site Acceleration (g)	0.66			
for a Magnitude (Mw) of	6.77			
and MSF of	1.35			
Depth to High GW	10	ft.	FS for Liquefaction:	1.3
Depth to GW during invest.	10	ft.	FS for Liqu. Settlement:	1.3
Hammer Efficiency	80	%	PI Threshold for Liquefaction:	12
Sublayer Thickness	1	ft.	Moisture Cnt Threshold for Liqu. (%LL)	85
Depth of Boring	50	ft.		

Notes: Underlined numbers are estimated values.
(1) Based on current groundwater conditions at the time of investigation.
(2) Based on assumed/proposed high groundwater conditions.
(3) Kα=1.0

(4) A Layer is located above historically high groundwater
B Factor of Saftey is greater than the specified value of FS=1.3
C The $(N_1)_{60\text{-}cs}$ is greater than 30 blows per foot
D PI > 12 or the in situ moisture content (M%) < 85% LL

Reference: Youd, T.L., et.al., (2001), "Liquefaction Resistance of Soils: Summary Report From The 1996 NCEER and 1998 NCEER/NSF Workshops on Evaluation of Liquefaction Resistance of Soils", ASCE Journal of Geotechnical and Geoenvironmental Engineering, Vol.127, No.10, pp.817-833, October, 2001.

Layer Label	Depth Interval (ft) Top	Depth Interval (ft) Bottom	Layer Mid-Depth (ft)	Soil Type (USCS)	Fines <#200 Sieve (%)	LL (%)	PI	M (%)	Field Nf (bls/ft)	Sample Type SPT/CA	Soil Wet Density (pcf)	Total Stress (psf)(1)	Effec. Stress (psf)(1)	C_n	C_e	C_b	C_r	C_L	$(N_1)_{60}$ (lbs/ft)	α	β	$(N_1)_{60\text{-}cs}$ (lbs/ft)	Effec. Stress (psf)(2)	R_d	CRR (M=7.5)	Kσ	CSR	FS (3)	To Liquefy Y/N?	Reason(4) not Liquifiable
																												1.30		
1	0.0	1.0	0.5	SM	30			3.8	20	CA	99	49	49	1.7	1.33	1.00	0.75	1.0	19.0	4.7	1.15	26.7	49	1.00	NA	1.00	0.42	NA	N	A
1	1.0	2.0	1.5	SM	30			3.8	20	CA	99	148	148	1.7	1.33	1.00	0.75	1.0	19.0	4.7	1.15	26.7	148	1.00	NA	1.00	0.42	NA	N	A
1	2.0	3.0	2.5	SM	30			3.8	20	CA	99	247	247	1.7	1.33	1.00	0.75	1.0	18.7	4.7	1.15	26.3	247	0.99	NA	1.00	0.42	NA	N	A
1	3.0	4.0	3.5	SM	30			3.8	20	CA	99	345	345	1.6	1.33	1.00	0.75	1.0	18.0	4.7	1.15	25.5	345	0.99	NA	1.00	0.42	NA	N	A
1	4.0	5.0	4.5	SM	30			3.8	20	CA	99	444	444	1.6	1.33	1.00	0.75	1.0	17.4	4.7	1.15	24.8	444	0.99	NA	1.00	0.42	NA	N	A
1	5.0	6.0	5.5	SM	30			3.8	20	CA	99	543	543	1.5	1.33	1.00	0.75	1.0	16.9	4.7	1.15	24.2	543	0.99	NA	1.00	0.42	NA	N	A
1	6.0	7.0	6.5	SM	30			3.8	20	CA	99	642	642	1.5	1.33	1.00	0.80	1.0	17.4	4.7	1.15	24.8	642	0.99	NA	1.00	0.42	NA	N	A
1	7.0	8.0	7.5	SM	30			3.8	20	CA	99	740	740	1.4	1.33	1.00	0.80	1.0	16.9	4.7	1.15	24.2	740	0.98	NA	1.00	0.42	NA	N	A
2	8.0	9.0	8.5	SP	5			25.3	11	CA	118	1001	1001	1.3	1.33	1.00	0.80	1.0	8.6	0.0	1.00	8.6	1001	0.98	NA	1.00	0.42	NA	N	A
2	9.0	10.0	9.5	SP	5			25.3	11	CA	118	1119	1119	1.3	1.33	1.00	0.85	1.0	8.8	0.0	1.00	8.8	1119	0.98	NA	1.00	0.42	NA	N	A
3	10.0	11.0	10.5	SP	5			25	17	CA	125	1313	1281	1.2	1.33	1.00	0.85	1.0	13.1	0.0	1.00	13.1	1281	0.98	0.14	1.00	0.42	0.46	Y	
3	11.0	12.0	11.5	SP	5			25	17	CA	125	1438	1344	1.2	1.33	1.00	0.85	1.0	12.9	0.0	1.00	12.9	1344	0.97	0.14	1.00	0.44	0.43	Y	
3	12.0	13.0	12.5	SP	5			25	17	CA	125	1563	1407	1.2	1.33	1.00	0.85	1.0	12.7	0.0	1.00	12.7	1407	0.97	0.14	1.00	0.46	0.40	Y	
3	13.0	14.0	13.5	SP	5			25	17	CA	125	1688	1469	1.2	1.33	1.00	0.85	1.0	12.5	0.0	1.00	12.5	1469	0.97	0.14	1.00	0.48	0.38	Y	
3	14.0	15.0	14.5	SP	5			25	17	CA	125	1813	1532	1.1	1.33	1.00	0.85	1.0	12.3	0.0	1.00	12.3	1532	0.97	0.13	1.00	0.50	0.36	Y	
4	15.0	16.0	15.5	CL	61	31	11	34	8	SPT	125	1938	1594	1.1	1.33	1.00	0.85	1.2	12.2	5.0	1.20	19.6	1594	0.96	0.21	1.00	0.50	0.57	Y	
4	16.0	17.0	16.5	CL	61	31	11	34	8	SPT	125	2063	1657	1.1	1.33	1.00	0.90	1.2	12.7	5.0	1.20	20.3	1657	0.96	0.22	1.00	0.52	0.57	Y	
4	17.0	18.0	17.5	CL	61	31	11	34	8	SPT	125	2188	1720	1.1	1.33	1.00	0.90	1.2	12.5	5.0	1.20	20.0	1720	0.96	0.22	1.00	0.52	0.56	Y	
4	18.0	19.0	18.5	CL	61	31	11	34	8	SPT	125	2313	1782	1.1	1.33	1.00	0.90	1.2	12.3	5.0	1.20	19.8	1782	0.96	0.21	1.00	0.54	0.53	Y	
4	19.0	20.0	19.5	CL	61	31	11	34	8	SPT	125	2438	1845	1.1	1.33	1.00	0.90	1.2	12.2	5.0	1.20	19.6	1845	0.96	0.21	1.00	0.54	0.53	Y	
5	20.0	21.0	20.5	SP	4			35	16	SPT	125	2563	1907	1.0	1.33	1.00	0.90	1.2	24.0	0.0	1.00	24.0	1907	0.95	0.27	1.00	0.54	0.68	Y	
5	21.0	22.0	21.5	SP	4			35	16	SPT	125	2688	1970	1.0	1.33	1.00	0.90	1.2	23.7	0.0	1.00	23.7	1970	0.95	0.27	1.00	0.56	0.65	Y	
5	22.0	23.0	22.5	SP	4			35	16	SPT	125	2813	2033	1.0	1.33	1.00	0.95	1.2	24.6	0.0	1.00	24.6	2033	0.95	0.28	1.01	0.56	0.69	Y	
5	23.0	24.0	23.5	SP	4			35	16	SPT	125	2938	2095	1.0	1.33	1.00	0.95	1.2	24.3	0.0	1.00	24.3	2095	0.95	0.28	1.01	0.56	0.68	Y	
5	24.0	25.0	24.5	SP	4			35	16	SPT	125	3063	2158	1.0	1.33	1.00	0.95	1.2	24.0	0.0	1.00	24.0	2158	0.94	0.27	1.00	0.58	0.64	Y	
6	25.0	26.0	25.5	CL	87	36	14	35.9	8	SPT	125	3188	2220	1.0	1.33	1.00	0.95	1.2	11.8	5.0	1.20	19.2	2220	0.94	NA	1.00	0.58	NA	N	D
6	26.0	27.0	26.5	CL	87	36	14	35.9	8	SPT	125	3313	2283	1.0	1.33	1.00	0.95	1.2	11.7	5.0	1.20	19.0	2283	0.94	NA	0.99	0.58	NA	N	D
6	27.0	28.0	27.5	CL	87	36	14	35.9	8	SPT	125	3438	2346	0.9	1.33	1.00	0.95	1.2	11.5	5.0	1.20	18.8	2346	0.94	NA	0.99	0.58	NA	N	D
6	28.0	29.0	28.5	CL	87	36	14	35.9	8	SPT	125	3563	2408	0.9	1.33	1.00	0.95	1.2	11.4	5.0	1.20	18.6	2408	0.93	NA	0.98	0.60	NA	N	D
6	29.0	30.0	29.5	CL	87	36	14	35.9	8	SPT	125	3688	2471	0.9	1.33	1.00	1.00	1.2	11.8	5.0	1.20	19.2	2471	0.93	NA	0.98	0.60	NA	N	D
7	30.0	31.0	30.5	CL	70	43	18	36.8	8	SPT	125	3813	2533	0.9	1.33	1.00	1.00	1.2	11.7	5.0	1.20	19.0	2533	0.93	NA	0.97	0.60	NA	N	D
7	31.0	32.0	31.5	CL	70	43	18	36.8	8	SPT	125	3938	2596	0.9	1.33	1.00	1.00	1.2	11.5	5.0	1.20	18.8	2596	0.92	NA	0.97	0.60	NA	N	D
7	32.0	33.0	32.5	CL	70	43	18	36.8	8	SPT	125	4063	2659	0.9	1.33	1.00	1.00	1.2	11.4	5.0	1.20	18.7	2659	0.91	NA	0.96	0.60	NA	N	D
7	33.0	34.0	33.5	CL	70	43	18	36.8	8	SPT	125	4188	2721	0.9	1.33	1.00	1.00	1.2	11.3	5.0	1.20	18.5	2721	0.90	NA	0.96	0.60	NA	N	D
7	34.0	35.0	34.5	CL	70	43	18	36.8	8	SPT	125	4313	2784	0.9	1.33	1.00	1.00	1.2	11.1	5.0	1.20	18.3	2784	0.89	NA	0.96	0.60	NA	N	D
8	35.0	36.0	35.5	CL	70	43	18	26.6	10	SPT	125	4438	2846	0.9	1.33	1.00	1.00	1.2	13.7	5.0	1.20	21.5	2846	0.89	NA	0.95	0.60	NA	N	D
8	36.0	37.0	36.5	CL	70	43	18	26.6	10	SPT	125	4563	2909	0.8	1.33	1.00	1.00	1.2	13.6	5.0	1.20	21.3	2909	0.88	NA	0.95	0.60	NA	N	D
8	37.0	38.0	37.5	CL	70	43	18	26.6	10	SPT	125	4688	2972	0.8	1.33	1.00	1.00	1.2	13.4	5.0	1.20	21.1	2972	0.87	NA	0.94	0.58	NA	N	D
8	38.0	39.0	38.5	CL	70	43	18	26.6	10	SPT	125	4813	3034	0.8	1.33	1.00	1.00	1.2	13.3	5.0	1.20	20.9	3034	0.86	NA	0.94	0.58	NA	N	D
8	39.0	40.0	39.5	CL	70	43	18	26.6	10	SPT	125	4938	3097	0.8	1.33	1.00	1.00	1.2	13.1	5.0	1.20	20.7	3097	0.85	NA	0.94	0.58	NA	N	D
9	40.0	41.0	40.5	CL	80	33	12	23	10	SPT	125	5063	3159	0.8	1.33	1.00	1.00	1.2	13.0	5.0	1.20	20.6	3159	0.85	NA	0.93	0.58	NA	N	D
9	41.0	42.0	41.5	CL	80	33	12	23	10	SPT	125	5188	3222	0.8	1.33	1.00	1.00	1.2	12.8	5.0	1.20	20.4	3222	0.84	NA	0.93	0.58	NA	N	D
9	42.0	43.0	42.5	CL	80	33	12	23	10	SPT	125	5313	3285	0.8	1.33	1.00	1.00	1.2	12.7	5.0	1.20	20.2	3285	0.83	NA	0.92	0.58	NA	N	D
9	43.0	44.0	43.5	CL	80	33	12	23	10	SPT	125	5438	3347	0.8	1.33	1.00	1.00	1.2	12.6	5.0	1.20	20.1	3347	0.82	NA	0.92	0.58	NA	N	D
9	44.0	45.0	44.5	CL	80	33	12	23	10	SPT	125	5563	3410	0.8	1.33	1.00	1.00	1.2	12.4	5.0	1.20	19.9	3410	0.81	NA	0.92	0.56	NA	N	D
10	45.0	46.0	45.5	SP	5			25	39	SPT	125	5688	3472	0.8	1.33	1.00	1.00	1.2	48.0	0.0	1.00	48.0	3472	0.81	NA	0.91	0.56	NA	N	C
10	46.0	47.0	46.5	SP	5			25	39	SPT	125	5813	3535	0.8	1.33	1.00	1.00	1.2	47.5	0.0	1.00	47.5	3535	0.80	NA	0.91	0.56	NA	N	C
10	47.0	48.0	47.5	SP	5			25	39	SPT	125	5938	3598	0.8	1.33	1.00	1.00	1.2	47.0	0.0	1.00	47.0	3598	0.79	NA	0.90	0.56	NA	N	C
10	48.0	49.0	48.5	SP	5			25	39	SPT	125	6063	3660	0.7	1.33	1.00	1.00	1.2	46.5	0.0	1.00	46.5	3660	0.78	NA	0.90	0.56	NA	N	C
10	49.0	50.0	49.5	SP	5			25	39	SPT	125	6188	3723	0.7	1.33	1.00	1.00	1.2	46.0	0.0	1.00	46.0	3723	0.77	NA	0.90	0.56	NA	N	C

TABLE C-2
LIQUEFACTION INDUCED SETTLEMENT
BORING B-1 (2%PE in 50 yrs; FS=1.3)

Client: NCR

J.N. 2853.00

Site: Buena Park

Notes:

(1) Effective ER=55% normalized standard penetration resistance for clean sands, $(N_1)_{60\text{-}cs}$*1.1 (Seed, 1994).

(2) Volumetric strain (Ishihara and Yoshimine, 1992) using $(N_1)_{55\text{-}cs}$.

(3) Volumetric strain (Tokimatsu and Seed, 1987) using $(N_1)_{60\text{-}cs}$.

									Total δ (in.)	3.58	3.20	3.39
Depth Interval (ft)		Soil layer thickness (ft)	Fines <#200 Sieve (%)	$(N_1)_{60\text{-}cs}$	$(N_1)_{55\text{-}cs}$ (1)	FS	IY Percent ε_v (2)	CSR*	TS Percent ε_v (3)	IY δ (in.)	TS δ (in.)	Ave δ (in.)
Top	Bottom											
0.00	1.00	1.00	30	26.7	29.4	NA	0.00	0.42	NA	NA	NA	0
1.00	2.00	1.00	30	26.7	29.4	NA	0.00	0.42	NA	NA	NA	0
2.00	3.00	1.00	30	26.3	28.9	NA	0.00	0.42	NA	NA	NA	0
3.00	4.00	1.00	30	25.5	28.1	NA	0.00	0.42	NA	NA	NA	0
4.00	5.00	1.00	30	24.8	27.3	NA	0.00	0.42	NA	NA	NA	0
5.00	6.00	1.00	30	24.2	26.6	NA	0.00	0.42	NA	NA	NA	0
6.00	7.00	1.00	30	24.8	27.3	NA	0.00	0.42	NA	NA	NA	0
7.00	8.00	1.00	30	24.2	26.6	NA	0.00	0.42	NA	NA	NA	0
8.00	9.00	1.00	5	8.6	9.5	NA	0.00	0.42	NA	NA	NA	0
9.00	10.00	1.00	5	8.8	9.7	NA	0.00	0.42	NA	NA	NA	0
10.00	11.00	1.00	5	13.1	14.4	0.5	2.87	0.42	2.14	0.34	0.26	0.30
11.00	12.00	1.00	5	12.9	14.2	0.4	2.90	0.44	2.16	0.35	0.26	0.30
12.00	13.00	1.00	5	12.7	13.9	0.4	2.22	0.46	2.18	0.27	0.26	0.26
13.00	14.00	1.00	5	12.5	13.7	0.4	2.27	0.48	2.20	0.27	0.26	0.27
14.00	15.00	1.00	5	12.3	13.5	0.4	2.33	0.50	2.22	0.28	0.27	0.27
15.00	16.00	1.00	61	19.6	21.6	0.6	2.06	0.50	1.68	0.25	0.20	0.22
16.00	17.00	1.00	61	20.3	22.3	0.6	1.99	0.52	1.64	0.24	0.20	0.22
17.00	18.00	1.00	61	20.0	22.0	0.6	2.02	0.52	1.66	0.24	0.20	0.22
18.00	19.00	1.00	61	19.8	21.8	0.5	2.06	0.54	1.67	0.25	0.20	0.22
19.00	20.00	1.00	61	19.6	21.6	0.5	2.08	0.54	1.68	0.25	0.20	0.23
20.00	21.00	1.00	4	24.0	26.4	0.7	1.31	0.54	1.49	0.16	0.18	0.17
21.00	22.00	1.00	4	23.7	26.0	0.6	1.63	0.56	1.50	0.20	0.18	0.19
22.00	23.00	1.00	4	24.6	27.1	0.7	1.24	0.56	1.46	0.15	0.18	0.16
23.00	24.00	1.00	4	24.3	26.7	0.7	1.28	0.56	1.48	0.15	0.18	0.17
24.00	25.00	1.00	4	24.0	26.4	0.6	1.59	0.58	1.49	0.19	0.18	0.18
25.00	26.00	1.00	87	19.2	21.1	NA	0.00	0.58	NA	NA	NA	0
26.00	27.00	1.00	87	19.0	20.9	NA	0.00	0.58	NA	NA	NA	0
27.00	28.00	1.00	87	18.8	20.7	NA	0.00	0.58	NA	NA	NA	0
28.00	29.00	1.00	87	18.6	20.5	NA	0.00	0.60	NA	NA	NA	0
29.00	30.00	1.00	87	19.2	21.1	NA	0.00	0.60	NA	NA	NA	0
30.00	31.00	1.00	70	19.0	20.9	NA	0.00	0.60	NA	NA	NA	0
31.00	32.00	1.00	70	18.8	20.7	NA	0.00	0.60	NA	NA	NA	0
32.00	33.00	1.00	70	18.7	20.5	NA	0.00	0.60	NA	NA	NA	0
33.00	34.00	1.00	70	18.5	20.4	NA	0.00	0.60	NA	NA	NA	0
34.00	35.00	1.00	70	18.3	20.2	NA	0.00	0.60	NA	NA	NA	0
35.00	36.00	1.00	70	21.5	23.6	NA	0.00	0.60	NA	NA	NA	0
36.00	37.00	1.00	70	21.3	23.4	NA	0.00	0.60	NA	NA	NA	0
37.00	38.00	1.00	70	21.1	23.2	NA	0.00	0.58	NA	NA	NA	0
38.00	39.00	1.00	70	20.9	23.0	NA	0.00	0.58	NA	NA	NA	0
39.00	40.00	1.00	70	20.7	22.8	NA	0.00	0.58	NA	NA	NA	0
40.00	41.00	1.00	80	20.6	22.6	NA	0.00	0.58	NA	NA	NA	0
41.00	42.00	1.00	80	20.4	22.4	NA	0.00	0.58	NA	NA	NA	0
42.00	43.00	1.00	80	20.2	22.3	NA	0.00	0.58	NA	NA	NA	0
43.00	44.00	1.00	80	20.1	22.1	NA	0.00	0.58	NA	NA	NA	0
44.00	45.00	1.00	80	19.9	21.9	NA	0.00	0.56	NA	NA	NA	0
45.00	46.00	1.00	5	48.0	52.8	NA	0.00	0.56	NA	NA	NA	0
46.00	47.00	1.00	5	47.5	52.2	NA	0.00	0.56	NA	NA	NA	0
47.00	48.00	1.00	5	47.0	51.7	NA	0.00	0.56	NA	NA	NA	0
48.00	49.00	1.00	5	46.5	51.1	NA	0.00	0.56	NA	NA	NA	0
49.00	50.00	1.00	5	46.0	50.6	NA	0.00	0.56	NA	NA	NA	0

TABLE C-3
ANALYSIS OF DRY SEISMIC SETTLEMENT POTENTIAL
BORING B-1 (2%PE in 50 yrs; FS=1.3)

Client: NCR
J.N. 2853.00
Site: Buena Park

		Total Seismic Settlement of Unsaturated Soil w/ FS=2.0 (in):	0.77
		Subtotal Seismic Settlement of Unsaturated Soil (in)	0.39
		Total Thickness of Unsaturated Soil (ft)	10.0

GW Depth: 10 feet
EQ Magnitude 6.77
MSF 1.35

Layer Mid-Depth (ft.)	Soil Type	Eff. Stress σ'_{vo}(tsf)	Clean Sand $(N_1)_{60}$	CSR	(psf) τ_{avg} Avg. Shear Stress	(tsf) σ_m' Mean Bulk Stress	(tsf) G_{max} Max. Dyn.Shr. Mod.	γ_{eff} (G_{eff}/G_{max})	Eff. Cyclic Shr.Strain γ_{eff}	Eff. Cyclic Shr.Strain γ_{eff} (%)	Volume Strain (%)	EQ Mag. Factor	Layer Thickness (ft.)	Estimated Dry Sand Seismic Settlement (in.)
									Fig.11		Fig.13			
0.5	SM	0.02	26.7	0.42	20.7	0.02	167.4	6.19E-05	9.98E-05	9.98E-03	6.63E-03	1.35	1.0	0.001
1.5	SM	0.07	26.7	0.42	62.2	0.05	290.0	1.07E-04	2.70E-04	2.70E-02	1.80E-02	1.35	1.0	0.002
2.5	SM	0.12	26.3	0.42	103.6	0.08	372.5	1.39E-04	4.58E-04	4.58E-02	3.11E-02	1.35	1.0	0.003
3.5	SM	0.17	25.5	0.42	145.1	0.11	436.5	1.66E-04	7.86E-04	7.86E-02	5.54E-02	1.35	1.0	0.005
4.5	SM	0.22	24.8	0.42	186.5	0.14	490.5	1.90E-04	1.60E-03	1.60E-01	1.17E-01	1.35	1.0	0.010
5.5	SM	0.27	24.2	0.42	228.0	0.18	537.5	2.12E-04	2.69E-03	2.69E-01	2.04E-01	1.35	1.0	0.018
6.5	SM	0.32	24.8	0.42	269.5	0.21	589.4	2.29E-04	9.71E-04	9.71E-02	7.10E-02	1.35	1.0	0.006
7.5	SM	0.37	24.2	0.42	310.9	0.24	628.0	2.48E-04	1.32E-03	1.32E-01	9.95E-02	1.35	1.0	0.009
8.5	SP	0.50	8.6	0.42	420.5	0.33	519.1	4.05E-04	1.00E-02	1.00E+00	1.89E+00	1.35	1.0	0.168
9.5	SP	0.56	8.8	0.42	470.0	0.36	553.8	4.24E-04	1.00E-02	1.00E+00	1.85E+00	1.35	1.0	0.164

APPENDIX G – Preliminary Water Quality Management Plan (WQMP)

Preliminary Water Quality Management Plan (WQMP)

Project Name:

8300 Valley View Street
Buena Park, CA

Prepared for:

National CORE

9421 Haven Avenue

Rancho Cucamonga, CA 91730

(909) 204-3444

Prepared by:

RRM Design Group

Engineer: Michael Hamilton Registration No. 62696

10 E. Figueroa Street, Suite 200

Santa Barbara, CA 93101

(805) 963-8283

August 5, 2020

Project Owner's Certification			
Permit/Application No.		Grading Permit No.	
Tract/Parcel Map No.	2020-138	Building Permit No.	
CUP, SUP, and/or APN (Specify Lot Numbers if Portions of Tract)			069-283-025

This Water Quality Management Plan (WQMP) has been prepared for National CORE by RRM Design Group. The WQMP is intended to comply with the requirements of the local NPDES Stormwater Program requiring the preparation of the plan.

The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan and will ensure that this plan is amended as appropriate to reflect up-to- date conditions on the site consistent with the current Orange County Drainage Area Management Plan (DAMP) and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated Cities of Orange County within the Santa Ana Region. Once the undersigned transfers its interest in the property, its successors-in-interest shall bear the aforementioned responsibility to implement and amend the WQMP. An appropriate number of approved and signed copies of this document shall be available on the subject site in perpetuity.

Owner: National CORE Representative:			
Title			
Company	National CORE		
Address	9421 Haven Avenue, Rancho Cucamonga, CA 91730		
Email			
Telephone #	(909) 204-3444		
Signature		Date	

Preparer (Engineer): Michael Hamilton			
Title	Manager of Engineering Services		
Company	RRM Design Group		
Address	10 E Figueroa Street, Suite 200, Santa Barbara, CA 93101		
Email	mchamilton@rrmdesign.com		
Telephone #	(805) 963-8283		
Preparer Signature		Date	
Place Stamp Here			

Preparer (Engineer): Michael Hamilton			
Title	Manager of Engineering Services		
Company	RRM Design Group		
Address	10 E Figueroa Street, Suite 200, Santa Barbara, CA 93101		
Email	mchamilton@rrmdesign.com		
Telephone #	(805) 963-8283		
Preparer Signature		Date	
Place Stamp Here			

Contents

Page No.

Attachments

Section I Discretionary Permit(s) and Water Quality Conditions

Provide discretionary permit and water quality information. *Refer to Section 2.1 in the Technical Guidance Document (TGD) available from the Orange County Stormwater Program (ocwatersheds.com).*

Project Information			
Permit/Application No.		Tract/Parcel Map No.	2020-138
Additional Information/ Comments:			
Water Quality Conditions			
Water Quality Conditions (list verbatim)			
Watershed-Based Plan Conditions			
Provide applicable conditions from watershed - based plans including WIHMPs and TMDLS.	TMDLs have been established for copper, lead, and zinc in Coyote Creek. A WIHMP has been developed for the San Gabriel River/Coyote Creek Watershed but has not been approved.		

Section II Project Description

II.1 Project Description

Include attributes relevant to determining applicable source controls. *Refer to Section 2.2 in the TGD for information that must be included in the project description.*

Description of Proposed Project				
Development Category (Verbatim from WQMP):	All significant redevelopment projects, where significant redevelopment is defined as the addition or replacement of 5,000 or more square feet of impervious surface on an already developed site. Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of the facility, or emergency redevelopment activity required to protect public health and safety. If the redevelopment results in the addition or replacement of less than 50 percent of the impervious area on-site and the existing development was not subject to WQMP requirement, the numeric sizing criteria discussed in Section 7.II-2.0 only applies to the addition or replacement area. If the addition or replacement accounts for 50 percent or more of the impervious area, the Project WQMP requirements apply to the entire development.			
Project Area (ft_2): 76,951	Number of Dwelling Units: 66		SIC Code: N/A	
Narrative Project Description:	The proposed affordable housing project is located at 8300 Valley View Street, California on a 1.77 acre site which has been previously developed. Currently the site contains an existing building, a surface parking lot and an undeveloped area. The proposed project included the demolition of the existing building and the construction of a five-building, 66-unit senior housing development consisting of 62 one-bedroom apartments and 4 two-bedroom apartments. There will also be a 3,000-sf community center and the parking ration will be 0.62 spaces per residential unit. The existing parking lot will be reconfigured for the change in use of the site.			
Project Area	Pervious		Impervious	
	Area (acres or sq ft)	Percentage	Area (acres or sq ft)	Percentage
Pre-Project Conditions	56,068 sq ft	72.9%	20,883 sq ft	27.1%
Post-Project Conditions	18,917 sq ft	24.6%	58,034 sq ft	75.%
Drainage Patterns/Connections	The site is currently occupied by an existing building, a surface parking lot, and an undeveloped area. Drainage sheet flows from the parking lot in a westerly direction toward Valley View Street frontage road. Drainage flows out of the existing driveway into the curb and gutter on Valley View Street. Eventually, runoff enters the municipal storm drain system through a curb inlet at the intersection of Valley View Street and Crescent Avenue.			

	Ultimately, runoff flows from the municipal storm drain system to the Coyote Creek, San Gabriel River Estuary, and San Pedro Bay.

II.2 Potential Stormwater Pollutants

Determine and list expected stormwater pollutants based on land uses and site activities. *Refer to Section 2.2.2 and Table 2.1 in the TGD for guidance.*

Pollutants of Concern			
Pollutant	Circle One: E=Expected to be of concern N=Not Expected to be of concern		Additional Information and Comments
Suspended-Solid/ Sediment	(E)	N	
Nutrients	(E)	N	
Heavy Metals	(E)	N	Uncovered Parking Areas
Pathogens (Bacteria/Virus)	(E)	N	
Pesticides	(E)	N	
Oil and Grease	(E)	N	Uncovered Parking Areas
Toxic Organic Compounds	E	(N)	
Trash and Debris	(E)	N	

II.3 Hydrologic Conditions of Concern

Determine if streams located downstream from the project area are determined to be potentially susceptible to hydromodification impacts. *Refer to Section 2.2.3.1 in the TGD for* NOC *or Section 2.2.3.2 for* SOC*.*

☒ No - Show map

☐ Yes - Describe applicable hydrologic conditions of concern below. *Refer to Section 2.2.3 in the TGD.*

The project is upstream of a stabilized channel that is not susceptible to erosion per the Susceptibility Analysis Map for the San Gabriel – Coyote Creek Watershed (Attachment B).

Therefore, according the TGD, an HCOC does not exist and hydromodification does not need to be considered further.

II.4 Post Development Drainage Characteristics

Describe post development drainage characteristics. *Refer to Section 2.2.4 in the TGD.*

The proposed development will maintain existing drainage patterns and discharge locations. The site has been divided into three (3) drainage management areas (DMAs): A, B, and C.

- Runoff from DMA 'A' will flow into a bio-retention area (INF-3) for treatment. Overflow from the basin will outlet through the curb on Valley View Street and enter the municipal storm drain system through inlets located at the intersection of Valley View Street and Crescent Avenue.
- Runoff from DMA 'B' will flow south-west into a bioretention area (INF-3) for treatment. Overflow from the basin will flow out through the curb on Valley View Street and enter the municipal storm drain system through inlets located at the intersection of Valley View Street and Crescent Avenue.
- Runoff from DMA 'C' will flow south-east into a bioretention area (INF-3) for treatment. Overflow from the basin will flow onto the adjacent parking lot to the south and enter the curb and gutter along Valley View Street as it did historically. Eventually runoff will enter the municipal storm drain system through inlets located at the intersection of Valley View Street and Crescent Avenue.

Ultimately, runoff flows from the municipal storm drain system to the Coyote Creek, San Gabriel River Estuary, and San Pedro Bay.

II.5 Property Ownership/Management

Describe property ownership/management. *Refer to Section 2.2.5 in the TGD.*

National CORE will own and manage the entire property. The Owner will be responsible for the long-term maintenance of the project's stormwater facilities and conformance with this WQMP after construction is complete.

A Notice of Transfer of Responsibility is provided in Attachment D and should be executed as part of an ownership transfer.

Section III Site Description

III.1 Physical Setting

Fill out table with relevant information. *Refer to Section 2.3.1 in the TGD.*

Planning Area/ Community Name	N/A
Location/Address	8300 Valley View Street
	Buena Park, CA
Land Use	Existing: Low Density Residential Proposed: Residential
Zoning	Existing: RS-6 – 6,000 sq. ft. One Family Residential Proposed: RM-20 – Medium Density Multifamily Residential
Acreage	1.77
Predominant Soil Type	Hydrologic Soil Group B (see Soils Map, Attachment B)

III.2 Site Characteristics

Fill out table with relevant information and include information regarding BMP sizing, suitability, and feasibility, as applicable. Refer to Section 2.3.2 in the TGD.

Precipitation Zone	85th percentile Rainfall = 0.9" (See Map, Attachment B)
Topography	The site slopes at 0.5-2% to the west.
Drainage Patterns/Connections	Runoff from the site flows south in the curb and gutter along Valley View Street. Runoff enters the municipal storm drain system through inlets at the intersection of Valley View Street and Crescent Avenue. Ultimately, runoff flows from the municipal storm drain system to the Coyote Creek, San Gabriel River Estuary, San Pedro Bay
Soil Type, Geology, and Infiltration Properties	Per the Orange County Infiltration Study Map (Attachment B), soils at the site are within the NRCS Hydrologic Soils Group B, which gives moderate infiltration potential and moderate runoff rates.

Site Characteristics (continued)	
Hydrogeologic (Groundwater) Conditions	Per the North Orange County Mapped Shallow Groundwater Map (Attachment B), the project site has a depth to groundwater of 5-10'. Per the geotechnical report prepared by Albus-Keefe & Associates, Inc., groundwater was encountered at 10 feet below the existing ground surface. See Attachment F.
Geotechnical Conditions (relevant to infiltration)	A minimum clearance of 5 feet above shallowest seasonally high groundwater table will be maintained given that the bottom of the infiltration facilities are set no more that 2 feet below the current ground surface. See Attachment F. The GeoTracker website shows no past or present soil or groundwater contamination sites within a 250' radius of the project site.
Off-Site Drainage	The proposed project site does not receive off-site runoff.
Utility and Infrastructure Information	No underground public utility lines cross the site.

III.3 Watershed Description

Fill out table with relevant information and include information regarding BMP sizing, suitability, and feasibility, as applicable. *Refer to Section 2.3.3 in the TGD.*

Receiving Waters	Coyote Creek, Coyote Creek - North Fork, San Gabriel River - Reach 1, San Gabriel River Estuary, San Pedro Bay
303(d) Listed Impairments	Coyote Creek: pH, Toxicity, Malathion, Iron Coyote Creek - North Fork: Selenium San Gabriel River - Reach 1: pH, Temperature (water) San Gabriel River Estuary: Dioxin, Nickel, Oxygen (Dissolved), Indicator Bacteria San Pedro Bay: None.
Applicable TMDLs	Metals (copper, lead, zinc)
Pollutants of Concern for the Project	Nutrients, Metals/Metalloids, Pesticides, Pathogens, Toxicity, Other Organics

Environmentally Sensitive and Special Biological Significant Areas	There are no environmentally sensitive or special biological significant areas within or adjacent to the project, and the project does not discharge directly to an ESA.

Section IV Best Management Practices (BMPs)

IV. 1 Project Performance Criteria

Describe project performance criteria. Several steps must be followed in order to determine what performance criteria will apply to a project. These steps include:

- If the project has an approved WIHMP or equivalent, then any watershed specific criteria must be used and the project can evaluate participation in the approved regional or sub-regional opportunities. The local Permittee planning or NPDES staff should be consulted regarding the existence of an approved WIHMP or equivalent.
- Determine applicable hydromodification control performance criteria. *Refer to Section 7.II-2.4.2.2 of the Model WQMP.*
- Determine applicable LID performance criteria. *Refer to Section 7.II-2.4.3 of the Model WQMP.*
- Determine applicable treatment control BMP performance criteria. *Refer to Section 7.II-*3.2.2 *of the Model WQMP.*
- Calculate the LID design storm capture volume for the project. *Refer to Section 7.II-2.4.3 of the Model WQMP.*

(NOC Permit Area only) Is there an approved WIHMP or equivalent for the project area that includes more stringent LID feasibility criteria or if there are opportunities identified for implementing LID on regional or sub-regional basis?	YES ☐	NO ☒
If yes, describe WIHMP feasibility criteria or regional/sub-regional LID opportunities.		

Project Performance Criteria (continued)	
If HCOC exists, list applicable hydromodification control performance criteria (Section 7.II-2.4.2.2 in MWQMP)	No HCOC exists, refer to Section II.3.
List applicable LID performance criteria (Section 7.II-2.4.3 from MWQMP)	Priority Projects must infiltrate, harvest and use, evapotranspire, or biotreat/biofilter, the 85th percentile, 24-hour storm event (Design Capture Volume). A properly designed biotreatment system may only be considered if infiltration, harvest and use, and evapotranspiration (ET) cannot be feasibly implemented for the full design capture volume. In this case, infiltration, harvest and use, and ET practices must be implemented to the greatest extent feasible and biotreatment may be provided for the remaining design capture volume.
List applicable treatment control BMP performance criteria (Section 7.II-3.2.2 from MWQMP)	Not Applicable-LID performance criteria is met through infiltration and biotreatment BMPs.
Calculate LID design storm capture volume for Project.	Refer to Worksheets B in Attachment B for DCV calculations.

IV.2. SITE DESIGN AND DRAINAGE PLAN

Describe site design and drainage plan including

- A narrative of site design practices utilized or rationale for not using practices;
- A narrative of how site is designed to allow BMPs to be incorporated to the MEP
- A table of DMA characteristics and list of LID BMPs proposed in each DMA.
- Reference to the WQMP plot plan.
- Calculation of Design Capture Volume (DCV) for each drainage area.
- A listing of GIS coordinates for LID and Treatment Control BMPs (unless not required by local jurisdiction).

Refer to Section 2.4.2 in the TGD.

Bioretention without underdrains (INF-3) has been chosen for the site due to the shallow groundwater depth and lack of nearby storm drain connections. Runoff from each drainage management area will flow overland and drain into their respective BMP.

The project site has been divided into three drainage management areas (DMAs). The DMAs and associated BMPs are shown on the WQMP Exhibit in Attachment C along with project Grading and Drainage Plans. Calculations of Design Capture Volumes for each DMA are provided in Attachment B.

The following treatment BMPs are proposed:

- DMA A is treated by bioretention with no underdrain (INF-3) at the northern property line of the site.
  - Outlet Coordinates: 33°50’32.23” N, 118°01’41.22” W
- DMA B is treated by bioretention with no underdrain (INF-3) at the south-western corner of the site.
  - Outlet Coordinates: 33°50’31.46” N, 118°01’41.43” W
- DMA C is treated by bioretention with no underdrain (INF-3) at the south-eastern corner of the site.
  - Outlet Coordinates: 33°50’31.23” N, 118°01’37.20” W

DMA	Total Area (SF)	Roof (SF)	Concrete (SF)	Asphalt (SF)	Permeable Pavers (SF)	Landscape (SF)	Total Impervious (SF)	Total Pervious (SF)
A	19,787	11,418	2,397	0	0	5,972	13,815	5,972
B	13,056	4,072	940	4,984	0	3,060	9,996	3,060
C	44,108	10,312	4,221	19,690	0	9,885	34,223	9,885
Total	**76,951**	**25,802**	**7,558**	**24,674**	**0**	**18,917**	**58,034**	**18,917**

DMA	Percent Impervious	C	DCV
A	70%	0.67	1,000
B	77%	0.72	709
C	78%	0.73	2,421
Total	75%	0.72	4,125

IV.3 LID BMP SELECTION AND PROJECT CONFORMANCE ANALYSIS

Each sub-section below documents that the proposed design features conform to the applicable project performance criteria via check boxes, tables, calculations, narratives, and/or references to worksheets. *Refer to Section 2.4.2.3 in the TGD for selecting LID BMPs and Section 2.4.3 in the TGD for conducting conformance analysis with project performance criteria.*

IV.3.1 Hydrologic Source Controls

Retention criteria for the project is met through infiltration and biotreatment BMPs listed in sections IV.3.2 and IV.3.4. HSCs are not required.

IV.3.2 Infiltration BMPs

Identify infiltration BMPs to be used in project. If design volume cannot be met, state why.

Name	Included?
Bioretention without underdrains	X
Rain gardens	
Porous landscaping	
Infiltration planters	
Retention swales	
Infiltration trenches	
Infiltration basins	
Drywells	
Subsurface infiltration galleries	
French drains	
Permeable asphalt	
Permeable concrete	
Permeable concrete pavers	
Other:	
Other:	

Show calculations below to demonstrate if the LID Design Strom Capture Volume can be met with infiltration BMPs. If not, document how much can be met with infiltration and document why it is not feasible to meet the full volume with infiltration BMPs.

Drainage Management Area A – Bioretention with no Underdrain (INF-3)
Simple Sizing method for Bioretention with no Underdrain

Step 1: Determine DCV
(See Worksheet B)

DCV = 1,000 cu-ft

Step 2: Determine the 48-hour Ponding Depth
The depth of effective storage depth that can be drawn down in 48 hours can be calculated using the following equation:

$d_{48} = K_{DESIGN} \times 4$

Where:

d_{48} = bioretention 48-hour effective depth, ft
K_{DESIGN} = bioretention design infiltration rate, in/hr

$d_{48} = 0.615 \times 4 = 2.46$ hours

This is the maximum effective depth of the basin below the overflow device to achieve drawdown in 48 hours. Effective depth includes ponding water and media/aggregate pore space.

Step 3: Design System Geometry to Provide d_{48}

Design system geometry such that
$d_{48} \geq d_{EFFECTIVE} = (d_P + n_M d_M + n_G d_G)$

Where:

d_{48} = depth of water that can drain in 48 hours
$d_{EFFECTIVE}$ = total effective depth of water stored in bioretention area, ft
d_P = bioretention ponding depth, ft (should be less than or equal to 1.5 ft)
n_M = bioretention media porosity
d_M = bioretention media depth, ft
n_G = bioretention gravel layer porosity; 0.35 may be assumed
d_G = bioretention gravel layer depth, ft

$d_{EFFECTIVE} = (0.5 + (0.25 \times 1.5) + (0.35 \times 0)) = 0.875$ ft

$d_{EFFECTIVE} = 0.875 \leq 2.46$ ft **OK**

Step 4: Calculate the Required Infiltrating Area

$A = DCV / d_{EFFECTIVE}$

Where:

A = required infiltrating area, sq-ft (measured as the media surface area)

DCV = design capture volume, cu-ft (see Step 1)

$d_{EFFECTIVE}$ = total effective depth of water stored in bioretention area, ft (see Step 3)

A = 1,000/0.875 = 1,142 sq-ft

Drainage Management Area B – Bioretention with no Underdrain (INF-3)
Simple Sizing method for Bioretention with no Underdrain

Step 1: Determine DCV
(See Worksheet B)

DCV = 709 cu-ft

Step 2: Determine the 48-hour Ponding Depth
The depth of effective storage depth that can be drawn down in 48 hours can be calculated using the following equation:

$d_{48} = K_{DESIGN} \times 4$

Where:

d_{48} = bioretention 48-hour effective depth, ft
K_{DESIGN} = bioretention design infiltration rate, in/hr

$d_{48} = 0.615 \times 4 = 2.46$ hours

This is the maximum effective depth of the basin below the overflow device to achieve drawdown in 48 hours. Effective depth includes ponding water and media/aggregate pore space.

Step 3: Design System Geometry to Provide d_{48}

Design system geometry such that
$d_{48} \geq d_{EFFECTIVE} = (d_P + n_M d_M + n_G d_G)$

Where:

d_{48} = depth of water that can drain in 48 hours
$d_{EFFECTIVE}$ = total effective depth of water stored in bioretention area, ft
d_P = bioretention ponding depth, ft (should be less than or equal to 1.5 ft)
n_M = bioretention media porosity
d_M = bioretention media depth, ft
n_G = bioretention gravel layer porosity; 0.35 may be assumed
d_G = bioretention gravel layer depth, ft

$d_{EFFECTIVE} = (0.5 + (0.25 \times 1.5) + (0.35 \times 0)) = 0.875$ ft

$d_{EFFECTIVE} = 0.875\text{ft} \leq 2.46$ ft **OK**

Step 4: Calculate the Required Infiltrating Area

$A = DCV / d_{EFFECTIVE}$

Where:

A = required infiltrating area, sq-ft (measured as the media surface area)

DCV = design capture volume, cu-ft (see Step 1)

$d_{EFFECTIVE}$ = total effective depth of water stored in bioretention area, ft (see Step 3)

A = 709/0.875 = 810 sq-ft

Drainage Management Area C – Bioretention with no Underdrain (INF-3)
Simple Sizing method for Bioretention with no Underdrain

Step 1: Determine DCV
(See Worksheet B)

DCV = 2,421 cu-ft

Step 2: Determine the 48-hour Ponding Depth
The depth of effective storage depth that can be drawn down in 48 hours can be calculated using the following equation:

$d_{48} = K_{DESIGN} \times 4$

Where:

d_{48} = bioretention 48-hour effective depth, ft
K_{DESIGN} = bioretention design infiltration rate, in/hr

$d_{48} = 0.615 \times 4 = 2.46$ hours

This is the maximum effective depth of the basin below the overflow device to achieve drawdown in 48 hours. Effective depth includes ponding water and media/aggregate pore space.

Step 3: Design System Geometry to Provide d_{48}

Design system geometry such that
$d_{48} \geq d_{EFFECTIVE} = (d_P + n_M d_M + n_G d_G)$

Where:

d_{48} = depth of water that can drain in 48 hours
$d_{EFFECTIVE}$ = total effective depth of water stored in bioretention area, ft
d_P = bioretention ponding depth, ft (should be less than or equal to 1.5 ft)
n_M = bioretention media porosity
d_M = bioretention media depth, ft
n_G = bioretention gravel layer porosity; 0.35 may be assumed
d_G = bioretention gravel layer depth, ft

$d_{EFFECTIVE} = (0.5 + (0.25 \times 1.0) + (0.35 \times 0)) = 0.875$ ft

$d_{EFFECTIVE} = 0.875$ ft ≤ 2.46 ft **OK**

Step 4: Calculate the Required Infiltrating Area

$A = DCV / d_{EFFECTIVE}$

Where:

A = required infiltrating area, sq-ft (measured as the media surface area)

DCV = design capture volume, cu-ft (see Step 1)

$d_{EFFECTIVE}$ = total effective depth of water stored in bioretention area, ft (see Step 3)

A = 2,421/0.875 = 2,765 sq-ft

NOTE:
Due to the limited available area and shallow groundwater depth at the site, the proposed bioretention facilities do not provide sufficient capture volume. Supplemental gravel storage has been designed to meet the required Design Capture Volume for the entire site.

DMA	DCV	Required Infiltrating Area	Provided Infiltrating Area	Provided Capture Volume
A	1,000	1,142	800	700
B	709	810	830	726
C	2,421	2,765	2,275	1,990
Total	**4,130**	**4,717**	**3,905**	**3,416**

Step 1: Determine Required Gravel Storage Volume

V_{GRAVEL} = DCV – Provided Capture Volume

V_{GRAVEL} = 4,130 – 3,416 = 714 cu-ft

Step 2: Determine Effective Depth of Gravel Storage

$d_{EFFECTIVE} = n_G d_G$

Where:

n_G = gravel layer porosity; 0.35 may be assumed
d_G = gravel layer depth, ft

$d_{EFFECTIVE}$ = (0.35×1.33) = 0.467 ft

Step 3: Calculate the Required Gravel Storage Area

$A = V_{GRAVEL} / d_{EFFECTIVE}$

A = 714/0.467 = 1,530 sq-ft

1,600 square-feet of gravel storage area has been provided, therefore sufficient storage is provided and the required Design Capture Volume for the site is met.

IV.3.3 Evapotranspiration, Rainwater Harvesting BMPs

Rainwater Harvesting BMPs are not required because the full design capture volume is treated with Infiltration BMPs.

IV.3.4 Biotreatment BMPs

Biotreatment BMPs are not required because the full design capture volume is treated with Infiltration BMPs.

IV.3.5 Hydromodification Control BMPs

Hydromodification Control BMPs are not necessary because the proposed project is upstream of a stabilized channel that is not susceptible to erosion.

IV.3.6 Regional/Sub-Regional LID BMPs

The project will not participate in any regional / sub-regional LID BMPs.

IV.3.7 Treatment Control BMPs

Treatment Control BMPs are not required because the full design capture volume is treated with Infiltration BMPs.

IV.3.8 Non-structural Source Control BMPs

Fill out non-structural source control check box forms or provide a brief narrative explaining if non- structural source controls were not used.

Non-Structural Source Control BMPs				
Identifier	**Name**	**Check One**		**If not applicable, state brief reason**
		Included	**Not Applicable**	
N1	Education for Property Owners, Tenants and Occupants	☒	☐	
N2	Activity Restrictions	☒	☐	
N3	Common Area Landscape Management	☒	☐	
N4	BMP Maintenance	☒	☐	
N5	Title 22 CCR Compliance (How development will comply)	☐	☒	No Hazardous Waste
N6	Local Industrial Permit Compliance	☐	☒	Residential Development
N7	Spill Contingency Plan	☐	☒	No Hazardous Materials
N8	Underground Storage Tank Compliance	☐	☒	No underground storage tanks
N9	Hazardous Materials Disclosure Compliance	☐	☒	No Hazardous Waste
N10	Uniform Fire Code Implementation	☒	☐	
N11	Common Area Litter Control	☒	☐	
N12	Employee Training	☒	☐	
N13	Housekeeping of Loading Docks	☐	☒	No loading docks
N14	Common Area Catch Basin Inspection	☒	☐	
N15	Street Sweeping Private Streets and Parking Lots	☒	☐	

IV.3.9 Structural Source Control BMPs

Fill out structural source control check box forms or provide a brief narrative explaining if Structural source controls were not used.

Structural Source Control BMPs				
Identifier	**Name**	**Check One**		**If not applicable, state brief reason**
		Included	**Not Applicable**	
S1	Provide storm drain system stenciling and signage	☐	☒	No on-site storm drains
S2	Design and construct outdoor material storage areas to reduce pollution introduction	☐	☒	No Hazardous Material storage
S3	Design and construct trash and waste storage areas to reduce pollution introduction	☒	☐	
S4	Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control	☒	☐	
S5	Protect slopes and channels and provide energy dissipation	☐	☒	No slopes or channels on-site
	Incorporate requirements applicable to individual priority project categories (from SDRWQCB NPDES Permit)	☐	☒	Site is within SARWQCB jurisdiction
S6	Dock areas	☐	☒	Not a part of site design
S7	Maintenance bays	☐	☒	Not a part of site design
S8	Vehicle wash areas	☐	☒	Not a part of site design
S9	Outdoor processing areas	☐	☒	Not a part of site design
S10	Equipment wash areas	☐	☒	Not a part of site design
S11	Fueling areas	☐	☒	Not a part of site design
S12	Hillside landscaping	☐	☒	Not a part of site design
S13	Wash water control for food preparation areas	☐	☒	Not a part of site design
S14	Community car wash racks	☐	☒	Not a part of site design

IV.4 ALTERNATIVE COMPLIANCE PLAN (IF APPLICABLE)

Not applicable to this project.

IV.4.1 Alternative Compliance Plan Information

Not applicable to this project.

Section V Inspection/Maintenance Responsibility for BMPs

Fill out information in table below. Prepare and attach an Operation and Maintenance Plan. Identify the mechanism through which BMPs will be maintained. Inspection and maintenance records must be kept for a minimum of five years for inspection by the regulatory agencies. *Refer to Section 7.II 4.0 in the Model WQMP.*

BMP Inspection/Maintenance

BMP	Reponsible Party(s)	Inspection/ Maintenance Activities Required	Minimum Frequency of Activities
DMA A Bioretention (INF-3)	Owner	See Bioretention Inspection and Maintenance Guidelines in Attachment G	2 times annually: (1) prior to the start of the rainy season, (1) after the rainy season
DMA B Bioretention (INF-3)	Owner	See Bioretention Inspection and Maintenance Guidelines in Attachment G	2 times annually: (1) prior to the start of the rainy season, (1) after the rainy season
DMA C Bioretention (INF-3)	Owner	See Bioretention Inspection and Maintenance Guidelines in Attachment G	2 times annually: (1) prior to the start of the rainy season, (1) after the rainy season

Section VI Site Plan and Drainage Plan

VI.1 SITE PLAN AND DRAINAGE PLAN

Include a site plan and drainage plan sheet set containing the following minimum information:

- Project location
- Site boundary
- Land uses and land covers, as applicable
- Suitability/feasibility constraints
- Structural BMP locations
- Drainage delineations and flow information
- Drainage connections
- BMP details

Section VII Educational Materials

Refer to the Orange County Stormwater Program (ocwatersheds.com) for a library of materials available. For the copy submitted to the Permittee, only attach the educational materials specifically applicable to the project. Other materials specific to the project may be included as well and must be attached.

Education Materials			
Residential Material (http://www.ocwatersheds.com)	**Check If Applicable**	**Business Material (http://www.ocwatersheds.com)**	**Check If Applicable**
The Ocean Begins at Your Front Door	☒	Tips for the Automotive Industry	☐
Tips for Car Wash Fund-raisers	☐	Tips for Using Concrete and Mortar	☐
Tips for the Home Mechanic	☐	Tips for the Food Service Industry	☐
Homeowners Guide for Sustainable Water Use	☐	Proper Maintenance Practices for Your Business	☐
Household Tips	☐	**Other Material**	**Check If Attached**
Proper Disposal of Household Hazardous Waste	☒		
Recycle at Your Local Used Oil Collection Center (North County)	☐		☐
Recycle at Your Local Used Oil Collection Center (Central County)	☐		☐
Recycle at Your Local Used Oil Collection Center (South County)	☐		☐
Tips for Maintaining a Septic Tank System	☐		☐
Responsible Pest Control	☐		☐
Sewer Spill	☐		☐
Tips for the Home Improvement Projects	☐		☐
Tips for Horse Care	☐		☐
Tips for Landscaping and Gardening	☐		☐
Tips for Pet Care	☒		☐
Tips for Pool Maintenance	☐		☐
Tips for Residential Pool, Landscape and Hardscape Drains	☐		☐
Tips for Projects Using Paint	☐		☐

Attachment A

Educational Materials

Did You Know?

- Most people believe that the largest source of water pollution in urban areas comes from specific sources such as factories and sewage treatment plants. In fact, the largest source of water pollution comes from city streets, neighborhoods, construction sites and parking lots. This type of pollution is sometimes called "non-point source" pollution.
- There are two types of non-point source pollution: stormwater and urban runoff pollution.
- Stormwater runoff results from rainfall. When rainstorms cause large volumes of water to rinse the urban landscape, picking up pollutants along the way.
- Urban runoff can happen any time of the year when excessive water use from irrigation, vehicle washing and other sources carries trash, lawn clippings and other urban pollutants into storm drains.

Where Does It Go?

- Anything we use outside homes, vehicles and businesses – like motor oil, paint, pesticides, fertilizers and cleaners – can be blown or washed into storm drains.
- A little water from a garden hose or rain can also send materials into storm drains.
- Storm drains are separate from our sanitary sewer systems; unlike water in sanitary sewers (from sinks or toilets), water in storm drains is not treated before entering our waterways.

Sources of Non-Point Source Pollution

- Automotive leaks and spills.
- Improper disposal of used oil and other engine fluids.
- Metals found in vehicle exhaust, weathered paint, rust, metal plating and tires.
- Pesticides and fertilizers from lawns, gardens and farms.
- Improper disposal of cleaners, paint and paint removers.
- Soil erosion and dust debris from landscape and construction activities.
- Litter, lawn clippings, animal waste, and other organic matter.
- Oil stains on parking lots and paved surfaces.

The Effect on the Ocean

Non-point source pollution can have a serious impact on water quality in Orange County. Pollutants from the storm drain system can harm marine life as well as coastal and wetland habitats. They can also degrade recreation areas such as beaches, harbors and bays.

Stormwater quality management programs have been developed throughout Orange County to educate and encourage the public to protect water quality, monitor runoff in the storm drain system, investigate illegal dumping and maintain storm drains.

Support from Orange County residents and businesses is needed to improve water quality and reduce urban runoff pollution. Proper use and disposal of materials will help stop pollution before it reaches the storm drain and the ocean.

The Ocean Begins at Your Front Door

Even if you live miles from the Pacific Ocean, you may be unknowingly polluting it.

Dumping one quart of motor oil into a storm drain can contaminate 250,000 gallons of water.

PROJECT Pollution PREVENTION

Orange County Stormwater Program

Aliso Viejo	(949)	425-2535
Anaheim Public Works Operations	(714)	765-6860
Brea Engineering	(714)	990-7666
Buena Park Public Works	(714)	562-3655
Costa Mesa Public Services	(714)	754-5323
Cypress Public Works	(714)	229-6740
Dana Point Public Works	(949)	248-3584
Fountain Valley Public Works	(714)	593-4441
Fullerton Engineering Dept.	(714)	738-6853
Garden Grove Public Works	(714)	741-5956
Huntington Beach Public Works	(714)	536-5431
Irvine Public Works	(949)	724-6315
La Habra Public Services	(562)	905-9792
La Palma Public Works	(714)	690-3310
Laguna Beach Water Quality	(949)	497-0378
Laguna Hills Public Services	(949)	707-2650
Laguna Niguel Public Works	(949)	362-4337
Laguna Woods Public Works	(949)	639-0500
Lake Forest Public Works	(949)	461-3480
Los Alamitos Community Dev.	(562)	431-3538
Mission Viejo Public Works	(949)	470-3056
Newport Beach, Code & Water Quality Enforcement	(949)	644-3215
Orange Public Works	(714)	532-6480
Placentia Public Works	(714)	993-8245
Rancho Santa Margarita	(949)	635-1800
San Clemente Environmental Programs	(949)	361-6143
San Juan Capistrano Engineering	(949)	234-4413
Santa Ana Public Works	(714)	647-3380
Seal Beach Engineering	(562)	431-2527 x317
Stanton Public Works	(714)	379-9222 x204
Tustin Public Works/Engineering	(714)	573-3150
Villa Park Engineering	(714)	998-1500
Westminster Public Works/Engineering	(714)	898-3311 x446
Yorba Linda Engineering	(714)	961-7138
Orange County Stormwater Program	(877)	897-7455

Orange County 24-Hour
Water Pollution Problem Reporting Hotline
1-877-89-SPILL (1-877-897-7455)

On-line Water Pollution Problem Reporting Form

www.ocwatersheds.com

For More Information

California Environmental Protection Agency
www.calepa.ca.gov

- **Air Resources Board**
  www.arb.ca.gov
- **Department of Pesticide Regulation**
  www.cdpr.ca.gov
- **Department of Toxic Substances Control**
  www.dtsc.ca.gov
- **Integrated Waste Management Board**
  www.ciwmb.ca.gov
- **Office of Environmental Health Hazard Assessment**
  www.oehha.ca.gov
- **State Water Resources Control Board**
  www.waterboards.ca.gov

Earth 911 - Community-Specific Environmental Information 1-800-cleanup or visit www.1800cleanup.org

Health Care Agency's Ocean and Bay Water Closure and Posting Hotline
(714) 433-6400 or visit www.ocbeachinfo.com

Integrated Waste Management Dept. of Orange County (714) 834-6752 or visit www.oclandfills.com for information on household hazardous waste collection centers, recycling centers and solid waste collection

O.C. Agriculture Commissioner
(714) 447-7100 or visit www.ocagcomm.com

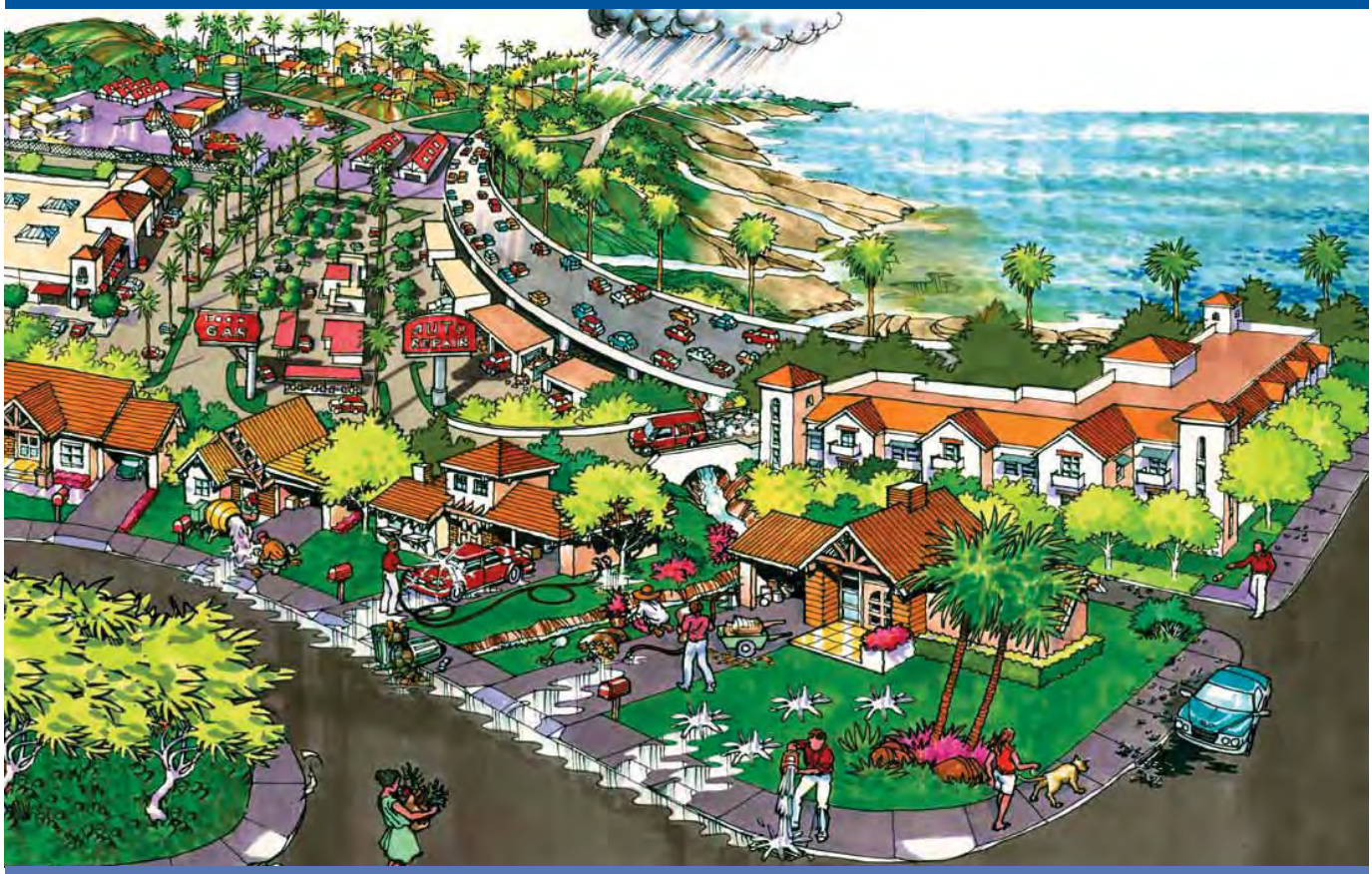
Stormwater Best Management Practice Handbook
Visit www.cabmphandbooks.com

UC Master Gardener Hotline
(714) 708-1646 or visit www.uccemg.com

The Orange County Stormwater Program has created and moderates an electronic mailing list to facilitate communications, take questions and exchange ideas among its users about issues and topics related to stormwater and urban runoff and the implementation of program elements. To join the list, please send an email to ocstormwaterinfo-join@list.ocwatersheds.com

Printed on Recycled Paper

The Ocean Begins at Your Front Door



Never allow pollutants to enter the street, gutter or storm drain!

Follow these simple steps to help reduce water pollution:

Household Activities

- Do not rinse spills with water. Use dry cleanup methods such as applying cat litter or another absorbent material, sweep and dispose of in the trash. Take items such as used or excess batteries, oven cleaners, automotive fluids, painting products and cathode ray tubes, like TVs and computer monitors, to a Household Hazardous Waste Collection Center (HHWCC).
- For a HHWCC near you call (714) 834-6752 or visit www.oclandfills.com.
- Do not hose down your driveway, sidewalk or patio to the street, gutter or storm drain. Sweep up debris and dispose of it in the trash.

Automotive

- Take your vehicle to a commercial car wash whenever possible. If you wash your vehicle at home, choose soaps, cleaners, or detergents labeled non-toxic, phosphate-free or biodegradable. Vegetable and citrus-based products are typically safest for the environment.
- Do not allow washwater from vehicle washing to drain into the street, gutter or storm drain. Excess washwater should be disposed of in the sanitary sewer (through a sink or toilet) or onto an absorbent surface like your lawn.
- Monitor your vehicles for leaks and place a pan under leaks. Keep your vehicles well maintained to stop and prevent leaks.
- Never pour oil or antifreeze in the street, gutter or storm drain. Recycle these substances at a service station, a waste oil collection center or used oil recycling center. For the nearest Used Oil Collection Center call 1-800-CLEANUP or visit www.1800cleanup.org.

Pool Maintenance

- Pool and spa water must be dechlorinated and free of excess acid, alkali or color to be allowed in the street, gutter or storm drain.
- When it is not raining, drain dechlorinated pool and spa water directly into the sanitary sewer.
- Some cities may have ordinances that do not allow pool water to be disposed of in the storm drain. Check with your city.

Landscape and Gardening

- Do not over-water. Water your lawn and garden by hand to control the amount of water you use or set irrigation systems to reflect seasonal water needs. If water flows off your yard onto your driveway or sidewalk, your system is over-watering. Periodically inspect and fix leaks and misdirected sprinklers.
- Do not rake or blow leaves, clippings or pruning waste into the street, gutter or storm drain. Instead, dispose of waste by composting, hauling it to a permitted landfill, or as green waste through your city's recycling program.
- Follow directions on pesticides and fertilizer, (measure, do not estimate amounts) and do not use if rain is predicted within 48 hours.
- Take unwanted pesticides to a HHWCC to be recycled. For locations and hours of HHWCC, call (714) 834-6752 or visit www.oclandfills.com.

Trash

- Place trash and litter that cannot be recycled in securely covered trash cans.
- Whenever possible, buy recycled products.
- Remember: Reduce, Reuse, Recycle.

Pet Care

- Always pick up after your pet. Flush waste down the toilet or dispose of it in the trash. Pet waste, if left outdoors, can wash into the street, gutter or storm drain.
- If possible, bathe your pets indoors. If you must bathe your pet outside, wash it on your lawn or another absorbent/permeable surface to keep the washwater from entering the street, gutter or storm drain.
- Follow directions for use of pet care products and dispose of any unused products at a HHWCC.

Common Pollutants

Home Maintenance
- Detergents, cleaners and solvents
- Oil and latex paint
- Swimming pool chemicals
- Outdoor trash and litter

Lawn and Garden
- Pet and animal waste
- Pesticides
- Clippings, leaves and soil
- Fertilizer

Automobile
- Oil and grease
- Radiator fluids and antifreeze
- Cleaning chemicals
- Brake pad dust

Do your part to prevent water pollution in our creeks, rivers, bays and ocean.

Clean beaches and healthy creeks, rivers, bays and ocean are important to Orange County. However, not properly disposing of household hazardous waste can lead to water pollution. Batteries, electronics, paint, oil, gardening chemicals, cleaners and other hazardous materials cannot be thrown in the trash. They also must never be poured or thrown into yards, sidewalks, driveways, gutters or streets. Rain or other water could wash the materials into the storm drain and eventually into our waterways and the ocean. In addition, hazardous waste must not be poured in the sanitary sewers (sinks and toilets).

NEVER DISPOSE OF HOUSEHOLD HAZARDOUS WASTE IN THE TRASH, STREET, GUTTER, STORM DRAIN OR SEWER.

For more information, please call the **Orange County Stormwater Program** at **1-877-89-SPILL** (1-877-897-7455) or visit **www.ocwatersheds.com**

To Report Illegal Dumping of Household Hazardous Waste call 1-800-69-TOXIC

To report a spill, call the **Orange County 24-Hour Water Pollution Problem Reporting Hotline 1-877-89-SPILL** (1-877-897-7455).

For emergencies, dial 911.

RECYCLE USED OIL

Printed on Recycled Paper

Help Prevent Ocean Pollution:

Proper Disposal of Household Hazardous Waste

The Ocean Begins at Your Front Door

PROJECT Pollution PREVENTION

ORANGE COUNTY

Pollution Prevention

Leftover household products that contain corrosive, toxic, ignitable, or reactive ingredients are considered to be "household hazardous waste" or "HHW." HHW can be found throughout your home, including the bathroom, kitchen, laundry room and garage.

WHEN POSSIBLE, USE NON-HAZARDOUS OR LESS-HAZARDOUS PRODUCTS.

Disposal of HHW down the drain, on the ground, into storm drains, or in the trash is illegal and unsafe.

Proper disposal of HHW is actually easy. Simply drop them off at a Household Hazardous Waste Collection Center (HHWCC) for free disposal and recycling. Many materials including anti-freeze, latex-based paint, motor oil and batteries can be recycled. Some centers have a "Stop & Swap" program that lets you take partially used home, garden, and automobile products free of charge. There are four HHWCCs in Orange County:

Anaheim:.....1071 N. Blue Gum St
Huntington Beach:.....17121 Nichols St
Irvine:.....6411 Oak Canyon
San Juan Capistrano:... 32250 La Pata Ave

Centers are open Tuesday-Saturday, 9 a.m.-3 p.m. Centers are closed on rainy days and major holidays. For more information, call **(714) 834-6752** or visit **www.oclandfills.com.**

Common household hazardous wastes

- Batteries
- Paint and paint products
- Adhesives
- Drain openers
- Household cleaning products
- Wood and metal cleaners and polishes
- Pesticides
- Fungicides/wood preservatives
- Automotive products (antifreeze, motor oil, fluids)
- Grease and rust solvents
- Fluorescent lamps
- Mercury (thermometers & thermostats)
- All forms of electronic waste including computers and microwaves
- Pool & spa chemicals
- Cleaners
- Medications
- Propane (camping & BBQ)
- Mercury-containing lamps
- Television & monitors (CRTs, flatscreens)

Tips for household hazardous waste

- Never dispose of HHW in the trash, street, gutter, storm drain or sewer.
- Keep these materials in closed, labeled containers and store materials indoors or under a cover.
- When possible, use non-hazardous products.
- Reuse products whenever possible or share with family and friends.
- Purchase only as much of a product as you'll need. Empty containers may be disposed of in the trash.
- HHW can be harmful to humans, pets and the environment. Report emergencies to 911.

Clean beaches and healthy creeks, rivers, bays and ocean are important to Orange County. However, many common activities can lead to water pollution if you're not careful. Pet waste and pet care products can be washed into the storm drains that flow to the ocean. Unlike water in sanitary sewers (from sinks and toilets), water in storm drains is not treated before entering our waterways.

You would never put pet waste or pet care products into the ocean, so don't let them enter the storm drains. Follow these easy tips to help prevent water pollution.

For more information,
please call the
Orange County Stormwater Program
at **1-877-89-SPILL** (1-877-897-7455)
or visit
www.ocwatersheds.com

To report a spill,
call the
Orange County 24-Hour
Water Pollution Problem
Reporting Hotline
1-877-89-SPILL (1-877-897-7455).

For emergencies, dial 911.

The tips contained in this brochure provide useful information to help prevent water pollution while caring for your pet. If you have other suggestions, please contact your city's stormwater representatives or call the Orange County Stormwater Program.

Printed on Recycled Paper

Help Prevent Ocean Pollution:

Tips for Pet Care

Tips for Pet Care

Never let any pet care products or washwater run off your yard and into the street, gutter or storm drain.

Washing Your Pets

Even biodegradable soaps and shampoos can be harmful to marine life and the environment.

- If possible, bathe your pets indoors using less-toxic shampoos or have your pet professionally groomed. Follow instructions on the products and clean up spills.

- If you bathe your pet outside, wash it on your lawn or another absorbent/ permeable surface to keep the washwater from running into the street, gutter or storm drain.

Flea Control

- Consider using oral or topical flea control products.

- If you use flea control products such as shampoos, sprays or collars, make sure to dispose of any unused products at a Household Hazardous Waste Collection Center. For location information, call **(714) 834-6752**.

Why You Should Pick Up After Your Pet

It's the law! Every city has an ordinance requiring you to pick up after your pet. Besides being a nuisance, pet waste can lead to water pollution, even if you live inland. During rainfall, pet waste left outdoors can wash into storm drains. This waste flows directly into our waterways and the ocean where it can harm human health, marine life and the environment.

As it decomposes, pet waste demands a high level of oxygen from water. This decomposition can contribute to killing marine life by reducing the amount of dissolved oxygen available to them.

Have fun with your pets, but please be a responsible pet owner by taking care of them and the environment.

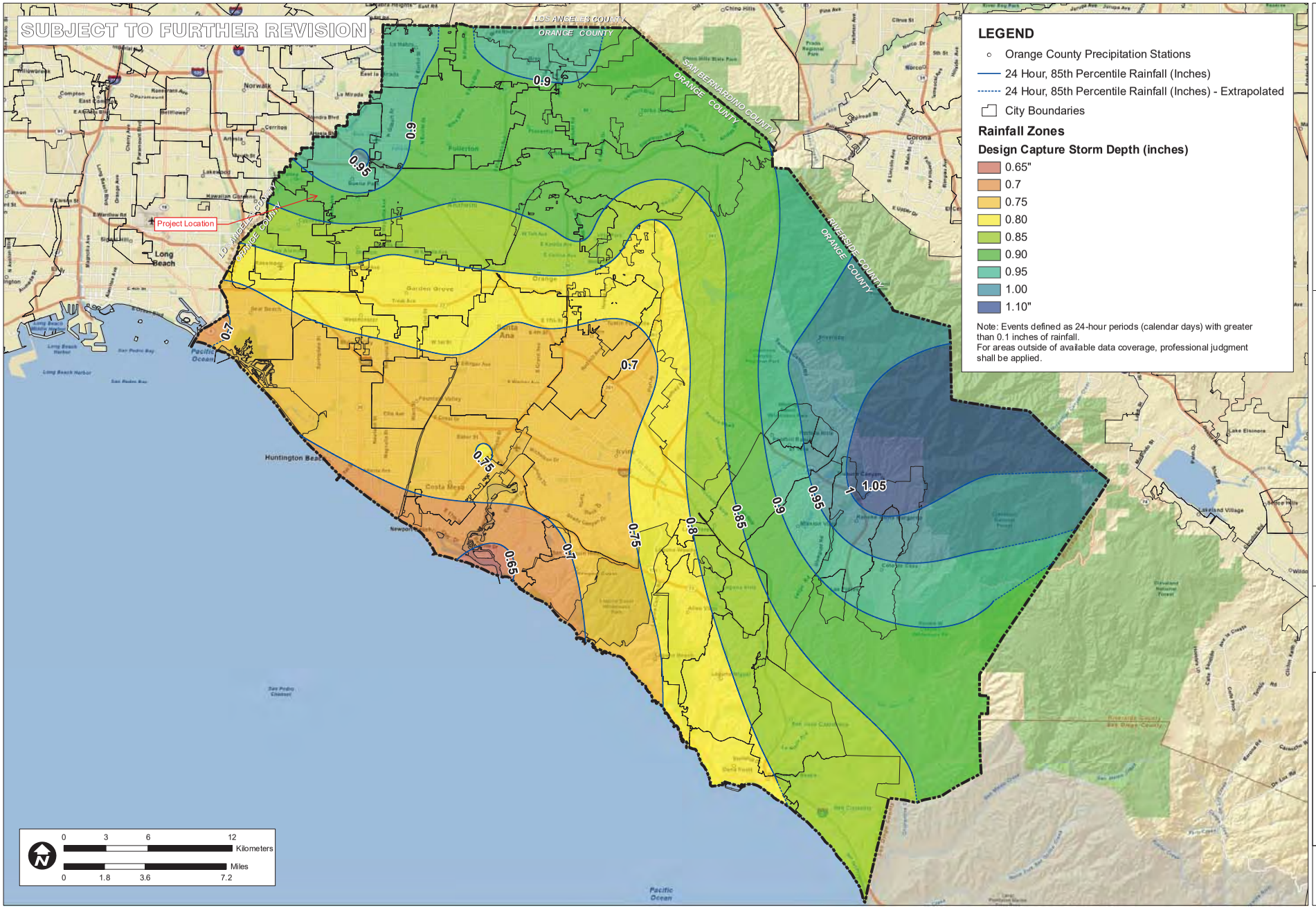
- Take a bag with you on walks to pick up after your pet.

- Dispose of the waste in the trash or in a toilet.

PROJECT Pollution PREVENTION

Attachment B

TGD Worksheets & Figures



P:\Y526E\6-GIS\Mxds\Reports\InfiltrationFeasability_20110215\Y526E_FigureXVI-1_RainfallZones_20110215.mxd

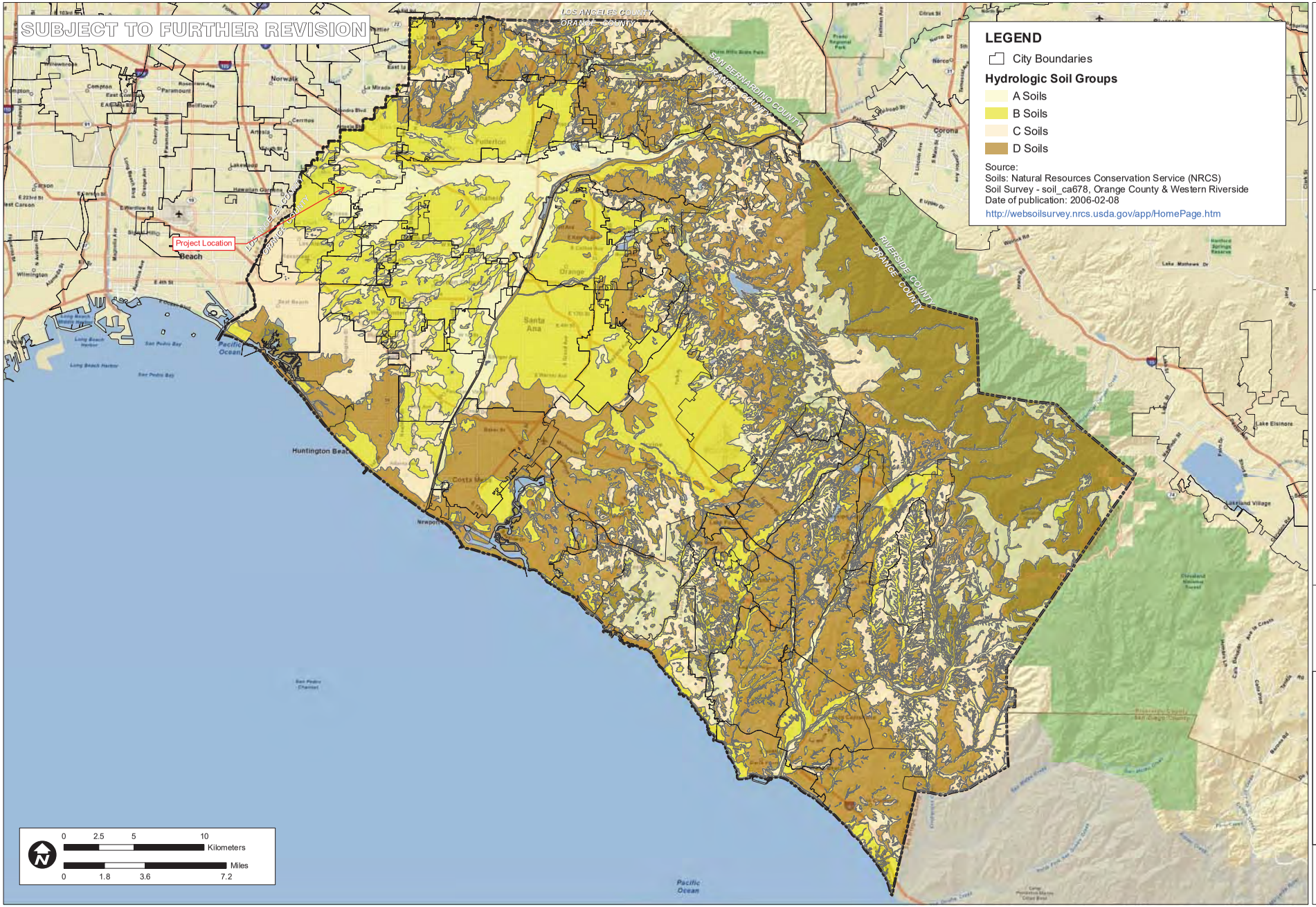
TITLE
RAINFALL ZONES

JOB
ORANGE COUNTY TECHNICAL GUIDANCE DOCUMENT
CA
ORANGE CO.

SCALE	1" = 1.8 miles
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	04/22/10
JOB NO.	9526-E

PACE
Advanced Water Engineering

FIGURE
XVI-1



TITLE
NRCS HYDROLOGIC SOILS GROUPS

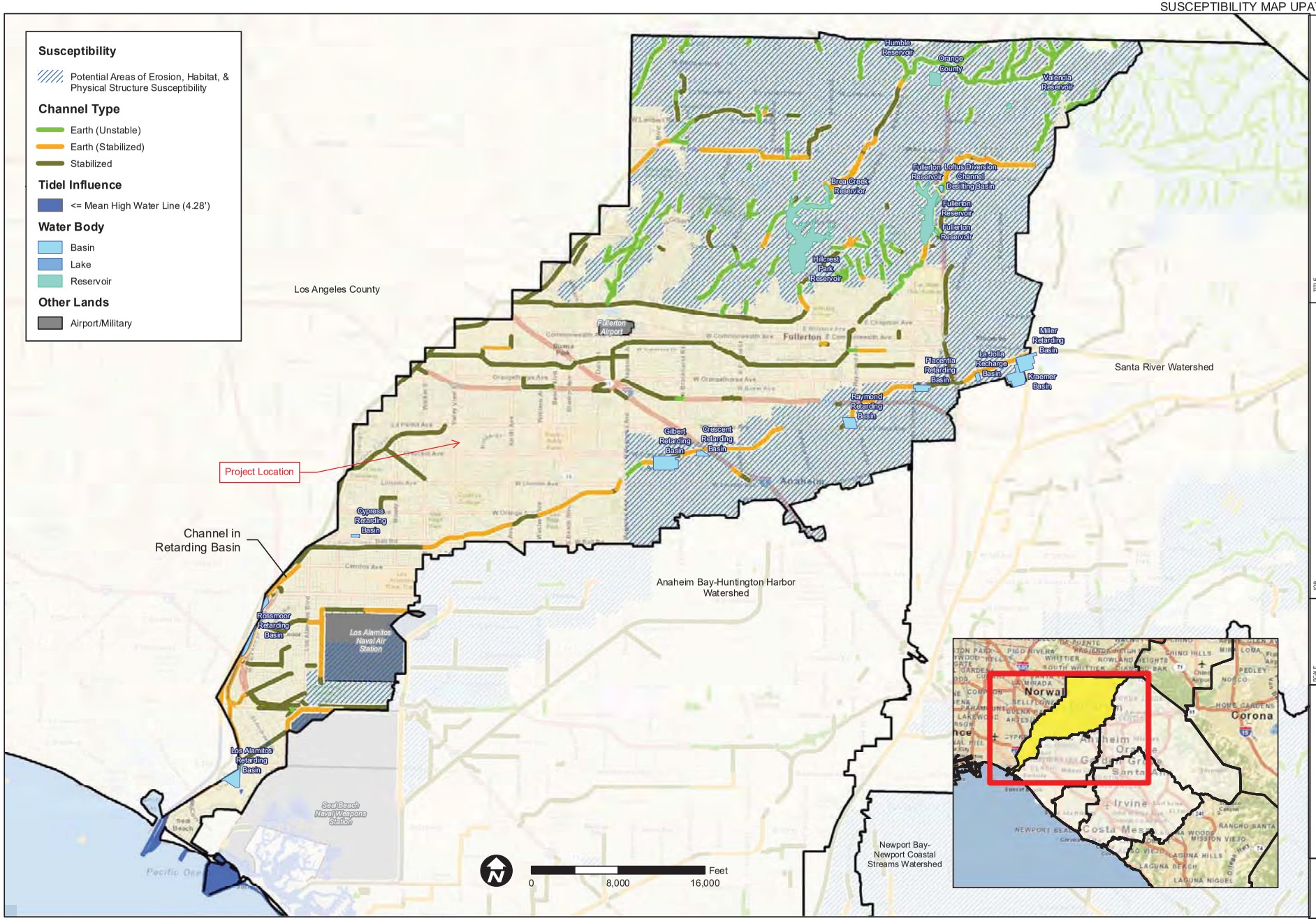
JOB
ORANGE COUNTY INFILTRATION STUDY
ORANGE CO. CA

SCALE	1" = 1.8 miles
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	02/09/11
JOB NO.	9526-E

PACE
Advanced Water Engineering

FIGURE
XVI-2a

P:\9526E\6-GIS\Mxds\Reports\InfiltrationFeasability_20110215\9526E_FigureXVI-2a_HydroSoils_20110215.mxd



TITLE
SUSCEPTIBILITY ANALYIS
SAN GABRIEL-COYOTE CREEK

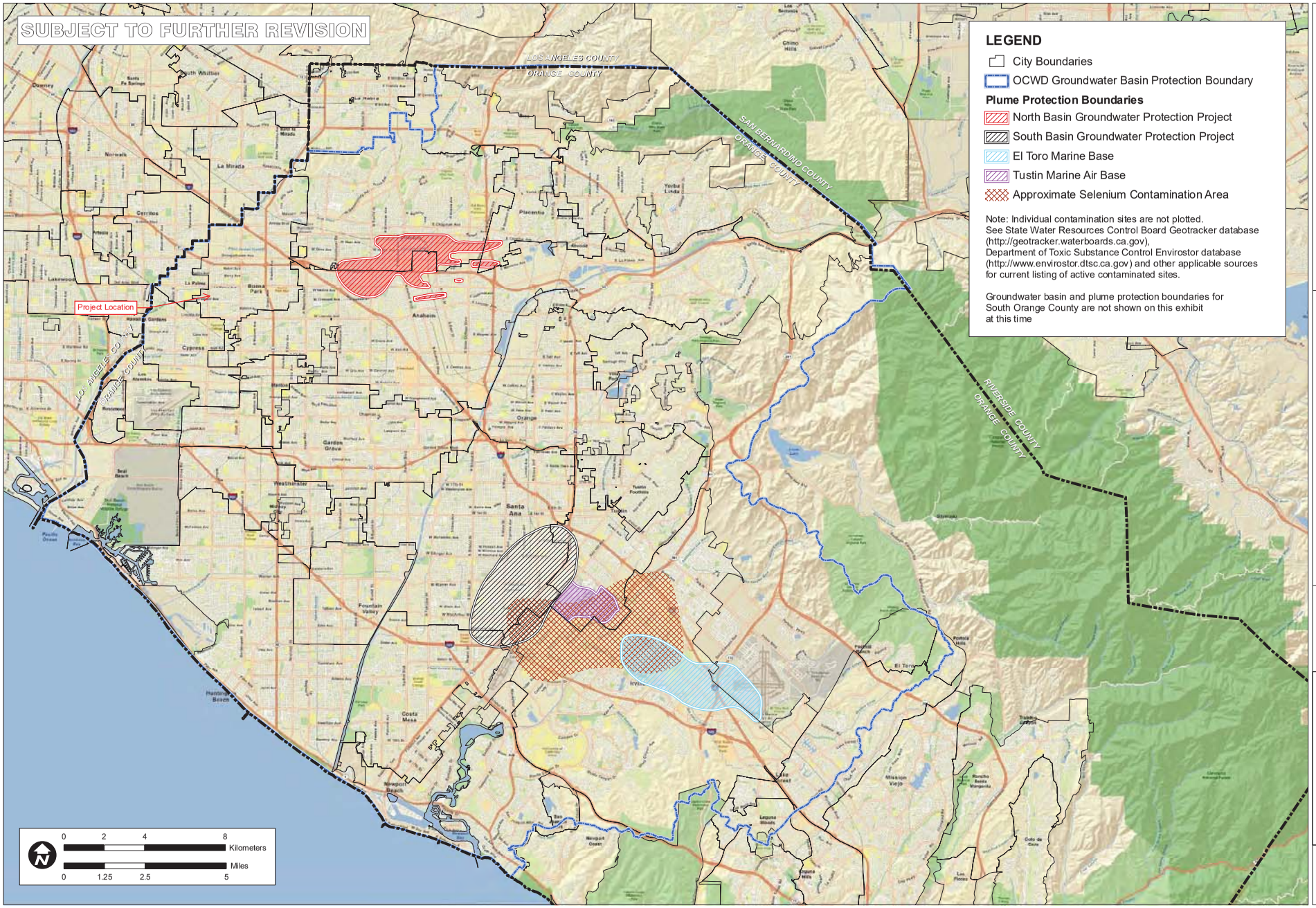
JOB
ORANGE COUNTY
WATERSHED
MASTER PLANNING
ORANGE CO. CA

SCALE	1" = 8000'
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	04/30/10
JOB NO.	9526-E

PACE
Advanced Water Engineering

1

P:\9526E\4-GIS\Mxds\SusceptibilityMaps_20100505\9526E_SanGabrielCoyoteCreekSusceptibility_20100430.mxd



P:\Y526E\L6-GIS\Mxds\Reports\InfiltrationFeasability_20110215\Y526E_FigureXVI-2f_NorthOCGroundwaterProtectionAreasStreetMap_20110215.mxd

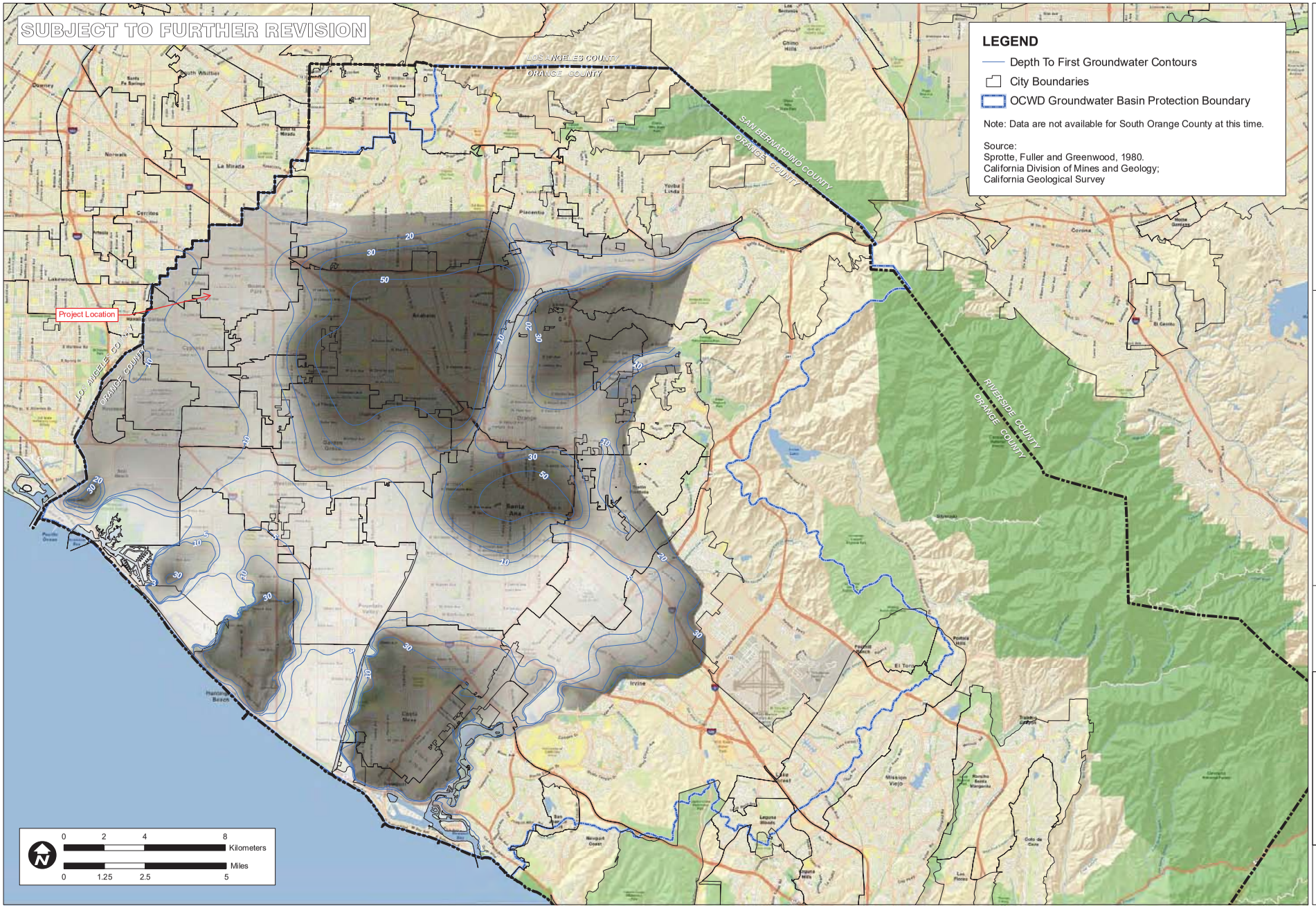
TITLE
NORTH ORANGE COUNTY
GROUNDWATER PROTECTION
AREAS

JOB
ORANGE COUNTY
INFILTRATION STUDY
ORANGE CO., CA

SCALE	1" = 1.25 miles
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	04/22/10
JOB NO.	9526-E

PACE
Advanced Water Engineering

FIGURE
XVI-2f



TITLE
NORTH ORANGE COUNTY
MAPPED DEPTH TO FIRST
GROUNDWATER

JOB
ORANGE COUNTY
INFILTRATION STUDY
ORANGE CO. CA

SCALE 1" = 1.25 miles
DESIGNED TH
DRAWING TH
CHECKED BMP
DATE 02/09/11
JOB NO. 9526-E

PACE
Advanced Water Engineering

FIGURE
XVI-2d

P:\9526E\6-GIS\Mxds\Reports\InfiltrationFeasability_20110215\9526E_FigureXVI-2d_DepthToGroundwaterOverview_20110215.mxd

Worksheet H: Factor of Safety and Design Infiltration Rate and Worksheet

Factor Category		Factor Description	Assigned Weight (w)	Factor Value (v)	Product (p) p = w x v
A	Suitability Assessment	Soil assessment methods	0.25	1	0.25
		Predominant soil texture	0.25	1	0.25
		Site soil variability	0.25	1	0.25
		Depth to groundwater / impervious layer	0.25	2	0.50
		Suitability Assessment Safety Factor, $S_A = \Sigma p$			1.25
B	Design	Tributary area size	0.25	1	0.25
		Level of pretreatment/ expected sediment loads	0.25	2	0.50
		Redundancy	0.25	3	0.75
		Compaction during construction	0.25	2	0.50
		Design Safety Factor, $S_B = \Sigma p$			2.00
Combined Safety Factor, $S_{Total} = S_A \times S_B$					3.25
Observed Infiltration Rate, inch/hr, $K_{observed}$ (corrected for test-specific bias)					2.0
Design Infiltration Rate, in/hr, $K_{DESIGN} = K_{Observed} / S_{Total}$					0.615

Supporting Data

Briefly describe infiltration test and provide reference to test forms:

Note: The minimum combined adjustment factor shall not be less than 2.0 and the maximum combined adjustment factor shall not exceed 9.0.

Worksheet B: Simple Design Capture Volume Sizing Method Project Site

Step 1: Determine the design capture storm depth used for calculating volume				
1	Enter design capture storm depth from Figure III.1, *d* (inches)	d=	0.9	inches
2	Enter the effect of provided HSCs, d_{HSC} (inches) (Worksheet A)	d_{HSC}=		inches
3	Calculate the remainder of the design capture storm depth, $d_{remainder}$ (inches) (Line 1 – Line 2)	$d_{remainder}$=	0.9	inches
Step 2: Calculate the DCV				
1	Enter Project area tributary to BMP (s), *A* (acres)	A=	1.77	acres
2	Enter Project Imperviousness, *imp* (unitless)	imp=	0.75	
3	Calculate runoff coefficient, *C= (0.75 x imp) + 0.15*	C=	0.72	
4	Calculate runoff volume, V_{design}= *(C x* $d_{remainder}$ *x A x 43560 x (1/12))*	V_{design}=	4,130	cu-ft
Step 3: Design BMPs to ensure full retention of the DCV				
Step 3a: Determine design infiltration rate				
1	Enter measured infiltration rate, $K_{observed}$[1] (in/hr) (**Appendix VII**)	$K_{observed}$=	2.0	In/hr
2	Enter combined safety factor from Worksheet H, S_{total} (unitless)	S_{total}=	3.25	
3	Calculate design infiltration rate, $K_{design} = K_{observed} / S_{total}$	K_{design}=	0.615	In/hr
Step 3b: Determine minimum BMP footprint				
4	Enter drawdown time, *T* (max 48 hours)	T=	48	Hours
5	Calculate max retention depth that can be drawn down within the drawdown time (feet), $D_{max} = K_{design} x T x (1/12)$	D_{max}=	2.46	feet
6	Calculate minimum area required for BMP (sq-ft), $A_{min} = V_{design} / d_{max}$	A_{min}=	1,678	sq-ft

[1] $K_{observed}$ is the vertical infiltration measured in the field, before applying a factor of safety. If field testing measures a rate that is different than the vertical infiltration rate (for example, three-dimensional borehole percolation rate), then this rate must be adjusted by an acceptable method (for example, Porchet method) to yield the field estimate of vertical infiltration rate, $K_{observed}$. See Appendix VII.

Worksheet B: Simple Design Capture Volume Sizing Method DMA A

Step 1: Determine the design capture storm depth used for calculating volume				
1	Enter design capture storm depth from Figure III.1, *d* (inches)	d=	0.9	inches
2	Enter the effect of provided HSCs, d_{HSC} (inches) (Worksheet A)	d_{HSC}=		inches
3	Calculate the remainder of the design capture storm depth, $d_{remainder}$ (inches) (Line 1 – Line 2)	$d_{remainder}$=	0.9	inches
Step 2: Calculate the DCV				
1	Enter Project area tributary to BMP (s), *A* (acres)	A=	0.45	acres
2	Enter Project Imperviousness, *imp* (unitless)	imp=	0.70	
3	Calculate runoff coefficient, *C= (0.75 x imp) + 0.15*	C=	0.67	
4	Calculate runoff volume, V_{design}= *(C x* $d_{remainder}$ *x A x 43560 x (1/12))*	V_{design}=	1000	cu-ft
Step 3: Design BMPs to ensure full retention of the DCV				
Step 3a: Determine design infiltration rate				
1	Enter measured infiltration rate, $K_{observed}$[1] (in/hr) (**Appendix VII**)	$K_{observed}$=	2.0	In/hr
2	Enter combined safety factor from Worksheet H, S_{total} (unitless)	S_{total}=	3.25	
3	Calculate design infiltration rate, $K_{design} = K_{observed} / S_{total}$	K_{design}=	0.615	In/hr
Step 3b: Determine minimum BMP footprint				
4	Enter drawdown time, *T* (max 48 hours)	T=	48	Hours
5	Calculate max retention depth that can be drawn down within the drawdown time (feet), $D_{max} = K_{design} x T x (1/12)$	D_{max}=	2.46	feet
6	Calculate minimum area required for BMP (sq-ft), $A_{min} = V_{design} / d_{max}$	A_{min}=	406	sq-ft

[1] $K_{observed}$ is the vertical infiltration measured in the field, before applying a factor of safety. If field testing measures a rate that is different than the vertical infiltration rate (for example, three-dimensional borehole percolation rate), then this rate must be adjusted by an acceptable method (for example, Porchet method) to yield the field estimate of vertical infiltration rate, $K_{observed}$. See Appendix VII.

Worksheet B: Simple Design Capture Volume Sizing Method DMA B

Step 1: Determine the design capture storm depth used for calculating volume				
1	Enter design capture storm depth from Figure III.1, *d* (inches)	d=	0.9	inches
2	Enter the effect of provided HSCs, d_{HSC} (inches) (Worksheet A)	d_{HSC}=		inches
3	Calculate the remainder of the design capture storm depth, $d_{remainder}$ (inches) (Line 1 – Line 2)	$d_{remainder}$=	0.9	inches
Step 2: Calculate the DCV				
1	Enter Project area tributary to BMP (s), *A* (acres)	A=	0.30	acres
2	Enter Project Imperviousness, *imp* (unitless)	imp=	0.77	
3	Calculate runoff coefficient, *C= (0.75 x imp) + 0.15*	C=	0.74	
4	Calculate runoff volume, V_{design}= *(C x* $d_{remainder}$ *x A x 43560 x (1/12))*	V_{design}=	709	cu-ft
Step 3: Design BMPs to ensure full retention of the DCV				
Step 3a: Determine design infiltration rate				
1	Enter measured infiltration rate, $K_{observed}$[1] (in/hr) (**Appendix VII**)	$K_{observed}$=	2.0	In/hr
2	Enter combined safety factor from Worksheet H, S_{total} (unitless)	S_{total}=	3.25	
3	Calculate design infiltration rate, $K_{design} = K_{observed} / S_{total}$	K_{design}=	0.615	In/hr
Step 3b: Determine minimum BMP footprint				
4	Enter drawdown time, *T* (max 48 hours)	T=	48	Hours
5	Calculate max retention depth that can be drawn down within the drawdown time (feet), $D_{max} = K_{design} x T x (1/12)$	D_{max}=	2.46	feet
6	Calculate minimum area required for BMP (sq-ft), $A_{min} = V_{design} / d_{max}$	A_{min}=	288	sq-ft

[1] $K_{observed}$ is the vertical infiltration measured in the field, before applying a factor of safety. If field testing measures a rate that is different than the vertical infiltration rate (for example, three-dimensional borehole percolation rate), then this rate must be adjusted by an acceptable method (for example, Porchet method) to yield the field estimate of vertical infiltration rate, $K_{observed}$. See Appendix VII.

Worksheet B: Simple Design Capture Volume Sizing Method DMA C

Step 1: Determine the design capture storm depth used for calculating volume				
1	Enter design capture storm depth from Figure III.1, *d* (inches)	d=	0.9	inches
2	Enter the effect of provided HSCs, d_{HSC} (inches) (Worksheet A)	d_{HSC}=		inches
3	Calculate the remainder of the design capture storm depth, $d_{remainder}$ (inches) (Line 1 – Line 2)	$d_{remainder}$=	0.9	inches
Step 2: Calculate the DCV				
1	Enter Project area tributary to BMP (s), *A* (acres)	A=	1.01	acres
2	Enter Project Imperviousness, *imp* (unitless)	imp=	0.78	
3	Calculate runoff coefficient, *C= (0.75 x imp) + 0.15*	C=	0.73	
4	Calculate runoff volume, V_{design}= *(C x* $d_{remainder}$ *x A x 43560 x (1/12))*	V_{design}=	2421	cu-ft
Step 3: Design BMPs to ensure full retention of the DCV				
Step 3a: Determine design infiltration rate				
1	Enter measured infiltration rate, $K_{observed}$[1] (in/hr) (**Appendix VII**)	$K_{observed}$=	2.0	In/hr
2	Enter combined safety factor from Worksheet H, S_{total} (unitless)	S_{total}=	3.25	
3	Calculate design infiltration rate, $K_{design} = K_{observed} / S_{total}$	K_{design}=	0.615	In/hr
Step 3b: Determine minimum BMP footprint				
4	Enter drawdown time, *T* (max 48 hours)	T=	48	Hours
5	Calculate max retention depth that can be drawn down within the drawdown time (feet), $D_{max} = K_{design} x T x (1/12)$	D_{max}=	2.46	feet
6	Calculate minimum area required for BMP (sq-ft), $A_{min} = V_{design} / d_{max}$	A_{min}=	984	sq-ft

[1] $K_{observed}$ is the vertical infiltration measured in the field, before applying a factor of safety. If field testing measures a rate that is different than the vertical infiltration rate (for example, three-dimensional borehole percolation rate), then this rate must be adjusted by an acceptable method (for example, Porchet method) to yield the field estimate of vertical infiltration rate, $K_{observed}$. See Appendix VII.

INF-3: Bioretention with no Underdrain

Bioretention stormwater treatment facilities are landscaped shallow depressions that capture and filter stormwater runoff. These facilities function as a soil and plant-based filtration device that removes pollutants through a variety of physical, biological, and chemical treatment processes. The facilities normally consist of a ponding area, mulch layer, planting soils, and plants. As stormwater passes down through the planting soil, pollutants are filtered, adsorbed, and biodegraded by the soil and plants. For areas with low permeability native soils or steep slopes, bioretention areas can be designed with an underdrain system that routes the treated runoff to the storm drain system rather than depending entirely on infiltration.

Also known as:

- *Rain gardens*
- *Infiltration planter*

Bioretention
Source: Geosyntec Consultants

Feasibility Screening Considerations

- Bioretention with no underdrains shall pass infiltration infeasibility screening criteria to be considered for use.

Opportunity Criteria

- Land use may include commercial, residential, mixed use, institutional, and subdivisions. Bioretention may also be applied in parking lot islands, cul-de-sacs, traffic circles, road shoulders, and road medians.
- Drainage area is ≤ 5 acres, preferrably ≤ 1 acre.
- Area available for infiltration.
- Soils are adequate for infiltration or can be amended to improve infiltration capacity. Site slope is less than 15 percent.

OC-Specific Design Criteria and Considerations

☐ Placement of BMPs should observe geotechnical recommendations with respect to geological hazards (e.g. landslides, liquefaction zones, erosion, etc.) and set-backs (e.g., foundations, utilities, roadways, etc.)

☐ Depth to mounded seasonally high groundwater shall not be less than 5 feet.

☐ If sheet flow is conveyed to the treatment area over stabilized grassed areas, the site must be graded in such a way that minimizes erosive conditions; sheet flow velocities should not exceed 1 foot per second.

☐ Ponding depth should not exceed 18 inches; fencing may be required if ponding depth exceeds 6 inches to mitigate the risk of drowning.

☐ Planting/storage media shall be based on the recommendations contained in MISC-1: Planting/Storage Media

☐ The minimum amended soil depth is 1.5 feet (3 feet is preferred).

☐ The maximum drawdown time of the planting soil is 48 hours.

- ☐ Infiltration pathways may need to be restricted due to the close proximity of roads, foundations, or other infrastructure. A geomembrane liner, or other equivalent water proofing, may be placed along the vertical walls to reduce lateral flows. This liner should have a minimum thickness of 30 mils.
- ☐ Plant materials should be tolerant of summer drought, ponding fluctuations, and saturated soil conditions for 48 hours; native plant species and/or hardy cultivars that are not invasive and do not require chemical fertilizers or pesticides should be used to the maximum extent feasible.
- ☐ The bioretention area should be covered with 2-4 inches (average 3 inches) of mulch at startup and an additional placement of 1-2 inches of mulch should be added annually.
- ☐ An optional gravel drainage layer may be installed below planting media to augment storage volume.
- ☐ An overflow device is required at the top of the ponding depth.
- ☐ Dispersed flow or energy dissipation (i.e. splash rocks) for piped inlets should be provided at basin inlet to prevent erosion.

Simple Sizing Method for Bioretention with no Underdrain

If the Simple Design Capture Volume Sizing Method described in **Appendix III.3.1** is used to size a bioretention area with underdrains, the user calculates the DCV and designs the system with geometry required to draw down the DCV in 48 hours. The sizing steps are as follows:

Step 1: Determine the Bioretention Design Capture Volume

Calculate the DCV using the Simple Design Capture Volume Sizing Method described in **Appendix III.3.1**.

Step 2: Determine the 48-hour Ponding Depth

The depth of effective storage depth that can be drawn down in 48 hours can be calculated using the following equation:

$$d_{48} = K_{DESIGN} \times 4$$

Where:

d_{48} = bioretention 48-hour effective depth, ft

K_{DESIGN} = bioretention design infiltration rate, in/hr (See **Appendix VII**)

This is the maximum effective depth of the basin below the overflow device to achieve drawdown in 48 hours. Effective depth includes ponding water and media/aggregate pore space.

Step 3: Design System Geometry to Provide d_{48}

Design system geometry such that

$$d_{48} \geq d_{EFFECTIVE} = (d_P + n_M d_M + n_G d_G)$$

Where:

d_{48} = depth of water that can drain in 48 hours

$d_{EFFECTIVE}$ = total effective depth of water stored in bioretention area, ft

d_P = bioretention ponding depth, ft (should be less than or equal to 1.5 ft)

n_M = bioretention media porosity

d_M = bioretention media depth, ft

n_G = bioretention gravel layer porosity; 0.35 may be assumed where other information is not available

d_G = bioretention gravel layer depth, ft

Step 4: Calculate the Required Infiltrating Area

The required infiltrating area (i.e. measured at the media surface) can be calculated using the following equation:

$A = DCV / d_{EFFECTIVE}$

Where:

A = required infiltrating area, sq-ft (measured as the media surface area)

DCV = design capture volume, cu-ft (see Step 1)

$d_{EFFECTIVE}$ = total effective depth of water stored in bioretention area, ft (from Step 3)

This does not include the side slopes, access roads, etc. which would increase bioretention footprint.

Capture Efficiency Method for Bioretention with no Underdrain

If BMP geometry has already been defined and deviates from the 48 hour drawdown time, the designer can use the Capture Efficiency Method for Volume-Based, Constant Drawdown BMPs (See **Appendix III.3.2**) to determine the fraction of the DCV that must be provided to manage 80 percent of average annual runoff volume. This method accounts for drawdown time different than 48 hours.

Step 1: Determine the drawdown time associated with the selected basin geometry

$DD = (d_{EFFECTIVE} / K_{DESIGN}) \times 12$ in/ft

Where:

DD = time to completely drain infiltration basin ponding depth, hours

$d_{EFFECTIVE} \leq (d_P + n_M d_M + n_G d_G)$

d_P = bioretention ponding depth, ft (should be less than or equal to 1.5 ft)

n_M = bioretention media porosity

d_M = bioretention media depth, ft

n_G = bioretention gravel layer porosity; 0.35 may be assumed where other information is not available

d_G = bioretention gravel layer depth, ft

K_{DESIGN} = basin design infiltration rate, in/hr (See **Appendix VII**)

Step 2: Determine the Required Adjusted DCV for this Drawdown Time

Use the Capture Efficiency Method for Volume-Based, Constant Drawdown BMPs (See **Appendix III.3.2**) to calculate the fraction of the DCV the basin must hold to achieve 80 percent capture of average annual stormwater runoff volume based on the basin drawdown time calculated above.

Step 4: Check that the Bioretention Effective Depth Drains in no Greater than 96 Hours

$DD = (d_{EFFECTIVE} / K_{DESIGN}) \times 12$

Where:

DD = time to completely drain bioretention facility, hours

$d_{EFFECTIVE}$ = total effective depth of water stored in bioretention area, ft (from Step 3)

K_{DESIGN} = basin design infiltration rate, in/hr (See **Appendix VII**)

If DD_{ALL} is greater than 96 hours, adjust bioretention media depth and/or gravel layer depth until DD is less than 96 hours. This duration is based on preventing extended periods of saturation from causing plant mortality.

Step 5: Determine the Basin Infiltrating Area Needed

The required infiltrating area (i.e. the surface area of the top of the media layer) can be calculated using the following equation:

$A = DCV / d_{EFFECTIVE}$

Where:

A = required infiltrating area, sq-ft (measured at the media surface)

DCV = design capture volume, adjusted for drawdown time, cu-ft (see Step 1)

$d_{EFFECTIVE}$ = total effective depth of water stored in bioretention area, ft (from Step 3)

This does not include the side slopes, access roads, etc. which would increase bioretention footprint. If the area required is greater than the selected basin area, adjust surface area or adjust ponding depth and recalculate required area until the required area is achieved.

Configuration for Use in a Treatment Train

- Bioretention areas may be preceeded in a treatment train by HSCs in the drainage area, which would reduce the required volume of the bioretention cell.
- Bioretention areas can be incorporated in a treatment train to provide enhanced water quality treatment and reductions in runoff volume and rate. For example, runoff can be collected from a roadway in a vegetated swale that then flows to a bioretention area. Similarly, bioretention could be used to manage overflow from a cistern.

Additional References for Design Guidance

- CASQA BMP Handbook for New and Redevelopment: http://www.cabmphandbooks.com/Documents/Development/TC-32.pdf
- SMC LID Manual (pp 68): http://www.lowimpactdevelopment.org/guest75/pub/All_Projects/SoCal_LID_Manual/SoCalLID_Manual_FINAL_040910.pdf
- Los Angeles County Stormwater BMP Design and Maintenance Manual, Chapter 5: http://dpw.lacounty.gov/DES/design_manuals/StormwaterBMPDesignandMaintenance.pdf
- San Diego County LID Handbook Appendix 4 (Factsheet 7): http://www.sdcounty.ca.gov/dplu/docs/LID-Appendices.pdf
- Los Angeles Unified School District (LAUSD) Stormwater Technical Manual, Chapter 4. http://www.laschools.org/employee/design/fs-studies-and-reports/download/white_paper_report_material/Storm_Water_Technical_Manual_2009-opt-red.pdf?version_id=76975850

  County of Los Angeles Low Impact Development Standards Manual, Chapter 5: http://dpw.lacounty.gov/wmd/LA_County_LID_Manual.pdf

XIV.2. Miscellaneous BMP Design Element Fact Sheets (MISC)

MISC-1: Planting/Storage Media

Planting and storage media is a critical design element for several common BMP types, including bioretention, bioinfiltration, swales, filter strips, and greenroofs. This fact sheet is intended to be used as referenced from these fact sheets.

Also known as:

- *Bioretention soil media (BSM)*

Street-end biofiltration with planting/storage media
Source: City of Portland

General Design Criteria

- Planting/storage media should be designed to achieve the long term hydraulic design requirements associated with the design of the facility (i.e., design K_{sat}).
- The planting media shall be designed to address pollutants of concern at the design hydraulic capacity.
- Bioretention soil shall also support vigorous plant growth.
- Planting media should consist of 60 to 80% fine sand and 20 to 40% compost.
- Planting media for projects draining to nutrient sensitive receiving water should adhere to recommendations for nutrient sensitive planting media provided below.

Sand

- Sand should be free of wood, waste, coating such as clay, stone dust, carbonate, etc., or any other deleterious material. All aggregate passing the No. 200 sieve size should be non-plastic. Sand for bioretention should be analyzed by an accredited lab using #200, #100, #40, #30, #16, #8, #4, and 3/8 sieves (ASTM D 422 or as approved by the local permitting authority) and meet the following gradation (Note: all sands complying with ASTM C33 for fine aggregate comply with the gradation requirements below):

Sieve Size (ASTM D422)	% Passing (by weight)	
	Minimum	Maximum
3/8 inch	100	100
#4	90	100
#8	70	100
#16	40	95
#30	15	70
#40	5	55
#100	0	15
#200	0	5

- Note: the gradation of the sand component of the media is believed to be a major factor in the hydraulic conductivity of the media mix. If the desired hydraulic conductivity of the media cannot be achieved within the specified proportions of sand and compost (#2), then it may be necessary to utilize sand at the coarser end of the range specified in the table above ("minimum" column).

Compost

Compost should be a well decomposed, stable, weed free organic matter source derived from waste materials including yard debris, wood wastes, or other organic materials not including manure or biosolids meeting standards developed by the US Composting Council (USCC). The product shall be certified through the USCC Seal of Testing Assurance (STA) Program (a compost testing and information disclosure program). Compost quality should be verified via a lab analysis to be:

- Feedstock materials shall be specified and include one or more of the following: landscape/yard trimmings, grass clippings, food scraps, and agricultural crop residues.
- Organic matter: 35-75% dry weight basis.
- Carbon and Nitrogen Ratio: 15:1 < C:N < 25:1
- Maturity/Stability: shall have dark brown color and a soil-like odor. Compost exhibiting a sour or putrid smell, containing recognizable grass or leaves, or is hot (120 F) upon delivery or rewetting is not acceptable.
- Toxicity: any one of the following measures is sufficient to indicate non-toxicity:
    - NH4:NH3 < 3
    - Ammonium < 500 ppm, dry weight basis
    - Seed Germination > 80% of control
    - Plant trials > 80% of control
- Solvita® > 5 index value
- Nutrient content:
    - Total Nitrogen content 0.9% or above preferred
    - Total Boron should be <80 ppm, soluble boron < 2.5 ppm
- Salinity: < 6.0 mmhos/cm
- pH between 6.5 and 8 (may vary with plant palette)
- Compost for bioretention should be analyzed by an accredited lab using #200, ¼ inch, ½ inch, and 1 inch sieves (ASTM D 422 or as approved by the local permitting authority) and meet the following gradation:

Sieve Size (ASTM D422)	% Passing (by weight)	
	Minimum	Maximum
1 inch	99	100
½ inch	90	100
¼ inch	40	90
#200	2	10

- Tests should be sufficiently recent to represent the actual material that is anticipated to be delivered to the site. If processes or sources used by the supplier have changed significantly since the most recent testing, new tests should be requested.
- Note: the gradation of compost used in bioretention media is believed to play an important role in the saturated hydraulic conductivity of the media. To achieve a higher saturated hydraulic conductivity, it may be necessary to utilize compost at the coarser end of this range ("minimum" column). The percent passing the #200 sieve (fines) is believed to be the most important factor in hydraulic conductivity. In addition, a coarser compost mix provides more heterogeneity of the bioretention media, which is believed to be advantageous for more rapid development of soil structure needed to support health biological processes. This may be an advantage for plant establishment with lower nutrient and water input.

Mulch

- Planting area should generally be covered with 2 to 4 inches (average 3 inches) of mulch at the start and an additional placement of 1 to 2 inches of mulch should be added annually. *The intention is that to help sustain the nutrient levels, suppress weeds, retain moisture, and maintain infiltration capacity*.
- For nutrient-sensitive planting/storage media design, inorganic mulch such as gravel, may be used.

Planting/Storage Media Design for Nutrient Sensitive Receiving Waters

Where the BMP discharges to receiving waters with nutrient impairments or nutrient TMDLs, the planting media placed should be designed with the specific goal of minimizing the potential for initial and long term leaching of nutrients from the media.

- In general, the potential for leaching of nutrients can be minimized by:
  - Utilizing stable, aged compost (as required of media mixes under all conditions).
  - Utilizing other sources of organic matter, as appropriate, that are safe, non-toxic, and have lower potential for nutrient leaching than compost.
  - Reducing the content of compost or other organic material in the media mix to the minimum amount necessary to support vigorous plant growth and healthy biological processes.
- A landscape architect should be consulted to assist in the design of planting/storage media to balance the interests of plant establishment, water retention capacity (irrigation demand), and the potential for nutrient leaching. The following practices should be considered in developing the media mix design:
  - The actual nutrient content and organic content of the selected compost source should be considered when specifying the proportions of compost and sand. The compost specification allows a range of organic content over approximately a factor of 2 and nutrient content may vary more widely. Therefore determining the actual organic content and nutrient content of the compost expected to be supplied is important in determining the proportion to be used for amendment.
  - A commitment to periodic soil testing for nutrient content and a commitment to adaptive management of nutrient levels can help reduce the amount of organic amendment that must be provided initially. Generally, nutrients can be added planting areas through the addition of organic mulch, but cannot be removed.
  - Plant palettes and the associated planting mix should be designed with native plants where possible. Native plants generally have a broader tolerance for nutrient content, and can be longer lived in leaner/lower nutrient soils. An additional benefit of lower nutrient levels is that native plants will generally have less competition from weeds.

- Nutrients are better retained in soils with higher cation exchange capacity (CEC). CEC can be increased through selection of organic material with naturally high CEC, such as peat, and/or selection of inorganic material with high CEC such as some sands or engineered minerals (e.g., low P-index sands, zeolites, rhyolites, etc). Including higher CEC materials would tend to reduce the net leaching of nutrients.
- Soil structure can be more important than nutrient content in plant survival and biologic health of the system. If a good soil structure can be created with very low amounts of compost, plants survivability should still be provided. Soil structure is loosely defined as the ability of the soil to conduct and store water and nutrients as well as the degree of aeration of the soil. While soil structure generally develops with time, planting/storage media can be designed to promote earlier development of soil structure. Soil structure is enhanced by the use of amendments with high hummus content (as found in well-aged organic material). In addition, soil structure can be enhanced through the use of compost/organic material with a distribution of particle sizes (i.e., a more heterogeneous mix). Finally, inorganic amendments such as polymer beads may be useful for promoting aeration and moisture retention associated with a good soil structure. An example of engineered soil to promote soil structure can be found here:

  http://www.hort.cornell.edu/uhi/outreach/pdfs/custructuralsoilwebpdf.pdf
- Younger plants are generally more tolerant of lower nutrient levels and tend to help develop soil structure as they grow. Starting plants from smaller transplants can help reduce the need for organic amendments and improve soil structure. The project should be able to accept a plant mortality rate that is somewhat higher than starting from larger plants and providing high organic content.

- With these considerations, it is anticipated that less than 10 percent compost amendment could be used, while still balancing plant survivability and water retention.

We wish to express our gratitude to following individuals for their feedback on the design of planting/storage media for nutrient sensitive receiving waters in Southern California.

Deborah Deets, City of Los Angeles Bureau of Sanitation

Drew Ready, LA and San Gabriel Rivers Watershed Council

Rick Fisher, ASLA, City of Los Angeles Bureau of Engineering

Dr. Garn Wallace, Wallace Laboratories

Glen Dake, GDML

Jason Schmidt, Tree People

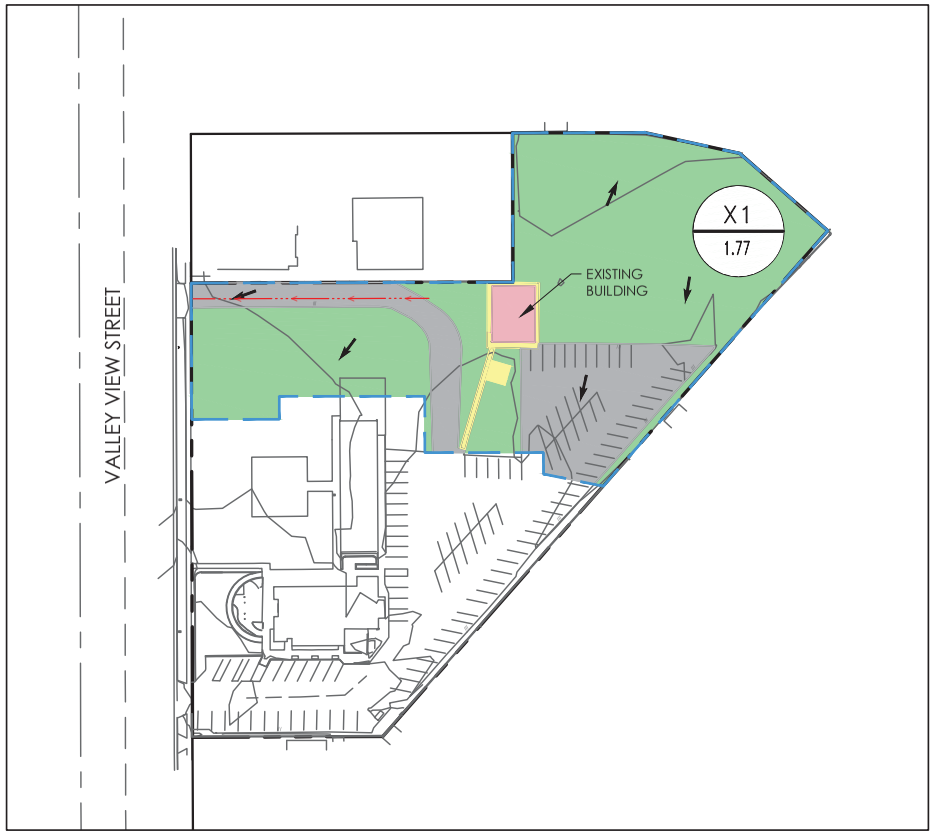
The guidance provided herein does not reflect the individual opinions of any individual listed above and should not be cited or otherwise attributed to those listed.

Selecting Plants for Planting/Storage Media

- Plant materials should be tolerant of summer drought, ponding fluctuations, and saturated soil conditions for 48 to 96 hours.
- It is recommended that a minimum of three types of tree, shrubs, and/or herbaceous groundcover species be incorporated to protect against facility failure due to disease and insect infestations of a single species.
- Native plant species and/or hardy cultivars that are not invasive and do not require chemical inputs should be used to the maximum extent feasible.

Attachment C

WQMP Site Exhibit and Grading Plan



STORM EVENT	PEAK FLOW (CFS)
10-YEAR	4.59
25-YEAR	5.54
100-YEAR	7.14

LEGEND

DRAINAGE AREA BOUNDARY

SURFACE FLOW DIRECTION

TIME OF CONCENTRATION PATH

X1 / 1.77 — DRAINAGE AREA NAME / AREA (ACRES)

DESIGNATION	FACILITY	AREA (AC)
	PARKING/PAVEMENT	0.41 (23.2%)
	BUILDING AND PATIO	0.04 (2.3%)
	SIDEWALK & HARDSCAPE	0.03 (1.7%)
	LANDSCAPE	1.29 (72.8%)

0 50' 100' 200'

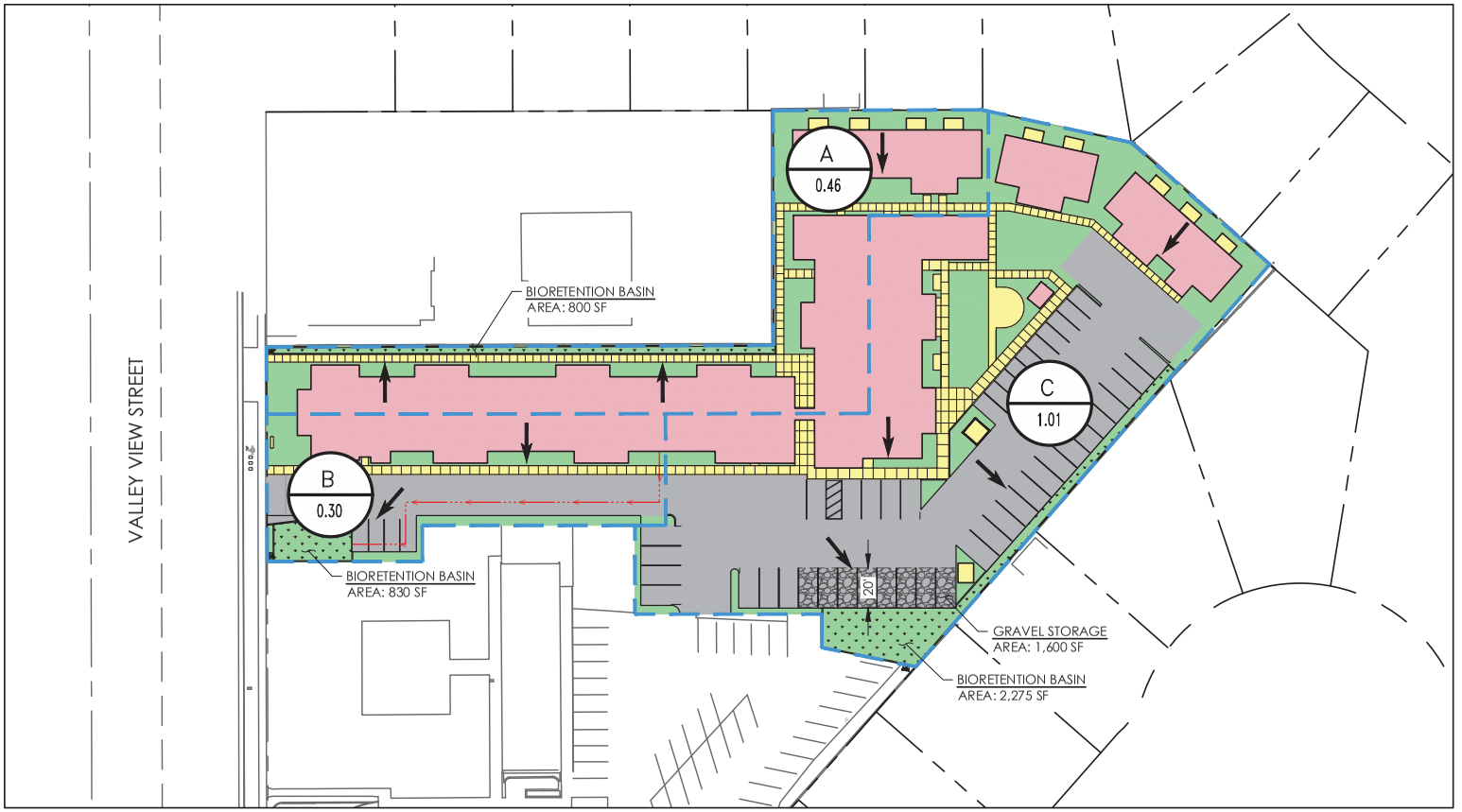
SCALE: 1" = 100'

rrm design group

EXISTING HYDROLOGY MAP

August 5, 2020

8300 VALLEY VIEW STREET, BUENA PARK, CA



STORM EVENT	PEAK FLOW (CFS)
10-YEAR	4.82
25-YEAR	5.78
100-YEAR	7.85

LEGEND

- DRAINAGE AREA BOUNDARY
- SURFACE FLOW DIRECTION
- TIME OF CONCENTRATION PATH
- X — DRAINAGE AREA NAME
- ### — AREA (ACRES)

DESIGNATION	FACILITY	AREA (AC)
	PARKING/PAVEMENT	0.57 (32.2%)
	BUILDING AND PATIO	0.59 (33.3%)
	SIDEWALK & HARDSCAPE	0.17 (9.6%)
	LANDSCAPE	0.44 (24.9%)
	BIORETENTION (INF-3)	

0 30' 60' 120'

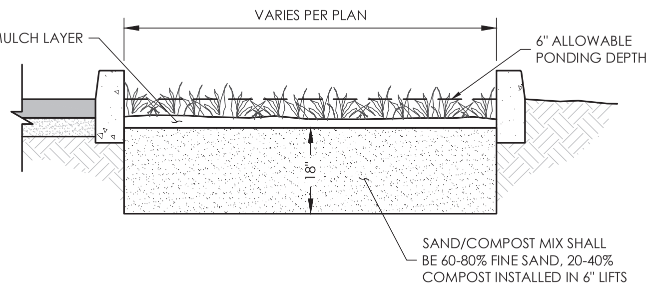
SCALE: 1" = 60'

rrm design group

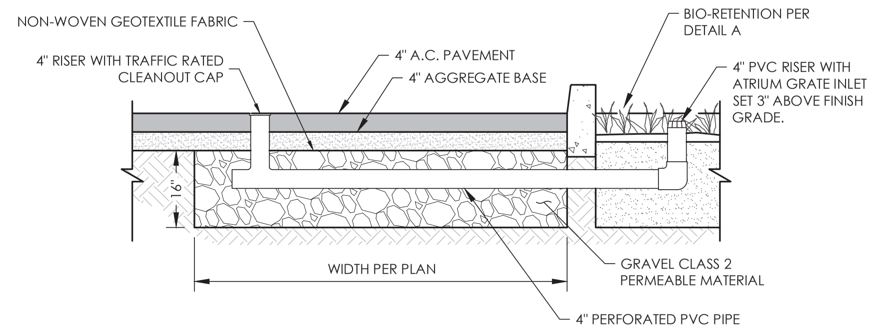
August 5, 2020

PROPOSED HYDROLOGY MAP

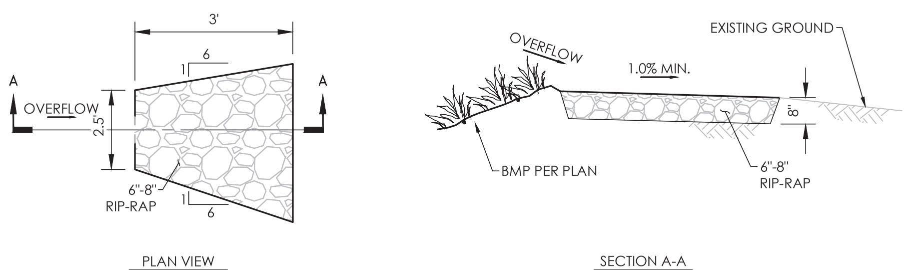
8300 VALLEY VIEW STREET, BUENA PARK, CA



A BIO-RETENTION DETAIL
SCALE: N.T.S



B GRAVEL STORAGE DETAIL
SCALE: N.T.S

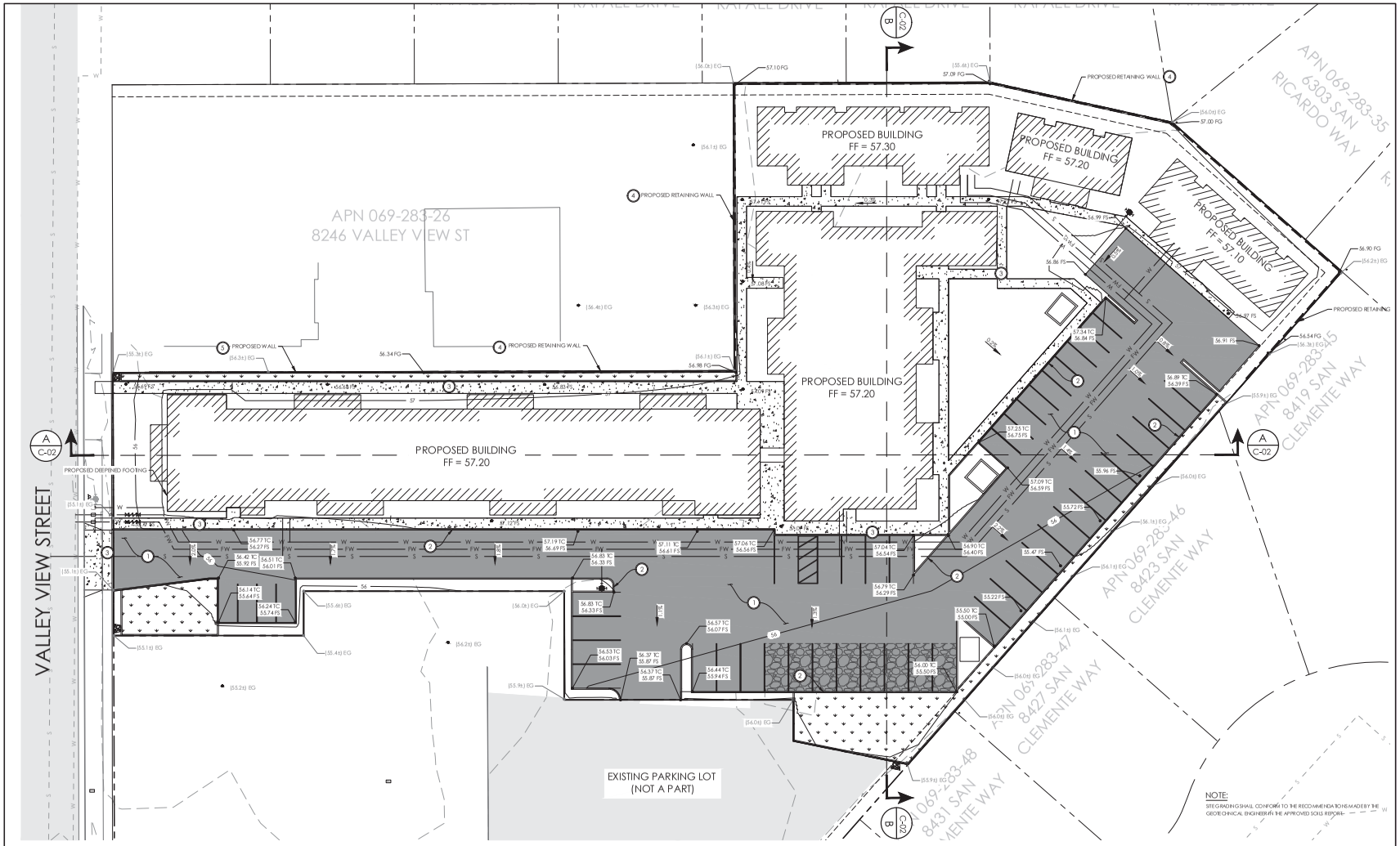


C RIP-RAP DETAIL
SCALE: N.T.S

rrm design group

August 5, 2020

BMP DETAILS
8300 VALLEY VIEW STREET, BUENA PARK, CA



GRADING/PAVING NOTES

1. PROPOSED ASPHALT CONCRETE PAVING.
2. PROPOSED 6" CONCRETE CURB.
3. PROPOSED CONCRETE SIDEWALK.
4. PROPOSED CMU RETAINING WALL- COLOR TO MATCH PROPOSED BUILDING.
5. PROPOSED CMU W.ALL - COLOR TO MATCH PROPOSED BUILDING.

PRELIMINARY EARTH QUANTITIES

AREA OF DISTURBANCE 1.7 AC±

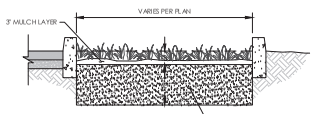
RAW CUT: 85 CY
RAW FILL: 6035 CY

QUANTITY ESTIMATES ON THESE PLANS ARE TO BE USED FOR PERMIT PURPOSES ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR THE PURPOSE OF CONSTRUCTION.

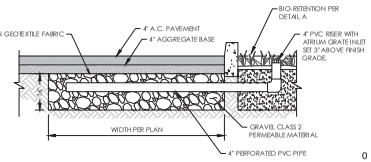
THE RAW EARTHWORK QUANTITIES SHOWN HEREON REPRESENT THE ESTIMATED VOLUMETRIC DIFFERENCE BETWEEN THE PROPOSED ROUGH GRADE AND THE LIMITED TOPOGRAPHIC EXISTING GRADES. THESE ESTIMATES DO NOT MAKE CONSIDERATIONS FOR LOSSES OR BULKING DUE TO: SHRINKAGE, SOIL AMENDMENTS, STABILIZATION, CONSTRUCTION TECHNIQUE, FOOTING & TRENCHING SPOILS, ETC. THESE, IN ADDITION TO ACTUAL FIELD CONDITIONS, CONSTRUCTION TECHNIQUE AND THE FINAL RECOMMENDATIONS OF THE SOILS ENGINEER MAY SIGNIFICANTLY EFFECT THE FINAL IMPORT/EXPORT QUANTITIES.

LEGEND

- PROPERTY LINE
- SD — PROPOSED STORM DRAIN
- PROPOSED RETAINING WALL
- PROPOSED W.ALL
- 250 — EXISTING CONTOUR MAJOR
- 251 — EXISTING CONTOUR MINOR
- 250 — PROPOSED CONTOUR MAJOR
- 251 — PROPOSED CONTOUR MINOR
- PROPOSED VEGETATED SWALE
- PROPOSED A.C. PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED BIORETENTION
- PROPOSED OFFSITE PARKING
- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE PAVEMENT



BIO-RETENTION DETAIL
SCALE: N.T.S



GRAVEL STORAGE DETAIL
SCALE: N.T.S

NORTH

0 20 40 60 feet
1" = 20'

RRM Design Group
10 E. Figueroa St., Suite 200
Santa Barbara, CA 93101

Tel: 805.963.8283
Fax: 805.963.8184
www.rrmdesign.com

NATIONAL COMMUNITY CORE RENAISSANCE

Orchard View Gardens Senior Housing
8300 Valley View Street, Buena Park, CA 90620

GRADING PLAN

C-01
07/17/2020

Attachment D

Notice of Transfer

Water Quality Management Plan
Notice of Transfer of Responsibility

Submission of this Notice of Transfer of Responsibility constitutes notice to the City of Anaheim that responsibility for the Water Quality Management Plan ("WQMP") for the subject property identified below, and implementation of that plan, is being transferred from the Previous Owner (and his/ her agent) of the site (or a portion thereof) to the New Owner, as further described below.

I. Previous Owner/ Previous Responsibility Party Information

Company/ Individual Name		Contact Person	
Street Address		Title	
City	State	Zip	Phone

II. Information about Site Transferred

Name of Project	
Title of WQMP Applicable to Site:	
Street Address of Site	
Tract Number(s) for Site	Lot Numbers
Date WQMP Prepared (or Revised)	

III. New Owner/ New Responsible Party Information

Company/ Individual Name		Contact Person	
Street Address		Title	
City	State	Zip	Phone

IV. Ownership Transfer Information

General Description of Site Transferred to New Owner	General Description of Portion of Project/ Parcel Subject to WQMP Retained by Owner (if any)
Lot/ Tract Number(s) of Site Transferred to New Owner	
Remaining Lot/ Tract Number(s) to WQMP still held by Owner (if any)	
Date of Ownership Transfer	

Note: When the Previous Owner is transferring a Site that is a portion of a larger project/ parcel addressed by the WQMP, as opposed to the entire project/ parcel addressed by the WQMP, the General Description of the Site transferred and the remainder of the project/ parcel no transferred shall be set forth as maps attached to this notice. These maps shall show those portions of the project/ parcel addressed by the WQMP that are transferred to the New Owner (the Transferred Site), those portions retained by the Previous Owner, and those portions previously transferred by the Previous Owner. Those portions retained by the Previous Owner shall be labeled "Previous Owner," and those portions previously transferred by the Previous Owner shall be labeled as "Previously Transferred."

V. Purpose of Notice of Transfer

The purposes of this Notice of Transfer of Responsibility are: 1) to track transfer of responsibility for implementation and amendment of the WQMP when property to which the WQMP is transferred from the Previous Owner to the New Owner, and 2) to facilitate notification to a transferee of property subject to a WQMP that such New Owner is now the Responsible Party of record for the WQMP for this portions of the site that it owns.

VI. Certifications

A. Previous Owner

I certify under penalty of law that I am no longer the owner of the Transferred Site as described in Section II above. I have provided the New Owner with a copy of the WQMP applicable to the Transferred Site that the New Owner is acquiring from the New Owner.

Print Name of Previous Owner Representative	Title
Signature of Previous Owner Representative	Date

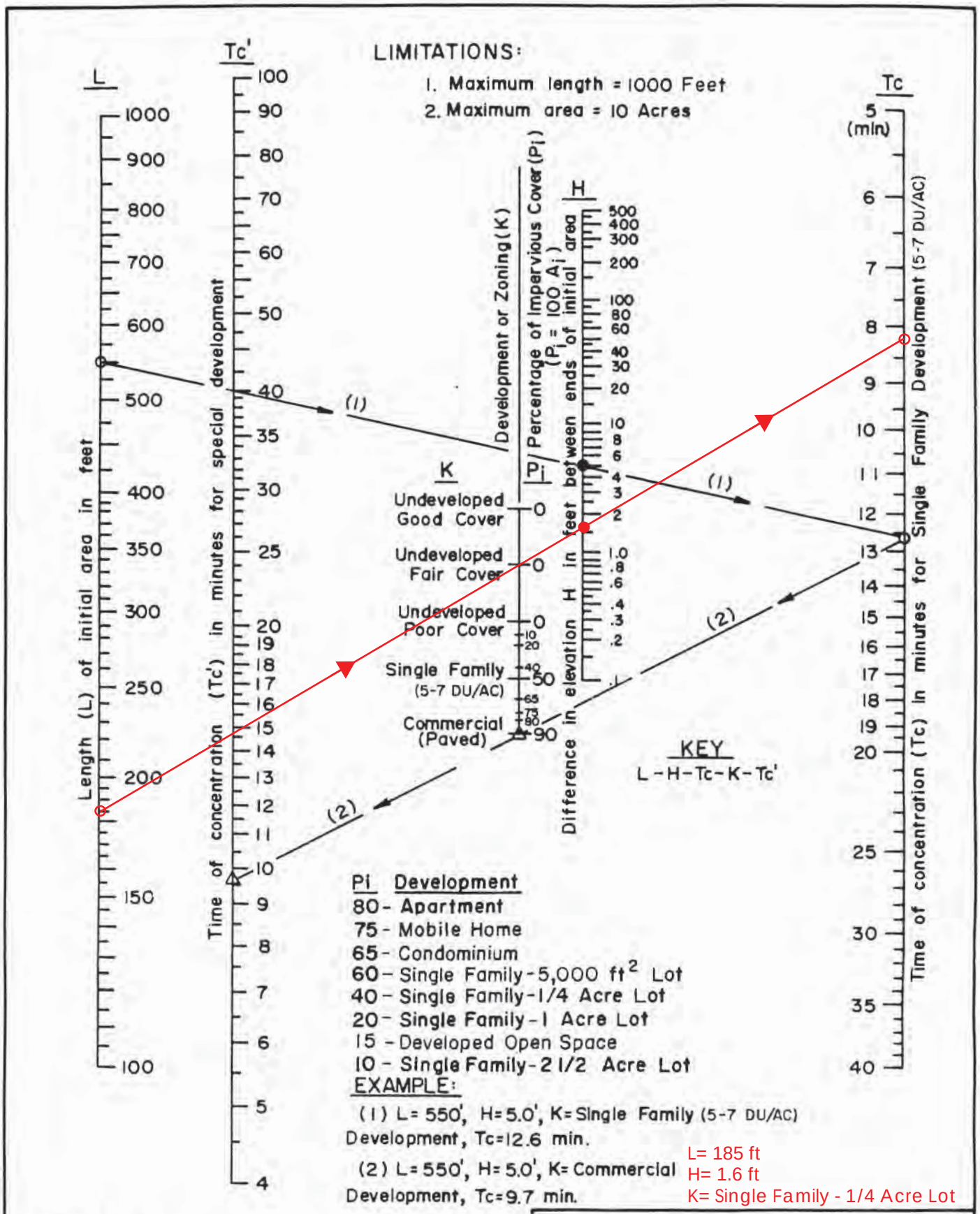
B. New Owner

I certify under penalty of law that I am the owner of the Transferred Site, as described in Section II above, that I have been provided a copy of the WQMP, and that I have informed myself and understand the New Owner's responsibilities related to the WQMP, its implementation, and Best Management Practices associated with it. I understand that by signing this notice, the New Owner is accepting all ongoing responsibilities for implementation and amendment of the WQMP for the Transferred Site, which the New Owner has acquired from the Previous Owner.

Print Name of New Owner Representative	Title
Signature of New Owner Representative	Date

Attachment E

Hydrology Calculations

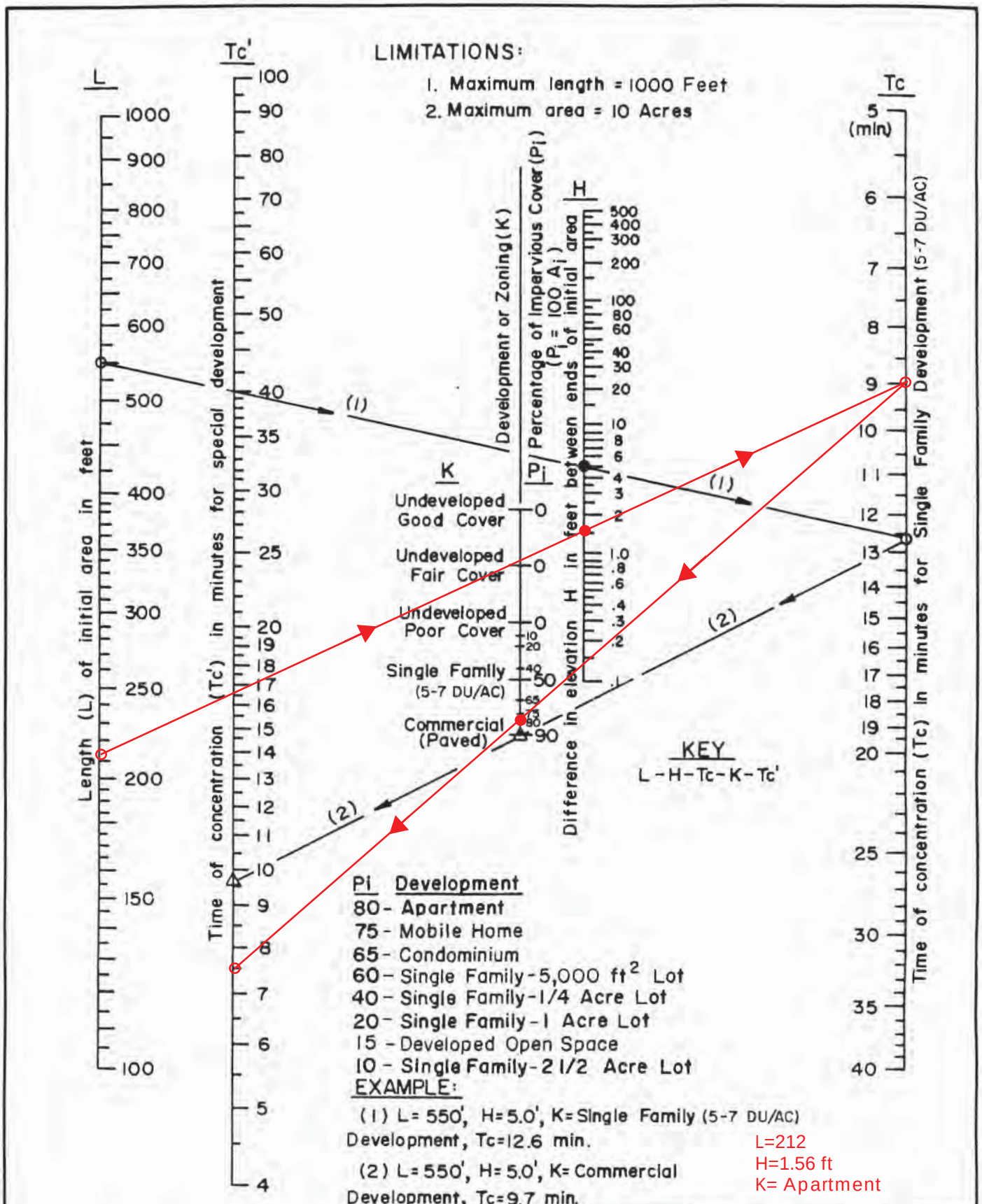


ORANGE COUNTY
HYDROLOGY MANUAL

Existing Condition
Tc'= 8.2 min

TIME OF CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA

Figure D-1



ORANGE COUNTY
HYDROLOGY MANUAL

Proposed Condition

Tc'= 7.5 min

TIME OF CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA

Figure D-1

RATIONAL METHOD STUDY FORM

ORANGE COUNTY
HYDROLOGY MANUAL

STUDY NAME: Orchard View Gardens Existing Condition

10 -YEAR STORM RATIONAL METHOD STUDY

Calculated by JMR Date 3/30/20
Checked by MCH Date 3/30/20
Page 1 of 1

Concentration Point	Area (Acres) Subarea	Area (Acres) Total	Soil Type	Dev. Type	T_t min.	T_c min.	I in/hr	Fm* in/hr	Fm avg.	Q** Total	Flow Path Length ft.	Slope ft./ft.	V ft./sec.	Hydraulics and Notes
	1.77	1.77	B		-	8.2	3.1	0.22	0.22	4.59	185	0.009		

Equations

*$F_m = a_p F_p$ (Equation C.7 - OC Hydrology Manual)

a_p = pervious area fraction= 72.7% = 0.727

F_p = 0.30 in/hr (Table C.2 - OC Hydrology Manual)

$F_m = (0.727)(0.30) = 0.2181$

** $Q = 0.9\ (I-F_m)A$

TABLE C.2.
MAXIMUM EFFECTIVE PERVIOUS AREA LOSS RATES (inch/hour), F_p

SOIL GROUP:	A	B	C	D
F_p:	0.40	0.30	0.25	0.20

Figure D-4

RATIONAL METHOD STUDY FORM

ORANGE COUNTY HYDROLOGY MANUAL

STUDY NAME: Orchard View Gardens Existing Condition

25 –YEAR STORM RATIONAL METHOD STUDY

Calculated by JMR Date 3/30/20

Checked by MCH Date 3/30/20

Page 1 of 1

Concentration Point	Area (Acres) Subarea	Area (Acres) Total	Soil Type	Dev. Type	T_t min.	T_c min.	I in/hr	Fm* in/hr	Fm avg.	Q** Total	Flow Path Length ft.	Slope ft./ft.	V ft./sec.	Hydraulics and Notes
	1.77	1.77	B			8.2	3.7	0.22	0.22	5.54	185	0.009		

Equations

*$F_m = a_p F_p$ (Equation C.7 - OC Hydrology Manual)

a_p = pervious area fraction= 72.7% = 0.727

F_p = 0.30 in/hr (Table C.2 - OC Hydrology Manual)

$F_m = (0.727)(0.30) = 0.2181$

** $Q = 0.9\ (I\text{-}F_m)A$

TABLE C.2.

MAXIMUM EFFECTIVE PERVIOUS AREA LOSS RATES (inch/hour), F_p

SOIL GROUP:	A	B	C	D
F_p:	0.40	0.30	0.25	0.20

Figure D-4

RATIONAL METHOD STUDY FORM

ORANGE COUNTY HYDROLOGY MANUAL

STUDY NAME: Orchard View Gardens Existing Condition

100-YEAR STORM RATIONAL METHOD STUDY

Calculated by JMR Date 2/18/20

Checked by MCH Date 2/18/20

Page 1 of 1

Concentration Point	Area (Acres) Subarea	Area (Acres) Total	Soil Type	Dev. Type	T_t min.	T_c min.	I in/hr	Fm* in/hr	Fm avg.	Q** Total	Flow Path Length ft.	Slope ft./ft.	V ft./sec.	Hydraulics and Notes
	1.77	1.77	B			8.2	4.7	0.22	0.22	7.14	185	0.009		

Equations

*$F_m = a_p F_p$ (Equation C.7 - OC Hydrology Manual)

a_p = pervious area fraction= 72.7% = 0.727

F_p = 0.30 in/hr (Table C.2 - OC Hydrology Manual)

$F_m = (0.727)(0.30) = 0.2181$

** $Q = 0.9\ (I\text{-}F_m)A$

TABLE C.2.

MAXIMUM EFFECTIVE PERVIOUS AREA LOSS RATES (inch/hour), F_p

SOIL GROUP:	A	B	C	D
F_p:	0.40	0.30	0.25	0.20

Figure D-4

RATIONAL METHOD STUDY FORM

ORANGE COUNTY HYDROLOGY MANUAL

STUDY NAME: Orchard View Gardens Proposed Condition

10 -YEAR STORM RATIONAL METHOD STUDY

Calculated by JMR Date 3/30/20
Checked by MCH Date 3/30/20
Page 1 of 1

Concentration Point	Area (Acres) Subarea	Area (Acres) Total	Soil Type	Dev. Type	T_t min.	T_c min.	I in/hr	Fm* in/hr	Fm avg.	Q** Total	Flow Path Length ft.	Slope ft./ft.	V ft./sec.	Hydraulics and Notes
	1.77	1.77	B	RES.		7.5	3.1	0.07	0.07	4.82	212	0.007		

Equations

$*F_m = a_p F_p$ (Equation C.7 - OC Hydrology Manual)

a_p = pervious area fraction= 24.3% = 0.243

F_p = 0.30 in/hr (Table C.2 - OC Hydrology Manual)

$F_m = (0.243)(0.30) = 0.0729$

$** Q = 0.9 (I-F_m)A$

TABLE C.2.
MAXIMUM EFFECTIVE PERVIOUS AREA LOSS RATES (inch/hour), F_p

SOIL GROUP:	A	B	C	D
F_p:	0.40	0.30	0.25	0.20

Figure D-4

RATIONAL METHOD STUDY FORM

ORANGE COUNTY HYDROLOGY MANUAL

STUDY NAME: Orchard View Gardens Proposed Condition

25 –YEAR STORM RATIONAL METHOD STUDY

Calculated by JMR Date 3/30/20

Checked by MCH Date 3/30/20

Page 1 of 1

Concentration Point	Area (Acres) Subarea	Area (Acres) Total	Soil Type	Dev. Type	T_t min.	T_c min.	I in/hr	Fm* in/hr	Fm avg.	Q** Total	Flow Path Length ft.	Slope ft./ft.	V ft./sec.	Hydraulics and Notes
	1.77	1.77	B	RES.		7.5	3.7	0.07	0.07	5.78	212	0.007		

Equations

*$F_m = a_p F_p$ (Equation C.7 - OC Hydrology Manual)

a_p = pervious area fraction= 24.3% = 0.243

F_p = 0.30 in/hr (Table C.2 - OC Hydrology Manual)

$F_m = (0.243)(0.30) = 0.0729$

0.07

** $Q = 0.9\ (I\text{-}F_m)A$

TABLE C.2.

MAXIMUM EFFECTIVE PERVIOUS AREA LOSS RATES (inch/hour), F_p

SOIL GROUP:	A	B	C	D
F_p:	0.40	0.30	0.25	0.20

Figure D-4

RATIONAL METHOD STUDY FORM

ORANGE COUNTY HYDROLOGY MANUAL

STUDY NAME: Orchard View Gardens Proposed Condition

100-YEAR STORM RATIONAL METHOD STUDY

Calculated by JMR Date 3/30/20

Checked by MCH Date 3/30/20

Page 1 of 1

Concentration Point	Area (Acres) Subarea	Area (Acres) Total	Soil Type	Dev. Type	T_t min.	T_c min.	I in/hr	Fm* in/hr	Fm avg.	Q** Total	Flow Path Length ft.	Slope ft./ft.	V ft./sec.	Hydraulics and Notes
	1.77	1.77	B	RES.		7.5	5.0	0.07	0.07	7.85	212	0.007		

Equations

*$F_m = a_p F_p$ (Equation C.7 - OC Hydrology Manual)

a_p = pervious area fraction= 24.3% = 0.243

F_p = 0.30 in/hr (Table C.2 - OC Hydrology Manual)

$F_m = (0.243)(0.30) = 0.0729$

** $Q = 0.9\ (I-F_m)A$

TABLE C.2.

MAXIMUM EFFECTIVE PERVIOUS AREA LOSS RATES (inch/hour), F_p

SOIL GROUP:	A	B	C	D
F_p:	0.40	0.30	0.25	0.20

Figure D-4

Attachment F

Geotechnical Report

ALBUS-KEEFE & ASSOCIATES, INC.
GEOTECHNICAL CONSULTANTS

May 13, 2020
J.N.: 2853.00

Ms. Sarah Walker
National Community Renaissance
432 2 Piedmont Drive
San Diego, CA 92107

Subject: **Preliminary Geotechnical Investigation for Proposed Water Quality Improvements, Investigation, Proposed Senior Housing Development, 8300 Valley View Street, Buena Park, California.**

Dear Ms. Walker,

Albus-Keefe & Associates, Inc. has completed a geotechnical investigation of the site for evaluation of the percolation characteristics of the site soils. The scope of this investigation consisted of the following:

- Exploratory drilling and soil sampling
- Laboratory testing of selected soil samples
- Engineering analysis of the data
- Preparation of this report

SITE DESCRIPTION AND PROPOSED DEVELOPMENT

Site Location and Description

The site is located at 8300 Valley View, within the city of Buena Park, California. The property is bordered by Valley View Street to the west, single-family homes and a church to the north, single-family homes to the east and a church to the south. The location of the site and its relationship to the surrounding areas is shown on Figure 1, Site Location Map.

The site consists of an irregular-shaped property containing approximately 3.2 acres of land and the east portion of the site is undeveloped while the west portion is part of the church facilities. The existing improvements within the site include a one-story structure located at the central portion of the site. Other improvements include an asphalt-paved driveway and parking lot, concrete sidewalk, playground, garden, and various underground utility lines.

Topographically, the area of the proposed medical building is relatively flat with elevations ranging from approximately 51 feet above mean sea level (MSL) to approximately 54 feet above MSL. Drainage within the developed portion of the site is generally directed as sheet flow to the east into Valley View Street. Vegetation on site primarily consists of scattered small to medium-sized trees, small-shrubs, and grass.

N

SITE LOCATION MAP
National Community Renaissance
Proposed Senior Housing Development
8300 Valley View Street
Buena Park, California

NOT TO SCALE

FIGURE 1

Proposed Development

Based on the architectural site plans by rrm design group dated on August 8, 2019, the proposed site development will consist of two- to three-story multi-family buildings. Additionally, nine single-family buildings are planned along the northeast perimeter. A private driveway, parking stalls, perimeter site walls, and underground utilities are also planned.

No grading or structural plans were available in preparing of this report. However, we anticipate that minor rough grading of the site will be required to achieve future surface configuration. We expect the proposed residential dwellings will be wood-framed structures with concrete slabs on grade yielding relatively light foundation loads. Treatment for storm water is anticipated to utilize bio-filtration basins and swales.

SUMMARY OF FIELD AND LABORATORY WORK

Subsurface Investigation

Subsurface exploration for this investigation was conducted on November 12, 2019, and consisted of the drilling of three (3) soil borings to depths ranging from approximately 21.5 to 51.5 feet below the existing ground surface (bgs). The borings were drilled using a truck-mounted, continuous flight, hollow-stem-auger drill rig. A representative of Albus-Keefe & Associates, Inc. logged the exploratory borings. Visual and tactile identifications were made of the materials encountered, and their descriptions are presented in the Exploration Logs in Appendix A. The approximate locations of the exploratory excavations completed by this firm are shown on the enclosed Geotechnical Map, Plate 1.

Bulk, relatively undisturbed and Standard Penetration Test (SPT) samples were obtained at selected depths within the exploratory borings for subsequent laboratory testing. Relatively undisturbed samples were obtained using a 3-inch O.D., 2.5-inch I.D., California split-spoon soil sampler lined with brass rings. SPT samples were obtained from the boring using a standard, unlined SPT soil sampler. During each sampling interval, the sampler was driven 18 inches with successive drops of a 140-pound automatic hammer falling 30 inches. The number of blows required to advance the sampler was recorded for each six inches of advancement. The total blow count for the lower 12 inches of advancement per soil sample is recorded on the exploration log. Samples were placed in sealed containers or plastic bags and transported to our laboratory for analyses. The borings were backfilled with auger cuttings upon completion of sampling.

Laboratory Testing

Selected soil samples of representative earth materials were tested to assist in the formulation of conclusions and recommendations presented in this report. Tests consisted of in-situ moisture contents and dry densities, and sieve analyses. Results of laboratory testing relevant to percolation characteristics are presented in Appendix B and on the Exploration Logs in Appendix A.

ANALYSIS OF DATA

Subsurface Conditions

Descriptions of the earth materials encountered during our investigation are summarized below and are presented in detail on the Exploration Logs presented in Appendix A.

Soil materials encountered at the subject site consisted of alluvial soils to the maximum depth explored, 51.5 feet below ground surface. Although not encountered, localized artificial fill materials could be present within the site.

The alluvial soils encountered are comprised of a silty sand to a depth of about 4 feet, then a poorly-graded sand to a depth of about 16 feet, followed by a layer of clay. These materials were typically slightly moist near the surface but become wet nearer the groundwater level. The upper granular soils tend to be loose to medium dense while the fine-grained soils tend to be stiff.

Groundwater

Groundwater was encountered at 10 feet below existing ground surface during this firm's subsurface exploration. Based on a review of the referenced CDMG Special Report, the site is mapped with a historical groundwater depth of less than 10 feet.

Design of Stormwater Infiltration Basin

The ***infiltration rate*** in the basin is dependent upon several factors including the soil permeabilities of the various soil layers throughout the soil mass, hydraulic gradient of water pressure head in the soil mass, and depth to groundwater. The infiltration rate is related to the permeability by Darcy's equation:

$V = ki$

Where:

V= water velocity (infiltration rate)
k= permeability
i=hydraulic gradient

We have performed estimates based on results of gradation testing to determine the ***Permeability Rate*** of the soils influencing the basin, not the infiltration rate. Therefore, the effective infiltration rate must be determined using the relationship between permeability and infiltration rate as expressed by Darcy's equation. Site conditions are further complicated by the presence of shallow groundwater and alternating layers of variable permeabilities. Using Darcy's equation to solve for the infiltration rate under these conditions gives rise to the solution of differential equations for water flow. Because of this complexity, we have utilized a computer program to solve for the infiltration rate.

Infiltration in the basin was modeled using the software Seep/W, version 2007, by Geo-Slope International. The program allows for modeling of both partially-saturated and saturated porous medium using a finite element approach to solve Darcy's Law. The program can evaluate both steady-state and transient flow in 2-D planer and axisymmetric cases. Boundaries of the model can be

identified with various conditions including fix total head, fix pressure head, fix flow rate, and head as a function of flow. Soil conductivity properties can be modeled with either Fredlund et al. (1994), Green and Corey (1971), Van Genuchten (1980), or Saxton et al. (1986). The parameters suggested by Van Genuchten (1980) were selected for use in our model and were based on test results of particle-size analyses and estimated in-place densities.

The model uses a 2-D planer setup with three (3) material types in three zones that represent the general soil profile observed at the site. The saturated conductivity of materials 1 and 2 were selected based on correlations with laboratory gradation test results (Plates B-1 and B-2). The third layer represents the clay zone acting as an aquitard and was assumed to have a relatively impermeable conductivity value. A summary of the well model parameters is provided in Table 1.

TABLE 1
Summary of Characteristic Curve Parameters

Depth (ft)	USCS	Material No.	Ks (in/hr)	Van Genuchten Parameters				
				a (psf)	n	m	Sat. Water Content	Residual Water Content
0-4	Alluvium (SM)	1	2	29.4	1.35	0.26	0.34	0.025
4-16	Alluvium (SP)	2	10	53.4	1.51	0.34	0.24	0.025
>16	Clay (CL)	3	0.001	251.5	1.10	0.09	0.55	0.010

Steady state analysis was performed to estimate the infiltration rate with 6 inches of water in the basin. This resulted in an "estimated" peak infiltration rate of 4.4 inches per hour (in/hr). A plot depicting the resulting pressure head contours and flow vectors for the model is provided in Appendix C on Plate C-1.

To evaluate the time required to empty the basin, the model was reanalyzed with a variable head condition that was dependent upon the volume of water leaving the basin through infiltration. If some other basin configuration is used, the analyses may require updating. As water infiltrates into the surrounding soil, both the volume of water remaining in the basin and the total head decrease. A graph of the water head versus exit volume for the basin is provided in Figure 2. Volume is based on a section of basin 1 foot in length.

The analysis was performed as a transient case over a maximum time of approximately 6 hours. The conditions in the model were evaluated in various increments of time over the total duration. From our analyses, the water in the basin is completely evacuated in approximately 2.9 hours. The corresponding average infiltration rate is taken as the depth of water divided by the time and yields a value of 2.1 in./hr. Plots depicting the resulting pressure head contours and flow vectors at selected times are provided in Appendix C on Plates C-2 through C-5. A plot of time versus water height in basin is shown on Figure 3.

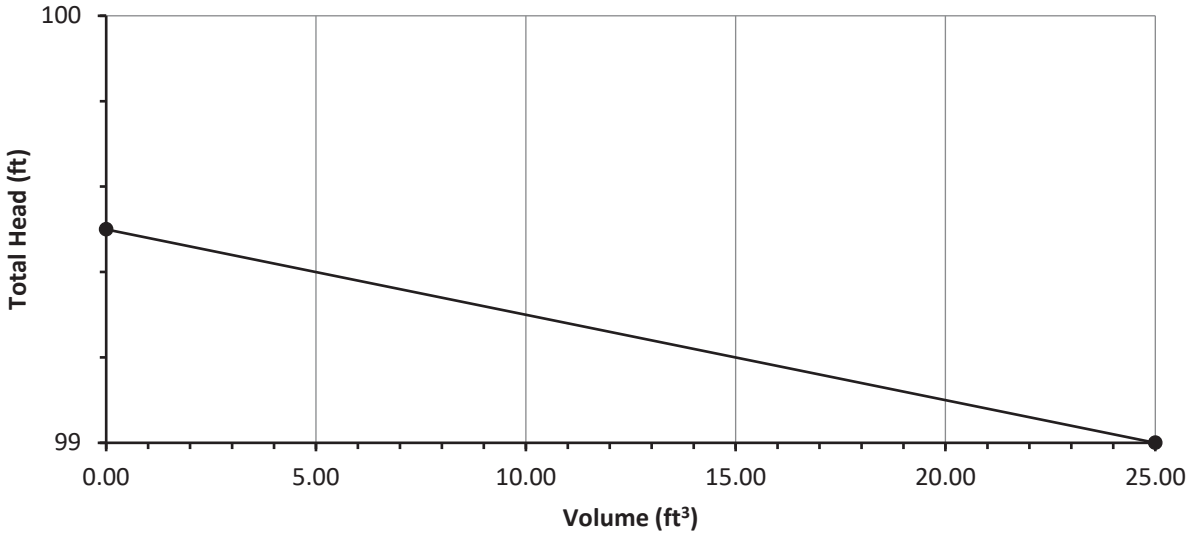


Figure 2 - Head Function

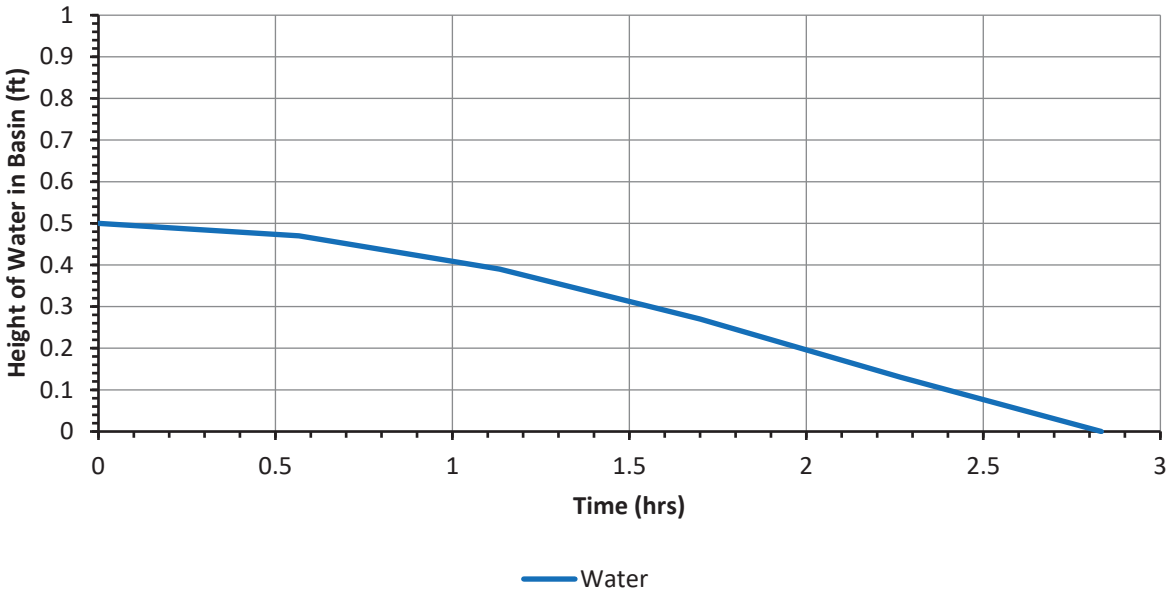


Figure 3 - Height of Water in Basin

CONCLUSIONS AND RECOMMENDATIONS

Based on our evaluation, infiltration of storm water is considered feasible at the site. Groundwater was encountered at a depth of 10 feet during our exploration. This depth is consistent with the reported shallowest ground water condition indicated by the CDMG. Groundwater may rise or fall somewhat from this level on a seasonal basis. However, we do not anticipate a groundwater level shallower than

7 feet. Provided the bottom of the basin is set no more than 2 feet below the current ground surface, a minimum clearance of 5 feet above shallowest seasonally groundwater levels will be maintained. The basins are anticipated to be located sufficiently far enough away from proposed habitable structures to avoid worsening of existing liquefaction hazards at the site. The site is also not considered subject to other adverse geotechnical factors including hydro-consolidation, that could be worsened by proposed infiltration. Our model indicates the groundwater mounding caused by a rain event would be substantially limited to within 15 feet horizontally of the basin and would dissipate within a few days.

From our study, storm water may be infiltrated using a shallow basin as proposed. Based on our analyses, an "estimated" peak infiltration rate of 4.4 in./hr. may be assumed for the proposed basin with a maintained water depth of 0.5 feet. As the water level in the basin drops, the infiltration rate will also lessen. The average "estimated" infiltration rate during the drawdown of the basin may be based on a rate of **2.1 in./hr.** This later value is more appropriately used for the typical "draw down" calculation method in LID manuals.

The "estimated" infiltration rates reported above should be adjusted by applying an appropriate factor of safety. Table 3 provides the recommended Factor Values for actor Category A per requirements of the Santa Ana Regional Water Quality Control Board TGD. The Project Civil Engineer should assign the Factor Values for Category B to determine the final weighted safety factor.

TABLE 3
Infiltration Facility Safety Factor Determination Worksheet

Infiltration Facility Safety Factor Determination Worksheet					
Factor Category		Factor Description	Assigned Weight (w)	Factor Value (v)	Product (p) p = w * v
A	Suitability Assessment	Soil assessment methods	0.25	1	0.25
		Predominant soil texture	0.25	1	0.25
		Site soil variability	0.25	1	0.25
		Depth to groundwater / impervious layer	0.25	2	0.5
		Suitability Assessment Safety Factor, $S_A = \Sigma p$			1.25

To avoid adverse effects on structures, we recommend the basin be setback at least 15 feet horizontally from structures. Once preliminary plans are completed, this office should review those plans to confirm the intent of this report. Further, this report is suitable only for preliminary WQMP design and submittal. Site specific percolation testing should be performed by this office for use in the final design.

The actual infiltration rate of the basin could be less or more than the estimated value. As such, provisions should be made to accommodate potential variations in the infiltration rate. The design

and recommended Factor Values for the factor of safety assumes that sediments will be removed each year from the basin. Excessive accumulation of sediments will tend to degrade the flow capacity by plugging up the infiltration surfaces.

Current governing requirements prohibit infiltrating into artificial fill soils. Artificial fills were not encountered during this exploration. If such materials are exposed in the bottom of the basin, then such materials will require removal to expose native alluvial soils. The bottom of the basin can then be refilled to the original planned bottom elevation through backfilling with a select granular material recommended by the geotechnical consultant.

LIMITATIONS

This report is based on the geotechnical data as described herein. The materials encountered in our boring excavations and utilized in our laboratory testing for this investigation are believed representative of the project area, and the conclusions and recommendations contained in this report are presented on that basis. However, soil and bedrock materials can vary in characteristics between points of exploration, both laterally and vertically, and those variations could affect the conclusions and recommendations contained herein. As such, observations by a geotechnical consultant during the construction phase of the storm water infiltration systems are essential to confirming the basis of this report.

This report has been prepared consistent with that level of care being provided by other professionals providing similar services at the same locale and time period. The contents of this report are professional opinions and as such, are not to be considered a guaranty or warranty.

This report should be reviewed and updated after a period of one year or if the site ownership or project concept changes from that described herein.

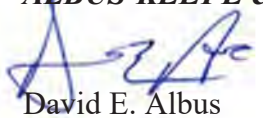
This report has been prepared for the exclusive use of **National Community Renaissance** to assist the project consultants in the design of the proposed development. This report has not been prepared for use by parties or projects other than those named or described herein. This report may not contain sufficient information for other parties or other purposes.

This report is subject to review by the controlling governmental agency.

We appreciate this opportunity to be of service to you. If you should have any questions regarding the contents of this report, please do not hesitate to call.

Sincerely,

ALBUS-KEEFE & ASSOCIATES, INC.



David E. Albus
Principal Engineer
GE 2455

Enclosures: Plate 1- Geotechnical Map
Appendix A - Exploratory Logs
Appendix B - Laboratory Testing
Appendix C - Analyses

REFERENCES

Publications and Reports

CDMG, "Seismic Hazard Zone Report for the Los Alamitos 7.5-Minute Quadrangles, Los Angeles and Orange Counties, California," Seismic Hazard Zone Report 019, 1998.

Saxton, K.E., W.J. Rawls, J.S. Romberger, and R.I. Papendick. 1986. Estimating generalized soil-water characteristics from texture. Soil Sci. Soc. Am. J. 50(4):1031-103

EXPLANATION

(Locations Approximate)

- Exploratory Boring

ALBUS-KEEFE & ASSOCIATES, INC.
GEOTECHNICAL CONSULTANTS

GEOTECHNICAL MAP

Job No.: 2853.00	Date: 5/13/2020	Plate: 1

APPENDIX A

EXPLORATORY LOGS

EXPLORATION LOG

Project:		Location:
Address:		Elevation:
Job Number:	Client:	Date:
Drill Method:	Driving Weight:	Logged By:

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
		EXPLANATION							
		Solid lines separate geologic units and/or material types.							
		Dashed lines indicate unknown depth of geologic unit change or material type change.							
5		**Solid black rectangle** in Core column represents California Split Spoon sampler (2.5in ID, 3in OD).							
		Double triangle in core column represents SPT sampler.							
10		**Vertical Lines** in core column represents Shelby sampler.							
		Solid black rectangle in Bulk column respresents large bag sample.							
		Other Laboratory Tests:							
15		Max = Maximum Dry Density/Optimum Moisture Content							
		EI = Expansion Index							
		SO4 = Soluble Sulfate Content							
		DSR = Direct Shear, Remolded							
		DS = Direct Shear, Undisturbed							
		SA = Sieve Analysis (1" through #200 sieve)							
		Hydro = Particle Size Analysis (SA with Hydrometer)							
20		200 = Percent Passing #200 Sieve							
		Consol = Consolidation							
		SE = Sand Equivalent							
		Rval = R-Value							
		ATT = Atterberg Limits							

EXPLORATION LOG

Project: Orchard View Gardens		Location: B-1
Address: 8300 Valley View St, Buena Park, CA 90620		Elevation: 51
Job Number: 2853.00	Client: National Community Renaissance	Date: 11/23/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
		ALLUVIUM (Qal) Silty Sand (SM): Grayish brown, slightly moist, medium dense							Max EI SO4 DS pH Resist Ch
5		@ 5 ft, Light gray		20			3.8	94.9	
		Sand (SP): Light gray, moist to very moist, loose, fine to medium grained sand		11			25.3	93.9	
10		@ 10 ft, Grayish brown, wet, medium dense, medium to coarse grained sand, sample disturbance	▽	17					
		Sandy Clay (CL): Medium grayish brown, very moist, stiff, fine grained sand, trace clay							
15				8			34		200 ATT
		Sand (SP): Light grayish brown, wet, medium dense, fine to medium grained sand, mica present							
20				16					200
		Clay (CL): Gray, very moist, stiff, some fine grained sand							

Albus-Keefe & Associates, Inc.

Plate A-1

EXPLORATION LOG

Project: Orchard View Gardens		Location: B-1
Address: 8300 Valley View St, Buena Park, CA 90620		Elevation: 51
Job Number: 2853.00	Client: National Community Renaissance	Date: 11/23/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
				8	▼		35.9		200 ATT
30		@ 30 ft, moist to very moist, few fine grained sand		8	▼		36.8		ATT
35		@ 35 ft, mica present		10	▼		26.6		
40		@ 40 ft, very moist, very stiff, fine grained sand		10	▼		23		ATT
45		Sand (SP): Light grayish brown, wet, very dense, medium to coarse grained sand		39	▼				

EXPLORATION LOG

Project: Orchard View Gardens		Location: B-1
Address: 8300 Valley View St, Buena Park, CA 90620		Elevation: 51
Job Number: 2853.00	Client: National Community Renaissance	Date: 11/23/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP

Depth (feet)	Lith-ology	Material Description	Water	Samples			Laboratory Tests		
				Blows Per Foot	Core	Bulk	Moisture Content (%)	Dry Density (pcf)	Other Lab Tests
		@ 50 ft, increased fines		53					
		End of boring at 51.5 feet. Groundwater encountered at 10 feet. Backfilled with soil cuttings.							

EXPLORATION LOG

Project: Orchard View Gardens		Location: B-2
Address: 8300 Valley View St, Buena Park, CA 90620		Elevation: 53
Job Number: 2853.00	Client: National Community Renaissance	Date: 11/23/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
		ALLUVIUM (Qal) Silty Sand (SM): light grayish brown, slightly moist, loose, fine grained sand, mica present		13	■		1.1	96.4	
		Sand (SP): Light gray, moist, medium dense, fine to coarse grained sand, mica present, trace fine gravel		17	■		3.3	94.5	Consol
5		@ 6 ft, very moist		18	■		11.8	88.6	
10		@ 10 ft, wet, loose, medium to coarse grained sand	▽	12	■		19.5	104.1	
15		@ 15 ft, medium dense		7	■		25.1		
		Clay (ML): Medium grayish brown, very moist, stiff, some fine to medium grained sand							
		Sand (SP): Gray, wet, medium dense, medium to coarse grained sand							

EXPLORATION LOG

Project: Orchard View Gardens		Location: B-2
Address: 8300 Valley View St, Buena Park, CA 90620		Elevation: 53
Job Number: 2853.00	Client: National Community Renaissance	Date: 11/23/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
				14					
		End of boring @ 21.5 feet. Groundwater encountered at 10 feet. Backfilled with soil cuttings.							

EXPLORATION LOG

Project: Orchard View Gardens		Location: B-3
Address: 8300 Valley View St, Buena Park, CA 90620		Elevation: 53
Job Number: 2853.00	Client: National Community Renaissance	Date: 11/23/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
		ALLUVIUM (Qal) Silty Sand (SM): Brown, slightly moist, loose, fine grained sand		14	■		6.1	101.3	
		Sand (SP): Light gray, slightly moist, medium dense, fine to medium grained sand		17	■		1.9	95.9	
5		@ 6 ft, moist to very moist		19	■		5.7	92.5	Consol
10		@ 10 ft, Brown, wet, increased fines	▽	23	■		25.7	96.1	
15		@ 15 ft, loose		5	⧗		23.1		
		Clay (CL): Brown, moist, medium stiff, iron oxidation			⧗		19.2		
		Sand (SP): Light grayish brown, wet, medium dense, medium grained sand							

EXPLORATION LOG

Project: Orchard View Gardens		Location: B-3
Address: 8300 Valley View St, Buena Park, CA 90620		Elevation: 53
Job Number: 2853.00	Client: National Community Renaissance	Date: 11/23/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP

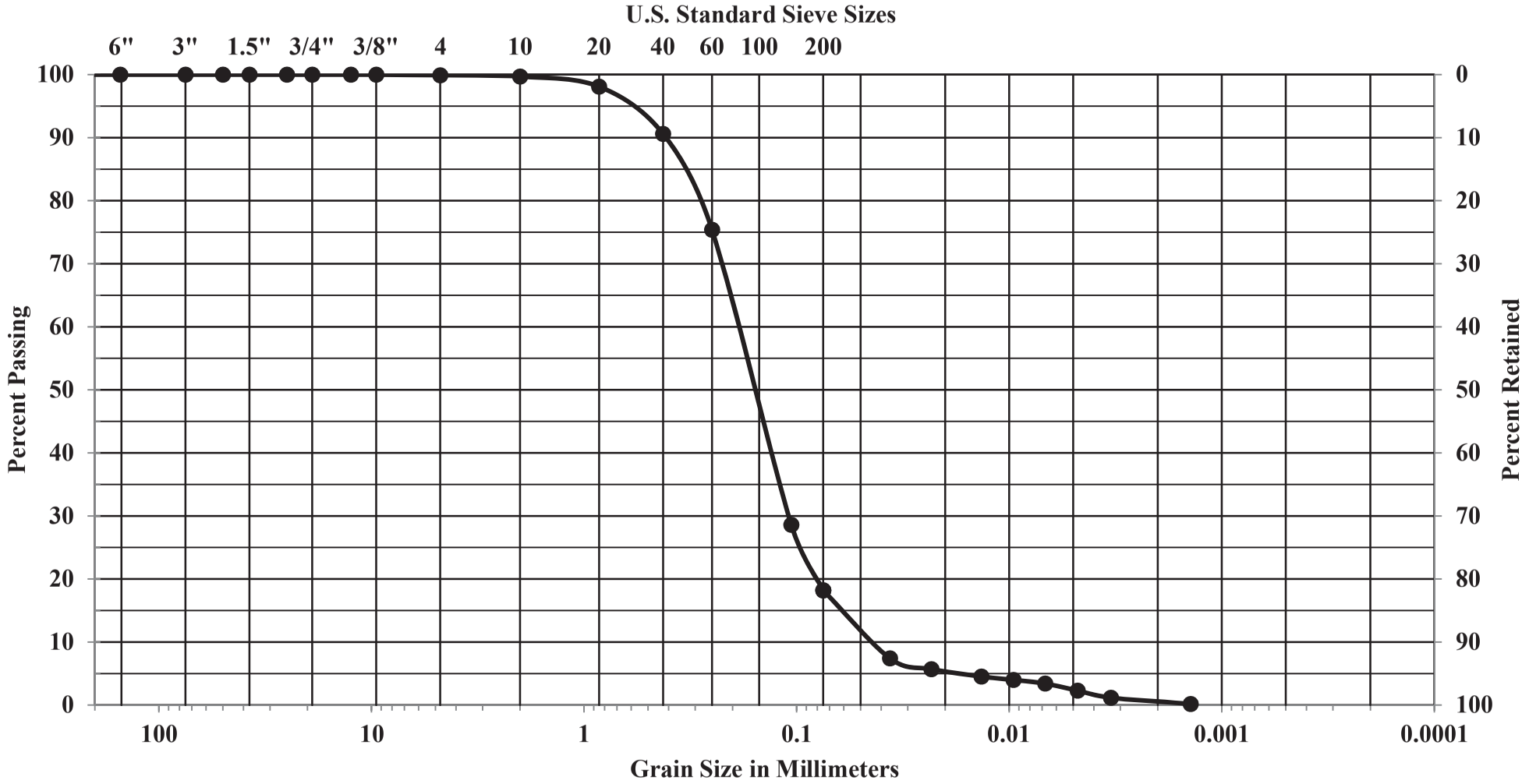
Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
				20			20.9		
		End of boring at 21.5 feet. Groundwater encountered at 10 feet. Backfilled with soil cuttings.							

APPENDIX B

LABORATORY TESTING

GRAIN SIZE DISTRIBUTION

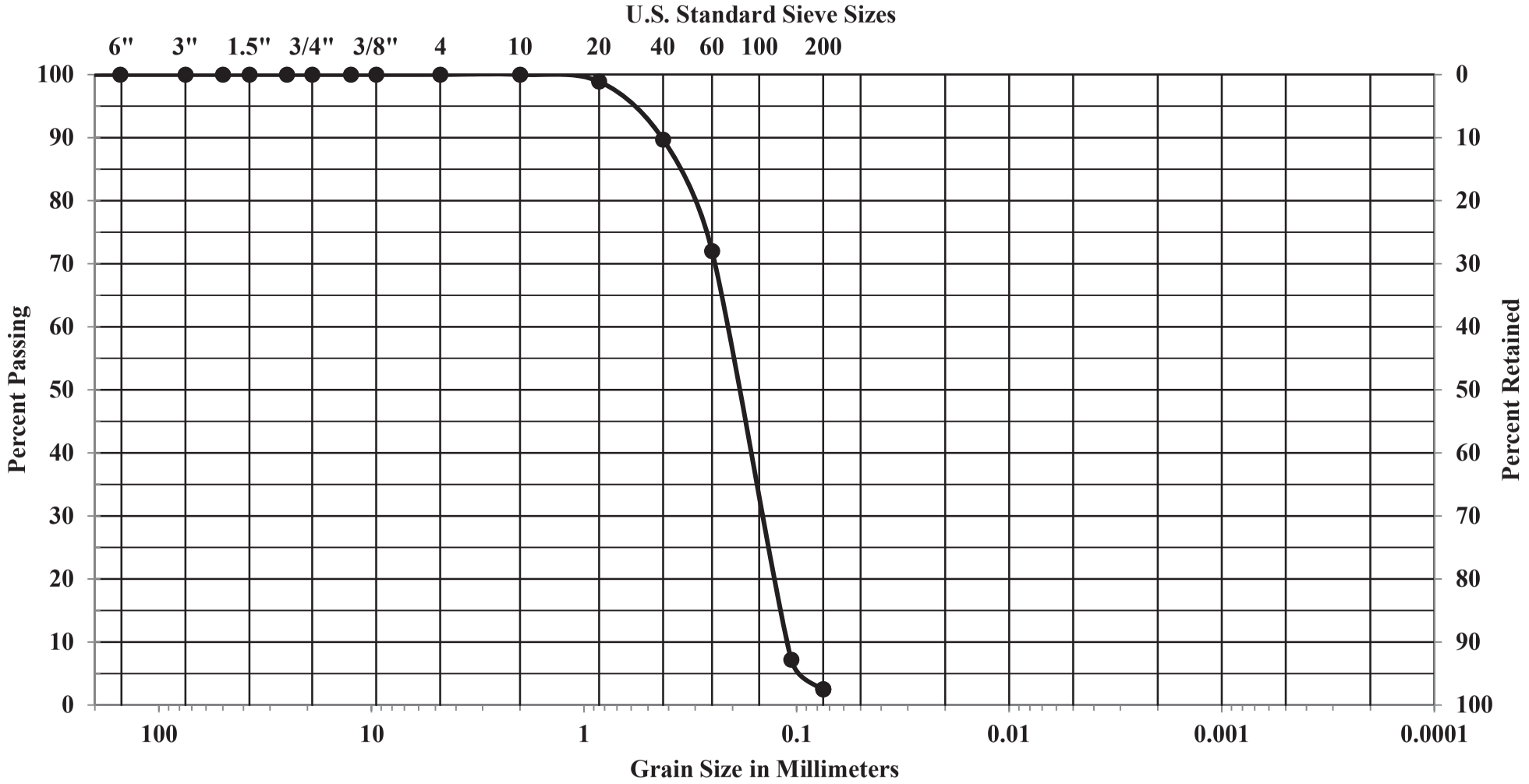
COBBLES	GRAVEL		SAND			SILT AND CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	



Job Number	Location	Depth	Description
2853.00	B-2	2	Silty Sand (SM)

GRAIN SIZE DISTRIBUTION

COBBLES	GRAVEL		SAND			SILT AND CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

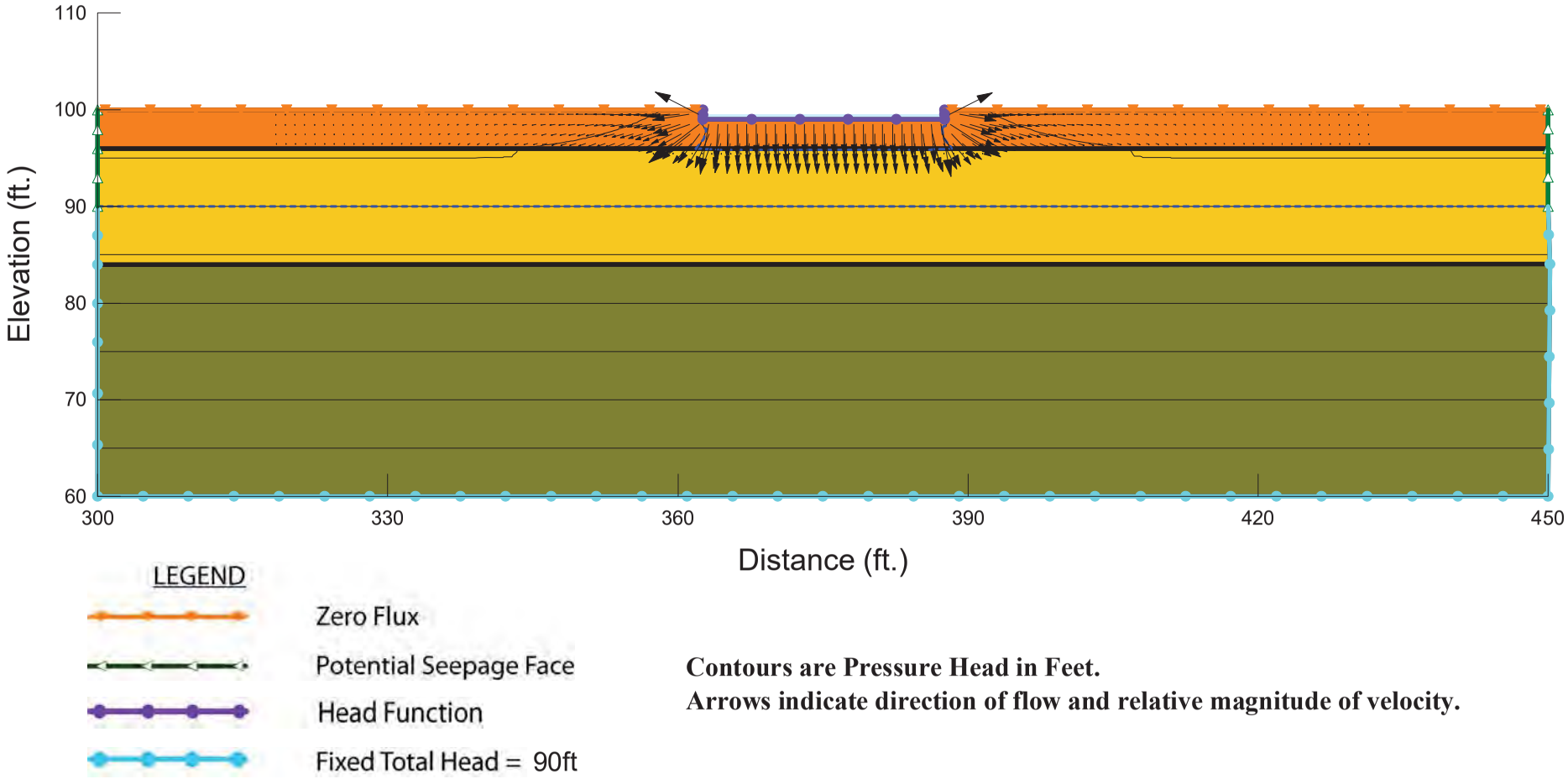


Job Number	Location	Depth	Description
2853.00	B-2	6	Sand (SP)

APPENDIX C

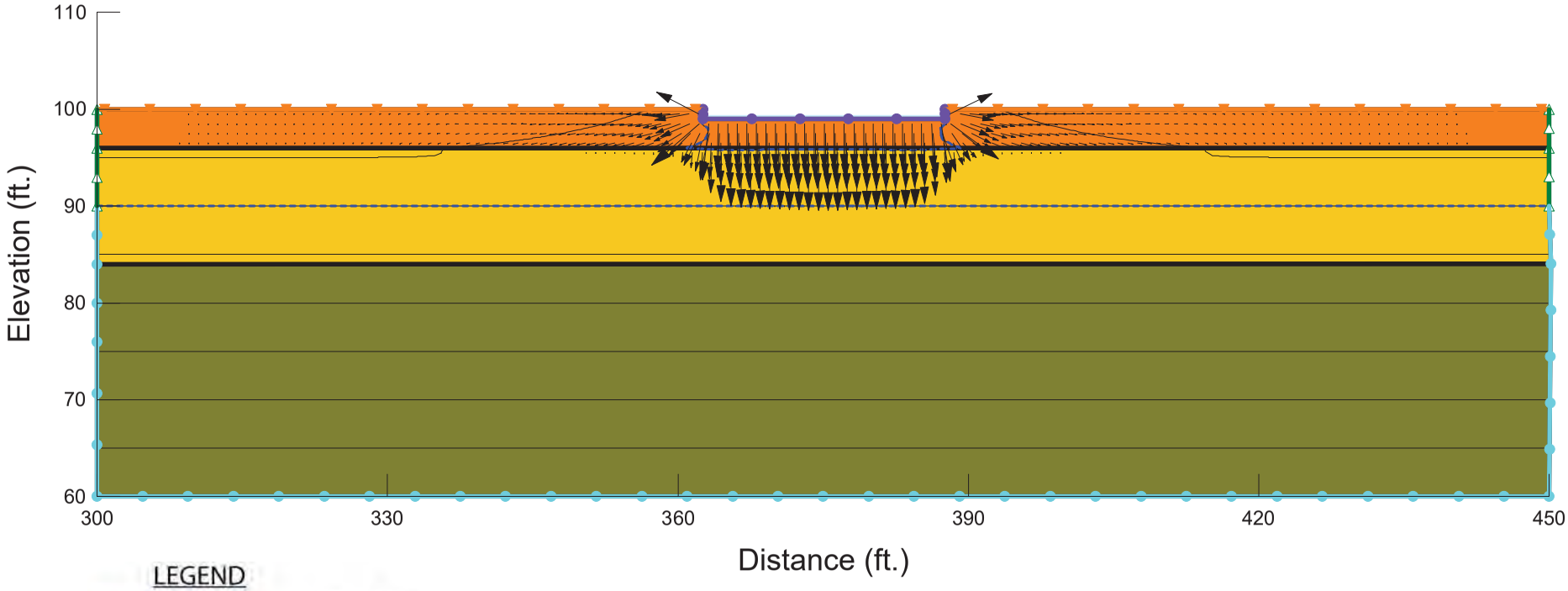
ANALYSES

FLOW ANALYSIS OF BASIN: MODEL CONFIGURATION



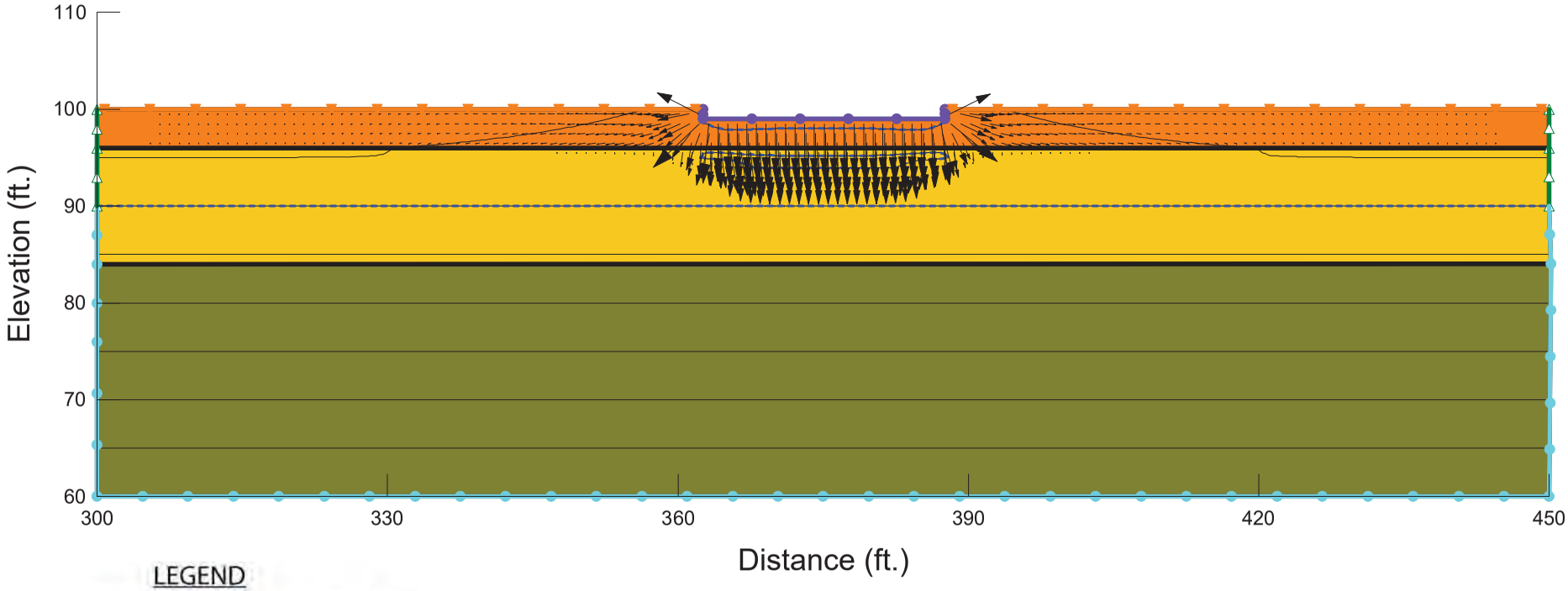
Contours are Pressure Head in Feet.
Arrows indicate direction of flow and relative magnitude of velocity.

FLOW ANALYSIS OF BASIN: MODEL CONFIGURATION
@ 1.1 hrs



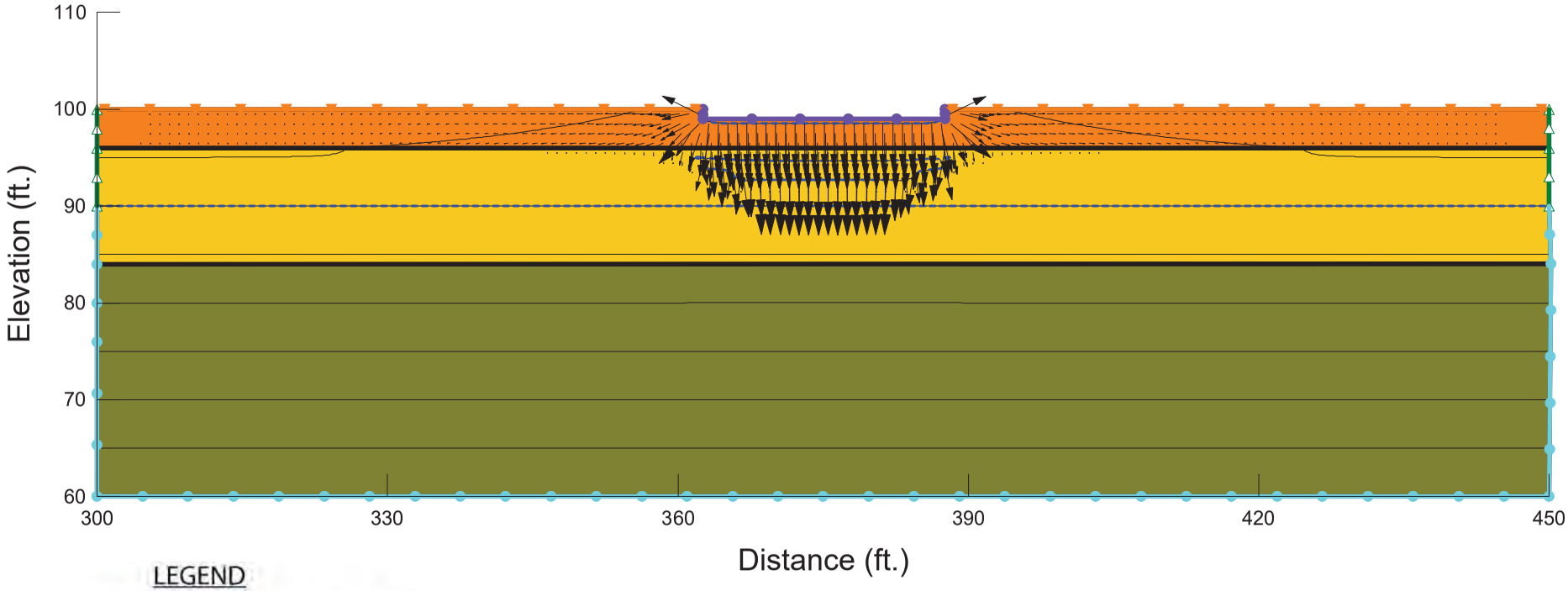
Contours are Pressure Head in Feet.
Arrows indicate direction of flow and relative magnitude of velocity.

FLOW ANALYSIS OF BASIN: MODEL CONFIGURATION
@ 1.7 hrs



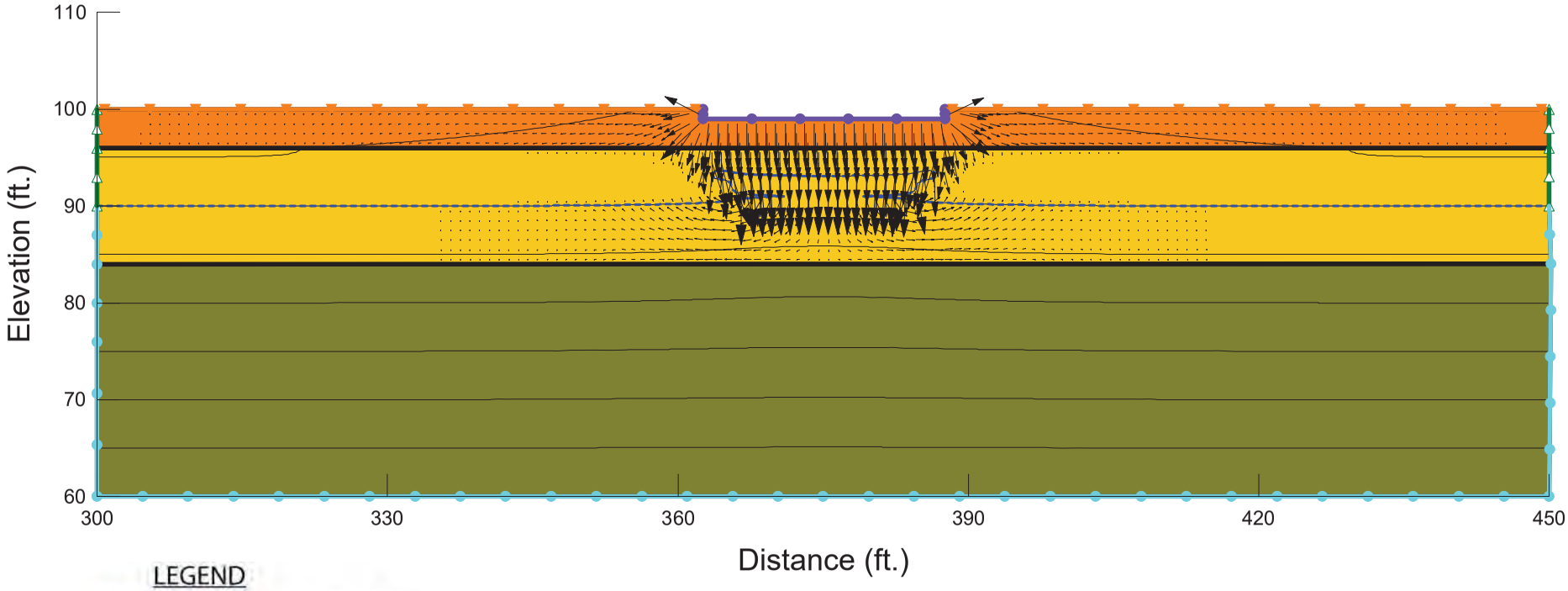
Contours are Pressure Head in Feet.
Arrows indicate direction of flow and relative magnitude of velocity.

FLOW ANALYSIS OF BASIN: MODEL CONFIGURATION
@ 2.3 hrs



Contours are Pressure Head in Feet.
Arrows indicate direction of flow and relative magnitude of velocity.

FLOW ANALYSIS OF BASIN: MODEL CONFIGURATION
@ 2.8 hrs



Contours are Pressure Head in Feet.
Arrows indicate direction of flow and relative magnitude of velocity.

ALBUS-KEEFE & ASSOCIATES, INC.
GEOTECHNICAL CONSULTANTS

January 20, 2019
J.N.: 2853.00

Ms. Sarah Walker
National Community Renaissance
432 2 Piedmont Drive
San Diego, CA 92107

Subject: **Preliminary Geotechnical Investigation, Proposed Senior Housing Development, 8300 Valley View Street, Buena Park, California.**

Dear Ms. Walker,

Pursuant to your request, ***Albus-Keefe & Associates, Inc***. is pleased to present to you our preliminary geotechnical investigation report for the subject development. This report presents the results of our field investigation, laboratory testing, engineering analyses, as well as our preliminary geotechnical recommendations for design and construction of the subject development.

We appreciate this opportunity to be of service to you. If you have any questions regarding the contents of this report, please do not hesitate to call this office.

Sincerely,

ALBUS-KEEFE & ASSOCIATES, INC.

Paul Kim
Associate Engineer

TABLE OF CONTENTS

TABLE OF CONTENTS

FIGURES AND PLATES

APPENDICES

1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

The purposes of our preliminary geotechnical investigation were to evaluate geotechnical conditions within the project area and to provide conclusions and recommendations relevant to the design and construction of the proposed improvements at the subject site. The scope of this investigation included the following:

- Review of the referenced conceptual site plan
- Review of published geologic and seismic data for the site and surrounding area
- Review of historical aerial photographs
- Exploratory drilling and soil sampling
- Laboratory testing of selected soil samples
- Engineering analyses of data obtained from our review, exploration, and laboratory testing
- Evaluation of site seismicity, liquefaction, and settlement potential
- Preparation of this report

1.2 SITE LOCATION AND DESCRIPTION

The site is located at 8300 Valley View, within the city of Buena Park, California. The property is bordered by Valley View Street to the west, single-family homes and a church to the north, single-family homes to the east/southeast and a church to the south. The location of the site and its relationship to the surrounding areas is shown on Figure 1, Site Location Map.

The site is incorporated into an irregular-shaped property containing approximately 3.2 acres of land currently being used as a church. The existing improvements within the site include a one-story structure located at the central portion of the site, a Church structure located along the south portion of the site and a single-story shed building along the north portion of the site. Other improvements include an asphalt-paved driveway and parking lot, concrete sidewalk, playground, garden, and various underground utility lines. Masonry walls are also located along the north and east property lines.

Topographically, the area of the proposed medical building is relatively flat with elevations ranging from approximately 51 feet above mean sea level (MSL) to approximately 54 feet above MSL. Drainage within the developed portion of the site is generally directed as sheet flow to the west into Valley View Street. Vegetation on site primarily consists of scattered small to medium-sized trees, small-shrubs, and grass.

N

SITE LOCATION MAP
National Community Renaissance
Proposed Senior Housing Development
8300 Valley View Street
Buena Park, California

NOT TO SCALE

FIGURE 1

1.3 PROPOSED DEVELOPMENT

Based on the architectural site plans by rrm design group dated on August 8, 2019, the proposed site development will consist of two- to three-story multi-family buildings along the north portion of the existing church site. The existing church facility to the south and existing single-story structure along the central portion of the site are to remain as part of the development. A new driveway with entryway is proposed just to the south of the planned buildings, in addition to parking stalls, perimeter site walls, and underground utilities.

No grading or structural plans were available in preparing of this report. However, we anticipate that minor rough grading of the site will be required to achieve future surface configuration. We expect the proposed residential dwellings will be wood-framed structures with concrete slabs on grade yielding relatively light foundation loads.

2.0 INVESTIGATION

2.1 RESEARCH

We have reviewed the referenced geologic publications and maps (see references). Data from these sources were utilized to develop some of the findings and conclusions presented herein.

We have also reviewed available historical aerial photographs. The aerial photos indicate that as early as 1952, the site was part of a larger site that was utilized for agricultural purposes. A single-family home with associated separate single-story structures were present within the north central portion of the site. It should be noted that the existing single-story structure along the north portion of the site was present at that time. By 1963, the agricultural development was abandoned. The existing church facility was constructed. The adjacent residences were constructed during this time also. In 1972, the site was graded in preparation for the asphalt-paved parking lot. Additionally, the single-story structure along the central portion of the site was constructed. In 1994, the existing asphalt paving is present. The site has remained unchanged since then.

2.2 SUBSURFACE EXPLORATION

Subsurface exploration for this investigation was conducted on November 12, 2019, and consisted of the drilling of three (3) soil borings to depths ranging from approximately 21.5 to 51.5 feet below the existing ground surface (bgs). The borings were drilled using a truck-mounted, continuous flight, hollow-stem-auger drill rig. A representative of Albus-Keefe & Associates, Inc. logged the exploratory borings. Visual and tactile identifications were made of the materials encountered, and their descriptions are presented in the Exploration Logs in Appendix A. The approximate locations of the exploratory excavations completed by this firm are shown on the enclosed Geotechnical Map, Plate 1.

Bulk, relatively undisturbed and Standard Penetration Test (SPT) samples were obtained at selected depths within the exploratory borings for subsequent laboratory testing. Relatively undisturbed samples were obtained using a 3-inch O.D., 2.5-inch I.D., California split-spoon soil sampler lined with brass rings. SPT samples were obtained from the boring using a standard, unlined SPT soil sampler. During each sampling interval, the sampler was driven 18 inches with successive drops of a 140-pound automatic hammer falling 30 inches. The number of blows required to advance the sampler

was recorded for each six inches of advancement. The total blow count for the lower 12 inches of advancement per soil sample is recorded on the exploration log. Samples were placed in sealed containers or plastic bags and transported to our laboratory for analyses. The borings were backfilled with auger cuttings upon completion of sampling.

2.3 LABORATORY TESTING

Selected samples of representative earth materials from our borings were tested in our laboratory. Tests consisted of USCS classification, in-situ moisture content and dry density, maximum dry density and optimum moisture content, consolidation/collapse, direct shear strength, Atterberg limit tests, percent passing No. 200 sieve, expansion index, soluble sulfate content, and corrosivity testing (pH, chloride, and resistivity). Descriptions of laboratory testing and the test results are presented in Appendix B and on the Exploration Logs in Appendix A.

3.0 GEOLOGIC CONDITIONS

3.1 SOIL CONDITIONS

Descriptions of the earth materials encountered during our investigation are summarized below and are presented in detail on the Exploration Logs presented in Appendix A.

Soil materials encountered at the subject site consisted of alluvial soils to the maximum depth explored, 51.5 feet below ground surface. Although not encountered, localized artificial fill materials could be present within the site.

The alluvial soils encountered are comprised of a grayish-brown to brown silty sand overlying a light gray sand that is slightly moist to moist and loose to medium dense. Deeper portions of the alluvium consist of interlayers of grayish-brown to cray clay with variable amounts of sand and grayish-brown sand. These materials were typically wet and medium dense to dense and very moist and stiff to very stiff.

3.2 GROUNDWATER

Groundwater was encountered at 10 feet below existing ground surface within all the borings during this firm's subsurface exploration. Based on a review of the referenced CDMG Special Report, the site is mapped with a historical groundwater depth of 10 feet.

3.3 FAULTING

Geologic literature and field exploration do not indicate the presence of active faulting within the site. The site does not lie within an "Earthquake Fault Zone" as defined by the State of California in the Earthquake Fault Zoning Act. Table 3.1 presents a summary of all the known seismically active faults within 10 miles of the site.

TABLE 3.1
Summary of Active Faults

Name	Distance (miles)	Slip Rate (mm/yr.)	Preferred Dip (degrees)	Slip Sense	Rupture Top (km)	Fault Length (km)
Puente Hills (Coyote Hills)	3.08	0.7	26	thrust	2.8	17
Puente Hills (Santa Fe Springs)	5.72	0.7	29	thrust	2.8	11
Newport Inglewood Connected alt 2	7.26	1.3	90	strike slip	0	208
Newport-Inglewood, alt 1	7.31	1	88	strike slip	0	65
Newport Inglewood Connected alt 1	7.31	1.3	89	strike slip	0	208
Elsinore;W+GI+T+J+CM	9.05	n/a	84	strike slip	0	241
Elsinore;W+GI	9.05	n/a	81	strike slip	0	83
Elsinore;W+GI+T	9.05	n/a	84	strike slip	0	124
Elsinore;W+GI+T+J	9.05	n/a	84	strike slip	0	199
Elsinore;W	9.05	2.5	75	strike slip	0	46

4.0 ANALYSES

4.1 SEISMICITY AND SEISMIC DESIGN PARAMETERS

2019 CBC requires seismic parameters in accordance with ASCE 7-16. Unless noted otherwise, all section numbers cited in the following refer to the sections in ASCE 7-16.

The site is underlain by soil strata that are susceptible to liquefaction. As such, per item 1 in Section 20.3.1 (ASCE7-16), the project site should be designated Site Class F. However, the proposed developments are anticipated to have fundamental period smaller than 0.5 seconds, and according to the "Exception" in referenced item, above, site class can be designated per Section 20.3 (ASCE7-16). Using weighted average SPT blow count N > 15 (across the top 100 ft; with assumed values used for depths greater than the deepest boring log) in Table 20.3-1, Site Class D is assigned.

We used USGS seismic design maps web tool developed by SEAOC and OSHPD to obtain the basic mapped acceleration parameters, including short periods (S_S) and 1-second period (S_1) MCE_R Spectral Response Accelerations. Section 11.4.8 requires site-specific ground hazard analysis for structures on Site Class E with S_S greater than or equal to 1.0 or Site Class D or E with S_1 greater than or equal to 0.2. Based on the mapped values of S_S and S_1 the project site falls within this category, requiring site specific hazard analysis in accordance with Section 21.2.

According to Section 21.2.3 (Supplement 1), the site-specific Risk Targeted Maximum Considered Earthquake (MCE_R) spectral response acceleration at any period is the lesser of the probabilistic and the deterministic response accelerations, subject to the exception specified in the same section. The probabilistic response spectrum was developed using USGS Risk Targeted Ground Motion (RTGM) calculator, which implements Method 2 as described on Section 21.2.1.2. The spectral acceleration and annual frequency of exceedance required by the RTGM calculator were extracted from hazard curves produced by USGS Unified Hazard Tool for the project site.

In accordance with Section 21.2.2 (Supplement 1), the deterministic spectral response acceleration at each period was calculated as the 84th percentile, 5% damped, response acceleration, using the NGA-West2 GMPE Worksheet. For this, the information from at least three causative faults with the greatest contribution per deaggregation analysis were used, and the larger acceleration spectrum among these was selected as the deterministic response spectrum. The deterministic spectrum was adjusted per requirements in Section 21.2.2 (Supplement 1) where applicable. Both probabilistic and deterministic spectra were subjected to the maximum direction scale factors specified in Section 21.2 to produce the maximum acceleration spectra.

Design response spectrum was developed by subjecting the site-specific MCE_R response spectrum to the provisions outlined in Section 21.3. This process included comparison with 80% code-based design spectrum determined in accordance with Section 11.4.6. The short period and long period site coefficient (F_a and F_v, respectively) were determined per Section 21.3 in conjunctions with Table 11.4-1. Site specific design acceleration parameters (S_{MS}, S_{M1}, S_{DS}, and S_{D1}) were calculated according to Section 21.4.

Per Section 11.2 (definitions on Page 79 of ASCE7-16) for evaluation of liquefaction, lateral spreading, seismic settlements, and other soil-related issues, Maximum Considered Earthquake Geometric Mean (MCE_G) peak ground acceleration PGA_M shall be used. The site-specific PGA_M is calculated per Section 21.5.3, as the lesser of the probabilistic PGA_M (Section 21.5.1) and deterministic PGA_M (Section 21.5.2), but no less than 80% site modified peak ground acceleration, PGA_M, obtained from SEAOC/OSHPD web-based seismic hazard tool.

4.2 STATIC SETTLEMENT

Analyses were performed to evaluate potential for static settlement of the alluvial material present within the site. Our analyses were based on the results of consolidation tests performed on selected samples from our borings as well as the recorded blow counts during the exploration. Results of our testing indicate the site materials have low compressibility. Analyses were performed assuming relatively light foundations loads typical for 3-story residences.

4.3 LIQUEFACTION

We have performed engineering analyses to evaluate the potential for liquefaction at the site if the design earthquake event were to occur. Our analyses followed the guidelines presented in the CGS Special Publication 117A (2008) and the procedures by Youd, et al. (2001).

Our liquefaction analyses were based on soil profile from boring B-1. High groundwater was assumed at a depth of 10 feet below the existing ground surface based on our discussion in Section 3.2. Fine-grained soils that do not have a Plasticity Index (PI) less than 12 and field moisture contents greater than 85% of liquid limit (LL) or soils with corrected blow counts greater than 30 per foot were assumed to be not susceptible to liquefaction. Based on our analyses, the layers located between 10 and 25 feet below existing ground surface are susceptible to liquefaction during a seismic event.

Analyses were performed to evaluate the potential magnitude of settlement resulting from seismic shaking of saturated soils with a liquefaction safety factor less than 1.3. The estimated settlement caused by soil liquefaction was evaluated for the site based on the empirical procedures developed by Tokimatsu and Seed (1987) and Ishihara and Yoshimine (1992), which compare the volumetric strain in the soil with the induced cyclic stress ratios/liquefaction safety factors. Taking the average of these three methods, we estimate liquefaction-induced settlements to be 3.4 inches. Liquefaction induced-settlement analyses are provided in Appendix C on Plates C-1 and C-2.

Seismic-induced settlement can occur both above and below the groundwater table during a strong seismic event. We have estimated the dry seismic settlement using the Tokumatsu and Seed (1987) Method. Based on our analyses, dry seismic settlement is approximately 0.8 inch. The results of this analysis are provided in Appendix D on Plate C-3.

The potential of lateral spreading is not likely to occur within the site as the general gradient in the vicinity of the site is less than 0.3 degrees as discussed in SP117A. Based on Google Earth, the gradient of Valley View Street and San Rafael Drive is less than 0.2 degrees.

5.0 CONCLUSIONS

5.1 FEASIBILITY OF PROPOSED DEVELOPMENT

From a geotechnical point of view, the proposed site development is considered feasible provided the recommendations presented in this report are incorporated into the design and construction of the project. Furthermore, it is also our opinion that the proposed development will not adversely impact the stability of adjoining properties if the recommendations presented in this report are incorporated into site development. Key issues that could have significant fiscal impacts on the geotechnical aspects of the proposed site development are discussed in the following sections of this report.

5.2 GEOLOGIC HAZARDS

5.2.1 Ground Rupture

No active faults are known to project through the site nor does the site lie within the bounds of an "Earthquake Fault Zone" as defined by the State of California in the Earthquake Fault Zoning Act. As such, the potential for ground rupture due to fault displacement beneath the site is considered very low.

5.2.2 Ground Shaking

The site is located in a seismically active area that has historically been affected by moderate to occasionally high levels of ground motion. The site lies in relatively close proximity to several seismically active faults; therefore, during the life of the proposed development, the property will probably experience moderate to occasionally high ground shaking from these fault zones, as well as some background shaking from other seismically active areas of the southern California region. Design of proposed structures in accordance with the current CBC is anticipated to adequately mitigate concerns with ground shaking.

5.2.3 Liquefaction

Our analyses indicate liquefaction could lead to a total seismic settlement (saturated and dry) of the ground surface of up to approximately 4.2 inches due to seismic consolidation during liquefaction. The differential settlement due to seismic settlement would likely be on the order of ½ of the total seismic settlement or approximately 2.1 inches over 30 feet. Lateral spreading is not a significant risk at the site.

Based on the State of California Special Publication 117A, hazards from liquefaction should be mitigated to the extent required to reduce seismic risk to "acceptable levels". The acceptable level of risk means, "that level that provides reasonable protection of the public safety" [California Code of Regulations Title 14, Section 3721 (a)]. The use of well-reinforced foundations, such as post-tensioned slabs, grade beams with structural slabs, or mat foundations have been proven to adequately provide basal support for similar structures during comparable liquefaction events.

5.3 STATIC SETTLEMENT

Provided rough grading is performed in accordance with the recommendations provided herein and based on the anticipated relatively light foundation loads, total and differential static settlements are anticipated to be less than approximately 1 inch and ½-inch over 30 feet, respectively, for the proposed structures. The estimated magnitudes of static settlements are considered within tolerable limits for the proposed structures.

5.4 EARTHWORK AND MATERIAL CHARACTERISTICS

All artificial fill is considered unsuitable to support proposed site development. This condition can be mitigated by the removal and re-compaction of the unsuitable soils. Although not encountered during our exploration, artificial fill may exist and likely throughout the site, particularly in the vicinity of the existing structures.

Removal and recompaction of the existing surficial materials are anticipated to result in minor shrinkage. Design of site grading will require consideration of this loss when evaluating earthwork balance issues.

Subsurface soils are anticipated to be relatively easy to excavate with conventional heavy earthmoving equipment. Most of the near-surface alluvial soils are generally below optimum moisture content.

This will require the addition of water prior to reuse as compacted fills depending on weather conditions at the time of grading.

Temporary construction slopes will be required to complete removal of unsuitable soils and for construction of underground utilities. Such excavations will require laybacks where they are surcharged or where they exceed a certain height. Specific recommendations to provide for stable temporary cuts are provided later in this report. The use of appropriate shoring or lay backs will be essential to protect workers and prevent delays due to caving during trenching or temporary backcut activities. These materials will also be very prone to erosion during periods of rain until they are covered by pavement or mature landscaping. Appropriate protection during the rainy season will be required to avoid costly repairs due to erosion.

The demolition of the existing structures and improvements will result is the generation of asphalt and concrete debris. Portions of concrete debris and asphalt can likely be reduced in size (4" minus) and incorporated within fill soils during earthwork operations.

Buried debris, onsite disposal systems, clarifiers and other underground improvements may be present beneath the site. If encountered during future rough grading, these improvements will require proper abandonment or removal.

Off-site improvements exist near the property lines. The presence of the existing improvements may limit removals of unsuitable materials adjacent the property lines. Special grading techniques, such as slot cutting, underpinning, or other acceptable criteria may be required when grading adjacent the property lines. Construction of perimeter site walls may require deepened footings where removals are restricted by property boundaries.

5.5 SHRINKAGE AND SUBSIDENCE

Volumetric changes in earth quantities will occur when excavated onsite soil materials are replaced as properly compacted fill. We estimate that the existing native alluvial soils will shrink less than 10 to 15 percent. Subsidence due to reprocessing of removal bottoms is anticipated to be approximately 0.1 feet. The estimates of shrinkage and subsidence are intended as an aid for project engineers in determining earthwork quantities. However, these estimates should be used with some caution since they are not absolute values. Contingencies should be made for balancing earthwork quantities based on actual shrinkage and subsidence that occurs during the grading process.

5.6 SOIL EXPANSION

Based on our laboratory test results and USCS visual manual classification, the near-surface soils within the site are generally anticipated to possess a **Very Low** expansion potential. Additional testing for soil expansion will be required subsequent to rough grading and prior to construction of foundations and other concrete flatwork to confirm these conditions.

6.0 RECOMMENDATIONS

6.1 EARTHWORK

6.1.1 General Earthwork and Grading Specifications

All earthwork and grading should be performed in accordance with all applicable requirements of the grading codes of the City of Buena Park, California and CAL OSHA, in addition to recommendations presented herein.

6.1.2 Pre-Grade Meeting and Geotechnical Observation

Prior to commencement of earthwork operations and foundation installation, we recommend a meeting be held between the City Inspector, general contractor, civil engineer, and geotechnical consultant to discuss proposed earthwork and logistics.

We also recommend that a geotechnical consultant be retained to provide soil engineering and engineering geologic services during site development. This is to observe compliance with the design specifications and recommendations, and to allow design changes in the event that subsurface conditions differ from those anticipated. If conditions are encountered during construction that appears to be different than those indicated in this report, the project geotechnical consultant should be notified immediately. Design and construction revisions may be required.

6.1.3 Site Clearing

All existing site improvements, including asphaltic concrete paving, structural foundations and underground utilities, should be removed from the areas to be developed prior to any grading activities. Existing underground utility lines within the project area that will be protected in place and that fall within a 1 to 1 (H:V) plane projected down from the edges of footings may be subject to surcharge loads. Under such conditions, this office should be made aware of these conditions for evaluation of potential surcharging. Supplemental recommendations may be required to protect such improvements in place.

In general, seepage pits that are open should be cleared of any fluids and then filled with 2-sack cement slurry up to within 5 feet of proposed grades. Any brick lining that remains in the upper 5 feet should be removed and the remainder of the pit filled with engineered fill in accordance with Section 6.1.5. Seepage pits that are presently backfilled with soil should be removed to a depth of 10 feet below pad grade and be capped with 2-sack cement slurry. The slurry cap should be at least 5 feet thick and should extend at least 12 inches outside the perimeter of the seepage pit. The remaining 5 feet should be filled with engineered fill in accordance with Section 6.1.5.

The project geotechnical consultant should be notified at the appropriate times to provide observation services during clearing operations to verify compliance with the above recommendations. Voids created by clearing and excavation should be left open for observation by the geotechnical consultant. Should any unusual soil conditions or subsurface structures be encountered during site clearing or grading that are not described or anticipated herein, these conditions should be brought to the immediate attention of the project geotechnical consultant for corrective recommendations as needed.

Temporary construction equipment (office trailers, power poles, etc.) should be positioned to allow adequate room for clearing and recommended ground preparation to be performed for proposed structures, pavements, and hardscapes.

6.1.4 Site Preparation (Removals and Overexcavations)

To provide a uniform bearing material for the proposed development, the upper 3 to 4 feet of earth materials should be removed and recompacted. Any additional artificial fill soils should also be removed from proposed building pads and site improvements, and replaced as engineered compacted fill. Removals should be deepened so that a minimum 2 feet of engineered fill is provided below the proposed foundations.

Within the limits of pavement and free-standing/retaining walls, the existing surficial soils should be removed to a minimum to 12 inches deep or to a depth of 12 inches below subgrade or footing, whichever is deeper. The actual depth of removal should be determined by the geotechnical consultant during grading.

Removals should extend laterally beyond the limits of the proposed structures a distance equal to the depth of removal (i.e. 1:1 projection) but not less than 5 feet. Removals within roadways and walls may be limited to the edge of foundations or pavement.

All removal excavations should be evaluated by the geotechnical consultant during grading to confirm the exposed conditions are as anticipated and to provide supplemental recommendations if required.

Where removals are limited by existing structures, protected trees or property lines, special considerations may be required in the construction of affected improvements. Under such conditions, specific recommendations should be provided by this firm based on review of site-specific development plans.

Following removals/overexcavation, the exposed grade should first be scarified to a depth of 6 inches, brought to at least 100 percent of the optimum moisture content, and then compacted to at least 90 percent of the laboratory standard (ASTM D 1557).

6.1.5 Fill Placement

Materials excavated from the site may be reused as fill provided, they are free of deleterious materials and particles greater than 6 inches in maximum dimension (oversized materials). Asphaltic and concrete debris generated during site demolition or encountered within any existing fill can be incorporated within new fill soils during earthwork operations provided they are reduced to no more than 6 inches in maximum dimension. Such materials should be mixed thoroughly with fill soils to prevent nesting. All fill should be placed in lifts no greater than 8 inches in loose thickness, moisture conditioned to at least 100 percent of the optimum moisture content, then compacted in place to at least 90 percent of the laboratory standard. Each lift should be treated in a similar manner. Subsequent lifts should not be placed until the project geotechnical consultant has approved the preceding lift.

6.1.6 Import Materials

If import materials are required to achieve the proposed finish grades, the proposed import soils should have an Expansion Index (EI, ASTM D 4829) less than 21 and possess negligible soluble sulfate concentrations. Import sources should be indicated to the geotechnical consultant prior to hauling the materials to the site so that appropriate testing and evaluation of the fill materials can be performed in advance.

6.1.7 Temporary Excavations

Temporary construction slopes or trench excavations in site materials may be cut vertically up to a height of 3 feet provided that no surcharging of the excavations is present. Temporary slopes over 3 feet in height should be laid back to 1:1 (H:V) or flatter and evaluated by the geotechnical consultant. Sandy materials were observed at deeper depths that are friable and prone to caving. Excavations within these sandy materials may have to be limited gradients of 1½ :1 (H:V) with no allowances of a vertical height.

Excavations should not be left open for prolonged periods of time. The project geotechnical consultant should observe all temporary cuts to confirm anticipated conditions and to provide alternate recommendations if conditions dictate. All excavations should conform to the requirements of CAL OSHA.

Where temporary excavations cannot accommodate a 1:1 layback or where surcharging occurs, shoring, slot cutting, underpinning, or other methods should be used. Specific recommendations for other options if considered should be provided by the geotechnical consultant based on review of the final design plans.

6.2 SEISMICITY

The site is underlain by soil strata that are susceptible to liquefaction. As such, per item 1 in Section 20.3.1 (ASCE7-16), the project site should be designated as Site Class F. However, the proposed developments are anticipated to have fundamental period smaller than 0.5 seconds, and according to the "Exception" in the referenced item, above, site class can be designated per Section 20.3 (ASCE7-16). Using the weighted average of the recorded SPT blow counts, N is greater than 15 (across the top 100 ft; with assumed values used for depths greater than the deepest boring log), therefore, Site Class D is assigned (Table 20.3-1).

Following ASCE7-16, Section 21.5.3, we have estimated site-specific maximum considered earthquake geometric mean (MCE_G) peak ground acceleration PGA_G = 0.660g. This value should be used for all geotechnical calculations. The mean event associated with a probability of exceedance equal to 2% over 50 years has a moment magnitude of 6.77 and the mean distance to the seismic source is 7.7 miles.

6.3 SEISMIC DESIGN PARAMETERS

For design of the project in accordance with Chapter 16 of the 2019 CBC, the table below presents the seismic design factors.

TABLE 6.1
CBC 2019 SEISMIC DESIGN PARAMETERS

Parameter	Value
Site Class	D
Mapped MCE_R Spectral Response Acceleration, short periods, S_S	1.486
Mapped MCE_R Spectral Response Acceleration, at 1-sec. period, S_1	0.526
Site Coefficient, Fa	1.0
Site Coefficient, Fv	**2.5**
Adjusted MCE_R Spectral Response Acceleration, short periods, S_{MS}	**1.562**
Adjusted MCE_R Spectral Response Acceleration, at 1-sec. period, S_{M1}	**1.124**
Design Spectral Response Acceleration, short periods, S_{DS}	**1.042**
Design Spectral Response Acceleration, at 1-sec. period, S_{D1}	**0.749**
Long-Period Transition Period, T_L (sec.)	8
Seismic Design Category for Risk Categories I-IV	**D**

MCE_R = Risk-Targeted Maximum Considered Earthquake
Boldface values: Site-specific values per ASCE7-16; other values are mapped values.

6.4 PRELIMINARY FOUNDATION DESIGN

6.4.1 General

The following recommendations are provided for preliminary design purposes. These recommendations have been based on the site materials exposed during our investigation, our understanding of the proposed development, and the assumption that the recommendations presented herein are incorporated into the design and construction of the project. Final recommendations should be provided by the project geotechnical consultant following review of final foundation plans as well as observation and testing of site materials during grading. Depending upon the design plans and actual site conditions, the recommendations provided herein may require modification.

6.4.2 Soil Expansion

The recommendations presented herein are based on soils with a **Very Low** expansion potential (EI≤20). Following site grading, additional testing of site soils should be performed by the project geotechnical consultant to confirm the basis of these recommendations. If site soils with higher expansion potentials are encountered or imported to the site, the recommendations contained herein may require modification.

6.4.3 Settlement

Under normal static conditions, the foundation system should be designed to tolerate a total settlement of 1 inch and a differential settlement of 1/2-inch over 30 feet. The foundations should also be designed for total and differential seismic settlement of 4.2 inches and 2.1 inches over 30 feet, respectively. The PTI design parameters presented below incorporate the estimated seismic settlements.

6.4.4 Allowable Bearing Value

Provided foundations are bearing into engineered fill, a bearing value of 2,100 pounds per square foot (psf) may be used for continuous and pad footings a minimum width of 12 inches and founded at a minimum depth of 12 inches below the lowest adjacent grade. This value may be increased by 250 psf and 700 psf for each additional foot in width and depth, respectively, up to a maximum value of 3,500 psf. Recommended allowable bearing values include both dead and live loads, and may be increased by one-third for wind and seismic forces.

6.4.5 Lateral Resistance

Provided site grading is performed and that foundations are founded in engineered fill, a passive earth pressure of 230 pounds per square foot per foot of depth (psf/ft) up to a maximum value of 1,200 pounds per square foot (psf) may be used to determine lateral bearing for footings. This value may be increased by one-third when designing for wind and seismic forces. A coefficient of friction of 0.33 times the dead load forces may also be used between concrete and the supporting soils to determine lateral sliding resistance. No increase in the coefficient of friction should be used when designing for wind and seismic forces.

The above values are based on footings placed directly against compacted fill or competent native soils. In the case where footing sides are formed, all backfill against the footings should be compacted to at least 90 percent of the laboratory standard.

6.4.6 Post-Tensioned Slab/Mat on grade

Perimeter edge beams for the post-tensioned slabs should have a minimum effective width of 12 inches and be founded at a minimum depth of 12 inches below the lowest adjacent final ground surface. Interior beams may be founded at a minimum depth of 12 inches below the tops of the finish floor slabs. Where a post-tensioned mat is utilized, the exterior edge of the mat should be embedded at least 8 inches below the lowest adjacent grade. The thickness of the floor slab/mat should be determined by the project structural engineer; however, we recommend a minimum slab thickness of 4.5 inches.

Concrete floor slabs in areas to receive carpet, tile, or other moisture sensitive coverings should be underlain with a minimum of 10-mil moisture vapor retarder conforming to ASTM E 1745, Class A. The membrane should be properly lapped, sealed, and underlain within a layer of sand at least 4 inches thick. One inch of sand may be placed over the membrane to aid in the curing of the concrete. The sand should have a SE no less than 30. This vapor retarder system is anticipated to be suitable for most flooring finishes that can accommodate some vapor emissions. However, this system may emit more than 4 pounds of water per 1000 sq. ft. and therefore, may not be suitable for all flooring finishes. Additional steps should be taken if such vapor emission levels are too high for anticipated flooring finishes. Where a mat is utilized, the sand may be reduced to 1 inch provided the mat is at least 6 inches thick.

Prior to placing concrete, subgrade soils below slab-on-grade/mat areas should be thoroughly moistened to provide moisture contents that are at least 100 percent of the optimum moisture content to a depth of 12 inches.

Based on the guidelines provided in the "Design of Post-Tensioned Slabs-on-Ground" 3rd Edition by Post-Tensioning Institute, the em and ym values are summarized below:

TABLE 6.2
PTI Design Parameters

Parameter	Value
Edge Lift Moisture Variation Distance, e_m	4.2 feet
Edge Lift, y_m	1.442 inches
Center Lift Moisture Variation Distance, e_m	8.1 feet
Center Lift, y_m	0.939 inches

6.4.7 Foundation Observations

Foundation excavation should be observed by the project geotechnical consultant to verify that they have been excavated into competent bearing soils and to the minimum embedment recommended above. These observations should be performed prior to placement of forms or reinforcement. The excavations should be trimmed neat, level and square. Loose, sloughed or moisture-softened materials and debris should be removed prior to placing concrete.

6.5 RETAINING AND SCREENING WALLS

6.5.1 General

The following preliminary design and construction recommendations are provided for general retaining and screen walls supported by engineered compacted fill or competent native soils. Final wall designs specific to the site development should be provided for review once completed. The structural engineer and architect should provide appropriate recommendations for sealing at all joints and applying moisture-proofing material on the back of the walls.

6.5.2 Allowable Bearing Value and Lateral Resistance

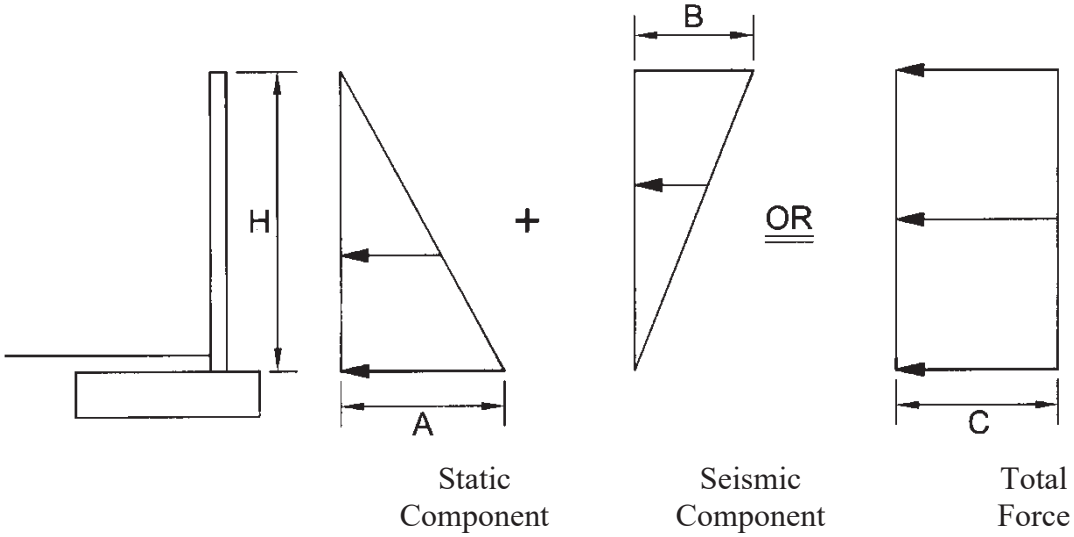
Design of retaining and screen walls may utilize the bearing and lateral resistance values provided in Section 6.4.4 and 6.4.5. Lateral resistance for walls along property lines, where lateral removals are restricted, should be reduced by 50%.

6.5.3 Active Earth Pressures

Static and seismic active earth pressures for level backfill and 2:1 (H:V) backfill conditions are provided in Table 6.3. Based on the 2019 CBC, walls that retain less than 6 feet need not be designed for seismic earth pressures. Seismic earth pressures provided herein are based on the method provided by Seed & Whitman (1970) using a peak ground acceleration (PGA) of 0.41 g, for 10% probability of exceedance in 50 years. The values provided in Table 6.3 are based on drained backfill conditions and do not consider hydrostatic pressure. Furthermore, retaining walls should be designed to support adjacent surcharge loads imposed by other nearby footings or traffic loads in addition to the earth pressure.

TABLE 6.3

SEISMIC EARTH PRESSURES
Pressure Diagram



Pressure Values
Walls Up To 10 Feet High

Value	Backfill Condition	
	Level	2H:1V Slope
A	40H	78H
B	12H	12H
C	26H	45H

Note:
H is in feet and resulting pressure is in psf. Design may utilize either the sum of the static component and the seismic component force diagrams or the total force diagram above. SEAOSC has suggested using a load factor of 1.7 for the static component and 1.0 for the seismic component. The actual load factors should be determined by the structural engineer.

6.5.4 Drainage and Moisture-Proofing

Retaining walls should be constructed with a perforated pipe and gravel subdrain to prevent entrapment of water in the backfill. The perforated pipe should consist of 4-inch-diameter, ABS SDR-35 or PVC Schedule 40 with the perforations laid down. The pipe should be embedded in ¾- to 1½-inch open-graded gravel wrapped in filter fabric. The gravel should be at least one foot wide and extend at least one foot up the wall above the footing and drainage outlet. Drainage gravel and piping should not be placed below outlets and weepholes. Filter fabric should consist of Mirafi 140N, or equal. Outlet pipes should be directed to positive drainage devices.

The use of weepholes may be considered in locations where aesthetic issues from potential nuisance water are not a concern. Weepholes should be 2 inches in diameter and provided at least every 6 feet on center. Where weepholes are used, perforated pipe may be omitted from the gravel subdrain.

Retaining walls supporting backfill should also be coated with a moisture-proofing compound or covered with such material to inhibit infiltration of moisture through the walls. Moisture-proofing material should cover any portion of the back of wall that will be in contact with soil and should lap over and onto the top of footing. A drainage panel should be provided between the soil backfill and water proofing. The panel should extend from the top of the backdrain gravel up to within 12 inches of finish grade. The top of footing should be finished smooth with a trowel to inhibit the infiltration of water through the wall. The project structural engineer should provide specific recommendations for moisture-proofing, water stops, and joint details.

6.5.5 Footing Reinforcement and Wall Jointing

All continuous footings should be reinforced with a minimum of four No. 4 bars, two top and two bottom. Walls should be provided with cold joints spaced no more than 40 feet apart. Wall finishes and capping materials should not extend across the cold joint. The structural engineer may require different reinforcement or jointing and should dictate if greater than the recommendations provided herein. Where recommended removals are limited due to space restrictions, greater reinforcement and closer jointing may be recommended. Specific recommendations should be provided by the geotechnical consultant during grading based on as-built conditions exposed in the field.

6.5.6 Footing Observations

Footing excavations should be observed by the project geotechnical consultant to verify that they have been excavated into competent bearing soils and to the minimum embedment recommended herein. These observations should be performed prior to placement of forms or reinforcement. The excavations should be trimmed neat, level and square. Loose, sloughed or moisture-softened materials and debris should be removed prior to placing concrete.

6.5.7 Retaining Wall Backfill

Onsite soils may generally be used for backfill of retaining walls. The project geotechnical consultant should approve all backfill used for retaining walls. Wall backfill should be moisture-conditioned to slightly over the optimum moisture content; placed in lifts no greater than 12 inches in thickness, and then mechanically compacted with appropriate equipment to at least 90 percent of the laboratory standard. Hand-operated compaction equipment should be used to compact the backfill placed immediately adjacent the wall to avoid damage to the wall. Flooding or jetting of backfill material is not recommended.

6.6 EXTERIOR FLATWORK

Exterior flatwork should be a minimum 4 inches thick. Cold joints or saw cuts should be provided at least every 7 feet in each direction. Flatwork having a minimum dimension more than 7 feet should be reinforced with No. 3 bars spaced 18 inches center to center each way or 6-inch by 6-inch, W4 by W4 welded wire mesh. Special jointing detail should be provided in areas of block-outs, notches, or other irregularities to avoid cracking at points of high stress. Subgrade soils below flatwork should be

thoroughly moistened to at least 100 percent of the optimum moisture content to a depth of 12 inches. Moistening should be accomplished by lightly spraying the area over a period of a few days just prior to pouring concrete. The geotechnical consultant should observe and verify the density and moisture content of subgrade soils prior to pouring concrete to ensure that the required compaction and pre-moistening recommendations have been met.

Drainage from flatwork areas should be directed to local area drains and/or other appropriate collection devices designed to carry runoff water to the street or other approved drainage structures. The concrete flatwork should also be sloped at a minimum gradient of 1 percent away from building foundations and retaining walls.

6.7 CONCRETE MIX DESIGN

Laboratory testing of onsite soil indicates **negligible** soluble sulfate content. Concrete designed to follow the procedures provided in ACI 318, Section 4.3, Table 4.3.1 for **negligible** sulfate exposure are anticipated to be adequate for mitigation of sulfate attack on concrete. Upon completion of rough grading, an evaluation of as-graded conditions and further laboratory testing will be required for the site to confirm or modify the conclusions provided in this section.

6.8 CORROSION

Results of preliminary testing of soils for pH, chloride, and minimum resistivity indicate the site is potentially **Moderately Corrosive** to metals that are in contact or close proximity to onsite soils. As such, specific recommendations should be obtained from a corrosion specialist if construction will include metals that will be near or in direct contact with site soils.

6.9 PRELIMINARY PAVEMENT DESIGN

6.9.1 Preliminary Pavement Structural Sections

Based on the soil conditions present at the site and estimated traffic index, preliminary pavement structural sections are recommended in the table below. An assumed "R-value" of 30 utilized for the near-surface soil in this preliminary pavement design. The sections provided in Table 6.4 are for planning purposes only and should be re-evaluated subsequent to site grading. Final pavement sections should be based on actual R-value testing of in-place soils and analysis of anticipated traffic.

6.9.2 Subgrade Preparation

Prior to placement of pavement elements, subgrade soils should be moisture-conditioned to at least 100 percent of the optimum moisture content then compacted to at least 90 percent of the laboratory determined maximum dry density. Areas observed to pump or yield under vehicle traffic should be removed and replaced with firm and unyielding compacted soil or aggregate base materials.

TABLE 6.4
PRELIMINARY PAVEMENT STRUCTURAL SECTIONS

Location	Traffic Index	AC (inches)	PCC (inches)	Concrete Pavers (mm)	AB (inches)
Entry and Main Driveway	5.0	3.0 4.0 -- --	-- -- 6.0 --	-- -- -- 80.0	6.0 4.0 -- 8.0
Parking Stalls	--	3.0	--	--	4.0

AC - Asphaltic Concrete AB - Aggregate Base

6.9.3 Aggregate Base

Aggregate base should be moisture conditioned to slightly over the optimum moisture content, placed in lifts no greater than 6 inches in thickness, then compacted to at least 95 percent of the laboratory standard (ASTM D 1557). Aggregate base materials should be Class 2 Aggregate Base conforming to Section 26-1 of the latest edition of the Caltrans Standard Specifications, Crushed Aggregate Base conforming to Section 200-2.2 of the latest edition of the Standard Specifications for Public Works Construction (Greenbook) or Crushed Miscellaneous Base conforming to Section 200-2.4 of the Greenbook.

6.9.4 Asphaltic Concrete

Paving asphalt should be PG 64-10. Asphaltic concrete materials should conform to Section 203-6 of the Greenbook and construction should conform to Section 302 of the Greenbook.

6.9.5 Concrete Pavers

Concrete pavers should conform to the requirements of ASTM C 936. Construction of the pavers, including bedding sand, should follow manufacturer's specifications. Typical thickness of bedding sand is about 1 inch. The gradation of bedding sand should meet the requirement in Table 6.5.

Construction of edge restraints should also follow manufacturer's specifications. As a minimum, restraints should be provided along the perimeter of concrete pavers and where there is a change in the paving materials.

TABLE 6.5
Gradation of Bedding for Pavers

Sieve Size	Percent Passing
⅜"	100
No. 4	95 - 100
No. 8	80 - 100
No. 16	50 - 85
No. 30	25 - 60
No. 50	5 - 30
No. 100	0 - 10
No. 200	0 - 1

6.9.6 Portland Cement Concrete

Portland cement concrete used to construct concrete paving should conform to Section 201 of the Greenbook and should have a minimum compressive strength of 3,250 pounds per square inch (psi) at 28 days. Reinforcement and jointing of concrete pavement sections should be designed according to the minimum recommendations provided by the Portland Cement Association (PCA). For rigid pavement, transverse and longitudinal contraction joints should be provided at spacing no greater than 15 feet. Score joints may be constructed by saw cutting to a depth of ¼ of the slab thickness. Expansion/cold joints may be used in lieu of score joints. Such joints should be properly sealed and provided with a key or dowels. Where traffic will traverse over edges of concrete paving (not including joints), the edges should be thickened by 20% of the design thickness toward the edge over a horizontal distance of 5 feet.

Trash pickup areas should be provided with a concrete slab where the bins will be picked up and extend at least 3 feet past the front wheel landing areas. The slab should be at least 8 inches thick and be reinforced with No. 4 bars spaced at 24 inches on centers, both ways. The slabs should be provided transverse and longitudinal joints spacing as specified above. Dowels or a keyway should be provided at all cold joints.

6.10 POST GRADING CONSIDERATIONS

6.10.1 Site Drainage and Irrigation

The ground immediately adjacent to foundations should be provided with positive drainage away from the structures in accordance with 2019 CBC, Section 1804.4. No rain or excess water should be allowed to pond against structures such as walls, foundations, flatwork, etc.

Excessive irrigation water can be detrimental to the performance of the proposed site development. Water applied in excess of the needs of vegetation will tend to percolate into the ground. Such percolation can lead to nuisance seepage and shallow perched groundwater. Seepage can form on slope faces, on the faces of retaining walls, in streets, or other low-lying areas. These conditions could lead to adverse effects such as the formation of stagnant water that breeds insects, distress or damage of trees, surface erosion, slope instability, discoloration and salt buildup on wall faces, and premature

failure of pavement. Excessive watering can also lead to elevated vapor emissions within buildings that can damage flooring finishes or lead to mold growth inside the home.

Key factors that can help mitigate the potential for adverse effects of overwatering include the judicious use of water for irrigation, use of irrigation systems that are appropriate for the type of vegetation and geometric configuration of the planted area, the use of soil amendments to enhance moisture retention, use of low-water demand vegetation, regular use of appropriate fertilizers, and seasonal adjustments of irrigation systems to match the water requirements of vegetation. Specific recommendations should be provided by a landscape architect or other knowledgeable professional.

6.10.2 Utility Trenches

Trench excavations should be constructed in accordance with the recommendations contained in Section 0 of this report. Trench excavations must also conform to the requirements of Cal/OSHA.

Trench backfill materials and compaction criteria should conform to the requirements of the local municipalities. As a minimum, utility trench backfill should be compacted to at least 90 percent of the laboratory standard. Materials placed within the pipe zone (6 inches below and 12 inches above the pipe) should consist of particles no greater than ¾ inches and have a SE of at least 30. The materials within the pipe zone should be moisture-conditioned and compacted by hand-operated compaction equipment. Above the pipe zone (>1 foot above pipe), the backfill may consist of general fill materials. Trench backfill should be moisture-conditioned to slightly over the optimum moisture content, placed in lifts no greater than 12 inches in thickness, and then mechanically compacted with appropriate equipment to at least 90 percent of the laboratory standard. For trenches with sloped walls, backfill material should be placed in lifts no greater than 8 inches in loose thickness, and then compacted by rolling with a sheepsfoot roller or similar equipment. The project geotechnical consultant should perform density testing along with probing to verify that adequate compaction has been achieved.

Within shallow trenches (less than 18 inches deep) where pipes may be damaged by heavy compaction equipment, imported clean sand having a SE of 30 or greater may be utilized. The sand should be placed in the trench, thoroughly watered, and then compacted with a vibratory compactor. For utility trenches located below a 1:1 (H:V) plane projecting downward from the outside edge of the adjacent footing base or crossing footing trenches, concrete or slurry should be used as trench backfill.

6.11 PLAN REVIEW AND CONSTRUCTION SERVICES

We recommend ***Albus-Keefe & Associates, Inc.*** be engaged to review any future development plans, including foundation plans prior to construction. This is to verify that the assumptions of this report are valid and that the preliminary conclusions and recommendations contained in this report have been properly interpreted and are incorporated into the project plans and specifications. If we are not provided the opportunity to review these documents, we take no responsibility for misinterpretation of our preliminary conclusions and recommendations.

We recommend that a geotechnical consultant be retained to provide soil engineering services during construction of the project. These services are to observe compliance with the design, specifications or recommendations, and to allow design changes in the event that subsurface conditions differ from those anticipated prior to the start of construction.

If the project plans change significantly from the assumed development described herein, the project geotechnical consultant should review our preliminary design recommendations and their applicability to the revised construction. If conditions are encountered during construction that appear to be different than those indicated in this report or subsequent design reports, the project geotechnical consultant should be notified immediately. Design and construction revisions may be required.

7.0 LIMITATIONS

This report is based on the proposed development and geotechnical data as described herein. The materials encountered on the project site, described in other literature, and utilized in our laboratory testing for this investigation are believed representative of the total project area, and the conclusions and recommendations contained in this report are presented on that basis. However, soil and bedrock materials can vary in characteristics between points of exploration, both laterally and vertically, and those variations could affect the conclusions and recommendations contained herein. As such, observation and testing by a geotechnical consultant during the grading and construction phases of the project are essential to confirming the basis of this report.

This report has been prepared consistent with that level of care being provided by other professionals providing similar services at the same locale and time period. The contents of this report are professional opinions and as such, are not to be considered a guaranty or warranty. This report should be reviewed and updated after a period of one year or if the site ownership or project concept changes from that described herein.

This report has been prepared for the exclusive use of **National Community Renaissance** and their project consultants in the planning and design of the proposed development. This report has not been prepared for use by parties or projects other than those named or described herein. This report may not contain sufficient information for other parties or other purposes. This report is subject to review by the controlling governmental agency.

Respectfully submitted,

ALBUS-KEEFE & ASSOCIATES, INC

Mark Principe
Staff Engineer

Paul Hyun Jin Kim
Associate Engineer
G.E. 3106

8.0 REFERENCES

Publications

California Geologic Survey, Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California, 2008.

CDMG, "Seismic Hazard Zone Report for the Los Alamitos 7.5-Minute Quadrangles, Los Angeles and Orange Counties, California," Seismic Hazard Zone Report 019, 1998.

Ishihara, K., and Yoshimine, M., "Evaluation of Settlements in Sand Deposits Following Liquefaction During Earthquakes", Soils and Foundations, Vol. 32, No. 1, 1992.

NCEER, "Proceedings of the NCEER Workshop on Evaluation of Liquefaction Resistance of Soils", Technical Report NCEER-97-0022, December 31, 1997.

Seed, HB, and Whitman, RV. "Design of Earth Retaining Structures for Dynamic Loads," ASCE Specialty Conference, Lateral Stresses in the Ground and Design of Earth Retaining Structures, Cornell Univ., Ithaca, New York, 103-147, 1970.

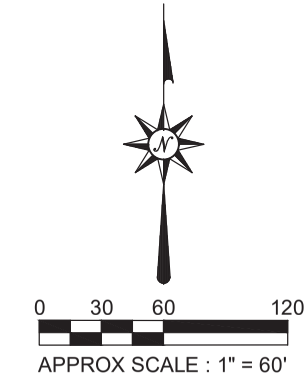
Southern California Earthquake Center (SCEC), University of Southern California, "Recommended Procedures for Implementation of DMG Special Publication 117 Guidelines for Analyzing and Mitigating Liquefaction Hazards in California", March 1999.

U.S. Geologic Survey. Unified Hazard Tool, https://earthquake.usgs.gov/hazards/interactive/

U.S. Geologic Survey. U.S. Seismic Design Maps, https://seismicmaps.org/

Tokimatsu, K. & Seed, H.B., "Evaluation of Settlement in Sands Due to Earthquake Shaking," Journal of Geotechnical Engineering, Vol. 113, No. 8, August, 1987.

Youd, T.L., Idriss, I.M., Andrus, R.D., Arango, I., Castro, G., Christian, J., Dobry, R., Finn, W.D.L., Harder, L.F., Hynes, M.E., Ishihara, K., Koester, J.P., Liao, S.S.C., Marcuson, W.F., Martin, G.R., Mitchell, J.K., Moriwaki, Y., Power, M.S., Robertson, P.K., Seed, R.B., and Stokoe, K.H., "Liquefaction Resistance of Soils: Summary Report from the 1996 NCEER and 1998 NCEER/NSF Workshops on Evaluation of Liquefaction Resistance of Soils", Journal of Geotechnical and Geoenvironmental Engineering, October, 2001.



EXPLANATION

(Locations Approximate)

- Exploratory Boring

ALBUS-KEEFE & ASSOCIATES, INC.
GEOTECHNICAL CONSULTANTS

GEOTECHNICAL MAP

Job No.: 2853.00	Date: 12/12/19	Plate: 1

APPENDIX A

EXPLORATION BORING LOGS

EXPLORATION LOG

Project:		Location:
Address:		Elevation:
Job Number:	Client:	Date:
Drill Method:	Driving Weight:	Logged By:

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
		EXPLANATION							
		Solid lines separate geologic units and/or material types.							
		Dashed lines indicate unknown depth of geologic unit change or material type change.							
5		**Solid black rectangle** in Core column represents California Split Spoon sampler (2.5in ID, 3in OD).							
		Double triangle in core column represents SPT sampler.							
10		**Vertical Lines** in core column represents Shelby sampler.							
		Solid black rectangle in Bulk column respresents large bag sample.							
		Other Laboratory Tests:							
15		Max = Maximum Dry Density/Optimum Moisture Content							
		EI = Expansion Index							
		SO4 = Soluble Sulfate Content							
		DSR = Direct Shear, Remolded							
		DS = Direct Shear, Undisturbed							
		SA = Sieve Analysis (1" through #200 sieve)							
		Hydro = Particle Size Analysis (SA with Hydrometer)							
20		200 = Percent Passing #200 Sieve							
		Consol = Consolidation							
		SE = Sand Equivalent							
		Rval = R-Value							
		ATT = Atterberg Limits							

EXPLORATION LOG

Project: Orchard View Gardens		Location: B-1
Address: 8300 Valley View St, Buena Park, CA 90620		Elevation: 51
Job Number: 2853.00	Client: National Community Renaissance	Date: 11/23/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
		ALLUVIUM (Qal) Silty Sand (SM): Grayish brown, slightly moist, medium dense							Max EI SO4 DS pH Resist Ch
5		@ 5 ft, Light gray		20			3.8	94.9	
		Sand (SP): Light gray, moist to very moist, loose, fine to medium grained sand		11			25.3	93.9	
10		@ 10 ft, Grayish brown, wet, medium dense, medium to coarse grained sand, sample disturbance	▽	17					
		Sandy Clay (CL): Medium grayish brown, very moist, stiff, fine grained sand, trace clay							
15				8			34		200 ATT
		Sand (SP): Light grayish brown, wet, medium dense, fine to medium grained sand, mica present							
20				16					200
		Clay (CL): Gray, very moist, stiff, some fine grained sand							

Albus-Keefe & Associates, Inc.

Plate A-1

EXPLORATION LOG

Project: Orchard View Gardens		Location: B-1
Address: 8300 Valley View St, Buena Park, CA 90620		Elevation: 51
Job Number: 2853.00	Client: National Community Renaissance	Date: 11/23/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
				8	▼		35.9		200 ATT
30		@ 30 ft, moist to very moist, few fine grained sand		8	▼		36.8		ATT
35		@ 35 ft, mica present		10	▼		26.6		
40		@ 40 ft, very moist, very stiff, fine grained sand		10	▼		23		ATT
45		Sand (SP): Light grayish brown, wet, very dense, medium to coarse grained sand		39	▼				

EXPLORATION LOG

Project: Orchard View Gardens		Location: B-1
Address: 8300 Valley View St, Buena Park, CA 90620		Elevation: 51
Job Number: 2853.00	Client: National Community Renaissance	Date: 11/23/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP

Depth (feet)	Lith-ology	Material Description	Water	Samples			Laboratory Tests		
				Blows Per Foot	Core	Bulk	Moisture Content (%)	Dry Density (pcf)	Other Lab Tests
		@ 50 ft, increased fines		53					
		End of boring at 51.5 feet. Groundwater encountered at 10 feet. Backfilled with soil cuttings.							

EXPLORATION LOG

Project: Orchard View Gardens		Location: B-2
Address: 8300 Valley View St, Buena Park, CA 90620		Elevation: 53
Job Number: 2853.00	Client: National Community Renaissance	Date: 11/23/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
		ALLUVIUM (Qal) Silty Sand (SM): light grayish brown, slightly moist, loose, fine grained sand, mica present		13	■		1.1	96.4	
		Sand (SP): Light gray, moist, medium dense, fine to coarse grained sand, mica present, trace fine gravel		17	■		3.3	94.5	Consol
5		@ 6 ft, very moist		18	■		11.8	88.6	
10		@ 10 ft, wet, loose, medium to coarse grained sand	▽	12	■		19.5	104.1	
15		@ 15 ft, medium dense		7	■		25.1		
		Clay (ML): Medium grayish brown, very moist, stiff, some fine to medium grained sand							
		Sand (SP): Gray, wet, medium dense, medium to coarse grained sand							

EXPLORATION LOG

Project: Orchard View Gardens		Location: B-2
Address: 8300 Valley View St, Buena Park, CA 90620		Elevation: 53
Job Number: 2853.00	Client: National Community Renaissance	Date: 11/23/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
				14					
		End of boring @ 21.5 feet. Groundwater encountered at 10 feet. Backfilled with soil cuttings.							

EXPLORATION LOG

Project: Orchard View Gardens		Location: B-3
Address: 8300 Valley View St, Buena Park, CA 90620		Elevation: 53
Job Number: 2853.00	Client: National Community Renaissance	Date: 11/23/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
		ALLUVIUM (Qal) Silty Sand (SM): Brown, slightly moist, loose, fine grained sand		14	■		6.1	101.3	
		Sand (SP): Light gray, slightly moist, medium dense, fine to medium grained sand		17	■		1.9	95.9	
5		@ 6 ft, moist to very moist		19	■		5.7	92.5	Consol
10		@ 10 ft, Brown, wet, increased fines	▽	23	■		25.7	96.1	
15		@ 15 ft, loose		5	⧗		23.1		
		Clay (CL): Brown, moist, medium stiff, iron oxidation			⧗		19.2		
		Sand (SP): Light grayish brown, wet, medium dense, medium grained sand							

EXPLORATION LOG

Project: Orchard View Gardens		Location: B-3
Address: 8300 Valley View St, Buena Park, CA 90620		Elevation: 53
Job Number: 2853.00	Client: National Community Renaissance	Date: 11/23/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
				20			20.9		
		End of boring at 21.5 feet. Groundwater encountered at 10 feet. Backfilled with soil cuttings.							

APPENDIX B

LABORATORY TEST PROGRAM

LABORATORY TESTING PROGRAM

Soil Classification

Soils encountered within the exploratory borings were initially classified in the field in general accordance with the visual-manual procedures of the Unified Soil Classification System (ASTM D2488). The samples were re-examined in the laboratory and classifications reviewed and then revised where appropriate. The assigned group symbols are presented in the Boring Logs provided in Appendix A.

In Situ Moisture and Density

Moisture content and dry density of in-place soil materials were determined in representative strata. Test data are summarized on the Boring Logs provided in Appendix A.

Maximum Dry Density and Optimum Moisture Content

Maximum dry density and optimum moisture content of onsite soils were determined for one selected sample in general accordance with Method A of ASTM D1557. Pertinent test values are given on Table B.

Consolidation

Consolidation tests were performed for selected soil samples in general conformance with ASTM D 2435. Axial loads were applied in several increments to a laterally restrained 1-inch-high sample. Loads were applied in geometric progression by doubling the previous load, and the resulting deformations were recorded at selected time intervals. The test samples were inundated at selected loads to evaluate the effects of a sudden increase in moisture content (hydro-consolidation potential). Results of the tests are graphically presented on Plates B-1 to B-2.

Direct Shear

The Coulomb shear strength parameters, angle of internal friction and cohesion, were determined for a bulk sample obtained from one our borings. The tests were performed in general conformance with Test Method ASTM D 3080. The sample was remolded to 90 percent of maximum dry density and at the optimum moisture content. Three specimens were prepared for each test, artificially saturated, and then sheared under varied loads at an appropriate constant rate of strain. Results are graphically presented on Plate B-3.

Expansion Potential

An Expansion Index test was performed on a selected sample in accordance with ASTM D 4829. The test result and expansion potential are presented on Table B.

Atterberg Limits

Atterberg Limits (Liquid Limit, Plastic Limit, and Plasticity Index) were performed in accordance with Test Method ASTM D4318. Pertinent test values are presented within Table B.

Corrosion

Select samples were tested for minimum resistivity, chloride, and pH in accordance with California Test Method 643. Results of these tests are provided in Table B.

Soluble Sulfate Content

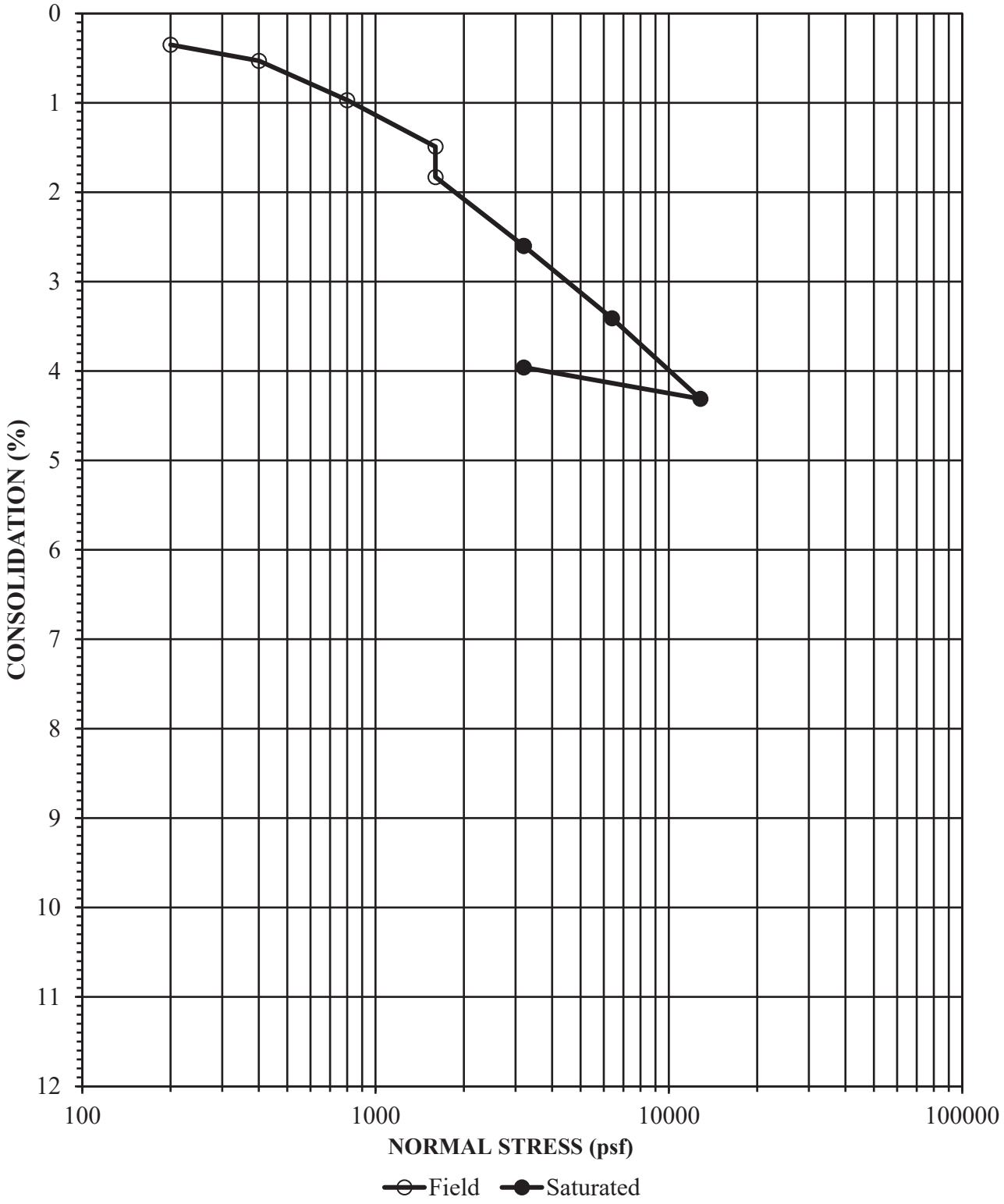
A chemical analysis was performed on a selected soil sample to determine soluble sulfate content. The test was performed in accordance with California Test Method (CTM) 417. The test result is included in Table B.

TABLE B
SUMMARY OF LABORATORY TEST RESULTS

Boring Number	Depth (feet)	Soil Type	Test Results	
B-1	0-5	Silty Sand (SM)	Maximum Dry Density (pcf): Optimum Moisture Content (%): Soluble Sulfate Content (%): Sulfate Exposure: pH: Minimum Resistivity: Chloride: Expansion Index: Expansion Potential:	118.5 11.5 0.001 Negligible 7.56 7300 Ohm-cm 10.3 ppm 0 Negligible
B-1	15	Sandy Clay (CL)	Liquid Limit: Plastic Index: Percent Passing No. 200 Sieve:	31 11 61.4 %
B-1	20	Sand (SP)	Percent Passing No. 200 Sieve:	3.7 %
B-1	25	Sandy Silt (ML)	Percent Passing No. 200 Sieve: Liquid Limit: Plastic Index:	86.7 % 36 14
B-1	30	Clay (CL)	Liquid Limit: Plastic Index:	43 18
B-1	40	Clay (CL)	Liquid Limit: Plastic Index:	33 12

Additional laboratory test results are provided on the boring logs provided in Appendix A and on the Plates that follow.

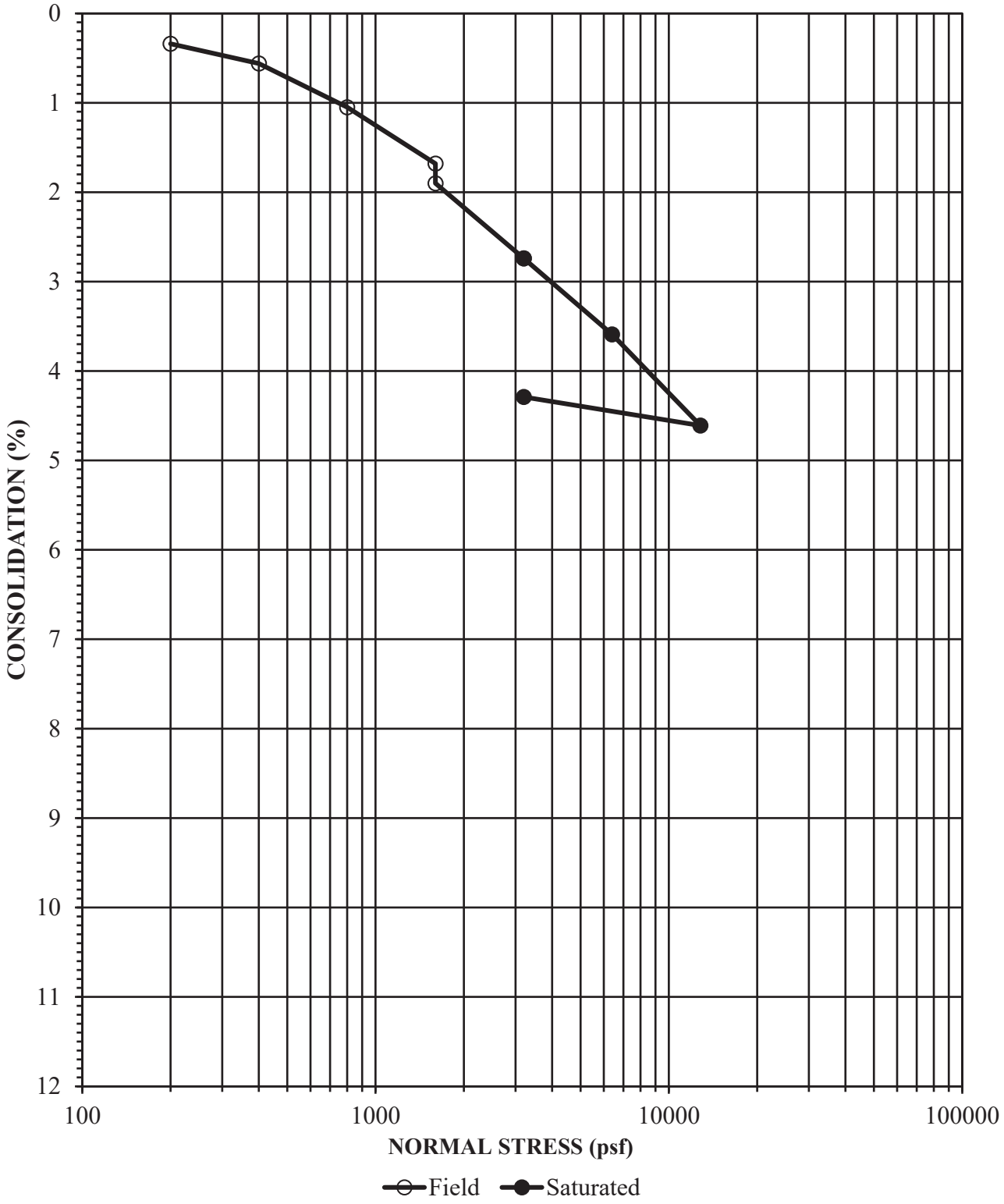
CONSOLIDATION



Job Number	Location	Depth	Description
2853.00	B-2	4	Sand (SP)

Initial Dry Density (pcf)	Initial Moisture Content (%)	Final Moisture Concent (%)
92.8	5.8	23.9

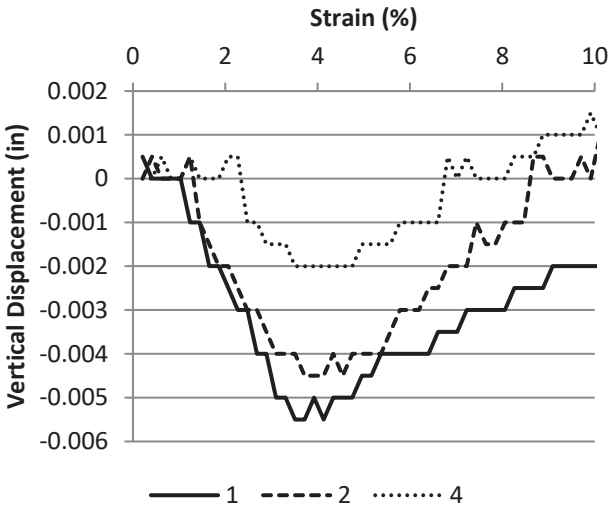
CONSOLIDATION

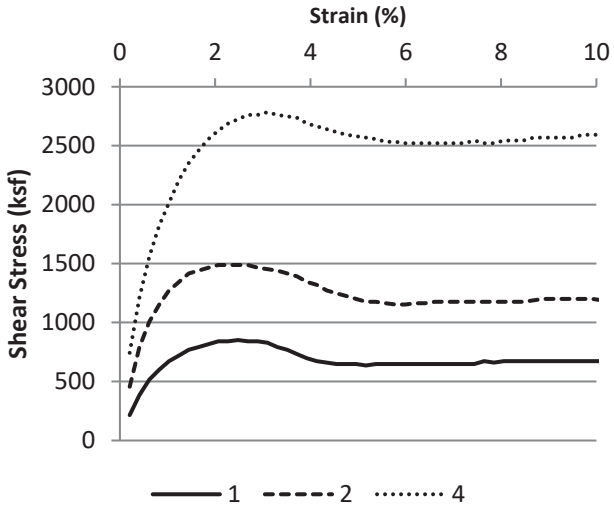


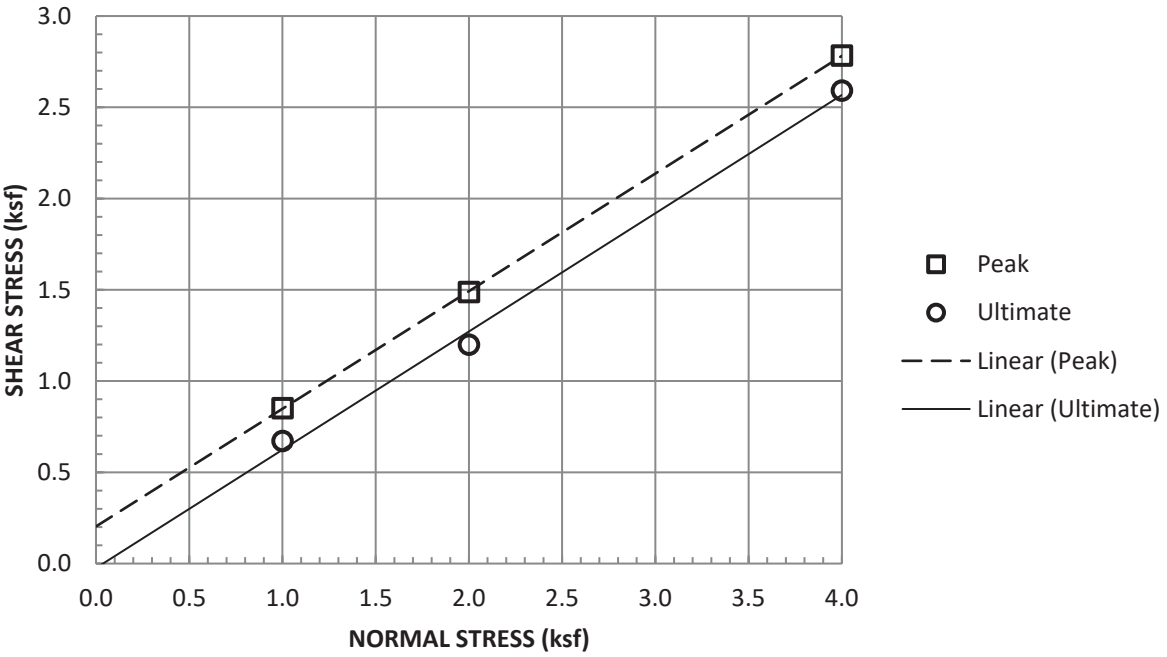
Job Number	Location	Depth	Description
2853.00	B-3	6	Sand (SP)

Initial Dry Density (pcf)	Initial Moisture Content (%)	Final Moisture Concent (%)
95.8	6	21.9

DIRECT SHEAR







Sample Type:	Remolded 90% of 118.5 @ 11.5%, Saturate		
Normal Stress (ksf)	1	2	4
Peak Shear Stress (ksf)	0.852	1.488	2.784
Peak Displacement (in)	0.006	0.005	0.002
Ultimate Shear Stress (ksf)	0.672	1.2	2.592
Ultimate Displacement (in)	0.25	0.25	0.25
Initial Dry Density (pcf)	106.7	106.7	106.7
Initial Moisture Content (%)	12	12	12
Final Moisture Content (%)	16	15.6	15.9
Strain Rate (in/min)	0.01		

Job Number	Location	Depth	Description
2853.00	B-1	0-5	Sand / Silty Sand (SP/SM)

APPENDIX C

LIQUEFACTION ANALYSIS

TABLE C-1
ANALYSIS OF LIQUEFACTION POTENTIAL
BORING: B-1 (2%PE in 50 yrs; FS=1.3)

SM

Client: NCR
J.N. 2853.00
Site: Buena Park

Hammer Type (D,S,A)	A			
Boring Diameter, ID (in)	4			
Site Acceleration (g)	0.66			
for a Magnitude (Mw) of	6.77			
and MSF of	1.35			
Depth to High GW	10	ft.	FS for Liquefaction:	1.3
Depth to GW during invest.	10	ft.	FS for Liqu. Settlement:	1.3
Hammer Efficiency	80	%	PI Threshold for Liquefaction:	12
Sublayer Thickness	1	ft.	Moisture Cnt Threshold for Liqu. (%LL)	85
Depth of Boring	50	ft.		

Notes: Underlined numbers are estimated values.
(1) Based on current groundwater conditions at the time of investigation.
(2) Based on assumed/proposed high groundwater conditions.
(3) Kα=1.0

(4) A Layer is located above historically high groundwater
B Factor of Saftey is greater than the specified value of FS=1.3
C The $(N_1)_{60\text{-}cs}$ is greater than 30 blows per foot
D PI > 12 or the in situ moisture content (M%) < 85% LL

Reference: Youd, T.L., et.al., (2001), "Liquefaction Resistance of Soils: Summary Report From The 1996 NCEER and 1998 NCEER/NSF Workshops on Evaluation of Liquefaction Resistance of Soils", ASCE Journal of Geotechnical and Geoenvironmental Engineering, Vol.127, No.10, pp.817-833, October, 2001.

Layer Label	Depth Interval (ft) Top	Depth Interval (ft) Bottom	Layer Mid-Depth (ft)	Soil Type (USCS)	Fines <#200 Sieve (%)	LL (%)	PI	M (%)	Field Nf (bls/ft)	Sample Type SPT/CA	Soil Wet Density (pcf)	Total Stress (psf)(1)	Effec. Stress (psf)(1)	C_n	C_e	C_b	C_r	C_L	$(N_1)_{60}$ (lbs/ft)	α	β	$(N_1)_{60\text{-}cs}$ (lbs/ft)	Effec. Stress (psf)(2)	R_d	CRR (M=7.5)	Kσ	CSR	FS (3)	To Liquefy Y/N?	Reason(4) not Liquifiable
																												1.30		
1	0.0	1.0	0.5	SM	30			3.8	20	CA	99	49	49	1.7	1.33	1.00	0.75	1.0	19.0	4.7	1.15	26.7	49	1.00	NA	1.00	0.42	NA	N	A
1	1.0	2.0	1.5	SM	30			3.8	20	CA	99	148	148	1.7	1.33	1.00	0.75	1.0	19.0	4.7	1.15	26.7	148	1.00	NA	1.00	0.42	NA	N	A
1	2.0	3.0	2.5	SM	30			3.8	20	CA	99	247	247	1.7	1.33	1.00	0.75	1.0	18.7	4.7	1.15	26.3	247	0.99	NA	1.00	0.42	NA	N	A
1	3.0	4.0	3.5	SM	30			3.8	20	CA	99	345	345	1.6	1.33	1.00	0.75	1.0	18.0	4.7	1.15	25.5	345	0.99	NA	1.00	0.42	NA	N	A
1	4.0	5.0	4.5	SM	30			3.8	20	CA	99	444	444	1.6	1.33	1.00	0.75	1.0	17.4	4.7	1.15	24.8	444	0.99	NA	1.00	0.42	NA	N	A
1	5.0	6.0	5.5	SM	30			3.8	20	CA	99	543	543	1.5	1.33	1.00	0.75	1.0	16.9	4.7	1.15	24.2	543	0.99	NA	1.00	0.42	NA	N	A
1	6.0	7.0	6.5	SM	30			3.8	20	CA	99	642	642	1.5	1.33	1.00	0.80	1.0	17.4	4.7	1.15	24.8	642	0.99	NA	1.00	0.42	NA	N	A
1	7.0	8.0	7.5	SM	30			3.8	20	CA	99	740	740	1.4	1.33	1.00	0.80	1.0	16.9	4.7	1.15	24.2	740	0.98	NA	1.00	0.42	NA	N	A
2	8.0	9.0	8.5	SP	5			25.3	11	CA	118	1001	1001	1.3	1.33	1.00	0.80	1.0	8.6	0.0	1.00	8.6	1001	0.98	NA	1.00	0.42	NA	N	A
2	9.0	10.0	9.5	SP	5			25.3	11	CA	118	1119	1119	1.3	1.33	1.00	0.85	1.0	8.8	0.0	1.00	8.8	1119	0.98	NA	1.00	0.42	NA	N	A
3	10.0	11.0	10.5	SP	5			25	17	CA	125	1313	1281	1.2	1.33	1.00	0.85	1.0	13.1	0.0	1.00	13.1	1281	0.98	0.14	1.00	0.42	0.46	Y	
3	11.0	12.0	11.5	SP	5			25	17	CA	125	1438	1344	1.2	1.33	1.00	0.85	1.0	12.9	0.0	1.00	12.9	1344	0.97	0.14	1.00	0.44	0.43	Y	
3	12.0	13.0	12.5	SP	5			25	17	CA	125	1563	1407	1.2	1.33	1.00	0.85	1.0	12.7	0.0	1.00	12.7	1407	0.97	0.14	1.00	0.46	0.40	Y	
3	13.0	14.0	13.5	SP	5			25	17	CA	125	1688	1469	1.2	1.33	1.00	0.85	1.0	12.5	0.0	1.00	12.5	1469	0.97	0.14	1.00	0.48	0.38	Y	
3	14.0	15.0	14.5	SP	5			25	17	CA	125	1813	1532	1.1	1.33	1.00	0.85	1.0	12.3	0.0	1.00	12.3	1532	0.97	0.13	1.00	0.50	0.36	Y	
4	15.0	16.0	15.5	CL	61	31	11	34	8	SPT	125	1938	1594	1.1	1.33	1.00	0.85	1.2	12.2	5.0	1.20	19.6	1594	0.96	0.21	1.00	0.50	0.57	Y	
4	16.0	17.0	16.5	CL	61	31	11	34	8	SPT	125	2063	1657	1.1	1.33	1.00	0.90	1.2	12.7	5.0	1.20	20.3	1657	0.96	0.22	1.00	0.52	0.57	Y	
4	17.0	18.0	17.5	CL	61	31	11	34	8	SPT	125	2188	1720	1.1	1.33	1.00	0.90	1.2	12.5	5.0	1.20	20.0	1720	0.96	0.22	1.00	0.52	0.56	Y	
4	18.0	19.0	18.5	CL	61	31	11	34	8	SPT	125	2313	1782	1.1	1.33	1.00	0.90	1.2	12.3	5.0	1.20	19.8	1782	0.96	0.21	1.00	0.54	0.53	Y	
4	19.0	20.0	19.5	CL	61	31	11	34	8	SPT	125	2438	1845	1.1	1.33	1.00	0.90	1.2	12.2	5.0	1.20	19.6	1845	0.96	0.21	1.00	0.54	0.53	Y	
5	20.0	21.0	20.5	SP	4			35	16	SPT	125	2563	1907	1.0	1.33	1.00	0.90	1.2	24.0	0.0	1.00	24.0	1907	0.95	0.27	1.00	0.54	0.68	Y	
5	21.0	22.0	21.5	SP	4			35	16	SPT	125	2688	1970	1.0	1.33	1.00	0.90	1.2	23.7	0.0	1.00	23.7	1970	0.95	0.27	1.00	0.56	0.65	Y	
5	22.0	23.0	22.5	SP	4			35	16	SPT	125	2813	2033	1.0	1.33	1.00	0.95	1.2	24.6	0.0	1.00	24.6	2033	0.95	0.28	1.01	0.56	0.69	Y	
5	23.0	24.0	23.5	SP	4			35	16	SPT	125	2938	2095	1.0	1.33	1.00	0.95	1.2	24.3	0.0	1.00	24.3	2095	0.95	0.28	1.01	0.56	0.68	Y	
5	24.0	25.0	24.5	SP	4			35	16	SPT	125	3063	2158	1.0	1.33	1.00	0.95	1.2	24.0	0.0	1.00	24.0	2158	0.94	0.27	1.00	0.58	0.64	Y	
6	25.0	26.0	25.5	CL	87	36	14	35.9	8	SPT	125	3188	2220	1.0	1.33	1.00	0.95	1.2	11.8	5.0	1.20	19.2	2220	0.94	NA	1.00	0.58	NA	N	D
6	26.0	27.0	26.5	CL	87	36	14	35.9	8	SPT	125	3313	2283	1.0	1.33	1.00	0.95	1.2	11.7	5.0	1.20	19.0	2283	0.94	NA	0.99	0.58	NA	N	D
6	27.0	28.0	27.5	CL	87	36	14	35.9	8	SPT	125	3438	2346	0.9	1.33	1.00	0.95	1.2	11.5	5.0	1.20	18.8	2346	0.94	NA	0.99	0.58	NA	N	D
6	28.0	29.0	28.5	CL	87	36	14	35.9	8	SPT	125	3563	2408	0.9	1.33	1.00	0.95	1.2	11.4	5.0	1.20	18.6	2408	0.93	NA	0.98	0.60	NA	N	D
6	29.0	30.0	29.5	CL	87	36	14	35.9	8	SPT	125	3688	2471	0.9	1.33	1.00	1.00	1.2	11.8	5.0	1.20	19.2	2471	0.93	NA	0.98	0.60	NA	N	D
7	30.0	31.0	30.5	CL	70	43	18	36.8	8	SPT	125	3813	2533	0.9	1.33	1.00	1.00	1.2	11.7	5.0	1.20	19.0	2533	0.93	NA	0.97	0.60	NA	N	D
7	31.0	32.0	31.5	CL	70	43	18	36.8	8	SPT	125	3938	2596	0.9	1.33	1.00	1.00	1.2	11.5	5.0	1.20	18.8	2596	0.92	NA	0.97	0.60	NA	N	D
7	32.0	33.0	32.5	CL	70	43	18	36.8	8	SPT	125	4063	2659	0.9	1.33	1.00	1.00	1.2	11.4	5.0	1.20	18.7	2659	0.91	NA	0.96	0.60	NA	N	D
7	33.0	34.0	33.5	CL	70	43	18	36.8	8	SPT	125	4188	2721	0.9	1.33	1.00	1.00	1.2	11.3	5.0	1.20	18.5	2721	0.90	NA	0.96	0.60	NA	N	D
7	34.0	35.0	34.5	CL	70	43	18	36.8	8	SPT	125	4313	2784	0.9	1.33	1.00	1.00	1.2	11.1	5.0	1.20	18.3	2784	0.89	NA	0.96	0.60	NA	N	D
8	35.0	36.0	35.5	CL	70	43	18	26.6	10	SPT	125	4438	2846	0.9	1.33	1.00	1.00	1.2	13.7	5.0	1.20	21.5	2846	0.89	NA	0.95	0.60	NA	N	D
8	36.0	37.0	36.5	CL	70	43	18	26.6	10	SPT	125	4563	2909	0.8	1.33	1.00	1.00	1.2	13.6	5.0	1.20	21.3	2909	0.88	NA	0.95	0.60	NA	N	D
8	37.0	38.0	37.5	CL	70	43	18	26.6	10	SPT	125	4688	2972	0.8	1.33	1.00	1.00	1.2	13.4	5.0	1.20	21.1	2972	0.87	NA	0.94	0.58	NA	N	D
8	38.0	39.0	38.5	CL	70	43	18	26.6	10	SPT	125	4813	3034	0.8	1.33	1.00	1.00	1.2	13.3	5.0	1.20	20.9	3034	0.86	NA	0.94	0.58	NA	N	D
8	39.0	40.0	39.5	CL	70	43	18	26.6	10	SPT	125	4938	3097	0.8	1.33	1.00	1.00	1.2	13.1	5.0	1.20	20.7	3097	0.85	NA	0.94	0.58	NA	N	D
9	40.0	41.0	40.5	CL	80	33	12	23	10	SPT	125	5063	3159	0.8	1.33	1.00	1.00	1.2	13.0	5.0	1.20	20.6	3159	0.85	NA	0.93	0.58	NA	N	D
9	41.0	42.0	41.5	CL	80	33	12	23	10	SPT	125	5188	3222	0.8	1.33	1.00	1.00	1.2	12.8	5.0	1.20	20.4	3222	0.84	NA	0.93	0.58	NA	N	D
9	42.0	43.0	42.5	CL	80	33	12	23	10	SPT	125	5313	3285	0.8	1.33	1.00	1.00	1.2	12.7	5.0	1.20	20.2	3285	0.83	NA	0.92	0.58	NA	N	D
9	43.0	44.0	43.5	CL	80	33	12	23	10	SPT	125	5438	3347	0.8	1.33	1.00	1.00	1.2	12.6	5.0	1.20	20.1	3347	0.82	NA	0.92	0.58	NA	N	D
9	44.0	45.0	44.5	CL	80	33	12	23	10	SPT	125	5563	3410	0.8	1.33	1.00	1.00	1.2	12.4	5.0	1.20	19.9	3410	0.81	NA	0.92	0.56	NA	N	D
10	45.0	46.0	45.5	SP	5			25	39	SPT	125	5688	3472	0.8	1.33	1.00	1.00	1.2	48.0	0.0	1.00	48.0	3472	0.81	NA	0.91	0.56	NA	N	C
10	46.0	47.0	46.5	SP	5			25	39	SPT	125	5813	3535	0.8	1.33	1.00	1.00	1.2	47.5	0.0	1.00	47.5	3535	0.80	NA	0.91	0.56	NA	N	C
10	47.0	48.0	47.5	SP	5			25	39	SPT	125	5938	3598	0.8	1.33	1.00	1.00	1.2	47.0	0.0	1.00	47.0	3598	0.79	NA	0.90	0.56	NA	N	C
10	48.0	49.0	48.5	SP	5			25	39	SPT	125	6063	3660	0.7	1.33	1.00	1.00	1.2	46.5	0.0	1.00	46.5	3660	0.78	NA	0.90	0.56	NA	N	C
10	49.0	50.0	49.5	SP	5			25	39	SPT	125	6188	3723	0.7	1.33	1.00	1.00	1.2	46.0	0.0	1.00	46.0	3723	0.77	NA	0.90	0.56	NA	N	C

TABLE C-2
LIQUEFACTION INDUCED SETTLEMENT
BORING B-1 (2%PE in 50 yrs; FS=1.3)

Client: NCR

J.N. 2853.00

Site: Buena Park

Notes:

(1) Effective ER=55% normalized standard penetration resistance for clean sands, $(N_1)_{60\text{-}cs}$*1.1 (Seed, 1994).

(2) Volumetric strain (Ishihara and Yoshimine, 1992) using $(N_1)_{55\text{-}cs}$.

(3) Volumetric strain (Tokimatsu and Seed, 1987) using $(N_1)_{60\text{-}cs}$.

									Total δ (in.)	3.58	3.20	3.39
Depth Interval (ft)		Soil layer thickness (ft)	Fines <#200 Sieve (%)	$(N_1)_{60\text{-}cs}$	$(N_1)_{55\text{-}cs}$ (1)	FS	IY Percent ε_v (2)	CSR*	TS Percent ε_v (3)	IY δ (in.)	TS δ (in.)	Ave δ (in.)
Top	Bottom											
0.00	1.00	1.00	30	26.7	29.4	NA	0.00	0.42	NA	NA	NA	0
1.00	2.00	1.00	30	26.7	29.4	NA	0.00	0.42	NA	NA	NA	0
2.00	3.00	1.00	30	26.3	28.9	NA	0.00	0.42	NA	NA	NA	0
3.00	4.00	1.00	30	25.5	28.1	NA	0.00	0.42	NA	NA	NA	0
4.00	5.00	1.00	30	24.8	27.3	NA	0.00	0.42	NA	NA	NA	0
5.00	6.00	1.00	30	24.2	26.6	NA	0.00	0.42	NA	NA	NA	0
6.00	7.00	1.00	30	24.8	27.3	NA	0.00	0.42	NA	NA	NA	0
7.00	8.00	1.00	30	24.2	26.6	NA	0.00	0.42	NA	NA	NA	0
8.00	9.00	1.00	5	8.6	9.5	NA	0.00	0.42	NA	NA	NA	0
9.00	10.00	1.00	5	8.8	9.7	NA	0.00	0.42	NA	NA	NA	0
10.00	11.00	1.00	5	13.1	14.4	0.5	2.87	0.42	2.14	0.34	0.26	0.30
11.00	12.00	1.00	5	12.9	14.2	0.4	2.90	0.44	2.16	0.35	0.26	0.30
12.00	13.00	1.00	5	12.7	13.9	0.4	2.22	0.46	2.18	0.27	0.26	0.26
13.00	14.00	1.00	5	12.5	13.7	0.4	2.27	0.48	2.20	0.27	0.26	0.27
14.00	15.00	1.00	5	12.3	13.5	0.4	2.33	0.50	2.22	0.28	0.27	0.27
15.00	16.00	1.00	61	19.6	21.6	0.6	2.06	0.50	1.68	0.25	0.20	0.22
16.00	17.00	1.00	61	20.3	22.3	0.6	1.99	0.52	1.64	0.24	0.20	0.22
17.00	18.00	1.00	61	20.0	22.0	0.6	2.02	0.52	1.66	0.24	0.20	0.22
18.00	19.00	1.00	61	19.8	21.8	0.5	2.06	0.54	1.67	0.25	0.20	0.22
19.00	20.00	1.00	61	19.6	21.6	0.5	2.08	0.54	1.68	0.25	0.20	0.23
20.00	21.00	1.00	4	24.0	26.4	0.7	1.31	0.54	1.49	0.16	0.18	0.17
21.00	22.00	1.00	4	23.7	26.0	0.6	1.63	0.56	1.50	0.20	0.18	0.19
22.00	23.00	1.00	4	24.6	27.1	0.7	1.24	0.56	1.46	0.15	0.18	0.16
23.00	24.00	1.00	4	24.3	26.7	0.7	1.28	0.56	1.48	0.15	0.18	0.17
24.00	25.00	1.00	4	24.0	26.4	0.6	1.59	0.58	1.49	0.19	0.18	0.18
25.00	26.00	1.00	87	19.2	21.1	NA	0.00	0.58	NA	NA	NA	0
26.00	27.00	1.00	87	19.0	20.9	NA	0.00	0.58	NA	NA	NA	0
27.00	28.00	1.00	87	18.8	20.7	NA	0.00	0.58	NA	NA	NA	0
28.00	29.00	1.00	87	18.6	20.5	NA	0.00	0.60	NA	NA	NA	0
29.00	30.00	1.00	87	19.2	21.1	NA	0.00	0.60	NA	NA	NA	0
30.00	31.00	1.00	70	19.0	20.9	NA	0.00	0.60	NA	NA	NA	0
31.00	32.00	1.00	70	18.8	20.7	NA	0.00	0.60	NA	NA	NA	0
32.00	33.00	1.00	70	18.7	20.5	NA	0.00	0.60	NA	NA	NA	0
33.00	34.00	1.00	70	18.5	20.4	NA	0.00	0.60	NA	NA	NA	0
34.00	35.00	1.00	70	18.3	20.2	NA	0.00	0.60	NA	NA	NA	0
35.00	36.00	1.00	70	21.5	23.6	NA	0.00	0.60	NA	NA	NA	0
36.00	37.00	1.00	70	21.3	23.4	NA	0.00	0.60	NA	NA	NA	0
37.00	38.00	1.00	70	21.1	23.2	NA	0.00	0.58	NA	NA	NA	0
38.00	39.00	1.00	70	20.9	23.0	NA	0.00	0.58	NA	NA	NA	0
39.00	40.00	1.00	70	20.7	22.8	NA	0.00	0.58	NA	NA	NA	0
40.00	41.00	1.00	80	20.6	22.6	NA	0.00	0.58	NA	NA	NA	0
41.00	42.00	1.00	80	20.4	22.4	NA	0.00	0.58	NA	NA	NA	0
42.00	43.00	1.00	80	20.2	22.3	NA	0.00	0.58	NA	NA	NA	0
43.00	44.00	1.00	80	20.1	22.1	NA	0.00	0.58	NA	NA	NA	0
44.00	45.00	1.00	80	19.9	21.9	NA	0.00	0.56	NA	NA	NA	0
45.00	46.00	1.00	5	48.0	52.8	NA	0.00	0.56	NA	NA	NA	0
46.00	47.00	1.00	5	47.5	52.2	NA	0.00	0.56	NA	NA	NA	0
47.00	48.00	1.00	5	47.0	51.7	NA	0.00	0.56	NA	NA	NA	0
48.00	49.00	1.00	5	46.5	51.1	NA	0.00	0.56	NA	NA	NA	0
49.00	50.00	1.00	5	46.0	50.6	NA	0.00	0.56	NA	NA	NA	0

TABLE C-3
ANALYSIS OF DRY SEISMIC SETTLEMENT POTENTIAL
BORING B-1 (2%PE in 50 yrs; FS=1.3)

Client: NCR
J.N. 2853.00
Site: Buena Park

		Total Seismic Settlement of Unsaturated Soil w/ FS=2.0 (in):	0.77
		Subtotal Seismic Settlement of Unsaturated Soil (in)	0.39
		Total Thickness of Unsaturated Soil (ft)	10.0

GW Depth: 10 feet
EQ Magnitude 6.77
MSF 1.35

Layer Mid-Depth (ft.)	Soil Type	Eff. Stress σ'_{vo}(tsf)	Clean Sand $(N_1)_{60}$	CSR	(psf) τ_{avg} Avg. Shear Stress	(tsf) σ_m' Mean Bulk Stress	(tsf) G_{max} Max. Dyn.Shr. Mod.	γ_{eff} (G_{eff}/G_{max})	Eff. Cyclic Shr.Strain γ_{eff}	Eff. Cyclic Shr.Strain γ_{eff} (%)	Volume Strain (%)	EQ Mag. Factor	Layer Thickness (ft.)	Estimated Dry Sand Seismic Settlement (in.)
									Fig.11		Fig.13			
0.5	SM	0.02	26.7	0.42	20.7	0.02	167.4	6.19E-05	9.98E-05	9.98E-03	6.63E-03	1.35	1.0	0.001
1.5	SM	0.07	26.7	0.42	62.2	0.05	290.0	1.07E-04	2.70E-04	2.70E-02	1.80E-02	1.35	1.0	0.002
2.5	SM	0.12	26.3	0.42	103.6	0.08	372.5	1.39E-04	4.58E-04	4.58E-02	3.11E-02	1.35	1.0	0.003
3.5	SM	0.17	25.5	0.42	145.1	0.11	436.5	1.66E-04	7.86E-04	7.86E-02	5.54E-02	1.35	1.0	0.005
4.5	SM	0.22	24.8	0.42	186.5	0.14	490.5	1.90E-04	1.60E-03	1.60E-01	1.17E-01	1.35	1.0	0.010
5.5	SM	0.27	24.2	0.42	228.0	0.18	537.5	2.12E-04	2.69E-03	2.69E-01	2.04E-01	1.35	1.0	0.018
6.5	SM	0.32	24.8	0.42	269.5	0.21	589.4	2.29E-04	9.71E-04	9.71E-02	7.10E-02	1.35	1.0	0.006
7.5	SM	0.37	24.2	0.42	310.9	0.24	628.0	2.48E-04	1.32E-03	1.32E-01	9.95E-02	1.35	1.0	0.009
8.5	SP	0.50	8.6	0.42	420.5	0.33	519.1	4.05E-04	1.00E-02	1.00E+00	1.89E+00	1.35	1.0	0.168
9.5	SP	0.56	8.8	0.42	470.0	0.36	553.8	4.24E-04	1.00E-02	1.00E+00	1.85E+00	1.35	1.0	0.164

Attachment G

Operation & Maintenance Plan

Non-Structural Source Control BMPs		
BMP Name and BMP Implementation, Maintenance and Inspection Procedures	**Implementation, Maintenance, and Inspection Frequency and Schedule**	**Person or Entity with Operation & Maintenance Responsibility**
N1 - Education for Property Owners, Tenants and Occupants	**Ongoing**	**Owner**
Practical information materials will be provided to the first residents/occupants/tenants on general housekeeping practices that contribute to the protection of stormwater quality. These materials will be initially developed and provided to first residents/occupants/tenants by the developer. Thereafter such materials will be available through the Permittees' education program. Educational Materials are provided in Appendix A.		
N2 - Activity Restrictions	**Ongoing**	**Owner**
The Owner shall restrict activities that have a potential to adversely affect downstream water quality. Activity Restrictions include but are not limited to: prohibiting vehicle maintenance activities within outdoor parking areas and stalls, prohibiting long-term parking without authorization, prohibiting outdoor vehicle washing. Activity Restrictions shall be implemented upon occupancy, through lease terms or other equally effective measure.		
N3 – Common Area Landscape Management	**Ongoing**	**Owner**
Landscape Maintenance shall be the responsibility of the Owner and shall be performed in conformance with Orange County Management Guidelines for Use of Fertilizers (DAMP Section 5.5). Common area landscape management includes minimizing fertilizer and pesticide application, use of slow release fertilizers, regular landscape maintenance. Regular landscape maintenance includes weeding, mowing, and debris removal, and shall be performed on a weekly basis. Trimming, replanting and replacement of mulch shall be provided on an as needed basis to prevent exposure of erodible materials.		
N4 – BMP Maintenance	**Minimum of two inspections/cleanings annually**	**Owner**
The Owner shall be responsible for the implementation and maintenance of all applicable non-structural BMPs and shall be responsible for scheduling inspections and maintenance of all applicable structural BMP facilities through its staff, landscape maintenance contractor, and/or any other necessary maintenance contractors.		
N5 - Title 22 CCR Compliance	Not Applicable	
N6 - Local Industrial Permit Compliance	Not Applicable	
N7 - Spill Contingency Plan	Not Applicable	
N8 - Underground Storage Tank Compliance	Not Applicable	
N9 - Hazardous Materials Disclosure Compliance	Not Applicable	
N10 - Uniform Fire Code Implementation	Not Applicable	

N11 – Common Area Litter Control	**Weekly**	**Owner**
The Owner shall be responsible for performing trash pickup and litter removal in common areas as needed, weekly at a minimum. Any trash and debris waste collected shall be properly disposed of in accordance with local regulations.		
N12- Employee Training	**Annually**	**Owner**
Any employees of the Homeowner's Association and any contractors will require training to ensure that employees are aware of maintenance activities that may result in pollutants contaminating downstream waters. Training shall include, but not be limited to, spill cleanup procedures, proper waste disposal, general housekeeping practices, etc. Educate all new employees on stormwater pollution prevention prior to the start of the rainy season (October 1st). Refresher courses shall be conducted as needed.		
N13 – Housekeeping of Loading Docks	**Not Applicable**	
N14 – Common Area Catch Basin Inspection	**Not Applicable**	
N15 – Street Sweeping Private Streets and Parking Lots	**Twice Annually**	**Owner**
The Owner shall be responsible for the street sweeping of all private driveways, drive aisles and parking areas within the project twice annually, and prior to the rainy season, no later than October 1st.		
N16 – Retail Gasoline Outlets	**Not Applicable**	
Structural Source Control BMPs		
BMP Name and BMP Implementation, Maintenance and Inspection Procedures	**Implementation, Maintenance, and Inspection Frequency and Schedule**	**Person or Entity with Operation & Maintenance Responsibility**
S1- Storm Drain Stenciling and Signage	**Not Applicable**	
S2 - Design and Construct Outdoor Material Storage Areas to Reduce Pollution Introduction	**Not Applicable**	
S3 - Design and Construct Trash and Waste Storage Areas to Reduce Pollutant Introduction	**Not Applicable**	
S4 - Use Efficient Irrigation Systems and Landscape Design	**Ongoing**	**Owner**
Irrigation systems shall be designed to meet City of Buena Park Standards in accordance with the City of Buena Park Water Efficient Landscape Ordinance by 1. Employing rain shutoff devices to prevent irrigation after precipitation. 2. Designing irrigation systems to each landscape area's specific water requirements. 3. Using flow reducers or shutoff valves trigger by a pressure drop to control water loss in the event of broken sprinkler heads or lines. 4. Implementing landscape plan consistent with County Water Conservation Resolution or city equivalent, which may include provision of water sensors, programmable irrigation times (for short cycles), etc. 5. The timing and application methods of irrigation water shall be designed to minimize the runoff of excess irrigation water into the municipal storm drain		

6. Employing other comparable, equally effective, methods to reduce irrigation water runoff. 7. Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface filtration.		
S5 – Protect Slopes and Channels and Provide Energy Dissipation	**Not Applicable**	
S6 – Loading Docks	**Not Applicable**	
S7- Maintenance Bays	**Not Applicable**	
S8 – Vehicle Wash Areas	**Not Applicable**	
S9 – Outdoor Processing Areas	**Not Applicable**	
S10 - Equipment Wash Areas	**Not Applicable**	
S11 – Fueling Areas	**Not Applicable**	
S12 – Hillside Landscaping	**Not Applicable**	
S13 – Wash Water Control for Food Preparation Areas	**Not Applicable**	
S14 – Community Car Wash Racks	**Not Applicable**	
Treatment Control BMPs		
BMP Name and BMP Implementation, Maintenance and Inspection Procedures	**Implementation, Maintenance, and Inspection Frequency and Schedule**	**Person or Entity with Operation & Maintenance Responsibility**
Bioretention (INF-3)	**Twice Annually**	**Owner**
Minimum two (2) inspections per year, prior to start of the rainy season (October 1st) and after major rain events. Inspect gravel storage water level elevations during and after rain events to ensure proper draining of the system. See attached 'Infiltration Facility Operations and Maintenance' Document for more information.		

Infiltration Facility Operations and Maintenance

General Requirements

Infiltration facility maintenance should include frequent inspections to ensure that water infiltrates into the subsurface completely within the recommended infiltration time of 72 hours or less after a storm (see Appendix E for guidance on facility inspection and Appendix F for an infiltration inspection and maintenance checklist).

Maintenance and regular inspections are of primary importance if infiltration basins and trenches are to continue to function as originally designed. A specific maintenance plan shall be developed specific to each facility outlining the schedule and scope of maintenance operations, as well as the documentation and reporting requirements. The following are general maintenance requirements:

1. Regular inspection should determine if the sediment pretreatment structures require routine maintenance.

2. If water is noticed in the basin more than 72 hours after a major storm or in the observation well of the infiltration trench more than 48 hours after a major storm, the infiltration facility may be clogged. Maintenance activities triggered by a potentially clogged facility include:

    - Check for debris/sediment accumulation, rake surface and remove sediment (if any) and evaluate potential sources of sediment and vegetative or other debris (e.g., embankment erosion, channel scour, overhanging trees, etc). If suspected upland sources are outside of the County's jurisdiction, additional pretreatment operations (e.g., trash racks, vegetated swales, etc.) may be necessary.

    - For basins, removal of the top layer of native soil may be required to restore infiltrative capacity.

    - For trenches, assess the condition of the top aggregate layer for sediment buildup and crusting. Remove top layer of pea gravel and replace. If slow draining conditions persist, entire trench may need to be excavated and replaced.

3. Any debris or algae growth located on top of the infiltration facility should be removed and disposed of properly.

4. Facilities should be inspected annually. Trash and debris should be removed as needed, but at least annually prior to the beginning of the wet season.

5. Site vegetation should be maintained as frequently as necessary to maintain the aesthetic appearance of the site, and as follows:

    - Vegetation, large shrubs, or trees that limit access or interfere with basin operation should be pruned or removed.

- Slope areas that have become bare should be revegetated and eroded areas should be regraded prior to being revegetated.
- Grass should be mowed to 4"-9" high and grass clippings should be removed.
- Fallen leaves and debris from deciduous plant foliage should be raked and removed.
- Invasive vegetation, such as Alligatorweed (*Alternanthera philoxeroides*), Halogeton (*Halogeton glomeratus*), Spotted Knapweed (*Centaurea maculosa*), Giant Reed (*Arundo donax*), Castor Bean (*Ricinus communis*), Perennial Pepperweed (*Lepidium latifolium*), and Yellow Starthistle (*Centaurea solstitalis*) must be removed and replaced with non-invasive species. Invasive species should never contribute more than 25% of the vegetated area. For more information on invasive weeds, including biology and control of listed weeds, look at the "encycloweedia" located at the California Department of Food and Agriculture website at http://www.cdfa.ca.gov/wma or the California Invasive Plant Council website at http://portal.cal-ipc.org/weedlist. .
- Dead vegetation should be removed if it exceeds 10% of area coverage. Vegetation should be replaced immediately to maintain cover density and control erosion where soils are exposed.

6. For infiltration basins, sediment buildup exceeding 50% of the forebay sediment storage capacity, as indicated by the steel markers, should be removed. Sediment from the remainder of the basin should be removed when 6 inches of sediment accumulates. Sediments should be tested for toxic substance accumulation in compliance with current disposal requirements if visual or olfactory indications of pollution are noticed. If toxic substances are encountered at concentrations exceeding thresholds of Title 22, Section 66261 of the California Code of Regulations, the sediment must be disposed of in a hazardous waste landfill and the source of the contaminated sediments should be investigated and mitigated to the extent possible.

7. Following sediment removal activities, replanting and/or reseeding of vegetation may be required for reestablishment.

Maintenance Standards

A summary of the routine and major maintenance activities recommended for infiltration facilities is shown in Table 6-1. Detailed routine and major maintenance standards are listed in Tables 6-2 and 6-3.

Table 6-1: Infiltration Facility Routine and Major Maintenance Quick Guide

Inspection and Maintenance Activities Summary	
Routine Maintenance	• Remove trash and debris as required • Repair and reseed erosion near inlet if necessary • Remove any visual evidence of contamination from floatables such as oil and grease • Clean under-drain (if present) and outlet piping to alleviate ponding and restore infiltrative capacity. • Remove minor sediment accumulation, debris and obstructions near inlet and outlet structures as needed • Mow routinely to maintain ideal grass height and to suppress weeds • Periodically observe function under wet weather conditions • Take photographs before and after maintenance (encouraged)
Major Maintenance	• Clean out under-drains if present to alleviate ponding. Replace media if ponding or loss of infiltrative capacity persists and revegetate • Repair structural damage to flow control structures including inlet, outlet and overflow structures • De-thatch grass to remove accumulated sediment and aerate compacted areas to promote infiltration

Table 6-2: Routine Maintenance – Infiltration Facilities

Defect	Conditions When Maintenance Is Needed	Results Expected When Maintenance Is Performed	Frequency
Trash & Debris	Any trash and debris which exceed 5 cubic feet per 1,000 square feet (one standard garbage can). In general, there should be no visual evidence of dumping. If less than threshold, all trash and debris will be removed as part of next scheduled maintenance.	Trash and debris cleared from site.	Annually prior to wet season. After major storm events (>0.75 in/24 hrs) if spot checks indicate widespread damage/ maintenance needs. Litter removal is dependent on site conditions and desired aesthetics and should be done at a frequency to meet those objectives.
Inlet Erosion	Visible evidence of erosion occurring near inlet structures.	Eroded areas repaired/reseeded	
Visual Contaminants and Pollution	Any evidence of oil, gasoline, contaminants or other pollutants.	No contaminants or pollutants present.	
Slow Drain Time	Standing water long after storm has passed (after 48 to 72 hours), or visual inspection of wells (if available) indicates that design drain times are not being achieved.	Water drains within 48 to 72 hours. Drainage pipe is cleared, accumulated litter on surface is removed, and top 1-2" of soil is raked or replaced.	
Inlets Blocked	Trash and debris or sediment blocking inlet structures.	Inlets clear and free of trash and debris.	
Appearance of Poisonous, Noxious or Nuisance Vegetation	Excessive grass and weed growth. Noxious weeds, woody vegetation establishing, Turf growing over rock filter.	Vegetation is mowed or trimmed to restore function. Weeds are removed to prevent noxious and nuisance plants from becoming established.	Monthly (or as dictated by agreement between County and landscape contractor).

APPENDIX H – Public Service Request Response Letters Received from BPPD and OCFA

UltraSystems
environmental•management•planning

April 17, 2020

Marc Stone, OCFA Battalion Chief
Orange County Fire Authority
1 Fire Authority Road
Irvine, CA 92602
capa@ocfa.org

RE: Information Request Letter for the Orchard View Gardens Senior Apartment Homes Project in Buena Park

Dear Chief Stone,

UltraSystems has been hired by the City of Buena Park to conduct environmental analysis for the proposed Orchard View Gardens Senior Apartment Homes (Project). UltraSystems is currently in the process of preparing environmental analysis for the proposed project, including its potential impacts on public services. UltraSystems is currently writing an Initial Study Mitigated Negative Declaration (IS/MND) for the proposed project and needs your department's input on potential environmental impacts.

This letter is to request information from the Orange County Fire Authority regarding the proposed project.

Project Description:
Located at 8300 Valley View Street, the approximately 3.2-acre project site is currently home to St. Joseph's Episcopal Church. See the attached Project Location Map. The Project proposes to subdivide the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres.

The newly created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with a primary residential apartment building and 9 single story casitas accommodating 66 residential apartment homes for seniors aged 62+ and a 3,000 square foot community center. See attached Conceptual Site Plan.

Primary vehicular access to the site would be provided via a 20-foot wide driveway off Valley View Street with a fire truck turnaround at the northwest corner of the site.

The layout of the buildings would create several unique landscaped areas that includes both passive and active spaces - raised planters, green lawn/turf areas, drought-tolerant and native ground covers, decomposed granite walkways for residents to access community spaces and an outdoor lounge area with a fireplace and planter beds at the northeast corner of the site.

It would be much appreciated if you would please answer the questions below via email no later than April 22, 2020.

Please send your answers to me at **vpaitimusa@ultrasystems.com**. If you have any questions I can be reached via email or by phone at (626) 512-5111.

1. Which Fire station(s) would respond to a call from the project site?

2. Would this project require construction of new fire department facilities to meet existing fire demands, in addition to the proposed project's demands?

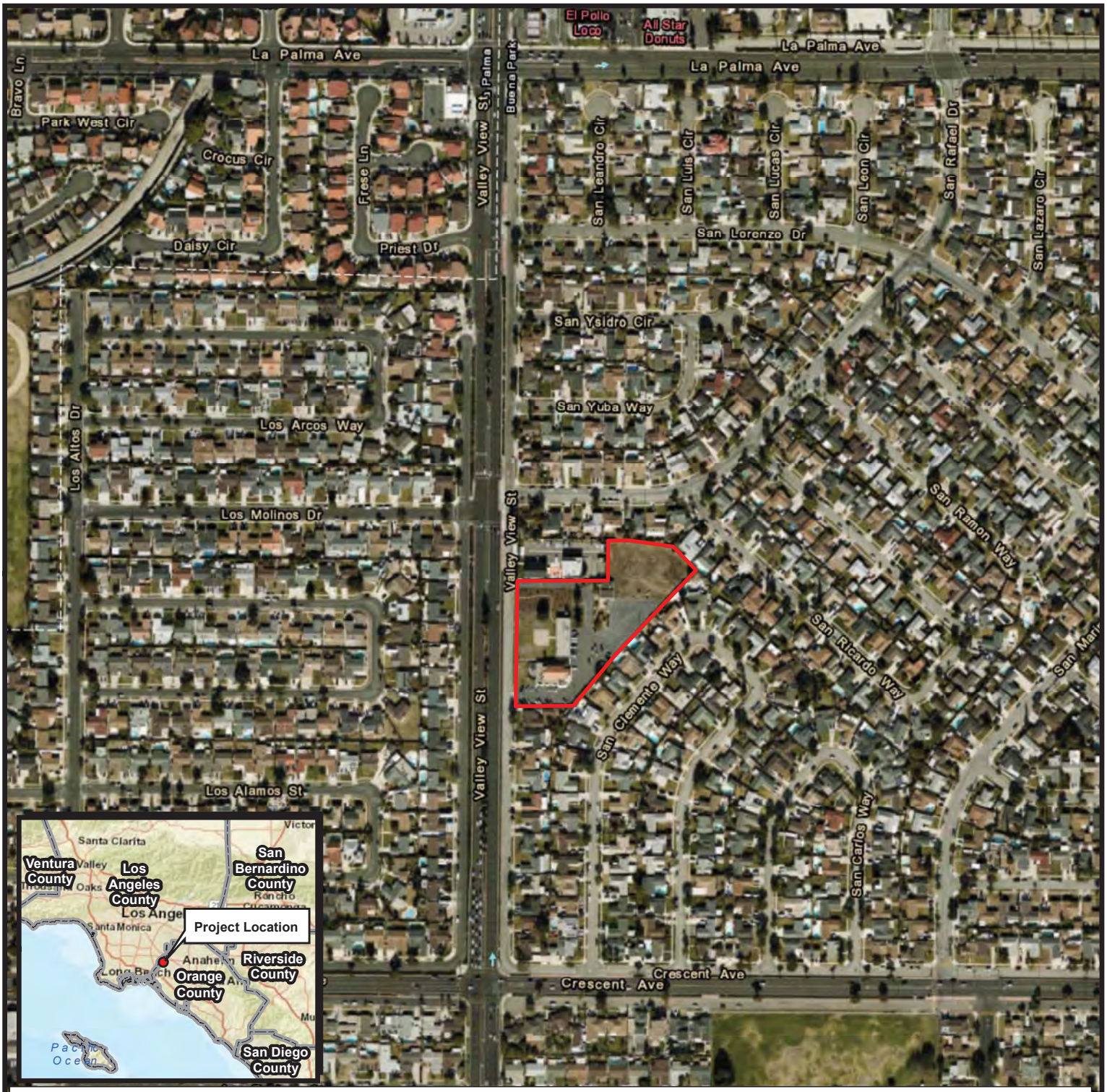
3. Does the Fire Department anticipate any potential environmental impacts from the proposed project related to providing fire service to the project site?

4. Could the proposed project have potentially significant impacts on the Fire Department's level of service and/or response times? If so, what mitigation, if any, do you recommend to reduce potential impacts?

Best Regards,

Victor Paitimusa
Associate Planner
UltraSystems
16431 Scientific Way
Irvine, CA 92618
(626) 512-5111
vpaitimusa@ultrasystems.com

Attachments: Project Location Map
Conceptual Site Plan



Disclaimer: Representations on this map or illustration are intended only to indicate locations of project parameters reported in the legend. Project parameter information supplied by others (see layer credits) may not have been independently verified for accuracy by UltraSystems Environmental, Inc. This map or illustration should not be used for, and does not replace, final grading plans or other documents that should be professionally certified for development purposes.

Path: \\Gissvr\gis\Projects\7037_NCR_Affordable_Housing_Buena Park_IS_MND\MXDs\7037_NCR_Buena_Park_Fig3_0_Project_Location_2020_01_07.mxd

January 08, 2020

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community, Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community; UltraSystems Environmental, Inc., 2020

Orchard View Gardens Senior Apartment Homes

Project Location

Scale: 1:4,800

N

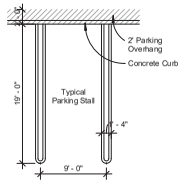
Legend

Project Boundary

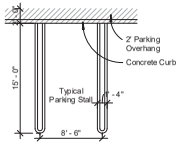
0 200 400 Feet

0 50 100 Meters

UltraSystems



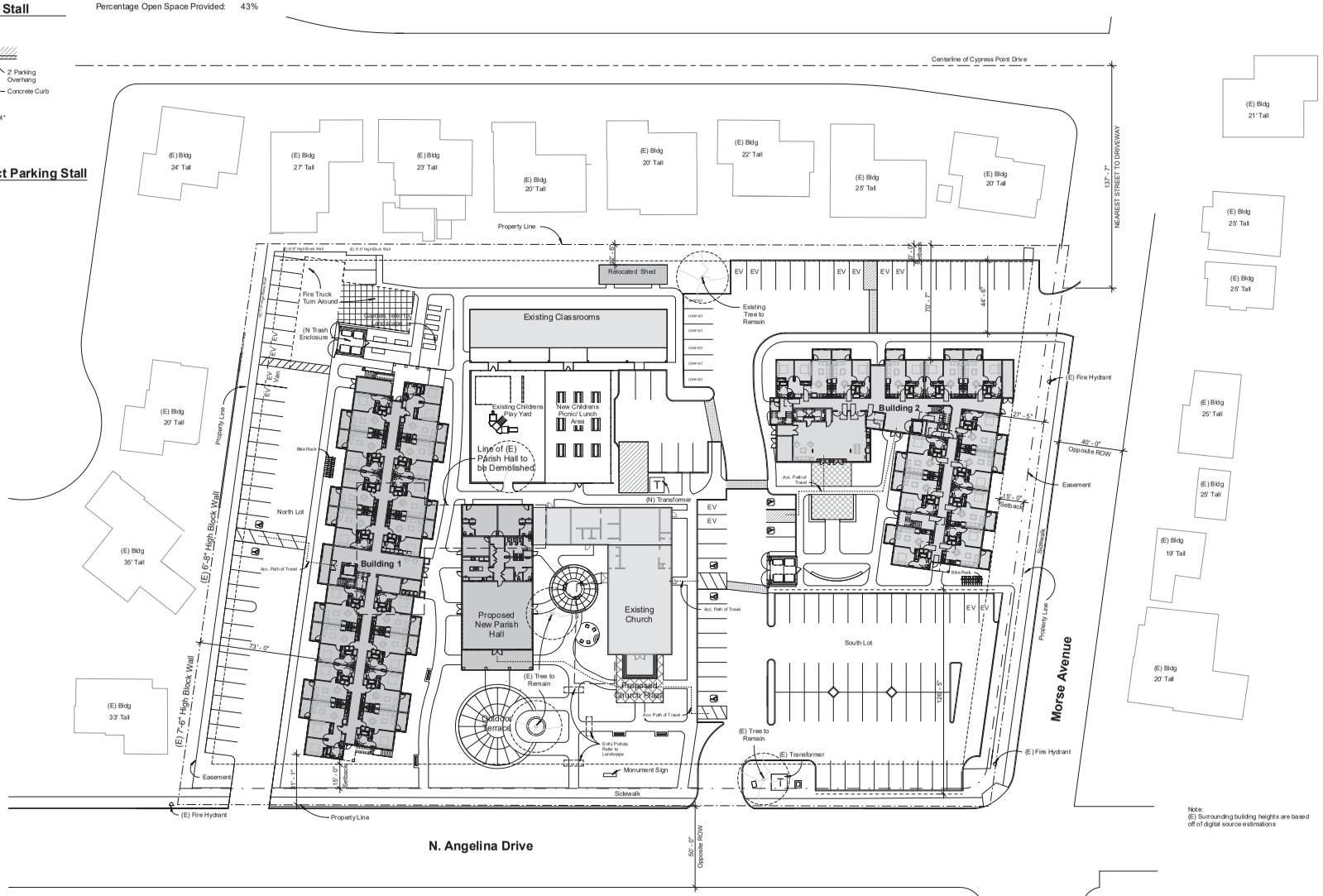
Typical Parking Stall
1/8" = 1'-0"



Typical Compact Parking Stall
1/8" = 1'-0"

Site Coverage

Gross Lot Area (SF) :	174,296 SF
Net Lot Area (SF)	167,536 SF/ 3.85 acres
Maximum Net Lot Coverage Allowed:	60% (100,521 SF)
Proposed Net Lot Coverage:	57%
Building Footprints (Existing and Proposed)	36500 SF
Parking and Driveways	56,048 SF
Covered Patios	2,892 SF
Total Proposed Net Lot Coverage	95,440 SF
Percentage Open Space Required:	40%
Percentage Open Space Provided:	43%



Note:
(E) Surrounding building heights are based off of digital source estimations

True North | Project North

1 Site Plan
SCALE: 1" = 30'-0"

rrm design group

RRM Design Group
10 E. Figueroa St., Suite 1
Santa Barbara, CA 93101

Tel: 805.963.8283
Fax: 805.963.8184
www.rrmdesign.com

NATIONAL COMMUNITY CORE RENAISSANCE

9421 Haven Avenue
Rancho Cucamonga, CA 91730
Tel: 949.394.7996 Fax: 909.483.6524
nationalcore.org

Placentia Senior Housing
A.P.N. 340-273-25
1314 N. Angelina Drive, Placentia CA 92870.

Site Plan

A1
03/31/2020

Fire Service Information Request – Orchard View Gardens Project (Buena Park)

From: Blumberg, William <WilliamBlumberg@ocfa.org>
Sent: Friday, April 24, 2020 1:08 PM
To: Victor Paitimusa <vpaitimusa@ultrasystems.com>
Cc: Kerbrat, Timothy <TimothyKerbrat@ocfa.org>
Subject: RE: Affordable Senior Housing

Victor,

Here is the OCFA response to your request on the Orchard View Gardens Project.

Regards,

William

1. Which Fire station(s) would respond to a call from the project site?
   - Fire Station 13 is located at 7822 Walker St., La Palma, which is 0.72 miles from project site
   - Fire Station 63 is located at 9120 Holder St, Buena Park, which is 0.95 miles from the project site

2. Would this project require construction of new fire department facilities to meet existing fire demands, in addition to the proposed project's demands?
   - This proposed project should not require construction of new fire department facilities

3. Does the Fire Department anticipate any potential environmental impacts from the proposed project related to providing fire service to the project site?
   - This project should have a less than significant impact our level of service and/or response times by adding more responses for OCFA

4. Could the proposed project have potentially significant impacts on the Fire Department's level of service and/or response times? If so, what mitigation, if any, do you recommend to reduce potential impacts?
   - There may be less than significant impacts on OCFA's level of service and/or response times
   - Mitigation to reduce impact on fire service:
     a. Ensure that proposed project meet California Fire Code, OCFA Fire Master Plans for Commercial & Residential Development (B-O9) Guideline, and OCFA Architectural Review (E-04) Guideline (For example, access on the proposed plan may not meet current requirements)
     b. Participate with the City of Buena Park through developer agreements for future fire facility mitigation

UltraSystems
environmental•management•planning

April 17, 2020

Corey S. Sianez, Chief of Police
Buena Park Police Department
6640 Beach Boulevard
Buena Park, CA 90622

RE: Information Request Letter for the Orchard View Gardens Senior Apartment Homes Project in Buena Park

Dear Chief Sianez,

UltraSystems has been hired by the City of Buena Park to conduct environmental analysis for the proposed Orchard View Gardens Senior Apartment Homes (Project). UltraSystems is currently in the process of preparing environmental analysis for the proposed project, including its potential impacts on public services. UltraSystems is currently writing an Initial Study Mitigated Negative Declaration (IS/MND) for the proposed project and needs your department's input on potential environmental impacts.

This letter is to request information from the Buena Park Police Department regarding the proposed project.

Project Description:
Located at 8300 Valley View Street, the approximately 3.2-acre project site is currently home to St. Joseph's Episcopal Church. See the attached Project Location Map. The Project proposes to subdivide the existing parcel (APN 039-283-25) into two new parcels. The southern parcel (Parcel 1) would maintain St. Joseph's Episcopal Church and surface parking on 1.44 acres.

The newly created 1.76-acre parcel occupying the eastern and northern portion of the site (Parcel 2) would be developed with a primary residential apartment building and 9 single story casitas accommodating 66 residential apartment homes for seniors aged 62+ and a 3,000 square foot community center. See attached Conceptual Site Plan.

Primary vehicular access to the site would be provided via a 20-foot wide driveway off Valley View Street with a fire truck turnaround at the northwest corner of the site.

The layout of the buildings would create several unique landscaped areas that includes both passive and active spaces - raised planters, green lawn/turf areas, drought-tolerant and native ground covers, decomposed granite walkways for residents to access community spaces and an outdoor lounge area with a fireplace and planter beds at the northeast corner of the site.

It would be much appreciated if you would please answer the questions below via email no later than April 22, 2020.

Please send your answers to me at **vpaitimusa@ultrasystems.com**. If you have any questions I can be reached via email or by phone at: (626) 512-5111.

Corporate Office – Orange County
16431 Scientific Way
Irvine, CA 92618-4355

Telephone: 949.788.4900
Facsimile: 949.788.4901
Website: www.ultrasystems.com

1. Which police station(s) would respond to a call from the project site?

2. Would this project require construction of new law enforcement facilities to meet existing law enforcement demands, in addition to the proposed project's demands?

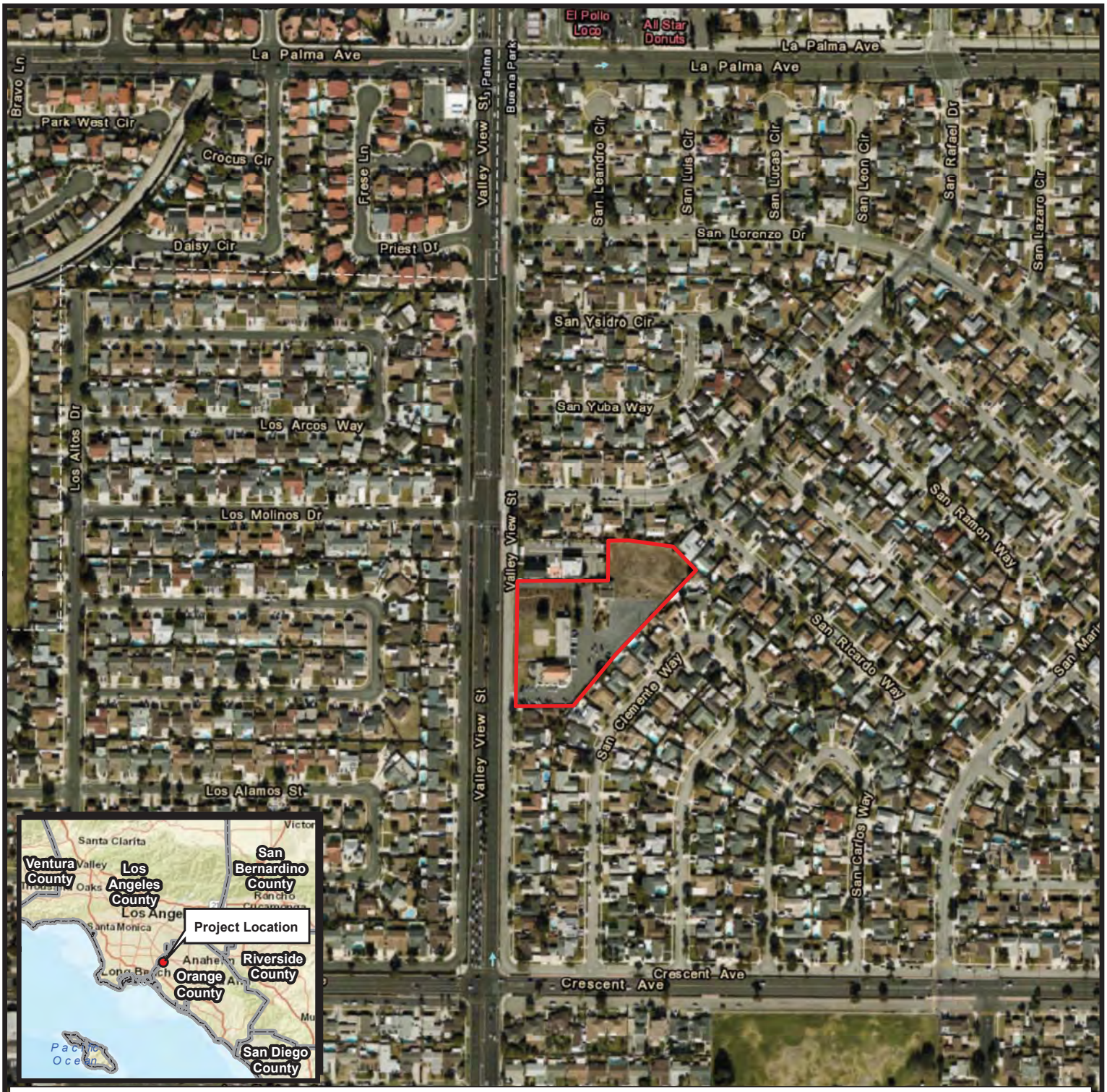
3. Does the Police Department anticipate any potential environmental impacts from the proposed project related to providing police service to the project site?

4. Could the proposed project have potentially significant impacts on the Police Department's level of service and/or response times? If so, what mitigation, if any, do you recommend to reduce potential impacts?

Best Regards,

Victor Paitimusa
Associate Planner
UltraSystems
16431 Scientific Way
Irvine, CA 92618
(626) 512-5111
vpaitimusa@ultrasystems.com

Attachments: Project Location Map
Conceptual Site Plan



Disclaimer: Representations on this map or illustration are intended only to indicate locations of project parameters reported in the legend. Project parameter information supplied by others (see layer credits) may not have been independently verified for accuracy by UltraSystems Environmental, Inc. This map or illustration should not be used for, and does not replace, final grading plans or other documents that should be professionally certified for development purposes.

Path: \\Gissvr\gis\Projects\7037_NCR_Affordable_Housing_Buena Park_IS_MND\MXDs\7037_NCR_Buena_Park_Fig3_0_Project_Location_2020_01_07.mxd

January 08, 2020

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community, Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community; UltraSystems Environmental, Inc., 2020

Orchard View Gardens Senior Apartment Homes

Project Location

Scale: 1:4,800

N

Legend

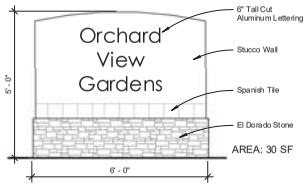
Project Boundary

0 200 400 Feet

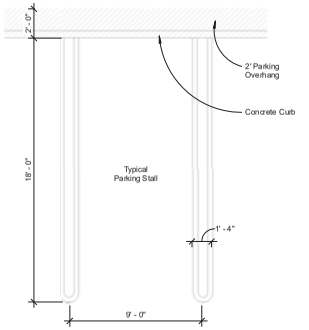
0 50 100 Meters

UltraSystems

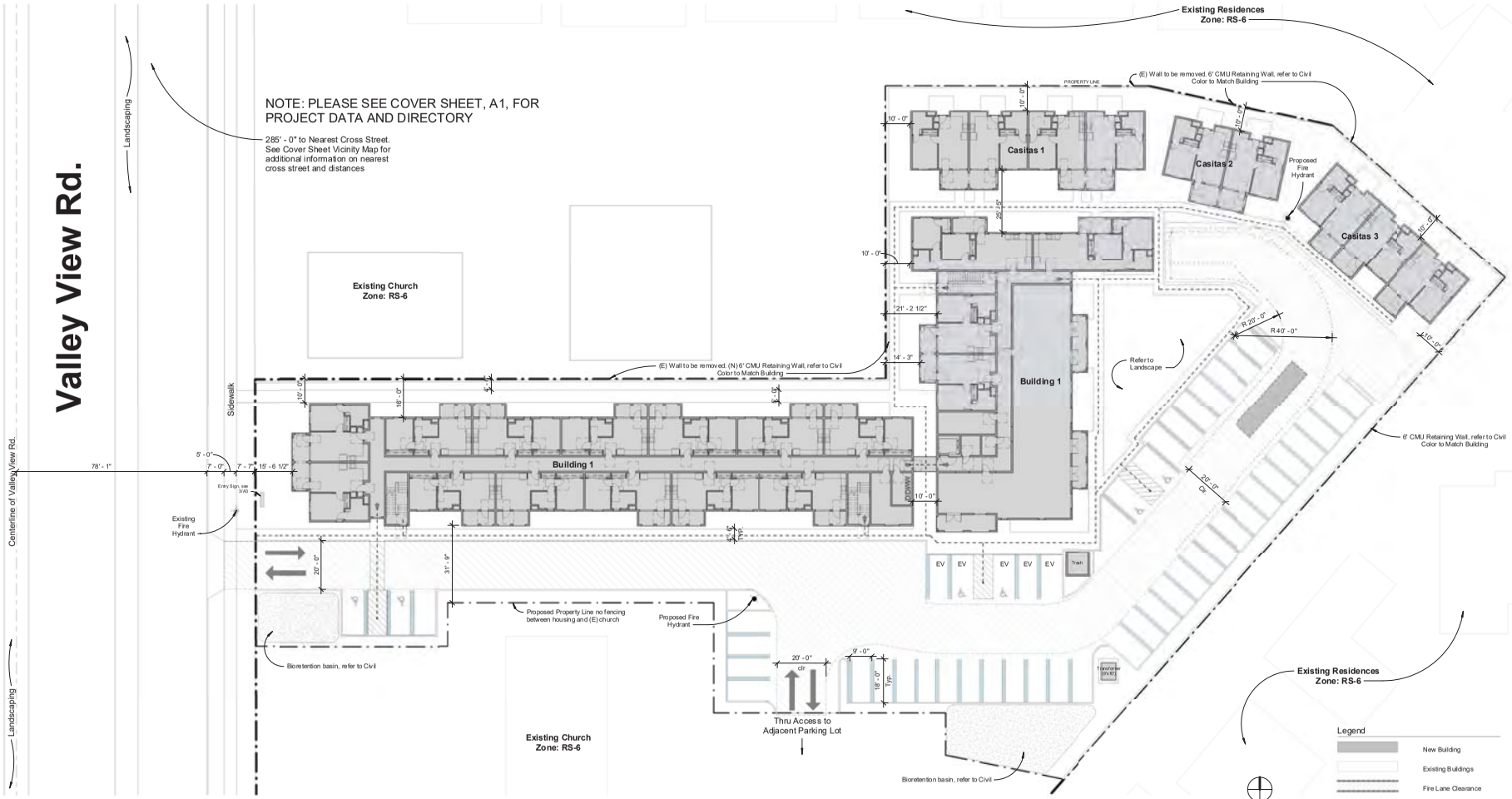
4 Technical Vicinity Plan
SCALE: 1" = 60'-0"



3 Signage
SCALE: 1/2" = 1'-0"



2 Typical Parking Stall
SCALE: 1/4" = 1'-0"



1 Site Plan
SCALE: 1" = 20'-0"

RRM Design Group
10 E. Figueroa St., Suite 200
Santa Barbara, CA 93101
Tel: 805.963.8283
Fax: 805.963.8184
www.rrmdesign.com

Orchard View Gardens Senior Housing
8300 Valley View Street, Buena Park, CA 90620

SITE PLAN

A4
03/13/2020

From: Worrall, Gary <gworrall@bppd.com>
Sent: Wednesday, April 22, 2020 12:38 PM
To: Victor Paitimusa <vpaitimusa@ultrasystems.com>
Cc: Sianez, Corey <csianez@bppd.com>
Subject: FW: Affordable Senior Housing Project: Police Information Request Letter

Mr. Paitimusa,

Please see our responses to your inquiry below:

1. The Buena Park Police Department would respond to calls for service from this project site.

2. This project would not require construction of new law enforcement facilities to meet existing law enforcement demands or project demands.

3. The Police Department does not anticipate any potential environmental impacts from the proposed project related to providing police services to the project site.

4. The proposed project would likely not have potentially significant impacts on the Police Department's level of service and/or response times.

APPENDIX I – Transportation Assessment Memorandum

FEHR PEERS

MEMORANDUM

Date: July 23, 2020

To: Swati Meshram, PhD.
City of Buena Park
6650 Beach Blvd,
Buena Park, CA 90622

CC: Alexa Washburn, National CORE of CA

From: Paul Herrmann, P.E.
Jessica Johnson

Subject: Valley View Senior Housing Buena Park, California

OC19-0699

Fehr & Peers has completed the transportation assessment for the proposed senior affordable housing project (Project) located at 8300 Valley View Street in Buena Park, California. Neighborhood residents in areas surrounding the Project expressed concerns regarding existing circulation. The City requested a focused traffic study to review circulation, specifically at the intersection of Valley View Street and San Rafael Drive, and the effects of Project traffic in the study area.

The purpose of this memorandum is to summarize an evaluation of the proposed Project's potential transportation impacts, parking demand, and circulation within the area. Intersection treatments are proposed at the end of this memorandum to improve circulation and safety with the construction of the Project. The remainder of this memorandum is divided into the following sections: Project Description, Operations Analysis, Parking Demand, and Circulation Review.

PROJECT DESCRIPTION

The proposed Project is a 66 unit affordable (rent restricted), age-qualified (62 years and above) senior housing project. The Project will be built on mostly vacant property behind two church sites. Access will be provided from the Valley View Street Frontage Road. The Project will share the

existing parking lot and two driveways with the St. Joseph's Episcopal Church. One of the existing driveways will be realigned, and ingress and egress will be allowed at both driveways.

OPERATIONS ANALYSIS

Trip Generation

Trip generation rates from *Trip Generation, 10th Edition* (Institute of Transportation Engineers [ITE], 2017) were used to estimate the number of trips associated with the Project. ITE trip generation rates for Senior Adult Housing (ITE Code 252) were used and are presented in **Table 1**.

TABLE 1: WEEKDAY TRIP GENERATION RATES

Land Use	ITE Code	Units	Daily	AM Peak Hour			PM Peak Hour			Sunday Peak Hour			
				In	Out	Total	In	Out	Total	Daily	In	Out	Total
Senior Adult Housing	252	DU	3.70	35%	65%	0.20	55%	45%	0.26	3.14	64%	36%	0.36

Notes:
1. DU = Dwelling Units
2. Trip generation rates are shown for peak hour of adjacent street traffic.

Source: Trip Generation, 10th Edition (Institute of Transportation Engineers [ITE], 2017)

As presented in **Table 2**, the Project is expected to generate approximately 244 daily trips on a weekday, including approximately 13 trips (5 inbound/8 outbound) during the AM peak hour, and approximately 17 trips (9 inbound/8 outbound) during the PM peak hour. To provide a conservative scenario, no trip credits were applied to the trip generation estimates. The Project is expected to generate approximately 207 daily trips on Sundays, including approximately 24 trips (15 inbound/9 outbound) during the Sunday peak hour. ITE does not include a trip generation rate for weekday midday peak hours for Senior Adult Housing so this analysis conservatively assumes the PM peak hour trip generation estimates for the midday peak hour.

TABLE 2: PROJECT WEEKDAY TRIP GENERATION ESTIMATES

Land Use	Quantity	Daily	AM Peak Hour			PM Peak Hour			Sunday Peak Hour			
			In	Out	Total	In	Out	Total	Daily	In	Out	Total
Senior Adult Housing	66 DU	244	5	8	13	9	8	17	207	15	9	24

Notes:
1. DU = Dwelling Units

Source: Trip Generation, 10th Edition (Institute of Transportation Engineers [ITE], 2017)

Trip Distribution

The geographic distribution of trips generated by the proposed Project is dependent on characteristics of the street system serving the Project site and the level of accessibility of routes to and from the proposed Project site. Based on the likely origins and destinations of Project traffic, which includes residents, visitors and employees, the majority of Project traffic is anticipated to utilize the intersection of Valley View Street and San Rafael Drive to access the Project. Other routes have limited access or connectivity to the surrounding street network. The forecasted traffic to be generated by the proposed Project was assigned to the street network using the distribution pattern described in **Figure 1.**

Intersection Analysis

Study Area

Three intersections were selected for intersection analysis based on the Project trip assignment, knowledge of the study area, and input from staff at the City of Buena Park. Weekday traffic counts were collected on Tuesday, December 17, 2019 during the AM peak (7:00-9:00 AM), PM school afternoon peak (1:30-3:30PM), and PM peak (4:00-6:00PM). Weekend counts were collected on Sunday, December 15, 2019 during the church ingress and egress (10:00AM-2:00PM). These count sheets are provided in **Appendix A.** The following three intersections, as shown on **Figure 2**, were analyzed in this transportation assessment:

1. Valley View Street & San Rafael Drive/Los Molinos Road (signalized)
2. Valley View Frontage Street & Project Driveway 1 (unsignalized)
3. Valley View Frontage Street & Project Driveway 2 (unsignalized)

Analysis Scenarios

The following two scenarios were analyzed as part of this study:

- Existing (2019) Conditions: Existing traffic volumes and lane geometries were used to evaluate Existing (2019) Conditions, as shown on **Figure 3.**
- Existing (2019) Plus Project Conditions: Project traffic generated by the proposed project was added to existing traffic volumes to evaluate Existing (2019) Plus Project Conditions, as shown in **Figure 4.**

Level of Service Analysis

Intersection Capacity Utilization methodology was used to evaluate signalized intersections, while the *Highway Capacity Manual* (HCM) *6th Edition* (Transportation Research Board, 2017) methodology was used to evaluate unsignalized intersections, consistent with City of Buena Park standards. **Table 3** summarizes the intersection operations for the Existing Conditions. As shown in **Table 3,** all intersections currently operate acceptably at LOS A. LOS calculation reports are provided in **Appendix B**.

TABLE 3 – EXISTING CONDITIONS INTERSECTION ANALYSIS

Intersection	Weekday						Weekend	
	AM Peak		Midday Peak		PM Peak		Midday Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Valley View St/ San Rafael Dr/Los Molinos Rd	0.386	A	0.383	A	0.332	A	0.341	A
2. Valley View Frontage Rd/ Project Driveway N	<3.0	A	8.4	A	8.4	A	8.7	A
3. Valley View Frontage Rd/ Project Driveway S	<3.0	A	8.8	A	8.7	A	9.2	A

Notes:
1. ICU methodology was used for the signalized intersection.
2. HCM 6th Edition methodology was used for unsignalized intersections.

Source: Fehr & Peers, 2020

Table 4 summarizes the Existing Plus Project conditions intersection LOS. Similar to the Existing Conditions, all intersections operate acceptably at LOS A. This analysis indicates that there is

capacity available to accommodate additional traffic generated by the project site and implementation of the Project will not degrade traffic operations to an unacceptable LOS.

TABLE 4 – EXISTING PLUS PROJECT CONDITIONS INTERSECTION ANALYSIS

Intersection	Weekday						Weekend	
	AM Peak		Noon Peak		PM Peak		Noon Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Valley View St/ San Rafael Dr/Los Molinos Rd	0.389	A	0.335	A	0.383	A	0.354	A
2. Valley View Frontage Rd/ Project Driveway N	8.5	A	8.7	A	8.4	A	8.8	A
3. Valley View Frontage Rd/ Project Driveway S	8.8	A	8.8	A	8.7	A	9.2	A

Notes:
1. ICU methodology was used for the signalized intersection.
2. HCM 6th Edition methodology was used for unsignalized intersections.

Source: Fehr & Peers, 2020

Vehicle Miles Traveled (VMT) Analysis

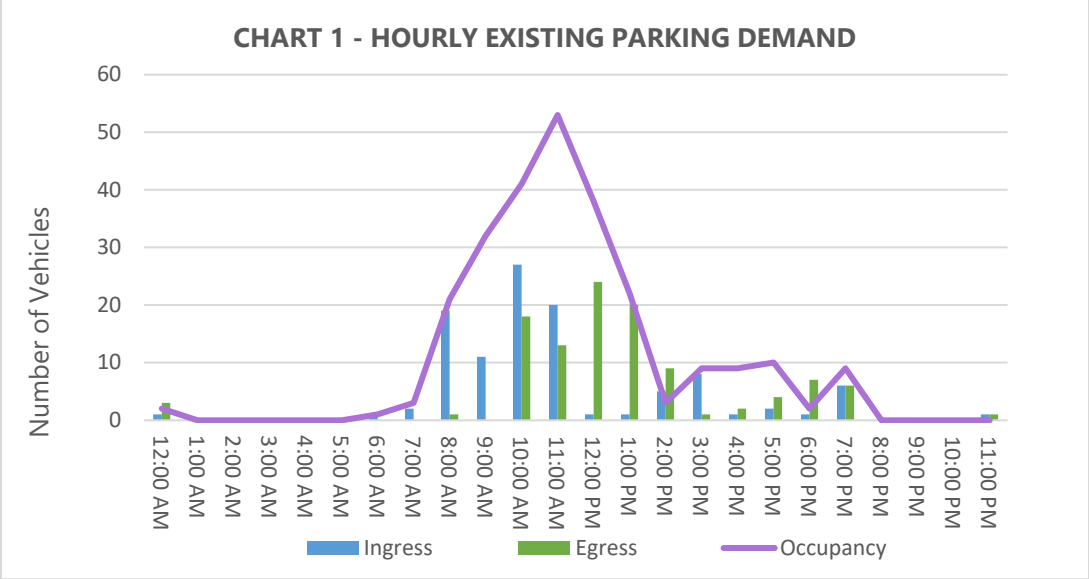
SB 743, signed by the Governor in 2013, changed the way transportation impacts are identified. Specifically, the legislation has directed the Office of Planning and Research (OPR) to look at different metrics for identifying transportation as a CEQA impact. The Final OPR guidelines, released in November 2017, identify vehicle miles of travel (VMT) as the preferred metric for traffic impact analysis moving forward. The City of Buena Park adopted Traffic Impact Study (TIS) guidelines in June 2020 that address VMT impact criteria and analysis methodology. These guidelines were applied to the Project in this assessment.

Projects are evaluated under a screening process as the first step of VMT assessment. The screening process determines if full VMT analysis is required for the Project. Specific project types, such as affordable housing projects, are presumed to have a less-than-significant impact and can be screened from VMT analysis. Based on the City's guidelines, the Project can be screened out from a full VMT assessment as it is assumed to result in a less-than-significant transportation impact.

PARKING DEMAND

With the development of the proposed Project, the existing church and proposed residential facility will share a total of 128 parking spaces. The existing church currently contains 121 parking spaces and plans to reduce their parking lot to 80 spaces with the development of the project. The project proposes the development of 48 parking spaces to accommodate residents, visitors, and staff.

Fehr & Peers coordinated a survey of the existing church site to establish the existing parking demand. A 24-hour parking survey was conducted on Sunday, December 15, 2019 to account for the peak business day for the church. Parking data collection is provided in **Appendix C. Chart 1** summarizes the hourly parking demand during the collection period. The maximum demand for the site was 53 vehicles at 11 AM.



ITE Parking Generation Manual 5th Edition (2017) parking rates were used to estimate the future demand for the project. ITE parking generation rates for senior affordable housing (ITE Code 232) were used and the estimates are presented in **Table 5**. At peak parking demand, the Project is expected to utilize 25 parking spaces on a weekday and 28 spaces on a Sunday. Based on these estimates, approximately 30% of the Project's parking supply will still be available if the Project provides 48 parking stalls. Based on this estimate, the Project site can efficiently serve the Project's parking demand with the proposed parking supply.

TABLE 5: PARKING DEMAND RATES AND ESTIMATES

Peak Hour	ITE Code	Quantity	Units	Rate	Estimates
Weekday	232	66	DU	0.44	25
Sunday				0.42	28

Notes:
1. *DU = Dwelling Units*
2. *85th percentile parking demand rates were used to calculate peak parking demand.*

Source: Parking Generation, 5th Edition (Institute of Transportation Engineers [ITE], 2017)

The expected future parking demand and utilization for the Project site and church are summarized in **Table 6.** In order to be conservative, we assumed that Project's estimated demand would remain the same between 8 AM and 5PM. The Project's estimated demand was added to existing parking demand for the church to estimate the future parking demand for the site. At peak demand on Sunday, it is estimated that approximately 37% of the total parking supply is still available. Based on this analysis, we estimate that the parking demand for the entire site can be accommodated with the proposed parking supply.

TABLE 6 – FUTURE PARKING UTILIZATION

Type	Capacity	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM
Project Demand	48	28	28	28	28	28	28	28	28	28	28
Church Demand	80	21	32	41	53	38	22	3	9	9	10
Total Demand	128	49	60	69	81	66	50	31	37	37	38
Demand (%)		38%	47%	54%	63%	52%	39%	24%	29%	29%	30%

Source: Fehr & Peers, 2020

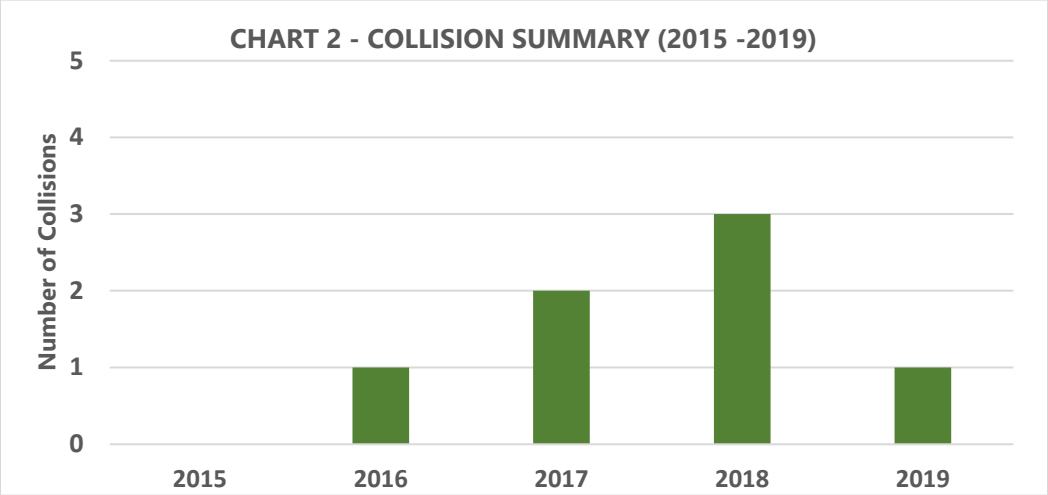
CIRCULATION REVIEW

The City of Buena Park received comments from the community regarding existing circulation at the intersection of Valley View Street at San Rafael Drive and the frontage roads. Most concerns centered around the intersection's operation and safety issues, especially during peak hours (typical commute hours, school let out, and church service on weekends). Though the addition of the Project will not result in deficient traffic operations, the City requested that the Project evaluate circulation within the project area and present options to address existing community concerns.

Fehr & Peers has observed the circulation at the intersection and developed recommendations to improve circulation within the area. Video footage was collected during the turning movement count data collection utilized for the LOS analysis and reviewed for this study.

Collision Summary

Collision data was reviewed for the intersection of San Rafael Drive and Valley View Street. California law enforcement updates the Statewide Integrated Traffic Records System (SWITRS) records with collision data. The latest SWITRS data between January 1, 2015 and December 31, 2019 was used to analyze collisions within the area. **Chart 2** indicates that seven traffic collision have occurred near the intersection within the last five years. The primary collision type in the study area is broadside collision (43%), followed by vehicle/pedestrian collisions (29%). Based on the latest available data, collisions steadily increased through 2018 and reduced in 2019. However, the limited sample size is not statistically significant. Broadside collisions can generally be contributed to driving errors due to left turns, which could be attributed to the permissive east/west phasing at the intersection, but the data is too broad to draw significant conclusions. Please note that SWITRS indicates that 2018 and 2019 data is provisional and subject to change.



Intersection Treatments

The irregular designed intersection of San Rafael Drive and Valley View Street presents some challenges for drivers maneuvering through the intersection. Fehr & Peers reviewed the recordings and observed issues and trends at the intersection. We have developed four intersection treatment options that can improve circulation based on the observations noted. Implementation of each treatment depends on available funding sources and the City's discretion. The following intersection treatment options are accompanied by graphics exhibiting drivers' behavior at this intersection.

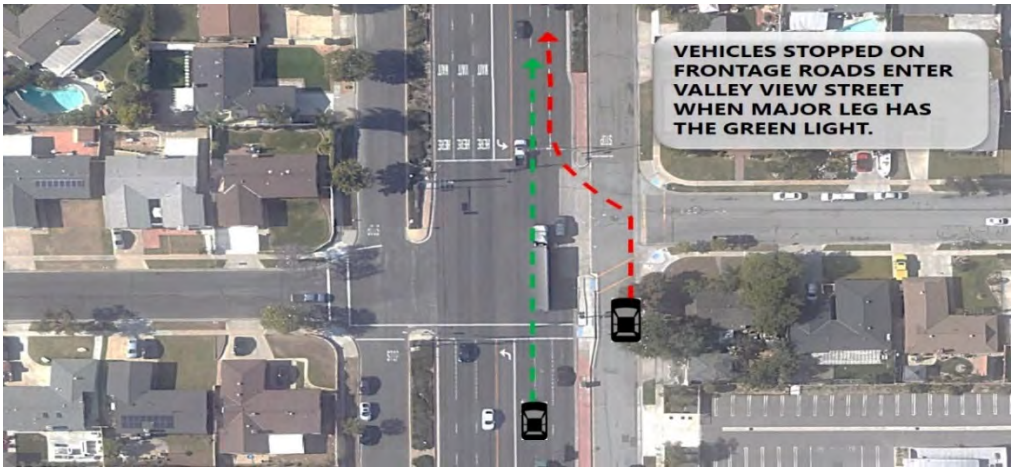
We developed four options below that would increase safety at the intersection. The options address different behaviors observed at the intersection, though some accomplish similar objectives. Any of these treatments could be implemented to improve circulation at the intersection.

Option 1 - Convert Frontage Roads to One-Way Streets

The Valley View frontage roads at the intersections of San Rafael Drive and Los Molinos Drive are stop-controlled, while the remainder of the intersection operates under the control of a traffic signal. We observed drivers confused by the two different types of traffic controls and not following designated traffic controls appropriately. Vehicles on the frontage roads were observed entering Valley View Street when the major street (Valley View) had the green light, as shown on **Exhibit A**.

This creates potential conflicts zones for vehicles along both roadways. Due to the irregular configuration of the intersection, drivers on the frontage road would have to turn their head more than 90 degrees to check for clearance on Valley View Street before entering the intersection. The site distance needed to complete this maneuver can create issues for drivers. As the project is located along Valley View frontage road, residents and visitors may experience the same confusion and follow existing driver behaviors, increasing conflict potential.

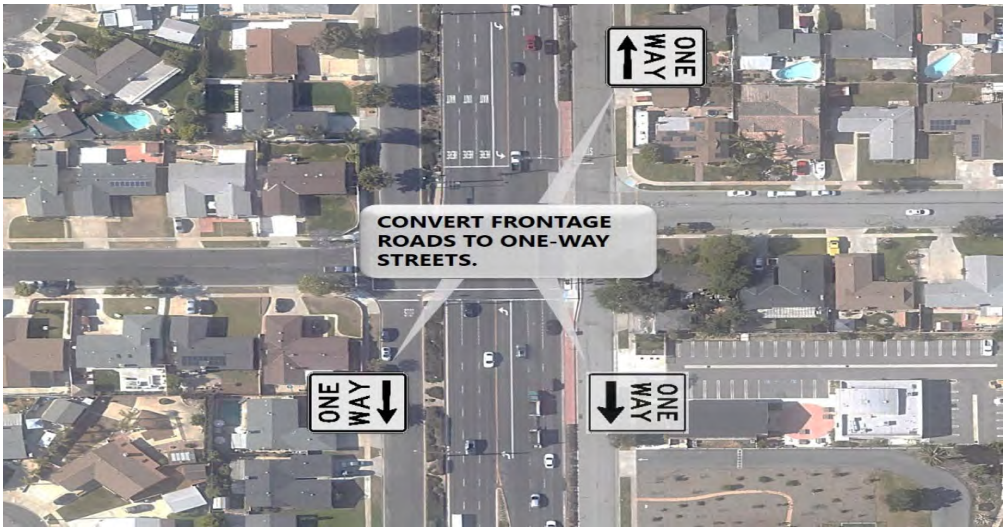
EXHIBIT A – OBSERVATION (VEHICLE ON FRONTAGE ROAD OBSERVE MAJOR STREET GREEN LIGHT)



Treatment Option 1 includes converting the frontage roads to one-way streets and diverting the flow of traffic along the frontage roads away from the signalized intersection, as shown on **Exhibit B**. The frontage roads would only provide ingress access from San Rafael Drive to the frontage roads, making the stop signs unnecessary as traffic would not be permitted towards San Rafael Drive. This would result in the rerouting of project traffic and existing neighborhood traffic. However, the project is anticipated to generate a low number of trips per day and the traffic generated by the existing houses and churches affected by the rerouting is also minimal. The rerouted traffic should not result in any traffic operation impacts to the surrounding network.

This treatment would improve traffic flow, reduce conflict areas, and eliminate difficult turning maneuvers. Vehicles making a northbound right U-turn onto the frontage road will have the area necessary to complete the turn, reducing the conflict observed on the frontage road. One drawback to this recommendation is that it cannot be implemented along the Los Molinos Drive southbound frontage road. This roadway terminates in a cul-de-sac without any additional access for vehicles. However, the implementation of this treatment along Valley View road could benefit the project and improve circulation near the site.

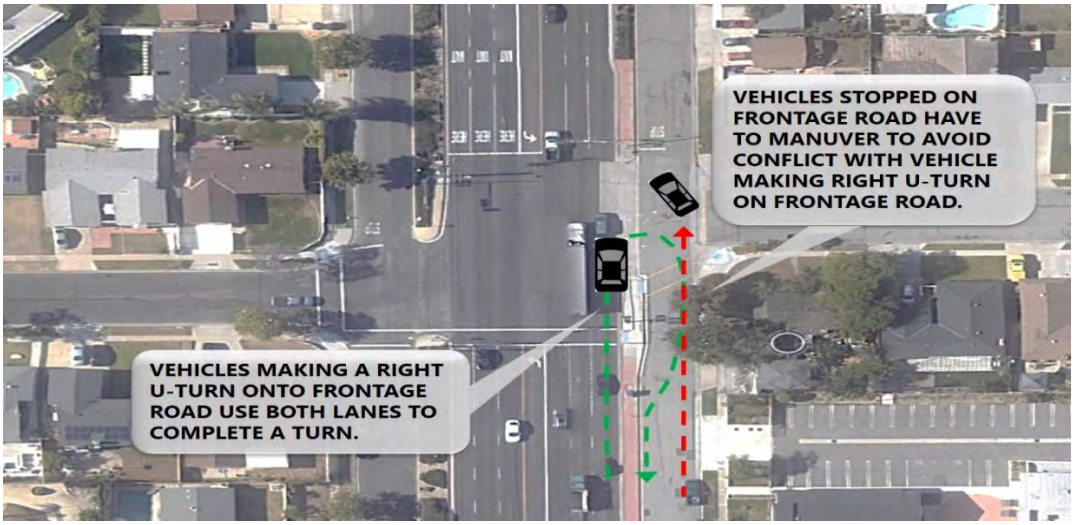
EXHIBIT B – ONE-WAY STREET CONVERSION



Option 2 - Restrict U-Turn Movements

Vehicles making a northbound right U-turn onto Valley View frontage road require both lanes to complete the turn which could result in a head-on collision. Vehicles stopped along the frontage road were observed entering the middle of an intersection to avoid conflicts with traffic attempting to make a right U-turn. As a result, vehicles avoiding conflict may block the intersection, as shown in **Exhibit C**. Due to the location of the project site, some vehicles may choose to make a right U-turn to access the project and may experience the same difficulty completing a right U-turn.

EXHIBIT C – OBSERVATION (DIFFICULTY COMPLETING RIGHT U-TURN)



Treatment option 1 (one-way treatment) precludes the need to restrict U-turn movements. If Treatment Option 1 is not selected, Treatment Option 2a could be implemented restricting right U-turn movements from Valley View Street onto the frontage roads. Installation of this improvement would require adding no U-turn signs on Valley View Street. As an extra measure to discourage right U-turn movements, we also proposed Treatment Option 2b which includes extending the median on the frontage road to make the turning movement difficult for vehicles to complete, as shown in **Exhibit D.** Treatment Option 2b can be implemented along with Treatment Option 2a, but it should not be implemented by itself. These treatment options would reduce conflicts for vehicles stopped along the frontage road and vehicles blocking the intersection

Drivers who were forecast to make the northbound right U-turn on the Valley View frontage road would still be provided access to the project site via intersections along Crescent Avenue. Similar to option 2a, the low number of trips affected by the rerouting is also minimal and would likely not result in any traffic operation impacts to the surrounding network.

Please note that restricting right U-turns would not be necessary if the frontage road was converted to one-way ingress only.

EXHIBIT D – RESTRICT U-TURN MOVEMENTS

Option 3- Modify Existing Median to include a Right-Turn Lane

Treatment Option 3 provides another solution to help alleviate the difficult northbound right U-turn at the intersection of San Rafael Drive & Valley View Street, similar to Treatment Option 2. This option includes modifying the existing median to accommodate a right-turn lane that would provide access to the Valley View frontage road near the project site, as shown in **Exhibit E**. The right-turn lane would align with the project's southern driveway. Drivers would only be allowed to make a left-turn on to the frontage road or proceed straight into the project from the turning lane.

Implementation of this treatment would require narrowing lane widths along Valley View Street or the Valley View frontage road. A "Do Not Enter" sign should be installed to discourage drivers from entering the turn lane from the Valley View frontage road. A stop sign would be required at the right-turn lane to encourage drivers to yield to traffic along the frontage road. Right-turns would be restricted for drivers utilizing the right-turn lane. The skewed intersection could create visibility challenges for drivers.

EXHIBIT E – MODIFY MEDIAN TO INCLUDE RIGHT-TURN LANE

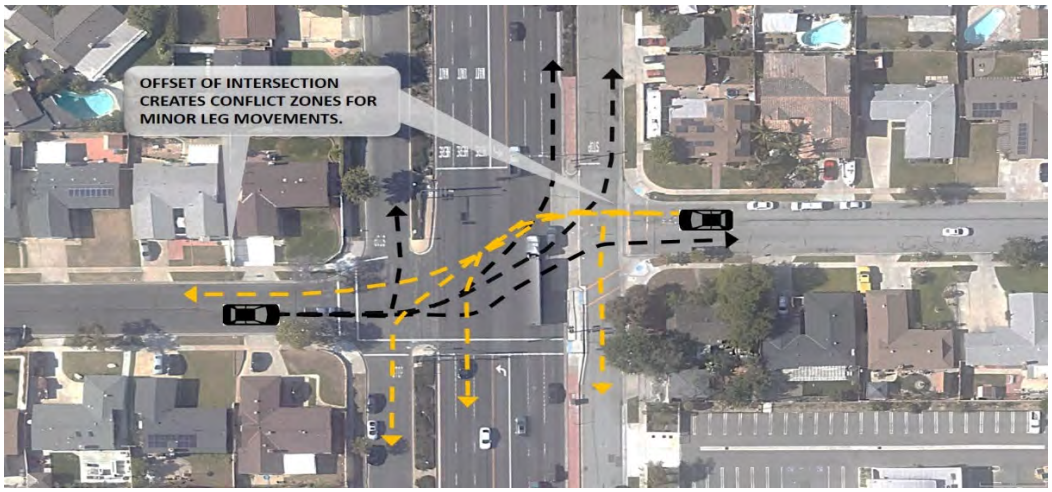
The rightmost northbound through lane along Valley View Street could be reduced from 14' to 12' to accommodate the right-turn lane. This reduction may require that the entire median between San Rafael Drive and Crescent Avenue is widen to 10' for a consistent right edge line for through traffic along Valley View Street. Lane widths along the Valley View frontage road could be reduced to accommodate 10' travel lanes. On-street parking along the frontage road may need to be restricted near the right-turn lane to accommodate this improvement.

Implementation of this treatment option would reduce right U-turns at the signalized intersection. Treatment Option 2 could be implemented along with Treatment Option 3. This improvement helps improve circulation and provides direct access to the project driveway.

Option 4- Traffic Signal Split Phasing on Minor Legs

Current traffic signal phasing at the intersection is permissive east-west and allows both minor legs to proceed through the intersection simultaneously. Due to the offset and irregular configuration of the intersection, it is difficult to predict the opposing vehicles path of travel (the vehicle making a left-turn could be accessing Valley View Street or the frontage road), as shown in **Exhibit F**. A driver exiting from the San Rafael Drive has three options for completing a left-turn: the driver could turn onto the Valley View frontage road, Valley View Street, or Los Molinos frontage road. A vehicle making an eastbound left-turn was observed taking an obscure path (driving closer to the westbound frontage road) in order to avoid a vehicle attempting to make a westbound left-turn onto Valley View Street.

EXHIBIT F – EXISTING MINOR LEG SIGNAL TIMING



The City has expressed similar concerns regarding circulation at this intersection based on comments from the community. Drivers leaving the project may also experience the same issues. Permissive signal phasing creates potential conflict zones for vehicles on the minor leg.

Treatment Option 4 includes modifying the signal phasing to provide split phasing for the eastbound and westbound legs of the intersection, as shown in **Exhibit G.** With this recommendation, the minor leg movements would enter the intersection separately. This can reduce conflict movements created by the offset and irregular intersection configuration.

Implementation of this treatment would require replacing four of the existing signal heads along the minor legs and updating the signal timing at the intersection. However, this signal modification could retain the existing traffic signal poles and mast arms.

One drawback to this recommendation is that it would affect signal timing coordination along the Valley View corridor because it requires more green time for the minor legs. This would require timing changes throughout the coordinated corridor. Pedestrian traffic along the intersection can also increase delay at an intersection. As shown in **Table 7** below, pedestrian activity is relatively low at the intersection.

TABLE 7 – EXISTING WEEKDAY PEDESTRIAN VOLUMES

Leg of Intersection	AM Peak	Noon Peak	PM Peak
South Leg (Valley View Road)	2	3	1
East Leg (Valley View Frontage Road)	1	8	3
West Leg (Los Molinos Road)	3	6	4

Source: Fehr & Peers, 2020

We performed a preliminary evaluation of split phasing signal timing at the intersection. This analysis, as shown in **Table 8,** suggest that including split phasing at the intersection will not significantly decrease level of service.

TABLE 8 – EXISTING PLUS PROJECT CONDITIONS INTERSECTION ANALYSIS

Scenarios	AM Peak		Noon Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS
Without Split Phasing	6.5	A	5.4	A	5.8	A
With Split Phasing	12.0	B	9.3	A	9.9	A

Notes:

1. HCM 6th Edition methodology was used for signalized intersection.

Source: Fehr & Peers, 2020

The concerns regarding circulation and the signal timing are existing conditions of the intersection. This project proposes to add a small number of trips to the intersection. These trips are not expected to impact circulation or further exacerbate the operational issues at the intersection.

EXHIBIT G – SPLIT PHASE SIGNAL TIMING

Please note that we also evaluated the option of adding protective left-turn phasing to the minor legs of the intersection. In order to accommodate protected left-turn phasing, the San Rafael Drive and Los Molinos Drive would need to be restriped to include a left-turn lane. Given the irregular geometry of the intersection, there is no area to stripe a proper left turn lane. The addition of this potential left-turn would also further offset the shared through-right-turn lane, which could further create potential conflict zones for vehicles maneuvering through the intersection. As such, we believe that the more appropriate treatment option would be to implement split phasing at this intersection.

Intersection Treatment Summary

The intersection treatments presented above are summarized in **Table 9.** This table includes estimated cost ranges for each improvement. Treatment Option 1 (One-way street conversion) and Treatment Option 2 (Restrict right U-turn movements) are not recommended to be implemented together as the installation of Treatment Option 1 precludes the need for Treatment Option 2. The other treatment options could be implemented by themselves or implemented together as complementary treatment options. Implementation and possible phasing of these treatments depend on available funding, though each treatment installation is at the discretion of the City's Traffic Engineer.

TABLE 9 – INTERSECTION TREATMENTS SUMMARY

Improvements	Descriptions	Issue Addressed	Drawbacks	Cost[1]
1. Convert Frontage Road to One Way Streets	• Restricts two-way movement along frontage streets • Add one-way streets signs • Requires additional infrastructure/treatments throughout one-way street for compliance	• Improves traffic flow • Reduces conflict areas • Eliminates difficult turn movements	• Improvement cannot be installed along both sides of Los Molinos Frontage Road	$20,000-$60,000
2a. Restrict U-turn Movements with Signage Only	• Restrict right U-turn movement • Add No U-turn signs	• Reduce conflicting movements	• Concerns with EB and WB traffic not addressed	$1,000-$2,000
2b. Restrict U-Turn Movements with Signage and Median Extension	• Restrict right U-turn movement • Add No U-turn signs • Extend frontage road median to discourage U-turns	• Reduce conflicting movements	• Concerns with EB and WB traffic not addressed	$15,000-$30,000
3. Modify Existing Median to include a Right-Turn Lane	• Add 10' right-turn lane to existing median on Valley View that aligns with the project driveway • Reduce the rightmost northbound through lane from 14' to 12' ***or*** reduce lane widths along Valley View frontage Road	• Eliminates difficult turn movement	• Concerns with EB and WB traffic not addressed	$24,000 - $75,000
4. Split Phasing on the Minor Legs (Los Molinos Dr and San Rafael Dr)	• Updates Signal timing at intersections • Add signal heads to minor legs	• Addresses concerns with EB and WB traffic • Reduces conflict areas	• Signal coordination along the corridor may need to may need to be adjusted	$50,000-$100,000

Notes:

1. Planning-level cost estimates only. Additional engineering required.

Source: Fehr & Peers, 2020

Construction Elements

Each treatment option has various construction requirements associated with the development of that project feature. The City of Buena Park will have the final decision as to which treatment options will be implemented following the completion of environmental documentation. Reconfiguration of the intersection of Valley View Road and San Rafael Drive and the surrounding roadways could require the following construction activity:

- Treatment Option 1 (Convert frontage road to one-way street)
    - Convert frontage road to one-way street by constructing median extensions
    - Assumes excavation of 800 square-foot area and construction of 800 square-foot area
- Treatment Option 2b (Restrict U-Turn Movements with Signage and Median Extension)
    - Extension of existing median to discourage northbound right U-turns
    - Assumes excavation of 480 square-foot area and construction of 480 square-foot area
- Treatment Option 3 (Modify Existing Median to include a Right-Turn Lane)
    - Excavation and removal of existing median; relocation of the existing lighting pole; and concrete and asphalt installation of right-turn lane into frontage road
    - Assumes excavation of 1,920 cubic-foot volume and construction of 3,120 cubic-foot volume

The worst case design alternatives were identified for the CEQA design alternatives based on construction activity and the highest anticipated truck traffic. The combination of treatment options 1 and 3 or treatment options 2b and 3 represent the worst case design alternative at the intersection of Valley View Road and San Rafael Drive and the surrounding roadways.

Please note that the proposed options presented in this study are conceptual in nature and specific design of these elements has not been completed. The construction activities noted above represent worst-case (maximum) construction scenario for environmental documentation purposes.

Please note that Option 2a and Option 4 would require negligible construction activity that is similar to standard maintenance. These treatment options, as described above, could be paired with the worst-case scenario with no assumed additional construction related activity.

CONCLUSION

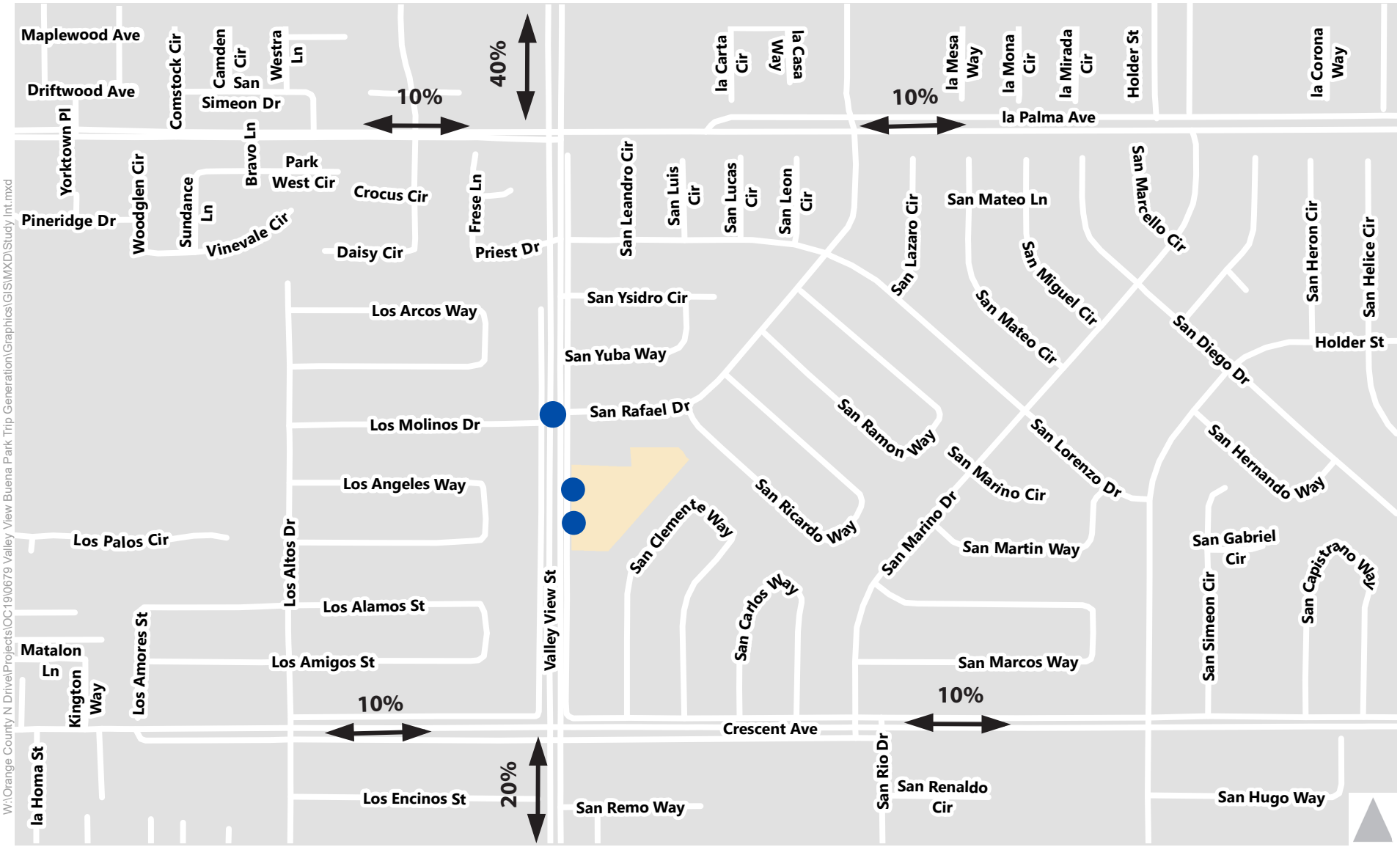
Level of service analysis indicates that the addition of the project will not impact traffic congestion within the surrounding area. The existing on-site parking demand uses less than 50% of its current supply during the peak demand, and the proposed project would also provide adequate parking to accommodate proposed and existing uses.

Circulation and driver behavior were observed at the intersection of Valley View Street and San Rafael Drive. Observations indicated that some vehicles experience difficulty maneuvering through the intersection and that the awkward configuration can create conflict zones. Several intersection treatments were developed as options that can be implemented to improve circulation and promote safety within the area.

We hope this information is helpful. If you have any questions or concerns, please do not hesitate to contact us at (949)-308-6313.

Attachments

Figure 1 – Trip Distribution
Figure 2 – Study Area
Figure 3 – Existing Conditions Traffic Volumes
Figure 4 – Existing Plus Project Conditions Traffic Volumes
Appendix A - Traffic Counts
Appendix B - Level of Service Reports
Appendix C – Parking Data

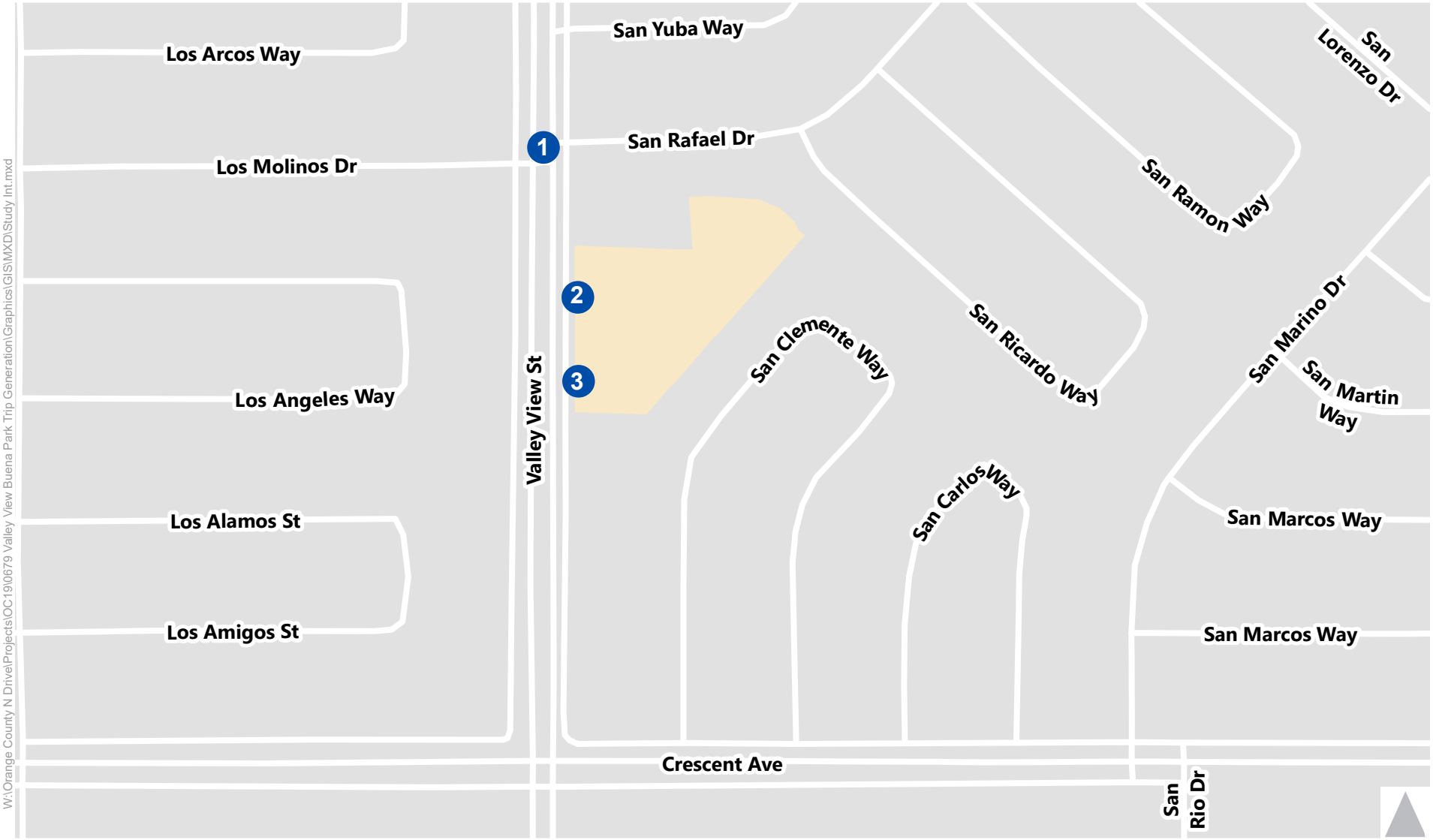


Study Intersections

Project Site

Figure 1

Trip Distribution



Study Intersections

Project Site

Figure 2

Study Area

Project Title: **Valley View Senior Housing Transportation Assessment**
Intersection: **1 - Valley View St San Rafael Dr**
Description: **Existing Plus Project**

Thru Lane:	1700 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	10 %	Lost Time (% of cycle) :	5
ITS:	5 %	V/C Round Off (decs.) :	2
OLA Movements :			
FF Movements:			

Date/Time: **AM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	42	0	0.000		N-S(1):	0.280
	TH	3.00	1,506	5,355	0.290	*	N-S(2):	0.290 *
	LT	1.00	17	1,680	0.010		E-W(1):	0.030
Westbound	RT	0.00	39	0	0.000		E-W(2):	0.100 *
	TH	1.00	18	1,785	0.050	*		
	LT	0.00	36	1,680	0.020		V/C:	0.390
Northbound	RT	0.00	13	0	0.000		Lost Time:	0.050
	TH	3.00	1,457	5,355	0.270		ITS:	-0.050
	LT	1.00	3	1,680	0.000	*		
Eastbound	RT	0.00	3	0	0.000		ICU:	0.390
	TH	1.00	13	1,785	0.010			
	LT	0.00	78	1,680	0.050	*	LOS:	A

Date/Time: **PM PEAK HOUR**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	84	0	0.000		N-S(1):	0.310
	TH	3.00	1,588	5,355	0.310	*	N-S(2):	0.320 *
	LT	1.00	44	1,680	0.030		E-W(1):	0.030
Westbound	RT	0.00	34	0	0.000		E-W(2):	0.060 *
	TH	1.00	5	1,785	0.040	*		
	LT	0.00	36	1,680	0.020		V/C:	0.380
Northbound	RT	0.00	31	0	0.000		Lost Time:	0.050
	TH	3.00	1,485	5,355	0.280		ITS:	-0.050
	LT	1.00	11	1,680	0.010	*		
Eastbound	RT	0.00	8	0	0.000		ICU:	0.380
	TH	1.00	12	1,785	0.010			
	LT	0.00	37	1,680	0.020	*	LOS:	A

* - Denotes critical movement

Project Title: **Valley View Senior Housing Transportation Assessment**
Intersection: **2 - Valley View St San Rafael Dr**
Description: **Existing Plus Project**

Thru Lane:	1700 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	10 %	Lost Time (% of cycle) :	5
ITS:	5 %	V/C Round Off (decs.) :	2
OLA Movements :			
FF Movements:			

Date/Time: **Noon Peak Hour Weekday**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C		ICU ANALYSIS	
Southbound	RT	0.00	62	0	0.000		N-S(1):	0.250
	TH	3.00	1,390	5,355	0.270	*	N-S(2):	0.280 *
	LT	1.00	11	1,680	0.010		E-W(1):	0.030
Westbound	RT	0.00	25	0	0.000		E-W(2):	0.060 *
	TH	1.00	10	1,785	0.040	*		
	LT	0.00	34	1,680	0.020		V/C:	0.340
Northbound	RT	0.00	22	0	0.000		Lost Time:	0.050
	TH	3.00	1,242	5,355	0.240		ITS:	-0.050
	LT	1.00	12	1,680	0.010	*		
Eastbound	RT	0.00	7	0	0.000		ICU:	0.340
	TH	1.00	10	1,785	0.010			
	LT	0.00	31	1,680	0.020	*	LOS:	A

* - Denotes critical movement

Project Title: **Valley View Senior Housing Transportation Assessment**
Intersection: **3 - Valley View St San Rafael Dr**
Description: **Existing Plus Project**

Thru Lane:	1700 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	10 %	Lost Time (% of cycle) :	5
ITS:	5 %	V/C Round Off (decs.) :	2
OLA Movements :			
FF Movements:			

Date/Time: **Sunday Peak Period**

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	46	0	0.000	N-S(1):	0.300 *
	TH	3.00	1,327	5,355	0.260	N-S(2):	0.270
	LT	1.00	22	1,680	0.010 *	E-W(1):	0.020
Westbound	RT	0.00	31	0	0.000	E-W(2):	0.050 *
	TH	1.00	3	1,785	0.020 *		
	LT	0.00	26	1,680	0.020	V/C:	0.350
Northbound	RT	0.00	23	0	0.000	Lost Time:	0.050
	TH	3.00	1,512	5,355	0.290 *	ITS:	-0.050
	LT	1.00	11	1,680	0.010		
Eastbound	RT	0.00	7	0	0.000	ICU:	0.350
	TH	1.00	1	1,785	0.000		
	LT	0.00	42	1,680	0.030 *	LOS:	A

* - Denotes critical movement

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	38	0	0	14
Future Vol, veh/h	0	0	38	0	0	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	0	0	41	0	0	15

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	56	41	0	-	-	-
Stage 1	41	-	-	-	-	-
Stage 2	15	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	952	1030	-	0	0	-
Stage 1	981	-	-	0	0	-
Stage 2	1008	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	952	1030	-	-	-	-
Mov Cap-2 Maneuver	952	-	-	-	-	-
Stage 1	981	-	-	-	-	-
Stage 2	1008	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	0	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	38	2	0	14
Future Vol, veh/h	0	0	38	2	0	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	0	0	41	2	0	15

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	57	42	0	0	43	0
Stage 1	42	-	-	-	-	-
Stage 2	15	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	950	1029	-	-	1566	-
Stage 1	980	-	-	-	-	-
Stage 2	1008	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	950	1029	-	-	1566	-
Mov Cap-2 Maneuver	950	-	-	-	-	-
Stage 1	980	-	-	-	-	-
Stage 2	1008	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1566	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	24	0	0	19
Future Vol, veh/h	0	3	24	0	0	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	0	3	26	0	0	21

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	47	26	0	-	-	-
Stage 1	26	-	-	-	-	-
Stage 2	21	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	963	1050	-	0	0	-
Stage 1	997	-	-	0	0	-
Stage 2	1002	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	963	1050	-	-	-	-
Mov Cap-2 Maneuver	963	-	-	-	-	-
Stage 1	997	-	-	-	-	-
Stage 2	1002	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	1050	-
HCM Lane V/C Ratio	-	0.003	-
HCM Control Delay (s)	-	8.4	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	0	24	1	3	16
Future Vol, veh/h	1	0	24	1	3	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	1	0	26	1	3	17

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	50	27	0	0	27	0
Stage 1	27	-	-	-	-	-
Stage 2	23	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	959	1048	-	-	1587	-
Stage 1	996	-	-	-	-	-
Stage 2	1000	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	957	1048	-	-	1587	-
Mov Cap-2 Maneuver	957	-	-	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	998	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	1.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	957	1587	-
HCM Lane V/C Ratio	-	-	0.001	0.002	-
HCM Control Delay (s)	-	-	8.8	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	23	0	0	34
Future Vol, veh/h	0	5	23	0	0	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	0	5	25	0	0	37

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	62	25	0	-	-	-
Stage 1	25	-	-	-	-	-
Stage 2	37	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	944	1051	-	0	0	-
Stage 1	998	-	-	0	0	-
Stage 2	985	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	944	1051	-	-	-	-
Mov Cap-2 Maneuver	944	-	-	-	-	-
Stage 1	998	-	-	-	-	-
Stage 2	985	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	1051	-
HCM Lane V/C Ratio	-	0.005	-
HCM Control Delay (s)	-	8.4	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	0	-

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	3	21	2	5	26
Future Vol, veh/h	6	3	21	2	5	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	7	3	23	2	5	28

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	62	24	0	0	25	0
Stage 1	24	-	-	-	-	-
Stage 2	38	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	944	1052	-	-	1589	-
Stage 1	999	-	-	-	-	-
Stage 2	984	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	941	1052	-	-	1589	-
Mov Cap-2 Maneuver	941	-	-	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	981	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	1.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	975	1589	-
HCM Lane V/C Ratio	-	-	0.01	0.003	-
HCM Control Delay (s)	-	-	8.7	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	6	38	0	3	14
Future Vol, veh/h	0	6	38	0	3	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	0	7	41	0	3	15

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	62	41	0	-	41	0
Stage 1	41	-	-	-	-	-
Stage 2	21	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	944	1030	-	0	1568	-
Stage 1	981	-	-	0	-	-
Stage 2	1002	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	942	1030	-	-	1568	-
Mov Cap-2 Maneuver	942	-	-	-	-	-
Stage 1	981	-	-	-	-	-
Stage 2	1000	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.5	0	1.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	1030	1568	-
HCM Lane V/C Ratio	-	0.006	0.002	-
HCM Control Delay (s)	-	8.5	7.3	-
HCM Lane LOS	-	A	A	-
HCM 95th %tile Q(veh)	-	0	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	0	38	4	0	14
Future Vol, veh/h	2	0	38	4	0	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	0	41	4	0	15

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	58	43	0	0	45	0
Stage 1	43	-	-	-	-	-
Stage 2	15	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	949	1027	-	-	1563	-
Stage 1	979	-	-	-	-	-
Stage 2	1008	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	949	1027	-	-	1563	-
Mov Cap-2 Maneuver	949	-	-	-	-	-
Stage 1	979	-	-	-	-	-
Stage 2	1008	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	949	1563	-
HCM Lane V/C Ratio	-	-	0.002	-	-
HCM Control Delay (s)	-	-	8.8	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	3	24	0	3	19
Future Vol, veh/h	6	3	24	0	3	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	7	3	26	0	3	21

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	53	26	0	-	26	0
Stage 1	26	-	-	-	-	-
Stage 2	27	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	955	1050	-	0	1588	-
Stage 1	997	-	-	0	-	-
Stage 2	996	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	953	1050	-	-	1588	-
Mov Cap-2 Maneuver	953	-	-	-	-	-
Stage 1	997	-	-	-	-	-
Stage 2	994	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	983	1588	-
HCM Lane V/C Ratio	-	0.01	0.002	-
HCM Control Delay (s)	-	8.7	7.3	-
HCM Lane LOS	-	A	A	-
HCM 95th %tile Q(veh)	-	0	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	0	24	6	3	16
Future Vol, veh/h	3	0	24	6	3	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	3	0	26	7	3	17

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	53	30	0	0	33	0
Stage 1	30	-	-	-	-	-
Stage 2	23	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	955	1044	-	-	1579	-
Stage 1	993	-	-	-	-	-
Stage 2	1000	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	953	1044	-	-	1579	-
Mov Cap-2 Maneuver	953	-	-	-	-	-
Stage 1	993	-	-	-	-	-
Stage 2	998	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	1.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	953	1579	-
HCM Lane V/C Ratio	-	-	0.003	0.002	-
HCM Control Delay (s)	-	-	8.8	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	23	0	0	34
Future Vol, veh/h	0	5	23	0	0	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	0	5	25	0	0	37

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	62	25	0	-	-	-
Stage 1	25	-	-	-	-	-
Stage 2	37	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	944	1051	-	0	0	-
Stage 1	998	-	-	0	0	-
Stage 2	985	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	944	1051	-	-	-	-
Mov Cap-2 Maneuver	944	-	-	-	-	-
Stage 1	998	-	-	-	-	-
Stage 2	985	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.4	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	WBLn1	SBT
Capacity (veh/h)	-	1051	-
HCM Lane V/C Ratio	-	0.005	-
HCM Control Delay (s)	-	8.4	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	0	-

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	3	21	2	5	26
Future Vol, veh/h	6	3	21	2	5	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	7	3	23	2	5	28

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	62	24	0	0	25	0
Stage 1	24	-	-	-	-	-
Stage 2	38	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	944	1052	-	-	1589	-
Stage 1	999	-	-	-	-	-
Stage 2	984	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	941	1052	-	-	1589	-
Mov Cap-2 Maneuver	941	-	-	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	981	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	1.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	975	1589	-
HCM Lane V/C Ratio	-	-	0.01	0.003	-
HCM Control Delay (s)	-	-	8.7	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	12	37	1	2	38
Future Vol, veh/h	5	12	37	1	2	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	5	13	40	1	2	41

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	86	41	0	0	41	0
Stage 1	41	-	-	-	-	-
Stage 2	45	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	915	1030	-	-	1568	-
Stage 1	981	-	-	-	-	-
Stage 2	977	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	914	1030	-	-	1568	-
Mov Cap-2 Maneuver	914	-	-	-	-	-
Stage 1	981	-	-	-	-	-
Stage 2	976	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	0.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	993	1568	-
HCM Lane V/C Ratio	-	-	0.019	0.001	-
HCM Control Delay (s)	-	-	8.7	7.3	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	0	35	12	21	21
Future Vol, veh/h	2	0	35	12	21	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	0	38	13	23	23

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	114	45	0	0	51	0
Stage 1	45	-	-	-	-	-
Stage 2	69	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	882	1025	-	-	1555	-
Stage 1	977	-	-	-	-	-
Stage 2	954	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	869	1025	-	-	1555	-
Mov Cap-2 Maneuver	869	-	-	-	-	-
Stage 1	977	-	-	-	-	-
Stage 2	940	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	3.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	869	1555	-
HCM Lane V/C Ratio	-	-	0.003	0.015	-
HCM Control Delay (s)	-	-	9.2	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	12	37	1	5	38
Future Vol, veh/h	11	12	37	1	5	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	12	13	40	1	5	41

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	92	41	0	0	41	0
Stage 1	41	-	-	-	-	-
Stage 2	51	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	908	1030	-	-	1568	-
Stage 1	981	-	-	-	-	-
Stage 2	971	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	905	1030	-	-	1568	-
Mov Cap-2 Maneuver	905	-	-	-	-	-
Stage 1	981	-	-	-	-	-
Stage 2	968	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	966	1568	-
HCM Lane V/C Ratio	-	-	0.026	0.003	-
HCM Control Delay (s)	-	-	8.8	7.3	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	0	35	17	21	21
Future Vol, veh/h	4	0	35	17	21	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	4	0	38	18	23	23

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	116	47	0	0	56	0
Stage 1	47	-	-	-	-	-
Stage 2	69	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	880	1022	-	-	1549	-
Stage 1	975	-	-	-	-	-
Stage 2	954	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	867	1022	-	-	1549	-
Mov Cap-2 Maneuver	867	-	-	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	940	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	3.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	867	1549	-
HCM Lane V/C Ratio	-	-	0.005	0.015	-
HCM Control Delay (s)	-	-	9.2	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Prepared by National Data & Surveying Services

Driveway Counts

Location: St. Joseph Church
City: Buena Park

Date: 12/15/2019
Day: Sunday

15-Minute Summary

Time:	Occupancy	Northern Driveway		Southern Driveway		Totals	
Inventory:	110	Ingress	Egress	Ingress	Egress	Ingress	Egress
12:00 AM	2	0	0	0	0	0	0
12:15 AM	0	0	2	1	1	1	3
12:30 AM	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0
1:45 AM	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0
2:15 AM	0	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0
5:30 AM	0	0	0	0	0	0	0
5:45 AM	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0
6:45 AM	1	0	0	1	0	1	0
7:00 AM	1	0	0	0	0	0	0
7:15 AM	1	0	0	0	0	0	0
7:30 AM	2	0	0	1	0	1	0
7:45 AM	3	0	0	1	0	1	0
8:00 AM	4	0	0	1	0	1	0
8:15 AM	7	0	0	3	0	3	0
8:30 AM	13	0	0	7	1	7	1
8:45 AM	21	0	0	8	0	8	0
9:00 AM	24	1	0	2	0	3	0
9:15 AM	25	0	0	1	0	1	0
9:30 AM	29	0	0	4	0	4	0
9:45 AM	32	0	0	3	0	3	0
10:00 AM	34	0	0	3	1	3	1
10:15 AM	35	0	4	5	0	5	4
10:30 AM	34	1	8	7	1	8	9
10:45 AM	41	0	3	11	1	11	4
11:00 AM	46	0	5	10	0	10	5
11:15 AM	50	1	1	4	0	5	1
11:30 AM	53	0	0	3	0	3	0
11:45 AM	48	0	7	2	0	2	7
12:00 PM	38	0	10	0	0	0	10
12:15 PM	37	0	2	1	0	1	2
12:30 PM	36	0	1	0	0	0	1
12:45 PM	25	0	9	0	2	0	11
1:00 PM	22	0	3	1	1	1	4
1:15 PM	18	0	4	0	0	0	4
1:30 PM	15	0	3	0	0	0	3
1:45 PM	6	0	7	0	2	0	9
2:00 PM	3	0	4	1	0	1	4
2:15 PM	1	1	2	0	1	1	3
2:30 PM	1	0	0	0	0	0	0
2:45 PM	2	0	2	3	0	3	2
3:00 PM	4	0	0	2	0	2	0
3:15 PM	6	0	0	2	0	2	0
3:30 PM	8	0	1	3	0	3	1
3:45 PM	9	0	0	1	0	1	0
4:00 PM	9	0	0	0	0	0	0
4:15 PM	9	0	1	1	0	1	1
4:30 PM	8	0	1	0	0	0	1
4:45 PM	8	0	0	0	0	0	0
5:00 PM	10	0	0	2	0	2	0
5:15 PM	10	0	0	0	0	0	0
5:30 PM	7	0	2	0	1	0	3
5:45 PM	6	0	1	0	0	0	1
6:00 PM	2	0	4	0	0	0	4
6:15 PM	1	0	1	0	0	0	1
6:30 PM	1	0	0	0	0	0	0
6:45 PM	0	0	2	1	0	1	2
7:00 PM	0	0	0	0	0	0	0
7:15 PM	0	2	2	0	0	2	2
7:30 PM	0	3	3	0	0	3	3
7:45 PM	0	1	1	0	0	1	1
8:00 PM	0	0	0	0	0	0	0
8:15 PM	0	0	0	0	0	0	0
8:30 PM	0	0	0	0	0	0	0
8:45 PM	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0

Hourly Summary

Time:	Occupancy	Northern Driveway		Southern Driveway		Totals	
Inventory:	110	Ingress	Egress	Ingress	Egress	Ingress	Egress
12:00 AM	2	0	2	1	1	1	3
1:00 AM	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0
6:00 AM	1	0	0	1	0	1	0
7:00 AM	7	0	0	2	0	2	0
8:00 AM	45	0	0	19	1	19	1
9:00 AM	110	1	0	10	0	11	0
10:00 AM	144	1	15	26	3	27	18
11:00 AM	197	1	13	19	0	20	13
12:00 PM	136	0	22	1	2	1	24
1:00 PM	61	0	17	1	3	1	20
2:00 PM	7	1	8	4	1	5	9
3:00 PM	27	0	1	8	0	8	1
4:00 PM	34	0	2	1	0	1	2
5:00 PM	33	0	3	2	1	2	4
6:00 PM	4	0	7	1	0	1	7
7:00 PM	0	6	6	0	0	6	6
8:00 PM	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0
11:00 PM	0	0	0	1	1	1	1
Totals	*808*	*10*	*96*	*97*	*13*	*107*	*109*

9:15 PM	0	0	0	0	0	0	0
9:30 PM	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0
10:15 PM	0	0	0	0	0	0	0
10:30 PM	0	0	0	0	0	0	0
10:45 PM	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0
11:15 PM	0	0	0	1	1	1	1
11:30 PM	0	0	0	0	0	0	0
11:45 PM	0	0	0	0	0	0	0
Totals	***808***	***10***	***96***	***97***	***13***	***107***	***109***