



CITY OF SANTEE

Planning & Building Department

Fanita Drive Project

Tentative Map (TM2021-02)

Class 32 CEQA Exemption Analysis

I. PROJECT CHARACTERISTICS

- 1. Project Title:**
Fanita Drive Project
Tentative Map (TM2021-02)
Development Review Permit
(DR2021-4)
- 2. Lead Agency Name and Address:**
City of Santee
Planning & Building Development
Services 10601 Magnolia Avenue
Santee, CA 92071
- 3. Contact Person and Phone Number:**
Christina Rios
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(619) 258-4100
10601 Magnolia Avenue
Santee, CA 92071
crios@cityofsanteeca.gov
- 4. Project Location:**
8504 Fanita Drive, Santee, CA
Assessor's Parcel Number: 386-690-38-00
- 5. Project Sponsor's Name and Address:**
TA Development, LLC
Attn: Tarik Alahmad
7710 Balboa Avenue, Suite 210c
San Diego, CA 92111
- 6. Property Owner:**
TA Development, LLC
Attn: Tarik Alahmad
7710 Balboa Avenue, Suite 210c
San Diego, CA 92111
- 7. Existing General Plan Designation:**
Medium Density Residential, R-7 (7-14 dwelling units/gross acre)
- 8. Existing Zoning:**
Medium Density Residential, R-7 (7-14 dwelling units/gross acre)

II. EXECUTIVE SUMMARY

The Project Applicant, TA Development LLC, has submitted documents for the proposed Fanita Drive Project (Project) at 8504 Fanita Drive for Tentative Map (TM2021-02). The Project site is a 0.69-acre previously graded vacant lot with a gross site area of 29,964 square feet. The Project site’s designated land use is R-7 Medium Density Residential (7-14 dwelling units/gross acre). The Project would consist of subdividing eight residential lots, one open space lot (Lot C), one private road lot (Lot A), one existing private easement lot (Lot D), and one lot for parking stalls (Lot B). The Project involves the construction of eight single family detached residences, with lot square-footages each averaging around 2,088 square feet. There are 12 lots in total proposed within the scope of the Project. Eight lots are for residential use, one lot for open space, one lot for parking, one lot for an existing private easement and one lot for the private road. Table A summarizes the characteristics of the project.

The California Environmental Quality Act (CEQA) analysis provided herein evaluates the consistency of the Project with the exemption requirements for a Class 32 Categorical Exemption for infill development projects as set forth in *State CEQA Guidelines* Section 15332. Based on the information and conclusions set forth on the following pages, this CEQA analysis demonstrates the Project’s consistency with the requirements for a Class 32 Categorical Exemption. No additional environmental documentation or analysis is required.

Table A: Project Development Summary	
Description	Amount
Total Lot Area	69,700 sq-ft (0.69 acre)
Total Building Footprint Area	7,790 sq-ft (47.5% average lot coverage)
Total Floor Area	15,105 sq-ft (FAR = 0.9 average)
Building Height	25 feet with a maximum height of 35 feet
Number of Units	Eight (8) single family detached homes
Landscaped Area	25,092 sq-ft (36%)
Number of Parking Spaces	16 dwelling unit spaces and 2 visitor street spaces

FAR = floor/area ratio
 Sq-ft = square feet

III. PROJECT DESCRIPTION

Project Location

As shown in **Figure 1**, the proposed Project is located on 8504 Fanita Drive (Assessor’s Parcel Number 386-690-38-00), immediately southwest of the intersection of Fanita Drive and Watson Place in the City of Santee, San Diego County, California. Fanita Drive is a north-south oriented street extending south from Mission Gorge Road, located between Cuyamaca Street and State Route (SR) 125. Regional access is provided by SR-52, SR-67, and SR-125.

The site is served by San Diego Metropolitan Transit System (MTS) Bus Route 834, with the nearest bus stop at the intersection of Mission Gorge Road and Fanita Drive (approximately 0.6 mile from the Project site).

Existing Conditions and Surrounding Land Uses

The existing setting of the Project site is vacant and undeveloped but highly disturbed. Surrounding land uses include single family residential communities directly to the north of Watson Place. Directly east of the site on the east frontage of Fanita Drive is a gated residential community, followed by open space, and the PRIDE Academy School (K-8th Grade). Directly south of the site are the Fanita Ranch Condominiums. West of the site are single family residences, SR-125 and Low-Density Residential housing on the southbound side of SR-125. **Figure 2** depicts the vegetation communities on the Project site and the surrounding area.

A residence had been previously developed on the Project site, but has since been removed. It is assumed that a demolition and grading permit were obtained for that work. This work was conducted prior to the current ownership of the property. A Biological Resources Report (Athena Consulting 2022, Appendix K) was prepared for the Project. The Project site was determined to support the following land cover categories: Developed, Disturbed, and Disturbed Wetland. None of these categories are sensitive. No sensitive natural communities occur onsite due to the previously graded and developed nature of the site. The only potential area where riparian habitat could occur onsite would be within the concrete drainage channel in the southeastern corner of the site along Fanita Drive; however, the drainage channel has a concrete bottom and no riparian vegetation was observed in the channel. Almost all of the Site can be classified as Disturbed Land because it supported a previously developed homesite and vegetation is dominated by non-native herbs, with grasses such as panic veldt grass (*Ehrharta erecta*), barley (*Hordeum* sp.), oats (*Avena* sp.), and riggut brome (*Bromus diandrus*); and escaped ornamentals such as chinaberry (*Melia azedarach*) and Peruvian pepper (*Schinus molle*). The herbaceous vegetation onsite appears to have been mowed and maintained.

General Plan and Zoning

The Project site's designated land use is Medium Density Residential and is zoned as Medium Density Residential R-7 (7 to 14 dwelling units per acre). According to the Housing Element, the Medium High Density Residential (R-14) designation is intended for a wide range of residential development types including attached and detached single-family units at the lower end of the density range and multifamily attached units at the higher end of the density range. Areas developed under this designation should exhibit adequate access to streets of at least collector capacity and be conveniently serviced by neighborhood commercial and recreational facilities.

Proposed Project

The Project would consist of constructing eight detached single family homes on the Project site (see **Figure 3**). There are 12 lots in total proposed within the scope of the Project. Eight lots are for residential use, one lot for open space, one lot for parking, one lot for an existing private easement, and one lot for the private road. See Table 1 for proposed lot areas.

Table 1: Proposed Lot Areas Square Footage

Lot Number	Square Footage (sq-ft)
1	2,040 sq-ft
2	2,101 sq-ft
3	2,102 sq-ft
4	2,102 sq-ft
5	2,099 sq-ft
6	2,103 sq-ft
7	2,103 sq-ft
8	2,052 sq-ft
Private Road (Lot A)	8,599 sq-ft
Open Space (Lot B)	1,205 sq-ft
Parking (Lot C)	768 sq-ft
Existing Private Easement (Lot D)	2,692 sq-ft

The proposed Project would construct eight, two-story single family detached homes. The residential lots average 2,059 sq-ft. The project would construct approximately 16,470 sq-ft total of building space that would include two story homes and garages for each of the eight residential lots. The average building height of the residences would be 25 feet with a maximum height of 35 feet.

The residential development would be accessed from Fanita Drive through a proposed 30-foot wide driveway entrance. Fanita Drive is a Collector Roadway with two-way left turn lanes, and has sidewalk along its west frontage that curves the perimeter of the site onto the south frontage of Watson Place. The proposed project would install a new curb and gutter, meeting Collector Road standards, along the eastern perimeter of the site on the west frontage of Fanita Drive and following to Watson Place along the north perimeter of the site. The proposed curb and gutter would be constructed per San Diego Regional Standard Drawings (SDRSD). The 30-foot wide driveway entrance is intended to meet City standards. The 30-foot entrance will transition to a 26-foot wide “private roadway” along the frontage of the proposed residential units. A mid-segment fork would transition to an additional driveway from Watson Place and would be utilized for fire access sized to allow unhindered access for City fire apparatus. An eight foot retaining wall would be located along the western boundary of the project site and would curve north around a portion of the northern boundary of the project site and would curve south along the southern boundary of the site.

All existing vegetation would be removed from the Project site and replaced in accordance with City Municipal Code Title 13, Section No. 13.36 (Landscaping) and Title 8, Section 8.06.070 (Protection of trees). The site would be 36% landscaped and would include drought tolerant groundcover, shrubs, and trees. Vegetation and irrigation design for the site would follow the City of Santee Water Efficient Landscape Ordinance. The Project proposes relocation of the existing sag inlet along Fanita Drive and the installation of one (1) biofiltration basin around the existing grate inlet. Off-site surface drainage shall be conveyed through concrete curb meeting the City of Santee Public Works standards. The onsite storm drain system will connect to the proposed biofiltration basin, which then connects to the existing public storm drain system.

Project Construction

Construction of the project would be completed in approximately six months and is anticipated to begin in the third quarter of 2023. Construction activities would consist of site preparation, grading, building construction, paving, and architectural coating. The proposed Project would require 550 cubic yards of cut, 600 cubic yards of fill, and would require 50 cubic yards of import material.

Construction of the Project would include the use of graders, scrapers, welder/torches, pavers, and rollers. Sensitive receptors such as the adjacent residences are located immediately west and south of the Project site, and construction equipment will incorporate noise reduction measures as part of the project design.

Project Conditions

The following Project Conditions would be required of the proposed Project. These measures would be incorporated as Conditions of Approval for the entitlement of the Tentative Map and Development Review Permit, and are typical for projects built on vacant land within the City of Santee. Such measures taken to comply with building codes or to address common and typical concerns for new projects do not preclude CEQA exemptions (*Berkeley Hillside Preservation v. City of Berkeley (2015) 241 Cal.App.4th 943, 960-961*). The following measures are standard conditions for similar development projects entitled in the past by the City of Santee:

Project Condition No. 1 – Air Quality:

The project shall incorporate the following standard air quality measures:

1. The construction contractor shall use a minimum of Tier 2 construction equipment with a Level 3 diesel particulate filter or equivalent for equipment over 50 horsepower.
2. During all grading and site preparation activities, the on-site construction superintendent shall ensure implementation of standard best management practices to reduce the emissions of fugitive dust, including, but not limited to, the following actions:
 - a) Water any exposed soil areas a minimum of twice per day, or as allowed under any imposed drought restrictions. On windy days or when fugitive dust can be observed leaving the construction site, additional water shall be applied at a frequency to be determined by the on-site construction superintendent.
 - b) Operate all vehicles on the construction site at speeds of less than 15 miles per hour.
 - c) Cover all stockpiles that will not be utilized within 3 days with plastic or equivalent material, to be determined by the on-site construction superintendent, or spray them with a nontoxic chemical stabilizer.
 - d) Fugitive dust should be suppressed to the greatest extent possible with the use of water trucks during site grading.

3. During all grading and site preparation activities, the on-site construction superintendent shall ensure implementation of applicable California Department of Resources Recycling and Recovery (CalRecycle) Sustainable (Green) Building Program Measures, as follows:
 - a) Recycle/reuse at least 65 percent of construction materials (including, but not limited to, soil, mulch, vegetation, concrete, lumber, metal, and cardboard).
 - b) Use “green building materials” (e.g., those materials that are rapidly renewable or resource efficient, and recycled and manufactured in an environmentally friendly way) for at least 10 percent of the project, as specified on the CalRecycle website.
4. The project shall exceed current Title 24 of the California Code of Regulations, established by the CEC, regarding energy conservation and green building standards by 10 percent. The project applicant shall incorporate the following in the building plans:
 - a) The project shall include the installation of infrastructure necessary for electric vehicle parking, as well as providing preferential parking for electric vehicles. The project shall provide bike parking on-site.
 - b) The project shall utilize high-efficiency equipment and fixtures consistent with the 2022 Green Building Code and Title 24 energy conservation standards. The project shall exceed Title 24 requirements by 10 percent. The project shall include the installation of infrastructure to make the proposed project solar-ready.
 - c) The project shall comply with the Santee Water Efficient Landscape Ordinance. The ordinance promotes water conservation and efficiency by imposing various requirements related to evapotranspiration rates, irrigation efficiency, and plant factors.
 - d) The project shall install a rainwater capture device used for outdoor landscaping purposes.
 - e) The project shall plant trees and plants to help increase the rate of carbon sequestration on-site.
 - f) The project shall reduce solid waste disposal through recycling, composting and source reduction of solid waste.
 - g) The project shall use energy-efficient clothes washers, dishwashers, fans, and refrigerators.
 - h) The project shall install high-efficiency lighting, as well as low-flow faucets, toilets, and showers.
 - i) The project shall use low VOC paints (consistent with SDAPCD Rule 67.0.1).
 - j) The project shall not include wood burning stoves or fireplaces.

Standard Project Condition No. 2 – Biological Resources:

The following standard biological resource measures shall be implemented with the proposed project:

1. If vegetation disturbance is scheduled to occur during the bird breeding season (between January 15 and September 15), a biologist shall perform a nesting bird survey within the proposed construction area and appropriately sized buffer no more than 72 hours prior to vegetation disturbance. If the planned vegetation disturbance does not occur within 72 hours of the nesting bird survey, then the area will be resurveyed. If nesting birds are found, then the qualified biologist will establish an adequate buffer zone (on a species-by-species, case-by-case basis) in which construction activities would be prohibited until the nest is no longer active. The size of the buffer zone is determined by the biologist based on the amount, intensity, and duration of construction and can be altered based on site conditions. If appropriate, as determined by the biologist, additional monitoring of the nesting birds may be conducted during construction to ensure that nesting activities are not disrupted.
2. All vehicles, equipment, tools, and supplies shall stay within the limits of the impact area.
3. BMP features (e.g., silt fencing, straw wattles, and gravel bags) shall be installed where necessary to prevent off-site sedimentation.

Standard Project Condition No. 3 – Geology/Soils:

1. The Construction Contractor shall ensure that construction of the project complies with the recommendations identified in the project specific geotechnical investigation. Recommendations related to general construction, seismic considerations, earthwork, foundations, building floor slabs, lateral earth pressures, corrosivity, drainage, storm infiltrations, exterior concrete and masonry flatwork and paved areas shall be adhered to during all project design and construction.

Standard Project Condition No. 4 – Noise:

Construction Best Business Practices:

1. Prior to issuance of grading permits, the Director of Development Services, or designee, shall verify that all construction plans include notes stipulating the following:
 - a) Operations shall conform to the City's noise ordinance standards through the use of smaller equipment or operation time restrictions.
 - b) All equipment shall be equipped with properly maintained mufflers.
 - c) The construction contractor shall place noise-generating construction equipment and locate construction staging areas away from sensitive uses whenever feasible.

- d) The construction contractor shall use on-site electrical sources to power equipment rather than diesel generators where feasible.
 - e) The construction contractor shall locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active project site during all project construction.
2. All residential units located within 300 feet of the construction site shall be sent a notice regarding the construction schedule. In addition, if work involving ≥ 85 dBAL_{MAX} noise rating equipment is anticipated to occur with more than 10 consecutive workdays, a notice will be provided to all property owners and residents within 300 feet of the site no later than 10 days before the start of said work. A sign legible at a distance of 50 feet shall also be posted at the construction site. All notices and the signs shall indicate the dates and durations of construction activities, as well as provide a telephone number for the “noise disturbance coordinator.”
 3. A “noise disturbance coordinator” shall be established. The disturbance coordinator shall be responsible for responding to any local complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., starting too early, bad muffler) and shall be required to implement reasonable measures to reduce noise levels.
 4. The following shall be incorporated into the project construction plan: “Control of Construction Hours. Construction activities occurring as part of the project shall be subject to the limitations and requirements of Section 5.04.090 of the City Municipal Code which states that construction activities may occur between 7:00 a.m. and 7:00 p.m. Mondays through Saturdays. No construction activities shall be permitted outside of these hours or on Sundays and federal holidays. No construction activity will be permitted outside of these hours except in emergencies.”

IV. CLASS 32 CATEGORICAL EXEMPTION ANALYSIS

The following analysis provides substantial evidence to support a conclusion that the Project qualifies for an exemption under *State CEQA Guidelines* Section 15332 as a Class 32 urban infill development and would not have a significant effect on the environment.

Class 32 Categorical Exemption: Class 32 consists of projects characterized as in-fill development meeting the conditions described below:

- (a) The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations.
- (b) The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses.
- (c) The project site has no value as habitat for endangered, rare or threatened species.
- (d) Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.
- (e) The site can be adequately served by all required utilities and public services.

Criterion Section 15332(a): General Plan and Zoning Consistency

- | Yes | No | |
|-------------------------------------|--------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations. |

General Plan

The Project site's designated General Plan land use is Medium Density Residential. According to the Housing Element, the Medium Density Residential (R-14) designation is intended for a wide range of residential development types including attached and detached single-family units at the lower end of the density range and multifamily attached units at the higher end of the density range. Areas developed under this designation should exhibit adequate access to streets of at least collector capacity and be conveniently serviced by neighborhood commercial and recreational facilities. The proposed Project is consistent with the Medium Density Residential General Plan land use designation.

Zoning

The Project site is zoned as R-7 Medium Density Residential (7–14 dwelling units per gross acre). The Medium Density Residential (R-7) zone designation is intended for a wide range of residential development types including attached and detached single-family units at the lower end of the density range and multifamily attached units at the higher end of the density range. Areas developed under this designation should exhibit adequate access to streets of at least collector capacity and be conveniently serviced by neighborhood commercial and recreational

facilities. The proposed Project provides adequate access to recreational facilities through the open space lot, has adequate access to the collector street of Fanita Drive, and is within one mile of commercial facilities. The open space lot (Lot C) would provide recreational amenities for the eight-unit development including a tot lot, play equipment, and benches. The location of the proposed Project site is within a 15-minute walk to neighborhood parks. The nearest park is Deputy Ken Collier Park located approximately 0.5-mile northeast of the project site. Open space is located north of the project site at the San Diego River, southwest of the site towards Mission Trails Regional Park, and east of the site approximately 0.1 mile away. At an approximate density of 11.8 dwelling units per acre, and close to major community facilities, the proposed Project is consistent with the intent of the R-7 Zone.

The proposed residential Project is consistent with the zoning regulations of the R-7 Zone. The maximum building height in the R-7 zone is 35 feet with a maximum of three stories. The proposed residences have an average height of 25 feet with two stories. The Project meets all other zoning standards, including setbacks and parking. The setback requirements are 20 feet for the front setback, 10 feet for the side setback, and 10 feet for the rear setback; the Project includes 20 feet for the front setback, 5 feet for the side setback, and 10 feet for the rear setback. A total of 16 dwelling unit car parking spaces, and 2 visitor on-site spaces, and 6 visitor off-site spaces will be provided. Landscaping will be provided within these setback areas as required by the City's Zoning Ordinance.

Criterion Section 15332(b): Project Location, Size, and Context

Yes	No	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	The proposed development occurs within city limits on a project site of no more than 5 acres substantially surrounded by urban uses

The Project site is located within the incorporated limits of the City of Santee on an approximately 0.69-acre site and is surrounded by single-family residences and apartments/condominiums parcels developed with urban land uses and paved public streets. Therefore, the Project is consistent with *State CEQA Guidelines* Section 15332(b).

Criterion Section 15332(c): Endangered, Rare, or Threatened Species

Yes	No	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	The project site has no value as habitat for endangered, rare or threatened species.

The Project site consists of undeveloped, disturbed lands. The project proposes a Tentative Tract Map for the development of eight two-story single family detached residences, on a 0.69-acre vacant lot. The project site is located north of Lund Street, south of Watson Place, east of SR-125, fronting the west side of Fanita Drive, and is surrounded by single family residences and apartments/condominiums (Figure 2). The project site is designated as Urban/Developed in Figure 6-3 Biological Resources of the General Plan Conservation Element and is classified as Urban/Developed in the City's 2023 draft Multiple Species Conservation Plan (MSCP) Subarea Plan (Subarea Plan). The project site was previously disturbed and developed with a residence, but the residence was removed. In August 2022, a biological study of the site was conducted by Athena Consulting (Appendix K). The August 2022 biological study found that the

site supports the following land cover categories: Developed, Disturbed, and Disturbed Wetland. None of these categories are sensitive. No sensitive natural communities occur onsite due to the previously graded and developed nature of the site. The only potential area where riparian habitat could occur onsite would be within the concrete drainage channel in the southeastern corner of the site along Fanita Drive; however, the drainage channel has a concrete bottom, and no riparian vegetation was observed in the channel, and no disturbance from the project. No riparian vegetation is expected to occur in the concrete bottom channel. An existing 13-foot drainage easement would remain to protect the concrete channel and box culvert in place. No listed species, candidate species, or other sensitive species were found. The potential for use of the site by such species was determined to be low.

Due to the existing conditions of the site and its location, it would not serve as a wildlife corridor or nursery site. The nearest wildlife corridor to the project site is the San Diego River, located approximately 0.8 mile north of the project site (**Figure 1**). Residential developments, general commercial businesses, and SR-52 are located between the project site and the San Diego River. The project site is not considered a native wildlife nursery site. The project site does support several small, young, non-native trees that are not anticipated to support migratory birds due to the age and location of the existing trees in a developed area. Therefore, the proposed project would not interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Due to the isolated nature of the Project site and the surrounding development to the east, north, and south, the Project site has no value as a wildlife corridor.

Therefore, the Project is consistent with Section 15332(c) of the *State CEQA Guidelines*, as the Project site has no value as habitat for endangered, rare, or threatened species.

Criterion Section 15332(d): Traffic, Noise, Air Quality, or Water Quality

Yes	No	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.

The analysis below describes the Project effects for the resource topics in this criterion, organized as follows: traffic, noise, air quality, and water quality. As demonstrated in the following discussions, the Project would not result in significant effects related to traffic, noise, air quality, or water quality and is consistent with Section 15332(d) of the *State CEQA Guidelines*.

Traffic

As the CEQA lead agency, the City of Santee determined that based on the size and scope of the Project, a CEQA Transportation Analysis Screening form was required (see Appendix J). A Project trip generation table was also developed with trip rates gathered from the 11th edition of the Institute of Transportation Engineers’ (ITE) *Trip General Manual*. As indicated in Table T1, the proposed Project would generate 80 average daily trips (ADT).

Table T1: Project Trip Generation

Proposed Land Use	Rate	Size & Units	ADT	%	Split		AM		%	Split		PM	
							In	Out				In	Out
Residential – Single Family	10/ DU	8 DU	80	8%	0.3	0.7	2	4	10	0.7	0.3	6	2

DU – Dwelling Unit; ADT – Average Daily Traffic; Split – Percent inbound and outbound
 Source: Trip Generation and Vehicle Miles Traveled Analysis prepared by LOS Engineering, Inc. (Appendix J)

Access to the project would occur from Fanita Drive, a Collector with TWLTL, through a 30-foot wide driveway entrance with a secondary 26-foot driveway off of Watson Place. The 30-foot wide driveway entrance is intended to meet City standards. The 30-foot entrance will transition to a 26-foot wide “private roadway” along the frontage of the proposed residential units. A mid-segment fork would transition to an additional driveway from Watson Place and would be utilized and would provide fire access sized to allow unhindered access for City fire apparatus. The drive aisle would bisect the site from east to west and provide circulation throughout the residential development and access to each single family lot.

Development of the Project site would not conflict with any program, plan, ordinance, or policy designed to promote or enhance the City’s transit facilities. To help reduce vehicle miles traveled (VMT) in the Project vicinity, public transit is provided by MTS.

The nearest bus stop is approximately 0.6 mile north of the project site at the intersection of Mission Gorge Road and Fanita Drive, and is part of the MTS Bus Route 834 West Santee Loop. According to Figure 7-1 of the Mobility Element of the General Plan, Fanita Drive is Collector with a two-way left turn lane (TWLTL), and Mission Gorge Road is a Prime Arterial roadway. The nearest grocery store to the site is Sprouts Farmers Market located 1.2 miles northeast on Mission Gorge Road.

The proposed Project is considered a small project as it is less than 5 acres of land and generates fewer than 500 daily trips. Therefore, the proposed Project is screened out from a VMT analysis and is presumed to have a less than significant effect relating to traffic pursuant to Section 15332(d) of the *State CEQA Guidelines*.

Noise

Project-generated noise levels and vibration have been evaluated in the Construction Noise Analysis (Appendix H). The analysis was prepared by Ldn Consulting pursuant to the California Code of Regulations, the City's General Plan Noise Element, the Santee Municipal Code, and the County of San Diego Noise Ordinance.

Onsite noise generation due to the proposed residential development project would primarily consist of normal residential activities. No major noise sources are proposed as of the typical residential development. Therefore, the operational noise would be less than significant. As such, approval of the project would not result in any significant effects relating to noise.

Sensitive receptors such as the adjacent residences are located immediately west and south of the project site, and construction equipment will incorporate noise reduction measures as part of the project design. The Construction Noise Analysis includes a discussion of the applicable regulatory guidelines.

According to the Project proponent, the Project will use small bulldozers or similar light equipment within 20 feet of the southerly and westerly property lines. Additionally, the project will use hand-operated tamper or walk-behind compactors within 10 feet of the southerly and westerly property lines. Not all the equipment will operate continuously over an 8-hour period, the equipment will be utilized on an as-needed basis depending on the site grading activities are required. As an example: a small bulldozer will push dirt from near the western property line to the eastern property line while a compactor will be used to tamper dirt on another area of the site. Based on empirical data gathered during the monitoring of a similar project, the worst-case hourly noise level was found to be up to 76 dBA Leq at an average distance of 50 feet for grading activities (Source: Aztec Court Noise Monitoring – San Diego, Ldn Consulting, 2012). At an average distance of 80 feet, the noise level from the grading activities would be less than 72 dBA. Additionally, due to the smaller site area and site constraints, less equipment will be utilized compared to the previously referenced project.

Construction related noises would be required to meet City noise standards as set forth in Chapter 5.04 of the Santee Municipal Code with standard conditions of approval (Standard Project Condition No. 4, detailed above).

The City of Santee does not have a specific noise threshold for construction activities. At this time, no construction is anticipated between the hours of 7:00 p.m. and 7:00 a.m. The Project construction will only occur during the allowed hours. Therefore, the construction noise would be less than significant. As such, approval of the project would not result in any significant effects relating to noise.

Air Quality

The following analysis is based on the project-specific Fanita Drive Villas Residential Air Quality Screening Assessment – City of Santee (Appendix G). The Project site is in the San Diego Air Basin (Basin). Air quality in the Basin is under the guidelines of the San Diego Air Pollution Control District (SDAPCD).

Construction of the project would be completed in approximately six months and is anticipated to begin in early 2023. Construction activities would consist of site preparation, grading, building construction, paving, and architectural coating. The proposed Project would require 550 cubic yards of cut, 600 cubic yards of fill, and would require 50 cubic yards of import material.

Both State and federal governments have established health-based ambient air quality standards (AAQS) for six criteria air pollutants: carbon monoxide (CO), ozone (O₃), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), lead (Pb), and suspended particulate matter (PM). In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. Long-term exposure to elevated levels of criteria pollutants may result in adverse health effects. However, emission thresholds established by an air quality district are used to manage total regional emissions within an air basin based on the air basin's attainment status for criteria pollutants.

Consistency with Applicable Air Quality Plan. The SDAPCD is responsible for developing and implementing the clean air plans for attainment and maintenance of the AAQS in the SDAPCD, specifically, the State Implementation Plan (SIP) and the Regional Air Quality Strategy (RAQS). The SIP and RAQS rely on information from the California Air Resources Board (CARB) and the San Diego Association of Governments (SANDAG), including mobile and area source emissions, as well as information regarding projected growth in the County as a whole and the cities in the County, to project future emissions and determine the strategies necessary for the reduction of emissions through regulatory controls. Projects that propose development that is consistent with the growth anticipated by the General Plans would be consistent with the RAQS.

Implementation of the proposed Project would result in an increase in eight (8) residential units and is designated as Medium Density Residential in the City's General Plan, and zoned R-7 Medium Density Residential (7–14 dwelling units per acre). R-14 zoning is intended for a wide range of residential development types including attached and detached single-family units at the lower end of the density range and multifamily attached units at the higher end of the density range. The proposed Project is consistent with the General Plan and zoning designations. Because the proposed Project activities and associated vehicle trips are anticipated in local air quality plans, the proposed Project would be consistent at a regional level with the underlying growth forecasts in the RAQS and SIP.

Construction Emissions. During construction, short-term degradation of air quality may occur due to the release of particulate matter (PM) emissions (e.g., fugitive dust) generated by excavating, grading, hauling, and paving activities. Emissions from construction equipment are

also anticipated and would include CO, nitrogen oxides (NO_x), volatile organic compounds (VOCs), directly emitted PM_{2.5} (particulates less than 2.5 microns in size) and PM₁₀ (particulates less than 10 microns in size), and toxic air contaminants (TACs), such as diesel particulate matter (DPM).

Construction-related effects on air quality from the proposed Project would be greatest during grading, due to construction activity on unpaved surfaces. Water or other soil stabilizers can be used to control dust at least twice daily, resulting in emissions reductions of 50 percent or more. The SDAPCD has established Rule 55, Fugitive Dust Control, which would require the Applicant to implement measures that would reduce the amount of PM generated during the construction period. In addition to dust related PM₁₀ emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO₂, NO_x, VOCs, and some soot particulate (PM_{2.5} and PM₁₀) in exhaust emissions.

Construction emissions were estimated for the Project using CalEEMod and are summarized in Table AQ1. As shown in Table C, construction emissions associated with the Project would not exceed the SDAPCD thresholds for VOCs, NO_x, CO, SO_x, PM_{2.5}, and PM₁₀.

Table AQ1: Expected Daily Construction Emissions Summary (Pounds/Day)

Year	ROG	NO _x	CO	SO ₂	PM ₁₀ (Dust)	PM ₁₀ (Exhaust)	PM ₁₀ (Total)	PM _{2.5} (Dust)	PM _{2.5} (Exhaust)	PM _{2.5} (Total)
2023 (lb/day)	63.42	12.01	14.74	0.02	5.38	0.59	5.80	2.59	0.54	2.97
City Thresholds (lb/day)	75	250	550	250	-	-	100	-	-	55
Significant?	NO	NO	NO	NO	-	-	NO	-	-	NO
Expected construction emissions are based upon CalEEMod 2020.4.0 modeling assumptions for equipment and durations listed in Table 3 above. Source: Air Quality Screening Assessment prepared by Ldn Consulting, Inc. (Appendix G)										

Therefore, construction of the proposed Project would not result in a cumulatively considerable increase of any criteria pollutant for which the Project region is in nonattainment under an applicable federal or State AAQS.

Operational Emissions. During the long-term operation of the project, pollutant emissions would be caused by mobile sources, stationary sources, and energy sources. Mobile sources include emissions from vehicles travelling to and from the homes by residents, and delivery vehicles. Stationary sources of air quality pollutants include residential solid waste, landscaping equipment, and architectural coatings. Energy sources of air pollutants include electricity usage typically associated with a residential development.

The Air Quality Screening Assessment analyzed project operation emissions during the first full year of project operations (year 2024). Operational pollutant emissions vary between summer and winter and therefore both scenarios are provided below. Table AQ2 displays the expected summer daily pollutant emissions and Table AQ3 displays the expected winter daily pollutant emissions generation.

Table AQ2: Expected Summer Daily Pollutant Generation

	ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
Area	15.63	0.31	19.72	0.03	2.65	2.65
Energy	0.00	0.03	0.01	0.00	0.00	0.00
Mobile	0.23	0.24	2.11	0.00	0.49	0.13
Total	15.87	0.58	21.84	0.04	3.15	2.79
City Thresholds (lb/day)	75	250	550	250	100	55
Significant?	NO	NO	NO	NO	NO	NO

Source: Air Quality Screening Assessment prepared by Ldn Consulting, Inc. (Appendix G)

Table AQ3: Expected Winter Daily Pollutant Generation

	ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
Area	15.63	0.31	19.72	0.03	2.65	2.65
Energy	0.00	0.03	0.01	0.00	0.00	0.00
Mobile	0.23	0.26	2.16	0.00	0.49	0.13
Total	15.86	0.60	21.89	0.04	3.15	2.79
City Thresholds (lb/day)	75	250	550	250	100	55
Significant?	NO	NO	NO	NO	NO	NO

Source: Air Quality Screening Assessment prepared by Ldn Consulting, Inc. (Appendix G)

As displayed in Table AQ2 and Table AQ3, based on findings of the air quality modeling, proposed operational activities would not generate daily air emissions in excess of the screening level significance thresholds set forth by the City. The proposed Project is not expected to result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.

Water Quality

The following analysis relies on the Priority Development Project (PDP) Storm Water Quality Management Plan (SWQMP) (Appendix E) and the Hydrology Report (Appendix F) prepared for the proposed Project.

Construction Water Quality Impacts. Construction activities would involve disturbance, grading, and excavation of soil, which could result in temporary erosion and movement of sediments into the storm drain system, particularly during precipitation events. The Project is not proposing any changes to the site's drainage patterns. However, the project will increase the area of impervious surfaces on-site, add a biofiltration basin and modifies the existing sump inlet to allow for storage and stormwater treatment. The Project proposes only minor modifications to the existing drainage structures. These changes include relocation of the existing sag inlet along Fanita Drive, so it matches the new curb line and the installation of the proposed biofiltration basin around the existing grate inlet. Because the proposed Project does not disturb more than one acre, the Applicant is not required to obtain coverage under the Construction General Permit, which requires the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) and best management practices (BMPs). The City of Santee Municipal Code, Title 9, Chapter 9.06, Stormwater Management and Discharge Control, also requires projects to implement stormwater pollution control requirements during construction activities. Compliance with the standard requirements of the City Municipal Code would ensure that construction impacts related to surface water quality would be less than significant.

According to the Geotechnical Investigation (Appendix D) prepared for the proposed Project, no groundwater or major seepage was encountered in the subsurface explorations. As a result, it is not anticipated that groundwater would be encountered during construction, and groundwater dewatering would not be required during construction. Therefore, construction-related impacts to groundwater quality would be less than significant.

Operational Water Quality Impacts. Pollutants of concern during operation of the proposed Project may include suspended solids/sediments, nutrients, pesticides, heavy metals, oil and grease, toxic organic compounds, and trash and debris.

Under existing conditions, the Project site has a gently sloping topography that drains to an existing sump grate inlet at the southwesterly corner of Fanita Drive and Watson Place. The remaining offsite portions of the property drains to an existing curb inlet located at the southwesterly corner of Fanita Drive and Watson Place. The project is not proposing any changes to the drainage patterns of the site or area. Under proposed conditions, runoff along Watson Place generated from adjacent properties to the west of the project will connect to the existing public storm drain system. The proposed onsite storm drain system will connect to the proposed biofiltration basin to be constructed around the current sump inlet.

The existing Project site is currently vacant with no impervious surface areas. The proposed Project would disturb 26,887 sq-ft (0.62 acre) with the construction of eight new detached residential units, all with a shared access driveway, which would result in the addition of a total of 16,692 sq-ft (0.38 acre) of impervious surface area. An increase in impervious surface area would increase the volume of runoff during a storm, which would potentially increase the amount of pollutants discharged into downstream receiving waters. The proposed Project is subject to the requirements of the San Diego Regional Water Quality Control Board's (RWQCB) NPDES Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4) Draining the Watersheds Within the San Diego Region (Order No R9-2013- 0001, NPDES No. CAS010266, as amended by Order No. WQ 2015-0100) (San Diego MS4 Permit). A PDP SWQMP has been prepared for the proposed Project in compliance with San Diego MS4 Permit, the City of Santee BMP Design Manual, and the City's Municipal Code. The project-specific SWQMP specifies the Source Control, Site Design, LID BMP, and treatment BMP (biofiltration basin) proposed for the Project. As described above, runoff would drain into the underground detention facility and treatment BMP, before connecting/draining to existing drainage infrastructure along the southern boundary of the Project site. As specified in the project-specific SWQMP underground retention and treatment BMP, will be sized appropriately to treat and detain peak flows without increasing peak flows to downstream drainage infrastructure. Implementation of the PDP SWQMP and stormwater related requirements outlined in the City's Municipal Code, would ensure Project impacts to water quality would be less than significant.

Project operation would not require groundwater extraction. Water usage for the proposed Project would primarily be associated with irrigation for landscaping, domestic uses, and fire suppression systems. Under post-project conditions, approximately 55 percent (0.38 acres) of the proposed Project would be impervious surface area (an increase of 0.38 acres). An increase in impervious surface area decreases infiltration, which can decrease the amount of water that is able to recharge the aquifer/groundwater. However, under existing conditions, a majority of the Project site (93 percent) is composed of Soil Group C, which has a slow infiltration rate. Therefore, the Project site is not a significant source of groundwater recharge under existing conditions. Therefore, development of the proposed Project would not significantly decrease groundwater supplies or interfere with groundwater recharge. The proposed project is located in the 06073C1634G FEMA Flood Map for Santee, CA. The proposed project is not located in a flood hazard area or a special flood hazard area. According to the FEMA Flood Map, the proposed project is not located in a flood hazard zone. The site is located inland, not near a tsunami or seiche zone.

Thus, operational impacts associated with water quality standards would be less than significant and approval of the project would not result in any significant effects relating to water quality.

Criterion Section 15332(e): Utilities and Public Services

Yes **No**
 The site can be adequately served by all required utilities and public services.

The proposed Project, which consists of the construction of eight two-story single family detached homes, would require utility connections to existing water, wastewater, electrical, natural gas, and telecommunications facilities. Water and sewer services would connect to existing water and sewer lines located in Fanita Drive and services would be provided by PDMWD. As shown on the Tentative Map for the site (**Figure 3**), a sewer line would be constructed under the main drive aisle of the site and connect to a sewer main in Fanita Drive. The project Improvement Plans would display all water and sewer connections and improvements and would be reviewed and approved by PDMWD. The water and sewer availability letters have been provided by PDMWD, and confirm for both utilities can serve the site (Appendix L). The project would connect to existing Sempra Energy facilities for power and natural gas, and Cox Communication facilities for telephone services. The project would construct a bio retention basin on the northeast corner of the project site which would treat storm water runoff.

All on-site utilities would be designed in accordance with applicable codes and current engineering practices. There would be no significant environmental effects specifically related to the installation of utility connections that are not encompassed within the Project's construction and operational footprints, and therefore already identified, disclosed, and subject to all applicable local, State, and federal regulations specified above. Therefore, the Project site can be adequately served by all required utilities pursuant to Section 15332(e) of the *State CEQA Guidelines*.

V. EXCEPTIONS TO CATEGORICAL EXEMPTIONS

Under the Class 32 Categorical Exemption Overview, even if a project is ordinarily exempt under any of the potential categorical exemptions, *State CEQA Guidelines* Section 15300.2 provides specific instances where exceptions to otherwise applicable exemptions apply. The following section addresses whether any of the exceptions to the CEQA exemption apply to the Project, consistent with *State CEQA Guidelines* Section 15300.2.

Criterion 15300.2(a): Location

Yes **No**
 Is there an exception to the exemption for the project due to its location in a particularly sensitive environment, such that the project may impact an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies?

This exception applies only to CEQA exemptions under Classes 3, 4, 5, 6, or 11. Since the Project qualifies as a Class 32 urban infill exemption, this criterion is not applicable and is provided here for information purposes only. There are no environmental resources of hazardous or critical concern that are designated, precisely mapped, or officially adopted in the

vicinity of the Project site, or that could be adversely affected by the Project. Therefore, exception under *State CEQA Guidelines* Section 15300.2(a) does not apply to the Project.

Criterion 15300.2(b): Cumulative Impact

Yes **No**
 Is there an exception to the exemption for the project due to significant cumulative impacts of successive projects of the same type and in the same place, over time?

As demonstrated under Criterion Section 15332(a), General Plan and Zoning Consistency, the Project is consistent with the development density allowed under the General Plan and zoning for the Project site. Successive projects of the same type (residential uses) and in the same place are unlikely to occur over time after the proposed apartments are constructed. Therefore, the exception under *State CEQA Guidelines* Section 15300.2(b) does not apply to the Project.

Criterion 15300.2(c): Significant Effect

Yes **No**
 Is there an exception to the exemption for the project because there is a reasonable possibility that the project will have a significant effect on the environment due to unusual circumstances?

There are no known unusual circumstances applicable to the Project or its site that may result in a significant effect on the environment. Therefore, an exception to the exemption under *State CEQA Guidelines* Section 15300.2(c) does not apply to the Project.

Criterion 15300.2(d): Scenic Highway

Yes **No**
 Is there an exception to the exemption for the project because project may result in damage to scenic resources including but not limited to, trees, historic buildings, rock outcroppings or similar resources, within a highway officially designated as a state scenic highway?

The California Department of Transportation (Caltrans) Scenic Highway Program does not identify any State-designated scenic highways near the Project site. The nearest officially designated State Scenic Highway is a portion of State Route 52, which begins where the freeway extends north past Mast Boulevard into Mission Trails Regional Park, approximately 2 miles northwest of the Project site.

The proposed Project would not degrade views or damage scenic resources including trees, rock outcroppings, or historic buildings within a highway officially designated as a State Scenic Highway. Therefore, an exception to the exemption under *State CEQA Guidelines* Section 15300.2(d) does not apply to the Project.

Criterion 15300.2(e): Hazardous Waste Sites

Yes

No

Is there an exception to the exemption for the project because the project is located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code?

Hazardous materials sites compiled pursuant to Government Code Section 65962.5 are listed on the “Cortese List” (named after the Legislator who authored the legislation that enacted it), which is maintained by the California Department of Toxic Substances Control. The Project site is not on any list (Appendix C) of hazardous material sites compiled pursuant to Government Code Section 65962.5 and therefore is not subject to the Hazardous Waste Sites Exemption (Section 15300.2(e)).

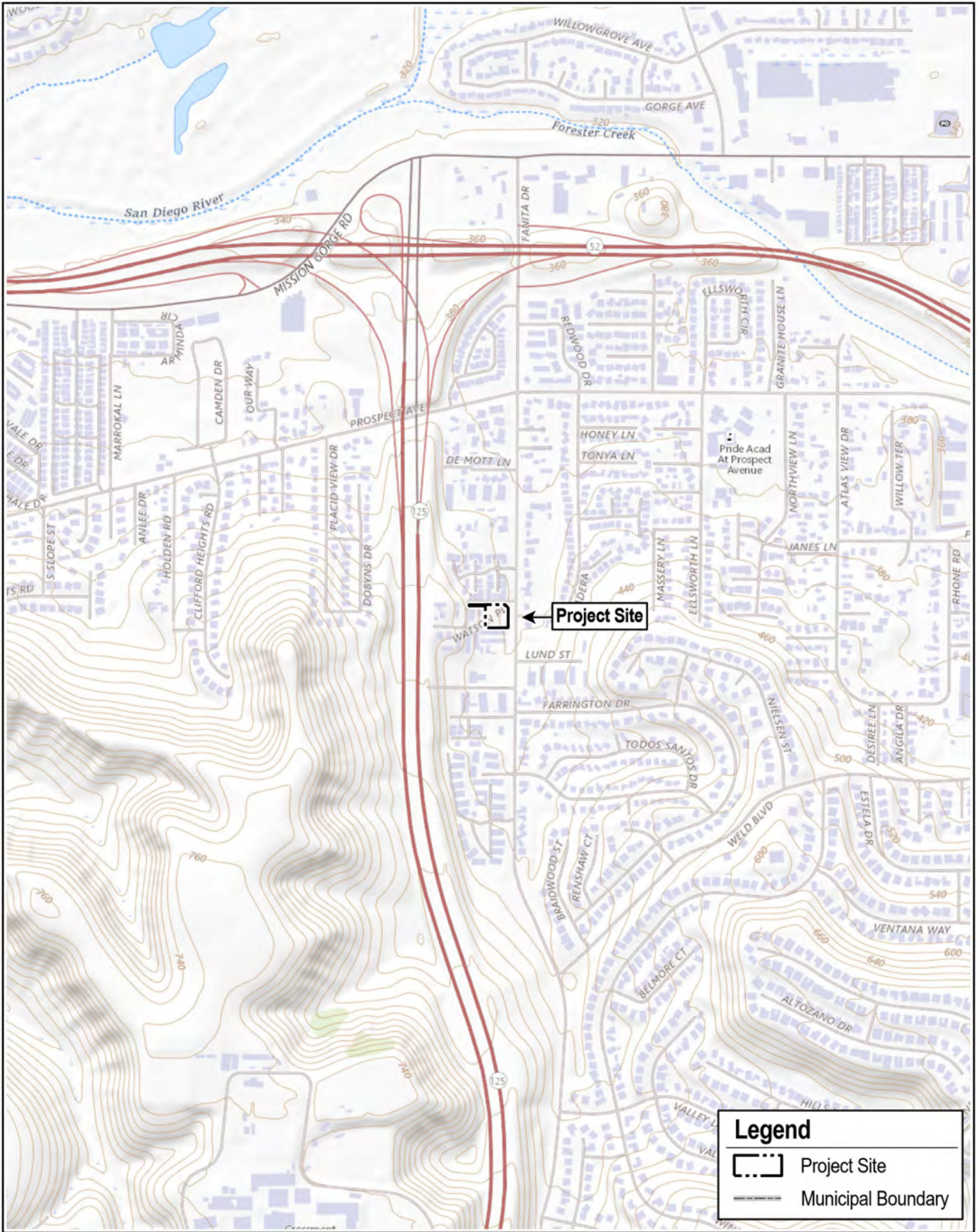
Criterion 15300.2(f): Historical Resources

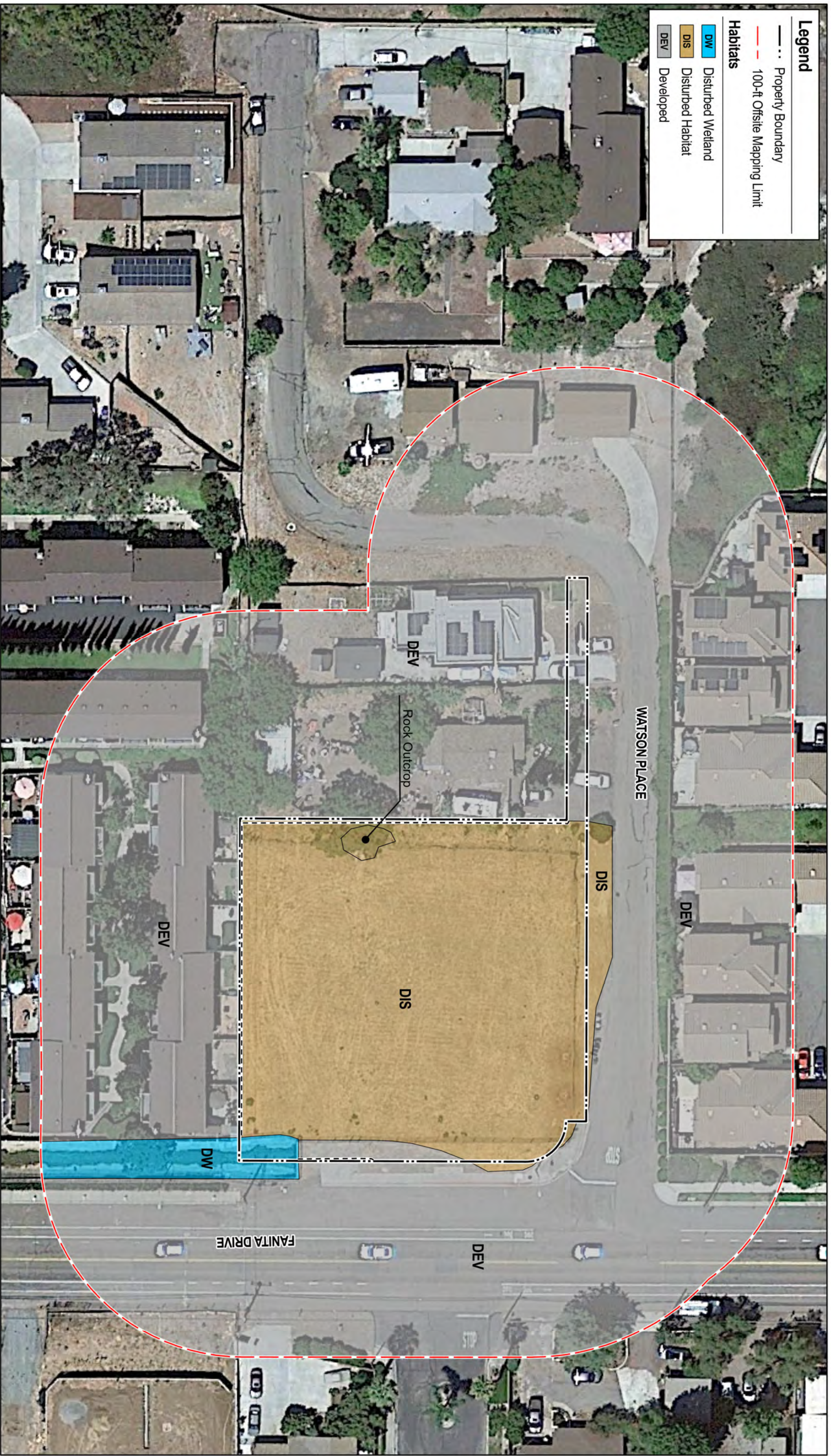
Yes

No

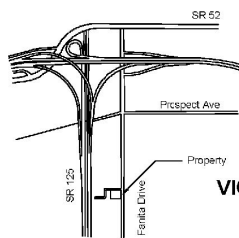
Is there an exception to the exemption for the project because the project may cause a substantial adverse change in the significance of a historical resource?

As defined in Section 15064.5 of the State CEQA Guidelines, the site does not contain any known historical resources. There are no existing structures on the site and the site is disturbed through previous grading activities. The site was graded sometime between 2010 and 2018. During that time, the existing residence had also been removed. Due to the site being previously graded and classified as developed land, there is low potential for historical or cultural resources on the site. Due to the level of disturbance, and urban development of the parcel and surrounding areas, the likelihood of a historical resource being discovered on the project site is low. Therefore, the proposed project would not create a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5 of the State CEQA Guidelines. Therefore, an exception to the exemption under *State CEQA Guidelines* Section 15300.2(f) does not apply to the Project.

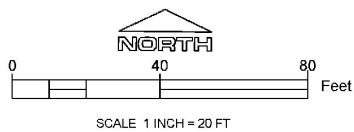




8504 FANITA DRIVE CITY OF SANTEE TENTATIVE MAP TM2021-02



VICINITY MAP
NOT TO SCALE



ZONING & LAND USE REQUIREMENTS

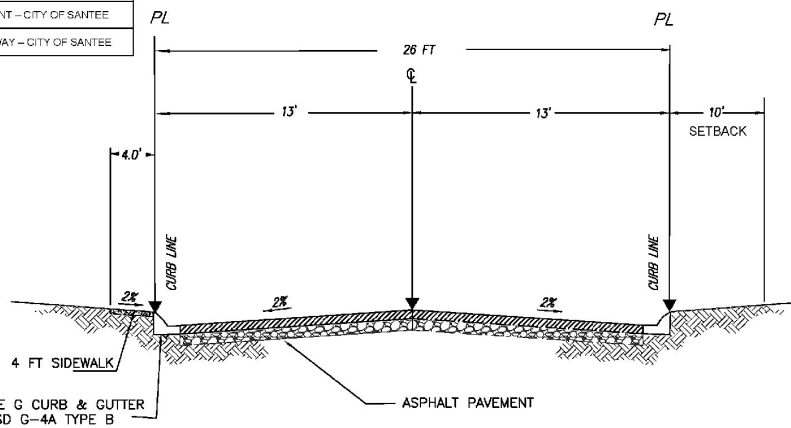
	REQUIRED	PROPOSED
DENSITY RANGE (DU/GROSS ACRE)	7-14	11.8
MAXIMUM LOT COVERAGE	55%	MAX. 47%
OFF STREET PARKING	2 SPACES/DU	2 SPACES/DU
VISITOR PARKING	2 SPACES	2 SPACES
GREEN BUILDING	TIER 2	TIER 2
FRONT SETBACK	10 FT	10 FT
SIDE SETBACK	5 FT	5 FT
REAR SETBACK	10 FT	10 FT
PRIVATE OPEN SPACE	100 S.F. / UNIT	AVG. 351 S.F./UNIT
COMMON OPEN SPACE	150 S.F. / UNIT	150.6 S.F. / UNIT

LEGENDS

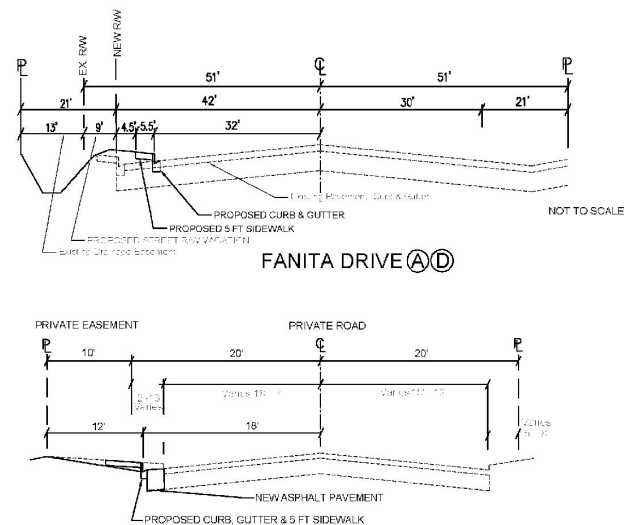
	EXISTING	PROPOSED
PROPERTY LINE	---	---
RIGHT OF WAY	---	---
CENTER LINE	---	---
FENCE	---	---
SEWER	---	---
DRAINAGE	---	---
WATER METER	⊕	⊕
OVERHEAD UTILITY	---	---
GAS LINE	---	---
ASPHALT PAVEMENT	N/A	▭
CONCRETE PAVEMENT	N/A	▭

EXISTING EASEMENTS			
NUMBER	DOCUMENT	DISPOSITION	DESCRIPTION
1	EAS 1022-56	TO REMAIN	SDG&E EASEMENT
2	EAS 7173-578	TO REMAIN	PRIVATE ROAD EASEMENT
3	EAS 1990-45400	TO REMAIN	PRIVATE EASEMENT
4	EAS 1978-473780	TO REMAIN	FANITA STREET EASEMENT
5	EAS 1965-329027	TO REMAIN	DRAINAGE EASEMENT - CITY OF SANTEE
6	EAS 1985-323028	TO REMAIN	STREET RIGHT OF WAY - CITY OF SANTEE

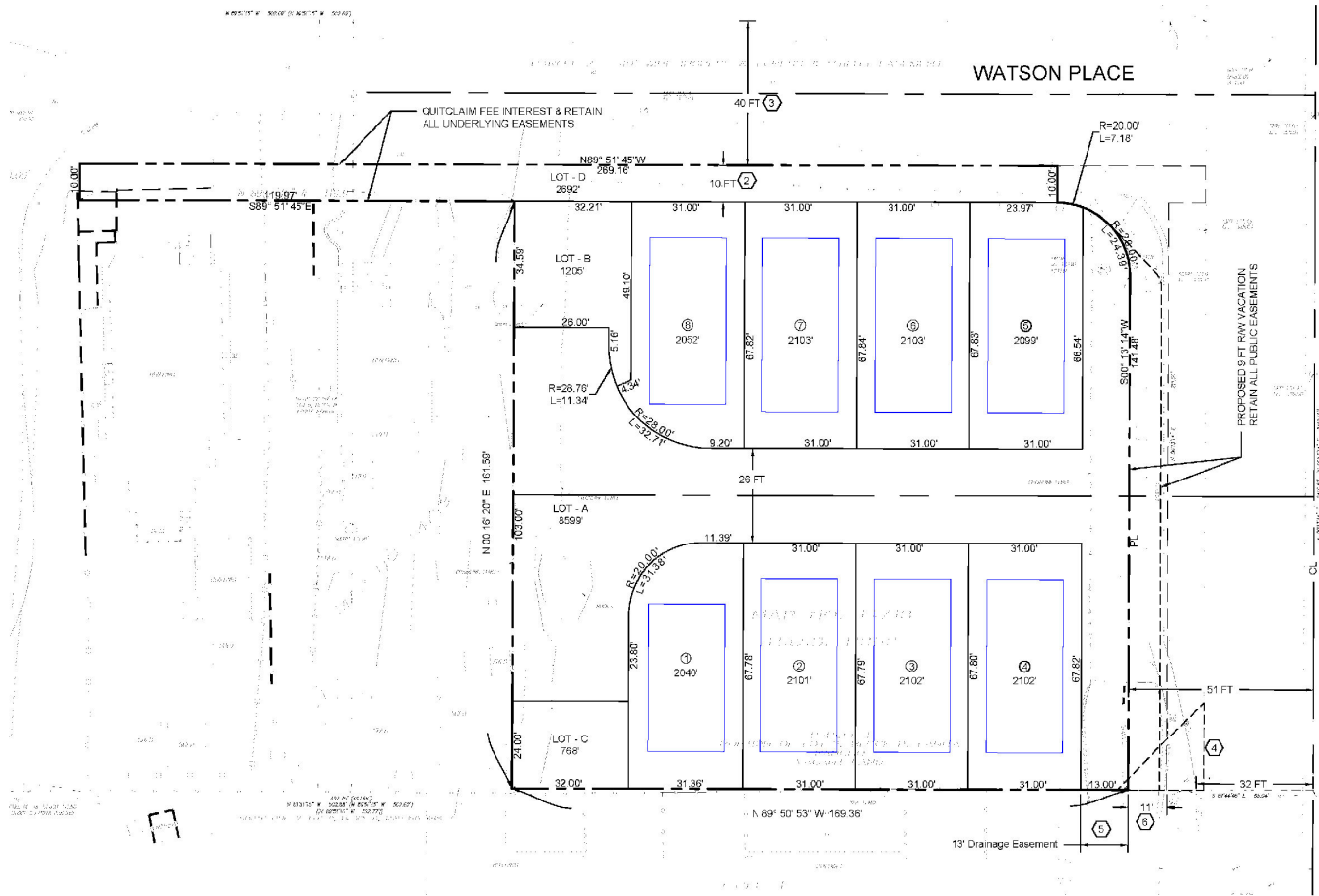
LOT	PARCEL AREA (SF)	PAD AREA (SF)	COVERAGE
1	2,040	956	46.85%
2	2,101	1,003	47.73%
3	2,102	1,003	47.70%
4	2,102	1,003	47.70%
5	2,089	1,003	47.77%
6	2,103	1,003	47.68%
7	2,103	1,003	47.68%
8	2,052	958	46.58%
A	8,599		PRIVATE EASEMENT
B	1,205		OPEN SPACE
C	788		PARKING
D	2,682		EXISTING PRIVATE EASEMENT



PRIVATE ROAD (B)



WATSON PLACE (F)



LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:
PARCEL 1
 THE SOUTH 171.50 FEET OF THE EAST 310.20 FEET OF LOT 9 IN BLOCK 'D' OF FANITA RANCHO, IN THE CITY OF SANTEE, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 888, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, OCTOBER 22, 1931, EXCEPTING THEREFROM THE WEST 120.00 FEET OF THE SOUTH 161.50 FEET OF SAID LAND, ALSO EXCEPTING THE SOUTH 161.50 FEET OF THE EAST 10.00 OF SAID LAND.
PARCEL 2
 AN EASEMENT FOR INGRESS AND EGRESS AND FOR PUBLIC AND PRIVATE UTILITY PURPOSES OVER, UNDER AND ALONG AND ACROSS THAT PORTION OF THE NORTHERLY 40.00 FEET OF THE SOUTHERLY 211.50 FEET OF SAID LOT 9, LYING EASTERLY OF THE FOLLOWING DESCRIBED LINE:
 BEGINNING AT A POINT ON THE SOUTHERLY LINE OF SAID LOT 9, DISTANT THEREON SOUTH 89°49'00" WEST, 310.55 FEET FROM THE SOUTHEASTERLY CORNER THEREOF, THENCE PARALLEL WITH THE WESTERLY LINE OF SAID LOT 8, NORTH 00°01'40" EAST, TO THE INTERSECTION WITH THE NORTHERLY LINE OF SAID SOUTHERLY 211.50 FEET.

ASSESSOR'S PARCEL NUMBER

386-890-38-00

OWNER/APPLICANT

TA DEVELOPMENT, LLC
 7710 BALBOA AVENUE, SUITE 210C
 SAN DIEGO, CA 92111

BY: _____ DATE: AUGUST 18, 2022

FIRE PROTECTION

CITY OF SANTEE

SEWAGE DISPOSAL

PADRE DAM MUNICIPAL WATER DISTRICT

WATER SUPPLY

PADRE DAM MUNICIPAL WATER DISTRICT

SCHOOL DISTRICT

SANTEE SCHOOL DISTRICT & GROSSMONT UNION HIGH SCHOOL DISTRICT

POWER

SAN DIEGO GAS & ELECTRIC

TELEPHONE

COX COMMUNICATION

EXISTING & PROPOSED USE:

MEDIUM DENSITY RESIDENTIAL

EXISTING & PROPOSED ZONING:

R7

GROSS SITE AREA: 29,964 SF = 0.69 ACRES

NET RESIDENTIAL	16,700 SF
LOT A - PRIVATE EASEMENT	8,599 SF
LOT B - OPEN SPACE	1,205 SF
LOT C - PARKING	788 SF
LOT D - EXISTING PRIVATE EASEMENT	2,682 SF

TOTAL NUMBER OF LOTS: 12

LOT NO.	DESCRIPTION
1-8	DETACHED RESIDENTIAL
A	PRIVATE ROAD & DRAINAGE
B	OPEN SPACE
C	PARKING
D	EXISTING PRIVATE EASEMENT

EARTHWORK QUANTITY

CUT 550 CU. YD.
 FILL 600 CU. YD.

SOURCE OF TOPOGRAPHY

AUGUST, 2021, ALTA LAND SURVEYING

SITE ADDRESS:

8504 FANITA DRIVE, SANTEE, CA 92071



3111 CAMINO DEL RIO NORTH
 SUITE 421
 SAN DIEGO, CA 92108
 TEL: (619) 528-2240



SOHAIB ALAGHA DATE: AUGUST 18, 2022

List of Appendices

- A. Residential NHD Report + Environmental Report
- B. Sustainable Santee Plan Consistency Checklist
- C. CalEPA Cortese List Data Resources Databases
- D. Report of Updated Geotechnical Investigation and Infiltration Feasibility Study
- E. SWQMP
- F. Hydrology Study
- G. Air Quality Screening Assessment
- H. Construction Noise Assessment
- I. School Availability Letters
- J. Trip Generation and Vehicle Miles Traveled (VMT) Analysis
- K. Biological Study
- L. Project Facility Availability Forms
- M. Waste Management Will Serve Letter

APPENDIX A



Report Date: 1/27/2021
 Report Number: 19523-285
 Subject Property: 8504 FANITA DR
 APN: 386-690-38-00
 Page Number: Invoice

Subject Property:
 8504 FANITA DR
 SANTEE, CA 92071-4017
 APN#: 386-690-38-00

Ordered By:
 Amanda Conrad
 Big Block Realty
 (760) 716-3525

Bill To:
 Nickie Bento
 Eaton Escrow
 (619) 873-3777
 Escrow #: 10435-NB

Product Description	Billing Terms	Amount Owed
Residential NHD Report + Environmental Report	Bill Escrow	\$94.95

\$94.95

NATURAL HAZARD DISCLOSURE

This Natural Hazard Disclosure ("Report") complies with Civil Code Section 1103 et seq. The maps and data cited herein were reviewed using the assessor parcel number ("APN") and/or the physical address listed in this Report ("Property"). Not all publicly available data regarding the Property is included in this Report. No physical inspection of the Property has been performed. Therefore, MyNHD, Inc. ("MyNHD") recommends a Certified Engineering Geologist or Professional Engineer be consulted to address specific concerns about the Property. This Report was prepared in accordance with, and therefore subject to, all of the conditions and limitations stated in the Report including the "Terms and Conditions" contained therein. An explanation of each category of disclosure is included later in this Report. The terms "No Map" or "Not Mapped" indicate that a disclosure map is not available from the governmental agency relative to specific disclosure in this Report. MyNHD has relied upon the statutes identified and has reviewed the maps and records specifically required for disclosure pursuant to California law. This information is made available to the public so that determinations if and to what extent each statute applies to the Property can be made. Receipt/use of this Report by recipient or any third party constitutes acceptance of the Terms and Conditions detailed at the end of this Report. This Report is not a policy of insurance or a warranty. This Report is prepared by MyNHD to comply with California law relating to public record information in connection with the sale of residential real estate. Please read the Terms and Conditions carefully.

Please return bottom portion with payment. Please do not staple check to stub.

----- TEAR-OFF HERE -----

Received from:
 Eaton Escrow
 Escrow #: 10435-NB

**8504 FANITA DR
 SANTEE, CA 92071-4017
 386-690-38-00**

Make Checks Payable to:

**MyNHD, Inc.
 PO Box 241426
 Los Angeles, CA 90024**

**REPORT NUMBER: 19523-285
 Amount Due: \$94.95**



Report Date: 1/27/2021
Report Number: 19523-285
Subject Property: 8504 FANITA DR
APN: 386-690-38-00
Page Number: 1 (Signature Page)

NATURAL HAZARD DISCLOSURE STATEMENT

NOTICE: This acknowledgement page does not represent the entire natural hazard disclosure report issued by MyNHD. Buyer acknowledges receipt of the entire NHD report and agrees to be bound by the terms and conditions thereof.

APN: 386-690-38-00 ADDRESS: 8504 FANITA DR SANTEE, CA 92071-4017

The transferor and his or her agent(s) or a third-party consultant disclose the following information with the knowledge that even though this is not a warranty, prospective transferees may rely on this information in deciding whether and on what terms to purchase the subject property.

The following are representations made by the transferor and his or her agent(s) based on their knowledge and maps drawn by the state and federal governments. This information is a disclosure and is not intended to be part of any contract between the transferee and transferor.

THIS REAL PROPERTY LIES WITHIN THE FOLLOWING HAZARDOUS AREA(S):

A SPECIAL FLOOD HAZARD AREA (Any type Zone "A" or "V")designated by the Federal Emergency Management Agency.

___ Yes ___ X No ___ Information is not available from local jurisdiction

AN AREA OF POTENTIAL FLOODING shown on a dam failure inundation map pursuant to Section 8589.5 of the Government Code.

___ Yes ___ X No ___ Information is not available from local jurisdiction

A VERY HIGH FIRE HAZARD SEVERITY ZONE pursuant to Section 51178 or 51179 of the Government Code. The owner of this property is subject to the maintenance requirements of Section 51182 of the Government Code.

___ Yes ___ X No

A WILDLAND AREA THAT MAY CONTAIN SUBSTANTIAL FOREST FIRE RISKS AND HAZARDS pursuant to Section 4125 of the Public Resources Code. The owner of this property is subject to the maintenance requirements of Section 4291 of the Public Resources Code. Additionally, it is not the state's responsibility to provide fire protection services to any building or structure located within the wildlands unless the Department of Forestry and Fire Protection has entered into a cooperative agreement with a Local agency for those purposes pursuant to Section 4142 of the Public Resources Code.

___ Yes ___ X No

AN EARTHQUAKE FAULT ZONE pursuant to Section 2622 of the Public Resources Code.

___ Yes ___ X No

A SEISMIC HAZARD ZONE pursuant to Section 2696 of the Public Resources Code.

___ Yes (Landslide Zone) ___ No ___ X Map is not yet released by state

___ Yes (Liquefaction Zone) ___ No ___ X Map is not yet released by state

THESE HAZARDS MAY LIMIT YOUR ABILITY TO DEVELOP THE REAL PROPERTY TO OBTAIN INSURANCE, OR TO RECEIVE ASSISTANCE AFTER A DISASTER. THE MAPS ON WHICH THESE DISCLOSURES ARE BASED ESTIMATE WHERE NATURAL HAZARDS EXIST. THEY ARE NOT DEFINITIVE INDICATORS OF WHETHER OR NOT A PROPERTY WILL BE AFFECTED BY A NATURAL DISASTER. TRANSFEEE(S) AND TRANSFEROR(S) MAY WISH TO OBTAIN PROFESSIONAL ADVICE REGARDING THOSE HAZARDS AND OTHER HAZARDS THAT MAY AFFECT THE PROPERTY.

Signature of Seller(s) _____ Date _____ Signature of Seller(s) _____ Date _____

Signature of Agent(s) _____ Date _____ Signature of Agent(s) _____ Date _____

Check only one of the following:

___ Transferor(s) (Seller(s) and their agent(s) represent that the information herein is true and correct to the best of their knowledge as of the date signed by the transferor(s) and agent(s).

X Transferor(s) (Seller(s) and their agent(s) acknowledge that they have exercised good faith in the selection of a third-party report provider as required in Civil Code Section 1103.7, and that the representations made in this Natural Hazard Disclosure Statement are based upon information provided by the independent third-party disclosure provider as a substituted disclosure pursuant to Civil Code Section 1103.4. Neither transferor(s) nor their agent(s) (1) has independently verified the information contained in this statement and report or (2) is personally aware of any errors or inaccuracies in the information contained on the statement.

Transferee (Buyer) represents that he or she has read and understands this document. Pursuant to Civil Code Section 1103.8, the representations made in this Natural Hazard Disclosure Statement do not constitute all of the transferor's or agent's disclosure obligations in this transaction.

This statement was prepared by the following provider: Third-Party Disclosure Provider(s) MyNHD, Inc. Date 1/27/2021

There are other statutory disclosures, determinations and legal information in the Report. Refer to Report for these additional disclosures, determinations and legal information. With their signature below, Transferee(s) also acknowledge(s) they have received, read, and understand this document and the additional disclosures, determinations and legal information provided in this Report, in the tax disclosures (Mello-Roos and Special Assessments), in the Environmental Report (if ordered), and in the required notices and booklets/information regarding Environmental Hazards, Earthquake Safety, Home Energy Rating System, Lead-Based Paint and Mold, which booklets/information are available at http://www.MyNHD.com/booklets/combined_booklets_engl.pdf.

Signature of Buyer(s) _____ Date _____ Signature of Buyer(s) _____ Date _____



[VIEW ALL MAPS](#)

Report Date: 1/27/2021
 Report Number: 19523-285
 Subject Property: 8504 FANITA DR
 APN: 386-690-38-00
 Page Number: 2 (Summary Page)

NATURAL HAZARD DISCLOSURE REPORT SUMMARY

Subject Property: 8504 FANITA DR SANTEE, CA 92071-4017

APN: 386-690-38-00

This property is located in/within:

	Yes	No		Details:
A Special Flood Hazard Area	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Page 3
An Area of Potential Flooding Due to Dam Inundation	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Page 3
A Very High Fire Hazard Severity Zone	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Page 3
A State of California Fire Responsibility Area	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Page 3
An Earthquake Fault Zone	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Page 3
A Landslide Seismic Hazard Zone	<input type="checkbox"/>	<input type="checkbox"/>	Data Not Available	Page 4
A Liquefaction Seismic Hazard Zone	<input type="checkbox"/>	<input type="checkbox"/>	Data Not Available	Page 4
1 Mile of a Former Military Ordnance Site	<input checked="" type="checkbox"/>	<input type="checkbox"/>		Page 4
1 Mile of a Commercial/Industrial Use Zone	<input checked="" type="checkbox"/>	<input type="checkbox"/>		Page 4
2 Miles of FAA Approved Landing Facility	<input checked="" type="checkbox"/>	<input type="checkbox"/>		Page 4
An Airport Influence Area	<input checked="" type="checkbox"/>	<input type="checkbox"/>		Page 4
Tsunami Inundation Hazard	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Page 4
Right to Farm/Important Farmland	<input checked="" type="checkbox"/>	<input type="checkbox"/>		Page 5
A Naturally Occurring Asbestos Area	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Page 5
Critical Habitats	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Page 5
1 Mile of a Mining Operation	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Page 5
Gas and Hazardous Liquid Transmission Pipelines			Included	Page 6
City/County Hazard Disclosures	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Seismic,Soils	Page 7, 8
Supplemental Fire Hazard Severity Zone (AB 38)	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Page 7, 8
A Mello-Roos Community Facility District	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Page 9
A Special Tax Assessment District	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Page 10
Property Tax Breakdown/Tax Calculator			Included	Page 11, 12
Notice of Supplemental Property Tax Bill/Transfer Tax Disclosure			Included	Page 13
Notice of Database Disclosure/Duct Sealing Requirements			Included	Page 15
Contaminated Water Advisory			Included	Page 15
Notice of Energy Efficiency Standards/Tax Credit Advisory			Included	Page 16
Notice of Williamson Act			Included	Page 16
Mold Addendum			Included	Page 17
Notice of Methamphetamine Contamination			Included	Page 17
Notice of Abandoned Water Wells and Oil/Gas Wells			Included	Page 17
Notice of Naturally Occurring Asbestos / Radon Gas Advisory			Included	Page 18
Notice of Abandoned Mines Advisory			Included	Page 18
Wood-Burning Heater Advisory			Included	Page 18
Environmental Report			Included	Page 19
Notice of Terms and Conditions			Included	Page 26

This Report Summary merely summarizes the research results contained in this full MyNHD Report, and does not, in any way, reduce or eliminate the need to read the Report in its entirety. Please verify the street address and APN for accuracy.



EXPLANATIONS AND NOTICES

SPECIAL FLOOD HAZARD AREAS

SUBJECT PROPERTY IS IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA

Special Flood Hazard Areas have been mapped by the Federal Emergency Management Agency (FEMA) on their Flood Rate Insurance maps. Special Flood Hazard Areas are located with the 100 year flood plain and are designated as either Zone A (Inland area) or Zone V (Coastal areas). Flood insurance is required by lenders for properties located within a Zone A or Zone V. FEMA periodically removes a property or a group of properties from a Special Flood Hazard Area based on information provided by cities, counties, or homeowners. The revised status of the property or properties is provided in a Letter of Map Amendment (LOMA) or in a Letter of Map Revision (LOMR). A search for a specific LOMA or LOMR is outside the scope of this report. Please visit www.fema.gov to search for a specific LOMA or LOMR.

Irrespective of the FEMA Flood Cert. determination as to whether the structure or property have been removed from the Special Flood Hazard Area, the property may be subject to limitations on development due to concerns over potential flooding. If there are concerns relative to the viability of potential development on the subject property an inquiry should be made with the local building and safety department.

AREAS OF POTENTIAL FLOODING FROM DAM FAILURES

SUBJECT PROPERTY IS IS NOT LOCATED IN A DAM INUNDATION ZONE

Maps have been prepared for most dams in the State of California that show the potential flooding areas due to dam failure. The maps are reviewed and approved by the California Office of Emergency Services. Local offices of emergency services have prepared evacuation plans in the areas affected by potential dam failure inundation.

VERY HIGH FIRE HAZARD SEVERITY ZONES

SUBJECT PROPERTY IS IS NOT LOCATED IN A VERY HIGH FIRE SEVERITY ZONE

Very High Fire Hazard Severity Zones have been mapped by the California Department of Forestry and Fire Protection to indicate area with increase fire risk. The Map by the California Department of Forestry and Fire Protection (CDF), dated January 2006, does not reflect changes made at the local level. Therefore, the CDF recommends verifying status with the local fire department. Brush clearing and other fire defense improvements are required for properties located in Very High Fire Hazard Severity Zones. Please contact the local fire department for fire defense and maintenance requirements.

STATE OF CALIFORNIA FIRE RESPONSIBILITY AREA

SUBJECT PROPERTY IS IS NOT LOCATED IN A STATE FIRE RESPONSIBILITY AREA

Wildland areas that may contain substantial forest fire risk and hazards have been mapped by the California Department of Forestry and Fire Protection to indicate areas with increased fire risk. These areas are also known as State Fire Responsibility Areas because the State of California has primary responsibility for fire prevention and suppression. In addition, the property owner may be responsible for structure protection and is responsible for brush clearing and other fire defense improvements. Please contact the county fire department for fire defense and maintenance requirements.

ALQUIST PRIOLO EARTHQUAKE FAULT ZONES

SUBJECT PROPERTY IS IS NOT LOCATED IN AN ALQUIST PRIOLO FAULT ZONE

The purpose of the Alquist Priolo Earthquake Fault Zoning Act is to regulate development near active faults in order to mitigate hazards associated with ground rupture. The State Geologist through the California Geological Survey has provided maps that show specific zones around active faults. Development of a property located within an Earthquake Fault Zone will likely require a fault study by State-licensed geologist. The determination made in this report does not indicate whether or not an active fault is located on the subject property and is not a substitute for a fault study by a State Licensed geologist.



SEISMIC HAZARD ZONES

SUBJECT PROPERTY IS IS NOT LOCATED IN A LANDSLIDE HAZARD ZONE MAP NOT YET RELEASED BY STATE

SUBJECT PROPERTY IS IS NOT LOCATED IN A LIQUEFACTION HAZARD ZONE MAP NOT YET RELEASED BY STATE

The purpose of the Seismic Hazards Mapping Act is to regulate development in areas determined to have increased risk of the seismic hazards of liquefaction and earthquake induced land sliding. The California Geological Survey provides maps delineating liquefaction hazard zones and earthquake induced landslide hazard zones. Although not all areas of the state have been mapped, the California Geological Survey is currently mapping additional areas. Liquefaction is a seismic hazard in which sediments below the water table lose strength as a result of strong earthquake ground shaking. Saturated soils comprised of sands and silts that are within 40 feet of the ground surface have a higher potential for liquefaction. Liquefaction is a rare, but real phenomenon that can result in damage to structures.

FORMER MILITARY ORDNANCE SITE DISCLOSURE

[View Map](#)

SUBJECT PROPERTY IS IS NOT WITHIN 1 MILE OF A KNOWN FORMER MILITARY ORDNANCE SITE

Military Ordnance sites are areas that were previously used for military training and that may contain unexploded munitions or other hazardous materials. Sites closed prior to 1989 are part of the Formerly Used Defense Sites database maintained by the United States Department of Defense. Current military bases or those closed after 1989 are not a part of the Formerly Used Defense Sites database.

SITE NAME

CAMP LA MESA
 MARINE PARACHUTE SCHOOL LA MESA

SITE ID#

J09CA0286
 J09CA7244

COMMERCIAL/INDUSTRIAL DISCLOSURE

[View Map](#)

SUBJECT PROPERTY IS IS NOT LOCATED WITHIN 1 MILE OF A PROPERTY ZONED FOR COMMERCIAL/INDUSTRIAL USE

The disclosure regarding the Subject Property's proximity to a zone or district allowing heavy commercial Industrial use zones is based upon currently available public records and excludes entirely agricultural properties. A physical inspection of the Subject Property has not been made. The calculation of the one-mile proximity measurement is based upon the distance between the Subject Property's street address and the street address of the next closet property allowing heavy commercial Industrial use. This is an actual knowledge disclosure required by the seller on the Transfer Disclosure Statement. There could be other nuisances not covered by this commercial industrial zoning.

FAA APPROVED LANDING FACILITY

[View Map](#)

SUBJECT PROPERTY IS IS NOT LOCATED WITHIN 2 MILES OF AN FAA APPROVED LANDING FACILITY

A search of data from the Federal Aviation Administration was made to determine if the property is located within two miles of a public/private FAA approved landing facility (i.e., an airport). Properties within proximity to airports/flight paths may experience airport noise and/or other nuisances. For more information please visit http://www.faa.gov/airports/environmental/airport_noise/.

Airport Name(s)

GILLESPIE FIELD AIRPORT - Public

Distance (in miles) from Subject Property

1.00

AIRPORT INFLUENCE AREA "AIA"

[View Map](#)

SUBJECT PROPERTY IS IS NOT LOCATED IN AN AIRPORT INFLUENCE AREA "AIA"

An Airport Influence Area is determined and mapped by the local Airport Land Use Commission. A property with an Airport Influence Area may be subject to annoyances and inconveniences associated with proximity to airport operations. Concerns about an Airport Influence Area should be addressed to the local Airport Land Use Commission. Inclusion of private and military airports vary by county and may or may not be included in this disclosure report.

TSUNAMI INUNDATION HAZARD

SUBJECT PROPERTY IS IS NOT LOCATED IN A TSUNAMI INUNDATION AREA

A tsunami is a sea wave typically generated by a submarine earthquake, but may be caused by an offshore landslide or volcanic action. A large offshore earthquake, typically a magnitude 7 or greater, may generate a tsunami. Properties located along the California coastline have a potential for inundation from a tsunami. Although early warning systems may provide sufficient warning from distant tsunamis, near shore generated tsunamis may reach the coast in a matter of minutes. Therefore, homeowners should contact their local emergency management agency and become knowledgeable about tsunami warning signs and local evacuation plans.



RIGHT TO FARM/IMPORTANT FARMLAND

[View Map](#)

SUBJECT PROPERTY IS IS NOT LOCATED WITHIN 1 MILE OF A FARM OR RANCH LAND

The search determines if the subject property is located within one mile of a property containing agricultural activity, operation or facility, or appurtenances thereof. These facilities may contain agricultural nuisances that may conflict with non-agricultural uses. Agricultural practices may include noise from farm equipment and machinery, dust, pesticides, and odors associated with animals, manure, and fertilizers.

NATURALLY OCCURRING ASBESTOS

SUBJECT PROPERTY IS IS NOT LOCATED WITHIN AN AREA OF NATURALLY OCCURRING ASBESTOS

Asbestos refers to naturally-occurring fibrous minerals found throughout the State of California. Serpentine, an ultra-mafic rock, contains asbestos and is commonly found in the Sierra foothills, the Coast Ranges, and the Klamath Mountains. On residential properties, naturally-occurring asbestos sources are typically dust from unpaved roads or driveways. Paving the unpaved driveways or roads can help to reduce exposure to asbestos. For more information please visit the Air Resources Board of the California Environmental Protection Agency website: <http://www.arb.ca.gov/homepage.htm>.

CRITICAL HABITATS

SUBJECT PROPERTY IS IS NOT LOCATED WITHIN AN AREA OF CRITICAL HABITATS

The Endangered Species Act establishes critical habitats for any species listed under the Act. A critical habitat is defined as a specific area within the geographical area occupied by the species at the time of listing, if the area contains physical or biological features essential to conservation. Those features may require special management considerations or protection even in areas outside their geographical area if the agency determines the area itself essential for conservation.

MINING OPERATION

SUBJECT PROPERTY IS IS NOT LOCATED WITHIN 1 MILE OF A MINING OPERATION

If the property is located within one mile of a mine operation for which the mine owner or operator has reported mine location data to the Department of Conservation pursuant to Section 2207 of the Public Resources Code, the property may be subject to inconveniences resulting from mining operations. The impacts of these practices should be considered when such mining operations are present within one mile of the property.

Effective January 1, 2012 Senate Bill 110 amends Section 1103.4 of the Civil Code and requires disclosure if the subject property is within one mile of a mining operation. The widespread degradation of land and water resources caused by strip mining and the failure of the states to effectively regulate the industry resulted in the passage of the Surface Mining Control and Reclamation Act ("SMCRA") of 1977. The Office of Surface Mining ("OSM") was created in 1977 when Congress enacted the SMCRA Act. OSM works with the states and Indian Tribes to assure that citizens and the environment are protected during coal mining and that the land is restored to beneficial use when mining is finished. OSM and its partners are also responsible for reclaiming and restoring lands and water degraded by mining operations before 1977. For more information, please visit <https://www.conservation.ca.gov/dmr>.



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NOTICE REGARDING GAS AND HAZARDOUS LIQUID TRANSMISSION PIPELINES

This notice is being provided simply to inform you that information about the general location of gas and hazardous liquid transmission pipelines is available to the public via the National Pipeline Mapping System (NPMS) Internet Web site maintained by the United States Department of Transportation at <http://www.npms.phmsa.dot.gov//>. To seek further information about possible transmission pipelines near the property, you may contact your local gas utility or other pipeline operators in the area. Contact information for pipeline operators is searchable by ZIP Code and county on the NPMS Internet Web site.

Upon delivery of the notice to the transferee of the real property, the seller or broker is not required to provide information in addition to that contained in the notice regarding gas and hazardous liquid transmission pipelines. The information in the notice shall be deemed to be adequate to inform the transferee about the existence of a statewide database of the locations of gas and hazardous liquid transmission pipelines and information from the database regarding those locations.

Nothing in this section shall alter any existing duty under any other statute or decisional law imposed upon the seller or broker, including, but not limited to, the duties of a seller or broker under this article, or the duties of a seller or broker under Article 1.5 (commencing with Section 1102) of Chapter 2 of Title 4 of Part 4 of Division 2.





CITY/COUNTY HAZARD DISCLOSURE EXPLANATIONS

MyNHD provides information on locally identified natural hazards as an additional service because their disclosure to purchasers is either required by ordinance or the information is available on maps publicly available from various City and County sources. This service also supplements and completes the natural hazard information required by the California Civil Code 1103.

The Subject Property:

- | | | | |
|--|--|--|--|
| <input type="checkbox"/> IS | <input checked="" type="checkbox"/> IS NOT | Located in a Supplemental Flood Hazard Zone. | <input type="checkbox"/> NOT MAPPED |
| <input type="checkbox"/> IS | <input checked="" type="checkbox"/> IS NOT | Located in a Supplemental Fire Hazard Zone. | <input type="checkbox"/> NOT MAPPED |
| <input type="checkbox"/> IS | <input checked="" type="checkbox"/> IS NOT | Located in a Supplemental Earthquake Fault Hazard Zone. | <input type="checkbox"/> NOT MAPPED |
| <input checked="" type="checkbox"/> IS | <input type="checkbox"/> IS NOT | Located in a Supplemental Seismic Geologic Hazard Zone. | <input type="checkbox"/> NOT MAPPED View Map |
| <input checked="" type="checkbox"/> IS | <input type="checkbox"/> IS NOT | Located in an Expansive/Subsidence Soil Area (High Expansive Soils). | <input type="checkbox"/> NOT MAPPED View Map |

Flood Hazard Zones: Supplemental flood zones include information not covered by Special Flood Hazard Areas as designated by the Federal Emergency Management Agency or by Dam Inundation zones as reported by the California State Office of Emergency Services. These can include tsunamis, runoff hazards, historical flood data and additional dike failure hazards.

Fire Hazard Zones: Local agencies may, at their discretion, include or exclude certain areas from the requirements of California Government Code Section 51182 (imposition of fire prevention measures on property owners), following a finding supported by substantial evidence in the record that the requirements of Section 51182 either are, or are not necessary for effective fire protection within the area. Any additions to these maps that MyNHD has been able to identify and substantiate are included in this Report.

An answer of "IN" on the supplemental Fire Zone would indicate that the property is in a high, very high or other high fire-risk areas. More information may be found on HOME FIRE HARDENING DISCLOSURE and ADVISORY. (C.A.R. form HHDA, 12/20) if provided by owner.

Even though the Answer to the Supplemental Fire may show "NOT IN", if the property is in or near a mountainous area, forest-covered lands brush covered lands, grass-covered lands or land that is covered with flammable material additional disclosures may be warranted. More information may be found on HOME FIRE HARDENING DISCLOSURE and ADVISORY. (C.A.R. form HHDA, 12/20) if provided by owner. Petrochemical complex area determinations do not qualify as high fire hazards in reference to California Assembly Bill 38.

This information should be verified and available through the local agency where the property is located.

Earthquake Fault Hazard Zones: Many local jurisdictions have different or higher standards than the State of California for the identification of active earthquake fault zones. These jurisdictions have created their own maps which indicate the active faults according to these alternate standards. Some jurisdictions also recommend or require the disclosures of potentially active faults. MyNHD has attempted to include all official and publicly available maps indicating earthquake faults identified by these jurisdictions.

Seismic/Geologic Hazard Zones: The California Division of Mines and Geology ("DMG") has not completed the project assigned it by Section 2696 of the California Public Resources Code to identify areas of potential seismic hazards within the State of California. The DMG and the United States Geological Survey have performed many valuable studies that supplement the Section 2696 maps and fill many missing areas. These maps were reviewed in the preparation of this Report. Also included in this Report is the review of maps that indicate many hazards that may or may not be seismically related, including, but not limited to, landslides, debris flows, mudslides, coastal cliff instability, volcanic hazards, and avalanches. Many cities and counties require geologic studies before any significant construction if the subject property is in or near a geologic hazard known to them. MyNHD has attempted to include all official and publicly available maps indicating geologic hazards identified by these jurisdictions.



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CITY/COUNTY HAZARD DISCLOSURE EXPLANATIONS (CONTINUED)

Expansive/Subsidence Soils: Expansive soils are soils which have a potential to undergo significant changes in volume, either shrinking or swelling, with changes in moisture content. Periodic shrinking and swelling of expansive soils can cause extensive damage to buildings, other structures and roads. Soils containing clays have variable potential for volume changes. High, or Expansive, indicates the dominant soil condition. Detailed investigations are required to fully evaluate the shrink-swell characteristics of soils at any given site. Check with your local building department if there is a question as to special requirements for various soils conditions in their jurisdiction as they may impose additional requirements for new or additional construction.

The main cause of subsidence in California is groundwater pumping. The effects of subsidence include damage to buildings and infrastructure, increased flood risk in low-lying areas, and lasting damage to groundwater aquifers and aquatic ecosystems.





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MELLO-ROOS COMMUNITY FACILITIES DISTRICT(S)

SUBJECT PROPERTY IS IS NOT SUBJECT TO MELLO-ROOS COMMUNITY FACILITIES DISTRICT SPECIAL TAX LIEN(S).

Mello-Roos Community Facilities Districts ("CFD") provide a method of financing certain public capital facilities and services especially in developing areas and areas undergoing rehabilitation. Public improvements funded by Mello-Roos CFDs may include, but are not limited to, roads, schools, water, sewer and storm drain facilities. Public services funded by Mello-Roos CFDs may include, but are not limited to, police and fire protection services, recreation program services, and flood or storm protection services. Mello-Roos CFDs commonly fund the construction of public improvements through the issuance of bonds. A special tax lien is placed on property within the district for the annual payment of principal and interest as well as administrative expenses. Typically, the annual special tax continues until the bonds are repaid, or until special taxes are no longer needed. In most instances, but not all, the special tax is collected with regular property taxes.

This property is within the Mello-Roos CFD(s) listed below and is subject to a special tax that will appear on the property tax bill. This special tax is in addition to the regular property taxes and any other charges and benefit assessments that will be listed on the property tax bill. This special tax may not be imposed on all parcels within the city or county where the property is located. This special tax is used to provide public facilities or services that are likely to particularly benefit the property.

The maximum tax rate, the maximum tax rate escalator, and the authorized facilities which are being paid for by the special taxes and by the money received from the sale of bonds which are being repaid by the special taxes, and any authorized services are indicated below. These facilities may not yet have all been constructed or acquired and it is possible that some may never be constructed or acquired.



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1915 BOND ACT ASSESSMENT DISTRICT(S)

SUBJECT PROPERTY IS IS NOT SUBJECT TO IMPROVEMENT BOND ACT OF 1915 SPECIAL ASSESSMENTS LIEN(S).

1915 Bond Act Assessment Districts ("AD") provide a method of financing certain public capital facilities. Public improvements funded by 1915 Bond Act Assessment Districts may include, but are not limited to, roads, sewer, water and storm drain systems, and street lighting. 1915 Bond Act Assessment Districts commonly fund the construction of public improvements through the issuance of bonds. A special assessment lien is placed on property within the Assessment District. The lien amount is calculated according to the specific benefit that an individual property receives from the improvements and is amortized over a period of years. 1915 Bond Act Assessments Districts can be prepaid at any time. In most instances, but not all, the assessment is collected with regular property taxes.

This property is within the 1915 Bond Act Assessment District(s) named below and is subject to annual assessment installments levied by the assessment district that will appear on the property tax bill. The annual assessments are in addition to the regular property taxes and any other charges and benefit assessments that will be listed on the property tax bill. The assessment district(s) has issued bonds to finance the acquisition or construction of certain public improvements that are of direct and special benefit to property within the assessment district. The bonds will be repaid from annual assessment installments on property within the assessment district. The special assessment is used to provide public facilities that are likely to particularly benefit the property.

The annual assessment installment and public facilities that are being paid for by the money received from the sale of bonds that are being repaid by the assessments are indicated below. These facilities may not yet have all been constructed or acquired and it is possible that some may never be constructed or acquired.



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BREAKDOWN OF THE 2020-2021 PROPERTY TAX BILL

This report is an estimate of the original secured property tax bill charges for the above-mentioned property using information obtained from the County on a given date. Changes made by the County or the underlying public agencies levying charges against this property after the date of this Report may not be reflected in this Report.

Basic Prop 13 Levy

1.	Basic 1% Levy County of San Diego (619) 531-5846	Basic 1% Levy General	\$2,850.93
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Voter Approved Ad Valorem Taxes

2.	Voter Approved Debt County of San Diego (619) 531-5846	Ad Valorem Tax General	\$540.39
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Basic Prop 13 Levy & Voter Approved Ad Valorem Taxes:	\$3,391.32
Estimated Tax Rate:	1.189549%

Direct Assessments

3.	Standby Charge Metropolitan Water District of Southern California (213) 217-7619	Standby Charge Water & Sewer Service	\$11.50
4.	Water Availability Standby Charge San Diego County Water Authority (858) 522-6600	Standby Charge Water & Sewer Service	\$10.00
5.	Fire Protection District Special Tax City of Santee (619) 258-4150	Fire Suppression Assessment Fire Protection	\$8.20
6.	Mosquito Surveillance Zone B County of San Diego (858) 694-2888	Vector Control District Vector Control	\$2.28
7.	Vector Disease Control County of San Diego (858) 694-2888	Vector Control District Vector Disease Control	\$2.08

Total Direct Assessment Charges:	\$34.06
Total 2020-2021 Amount	\$3,425.38



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Subject Property: 8504 FANITA DR SANTEE, CA 92071-4017

THIS IS A NOTIFICATION TO YOU PRIOR TO YOUR PURCHASING THIS PROPERTY.

On July 1, 1983, California State law was changed to require the reassessment of property following a change of ownership or the completion of new construction. This reassessment may result in one or more supplemental tax bills being mailed to the assessed owner, in addition to the annual property tax bill. The calculator below is provided an estimate of the potential amount of supplemental taxes to be billed on the listed property.

Instantly calculate estimated property taxes and supplemental taxes on our website: (or manually calculate below).

Instant Tax Calculator: <http://www.mynhd.com/suptax/calculator/610800/Of2149c3e2e158794325e2381031de02>

SUPPLEMENTAL TAX CALCULATOR (ESTIMATE ONLY)

1. Estimated Sales Price.....	\$	
2. Estimated Current Assessed Value	\$	285,093.00
3. Subtract line #2 from line #1. Estimated Supplemental Assessed Value	\$	
4. Ad Valorem Tax Rate		1.19
5. Multiply line #3 by line #4. Estimated Supplemental Tax Amount Obligation	\$	

If a supplemental event occurs between June 1 and December 31, only one supplemental tax bill or refund check is issued. This bill or refund accounts for the property's change in value for the period between the first day of the month following the event date and the end of the current fiscal year (i.e., the following June 30). If, however, a supplemental event occurs between January 1 and May 31, two supplemental tax bills or refund checks are issued. The second bill or refund accounts for the property's change in value for the entire 12 months of the coming fiscal year, beginning on the following July 1.

IF SALE DATE FOR THE RESIDENTIAL PROPERTY IS BETWEEN THE MONTHS OF JANUARY THROUGH MAY:

6. Enter Proration Month Factor (See TABLE 1. below).....	_____
7. Multiply line #5 by line #6. Estimated Supplemental Tax Bill #1	\$ _____
8. Enter the amount from line #5. Estimated Supplemental Tax Bill #2	\$ _____
9. Add lines #7 and line #8. Total Estimated Supplemental Tax Bill	\$ _____

IF SALE DATE FOR THE RESIDENTIAL PROPERTY IS BETWEEN THE MONTHS OF JUNE THROUGH DECEMBER:

10. Enter Proration Month Factor (See TABLE 2. below).....	_____
11. Multiply line #5 by line #10. Total Estimated Supplemental Tax Bill	\$ _____

Proration Month-of-Sale Factor

TABLE 1.

January	0.4167
February	0.3333
March	0.2500
April	0.1667
May	0.0833

TABLE 2.

June	1.0000
July	0.9167
August	0.8333
September	0.7500
October	0.6667
November	0.5833
December	0.5000

Real Property Taxes in California are influenced by several factors, including but not limited to the reassessment rules pursuant to Proposition 13, appraisal values, and bonds. As such, this calculator is not intended to provide a representation of the actual tax amounts that will be assessed. This information is provided for informational and planning purposes only, and should not be relied upon to make a determination regarding acquisition of a property. This calculator does not account for supplemental taxes that may be due as a result of the sale of a property or construction at a property which could result pursuant to Proposition 13. MyNHD, Inc. makes no representation regarding the actual amount of tax that will be assessed on any particular property. For specific questions or actual tax calculations, please call the tax assessor's office for the county in which the subject property is located.



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NOTICE OF SUPPLEMENTAL PROPERTY TAX BILL

In accordance with Section 1102.6c of the Civil Code, it is the sole responsibility of the seller of any real property, or his or her agent, to deliver to the prospective purchaser a disclosure notice of the following:

California property tax law requires the Assessor to revalue real property at the time the ownership of the property changes. Because of this law, you may receive one or two supplemental tax bills, depending on when your loan closes.

The supplemental tax bills are not mailed to your lender. If you have arranged for your property tax payments to be paid through an impound account, the supplemental tax bills will not be paid by your lender. It is your responsibility to pay these supplemental bills directly to the Tax Collector. If you have any question concerning this matter, please call your local Tax Collector's Office.

As stated above, California law requires that the Assessor re-appraise property upon a change of ownership or the completion of new construction (the "Triggering Event"). This re appraisal results in a supplemental tax assessment which is based on the difference between the new value and the old value of the property, multiplied by the property's Ad Valorem tax rate. The resulting Supplemental Tax amount is then pro-rated, based upon the number of months remaining in the fiscal year in which the Triggering Event occurred.

The number of tax bills which will be issued also depends on the date the event Triggering Event occurred. If the change of ownership or new construction is completed between January 1st and May 31st, the result will be two supplemental assessments levied on two supplemental tax bills. If the event occurs between June 1st and December 31st, then only one supplemental bill will be issued.

MANDATORY PRIVATE TRANSFER FEE DISCLOSURE PURSUANT TO CIVIL CODE SECTION 1102.6E

A "Private Transfer Fee" is a fee imposed by a private entity such as a property developer, home builder, or homeowner association, when a property within a certain type of subdivision is sold or transferred. A Private Transfer Fee may also be imposed by an individual property owner. Private Transfer Fees are different from and are charged in addition to any Documentary Transfer Taxes levied by a City or County Government upon sale or transfer of a property.

Civil Code Section 1098 defines a "Transfer Fee" as "any fee payment requirement imposed within a covenant, restriction, or condition contained in any deed, contract, security instrument, or other document affecting the transfer or sale of, or any interest in, real property that requires a fee be paid upon transfer of the real property." Certain existing fees such as governmental fees, court ordered fees, mechanic lien fees, common interest development fees, etc. are specially excluded from the definition of "Transfer Fee".

To determine if the property is subject to a Transfer Fee, OBTAIN COPIES OF ALL THE EXCEPTIONS LISTED ON THE PRELIMINARY (TITLE) REPORT FROM THE TITLE COMPANY AND READ THEM TO DETERMINE IF ANY TRANSFER FEES ARE APPLICABLE. Please be aware that private transfer fees may be difficult to identify by simply reading the title report.

Effective January 1, 2008, Civil Code Section 1102.6e requires the Seller to notify the Buyer of whether a private transfer fee applies and if present, to disclose certain specific information about the fee.

Content of Disclosure: Civil Code Section 1102.6e requires the Seller to disclose specific information about any Transfer Fee that may affect the property. Please refer to the Section 1102.6e or the California Association of Realtors Notice of Private Transfer Fee Form, for a standard format to use in making the Transfer Fee Disclosure if such a disclosure is required.



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How to Determine the Existence of a Transfer Fee: If a Transfer Fee does exist affecting the property, the document creating the fee may be on file with the County Recorder as a notice recorded against the property and should be disclosed in the preliminary (title) report on the property. However, the preliminary (title) report will merely disclose the existence of the documents affecting title, not the content of the documents. The title of a document may also not be sufficient to disclose that a transfer fee is included in its terms. Accordingly Seller should (a) request the title company which issued the preliminary (title) report to provide copies of the documents shown as “exceptions,” and (b) review each document to determine if it contains a transfer fee.

Documentary Transfer Taxes

This is a government tax imposed by a City or County when a property within the jurisdiction is sold or transferred. It is NOT the same as a Private Transfer Fee, which may be imposed by a private entity such as a property developer, home builder, or homeowner association. However, it is a similar fee due upon closing, calculated based on a percentage of the purchase price.

Transfer Tax Defined. Pursuant to Revenue and Taxation Code Sections 11911-11929, Counties and Cities are authorized to impose a tax on the transfer of property located within their jurisdiction. The tax is commonly known by various names, including the Documentary Transfer Tax, Real Property Transfer Tax, or Real Estate Transfer Tax (hereinafter, the “Transfer Tax”).

How Much? Transfer Tax is due at closing and payable through escrow. This tax does not expire. All future sales of this property will be charged this tax at close of escrow. The amount of the Transfer Tax is based on the value or sale prices of the property that is transferred. The County rate is one dollar and ten cents (\$1.10) for each one thousand dollars (\$1.000) of value. The rate for noncharter (“general law”) cities is one-half of the County rate and is credited against the County tax due. Charter cities may impose a transfer tax at a rate higher than the County rate.

For any City or County in California, the Transfer Tax rate (“Tax Rate Table”) is available at no charge from many sources, most conveniently on the website of the California Local Government Finance Almanac (sponsored by the California League of Cities): <http://www.californiacityfinance.com/PropTransfTaxRates.pdf>.

To estimate the Transfer Tax for the property, multiply the Property’s estimated sales price (in thousands of dollars) by the amount shown in the Tax Rate Table for the City and County in which the property is located.

Who Pays? The law states that, “the Transfer Tax must be paid by the person who makes signs or issues any document subject to the tax, or for whose use or benefit the document is made, signed or issued.” In practice, this means that the payment of the Transfer Tax is customarily made by the Seller or the Buyer, or shared by both, depending on the jurisdiction in which the transferred property is located.

Are there any exemptions? The Revenue and Taxation Code, which provides the statutory authority for counties to impose the Transfer Tax, specifically exempts from the transfer tax the following transactions:

1. Instruments in writing given to secure a debt.
2. Transfers whereby the federal or any state government, or agency, instrumentality or political subdivision thereof, acquires title to realty.
3. Transfers made to effect a plan of reorganization or adjustment (i) confirmed under the Federal Bankruptcy Act, (ii) approved in certain equity receivership proceedings or (iii) whereby a mere change in identity, form or place of organization is effected.
4. Certain transfers made to effect an order of the Securities and Exchange Commission relating to the Public Utility Holding Company Act of 1935.
5. Transfers of an interest in a partnership (or, beginning January 1, 2000, an entity treated as a partnership for federal income tax purposes) that holds realty, if (i) the partnership is treated as continuing under IRC § 708 and (ii) the continuing partnership continues to hold the realty.
6. Certain transfers in lieu of foreclosure.
7. Transfers, divisions or allocations of community, quasi community or quasi marital property between spouses pursuant to, or in contemplation of, a judgment under the Family Code.
8. Transfers by the State of California, or any political subdivision, agency or instrumentality thereof, pursuant to an agreement whereby the purchaser agrees to immediately reconvey the realty to the exempt agency.
9. Transfers by the State of California, or any political subdivision, agency or instrumentality thereof, to certain nonprofit corporations.
10. Transfers pursuant to certain inter vivos gifts or inheritances.



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NOTICE OF DATABASE DISCLOSURE

Pursuant to Section 290.46 of the Penal Code, information about specified registered sex offenders is made available to the public via an Internet Website by the Department of Justice at www.meganslaw.ca.gov. Depending on an offender's criminal history, this information will include either the address at which the offender resides or the community of residence and Zip Code in which he or she resides. California Law (AB 488), signed by the Governor on September 24, 2004, provides the public with Internet access to detailed information on registered sex offenders. The Sex Offender Tracking Program of the California Department of Justice maintains the database of the locations or persons required to register pursuant to paragraph (1) of subdivision (a) of Section 290.46 of the Penal Code. The online database is updated with data provided by local sheriff and police agencies on an ongoing basis. It presents offender information in 13 languages; may be searched by sex offender's specific name, zip code, or City/County provides access to detailed personal profile information on each registrant; and includes a map of the neighborhood surrounding any particular property.

California Department of Justice Information Sources:

Megan's Law Sex Offender Locator Web Site: <http://www.meganslaw.ca.gov>.

California Department of Justice Megan's Law Email Address: meganslaw@doj.ca.gov.

Local Information Locations for the Subject Property:

All sheriffs' departments and every police department in jurisdiction with a population of 200,000 or more are required to make a CD-ROM available free to the public for viewing. Although not required, many other law enforcement departments in smaller jurisdictions make the CD-ROM available as well. Please contact the local law enforcement department to investigate availability.

NOTICE OF MINIMUM ENERGY CONSERVATION STANDARDS FOR RESIDENTIAL CENTRAL AIR CONDITIONERS AND HEAT PUMPS

Manufacturers have been required to comply with the Department of Energy's ("DOE") energy conservation standards for residential central air conditioners and heat pumps since 1992. From time to time the DOE amends the minimum seasonal energy efficiency ratio ("SEER") for such equipment for the purpose of saving energy. Equipment manufactured after January 1, 1992, and before January 23, 2006, must meet a minimum SEER rating of 10. Equipment manufactured between January 23, 2006 and January 1, 2015, must meet a minimum SEER rating of 13. After January 1, 2015, equipment installed in California must meet a minimum SEER rating of 14. The law does not require a seller to replace non-compliant existing equipment upon transfer. For more information about the new standards please visit https://www1.eere.energy.gov/buildings/appliance_standards/product.aspx/productid/75.

CONTAMINATED WATER ADVISORY

According to the Public Policy Institute of California almost 400 small rural water systems and schools are unable to provide safe drinking water. In some areas, nitrate produced by nitrogen fertilizers and manure—is polluting local groundwater basins. Chemicals such as arsenic, chromium-6 and lead are also a challenge.

The San Joaquin Valley is particularly hard hit by nitrate: 63 percent of the state's public water systems that report violations of health standards for the contaminant in 2015 were in the Valley. Nitrate is the most critical and immediate contaminant in the San Joaquin Valley according to Thomas Harter University of California, Davis.

About 1 million Californians can't safely drink their tap water. Approximately 300 water systems in California currently have contamination issues ranging from nitrates, arsenic lead and uranium at levels that create severe health issues.

In particular the city of Fresno has Lead contamination in the northeast portion of the city.



NOTICE OF CALIFORNIA'S 2013 ENERGY EFFICIENCY STANDARDS

Public Resources Code Sections 25402 and 25402.1 were enacted in 1975 as part of the enabling legislation establishing the California Energy Commission and its basic mandates. These sections require the Energy Commission to adopt, implement, and periodically update energy efficiency standards for both residential and nonresidential buildings.

The Standards must be cost effective based on the life cycle of the building, must include performance and prescriptive compliance approaches, and must be periodically updated to account for technological improvements in efficiency technology. Accordingly, the California Energy Commission has adopted and periodically updated the Standards (codified in Title 24, Part 6 of the California Code of Regulations) to ensure that building construction, system design and installation achieve energy efficiency and preserve outdoor and indoor environmental quality. The Standards establish a minimum level of building energy efficiency. A building can be designed to a higher efficiency level, resulting in additional energy savings.

The 2013 Building Energy Efficiency Standards, which are effective July 1, 2014, focus on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings, and include requirements that will enable both demand reductions during critical peak periods and future solar electric and thermal system installations. The most significant efficiency improvements to the residential Standards are proposed for windows, envelope insulation and HVAC system testing. The most significant efficiency improvements to the nonresidential Standards are proposed for lighting controls, windows, unitary HVAC equipment and building commissioning. New efficiency requirements for process loads such as commercial refrigeration, data centers, kitchen exhaust systems and compressed air systems are included in the nonresidential Standards. The 2013 Standards include expanded criteria for acceptance testing of mechanical and lighting systems, as well as new requirements for code compliance data to be collected in a California Energy Commission managed repository. Compliance with the standard is assured by hiring a contractor who is properly licensed, and doing the installation with a building permit so that the City Building Inspector can check the work when completed. For more information, visit <http://www.energy.ca.gov/title24/2013standards/>.

NOTICE OF HOME ENERGY EFFICIENCY IMPROVEMENTS TAX CREDIT ADVISORY

According to the DOE, the higher replacement cost of SEER compliant air conditioning system will be offset by a savings of up to 23 percent in monthly energy costs. The California Energy Commission notes that leaking ductwork accounts for up to 25 percent of the heating costs of a typical home. Therefore, compliance with the new Federal and State standards offers substantial benefits to the property owner, as well as significant environmental benefits through decreased energy consumption, compared with older systems. In addition, consumers who purchase and install specific products, such as energy efficient windows, insulation, doors, roofs, and heating and cooling equipment in the home can receive a tax credit of up to \$500 beginning January 2006. For more information visit <http://www.energy.gov/taxbreaks.htm>.

NOTICE OF WILLIAMSON ACT

The [Williamson Act](#) (California Land Conservation Act of 1965: Government Code Section 51200 et. seq.) is a state agricultural land protection program in which local governments elect to participate. The intent of the program is to preserve agricultural lands by discouraging their premature and unnecessary conversion to urban uses. No later than 20 days after a city or county enters into a contract with a landowner pursuant to this chapter, the clerk of the board or council, as the case may be, shall record with the county recorder a copy of the contract which would impart notice and therefore appear in the title report.



MOLD ADDENDUM

All prospective home and condominium purchasers are advised to thoroughly inspect the Property for mold. Mold may appear as discolored patches or cottony or speckled growth on walls, furniture, or floors, and it often has an earthy or musty odor. Mold may also grow beneath water-damaged surfaces and floors, behind walls and above ceilings. Therefore, if a property has an earthy smell or musty odor, mold contamination may exist even if no actual mold growth is visible.

Mold only needs a food source (any organic material such as wood, paper, dirt or leaves) and moisture to grow. There are many potential food sources for mold in homes. Therefore, preventing excess moisture is the key to preventing mold growth. Excess moisture can come from many sources, including flooding, plumbing or roof leaks, lawn sprinklers hitting the house, air conditioner condensation, humidifiers, overflow from sinks and sewers, steam, and wet clothes drying indoors. Be sure to inspect the Property for sources of excess moisture, current water leaks and evidence of past water damage. Once mold is found and the contaminated area properly cleaned up, mold growth is likely to recur unless the source of moisture is also eliminated.

If it is suspected that the Property has a mold problem, be sure to have a qualified inspector conduct a more thorough inspection. All areas contaminated with mold should be properly and thoroughly remediated.

Additional information can be found in the Homeowner's Guide to Earthquake Safety and Environmental Hazards and in the following publication:

Mold In My Home: What Do I Do?

Available online at http://www.cdph.ca.gov/programs/IAQ/Documents/MIMH_2012-07-05.pdf.

For more information visit: www.cal-iaq.org

NOTICE OF METHAMPHETAMINE CONTAMINATION

The Methamphetamine Contaminated Property Act of 2005 requires the clean up of the property so it can be safe for occupancy if the property is found to be contaminated. In addition the bill provides for the imposition of a civil penalty (fines up to \$5,000) upon a property owner who does not provide a notice or disclosure in writing and acknowledged by the buyer as required by the act, or upon a person who violates an order issued by the local health officer prohibiting the use or occupancy of a property contaminated by a methamphetamine laboratory activity.

This law also requires the Department of Environmental Health (DEH) to respond to complaints of potentially contaminated property which includes evaluating the property, testing for contamination, notifying and posting of warning notices, issuing orders prohibiting occupancy if the site is not safe, as well as overseeing the ultimate return of the property to a safe environment. Property owners are responsible for all the costs that may be associated with these actions.

NOTICE OF ABANDONED WELLS

According to the California Department of Water Resources an abandoned or "permanently inactive well" is a well that has not been used for a period of one year. Abandoned wells that are not properly sealed are a potential hazard to people and animals and may be a potential site of illegal waste disposal. Abandoned wells may allow contamination of groundwater. Abandoned wells should be destroyed in accordance with methods developed by the Department of Water Resources pursuant to Section 13800 of the Water Code.

NOTICE OF OIL AND GAS WELLS

California is a leading oil producer with most production in Los Angeles, Kern, Fresno, and Ventura Counties. There are thousands of idle and "orphan" wells. An idle well is a well that has not produced oil and/or gas or has not been used for fluid injection for six months during the last five years. The Division of Oil, Gas, and Geothermal Resources tracks and maintains an idle-well inventory. According to the Division an abandoned or "orphan" well is a well that has been deserted and has no viable operator or owner. The Division plugged 1,062 orphan wells from 1977 to 2004 at a cost of 14.8 million dollars. Oil and gas wells pose a threat to humans for fall hazard, fire hazard, groundwater contamination, methane gas seeps, and other hazards.



NOTICE OF NATURALLY OCCURRING ASBESTOS

Asbestos refers to naturally-occurring fibrous minerals found throughout the State of California. Serpentine, an ultra-mafic rock, contains asbestos and is commonly found in the Sierra foothills, the Coast Ranges, and the Klamath Mountains. On residential properties, naturally-occurring asbestos sources are typically dust from unpaved roads or driveways. Paving the unpaved driveways or roads can help to reduce exposure to asbestos. Asbestos is a known carcinogen and exposure may increase the risk of lung cancer. It is recommended that prospective buyers in an area designated as a Naturally Occurring Asbestos Zone consult an appropriate expert(s) who can test and identify naturally occurring asbestos rocks, on or near the property, which are exposed and may present a health risk. For more information please visit the Air Resources Board of the California Environmental Protection Agency website: <http://www.arb.ca.gov/homepage.htm>.

RADON GAS ADVISORY

THE COUNTY IN WHICH THE SUBJECT PROPERTY IS LOCATED IS DESIGNATED ZONE

3

 FOR RADON GAS POTENTIAL

Radon is a gas that is produced from the radioactive decay of uranium and thorium found in certain rock and soil types. Radon, an odorless and colorless gas, can move from the soil into buildings. Exposure to concentrated levels of radon can increase a person's risk of developing lung cancer.

The Highest Radon Potential, Zone 1, is set at 4.0pCi/l and above by the U.S. Environmental Protection Agency ("EPA"). Moderate Radon Potential, Zone 2, is set at between 2.0pCi and 4.0pCi/l. Low Radon Potential, Zone 3, is set at less than 2.0pCi/l. The EPA recommends indoor radon testing for all homes and recommends radon reduction measures for homes with radon levels of 4.0pCi/l and above. Radon testing kits can be purchased by homeowners or homeowners can hire contractors to provide the testing. For more information please visit <http://www.MyNHD.com/booklets/RadonInformation.pdf>.

NOTICE OF ABANDONED MINES ADVISORY

According to the Abandoned Mine Lands Unit of the State of California Department of Conservation, there are more than 165,000 mines features on more than 47,000 abandoned mine sites in the State of California. Approximately 84 percent of those sites contain physical safety hazards. The public is warned against entering any open shafts or mine openings. For more information please visit the Abandoned Mine Lands Unit website: http://www.conservacion.ca.gov/omr/abandoned_mine_land/ Pages/Index.aspx.

WOOD-BURNING HEATER ADVISORY

The Clean Air Act is the law that defines EPA's responsibilities for protecting and improving the nation's air quality and the stratospheric ozone layer. Using a nationwide network of monitoring sites, EPA has developed ambient air quality trends for particle pollution, also called Particulate Matter (PM). Under the [Clean Air](#) Act, EPA sets and reviews national air quality standards for PM. Air quality monitors measure concentrations of PM throughout the country. EPA, state, tribal and local agencies use that data to ensure that PM in the air is at levels that protect public health and the environment.

"Particulate matter," also known as particle pollution or PM, is a complex mixture of extremely small particles and liquid droplets. Particle pollution is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing [health](#) problems. EPA is concerned about particles that are 10 micrometers in diameter or smaller because those are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. "Fine particles," such as those found in smoke and haze, are 2.5 micrometers in diameter and smaller. Approximately 10 million wood stoves are currently in use in the United States, and 70 to 80 percent of them are older, inefficient, conventional stoves that pollute.

[The Great American Woodstove Changeout](#) is a voluntary program designed to reduce particle pollution from woodstoves by encouraging people to replace older, more polluting stoves with EPA-certified stoves and fireplace inserts. It also provides information on building more efficient, less polluting fires. Certain jurisdictions have established legal requirements to reduce wood smoke. For example, some communities have restrictions on installing wood-burning appliances in new construction. For more information on possible regulations in your area go to <http://www.epa.gov/burnwise/ordinances.html>.



[VIEW ALL MAPS](#)

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ENVIRONMENTAL REPORT

Report Summary

Subject Property: 8504 FANITA DR SANTEE, CA 92071-4017
APN: 386-690-38-00

Federal and state databases list numerous sites within California that have actual or potential environmental contamination associated with them. This Report identifies whether the subject property is located within a specific distance from sites listed within these databases. However, these databases are not all-inclusive and may be inaccurate; some environmental hazards have not yet been located or their location has been inaccurately recorded in the database. There may be errors or inaccuracies in the databases. Moreover, not all properties containing environmental contamination are listed in these databases. There are additional environmental concerns that may affect the subject property. Although data for these concerns are not provided in databases, brief descriptions of them are provided below. It should be noted that this does not constitute a complete listing of all environmental concerns. Therefore, no representations or warranties, express or implied, are made in connection with this environmental report, and all implied warranties are disclaimed. This Report is not a substitute for a Phase I Environmental Assessment. All of the Terms and Conditions applicable to the MyNHD Natural Hazard Disclosure Report are equally applicable to the MyNHD Environmental Report and are incorporated herein by reference.

SUBJECT PROPERTY IS IN PROXIMITY TO:	YES	NO	DISTANCE SEARCH FROM PROPERTY	View Map DETAILS
EPA Final Superfund Site ("NPL")	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1 Mile	1
Landfill and/or Waste Transfer Stations ("SWIS")	<input checked="" type="checkbox"/>	<input type="checkbox"/>	½ Mile	1
Leaking Underground Storage Tanks ("LUST")	<input type="checkbox"/>	<input checked="" type="checkbox"/>	¼ Mile	1
The Resource Conservation and Recovery Act ("RCRA")	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1 Mile	2
Toxics Release Inventory ("TRI")	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1 Mile	2
EnviroStor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1 Mile	3
Emergency Planning Zone ("RADIATION")	<input type="checkbox"/>	<input checked="" type="checkbox"/>		3
Spills, Leaks, Investigation, and Cleanups sites ("SLIC")	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1 Mile	3
CERCLIS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	½ Mile	4
Oil Wells	<input type="checkbox"/>	<input checked="" type="checkbox"/>	¼ Mile	4
Major Natural Gas Pipeline	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1 Mile	5
Gas and Hazardous Liquid Transmission Pipelines		Included		5
Notice of Noise Pollution		Included		6
Notice of Air Pollution		Included		6
Notice of Electrical and Magnetic Fields ("EMF")		Included		6
Notice of Light Pollution		Included		6



EPA FINAL SUPERFUND SITE (“NPL”)

SUBJECT PROPERTY IS IS NOT LOCATED WITHIN 1 MILE OF AN EPA FINAL SUPERFUND SITE (“NPL”)

Superfund Site Information from the Environmental Protection Agency (“EPA”) provides data on hazardous waste sites, potentially hazardous waste sites and remedial activities across the nation. It also contains sites that are on the National Priorities List (“NPL”). NPL is the list of known releases or threatened releases of hazardous substances, pollutants, or contaminants. According to the EPA, inclusion of a site on the NPL does not in itself reflect a judgment of the activities of its owner or operator, it does not require those persons to undertake any action, nor does it assign liability to any person. The NPL serves primarily informational purposes, identifying for the States and the public those sites or releases that appear to warrant remedial actions. For more information visit <http://www.epa.gov/superfund>.

LANDFILLS AND/OR WASTE TRANSFER STATIONS (“SWIS”)

SUBJECT PROPERTY IS IS NOT LOCATED WITHIN ½ MILE OF A LANDFILL AND/OR WASTE TRANSFER STATION (“SWIS”)

The Solid Waste Information System (“SWIS”) database contains data on solid waste facilities, operations, and disposal sites in California. Types of facilities include transfer stations, composting sites, landfills, material recovery sites, waste tire sites, as well as closed disposal sites. The database provides data on owner, location, operator, facility type, regulatory and operational status, authorized waste types, local enforcement agency, and inspection and enforcement records. The data is regularly updated. Enforcement and inspection data are current to the preceding quarter. For more information visit <http://www.calrecycle.ca.gov/SWFacilities/Directory>.

SwisNo	SITE NAME	ACTIVITY	ADDRESS	CITY
37-AA-0971	SANTEE LIMITED VOLUME TRNSFER OPERATION	LIMITED VOLUME TRANSFER OPERATION	MISSION ROAD @ SR 52/125	SANTEE (COUNTY OF SAN DIEGO)

LEAKING UNDERGROUND STORAGE TANKS (“LUST”)

SUBJECT PROPERTY IS IS NOT LOCATED WITHIN ¼ MILE OF A LEAKING UNDERGROUND STORAGE TANK (“LUST”)

According to the State Water Resources Control Board (“SWRCB”), leaking underground storage tanks are a significant source of petroleum impacts to groundwater. They may pose potential risks to health and safety such as exposure from impacts to soil and/or groundwater, contamination of drinking water, contamination of water wells, and inhalation of vapors. The SWRCB maintains a database, Leaking Underground Storage Tank Information System (“LUSTIS”), which contains information investigation and cleanup data that is updated quarterly. All of the information formerly contained in the LUSTIS database now resides in the SWRCB Geotracker database. For more information visit <http://www.swrcb.ca.gov> or www.geotracker.waterboards.ca.gov.



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THE RESOURCE CONSERVATION AND RECOVERY ACT ("RCRA")

SUBJECT PROPERTY IS IS NOT LOCATED WITHIN 1 MILE OF A RESOURCE CONSERVATION AND RECOVERY ACT ("RCRA") SITE

The Resource Conservation and Recovery Act ("RCRA"), enacted in 1976, is the principal federal law in the United States governing the disposal of solid waste and hazardous waste. Hazardous waste generators, transporters, treaters, storers and disposers of hazardous waste are required to provide information on their activities to state environmental agencies. These agencies then provide the information to regional and national EPA offices through the Resource Conservation and Recovery Act Information System ("RCRAInfo"). Information on cleaning up after accidents or other activities that result in a release of hazardous materials to the water, air or land must also be reported through RCRAInfo. For more information visit <https://www.epa.gov/rcra>.

TOXICS RELEASE INVENTORY ("TRI")

SUBJECT PROPERTY IS IS NOT LOCATED WITHIN 1 MILE OF A TOXICS RELEASE INVENTORY ("TRI") SITE

The Toxics Release Inventory ("TRI") is a publicly available EPA database that contains information on specific toxic chemical releases and other waste management activities reported annually by certain covered industry groups as well as federal facilities. This inventory was established under the Emergency Planning and Community Right-to-Know Act of 1986, which requires facilities to use their best readily available data to calculate their releases and waste management estimates. If facilities do not have actual monitoring data, submitted values are derived from various estimation techniques. This report incorporates original TRI reports since 2001 and any updates that are available. To view the data that has been submitted more recently than the published updates, please access EPA Envirofacts at <https://www3.epa.gov/enviro/>.

FACILITY	CHEMICAL	DISTANCE (IN MILES) FROM SUBJECT PROPERTY
BUCK KNIVES INC	CHROMIUM COMPOUNDS(EXCEPT CHROMITE ORE MINED IN THE TRANSVAAL REGION)	0.69



ENVIROSTOR

SUBJECT PROPERTY IS IS NOT LOCATED WITHIN 1 MILE OF A HAZARDOUS WASTE AND CORRECTIVE ACTION FACILITY

("ENVIROSTOR") SITE

The mission of the California Environmental Protection Agency's Department of Toxic Substances Control ("DTSC") is to protect California's people and environment from the harmful effects of toxic substances by restoring contaminated properties, identifying and promoting safer ingredients in consumer products, and ensuring stewardship through enforcement, regulation and pollution prevention. The EnviroStor database contains detailed information on hazardous waste permitted and corrective action facilities, as well as existing site cleanup information. The DTSC manages this database and has developed a public website for informational searches on investigation, cleanup, permitting, and/or corrective actions that are planned, being conducted or have been completed under DTSC's oversight. The EnviroStor database can be accessed through the DTSC Web Page located at: <http://www.envirostor.dtsc.ca.gov>. Sites listed on the EnviroStor website within one mile of the Property are listed below:

PROJECT NAME	PROGRAM TYPE	STATUS	DISTANCE (IN MILES) FROM SUBJECT PROPERTY
CONEEN PROPERTY	EVALUATION	REFER: 1248 LOCAL AGENCY	0.98

Emergency Planning Zone ("RADIATION")

SUBJECT PROPERTY IS IS NOT LOCATED IN AN EMERGENCY PLANNING ZONE

The Radiation Information Database (RADINFO) contains basic information about certain facilities that the U.S. Environmental Protection Agency (EPA) regulates for radiation and radioactivity. For more information see: <https://www.epa.gov/radiation>.

Spills, Leaks, Investigation, and Cleanups sites ("SLIC")

SUBJECT PROPERTY IS IS NOT LOCATED WITHIN 1 MILE OF A KNOWN SPILLS, LEAKS, INVESTIGATIONS & CLEANUP SITE

In the Spills, Leaks, Investigations & Cleanup (SLIC) Program, Water Board staff oversee soil and water investigations, corrective actions, and human health risk assessments at sites with current or historic unauthorized discharges, which have adversely affected or threaten to adversely affect waters of the state. The program covers all types of pollutants (such as solvents, petroleum fuels, heavy metals, pesticides, etc) and all environments (including surface water, groundwater, sediment, and soil). Public participation is conducted and tailored to the needs of the community. SLIC sites within one mile of the Property are listed below:

SITE ID	SITE NAME	ADDRESS	STATUS	DISTANCE (IN MILES) FROM SUBJECT PROPERTY
T0608171641	QWIK MART	9035 MISSION GORGE RD	Completed - Case Closed	0.59
T0608125550	TOWNE CENTER SERVICE STATION	9305 MISSION GORGE RD	Completed - Case Closed	0.67
T0607399817	TOWNE CENTER SERVICE STATION	9305 MISSION GORGE RD	Completed - Case Closed	0.67
T0608184572	TOWNE CENTER SERVICE STATION	9305 MISSION GORGE RD	Completed - Case Closed	0.67



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SITE ID	SITE NAME	ADDRESS	STATUS	DISTANCE (IN MILES) FROM SUBJECT PROPERTY
T06019742920	TOWNE CENTER SERVICE STATION	9305 MISSION GORGE RD	Open - Remediation	0.67
T0607302088	JAMES M MCDOWELL	9265 MISSION GORGE RD	Completed - Case Closed	0.67
T10000004225	FORESTER SQUARE	9560 VIA ZAPADOR	Completed - Case Closed	0.78
T0608179783	ARCO STN #9574	9009 CARLTON HILLS BL	Completed - Case Closed	0.84
T0608119641	ARCO STN #9574	9009 CARLTON HILLS BL	Completed - Case Closed	0.84
T0608139038	UNDERGROUND E O C - SHERIFF	1801 HACIENDA DR	Completed - Case Closed	0.94
T0608160690	HOGAN'S HYDRAULICS	8656 CUYAMACA ST	Completed - Case Closed	1.00

CERCLIS

SUBJECT PROPERTY IS IS NOT LOCATED WITHIN 1/2 MILE OF A KNOWN CERCLIS FACILITY.

The CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System) Database is now known as "SEMS" (Superfund Enterprise Management System) and includes all potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. The EPA retired CERCLIS in November 2013 and has been transitioning to SEMS, which contains the same content as CERCLIS. SEMS contains information such as the current status of cleanup efforts, cleanup milestones reached, and amounts of liquid and solid media treated at sites on the National Priorities List (NPL) or under consideration for the NPL.

Oil Wells

SUBJECT PROPERTY IS IS NOT LOCATED WITHIN 1/4 MILE OF A KNOWN OIL WELL

This list includes oil wells which were used for production, exploration, injection, etc., and which may have been abandoned or are still in use. The requirements for abandonment of such wells have become more stringent since the 1970s. In some situations, formerly abandoned wells must be re-abandoned pursuant to such newer, more stringent requirements. We have divided the wells into "active" OILWELL-A and "plugged and abandoned" OILWELL-P. Further information on these wells can be obtained from: <http://www.consrv.ca.gov/dog/>.



MAJOR NATURAL GAS PIPELINE

SUBJECT PROPERTY IS IS NOT located within 1 mile of a major natural gas pipeline according to the California Energy

Commission Map of Major Natural Gas Pipelines.

Only 13.5 percent of the natural gas California used came from in-state production in 2006; the rest was delivered by pipelines from several production areas in the western United States and western Canada. California is at the end of those pipelines, forcing it to compete with other states for supplies. Once the gas arrives in California, it is distributed by the state’s three major gas utilities - San Diego Gas & Electric, Southern California Gas Company, and Pacific Gas and Electric - that provide a collective total of 98 percent of the state's natural gas. Long Beach and Palo Alto are the only municipal utilities in California that operate city-owned utility services for natural gas customers.

On September 9, 2010, a 30-inch Pacific Gas and Electric Company natural gas transmission pipeline in San Bruno exploded, claiming the lives of eight residents, injuring numerous others, and destroying many homes. As the state agency charged with overseeing the operation of the state’s utilities, the California Public Utilities Commission immediately had an inspector on-site in San Bruno, and has since been working closely with the National Transportation Safety Board to investigate the cause of the explosion, and take other actions in the interest of public safety. The National Pipeline Mapping System (“NPMS”) has provided a map viewer that shows pipeline locations throughout the United States at <https://www.npms.phmsa.dot.gov/>.

Source: California Energy Commission

NOTICE REGARDING GAS AND HAZARDOUS LIQUID TRANSMISSION PIPELINES

(a) Every contract for the sale of residential real property entered into on or after July 1, 2013, shall contain, in not less than 8-point type, a notice as specified below:

NOTICE REGARDING GAS AND HAZARDOUS LIQUID TRANSMISSION PIPELINES

This notice is being provided simply to inform you that information about the general location of gas and hazardous liquid transmission pipelines is available to the public via the NPMS Internet Web site maintained by the United States Department of Transportation at <https://www.npms.phmsa.dot.gov/>. To seek further information about possible transmission pipelines near the property, you may contact your local gas utility or other pipeline operators in the area. Contact information for pipeline operators is searchable by ZIP Code and county on the NPMS Internet Web site.

(b) Upon delivery of the notice to the transferee of the real property, the seller or broker is not required to provide information in addition to that contained in the notice regarding gas and hazardous liquid transmission pipelines in subdivision (a). The information in the notice shall be deemed to be adequate to inform the transferee about the existence of a statewide database of the locations of gas and hazardous liquid transmission pipelines and information from the database regarding those locations.

(c) Nothing in this section shall alter any existing duty under any other statute or decisional law imposed upon the seller or broker, including, but not limited to, the duties of a seller or broker under this article, or the duties of a seller or broker under Article 1.5 (commencing with Section 1102) of Chapter 2 of Title 4 of Part 4 of Division 2.



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Notice of Noise Pollution

Environmental sounds that impede daily activities are considered noise pollution. Sources of noise that can diminish the quality of life include automobile traffic, trains, aircraft and construction operations. Health effects from noise pollution can include stress related illnesses, sleep loss, high blood pressure, and even hearing loss. For more information: <https://www.epa.gov/clean-air-act-overview/clean-air-act-title-iv-noise-pollution>.

Notice of Air Pollution

The burning of fossil fuels in automobiles, trucks, and industrial concerns contributes to reduced air quality. Ultraviolet light in the atmosphere acts on the traffic and industrial emissions to create photochemical smog. Air pollution can affect the respiratory system and cardiovascular system in the human body. It is an increased risk factor in respiratory infections, heart disease, and lung cancer. Asthma can be exacerbated by air pollution. For more information: www.epa.gov/air/urbanair.

Notice of Electrical and Magnetic Fields (“EMF”)

Electrical and magnetic fields (“EMF”) are natural forces caused by electricity. Sources of EMF include high voltage transmission lines, distribution lines, and household electronic devices. Health concerns from EMF have been studied. According to the EPA and the California Department of Public Health (“CDPH”) these studies do not show a clear pattern of health hazards. However, the CDPH provides information regarding decreases of EMF at given distances. They indicate that the EMF from household electronic device decreases to background levels at a distance of 3 to 4 feet. The EMF from electricity distribution lines decreases to background levels at a distance of 60 to 200 feet. The EMF from high voltage transmission lines decreases to background levels at a distance of 300 to 1000 feet. For more information: <https://www.epa.gov/radtown/electric-and-magnetic-fields-power-lines>.

Notice of Light Pollution

Street lights, lighted commercial signs, and commercial buildings are examples of unnatural light that may diminish quality of life. An overly bright night time environment may cause sleep deprivation and may reduce scenic views. For more information: https://en.wikipedia.org/wiki/Light_pollution.



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TERMS AND CONDITIONS

1. This MyNHD Natural Hazard Disclosure Report ("Report") was prepared solely for one transaction and one escrow, as described on page 1 (collectively, the "Transaction"). This Report was prepared by MyNHD, Inc. ("MyNHD"). This Report may be used solely between this seller and this buyer for that single Transaction related to the property address and assessor's parcel number ("Property") provided to MyNHD.
2. Only the seller, buyer, listing agent/broker and selling agent/broker, if any, involved in the Transaction (collectively, the "Recipients") may use and rely on this Report and only after they have paid in full for the Report. Neither lenders nor subsequent buyers of the Property may use or rely on this Report. There are no third party beneficiaries to this Report even if they have a foreseeable relationship with any of the Recipients, or with the Property. This Report is time-sensitive; its information is accurate only as of the date referenced on Page 1 (the "Effective Date"). Taxes, governmental legislation and other matters affecting the Property after the Effective Date are not disclosed, and MyNHD expressly disclaims any duty to supplement this Report to disclose any taxes, legislation, changes or charges becoming effective after the Effective Date. If the Transaction does not close within a reasonable time after the Effective Date, MyNHD strongly recommends that a new report be ordered.
3. This Report may not be used in conjunction with any Natural Hazard Disclosure Statement ("NHDS") other than the NHDS issued as part of this Report. This Report may have an effect on the value of the Property; nevertheless, this Report may not be used in connection with any appraisal or valuation of the Property, or for any other valuation purposes. This Report is protected by copyright, trademark and other intellectual property laws and may not be copied or reproduced in any manner. Violators will be prosecuted as permitted by law.
4. MyNHD has not visually inspected the Property. Instead, this Report refers specifically to certain records, statutes and other information provided by various governmental agencies and third parties. In particular, the information contained in the tax disclosures are obtained from independent third parties. MyNHD has no way to verify the accuracy or completeness of this information, but has assumed the information is accurate and complete. If such information is not accurate or complete, MyNHD cannot and shall not be liable or responsible for such omissions or inaccuracies. MyNHD further shall not be liable or responsible for omissions or inaccuracies in the Report that the Recipients, or any of them, knew or should have known as of the Effective Date. This Report does not disclose whether the Property is contaminated with hazardous substances.
5. There may be other disclosures required by California law; MyNHD makes no representations or warranties as to the adequacy or accuracy of any other representations, warranties or disclosures required under other such laws. MyNHD shall not be liable or responsible for failing to disclose any matters not known to MyNHD, not shown on the maps used by MyNHD, not recorded in the public record as of the Effective Date, or not included within the categories of items included in the Report. MyNHD's total liability and responsibility to any Recipient for any liabilities, causes of action, claim or claims, including but not limited to any claim for breach of contract or negligence, shall be limited to actual proven damages measured by the difference in fair market value of the Property on the Effective Date, if any, caused by MyNHD's error. Any action initiated relative to the Report shall be governed by the laws of the State of California without regard to conflicts of law principles. In the event of any error, omission or inaccuracy in the MyNHD Report for which MyNHD is liable, MyNHD reserves the right to assume defense of the action and/or, compromise or settle the matter with the Recipients, or any of them. The Recipients, and each of them, expressly waive the benefits of Civil Code Section 2778.
6. Recipients are encouraged to contact a local insurance agent regarding earthquake insurance, fire insurance and flood insurance. Recipients also may contact the National Flood Insurance Program regarding flood insurance. If there is a dispute involving a FEMA flood determination, MyNHD shall obtain a "Flood Certificate" from a flood insurance company admitted and licensed to do business in California. The determination shown on the Flood Certificate shall be final and binding as to whether the Property is or is not in Zone "A" or "V" as shown on Flood Insurance Rate Map panels. The issuance of a "Flood Certificate" showing that a property is not in Zone "A" or "V" does not guarantee that the entire parcel of property is outside of the area designated by FEMA as at risk of a flood. MyNHD is not and shall not be responsible or liable for any costs, losses, or compensatory or consequential damages arising from earthquakes, fires or floods.
7. If the Transaction involves multiple adjacent parcels, the parcel shown on Page 1 of this Report is regarded as the "Primary Parcel," and the disclosures contained in the Report operate as if only a single parcel is involved. In other words, even if a matter affects only one parcel, it will be disclosed as affecting all of the parcels. For parcel-by-parcel disclosures, individual reports must be ordered separately for each parcel. With regard to Mello-Roos Community Facilities Districts, Special Assessment Districts (1915 Bond Act) (collectively, "Mello-Roos/SAD") tax disclosures and the property tax breakdown (if included), the tax information is provided only for the Primary Parcel.



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8. Only current tax-year Mello-Roos/SAD assessments are disclosed. However, accurate or complete Mello-Roos/SAD information sometimes is unavailable for a number of reasons, including (a) if a property is in foreclosure because a Mello-Roos/SAD assessment is delinquent, (b) if the secured property tax bill information is unavailable or has not been released by the county where the property is located. In addition, this Report may not disclose certain items because (i) they are not levied on the current tax bill, (ii) if the owner has applied for an exemption, certain items may not appear on the current tax bill, (iii) judicial foreclosure lawsuits sometimes cause items to be removed from the current tax bill, (iv) the property owner was billed directly for an item, e.g., apart from the secured property tax bills, and (v) the relevant County has not yet released the applicable tax information. The information in this Report comes from what MyNHD believes to be reliable sources. However, MyNHD shall not be responsible or liable for errors in the tax data it obtains from third party suppliers.

9. The maximum tax amounts specified in this Report are estimates only, calculated based on available County assessor data and/or third party data. MyNHD does not review of the relevant County recorder's or other jurisdictions' files to determine the presence of any other taxes or assessments affecting the Property. The levy amounts are subject to change for many reasons, including different interpretations of the Special Tax Formula, availability of data, and changes or corrections to classifications from year-to-year. The Report provides an estimate of items not included on the current tax bill, but the estimates are not comprehensive. For example, there may exist taxes and assessments which have not yet been levied on the tax bill or during the tax year described in the Report. MyNHD updates its information annually reasonably after updated information is released. Assessment districts also are subject to change, and therefore, this Report cannot be used or relied upon for nearby properties or future transactions involving this Property. Each Recipient is encouraged to contact the appropriate agents representing the local Mello-Roos/SAD with any specific questions they may have.

10. This Report is intended to satisfy the disclosure obligations related to Civil Code Sections 1103.2, 1102.6b, 1102.6c, 1102.6e, 1102.15, 1102.17, and 2079.10a. MyNHD has been asked by the seller to provide this Report to assist the seller, and both the buyer's and seller's agents, in availing itself/ themselves of the protections contained in Civil Code Section 1103.4. However, MyNHD cannot guaranty the availability of such protections, and makes no representations or warranties in connection therewith. California law also requires sellers to disclose a continuing lien securing the levy of special taxes pursuant to the Mello-Roos Community Facilities Act (Chapter 2.5 (commencing with Section 53311) of Part 1 of Division 2 of Title 5 of the Government Code) and of a fixed lien assessment collected in installments to secure bonds issued pursuant to the Improvement Bond Act of 1915 (Division 10 (commencing with Section 8500) of the Streets and Highways Code) in connection with the sale of real property in California. MyNHD strongly recommends that the buyer obtain a title report and title insurance covering the Property; the MyNHD Report is not a replacement for a title report or a title insurance policy.

11. This Report discloses certain earthquake zones, flood zones, fire zones, and special tax assessment matters. Nothing in this Report relates to (a) title or title defects, (b) encroachments, geological issues or matters that would be disclosed by a land surveyor, soil survey or geological survey, (c) land use or zoning related matters, (d) parcel maps or subdivisions under the California Subdivided Land Acts or the Subdivision Map Act, (e) compliance with the Americans with Disabilities Act, local building codes or other federal, state or local laws, ordinances or restrictions that may affect the Property, (f) the use, occupancy or development of the Property, including any restrictions resulting from any state, local or federal governmental agency, such as school districts, water districts, joint power districts, flood control districts, or the California Coastal Commission, (g) building permits or any other permits that may be required for the Property or its current or future anticipated uses, or (h) any other matter potentially affecting the Property.

12. BY SIGNING, ACCEPTING OR USING THE NATURAL HAZARD DISCLOSURE STATEMENT OR THIS REPORT, THE RECIPIENTS, AND EACH OF THEM AND THEIR AGENTS AND REPRESENTATIVES, HEREBY ACKNOWLEDGE AND AGREE (AND SHALL BE DEEMED TO HAVE ACKNOWLEDGED AND AGREED) THAT THEY HAVE REVIEWED, APPROVED AND ACCEPTED ALL OF THE TERMS, CONDITIONS AND LIMITATIONS CONTAINED HEREIN. MYNHD SHALL NOT BE LIABLE OR RESPONSIBLE FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION LOST PROFITS OR ANY REDUCTION IN THE VALUE OF THE PROPERTY, ARISING OUT OF OR RELATED TO THE PREPARATION, ISSUANCE, USE OF OR RELIANCE UPON THIS REPORT, EVEN IF SUCH DAMAGES ARE FORESEEABLE.

13. MyNHD, Inc. hereby agrees to indemnify the real estate brokers, agents and transaction coordinators, escrow company, and the seller ordering this report as covered by our Professional Liability Insurance Policy for damages to the extent they are caused by our negligent acts, errors or omissions in the performance of our services and subject to the limitations of this report. The seller nor any listing or selling agent, transaction coordinator or escrow company will not be liable for any error in this information as long as ordinary care is exercised in transmitting it. (Cal. Civ. Code §1102.4)

APPENDIX B

1. Project Information	
Contact Information	
Project No./Name:	
Address:	
Applicant Name:	
Contact Information:	
Project Description Characteristics	
1. What is the size of the Project (acres)?	
2. Identify all Applicable Proposed Land uses:	
a. Residential-Single Family (Indicate number of single-family units)	
b. Residential-Multifamily (Indicate number of multifamily units)	
c. Commercial (total square footage)	
d. Industrial (total square footage)	
e. Other (describe)	
3. Provide a brief description of the project proposed:	

2. Determining Land Use Consistency

Checklist Item

As the first step in determining the consistency with the Sustainable Santee Action Plan for the discretionary development projects, this section allows the City to determine the project’s consistency with the land use assumptions used in the Plan.

	Yes	No
1. Is the proposed project consistent with the existing General Plan and land use zoning designations? OR		
2. If the proposed project is not consistent with the existing land use plan and zoning designations, does the project include a land use plan and/or zoning designation amendment that is identified in the Sustainable Santee Action Plan Land Use Buffer (see Appendix A, Table 11)?		
3. If the proposed project is not consistent with the existing land use plan, zoning designations, or Land Use Buffer, does the project include a land use plan and/or zoning designation ammendment that will result in an equivalent or less GHG-intensive project when compared to the existing designations?		

Notes:

For questions 1, if the answer is **Yes**, proceed to the Sustainable Santee Action Plan Consistency Checklist. If the answer is **No**, proceed to question 2.

For question 2, if the answer is **Yes**, proceed to the Sustainable Santee Action Plan Consistency Checklist. If the answer is **No**, proceed to question 3.

For question 3, if the answer is **Yes** provide estimated project emissions under both existing and proposed designation (s) for comparison. Compare the maximum buildout of the existing designation and the maximum buildout of the proposed designation. If the answer of question 3 is **No** then, in accordance with the City’s Significance Determination Thresholds, the project’s GHG impact may be significant. The project must nonetheless incorporate each of the applicable measures identified in the Checklist to mitigate cumulative GHG emissions impacts unless the decision maker finds that a measure is infeasible in accordance with CEQA Guidelines Section 15091.

Sustainable Santee Action Plan CEQA Project Consistency Checklist					Notes	
Greenhouse Gas Reduction Measure	Measure Applicability				Description	Notes
	Yes	No	N/A			
Emissions Measures Category: Energy Efficiency						This checklist is to be filled out by the applicant
Land Use Sector-Residential						
Goal 1. Increase Energy Efficiency in Existing Residential Units						Measure 1.1 is not on checklist because it focuses on minor residential alterations not subject to CEQA
Measure 1.2. For existing Residential Unit Permit for Major Modifications (more than 30% of dwelling unit size, including bathroom and kitchen) that is considered a Project under CEQA must implement energy efficiency retrofits recommended from City Energy Audit and explain the energy efficiency retrofits implemented.						
Goal 2. Increase Energy Efficiency in the New Residential Units						Measure 1.2 only applies if alteration is subject to CEQA
Measure 2.1. New residential construction meet or exceed California Green Building Standards Tier 2 Voluntary Measures, such as obtaining green building ratings including LEED, Build it Green, or Energy Star Certified building certifications in scoring development and explain the measures implemented.						
Land Use Sector-Commercial						Measure 3.1 is not on checklist because it focuses on minor alterations which are not subject to CEQA
Goal 3. Increase Energy Efficiency in Existing Commercial Units						
Measure 3.2. For existing commercial units of 10,000 sq. ft. or more seeking building permits for modifications representing 30% or more sq. ft. and considered a Project under CEQA must implement energy efficiency retrofits recommended by the City to meet California Green Building Standards Tier 1 Voluntary Measures and explain the retrofits implemented.						Measure 3.2 only applies if alteration is subject to CEQA
Goal 4. Increase Energy Efficiency in New Commercial Units						
Measure 4.1. New commercial units meet or exceed California Green Building Standards Tier 2 Voluntary Measures such as obtain green building ratings including: LEED, Build it Green, or Energy Star Certified buildings certifications in scoring development and explain the measures implemented.						
Emissions Measures Category: Advanced Goals Measures						
Land Use Sector-Commercial						
Goal 5. Decrease Energy Demand through Reducing Urban Heat Island Effect						
Measure 5.1. Project utilizes tree planting for shade and energy efficiency such as tree planting in parking lots and streetscapes.						
Measure 5.2. Project uses light-reflecting surfaces such as enhanced cool roofs on commercial buildings.						
Emissions Measures Category: Transportation						
Land Use Sector-Residential and Commercial						
Goal 6. Decrease GHG Emissions through a Reduction in VMT						
Measure 6.1. Proposed project streets include sidewalks, crosswalks, and other infrastructure that promotes non-motorized transportation options.						
Measure 6.2. Proposed project installs bike paths to improve bike transit.						

Land Use Sector-Residential and Commercial					
Goal 7: Increase Use of Electric Vehicles					
Measure 7.1. Install electric vehicle chargers in all new residential and commercial developments.					
a. For new Single-Family Residential, install complete 40 Amp electrical service and one e-charger.					
b. For new Multifamily Residential, install e-chargers for 13 percent of total parking.					
c. For new Office Space, Regional Shopping Centers, and Movie Theaters, install e-chargers for 5 percent of total parking spaces.					
d. For new Industrial and other Land Uses employing 200 or more employees, install e-chargers for 5 percent of total parking spaces.					
Land Use Sector-Residential and Commercial					
Goal 8. Improve Traffic Flow					
Measure 8.1. Implement traffic flow improvement program.					Projects that include traffic controls need to show consistency with one of these
a. Install smart traffic signals at intersections warranting a traffic signal, OR					
b. Install roundabout.					
Emissions Measures Category: Solid Waste					
Land Use Sector-Residential and Commercial					
Goal 9: Decrease GHG Emissions through Reducing Solid Waste Generation					
Measure 9.1. Reduce waste at landfills.					
waste.					
Emissions Measures Category: Clean Energy					
Land Use Sector-Residential and Commercial					
Goal 10. Decrease GHG Emissions through Increased Clean Energy Use					
Measure 10.1. Increase distributed energy generation within City of Santee by implementing the following applicable photovoltaic solar systems:					
a. Single-family residential to install at least 2kW per unit of PV solar systems, unless the installation is infeasible due to poor solar resources established in a solar feasibility study prepared by a qualified solar consultant submitted with an application					
b. Multifamily residential to install at least 1kW per unit of PV solar systems, unless the installation is infeasible due to poor solar resources established in a solar feasibility study prepared by a qualified solar consultant submitted with an applicant's formal project submittal to City.					
c. On commercial buildings, install at least 2 kW per square foot of building area (e.g., 2,000 sq. ft. = 3 kW) unless the installation is infeasible due to poor solar resources.					

APPENDIX C

CORTESE LIST

8504 FANITA DRIVE, SANTEE, CALIFORNIA 92071

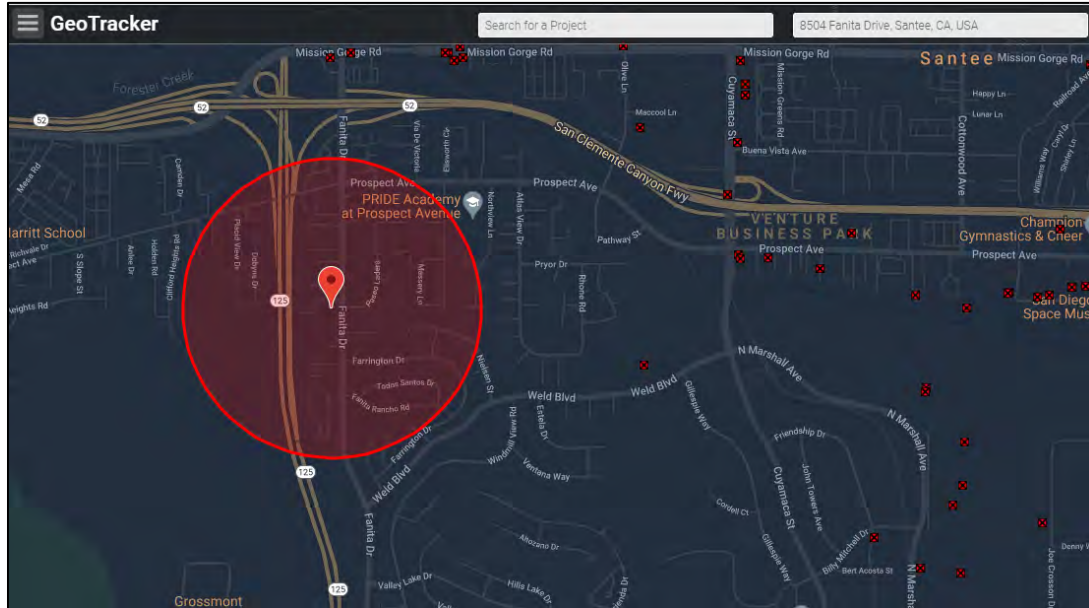
OCTOBER 6, 2021

1. List of Hazardous Waste and Substances sites from Department of Toxic Substances Control (DTSC) EnviroStor database: Project site not on list.

[REPORT]	[MAP]	BORREGO SITES (J09CA701100 AND J09CA701800 AND OTHER ANZA BORREGO 37970028 IMPACT AREAS)	STATE RESPONSE	ACTIVE	ANZA-BORREGO DESERT STATE PARK	BORREGO SPRINGS	92004	41-45%	SAN DIEGO
[REPORT]	[MAP]	CAMP ELLIOTT-J09CA0067	STATE RESPONSE	ACTIVE	NORTHERN PORTION OF SAN DIEGO	SAN DIEGO	92103	36-40%	SAN DIEGO
[REPORT]	[MAP]	GARRIZO IMPACT AREA	STATE RESPONSE	ACTIVE	ANZA-BORREGO DESERT STATE PARK	BORREGO SPRINGS	92004	61-65%	SAN DIEGO
[REPORT]	[MAP]	MAGNOLIA ELEMENTARY SCHOOL	STATE RESPONSE	ACTIVE	650 GREENFIELD DRIVE	EL CAJON	92021	66-70%	SAN DIEGO
[REPORT]	[MAP]	UCSD (CAMP MATTHEWS)-J09CA111001	STATE RESPONSE	ACTIVE	12 MILES NORTH OF SAN DIEGO	LA JOLLA	92103	11-15%	SAN DIEGO
[REPORT]	[MAP]	SUNFLOWER PROPERTIES INC.	STATE RESPONSE	ACTIVE	9755 DISTRIBUTION AVENUE	SAN DIEGO	92121	36-40%	SAN DIEGO
[REPORT]	[MAP]	CHATHAM BROTHERS BARREL YARD	STATE RESPONSE	CERTIFIED / OPERATION & MAINTENANCE	2257 BERNARDO AVE	ESCONDIDO	92029	16-20%	SAN DIEGO
[REPORT]	[MAP]	KETEMA AEROSPACE & ELECTRONICS	STATE RESPONSE	ACTIVE	790 GREENFIELD DR.	EL CAJON	92021	66-70%	SAN DIEGO
[REPORT]	[MAP]	TRI-CITY PLATING, INCORPORATED	STATE RESPONSE	ACTIVE	1307 SOUTH COAST HIGHWAY	OCEANSIDE	92054	66-70%	SAN DIEGO

https://www.envirostor.dtsc.ca.gov/public/search?cmd=search&reporttype=CORTESE&site_type=CSITES.FUDS&status=ACT,BKLG,COM&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST+%28CORTESE%29

2. List of Leaking Underground Storage Tank Sites from the State Water Board's GeoTracker database: Project site is not within 2,000 feet of a leaking underground storage tank.



<https://geotracker.waterboards.ca.gov/map/?myaddress=California&from=header&cqid=3070478141#>

3. Sites Identified with Waste Constituents above Hazardous Waste Levels outside the Waste Management Unit:
Project site is not on list.

SITES IDENTIFIED WITH WASTE CONSTITUENTS ABOVE HAZARDOUS WASTE LEVELS OUTSIDE THE WASTE MANAGEMENT UNIT								
COUNTY	CITY	REGION	SWAT #	WASTE DISCHARGER SYSTEM NO.	SOLID WASTE ID NO.	WASTE MANAGEMENT UNIT NAME	FACILITY NAME	AGENCY NAME
DEL NORTE	CRESCENT CITY	1	2	1A80520NSL-01		DEL NORTE COUNTY- PESTICIDE STORAGE	DEL NORTE PESTICIDE STORAGE AR	DEL NORTE, COUNTY OF
CONTRA COSTA	PITTSBURG	2	1	2 071059002-02	07-AA-0001	U.S. STEEL CORP.-PITTSBURG SITE LA	WDR-USS-POSCO	USS-POSCO
SOLANO	VALLEJO	2	1	2 4K2011001-01	48-AA-0008	US NAVY MARE ISLAND SANITARY LANDFILL	WDR-NAVAL SHIPYARD CLASS I LAN	MARE ISLAND NAVAL SHIPYARD
CONTRA COSTA	RICHMOND	2	3	2 071007002-01		CHEVRON CHEMICAL COMPANY-OLD SITES	WDR-ORTHO DIV-RICHMOND PLANT	CHEVRON CHEMICAL COMPANY
MONTEREY	FORT ORD (Marina)	3	1	3 270301004-01	27-AA-0015	FORT ORD LANDFILL	SANITARY LANDFILL	U.S. ARMY, FORT ORD
SANTA BARBARA	LOMPOC	3	3	3 428105001-01	42-AA-0017	LOMPOC CITY LANDFILL	SOLID WASTE DISPOSAL SITE	LOMPOC CITY
LOS ANGELES	MONTEREY PARK	4	1	40190332001-01	06-AA-0001	OPERATING INDUSTRIES LANDFILL	OPERATING INDUSTRIES, INC.	OPERATING INDUSTRIES, INC.
TULARE	WOODLAKE	5F	1	5F540300010-01	54-AA-0007	TULARE COUNTY WOODLAKE LANDFILL	WOODLAKE SWDS	TULARE, COUNTY OF
FRESNO	FRESNO	5F	2	5D109300901-01		MCKINLEY AVE. YARD	T.H. AGRICULTURE AND NUTRITION	NORTH AMERICAN PHILLIPS
KINGS	CORCORAN	5F	2	5D160302001-01	16-AA-0011	KINGS COUNTY-CORCORAN LANDFILL	CORCORAN SWDS	KINGS COUNTY WASTE MGMT AUTH
FRESNO	FRESNO	5F	3	5D100319001-01	10-AA-0013	ORANGE AVENUE DISPOSAL COMPANY	ORANGE AVENUE LANDFILL	ORANGE AVENUE DISP CO, INC.
TULARE	EXETER	5F	3	5D540300003-01	54-AA-0002	TULARE COUNTY-EXETER DISPOSAL SITE	EXETER SWDS	TULARE, COUNTY OF
MERCED	ATWATER	5F	4	5C240115001-01		ATWATER CITY	BERT CRANE ROAD LANDFILL	ATWATER, CITY OF
FRESNO	FOWLER	5F	5	5D100325001-01		FOWLER CITY	POWLER CITY LANDFILL (OLD)	FOWLER, CITY OF
BUTTE	OROVILLE	5R	2	5A042005001-01		KOPPERS COMPANY-OROVILLE SITE	KOPPERS WOOD PRESERVING ISW	KOPPERS INDUSTRIES INC.
BUTTE	CHICO	5R	4	5A040302001-01		CHICO CITY BURN DUMP	HUMBOLDT ROAD LANDFILL	CHICO, CITY OF
SACRAMENTO	SACRAMENTO	5S	1	5A140700001-01	14-AA-0008	US AIR FORCE-MCCLELLAN AFB LANDFILL	CLASS III SITE 8 (CLOSURE)	US AIR FORCE-MCCLELLAN AFB
SACRAMENTO	MATHER (Rancho Comova)	5S	2	5A140700001-01		US AIR FORCE-MATHER FIELD LANDFILL	MATHER AFB ENVIRONMENTAL MGMT	US AIR FORCE-MATHER AFB
SACRAMENTO	SACRAMENTO	5S	3	5B142000001-01		SACRAMENTO ARMY DEPOT	SACRAMENTO ARMY DEPOT	U.S. ARMY
SAN JOAQUIN	STOCKTON	5S	3	5 390002NUR-01	39-AA-0006	US NAVY COMMUNICATIONS LANDFILL	U.S.N. COMMUNICATION STA. LANDF	U.S. NAVY COMMUNICATIONS
SAN JOAQUIN	FRENCH CAMP	5S	3	5 390001NUR-01		US ARMY-SHARPE ARMY DEPOT	US ARMY-SHARPE ARMY DEPOT	US ARMY
SAN JOAQUIN	FRACY	5S	5	5 390006NUR-01		SITE 300 (OTHER 39 WM/S)	LAWRENCE LIVERMORE LAB	LAWRENCE LIVERMORE LABS
INYO	KEELER	6V	1	6B14200001-01	14-AA-0009	US TUNGSTEN OWENS LAKE LANDFILL	OWENS LAKE LANDFILL	TUNGSTEN MINERALS CORPORATION
ORANGE	FULLERTON	8	1	830002NUR-01		MC COLL SITE	MC COLL SLUDGE DISPOSAL SITE	TOXIC SUBSTANCES CONTROL DIVIS
RIVERSIDE	RIVERSIDE	8	1	8 130125001-01		STRINGFELLOW QUARRY ACID PITS	STATE OF CALIFORNIA-STRINGFELLOW	TOXIC PROGRAM MANAGEMENT SECT

<https://calepa.ca.gov/wp-content/uploads/sites/6/2016/10/SiteCleanup-CorteseList-CurrentList.pdf>

4. List of “active” CDO and CAO from the Water Board: Project site is not on list.

APPENDIX D



CHRISTIAN WHEELER
ENGINEERING

**REPORT OF UPDATED GEOTECHNICAL INVESTIGATION
AND INFILTRATION FEASIBILITY STUDY**

**PROPOSED 8-LOT SUBDIVISION
8504 FANITA DRIVE
SANTEE, CALIFORNIA**

PREPARED FOR

**TA DEVELOPMENT
7710 BALBOA AVENUE, #210C
SAN DIEGO, CALIFORNIA 92111**

PREPARED BY

**CHRISTIAN WHEELER ENGINEERING
3980 HOME AVENUE
SAN DIEGO, CALIFORNIA 92105**



CHRISTIAN WHEELER
ENGINEERING

August 29, 2022

TA Development
7710 Balboa Avenue, #210C
San Diego, California 92111
Attention: Tarik Alahmad

CWE 2210452.03R

**Subject: Report of Updated Geotechnical Investigation and Infiltration Feasibility Study
Proposed 8-Lot Subdivision, 8504 Fanita Drive, Santee, California**

Ladies and Gentlemen:

In accordance with your request, we have completed an updated geotechnical investigation and infiltration feasibility study for the subject project. We are presenting herewith a report of our findings and recommendations.

It is our professional opinion and judgment that no geotechnical conditions exist on the subject property that would preclude the construction of the proposed residential subdivision provided the recommendations presented herein are implemented.

If you have questions after reviewing this report, please do not hesitate to contact our office. This opportunity to be of professional service is sincerely appreciated.

Respectfully submitted,

CHRISTIAN WHEELER ENGINEERING

Daniel B. Adler, RCE #36037

DBA:dba:djf
ec: t.alahmad@cox.net



Daniel J. Flowers, CEG #2686



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Plate 3	Pad Undercut Detail
Plate 4	Retaining Wall Subdrain Detail

APPENDICES

Appendix A	Subsurface Explorations
Appendix B	Laboratory Test Results
Appendix C	References
Appendix D	Recommended Grading Specifications-General Provisions
Appendix E	Infiltration Feasibility Study



CHRISTIAN WHEELER
ENGINEERING

**REPORT OF UPDATED GEOTECHNICAL INVESTIGATION
AND INFILTRATION FEASIBILITY STUDY**

PROPOSED 8-LOT SUBDIVISION

8504 FANITA DRIVE

SANTEE, CALIFORNIA

INTRODUCTION AND PROJECT DESCRIPTION

This report presents the results of a preliminary geotechnical investigation performed for a proposed residential subdivision to be located at 8504 Fanita Drive, Santee, California. The following Figure No. 1 presents a vicinity map showing the location of the property.

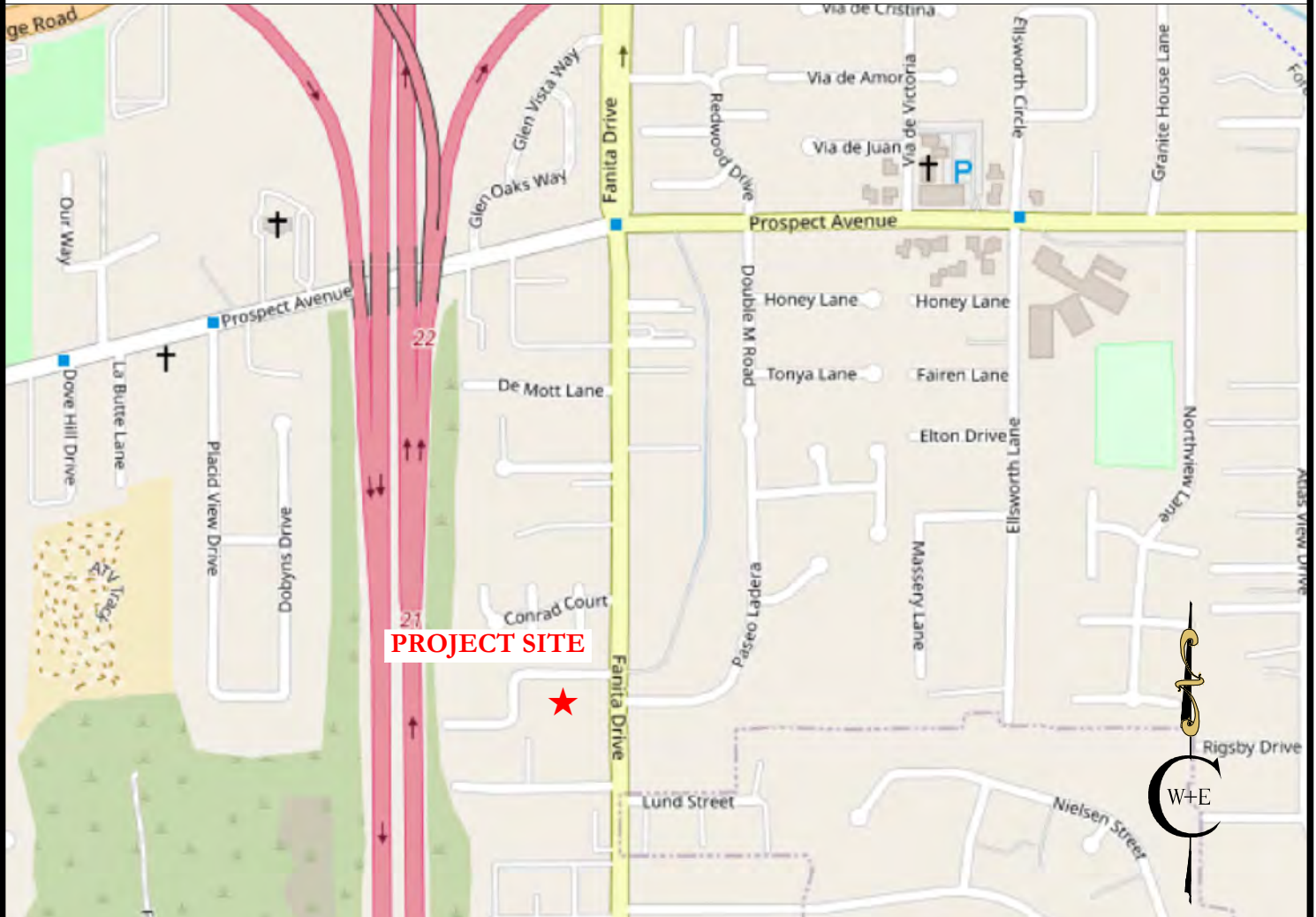
We understand that the subject project will consist of the construction of an 8-lot residential subdivision with associated access driveways and retaining walls up to approximately 7 feet high. It is anticipated that the homes will be one-and two-story, of wood-frame construction, supported by shallow foundations, and will incorporate conventional concrete on-grade floor slabs. As part of the storm water management for the project a biofiltration basin is proposed. Grading to accommodate the proposed improvements is anticipated to consist of cuts and fills up to about 7 feet.

To assist in the preparation of this report, we were provided with a tentative map prepared by Zenith Consultants, dated August 18, 2022, and a topographic survey prepared by Alta Land Surveying, Inc., dated August 23, 2021. A copy of sheet 2 of the tentative map was used as a base map for our Site Plan and Geologic Map, and is included herein as Plate No. 1. Two geologic cross sections were also created to depict the existing topography and subsurface soil conditions, the cross sections are included as Plate No. 2 of this report. In addition, we have reviewed our report titled “Preliminary Geotechnical Investigation, Proposed 9-Lot Subdivision”, CWE 2210452.01, dated October 27, 2021 as well as our report titled “Preliminary Storm Water Infiltration Feasibility Study, Proposed 9-Lot Subdivision”, CWE 2210452.02, dated April 1, 2022. Data from these reports is included in Appendices A, B, and E.

A review of available maps, photographs, and literature was also performed as part of this investigation. The geotechnical reports (Construction Testing & Engineering, 2006 and Geocon, 2015) for the D’Lazio subdivision to the east of the site located at 8429-8441 Fanita Drive were also obtained and reviewed as part of this investigation.

SITE VICINITY

© OpenStreetMap contributors



PROPOSED 9-LOT SUBDIVISION
8504 FANITA DRIVE
SANTEE, CALIFORNIA

DATE: AUGUST 2022

JOB NO.: 2210452.03R

BY: SRD

FIGURE NO.: 1



CHRISTIAN WHEELER
ENGINEERING

This report has been prepared for the exclusive use of TA Development, and its design consultants, for specific application to the project described herein. Should the project be modified, the conclusions and recommendations presented in this report should be reviewed by Christian Wheeler Engineering for conformance with our recommendations and to determine whether any additional subsurface investigation, laboratory testing and/or recommendations are necessary. Our professional services have been performed, our findings obtained and our recommendations prepared in accordance with generally accepted engineering principles and practices. This warranty is in lieu of all other warranties, expressed or implied.

SCOPE OF SERVICES

Our previous geotechnical investigation consisted of surface reconnaissance, subsurface exploration, obtaining representative soil samples, laboratory testing, analysis of the field and laboratory data, and review of relevant geologic literature. Our scope of service did not include assessment of hazardous substance contamination, recommendations to prevent floor slab moisture intrusion or the formation of mold within the structures, evaluation or design of storm water infiltration facilities, or any other services not specifically described in the scope of services presented below.

More specifically, the intent of our update report is to:

- Review of our previous reports and combined them into one all-inclusive report.
- Evaluate, by laboratory tests and our past experience with similar soil types, the engineering properties of the various soil strata that may influence the proposed construction, including bearing capacities, expansive characteristics and settlement potential.
- Describe the general geology at the site including possible geologic hazards that could have an effect on the proposed construction, and provide the seismic design parameters in accordance with the 2019 edition of the California Building Code.
- Discuss potential construction difficulties that may be encountered due to soil conditions, groundwater or geologic hazards, and provide geotechnical recommendations to mitigate identified construction difficulties.
- Provide site preparation and grading recommendations for the anticipated work, as necessary.
- Provide foundation recommendations for the type of construction anticipated and develop soil engineering design criteria for the recommended foundation designs.
- Provide earth retaining wall design parameters, as necessary.
- Provide a preliminary geotechnical report presenting the results of our investigation, including a plot plan showing the location of our subsurface explorations, excavation logs, laboratory test results, and

our conclusions and recommendations for the proposed project. The report will be provided as an electronic document in Portable Document Format (PDF).

Although tests for the presence of soluble sulfates within the soils that may be in contact with reinforced concrete and testing of near surface soils samples' pH and resistivity were performed as part of the scope of our services, it should be understood Christian Wheeler Engineering does not practice corrosion engineering. If a corrosivity analysis is considered necessary, we recommend that the client retain an engineering firm that specializes in this field to consult with them on this matter. The results of our sulfate, pH, and resistivity testing should only be used as a guideline to determine if additional testing and analysis is necessary.

FINDINGS

SITE DESCRIPTION

The subject site consists of a vacant, rectangular-shaped lot located at 8504 Fanita Drive, Santee, California. The lot is identified as Assessor's Parcel Numbers 386-690-38-00 and has a 10-foot-wide easement which extends about 120 feet west of the northwest corner. The site is bounded on the east by Fanita Drive, on the north by Watson Place, and on the remaining sides by residential properties. A double box culvert and concrete lined drainage channel exist along the easterly property line. Topographically, the property slopes gently to the east. According to topographic survey, elevations within the rectangular portion of the lot range from about 390 feet at the western property line to about 375 feet at the eastern property line.

SITE HISTORY

A review of the photographs for available years revealed that the subject site has been used for residential purposes for over 45 years. As depicted on the available photographs, a residential structure was constructed on the central portion of the lot in the early 1960's and remained until approximately 2008 when it was razed. The existing drainage channel at the southeast end of the lot appears to have been constructed in the late 1970's in associated with the residential development to the south. Prior to the development of the site, it appears that the site supported spars vegetation and a few trees. Grading at the site appears to have been minimal and limited to razing the residential structure, excavating and backfilling the double box culvert, and excavating the drainage channel.

GENERAL GEOLOGY AND SUBSURFACE CONDITIONS

GEOLOGIC SETTING AND SOIL DESCRIPTION: The project site is located in the Foothills Physiographic Province of San Diego County. Based upon the findings of our subsurface explorations and review of readily available, pertinent geologic and geotechnical literature, it was determined that the site is generally underlain by granitic rock mantled by artificial fill, slopewash, younger alluvium, and older alluvium. The following presents a description of the soils which were encountered beneath the site in order of increasing age.

ARTIFICIAL FILL (Qaf): Man-placed fill was encountered in the central portion of the site and appears to be associated with the razed residence which previously occupied the subject site. Fill soils are also expected to comprise a portion of the off-site, ascending slope along the westerly property line. These fill soils appear to be related to the construction of neighboring building pad. Additionally, fills are anticipated to exist along the easterly property line in association with the backfill and grading operations for the double box culvert. As encountered in our subsurface exploration (trench T-7), the artificial fill associated with the razed residence extended a maximum depth of about 3 feet from existing grade. Additional and/or deeper fill soils may exist in areas of the site not investigated. The fill materials generally consisted of dark grayish-brown, dry, soft, clay (CH) with varying amounts of construction debris such as pipe, glass and concrete debris. Maximum debris size observed was about 6 inches. The artificial fill was judged to have a high expansion potential (EI between 91 and 130).

SLOPEWASH (Qsw): A slopewash layer was encountered underlying the fill soils or at grade throughout the site. As encountered in the trenches, this layer had a maximum thickness of about 4½ feet (trench T-5). However, it may be thicker in areas of the site not investigated. The slopewash consisted of dark grayish-brown, dry and moist, soft, clay (CH) and grayish-brown to light brown, moist, loose, clayey sand (SC). The slopewash was found to have a high expansion potential (EI=107).

YOUNGER ALLUVIUM (Qyal): Younger alluvium was encountered underlying the slopewash in the southeastern corner of the site (trench T-3) and is expected to underlie the easterly most portion of site and Fanita Drive. These materials had a thickness of about 3 feet. However, younger alluvium may be thicker and/or exist in areas of the site not investigated. The younger alluvium consisted of light brown to light grayish-brown, damp, loose, silty sand with gravel/silty gravel with sand (SM/GM) with some friable sand beds. The younger alluvium was judged to have a low expansion potential (EI between 21 and 50).

OLDER ALLUVIUM (Qoal): Older alluvium was encountered underlying the surficial soils throughout the site. As encountered in the trenches, these materials consisted of brown, light brown, reddish-brown, and greenish-brown, moist, stiff, very stiff and hard, sandy clay (CL), light gray, and light reddish-brown, moist, dense, clayey sand (SC), and light reddish brown and brown, moist, medium dense to dense and very dense, well graded gravel with silt (GM-GW). Maximum cobble size was about 12 inches. The clayey older alluvium (CL) was found to have a high expansion potential (EI=122) whereas, the sandy and gravelly older alluvium (SC and GM-GW) was judged to have a very low to low expansion potential (EI<50).

WEATHERED GRANITIC ROCK (Kgr): Cretaceous-age granitic rock was encountered underlying the older alluvium in all of the trenches with the exception T-5. The granitic rock is expected to underlie the older alluvium in the area of T-5 at a depth of approximately 16 feet below existing grades, see cross section B-B'. In general, the granitic rock was found to be moderately weathered and when excavated consisted of light gray, moist, very dense, well graded sand with silt (SW-SM). A rock outcrop was observed in the central portion of the lot near the westerly property line. It is unknown if this rock outcrop is deep seated or simply a "floater." The granitic rock was judged to have a very low expansion potential (EI<20).

GROUNDWATER: No groundwater or major seepage was encountered in our subsurface explorations. We do not expect any significant groundwater related conditions during or after the proposed construction. However, it should be recognized that minor groundwater seepage problems might occur after construction and landscaping are completed, even at a site where none were present before construction. These are usually minor phenomena and are often the result of an alteration in drainage patterns and/or an increase in irrigation water. Based on the anticipated construction and the permeability of the on-site soils, it is our opinion that any seepage problems that may occur will be minor in extent. It is further our opinion that these problems can be most effectively corrected on an individual basis if and when they occur.

TECTONIC SETTING: Much of Southern California, including the San Diego County area, is characterized by a series of Quaternary-age fault zones that consist of several individual, en echelon faults that generally strike in a northerly to northwesterly direction. Some of these fault zones (and the individual faults within the zone) are classified as "active" according to the criteria of the California Division of Mines and Geology. Active fault zones are those that have shown conclusive evidence of faulting during the Holocene Epoch (the most recent 11,000 years). The Division of Mines and Geology used the term "potentially active" on Earthquake Fault Zone maps until 1988 to refer to all Quaternary-age (last 1.6 million years) faults for the purpose of evaluation for possible zonation in accordance with the Alquist-Priolo Earthquake Fault Zoning

Act and identified all Quaternary-age faults as “potentially active” except for certain faults that were presumed to be inactive based on direct geologic evidence of inactivity during all of Holocene time or longer. Some faults considered to be “potentially active” would be considered to be “active” but lack specific criteria used by the State Geologist, such as *sufficiently active* and *well-defined*. Faults older than Quaternary-age are not specifically defined in Special Publication 42, Fault Rupture Hazard Zones in California, published by the California Division of Mines and Geology. However, it is generally accepted that faults showing no movement during the Quaternary period may be considered to be “inactive”.

A review of available geologic maps indicates that the nearest active fault zone is the Rose Canyon Fault Zone (RCFZ), located approximately 12 miles east of the site. Other fault zones in the region that could possibly affect the site include the Coronado Bank, San Diego Trough and San Clemente fault zones to the west, the Newport-Inglewood and Palos Verdes fault zones to the northwest, and the Elsinore, Earthquake Valley, San Jacinto, and San Andreas fault zones to the northeast.

GENERAL GEOLOGIC HAZARDS

GENERAL: The site is located in an area where the risks due to significant geologic hazards are relatively low. No geologic hazards of sufficient magnitude to preclude the construction of the subject project are known to exist. In our professional opinion and to the best of our knowledge, the site is suitable for the proposed improvements. There does not appear to be any soil conditions within the area of the proposed tentative map which, if not corrected, would lead to structural defects of the proposed improvements. Additionally, provided the recommendations contained in this report as well as sound construction practices are followed, the proposed development should not destabilize or result in settlement of adjacent property of the public right of way.

SURFACE RUPTURE: There are no known active faults that traverse the subject site; therefore, the risk for surface rupture at the subject site is considered low.

LANDSLIDE POTENTIAL AND SLOPE STABILITY: As part of this investigation we reviewed the publication, “Landslide Hazards in the Southern Part of the San Diego Metropolitan Area” by Tan, 1995. This reference is a comprehensive study that classifies San Diego County into areas of relative landslide susceptibility. According to this publication, the site is mapped within Relative Landslide Susceptibility Area 4-1, which is considered to be the “most susceptible” area. Subarea 4-1 contains observably unstable slopes underlain by both weak materials such as the Friars Formation and adverse geologic structure. Subarea 4-1 also includes the “questionable” landslides shown on the map.

We have also reviewed the Geotechnical/ Seismic Hazard Study for the Safety Element of the Santee General Plan, prepared by Geocon, Incorporated, dated October 31, 2002. This document was prepared to assist land use planners in their responsibility to minimize loss of life and destruction of property caused by seismic and geologic hazards. This document identifies areas that are potentially subject to seismic or other geologic hazards and indicates that the project geotechnical consultant should establish either that the unfavorable conditions do not exist in the specific area in question or that they can be mitigated through proper design and construction. The map accompanying the Geocon report indicates that the eastern portion of the site is in Geotechnical/Seismic Hazard Category D3 and that the remainder of the site is in Geotechnical/Seismic Hazard Category D2. Hazard Category D3 is assigned to areas underlain by the Friars Formation and Hazard Category D2 is assigned to areas underlain by possible landslides within the Friars Formation.

Based on the results of our subsurface explorations and review of the referenced geotechnical reports, it is our opinion that the site, although mapped as being underlain by the Friars Formation which is often associated with slope instability, is not underlain by landslide materials or the Friars Formation. Our site-specific geotechnical investigation, demonstrates that the entire site is underlain by older alluvium and granitic rock and that there is apparently no Friars Formation at the subject site proper. These findings are supported by the referenced geotechnical reports (Construction Testing & Engineering, 2006 and Geocon, 2015) for the D'Lazio subdivision approximately 100 feet southeast of the subject site at 8429-8441 Fanita Drive. The subsurface excavations and geologic cross sections presented in these reports indicate that the Friars Formation and a westerly trending landslide exist beneath the easterly portion of the D'Lazio subdivision. The toe of the landslide is depicted as being located approximately 300 feet east of Fanita Drive with a base elevation of approximately 393 feet (Construction Testing & Engineering, 2006). West of the landslide debris, towards the subject site the D'Lazio subdivision was found to be underlain by competent older alluvium and/or weathered granitic rock. The younger materials overlying the older alluvium and weathered granitic rock were interpreted as colluvium (Construction Testing & Engineering, 2006) and topsoil (Geocon, 2015). These similar conditions were observed at the subject site, however, we have interpreted the younger materials which overlie the older alluvium to be slopewash and younger alluvium.

LIQUEFACTION: The earth materials underlying the site are not considered subject to liquefaction due to such factors as soil density and grain-size distribution, and the absence of an unconfined, free groundwater table within the alluvium.

FLOODING: As delineated on the Flood Insurance Rate Map (FIRM), map number 06073C1634G prepared by the Federal Emergency Management Agency, the site is in Zone X which is considered to be an

“area of minimal flood hazard.” Areas of minimal flood hazards are located outside of the boundaries of both the 100-year and 500-year flood zones.

TSUNAMIS: Tsunamis are great sea waves produced by submarine earthquakes or volcanic eruptions. Due to the site’s elevation and location, the site is not subject to risk from tsunamis.

SEICHES: Seiches are periodic oscillations in large bodies of water such as lakes, harbors, bays or reservoirs. Due to the site’s location, it is considered to have a negligible risk potential for seiches.

CONCLUSIONS

In general, it is our professional opinion and judgment that the subject property is suitable for the construction of the subject project provided the recommendations presented herein are implemented. The main geotechnical conditions encountered affecting the proposed project are potentially compressible artificial fill and younger alluvium, expansive soils, cut/fill transitions, granitic rock, and a property line retaining wall. The following recommendations should be considered preliminary and may require revisions after grading plans are available.

The site is underlain by potentially compressible artificial fill, slopewash, and younger alluvium. As encountered in our subsurface explorations, these materials extended a maximum combined depth of about 6 feet from existing grade (Trench T-3). However, the compressible soils may be deeper in areas of the site not investigated. It is our opinion that these soils are not suitable, in their present condition, for the support of settlement sensitive improvements. It is therefore recommended that potentially compressible soils not removed to achieve finish pad grades be removed and replaced as compacted fill in areas to receive settlement sensitive improvements and new fills.

It is anticipated that the majority of the soils involved in site preparation and grading will be highly expansive (EI between 91 and 130). Although some of these soils will be nondetrimentally expansive (EI<50) their quantity is not expected to significantly change this condition. The recommendations contained herein reflect the expansive potential of the anticipated foundation soils. It should be recognized that the intent of this report is to provide cost-effective site preparation and foundation recommendations to mitigate the potential detrimental effect of the on-site expansive soils on the proposed structures. However, soils with high expansion potential may detrimentally affect light-weight exterior improvements such as site walls, sidewalks, and driveways. Select grading consisting of replacing the expansive soils with a soil that has a low expansive potential is one of the best ways to mitigate for expansive soil conditions. If select grading is not performed, consideration should be given to utilizing materials that are tolerant to movement, implementing drought

tolerant landscaping, providing positive drainage away from exterior improvements, and providing concrete surfaces with appropriate weakened plane joints. Regardless of these or other similar measures, some distress to exterior improvements requiring future maintenance or even replacement should be anticipated, due to expansive soils. The recommendations contained in this report assume that select grading will not be performed.

The removal and replacement as compacted fill of existing potentially compressible soils as well as the proposed grading may result in cut/fill transition under some of the proposed lots and associated improvements. This configuration may result in differential settlements detrimental to proposed structures and improvements due to the potential of fill soils and native materials to settle differently. In order to mitigate this condition, it is recommended that the cut portions of the lots that incur a cut/fill transition be undercut as described hereinafter.

Unweathered granitic rock maybe encountered at the western edge of the site that may require heavy ripping and/or blasting. Heavy ripping, splitting and/or blasting maybe necessary to achieve proposed pad grades and excavations. Also, trenching into unweathered granitic rock with conventional trenching equipment may be difficult.

A seven-foot-high retaining wall is proposed along the western property line. Retaining wall footing should be founded in older alluvium. Temporary cut slopes up to about 10 feet deep (including foundation excavation) may be necessary for wall construction. Temporary cut slopes associated with wall construction will require shoring or off-site grading.

Based on the results of our subsurface explorations and review of the referenced geotechnical reports, it is our opinion that the site, although mapped as being underlain by the Friars Formational which is often associated with slope instability, is not underlain by landslide materials or the Friars Formation. Our site-specific geotechnical investigation, demonstrates that the entire site is underlain by older alluvium and granitic rock and that there is apparently no Friars Formation at the subject site proper.

As part of the storm water management for the site, we understand that on-site BMPs will be constructed. Design infiltration rates within the materials tested were very low (0.005 inches per hour). In addition, infiltration restrictions have been identified at the subject site. Appendix E of this report presents our Preliminary Storm Water Infiltration Feasibility Analysis for the proposed project.

The site is located in an area that is relatively free of geologic hazards that will have a significant effect on the proposed construction. The most likely geologic hazard that could affect the site is ground shaking due to seismic activity along one of the regional active faults. However, construction in accordance with the requirements of the most recent edition of the California Building Code and the local governmental agencies should provide a level of life-safety suitable for the type of development proposed.

RECOMMENDATIONS

GRADING AND EARTHWORK

GENERAL: All grading should conform to the guidelines presented in the current edition of the California Building Code, the minimum requirements of the City of Santee, and the recommended Grading Specifications and Special Provisions attached hereto, except where specifically superseded in the text of this report.

PREGRADE MEETING: It is recommended that a pregrade meeting including the grading contractor, the client, and a representative from Christian Wheeler Engineering be performed, to discuss the recommendations of this report and address any issues that may affect grading operations.

CLEARING AND GRUBBING: Site preparations should begin with the removal of the disturbed soils resulting from demolition operations as well as any existing vegetation and other deleterious materials in areas to receive proposed improvements or new fill soils.

SITE PREPARATION: It is recommended that existing potentially compressible soils underlying proposed settlement sensitive improvements and new fills be removed in their entirety. Based on our findings, the maximum anticipated removal depth is about 6 feet from existing grade (Trench T-3). Deeper removals may be necessary in areas of the site not investigated or due to unforeseen condition. No removals are recommended beyond property lines. All excavated areas should be approved by the geotechnical engineer or his representative prior to replacing any of the excavated soils. The excavated materials can be replaced as properly compacted fill in accordance with the recommendations presented in the “Compaction and Method of Filling” section of this report.

EXPLORATORY TRENCHES: Fill soils associated with the exploratory trenches not removed to achieve proposed pad grades will have to be removed and replaced as compacted fill.

EXCAVATION CHARACTERISTICS: Based on our exploratory excavations, the subsurface materials at the site appear to be excavatable to the anticipated excavation depths with conventional heavy-duty equipment in good operating condition. Significant caving of the exploratory excavations was not encountered at the time of our subsurface explorations. It should be expected that cobble and construction debris will be encountered in the fill soil and that abundant gravel, cobble, and occasional boulders may be encountered within the alluvium. In addition, unweathered granitic rock will be encountered at the western edge of the site that may require heavy ripping and/or blasting. Heavy ripping, splitting and/or blasting will likely be necessary to achieve proposed pad grades and excavations. Also, trenching into unweathered granitic rock with conventional trenching equipment may be difficult.

OVERSIZE ROCK: Oversized rock should be anticipated during the grading operations. Oversize rock is defined herein as rock over 6 inches in maximum dimension. Oversized rock may be placed 3 feet below the building pad grade and 10 feet from the face of slopes. Oversize rock up to 12 inches in maximum dimension may be placed below said depth. Oversized rock should be placed in such a way as to avoid nesting.

UNDERCUT: Older alluvium and weathered granitic rock within the cut portions of cut/fill transition lots should be undercut to a minimum depth of 4 feet from finish pad grade or 1 foot below the bottom of the deepest footing whichever is greater. Laterally undercuts should extend across the entire pad. The removals and undercuts should be performed in such a way as to provide for a continuous contact between the fill and native soils that drains away from the proposed structures, and avoids adjacent zones with different undercut depths that may impair subsurface drainage. A pad undercut detail is provided on Plate No. 3.

PROCESSING OF FILL AREAS: Prior to placing any new fill soils or constructing any new improvements in areas that have been cleaned out to receive fill, the exposed soils should be scarified to a depth of 12 inches, moisture conditioned, and compacted to at least 90 percent relative compaction.

COMPACTION AND METHOD OF FILLING: In general, all structural fill placed at the site should be compacted to a relative compaction of at least 90 percent of its maximum laboratory dry density as determined by ASTM Laboratory Test D1557. Fills should be placed at or slightly above optimum moisture content, in lifts 6 to 8 inches thick, with each lift compacted by mechanical means. However, clayey fills should be placed at moisture contents at least 3 percent above optimum moisture content. Fills should consist of approved earth material, free of trash or debris, roots, vegetation, or other materials determined to be unsuitable by the Geotechnical Consultant. Fill material should be free of rocks or lumps of soil in excess of 3 inches in maximum dimension.

Utility trench backfill within 5 feet of the proposed structure and beneath all concrete flatwork or pavements should be compacted to a minimum of 90 percent of its maximum dry density.

TEMPORARY CUT SLOPES: The contractor is solely responsible for designing and constructing stable, temporary excavations and will need to shore, slope, or bench the sides of trench excavations as required to maintain the stability of the excavation sides. The contractor's "competent person", as defined in the OSHA Construction Standards for Excavations, 29 CFR, Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety process. We anticipate that the existing on-site fill soils, slopewash and alluvium will consist of Type C material while the weathered granitics will consist of Type B material. Our firm should be contacted to observe all temporary cut slopes during grading to ascertain that no unforeseen adverse conditions exist. No surcharge loads such as foundation loads, or soil or equipment stockpiles, vehicles, etc. should be allowed within a distance from the top of temporary slopes equal to half the slope height. Where it is not possible to construct temporary construction slopes as recommended, shoring will be required.

SURFACE DRAINAGE: The drainage around the proposed improvements should be designed to collect and direct surface water away from proposed improvements and the top of slopes toward appropriate drainage facilities. Rain gutters with downspouts that discharge runoff away from the structure into controlled drainage devices are recommended.

The ground around the proposed improvements should be graded so that surface water flows rapidly away from the improvements without ponding. In general, we recommend that the ground adjacent to structure slope away at a gradient of at least 5 percent for a minimum distance of 10 feet. If the minimum distance of 10 feet cannot be achieved, an alternative method of drainage runoff away from the building at the termination of the 5 percent slope will need to be used. Swales and impervious surfaces that are located within 10 feet of the building should have a minimum slope of 2 percent. Permeable paver areas adjacent to the structure should incorporate a combination of impermeable liners, underdrains and/or deepened edge restraints.

Drainage patterns provided at the time of construction should be maintained throughout the life of the proposed improvements. Site irrigation should be limited to the minimum necessary to sustain landscape growth. Over watering should be avoided. Should excessive irrigation, impaired drainage, or unusually high rainfall occur, zones of wet or saturated soil may develop.

GRADING PLAN REVIEW: The final grading plans should be submitted to this office for review in order to ascertain that the recommendations of this report have been implemented, and that no additional recommendations are needed due to changes in the anticipated development plans.

FOUNDATIONS

GENERAL: Based on our findings and engineering judgment, the proposed structures and associated improvements may be supported by conventional shallow continuous and isolated spread footings or post-tensioned foundations. The following recommendations are considered the minimum based on the anticipated soil conditions, and are not intended to be lieu of structural considerations. All foundations should be designed by a qualified engineer.

POST-TENSIONED FOUNDATIONS

GENERAL: Post-Tensioned foundations may be utilized for the support of the subject structures. The post tension related design parameters from the Post Tensioning Institute, 3rd edition, are provided below.

TABLE I: POST-TENSIONED FOUNDATIONS

Post-Tensioning Institute (PTI) – 3rd Edition	
Thornthwaite Index	-20
<i>Edge Moisture Variation, e_m</i>	
<i>Center Lift (ft)</i>	9.0
<i>Edge Lift (ft)</i>	5.3
<i>Differential Soil Movement, y_m</i>	
<i>Center Lift (in)</i>	0.65
<i>Edge Lift (in)</i>	1.93

Minimum footing width, depth and slab thickness should be determined by the project structural engineer. However, from a geotechnical standpoint, it is recommended that perimeter footings extend to a minimum depth of 30 inches below lowest adjacent finish pad grade. The under-slab vapor retarder section of this report also applies to post-tensioned foundations. A soil bearing capacity of 1,500 pounds per square foot may be assumed for foundation design. The bearing value may also be increased by one-third for combinations of temporary loads such as those due to wind or seismic loads.

SHALLOW FOUNDATIONS

DIMENSIONS: Spread footings supporting the proposed structures and associated exterior improvements should extend to a minimum depth at least 30 inches below lowest adjacent finish pad

grade. Continuous and isolated spread footings should have a minimum width of 12 inches and 24 inches, respectively. Retaining wall footings should be at least 30 inches deep and 24 inches wide. Property line footings should extend at least 12 inches into competent older alluvium.

BEARING CAPACITY: Spread footings with a minimum embedment described in the previous paragraph may be designed for an allowable soil bearing pressure of 1,500 pounds per square foot (psf). The bearing value may also be increased by one-third for combinations of temporary loads such as those due to wind or seismic loads.

FOOTING REINFORCING: Reinforcement requirements for foundations should be provided by a structural engineer. However, based on the existing soil conditions, we recommend that the minimum reinforcing for continuous footings consist of at least 2 No. 5 bars positioned near the bottom of the footing and 2 No. 5 bars positioned near the top of the footing.

LATERAL LOAD RESISTANCE: Lateral loads against foundations may be resisted by friction between the bottom of the footing and the supporting soil, and by the passive pressure against the footing. The coefficient of friction between concrete and soil may be considered to be 0.25. The passive resistance may be considered to be equal to an equivalent fluid weight of 250 pounds per cubic foot. This assumes the footings are poured tight against undisturbed soil. If a combination of the passive pressure and friction is used, the friction value should be reduced by one-third.

FOUNDATION EXCAVATION MOISTURE CONDITIONING: It is recommended that foundation excavations not be allowed to dry out during the construction process. However, due to the clayey nature of the foundation materials, this operation should be done carefully. Excessive moistening of the soils will result in a sloppy foundation bottom.

FOUNDATION EXCAVATION OBSERVATION: All footing excavations should be observed by Christian Wheeler Engineering prior to placing of forms and reinforcing steel to determine whether the foundation recommendations presented herein are followed and that the foundation soils are as anticipated in the preparation of this report. All footing excavations should be excavated neat, level, and square. All loose or unsuitable material should be removed prior to the placement of concrete.

SETTLEMENT CHARACTERISTICS: The anticipated total and differential settlement is expected to be less than about 1 inch and 1 inch over 40 feet, respectively, provided the recommendations presented in this report are followed. It should be recognized that minor cracks normally occur in concrete slabs and

foundations due to concrete shrinkage during curing or redistribution of stresses, therefore some cracks should be anticipated. Such cracks are not necessarily an indication of excessive vertical movements.

EXPANSIVE CHARACTERISTICS: The prevailing foundation soils are assumed to have a high expansive potential (EI between 91 and 130). The recommendations within this report reflect these conditions.

FOUNDATION PLAN REVIEW: The final foundation plan and accompanying details and notes should be submitted to this office for review. The intent of our review will be to verify that the plans used for construction reflect the minimum dimensioning and reinforcing criteria presented in this section and that no additional criteria are required due to changes in the foundation type or layout. It is not our intent to review structural plans, notes, details, or calculations to verify that the design engineer has correctly applied the geotechnical design values. It is the responsibility of the design engineer to properly design/specify the foundations and other structural elements based on the requirements of the structure and considering the information presented in this report.

SOLUBLE SULFATES: The water-soluble sulfate content of selected soil sample from the site was determined in accordance with California Test Method 417. The test result indicate that the soil sample had soluble sulfate content of 0.022 percent. Soils with a soluble sulfate content of less than 0.1 percent are considered to be negligible. However, it should be recognized that the sulfate content of surficial soils may increase with time due to soluble sulfate in the irrigation water or fertilized use. Additional sampling and testing of on-site earth materials should be conducted following the completion of mass grading to determine if deleterious chemicals are present that could detrimentally affect construction materials.

It should be understood Christian Wheeler Engineering does not practice corrosion engineering. If a corrosivity analysis is considered necessary, we recommend that the client retain an engineering firm that specializes in this field to consult with them on this matter. The results of our corrosion testing should only be used as a guideline to determine if additional testing and analysis is necessary.

SEISMIC DESIGN FACTORS

The seismic design factors applicable to the subject site are provided below. The seismic design factors were determined in accordance with the 2019 California Building Code. The site coefficients and adjusted maximum considered earthquake spectral response acceleration parameters are presented in the following Table II.

TABLE II: SEISMIC DESIGN FACTORS

Site Coordinates: Latitude	32.829°
Longitude	-117.001°
Site Class	C
Site Coefficient F_a	1.2
Site Coefficient F_v	1.5
Spectral Response Acceleration at Short Periods S_s	0.777 g
Spectral Response Acceleration at 1 Second Period S_1	0.285 g
$S_{MS}=F_a S_s$	0.933 g
$S_{M1}=F_v S_1$	0.428g
$S_{DS}=2/3*S_{MS}$	0.622 g
$S_{D1}=2/3*S_{M1}$	0.285 g

Probable ground shaking levels at the site could range from slight to moderate, depending on such factors as the magnitude of the seismic event and the distance to the epicenter. It is likely that the site will experience the effects of at least one moderate to large earthquake during the life of the proposed improvements.

ON-GRADE SLABS

GENERAL: It is our understanding that the floor system for proposed structures will consist of concrete slab-on-grade. The slabs should be designed by the project structural engineer based on the findings of this report. A design coefficient of subgrade reaction, K_v1 , of 50 pounds per cubic inch (pci) may be used for slab-on-grade design.

UNDER-SLAB VAPOR RETARDERS: Steps should be taken to minimize the transmission of moisture vapor from the subsoil through the interior slabs where it can potentially damage the interior floor coverings. Local industry standards typically include the placement of a vapor retarder, such as plastic, in a layer of coarse sand placed directly beneath the concrete slab. Two inches of sand are typically used above and below the plastic. The vapor retarder should be at least 15-mil Stegowrap® or similar material with sealed seams and should extend at least 12 inches down the sides of the interior and perimeter footings. The sand should have a sand equivalent of at least 30, and contain less than 10% passing the Number 100 sieve and less than 5% passing the Number 200 sieve. The membrane should be placed in accordance with the recommendation and consideration of ACI 302, “Guide for Concrete Floor and Slab Construction” and ASTM E1643, “Standards Practice for Installation of Water Vapor Retarder Used in Contact with Earth or Granular Fill Under Concrete Slabs.” It is the flooring contractor’s responsibility to place floor coverings in accordance with the flooring manufacturer specifications.

EXTERIOR CONCRETE FLATWORK: Exterior concrete slabs on grade, including driveways, should have a minimum thickness of 5 inches and be reinforced with at least No. 4 bars placed at 12 inches on center each way (ocew). Driveway slabs should be provided with a thickened edge at least 24 inches deep and 6 inches wide. All slabs should be provided with weakened plane joints in accordance with the ACI guidelines. Special attention should be paid to the method of concrete curing to reduce the potential for excessive shrinkage cracking. It should be recognized that minor cracks occur normally in concrete slabs due to shrinkage. Some shrinkage cracks should be expected and are not necessarily an indication of excessive movement or structural distress. However, it should be recognized that soils with high (EI between 91 and 130) expansion potential may detrimentally affect light weight exterior improvements such as site walls, sidewalks, and driveways. Some distress to exterior improvements requiring future maintenance or even replacement should be anticipated due to expansive soils.

EARTH RETAINING WALLS

FOUNDATIONS: Foundations for any proposed retaining walls should be constructed in accordance with the foundation recommendations presented previously in this report.

PASSIVE PRESSURE: The passive pressure for the anticipated foundation soils may be considered to be 250 pounds per square foot per foot of depth. The upper foot of embedment should be neglected when calculating passive pressures, unless the foundation abuts a hard surface such as a concrete slab. The passive pressure may be increased by one-third for seismic loading. The coefficient of friction for concrete to soil may be assumed to be 0.25 for the resistance to lateral movement. When combining frictional and passive resistance, the friction should be reduced by one-third.

ACTIVE PRESSURE: The active soil pressure for the design of “unrestrained” and “restrained” earth retaining structures with level backfill may be assumed to be equivalent to the pressure of a fluid weighing 36 and 52 pounds per cubic foot, respectively. An additional 15 pcf may be assumed for 2:1 (horizontal to vertical) sloping backfills. These pressures do not consider any other surcharge. If any are anticipated, this office should be contacted for the necessary increase in soil pressure. These values are based on a drained and granular backfill condition.

Seismic lateral earth pressures may be assumed to equal an inverted triangle starting at the bottom of the wall with the maximum pressure equal to $7H$ pounds per square foot (where H = wall height in feet) occurring at the top of the wall.

WATERPROOFING AND WALL DRAINAGE SYSTEMS: The need for waterproofing should be evaluated by others. If required, the project architect should provide (or coordinate) waterproofing details for the retaining walls. The design values presented above are based on a drained backfill condition and do not consider hydrostatic pressures. Unless hydrostatic pressures are incorporated into the design, the retaining wall designer should provide a detail for a wall drainage system. Typical retaining wall drain system details are presented in Plate No. 4 of this report for informational purposes. Additionally, outlet points for the retaining wall drain system should be coordinated with the project civil engineer.

BACKFILL: Retaining wall backfill soils should be compacted to at least 90 percent relative compaction. Expansive or clayey soils should not be used for backfill material. The wall should not be backfilled until the masonry has reached an adequate strength.

UTILITY TRENCHES

It is anticipated that utility trenches will be backfilled with materials much more permeable than the surrounding clayey soils. In order to mitigate the potential for these trenches to act as conduits for water under the proposed structure, it is recommended that a cutoff concrete plug be constructed at minimum distance of at least 3 feet from the structure to act as a dam. The plug should extend at least 12 inches beyond the edges and the bottom of the trench and should be at least 12 inches high or 6 inches above any bedding material, whichever is more.

LIMITATIONS

REVIEW, OBSERVATION AND TESTING

The recommendations presented in this report are contingent upon our review of final plans and specifications. Such plans and specifications should be made available to the geotechnical engineer and engineering geologist so that they may review and verify their compliance with this report and with the California Building Code.

It is recommended that Christian Wheeler Engineering be retained to provide continuous soil engineering services during the earthwork operations. This is to verify compliance with the design concepts, specifications or recommendations and to allow design changes in the event that subsurface conditions differ from those anticipated prior to start of construction.

UNIFORMITY OF CONDITIONS

The recommendations and opinions expressed in this report reflect our best estimate of the project requirements based on an evaluation of the subsurface soil conditions encountered at the subsurface exploration locations and on the assumption that the soil conditions do not deviate appreciably from those encountered. It should be recognized that the performance of the foundations and/or cut and fill slopes may be influenced by undisclosed or unforeseen variations in the soil conditions that may occur in the intermediate and unexplored areas. Any unusual conditions not covered in this report that may be encountered during site development should be brought to the attention of the geotechnical engineer so that he may make modifications if necessary.

CHANGE IN SCOPE

This office should be advised of any changes in the project scope or proposed site grading so that we may determine if the recommendations contained herein are appropriate. This should be verified in writing or modified by a written addendum.

TIME LIMITATIONS

The findings of this report are valid as of this date. Changes in the condition of a property can, however, occur with the passage of time, whether they be due to natural processes or the work of man on this or adjacent properties. In addition, changes in the Standards-of-Practice and/or Government Codes may occur. Due to such changes, the findings of this report may be invalidated wholly or in part by changes beyond our control. Therefore, this report should not be relied upon after a period of two years without a review by us verifying the suitability of the conclusions and recommendations.

PROFESSIONAL STANDARD

In the performance of our professional services, we comply with that level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions and in the same locality. The client recognizes that subsurface conditions may vary from those encountered at the locations where our borings, surveys, and explorations are made, and that our data, interpretations, and recommendations be based solely on the information obtained by us. We will be responsible for those data, interpretations, and recommendations, but shall not be responsible for the interpretations by others of the information developed. Our services consist of professional consultation and observation only, and no warranty of any

kind whatsoever, express or implied, is made or intended in connection with the work performed or to be performed by us, or by our proposal for consulting or other services, or by our furnishing of oral or written reports or findings.

CLIENT'S RESPONSIBILITY

It is the responsibility of the Client, or its representatives, to ensure that the information and recommendations contained herein are brought to the attention of the structural engineer and architect for the project and incorporated into the project's plans and specifications. It is further their responsibility to take the necessary measures to ensure that the contractor and his subcontractors carry out such recommendations during construction.

FIELD EXPLORATIONS

Seven subsurface explorations were made on August 25, 2021 at the locations indicated on the Site Plan and Geotechnical Map included herewith as Plate No. 1. These explorations consisted of trenches excavated utilizing a John Deere 310 backhoe. The fieldwork was conducted under the observation and direction of our engineering geology personnel.

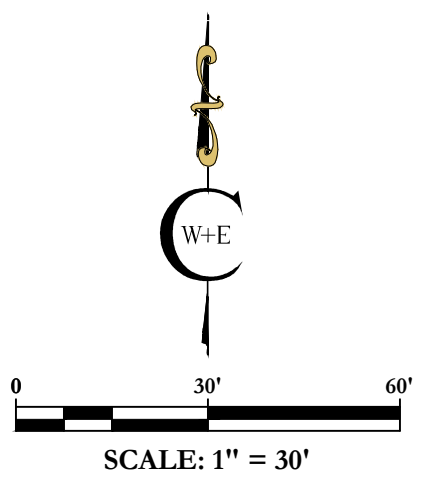
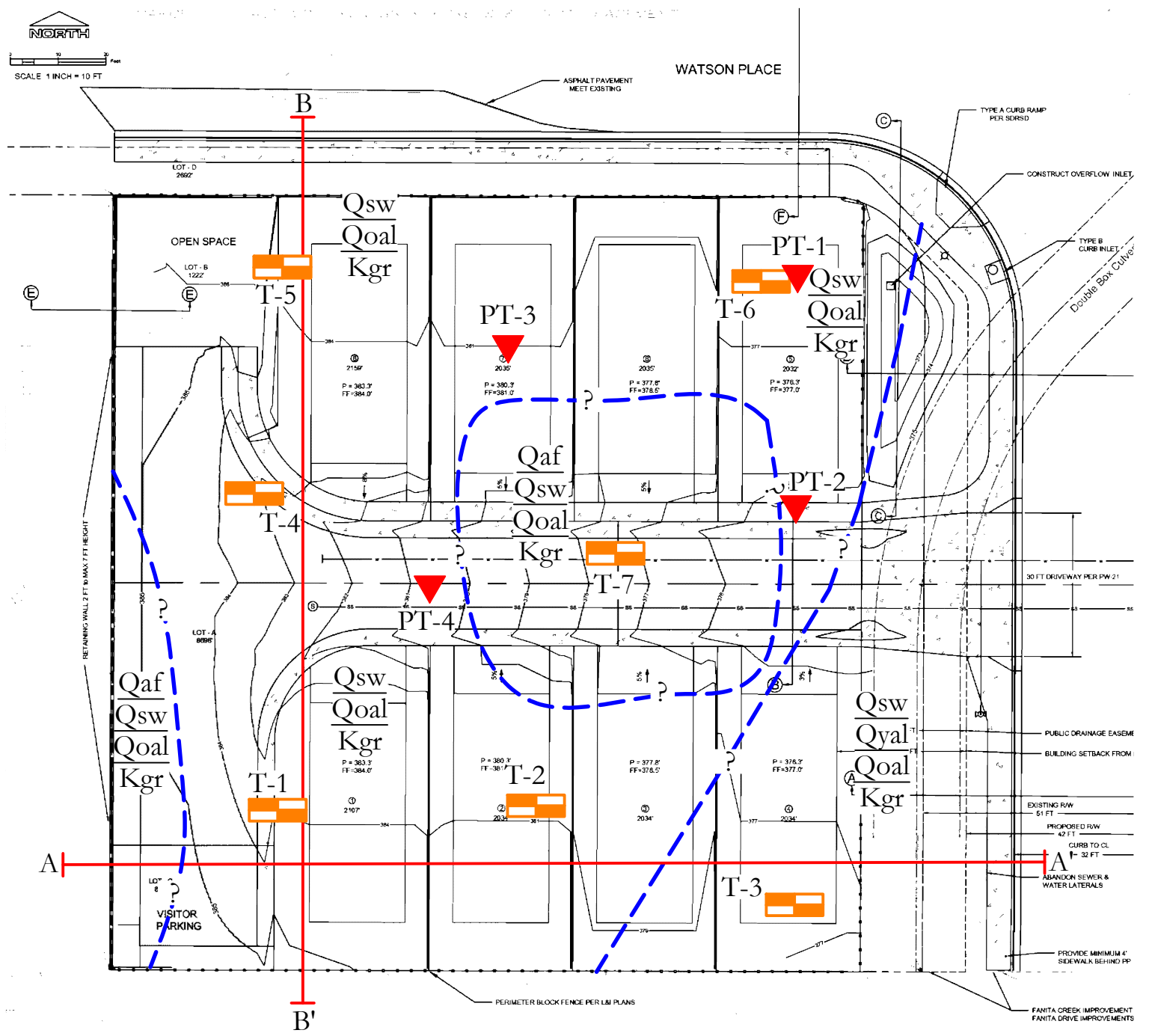
The explorations were carefully logged when made. The boring and trench logs are presented on Appendix A. The soils are described in accordance with the Unified Soils Classification. In addition, a verbal textural description, the wet color, the apparent moisture, and the density or consistency is provided. The density of granular soils is given as very loose, loose, medium dense, dense or very dense. The consistency of silts or clays is given as either very soft, soft, medium stiff, stiff, very stiff, or hard.

Relatively undisturbed chunk samples and bulk samples of the earth materials encountered were collected and transported to our laboratory for testing.

LABORATORY TESTING

Laboratory tests were performed in accordance with the generally accepted American Society for Testing and Materials (ASTM) test methods or suggested procedures. A brief description of the tests performed and the subsequent results are presented in Appendix B.

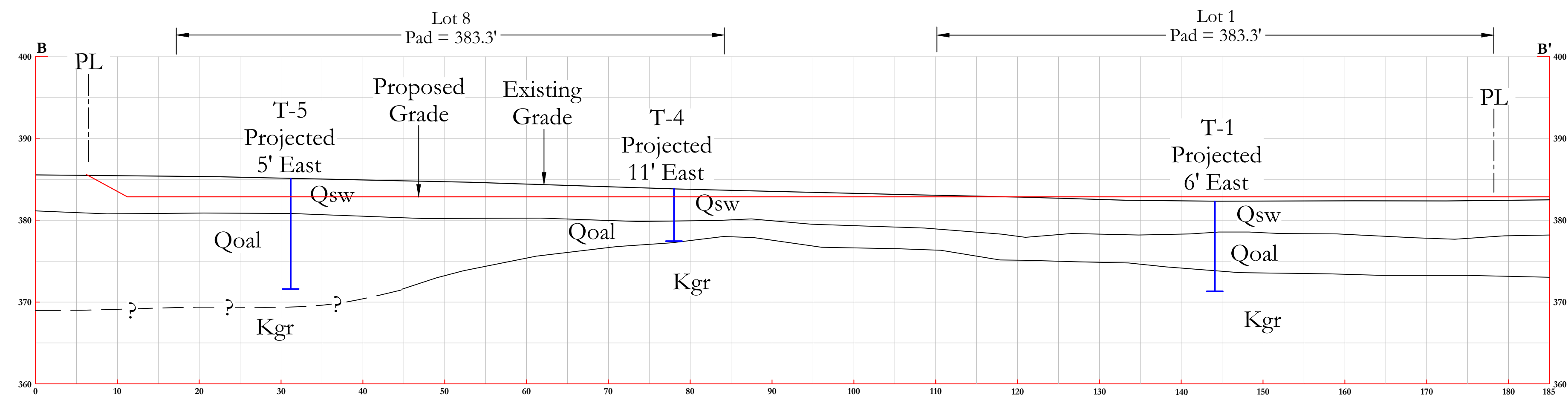
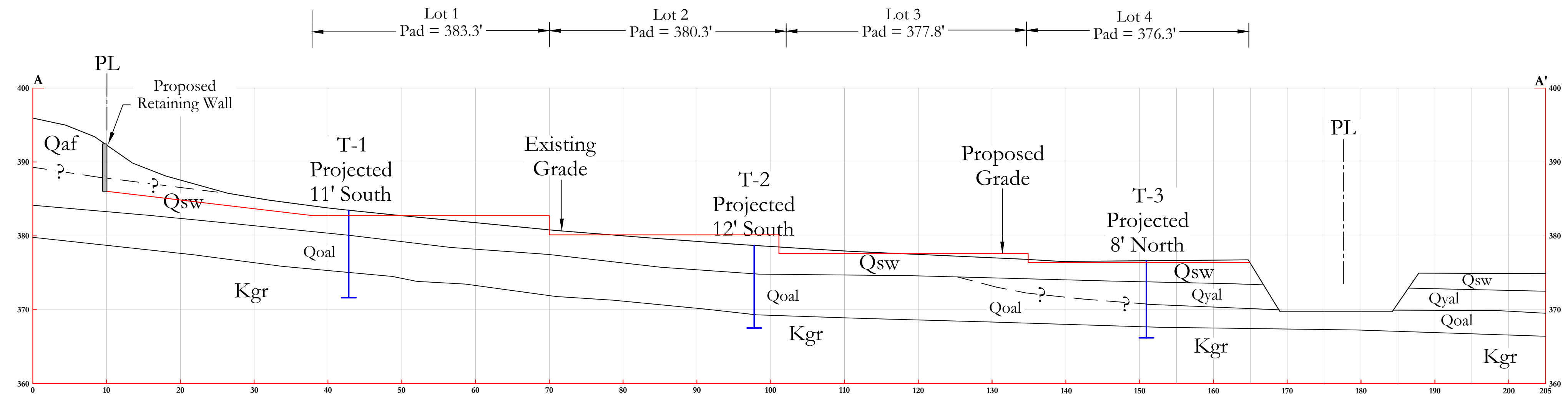
CWE LEGEND	
	T-7 Approximate Test Trench Location
$\frac{Qsw}{Qoal}$ Kgr	Slopeswash over Older Alluvium over Weathered Granitics
$\frac{Qaf}{Qsw}$ $\frac{Qoal}{Kgr}$	Artificial Fill over Slopeswash over Older Alluvium over Weathered Granitics
$\frac{Qsw}{Qyal}$ $\frac{Qoal}{Kgr}$	Slopeswash over Younger Alluvium over Older Alluvium over Weathered Granitics
	Approximate Geologic Contact (Queried where Inferred)
	Geologic Cross Section



SITE PLAN AND GEOTECHNICAL MAP

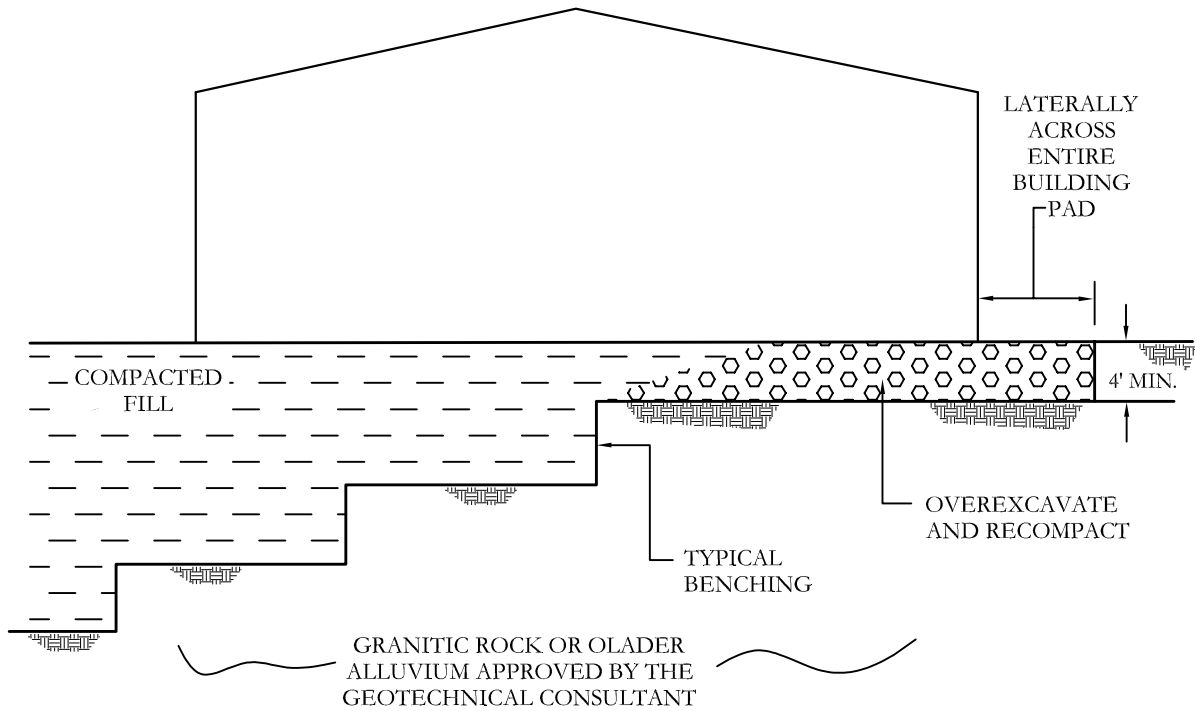
PROPOSED 8-LOT SUBDIVISION 8504 FANITA DRIVE SANTEE, CALIFORNIA			
DATE:	AUGUST 2022	JOB NO.:	2210452.03R
BY:	SD	PLATE NO.:	1





CWE LEGEND	
Qsw	Slopewash
Qyal	Younger Alluvium
Qoal	Older Alluvium
Kgr	Weathered Granitics

CUT-FILL TRANSITION LOT OVEREXCAVATION



NO SCALE

PAD UNDERCUT DETAIL

PROPOSED 8-LOT SUBDIVISION
8504 FANITA DRIVE
SANTEE, CALIFORNIA

DATE: AUGUST 2022

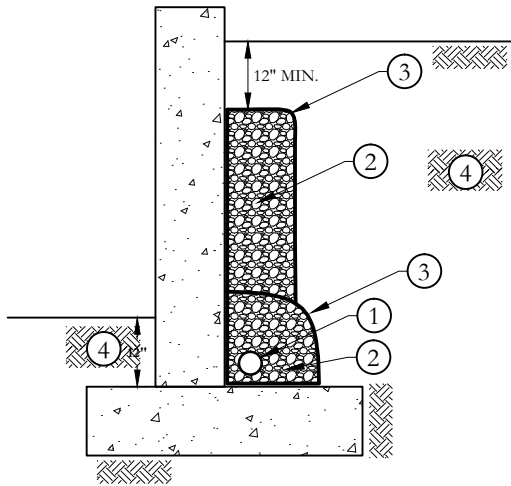
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BY: SD

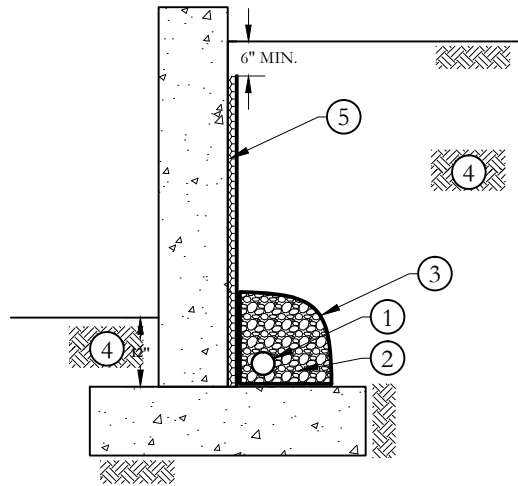
PLATE NO.: 3



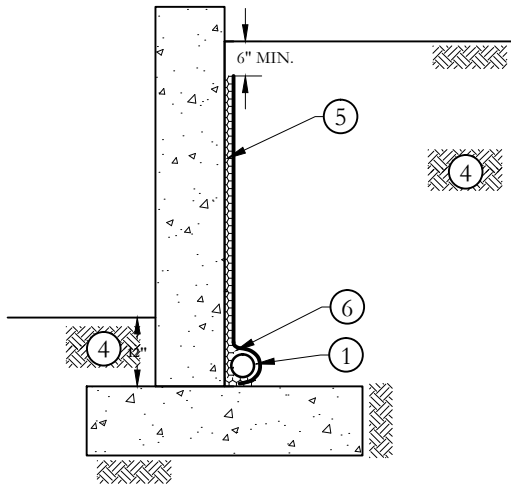
CHRISTIAN WHEELER
ENGINEERING



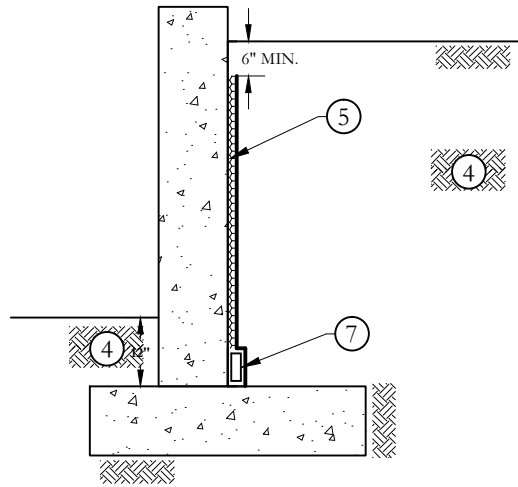
1 DETAIL



2 DETAIL



3 DETAIL



4 DETAIL

NOTES AND DETAILS

GENERAL NOTES:

- 1) THE NEED FOR WATERPROOFING SHOULD BE EVALUATED BY OTHERS.
- 2) WATERPROOFING TO BE DESIGNED BY OTHERS (CWE CAN PROVIDE A DESIGN IF REQUESTED).
- 3) EXTEND DRAIN TO SUITABLE DISCHARGE POINT PER CIVIL ENGINEER.
- 4) DO NOT CONNECT SURFACE DRAINS TO SUBDRAIN SYSTEM.

DETAILS:

- | | |
|---|---|
| <ul style="list-style-type: none"> ① 4-INCH PERFORATED PVC PIPE ON TOP OF FOOTING, HOLES POSITIONED DOWNWARD (SDR 35, SCHEDULE 40, OR EQUIVALENT). ② ¾ INCH OPEN-GRADED CRUSHED AGGREGATE. ③ GEOFABRIC WRAPPED COMPLETELY AROUND ROCK. ④ PROPERLY COMPACTED BACKFILL SOIL. ⑤ WALL DRAINAGE PANELS (MIRADRAIN OR EQUIVALENT) PLACED PER MANUFACTURER'S REC'S. | <ul style="list-style-type: none"> ⑥ UNDERLAY SUBDRAIN WITH AND CUT FABRIC BACK FROM DRAINAGE PANELS AND WRAP FABRIC AROUND PIPE. ⑦ COLLECTION DRAIN (TOTAL DRAIN OR EQUIVALENT) LOCATED AT BASE OF WALL DRAINAGE PANEL PER MANUFACTURER'S RECOMMENDATIONS. |
|---|---|

**CANTILEVER RETAINING WALL
DRAINAGE SYSTEMS**

**PROPOSED 8 LOT SUBDIVISION
8504 FANITA DRIVE
SANTEE, CALIFORNIA**

DATE: AUGUST 2022

JOB NO.: 2210452.03R

BY: SD

PLATE NO.: 4



**CHRISTIAN WHEELER
ENGINEERING**

Appendix A

Subsurface Explorations

LOG OF TEST TRENCH T-1

Sample Type and Laboratory Test Legend

Cal	Modified California Sampler	CK	Chunk
SPT	Standard Penetration Test	DR	Drive Ring
ST	Shelby Tube		
MD	Max Density	DS	Direct Shear
SO4	Soluble Sulfates	Con	Consolidation
SA	Sieve Analysis	EI	Expansion Index
HA	Hydrometer	R-Val	Resistance Value
SE	Sand Equivalent	Chl	Soluble Chlorides
PI	Plasticity Index	Res	pH & Resistivity
CP	Collapse Potential	SD	Sample Density

Date Logged: 8/25/21 Equipment: John Deere 310
 Logged By: DJF Auger Type: 24" Bucket
 Existing Elevation: 384' Drive Type: N/A
 Finish Elevation: 386' Depth to Water: N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	USCS SYMBOL	SUMMARY OF SUBSURFACE CONDITIONS (based on Unified Soil Classification System)	PENETRATION (blows per foot)	SAMPLE TYPE	BULK	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	RELATIVE COMPACTION (%)	LABORATORY TESTS
0			CH	Slopewash (Qsw): Dark grayish-brown, dry, soft, FAT CLAY with gravels. Expansion Index = 106 (High)							HA EI
1				Moist, stiff.		CK		14.6	114.8		MD PI SO4 Chl DS Res
2			CL	Older Alluvium (Qoa): Brown, moist, very stiff, SANDY CLAY with gravels and reddish iron staining in upper 18", highly weathered. Expansion Index = 122 (High)		CK		16.6	106.3		HA EI
3				Increase in sand content at depth.		CK					
4			SC	Light gray, moist, dense, very fine- to medium-grained, CLAYEY SAND, mottled.		CK					
5				GW-GM Light reddish-brown, very dense, well-graded GRAVELS with silt, basal contact, contact sloping east.							
6			SW-SM	Weathered Granitics (Kgr): Light gray, moist, very dense, well-graded SAND with silt.		CK					
7				Terminated at 11 feet. No groundwater or seepage encountered.							
8											
9											
10											
11											
12											
13											
14											
15											

Notes:

Symbol Legend

- Groundwater Level During Drilling
- Groundwater Level After Drilling
- Apparent Seepage
- No Sample Recovery
- Non-Representative Blow Count (rocks present)

PROPOSED 8-LOT SUBDIVISION
 8504 FANITA DRIVE
 SANTEE, CALIFORNIA

DATE:	AUGUST 2022	JOB NO.:	2210452.03R
BY:	SRD	APPENDIX:	A-1







CHRISTIAN WHEELER
 ENGINEERING

LOG OF TEST TRENCH T-2

Sample Type and Laboratory Test Legend






Cal	Modified California Sampler	CK	Chunk
SPT	Standard Penetration Test	DR	Drive Ring
ST	Shelby Tube		
MD	Max Density	DS	Direct Shear
SO4	Soluble Sulfates	Con	Consolidation
SA	Sieve Analysis	EI	Expansion Index
HA	Hydrometer	R-Val	Resistance Value
SE	Sand Equivalent	Cbl	Soluble Chlorides
PI	Plasticity Index	Res	pH & Resistivity
CP	Collapse Potential	SD	Sample Density

Date Logged: 8/25/21 Equipment: John Deere 310
 Logged By: DJF Auger Type: 24" Bucket
 Existing Elevation: 379' Drive Type: N/A
 Finish Elevation: 381' Depth to Water: N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	USCS SYMBOL	SUMMARY OF SUBSURFACE CONDITIONS (based on Unified Soil Classification System)	PENETRATION (blows per foot)	SAMPLE TYPE	BULK	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	RELATIVE COMPACTION (%)	LABORATORY TESTS
0			CH	Slopewash (Qsw): Dark gray, dry soft, FAT CLAY with gravels.							
1				Moist, medium stiff.							
2											
3											
4			GW-GM	Older Alluvium (Qoa): Brown, moist, medium dense to dense, well-graded GRAVELS with silt.							SA
5											MD
6											DS
7											
8				Reddish-brown, very dense.							
9											
10			SW-SM	Weathered Granitics (Kgr): Light gray, damp, very dense, very fine- to coarse-grained, well-graded SAND with silt.							
11				Terminated at 11 feet. No groundwater or seepage encountered.							
12											
13											
14											
15											

Notes:

Symbol Legend

-  Groundwater Level During Drilling
-  Groundwater Level After Drilling
-  Apparent Seepage
-  No Sample Recovery
-  Non-Representative Blow Count (rocks present)

PROPOSED 8-LOT SUBDIVISION
 8504 FANITA DRIVE
 SANTEE, CALIFORNIA

DATE:	AUGUST 2022	JOB NO.:	2210452.03R
BY:	SRD	APPENDIX:	A-2



CHRISTIAN WHEELER
 ENGINEERING

LOG OF TEST TRENCH T-3

Sample Type and Laboratory Test Legend

Cal	Modified California Sampler	CK	Chunk
SPT	Standard Penetration Test	DR	Drive Ring
ST	Shelby Tube		
MD	Max Density	DS	Direct Shear
SO4	Soluble Sulfates	Con	Consolidation
SA	Sieve Analysis	EI	Expansion Index
HA	Hydrometer	R-Val	Resistance Value
SE	Sand Equivalent	Cbl	Soluble Chlorides
PI	Plasticity Index	Res	pH & Resistivity
CP	Collapse Potential	SD	Sample Density

Date Logged: 8/25/21 Equipment: John Deere 310
 Logged By: DJF Auger Type: 24" Bucket
 Existing Elevation: 377' Drive Type: N/A
 Finish Elevation: 376.5' Depth to Water: N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	USCS SYMBOL	SUMMARY OF SUBSURFACE CONDITIONS (based on Unified Soil Classification System)	PENETRATION (blows per foot)	SAMPLE TYPE	BULK	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	RELATIVE COMPACTION (%)	LABORATORY TESTS
0			CH	Sloewash (Qsw): Dark grayish-brown, dry, soft, FAT CLAY with gravels.							
1				Medium stiff.							
2			SC	Grayish-brown to light brown, moist, loose, very fine- to medium-grained, CLAYEY SAND with gravels.		CK					
3			SM/ GM	Younger Alluvium (Qyal): Light brown to light grayish-brown, damp, loose, SILTY SAND with gravels/SILTY GRAVELS with friable sand beds ±6" thick.		CK					
4											
5											
6			GW- GM	Older Alluvium (Qoal): Brown, moist, medium dense to dense, well-graded GRAVELS with silt.							
7											
8											
9											
10			SW- SM	Weathered Granitics (Kgr): Light gray, damp, very dense, very fine- to coarse-grained, well-graded SAND with silt.							
11				Terminated at 10.5 feet. No groundwater or seepage encountered.							
12											
13											
14											
15											

Notes:

Symbol Legend

- Groundwater Level During Drilling
- Groundwater Level After Drilling
- Apparent Seepage
- * No Sample Recovery
- ** Non-Representative Blow Count (rocks present)

PROPOSED 8-LOT SUBDIVISION
 8504 FANITA DRIVE
 SANTEE, CALIFORNIA

DATE:	AUGUST 2022	JOB NO.:	2210452.03R
BY:	SRD	APPENDIX:	A-3



CHRISTIAN WHEELER
 ENGINEERING

LOG OF TEST TRENCH T-4

Sample Type and Laboratory Test Legend

Cal	Modified California Sampler	CK	Chunk
SPT	Standard Penetration Test	DR	Drive Ring
ST	Shelby Tube		
MD	Max Density	DS	Direct Shear
SO4	Soluble Sulfates	Con	Consolidation
SA	Sieve Analysis	EI	Expansion Index
HA	Hydrometer	R-Val	Resistance Value
SE	Sand Equivalent	Cbl	Soluble Chlorides
PI	Plasticity Index	Res	pH & Resistivity
CP	Collapse Potential	SD	Sample Density

Date Logged: 8/25/21 Equipment: John Deere 310
 Logged By: DJF Auger Type: 24" Bucket
 Existing Elevation: 386' Drive Type: N/A
 Finish Elevation: 386' Depth to Water: N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	USCS SYMBOL	SUMMARY OF SUBSURFACE CONDITIONS (based on Unified Soil Classification System)	PENETRATION (blows per foot)	SAMPLE TYPE	BULK	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	RELATIVE COMPACTION (%)	LABORATORY TESTS
0			CH	Slopewash (Qsw): Dark grayish-brown, dry, soft, FAT CLAY with gravels.							
1				Moist, medium stiff.							
2							CK				
3				Gravels at contact.							
4			CL	Older Alluvium (Qoa1): Reddish-brown, moist, stiff, SANDY CLAY.							
5						CK		14.9	106.8		
6			SW-SM	Weathered Granitics (Kgr): Light reddish-brown to light gray, moist, very dense, very fine- to coarse-grained, well-graded SAND with silt.		CK		10.0	120.5		
7				Terminated at 7 feet. No groundwater or seepage encountered.							
8											
9											
10											
11											
12											
13											
14											
15											

Notes:

Symbol Legend

- Groundwater Level During Drilling
- Groundwater Level After Drilling
- Apparent Seepage
- * No Sample Recovery
- ** Non-Representative Blow Count (rocks present)

PROPOSED 8-LOT SUBDIVISION
 8504 FANITA DRIVE
 SANTEE, CALIFORNIA

DATE:	AUGUST 2022	JOB NO.:	2210452.03R
BY:	SRD	APPENDIX:	A-4



CHRISTIAN WHEELER
 ENGINEERING

LOG OF TEST TRENCH T-5

Sample Type and Laboratory Test Legend

Cal	Modified California Sampler	CK	Chunk
SPT	Standard Penetration Test	DR	Drive Ring
ST	Shelby Tube		
MD	Max Density	DS	Direct Shear
SO4	Soluble Sulfates	Con	Consolidation
SA	Sieve Analysis	EI	Expansion Index
HA	Hydrometer	R-Val	Resistance Value
SE	Sand Equivalent	Cbl	Soluble Chlorides
PI	Plasticity Index	Res	pH & Resistivity
CP	Collapse Potential	SD	Sample Density

Date Logged: 8/25/21 Equipment: John Deere 310
 Logged By: DJF Auger Type: 24" Bucket
 Existing Elevation: 386' Drive Type: N/A
 Finish Elevation: 383' Depth to Water: N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	USCS SYMBOL	SUMMARY OF SUBSURFACE CONDITIONS (based on Unified Soil Classification System)	PENETRATION (blows per foot)	SAMPLE TYPE	BULK	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	RELATIVE COMPACTION (%)	LABORATORY TESTS
0			CH	Slopewash (Qsw): Dark grayish-brown, dry, soft, FAT CLAY with gravels, upper 12" disturbed with trace construction debris.							
1											
2					Moist, medium stiff.						
3						CK					
4											
5			CL	Older Alluvium (Qoal): Greenish-gray, very moist, stiff, SILTY CLAY with trace cobbles.				23.4	93.4		
6							CK				
7					Light brown to light gray, very stiff, SANDY CLAY, mottled.						
8				Increase in sand content at depth.		CK		17.0	102.3		
9											
10			SC	Light brown, moist, medium dense, very fine- to medium-grained, CLAYEY SAND.							
11											
12			GW-GM	Reddish-brown, moist, very dense, well-graded GRAVELS with silt.							
13											
14				Terminated at 13.5 feet. No groundwater or seepage encountered.							
15											

Notes:

Symbol Legend

- Groundwater Level During Drilling
- Groundwater Level After Drilling
- Apparent Seepage
- No Sample Recovery
- Non-Representative Blow Count (rocks present)

PROPOSED 8-LOT SUBDIVISION
 8504 FANITA DRIVE
 SANTEE, CALIFORNIA

DATE:	AUGUST 2022	JOB NO.:	2210452.03R
BY:	SRD	APPENDIX:	A-5



CHRISTIAN WHEELER
 ENGINEERING

LOG OF TEST TRENCH T-6

Sample Type and Laboratory Test Legend

Cal	Modified California Sampler	CK	Chunk
SPT	Standard Penetration Test	DR	Drive Ring
ST	Shelby Tube		
MD	Max Density	DS	Direct Shear
SO4	Soluble Sulfates	Con	Consolidation
SA	Sieve Analysis	EI	Expansion Index
HA	Hydrometer	R-Val	Resistance Value
SE	Sand Equivalent	Cbl	Soluble Chlorides
PI	Plasticity Index	Res	pH & Resistivity
CP	Collapse Potential	SD	Sample Density

Date Logged: 8/25/21 Equipment: John Deere 310
 Logged By: DJF Auger Type: 24" Bucket
 Existing Elevation: 376' Drive Type: N/A
 Finish Elevation: 376.5' Depth to Water: N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	USCS SYMBOL	SUMMARY OF SUBSURFACE CONDITIONS (based on Unified Soil Classification System)	PENETRATION (blows per foot)	SAMPLE TYPE	BULK	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	RELATIVE COMPACTION (%)	LABORATORY TESTS
0			C-H	Slopewash (Qsw): Dark grayish-brown, dry, soft, FAT CLAY with gravels.							
1				Moist, stiff.							
2							CK				
3			GW-GM	Older Alluvium (Qoa): Reddish-brown, moist, dense, well-graded GRAVELS with silt.							
4											
5											
6											
7			SW-SM	Weathered Granitics (Kgr): Light gray to reddish-brown, moist, very dense, very fine- to coarse-grained, well-graded SAND with silt.							
8											
9											
10											
11				Terminated at 11 feet. No groundwater or seepage encountered.							
12											
13											
14											
15											

Notes:

Symbol Legend

- Groundwater Level During Drilling
- Groundwater Level After Drilling
- Apparent Seepage
- * No Sample Recovery
- ** Non-Representative Blow Count (rocks present)

PROPOSED 8-LOT SUBDIVISION
 8504 FANITA DRIVE
 SANTEE, CALIFORNIA

DATE:	AUGUST 2022	JOB NO.:	2210452.03R
BY:	SRD	APPENDIX:	A-6



CHRISTIAN WHEELER
 ENGINEERING

LOG OF TEST TRENCH T-7

Sample Type and Laboratory Test Legend

Cal	Modified California Sampler	CK	Chunk
SPT	Standard Penetration Test	DR	Drive Ring
ST	Shelby Tube		
MD	Max Density	DS	Direct Shear
SO4	Soluble Sulfates	Con	Consolidation
SA	Sieve Analysis	EI	Expansion Index
HA	Hydrometer	R-Val	Resistance Value
SE	Sand Equivalent	Cbl	Soluble Chlorides
PI	Plasticity Index	Res	pH & Resistivity
CP	Collapse Potential	SD	Sample Density

Date Logged: 8/25/21 Equipment: John Deere 310
 Logged By: DJF Auger Type: 24" Bucket
 Existing Elevation: 377' Drive Type: N/A
 Finish Elevation: 378' Depth to Water: N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	USCS SYMBOL	SUMMARY OF SUBSURFACE CONDITIONS (based on Unified Soil Classification System)	PENETRATION (blows per foot)	SAMPLE TYPE	BULK	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	RELATIVE COMPACTION (%)	LABORATORY TESTS
0			CI	Artificial Fill (Qaf): Dark grayish-brown, dry, soft, FAT CLAY with construction debris (pipe, glass, concrete), fill associated with demo of previous structure.							
1											
2											
3			CH	Slopewash (Qsw): Dark grayish-brown, damp, stiff, FAT CLAY with gravels and white precipitate deposits.							
4											
5			GW-GM	Older Alluvium (Qoa): Light reddish-brown, moist, very dense, well-graded GRAVELS with silt.		CK		11.8	114.4		
6											
7											
8											
9											
10			SW-SM	Weathered Granitics (Kgr): Light gray to reddish-brown, moist, very dense, very fine- to coarse-grained, well-graded SAND with silt.							
11											
12				Terminated at 11 feet. No groundwater or seepage encountered.							
13											
14											
15											

Notes:

Symbol Legend

- Groundwater Level During Drilling
- Groundwater Level After Drilling
- Apparent Seepage
- No Sample Recovery
- Non-Representative Blow Count (rocks present)

PROPOSED 8-LOT SUBDIVISION
 8504 FANITA DRIVE
 SANTEE, CALIFORNIA

DATE:	AUGUST 2022	JOB NO.:	2210452.03R
BY:	SRD	APPENDIX:	A-7



CHRISTIAN WHEELER
 ENGINEERING

LOG OF TEST BORING B-1

Sample Type and Laboratory Test Legend

Cal	Modified California Sampler	CK	Chunk
SPT	Standard Penetration Test	DR	Drive Ring
ST	Shelby Tube		
MD	Max Density	DS	Direct Shear
SO4	Soluble Sulfates	Con	Consolidation
SA	Sieve Analysis	EI	Expansion Index
HA	Hydrometer	R-Val	Resistance Value
SE	Sand Equivalent	Cbl	Soluble Chlorides
PI	Plasticity Index	Res	pH & Resistivity
CP	Collapse Potential	SD	Sample Density

Date Logged: 3/15/22 Equipment: IR A-300
 Logged By: DRR Auger Type: 8' Hollow Stem
 Existing Elevation: 375' Drive Type: 140lb @ 30" drop
 Finish Elevation: 376' Depth to Water: N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	USCS SYMBOL	SUMMARY OF SUBSURFACE CONDITIONS (based on Unified Soil Classification System)	PENETRATION (blows per foot)	SAMPLE TYPE	BULK	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	RELATIVE COMPACTION (%)	LABORATORY TESTS
0			CH	<u>Slopewash (Qsw)</u> : Medium brown to gray, damp to moist, soft, FAT CLAY.							
1											
2											
3											
4			GW-GM	<u>Older Alluvium (Qoa)</u> : Medium brown, moist, dense, well-graded GRAVEL.							
5											
6											
7											
8			SW-SM	<u>Weathered Granitics (Kgr)</u> : Light gray, moist, very dense, well-graded SAND with silt.							
9											
10											
11											
12											
13											
14											
15				Boring terminated at 15 feet. No groundwater or seepage encountered.							

Notes:

Symbol Legend

- Groundwater Level During Drilling
- Groundwater Level After Drilling
- Apparent Seepage
- * No Sample Recovery
- ** Non-Representative Blow Count (rocks present)

PROPOSED 8-LOT SUBDIVISION
 8504 FANITA DRIVE
 SANTEE, CALIFORNIA

DATE:	AUGUST 2022	JOB NO.:	2210452.03R
BY:	SD	APPENDIX:	A-8



CHRISTIAN WHEELER
 ENGINEERING

LOG OF PERCOLATION TEST - PT-1

Sample Type and Laboratory Test Legend

Cal	Modified California Sampler	CK	Chunk
SPT	Standard Penetration Test	DR	Drive Ring
ST	Shelby Tube		
MD	Max Density	DS	Direct Shear
SO4	Soluble Sulfates	Con	Consolidation
SA	Sieve Analysis	EI	Expansion Index
HA	Hydrometer	R-Val	Resistance Value
SE	Sand Equivalent	Cbl	Soluble Chlorides
PI	Plasticity Index	Res	pH & Resistivity
CP	Collapse Potential	SD	Sample Density

Date Logged: 3/15/22 Equipment: IR A-300
 Logged By: DRR Auger Type: 8' Hollow Stem
 Existing Elevation: 375' Drive Type: 140lb @ 30" drop
 Finish Elevation: 376' Depth to Water: N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	USCS SYMBOL	SUMMARY OF SUBSURFACE CONDITIONS (based on Unified Soil Classification System)	PENETRATION (blows per foot)	SAMPLE TYPE	BULK	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	RELATIVE COMPACTION (%)	LABORATORY TESTS
0			CH	Slopewash (Qsw): Medium brown to grayish-brown, damp, soft to medium stiff, FAT CLAY.							
1											
2											
3				Boring terminated at 3 feet. No groundwater or seepage encountered.							
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

Notes:

Symbol Legend

- Groundwater Level During Drilling
- Groundwater Level After Drilling
- Apparent Seepage
- No Sample Recovery
- Non-Representative Blow Count (rocks present)

PROPOSED 8-LOT SUBDIVISION
 8504 FANITA DRIVE
 SANTEE, CALIFORNIA

DATE:	AUGUST 2022	JOB NO.:	2210452.03R
BY:	SD	APPENDIX:	A-9




CHRISTIAN WHEELER
 ENGINEERING

LOG OF PERCOLATION TEST - PT-2

Sample Type and Laboratory Test Legend






Cal	Modified California Sampler	CK	Chunk
SPT	Standard Penetration Test	DR	Drive Ring
ST	Shelby Tube		
MD	Max Density	DS	Direct Shear
SO4	Soluble Sulfates	Con	Consolidation
SA	Sieve Analysis	EI	Expansion Index
HA	Hydrometer	R-Val	Resistance Value
SE	Sand Equivalent	Cbl	Soluble Chlorides
PI	Plasticity Index	Res	pH & Resistivity
CP	Collapse Potential	SD	Sample Density

Date Logged: 3/15/22 Equipment: IR A-300
 Logged By: DRR Auger Type: 8' Hollow Stem
 Existing Elevation: 375' Drive Type: 140lb @ 30" drop
 Finish Elevation: 376' Depth to Water: N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	USCS SYMBOL	SUMMARY OF SUBSURFACE CONDITIONS (based on Unified Soil Classification System)	PENETRATION (blows per foot)	SAMPLE TYPE	BULK	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	RELATIVE COMPACTION (%)	LABORATORY TESTS
0			CH	Slopewash (Qsw): Medium brown to grayish-brown, damp, soft to medium stiff, FAT CLAY.							
1											
2											
3				Boring terminated at 3 feet. No groundwater or seepage encountered.							
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

Notes:

Symbol Legend

-  Groundwater Level During Drilling
-  Groundwater Level After Drilling
-  Apparent Seepage
-  No Sample Recovery
-  Non-Representative Blow Count (rocks present)

PROPOSED 8-LOT SUBDIVISION
 8504 FANITA DRIVE
 SANTEE, CALIFORNIA

DATE:	AUGUST 2022	JOB NO.:	2210452.03R
BY:	SD	APPENDIX:	A-10



CHRISTIAN WHEELER
 ENGINEERING

LOG OF PERCOLATION TEST PT-3

Sample Type and Laboratory Test Legend






Cal	Modified California Sampler	CK	Chunk
SPT	Standard Penetration Test	DR	Drive Ring
ST	Shelby Tube		
MD	Max Density	DS	Direct Shear
SO4	Soluble Sulfates	Con	Consolidation
SA	Sieve Analysis	EI	Expansion Index
HA	Hydrometer	R-Val	Resistance Value
SE	Sand Equivalent	Cbl	Soluble Chlorides
PI	Plasticity Index	Res	pH & Resistivity
CP	Collapse Potential	SD	Sample Density

Date Logged: 3/15/22 Equipment: IR A-300
 Logged By: DRR Auger Type: 8' Hollow Stem
 Existing Elevation: 381' Drive Type: 140lb @ 30" drop
 Finish Elevation: 381' Depth to Water: N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	USCS SYMBOL	SUMMARY OF SUBSURFACE CONDITIONS (based on Unified Soil Classification System)	PENETRATION (blows per foot)	SAMPLE TYPE	BULK	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	RELATIVE COMPACTION (%)	LABORATORY TESTS
0			CH	Slopewash (Qsw): Medium brown to grayish-brown, damp, soft to medium stiff, FAT CLAY.							
1											
2											
3				Boring terminated at 3 feet. No groundwater or seepage encountered.							
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

Notes:

Symbol Legend

-  Groundwater Level During Drilling
-  Groundwater Level After Drilling
-  Apparent Seepage
-  No Sample Recovery
-  Non-Representative Blow Count (rocks present)

PROPOSED 8-LOT SUBDIVISION
 8504 FANITA DRIVE
 SANTEE, CALIFORNIA

DATE:	AUGUST 2022	JOB NO.:	2210452.03R
BY:	SD	APPENDIX:	A-11



CHRISTIAN WHEELER
 ENGINEERING

LOG OF PERCOLATION TEST PT-4

Sample Type and Laboratory Test Legend

Cal	Modified California Sampler	CK	Chunk
SPT	Standard Penetration Test	DR	Drive Ring
ST	Shelby Tube		
MD	Max Density	DS	Direct Shear
SO4	Soluble Sulfates	Con	Consolidation
SA	Sieve Analysis	EI	Expansion Index
HA	Hydrometer	R-Val	Resistance Value
SE	Sand Equivalent	Cbl	Soluble Chlorides
PI	Plasticity Index	Res	pH & Resistivity
CP	Collapse Potential	SD	Sample Density

Date Logged: 3/15/22 Equipment: IR A-300
 Logged By: DRR Auger Type: 8' Hollow Stem
 Existing Elevation: 382' Drive Type: 140lb @ 30" drop
 Finish Elevation: 382' Depth to Water: N/A

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	USCS SYMBOL	SUMMARY OF SUBSURFACE CONDITIONS (based on Unified Soil Classification System)	PENETRATION (blows per foot)	SAMPLE TYPE	BULK	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	RELATIVE COMPACTION (%)	LABORATORY TESTS
0			CH	Slopewash (Qsw): Medium brown to grayish-brown, damp, soft to medium stiff, FAT CLAY.							
1											
2											
3				Boring terminated at 3 feet. No groundwater or seepage encountered.							
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

Notes:

Symbol Legend

- Groundwater Level During Drilling
- Groundwater Level After Drilling
- Apparent Seepage
- No Sample Recovery
- Non-Representative Blow Count (rocks present)

PROPOSED 8-LOT SUBDIVISION
 8504 FANITA DRIVE
 SANTEE, CALIFORNIA

DATE:	AUGUST 2022	JOB NO.:	2210452.03R
BY:	SD	APPENDIX:	A-12



CHRISTIAN WHEELER
 ENGINEERING

Appendix B

Laboratory Test Results

Laboratory tests were performed in accordance with the generally accepted American Society for Testing and Materials (ASTM) test methods or suggested procedures. Brief descriptions of the tests performed are presented below:

- a) **CLASSIFICATION:** Field classifications were verified in the laboratory by visual examination. The final soil classifications are in accordance with the Unified Soil Classification System and are presented on the exploration logs in Appendix A.
- b) **MOISTURE-DENSITY: MOISTURE-DENSITY:** In-place moisture contents and dry densities were determined for a selected soil sample in accordance with ASTM D 1188. The results are summarized in the subsurface exploration logs presented in Appendix A.
- c) **MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT TEST:** The maximum dry density and optimum moisture content of selected soil samples were determined in the laboratory in accordance with ASTM D 1557, Method A.
- d) **DIRECT SHEAR:** a direct shear test was performed on selected samples of the on-site soils in accordance with ASTM D3080.
- e) **EXPANSION INDEX TEST:** Expansion index tests were performed on selected remolded soil samples in accordance with ASTM D 4829.
- f) **GRAIN SIZE DISTRIBUTION:** The grain size distribution of selected samples was determined in accordance with ASTM C136 and/or ASTM D422.
- g) **SOLUBLE SULFATE CONTENT:** The soluble sulfate content of a selected sample was determined in accordance with California Test Methods 417.
- h) **SOLUBLE CHLORIDE CONTENT:** The soluble chloride content of a selected sample was determined in accordance with California Test Methods 422.
- i) **pH and RESISTIVITY:** The pH and Resistivity of a selected sample was determined in accordance with California Test Methods 643.

LABORATORY TEST RESULTS

PROPOSED 8 LOT SUBDIVISION

8504 FANITA DRIVE

SANTEE, CALIFORNIA

MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT (ASTM D1557)

Sample Location	Trench T-1 @ 0-4'	Trench T-2 @ 4'-7½'
Sample Description	Dark Grayish- Brown Fat Clay with Gravels (CH)	Brown, Well Graded Gravel with Silt (GW-GM)
Maximum Density	114.8 pcf	120.8 pcf
Optimum Moisture	14.6 %	10.7 %

DIRECT SHEAR (ASTM D3080)

Sample Location	Trench T-1 @ 0-4'	Trench T-2 @ 4'-7½'
Sample Type	Remolded to 90 %	Undisturbed
Friction Angle	18°	30°
Cohesion	400 psf	300 psf

EXPANSION INDEX TESTS (ASTM D4829)

Sample Location	Trench T-1 @ 0-4'	Trench T-1 @ 4'-7'
Initial Moisture:	15.5 %	12.9 %
Initial Dry Density	93.6 pcf	99.5 pcf
Final Moisture:	35.1 %	30.7 %
Expansion Index:	106 (High)	122 (High)

GRAIN SIZE DISTRIBUTION (ASTM D422)

Sample Location	Trench T-1 @ 0-4'	Trench T-1 @ 4'-7'	Trench T-2 @ 4'-7½'
<i>Sieve Size</i>	Percent Passing	Percent Passing	Percent Passing #4
#4	100	100	30
#8	98	97	26
#16	93	88	23
#30	88	78	18
#50	81	70	11
#100	74	62	8
#200	69	54	6
0.05 mm	66	52	
0.005 mm	54	40	
0.001 mm	50	37	

LABORATORY TEST RESULTS (CONT.)

ATTERBERG LIMITS (ASTM D424)

Sample Location	Trench T-1 @ 0-4'
Liquid Limit	62
Plastic Limit	25
Plasticity Index	37 (CH)

CORROSIVITY TESTS

Sample No.	CALTEST 643		CALTEST 417	CALTEST 422
	Resistivity (ohm-cm)	pH	Sulfate Content (% SO ₄)	Chloride Content (%)
T1 @ 0-4'	430	8.2	0.022	0.005

CORROSIVITY STANDARDS

Building Code Requirements for Structural Concrete (ACI 318-11)

Table 4.2.1 Exposure Categories and Classes & Table 4.3.1 Requirements for Concrete by Exposure Class

Severity	Water-Soluble Sulfate in Soil Percentage by Weight	Cementitious Materials- Types (ASTM C150)	Maximum Water- cementitious Material Ratio (w/cm)	Minimum F'c, psi
Not Applicable	SO ₄ < 0.10	No Type Restriction	N/A	2500
Moderate	0.10 ≤ SO ₄ < 0.20	II	0.50	4000
Severe	0.20 ≤ SO ₄ ≤ 2.00	V	0.45	4500
Very Severe	SO ₄ > 2.00	V+ Pozzolan or Slag	0.45	4500

* See ACI 318-11 for exceptions and additional requirements

California Department of Transportation (DOT), Division of Engineering Services Material Engineering and Testing, Corrosion and Structural Concrete, Field Investigation Branch Corrosion Guidelines, Version 2.1, January 2015

Corrosive Environment	Resistivity (ohm-cm)	pH	Soluble Sulfate (%)	Chloride (%)
	<1000 *	<5.5	>0.2	>0.05

*Soil and water that have a minimum resistivity equal to or less than, 1,000 ohm-cm are required to be tested by a certified lab for chlorides and sulfates per CT417 and CT422.

For structural elements, the DOT considers a site to be corrosive if one or more of the conditions (pH, sulfate concentration, or chloride concentration) exists for the soil and/or water samples taken at the site.



PROPOSED 8 LOT SUBDIVISION 8504 FANITA DRIVE, SANTEE, CALIFORNIA

BY: DBA

DATE: August 2022

REPORT NO.:2210452.03R

Plate No. B-4

Appendix C

References

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Appendix D

Recommended Grading Specifications – General Provisions

RECOMMENDED GRADING SPECIFICATIONS - GENERAL PROVISIONS

PROPOSED 8 LOT SUBDIVISION

8504 FANITA DRIVE

SANTEE, CALIFORNIA

GENERAL INTENT

The intent of these specifications is to establish procedures for clearing, compacting natural ground, preparing areas to be filled, and placing and compacting fill soils to the lines and grades shown on the accepted plans. The recommendations contained in the preliminary geotechnical investigation report and/or the attached Special Provisions are a part of the Recommended Grading Specifications and shall supersede the provisions contained hereinafter in the case of conflict. These specifications shall only be used in conjunction with the geotechnical report for which they are a part. No deviation from these specifications will be allowed, except where specified in the geotechnical report or in other written communication signed by the Geotechnical Engineer.

OBSERVATION AND TESTING

Christian Wheeler Engineering shall be retained as the Geotechnical Engineer to observe and test the earthwork in accordance with these specifications. It will be necessary that the Geotechnical Engineer or his representative provide adequate observation so that he may provide his opinion as to whether or not the work was accomplished as specified. It shall be the responsibility of the contractor to assist the Geotechnical Engineer and to keep him apprised of work schedules, changes and new information and data so that he may provide these opinions. In the event that any unusual conditions not covered by the special provisions or preliminary geotechnical report are encountered during the grading operations, the Geotechnical Engineer shall be contacted for further recommendations.

If, in the opinion of the Geotechnical Engineer, substandard conditions are encountered, such as questionable or unsuitable soil, unacceptable moisture content, inadequate compaction, adverse weather, etc., construction should be stopped until the conditions are remedied or corrected or he shall recommend rejection of this work.

Tests used to determine the degree of compaction should be performed in accordance with the following American Society for Testing and Materials test methods:

Maximum Density & Optimum Moisture Content - ASTM D1557

Density of Soil In-Place - ASTM D1556 or ASTM D6938

All densities shall be expressed in terms of Relative Compaction as determined by the foregoing ASTM testing procedures.

PREPARATION OF AREAS TO RECEIVE FILL

All vegetation, brush and debris derived from clearing operations shall be removed, and legally disposed of. All areas disturbed by site grading should be left in a neat and finished appearance, free from unsightly debris.

After clearing or benching the natural ground, the areas to be filled shall be scarified to a depth of 6 inches, brought to the proper moisture content, compacted and tested for the specified minimum degree of compaction. All loose soils in excess of 6 inches thick should be removed to firm natural ground which is defined as natural soil which possesses an in-situ density of at least 90 percent of its maximum dry density.

When the slope of the natural ground receiving fill exceeds 20 percent (5 horizontal units to 1 vertical unit), the original ground shall be stepped or benched. Benches shall be cut to a firm competent formational soil. The lower bench shall be at least 10 feet wide or 1-1/2 times the equipment width, whichever is greater, and shall be sloped back into the hillside at a gradient of not less than two (2) percent. All other benches should be at least 6 feet wide. The horizontal portion of each bench shall be compacted prior to receiving fill as specified herein for compacted natural ground. Ground slopes flatter than 20 percent shall be benched when considered necessary by the Geotechnical Engineer.

Any abandoned buried structures encountered during grading operations must be totally removed. All underground utilities to be abandoned beneath any proposed structure should be removed from within 10 feet of the structure and properly capped off. The resulting depressions from the above-described procedure should be backfilled with acceptable soil that is compacted to the requirements of the Geotechnical Engineer. This includes, but is not limited to, septic tanks, fuel tanks, sewer lines or leach lines, storm drains and water lines. Any buried structures or utilities not to be abandoned should be brought to the attention of the Geotechnical Engineer so that he may determine if any special recommendation will be necessary.

All water wells which will be abandoned should be backfilled and capped in accordance to the requirements set forth by the Geotechnical Engineer. The top of the cap should be at least 4 feet below finish grade or 3

feet below the bottom of footing whichever is greater. The type of cap will depend on the diameter of the well and should be determined by the Geotechnical Engineer and/or a qualified Structural Engineer.

FILL MATERIAL

Materials to be placed in the fill shall be approved by the Geotechnical Engineer and shall be free of vegetable matter and other deleterious substances. Granular soil shall contain sufficient fine material to fill the voids. The definition and disposition of oversized rocks and expansive or detrimental soils are covered in the geotechnical report or Special Provisions. Expansive soils, soils of poor gradation, or soils with low strength characteristics may be thoroughly mixed with other soils to provide satisfactory fill material, but only with the explicit consent of the Geotechnical Engineer. Any import material shall be approved by the Geotechnical Engineer before being brought to the site.

PLACING AND COMPACTION OF FILL

Approved fill material shall be placed in areas prepared to receive fill in layers not to exceed 6 inches in compacted thickness. Each layer shall have a uniform moisture content in the range that will allow the compaction effort to be efficiently applied to achieve the specified degree of compaction. Each layer shall be uniformly compacted to the specified minimum degree of compaction with equipment of adequate size to economically compact the layer. Compaction equipment should either be specifically designed for soil compaction or of proven reliability. The minimum degree of compaction to be achieved is specified in either the Special Provisions or the recommendations contained in the preliminary geotechnical investigation report. When the structural fill material includes rocks, no rocks will be allowed to nest and all voids must be carefully filled with soil such that the minimum degree of compaction recommended in the Special Provisions is achieved. The maximum size and spacing of rock permitted in structural fills and in non-structural fills is discussed in the geotechnical report, when applicable.

Field observation and compaction tests to estimate the degree of compaction of the fill will be taken by the Geotechnical Engineer or his representative. The location and frequency of the tests shall be at the Geotechnical Engineer's discretion. When the compaction test indicates that a particular layer is at less than the required degree of compaction, the layer shall be reworked to the satisfaction of the Geotechnical Engineer and until the desired relative compaction has been obtained.

Fill slopes shall be compacted by means of sheepfoot rollers or other suitable equipment. Compaction by sheepfoot roller shall be at vertical intervals of not greater than four feet. In addition, fill slopes at a ratio of

two horizontal to one vertical or flatter, should be trackrolled. Steeper fill slopes shall be over-built and cut-back to finish contours after the slope has been constructed. Slope compaction operations shall result in all fill material six or more inches inward from the finished face of the slope having a relative compaction of at least 90 percent of maximum dry density or the degree of compaction specified in the Special Provisions section of this specification. The compaction operation on the slopes shall be continued until the Geotechnical Engineer is of the opinion that the slopes will be surficially stable.

Density tests in the slopes will be made by the Geotechnical Engineer during construction of the slopes to determine if the required compaction is being achieved. Where failing tests occur or other field problems arise, the Contractor will be notified that day of such conditions by written communication from the Geotechnical Engineer or his representative in the form of a daily field report.

If the method of achieving the required slope compaction selected by the Contractor fails to produce the necessary results, the Contractor shall rework or rebuild such slopes until the required degree of compaction is obtained, at no cost to the Owner or Geotechnical Engineer.

CUT SLOPES

The Engineering Geologist shall inspect cut slopes excavated in rock or lithified formational material during the grading operations at intervals determined at his discretion. If any conditions not anticipated in the preliminary report such as perched water, seepage, lenticular or confined strata of a potentially adverse nature, unfavorably inclined bedding, joints or fault planes are encountered during grading, these conditions shall be analyzed by the Engineering Geologist and Geotechnical Engineer to determine if mitigating measures are necessary.

Unless otherwise specified in the geotechnical report, no cut slopes shall be excavated higher or steeper than that allowed by the ordinances of the controlling governmental agency.

ENGINEERING OBSERVATION

Field observation by the Geotechnical Engineer or his representative shall be made during the filling and compaction operations so that he can express his opinion regarding the conformance of the grading with acceptable standards of practice. Neither the presence of the Geotechnical Engineer or his representative or the observation and testing shall release the Grading Contractor from his duty to compact all fill material to the specified degree of compaction.

SEASON LIMITS

Fill shall not be placed during unfavorable weather conditions. When work is interrupted by heavy rain, filling operations shall not be resumed until the proper moisture content and density of the fill materials can be achieved. Damaged site conditions resulting from weather or acts of God shall be repaired before acceptance of work.

RECOMMENDED GRADING SPECIFICATIONS - SPECIAL PROVISIONS

RELATIVE COMPACTION: The minimum degree of compaction to be obtained in compacted natural ground, compacted fill, and compacted backfill shall be at least 90 percent. For street and parking lot subgrade, the upper six inches should be compacted to at least 95 percent relative compaction.

EXPANSIVE SOILS: Detrimentially expansive soil is defined as clayey soil which has an expansion index of 50 or greater when tested in accordance with the Uniform Building Code Standard 29-2.

OVERSIZED MATERIAL: Oversized fill material is generally defined herein as rocks or lumps of soil over 6 inches in diameter. Oversized materials should not be placed in fill unless recommendations of placement of such material are provided by the Geotechnical Engineer. At least 40 percent of the fill soils shall pass through a No. 4 U.S. Standard Sieve.

TRANSITION LOTS: Where transitions between cut and fill occur within the proposed building pad, the cut portion should be undercut a minimum of one foot below the base of the proposed footings and recompacted as structural backfill. In certain cases that would be addressed in the geotechnical report, special footing reinforcement or a combination of special footing reinforcement and undercutting may be required.

Appendix E

**Preliminary Storm Water Infiltration Feasibility Study
Percolation to Infiltration Rate Conversion (Porchet Method)**

Worksheet C.4-1

NRCS Web Soil Survey Map

PRELIMINARY STORM WATER INFILTRATION FEASIBILITY STUDY

PROPOSED 8-LOT SUBDIVISION

8504 FANITA DRIVE

SANTEE, CALIFORNIA

We have prepared this feasibility study to address the potential for storm water infiltration at the subject site in accordance with the City of Santee BMP Design Manual (February 2016). In general, the purpose of our feasibility analysis is to provide design phase infiltration rates based on our borehole percolation tests and our subsurface explorations.

SITE AND PROJECT DESCRIPTION

The subject site consists of a vacant, rectangular-shaped lot located at 8504 Fanita Drive, Santee, California. The lot is identified as Assessor's Parcel Numbers 386-690-38-00 and has a 10-foot-wide easement which extends about 120 feet west of the northwest corner. The site is bounded on the east by Fanita Drive, on the north by Watson Place, and on the remaining sides by residential properties. Topographically, the property slopes gently to the east. Based on the tentative map (Zenith, undated), on-site elevations range from about 390 feet at the western property line to about 375 eastern property line.

We understand that the subject project will consist of the construction of an 8-lot residential subdivision with associated access driveways and retaining walls up to approximately 7 feet high. It is anticipated that the homes will be one-and two-story, of wood-frame construction, supported by shallow foundations, and will incorporate conventional concrete on-grade floor slabs. Grading to accommodate the proposed improvements is anticipated to consist of cuts and fills up to about 7 feet.

It is our understanding that the proposed BMPs at the site will consist of a biofiltration basin in the northeast corner. As part of the project's required storm water permit processing (completed by others), a feasibility analysis for storm water infiltration is being requested. This report will address feasibility of infiltration related to geotechnical conditions as described in the City of Santee BMP Design Manual (2016), which may affect the potential for on-site storm water infiltration.

To aid us in the preparation of this report, we were provided with an undated, tentative map prepared by Zenith Consultants. A copy of the tentative map has been used as the base for our Site Plan and Geotechnical Map, and is included herein as Plate No. 1.

FIELD INVESTIGATION

The subsurface explorations associated with this study consisted of five, 8-inch-diameter auger borings which extended to a depth up to approximately 15 feet below existing grade. The borings were drilled within the area of the proposed BMPs in order to supplement our previous (2021) subsurface explorations. Our previous field investigation consisted of seven exploratory trenches excavated with a backhoe. The approximate locations of our recent and previous subsurface explorations are shown on Plate No. 1 of this report. Logs of the explorations are presented in Appendix A of this report. The borings were logged in detail with emphasis on describing the soil profile. Low permeability and relatively impermeable materials were identified in the borings. No evidence of soil contamination was detected within the samples obtained.

GEOLOGIC SOIL DESCRIPTION: Based upon the findings of our subsurface explorations and review of readily available, pertinent geologic and geotechnical literature, it was determined that the project area is generally underlain by Cretaceous-age granitic rock and Quaternary- age alluvium, which are mantled by slopewash.

MAPPED HYDROLOGIC SOIL GROUP: According to the Natural Resources Conservation Service (NRCS) Web Soil Survey, the site is located in the map unit designated Diablo Clay (DaD). Diablo Clay (DaD) has a Hydrologic Soil Group rating of C. Group C soils have slow infiltration rates when thoroughly wetted and a slow rate of water transmission. The NRCS Web Soil Survey map for the subject site and corresponding map unit description are presented hereafter.

GROUNDWATER

No groundwater was encountered in our subsurface explorations. We reviewed available groundwater data in the vicinity of the site to determine the historic high groundwater level. The main resources utilized were Geotracker and California Department of Water Resources websites. Nearby well data from a site located ½ a mile to the north of the project site at the corner of Mission Gorge Road and Fanita Drive indicates a historical high groundwater elevation of approximately 30 feet below existing site grades corresponding to an elevation of approximately 300 feet. It should be noted that groundwater elevations can fluctuate based on seasons and wet/dry years. It is our opinion that the seasonal high, free groundwater level can be approximately 50 feet below existing site grades.

INFILTRATION RATE DETERMINATION

FIELD MEASUREMENTS

Percolation testing was performed within four borings that were drilled within the proposed storm water infiltration areas at the site. The approximate locations of the percolation borings are shown on Plate No. 1. The 8-inch-diameter borings, which are labelled as PT-1 through PT-4, were drilled to a depth of approximately 3 feet below existing site grades, which corresponds to the anticipated bottom elevation of the proposed BMPs. Once cleaned of slough, a 3-inch diameter perforated pipe was set in the excavation and surrounded by ¾-inch gravel to prevent caving. After pipe installation, the percolation borings were presoaked.

The field percolation rates were determined the following day by using the falling head test method. It should be noted that water remained within the borings from presoaking on the previous day. The initial water level was established by refilling the test holes and percolation rates were monitored and recorded every 30 minutes over a period of at least 6 hours until the infiltration rates stabilized. Measurements were taken using a water level meter (Solinst, Model 101) with an accuracy of measurement of 0.005 foot (0.06 inch). To account for the use of gravel placed around the perforated pipe, an adjustment factor of 0.44 was used in the calculations.

FACTOR OF SAFETY

The City of Santee BMP Design Manual states that “a maximum factor of safety of 2.0 is recommended for infiltration feasibility screening such that an artificially high factor of safety cannot be used to inappropriately rule out infiltration, unless justified. If the site passes the feasibility analysis at a factor of safety of 2.0, then infiltration must be investigated, but a higher factor of safety may be selected at the discretion of the design engineer.” The field infiltration rates were averaged and a factor of safety factor of 2 was applied. The calculated infiltration rates are presented in Table I.

TABLE I: INFILTRATION RATES

Test No.	Location	Soil Underlying BMP	Depth of Testing	Field Infiltration Rate (Inches per hour)	Average Field Infiltration Rate	Average Infiltration Rate with Safety Factor of 2 Applied
PT-1	See Plate 1	Qsw	34 inches	0.01	0.01 inches per hour	0.005 inches per hour
PT-2	See Plate 1	Qsw	39 inches	0.01		
PT-3	See Plate 1	Qsw	37 inches	0.01		
PT-4	See Plate 1	Qsw	37 inches	0.01		

Infiltration and percolation are two related but different processes describing the movement of moisture through soil. Lateral and downward movement of water into soil and porous or fractured rock is called percolation, and the downward entry of water into the soil is called infiltration. The direct measurement yielded by a percolation test tends to overestimate the infiltration rate, except perhaps in cases where an infiltration basin is similarly dimensioned to the borehole. As such, adjustments of the measured percolation rates were converted into infiltration rates using the Porchet Method. The spreadsheet used for the conversion is presented hereafter.

POTENTIAL STORM WATER INFILTRATION HAZARDS

SETTLEMENT AND VOLUME CHANGE: Settlement and volume change can occur when water is introduced below grade. Settlement refers to a condition when soils decrease in volume (i.e. hydro collapse, calcareous soils, consolidation or liquefaction). Heave refers to expansion of soils or an increase in volume (i.e. expansive soils or frost heave). Based upon the soil conditions observed in our borings, the site is underlain by underlain by artificial fill, slopewash, Quaternary-age alluvium, and Cretaceous-age granitic rock. In our opinion the underlying granitic rock will not be prone to hydro collapse. The slopewash, alluvium, and existing fills are subject to heave and hydro collapse. These materials will be partially or completely removed and recompacted during the recommended grading operations for the site. However, the expansion potential of the soils underlying the site upon completion of grading are anticipated to have a high expansion potential (EI between 91 and 130). In our opinion infiltration of water into these soils will result in heave and the lateral migration of water.

SLOPE STABILITY: Infiltration of water has the potential to increase the risk of failure to nearby slopes. The BMP Design Manual recommends that infiltration BMPs be set back at least 50 feet from natural slopes (<25%) and at least a distance of 1.5H from the fill slopes where H is the height of the fill slope. The setbacks should be measured from the closest horizontal radial distance from the surface edge (at the overflow elevation) of the BMP. The subject site and the adjacent properties are relatively flat-lying, with no significant sloping terrain. As such, the risk of slope failure associated with on-site partial infiltration may be considered low.

UTILITY CONSIDERATIONS: Utilities are either public or private infrastructure components that include underground pipelines, vaults, and wires/conduit, and above ground wiring and associated structures. Infiltration of water can pose a risk to subsurface utilities, or geotechnical hazards can occur within the utility trenches when water is introduced. We anticipate that the proposed BMP devices will be located at least 10 feet away from the existing and proposed utilities to prevent water migration into the utility trenches. If the utility trenches are not located at a sufficient distance away from the proposed BMP devices, vertical cut-off liners should be used to

prevent groundwater infiltration into the utility trenches. Therefore, the risk of introducing water into a utility trench may be considered low.

GROUNDWATER MOUNDING: Groundwater mounding occurs when infiltrated water creates a rise in the groundwater table beneath the facility. Groundwater mounding can affect nearby subterranean structures and utilities. Based on the anticipated soil conditions below the proposed BMP devices, the risk of groundwater mounding below the BMP devices is anticipated to be low.

RETAINING WALLS AND FOUNDATIONS: Infiltration of water can result in potential increases in lateral pressures and potential reduction in soil strength. Retaining walls and foundations can be negatively impacted by these changes in soil conditions. This should be taken into account when designing the storm water BMP devices, retaining walls and foundations for the site. The BMP manual recommends BMPs be setback at least 10 feet from foundations or settlement-sensitive improvements. This should be taken into account when designing the storm water BMP devices, retaining walls and foundations for the site. The setback must be measured from the closest horizontal radial distance from the surface edge (at the overflow elevation) of the BMP. If appropriate storm water control measures are implemented, the risk of increased lateral pressure and reduction in soil strength for retaining walls and foundations may be considered low.

SOIL AND GROUNDWATER CONTAMINATION: Infiltration should be avoided in areas where infiltration could contribute to the movement or dispersion of soil or groundwater contamination or adversely affect ongoing clean-up efforts, either on site or down-gradient of the project. Based on the information found on <http://geotracker.waterboards.ca.gov/>, there are no sites with ongoing cleanup efforts located within 100 feet of the proposed BMPs.

SEPARATION TO SEASONAL HIGH GROUNDWATER: The depth to seasonal high groundwater beneath the site is expected to fluctuate seasonally and is estimated to be 50 feet below the existing site grades. Based on this information we anticipate that seasonal high groundwater will not encroach within 10 feet of the base of the proposed BMPs.

WELLHEAD PROTECTION: Wellheads, natural and man-made, are water resources that may potentially be adversely impacted by storm water infiltration through the introduction of contaminants or alterations in water supply and levels. Infiltration BMP devices must be located at a minimum of 100 feet horizontally from any water supply well.

CONCLUSIONS AND RECOMMENDATIONS

The site is underlain by slopewash and alluvium that were found to consist of sandy clay (CL) and fat clay (CH). The slopewash and alluvium were found to have a high expansion potential (EI=107 to 122) and are relatively impermeable with very low infiltration rates. In our opinion, infiltration into these materials will result in heave and the lateral migration of water. This condition cannot be reasonably mitigated to an acceptable level. As such, infiltration into the clayey slopewash or alluvium is not recommended.

In addition, field infiltration rates were negligible at 0.01 inches per hour. Using a FOS of 2.0, the average infiltration rate will decrease to 0.005 inches per hour. We do not think that a design infiltration rate of 0.005 inches per hour can be considered an appreciable rate and the site should be considered to have a no infiltration category. The most recent edition of the City of San Diego BMP Design Manual (2018) considers a reliable infiltration rate (i.e. average measured rate/2) of less than 0.05 inches per hour as a “No Infiltration” condition. Worksheet C.4-1: Categorization of Infiltration Feasibility Criteria has been completed which concludes a “No infiltration” condition for the subject project which is presented hereafter.

In order to mitigate the risk to acceptable levels, liners and underdrains are recommended in the design and construction of biofiltration basin. The liners should be impermeable (e.g. High-density polyethylene, HDPE, with a thickness of about 30 mil or equivalent Polyvinyl Chloride, PVC). The underdrains should be perforated within the liner area, installed at the base and above the liner, be at least 3 inches in diameter and consist of Schedule 40 PVC pipe. The underdrains outside of the liner should consist of solid pipe. The penetration of the liners at the underdrains should be properly waterproofed. The underdrains should be connected to a proper outlet. The devices should also be installed in accordance with the manufacturer’s recommendations.

It should be noted that it is not our intent to review the civil engineering plans, notes, details, or calculations, when prepared, to verify that the engineer has complied with any particular storm water design standards. It is the responsibility of the designer to properly prepare the storm water plan based on the municipal requirements considering the planned site development and infiltration rates.

LIMITATIONS

The recommendations and opinions expressed in this report reflect our best estimate of the project requirements based on our limited percolation testing, an evaluation of the subsurface soil conditions encountered at our subsurface exploration locations and the assumption that the infiltration rates and soil

conditions do not deviate appreciably from those encountered. It should be recognized that the performance of the BMPs may be influenced by undisclosed or unforeseen variations in the soil conditions that may occur in the intermediate and unexplored areas. Any unusual conditions not covered in this report that may be encountered during site development should be brought to the attention of the soils engineer so that he may make modifications if necessary. In addition, this office should be advised of any changes in the project scope, proposed site grading or storm water BMP design so that it may be determined if the recommendations contained herein are appropriate. This should be verified in writing or modified by a written addendum.

It should be recognized that routine inspection and maintenance of infiltration basins are necessary to prevent clogging and failure. A maintenance plan should be specified for each basin by the designer and followed by the owner during the entire lifetime of the BMP device. It is not our intent to review the civil engineering plans, notes, details, or calculations, when prepared, to verify that the engineer has complied with any particular storm water design standards. It is the responsibility of the designer to properly prepare the storm water plan based on the municipal requirements considering the planned site development and infiltration rates.

Percolation to Infiltration Rate Conversion (Porchet Method)

Fanita 8 Lot Subdivision, 8504 Fanita Drive, Santee, California

Perc Test #	Gravel Adjustment Factor	Effective Radius (inches) r	Depth of Hole Below Existing Grade (inches)	Time Interval (min.) Δt	Height of pipe above surface (feet)	Initial Water Depth without correction (feet)	Final Water Depth without correction (feet)	Initial Water Height with correction (inches) H _o	Final Water Height with correction (inches) H _f	Change in head (inches) ΔH	Average Head Height (inches) H _{avg}	Tested Infiltration Rate (inch/hour) I _t
PT-1	0.44	4	34	30	2.33	3.28	3.29	22.64	22.52	0.12	22.58	0.01
PT-2	0.44	4	39	30	2.00	3.10	3.11	25.80	25.68	0.12	25.74	0.01
PT-3	0.44	4	37	30	1.92	2.79	2.80	26.52	26.40	0.12	26.46	0.01
PT-4	0.44	4	37	30	2.00	3.25	3.26	22.00	21.88	0.12	21.94	0.01
Average Infiltration Rate=											0.01	

"Initial and final water depth without correction" are measurements taken from top of pipe if pipe is sticking out of ground (most cases)

"Initial and final water height with correction" factors in the height of pipe above surface, and provides measurement of water above bottom of pipe

If measurements are taken from grade "Height of pipe above surface" = 0

Gravel Adjustment Factor:

4-inch Diameter Pipe: 1.00 - No Gravel Used (No Caving)

0.51 - 3/4 inch gravel with 8 inch diameter hole

0.56 - 3/4 inch gravel with 7 inch diameter hole

0.64 - 3/4 inch gravel with 6 inch diameter hole

3-inch Diameter Pipe: 1.00 - No Gravel Used (No Caving)

0.44 - 3/4 inch gravel with 8 inch diameter hole

0.47 - 3/4 inch gravel with 7 inch diameter hole

0.51 - 3/4 inch gravel with 6 inch diameter hole

Porchet Method - Tested Percolation Rate Conversion to Tested Infiltration Rate

$$I_t = \frac{\Delta H \cdot 60 \cdot r}{\Delta t (r + 2H_{avg})}$$

I_t = tested infiltration rate, inches per hour

ΔH = change in head over the time interval, inches

Δt = time interval, minutes

r = effective radius of test hole

H_{avg} = average head over the time interval, inches

Appendix C: Geotechnical and Groundwater Investigation Requirements

Worksheet 0-1: Categorization of Infiltration Feasibility Condition

Categorization of Infiltration Feasibility Condition		Worksheet C.4-1	
Part 1 - Full Infiltration Feasibility Screening Criteria			
Would infiltration of the full design volume be feasible from a physical perspective without any undesirable consequences that cannot be reasonably mitigated?			
Criteria	Screening Question	Yes	No
1	Is the estimated reliable infiltration rate below proposed facility locations greater than 0.5 inches per hour? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.		X
Provide basis:			
An infiltration rate assessment has been performed for the soils beneath the subject site as presented our Preliminary Storm Water Infiltration Feasibility Study (CWE 2210452.02). The measured percolation rates were converted to infiltration rates using the Porchet Method. The City of Santee BMP Design Manual states that “a maximum factor of safety (FOS) of 2.0 is recommended for infiltration feasibility screening such that an artificially high factor of safety cannot be used to inappropriately rule out infiltration, unless justified.” Field infiltration rates were negligible at 0.01 inches per hour. Using a FOS of 2.0, the average infiltration rate will decrease to 0.005 inches per hour.			
2	Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2.		
Provide basis:			

Appendix C: Geotechnical and Groundwater Investigation Requirements

Worksheet C.4-1 Page 3 of 4

Part 2 – Partial Infiltration vs. No Infiltration Feasibility Screening Criteria

Would infiltration of water in any appreciable amount be physically feasible without any negative consequences that cannot be reasonably mitigated?

Criteria	Screening Question	Yes	No
5	Do soil and geologic conditions allow for infiltration in any appreciable rate or volume? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.		X

Provide basis:

An infiltration rate assessment has been performed for the soils beneath the subject site as presented our Preliminary Storm Water Infiltration Feasibility Study (CWE 2210452.02). The measured percolation rates were converted to infiltration rates using the Porchet Method. The City of Santee BMP Design Manual states that “a maximum factor of safety (FOS) of 2.0 is recommended for infiltration feasibility screening such that an artificially high factor of safety cannot be used to inappropriately rule out infiltration, unless justified.” Field infiltration rates were negligible at 0.01 inches per hour. Using a FOS of 2.0, the average infiltration rate will decrease to 0.005 inches per hour. We do not think that an infiltration rate of 0.005 inches per hour can be considered an appreciable rate and the site should be considered to have a no infiltration category. In addition the most recent edition of the City of San Diego BMP Design Manual (2018) considers a reliable infiltration rate (i.e. average measured rate/2) of less than 0.05 inches per hour as a no infiltration condition.

6	Can Infiltration in any appreciable quantity be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2.		X
---	---	--	---

Provide basis:

An infiltration rate assessment has been performed for the subject site. Based on the underlying soil conditions and our recommendations presented in our report, we anticipate that infiltration into the expansive soils on-site cannot be mitigated to an acceptable level.

C.2.1 A site specific geotechnical investigation was performed.

C.2.2 The site is underlain by slopewash and alluvium that were found to consist of sandy clay (CL) and fat clay (CH). The slopewash and alluvium were found to have a high expansion potential (EI=107 to 122) and are relatively impermeable with very low infiltration rates. In our opinion, infiltration into these materials will result in heave and the lateral migration of water. This condition cannot be reasonably mitigated to an acceptable level. As such, infiltration into the clayey slopewash or alluvium is not recommended.

C.2.3 The site is relatively flat and in our opinion the risk of slope instability is low.

C.2.4 A vertical liner will be used to prevent lateral migration into nearby utility trenches.

C.2.5 Based on the anticipated depth to groundwater, the potential for groundwater mounding is low.

C.2.6 BMPs should be set back at least 10 feet from any structure, retaining wall or settlement sensitive improvements.

Appendix C: Geotechnical and Groundwater Investigation Requirements

Worksheet C.4-1 Page 4 of 4			
Criteria	Screening Question	Yes	No
7	<p>Can Infiltration in any appreciable quantity be allowed without posing significant risk for groundwater related concerns (shallow water table, storm water pollutants or other factors)? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.</p>	X	
<p>Provide basis:</p> <p>Based on our review of items presented in Appendix C.3, we anticipate that infiltration in any appreciable quantity can be allowed without increasing risk of groundwater contamination that cannot be mitigated to an acceptable level.</p> <p>C.3.1 Based on the information found on http://geotracker.waterboards.ca.gov/, there are no sites with ongoing cleanup efforts located within 100 feet of the proposed site.</p> <p>C.3.2 No groundwater or seepage was encountered in our subsurface explorations. The estimated high seasonal groundwater level is expected to be greater than 50 feet below existing site grades. We anticipate that seasonal high groundwater will not encroach within 10 feet of the base of the proposed BMPs.</p> <p>C.3.3 The infiltration BMPs should be set back at least 100 feet from any wells. We have no knowledge of any wells at the site.</p> <p>C.3.4 We have no knowledge of the site being previously used for industrial use.</p> <p>C.3.5 We recommend that infiltration activities be coordinated with the applicable groundwater management agency.</p>			
8	<p>Can infiltration be allowed without violating downstream water rights? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.</p>		
<p>Provide basis:</p> <p>The projects design engineer should address this criterion per the BMP Design Manual.</p>			
Part 2 Result*	<p>If all answers from row 1-4 are yes then partial infiltration design is potentially feasible. The feasibility screening category is Partial Infiltration.</p> <p>If any answer from row 5-8 is no, then infiltration of any volume is considered to be infeasible within the drainage area. The feasibility screening category is No Infiltration.</p>	No Infiltration	

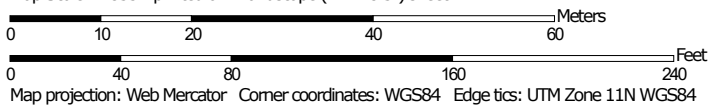
*To be completed using gathered site information and best professional judgment considering the definition of MEP in the Permit. Additional testing and/or studies may be required by Agency/Jurisdictions to substantiate findings


 Daniel J. Flowers CEG # 2686

Hydrologic Soil Group—San Diego County Area, California
(Fanita 9 Lot Subdivision, 85-4 Fanita Drive, Santee)




Map Scale: 1:833 if printed on A landscape (11" x 8.5") sheet.



MAP LEGEND

Area of Interest (AOI)









 Area of Interest (AOI)

Soils

Soil Rating Polygons





 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines


 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points






 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available


Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Diego County Area, California
 Survey Area Data: Version 16, Sep 13, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 18, 2018—Aug 22, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
DaD	Diablo clay, 9 to 15 percent slopes, warm MAAT	C	1.9	71.8%
DaE	Diablo clay, 15 to 30 percent slopes	D	0.0	1.0%
SbA	Salinas clay loam, 0 to 2 percent slopes, warm MAAT, MLRA 19	C	0.7	27.2%
Totals for Area of Interest			2.7	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

APPENDIX E

CITY OF SANTEE

PRIORITY DEVELOPMENT PROJECT (PDP) STORM WATER QUALITY MANAGEMENT PLAN (SWQMP)

FOR
TENTATIVE MAP for
8504 FANITA DRIVE
PA2021-4

8504 FANITA DRIVE
SANTEE, CA 92071

ASSESSOR'S PARCEL NUMBER(S):
386-690-38-00
ENGINEER OF WORK:



SOHAIB ALAGHA, RCE# 45440

PREPARED FOR:

TA DEVELOPMENT, LLC
7710 BALBOA AVENUE, SUITE 210C
SAN DIEGO, CA 92111
(619) 277-2514

PDP SWQMP PREPARED BY:

ZENITH CONSULTANTS
3111 CAMINO DEL RIO N, SUITE 421
SAN DIEGO, CA 92108
(619) 528-2240

DATE OF SWQMP:
November 2021

PLANS PREPARED BY:
SOHAIB ALAGHA, PE
3111 CAMINO DEL RIO N, SUITE 421
SAN DIEGO, CA 92108
(619) 528-2240

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FORM I-2 Project Type Determination Checklist (Standard Project or PDP)

FORM I-3B Site Information Checklist for PDPs

FORM I-4 Source Control BMP Checklist for All Development Projects

FORM I-5 Site Design BMP Checklist for All Development Projects

FORM I-6 Summary of PDP Structural BMPs

Attachment 1: Backup for PDP Pollutant Control BMPs

Attachment 1a: DMA Exhibit

Attachment 1b: Tabular Summary of DMAs and Design Capture Volume Calculations

Attachment 1c: Harvest and Use Feasibility Screening (when applicable)

Attachment 1d: Categorization of Infiltration Feasibility Condition (when applicable)

Attachment 1e: Pollutant Control BMP Design Worksheets / Calculations

Attachment 2: Backup for PDP Hydromodification Control Measures

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Attachment 2b: Management of Critical Coarse Sediment Yield Areas

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Attachment 2d: Flow Control Facility Design

Attachment 3: Structural BMP Maintenance Plan

Attachment 3a: B Structural BMP Maintenance Thresholds and Actions

Attachment 3b: Draft Maintenance Agreement (when applicable)

Attachment 4: Copy of Plan Sheets Showing Permanent Storm Water BMPs

ACRONYMS

APN	Assessor's Parcel Number
BMP	Best Management Practice
HMP	Hydromodification Management Plan
HSG	Hydrologic Soil Group
MS4	Municipal Separate Storm Sewer System
N/A	Not Applicable
NRCS	Natural Resources Conservation Service
PDP	Priority Development Project
PE	Professional Engineer
SC	Source Control
SD	Site Design
SDRWQCB	San Diego Regional Water Quality Control Board
SIC	Standard Industrial Classification
SWQMP	Storm Water Quality Management Plan

SWQMP PREPARER'S CERTIFICATION PAGE

Project Name: TENTATIVE MAP on 8504 FANITA DRIVE
Permit Application Number: PA2021-4, TM2021-2

PREPARER'S CERTIFICATION

I hereby declare that I am the Engineer in Responsible Charge of design of storm water best management practices (BMPs) for this project, and that I have exercised responsible charge over the design of the BMPs as defined in Section 6703 of the Business and Professions Code, and that the design is consistent with the PDP requirements of the City of Santee's BMP Design Manual, which is a design manual for compliance with local City of Santee and regional MS4 Permit (California Regional Water Quality Control Board San Diego Region Order No. R9-2015-0100) requirements for storm water management.

I have read and understand that the City Engineer has adopted minimum requirements for managing urban runoff, including storm water, from land development activities, as described in the BMP Design Manual. I certify that this PDP SWQMP has been completed to the best of my ability and accurately reflects the project being proposed and the applicable BMPs proposed to minimize the potentially negative impacts of this project's land development activities on water quality. I understand and acknowledge that the plan check review of this PDP SWQMP by the City Engineer is confined to a review and does not relieve me, as the Engineer in Responsible Charge of design of storm water BMPs for this project, of my responsibilities for project design.

PE 45440 EXP. 12/31/2022

Engineer of Work's Signature, PE Number & Expiration Date

Sohaib Alagha

Print Name

ZENITH CONSULTANTS

Company

April 15,2022

Date

Engineer's Seal:



PDP SWQMP Template Date: February 2016
PDP SWQMP Preparation Date: November 2021

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SWQMP PROJECT OWNER'S CERTIFICATION PAGE

Project Name: TENTATIVE MAP on 8504 FANITA DRIVE
Permit Application Number: PA2021-4, TM2021-2

PROJECT OWNER'S CERTIFICATION

This PDP SWQMP has been prepared for TA DEVELOPMENT, LLC by ZENITH CONSULTANTS. The PDP SWQMP is intended to comply with the PDP requirements of the City of Santee BMP Design Manual, which is a design manual for compliance with local City of Santee and regional MS4 Permit (California Regional Water Quality Control Board San Diego Region Order No. R9-2015-0100) requirements for storm water management.

The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan. Once the undersigned transfers its interests in the property, its successor-in-interest shall bear the aforementioned responsibility to implement the best management practices (BMPs) described within this plan, including ensuring on-going operation and maintenance of structural BMPs. A signed copy of this document shall be available on the subject property into perpetuity.



Project Owner's Signature

Tarik Alahmad

Print Name

TA DEVELOPMENT LLC

Company

August 25, 2022

Date

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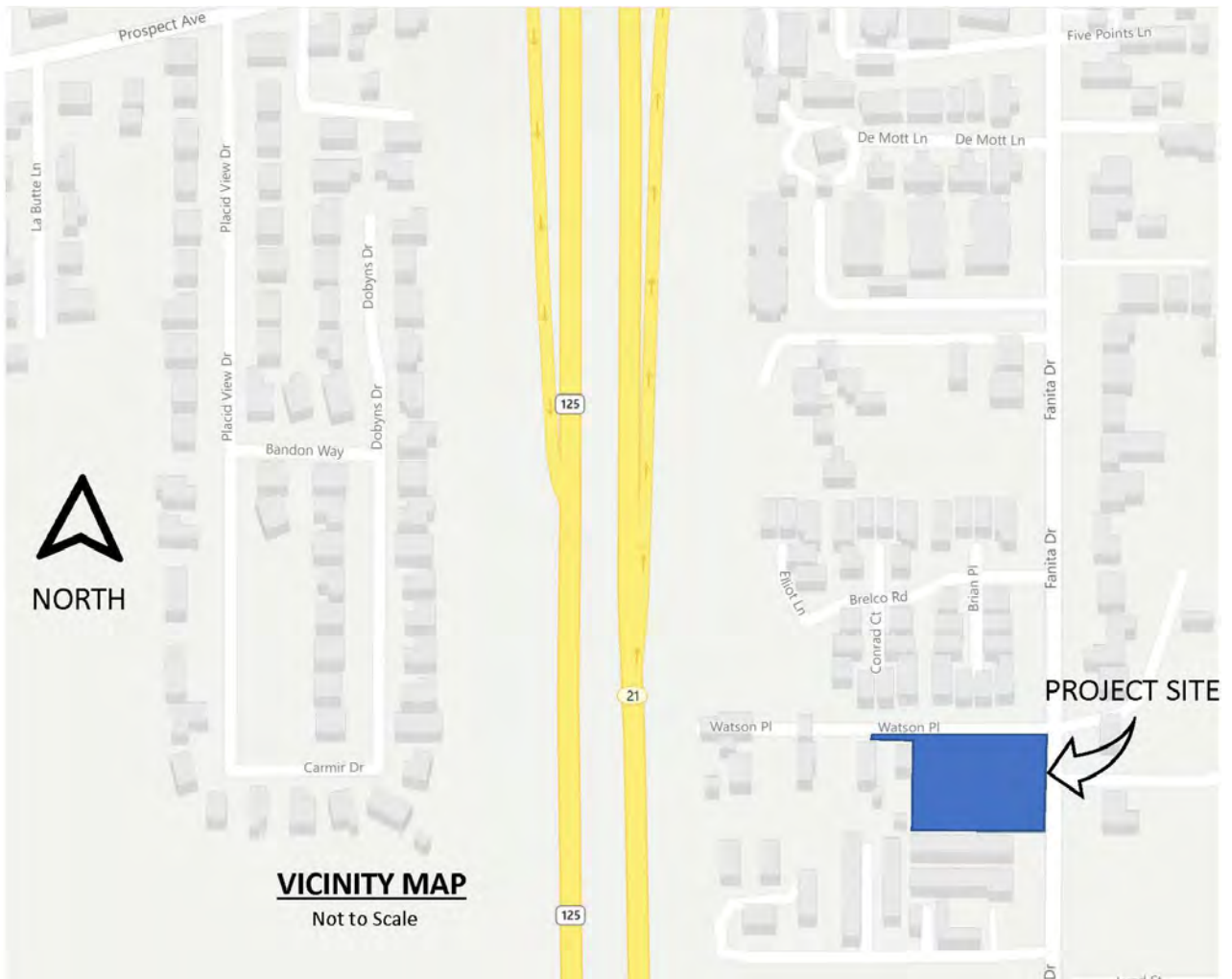
SUBMITTAL RECORD

Use this Table to keep a record of submittals of this PDP SWQMP. Each time the PDP SWQMP is re-submitted, provide the date and status of the project. In column 4 summarize the changes that have been made or indicate if response to plan check comments is included. When applicable, insert response to plan check comments behind this page.

Submittal Number	Date	Project Status	Summary of Changes
1	11/30/2021	<input checked="" type="checkbox"/> Preliminary Design / Planning/ CEQA <input type="checkbox"/> Final Design	Initial Submittal
2	04/15/2022	<input checked="" type="checkbox"/> Preliminary Design / Planning/ CEQA <input type="checkbox"/> Final Design	
3	07/19/2022	<input type="checkbox"/> Preliminary Design / Planning/ CEQA <input type="checkbox"/> Final Design	
4		<input type="checkbox"/> Preliminary Design / Planning/ CEQA <input type="checkbox"/> Final Design	

PROJECT VICINITY MAP

Project Name: TENTATIVE MAP – 8504 FANITA DRIVE
Permit Application Number: PA2021-4



Applicability of Permanent, Post-Construction Storm Water BMP Requirements (Storm Water Intake Form for all Development Permit Applications)		Form I-1 Model BMP Design Manual [August 31, 2015]
Project Identification		
Project Name: TENTATIVE MAP – 8504 FANITA DRIVE		
Permit Application Number: PA2021-4, TM2021-2		Date: November 2021
Project Address: 8504 FANITA DRIVE		
<input checked="" type="checkbox"/> <input type="checkbox"/> APN: 386-690-38-00		
Determination of Requirements		
<p>The purpose of this form is to identify permanent, post-construction requirements that apply to the project. This form serves as a short <u>summary</u> of applicable requirements, in some cases referencing separate forms that will serve as the backup for the determination of requirements.</p> <p>Answer each step below, starting with Step 1 and progressing through each step until reaching "Stop". Upon reaching a Stop, do not complete further Steps beyond the Stop.</p> <p>Refer to BMP Design Manual sections and/or separate forms referenced in each step below.</p>		
Step	Answer	Progression
Step 1: Is the project a "development project"? See Section 1.3 of the BMP Design Manual for guidance.	<input checked="" type="checkbox"/> Yes	Go to Step 2.
	<input type="checkbox"/> No	Stop. Permanent BMP requirements do not apply. No SWQMP will be required. Provide discussion below.
Discussion / justification if the project is <u>not</u> a "development project" (e.g., the project includes <i>only</i> interior remodels within an existing building):		
Step 2: Is the project a Standard Project, Priority Development Project (PDP), or exception to PDP definitions? To answer this item, see Section 1.4 of the BMP Design Manual <i>in its entirety</i> for guidance, AND complete Form I-2, Project Type Determination.	<input type="checkbox"/> Standard Project	Stop. <u>Only Standard Project</u> requirements apply, including <u>Standard Project SWQMP</u> .
	<input checked="" type="checkbox"/> PDP	<u>Standard and PDP</u> requirements apply, including <u>PDP SWQMP</u> . Go to Step 3.
	<input type="checkbox"/> Exception to PDP definitions	Stop. <u>Standard Project</u> requirements apply, <u>and any additional requirements specific to the type of project</u> . Provide discussion and list any additional requirements below. Prepare <u>Standard Project SWQMP</u> .

[Step 2 Continued from Page 1] Discussion / justification, and additional requirements for exceptions to PDP definitions, if applicable:

Step 3 (PDPs only). Is the project subject to earlier PDP requirements due to a prior lawful approval? See Section 1.10 of the BMP Design Manual for guidance.	<input type="checkbox"/> Yes	Consult the [City Engineer] to determine requirements. Provide discussion and identify requirements below. Go to Step 4.
	<input checked="" type="checkbox"/> No	BMP Design Manual PDP requirements apply. Go to Step 4.

Discussion / justification of prior lawful approval, and identify requirements (*not required if prior lawful approval does not apply*):

Step 4 (PDPs only). Do hydromodification control requirements apply? See Section 1.6 of the BMP Design Manual for guidance.	<input checked="" type="checkbox"/> Yes	PDP structural BMPs required for pollutant control (Chapter 5) and hydromodification control (Chapter 6). Go to Step 5.
	<input type="checkbox"/> No	Stop. PDP structural BMPs required for pollutant control (Chapter 5) only. Provide brief discussion of exemption to hydromodification control below.

Discussion / justification if hydromodification control requirements do not apply:

Step 5 (PDPs subject to hydromodification control requirements only). Does protection of critical coarse sediment yield areas apply based on review of WMAA Potential Critical Coarse Sediment Yield Area Map? See Section 6.2 of the BMP Design Manual for guidance.	<input type="checkbox"/> Yes	Management measures required for protection of critical coarse sediment yield areas (Chapter 6.2). Stop.
	<input checked="" type="checkbox"/> No	Management measures not required for protection of critical coarse sediment yield areas. Provide brief discussion below. Stop.

Discussion / justification if hydromodification control requirements do not apply:
No potential critical coarse sediment yield areas are identified within the project drainage boundaries

Project Information

Project Name: TENTATIVE MAP – 8504 FANITA DRIVE

Permit Application Number: PA2021-4, TM2021-2	Date: November 2021
---	---------------------

Project Address:
8504 FANITA DRIVE - APN: 386-690-38-00

Project Type Determination: Standard Project or Priority Development Project (PDP)

The project is (select one): New Development Redevelopment

The total proposed newly created or replaced impervious area is: 16,692 ft² (0.38) acres

Is the project in any of the following categories, (a) through (f)?

Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	(a)	New development projects that create 10,000 square feet or more of impervious surfaces (collectively over the entire project site). This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land.
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	(b)	Redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface (collectively over the entire project site on an existing site of 10,000 square feet or more of impervious surfaces). This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land.
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	(c)	<p>New and redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface (collectively over the entire project site), and support one or more of the following uses:</p> <ul style="list-style-type: none"> (i) Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (Standard Industrial Classification (SIC) code 5812). (ii) Hillside development projects. This category includes development on any natural slope that is twenty-five percent or greater. (iii) Parking lots. This category is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce. (iv) Streets, roads, highways, freeways, and driveways. This category is defined as any paved impervious surface used for the transportation of automobiles, trucks, motorcycles, and other vehicles.

Form I-2 Page 2, Form Template Date: August 31, 2015

Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	(d)	<p>New or redevelopment projects that create and/or replace 2,500 square feet or more of impervious surface (collectively over the entire project site), and discharging directly to an Environmentally Sensitive Area (ESA). "Discharging directly to" includes flow that is conveyed overland a distance of 200 feet or less from the project to the ESA, or conveyed in a pipe or open channel any distance as an isolated flow from the project to the ESA (i.e. not commingled with flows from adjacent lands).</p> <p><i>Note: ESAs are areas that include but are not limited to all Clean Water Act Section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the State Water Board and San Diego Water Board; State Water Quality Protected Areas; water bodies designated with the RARE beneficial use by the State Water Board and San Diego Water Board; and any other equivalent environmentally sensitive areas which have been identified by the Copermittees. See BMP Design Manual Section 1.4.2 for additional guidance.</i></p>
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	(e)	<p>New development projects, or redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface, that support one or more of the following uses:</p> <ul style="list-style-type: none"> (i) Automotive repair shops. This category is defined as a facility that is categorized in any one of the following SIC codes: 5013, 5014, 5541, 7532-7534, or 7536-7539. (ii) Retail gasoline outlets (RGOs). This category includes RGOs that meet the following criteria: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day.
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	(f)	<p>New or redevelopment projects that result in the disturbance of one or more acres of land and are expected to generate pollutants post construction.</p> <p><i>Note: See BMP Design Manual Section 1.4.2 for additional guidance.</i></p>

Does the project meet the definition of one or more of the Priority Development Project categories (a) through (f) listed above?

No – the project is not a Priority Development Project (Standard Project).

Yes – the project is a Priority Development Project (PDP).

The following is for redevelopment PDPs only:

The area of existing (pre-project) impervious area at the project site is: 0 ft² (A)

The total proposed newly created or replaced impervious area is 16,692 ft² (B)

Percent impervious surface created or replaced (B/A)*100: 100%

The percent impervious surface created or replaced is (select one based on the above calculation):

less than or equal to fifty percent (50%) – only new impervious areas are considered PDP

OR

greater than fifty percent (50%) – the entire project site is a PDP

**Site Design Checklist
For PDPs**

Form I-3B (PDPs)
Model BMP Design Manual
[August 31, 2015]

Project Summary Information

Project Name TENTATIVE MAP – 8504 FANITA DRIVE	
Project Address 8504 FANITA DRIVE	
Assessor's Parcel Number(s) (APN(s))	386-690-38-00
Permit Application Number	PA2021-4
Project Hydrologic Unit	Select One: <input type="checkbox"/> Santa Margarita 902 <input type="checkbox"/> San Luis Rey 903 <input type="checkbox"/> Carlsbad 904 <input type="checkbox"/> San Dieguito 905 <input type="checkbox"/> Penasquitos 906 <input checked="" type="checkbox"/> San Diego 907 <input type="checkbox"/> Pueblo San Diego 908 <input type="checkbox"/> Sweetwater 909 <input type="checkbox"/> Otay 910 <input type="checkbox"/> Tijuana 911
Project Watershed (Complete Hydrologic Unit, Area, and Subarea Name with Numeric Identifier)	The Project is within the San Diego River Watershed. More specifically, the site lies within the middle part of the Lower San Diego Watershed in hydrological area number 907.1
Parcel Area (total area of Assessor's Parcel(s) associated with the project)	0.68 Acres (29,964 Square Feet)
Area to be Disturbed by the Project (Project Area)	0.62 Acres (26,887 Square Feet)
Project Proposed Impervious Area (subset of Project Area)	0.38 Acres (16,692 Square Feet)
Project Proposed Pervious Area (subset of Project Area)	0.34 Acres (10,195 Square Feet)
Note: Proposed Impervious Area + Proposed Pervious Area = Area to be Disturbed by the Project. This may be less than the Parcel Area.	

Description of Existing Site Condition

Current Status of the Site (select all that apply):

- Existing development
 - Previously graded but not built out
 - Demolition completed without new construction
- Agricultural or other non-impervious use
- Vacant, undeveloped/natural

Description / Additional Information:

The Parcel was a single-family residential lot. The house was removed in year 2008.

Existing Land Cover Includes (select all that apply):

- Vegetative Cover
- Non-Vegetated Pervious Areas
- Impervious Areas

Description / Additional Information:

Underlying Soil belongs to Hydrologic Soil Group (select all that apply):

- NRCS Type A
- NRCS Type B
- NRCS Type C
- NRCS Type D

Approximate Depth to Groundwater (GW):

- GW Depth < 5 feet
- 5 feet < GW Depth < 10 feet
- 10 feet < GW Depth < 20 feet
- GW Depth > 20 feet

Existing Natural Hydrologic Features (select all that apply):

- Watercourses
- Seeps
- Springs
- Wetlands
- None

Description / Additional Information:

Description of Existing Site Drainage Patterns

How is storm water runoff conveyed from the site? At a minimum, this description should answer:

- (1) whether existing drainage conveyance is natural or urban;
- (2) Is runoff from offsite conveyed through the site? if yes, quantify all offsite drainage areas, design flows, and locations where offsite flows enter the project site, and summarize how such flows are conveyed through the site;
- (3) Provide details regarding existing project site drainage conveyance network, including any existing storm drains, concrete channels, swales, detention facilities, storm water treatment facilities, natural or constructed channels; and
- (4) Identify all discharge locations from the existing project site along with a summary of conveyance system size and capacity for each of the discharge locations. Provide summary of the pre-project drainage areas and design flows to each of the existing runoff discharge locations.

Describe existing site drainage patterns:

Existing drainage conveyance is urban. The site was a single-family residence for many years. In the year 2008, the house along with existing impervious surfaces were demolished in preparation for a new development. The development didn't happen, and the site remained vacant for 13 years. Historically, the existing residence runoff used to drain directly into an adjacent drainage channel and access to the site was achieved thru a bridge across the subject channel. Later, the channel was replaced with an underground concrete box culvert and a sump grate inlet was installed to capture runoff from the site and connect such runoff to a new curb inlet then to the box culvert. Approximately, about 0.62 acres of the site drains into the subject grate inlet.

No offsite runoff drains through the site. The existing grate inlet has sufficient capacity to capture both the existing runoff or the proposed runoff. Also, an existing curb inlet immediately adjacent to the site has sufficient capacity to capture adjacent runoff from Watson Place and Fanita Drive along the property.

Description of Proposed Site Development

Project Description / Proposed Land Use and/or Activities:

8 detached residential units are proposed. In addition, a common open space is included, a private driveway and a biofiltration basin is also proposed within the property and around the existing grate inlet.

List/describe proposed impervious features of the project (e.g., buildings, roadways, parking lots, courtyards, athletic courts, other impervious features):

Private driveways, private road, sidewalks and 8 residences.

List/describe proposed pervious features of the project (e.g., landscape areas):

Both common and private open spaces, all landscaped. Landscaped buffers between the proposed curbs and sidewalks and landscaped bioretention basin.

Does the project include grading and changes to site topography?

Yes

No

Description / Additional Information:

Pad grading is proposed to allow for the construction of the new residences.

Description of Proposed Site Drainage Patterns

Does the project include changes to site drainage (e.g., installation of new storm water conveyance systems)?

Yes

No

If yes, provide details regarding the proposed project site drainage conveyance network, including storm drains, concrete channels, swales, detention facilities, storm water treatment facilities, natural or constructed channels, and the method for conveying offsite flows through or around the proposed project site. Identify all discharge locations from the proposed project site along with a summary of the conveyance system size and capacity for each of the discharge locations. Provide a summary of pre- and post-project drainage areas and design flows to each of the runoff discharge locations. Reference the drainage study for detailed calculations.

Describe proposed site drainage patterns:

The project is NOT proposing any changes to the site’s drainage patterns. However, the project will increase the area of impervious surfaces on-site, add a biofiltration basin and modifies the existing sump inlet to allow for storage and stormwater treatment. The Project proposes only minor modifications to the existing drainage structures. These changes include relocation of the existing sag inlet along Fanita Drive, so it matches the new curb line and the installation of the proposed biofiltration basin around the existing grate inlet.

Below is a summary of Pre and Post development flows and areas:

BASIN	OUTLET	DRAINAGE AREA (AC)	Tc (MIN)	Q100 (CFS)	
EXISTING					
A1	Existing Sump Curb Inlet	2.18	17.62	3.18	4.0
B1	Existing Sump Grate Inlet	0.62	16.70	0.82	
PROPOSED					
A2	Existing Sump Curb Inlet	2.18	17.62	3.18	4.46
B2	Existing Sump Grate Inlet	0.62	14.46	1.28	

Identify whether any of the following features, activities, and/or pollutant source areas will be present (select all that apply):

- On-site storm drain inlets
- Interior floor drains and elevator shaft sump pumps
- Interior parking garages
- Need for future indoor & structural pest control
- Landscape/Outdoor Pesticide Use
- Pools, spas, ponds, decorative fountains, and other water features
- Food service
- Refuse areas
- Industrial processes
- Outdoor storage of equipment or materials
- Vehicle and Equipment Cleaning
- Vehicle/Equipment Repair and Maintenance
- Fuel Dispensing Areas
- Loading Docks
- Fire Sprinkler Test Water
- Miscellaneous Drain or Wash Water
- Plazas, sidewalks, and parking lots

Description / Additional Information:

Identification and Narrative of Receiving Water and Pollutants of Concern

Describe flow path of storm water from the project site discharge location(s), through urban storm conveyance systems as applicable, to receiving creeks, rivers, and lagoons as applicable, and ultimate discharge to the Pacific Ocean (or bay, lagoon, lake or reservoir, as applicable):

Runoff from the site will enter the storm drain system through the proposed biofiltration/bioretention facility. Runoff is then directed towards Fanita Creek, then Forester Creek which then empties into the San Diego River. The San Diego River empties into the Pacific Ocean.

List any 303(d) impaired water bodies within the path of storm water from the project site to the Pacific Ocean (or bay, lagoon, lake or reservoir, as applicable), identify the pollutant(s)/stressor(s) causing impairment, and identify any TMDLs and/or Highest Priority Pollutants from the WQIP for the impaired water bodies:

303(d) Impaired Water Body	Pollutant(s)/Stressor(s)	TMDLs / WQIP Highest Priority Pollutant
Forester Creek	Dissolved Oxygen	
San Diego River (Lower)	Benthic Community Effects, Cadmium, Indicator Bacteria, Nitrogen, Phosphorus, Total Dissolved Solids, Toxicity.	Indicator bacteria
Pacific Ocean at San Diego River outlet at Dog Beach	Indicator Bacteria	Indicator Bacteria

Identification of Project Site Pollutants*

***Identification of project site pollutants is only required if flow-thru treatment BMPs are implemented onsite in lieu of retention or biofiltration BMPs (note the project must also participate in an alternative compliance program unless prior lawful approval to meet earlier PDP requirements is demonstrated)**

Identify pollutants expected from the project site based on all proposed use(s) of the site (see BMP Design Manual Appendix B.6):

Pollutant	Not Applicable to the Project Site	Expected from the Project Site	Also a Receiving Water Pollutant of Concern
Sediment		<input checked="" type="checkbox"/>	
Nutrients	<input checked="" type="checkbox"/>		
Heavy Metals	<input checked="" type="checkbox"/>		
Organic Compounds	<input checked="" type="checkbox"/>		
Trash & Debris		<input checked="" type="checkbox"/>	
Oxygen Demanding Substances	<input checked="" type="checkbox"/>		
Oil & Grease	<input checked="" type="checkbox"/>		
Bacteria & Viruses	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Pesticides		<input checked="" type="checkbox"/>	

Hydromodification Management Requirements

Do hydromodification management requirements apply (see Section 1.6 of the BMP Design Manual)?

- Yes, hydromodification management flow control structural BMPs required.
- No, the project will discharge runoff directly to existing underground storm drains discharging directly to water storage reservoirs, lakes, enclosed embayment, or the Pacific Ocean.
- No, the project will discharge runoff directly to conveyance channels whose bed and bank are concrete-lined all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayment, or the Pacific Ocean.
- No, the project will discharge runoff directly to an area identified as appropriate for an exemption by the WMAA for the watershed in which the project resides.

Description / Additional Information (to be provided if a 'No' answer has been selected above):

Critical Coarse Sediment Yield Areas*

***This Section only required if hydromodification management requirements apply**

Based on the maps provided within the WMAA, do potential critical coarse sediment yield areas exist within the project drainage boundaries?

- Yes
- No, No critical coarse sediment yield areas to be protected based on WMAA maps

If yes, have any of the optional analyses presented in Section 6.2 of the BMP Design Manual been performed?

- 6.2.1 Verification of Geomorphic Landscape Units (GLUs) Onsite
- 6.2.2 Downstream Systems Sensitivity to Coarse Sediment
- 6.2.3 Optional Additional Analysis of Potential Critical Coarse Sediment Yield Areas Onsite
- No optional analyses performed, the project will avoid critical coarse sediment yield areas identified based on WMAA maps

If optional analyses were performed, what is the final result?

- No critical coarse sediment yield areas to be protected based on verification of GLUs onsite
- Critical coarse sediment yield areas exist but additional analysis has determined that protection is not required. Documentation attached in Attachment 2.b of the SWQMP.
- Critical coarse sediment yield areas exist and require protection. The project will implement management measures described in Sections 6.2.4 and 6.2.5 as applicable, and the areas are identified on the SWQMP Exhibit.

Discussion / Additional Information:

Flow Control for Post-Project Runoff*

***This Section only required if hydromodification management requirements apply**

List and describe point(s) of compliance (POCs) for flow control for hydromodification management (see Section 6.3.1). For each POC, provide a POC identification name or number correlating to the project's HMP Exhibit and a receiving channel identification name or number correlating to the project's HMP Exhibit.

The proposed Biofiltration basin is the only Point of compliance for hydromodification flow control. See attached DMA/BMP/HMP Exhibit, attachment C1.

Has a geomorphic assessment been performed for the receiving channel(s)?

- No, the low flow threshold is 0.1Q2 (default low flow threshold)
- Yes, the result is the low flow threshold is 0.1Q2
- Yes, the result is the low flow threshold is 0.3Q2
- Yes, the result is the low flow threshold is 0.5Q2

If a geomorphic assessment has been performed, provide title, date, and preparer:

Discussion / Additional Information: (optional)

Other Site Requirements and Constraints

When applicable, list other site requirements or constraints that will influence storm water management design, such as zoning requirements including setbacks and open space, or local codes governing minimum street width, sidewalk construction, allowable pavement types, and drainage requirements.

Previously graded site with relatively mild slopes.

Optional Additional Information or Continuation of Previous Sections As Needed

This space provided for additional information or continuation of information from previous sections as needed.

Source Control BMP Checklist for All Development Projects (Standard Projects and Priority Development Projects)		Form I-4 Model BMP Design Manual [August 31, 2015]	
Project Identification			
Project Name: Tentative Map 8504 Fanita Drive			
Permit Application Number: PA2021-4			
Source Control BMPs			
All development projects must implement source control BMPs SC-1 through SC-6 where applicable and feasible. See Chapter 4 and Appendix E of the Model BMP Design Manual for information to implement source control BMPs shown in this checklist.			
Answer each category below pursuant to the following.			
<ul style="list-style-type: none"> • "Yes" means the project will implement the source control BMP as described in Chapter 4 and/or Appendix E of the Model BMP Design Manual. Discussion / justification is not required. • "No" means the BMP is applicable to the project but it is not feasible to implement. Discussion / justification must be provided. • "N/A" means the BMP is not applicable at the project site because the project does not include the feature that is addressed by the BMP (e.g., the project has no outdoor materials storage areas). Discussion / justification may be provided. 			
Source Control Requirement		Applied?	
SC-1 Prevention of Illicit Discharges into the MS4		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
Discussion / justification if SC-1 not implemented:			
SC-2 Storm Drain Stenciling or Signage		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
Discussion / justification if SC-2 not implemented:			
SC-3 Protect Outdoor Materials Storage Areas from Rainfall, Run-On, Runoff, and Wind Dispersal		<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Discussion / justification if SC-3 not implemented: This is a residential development and there are no permanent outdoor material storage areas			
SC-4 Protect Materials Stored in Outdoor Work Areas from Rainfall, Run-On, Runoff, and Wind Dispersal		<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Discussion / justification if SC-4 not implemented: This is a residential development and there are no permanent outdoor material storage areas			

Source Control Requirement	Applied?		
SC-5 Protect Trash Storage Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Discussion / justification if SC-5 not implemented:			
<p>SC-6 Additional BMPs Based on Potential Sources of Runoff</p> <p>Pollutants (must answer for each source listed below)</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> On-site storm drain inlets <input type="checkbox"/> Interior floor drains and elevator shaft sump pumps <input checked="" type="checkbox"/> Interior parking garages <input checked="" type="checkbox"/> Need for future indoor & structural pest control <input checked="" type="checkbox"/> Landscape/Outdoor Pesticide Use <input type="checkbox"/> Pools, spas, ponds, decorative fountains, and other water features <input type="checkbox"/> Food service <input type="checkbox"/> Refuse areas <input type="checkbox"/> Industrial processes <input type="checkbox"/> Outdoor storage of equipment or materials <input type="checkbox"/> Vehicle and Equipment Cleaning <input type="checkbox"/> Vehicle/Equipment Repair and Maintenance <input type="checkbox"/> Fuel Dispensing Areas <input type="checkbox"/> Loading Docks <input checked="" type="checkbox"/> Fire Sprinkler Test Water <input type="checkbox"/> Miscellaneous Drain or Wash Water <input checked="" type="checkbox"/> Plazas, sidewalks, and parking lots 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes 	<ul style="list-style-type: none"> <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No 	<ul style="list-style-type: none"> <input type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input type="checkbox"/> N/A
Discussion / justification if SC-6 not implemented. Clearly identify which sources of runoff pollutants are discussed. Justification must be provided for <u>all</u> "No" answers shown above.			

Site Design BMP Checklist for All Development Projects (Standard Projects and Priority Development Projects)		Form I-5 Model BMP Design Manual [August 31, 2015]	
Project Identification			
Project Name: Tentative Map 8504 Fanita Drive			
Permit Application Number: PA2021-4			
Site Design BMPs			
All development projects must implement site design BMPs SD-1 through SD-8 where applicable and feasible. See Chapter 4 and Appendix E of the Model BMP Design Manual for information to implement site design BMPs shown in this checklist.			
Answer each category below pursuant to the following.			
<ul style="list-style-type: none"> • "Yes" means the project will implement the site design BMP as described in Chapter 4 and/or Appendix E of the Model BMP Design Manual. Discussion / justification is not required. • "No" means the BMP is applicable to the project but it is not feasible to implement. Discussion / justification must be provided. • "N/A" means the BMP is not applicable at the project site because the project does not include the feature that is addressed by the BMP (e.g., the project site has no existing natural areas to conserve). Discussion / justification may be provided. 			
Site Design Requirement		Applied?	
SD-1 Maintain Natural Drainage Pathways and Hydrologic Features		<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Discussion / justification if SD-1 not implemented: The Site does not contain any natural pathways or hydrologic features			
SD-2 Conserve Natural Areas, Soils, and Vegetation		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
Discussion / justification if SD-2 not implemented: The existing site will be graded to allow for the construction of 8 residential units.			
SD-3 Minimize Impervious Area		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
Discussion / justification if SD-3 not implemented:			
SD-4 Minimize Soil Compaction		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
Discussion / justification if SD-4 not implemented:			
SD-5 Impervious Area Dispersion		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
Discussion / justification if SD-5 not implemented: Rooftop downspouts will be required to drain onto adjacent landscaped areas.			

Site Design Requirement	Applied?		
SD-6 Runoff Collection	<input checked="" type="checkbox"/> Yes	No	<input type="checkbox"/> N/A
Discussion / justification if SD-6 not implemented: Runoff collection by means of biofiltration is proposed. By limiting the number of treatment facilities, maintenance and operation of the BMPs is ensured.			
SD-7 Landscaping with Native or Drought Tolerant Species	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Discussion / justification if SD-7 not implemented:			
SD-8 Harvesting and Using Precipitation	<input checked="" type="checkbox"/> Yes	No	<input type="checkbox"/> N/A
Discussion / justification if SD-8 not implemented: Rain Barrels will be used onsite.			

Summary of PDP Structural BMPs	Form I-6 (PDPs) Model BMP Design Manual [August 31, 2015]
Project Identification	
Project Name: Tentative Map 8504 Fanita Drive	
Permit Application Number: PA2021-4	
PDP Structural BMPs	
<p>All PDPs must implement structural BMPs for storm water pollutant control (see Chapter 5 of the BMP Design Manual). Selection of PDP structural BMPs for storm water pollutant control must be based on the selection process described in Chapter 5. PDPs subject to hydromodification management requirements must also implement structural BMPs for flow control for hydromodification management (see Chapter 6 of the BMP Design Manual). Both storm water pollutant control and flow control for hydromodification management can be achieved within the same structural BMP(s).</p> <p>PDP structural BMPs must be verified by the local jurisdiction at the completion of construction. This may include requiring the project owner or project owner's representative and engineer of record to certify construction of the structural BMPs (see Section 1.12 of the BMP Design Manual). PDP structural BMPs must be maintained into perpetuity, and the local jurisdiction must confirm the maintenance (see Section 7 of the BMP Design Manual).</p> <p>Use this form to provide narrative description of the general strategy for structural BMP implementation at the project site in the box below. Then complete the PDP structural BMP summary information sheet (page 3 of this form) for each structural BMP within the project (copy the BMP summary information page as many times as needed to provide summary information for each individual structural BMP).</p>	
<p>Describe the general strategy for structural BMP implementation at the site. This information must describe how the steps for selecting and designing storm water pollutant control BMPs presented in Section 5.1 of the BMP Design Manual were followed, and the results (type of BMPs selected). For projects requiring hydromodification flow control BMPs, indicate whether pollutant control and flow control BMPs are integrated or separate.</p> <p>This site will be treated by the proposed biofiltration/Bioretenion facility located at the Northeasterly corner of the project.</p> <p>Areas which entirely consist of pervious areas such as the graded slopes will be considered self-mitigating as defined in the City of Santee BMP Design Manual.</p> <p>(Continue on page 2 as necessary.)</p>	

(Page reserved for continuation of description of general strategy for structural BMP implementation at the site)

(Continued from page 1)

In selection of the biofiltration BMPs, the following steps were taken in accordance with Section 5.1 of the BMP Design Manual:

1. The preliminary design site layout consists of building structures for residential, sidewalks, parking areas, parks, stormwater treatment facilities, and landscaped areas.
 - A. The existing impervious area along the site exterior will not change drainage patterns, quantity nor quality and were not included in the DCV calculations. Fanita Drive width reduction introduced additional landscaped area increasing landscaped, pervious areas.
 - B. The Automated Worksheet B.1-1 from the San Diego County website were utilized in calculating the DCV for the DMA. The DCV calculations for the DMA are included in Attachment 1b.
2. Various sources were referenced in determining the soil characteristics and classification. Per these sources, it was determined that the site consists of Hydrologic soil type C. The sources include the NRCS Web Soil Survey, and the geotechnical study prepared by Christian Wheeler. See Attachment 1d for data obtained from the NRCS website. See the Infiltration report by Christian Wheeler.
3. After DCV and feasibility determination was completed per Steps 1-2 above, the sizes of the respective BMP was determined by the procedures detailed in the City of Santee BMP Design Manual. The latest BMP Sizing spreadsheet (V3.1) for Biofiltration BMP was completed to determine the minimum basin dimensions, ponding depths, and subsurface layer thicknesses needed to meet pollutant control standards.
4. This SWQMP is prepared as Step 5.

Maintenance agreements associated with this project will processed during the final engineering phase and are therefore not included as part of this SWQMP.

Structural BMP Summary Information

(Copy this page as needed to provide information for each individual proposed structural BMP)

Structural BMP ID No. BASIN-1

Construction Plan Sheet No. This is TM submittal. Construction plans will be provided with final plans

Type of structural BMP:

- Retention by harvest and use (HU-1)
- Retention by infiltration basin (INF-1)
- Retention by bioretention (INF-2)
- Retention by permeable pavement (INF-3)
 - Partial retention by biofiltration with partial retention (PR-1)
- Biofiltration (BF-1)
 - Biofiltration with Nutrient Sensitive Media Design (BF-2)
- Proprietary Biofiltration (BF-3) meeting all requirements of Appendix F
- Flow-thru treatment control with prior lawful approval to meet earlier PDP requirements (provide BMP type/description in discussion section below)
- Flow-thru treatment control included as pre-treatment/forebay for an onsite retention or biofiltration BMP (provide BMP type/description and indicate which onsite retention or biofiltration BMP it serves in discussion section below)
- Flow-thru treatment control with alternative compliance (provide BMP type/description in discussion section below)
- Detention pond or vault for hydromodification management
- Other (describe in discussion section below)

Purpose:

- Pollutant control only
- Hydromodification control only
- Combined pollutant control and hydromodification control
 - Pre-treatment/forebay for another structural BMP
- Other (describe in discussion section below)

Who will certify construction of this BMP? Provide name and contact information for the party responsible to sign BMP verification forms if required by the [City Engineer] (See Section 1.12 of the BMP Design Manual)	Sohaib Alagha Zenith Consultants 3111 Camino Del Rio N, San Diego, CA 92108 (619) 528-2240 alagha@zenith-consultants.com
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Who will be the final owner of this BMP?	HOA
--	-----

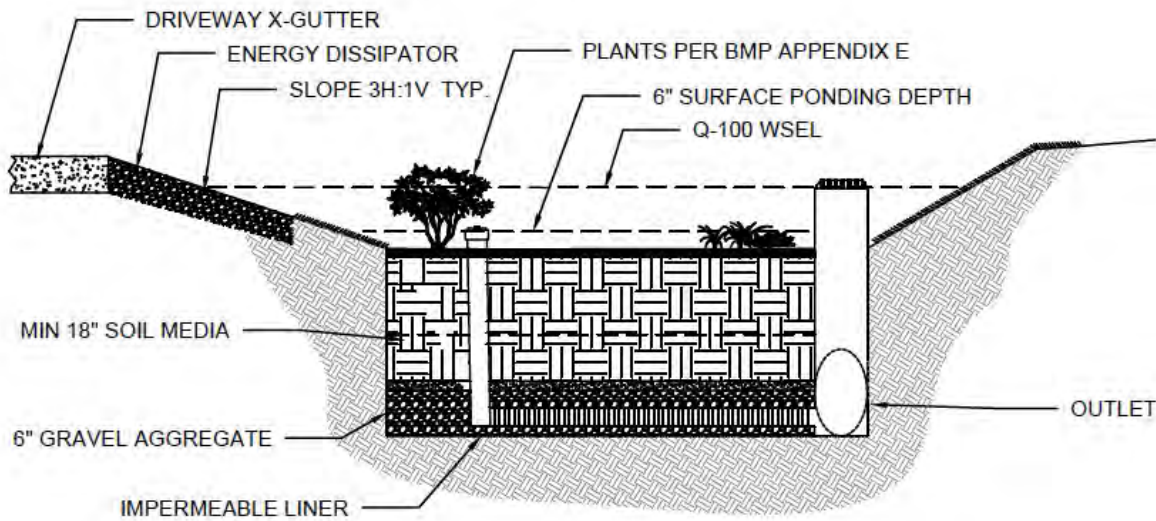
Who will maintain this BMP into perpetuity?	HOA
---	-----

What is the funding mechanism for maintenance?	HOA revenues
--	--------------

Structural BMP ID No. BASIN-1

Construction Plan Sheet No. N/A

Discussion (as needed):



BIOFILTRATION BASIN

DMA ID	DMA AREA SF	BMP ID	BMP TYPE	UNDER DRAIN DIAMETER INCH	RETENTION REQUIRED CF	RETENTION PROVIDED CF
B-2	26,887	BASIN-1	BIOFILTRATION	4"	3	26

ATTACHMENT – 1

BACKUP FOR PDP POLLUTANT CONTROL BMPS

ATTACHMENT 1 BACKUP FOR PDP POLLUTANT CONTROL BMPS

This is the cover sheet for Attachment 1.

Indicate which Items are Included behind this cover sheet:

Attachment Sequence	Contents	Checklist
Attachment 1a	DMA Exhibit (Required) See DMA Exhibit Checklist on the back of this Attachment cover sheet.	<input checked="" type="checkbox"/> Included
Attachment 1b	Tabular Summary of DMAs Showing DMA ID matching DMA Exhibit, DMA Area, and DMA Type (Required)* *Provide table in this Attachment OR on DMA Exhibit in Attachment 1a	<input checked="" type="checkbox"/> Included on DMA Exhibit in Attachment 1a <input type="checkbox"/> Included as Attachment 1b, separate from DMA Exhibit
Attachment 1c	Form I-7, Harvest and Use Feasibility Screening Checklist (Required unless the entire project will use infiltration BMPs) Refer to Appendix B.3-1 of the BMP Design Manual to complete Form I-7.	<input checked="" type="checkbox"/> Included <input type="checkbox"/> Not included
Attachment 1d	Form I-8, Categorization of Infiltration Feasibility Condition (Required unless the project will use harvest and use BMPs) Refer to Appendices C and D of the BMP Design Manual to complete Form I-8.	<input checked="" type="checkbox"/> Included <input type="checkbox"/> Not included because the entire project will use harvest and use BMPs
Attachment 1e	Pollutant Control BMP Design Worksheets / Calculations (Required) Refer to Appendices B and E of the BMP Design Manual for structural pollutant control BMP design guidelines	<input checked="" type="checkbox"/> Included

Use this checklist to ensure the required information has been included on the DMA Exhibit:

The DMA Exhibit must identify:

- Underlying hydrologic soil group
- Approximate depth to groundwater
- N/A No-Existing natural hydrologic features (watercourses, seeps, springs, wetlands)
- No Critical coarse sediment yield areas to be protected
- Existing topography and impervious areas
- Existing and proposed site drainage network and connections to drainage offsite
- No Proposed demolition
- Proposed grading
- Proposed impervious features
- Proposed design features and surface treatments used to minimize imperviousness
- Drainage management area (DMA) boundaries, DMA ID numbers, and DMA areas (square footage or acreage), and DMA type (i.e., drains to BMP, self-retaining, or self-mitigating)
- Potential pollutant source areas and corresponding required source controls (see Chapter 4, Appendix E.1, and Form I-3B)
- Structural BMPs (identify location, type of BMP, and size/detail)

ATTACHMENT – 1a

DMA EXHIBIT

**ATTACHMENT 1a / 2a DMA/BMP/HMA EXHIBIT
8504 FANITA DRIVE TENTATIVE MAP**

PROJECT NOTES

CRITICAL COURSE SEDIMENT:

THE PROJECT SITE HAS NO CRITICAL COURSE SEDIMENT YIELD AREAS TO BE PROTECTED. SEE SWQMP ATTACHMENT 2C FOR MAP.

GROUNDWATER:

NO GROUNDWATER WAS ENCOUNTERED PER THE GEOTECHNICAL REPORT GROUND WATER ESTIMATED TO BE GREATER THAN 20' HYDROLOGIC SOIL GROUP: SOIL TYPE C.

STRUCTURAL BMPs:

A SINGLE BIOFILTRATION BF-1 BASIN IS PROPOSED FOR WATER QUALITY TREATMENT & HYDROMODIFICATION.

SOURCE CONTROL BMPs:

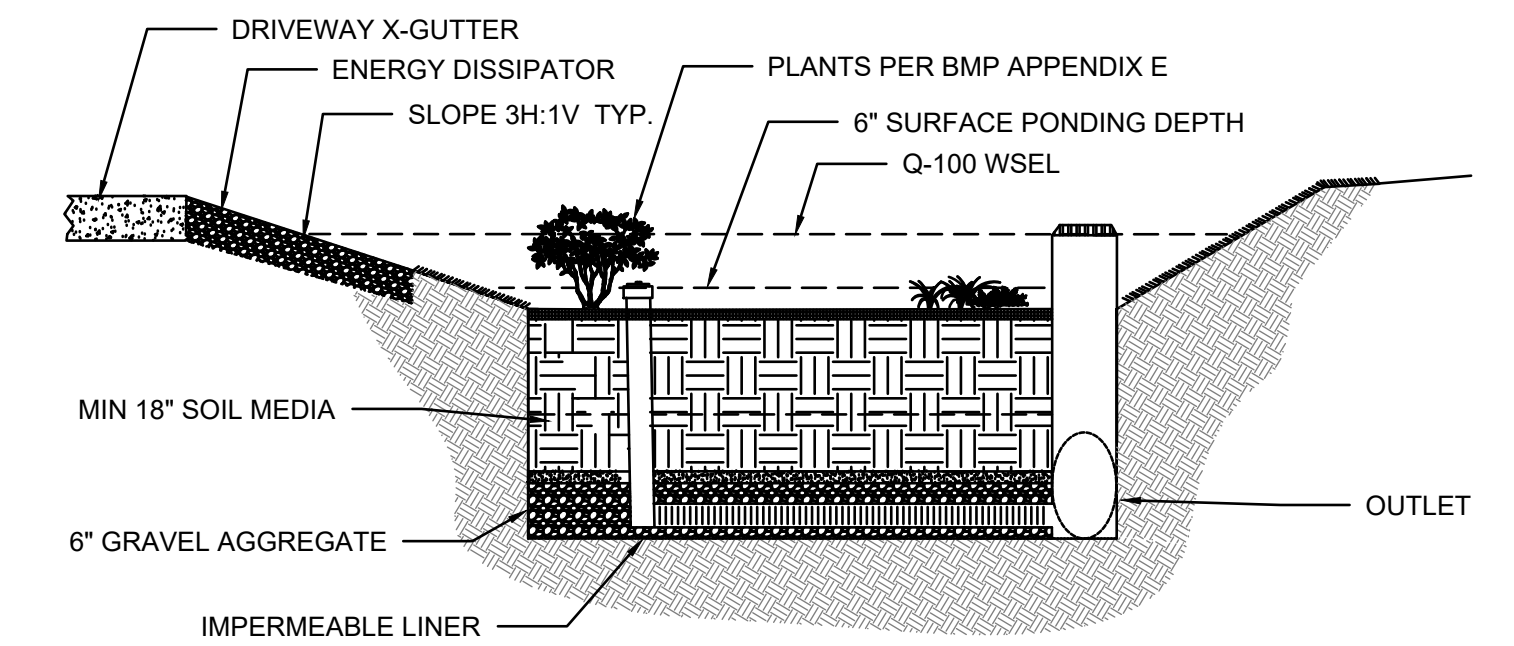
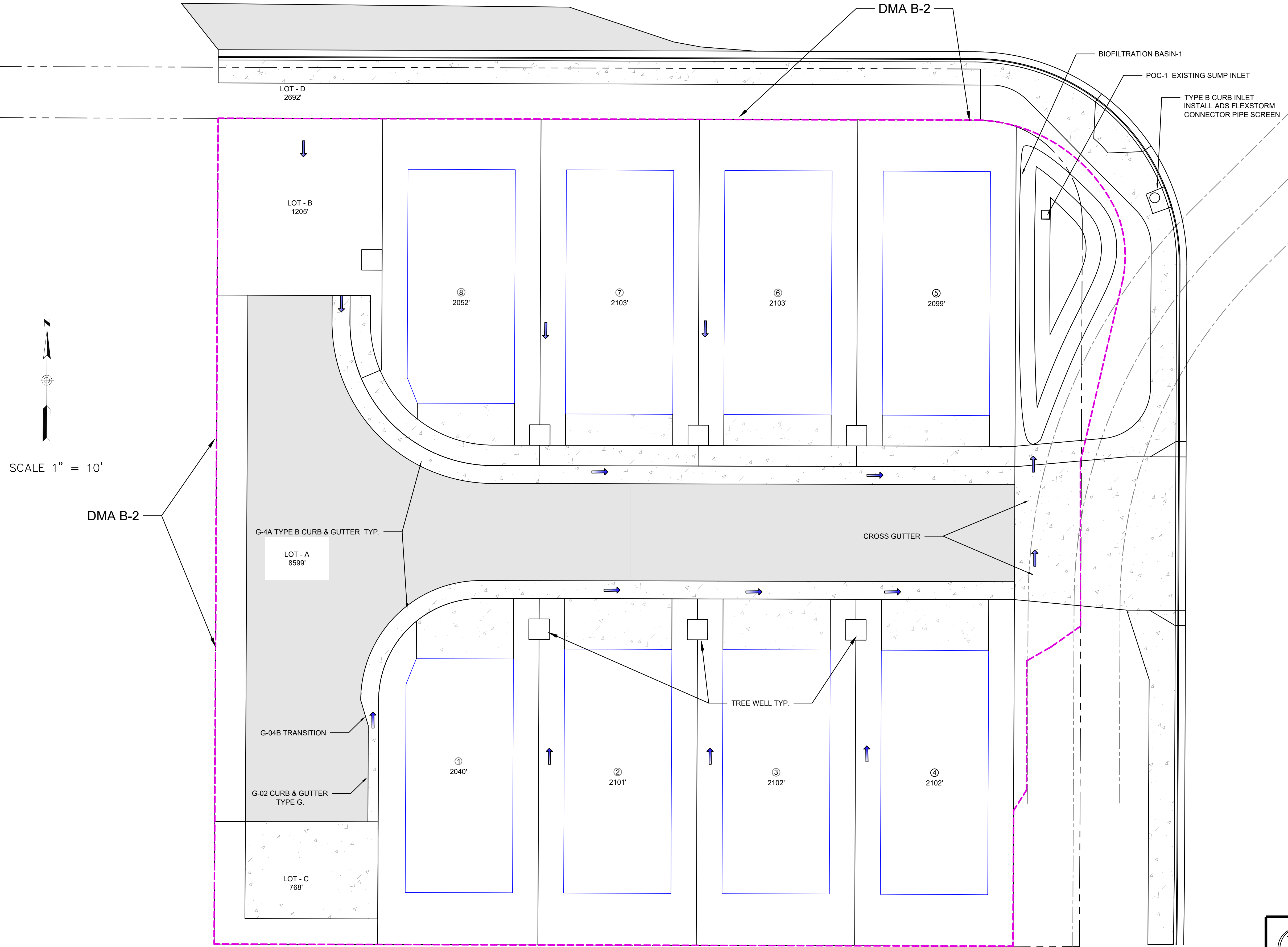
- SC-1 PREVENTION OF ILLICIT DISCHARGES INTO THE MS4
 - Smart Irrigation Systems
- SC-2 / SC-6a STORM DRAIN STENCILING OR SIGNAGE
 - Provide stenciling stating "NO DUMPING - DRAINS TO RIVER"
- SC-5 PROTECT TRASH STORAGE AREAS FROM RAINFALL
 - Trash Storage Containers Will Be Required to Have Lids
- SC-6 ON-SITE STORM DRAIN INLETS
 - Maintain Inlets
- SC-6 NEED FOR FUTURE INDOOR & STRUCTURAL PEST CONTROL
 - Provide Integrated Pest Management Information to Owners
- SC-6 LANDSCAPE/OUTDOOR PESTICIDE USE
 - Maintain Landscaping Using Minimum or No Pesticides
- SC-6 PLAZAS, SIDEWALKS AND PARKING LOTS
 - Sweep Streets Regularly

SITE DESIGN / LID BMPs:

- SD-3 MINIMIZE IMPERVIOUS AREA
 - Maximize the Amount of Open Space and Landscaping
- SD-4 MINIMIZE SOIL COMPACTION
 - Where Feasible, Use Minimum Compaction
- SD-5 IMPERVIOUS AREA DISPERSION
 - Use Splash Pads at Downspout Discharge Points SD-6 RUNOFF COLLECTION
 - Where Possible, Direct Downspout Discharge to Biofiltration Areas
- SD-7 LANDSCAPING WITH NATIVE OR DROUGHT TOLERANT SPECIES

NOTES

- 1- THE SITE WILL COMPLY WITH FULL TRASH CAPTURE REQUIREMENTS
- 2- USE ADS FLEXSTORM CONNECTOR PIPE SCREEN OR APPROVED EQUAL
- 3- ALL INLET WILL BE LABELED WITH CONCRETE STAMP STATING "NO DUMPING - DRAIN TO RIVER"
- 4- ALL DOWN SPOUTS & HVAC SYSTEMS ARE NOT PERMITTED TO CONNECT TO ANY STORM DRAIN
- 5- ALL STORM DRAIN DISCHARGES MUST DRAIN TO LANDSCAPED AREA OR CONNECTED TO SEWER
- 6- FIRE SUPPRESSION SYSTEM MUST DISCHARGE TO A SEWER CLEAN OUT



BIOFILTRATION BASIN

DMA ID	DMA AREA SF	BMP ID	BMP TYPE	UNDER DRAIN DIAMETER INCH	RETENTION REQUIRED CF	RETENTION PROVIDED CF
B-2	26.887	BASIN-1	BIOFILTRATION	4"	3	26

SCALE 1" = 10'

Tuesday, October 4, 2022 10:21:39 AM Post Development DMA-HMP Final.dwg

3111 CAMINO DEL RIO NORTH, SUITE 421
SAN DIEGO, CA 92108
PHONE: (619) 528-2240

DMA EXHIBIT

SHEET 1	CITY OF SANTEE	1 SHEETS
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PRIORITY DEVELOPMENT PROJECT BMP PLAN SHEET FOR:
8504 FANITA DRIVE TENTATIVE MAP

ATTACHMENT – 1c

FORM I-7 HARVEST & USE FEASIBILITY SCREENING CHECKLIST

Harvest and Use Feasibility Checklist

Form I-7

1. Is there a demand for harvested water (check all that apply) at the project site that is reliably present during the wet season?

- Toilet and urinal
- Landscape irrigation
- Other: _____

2. If there is a demand; estimate the anticipated average wet season demand over a period of 36 hours. Guidance for planning level demand calculations for toilet/urinal flushing and landscape irrigation is provided in Section B.3.2.

[Provide a summary of calculations here]

Project will require moderate plant water use. Per Table 0-3 of the City's BMP manual, the 36-hour irrigation demand is 1,470 Gallon per acre. The irrigated area is approximately 10,000 sf or 0.23 acres or 338 Gallon.

3. Calculate the DCV using worksheet B-2.1.

DCV = 170 (cubic feet)


3a. Is the 36 hour demand greater than or equal to the DCV?

- Yes /  No 

3b. Is the 36 hour demand greater than 0.25DCV but less than the full DCV?

- Yes  / No 

3c. Is the 36 hour demand less than 0.25DCV?

- Yes 

Harvest and use appears to be feasible. Conduct more detailed evaluation and sizing calculations to confirm that DCV can be used at an adequate rate to meet drawdown criteria.

Harvest and use may be feasible. Conduct more detailed evaluation and sizing calculations to determine feasibility. Harvest and use may only be able to be used for a portion of the site, or (optionally) the storage may need to be upsized to meet long term capture targets while draining in longer than 36 hours.

Harvest and use is considered to be infeasible.

Is harvest and use feasible based on further evaluation?

- Yes, refer to Appendix E to select and size harvest and use BMPs.
- No, select alternate BMPs.

ATTACHMENT – 1d

CATEGORIZATION OF INFILTRATION FEASIBILITY CONDITIONS

Categorization of Infiltration Feasibility Condition	Form I-8
---	-----------------

Part 1 - Full Infiltration Feasibility Screening Criteria
Would infiltration of the full design volume be feasible from a physical perspective without any undesirable consequences that cannot be reasonably mitigated?

Criteria	Screening Question	Yes	No
1	Is the estimated reliable infiltration rate below proposed facility locations greater than 0.5 inches per hour? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.		<input checked="" type="checkbox"/>

Provide basis:

An infiltration rate assessment has been performed for the soils beneath the subject site as presented our Preliminary Storm Water Infiltration Feasibility Study (CWE 2210452.02). The measured percolation rates were converted to infiltration rates using the Porchet Method. The City of Santee BMP Design Manual states that “a maximum factor of safety (FOS) of 2.0 is recommended for infiltration feasibility screening such that an artificially high factor of safety cannot be used to inappropriately rule out infiltration, unless justified.” Field infiltration rates were negligible at 0.01 inches per hour. Using a FOS of 2.0, the average infiltration rate will decrease to 0.005 inches per hour.

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.

2	Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2.		<input checked="" type="checkbox"/>
---	--	--	-------------------------------------

Provide basis:

The proposed biofiltration basin is located at the lowest point of the proposed development. Infiltration is not recommended nor feasible.

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.

Part 2 – Partial Infiltration vs. No Infiltration Feasibility Screening Criteria

Would infiltration of water in any appreciable amount be physically feasible without any negative consequences that cannot be reasonably mitigated?

Criteria	Screening Question	Yes	No
5	Do soil and geologic conditions allow for infiltration in any appreciable rate or volume? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.		<input checked="" type="checkbox"/>

Provide basis:
 An infiltration rate assessment has been performed for the soils beneath the subject site as presented our Preliminary Storm Water Infiltration Feasibility Study (CWE 2210452.02). The measured percolation rates were converted to infiltration rates using the Porchet Method. The City of Santee BMP Design Manual states that “a maximum factor of safety (FOS) of 2.0 is recommended for infiltration feasibility screening such that an artificially high factor of safety cannot be used to inappropriately rule out infiltration, unless justified.” Field infiltration rates were negligible at 0.01 inches per hour. Using a FOS of 2.0, the average infiltration rate will decrease to 0.005 inches per hour. We do not think that an infiltration rate of 0.005 inches per hour can be considered an appreciable rate and the site should be considered to have a no infiltration category. In addition the most recent edition of the City of San Diego BMP Design Manual (2018) considers a reliable infiltration rate (i.e. average measured rate/2) of less than 0.05 inches per hour as a no infiltration condition.

6	Can Infiltration in any appreciable quantity be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2.		<input checked="" type="checkbox"/>
---	---	--	-------------------------------------

Provide basis:
 An infiltration rate assessment has been performed for the subject site. Based on the underlying soil conditions and our recommendations presented in our report, we anticipate that infiltration into the expansive soils on-site cannot be mitigated to an acceptable level.
 C.2.1 A site specific geotechnical investigation was performed.
 C.2.2 The site is underlain by slopewash and alluvium that were found to consist of sandy clay (CL) and fat clay (CH). The slopewash and alluvium were found to have a high expansion potential (EI=107 to 122) and are relatively impermeable with very low infiltration rates. In our opinion, infiltration into these materials will result in heave and the lateral migration of water. This condition cannot be reasonably mitigated to an acceptable level. As such, infiltration into the clayey slopewash or alluvium is not recommended.
 C.2.3 The site is relatively flat and in our opinion the risk of slope instability is low.
 C.2.4 A vertical liner will be used to prevent lateral migration into nearby utility trenches.
 C.2.5 Based on the anticipated depth to groundwater, the potential for groundwater mounding is low.
 C.2.6 BMPs should be set back at least 10 feet from any structure, retaining wall or settlement sensitive improvements.

Form I-8 Page 4 of 4

Criteria	Screening Question	Yes	No
7	<p>Can Infiltration in any appreciable quantity be allowed without posing significant risk for groundwater related concerns (shallow water table, storm water pollutants or other factors)? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.</p>	<input checked="" type="checkbox"/>	
<p>Provide basis: Based on our review of items presented in Appendix C.3, we anticipate that infiltration in any appreciable quantity can be allowed without increasing risk of groundwater contamination that cannot be mitigated to an acceptable level. C.3.1 Based on the information found on http://geotracker.waterboards.ca.gov/, there are no sites with ongoing cleanup efforts located within 100 feet of the proposed site. C.3.2 No groundwater or seepage was encountered in our subsurface explorations. The estimated high seasonal groundwater level is expected to be greater than 50 feet below existing site grades. We anticipate that seasonal high groundwater will not encroach within 10 feet of the base of the proposed BMPs. C.3.3 The infiltration BMPs should be set back at least 100 feet from any wells. We have no knowledge of any wells at the site. C.3.4 We have no knowledge of the site being previously used for industrial use. C.3.5 We recommend that infiltration activities be coordinated with the applicable groundwater management agency.</p> <p>Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.</p>			
8	<p>Can infiltration be allowed without violating downstream water rights? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.</p>		<input checked="" type="checkbox"/>
<p>Provide basis: Per Christian Wheeler infiltration study dated April 1, 2022, the average infiltration rate at the site is only 0.005 inch per hour. Infiltration is not feasible and thus no changes are proposed or contemplated to any downstream water rights, to the extent existing.</p> <p>Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.</p>			
Part 2 Result*	<p>If all answers from row 1-4 are yes then partial infiltration design is potentially feasible. The feasibility screening category is Partial Infiltration.</p> <p>If any answer from row 5-8 is no, then infiltration of any volume is considered to be infeasible within the drainage area. The feasibility screening category is No Infiltration.</p>		Partial Infiltration is feasible.

*To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by Agency/Jurisdictions to substantiate findings

ATTACHMENT – 1e

POLLUTION CONTROL BMP DESIGN WORKSHEETS

Automated Worksheet B.1: Calculation of Design Capture Volume (V2.0)

Category	#	Description	<i>i</i>	Units
Standard Drainage Basin Inputs	1	Drainage Basin ID or Name	B-2	unitless
	2	85th Percentile 24-hr Storm Depth	0.49	inches
	3	Impervious Surfaces <u>Not Directed to Dispersion Area</u> (C=0.90)	9,017	sq-ft
	4	Semi-Pervious Surfaces <u>Not Serving as Dispersion Area</u> (C=0.30)		sq-ft
	5	Engineered Pervious Surfaces <u>Not Serving as Dispersion Area</u> (C=0.10)		sq-ft
	6	Natural Type A Soil <u>Not Serving as Dispersion Area</u> (C=0.10)		sq-ft
	7	Natural Type B Soil <u>Not Serving as Dispersion Area</u> (C=0.14)		sq-ft
	8	Natural Type C Soil <u>Not Serving as Dispersion Area</u> (C=0.23)		sq-ft
	9	Natural Type D Soil <u>Not Serving as Dispersion Area</u> (C=0.30)		sq-ft
Dispersion Area, Tree Well & Rain Barrel Inputs (Optional)	10	Does Tributary Incorporate Dispersion, Tree Wells, and/or Rain Barrels?	Yes	yes/no
	11	Impervious Surfaces Directed to Dispersion Area per SD-B (Ci=0.90)	7,675	sq-ft
	12	Semi-Pervious Surfaces Serving as Dispersion Area per SD-B (Ci=0.30)		sq-ft
	13	Engineered Pervious Surfaces Serving as Dispersion Area per SD-B (Ci=0.10)		sq-ft
	14	Natural Type A Soil Serving as Dispersion Area per SD-B (Ci=0.10)		sq-ft
	15	Natural Type B Soil Serving as Dispersion Area per SD-B (Ci=0.14)		sq-ft
	16	Natural Type C Soil Serving as Dispersion Area per SD-B (Ci=0.23)	10,195	sq-ft
	17	Natural Type D Soil Serving as Dispersion Area per SD-B (Ci=0.30)		sq-ft
	18	Number of Tree Wells Proposed per SD-A	7	#
	19	Average Mature Tree Canopy Diameter	10	ft
	20	Number of Rain Barrels Proposed per SD-E	0	#
Initial Runoff Factor Calculation	21	Average Rain Barrel Size	0	gal
	22	Total Tributary Area	26,887	sq-ft
	23	Initial Runoff Factor for Standard Drainage Areas	0.90	unitless
	24	Initial Runoff Factor for Dispersed & Dispersion Areas	0.52	unitless
	25	Initial Weighted Runoff Factor	0.65	unitless
	26	Initial Design Capture Volume	714	cubic-feet
Dispersion Area Adjustments	27	Total Impervious Area Dispersed to Pervious Surface	7,675	sq-ft
	28	Total Pervious Dispersion Area	10,195	sq-ft
	29	Ratio of Dispersed Impervious Area to Pervious Dispersion Area	0.80	ratio
	30	Adjustment Factor for Dispersed & Dispersion Areas	0.31	ratio
	31	Runoff Factor After Dispersion Techniques	0.41	unitless
	32	Design Capture Volume After Dispersion Techniques	450	cubic-feet
Tree & Barrel Adjustments	33	Total Tree Well Volume Reduction	280	cubic-feet
	34	Total Rain Barrel Volume Reduction	0	cubic-feet
Results	35	Final Adjusted Runoff Factor	0.15	unitless
	36	Final Effective Tributary Area	4,033	sq-ft
	37	Initial Design Capture Volume Retained by Site Design Elements	544	cubic-feet
	38	Final Design Capture Volume Tributary to BMP	170	cubic-feet
No Warning Messages				

Automated Worksheet B.2: Retention Requirements (V2.0)

Category	#	Description	<i>i</i>	Units
Basic Analysis	1	Drainage Basin ID or Name	B-2	unitless
	2	85th Percentile Rainfall Depth	0.49	inches
	3	Predominant NRCS Soil Type Within BMP Location	C	unitless
	4	Is proposed BMP location Restricted or Unrestricted for Infiltration Activities?	Unrestricted	unitless
	5	Nature of Restriction	n/a	unitless
	6	Do Minimum Retention Requirements Apply to this Project?	Yes	yes/no
	7	Are Habitable Structures Greater than 9 Stories Proposed?	No	yes/no
Advanced Analysis	8	Has Geotechnical Engineer Performed an Infiltration Analysis?	Yes	yes/no
	9	Design Infiltration Rate Recommended by Geotechnical Engineer	0.005	in/hr
Result	10	Design Infiltration Rate Used To Determine Retention Requirements	0.005	in/hr
	11	Percent of Average Annual Runoff that Must be Retained within DMA	4.5%	percentage
	12	Fraction of DCV Requiring Retention	0.02	ratio
	13	Required Retention Volume	3	cubic-feet
<u>No Warning Messages</u>				

Automated Worksheet B.3: BMP Performance (V2.0)

Category	#	Description	<i>i</i>	Units
BMP Inputs	1	Drainage Basin ID or Name	B-2	sq-ft
	2	Design Infiltration Rate Recommended	0.005	in/hr
	3	Design Capture Volume Tributary to BMP	170	cubic-feet
	4	Is BMP Vegetated or Unvegetated?	Vegetated	unitless
	5	Is BMP Impermeably Lined or Unlined?	Lined	unitless
	6	Does BMP Have an Underdrain?	Underdrain	unitless
	7	Does BMP Utilize Standard or Specialized Media?	Standard	unitless
	8	Provided Surface Area	125	sq-ft
	9	Provided Surface Ponding Depth	6	inches
	10	Provided Soil Media Thickness	18	inches
	11	Provided Gravel Thickness (Total Thickness)	6	inches
	12	Underdrain Offset	3	inches
	13	Diameter of Underdrain or Hydromod Orifice (Select Smallest)	4.00	inches
	14	Specialized Soil Media Filtration Rate		in/hr
	15	Specialized Soil Media Pore Space for Retention		unitless
	16	Specialized Soil Media Pore Space for Biofiltration		unitless
	17	Specialized Gravel Media Pore Space		unitless
Retention Calculations	18	Volume Infiltrated Over 6 Hour Storm	0	cubic-feet
	19	Ponding Pore Space Available for Retention	0.00	unitless
	20	Soil Media Pore Space Available for Retention	0.05	unitless
	21	Gravel Pore Space Available for Retention (Above Underdrain)	0.00	unitless
	22	Gravel Pore Space Available for Retention (Below Underdrain)	0.40	unitless
	23	Effective Retention Depth	2.10	inches
	24	Fraction of DCV Retained (Independent of Drawdown Time)	0.13	ratio
	25	Calculated Retention Storage Drawdown Time	120	hours
	26	Efficacy of Retention Processes	0.15	ratio
	27	Volume Retained by BMP (Considering Drawdown Time)	26	cubic-feet
	28	Design Capture Volume Remaining for Biofiltration	144	cubic-feet
Biofiltration Calculations	29	Max Hydromod Flow Rate through Underdrain	0.6065	cfs
	30	Max Soil Filtration Rate Allowed by Underdrain Orifice	209.60	in/hr
	31	Soil Media Filtration Rate per Specifications	5.00	in/hr
	32	Soil Media Filtration Rate to be used for Sizing	5.00	in/hr
	33	Depth Biofiltered Over 6 Hour Storm	30.00	inches
	34	Ponding Pore Space Available for Biofiltration	1.00	unitless
	35	Soil Media Pore Space Available for Biofiltration	0.20	unitless
	36	Gravel Pore Space Available for Biofiltration (Above Underdrain)	0.40	unitless
	37	Effective Depth of Biofiltration Storage	10.80	inches
	38	Drawdown Time for Surface Ponding	1	hours
	39	Drawdown Time for Effective Biofiltration Depth	2	hours
	40	Total Depth Biofiltered	40.80	inches
	41	Option 1 - Biofilter 1.50 DCV: Target Volume	217	cubic-feet
	42	Option 1 - Provided Biofiltration Volume	217	cubic-feet
	43	Option 2 - Store 0.75 DCV: Target Volume	108	cubic-feet
	44	Option 2 - Provided Storage Volume	108	cubic-feet
	45	Portion of Biofiltration Performance Standard Satisfied	1.00	ratio
Result	46	Do Site Design Elements and BMPs Satisfy Annual Retention Requirements?	Yes	yes/no
	47	Overall Portion of Performance Standard Satisfied (BMP Efficacy Factor)	1.00	ratio
	48	Deficit of Effectively Treated Stormwater	0	cubic-feet

No Warning Messages

ATTACHMENT – 2

BACKUP FOR PDP HYDROMODIFICATION CONTROL MEASURES

ATTACHMENT 2

BACKUP FOR PDP HYDROMODIFICATION CONTROL MEASURES

This is the cover sheet for Attachment 2.

- Mark this box if this attachment is empty because the project is exempt from PDP hydromodification management requirements.

Indicate which Items are Included behind this cover sheet:

Attachment Sequence	Contents	Checklist
Attachment 2a	Hydromodification Management Exhibit (Required)	<input checked="" type="checkbox"/> Included See Hydromodification Management Exhibit Checklist on the back of this Attachment cover sheet.
Attachment 2b	Management of Critical Coarse Sediment Yield Areas (WMAA Exhibit is required, additional analyses are optional) See Section 6.2 of the BMP Design Manual.	<input checked="" type="checkbox"/> Exhibit showing project drainage boundaries marked on WMAA Critical Coarse Sediment Yield Area Map (Required) Optional analyses for Critical Coarse Sediment Yield Area Determination <input type="checkbox"/> 6.2.1 Verification of Geomorphic Landscape Units Onsite <input type="checkbox"/> 6.2.2 Downstream Systems Sensitivity to Coarse Sediment <input type="checkbox"/> 6.2.3 Optional Additional Analysis of Potential Critical Coarse Sediment Yield Areas Onsite
Attachment 2c	Geomorphic Assessment of Receiving Channels (Optional) See Section 6.3.4 of the BMP Design Manual.	<input checked="" type="checkbox"/> Not performed <input type="checkbox"/> Included <input type="checkbox"/> Submitted as separate stand-alone document
Attachment 2d	Flow Control Facility Design, including Structural BMP Drawdown Calculations and Overflow Design Summary (Required) See Chapter 6 and Appendix G of the BMP Design Manual	<input checked="" type="checkbox"/> Included <input type="checkbox"/> Submitted as separate stand-alone document
Attachment 2e	Vector Control Plan (Required when structural BMPs will not drain in 96 hours)	<input type="checkbox"/> Included <input checked="" type="checkbox"/> Not required because BMPs will drain in less than 96 hours

Use this checklist to ensure the required information has been included on the Hydromodification Management Exhibit:

The Hydromodification Management Exhibit must identify:

- Underlying hydrologic soil group
- Approximate depth to groundwater (No groundwater)
- Existing natural hydrologic features (watercourses, seeps, springs, wetlands) NONE.
- Critical coarse sediment yield areas to be protected NONE
- Existing topography
- Existing and proposed site drainage network and connections to drainage offsite
- Proposed grading
- Proposed impervious features
- Proposed design features and surface treatments used to minimize imperviousness
- Point(s) of Compliance (POC) for Hydromodification Management
- Existing and proposed drainage boundary and drainage area to each POC (when necessary, create separate exhibits for pre-development and post-project conditions)
- Structural BMPs for hydromodification management (identify location, type of BMP, and size/detail)

ATTACHMENT – 2a

HYDROMODIFICATION MANAGEMENT EXHIBIT

ATTACHMENT 1a / 2a DMA/BMP/HMA EXHIBIT 8504 FANITA DRIVE TENTATIVE MAP

PROJECT NOTES

CRITICAL COURSE SEDIMENT:

THE PROJECT SITE HAS NO CRITICAL COURSE SEDIMENT YIELD AREAS TO BE PROTECTED. SEE SWQMP ATTACHMENT 2C FOR MAP.

GROUNDWATER:

NO GROUNDWATER WAS ENCOUNTERED PER THE GEOTECHNICAL REPORT. GROUND WATER ESTIMATED TO BE GREATER THAN 20' HYDROLOGIC SOIL GROUP: SOIL TYPE C.

STRUCTURAL BMPs:

A SINGLE BIOFILTRATION BF-1 BASIN IS PROPOSED FOR WATER QUALITY TREATMENT & HYDROMODIFICATION.

SOURCE CONTROL BMPs:

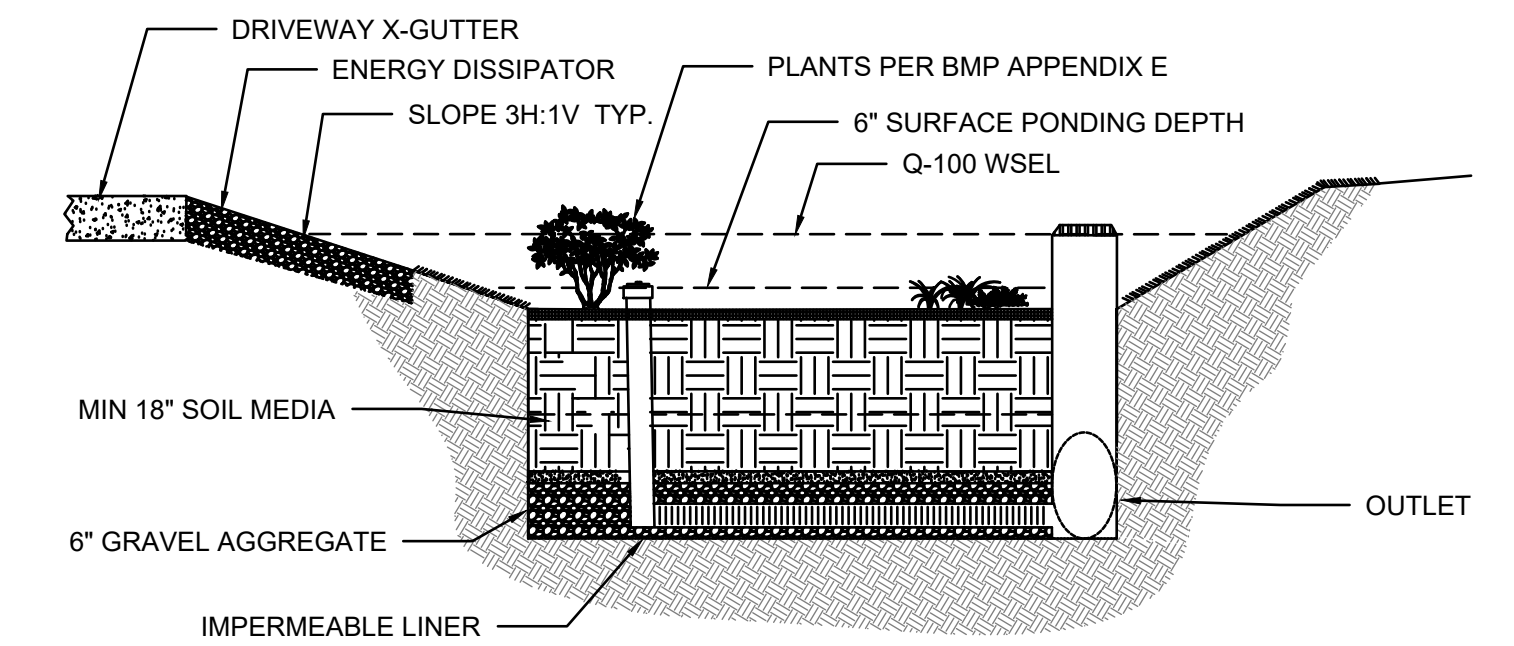
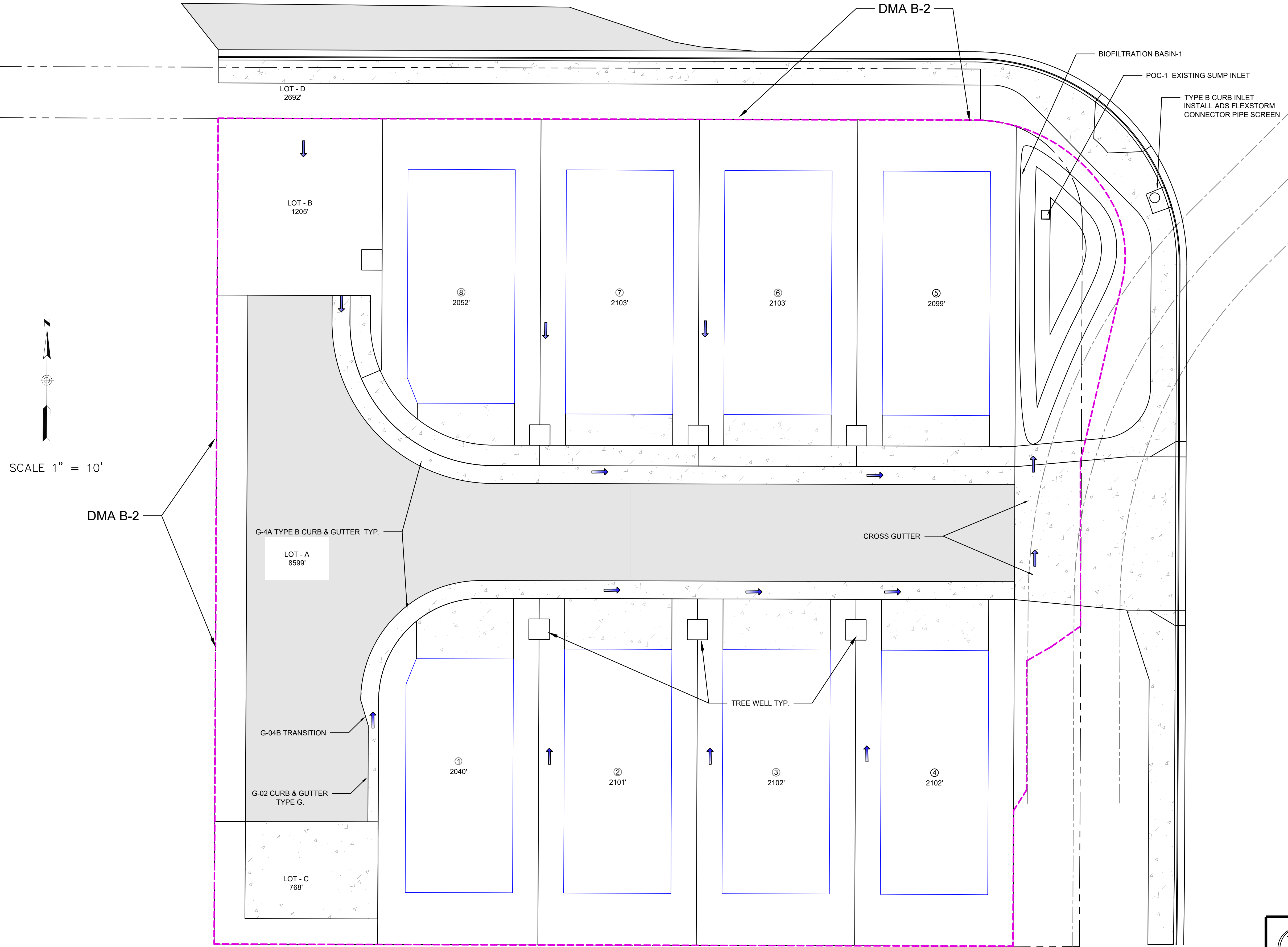
- SC-1 PREVENTION OF ILLICIT DISCHARGES INTO THE MS4
 - Smart Irrigation Systems
- SC-2 / SC-6a STORM DRAIN STENCILING OR SIGNAGE
 - Provide stenciling stating "NO DUMPING - DRAINS TO RIVER"
- SC-5 PROTECT TRASH STORAGE AREAS FROM RAINFALL
 - Trash Storage Containers Will Be Required to Have Lids
- SC-6 ON-SITE STORM DRAIN INLETS
 - Maintain Inlets
- SC-6 NEED FOR FUTURE INDOOR & STRUCTURAL PEST CONTROL
 - Provide Integrated Pest Management Information to Owners
- SC-6 LANDSCAPE/OUTDOOR PESTICIDE USE
 - Maintain Landscaping Using Minimum or No Pesticides
- SC-6 PLAZAS, SIDEWALKS AND PARKING LOTS
 - Sweep Streets Regularly

SITE DESIGN / LID BMPs:

- SD-3 MINIMIZE IMPERVIOUS AREA
 - Maximize the Amount of Open Space and Landscaping
- SD-4 MINIMIZE SOIL COMPACTION
 - Where Feasible, Use Minimum Compaction
- SD-5 IMPERVIOUS AREA DISPERSION
 - Use Splash Pads at Downspout Discharge Points SD-6 RUNOFF COLLECTION
 - Where Possible, Direct Downspout Discharge to Biofiltration Areas
- SD-7 LANDSCAPING WITH NATIVE OR DROUGHT TOLERANT SPECIES

NOTES

- 1- THE SITE WILL COMPLY WITH FULL TRASH CAPTURE REQUIREMENTS
- 2- USE ADS FLEXSTORM CONNECTOR PIPE SCREEN OR APPROVED EQUAL
- 3- ALL INLET WILL BE LABELED WITH CONCRETE STAMP STATING "NO DUMPING - DRAIN TO RIVER"
- 4- ALL DOWN SPOUTS & HVAC SYSTEMS ARE NOT PERMITTED TO CONNECT TO ANY STORM DRAIN
- 5- ALL STORM DRAIN DISCHARGES MUST DRAIN TO LANDSCAPED AREA OR CONNECTED TO SEWER
- 6- FIRE SUPPRESSION SYSTEM MUST DISCHARGE TO A SEWER CLEAN OUT



BIOFILTRATION BASIN

DMA ID	DMA AREA SF	BMP ID	BMP TYPE	UNDER DRAIN DIAMETER INCH	RETENTION REQUIRED CF	RETENTION PROVIDED CF
B-2	26.887	BASIN-1	BIOFILTRATION	4"	3	26

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DMA EXHIBIT

SHEET 1	CITY OF SANTEE	1 SHEETS
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PRIORITY DEVELOPMENT PROJECT BMP PLAN SHEET FOR:
8504 FANITA DRIVE TENTATIVE MAP

Tuesday, October 4, 2022 10:21:39 AM Post Development DMA-HMP Final.dwg

ATTACHMENT – 2b

MANAGEMENT OF CRITICAL COARSE SEDIMENT YIELD AREAS

Attachment 2b



ATTACHMENT – 2d

FLOW CONTROL FACILITY DESIGN

Automated Spreadsheet Calculation for Worksheet A.2: Biofiltration BMP Efficacy Factor Determination for Water Quality Equivalency (Version 1.0)

Category	#	Description	Value	Units	Notes
BMP Inputs	0	Effective Tributary Area	4,033	sq-ft	User Input (Tributary Runoff Coefficient x Tributary Area)
	1	Design Capture Volume Tributary to BMP	170	cubic-feet	User Input from BMPDM
	2	Provided BMP Surface Area	125	sq-ft	User Input, must be ≥ 3% of Effective Tributary Area.
	3	Provided Surface Ponding Depth	6	inches	User Input
	4	Provided Soil Media Thickness	18	inches	User Input, 18 inches minimum
	5	Provided Gravel Storage Thickness	6	inches	User Input, use a value of zero if gravel does not cover entire bottom.
	6	Hydromodification Orifice Diameter of Underdrain	4.0	inches	User Input, Select n/a if no hydromodification flow control is provided
Biofiltration Calculations	7	Max Hydromod Flow Rate through Underdrain	0.642	CFS	If flow controls are provided, calculate per orifice equation below
	8	Max Soil Filtration Rate Allowed by Underdrain Orifice	221.82	in/hr	If flow controls are provided, calculate as [(Line 7 x 12 x 3600)/Line 2]
	9	Soil Media Filtration Rate	5.00	in/hr	Default = 5.00
	10	Soil Media Filtration Rate to be used for Sizing	5.00	in/hr	Minimum of Line 8 or Line 9
	11	Depth Biofiltered Over 6 Hour Storm	30.00	inches	[Line 10 x 6 Hours]
	12	Soil Media Pore Space	0.30	-	Default = 0.30 for Biofiltration-Only BMPs
	13	Gravel Pore Space	0.40	-	Default = 0.40
	14	Effective Depth of Biofiltration Storage	13.8	inches	[Line 3 + (Line 4 x Line 12) + (Line 5 x Line 13)]
	15	Drawdown Time for Surface Ponding	1	hours	[Line 3 / Line 10]
	16	Drawdown Time for Entire Biofiltration Basin	3	hours	[Line 14 / Line 10]
	17	Total Depth Biofiltered	43.80	inches	[Line 11 + Line 14]
	18	Option 1 - Biofilter 1.50 DCV: Target Volume	255	cubic-feet	[1.50 x Line 1]
	19	Option 1 - Provided Biofiltration Volume	255	cubic-feet	[Minimum of Line 18 or [(Line 17/12) x Line 2]]
	20	Option 2 - Store 0.75 DCV: Target Volume	128	cubic-feet	[0.75 x Line 1]
	21	Option 2 - Provided Storage Volume	128	cubic-feet	[Minimum of Line 20 or [(Line 14/12) x Line 2]]
	22	Provided Capture for Biofiltration BMP	1.50	ratio	[Maximum of (1.50 x Line 19/Line 18) or (1.50 x Line 21/Line 20)]
	23	Biofiltration BMP Efficacy Factor for Use in WQE Formula	1.00	ratio	[Line 22 x 0.666]

Notes:

1. Applicants must provide user input for yellow shaded cells. Values for all other cells will be automatically generated.

2. Refer to **Section 2.3.1.3** of the guidance document for additional discussion of BMP Efficacy Factors.

3. Orifice Equation: $Q = CA\sqrt{2gh}$

Where Q: Flow Rate (cfs), C: Discharge Coefficient (0.60), A: Area of Orifice Opening (ft²), g: acceleration of gravity (ft/s²), and h: head difference across orifice (ft)

ATTACHMENT – 3

Structural BMP Maintenance Information

ATTACHMENT 3
Structural BMP Maintenance Information

This is the cover sheet for Attachment 3.

Indicate which Items are Included behind this cover sheet:

Attachment Sequence	Contents	Checklist
Attachment 3a	Structural BMP Maintenance Thresholds and Actions (Required)	<input checked="" type="checkbox"/> Included See Structural BMP Maintenance Information Checklist on the back of this Attachment cover sheet.
Attachment 3b	Draft Maintenance Agreement (when applicable)	<input type="checkbox"/> Included <input checked="" type="checkbox"/> Not Applicable

Use this checklist to ensure the required information has been included in the Structural BMP Maintenance Information Attachment:

Preliminary Design / Planning / CEQA level submittal:

Attachment 3a must identify:

- Typical maintenance indicators and actions for proposed structural BMP(s) based on Section 7.7 of the BMP Design Manual

Attachment 3b is not required for preliminary design / planning / CEQA level submittal.

Final Design level submittal:

Attachment 3a must identify:

- Specific maintenance indicators and actions for proposed structural BMP(s). This shall be based on Section 7.7 of the BMP Design Manual and enhanced to reflect actual proposed components of the structural BMP(s)
- How to access the structural BMP(s) to inspect and perform maintenance
- Features that are provided to facilitate inspection (e.g., observation ports, cleanouts, silt posts, or other features that allow the inspector to view necessary components of the structural BMP and compare to maintenance thresholds)
- Manufacturer and part number for proprietary parts of structural BMP(s) when applicable
- Maintenance thresholds specific to the structural BMP(s), with a location-specific frame of reference (e.g., level of accumulated materials that triggers removal of the materials, to be identified based on viewing marks on silt posts or measured with a survey rod with respect to a fixed benchmark within the BMP)
- Recommended equipment to perform maintenance
- When applicable, necessary special training or certification requirements for inspection and maintenance personnel such as confined space entry or hazardous waste management

Attachment 3b: For private entity operation and maintenance, Attachment 3b shall include a draft maintenance agreement in the local jurisdiction's standard format (PDP applicant to contact the [City Engineer] to obtain the current maintenance agreement forms).

TABLE 0-2. Maintenance Indicators and Actions for Vegetated BMPs

Typical Maintenance Indicator(s) for Vegetated BMPs	Maintenance Actions
Accumulation of sediment (sedimentation), litter, or debris	Remove and properly dispose of accumulated materials, without damage to the vegetation.
Poor vegetation establishment	Re-seed, re-plant, or re-establish vegetation per original plans, without the use of chemical applications.
Overgrown vegetation	Mow or trim as appropriate, but not less than the design height of the vegetation per original plans (e.g. a vegetated swale may require a minimum vegetation height).
Erosion due to concentrated irrigation flow	Repair/re-seed/re-plant eroded areas and adjust the irrigation system.
Erosion due to concentrated storm water runoff flow	Repair/re-seed/re-plant eroded areas, and make appropriate corrective measures such as retilling the soil, replacing or amending the soil media, adding erosion control BMPs, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the City Engineer shall be contacted prior to any additional repairs or reconstruction. Any modifications to the existing approved SWQMP must be reviewed and approved by the City in advance.
Standing water in vegetated swales	Take appropriate corrective measures such as adjusting irrigation system, removing obstructions of debris or invasive vegetation, loosening or replacing top soil to allow for better infiltration, or minor re-grading for proper drainage. If the issue is not corrected by restoring the BMP to the original plan and grade, the City Engineer shall be contacted prior to any additional repairs or reconstruction. Any modifications to the existing approved SWQMP must be reviewed and approved by the City in advance.
Standing water in bioretention, biofiltration with partial retention, or biofiltration areas, or flow-through planter boxes for longer than 96 hours following a storm event*	Make appropriate corrective measures such as adjusting irrigation system, removing obstructions of debris or invasive vegetation, clearing underdrains (where applicable), or repairing/replacing clogged or compacted soils.
Obstructed inlet or outlet structure	Clear obstructions and properly dispose of materials.
Damage to structural components such as weirs, inlet or outlet structures	Repair or replace as applicable.
*These BMPs typically include a surface ponding layer as part of their function which may take no longer than 96 hours to drain following a storm event.	

TABLE 0-3. Maintenance Indicators and Actions for Non-Vegetated Infiltration BMPs

Typical Maintenance Indicator(s) for Non-Vegetated Infiltration BMPs	Maintenance Actions
Accumulation of sediment, litter, or debris in infiltration basin, pre-treatment device, or on permeable pavement surface	Remove and properly dispose accumulated materials. Clean permeable pavements per product specifications.
Standing water in infiltration basin without subsurface infiltration gallery for longer than 96 hours following a storm event	Remove and replace clogged surface soils. The City may require the development and implementation of a Vector Management Plan.
Standing water in subsurface infiltration gallery for longer than 96 hours following a storm event	This condition requires investigation of why infiltration is not occurring. If feasible, corrective action shall be taken to restore infiltration (e.g. flush fine sediment or remove and replace clogged soils). BMP may require retrofit if infiltration cannot be restored. If retrofit is deemed necessary, the City Engineer shall be contacted prior to any repairs or reconstruction. The City may require the development and implementation of a Vector Management Plan.
Standing water in permeable paving area	Provide regular maintenance per product specifications. Flush fine sediment from paving and subsurface gravel. Provide routine vacuuming of permeable paving areas to prevent clogging.
Damage to permeable paving surface	Repair or replace damaged surface as appropriate. Do not allow permeable pavements to be sealed, paved over, or removed. Any change to the materials selected, size, or placement must be reviewed and approved by the City Engineer prior to proceeding with any modifications.
<p>Note: When inspection or maintenance indicates sediment is accumulating in an infiltration BMP, the DMA draining to the infiltration BMP should be examined to determine the source of the sediment, and corrective measures should be made (i.e.: implementing erosion control BMPs) to minimize the sediment supply.</p>	

7.7.3 Maintenance of Non-Vegetated Filtration BMPs

"Non-vegetated filtration BMPs" include media filters (FT-2) and sand filters (FT-3). These BMPs function by passing runoff through the media to remove pollutants. The project civil engineer is responsible for determining which maintenance indicators and actions shown in Table 7-4 are applicable based on the components of the structural BMP.

TABLE 0-4. Maintenance Indicators and Actions for Filtration BMPs

Typical Maintenance Indicator(s) for Filtration BMPs	Maintenance Actions
Accumulation of sediment, litter, or debris	Remove and properly dispose accumulated materials.
Obstructed inlet or outlet structure	Clear obstructions.
Clogged filter media	Remove and properly dispose filter media, and replace with fresh media.
Damage to components of the filtration system	Repair or replace as applicable.
Note: For proprietary media filters, refer to the manufacturer's maintenance guide.	

7.7.4 Maintenance of Detention BMPs

"Detention BMPs" includes basins, cisterns, vaults, and underground galleries that are primarily designed to store runoff for controlled release to downstream systems. For the purpose of the maintenance discussion, this category does not include an infiltration component (refer to "vegetated infiltration or filtration BMPs" or "non-vegetated infiltration BMPs" above). Applicable Fact Sheets may include HU-1 (cistern) or FT-4 (extended detention basin). There are many possible configurations of above ground and underground detention BMPs, including both proprietary and non-proprietary systems. The project civil engineer is responsible for determining which maintenance indicators and actions shown below are applicable based on the components of the structural BMP.

TABLE 0-5. Maintenance Indicators and Actions for Detention BMPs

Typical Maintenance Indicator(s) for Detention Basins	Maintenance Actions
Poor vegetation establishment	Re-seed, re-establish vegetation.
Overgrown vegetation	Mow or trim as appropriate.
Erosion due to concentrated irrigation flow	Repair/re-seed/re-plant eroded areas and adjust the irrigation system.
Erosion due to concentrated storm water runoff flow	Repair/re-seed/re-plant eroded areas and make appropriate corrective measures such as adding erosion controls, adding stone at flow entry points, replacing soil media to restore infiltration, or re-grading where necessary.
Accumulation of sediment, litter, or debris	Remove and properly dispose of accumulated materials.
Standing water	Make appropriate corrective measures such as adjusting irrigation system, removing obstructions of debris or invasive vegetation, replacing soil media to restore infiltration, or minor re-grading for proper drainage.
Obstructed inlet or outlet structure	Clear obstructions and properly dispose of materials.
Damage to structural components such as weirs, inlet or outlet structures	Repair or replace as applicable.

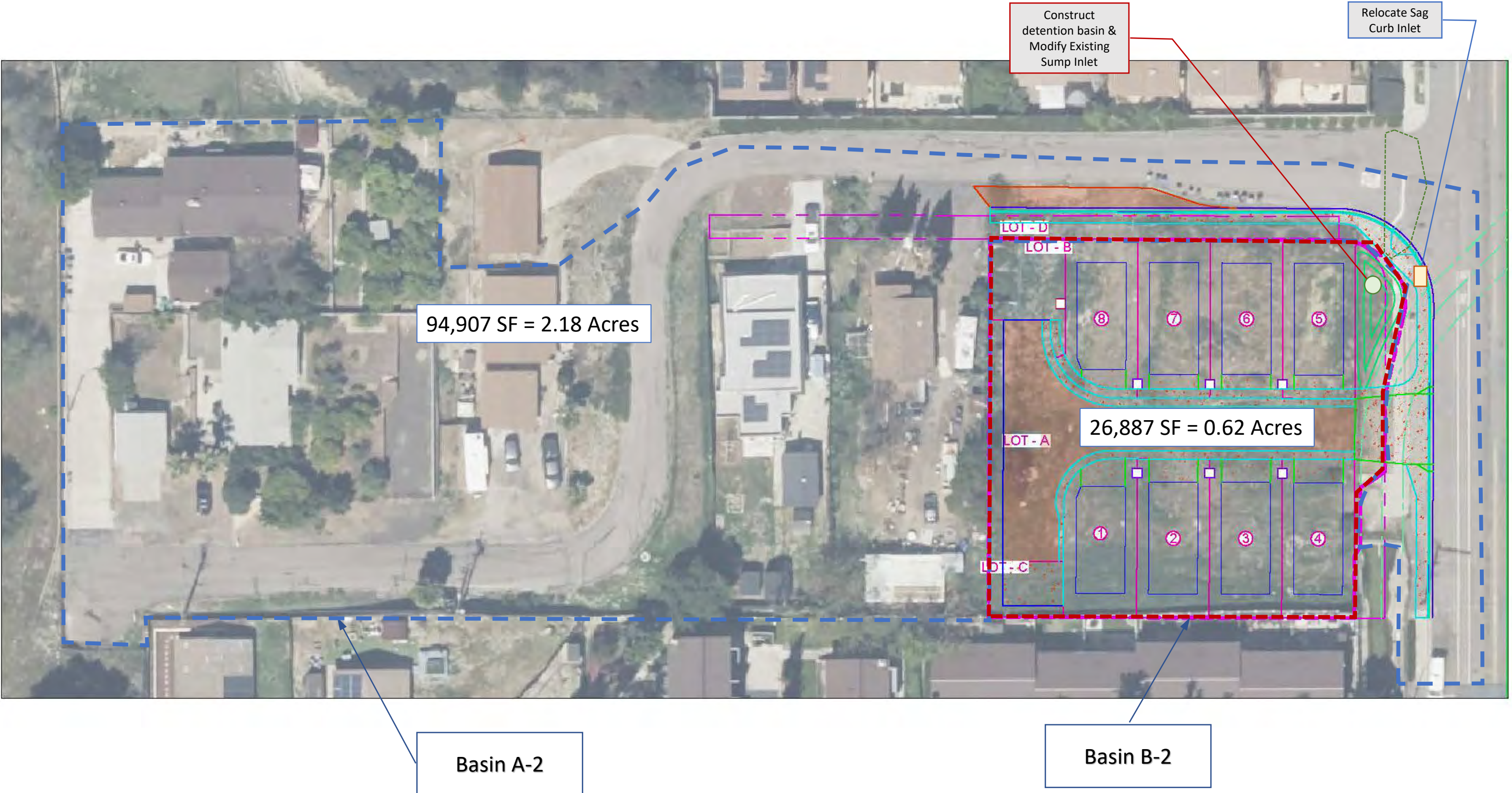
APPENDIX A

OFF-SITE BASIN A-2 DI MINIMIS ASSESSMENT

EXISTING HYDROLOGY



PROPOSED HYDROLOGY



DMA A-2 Di Minimis Assessment

For the 2.18 acres off-site Basin A-1 (pre-development) and Basin A-2 (post-Development), basin area, basin boundary, runoff quantity, and drainage patterns remain identical for the Pre-Development and Post-Development scenarios. The only change is an increase in paved surfaces on Watson Place and a decrease in paved surfaces on Fanita Drive. The entire off-site basin constitutes a single DMA in which an existing single POC consists of an eight-foot sump inlet at the corner of Fanita Drive and Watson Place.

Per Section 5.2.2 of the City of Santee's BMP Manual, De minimis DMAs consist of very small areas, and therefore are not considered to be significant contributors of pollutants, and are considered by the owner, with concurrence of the City Engineer to be impracticable to drain to a BMP. Examples include driveway aprons connecting to existing streets, portions of sidewalks, retaining walls at the external boundaries of a project, and similar features. De minimis DMAs must include **ALL** of the following characteristics to be eligible for exclusion:

Areas around the perimeter of the development site.

All proposed improvements are around the development site's perimeter and thus meet this characteristic.

Topography and land ownership constraints make BMP construction to reasonably capture runoff technically infeasible.

Watson Place is a private road with a steep 8% slope. Segregating the flow generated from this proposed project from the overall runoff is infeasible. Thus, constructing an independent BMP to capture the limited runoff from the proposed improvements is technically infeasible.

The portion of the site falling into this category is minimized through effective site design

The Project is offering the minimization of improvements along Watson Place and Fanita Drive to reduce or eliminate increases in paved surfaces.

Each DMA should be less than 250 square feet and the sum of all de minimis DMAs should represent less than 2 percent of the total added or replaced impervious surface of the project. Except for projects where 2 percent of the total added or replaced impervious surface of the project is less than 250 square feet, a de minimis DMA of 250 square feet or less is allowed.

The proposed improvements on Watson Place and Fanita Drive constitute an overall net increase in impervious surfaces of 244 SF. The total area of off-site DMA A-2 is 94,907 SF, and the off-site DMA area remains the same before and after development. The proposed improvements on Fanita Drive will reduce impervious surfaces by 861 SF, while the proposed improvements on Watson Drive will increase impervious surfaces by 1,105 SF. The net increase in impervious surfaces is 244 SF or less than 0.26% of the DMA area. Also, 2% of all added and replaced impervious surfaces amounts to 39 SF, thus meeting the subject characteristics.

Two de minimis DMAs cannot be adjacent to each other and hydraulically connected.

The off-site improvement is a single DMA connected to a single POC. Thus, the basin meets this condition.

The SWQMP must document the reason that each de minimis area could not be addressed otherwise.

This is a single De Minimis area addressed hereon.

SUMMARY:

Off-Site DMA Basin A-2 contains existing residential development west of the proposed project along with portions of both Fanita Drive and Watson Place, all currently draining to an existing sump inlet at the southwest corner of the intersection. The proposed improvements meet the definition of di minimis consisting of driveway aprons connecting to existing streets and portions of sidewalks at the external boundaries of a project. The proposed net increase in impervious surfaces is 244 SF or less than 0.26% of the DMA area.

REGFERENCES

- 1) [85th Percentile Rainfall](#)

APPENDIX F



LAND PLANNING – LAND SURVEYING – CIVIL ENGINEERING

3111 Camino Del Rio North, Suite 421
San Diego, California 92108

PRELIMINARY HYRDOLOGY REPORT

For

Tentative Map TM 2021-2 on

8504 Fanita Drive
Santee, California 92071

PROJECT NO. PA2021-4

APN: 386-690-38

PREPARED FOR:

TA Development, LLC
7710 Balboa Avenue, Suite 210C
San Diego, California 92111

DATE: July 2022

SOHAIB ALAGHA, PE 45440

DATE: July 19, 2022

A handwritten signature in blue ink, appearing to read 'Sohaib Alagha', is written over a light blue circular watermark.



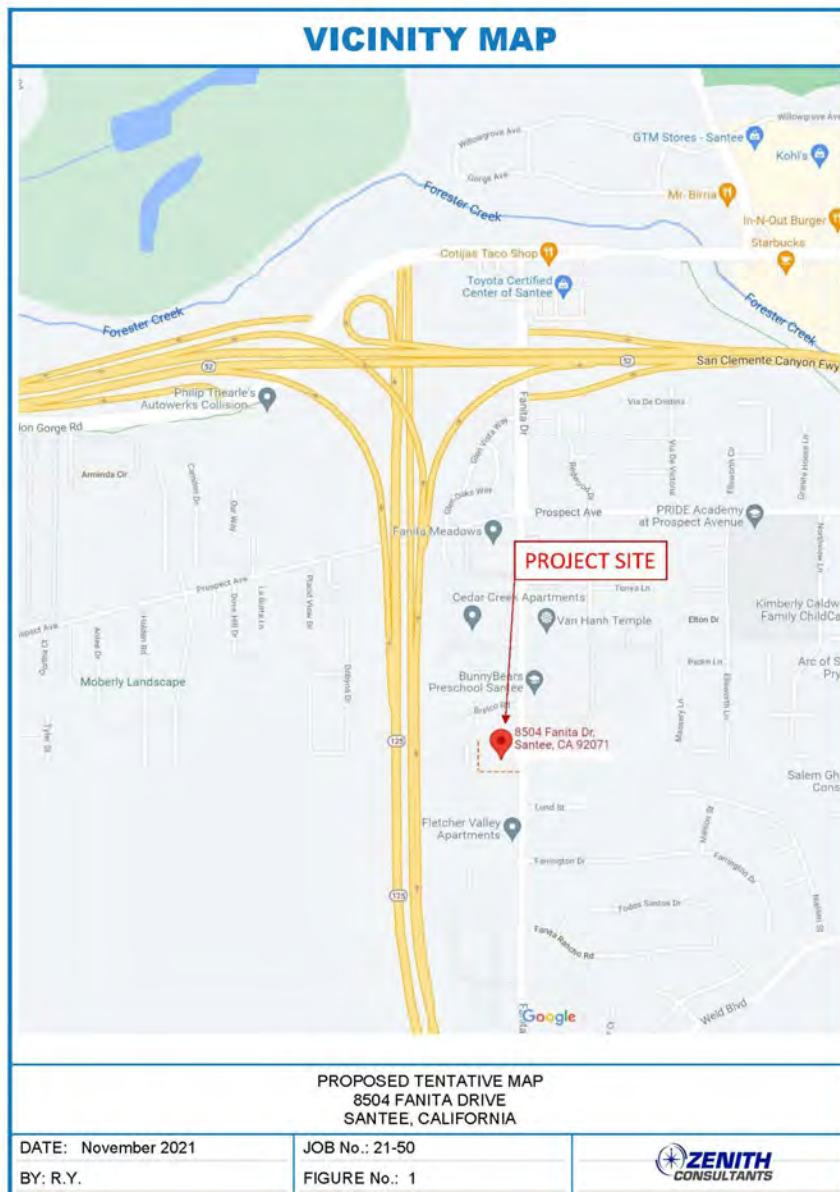
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1.0 EXECUTIVE SUMMARY

1.1 Introduction

This Preliminary Hydrology Study for the proposed development at the property at 8504 Fanita Drive has been prepared to analyze the hydrologic and hydraulic characteristics of the existing and proposed project site. This report intends to present both the methodology, and the calculations used to determine the project site's runoff in both the pre-developed (existing) conditions and the post-developed (proposed) conditions produced by the 10-year, 50-year, and 100-year 6-hour storm events. In addition, this report will propose the sizing of all necessary storm drain facilities and retention basins to convey the runoff from the 100-year rainfall event safely.



1.2 Existing Conditions

The project site is located at the corner of Fanita Drive and Watson Place in the City of Santee, California. The project is located east of SR-125 and south of Prospect Avenue. Single Family Residential Homes surround the site to the west and existing Multi-Family Residential Development to the north, south, and east. The property's total area is 29,964 sq. Ft. or approximately 0.68 acres and consists of a single parcel, as shown on the Existing Condition Drainage Map in Appendix A. The existing portion of the proposed development property has been graded previously, and a single-family residential unit was situated on the site until the year 2008.

The project site encompasses 26,887 SF amounting to most of the existing parcel. The project site has a gently sloping topography that drains to an existing sump grate inlet at the southwesterly corner of Fanita Drive & Watson Place. The remaining offsite portions of the property drains to an existing curb inlet located at the southwesterly corner of Fanita Drive & Watson Place. The downstream drainage conditions consist of a public storm drain system that discharges to Fanita Creek, Forester Creek, San Diego River, and eventually the Pacific Ocean.

The existing offsite drainage basin, 2.75 acres in size, will contribute runoff to the sag inlet at the corner of Fanita Drive and Watson Place. The TM is not proposing any changes to the drainage patterns or catchment size of the offsite drainage. A new curb & sidewalk will replace the existing curbs to increase permeable surfaces by adding a landscape buffer. Also, the project will extend the current curb return and sidewalk on Watson Place along the property line.

Based on the project location shown on the USDA Soils Survey Map in Appendix E of this report, the existing site has type "C" soils. A report entitled "Report of Preliminary Geotechnical Investigation" was prepared by Christian Wheeler Engineering (Refer to the Geotechnical Investigation for more detailed information regarding the soil present on the project site.)

This drainage study used a runoff coefficient of 0.42 for the existing onsite conditions. A runoff coefficient of 0.48 was used for the offsite drainage catchment based on existing land use. Based on the rational method calculations for the 100-year, 6-hour storm event contained in section 3.0 of this report, the existing 100-year peak runoff for the project, both for the offsite and onsite basins, was determined to be 4.0 CFS.

1.3 Proposed Project

The project proposes the construction of eight new Detached Residential Units, all with a shared access driveway. The project offers the reconstruction of curb and sidewalks along Fanita Drive to provide a landscaped buffer area and the extension of the curb, gutter, and sidewalks along the southerly side of Watson Place, a private street as shown on the Tentative Map. The project includes the construction of site grading, retaining walls, surface improvements, and drainage and related utility improvements. Runoff along Watson Place generated from adjacent properties to the west of the project will connect to the existing public storm drain system. The proposed onsite storm drain system will connect to the proposed Biofiltration basin to be constructed around the current sump inlet.

There is no increase in the peak flow or the runoff volume of the offsite catchment. However, post-development 100-year peak runoff for the onsite basin did increase by 0.46 CFS. Such an increase in the peak runoff will be fully mitigated thru the proposed Bioretention facility at the east-northerly part of the project. The proposed facility will provide both stormwater treatment and peak flow attenuation and mitigation.

The Proposed BMP is located at existing local low points of the project site and has been designed to also function as a stormwater retention basin to mitigate any increase in peak runoff flows associated with the proposed development. The proposed Bioretention BMP has also been incorporated into the project design to comply with current water quality and Hydromodification Management Plan (HMP) requirements as required by the City of Santee BMP Design Manual. See project Storm Water Quality Management Plan (SWQMP) for more information regarding BMP design and HMP compliance. Please refer to Section 4.0 of this report for stormwater detention sizing requirements.

1.4 Summary of Results

The rational method hydrologic analysis of the project offsite and onsite basins produced the following results for both the existing and the proposed conditions.

TABLE 1 RUNOFF SUMMARY

BASIN	OUTLET	DRAINAGE AREA (AC)	Tc (MIN)	Q100 (CFS)	
EXISTING					
A1	Existing Sump Curb Inlet	2.18	17.62	3.18	4.0
B1	Existing Sump Grate Inlet	0.62	16.70	0.82	
PROPOSED					
A2	Existing Sump Curb Inlet	2.18	17.62	3.18	4.46
B2	Existing Sump Grate Inlet	0.62	14.46	1.28	

Both the existing and proposed conditions produced a 100-year peak flow rate of 3.18 CFS at the existing sag inlet along Fanita Drive for offsite runoff. A new sag inlet will replace the current inlet to capture the offsite runoff. For onsite runoff, the existing grate sump inlet is currently capturing an estimated runoff of 0.82 CFS. The existing grate sump inlet will be retained as an outlet structure for the proposed detention/Bioretenion facility. The increase in the overall impervious area on the project site yielded a net increase in peak runoff of 0.46 CFS at the existing grate inlet adjacent to the site for the 100-year 6-hour storm event. The proposed Bioretention/detention facility has been designed and incorporated into the project to capture the increase of stormwater discharge from existing to the proposed conditions for the 100-year, 6-hour storm event. Therefore, the proposed project will not increase the stormwater discharge from the project site during a 100-year storm event. See Section 4.0 of this report for the calculations methodology adopted regarding peak stormwater storage.

TABLE 2 ON-SITE PEAK VOLUME

CONDITION	AREA (ACRES)	C	VOLUME (CU-FT)
EXISTING	0.62	0.42	2458
PROPOSED	0.62	0.60	3510
DIFFERENCE			1052

As shown in Table 2 above, the proposed biofiltration basin will mitigate the increase in peak runoff flow and peak runoff volume. This estimated volume is based on the County of San Diego Hydrology Manual. The biofiltration basin has been incorporated to comply with the City of Santee BMP design manual. See project Storm Water Quality Management Plan (SWQMP) for more information regarding BMP design and HMP compliance.

1.5 Conclusion

Per the computed flow rates as shown in Table 1 in Section 1.4, the proposed development will increase peak flows for the 100-year, 6-hour storm event by a total of 0.46 CFS. A new retention/detention facility has been incorporated into the project. The proposed retention BMP has an adequate storage capacity to store the increase in peak flows due to the proposed development, thus reducing the ultimate 100-year peak flow rate to match the existing hydrologic condition. The proposed basin will also perform as a biofiltration basin acting as a stormwater treatment and hydromodification purposes. Refer to Appendix D of this report for detailed calculations regarding the stormwater flowrates of this project. Refer to the SWQMP report for detention and biofiltration sizing calculations,

1.6 References

"San Diego County Hydrology Manual", revised June 2003, County of San Diego, Department of Public Works, Flood Control Section.

"San Diego County Drainage Design Manual", County of San Diego, May 2005

"California Regional Water Quality Control Board Order No. 2001-01," California Regional Water Quality Control Board, San Diego Region (SDRWQCB).

"City of Santee BMP Design Manual", City of Santee Municipal Code

2.0 METHODOLOGY

2.1 Introduction

The hydrologic model used to perform the hydrologic analysis presented in this report utilizes the Rational Method (RM) equation, $Q=CIA$. The RM formula estimates the peak rate of runoff based on the variables of area, runoff coefficient, and rainfall intensity.

The RM equation determines the storm water runoff rate (Q) for a given basin in terms of flow (typically in cubic feet per second (cfs) but sometimes as gallons per minute (gpm)). The RM equation is as follows:

$$Q = C \times I \times A$$

Where:

- Q** = flow (in cfs)
- C** = Runoff coefficient, ratio of rainfall that produces storm water runoff
- I** = average rainfall intensity, T_c duration, for the area, (in/hr.
- A** = drainage area contributing to the basin in acres. (ac)

The RM equation assumes that the storm event being analyzed delivers precipitation to the entire basin uniformly, and therefore the peak discharge rate will occur when a raindrop falls at the most remote portion of the basin arrives at the point of analysis. The RM also assumes that the fraction of rainfall that becomes runoff or the runoff coefficient C is not affected by the storm intensity, I, or the precipitation zone number.

In addition to the above Rational Method assumptions, the runoff coefficients utilized for this report are based on type "C" soils based NRCS as detailed in Appendix C.

In order to perform the hydrologic analysis; base information for the study area is required. This information includes the existing drainage facility locations and sizes, existing land uses, flow patterns, drainage basin boundaries, and topographic elevations. Drainage basin boundaries, flow patterns, and topographic elevations are shown in Appendix D.

The rainfall intensity (I) is the rainfall in inches per hour (in/hr) for a duration equal to the Time of Concentration (T_c) for a selected storm frequency. Once a particular storm frequency has been selected for design and a T_c calculated for the drainage area, the rainfall intensity can be determined from the Intensity-Duration Design Chart (Figure 3-1) see Appendix D. The 6-hour storm rainfall amount (P6) and the 24-hour storm rainfall amount (P24) for the selected storm frequency are also needed for calculation of I. P6 and P24 are shown on the isopluvial maps provided in Appendix E.

The rainfall intensity (I) is equal to:

$$I = 7.44 \times P_6 \times D^{-0.645}$$

Where:

- I = Intensity (in/hr)
- P₆ = 6-hour precipitation (inches)
- D = duration (minutes – use T_c)

Using the Time of Concentration (T_c), which is the time required for a given element of water that originates at the most remote point of the basin being analyzed to reach the point at which the runoff from the basin is being analyzed.

The Time of Concentration (T_c) is the time required for runoff to flow from the most remote part of the drainage area to the point of interest. The T_c is composed of two components: initial time of concentration (T_i) and travel time (T_t).

The T_i is the time required for runoff to travel across the surface of the most remote subarea in the study, or "initial subarea." Guidelines for designating the initial subarea are provided within the discussion of computation of T_i. The T_t is the time required for the runoff to flow in a watercourse (e.g., swale, channel, gutter, pipe) or series of watercourses from the initial subarea to the point of interest. For the RM, the T_c at any point within the drainage area is given by:

$$T_c = T_i + T_t$$

Initial time or overland flow time is calculated by the following formula:

$$T_i = [1.8 \times (1.1 - C) \times L^{1/2}] / S^{1/3}$$

Where:

- T_i = Initial (Overland) time of concentration in minutes
- C = Runoff coefficient
- L = Length of travel of runoff in feet
- S = Slope in percent

The travel time for shallow concentrated flow is a function of the water course length, surface condition, slope and resulting velocity. Based on surface conditions (paved or unpaved), assumptions can be made for Manning's roughness coefficient and hydraulic radius resulting in the following equation:

$$T_s = [L / (C \times S^{1/2})] * 60$$

Where:

- T_s = Sheet flow time of concentration in minutes
- L = Length of travel of runoff in feet
- C = Manning's equation constant

= 16.1345 for unpaved surfaces

= 20.3282 for paved surfaces

- S = Slope in feet per feet

Lastly, travel time for channel flow can be calculated as a function of flow length and average velocity. When needed, longitudinal slopes along with estimated peak discharges can be used to determine average velocities. The length of flow over a segment of longitudinal slope will then be divided by the average velocity to determine channel flow travel time.

2.2 Runoff Coefficient Determination

Runoff Coefficients for offsite areas used in this analysis contained in this report were taken from Table 3-1 of the County of San Diego Hydrology Manual, June 2003 Revision. Weighted runoff coefficients for onsite areas were calculated using the existing and proposed land use for each basin. See Appendix D of this report for weighted runoff coefficient calculations. The runoff coefficients are based on land use and soil type. An appropriate runoff coefficient (C) for each type of land use in the subarea should be selected from this table and multiplied by the percentage of the total area (A) included in that class. The sum of the products for all land uses is the weighted runoff coefficient ($\sum[CA]$). Good engineering judgment should be used when applying the values presented in Table 3-1 and adjustments may be made based on site characteristics. The runoff coefficient can also be calculated for an area based on soil type and impervious percentage using the following formula:

$$C = 0.90 \times (\% \text{ Impervious}) + C_p \times (1 - \% \text{ Impervious})$$

Where: C_p = Pervious Coefficient Runoff Value for the soil type (shown in Table 3-1 as Undisturbed Natural Terrain/Permanent Open Space, 0% Impervious). Soil type can be determined from the soil type map provided in Appendix C.

2.3 County of San Diego Hydrology Design Criteria

As defined by the County of San Diego Hydrology Manual dated June 2003, the rational method is the preferred equation for determining the hydrologic characteristics of basins up to approximately one square mile in size. The County of San Diego has developed its own tables, nomographs, and methodologies for analyzing storm water runoff for areas within the county. The County has also developed precipitation isopluvial contour maps that show even lines of rainfall anticipated from a given storm event (i.e. 100-year, 6-hour storm). One of the variables of the RM equation is the runoff coefficient, C. Runoff coefficients can be determined using one of two methods. In the first method, pervious and impervious surfaces are assigned a weighted value. The runoff coefficient is then determined by calculating the weighted average for the

given surfaces present on site. The second method uses land use and soil types to determine a runoff coefficient. This study used the land use type method to determine the runoff coefficient. The County of San Diego has developed a table of Runoff Coefficients for Urban Areas to be applied to basins located within the County of San Diego. The table categorizes the land use, the associated development density (dwelling units per acre) and the percentage of impervious area. Each of the categories listed has an associated runoff coefficient, C, for each soil type class.

Detention Analysis:

Because detention analysis is dependent on the total storm volume, it is not sufficient to consider a single hydrograph for peak flow occurring over the time of concentration. Therefore, hydrograph volumes were based on Section 6.2 of the County of San Diego Hydrology Manual dated June 2003. This process accounts for the total volume of runoff produced from the 6-hour storm event. The total volume from the resulting hydrograph is equal to the following equation:

$$VOL = CP_6A$$

Where:

- VOL = volume of runoff (acre-inches)
- P6 = 6-hour rainfall (inches)
- C = runoff coefficient
- A = area of the watershed (acres)

APPENDIX – A

EXISTING CONDITIONS

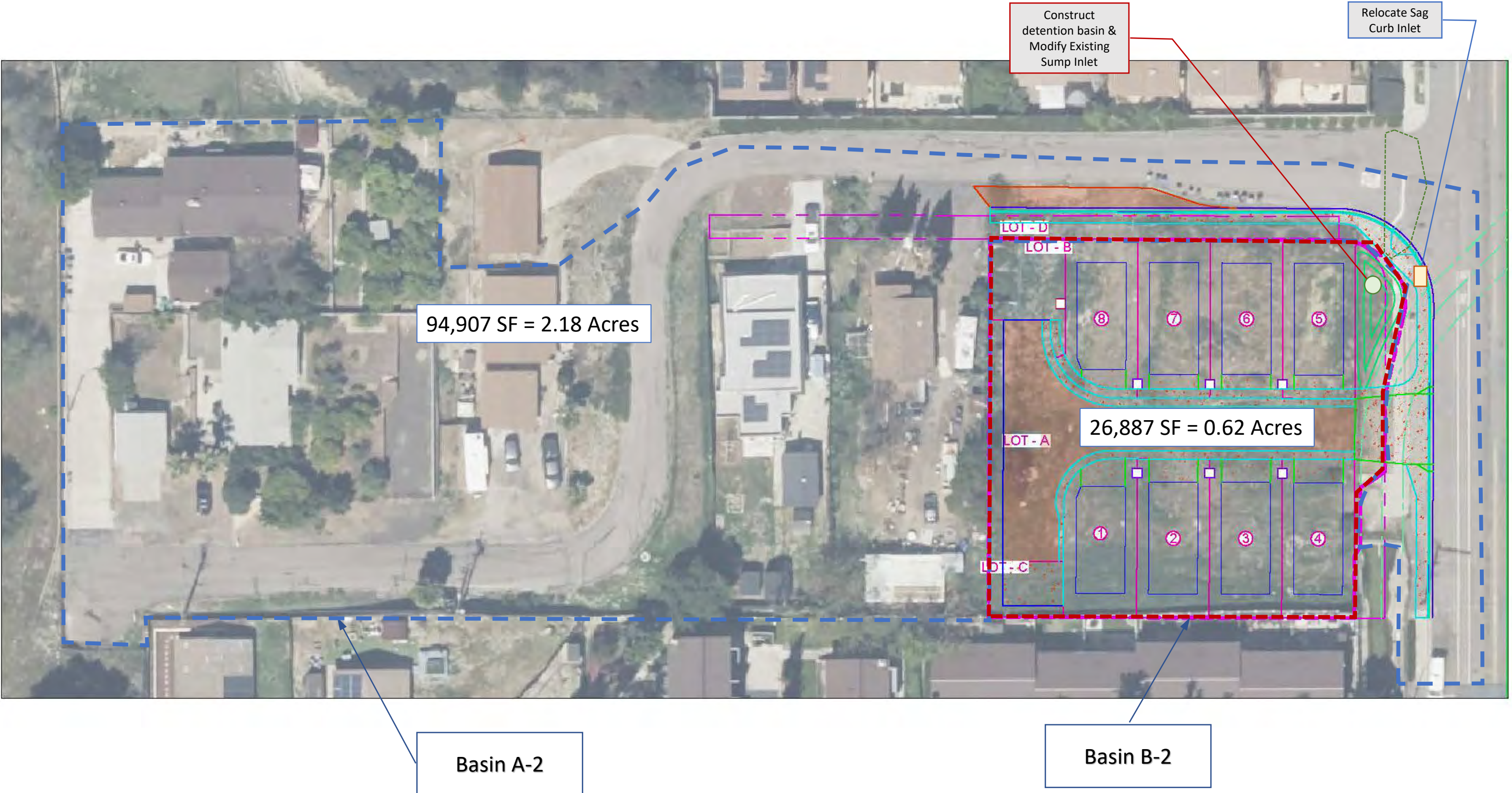
EXISTING HYDROLOGY



APPENDIX – B

PROPOSED CONDITIONS

PROPOSED HYDROLOGY



Basin A-2

Basin B-2

Construct detention basin & Modify Existing Sump Inlet

Relocate Sag Curb Inlet

94,907 SF = 2.18 Acres

26,887 SF = 0.62 Acres

LOT-D

LOT-B

LOT-A

LOT-C

8

7

6

5

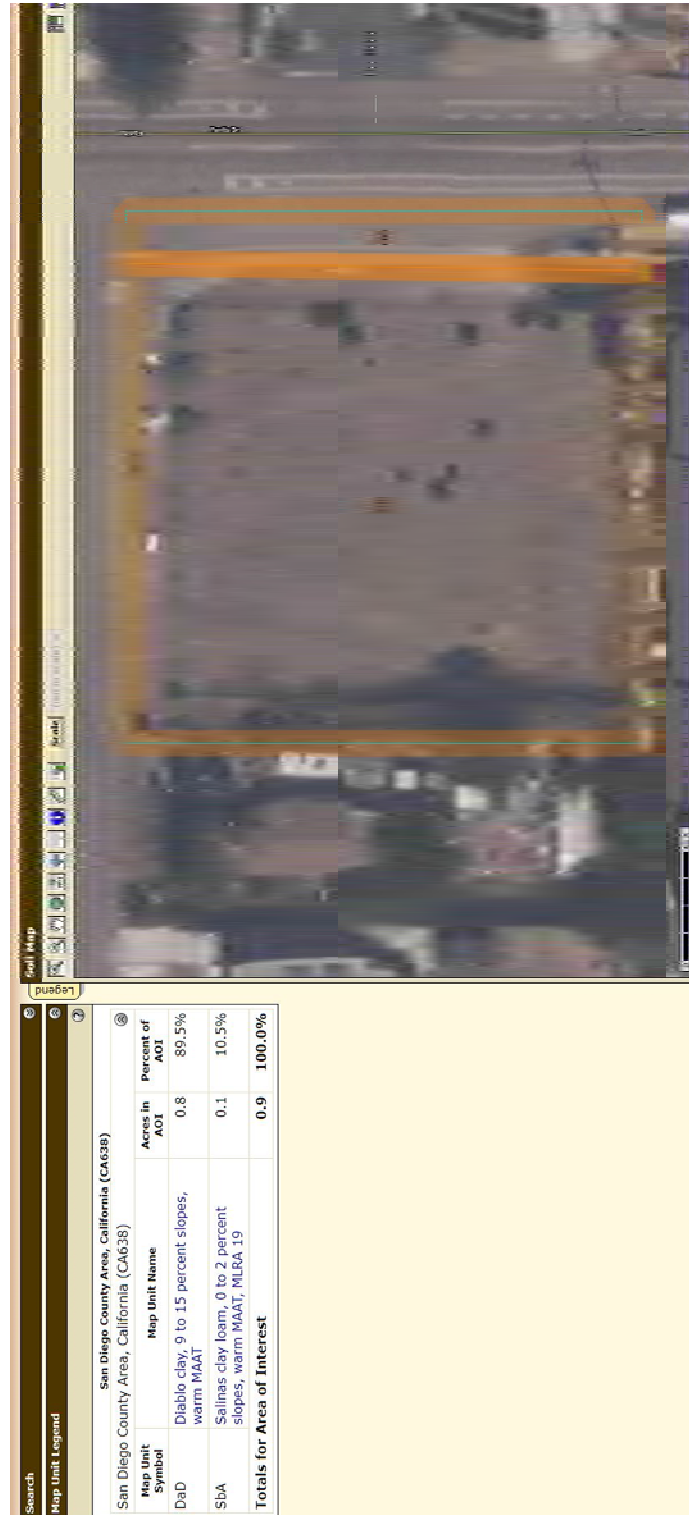
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APPENDIX – C



San Diego County Area, California

DaD—Diablo clay, 9 to 15 percent slopes, warm MAAT

Map Unit Setting

National map unit symbol: 2w63f

Elevation: 110 to 910 feet

Mean annual precipitation: 11 to 21 inches

Mean annual air temperature: 58 to 64 degrees F

Frost-free period: 290 to 365 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Diablo and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Diablo

Setting

Landform: Hillslopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Residuum weathered from calcareous shale

Typical profile

A - 0 to 15 inches: clay

Bkss1 - 15 to 28 inches: clay

Bkss2 - 28 to 40 inches: clay loam

Cr - 40 to 79 inches: bedrock

Properties and qualities

Slope: 9 to 15 percent

Depth to restrictive feature: 39 to 79 inches to paralithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 5 percent

Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)

Sodium adsorption ratio, maximum: 4.0

Available water capacity: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): 4e

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C

Ecological site: R019XD001CA

Hydric soil rating: No

Minor Components

Altamont

Percent of map unit: 10 percent

Landform: Hillslopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Linne

Percent of map unit: 3 percent

Landform: Hillslopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Olephant

Percent of map unit: 2 percent

Landform: Terraces

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil rating: No

Data Source Information

Soil Survey Area: San Diego County Area, California

Survey Area Data: Version 15, May 27, 2020

San Diego County Area, California

SbA—Salinas clay loam, 0 to 2 percent slopes, warm MAAT, MLRA 19

Map Unit Setting

National map unit symbol: 2tyy2

Elevation: 0 to 900 feet

Mean annual precipitation: 10 to 18 inches

Mean annual air temperature: 61 to 64 degrees F

Frost-free period: 330 to 360 days

Farmland classification: Prime farmland if irrigated

Map Unit Composition

Salinas and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Salinas

Setting

Landform: Alluvial fans

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Base slope, rise

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Alluvium derived from sedimentary rock

Typical profile

Ap - 0 to 7 inches: clay loam

A - 7 to 22 inches: clay loam

C1 - 22 to 32 inches: clay loam

C2 - 32 to 46 inches: clay loam

2Ck1 - 46 to 55 inches: clay loam

2Ck2 - 55 to 64 inches: loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Very low

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 10 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water capacity: High (about 10.4 inches)

Interpretive groups

Land capability classification (irrigated): 1

Land capability classification (nonirrigated): 3c

Hydrologic Soil Group: C

Hydric soil rating: No

Minor Components

Tujunga

Percent of map unit: 3 percent

Hydric soil rating: No

Diablo

Percent of map unit: 3 percent

Hydric soil rating: No

Huerhuero

Percent of map unit: 3 percent

Hydric soil rating: No

Cropley

Percent of map unit: 2 percent

Hydric soil rating: No

Sorrento

Percent of map unit: 1 percent

Hydric soil rating: No

Garretson

Percent of map unit: 1 percent

Hydric soil rating: No

Pacheco

Percent of map unit: 1 percent

Hydric soil rating: No

Mocho

Percent of map unit: 1 percent

Hydric soil rating: No

Data Source Information

Soil Survey Area: San Diego County Area, California







Survey Area Data: Version 15, May 27, 2020

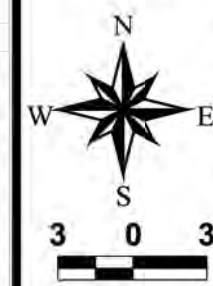
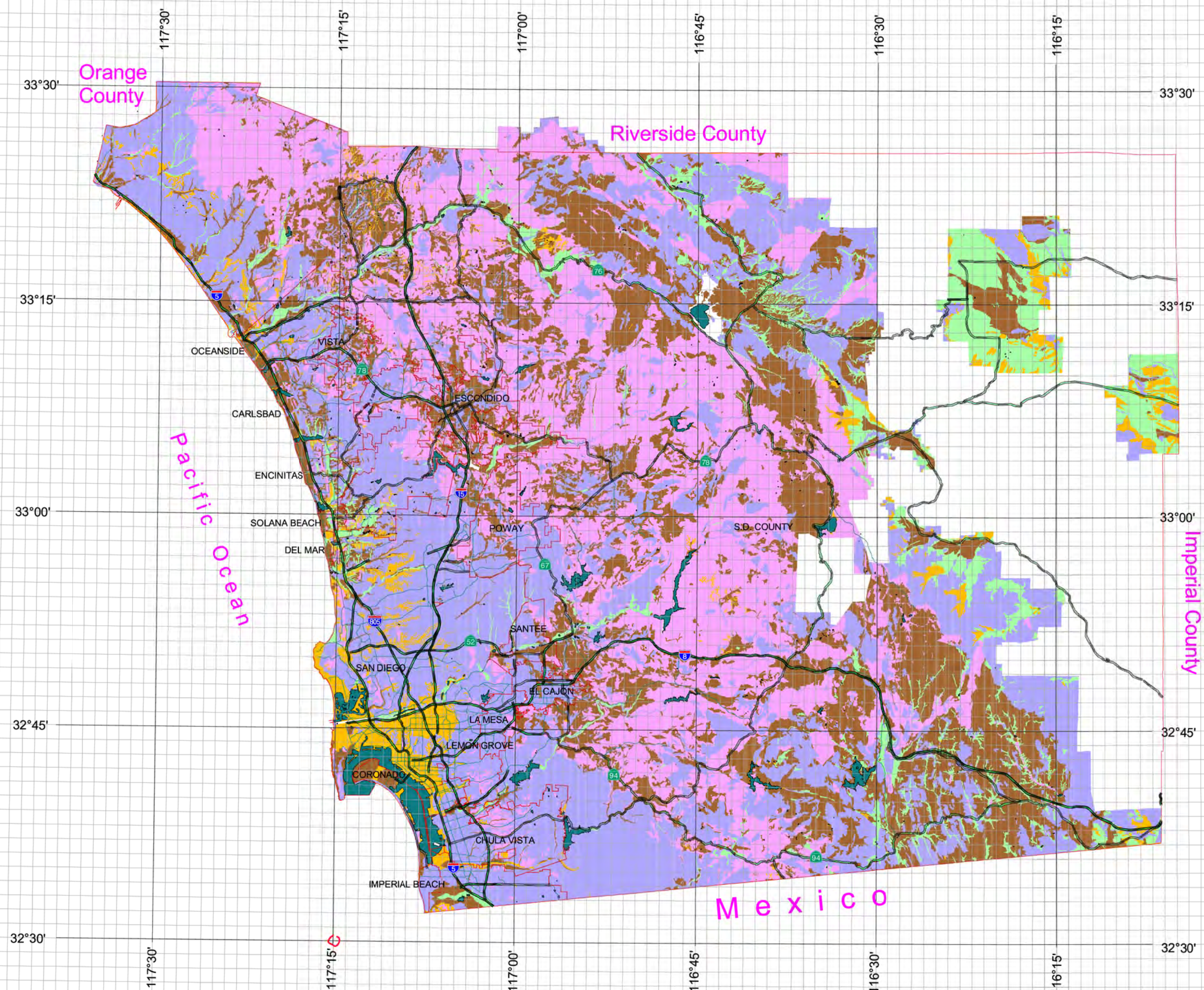
County of San Diego Hydrology Manual



Soil Hydrologic Groups

Legend

Soil Groups	
	Group A
	Group B
	Group C
	Group D
	Undetermined
	Data Unavailable



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APPENDIX – D

RATIONAL METHOD DRAINAGE CALCULATION

SAG INLET CAPACITY

Inlet at Corner of Fanita & Watson
 100-YR Runoff = 3.18 CFS < 5.0 OK

C_w 3
 L 5 Ft
 L_w 2.5 Ft
 Throat 0.26 Ft
 d 0.76

Total Length
 Adjusted Length

Q 5.0 CFS

Weir

$$Q = C_w L_w d^{3/2}$$

where ...

- Q = inlet capacity (ft³/s);
- C_w = weir discharge coefficient (see Table 2-1);
- L_w = weir length (ft); and
- d = flow depth (ft).

Orifice

$$Q = 0.67hL(2gd_o)^{1/2}$$

where ...

- Q = inlet capacity (ft³/s);
- h = curb opening height (ft);
- L = curb opening length (ft);
- g = gravitational acceleration (ft²/s²);
- d_o = effective depth of flow at curb

Table 2-1 Weir Coefficients for Inlets in Sag Locations

Inlet Type	Coefficient	Weir Length	Equation Valid
	C_w	L_w	
Grate Inlet Against Curb	3.00	$L + 2W$ ⁽¹⁾	$d < 1.79(A_o/L_w)$
Grate Inlet, Flow from All Sides	3.00	$2(L + W)$ ⁽¹⁾	$d < 1.79(A_o/L_w)$
Curb Opening Inlet	3.00	L'	$d < h$
Depressed Curb Opening Inlets Less than $L'=12$ ft ⁽²⁾	3.00	$L' + 1.8W$	$d < h$
Slotted Inlets	2.48	L ⁽¹⁾	$d < 0.2$ ft

(1) Weir length shall be reduced by 50% to account for clogging. (2) "Depressed Curb Opening Inlets" refers to curb inlets with depression larger the width of the gutter (for example, SD-RSD No. 20, "Concrete Apron for Curb Inlet"). The width (W) of the curb opening depression is measured perpendicular to the face of the curb opening.

RATIONAL METHOD HYDROLOGY

8504 Fanita Drive	
PROJECT	21-50
DATE	11/10/2021

Runoff Summary Spreadsheet

100 YEAR STORM EVENT

Basin	Initial TC	Basin Acre	Basin TC	Intensity	C	Basin Q CFS		
A-1	8.10	2.18	17.62	3.04	0.48	3.18	Pre-Development	OFFSITE
A-2	8.10	2.18	17.62	3.04	0.48	3.18	Post-Development	
B-1	9.20	0.62	16.70	3.15	0.42	0.82	Pre-Development	ONSITE
B-2	6.50	0.62	14.46	3.45	0.6	1.28	Post-Development	



Project:

8504 Fanita Drive

DMA

A1

SF

Acre

Status

Existing

AREA

94,907

2.18

100

Storm Event

Initial Time of Concentration Calculation

Type of Soil	C	
Land Use	Residential, 4.3 DU/A or less	
Runoff Coefficient	0.48	
Overland Distance	80	ft
Slope	0.02	ft/ft
Unadjusted T_i	36.3	min
Adjusted T_i	8.1	min

$$t_c = \frac{1.8(1.1 - C)L^{0.5}}{S_{\%}^{0.33}}$$

See Maximum

Overland Travel Time of Concentration Calculation

Land Use	Residential, 4.3 DU/A or less	
Runoff Coefficient	0.48	
Overland Distance	10	ft
Slope	0.103	ft/ft
Overland T_s	7.5	min

$$T_c = T_i + T_t$$

$T_c = 17.6$ Min

Shallow Concentrated T_s

Type	Paved	
Manning's Constant	20.3282	
Length	802	ft
Slope	0.103	ft/ft
T_s	2.0	min

Project:

8504 Fanita Drive

Basin

A-1
Existing

Area

2.18 Acres

Frequency 100 years

P6 2.6 Inch

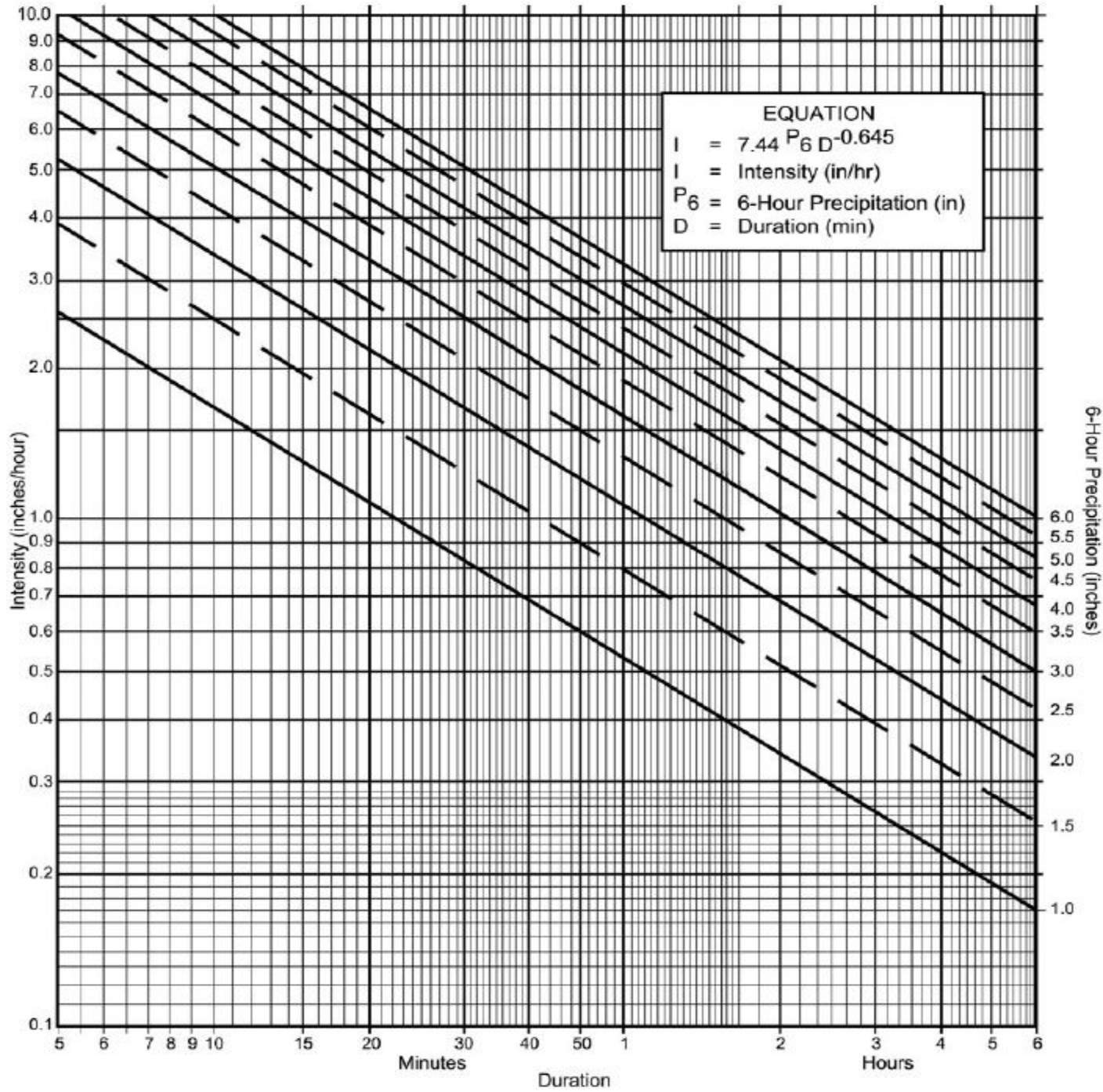
P24 5.7 Inch

P6/P24 45.6%

Adjusted P6 2.6

Duration D 17.6 Minutes

Intensity I 3.04 in/hr





Project:

8504 Fanita Drive

DMA

A2

SF

Acre

Status

Proposed

AREA

94,907

2.18

100

Storm Event

Initial Time of Concentration Calculation

Type of Soil	C	
Land Use	Residential, 4.3 DU/A or less	
Runoff Coefficient	0.48	
Overland Distance	80	ft
Slope	0.02	ft/ft
Unadjusted T_i	36.3	min
Adjusted T_i	8.1	min

$$t_c = \frac{1.8(1.1 - C)L^{0.5}}{S_{\%}^{0.33}}$$

See Maximum

Overland Travel Time of Concentration Calculation

Land Use	Residential, 4.3 DU/A or less	
Runoff Coefficient	0.48	
Overland Distance	10	ft
Slope	0.103	ft/ft
Overland T_s	7.5	min

$$T_c = T_i + T_t$$

T_c = 17.6 Min

Shallow Concentrated **T_s**

Type	Paved	
Manning's Constant	20.3282	
Length	802	ft
Slope	0.103	ft/ft
T_s	2.0	min

Project:

8504 Fanita Drive

Basin

A-2

Area

2.18 Acres

Use

Proposed

Frequency 100 years

P6 2.6 Inch

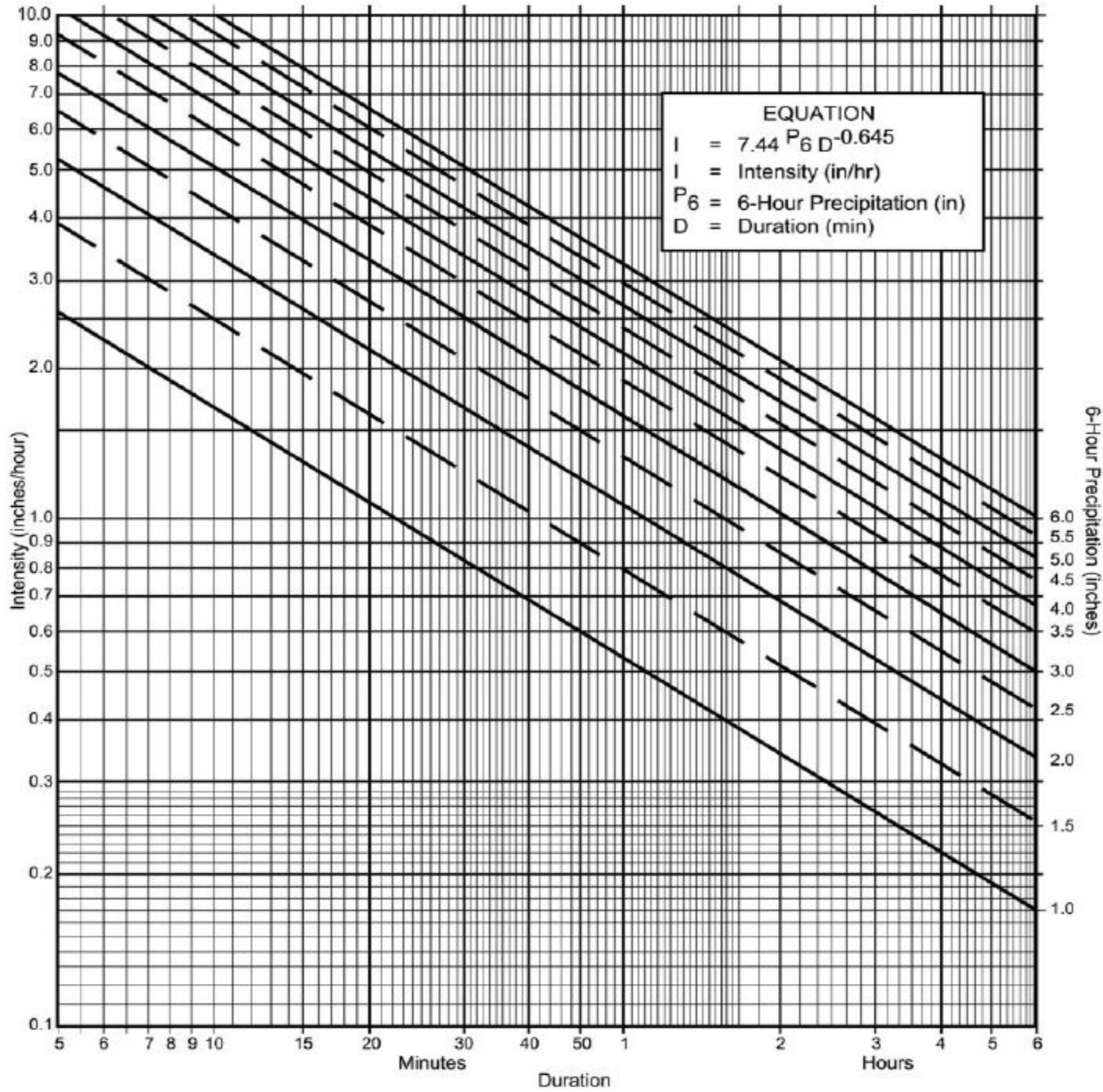
P24 5.7 Inch

P6/P24 45.6%

Adjusted P6 2.6

Duration D 17.6 Minutes

Intensity I 3.04 in/hr





Project:

8504 Fanita Drive

DMA

B1

SF

Acre

Status

Existing

AREA

26,887

0.62

100

Storm Event

Initial Time of Concentration Calculation

Type of Soil	C	
Land Use	Residential, 2.0 DU/A or less	
Runoff Coefficient	0.42	
Overland Distance	80	ft
Slope	0.02	ft/ft
Unadjusted T_i	39.8	min
Adjusted T_i	9.2	min

$$t_c = \frac{1.8(1.1 - C)L^{0.5}}{S_{\%}^{0.33}}$$

See Maximum

Overland Travel Time of Concentration Calculation

Land Use	Residential, 2.0 DU/A or less	
Runoff Coefficient	0.42	
Overland Distance	5	ft
Slope	0.06	ft/ft
Overland T_s	6.9	min

$$T_c = T_i + T_t$$

$$T_c = 16.7 \text{ Min}$$

Shallow Concentrated T_s

Type	Unpaved	
Manning's Constant	16.1345	
Length	135	ft
Slope	0.06	ft/ft
T_s	0.6	min

Project:

8504 Fanita Drive

Basin

B-1

Area

0.62 Acres

Use

Existing

Frequency

100 years

P6

2.6 Inch

P24

5.7 Inch

P6/P24

45.6%

Adjusted P6

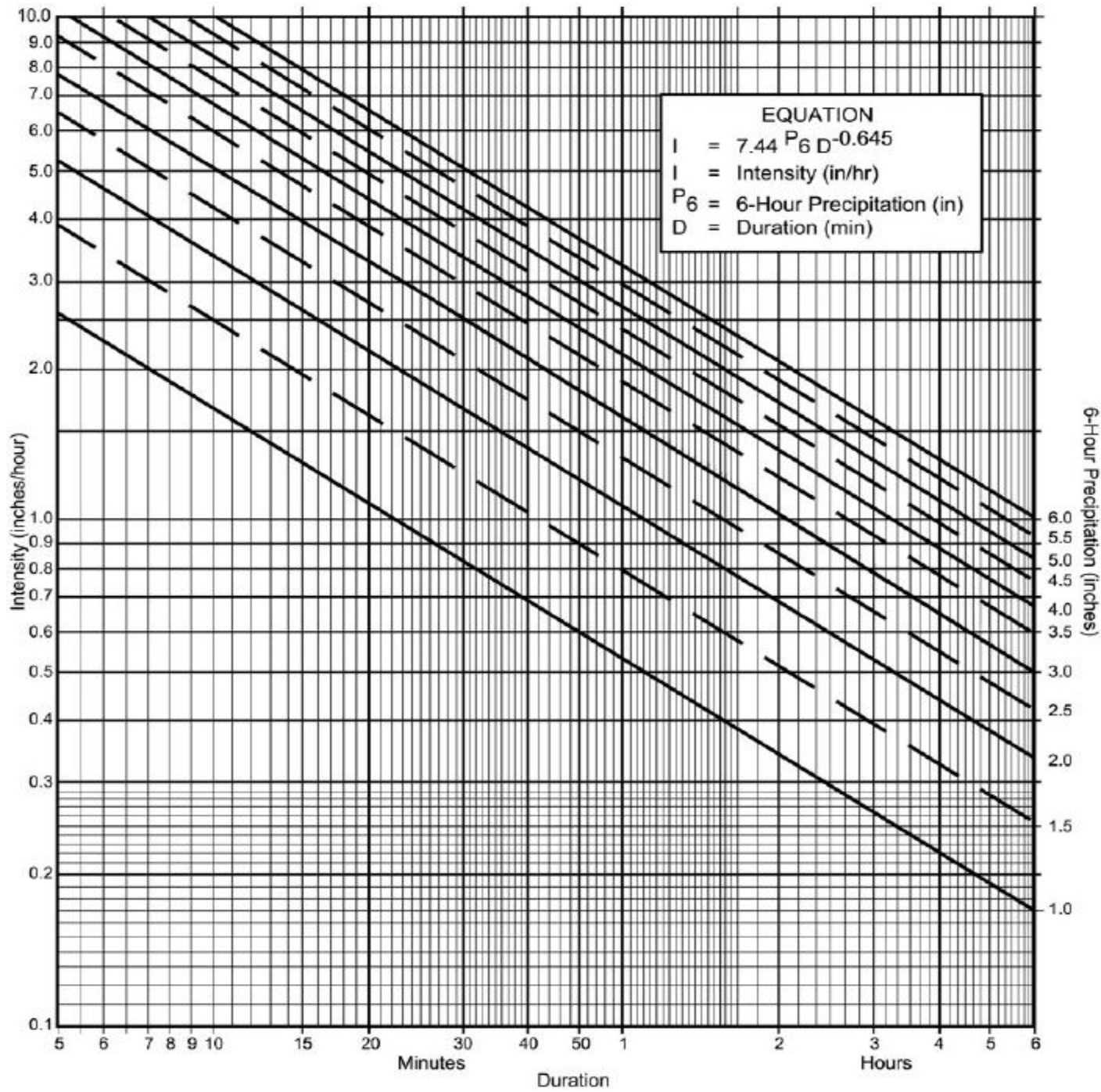
2.6

Duration D

16.7 Minutes

Intensity I

3.15 in/hr





Project:

8504 Fanita Drive

DMA

B2

SF

Acre

Status

Proposed

AREA

26,887

0.62

100

Storm Event

Initial Time of Concentration Calculation

Type of Soil	C
Land Use	Residential, 14.5 DU/A or less
Runoff Coefficient	0.6
Overland Distance	80 ft
Slope	0.02 ft/ft
Unadjusted T_i	29.3 min
Adjusted T_i	6.5 min

$$t_c = \frac{1.8(1.1 - C)L^{0.5}}{S_{\%}^{0.33}}$$

See Maximum

Overland Travel Time of Concentration Calculation

Land Use	Residential, 14.5 DU/A or less
Runoff Coefficient	0.6
Overland Distance	5 ft
Slope	0.02 ft/ft
Overland T_s	7.3 min

$$T_c = T_i + T_t$$

$T_c = 14.5$ Min

Shallow Concentrated T_s

Type	Paved
Manning's Constant	20.3282
Length	193 ft
Slope	0.06 ft/ft
T_s	0.6 min

Project:

8504 Fanita Drive

Basin

B-2

Area

0.62 Acres

Use

Proposed

Frequency

100 years

P6

2.6 Inch

P24

5.7 Inch

P6/P24

45.6%

Adjusted P6

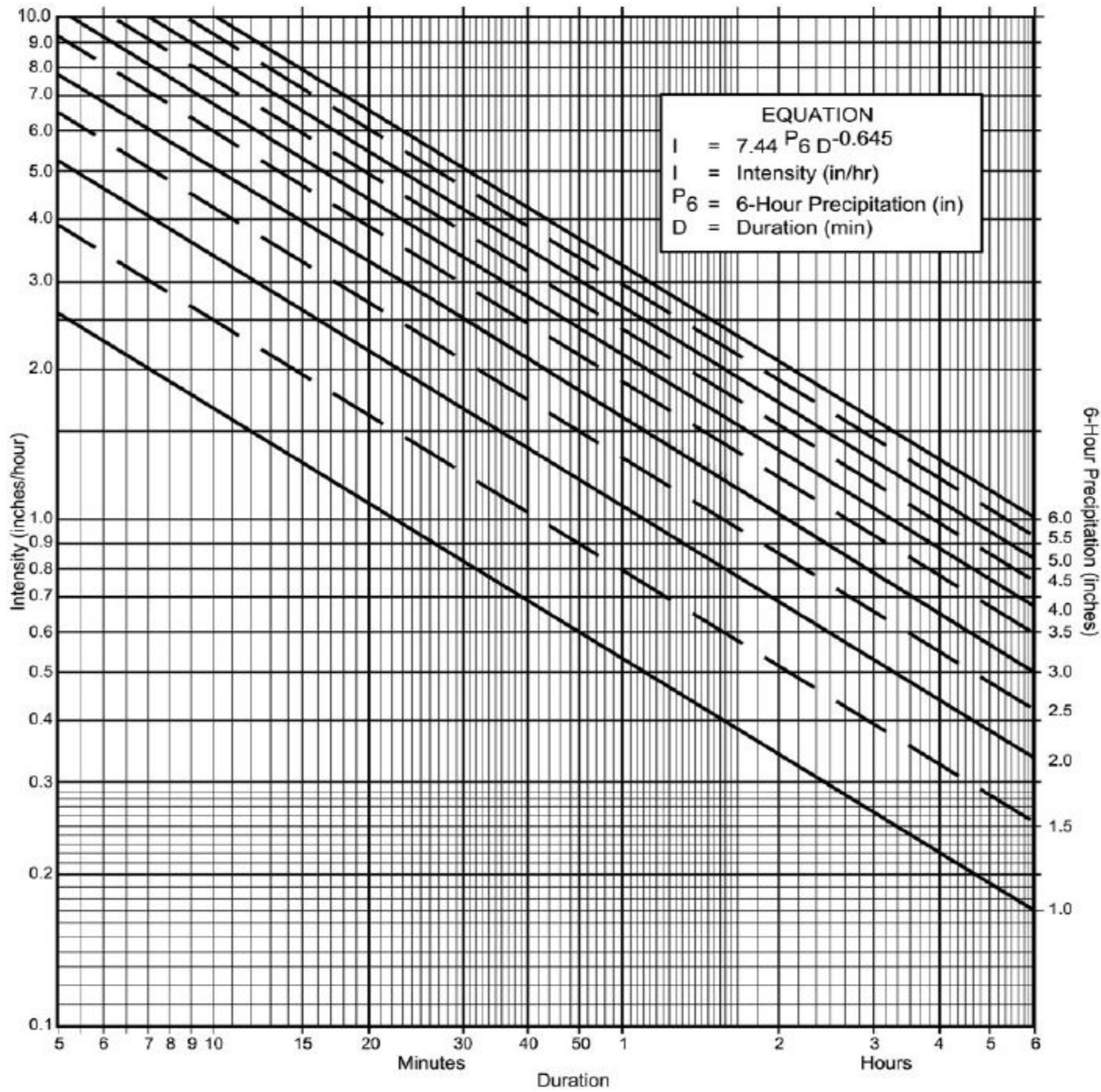
2.6

Duration D

14.5 Minutes

Intensity I

3.45 in/hr



RATIONAL METHOD HYDROLOGY

Runoff Summary Spreadsheet

8504 Fanita Drive	
PROJECT	21-50
DATE	11/10/2021

50 YEAR STORM EVENT

Basin	Initial TC	Basin Acre	Basin TC	Intensity	C	Basin Q CFS		
A-1	8.10	2.18	17.62	2.69	0.48	2.81	Pre-Development	OFFSITE
A-2	8.10	2.18	17.62	2.69	0.48	2.81	Post-Development	
B-1	9.20	0.62	16.70	2.78	0.42	0.72	Pre-Development	ONSITE
B-2	6.50	0.62	14.46	3.05	0.6	1.13	Post-Development	



Project:

8504 Fanita Drive

DMA

A1

SF

Acre

Status

Existing

AREA

94,907

2.18

50-years

Storm Event

Initial Time of Concentration Calculation

Type of Soil	C
Land Use	Residential, 4.3 DU/A or less
Runoff Coefficient	0.48
Overland Distance	80 ft
Slope	0.02 ft/ft
Unadjusted T_i	36.3 min
Adjusted T_i	8.1 min

$$t_c = \frac{1.8(1.1 - C)L^{0.5}}{S_{\%}^{0.33}}$$

See Maximum

Overland Travel Time of Concentration Calculation

Land Use	Residential, 4.3 DU/A or less
Runoff Coefficient	0.48
Overland Distance	10 ft
Slope	0.103 ft/ft
Overland T_s	7.5 min

$$T_c = T_i + T_t$$

$T_c = 17.6$ Min

Shallow Concentrated T_s

Type	Paved
Manning's Constant	20.3282
Length	802 ft
Slope	0.103 ft/ft
T_s	2.0 min

Project:

8504 Fanita Drive

Basin

A-1
Existing

Area

2.18 Acres

Use

Frequency 50 years

P6 2.3 Inch

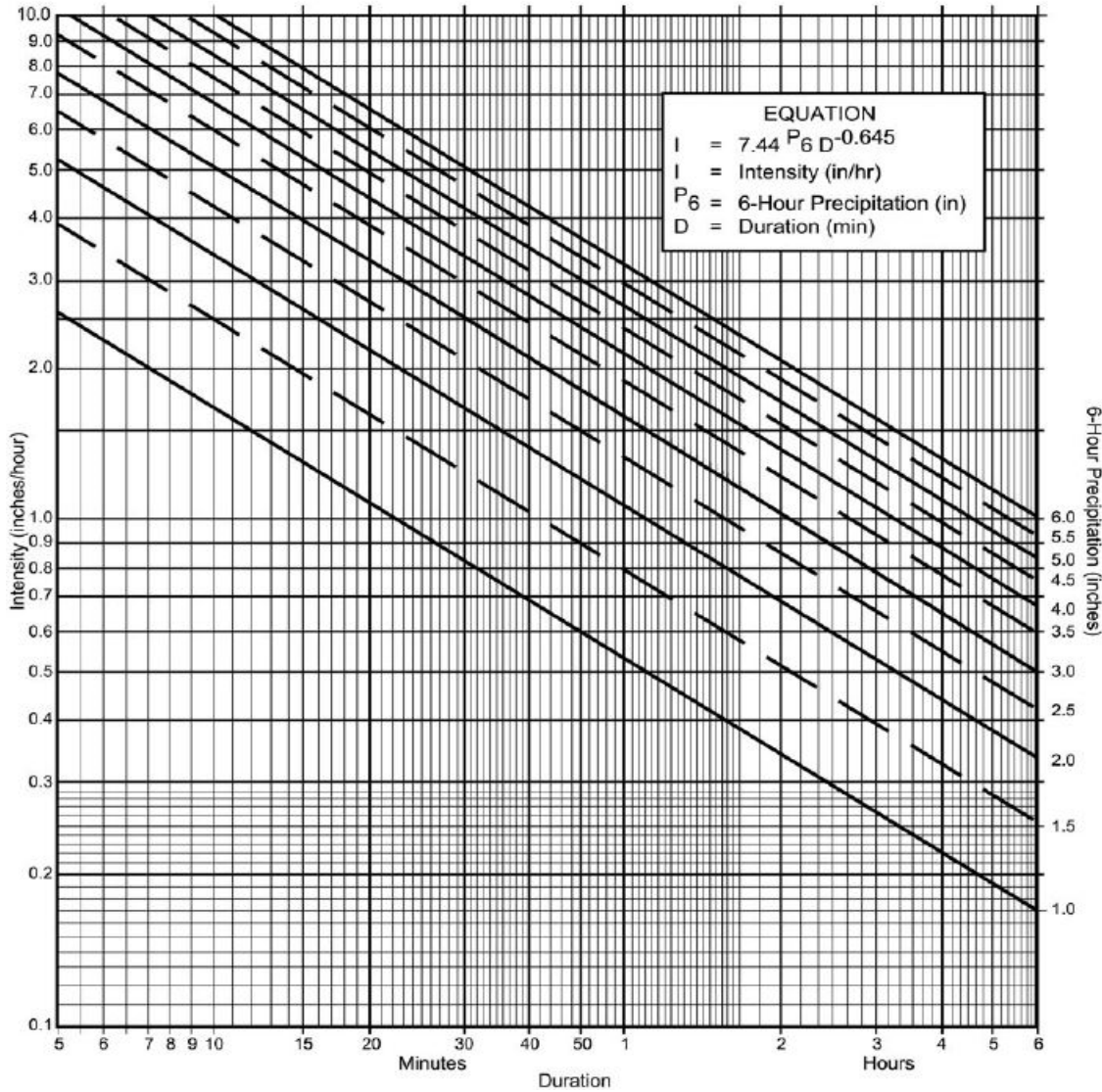
P24 5.4 Inch

P6/P24 42.6%

Adjusted P6 2.3

Duration D 17.6 Minutes

Intensity I 2.69 in/hr





Project:

8504 Fanita Drive

DMA

A2

Status

Proposed

AREA

SF

94,907

Acre

2.18

50-years

Storm Event

Initial Time of Concentration Calculation

Type of Soil	C
Land Use	Residential, 4.3 DU/A or less
Runoff Coefficient	0.48
Overland Distance	80 ft
Slope	0.02 ft/ft
Unadjusted T_i	36.3 min
Adjusted T_i	8.1 min

$$t_c = \frac{1.8(1.1 - C)L^{0.5}}{S_{\%}^{0.33}}$$

See Maximum

Overland Travel Time of Concentration Calculation

Land Use	Residential, 4.3 DU/A or less
Runoff Coefficient	0.48
Overland Distance	10 ft
Slope	0.103 ft/ft
Overland T_s	7.5 min

$$T_c = T_i + T_t$$

$$T_c = 17.6 \text{ Min}$$

Shallow Concentrated T_s

Type	Paved
Manning's Constant	20.3282
Length	802 ft
Slope	0.103 ft/ft
T_s	2.0 min

Project:

8504 Fanita Drive

Basin

A-2

Area

2.18 Acres

Use

Proposed

Frequency

50 years

P6

2.3 Inch

P24

5.4 Inch

P6/P24

42.6%

Adjusted P6

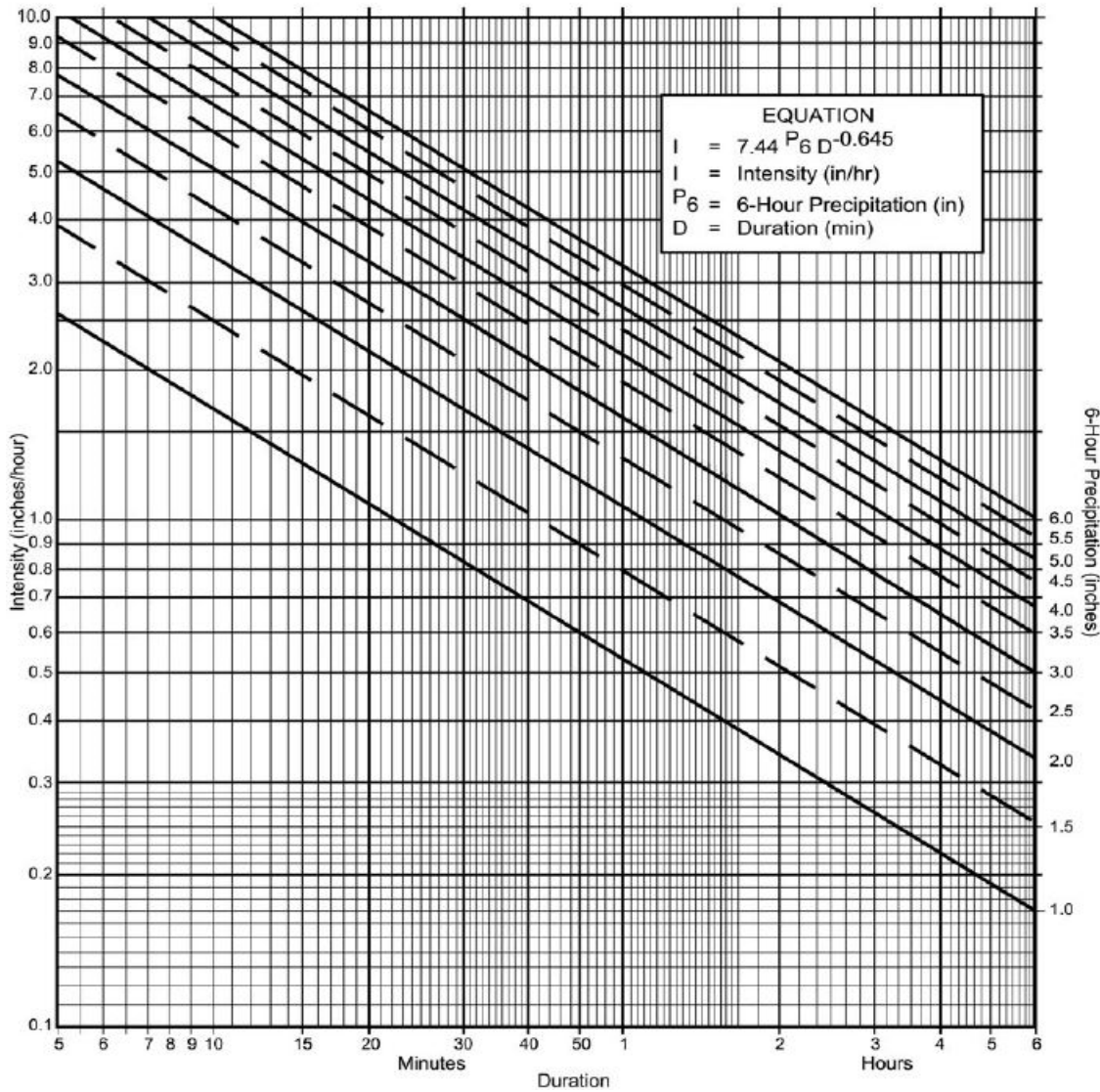
2.3

Duration D

17.6 Minutes

Intensity I

2.69 in/hr





Project:

8504 Fanita Drive

DMA

B1

SF

Acre

Status

Existing

AREA

26,887

0.62

50-years

Storm Event

Initial Time of Concentration Calculation

Type of Soil	C
Land Use	Residential, 2.0 DU/A or less
Runoff Coefficient	0.42
Overland Distance	80 ft
Slope	0.02 ft/ft
Unadjusted T_i	39.8 min
Adjusted T_i	9.2 min

$$t_c = \frac{1.8(1.1 - C)L^{0.5}}{S_{\%}^{0.33}}$$

See Maximum

Overland Travel Time of Concentration Calculation

Land Use	Residential, 2.0 DU/A or less
Runoff Coefficient	0.42
Overland Distance	5 ft
Slope	0.06 ft/ft
Overland T_s	6.9 min

$$T_c = T_i + T_t$$

$T_c = 16.7$ Min

Shallow Concentrated T_s

Type	Unpaved
Manning's Constant	16.1345
Length	135 ft
Slope	0.06 ft/ft
T_s	0.6 min

Project:

8504 Fanita Drive

Basin

B-1

Area

0.62 Acres

Use

Existing

Frequency

50 years

P6

2.3 Inch

P24

5.4 Inch

P6/P24

42.6%

Adjusted P6

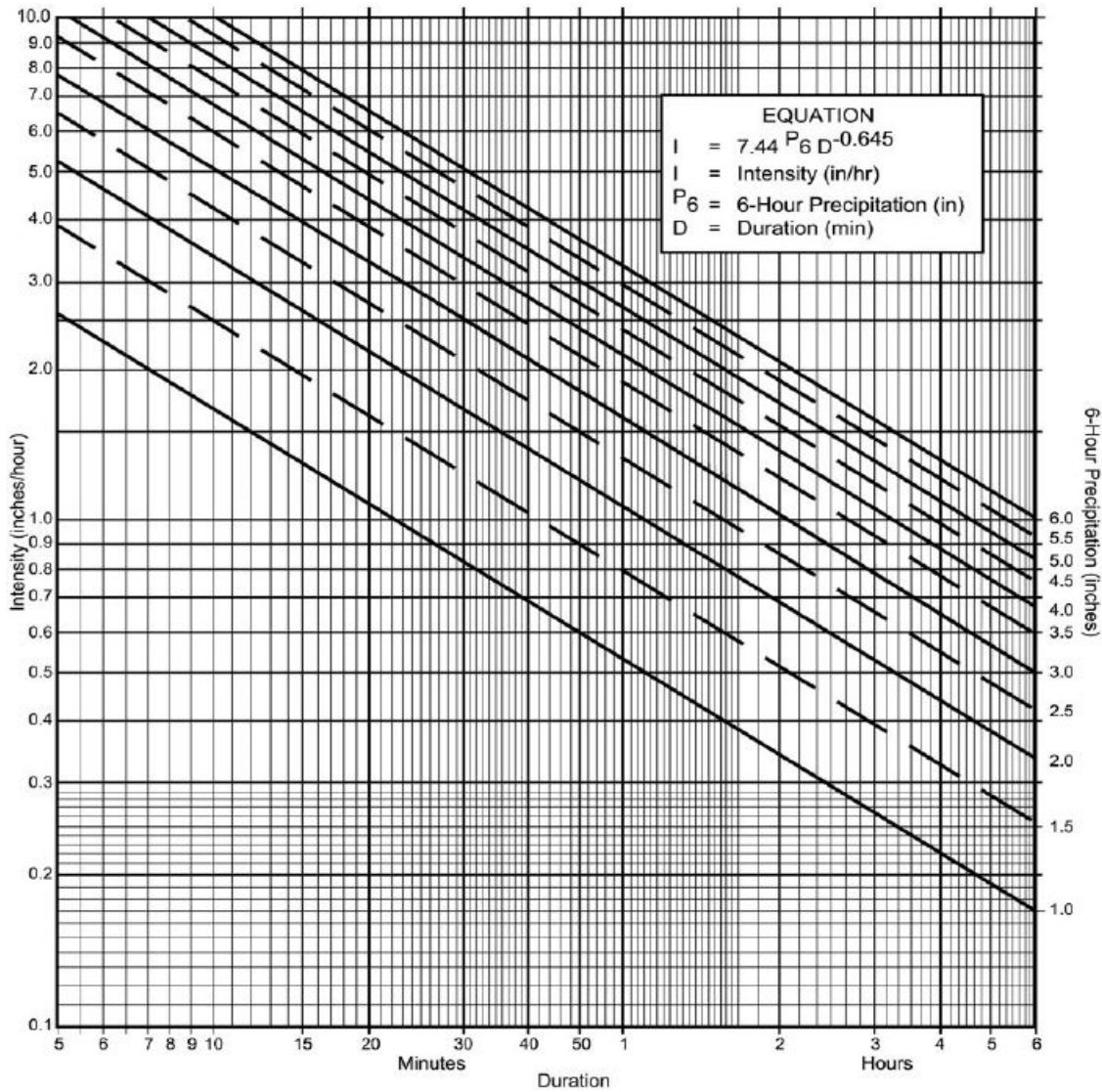
2.3

Duration D

16.7 Minutes

Intensity I

2.78 in/hr





Project:

8504 Fanita Drive

DMA

B2

Status

Proposed

AREA

SF

26,887

Acre

0.62

50-years

Storm Event

Initial Time of Concentration Calculation

Type of Soil	C
Land Use	Residential, 14.5 DU/A or less
Runoff Coefficient	0.6
Overland Distance	80 ft
Slope	0.02 ft/ft
Unadjusted T_i	29.3 min
Adjusted T_i	6.5 min

$$t_c = \frac{1.8(1.1 - C)L^{0.5}}{S_{\%}^{0.33}}$$

See Maximum

Overland Travel Time of Concentration Calculation

Land Use	Residential, 14.5 DU/A or less
Runoff Coefficient	0.6
Overland Distance	5 ft
Slope	0.02 ft/ft
Overland T_s	7.3 min

$$T_c = T_i + T_t$$

Tc = 14.5 Min

Shallow Concentrated **T_s**

Type	Paved
Manning's Constant	20.3282
Length	193 ft
Slope	0.06 ft/ft
T_s	0.6 min

Project:

8504 Fanita Drive

Basin

B-2

Area

0.62 Acres

Use

Proposed

Frequency

50 years

P6

2.3 Inch

P24

5.4 Inch

P6/P24

42.6%

Adjusted P6

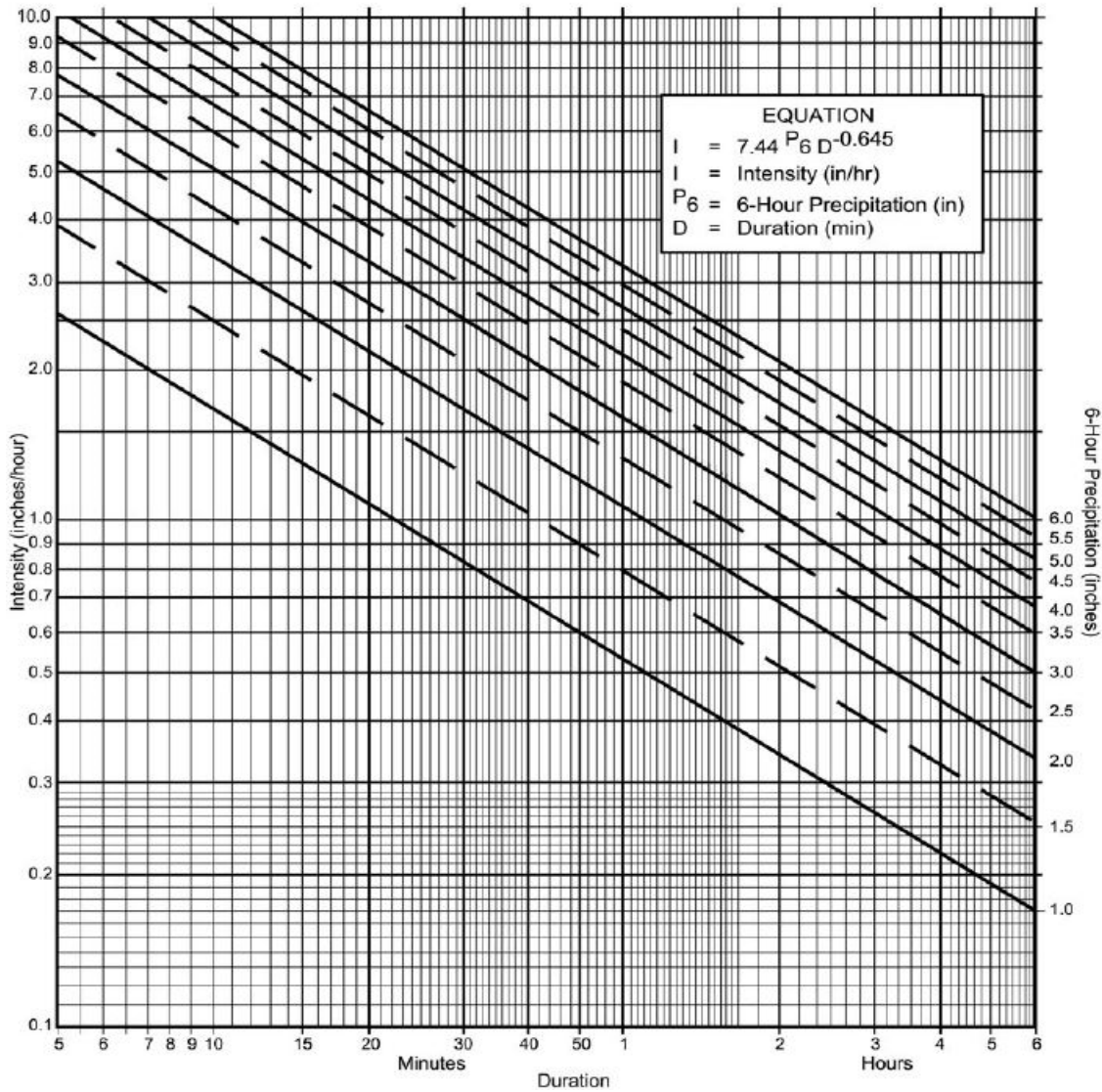
2.3

Duration D

14.5 Minutes

Intensity I

3.05 in/hr



RATIONAL METHOD HYDROLOGY

8504 Fanita Drive	
PROJECT	21-50
DATE	11/10/2021

Runoff Summary Spreadsheet

10 YEAR STORM EVENT

Basin	Initial TC	Basin Acre	Basin TC	Intensity	C	Basin Q CFS		
A-1	8.10	2.18	17.62	1.99	0.48	2.08	Pre-Development	OFFSITE
A-2	8.10	2.18	17.62	1.99	0.48	2.08	Post-Development	
B-1	9.20	0.62	16.70	2.06	0.42	0.53	Pre-Development	ONSITE
B-2	6.50	0.62	14.46	2.26	0.6	0.84	Post-Development	



Project:

8504 Fanita Drive

DMA

A1

SF

Acre

Status

Existing

AREA

94,907

2.18

10-years

Storm Event

Initial Time of Concentration Calculation

Type of Soil	C	
Land Use	Residential, 4.3 DU/A or less	
Runoff Coefficient	0.48	
Overland Distance	80	ft
Slope	0.02	ft/ft
Unadjusted T_i	36.3	min
Adjusted T_i	8.1	min

$$t_c = \frac{1.8(1.1 - C)L^{0.5}}{S_{\%}^{0.33}}$$

See Maximum

Overland Travel Time of Concentration Calculation

Land Use	Residential, 4.3 DU/A or less	
Runoff Coefficient	0.48	
Overland Distance	10	ft
Slope	0.103	ft/ft
Overland T_s	7.5	min

$$T_c = T_i + T_t$$

$T_c = 17.6$ Min

Shallow Concentrated T_s

Type	Paved	
Manning's Constant	20.3282	
Length	802	ft
Slope	0.103	ft/ft
T_s	2.0	min

Project:

8504 Fanita Drive

Basin

A-1

Area

2.18 Acres

Use

Existing

Frequency 10 years

P6 1.7 Inch

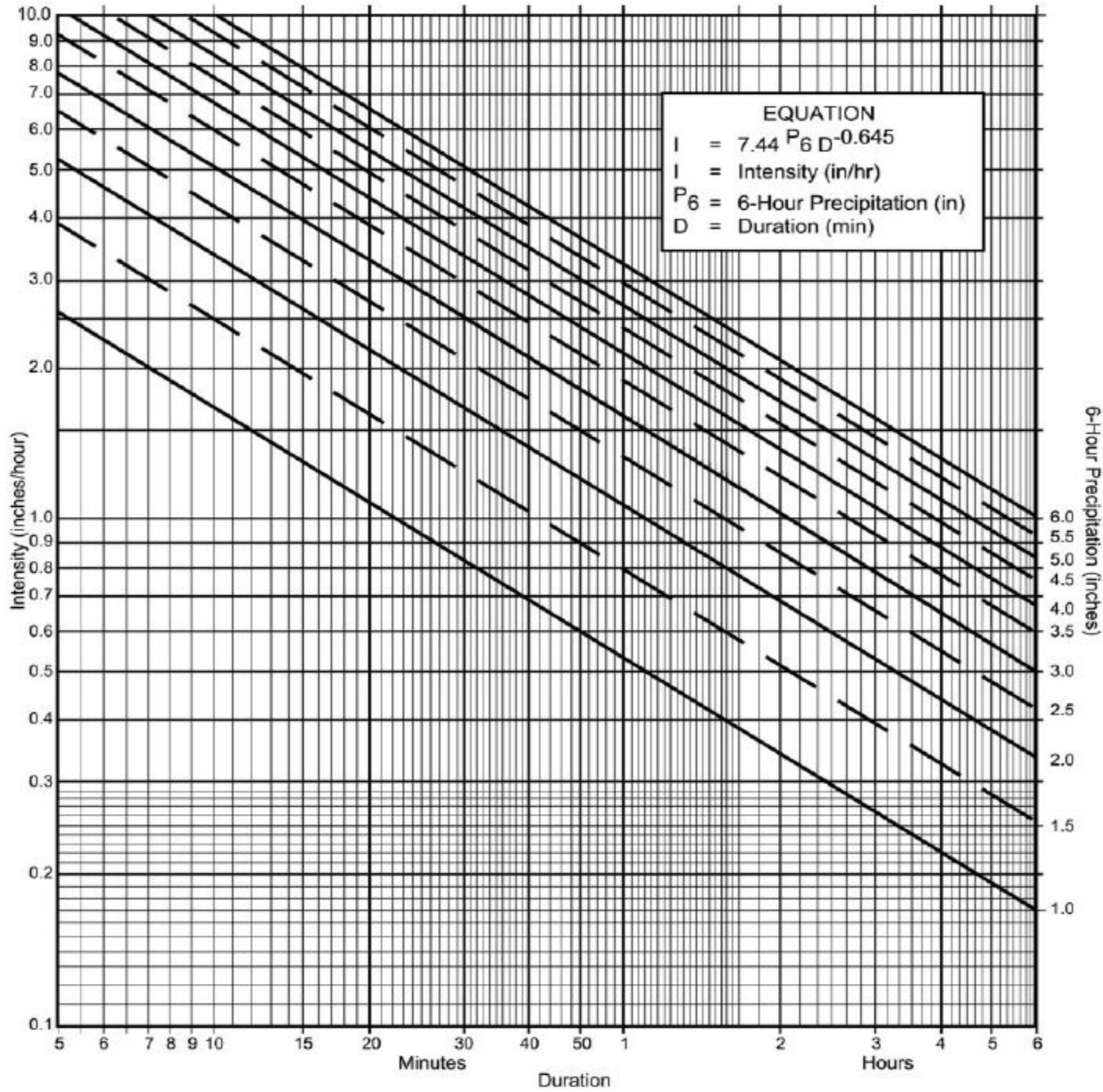
P24 2.8 Inch

P6/P24 60.7%

Adjusted P6 1.7

Duration D 17.6 Minutes

Intensity I 1.99 in/hr





Project:

8504 Fanita Drive

DMA

A2

SF

Acre

Status

Proposed

AREA

94,907

2.18

10-years

Storm Event

Initial Time of Concentration Calculation

Type of Soil	C	
Land Use	Residential, 4.3 DU/A or less	
Runoff Coefficient	0.48	
Overland Distance	80	ft
Slope	0.02	ft/ft
Unadjusted T_i	36.3	min
Adjusted T_i	8.1	min

$$t_c = \frac{1.8(1.1 - C)L^{0.5}}{S_{\%}^{0.33}}$$

See Maximum

Overland Travel Time of Concentration Calculation

Land Use	Residential, 4.3 DU/A or less	
Runoff Coefficient	0.48	
Overland Distance	10	ft
Slope	0.103	ft/ft
Overland T_s	7.5	min

$$T_c = T_i + T_t$$

$$T_c = 17.6 \text{ Min}$$

Shallow Concentrated T_s

Type	Paved	
Manning's Constant	20.3282	
Length	802	ft
Slope	0.103	ft/ft
T_s	2.0	min

Project:

8504 Fanita Drive

Basin

A-2

Area

2.18 Acres

Use

Proposed

Frequency 10 years

P6 1.7 Inch

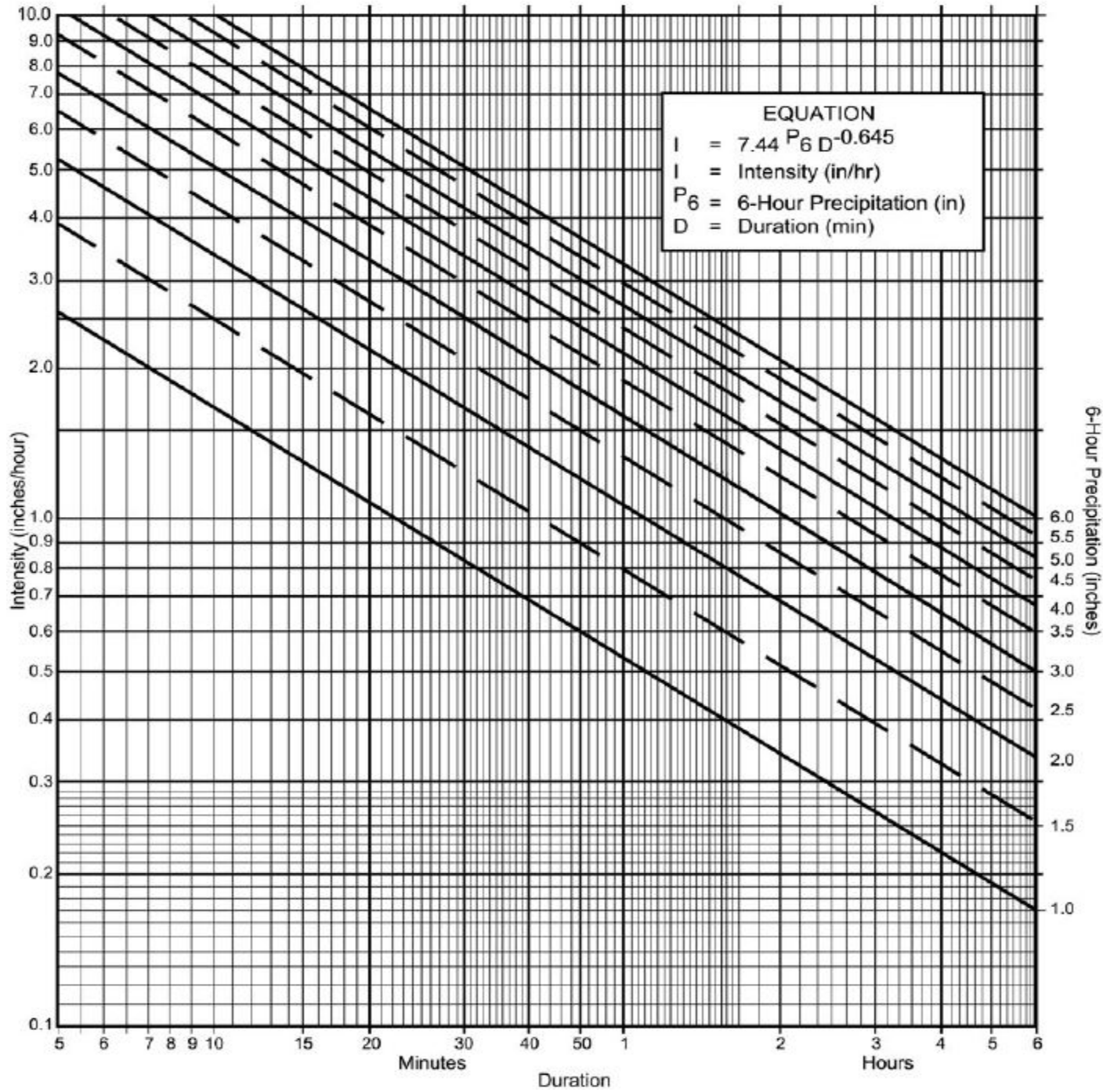
P24 2.8 Inch

P6/P24 60.7%

Adjusted P6 1.7

Duration D 17.6 Minutes

Intensity I 1.99 in/hr





Project:

8504 Fanita Drive

DMA

B1

SF

Acre

Status

Existing

AREA

26,887

0.62

10-years

Storm Event

Initial Time of Concentration Calculation

Type of Soil	C	
Land Use	Residential, 2.0 DU/A or less	
Runoff Coefficient	0.42	
Overland Distance	80	ft
Slope	0.02	ft/ft
Unadjusted T_i	39.8	min
Adjusted T_i	9.2	min

$$t_c = \frac{1.8(1.1 - C)L^{0.5}}{S_{\%}^{0.33}}$$

See Maximum

Overland Travel Time of Concentration Calculation

Land Use	Residential, 2.0 DU/A or less	
Runoff Coefficient	0.42	
Overland Distance	5	ft
Slope	0.06	ft/ft
Overland T_s	6.9	min

$$T_c = T_i + T_t$$

$T_c = 16.7$ Min

Shallow Concentrated T_s

Type	Unpaved	
Manning's Constant	16.1345	
Length	135	ft
Slope	0.06	ft/ft
T_s	0.6	min

Project:

8504 Fanita Drive

Basin

B-1

Area

0.62 Acres

Use

Existing

Frequency 10 years

P6 1.7 Inch

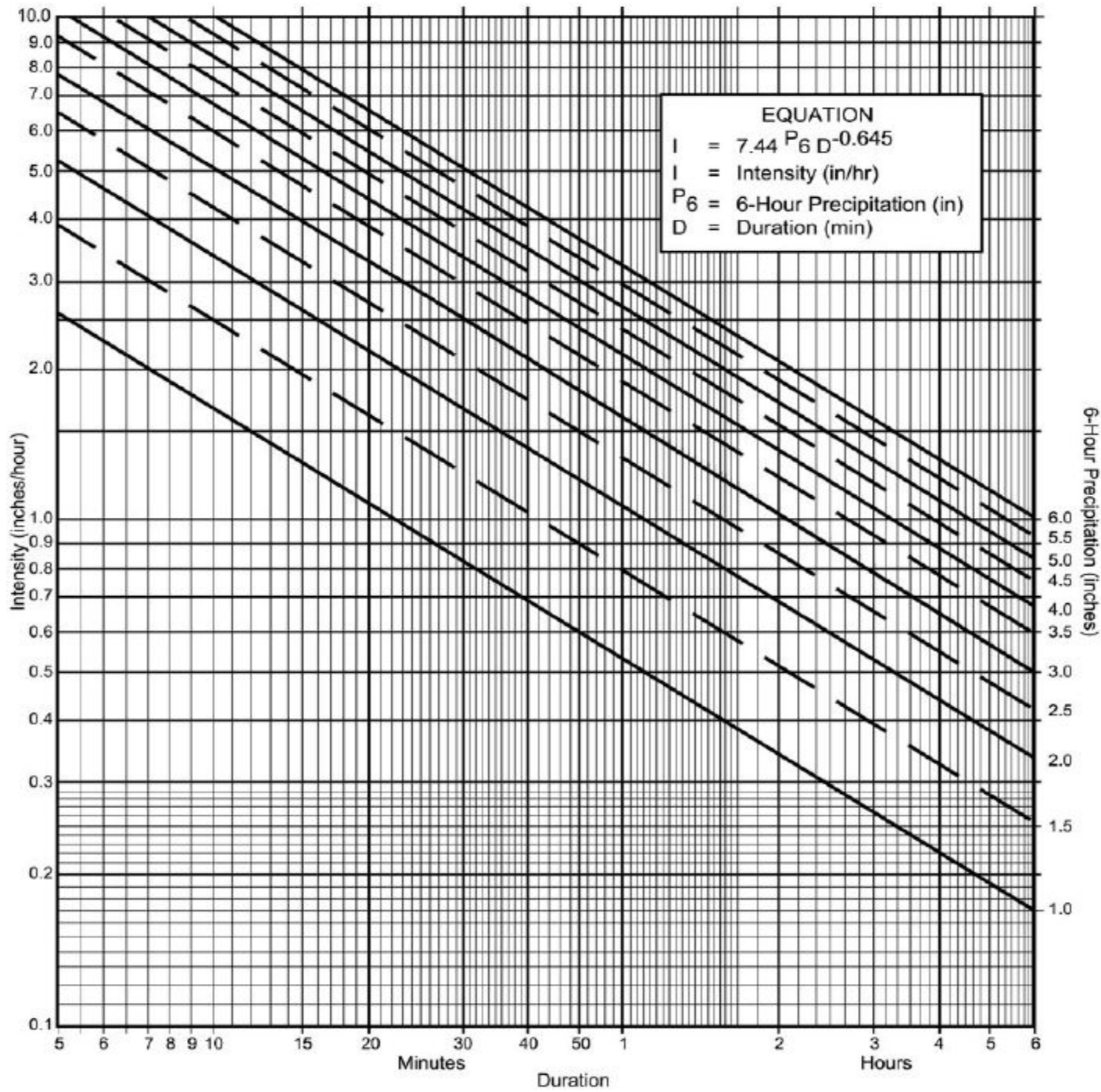
P24 2.8 Inch

P6/P24 60.7%

Adjusted P6 1.7

Duration D 16.7 Minutes

Intensity I 2.06 in/hr





Project:

8504 Fanita Drive

DMA

B2

Status

Proposed

AREA

SF

26,887

Acre

0.62

10-years

Storm Event

Initial Time of Concentration Calculation

Type of Soil	C
Land Use	Residential, 14.5 DU/A or less
Runoff Coefficient	0.6
Overland Distance	80 ft
Slope	0.02 ft/ft
Unadjusted T_i	29.3 min
Adjusted T_i	6.5 min

$$t_c = \frac{1.8(1.1 - C)L^{0.5}}{S_{\%}^{0.33}}$$

See Maximum

Overland Travel Time of Concentration Calculation

Land Use	Residential, 14.5 DU/A or less
Runoff Coefficient	0.6
Overland Distance	5 ft
Slope	0.02 ft/ft
Overland T_s	7.3 min

$$T_c = T_i + T_t$$

$T_c = 14.5$ Min

Shallow Concentrated T_s

Type	Paved
Manning's Constant	20.3282
Length	193 ft
Slope	0.06 ft/ft
T_s	0.6 min

Project:

8504 Fanita Drive

Basin

B-2

Area

0.62 Acres

Use

Proposed

Frequency 10 years

P6 1.7 Inch

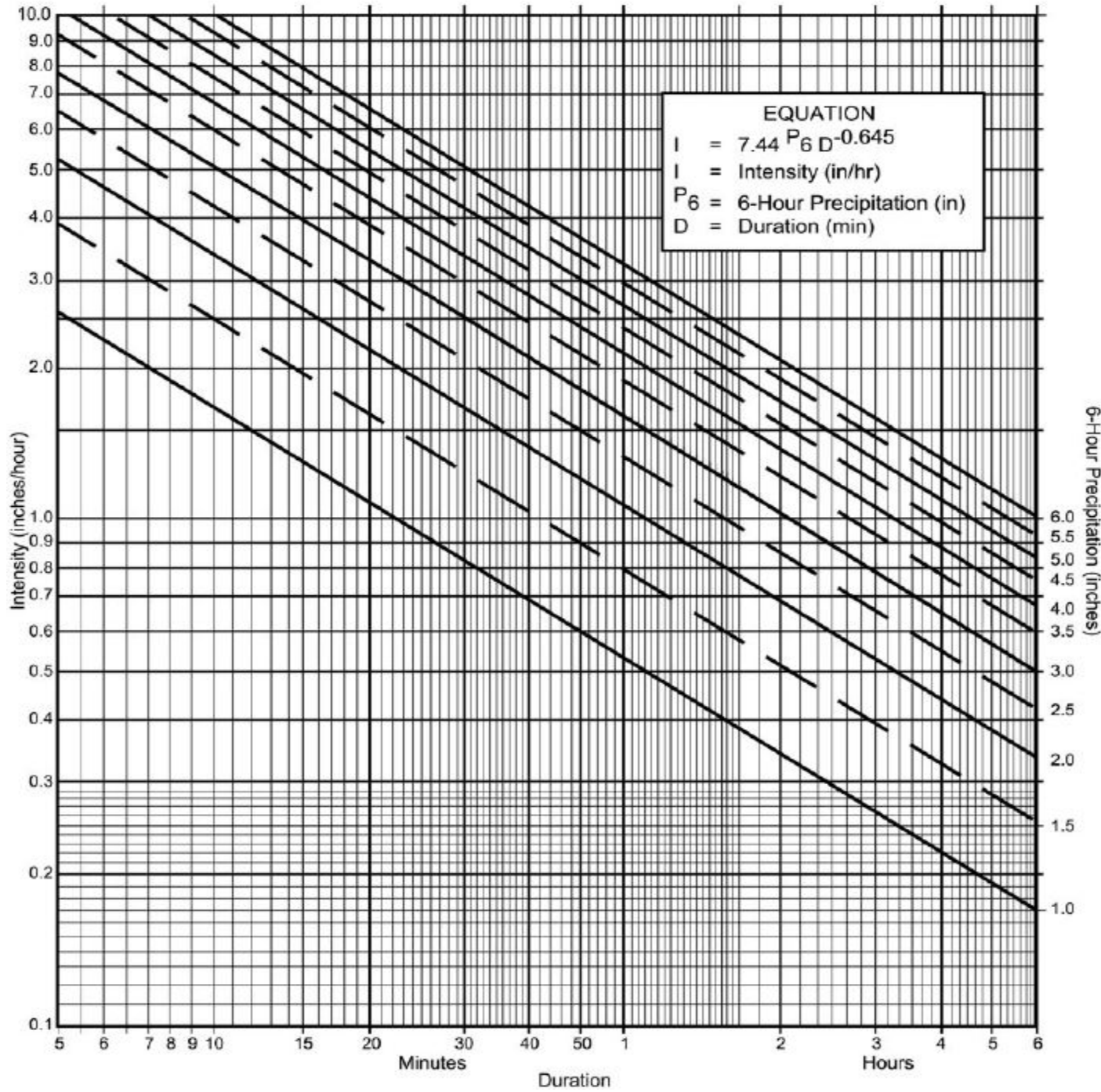
P24 2.8 Inch

P6/P24 60.7%

Adjusted P6 1.7

Duration D 14.5 Minutes

Intensity I 2.26 in/hr



RATIONAL METHOD HYDROLOGY

Runoff Summary Spreadsheet

8504 Fanita Drive	
PROJECT	21-50
DATE	11/10/2021

2 YEAR STORM EVENT

Basin	Initial TC	Basin Acre	Basin TC	Intensity	C	Basin Q CFS		
A-1	8.10	2.18	17.62	1.32	0.48	1.38	Pre-Development	OFFSITE
A-2	8.10	2.18	17.62	1.32	0.48	1.38	Post-Development	
B-1	9.20	0.62	16.70	1.37	0.42	0.35	Pre-Development	ONSITE
B-2	6.50	0.65	14.46	1.50	0.6	0.59	Post-Development	



Project:

8504 Fanita Drive

DMA

A1

SF

Acre

Status

Existing

AREA

94,907

2.18

2-years

Storm Event

Initial Time of Concentration Calculation

Type of Soil	C	
Land Use	Residential, 4.3 DU/A or less	
Runoff Coefficient	0.48	
Overland Distance	80	ft
Slope	0.02	ft/ft
Unadjusted T_i	36.3	min
Adjusted T_i	8.1	min

$$t_c = \frac{1.8(1.1 - C)L^{0.5}}{S_{\%}^{0.33}}$$

See Maximum

Overland Travel Time of Concentration Calculation

Land Use	Residential, 4.3 DU/A or less	
Runoff Coefficient	0.48	
Overland Distance	10	ft
Slope	0.103	ft/ft
Overland T_s	7.5	min

$$T_c = T_i + T_t$$

$T_c = 17.6$ Min

Shallow Concentrated T_s

Type	Paved	
Manning's Constant	20.3282	
Length	802	ft
Slope	0.103	ft/ft
T_s	2.0	min

Project:

8504 Fanita Drive

Basin

A-1
Existing

Area

2.18 Acres

Frequency 2 years

P6 1.13 Inch

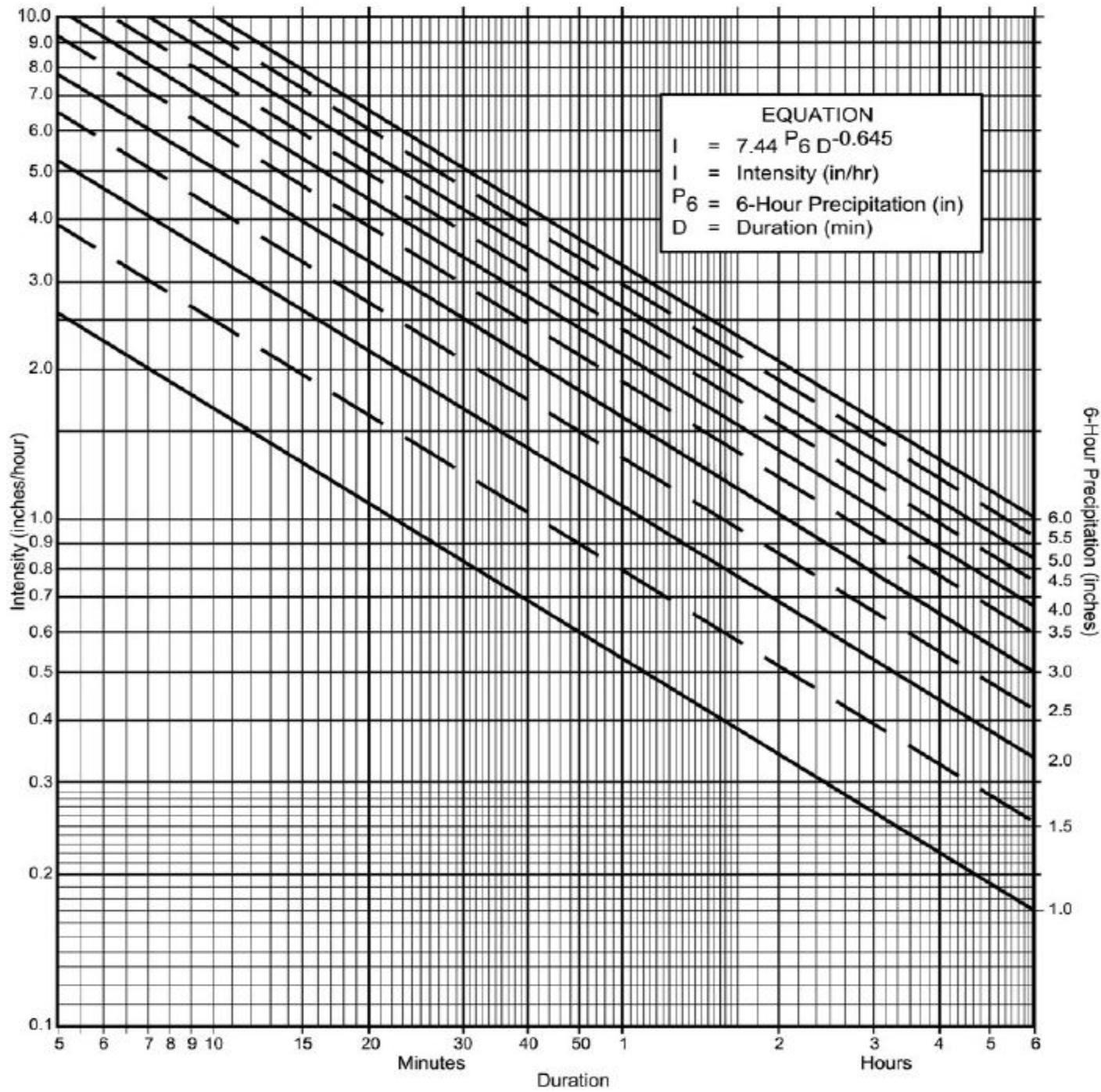
P24 1.75 Inch

P6/P24 64.6%

Adjusted P6 1.13

Duration D 17.6 Minutes

Intensity I 1.32 in/hr





Project:

8504 Fanita Drive

DMA
Status

A2
Proposed
2-years

AREA
Storm Event

SF

94,907

Acre
2.18

Initial Time of Concentration Calculation

Type of Soil	C	
Land Use	Residential, 4.3 DU/A or less	
Runoff Coefficient	0.48	
Overland Distance	80	ft
Slope	0.02	ft/ft
Unadjusted T_i	36.3	min
Adjusted T_i	8.1	min

$$t_c = \frac{1.8(1.1 - C)L^{0.5}}{S_{\%}^{0.33}}$$

See Maximum

Overland Travel Time of Concentration Calculation

Land Use	Residential, 4.3 DU/A or less	
Runoff Coefficient	0.48	
Overland Distance	10	ft
Slope	0.103	ft/ft
Overland T_s	7.5	min

$$T_c = T_i + T_t$$

$T_c = 17.6$ Min

Shallow Concentrated T_s

Type	Paved	
Manning's Constant	20.3282	
Length	802	ft
Slope	0.103	ft/ft
T_s	2.0	min

Project:

8504 Fanita Drive

Basin

A-2

Area

2.18 Acres

Use

Proposed

Frequency 2 years

P6 1.13 Inch

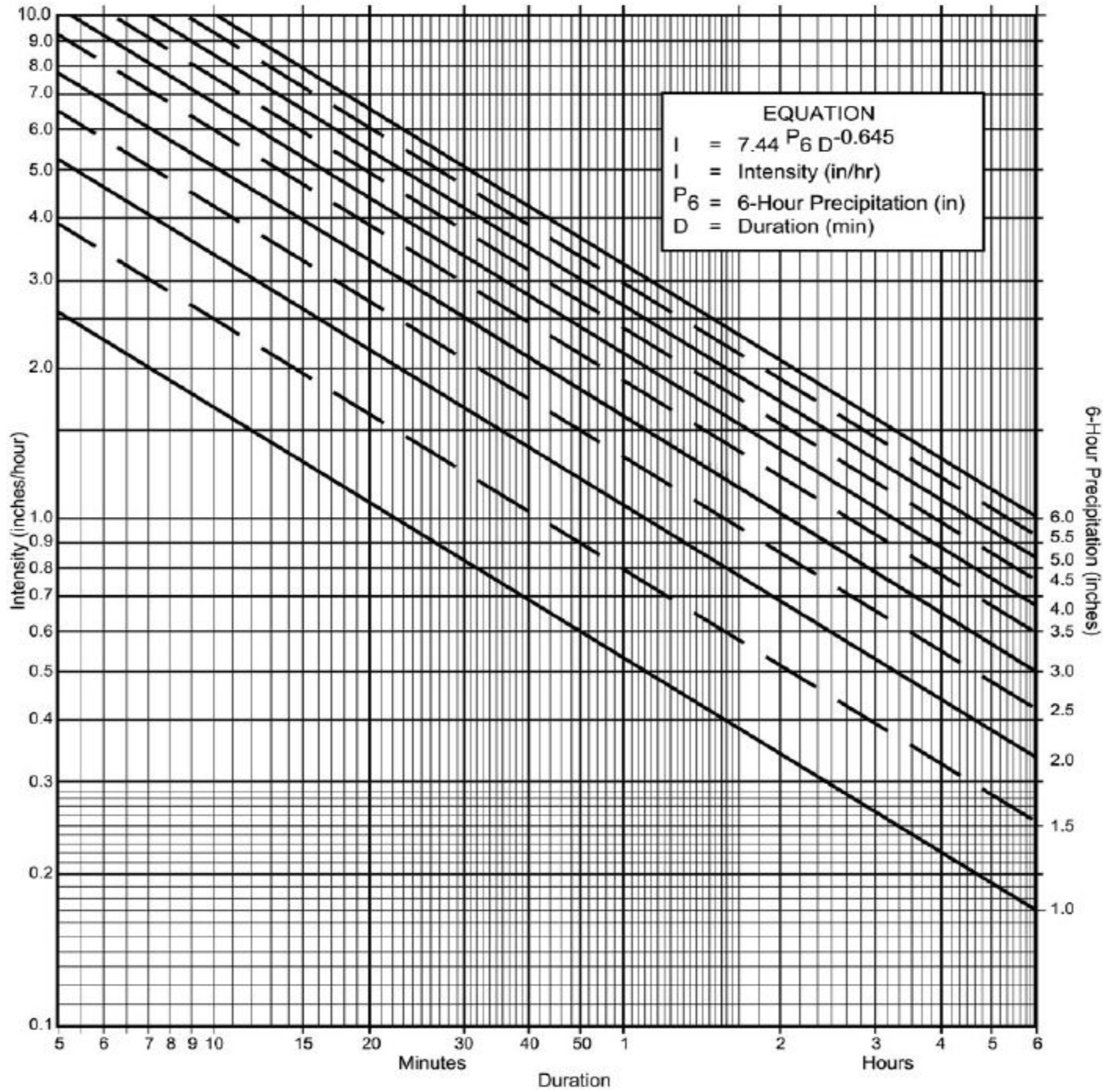
P24 1.75 Inch

P6/P24 64.6%

Adjusted P6 1.13

Duration D 17.6 Minutes

Intensity I 1.32 in/hr





Project:

8504 Fanita Drive

DMA

B1

SF

Acre

Status

Existing

AREA

26,887

0.62

2-years

Storm Event

Initial Time of Concentration Calculation

Type of Soil	C	
Land Use	Residential, 2.0 DU/A or less	
Runoff Coefficient	0.42	
Overland Distance	80	ft
Slope	0.02	ft/ft
Unadjusted T_i	39.8	min
Adjusted T_i	9.2	min

$$t_c = \frac{1.8(1.1 - C)L^{0.5}}{S_{\%}^{0.33}}$$

See Maximum

Overland Travel Time of Concentration Calculation

Land Use	Residential, 2.0 DU/A or less	
Runoff Coefficient	0.42	
Overland Distance	5	ft
Slope	0.06	ft/ft
Overland T_s	6.9	min

$$T_c = T_i + T_t$$

$T_c = 16.7$ Min

Shallow Concentrated T_s

Type	Unpaved	
Manning's Constant	16.1345	
Length	135	ft
Slope	0.06	ft/ft
T_s	0.6	min

Project:
8504 Fanita Drive

Basin Use
B-1
Existing

Area 0.62 Acres

Frequency 2 years

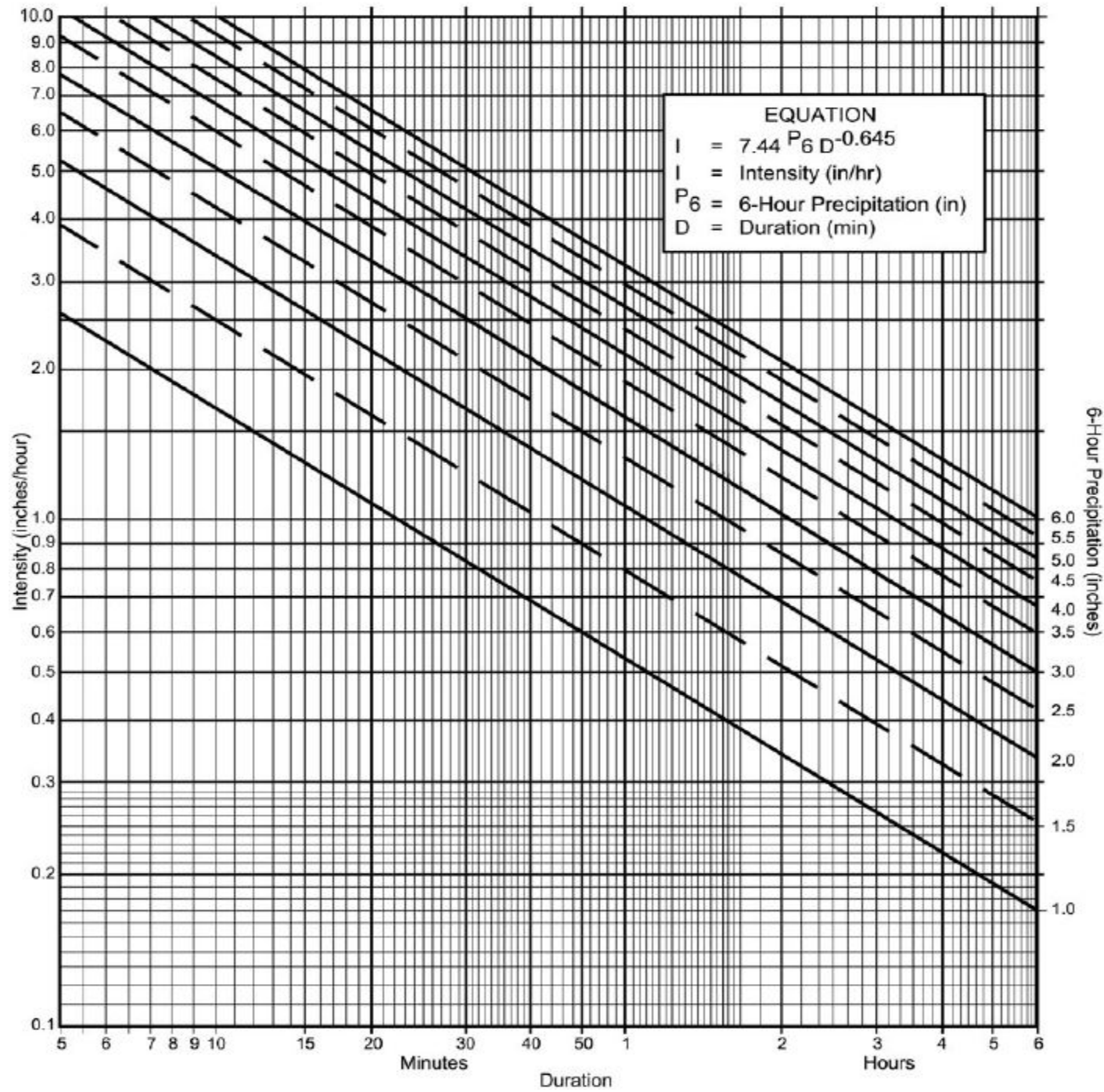
P6 1.13 Inch
P24 1.75 Inch

P6/P24 64.6%

Adjusted P6 1.13

Duration D 16.7 Minutes

Intensity I 1.37 in/hr





Project:

8504 Fanita Drive

DMA

B2

Status

Proposed

AREA

SF

28,421

Acre

0.65

2-years

Storm Event

Initial Time of Concentration Calculation

Type of Soil	C
Land Use	Residential, 14.5 DU/A or less
Runoff Coefficient	0.6
Overland Distance	80 ft
Slope	0.02 ft/ft
Unadjusted T_i	29.3 min
Adjusted T_i	6.5 min

$$t_c = \frac{1.8(1.1 - C)L^{0.5}}{S_{\%}^{0.33}}$$

See Maximum

Overland Travel Time of Concentration Calculation

Land Use	Residential, 14.5 DU/A or less
Runoff Coefficient	0.6
Overland Distance	5 ft
Slope	0.02 ft/ft
Overland T_s	7.3 min

$$T_c = T_i + T_t$$

Tc = 14.5 Min

Shallow Concentrated **T_s**

Type	Paved
Manning's Constant	20.3282
Length	193 ft
Slope	0.06 ft/ft
T_s	0.6 min

Project:

8504 Fanita Drive

Basin

B-2

Area

0.65 Acres

Use

Proposed

Frequency 2 years

P6 1.13 Inch

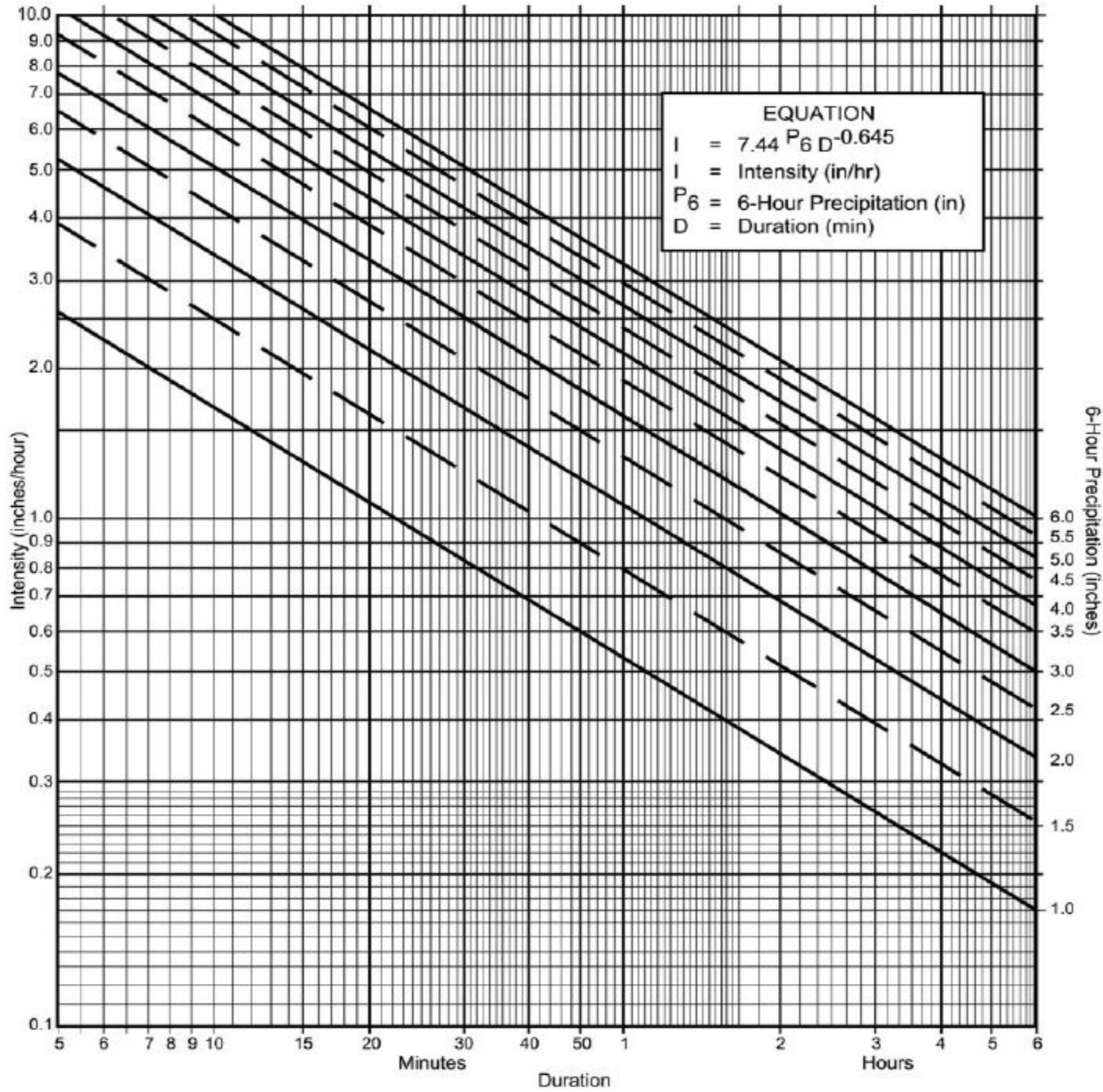
P24 1.75 Inch

P6/P24 64.6%

Adjusted P6 1.13

Duration D 14.5 Minutes

Intensity I 1.50 in/hr



APPENDIX – E

San Diego County

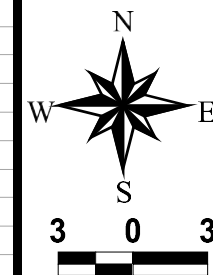
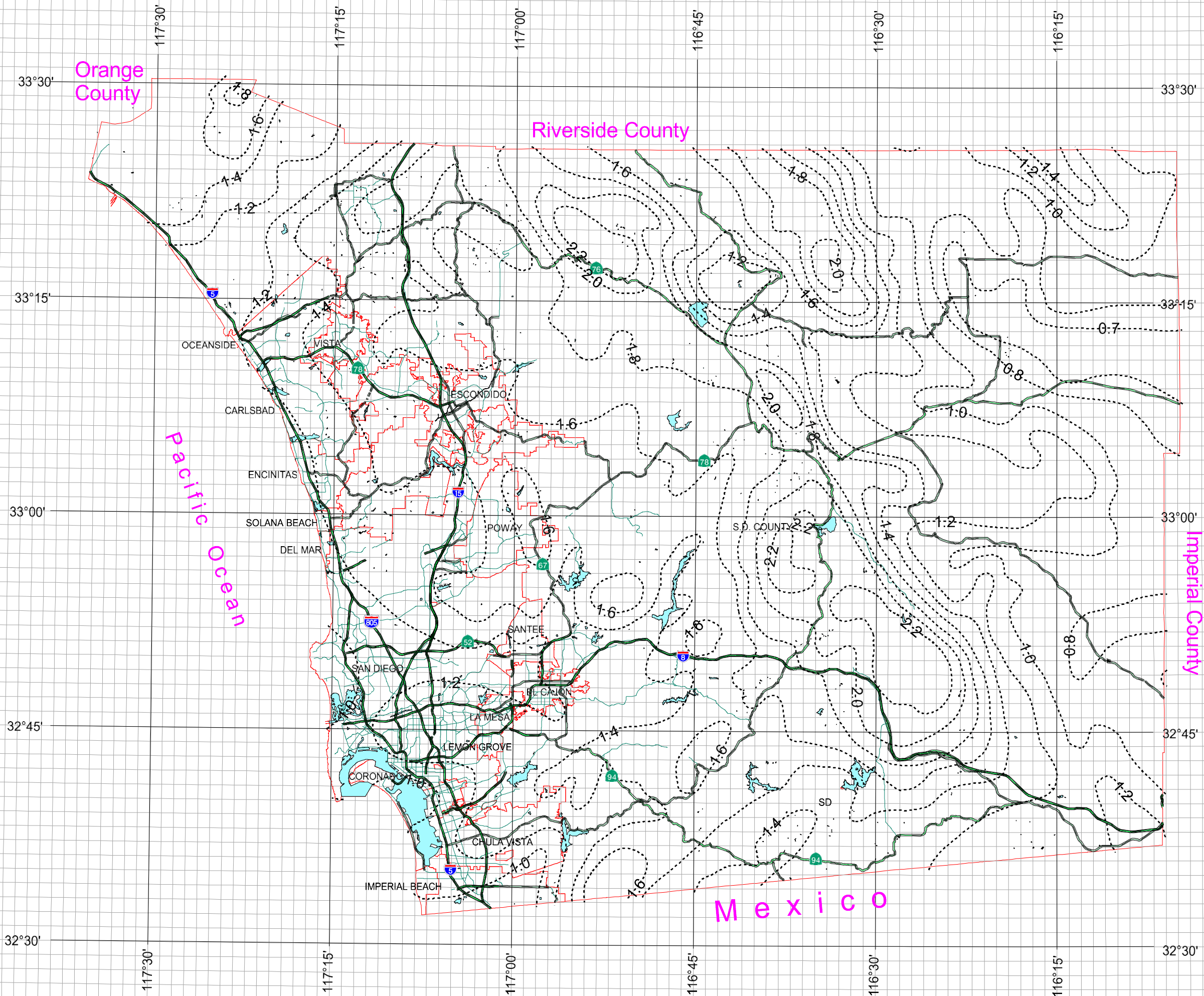
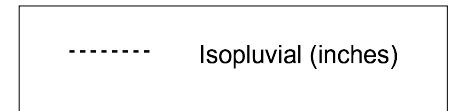
ISOPLUVIAL LINES

County of San Diego Hydrology Manual



Rainfall Isopluvials

2 Year Rainfall Event - 6 Hours



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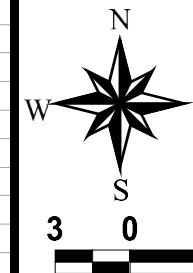
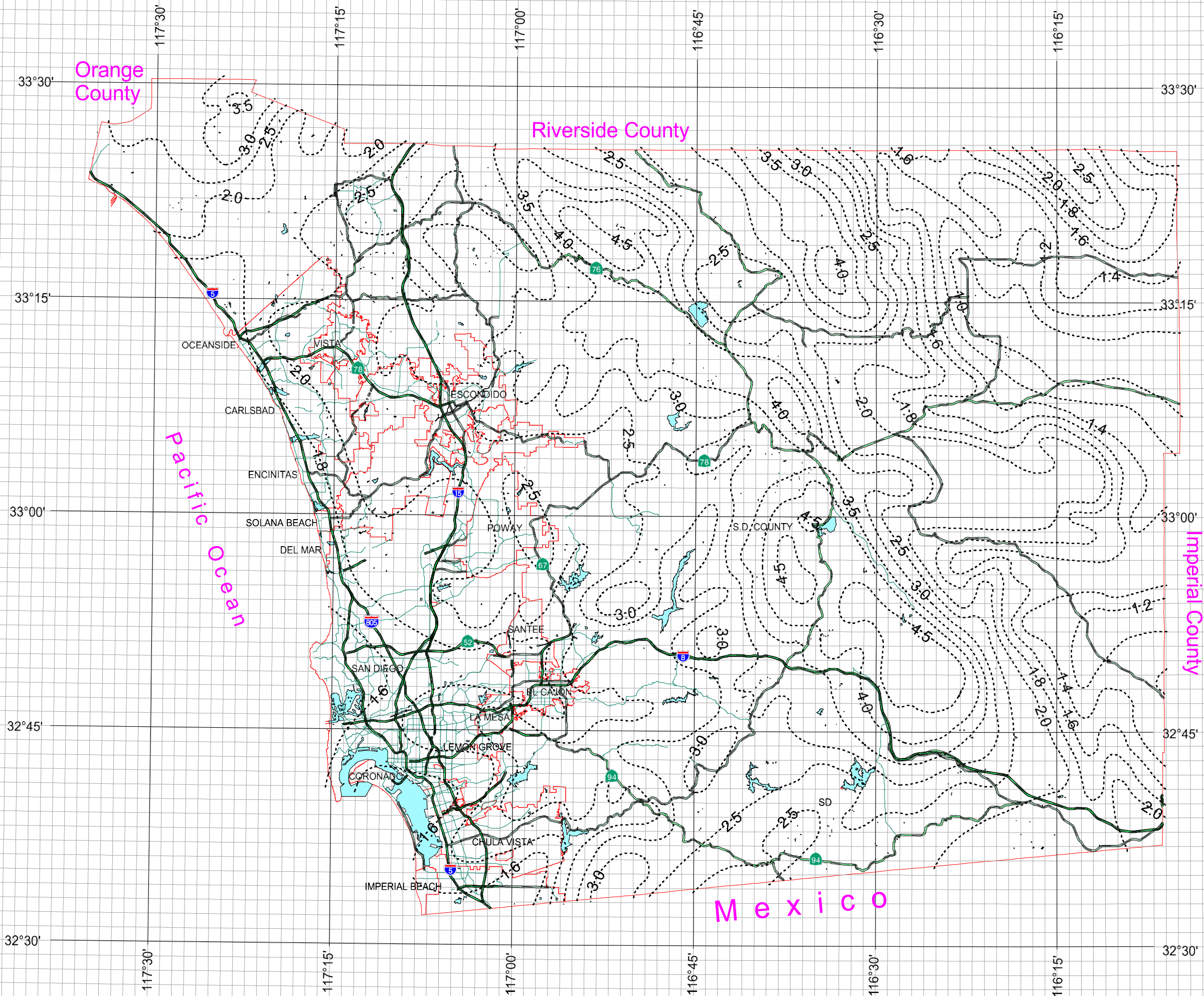
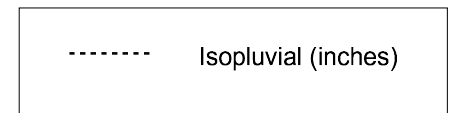
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County of San Diego Hydrology Manual



Rainfall Isopluvials

2 Year Rainfall Event - 24 Hours



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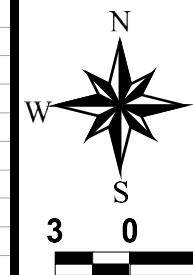
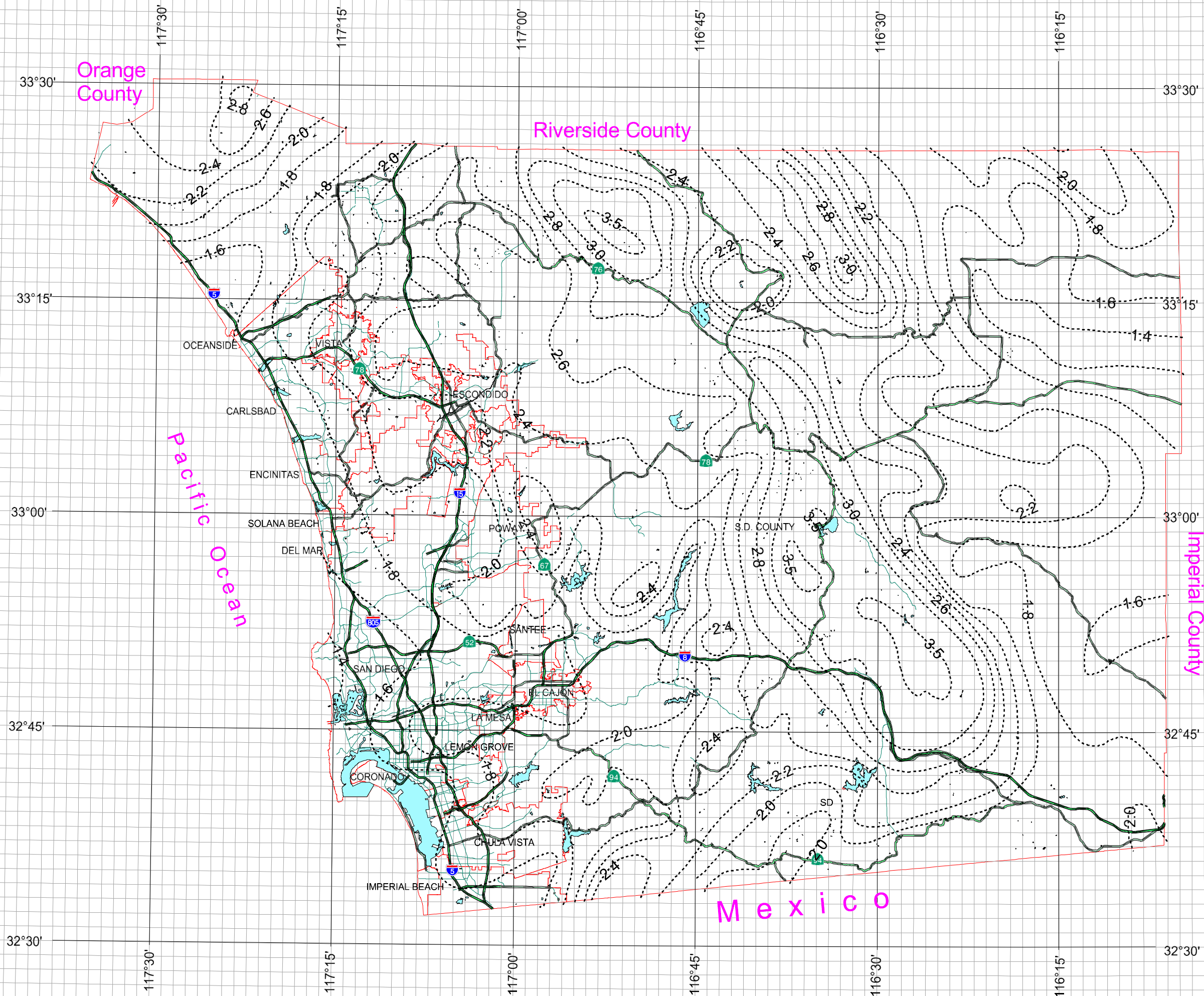
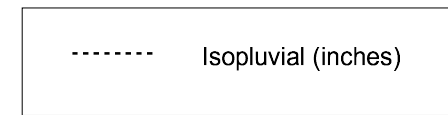
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County of San Diego Hydrology Manual



Rainfall Isopluvials

10 Year Rainfall Event - 6 Hours



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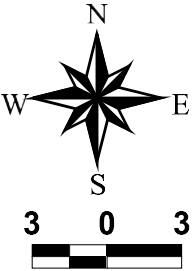
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Rainfall Isopluvials

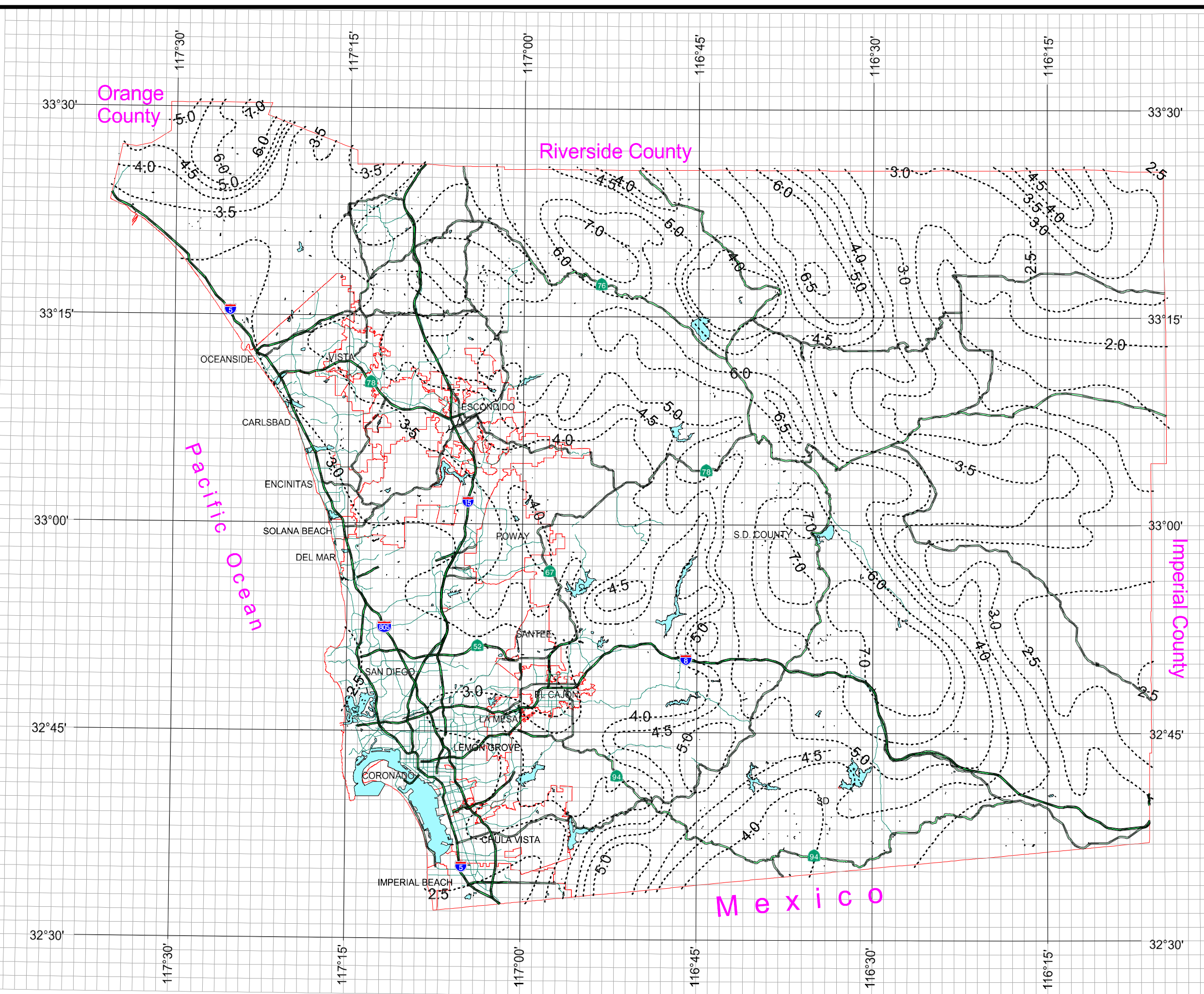
10 Year Rainfall Event - 24 Hours



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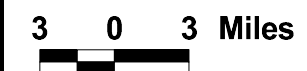
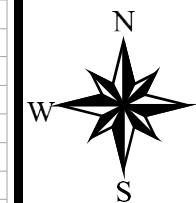
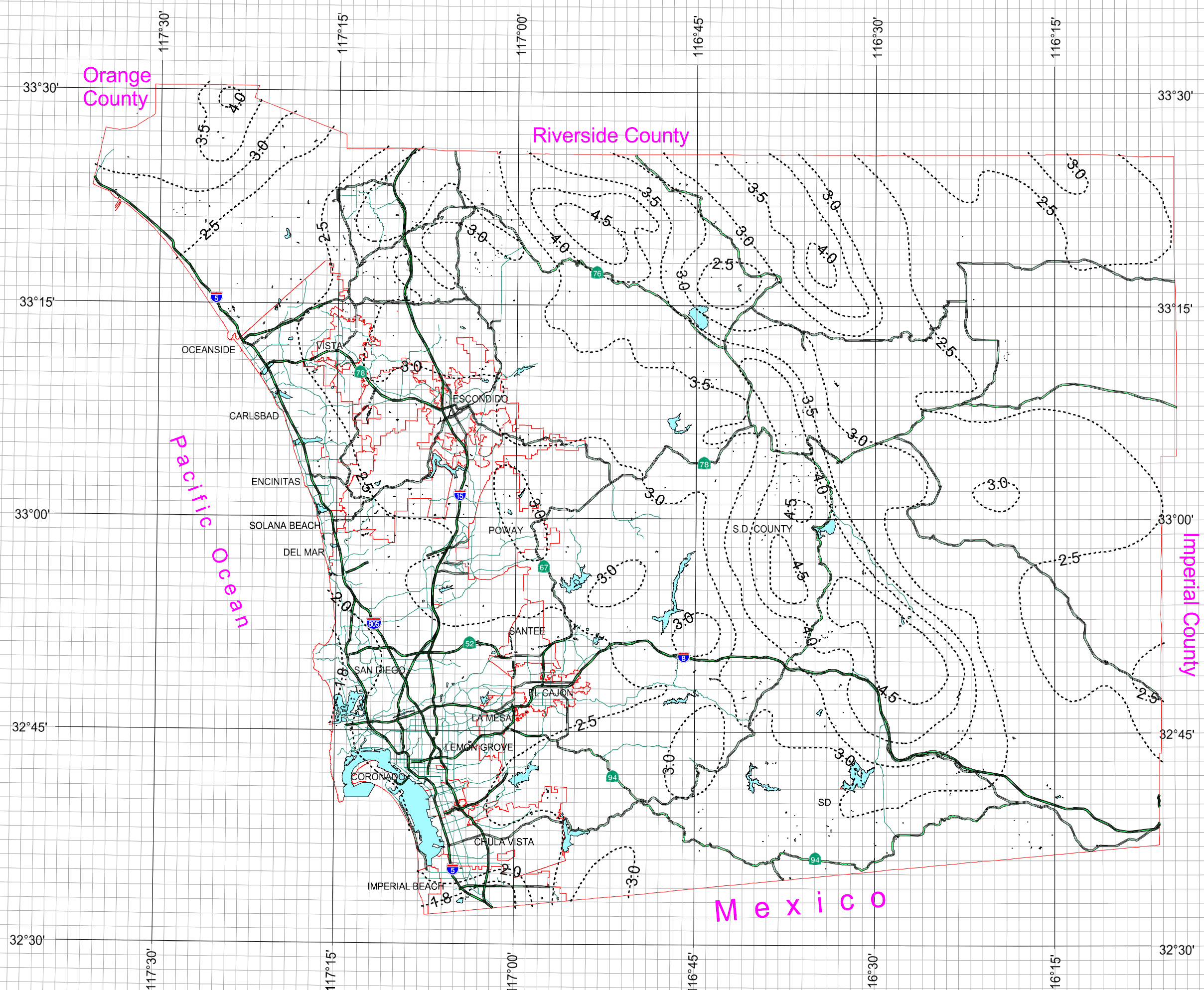
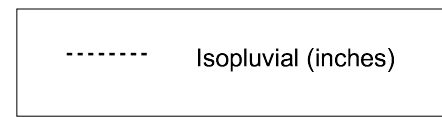


County of San Diego Hydrology Manual



Rainfall Isopluvials

50 Year Rainfall Event - 6 Hours



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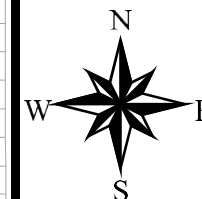
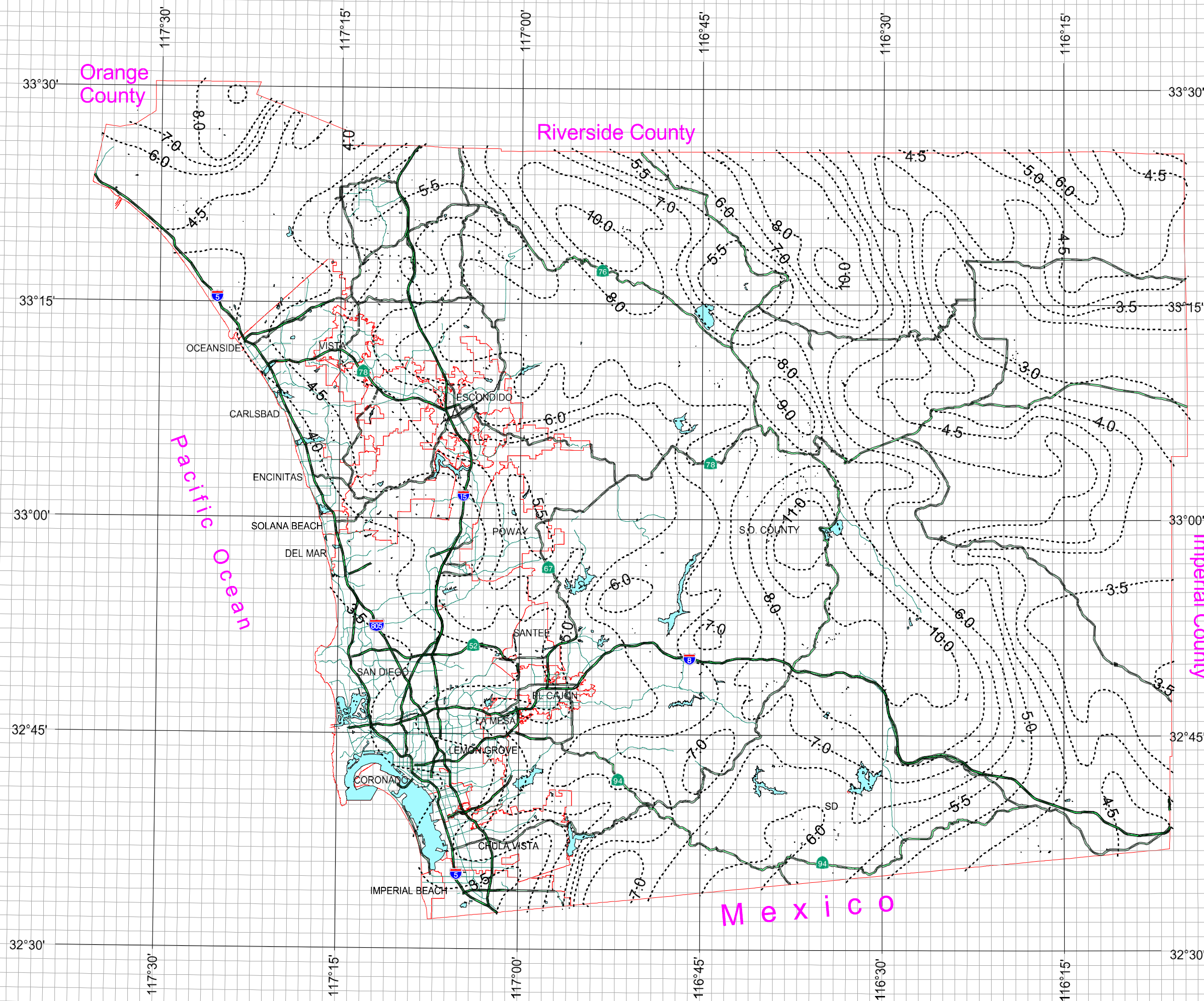
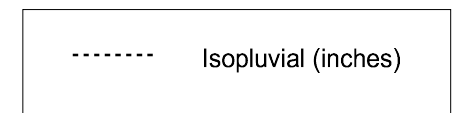
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County of San Diego Hydrology Manual



Rainfall Isopluvials

50 Year Rainfall Event - 24 Hours



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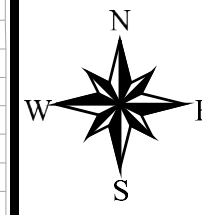
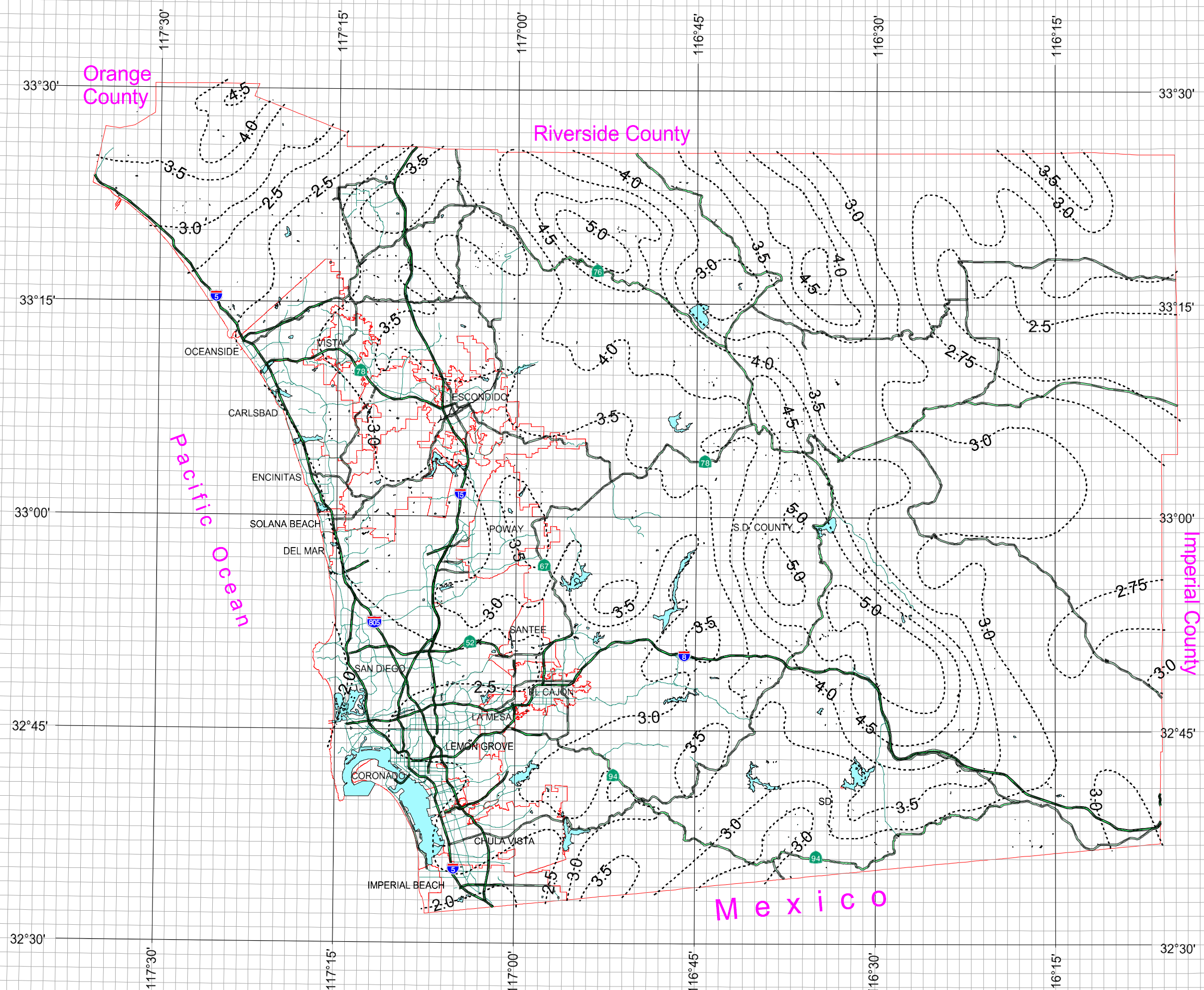
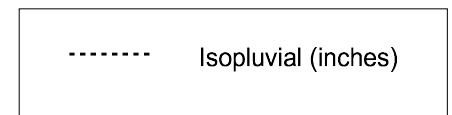
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County of San Diego Hydrology Manual



Rainfall Isophuvials

100 Year Rainfall Event - 6 Hours



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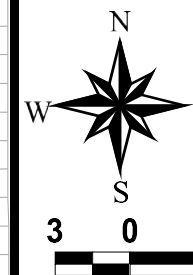
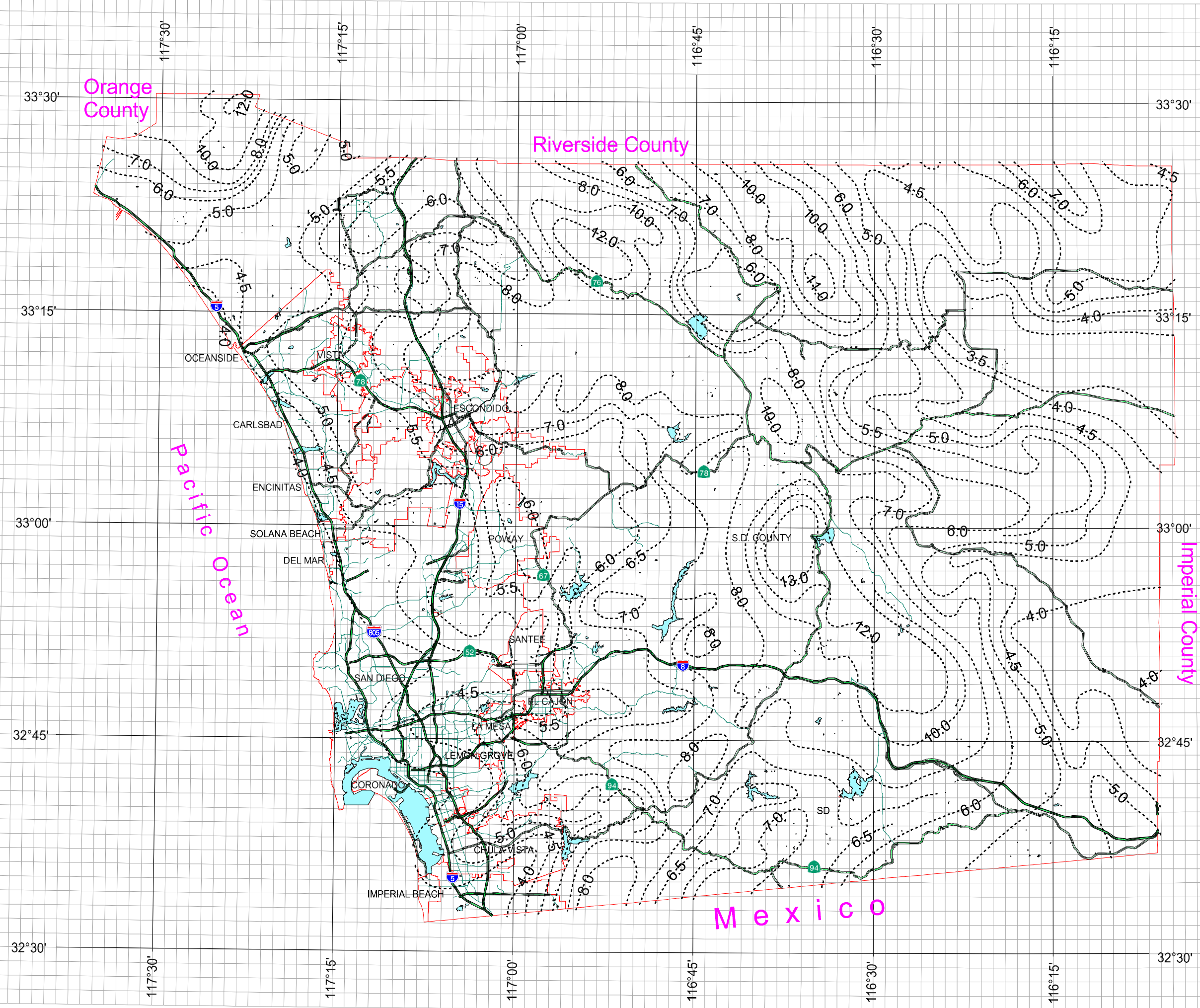
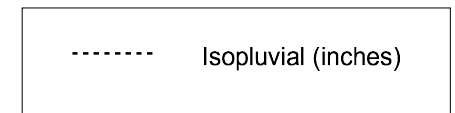
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County of San Diego Hydrology Manual



Rainfall Isopluvials

100 Year Rainfall Event - 24 Hours



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APPENDIX G

Ldn Consulting, Inc.

42428 Chisolm Trail, Murrieta CA 92562

phone 760-473-1253

March 28, 2021

Tarik Alahmad
7710 Balboa Avenue, Ste 201c
San Diego, California 92111

RE: Fanita Drive Villas Residential Air Quality Screening Assessment – City of Santee

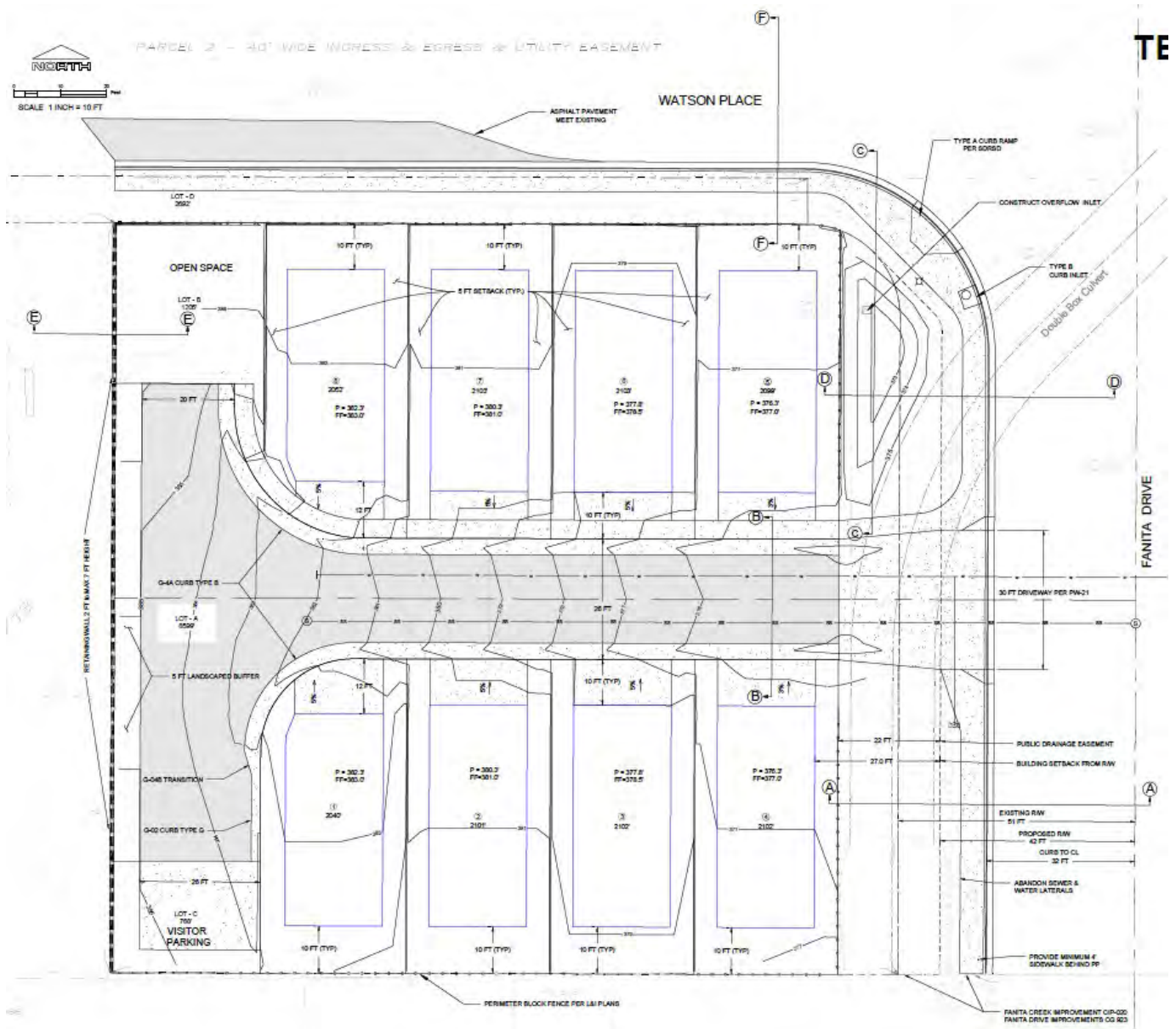
The purpose of this air quality screening letter is to identify potential air quality impacts, if any, which may be created from the construction or operation of a proposed multi-family development located 8504 Fanita Drive in the City of Santee. The proposed development plan is shown in Figure 1 on the following page. Initially, the project consisted of a unit multi-family development that would include up to 10 units. The revised site plan identifies 8 multi-family units. To be conservative, modeling was conducted on 10 units.

Construction and operational emissions would be required to conform to all federal, state and local regional air quality laws. The air quality emissions from this project were analyzed using CalEEMod 2020.4.0 and compared to San Diego Air Pollution Control District's (SDAPCD) Rule 20.2, which is the principal rule typically used to screen for significance under CEQA for both construction and operational emissions. The City of Santee has adopted SDAPCD Rule 20.2 standards as their own. The significance thresholds are shown in Table 1.

Table 1: City of Santee Air Quality Significance Thresholds

Pollutant	Total Emissions (Pounds per Day)
Respirable Particulate Matter (PM ₁₀ / PM _{2.5})	100 and 55
Nitrogen Oxide (NO _x)	250
Sulfur Oxide (SO _x)	250
Carbon Monoxide (CO)	550
Reactive Organic Gases (ROG)	75

Figure 1: Proposed Project Site Development Plan



The proposed project seeks to start construction in early 2023. The site is currently vacant and would require minimal earthwork. It is expected that the site will require 800 cubic yards (CY) of cut and 800 CY of fill and would therefore be balanced and would not require export/import of any soil. The total construction project would be expected to be completed in roughly six months. The durations and equipment estimates are shown in Table 2.

Table 2: Proposed Construction Phase and Duration

Equipment Identification	Proposed Start	Proposed Completion	Quantity
Site Preparation	1/1/2023	1/2/2023	
Graders			1
Tractors/Loaders/Backhoes			1
Grading	1/3/2023	1/4/2023	
Graders			1
Rubber Tired Loaders			1
Tractors/Loaders/Backhoes			1
Building Construction	1/5/2023	5/24/2023	
Cranes			2
Forklifts			2
Tractors/Loaders/Backhoes			1
Paving	5/1/2023	5/5/2023	
Cement and Mortar Mixers			4
Pavers			1
Rollers			1
Tractors/Loaders/Backhoes			1
Architectural Coating	5/18/2023	5/24/2023	
Air Compressors			1
This equipment list is based upon equipment inventory and estimates within CalEEMod 2020.4.0.			

The CalEEMod air quality model was developed by South Coast Air Quality Management District (SCAQMD) and was just updated in 2021. Short-term daily air quality construction emissions are reported in pounds per day and are shown in Table 3.

Based on the findings of the air quality modeling, construction activities would not generate daily air emissions in excess of the screening level significance thresholds identified in Table 1 above.

Table 3: Expected Daily Construction Emissions Summary (Pounds/Day)

Year	ROG	NO _x	CO	SO ₂	PM ₁₀ (Dust)	PM ₁₀ (Exhaust)	PM ₁₀ (Total)	PM _{2.5} (Dust)	PM _{2.5} (Exhaust)	PM _{2.5} (Total)
2023 (lb/day)	63.42	12.01	14.74	0.02	5.38	0.59	5.80	2.59	0.54	2.97
City Thresholds (lb/day)	75	250	550	250	-	-	100	-	-	55
Significant?	No	No	No	No	-	-	No	-	-	No

Expected Construction emissions are based upon CalEEMod 2020.4.0 modeling assumptions for equipment and durations listed in Table 2 above.

Project Buildout is expected in 2023 and the first full year of operations would be expected in 2024 and was modeled as such. The Project traffic generation was not modified within CalEEMod and default settings were assumed for operations. Generally operational emissions are different in both summer and winter scenarios so both data sets are provided and is shown in Tables 4 and Table 5. In addition, the CalEEMod input/output model for both construction and operations is shown in **Attachment A** at the end of this letter.

Table 4: Expected Summer Daily Pollutant Generation

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Area	15.63	0.31	19.72	0.03	2.65	2.65
Energy	0.00	0.03	0.01	0.00	0.00	0.00
Mobile	0.23	0.24	2.11	0.00	0.49	0.13
Total	15.87	0.58	21.84	0.04	3.15	2.79
City Thresholds (lb/day)	57	250	550	250	100	55
Significant?	No	No	No	No	No	No

Table 5: Expected Winter Daily Pollutant Generation

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Area	15.63	0.31	19.72	0.03	2.65	2.65
Energy	0.00	0.03	0.01	0.00	0.00	0.00
Mobile	0.23	0.26	2.16	0.00	0.49	0.13
Total	15.86	0.60	21.89	0.04	3.15	2.79
City Thresholds (lb/day)	57	250	550	250	100	55
Significant?	No	No	No	No	No	No

Tarik Alahmad
7710 Balboa Avenue, Ste 201c
San Diego, California 92111

Ldn Consulting, Inc.
42428 Chisolm Trail, Murrieta CA 92562
phone 760-473-1253
fax 760-689-4943

Based on the findings of the air quality modeling, operational activities would not generate daily air emissions in excess of the screening level significance thresholds identified in Table 1 above.

Per this analysis, no air quality impacts are anticipated, and no further analysis is required. If you have any questions, please do not hesitate to contact me directly at (760) 473-1253.

Sincerely,
Ldn Consulting, Inc.



Jeremy Loudon, Principal

Attachment A: CalEEMod Results

Fanita Drive Villas (10 Unit MF) - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Fanita Drive Villas (10 Unit MF)

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	10.00	Dwelling Unit	0.67	10,000.00	29

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2024
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site is 0.67 acres

Construction Phase -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	6/21/2023	5/24/2023
tblConstructionPhase	PhaseEndDate	6/7/2023	5/24/2023
tblConstructionPhase	PhaseEndDate	1/18/2023	1/4/2023
tblConstructionPhase	PhaseEndDate	6/14/2023	5/5/2023
tblConstructionPhase	PhaseEndDate	1/16/2023	1/2/2023
tblConstructionPhase	PhaseStartDate	6/15/2023	5/18/2023
tblConstructionPhase	PhaseStartDate	1/19/2023	1/5/2023

Fanita Drive Villas (10 Unit MF) - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	PhaseStartDate	1/17/2023	1/3/2023
tblConstructionPhase	PhaseStartDate	6/8/2023	5/1/2023
tblConstructionPhase	PhaseStartDate	1/14/2023	1/1/2023
tblLandUse	LotAcreage	0.63	0.67

2.0 Emissions Summary

Fanita Drive Villas (10 Unit MF) - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	15.6285	0.3084	19.7157	0.0343		2.6533	2.6533		2.6533	2.6533	277.7173	117.9561	395.6734	0.2577	0.0218	408.6259
Energy	3.9700e-003	0.0339	0.0144	2.2000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003		43.2677	43.2677	8.3000e-004	7.9000e-004	43.5248
Mobile	0.2346	0.2384	2.1110	4.6500e-003	0.4893	3.5000e-003	0.4928	0.1303	3.2700e-003	0.1336		481.8806	481.8806	0.0314	0.0199	488.5997
Total	15.8671	0.5806	21.8411	0.0391	0.4893	2.6595	3.1488	0.1303	2.6593	2.7896	277.7173	643.1044	920.8217	0.2900	0.0425	940.7504

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	15.6285	0.3084	19.7157	0.0343		2.6533	2.6533		2.6533	2.6533	277.7173	117.9561	395.6734	0.2577	0.0218	408.6259
Energy	3.9700e-003	0.0339	0.0144	2.2000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003		43.2677	43.2677	8.3000e-004	7.9000e-004	43.5248
Mobile	0.2346	0.2384	2.1110	4.6500e-003	0.4893	3.5000e-003	0.4928	0.1303	3.2700e-003	0.1336		481.8806	481.8806	0.0314	0.0199	488.5997
Total	15.8671	0.5806	21.8411	0.0391	0.4893	2.6595	3.1488	0.1303	2.6593	2.7896	277.7173	643.1044	920.8217	0.2900	0.0425	940.7504

Fanita Drive Villas (10 Unit MF) - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2023	1/2/2023	5	1	
2	Grading	Grading	1/3/2023	1/4/2023	5	2	
3	Building Construction	Building Construction	1/5/2023	5/24/2023	5	100	
4	Paving	Paving	5/1/2023	5/5/2023	5	5	
5	Architectural Coating	Architectural Coating	5/18/2023	5/24/2023	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 20,250; Residential Outdoor: 6,750; 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
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Grading	Graders	1	6.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41

Fanita Drive Villas (10 Unit MF) - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	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
Architectural Coating	1	1.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	7.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Fanita Drive Villas (10 Unit MF) - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 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					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5348	6.1887	3.9239	9.7300e-003		0.2266	0.2266		0.2084	0.2084		942.4317	942.4317	0.3048		950.0517
Total	0.5348	6.1887	3.9239	9.7300e-003	0.5303	0.2266	0.7568	0.0573	0.2084	0.2657		942.4317	942.4317	0.3048		950.0517

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	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
Worker	0.0137	8.4900e-003	0.1203	3.6000e-004	0.0411	2.2000e-004	0.0413	0.0109	2.0000e-004	0.0111		37.1427	37.1427	9.9000e-004	9.1000e-004	37.4400
Total	0.0137	8.4900e-003	0.1203	3.6000e-004	0.0411	2.2000e-004	0.0413	0.0109	2.0000e-004	0.0111		37.1427	37.1427	9.9000e-004	9.1000e-004	37.4400

Fanita Drive Villas (10 Unit MF) - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 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					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5348	6.1887	3.9239	9.7300e-003		0.2266	0.2266		0.2084	0.2084	0.0000	942.4317	942.4317	0.3048		950.0517
Total	0.5348	6.1887	3.9239	9.7300e-003	0.5303	0.2266	0.7568	0.0573	0.2084	0.2657	0.0000	942.4317	942.4317	0.3048		950.0517

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	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
Worker	0.0137	8.4900e-003	0.1203	3.6000e-004	0.0411	2.2000e-004	0.0413	0.0109	2.0000e-004	0.0111		37.1427	37.1427	9.9000e-004	9.1000e-004	37.4400
Total	0.0137	8.4900e-003	0.1203	3.6000e-004	0.0411	2.2000e-004	0.0413	0.0109	2.0000e-004	0.0111		37.1427	37.1427	9.9000e-004	9.1000e-004	37.4400

Fanita Drive Villas (10 Unit MF) - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 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					
Fugitive Dust					5.3119	0.0000	5.3119	2.5686	0.0000	2.5686			0.0000			0.0000
Off-Road	0.9335	10.1789	5.5516	0.0141		0.4201	0.4201		0.3865	0.3865		1,364.771 3	1,364.771 3	0.4414		1,375.806 2
Total	0.9335	10.1789	5.5516	0.0141	5.3119	0.4201	5.7320	2.5686	0.3865	2.9550		1,364.771 3	1,364.771 3	0.4414		1,375.806 2

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	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
Worker	0.0219	0.0136	0.1925	5.8000e-004	0.0657	3.5000e-004	0.0661	0.0174	3.3000e-004	0.0178		59.4283	59.4283	1.5900e-003	1.4600e-003	59.9041
Total	0.0219	0.0136	0.1925	5.8000e-004	0.0657	3.5000e-004	0.0661	0.0174	3.3000e-004	0.0178		59.4283	59.4283	1.5900e-003	1.4600e-003	59.9041

Fanita Drive Villas (10 Unit MF) - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 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					
Fugitive Dust					5.3119	0.0000	5.3119	2.5686	0.0000	2.5686			0.0000			0.0000
Off-Road	0.9335	10.1789	5.5516	0.0141		0.4201	0.4201		0.3865	0.3865	0.0000	1,364.771 3	1,364.771 3	0.4414		1,375.806 2
Total	0.9335	10.1789	5.5516	0.0141	5.3119	0.4201	5.7320	2.5686	0.3865	2.9550	0.0000	1,364.771 3	1,364.771 3	0.4414		1,375.806 2

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	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
Worker	0.0219	0.0136	0.1925	5.8000e-004	0.0657	3.5000e-004	0.0661	0.0174	3.3000e-004	0.0178		59.4283	59.4283	1.5900e-003	1.4600e-003	59.9041
Total	0.0219	0.0136	0.1925	5.8000e-004	0.0657	3.5000e-004	0.0661	0.0174	3.3000e-004	0.0178		59.4283	59.4283	1.5900e-003	1.4600e-003	59.9041

Fanita Drive Villas (10 Unit MF) - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 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	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946		1,104.6089	1,104.6089	0.3573		1,113.5402
Total	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946		1,104.6089	1,104.6089	0.3573		1,113.5402

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	0.0000
Vendor	1.1900e-003	0.0429	0.0155	2.0000e-004	6.7700e-003	2.6000e-004	7.0300e-003	1.9500e-003	2.5000e-004	2.2000e-003		22.1047	22.1047	6.7000e-004	3.2000e-003	23.0752
Worker	0.0191	0.0119	0.1685	5.1000e-004	0.0575	3.1000e-004	0.0578	0.0153	2.8000e-004	0.0155		51.9998	51.9998	1.3900e-003	1.2800e-003	52.4161
Total	0.0203	0.0548	0.1839	7.1000e-004	0.0643	5.7000e-004	0.0648	0.0172	5.3000e-004	0.0177		74.1045	74.1045	2.0600e-003	4.4800e-003	75.4913

Fanita Drive Villas (10 Unit MF) - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 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	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946	0.0000	1,104.6089	1,104.6089	0.3573		1,113.5402
Total	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946	0.0000	1,104.6089	1,104.6089	0.3573		1,113.5402

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	0.0000
Vendor	1.1900e-003	0.0429	0.0155	2.0000e-004	6.7700e-003	2.6000e-004	7.0300e-003	1.9500e-003	2.5000e-004	2.2000e-003		22.1047	22.1047	6.7000e-004	3.2000e-003	23.0752
Worker	0.0191	0.0119	0.1685	5.1000e-004	0.0575	3.1000e-004	0.0578	0.0153	2.8000e-004	0.0155		51.9998	51.9998	1.3900e-003	1.2800e-003	52.4161
Total	0.0203	0.0548	0.1839	7.1000e-004	0.0643	5.7000e-004	0.0648	0.0172	5.3000e-004	0.0177		74.1045	74.1045	2.0600e-003	4.4800e-003	75.4913

Fanita Drive Villas (10 Unit MF) - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 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	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466		1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466		1,036.0878	1,036.0878	0.3018		1,043.6331

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	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
Worker	0.0492	0.0306	0.4332	1.3100e-003	0.1479	8.0000e-004	0.1487	0.0392	7.3000e-004	0.0400		133.7136	133.7136	3.5800e-003	3.2900e-003	134.7841
Total	0.0492	0.0306	0.4332	1.3100e-003	0.1479	8.0000e-004	0.1487	0.0392	7.3000e-004	0.0400		133.7136	133.7136	3.5800e-003	3.2900e-003	134.7841

Fanita Drive Villas (10 Unit MF) - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 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	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466	0.0000	1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466	0.0000	1,036.0878	1,036.0878	0.3018		1,043.6331

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	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
Worker	0.0492	0.0306	0.4332	1.3100e-003	0.1479	8.0000e-004	0.1487	0.0392	7.3000e-004	0.0400		133.7136	133.7136	3.5800e-003	3.2900e-003	134.7841
Total	0.0492	0.0306	0.4332	1.3100e-003	0.1479	8.0000e-004	0.1487	0.0392	7.3000e-004	0.0400		133.7136	133.7136	3.5800e-003	3.2900e-003	134.7841

Fanita Drive Villas (10 Unit MF) - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 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					
Archit. Coating	62.5725					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	62.7642	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690

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	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
Worker	2.7300e-003	1.7000e-003	0.0241	7.0000e-005	8.2100e-003	4.0000e-005	8.2600e-003	2.1800e-003	4.0000e-005	2.2200e-003		7.4285	7.4285	2.0000e-004	1.8000e-004	7.4880
Total	2.7300e-003	1.7000e-003	0.0241	7.0000e-005	8.2100e-003	4.0000e-005	8.2600e-003	2.1800e-003	4.0000e-005	2.2200e-003		7.4285	7.4285	2.0000e-004	1.8000e-004	7.4880

Fanita Drive Villas (10 Unit MF) - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 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					
Archit. Coating	62.5725					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	62.7642	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690

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	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
Worker	2.7300e-003	1.7000e-003	0.0241	7.0000e-005	8.2100e-003	4.0000e-005	8.2600e-003	2.1800e-003	4.0000e-005	2.2200e-003		7.4285	7.4285	2.0000e-004	1.8000e-004	7.4880
Total	2.7300e-003	1.7000e-003	0.0241	7.0000e-005	8.2100e-003	4.0000e-005	8.2600e-003	2.1800e-003	4.0000e-005	2.2200e-003		7.4285	7.4285	2.0000e-004	1.8000e-004	7.4880

Fanita Drive Villas (10 Unit MF) - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.2346	0.2384	2.1110	4.6500e-003	0.4893	3.5000e-003	0.4928	0.1303	3.2700e-003	0.1336		481.8806	481.8806	0.0314	0.0199	488.5997
Unmitigated	0.2346	0.2384	2.1110	4.6500e-003	0.4893	3.5000e-003	0.4928	0.1303	3.2700e-003	0.1336		481.8806	481.8806	0.0314	0.0199	488.5997

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	73.20	81.40	62.80	208,111	208,111
Total	73.20	81.40	62.80	208,111	208,111

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Condo/Townhouse	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949

Fanita Drive Villas (10 Unit MF) - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	3.9700e-003	0.0339	0.0144	2.2000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003		43.2677	43.2677	8.3000e-004	7.9000e-004	43.5248
NaturalGas Unmitigated	3.9700e-003	0.0339	0.0144	2.2000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003		43.2677	43.2677	8.3000e-004	7.9000e-004	43.5248

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					
Condo/Townhouse	367.775	3.9700e-003	0.0339	0.0144	2.2000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003		43.2677	43.2677	8.3000e-004	7.9000e-004	43.5248
Total		3.9700e-003	0.0339	0.0144	2.2000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003		43.2677	43.2677	8.3000e-004	7.9000e-004	43.5248

Fanita Drive Villas (10 Unit MF) - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

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					
Condo/Townhouse	0.367775	3.9700e-003	0.0339	0.0144	2.2000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003		43.2677	43.2677	8.3000e-004	7.9000e-004	43.5248
Total		3.9700e-003	0.0339	0.0144	2.2000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003		43.2677	43.2677	8.3000e-004	7.9000e-004	43.5248

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	15.6285	0.3084	19.7157	0.0343		2.6533	2.6533		2.6533	2.6533	277.7173	117.9561	395.6734	0.2577	0.0218	408.6259
Unmitigated	15.6285	0.3084	19.7157	0.0343		2.6533	2.6533		2.6533	2.6533	277.7173	117.9561	395.6734	0.2577	0.0218	408.6259

Fanita Drive Villas (10 Unit MF) - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0857					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2140					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	15.3040	0.2989	18.8911	0.0342		2.6487	2.6487		2.6487	2.6487	277.7173	116.4706	394.1879	0.2563	0.0218	407.1048
Landscaping	0.0248	9.5000e-003	0.8247	4.0000e-005		4.5700e-003	4.5700e-003		4.5700e-003	4.5700e-003		1.4855	1.4855	1.4300e-003		1.5212
Total	15.6285	0.3084	19.7157	0.0343		2.6533	2.6533		2.6533	2.6533	277.7173	117.9561	395.6734	0.2577	0.0218	408.6259

Fanita Drive Villas (10 Unit MF) - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0857					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2140					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	15.3040	0.2989	18.8911	0.0342		2.6487	2.6487		2.6487	2.6487	277.7173	116.4706	394.1879	0.2563	0.0218	407.1048
Landscaping	0.0248	9.5000e-003	0.8247	4.0000e-005		4.5700e-003	4.5700e-003		4.5700e-003	4.5700e-003		1.4855	1.4855	1.4300e-003		1.5212
Total	15.6285	0.3084	19.7157	0.0343		2.6533	2.6533		2.6533	2.6533	277.7173	117.9561	395.6734	0.2577	0.0218	408.6259

7.0 Water Detail

7.1 Mitigation Measures Water

Fanita Drive Villas (10 Unit MF) - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Fanita Drive Villas (10 Unit MF) - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Fanita Drive Villas (10 Unit MF)

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	10.00	Dwelling Unit	0.67	10,000.00	29

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2024
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site is 0.67 acres

Construction Phase -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	6/21/2023	5/24/2023
tblConstructionPhase	PhaseEndDate	6/7/2023	5/24/2023
tblConstructionPhase	PhaseEndDate	1/18/2023	1/4/2023
tblConstructionPhase	PhaseEndDate	6/14/2023	5/5/2023
tblConstructionPhase	PhaseEndDate	1/16/2023	1/2/2023
tblConstructionPhase	PhaseStartDate	6/15/2023	5/18/2023
tblConstructionPhase	PhaseStartDate	1/19/2023	1/5/2023

Fanita Drive Villas (10 Unit MF) - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	PhaseStartDate	1/17/2023	1/3/2023
tblConstructionPhase	PhaseStartDate	6/8/2023	5/1/2023
tblConstructionPhase	PhaseStartDate	1/14/2023	1/1/2023
tblLandUse	LotAcreage	0.63	0.67

2.0 Emissions Summary

Fanita Drive Villas (10 Unit MF) - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	15.6285	0.3084	19.7157	0.0343		2.6533	2.6533		2.6533	2.6533	277.7173	117.9561	395.6734	0.2577	0.0218	408.6259
Energy	3.9700e-003	0.0339	0.0144	2.2000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003		43.2677	43.2677	8.3000e-004	7.9000e-004	43.5248
Mobile	0.2294	0.2583	2.1630	4.4500e-003	0.4893	3.5100e-003	0.4928	0.1303	3.2700e-003	0.1336		460.8960	460.8960	0.0332	0.0210	467.9779
Total	15.8619	0.6006	21.8931	0.0389	0.4893	2.6595	3.1488	0.1303	2.6593	2.7896	277.7173	622.1198	899.8371	0.2918	0.0436	920.1286

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	15.6285	0.3084	19.7157	0.0343		2.6533	2.6533		2.6533	2.6533	277.7173	117.9561	395.6734	0.2577	0.0218	408.6259
Energy	3.9700e-003	0.0339	0.0144	2.2000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003		43.2677	43.2677	8.3000e-004	7.9000e-004	43.5248
Mobile	0.2294	0.2583	2.1630	4.4500e-003	0.4893	3.5100e-003	0.4928	0.1303	3.2700e-003	0.1336		460.8960	460.8960	0.0332	0.0210	467.9779
Total	15.8619	0.6006	21.8931	0.0389	0.4893	2.6595	3.1488	0.1303	2.6593	2.7896	277.7173	622.1198	899.8371	0.2918	0.0436	920.1286

Fanita Drive Villas (10 Unit MF) - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2023	1/2/2023	5	1	
2	Grading	Grading	1/3/2023	1/4/2023	5	2	
3	Building Construction	Building Construction	1/5/2023	5/24/2023	5	100	
4	Paving	Paving	5/1/2023	5/5/2023	5	5	
5	Architectural Coating	Architectural Coating	5/18/2023	5/24/2023	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 20,250; Residential Outdoor: 6,750; 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
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Grading	Graders	1	6.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41

Fanita Drive Villas (10 Unit MF) - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	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
Architectural Coating	1	1.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	7.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Fanita Drive Villas (10 Unit MF) - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 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					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5348	6.1887	3.9239	9.7300e-003		0.2266	0.2266		0.2084	0.2084		942.4317	942.4317	0.3048		950.0517
Total	0.5348	6.1887	3.9239	9.7300e-003	0.5303	0.2266	0.7568	0.0573	0.2084	0.2657		942.4317	942.4317	0.3048		950.0517

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	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
Worker	0.0148	9.5500e-003	0.1143	3.4000e-004	0.0411	2.2000e-004	0.0413	0.0109	2.0000e-004	0.0111		35.1010	35.1010	1.0600e-003	9.9000e-004	35.4222
Total	0.0148	9.5500e-003	0.1143	3.4000e-004	0.0411	2.2000e-004	0.0413	0.0109	2.0000e-004	0.0111		35.1010	35.1010	1.0600e-003	9.9000e-004	35.4222

Fanita Drive Villas (10 Unit MF) - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 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					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5348	6.1887	3.9239	9.7300e-003		0.2266	0.2266		0.2084	0.2084	0.0000	942.4317	942.4317	0.3048		950.0517
Total	0.5348	6.1887	3.9239	9.7300e-003	0.5303	0.2266	0.7568	0.0573	0.2084	0.2657	0.0000	942.4317	942.4317	0.3048		950.0517

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	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
Worker	0.0148	9.5500e-003	0.1143	3.4000e-004	0.0411	2.2000e-004	0.0413	0.0109	2.0000e-004	0.0111		35.1010	35.1010	1.0600e-003	9.9000e-004	35.4222
Total	0.0148	9.5500e-003	0.1143	3.4000e-004	0.0411	2.2000e-004	0.0413	0.0109	2.0000e-004	0.0111		35.1010	35.1010	1.0600e-003	9.9000e-004	35.4222

Fanita Drive Villas (10 Unit MF) - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 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					
Fugitive Dust					5.3119	0.0000	5.3119	2.5686	0.0000	2.5686			0.0000			0.0000
Off-Road	0.9335	10.1789	5.5516	0.0141		0.4201	0.4201		0.3865	0.3865		1,364.771 3	1,364.771 3	0.4414		1,375.806 2
Total	0.9335	10.1789	5.5516	0.0141	5.3119	0.4201	5.7320	2.5686	0.3865	2.9550		1,364.771 3	1,364.771 3	0.4414		1,375.806 2

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	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
Worker	0.0237	0.0153	0.1829	5.5000e-004	0.0657	3.5000e-004	0.0661	0.0174	3.3000e-004	0.0178		56.1616	56.1616	1.6900e-003	1.5800e-003	56.6755
Total	0.0237	0.0153	0.1829	5.5000e-004	0.0657	3.5000e-004	0.0661	0.0174	3.3000e-004	0.0178		56.1616	56.1616	1.6900e-003	1.5800e-003	56.6755

Fanita Drive Villas (10 Unit MF) - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 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					
Fugitive Dust					5.3119	0.0000	5.3119	2.5686	0.0000	2.5686			0.0000			0.0000
Off-Road	0.9335	10.1789	5.5516	0.0141		0.4201	0.4201		0.3865	0.3865	0.0000	1,364.771 3	1,364.771 3	0.4414		1,375.806 2
Total	0.9335	10.1789	5.5516	0.0141	5.3119	0.4201	5.7320	2.5686	0.3865	2.9550	0.0000	1,364.771 3	1,364.771 3	0.4414		1,375.806 2

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	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
Worker	0.0237	0.0153	0.1829	5.5000e-004	0.0657	3.5000e-004	0.0661	0.0174	3.3000e-004	0.0178		56.1616	56.1616	1.6900e-003	1.5800e-003	56.6755
Total	0.0237	0.0153	0.1829	5.5000e-004	0.0657	3.5000e-004	0.0661	0.0174	3.3000e-004	0.0178		56.1616	56.1616	1.6900e-003	1.5800e-003	56.6755

Fanita Drive Villas (10 Unit MF) - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 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	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946		1,104.6089	1,104.6089	0.3573		1,113.5402
Total	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946		1,104.6089	1,104.6089	0.3573		1,113.5402

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	0.0000
Vendor	1.1600e-003	0.0447	0.0159	2.1000e-004	6.7700e-003	2.6000e-004	7.0400e-003	1.9500e-003	2.5000e-004	2.2000e-003		22.1361	22.1361	6.7000e-004	3.2100e-003	23.1088
Worker	0.0208	0.0134	0.1601	4.8000e-004	0.0575	3.1000e-004	0.0578	0.0153	2.8000e-004	0.0155		49.1414	49.1414	1.4800e-003	1.3800e-003	49.5911
Total	0.0219	0.0580	0.1760	6.9000e-004	0.0643	5.7000e-004	0.0649	0.0172	5.3000e-004	0.0177		71.2775	71.2775	2.1500e-003	4.5900e-003	72.6999

Fanita Drive Villas (10 Unit MF) - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 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	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946	0.0000	1,104.6089	1,104.6089	0.3573		1,113.5402
Total	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946	0.0000	1,104.6089	1,104.6089	0.3573		1,113.5402

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	0.0000
Vendor	1.1600e-003	0.0447	0.0159	2.1000e-004	6.7700e-003	2.6000e-004	7.0400e-003	1.9500e-003	2.5000e-004	2.2000e-003		22.1361	22.1361	6.7000e-004	3.2100e-003	23.1088
Worker	0.0208	0.0134	0.1601	4.8000e-004	0.0575	3.1000e-004	0.0578	0.0153	2.8000e-004	0.0155		49.1414	49.1414	1.4800e-003	1.3800e-003	49.5911
Total	0.0219	0.0580	0.1760	6.9000e-004	0.0643	5.7000e-004	0.0649	0.0172	5.3000e-004	0.0177		71.2775	71.2775	2.1500e-003	4.5900e-003	72.6999

Fanita Drive Villas (10 Unit MF) - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 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	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466		1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466		1,036.0878	1,036.0878	0.3018		1,043.6331

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	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
Worker	0.0534	0.0344	0.4116	1.2300e-003	0.1479	8.0000e-004	0.1487	0.0392	7.3000e-004	0.0400		126.3637	126.3637	3.8100e-003	3.5600e-003	127.5200
Total	0.0534	0.0344	0.4116	1.2300e-003	0.1479	8.0000e-004	0.1487	0.0392	7.3000e-004	0.0400		126.3637	126.3637	3.8100e-003	3.5600e-003	127.5200

Fanita Drive Villas (10 Unit MF) - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 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	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466	0.0000	1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466	0.0000	1,036.0878	1,036.0878	0.3018		1,043.6331

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	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
Worker	0.0534	0.0344	0.4116	1.2300e-003	0.1479	8.0000e-004	0.1487	0.0392	7.3000e-004	0.0400		126.3637	126.3637	3.8100e-003	3.5600e-003	127.5200
Total	0.0534	0.0344	0.4116	1.2300e-003	0.1479	8.0000e-004	0.1487	0.0392	7.3000e-004	0.0400		126.3637	126.3637	3.8100e-003	3.5600e-003	127.5200

Fanita Drive Villas (10 Unit MF) - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 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					
Archit. Coating	62.5725					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	62.7642	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690

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	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
Worker	2.9700e-003	1.9100e-003	0.0229	7.0000e-005	8.2100e-003	4.0000e-005	8.2600e-003	2.1800e-003	4.0000e-005	2.2200e-003		7.0202	7.0202	2.1000e-004	2.0000e-004	7.0844
Total	2.9700e-003	1.9100e-003	0.0229	7.0000e-005	8.2100e-003	4.0000e-005	8.2600e-003	2.1800e-003	4.0000e-005	2.2200e-003		7.0202	7.0202	2.1000e-004	2.0000e-004	7.0844

Fanita Drive Villas (10 Unit MF) - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 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					
Archit. Coating	62.5725					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	62.7642	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690

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	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
Worker	2.9700e-003	1.9100e-003	0.0229	7.0000e-005	8.2100e-003	4.0000e-005	8.2600e-003	2.1800e-003	4.0000e-005	2.2200e-003		7.0202	7.0202	2.1000e-004	2.0000e-004	7.0844
Total	2.9700e-003	1.9100e-003	0.0229	7.0000e-005	8.2100e-003	4.0000e-005	8.2600e-003	2.1800e-003	4.0000e-005	2.2200e-003		7.0202	7.0202	2.1000e-004	2.0000e-004	7.0844

Fanita Drive Villas (10 Unit MF) - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.2294	0.2583	2.1630	4.4500e-003	0.4893	3.5100e-003	0.4928	0.1303	3.2700e-003	0.1336		460.8960	460.8960	0.0332	0.0210	467.9779
Unmitigated	0.2294	0.2583	2.1630	4.4500e-003	0.4893	3.5100e-003	0.4928	0.1303	3.2700e-003	0.1336		460.8960	460.8960	0.0332	0.0210	467.9779

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	73.20	81.40	62.80	208,111	208,111
Total	73.20	81.40	62.80	208,111	208,111

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Condo/Townhouse	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.557888	0.062607	0.178921	0.119061	0.024112	0.006269	0.008734	0.006266	0.000708	0.000566	0.028949	0.000971	0.004949

Fanita Drive Villas (10 Unit MF) - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	3.9700e-003	0.0339	0.0144	2.2000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003		43.2677	43.2677	8.3000e-004	7.9000e-004	43.5248
NaturalGas Unmitigated	3.9700e-003	0.0339	0.0144	2.2000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003		43.2677	43.2677	8.3000e-004	7.9000e-004	43.5248

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					
Condo/Townhouse	367.775	3.9700e-003	0.0339	0.0144	2.2000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003		43.2677	43.2677	8.3000e-004	7.9000e-004	43.5248
Total		3.9700e-003	0.0339	0.0144	2.2000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003		43.2677	43.2677	8.3000e-004	7.9000e-004	43.5248

Fanita Drive Villas (10 Unit MF) - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

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					
Condo/Townhouse	0.367775	3.9700e-003	0.0339	0.0144	2.2000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003		43.2677	43.2677	8.3000e-004	7.9000e-004	43.5248
Total		3.9700e-003	0.0339	0.0144	2.2000e-004		2.7400e-003	2.7400e-003		2.7400e-003	2.7400e-003		43.2677	43.2677	8.3000e-004	7.9000e-004	43.5248

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	15.6285	0.3084	19.7157	0.0343		2.6533	2.6533		2.6533	2.6533	277.7173	117.9561	395.6734	0.2577	0.0218	408.6259
Unmitigated	15.6285	0.3084	19.7157	0.0343		2.6533	2.6533		2.6533	2.6533	277.7173	117.9561	395.6734	0.2577	0.0218	408.6259

Fanita Drive Villas (10 Unit MF) - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0857					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2140					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	15.3040	0.2989	18.8911	0.0342		2.6487	2.6487		2.6487	2.6487	277.7173	116.4706	394.1879	0.2563	0.0218	407.1048
Landscaping	0.0248	9.5000e-003	0.8247	4.0000e-005		4.5700e-003	4.5700e-003		4.5700e-003	4.5700e-003		1.4855	1.4855	1.4300e-003		1.5212
Total	15.6285	0.3084	19.7157	0.0343		2.6533	2.6533		2.6533	2.6533	277.7173	117.9561	395.6734	0.2577	0.0218	408.6259

Fanita Drive Villas (10 Unit MF) - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0857					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2140					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	15.3040	0.2989	18.8911	0.0342		2.6487	2.6487		2.6487	2.6487	277.7173	116.4706	394.1879	0.2563	0.0218	407.1048
Landscaping	0.0248	9.5000e-003	0.8247	4.0000e-005		4.5700e-003	4.5700e-003		4.5700e-003	4.5700e-003		1.4855	1.4855	1.4300e-003		1.5212
Total	15.6285	0.3084	19.7157	0.0343		2.6533	2.6533		2.6533	2.6533	277.7173	117.9561	395.6734	0.2577	0.0218	408.6259

7.0 Water Detail

7.1 Mitigation Measures Water

Fanita Drive Villas (10 Unit MF) - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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
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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 H

Ldn Consulting, Inc.

42428 Chisolm Trail, Murrieta CA 92562

phone 760-473-1253

March 28, 2022

Tarik Alahmad
7710 Balboa Avenue, Ste 201c
San Diego, California 92111

SUBJECT: Construction Noise for Fanita Drive Villas Residential Development – Santee CA

Ldn Consulting (Ldn) has examined the construction noise conditions for the Fanita Drive Villas construction. Provided below is the City Noise Ordinance and the findings.

City of Santee Municipal Code Chapter 5.04, Noise Abatement and Control (Noise Ordinance)

Section 5.04.090 (Construction Equipment)

Prohibitions. Except for emergency work or work that has been expressly approved by the City, it is unlawful for any person to operate any single or combination of powered construction equipment at any construction site, as follows:

1. It is unlawful for any person to operate any single or combination of powered construction equipment at any construction site on Mondays through Saturdays except between the hours of 7:00 a.m. and 7:00 p.m., unless expressly approved by the Director of Development Services.
2. It is unlawful for any person to operate any single or combination of powered construction equipment at any construction site on Sundays or City recognized holidays unless expressly approved by the Director of Development Services.
3. No construction equipment is permitted to be started, idled, moved or operated at any location before 7:00 a.m. or after 7:00 p.m. on Mondays through Saturdays and all times on Sundays and holidays, described in subsection (A)(2) of this section. Specific exemptions may be authorized by the Director of Development Services.
4. Construction equipment with a manufacturer's noise rating of 85 dBL_{MAX} or greater, may only operate at a specific location for 10 consecutive workdays. If work involving such equipment will involve more than 10 consecutive workdays, a notice must be provided to all property owners and residents within 300 feet of the site no later than 10 days before the start of construction. The notice must be approved by the City and describe the project, the expected duration, and provide a point of contact to resolve noise complaints. (Ord. 558 § 3, 2019).

Background and Analysis

The development construction will consist of grading, building construction, and paving. The building construction activities will consist of trenching, paving, and building construction. Noise would typically occur during this phase due to the operation of backhoes, and front-end loaders as well as air compressors and hand-held power tools. The nearest residences to be impacted by construction is the single-family home located along the western property line and the multi-family residences located along the southern property line. Noise monitoring was conducted as part of a Noise Control Plan during the construction at a similar construction site to determine the noise levels from the associated equipment. A list of the anticipated noise levels for each phase of construction is shown in Table 1.

Table 1: Construction List and Noise Levels

Construction Phase	Distance	Source Level (dBA)	Actual Distance from Property Line (Feet)	Noise Reduction from distance (dBA)	Resultant Noise Level (dBA)
Site Grading	50 Feet	75.7	80	-4.1	71.6
Building Construction		68.2	60	-1.6	66.6
Architectural Coating		62.3	60	-1.6	60.7
Paving Equipment		71.6	100	-6.0	65.6

Site Grading Activities Noise Findings

It was determined that the site grading activities are expected to have the most noise impact potential. The site slopes gradually from west to east and the proposed site plan indicates that site grading will include approximately 800 cubic yards of cut and 800 cubic yards of fill. According to the project proponent, the project will use small bulldozers or similar light equipment within 20 feet of the southerly and westerly property lines. Additionally, the project will use hand-operated tamper or walk-behind compactors within 10 feet of the southerly and westerly property lines. Not all the equipment will operate continuously over an 8-hour period, the equipment will be utilized on an as-needed basis depending on the site grading activities are required. As an example: a small bulldozer will push dirt from near the western property line to the eastern property line while a compactor will be used to tamper dirt on another area of the site. Based on empirical data gathered during the monitoring of a similar project, the worst-case hourly noise level was found to be up to 76 dBA Leq at an average distance of 50 feet for grading activities (Source: Aztec Court Noise Monitoring – San Diego, Ldn Consulting, 2012). At an average distance of 80 feet, the noise level

Tarik Alahmad
7710 Balboa Avenue, Ste 201c
San Diego, California 92111

Ldn Consulting, Inc.
42428 Chisolm Trail, Murrieta CA 92562
phone 760-473-1253
fax 760-689-4943

from the grading activities would be less than 72 dBA. Additionally, due to the smaller site area and site constraints, less equipment will be utilized compared to the previously referenced project.

Compliance of Construction Noise Levels

The City of Santee does not have a specific noise threshold for construction activities. At this time, no construction is anticipated between the hours of 7:00 p.m. and 7:00 a.m. Therefore, no noise impacts are anticipated. Additionally, to achieve compliance with the City's noise ordinance for construction within 300 feet of off-site residential lot, the following should be incorporated in the project's construction plan, as necessary.

- Equipment and trucks used for the project construction shall use the best the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds).
- Construction contractors shall use "quiet" gasoline-powered compressors or other electric-powered compressors, and use electric rather than gasoline or diesel powered forklifts for small lifting.
- Stationary noise sources, such as temporary generators, shall be located as far from nearby receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or other measures to the extent feasible.

Based on location and incorporation of the recommended measures above, the construction will not expose nearby sensitive receptors to noise levels above 75 dBA. Therefore, the construction noise would be less than significant. If you should have any questions regarding this noise control plan, please contact me at (760) 473-1253 at your convenience.

Sincerely,

Ldn Consulting,



Jeremy Loudon, Principal

APPENDIX I



COMMITTED TO EXCELLENCE
S I N C E 1 9 2 0

• GOVERNING BOARD MEMBERS

CHRIS FITE
JIM KELLY
ELVA SALINAS
ROBERT SHIELD
DR. GARY C. WOODS

• SUPERINTENDENT

THERESA KEMPER

March 1, 2022

Tarik Alahmad
7710 Balboa Avenue, Suite 210C
San Diego, CA 92111

Name of Project: Fanita Drive Villas
Location: 8504 Fanita Drive, Santee, CA 92071
Number of Units: 8 Units

To Whom It May Concern:

The District is in receipt of your letter requesting information for the above project. The Grossmont Union High School District is responsible for providing education for students in grades 9 through 12. The proposed project is within the District, more specifically it lies within the West Hills High School attendance area (8756 Mast Boulevard, Santee, CA 92071).

The Grossmont Union High School District has a developer fee assessment policy. The current level of assessment is **\$1.20** per square foot for residential and **\$.19** cents per square foot for commercial projects.

If you have any questions regarding any part of this correspondence, please feel free to call me at 619-644-8176.

Sincerely,

Rosa Rosselli
Planning Technician
Facilities Management



Santee School District

SCHOOLS:

Cajon Park
Carlton Hills
Carlton Oaks
Chet F. Harritt STEAM
Hill Creek
Pepper Drive
PRIDE Academy
at Prospect Avenue
Rio Seco
Sycamore Canyon
Alternative
Success Program

February 25, 2022

Tarik Alahmad
7710 Balboa Avenue, Suite 210C
San Diego, CA 92111

RE: *“Fanita Drive Villas”*
Unit Count: *8 Units (Residence Development), SFDs, 1600 sq ft each*
Builder: *Enterprises Construction*
Map No.: *Lot 9 Blk: D City of Santee, Subdivision TR#688 TR 688. Block D Lot 9. Docum. 71-20319*
Location: *8504 Fanita Drive, Santee, CA 92071*
Cross Street: *Watson Place*

To Whom It May Concern:

I am in receipt of your request for a letter indicating availability of schools for the future residents of a planned residential development project named “Fanita Drive Villas.” As I understand it, this development project would result in the construction and occupancy of 8 single family dwellings that are each approximately 1,600 square feet in size.

This project is in the attendance boundary of Chet F. Harritt School located at 8120 Arlette Street, Santee, CA 92071. Based on the information you provided and current school capacity analysis, Chet F. Harritt School may not be able to accommodate new students generated from this residential project. There is, however, sufficient classroom availability at other District schools for these new students. The District reserves the right to assign students to schools throughout the Santee School District based on various factors, including, but not limited to, space availability. Please also be aware that Santee School District serves students from Grades Preschool through 8th. Information on availability of high schools should be obtained from Grossmont High School District.

This project will require the payment of Developer Fees at the residential per square footage amount that is in effect at the time building permits are to be issued.

If you have any further questions regarding this matter, please feel free to contact me by email at karl.christensen@santeesd.net or by phone at 619-258-2321.

Sincerely,

Karl Christensen
Assistant Superintendent Business Services

APPENDIX J



LOS Engineering, Inc.
Traffic and Transportation

11622 El Camino Real, Suite 100, San Diego, CA 92130
Phone 619-890-1253, Email: justin@losengineering.com

August 22, 2022

Mr. Minjie Mei, P.E.
City of Santee, Department of Development Services
10601 Magnolia Avenue
San Diego, CA 92027

Subject: Trip Generation and Vehicle Miles Traveled Analysis for 8504 Fanita Dr, Santee, CA (TM2021-02)

Dear Mr. Mei:

LOS Engineering, Inc. is pleased to present this trip generation and Vehicle Miles Traveled (VMT) analysis to satisfy the California Environmental Quality Act (CEQA) guidelines that utilize VMT as the measure of effectiveness for determining transportation impacts.

PROJECT DESCRIPTION

The project is located at 8504 Fanita Dr, Santee, California. The project site is approximately 0.67 acres and is shown in **Figure 1**.

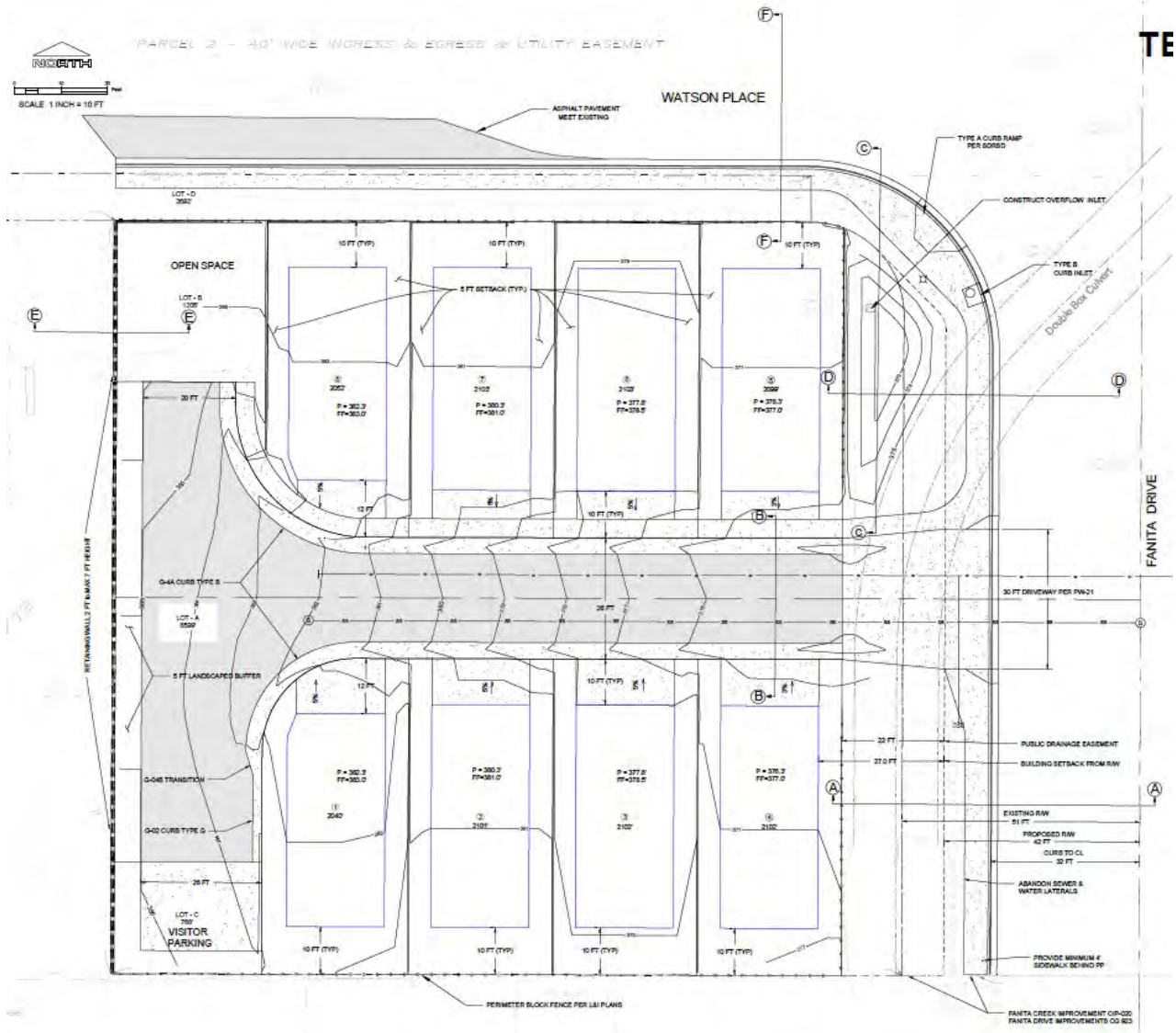
Figure 1: Project Location



Source: Google Maps

The project consists of 8 residential lots for single family homes. The project site is proposed with one driveway on Fanita Drive as shown in **Figure 2**.

Figure 2: Site Plan



Source: Zenith Consultants

PROJECT TRIP GENERATION

The project traffic generation was calculated using SANDAG trip rates from the *Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, April 2002. The project includes 8 single family dwelling units. The project trip generation is calculated at 80 daily trips, 6 AM peak hour trips (2 inbound and 4 outbound), and 8 PM peak hour trips (6 inbound and 2 outbound) as shown in **Table 1**.

Table 1: Project Trip Generation

Proposed Land Use	Rate	Size & Units	ADT	%	Split	AM			PM		
						IN	OUT	%	Split	IN	OUT
Residential - Single Family	10 /DU	8 DU	80	8%	0.3 0.7	2	4	10%	0.7 0.3	6	2

Source: SANDAG *Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, April 2002.

DU - Dwelling Unit; ADT-Average Daily Traffic; Split-percent inbound and outbound.

VEHICLE MILES TRAVELED

The California Governor’s Office of Planning and Research (OPR) has identified VMT as the CEQA metric to evaluate a project’s potential transportation impacts. Senate Bill 743 (SB 743) shifted the transportation impact measure of effectiveness from Level of Service (LOS) to VMT. As part of the State’s CEQA Guidelines, the changes included the elimination of vehicular delay and LOS for determining significant transportation impacts.

OPR outlines the following criteria for determining potential VMT impacts for small projects (excerpts included in **Attachment A**):

“Many local agencies have developed screening thresholds to indicate when detailed analysis is needed. Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact.”

The project with a calculated trip generation of 80 trips per day is below the OPR threshold of 110 trips per day; therefore, according to the OPR Guidelines, the project is presumed to have a less-than-significant VMT traffic impact and VMT mitigation measures are not required.

CITY OF SANTEE VMT CRITERIA

The *City of Santee VMT Analysis Guidelines*, April 13, 2022 provides criteria to determine if a project can screen out from a VMT analysis (excerpts included in **Attachment B**). Page 9 of the guidelines state:

“Projects generating 500 or fewer net new daily vehicle trips may be presumed to have a less-than significant impact absent substantial evidence to the contrary. Trips are based on the number of vehicle trips calculated using SANDAG’s (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region or ITE trip generation rates with any alternative modes/location-based adjustments applied.”

As shown previously in Table 1, the project is calculated to generate 80 daily trips. Based on the City of Santee VMT Analysis Guidelines (April 2022), the project is presumed to have a less-than-significant VMT impact because the project’s trip generation based on SANDAG rates is calculated to generate less than 500 net daily vehicle trips.

PROJECT INFORMATION FORM

The City of Santee VMT Analysis Guidelines includes a Project Information Form template to document the CEQA transportation analysis screening process. A completed project PIF documenting how the project is screened out from requiring a VMT analysis is included in **Attachment C**.

CONCLUSION

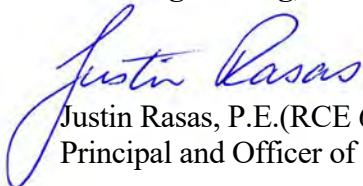
The purpose of this trip generation and VMT analysis was to determine if the project would have a potential transportation impact based on CEQA guidelines.

The project site of approximately 0.67 acres is located at 8504 Fanita Dr. The project consists of 8 single family dwelling units. The project trip generation is calculated at 80 daily trips, 6 AM peak hour trips (2 inbound and 4 outbound), and 8 PM peak hour trips (6 inbound and 2 outbound).

The project with a calculated trip generation of 80 trips per day is below the OPR threshold of 110 trips per day; therefore, according to the OPR Guidelines, the project is presumed to have a less-than-significant VMT traffic impact and VMT mitigation measures are not required.

Additionally, the project with 80 trips per day is below the City of Santee VMT threshold of 500 trips per day; therefore, according to the City of Santee Guidelines, the project is presumed to have a less-than-significant VMT impact and is screened out from requiring a VMT analysis.

Sincerely,
LOS Engineering, Inc.



Justin Rasas, P.E.(RCE 60690), PTOE
Principal and Officer of LOS Engineering, Inc.

Job 2207
Attachments

Attachment A

Excerpts from the *California Governor's Office of Planning and Research*

TECHNICAL ADVISORY

ON EVALUATING TRANSPORTATION IMPACTS IN CEQA



December 2018

Also, in order to capture the full effects of induced travel resulting from roadway capacity projects, an RTP/SCS would need to include an assessment of land use effects of those projects, and the effects of those land uses on VMT. (See section titled “*Estimating VMT Impacts from Transportation Projects*” below.) RTP/SCSs typically model VMT using a collaboratively-developed land use “vision” for the region’s land use, rather than studying the effects on land use of the proposed transportation investments.

In summary, achieving 15 percent lower per capita (residential) or per employee (office) VMT than existing development is both generally achievable and is supported by evidence that connects this level of reduction to the State’s emissions goals.

1. Screening Thresholds for Land Use Projects

Many agencies use “screening thresholds” to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. (See e.g., CEQA Guidelines, §§ 15063(c)(3)(C), 15128, and Appendix G.) As explained below, this technical advisory suggests that lead agencies may screen out VMT impacts using project size, maps, transit availability, and provision of affordable housing.

Screening Threshold for Small Projects

Many local agencies have developed screening thresholds to indicate when detailed analysis is needed. Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day¹⁹ generally may be assumed to cause a less-than-significant transportation impact.

Map-Based Screening for Residential and Office Projects

Residential and office projects that locate in areas with low VMT, and that incorporate similar features (i.e., density, mix of uses, transit accessibility), will tend to exhibit similarly low VMT. Maps created with VMT data, for example from a travel survey or a travel demand model, can illustrate areas that are

¹⁹ CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. (CEQA Guidelines, § 15301, subd. (e)(2).) Typical project types for which trip generation increases relatively linearly with building footprint (i.e., general office building, single tenant office building, office park, and business park) generate or attract an additional 110-124 trips per 10,000 square feet. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 110 or fewer trips could be considered not to lead to a significant impact.

Attachment B

Excerpts from the *City of Santee VMT Analysis Guidelines*, April 13, 2022



City of Santee VMT Analysis Guidelines

April 13, 2022

Prepared by: FEHR & PEERS

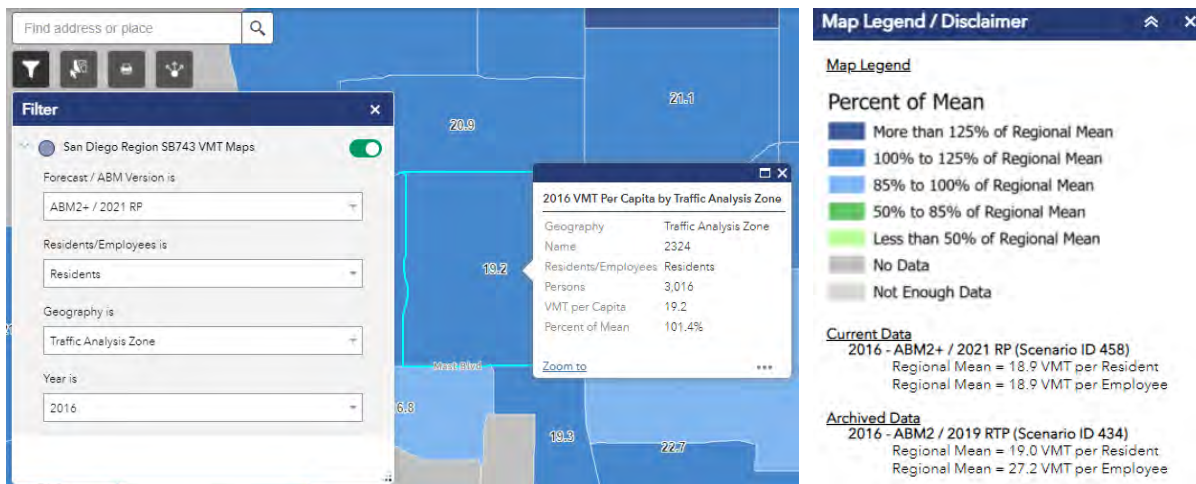
2. Small Projects

Projects generating 500 or fewer net new daily vehicle trips may be presumed to have a less-than-significant impact absent substantial evidence to the contrary. Trips are based on the number of vehicle trips calculated using SANDAG's (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region or ITE trip generation rates with any alternative modes/location-based adjustments applied.

For information regarding the process for establishing the small project screening criteria see Appendix C.

3. Projects in a VMT-Efficient Area

A VMT-efficient area is any area within the City with an average VMT/capita or VMT/employee below the thresholds as compared to the baseline City/Regional VMT per capita for the TAZ that the project is located within. VMT efficient areas could be accessed through SANDAG's SB743 VMT Webmaps⁷. Note that the TAZ maps consider the minimum amount of data necessary as a population of 300 residents or 500 employees per TAZ. If minimum data is not available in the desired TAZ, census tract data may be used for comparison. Image below demonstrate a snapshot of the SB743 VMT Webmap that shows VMT/Capita for Residents on a TAZ level using the 2016 Baseline Model.



Residential projects located within a VMT-efficient area may be presumed to have a less-than-significant impact absent substantial evidence to the contrary. A VMT-efficient area for residential projects is any area with an average VMT/capita 15% below the baseline City average for the TAZ that the project is located within.

General Employment projects located within a VMT-efficient area may be presumed to have a less-than-significant impact absent substantial evidence to the contrary. A VMT-efficient area for employment projects (excluding industrial employment projects) is any area with an average VMT/employee 15% below the baseline regional average for the TAZ that the project is located within.

⁷ [San Diego Region SB743 VMT Maps \(arcgis.com\):](https://sandag.maps.arcgis.com/apps/webappviewer/index.html?id=bb8f938b625c40cea14c825835519a2b)

<https://sandag.maps.arcgis.com/apps/webappviewer/index.html?id=bb8f938b625c40cea14c825835519a2b>

Attachment C

City of Santee Project Information Form

CEQA Transportation Analysis Screening

The Project Information Form (PIF) is to be completed by the applicant. The PIF is subject to change as new project information arises.

General Project Information and Description

Owner/Applicant Information

Name: Mr. Tarik Alahmad
Address: 7710 Balboa Ave, Suite 201c, San Diego, Ca 92111
Phone Number: 619-277-2514
Email: t.al.a@hotmail.com

Project Information

Project Name: TM2021-02
Project Address: 8504 Fanita Dr, Santee, CA
APN: 3866903800
Land Use Designation: Medium Density Residential Zoning Designation: R7

CEQA Transportation Analysis Screening

To determine if your project is screened from VMT analysis, review the Project Type Screening and the Project Location Screening tables below. If no "Yes" is checked for any project type or land use applicable to your project, the project is not screened out and must complete VMT analysis in accordance with the analysis requirements outline in the City of Santee *SB 743 Guidelines*. Trip generation should be supported by a memo prepared by a traffic engineer.

Project Type Screening

1. Select the Screening Criteria that applies to your project	Screened Out	Not Screened Out
2. Answer the questions for each screening criteria that applies to your project (if "Yes" is indicated in any land use category below, then that land use (or a portion of the land use) is screened from CEQA Transportation Analysis) <i>Note: All responses must be documented and supported by substantial evidence.</i>	Yes	No
<input type="checkbox"/> 1. Project located in a transit accessible area <ul style="list-style-type: none"> a. Is the project in a transit priority area or within ½ mile of a stop along a high-quality transit corridor, and has the following project characteristics? <ul style="list-style-type: none"> i. Has a Floor Area Ratio (FAR) of more than 0.75 ii. Includes no more than the minimum parking for use by residents, customers, or employees of the project than required by the jurisdiction iii. Is consistent with the City of Santee General Plan iv. Does not replace affordable residential units with moderate- or high-income residential units. v. Have basic walking and biking access to transit 	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> 2. Small Project <ul style="list-style-type: none"> a. The project generates 500 or fewer net new daily vehicle trips 	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CEQA Transportation Analysis Screening

- 3. Projects in VMT-Efficient area (Provide SANDAG screening map showing project location)
 - a. Residential Projects: Is the project located in a VMT-efficient area (15% or more below the baseline citywide average) using the SANDAG screening maps for VMT/Capita?
 - b. Employment Projects: Is the project located in a VMT-efficient area (15% or more below the baseline citywide average) using the SANDAG screening maps for VMT/Employee?
 - c. Industrial Projects: Is the project located in a VMT-efficient area (at or below the baseline citywide average) using the SANDAG screening maps for VMT/Employee?
 - d. Mixed-use Projects: refer to the appropriate section for each land-use included as part of the mixed-use project
- 4. Locally Serving Retail Projects
 - a. Is the project less than 125 ksf and serving the local community? The City may request a market capture study that identifies local market capture to the City's satisfaction. (for Retail Projects above 50 ksf, market studies may be required to demonstrate that at least 75% of customers are local customers)
- 5. Locally Serving Public Facility or Community Purpose Facility
 - a. Is the project a public facility or Community Purpose Facility that serves the local community? (see section 2.3 of VMT analysis guidelines for a list of public facilities)
- 6. Redevelopment Project
 - a. Is the proposed project's total project VMT less than the existing land use's total VMT? And the CEQA action includes closing the existing land use?
- 7. Infill affordable housing
 - a. Is the proposed project a deed restricted affordable housing project that meet the following criteria?
 - i. Is an infill project;
 - ii. Consists of a minimum of 52% affordable housing;
 - iii. Is within ½ mile radius of a transit stop or station; and
 - iv. Project provided parking does not exceed parking required by the City of Santee

APPENDIX K

August 29, 2022

Alex Alagha, Principal
Zenith Consultants
3111 Camino Del Rio North, Suite 421
San Diego, CA 92108
Via e-mail: alagha@zenith-consultants.com

Subject: Biological Study for 8504 Fanita Drive, Santee, California 92071; Assessor's Parcel Number 386-690-38-00; Prepared for the City of Santee

Mr. Alagha:

Athena Consulting has conducted a biological study of the property at 8504 Fanita Drive, and the results are provided in this letter.

LOCATION

The 0.69-acre property is located in inland San Diego County (**Figure 1**) in the City of Santee, immediately southwest of the intersection of Fanita Drive and Watson Place (**Figure 2**). This location is shown on a US Geological Survey topographic map in **Figure 3**. This location is within the area covered by the draft City of Santee Subarea Plan.

Surrounding land uses include a partially underground drainage culvert, Fanita Drive, and residential development to the east; residential development to the west and south; and Watson Place and residential development to the north.

METHODS

The biological study included both a records review and a biological site survey. The records review covered California Department of Fish and Wildlife (CDFW) records of sensitive species and vegetation occurrence records, soils mapping, US Geological Survey topographic maps, National Hydrography Dataset mapping, National Wetlands Inventory Mapping, and Google Earth satellite imagery dating from 1994 and 2021.

The site visit was conducted on August 23, 2022 between 8:05 and 8:35 AM. Weather conditions were 68° F, 100% cloud cover, and windspeed of 0 to 1 MPH at the beginning; and 69° F, 95% cloud cover, and windspeed of 0-1 MPH at the end. The biological survey consisted of walking around the perimeter of the property and then back and forth across it. All observed plant and animals were documented. Vegetation / land cover categories were mapped on a Google Earth image scaled at approximately 1 inch = 36 feet. Potential for occurrence of sensitive species was evaluated based on observed conditions. Surrounding land was observed from the site and from the public roadways.

Survey limitations include under-representation of plants species due to time of year, and of nocturnal or crepuscular wildlife due to time of day.

Vegetation communities and land cover classification in this report follow Holland (1986) as updated by Oberbauer et al. (2008) with additional guidance from the City. Plant taxonomy and nomenclature in this report follow the Jepson eFlora (Jepson 2021) for taxonomy and scientific names, and Checklist of the Vascular Plants of San Diego County, 5th Edition (Rebman and Simpson 2014) for common names, with some rare plant common names from the California Native Plant Society (CNPS) Rare Plant Inventory (CNPS 2018). Wildlife taxonomy and nomenclature in this report follow *San Diego County Mammal Atlas* (Tremor et al. 2017) for mammals, Avibase (Lepage 2015) for birds, California Herps (Nafis 2015) for reptiles and amphibians, Butterflies of America (Warren et al. 2015) for butterflies, BugGuide (ISUDE 2015) for other insects and arachnids, and the Integrated Taxonomic Information System (ITIS 2015) for other invertebrates, as well as the San Diego Natural History Museum spider, butterfly, bird, reptile, and amphibian checklists for localized subspecies information (SDNHM 2002, 2005, and undated).

RESULTS

The property slopes gently to the east and elevations of the site range from about 390 feet above mean sea level (AMSL) at the western property line to about 375 feet AMSL at the eastern property line. At the southeastern corner of the site is a concrete-lined drainage channel. The existing concrete channel transitions into an underground double box culvert. The entire parcel has been previously impacted and appears to be actively maintained. In historical Google Earth imagery, a house is clearly visible in 2002, and appears to be present in the earlier 1994 image as well. The house is present in the 2008 image, but the property is bare in the next image from 2009. No structures are present on the site since that time. The concrete channel along the southeastern side of the property is also visible as early as 1994.

Vegetation and Land Cover

Most of the property is currently Disturbed Land, but Developed Land and Disturbed Wetland occupy small areas. Each of these categories is described below. Representative photographs are provided in **Attachment A**. Lists of plants and animals observed are provided in **Attachments B and C**.

Disturbed Land, 0.64 Acre

This category consists of areas “that have been physically disturbed (by previous legal human activity) and are no longer recognizable as a native or naturalized vegetation association, but continue to retain a soil substrate. Typically vegetation, if present, is nearly exclusively composed of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance, or shows signs of past or present animal usage that removes any capability of providing viable natural habitat for uses other than dispersal. Examples of Disturbed Land include areas that have been graded, repeatedly cleared for fuel management purposes and/or experienced repeated use that prevents natural revegetation (i.e., dirt parking lots, trails that have been present for several decades), recently graded firebreaks, graded construction pads, construction staging areas, off-road vehicle trails, and old homesites.” (Oberbauer et al. 2008)

According to the City of Santee, Disturbed Land includes areas where vegetation covers less than 10% of the surface area (disregarding natural rock outcrops) and where there is evidence of soil surface disturbance and/or compaction (e.g., grading); or where the vegetation cover is greater than 10%, there is soil surface disturbance and compaction, and the presence of building foundations and debris (e.g., irrigation piping, fencing, old wells, abandoned farming or mining equipment) resulting from legal activities (as opposed to illegal dumping). Vegetation on Disturbed Land (if present), referred to as “ruderal”, has a predominance of nonnative, weedy species, such as Russian thistle (*Salsola tragus*), telegraph weed (*Heterotheca grandiflora*), horehound (*Marrubium vulgare*), and sow-thistle (*Sonchus oleraceus*). Although nonnative grasses may be present on Disturbed Land, they do not dominate the vegetation cover. Examples of Disturbed Land include recently graded fuelbreaks, graded construction pads, construction staging areas, off-road vehicle trails, and old homesites. (City of Santee 2006)

Almost all of the Site can be classified as Disturbed Land because it supported a previously developed homesite and vegetation is dominated by non-native herbs such as lamb’s quarters (*Chenopodium album*), Crete weed (*Hedypnois rhagadioloides*), bristly ox-tongue (*Helminthotheca echioides*), short-pod mustard (*Hirschfeldia incana*), prickly lettuce (*Lactuca serriola*), and Russian-thistle (*Salsola* sp.), with grasses such as panic veldt grass (*Ehrharta erecta*), barley (*Hordeum* sp.), oats (*Avena* sp.), and riggut brome (*Bromus diandrus*); and escaped ornamentals such as chinaberry (*Melia azedarach*) and Peruvian pepper (*Schinus molle*). A thin row of giant reed (*Arundo donax*) is present along the western edge; this bamboo-like grass was historically planted for erosion control, screening, and windbreaks. The herbaceous vegetation onsite appears to have been mowed and maintained.

Developed Land, 0.04 Acre

This land cover category consists of areas “that have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Developed land is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that require irrigation. Areas where no natural lands is evident due to a large amount of debris or other materials being placed upon it may also be considered urban/developed (e.g. car recycling plant, quarry).” Developed Land is typically unvegetated, or landscaped with a variety of ornamental (usually non-native) plants. (Oberbauer et al. 2008)

The northwestern “panhandle” of the parcel along the edge of Watson Place is Developed Land characterized by paved ground surface, with some weeds and a chinaberry. The area along Fanita Drive that is on top of the underground drainage culvert is also classified as Developed.

Disturbed Wetland, 0.01 Acre

This category consists of areas permanently or periodically inundated by water, which have been significantly modified by human activity and structures such as concrete lining, barricades, rip-rap, piers, or gates. Disturbed Wetlands are often unvegetated, but may contain scattered native or non-native vegetation. Examples include lined channels, Arizona crossings, detention basins, culverts, and ditches. (Oberbauer et al. 2008)

The area classified as Disturbed Wetland is the open concrete drainage channel along the southeastern edge of the property. At the time of the site survey, water was flowing in the channel. No plants were observed growing in the culvert.

Wildlife

Animals onsite were typical of a developed suburban setting, such as black phoebe (*Sayornis nigricans*), mourning dove (*Zenaida macroura*), Botta's pocket gopher (*Thomomys bottae*), and domestic cat (*Felis catus*). A complete list is provided in **Attachment C**.

Sensitive Biological Resources

For the purposes of this report, a sensitive plant or animal is any species, subspecies, or variety (taxon) that is officially listed by the State of California or the federal government as Endangered, Threatened, or Rare, or a candidate for one of those listings; classified as Fully Protected, Species of Special Concern, or Watch List by CDFW; included in California Rare Plant Ranks (CRPR) 1 through 4; covered by the MSCP; or addressed by the Santee Subarea Plan.

No sensitive biological resources were observed onsite.

Lists of sensitive plants and animals documented in the project area were generated by searching for California Natural Diversity Database (CNDDDB) RareFind5 records in the project USGS quadrangle. Because the property is near the border between the La Mesa and El Cajon quadrangles, the El Cajon quadrangle was also checked. The search results are provided in **Attachment D**. Search results were reviewed in report form and also checked in the CNDDDB BIOS viewer to help evaluate the potential for sensitive species to occur onsite.

The only CNDDDB record overlapping the property was a very large and imprecise record for prairie falcon (*Falco mexicanus*). Prairie falcon has low potential to use the property due to lack of large open spaces in this neighborhood. The other search results were reviewed and all of the species were judged to have low potential to occur onsite due to the highly disturbed condition of the property and its setting in a developed area.

Wildlife Corridors and Nursery Sites

The property is in a developed setting and would not serve as a wildlife corridor or nursery site.

Wetlands and Other Jurisdictional Aquatic Resources

No wetlands were observed on or adjacent to the property, but one non-wetland drainage channel crosses the southeastern corner. This channel is a concrete-lined and open near the southeastern corner of the property, but goes underground into a double box culvert approximately 25 feet north of the southern property boundary (see photograph 7 in **Appendix A**). The open section is shown as Disturbed Wetland on **Figure 4**, while the underground section is included in Developed Land.

This channel was originally shown as a blue line drainage on older USGS topo maps. In current National Hydrography Dataset mapping (NHD 2022), upstream and downstream sections are mapped

as ephemeral drainage, but the section onsite is not shown. In current National Wetlands Inventory mapping (USFWS 2022), the section along the eastern edge of the property is shown as R4SBC (Riverine Intermittent Streambed Seasonally Flooded).

Because water was flowing in the culvert during the site visit, it would be considered at least a jurisdictional Waters of the State, a broad category that includes all surface waters.

Other Unique and Significant Natural Resource Features

Rock outcrops can be natural resource features of unique or significant value, depending on their size, setting, and associated biological resources, and one rock outcrop was observed onsite at the location shown in **Figure 4**. A photograph is provided in **Attachment A**. However, it did not appear to have any associated different vegetation and did not appear to be unique or significant.

PROJECT DESCRIPTION

The proposed project would develop the property with eight two-story single family residences with attached garages on Lots 1-8, a biofiltration basin, a private road, and an open space lot for recreation. The “panhandle” section of the parcel would not be impacted. Limited offsite impacts would occur on Watson Place and Fanita Drive for project-related improvements. The existing concrete channel and box culvert will be protected in place by the existing drainage easement.

PROJECT IMPACTS

The proposed project would impact almost all of the parcel, and limited offsite areas for project-related improvements. These impacts are shown in **Figure 4**. The only unimpacted areas would be the northwestern “panhandle” and a small area in the southeastern corner that is already developed. The access drive and biofiltration basin to be constructed over the existing underground culvert would not impact the culvert. No changes or improvements would be made to the concrete channel or culvert. Impacts to vegetation/land cover category area are summarized in Table 1, below.

Table 1. Vegetation and Land Cover Impacts

Category	Existing on the Site (Acres)	Impacted on the Site (Acres)	Impact Offsite (Acres)	Total Impacts (Acres)
Developed Land	0.04	0.02	0.08	0.10
Disturbed Land	0.64	0.63	0.03	0.66
Disturbed Wetland	0.01	0.00	0.00	0.00
Total	0.69	0.65	0.11	0.76

Impacts to Disturbed Land and Developed Land are not significant and would not require mitigation.

The project would not impact Disturbed Wetland or any sensitive habitats, sensitive species, wildlife corridors or nursery sites, jurisdiction wetlands or other aquatic resources.

The rock outcrop present near the western boundary will be impacted. These rocks did not appear to have any biology-related unique or significant value, and their loss would not be considered a significant impact.

PROJECT MITIGATION AND AVOIDANCE

Because the project will not result in impacts to sensitive biological resources, no mitigation measures are required.


The project would implement design features, Best Management Practices (BMPs), and avoidance measures such as avoiding impacts to the concrete drainage channel (both the open and underground culvert sections), installation of silt fencing around the open portion of the channel to prevent accidental fill, and installation of permanent fencing along the portion of the channel adjacent to the project site. No invasive non-native plant species will be used in project landscaping.

CONCLUSIONS

The project site is a previously developed lot of Disturbed Land with small areas of Developed Land and Disturbed Wetland. Only Disturbed Land and Developed Land would be impacted by the project. The project would not impact any sensitive biological resources, and no mitigation would be required.

Please do not hesitate to contact us with any questions.

Sincerely,



Catherine MacGregor
Senior Biologist and Botanist

FIGURES

1. Regional Location
2. Vicinity Map
3. Project Site on USGS Topographic Map
4. Biological Resources and Project Impacts

ATTACHMENTS

- A. Site Photographs
- B. Plants Observed at 8504 Fanita Drive
- C. Animals Observed at 8504 Fanita Drive
- D. CNDDDB Search Results

REFERENCES

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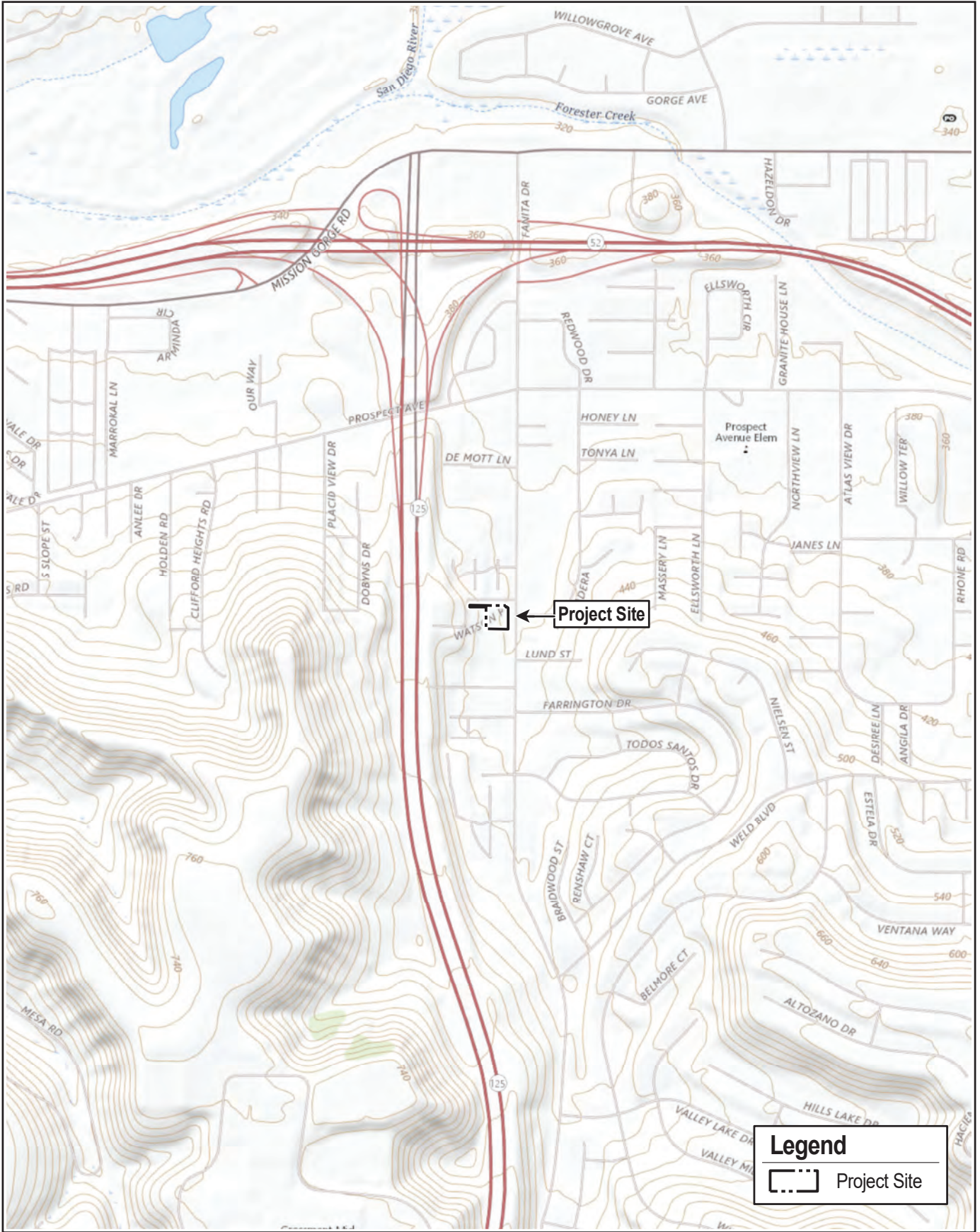
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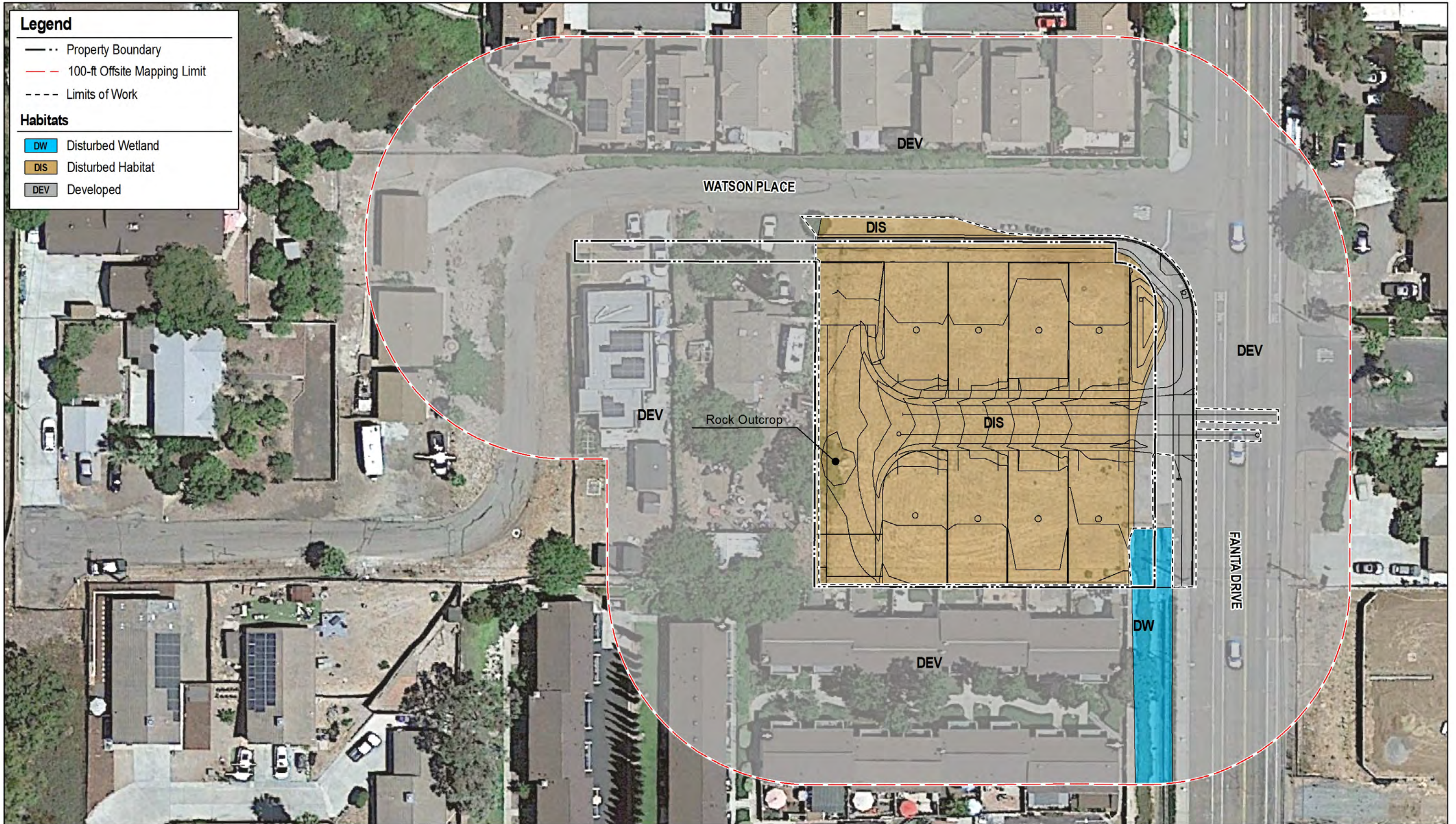
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Project Site on USGS Topographic Map



APPENDIX L

CITY OF SANTEE

PROJECT FACILITY AVAILABILITY FORM, Sewer

Please type or use pen

TA Development LLC Owner's Name	619-277-2514 Phone	ORG _____ ACCT _____ ACT _____ TASK _____ DATE _____	AMT \$ _____
7710 Balboa Ave. #210C Owner's Mailing Address		Street	
San Diego, CA 92111 City		State Zip	

S

DISTRICT CASHIER'S USE ONLY

SECTION 1. PROJECT DESCRIPTION TO BE COMPLETED BY APPLICANT

A. Major Subdivision (TM) Specific Plan or Specific Plan Amendment
 Minor Subdivision (TPM) Certificate of Compliance: _____
 Boundary Adjustment
 Rezone (Reclassification) from _____ to _____ zone.
 Major Use Permit (MUP), purpose: _____
 Time Extension? Case No. _____
 Expired Map? Case No. _____
 Other _____

B. Residential Total number of dwelling units 10
 Commercial Gross floor area _____
 Industrial Gross floor area _____
 Other Gross floor area _____

C. Total Project acreage 0.68 Total number of lots 10

D. Is the project proposing its own wastewater treatment plant? Yes No
 Is the project proposing the use of reclaimed water? Yes No

Assessor's Parcel Number(s)
(Add extra if necessary)

386-690-38-00	

Thomas Bros. Page _____ Grid _____
 8504 Fanita Dr.
 Project address Street
 Santee CA 92071
 Community Planning Area/Subregion Zip

Owner/Applicant agrees to pay all necessary construction costs, dedicate all district required easements to extend service to the project.
OWNER/APPLICANT MUST COMPLETE ALL CONDITIONS REQUIRED BY THE DISTRICT.

Applicant's Signature: [Signature] Date: 2-25-2021
 Address: 7710 Balboa Ave. CA 92111 Phone: 619-277-2514

(On completion of above, present to the district that provides water protection to complete Section 2 below.)

SECTION 2: FACILITY AVAILABILITY TO BE COMPLETED BY DISTRICT

***LETTER EXPIRES 4/8/2022

District Name: PADRE DAM MUNICIPAL WATER DISTRICT Service area WGA

A. Project is in the district.
 Project is not in the district but is within its Sphere of Influence boundary, owner must apply for annexation.
 Project is not in the district and is not within its Sphere of Influence boundary.
 The project is not located entirely within the district and a potential boundary issue exists with the _____ District.

B. Facilities to serve the project ARE ARE NOT reasonably expected to be available within the next 5 years based on the capital facility plans of the district. Explain in space below or on attached _____. (Number of sheets)
 Project will not be served for the following reason(s): _____

C. District conditions are attached. Number of sheets attached: 1
 District has specific water reclamation conditions which are attached. Number of sheets attached: _____
 District will submit conditions at a later date.
 Additional District conditions: _____

D. How far will the pipeline(s) have to be extended to serve the project? _____

This Project Facility Availability Form is valid until final discretionary action is taken pursuant to the application for the proposed project or until it is withdrawn, unless a shorter expiration date is otherwise noted.

Authorized signature: [Signature] Print name Brett Schultz
 Print title Engineering Technician Phone 619-258-4655 Date _____

NOTE: THIS DOCUMENT IS NOT A COMMITMENT OF SERVICE OR FACILITIES BY THE DISTRICT
 On completion of Section 2 by the district, applicant is to submit this form with application to:
 Department of Development Services, 10601 Magnolia Avenue, Santee, CA 92071

**SEWER AVAILABILITY ATTACHMENT
CONDITIONS OF APPROVAL**

PROJECT NAME 8504 Fanita Drive FOR Tarik Alahmad MAP NUMBER _____

A.P.N.(s) 386-690-38-00

FACILITIES

Project location and lot size may determine if the proposed project will require a public sewer main extension. If a sewer main extension is necessary, the following will be requirements to proceed with the project. The Developer / Property Owner shall:

- X] Install a Sewer System per the Padre Dam Rules and Regulations and Standard Specifications.
- X] Pay for all installation and capacity fees for each lateral connection, each lot, or each building. (As determined by project need prior to District providing service or a commitment letter)
- X] Install potable water, reclaimed water and sewer lines with the required separation as determined by the Health Department and Padre Dam.

EASEMENTS

- X] Developer shall dedicate to Padre Dam all necessary easements for that portion of the sewer system which is to be public.
- X] Easements may be required by Padre Dam to allow for future main extensions to serve property beyond the boundaries of the map/project.

FACILITY COMMITMENT

- X] Adequate sewer facility commitment shall be committed prior to final project approval/map recordation and shall be available concurrent with project need.

SPECIAL CONDITIONS

- X] The onsite sewer system shall be private.
- X] Additional conditions and comments may be addressed during the design phase.
- X] Submit all grading, landscape, and street improvement plans to Padre Dam for review and approval.
- X] There is an existing 4" sewer lateral that ties into the 8" VCP sewer main on Fanita Drive. If the onsite private sewer is 8" or larger, a sewer manhole will need to be installed on Fanita Drive.
- X] Sewer lateral required to be installed per Water Agency Standards (WAS) SS-01 with min. 2% slope.
- X] Any existing laterals not used as part of this project are to be abandoned at the developer's cost. Any existing lateral connections to be used must be CCTV'd and shown to be in good, usable condition. District approval is required prior to approved plans showing existing connection to be used.

Prepared by: Brett Schultz

Approved by: Brett Schultz
Date: 04/07/2021

-32 R-8/08

386-690-38

CITY OF SANTEE

PROJECT FACILITY AVAILABILITY FORM, Water

Please type or use pen

TA Development LLC Owner's Name	619-277-2514 Phone	ORG _____	W
7710 Balboa Ave. #210C Owner's Mailing Address	Street	ACCT _____	
San Diego, CA 92111 City	State Zip	ACT _____	
		TASK _____	
		DATE _____ AMT \$ _____	

DISTRICT CASHIER'S USE ONLY

SECTION 1: PROJECT DESCRIPTION **TO BE COMPLETED BY APPLICANT**

A. Major Subdivision (TM) Specific Plan or Specific Plan Amendment
 Minor Subdivision (TPM) Certificate of Compliance: _____
 Boundary Adjustment
 Rezone (Reclassification) from _____ to _____ zone.
 Major Use Permit (MUP), purpose: _____
 Time Extension? Case No. _____
 Expired Map? Case No. _____
 Other _____

B. Residential Total number of dwelling units 10
 Commercial Gross floor area _____
 Industrial Gross floor area _____
 Other Gross floor area _____

C. Total Project acreage 0.68 Total number of lots 10

D. Is the project proposing the use of groundwater? Yes No
 Is the project proposing the use of reclaimed water? Yes No

Owner/Applicant agrees to pay all necessary construction costs, dedicate all district required easements to extend service to the project and COMPLETE ALL CONDITIONS REQUIRED BY THE DISTRICT.

Applicant's Signature: Taylor Date: 2-25-2021
 Address: 7710 Balboa Ave. #210C, San Diego, CA 92111 Phone: 619-277-2514

Assessor's Parcel Number(s)
(Add extra if necessary)

386-690-38-00	

Thomas Bros. Page _____ Grid _____
 8504 Fanita Dr _____ Street
 Santee, CA 92071 _____ Zip
 Community Planning Area/Subregion _____

(On completion of above, present to the district that provides water protection to complete Section 2 below.)

SECTION 2: FACILITY AVAILABILITY **TO BE COMPLETED BY DISTRICT**

***LETTER EXPIRES 4/8/2022

District Name: PADRE DAM MUNICIPAL WATER DISTRICT Service area WSA

A. Project is in the district.
 Project is not in the district but is within its Sphere of Influence boundary, owner must apply for annexation.
 Project is not in the district and is not within its Sphere of Influence boundary.
 The project is not located entirely within the district and a potential boundary issue exists with the _____ District.

B. Facilities to serve the project ARE ARE NOT reasonably expected to be available within the next 5 years based on the capital facility plans of the district. Explain in space below or on attached _____. (Number of sheets)
 Project will not be served for the following reason(s): _____

C. District conditions are attached. Number of sheets attached: 1
 District has specific water reclamation conditions which are attached. Number of sheets attached: _____
 District will submit conditions at a later date.
 Additional District conditions: _____

D. How far will the pipeline(s) have to be extended to serve the project? _____

This Project Facility Availability Form is valid until final discretionary action is taken pursuant to the application for the proposed project or until it is withdrawn, unless a shorter expiration date is otherwise noted.

Authorized signature: Brett Schultz Print name Brett Schultz
 Print title Engineering Technician Phone 619 258 4635 Date _____

NOTE: THIS DOCUMENT IS NOT A COMMITMENT OF SERVICE OR FACILITIES BY THE DISTRICT
 On completion of Section 2 by the district, applicant is to submit this form with application to:
 Department of Development Services, 10601 Magnolia Avenue, Santee, CA 92071

**WATER AVAILABILITY ATTACHMENT
CONDITIONS OF APPROVAL**

PROJECT NAME 8504 Fanita Drive FOR Tarik Alahmad MAP NUMBER _____

A.P.N.(s) 386-690-38-00

FACILITIES

Domestic/Irrigation service and fire hydrant requirements may determine if the proposed project will require a water main extension. If a water main extension is necessary, the following will be requirements to proceed with the project. The Developer / Property Owner shall:

- Prepare plans for a Potable Water system according to Padre Dam's Requirements.
- Install a Potable Water System per the Padre Dam Rules and Regulations and Standard Specifications.
- Pay for all installation and capacity fees for each meter connection, each lot, or each building. (As determined by project need prior to District providing service or an unconditional commitment letter)
- Install private/public potable water, reclaimed water and sewer lines with the required separation as determined by the Health Department and Padre Dam.

EASEMENTS

- Developer shall dedicate to Padre Dam all necessary easements for that portion of the water system which is to be public.
- Easements may be required by Padre Dam to allow for future main extensions to serve property beyond the boundaries of the map/project.

FACILITY COMMITMENT

- Adequate water facility commitment shall be committed prior to final project approval/map recordation and shall be available concurrent with project need. Unconditional Facility Commitment form will be signed upon payment of capacity and meter fees.

SPECIAL CONDITIONS

- The onsite water system shall be private.
- Backflow devices are required for all proposed water services.
- Submit all grading, landscape, and street improvement plans to Padre Dam for review and approval.
- There is an existing 3/4" lateral that is coming off of the 8" ACP main on Fanita Drive.
- Water meter box may be required to be relocated at developer's expense.
- Any existing laterals not used as part of this project are to be abandoned at the developer's cost.
- All fire requirements will be assigned by the City Fire Marshal.

Prepared by: Brett Schultz

Approved by: Brett Schultz
Date: 04/07/2021

-32 R-8/08

APPENDIX M



September 8, 2021

Tarik Alahmad
TA Development LLC
7710 Balboa Ave. Ste. 210C
San Diego, CA 92111

RE: Fanita Project

Dear Tarik,

This letter is to serve as notice that Waste Management will provide residential curbside collection services, to the residents, located within your Fanita Project. The standard scope of service will include weekly solid waste, recycling, and organics collection services, at the City approved rate.

Please feel free to contact me at (619) 596-5160 if you have any further questions or require additional information.

Sincerely,

Kristine Costa

Kristine Costa
Waste Management of San Diego
Public Sector Services

cc: Heather Heckman, City of Santee