YOUNGER COASTAL PLANNED DEVELOPMENT PERMIT
CASE NO. PL24-0058

A. PROJECT INFORMATION

1. **Request:** The Applicant requests approval of a Coastal Planned Development (PD) Permit for the construction of a single-family dwelling on an undeveloped lot in La Conchita (Case No. PL24-0058).

2. **Applicant/Property Owner:** Donald Younger, 695 W. Highland Drive, Camarillo, CA 93010

3. **Applicant's Representative:** SPH Architects c/o Mr. Penn Hsu, 1507 Callens Rd. Ventura, CA 93003

4. **Decision-Making Authority:** Pursuant to the Ventura County Coastal Zoning Ordinance (CZO) (Section 8174-5 and Section 8181-3 et seq.), the Planning Director is the decision-maker for the requested PD Permit.

5. **Project Site Size, Location, and Parcel Number:** The 3,484 square foot (sq. ft.) (0.08 acres) lot is located at 7026 Oxnard Avenue, near the intersection of Oxnard Avenue and Surfside Street, in the community of La Conchita, in the unincorporated area of Ventura County. The Tax Assessor's parcel number for the parcel that constitutes the project site is 060-0-065-295 (Exhibit 2).

6. **Project Site Land Use and Zoning Designations (Exhibit 2):**

   a. Countywide General Plan Land Use Map Designation: Residential Beach

   b. Coastal Area Plan Land Use Map Designation: Residential Beach 6.1 – 36 dwelling units per acre

   c. Zoning Designation: RB-3,000 sq. ft. (Residential Beach 3,000 sq. ft. minimum lot size)

7. **Adjacent Zoning and Land Uses/Development (Exhibit 2):**

Location in Relation to the Project Site	Zoning	Land Uses/Development
North	RB-3,000 sq. ft.	Residential Development
East	RB-3,000 sq. ft.	Residential Development
South	RB-3,000 sq. ft.	Residential Development

Location in Relation to the Project Site	Zoning	Land Uses/Development
West	RB-3,000 sq. ft.	Residential Development

8. **History:** The undeveloped lot is part of the La Conchita Del Mar Subdivision (Lot 9 of 12RM31), recorded in May 1924.

9. **Project Description:** The Applicant requests a PD Permit be granted for the construction of a new 1,919 square foot (sq. ft.) single-family dwelling on an undeveloped lot in the community of La Conchita. The first floor will include living space, a garage, carport and covered porch (997, sq. ft.). The second floor will include living space and a deck (1,065 sq. ft.) and the third floor will include a loft and balcony (588 sq. ft.). Casitas Municipal Water District (CMWD) will provide potable water service and wastewater disposal will be provided by an onsite wastewater treatment system (OWTS) with advanced treatment. To mitigate for debris flow risk that currently exists in the La Conchita area, the proposed development has been designed so that the pad elevation for the dwelling and garage will be raised by two feet and utilize an engineered impact wall at least 2 feet in height on the slope facing the northeast side of the property. Access to the project site will be made available from a proposed driveway adjacent to Oxnard Avenue. (Exhibit 3).

B. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) COMPLIANCE

Pursuant to CEQA (Public Resources Code Section 21000 et seq.) and the CEQA Guidelines (Title 14, California Code or Regulations, Division 6, Chapter 3, Section 15000 et seq.), the proposed project is subject to environmental review.

The State Legislature through the Secretary for Resources has found that certain classes of projects are exempt from CEQA environmental impact review because they do not have a significant effect on the environment. These projects are declared to be categorically exempt from the requirement for the preparation of environmental impact documents. The project is exempt from the CEQA Guidelines pursuant to Section 15303, Class 3 (New Construction or Conversion of Small Structures) as the Applicant is proposing to construct a 1,919 sq, ft. single-family dwelling on a 3,484 sq. ft. lot. Further, the project will not trigger any exceptions to the exemptions listed under CEQA Guidelines Section 15300.2. Therefore, no further environmental review is required.

Therefore, this project is categorically exempt pursuant to Section 15303 of the CEQA Guidelines and complies with the requirements of CEQA.

C. CONSISTENCY WITH THE GENERAL PLAN AND COASTAL AREA PLAN

The proposed project has been analyzed and determined to be consistent with all applicable General Plan and Coastal Area Plan policies. An analysis which evaluates the

project's consistency with the policies of the General Plan and Coastal Area Plan is included as Exhibit 4 of this Staff Report. This analysis concludes the project complies with the General Plan and Coastal Area Plan.

D. ZONING ORDINANCE COMPLIANCE

The proposed project is subject to the requirements of the Ventura County CZO.

Pursuant to the requirements of the Ventura County Ventura County CZO (Section 8174-4), the proposed use is allowed in the RB 3,000 sq. ft. zone district with the granting of a PD Permit. Upon the granting of the PD Permit, the proposed project will comply with the requirements of the Ventura County CZO.

The proposed project includes the construction and use of structures that are subject to the development standards of the Ventura County Ventura County CZO (Section 8175-2). Table 1 lists the applicable development standards and a description of whether the proposed project complies with these standards.

Table 1 – Development Standards Consistency Analysis

Type of Requirement	Zoning Ordinance Requirement	Complies?
Minimum Lot Area (Gross)	3,000 sq. ft.	Yes. The project site is 0.08 acres or 3,484 sq. ft.
Maximum Percentage of Building Coverage	65 percent	Yes. The proposed dwelling will have a building coverage of 1,919 sq. ft., or 55 percent.
Front Setback	10 feet	Yes. The proposed dwelling will be set back 10 feet from the front property line.
Side Setback	3 feet	Yes. The proposed dwelling will be set back 3 feet from the side property line.
Rear Setback	15 feet	Yes. The proposed dwelling will be set back 14 feet from the rear property line.
Maximum Building Height	28 feet	Yes. The dwelling will be 28 feet in height.

E. PD PERMIT FINDINGS AND SUPPORTING EVIDENCE

The Planning Director must make certain findings in order to determine that the proposed project is consistent with the permit approval standards of the Ventura County CZO (Section 8181-3.5 et seq.). The proposed findings and supporting evidence are as follows:

1. The proposed development is consistent with the intent and provisions of the County's Certified Local Coastal Program [Section 8181-3.5.a].

Based on the information and analysis presented in Section D and Exhibit 4 of this staff report, the finding that the proposed development is consistent with the intent and provisions of the County's Certified Local Coastal Program can be made.

2. **The proposed development is compatible with the character of surrounding development [Section 8181-3.5.b].**

   La Conchita is developed as a beach oriented residential community with a small lot subdivision pattern. The community includes one-story beach bungalows, Spanish style villas, and modern style homes. Existing residential development consisting of one and two-story single-family dwellings surround the project site. The project site is 0.08 acres in size and adjacent parcels range in size from 0.05 acres to 0.11 acres. The Pacific Ocean (approximately 437 feet), US Route 101 (approximately 268 feet), and Southern Pacific Railroad line (approximately 227 feet) are southwest of the project site. The project site will be adequately served by existing public facilities that serve the La Conchita community.

   The proposed modern style single-family dwelling will not introduce physical development that is incompatible with the character of the surrounding residential development. The proposed single-family dwelling does not include a change of use that has the potential to create any land use conflicts with surrounding residential development. Additionally, the project will generate new traffic, which will not adversely impact the existing level of service on local County roads. The Applicant will be required to conduct driveway and drainage improvements along the parcel's frontage adjacent to Oxnard Avenue, in accordance with County Road standard Plate E-7 (Exhibit 5, Condition No. 26). Furthermore, the implementation of a condition to limit days and times of noise-generating construction activities will ensure that the proposed project does not generate noise that is incompatible with surrounding residential, and beach uses (Exhibit 5, Condition 18). Therefore, the proposed single-family dwelling will be consistent with the character of the surrounding residential development. Based on the discussion above, this finding can be made.

3. **The proposed development, if a conditionally permitted use, is compatible with planned land uses in the general area where the development is to be located [Section 8181-3.5.c].**

   The proposed development involves the construction, use and maintenance of a single-family dwelling. The proposed use is not conditionally permitted; therefore, the requirement of this finding does not apply to the proposed project. Based on the discussion above, this finding can be made.

4. **The proposed development would not be obnoxious or harmful, or impair the utility of neighboring property or uses [Section 8181-3.5.d].**

   CMWD will provide potable water service to the project site and wastewater disposal services will be provided by an OWTS that includes a Biomicrobics Microfast 0.5 Advanced Treatment Unit inside the OWTS. The proposed single-family dwelling will not include new physical development that may interfere with beach uses or surrounding residential uses. The proposed single-family dwelling will not result in a

significant change in traffic generation or water service connections or wastewater disposal. Existing public services are adequate to serve the proposed development along with existing residential development on neighboring properties. The proposed single-family dwelling will comply with maximum building height, maximum building coverage, and minimum setback standards for the Residential Beach zone. Therefore, the proposed project will not be obnoxious, harmful, or impair the utility of neighboring properties or uses. Based on the discussion above, this finding can be made.

5. The proposed development would not be detrimental to the public interest, health, safety, convenience, or welfare [Section 8181-3.5.e].

Adequate public resources and infrastructure exist to serve the single-family dwelling. CMWD will provide water service and wastewater disposal services will be provided by an OWTS for the subject property. Adequate response times exist for fire protection purposes. The project site is located approximately 2.5 miles northwest of the nearest fire station, Station No. 25, addressed at 5674 W. Pacific Coast Highway in the unincorporated area of Ventura. The Applicant will be required to verify adequate fire flow prior to the issuance of building permits and compliance with the applicable standards of the Ventura County Fire Code and Ventura County Fire Protection District Ordinances (Exhibit 5, Condition Nos. 30 and 36) related to construction. Furthermore, the proposed project will not generate significant new traffic that will alter the existing County roads. Oxnard Avenue and the surrounding public road network are adequate to serve the single-family dwelling. The Applicant will be required to construct the driveway per County Road Standard E-7, which addresses drainage construction, and driveway surfacing and profiles (Exhibit 5, Condition No. 26). Finally, the Applicant will be required to implement construction best management practices (BMPs), such as fiber rolls and silt fences, during all ground disturbing activities to address stormwater runoff and surface water quality impacts that would result from the proposed project (Exhibit 5, Condition No. 27). Therefore, the proposed project will not be detrimental to the public interest, health, safety, convenience, or welfare. Based on the discussion above, this finding can be made.

F. PLANNING DIRECTOR HEARING NOTICE, PUBLIC COMMENTS, AND JURISDICTIONAL COMMENTS

The Planning Division provided public notice regarding the Planning Director hearing in accordance with the Government Code (Section 65091), CZO (Section 8181-6.2 et seq.). On May 12, 2025, the Planning Division mailed notice to owners of property within 300 feet and residents within 100 feet of the property on which the project site is located. On May 12, 2025, the Planning Division placed a legal ad in the *Ventura County Star*.

G. RECOMMENDED ACTIONS

Based upon the analysis and information provided above, Planning Division Staff recommends that the Planning Director take the following actions:

1. **CERTIFY** that the Planning Director has reviewed and considered this staff report and all exhibits thereto and has considered all comments received during the public comment process;

2. **FIND** that this project is categorically exempt from CEQA pursuant to Section 15303 of the CEQA Guidelines.

3. **MAKE** the required findings to grant a PD Permit pursuant Section 8181-3.5 of the Ventura County CZO, based on the substantial evidence presented in Section E of this staff report and the entire record;

4. **GRANT** Coastal PD Permit Case No. PL24-0058 subject to the conditions of approval (Exhibit 5).

5. **SPECIFY** that the Clerk of the Planning Division is the custodian, and 800 S. Victoria Avenue, Ventura, CA 93009 is the location, of the documents and materials that constitute the record of proceedings upon which this decision is based.

The decision of the Planning Director is final unless appealed to the Planning Commission within 10 calendar days after the permit has been approved, conditionally approved, or denied (or on the following workday if the 10th day falls on a weekend or holiday). Any aggrieved person may file an appeal of the decision with the Planning Division. The Planning Division shall then set a hearing date before the Planning Commission to review the matter at the earliest convenient date.

If you have any questions concerning the information presented above, please contact Kristina Boero at (805) 6542467 or kristina.boero@ventura.org.

Prepared by:

Kristina Boero, Senior Planner
Residential Permit Section
Ventura County Planning Division

Reviewed by:

Jasmin Kim, AICP
Residential Permit Section Manager
Ventura County Planning Division

EXHIBITS

Exhibit 2	Maps
Exhibit 3	Plans
Exhibit 4	General Plan Consistency Analysis
Exhibit 5	Conditions of Approval
Exhibit 6	Noorzay Geotechnical Services Updated Seepage Pit Percolation Test, dated November 20, 2024
Exhibit 7	Noorzay Geotechnical Services Geotechnical Report, dated October 17. 2023

COUNTY of VENTURA

Ventura County,California
Resource Management Agency
GIS Development & Mapping Services
Map Created on 04-22-2025
This aerial imagery is under the
copyrights of Vexcel 2024

RMAgis

County of Ventura
Planning Director Hearing
PL24-0058
Exhibit 2 - Maps

0 25 50 Feet

Disclaimer: This Map was created by the Ventura County Resource Management Agency, Mapping Services - GIS which is designed and operated solely for the convenience of the County and related public agencies. The County does no twarrant the accuracy of this mapand no decision involving a risk of economic loss or physical injury should be made in reliance thereon.

É
RH

COUNTY of VENTURA

Ventura County,California
Resource Management Agency
GIS Development & Mapping Services
Map Created on 04-22-2025
This aerial imagery is under the
copyrights of Vexcel 2024

RMAgis

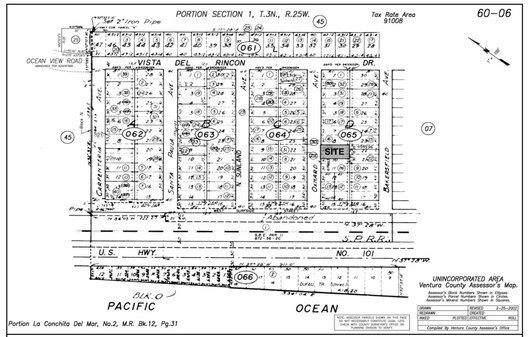
0 50 100 Feet

Disclaimer: This Map was created by the Ventura County Resource Management Agency, Mapping Services - GIS which is designed and operated solely for the convenience of the County and related public agencies. The County does no twarrant the accuracy of this mapand no decision involving a risk of economic loss or physical injury should be made in reliance thereon.

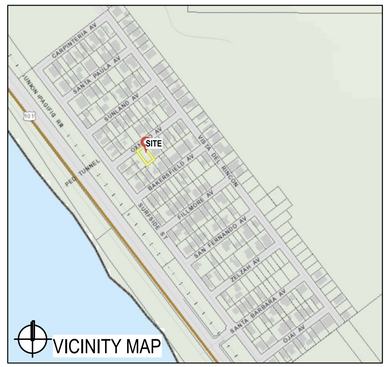
É RH

BEST MANAGEMENT PRACTICES

1. STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER. THIS INCLUDES SAND FOR STUCCO, DRYWALL DEMOLITION DEBRIS, DRYWALL "MUD" PACKAGING, ETC.
2. FUELS, OILS, SOLVENTS AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
3. NON-STORM WATER RUNOFF FROM EQUIPMENT AND VEHICLE WASHING AND ANY OTHER ACTIVITY SHALL BE CONTAINED AT THE SITE.
4. EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS MUST BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS A **SOLID** WASTE.
5. TRASH AND CONSTRUCTION RELATED WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
6. SEDIMENTS AND OTHER MATERIAL MAY NOT BE TRACED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
8. OTHER



PARCEL MAP



STATISTICS - BUILDING & ZONING CODE NOTES

•PROPERTY OWNER:	DONALD YOUNGER 695 WEST HIGHLAND DRIVE CAMARILLO, CA 93010
•PROJECT ADDRESS:	7026 OXNARD AVENUE LA CONCHITA, CA 93001
•PROJECT JURSDICTION:	COUNTY OF VENTURA
•A.P.N.	060-0-065-295
•ZONE:	RB-3000
•LOT SIZE:	0.089 AC
•OCCUPANCY GROUP:	R-3 / U GARAGE
•BUILDING TYPE:	V-A, SPRINKLERS
•SETBACK REQUIRED:	FRONT YARD - 10 FT. SIDE / INTERIOR YARDS - 3FT. REAR YARD - 14 FT. , (OR 6 FT IF FRONT YARD IS 20 FT. OR MORE)
•MAX. BUILDING HEIGHT:	MAX. HEIGHT - 28 FT. TO TOP OF ROOF.
•GRADING:	266 CUBIC YARDS
•PARKING:	1 IN GARAGE, 1 IN CARPORT PROPOSED
•DEFFERED SUBMITTAL:	FIRE-SPRINKLER SYSTEM

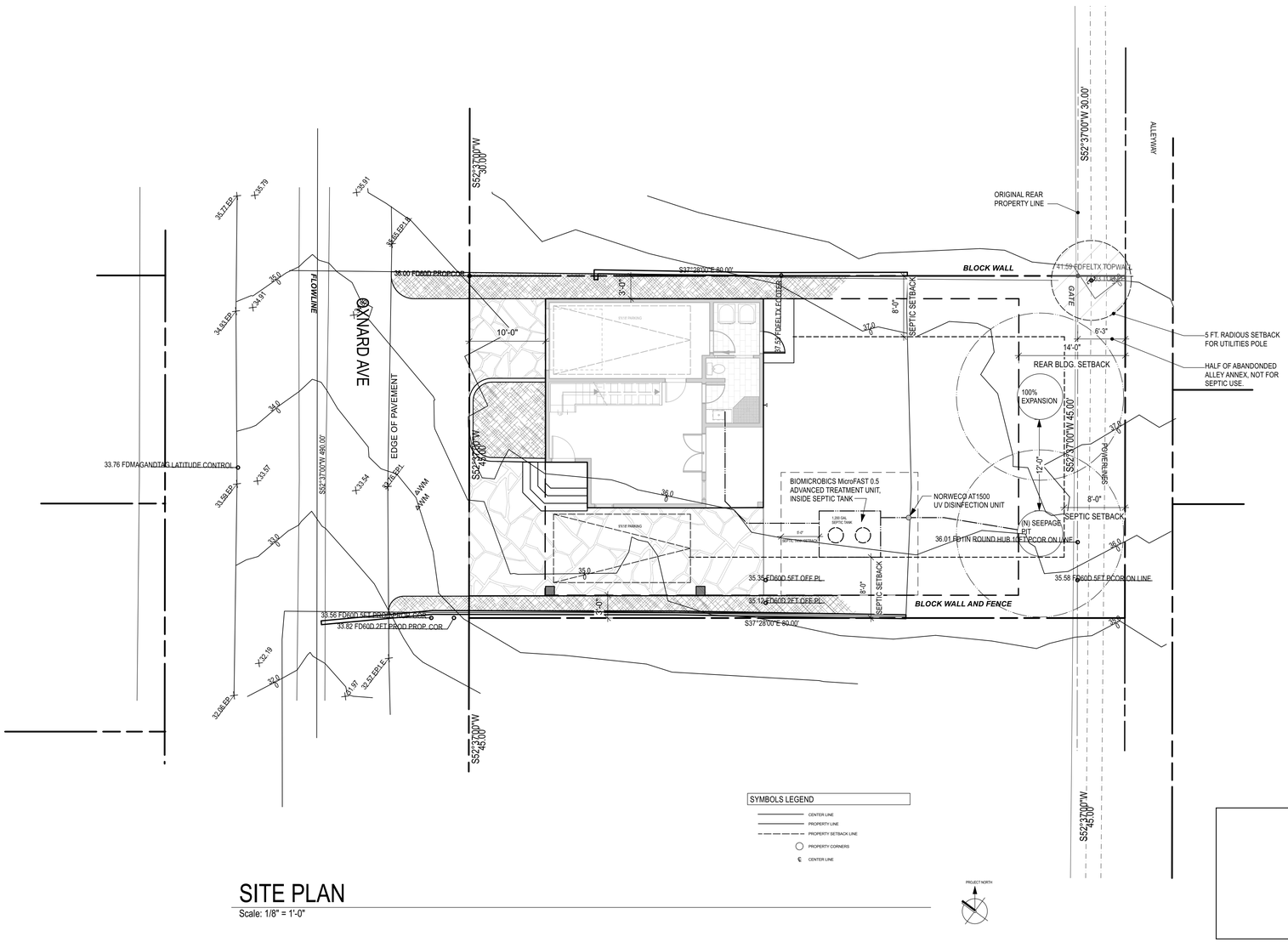
PROPOSED SQUARE FOOTAGES: (FOOTPRINT)

	GROSS (SF)		NET (SF)	
1ST FLOOR RESIDENCE	259	450	259	396
PROPOSED 1-CAR GARAGE	200	224	179	208
CARPORT	243	243		
COVERED PORCH		80		
2ND FLOOR RESIDENCE	568	700	508	623
2ND FLOOR DECK	134	365		
3RD FLOOR/LOFT	540	545	471	490
BALCONY	43	43	37	37
TOTAL HABITABLE		**1,919**		**1,717**

PROJECT DESCRIPTION

PROPOSED NEW BEACH HOME

SHEET INDEX



SITE PLAN
Scale: 1/8" = 1'-0"

County of Ventura
Planning Director Hearing
PL24-0058
Exhibit 3 - Plans

REVISION :

design | **architecture**

Steven Penn Hsu
Architect

805.415.0910
pennarch@att.net

DUNS #833001022
CAGE CODE 5W2N8

building design | master planning | permit processing

LICENSED ARCHITECT
STEVEN PENN HSU
C-32150
7-29-2025
RENEWAL DATE
STATE OF CALIFORNIA

YOUNGER RESIDENCE
PROPOSED NEW RESIDENCE
7026 OXNARD AVE. LA CONCHITA, CA 93001

SHEET TITLE :
COVER /
GENERAL NOTES

Date: 11/20/24

SHEET :
A-0.0

We are committed to helping you keep your customers safe and the environment clean. The AT 1500 is the only UV treatment system listed with Underwriters Laboratories (UL) for residential disinfection applications.

customer focus

Consider the facts:

- Dual-pass design assures the integrity of the treatment process. All liquid flowing through the system is treated twice by the UV lamp, once on the way down and again on the way back up. This doubles the exposure to UV light and greatly improves treatment.
- All electrical components are contained in a NEMA 6 weatherproof electrical enclosure. These components control the disinfection process and assure treatment integrity. The gasketed cover is secured with screws to seal the enclosure.
- The long-life lamp provides superior reliability and operational performance to meet strict water quality standards. The bulb provides bacteria reduction rates of 99.9% for complete disinfection.
- The lighting ballast is contained within the gasketed electrical enclosure to assure maximum life. Competitive systems leave the ballast exposed to the treatment environment.
- Disinfection quality is assured by a corrosion resistant solid-state circuit board that continually monitors system performance. A current sensing circuit automatically gives immediate notification should a service interruption occur.
- The AT 1500 UV disinfection system is certified to NSF/ANSI Standard 385. The system successfully completed the 6 month evaluation at 500 GPD loading, disinfecting instantaneous flow rates as low as 0.18 GPM and as high as 1.50 GPM.
- No chemical residual or harmful by-products. The AT 1500 UV disinfection system provides superior treatment and its performance is independent of the pH, temperature and ammonia content of the effluent being treated.
- Low electrical usage. The high efficiency electrical controls use very little electricity.
- Inexpensive to install and operate. The AT 1500 can be installed for less than some chemical feed systems, and requires no recurring chemical purchase. The only maintenance requirement is periodic cleaning of the quartz sleeve.
- Can be used to eliminate contaminants not readily removed by chemical treatment. Advanced Oxidation Processes (AOP) can be constructed by supplementing the AT 1500 system with ozone or H_2O_2 to remove chemical resistant pollutants, such as certain pharmaceuticals and methyl tertiary butyl ether (MTBE).

Bio-Max® Dechlorination Tablets
BIO-MAX DECHLORINATION TABLETS PROVIDE A CONVENIENT SOURCE OF CONCENTRATED SODIUM SULFITE TO INSTANTLY REMOVE ALL FORMS OF CHLORINE FROM WASTEWATER, POTABLE WATER AND PROCESS WATER. CONTAINING 92% SODIUM SULFITE AS ACTIVE INGREDIENT AND 8% PROPRIETARY INERT INGREDIENTS, BIO-MAX TABLETS CAN BE USED IN ALL BRANDS OF GRAVITY OR PRESSURIZED TABLET FEEDERS.

Bio-Dynamic® Tablet Feeders
BIO-DYNAMIC TABLET FEEDERS PROVIDE LOW COST, EFFECTIVE DISINFECTION AND DECHLORINATION OF SECONDARY EFFLUENT IN LESS SENSITIVE RECEIVING ENVIRONMENTS. EMPLOYING FLOW PROPORTIONAL CHEMICAL DOSAGE WITHOUT MOVING PARTS OR ELECTRICAL COMPONENTS, THE COMPACT TABLET FEEDERS INSTALL EASILY AND PROVIDE UNMATCHED DURABILITY.

Norweco distributors are located throughout the United States and much of the rest of the world. Research, product development, manufacturing, marketing and sales support are conducted inside our offices and factory in Norwalk, Ohio USA. Everyone at Norweco is committed to shaping the future of our industry.

engineering the future of water and wastewater treatment

Specify Norweco UV Disinfection

Equipped with an internal current sensing circuit that continuously monitors the performance of the UV bulb, the AT 1500 automatically provides notification if system operation is interrupted. This self-diagnostic feature protects the disinfection process from disruptions and maintains treatment quality. When used in conjunction with a Norweco remote monitoring controller, the system owner and service provider can be immediately notified of any change in performance.

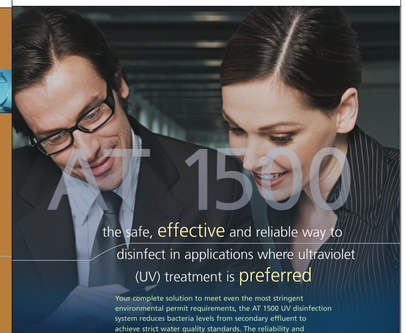
The compact design and rigid construction of the system makes installation quick and easy. The custom molded treatment chamber is constructed from carbon-impregnated ABS plastic that is resistant to ultraviolet light and the engineered flow path assures disinfection quality.

norweco
Engineering the future of water and wastewater treatment

220 Republic Street
Norwalk, Ohio, U.S.A. 44857
PH: 419.668.4471
FAX: 419.663.5640
www.norweco.com

AT 1500
ULTRAVIOLET DISINFECTION

norweco
Engineering the future of water and wastewater treatment



AT 1500

the safe, effective and reliable way to disinfect in applications where ultraviolet (UV) treatment is preferred

Your complete solution to meet even the most stringent environmental permit requirements, the AT 1500 UV disinfection system reduces bacteria levels from secondary effluent to achieve strict water quality standards. The reliability and performance of the AT 1500 is unmatched for onsite and decentralized treatment applications. Every component of the compact unit is highly engineered and constructed to provide reliable disinfection and superior operational life.

UV disinfection is routinely used in ecologically sensitive areas where residuals from chemical disinfection might possibly create problems in the receiving environment. Harmful pathogens and other contaminants, including some that are resistant to chemical disinfection, are rendered completely harmless by the reliable performance of the AT 1500 UV disinfection system.

solutions in wastewater treatment

Today's Answer for the Protection of Tomorrow's Environment

comprehensive protection, guaranteed

The AT 1500 disinfection system is warranted against defects in material and workmanship under normal use and service by a comprehensive 2 year warranty. This limited warranty provides single source protection and covers all system components. A warranty registration card is included with every new AT 1500 Installation and Operation Manual.

The Model AT 1500 UV disinfection system has been listed, licensed and/or certified by each of the following agencies/organizations.

Progress Through Service Since 1906

We engineer, manufacture, install and maintain advanced water and wastewater treatment technologies for residential properties, communities and commercial properties that are not connected to sewer lines. Norweco treatment systems are in service all over the world.

Norweco®, Norweco Ideal®, Singulair®, NSE360®, TankAlert®, Singulair RT®, Singulair Green®, Ridat Rivet®, Hydro-Kinetic®, Hydro-Kinetic Bio-Flo Reactor®, Evenair®, Lift-Rat®, Microsaire®, Bio-Dynamic®, Bio-Sanitizer®, Bio-Revitalizer®, Bio-Kinetic®, Bio-Saturn®, Bio-Gem®, Bio-Max®, Bio-Pack®, Blue Crystal®, Phos-4-Fate®, Endo-C®, Nitro-Bolster®, CleanCheck®, ChemCheck®, Tri-Max®, Hydra-Max®, Phos-Pro®, MOD®, TNT®, MASP®, Stress-Buster® and "BUSTER" logo are all registered trademarks of Norwalk Wastewater Equipment Company, Inc.

The AT 1500 UV disinfection system reduces bacteria levels to meet strict water quality standards

Interlock Switch
A power interlock switch automatically de-energizes the system during service.

Inlet
Treated wastewater enters the system through an integral 4" inlet hub.

Turbulence Inducer
Turbulence is purposely created within the influent, accomplishing more complete disinfection.

UV Bulb
The heavy duty, long-life bulb provides reliable disinfection. Our lamp is tested and certified to provide superior bacteria kill over competitive systems, while maintaining extended service life.

Quartz Sleeve
The long-life bulb is encased within a transparent quartz sleeve to isolate the bulb from the flow stream and allows for uniform heat dissipation. The sleeve is manufactured from optical grade fused silica quartz for easy cleaning and superior UV transmittance.

Dual-Pass Design
An anodized aluminum frame with rubber gaskets creates a dual-pass flow path through the disinfection chamber. Extended treatment time and exposure to UV light allow for maximum disinfection and performance for stringent environmental standards.

NEMA 6 Electrical Enclosure with Internal Ballast
The compact electrical enclosure provides a watertight and weatherproof connection for all power lines to the system. The ballast is located safely inside this durable enclosure for protection and long-life. The green light on the enclosure is constantly lit to indicate proper operation.

Solid State Circuit Board
Function of the system is fully solid state, with a current sensing circuit. The current sensor automatically monitors performance of the UV bulb and provides constant assurance of proper operation.

Simplified Wiring
A single incoming power cable is the only electrical connection required to operate the AT 1500 system. The current sensing control center operates the bulb through a watertight pre-wired, NEMA 6P plug and play power cable assembly.

Outlet
Disinfected effluent exits the system through an integral 4" outlet hub.

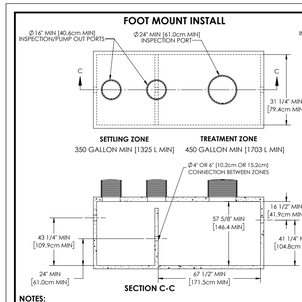
ABS Disinfection Chamber
The system is contained within a compact, integrally molded ABS disinfection chamber that is carbon-impregnated for maximum durability. The watertight chamber is resistant to UV light and provides long operational life.

NPDES Treatment System
UNIQUE, STATE-SPECIFIC TREATMENT NEEDS CAN BE MET WITH THIS EQUIPMENT PACKAGE. THE NPDES TREATMENT UNIT FOLLOWS ANY APPROVED NORWECO AEROBIC WASTEWATER TREATMENT SYSTEM AND INCREASES DISSOLVED OXYGEN (DO) TO ABOVE 6 PPM TO PROTECT THE MOST SENSITIVE RECEIVING ENVIRONMENTS.

Pumping Stations
NORWECO'S SIMPLEX AND DUPLEX PUMPING STATIONS ARE A VERSATILE, DURABLE AND AFFORDABLE WAY TO SOLVE YOUR DOMESTIC FLUID HANDLING NEEDS. BASIC PRE-ENGINEERED PACKAGES INCLUDE A CORROSION RESISTANT POLYETHYLENE BASIN, PRE-WIRED ELECTRICAL CONTROL CENTER AND A WIDE SELECTION OF PUMPING EQUIPMENT.

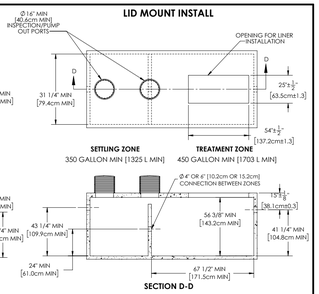
Blue Crystal® Residential Disinfecting Tablets
OUR PURE CALCIUM HYPOCHLORITE TABLETS ARE SPECIALLY FORMULATED FOR USE IN RESIDENTIAL SYSTEMS FOR EFFICIENT, RELIABLE DISINFECTION. EACH TABLET CONTAINS AT LEAST 70% AVAILABLE CHLORINE. PACKAGED IN RE-SEALABLE CONTAINERS, OUR TABLETS ARE AVAILABLE FROM YOUR LOCAL NORWECO DISTRIBUTOR IN 5, 10, AND 130 POUND POLYETHYLENE PAILS.

FOOT MOUNT INSTALL



SECTION C-C

LID MOUNT INSTALL

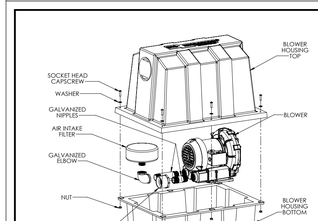


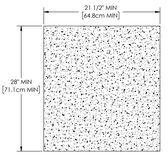
SECTION D-D

NOTES:

1. **MINIMUM DIMENSIONS DO NOT DETERMINE OVERALL TANK CAPACITY.**
2. INSPECTION/PUMPOUT PORT LOCATIONS MAY VARY DEPENDING ON TANK CONSTRUCTION.
3. ALL APPURTENANCES TO FASTIB (E.G. TANKS, ACCESS PORTS, ELECTRICAL, ETC.) MUST CONFORM TO ALL APPLICABLE COUNTY, STATE, PROVINCE, AND LOCAL PLUMBING AND ELECTRICAL CODES.
4. PUMP OUT ACCESS SHALL BE ADEQUATE TO THOROUGHLY CLEAN OUT BOTH ZONES.
5. IF LESS THAN THE SPECIFIED MINIMUMS ARE CONSIDERED NECESSARY, CONSULT FACTORY FOR GUIDANCE.
6. SPECIALIZED TREATMENT NEEDS MAY REQUIRE SPECIFIC FEATURES TO BE INCORPORATED INTO THE DESIGN. CONSULT FACTORY FOR GUIDANCE.
7. MINIMUM OF 2.0m (5.1cm)INVERT IS NECESSARY BETWEEN THE INLET AND OUTLET OF EACH ZONE FOR GRAVITY FLOW SYSTEMS.
8. TANK VOLUMES MAY VARY BY APPLICATION AND JURISDICTION.
9. TANKS OF VARYING SHAPE AND MATERIAL CAN BE USED WITHIN SPECIFIED MINIMUMS.
10. TANK SET UP MAY BE DIFFERENT THAN SHOWN, i.e., SEPARATE SETTLING AND TREATMENT TANKS.

PROPRIETARY AND CONFIDENTIAL	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND TOLERANCES ARE AS FOLLOWS:	BIO MICROBICS BETTER WASTE, BETTER WORLD
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BIO-MICROBICS, INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BIO-MICROBICS, INC. IS PROHIBITED.	$\frac{1}{2}$" ± 1/8" (12.7 ± 3.2) .XX ± .05 (.0.5)	TREATMENT: ESG
DO NOT SCALE DRAWING	SURFACE FINISH:	DATE: 6/24/2022
SHEET 5 OF 6	MSH	PART NUMBER: 600-FINMCF0.5
SCALE: 1:32 SIZE: B	DATE: 6/24/2022	REV: G



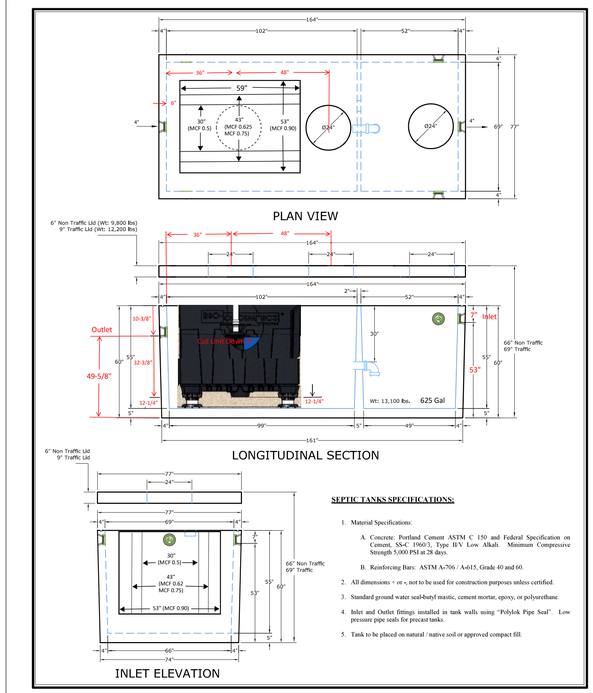


BLOWER PAD

NOTES:

1. SOME MICROFAST CONFIGURATIONS MAY REQUIRE DIFFERENT BLOWER HOUSINGS.
2. BLOWER MUST BE LOCATED ABOVE FLOOD LEVELS.

PROPRIETARY AND CONFIDENTIAL	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND TOLERANCES ARE AS FOLLOWS:	BIO MICROBICS BETTER WASTE, BETTER WORLD
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BIO-MICROBICS, INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BIO-MICROBICS, INC. IS PROHIBITED.	$\frac{1}{2}$" ± 1/8" (12.7 ± 3.2) .XX ± .05 (.0.5)	TREATMENT: ESG
DO NOT SCALE DRAWING	SURFACE FINISH:	DATE: 6/24/2022
SHEET 6 OF 6	MSH	PART NUMBER: 600-FINMCF0.5
SCALE: N/A SIZE: B	DATE: 6/24/2022	REV: G

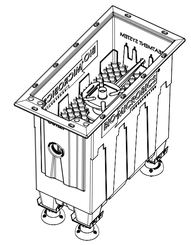


SEPTIC TANKS SPECIFICATIONS:

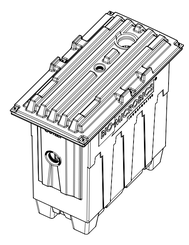
1. Material Specifications:
   A. Concrete: Portland Cement ASTM C 150 and Federal Specification on Cement, SS-C 1960/3, Type II/V Low Alkali. Minimum Compressive Strength 5,000 PSI at 28 days.
   B. Reinforcing Bars: ASTM A-706 / A-615, Grade 40 and 60.
2. All dimensions + or -, not to be used for construction purposes unless certified.
3. Standard ground water seal-butyl mastic, cement mortar, epoxy, or polyurethane.
4. Inlet and Outlet fittings installed in tank walls using "Polylok Pipe Seal". Low pressure pipe seals for precast tanks.
5. Tank to be placed on natural / native soil or approved compact fill.

MID STATE Concrete Products
Santa Maria, Ca
1625 E. DONOVAN RD., STE. C
SANTA MARIA, CA 93455
PH: (805) 928-2885
FAX: (805) 928-2114
www.midstateconcrete.com

MicroFast 0.5, 0.625, 0.75, 0.90
2,000 GAL. SEPTIC TANK
REV. 07/2015

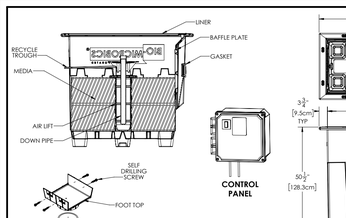


MicroFAST® 0.5 WITH FEET



MicroFAST® 0.5 WITH LID

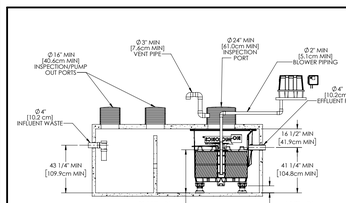
PROPRIETARY AND CONFIDENTIAL	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND TOLERANCES ARE AS FOLLOWS:	BIO MICROBICS BETTER WASTE, BETTER WORLD
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BIO-MICROBICS, INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BIO-MICROBICS, INC. IS PROHIBITED.	$\frac{1}{2}$" ± 1/8" (12.7 ± 3.2) .XX ± .05 (.0.5)	TREATMENT: ESG
DO NOT SCALE DRAWING	SURFACE FINISH:	DATE: 6/24/2022
SHEET 1 OF 6	MSH	PART NUMBER: 600-FINMCF0.5
SCALE: 1:12 SIZE: B	DATE: 6/24/2022	REV: G

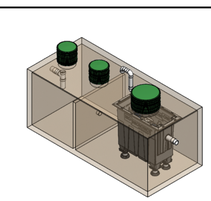


NOTES:

1. ITEMS ARE DEPICTIONS AND MAY VARY IN APPEARANCE.

PROPRIETARY AND CONFIDENTIAL	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND TOLERANCES ARE AS FOLLOWS:	BIO MICROBICS BETTER WASTE, BETTER WORLD
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BIO-MICROBICS, INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BIO-MICROBICS, INC. IS PROHIBITED.	$\frac{1}{2}$" ± 1/8" (12.7 ± 3.2) .XX ± .05 (.0.5)	TREATMENT: ESG
DO NOT SCALE DRAWING	SURFACE FINISH:	DATE: 6/24/2022
SHEET 2 OF 6	MSH	PART NUMBER: 600-FINMCF0.5
SCALE: N/A SIZE: B	DATE: 6/24/2022	REV: G

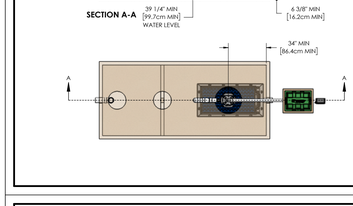


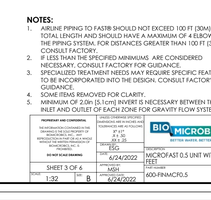


NOTES:

1. AIRLINE PIPING TO FAST® SHOULD NOT EXCEED 100 FT (30M) TOTAL LENGTH AND SHOULD HAVE A MAXIMUM OF 4 ELBOWS IN THE PIPING SYSTEM. FOR DISTANCES GREATER THAN 100 FT (30M) CONSULT FACTORY.
2. IF LESS THAN THE SPECIFIED MINIMUMS ARE CONSIDERED NECESSARY, CONSULT FACTORY FOR GUIDANCE.
3. SPECIALIZED TREATMENT NEEDS MAY REQUIRE SPECIFIC FEATURES TO BE INCORPORATED INTO THE DESIGN. CONSULT FACTORY FOR GUIDANCE.
4. SOME ITEMS REMOVED FOR CLARITY.
5. MINIMUM OF 2.0m (5.1cm) INVERT IS NECESSARY BETWEEN THE INLET AND OUTLET OF EACH ZONE FOR GRAVITY FLOW SYSTEMS.

PROPRIETARY AND CONFIDENTIAL	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND TOLERANCES ARE AS FOLLOWS:	BIO MICROBICS BETTER WASTE, BETTER WORLD
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BIO-MICROBICS, INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BIO-MICROBICS, INC. IS PROHIBITED.	$\frac{1}{2}$" ± 1/8" (12.7 ± 3.2) .XX ± .05 (.0.5)	TREATMENT: ESG
DO NOT SCALE DRAWING	SURFACE FINISH:	DATE: 6/24/2022
SHEET 3 OF 6	MSH	PART NUMBER: 600-FINMCF0.5
SCALE: 1:32 SIZE: B	DATE: 6/24/2022	REV: G





NOTES:

1. AIRLINE PIPING TO FAST® SHOULD NOT EXCEED 100 FT (30M) TOTAL LENGTH AND SHOULD HAVE A MAXIMUM OF 4 ELBOWS IN THE PIPING SYSTEM. FOR DISTANCES GREATER THAN 100 FT (30M) CONSULT FACTORY.
2. IF LESS THAN THE SPECIFIED MINIMUMS ARE CONSIDERED NECESSARY, CONSULT FACTORY FOR GUIDANCE.
3. SPECIALIZED TREATMENT NEEDS MAY REQUIRE SPECIFIC FEATURES TO BE INCORPORATED INTO THE DESIGN. CONSULT FACTORY FOR GUIDANCE.
4. SOME ITEMS REMOVED FOR CLARITY.
5. MINIMUM OF 2.0m (5.1cm) INVERT IS NECESSARY BETWEEN THE INLET AND OUTLET OF EACH ZONE FOR GRAVITY FLOW SYSTEMS.

PROPRIETARY AND CONFIDENTIAL	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND TOLERANCES ARE AS FOLLOWS:	BIO MICROBICS BETTER WASTE, BETTER WORLD
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BIO-MICROBICS, INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BIO-MICROBICS, INC. IS PROHIBITED.	$\frac{1}{2}$" ± 1/8" (12.7 ± 3.2) .XX ± .05 (.0.5)	TREATMENT: ESG
DO NOT SCALE DRAWING	SURFACE FINISH:	DATE: 6/24/2022
SHEET 4 OF 6	MSH	PART NUMBER: 600-FINMCF0.5
SCALE: 1:32 SIZE: B	DATE: 6/24/2022	REV: G

REVISION :

YOUNGER RESIDENCE
PROPOSED NEW RESIDENCE
7026 OXNARD AVE. LA CONCHITA, CA 93001

building design | master planning | permit processing
SPA design | architecture
Steven Penn Hsu
Architect
805.415.0910
pennarch@att.net
DUNS #833001022
CAGE CODE 5WZN8

LICENSED ARCHITECT
STEVEN PENN HSU
C-32150
7-29-2025
RENEWAL DATE
STATE OF CALIFORNIA

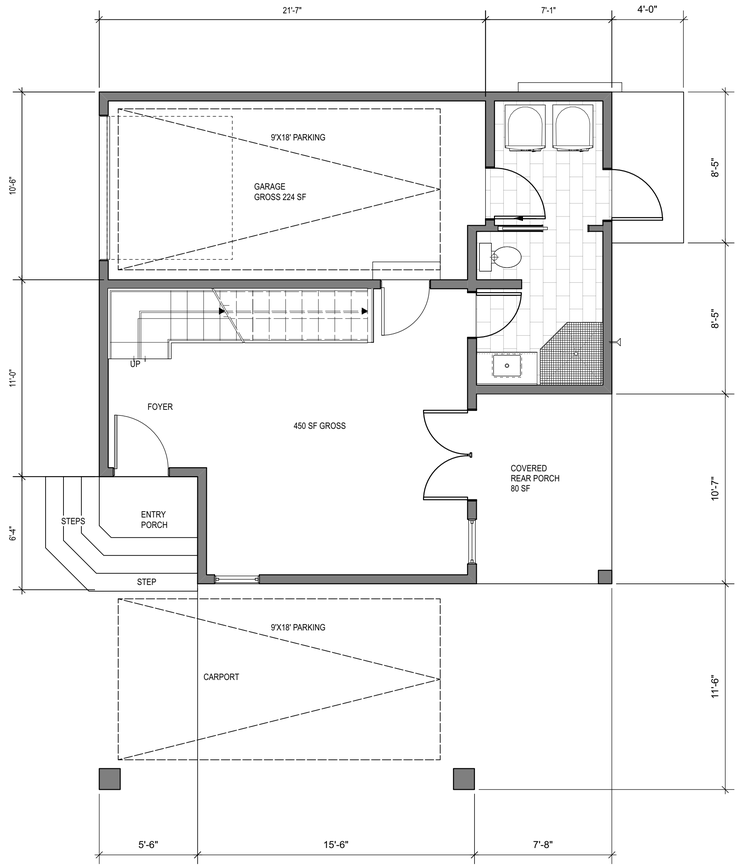
SHEET TITLE :

ADVANCED TREATMENT UNIT SPEC SHEETS

Date: 11/20/24

SHEET :

A-0.2



GARAGE / FIRST FLOOR PLAN

Scale: 1/4" = 1'-0"

PROJECT NORTH

TRUE NORTH

REVISION :

building design | master planning | permit processing

design | **architecture**

Steven Penn Hsu
Architect

805.415.0910
pennarch@att.net

DUNS #833001022
CAGE CODE 5W2N8

LICENSED ARCHITECT
STEVEN PENN HSU
C-32150
7-29-2025
RENEWAL DATE
STATE OF CALIFORNIA

YOUNGER RESIDENCE
PROPOSED NEW RESIDENCE
7026 OXNARD AVE. LA CONCHITA, CA 93001

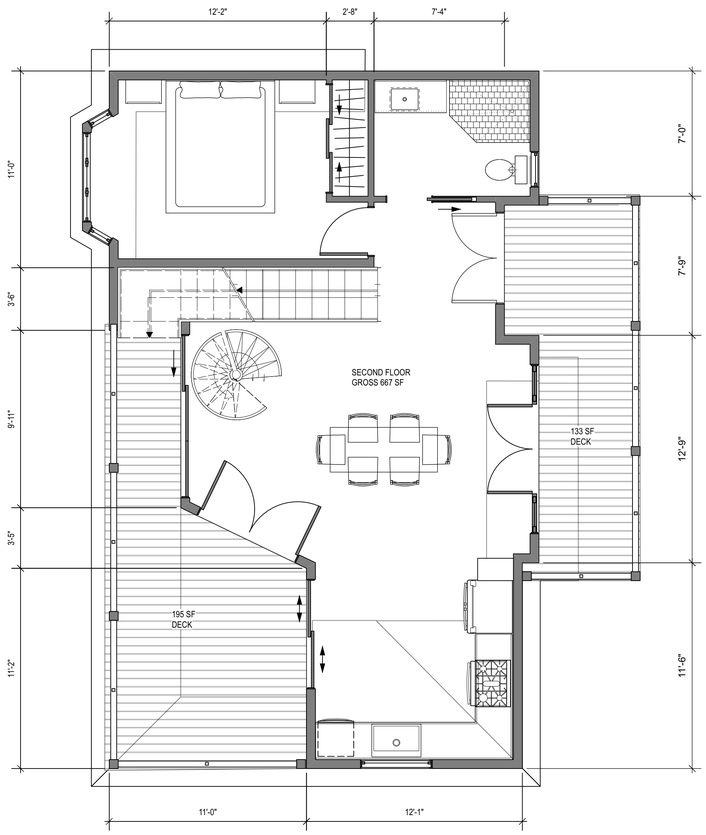
SHEET TITLE :

GARAGE FLOOR PLAN

Date: 11/20/24

SHEET :

A-2.0



2ND FLOOR PLAN

Scale: 1/4" = 1'-0"

PROJECT NORTH

TRUE NORTH

REVISION :

building design | master planning | permit processing

design | **architecture**

Steven Penn Hsu
Architect

805.415.0910
pennarch@att.net

DUNS #833001022
CAGE CODE 5W2N8

LICENSED ARCHITECT
STEVEN PENN HSU
C-32150
7-29-2025
RENEWAL DATE
STATE OF CALIFORNIA

YOUNGER RESIDENCE

PROPOSED NEW RESIDENCE

7026 OXNARD AVE. LA CONCHITA, CA 93001

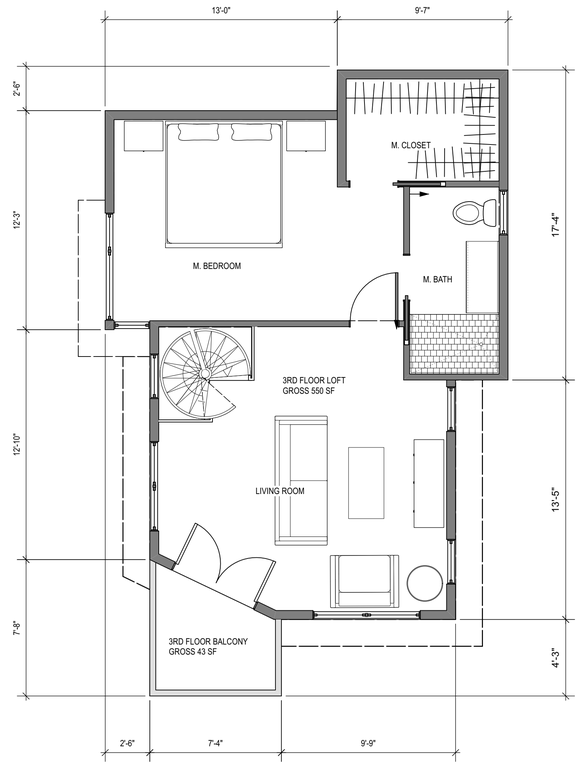
SHEET TITLE :

2ND FLOOR PLAN

Date: 11/20/24

SHEET :

A-2.1



3RD FLOOR LOFT / DECK PLAN

Scale: 1/4" = 1'-0"

PROJECT NORTH

TRUE NORTH

REVISION :

building design | master planning | permit processing

design | **architecture**

Steven Penn Hsu
Architect

805.415.0910
pennarch@att.net

DUNS #833001022
CAGE CODE 5W2N8

LICENSED ARCHITECT
STEVEN PENN HSU
C-32150
7-29-2025
RENEWAL DATE
STATE OF CALIFORNIA

YOUNGER RESIDENCE
PROPOSED NEW RESIDENCE
7026 OXNARD AVE. LA CONCHITA, CA 93001

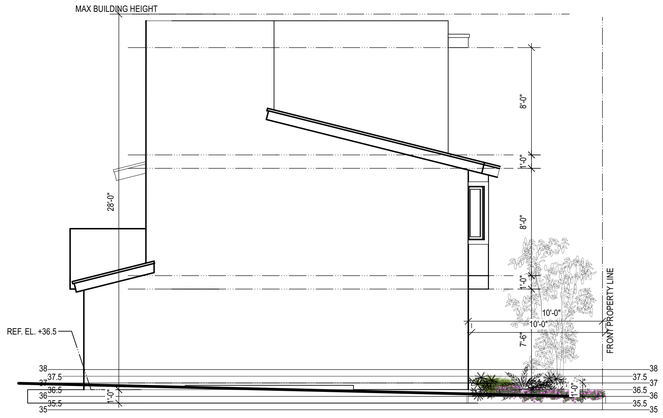
SHEET TITLE :

LOFT PLAN

Date: 11/20/24

SHEET :

A-2.2



NORTH ELEVATION (SIDE PROPERTY LINE)

Scale: 3/16" = 1'-0"

WEST ELEVATION (FRONT-OXNARD AVE)

Scale: 3/16" = 1'-0"

SOUTH ELEVATION (SIDE PROPERTY LINE)

Scale: 3/16" = 1'-0"

EAST ELEVATION (REAR -BACKYARD)

Scale: 3/16" = 1'-0"

REVISION :

building design | master planning | permit processing

design | architecture

Steven Penn Hsu
Architect

805.415.0910
pennarch@att.net

DUNS #833001022
CAGE CODE 5W2N8

LICENSED ARCHITECT
STEVEN PENN HSU
C-32150
7-29-2025
RENEWAL DATE
STATE OF CALIFORNIA

YOUNGER RESIDENCE
PROPOSED NEW RESIDENCE
7026 OXNARD AVE. LA CONCHITA, CA 93001

SHEET TITLE :

ELEVATIONS

Date: 11/20/24

SHEET :

A-3.0

EXHIBIT 4 - GENERAL PLAN AND COASTAL AREA PLAN CONSISTENCY ANLAYSIS FOR COASTAL PLANNED DEVELOPMENT PERMIT CASE NO. PL24-0058

The 2040 Ventura County General Plan Goals, Policies and Programs (2020, page 1-1) states:

All area plans, specific plans subdivision, public works projects, and zoning decisions must be consistent with the direction provided in the County's General Plan.

Furthermore, the Ventura County Coastal Zoning Ordinance (CZO) (Section 8181-3.5.a) states that to be approved, a project must be found consistent with all applicable policies of the Ventura County General Plan Goals, Policies and Programs.

The proposed project includes the construction of a single-family dwelling on an undeveloped lot in the community of La Conchita.

Evaluated below is the consistency of the proposed project with the applicable policies of the General Plan Goals, Policies and Programs, as well as the Coastal Area Plan Goals and Policies and the California Coastal Act.

1. Land Use and Community Character

Ventura County General Plan Community Character and Quality of Life Policy LU-16.1: *The County shall encourage discretionary development to be designed to maintain the distinctive character of unincorporated communities, to ensure adequate provision of public facilities and services, and to be compatible with neighboring uses.*

Ventura County General Plan Policy LU-16.8 (Residential Design that Complements the Natural Environment): *The County shall encourage discretionary development that incorporates design features that provide a harmonious relationship between adjoining uses and the natural environment.*

Ventura County General Plan Scenic Roadways Policy COS-3.1: *The County shall protect the visual character of scenic resources visible from state or County designated scenic roadways.*

California Coastal Act Section 30250(a): *New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable parcels in the area*

have been developed and the created parcels would be no smaller than the average size of surrounding parcels.

California Coastal Act Policy Section 30251: *The scenic and visual qualities of coastal areas shall be considered and protected as a re-source of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural landforms, to be visually compatible with the character of sur-rounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.*

California Coastal Act Policy Section 30253: *New development shall do all of the following: (e) Where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses.*

Staff Analysis: The project site is in the unincorporated community of La Conchita and is zoned Residential Beach (RB). The intent of the RB zone is to provide for development and preservation of small lot, beach-oriented residential communities. The character of this residential beach community will not be altered with the proposed construction of the single-family dwelling. La Conchita is developed as a beach oriented residential community with a small lot subdivision pattern. Adjacent parcels are developed and range in size from 0.05 acres to 0.11 acres. The community includes a one-story beach bungalows, Spanish style villas, and modern style homes. The proposed modern style home would be located on a 0.08-acre (3,484 square feet (sq. ft.)) lot and include three stories with a garage and carport. As discussed in Section D of the staff report, proposed building coverage, height and setbacks will not exceed Ventura County CZO development standards.

The Pacific Ocean and US Route 101 are considered scenic resources per the Ventura County General Plan and are approximately 437 feet and 268 feet west of the project site, respectively. Existing one- and two-story single-family dwellings block public views of the project site from these scenic resources. Based on the distance from US Route 101, the proposed dwelling would not contribute to the alteration of the coastline or public views to and from US Route 101. Further, the proposed residence would not degrade or significantly alter the existing scenic visual qualities of the La Conchita community as it will be similar in visual character (e.g., size, scale, and style) to other residential dwellings in the surrounding area.

Based on the above discussion, the proposed project is consistent with *Ventura County General Plan* Policies LU-16.1, LU- 16.8, and COS-3.1 and Coastal Act Sections 30250(a), 30251, and 30253(e).

2. Circulation, Transportation, and Mobility

Ventura County General Plan Vehicle Miles Traveled (VMT) Standards and CEQA Evaluation Policy CTM-1.1: *The County shall require evaluation of County General Plan land use designation changes, zone changes, and discretionary development for their individual (i.e., project-specific) and cumulative transportation impacts based on Vehicle Miles Traveled (VMT) under the California Environmental Quality Act (CEQA) pursuant to the methodology and thresholds of significance criteria set forth in the County Initial Study Assessment Guidelines*.

Ventura County General Plan County Level of Service (LOS) Standards Policy CTM-1.3: *The County shall maintain LOS standards for use as part of the County's transportation planning including the traffic impact mitigation fee program, and the County's review and consideration of proposed land use legislation and discretionary development. For purposes of County transportation planning and review and consideration of proposed land use legislation and discretionary development, the County shall use the following minimum acceptable Level of Service (LOS) for road segment and intersection design standards within the Regional Road Network and all other County-maintained roadways: a. LOS-'C' for all Federal functional classification of Minor Collector (MNC) and Local roadways (L); and b. LOS-'D' for all Federal functional classifications except MNC and L, and Federal and State highways in the unincorporated area, except as otherwise provided in subparagraph (c and d; c. LOS-'E' for State Route 33 between the northerly end of the Ojai Freeway and the city of Ojai, Santa Rosa Road, Moorpark Road north of Santa Rosa Road, State Route 34 north of the city of Camarillo, and State Route 118 between Santa Clara Avenue and the city of Moorpark; d. LOS 'F' for Wendy Drive between Borchard Drive to Lois Avenue; and e. The LOS prescribed by the applicable city for all federal highways, state highways, city thoroughfares and city-maintained local roads located within that city, if the city has formally adopted and is implementing a General Plan policy, ordinance, or a reciprocal agreement with the County regarding development in the city that is intended to improve the LOS of County-maintained local roads and federal and state highways located within the unincorporated area of the county. f. At any intersection between two or more roads, each of which has a prescribed minimum acceptable LOS, the lower LOS of the roads shall be the minimum acceptable LOS for that intersection.*

Ventura County General Plan County Road Access Policy CTM-2.3: *The County shall require discretionary development with access onto a County road to have the access point(s) designed and built to County standards.*

Staff Analysis: The California Natural Resources Agency has adopted new CEQA Guidelines that require an analysis of vehicle miles travelled (VMT). Based on guidance provided by the Office of Planning and Research (OPR), certain projects may be screened out of requiring VMT analysis, because their impacts are known to be less than significant. Screened projects include those that generate fewer than

110 average daily vehicle trips. Using the Ventura County Transportation Commission (VCTC) Ventura County Traffic Model (VCTM), the baseline average trip length of all home-based model trip types is 9.66 miles. Applying the 15 percent reduction yields a VMT threshold of 8.21 miles which is the threshold of significance for residential land use projects. The proposed single-family dwelling is approximately 268 feet to the northeast of US Route 101. The proposed home-based dwelling trips will likely average one per day given the distance to employment centers and public services. Based on the above 8.21-mile VCTM baseline and the location of the dwelling in relation to US Route 101, the VMT that would be generated from the dwelling development would not exceed the threshold.

Oxnard Avenue is a County maintained local road. The proposed single-family dwelling will generate additional traffic on the Regional Road Network and local public roads, but approval of the project will not result in the degradation of LOS for any identified roadway segments or intersections within the project area.

The proposed driveway does not meet current driveway access standards. The Applicant will be required to construct driveway and drainage improvements in accordance with County Road Standard Plate E-7 (Exhibit 5, Condition No. 26).

Based on the discussion above, the proposed project is consistent with Ventura County General Plan Policies CTM-1.1, CTM-1.3, CTM-1.7 and CTM-2.3.

California Coastal Act Section 30212(a): *Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) adequate access exists nearby, or, (3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.*

Staff Analysis: The proposed project will not obstruct or adversely impact access to a public recreation source (e.g., the beach). The nearest vertical beach access is approximately 334 feet north of the project site. Based on this distance, the proposed single-family dwelling would not extend beyond the boundaries of the property in a way that impedes horizontal public access routes. In addition, public parking along Surfside Street would not be affected by the project. Therefore, the proposed development will not interfere with the public's right of access to the sea and will not require development of new dedicated accessways to the public beach.

Based on the above discussion, the proposed project is consistent with Coastal Act Section 30212(a).

3. Public Facilities, Services, and Infrastructure

Ventura County General Plan Public Facilities, Services, and Infrastructure Availability Policy PFS-1.7: *The County shall only approve discretionary development in locations where adequate public facilities, services, and infrastructure are available and functional, under physical construction, or will be available prior to occupancy.*

Ventura County General Plan Adequate Water for Discretionary Development Policy WR-1.11: *The County shall require all discretionary development to demonstrate an adequate long-term supply of water.*

Ventura County General Plan Water Use Efficiency for Discretionary Development Policy WR-3.2: *The County shall require the use of water conservation techniques for discretionary development, as appropriate. Such techniques include low-flow plumbing fixtures in new construction that meet or exceed the California Plumbing Code, use of graywater or reclaimed water for landscaping, retention of stormwater runoff for direct use and/or groundwater recharge, and landscape water efficiency standards that meet or exceed the standards in the California Model Water Efficiency Landscape Ordinance.*

Staff Analysis: Casitas Municipal Water District (CMWD) will provide potable water service (Letter dated April 29, 2024) and wastewater disposal will be provided by an onsite wastewater treatment system (OWTS) that includes a Biomicrobics Microfast 0.5 Advanced Treatment Unit inside the OWTS. The proposed project will be required to meet the standards of the California Plumbing Code and California Building Code. These standards include requirements for water conservation, low flow plumbing fixtures, and efficient appliances.

Direct access to the project site would be provided by an onsite driveway adjacent to Oxnard Avenue, which the Ventura County Fire Protection District (VCFPD) determined meets current VCFPD standards for access. US Route 101 is approximately 268 feet southwest of the project site and will not be adversely impacted by the proposed project. The project site is located approximately 2.5 miles northwest of the nearest fire station, Station No. 25, addressed at 5674 W. Pacific Coast Highway in the unincorporated area of Ventura. The area in which the project site is located is currently served with electrical, gas, and communications facilities. The proposed construction of a single-family dwelling will require an extension of utilities, however, there are no utilities that would be disrupted or rerouted to accommodate future development.

Carpinteria Branch Library located at 5141 Carpinteria Ave, Carpinteria, CA 93013 is about 5.3 miles northwest of the project site. Based on this distance, the construction and use of the single-family dwelling does not have the potential to interfere with the use of the library.

The nearest school, Aliso Elementary School, located at 4545 Carpinteria Avenue, Carpinteria, CA 93013, is approximately 6.6 miles northeast of the project site. Cate School, located at 1960 Cate Mesa Road in the city of Carpinteria, is approximately 7.6 miles north of the project site. Based on these distances, the construction and use of the single-family dwelling does not have the potential to interfere with the use or population of these schools.

Based upon the above discussion, the proposed project is consistent with Ventura County General Plan Policies PFS-1.7, WR-1.11 and WR-3.2.

Ventura County General Plan Wastewater Connections Requirement Policy PFS-4.1: *The County shall require development to connect to an existing wastewater collection and treatment facility if such facilities are available to serve the development. An onsite wastewater treatment system shall only be approved in areas where connection to a wastewater collection and treatment facility is deemed unavailable.*

Ventura County General Plan Onsite Wastewater Treatment Systems Policy PFS-4.2: *The County may allow the use of onsite wastewater treatment systems that meet the state Water Resources Control Board Onsite Wastewater Treatment System Policy, Ventura County Sewer Policy, Ventura County Building Code, and other applicable County standards and requirements.*

Staff Analysis: The Applicant has proposed to install an OWTS that includes a Biomicrobics Microfast 0.5 Advanced Treatment Unit inside the OWTS, in compliance with state and local regulations related to the design and installation of an OWTS. To determine septic design and feasibility, the Applicant will be required to submit for review and approval a soil / geotechnical report to the Environmental Health Division prior to building permit issuance (Exhibit 5, Condition No. 21). The Noorzay preliminary percolation testing report (Exhibit 6) concluded that with design of the system that includes the installation of seepage pits at a depth of 15 feet, OWTS feasibility would be achieved and would not encroach within the minimum required 10-foot vertical setback from the historic groundwater table.

Based on the discussion above, the proposed project is consistent with Ventura County General Plan Policies PFS-4.1 and PFS-4.2.

Ventura County General Plan Waste Reduction Practices for Discretionary Development Policy PFS-5.9: *The County shall encourage Applicants for discretionary development to employ practices that reduce the quantities of wastes generated and engage in recycling activities to further reduce the volume of waste disposed of in landfills.*

Staff Analysis: Ventura County Ordinance No. 4421 requires all discretionary permit Applicants whose proposed project includes construction and/or demolition activities to reuse, salvage, recycle, or compost a minimum of 65 percent of the solid waste generated by their project. The Integrated Waste Management Division's (IWMD) waste diversion program ensures this 65 percent diversion goal is met prior to Building and Safety Division's issuance certificate of occupancy, consistent with the Ventura County General Plan. The Applicant will be required to address recycling and demolition debris removal during the construction phase of the project (Exhibit 5, Condition Nos. 24 and 25).

Based on the above discussion, the proposed project is consistent with Ventura County General Plan Policy PFS-5.9.

Ventura County General Plan Flood Control and Drainage Facilities Required for Discretionary Development Policy PFS-6.1: *The County shall require discretionary development to provide flood control and drainage facilities, as deemed necessary by the County Public Works Agency and Watershed Protection District. The County shall also require discretionary development to fund improvements to existing flood control facilities necessitated by or required by the development.*

Ventura County General Plan Stormwater Drainage Facilities Policy PFS-6.5: *The County shall require that stormwater drainage facilities are properly designed, sited, constructed, and maintained to efficiently capture and convey runoff for flood protection and groundwater recharge.*

Ventura County General Plan Water Quality Protection for Discretionary Development Policy WR-2.2: *The County shall evaluate the potential for discretionary development to cause deposition and discharge of sediment, debris, waste, and other contaminants into surface runoff, drainage systems, surface water bodies, and groundwater. In addition, the County shall evaluate the potential for discretionary development to limit or otherwise impair later reuse or reclamation of wastewater or stormwater. The County shall require discretionary development to minimize potential deposition and discharge through point source controls, storm water treatment, runoff reduction measures, best management practices, and low impact development.*

Ventura County General Plan Soil Erosion and Pollution Prevention Policy HAZ-4.5: *The County shall require discretionary development be designed to prevent soil erosion and downstream sedimentation and pollution.*

Ventura County General Plan Water Quality Protection for Discretionary Development Policy WR-1.12: *The County shall evaluate the potential for discretionary development to cause deposition and discharge of sediment, debris, waste and other pollutants into surface runoff, drainage systems, surface water bodies, and groundwater. The County shall require discretionary development to*

minimize potential deposition and discharge through point source controls, storm water treatment, runoff reduction measures, best management practices, and low impact development.

Coastal Area Plan Policy 4.2.4-2: *New development shall be sited and designed to minimize risks to life and property in areas of high geologic, flood, and fire hazards.*

Coastal Area Plan Policy 4.2.4-3: *All new development will be evaluated for its impacts to, and from, geologic hazards (including seismics safety, landslides, expansive soils, subsidence, etc.), flood hazards, and fire hazards. Feasible mitigation measures shall be required where necessary.*

Coastal Area Plan Policy 4.2.4-6: *New development shall be sited and designed so as not to cause or contribute to flood hazards, or lead to the expenditure of public funds for flood control works.*

California Coastal Act Policy Section 30253: *New development shall do all of the following: (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard. (b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.*

Staff Analysis: The proposed OWTS will be setback more than 400 feet northeast from the coastline and 800 feet northwest from the closest groundwater well (State Well Number (SWN) 03N25W12A01S). With the installation of the Advanced Treatment Unit with seepage pits at a depth of 15 feet and adherence to the minimum required 10-foot setback from the historic groundwater table, the proposed system design would meet the necessary absorption criteria (Exhibit 6). As a result, the proposed project will not cause the quality of groundwater to fail to meet the groundwater quality objectives set by the Basin Plan.

The proposed single-family dwelling will create new impervious surfacing and alter drainage patterns. New impervious area will be less than one acre. As part of the required Ventura Countywide Municipal Stormwater National Pollutant Discharge Elimination System (NPDES) Permit, the Applicant must include Best Management Practices (BMPs) designed to ensure compliance and implementation of an effective combination of erosion and sediment control measures (Exhibit 5, Condition No. 27). The Applicant will be required to divert runoff from the site to Oxnard Avenue that does not exceed the undeveloped flow rate and in a way that will not cause an adverse impact downstream in peak velocity or duration.

The proposed project will be required to meet the standards of the California Plumbing Code and California Building Code. These standards include requirements for water conservation, low flow plumbing fixtures, and efficient appliances.

According to the Federal Emergency Management Agency (FEMA) Map, Panel 06111C0702F effective January 29, 2021, the project site is located within an area of minimal flood hazard Zone X unshaded. However, the project site is outside the 100- year and 500-year floodplain (RMA GIS, 2024). As proposed, there would not be an increase in flooding hazard or potential for erosion or siltation because the project site is outside the mapped 100 and 500-year floodplain.

The site is in an area of potential, seismically induced, liquefaction susceptibility, however the liquefaction risk of the site is low (Exhibit 7). The site is located within a Geologic Hazard Area for landslides and mudslides (RMA GIS, 2024). The site has been evaluated as part of a State of California funded study[1] pertaining to the La Conchita Landslide area and adjoining community. The results of these studies indicate the site is outside of the 1995/2005 landslide areas and within potential or prehistoric debris flow areas. Furthermore, the October 2023 Geotechnical Report prepared for the proposed project indicates the site is not within a prehistoric or historic debris flow area, but the site may be subject to up to 2 feet of outwash debris from a design level event. To mitigate for debris flow risk that currently exists in the La Conchita area, the proposed development has been designed so that the pad elevation for the dwelling, garage and carport will be raised by two feet and utilize an engineered impact wall at least 2 feet in height on the slope facing the northeast side of the property (Exhibit 7).

Based on the discussion above, the proposed project is consistent with Ventura County General Plan Policies PFS-6.1, PFS-6.5, WR-2.2, WR-1.12, HAZ-4.5, Coastal Area Plan Policies 4.2.4.2, 4.2.4.3, 4.2.4.6 and Coastal Act Policy 30253.

4. Conservation and Open Space

Ventura County General Plan Protection of Sensitive Biological Resources Policy COS-1.1: *The County shall ensure that discretionary development that could potentially impact sensitive biological resources be evaluated by a qualified biologist to assess impacts and, if necessary, develop mitigation measures that fully account for the impacted resource. When feasible, mitigation measures should adhere to the following priority: avoid impacts, minimize impacts, and compensate for impacts. If the impacts cannot be reduced to a less than significant level, findings of overriding considerations must be made by the decision-making body.*

[1] William Lettis and Associates, dated August 28, 2009, and Alan Kropp and Associates, dated September 4, 2009

Ventura County General Plan Agency Consultation Regarding Biological Resources Policy COS-1.9: *The County shall consult with the California Department of Fish and Wildlife, the LARWQCB, the U.S. Fish and Wildlife Service, National Audubon Society, California Native Plant Society, National Park Service for development in the Santa Monica Mountains or Oak Park Area, and other resource management agencies, as applicable during the review of discretionary development applications to ensure that impacts to biological resources, including rare, threatened, or endangered species, are avoided or minimized.*

Coastal Area Plan Policy 1.4.10(2): *All projects on land either in a stream or creek corridor or within 100 feet of such corridor, shall be sited and designed to prevent impacts which would significantly degrade riparian habitats, and shall be compatible with the continuance of such habitats.*

California Coastal Act Policy Section 30231: *"The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference of ground water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams."*

California Coastal Act Policy Section 30240:

a) *Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.*
b) *Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas and shall be compatible with the continuance of such habitat areas.*

Staff Analysis: The proposed construction of the single-family dwelling will occur in an area that is residentially developed, densely populated and highly disturbed area. Vegetation onsite includes non-native grass and weeds and barren dirt areas. The community of La Conchita includes *Salvia mellifera-Salvia leucophylla* Vegetation Alliance, which is considered Environmentally Sensitive Habitat Areas (ESHA) (RMA GIS, 2024), However historical aerial photos show that the previous vegetation alliance was cleared as early as 1945 with the construction of the residential lots. The vegetation map was not corrected to omit existing development at the time of its creation.

No impacts to sensitive plants or animal species are expected. The proposed development will not construct or create barriers that impede fish and/or wildlife

movement, foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction. This is because the nearest mapped wildlife corridor is more than 7.0 miles northeast of the project site along the western side of State Route 33 between Ojai and Ventura (RMA GIS, 2024). Landscaping is proposed by the Applicant, but according to the site plans (Exhibit 3) it would include less than 500 sq. ft. and not subject to the State of California Water Efficient Landscape Ordinance (WELO) guidelines, based on the size of the project site in relation to the proposed development. The Applicant will be required to provide a conceptual landscape plan that includes drought tolerant native plant species prior to the issuance of the Zoning Clearance for construction (Exhibit 5, Condition No. 17).

Based on the discussion above, the proposed project is consistent with Ventura County General Plan Resources Policies COS-1.1, COS-1.9, Coastal Area Plan Policies 1.4.10(2), Coastal Act Policy Sections 30231 and 30240.

5. Cultural Resources

Ventura County General Plan Cooperation for Cultural, Historical, Paleontological, and Archaeological Resource Preservation Policy COS 4.2(a): *The County shall cooperate with cities, special districts, appropriate organizations and private landowners to identify known cultural, archaeological, historical, and paleontological resources to preserve identified resources within the county.*

Ventura County General Plan Cooperation for Tribal Cultural Resource Preservation Policy COS-4.2(b): *For discretionary projects, the County shall request local tribes contact information from Native American Heritage Commission, to identify known tribal cultural resources. If requested by one or more of the identified local tribes, the County shall engage in consultation with each local tribe to preserve, and determine appropriate handling of, identified resources within the county.*

Ventura County General Plan Discretionary Development and Tribal, Cultural, Historical, Paleontological, and Archaeological Resource Preservation Policy COS-4.4: *The County shall require that all discretionary development projects be assessed for potential tribal, cultural, historical, paleontological, and archaeological resources by a qualified professional and shall be designed to protect existing resources. Whenever possible, significant impacts shall be reduced to a less-than significant level through the application of mitigation and/or extraction of maximum recoverable data. Priority shall be given to measures that avoid resources.*

California Coastal Area Plan Archaeology Policy 4.1.1(1): *Discretionary development shall be reviewed to identify potential locations for sensitive archaeological resources.*

California Coastal Area Plan Archaeology Policy 4.1.1(2): *New development shall be sited and designed to avoid adverse impacts to archaeological resources to the maximum extent feasible. If there is no feasible alternative that can eliminate all impacts to archaeological resources, then the alternative that would result in the fewest or least significant impacts to resources shall be selected. Impacts to archaeological resources that cannot be avoided through siting and design alternatives shall be mitigated. When impacts to archaeological resources cannot be avoided, mitigation shall be required and shall be Last Certified 7-1-2017 Goals. Policies and Programs - 4-3 designed in accordance with established federal, state and/or County standards and shall be consistent with the policies and provisions of the LCP.*

California Coastal Area Plan Archaeology Policy 4.1.1(3):: *Archaeological, historical, and ethnobotanical interpretation of native peoples in Ventura County should be incorporated into existing and future interpretive programs at public recreation areas.*

California Coastal Area Plan Archaeology Policy 4.1.1(4): *Location of all coastal zone archaeological sites will be kept confidential to avert disturbance or destruction.*

California Coastal Area Plan Archaeology Policy 4.1.1(5): *Native American tribal groups approved by the Native American Heritage Commission for the area shall be consulted when development has the potential to adversely impact archeological resources.*

California Coastal Area Plan Archaeology Policy 4.1.1(6): *Protect and preserve archaeological resources from destruction and avoid impacts to such resources where feasible.*

California Coastal Act Policy Section 30244: *Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.*

Staff Analysis: The project site is underlain by paralic deposits of the Pico Formation (Exhibit 7), which is considered to have a moderate likelihood of containing paleontological resources. (Ventura County Initial Study Assessment Guidelines, 2011). Grading activities to construct the foundation for the single-family dwelling and garage is not expected to go beyond one and a half feet (Exhibit 7). It is unlikely that the proposed construction of the single-family dwelling will encounter and have an adverse impact to paleontological resources. However should paleontological resources be discovered onsite during ground disturbance, the Applicant will be required to: (1) stop all work that has the potential to adversely affect paleontological resources; (2) retain a paleontologist or geologist to assess the significance of the find and provide recommendations on the disposition of the resources; and (3)

implement any and all measures to protect and curate the resources, subject to the Planning Division's approval (Exhibit 5, Condition No. 19).

The archeological sensitivity of the project site is unknown (RMA GIS, 2024). On May 28, 2024, The Planning Division contacted the South-Central Coastal Information Center (SCCIC), which is the local repository for the California Historical Resources Information System (CHRIS), and conducted an archeological resources review of the project site. On October 17, 2024, SCCIC concluded that although the archeological sensitivity is unknown, the project site has been cleared of surface vegetation and graded. As such, no archeological work is required. Although the proposed project is not likely to result in impacts to cultural resources, a standard condition of approval will be included with the project conditions that will require the Applicant to: (1) stop all work that has the potential to adversely affect cultural resources; (2) retain an archeologist to assess the significance of the find and provide recommendations on the disposition of the resources; and (3) implement any and all measures to protect and curate the resources, subject to the Planning Division's approval (Exhibit 5, Condition No. 20).

Based on the discussion above, the proposed project is consistent with Ventura County General Plan Policies COS-4.2(a), COS-4.2(b), COS-4.4, Coastal Area Plan Policies 4.1.1(1) through 4.1.1(6), and Coastal Act Policy 30244.

6. Hazards and Safety

Ventura County General Plan Projects in Earthquake Fault Zones Policy HAZ-4.1: *The County shall prohibit new structures for human occupancy and subdivisions that contemplate the eventual construction of structures for human occupancy in Earthquake Fault Zones unless a geologic investigation is performed to delineate any hazard of surface fault rupture and appropriate and sufficient safeguards, based on this investigation, are incorporated into the project design.*

Ventura County General Plan Structural Design Policy HAZ-4.3: *The County shall require that all structures designed for human occupancy incorporate engineering measures to reduce the risk of and mitigate against collapse from ground shaking.*

California Coastal Act Section 30253(a) and (b): *New development shall do all of the following: (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard. (b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.*

California Coastal Area Plan, North Coast Hazards Policy 2: *New development shall be sited and designed to minimize risks to life and property in areas of high geologic, flood, and fire hazards.*

California Coastal Area Plan, North Coast Hazards Policy 3: *All new development will be evaluated for its impacts to, and from, geologic hazards (including seismic safety, landslides, expansive soils, subsidence, etc.), flood hazards, and fire hazards. Feasible mitigation measures shall be required where necessary.*

Staff Analysis: The nearest fault is approximately 882 feet north of the project site and not located within 50 feet of the Alquist-Priolo Special Fault Hazard Area. The site will be subject to strong ground shaking caused by regionally active faults (RMA GIS, 2024). The construction of a new single-family dwelling would neither create nor contribute significantly to geologic instability or destruction of the site or surrounding areas. The proposed project has been designed in compliance with the 2022 California Building Code, which ensures stability and structural integrity. Compliance with the Building Code will also ensure that risks from seismic events or liquefaction are minimized.

Based on the above discussion, the proposed project is consistent with *Ventura County General Plan* Hazards and Safety Policies HAZ-4.1 and HAZ-4.3, Coastal Act Sections 30253(a) and (b), and Coastal Area Plan, North Coast Hazards Policies 2 and 3.

Ventura County General Plan Emergency Response Policy PFS-11.1: *The County shall maintain adequate staffing, equipment, and facilities to provide timely and effective responses to emergencies.*

Ventura County General Plan Emergency Vehicles Access Policy PFS-11.4: *The County shall require all discretionary development to provide, and existing development to maintain, adequate access for emergency vehicles, including two points of access for subdivisions and multifamily developments.*

Ventura County General Plan Adequate Water Supply, Access, and Response Times for Firefighting Purposes Policy PFS-12.3: *The County shall prohibit discretionary development in areas that lack and cannot provide adequate water supplies, access, and response times for firefighting purposes*

Ventura County General Plan Consistent Fire Protection Standards for New Development Policy PFS-12.4: *The County, in coordination with local water agencies and the Fire Protection District, shall require new discretionary development to comply with applicable standards for fire flows and fire protection.*

Ventura County General Plan Fire Prevention Design and Practices Policy HAZ-1.1: *The County shall continue to require development to incorporate design measures that enhance fire protection in areas of high fire risk. This shall include but is not limited to incorporation of fire-resistant structural design, use of fire-resistant landscaping, and fuel modification around the perimeter of structures.*

Ventura County General Plan Development in High Fire Hazard Severity Zones and Hazardous Fire Areas Policy HAZ-1.4: *The County shall require the recordation of a Notice of Fire Hazard with the County Recorder for all new discretionary entitlements (including subdivisions and land use permits) within areas designated as Hazardous Fire Areas by the Ventura County Fire Department or High Fire Hazard Severity Zones by the California Department of Forestry and Fire Protection.*

Staff Analysis: The project site is located within a very high fire hazard area and is under the jurisdiction of the California Department of Forestry and Fire Protection (CalFire). The Applicant will be required to record the project conditions of approval with the Ventura County Recorder, which will provide notice to the public that the project site is located within a very high fire hazard area (Exhibit 5, Condition No. 10). To ensure that fire hazard impacts are maintained at a less than significant level, the Applicant will be subject to standard conditions of approval which will ensure that all structures are constructed to meet hazardous fire area building code requirements for fire prevention. These include:

- Verification from CMWD that a minimum fire flow of 1,000 gallons per minute at 20 pounds per square inch (psi) for a 2-hour duration is available at the project site, (Exhibit 5, Condition No. 30).

- Installation of sprinklers in the proposed single-family dwelling and hydrants within 500 feet of the project site (Exhibit 5, Condition No. 31).

- Annual fire hazard abatement within 100 feet of the single-family dwelling and 10 feet on each side of the driveway (Exhibit 5, Condition No. 34).

VCFPD evaluated the proposed project and determined that access to the project site from Oxnard Avenue is adequate. The response time for firefighting personnel is also adequate as the project site is located about 2.5 miles northwest of Fire Station No. 25.

Based on the discussion above, the proposed project is consistent with Ventura County General Plan Policies PFS-11.1, PFS-11.4, PFS-12.3, PFS-12.4, HAZ-1.1 and HAZ-1.4.

Ventura County General Plan Noise Compatibility Standards Policy HAZ-9.2: *The County shall review discretionary development for noise compatibility with*

surrounding uses. The County shall determine noise based on the following standards:

1. *New noise sensitive uses proposed to be located near highways, truck routes, heavy industrial activities and other relatively continuous noise sources shall incorporate noise control measures so that indoor noise levels in habitable rooms do not exceed Community Noise Equivalent Level (CNEL) 45 and outdoor noise levels do not exceed CNEL 60 or Leq1H of 65 dB(A) during any hour.*
2. *New noise sensitive uses proposed to be located near railroads shall incorporate noise control measures so that indoor noise levels in habitable rooms do not exceed Community Noise Equivalent Level (CNEL) 45 and outdoor noise levels do not exceed L10 of 60 dB(A)*
3. *New noise sensitive uses proposed to be located near airports:*
   a. *Shall be prohibited if they are in a Community Noise Equivalent Level (CNEL) 65 dB or greater, noise contour; or*
   b. *Shall be permitted in the Community Noise Equivalent Level (CNEL) 60 dB to CNEL 65 dB noise contour area only if means will be taken to ensure interior noise levels of CNEL 45 dB or less.*
4. *New noise generators, proposed to be located near any noise sensitive use, shall incorporate noise control measures so that ongoing outdoor noise levels received by the noise sensitive receptor, measured at the exterior wall of the building, does not exceed any of the following standards:*
   a. *Leq1H of 55dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour from 6:00 a.m. to 7:00 p.m.;*
   b. *Leq1H of 50dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour from 7:00 p.m. to 10:00 p.m.; and*
   c. *Leq1H of 45dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour from 10:00 p.m. to 6:00 a.m.*
5. *Construction noise and vibration shall be evaluated and, if necessary, mitigated in accordance with the Construction Noise Threshold Criteria and Control Plan (Advanced Engineering Acoustics, November 2005).*

Staff Analysis: The proposed single-family dwelling qualifies as a noise-sensitive land use. The western portion of the project site is within the CNEL 70dB(A) noise contour (RMA GIS, 2023). The noise that will be experienced at the project site will largely result from traffic on US Route 101, which is located approximately 268 feet west of the project site, and the Southern Pacific Railroad line that is located approximately 227 feet west of the project site. The location of the dwelling would be surrounded by existing single-family dwellings that will act to muffle outdoor noise levels in compliance with Ventura County General Plan noise policy limits.

To ensure interior noise levels comply with Ventura County General Plan noise policy limits, construction techniques, such as installation of noise reducing drywall to minimize sound transmission will be conducted to ensure that internal spaces comply with Ventura County General Plan Policy HAZ-9.2(5). While the proposed

single-family dwelling is not considered a noise generating use, temporary construction noise will be generated during the development phase of the proposed project. Temporary construction activities required to develop the project site are not likely to require pile-driving, vibratory compaction, demolition, drilling, or other similar types of vibration-generating activities. The Applicant will be subject to a standard condition of approval that will limit site preparation and construction activities to the hours between 7:00 a.m. and 7:00 p.m., Monday through Friday, and from 9:00 a.m. to 7:00 p.m. Saturday, Sunday, and State holidays. Construction equipment maintenance shall be limited to the same hours (Exhibit 5, Condition No. 18).

Based on the above discussion, the proposed project is consistent with Ventura County General Plan Hazards and Safety Policy HAZ-9.2.

Ventura County General Plan Air Quality Management Plan Consistency Policy HAZ-10.2: *The County shall prohibit discretionary development that is inconsistent with the most recent adopted Air Quality Management Plan (AQMP), unless the Board of Supervisors adopts a statement of overriding considerations.*

Ventura County General Plan Air Quality Assessment Guidelines Policy HAZ-10.11: *In evaluating air quality impacts, the County shall consider total emissions from both stationary and mobile sources, as required by the California Environmental Quality Act. The County shall evaluate discretionary development for air quality impacts using the Air Quality Assessment Guidelines as adopted by the Ventura County Air Pollution Control District (APCD), except that emissions from APCD-permitted sources shall also be included in the analysis. The County shall revise the Initial Study Assessment Guides to implement this policy.*

Ventura County General Plan Conditions for Air Quality Impacts Policy HAZ-10.12: *The County shall require that discretionary development that would have a significant adverse air quality impact shall only be approved if it is conditioned with all feasible mitigation measures to avoid, minimize or compensate (offset) for the air quality impact. The use of innovative methods and technologies to minimize air pollution impacts shall be encourage in project design.*

Ventura County General Plan Fugitive Dust Best Management Practices Policy HAZ-10.14: *The County shall ensure that discretionary development which will generate fugitive dust emissions during construction activities will, to the extent feasible, incorporate appropriate BMPs to reduce emissions to be less than applicable thresholds.*

Staff Analysis: VCAPCD has determined that the project would have less than significant impact to air quality. Approximately 0.06 lbs./day Reactive Organic Compounds (ROC) and 0.03 lbs./day Nitrous Oxide (NOx) will be emitted as a result of the proposed project. This is below the 25 pounds per day significance threshold of ROC and NOx for the Ventura Non-Growth Area (VCAPCD Memorandum, dated

June 10, 2024). The project's operational emissions were estimated at below 2 lbs./day for ROC or NOx, and therefore the AQMP consistency analysis is not warranted (2003 AQAG, Section 4.2), as the proposed project will not adversely contribute to the population growth forecasts and does not conflict or obstruct with implementation of the current AQMP standards. Additionally, the project will be subject to a standard condition of approval relating to construction best practices and fugitive dust control (Exhibit 5, Conditions 28).

Based on the discussion above, the proposed project is consistent with Ventura County General Plan Resources Policies HAZ-10.2, HAZ-10.11, HAZ-10.12 and HAZ-10.14.

EXHIBIT 5 - DRAFT CONDITIONS OF APPROVAL FOR COASTAL PLANNED DEVELOPMENT PERMIT CASE NO. PL24-0058

RESOURCE MANAGEMENT AGENCY (RMA)
Planning Division Conditions

1. Project Description

This Planned Development (PD) Permit is based on and limited to compliance with the project description stated in this condition below, Exhibit 3 of the Planning Director hearing on May 22, 2025, and conditions of approval set forth below. Together, these conditions and documents describe the "Project." Any deviations from the Project must first be reviewed and approved by the County to determine if the Project deviations conform to the Project as approved. Project deviations may require Planning Director approval for changes to the permit or further California Environmental Quality Act (CEQA) environmental review, or both. Any Project deviation that is implemented without requisite County review and approval(s) may constitute a violation of the conditions of this permit and applicable law.

The Project description is as follows:

The Permittee requests a PD Permit be granted for the construction of a new 1,919 square foot (sq. ft.) single-family dwelling on an undeveloped lot in the community of La Conchita. The first floor will include living space, a garage, carport and covered porch (997, sq. ft.). The second floor will include living space and a deck (1,065 sq. ft.) and the third floor will include a loft and balcony (588 sq. ft.). Casitas Municipal Water District (CMWD) will provide potable water service and wastewater disposal will be provided by an onsite wastewater treatment system (OWTS) with advanced treatment. To mitigate for debris flow risk that currently exists in the La Conchita area, the proposed development has been designed so that the pad elevation for the dwelling and garage is raised by two feet and utilizes an engineered impact wall at least 2 feet in height on the slope facing the northeast side of the property. Access to the project site is made available from a driveway adjacent to Oxnard Avenue (Exhibit 3).

The grading, development, use, and maintenance of the property, the size, shape, arrangement, and location of structures, parking areas and landscape areas, shall conform to the project description above and all approved County land use hearing exhibits in support of the Project and conditions of approval below.

2. Required Improvements for PD

Purpose: To ensure the project site conforms to the plans approved at the Planning Director hearing in support of the project.

Requirement: The Permittee shall ensure that all required off-site and on-site improvements for the Project, including structures, paving, parking, and landscaping are

completed in conformance with the approved plans stamped as hearing exhibit 3. The Permittee shall prepare and submit all final building and site plans for the County's review and approval in accordance with the approved plans.

Documentation: The Permittee shall obtain Planning Division staff's stamped approval on the project plans and submit them to the County for inclusion in the Project file. The Permittee shall submit additional plans to the Planning Division for review and stamped approval (e.g., tree protection and landscape plans) for inclusion in the Project file, as necessary.

Timing: Prior to the issuance of a Zoning Clearance for construction, the Permittee shall submit all final development plans to the Planning Division for review and approval. Unless the Planning Director and/or Public Works Agency Director allow the Permittee to provide financial security and a final executed agreement, approved as to form by the County Counsel, that ensures completion of such improvements, the Permittee shall complete all required improvements prior to occupancy. The Permittee shall maintain the required improvements for the life of the Project.

Monitoring and Reporting: The County Building Inspector, Public Works Agency Grading Inspector, Fire Marshall, and/or Planning Division staff has the authority to conduct periodic site inspections to ensure the Permittee's ongoing compliance with this condition consistent with the requirements of § 8183-5 of the Ventura County Coastal Zoning Ordinance.

3. Site Maintenance

Purpose: To ensure that the Project site is maintained in a neat and orderly manner so as not to create any hazardous conditions or unsightly conditions which are visible from outside of the Project site.

Requirement: The Permittee shall maintain the Project site in a neat and orderly manner, and in compliance with the Project description set forth in Condition No. 1. Only equipment and/or materials which the Planning Director determines to substantially comply with the Project description shall be stored within the Project site during the life of the Project.

Documentation: The Permittee shall maintain the Project site in compliance with Condition No. 1 and the approved plans for the Project.

Timing: The Permittee shall maintain the Project site in a neat and orderly manner and in compliance with Condition No. 1 throughout the life of the Project.

Monitoring and Reporting: The County Building Inspector, Public Works Agency Grading Inspector, Fire Marshall, and/or Planning Division staff has the authority to conduct periodic site inspections to ensure the Permittee's ongoing compliance with this condition consistent with the requirements of § 8183-5 of the Ventura County Coastal Zoning Ordinance.

4. PD Modification

Prior to undertaking any operational or construction-related activity which is not expressly described in these conditions, the Permittee shall first contact the Planning Director to determine if the proposed activity requires a modification of this PD. The Planning Director may, at the Planning Director's sole discretion, require the Permittee to file a written and/or mapped description of the proposed activity in order to determine if a PD modification is required. If a PD modification is required, the modification shall be subject to:

a. The modification approval standards of the Ventura County Ordinance Code in effect at the time the modification application is acted on by the Planning Director; and

b. Environmental review, as required pursuant to the California Environmental Quality Act (CEQA; California Public Resources Code, §§ 21000-21178) and the State CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, §§ 15000-15387), as amended from time to time.

5. Construction Activities

Prior to any construction, the Permittee shall obtain a Zoning Clearance for construction from the Planning Division, and a Building Permit from the Building and Safety Division. Prior to any grading, the Permittee shall obtain a Grading Permit from the Public Works Agency.

6. Acceptance of Conditions and Schedule of Enforcement Responses

The Permittee's acceptance of this PD Permit and/or commencement of construction and/or operations under this PD Permit shall constitute the Permittee's formal agreement to comply with all conditions of this PD Permit. Failure to abide by and comply with any condition of this PD Permit shall constitute grounds for enforcement action provided in the Ventura County Coastal Zoning Ordinance (Article 13), which shall include, but is not limited to, the following:

a. Public reporting of violations to the Planning Commission and/or Board of Supervisors;
b. Suspension of the permitted land uses (Condition No. 1);
c. Modification of the PD Permit conditions listed herein;
d. Recordation of a "Notice of Noncompliance" on the deed to the subject property;
e. The imposition of civil administrative penalties; and/or
f. Revocation of this PD Permit.

The Permittee is responsible for being aware of and complying with the PD Permit conditions and all applicable federal, state, and local laws and regulations.

7. Time Limits
   a. Use inauguration:

      (1) The approval decision for this PD Permit becomes effective upon the expiration of the 10-day appeal period following the approval decision, or when any appeals of the decision are finally resolved. Once the approval decision becomes effective, the Permittee must obtain a Zoning Clearance for construction to initiate the land uses set forth in Condition No. 1.

      (2) This PD Permit shall expire and become null and void if the Permittee fails to obtain a Zoning Clearance for construction within one year from the date the approval decision of this PD becomes effective (see Ventura County Coastal Zoning Ordinance § 8181-7.7). The Planning Director may grant a one-year extension of time to the Permittee in order to obtain the Zoning Clearance for construction if the Permittee can demonstrate to the satisfaction of the Planning Director that the Permittee has made a diligent effort to implement the Project, and the Permittee has requested the time extension in writing at least 30 days prior to the one year expiration date.

      (3) Prior to the issuance of the Zoning Clearance for construction, all fees and charges billed to that date by any County agency, as well as any fines, penalties, and sureties, must be paid in full. After issuance of the Zoning Clearance for construction, any final billed processing fees must be paid within 30 days of the billing date, or the County may revoke this PD Permit.

8. Documentation Verifying Compliance with Other Agencies' Requirements Related to this PD Permit

Purpose: To ensure compliance with, and notification of, federal, state, and/or local government regulatory agencies that have requirements that pertain to the Project (Condition No. 1, above) that is the subject of this PD Permit.

Requirement: Upon the request of the Planning Director, the Permittee shall provide the Planning Division with documentation (e.g., copies of permits or agreements from other agencies, which are required pursuant to a condition of this PD Permit) to verify that the Permittee has obtained or satisfied all applicable federal, state, and local entitlements and conditions that pertain to the Project.

Documentation: The Permittee shall provide this documentation to Planning Division staff in the form that is acceptable to the agency issuing the entitlement or clearance, to be included in the Planning Division Project file.

Timing: The documentation shall be submitted to the Planning Division prior to the issuance of the Zoning Clearance for construction.

Monitoring and Reporting: The Planning Division maintains the documentation provided by the Permittee in the respective Project file. In the event that the federal, state, or local government regulatory agency prepares new documentation due to changes in the Project or the other agency's requirements, the Permittee shall submit the new documentation within 30 days of receipt of the documentation from the other agency.

9. Notice of PD Permit Requirements and Retention of PD Permit Conditions On Site

Purpose: To ensure full and proper notice of these PD Permit conditions affecting the use of the subject property.

Requirement: Unless otherwise required by the Planning Director, the Permittee shall notify, in writing, the Property Owner(s) of record, contractors, and all other parties and vendors who regularly conduct activities associated with the Project, of the pertinent conditions of this PD Permit.

Documentation: The Permittee shall present to the Planning Division staff copies of the conditions, upon Planning Division staff's request.

Timing: Prior to issuance of a Zoning Clearance for construction and throughout the life of the Project.

Monitoring and Reporting: The Planning Division has the authority to conduct periodic site inspections to ensure ongoing compliance with this condition consistent with the requirements of § 8183-5 of the Ventura County Coastal Zoning Ordinance.

10. Recorded Notice of Land Use Entitlement

Purpose: The Permittee shall record a "Notice of Land Use Entitlement" form and the conditions of this PD Permit with the deed for the subject property that notifies the current and future Property Owner(s) of the conditions of this PD Permit.

Requirement: The Permittee shall sign, have notarized, and record with the Office of the County Recorder, a wet signed "Notice of Land Use Entitlement" form furnished by the Planning Division and the conditions of this PD Permit, with the deed of the property that is subject to this PD Permit.

Documentation: Recorded "Notice of Land Use Entitlement" form and conditions of this PD Permit.

Timing: The Permittee shall record the "Notice of Land use Entitlement" form and conditions of this PD Permit prior to issuance of a Zoning Clearance for construction.

Monitoring and Reporting: The Permittee shall return a copy of the recorded "Notice of Land Use Entitlement" form and conditions of this PD Permit to Planning Division staff to be included in the Project file.

11. Financial Responsibility for Compliance Monitoring and Enforcement

    a. Cost Responsibilities: The Permittee shall bear the full costs of all County staff time, materials, and County-retained consultants associated with condition compliance review and monitoring, CEQA mitigation monitoring, other permit monitoring programs, and enforcement activities, actions, and processes conducted pursuant to the Ventura County Coastal Zoning Ordinance (§ 8183-5) related to this PD Permit. Such condition compliance review, monitoring and enforcement activities may include (but are not limited to): periodic site inspections; preparation, review, and approval of studies and reports; review of permit conditions and related records; enforcement hearings and processes; drafting and implementing compliance agreements; and attending to the modification, suspension, or revocation of permits. Costs will be billed at the rates set forth in the Planning Division or other applicable County Fee Schedule, and at the contract rates of County-retained consultants, in effect at the time the costs are incurred.

    b. Billing Process: The Permittee shall pay all Planning Division invoices within 30 days of receipt thereof. Failure to timely pay an invoice shall subject the Permittee to late fees and charges set forth in the Planning Division Fee Schedule, and shall be grounds for suspension, modification, or revocation of this PD Permit. The Permittee shall have the right to challenge any charge or penalty prior to payment.

12. Defense and Indemnification

    a. The Permittee shall defend, at the Permittee's sole expense with legal counsel acceptable to the County, against any and all claims, actions, or proceedings against the County, any other public agency with a governing body consisting of the members of the County Board of Supervisors, or any of their respective board members, officials, employees and agents (collectively, “Indemnified Parties”) arising out of or in any way related to the County’s issuance, administration, or enforcement of this PD Permit. The County shall promptly notify the Permittee of any such claim, action or proceeding and shall cooperate fully in the defense.

    b. The Permittee shall also indemnify and hold harmless the Indemnified Parties from and against any and all losses, damages, awards, fines, expenses, penalties, judgments, settlements, or liabilities of whatever nature, including but not limited to court costs and attorney fees (collectively, “Liabilities”), arising out of or in any way related to any claim, action or proceeding subject to subpart (a) above, regardless of how a court apportions any such Liabilities as between the Permittee, the County, and/or third parties.

    c. Except with respect to claims, actions, proceedings, and Liabilities resulting from an Indemnified Party’s sole active negligence or intentional misconduct, the

Permittee shall also indemnify, defend (at Permittee's sole expense with legal counsel acceptable to County), and hold harmless the Indemnified Parties from and against any and all claims, actions, proceedings, and Liabilities arising out of, or in any way related to, the construction, maintenance, land use, or operations conducted pursuant to this PD Permit, regardless of how a court apportions any such Liabilities as between the Permittee, the County, and/or third parties. The County shall promptly notify the Permittee of any such claim, action, or proceeding and shall cooperate fully in the defense.

d. Neither the issuance of this PD Permit, nor compliance with the conditions hereof, shall relieve the Permittee from any responsibility otherwise imposed by law for damage to persons or property; nor shall the issuance of this PD Permit serve to impose any liability upon the Indemnified Parties for injury or damage to persons or property.

13. Invalidation of Condition(s)

If any of the conditions or limitations of this PD Permit are held to be invalid in whole or in part by a court of competent jurisdiction, that holding shall not invalidate any of the remaining PD Permit conditions or limitations. In the event that any condition imposing a fee, exaction, dedication, or other mitigation measure is challenged by the Permittee in an action filed in a court of competent jurisdiction, or threatened to be filed therein, the Permittee shall be required to fully comply with this PD Permit, including without limitation, by remitting the fee, exaction, dedication, and/or by otherwise performing all mitigation measures being challenged. This PD Permit shall continue in full force unless, until, and only to the extent invalidated by a final, binding judgment issued in such action.

If a court of competent jurisdiction invalidates any condition in whole or in part, and the invalidation would change the findings and/or the mitigation measures associated with the approval of this PD Permit, at the discretion of the Planning Director, the Planning Director may review the project and impose substitute feasible conditions/mitigation measures to adequately address the subject matter of the invalidated condition. The Planning Director shall make the determination of adequacy. If the Planning Director, cannot identify substitute feasible conditions/mitigation measures to replace the invalidated condition, and cannot identify overriding considerations for the significant impacts that are not mitigated to a level of insignificance as a result of the invalidation of the condition, then this PD Permit may be revoked.

14. Consultant Review of Information and Consultant Work

The County and all other County permitting agencies for the Project have the option of referring any and all special studies that these conditions require to an independent and qualified consultant for review and evaluation of issues beyond the expertise or resources of County staff.

Prior to the County engaging any independent consultants or contractors pursuant to the conditions of this PD Permit, the County shall confer in writing with the Permittee

regarding the necessary work to be contracted, as well as the estimated costs of such work. Whenever feasible, the County will use the lowest responsible bidder or proposer. Any decisions made by County staff in reliance on consultant or contractor work may be appealed pursuant to the appeal procedures contained in the Ventura County Zoning Ordinance Code then in effect.

The Permittee may hire private consultants to conduct work required by the County, but only if the consultant and the consultant's proposed scope-of-work are first reviewed and approved by the County. The County retains the right to hire its own consultants to evaluate any work that the Permittee or a contractor of the Permittee undertakes. In accordance with Condition No. 14 above, if the County hires a consultant to review any work undertaken by the Permittee or hires a consultant to review the work undertaken by a contractor of the Permittee, the hiring of the consultant will be at the Permittee's expense.

15. Relationship of PD Permit Conditions, Laws, and Other Entitlements

The Permittee shall implement the Project in compliance with all applicable requirements and enactments of federal, state, and local authorities. In the event of conflict between various requirements, the more restrictive requirements shall apply. In the event the Planning Director determines that any PD Permit condition contained herein conflicts with any other PD Permit condition contained herein, when principles of law do not provide to the contrary, the PD Permit condition most protective of public health and safety and environmental resources shall prevail to the extent feasible.

No condition of this PD Permit for uses allowed by the Ventura County Ordinance Code shall be interpreted as permitting or requiring any violation of law, lawful rules, or regulations, or orders of an authorized governmental agency. Neither the approval of this PD Permit, nor compliance with the conditions of this PD Permit, shall relieve the Permittee from any responsibility otherwise imposed by law for damage to persons or property.

16. Change of Permittee

Purpose: To ensure that the Planning Division is properly and promptly notified of any change of Permittee.

Requirement: The Permittee shall file, as an initial notice with the Planning Director, the new name(s), address(es), telephone, and email addresses of the new owner(s), lessee(s), operator(s) of the permitted uses, and the company officer(s). The Permittee shall provide the Planning Director with a final notice once the transfer of ownership and/or operational control has occurred.

Documentation: The initial notice must be submitted with the new Permittee's contact information. The final notice of transfer must include the effective date and time of the transfer and a letter signed by the new Property Owner(s), lessee(s), and/or operator(s)

of the permitted uses acknowledging and agreeing to comply with all conditions of this PD Permit.

Timing: The Permittee shall provide written notice to the Planning Director 10 calendar days prior to the change of ownership or change of Permittee. The Permittee shall provide the final notice to the Planning Director within 15 calendar days of the effective date of the transfer.

Monitoring and Reporting: The Planning Division maintains notices submitted by the Permittee in the Project file and has the authority to periodically confirm the information consistent with the requirements of § 8183-5 of the Ventura County Coastal Zoning Ordinance.

17. Landscaping
Purpose: To comply with the County's landscaping requirements.

Requirement: The Permittee shall retain a landscape architect to prepare a landscape plan that complies with the requirements of this condition and the California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO).

Landscaping Objectives: The Permittee must install and maintain landscaping that serves the following functions:

a. Ensures compatibility with community character. The Permittee must install landscaping that visually integrates the development with the character of the surrounding community.

b. Retains and treats stormwater. The Permittee must install landscaping that retains and treats stormwater as required pursuant to Condition No. 27 of this PD Permit.

Landscaping Design: The Permittee shall design all landscaping such that the landscaping requires minimal amounts of water and uses required water efficiently, in accordance with the water efficiency requirements of the Landscape Design Criteria and must achieve the following design objectives:

a. Use Available Non-Potable Sources of Water. The landscaping must involve the harvesting and/or use of alternative, non-potable sources of water, including stormwater, reclaimed water, and gray water, if available to the Project site.

b. Species Diversity. The landscape plan must integrate a variety of plant species, heights, colors, and textures, as appropriate given the size of the landscape.

c. Fire Resistance. Plant material installed in the fuel modification zone must be fire resistant.

d. Use Native Plant Species.

Documentation: The Permittee shall submit three sets of a draft landscape plan to the Planning Division for review and approval. A California registered landscape architect (or other qualified individual as approved by the Planning Director) shall prepare the landscape plan, demonstrating compliance with the requirements set forth in this condition (above). The landscape architect responsible for the work shall stamp the plan. After landscape installation, the Permittee shall submit to Planning Division staff a statement from the project landscape architect that the Permittee installed all landscaping as shown on the approved landscape plan. Prior to installation of the landscaping, the Permittee must obtain the Planning Director's approval of any changes to the landscape plans that affect the character or quantity of the plant material or irrigation system design.

Timing: The Permittee shall submit the landscape plan to the Planning Division for review and approval prior to issuance of a Zoning Clearance for construction. Landscaping installation and maintenance activities shall occur according to the timing requirements set forth in Section 8178-8.9.3 of the Coastal Zoning Ordinance.

Monitoring and Reporting: Landscaping shall be maintained for the life of the permit. Landscaping approval/installation and verification shall occur after the Permittee submits the Certificate of Completion for the landscape installation. County staff shall then conduct an onsite inspection to verify that the landscaping was installed as required by the approved landscape plan as set forth Section 8178-8.9.2(a)(2) or the Coastal Zoning Ordinance. Monitoring activities and enforcement activities shall occur according to the procedures set forth in Section 8178-8.9.3 or the Coastal Zoning Ordinance. The Planning Division maintains the landscape plans and statement by the landscape architect in the Project file.

18. Construction Noise

Purpose: In order for this project to comply with the Ventura County General Plan *Goals, Policies and Programs* Noise Policy 2.16.2-1(5) and the County of Ventura Construction Noise Threshold Criteria and Control Plan (Amended 2010).

Requirement: The Permittee shall limit construction activity for site preparation and development to the hours between 7:00 a.m. and 7:00 p.m., Monday through Friday, and from 9:00 a.m. to 7:00 p.m. Saturday, Sunday, and State holidays. Construction equipment maintenance shall be limited to the same hours. Non-noise generating construction activities such as interior painting are not subject to these restrictions.

Documentation: The Permittee shall post a sign stating these restrictions in a conspicuous location on the Project site, in order so that the sign is visible to the general public. The Permittee shall provide photo documentation showing posting of the required signage to the Planning Division, prior to the commencement of grading and construction activities. The sign must provide a telephone number of the site foreman, or other person who controls activities on the jobsite, for use for complaints from the public. The

Permittee shall maintain a "Complaint Log," noting the date, time, complainant's name, complaint, and any corrective action taken, if the Permittee receives noise complaints. The Permittee must submit the "Complaint Log" to the Planning Division upon the Planning Director's request.

Timing: The Permittee shall install the sign prior to the issuance of a building permit and throughout all grading and construction activities. The Permittee shall maintain the signage on-site until all grading and construction activities are complete. If the Planning Director requests the Permittee to submit the "Complaint Log" to the Planning Division, the Permittee shall submit the "Complaint Log" within one day of receiving the Planning Director's request.

Monitoring and Reporting: The Planning Division reviews, and maintains in the Project file, the photo documentation of the sign and the "Complaint Log." The Planning Division has the authority to conduct site inspections and take enforcement actions to ensure that the Permittee conducts grading and construction activities in compliance with this condition, consistent with the requirements of Section 8183-5 of the Ventura County Coastal Zoning Ordinance.

19. Paleontological Resources Discovered During Grading

Purpose: In order to mitigate potential impacts to paleontological resources that may be encountered during ground disturbance or construction activities.

Requirement: If any paleontological remains are uncovered during ground disturbance or construction activities, the Permittee shall:

i. Cease operations and assure the preservation of the area in which the discovery was made;

ii. Notify the Planning Director in writing, within three days of the discovery;

iii. Obtain the services of a paleontological consultant or professional geologist who shall assess the find and provide a report that assesses the resources and sets forth recommendations on the proper disposition of the site;

iv. Obtain the Planning Director's written concurrence with the recommended disposition of the site before resuming development; and

v. Implement the agreed upon recommendations.

Documentation: The Permittee shall submit the paleontologist's or geologist's reports. Additional documentation may be required to demonstrate that the Permittee has implemented the recommendations set forth in the paleontological report.

Timing: If any paleontological remains are uncovered during ground disturbance or construction activities, the Permittee shall provide the written notification to the Planning Director within three days of the discovery. The Permittee shall submit the paleontological report to the Planning Division immediately upon completion of the report.

Monitoring and Reporting: The Permittee shall provide the paleontological report to the Planning Division to be made part of the Project file. The Permittee shall implement any recommendations made in the paleontological report to the satisfaction of the Planning Director. The paleontologist shall monitor all ground disturbance activities within the area in which the discovery was made, to ensure the successful implementation of the recommendations made in the paleontological report. The Planning Division has the authority to conduct site inspections to ensure that the Permittee implements the recommendations set forth in the paleontological report, consistent with the requirements of Section 8183-5 of the Ventura County Coastal Zoning Ordinance.

20. Archaeological Resources Discovered During Grading

Purpose: In order to mitigate potential impacts to archaeological resources discovered during ground disturbance.

Requirement: The Permittee shall implement the following procedures:

i. If any archaeological or historical artifacts are uncovered during ground disturbance or construction activities, the Permittee shall:

   1. Cease operations and assure the preservation of the area in which the discovery was made;

   2. Notify the Planning Director in writing, within three days of the discovery;

   3. Obtain the services of a County-approved archaeologist who shall assess the find and provide recommendations on the proper disposition of the site in a written report format;

   4. Obtain the Planning Director's written concurrence of the recommended disposition of the site before resuming development; and

   5. Implement the agreed upon recommendations.

ii. If any human burial remains are encountered during ground disturbance or construction activities, the Permittee shall:

   1. Cease operations and assure the preservation of the area in which the discovery was made;

   2. Immediately notify the County Coroner and the Planning Director;

3. Obtain the services of a County-approved archaeologist and, if necessary, Native American Monitor(s), who shall assess the find and provide recommendations on the proper disposition of the site in a written report format;

4. Obtain the Planning Director's written concurrence of the recommended disposition of the site before resuming development on-site; and

5. Implement the agreed upon recommendations.

Documentation: If archaeological remains are encountered, the Permittee shall submit a report prepared by a County-approved archaeologist including recommendations for the proper disposition of the site. Additional documentation may be required to demonstrate that the Permittee has implemented any recommendations made by the archaeologist's report.

Timing: If any archaeological remains are uncovered during ground disturbance or construction activities, the Permittee shall provide the written notification to the Planning Director within three days of the discovery. The Permittee shall submit the archaeological report to the Planning Division immediately upon completion of the report.

Monitoring and Reporting: The Permittee shall provide the archaeological report to the Planning Division to be made part of the Project file. The Permittee shall implement any recommendations made in the archaeological report to the satisfaction of the Planning Director. The archaeologist shall monitor all ground disturbance activities within the area in which the discovery was made, to ensure the successful implementation of the recommendations made in the archaeological report. The Planning Division has the authority to conduct site inspections to ensure that the Permittee implements the recommendations set forth in the archaeological report, consistent with the requirements of Section 8183-5 of the Ventura County Coastal Zoning Ordinance.

Environmental Health Division Conditions

21. New OWTS Installation

Purpose: To demonstrate the feasibility for the installation of an onsite wastewater treatment system (OWTS), also known as a septic system or individual sewage disposal system. To demonstrate compliance with state and local regulations related to the design and installation of an OWTS. Only domestic waste as defined in the Ventura County General Plan and the Ventura County Building Code Ordinance is allowed to be discharged into the on-site sewage disposal system.

Requirement: Permittee shall submit a soils/geotechnical report and OWTS system design satisfactory to the Ventura County Environmental Health Division, Liquid Waste Program (EHD) staff. Permittee shall also obtain the approval of EHD staff to install an OWTS on the property. During the ministerial permitting process, the proposed OWTS

will be required to meet all current building code, system design, and system installation/construction standards at the time of submittal.

Documentation: Submit soils/geotechnical report, OWTS design, and OWTS application to the EHD for review and approval. Submit all applicable documentation, including permit application, site plan, system design, bedroom and fixture unit equivalent worksheet, etc., to EHD for review and approval.

Timing: Prior to the issuance of a building permit pertaining to the project, OWTS design approval and permit to construct the OWTS shall be obtained from EHD.

Monitoring and Reporting: To ensure compliance with this condition, EHD staff shall review and verify all relevant documentation, including but not limited to: geotechnical report, system design calculations, building codes, and historic geological data for the area. Once the OWTS design has been evaluated to the satisfaction of EHD staff, the OWTS plans will be approved and EHD staff shall issue a permit to construct, conduct site inspections, and give final approval of the OWTS.

Ongoing Maintenance: Once the OWTS has been installed and finalized by EHD, it is the owner's responsibility to properly maintain the system to prevent OWTS failure or an unauthorized sewage release, and from creating a public nuisance, health concern, or impact the environment. The septic tank shall be serviced, as needed, by a septic pumper truck registered and permitted by EHD, and all pumping activities shall be reported to EHD. All septage wastes must be disposed of in an approved manner. EHD staff will also receive and respond to any complaints related to OWTS and/or unauthorized sewage releases.

22. <u>CSA 32 for Commercial OWTS or Alternate OWTS</u>

Purpose: To assure protection of groundwater quality and prevent public health hazards from failing onsite wastewater treatment systems (OWTS), also known as septic systems or individual sewage disposal systems.

Requirement: The Permittee shall execute an offer to grant easement agreement to County Service Area 32 (CSA 32), an OWTS monitoring and maintenance district.

Documentation: The Permittee shall submit an application for CSA 32 to the Environmental Health Division (EHD) for review and approval.

Timing: Prior to the issuance of a building permit, or at the time of OWTS certification, the Permittee shall obtain written confirmation from EHD that the condition has been satisfied.

Monitoring and Reporting: EHD shall review and approve the adequacy of the CSA 32 application to assure compliance with this condition.

PUBLIC WORKS AGENCY (PWA)

Development and Inspection Services Conditions

23. Grading Permit

Purpose: In order to ensure the Permittee performs all grading in compliance with Appendix J of the Ventura County Building Code.

Requirement: The Permittee shall submit a grading plan showing existing and proposed elevations to the Public Works Agency's Land Development Services Division for review and approval. If a grading permit is required, a civil engineer registered in the State of California must prepare and submit the grading plans, geotechnical and hydrology reports as necessary, to Land Development Services Division for review and approval. The Permittee must post sufficient surety in order to ensure proper completion of the proposed grading.

Documentation: If a grading permit is required, all deposits, fees, and materials detailed on Public Works Agency Grading Permit Submittal Checklist, must be submitted to Land Development Services Division for review and approval.

Timing: All applicable documentation, as specified above, must be submitted for review prior to issuance of a Zoning Clearance for development.

Monitoring and Reporting: Public Works Agency staff will review grading plans and reports for compliance with Ventura County codes, ordinances and standards, as well as state and federal laws. Public Works Agency inspectors will monitor the proposed grading to verify that the work is done in compliance with the approved plans and reports.

Integrated Waste Management Division (IWMD) Conditions

24. Construction & Demolition Debris Recycling Plan

Purpose: To ensure the project complies with Division 4, Chapter 7, Article 3 of the Ventura County Ordinance Code (VCOC). Section 4773 aligns with the California Green Building Standards Code which requires the Permittee to divert recyclable construction and demolition (C&D) materials generated by their project (e.g., wood, metal, green waste, soil, concrete, asphalt, paper, cardboard, etc.) from local landfills through recycling, reuse, or salvage.

Requirement: The Permittee must submit a comprehensive recycling plan to Ventura County Public Works Agency, Water & Sanitation Department, Integrated Waste Management Division (Water & Sanitation) for any Covered Project as defined in Division 4, Chapter 7, Article 3, Section 4741-24 of the VCOC, meaning all proposed construction and/or demolition projects that require a building permit, except certain exempted projects as defined in Section 4773-4.

Documentation: A Recycling Plan must be submitted online at Ventura County Citizen Access. For more information and instructions on how to complete the Recycling Plan, please visit https://www.vcpublicworks.org/wsd/iwmd/construction-2-2/.

Timing: Upon Building and Safety Division's issuance of a building permit for the project, the Permittee must submit a Recycling Plan online through Ventura County Citizen Access for approval.

Monitoring & Reporting: The Permittee is required to keep a copy of their approved Recycling Plan until Building and Safety Division's issuance of final permit.

25. Construction & Demolition Debris Reporting

Purpose: Division 4, Chapter 7, Article 3 of the Ventura County Ordinance Code, Section 4773 aligns with the California Green Building Standards Code which requires the Permittee to divert recyclable construction and demolition (C&D) materials generated by their project (e.g., wood, metal, green waste, soil, concrete, asphalt, paper, cardboard, etc.) from local landfills through recycling, reuse, or salvage.

Requirement: The Permittee must upload recycling receipts to their Recycling Plan to Ventura County Citizen Access. Applicants will receive a Final Approval email once the receipts are reviewed and approved. For more information and instructions on how to complete submit recycling receipts, please visit vcpublicworks.org/cdrecycling.

Documentation: Recycling receipts and/or documentation of reuse to verify minimum landfill diversion requirements are met.

Timing: Required recycling receipts and/or documentation of reuse, must be submitted to Ventura County Citizen Access at the time of Building and Safety Division's issuance of final permit.

Monitoring & Reporting: The Permittee is required to keep a copy of their approved Recycling Plan and recycling receipts and/or documentation of reuse until Building and Safety Division's issuance of final permit.

Transportation Department Conditions

26. Driveway Access

Purpose: Driveway access shall be in accordance with the County Road Standards, the Driveways and Curb Cuts Brochure, and the County's Access Policies.

Requirement: The driveway shall be constructed per County Road Standard Plate E-7. The Permittee shall obtain an Encroachment Permit (EP) from the Public Works Agency – Transportation Department. Contact the Transportation Department Permits Division at 654

2055 for the requirements of the EP. The EP form is available on the internet. Improvement plans and supporting documentation may be required by the Encroachments Division.

Refer to the following websites for additional information:

http://pwaportal.ventura.org/TD/Residents/Streets_and_Transportation/Reports_and_Programs/AP_RoadStds.pdf

http://pwaportal.ventura.org/TD/Residents/Streets_and_Transportation/FAQs_and_Citizen_Brochures/Brochure_EncroachmentPermits.pdf

Documentation: The Public Works Agency – Transportation Department will review the improvement plans and supporting documentation.

Timing: This condition shall be met prior to the issuance of the Zoning Clearance for construction.

Monitoring and Reporting: The Public Works Agency – Transportation Department Inspectors will monitor construction and verify that the work is performed in accordance with the Encroachment Permit.

Watershed Protection District (WPD) Conditions

County Stormwater Program Section

27. Stormwater Development Construction Program

Purpose: To ensure compliance with the Los Angeles Regional Water Quality Control Board NPDES Municipal Stormwater Permit, No. CAS004002 (Permit), the proposed project will be subject to the construction requirements for surface water quality and storm water runoff, in accordance with Part 4.F., "Development Construction Program", of the Permit.

Requirement: The construction of the proposed project shall meet requirements contained in Part 4.F., "Development Construction Program", of the Permit through the inclusion of an effective combination of construction best management practices (BMPs) during all ground disturbing activities.

Documentation: The Permittee shall submit a completed and signed SW-1 form (Best Management Practices for Construction Less Than One Acre) to the Public Works Agency - County Stormwater Program (CSP) for review and approval, a template for which can be found at https://www.onestoppermits.vcrma.org/departments/stormwater-program.

Timing: The above listed item shall be submitted to the CSP for review and approval prior to issuance of a zoning clearance for construction.

Monitoring and Reporting: The CSP will review the submitted materials for consistency with the Permit. Building permit inspectors will conduct inspections during construction to ensure effective installation of the required BMPs

OTHER VENTURA COUNTY AGENCIES

Ventura County Air Pollution Control District (APCD) Conditions

28. Fugitive Dust During Construction

Purpose: To ensure that fugitive dust and particulate matter that may result from site preparation and construction activities are minimized to the greatest extent feasible.

Requirement: The Permittee shall comply with the provisions of applicable VCAPCD Rules and Regulations, which include but are not limited to, Rule 50 (Opacity), Rule 51 (Nuisance), and Rule 55 (Fugitive).

Documentation: The project applicant shall ensure compliance with the following provisions:

I. The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust;

II. Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water should penetrate sufficiently to minimize fugitive dust during grading activities;

III. All trucks shall cover their loads as required by California Vehicle Code §23114.

IV. Fugitive dust throughout the construction site shall be controlled by the use of a watering truck or equivalent means (except during and immediately after rainfall). Water shall be applied to all unpaved roads, unpaved parking areas or staging areas, and active portions of the construction site. Environmentally-safe dust control agents may be used in lieu of watering.

V. Graded and/or excavated inactive areas of the construction site shall be monitored at least weekly for dust stabilization.

VI. Signs shall be posted onsite limiting traffic to 15 miles per hour or less.

VII. All clearing, grading, earth moving, or excavation activities shall cease during periods of high winds (i.e., wind speed sufficient to cause fugitive dust to be a nuisance or hazard to adjacent properties). During periods of high winds, all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by onsite activities and operations from being a nuisance or hazard, either offsite or onsite.

Timing: Throughout the construction phases of the project.

Reporting and Monitoring: Dust control is a standard condition on all Grading Permits issued by Publics Works Agency and grading inspector shall perform periodic site inspections throughout the grading period. Monitoring and Enforcement of APCD Rule 55 is also conducted by APCD staff on a complaint-driven basis.

Ventura County Fire Protection District (VCFPD) Conditions

NOTICE IS HEREBY PROVIDED THAT THE SUBJECT PROPERTY (APN 060-0-065-295) IS WITHIN A MODERATE, HIGH, OR VERY HIGH FIRE HAZARD SEVERITY ZONE, AS DESIGNATED BY THE CALIFORNIA STATE FIRE MARSHALL, OR A LOCAL HAZARDOUS FIRE AREA, AS DESIGNATED BY THE VENTURA COUNTY FIRE PROTECTION DISTRICT.

29. Address Numbers (Single-Family Homes)
Purpose: To ensure proper premise identification to expedite emergency response.

Requirement: The Permittee shall install a minimum of 4 inch (4") address numbers that are a contrasting color to the background and readily visible at night. Brass or gold plated numbers shall not be used. Where structures are setback more than 150 feet (150') from the street, larger numbers will be required so that they are distinguishable from the street. In the event the structure(s) is not visible from the street, the address number(s) shall be posted adjacent to the driveway entrance on an elevated post.

Documentation: A stamped copy of an approved addressing plan or a signed copy of the VCFPD Form #610B "Requirements for Construction".

Timing: The Permittee shall install approved address numbers before final occupancy.

Monitoring and Reporting: A copy of the approved addressing plan and/or signed copy of the VCFPD Form #610B "Requirements for Construction" shall be kept on file with the VCFPD. The VCFPD shall conduct a final inspection to ensure that all structures are addressed according to the approved plans/form.

30. Fire Flow
Purpose: To ensure that adequate water supply is available to the project for firefighting purposes.

Requirement: The Permittee shall verify that the water purveyor can provide the required volume and duration at the project. The minimum required fire flow shall be determined as specified by the current adopted edition of the Ventura County Fire Code and the applicable Water Manual for the jurisdiction (whichever is more restrictive). Given the present plans and information, the required fire flow is approximately 1,000 gallons per

minute at 20 pounds per square inch (psi) for a minimum 2 hour duration.

Documentation: A signed copy of the water purveyor's fire flow certification.

Timing: Prior to building permit issuance, the Permittee shall provide to the Fire District, verification from the water purveyor that the purveyor can provide the required fire flow. If there is no map recordation, the Permittee shall submit a signed copy of the water purveyor's certification to the VCFPD for approval before the issuance of building permits.

Monitoring and Reporting: A copy of the fire flow certification shall be kept on file with the Fire Prevention Bureau.

31. Fire Hydrant(s)

Purpose: To provide fire hydrants capable of meeting the required fire flow and duration. Requirement: The Permittee shall provide fire hydrant(s) per the current adopted edition of the Ventura County Fire Code, Appendix C. Design and installation shall conform to the minimum standard of the Water Works Manual.

Documentation: A stamped copy of the approved fire hydrant location plan.

Timing: The Permittee shall submit a site plan to the VCFPD for fire hydrant placement and approval before the issuance of building permits. The plans shall indicate all existing fire hydrants located within 500 feet of the project site, the type of hydrant (i.e. wet or dry barrel) and the number and size of outlets. All required fire hydrants shall be installed per the approved plans and in-service before the start of construction.

Monitoring and Reporting: A copy of the approved fire hydrant plans shall be kept on file with the VCFPD. The VCFPD shall conduct on-site inspections to ensure that the fire hydrants are installed according to the approved plans. Unless a modification is approved by the VCFPD, the Permittee, and their successors in interest, shall maintain the fire hydrants for the life of the development.

32. Fire Sprinklers

Purpose: To comply with current California Codes and Ventura County Fire Protection District Ordinance.

Requirement: The Permittee shall be responsible to have an automatic fire sprinkler system installed in all structures as required by the VCFPD. The fire sprinkler system shall be designed and installed by a properly licensed contractor under California State Law.

Documentation: A stamped copy of the approved fire sprinkler plans.

Timing: The Permittee shall submit fire sprinkler plans to the VCFPD for approval

before the installation of the fire sprinkler system.

Monitoring and Reporting: A copy of the approved fire sprinkler plans shall be kept on file with the VCFPD. The VCFPD shall conduct on-site inspections to ensure that the fire sprinkler system is installed according to the approved plans. Unless a modification is approved by the VCFPD, the Permittee, and their successors in interest, shall maintain the fire sprinkler system for the life of the development.

33. Hazardous Fire Area

Purpose: To advise the Permittee that the project is located within a Hazardous Fire Area and ensure compliance with California Building and Fire Codes.

Requirement: The Permittee shall construct all structures to meet hazardous fire area building code requirements.

Documentation: A stamped copy of the approved building plans to be retained by the Building Department.

Timing: The Permittee shall submit building plans to the Building Department for approval before the issuance of building permits.

Monitoring and Reporting: The VCFPD shall conduct a final inspection to ensure that the structure is constructed according to the approved hazardous fire area building code requirements. Unless a modification is approved by the VCFPD, the Permittee, and their successors in interest, shall maintain the approved construction for the life of the structure.

34. Hazard Abatement

Purpose: To ensure compliance with Ventura County Fire Protection District Ordinance.

Requirement: The Permittee shall have all grass or brush adjacent to structure's footprint cleared for a distance of 100 feet or to the property line if less than 100 feet. All grass and brush shall be removed a distance of 10 feet on each side of all access road(s)/driveway(s) within the project. The Fire District may require the entire parcel to be cleared. Note: A Notice to Abate Fire Hazard may be recorded against the parcel.

Documentation: The Permittee shall obtain VCFD Form #610B "Requirements for Construction" Construction" or the "Notice to Abate" issued under the Fire District's Fire Hazard Reduction Program.

Timing: The Permittee shall remove all grass and brush as outlined by the Ventura County Fire Protection District's Fire Hazard Reduction Program guidelines before the start of construction on any structure.

Monitoring and Reporting: The VCFPD shall conduct on-site inspections to ensure

compliance with this condition.

35. Fuel Modification Plans

Purpose: To reduce hazardous fuel loads surrounding a project or developments to provide wildfire protection.

Requirement: The Permittee shall prepare a Fuel Modification Plan (FMP).

Documentation: A stamped copy of the approved Fuel Modification Plan (FMP).

Timing: The Permittee shall submit a Fuel Modification Plan (FMP) to the VCFPD for approval before the start of construction.

Monitoring and Reporting: A copy of the approved Fuel Modification Plan shall be kept on file with the VCFPD. The VCFPD shall conduct a final inspection to ensure the Fuel Modification Zones are installed according to the approved FMP. The VCFPD shall conduct annual inspections through its Fire Hazard Reduction Program to ensure the Fuel Modification Zones are maintained according to the FMP. Unless a modification is approved by the VCFPD, the Permittee, and their successors in interest, shall maintain the approved Fuel Modification Zones for the life of the development.

36. Fire Department Clearance

Purpose: To provide the Permittee a list of all applicable fire department requirements for their project.

Requirement: The Permittee shall obtain VCFD Form #610B "Requirements for Construction" for any new structures or additions to existing structures before issuance of building permits.

Documentation: A signed copy of the Ventura County Fire Protection District's Form #610B "Requirements for Construction."

Timing: The Permittee shall submit VCFPD Form #610B Application to the VCFPD for approval before issuance of building permits.

Monitoring and Reporting: A copy of the completed VCFPD Form #610B shall be kept on file with the VCFPD. The VCFPD will conduct a final on-site inspection of the project to ensure compliance with all conditions and applicable codes / ordinances.

August 2, 2024

Updated November 20, 2024

Mr. Donald Younger
695 West Highland Drive
Camarillo, California 93010

Project No. 23054A

Subject: Supplemental Report No. 1 – Updated Seepage Pit Percolation Test
Proposed Single Family Residence
7026 Oxnard Avenue, La Conchita
Ventura County, California 93001
APN 060-0-065-295

Reference: Preliminary Geotechnical Investigation
And Septic Percolation Testing
Proposed Single Family Residence
7026 Oxnard Avenue, La Conchita
Ventura County, California
NGS Job No. 23054
Dated: October 17, 2023

Dear Mr. Younger:

Noorzay Geotechnical Services (NGS) would like to thank you for the opportunity to submit this updated supplemental report for the subject project. This report was updated in response to the "Second Determination of Application Incompleteness, Coastal Planned Development Permit, Case No. PL24-0058, 7026 Oxnard Avenue., in the community of La Conchita, Assessor's Parcel Number 060-0-065-295." See review comments in Appendix F.

Please note that this report should be considered as a part of the referenced report. All

recommendations and conclusions provided in the referenced report remain applicable to the subject project with the exception of the percolation testing, which is updated herein. No other updates are considered necessary for this project at this time.

The location of the site is depicted on the Index Map (Enclosure A-1). A topographic survey by WM Surveys, dated August 15, 2023, was used as base map for our Site Plan, System Design (Enclosure A-2).

The referenced preliminary geotechnical investigation was performed in October 2023 which included percolation testing for septic system design. Initially, percolation testing was performed for leach lines at the subject site in accordance with the "Onsite Wastewater Treatment System Technical Manual" prepared by Ventura County Environmental Health Division (Manual), dated June 17, 2015. Based on results of the leach line percolation testing performed at the subject site and obtaining a percolation rate of greater than 60 minutes per inch, leach lines were not considered feasible for the site.

Because leach lines were not considered feasible at the subject site, seepage pits were considered. Although a seepage pit performance test was performed during the referenced preliminary geotechnical investigation, additional data was required. An additional seepage pit performance test was performed for this supplemental report. A meeting with the County of Ventura Environmental Health provided additional information indicating that the percolation rate to be used for the design will no longer be dependent on the soils type and that the aforementioned manual will be updated to reflect this change.

Using a historic high groundwater level of 25 feet bgs, and in order to maintain a minimum of 10 feet separation between the bottom of the seepage pit and groundwater, the maximum depth for seepage pits on this site is limited to 15 feet. A seepage pit performance test, with a hole drilled to 15 feet, was conducted in accordance with the Manual (Appendix D). Results of the test indicate a percolation rate of 6.1 gal/ft^2/day. It is our understanding that the maximum percolation rate that can be used in

the design is 5 gal/ft^2/day. As such, a design rate of 5 gal/ft^2/day was used for design of the subsurface sewage disposal system.

We anticipate that the proposed structure will have 2 bedrooms and 3 bathrooms totaling 33 fixture units which requires a 1,200-gallon septic tank, as a minimum. The maximum seepage pit diameter is 6 feet.

With a 1,200-gallon septic tank and a design rate of 5 gal/ft^2/day, 240 square feet of absorption area is required. Because the pits can only be 15 feet in total depth, the maximum usable sidewall is 13.2 feet per pit with an inlet depth of 1.8 feet bgs. It was determined that one seepage pit is required using a 6-foot diameter seepage pit. The minimum depth from ground surface to pit cap is 18 inches.

An Alternative Treatment System Unit (ATU) is required for this installation. The BioMicrobics MicroFAST® 0.5, or equivalent, may be used inside the 1,200 gallon septic tank. The MicroFAST® 0.5 should be used in conjunction with Norweco Model AT 1500, or equivalent, in order to disinfect the wastewater prior to entering the seepage pit. It is our understanding that the proposed system, should treat at least 300 gallons (150 gallons per bedroom) per day, should be designed to reduce nitrogen and certified to National Sanitation Foundation (NSF) Standard 245, and should be capable of performing pathogen reduction (disinfection) and certified to NSF Standard 40 or 245. Further information regarding the ATU is provided in Appendix E.

The requirements set forth in the OWTS Manual should be followed. It is our opinion that seepage pits (15 feet deep) will not encroach within the minimum required 10-foot vertical setback from the historic groundwater table. The seepage pit must be over drilled down to 25 feet (10 feet past the bottom of the seepage pit) and have the bottom 10 feet replaced with coarse sand as per the OWTS Manual, page 9-25. The design of the proposed system including the location of the proposed expansion area, the location of the septic tank and disposal fields, and setbacks to other structures including lot lines and utility poles is provided in Enclosure A-2.

It is our opinion that the site has sufficient area to provide a 100-percent expansion of the required absorption area when/ if necessary.

Additional recommendations/ previous testing data should be referred to the referenced soils report.

LIMITATIONS

Noorzay Geotechnical Services has striven to perform our services within the limits prescribed by our client, and in a manner consistent with the usual thoroughness and competence of reputable geotechnical engineers and engineering geologists practicing under similar circumstances. No other representation, express or implied, and no warranty or guarantee is included or intended by virtue of the services performed or reports, opinion, documents, or otherwise supplied.

This report reflects the testing conducted on the site as the site existed during the investigation, which is the subject of this report. However, changes in the conditions of a property can occur with the passage of time, due to natural processes or the works of man on this or adjacent properties. Changes in applicable or appropriate standards may also occur whether as a result of legislation, application, or the broadening of knowledge. Therefore, this report is indicative of only those conditions tested at the time of the subject investigation, and the findings of this report may be invalidated fully or partially by changes outside of the control of Noorzay Geotechnical Services. This report is therefore subject to review and should not be relied upon after a period of one year.

The conclusions and recommendations in this report are based upon observations performed and data collected at separate locations, and interpolation between these locations, carried out for the project and the scope of services described. It is assumed and expected that the conditions between locations observed and/or sampled are similar to those encountered at the individual locations where observation and sampling was performed. However, conditions between these locations may vary significantly. Should conditions that appear different than those described herein be encountered in the field by the client or any firm performing services for the client or the client's assign, this firm should be contacted immediately in order that we might evaluate their effect.

If this report or portions thereof are provided to contractors or included in specifications, it should be understood by all parties that they are provided for information only and should be used as such.

The report and its contents resulting from this investigation are not intended or represented to be suitable for reuse on extensions or modifications of the project, or for use on any other project.

Closure:

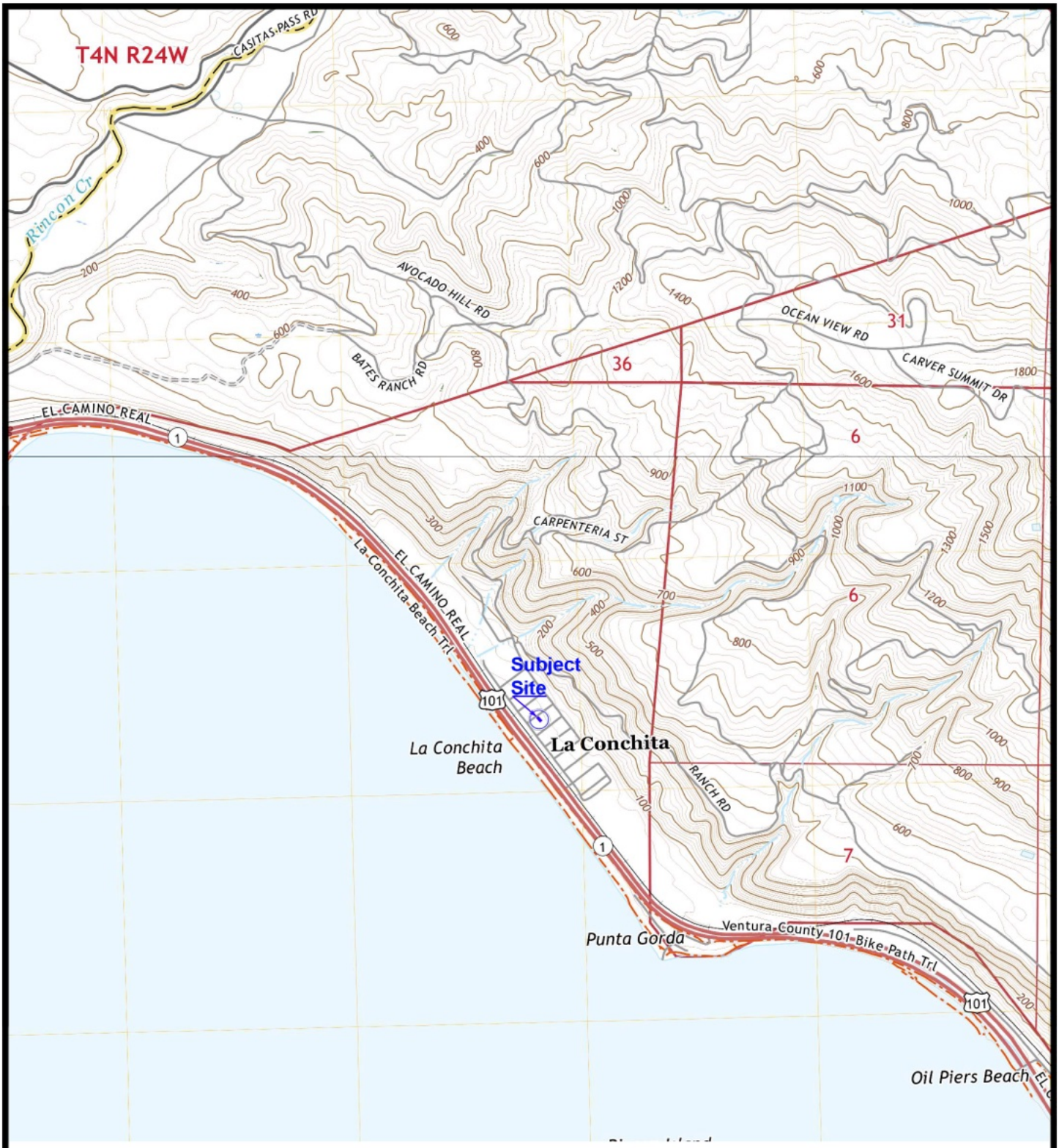
We appreciate this opportunity to be of service and trust this report provides the information desired at this time. Should questions arise, please do not hesitate to contact this office.

Respectfully submitted,
Noorzay Geotechnical Services, Inc.

Maihan Noorzay, G.E. 3085
Principal Engineer

APPENDIX A

MAPS

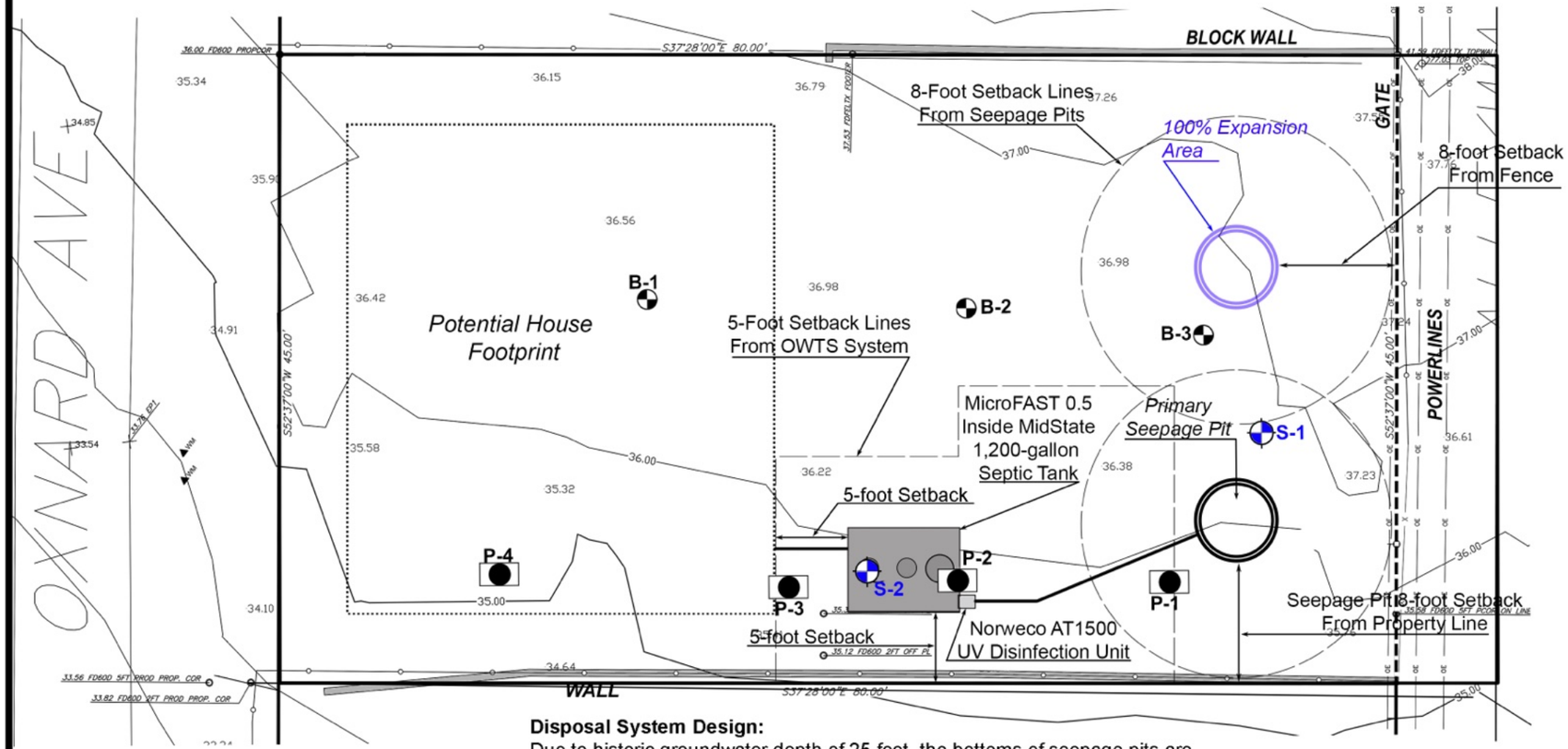


Reference: **United States Department of the Interior, Geological Survey**, 2022, *Pitas Point Quadrangle, California*, and 2022, *White Ledge Peak Quadrangle, California*, 7.5-Minute Topographic, Scale 1:24,000.

0 2000 4000
Scale Approximate in Feet

N

DATE			
10/12/2023	**Index Map** 7026 Oxnard Avenue La Conchita, California	NoorzayGeo	A-1
DRAWN BY: RG			



Legend

- **B-3** - Approximate locations of exploratory soil borings.
- **S-2** - Approximate locations of seepage pit percolation tests.
- **P-4** - Approximate locations leach line performance test location.
- Seepage pit locations.
- 100% expansion seepage pits.
- Sewer Lines
- System setback lines.
- 36.00 - Contour lines and elevation.

Disposal System Design:

Due to historic groundwater depth of 25 feet, the bottoms of seepage pits are limited to 15 feet below ground surface.
2 Bedrooms, 3 Bathrooms, 33 Fixture Units = 1,200 gallon septic tank.
NOTE: additional fixture units greater than 33 will require a 1,500 gallon septic tank.
Application rate 5 gal / ft^2 / day.
1,200gal/day / 5 gal/ft^2/day = 240 ft^2.
Maximum depth below inlet = 13.2 feet.
Seepage Pit diameter 6 feet.
$2\pi r*h+\pi r^2= (2\pi*3*13.2)+(\pi*3^2)$ = 277ft^2.

Alternative Treatment Unit (ATU)

An Alternative Treatment System Unit (ATU) is required for this installation. The BioMicrobics MicroFAST® 0.5, or equivalent, may be used inside the 1,200 gallon septic tank. The MicroFAST® 0.5 should be used in conjunction with Norweco Model AT 1500, or equivalent, in order to disinfect the wastewater prior to entering the seepage pit. It is our understanding that the proposed system, should treat at least 300 gallons (150 gallons per bedroom) per day, should be designed to reduce nitrogen and certified to National Sanitation Foundation (NSF) Standard 245, and should be capable of performing pathogen reduction (disinfection) and certified to NSF Standard 40 or 245.

Seepage Pit Design

The design incorporates one seepage pit
- Pit diameter = 6 feet
- Depth from ground surface to pit cap 18 inches.
- Pit depth 15 feet with inlet depth below surface of 1.8 feet.
- Pits (including expansion area) must be 12 feet apart.
- No distribution box required.

100% expansion must equal primary seepage pit design.

Minimum Setbacks
Seepage pits to:
- building 8 feet
- property line 8 feet
- private water well 150 feet*
- stream drainage or ocean 150 feet*
- large trees 10 feet
- seepage pits 12 feet
- onsite water supply line 5 feet
- distribution box 5 feet
- septic tank 5 feet
- ATU 5 feet
- public pressure main 10 feet
- public water well 200 feet*

Septic tank to:
- building 5 feet
- property line 5 feet
- large trees 10 feet
- seepage pits 5 feet
- ATU 5 feet
- water supply line 5 feet
- public pressure main 10 feet

*Proposed system is more than 200 feet from nearest stream drainage or nearest known water well.

0 10 20
Approximate Scale in Feet

Reference: WM Surveys Inc., 08/15/2023, 7026 Oxnard Ave, Ventura, CA 93001, Sheet 1 of 1, Scale 1"=5'.

DATE 11/20/2024 SCALE 1"=10' DRAWN BY: RG JOB NO. 23054	**Site Plan, System Design** 7026 Oxnard Avenue La Conchita, California	NoorzayGeo	A-2

APPENDIX B

EXPLORATORY LOGS

SUBSURFACE EXPLORATION LEGEND

UNIFIED SOIL CLASSIFICATION SYSTEM Visual-Manual Procedure (ASTM D2488)					CONSISTENCY / RELATIVE DENSITY
MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES	CRITERIA
Coarse-Grained Soils*	Gravels 50 % or more of Coarse Fraction Retained on No. 4 Sieve	Clean Gravels	GW	Well Graded Gravels and Gravel-Sand Mixtures, Little or no Fines	Reference: 'Foundation Engineering', Peck, Hansen, Thornburn, 2nd Edition.
			GP	Poorly Graded Gravels and Gravel-Sand Mixtures, Little or no Fines	Standard Penetration Test, Granular Soils
		Gravels with Fines	GM	Silty Gravels, Gravel-Sand-Silt Mixtures**	Penetration Resistance, N, (Blows / Foot) / Relative Density
			GC	Clayey Gravel, Gravel-Sand-Clay Mixtures**	0 - 4 Very Loose
More than 50 % Retained on No. 200 Sieve	Sands More than 50 % of Coarse Fraction Passes No. 4 Sieve	Clean Sands	SW	Well Graded Sands and Gravely Sands, Little or no Fines	4 - 10 Loose
			SP	Poorly Graded Sands and Gravely Sands, Little or no Fines	10 - 30 Medium
		Sands with Fines	SM	Silty Sands, Sand-Silt Mixtures**	30 - 50 Dense
			SC	Clayey Sands, Sand-Clay Mixtures**	> 50 Very Dense
Fine Grained Soils*	Silts and Clays Liquid Limits 50 % or less		ML	Inorganic Silts, Sandy Silts, Rock Flour	Standard Penetration Test, Cohesive Soils
			CL	Inorganic Clays of Low to Medium Plasticity, Gravelly Clays, Sandy Clays, Silty Clays, Lean Clays	Penetration Resistance, N, (Blows / Foot) / Consistency / Unconfined Compressive Strength, (Tons / Sq. Ft.)
			OL	Organic Silts and Organic silty Clays of Low Plasticity	< 2 Very Soft < 0.25
50 % or more Passes No. 200 Sieve	Silts and Clays Liquid Limits Greater than 50 %		MH	Inorganic Silts, Micaceous or Diatomaceous silts, Plastic Silts	2 - 4 Soft 0.25 - 0.5
			CH	Inorganic Clays of High Plasticity, Fat Clays	4 - 8 Medium 0.5 - 1.0
			OH	Organic Clays of Medium to High Plasticity	8 - 15 Stiff 1.0 - 2.0
					15 - 30 Very Stiff 2.0 - 4.0
					> 30 Hard > 4.0
Highly Organic Soils			PT	Peat, Muck, or Other Highly Organic Soils	

* Based on material passing the 3-inch sieve.

** More than 12% passing the No. 200 sieve; 5% to 12% passing No. 200 sieve requires use of duel symbols (i.e., SP-SM., GP-GM, SP-SC, GP-GC, etc.); Border line classifications are designated as CH/Cl, GM/SM, SP/SW, etc.

U.S. Standard Sieve Size 12" 3" 3/4" #4 #10 #40 #200

Unified Soil Classification Designation	Boulders	Cobbles	Gravel		Sand			Silt and Clay
			Coarse	Fine	Coarse	Medium	Fine	

Moisture Condition		Material Quantity		Other Symbols
Dry	Absence of moisture, dusty, dry to the touch.	Trace	< 5 %	C - Core Sample
		Slightly	5 - 12%	S - SPT Sample
Moist	Damp but no visible moisture.	Little	12 - 25%	B - Bulk Sample
Wet	Visible free water, usually below the water table.	Some	25 - 50 %	CK - Chunk Sample
				R - Ring Sample
				N - Nuclear Gauge Test
				∇ - Water Table

DATE			
2023	**Simplified USCS Soils Classification Chart**	NoorzayGeo	B
DRAWN BY: RG			

NoorzayGeo

SUBSURFACE EXPLORATION LOG
Exploratory Boring No. 1

Project Number:	23054	Date:	8/21/23	Logged By:	MN
Type of Rig:	CME75	Drive Wt.	140 lbs	Elevation:	36 ±
Drill Hole Dia.:	8"	Drop:	30"	Boring Depth (ft.):	51'

Depth (ft.)	Sample Type	Penetration Resistance	Soil Classification	Dry Density (lb/ft^3)	Moisture Content (%)	Lithology	Groundwater	Description (USCS, color, moisture, density, etc.)
	B		SC			Qhprs		**Paralic Deposits, Sea Cliff:**
1	0-5'							Clayey sand, tan brown, dry, loose, with gravel
2								
3								
4								Silty, clayey sand, dark brown, moist, with gravel
5	S	3						...some fine gravel
6		3						
7		2						
8			CL					Lean clay, dark brown, moist, firm to stiff, some sand
9								
10	S	2						… firm to stiff, some sand
11		3						
12		5						
13								
14								
15	S	2						... grades to silty clay, tan brown, moist, firm, fine sand
16		2						
17		4						
18								
19								
20	S	2						… stiff, very fine sand
21		4						
22		5						
23								
24								

S - SPT Sample R - Ring Sample B - Bulk Sample N - Nuclear Gauge Test D - Disturbed Sample

NoorzayGeo

SUBSURFACE EXPLORATION LOG
Exploratory Boring No. 1 (con't.)

Project Number:	23054	Date:	8/21/23	Logged By:	MN
Type of Rig:	CME75	Drive Wt.	140 lbs	Elevation:	36 ±
Drill Hole Dia.:	8"	Drop:	30"	Boring Depth (ft.):	51'

Depth (ft.)	Sample Type	Penetration Resistance	Soil Classification	Dry Density (lb/ft³)	Moisture Content (%)	Lithology	Groundwater	Description (USCS, color, moisture, density, etc.)
			CL			Qhprs		**Paralic Deposits, Sea Cliff (cont):** Silty clay, tan brown, moist, stiff, very fine sand
25	S	7	ML					Sandy silt, light tan, moist, very stiff, with sand
26		8						
		8						
27								
28								
29								
								Groundwater encountered at 29.8'
30	S	13	SP-SM					Poorly graded sand to silty sand, brown, wet, medium dense, medium grained sand
31		21						
		24						
32						Tp		**Pico formation:** Siltstone, gray, wet, hard, some sand
33								
34								
35	S	16						Siltstone, gray, moist, hard, some sand
36		50/6"						
37								
38								
39								
40	S	19						Siltstone, gray, moist, hard
41		22						
		46						
42								
43								
44								
45	S	16						… same
46		50/6"						
47								
48								

S - SPT Sample R - Ring Sample B - Bulk Sample N - Nuclear Gauge Test D - Disturbed Sample

NoorzayGeo

SUBSURFACE EXPLORATION LOG
Exploratory Boring No. 1 (con't.)

Project Number:	23054	Date:	8/21/23	Logged By:	MN
Type of Rig:	CME75	Drive Wt.	140 lbs	Elevation:	36 ±
Drill Hole Dia.:	8"	Drop:	30"	Boring Depth (ft.):	51'

Depth (ft.)	Sample Type	Penetration Resistance	Soil Classification	Dry Density (lb/ft^3)	Moisture Content (%)	Lithology	Groundwater	Description (USCS, color, moisture, density, etc.)
49						Tp		**Pico formation (cont):** Siltstone, gray, moist, hard
50	S	17 50/5"						… same
51								End of boring at 51' Groundwater encountered at 29.8' No caving observed Backfilled with soil cuttings
52								
53								
54								
55								
56								
57								
58								
59								
60								
61								
62								
63								
64								
65								
66								
67								
68								
69								
70								
71								
72								

S - SPT Sample R - Ring Sample B - Bulk Sample N - Nuclear Gauge Test D - Disturbed Sample

NoorzayGeo

SUBSURFACE EXPLORATION LOG
Exploratory Boring No. 2

Project Number:	23054	Date:	8/21/23	Logged By:	MN
Type of Rig:	CME75	Drive Wt.	140 lbs	Elevation:	37 ±
Drill Hole Dia.:	8"	Drop:	30"	Boring Depth (ft.):	21.5'

Depth (ft.)	Sample Type	Penetration Resistance	Soil Classification	Dry Density (lb/ft^3)	Moisture Content (%)	Lithology	Groundwater	Description (USCS, color, moisture, density, etc.)
			SM			Qhprs		**Paralic Deposits, Sea Cliff:** Silty sand, tan brown, dry, loose, with gravel
5	R	6 8 4	SM/SC	76.4	23.5			Silty sand to clayey sand, tan brown to brown, moist, loose, with gravels
10	R	7 14 15	CL	93.7	23.3			Sandy lean clay, brown to dark brown, moist, very stiff, with gravel
			ML					Silt with gravel, tan, moist, very stiff
15	R	3 5 7	ML/CL	86.4	25.9			Sandy silt to sandy lean clay, brown to tan brown, moist, stiff, with gravel
20	R	5 7 11		85.7	28.5			… same, no gravel
								End of boring at 21.5' No groundwater encountered No caving observed Backfilled with soil cuttings

S - SPT Sample R - Ring Sample B - Bulk Sample N - Nuclear Gauge Test D - Disturbed Sample

NoorzayGeo

SUBSURFACE EXPLORATION LOG
Exploratory Boring No. 3

Project Number:	23054	Date:	9/18/23	Logged By:	MN
Type of Rig:	GT-16	Drive Wt.	140 lbs	Elevation:	37 ±
Drill Hole Dia.:	8"	Drop:	30"	Boring Depth (ft.):	30

Depth (ft.)	Sample Type	Penetration Resistance	Soil Classification	Dry Density (lb/ft^3)	Moisture Content (%)	Lithology	Groundwater	Description (USCS, color, moisture, density, etc.)
			CL			Qhprs		**Paralic Deposits, Sea Cliff:** Sandy clay with gravel, tan brown, dry, firm to stiff
2	S	5 4 4						
5			CL					Lean clay with gravel, dark brown, moist, sandy
7	S	1 2 1	CL					Lean clay, dark brown to gray brown, moist, soft, some gravels
12	S	2 2 3						Sandy lean clay, brown, moist, firm, some gravels
15	S	3 2 3						Lean clay, brown, moist, firm, some gravels
20	S	3 5 6						... stiff

S - SPT Sample R - Ring Sample B - Bulk Sample N - Nuclear Gauge Test D - Disturbed Sample

NoorzayGeo

SUBSURFACE EXPLORATION LOG
Exploratory Boring No. 3 (con't)

Project Number:	23054	Date:	9/18/23	Logged By:	MN
Type of Rig:	GT-16	Drive Wt.	140 lbs	Elevation:	37 ±
Drill Hole Dia.:	8"	Drop:	30"	Boring Depth (ft.):	30

Depth (ft.)	Sample Type	Penetration Resistance	Soil Classification	Dry Density (lb/ft^3)	Moisture Content (%)	Lithology	Groundwater	Description (USCS, color, moisture, density, etc.)
			SP-SM			Qhprs		**Paralic Deposits, Sea Cliff (cont):** Poorly graded sand with silt, tan brown, medium dense, wet
25	S	4						
26		7						
		15						
27								
28								…groundwater at 27.7'
29								
30								End of boring at 30' Groundwater encountered at 27.7' No caving observed Backfilled with soil cuttings
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								

S - SPT Sample R - Ring Sample B - Bulk Sample N - Nuclear Gauge Test D - Disturbed Sample

NoorzayGeo

SUBSURFACE EXPLORATION LOG
Percolation Test No. 1

Project Number:	23054	Date:	8/21/23	Logged By:	MN
Type of Rig:	CME75	Drive Wt.	140 lbs	Elevation:	36 ±
Drill Hole Dia.:	12"	Drop:	30"	Boring Depth (ft.):	4'

Depth (ft.)	Sample Type	Penetration Resistance	Soil Classification	Dry Density (lb/ft^3)	Moisture Content (%)	Lithology	Groundwater	Description (USCS, color, moisture, density, etc.)
	B		SM			Qaf		**Artificial Fill:**
1	0-4'							Silty sand, dark brown, moist, loose
			SM			Qhprs		**Paralic Deposits, Sea Cliff:**
2								Silty sand, tan brown, dry to moist, loose, with gravel
3								… cobble to 6"
4								End of boring at 4'
5								Boring converted to percolation test hole
6								No groundwater encountered
7								No caving observed
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								

S - SPT Sample R - Ring Sample B - Bulk Sample N - Nuclear Gauge Test D - Disturbed Sample

NoorzayGeo

SUBSURFACE EXPLORATION LOG
Percolation Test No. 2

Project Number:	23054	Date:	8/21/23	Logged By:	MN
Type of Rig:	CME75	Drive Wt.	140 lbs	Elevation:	36 ±
Drill Hole Dia.:	12"	Drop:	30"	Boring Depth (ft.):	4'

Depth (ft.)	Sample Type	Penetration Resistance	Soil Classification	Dry Density (lb/ft^3)	Moisture Content (%)	Lithology	Groundwater	Description (USCS, color, moisture, density, etc.)
1	B 0-4'		SM			Qhprs		**Paralic Deposits, Sea Cliff:** Silty sand, tan brown, dry to moist, loose, with gravel
2								
3								
4								End of boring at 4'
5								Boring converted to percolation test hole
6								No groundwater encountered
7								No caving observed
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								

S - SPT Sample R - Ring Sample B - Bulk Sample N - Nuclear Gauge Test D - Disturbed Sample

NoorzayGeo

SUBSURFACE EXPLORATION LOG
Percolation Test No. 3

Project Number:	23054	Date:	8/21/23	Logged By:	MN
Type of Rig:	CME75	Drive Wt.	140 lbs	Elevation:	36 ±
Drill Hole Dia.:	12"	Drop:	30"	Boring Depth (ft.):	9'

Depth (ft.)	Sample Type	Penetration Resistance	Soil Classification	Dry Density (lb/ft^3)	Moisture Content (%)	Lithology	Groundwater	Description (USCS, color, moisture, density, etc.)
1	B 0-4'		SM			Qhprs		**Paralic Deposits, Sea Cliff:** Silty sand, tan brown, dry to moist, loose, with gravel
5	B 5-9'		SM/SC					Silty, clayey sand, dark brown, moist, some gravel
9								End of boring at 9' Boring converted to percolation test hole No groundwater encountered No caving observed

S - SPT Sample R - Ring Sample B - Bulk Sample N - Nuclear Gauge Test D - Disturbed Sample

NoorzayGeo

SUBSURFACE EXPLORATION LOG
Percolation Test No. 4

Project Number:	23054	Date:	8/21/23	Logged By:	MN
Type of Rig:	CME75	Drive Wt.	140 lbs	Elevation:	35 ±
Drill Hole Dia.:	12"	Drop:	30"	Boring Depth (ft.):	4'

Depth (ft.)	Sample Type	Penetration Resistance	Soil Classification	Dry Density (lb/ft^3)	Moisture Content (%)	Lithology	Groundwater	Description (USCS, color, moisture, density, etc.)
1	B 0-4'		SM			Qhprs		**Paralic Deposits, Sea Cliff:** Silty sand, tan brown to brown, moist, loose, with gravel
2								
3								
4								End of boring at 4' Boring converted to percolation test hole No groundwater encountered No caving observed
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								

S - SPT Sample R - Ring Sample B - Bulk Sample N - Nuclear Gauge Test D - Disturbed Sample

NoorzayGeo

SUBSURFACE EXPLORATION LOG
Percolation Test No. S-1

Project Number:	23054	Date:	9/18/23	Logged By:	MN
Type of Rig:	GT-16	Drive Wt.	140 lbs	Elevation:	37 ±
Drill Hole Dia.:	12"	Drop:	30"	Boring Depth (ft.):	15'

Depth (ft.)	Sample Type	Penetration Resistance	Soil Classification	Dry Density (lb/ft^3)	Moisture Content (%)	Lithology	Groundwater	Description (USCS, color, moisture, density, etc.)
			SM/SC			Qhprs		**Paralic Deposits, Sea Cliff:** Silty sand to clayey sand with gravel, tan brown, dry
7			CL/CH					Lean to fat clay with gravel, dark gray brown, moist
14			CL					Lean clay with gravel, dark brown, moist
15								End of boring at 15' bgs No groundwater encountered No caving noted Used for percolation test

S - SPT Sample R - Ring Sample B - Bulk Sample N - Nuclear Gauge Test D - Disturbed Sample

NoorzayGeo

SUBSURFACE EXPLORATION LOG
Percolation Test No. S-2

Project Number:	23054	Date:	7/12/2024	Logged By:	MN
Type of Rig:	GT-16	Drive Wt.	140 lbs	Elevation:	+/-36
Drill Hole Dia.:	12"	Drop:	30"	Boring Depth (ft.):	15'

Depth (ft.)	Sample Type	Penetration Resistance	Soil Classification	Dry Density (lb/ft^3)	Moisture Content (%)	Lithology	Groundwater	Description (USCS, color, moisture, density, etc.)
			SM			Qhprs		**Paralic Deposits, Sea Cliff:** Silty sand with gravel, tan brown, dry, loose, some clay
1								
2	S	9 4 4						
3			ML					Clayey silt, dark brown, moist, fine sand, trace gravel
4								
5	S	2 2 2						
6								
7								
8								
9								
10	S	5 6 8	SM					Silty sand, brown to light brown, moist, fine sand, trace gravel, some fine gravel
11								
12								
13								
14	S	3 2 4	ML					Silt, brown to light brown, moist
15								End of boring at 15' bgs and used for percolation testing No groundwater encountered No caving noted Backfilled with soil cuttings
16								
17								
18								
19								
20								
21								
22								
23								
24								

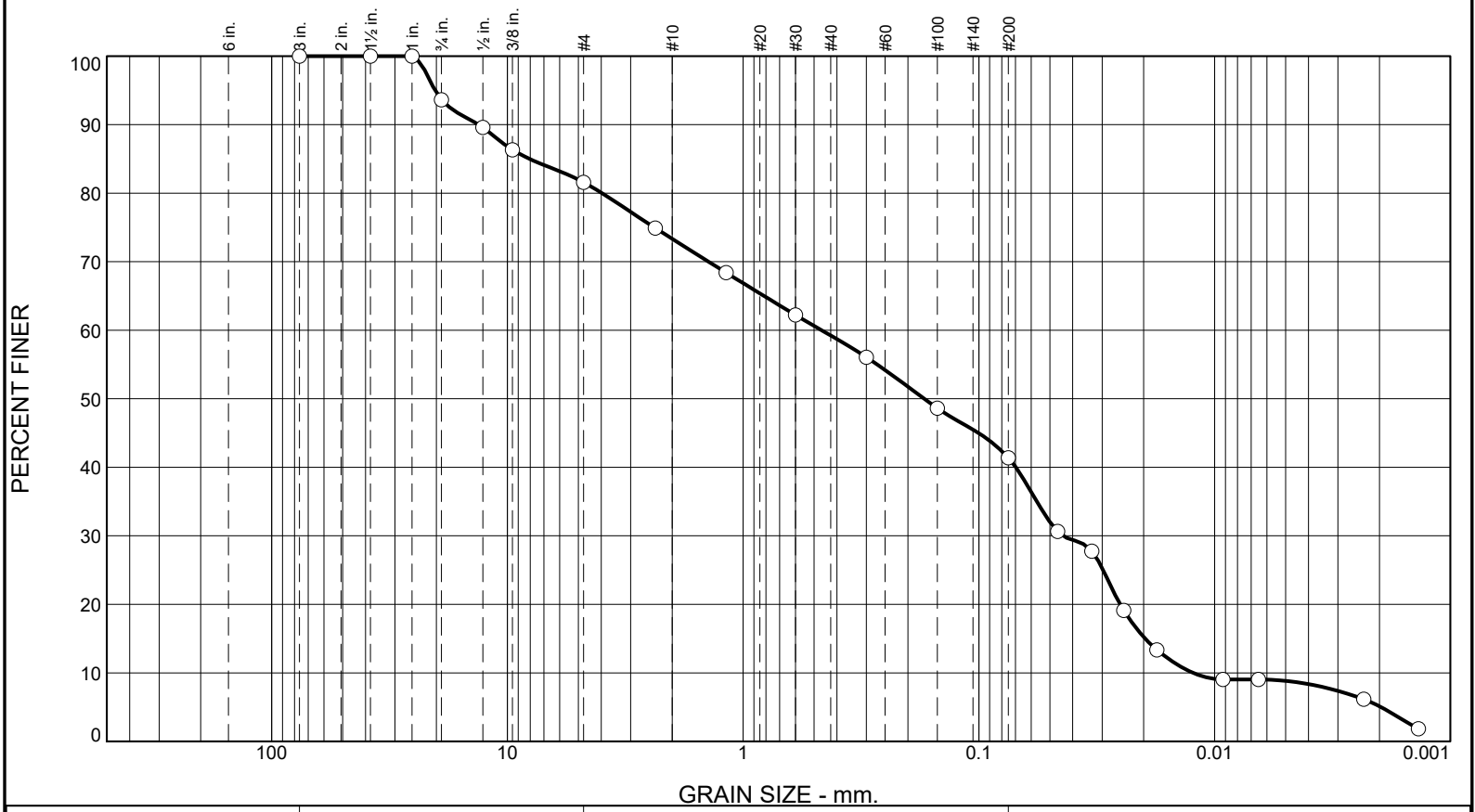
S - SPT Sample R - Ring Sample B - Bulk Sample N - Nuclear Gauge Test D - Disturbed Sample

APPENDIX C

LABORATORY TESTING

Particle Size Distribution Report

ASTM D422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	6.4	12.0	8.3	14.1	17.8	36.3	5.1

Test Results (ASTM D422)

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
3	100.0			
1.5	100.0			
1	100.0			
.75	93.6			
0.5	89.6			
.375	86.3			
#4	81.6			
#8	74.9			
#16	68.4			
#30	62.2			
#50	56.1			
#100	48.6			
#200	41.4			
0.0463 mm.	30.6			
0.0332 mm.	27.8			
0.0243 mm.	19.1			
0.0176 mm.	13.4			
0.0092 mm.	9.0			
0.0065 mm.	9.0			
0.0023 mm.	6.2			
0.0014 mm.	1.8			

* (no specification provided)

Material Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 13.2453 D_{85}= 8.0533 D_{60}= 0.4649
D_{50}= 0.1705 D_{30}= 0.0440 D_{15}= 0.0197
D_{10}= 0.0123 C_u= 37.67 C_c= 0.34

Classification

USCS= AASHTO=

Test Remarks

Sample Number: S-2 **Depth:** 1.5 **Sample Date:**

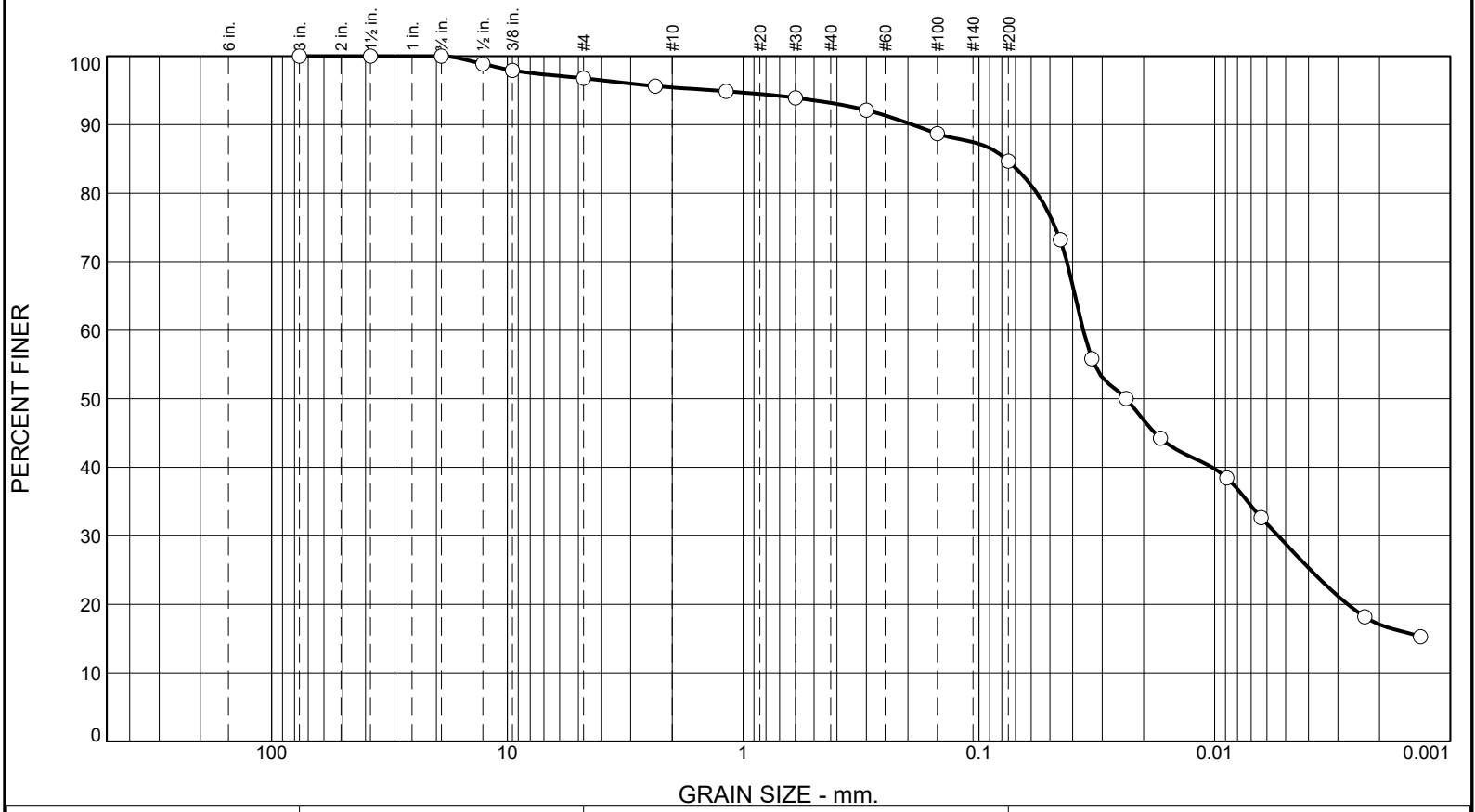
NoorzayGeo

Client: Mr. Donald Younger
Project: 7026 Oxnard Avenue, La Conchita

Project No: 23054 **Figure**

Particle Size Distribution Report

ASTM D422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	3.2	1.4	2.2	8.5	67.6	17.1

Test Results (ASTM D422)

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
3	100.0			
1.5	100.0			
.75	100.0			
0.50	98.9			
.375	97.9			
#4	96.8			
#8	95.6			
#16	94.9			
#30	93.9			
#50	92.1			
#100	88.7			
#200	84.7			
0.0452 mm.	73.2			
0.0332 mm.	55.8			
0.0237 mm.	50.0			
0.0170 mm.	44.2			
0.0089 mm.	38.4			
0.0063 mm.	32.7			
0.0023 mm.	18.2			
0.0013 mm.	15.3			

* (no specification provided)

Material Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.1918 D_{85}= 0.0768 D_{60}= 0.0361
D_{50}= 0.0237 D_{30}= 0.0054 D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= AASHTO=

Test Remarks

Sample Number: S-2 **Depth:** 5 **Sample Date:**

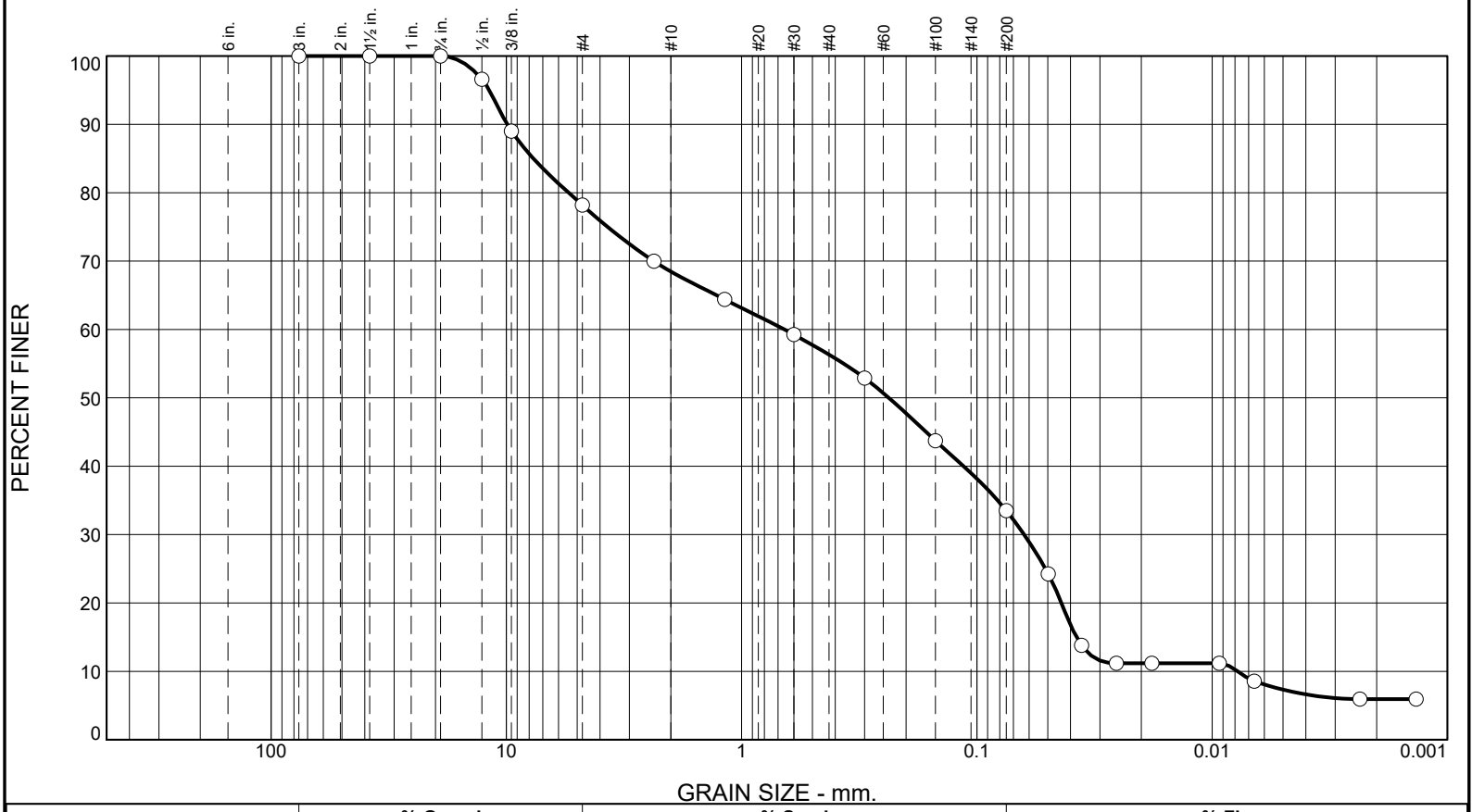
NoorzayGeo

Client: Mr. Donald Younger
Project: 7026 Oxnard Avenue, La Conchita

Project No: 23054 **Figure**

Particle Size Distribution Report

ASTM D422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	21.8	9.7	12.2	22.8	27.6	5.9

Test Results (ASTM D422)

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
3	100.0			
1.5	100.0			
.75	100.0			
0.5	96.6			
.375	89.0			
#4	78.2			
#8	70.0			
#16	64.4			
#30	59.2			
#50	52.9			
#100	43.7			
#200	33.5			
0.0497 mm.	24.3			
0.0359 mm.	13.8			
0.0255 mm.	11.2			
0.0181 mm.	11.2			
0.0093 mm.	11.2			
0.0066 mm.	8.6			
0.0024 mm.	5.9			
0.0014 mm.	5.9			

* (no specification provided)

Material Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 9.9356 D_{85}= 7.6741 D_{60}= 0.6577
D_{50}= 0.2368 D_{30}= 0.0630 D_{15}= 0.0378
D_{10}= 0.0078 C_u= 84.41 C_c= 0.77

Classification

USCS= AASHTO=

Test Remarks

Sample Number: S-2 **Depth:** 10 **Sample Date:**

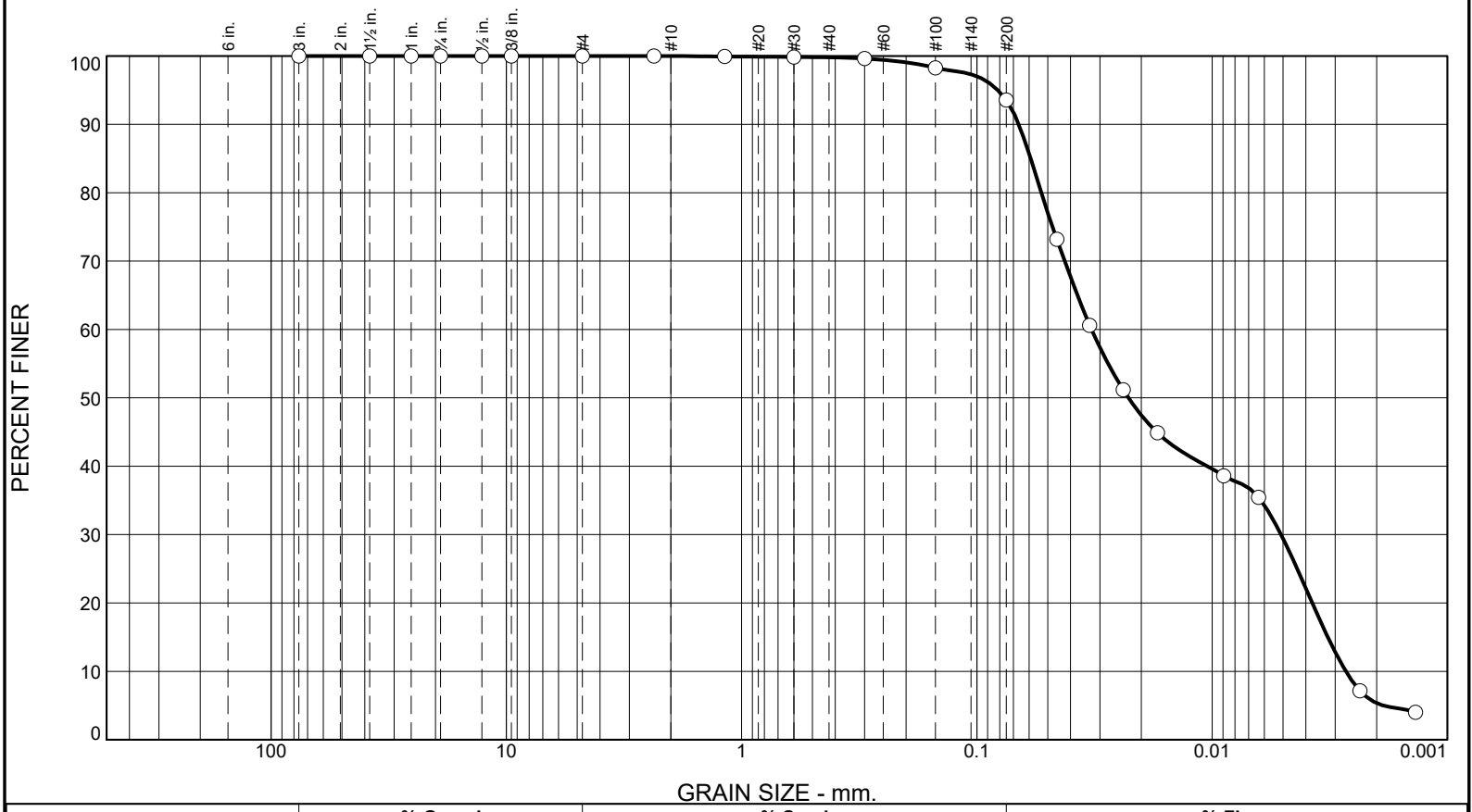
NoorzayGeo

Client: Mr. Donald Younger
Project: 7026 Oxnard Avenue, La Conchita

Project No: 23054 **Figure**

Particle Size Distribution Report

ASTM D422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.2	6.2	88.3	5.3

Test Results (ASTM D422)

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
3	100.0			
1.5	100.0			
1	100.0			
.75	100.0			
0.5	100.0			
.375	100.0			
#4	100.0			
#8	100.0			
#16	99.9			
#30	99.8			
#50	99.6			
#100	98.3			
#200	93.6			
0.0458 mm.	73.2			
0.0332 mm.	60.6			
0.0239 mm.	51.2			
0.0171 mm.	44.9			
0.0089 mm.	38.6			
0.0063 mm.	35.5			
0.0024 mm.	7.2			
0.0014 mm.	4.0			

* (no specification provided)

Material Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.0664 D_{85}= 0.0591 D_{60}= 0.0326
D_{50}= 0.0227 D_{30}= 0.0051 D_{15}= 0.0032
D_{10}= 0.0027 C_u= 12.06 C_c= 0.29

Classification

USCS= AASHTO=

Test Remarks

Sample Number: S-2 **Depth:** 13.5 **Sample Date:**

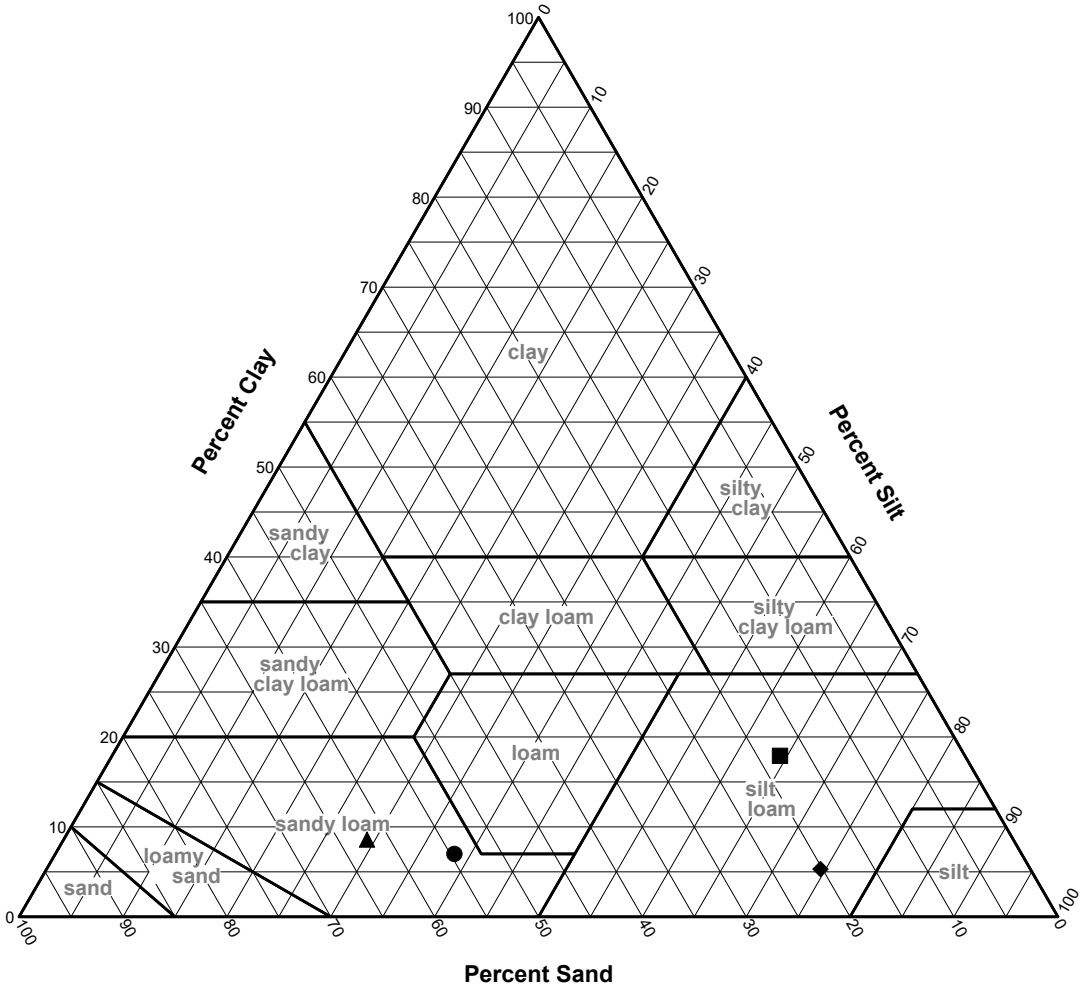
NoorzayGeo

Client: Mr. Donald Younger

Project: 7026 Oxnard Avenue, La Conchita

Project No: 23054 **Figure**

USDA Soil Classification



SOIL DATA

	Source	Sample No.	Depth	Percentages From Material Passing a #10 Sieve			Classification
				Sand	Silt	Clay	
●		S-2	1.5	54.6	38.5	7.0	Sandy loam
■		S-2	5	17.8	64.3	17.9	Silt loam
▲		S-2	10	62.2	29.2	8.6	Sandy loam
◆		S-2	13.5	20.2	74.5	5.3	Silt loam

NoorzayGeo

Client: Mr. Donald Younger

Project: 7026 Oxnard Avenue, La Conchita

Project No.: 23054 **Figure**

NoorzayGeo

In-Situ Moisture Content and Dry Density

ASTM D2937

Job Name:	7026 Oxnard Avenue	Tested By :	M. Noorzay
Job Number:	23054	Date Completed:	8/28/23
Sampled By:	M. Noorzay	Input By:	M. Noorzay
Date Sampled:	8/21/23		

Boring Number	B-2	B-2	B-2	B-2		
Sample Depth (ft)	5	10	15	20		
Sample Number	1	2	3	4		
Sample Type	RING	RING	RING	RING		
USCS Description	SM/SC	CL	ML/CL	ML/CL		
Number of Rings	3	3	3	3		
Total Weight of Rings + Soil (gms)	477.5	554.4	529.8	534.7		
Volume of Rings(ft^3)(1r = 0.0027 ft^3)	7.972E-03	7.972E-03	7.972E-03	7.972E-03		
Weight of Rings (gms)(1r = 45.497 g)	136.5	136.5	136.5	136.5		
Weight of Soil (gms)	341.0	417.9	393.3	398.2		
Wet Density (pcf)	94.3	115.6	108.8	110.1		
% Saturation (Assumed Gs=2.7)	52.5	78.8	73.6	79.7		
Container Number	1	2	3	4		
Tare (gms)	0.0	0.0	0.0	0.0		
Wet Soil + Tare (gms)	250.0	250.0	250.0	250.0		
Dry Soil + Tare (gms)	202.5	202.8	198.6	194.5		
Weight of Water (gms)	47.5	47.2	51.4	55.5		
Water Content (%)	23.5	23.3	25.9	28.5		
Dry Density (pcf)	76.4	93.7	86.4	85.7		

NoorzayGeo

No. 200 Wash

ASTM D 1140

Job Name:	7026 Oxnard Avenue	Tested By :	M. Noorzay
Job Number:	23054	Date Completed:	8/28/23
Sampled By:	M. Noorzay	Input By:	M. Noorzay
Date Sampled:	8/21/23		

Boring No.	Depth (ft.)	B = Original Dry Mass (g)	C = Wash Dry Mass (g)	A = % Passing #200	USCS
P-1	0-4	213.5	139.3	34.8	SM
P-2	0-4	213	148.6	30.2	SM
P-3	0-4	217	148.8	31.4	SM
P-3	5-9	199.2	100.8	49.4	SM/SC
P-4	0-4	207.4	139.3	32.8	SM
B-1	5	184.6	93.3	49.5	SC
B-1	10	118.9	28.2	76.3	CL
B-1	15	166.6	27.3	83.6	CL
B-1	20	162.5	7.1	95.6	CL
B-1	25	173	81.7	52.8	ML
B-1	30	208.5	192.5	7.7	SP-SM
B-1	35	211.3	23.6	88.8	ML
B-1	40	216.9	27.4	87.4	ML
B-1	45	200.3	30.2	84.9	ML
B-1	50	207.1	30.5	85.3	ML

Calculation for Percent of Material Finer than 75-µm (No. 200) Sieve by Washing:

$$A = \frac{B - C}{B} \times 100$$

Where:

A= Percent of Material Finer than 75-µm (No.200) Sieve by Washing
B= Original Dry Mass of Sample (g)
C= Dry Mass of Sample after Washing (g)

Note: Report the material passing the 75-µm (No. 200) sieve by washing to the nearest 0.1%.
If greater than 10%, report to the nearest 1%.

NoorzayGeo

Expansion Index

ASTM D4829

Job Name:	7026 Oxnard Avenue	Tested By :	M. Noorzay
Job Number:	23054	Date Completed:	8/28/23
Sampled By:	M. Noorzay	Input By:	M. Noorzay
Date Sampled:	8/21/23	Sample Number:	B-1 at 0-5'

SAMPLE CONDITION	Initial	Initial	Initial
Wt. Specimen & Ring (gr)	531.1		
Wt. of ring (gr)	179.7		
Wt. Specimen (gr)	351.4		
Wt. Specimen (lbs)	0.77308		
Specimen diameter (in)	4		
Init. Spec. Height (in)	1		
Volume of ring (cu. Ft.)	0.007272		
Moist Density (pcf)	106.31		
Wt. moist soil+tare (gr)	200		
Wt. dry soil+tare (gr)	171.8		
Wt. of tare (gr)	0		
Wt. dry soil (gr)	171.8		
Wt. of water (gr)	28.2		
M/C (%)	16.4		
DRY DENSITY (pcf)	91.32		
% Saturation* (48-52)	52		

Final Moisture		
	Start (g)	380.6
	End (g)	289.3
	%	31.6

Date	Time	Dial
8/27/23	6:00PM	0.453
8/27/23	6:10PM	0.453
8/27/23	6:30PM	0.476
8/28/23	6:00PM	0.478

Expansion Index:	25
Expansion Potential:	**LOW**

Expansion Index	Potential Expansion
0-20	Very Low
21-50	Low
51-90	Medium
91-130	High
Above- 130	Very High

NoorzayGeo

Modified Proctor

ASTM D1557

Job Name:	7026 Oxnard Avenue	Tested By :	M. Noorzay
Job Number:	23054	Date Completed:	8/28/23
Sampled By:	M. Noorzay	Input By:	M. Noorzay
Date Sampled:	8/21/23	Sample Number:	B-1 @ 0-5'
Sample Description:	SM/SC		

Trial Number	1	2	3	4	5
Water Added (%)	2	4	6	8	
Weight of Soil + Mold (grams)	5760.7	5815.2	5797.0	5760.7	
Weight of Mold (grams)	4109.6	4109.6	4109.6	4109.6	
Weight of Wet Soil (grams)	1651.1	1705.6	1687.4	1651.1	
Wet Density (pcf)	109.2	112.8	111.6	109.2	

Container ID	1	2	3	4	
Wet Soil + Container (grams)	200.0	200.0	200.0	200.0	
Dry Soil + Container (grams)	168.1	164.9	161.6	159.7	
Weight of Container (grams)	0.0	0.0	0.0	0.0	
Weight of Dry Soil (grams)	168.1	164.9	161.6	159.7	
Weight of Water (grams)	31.9	35.1	38.4	40.3	
Moisture Content (%)	19.0	21.3	23.8	25.2	
Dry Density (pcf)	91.8	93.0	90.2	87.2	

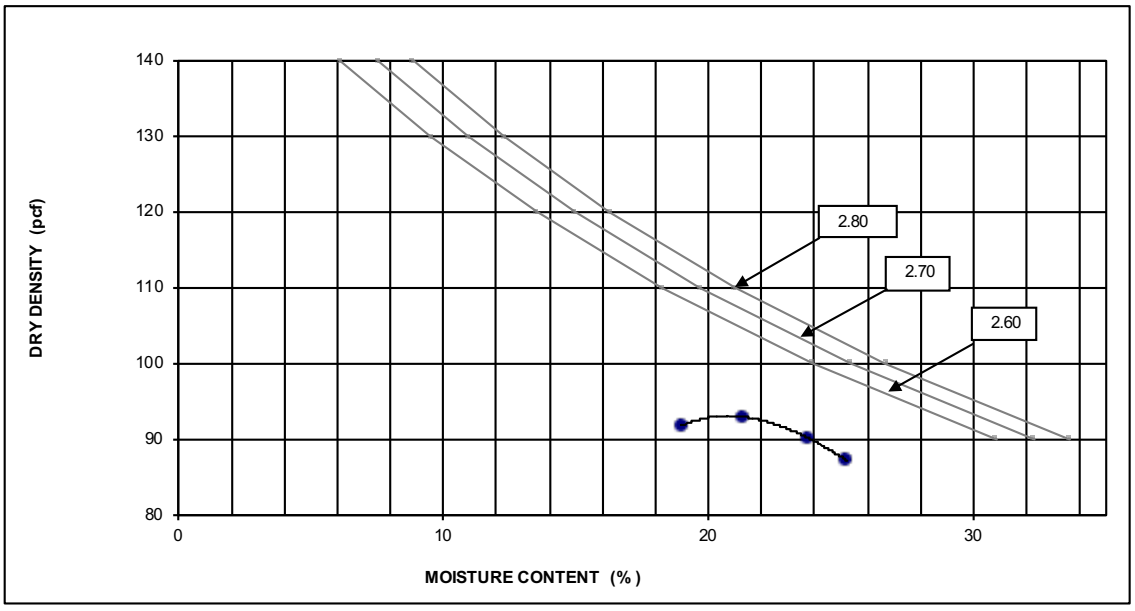
Compaction Method	
ASTM D1557	X
ASTM D698	

Method	B
Mold Size	4
Mold Vol.	0.0333333

Preparation Method	
Moist	X
Dry	

Maximum Dry Density (pcf)	**93.0**
Maximum Dry Density w/ Rock Correction (pcf)	**98.6**
Optimum Moisture Content (%)	**21.3**
Optimum Moisture Content w/ Rock Correction (%)	**20.0**

METHOD B
Percent Retained on 3/8" Sieve: 13%
Mold : 4 in. (101.6 mm) diameter
Layers : 5 (Five)
Blows per layer : 25 (Twenty-five)



NoorzayGeo

Direct Shear

ASTM D3080

Job Name:	7026 Oxnard Avenue	Tested By :	M. Noorzay
Job Number:	23054	Date Completed:	8/28/23
Sampled By:	M. Noorzay	Input By:	M. Noorzay
Date Sampled:	8/21/23	Sample Number:	B-1 at 0-5'
Sample Description:	SM/SC		

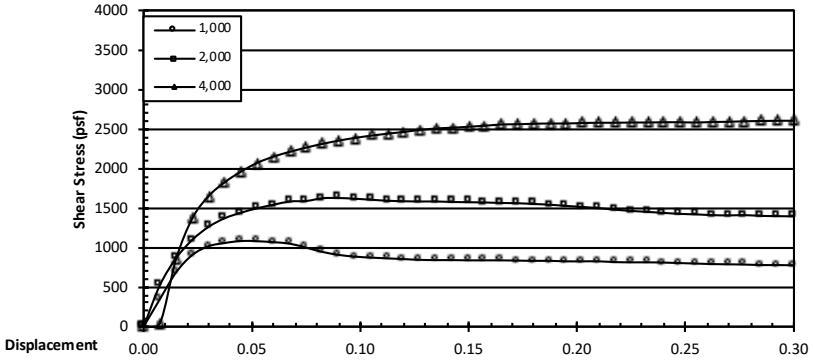
Samples Tested	1	2	3
Boring ID	B-1	B-1	B-1
Depth (in/ft.)	0-5	0-5	0-5

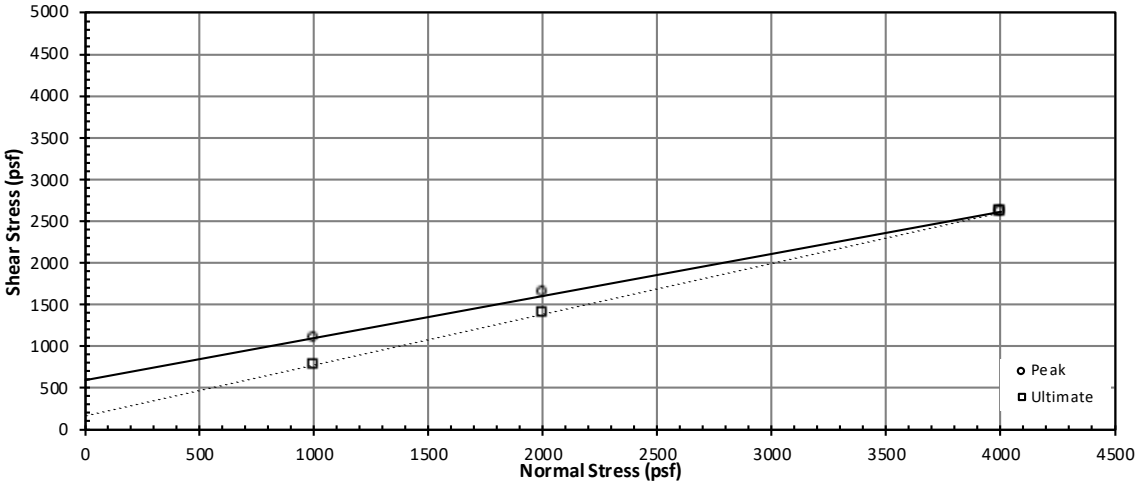
	Peak	Ultimate
Friction, phi (Deg)	26.8	31.3
Cohesion (psf)	595.2	171.2

Sample Type:	RM
Method:	Drained
Consolidation:	Yes
Saturation:	Yes
Strain Rate (in/min):	0.005

Normal Stress (psf)	1000	2000	4000
Maximum Shear Stress (psf)	1084	1627	2604
Ultimate Shear Stress (psf)	776	1395	2604
Soil Type	SM/SC	SM/SC	SM/SC

Shear Stress v. Displacement





SIEVE ANALYSIS

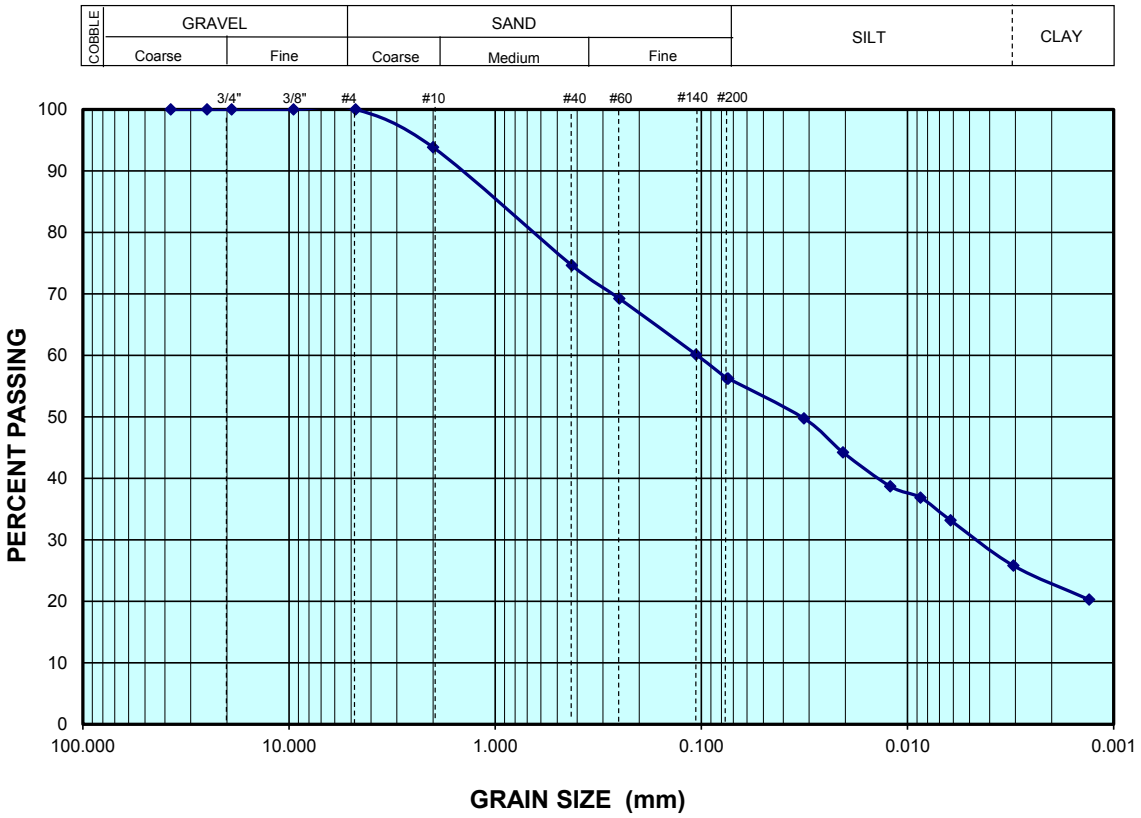
Project: 7026 Oxnard Avenue
Site: La Conchita, CA
Tech: J.Cromer

Project No. 23-1239
Date: 9/27/2023

Sample B-3 @ 1.5'
Material Sandy Lean CLAY with siltstone/claystone particles (CL)

Test Specification: ASTM D-422

Sieve	Mesh Opening (mm)	Percent Passing (%)
1 1/2 in	37.50	100.0 %
1 in	25.00	100.0 %
3/4 in	19.000	100.0 %
3/8 in	9.500	100.0 %
No. 4	4.750	100.0 %
No. 10	2.000	93.8 %
No. 40	0.425	74.6 %
No. 60	0.250	69.2 %
No. 140	0.106	60.1 %
No. 200	0.075	56.2 %
0.074 mm	0.074	56.2 %
0.0318 mm	0.0318	49.8 %
0.0206 mm	0.0206	44.2 %
0.0121 mm	0.0121	38.7 %
0.0086 mm	0.0086	36.9 %
0.0062 mm	0.0062	33.2 %
0.0031 mm	0.0031	25.8 %
0.0013 mm	0.0013	20.3 %



Rev. 9-22-2020

Geo-Advantec, Inc.		SIEVE ANALYSIS	FIGURE
PROJECT NO.	23-1239	7026 Oxnard Avenue - La Conchita, CA	
DATE	9/27/2023	Noorzay Geotechnical Project No.: 23054	

SIEVE ANALYSIS

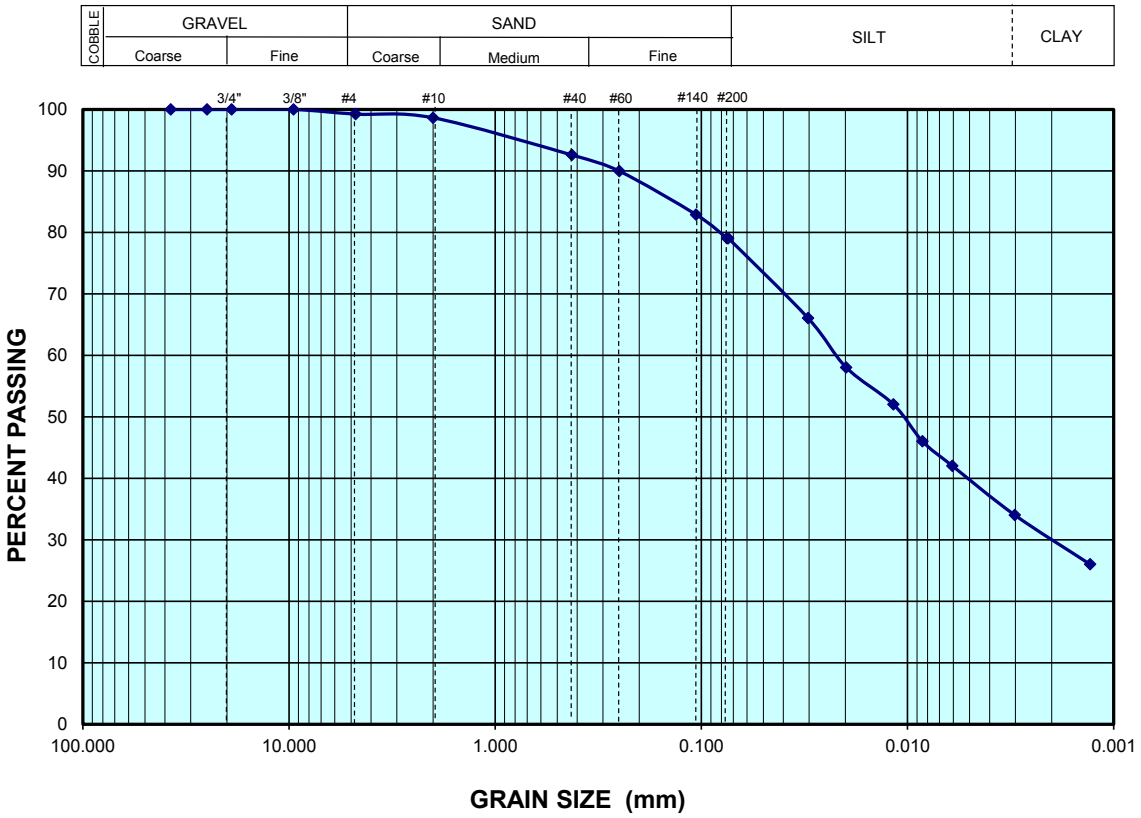
Project: 7026 Oxnard Avenue
Site: La Conchita, CA
Tech: J.Cromer

Project No. 23-1239
Date: 9/27/2023

Sample B-3 @ 6.5'
Material Lean CLAY with Sand and siltstone/claystone particles (CL)

Test Specification: ASTM D-422

Sieve	Mesh Opening (mm)	Percent Passing (%)
1 1/2 in	37.50	100.0 %
1 in	25.00	100.0 %
3/4 in	19.000	100.0 %
3/8 in	9.500	100.0 %
No. 4	4.750	99.2 %
No. 10	2.000	98.6 %
No. 40	0.425	92.6 %
No. 60	0.250	90.0 %
No. 140	0.106	82.9 %
No. 200	0.075	79.1 %
0.074 mm	0.074	79.1 %
0.0304 mm	0.0304	66.1 %
0.0198 mm	0.0198	58.0 %
0.0117 mm	0.0117	52.0 %
0.0085 mm	0.0085	46.0 %
0.0061 mm	0.0061	42.0 %
0.0030 mm	0.0030	34.0 %
0.0013 mm	0.0013	26.0 %



Rev. 9-22-2020

Geo-Advantec, Inc.		SIEVE ANALYSIS	FIGURE
PROJECT NO.	23-1239	7026 Oxnard Avenue - La Conchita, CA	
DATE	9/27/2023	Noorzay Geotechnical Project No.: 23054	

SIEVE ANALYSIS

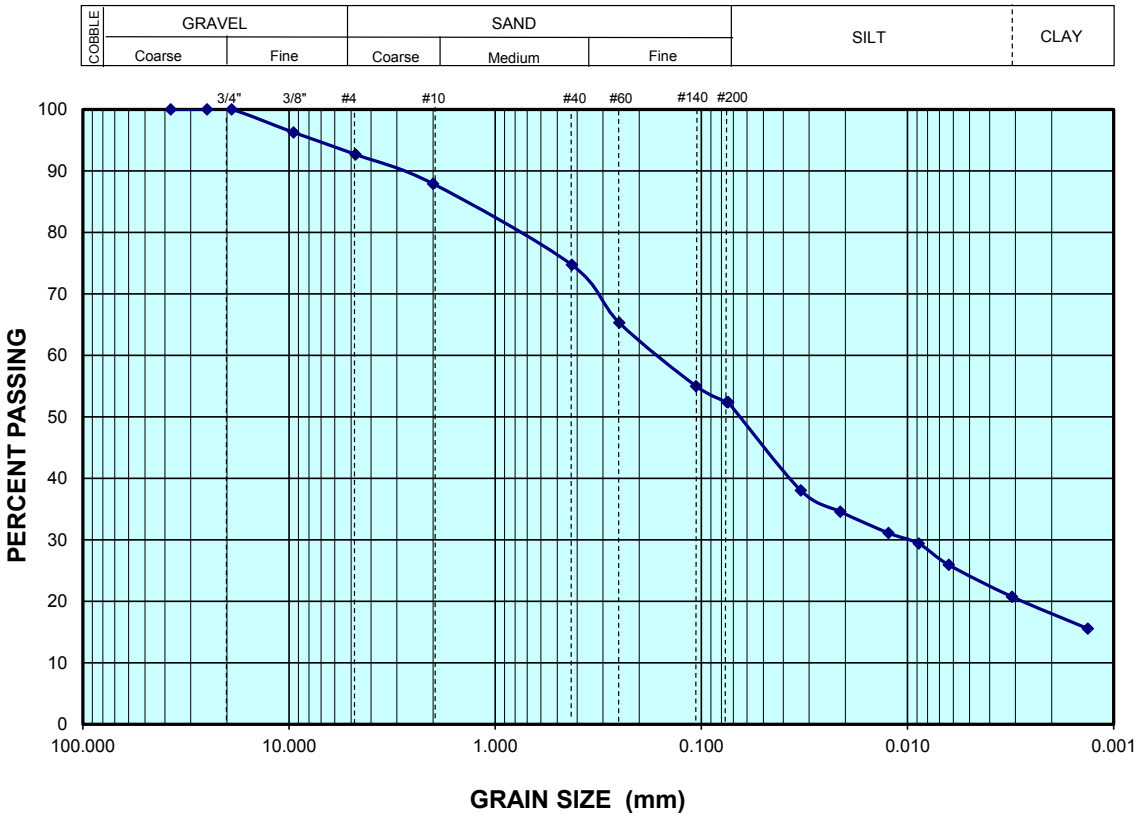
Project: 7026 Oxnard Avenue
Site: La Conchita, CA
Tech: J.Cromer

Project No. 23-1239
Date: 9/27/2023

Sample B-3 @ 11.5'
Material Sandy Lean CLAY with siltstone/claystone particles (CL)

Test Specification: ASTM D-422

Sieve	Mesh Opening (mm)	Percent Passing (%)
1 1/2 in	37.50	100.0 %
1 in	25.00	100.0 %
3/4 in	19.000	100.0 %
3/8 in	9.500	96.3 %
No. 4	4.750	92.7 %
No. 10	2.000	87.9 %
No. 40	0.425	74.7 %
No. 60	0.250	65.3 %
No. 140	0.106	55.0 %
No. 200	0.075	52.4 %
0.074 mm	0.074	52.4 %
0.0329 mm	0.0329	38.0 %
0.0212 mm	0.0212	34.6 %
0.0124 mm	0.0124	31.1 %
0.0088 mm	0.0088	29.4 %
0.0063 mm	0.0063	25.9 %
0.0031 mm	0.0031	20.7 %
0.0013 mm	0.0013	15.6 %



Rev. 9-22-2020

Geo-Advantec, Inc.		SIEVE ANALYSIS	FIGURE
PROJECT NO.	23-1239	7026 Oxnard Avenue - La Conchita, CA	
DATE	9/27/2023	Noorzay Geotechnical Project No.: 23054	

SIEVE ANALYSIS

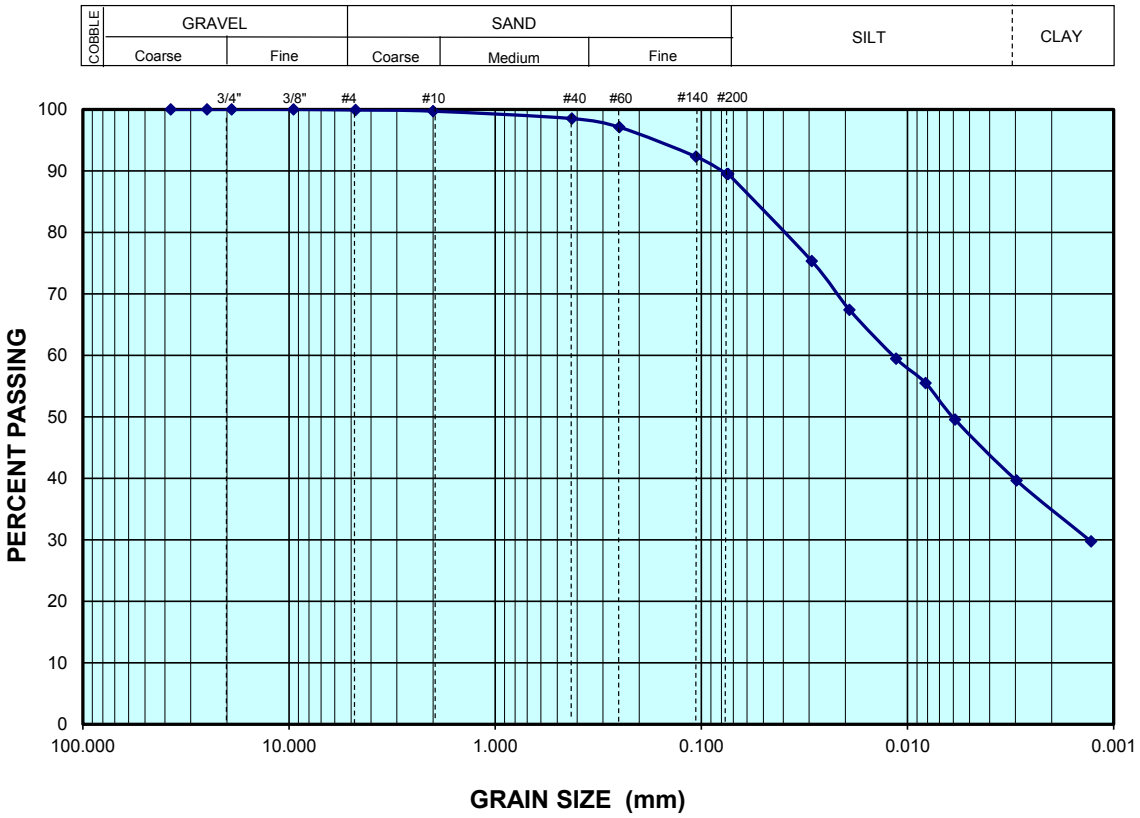
Project: 7026 Oxnard Avenue
Site: La Conchita, CA
Tech: J.Cromer

Project No. 23-1239
Date: 9/27/2023

Sample B-3 @ 15'
Material Lean CLAY with siltstone/claystone particles (CL)

Test Specification: ASTM D-422

Sieve	Mesh Opening (mm)	Percent Passing (%)
1 1/2 in	37.50	100.0 %
1 in	25.00	100.0 %
3/4 in	19.000	100.0 %
3/8 in	9.500	100.0 %
No. 4	4.750	99.9 %
No. 10	2.000	99.7 %
No. 40	0.425	98.5 %
No. 60	0.250	97.1 %
No. 140	0.106	92.3 %
No. 200	0.075	89.5 %
0.074 mm	0.074	89.5 %
0.0291 mm	0.0291	75.3 %
0.0191 mm	0.0191	67.4 %
0.0114 mm	0.0114	59.5 %
0.0082 mm	0.0082	55.5 %
0.0059 mm	0.0059	49.6 %
0.0030 mm	0.0030	39.6 %
0.0013 mm	0.0013	29.7 %



Rev. 9-22-2020

Geo-Advantec, Inc.		SIEVE ANALYSIS	FIGURE
PROJECT NO.	23-1239	7026 Oxnard Avenue - La Conchita, CA	
DATE	9/27/2023	Noorzay Geotechnical Project No.: 23054	

SIEVE ANALYSIS

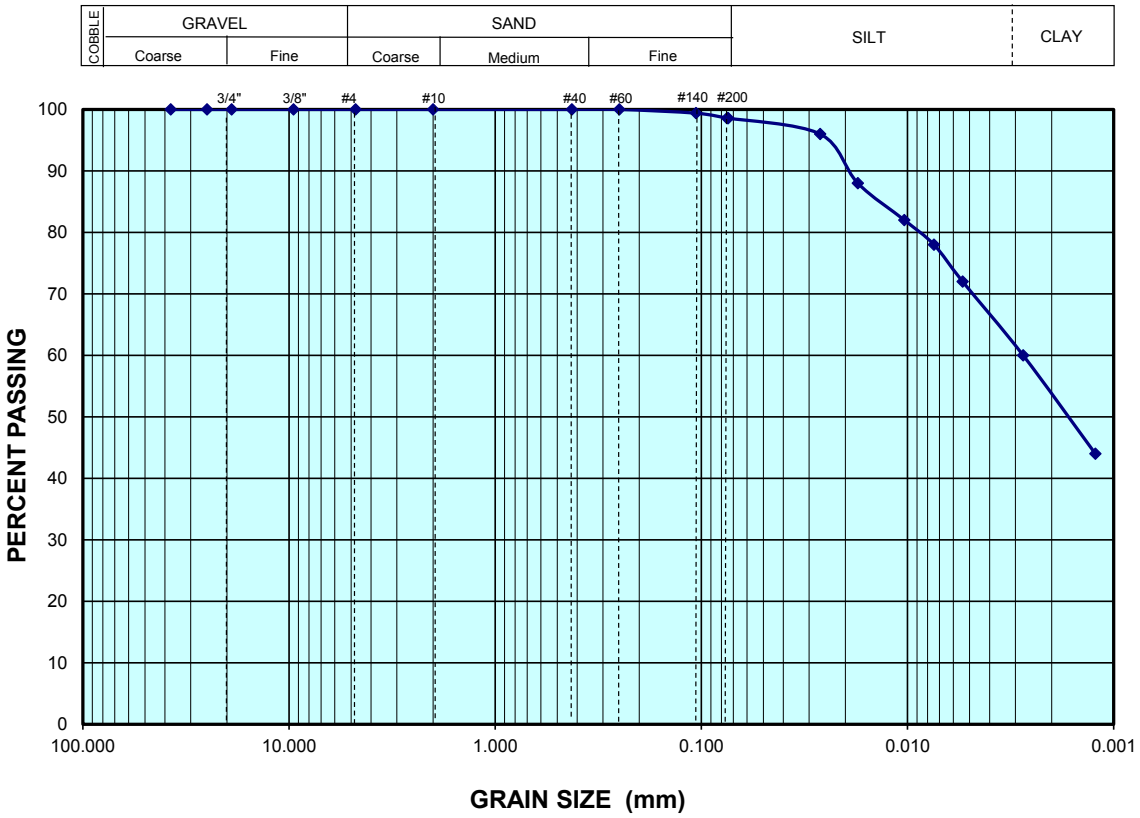
Project: 7026 Oxnard Avenue
Site: La Conchita, CA
Tech: J.Cromer

Project No. 23-1239
Date: 9/27/2023

Sample B-3 @ 20'
Material Lean CLAY (CL)

Test Specification: ASTM D-422

Sieve	Mesh Opening (mm)	Percent Passing (%)
1 1/2 in	37.50	100.0 %
1 in	25.00	100.0 %
3/4 in	19.000	100.0 %
3/8 in	9.500	100.0 %
No. 4	4.750	100.0 %
No. 10	2.000	100.0 %
No. 40	0.425	100.0 %
No. 60	0.250	100.0 %
No. 140	0.106	99.4 %
No. 200	0.075	98.6 %
0.074 mm	0.074	98.6 %
0.0265 mm	0.0265	96.0 %
0.0174 mm	0.0174	88.0 %
0.0104 mm	0.0104	82.0 %
0.0074 mm	0.0074	78.0 %
0.0054 mm	0.0054	72.0 %
0.0027 mm	0.0027	60.0 %
0.0012 mm	0.0012	44.0 %



Rev. 9-22-2020

Geo-Advantec, Inc.		SIEVE ANALYSIS	FIGURE
PROJECT NO.	23-1239	7026 Oxnard Avenue - La Conchita, CA	
DATE	9/27/2023	Noorzay Geotechnical Project No.: 23054	

SIEVE ANALYSIS

Project: 7026 Oxnard Avenue
Site: La Conchita, CA
Tech: J.Cromer

Project No. 23-1239
Date: 9/27/2023

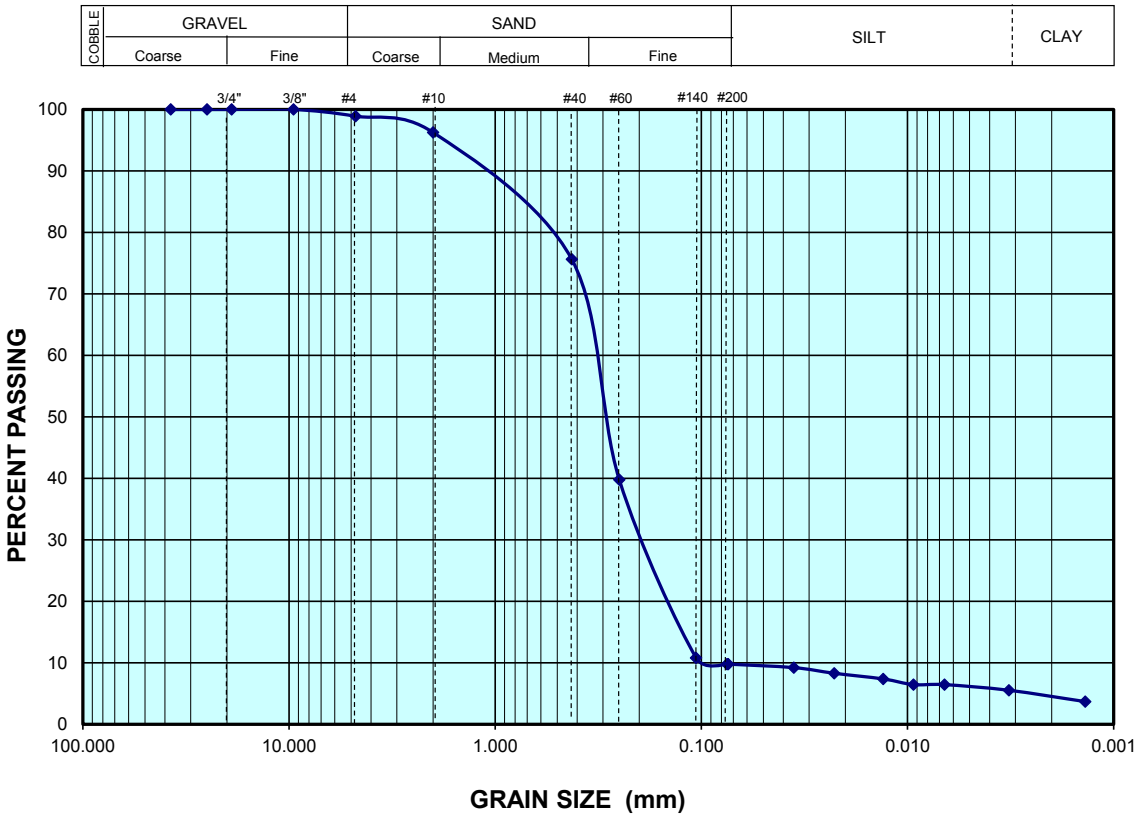
Sample B-3 @ 25'
Material Poorly-graded SAND with Silt (SP-SM)

Test Specification: ASTM D-422

Sieve	Mesh Opening (mm)	Percent Passing (%)
1 1/2 in	37.50	100.0 %
1 in	25.00	100.0 %
3/4 in	19.000	100.0 %
3/8 in	9.500	100.0 %
No. 4	4.750	98.9 %
No. 10	2.000	96.2 %
No. 40	0.425	75.6 %
No. 60	0.250	39.8 %
No. 140	0.106	10.8 %
No. 200	0.075	9.8 %
0.074 mm	0.074	9.8 %
0.0356 mm	0.0356	9.2 %
0.0226 mm	0.0226	8.3 %
0.0131 mm	0.0131	7.4 %
0.0094 mm	0.0094	6.5 %
0.0066 mm	0.0066	6.5 %
0.0032 mm	0.0032	5.5 %
0.0014 mm	0.0014	3.7 %

CC: 1.17

CU: 3.51



Rev. 9-22-2020

Geo-Advantec, Inc.		SIEVE ANALYSIS	FIGURE
PROJECT NO.	23-1239	7026 Oxnard Avenue - La Conchita, CA	
DATE	9/27/2023	Noorzay Geotechnical Project No.: 23054	

Soil Analysis Lab Results

Client: Noorzay Geotechnical Services, Inc.
Job Name: 7026 Oxnard Avenue, La Conchita
Client Job Number: NGS#23054
Project X Job Number: S230828G
August 29, 2023

	Method	ASTM D4327		ASTM D4327		ASTM G187		ASTM G51
Bore# / Description	**Depth**	**Sulfates** SO_4^{2-}		**Chlorides** Cl^-		**Resistivity** As Rec'd | Minimum		**pH**
	(ft)	(mg/kg)	(wt%)	(mg/kg)	(wt%)	(Ohm-cm)	(Ohm-cm)	
B-1 SM/SC	0-5	1,444.8	0.1445	14.6	0.0015	4,489	1,005	7.0

Cations and Anions, except Sulfide and Bicarbonate, tested with Ion Chromatography
mg/kg = milligrams per kilogram (parts per million) of dry soil weight
ND = 0 = Not Detected | NT = Not Tested | Unk = Unknown
Chemical Analysis performed on 1:3 Soil-To-Water extract
PPM = mg/kg (soil) = mg/L (Liquid)

Note: Sometimes a bad sulfate hit is a contaminated spot. Typical fertilizers are Potassium chloride, ammonium sulfate or ammonium sulfate nitrate (ASN). So this is another reason why testing full corrosion series is good because we then have the data to see if those other ingredients are present meaning the soil sample is just fertilizer-contaminated soil. This can happen often when the soil samples collected are simply surface scoops which is why it's best to dig in a foot, throw away the top and test the deeper stuff. Dairy farms are also notorious for these items.

APPENDIX D

PERCOLATION DATA

SEEPAGE PIT PERCOLATION TEST DATA

BORING NUMBER: S-2
LOT No: N/A
TRACT No: N/A

CLIENT: Mr. Donald Younger
PROJECT: 7026 Oxnard Avenue, La Conchita

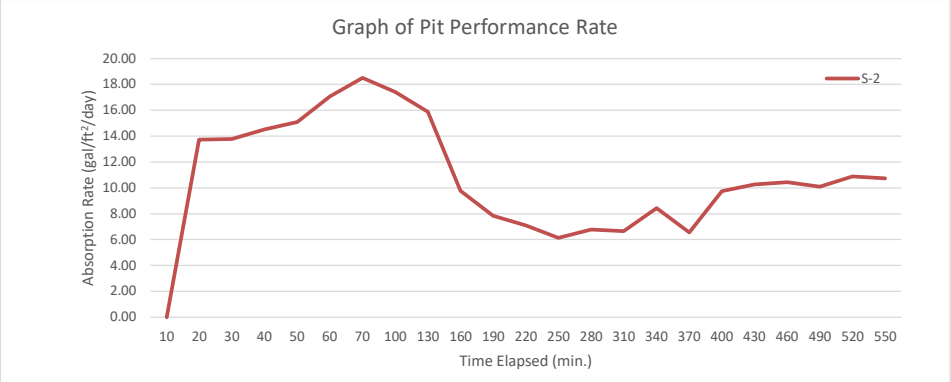
DATE OF DRILLING: July 12, 2024
DATE OF TESTING: July 13, 2024
DRILLED BY: MN
TESTED BY: MN

DEPTH BEFORE (ft.): 15.0
DEPTH AFTER (ft.): 15.0

PERC HOLE DIA. (ft.): 1.0

* Test holes were pre-soaked overnight, material was considered "non-sandy" for the purposes of percolation testing

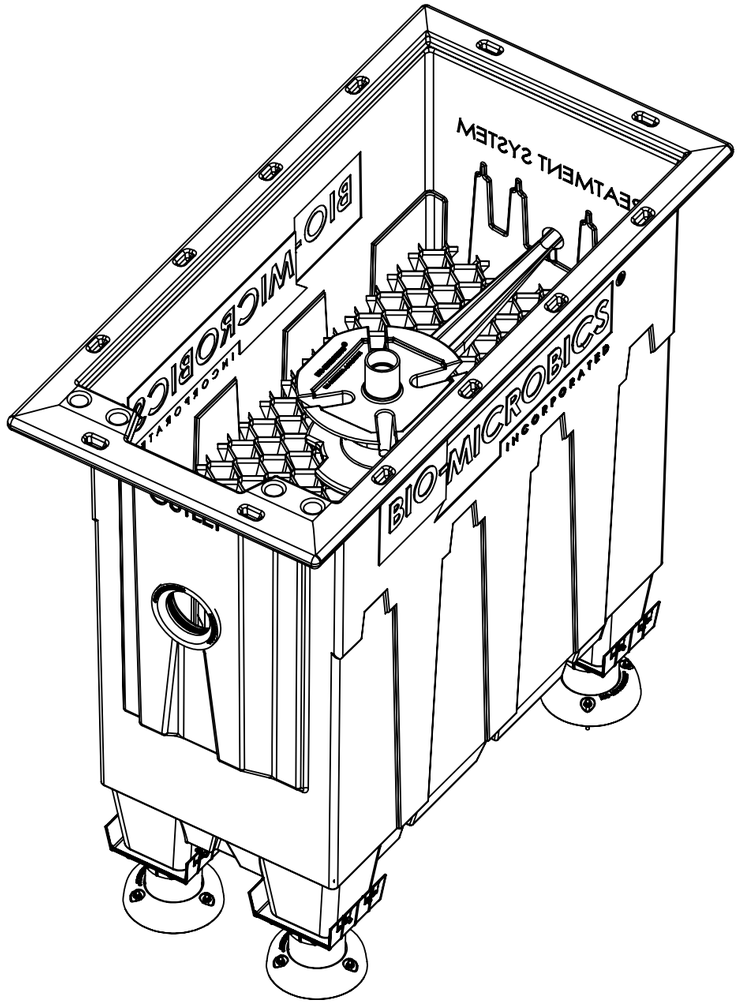
Time Interval (min.)	Total Elapsed Time (min.)	Initial Water Level (ft.)	Final Water Level (ft.)	Change in Water Level (ft.)	Initial Hole Depth (ft.)	Final Hole Depth (ft.)	Depth of water remaining for time period (d) (ft.)	Have (ft.)	Absorption Rate (gal/ft^2/day)
10	10	1.49	2.17	0.68	15.0	15.0	12.8	-	-
10	20	2.17	2.82	0.65	15.0	15.0	12.2	12.51	13.72
10	30	2.82	3.44	0.62	15.0	15.0	11.6	11.87	13.78
10	40	3.44	4.06	0.62	15.0	15.0	10.9	11.25	14.52
10	50	4.06	4.67	0.61	15.0	15.0	10.3	10.64	15.09
10	60	4.67	5.32	0.65	15.0	15.0	9.7	10.01	17.07
10	70	5.32	5.98	0.66	15.0	15.0	9.0	9.35	18.51
30	100	5.98	7.62	1.64	15.0	15.0	7.4	8.20	17.42
30	130	7.62	8.86	1.24	15.0	15.0	6.1	6.76	15.88
30	160	8.86	9.52	0.66	15.0	15.0	5.5	5.81	9.78
30	190	9.52	10.00	0.48	15.0	15.0	5.0	5.24	7.85
30	220	10.00	10.40	0.40	15.0	15.0	4.6	4.80	7.11
30	250	10.40	10.72	0.32	15.0	15.0	4.3	4.44	6.12
30	280	10.72	11.05	0.33	15.0	15.0	4.0	4.12	6.79
30	310	11.05	11.35	0.30	15.0	15.0	3.7	3.80	6.65
30	340	11.35	11.70	0.35	15.0	15.0	3.3	3.48	8.43
30	370	11.70	11.95	0.25	15.0	15.0	3.1	3.18	6.55
30	400	11.95	12.29	0.34	15.0	15.0	2.7	2.88	9.75
30	430	12.29	12.61	0.32	15.0	15.0	2.4	2.55	10.26
30	460	12.61	12.90	0.29	15.0	15.0	2.1	2.25	10.43
30	490	12.90	13.15	0.25	15.0	15.0	1.9	1.98	10.09
30	520	13.15	13.39	0.24	15.0	15.0	1.6	1.73	10.88
30	550	13.39	13.60	0.21	15.0	15.0	1.4	1.51	10.74
30	580	13.60	13.78	0.18	15.0	15.0	1.2	1.31	10.36
24 hr	1440	15.00	15.00						



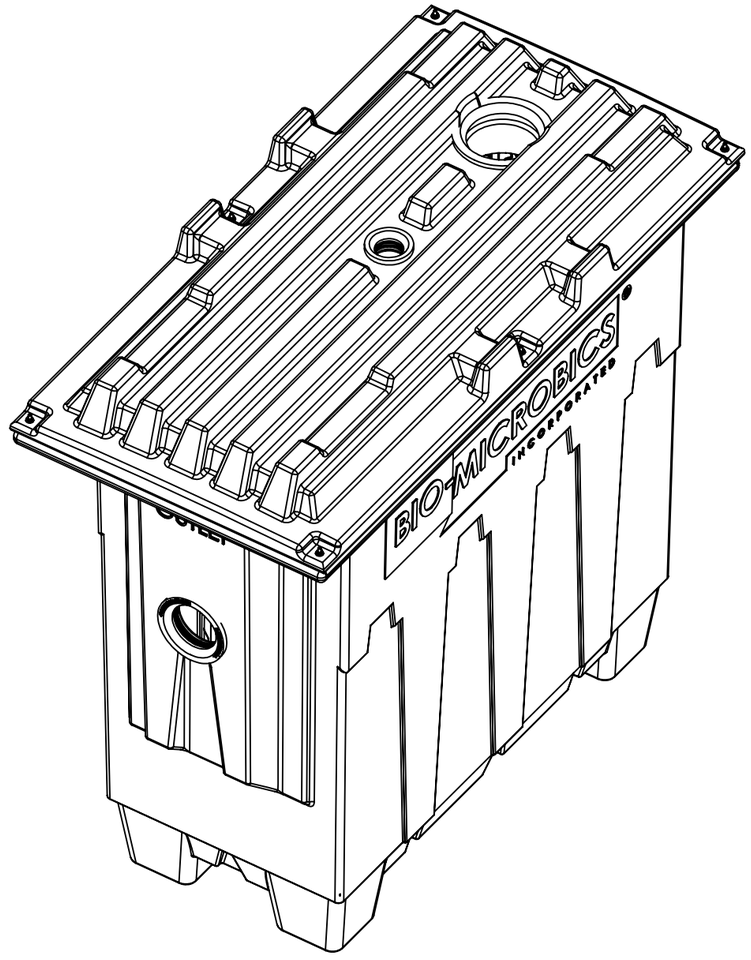
APPENDIX E

ATU SYSTEM

REVISIONS		
REV.	DESCRIPTION	DATE
G	UPDATED TO CURRENT	6/24/2022



MicroFAST® 0.5 WITH FEET



MicroFAST® 0.5 WITH LID

PROPRIETARY AND CONFIDENTIAL

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BIOMICROBICS, INC., ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BIOMICROBICS, INC. IS PROHIBITED.

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND TOLERANCES ARE AS FOLLOWS

X° ±1°
.X ± .50
.XX ± .25

DRAWN BY: ESG

DATE: 6/24/2022

APPROVED BY: MSH

APPROVED DATE: 6/24/2022

SHEET 1 OF 6

SCALE: 1:12

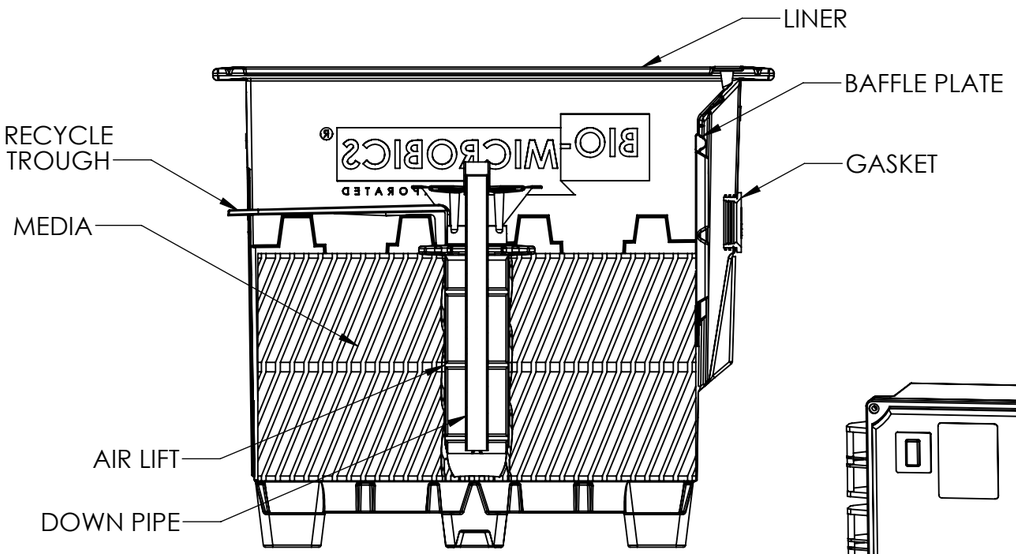
SIZE: B

BIO MICROBICS
BETTER WATER. BETTER WORLD.

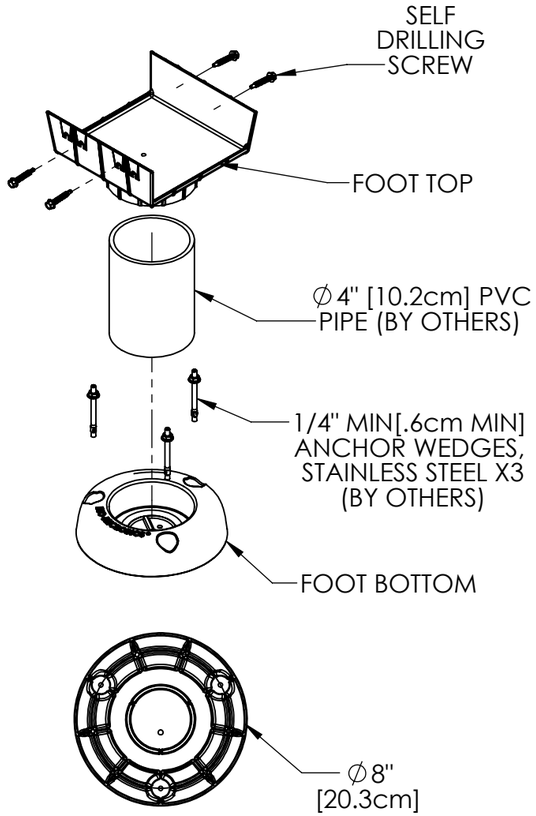
DESCRIPTION: MICROFAST 0.5 UNIT VIEWS

PART NUMBER: 600-FINMCF0.5

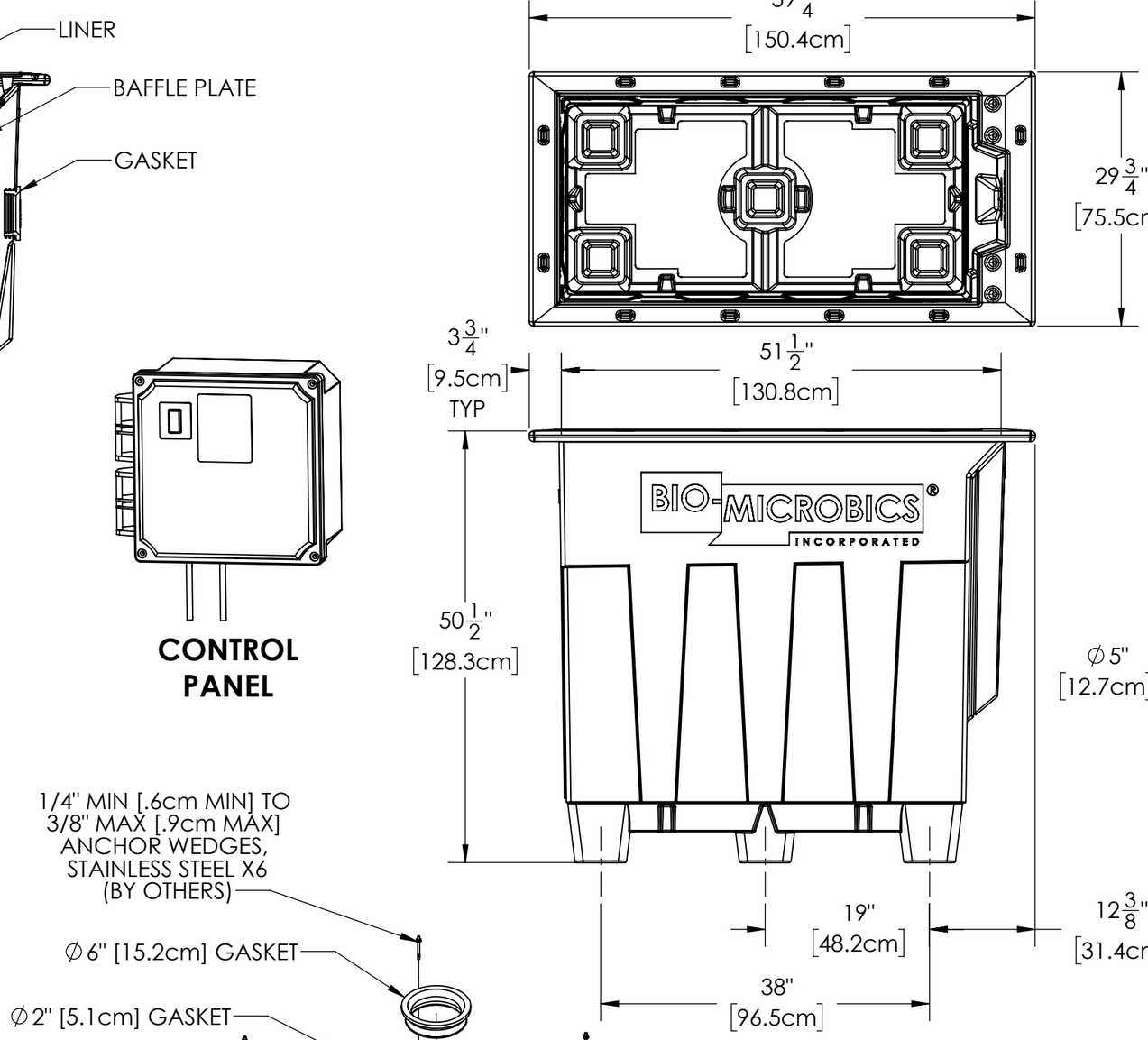
REV: G

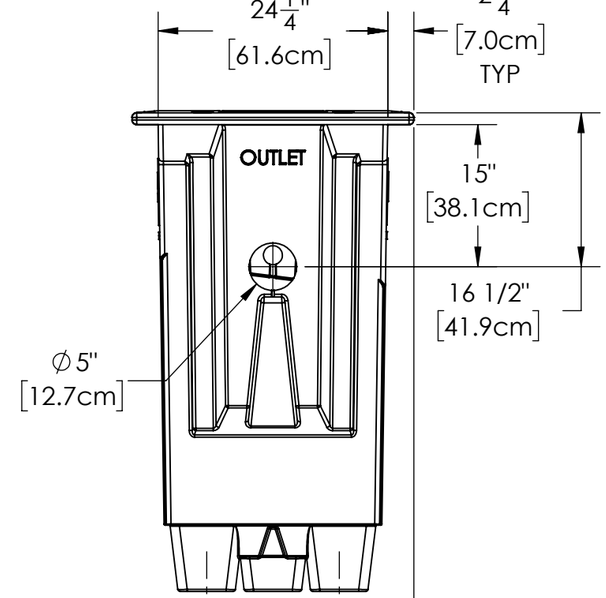


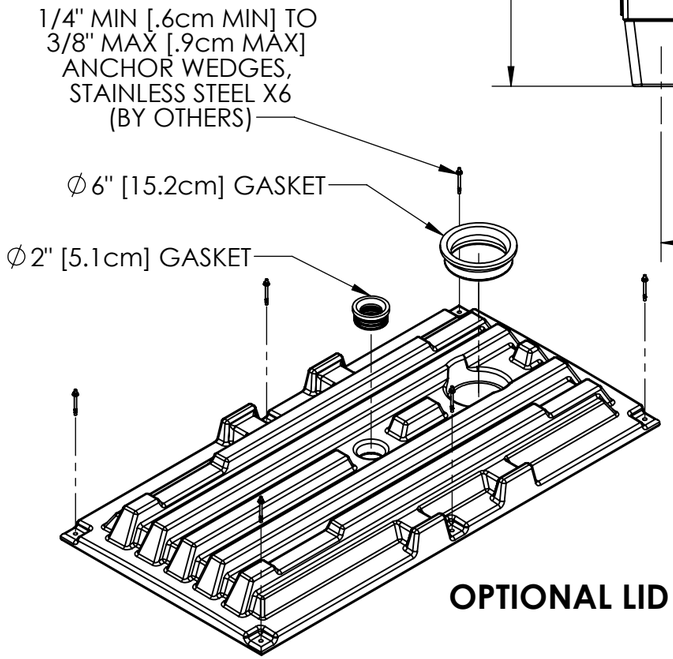
CONTROL PANEL



OPTIONAL FEET







OPTIONAL LID

NOTES:

1. ITEMS ARE DEPICTIONS AND MAY VARY IN APPEARANCE.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND TOLERANCES ARE AS FOLLOWS

X° ±1°
.X ± .50
.XX ± .25

DRAWN BY: ESG

DATE: 6/24/2022

APPROVED BY: MSH

APPROVED DATE: 6/24/2022

SHEET 2 OF 6

SCALE: N/A

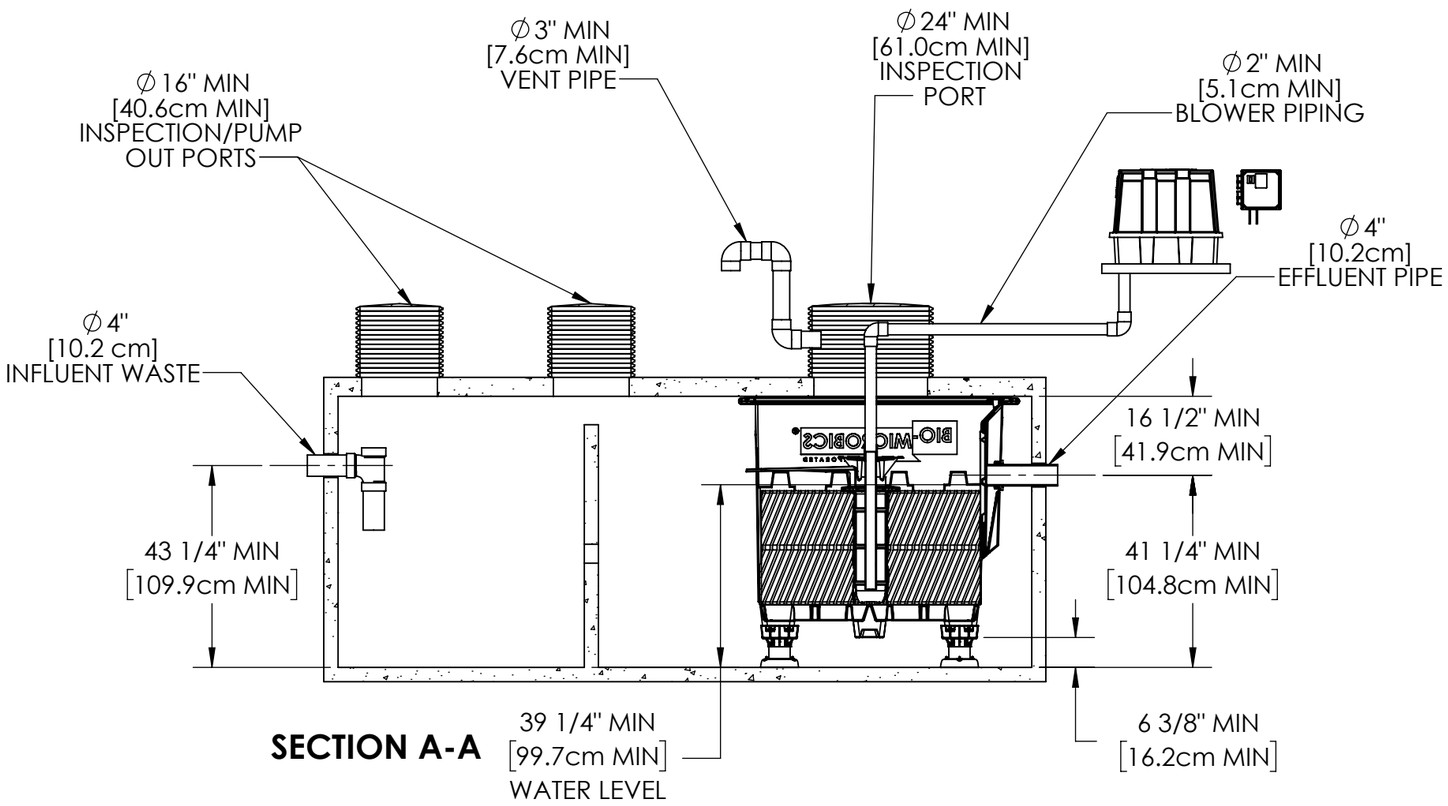
SIZE: B

BIO MICROBICS® BETTER WATER. BETTER WORLD.

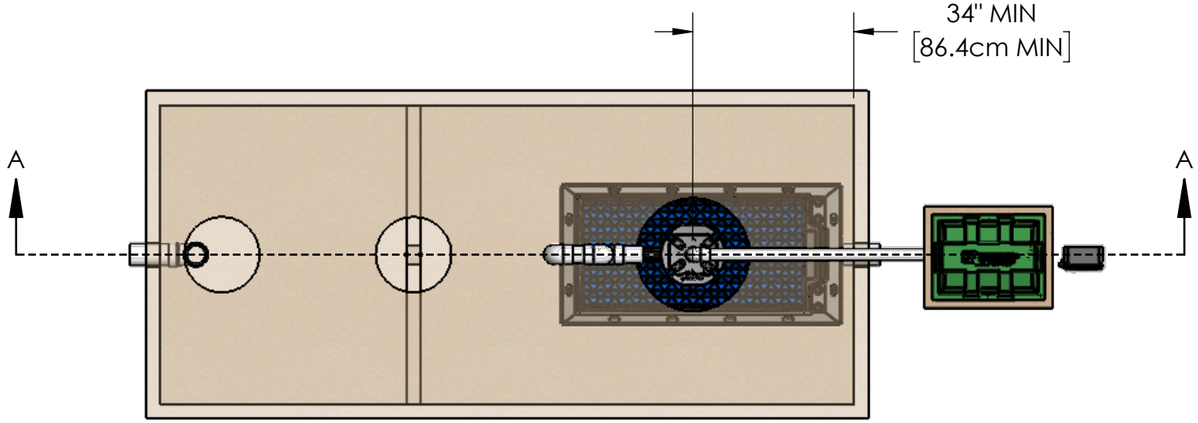
DESCRIPTION: MICROFAST 0.5 UNIT DETAILS

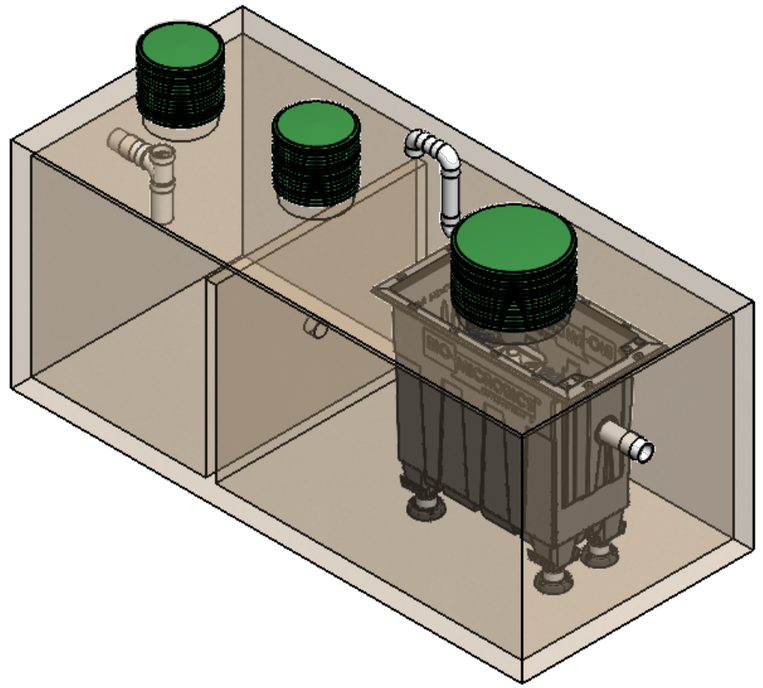
PART NUMBER: 600-FINMCF0.5

REV: G



SECTION A-A





NOTES:

1. AIRLINE PIPING TO FAST® SHOULD NOT EXCEED 100 FT (30M) TOTAL LENGTH AND SHOULD HAVE A MAXIMUM OF 4 ELBOWS IN THE PIPING SYSTEM. FOR DISTANCES GREATER THAN 100 FT (30M) CONSULT FACTORY.
2. IF LESS THAN THE SPECIFIED MINIMUMS ARE CONSIDERED NECESSARY, CONSULT FACTORY FOR GUIDANCE.
3. SPECIALIZED TREATMENT NEEDS MAY REQUIRE SPECIFIC FEATURES TO BE INCORPORATED INTO THE DESIGN. CONSULT FACTORY FOR GUIDANCE.
4. SOME ITEMS REMOVED FOR CLARITY.
5. MINIMUM OF 2.0in [5.1cm] INVERT IS NECESSARY BETWEEN THE INLET AND OUTLET OF EACH ZONE FOR GRAVITY FLOW SYSTEMS.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND TOLERANCES ARE AS FOLLOWS
X° ±1°
.X ± .50
.XX ± .25

DRAWN BY: ESG

DATE: 6/24/2022

APPROVED BY: MSH

APPROVED DATE: 6/24/2022

SHEET 3 OF 6

SCALE: 1:32

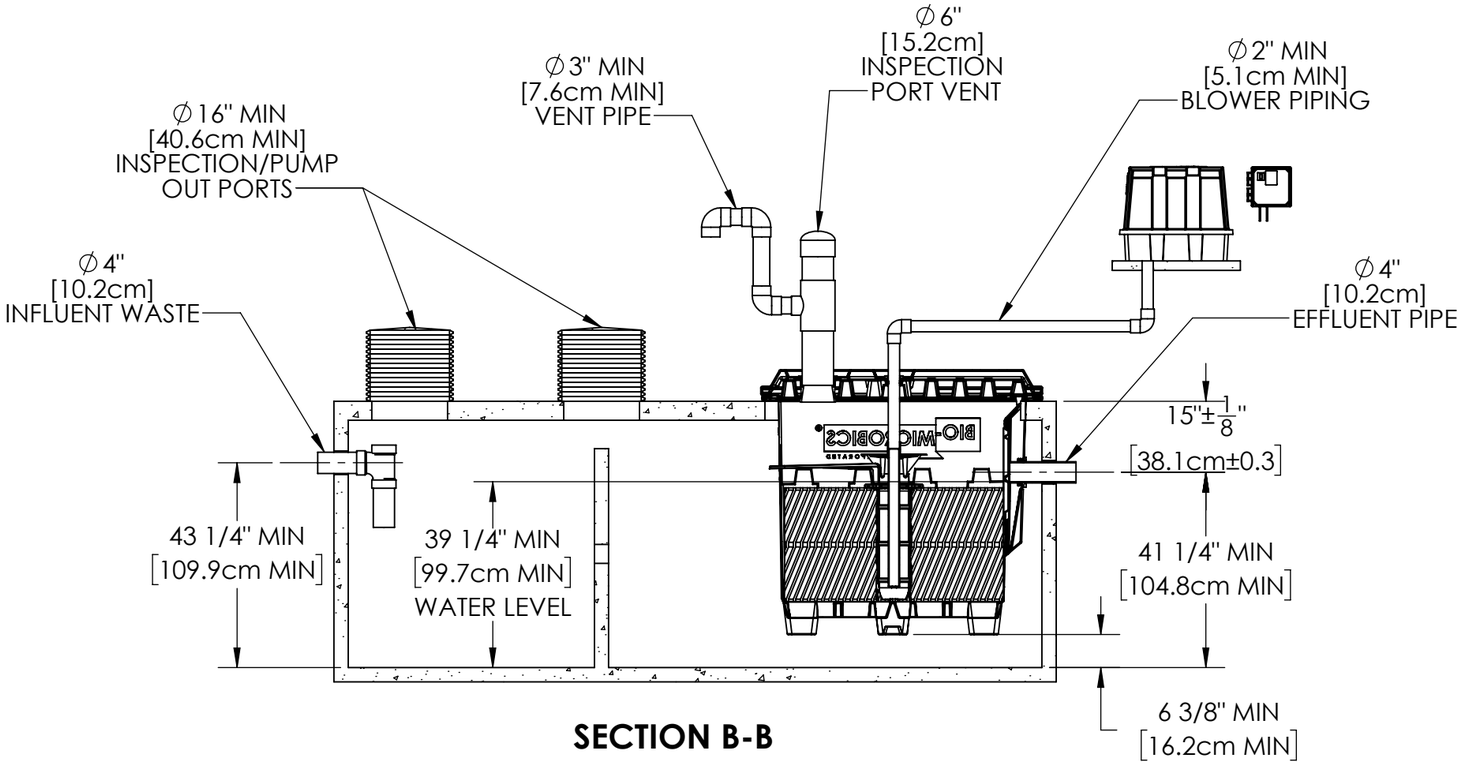
SIZE: B

BIO MICROBICS
BETTER WATER. BETTER WORLD.

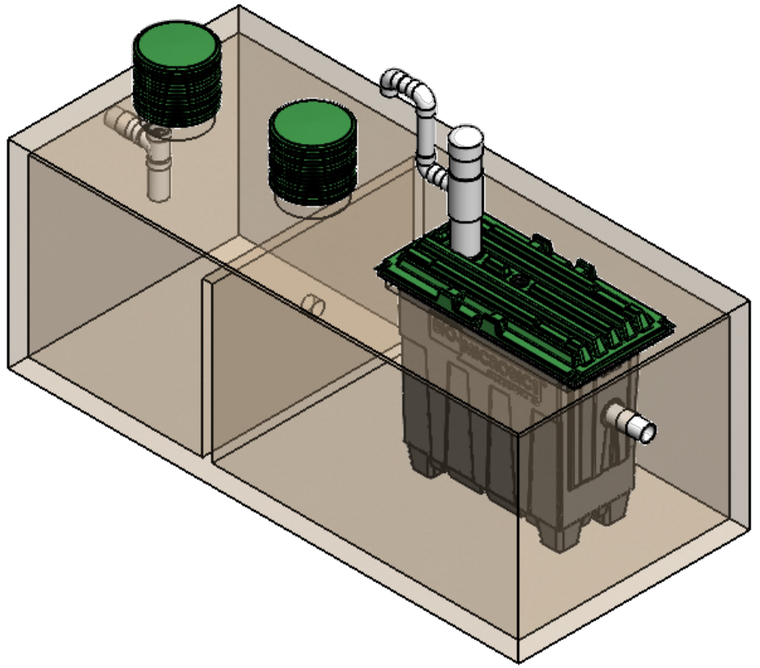
DESCRIPTION
MICROFAST 0.5 UNIT WITH FEET

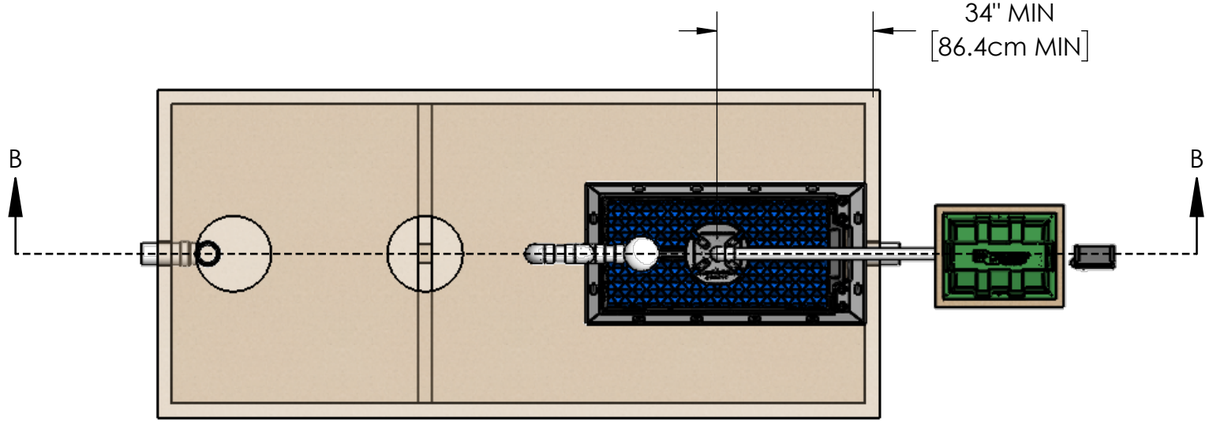
PART NUMBER
600-FINMCF0.5

REV
G



SECTION B-B





NOTES:

1. AIRLINE PIPING TO FAST® SHOULD NOT EXCEED 100 FT (30M) TOTAL LENGTH AND SHOULD HAVE A MAXIMUM OF 4 ELBOWS IN THE PIPING SYSTEM. FOR DISTANCES GREATER THAN 100 FT (30M) CONSULT FACTORY.
2. IF LESS THAN THE SPECIFIED MINIMUMS ARE CONSIDERED NECESSARY, CONSULT FACTORY FOR GUIDANCE.
3. SPECIALIZED TREATMENT NEEDS MAY REQUIRE SPECIFIC FEATURES TO BE INCORPORATED INTO THE DESIGN. CONSULT FACTORY FOR GUIDANCE.
4. SOME ITEMS REMOVED FOR CLARITY.
5. MINIMUM OF 2.0in [5.1cm] INVERT IS NECESSARY BETWEEN THE INLET AND OUTLET OF EACH ZONE FOR GRAVITY FLOW SYSTEMS.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND TOLERANCES ARE AS FOLLOWS
X° ±1°
.X ± .50
.XX ± .25

DRAWN BY: ESG

DATE: 6/24/2022

APPROVED BY: MSH

APPROVED DATE: 6/24/2022

SHEET 4 OF 6

SCALE: 1:32

SIZE: B

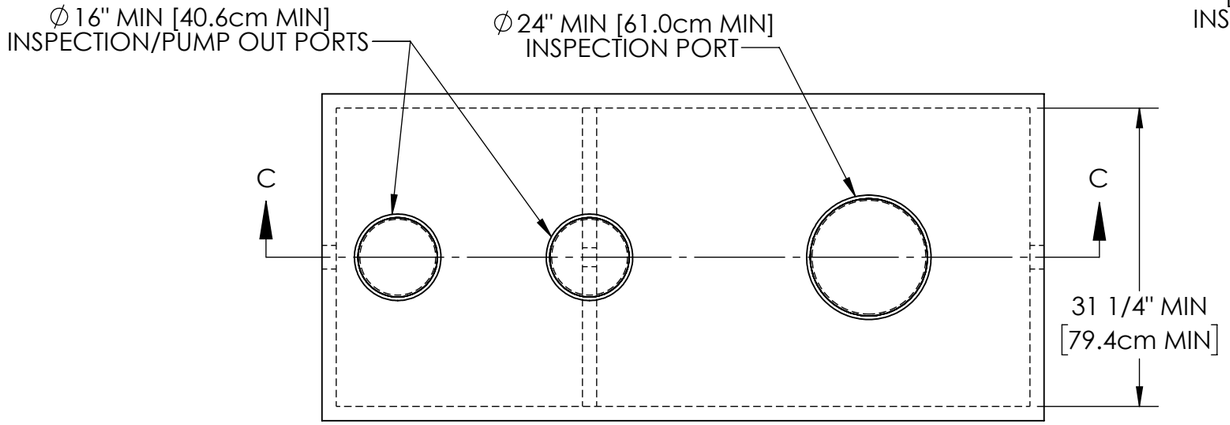
BIO MICROBICS
BETTER WATER. BETTER WORLD.

DESCRIPTION
MICROFAST 0.5 UNIT WITH LID

PART NUMBER
600-FINMCF0.5

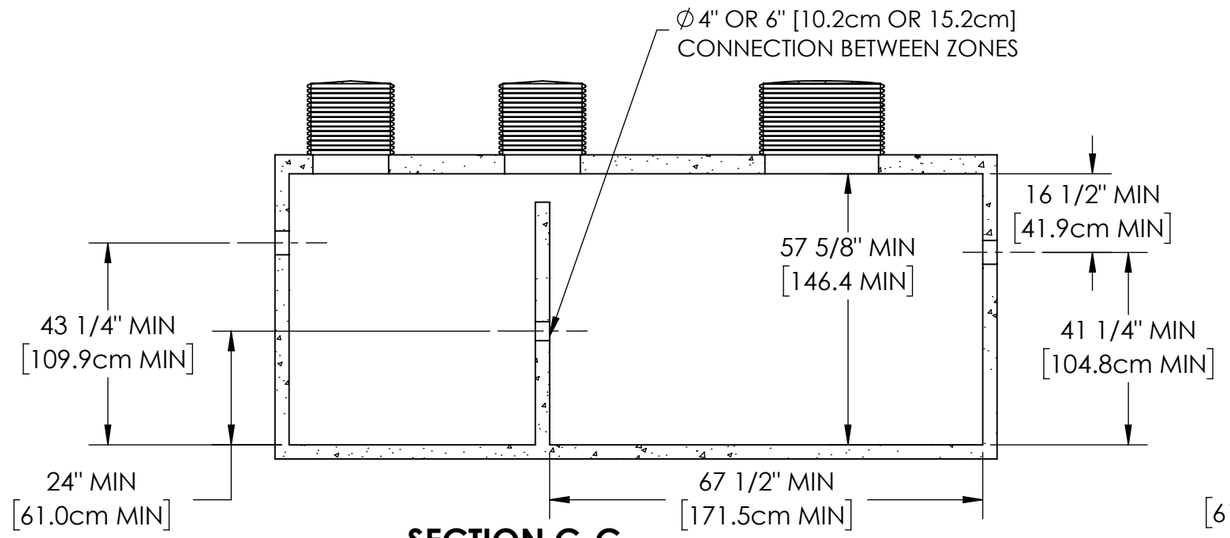
REV
G

FOOT MOUNT INSTALL



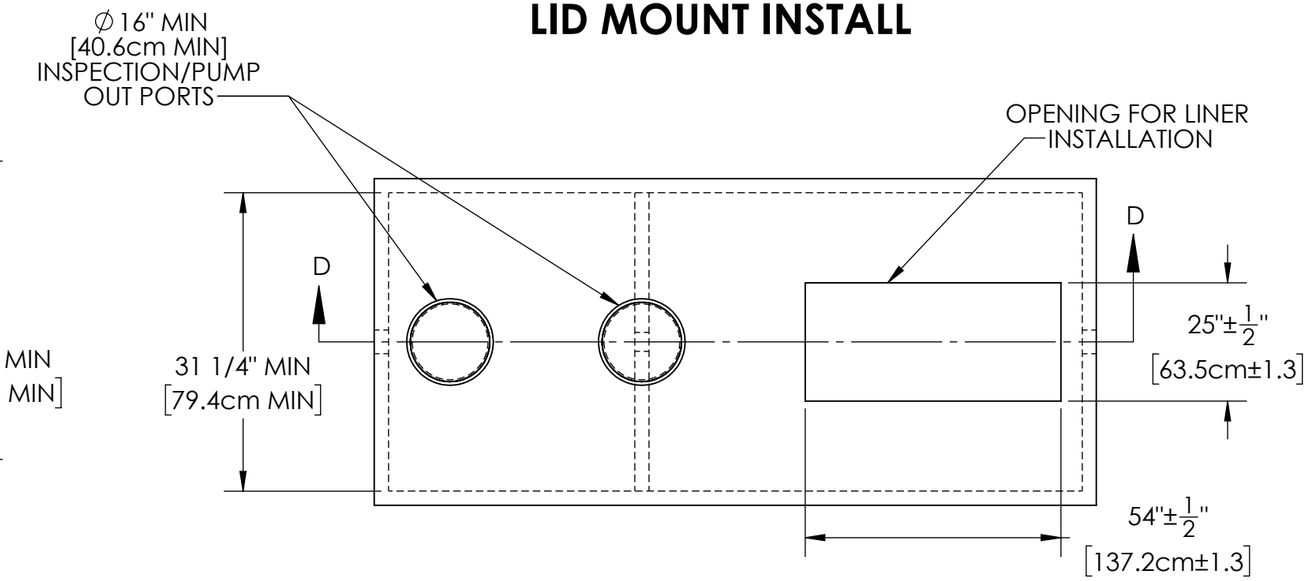
SETTLING ZONE
350 GALLON MIN [1325 L MIN]

TREATMENT ZONE
450 GALLON MIN [1703 L MIN]



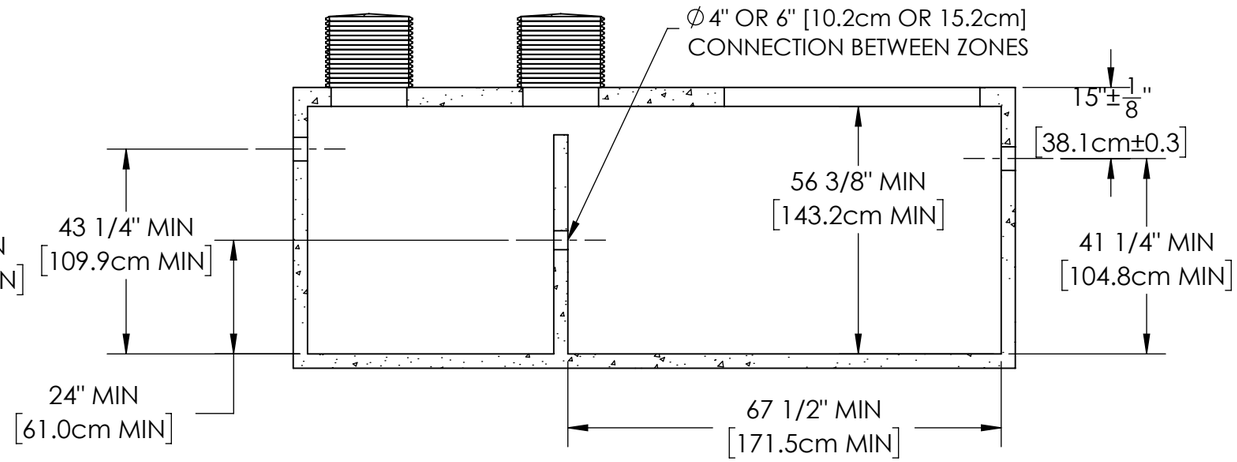
SECTION C-C

LID MOUNT INSTALL



SETTLING ZONE
350 GALLON MIN [1325 L MIN]

TREATMENT ZONE
450 GALLON MIN [1703 L MIN]



SECTION D-D

NOTES:

1. **MINIMUM DIMENSIONS DO NOT DETERMINE OVERALL TANK CAPACITY.**
2. INSPECTION/PUMPOUT PORT LOCATIONS MAY VARY DEPENDING ON TANK CONSTRUCTION.
3. ALL APPURTENANCES TO FAST® (E.G. TANKS, ACCESS PORTS, ELECTRICAL, ETC.) MUST CONFORM TO ALL APPLICABLE COUNTY, STATE, PROVINCE, AND LOCAL PLUMBING AND ELECTRICAL CODES.
4. PUMP OUT ACCESS SHALL BE ADEQUATE TO THOROUGHLY CLEAN OUT BOTH ZONES.
5. IF LESS THAN THE SPECIFIED MINIMUMS ARE CONSIDERED NECESSARY, CONSULT FACTORY FOR GUIDANCE.
6. SPECIALIZED TREATMENT NEEDS MAY REQUIRE SPECIFIC FEATURES TO BE INCORPORATED INTO THE DESIGN. CONSULT FACTORY FOR GUIDANCE.
7. MINIMUM OF 2.0in [5.1cm]INVERT IS NECESSARY BETWEEN THE INLET AND OUTLET OF EACH ZONE FOR GRAVITY FLOW SYSTEMS.
8. TANK VOLUMES MAY VARY BY APPLICATION AND JURISDICTION.
9. TANKS OF VARYING SHAPE AND MATERIAL CAN BE USED WITHIN SPECIFIED MINIMUMS.
10. TANK SET UP MAY BE DIFFERENT THAN SHOWN, i.e., SEPARATE SETTLING AND TREATMENT TANKS.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND TOLERANCES ARE AS FOLLOWS
X° ±1°
.X ± .50
.XX ± .25

DRAWN BY: ESG
DATE: 6/24/2022
APPROVED BY: MSH
APPROVED DATE: 6/24/2022

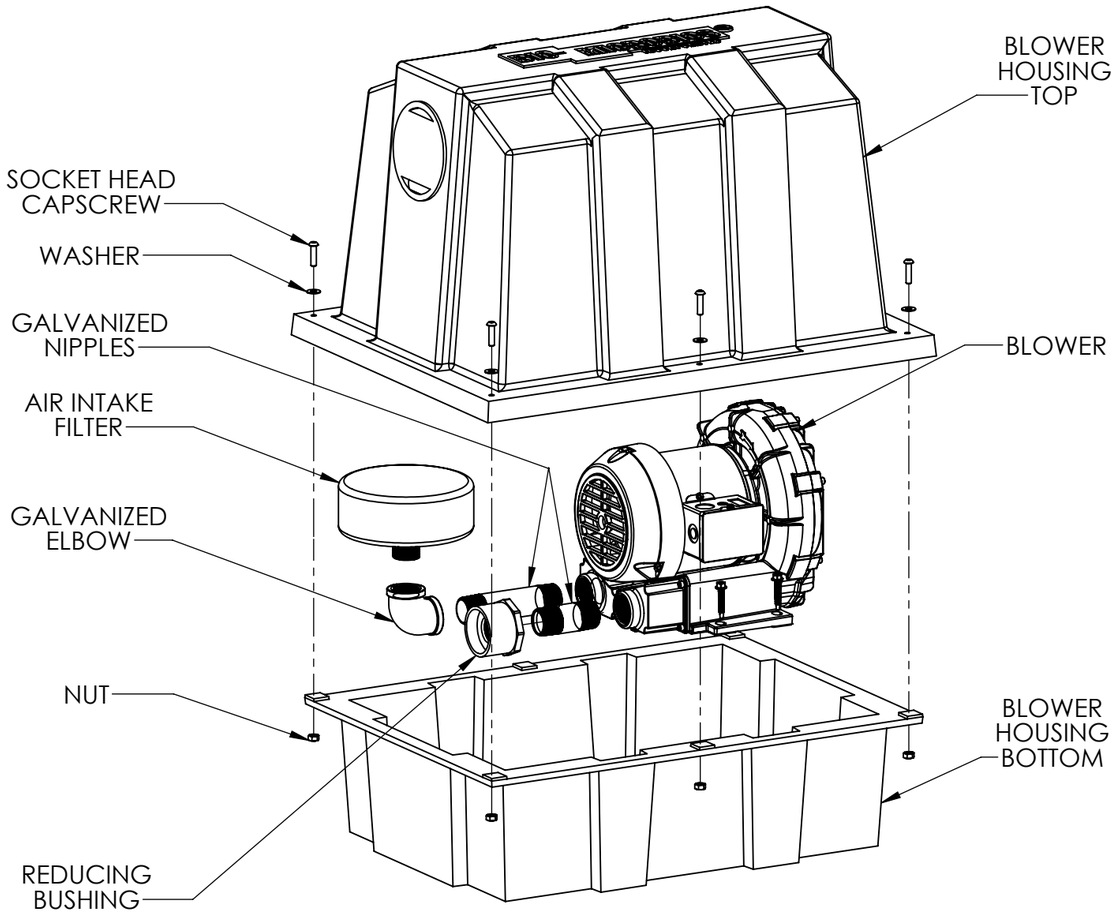
SHEET 5 OF 6
SCALE: 1:32
SIZE: B

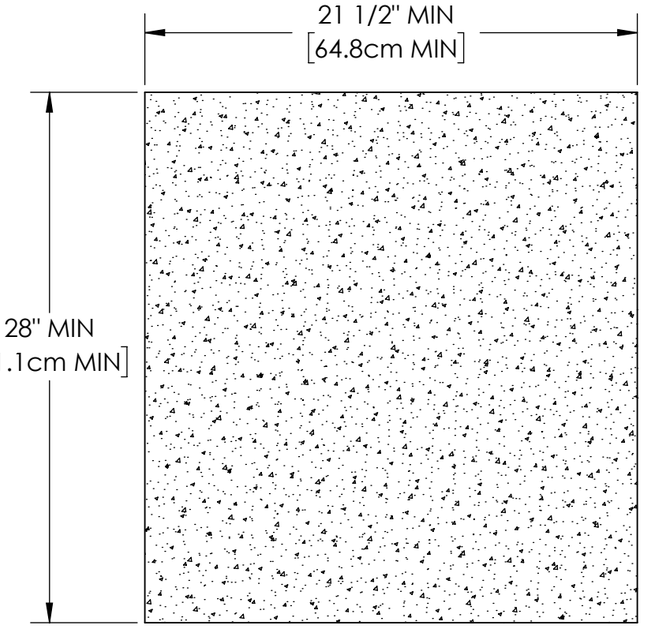
BIO MICROBICS
BETTER WATER. BETTER WORLD.

DESCRIPTION
TANK DETAIL DIMENSIONS

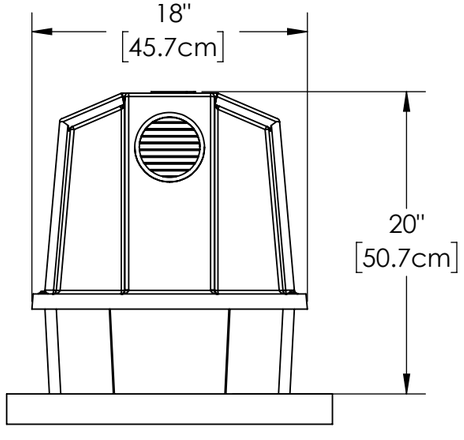
PART NUMBER
600-FINMCF0.5

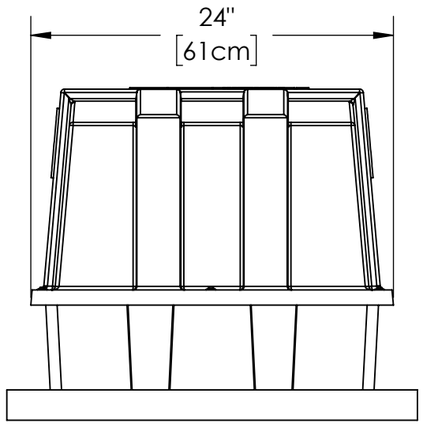
REV
G





BLOWER PAD





NOTES:

1. SOME MICROFAST CONFIGURATIONS MAY REQUIRE DIFFERENT BLOWER HOUSINGS.
2. BLOWER MUST BE LOCATED ABOVE FLOOD LEVELS.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND TOLERANCES ARE AS FOLLOWS
X° ±1°
.X ± .50
.XX ± .25

DRAWN BY: ESG
DATE: 6/24/2022
APPROVED BY: MSH
APPROVED DATE: 6/24/2022

SHEET 6 OF 6
SCALE: N/A
SIZE: B

BIO MICROBICS
BETTER WATER. BETTER WORLD.

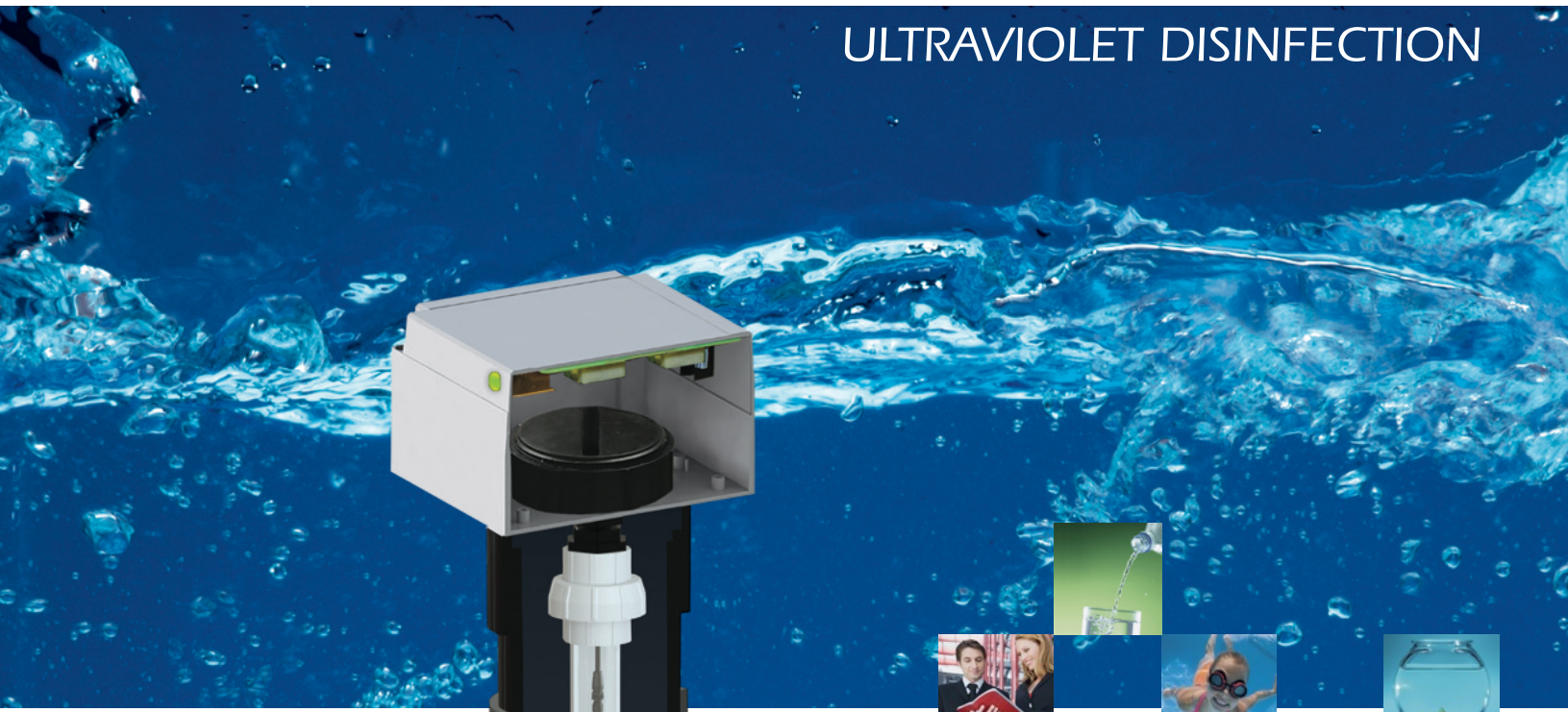
DESCRIPTION
SMALL BLOWER HOUSING AND PAD DETAILS

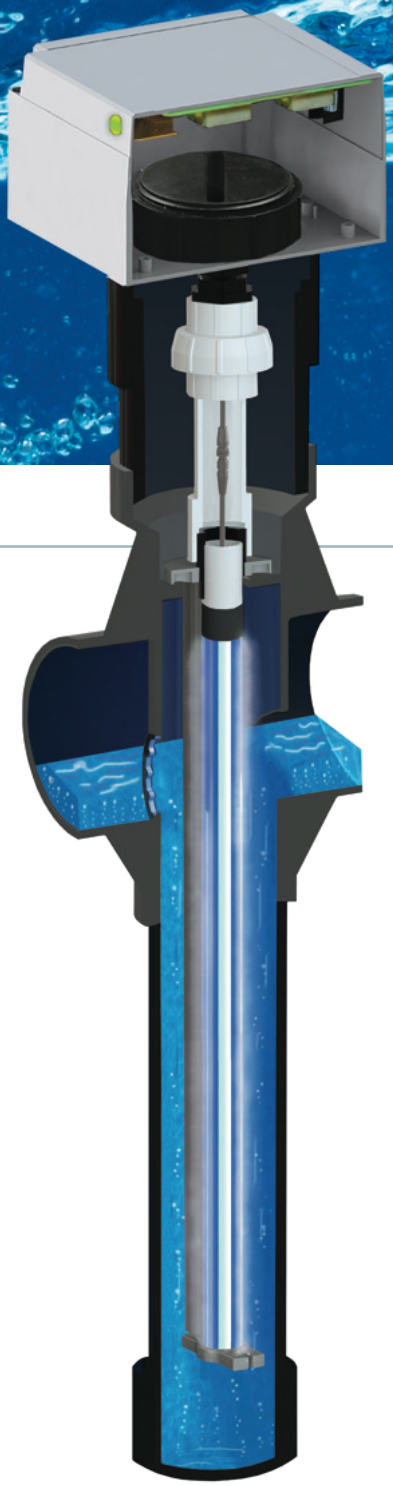
PART NUMBER
600-FINMCF0.5

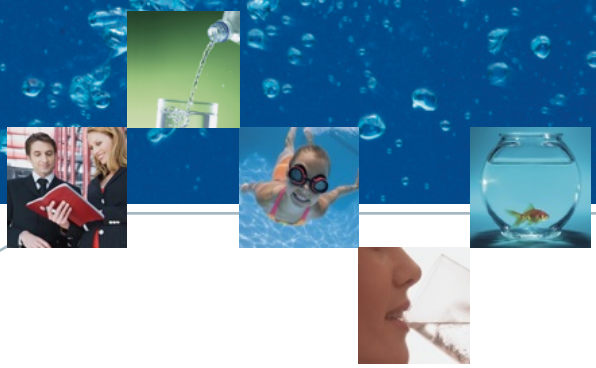
REV
G

AT 1500

ULTRAVIOLET DISINFECTION







norweco®

Engineering the future of water and wastewater treatment

AT 1500

the safe, effective and reliable way to disinfect in applications where ultraviolet (UV) treatment is preferred

Your complete solution to meet even the most stringent environmental permit requirements, the AT 1500 UV disinfection system reduces bacteria levels from secondary effluent to achieve strict water quality standards. The reliability and performance of the AT 1500 is unmatched for onsite and decentralized treatment applications. Every component of the compact unit is highly engineered and constructed to provide reliable disinfection and superior operational life.

UV disinfection is routinely used in ecologically sensitive areas where residuals from chemical disinfection might possibly create problems in the receiving environment. Harmful pathogens and other contaminants, including some that are resistant to chemical disinfection, are rendered completely harmless by the reliable performance of the AT 1500 UV disinfection system.

solutions in wastewater treatment

The AT 1500 UV disinfection system reduces bacteria levels to meet strict water quality standards

Interlock Switch
A power interlock switch automatically de-energizes the system during service.

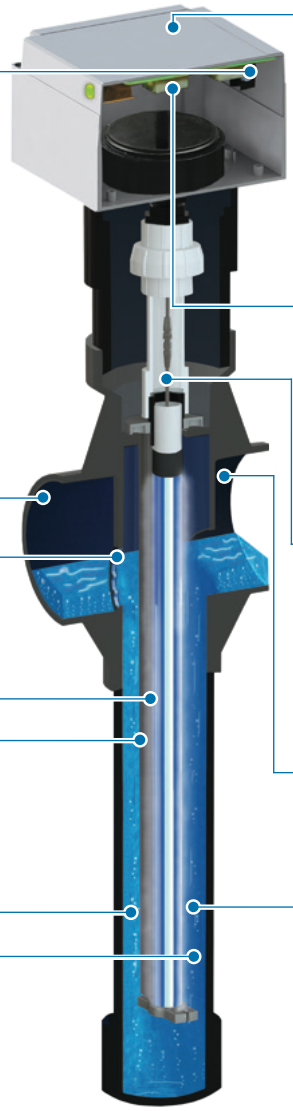
Inlet
Treated wastewater enters the system through an integral 4" inlet hub.

Turbulence Inducer
Turbulence is purposely created within the influent, accomplishing more complete disinfection.

UV Bulb
The heavy duty, long-life bulb provides reliable disinfection. Our lamp is tested and certified to provide superior bacteria kill over competitive systems, while maintaining extended service life.

Quartz Sleeve
The long-life bulb is encased within a transparent quartz sleeve to isolate the bulb from the flow stream and allow for uniform heat dissipation. The sleeve is manufactured from optical grade fused silica quartz for easy cleaning and superior UV transmittance.

Dual-Pass Design
An anodized aluminum frame with rubber gaskets creates a dual-pass flow path through the disinfection chamber. Extended treatment time and exposure to UV light allow for maximum disinfection and performance for stringent environmental standards.



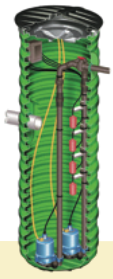
NEMA 6 Electrical Enclosure with Internal Ballast
The compact electrical enclosure provides a watertight and weatherproof connection for all power lines to the system. The ballast is located safely inside this durable enclosure for protection and long-life. The green light on the enclosure is constantly lit to indicate proper operation.

Solid State Circuit Board
Function of the system is fully solid state, with a current sensing circuit. The current sensor automatically monitors performance of the UV bulb and provides constant assurance of proper operation.

Simplified Wiring
A single incoming power cable is the only electrical connection required to operate the AT 1500 system. The current sensing control center operates the bulb through a watertight pre-wired, NEMA 6P plug and play power cable assembly.

Outlet
Disinfected effluent exits the system through an integral 4" outlet hub.

ABS Disinfection Chamber
The system is contained within a compact, integrally molded ABS disinfection chamber that is carbon-impregnated for maximum durability. The watertight chamber is resistant to UV light and provides long operational life.



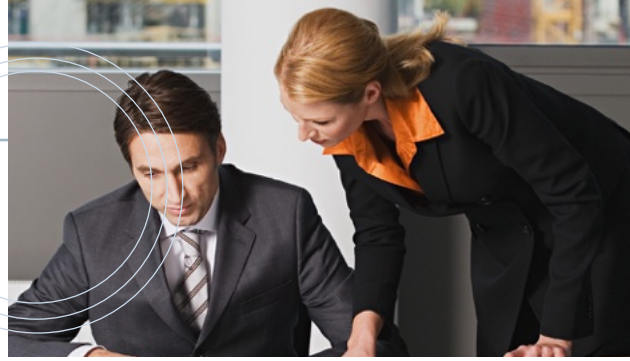
NPDES Treatment System
UNIQUE, STATE-SPECIFIC TREATMENT NEEDS CAN BE MET WITH THIS EQUIPMENT PACKAGE. THE NPDES TREATMENT UNIT FOLLOWS ANY APPROVED NORWECO AEROBIC WASTEWATER TREATMENT SYSTEM AND INCREASES DISSOLVED OXYGEN (DO) TO ABOVE 6 PPM TO PROTECT THE MOST SENSITIVE RECEIVING ENVIRONMENTS.

Pumping Stations
NORWECO'S SIMPLEX AND DUPLEX PUMPING STATIONS ARE A VERSATILE, DURABLE AND AFFORDABLE WAY TO SOLVE YOUR DOMESTIC FLUID HANDLING NEEDS. BASIC PRE-ENGINEERED PACKAGES INCLUDE A CORROSION RESISTANT POLYETHYLENE BASIN, PRE-WIRED ELECTRICAL CONTROL CENTER AND A WIDE SELECTION OF PUMPING EQUIPMENT.

Blue Crystal® Residential Disinfecting Tablets
OUR PURE CALCIUM HYPOCHLORITE TABLETS ARE SPECIALLY FORMULATED FOR USE IN RESIDENTIAL SYSTEMS FOR EFFICIENT, RELIABLE DISINFECTION. EACH TABLET CONTAINS AT LEAST 70% AVAILABLE CHLORINE. PACKAGED IN RE-SEALABLE CONTAINERS, OUR TABLETS ARE AVAILABLE FROM YOUR LOCAL NORWECO DISTRIBUTOR IN 5, 10 AND 100 POUND POLYETHYLENE PAILS.

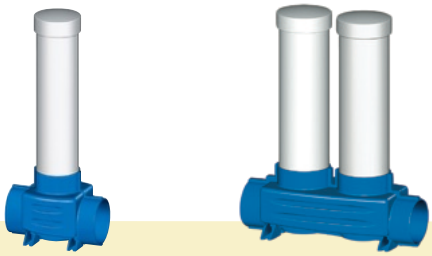
We are committed to helping you keep your customers safe and the environment clean. The AT 1500 is the only UV treatment system listed with Underwriters Laboratories (UL) for residential disinfection applications.

customer focus



Consider the facts:

- Dual-pass design assures the integrity of the treatment process. All liquid flowing through the system is treated twice by the UV lamp, once on the way down and again on the way back up. This doubles the exposure to UV light and greatly improves treatment.
- All electrical components are contained in a NEMA 6 weatherproof electrical enclosure. These components control the disinfection process and assure treatment integrity. The gasketed cover is secured with screws to seal the enclosure.
- The long-life lamp provides superior reliability and operational performance to meet strict water quality standards. The bulb provides bacteria reduction rates of 99.9% for complete disinfection.
- The lighting ballast is contained within the gasketed electrical enclosure to assure maximum life. Competitive systems leave the ballast exposed to the treatment environment.
- Disinfection quality is assured by a corrosion resistant solid state circuit board that continually monitors system performance. A current sensing circuit automatically gives immediate notification should a service interruption occur.
- The AT 1500 UV disinfection system is certified to NSF/ANSI Standard 385. The system successfully completed the 6 month evaluation at 500 GPD loading, disinfecting instantaneous flow rates as low as 0.18 GPM and as high as 1.50 GPM.
- No chemical residual or harmful by-products. The AT 1500 UV disinfection system provides superior treatment and its performance is independent of the pH, temperature and ammonia content of the effluent being treated.
- Low electrical usage. The high efficiency electrical controls use very little electricity.
- Inexpensive to install and operate. The AT 1500 can be installed for less than some chemical feed systems, and requires no recurring chemical purchase. The only maintenance requirement is periodic cleaning of the quartz sleeve.
- Can be used to eliminate contaminants not readily removed by chemical treatment. Advanced Oxidation Processes (AOP) can be constructed by supplementing the AT 1500 system with ozone or H_2O_2 to remove chemical resistant pollutants, such as certain pharmaceuticals and methyl tertiary butyl ether (MTBE).



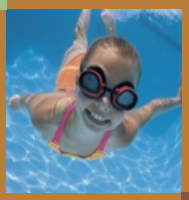
Bio-Max® Dechlorination Tablets

BIO-MAX DECHLORINATION TABLETS PROVIDE A CONVENIENT SOURCE OF CONCENTRATED SODIUM SULFITE TO INSTANTLY REMOVE ALL FORMS OF CHLORINE FROM WASTEWATER, POTABLE WATER AND PROCESS WATER. CONTAINING 92% SODIUM SULFITE AS ACTIVE INGREDIENT AND 8% PROPRIETARY INERT INGREDIENTS, BIO-MAX TABLETS CAN BE USED IN ALL BRANDS OF GRAVITY OR PRESSURIZED TABLET FEEDERS.

Bio-Dynamic® Tablet Feeders

BIO-DYNAMIC TABLET FEEDERS PROVIDE LOW COST, EFFECTIVE DISINFECTION AND DECHLORINATION OF SECONDARY EFFLUENT IN LESS SENSITIVE RECEIVING ENVIRONMENTS. EMPLOYING FLOW PROPORTIONAL CHEMICAL DOSAGE WITHOUT MOVING PARTS OR ELECTRICAL COMPONENTS, THE COMPACT TABLET FEEDERS INSTALL EASILY AND PROVIDE UNMATCHED DURABILITY.





Norweco distributors are located throughout the United States and much of the rest of the world. Research, product development, manufacturing, marketing and sales support are conducted inside our offices and factory in Norwalk, Ohio USA. Everyone at Norweco is committed to shaping the future of our industry.

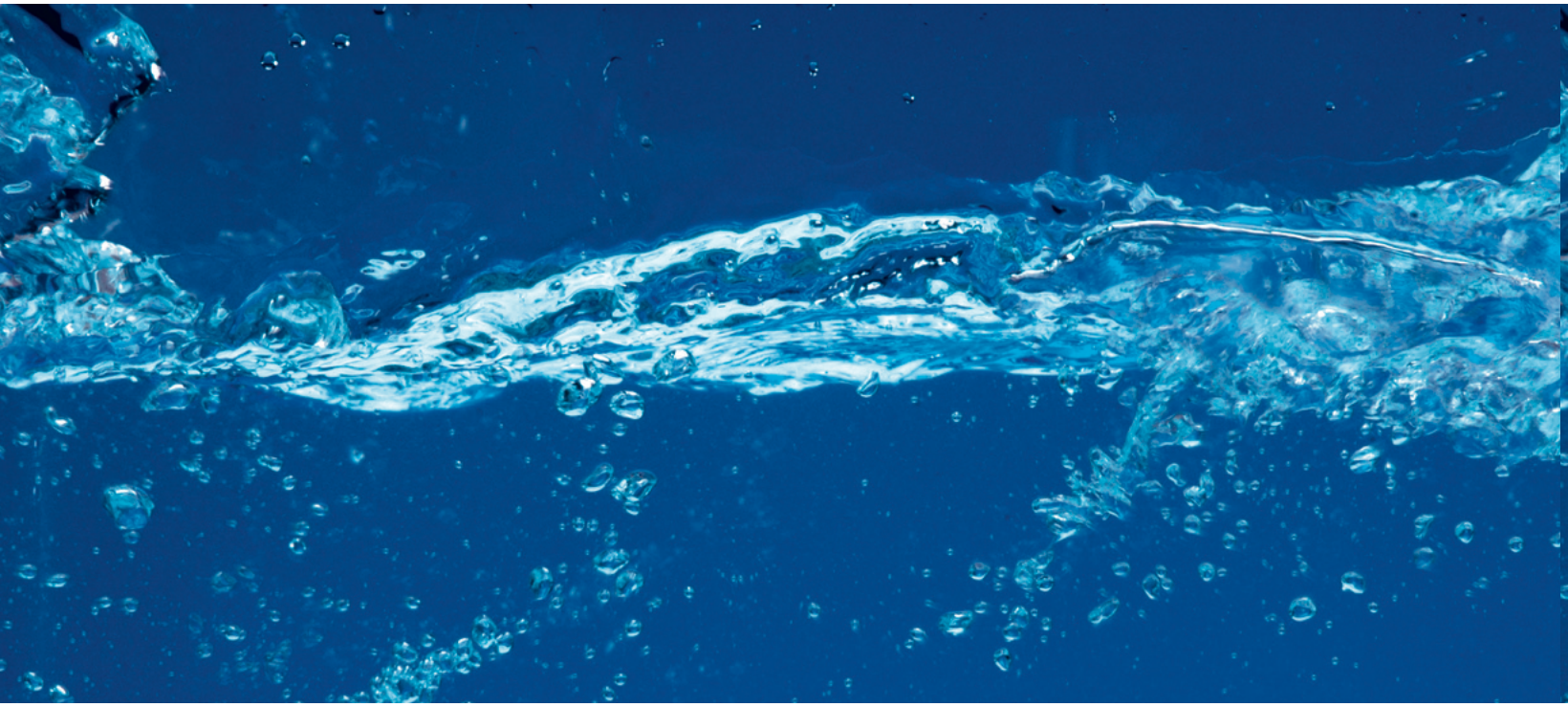
engineering the future

of water and wastewater treatment

Specify Norweco UV Disinfection

Equipped with an internal current sensing circuit that continuously monitors the performance of the UV bulb, the AT 1500 automatically provides notification if system operation is interrupted. This self-diagnostic feature protects the disinfection process from disruptions and maintains treatment quality. When used in conjunction with a Norweco remote monitoring controller, the system owner and service provider can be immediately notified of any change in performance.

The compact design and rigid construction of the system makes installation quick and easy. The custom molded treatment chamber is constructed from carbon-impregnated ABS plastic that is resistant to ultraviolet light and the engineered flow path assures disinfection quality.



comprehensive protection, guaranteed

The AT 1500 disinfection system is warranted against defects in material and workmanship under normal use and service by a comprehensive 2 year warranty. This limited warranty provides single source protection and covers all system components. A warranty registration card is included with every new AT 1500 Installation and Operation Manual.

The Model AT 1500 UV disinfection system has been listed, licensed and/or certified by each of the following agencies/organizations.

Progress Through Service Since 1906

We engineer, manufacture, install and maintain advanced water and wastewater treatment technologies for residential properties, communities and commercial properties that are not connected to sewer lines. Norweco treatment systems are in service all over the world.

norweco®

Engineering the future of water and wastewater treatment

220 Republic Street
Norwalk, Ohio, U.S.A. 44857
PH: 419.668.4471
FAX: 419.663.5440
www.norweco.com

MODEL AT 1500

UV DISINFECTION SYSTEM

INSTALLATION AND OPERATION MANUAL

The Model AT 1500 UV disinfection system is listed with Underwriters Laboratories (UL) under Standard 979 as a residential treatment device. The installer should provide a power disconnect switch mounted to the exterior of the facility being served to de-energize power to the unit during maintenance. Electrical work must be performed in accordance with the latest edition of the National Electrical Code, as well as all applicable local codes. The Model AT 1500 UV disinfection system conforms to the applicable provisions of the Code of Federal Regulations (CFR) requirements including Title 21, Chapter 1, Subchapter J, Radiological Health. **CAUTION: DO NOT LOOK DIRECTLY AT THE UV LAMP OR EXPOSE SKIN DURING OPERATION. PERMANENT EYE DAMAGE AND SKIN BURNS WILL OCCUR FROM UV RADIATION EXPOSURE. UV BLOCKING SAFETY GLASSES MUST BE WORN DURING INSTALLATION, SERVICE OR ANY TIME THE LAMP MAY BE ILLUMINATED. UV BLOCKING SAFETY GLASSES ARE AVAILABLE FROM NORWECO.**

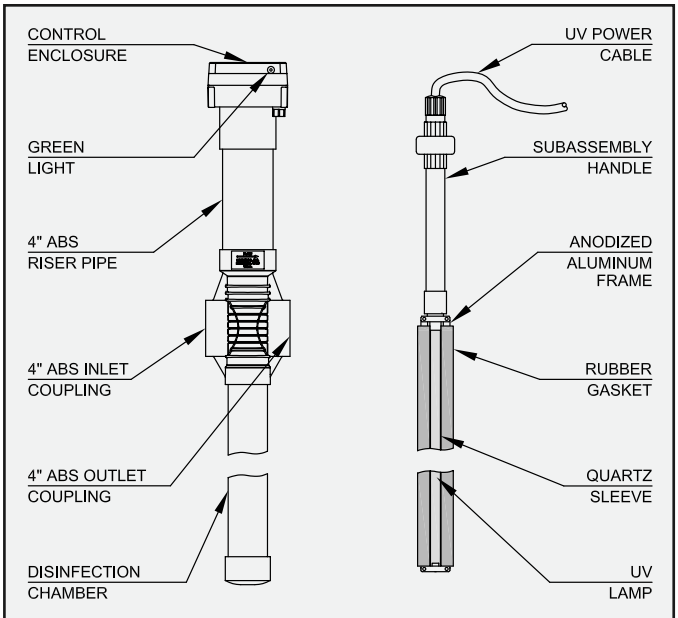
COMPONENTS

The Model AT 1500 UV disinfection system consists of the following components:

1) Control enclosure
2) 4" ABS riser pipe
3) Disinfection chamber with turbulence inducer
4) 4″ ABS inlet and outlet coupling
5) UV lamp (bulb) with male connector
6) Power cable with female twist lock connector
7) UV quartz sleeve
8) Subassembly handle

The components should be supplied by the installer:

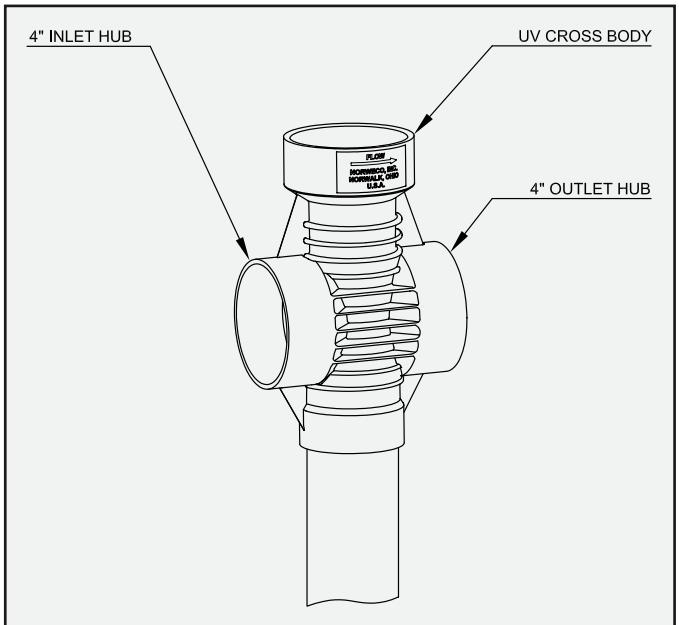
1) Disconnect switch
2) Solvent cement
3) Hacksaw
4) Glycerin (optional)
5) Clean, soft cloth
6) Isopropyl alcohol
7) #14/2 AWG cable
8) Conduit and fittings
9) Flat head screwdriver
10) Phillips head screwdriver



UV DISINFECTION CHAMBER AND SUBASSEMBLY

INSTALLATION INSTRUCTIONS

1. The excavation for the upstream wastewater treatment system should include an additional 3 feet of length to allow for installation of the Model AT 1500.
2. Carefully unpack the Model AT 1500 system. Remove and properly discard all packaging materials from the system components. The UV lamp should remain in the protective shipping sleeve until it is installed.
3. Flow direction indicator arrows are molded into the disinfection chamber. When installing the disinfection chamber, be sure to orient the chamber correctly with the flow arrows pointing towards the effluent plumbing.

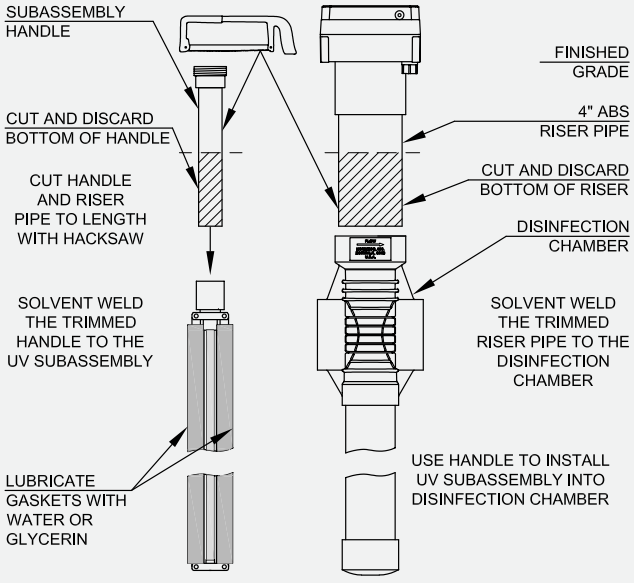


INLET AND OUTLET HUBS

4. Solvent weld the effluent line of the upstream treatment system to the 4" inlet hub of the Model AT 1500. Next, solvent weld the 4" outlet hub to the final effluent line. Cover the open top of the disinfection chamber and backfill up to the bottom of the plumbing.

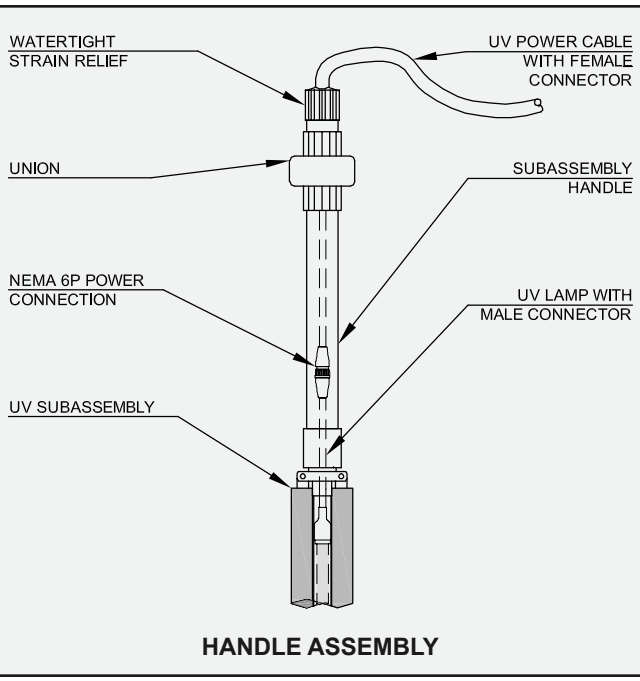
AT 1500 UV DISINFECTION INSTALLATION AND OPERATION (Cont.)

5. The control enclosure should be completely above grade in the finished installation. The riser pipe and subassembly handle are purposely manufactured longer than necessary and must be trimmed. Fit the riser pipe into the top of the disinfection chamber and mark a trim line on the bottom. Mark the subassembly handle on the bottom to trim the same amount.

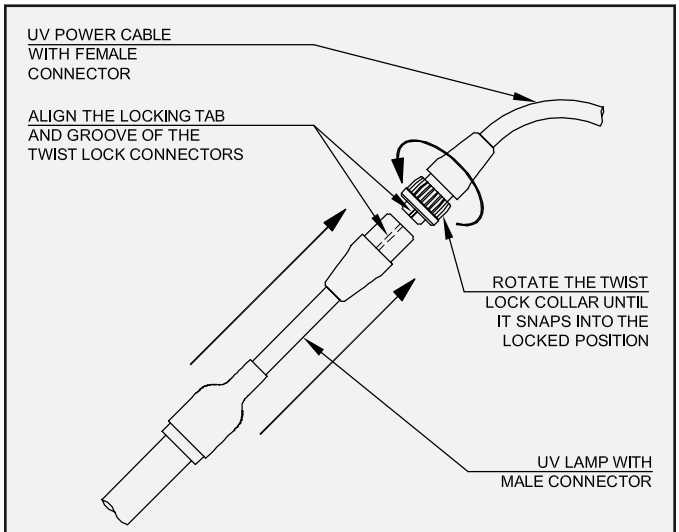


TRIM RISER PIPE AND HANDLE

6. Disassemble the union on subassembly handle and set aside the top portion with UV power cable.
7. Use a hacksaw to cut along the trim line on both the riser pipe and handle to make them the proper length.
8. Solvent weld the riser pipe to the disinfection chamber and solvent weld the handle to the UV subassembly.
9. The Model AT 1500 is shipped with the UV power cable connected to the control enclosure. If this power cable has become disconnected, it must be reconnected at this time. To do so, remove the gasketed cover from the control enclosure. Connect the lead labeled "ONE" on the UV power cable to the terminal block marked "1". Connect the lead labeled "TWO" to the terminal block marked "2". Connect the lead labeled "THREE" to the terminal block marked "3". Connect the yellow/green lead to the terminal marked "Y/G".



HANDLE ASSEMBLY



LAMP POWER CONNECTION

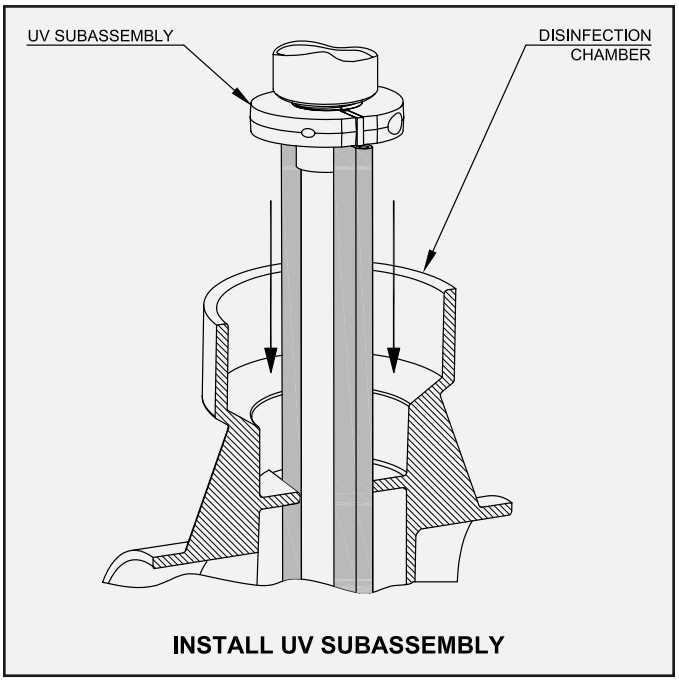
10. Remove the threaded access plug from the riser pipe.
11. Match the alignment tab on the male connector from the UV lamp to the alignment groove in the female twist lock connector on the UV power cable. Push the two connectors together until the male connector is fully seated in the female connector. Rotate the twist lock collar until it snaps into the locked position.
12. Insert the UV lamp and power cable into the handle assembly until the base of the lamp is seated in the bottom of the quartz sleeve. Rotate the power cable if the lamp becomes misaligned.
13. Lower the union onto the handle assembly, making sure to pull any slack cable through the strain relief connector. Assemble and tighten the union and strain relief to insure a watertight seal.
14. Use water or glycerin to lubricate the rubber gaskets located on both sides of the UV subassembly.
15. Do not touch the quartz sleeve or allow excess glycerin to contact it. Use a clean, soft cloth and isopropyl alcohol to thoroughly clean the quartz sleeve.
16. Fill the disinfection chamber with clean water.

MANUFACTURED BY

norweco®
Engineering the future of water and wastewater treatment

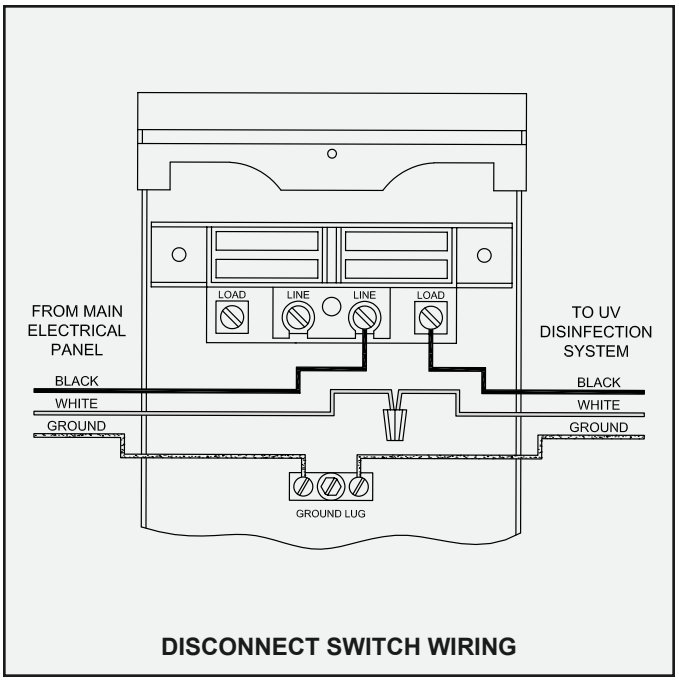
NORWECO, INC.
NORWALK, OHIO
U.S.A. 44857
www.norweco.com

AT 1500 UV DISINFECTION INSTALLATION AND OPERATION (Cont.)



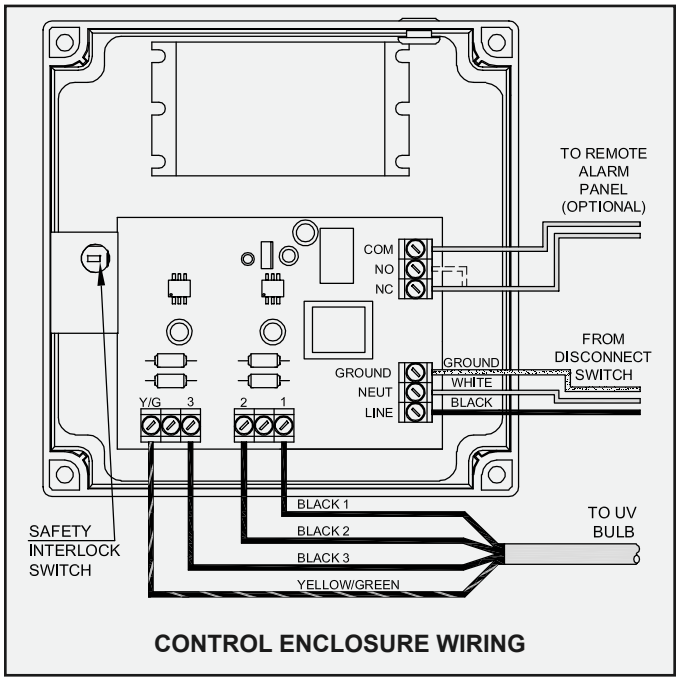
INSTALL UV SUBASSEMBLY

17. Align the rubber gaskets with the rectangular opening and lower the UV subassembly into the disinfection chamber.
18. Tuck the excess power cable into the riser pipe.
19. Use a dedicated 115 volt AC single phase 15 amp circuit in the main electrical panel for the AT 1500. **CAUTION: Make sure the breaker is off before proceeding.**
20. Use a disconnect switch to de-energize power during service. Mount directly to the facility being served.
21. Install a #14/2 AWG cable from the dedicated breaker in the main electrical panel to the disconnect switch.
22. In the disconnect switch enclosure, connect the hot (black) lead from the main electrical panel to the "LINE" terminal. Connect the black lead from the UV system to the "LOAD" terminal. Wire nut both white leads together. Connect ground leads to the ground lug.



DISCONNECT SWITCH WIRING

23. Remove the control enclosure cover and black electrical insulator. Install a #14/2 AWG cable from the disconnect switch to the control enclosure. Insure the connection to the UV system is made in conduit, solvent welded to the conduit fitting provided. A watertight connection is critical for proper operation and safety.
24. Attach the incoming hot (black) lead to the terminal block marked "LINE". Attach the common (white) lead to the terminal block marked "NEUT". Attach the incoming ground lead to the terminal block marked "GROUND".
25. If a remote alarm panel is required, the alarm leads should be installed in a separate conduit, solvent welded to the second conduit fitting provided. Connect one alarm lead to either the normally open (NO) terminal or the normally closed (NC) terminal. Choose the correct terminal for the type of signal required by the remote alarm panel. Connect the other lead to the common (COM) terminal.
26. Solvent weld a conduit plug into any unused fittings.
27. Apply thread sealant to the access plug and install plug in the riser opening. Tighten to insure a watertight seal.



CONTROL ENCLOSURE WIRING

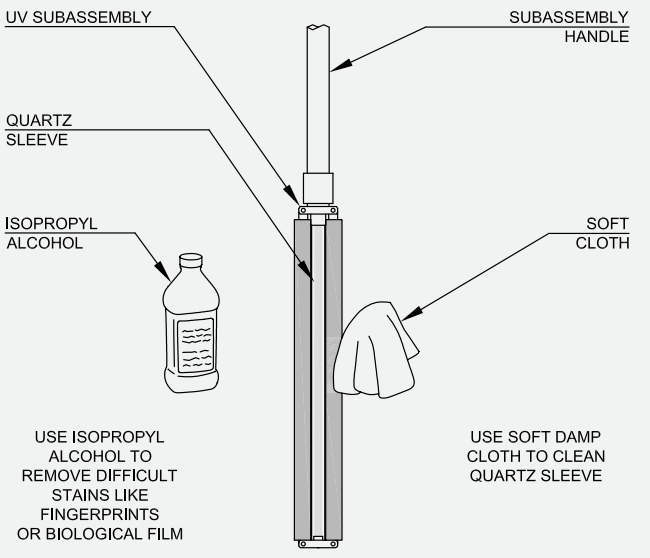
28. Reinstall the electrical insulator and four thumb screws. Make sure that the cutout for the safety interlock switch is positioned correctly over the switch.
29. Reinstall the control enclosure cover, insuring that the safety interlock post is aligned with the safety interlock switch. Tighten the four screws on the cover to insure a watertight seal. **NOTE:** If the switch is not aligned with the post, the UV lamp will not operate and the green light on the side of the enclosure will not illuminate.
30. Backfill around the disinfection chamber and riser pipe. Finished grade should be below the control enclosure to prevent the entry of surface water.
31. Turn on power at the disconnect switch and main service panel. Confirm the green light on the enclosure is illuminated indicating proper operation.

AT 1500 UV DISINFECTION INSTALLATION AND OPERATION (Cont.)

MAINTENANCE AND SERVICE

UV protective eyewear must be worn during service or any time the lamp may be illuminated. It is recommended that the subassembly be removed and serviced every six months to insure proper disinfection. To inspect and clean the quartz sleeve:

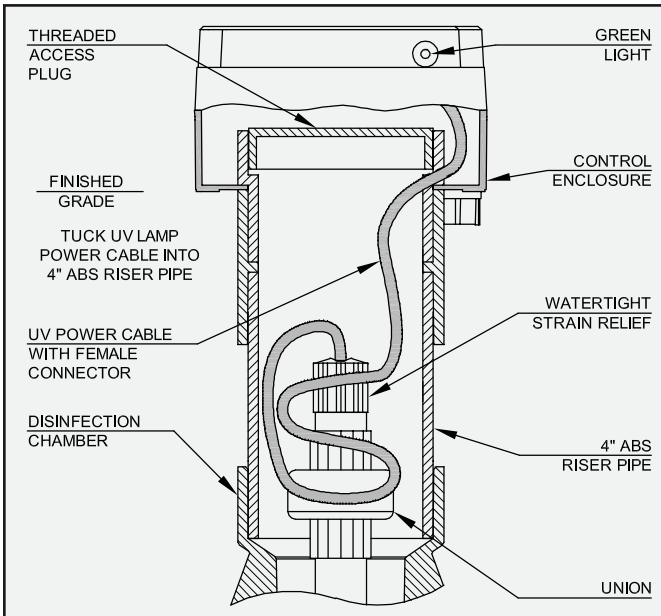
1. **Turn off power to the UV system at the disconnect switch and/or main service panel. Confirm that the green light on the side of the enclosure is off.**
2. Remove the control enclosure cover and access plug.
3. Carefully remove the UV subassembly from the disinfection chamber
4. Inspect the quartz sleeve for signs of damage or an accumulation of biological film. If the quartz sleeve has been damaged, the UV subassembly must be replaced. If biological film is present on the surface of the quartz sleeve, it must be cleaned to insure proper disinfection.
5. Use a soft damp cloth to carefully and thoroughly clean the quartz sleeve.
6. Use isopropyl alcohol on a soft cloth to carefully remove difficult stains like fingerprints or biological film.
7. Remove all accumulated solids from the disinfection chamber using a vacuum or service pump.



CLEANING THE QUARTZ SLEEVE

It is recommended that the UV lamp be replaced every two years to insure proper disinfection of the treatment system effluent. The green light on the side of the control enclosure will no longer illuminate when the lamp needs replaced. To replace the lamp:

1. Repeat steps 1, 2 and 3 above.
2. Disassemble the union on the subassembly handle and remove the UV lamp using the power cable.
3. Disconnect the UV lamp from the UV power cord by rotating the twist lock collar ¼ turn.



TUCK POWER CABLE INSIDE RISER

4. Connect new lamp and carefully lower into the UV subassembly. Make sure the lamp is fully seated in the quartz sleeve.
5. Reassemble union and tighten strain relief.
6. Lower the subassembly into the disinfection chamber.
7. Reinstall the threaded access plug into the riser.
8. Reinstall the enclosure cover, insuring that the safety interlock post is aligned with the safety interlock switch. Tighten the four screws to insure a watertight seal.
9. Turn on power at the disconnect switch or main service panel. Verify that the green light on the side of the control enclosure is illuminated.

NOTE: UV lamps contain mercury which is harmful to the environment. Recycle old UV lamps at an authorized center.

ALARM CIRCUIT

The Model AT 1500 system is equipped with a current sensing circuit to monitor the UV lamp performance. If the UV lamp output drops below an acceptable level for proper disinfection, the alarm circuit will turn off the green light on the enclosure. When connected to the Service Pro control center, the service provider can be immediately notified that maintenance to the UV system is required. For more information regarding connection of the Model AT 1500 UV disinfection system alarm to a Service Pro control center, please refer to the Service Pro Control Center with MCD Technology Installation and Operation Instructions.

MANUFACTURED BY

norweco®
Engineering the future of water and wastewater treatment

NORWECO, INC.
NORWALK, OHIO
U.S.A. 44857
www.norweco.com

APPENDIX F

REVIEW COMMENTS

COUNTY of VENTURA

RESOURCE MANAGEMENT AGENCY
DAVE WARD
Planning Director

SUSAN CURTIS
Assistant Planning Director

November 14, 2024

SPH Architects
Mr. Penn Hsu
1507 Callens Rd.
Ventura, CA 93003

Subject: Second Determination of Application Incompleteness
Coastal Planned Development Permit
Case No. PL24-0058
7026 Oxnard Ave., in the community of La Conchita
Assessor's Parcel Number 060-0-065-295

Dear Mr. Hsu:

Ventura County agencies reviewed your application as submitted on May 14, 2024, along with the additional application materials submitted on September 13, 2024, and find that it is incomplete as of November 14, 2024. The date of this determination reflects a voluntary time extension to the 30-day review granted on October 7, 2024.

The information required to complete the application is as follows:

Incompleteness Items

Resource Management Agency Environmental Health Division: Roxy Cabral, (805) 654-2830 or roxy.cabral@ventura.org

The Onsite Wastewater Treatment System (OWTS) design has changed from the initial proposed design noted in the Preliminary Geotechnical Investigation and Septic Percolation Testing document dated October 17, 2023 (provided in this recent resubmittal). The site plan dated November 8, 2024, demonstrates an Advanced Treatment Unit (ATU) and 2 seepage pits.

1. Provide an updated Geotechnical/Soils and Engineering Report prepared by a Qualified Professional indicating the changes to the design.

   Provide the specific make and model of the ATU in the updated report. Ensure the unit meets the following requirements:

   - Must be capable of treating 300 gallons per day (150 gallons per bedroom per day);

- Must be designed to reduce nitrogen and certified to National Sanitation Foundation (NSF) Standard 245; and

- Must be capable of performing pathogen reduction (disinfection) and certified to NSF Standard 40 or 245.

Refer to the following website for additional information:
https://vcrma.org/divisions/environmental-health/new-onsite-wastewater-treatment-systems-design/

2. Ensure the updated Geotechnical/Soils and Engineering Report indicates the proposed pit dimensions of the new design. The seepage pit must be, at a minimum, capable of absorbing the total capacity of the proposed septic tank per day (1,200 gallons for this project).

   NOTE: The previously proposed pit dimensions are acceptable (6-foot diameter, 13 feet of effective depth and not to exceed 15 feet in total depth).

3. The site plan must include the proposed 100% expansion area, the location of the septic tank and disposal fields, and setbacks to other structures including lot lines, and utility poles.

   Refer to the following website for additional information:
   https: // https://vcrma.org/wp-content/uploads/2024/05/onsite-wastewater-treatment-system-technical-manual.pdf

   The qualified professional designing the Advanced Onsite Wastewater Treatment System shall be able to provide written verification upon completion of the construction that the installation is in conformance with the approved design.

   Please note: A maintenance agreement with a manufacturer-approved provider is required upon permitting of the ATU. It is highly recommended to install a unit that can be serviced by a local provider.

When you have gathered all of the information requested above, please submit the information to Kristina Boero, the case planner, to begin the next 30-day review period. Submittal directly to another department or agency may not start the third 30-day review period, resulting in processing delays for your permit application. to avoid potential termination of the application due to inactivity (Coastal Zoning Ordinance Section 8181-5.1.g.2).

This determination of incompleteness may be appealed to the Ventura County Planning Commission provided the appeal is filed with the Planning Division by November 25, 2024 (i.e., within 10 calendar days from the date of this letter, including weekends and holidays), and is accompanied by the appropriate fee and appeal form. Appeal forms

are available at the Planning Division public counter and online at https://vcrma.org/appeals.

Attached to this letter is a copy of the draft conditions of approval for the project, which are available at this time. However, please be aware that although some agencies have prepared draft conditions of approval for the project, County staff has not formulated a recommendation as to whether or not the decision-maker should grant the requested Coastal Planned Development Permit.

If you have any questions about this letter, please contact Kristina Boero at (805) 654-2467 or kristina.boero@ventura.org.

Sincerely,

Jennifer Trunk, Manager
Residential Permits Section
Ventura County Planning Division

Encl.: Draft Conditions of Approval

c: Donald Younger, 695 W. Highland Drive, Camarillo, CA 93010 (property owner)
Resource Management Agency Environmental Health Division - Roxy Cabral
Case File

DRAFT CONDITIONS OF APPROVAL FOR COASTAL PLANNED DEVELOPMENT (PD) PERMIT CASE NO. PL24-0058

PUBLIC WORKS AGENCY (PWA)

Development and Inspection Services Conditions

1. Grading Permit

Purpose: In order to ensure the Permittee performs all grading in compliance with Appendix J of the Ventura County Building Code.

Requirement: The Permittee shall submit a grading plan showing existing and proposed elevations to the Public Works Agency's Land Development Services Division for review and approval. If a grading permit is required, a civil engineer registered in the State of California must prepare and submit the grading plans, geotechnical and hydrology reports as necessary, to Land Development Services Division for review and approval. The Permittee must post sufficient surety in order to ensure proper completion of the proposed grading.

Documentation: If a grading permit is required, all deposits, fees, and materials detailed on Public Works Agency Grading Permit Submittal Checklist, must be submitted to Land Development Services Division for review and approval.

Timing: All applicable documentation, as specified above, must be submitted for review prior to issuance of a Zoning Clearance for development.

Monitoring and Reporting: Public Works Agency staff will review grading plans and reports for compliance with Ventura County codes, ordinances and standards, as well as state and federal laws. Public Works Agency inspectors will monitor the proposed grading to verify that the work is done in compliance with the approved plans and reports.

Integrated Waste Management Division (IWMD) Conditions

2. Construction & Demolition Debris Recycling Plan

Purpose: To ensure the project complies with Division 4, Chapter 7, Article 3 of the Ventura County Ordinance Code (VCOC). Section 4773 aligns with the California Green Building Standards Code which requires the Permittee to divert recyclable construction and demolition (C&D) materials generated by their project (e.g., wood, metal, green waste, soil, concrete, asphalt, paper, cardboard, etc.) from local landfills through recycling, reuse, or salvage.

Requirement: The Permittee must submit a comprehensive recycling plan to Ventura

County Public Works Agency, Water & Sanitation Department, Integrated Waste Management Division (Water & Sanitation) for any Covered Project as defined in Division 4, Chapter 7, Article 3, Section 4741-24 of the VCOC, meaning all proposed construction and/or demolition projects that require a building permit, except certain exempted projects as defined in Section 4773-4.

Documentation: A Recycling Plan must be submitted online at Ventura County Citizen Access. For more information and instructions on how to complete the Recycling Plan, please visit vcpublicworks.org/cdrecycling.

Timing: Upon Building and Safety Division's issuance of a building permit for the project, the Permittee must submit a Recycling Plan online through Ventura County Citizen Access for approval.

Monitoring & Reporting: The Permittee is required to keep a copy of their approved Recycling Plan until Building and Safety Division's issuance of final permit.

3. Construction & Demolition Debris Reporting

Purpose: Division 4, Chapter 7, Article 3 of the Ventura County Ordinance Code, Section 4773 aligns with the California Green Building Standards Code which requires the Permittee to divert recyclable construction and demolition (C&D) materials generated by their project (e.g., wood, metal, green waste, soil, concrete, asphalt, paper, cardboard, etc.) from local landfills through recycling, reuse, or salvage.

Requirement: The Permittee must upload recycling receipts to their Recycling Plan to Ventura County Citizen Access. Applicants will receive a Final Approval email once the receipts are reviewed and approved. For more information and instructions on how to complete submit recycling receipts, please visit vcpublicworks.org/cdrecycling.

Documentation: Recycling receipts and/or documentation of reuse to verify minimum landfill diversion requirements are met.

Timing: Required recycling receipts and/or documentation of reuse, must be submitted to Ventura County Citizen Access at the time of Building and Safety Division's issuance of final permit.

Monitoring & Reporting: The Permittee is required to keep a copy of their approved Recycling Plan and recycling receipts and/or documentation of reuse until Building and Safety Division's issuance of final permit.

Transportation Department Conditions

4. Driveway Access

Purpose: Driveway access shall be in accordance with the County Road Standards, the Driveways and Curb Cuts Brochure, and the County's Access Policies.
Requirement: The driveway shall be constructed per County Road Standard Plate E-7. The Permittee shall obtain an Encroachment Permit (EP) from the Public Works Agency – Transportation Department. Contact the Transportation Department Permits Division at 654 2055 for the requirements of the EP. The EP form is available on the internet. Improvement plans and supporting documentation may be required by the Encroachments Division.

Refer to the following websites for additional information:

http://pwaportal.ventura.org/TD/Residents/Streets_and_Transportation/Reports_and_Programs/AP_RoadStds.pdf

http://pwaportal.ventura.org/TD/Residents/Streets_and_Transportation/FAQs_and_Citizen_Brochures/Brochure_EncroachmentPermits.pdf

Documentation: The Public Works Agency – Transportation Department will review the improvement plans and supporting documentation.

Timing: This condition shall be met prior to the issuance of the Zoning Clearance.

Monitoring and Reporting: The Public Works Agency – Transportation Department Inspectors will monitor construction and verify that the work is performed in accordance with the Encroachment Permit.

Watershed Protection District (WPD) Conditions

County Stormwater Program Section

5. Stormwater Development Construction Program

Purpose: To ensure compliance with the Los Angeles Regional Water Quality Control Board NPDES Municipal Stormwater Permit, No. CAS004002 (Permit), the proposed project will be subject to the construction requirements for surface water quality and storm water runoff, in accordance with Part 4.F., "Development Construction Program", of the Permit.

Requirement: The construction of the proposed project shall meet requirements contained in Part 4.F., "Development Construction Program", of the Permit through the inclusion of an effective combination of construction best management practices (BMPs) during all ground disturbing activities.

Documentation: The Permittee shall submit a completed and signed SW-1 form (Best Management Practices for Construction Less Than One Acre) to the Public Works Agency - County Stormwater Program (CSP) for review and approval, a template for which can be found at

https://www.onestoppermits.vcrma.org/departments/stormwater-program.

Timing: The above listed item shall be submitted to the CSP for review and approval prior to issuance of a zoning clearance for construction.

Monitoring and Reporting: The CSP will review the submitted materials for consistency with the Permit. Building permit inspectors will conduct inspections during construction to ensure effective installation of the required BMPs

OTHER VENTURA COUNTY AGENCIES

Ventura County Air Pollution Control District (APCD) Conditions

6. Fugitive Dust During Construction

Purpose: To ensure that fugitive dust and particulate matter that may result from site preparation and construction activities are minimized to the greatest extent feasible.

Requirement: The Permittee shall comply with the provisions of applicable VCAPCD Rules and Regulations, which include but are not limited to, Rule 50 (Opacity), Rule 51 (Nuisance), and Rule 55 (Fugitive Dust).

Documentation: The project applicant shall ensure compliance with the following provisions:

I. The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust;
II. Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water should penetrate sufficiently to minimize fugitive dust during grading activities;
III. All trucks shall cover their loads as required by California Vehicle Code §23114.
IV. Fugitive dust throughout the construction site shall be controlled by the use of a watering truck or equivalent means (except during and immediately after rainfall). Water shall be applied to all unpaved roads, unpaved parking areas or staging areas, and active portions of the construction site. Environmentally-safe dust control agents may be used in lieu of watering.
V. Graded and/or excavated inactive areas of the construction site shall be monitored at least weekly for dust stabilization.
VI. Signs shall be posted onsite limiting traffic to 15 miles per hour or less.
VII. All clearing, grading, earth moving, or excavation activities shall cease during periods of high winds (i.e., wind speed sufficient to cause fugitive dust to be a nuisance or hazard to adjacent properties). During periods of high winds, all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by onsite activities and

operations from being a nuisance or hazard, either offsite or onsite.

Timing: Throughout the construction phases of the project.

Reporting and Monitoring: Dust control is a standard condition on all Grading Permits issued by Publics Works Agency and grading inspector shall perform periodic site inspections throughout the grading period. Monitoring and Enforcement of APCD Rule 55 is also conducted by APCD staff on a complaint-driven basis.

Ventura County Fire Protection District (VCFPD) Conditions

NOTICE IS HEREBY PROVIDED THAT THE SUBJECT PROPERTY (APN 060-0-065-295) IS WITHIN A MODERATE, HIGH, OR VERY HIGH FIRE HAZARD SEVERITY ZONE, AS DESIGNATED BY THE CALIFORNIA STATE FIRE MARSHALL, OR A LOCAL HAZARDOUS FIRE AREA, AS DESIGNATED BY THE VENTURA COUNTY FIRE PROTECTION DISTRICT.

7. Address Numbers (Single-Family Homes)

Purpose: To ensure proper premise identification to expedite emergency response.

Requirement: The Permittee shall install a minimum of 4 inch (4") address numbers that are a contrasting color to the background and readily visible at night. Brass or gold plated numbers shall not be used. Where structures are setback more than 150 feet (150') from the street, larger numbers will be required so that they are distinguishable from the street. In the event the structure(s) is not visible from the street, the address number(s) shall be posted adjacent to the driveway entrance on an elevated post.

Documentation: A stamped copy of an approved addressing plan or a signed copy of the VCFPD Form #610B "Requirements for Construction".

Timing: The Permittee shall install approved address numbers before final occupancy.

Monitoring and Reporting: A copy of the approved addressing plan and/or signed copy of the VCFPD Form #610B "Requirements for Construction" shall be kept on file with the VCFPD. The VCFPD shall conduct a final inspection to ensure that all structures are addressed according to the approved plans/form.

8. Fire Flow

Purpose: To ensure that adequate water supply is available to the project for firefighting purposes.

Requirement: The Permittee shall verify that the water purveyor can provide the required volume and duration at the project. The minimum required fire flow shall be determined as specified by the current adopted edition of the Ventura County Fire Code and the

applicable Water Manual for the jurisdiction (whichever is more restrictive). Given the present plans and information, the required fire flow is approximately 1,000 gallons per minute at 20 psi for a minimum 2 hour duration.

Documentation: A signed copy of the water purveyor's fire flow certification.

Timing: Prior to building permit issuance, the Permittee shall provide to the Fire District, verification from the water purveyor that the purveyor can provide the required fire flow. If there is no map recordation, the Permittee shall submit a signed copy of the water purveyor's certification to the VCFPD for approval before the issuance of building permits.

Monitoring and Reporting: A copy of the fire flow certification shall be kept on file with the Fire Prevention Bureau.

9. Fire Hydrant(s)

Purpose: To provide fire hydrants capable of meeting the required fire flow and duration. Requirement: The Permittee shall provide fire hydrant(s) per the current adopted edition of the Ventura County Fire Code, Appendix C. Design and installation shall conform to the minimum standard of the Water Works Manual.

Documentation: A stamped copy of the approved fire hydrant location plan.

Timing: The Permittee shall submit a site plan to the VCFPD for fire hydrant placement and approval before the issuance of building permits. The plans shall indicate all existing fire hydrants located within 500 feet of the project site, the type of hydrant (i.e. wet or dry barrel) and the number and size of outlets. All required fire hydrants shall be installed per the approved plans and in-service before the start of construction.

Monitoring and Reporting: A copy of the approved fire hydrant plans shall be kept on file with the VCFPD. The VCFPD shall conduct on-site inspections to ensure that the fire hydrants are installed according to the approved plans. Unless a modification is approved by the VCFPD, the Permittee, and their successors in interest, shall maintain the fire hydrants for the life of the development.

10. Fire Sprinklers

Purpose: To comply with current California Codes and Ventura County Fire Protection District Ordinance.

Requirement: The Permittee shall be responsible to have an automatic fire sprinkler system installed in all structures as required by the VCFPD. The fire sprinkler system shall be designed and installed by a properly licensed contractor under California State Law.

Documentation: A stamped copy of the approved fire sprinkler plans.

Timing: The Permittee shall submit fire sprinkler plans to the VCFPD for approval before the installation of the fire sprinkler system.

Monitoring and Reporting: A copy of the approved fire sprinkler plans shall be kept on file with the VCFPD. The VCFPD shall conduct on-site inspections to ensure that the fire sprinkler system is installed according to the approved plans. Unless a modification is approved by the VCFPD, the Permittee, and their successors in interest, shall maintain the fire sprinkler system for the life of the development.

11. Hazardous Fire Area

Purpose: To advise the Permittee that the project is located within a Hazardous Fire Area and ensure compliance with California Building and Fire Codes.

Requirement: The Permittee shall construct all structures to meet hazardous fire area building code requirements.

Documentation: A stamped copy of the approved building plans to be retained by the Building Department.

Timing: The Permittee shall submit building plans to the Building Department for approval before the issuance of building permits.

Monitoring and Reporting: The VCFPD shall conduct a final inspection to ensure that the structure is constructed according to the approved hazardous fire area building code requirements. Unless a modification is approved by the VCFPD, the Permittee, and their successors in interest, shall maintain the approved construction for the life of the structure.

12. Hazard Abatement

Purpose: To ensure compliance with Ventura County Fire Protection District Ordinance.

Requirement: The Permittee shall have all grass or brush adjacent to structure's footprint cleared for a distance of 100 feet or to the property line if less than 100 feet. All grass and brush shall be removed a distance of 10 feet on each side of all access road(s)/driveway(s) within the project. The Fire District may require the entire parcel to be cleared. Note: A Notice to Abate Fire Hazard may be recorded against the parcel.

Documentation: The Permittee shall obtain VCFD Form #610B "Requirements for Construction" Construction" or the "Notice to Abate" issued under the Fire District's Fire Hazard Reduction Program.

Timing: The Permittee shall remove all grass and brush as outlined by the Ventura

County Fire Protection District's Fire Hazard Reduction Program guidelines before the start of construction on any structure.

Monitoring and Reporting: The VCFPD shall conduct on-site inspections to ensure compliance with this condition.

13. Fuel Modification Plans

Purpose: To reduce hazardous fuel loads surrounding a project or developments to provide wildfire protection.

Requirement: The Permittee shall prepare a Fuel Modification Plan (FMP).

Documentation: A stamped copy of the approved Fuel Modification Plan (FMP).

Timing: The Permittee shall submit a Fuel Modification Plan (FMP) to the VCFPD for approval before the start of construction.

Monitoring and Reporting: A copy of the approved Fuel Modification Plan shall be kept on file with the VCFPD. The VCFPD shall conduct a final inspection to ensure the Fuel Modification Zones are installed according to the approved FMP. The VCFPD shall conduct annual inspections through its Fire Hazard Reduction Program to ensure the Fuel Modification Zones are maintained according to the FMP. Unless a modification is approved by the VCFPD, the Permittee, and their successors in interest, shall maintain the approved Fuel Modification Zones for the life of the development.

14. Fire Department Clearance

Purpose: To provide the Permittee a list of all applicable fire department requirements for their project.

Requirement: The Permittee shall obtain VCFD Form #610B "Requirements for Construction" for any new structures or additions to existing structures before issuance of building permits.

Documentation: A signed copy of the Ventura County Fire Protection District's Form #610B "Requirements for Construction."

Timing: The Permittee shall submit VCFPD Form #610B Application to the VCFPD for approval before issuance of building permits.

Monitoring and Reporting: A copy of the completed VCFPD Form #610B shall be kept on file with the VCFPD. The VCFPD will conduct a final on-site inspection of the project to ensure compliance with all conditions and applicable codes / ordinances.

NoorzayGeo

October 17, 2023

Mr. Donald Younger
695 West Highland Drive
Camarillo, California 93010

Project No. 23054

Dear Mr. Younger:

Attached herewith is the Preliminary Geotechnical Investigation and Septic Percolation Testing report prepared for the proposed single-family residence to be located at 7026 Oxnard Avenue, La Conchita, in Ventura County, California.

We appreciate this opportunity to provide geotechnical services for this project. If you have questions or comments concerning this report, please contact us at your convenience.

Respectfully submitted,
Noorzay Geotechnical Services, Inc.

Maihan Noorzay, G.E.
Principal Engineer

County of Ventura
Planning Director Hearing
PL24-0058
Exhibit 7 - Noorzay Geotechnical Services Geotechnical Report, dated October 17. 2023

Distribution: Mr. Donald Younger (PDF)

PRELIMINARY GEOTECHNICAL INVESTIGATION
AND SEPTIC PERCOLATION TESTING
PROPOSED SINGLE-FAMILY RESIDENCE
7026 OXNARD AVENUE, LA CONCHITA
VENTURA COUNTY, CALIFORNIA
PREPARED FOR
MR. DONALD YOUNGER
NGS PROJECT NO. 23054

NoorzayGeo

INTRODUCTION

During August to October 2023, a preliminary geotechnical investigation and septic percolation testing were performed by this firm for the proposed single-family residence to be located at 7026 Oxnard Avenue, APN No. 060-0-065-295, in the La Conchita Community, Ventura County, California. The purposes of this investigation were to explore and evaluate the geotechnical engineering conditions at the subject site and to provide appropriate geotechnical engineering recommendations for design and construction of the proposed single-family residence. Septic percolation testing was also performed.

The location of the site is depicted on the Index Map (Enclosure A-1). A topographic survey by WM Surveys, dated August 15, 2023, was used as base map for our Site Plan (Enclosure A-2).

The results of our investigation, together with our conclusions and recommendations, are presented in this report.

SCOPE OF SERVICES

The scope of services provided during this preliminary geotechnical investigation included the following:

- A field reconnaissance of the site and surrounding area
- Logging and sampling of exploratory borings for testing and evaluation
- Percolation testing for septic system feasibility and design purposes
- Laboratory testing on selected samples
- Evaluation of the geotechnical engineering/geologic data to develop site-specific recommendations for site grading and foundation design
- Preparation of this report summarizing our findings, professional opinions, and recommendations for the geotechnical aspects of project design and construction

PROJECT CONSIDERATIONS

As we understand it, a new single-family residence is proposed to be developed on the subject site. We anticipate that the structure will consist of wood framing and will include continuous or spread footings and a slab-on-grade. Septic percolation testing has also been requested for on-site wastewater disposal by means of leach lines or seepage pits. The site exists within the vicinity of the La Conchita Landslide that occurred in 2005. No additional information was provided during preparation of this report.

Preliminary grading and foundation plans were not provided for review during preparation of this report. The final project grading and foundation plans should be reviewed by the geotechnical engineer.

SITE DESCRIPTION

The assessor's parcel number, supplied by the Ventura County Assessor, is APN 060–0-065-295. The site is located at 7026 Oxnard Avenue about 150 feet north of West Surfside Street in the La Conchita community in Ventura County, California. The subject property is a rectangular-shaped parcel approximately 3,900 square feet in size. The project site currently is vacant. The site is bounded by Oxnard Avenue to the northwest, an alleyway to the southeast and by residential properties on the remaining sides. The subject property is flat with an average, downhill gradient of about five percent toward the southwest.

FIELD INVESTIGATION

Soil conditions underlying the subject site were explored by means of three exploratory borings drilled to a maximum depth of 51.5 feet below ground surface (bgs), one seepage pit performance test drilled to 15 feet bgs, and four leach line percolation test holes excavated to depths of four to nine feet with a truck-mounted CME75 or GT-16 drill rig equipped for soil sampling. The approximate locations of our exploratory borings are indicated on Enclosure A-2.

Continuous logs of the subsurface conditions, as encountered within the exploratory borings, were recorded at the time of drilling by an engineer from this firm. Both a standard penetration test (SPT) sampler (2-inch outer diameter and 1-3/8-inch inner diameter) and a ring sampler (3-1/4-inch outer diameter and 2-1/2-inch inner diameter) were utilized in our investigation. The penetration resistance was recorded on the boring logs as the number of hammer blows used to advance the sampler in 6-inch increments (or less if noted). The samplers were driven with an automatic hammer that drops a 140-pound weight 30 inches for each blow. After the required seating, samplers are advanced up to 18 inches, providing up to three sets of blow counts at each sampling interval. The recorded blows are raw numbers without any corrections for hammer type (automatic vs. manual cathead) or sampler size (ring sampler vs. standard penetration test sampler). Both relatively undisturbed and bulk samples of typical soil types obtained were returned to the laboratory in sealed containers for testing and evaluation.

The exploratory boring logs and in-place density data are presented in Appendix B. The stratification lines presented on the boring logs represent approximate boundaries between soil types, which may include gradual transitions.

The exploratory borings were backfilled with excavated soils using reasonable effort to restore the areas to their initial condition prior to leaving the site, but it was not compacted to a relative compaction of 90 percent or greater. In an area as small and deep as a boring, consolidation and subsidence of soil backfill may occur over time causing a depression. The client is advised to observe explored areas occasionally and, when needed, backfill noted depressions.

LABORATORY INVESTIGATION

Included in our laboratory testing program were in-situ moisture content and dry density tests on relatively undisturbed ring samples. Pertinent results are included on the boring logs. An optimum moisture- maximum density relationship was established in order to evaluate the relative compaction of the subsurface soils during grading. Direct shear testing was performed to provide shear strength

parameters for bearing capacity and earth pressure evaluations. An expansion index test was performed to evaluate the expansion potential of the subsurface soils. Sieve analysis including hydrometer and No. 200 washes were performed for classification purposes. A selected sample of material was delivered to Project X Corrosion Engineering and tested for preliminary corrosivity analysis.

Laboratory test results appear in Appendix C. Soil classifications provided in our geotechnical investigation are in accordance with the Unified Soil Classification System (USCS).

REGIONAL GEOLOGIC SETTING

The Ventura area lies south of the San Rafael - Topatopa Mountains, where steeply descending hills form the rugged coastline. The San Rafael – Topatopa Mountains, Santa Monica Mountains, Simi Hills, and other ranges to the west and east are portions of the Transverse Ranges Province, a nearly 300-mile-long belt of folded, faulted, and uplifted rocks of diverse lithologies. The east-west orientation of the Transverse Ranges markedly contrasts with the generally northwest-trending, structural grain of surrounding areas of California. The presence and orientation of these ranges are generally attributed to north-south directed compression and crustal shortening related to complications within the geometry of the San Andreas transform fault system. These complications are reflected in the relationships between the complex system of faults that control the shapes and locations of most topographic features within the western Transverse ranges.

Basement rocks in the western Transverse ranges are dominated by folded and faulted, Mesozoic and Tertiary, marine sedimentary and metasedimentary rocks which are underlain in many areas by Mesozoic igneous rocks. Paleozoic marine sedimentary rocks, common to the Coastal Ranges, are found in the far western portion of the Transverse Ranges.

The San Andreas fault zone passes along the north edge of the Western Transverse Ranges before it bends northward toward the San Francisco Bay area. Extending over 650 miles from the Gulf of California to the vicinity of Cape Mendocino in northwestern California, the San Andreas fault zone

often comprises a strip up to several miles wide of subparallel, branching, and anastamosing fault strands.

Locally, the subject site is underlain by paralic deposits of the Sea Cliff Terrace, which are unconsolidated, Quaternary sedimentary materials. The paralic deposits are underlain by the Pico formation, which is composed of sandstone, siltstone, and claystone with some pebbly conglomerate. The general geology in the area surrounding the subject site is shown on the Regional Geology Map and legend (Enclosures A-4, A-4a).

FAULTING AND GROUND RUPTURE

The site does not lie within an Alquist-Priolo Special Studies zone.

As with most of southern California, the subject site is situated in an area of active and potentially active faults. Active faults present several potential risks to structures, the most common of which are strong ground shaking, dynamic densification, liquefaction, mass wasting, and surface rupture at the fault plane. The following four factors are the principal determinants of seismic risk at a given location:

- Distance to seismogenically capable faults.
- The maximum or "characteristic" magnitude earthquake for a capable fault.
- Seismic recurrence interval, in turn related to tectonic slip rates.
- Nature of earth materials underlying the site.

Based upon proximity to regionally significant, active faults, ground shaking is considered to be the primary hazard most likely to affect the site. Characteristics of the major active fault zones selected for inclusion in analysis of strong ground shaking are listed in the following table. Numerous significant fault zones are located at distances exceeding 40 kilometers from the site, but greater distances, lower slip rates, and/or lesser maximum magnitudes indicate much lower risk to the site from the latter fault zones than those listed below.

Fault Zone[1]	Distance from Site (km)	Fault Length (km)[1]	Slip Rate (mm/yr)[1]	Reference Earthquake $M_{(Max)}$[1]	Fault Type[1]
Red Mountain North Strand (r, 45 NE)	0.2	39±4	2.0±1.0	7.0	B
Mission Ridge (Arroyo Parida) (r, 60N)	5.2	69±7	0.4±0.2	7.2	B
Ventura-Pitas Point (r-ll-o, 75 N)	7.0	40±4	1.0±0.5	6.9	B
Santa Ynez (ll-ss)	13	130±13	2.0±1.0	7.5	B
Oak Ridge (r, 28 N)	14	37±4	1.0±1.0	6.6	B
San Cayetano (r, 45 N)	28	42±4	6.0±3.0	7.0	B
Simi-Santa Rosa (ll-r-o, 60 N)	36	40±4	1.0±0.5	7.0	B
San Andreas (Mojave Segment) (rl-ss)	59	103±10	30.0±7.0	7.4	A

1. **California Department of Conservation, Geological Survey**, 2007 (Appendix A), *California Fault Parameters for the National Seismic Hazard Maps and Working Group on California Earthquake Probabilities*, CGS Special Report 203A, USGS Open File Report 2007-1437A.
2. **U.S. Department of the Interior, Geological Survey, 2008,** website: *2008 National Seismic Hazards Maps – Source Parameters*, https://earthquake.usgs.gov/cfusion/hazfaults_2008_search/query_results.cfm.
3. **Southern California Earthquake Data Center**, website: *Significant Earthquakes and Faults*, http://scedc.caltech.edu/significant/fault-index.html.
4. Fault Geometry: (ss) strike slip; (r) reverse; (n) normal; (rl) right lateral; (ll) left lateral; (O) oblique; (45 N) direction.

SUBSURFACE SOIL CONDITIONS

Near-surface soils consisted of up to one foot of artificial fill soils (Qaf) underlain by native, paralic deposits (Qhpr-s). Sedimentary bedrock identified as Pico formation (Tp), was found underlying the paralic deposits. The artificial fill soil was composed of silty sand (SM), which was dark brown in color, moist, and loose in consistency. The underlying paralic deposits were composed of silty sand (SM), clayey sand (SC), silty sand to clayey sand (SM/SC), lean to fat clay (CL/CH), silt (ML), sandy

silt to sandy lean clay (ML/CL) and lean clay (CL), which were tan brown to dark gray brown and dark brown, dry to saturated, and loose or soft, and firm to very stiff. The underlying formation was composed of siltstone, which was massive, gray to gray brown, moist to wet, and hard in consistency.

Groundwater was encountered within two exploratory borings at approximately 27.7 and 29.8 feet bgs. More detailed descriptions of the subsurface soil conditions encountered are included within our exploratory boring logs (Appendix B).

2022 CALIFORNIA BUILDING CODE - SEISMIC PARAMETERS

Based on our review of the geologic setting, the site is underlain by paralic deposits, which overlie Pico formation siltstone. The borings were not excavated down to a depth of 100 feet. However, based on the mapped geology of the site coupled with density of the subsurface materials encountered, the soils underlying the site may be classified as Site Class D – stiff soil, according to the 2022 California Building Code (CBC).

The seismic parameters according to the 2022 CBC are summarized in the following table. The values of S_{M1} and subsequently S_{D1} have been increased by 50 percent per Section 11.4.8 of Supplement 3 for ASCE 7-16.

2022 CBC - Seismic Parameters	
Spectral Acceleration Parameters	$S_s = 2.319$ and $S_1 = 0.843$
Site Coefficients	$F_a = 1.0$ and $F_v = 1.7$
Adjusted Maximum Considered Earthquake Spectral Response Parameters	$S_{MS} = 2.319$ and $S_{M1} = 2.150$
Design Spectral Acceleration Parameters	$S_{DS} = 1.546$ and $S_{D1} = 1.433$
Peak Ground Acceleration (PGA_M)	1.137g
Deaggregated Magnitude (mean, over all sources)	6.98

It should be noted that the above seismic parameters should be reviewed by the civil/ structural design engineer and approved by the appropriate governmental agency prior to using for this project. The civil/ structural design engineer should consult with the project geotechnical consultant if additional geotechnical information is needed for structural design.

GROUNDWATER

The site is in the southeast quarter of projected Section 1, Township 3 North, Range 25 West of the San Bernardino Principal Meridian at Latitude: 34.364717° North, Longitude: 119.44858° West. The closest available well data from the California Department of Water Resources was well number 343872N1194754W001, located over two miles northwest of the subject site. Because of the distance from this well and because of the different geological conditions in the two locations, information from this source was determined not to be relevant to conditions at the site. The California Geological Survey, Seismic Hazards Zones Report 073, plate 1.2, shows the entire community of La Conchita, from the base of the northern slope to the shore, to be in an area of consistent, historical highest depth to groundwater of 10 feet.

A large landslide study (Lettis & Associates, 2009) contained information from many previous studies focused on the La Conchita area. As stated in reports that studied the La Conchita locality intensively, the only area with uniform depth to groundwater of about 10 feet is located south of La Conchita between Highway 101 and the shore. Depth to groundwater within La Conchita is deeper, discontinuous, and perched. Lettis confirmed that, where groundwater was encountered at all beneath La Conchita, it was generally found 10 to 20 feet above sea level.

Groundwater at the subject site was encountered at 27.7 and 29.8 feet below ground surface during this investigation. At the location of the borings, groundwater was encountered at about 6.2 to 9.3 feet above sea level.

Based on the information available to us, we estimate a historic high groundwater level of approximately 25 feet below the existing ground surface at the subject site or about 10 feet above sea level.

LIQUEFACTION POTENTIAL AND SEISMIC SETTLEMENT

Liquefaction is a process in which strong ground shaking causes saturated soils to lose their strength and behave as a fluid (Matti and Carson, 1991). Ground failure associated with liquefaction can result in severe damage to structures. Soil types susceptible to liquefaction include sand, silty sand, sandy silt, and silt, as well as soils having a plasticity index (PI) less than 7 (Boulanger and Idriss, 2004) and loose soils with a PI less than 12 and a moisture content greater than 85 percent of the liquid limit (Bray and Sancio, 2006). The geologic conditions for increased susceptibility to liquefaction are: 1) shallow groundwater (generally less than 50 feet in depth); 2) the presence of unconsolidated sandy alluvium, typically Holocene in age; and 3) strong ground shaking. All three of these conditions must be present for liquefaction to occur.

The site is located in an area of potential, seismically induced, liquefaction susceptibility, as identified by the State of California (Enclosure A-5a).

Severe seismic shaking may cause dry and non-saturated sands to densify, resulting in settlement expressed at the ground surface. Seismic settlement in dry soils generally occurs in loose sands and silty sands, with cohesive soils being less prone to significant settlement.

A quantitative method using an index called the liquefaction potential index (LPI) was developed and presented by Iwasaki et al. (1978, 1982). The LPI is defined as:

$$LPI = \int_0^{20} F_1 W(z) dz$$

where $W(z) = 10 - 0.5z$, $F_1 = 1$ - FS for FS < 1.0, $F_1 = 0$ for FS > 1.0 and z is the depth below the ground surface in meters. The LPI presents the risk of liquefaction damage as a single value with the following indicators of liquefaction-induced damage:

LPI Range and Damage	
LPI Range	**Damage**
LPI = 0	Liquefaction risk is very low.
$0 < LPI \leq 5$	Liquefaction risk is low.
$5 < LPI \leq 15$	Liquefaction risk is high.
LPI > 15	Liquefaction risk is very high.

The most recent development for quantitative descriptions of liquefaction-induced surface damage, called "liquefaction vulnerability", was made by Tonlin & Taylor (2013) after the Christchurch earthquakes occurred between 2010 and 2011 and was based on field observations and analyses of approximately 7,500 CPT investigations. A new index, the liquefaction severity number (LSN), was proposed and defined as:

$$LSN = \int \frac{\varepsilon_v}{z} dz$$

where ε_v is the calculated volumetric densification strain in the subject layer from Zhang et al. (2002) and z is the depth to the layer of interest in meters below the ground surface. The typical behaviors of sites with a given LSN are summarized in following table.

LSN Ranges and Observed Land Effects	
LSN Range	**Predominant Performance**
0-10	Little to no expression of liquefaction, minor effects
10-20	Minor expression of liquefaction, some sand boils
20-30	Moderate expression of liquefaction, with sand boils and some structural damage
30-40	Moderate to severe expression of liquefaction, settlement can cause structural damage
40-50	Major expression of liquefaction, undulations, and damage to ground surface, severe total and differential settlement of structures
>50	Severe damage, extensive evidence of liquefaction at surface, severe total and differential settlements affecting structures, damage to services

Both LPI and LSN indices were calculated for the soil profile with the results presented in Appendix D. The results indicate that the liquefaction risk of the site is "low" per the LPI index. The site exhibits little to no expression of liquefaction per the LSN index. Little to no expression of liquefaction means that minor effects of liquefaction will be observed per Tonlin & Taylor (2013).

The Idriss and Boulanger (2010-16) and Pradel (1998) methods were used to evaluate liquefaction-induced and dry sand settlements. As input into our calculations a deaggregated modal moment magnitude of 6.98 and an acceleration of 1.137g were utilized for the representative soil profile provided in Boring B-1. A historic groundwater table of 25 feet below the existing ground surface was used.

The results indicate that a maximum seismic settlement of approximately 0.5 inches can be anticipated. Based on the relative uniformity of soil materials encountered, differential seismic settlement is anticipated to be approximately one-half of the total seismic settlement over 40 feet. The settlement

calculated is accumulated from soil layers sampled to a maximum depth of 51-1/2 feet below the existing ground surface and the result of our analysis is provided in Appendix D.

Lateral Spread

Lateral spread is the most pervasive type of liquefaction-induced ground failure. Lateral spreads can occur on gently sloping ground or where nearby drainage or stream channels can lead to static shear stress biases on essentially horizontal ground. During lateral spread, blocks of mostly intact, surficial earth material displace downslope or towards a free face along a shear zone that has formed within the liquefied sediment. The resulting ground deformation typically has extensional fissures or a graben at the head of the failure, shear deformations along the side margins, and compression or buckling of the earth material at the toe. The amount of lateral displacement typically ranges from a few centimeters to several meters and can cause considerable damage to engineered structures and lifelines.

Past earthquakes indicated that significant damage to structures occurred even with less than one foot of lateral spread. Consequently, the determination of lateral spread potential, an assessment of its likely magnitude, and the development of appropriate mitigation, need to be addressed as part of the hazard assessment process.

The lateral spread potential of the subject site was evaluated in general accordance with procedures proposed by Idriss and Boulanger (2008). A slope of 5 percent was used for the existing gentle sloping conditions.

The results of our lateral spread evaluation indicate that the estimated lateral ground displacement for the subject site is less than 10 inches (see Appendix D) which is less than the upper limit for shallow foundations as indicated on Table 12.13-2 of the ASCE 7-16. The building may be supported on shallow foundations.

Due to the liquefaction potential of the subject site and the potential for differential settlement, foundations for the proposed structure should be stiffened and designed to consider the liquefaction

potential and prevent catastrophic collapse due to the loss of foundation support that might result due to liquefaction of the site during the design earthquake event, as necessary. If necessary, the stiffening of the foundation system, which may include grade beams, should be based upon criteria limited to fulfilling life safety concepts. Additionally, using the above criteria, the foundations should be designed by the Structural Engineer in accordance with the current codes at the time of construction.

HYDROCONSOLIDATION

Based on the anticipated grading and site preparations and the low potential for full saturation of the upper soil layers, it is our opinion that the potential for hydrocollapse settlement at the site is low.

STATIC SETTLEMENT

Potential static settlement was evaluated utilizing field and laboratory data and foundation load assumptions. The calculations indicate total static settlement of approximately one inch beneath shallow foundations. Most of the potential static settlement should occur during construction. Based on the uniformity of the materials encountered, differential settlement is anticipated to be on the order of 1/2 the total settlement in 40 feet.

LANDSLIDES AND SLOPE STABILITY

The State of California has not included the subject site within an area that is susceptible to seismically induced landsliding (Enclosure A-5a). However, the cliffs immediately northeast of the La Conchita community are included in an area of seismically induced landslide susceptibility.

Geological investigations have revealed numerous historic and prehistoric landslides and debris flows within and bordering the community. The area around La Conchita has been adversely affected by numerous historical landslides and debris flows. The Coast Highway and railroad have been buried or damaged by landslides in this area as early as 1875 and 1892, respectively. For the purpose of this

report, the most pertinent events occurred in 1937-1938, 1995, and 2005. The heavy precipitation in winter of 1937-1938 caused a large debris flow that covered about 34,000 square feet of what is now La Conchita. In 1995, again triggered by heavy precipitation, a deep landslide occurred, in which a large block moved downslope, which buried part of Vista del Rincon Drive around San Fernando Avenue. A debris flow occurred shortly after in 1995 emanating from the barranca immediately west of La Conchita and damaged at least three houses in the northwest corner of the development. In 2005 a large, fast-moving debris flow cascaded down the side of the 1995 landslide block, starting at an elevation of 450 feet above mean sea level, and terminated within the La Conchita community after destroying 13 houses, severely damaging 23 others, and killing 10 people.

Of note is that the total area covered by the 1937-1938, 1995, and 2005 landslides and debris flows amounts to less than 14 percent of the total 12 acres occupied by the development, yet landslide and debris flow deposits from prehistoric events have been identified covering over 60 percent of the development area. Without significant mitigation techniques applied to the problem, all of La Conchita is at risk from future landslides and debris flows, although some areas have a higher risk than others.

A landslide/debris flow map of the La Conchita area showing the subject site was prepared by Lettis & Assoc in 2009 (Enclosure A-5c). The subject property lies outside any recognized prehistoric debris flows or runout areas with an inferred depth of debris flow ranging between 0 and 2 feet in thickness. The subject site is outside any historic debris flow runout areas. Another map prepared by Alan Kropp & Associates in July 2008 (Enclosure A-5d) provided setback from the potential debris flow zones as a mitigation method to the debris flow hazard. This map shows that the subject site is outside of the "limits of unoccupied area" which provides a 50-foot setback from a 2-foot minimum debris flow thickness, design-level event.

FLOODING POTENTIAL

Flood Insurance Rate Maps (FIRM) were compiled by the Federal Emergency Management Agency (FEMA) for the Flood Insurance Program and are available for most areas within the United States at

the FEMA web site (http://msc.fema.gov/). The attached FEMA Flood Map and legend (Enclosure A-6) and FEMA Flood Map Legend was created from FIRMs specific to the area of the subject site. The FEMA Flood Map shows the site is located within 'Zone X', which is not located within a potential flood zone.

Therefore, flooding should not be considered a constraint for the development of the subject project at this location.

Seiching

Seiching is the oscillation of an enclosed body water, usually due to strong groundshaking following a seismic event. Seiching can affect lakes, water towers, swimming pools. There were no enclosed bodies of water observed in close enough proximity to affect the subject site. Seiching should not be considered to be a geologic constraint at this site.

Tsunamis

The subject site lies outside the State of California zone of potential Tsunami Inundation (Enclosure A-5b). Additionally, Lettis & Associates (2009) addressed the tsunami issue and indicated that the potential for tsunami run-up high enough to adversely affect the La Conchita community is not a significant hazard "within the 100- and 500-year periods of interest".

EXPANSION POTENTIAL

The results of our expansion index testing indicate that the soils encountered at the site are considered "low" expansive. Recommendations provided in this report are made with consideration to the expansive conditions of the on-site soils.

SEPTIC PERCOLATION TESTING

Percolation testing was performed for leach lines at the subject site in accordance with the "Onsite Wastewater Treatment System Technical Manual" prepared by Ventura County Environmental Health Division (Manual), dated June 17, 2015. Four percolation tests were performed at the subject site within the anticipated primary areas for the leach lines. Three tests were performed within the approximate depth of the leach lines which was anticipated to be 4 feet bgs. One test was performed at a depth of 9 feet bgs. The test holes were pre-soaked overnight. The field data is provided in Appendix E.

Percolation Rates			
Test No.	Depth (ft.)	Percolation Rate (minutes/inch)	Soil Type
P-1	4	14.7	SM
P-2	4	41.7	SM
P-3	9	125	SM/SC
P-4	4	41.7	SM

Based on results of the percolation testing performed at the subject site and obtaining a percolation rate of 125 minutes per inch in our deeper percolation test, leach lines were not considered feasible for the site.

Because leach lines were not considered feasible at the subject site, seepage pits were considered. Using a historic high groundwater level of 25 feet bgs, and in order to maintain a minimum of 10 feet separation between the bottom of the seepage pit and groundwater, the maximum depth for seepage pits on this site is limited to 15 feet. Based on the soil borings, we determined that the predominant soil type from the surface to 25 feet was Type V soils. Laboratory hydrometer test results on six

samples from B-3 down to 25 feet bgs confirmed the soil type. A seepage pit performance test, with a hole drilled to 15 feet, was conducted in accordance with the Manual. Results of the test indicate a percolation rate of 1.57 gal/ft^2/day. The most conservative results from the hydrometer or performance tests were from the hydrometer. As such, a design rate of 0.83 gal/ft^2/day was used for design of the subsurface sewage disposal system.

We anticipate that the proposed structure will have two bedrooms. The Manual states that with 2 or 3 bedrooms, with less than 25 fixture units, a minimum 1,000-gallon septic tank must be used. The maximum seepage pit diameter is 6 feet.

With a 1,000-gallon septic tank and a design rate of 0.83 gal/ft^2/day, 830 square feet of absorption area is required. Because the pits can only be 15 feet in total depth, the maximum usable sidewall is 13.2 feet per pit with an inlet depth of 1.8 feet bgs. It was determined that 3 seepage pits are required using a 6-foot diameter seepage pit. The minimum depth from ground surface to pit cap is 18 inches. The seepage pits must be 12 feet apart, and they may not use a serial connection; they must be connected by a distribution box. The 100 percent expansion area must equal primary seepage pit design.

It is our opinion that the site has sufficient area to provide a 100 percent expansion of the required absorption area when/ if necessary.

The requirements set forth in the OTWS Manual should be followed. It is our opinion that seepage pits (15 feet deep) will not encroach within the minimum required, 10-foot vertical setback from the historic groundwater table. The seepage pit must be over drilled down to 25 feet (10 feet past the bottom of the seepage pit) and have the bottom 10 feet replaced with coarse sand as per the OWTS Manual, page 9-25.

CONCLUSIONS

On the basis of our field and laboratory investigations, it is the opinion of this firm that the proposed development is feasible from geotechnical engineering and engineering geologic standpoints, provided the recommendations contained in this report are implemented during grading and construction.

Moderate to severe seismic shaking can be expected at the site. There are no known active faults on the subject site.

Fill, one foot deep or less, was encountered during our field investigation. Groundwater was encountered at 27.7 and 29.8 feet below ground surface in our exploratory borings. No caving was observed in our exploratory borings. However, trenches, larger-diameter borings, or excavations that remain open for longer periods of time may be subject to caving. Temporary excavations are anticipated to conform to local and State codes with regard to the geologic materials present at the site.

The site is located in an area of potential, seismically induced, liquefaction susceptibility, as identified by the State of California. The results of our analysis indicate that the liquefaction risk of the site is "low" per the LPI index. The site exhibits little to no expression of liquefaction per the LSN index. Little to no expression of liquefaction means that minor effects of liquefaction will be observed per Tonlin & Taylor (2013).

Total seismic settlement of approximately 0.5 inches can be anticipated. Based on the relative uniformity of soil materials encountered, differential seismic settlement is anticipated to be approximately one-half of the total seismic settlement over 40 feet. Total static settlement of approximately one inch beneath shallow foundations should be anticipated. Differential static settlement is anticipated to be on the order of 1/2 the total settlement in 40 feet. The potential for hydrocollapse settlement at the site is considered low.

Landslides and debris flows may be considered to be a potential geologic hazard on the subject site.

The subject property lies outside recognized historic or prehistoric landslide or debris flow areas.

The results of our expansion index testing indicate that the soils encountered at the site are considered "low" expansive. Recommendations provided in this report are made with consideration to the expansive conditions of the on-site soils.

Based upon our field investigation and test data, it is our opinion that the upper existing soils will not, in their present condition, provide uniform or adequate support for the proposed structure. Undocumented fill and/or variable in situ conditions may be present in the upper soils. These conditions may cause unacceptable differential and/or overall settlement upon application of the anticipated foundation loads.

Because of site conditions and the presence of existing fill soils, it will be necessary to remove and recompact a minimum of 4 feet of the existing soils in building areas. To provide adequate support for the proposed structure, it is our recommendation that soil from building areas be subexcavated as necessary and replaced with a compacted fill mat beneath footings. A compacted fill mat will provide a dense, uniform, high-strength soil layer to distribute the foundation loads over the underlying soils.

Based on the potential for debris flow, we recommend that the proposed building pad be elevated a minimum of 1 to 2 feet from the existing adjacent grade. Additionally, we recommend that a debris/ impact wall at least 2 feet in height be designed and constructed on the slope facing (northeast) side of the property. The building should also be setback from the northeastern side of the lot as far southwest (away from the slope) as possible.

The final project grading and foundation plans should be reviewed by the geotechnical engineer.

RECOMMENDATIONS

GENERAL SITE GRADING:

It is imperative that no clearing and/or grading operations be performed without the presence of a representative of the geotechnical engineer. An on-site, pre-job meeting with the developer, the contractor and the geotechnical engineer should occur prior to all grading-related operations. Operations undertaken at the site without the geotechnical engineer present may result in exclusions of affected areas from the final compaction report for the project.

Grading of the subject site should be performed, at a minimum, in accordance with these recommendations and with applicable portions of the CBC. The following recommendations are presented for your assistance in establishing proper grading criteria.

INITIAL SITE PREPARATION:

All areas to be graded should be stripped or cleaned of significant vegetation and other deleterious materials. These materials should be removed from the site for disposal. The cleaned soils may be reused as properly compacted fill. Rocks or similar irreducible material with a maximum dimension greater than 8 inches should not be used in compacted fills. If encountered, existing utility lines should be traced, removed, and rerouted from areas to be graded.

MINIMUM MANDATORY REMOVAL OF EXISTING SOILS:

All building areas (including at least 5 feet laterally beyond the footing lines, where possible) should have at least the upper 4 feet of existing soils removed and the open excavation bottoms observed by our engineer/ geologist to verify and document in writing that all undocumented fill is removed prior to refilling with properly tested and documented compacted fill. The removed and cleaned soils may be reused as properly compacted fill.

Further subexcavation may be necessary depending on the conditions of the underlying soils. The actual depth of removal should be determined at the time of grading by the project geotechnical

engineer/geologist. The determination will be based on soil conditions exposed within the excavations. At minimum, any undocumented fill, topsoil, or other unsuitable materials should be removed and replaced with properly compacted fill.

In-place density tests may be taken in the removal bottom areas where appropriate to provide data to help support and document the engineer/geologist's decision.

EXCAVATION ADJACENT TO EXISTING STRUCTURES:

Removal and recompaction of the soils adjacent to any existing structures may result in unacceptable distress by the removal of bearing and lateral support. The following precautionary measures should be utilized during proposed subexcavation/recompaction operations to reduce the potential for distress to any existing adjacent structures.

During compacted fill mat construction for the proposed structure, the excavation and replacement of soils adjacent to any existing structures should be accomplished in the shortest period of time possible. Sufficient forces and equipment should be available to accomplish any removal and replacement of soils adjacent to existing structures within one 8-hour working day. The excavation should not be performed during periods of rain or threat of rain. During the excavation operation, the moisture content of the soils near existing structures should be monitored. If excessive moisture contents or excessively dry soils are encountered, the geotechnical engineer should be notified immediately.

The actual excavation and recompaction of soils near existing structures should be performed in alternating sections. A checkerboard-type (A-B) system should be utilized by initially removing and recompacting every other square and thereupon going back and removing and recompacting the remaining squares. The width of these excavations is usually equal to the blade or bucket size of the available equipment but should not exceed 6 feet.

PREPARATION OF FILL AREAS:

Prior to placing fill, and after the mandatory subexcavation operation, the surfaces of all areas to receive fill should be scarified and moisture treated to a depth of 6 inches or more. The soils should be brought to near optimum moisture content and compacted to a minimum relative compaction of 90 percent in accordance with ASTM D1557.

PREPARATION OF SHALLOW FOOTING AREAS:

All footings should rest upon at least 24 inches of properly compacted fill material. In areas where the required thickness of compacted fill is not accomplished by the mandatory removal operation, the footing areas should be overexcavated to a depth of 24 inches or more below the lowest proposed footing base grade. The required overexcavation should extend at least 5 feet laterally beyond the footing lines, where reasonably possible. In instances where the 5-foot lateral overexcavation may not be accomplished, this firm should be contacted to evaluate the effect. The bottom of this excavation should then be scarified and moisture treated to a depth of at least 6 inches, brought to near optimum moisture content and compacted to a minimum of 90 percent relative compaction in accordance with ASTM D1557 prior to refilling the excavation to the required grade as properly compacted fill.

All footing excavations should be observed by a representative of the project geotechnical engineer to verify that they have been excavated into compacted fill prior to placement of forms, reinforcement, or concrete. The excavations should be trimmed neat, level, and square. All loose, sloughed or moisture-softened soils should be removed from the excavations prior to placing of concrete. Excavated soils derived from the footing and/or utility trenches should not be placed in building slab-on-grade areas or exterior concrete flatwork areas unless the soils are brought to near optimum moisture content and compacted to at least 90 percent of the maximum dry density.

COMPACTED FILLS:

The on-site soils should provide adequate quality fill material provided they are free from organic matter and other deleterious materials. Rocks or similar irreducible material with a maximum dimension greater than 8 inches should not be used in compacted fills.

If utilized, import fill should be inorganic, non-expansive granular soils free from rocks or lumps greater than 6 inches in maximum dimension. The contractor shall notify the geotechnical engineer of import sources sufficiently ahead of their use so that the sources can be observed and approved as to the physical characteristic of the import material. For all import material, the contractor shall also submit current verified reports from a recognized analytical laboratory indicating that the import has a "not applicable" potential for sulfate attack based upon current American Concrete Institute (ACI) criteria and is "mildly to moderately corrosive" to ferrous metal and copper. The reports shall be accompanied by a written statement from the contractor that the laboratory test results are representative of all import material that will be brought to the job.

Fill should be spread in near-horizontal layers, approximately 8 inches thick. Thicker lifts may be approved by the geotechnical engineer if testing indicates that the grading procedures are adequate to achieve the required compaction. Each lift should be spread evenly, thoroughly mixed during spreading to attain uniformity of the material and moisture in each layer, brought to near optimum moisture content and compacted to a minimum relative compaction of 90 percent in accordance with ASTM D1557.

Based upon the relative compaction anticipated for compacted fill soils, we estimate compaction shrinkage of approximately 10 to 15 percent. Therefore, 1.10 cubic yards to 1.15 cubic yards of in-place soil material would be necessary to yield one cubic yard of properly compacted fill material. In addition, we would anticipate compaction subsidence of approximately 0.4 to 0.6 feet in the upper 4 feet. These values are exclusive of losses due to disposal of oversized material, stripping, tree removal or removal of other subsurface obstructions, if encountered, and may vary due to differing conditions within the project boundaries and the limitations of this investigation.

Values presented for shrinkage and subsidence are estimates only. Final grades should be adjusted, and/or contingency plans to import or export material should be made to accommodate possible variations in actual quantities during site grading.

SPREAD OR CONTINUOUS FOUNDATION DESIGN:

The proposed structure may be safely founded on spread foundations, either individual spread footings and/or continuous wall footings, bearing on a minimum of 24 inches of compacted fill.

Interior footings should be a minimum of 18 inches wide and should be established at a minimum depth of 18 inches below lowest adjacent final subgrade level. Footing reinforcement for interior footings should consist of at least four No. 4 bars, two at the top and two at the bottom.

Exterior footings should be a minimum of 18 inches wide and should be established at a minimum depth of 24 inches below lowest adjacent final subgrade level. Footing reinforcement for exterior footings should consist of at least four No. 5 bars, two at the top and two at the bottom.

For a minimum width of 18 inches and a minimum depth of 18 inches below lowest adjacent final subgrade level, footings may be designed for a maximum safe soil bearing pressure of 1,500 pounds per square foot (psf) for dead plus live loads. These allowable bearing pressures may be increased by 175 psf for each additional foot of width and by 550 psf for each additional foot of depth to a maximum safe soil bearing pressure 2,000 psf for dead plus live loads. These bearing values may be increased by one-third for wind or seismic loading.

For footings thus designed and constructed, we would anticipate a maximum total settlement (static and seismic) of approximately 1.5 inches. Differential settlement between similarly loaded adjacent footings is expected to be approximately half the total settlement over 40 feet. Static settlement is expected to occur during construction or shortly after.

LATERAL LOADING:

Resistance to lateral loads will be provided by passive earth pressure and base friction. For footings bearing against compacted fill, passive earth pressure may be considered to be developed at a rate of 320 psf per foot of depth. Base friction may be computed at 0.38 times the normal load. Base friction and passive earth pressure may be combined without reduction. Other than conservative soil modeling,

the lateral passive earth pressure and base friction values recommended do not include factors of safety. If the design is to be based on allowable lateral resistance values, we recommend that minimum factors of safety of 1.5 and 2.0 be applied to the friction coefficient and passive lateral earth pressure, respectively. The resulting allowable lateral resistance values follow:

Allowable Lateral Resistance Values			
	Ultimate	**Allowable**	**Factor of Safety**
Passive Lateral Earth Pressure (psf/ft)	320	160	2.0
Base Friction Coefficient	0.38	0.25	1.5

DEBRIS/ IMPACT WALL:

A free standing debris/ impact wall should be designed and constructed along the slope facing/ northeast side of the property to divert flowing mud around the structure in the case of a debris flow. The wall should be at least 2 feet in height. The wall should be designed for an equivalent fluid pressure of 150 pcf. The backside of the wall should be cleared of any mud or debris following storm events.

SLABS-ON-GRADE:

To provide adequate support, concrete slabs-on-grade should bear on a minimum of 24 inches of compacted soil. The final pad surfaces should be rolled to provide smooth, dense surfaces. As a minimum, concrete slabs-on-grade should be 4 inches in thickness and should have No. 3 bars spaced at 18 inches on center each way.

Slabs to receive moisture-sensitive coverings should be provided with a moisture vapor retarder/barrier. We recommend that a vapor retarder/barrier be designed and constructed according to the American Concrete Institute 302.1R, Concrete Floor and Slab Construction, which addresses moisture vapor retarder/barrier construction. At a minimum, the vapor retarder/barrier should comply with ASTM E1745 and have a nominal thickness of at least 10 mils. The vapor retarder/barrier should be properly sealed, per the manufacturer's recommendations, and protected from punctures and other damage. Per

the Portland Cement Association (www.cement.org/tech/cct_con_vapor_retarders.asp), for slabs with vapor-sensitive coverings, a layer of dry, granular material (sand) should be placed under the vapor retarder/barrier. For slabs in humidity-controlled areas, a layer of dry, granular material (sand) should be placed above the vapor retarder/barrier.

Flatwork

Use of maximum control joint spacing of no more than 8.0 feet in each direction and a construction joint spacing of 10 to 12 feet should be used in the design of flatwork. Construction joints that abut foundations or slabs should include a felt strip, or approved equivalent, that extends the full depth of the exterior slab. Although not required, it is suggested that exterior slabs be doweled into adjacent foundations.

If the subgrade earth materials are allowed to become saturated, there is a risk of vertical differential movement of the exterior concrete hardscape, sidewalks, curbs / gutters, etc. Therefore, proper drainage should be established away from such improvements and minimal precipitation or irrigation water allowed to percolate into the earth materials adjacent to and/or under the exterior concrete flatwork or hardscape, curbs / gutters, etc.

EXCAVATIONS:

The soils encountered within our exploratory borings are generally classified as a Type "C" soil in accordance with the CAL/OSHA excavation standards. Unless specifically evaluated by our engineering geologist, all the trench excavations should be performed following the recommendation of CAL/OSHA (State of California, 2013) for Type "C" soil. Based upon a soil classification of Type "C", the temporary excavations should not be inclined steeper than 1.5 horizontal to 1 vertical for maximum trench depth of less than 20 feet. For trench excavations deeper than 20 feet or for conditions that differ from those described for Type "C" in the CAL/OSHA excavation standards, this firm should be contacted.

RAISING PAD ELEVATION AND PLACEMENT OF STRUCTURE:

Based on the potential for debris flow, we recommend that the proposed building pad be elevated a minimum of 1 to 2 feet from the existing adjacent grade. This should be done after performing the mandatory overexcavation and recompaction of the existing soils.

The building should also be set back from the northeastern side of the lot as far southwest (away from the slope) as possible.

POTENTIAL EROSION AND DRAINAGE:

The potential for erosion should be mitigated by proper drainage design. The site should be graded so that surface water flows away from structures at a minimum gradient of 5 percent for a minimum distance of 10 feet from structures. Impervious surfaces within 10 feet of structures should be sloped a minimum of 2 percent away from the building. Water should not be allowed to flow over graded areas or natural areas so as to cause erosion. Graded areas should be planted or otherwise protected from erosion by wind or water.

Water should not be permitted to collect or pond in landscaped areas.

The structure should be provided with roof drains, gutters, and downspouts connected to subsurface pipes. Roof water should not be allowed to discharge onto the ground surface without collecting into surface drains and pipes. Water should not be allowed to collect against foundations or retaining walls. These walls are typically built to withstand the effects of normal soil moisture and may require subsurface drains to collect and transfer excessive water away from the structures.

All drainage devices should be checked at least twice per year to ensure that they are not blocked. All blockages should be cleared.

Swales that have been graded around the structure or on the lot should not be blocked. These swales are typically constructed to provide drainage toward the driveways, street, or other positive outlet.

SOIL CORROSION:

A selected sample of material was tested for preliminary corrosivity analysis. Laboratory testing consisted of pH, resistivity, chlorides, and sulfates. The results of the laboratory tests appear in Appendix C.

The result from the resistivity test indicates a "corrosive" condition to ferrous metals. Specific corrosion control measures, such as coating of the pipe with non-corrosive material or alternative non-metallic pipe material, are considered necessary.

Results of the soluble sulfate testing indicate a Class S1 anticipated exposure to sulfate attack. Based on the criteria from Table 19.3.2.1 of the American Concrete Institute Manual of Concrete Practice (2014), special measures, such as specific cement types or water-cement ratios, are considered necessary for this Class S1 exposure to sulfate attack. As a minimum, the water to cement ratio should be 0.50, Type II cement should be used, and the compressive strength of concrete used on site should be at least 4000 psi.

The soluble chloride content of the soils tested was not at levels high enough to be of concern with respect to corrosion of reinforcing steel. The results should be considered in combination with the soluble chloride content of the hardened concrete in determining the effect of chloride on the corrosion of reinforcing steel.

Noorzay Geotechnical Services does not practice corrosion engineering. If further information concerning the corrosion characteristics, or interpretation of the results submitted herein, is required, then a competent corrosion engineer could be consulted.

PRELIMINARY RIGID PAVEMENT DESIGN

Based on an estimated R-value of 5 (California Bearing Ratio of 2), we recommend the following Portland cement concrete pavement design. This design is based on the ACI Guide for the Design and Construction of Concrete Parking Lots (ACI 330R-08).

Preliminary Rigid Pavement Design	
Design Area	**Recommended Section**
Car Parking and Access Lanes ADTT = 1 (Category A)	5.0" PCC/Compacted Soil

ADTT = Average Daily Truck Traffic

The above recommended concrete section is based on a design life of 20 years, with integral curbs or thickened edges. In addition, the above structural section is predicated upon proper compaction of the utility trench backfills and the subgrade soils, with the upper 12 inches of subgrade soils brought to a uniform relative compaction of 95 percent (ASTM D1557).

Slab edges that will be subject to vehicle loading should be thickened at least 2 inches at the outside edge and tapered to 36 inches back from the edge. Typical details are given in the ACI Guide for the Design and Construction of Concrete Parking Lots (ACI 330R-08). Alternatively, slab edges subject to vehicle loading should be designed with dowels or other load transfer mechanism. Thickened edges or dowels are not necessary where new pavement will abut areas of curb and gutter, buildings or other structures preventing through-vehicle traffic and associated traffic loads.

The concrete sections may be placed directly over a compacted subgrade prepared as described above. The concrete to be utilized for the concrete pavement should have a minimum modulus of rupture of 590 pounds per square inch. This approximates a 28-day compressive strength of 3,500 pounds per square inch. However, the design strength should be based upon the modulus of rupture and not the compressive strength. Contraction joints should be sawcut in the pavement at maximum spacing of 30 times the thickness of the slab, up to a maximum of 15 feet. Saw cutting in the pavement should be performed within 12 hours of concrete placement, or preferably sooner. Saw cut depths should be equal to approximately one-quarter of the slab thickness for conventional saws or 1 inch when early-entry saws are utilized on slabs 9 inches thick or less. The use of plastic strips for formation of jointing is not recommended. The use of expansion joints is not recommended, except where the pavement

will adjoin structures. Construction joints should be constructed such that adjacent sections butt directly against each other and are keyed into each other or the joints are properly doweled with smooth dowels. It should be noted that distributed steel reinforcement (welded wire fabric) is not necessary, nor will any decrease in section thickness result from its inclusion.

The above pavement design was based upon an estimated R-value and should be verified by sampling and testing during construction when the actual subgrade soils are exposed.

Noorzay Geotechnical Services, Inc. does not practice traffic engineering. The ADTT values used to develop the recommended PCC pavement sections are typical for projects of this type. We recommend that the ADTT values used be reviewed by the project civil engineer or traffic engineer to verify that they are appropriate for this project.

CONSTRUCTION OBSERVATION:

All grading operations, including site clearing and stripping, should be observed by a representative of the geotechnical engineer. The geotechnical engineer's field representative will be present to provide observation and field testing and will not supervise or direct any of the actual work of the contractor, his employees, or agents. Neither the presence of the geotechnical engineer's field representative nor the observations and testing by the geotechnical engineer shall excuse the contractor in any way for defects discovered in his work. It is understood that the geotechnical engineer will not be responsible for job or site safety on this project, which will be the sole responsibility of the contractor.

LIMITATIONS

Noorzay Geotechnical Services has striven to perform our services within the limits prescribed by our client, and in a manner consistent with the usual thoroughness and competence of reputable geotechnical engineers and engineering geologists practicing under similar circumstances. No other representation, express or implied, and no warranty or guarantee is included or intended by virtue of the services performed or reports, opinion, documents, or otherwise supplied.

This report reflects the testing conducted on the site as the site existed during the investigation, which is the subject of this report. However, changes in the conditions of a property can occur with the passage of time, due to natural processes or the works of man on this or adjacent properties. Changes in applicable or appropriate standards may also occur whether as a result of legislation, application, or the broadening of knowledge. Therefore, this report is indicative of only those conditions tested at the time of the subject investigation, and the findings of this report may be invalidated fully or partially by changes outside of the control of Noorzay Geotechnical Services. This report is therefore subject to review and should not be relied upon after a period of one year.

The conclusions and recommendations in this report are based upon observations performed and data collected at separate locations, and interpolation between these locations, carried out for the project and the scope of services described. It is assumed and expected that the conditions between locations observed and/or sampled are similar to those encountered at the individual locations where observation and sampling was performed. However, conditions between these locations may vary significantly. Should conditions that appear different than those described herein be encountered in the field by the client or any firm performing services for the client or the client's assign, this firm should be contacted immediately in order that we might evaluate their effect.

If this report or portions thereof are provided to contractors or included in specifications, it should be understood by all parties that they are provided for information only and should be used as such.

The report and its contents resulting from this investigation are not intended or represented to be suitable for reuse on extensions or modifications of the project, or for use on any other project.

CLOSURE

We appreciate this opportunity to be of service and trust this report provides the information desired at this time. Should questions arise, please do not hesitate to contact this office.

Respectfully submitted,

Noorzay Geotechnical Services, Inc.

Richard George, C.E.G. 2516
Consulting Geologist

Maihan Noorzay, G.E. 3085
Principal Engineer

REFERENCES

American Concrete Institute, 2014, Building Code Requirements for Structural Concrete (ACI 318-14), Commentary on Building Code Requirements for Structural Concrete (ACI 318R-14), American Concrete Institute

Alan Kropp & Associates, Inc., 2009, Phase 3 Engineering and Risk Assessment Report, La Conchita Slope Stabilization Project, La Conchita, Ventura County, Project No. 122259A, 273 pages.

California Department of Conservation, Division of Mines and Geology, 1991, Special Studies Zones Map, Pitas Point Quadrangle, Revised Official Map, Scale 1:24,000.

California Department of Conservation, Geological Survey, 2002, Seismic Hazards Zones, Pitas Point Quadrangle, Official Map, Scale 1:24,000.

California Department of Conservation, Geological Survey, 2002, Seismic Hazards Zones Report for the Pitas Point 7.5-Minute Quadrangle, Ventura County, California, Seismic Hazard Report 073.

California Department of Conservation, Geological Survey, 2023, Interactive Tsunami Inundation Map for Emergency Planning, Ventura County, https://www.conservation.ca.gov/cgs/tsunami/maps/ventura

California Department of Conservation, Geological Survey, Tan, S.S., et al, 2003, Geologic Map of Pitas Point 7.5' Quadrangle, Ventura County, California, Regional Geologic Map Series, Scale 1:24,000.

California Department of Conservation, Geological Survey, Gutierrez, C.I., et al, 2008, Geologic Map of the East Half Santa Barbara 30' x 60' Quadrangle, California, Regional Geologic Map Series, Scale 1:100,000.

California, State of, Department of Water Resources, 2023, Water Data Library, http://www.water.ca.gov/waterdatalibrary.

Coduto, Donald P., 2001, Foundation Design, Principles and Practices 2nd Edition, Prentice-Hall.

Day, R. W., 2012, Geotechnical Engineer's Portable Handbook, Second Edition, McGraw-Hill, New York

International Conference of Building Officials, 2022, California Building Code, 2022 Edition: Whittier, California.

Tokimatsu, K. and Seed, H. B. (1987), "Evaluation of Settlements in Sands Due to Earthquake Shaking", Journal of Geotechnical Engineering, Vol 113, No. 8.

U.S. Department of the Interior, Geological Survey, 2022, Pitas Point Quadrangle, California, 7.5-minute Series, Topographic, Scale 1: 24,000.

U.S. Department of the Interior, Geological Survey, 2022, White Ledge Peak Quadrangle, California, 7.5-minute Series, Topographic, Scale 1: 24,000.

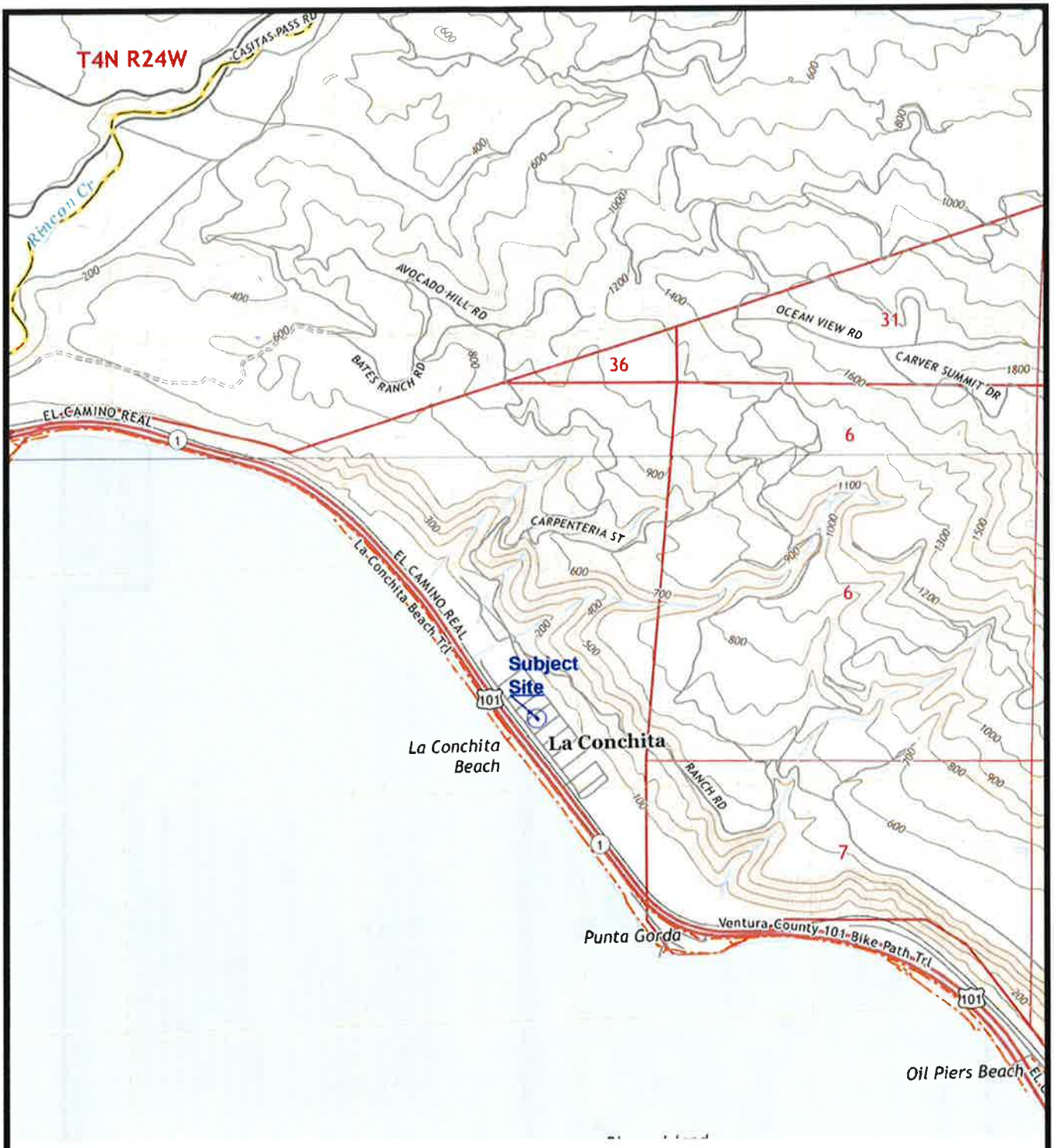
United States Federal Emergency Management Agency, 2021, Flood Insurance Rate Maps (FIRM), Ventura County, California, Panel 06111C 0702F, Scale 1:6,000.

William Lettis & Associates, Inc., 2009, Final Report, La Conchita Slope Stabilization Project, Geological Study, La Conchita, California, Project No. 122259A, 124 pages.

Yi, F., 2019, GeoSuite, version 2.4

APPENDIX A

MAPS

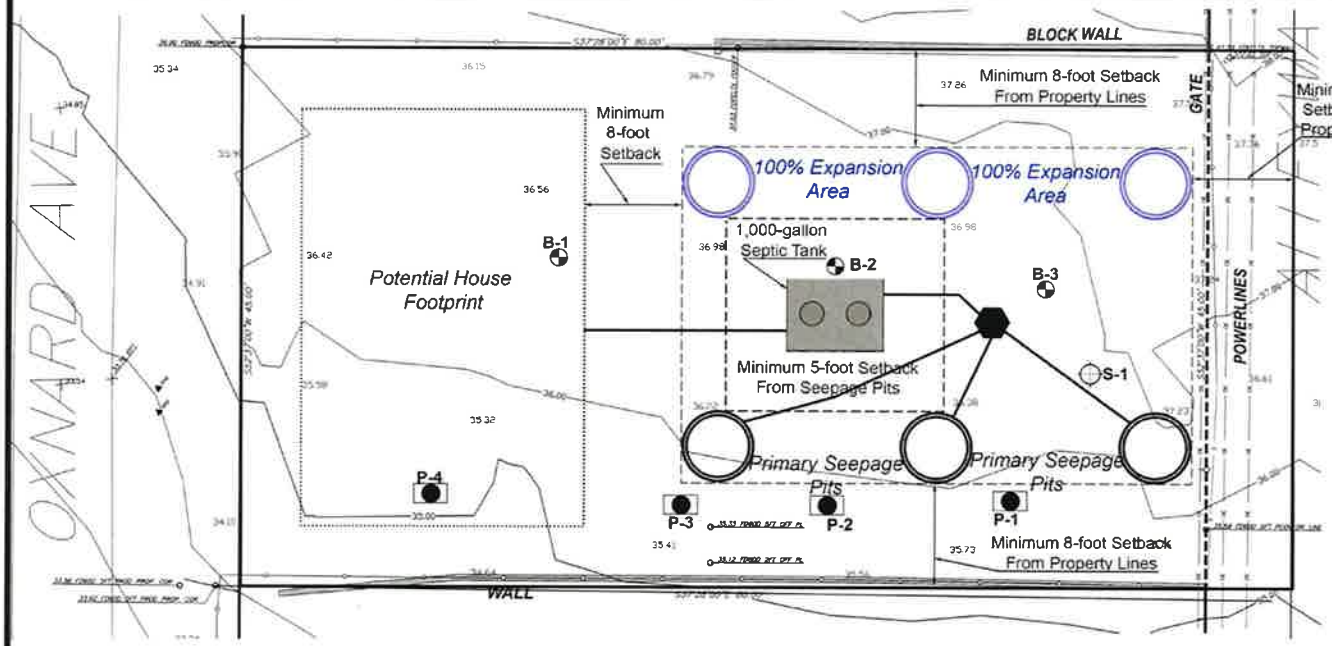


Reference: **United States Department of the Interior, Geological Survey**, 2022, *Pitas Point Quadrangle, California*, and 2022, *White Ledge Peak Quadrangle, California*, 7.5-Minute Topographic, Scale 1:24,000.

0 2000 4000
Scale Approximate in Feet

N

DATE			
10/12/2023	**Index Map** 7026 Oxnard Avenue La Conchita, California	NoorzayGeo	A-1
DRAWN BY RG			



Minimum Setbacks
Seepage pits to:
- building 8 feet
- property line 8 feet
- private water well 150 feet*
- stream drainage or ocean 150 feet*
- large trees 10 feet
- seepage pits 12 feet
- onsite water supply line 5 feet
- distribution box 5 feet
- septic tank 5 feet
- public pressure main 10 feet
- public water well 200 feet*

Septic tank to:
- building 5 feet
- property line 5 feet
- large trees 10 feet
- seepage pits 5 feet
- water supply line 5 feet
- public pressure main 10 feet

*Proposed system is more than 200 feet from nearest stream drainage or nearest known water well.

Legend

- B-3 - Approximate locations of exploratory soil borings.
- S-1 - Approximate locations of leach line percolation tests.
- P-4 - Approximate locations seepage pit performance test location.
- Seepage pit locations.
- 100% expansion seepage pits.
- Sewer Lines
- System setback lines.
- 36.00 - Contour lines and elevation.

Disposal System Design:
Due to historic groundwater depth of 25 feet, the bottoms of seepage pits are limited to 15 feet below ground surface.
2-bedroom House, 2 Bathrooms, 22 Fixture Units = 1,000 gallon septic tank.
Application rate 0.83 gal / ft² / day.
1,000 * 0.83 = 830 ft².
Depth below inlet = 13.2 feet.
Seepage Pit diameter 6 feet.
830 ft² / 3 = 276.7 ft² per pit
276.7 ft² < (13.2*πD + πr²) = 248.8 + 28.3 = 277.1

3.0 seepage pits
The design incorporates three (3) seepage pits
- Pit diameter 6 feet diameter
- Depth from ground surface to pit cap 18 inches.
- Pit depth 15 feet with inlet depth below surface of 1.8 feet.
- Pits must be 12 feet apart.
- Pits may not use a serial connection; they must be connected by a distribution box.

100% expansion must equal primary seepage pit design.

0 10 20
Approximate Scale in Feet

Reference: WM Surveys Inc., 08/15/2023, 7026 Oxnard Ave, Ventura, CA 93001, Sheet 1 of 1, Scale 1"=5'.

DATE 10/11/2023 SCALE 1"=10' DRAWN BY RG JOB NO 23054	**Site Plan, System Design** 7026 Oxnard Avenue La Conchita, California	NoorzayGeo	A-2

INTENTIONALLY LEFT BLANK

NO CROSS-SECTION NEEDED

DATE 10/12/2023 DRAWN BY: RG	**Geologic Cross-section** 7026 Oxnard Avenue La Conchita, California	NoorzayGeo	A-3

Reference: **California Department of Conservation, Geological Survey,** Tan, S.S., et al, 2003, *Geologic Map of Pitas Point 7.5' Quadrangle, Ventura County, California*, Regional Geologic Map Series, Scale 1:24,000.

0 2000 4000
Scale Approximate in Feet

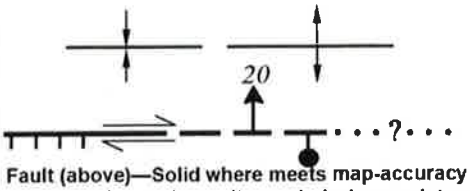
N

DATE			
10/12/2023	**Regional Geologic Map** 7026 Oxnard Avenue La Conchita, California	NoorzayGeo	A-4
DRAWN BY: RG			

Legend for Geologic Symbols and Units

Contact (left)—Separates geologic-map units.Solid where meets map- accuracy standard; dashed where may not meet map-accuracy standard; dotted where concealed.

Contact (left)—Separates terraced alluvial units where younger alluvial unit is incised into older alluvial unit; hachures at base of slope, point toward topographically lower surface. Solid where meets map-accuracy standard; dashed where may not meet map-accuracy standard.



Anticline/Syncline (left)—Folds in sedimentary rock; line is centerline of fold, arrows pointing toward centerline is syncline; arrows pointing away from centerline is anticine.

Fault (above)—Solid where meets map-accuracy standard; dashed where may not meet map accuracy standard. Dotted where concealed by mapped covering unit; queried where existence uncertain. Hachures indicate scarp, with hachures on downdropped block. Paired arrows indicate relative movement; single arrow indicates direction and amount of fault-plane dip. Bar and ball on down-thrown block.

af	Artificial fill material (late Holocene).
Qb	Active beach deposits (late Holocene).
Qls	Landslide deposits, including active (Holocene, Pleistocene).
Qhpr-s	Paralic deposits of Sea Cliff marine terrace (Pleistocene).
Qhf	Alluvial fan deposits (Holocene).
Qppr-p	Paralic deposits of Punta Grad marine terrace (Pleistocene).
Qpmw	Mass wasting deposits, colluvial, talus, landslide (Pleistocene).
Qsb	Santa Barbara claystone (Pleistocene).
Tp	Pico formation, undivided (Pliocene).
Tpsc	Pico formation, sandstone and conglomerate (Pliocene).
Tsq	Sisquoc Shale, silty shale and claystone (Pliocene, Miocene).

DATE 10/12/2023 DRAWN BY: RG	**Regional Geologic Map Legend** 7026 Oxnard Avenue La Conchita, California	NoorzayGeo	A-4a

Legend

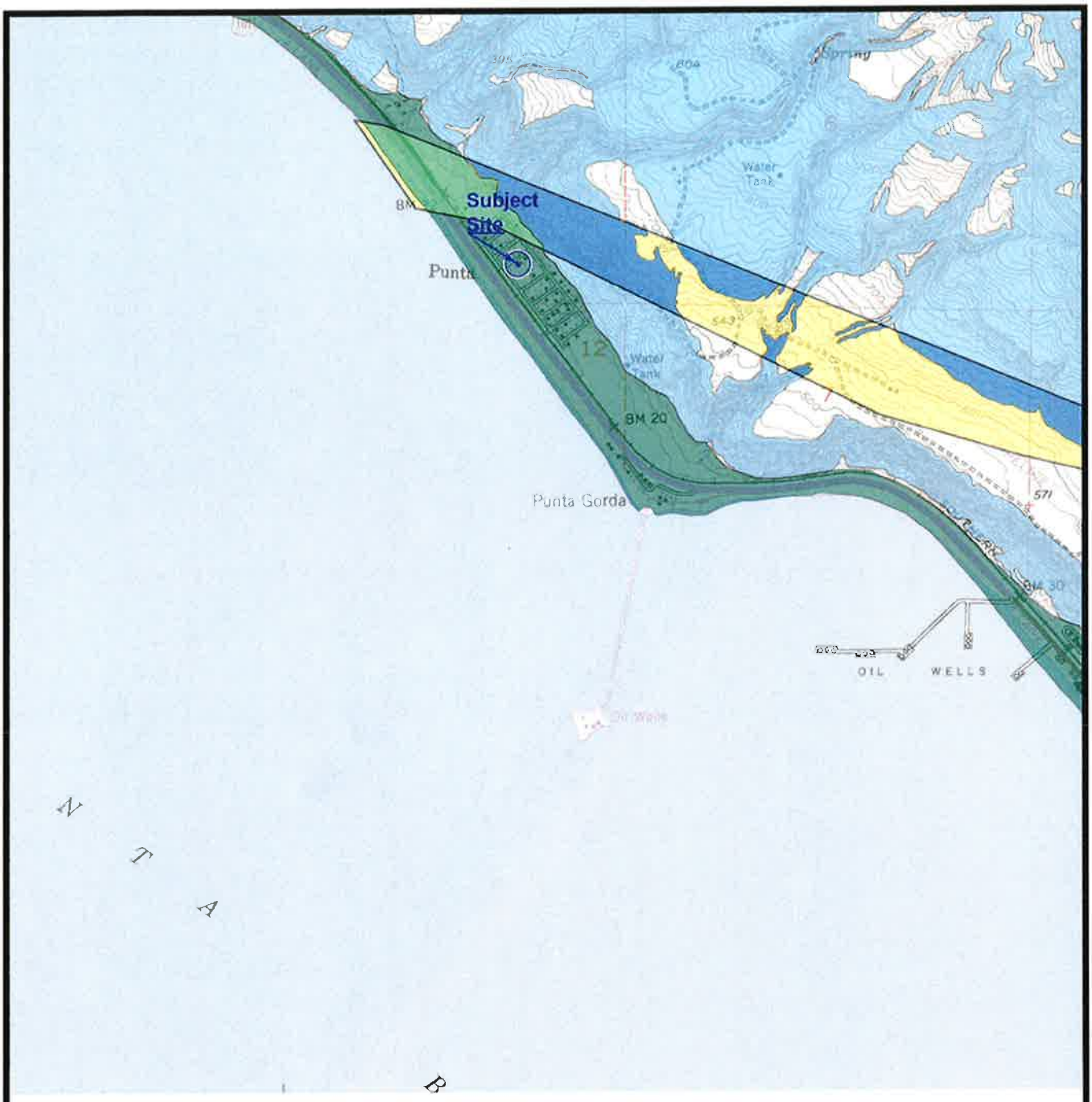
- Historic (< 150 years), well constrained location
- Historic (< 150 years), moderately constrained location
- Historic (< 150 years), inferred location
- Latest Quaternary (<15,000 years), well constrained location
- Latest Quaternary (<15,000 years), moderately constrained location
- Latest Quaternary (<15,000 years), inferred location
- Late Quaternary (< 130,000 years), well constrained location
- Late Quaternary (< 130,000 years), moderately contrained location
- Late Quaternary (< 130,000 years), inferred location
- Middle and late Quaternary (< 750,000 years), well constrained location
- Middle and late Quaternary (< 750,000 years), moderately constrained location
- Middle and late Quaternary (< 750,000 years), inferred location
- Undifferentiated Quaternary (< 1.6 million years), well constrained location
- Undifferentiated Quaternary (< 1.6 million years), moderately constrained location
- Undifferentiated Quaternary (< 1.6 million years), inferred location
- Unspecified age, well constrained location
- Unspecified age, moderately constrained location
- Unspecified age, inferred location

0 10 20

Scale Approximate in Miles

Reference: USGS, 2023, U.S. Quaternary Maps, USGS Geologic Hazards Science Center, Golden, CO, https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf

DATE			
10/12/2023	**Regional Fault Map** 7026 Oxnard Avenue La Conchita, California	NoorzayGeo	A-5
DRAWN BY: RG			



Legend

- Areas within earthquake fault study zones.
- Areas of potential, seismically-induced liquefaction.
- Areas of potential, seismically-induced landslides.

0 2000 4000

Scale Approximate in Feet

N

References: California Department of Conservation, Geological Survey, 2002, Seismic Hazards Zones, Pitas Point Quadrangle, Official Map, Scale 1:24,000.

California Department of Conservation, Division of Mines and Geology Survey, 1991, Earthquake Fault Zones, Pitas Point Quadrangle, Revised Official Map, Scale 1:24,000.

DATE			
10/12/2023	**Alquist-Priolo / Seismic Hazards Map** 7026 Oxnard Avenue La Conchita, California	NoorzayGeo	A-5a
DRAWN BY: RG			

LEGEND

- Tsunami Inundation Area
- Outside Tsunami Inundation Area

References: California Department of Conservation, Geological Survey, 2023, Interactive Tsunami Inundation Map for Emergency Planning, Scale 1:3,600.

DATE			
10/12/2023	**Tsunami Inundation Map** 7026 Oxnard Avenue La Conchita, California	NoorzayGeo	A-5b
DRAWN BY: RG			

LA CONCHITA LANDSLIDE - PHASE 2
Figure 8.7
02 JAN 09, 1885, CSH

Map of Debris Flow Sources and Run-out Fans Showing Inferred Depth Ranges

WLA

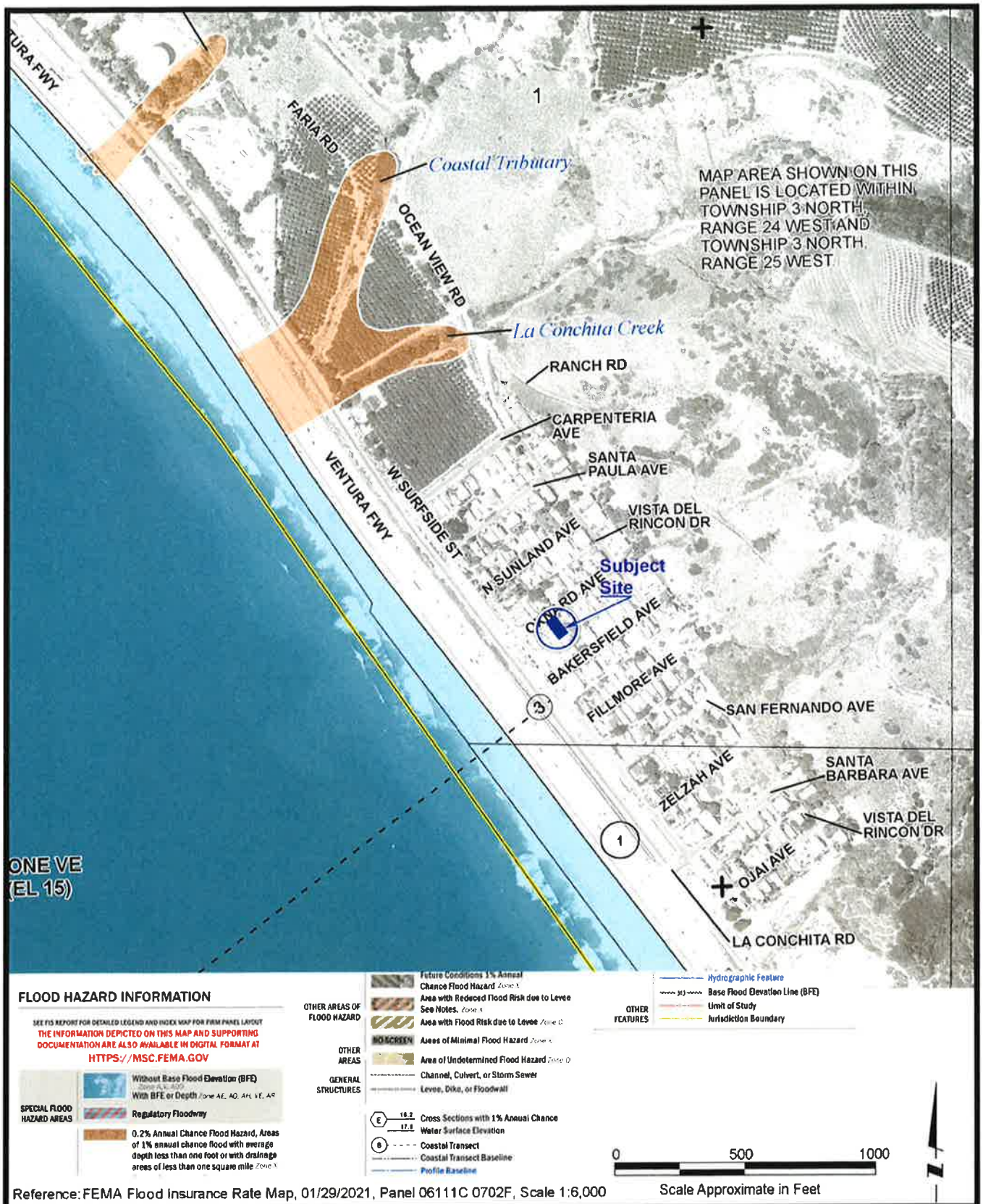
William Lettis & Associates, Inc, 2009, La Conchita Slope Stabilization Project, Geological Study, La Conchita, California, Final Report, Figure 8.7.

0 400 800
Approximate Scale in Feet

DATE			
10/12/2023	**La Conchita Landslide/Debris Flow Map** 7026 Oxnard Avenue La Conchita, California	NoorzayGeo	A-5c
DRAWN BY RG			

William Lettis & Associates, Inc, 2009, La Conchita Slope Stabilization Project, Geological Study, La Conchita, California. Final Report, Figure 8.7.

DATE			
10/12/2023	**La Conchita Landslide/Debris Flow Map** 7026 Oxnard Avenue La Conchita, California	NoorzayGeo	A-5d
DRAWN BY: RG			



Reference: FEMA Flood Insurance Rate Map, 01/29/2021, Panel 06111C 0702F, Scale 1:6,000

DATE			
10/12/2023	**FEMA Flood Map** 7026 Oxnard Avenue La Conchita, California	NoorzayGeo	A-6
DRAWN BY: RG			

APPENDIX B

EXPLORATORY LOGS

SUBSURFACE EXPLORATION LEGEND

UNIFIED SOIL CLASSIFICATION SYSTEM Visual-Manual Procedure (ASTM D2488)					CONSISTENCY / RELATIVE DENSITY
MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES	CRITERIA
Coarse-Grained Soils* More than 50 % Retained on No. 200 Sieve	Gravels 50 % or more of Coarse Fraction Retained on No. 4 Sieve	Clean Gravels	GW	Well Graded Gravels and Gravel-Sand Mixtures, Little or no Fines	Reference: 'Foundation Engineering', Peck, Hansen, Thornburn, 2nd Edition.
			GP	Poorly Graded Gravels and Gravel-Sand Mixtures, Little or no Fines	Standard Penetration Test — Granular Soils
		Gravels with Fines	GM	Silty Gravels, Gravel-Sand-Silt Mixtures**	Penetration Resistance, N, (Blows / Foot) / Relative Density
			GC	Clayey Gravel, Gravel-Sand-Clay Mixtures**	0 - 4 Very Loose
	Sands More than 50 % of Coarse Fraction Passes No. 4 Sieve	Clean Sands	SW	Well Graded Sands and Gravely Sands, Little or no Fines	4 - 10 Loose
			SP	Poorly Graded Sands and Gravely Sands, Little or no Fines	10 - 30 Medium
		Sands with Fines	SM	Silty Sands, Sand-Silt Mixtures**	30 - 50 Dense
			SC	Clayey Sands, Sand-Clay Mixtures**	> 50 Very Dense
Fine Grained Soils* 50 % or more Passes No. 200 Sieve	Silts and Clays Liquid Limits 50 % or less		ML	Inorganic Silts, Sandy Silts, Rock Flour	Standard Penetration Test — Cohesive Soils
			CL	Inorganic Clays of Low to Medium Plasticity, Gravelly Clays, Sandy Clays, Silty Clays, Lean Clays	Penetration Resistance, N, (Blows / Foot) / Consistency / Unconfined Compressive Strength, (Tons / Sq. Ft.)
			OL	Organic Silts and Organic silty Clays of Low Plasticity	< 2 Very Soft < 0.25
	Silts and Clays Liquid Limits Greater than 50 %		MH	Inorganic Silts, Micaceous or Diatomaceous silts, Plastic Silts	2 - 4 Soft 0.25 - 0.5
			CH	Inorganic Clays of High Plasticity, Fat Clays	4 - 8 Medium 0.5 - 1.0
			OH	Organic Clays of Medium to High Plasticity	8 - 15 Stiff 1.0 - 2.0
					15 - 30 Very Stiff 2.0 - 4.0
					> 30 Hard > 4.0
Highly Organic Soils			PT	Peat, Muck, or Other Highly Organic Soils	

* Based on material passing the 3-inch sieve.

** More than 12% passing the No. 200 sieve; 5% to 12% passing No. 200 sieve requires use of duel symbols (i.e., SP-SM., GP-GM, SP-SC, GP-GC, etc.); Border line classifications are designated as CH/Cl, GM/SM, SP/SW, etc.

U.S. Standard Sieve Size 12" 3" 3/4" #4 #10 #40 #200

Unified Soil Classification Designation	Boulders	Cobbles	Gravel		Sand			Silt and Clay
			Coarse	Fine	Coarse	Medium	Fine	

Moisture Condition

Dry	Absence of moisture, dusty, dry to the touch.
Moist	Damp but no visible moisture.
Wet	Visible free water, usually below the water table.

Material Quantity

Trace	< 5 %
Slightly	5 - 12%
Little	12 - 25%
Some	25 - 50 %

Other Symbols

C - Core Sample
S - SPT Sample
B - Bulk Sample
CK - Chunk Sample
R - Ring Sample
N - Nuclear Gauge Test
∇ - Water Table

DATE			
2023	**Simplified USCS Soils Classification Chart**	NoorzayGeo	B
DRAWN BY: RG			

NoorzayGeo

SUBSURFACE EXPLORATION LOG
Exploratory Boring No. 1

Project Number:	23054	Date:	8/21/23	Logged By:	MN
Type of Rig:	CME75	Drive Wt.	140 lbs	Elevation:	36 ±
Drill Hole Dia.:	8"	Drop:	30"	Boring Depth (ft.):	51'

Depth (ft.)	Sample Type	Penetration Resistance	Soil Classification	Dry Density (lb/ft³)	Moisture Content (%)	Lithology	Groundwater	Description (USCS, color, moisture, density, etc.)
1	B 0-5'		SC			Qhprs		**Paralic Deposits, Sea Cliff:** Clayey sand, tan brown, dry, loose, with gravel
2								
3								
4								Silty, clayey sand, dark brown, moist, with gravel
5	S	3						...some fine gravel
6		3						
7		2						
8			CL					Lean clay, dark brown, moist, firm to stiff, some sand
9								
10	S	2						... firm to stiff, some sand
11		3						
12		5						
13								
14								
15	S	2						... grades to silty clay, tan brown, moist, firm, fine sand
16		2						
17		4						
18								
19								
20	S	2						... stiff, very fine sand
21		4						
22		5						
23								
24								

S - SPT Sample R - Ring Sample B - Bulk Sample N - Nuclear Gauge Test D - Disturbed Sample

NoorzayGeo

SUBSURFACE EXPLORATION LOG
Exploratory Boring No. 1 (con't.)

Project Number:	23054	Date:	8/21/23	Logged By:	MN
Type of Rig:	CME75	Drive Wt.	140 lbs	Elevation:	36 ±
Drill Hole Dia.:	8"	Drop:	30"	Boring Depth (ft.):	51'

Depth (ft.)	Sample Type	Penetration Resistance	Soil Classification	Dry Density (lb/ft³)	Moisture Content (%)	Lithology	Groundwater	Description (USCS, color, moisture, density, etc.)
			CL			Qhprs		**Paralic Deposits, Sea Cliff (cont):** Silty clay, tan brown, moist, stiff, very fine sand
25	S	7	ML					Sandy silt, light tan, moist, very stiff, with sand
26		8						
		8						
27								
28								
29								
							▽	Groundwater encountered at 29.8'
30	S	13	SP-SM					Poorly graded sand to silty sand, brown, wet, medium dense, medium grained sand
31		21						
		24						
						Tp		**Pico formation:**
32								Siltstone, gray, wet, hard, some sand
33								
34								
35	S	16						Siltstone, gray, moist, hard, some sand
36		50/6"						
37								
38								
39								
40	S	19						Siltstone, gray, moist, hard
41		22						
		46						
42								
43								
44								
45	S	16						... same
46		50/6"						
47								
48								

S - SPT Sample R - Ring Sample B - Bulk Sample N - Nuclear Gauge Test D - Disturbed Sample

NoorzayGeo

SUBSURFACE EXPLORATION LOG
Exploratory Boring No. 1 (con't.)

Project Number:	23054	Date:	8/21/23	Logged By:	MN
Type of Rig:	CME75	Drive Wt.	140 lbs	Elevation:	36 ±
Drill Hole Dia.:	8"	Drop:	30"	Boring Depth (ft.):	51'

Depth (ft.)	Sample Type	Penetration Resistance	Soil Classification	Dry Density (lb/ft³)	Moisture Content (%)	Lithology	Groundwater	Description (USCS, color, moisture, density, etc.)
						Tp		**Pico formation (cont):** Siltstone, gray, moist, hard
49								
50	S	17						... same
51		50/5"						End of boring at 51'
52								Groundwater encountered at 29.8'
53								No caving observed
54								Backfilled with soil cuttings
55								
56								
57								
58								
59								
60								
61								
62								
63								
64								
65								
66								
67								
68								
69								
70								
71								
72								

S - SPT Sample R - Ring Sample B - Bulk Sample N - Nuclear Gauge Test D - Disturbed Sample

NoorzayGeo

SUBSURFACE EXPLORATION LOG
Exploratory Boring No. 2

Project Number:	23054	Date:	8/21/23	Logged By:	MN
Type of Rig:	CME75	Drive Wt.	140 lbs	Elevation:	37 ±
Drill Hole Dia.:	8"	Drop:	30"	Boring Depth (ft.):	21.5'

Depth (ft.)	Sample Type	Penetration Resistance	Soil Classification	Dry Density (lb/ft³)	Moisture Content (%)	Lithology	Groundwater	Description (USCS, color, moisture, density, etc.)
1			SM			Qhprs		**Paralic Deposits, Sea Cliff:** Silty sand, tan brown, dry, loose, with gravel
2								
3								
4								
5	R	6	SM/SC					Silty sand to clayey sand, tan brown to brown, moist, loose, with gravels
6		8						
7		4		76.4	23.5			
8								
9								
10	R	7	CL					Sandy lean clay, brown to dark brown, moist, very stiff, with gravel
11		14						
12		15	ML	93.7	23.3			Silt with gravel, tan, moist, very stiff
13								
14								
15	R	3	ML/CL					Sandy silt to sandy lean clay, brown to tan brown, moist, stiff, with gravel
16		5						
17		7		86.4	25.9			
18								
19								
20	R	5						... same, no gravel
21		7						
		11		85.7	28.5			
22								End of boring at 21.5'
23								No groundwater encountered
24								No caving observed
								Backfilled with soil cuttings

S - SPT Sample R - Ring Sample B - Bulk Sample N - Nuclear Gauge Test D - Disturbed Sample

NoorzayGeo

SUBSURFACE EXPLORATION LOG
Exploratory Boring No. 3

Project Number:	23054	Date:	9/18/23	Logged By:	MN
Type of Rig:	GT-16	Drive Wt.	140 lbs	Elevation:	37 ±
Drill Hole Dia.:	8"	Drop:	30"	Boring Depth (ft.):	30

Depth (ft.)	Sample Type	Penetration Resistance	Soil Classification	Dry Density (lb/ft³)	Moisture Content (%)	Lithology	Groundwater	Description (USCS, color, moisture, density, etc.)
			CL			Qhprs		**Paralic Deposits, Sea Cliff:** Sandy clay with gravel, tan brown, dry, firm to stiff
1								
2	S	5						
3		4						
		4						
4								
5			CL					Lean clay with gravel, dark brown, moist, sandy
6								
7	S	1	CL					Lean clay, dark brown to gray brown, moist, soft, some gravels
		2						
8		1						
9								
10								
11								
12	S	2						Sandy lean clay, brown, moist, firm, some gravels
		2						
13		3						
14								
15	S	3						Lean clay, brown, moist, firm, some gravels
16		2						
		3						
17								
18								
19								
20	S	3						... stiff
		5						
21		6						
22								
23								
24								

S - SPT Sample R - Ring Sample B - Bulk Sample N - Nuclear Gauge Test D - Disturbed Sample

NoorzayGeo

SUBSURFACE EXPLORATION LOG
Exploratory Boring No. 3 (con't)

Project Number:	23054	Date:	9/18/23	Logged By:	MN
Type of Rig:	GT-16	Drive Wt.	140 lbs	Elevation:	37 ±
Drill Hole Dia.:	8"	Drop:	30"	Boring Depth (ft.):	30

Depth (ft.)	Sample Type	Penetration Resistance	Soil Classification	Dry Density (lb/ft³)	Moisture Content (%)	Lithology	Groundwater	Description (USCS, color, moisture, density, etc.)
			SP-SM			Qhprs		**Paralic Deposits, Sea Cliff (cont):** Poorly graded sand with silt, tan brown, medium dense, wet
25	S	4 7 15						
26								
27								
28							▽	...groundwater at 27.7'
29								
30								End of boring at 30' Groundwater encountered at 27.7' No caving observed Backfilled with soil cuttings
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								

S - SPT Sample R - Ring Sample B - Bulk Sample N - Nuclear Gauge Test D - Disturbed Sample

NoorzayGeo

SUBSURFACE EXPLORATION LOG
Percolation Test No. 1

Project Number:	23054	Date:	8/21/23	Logged By:	MN
Type of Rig:	CME75	Drive Wt.	140 lbs	Elevation:	36 ±
Drill Hole Dia.:	12"	Drop:	30"	Boring Depth (ft.):	4'

Depth (ft.)	Sample Type	Penetration Resistance	Soil Classification	Dry Density (lb/ft³)	Moisture Content (%)	Lithology	Groundwater	Description (USCS, color, moisture, density, etc.)
	B		SM			Qaf		**Artificial Fill:**
1	0-4'							Silty sand, dark brown, moist, loose
			SM			Qhprs		**Paralic Deposits, Sea Cliff:**
2								Silty sand, tan brown, dry to moist, loose, with gravel
3								... cobble to 6"
4								End of boring at 4'
5								Boring converted to percolation test hole
6								No groundwater encountered
7								No caving observed
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								

S - SPT Sample R - Ring Sample B - Bulk Sample N - Nuclear Gauge Test D - Disturbed Sample

NoorzayGeo

SUBSURFACE EXPLORATION LOG
Percolation Test No. 2

Project Number:	23054	Date:	8/21/23	Logged By:	MN
Type of Rig:	CME75	Drive Wt.	140 lbs	Elevation:	36 ±
Drill Hole Dia.:	12"	Drop:	30"	Boring Depth (ft.):	4'

Depth (ft.)	Sample Type	Penetration Resistance	Soil Classification	Dry Density (lb/ft³)	Moisture Content (%)	Lithology	Groundwater	Description (USCS, color, moisture, density, etc.)
1	B 0-4'		SM			Qhprs		**Paralic Deposits, Sea Cliff:** Silty sand, tan brown, dry to moist, loose, with gravel
2								
3								
4								End of boring at 4'
5								Boring converted to percolation test hole
6								No groundwater encountered
7								No caving observed
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								

S - SPT Sample R - Ring Sample B - Bulk Sample N - Nuclear Gauge Test D - Disturbed Sample

NoorzayGeo

SUBSURFACE EXPLORATION LOG
Percolation Test No. 3

Project Number:	23054	Date:	8/21/23	Logged By:	MN
Type of Rig:	CME75	Drive Wt.	140 lbs	Elevation:	36 ±
Drill Hole Dia.:	12"	Drop:	30"	Boring Depth (ft.):	9'

Depth (ft.)	Sample Type	Penetration Resistance	Soil Classification	Dry Density (lb/ft³)	Moisture Content (%)	Lithology	Groundwater	Description (USCS, color, moisture, density, etc.)
1	B 0-4'		SM			Qhprs		**Paralic Deposits, Sea Cliff:** Silty sand, tan brown, dry to moist, loose, with gravel
5	B 5-9'		SM/SC					Silty, clayey sand, dark brown, moist, some gravel
9								End of boring at 9' Boring converted to percolation test hole No groundwater encountered No caving observed

S - SPT Sample R - Ring Sample B - Bulk Sample N - Nuclear Gauge Test D - Disturbed Sample

NoorzayGeo

SUBSURFACE EXPLORATION LOG
Percolation Test No. 4

Project Number:	23054	Date:	8/21/23	Logged By:	MN
Type of Rig:	CME75	Drive Wt.	140 lbs	Elevation:	35 ±
Drill Hole Dia.:	12"	Drop:	30"	Boring Depth (ft.):	4'

Depth (ft.)	Sample Type	Penetration Resistance	Soil Classification	Dry Density (lb/ft^3)	Moisture Content (%)	Lithology	Groundwater	Description (USCS, color, moisture, density, etc.)
	B		SM			Qhprs		**Paralic Deposits, Sea Cliff:** Silty sand, tan brown to brown, moist, loose, with gravel
1	0-4'							
2								
3								
4								End of boring at 4'
5								Boring converted to percolation test hole
6								No groundwater encountered
7								No caving observed
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								

S - SPT Sample R - Ring Sample B - Bulk Sample N - Nuclear Gauge Test D - Disturbed Sample

NoorzayGeo

SUBSURFACE EXPLORATION LOG
Percolation Test No. S-1

Project Number:	23054	Date:	9/18/23	Logged By:	MN
Type of Rig:	GT-16	Drive Wt.	140 lbs	Elevation:	37 ±
Drill Hole Dia.:	12"	Drop:	30"	Boring Depth (ft.):	15'

Depth (ft.)	Sample Type	Penetration Resistance	Soil Classification	Dry Density (lb/ft^3)	Moisture Content (%)	Lithology	Groundwater	Description (USCS, color, moisture, density, etc.)
1–6			SM/SC			Qhprs		**Paralic Deposits, Sea Cliff:** Silty sand to clayey sand with gravel, tan brown, dry
7–13			CL/CH					Lean to fat clay with gravel, dark gray brown, moist
14			CL					Lean clay with gravel, dark brown, moist
15								End of boring at 15' bgs No groundwater encountered No caving noted Used for percolation test
16–24								

S - SPT Sample R - Ring Sample B - Bulk Sample N - Nuclear Gauge Test D - Disturbed Sample

APPENDIX C

LABORATORY TESTING

NoorzayGeo

In-Situ Moisture Content and Dry Density
ASTM D2937

Job Name:	7026 Oxnard Avenue	Tested By :	M. Noorzay
Job Number:	23054	Date Completed:	8/28/23
Sampled By:	M. Noorzay	Input By:	M. Noorzay
Date Sampled:	8/21/23		

Boring Number	B-2	B-2	B-2	B-2		
Sample Depth (ft)	5	10	15	20		
Sample Number	1	2	3	4		
Sample Type	RING	RING	RING	RING		
USCS Description	SM/SC	CL	ML/CL	ML/CL		
Number of Rings	3	3	3	3		
Total Weight of Rings + Soil (gms)	477.5	554.4	529.8	534.7		
Volume of Rings(ft^3)(1r = 0.0027 ft^3)	7.972E-03	7.972E-03	7.972E-03	7.972E-03		
Weight of Rings (gms)(1r = 45.497 g)	136.5	136.5	136.5	136.5		
Weight of Soil (gms)	341.0	417.9	393.3	398.2		
Wet Density (pcf)	94.3	115.6	108.8	110.1		
% Saturation (Assumed Gs=2.7)	52.5	78.8	73.6	79.7		
Container Number	1	2	3	4		
Tare (gms)	0.0	0.0	0.0	0.0		
Wet Soil + Tare (gms)	250.0	250.0	250.0	250.0		
Dry Soil + Tare (gms)	202.5	202.8	198.6	194.5		
Weight of Water (gms)	47.5	47.2	51.4	55.5		
Water Content (%)	23.5	23.3	25.9	28.5		
Dry Density (pcf)	76.4	93.7	86.4	85.7		

NoorzayGeo

No. 200 Wash

ASTM D 1140

Job Name:	7026 Oxnard Avenue	Tested By :	M. Noorzay
Job Number:	23054	Date Completed:	8/28/23
Sampled By:	M. Noorzay	Input By:	M. Noorzay
Date Sampled:	8/21/23		

Boring No.	Depth (ft.)	B = Original Dry Mass (g)	C = Wash Dry Mass (g)	A = % Passing #200	USCS
P-1	0-4	213.5	139.3	34.8	SM
P-2	0-4	213	148.6	30.2	SM
P-3	0-4	217	148.8	31.4	SM
P-3	5-9	199.2	100.8	49.4	SM/SC
P-4	0-4	207.4	139.3	32.8	SM
B-1	5	184.6	93.3	49.5	SC
B-1	10	118.9	28.2	76.3	CL
B-1	15	166.6	27.3	83.6	CL
B-1	20	162.5	7.1	95.6	CL
B-1	25	173	81.7	52.8	ML
B-1	30	208.5	192.5	7.7	SP-SM
B-1	35	211.3	23.6	88.8	ML
B-1	40	216.9	27.4	87.4	ML
B-1	45	200.3	30.2	84.9	ML
B-1	50	207.1	30.5	85.3	ML

Calculation for Percent of Material Finer than 75-µm (No. 200) Sieve by Washing:

$$A = \frac{B - C}{B} \times 100$$

Where:

A= Percent of Material Finer than 75-µm (No.200) Sieve by Washing
B= Original Dry Mass of Sample (g)
C= Dry Mass of Sample after Washing (g)

Note: Report the material passing the 75-µm (No. 200) sieve by washing to the nearest 0.1%.
If greater than 10%, report to the nearest 1%.

NoorzayGeo

Expansion Index

ASTM D4829

Job Name:	7026 Oxnard Avenue	Tested By :	M. Noorzay
Job Number:	23054	Date Completed:	8/28/23
Sampled By:	M. Noorzay	Input By:	M. Noorzay
Date Sampled:	8/21/23	Sample Number:	B-1 at 0-5'

SAMPLE CONDITION	Initial	Initial	Initial
Wt. Specimen & Ring (gr)	531.1		
Wt. of ring (gr)	179.7		
Wt. Specimen (gr)	351.4		
Wt. Specimen (lbs)	0.77308		
Specimen diameter (in)	4		
Init. Spec. Height (in)	1		
Volume of ring (cu. Ft.)	0.007272		
Moist Density (pcf)	106.31		
Wt. moist soil+tare (gr)	200		
Wt. dry soil+tare (gr)	171.8		
Wt. of tare (gr)	0		
Wt. dry soil (gr)	171.8		
Wt. of water (gr)	28.2		
M/C (%)	16.4		
DRY DENSITY (pcf)	91.32		
% Saturation* (48-52)	52		

Final Moisture		
	Start (g)	380.6
	End (g)	289.3
	%	31.6

Date	Time	Dial
8/27/23	6:00PM	0.453
8/27/23	6:10PM	0.453
8/27/23	6:30PM	0.476
8/28/23	6:00PM	0.478

Expansion Index:	25
Expansion Potential:	**LOW**

Expansion Index	Potential Expansion
0-20	Very Low
21-50	Low
51-90	Medium
91-130	High
Above- 130	Very High

NoorzayGeo

Modified Proctor

ASTM D1557

Job Name:	7026 Oxnard Avenue	Tested By :	M. Noorzay
Job Number:	23054	Date Completed:	8/28/23
Sampled By:	M. Noorzay	Input By:	M. Noorzay
Date Sampled:	8/21/23	Sample Number:	B-1 @ 0-5'
Sample Description:	SM/SC		

Trial Number	1	2	3	4	5
Water Added (%)	2	4	6	8	
Weight of Soil + Mold (grams)	5760.7	5815.2	5797.0	5760.7	
Weight of Mold (grams)	4109.6	4109.6	4109.6	4109.6	
Weight of Wet Soil (grams)	1651.1	1705.6	1687.4	1651.1	
Wet Density (pcf)	109.2	112.8	111.6	109.2	

Container ID	1	2	3	4	
Wet Soil + Container (grams)	200.0	200.0	200.0	200.0	
Dry Soil + Container (grams)	168.1	164.9	161.6	159.7	
Weight of Container (grams)	0.0	0.0	0.0	0.0	
Weight of Dry Soil (grams)	168.1	164.9	161.6	159.7	
Weight of Water (grams)	31.9	35.1	38.4	40.3	
Moisture Content (%)	19.0	21.3	23.8	25.2	
Dry Density (pcf)	91.8	93.0	90.2	87.2	

Compaction Method

ASTM D1557	X
ASTM D698	

Method	B
Mold Size	4
Mold Vol.	0.0333333

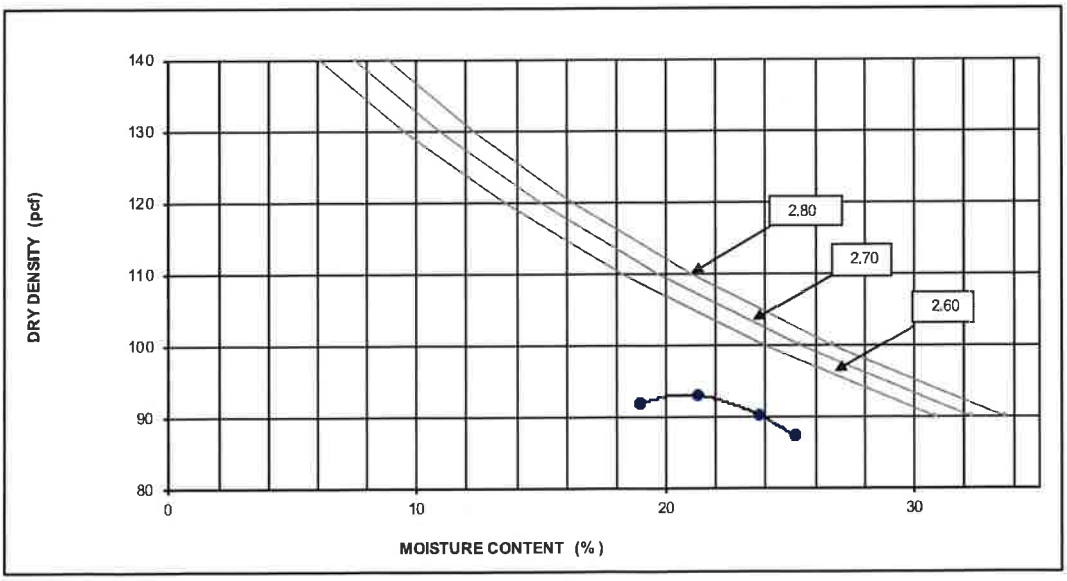
Preparation Method

Moist	X
Dry	

Maximum Dry Density (pcf)	**93.0**
Maximum Dry Density w/ Rock Correction (pcf)	**98.6**

Optimum Moisture Content (%)	**21.3**
Optimum Moisture Content w/ Rock Correction (%)	**20.0**

METHOD B
Percent Retained on 3/8" Sieve: 13%
Mold : 4 in. (101.6 mm) diameter
Layers : 5 (Five)
Blows per layer : 25 (Twenty-five)



NoorzayGeo

Direct Shear

ASTM D3080

Job Name:	7026 Oxnard Avenue	Tested By :	M. Noorzay
Job Number:	23054	Date Completed:	8/28/23
Sampled By:	M. Noorzay	Input By:	M. Noorzay
Date Sampled:	8/21/23	Sample Number:	B-1 at 0-5'
Sample Description:	SM/SC		

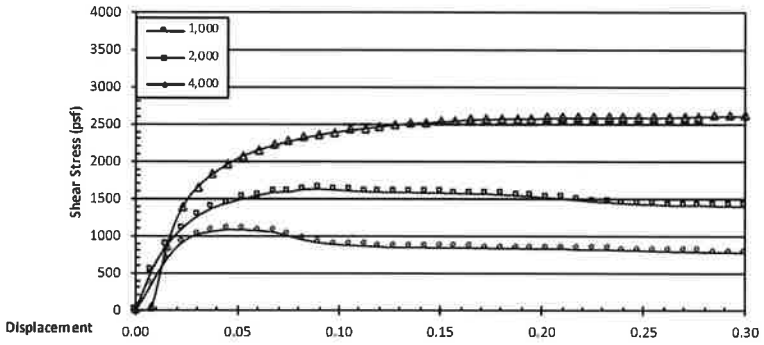
Samples Tested	1	2	3
Boring ID	B-1	B-1	B-1
Depth (in/ft.)	0-5	0-5	0-5

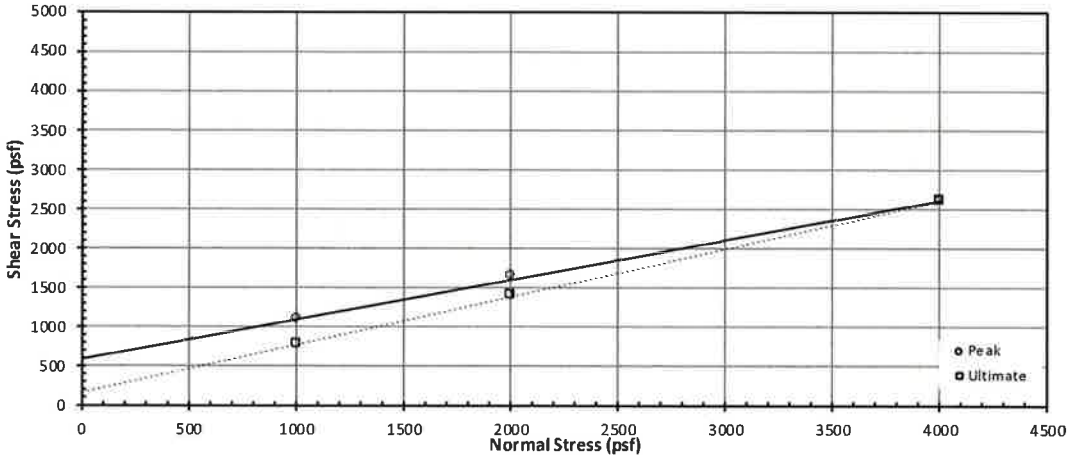
	Peak	Ultimate
Friction, phi (Deg)	26.8	31.3
Cohesion (psf)	595.2	171.2

Normal Stress (psf)	1000	2000	4000
Maximum Shear Stress (psf)	1084	1627	2604
Ultimate Shear Stress (psf)	776	1395	2604
Soil Type	SM/SC	SM/SC	SM/SC

Sample Type:	RM
Method:	Drained
Consolidation:	Yes
Saturation:	Yes
Strain Rate (in/min):	0.005

Shear Stress v. Displacement





SIEVE ANALYSIS

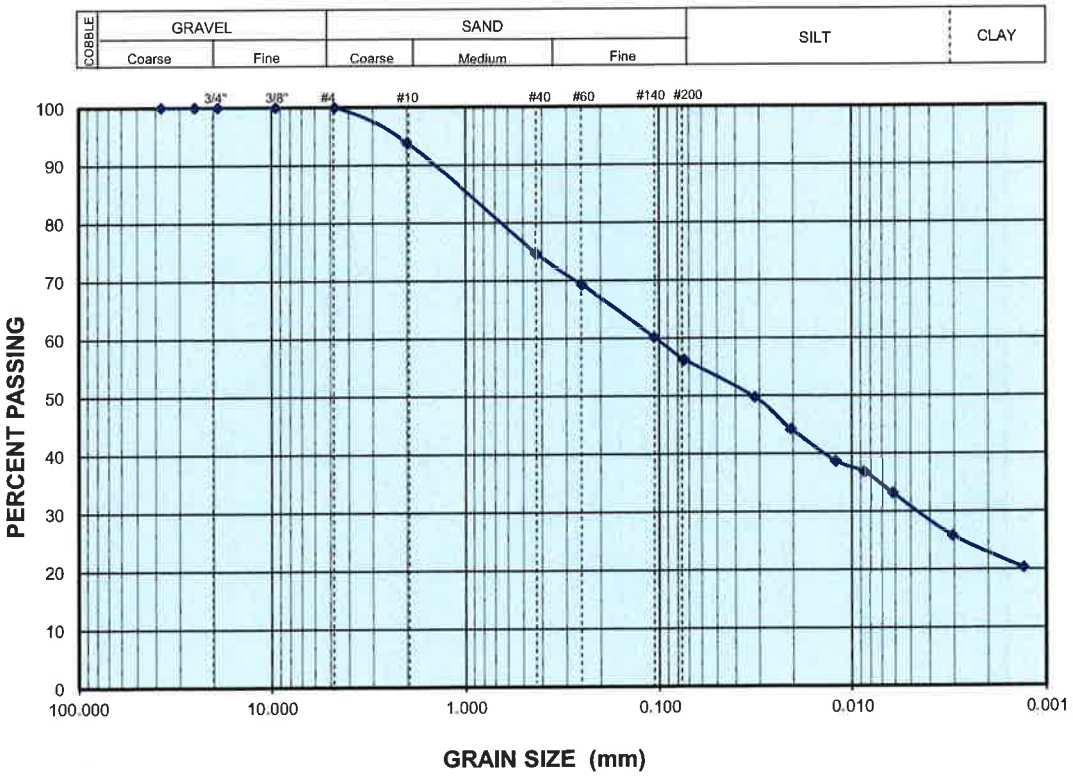
Project: 7026 Oxnard Avenue
Site: La Conchita, CA
Tech: J.Cromer

Project No. 23-1239
Date: 9/27/2023

Sample B-3 @ 1.5'
Material Sandy Lean CLAY with siltstone/claystone particles (CL)

Test Specification: ASTM D-422

Sieve	Mesh Opening (mm)	Percent Passing (%)
1 1/2 in	37.50	100.0 %
1 in	25.00	100.0 %
3/4 in	19.000	100.0 %
3/8 in	9.500	100.0 %
No. 4	4.750	100.0 %
No. 10	2.000	93.8 %
No. 40	0.425	74.6 %
No. 60	0.250	69.2 %
No. 140	0.106	60.1 %
No. 200	0.075	56.2 %
0.074 mm	0.074	56.2 %
0.0318 mm	0.0318	49.8 %
0.0206 mm	0.0206	44.2 %
0.0121 mm	0.0121	38.7 %
0.0086 mm	0.0086	36.9 %
0.0062 mm	0.0062	33.2 %
0.0031 mm	0.0031	25.8 %
0.0013 mm	0.0013	20.3 %



Rev. 9-22-2020

Geo-Advantec, Inc.		SIEVE ANALYSIS	FIGURE
PROJECT NO.	23-1239	7026 Oxnard Avenue - La Conchita, CA Noorzay Geotechnical Project No.: 23054	
DATE	9/27/2023		

SIEVE ANALYSIS

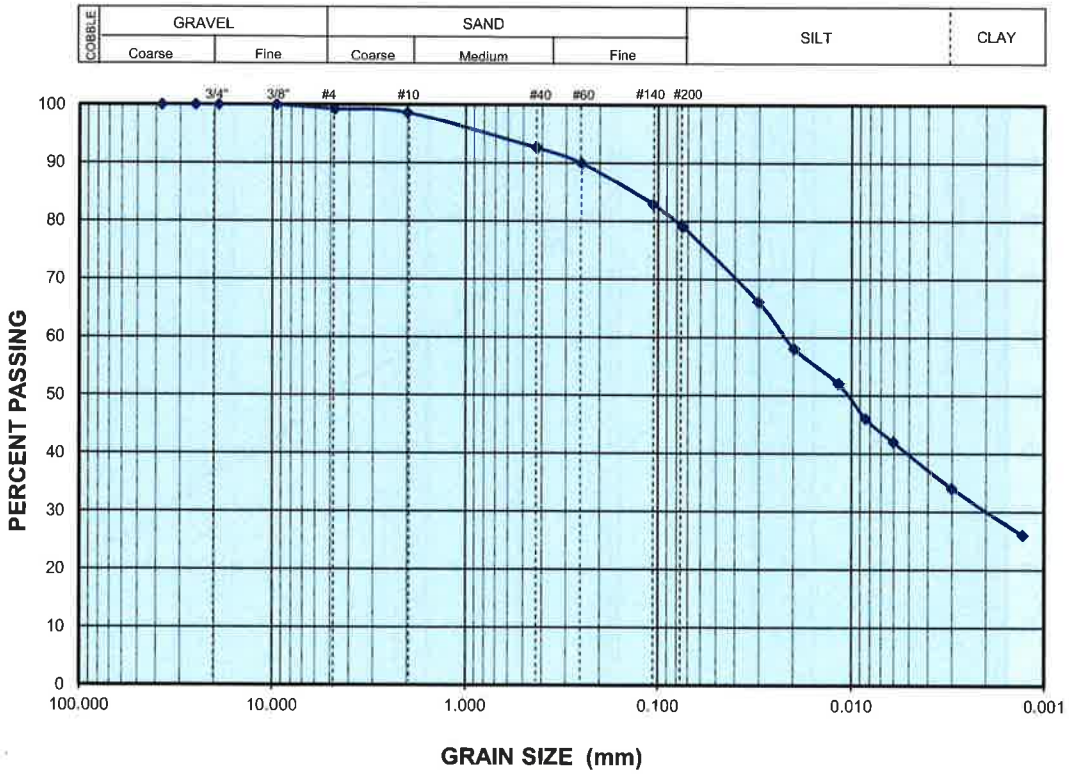
Project: 7026 Oxnard Avenue
Site: La Conchita, CA
Tech: J.Cromer

Project No. 23-1239
Date: 9/27/2023

Sample B-3 @ 6.5'
Material Lean CLAY with Sand and siltstone/claystone particles (CL)

Test Specification: ASTM D-422

Sieve	Mesh Opening (mm)	Percent Passing (%)
1 1/2 in	37.50	100.0 %
1 in	25.00	100.0 %
3/4 in	19.000	100.0 %
3/8 in	9.500	100.0 %
No. 4	4.750	99.2 %
No. 10	2.000	98.6 %
No. 40	0.425	92.6 %
No. 60	0.250	90.0 %
No. 140	0.106	82.9 %
No. 200	0.075	79.1 %
0.074 mm	0.074	79.1 %
0.0304 mm	0.0304	66.1 %
0.0198 mm	0.0198	58.0 %
0.0117 mm	0.0117	52.0 %
0.0085 mm	0.0085	46.0 %
0.0061 mm	0.0061	42.0 %
0.0030 mm	0.0030	34.0 %
0.0013 mm	0.0013	26.0 %



Rev. 9-22-2020

Geo-Advantec, Inc.		SIEVE ANALYSIS	FIGURE
PROJECT NO.	23-1239	7026 Oxnard Avenue - La Conchita, CA	
DATE	9/27/2023	Noorzay Geotechnical Project No.: 23054	

SIEVE ANALYSIS

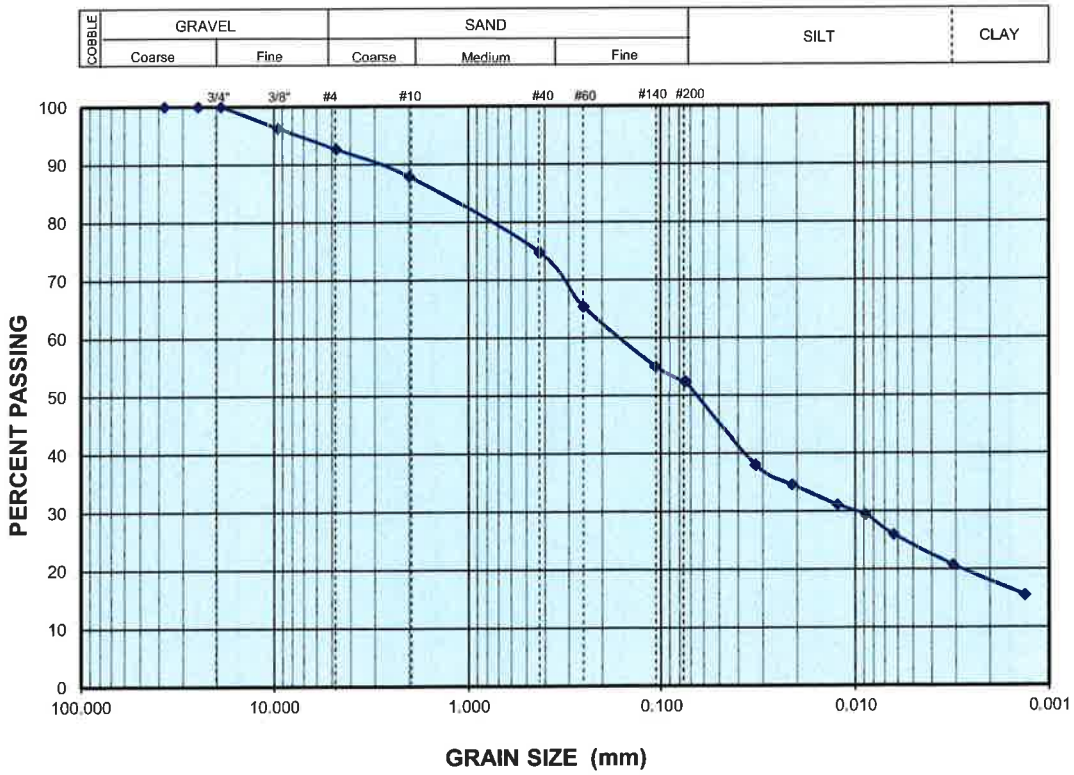
Project: 7026 Oxnard Avenue
Site: La Conchita, CA
Tech: J.Cromer

Project No. 23-1239
Date: 9/27/2023

Sample B-3 @ 11.5'
Material Sandy Lean CLAY with siltstone/claystone particles (CL)

Test Specification: ASTM D-422

Sieve	Mesh Opening (mm)	Percent Passing (%)
1 1/2 in	37.50	100.0 %
1 in	25.00	100.0 %
3/4 in	19.000	100.0 %
3/8 in	9.500	96.3 %
No. 4	4.750	92.7 %
No. 10	2.000	87.9 %
No. 40	0.425	74.7 %
No. 60	0.250	65.3 %
No. 140	0.106	55.0 %
No. 200	0.075	52.4 %
0.074 mm	0.074	52.4 %
0.0329 mm	0.0329	38.0 %
0.0212 mm	0.0212	34.6 %
0.0124 mm	0.0124	31.1 %
0.0088 mm	0.0088	29.4 %
0.0063 mm	0.0063	25.9 %
0.0031 mm	0.0031	20.7 %
0.0013 mm	0.0013	15.6 %



Rev. 9-22-2020

Geo-Advantec, Inc.		SIEVE ANALYSIS	FIGURE
PROJECT NO.	23-1239	7026 Oxnard Avenue - La Conchita, CA	
DATE	9/27/2023	Noorzay Geotechnical Project No.: 23054	

SIEVE ANALYSIS

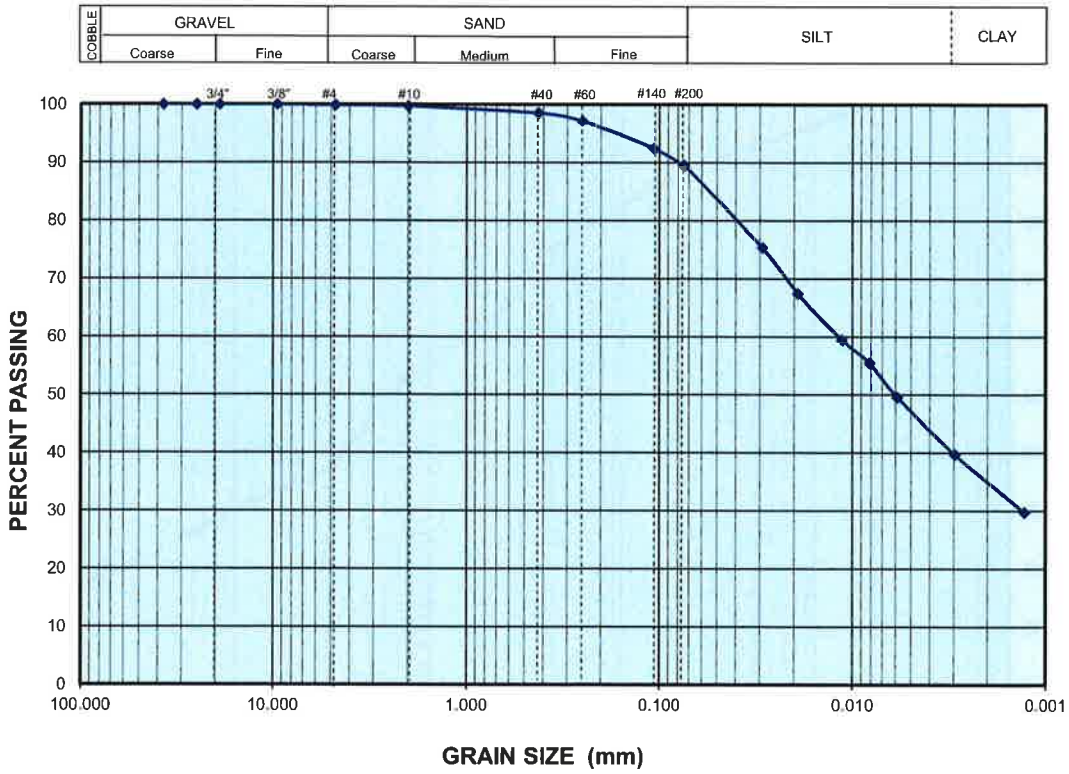
Project: 7026 Oxnard Avenue
Site: La Conchita, CA
Tech: J.Cromer

Project No. 23-1239
Date: 9/27/2023

Sample B-3 @ 15'
Material Lean CLAY with siltstone/claystone particles (CL)

Test Specification: ASTM D-422

Sieve	Mesh Opening (mm)	Percent Passing (%)
1 1/2 in	37.50	100.0 %
1 in	25.00	100.0 %
3/4 in	19.000	100.0 %
3/8 in	9.500	100.0 %
No. 4	4.750	99.9 %
No. 10	2.000	99.7 %
No. 40	0.425	98.5 %
No. 60	0.250	97.1 %
No. 140	0.106	92.3 %
No. 200	0.075	89.5 %
0.074 mm	0.074	89.5 %
0.0291 mm	0.0291	75.3 %
0.0191 mm	0.0191	67.4 %
0.0114 mm	0.0114	59.5 %
0.0082 mm	0.0082	55.5 %
0.0059 mm	0.0059	49.6 %
0.0030 mm	0.0030	39.6 %
0.0013 mm	0.0013	29.7 %



Rev. 9-22-2020

Geo-Advantec, Inc.	SIEVE ANALYSIS	FIGURE
PROJECT NO. 23-1239	7026 Oxnard Avenue - La Conchita, CA	
DATE 9/27/2023	Noorzay Geotechnical Project No.: 23054	

SIEVE ANALYSIS

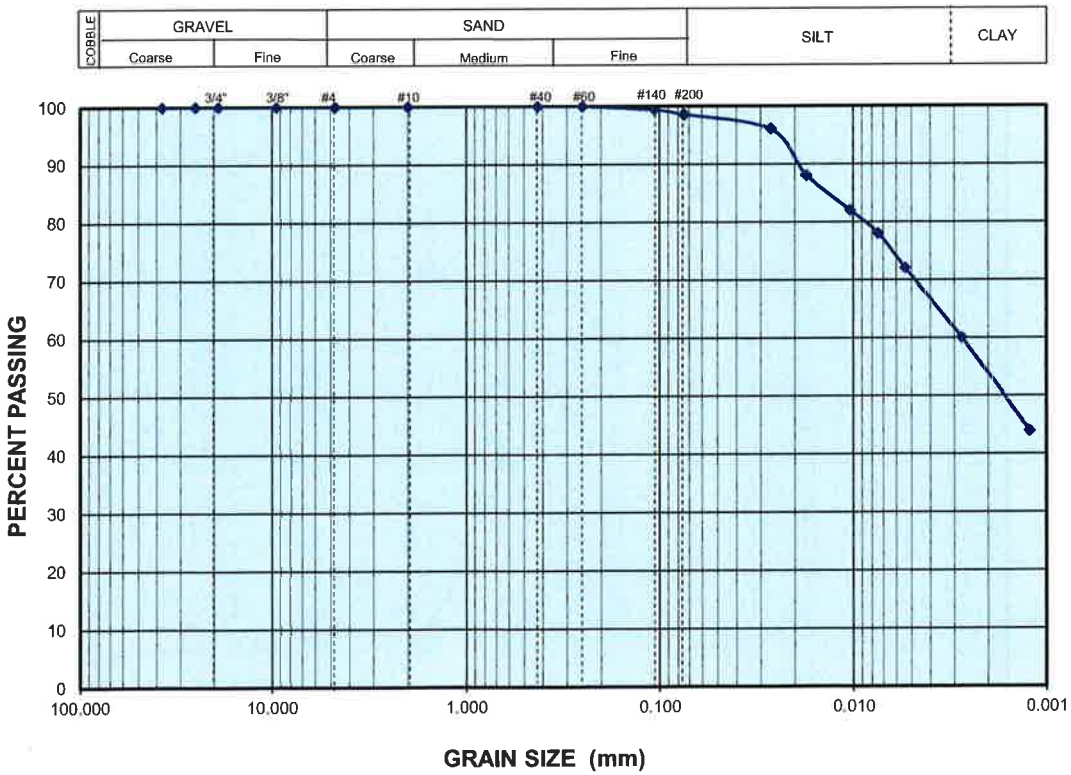
Project: 7026 Oxnard Avenue
Site: La Conchita, CA
Tech: J.Cromer

Project No. 23-1239
Date: 9/27/2023

Sample B-3 @ 20'
Material Lean CLAY (CL)

Test Specification: ASTM D-422

Sieve	Mesh Opening (mm)	Percent Passing (%)
1 1/2 in	37.50	100.0 %
1 in	25.00	100.0 %
3/4 in	19.000	100.0 %
3/8 in	9.500	100.0 %
No. 4	4.750	100.0 %
No. 10	2.000	100.0 %
No. 40	0.425	100.0 %
No. 60	0.250	100.0 %
No. 140	0.106	99.4 %
No. 200	0.075	98.6 %
0.074 mm	0.074	98.6 %
0.0265 mm	0.0265	96.0 %
0.0174 mm	0.0174	88.0 %
0.0104 mm	0.0104	82.0 %
0.0074 mm	0.0074	78.0 %
0.0054 mm	0.0054	72.0 %
0.0027 mm	0.0027	60.0 %
0.0012 mm	0.0012	44.0 %



Rev. 9-22-2020

Geo-Advantec, Inc.		SIEVE ANALYSIS	FIGURE
PROJECT NO.	23-1239	7026 Oxnard Avenue - La Conchita, CA	
DATE	9/27/2023	Noorzay Geotechnical Project No.: 23054	

SIEVE ANALYSIS

Project: 7026 Oxnard Avenue
Site: La Conchita, CA
Tech: J.Cromer

Project No. 23-1239
Date: 9/27/2023

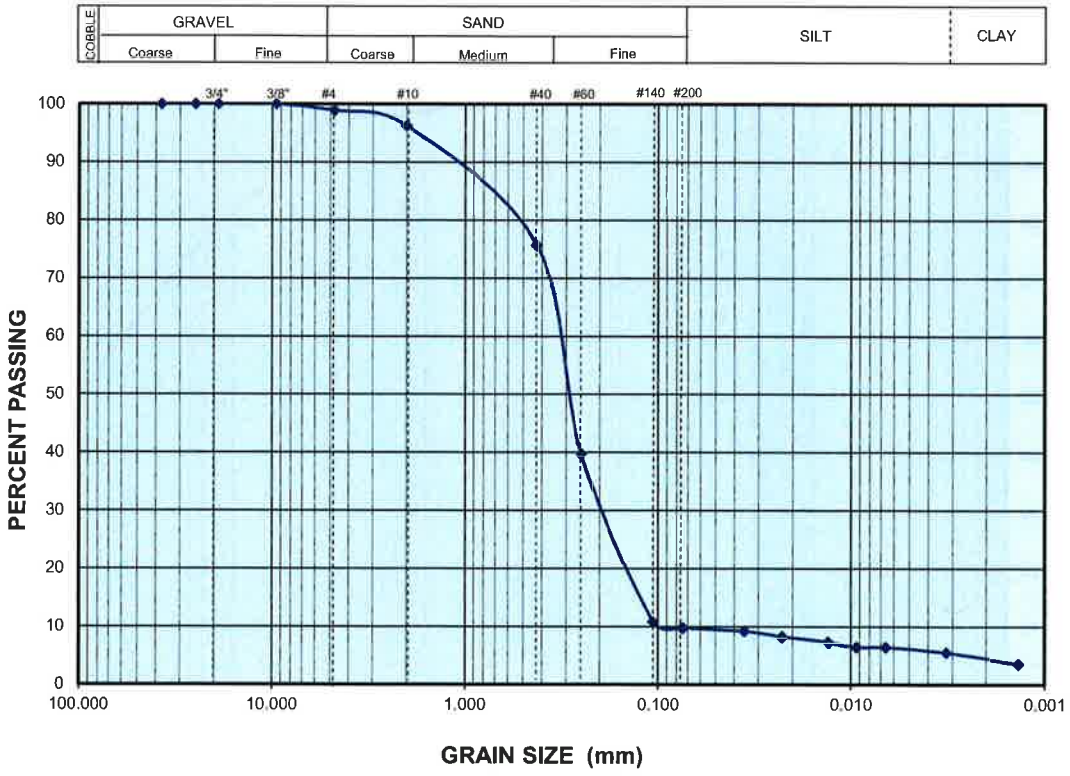
Sample B-3 @ 25'
Material Poorly-graded SAND with Silt (SP-SM)

Test Specification: ASTM D-422

Sieve	Mesh Opening (mm)	Percent Passing (%)
1 1/2 in	37.50	100.0 %
1 in	25.00	100.0 %
3/4 in	19.000	100.0 %
3/8 in	9.500	100.0 %
No. 4	4.750	98.9 %
No. 10	2.000	96.2 %
No. 40	0.425	75.6 %
No. 60	0.250	39.8 %
No. 140	0.106	10.8 %
No. 200	0.075	9.8 %
0.074 mm	0.074	9.8 %
0.0356 mm	0.0356	9.2 %
0.0226 mm	0.0226	8.3 %
0.0131 mm	0.0131	7.4 %
0.0094 mm	0.0094	6.5 %
0.0066 mm	0.0066	6.5 %
0.0032 mm	0.0032	5.5 %
0.0014 mm	0.0014	3.7 %

CC: 1.17

CU: 3.51



Rev. 9-22-2020

Geo-Advantec, Inc.		SIEVE ANALYSIS	FIGURE
PROJECT NO.	23-1239	7026 Oxnard Avenue - La Conchita, CA Noorzay Geotechnical Project No.: 23054	
DATE	9/27/2023		

Soil Analysis Lab Results

Client: Noorzay Geotechnical Services, Inc.
Job Name: 7026 Oxnard Avenue, La Conchita
Client Job Number: NGS#23054
Project X Job Number: S230828G
August 29, 2023

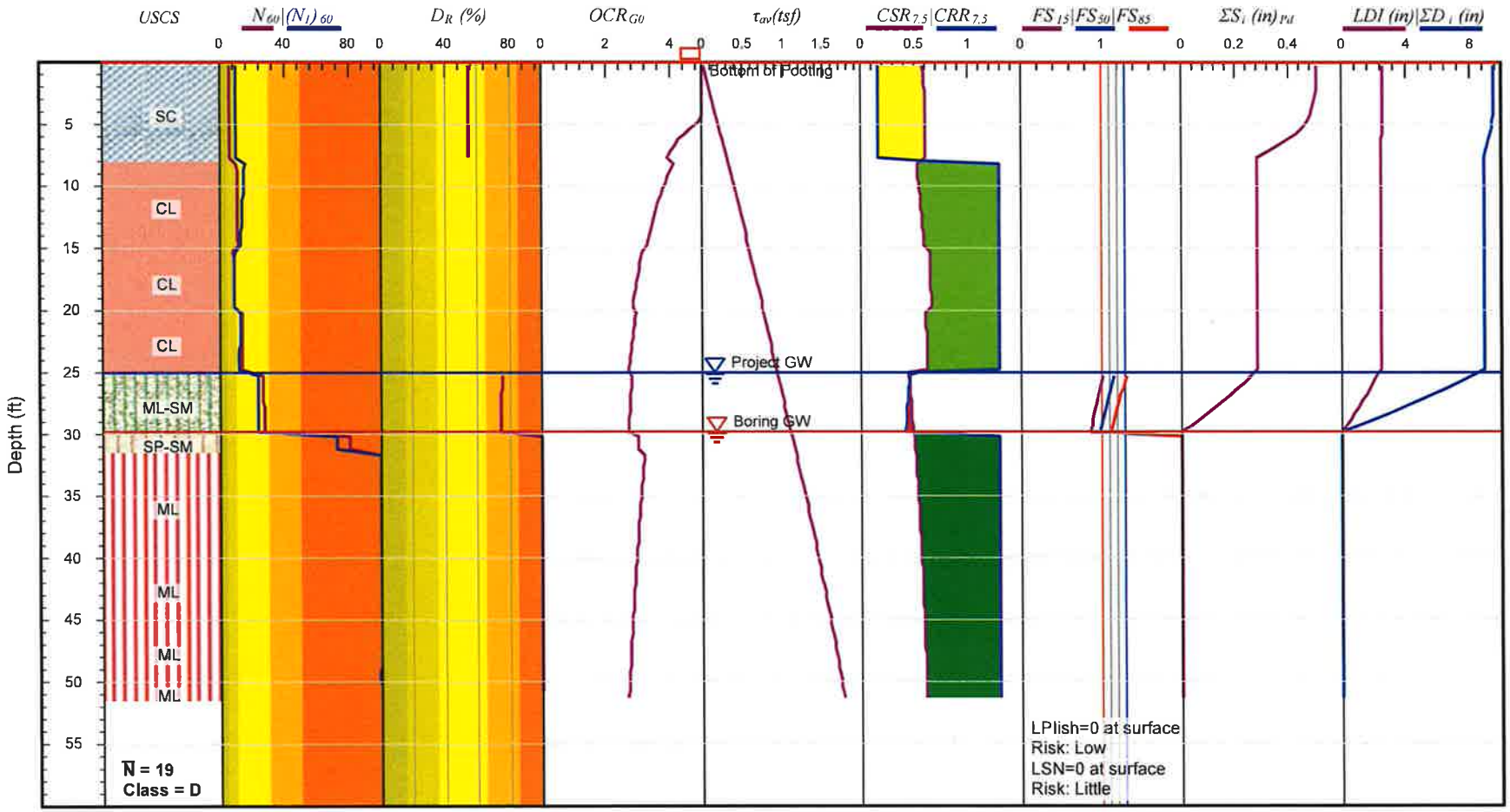
	Method	ASTM D4327		ASTM D4327		ASTM G187		ASTM G51
Bore# / Description	**Depth**	**Sulfates** SO_4^{2-}		**Chlorides** Cl^-		**Resistivity** As Rec'd | Minimum		**pH**
	(ft)	(mg/kg)	(wt%)	(mg/kg)	(wt%)	(Ohm-cm)	(Ohm-cm)	
B-1 SM/SC	0-5	1,444.8	0.1445	14.6	0.0015	4,489	1,005	7.0

Cations and Anions, except Sulfide and Bicarbonate, tested with Ion Chromatography
mg/kg = milligrams per kilogram (parts per million) of dry soil weight
ND = 0 = Not Detected | NT = Not Tested | Unk = Unknown
Chemical Analysis performed on 1:3 Soil-To-Water extract
PPM = mg/kg (soil) = mg/L (Liquid)

Note: Sometimes a bad sulfate hit is a contaminated spot. Typical fertilizers are Potassium chloride, ammonium sulfate or ammonium sulfate nitrate (ASN). So this is another reason why testing full corrosion series is good because we then have the data to see if those other ingredients are present meaning the soil sample is just fertilizer-contaminated soil. This can happen often when the soil samples collected are simply surface scoops which is why it's best to dig in a foot, throw away the top and test the deeper stuff. Dairy farms are also notorious for these items.

APPENDIX D

GEOTECHNICAL CALCULATIONS



SC ML-SM ML

CL SP-SM

Silt Correction:
$K=(1-FC)^{0.75}$

Earthquake & Groundwater Information:
Magnitude = 6.98
Max. Acceleration = 1.137 g
Project GW = 25 ft
Maximum Settlement = 0.51 in
Settl. at Bottom of Footing = 0.51 in

Liquefaction: Boulanger & Idriss (2010-16)
Settl.: [dry] Pradel (1998); [sat] Idriss & Boulanger (2008)
Lateral spreading: Idriss & Boulanger (2008)
M correction: [Sand; Clay] Boulanger & Idriss(2004)
σv correction: Idriss & Boulanger (2008)
Stress reduction: Idriss & Boulanger (2008)

NoorzayGeo

Liquefaction Potential - SPT Data

Project:	Proposed Single Family Residence				
Location:	7026 Oxnard Avenue, La Conchita				
Job Number:	23054	Boring No.:	B-1	Enclosure:	D-1

C:\Users\mahen\OneDrive\WGS\Projects\2023\23054 - 7026 Oxnard Avenue, La Conchita\geosuite calcs\GeoSuite_23054_B-1.csv

Prepared at 10/16/2023 4:44:51 PM

APPENDIX E

PERCOLATION DATA

SEEPAGE PIT PERCOLATION TEST DATA

BORING NUMBER: S-1
LOT No: N/A
TRACT No: N/A

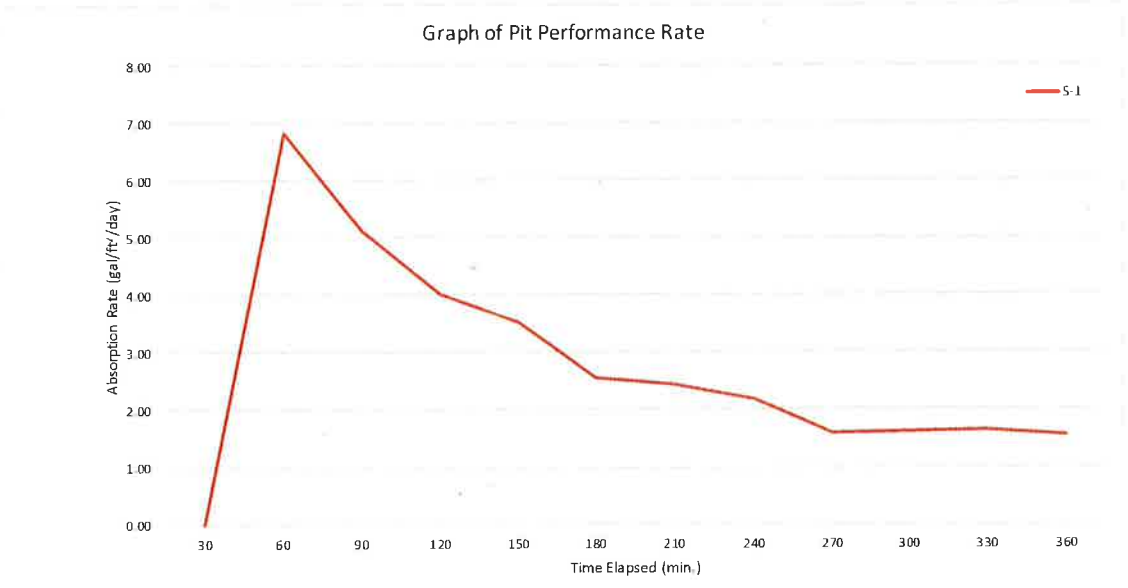
CLIENT: Mr. Donald Younger
PROJECT: 7026 Oxnard Avenue, La Conchita

DATE OF DRILLING: September 18, 2023
DATE OF TESTING: September 19, 2023
DRILLED BY: MN
TESTED BY: CF

DEPTH BEFORE (ft.): 15.0
DEPTH AFTER (ft.): 15.0
PERC HOLE DIA. (ft.): 1.0

* Test holes were pre-soaked overnight, material was considered "non-sandy" for the purposes of percolation testing

Time Interval (min.)	Total Elapsed Time (min.)	Initial Water Level (ft.)	Final Water Level (ft.)	Change in Water Level (Δh) (ft.)	Initial Hole Depth (ft.)	Final Hole Depth (ft.)	Depth of water remaining for time period (d) (ft.)	Have (ft.)	Absorption Rate (gal/ft^2/day)
30	30	2.49	3.78	1.29	15.0	15.0	11.2	-	-
30	60	3.78	4.62	0.84	15.0	15.0	10.4	10.80	6.83
30	90	4.62	5.21	0.59	15.0	15.0	9.8	10.08	5.13
30	120	5.21	5.65	0.44	15.0	15.0	9.3	9.57	4.02
30	150	5.65	6.02	0.37	15.0	15.0	9.0	9.16	3.53
30	180	6.02	6.28	0.26	15.0	15.0	8.7	8.85	2.57
30	210	6.28	6.52	0.24	15.0	15.0	8.5	8.60	2.44
30	240	6.52	6.73	0.21	15.0	15.0	8.3	8.37	2.19
30	270	6.73	6.88	0.15	15.0	15.0	8.1	8.19	1.59
30	300	6.88	7.03	0.15	15.0	15.0	8.0	8.04	1.62
30	330	7.03	7.18	0.15	15.0	15.0	7.8	7.90	1.65
30	360	7.18	7.32	0.14	15.0	15.0	7.7	7.75	1.57



LEACH LINE PERCOLATION TEST DATA

Location:	7026 Oxnard Avenue, La Conchita, CA		Test Hole Number:	P-1
Client:	Mr. Donald Younger		Job Number:	23054
Depth (ft):	4		Tested By:	Maihan Noorzay
Size of Test Hole	48"	in. deep	Date Excavated/Presoaked:	8/21/23
	12"	in. dia.	Date Tested:	8/22/23
Weather:	cool, sprinkles, mid 60s to mid 70s			
Soil Classification:	Silty sand (SM)			

PRESOAK PERIOD
The test hole was filled to the top with water and allowed to soak overnight

TEST PERIOD					
Time		Time Interval (h:mm:ss)	Water Level (ft)	Change in Water Level (in.)	Percolation Rate (min./in.)
Start:	8:00:00 AM	0:30:00	3.04	3.12	9.62
Stop:	8:30:00 AM		3.30		
Start:	8:30:00 AM	0:30:00	3.30	2.04	14.71
Stop:	9:00:00 AM		3.47		
Start:	9:00:00 AM	0:30:00	3.47	2.16	13.89
Stop:	9:30:00 AM		3.65		
Start:	9:30:00 AM	0:30:00	3.02	2.04	14.71
Stop:	10:00:00 AM		3.19		
Start:	10:00:00 AM	0:30:00	3.19	2.16	13.89
Stop:	10:30:00 AM		3.37		
Start:	10:30:00 AM	0:30:00	3.37	2.04	14.71
Stop:	11:00:00 AM		3.54		
Start:	11:00:00 AM	0:30:00	3.54	2.04	14.71
Stop:	11:30:00 AM		3.71		
Start:	11:30:00 AM	0:30:00	3.09	2.04	14.71
Stop:	12:00:00 PM		3.26		

LEACH LINE PERCOLATION TEST DATA

Location:	7026 Oxnard Avenue, La Conchita, CA		Test Hole Number:	P-2
Client:	Mr. Donald Younger		Job Number:	23054
Depth (ft):	4		Tested By:	Maihan Noorzay
Size of Test Hole	48"	in. deep	Date Excavated/Presoaked:	8/21/23
	12"	in. dia.	Date Tested:	8/22/23
Weather:	cool, sprinkles, mid 60s to mid 70s			
Soil Classification:	Silty sand (SM)			

PRESOAK PERIOD
The test hole was filled to the top with water and allowed to soak overnight

TEST PERIOD					
Time		Time Interval (h:mm:ss)	Water Level (ft)	Change in Water Level (in.)	Percolation Rate (min./in.)
Start:	8:00:00 AM	0:30:00	3.22	1.08	27.78
Stop:	8:30:00 AM		3.31		
Start:	8:30:00 AM	0:30:00	2.91	1.32	22.73
Stop:	9:00:00 AM		3.02		
Start:	9:00:00 AM	0:30:00	3.02	1.08	27.78
Stop:	9:30:00 AM		3.11		
Start:	9:30:00 AM	0:30:00	3.11	1.08	27.78
Stop:	10:00:00 AM		3.20		
Start:	10:00:00 AM	0:30:00	3.20	0.96	31.25
Stop:	10:30:00 AM		3.28		
Start:	10:30:00 AM	0:30:00	3.28	0.72	41.67
Stop:	11:00:00 AM		3.34		
Start:	11:00:00 AM	0:30:00	3.34	0.84	35.71
Stop:	11:30:00 AM		3.41		
Start:	11:30:00 AM	0:30:00	3.41	0.72	41.67
Stop:	12:00:00 PM		3.47		

LEACH LINE PERCOLATION TEST DATA

Location:	7026 Oxnard Avenue, La Conchita, CA		Test Hole Number:	P-3
Client:	Mr. Donald Younger		Job Number:	23054
Depth (ft):	9		Tested By:	Maihan Noorzay
Size of Test Hole	108"	in. deep	Date Excavated/Presoaked:	8/21/23
	12"	in. dia.	Date Tested:	8/22/23
Weather:	cool, sprinkles, mid 60s to mid 70s			
Soil Classification:	Silty sand (SM)			

PRESOAK PERIOD
The test hole was filled to the top with water and allowed to soak overnight

TEST PERIOD					
Time		Time Interval (h:mm:ss)	Water Level (ft)	Change in Water Level (in.)	Percolation Rate (min./in.)
Start:	8:00:00 AM	0:30:00	4.87	0.36	83.33
Stop:	8:30:00 AM		4.90		
Start:	8:30:00 AM	0:30:00	4.90	0.48	62.50
Stop:	9:00:00 AM		4.94		
Start:	9:00:00 AM	0:30:00	4.94	0.24	125.00
Stop:	9:30:00 AM		4.96		
Start:	9:30:00 AM	0:30:00	4.96	0.24	125.00
Stop:	10:00:00 AM		4.98		
Start:	10:00:00 AM	0:30:00	4.98	0.24	125.00
Stop:	10:30:00 AM		5.00		
Start:	10:30:00 AM	0:30:00	5.00	0.24	125.00
Stop:	11:00:00 AM		5.02		
Start:	11:00:00 AM	0:30:00	5.02	0.24	125.00
Stop:	11:30:00 AM		5.04		
Start:	11:30:00 AM	0:30:00	5.04	0.24	125.00
Stop:	12:00:00 PM		5.06		

LEACH LINE PERCOLATION TEST DATA

Location:	7026 Oxnard Avenue, La Conchita, CA		Test Hole Number:	P-3
Client:	Mr. Donald Younger		Job Number:	23054
Depth (ft):	4		Tested By:	Maihan Noorzay
Size of Test Hole	48"	in. deep	Date Excavated/Presoaked:	8/21/23
	12"	in. dia.	Date Tested:	8/22/23
Weather:	cool, sprinkles, mid 60s to mid 70s			
Soil Classification:	Silty sand (SM)			

PRESOAK PERIOD
The test hole was filled to the top with water and allowed to soak overnight

TEST PERIOD					
Time		Time Interval (h:mm:ss)	Water Level (ft)	Change in Water Level (in.)	Percolation Rate (min./in.)
Start:	8:00:00 AM	0:30:00	3.14	0.84	35.71
Stop:	8:30:00 AM		3.21		
Start:	8:30:00 AM	0:30:00	3.21	0.72	41.67
Stop:	9:00:00 AM		3.27		
Start:	9:00:00 AM	0:30:00	3.27	0.84	35.71
Stop:	9:30:00 AM		3.34		
Start:	9:30:00 AM	0:30:00	3.34	0.60	50.00
Stop:	10:00:00 AM		3.39		
Start:	10:00:00 AM	0:30:00	3.39	0.84	35.71
Stop:	10:30:00 AM		3.46		
Start:	10:30:00 AM	0:30:00	3.46	0.84	35.71
Stop:	11:00:00 AM		3.53		
Start:	11:00:00 AM	0:30:00	3.53	0.84	35.71
Stop:	11:30:00 AM		3.60		
Start:	11:30:00 AM	0:30:00	3.60	0.72	41.67
Stop:	12:00:00 PM		3.66		