



## Planning Director Staff Report Hearing on February 16, 2023

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County of Ventura • Resource Management Agency

800 S. Victoria Avenue, Ventura, CA 93009 • (805) 654-2478 • [www.vcrma.org/divisions/planning](http://www.vcrma.org/divisions/planning)

### BENEDEK RESIDENTIAL ADDITION COASTAL PLANNED DEVELOPMENT (PD) PERMIT CASE NO. PL22-0033

#### A. PROJECT INFORMATION

1. **Request:** The applicant requests approval of a Coastal Planned Development (PD) Permit for the construction of a residential addition and a voluntary merger of two legal lots (Case No. PL22-0033).
2. **Agent:** Danny Longwill, Two Trees, 112 Canada Street, Ojai, CA 93023
3. **Property Owner:** Peter Benedek, 1880 Century Park East, Suite 1600, Los Angeles, CA 90067
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 Coastal Planned Development Permit.
5. **Project Site Size, Location, and Parcel Number:** The 5,040-square foot (sq. ft.) Project site is located at 6772 Breakers Way, northwest of the intersection of Ocean Avenue and Old Pacific Coast Highway, in the Community of Mussel Shoals, in the unincorporated area of Ventura County. The Tax Assessor's parcel numbers for the parcels that constitute the Project site are 060-0-082-625 and 060-0-082-635 (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 High 6.1-36 DU/AC
  - c. Zoning Designation: RB-3,000 sq. ft. (Residential Beach, 3,000 square-foot minimum lot size)

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

Location in Relation to the Project Site	Zoning	Land Uses/Development
North	COS-10 ac-sdf (Coastal Open Space – 10 acre minimum lot size)	101 Freeway
East	RB-3,000 sq. ft.	Single-Family Dwelling
South	N/A	Pacific Ocean/Sandy Beach Area
West	RB-3,000 sq. ft.	Single-Family Dwelling

- 8. History:** The subject property contains an existing 2,833 square foot (sq. ft.) single-family dwelling (conventional wood frame structure) which appears to have been constructed in 1949, based upon review of available Ventura County Assessors data. The dwelling contains three-levels: a basement with a storage and mechanical area, four (4) bedrooms, two full bathrooms, a kitchen, and a den. The second story is accessed via unenclosed stairs and an exterior door.

The subject property and surrounding buildings are protected by an existing rock revetment constructed in 1978. Repairs to the seawall were documented in 1993 under Coastal Planned Development Permit No. PD-1574. The repairs consisted of the placement of riprap along a 120-foot portion of the seawall.

The proposed Project was evaluated for potential impacts to historic resources by Ventura County Planning Division staff. Based upon direction from Cultural Heritage Board Program Planning Staff, the applicant submitted a California State Department of Parks and Recreation 523A form documenting the present condition of the structure and providing a short history of the area and the subject property. The form indicates that the home was built during the post-World War II era, in the decades following the initial development of the area with the discovery of the Rincon Oil Field in 1927. The present state of the structure indicates that the subject property is not a notable example of the Vernacular Beach House architectural style nor significant for the post-war period or any other significant events in U.S. California or local history. Therefore, the proposed modifications present no significant impacts with respect to historic resources in Ventura County.

- 9. Project Description:** The Applicant requests a Coastal Planned Development Permit to merge two legal lots and construct an attached 384 sq. ft. two car garage, a 622 sq. ft. master bedroom, and 127 sq. ft. of minor renovations to the existing residence to add an internal stairway to the second story addition. Additional improvements include the construction of a new 190 sq. ft. first floor wood deck, the second story balcony.

Water to the site is provided by Casitas Municipal Water District and County Service Area 29 provides sewer service(Exhibit 3). The proposed Project includes the installation of a replacement Septic Tank Effluent Pump (STEP) System. The STEP System includes a septic tank and a pump. Sewage is conveyed by gravity to the tank through the building plumbing line. Liquid waste is pumped under

pressure to the public sewer system. Solid waste will remain in the STEP tank where it naturally degrades and is eventually pumped out.

**10. Substantial Alteration:** Pursuant to Ventura County Coastal Zoning Ordinance (CZO) Section 8174-6.2.2 (Improvements to Existing Single Family Dwellings), for property located between the first public road paralleling the sea, improvements that would result in an increase of 10 percent or more of internal floor area of an existing structure are subject to the requirement for a new Coastal Planned Development Permit. The scope of work was reviewed under this provision and was determined to be subject to the requirement for review and approval of a Coastal Planned Development Permit. Further, the Ventura County Planning Division determined (Pursuant to CZO Sections 8174-6.3.2(d) and 8182-7.1) that residential projects which modify 50 percent or less of the structure’s floor area, roof area, foundation, exterior walls (exclusive of each metric) do not require conformance to the current regulations of the zone classification for existing unmodified portions of the structure. As applied in this case, the expanded portions of the single-family dwelling are subject to compliance with all applicable policies and regulations (i.e., setbacks, height regulations, protection from coastal hazards), though nonconformities of the existing portions of the home are not required to be upgraded. The proposed development envelope is located in an area of Minimal Flood Hazard (Zone X) as identified on the Federal Emergency Management Agency’s (FEMA) National Flood Insurance Program (NFIP) Flood Rate Insurance Map (FIRM) Panel 0611C0702F. Accordingly, the requirements for “*Substantial Improvement*” projects required under Ventura County Code of Ordinances Section 5605-7 do not apply to the proposed Project.

The Project plans (Exhibit 3) indicate the following percent changes to the proposed structure

**Table 1 – Substantial Alteration Calculation**

Calculation	Existing Area	New Sq. Ft.	Modified Area (Existing)	Percent Modification
Roof Area	2,025 sq. ft.	645 sq. ft.	321 sq. ft.	47.7%
Wall Area	9,625 sq. ft.	2,452 sq. ft.	-	25.4%
Floor Area	2,833 sq. ft.	1,006	127 sq. ft.	39.9%

**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 of 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 proposed Project consists of the construction of an addition to an existing single-family dwelling and the installation of a Septic Tank Effluent Pump (STEP) system. Based upon the review of the proposed scope of work, the proposed project was determined to qualify for an exemption from CEQA pursuant to Guidelines Section 15301 for (Existing Facilities) and Section 15303 (New Construction or Conversion of Small Structures). CEQA Guidelines Section 15301 exempts projects which result in a 50 percent (or less) increase of floor area or 2,500 square feet whichever is less. CEQA Guidelines Section 15303 exempts projects which involve the modification of existing structures and the construction of accessory structures including garages and fences. Further, the project will not trigger any of the 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 15301 of the CEQA Guidelines.

**C. CONSISTENCY WITH THE GENERAL PLAN COASTAL AREA PLAN**

The proposed Project has been analyzed and determined to be consistent with all applicable General Plan and Coastal Area Plan policies. A consistency analysis which evaluates the Project’s consistency with the policies of the General Plan is included as Exhibit 5 of this staff report.

**D. ZONING ORDINANCE COMPLIANCE**

The proposed Project is subject to the requirements of the Ventura County CZO. Pursuant to the Ventura County CZO (Section 8174-4), the proposed use is allowed in the RB zone district with the granting of a Coastal PD Permit. Upon the granting of the Coastal PD Permit, the proposed Project will comply with this requirement.

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

**Table 2 – Development Standards Consistency Analysis**

Type of Requirement	Zoning Ordinance Requirement	Complies?
Minimum Lot Area (Gross)	3,000 sq. ft.	Yes, 5,040 sq. ft.
Maximum Percentage of Building Coverage	65%	31.4%
Front Setback	10 ft.	21.5 ft.
Side Setback	3 ft.	10 ft.

**Table 2 – Development Standards Consistency Analysis**

Type of Requirement	Zoning Ordinance Requirement	Complies?
Rear Setback	14 ft.	14 ft.
Maximum Building Height	28 ft.	19.88 ft.

**E. COASTAL 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 Sections C and D 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].**

The proposed Project consists of a residential building addition to an existing single-family dwelling in the unincorporated community of Mussel Shoals, an area developed with multi-story residential development of varying size, age, and architectural style on lots that are generally 40 feet by 60 feet and range in size between 1,230 sq. ft. and 2,642 sq. ft. The proposed development includes the merger of two existing lots, correcting an existing encroachment of the single-family dwelling across the property line between Lots 49 and 50 of Mussel Shoals Tract 1. With the proposed merger, the subject property will be one of the larger lots in Mussel Shoals, at approximately 5,040 sq. ft. The subject dwelling does not presently have a garage, the proposed Project will result in the construction of a new garage which includes similar architectural treatment to the existing structure (wood sliding/shiplap). All residences within a 300 foot radius of the Project were noted by Planning staff as having attached garages.

The proposed Project does not include a change of use that has the potential to create any land use conflicts with the surrounding residential development or introduce physical development that is not customarily associated with residential infill development. Additionally, the Project will not generate additional traffic. While the proposed Project is not considered a noise generating use, construction noise will be generated during the development phase. The proposed Project would be subject to a condition of approval to limit noise-generating activities to the days and times when such noise is least likely to adversely affect surrounding residential uses (Exhibit 4, Condition of Approval No. 21).

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 of a residential addition to an existing single-family dwelling. The proposed changes to the existing use are 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].**

As discussed in the General Plan Consistency Analysis (Section C), the proposed development will be compatible with residential uses on properties within the surrounding area. Water and wastewater disposal services for the Project will be provided by Casitas Municipal Water District and County Service Area 29. The proposed Project includes the installation of a replacement STEP tank to support the proposed residential improvements. The site contains sufficient area for the installation of the proposed expanded sewage disposal system (Exhibit 3). The proposed development is also served for vehicular access by an existing segment of private road (Breakers Way) which connects to the public road system (Ocean Avenue and onramps to the 101 Freeway). Conditions of approval have been added to the Project which address temporary impacts from construction and limiting the hours and days for construction, including designation of a contact person to respond to complaints (Exhibit 4, Conditions Nos. 16 and 21). The proposed development will not be obnoxious, harmful, or impair the utility of neighboring properties or uses because the Project is adequately served by existing public facilities such as water and sewage disposal, has adequate physical and legal access to serve the proposed site and adequately addresses temporary impacts from construction through appropriate conditions of approval (Exhibit 4).

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].**

As discussed in Section C of this Staff Report, the Project is adequately protected from the range of considerable hazards eliminating any detrimental impacts to the public interest, health, safety, convenience, or welfare. The Project site possesses adequate access to water for fire suppression purposes (fire flow), and adequate access (ingress and egress) in the event of a public safety emergency. The proposed Project has also been designed to address potential impacts from

coastal hazards including sea level rise, wave runup and flood hazards. Accordingly, the proposed garage is designed with breakaway walls at ground level, below the design flood elevation (DFE) identified in the Revised Wave Runup & Coastal Hazards Analysis (Exhibit 7). The residential addition above the garage is elevated well above the DFE. The residential addition will be built upon piles designed to withstand the forces projected in the Revised Wave Runup & Coastal Hazards Analysis including incorporating the recommendations for final construction design (Exhibit 4 Condition No. 18). Accordingly, the proposed development will not be detrimental to the public interest, health, safety, convenience, or welfare because the structure is reasonably safe from coastal hazards including shoreline erosion, wave runup, and flooding. Further, the proposed project is served by public water and sewer services and adequate fire protection.

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 February 3, 2023, 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 February 6, 2023, 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 Sections 15301 (Existing Facilities) and 15303 (New Construction or Conversion of Small Structures) of the CEQA Guidelines.
3. **MAKE** the required findings to grant a Coastal PD Permit pursuant to 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. PL22-0033 subject to the conditions of approval (Exhibit 4).

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 10<sup>th</sup> 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.

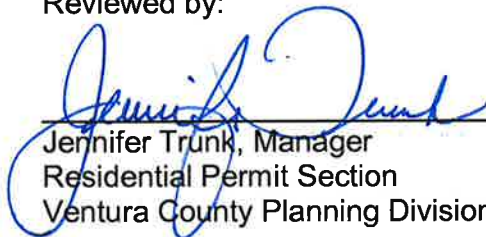
If you have any questions concerning the information presented above, please contact John Oquendo at (805) 654-3588 or John.Oquendo@ventura.org.

Prepared by:



John Oquendo, Case Planner  
Residential Permit Section  
Ventura County Planning Division

Reviewed by:



Jennifer Trunk, Manager  
Residential Permit Section  
Ventura County Planning Division

#### EXHIBITS

- Exhibit 2 Maps
- Exhibit 3 Plans
- Exhibit 4 Conditions of Approval
- Exhibit 5 General Plan Consistency Analysis
- Exhibit 6 Supplemental Policy Analysis (Dated February 7, 2022, Two Trees Architect)
- Exhibit 7 Revised Wave Runup & Coastal Hazard Analysis (Dated October 17, 2022, GeoSoils, Inc.)
- Exhibit 8 Geotechnical Exploration Report (Dated December 13, 2021, Pacific Materials Laboratory, Inc.)





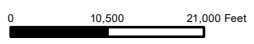
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Ventura County, California  
Resource Management Agency  
GIS Development & Mapping Services  
Map created on 04-11-2022



County of Ventura  
Planning Director Hearing  
Case No. PL22-0033  
Exhibit 2 - Maps



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 not warrant the accuracy of this map nor does it involve a risk of economic loss or physical injury should be made in reliance thereon.

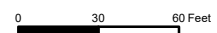




Ventura County, California  
 Resource Management Agency  
 GIS Development & Mapping Services  
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County of Ventura  
 Planning Director Hearing  
 PL22-0033  
 General Plan & Zoning Map



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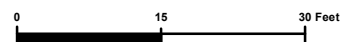




Ventura County, California  
Resource Management Agency  
GIS Development & Mapping Services  
Map Created on 04-11-2022  
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County of Ventura  
Planning Director Hearing  
PL22-0033  
**Aerial Photography**



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### ABBREVIATIONS

A.C. asphalt concrete	I.D. inside diameter
A.D. area drain	INSUL insulation
ACU. acoustical	INT. interior
ASPH. asphalt	JST. joint
BD. board	JT. joint
BLDG. building	LAV. lavatory
BLKG. blocking	MATL. material
CAB. cabinet	MAX. maximum
CER. ceramic	ME. metal
CLR. clear	MT. metal
COL. column	MFR. manufacturer
CON. concrete	MIN. minimum
CONSTR. construction	MR. mirror
DBL. double	MISC. miscellaneous
D.F. drinking fountain	N. north
DET. detail	N.C. not in contract
DTL. detail	N.T.S. not to scale
Ø. diameter	PL. plate
D. dimension	PLG. plaster
DN. down	PLYWD. plywood
DS. downspout	R. radius
D.S.P. dry standpipe	R. roof drain
DWS. driving	REF. reference
E. expansion joint	REFR. refrigerator
EF. exhaust fan	SH. shelf
EL. elevation (grade)	SHG. sheathing
ELEV. elevation (building)	SM. similar
EQ. equipment	SPEC. specification
EXST. existing	STD. standard
EXT. exterior	STR. storage
F.A. fire alarm	STRUC. structural
F.D. floor drain	SUSP. suspended
FDN. foundation	TR. tread
F.E. fire extinguisher	TEL. telephone
F.E.C. fire extinguisher cabinet	TEMP. tempered
FIN. finish	T. & G. tongue & groove
FL. floor	TH. thick
FLUOR. fluorescent	TOL. toilet
FO.C. face of concrete	TOP. top of
FO.F. face of finish	TOP. top of plywood
FO.M. face of masonry	TOP. top of slab
FO.S. face of stud	TV. television
FT. foot or feet	TYP. typical
FTG. footing	UNO unless noted otherwise
GALV. galvanized	WC. water closet
GL. glass	WD. wood
GR. grade	
GYP. gypsum	
H.B. hose bibb	
HORIZ. horizontal	
HR. hour	
HGT. height	
H.W. hot water	

### SYMBOL LEGEND

	Finish Elevation Reference
	Detail Reference Detail Number Sheet Number
	Exterior Elevation Reference Detail Number Sheet Number
	Building or Wall Section Reference Detail Number Sheet Number
	Interior Elevation Reference Detail Number Sheet Number Directional Reference
	Window Reference - See sheet A-4 for schedule
	Door Reference - See sheet A-4 for schedule
	Material and Keynote Reference
	Cabinet or Appliance Reference
	Roof/Floor Type Reference, See sheet A&-1.1 for reference
	Wall Type Reference, See sheet A&-1.1 for reference

### PROJECT TEAM

<b>OWNER:</b>	Benedek Family Trust Lois Wecker 310-712-3509 lwecker@gmail.com
<b>ARCHITECT:</b>	Two Trees Architect Contact: Danny Longwill 112 Canada St. Ojai, CA 93023 Phone: (805) 403-6595 Email: danny@twotrees-architect.com

### CODE REQUIREMENTS

All work to comply with:  
2019 CBC, 2019 CEC, 2019 CMC, 2019 CPC, State codes & City Ordinances

### INSPECTION & OBSERVATIONS

Work shall be inspected as required by applicable consultants, specified below & in consultants' drawings.

Structural Engineer Requirements:  
See structural drawings S-1,0 for special inspection and observation requirements.

### UTILITIES

<b>WATER:</b>	Casitas Municipal Water District 1055 Ventura Ave Oakview CA, Phone: (805) 649-2251
<b>ELECTRICAL:</b>	Southern California Edison P.O. Box 600 Rosemead CA, 91771 Phone: (800) 811-1911
<b>GAS:</b>	Southern California Gas Company 8400 Oakdale Ave, Chatsworth CA, Phone: (800) 427-2200
<b>TELEPHONE:</b>	***PHONE COMPANY*** ADDRESS CITY, STATE POSTAL CODE PHONE

### PROJECT DATA

<b>ADDRESS:</b>	6772 Breakers Way, Ventura CA, 93001
<b>A.P.N.:</b>	060-0-082-625 & 060-0-082-635
<b>Construction Type:</b>	Type V
<b>Occupancy Category:</b>	R-3

### PROJECT DESCRIPTION

Project consists of a small addition to the existing SFD adding a new attached two car garage, and new bedroom on the second floor, fencing, decking, handrail, guardrail, and dispened pier (caissons) foundation system. Existing sewer tank and pump system to be upgrade and relocated. Project consists of merging the two lots.

### LOT COVERAGE CALCULATIONS:

Existing Residence Footprint:	1,400 sq ft (gross)
<b>Existing Building Area / Lot Area</b>	1400 sq ft / 5,040 sq ft = 27.7% Lot Coverage
Proposed Residence Footprint:	1,784 sq ft (gross)
<b>Proposed Building Area / Lot Area</b>	1,784 sq ft / 5,040 sq ft = 35.4% Lot Coverage

### FAR CALCULATION:

Existing:	2,833 sq ft / 5,040 sq ft = 56%
Proposed:	3,839 sq ft / 5,040 sq ft = 76%

### AGENCIES

<b>PLANNING &amp; DEVELOPMENT:</b>	County of Ventura Planning Division 800 S. Victoria Avenue #1740 Ventura, CA 93009-1740 Phone: (805) 654-2488
<b>BUILDING &amp; SAFETY:</b>	Ventura County Building & Safety Division 800 S. Victoria Avenue Ventura, CA, 93009 Phone: (805) 654-2771
<b>FIRE PREVENTION</b>	Ventura County Fire Protection District 185 Durley Ave, Camarillo CA, 93010 Phone: (805) 398-9739



**VICINITY MAP**  
NOT TO SCALE

### AREA CALCULATIONS:

<b>FLOOR AREA CALCULATIONS</b>	
Existing First Floor	1,400 sq ft (gross)
Existing Second Floor	353 sq ft (gross)
Existing Mechanical / Storage Area:	1,080 sq ft (gross)
<b>Total Existing Floor Area</b>	2,833 sq ft (gross)
New Modified First Floor	511 sq ft (gross) + 127 sq ft of modified + 384 sq ft of new
New Modified Second Floor	622 sq ft (gross)
New Modified Mechanical / Storage Area	None
<b>Total New Modified Area</b>	1,133 sq ft (gross)
<b>Combined Existing + New Area</b>	3,839 sq ft (gross)

<b>ROOF AREA CALCULATIONS</b>	
Existing Roof Area	2,025 sq ft
New Modified Roof Area	966 sq ft
<b>Combined Existing + New Modified Area</b>	2,991 sq ft

<b>WALL AREA CALCULATIONS</b>	
Existing Wall Area	9,655 sq ft
New Modified Wall Area	2,452 sq ft
<b>Combined Existing + New Modified Area</b>	12,107 sq ft

<b>TOTALS</b>	
<b>Total Existing Area (Floors, Roofs, Walls)</b>	14,513 sq ft
<b>Total New Modified Area</b>	4,551 sq ft
<b>Total New Modified Area</b>	31.4%

Existing First Floor Wood Deck	550 sq ft (gross)
Existing Exterior Stairs and 2nd Story Balcony	84 sq ft (gross)
New First Floor Wood Deck	190 sq ft (gross)
New 2nd Story Balcony	49 sq ft (gross)
New Driveway	373 sq ft (gross)

### SHEET INDEX

<b>GENERAL INDEX</b>	
G0.01	TITLE SHEET / GENERAL INFO
<b>TOPOGRAPHICAL SURVEY</b>	
TS0.1	SITE SURVEY
<b>ARCHITECTURAL DRAWINGS</b>	
A0.01	AERIAL IMAGE
A0.02	SITE PLAN
A1.01	FIRST FLOOR PLANS
A1.02	SECOND FLOOR PLANS
A1.03	ROOF PLANS
A3.01	EXTERIOR ELEVATIONS
A3.02	EXTERIOR ELEVATIONS
A3.03	EXTERIOR ELEVATIONS
A3.04	EXTERIOR ELEVATIONS

**TWO TREES ARCHITECT**



TWO TREES ARCHITECT EXPRESSLY RESERVES THE COMMON LAW RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WITHOUT WRITTEN CONSENT OF TWO TREES ARCHITECT.

**PRELIMINARY NOT FOR CONSTRUCTION**

**BREAKERS WAY**  
6772 Breakers Way, Ventura CA, 93001  
060-0-082-625 & 060-0-082-635

JOB NUMBER  
1514

DATE PLOTTED

PRINTED 2/14/22

SHEET

**G0.01**

County of Ventura  
Planning Director Hearing  
Case No. PL22-0033  
Exhibit 3 - Plans



**AERIAL IMAGE**  
NOT TO SCALE

**TWO TREES**  
ARCHITECT



TWO TREES ARCHITECT EXPRESSLY DISCLAIMS ANY COMMON LAW OR STATUTE RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, UNLESS THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESS WRITTEN PERMISSION AND CONSENT OF TWO TREES ARCHITECT.

**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

PROJECT:  
**BREAKERS WAY**  
6772 Breakers Way, Ventura CA, 93001  
060-0-082-625 & 060-0-082-635

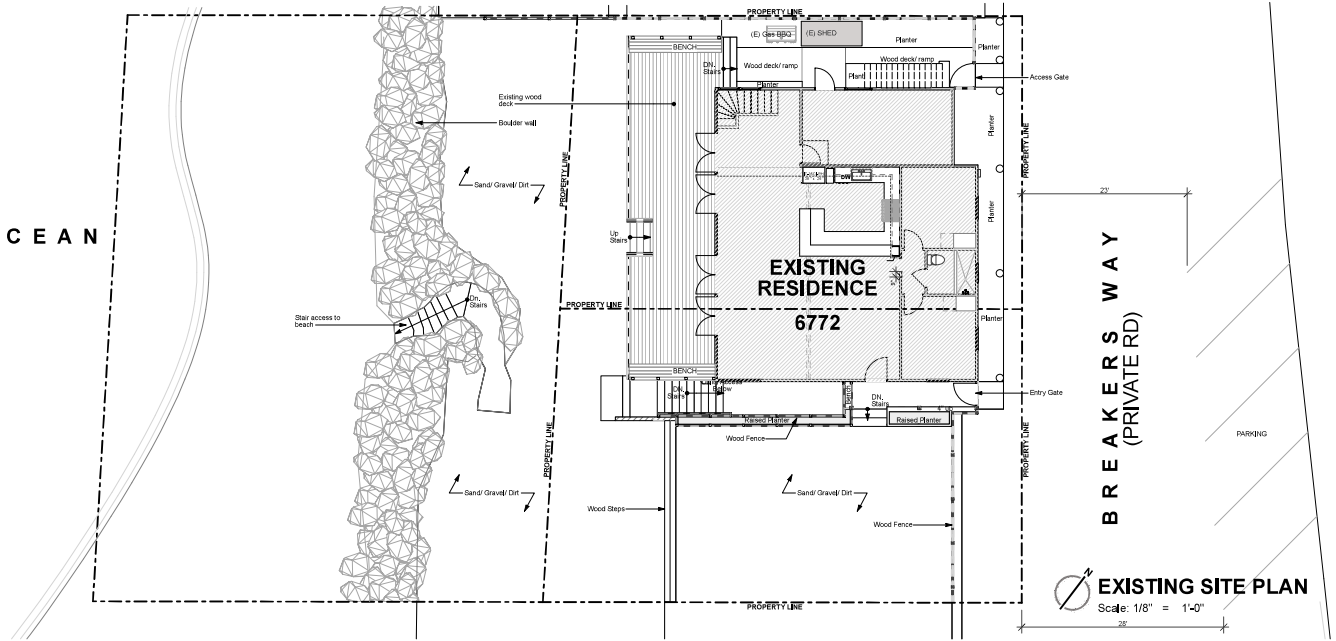
JOB NUMBER:  
1514

DATE BUILT:

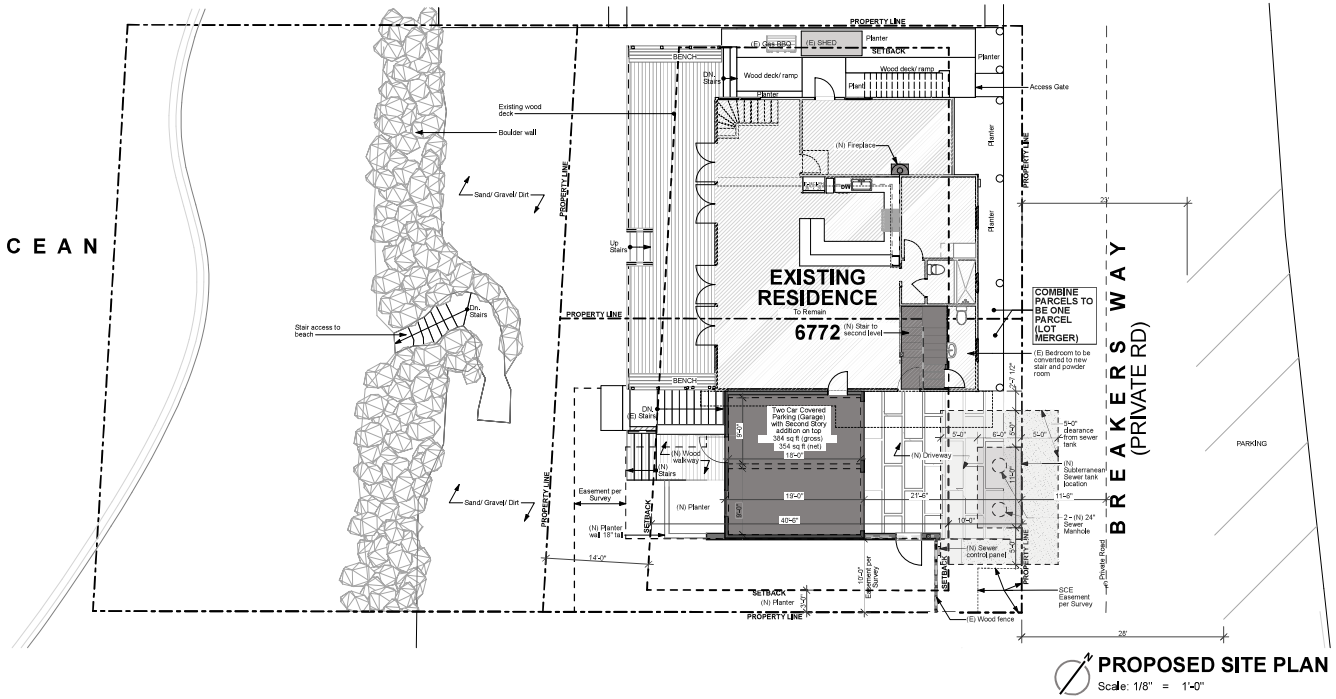
PRINTED 2/14/22

SHEET:  
**A0.01**

PACIFIC OCEAN



PACIFIC OCEAN



**TWO TREES ARCHITECT**

LICENSED ARCHITECT  
1214 CHERRY  
SAN JOSE, CA  
STATE OF CALIFORNIA

TWO TREES ARCHITECT EXPRESSLY DISCLAIMS ANY COMMON LAW COPYRIGHT AND OTHER PROPRITARY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT WRITTEN OBTAINING THE WRITTEN CONSENT OF TWO TREES ARCHITECT.

**PRELIMINARY  
NOT FOR CONSTRUCTION**

**BREAKERS WAY  
6772 Breakers Way, Ventura CA, 93001  
060-0-082-625 & 060-0-082-635**

JOB NUMBER  
1514

DATE PLOTTED:

PRINTED 2/14/22

SHEET:

**A0.02**

**FIDELITY NATIONAL TITLE COMPANY PRELIMINARY TITLE REPORT NO. 10008854-988-VEN-50, DATED AUGUST 11, 2015. EXCEPTIONS:**

1. The title of this title is in the name of said land and the same may be income subjecting.
2. Public easements for conduits, pipelines and facilities over any portion of subject property which is not income subjecting.
3. Public easements for ingress and egress over said land, such easements having been acquired by owners of other lots under circumstances which were made by reference to maps of Mussel Shoals Tract No. 1, recorded Book 12, Pages 29 and 30 of Maps, in the Office of the County Recorder of said County.
4. An easement for the purposes shown below and rights incidental thereto as set forth in a document in favor of John H. Beck et al. Purpose: A utility and maintenance easement limited to that area only upon which the subject building extends now exists. Recording Date: June 6, 1975. Recording No: 1975-25462, Book 44, Page 115, Official Records. Affect: The Southwesterly 4.12 feet lot 50. Resolutions on the use, by the owners of said land, of the easement area as set forth in the easement document shown hereon.
5. Easement(s) for the purposes shown below and rights incidental thereto as reserved in a document recorded by Southern California Edison Company, the Calico Municipal Water District, and the Public Telephone and Telegraph Company. Purpose: Public Utilities. Recording Date: September 22, 1978. Recording No: Book 5215, Page 811, Official Records. Affect: Public Utilities.
6. Easement(s) for the purposes shown below and rights incidental thereto as granted in a document recorded by Southern California Edison Company. Purpose: Gas, water, sewer, telephone, and other utility lines. Recording Date: September 22, 1978. Recording No: 1983-37831, Official Records. Affect: Gas, water, sewer, telephone, and other utility lines.
7. Easement(s) for the purposes shown below and rights incidental thereto as granted in a document recorded by Southern California Edison Company. Purpose: Public Utilities. Recording Date: October 20, 2004. Recording No: 2004-28194, Official Records. Affect: The Southwesterly 4.00 feet lot 49 and the westerly 4.00 feet of Lot 50.

**FIDELITY NATIONAL TITLE COMPANY PRELIMINARY TITLE REPORT NO. 10008854-988-VEN-50, DATED AUGUST 11, 2015. LEGAL DESCRIPTION:**

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF VENTURA, IN THE COUNTY OF VENTURA, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

**PARCEL 1:** LOTS 49 AND 50, OF MUSSEL SHOALS TRACT NO. 1, IN THE COUNTY OF VENTURA, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 12, PAGES 29 AND 30 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, TOGETHER WITH THAT PORTION OF THE SOUTHWESTERLY ONE-HALF OF BREAKERS WAY AS SET FORTH IN THAT CERTAIN RESOLUTION OF ABANDONMENT OF A PORTION OF BREAKERS WAY RECORDED SEPTEMBER 22, 1978, IN BOOK 5215, PAGE 811 OF OFFICIAL RECORDS.

EXCEPTING THEREFROM ANY PORTION OF THE ABOVE-DESCRIBED PROPERTY ALONG THE SHORE BELOW THE LINE OF NATURAL ORDINARY HIGH TIDE, AND ALSO EXCEPTING ANY ARTIFICIAL ACCRETIONS TO SAID LAND, WATERWARD OF SAID LINE OF NATURAL ORDINARY HIGH TIDE.

ALSO EXCEPTING THEREFROM ALL OIL, GAS AND OTHER HYDROCARBON SUBSTANCES AND MINERALS IN AND UNDER SAID LAND, WITHOUT, HOWEVER, THE RIGHT TO OCCUPY OR USE ANY PORTION OF THE SURFACE THEREOF FOR ANY PURPOSE WHATSOEVER AS RESERVED AND GRANTED BY VARIOUS DEEDS OF RECORD.

**PARCEL 2:** THAT PORTION OF THE SOUTHWESTERLY 1/2 OF BREAKERS WAY (ABANDONED) WHICH LIES IMMEDIATELY ADJACENT TO SAID LOTS 49 AND 50 OF MUSSEL SHOALS TRACT NO. 1,

**NOTE:**

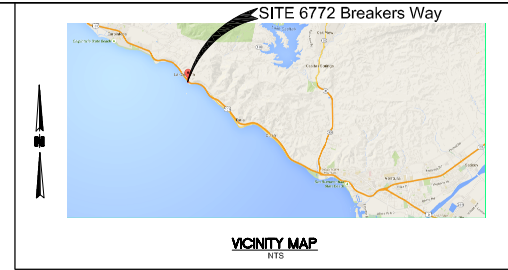
1. SAID DESCRIBED PROPERTY IS LOCATED WITHIN AN AREA HAVING A ZONE DESIGNATION 'X' BY THE SECRETARY OF HOUSING AND URBAN DEVELOPMENT, ON FLOOD INSURANCE RATE MAP NO. 806111C070E, WITH A DATE OF IDENTIFICATION OF JANUARY 20, 2010, IN THE COUNTY OF VENTURA, STATE OF CALIFORNIA, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PROPERTY IS SITUATED.

AREA ANALYSIS	LOT 49 [sq.ft.]	LOT 50 [sq.ft.]
GROSS LAND AREA	2473.74	2506.72
VACATED PORTION BREAKERS WAY	4600.15	4600.07
TOTAL GROSS AREA	3073.89	3166.79
EASEMENTS	-307.34	-738.67
VACATED PORTION BREAKERS WAY	-600.15	-600.07
TOTAL NET AREA	2166.4	1827.95

**BENCHMARK**

GORDA 3 RM 1; NSPID EW6804  
5.7 MILES SOUTHEAST ALONG THE SOUTHERN PACIFIC RAILROAD FROM THE STATION AT CARPINTERIA, THENCE 0.1 MILE SOUTH AND NORTHEAST ALONG A PAVED STREET IN MUSSEL SHOALS, THENCE 0.05 MILE SOUTHWEST ALONG OCEAN AVENUE TO THE JUNCTION OF BREAKERS WAY, 31.7 FEET SOUTH OF THE CENTER LINE OF BREAKERS WAY, 32 FEET NORTH OF NORTH FACE OF MOST SEAWARD OF SIX ABANDONED CONCRETE FOUNDATION PIERS, 61.9 FEET EAST OF SW GORDA 3 1974, IN TOP OF A 2.5 FEET HIGH BY 3 FEET SQUARE ABANDONED CONCRETE FOUNDATION PIER.

NAVD 88  
ELEV 6.716 M, 22.034 FEET



**SURVEYOR'S CERTIFICATE:**

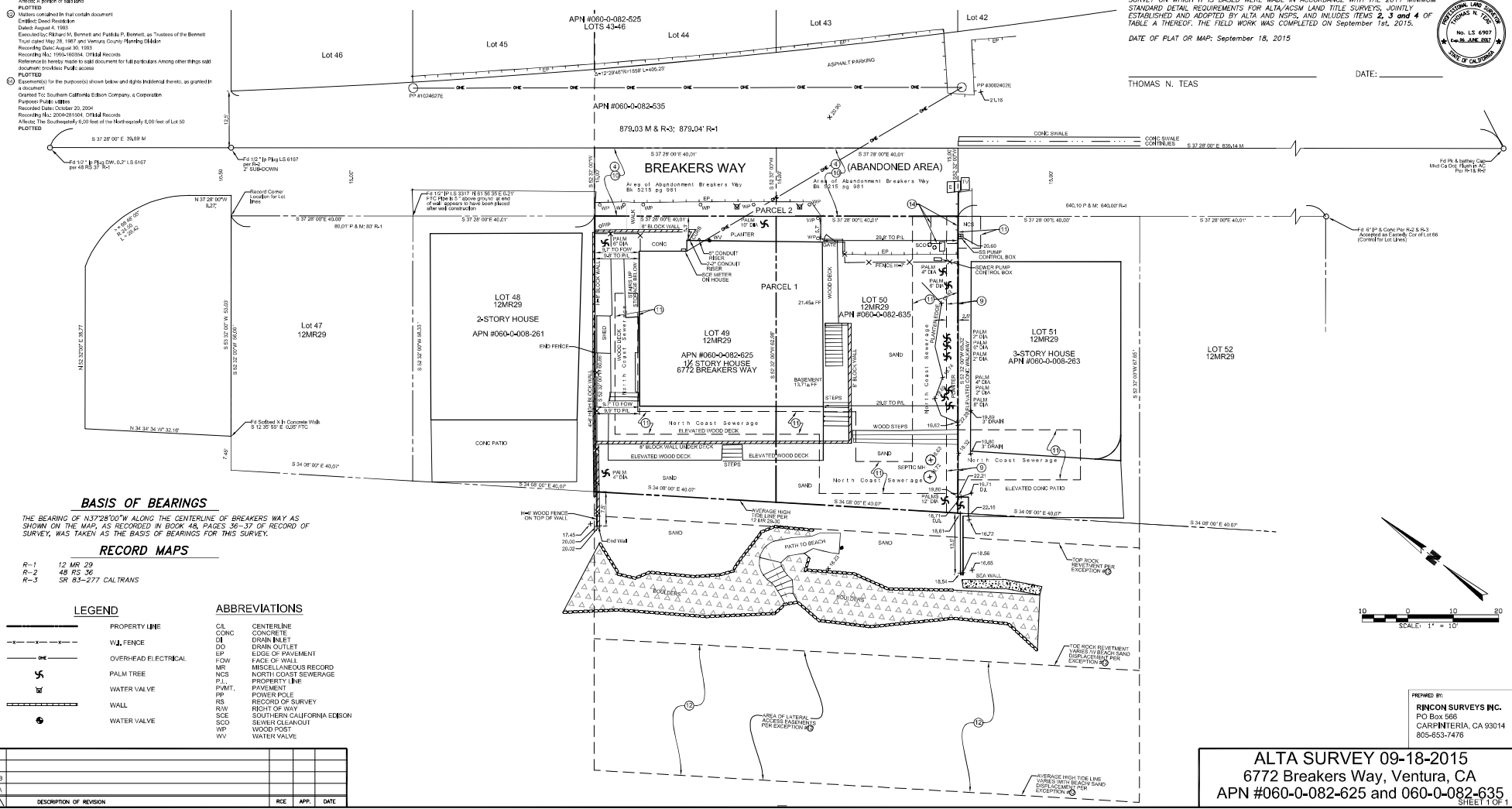
THIS IS TO CERTIFY TO BENEDEK FAMILY TRUST THAT THIS MAP OR PLAN AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3 and 4 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON September 1st, 2015.

DATE OF PLAN OR MAP: September 18, 2015

THOMAS N. TEAS

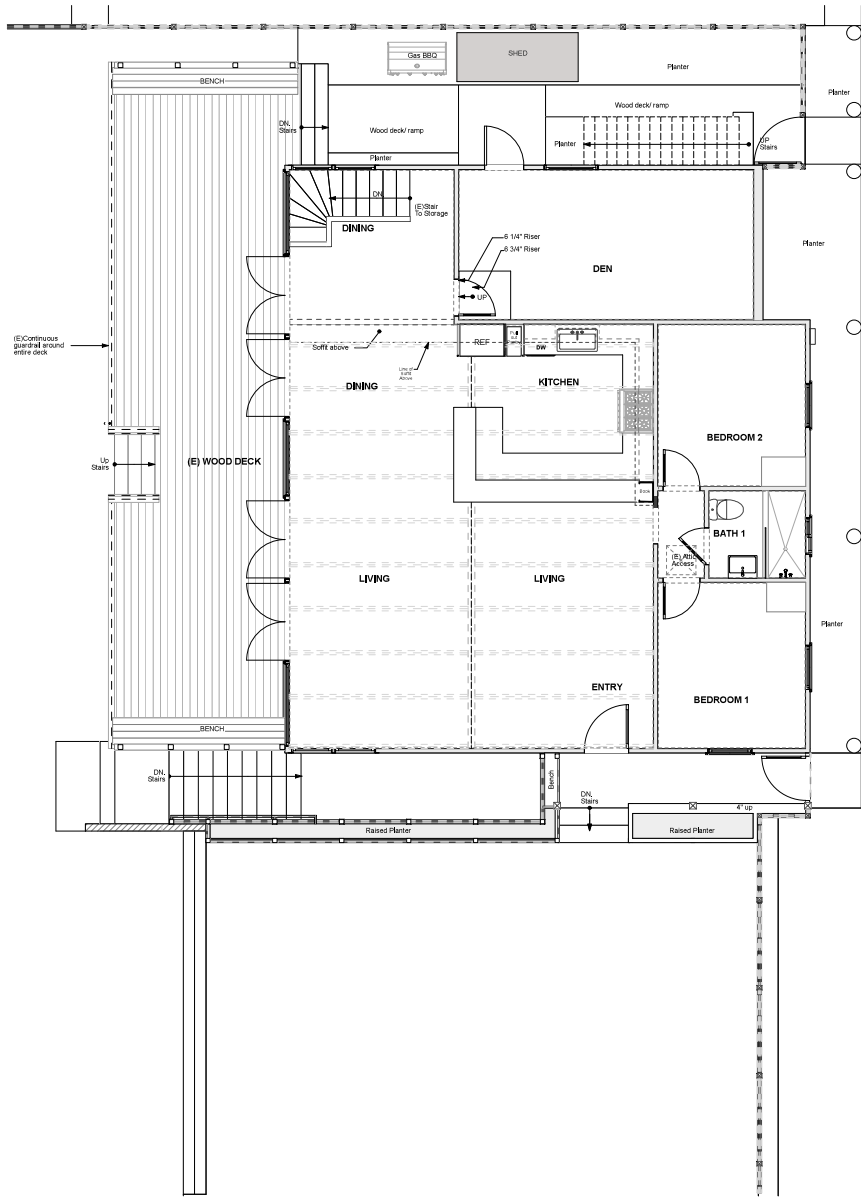
DATE: \_\_\_\_\_

PROFESSIONAL LAND SURVEYOR  
No. LS 4907  
Exp. 06-30-2017  
STATE OF CALIFORNIA

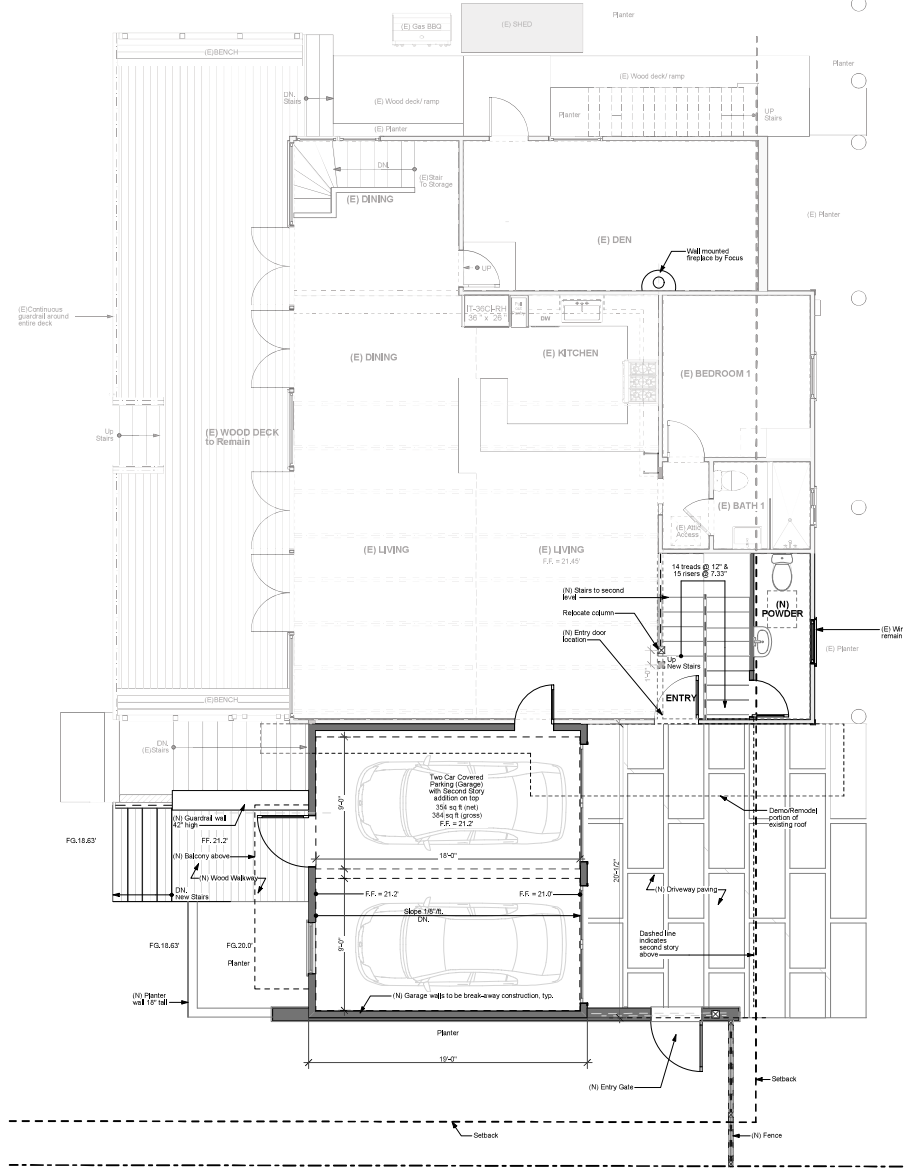


PREPARED BY:  
**RINCON SURVEYS INC.**  
PO Box 588  
CARPINTERIA, CA 93014  
805-853-7478

**ALTA SURVEY 09-18-2015**  
6772 Breakers Way, Ventura, CA  
APN #060-0-082-625 and 060-0-082-635  
SHEET 1 OF 1



**EXISTING FIRST FLOOR PLAN**  
 Scale: 1/4" = 1'-0"



**PROPOSED FIRST FLOOR PLAN**  
 Scale: 1/4" = 1'-0"



TWO TREES ARCHITECT EXPRESSLY DISCLAIMS ANY GUARANTEE OR WARRANTY IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WITHOUT THE WRITTEN CONSENT OF TWO TREES ARCHITECT.

**PRELIMINARY NOT FOR CONSTRUCTION**

**BREAKERS WAY**  
 6772 Breakers Way, Ventura CA, 93001  
 060-0-082-625 & 060-0-082-635

JOB NUMBER: 1514

DATE BLDG: \_\_\_\_\_

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_

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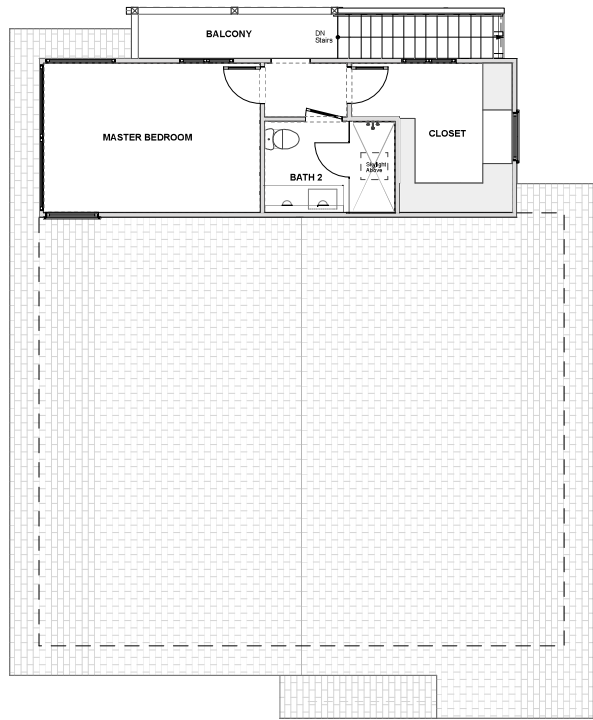
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PRINTED 2/14/22

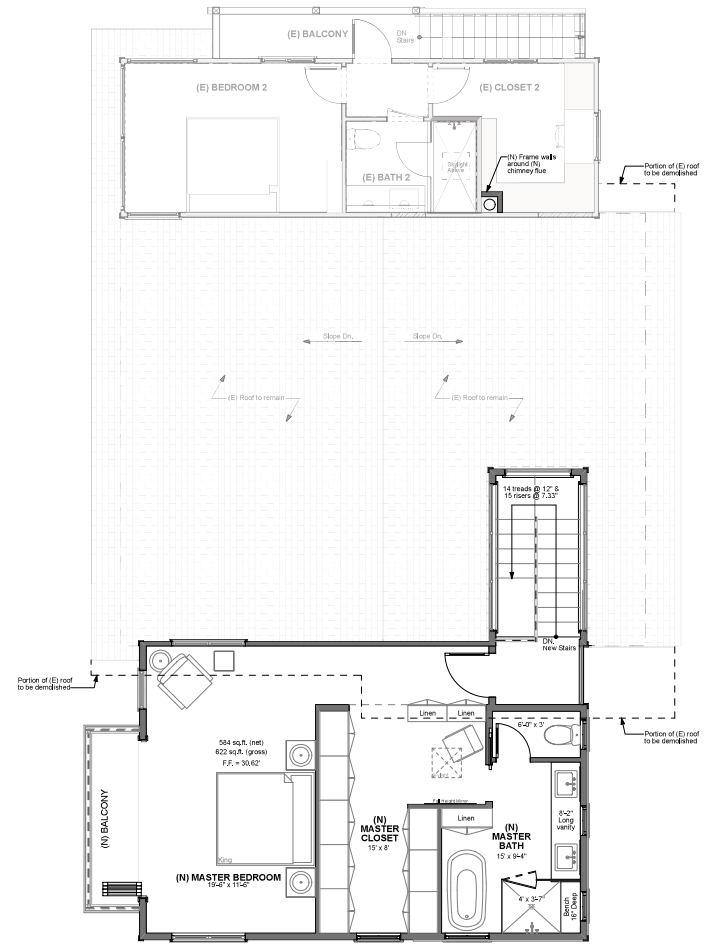
1514

**A1.01**





**EXISTING SECOND FLOOR PLAN**  
Scale: 1/4" = 1'-0"



**PROPOSED SECOND FLOOR PLAN**  
SCALE: 1/4" = 1'-0"



TWO TREES ARCHITECT EXPRESSLY DISCLAIMS ANY GUARANTEE, WARRANTY OR LIABILITY FOR THE PROJECT. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN AND EXCLUSIVE CONSENT OF TWO TREES ARCHITECT.

**PRELIMINARY  
NOT FOR CONSTRUCTION**

PROJECT: **BREAKERS WAY**  
6772 Breakers Way, Ventura CA, 93001  
060-0-082-625 & 060-0-082-635

JOB NUMBER: 1514

DATE BLDG: \_\_\_\_\_

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PRINTED 2/14/22

SHEET:

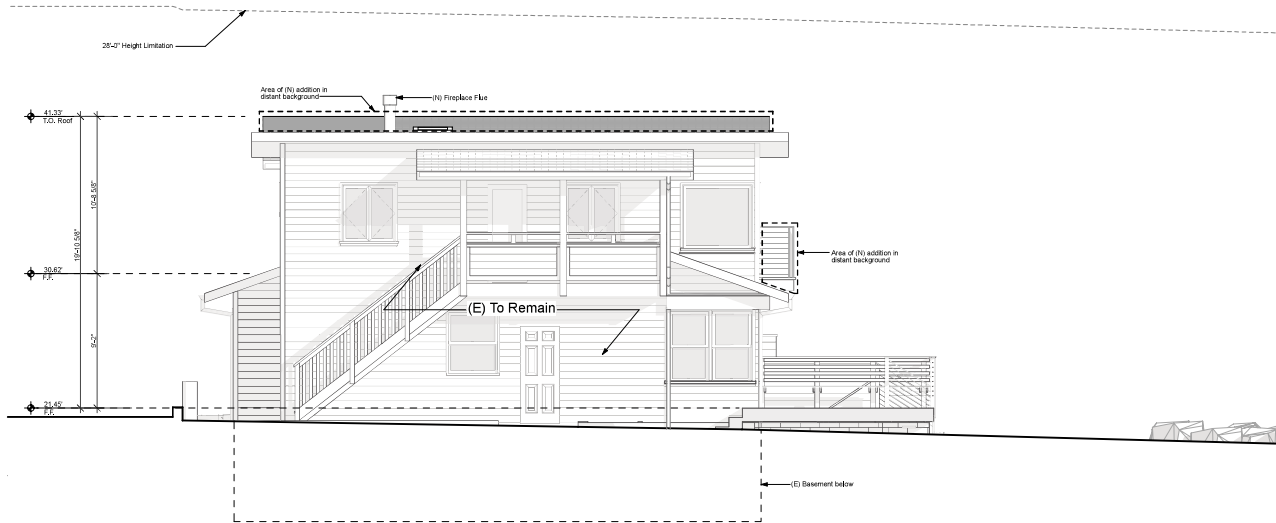
**A1.02**





**EXISTING NORTH ELEVATION**

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



**PROPOSED NORTH ELEVATION**

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

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**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

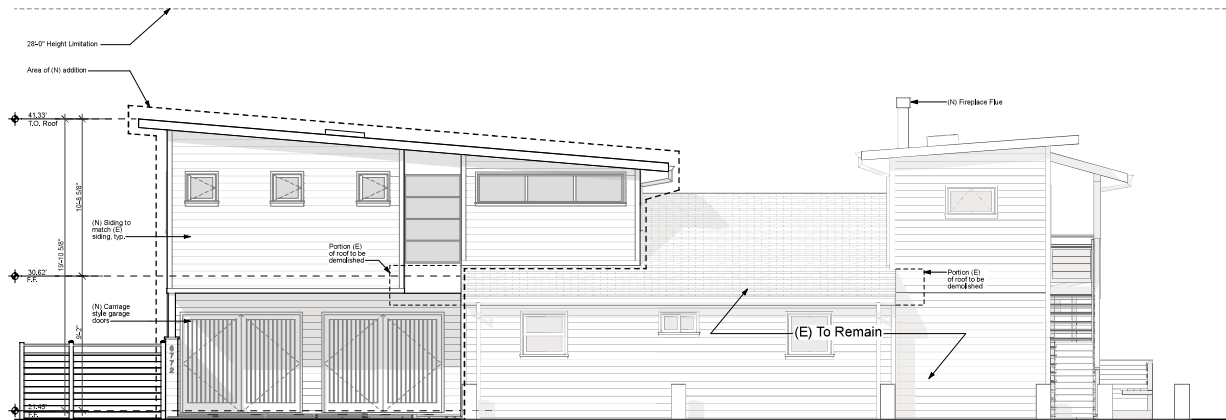
**BREAKERS WAY**  
6772 Breakers Way, Ventura CA, 93001  
060-0-082-625 & 060-0-082-635

PROJECT: \_\_\_\_\_  
JOB NUMBER: 1514  
DATE BLDG: \_\_\_\_\_  
PRINTED 2/14/22  
SHEET: \_\_\_\_\_  
**A3.01**



**EXISTING EAST ELEVATION**

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



**PROPOSED EAST ELEVATION**

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



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PRELIMINARY  
NOT FOR  
CONSTRUCTION

PROJECT:  
**BREAKERS WAY**  
6772 Breakers Way, Ventura CA, 93001  
060-0-082-625 & 060-0-082-635

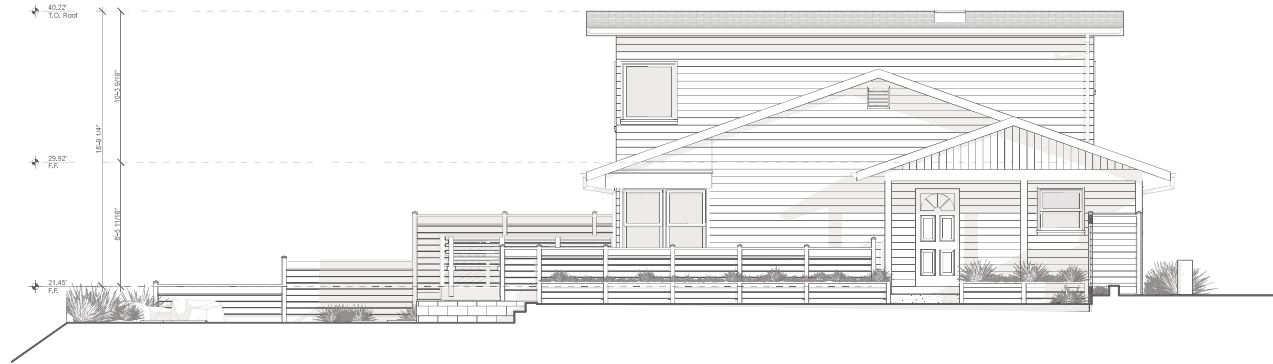
JOB NUMBER:  
1514

DATE PLOTTED:

PRINTED 2/14/22

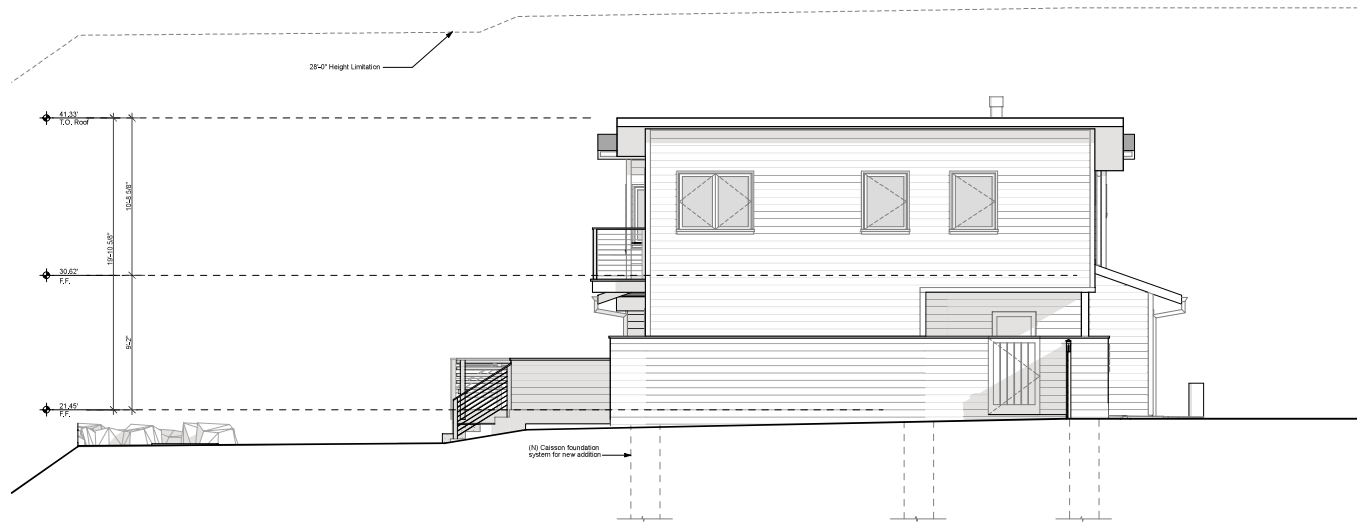
SHEET:

**A3.02**



**EXISTING SOUTH ELEVATION**

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



**PROPOSED SOUTH ELEVATION**

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



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PRELIMINARY  
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PROJECT:  
**BREAKERS WAY**  
6772 Breakers Way, Ventura CA, 93001  
060-0-082-625 & 060-0-082-635

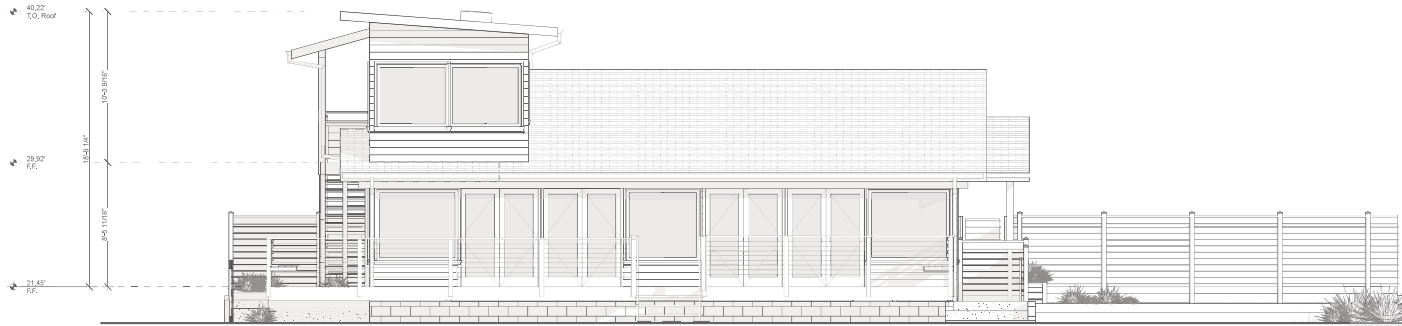
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1514

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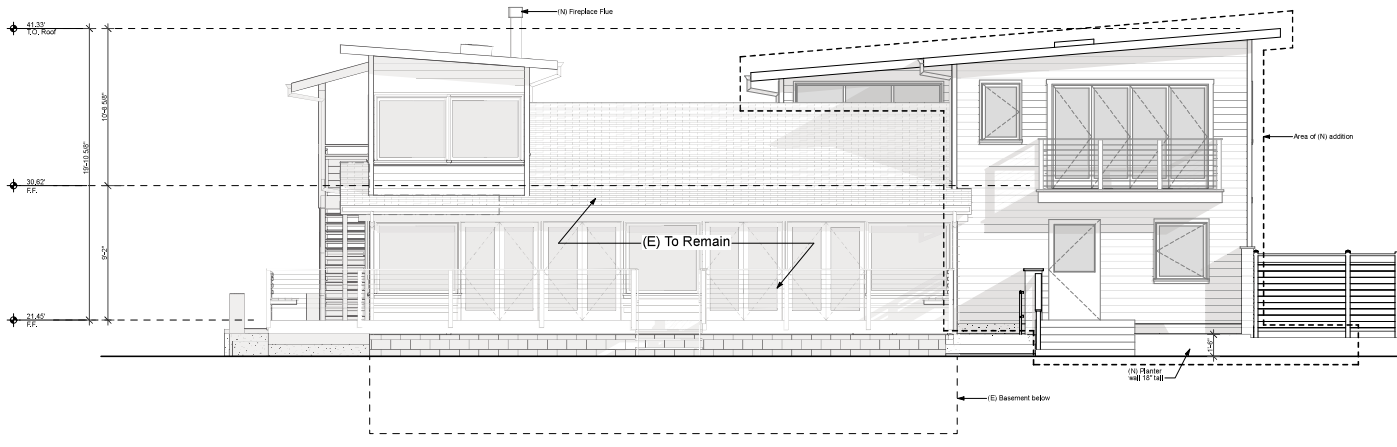
SHEET:

**A3.03**



**EXISTING WEST ELEVATION**

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



**PROPOSED WEST ELEVATION**

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



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PRELIMINARY  
NOT FOR  
CONSTRUCTION

PROJECT:  
**BREAKERS WAY**  
6772 Breakers Way, Ventura CA, 93001  
060-0-082-625 & 060-0-082-635

JOB NUMBER:  
1514

DATE BUILT:

PRINTED 2/14/22

SHEET:

**A3.04**

**BENEDEK RESIDENTIAL ADDITION  
COASTAL PLANNED DEVELOPMENT (PD) PERMIT  
CONDITIONS OF APPROVAL FOR  
COASTAL PLANNED DEVELOPMENT PD PERMIT CASE NO. PL22-0033**

**RESOURCE MANAGEMENT AGENCY (RMA)**

**Planning Division Conditions**

1. Project Description

This Coastal Planned Development (PD) Permit is based on and limited to compliance with the project description stated in this condition below, Exhibits 3 (Plans), 6 (Supplemental Policy Analysis, dated February 7, 2022, Two Trees Architect), 7 (Revised Wave Runup & Coastal Hazard Analysis, dated October 17, 2022, GeoSoils, Inc.), 8 (Geotechnical Exploration Report, dated December 13, 2021, Pacific Materials Laboratory, Inc.) of the Planning Director Hearing on February 16, 2023, 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 in order 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:

This a Coastal Development Permit to merge two legal lots and construct an attached 384 sq. ft. two car garage, a 622 sq. ft. master bedroom, and 127 sq. ft. of minor renovations to the exiting residence to add an internal stairway to the second story addition. Additional improvements include the construction of a new 190 sq. ft. first floor wood deck, and a second story balcony.

Water to the site is provided by Casitas Municipal Water District and County Service Area 29 provides sewer service (Exhibit 3). The proposed Project includes the installation of a new Septic Tank Effluent Pump (STEP) System. The STEP System includes a septic tank and a pump. Sewage is conveyed by gravity to the tank through the building plumbing line. Liquid waste is pumped under pressure to the public sewer system. Solid waste will remain in the STEP tank where it naturally degrades and is eventually pumped out.

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.

County of Ventura  
Planning Director Hearing  
Case No. PL22-0033  
Exhibit 4 - Conditions of Approval

## 2. Required Improvements for Coastal 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, 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 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. Coastal 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 Coastal 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 Coastal PD modification is required. If a Coastal 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 Coastal PD Permit and/or commencement of construction and/or operations under this Coastal PD Permit shall constitute the Permittee's formal agreement to comply with all conditions of this Coastal PD Permit. Failure to abide by and comply with any condition of this Coastal 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 Coastal 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 Coastal PD Permit.

The Permittee is responsible for being aware of and complying with the Coastal 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 Coastal 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 in order to initiate the land uses set forth in Condition No. 1.
- (2) This Coastal PD Permit shall expire and become null and void if the Permittee fails to obtain a Zoning Clearance for construction within one year [Ventura County Coastal Zoning Ordinance (§ 8181-7.7)] from the date the approval decision of this Coastal PD becomes effective. 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 Coastal PD Permit.

8. Documentation Verifying Compliance with Other Agencies' Requirements Related to this Coastal 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 Coastal 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 Coastal 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 Coastal PD Permit Requirements and Retention of Coastal PD Permit Conditions On Site

**Purpose:** To ensure full and proper notice of these Coastal 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 Coastal PD Permit.

**Documentation:** The Permittee shall maintain a current set of Coastal PD Permit conditions and exhibits at the project site.

**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 [select appropriate].

10. Recorded Notice of Land Use Entitlement

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

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

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

**Timing:** The Permittee shall record the "Notice of Land use Entitlement" form and conditions of this Coastal PD Permit, prior to 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 Coastal 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 Coastal 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.

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 Coastal 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 Coastal 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 Coastal 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 Coastal 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 Coastal 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 Coastal 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 Coastal PD Permit, including without limitation, by remitting the fee, exaction, dedication, and/or by otherwise performing all mitigation measures being challenged. This Coastal 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 Coastal 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 Coastal 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 Coastal 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. 11 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 Coastal 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 Coastal PD Permit condition contained herein is in conflict with any other Coastal PD Permit condition contained herein, when principles of law do not provide to the contrary, the Coastal PD Permit condition most protective of public health and safety and environmental resources shall prevail to the extent feasible.

No condition of this Coastal 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 Coastal PD Permit, nor compliance with the conditions of this Coastal PD Permit, shall relieve the Permittee from any responsibility otherwise imposed by law for damage to persons or property.

16. Contact Person

**Purpose:** To designate a person responsible for responding to complaints.

**Requirement:** The Permittee shall designate a contact person(s) to respond to complaints from citizens and the County which are related to the permitted uses of this Coastal PD Permit.

**Documentation:** The Permittee shall provide the Planning Director with the contact information (e.g., name and/or position title, address, business and cell phone numbers, and email addresses) of the Permittee's field agent who receives all orders, notices, and communications regarding matters of condition and code compliance at the Project site.

**Timing:** Prior to the issuance of a Zoning Clearance for construction, the Permittee shall provide the Planning Division the contact information of the Permittee's field agent(s) for the Project file. If the address or phone number of the Permittee's field agent(s) should change, or the responsibility is assigned to another person, the Permittee shall provide Planning Division staff with the new information in writing within three calendar days of the change in the Permittee's field agent.

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

17. 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/FAX number(s), 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 Coastal 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.

18. Plans Conforming to Coastal Engineer's Recommendation

**Purpose:** To demonstrate that permitted buildings and structures comply with the recommendations in the Revised Wave Runup & Coastal Hazard Analysis for 6772 Breakers Way, Ventura County, CA (Geosoils Inc., October 17, 2022).

**Requirement:** The final plans for the permitted development shall be in substantial conformance with the recommendations contained in Revised Wave Runup & Coastal Hazard Analysis for 6772 Breakers Way, Ventura County, CA (Geosoils Inc., October 17, 2022), relative to foundation, construction, grading, drainage, and height of the structure. The plans and specifications shall note the design flood elevation and height of the single-family dwelling and all other permitted structures.

**Documentation:** A copy of building plans and specifications and the Revised Wave Runup & Coastal Hazard Analysis for 6772 Breakers Way, Ventura County, CA (Geosoils

Inc., October 17, 2022), for the permitted development that comply with all of the requirements set forth above.

**Timing:** Prior to issuance of a Zoning Clearance for construction, the Permittee shall submit a copy of the plans, specifications and reports to the Planning Division for review and approval. The Permittee shall maintain the County-approved building plans and specifications throughout the life of this Coastal PD.

**Monitoring and Reporting:** Prior to occupancy, the Planning Division has the authority to inspect the site to ensure that permitted development was constructed as approved. The Planning Division has the authority to conduct site inspections to ensure ongoing compliance by the Permittee with this condition consistent with the requirements of § 8183-5 of the Ventura County Coastal Zoning.

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:

- a. Cease operations and assure the preservation of the area in which the discovery was made;
- b. Notify the Planning Director in writing, within three days of the discovery;
- c. 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;
- d. Obtain the Planning Director's written concurrence with the recommended disposition of the site before resuming development; and
- e. 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, in order 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 § 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:

- a. 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.
- b. 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, in order 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 § 8183-5 of the Ventura County Coastal Zoning Ordinance.

#### 21. Construction Noise

**Purpose:** In order for this project to comply with the Ventura County General Plan Goals, Policies and Programs Hazards Policy HAZ-9.2 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, in the event that 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 § 8183-5 of the Ventura County Coastal Zoning Ordinance.

## 22. Noise Attenuation Features

**Purpose:** In order to ensure interior noise levels do not exceed the maximum acceptable noise levels set forth in the Ventura County General Plan Hazards Policy HAZ-9.1 and HAZ-9.2.

**Requirement:** The Permittee shall install noise attenuation features, including dual-paned windows and sound dampening exterior doors, in expanded area of the single-family dwelling, so that interior noise levels do not exceed the maximum acceptable interior noise levels set forth in Ventura County General Plan Goals, Policies, and Programs Noise Policy HAZ-9.2.

**Documentation:** The Permittee shall submit building plans and any other documentation (e.g., manufacturer’s specifications for windows and doors) that specify noise attenuation features will be included in the expanded area of the single-family dwelling, and demonstrate compliance with the requirements of Ventura County General Plan Goals, Policies, and Programs Noise Policy HAZ-9.2.

**Timing:** Prior to issuance of a Zoning Clearance for Construction, the Permittee shall provide the building plans and other documentation (if required) to the Planning Division for review and approval.

**Monitoring and Reporting:** The Planning Division has the authority to conduct inspections to ensure that the specified noise attenuation features are installed in compliance with this condition, consistent

## 23. Conditional Voluntary Merger – Prepayment of Real Property Taxes

**Purpose:** To impose conditions on the voluntary merger that must be met prior to the recordation of the voluntary merger documents pursuant to Section 8210-4 of the Ventura County Subdivision Ordinance.

**Requirement:** The Permittee shall prepay all real property taxes owed for the subject properties prior to the recordation of the voluntary merger.

**Document:** The Permittee shall submit a Certification of Tax Status for Lot Line Adjustments and Voluntary Mergers to the Planning Division demonstrating prepayment of all real property taxes due for the subject properties.

**Timing:** The Permittee shall provide the Planning Division with proof of prepayment of all real property taxes prior to the issuance of a Zoning Clearance for construction and, in any event, no more than one year after a letter of conditional approval is sent notifying the Permittee of the conditions to be fulfilled prior to recordation of the voluntary merger, unless the Permittee obtains a written extension from the Planning Division pursuant to Section 8210-4.1 of the Ventura County Subdivision Ordinance.

**Monitoring and Reporting:** The Planning Division maintains a copy of the proof of prepayment of property taxes and recorded voluntary merger documents in the Project file.

#### 24. Conditional Voluntary Merger – County Surveyor Requirements

**Purpose:** To comply with Sections 8310-1.1.2(b) and 8210-3 of the Ventura County Subdivision Ordinance for approval of a voluntary merger.

**Requirement:** The Permittee shall obtain the approval of the Ventura County Surveyor that the documents required to effectuate the voluntary merger are technically correct, including the deeds, legal description, and sketch map; that the lot description accurately represents the exterior boundaries of the resulting merged lot; and that the deed(s) submitted to the Ventura County Surveyor to effectuate the merger contain an express statement of the grantor(s), pursuant to section 1093 of the Civil Code, that the intent of the grantor(s) and the purpose of the deed(s) is to merge all of the property described in the deed(s) into a single lot.

**Documentation:** Upon receipt of approval by the Ventura County Surveyor of the above requirements, the Permittee shall provide to the Planning Division the following documents:

1. An up-to-date preliminary title report;
2. The voluntary merger documents approved by the County Surveyor (e.g., legal description and sketch); and,
3. All deeds prepared for recordation as approved by the County Surveyor pursuant to Section 8210-1.1(a)(7) of the Ventura County Subdivision Ordinance.

**Timing:** The Permittee shall provide the Planning Division with the preliminary title report, voluntary merger documents and deeds as described above prior to the issuance of a Zoning Clearance for construction.

**Monitoring and Reporting:** The Planning Division maintains a copy of the preliminary title report, voluntary merger documents and deeds as described above in the Project file.

## 25. Notice of Fire Hazard

**Purpose:** To comply with the requirements of the Ventura County 2040 General Plan, Hazards and Safety Element Policy HAZ-1.4 and the requirement to record a Notice of Fire Hazard with the County Recorder for Case No. PL22-0033, Benedek Coastal PD Permit, being located within an area designated as a “Hazardous Fire Area” by the Ventura County Fire Protection District (VCFPD) or “High Fire Hazard Severity Zone” by the California Department of Forestry and Fire Protection (CAL FIRE).

**Requirement:** The Permittee shall sign, have notarized, and record with the Office of the County Recorder, a “Notice of Fire Hazard” form furnished by the Planning Division, with the deed of the property that is subject to this CUP.

**Documentation:** Recorded “Notice of Fire Hazard” form.

**Timing:** The Permittee shall record the “Notice of Fire Hazard” form prior to the issuance of a Zoning Clearance for use inauguration.

**Monitoring and Reporting:** The Permittee shall return a copy of the recorded “Notice of Fire Hazard” form to Planning Division staff to be included in the Project file.

**Notice:** For purposes of this condition, the term “Hazardous Fire Area” includes the following as referenced in the California Building Code and VCFPD Ordinance: State Responsibility Area Fire Hazard Severity Zone, Local Agency Very High Fire Hazard Severity Zone, Local Agency Wildland Urban Interface Fire Area (WUI Area), and/or Local Agency Hazardous Fire Area.

## **PUBLIC WORKS AGENCY (PWA)**

### **Integrated Waste Management Division (IWMD) Conditions**

#### 26. Construction and Demolition Debris Recycling Plan (From B)

**Purpose:** VCOC Section 4773 et seq. requires the Permittee to divert recyclable construction and demolition (C&D) materials generated by the 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 (Form B – Recycling Plan) to the IWMD for any proposed construction and/or demolition projects that require a building permit.

**Documentation:** The Form B – Recycling Plan must ensure a minimum of 65 percent of the recyclable C&D debris generated by the Project will be diverted from the landfill by recycling, reuse, or salvage. A copy of Form B is available at:

<https://www.vcpublicworks.org/wsd/iwmd/construction/#Debris-Management>

A comprehensive list of permitted recyclers, County franchised haulers, and solid waste & recycling facilities in Ventura County is available at:

<https://www.vcpublicworks.org/wsd/iwmd/businessrecycling/#Collectors-Rates-Agreements>

A list of local facilities permitted to recycle soil, wood, and green waste is available at:  
<https://www.vcpublicworks.org/wsd/iwmd/construction/#solid-waste-collectors>

**Timing:** Upon Building and Safety Division's issuance of a building permit for the project, the Permittee must submit a Form B – Recycling Plan to the IWMD for approval.

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

27. Construction and Demolition Debris Reporting Form (Form C)

**Purpose:** VCOG Section 4773 et seq. requires the Permittee to divert recyclable construction and demolition (C&D) materials generated by their Project (e.g., wood, metal, greenwaste, soil, concrete, paper, cardboard, plastic containers, etc.) from local landfills through recycling, reuse, or salvage.

**Requirement:** The Permittee must submit a Form C – Reporting Form to the IWMD for approval prior to issuance of their final Building and Safety Division permit. Form C is available at <https://www.vcpublicworks.org/wsd/iwmd/construction/#Debris-Management>

**Documentation:** The Permittee must submit original recycling facility receipts and/or documentation of reuse with their Form C – Reporting Form to verify a minimum of 65% of the recyclable C&D debris generated by their project was diverted from the landfill.

**Timing:** A completed Form C – Reporting Form, with required recycling facility receipts and/or documentation or reuse, must be submitted to the IWMD for approval 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 Form C – Reporting Form until Building and Safety Division's issuance of final permit.

Water & Sanitation Department, County Service Area 29

28. Sewer Improvement Plans

**Purpose:** To ensure that the design of sewer service improvements comply with the minimum standards in the Ventura County Sewage Manual.

**Requirement:** The Permittee shall submit a set of plans prepared by a registered civil engineer for review and approval. The plans shall include a new STEP tank, a submersible non-clog pump with required electrical service and controls. The electrical

service and controls plan shall be prepared by a registered electrical engineer. The STEP shall be installed in a accessible location to facilitate operations and maintenance at the front of the property. Clean-outs and access manholes to the STEP tank shall be brought to grade. No structures shall be built with five (5) feet of the STEP tank, and three (3) feet of any lateral. Property Owner shall dedicate an easement as required by CSA 29, prior to the completion of the construction.

**Documentation:** The Permittee shall submit to the Ventura County Public Works Agency copies of the Sewer Service Provider's Will-Serve Letter, and the requested plans for review and permit issuance.

**Timing:** The Permittee shall submit all documentation, as stated above, to the Ventura County Public Works Agency prior to occupancy.

### **Watershed Protection District (WPD) Conditions**

#### **County Stormwater Program Section**

##### **29. 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**

### 30. Fugitive Dust

**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. Soil stabilization methods, such as water and roll compaction, and environmentally safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days.
- 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 dust-related provisions for grading operation shall also be conducted by APCD staff on a complaint-driven basis.



31. Nuisance

**Purpose:** To ensure that discharge of air contaminants that may result from site construction operations are minimized to the greatest extent feasible.

**Requirement:** Construction shall be operated in accordance with the Rules and Regulations of the Ventura County Air Pollution Control District, with emphasis on Rule 51, Nuisance, as described below.

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endangers the comfort, repose, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property.

**Documentation:** There is no documentation required for this condition.

**Timing:** Throughout the phases of construction.

**Reporting and Monitoring:** Monitoring and Enforcement of the Nuisance Rule shall be conducted by APCD staff during compliance inspections and on a complaint-basis.

**Ventura County Fire Protection District (VCFPD) Conditions**

32. 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 Ventura County Fire Protection District's Form #126 "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 Ventura County Fire Protection District's Form #126 "Requirements for Construction" shall be kept on file with the Fire Prevention Bureau. The Fire Prevention Bureau shall conduct a final inspection to ensure that all structures are addressed according to the approved plans/form.

33. Vertical Clearance

**Purpose:** To ensure that adequate fire department access is provided in conformance

with current California State Law and Ventura County Fire Protection District Ordinance.

**Requirement:** The Permittee shall provide a minimum vertical clearance of 13 feet 6 inches (13'-6") along all access roads/driveways.

**Documentation:** A stamped copy of the approved access plan.

**Timing:** The Permittee shall submit an access plan to the Fire Prevention Bureau for approval before the issuance of building permits. All required access shall be installed before the start of combustible construction.

**Monitoring and Reporting:** A copy of the approved access plan shall be kept on file with the Fire Prevention Bureau. The Fire Prevention Bureau shall conduct a final inspection to ensure that the access is installed according to the approved plans. Unless a modification is approved by the Fire Prevention Bureau, the Permittee, and their successors in interest, shall maintain the access for the life of the development.

#### 34. Construction Access

**Purpose:** To ensure that adequate fire department access is provided during construction in conformance with current California State Law and Ventura County Fire Protection District Ordinance.

**Requirement:** The Permittee shall install all utilities located within the access road(s) and a paved all-weather access road/driveway suitable for use by a 20-ton fire apparatus. The access road(s)/driveway(s) shall be maintained with a minimum 20 foot clear width at all times.

**Documentation:** A stamped copy of the construction access plan.

**Timing:** The Permittee shall submit plans to the Fire Prevention Bureau for approval before the issuance of building permits. All required access installed before start of construction.

**Monitoring and Reporting:** A copy of the approved access plan shall be kept on file with the Fire Prevention Bureau. The Fire Prevention Bureau shall conduct periodic on-site inspections ensure that all required fire department access is maintained during construction. Unless a modification is approved by the Fire Prevention Bureau, the Permittee, and their successors in interest, shall maintain all required fire access during construction.

#### 35. 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 Fire Prevention Bureau 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 Fire Prevention Bureau. The Fire Prevention Bureau 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 Fire Prevention Bureau, the Permittee, and their successors in interest, shall maintain the fire sprinkler system 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 #610 "Requirements for Construction."

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

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

**BENEDEK RESIDENTIAL ADDITION  
COASTAL PLANNED DEVELOPMENT (PD),  
CASE NO. PL22-0033**

**CONSISTENCY WITH THE GENERAL PLAN**

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

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

Finally, the Ventura County CZO (Section 8181-3.5.a) states that in order to be approved, a project must be found consistent with all applicable policies of the Ventura County Coastal Area Plan.

Evaluated below is the consistency of the proposed Project with the applicable policies of the General Plan *Goals, Policies and Programs* and *Coastal Area Plan*.

**Land Use Element Policies**

- 1. General Plan Land Use Policy LU-16.1 Community Character and Quality of Life:** *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.*

**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.*

**LU-16.9 Building Orientation and Landscaping** *The County shall encourage discretionary development to be oriented and landscaped to enhance natural lighting, solar access, and passive heating or cooling opportunities to maximize energy efficiency.*

**Coastal Act Policy § 30250 Location; Existing Developed Area**

- 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*

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Consistency Analysis

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

**Coastal Act Policy § 30251 Scenic and Visual Qualities**

*The scenic and visual qualities of coastal areas shall be considered and protected as a resource 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 land forms, to be visually compatible with the character of surrounding 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.*

The Project site is zoned RB and is located between the 101 Freeway, the nearest public road, and the sandy beach, in the residential community of Mussel Shoals. The purpose of the RB zone is to provide for the development and preservation of small-lot, beach-oriented residential communities. The proposed residential addition and attached garage to the existing single-family dwelling in an undeveloped area of the Project site. The proposed Project will be located within, and contiguous with existing residential development. The proposed Project also includes merging the two underlying legal lots creating a 80 ft. x. 60 ft. lot. The permitted maximum building coverage in the RB zone is 65%; the existing residence has a building coverage of 35.4%. After the lot is merged, the proposed Project will have a maximum building coverage of 35.4 percent. The proposed residential addition will have an asymmetrical flat roof, as measured from the minimum elevation of the first floor as established by the Public Works Agency (or 13.65 ft. NAVD). Homes along the beachside of Breakers Way are one, two, and three-stories, range in size from 2,279 sq. ft. (6774 Breakers Way) to 3,259 sq. ft. (6772 Breakers Way) and include a variety of architectural styles and forms (e.g., American contemporary, modern eclectic, altered Vernacular style beach house etc.). The Project Plans contain architectural elevations which demonstrate that the added portion integrates with the character of the existing structure as well as the surrounding neighborhood.

Ocean views from the nearest public road (the 101 freeway) are presently obstructed by a sound wall which separates the freeway from the community of Mussel Shoals. The proposed dwelling would not degrade or significantly alter the existing scenic or visual qualities of the community of Mussel Shoals and will be similar in visual character (size, scale and style) to the other residential dwellings in the surrounding area. Therefore, the proposed single-family dwelling will be visually compatible with the character of the surrounding area and will not significantly degrade visual resources or obscure significant public views both from and to the coast.

Based on the discussion above, the proposed Project is consistent with Ventura County General Plan Land Use and Community Character Policies LU16.1, LU16.8, and LU16.9 and Coastal Act Sections 30250(a) and 30251.

## **Public Facilities, Services, and Infrastructure**

2. **General Plan Public Facilities, Services, and Infrastructure (PFS) Policy PFS-1.7 Public Facilities, Services, and Infrastructure Availability** 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.

**PFS-3.2 Fair Share of Improvement Costs** *The County shall require development to pay its fair share of community improvement costs through impact fees, assessment districts, and other mechanisms.*

**PFS-6.1 Flood Control and Drainage Facilities Required for Discretionary Development** *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.*

**PFS-4.1 Wastewater Connections Requirement** *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.*

**PFS-4.2 Onsite Wastewater Treatment Systems** *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.*

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

**WR-1.12 Water Quality Protection for Discretionary Development** *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.*

The proposed Project has been reviewed for consistency with the applicable standards for public facilities, services, and infrastructure. The Project was found to have adequate access to the range of utilities, public services and infrastructure required for construction and occupancy of an expanded single-family dwelling without compromising existing levels of service. Casitas Municipal Water District will continue to serve the Project site as confirmed by a water will-serve letter dated October 20, 2021. The subject property is served by a 1-inch water meter and has an existing Stage 1 allocation of 0.51 acre-feet of water per year. The proposed Project will utilize an existing connection to County Service Area No. 29 for domestic sewage disposal; connection verified by a sewer availability letter dated February 16, 2022. The sewer availability letter states the Project will require the installation of a new Septic Tank Effluent Pump (STEP) system; the proposed scope of work includes the installation of a new STEP tank. The proposed project is currently served by all necessary utilities (water, wastewater disposal, electricity). The Project will not require the expansion or construction of new flood control facilities as the result of the expansion of the existing single-family dwelling. As a standard requirement for development, the Project conditions of approval include the requirement for the submittal of stormwater regulation compliance from (the SW-1 form) where the applicant will be responsible for indicating and affirming compliance with the county's requirements for residential construction (i.e. Best Management Practices employed during construction – scheduling, silt fence, sandbag barrier, stabilized construction) (Exhibit 4 Condition No. 29). Onsite drainage is governed by the provisions of the Ventura County Building Code (2021) which under Section J101.7 prohibits drainage from impacting adjacent properties. As applicant will be required to implement regulations and standards related to drainage and stormwater quality, the proposed Project is in compliance with the applicable Policies of the Ventura County General Plan.

Based on the discussion above, the proposed Project is consistent with Ventura County General Plan Policies PFS1.7, PFS3.2, PFS-4.1, PFS-4.2 and PFS-6.1, WR-1-11 and WR-1.12.

3. **PFS-11.4 Emergency Vehicles Access** *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.*

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

**PFS-12.4 Consistent Fire Protection Standards for New Development** *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.*

**General Plan Circulation CTM-2.28 Emergency Access** *The County shall ensure that all new discretionary projects are fully evaluated for potential impacts to emergency access. Mitigation of these impacts shall be handled on a project-by-project basis to guarantee continued emergency service operations and service levels.*

The proposed Project has been evaluated by the Ventura County Fire Protection District (VCFPD) and found to comply with the applicable requirements related to emergency access and the fire protection standards. According to the Ventura County Geographic Information System (VCGIS, 2022), the Project is located within the local responsibility area in the Very High Fire Severity Zone. The subject property is approximately 1.5 miles north of Ventura County Fire Station 25 located at 5674 West Pacific Coast Highway. The proposed Project will not degrade existing levels of service for fire protection. In conformance with the Conditions of Approval issued by the VCFPD (Exhibit 5, Condition of Approval Nos. 32 through 36), the applicant will be required to install address identification numbers, install fire sprinklers, and submit construction documents for review and approval. The implementation of these conditions ensures compliance with the applicable fire protection standards. Lastly, the Ventura County Sheriff's Office is responsible for law enforcement services in Ventura County. The proposed Project is located within the West County Patrol area, the Sheriff's main office is located at 800 S Vitoria Avenue, Ventura, 15 miles to the southeast. The proposed Project will not have a significant impact on the provision of public safety services.

Based on the discussion above, the proposed Project is consistent with Ventura County General Plan Policies PFS-11.4, PFS-12.3, PFS-12.4, CTM-2.28.

## **Conservation and Open Space**

- COS-4.4 Discretionary Development and Tribal, Cultural, Historical, Paleontological, and Archaeological Resource Preservation** *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.*

**Coastal Area Plan - Archaeological Resources Policy 4.1.1-1:** *Discretionary development shall be reviewed to identify potential locations for sensitive archaeological resources.*



**Coastal Area Plan – Central Coast Policy Archaeological Resources 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 designed in accordance with established federal, state and/or County standards and shall be consistent with the policies and provisions of the LCP.*

**Coastal Area Plan - Archaeological Resources Policy 4.1.1-6:** *Protect and preserve archaeological resources from destruction and avoid impacts to such resources where feasible.*

**Coastal Area Plan - Archaeological Resources Policy 4.1.1-7:** *The unauthorized collection of archaeological artifacts is prohibited.*

**Coastal Area Plan - Paleontology Policy 4.1.2-1:** *Discretionary development shall be reviewed to determine the geologic unit(s) to be impacted and paleontological significance of the geologic rock units containing them.*

**Coastal Area Plan - Paleontology Policy 4.1.2-2:** *New development shall be sited and designed to avoid adverse impacts to paleontological resources to the maximum extent feasible. If there is no feasible alternative that can eliminate all impacts to paleontological resources, then the alternative that would result in the fewest or least significant impacts to resources shall be selected. Impacts to paleontological resources that cannot be avoided through siting and design alternatives shall be mitigated. When impacts to paleontological resources cannot be avoided, mitigation shall be required that includes procedures for monitoring grading and handling fossil discoveries that may occur during development.*

**Coastal Area Plan - Paleontology Policy 4.1.2-3:** *Protect and preserve paleontological resources from destruction and avoid impacts to such resources where feasible.*

**Coastal Act 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.*

*For projects in an area (a) or (b), the applicant will have a qualified archaeologist assess the development impacts and cultural significance of the site. As may be appropriate, the Northridge Archaeological Research Center at Cal State Northridge should be contacted for a Native American approved Monitor to observe and aide the work during excavation of auger holes, test pits, trenches or exposures (Appendix 2).*

The proposed Project will result in minimal ground disturbing activities associated with the construction of a new garage and the placement of piles supporting the proposed 2<sup>nd</sup> story addition. Based on the review of the California Department of Conservation Compilation of Quaternary Surficial Deposits map (2022), the Project site is located with an area of active beach deposits which has no paleontological importance (CZO Section 8178-3.2). However, in the unlikely event that paleontological resources are uncovered during ground disturbance activities, the applicant will be subject to a condition of approval to require the suspension of ground disturbance activities until a paleontologist can evaluate, recover, and curate the find, subject to the Planning Director's concurrence (Exhibit 5, Condition of Approval 19).

In accordance with the applicable policies of the Ventura County General Plan, the Project was referred to the South Central Coastal Information Center (SCCIC), the regional office for the California Historical Resources Information System (CHRIS). The SCCIC response, dated June 22, 2022, determined that the archeological sensitivity of the site was unknown, however no archaeological work would be required before the approval of the Project plans. Instead, SCCIC recommended a condition be placed on the Project, which would require the Applicant and their contractors to halt work in the event that archaeological resources are uncovered during ground disturbing activities and retain an archeological consultant and consultation with the local California Native Tribe (Exhibit 5, Condition of Approval No. 20). The applicant also commissioned a Phase I Archaeological Assessment (Leftwich Archaeology, July 2022), which determined that no cultural resources were encountered during a survey of the Project site and the implementation of halt work requirements would be appropriate for the proposed Project. The proposed Project will not result in any significant impacts upon archaeological or paleontological resources.

Based on the discussion above the proposed Project is determined to be consistent with the Ventura County General Plan Policy COS-4.4 and Coastal Area Plan Policies 4.1.1-1, 4.1.1-2, 4.1.1-6, 4.1.1-7, 4.1.2-1, 4.1.2-24.1.2-3 and Coastal Act Section 30244.

## **Hazards and Safety**

- 5. HAZ-1.1 Fire Prevention Design and Practices** 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.

**HAZ-1.2 Defensible Space Clear Zones** *The County shall require adherence to defensible space standards, or vegetation "clear zones," for all existing and new structures in areas that are designated as Hazardous Fire Areas by the Ventura*

*County Fire Protection District and High Fire Hazard Severity Zones by the California Department of Forestry and Fire Protection.*

**HAZ-1.4 Development in High Fire Hazard Severity Zones and Hazardous Fire Areas** *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 (CAL FIRE).*

The Project is located within an area identified as a Very High Fire Hazard Severity Zone within an area of local responsibility (Fire Resource Assessment Program MAP, California Department of Forestry and Fire Protection, 2022). The proposed Project has been reviewed by the Ventura County Fire Protection District (VCFPD) for compliance with the applicable public safety policies and VCFPD regulations. The Project includes the implementation of conditions of approval related to fire protection which includes the installation address number and the installation of fire sprinklers. VCFPD staff will review the construction documents associated with the proposed development to ensure compliance with the conditions of approval via their Fire Department Clearance review process. As the surrounding areas are developed and not located within the wildland urban interface area, the subject property does not require annual fire hazard abatement (Brush clearance within 100 feet of the building) however, VCFPD has required the recordation of a notice of fire hazard. The Project complies with all applicable Hazard Policies related to fire hazard because the applicant will be required to implement features and improvements via the recommended Condition of Approval (Exhibit 4, Conditions Nos. 32 through 36) that address the risk of fire hazards at the site.

Based on the discussion of above, the proposed Project is consistent with Ventura County General Plan Policies HAZ-1.1, HAZ-1.2, and HAZ-1.4.

6. **HAZ-3.1 Sea Level Rise Planning and Adaptation** *The County shall continue to actively plan for sea level rise by using the best available science to analyze critical vulnerabilities, identify measures to conserve coastal resources, minimize impacts on residents and businesses, maintain public services, and strengthen resiliency.*

**§ 30253 Minimization of Adverse Impacts**

*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.*

- (c) *Be consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development.*
- (d) *Minimize energy consumption and vehicle miles traveled.*
- (e) *Where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses.*

**Coastal Area Plan Hazards Policy 4.2.4 – A-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 Hazards Policy 4.2.4 – A-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.*

The proposed Project has been sited and designed to assure the stability and structural integrity of the proposed building, and neither creates nor contributes significantly to erosion, geologic instability, or destruction of the site or surrounding area. The subject property is located next to an existing rock revetment of constructed in 1978. The proposed Project (i.e., garage and second story addition) has been designed to not increase risks from coastal hazards. According to the Geotechnical Exploration Report (Exhibit 6, Pacific Materials Laboratory, Inc, December 2021), the site is located in an area with natural sand and gravel soils overlying dense formation at a depth of 15 feet. The site is located 0.5 miles to the north of the Red Mountain Fault and 3.8 kilometers to the northeast of the Santa Ana Fault, with the possibility to experience liquefaction and strong shaking in the event of a major earthquake. The Geotechnical Exploration Report recommends the 2-story addition be constructed on piles with deepened pier supported foundations, concrete slabs will be prepared with limited removal of soils and recompaction grading to prepare the underlying structural base. Piles will be drilled to a depth of 35 feet (a maximum 20 feet into formation).

As shown on the Flood Emergency Management Agency's (FEMA) Flood Rate Insurance Map (FIRM) Panel 0611C0702F (Effective January 29, 2021), a portion of the property is located within the mapped VE Special Flood Hazard Area with an established Base Flood Elevation (BFE) of 16 feet above the North American Vertical Datum 1988 (NAVD88). In consideration of the potential for flooding, the proximity of the Project to the coast and its associated hazards and the subject property's potential for flooding, the Project review included evaluation of a supporting site-specific coastal hazards analysis. The Revised Wave Runup & Coastal Hazard Analysis (Exhibit 7, GeoSoils, Inc., October 17, 2022) analyzes the existing and future conditions of the site and provides recommendations based on the potential coastal hazards. With respect to the primary risk for the subject property, the report indicates that the historic high-water level for the area is 7.6 feet NAVD88 (above the North American Vertical Datum for 1988) and projects 5.9

feet of sea level rise (SLR) based on a medium high-risk design scenario, indicating a design wave runup elevation of 13.5 feet NAVD88 for the future still water level for the design life of the proposed Project. The wave uprush analysis projects a future Base Flood Elevation (BFE) in consideration of SLR will be +20 feet NAVD88 (for the “with the revetment removed” scenario). The report concludes that the bottom of the lowest horizontal structural member should be located at one foot (+1) above the projected BFE. Per the report, the elevation of the lowest horizontal member will be +21 feet NAVD88.

The report (Exhibit 7) concludes that the Project is reasonably safe from coastal hazards including shoreline erosion, wave runup, and flooding without the shore protection in place, with the incorporation of the recommendations (foundation type, elevation, and potential wave runup forces) into the Project design.

Based on the discussion of above, the proposed Project is consistent with Ventura County General Plan Policies HAZ-3.1, Coastal Act Section 30253, and Coastal Area Plan Policies 4.2.4 A-2, and A-3.

7. **HAZ-9.1 Limiting Unwanted Noise** *The County shall prohibit discretionary development which would be impacted by noise or generate project-related noise which cannot be reduced to meet the standards prescribed in Policy Haz-9.2. This policy does not apply to noise generated during the construction phase of a project.*

**HAZ-9.2 Noise Compatibility Standards** *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).*

**HAZ-9.5 Site and Building Design** *The County shall require discretionary development and County-initiated projects to comply with adopted noise standards through proper site and building design features, such as building location and orientation, setbacks, natural barriers and vegetation, and building construction. The County shall only consider sound walls if noise mitigation measures have been evaluated or integrated into the project and found infeasible.*

The Project proposes modifications to an existing single-family dwelling, which is categorized as a noise-sensitive land use. Noise sensitive uses include, but are not limited to, dwellings, schools, hospitals, nursing homes, churches, and libraries. The U.S. 101 freeway and Union Pacific Railroad are located 50 feet and 220 feet to the northeast of the Project site. The proposed Project is located within the 60 dB(A) community Noise Equivalent Level noise contour (RMA GIS View, Noise Contour Maps, 2022). The Project may be exposed to unacceptable levels of noise from the nearby noise generating land uses. The site is protected by a soundwall, when the U.S. 101 High Occupancy Vehicle Lane project was implemented, the Community of Mussel Shoals was the only community to agree to having this wall to minimize the impacts from highway noise. However, the Project does not substantially expand the existing single-family use, and existing outdoor use areas will effectively remain within their same location after the construction of the garage and second story addition. The Project description includes the construction of a first floor wood deck and a second story balcony which face the ocean, directed away from the freeway. The new outdoor areas are blocked by the structure minimizing the impacts from noise on the proposed Project. Further, the proposed Project has been conditioned to incorporate noise attenuation features (i.e., double paned windows) in the design of the residential addition (Exhibit 4, Condition of Approval 22).

While the proposed single-family dwelling is not considered a noise generating land use, construction noise will be generated during the development phase of the proposed Project that has the potential to adversely affect surrounding residential uses. Pursuant to the requirements of the Ventura County Construction Noise Threshold Criteria and Control Plan, the proposed Project will be subject to a condition of approval to limit noise-generating activities to the days and times

when construction-generated noise is least likely to adversely affect surrounding residential uses (Exhibit 5, Condition of Approval No. 21).

Based on the discussion above, the proposed Project is determined to be consistent with the Ventura County General Plan Policies HAZ-9.1, HAZ-9.2, 4 and HAZ-9.5.

The proposed project includes improvements to an existing 1,678 sq. ft. (net)/1,753 sq. ft. (gross) beachfront single-family residence including: a new 354 sq. ft. (net)/ 384 sq. ft. (gross) two car garage, a new 584 sq. ft. (net)/622 sq. ft. (gross) master bedroom addition above the garage, and 127 sq. ft. of minor renovations to the existing residence to add an internal stairway to access the habitable upstairs addition. The project site is located at 6772 Breakers Way, within the coastal zone in the County of Ventura, which has a certified Local Coastal Program (LCP). Pursuant to the LCP, the proposed minor addition project requires a Planned Development Permit (Coastal Development Permit) from the County of Ventura which is appealable to the Coastal Commission under Coastal Act Section 30603(a)(4) because the project site is located between the first public road and the ocean.<sup>1</sup> The project site is not within a FEMA flood zone according to County requirements.

To determine conformance of the proposed project with coastal policies supporting approval of a Planned Development Permit, we have reviewed applicable California Coastal Act (Coastal Act) provisions, County of Ventura LCP policies and implementation measures, as well as researched past actions by the California Coastal Commission (CCC or Commission) regarding improvements to beachfront single-family residences. This memorandum discusses (1) whether the scope of the proposed improvements would require that the residence be brought into conformance with all current Coastal Act and LCP provisions and (2) consistency of the proposed addition with applicable provisions of the Coastal Act and County's LCP.

### **I. California Coastal Commission's "50% Rule"**

Assessing the extent of the proposed remodel and addition is important because, as discussed below, when existing development is altered so substantially that the resulting structure is considered a new or replacement structure, rather than just an altered version of the original structure, existing non-conformities must be brought into conformance with current rules. In other words, a site that contains features that are non-conforming to the current CCC-certified development standards can maintain those non-conforming features if the project is not considered to be "new development"<sup>2</sup>.

The County's LCP is the standard of review for the project, as well as Coastal Act Chapter Three resource protection policies as incorporated into the LCP. Although many updated LCPs include a definition for "new development," "redevelopment," or "major remodel," and similar terms, the County's LCP does not define these terms or related terms to identify when a remodeled or altered structure passes the threshold of improvements to be considered new development requiring that all non-conformances be addressed. Although the County's Coastal Zoning Ordinance portion of the certified LCP defines "remodel" as "an interior alteration to an existing approved, permitted and inspected structure where the foundation, exterior walls and roof structure remain in place without modification," the LCP does not distinguish

<sup>1</sup> The grounds for appeal of a local government approval of development shall be limited to an allegation that the development does not conform to the standards set forth in the certified Local Coastal Program or the public access policies set forth in the Coastal Act (See Public Resources Code Section 30603[b][1]).

<sup>2</sup> The term "new development" is equivalent to terms such as, but not limited to, "redevelopment" or "major remodel," etc., as used in past Coastal Commission actions.



between a major remodel or a minor remodel or for situations where small additions are proposed. Furthermore, the Coastal Act and implementing regulations do not specifically define what constitutes new or redevelopment.

In past actions, the Commission has evaluated the extent of proposed alterations to an existing residence to determine whether the existing residence is modified to such a significant degree that the entire structure constitutes “new development” that must, as a whole, comply with coastal policies. Prior Coastal Commission permit, appeal, and LCP amendment findings have been based on Coastal Act Section 30610(d) (related to repair and maintenance) and California Code of Regulations Section 13252(b), which states that replacement of 50 percent or more of a single-family residence cannot be considered repair and maintenance, but instead constitutes a replacement structure for purposes of requiring a CDP. The Commission has in the past determined that replacement structures of 50 percent or more are considered “new development” and must, therefore, conform will all current coastal policies, informally called the “50 percent rule.”

Although the Coastal Act and implementing regulations do not specifically provide how to determine whether 50% or more of an existing structure has been replaced, the Coastal Commission has found, in several recent actions<sup>3</sup>, based on California Code of Regulations Section 13252(b), that alterations to a structure must be treated as creating a new structure whenever one of the following takes place: 1) 50% or more of the major structural components<sup>4</sup> are replaced; 2) there is a 50% increase in gross floor area; 3) replacement of less than 50% of a major structural component, when considered in conjunction with prior remodeling work, results in cumulative alterations exceeding 50% or more of that major structural component; and/or 4) less than a 50% increase in floor area where the alteration would result in a cumulative addition of 50% or more of the floor area, taking into account previous additions to the structure. (See CCC staff report for CDP No. 5-20-0224 (Braff)). Alterations are not additive between individual structural components (e.g., if 20% of a roof is altered and 30% of a floor is altered, that will not trigger the 50% rule). However, they are cumulative over time with respect to each individual major structural component (e.g. if 20% of a roof is altered in one year, and then another 30% of the roof is altered in a subsequent year, that will trigger the 50% rule). Further, in assessing residential additions, the Coastal Commission has in the past stated that: “[t]he Coastal Act does not put a limit on the size of an addition to an existing structure, with limited exceptions (depending on certain geographical features) of the site, as long as 50 percent of the existing structure is not removed, replaced, or demolished.” (See staff report for A-5-VEN-16-0081) Additionally, several LCPs throughout California have memorialized this typical approach to the 50 percent rule to determine when an existing structure is redeveloped to a degree that it is considered to be a major remodel or substantial redevelopment for purposes of requiring

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<sup>3</sup> See CCC staff reports CDP No. 5-20-0224 (Braff), A-5-LGB-18-0012 (Bracamonte); CDP No. 6-18-0182 (Harris); CDP No. 5-18-0223 (Walsh)

<sup>4</sup> CCC considers major structural components to include structural walls, floor and roof structure, and foundation.

conformance of the residence with all updated LCP policies.<sup>5</sup>

Based on the above factors, the proposed alterations would consist of the following:

(1) Less than 50% of the major structural components will be replaced, as follows:

Major Structural Component	Existing	New/Modified	Total Proposed	% change
Roof	2,025 sq. ft.	966 sq. ft.	2,991 sq. ft.	49%
Floor Area	2,833 sq. ft.	1,133 sq. ft.	3,966 sq. ft.	39%
Exterior Structural Walls	2,091 sq. ft.	958 sq. ft.	3,049 sq. ft.	45%
Interior Structural Walls	7,564 sq. ft.	182 sq. ft.	7,746 sq. ft.	2%
Foundation	1,661 sq. ft.	390 sq. ft.	2,051 sq. ft.	23%

(2) There will be less than a 50% increase in gross floor area. As noted in the table above, the percentage increase in gross floor area is approximately 39%.

(3) Cumulative alterations will not exceed 50% or more of any major structural component. As noted in the table above, the total percentage of major structural components that will be altered is less than 50%. In October 2016, the County issued a zoning clearance for an interior remodel and window replacement (no exterior changes); no major structural components were modified at that time. (See ZC16-0382)

(4) Cumulative additions will not exceed of 50% or more of the floor area as there have been no known prior floor area additions. (See aerial photos from 1972 to present)

As evidenced above, less than 50% of the structure will be improved, calculated based on requirements as laid out by the Commission's past actions. Therefore, the proposed project will not alter the residence so substantially that it would be considered "new development," for purposes of bringing the entire structure into conformance with all current standards.

## II. Coastal Policy Consistency

The proposed minor improvements and small addition have been designed to meet all applicable

<sup>5</sup> City of San Clemente Major LCP Amendment No. LCP-5-SCL-18-009-1 (Major Remodel Definition) *NOT CERTIFIED*; City of Newport Beach Implementation Plan (2016); City of Santa Barbara Land Use Plan (2019) (Substantial Redevelopment definition) City of Solana Beach Land Use Plan (2012) (Redevelopment Definition), and City of Pacific Grove Implementation Plan (2019) (Redevelopment Definition);

requirements of the Coastal Act and County LCP, including policies related to coastal hazards, marine resources, water quality, and public access, in addition to zoning standards for the residential area of Mussel Shoals.

### **A. Coastal Hazards**

The certified Ventura County LCP, and Coastal Act, as incorporated into the certified LCP, contain policies and provisions regarding geologic resources and coastal hazards, including Coastal Act Sections 30253 and 30235, LUP Policies 4.2.4(A)(2), 4.2.4(A)(3), 4.2.4(A)(6), and IP Section 8178.4. Coastal Act Section 30253 requires new development to minimize risks to life and property in areas of high geologic and flood hazards, to assure stability and structural integrity, and avoid creating or contributing significantly to erosion, geologic instability, or destruction of the site or surrounding area or require the construction of protective devices. Coastal Act Section 30235 provides that revetments or other construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. LUP Policy 4.2.4(A)(2) and Policy 4.2.4(A)(6) require new development to be sited and designed to minimize risks to life and property in areas of high geologic, flood, and fire hazards, and 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. LUP Policy 4.2.4(A)(3) requires new development to be evaluated for its impacts to, and from, geologic hazards, flood hazards, and fire hazards and requires feasible mitigation measures where necessary. Taken together, these policies require careful consideration of geologic and flood hazards when siting and designing development.

In addition, the Coastal Commission's Sea Level Rise Guidance (2018) and Draft Sea Level Rise Adaptation Guidance for Residential Development (2018) provide guidance regarding shoreline development, including sea level rise accommodation strategies to decrease coastal hazard risks and increase resiliency of development where alternative siting options are not feasible, as is the case here. For example, these guidance documents provide strategies to avoid risks from coastal hazards, including elevating the finished floor, locating only non-habitable space below the flood hazard elevation, elevating mechanical utility installations, and using flood vents. (See Section E.4 (Flood Hazard Mitigation) of the Coastal Commission's 2018 Draft Sea Level Rise Adaptation Guidance for Residential Development). Further, the SLR Guidance does not mandate that structures be designed to avoid the extreme H++ risk aversion scenario or avoid any potential at all to be threatened from sea level rise over the project's expected life. Rather, the SLR Guidance recommends the scenario-based analysis to examine the consequences of a range of situations and to evaluate design constraints, as well as adaptation options to avoid resource impacts and minimize risks to life and property over time.

Because the addition cannot be sited on the parcel in a way that would altogether avoid coastal hazards, including from sea level rise, the project has incorporated accommodation techniques to minimize risks from coastal hazards and sea level rise and increase resiliency in accordance with the above-cited policy and guidance requirements. The proposed garage and second story addition will be attached to the existing residence and will not extend further seaward than the existing residence. The proposed habitable addition space has been elevated to a finished floor elevation of 30.62 feet which is 9.17 feet

above the existing floor elevation. Other adaptive design features to address risks from potential future hazards include using a pile/caisson foundation system for the addition and a breakaway wall design for the garage. These are provided as example “accommodation” adaptation strategies in the Commission’s SLR Guidance. Therefore, project design measures will minimize risks due to coastal hazards and coastal resource impacts for the life of the project in conformance with Coastal Act, LCP, and Coastal Commission SLR Guidance standards regarding coastal hazards

## **B. Water Quality and Marine Resources**

Section 30230 of the Coastal Act, as incorporated into the certified LCP, requires that uses of the marine environment be carried out in a manner that will sustain the biological productivity of coastal waters for long-term commercial, recreational, scientific, and educational purposes. In addition, Section 30231 as incorporated into the certified LCP requires that the biological productivity and quality of coastal waters be maintained.

Construction activities related to the proposed construction have the potential to negatively impact the surrounding marine environment. Introduction of waste or construction debris into the marine environment could impact coastal waters and could stem from activities such as stockpiling of materials or cleaning of construction equipment on or adjacent to the beach. To ensure that adverse impacts to the marine environment are minimized, erosion control plans and construction best management practices have been incorporated into the project. For example, no construction materials, debris or waste will be placed or stored on the beach or where it may be subject to wave erosion and dispersion and no machinery or mechanized equipment will occur seaward of the existing revetment. All water quality requirements of the County will be implemented during construction. Therefore, the proposed project is consistent with County LCP and Coastal Act provisions protecting water quality and the marine environment.

## **C. Public Access and Recreation**

The certified Ventura County LCP, and Coastal Act, as incorporated into the certified LCP, contain policies and provisions regarding public access and recreation, including Coastal Act Sections 30210, 30211, 30212 and 30221, and LUP Policies 4.2.2(B)(1), 4.2.2(B)(2), and IP Sections 8178-6.1 and 8178-6.2. Coastal Act Section 30210 and Coastal Act Section 30211 mandate that maximum public access and recreational opportunities be provided and that development not interfere with the public’s right to access the coast. Section 30212(a) of the Coastal Act provides that adequate public access to the sea be provided in new development projects. Section 30221 of the Coastal Act protects oceanfront land for recreational uses. LUP Policy 4.2.2.B and IP Section 8178-6.2 require public access to and along the shoreline for new development, except in very limited circumstances, such as where it would be inconsistent with public safety, military security, or protection of sensitive resources. IP Section 8178-6.1 provides that the granting of a vertical access easement to the mean high tide shall be mandatory unless adequate access is available nearby, access would result in habitat impacts, and the parcel is too narrow to allow an adequate vertical access corridor.

In this case, because the project includes only a minor residential addition that is not considered new or



redevelopment, and the addition will not extend seaward of the existing residence or create any impacts to public access and recreation, the policies requiring lateral and vertical access easements do not apply.

**D. Compliance with Zoning Standards**

Furthermore, as development standards have changed over time since the residence was originally constructed, the existing residence may have some non-conformities. However, any existing non-conformities are allowed to remain under IP Section Sec. 8182-2 (Nonconforming Structures Due Only to Changed Standards). IP Section 8182-2 provides that, where structures have been rendered nonconforming due only to revisions in development standards dealing with lot coverage, lot area per structure, height or setbacks, and the use therein is permitted or conditionally permitted in the zone, such structures are not required to be terminated and may be continued and expanded or extended on the same lot, provided that the structural or other alterations for the expansion or extension of the structure are in conformance with the regulations in effect for the zone in which such structures are located.

Here, applying IP Section 8182-2, the proposed residence may be expanded because the proposed small addition is consistent with all of the certified standards of the IP for development on a lot with a zoning designation of Residential Beach-3,000 sq. ft., including height, setbacks, and building coverage, as follows:

	Allowable/Maximum	Existing	Proposed
Height	28 ft.	Approx. 18'-9"	19'-11"
Setbacks	10 ft. (front), 3 ft. and 5 ft. (sides), 14 ft. (rear)	Refer to Site Plan Sheet A0.02	Refer to Site Plan Sheet A0.02
Building Coverage	Residential – High 65%	1,400 sq. ft. (gross) 27.7%	1,784 sq. ft. (gross) 35.4%

Therefore, the project meets all residential zoning standards under the County’s IP.

**III. Conclusion**

In conclusion, the proposed minor residential improvement project meets all required coastal policies supporting approval of a Planned Development Permit under the Coastal Act and County of Ventura’s LCP. The project site is not within a FEMA flood zone according to County requirements, and the proposed project is less than 50% improvement, therefore a coastal hazard analysis is not required. The proposed minor scope of improvements do not rise to the level of new development or redevelopment and do not require that the entire residence be brought into conformance with all current Coastal Act and LCP provisions. Furthermore, the proposed minor improvements will comply with applicable coastal policies, including regarding coastal hazards, marine resources, water quality, and public access.



1972

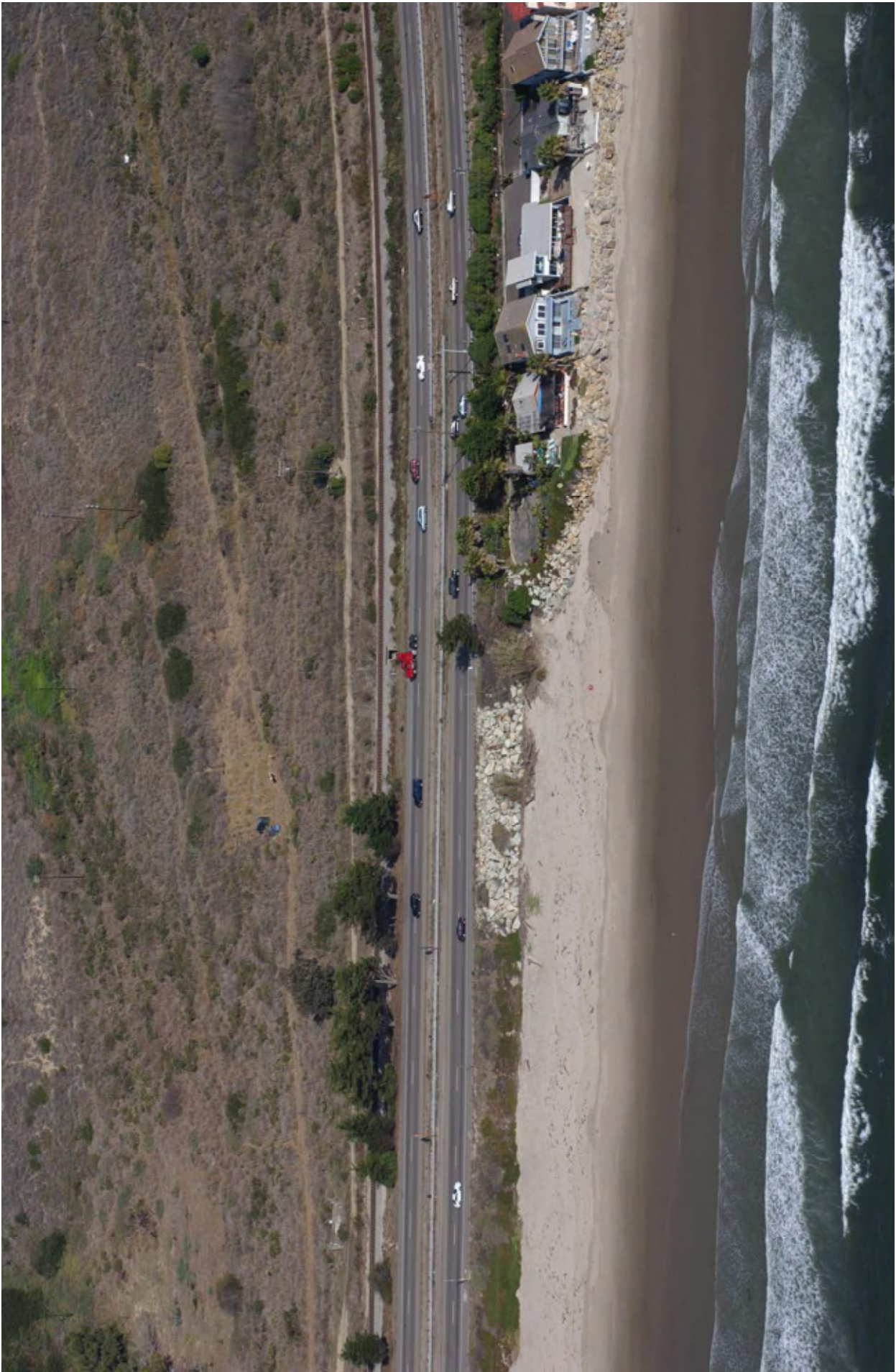


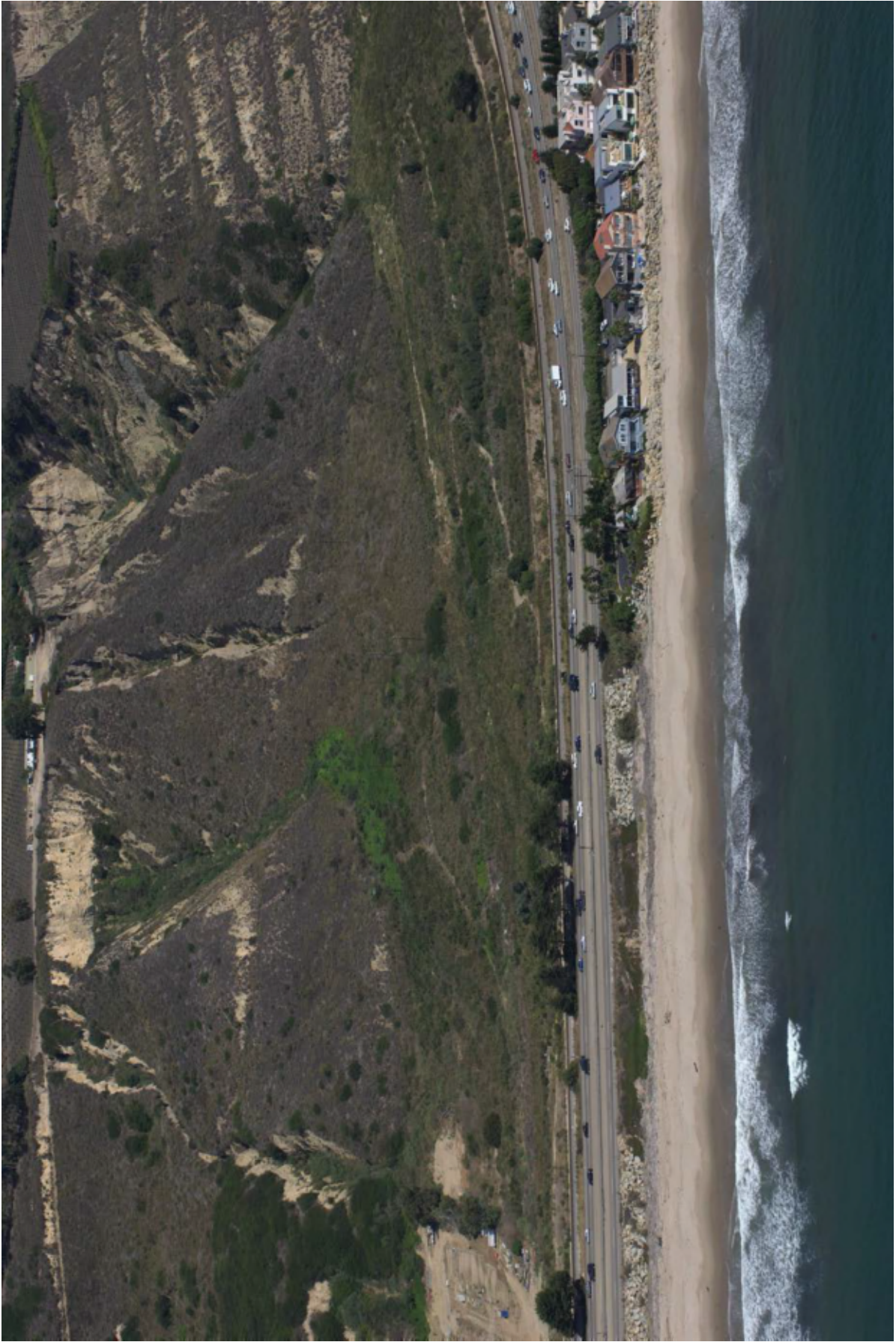
October 1979

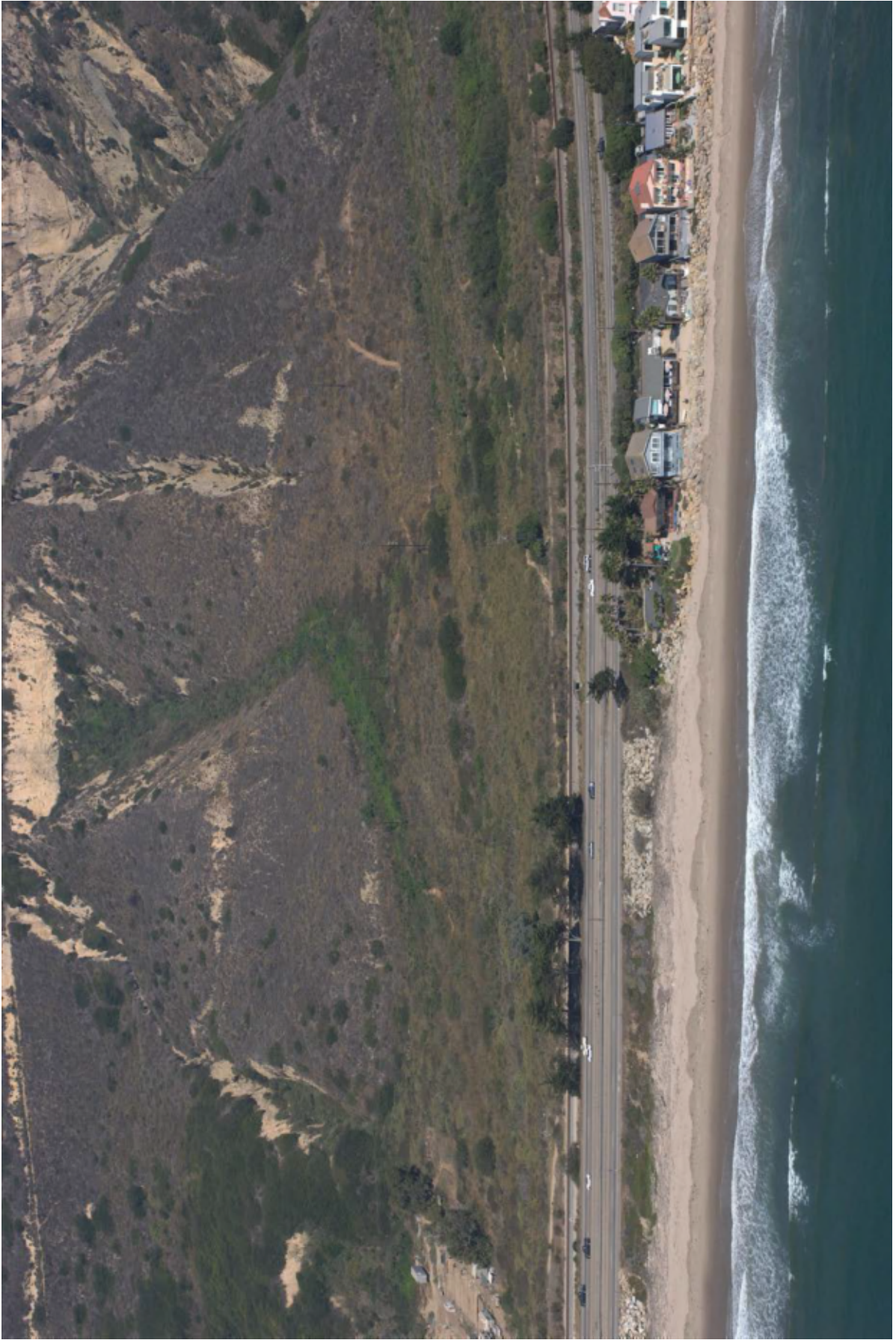


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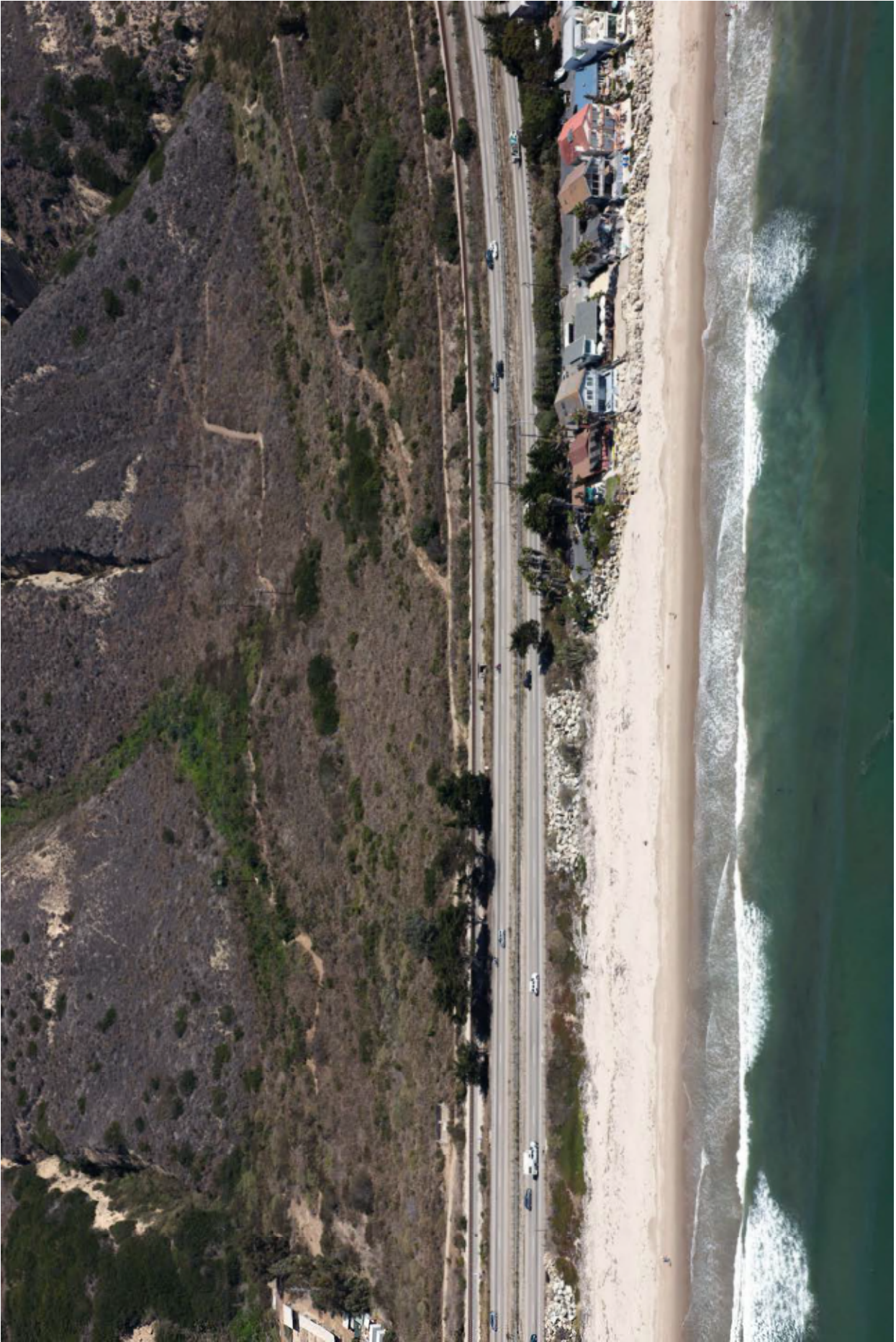








2008



2010



# GeoSoils Inc.

October 17, 2022

**Benedek Family Trust**  
6772 Breakers Way  
Ventura, CA 93001

**SUBJECT:** Revised Wave Runup & Coastal Hazard Analysis, 6772 Breakers Way, Ventura County, California.

Dear Benedek Family Trust:

At your request, we are pleased to present the following revised coastal processes information, and wave runup and coastal hazard analysis for the subject property and proposed development. The information provided herein is based upon our reconnaissance of the coastal area, published regional information, FEMA flood insurance rates maps (FIRM), United States Geologic Survey (USGS) studies and analysis tools, site specific topographic survey and development plans, and County of Ventura review comments (dated 9/15/22). The purpose of this report is to provide the necessary coastal processes and engineering permit information to support a minor addition to the existing single family dwelling and the construction of a new pile supported garage with a bedroom above on the subject site. Specifically, this report provides the design flood elevation (per ASCE24-14) and potential wave forces on the proposed garage structure in consideration of SLR. The information provided herein is intended to provide Ventura County and the California Coastal Commission (CCC) the required discussion of coastal hazards at the site including consideration of the CCC Sea-Level Rise (SLR) Policy Guidance document.

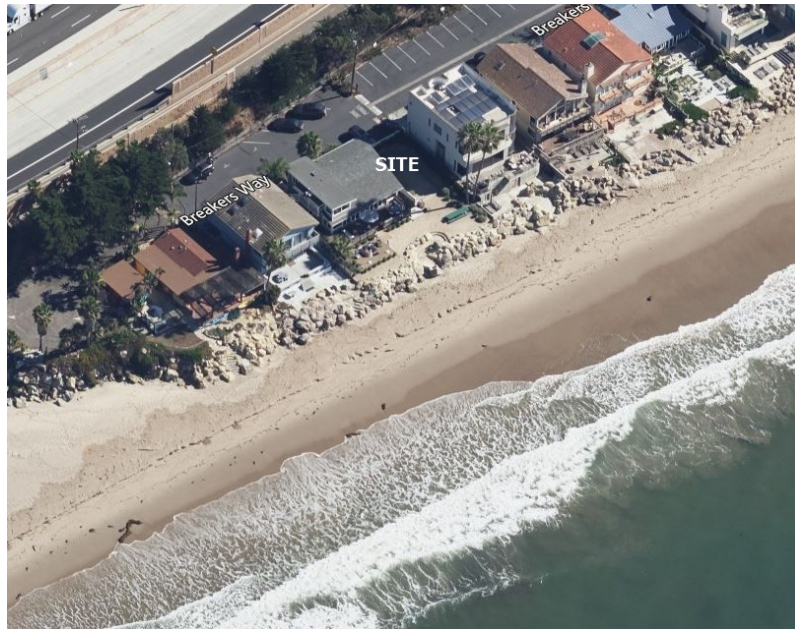
## INTRODUCTION

The subject site, two legal parcels, is rectangular shaped with about 80 feet on ocean frontage. Photograph 1 is a 2022 aerial photograph of the site downloaded, with permission, from Bing Maps on the internet. The site is currently protected by an offsite permitted quarry stone revetment from about elevation +17 feet NAVD88 up to about +19 feet NAVD88. Photograph 2, taken in 1972, was downloaded from the California Coastal Records Project web site (<http://www.californiacoastline.org/>). Comparison of these photos shows that the shoreline has not moved landward over the ~50 year time period. The presence of the nearby pier head/abutment, down-coast of the site, creates a stable beach on the up-coast side of the abutment, in front of, and to the northwest of, the site. The site lies next to a sand and cobble beach along a relatively high wave energy section of shoreline. The cobbles lie below the sand on the erosion resistant formational shore platform. Additional comparison of available historical photographs reveals that the existing shore protection appears to have had no long term impact on the adjacent beach.

**5741 Palmer Way, Suite D, Carlsbad CA 92010 S8114**

**Phone 760-438-3155**

County of Ventura Planning Director Hearing Case No. PL22-0033 Exhibit 7 - Revised Wave Runup & Coastal Hazards Analysis
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Photograph 1. Subject site and adjacent shoreline in 2022. Note the continuous revetment fronting the properties.



Photograph 2. Subject site and shoreline in 1972. Note that the beach width has not change over the ~50 year time period between Photograph 1 and Photograph 2.

## DATUM

The datum used in this report is North American Vertical Datum 1988 (NAVD88) which is about 2.75 feet lower than Mean Tide Level (MTL). The closest operating NOAA tidal station to the site is at Santa Barbara (Station ID 9411340), where Mean High Water (MHW) is 4.5 feet above NAVD88. The proposed plans with survey information were provided by Two Trees Architect, the project designer. The site is currently mapped in the FEMA X Zone on Panel 0611C0705F (effective date 1/29/2021). The X Zone is an area of low flood risk outside the 1% chance flood. The adjacent ocean/beach is in the VE zone (EL +16 feet NAVD88). The units of measurement in this report are feet (ft), pounds force (lbs), and second (sec). The tidal datum elevations are as follows in Table 1. The project design highest water elevation will be +7.6 feet NAVD88.

Table 1 - NOAA Tide Data, Santa Barbara (9411340)

Tidal Datum	Vertical Datum			
	MLLW (m)	MLLW (ft)	NAVD88 (ft)	NGVD29 (ft)
100 Year	2.35	7.71	7.57	4.93
Highest Observed	2.25	7.39	7.25	4.61
MHHW	1.65	5.40	5.26	2.62
MHW	1.42	4.64	4.50	1.86
MTL	0.86	2.81	2.67	0.03
MSL	0.85	2.79	2.65	0.01
NGVD29	0.85	2.78	2.64	0.00
MLW	0.30	0.98	0.84	-1.80
NAVD88	0.04	0.14	0.00	-2.64
MLLW	0.00	0.00	-0.14	-2.78
Lowest Observed	-0.88	-2.89	-3.03	-5.67

## COASTAL PROCESSES

The subject site lies within the Santa Barbara Littoral Cell. A littoral cell is a coastal compartment that contains a complete cycle of littoral sedimentation including sources, transport pathways and sediment sinks. The Santa Barbara Littoral Cell extends from Point Conception to Point Mugu, a distance of 96 miles. It is one of the longest littoral cells in Southern California and contains a variety of coastal types and shoreline orientations. An extensive shoreline management study was conducted for the section of the littoral cell from Goleta to Point Mugu by Noble Consultants (BEACON 1989).



The BEACON study divided the Santa Barbara Littoral Cell into sub cells based upon shoreline characteristics and the location of sediment sources and sinks. The subject site, 6772 Breakers Way, lies within the sub cell from Rincon Point to Ventura River. This area is also referred to by BEACON as the Rincon Parkway. This area has always been an area of thin sand and/or cobble beaches. Historical photographs as far back as the late 1800's show cobble beaches and a narrow sandy coastline. The movement of sand (and cobbles) is generally from the west to the east. The closet BEACON beach profile monitoring range is BEACON #19. Figure 1 below is the data from BEACON line 19. The monitoring shows that from the year 2000 to 2007 there was no change in the beach profile.

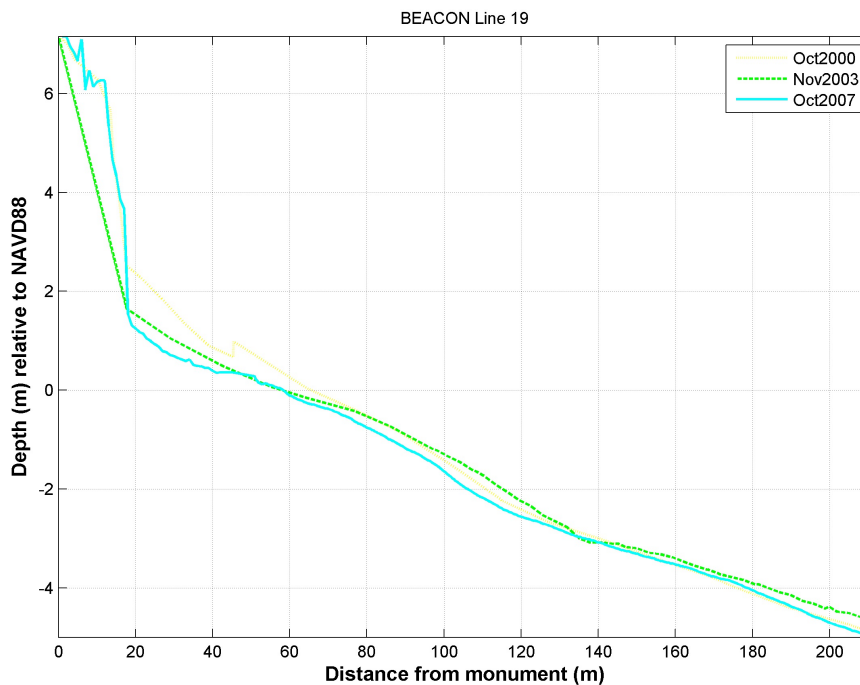


Figure 1. BEACON beach profile data near the site.

In 2006, the U.S. Geologic Survey published a comprehensive report about shoreline change for the coast of California (Hapke, et al., 2006). This report uses data from the late 1800s to the early 2000s, and covers the section of shoreline fronting the subject site. Using Figure 35 from the Hapke report and the ruler/path tool on Google Earth, the distance from the site to the Rincon Point is ~5 kilometers. A portion of Figure 35 from the USGS report is reproduced below as Figure 2 to show the short-term and long-term shoreline change rates at the site.

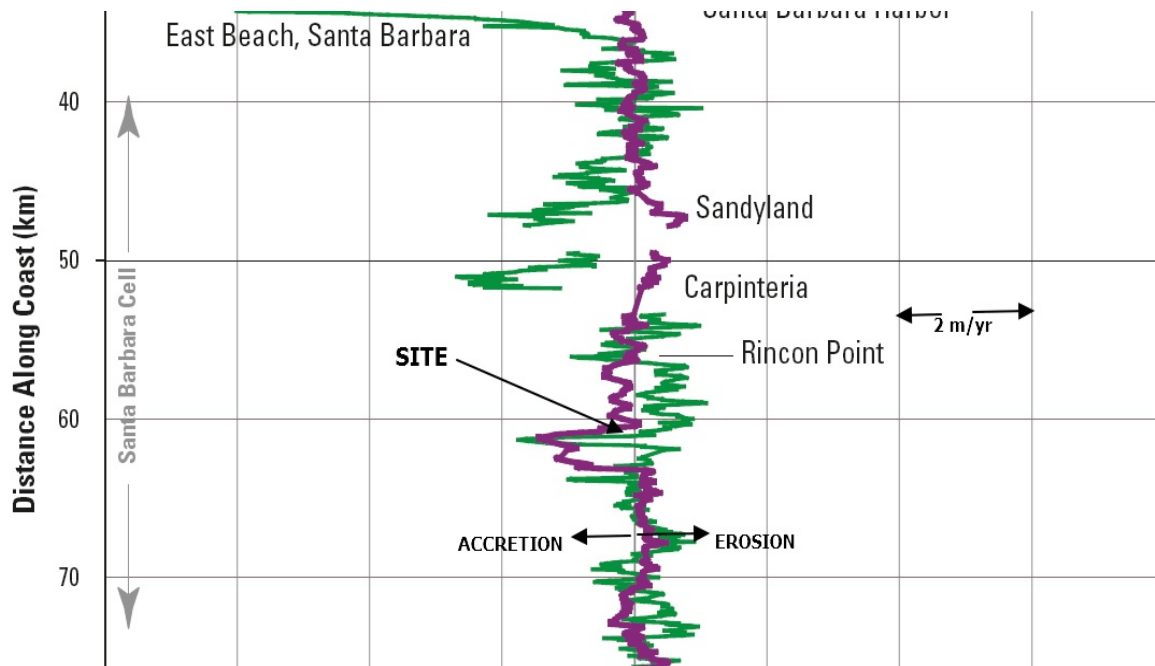


Figure 2. Short-term and long-term shoreline change at the subject site (USGS, 2006).

Figure 2 shows that in the short-term (green line), the beach is slightly beach accreting. The stable beach is a result of the nearby pier abutment stabilizing the up coast section of shoreline in front of the site. The USGS study does show that there is also a long-term trend of accretion at about 0.25 m/yr = 0.82 ft/yr. Again, this long-term accretion trend is a result of the construction of the nearby pier head that stabilizes the beach. The long-term trend determined by USGS is basically movement of the sand at the shoreline. The USGS long-term trend does not take into account that the beach is made up of sand overlying cobbles, which ride on an erosion resistant claystone. Once the sand is eroded, the beach is composed of cobble overlying an erosion resistant bedrock claystone.

The Rincon Parkway is almost entirely fortified with seawalls and revetments. The lack of historical beach profile and shoreline data makes it difficult to document shoreline changes. However, the historical photos show significant encroachment of the roadway and structures over the years. It may be that the offshore areas are still adjusting as a result of the seaward encroachment. While the roadway and structure encroachment, which has occurred over the years along the Rincon Parkway, has been detrimental to the narrow beaches which formerly existed there, the BEACON report concludes that the shoreline, in general, is relatively stable.

## SHORE PROTECTION INSPECTION & COASTAL DESIGN PARAMETERS

The shore protection along this section of shoreline was visually inspected on May 7, 2021. It is believed that the revetment was constructed in front of several adjacent properties under an 1981 permit from the CCC. The quarry stone revetment is in relatively good condition and not in need of any maintenance at this time. The revetment has not been significantly overtopped in the past at the subject site. The proposed garage/bedroom addition will be pile supported with the site finished grade varying from about +18 NAVD88, just landward of the top of the revetment, to about +20.5 feet NAVD88 at Breakers Way. The design analysis contained herein will consider that the site has no shore protection in place. There are several factors that are important to the design of a structure on the shoreline. Some of the factors are based upon the existing bathymetry, beach slope, and elevations of improvements at the site.

Offshore slope (BEACON)	1:100 (v:h)
Natural Beach Slope (BEACON)	1:10 (v:h)
Structure Slope	1:1.5 (v:h)
Elevation of Top Revetment	+17 to +19 feet NAVD88
Existing Site Grade(Approx)	+18.5 feet NAVD88

## SEA LEVEL RISE

The 1% design water elevation near the site is ~+7.6 feet (page 3, **Table 1**). This sea level includes short term effects that would increase sea level, such as wave set up and El Niño. The CCC SLR estimates are based upon a paper published in 2014. This paper was the scientific basis for the California Ocean Protection Council 2018 SLR document, which the CCC SLR Guidance (CCCSLRG) 2018 states is the best available science. The SLR tables provided in the CCCSLRG have been modified by the CCC and does not provide the complete data set from the COPC document. Figure 3 is the SLR probabilities for the Santa Barbara tide station (closest to the site) and is taken from the COPC document. The “likely range” SLR in the year 2096 is 1.2 feet to ~2.8 feet (high emissions). The estimates from the COPC 2018 SLR document for the year 2096, averaging between the low emission and high emissions for the 0.5% SLR case, the SLR is 5.4 feet.

SANTA BARBARA		Probabilistic Projections (in feet) (based on Kopp et al. 2014)				H++ scenario (Sweet et al. 2017) *Single scenario
		MEDIAN	LIKELY RANGE	1-IN-20 CHANCE	1-IN-200 CHANCE	
		50% probability sea-level rise meets or exceeds...	66% probability sea-level rise is between...	5% probability sea-level rise meets or exceeds...	0.5% probability sea-level rise meets or exceeds...	
			Low Risk Aversion		Medium - High Risk Aversion	Extreme Risk Aversion
High emissions	2030	0.3	0.2 - 0.4	0.5	0.7	1.0
	2040	0.5	0.3 - 0.7	0.8	1.1	1.6
	2050	0.7	0.4 - 1.0	1.2	1.8	2.5
Low emissions	2060	0.7	0.4 - 1.0	1.4	2.2	
High emissions	2060	0.9	0.6 - 1.3	1.6	2.5	3.6
Low emissions	2070	0.9	0.5 - 1.3	1.7	2.8	
High emissions	2070	1.1	0.7 - 1.7	2.1	3.3	4.9
Low emissions	2080	1.0	0.5 - 1.5	2.0	3.6	
High emissions	2080	1.4	0.9 - 2.1	2.7	4.3	6.3
Low emissions	2090	1.1	0.6 - 1.8	2.4	4.4	
High emissions	2090	1.7	1.1 - 2.6	3.3	5.3	7.9
Low emissions	2100	1.2	0.6 - 2.0	2.9	5.3	
High emissions	2100	2.1	1.2 - 3.1	4.1	6.6	9.8

Figure 3. COPC probabilities that SLR will meet or exceed.

As stated before, the CCCSLRG is based upon the California Ocean Protection Council (COPC) update to the State’s Sea-Level Rise Guidance in March 2018. These COPC estimates are based upon a 2014 report that used 2009 to 2012 SLR modeling by climate scientists for the probability analysis, which means the “best available science” used by the CCC is about 10 years old. The SLR models used as the basis for the COPC and CCCSLRG have been in place for over a decade. The accuracy of any model can be determined by comparing the measured SLR (real time data) to the model predicted SLR (model prediction). If the model does not predict, with any accuracy, what has happened in the past, it is very unlikely that the model will increase in accuracy when predicting SLR over the next 75 years. Simply put, if the model is not accurate now, it will be even less accurate in the future.

The National Oceanic and Atmospheric Administration (NOAA) has been measuring SLR globally, and specifically in Santa Barbara (NOAA, 2022a). The NOAA Santa Barbara SLR rate is 1.08 mm/yr as shown in Figure 4. The rate can be used to calculate a sea level rise of 23.76 mm ( 0.078 ft) over the last 22 years (2000 through December 2021). If we assume that the Santa Barbara rates do not change significantly in the next 8 years (which is likely) the amount of Santa Barbara SLR will be about 0.1 feet (30X1.08= 32.4 mm or 0.1 feet).

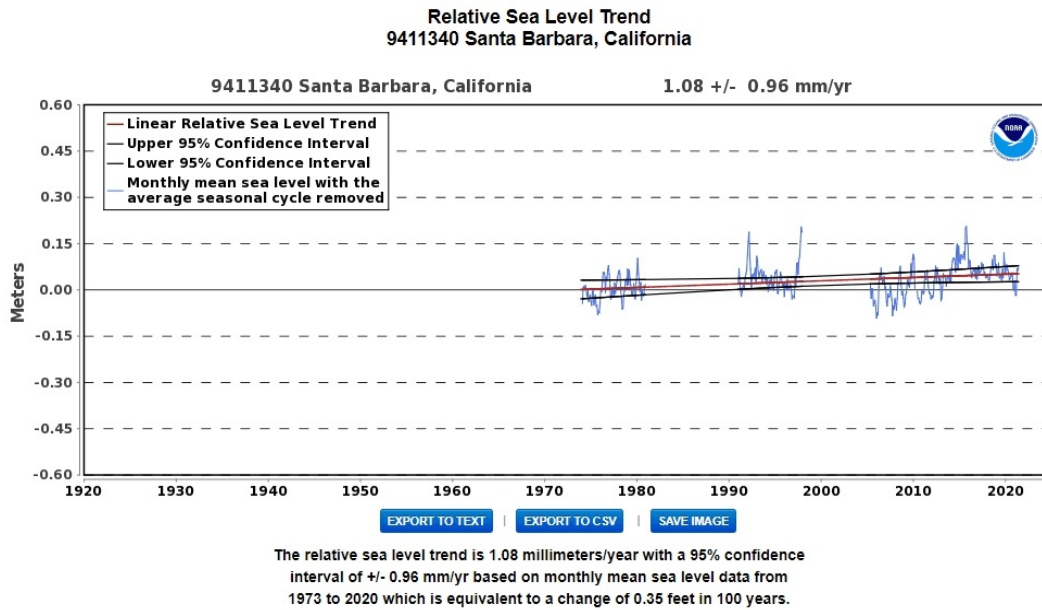
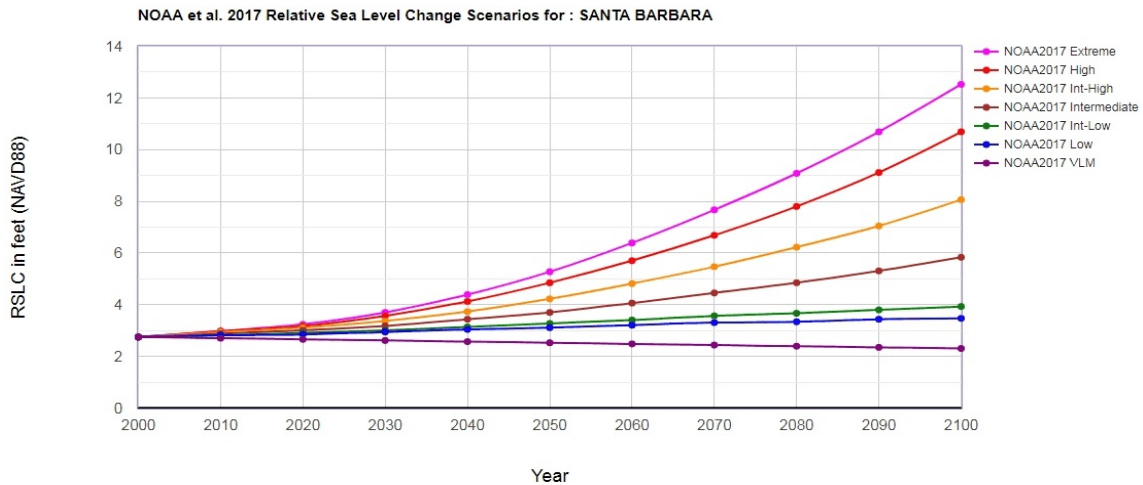


Figure 4. Latest measure SLR at Santa Barbara from NOAA.

NOAA also provides plots of the most current SLR model projections (best available science) over time starting in the year 2000. Figure 5, is the model projections taken NOAA, which is more current SLR science than from the COPC used models. To see which model is more accurately predicting SLR, the data for Santa Barbara can be either plotted onto the curves or estimated from the table below the curves.



501 Sand Point  
Scenarios for SANTA BARBARA  
NOAA2017 VLM: -0.00443 feet/yr  
All values are expressed in feet

Year	NOAA2017 VLM	NOAA2017 Low	NOAA2017 Int-Low	NOAA2017 Intermediate	NOAA2017 Int-High	NOAA2017 High	NOAA2017 Extreme
2000	2.75	2.75	2.75	2.75	2.75	2.75	2.75
2010	2.70	2.81	2.81	2.88	2.95	2.98	2.98
2020	2.66	2.85	2.91	3.01	3.11	3.18	3.24
2030	2.62	2.95	3.01	3.18	3.37	3.57	3.70
2040	2.57	3.04	3.14	3.44	3.73	4.13	4.39
2050	2.53	3.11	3.27	3.70	4.23	4.85	5.27
2060	2.48	3.21	3.40	4.06	4.82	5.70	6.39
2070	2.44	3.31	3.57	4.45	5.47	6.69	7.67
2080	2.39	3.34	3.67	4.85	6.23	7.80	9.08
2090	2.35	3.44	3.80	5.31	7.05	9.11	10.69
2100	2.31	3.47	3.93	5.83	8.06	10.69	12.53

Figure 5. NOAA 2021 SLR projections for Santa Barbara.

Recognizing that in the year 2000 the SLR zero line is 2.75 feet, and using the current Santa Barbara SLR data (trends), Santa Barbara SLR should be  $(2.75 + 0.1 \text{ feet})$  2.85 feet in the year 2030. Looking at the table in Figure 5 for the year 2030 (8 years from now) reveals that Santa Barbara SLR is tacking below the NOAA 2017 Low model curve. The Low model predicts a SLR rise total in the year 2100 of less than 1 foot. In contrast, the model the CCC is requiring to be used and analyzed is the high emissions scenario and the 0.5% probability to be analyzed shown in Figure 3 is 6.6 feet). For the year 2030 the CCC required SLR is 0.7 feet which is 7 times greater than the 0.1 feet that is being measured. Over the 75 year life of the development this results in very significant difference in what the CCC requires and what is the current best available science.

The CCCSLRG document recommends that a project designer determine the range of SLR using the “best available science.” The NOAA SLR information provided above is more current than the CCCSLRG. The checking of the models is the “best available science” for SLR prediction and is required to be used. Currently, the SLR model that the

CCC is “requiring” to be used for development is incorrect by more than a factor of 7 as to the measured amount of the SLR in Santa Barbara. Clearly, the CCC required model has inflated SLR, is incorrect, and over time will become more and more inaccurate. NOAA has recently provided the most current and best available science in their 2022 SLR report (NOAA, 2022b). Figure 6 is from the NOAA report and shows that the “best available science” is predicting about 2 feet of SLR by the year 2100. However, even though this is the most current and “best” available SLR science, it is our experience that the CCC still requires the analysis of, but not necessarily the design use of, the very low probability SLR scenario.

Possible pathways for future sea level rise

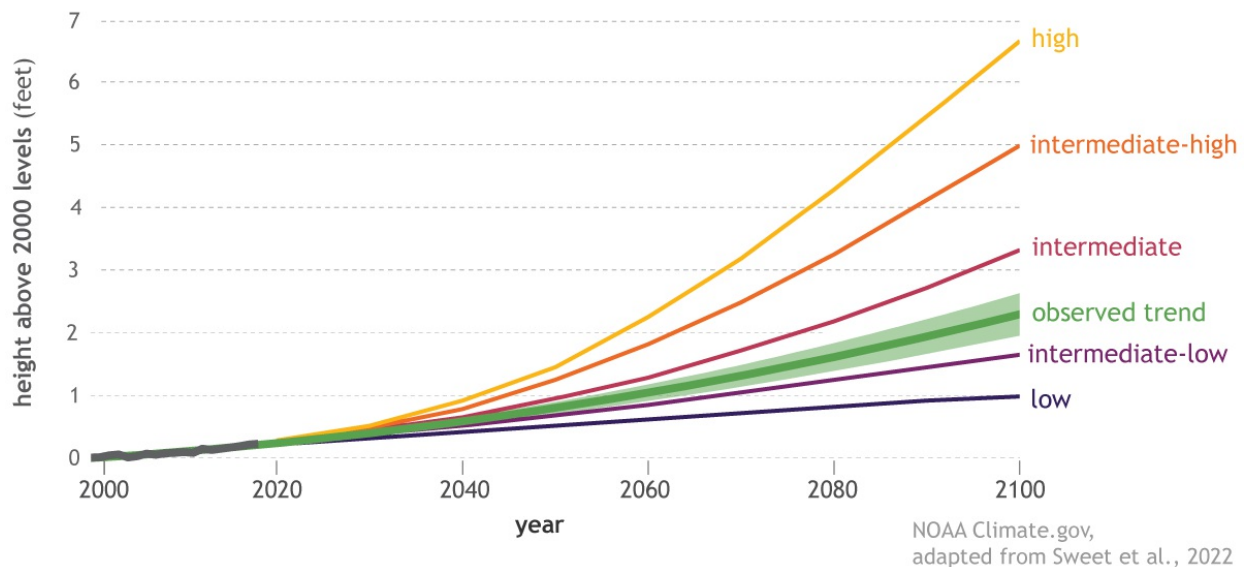


Figure 6. From NOAA 2022b showing the best available SLR science with the observed trend of about 2 feet of SLR in the year 2100.

GSI respectfully points out that the CCCSLRG is “advisory and not a regulatory document or legal standard for review.” The CCCSLRG is not a check list. Regardless of what the current best available science reveals, the CCC is steadfast in insisting that the most onerous 0.5% SLR estimate in the year 2097 be considered. However, the CCCSLRG does not dictate that the project be designed to any specific SLR. That is up to the project designer. Based upon the current trends and modeling of SLR it is very likely that SLR over the project life will be less than 2 feet. A SLR of 5.9 feet should be considered conservative design rise in sea level over the project life.

Using the 1% historical water level of 7.6 feet NAVD88 and 5.9 feet of SLR, the design water elevation for the SLR scenario is 13.5 feet NAVD88. The design scour elevation is

estimated to be +2.5 to +3.5 feet NAVD88. It should be noted that beneath the sand fronting the site are cobbles which will not scour down and lie on an erosion resistant claystone. The design scour elevation is fixed by the elevation of the claystone and overlying cobbles (~+2.5 feet NAVD88).

## WAVE RUNUP AND OVERTOPPING ANALYSIS

Waves from distant storms and nearby hurricanes (chubascos) have pounded the coastline of Rincon Parkway several times within the last few centuries. However, these extreme waves break further offshore and lose a significant portion of their energy before they reach the shoreline. The offshore area allows for energy from large waves to dissipate before reaching the shoreline. Once a wave reaches a water depth that is about 1.28 times the wave height, the wave breaks and runs up onto the revetment. The wave that generates the greatest runup is the wave that has not yet broken when it reaches the toe of the beach. Determination of the maximum scour depth at the base of the shore protection structure enables the engineer to determine the actual water depth at the structure under the design water level conditions. The "beach" in front of the revetment is composed of sand and cobbles that cover an erosion resistant formational material. The depth of this formational material at this site is at about elevation +2.5 feet NAVD88, based upon the observed cobbles over the bedrock shelf in front of the site.

As waves encounter the revetment or beach in front of the site, the waves can rush up, and sometimes over the revetment and onto the property. The revetment has in the past has not been subject to overtopping, however if this occurs in the future, the site drainage is capable of conveying these waters back into the ocean or back to Breakers Way. Wave runup is defined as the vertical height above the still water level to which a wave will rise on a structure of infinite height. Overtopping is the flow rate of water over the top of a finite height structure (the revetment) as a result of wave runup.

Wave runup and overtopping on the existing shore protection and natural beach is calculated using the US Army Corps of Engineers Automated Coastal Engineering System, ACES. The methods to calculate runup and overtopping implemented within this ACES application are discussed in greater detail in Coastal Engineering Manual. The overtopping estimates calculated herein are corrected for the effect of onshore winds. Figure7 from the ACES manual shows some of the variables involved in the runup and overtopping analysis.



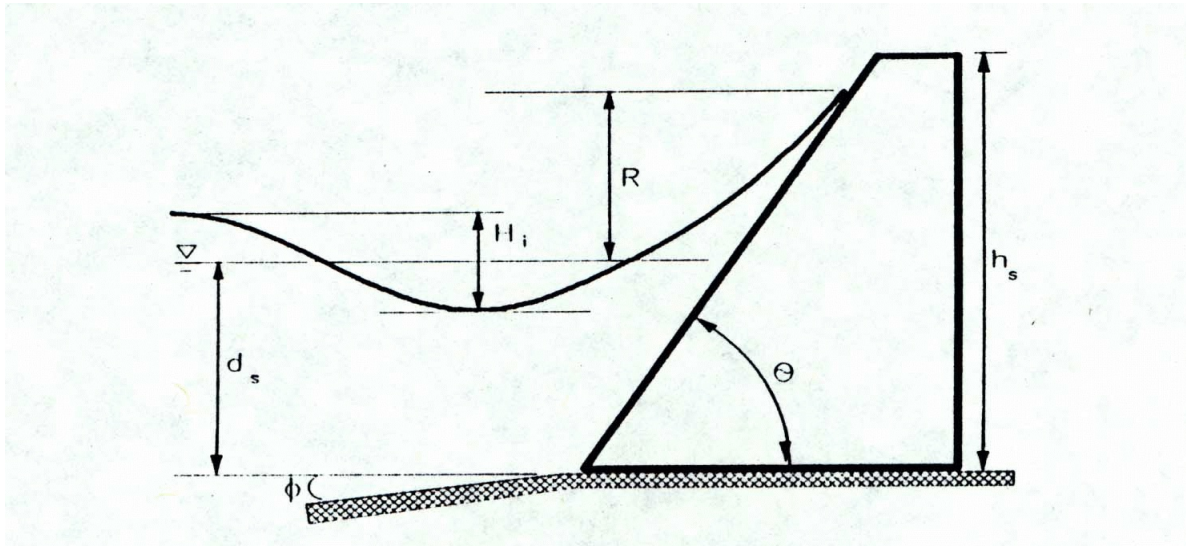


Figure 7. Wave runup terms from ACES manual.

Wave runup analysis assumes that whatever slope (natural shoreline slope or structure slope) the wave is running up is higher than the actual wave runup elevation. When the slope is lower than the wave runup elevation, the wave runup becomes wave overtopping. At the site, the top of the revetment is below the highest future design wave runup elevation. Both the revetment and, if the revetment is removed, the site grade, are of finite height, and the design waves will overtop them. In the case where there is no revetment (required to be analyzed by the CCC) the wave runup travels up the eroded natural cobble shoreline, to the top of the slope, and then across the generally flat site to Breakers Way.

The analysis herein will only consider the maximum SLR design water elevation condition for the site, with and without the revetment in place. If the toe of the beach slope and the revetment are both at about elevation +2.5 feet NAVD88, then the design water depth for 5.9 feet of SLR is  $13.5 - 2.5 = 11$  feet. Using the FEMA design breaking wave criteria, the design wave will break at the toe when the ratio of the breaker height to water depth is 0.78. Therefore, the design wave height is 8.6 feet for the wave runup and overtopping cases. The wave period for both case is 15 seconds which is peak spectral wave period for extreme wave events in the area. **Table 2** and **Table 3** contains the ACES output for the analysis with and without the revetment in place.

**Table 2**

ACES	Mode: Single Case	Functional Area: Wave - Structure Interaction		
Application: Wave Runup and Overtopping on Impermeable Structures				
Item		Unit	Value	
Incident Wave Height	Hi:	ft	8.600	<div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">Rough Slope Runup and Overtopping</div> 6772 Breakers Way  5.9 FT SLR  Revetment Overtopping
Wave Period	T:	sec	15.000	
COTAN of Nearshore Slope	COT( $\phi$ ):		100.000	
Water Depth at Structure Toe	ds:	ft	11.000	
COTAN of Structure Slope	COT( $\theta$ ):		1.500	
Structure Height Above Toe	hs:	ft	16.000	
Rough Slope Coefficient	a:		0.775	
Rough Slope Coefficient	b:		0.361	
Wave Runup	R:	ft	13.585	
Onshore Wind Velocity	U:	ft/sec	16.878	
Deepwater Wave Height	H0:	ft	5.929	
Relative Height	ds/H0:		1.855	
Wave Steepness	H0/(gT <sup>2</sup> ):		0.000819	
Overtopping Coefficient	$\alpha$ :		0.060000	
Overtopping Coefficient	Qstar $\theta$ :		0.150000	
Overtopping Rate	Q:	ft <sup>3</sup> /s-ft	7.998	

**Table 3**

ACES	Mode: Single Case	Functional Area: Wave - Structure Interaction		
Application: Wave Runup and Overtopping on Impermeable Structures				
Item		Unit	Value	
Incident Wave Height	Hi:	ft	8.600	<div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">Rough Slope Runup and Overtopping</div> 6772 Breakers Way  5.9 FT SLR  Design Beach No Revetment (revised)
Wave Period	T:	sec	15.000	
COTAN of Nearshore Slope	COT( $\phi$ ):		100.000	
Water Depth at Structure Toe	ds:	ft	11.000	
COTAN of Structure Slope	COT( $\theta$ ):		10.000	
Structure Height Above Toe	hs:	ft	14.500	
Rough Slope Coefficient	a:		0.956	
Rough Slope Coefficient	b:		0.398	
Wave Runup	R:	ft	6.515	
Onshore Wind Velocity	U:	ft/sec	8.439	
Deepwater Wave Height	H0:	ft	5.929	
Relative Height	ds/H0:		1.855	
Wave Steepness	H0/(gT <sup>2</sup> ):		0.000819	
Overtopping Coefficient	$\alpha$ :		0.090000	
Overtopping Coefficient	Qstar $\theta$ :		0.200000	
Overtopping Rate	Q:	ft <sup>3</sup> /s-ft	8.624	

The amount/height of water and the velocity of this water can be calculated using the following empirical formulas provided by the USACOE based upon the calculated overtopping rate  $q$ .

$$q = 0.5443\sqrt{g}h_1^{3/2} \qquad v_c = \sqrt{\frac{2}{3}gh_1}$$

For 8 ft<sup>3</sup>/s-ft, the height of the overtopping bore is about 2 feet. This bore will go over the top of the revetment and loose height as it flows back towards the proposed addition. The proposed structure is setback about 40 feet from the top of the revetment. The wave overtopping bore will be reduced in height before it reaches the proposed structure. The post construction site elevation at the proposed structure is about +18 feet NAVD88 and, with an overtopping bore of about 1 foot in height (due to distance from the revetment), the effective future flood elevation in consideration of SLR at the proposed development is about +20 feet NAVD88 with the revetment in place and maintained.

For 8.6 ft<sup>3</sup>/s-ft, the height of the overtopping bore is about 2.0 feet. This bore will go over the berm of the beach, which will be lower than the finished floor (FF) of the structure and loose height as it flows back to the proposed garage/addition. The maximum site elevation, in consideration of SLR, at the proposed structure is about +18 feet NAVD88 and, with an overtopping bore of about 2 feet in height, the effective future flood elevation in consideration of SLR at the proposed development is also about +20 feet NAVD88 with the revetment removed.

## GSI DESIGN FLOOD ELEVATION DISCUSSION

GSI used a traditional deterministic method for analysis of the design flood elevation. The US Army Corps of Engineers ACES computer modeling was used to calculate the runup bore height under the design conditions. The design flood elevation is the calculated bore height above the berm crest elevation or site elevation. The ACES type analysis is an acceptable method according FEMA guidelines (Wave Runup and Overtopping, FEMA Coastal Flood Hazard Analysis and Mapping Guidelines Focus Report, February 2005). The purpose of the GSI analysis is to determine the design flood elevation in consideration of SLR. The proposed development is not currently in the FEMA VE Zone but it may be in the VE Zone in the future, if the revetment is removed. Because the project is required by local and state regulatory agencies to be designed without the revetment in place the development needs to be constructed on piles in conformance with FEMA V/VE Flood Hazard Zone requirements. GSI will provide the wave runup elevations on the DBP. The GSI wave runup elevation calculation assumes an infinite slope, which does not occur at this site. The proposed building could be within future VE Zone so the other, less onerous, special flood zones are not considered.

## GSI Revetment Case

This case is provided because it depicts real conditions that will occur over the life of the development. The calculated revetment bore overtopping height, with SLR, is 2.0 feet. Using the calculated bore height ( $h_1$ ) and the velocity ( $v_c$ ), then  $h_1 v_c^2 = 85 \text{ ft}^3/\text{sec}^2$  which is less than  $200 \text{ ft}^3/\text{sec}^2$  and places the site landward of the revetment in an AO zone by definition. However, the project is required to be designed as being in the VE Zone. The lowest top of the revetment is at about +18 feet NAVD88. The design flood elevation behind the revetment would be the elevation of the revetment plus the height of the bore or about elevation +20 feet NAVD88. As the overtopping bore propagates across the site, the height of the bore is reduced as it travels at a rate depending upon the roughness of the flow surface. The GSI DFE area is depicted on the attached DBP. The wave runup elevation is 13.5 feet NAVD88 + 13.6 feet runup or about +27.1 feet NAVD88. This elevation assumes that the wave is running up on an infinite slope, which does not exist on the site.

## GSI No Revetment

The calculated wave runup on a 1/10 sloping cobble beach overtops elevation + 17 feet NAVD88 with a bore height  $h_1 = \sim 2$  feet and a velocity  $v_c = 6.5$  ft/sec. This water height and velocity ( $h_1 v_c^2 = 86 \text{ ft}^3/\text{sec}^2 < 200 \text{ ft}^3/\text{sec}^2$ ) places this location in the AO Zone. In this case the upper limit of the water elevation would be the berm height +17 NAVD88 +  $\sim 2$  feet or  $\sim +19$  feet NAVD88. Due to the uncertainty of future site elevations, uncertainty of SLR, and inaccuracy of wave runup calculations, the future DFE is determined to be +20 feet NAVD88. If the revetment is removed, it is likely that the proposed building would be in the FEMA VE Zone. The 75 year design wave runup elevation on an infinite slope (with no revetment) is 13.5 feet NAVD88 + 6.5 feet runup or  $\sim +20$  feet NAVD88.

The future flood zone designation for the development is VE. A review of ASCE24-14 relative to conditions of the subject site indicates that the bottom of the lowest horizontal structural member should be BFE + 1' or the Design Flood Elevation (DFE), whichever is higher. The development is in the current FEMA X Zone with no BFE. The DFE for the site per ASCE24-14 would be the BFE + 1'. The lowest floor for the proposed development is a non-habitable garage which can be located at grade ( $\sim +20$  feet NAVD88) per FEMA requirements. The habitable portion of the structure is about 10 feet above the future potential flood elevation, and in conformance with flood plain requirements.

**Tsunamis**

The State of California (2009) shows that the site is mapped within a tsunami inundation zone (Pitas Point Quadrangle). The tsunami inundation map use is for evacuation planning only. The County of Ventura has developed a tsunami alert and evacuation plan. This plan recommends that coastal communities within the potential areas of inundation upgrade their tsunami education programs. The County has posted signs throughout the community showing tsunami evacuation routes, tsunami evacuation center locations, and the limits of the tsunami hazard zones. The limit of the tsunami inundation zone at the site is landward of the proposed residential structure.

**HAZARD ANALYSIS VERIFICATION**

The USGS has also developed a model called the Coastal Storm Modeling System (CoSMoS) for assessment of the vulnerability of coastal areas to SLR and the 100-year storm, <https://data.pointblue.org/apps/ocof/cms/>. Using the modeling program, the vulnerability of the site to different SLR scenarios and the 100-year storm can be assessed. Figure 8 is the output from the CoSMoS for the Breakers Way site. You will note that under 175 cm (5.7 feet) of SLR the area, the proposed development is just within the flooding or inundation zone. The CoSMoS results are similar to the results herein, and show reasonable agreement. The NOAA 2022 SLR modeling tool shows results similar to the CoSMoS modeling.

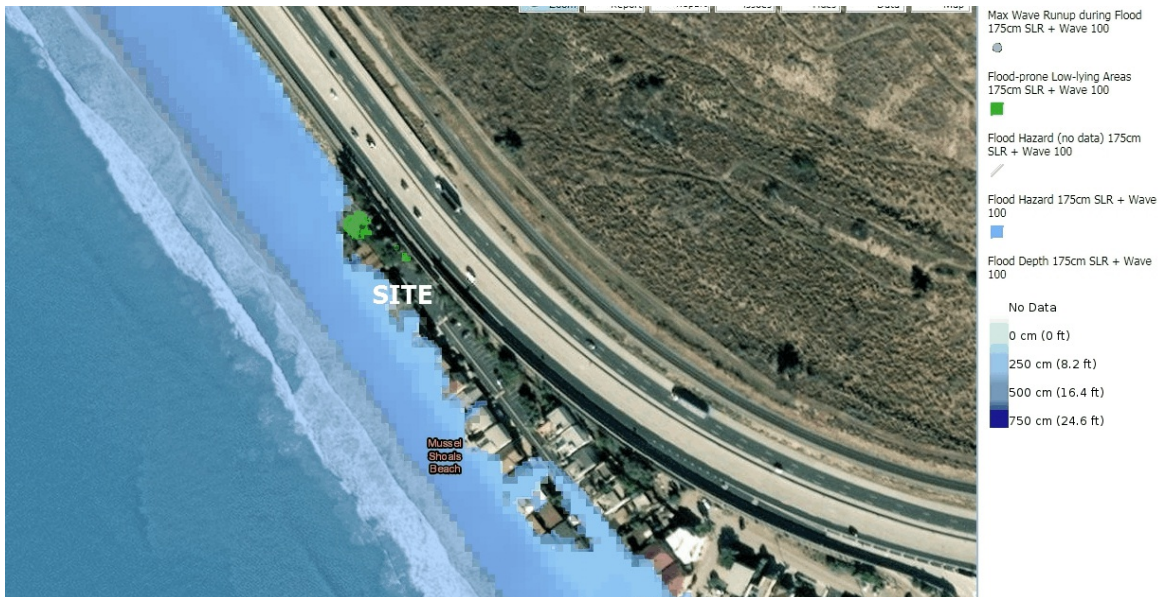


Figure 8. Output graphic from USGS CoSMoS analysis with 5.7 feet (175 cm) SLR.

## COASTAL HAZARD DISCUSSION

### Future Shoreline Erosion Hazard

It is highly speculative to assume that the existing permitted revetment could, or will be, removed at any time in the future in front of the subject property, or in its entirety, because it protects properties to either side of the subject site. Removal would jeopardize these properties. As stated in the CCC Sea-Level Rise Policy Guidance document (Appendix B, page 237), "predictions of future beach, bluff, and dune erosion are complicated by the uncertainty associated with future waves, storms and sediment supply. The CCC Sea Level Rise Policy Guidance also recognizes that the future erosion rate may be lower than current rates due to more erosion resistant material being exposed. The CCC staff typically uses the highest historic erosion rate as an estimate of the future erosion rate with sea level rise. As stated above, with the shore protection in place, the erosion rate for the next 75 years will be 0.0 ft/yr. In addition, the USGS historical shoreline movement analysis does not take into account that as the beach erodes, the littoral material changes. While the SLR document generally recommends use of the higher rate, it specifically acknowledges that based on site specific evidence, a lower rate may be used provided "future erosion will encounter more resistant material, in which case lower erosion rates may be used."

This is exactly what will occur along this beach. Once the sand is gone, the "future erosion" will encounter cobbles and the erosion resistant claystone. Cobbles do not behave the same as sand when subjected to waves. Cobbles do move/transport, but at a rate that is much slower than sand. Cobble beaches tend to be steeper because the beach slope is a function of the littoral material grain size. Cobble transport is bed load transport, while sand transport is suspended load transport. Stated very simply, the transport rate of any beach material is inversely proportional to the weight. That is to say, the larger the sediment size, the heavier it is, and the slower it moves. The beach cobbles are about 6 inches (146 mm) or greater in size as compared to sand at about 0.1 mm in size. A conservative estimate of the erosion rate of the cobbles versus the sand is that the cobble erode at a rate of 1/3 or lower than the rate at which the sand erodes. The proposed design and use of the "no seawall" BFE allows for the beach to erode beneath the structure. With the seawall in place, no erosion will occur. If the revetment is removed, the shoreline can move to the structure and be within the influence of erosion and wave runup. However, the proposed development will not be impacted due to its elevation and provided that it is constructed on a pile foundation. GSI recommends that the development be constructed on a pile foundation per the project geotechnical engineer's recommendation.

## Flooding Hazard

The proposed structure should not be subject to damaging short-term flooding from wave runup attack if the recommendations herein are incorporated into the project design. With revetment in place, and the habitable finished first floor (FF) above elevation +21 feet NAVD88 (BFE + 1 foot), the FF is above any flooding elevation due to wave overtopping. The garage needs to be at about the elevation of the road for vehicle access and egress. Due to the uncertainty of future site elevations (erosion), uncertainty of SLR, and inaccuracy of wave runup calculations, the lower three feet of the garage wall parallel to the shoreline should be designed with blow out panels to allow wave bores to flow through the garage. The garage may be subject to future flooding. This is allowed under FEMA.

## Wave Attack & Wave Runup

With no revetment in place, waves will break seaward of the piles and wave runup will reach to and or beneath the development the future. Wave runup beneath the pile supported structure may strike the bottom of the structure or the back of the at grade garage wall. The proposed pile supported foundation and the garage wall will be subject to wave forces. Wave runup may strike the bottom of the foundation as the beach erodes beneath the building. The wave runup and overtopping analysis calculated a wave bore height beneath the building of about 2 feet. Using Equation VI-5-184 from the Coastal Engineering Manual the surge force per unit horizontal width is ~1,200 lbs.

The design engineer for the foundation will determine the proper design loading on the bottom of the garage floor and the shore parallel garage wall in consideration of the above information. Typically, the seismic forces of the accelerated building mass on the piles are much greater than the potential breaking wave loads. The structural engineer will be provided these force calculations for his design.

In summary, the proposed development is reasonably safe from coastal hazards including shoreline erosion, wave runup, and flooding without the shore protection in place. Provided the recommendations (foundation type, FEMA compliance, elevation, and potential wave runup forces) in this report are incorporated into the project design.

## **CALIFORNIA COASTAL COMMISSION SLR POLICY GUIDANCE INFORMATION**

**Step 1. Establish the projected sea level rise range for the proposed project's planning horizon using the best available science, which is NOAA 2022 report.**

Using the COPC SLR estimate, over the project design life, the range in the year ~2097 is between 2 feet and 5.9 feet. This is the projected sea level rise range for the proposed

project. The GSI analysis used the high emissions estimated SLR.

**Step 2. Determine how physical impacts from sea level rise may constrain the project site, including erosion, structural and geologic stability, flooding, and inundation.**

This report discusses the physical impacts from SLR and the corresponding project constraints.

**Step 3. Determine how the project may impact coastal resources, considering the influence of future sea level rise upon the landscape as well as potential impacts of sea level rise adaptation strategies that may be used over the lifetime of the project.**

In the future, the revetment can be increased in height as an adaptation strategy to manage wave overtopping onto the property. It should be noted that the project will provide protection to the public street and railroad located behind it. It should also be noted that the garage addition is designed such that the revetment is not in place.

**Step 4. Identify alternatives to avoid resource impacts and minimize risks throughout the expected life of the development.**

The impact of SLR on the narrowing beach and lateral access cannot be mitigated at this site alone.

**Step 5. Finalize project design and submit CDP application.**

GSI is the coastal engineer for the project and has provided this information to the project designer and the applicant.

## CONCLUSIONS

The existing revetment is not necessary to protect the proposed garage development provided the recommendations in the report with regards to foundation type (pile foundation), garage blow out walls, habitable FF elevation, and potential wave loading are incorporated into the design. It is GSI's professional opinion that the revetment should remain in place to insure the integrity of the adjacent properties, protect Breakers Way access, the existing infrastructure (water, sewer, natural gas, and electrical services), and the railroad. The revetment should be inspected when the beach is at the lowest level. The revetment should be maintained. Maintenance typically consists of repositioning stones that have rolled off of the structure. In as much as the revetment may be subject



to overtopping during future extreme events, the site drainage paths should be maintained (clear) to convey wave overtopping waters.

The proposed development is entirely on private property and well above the mean high tide line so it will not impact lateral public access. If the revetment is removed, the only portion of the development that may be subject to direct wave attack (other than the garage wall), is the vertical piles, which the development will be supported upon. The adjacent road may be subject to temporary flooding if the revetment is removed. The piles should extend well below the maximum beach scour depth. The only time that the piles will interact with the ocean is under conditions when the beach is eroded back underneath the structure (with no revetment in place).

## RECOMMENDATIONS

- The existing revetment is not necessary to protect the proposed garage development provided it is founded on piles and elevated as recommended in this report. GSI recommends that the revetment remain in place to insure the integrity of the adjacent properties, to protect Breakers Way, and to protect the public bike path.
- The site has been subject to wave splash in the past and the proposed development will be subject to wave overtopping in the future. The proposed habitable finished floor is well above the sustained flooding elevation.

We appreciate this opportunity to be of service. Should you have any questions, please do not hesitate to contact the undersigned at (760) 438-3155.

Respectfully submitted,



**GeoSoils, Inc.**  
David W. Skelly MS, PE  
RCE#47857



Attachments: APPENDIX A Design Beach Profile

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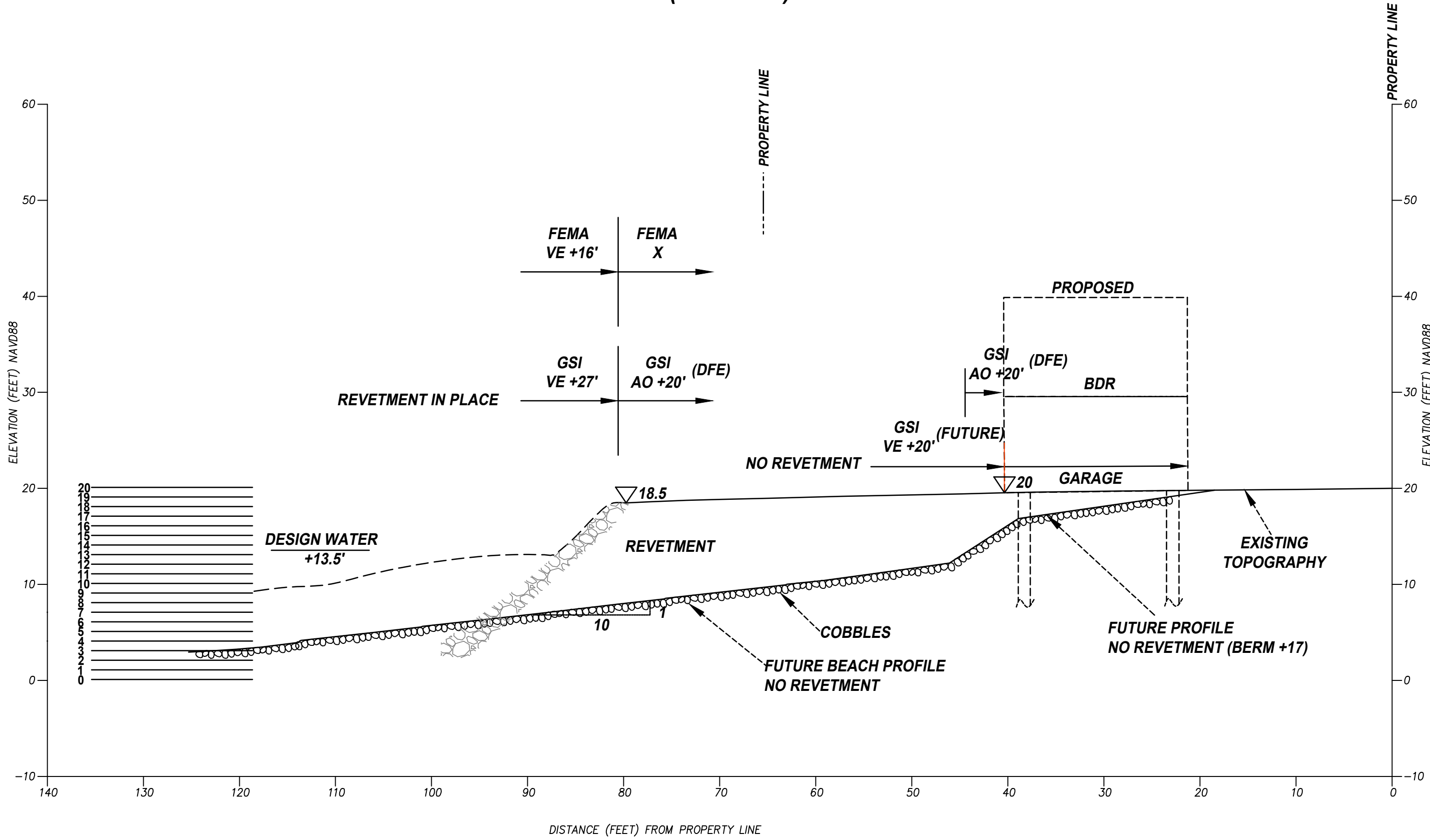
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# **GeoSoils Inc.**

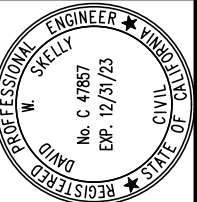
## **APPENDIX A**

# 6772 BREAKERS WAY DESIGN BEACH PROFILE (REVISED)



REVISIONS	BY
10/17/22	

DRAFTING BY:



**GeoSoils, Inc.**  
 Geotechnical • Geologic • Coastal • Environmental  
 5741 Palmer Way, Carlsbad, CA 92010  
 760-438-3155

TITLE: **DESIGN BEACH PROFILE**  
**6772 BREAKERS WAY**  
 CLIENT: BENEDEK FAMILY TRUST  
 6772 BREAKERS WAY  
 VENTURA CA - 93001  
 W.O. S8114

CHECKED
DATE 5/17/22
SCALE
JOB NO.
SHEET <b>S1</b>
1 OF 1 SHEETS



**GEOTECHNICAL EXPLORATION REPORT  
Addition to the Existing Single Family Residence  
6772 Breakers Way  
Ventura, CA 93001**

**CLIENT:  
Benedek Family Trust  
c/o Peter Benedek  
6772 Breakers Way  
Ventura, CA 93001**

**December 13, 2021  
Lab No. 35945-3  
File No. 21-8280-3**

County of Ventura  
Planning Director Hearing  
Case No. PL22-0033  
Exhibit 8 - Geotechnical  
Exploration Report

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### ATTACHMENTS:

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- APPENDIX A: Geotechnical Map
- APPENDIX B: Log of Borings
- APPENDIX C: Field/Laboratory Test Data
- APPENDIX D: Engineering Calculations

## I. INTRODUCTION

An attached new 2-story addition is being planned along the East side of the existing residence addressed as 6772 Breakers Way, Ventura, CA. The improvement is planned to include a new 2-car garage with a second story bedroom addition over top, fencing, decking, handrails, & guardrails.

The residential parcels (APN 060-0-082-625 & 060-0-082-635) reportedly consist of 5,040 square feet. The existing and proposed addition building pads are relatively flat and ultimately step down to sea level along the south side of the parcel. The existing pad(s) appear to have been previously graded before original development. The subject building area is relatively flat with apparent surface sheet flow drainage trends south at ~1-2%.

It is the purpose of this exploration to provide sufficient data concerning the characteristics of the soils in the supporting soil mantle to enable a suitable foundation design intended to support the planned improvement within acceptable long term settlement limits. The scope of this exploration does not include analysis of existing or proposed cut and/or artificial fill slopes, geologic structures, or associated geologic features such as faults, fractures, landslides, or assessment of potential geologic movement. This exploration was conducted in accordance with presently accepted soils mechanics engineering procedures consistent with the scope of the stated development, and no warranty or uniformity of soil conditions between borings is implied.

## II. SCOPE OF WORK

The scope of work performed in preparation of this report included:

- Review of available relevant geotechnical reports, plans, photographs and maps<sup>1</sup>.
- Excavation, logging, obtaining bulk and insitu sampling of one (1) test boring.
- Execution of programed geotechnical field and laboratory soil mechanics tests.
- Preparation of a preliminary Geo-Hazard Risk Assessment for your information.
- Determination of current ASCE-7 (2016) site specific lateral seismic design coefficients.
- Review of data, synthesis, evaluation, and preparation of this report. Appropriate geotechnical developments recommendations.

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<sup>1</sup> See *References Cited* herein for a complete listing of referenced reports.

### III. VICINITY MAP

To aid and simply review of this report the subject property has been approximately located on a Goggle Maps satellite view. The subject property is indicated by a red site-arrow.



FIGURE 1 - Vicinity Map

### IV. APPENDICES

- Appendix A: Site Sketch:** A copy of the project survey plan was used to create a geotechnical map. The plan is simplistic; however, it does include the applicable foundation configuration, test locations and other pertinent information. The plan is included as **Enclosure A**.
- Appendix B: Log of Test Boring:** The test boring was logged in the field. Laboratory test data were then added. The profile was then interpreted by the undersigned registered engineer, finalized, and summarized herein as **Enclosures B-1**.
- Appendix C: Field/Laboratory Test Data:** Field and laboratory test data performed during this study are included in this appendix. Test data include maximum density optimum moisture determination, expansion index, graphically displayed insitu consolidation, direct shear testing, sieve, and hydrometer analysis, UCSC classification and near surface soil corrosive series test data.
- Appendix D: Engineering Calculations:** Calculations provided herein include allowable shallow footing bearing capacities, active and passive soil pressures, coefficient of friction determination as well as a friction developed deepened pier embedment chart. USGS-ASCE-7 (2016) site specific seismic design Criteria is also provided.



## V. PRELIMINARY GEO-HAZARD RISK ASSESSMENT

A preliminary geo-hazards risk assessment relative to the subject parcels is summarized below. The assessment is based upon The County of Ventura Hazard information along with USGS Maps. The assessment is provided solely for informational purposes.

- Faulting:** The closest significant local active fault to the subject parcel is the Red Mountain Fault. The most significant regional active fault is the San Andreas Fault. The San Andreas Fault is reportedly capable of producing a 8.0 magnitude event.
- Ground Shaking:** This is considered to be a primary hazard on this and most Southern California properties. The subject parcel resides in an area of potentially strong seismic shaking. The seismic design criteria (ASCE-7 – 2016) assigned to this project takes this and other factors into account to mitigate this hazard.
- Liquefaction:** The subject parcel may reside in a designated liquefaction area. However the subject parcel is underlain by shallow loose soils and is underlain by very dense formational materials. Based on this data the risk of liquefaction at this site is considered low.
- Seiche:** Is defined as an earthquake induced wave in a confined body of water. The Ocean, Pools or ponds could produce episodes of temporary flooding during a local seismic event.
- Tsunami:** The subject parcel resides in a designated Tsunami inundation hazard area. The risk of Tsunami impacting the subject parcels is considered moderate.
- Landslide/Flow:** The subject property does not reside within a zone designated to be at risk of significant landslide, mudflow, debris flow or earthquake induced landslides. Ascending hillslopes located north of the 101 freeway may be prone to landslide and/or mud flows. No landslides were observed on or immediate to the subject parcel. Earthquake indicated deformation of near surface soils is possible but should be effectively mitigated by use of deepened pier footings.
- Subsidence:** The subject parcel does not reside within a designated subsidence area. Subsidence could be realized in artificial fill over time, however, differential movement beneath structural components should be effectively mitigated by construction of deepened pier footings. Formational materials do not appear to be subject to measurable subsidence. The risk of soil hydro-consolidation at this site is considered low to remote.
- Expansive Soil:** The soils and formational materials encountered are classified as of low expansive potential. When designed and constructed as recommended herein foundation elements and slabs on grade should perform without significant long term expansive soil movement and/or damage.
- Flood Hazard:** The subject building area and parcels are virtually at sea level and reside in a designated flood hazard zone. The potential for flooding appears moderate to severe during periods of moderate to severe weather.
- Erosion:** Artificial fills and native topsoil's are potentially susceptible to episodes of erosion and scour when subjected to concentrated water flow. Design, implementation, and maintenance of proper drainage elements should be capable of effectively mitigating this potential hazard. Formational materials appear relatively resistant to erosion.

## VI. SUBSURFACE EXPLORATION

The soil mechanics and engineering properties of subsurface soils which are anticipated to be of primary influence to planned improvement was explored by one (1) 4"-diameter truck mount continuous flight auger boring excavated to a depth of ~50' below the present ground surface. The drilling method employed is consistent with ASTM D1452 procedures.

During excavation insitu and bulk soil samples were obtained at regular programmed intervals. The purpose of sampling is for engineering identification and laboratory testing including but not necessarily limited to:

- (ASTM D 2488) Description and identification of soils
- (ASTM D 2487) Classification of soils for engineering purposes
- (ASTM D 421) Dry preparation of soil samples
- (ASTM D 2216) Moisture content determination
- (ASTM D 1556) Density and unit weight (sand cone method)

• (ASTM D 1557)	Laboratory compaction characteristics of soil
• (ASTM D 422)	Mechanical and hydrometer analysis
• (ASTM D 4829)	Expansion potential and classification
• (ASTM D 2435)	One dimensional consolidation
• (ASTM D 3080)	Direct shear test of soils
• (CTM 417)	Soluble Sulfates
• (CTM 422)	Soluble Chloride
• (ASTM D 4972)	pH
• (CTM 643)	Resistivity

Soil samples referred herein as insitu, or undisturbed, were obtained by driving a 12" - 18" long California Sampler in accordance with ASTM D3550 "*Ring-Lined Barrel Sampling of Soils*". Methods presently available for recovery of samples termed insitu, result in some degree of disturbance to the insitu nature of the soil samples. The careful management of these samples, however, provide a useful tool for engineering evaluation of subsurface soil performance.

Additional sampling included *Standard Penetration Test(s)* SPT per ASTM D1586 to aid in determining insitu soil strength, evaluation of the potential of site liquefaction and dynamic settlement. The sampler consists of an 18" long, 1.5" I.D. diameter sampler, with liners, driven by a 140 lb. hammer falling 30" employing a mobile Safe-T-Driver wireline drum hoist fitted with manual release.

## VII. SUMMARY OF FINDINGS

- 7.1 Free ground water was encountered @ a depth of ~14' during excavation of the test boring. The native soils & formational materials encountered above the free water elevation were damp.
- 7.2. Nearly all the soils and formational materials encountered (0-50' deep) are classified as non to low expansive Sands, with an expansion index (EI) of 0. Minor interbedded strata of clayey materials were encountered. They clayey materials may be slightly to moderately expansive. However, they do not appear to be a factor in foundation design.
- 7.3 The results of consolidation tests indicate native soils & formational materials are not sensitive to the addition of water.
- 7.4 Given the level of soil soluble sulfates present in the near surface soils all concrete in contact with soil should be designed as "moderate sulfate exposure". See Section X of this report for specific details and discussion.
- 7.5 **Based upon subsurface soils engineering data obtained, tested, and reviewed during this exploration, the site is considered suitable for support of the planned improvements when geotechnically prepared as recommended herein**

## VIII. LIMITATIONS

The data findings and design recommendations provided herein are intended as an instrument of professional service. The scope of work performed in preparation of this report is consistent with the work prescribed by the client and included within *Pacific Materials Laboratory, Inc.* cost proposal and agreement formally executed prior to the start of work on this report. *Pacific Materials Laboratory, Inc.* authorizes use of this document as needed, by the client, his professional representatives or consultants as necessary to further planning, development and construction of the specific project defined, and limited to, the subject of this report. This document is the exclusive property of *Pacific Materials Laboratory, Inc.*, and is not to be used in whole or part for any other use except as defined herein without prior written authorization by *Pacific Materials Laboratory, Inc.*

All building sites are subject to elements of risk which cannot be wholly identified and/or entirely eliminated. Furthermore, building sites in Southern California are subject to many different types of geotechnical hazard potentials including but not limited to the effects of water infiltration, erosion,

inappropriate drainage, static total settlement, static differential settlement, expansive soil movement, chemical alteration, seismic shaking, seismic-induced ground and slope deformation, seismic-induced settlement, liquefaction, hydro consolidation, mud flow, and land sliding. Some, but not all the listed potential geotechnical hazards may be evaluated within the scope of this report. Accordingly, the subject project may be at *risk* from some geotechnical hazard as of yet not evaluated.

Acceptable long-term performance is highly dependent on the property owner properly maintaining the site (*such as repair and maintenance of drainage facilities, slopes, etc.*) and by immediately correcting any and all deficiencies discovered throughout stewardship of the property. It is not possible to completely eliminate all hazards or inherent risks. Even with a thorough subsurface exploration and testing program, significant insitu geotechnical variability and latent defects between test locations may exist. Latent defects can be concealed by earth materials, deposition, geologic history, and preexisting site improvements. Such is made or intended in connection with findings, data or recommendations included in this report (*or by any other oral or written statement*) other than the services performed which were provided within the limits prescribed by and agreed to by the client. *Pacific Materials Laboratory, Inc.* warrants that the services performed in preparation of this report are consistent with the limits prescribed by the client and with generally accepted thoroughness and competence of the geotechnical and geological engineering profession.

The recommendations presented herein should be considered applicable for a period of not greater than 12 months from the date of this document. Reports older than 12 months should not be relied upon for design and/or plan check without a currently dated (not greater than 12 months) site specific soils engineering update report.

It is the responsibility of the client, or of his representative, to ensure that the information and geotechnical recommendations provided herein are conveyed to the project architect(s), engineer(s), contractor(s) and/or building officials and that the intent and spirit of these geotechnical recommendations are incorporated into plans and specifications, and that these recommendations are in turn properly implemented in the field during construction.

Furthermore, it is the sole responsibility of the contractor(s) to employ all necessary safety procedures during construction. *Pacific Materials Laboratory, Inc.* cannot be held responsible for the safety of other than our own personnel on or immediate to the site. The contractor(s) should immediately notify the owner in writing if he considers any of the recommended actions discussed herein to be unsafe. The project contractor(s) should not start or continue any work or service that is considered to be at risk or unsafe by any effected party.

## **IX. RECOMMENDATIONS**

It is our understanding that a new attached 2- story addition is planned along the East side of the existing single family residence. New addition foundations will be supported by deepened pier footings given the potential for beach erosion, storm surge potential for Tsunami and near surface cohesionless soil deformation potential during periods of local seismic events. Concrete slabs on grade will be prepared by a limited removal and re-compaction rough grading activity.

The following recommendations are based solely upon the afore described mode of construction. The project site, grading and foundation plans should be submitted to *Pacific Materials Laboratory, Inc.*, for review and written comment prior to construction. Proposed changes in construction mode should also be reviewed by *Pacific Materials Laboratory, Inc.*, and as required, recommendations modified in writing prior to construction.

### **A. ROUGH GRADING PREPARATION**

- 9.1 All foundation elements to be removed, slabs on grade (if any), subsurface utilities (*if any*) along with surface vegetation (*if any*), root structures and debris shall be removed from the improvement area prior to the start of rough grading. A careful search should be made during rough grading activity to remove and/or relocate any and all debris/organics/septic system components/water wells/utilities/etc.

- 9.2 Existing tree and/or large shrub roots (*if any*) residing within the limits of the proposed improvement should be removed and careful attention should be given to completely removing all root structures. Once cleared the cavity should be observed and approved by a representative of *Pacific Materials Laboratory, Inc.* When approved, the areas should be scarified an additional 6 inches in depth, uniformly brought to optimum moisture content and compacted to 95% relative compaction.
- 9.3 Areas to receive artificial fill, (*if any*) should be removed to a minimum depth of 48 inches below present grade. A representative of *Pacific Materials Laboratory, Inc.*, should be notified to observe and approve the exposed cavity prior to placing artificial fill. Upon approval, the area should then be scarified an additional 12 inches in depth, uniformly brought to near optimum moisture content and compacted to a minimum of 95% relative compaction.
- 9.4 Preparation to receive concrete slabs on grade driveways, walkways, or other hardscapes should include removal to a minimum depth of 24 inches below the finished subgrade elevation. A representative of *Pacific Materials Laboratory, Inc.*, should be notified to observe and approve the exposed cavity prior to placing artificial fill. Upon approval, the area should then be scarified an additional 6 inches in depth, uniformly brought to near optimum moisture content and compacted to a minimum of 95% relative compaction.
- 9.5 Area preparation to receive structural artificial fill (*if any*), need only extend up to the existing exterior building lines.
- 9.6 Artificial fill (*if any*) should be placed in *horizontal* layers of *less* than 6 inches in depth, brought to near optimum moisture content and *uniformly* compacted to a minimum of 95% relative compaction prior to placing the next lift of artificial fill.
- 9.7 The laboratory compaction standard should be performed in accordance with ASTM D1557 procedures. Compaction tests should be performed in accordance with ASTM D1556 (*sand cone method*) or ASTM D3017 (*nuclear method*).
- 9.8 Compaction should be attained employing a dedicated mechanical compactor. The use of wheel rolling is not considered appropriate.
- 9.9 Actual site conditions may vary from conditions interpreted from this study. Therefore, the final limits/recommendations pertaining to the rough grading activity will be determined by a representative of *Pacific Materials Laboratory, Inc.* during grading progress.

## **B. FOUNDATION DESIGN**

The following foundation design criteria is based upon successful completion of recommended rough grading preparation activities and verification that the soils resulting in the finished building pad are consistent in engineering properties with those encountered and tested herein. A final rough grading compaction/excavation report along with a geotechnical review of the subject foundation plans is required prior to the start of foundation excavation and construction. *Final* geotechnical foundation design recommendations will be presented upon conclusion of rough grading based upon the "*as-graded*" geotechnical conditions.

### **i. FOUNDATIONS, GRADEBEAMS AND SLABS ON GRADE**

- 9.10 All slab and foundation components should be designed by a California Registered Civil or Structural Engineer, experienced with similar structures, including experience with slabs on grade, deepened pier footing design and underpinning requirements included in the current Edition of the California Building Code (*CBC*).

- 9.11 *All interior and exterior (strip) footings and/or grade beams should be continuous and extend a minimum depth of 24 inches below the lowest adjacent grade and should be reinforced using a minimum of six (6) No. 5 reinforcing bars placed three (3) near the top and three (3) near the bottom of the footing or per structural design, whichever is greater. All shallow footings and gradebeams shall be fully supported by engineered deepened pier footings.*
- 9.12 *All spread footings should be excavated to the same minimum depth as continuous exterior footings and should be designed to uniformly distribute the impending loads to the underlying soils. Spread footings should be reinforced using a minimum of one (1) horizontal mat of No.5 reinforcing bars at 6 inches on center in two (2) perpendicular directions, placed a minimum of three (3) inches above the bottom of the excavation or sized per the requirements of the project structural engineer whichever is greater. The use of isolated footings is not recommended. All spread footings should be mechanically interconnected by continuous footings and/or grade beams and fully supported by deepened pier footings.*
- 9.13 *All concrete slabs on grade should be a minimum of 5 inches thick and reinforced with No. 4 rebar spaced at 16 inches on center each way. All slabs at grade should be underlain with a minimum of four (4) inches of clean compact coarse sand in which two (2) layers of 10-mil visqueen or equivalent moisture membrane should be embedded. All laps/edges of the visqueen shall be heat bonded to form a vapor/moisture proof joint. A minimum of 1" of compact sand should be provided between the concrete and the moisture membrane. The moisture membrane may be omitted in areas where flooring (*tile, linoleum, carpet*) is not planned. Hardwood floors planned over slabs at grade should incorporate an appropriate secondary vapor barrier and should be placed in strict compliance with manufacturer recommendations to assure acceptable service. (*Many wood flooring products are not intended for use in contact with concrete slabs at grade*).*
- 9.14 *Clean sand fill exceeding 6 inches in depth to be used for slab support should be mechanically compacted to not less than 95% relative compaction. Sand fill preparation and placement in excess of 6" in depth should be monitored and tested during the process by *Pacific Materials Laboratory, Inc.* Please notify our office a minimum of 48 hours in advance of required site visits.*
- 9.15 *Utility trench backfill underlying slabs at grade and/or utility trench backfill crossing footings should be mechanically compacted slightly above optimum moisture to a minimum of 95% relative compaction. All trenches backfill should be tested for compliance and approved by *Pacific Materials Laboratory, Inc.* prior to the placement of concrete. Trenches running parallel to footings should be placed no closer than a 1:1 plane extending away from the bottom edge of the footing nor closer than five (5) feet from any portion of the foundation system.*
- 9.16 ***Because the soils underlying the proposed structure are considered non-expansive, presaturation of the soils underlying footings and slabs will not be required. However, to promote proper concrete curing and performance all subgrade soils and fill sand should be dampened and kept moist until concrete is placed.***

ii. **DEEPENED PIER FOOTING DESIGN**

- 9.17 *Friction developed pier footings should be provided for full support of the planned 2-story addition. Pier footings should be provided at all interior and exterior corners and at reasonable spans. The span between pier footings should be determined by the project structural engineer. Deflection control criteria should be provided considering all applied dead and live load environments including the weight of line footings, grade beams. The weight of the deepened pier footing may be omitted from load evaluation. At a minimum, pier footings should be 18" in diameter, or larger as determined by structural design. All pier footings should be reinforced throughout their depth as determined by structural analysis.*

- 9.18 Lateral resistance is considered necessary to mitigate potential effects of horizontal building movement resulting from artificial fill/colluvial topsoil lateral (*creep*) induced loading. This may be accomplished by design of pier footings to resist pertinent lateral loads. Pier footings should be designed to provide lateral restraint of not less than a uniform 1000 lb/ft of embedment depth of all soil (*from the ground surface to the interface of firm formational bedrock*). The depth to bedrock appears to vary from below the present residence subgrade elevation. Laterally restrained pier design should also account for the lateral reaction of the interconnected grade beams. Lateral passive resistance of 370 psf/ft of embedment into firm formational material is considered appropriate for deepened piers. The point of fixity may be assumed at a depth of five (5) feet into firm underlying bedrock formations.
- 9.19 Pier footings should be mechanically interconnected to structural members.
- 9.20 The allowable deepened pier bearing values presented below are based upon development of skin friction and include an appropriate factor of safety. The compressive and tensile structural capacities of the pier footings and grade beams should be verified by structural evaluation. Should additional Pier bearing capacity values be required please refer to **Enclosure-PIER FOOTING in Appendix D.**

MINIMUM PIER EMBEDMENT DEPTH TABLE				
Depth to Formation (ft)	Apparent Depth Loose Soil (ft)	Recommended Embedment Depth (ft)	Allowable Bearing <sup>1</sup> Capacity (lbs.)	Allowable Bearing Capacity Chart (Appendix D)
9	6	14	8,265	PIER FOOTING
9	6	20	21,518	PIER FOOTING

Table Footnotes: 1) measured from finished grade

- 9.21 The indicated values refer to total applied dead plus live load values for cast-in place drilled piers. Values may be increased 1/3 when considering wind or seismic loads.
- 9.22 All pier footings and grade beams should be fully reinforced per the minimum requirements of the ACI, CBC or by structural evaluation, whichever is greater.
- 9.23 Pier footings in groups should be spaced a minimum of 2.5 diameters on center and should be drilled and filled alternately with concrete permitted to set up at least 8 hours before drilling an adjacent pier.
- 9.24 Should free water migration may be realized during construction of pier footings water should be pumped and maintained in a drained condition until concrete has been placed unless an alternate method is submitted to and found acceptable to *Pacific Materials Laboratory, Inc.* prior to the start of pier footing excavation. It is anticipated that all deepened excavations will need to be shored to remain grossly stable during the construction process owing to the cohesionless nature of the material.
- 9.25 *Pacific Materials Laboratory, Inc.* should be requested to approve all pier footing and grade beam and line footing excavations prior to the placement of steel. The excavations should be neatly trimmed, level, and square and clear of all loose, slough, or moist materials. Periodic inspections by the project Geotechnical Engineer during grading/excavation operations by the project contractor(s) should be accommodated. Periodic observations will allow evaluation and mitigation of potential hazardous or unforeseen conditions.
- 9.26 Although this does not appear to be a factor at this time the setbacks of the primary and any secondary structures from top of toe of natural, cut and/or artificial fill slopes should conform to the current edition of the California Building Code (CBC). The bottom of the footings should horizontally setback from top of slope a minimum of 10 feet or H/3 not to exceed 40 feet, whichever is greater. The setback from the toe of slope should be a minimum of H/2 but not be greater than 15', where H represents the total vertical slope height. The setback from swimming pools shall be applied as at least one-half of the required building setback but not less than 10 from top or toe of slope.

- 9.27 Based upon compliance with the above recommendations, the maximum *total* long term static movement is estimated at less than L/150 while the maximum long term static *differential* movement is estimated at less than L/500 where L= the design span (*i.e., column spacing*).
- 9.28 It is recommended that the garage and residence be completely physically (*structurally and architecturally*) separated by not less than 1" horizontally. Each structural system should be engineered to provide its own structural foundation support and should be separated sufficiently to lateral impact during periods of local severe seismic activity.

### C. LATERAL BUILDING DESIGN LOADS

As required by Section 1613.9 of the 2016 CBC "...Every structure and portion thereof, including nonstructural components that are permanently attached to structures and their supports and attachments, shall be designed, and constructed to resist the effects of earthquake motions in accordance with ASCE 7 – 16, Section 12.4.2.2.3 ...."

Accordingly, based upon the results of subsurface exploration(s) conducted by *Pacific Materials Laboratory, Inc.*, the ASCE 7 compliant geotechnical lateral design criteria included in **Appendix D** entitled "ATC Hazards by Location" should be employed by the project structural engineer in design.

### D. RETAINING WALLS SEISMIC LATERAL PRESSURES

If the project design plans to incorporate landscape, slope stabilizing and/or basement retaining walls 6' or higher are subject to increased seismic resistant lateral design loads according to the CBC. **Section E** of this Update report includes specific static design criteria for retaining walls. These recommendations remain valid and should be reflected in design, plans and construction of all retaining walls, all classifications and all wall heights. For added clarification each class of retaining wall is discussed below.

- 1) **Landscape Retaining Walls** – Subject to normal static and seismic pressures should be designed as yielding walls provided they are fully drained.
- 2) **Slope Stabilizing Walls & Basement Walls** – Are subject to enhanced pressure as the result of unsupported (*daylighted*) bedding. These walls should be designed as non-yielding walls, fully drained with enhanced loading resistance.

In addition to static force design current codes also require design review for static plus potential seismic lateral pressures for walls of 6' or taller. Accordingly, it is recommended that the simplified Mononobe-Okaber (*M-O*) procedures extended to include the displacement method be employed along with the following design coefficients be considered for all categories of retaining walls 6' high or taller.

**Yielding Walls** – (Use ASCE-7 assigned peak ground acceleration modified per NEHRP<sup>1</sup>)

$$MCE^2 = 0.842$$

$$k_h MCE/2.5 = 0.337$$

$$\text{Maximum allowable displacement} = 6 \text{ inches}^2$$

**Non-Yielding and Basement Walls** (One-third to one-half of the assigned yielding walls  $k_h$ )

It has been argued that non-yielding walls already include both static and seismic coefficients given the enhanced design pressures. However, to remain conservative the following total design coefficient(s) could be applied:

$$K_h = 0.281 \text{ to } 0.421$$

$$\text{Maximum allowable displacement} = 0.0''^2$$

**Footnotes:**

1) NEHRP Part 2, Commentary 7.5.1

2) ASCE-7 Seismic Hazard by location (*Appendix D*)

**E. RETAINING WALLS:**

When possible, all retaining walls should be fully drained using one of the backdrain methods depicted on "Retaining Wall Backdrain Details" included herein. If full height, full length effective drainage cannot be provided, retaining structures should be designed for undrained conditions. Non-yielding, or at-rest equivalent fluid pressures should be used as warranted by the structural setting, such as for basement walls. Appropriate retaining wall design criteria is presented in **Table-3** "Retaining Wall Design Criteria" below for retaining walls supported via foundations extending a minimum of 12 inches into firm material.

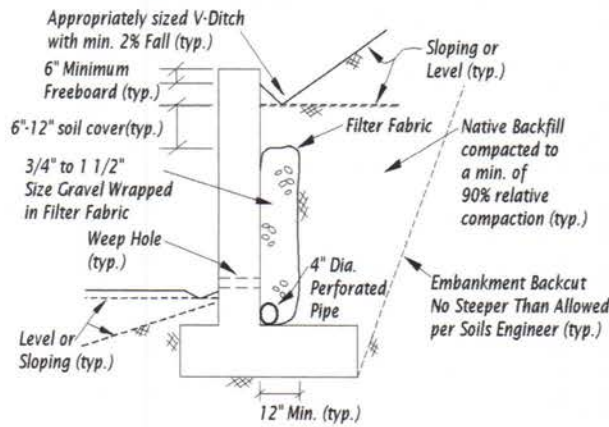
Design Condition	Equivalent Fluid Pressure				Coefficient of Sliding Friction	Allowable Bearing Capacity (i) (psf)
	Level Backfill (b,g,h)		Sloping Backfill (f,g,h)			
	Drained (d)	Undrained(e)	Drained (d)	Undrained(e)		
<b>Active</b> <sub>(a)</sub> (pcf)	30	43	48	86	0.56	2200
<b>At-Rest</b> <sub>(c)</sub> (pcf)	85	105	116	120	0.56	2200
<b>Passive</b> <sub>(j)</sub> (psf/ft)	368	368	100	100		

**TABLE – 3 “Retaining Wall Design Criteria****Table Notes:**

- a. Yielding cantilevered engineered retaining wall design.
- b. Level cohesionless compacted (90%) backfill with a sand equivalent  $\geq 30$  and an expansion index = 0.
- c. Non-Yielding and/or restrained engineered retaining wall design.
- d. A drained condition requires a continuous 4" diameter perforated pipe for runs up to 150' long and a 6" diameter pipe for runs up to 500' long be placed (perforations down) along the intersection of the retaining wall footing and stem prior to placing backfill. The drain shall be placed to achieve a minimum positive flow gradient of 1% normal to the run of throw all. The retaining wall backfill system shall comply with one of the methods prescribed on "Retaining Wall Backdrain Details" included herein.
- e. Undrained cohesionless backfill design values take into account the water accumulation in the backfill,
- f. Sloping cohesionless backfill up to a maximum 2:1 slope repose. Appropriate lateral pressure for steeper sloping surcharge and/or geologic conditions provided by Pacific Materials Laboratory, Inc. specific geotechnical conditions review.
- g. Wall backfill shall conform with options 1, 2, 3A or 3B as depicted on "Retaining Wall Backdrain Details". Sand backfill shall consist of clean sand conforming to SSPWC "Previous Backfill". Native soil backfill should be placed in lifts of 6 inches or less and mechanically compacted at optimum moisture content to 90% relative compaction. See "Retaining Wall Backdrain Details" for more detail.
- h. All retaining wall footing excavations, drains, materials and backfill activities should be observed, tested and approved by Pacific Materials Laboratory, Inc. during the construction process.
- i. Retaining wall footings should extend not less than 12" below the lowest adjacent ground surface, to the minimum depth required to satisfy foundation depths based upon the CBC Expansion Index or to the depth required to satisfy CBC setback requirements, whichever is greater.
- j. When combining the total lateral resistant forces of friction, passive pressure and/or mechanical anchorage the passive pressure shall be reduced by one-third. In addition, lateral resistance should only be applied when the designer is assured that the soil in contact with the embedment structure will remain in contact and provide resistance at all times.

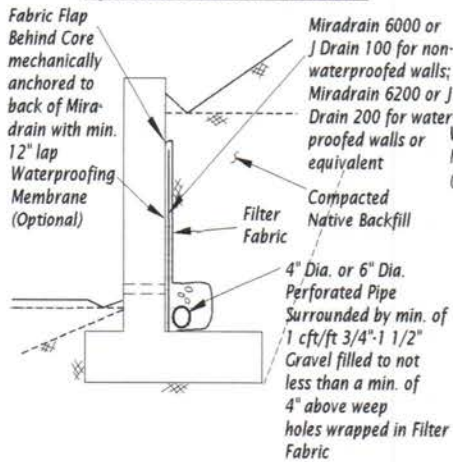


**Option 1: Gravel Wrapped in Filter Fabric**

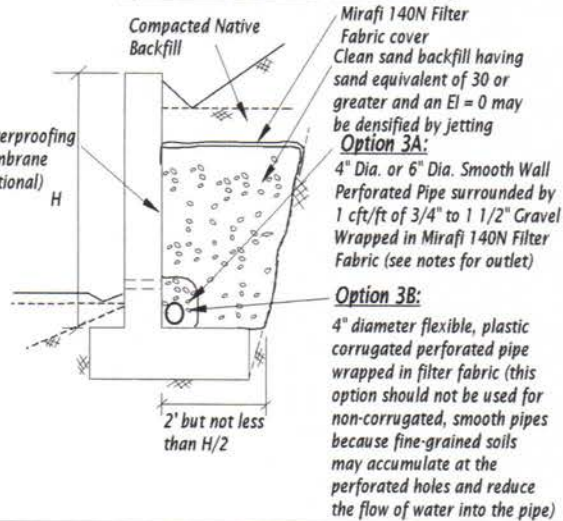


Proper Outlet(s) Should be Provided for all Gravel and Pipe Backdrains  
See Notes Below for Detail

**Option 2: Geotextile Backdrain**



**Option 3A & 3B: Clean Sand Backfill**



**Notes:**

- Pipe should conform to ASTM D1527 Acrylonitrile Butadiene Styrene (ABS) SDR35 or ASTM D1785 Polyvinyl Chloride plastic (PVC), Schedule 40, Armco A2000 PVC, or approved equivalent. Pipe should be installed perforations down.
- Filter fabric should be Mirafli 140N, 140NS, Supac 4NP, Amoco 4545, Trevira 1114, or approved equivalent. All laps shall be a min. of 24".
- All drain piping should positively drain @ not less than 1 percent.
- Outlets for gravel heeldrains should connect to solid 4"-diameter pipe. Proper sealing should be provided at the pipe insertion enabling water to run from the gravel portion into rather than outside the pipe.
- Waterproofing membrane may be required for task specific retaining wall such as a stucco or basement wall.
- Weepholes should be 2" minimum diameter and provided at 15' centers throughout the length of the wall. Caution: weep hole cores should be constructed before filter fabric placement behind the wall. When exposure is permitted, weep hole should be located at ~3" above finished grade. If exposure does not permit (such as for a wall adjacent to a sidewalk/curb), a pipe under the sidewalk to discharge through the curb face or equivalent should be provided. Open vertical masonry joints (i. e., omit mortar from joints of first course above finished grade) may not be substituted for weepholes. Screening such as a filter fabric should be provided behind for weepholes to prevent earth materials from piping out.

**Retaining Wall Backdrain Details**

## X. CORROSIVE SOIL TERMS & RECOMMENDATIONS

Common chemicals found in soil, when combined with water, can lead to adverse chemical reactions impacting hardened concrete, reinforcement and buried metallic piping overtime. In order to assess this potential hazard relative to planned improvements, a preliminary series of chemical tests have been completed on the most common, near surface, soil type. As a practical matter each soil type in direct contact with hardened concrete and/or buried ferrous metal piping should be tested for corrosive potential. Accordingly, additional testing is strongly recommended during the development phase of construction to ensure appropriate mitigation measures are employed. A short discussion of each chemical test performed and its potential impact on the subject project follows:

SOIL TYPE	pH ASTM D 4972	SOLUBLE SULFATES CTM 417 (ppm)	SOLUBLE CHLORIDE CTM422 (ppm)	RESISTIVITY CTM 643 (ohm-cm)
1	7.8	642	96	2,400

### Site Specific Corrosive Test Results

**pH-** Acidic water (such as acid rain -pH 4.0-4.5) are capable of etching, staining and/or deteriorating concrete surfaces. Prolonged contact with strong acids (such as found in some soils -pH < 4.0) warrant special concrete mix designs and other precautions. Typically, lean concrete with a low water to cement ratio (0.45-0.50) coupled with the use of Type II cement and low permeability are more resistant to acid attack.

**Sulfates (SO<sub>4</sub>)** Chemical reaction between hydrated cement and sulfate ions commonly migrating from exterior sources (such as sulfates carried by way of water and/or water vapor migration from soil into hardened concrete) can produce expansive forces within hardened concrete. Over time this reaction could result in a progressive loss of strength, progressive loss of concrete mass and ultimately in concrete failure. As a result of this potential risk the California Building Code (CBC) and the American Concrete Institute (ACI) recommend specialized concrete mix designs to improve concrete performance when subject to sulfate attack.

CBC recommends concrete in direct contact with soil comply with ACI 318, Table 4.3.1 requirements. ACI 318, Table 4.3.1 has been reprinted herein and should be applied to all concrete in direct contact with soil. Concrete slabs on grade underlain with clean, chemically neutral fill sand and a 10 mil vapor resistive membrane maybe considered isolated from subgrade soil and concrete for this element are not considered to be at risk from sulfate attack as such they may be established strictly based upon ACI structural criteria.

Sulfate Exposure	Water-Soluble Sulfate (SO <sub>4</sub> ) in soil, percentage by weight	Sulfate (SO <sub>4</sub> ) in water ppm	Cement Type	Maximum Water-Cementitious materials ratio, by weight, normal-weight, Aggregate Concrete	Minimum f' c <sup>1</sup> Normal-weight and Lightweight Aggregate Concrete psi x 0.00689 for MPa
Negligible	0.00-0.10	0-150	-----	-----	-----
Moderate <sup>2</sup>	0.10-0.20	150-1,500	II, IP (MS), IS (MS)	0.5	4,000
Severe	0.20-2.00	1,500-10,000	V	0.45	4,500
Very Severe	Over 2.00	Over 10,000	V plus pozzolan <sup>3</sup>	0.45	4,500

ACI 318 – TABLE 4.3.1

**Footnotes:**

<sup>1</sup> A lower water-cementitious materials ratio or higher strength may be required for low permeability or for protection against corrosion of embedded items or freezing and thawing.

<sup>2</sup> Sea water.

<sup>3</sup> Pozzolan that has been determined by test or service record to improve sulfate resistance when used in concrete containing Type V cement.

**Chlorides** - Over time a concentration of soluble chloride can adversely impact reinforcing steel, prestressing cables or other ferrous materials embedded in concrete. When soluble chloride concentrations of 15,000 ppm or more are found in water and/or soils special mitigation measures are needed to protect ferrous metals within the concrete. The corrosive potential due to chlorides in the soil are summarized below.

Soil Resistivity, Ohm-Cm	Corrosivity Category
0-1,000	Severely Corrosive
1,000-2,000	Corrosive
2,000-10,000	Moderately Corrosive
Over 10,000	Mildly Corrosive

#### Soil Corrosion Potential

**Resistivity**- Electrical resistivity is a common cause of deterioration of ferrous metals in direct contact with soil (*such as buried metal piping*). Generally speaking, all soils are, at the very least, mildly corrosive and as a result will shorten the life of buried ferrous metal piping, fence posts, etc. Wherever possible coated metal and/or PVC or ABS piping should be employed to help mitigate this risk.

If ferrous metal piping is employed mitigation is recommended when the soil resistivity is less than 10,000Ohm-Cm (*a moderately corrosive condition*). The following table has been provided as a general guideline for use in determination of the soil resistivity risk.

## XI. DRAINAGE RECOMMENDATIONS

All protects are highly dependent upon proper engineering design construction as well as proper waterproofing, irrigation, planting and maintenance by the homeowner. Establishing and maintaining proper drainage systems cannot be over emphasized. At a minimum, the following drainage recommendations should be incorporated into design and construction of the proposed development.

- 11.1 Landscape grading should be performed as necessary to ensure that all slopes are of a uniform slope repose and that surface drainage is positively directed away from existing and/or proposed foundation systems
- 11.2 Surface drainage should be carefully controlled to prevent gulying and rapid erosion of all cut and artificial fill slopes. Paved drainage swales and brow ditches should be designed and constructed at the tops of all slopes. Paved terrace drains should be established as required by the current edition of the California Building Code (CBC). Non-erodible down drains are necessary to conduct all water away from slopes and should discharge into approved drainage devices.
- 11.3 A 24" wide x 18" high compacted soil berm should be provided at the top of all slopes not serviced by paved brow ditches and/or paved terrace drains.
- 11.4 The minimum provisions of the current edition of the California Building Code (CBC) relative to building and site drainage should be incorporated into plans and construction unless superseded by information contained in this section.
- 11.5 All primary and secondary structures should be fitted with properly sized gutters and downspouts which discharge directly into solvent-welded watertight subsurface piping. Redundant use of catch basins, yard drains with solvent-welded, watertight piping should also be provided to capture landscape/hardscape sheet flow or discharge water. All drainage piping should be discharged directly to the street or other approved drainage discharge area.
- 11.6 Positive drainage should be established and maintained during construction. This is especially important when construction takes place during the rainy season.

- 11.7 Where practical, landscape planters should be eliminated immediate to foundation systems and replaced with impervious hardscapes. All landscape areas should be designed to positively drain a minimum of 2% to the street or other approved drainage area. All landscaping should drain away from all primary and/or secondary structures.
- 11.8 Positive drainage is defined as:
- Not less than 5% extending a minimum distance of 10 feet away from all foundations systems where landscaping is immediate to the structure.
  - Hardscape or drive areas immediate to foundation systems drained by sheet flow and/or earthen swale (*without deck drains*) should provide a minimum of 2% positive drainage extending a minimum distance of 10 feet away from all foundation systems along with maintaining a minimum 2% positive drainage swale gradient to the street or other approved drainage discharge area.
  - Hardscape or drives employing redundant deck drains may be employed but should provide a minimum 2% positive drainage gradient away from foundation systems for a minimum distance of 10 feet, provided deck drain flow line maintain a minimum 2% gradient and the number and size of the deck drains provided are more than adequate to prevent ponding during severe weather.
- 11.9 Slopes (*if any*) should be uniformly and thoroughly planted with drought tolerant, native positive rooting vegetation. A uniformly applied, low volume, low impact irrigation system should be provided for complete coverage of all slopes. All slope vegetation and irrigation systems should be routinely maintained to provide continuous, efficient long-term service. Slope watering should be limited to the minimum necessary to maintain vegetation and should be non-erosive.
- 11.10 Slope drainage devices, such as berms, swales, terrace drains and down drains should be routinely cleaned and maintained to provide continuous, effective service.
- 11.11 In the event that erosion rivulets, slumps of other slope irregularities should occur immediate repair including removal of debris, proper benching and compaction should be performed as soon as possible. *Pacific Materials Laboratory, Inc.* should be consulted with regard to cause and repair methodology prior to starting the repairs.

## XII. PLAN REVIEW AND INSPECTIONS

### **Geotechnical Review:**

While *Pacific Materials Laboratory, Inc.* makes every effort to anticipate needs, often times it is necessary to respond to specific issues based upon building official geotechnical reviews of development plans and geotechnical reports. Preparation of follow-up geotechnical response reports "are not normally included within the scope of our contracted works or agreement". The cost associated with follow-up geotechnical report(s) will be based upon our current *Schedule of Laboratory Fees*. Normally responses include registered engineers, staff engineers and clerical hour(s). However, in some cases additional laboratory and/or field testing may be required. Please feel free to contact our office if necessary for details.

Additional geotechnical services are also normally associated with the final review of plans as well as the construction phase of development. The costs associated with these services are not included within the scope of contracted services. Here again, all additional services will be invoiced in accordance with our laboratory schedule fees. Following is a listing of recommended follow-up geotechnical issues.

- Complete sets of final *grading, site, foundation* and *landscape* plans should be submitted to *Pacific Materials Laboratory, Inc.* for geotechnical content review and written comment. *Pacific Materials Laboratory, Inc.* reserves the right to recommend plan changes and to provide additional recommendations at that time if warranted by the review(s).
- At a minimum, a representative of *Pacific Materials Laboratory, Inc.* should be requested to observe the following phases of construction. *Pacific Materials Laboratory, Inc.* reserves the right to modify (*increase or decrease*) the scope of observations and testing as conditions dictate. *Pacific Materials Laboratory, Inc.* further reserves the right to modify geotechnical recommendations commensurate with the new information, facts, observations or findings as conditions mandate. Supplemental geotechnical recommendations may prove warranted based upon exposure and interpretation of actual conditions during grading activities.
  - Tree and large shrub removal (*if any*)
  - Verify vegetation and debris removal (*if any*)
  - Provide grading observation and periodic random compaction testing during the rough grading process including limits of removal(s), building pad subgrade
  - Foundation & Pier excavation
  - Slab subgrade preparation and fill sand observation and testing
  - Critical drainage system construction observation
  - *Periodic* observation and random compaction testing of utility trench backfill
- Foundation excavation observations should be made prior to placing reinforcing steel, forms or concrete. It is the responsibility of the owner or the owners representative to coordinate construction timing and to notify *Pacific Materials Laboratory, Inc.* a minimum of 48 hours in advance of the start of or of required observations and testing. Failure to coordinate geotechnical observations and follow-up testing services at the proper construction sequence could result in increased testing costs, construction delays or both.

### XIII. CLOSURE

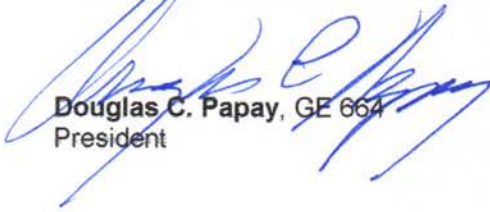
As discussed herein, this report is issued and made for the sole use and benefit of the client. *Pacific Materials Laboratory, Inc.* affirms that contents of this report remain applicable for a period of not greater than 12 months from the date of this report. Reports more than 12 months old require written supplemental updating by *Pacific Materials Laboratory, Inc.* to compliment prevailing specifications, building codes and standards of practice.

This report concludes the current contracted agreement between *Pacific Materials Laboratory, Inc.* and the client. The recommendations contained herein are based upon the assumption that *Pacific Materials Laboratory, Inc.* will be requested to provide the necessary testing and observation services which are recommended during rough grading, fine grading, and construction. Additional services and associated fees will be necessary to verify the actual soil conditions encountered and to affirm that the plans and construction are consistent with the intent of the recommendations provided herein.

A current Schedule of Fees should have already been provided to you prior to the commencement of current services. The Schedule of Fees will be the basis of all further invoices and will be fully itemized as a service to you. If you have not received a current Schedule of Fees, it is incumbent to request one at your earliest convenience. If additional geotechnical services are performed by others, only the technical correctness of the actual tests performed can be attested to. Should a separate geotechnical firm assume this project, *Pacific Materials Laboratory, Inc.* will not be responsible for interpretations, opinions, conclusions nor recommendations made by others with regard to fill selection, fill placement, compaction, foundation, slab or hardscape support or any summary of findings, conclusion, recommendation, or opinion presented in this report.

Thank you for allowing *Pacific Materials Laboratory, Inc.* to be of service. If we may be of further service regarding this or other geotechnical issues, please do not hesitate to call at (805) 482-9801 or email at [pmlgeo@gmail.com](mailto:pmlgeo@gmail.com).

Respectfully Submitted,  
**PACIFIC MATERIALS LABORATORY, INC.**

  
**Douglas C. Papay, GE 664**  
President



DGP:dkp

cc: Addressee (Email)

Attachments:

*References Cited*

*Appendix A, B, C and D*

**REFERENCES CITED**

- 2020 ASTM - Annual Book of ASTM Standards, Section 4, Volume 04.08 and 04.09 "Soil and Rock" - 2021
- 2019 California Building Code, California Code, Title 24, Part 2 (Volumes 1 and 2)
- International Code Council (ICC), International Code Council - 2021
- International Conference of Building Officials (ICBO), Maps of Known Active Fault Near Source Zones in California and Adjacent Portions of Nevada, February, 1998, ISBN 1-58001-008-3
- SCEC Procedures for Implementation of DMG Special Publication 117 Guidelines for Analyzing and Mitigating Landslide hazards in California
- SCEC Published Guidelines "Recommended Procedures for Implementation of DMG Special Publication 117 Guidelines for Analyzing and Mitigating Liquefaction in California
- CGS – Note 49 "Guidelines for evaluating the Hazard of Surface Fault Rupture: - 2002
- CGS – Special Publication 117A "Guidelines for evaluation and Mitigating Seismic Hazards in California" - 2008
- 2021 State of California Department of Transportation Standard Specifications (*CalTrans*)
- 2021 State of California Department of Transportation Laboratory Manual of Test Volumes 1, 2 & 3, Third Edition 1978
- Ventura County General Plan, Hazards Appendix, last amended 2013
- Ventura County Building code last amended 2021
- 2021 Edition of the Standard Specific for Public Works Construction ("*The Green Book*")
- Technical Engineering and Design Guides as abated from the U.S. Army Corps of Engineers, No. a "Design of Pile Foundations – ASCE 1993"
- ASCE Geotechnical Special Publication No. 68 "Unsaturated Soil Engineering Practice", Sandra L. Houston and Delwyn G. Fredlund, 1997

# **APPENDIX A**





# **APPENDIX B**

## BORING LOG LEGEND


**SPT** - Standard penetration split barrel (1.5"IDx18"length, with liners), ASTM D1586

**SB** - Split barrel sampler (2.5"IDx18"length, with liners), ASTM D1587




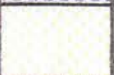



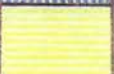

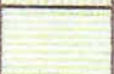





**TW** - Thin wall tube (Shelby) sampler, ASTM D1556

**N<sub>spt</sub>** - Results of standard penetration test. N represents the number of blows with a 140lb hammer falling 30" to drive a SPT sampler 12" into insitu material

**N<sub>eq</sub>** - Approximately equivalent to N<sub>spt</sub> but is based upon the number of blows with a 140lb. Hammer falling 30" to drive a SB sampler 12" into insitu material and calculating an equivalent standard penetration blow count, after R.H. Karol, *Soils and Soils Engineering, Prentice - Hall, Inc. 4/64 Page 23.*

 - Indicates elevation of free water surface encountered

**USCS** - Unified Soil Classification System - method of defining soil types

USCS - MAJOR DIVISION		Group Symbol	DESCRIPTION	
Gravelly soils with over 50% of the coarse fraction larger than No. 4 sieve size	Clean Gravelly Soils with little or no fines	GW	Well graded Gravel	
		GP	Poorly graded Gravels	
	Sandy Gravelly with fines	GM	Silty Gravels well or poorly Graded Gravel-Sand-Silt mixtures	
		GC	Clayey Gravels well or poorly graded Gravel-Sand-Clay mixtures	
Sandy soils with over 50% of the coarse fraction smaller than No. 4 sieve size	Clean Sandy soils with little or no fines	SW	Well Graded Sands	
		SP	Poorly Graded Sands	
	Sandy soils with fines	SM	Sandy-Silt, Silty Sands well or poorly graded Sand-Silt mixtures	
		SC	Clayey Sands well or poorly graded Sand-Clay mixtures	
Silty and Clayey Soils  Liquid Limits Less than 50%		ML	Inorganic Silts and very fine Sands, Rock Flour, Silty or Clayey fine Sands, or Clayey Silts with slight plasticity	
		CL	Inorganic Clays of low to medium plasticity, Gravelly Clays, Sandy Clays, Silty Clays or lean Clays	
		OL	Organic Clays or Organic Silty Clays of low plasticity	
Silty and Clayey Soils  Liquid Limits Greater than 50%		MH	Inorganic Silts, micaceous or diatomaceous fine Sandy or Silty soils, or elastic Silts	
		CH	Inorganic Clays of high plasticity, or fat Clays	
		OH	Organic Clays of medium to high plasticity, or organic Silts	
Highly organic soils		PT	Peat or other highly organic soil	

**PACIFIC MATERIALS LABORATORY, INC.**

LOG OF BORINGS						
Project: Besedek Family Trust						Boring No. B-1
Data Drilled: 11/08/2021						
Logged by: JB						
Equipment: HT-95 4' Dia. Truck Mounted Continuous Hollow Stem Flight Auger drill rig						
Sample Method	Blow Count Neq	Relative Compactor (%)	Dry Density (pcf)	Moisture Content (%)	Depth (ft)	USCS DESCRIPTION
					1'	<b>ARTIFICIAL FILL:</b> GP-SW Brown clean C-F sand with some organics, moist and loose
					2'	GP-SW Dark Brown Gravelly M-F Sand, damp & firm
SB	19	~89.0	117.0	4.2	3'	SM Brown Clayey Silty Sand, damp & loose
					4'	
SB	24	~75.7	109	3.6	5'	<b>NATIVE SOIL:</b> GP-SW Light Brown Cobbely, Gravel & M-F Sand, damp & moderately firm
					6'	Same with less gravel & cobbles
					7'	Same with repeated thin strata of Gravelly Clay
					8'	
					9'	
SB	48		102.5	4.2	10'	<b>FORMATIONAL:</b> Light Brown Cobbely, Gravel & M-F Sand, damp & very firm
					11'	
					12'	Same, becoming damp with increased coarse to fine Sand and very firm
					13'	
					14'	Freewater $\nabla$ GP-SW Brown M-F Sand, saturated & very firm
SB	91		110.1	18.3	15'	Same with rounded gravel
					16'	
					17'	
					18'	
					19'	
SB	26	*		22.0	20'	Same
					21'	
					22'	
					23'	
					24'	
SPT	87		107.8	19.7	25'	Same
					26'	
					27'	
					28'	
					29'	
SPT	100		107.6	21.2	30'	Same, moist and without Cobbles
					31'	
					32'	SC Blue Gray Clayey Silty Sand, saturated & very firm
					33'	Blue Gray M-F Sand, saturated & very firm
					34'	
SPT	84		109.9	18.3	35'	Same
					36'	
					37'	
					38'	
					39'	
SPT	100		104	24.2	40'	Same
					41'	
					42'	
					43'	
					44'	
SPT	100		100.4	27.4	45'	Same
					46'	
					47'	
					48'	
					49'	
SPT	110		98.9	32.4	50'	Same

\* Blow count not considered representative of in situ condition

Total Drilled Attempted = 50.0'  
Used clay to prevent sidewall caving  
Freewater @ & below 14'

# **APPENDIX C**

## LABORATORY TEST DATA

### LABORATORY COMPACTION CHARACTERISTICS (ASTM D1557)

Maximum density optimum moisture data was determined in the laboratory from bulk soil samples using ASTM D1557 procedures. The test uses a 4 or 6 inch diameter mold of 1/30 or 1/56 cft. volume respectively. The soil is moistened to various degrees of saturation and compacted in 5-layers, using a 10-pound hammer falling 18-inches, and 25 or 56 blows per layer for 4 or 6 inch molds respectively. The test results are tabulated below and shown graphically on Enclosure \_\_\_\_\_.

<u>SOIL TYPE</u>	<u>ASTM METHOD</u>	<u>SOIL DESCRIPTION</u>	<u>MAXIMUM DRY DENSITY (lbs/cft)</u>	<u>OPTIMUM MOISTURE CONTENT (%)</u>
1	B	Dark Brown Gravelly medium-fine Sand	131.5	8.5

### EXPANSION INDEX TEST DATA (ASTM D 4829)

An expansion index test was performed on representative near surface soil encountered. The expansion testing was performed in accordance with the 2007 ASTM D 4829 Procedures. The test results are tabulated below and included on Enclosure \_\_\_\_\_.

<u>SOIL TYPE</u>	<u>INITIAL MOISTURE CONTENT (%)</u>	<u>FINAL MOISTURE CONTENT (%)</u>	<u>DRY DENSITY (lbs/cft)</u>	<u>EXPANSION INDEX</u>	<u>EXPANSION POTENTIAL</u>
1	7.0	13.6	131.5	0	Very Low

### MECHANICAL ANALYSIS (ASTM D422 - Values in Percent Passing)

<u>SIEVE SIZE</u>	<u>LOCATION B-1 @ 1.0'</u>	<u>LOCATION B-1 @ 25.0'</u>	<u>LOCATION B-1 @ 45.0'</u>
3/4"		100	100
1/2"		93	94
3/8"	100	93	94
No. 4	100	91	92
No. 8	100	89	89
No. 16	99	88	89
No. 30	94	86	88
No. 50	60	70	86
No. 100	3	34	67
No. 200	1	12	39

**HYDROMETER ANALYSES<sup>A</sup> (ASTM D422 & ASTM D2487)**

<u>LOCATION</u>	<u>% SAND</u>	<u>% SILT</u>	<u>% CLAY</u>	<u>MATERIAL CLASSIFICATION<sup>B</sup></u>
B-1 @ 10.0'	89	1	0	Sand (SW-SP)
B-1 @ 25.0'	90	4	6	Sand (SW-SP)
B-1 @ 45.0'	64	20	20	Silty Sand (SM)

<sup>A</sup> Hydrometer analysis modified to short method (1 hour), for determination of percentages of sand, silts and clay.

<sup>B</sup> Classification per Unified Soils Classification Method and ASTM D2487-85

**CORROSIVE SERIES TESTING (ASTM D4972, CTM 417, CTM 422 and CTM 643)**

Soil corrosive series testing was performed on a bulk soil sample obtained at or near the foundation elevation to identify the long-term chemical nature of the soils which will be in contact with the foundation and slab on-grade.

<u>SOIL TYPE</u>	<u>pH</u> <u>ASTM D4972</u>	<u>SOLUBLE SULFATES</u> CTM 417 <u>(ppm)</u>	<u>SOLUBLE CHLORIDE</u> CTM 422 <u>(ppm)</u>	<u>RESISTIVITY</u> CTM 643 <u>(Ohm-cm)</u>
1	7.8	642	96	2,400

**DIRECT SHEAR DATA (ASTM D 3080)**

A direct shear test was performed on insitu specimens trimmed to 2.4" diameter x 1.5" high, placed under a normal confining load and saturated prior to testing. The reported parameters are peak or residual values. The results are resented graphically on **ENCLOSURE SHEAR1**.

**CONSOLIDATION TEST DATA (ASTM D 2435-80)**

Three (3) consolidation test were performed on soil samples considered insitu. The samples were trimmed to 2.4" diameter x 1" high, placed in a floating ring consolidometer, with a confining load of 500 psf, and sequentially increased after completion of primary consolidation to a maximum load of 8000 psf. The load was then reduced to 1000 psf to observe elastic rebound. The test specimen was flooded at 1000 psf to observe the effect of saturation. The test results are presented graphically as **Enclosure CON1**.

## MODIFIED PROCTOR MAXIMUM DENSITY OPTIMUM MOISTURE TEST

ASTM D 1557

**Client:** Benedek Family Trust  
**Project:** Addition to the Existing residence

**Tested By :** JB  
**Date Tested:** 11/16/2021

**Sample location:** B-1  
**Depth (ft.)** 5', 10' 15' composite  
**Sample Identification:** Soil Type 1  
**Soil Description:** Dark Brown Gravelly M\_F Sand  
**ASTM Method:** ASTM D1557-B

**Method of Compaction:** Rainhart Auto Tamper Series 662  
**Drop:** 18 in.  
**Ram weight:** 10 lbs.  
**Mold Volume (cft):** 0.033333333

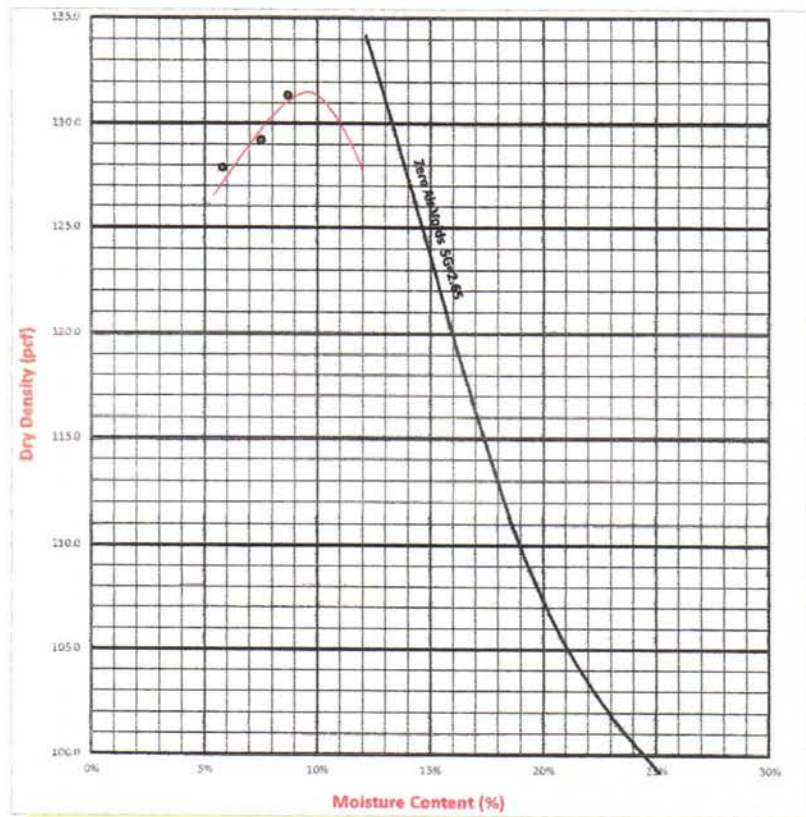
Test No.	1	2	3
Wt. Compacted Soil + Mold (lbs.)	13.52	13.69	13.83
Weight of Mold (lbs.)	9.07	9.07	9.07
Net Weight of Soil (lbs.)	4.51	4.63	4.76
Wet Density (pcf)	135.3	138.9	142.8
Moisture Content (%)	5.8%	7.5%	8.7%
Dry Density (pcf)	127.9	129.2	131.4

**Maximum Density (cft):** 131.5

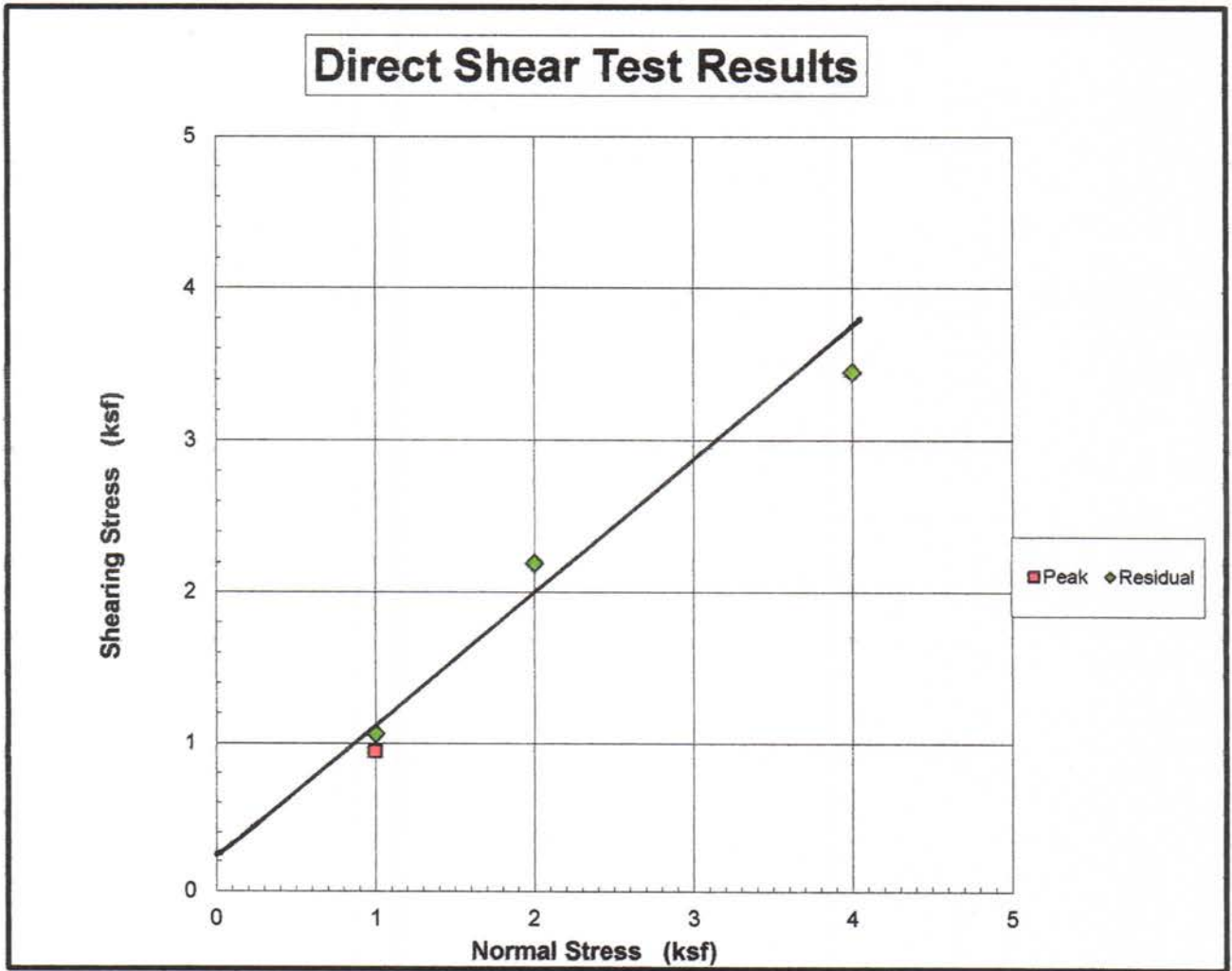
**Optimum Moisture Content (%):** 9.5

**PROCEDURE USED:**

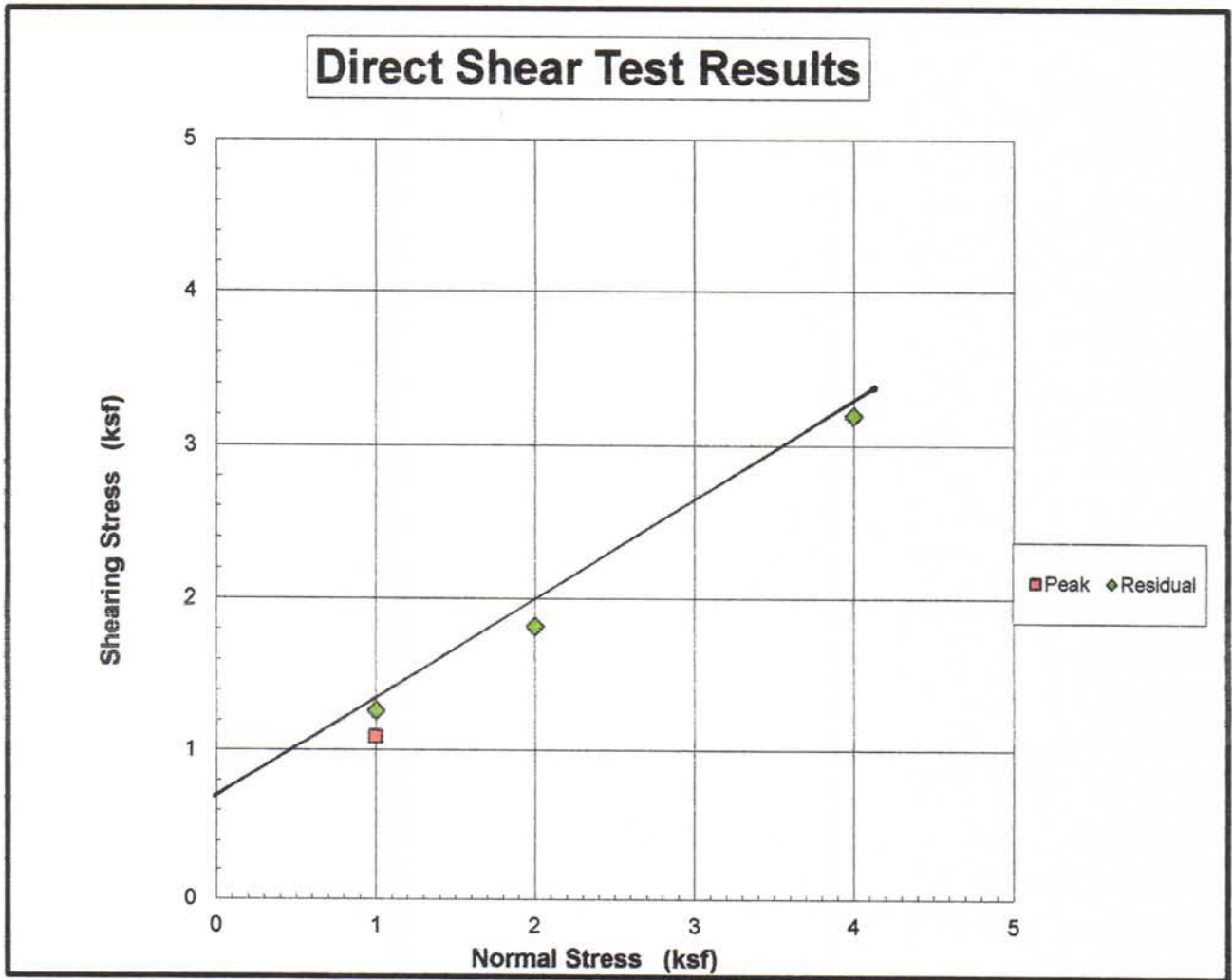
- Procedure A**  
 Soil Passing No. 4 (4.75 mm) Sieve  
 Mold : 4 in. (101.6 mm) diameter  
 Layers : 5 (Five)  
 Blows per layer : 25 (twenty-five)  
 May be used if #4 is 20% or less
- Procedure B**  
 Soil Passing 3/8 in. (9.5 mm) Sieve  
 Mold : 4 in. (101.6 mm) diameter  
 Layers : 5 (Five)  
 Blows per layer : 25 (twenty-five)  
 Use if #4 is >20% and +3/8 in. is 20% or less
- Procedure C**  
 Soil Passing 3/4 in. (19.0 mm) Sieve  
 Mold : 6 in. (152.4 mm) diameter  
 Layers : 5 (Five)  
 Blows per layer : 56 (fifty-six)  
 Use if +3/8 in. is >20% and +4 in. is <30%







<b>Sample Location:</b>	<b>B-1 @ 10'</b>
<b>Material:</b>	Formational
<b>Soil Description:</b>	Light Brown M-F Sand
<b>Shear Method:</b>	Undisturbed Reverse Shear
<b>Residual Values :</b>	
$\phi$	<b>40°</b>
Cohesion	212 psf
<b>Peak Values:</b>	
$\phi$	<b>40°</b>
Cohesion	135 psf



**Sample Location:**

**B-1 @ 25'**

**Material:**

**Formational**

**Soil Description:**

**Light Brown M-F Sand**

**Shear Method:**

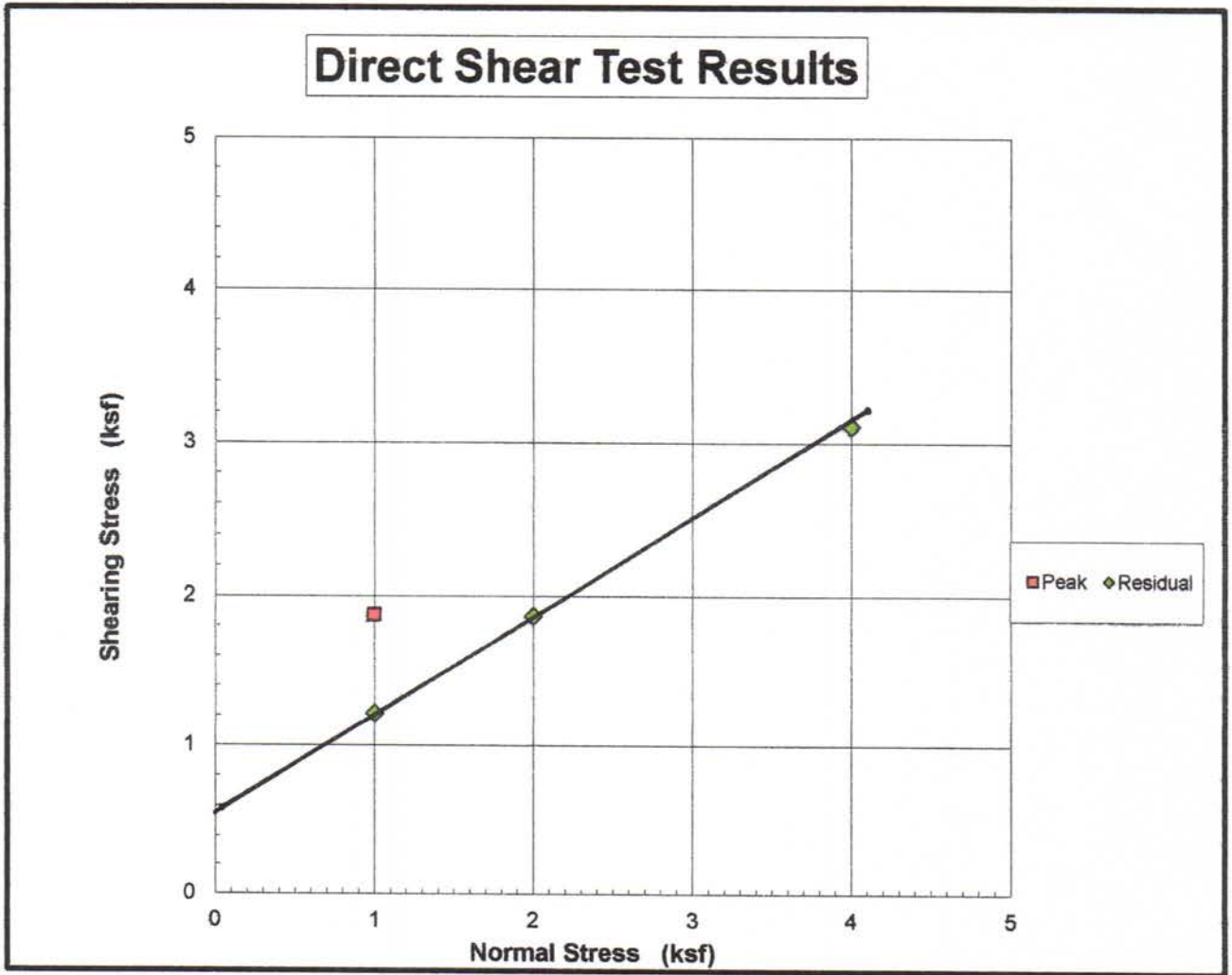
**Undisturbed Reverse Shear**

**Residual Values :**

∅ **32°**  
Cohesion **634 psf**

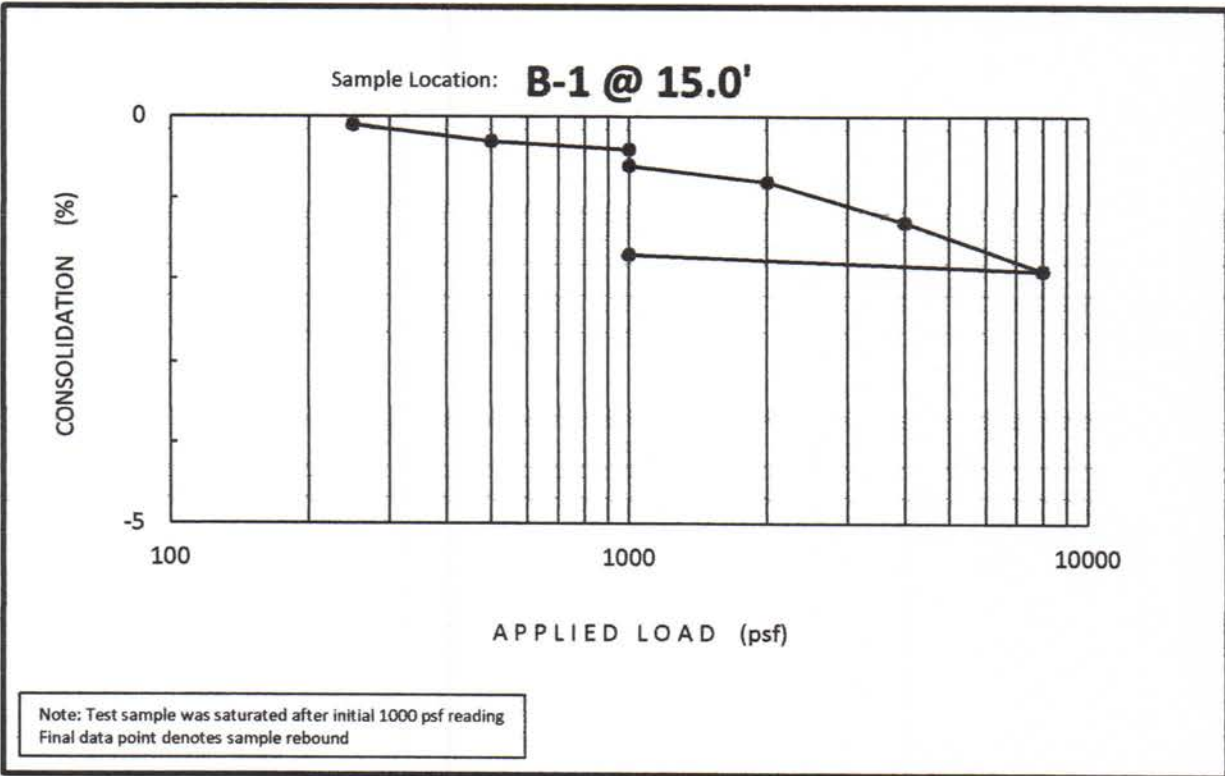
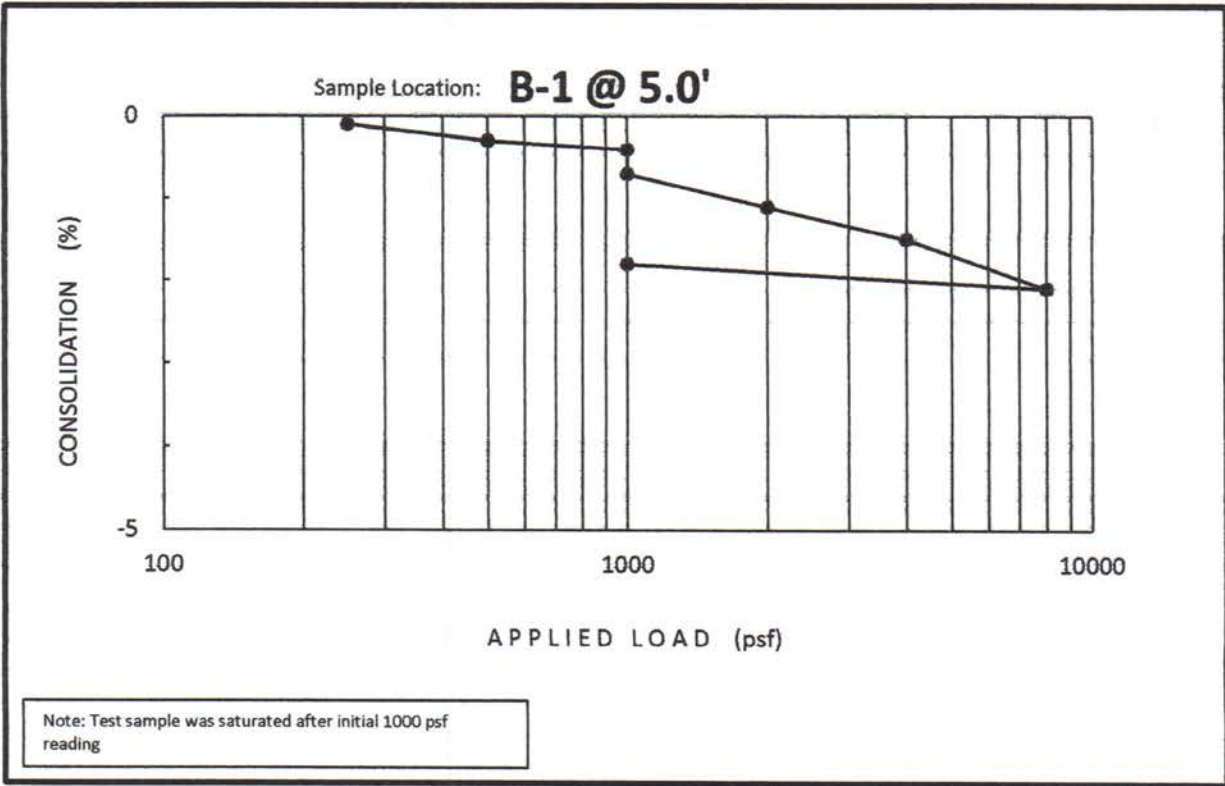
**Peak Values:**

∅ **32°**  
Cohesion **500 psf**



<b>Sample Location:</b>	<b>B-1 @ 35'</b>
<b>Material:</b>	Formational
<b>Soil Description:</b>	Blue-Grey Silty F Sand
<b>Shear Method:</b>	Remolded Reverse Shear
<b>Residual Values :</b>	
$\emptyset$	<b>32°</b>
Cohesion	582 psf
<b>Peak Values:</b>	
$\emptyset$	<b>32°</b>
Cohesion	913 psf

### CONSOLIDATION TEST DATA



# **APPENDIX D**

## BEARING CAPACITY OF SHALLOW FOOTINGS

**PROJECT : Benedek Family Trust**

6772 Brakers Way

Ventura, CA

**SOIL:** Brown M-F Sand

### I. CONTINUOUS STRIP FOOTING

W = 120 pcf	B = 1.0 ft	NC = 75.31
C = 0 psf	d = 1.5 ft	NQ = 64.20
ANGLE = 40 deg.	Kw = 1.00	NW = 109.41
FS = 10	Kc = 1.00	KQ = 1.00

$$\text{allowable bearing capacity } q/FS = (0.5WBKwNW + CKCNC + KqdWNQ)/FS = \mathbf{1,812 \text{ psf}}$$

### II. SPREAD FOOTINGS

W = 120 pcf	B = 3.0 ft	NC = 75.31
C = 0 psf	d = 2.0 ft	NQ = 64.20
ANGLE = 40 deg.	Kw = 0.60	NW = 109.41
FS = 30	Kc = 1.85	KQ = 1.84

$$\text{allowable bearing capacity } q/FS = (0.5WBKwNW + CKCNC + KqdWNQ)/FS = \mathbf{2,161 \text{ psf}}$$

### III. LATERAL EARTH PRESSURES AND COEFFICIENT OF FRICTION

Factor of Safety	Soil Friction Angle	Soil Cohesion (pcf)	Soil Unit Weight (pcf)	Allowable Coefficient of Sliding Friction	Allowable Passive Pressure (psf/ft)	Yielding Level Backfill Active pressure (pcf)	Non-Yielding Level Backfill Active pressure (pcf)
1.5	40	0	120.0	0.56	368	30	43

**NOTES :**

1. The allowable bearing values above are based upon the GENERAL BEARING CAPACITY FORMULA for shallow footings without consideration of total or differential settlement. Accordingly the design allowable bearing capacity values recommended in this report for design maybe lower than values computed above.
2. Active retaining wall design parameters are based upon the Empirical method of determination of Earth Pressure. Design earth pressures recommended in this report may be higher to account for potential creep (if any).
3. Non-Yielding condition assumes at rest conditions (no deformation).

## PIER FOOTING FRICTIONAL DEVELOPMENT

project: **Addition to the Existing Residence**  
6772 Breakers Way  
Ventura, CA

caisson dia. = 1.5 ft  
wetted perimeter = 4.7 ft  
factor of safety = 3.00

Depth to water = 14 ft

### Artificial Fill (0-4') :

*Dark Brown Gravelly Sand*

unit weight (pcf) = 115.0 Ave.  
angle (degree) = 40  
cohesion (psf) = 212

### Native Soil (4'-9') :

*Light Brown Gravel & Sand*

unit weight (pcf) = 106.0 Ave.  
angle (degree) = 40  
cohesion (psf) = 212

### Formational (>9') :

*Light Brown to Blue Grey Gravel & Sand*

unit weight (pcf) = 130.0 Ave.  
angle (degree) = 32  
cohesion (psf) = 582

embed. depth h (ft)	USCS soil type	Wet density (pcf)	Phi (Deg)	Cohesion (Psf)	Avg. effective overburden weight			Total vertical load (lbs.)	Allow vertical load (lbs.)	embed. depth h (ft)	
					Wav (lb/cft)	Sa (1.)	Sc (2.)				
0	-	0	0	0	0	0	0	0	0	0	
2	SP-SW	115.0	40	212	115	-787	-1998	-2786	-2786	-929	2
4	SP-SW	115.0	40	212	345	-2362	-1998	-4360	-7146	-2382	4
6	GP-SW	106.0	40	212	566	-3876	-1998	-5874	-13020	-4340	6
8	GP-SW	106.0	40	212	778	5327	1998	7325	-5694	-1898	8
10	GP-SW	106.0	40	212	990	6779	1998	8777	3083	1028	10
12	GP-SW	130.0	32	582	1226	6352	3830	10182	13285	4422	12
14	GP-SW	130.0	32	582	1486	7699	3830	11529	24794	8285	14
16	GP-SW	130.0	32	582	1684	8723	3830	12553	37347	12449	16
18	GP-SW	130.0	32	582	1819	9424	3830	13253	50600	16867	18
20	GP-SW	130.0	32	582	1954	10124	3830	13954	64554	21518	20
22	GP-SW	130.0	32	582	2089	10825	3830	14654	79209	26403	22
24	GP-SW	130.0	32	582	2224	11525	3830	15355	94564	31521	24
26	GP-SW	130.0	32	582	2360	12226	3830	16056	110619	36873	26
28	GP-SW	130.0	32	582	2495	12926	3830	16756	127375	42458	28
30	GP-SW	130.0	32	582	2630	13627	3830	17457	144832	48277	30
32	GP-SW	130.0	32	582	2765	13627	3830	17457	162288	54096	32
34	GP-SW	130.0	32	582	2900	13627	3830	17457	179745	59915	34
36	GP-SW	130.0	32	582	3036	13627	3830	17457	197201	65734	36
38	GP-SW	130.0	32	582	3171	13627	3830	17457	214658	71553	38
40	GP-SW	130.0	32	582	3306	13627	3830	17457	232115	77372	40
42	GP-SW	130.0	32	582	3441	13627	3830	17457	249571	83190	42
44	GP-SW	130.0	32	582	3576	13627	3830	17457	267028	89009	44
46	GP-SW	130.0	32	582	3712	13627	3830	17457	284484	94828	46
48	GP-SW	130.0	32	582	3847	13627	3830	17457	301941	100647	48
50	GP-SW	130.0	32	582	3982	13627	3830	17457	319397	106466	50

### FOOTNOTES :

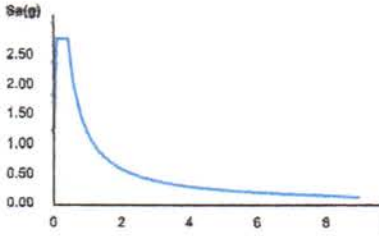
- (1.)  $S_a = \pi * d * h * W_{av} * \tan(.9 * \phi)$
- (2.)  $S_c = \pi * d * c * h * k_a$  (where  $k_a$  = adhesion factor)
- (3.) Allowable uplift may be assumed to be 50% of Allowable Vertical loading for sand, 35% for silt and 70% for clay
- (4.) Allowable uplift values should be modified to account for inclination of batter piles (if any)
- (5.) Allowable vertical loading may be increased 150% if static pile load tests are required/performed
- (6.) Based on U.S. Army Corps of Engineers, EM 1110-2-2906, Design of Pile Foundations

Search Information

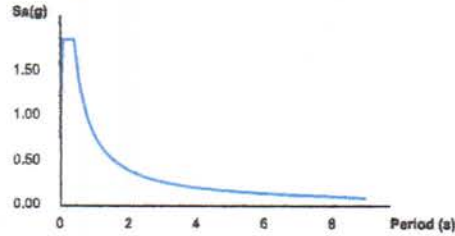
Address: 6772 Breakers Way, Ventura, CA 93001, USA  
 Coordinates: 34.3574368999999, -119.4439816  
 Elevation: 20 ft  
 Timestamp: 2021-12-02T15:46:12.806Z  
 Hazard Type: Seismic  
 Reference Document: ASCE7-16  
 Risk Category: II  
 Site Class: C



MCER Horizontal Response Spectrum



Design Horizontal Response Spectrum



Basic Parameters

Name	Value	Description
$S_S$	2.316	$MCE_R$ ground motion (period=0.2s)
$S_1$	0.842	$MCE_R$ ground motion (period=1.0s)
$S_{MS}$	2.779	Site-modified spectral acceleration value
$S_{M1}$	1.178	Site-modified spectral acceleration value
$S_{DS}$	1.853	Numeric seismic design value at 0.2s SA
$S_{D1}$	0.786	Numeric seismic design value at 1.0s SA

Additional Information

Name	Value	Description
SDC	E	Seismic design category
$F_a$	1.2	Site amplification factor at 0.2s
$F_v$	1.4	Site amplification factor at 1.0s
$CR_0$	0.874	Coefficient of risk (0.2s)
$CR_1$	0.866	Coefficient of risk (1.0s)
PGA	1.032	$MCE_G$ peak ground acceleration
$F_{PGA}$	1.2	Site amplification factor at PGA
$PGA_M$	1.238	Site modified peak ground acceleration
$T_L$	8	Long-period transition period (s)
$S_{sRT}$	2.316	Probabilistic risk-targeted ground motion (0.2s)
$S_{sUH}$	2.649	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
$S_{sD}$	3.109	Factored deterministic acceleration value (0.2s)
$S_{1RT}$	0.842	Probabilistic risk-targeted ground motion (1.0s)
$S_{1UH}$	0.968	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
$S_{1D}$	0.941	Factored deterministic acceleration value (1.0s)
$PGA_d$	1.25	Factored deterministic acceleration value (PGA)

The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

Disclaimer

Hazard loads are provided by the U.S. Geological Survey [Seismic Design Web Services](#).

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