



Planning Director Staff Report– Hearing on November 18, 2021

County of Ventura • Resource Management Agency

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NAMM RESIDENCE COASTAL PLANNED DEVELOPMENT (PD) PERMIT CASE NO. PL21-0027

A. PROJECT INFORMATION

1. **Request:** The applicant requests approval of a Coastal Planned Development (PD) permit for the demolition of an existing single-family dwelling and the construction of a new single-family dwelling (Case No. PL21-0027).
2. **Applicant/Property Owner:** Mr. and Mrs. Steve Namm, 4563 Petit Ave, Encino, CA 91436
3. **Applicant's Representative:** Walt Philipp, Integral Design, 950 County Square Drive, #116, Ventura, CA 93003
4. **Decision-Making Authority:** Pursuant to the Ventura County Coastal Zoning Ordinance (CZO) (Section 8174-5 and Section 8181-3 et seq.), the Planning Director is the decision-maker for the requested Coastal PD Permit.
5. **Project Site Size, Location, and Parcel Number:** The 2,625-square foot (sq. ft.) property is located at 3413 Ocean Drive, 100 feet north of the intersection of Los Robles Street and Ocean Drive, in the community of Hollywood Beach, in the unincorporated area of Ventura County. The Tax Assessor's parcel number for the parcel that constitutes the project site is 206-0-234-110 (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: RBH (Residential Beach Harbor)
7. **Adjacent Zoning and Land Uses/Development (Exhibit 2):**

Location in Relation to the Project Site	Zoning	Land Uses/Development
North	RBH (Residential Beach Harbor)	Single-Family Dwelling
East	RBH (Residential Beach Harbor)	Single-Family Dwelling
South	RBH (Residential Beach Harbor)	Single-Family Dwelling
West	COS-10 ac-sdf (Coastal Open Space 10 acres minimum lot size)	Hollywood Beach

- 8. History:** The property is Lot 38 of Block B within the Hollywood Beach Tract. The property is developed with an existing single family dwelling constructed in 1973. The existing structure is two-story non-descript stucco building, 2,228 square feet in area with an attached two car garage. A review of the permit history for the subject property indicates the structure has been modified through a series of permit requests since the construction of the home in 1973. Permitted modifications to the dwelling include the addition of 16 square of storage space and the conversion of 115 square feet of living space to deck area in 1995 (Zoning Clearance No 75529). Other permits include an electrical upgrade in 1986 and reroofing in 2012.
- 9. Project Description:** The applicant requests a Coastal Planned Development (PD) Permit to authorize the demolition of an existing two-story single-family dwelling (2,228 square foot (sq. ft.)) and attached garage (448 sq. ft.) and the construction of a new three-story single-family dwelling (3,433 sq. ft.) and attached garage (529 sq. ft.). The Project includes three balconies (a 224 sq. ft. second floor balcony and a 137 sq. ft. and 68 sq. ft. third floor balcony). The single-family dwelling will have a height of 28 feet, as measured from the from the flood control datum established by the Public Works Agency. Site improvements also include the installation of 60 sq. ft. of new landscaping improvements.

Access to the project site is provided by a new private driveway which connects to Ocean Drive. Water and wastewater services will be provided by the Channel Islands Beach Community Services District. (Exhibit 3).

B. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) COMPLIANCE

Pursuant to CEQA (Public Resources Code Section 21000 et seq.) and the CEQA Guidelines (Title 14, California Code 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 involves the demolition of an existing structure (one dwelling unit) and the construction of a new single-family dwelling and is therefore covered under the list of exempt classes of projects defined under CEQA Guidelines Section 15301 (Existing Facilities) and Section 15303 (New Construction or Conversion of Small Structures). 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.

C. CONSISTENCY WITH THE GENERAL PLAN

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

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

Finally, the Ventura County CZO (Section 8181-3.5.a) states that in order to be approved, a project must be found consistent with the intent and provisions of the County's Certified Local Coastal Program (LCP).

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

Land Use and Community Character

- 1. General Plan Policy LU16.1 (Community Character and Quality of Life):** *The County shall encourage discretionary development to be designed to maintain the distinctive character of the unincorporated communities, to ensure adequate provision of public facilities and services, and to be compatible with neighboring uses.*

General Plan Policy LU16.8 (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.*

General Plan Policy LU16.9 (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 Section 30250(a): *New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it, or where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable parcels in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels.*

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 the surrounding area 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 RBH and is located between Ocean Drive, the nearest public road, and Hollywood Beach. The purpose of the RBH zone is to provide for the development and preservation of unique beach-oriented residential communities within small lot subdivision patterns. The proposed single-family dwelling will be located on 35-foot-wide by 75-foot-long lot, which is identical to the lot configuration of parcels within the surrounding community. The permitted maximum building coverage in the RBH zone is 65%; the proposed dwelling will have a maximum building coverage of 52.5%. The project will result in from the demolition of the existing two-story dwelling and the construction of a three-story dwelling. The proposed dwelling will have a 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 Ocean Drive are one-, two-, and three-stories, range in size from 2,688 sq. ft. (3417 Ocean Drive) to 2,645 sq. ft. (3409 Ocean Drive), and include a variety of architectural styles and forms (e.g., contemporary, cottage, Mediterranean, etc.). Ocean views from the harbor side of the Hollywood Beach are blocked or obstructed by the beachside homes, therefore the proposed project will not lead to a significant adverse impact to public views of the ocean.

The proposed dwelling would not degrade or significantly alter the existing scenic or visual qualities of the Hollywood Beach Community and will be similar in visual character (size, scale and style) to the other residential dwellings in the surrounding area. The proposed single-family dwelling, a 3,962 sq. ft. modern style residence is larger, however the difference in the proposed habitable floor area is attributable to configuration of the proposed levels of the home and the floorplate heights. 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.

Circulation, Transportation, and Mobility

- 2. General Plan Policy CTM-1.1 (Vehicle Miles Traveled (VMT) Standards and CEQA Evaluation):** *The County shall require evaluation of County General Plan land use designation changes, zone changes, and discretionary development for*

their individual (i.e., project-specific) and cumulative transportation impacts based on Vehicle Miles Traveled (VMT) under the California Environmental Quality Act (CEQA) pursuant to the methodology and thresholds of significance criteria set forth in the County Initial Study Assessment Guidelines.

CTM-1.2 Projects with Significant Transportation Impacts: *County General Plan land use designation changes, zone changes, and discretionary development that would cause an individual (i.e., project-specific) or cumulative significant transportation impact based on Vehicle Miles Traveled (VMT) under the California Environmental Quality Act (CEQA) shall be prohibited unless:*

- 1. There are no feasible mitigation measures available that would reduce the impact to a less than significant level; and*
- 2. The County's decision-making body, after balancing, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of the project against its unavoidable transportation impact and any other environmental risks, determines that the benefits of the project outweigh the unavoidable adverse environmental impacts and adopt a statement of overriding considerations pursuant CEQA.*

General Plan Policy CTM-1.3 (County Level of Service (LOS) Standards): *The County shall maintain LOS standards for use as part of the County's transportation planning including the traffic impact mitigation fee program, and the County's review and consideration of proposed land use legislation and discretionary development. For purposes of County transportation planning and review and consideration of proposed land use legislation and discretionary development, the County shall use the following minimum acceptable Level of Service (LOS) for road segment and intersection design standards within the Regional Road Network and all other County-maintained roadways:*

- a. LOS-'C' for all Federal functional classification of Minor Collector (MNC) and Local roadways (L); and*
- b. LOS-'D' for all Federal functional classifications except MNC and L, and Federal and State highways in the unincorporated area, except as otherwise provided in subparagraph (c and d);*
- c. LOS-'E' for State Route 33 between the northerly end of the Ojai Freeway and the city of Ojai, Santa Rosa Road, Moorpark Road north of Santa Rosa Road, State Route 34 north of the city of Camarillo, and State Route 118 between Santa Clara Avenue and the city of Moorpark;*
- d. LOS 'F' for Wendy Drive between Borchard Drive to Lois Avenue; and*
- e. The LOS prescribed by the applicable city for all federal highways, state highways, city thoroughfares and city-maintained local roads located within*

that city, if the city has formally adopted and is implementing a General Plan policy, ordinance, or a reciprocal agreement with the County regarding development in the city that is intended to improve the LOS of County-maintained local roads and federal and state highways located within the unincorporated area of the county.

- f. At any intersection between two or more roads, each of which has a prescribed minimum acceptable LOS, the lower LOS of the roads shall be the minimum acceptable LOS for that intersection.*

General Plan Policy CTM-1.7 (Pro Rata Share of Improvements): *The County shall require discretionary development that would generate additional traffic pay its pro rata share of the cost of added vehicle trips and the costs of necessary improvements to the Regional Road Network pursuant to the County's Traffic Impact Mitigation Fee Ordinance.*

CTM-2.18 Complete Streets Standard in Existing Communities: *The County shall require discretionary development in designated Existing Communities to construct roadways to urban standards and Complete Streets principles, including curb, gutter, sidewalks, and bike lanes when there is a nexus for improvement. The County shall rely on the guidelines and design standards for Complete Streets design established by the California Manual on Uniform Traffic Control Devices (CAMUTCD), Caltrans in the Highway Design Manual, and Complete Streets Guidelines (pursuant to Deputy Directive-64-R2), Federal Highway Administration, American Association of State Highway and Transportation Officials (AASHTO). (RDR)*

General Plan Policy 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 will connect to the existing county roadway network via a private driveway to Ocean Drive. Ventura Public Works Agency Roads and Transportation Department staff has reviewed the proposed project and determined approval of the project will not result in the degradation of LOS for any identified roadway segments or intersections within the project area. Therefore, no contribution of pro rata share will be required for improvements to the existing public roadway system. The current metric by which traffic related environmental impacts are measured is known as Vehicle Miles Traveled (or VMT). VMT refers to the amount and distance of automobile travel attributable to a project. All discretionary projects are screened to determine if additional project-specific analysis is required related to a project's potential to increase VMT. The proposed Project is consistent with General Plan Transportation Policies CTM-1.1 and 1.2 and will not generate more than 110 average daily trips therefore the proposed

demolition and construction does not require project specific VMT analysis and will not generate any significant traffic-related environmental impact.

The proposed project will be subject to standard conditions of approval requiring the construction of sidewalk improvements adjacent to the property frontage. In accordance with Circulation, Transportation and Mobility Policy CTM-2.18, discretionary development in existing communities is required to implement Complete Street Principles which include the construction of sidewalks. The Public Works Agency, Roads and Transportation Department staff determined that Ocean Drive is subject to the implementation of Complete Streets principles to accomplish the overall goal of increased pedestrian access in the Hollywood Beach community. All new development projects along Ocean Drive are subject to the requirement for sidewalk construction. No new dedication will be required nor will the existing rolled curb configuration be changed. The project has been conditioned to require the Permittee to construct the required sidewalk improvement (Exhibit 4, Condition of Approval No. 24).

The project will not interrupt the continued delivery of emergency services or significantly degrade service levels for Police and Fire within the Hollywood Beach community. City of Oxnard Fire Station 6 (2601 Peninsula Road) is located 0.75 miles northeast of the project site and the Ventura County Sheriff Headquarters is located at 800 South Victoria Avenue, approximately 8 miles north of the project site; West Ventura County unincorporated areas will be handled by the Ventura County Sheriff's Office.

Based on the discussion above, the proposed project is consistent with *Ventura County General Plan* Circulation, Transportation, and Mobility Policies CTM-1.1, CTM-1.3, CTM 1.7, CTM-2.18 and CTM-2.28.

Public Facilities, Services, and Infrastructure and Water Resources

- 3. General Plan 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.*

General Plan Policy 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.*

General Plan Policy PFS-5.9 (Waste Reduction Practices for Discretionary Development): *The County shall encourage applicants for discretionary development to employ practices that reduce the quantities of wastes generated*

and engage in recycling activities to further reduce the volume of waste disposed of in landfills.

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

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

The applicant provided a Will Serve Water and Sewer letter from the Channel Islands Beach Community Services District dated February 4, 2021 certifying that the lot is within its service area and has an existing metered service connection. Channel Island Beach Community Service District has an approved Agency Water Availability Letter (as of December 30, 2020) on file with the Ventura County Public Works Agency. The proposed project will not have any detrimental impacts on the future provision of domestic sewage disposal and domestic water supply. The proposed project would not result in a significant generation of waste. CIBCSD will continue to provide curbside garbage and recycling pickup services to the project site. The Channel Islands Beach Community Services District is a participant in the Port Hueneme Water Agency (PHWA). PHWA is the water supplier for multiple agencies and has prepared a 2020 Urban Water Management Plan (UWMP) which includes projections of supply and demand for the member retail water suppliers. PHWA purchases imported water from the State Water Project which relies imports from Northern California surface water and also relies on water from the United Conservation District (80 percent of the PHWA supply). Water supplies are expected to meet use projections for the next five years including drought-scenario projections for the same term as stated in the UWMP Water Shortage Contingency Plan. PHWA water supply has been determined to be reliable until 2040.

As required by California Public Resources Code (PRC) 41701, Ventura County's Countywide Siting Element (CSE), adopted in June 2001 and updated annually, Ventura County has at least 15 years of disposal capacity available for waste generated by in-County projects. Because the County currently exceeds the minimum disposal capacity required by the state PRC, the proposed project will have less than a significant project-specific impact upon Ventura County's solid waste disposal capacity. Ventura County Ordinance 4421 requires all discretionary permit applicants whose proposed project includes construction and/or demolition activities to reuse, salvage, recycle, or compost a minimum of 65% of the solid

waste generated by their project. The Integrated Waste Management Division's (IWMD) waste diversion program (Form B Recycling Plan/Form C Report) ensures this 65% diversion goal is met prior to Building and Safety Division's issuance certificate of occupancy, consistent with the Ventura County General Plan. The project has been conditioned to address recycling during the demolition and construction phases of the project (Exhibit 4, Condition Nos. 22 and 23).

The proposed 60 feet of landscape area is exempt from the requirements for Water Efficient Landscaping defined in CZO Section 8178-8. For water conservation techniques within the building, the project plans will be reviewed by the Building and Safety Division who will verify that the project meets the current requirements of the Ventura County Building Code and Title 24 California Building Standards Code which includes requirements for energy conservation, green design, construction and maintenance, fire and life safety, and accessibility that apply to the structural, mechanical, electrical, and plumbing systems in the building.

Based on the discussion above, the proposed project is consistent with *Ventura County General Plan* Public Facilities, Services, and Infrastructure Policies PFS-1.7, PFS-4.1, PFS-4.2, PFS-4.3, PFS-5.9, and Water Resources Element Policies WR-1.11 and WR-3.2.

- 4. General Plan Policy 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.*

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

General Plan Policy PFS-7.4 (Discretionary Development Utility Service Line Placement): *The County shall require discretionary development to place new utility service lines underground if feasible. If undergrounding is determined by the County to be infeasible, then new utility service lines shall be placed in parallel to existing utility rights-of-way, if they exist, or sited to minimize their visual impact.*

General Plan Policy 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.

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

General Plan Policy WR-3.3 (Low-Impact Development): *The County shall require discretionary development to incorporate low impact development design features and best management practices, including integration of stormwater capture facilities, consistent with County's Stormwater Permit.*

As shown on Federal Emergency Management Agency (FEMA) Flood Rate Insurance Map (FIRM) Panel 06111C0911F, effective January 29, 2021, the project site is in a location identified as Zone X, an area of moderate flood hazard (0.2% Annual Chance Flood Hazard). The project will not require the development of new flood facilities nor contributions to funds for the development and/or maintenance of flood control facilities, however a flood zone clearance has been filed for the project (Floodplain Clearance No. FW21-0006).

The project site is within the County Urban Unincorporated Area but not within a High-Risk Area. Land disturbance from construction will be less than one acre; the project site is 2,625 square feet in area. The project includes the demolition of an existing single-family dwelling and construction of a new single-family dwelling and will not directly or indirectly cause stormwater quality to exceed water quality objectives or standards in the applicable MS4 Permit or any other NPDES Permits. In accordance with the Ventura Countywide Municipal Stormwater NPDES Permit CAS004002, "Development Construction Program" Subpart 4.F, the applicant will be required to include Best Management Practices (BMPs) designed to ensure compliance and implementation of an effective combination of erosion and sediment control measures for a disturbed site area less than 1 acre (Table 6 in Subpart 4.F, SW-1). As such, neither the individual project nor the cumulative threshold for significance would be exceeded and the project is expected to have a less than significant impact related to water quality objectives or standards in the applicable MS4 Permit or any other NPDES Permits. Verification to implement the minimum requirements for construction will occur prior to issuance of building permits for demolition/construction (Exhibit 4, Condition of Approval No. 26). The total area of disturbance remains below the thresholds for the incorporation of the post construction stormwater management improvements; therefore, the proposed

project is determined to be in compliance with the policies related to Low Impact Development. A schedule of BMPs will be implemented during the construction of the proposed Project unless determined by Ventura County to be not applicable or inadequate. BMPs may include sandbag barriers, silt fencing, and material delivery and storage practices for construction materials.

The proposed project is not located adjacent to any aboveground utilities; therefore, all utilities will be placed underground.

Based on the discussion above, the proposed project is consistent with *Ventura County General Plan* Public Facilities, Services, and Infrastructure Policies PFS-6.1, PFS-6.5 and PFS-7.4 and Water Resources Policies WR-1.12, WR-2.2 and WR-3.3.

5. **General Plan Policy 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.*

General Plan Policy 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. (RDR)*

General Plan Policy 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.*

According to Ventura County Fire Protection District (VCFPD), there is adequate water for fire suppression purposes available to serve the project and the project will meet current VCFPD access standards. Domestic water supply for the proposed project will be provided via an existing connection to Channel Islands Beach Community Services District (Water Will Serve letter dated February 4, 2021). The proposed project will not have any project-specific or cumulative impacts to the domestic water supply. In addition, City of Oxnard Fire Station 6 is located at 2601 Peninsula Road, 0.75 miles northeast of the project site. VCFPD conditioned the project to comply with the applicable standards of the Ventura County Fire Code and VCFPD ordinances (Exhibit 4, Condition Nos. 30 through 34).

Based on the discussion above, the proposed project is consistent with *Ventura County General Plan* Public Facilities, Services, and Infrastructure Policies PFS-11.4, PFS-12.3, and PFS-12.4.

Conservation and Open Space

- 6. General Plan Policy 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 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.*

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.*

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 project site is located 0.94 miles southeast from the closest area designated as Sensitive for Archaeological Sites (Ventura County Resource Management Agency Geographic Information System (VCRMA GIS), 2021). The underlying geology is identified as alluvial sands (Holocene age). No additional assessment of paleontological importance is required for the Project as the underlying geological unit is not very likely to contain vertebrate fossils or scientifically significant non-vertebrate fossils pursuant to CZO Section 8178-3.2.2 Table 1. The Soils Engineering Investigation (Exhibit 5, Heathcote Geotechnical, January 2021) prepared for the project indicates that the project site is characterized by natural soils with sand and some clay layers deeper below. The proposed project includes the construction of conventional slab-on-grade foundations (structurally reinforced) with a minimum 18 inch footings and a minimum excavation depth of 24 inches below the finished grade. In light of the presence of alluvial deposits associated with a relatively recent geological age, and the relatively small development envelope with a shallow depth of excavation for the preparation of foundations, the project is estimated to have a less than significant impact upon paleontological resources. In the unlikely event that archaeological or paleontological resources are encountered during construction, the project will be conditioned to require the permittee to immediately halt ground disturbing activities and retain a qualified consultant to assess the find and make recommendations on the proper disposition of the resources subject to the Planning Director's review and approval (Exhibit 4, Condition Nos. 19 and 20).

Based on the discussion above, the proposed project is consistent with *Ventura County General Plan* Conservation and Open Space Policy COS-4.4, Coastal Act Section 30244, Coastal Area Plan Policies 4.1.1-1, 4.1.1-2, 4.1.1-6, 4.1.1-7, 4.1.2-1, 4.1.2-2, and 4.1.2-3.

Hazards and Safety

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

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

Coastal Act Policy Section 30253 – Minimization of Adverse Impacts:

New development shall:

- (1) Minimize risks to life and property in areas of high geologic, flood, and fire hazards.*
- (2) 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.*

Coastal Area Plan - Central Coast Hazards Policy 4.3.4-1-3: *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 - Central Coast Hazards Policy 4.3.4-1-4: *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.*

Coastal Area Plan Central Coast Hazards Policy 4.3.4-1-5: *The County may require the preparation of a geologic report at the applicant's expense. Such report shall include feasible mitigation measures which will be used in the proposed development.*

The proposed project has been sited and designed that assures the stability and structural integrity, and neither creates nor contributes significantly to erosion, geologic instability, or destruction of the site or surrounding area, or will require the construction of protective devices. According to the Soil Engineering Investigation (Exhibit 5, Heathcote Geotechnical, January 2021), the site is located in an alluvial sand area with no identified faults within the vicinity of the project. The site will be subject to strong ground shaking caused by regionally active faults such as the San Andreas and Malibu Coast faults. The nearest fault is the Simi-Springville which is 6.7 miles east of the project site. Additionally, the project is located in an

area subject to liquefaction (VCRMA GIS 2021). According to the Soil Engineering Investigation, the soil profile will likely be subject to liquefaction at a depth of between 6 to 7 feet and has a low probability to experience soil expansion. The proposed project can be supported by conventional slab-on-grade foundations with 18 inch footings, a minimum depth of 24 inches below the existing grade. The Soil Engineering Investigation states that no ground stabilization is deemed necessary for the construction of a new single-family dwelling.

As shown on FEMA FIRM Panel 06111C0911F (effective January 29, 2021) the project site is in the Special Flood Hazard Area identified as Zone X Shaded, an area of moderate flood hazard. While the project is subject to moderate flood hazard, the project will not require the development of new flood facilities. The Applicant has filed for a flood zone clearance for construction in accordance with the Ventura County Flood Ordinance (Floodplain Clearance No. FW21-0006).

A Coastal Hazard and Wave Runup Study (Exhibit 6, GeoSoils, Inc., April 29, 2021) was prepared for the project. The Coastal Hazard and Wave Runup Study states that the Hollywood Beach area is characterized by a wide sandy beach and has been stabilized by the Channel Islands Harbor inlet jetty. The report indicates the structural design life of the project is 75 years. The proposed project complies with the conclusions included in the Coastal Hazard and Wave Runup Study and the standards set forth in the Coastal Commission's Sea Level Rise Policy Guidance document. In short, the report concludes that there is no need for shore protection for the development because the potential flooding risk is not site specific and the site benefits from the presence of a wide sandy beach which has not been subject to wave runup and overtopping attack in the past. The proposed project is reasonably safe from shoreline erosion due to the overall long-term stability of the beach and the existing 730 foot setback from the shoreline. The lowest finished floor elevation is over 1.5 feet above the street flow line which will sufficiently reduce the vulnerability of the residence sea level rise risk. The proposed development will not contribute to beach erosion or alteration of natural landforms along the adjacent shoreline.

The nearest full-time fire station is City of Oxnard Fire Station 6 (2601 Peninsula Road), located 0.75 miles northeast of the project site. Given the station's proximity to the project site, there will be adequate response time to provide fire protection services. The VCFPD has conditioned the project to ensure adequate water supply, access and response time will be available for fire protection (Exhibit4, Condition Nos. 30 through 34).

Based on the discussion above, the proposed project is consistent with *Ventura County General Plan* Hazards and Safety Policies HAZ-1.1, HAZ-4.1, HAZ-4.3, Coastal Act Policy 30253 and Coastal Area Plan Central Hazard Policies 4.3.4-1-3, 4.3.4-1-4, and 4.3.4-1-5.

8. General Plan Policy 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).*

General Plan Policy 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 proposed single-family dwelling qualifies as a noise-sensitive land use. Noise sensitive uses include, but are not limited to, dwellings, schools, hospitals, nursing homes, churches, and libraries. The proposed project is located approximately two miles south of the designated noise contour for Harbor Boulevard, outside the CNEL 60dB(A) noise contour (RMA GIS Viewer, Noise Contour Maps, 2018). In addition, the proposed project site is not located near any active railroad tracks or the Oxnard airport (both of which are approximately 1.5 miles and 2.44 miles to the northeast, respectively) Therefore, the proposed project will not be subject to unacceptable levels of noise from these noise generators. The residential use of the property is not considered a noise generator that will adversely affect any nearby noise sensitive uses (e.g., surrounding residences). While the proposed single-family dwelling is not considered a noise generating 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 4, Condition No. 21).

Based on the discussion above, the proposed project is consistent with *Ventura County General Plan* Hazards and Safety Policies HAZ-9.2 and HAZ-9.5.

Coastal Access

9. Coastal Area Plan - Central Coast Access Policy 4.3.1-B-1 (Vertical): *For all new development between the first public road and the ocean, granting of an easement to allow vertical access to the mean high tide line shall be mandatory unless:*

- a. Adequate public access is already available within a reasonable distance of the site measured along the shoreline,*
- b. Access at the site would result in unmitigable adverse impacts on areas designated as "sensitive habitats" or tidepools by the land use plan,*
- c. Findings are made, consistent with Section 30212 of the Coastal Act, that access is inconsistent with public safety, military security needs, or that agriculture would be adversely affected, or*
- d. The parcel is too narrow to allow for an adequate vertical access corridor without adversely affecting the privacy of the property owner.*

Coastal Area Plan - Central Coast Access Policy 4.3.1-B-2 (Lateral): *For all new development between the first public road and the ocean, granting of lateral*

easements to allow for public access along the shoreline shall be mandatory unless subsection (a) below is found. In coastal areas, where the bluffs exceed five feet in height, all beach seaward of the base of the bluff shall be dedicated. In coastal areas where the bluffs are less than five feet, the area to be dedicated shall be determined by the County. At a minimum, the dedicated easement shall be adequate to allow for lateral access during periods of high tide. In no case shall the dedicated easement be required to be closer than 10 feet to a residential structure. In addition, all fences, no trespassing signs, and other obstructions that may limit public lateral access shall be removed as a condition of development approval.

- a. Findings are made, consistent with Section 30212 of the Coastal Act that access is inconsistent with public safety, military security needs, or that agriculture would be adversely affected.*

Coastal Act Policy Section 30211: *Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*

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

The proposed project will not obstruct or adversely impact access to a public recreation resource (Hollywood Beach). The nearest vertical access to the beach is located approximately 96 feet to the southeast of the subject property. The proposed single-family dwelling will not extend beyond the boundaries of the subject property, such that it would impede any horizontal public access routes. There are developed parking facilities one-quarter of a mile south of the site. Therefore, the proposed development will not interfere with the public's right of access to the sea and will not require development of new dedicated accessways to the public beach.

Based on the discussion above, the proposed project is consistent with Coastal Area Plan Central Coast Access Policies 4.3.1-B-1 and 4.3.1-B-2, and Coastal Act Policies Sections 30211 and 30212.

D. ZONING ORDINANCE COMPLIANCE

The proposed project is subject to the requirements of the Ventura County CZO. Pursuant to Ventura County CZO (Section 8174-4), the proposed use is allowed in the RBH 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 1 – Development Standards Consistency Analysis

Type of Requirement	Zoning Ordinance Requirement	Complies?
Minimum Lot Area (Gross)	1,750 square feet	Yes, the lot is 2,625 square feet
Maximum Percentage of Building Coverage	65%	53%
Front Setback	20 ft. first floor / 16 ft. for second and third floors	20 ft. first floor and 16 ft. for second and third floors
Side Setback	3 ft.	3 ft.
Rear Setback	6 ft.	6 ft.
Maximum Building Height	28 ft.	28 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].**

As discussed in Section C and D above, the project was determined to be in conformance with the applicable policies and standards of the Ventura County General Plan, the Coastal Area Plan, and the Coastal Zoning Ordinance. The Hollywood Beach Community is characterized predominately by single family development with varying year-built dates, house styles, forms and footprints. The proposed project is a request to demolish an existing dwelling (2,228 sq. ft.) and attached garage (448 sq. ft.) and construct a new single-family dwelling (3,433 sq. ft.) and attached garage (529 sq. ft.). The proposed dwelling maximizes the proposed floor area by building out to the rear and side yard setbacks, utilizing a permissible encroachment for the second and third floors and proposing three building levels within the maximum height envelope of 28 ft. The proposed

contemporary structure will be larger than the neighboring homes, which range in size from in size from 2,688 sq. ft. (3417 Ocean Drive) to 2,645 sq. ft. (3409 Ocean Drive), however as discussed in Section D of this staff report (above) the project complies with the development standards for the RBH zone. Given the similarity of the adjacent lots, the proposed 3,433 sq. ft. single-family dwelling is compatible with the surrounding single-family development.

As discussed in Section C of this staff report (above), the proposed project does not create any land use conflicts with surrounding residential development or generate any significant new traffic. Furthermore, with the adoption of the recommended condition of approval to limit the days and times of noise-generating construction activities, the proposed project will not generate noise that is incompatible with surrounding residential and beach uses (Exhibit 4, Condition No. 21). Therefore, the construction of the proposed single-family dwelling will be consistent with the character of the surrounding residential development.

Based on the discussion above, this finding can be made.

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

The proposed project consists of the demolition and construction of a new single-family dwelling. The proposed use is not conditionally permitted; therefore, the requirement of this finding does not apply to the proposed project.

Based on the discussion above, this finding can be made.

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

As discussed above in Section C of this staff report, the project appropriately addresses hazards associated with coastal residential development. The project was found to adequately address applicable policies related to fire prevention, geological hazards and flood hazards. The project has water available for domestic purposes which include fire prevention purposes as evidenced by the submitted water will serve letter (Channel Island Beach CSD dated February 4, 2021). Additionally, the proposed structure meets the applicable requirements for safety related flood and geological hazards and that the proposed conventional slab-on-grade foundation with a first floor elevation of 13.65 NAVD 88 is an appropriate design for the project. The proposed project will not result in a change in traffic generation, water, or sewage disposal service connections. Existing public services are adequate to serve the proposed development along with existing residential development on neighboring properties. The proposed project will be subject to a condition of approval to limit the days and times of noise-generating construction activities (Exhibit 4, Condition No. 21). Finally, as discussed in Section

D of this staff report (above), the proposed project will comply with the maximum building height, front and rear setbacks, and maximum building coverage standards of the RBH zone. Therefore, the proposed demolition and construction of the new single-family dwelling will not be obnoxious or harmful or impair the utility of neighboring properties or uses.

Based on the discussion above, this finding can be made.

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

As discussed in Section C of this staff report (above), adequate public resources and infrastructure exist to serve the proposed single-family dwelling. The Channel Islands Beach Community Service District will continue to provide water and sewage disposal services to the subject property. Adequate fire flow, access, and response times exist for fire protection purposes. VCFPD reviewed the project and conditioned the project to comply with the applicable standards of the Ventura County Fire Code and VCFPD ordinances (Exhibit 4, Condition Nos. 30 through 34). Furthermore, the proposed project will not generate new traffic beyond customary vehicle trips associated with the development of a single-family dwelling. Ocean Drive and the surrounding public road network are adequate to continue serving the new single-family dwelling. The applicant will be required to construct sidewalks adjacent the property street frontage (Exhibit 4, Condition of Approval No. 24). The applicant designed the proposed project to comply with the standards set forth in the Coastal Commission's Sea Level Rise Policy Guidance (Exhibit 6, GeoSoils, Inc., April 29, 2021). The proposed project will be subject to conditions of approval to limit the days and times of noise-generating construction activities (Exhibit 4, Condition No. 21). Therefore, the proposed project will not be detrimental to the public interest, health, safety, convenience, or welfare.

Based on the discussion above, this finding can be made.

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

The Planning Division provided public notice regarding the Planning Director hearing in accordance with the Government Code (Section 65091), CZO (Section 8181-6.2 et seq.). On November 4, 2021, 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 November 8, 2021, the Planning Division placed a legal ad in the *Ventura County Star*. As of the date of this document, not comments on the Project have been received.

The project site is located within the City of Oxnard's Sphere of Influence. On March 26, 2021, the Planning Division notified the City of Oxnard of the proposed project and requested interagency review of the project. On April 7, 2021, representatives for the City of Oxnard responded the City had no comment on the proposed project.

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 Construct 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. PL21-0027, subject to the conditions of approval (Exhibit 4); and
5. **SPECIFY** that the Clerk of the Planning Division is the custodian, and 800 S. Victoria Avenue, Ventura, CA 93009 is the location, of the documents and materials that constitute the record of proceedings upon which this decision is based.

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

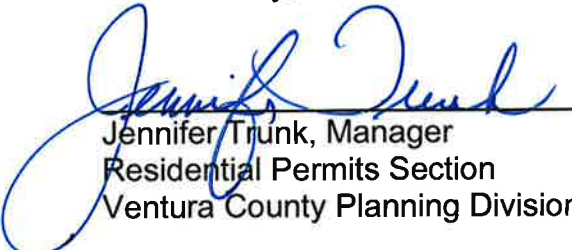
If you have any questions concerning the information presented above, please contact John Oquendo at (805) 654-3588 or John.Oquendo@ventura.org.

Prepared by:



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

Reviewed by:



Jennifer Trunk, Manager
Residential Permits Section
Ventura County Planning Division

EXHIBITS

Exhibit 2 Maps

- Exhibit 3 Plans
- Exhibit 4 Conditions of Approval
- Exhibit 5 Soil Engineering Investigation (Heathcote Geotechnical, January 2021)
- Exhibit 6 Revised Coastal Hazard & Wave Runup Study (GeoSoils, Inc., April 2021)



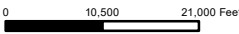
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Resource Management Agency
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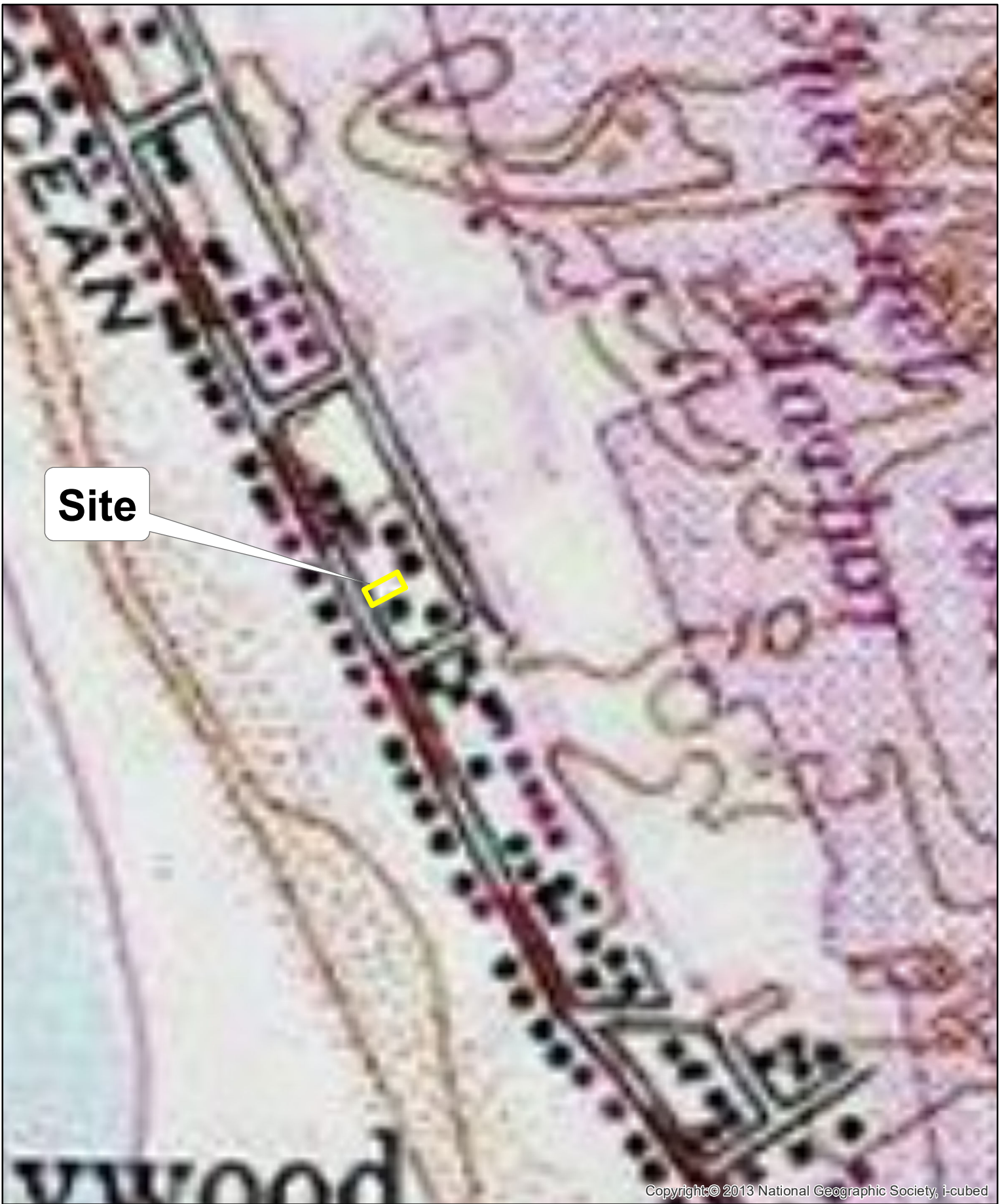


County of Ventura
Planning Director Hearing
PL21-0027
Exhibit 2 - Maps



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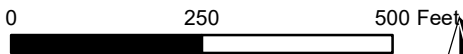
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County of Ventura
 Resource Management Agency
 GIS Development & Mapping Services
 Map created on 04-14-2021
 Source: Oxnard U.S.G.S.
 7.5 Minutes Quadrangle
 Contour Interval = 20 ft

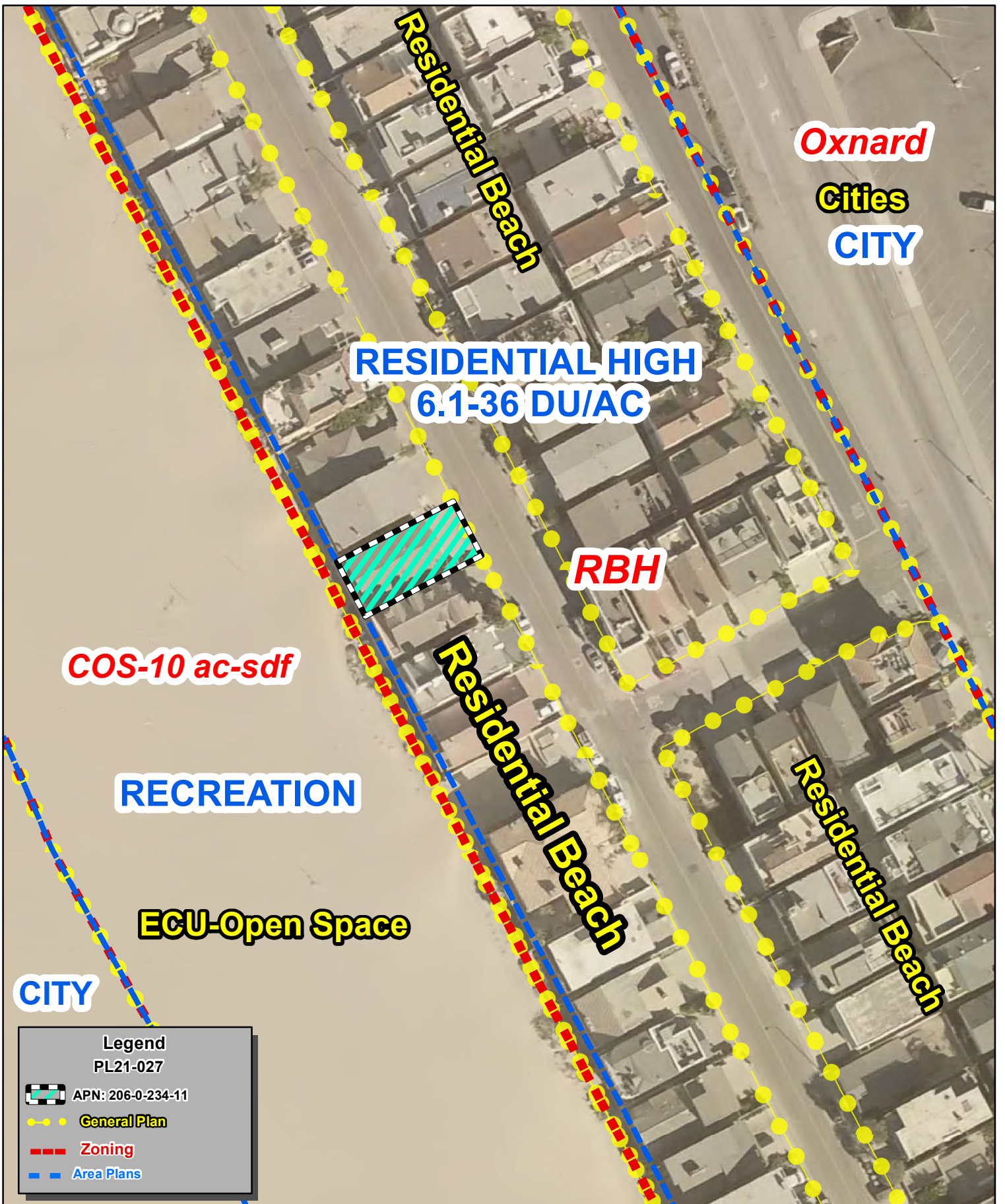


**County of Ventura
 Planning Director Hearing
 PL21-0027
 Topo Map**



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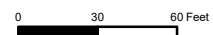




Ventura County, California
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County of Ventura
Planning Director Hearing
PL21-0027
General Plan & Zoning Map



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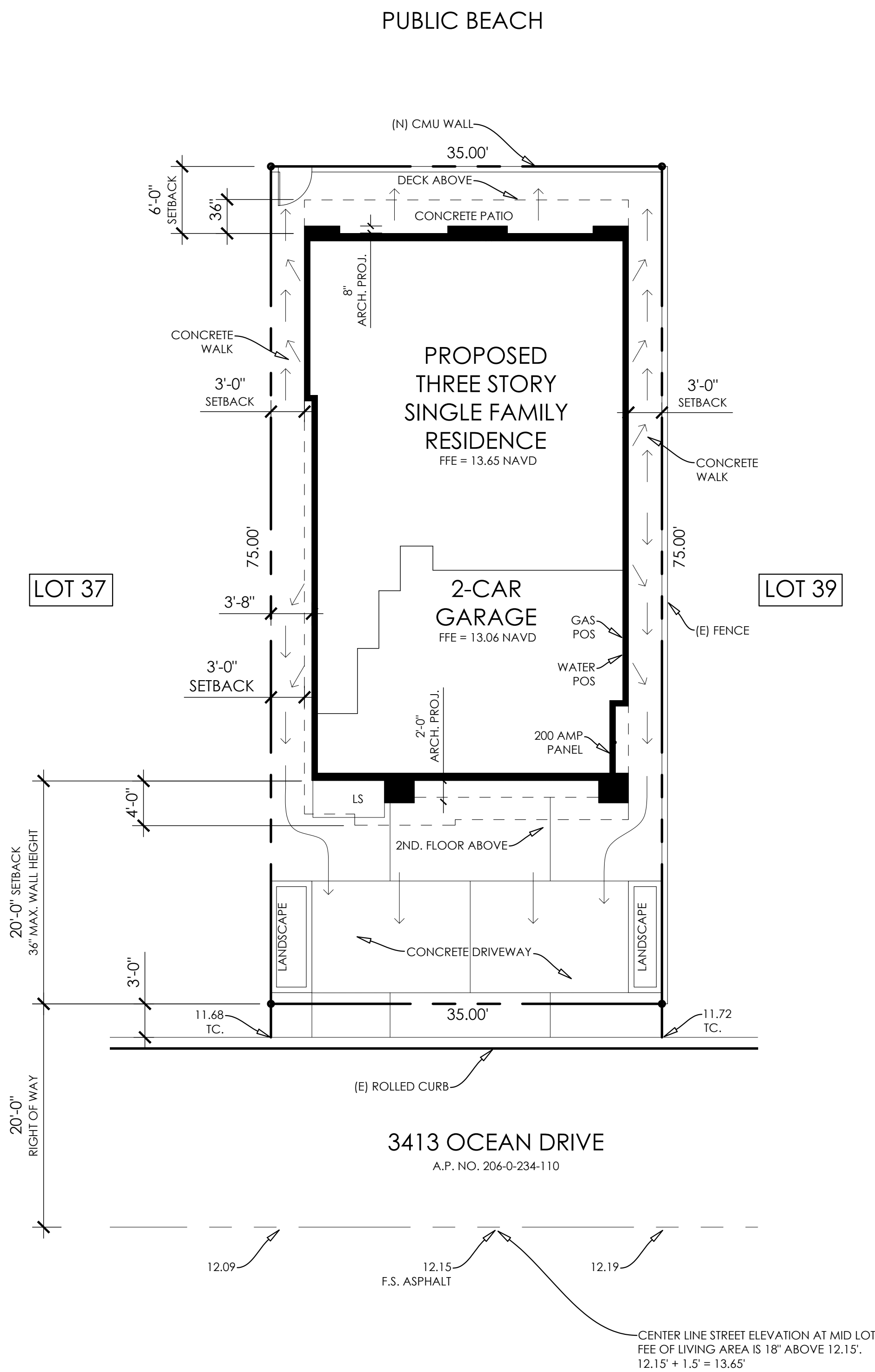
BUILDING ANALYSIS

THREE STORY	
TYPE OF OCCUPANCY:	R-3
TYPE OF CONSTRUCTION:	TYPE V-B
FIRE SPRINKLERS:	REQUIRED
MAXIMUM BUILDING HEIGHT:	28'-0"
COASTAL ZONE	RBH

INDEX

C	SITE PLAN, PROJECT INFO.
LS	SURVEY
A3	FIRST FLOOR & SECOND FLOOR PLAN
A4	THIRD FLOOR & ROOF PLAN
A5	ELEVATIONS
A6	SECTIONS

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AREAS

FIRST FLOOR	848 S.F.
SECOND FLOOR	1,263 S.F.
THIRD FLOOR	1,322 S.F.
TOTAL FLOOR AREA	3,433 S.F.
GARAGE	529 S.F.
DECK #1	224 S.F.
DECK #2	137 S.F.
DECK #3	68 S.F.
LOT	2,625 S.F.
LOT COVERAGE	52.5%

CONSULTANTS

CIVIL ENGINEER: LAIMA REEDER P.E.	(805) 985-1700
SOILS ENGINEER: HEATHCOTE GEOTECHNICAL	
FRED HEATHCOTE	(805) 646-9978
JOB NO. 20215	
COASTAL ENGINEER: DAVID W. SKELLY	(960) 438-3155
SURVEYOR: AZIMUTH GROUP	
LES EVERARD	(805) 797-4690

FLOOD PLAIN CONSTRUCTION REQUIREMENTS

- FLOOD PLAIN ZONE X
- THIS PROJECT IS NOT SUBJECT TO THE FLOOD PLAIN MANAGEMENT ORDINANCE

SCOPE OF WORK

DEMO EXISTING TWO STORY & CONSTRUCT NEW THREE STORY SINGLE FAMILY RESIDENCE WITH AN ATTACHED TWO CAR GARAGE, DECKS AND SOLAR PANELS.



County of Ventura
 Planning Director Hearing
 PL21-0027
 Exhibit 3 - Plans

VICINITY MAP
 N.T.S.



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

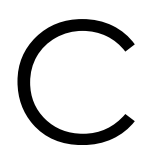
Integral Design, Inc.
 AND CONSTRUCTION
WALT PHILIPP
 950 COUNTY SQUARE DRIVE, SUITE 116
 VENTURA, CALIFORNIA 93003
 805/644-5594 (OFFICE)

PROPOSED SINGLE FAMILY RESIDENCE FOR:
MR. & MRS. STEVE NAMM
 3413 OCEAN DRIVE, OXNARD, CA
 HOLLYWOOD BEACH TRACT
 LOT 47, A.P. NO. 206-0-234-110

OWNER
 MR. & MRS. STEVE NAMM
 4563 PETIT AVE
 ENCINO, CA 91436-3259
 818-406-1478

SHEET TITLE
 SITE PLAN &
 PROJECT INFO

DATE
 03/03/21
 SHEET NO.



SURVEYOR'S STATEMENT

THIS MAP CORRECTLY REPRESENTS A TOPOGRAPHIC SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH LOCALLY ACCEPTED STANDARDS AND PRACTICES ON JANUARY 29, 2021

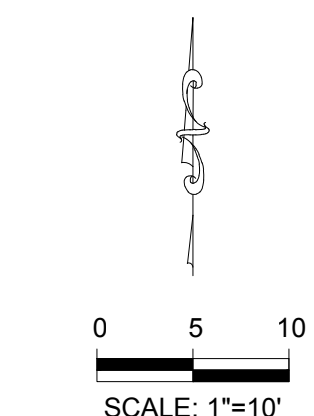
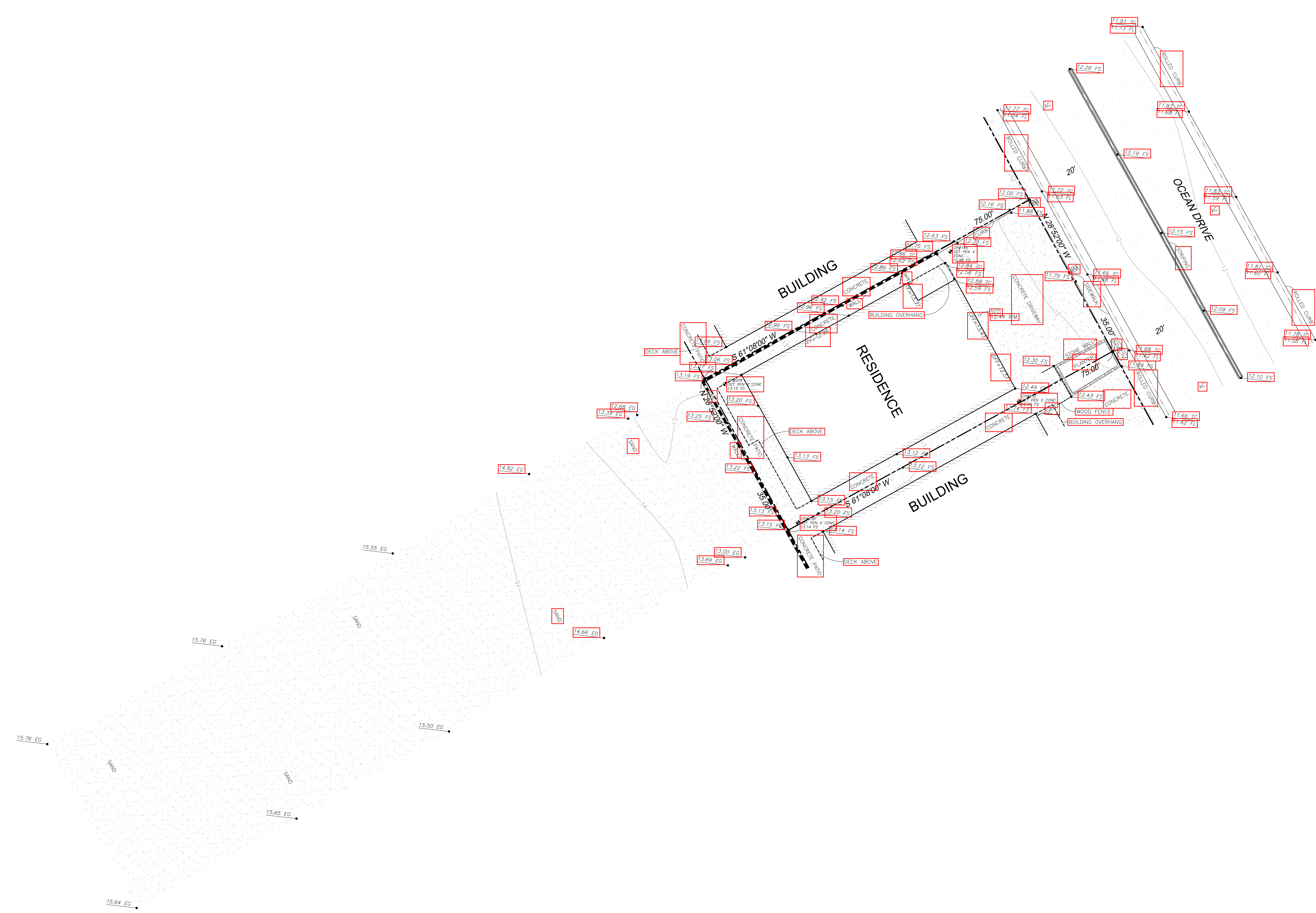
BENCHMARK

BM 32-3 RM 1
ELEVATION: 10.63 (NAVD 88)

AT THE SOUTHWEST CORNER OF HARBOR BOULEVARD AND SANTA ANA AVENUE, 33.1 FEET SOUTHEAST FROM AN EDISON VAULT ON SANTA ANA AVENUE, 10.9 FEET NORTHERLY FROM A SEWER MANHOLE.

NOTES

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Prepared by:
AZIMUTH GROUP
 5201 CLEMSON STREET
 VENTURA, CA 93003 (805) 289-9407

TOPOGRAPHIC SURVEY
 3413 OCEAN DRIVE
 OXNARD, CA

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AND CONSTRUCTION

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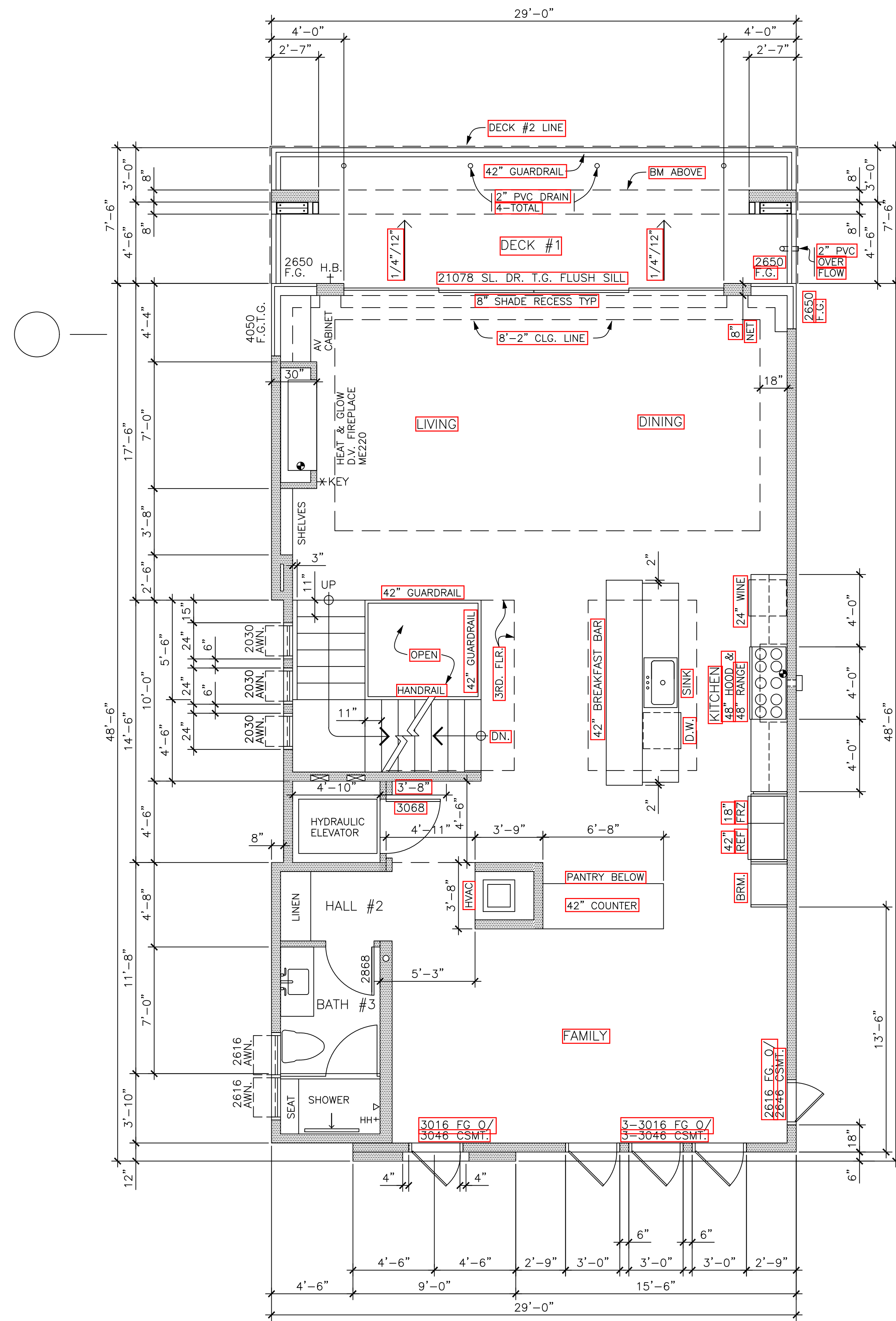
OWNER
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818-406-1478

SHEET TITLE
FIRST FLOOR
SECOND FLOOR

DATE
03/03/21

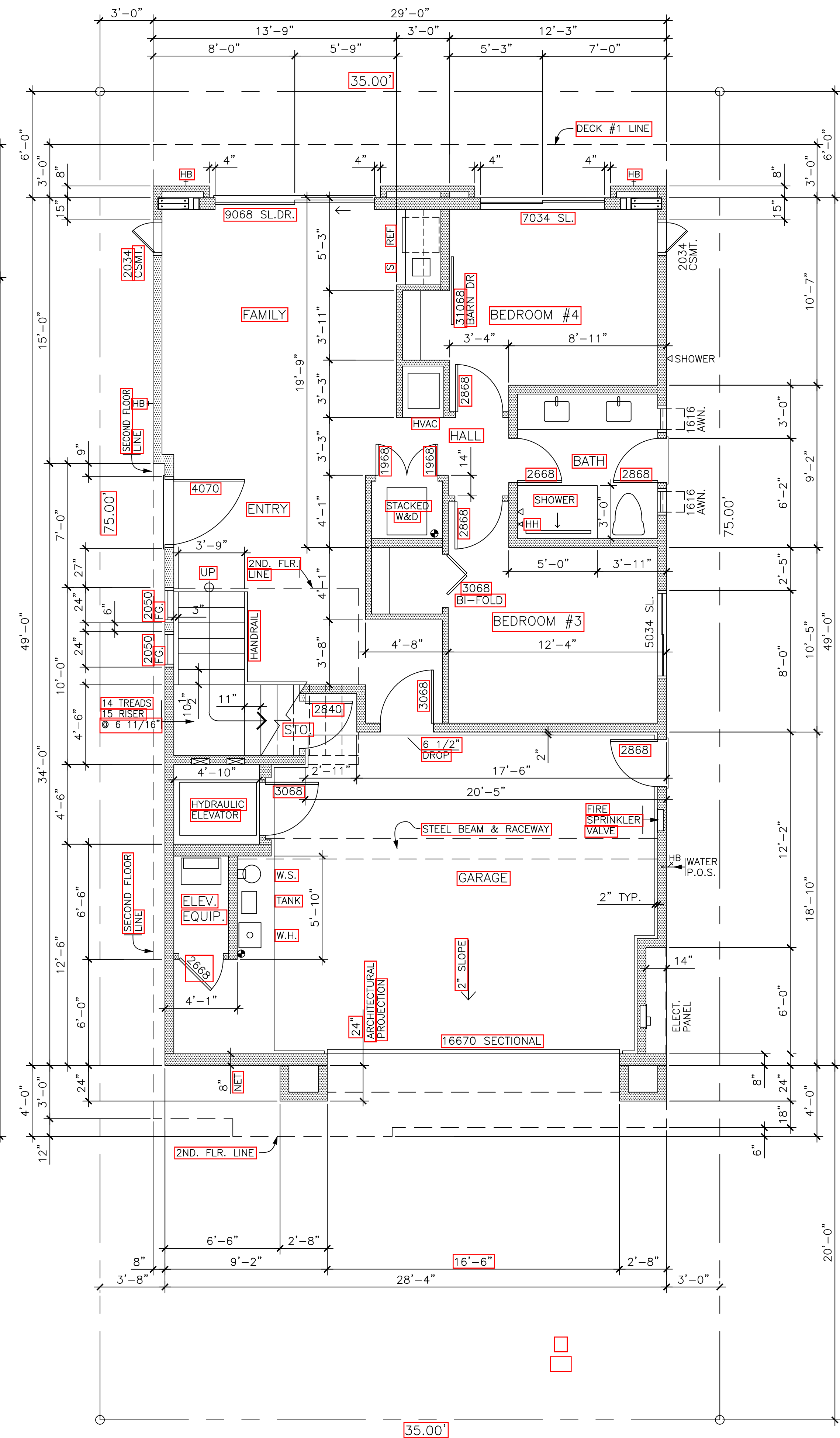
SHEET NO.

A3



SECOND FLOOR

1/4" = 1'-0"



FIRST FLOOR

1/4" = 1'-0"

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Integral Design, Inc.
 AND CONSTRUCTION

WALT PHILIPP
 950 COUNTY SQUARE DRIVE, SUITE 116
 VENTURA, CALIFORNIA 93003
 805/644-5594 (OFFICE)

PROPOSED SINGLE FAMILY RESIDENCE FOR:

MR. & MRS. STEVE NAMM

3413 OCEAN DRIVE, OXNARD, CA
 HOLLYWOOD BEACH TRACT
 LOT 47, A.P. NO. 206-0-234-110

OWNER

MR. & MRS. STEVE NAMM
 4563 PETIT AVE
 ENCINO, CA 91436-3259
 818-406-1478

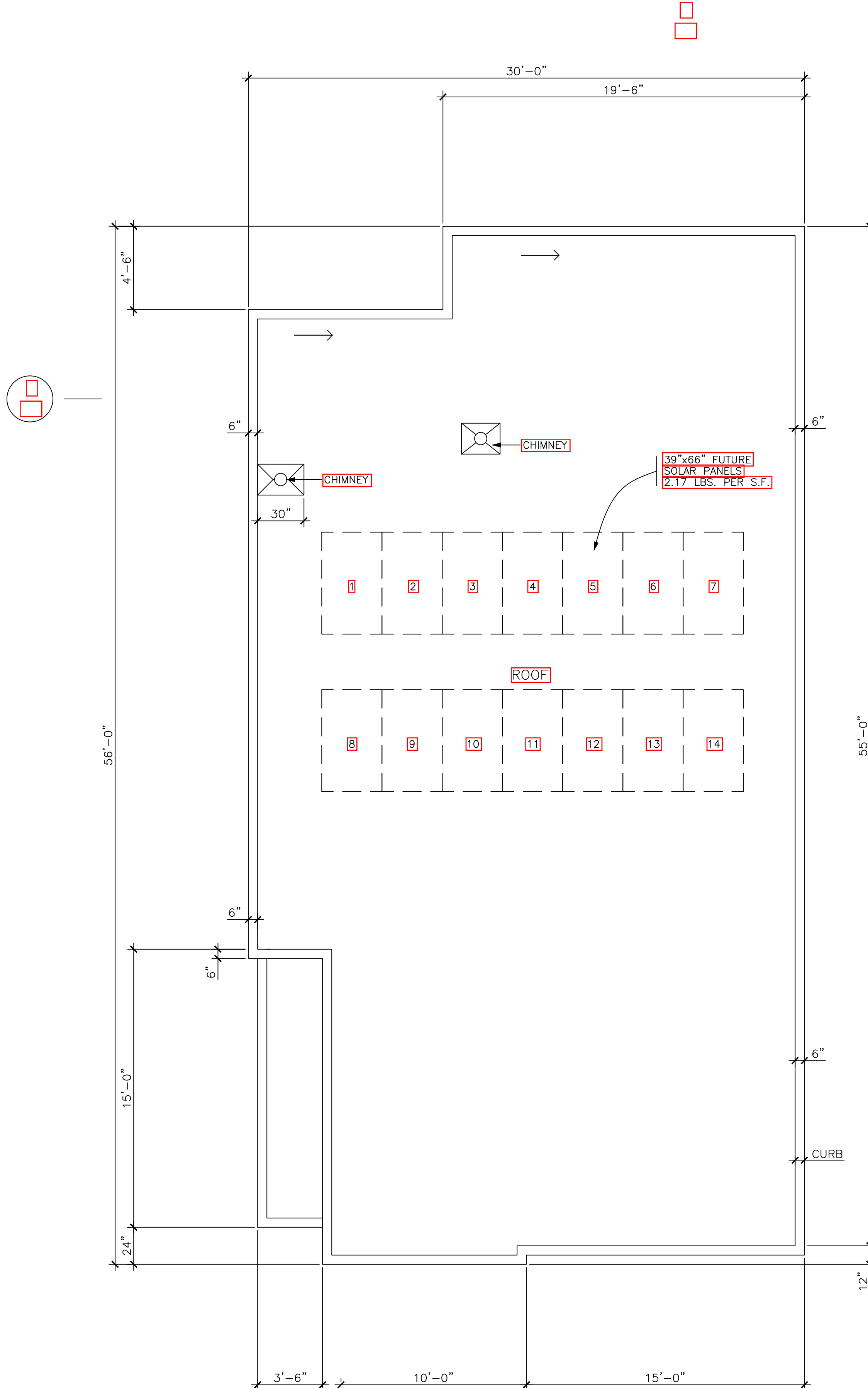
SHEET TITLE
 THIRD FLOOR
 ROOF DECK

DATE

03/03/21

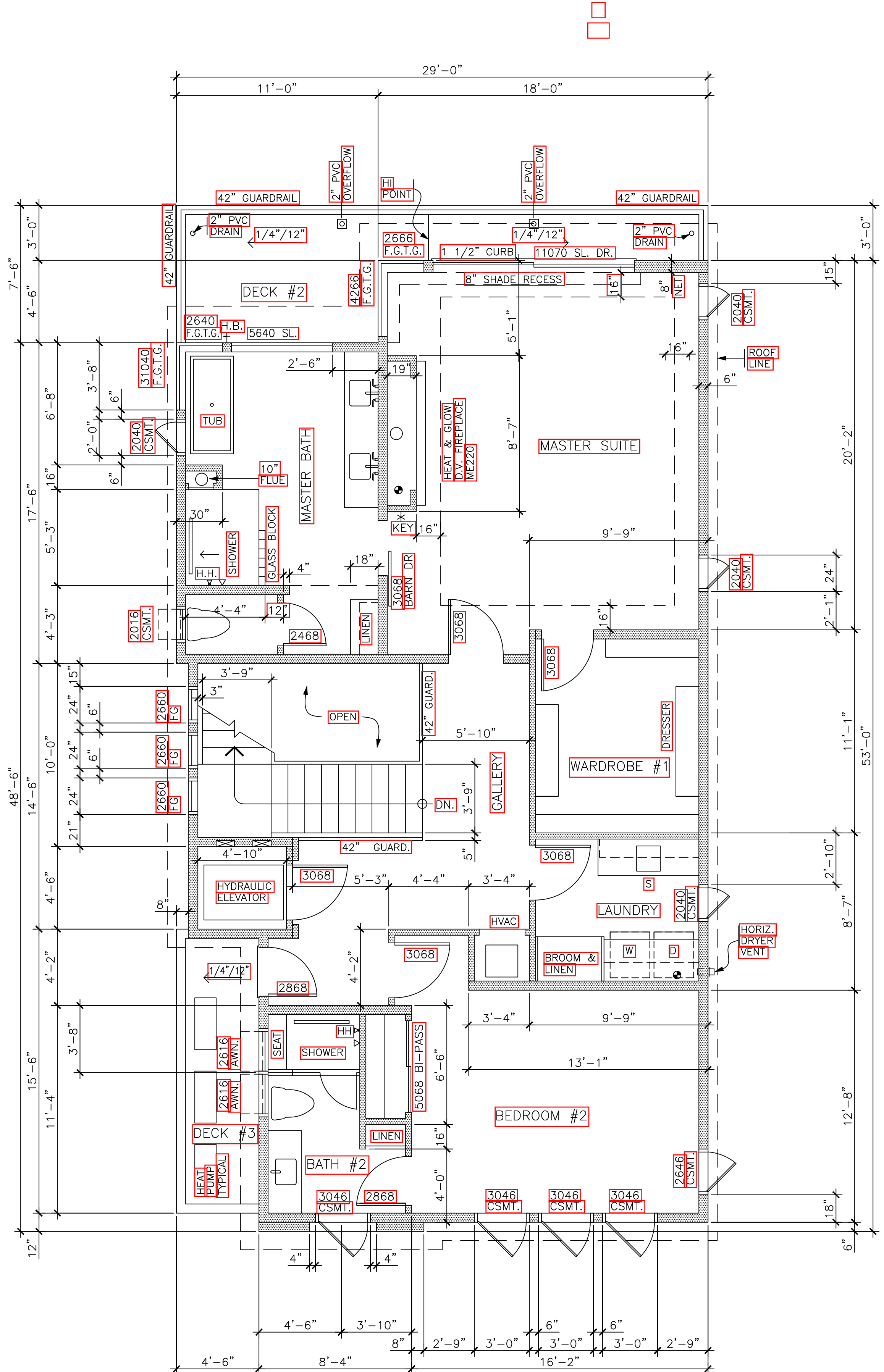
SHEET NO.

A4



ROOF PLAN

1/4" = 1'-0"

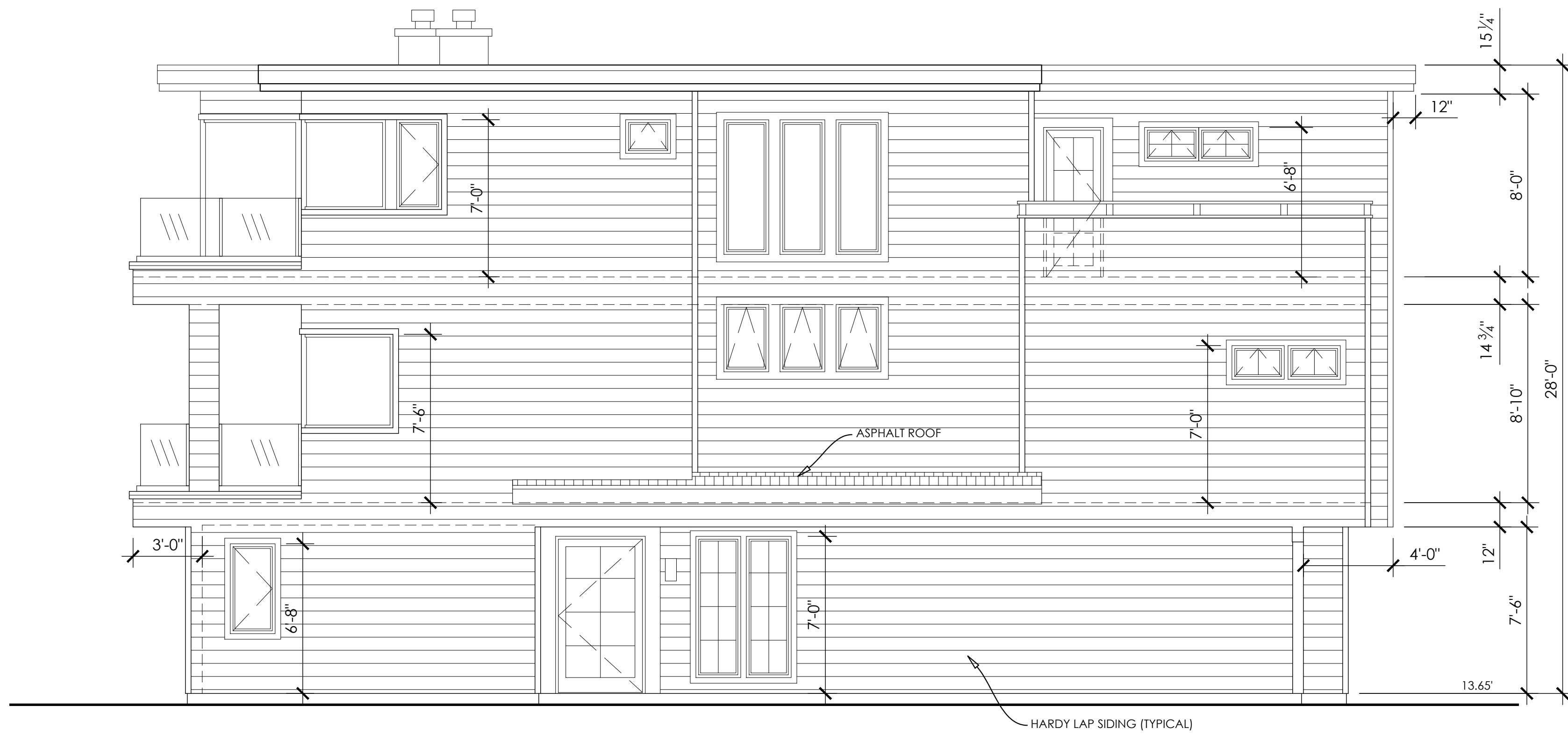


THIRD FLOOR

1/4" = 1'-0"

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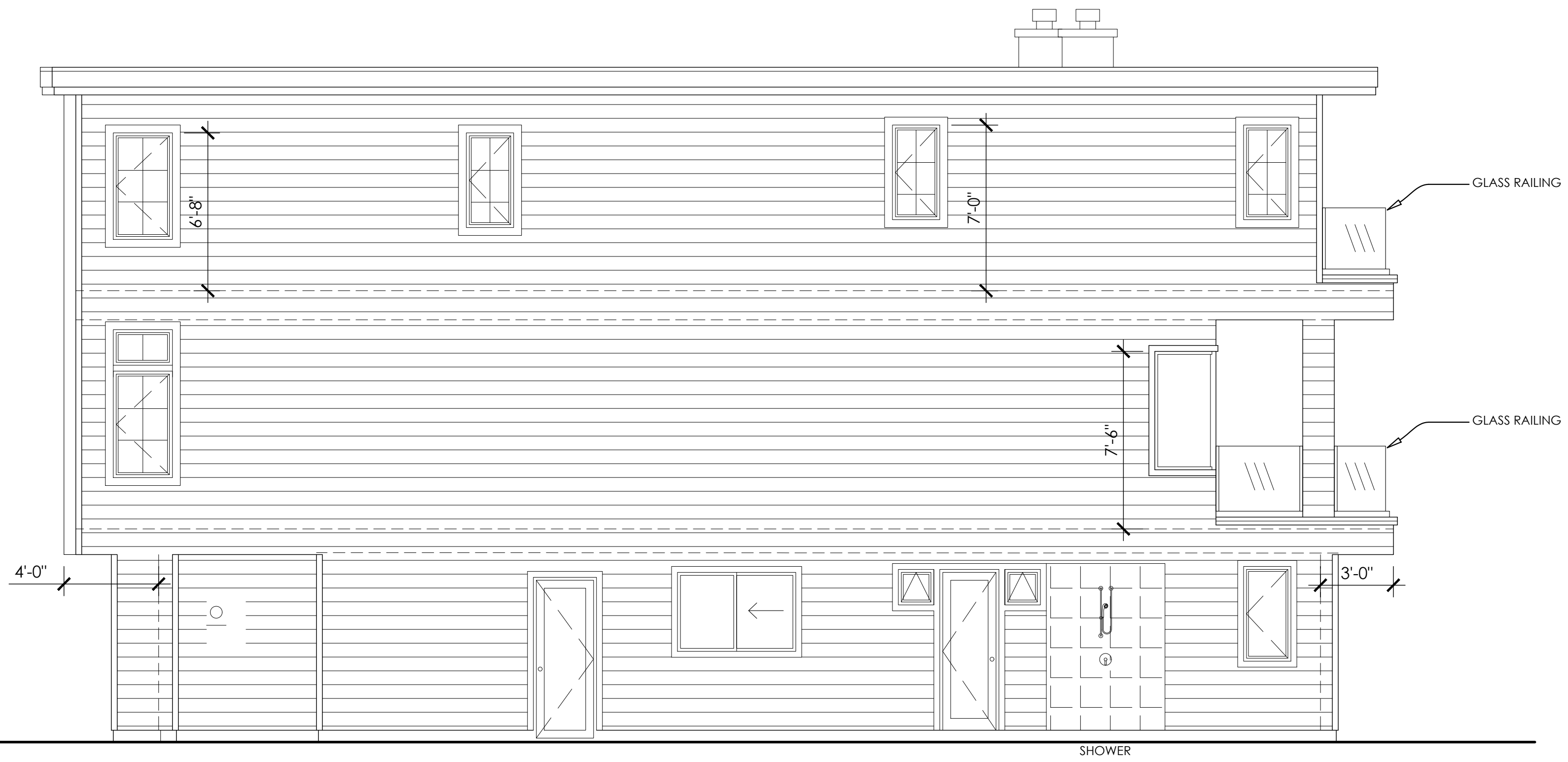
Integral Design, Inc.
 AND CONSTRUCTION
 WALT PHILIPP
 950 COUNTY SQUARE DRIVE, SUITE 116
 VENTURA, CALIFORNIA 93003
 805/644-5594 (OFFICE)



SOUTH ELEVATION
 1/4" = 1'-0"



EAST ELEVATION
 1/4" = 1'-0"



NORTH ELEVATION
 1/4" = 1'-0"



WEST ELEVATION
 1/4" = 1'-0"

PROPOSED SINGLE FAMILY RESIDENCE FOR:
MR. & MRS. STEVE NAMM
 3413 OCEAN DRIVE, OXNARD, CA
 HOLLYWOOD BEACH TRACT
 LOT 47, A.P. NO. 206-0-234-110

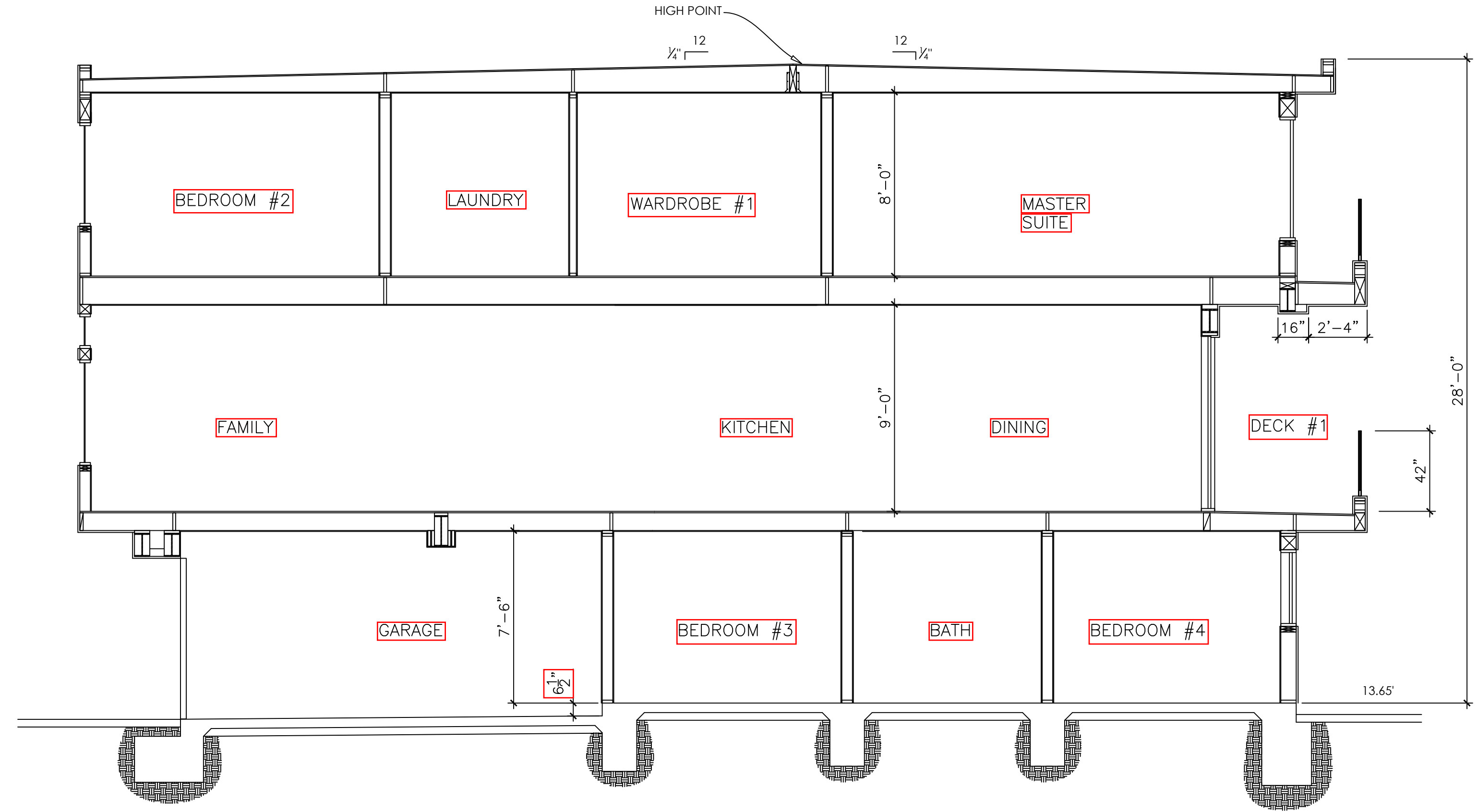
OWNER
 MR. & MRS. STEVE NAMM
 4563 PETIT AVE
 ENCINO, CA 91436-3259
 818-406-1478

SHEET TITLE
 ELEVATIONS

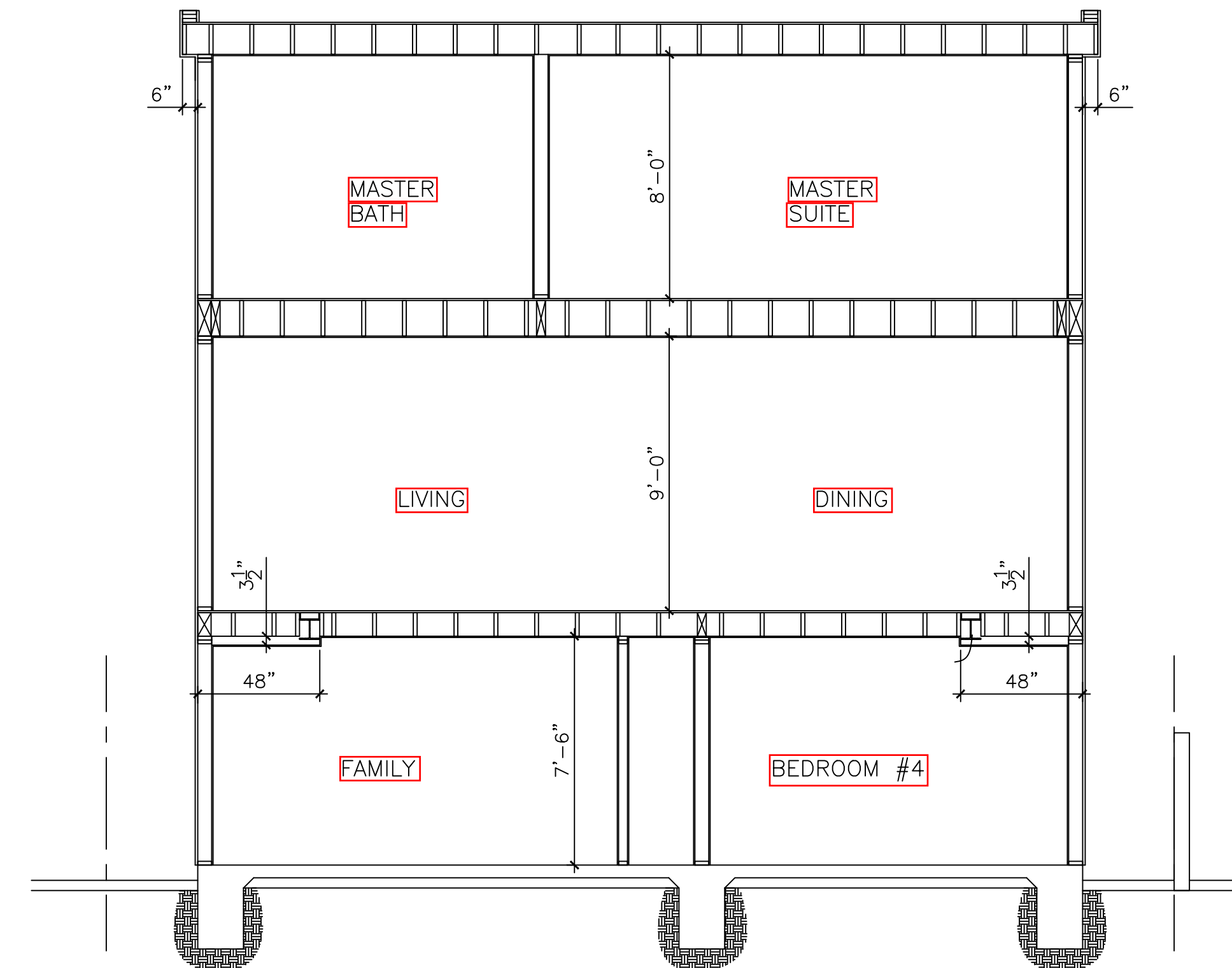
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Integral Design, Inc.
 AND CONSTRUCTION
 WALT PHILIPP
 950 COUNTY SQUARE DRIVE, SUITE 116
 VENTURA, CALIFORNIA 93003
 805/644-5594 (OFFICE)



SECTION A
 1/4" = 1'-0"



SECTION B
 1/4" = 1'-0"

PROPOSED SINGLE FAMILY RESIDENCE FOR:
MR. & MRS. STEVE NAMM
 3413 OCEAN DRIVE, OXNARD, CA
 HOLLYWOOD BEACH TRACT
 LOT 47, A.P. NO. 206-0-234-110

OWNER
 MR. & MRS. STEVE NAMM
 4563 PETIT AVE
 ENCINO, CA 91436-3259
 818-406-1478

SHEET TITLE
 SECTIONS

DATE
 03/03/21

SHEET NO.

A6

**NAMM RESIDENCE
CONDITIONS OF APPROVAL FOR
COASTAL PD PERMIT CASE NO. PL21-0027**

RESOURCE MANAGEMENT AGENCY (RMA)

Planning Division Conditions

1. Project Description

This Coastal Planned Development Permit is based on and limited to compliance with the project description stated in this condition below, Exhibits 3 (Plans), 5 (Soil Engineering Investigation), 6 (Revised Coastal Hazards & Wave Runup Study) of the Planning Director hearing on November 18, 2021, 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:

The Project is a Coastal Planned Development (PD) Permit to authorize the demolition of an existing two-story single-family dwelling 2,228 square foot single-family dwelling with a 448 square foot attached garage and the construction of a new three-story 3,433 square foot single-family dwelling and a 529 square foot attached garage. The Project includes three balconies (a 224 square foot second floor balcony and a 137 square foot and 68 square foot third floor balcony). The single-family dwelling will have a height of 28 feet, as measured from the from the flood control datum established by the Public Works Agency. Site improvements also include the installation of 60 square feet of new landscaping improvements.

Access to the project site is provided by a new private driveway which connects to Ocean Drive. Water and wastewater service will be provided by the Channel Islands Beach Community Services District.

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

2. Required Improvements for Coastal PD

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

County of Ventura Planning Director Hearing PL21-0027 Exhibit 4 - Conditions of Approval
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Requirement: The Permittee shall ensure that all required off-site and on-site improvements for the Project, including structures, paving, parking, and landscaping [revise as needed] are completed in conformance with the approved plans stamped as Planning Director Hearing Exhibit 3. The Permittee shall prepare and submit all final building and site plans for the County's review and approval in accordance with the approved plans.

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

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

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 from the date the approval decision of this Coastal PD Permit 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 or as dictated by the respective agency.

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.

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.

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

Monitoring and Reporting: The Permittee shall return a copy of the recorded "Notice of Land Use Entitlement" form and conditions of this 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.
- b. Billing Process: The Permittee shall pay all Planning Division invoices within 30 days of receipt thereof. Failure to timely pay an invoice shall subject the Permittee to late fees and charges set forth in the Planning Division Fee Schedule, and shall be grounds for suspension, modification, or revocation of this Coastal PD Permit. The Permittee shall have the right to challenge any charge or penalty prior to payment.

12. Defense and Indemnification

- a. The Permittee shall defend, at the Permittee's sole expense with legal counsel acceptable to the County, against any and all claims, actions, or proceedings against the County, any other public agency with a governing body consisting of the members of the County Board of Supervisors, or any of their respective board members, officials, employees and agents (collectively, "Indemnified Parties") arising out of or in any way related to the County's issuance, administration, or enforcement of this 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 Recommendations

Purpose: To demonstrate that permitted buildings and structures comply with the recommendations contained in the Revised Coastal Hazard & Wave Runup Study for 3413 Ocean Drive, Oxnard, California (GeoSoils, Inc., April 29, 2021).

Requirement: The final plans for the permitted development shall be in substantial conformance with the recommendations contained in the Revised Coastal Hazard & Wave Runup Study for 3413 Ocean Drive, Oxnard, California (GeoSoils, Inc., April 29,

2021), relative to foundation, construction, grading, drainage, and height of the structure. The plans and specifications shall note the base flood elevation and height of the single-family dwelling and all other permitted structures.

Documentation: A copy of building plans and specifications and Revised Coastal Hazard & Wave Runup Study for 3413 Ocean Drive, Oxnard, California (GeoSoils, Inc., April 29, 2021), 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.

PUBLIC WORKS AGENCY (PWA)

Integrated Waste Management Division (IWMD) Conditions

22. Construction & Demolition Debris Recycling Plan (Form B)

Purpose: Ordinance 4421 requires the Permittee to divert recyclable construction and demolition (C&D) materials generated by the Project (e.g., wood, metal, greenwaste, soil, concrete, asphalt, paper, cardboard, etc.) from local landfills through recycling, reuse, or salvage. Review Ordinance 4421 at:

<http://onestop.vcpublicworks.org/integrated-waste-management-laws-ordinances>.

Requirement: The Permittee must submit a comprehensive recycling plan (Form B – Recycling Plan) to the Integrated Waste Management (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: <http://onestop.vcpublicworks.org/integrated-waste-management-forms>.

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/construction/#solid-waste-collectors>.

A list of local facilities permitted to recycle soil, wood, and greenwaste is available at:

<https://www.vcpublishworks.org/wsd/iwmd/businessrecycling/#GreenWasteProcessing>.

A complete list of County franchised solid waste haulers is available at: www.vcpublishworks.org/commercialhaulers.

Timing: Upon Building & Safety'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.

23. Construction & Demolition Debris Reporting Form (Form C)

Purpose: Ordinance 4421 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. Please review Ordinance 4421 at:

<http://onestop.vcpublishworks.org/integrated-waste-management-laws-ordinances>.

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 <http://onestop.vcpublishworks.org/integrated-waste-management-forms>

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 prior to 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.

Transportation Department Conditions

24. Road Improvements

Purpose: Road improvements shall be required when the existing road does not meet the current applicable County Road Standard Plate.

Requirement: Road improvements are required in accordance with the County Road Standards, 2040 General Plan CMT-2.18; Ordinance 1607 dated November 10, 1964; and Code of Ordinances Division 8, Chapter 4 – Urban Area Development. Ocean Drive has an existing right-of-way width of 40 feet.

- a. The applicant/permittee shall submit road improvement plans for improvements along the parcel's frontage for a minimum 4-ft wide ADA compliant sidewalk along

the property frontage behind the existing rolled curb and in accordance with Road Standard Plate B-5 [A], Plate E-2 or as modified by the VCPWA-RT Permit Engineer, prepared by a Registered Civil Engineer, to the VCPWA-RT Permits Section for review and approval.

- b. The applicant/permittee shall obtain an Encroachment Permit (EP) from the VCPWA-RT Permits Section. Contact the VCPWA-RT Permits Section, by phone at (805) 654-2055 or by e-mail at pwa.transpermits@ventura.org, for the requirements of the EP. The EP form is available on the internet.
- c. Construct and complete sidewalk improvements along the parcel's frontage in accordance with the approved improvements plans and Road Standard Plate B-5 [A], and Plate E-2, or as modified by the VCPWA-RT Permit Engineer.

Documentation: The VCPWA-RT will review the improvement plans, supporting documentation, and final sign off on the completion of the improvements.

Timing: This condition shall be met prior to the issuance of the Certificate of Occupancy.

Monitoring and Reporting: The VCPWA-RT will review the improvement plans and the VCPWA-RT Inspectors will monitor construction and verify that the work is performed, and completed, in accordance with the Encroachment Permit.

25. Encroachment Permit

Purpose: The current right-of-way width on Ocean Drive is 40 feet wide along the front of this parcel. An Encroachment Permit is required for any work conducted within the County road right-of-way, for example but not limited to, driveways, road improvements, utility installation, planter walls, and landscaping and any construction related storage in the County road right-of-way.

Requirement: The applicant/permittee shall contact the Permits Division at (805) 654-2055 for requirements of the permit.

An Encroachment Permit (EP) is required for any work and construction related storage conducted within the County right-of-way. Contact the VCPWA-RT Permits Section, by phone at (805) 654-2055 or by e-mail at pwa.transpermits@ventura.org, for the requirements of the EP. The application shall be submitted to the VCPWA-RT.

Documentation: The application shall be submitted to the VCPWA-RT. When applying for the permit, the applicant/permittee shall provide sufficient documentation, including, but not limited to, a (1) Resource Management Agency (RMA) Project Number (for discretionary projects), (2) a copy of the Roads & Transportation Conditions of Approval, (3) a sketch or map showing the work to be accomplished, project, project parcel, Assessor Parcel Number (APN), address and street name. Permit applications without sufficient documentation for processing may not be accepted for processing.

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

Monitoring and Reporting: The VCPWA-RT will review the application and supporting documentation. The VCPWA-RT Inspectors will monitor construction and verify that the work is performed, and completed, in accordance with the Encroachment Permit.

Watershed Protection District (WPD) Conditions

County Stormwater Program Section

26. Compliance with 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 effective implementation of the Construction BMPs during all ground disturbing activities.

Documentation: The Permittee shall submit to the Watershed Protection District – County Stormwater Program Section (CSP) for review and approval a completed and signed SW-1 form (Best Management Practices for Construction Less Than One Acre) which can be found at <http://onestop.vcpubliworks.org/stormwater-forms>.

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: CSP will review the submitted materials for consistency with the NPDES Municipal Stormwater Permit. Building Permit Inspectors will conduct inspections during construction to ensure effective installation of the required BMPs.

OTHER VENTURA COUNTY AGENCIES

Ventura County Air Pollution Control District (APCD) Conditions

27. 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 Public 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.

28. Rule 51, 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.

Documentation: The Permittee shall ensure compliance with the following provision:

- I. 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.

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.

29. Demolition of Asbestos Containing Material

Purpose: To ensure that the owner or operator of a facility shall remove all asbestos-containing material from a facility being demolished.

Requirement: Project demolition activities shall be operated in accordance with the Rules and Regulations of the Ventura County Air Pollution Control District, with emphasis on Rule 62.7, Asbestos – Demolition and Renovation.

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

- I. The applicant shall submit an AB3205 Form to APCD for approval. In addition, the contractor shall notify APCD 10 business days prior to the abatement commencement, if applicable, by submitting a Notification of Demolition or Renovation Form. Demolition and/or renovation activities shall be conducted in compliance with APCD Rule 62.7, Asbestos – Demolition and Renovation.

Timing: Prior to issuance of a demolition permit(s) by Building & Safety or the applicable jurisdiction agency.

Reporting and Monitoring: An AB3205 form must be submitted to and approved by APCD. Building & Safety is aware of the District's AB3205 Form and is contained in their Compliance Checklist to submit prior to issuance of a demolition permit. The Notification of Demolition or Renovation Form must be submitted to APCD. Enforcement of notification requirements for both forms and compliance with the APCD Asbestos Rule will be enforced by APCD Asbestos Inspectors or on a complaint-driven basis.

Ventura County Fire Protection District (VCFPD) Conditions

30. 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.

31. 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. [Erase if not applicable: For tract construction, the Permittee shall install all utilities located within the access road(s) and first lift of pavement.]

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.

32. Fire Flow

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

Requirement: The Permittee shall verify that the water purveyor can provide the required volume and duration at the project. The minimum required fire flow shall be determined

as specified by the current adopted edition of the Ventura County Fire Code and the applicable Water Manual for the jurisdiction (whichever is more restrictive). Given the present plans and information, the required fire flow is approximately [Enter the flow per the IFC] gallons per minute at 20 psi for a minimum [Enter the duration per the IFC] hour duration. A minimum flow of [Enter the flow per hydrant per VCFD Standard] gallons per minute shall be provided from any one hydrant. Note: For Commercial, Industrial, Multi-family buildings, a minimum fire flow of 1,000 GPM shall be provided from each hydrant when multiple hydrants are flowing at the same time.

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

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

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

33. 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.

34. Fire Department Clearance

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

Conditions for Coastal PD Permit Case No. PL21-0027
Date of Public Hearing: November 18, 2021
Date of Approval: TBD

Permittee: Mr. and Mrs. Steve Namm
Location: 3413 Ocean Drive, Oxnard
Page 21 of 21

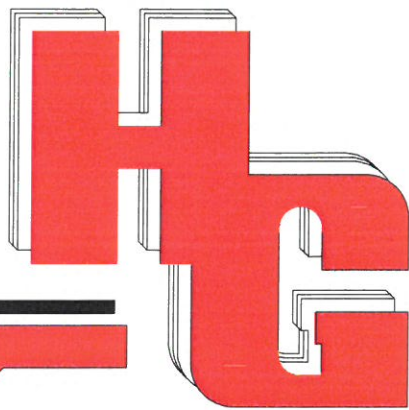
Requirement: The Permittee shall obtain VCFD Form #610 "Requirements for Construction" for any new structures or additions to existing structures before issuance of building permits.

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.

**SOIL ENGINEERING INVESTIGATION
PROPOSED RESIDENCE
AT
3413 OCEAN DRIVE
OXNARD, CALIFORNIA
FOR
NAMM**



**HEATHCOTE
GEOTECHNICAL**

SOIL TESTING • FOUNDATIONS • INSPECTION

County of Ventura
Planning Director Hearing
PL21-0027
Exhibit 5 - Soils Engineering
Investigation



HEATHCOTE GEOTECHNICAL

SOIL TESTING • FOUNDATIONS • INSPECTION
1884 EASTMAN AVENUE, SUITE 105, VENTURA, CALIFORNIA 93003



Mrs. and Mr. Steve Namm
C/O Walt Philipp
950 County Square Drive 116
Ventura, CA 93003

Job: 20215
Date: January 30, 2021

Ladies/Gentlemen:

We are pleased to present this soil engineering report to aid in the design of the proposed project.

The project is located at 3413 Ocean Drive, Oxnard, California.

The project involves erecting a new residential structure with three stories. The structure will be of wood frame construction. The loads will be relatively light. No basement is intended. Slab on grade will be used. The existing public sewer lines will service the proposed residence. An existing residence will be removed.

Overexcavation is not expected.

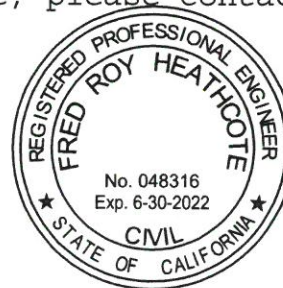
This project will be safe for intended use as long as the recommendations given are followed.

Submittal of this report to appropriate governmental agencies is the responsibility of the owner or his representatives.

The report will follow and includes; a comprehensive task list, observations and findings, recommendations, basis of report, results of testing, plot plan, and borings.

It has been our pleasure to serve you and if you have any questions or need additional service, please contact us.

Fred Heathcote
Civil Engineer
No. C48316



COMPREHENSIVE TASK LIST

GENERAL

This portion of the report specifies all the work that was performed and the procedures used. This investigation did not address the possibility of any geologic hazards or contaminants in the soil, although none were noted.

SITE WORK

1. Reviewed site for soil engineering problems.
2. Drilled two borings, up to 50 feet in depth, using a 8 inch hollow stem auger. Undisturbed samples taken with a 2-1/2 inch I.D. sampler using a 140 pound weight dropped 30 inches. Standard penetration tests were performed to assess strong ground motion settlement using an autotrip 140 pound hammer to drive the samples. The samples are driven 18 inches with the blowcount from the bottom 12 inches being used as the standard penetration number. Drilling by Choice Drilling.
3. Visual logging of the borings for classification of soil types and characteristics.
4. Obtained a bulk sample for laboratory testing.

LABORATORY TESTING

1. Determined in place density and moisture of undisturbed samples and is shown on boring logs.
2. Performed expansion index test of the soils. The test was performed according to the guidelines set forth in the latest ASTM version.
3. Performed compaction test of the soils to aid in grading and density testing. The test was performed according to latest version of ASTM (five layers, 25 blows/layer, 10 lb. hammer, 18" drop, 1/30 c.f. mold).

Results of testing are presented in the boring logs and following the Basis of Report.

REPORT

1. Comprehensive task list
2. Findings and Observations
 - a) site conditions
 - b) soil conditions
 - c) geologic conditions
 - d) liquefaction
 - e) subsidence

3. Recommendations
 - a) foundation: bearing values, depths, settlements, and lateral values
 - b) slabs on grade
 - c) drains and grades
 - d) construction procedures: earthwork, inspection
4. Basis of report
5. Results of testing
6. Boring logs

FINDINGS AND OBSERVATIONS

SITE CONDITIONS

Location description

The site is located along the west side of Ocean Drive. The proposed residence is about 150 feet north of Los Robles Street.

Site access

The site is accessed directly from the street.

Site relief

The area of the proposed building is located in a mildly sloping area. There is an existing structure.

Site drainage conditions-Erosion

There are no drainage patterns that exist. No erosion is evident in the area of the residence.

Vegetation

The site has some vegetation in the area of the proposed structure.

Existing structures-performance

The site is occupied by a two story residence.

Past use

No known past use.

Adjacent properties

Residential use is present on adjacent properties.

SOILS CONDITIONS

Fill soils were not encountered on the site. Fill soils may be encountered during construction.

The natural soils are sands with some clay layers down deeper. These upper natural soils are moderately compressible. The soil has a medium strength. The soil has a low expansion potential with an expansion index of 0. The densities are greater with depth.

Groundwater was first observed at a depth of 7 feet. Historical groundwater is at 6 feet. This historical groundwater is not within 5 feet of the finished floor elevation.

Hydrocollapse

Upper soils are not susceptible to hydrocollapse. The lower soils are dense. Typically soils with a relative density of 80% or more are less susceptible to hydrocollapse.

GEOLOGIC HAZARDS

This report is not a geology report, but certain things should be noted.

Flooding is a minor possibility due to the distance to wave action.

Tsunamis are a possibility. The last tsunami was over 150 years ago. Consequently, the chance of a tsunami affecting the site in the near future is considered remote. The question of when the next tsunami will occur is based in probability. This means that you are just as likely to see a tsunami in any given year. The probability of having a tsunami in any "one" given year does not go up or down with the passage of time. This means you could have 2 tsunamis in one year or have one in two thousand years. The mentioning of past events 150 years ago is to establish probabilities through history search in much the same way as we predict probabilities of earthquakes. The probability of having a tsunami increases with the time period considered. It is much likelier to see a tsunami in a 1000 year period as opposed to a 50 year period. In this manner, we expect that it is unlikely that the project will experience a tsunami in the next 100 years. No exact probability is given due to the limited nature of the observations of tsunamis over time in this area.

No identified faults are within the nearby vicinity of the project. This information could be addressed in a geology report to determine the exact distances to any known faults, if desired.

No slope stability problems are present.

LIQUEFACTION

The site is situated within the alluvial area of the Oxnard plain. As with most of Southern California, this area is bordered by faults which are active potentially active and inactive. Faults which are most concern from a ground shaking viewpoint are the San Andreas, Simi-Santa Rosa, San Cayetano, Ventura Pitas Point, Santa Ynez, Malibu Coast and Oak Ridge faults. Each are capable of generating large to moderate earthquakes and of causing significant shaking at the site. The site will experience significantly strong coseismic ground motions caused by activity on regional faults at some time in the future.

The earthquake magnitudes are listed using maximum probable values. These values are used with the distances from the site to formulate the accelerations. The probabilistic methods are used to determine the accelerations from emperical data. The chart of this data is presented at the end of this letter. The fault data is shown below.

<u>FAULT</u>	<u>DISTANCE (k)</u>	<u>MAX PROB MAG.</u>	<u>ACCEL.</u>
SIMI-SPRINGVILLE	15	6.7	.22
SAN CAYETANO	22	6.8	.17
OAKRIDGE	7	6.9	.40
MALIBU COAST	15	6.7	.22
SAN ANDREAS	82	7.8	.11
SANTA YNEZ	35	7.0	.12
VENTURA PITAS	14	6.8	.24

The acceleration used for liquefaction analysis is taken from the Seismic Hazards Evaluation of the Oxnard Quadrangle. The 10% exceedance in 50 years peak ground

acceleration for alluvial conditions is 0.62. The predominant earthquake is 6.7.

Groundwater was found at 7 feet below the surface. We are assuming a historical high water level of 6 feet in the liquefaction analysis. The standard penetration numbers are presented on the boring logs.

To convert standard penetration data to a N_{160} value, corrections are made for the overburden, and rod length. Corrections are needed for the sampling method of an automatic trip hammer. Corrections are needed for no liners in the spt device.

The soil profile will most likely experience liquefaction at various levels. The liquefaction induced settlement is on the order of 1.4 inches. We are assuming a minimum settlement of 1-1/2 inches due to experience in the area. Empirical data has been developed to relate standard penetration values with bulk modulus of settlement. These values are used to determine the settlement in the layers.

Due to the depth of the groundwater, the narrower foundations will not suffer a shear failure. Influence of the footings will typically be 4 to 8 feet beneath the surface. Liquefaction residual shear strength is not considered a factor due to the size of the structure. The size of the structure will allow us to keep foundations to a size less than 3 feet in width. Most of the additional foundation stresses in the soil profile are in the upper 5 feet of the soils. Almost all the additional foundation stresses are reduced to near zero at 8 feet below the surface. The residual shear strength of the liquefied zones at a depth of 6 to 7 feet are sufficient for the type of loadings that we are placing. Bearing value drops to around 300 psf in the liquefied zones. The pressure drops to around .3 of the pressure at the soil foundation interface. This gives a foundation value of 300 psf of a starting pressure of 2000 psf. Thus foundations kept at this size will be sufficiently designed for shear. Foundations should be designed for primarily strip footings and pad footings no larger than 3 feet.

We have evaluated the possibility of lateral spreading toward the ocean which is about 400 feet from the project. The first component of the lateral spread is slope for any of the methods. The ground is virtually flat in the area.

From our experience, there is not a sloping layer that is subsurface. We do not feel that lateral spreading will occur on the project.

Slightly enlarged footings and slabs will be used to mitigate liquefaction induced settlement problems.

SUBSIDENCE

The site is listed in an area of subsidence. The County of Ventura Hazards Report shows .05' per year. This is a general lowering of the ground surface due to removal of water or oil from underground. This can cause problems with drainage courses, utilities, flooding in new areas etc. The owner should be aware of this process. Groundwater under the site appears to be at 6 feet.

SEISMIC VALUES

3413 Ocean Dr, Oxnard, CA 93035, USA

Latitude, Longitude: 34.1634461, -119.2283845

Date	1/30/2021, 8:44:57 PM
Design Code Reference	ASCE7-16
Document	
Risk Category	II
Site Class	D - Default (See Section 11.4.3)
Type Value	Description
S _s 1.697	MCE _R ground motion. (for 0.2 second period)
S ₁ 0.616	MCE _R ground motion. (for 1.0s period)
S _{MS} 2.037	Site-modified spectral acceleration value
S _{M1} null -See Section 11.4.8	Site-modified spectral acceleration value
S _{DS} 1.358	Numeric seismic design value at 0.2 second SA
S _{D1} null -See Section 11.4.8	Numeric seismic design value at 1.0 second SA

RECOMMENDATIONS

FOUNDATIONS

The expansion potential of the soils indicates a foundation design for very low expansion soils is needed for the foundations. Foundations should have at least 2-#5 bar at top and bottom.

No lateral pressure on foundations due to seismic loads are anticipated.

No lateral loads or movement are expected on foundations due to liquefaction. There are no retaining walls that will be affected by liquefaction. There is no flotation of buried structures that will affect the project.

No ground stabilization is deemed necessary. Our foundations have been structurally reinforced from normal due to liquefiable soils. Differential settlement has been accounted for in the design.

Supporting Soils

The proposed structure may be supported on the underlying firm natural soils.

Depth and Width

The footings must extend at least 24 inches below finished grade. Minimum width for the footings is 18 inches. Foundations shall bear in natural soils. Depth may need to be greater if fill soils are present.

Foundations should be designed for primarily strip footings and pad footings no larger than 3 feet. Any pads larger than this would need to be evaluated for liquefaction shear loss.

Allowable Bearing Value

The proposed foundations may be designed to place a load of 2000 pounds per square foot on the soil. This value may be increased by 1/3 for wind or seismic forces. Bearing shall take into account the existing plus proposed loads. For any foundations near each other, the foundations shall be tied together to act in unison.

Settlement

Load induced settlement of the structures should not exceed 1/2 inch. Differential settlement should be less than 1/2 inch. Liquefaction induced settlement is on the order of 1.5 inches.

Lateral Values

The allowable sliding resistance value is equal to 130 pounds per square foot. This value is to be multiplied by the contact area. In no case shall this value exceed one half the dead load. The allowable passive pressure is equal to a fluid density of 100 pounds per cubic foot. This value may be increased by 1/3 for wind or seismic forces. Sliding resistance and passive pressure may be used to resist lateral forces without reduction.

SLABS ON GRADE

The slabs if any, may be placed on the resulting compacted fill from proper grading. The slabs should be designed for soils of very low expansion. Reinforcing should have a minimum of #4 bars at 18 inches on centers each way. Slab should be a minimum of 5 inches thick.

If a floor covering is used that will be affected by moisture, then we recommend that you use a 4 inch layer of gravel beneath the slab as a capillary break. The gravel should be of 3/4 inch variety with less than 10% sand with very little amount of fines.

A visquene covering must be used to serve as a water vapor barrier. To reduce problems associated with the concrete curing process, a 2 inch layer of sand should be placed on top of the visquene or a low slump concrete should be used.

DRAINS AND GRADES

All grades shall drain away from the foundations. Downspouts should be drained away from the foundations.

CONSTRUCTION PROCEDURES

EARTHWORK

To support slabs for the structure if any, the following must be excavated.

- 1) In the area of the proposed building all organic material should be removed and taken off site.
- 2) Any loose soils.

After excavation the following must be accomplished.

- 1) All bottoms of the excavation, areas to receive slabs, and foundations should be scarified and compacted to 90% compaction.
- 2) All fills and backfills should be placed in horizontal layers less than 8 inches in loose thickness.
- 3) The soils shall be compacted to a minimum of 90% of the maximum density rendered by the latest version of the ASTM(D-1557). Field density testing per latest ASTM version for Sand Cone Method.
- 4) The moisture content should not vary more than 2% from the optimum moisture content, although the grading process will be more easily accomplished with the soils being 1 to 2% wetter than optimum moisture content.
- 5) Any utility trenches will need to be properly backfilled as detailed in 2,3 and 4 above.
- 6) All on site soils may be used. Any import soils should be approved by our firm and should not have an expansion index greater than 35.

INSPECTION

This is an important step to obtain quality construction and to obtain correct design. The following will need inspection by our firm.

- * Foundations
- * All earthwork
 - a) All fill and backfills
 - b) Testing frequency is at all bottoms and every 2 vertical feet

Inspection, by our firm, is needed to assure that the soil conditions are consistent with this report and design assumptions. Inspection by local government agencies may also be needed.

BASIS OF REPORT

RIGHT OF USE

This report is intended exclusively for the use of the Namms and the project designers.

METHODS

This report has been developed based on our understanding of the project details, field review, boring excavations, laboratory testing, engineering analyses, and experience with similar soil conditions with similar use and loads.

DEGREE OF PERFORMANCE

The work was performed using the methods and degree of care used by other soil engineering firms operating in this vicinity, for similar projects, in this time period. This firm is responsible only for our own negligent errors and negligent omissions. Any error or omission that results in an unexpected cost that normally would have been present, is not the responsibility of our firm. Nothing else is warranted, implied or expressed, as to the details presented in this report.

VALIDITY OF REPORT

Changes

This report is valid for this specific project as described in the text of the report and on the plot plan. Any change in project size, loads, location, grade or use would require a review of this report.

Inspection

The recommendations given in this report are based on the assumption that all necessary inspection work will be performed during the construction phase of the project. The initial soil engineering investigation is only a part of the work needed to obtain correct engineering design. The soil conditions are only anticipated in the initial report. The inspection work verifies the conditions are as expected and allow our firm the ability to modify the recommendations in the event that the soil conditions are different.

The presence of inspection will provide the owner with the ability to obtain advice as to soil related construction procedures and answer related questions as to the implementation of the recommendations provided in this report.

If another firm is used to perform the construction inspection of the soil related aspects, our professional liability and responsibility would be drastically reduced to the point that we would no longer be the engineer of record.

RESULTS OF TESTING

EXPANSION INDEX TEST

Sample Location:	Boring 1@0-1'
Soil type:	Sand
Confining Pressure:	144 psf
Initial Moisture Content: (% of dry wt.)	11.3
Final Moisture Content: (% of dry wt.)	15.4
Dry Density:	98 pcf
Expansion Index:	0

TEST METHOD:
THE LATEST ASTM VERSION
EXPANSION INDEX TEST

COMPACTION TEST

Sample Location:	Boring1@0-1'
Soil type:	Sand
Maximum Dry Density:	110 pcf
Optimum Moisture Content: (% of dry wt.)	9

TEST METHOD:
LATEST VERSION OF ASTM
COMPACTION TEST

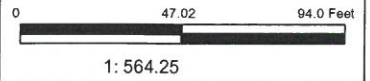


County View



Legend

- 100 Year Floodplain
- 500 Year Floodplain
- Actual and Potential Landslides
- All Faults
- Earthquake Fault Hazard Zones
- Liquefaction
- Potential EQ-Induced Landslides
- Parcels
- 1:9k



Notes

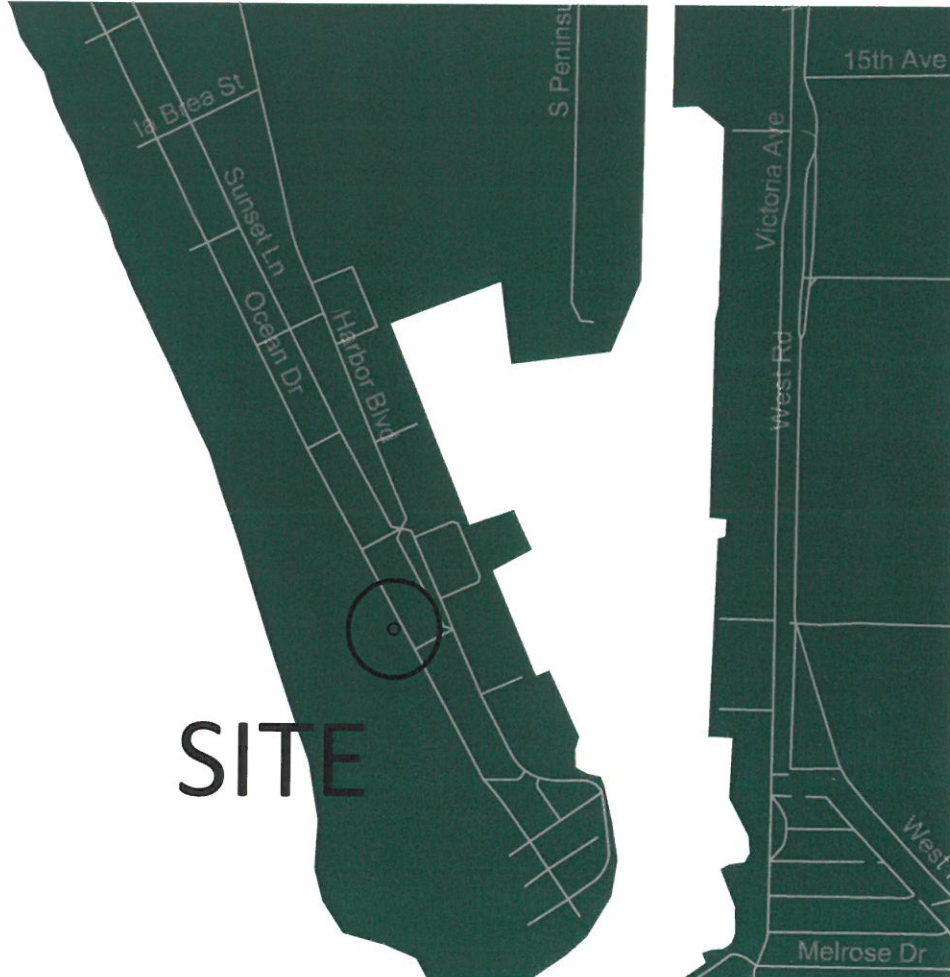
Disclaimer: The information contained on this web site and in the application was created by the Ventura County Geographical Information System (GIS) which is designed and operated solely for the convenience of the County and related contract entities. The County does not warrant the accuracy of the information, and no decision involving a risk of economic loss or physical injury should be made in reliance thereon.

Earthquake Zones of Required Investigation

Oxnard Quadrangle

California Geological Survey

This Map Shows Seismic Hazard Zones for Soil Liquefaction and Earthquake-Induced Landslides.
 Alquist-Priolo Earthquake Fault Zones Have Not Been Prepared for the Oxnard Quadrangle.



SITE

**3413 Ocean Drive
 Oxnard, California 93035**

SEISMIC HAZARD ZONES

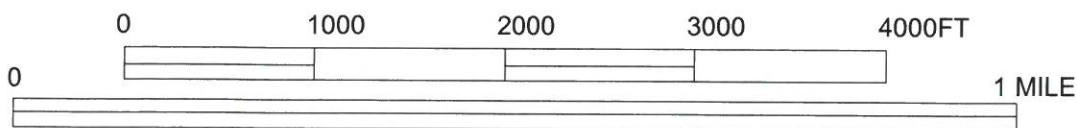
Liquefaction Zones
 Areas where historical occurrence of liquefaction, or local geological, geotechnical and ground water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 26993(c) would be required.



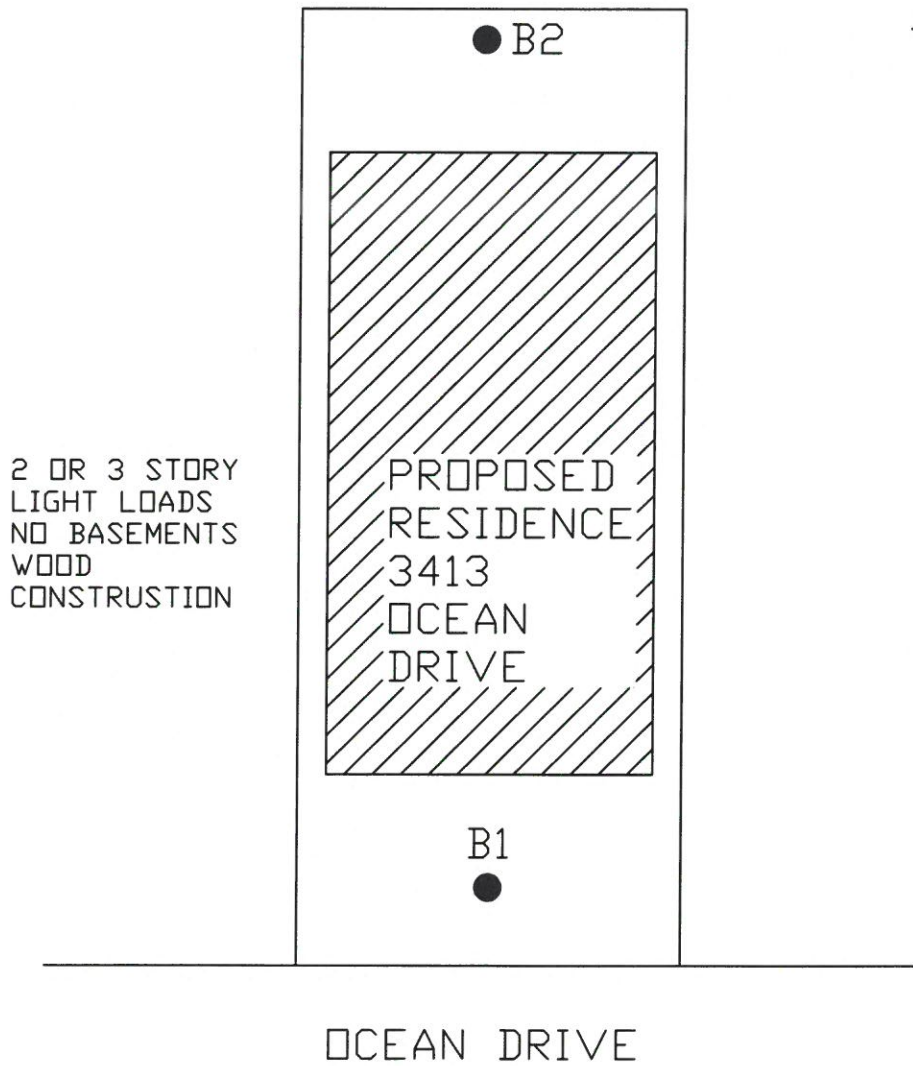
Note:

○ Location

SCALE 1"=1000'



PLOT PLAN



PROPOSED RESIDENCE
PACIFIC IMAGE BUILDERS
3413 OCEAN DRIVE
OXNARD, CALIFORNIA

REFERENCE: SITE PLAN
SOURCE: H.G.

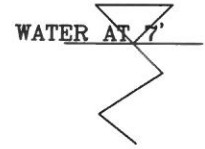
● BORING LOCATION

Scale: 1"=20'

BORING 1

JOB: 20215
 FIELD ENGINEER: FRED HEATHCOTE
 DATES DRILLED: JANUARY 13, 2021
 DRILLING EQUIPMENT: 8-INCH HOLLOW STEM AUGER

STANDARD PEN (blows per foot)	MOISTURE CONTENT (% of dry weight)	DRY DENSITY (lbs. per cubic foot)	DRIVE ENERGY (kip-feet)	ELEVATION (feet)	DEPTH (feet)	SAMPLE LOCATION
	3.3	102	9			SP SAND- fine, light greyish brown,damp,mod dense
	3.5	99	4		5	
13						
13					10	
19					15	
31					20	
14	15.3	106	15		25	
17					30	
36					35	
	14.8	107	21			



Some clay layers and gravel, grey

CONTINUED

<h1>BORING 1</h1>						
CONTINUED						
JOB: 20215						
FIELD ENGINEER: FRED HEATHCOTE						
DATES DRILLED: JANUARY 13, 2021						
DRILLING EQUIPMENT: 8-INCH HOLLOW STEM AUGER						
STANDARD PEN (blows per foot)	MOISTURE CONTENT (% of dry weight)	DRY DENSITY (lbs. per cubic foot)	DRIVE ENERGY (kip-feet)	ELEVATION (feet)	DEPTH (feet)	SAMPLE LOCATION
29						SP SAND- fine, grey, wet, dense, some clay layers
43					45	
48					50	

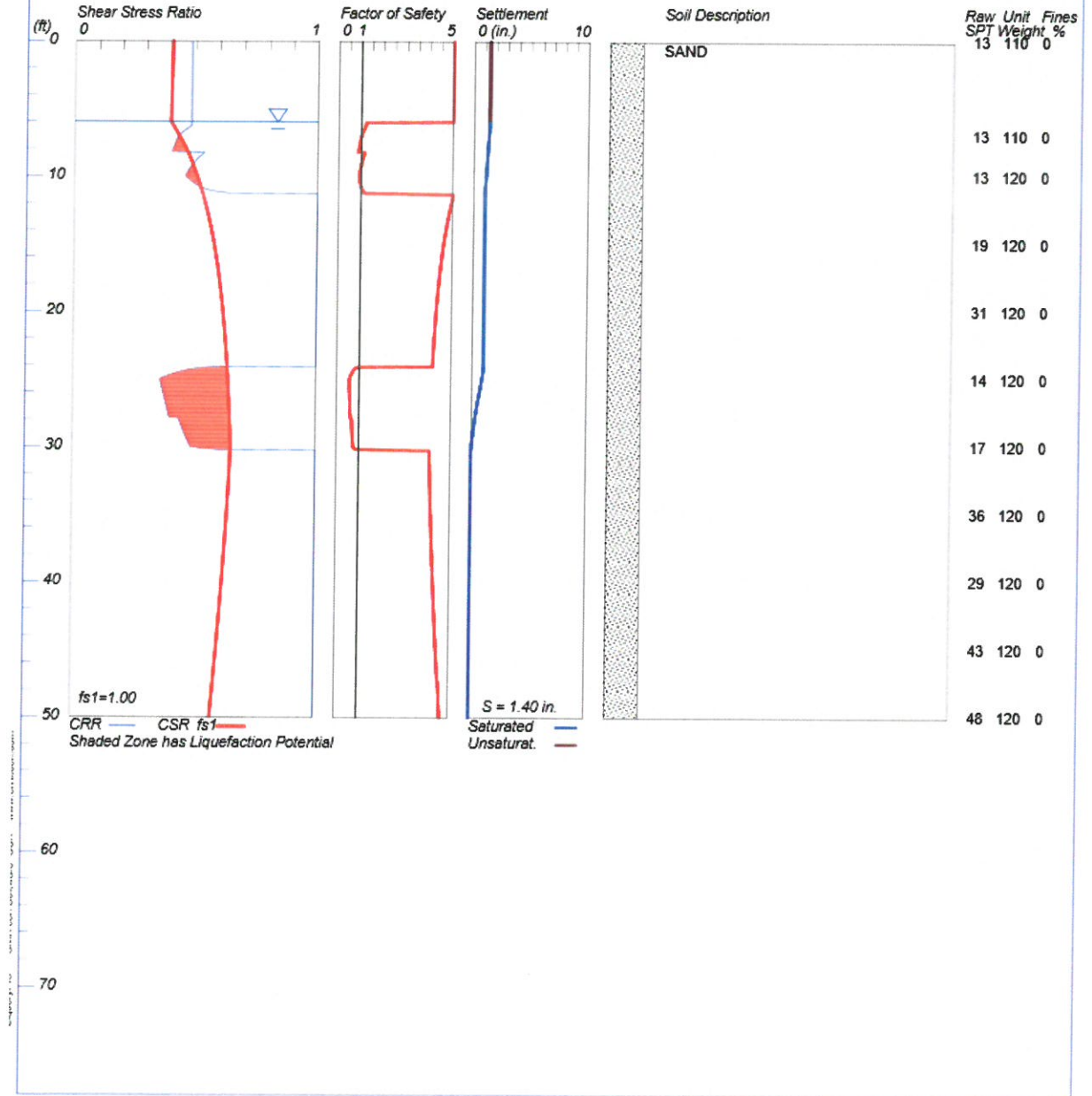
<h1>BORING 2</h1>						
JOB: 20215						
FIELD ENGINEER: FRED HEATHCOTE						
DATES DRILLED: JANUARY 13, 2021						
DRILLING EQUIPMENT: HAND AUGER						
STANDARD PEN (blows per foot)	MOISTURE CONTENT (% of dry weight)	DRY DENSITY (lbs. per cubic foot)	DRIVE ENERGY (kip-feet)	ELEVATION (feet)	DEPTH (feet)	SAMPLE LOCATION
	2.8	102	4			SP SAND- fine, light greyish brown, damp, mod dense
					5	

LIQUEFACTION ANALYSIS

mann

Hole No.=B-1 Water Depth=6 ft

Magnitude=6.7
Acceleration=.62g



CivilTech Corporation

Subtitle or Proj No.

Plate A-1

 LIQUEFACTION ANALYSIS CALCULATION SHEET
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 www.civiltech.com
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Input File Name: C:\Users\Fred\Documents\liquefaction\20215.liq
 Title: mann
 Subtitle: Subtitle or Proj No.

Input Data:

Surface Elev.=
 Hole No.=B-1
 Depth of Hole=50.0 ft
 Water Table during Earthquake= 6.0 ft
 Water Table during In-Situ Testing= 7.0 ft
 Max. Acceleration=0.62 g
 Earthquake Magnitude=6.7

1. SPT or BPT Calculation.
 2. Settlement Analysis Method: Ishihara / Yoshimine*
 3. Fines Correction for Liquefaction: Stark/Olson et al.*
 4. Fine Correction for Settlement: During Liquefaction*
 5. Settlement Calculation in: All zones*
 6. Hammer Energy Ratio, Ce = 1.25
 7. Borehole Diameter, Cb= 1.15
 8. Sampling Method, Cs= 1.2
 9. User request factor of safety (apply to CSR) , User= 1
 10. Use Curve Smoothing: Yes*
- * Recommended Options

In-Situ Test Data:

Depth ft	SPT	GammaFines pcf	%
0.0	13.0	110.0	0.0
7.0	13.0	110.0	0.0
10.0	13.0	120.0	0.0
15.0	19.0	120.0	0.0
20.0	31.0	120.0	0.0
25.0	14.0	120.0	0.0
30.0	17.0	120.0	0.0
35.0	36.0	120.0	0.0
40.0	29.0	120.0	0.0
45.0	43.0	120.0	0.0
50.0	48.0	120.0	0.0

Output Results:

Calculation segment, dz=0.050 ft
 User defined Print Interval, dp=1.00 ft

CSR Calculation:

Depth ft	gamma pcf	sigma tsf	gamma' pcf	sigma' tsf	rd	CSR	x fs1	=CSRfs
0.00	110.0	0.000	110.0	0.000	1.00	0.40	1.0	0.40
1.00	110.0	0.055	110.0	0.055	1.00	0.40	1.0	0.40
2.00	110.0	0.110	110.0	0.110	1.00	0.40	1.0	0.40
3.00	110.0	0.165	110.0	0.165	0.99	0.40	1.0	0.40
4.00	110.0	0.220	110.0	0.220	0.99	0.40	1.0	0.40
5.00	110.0	0.275	110.0	0.275	0.99	0.40	1.0	0.40
6.00	110.0	0.330	47.6	0.330	0.99	0.40	1.0	0.40
7.00	110.0	0.385	47.6	0.354	0.98	0.43	1.0	0.43
8.00	113.3	0.441	50.9	0.378	0.98	0.46	1.0	0.46
9.00	116.7	0.498	54.3	0.405	0.98	0.49	1.0	0.49
10.00	120.0	0.557	57.6	0.433	0.98	0.51	1.0	0.51
11.00	120.0	0.617	57.6	0.461	0.97	0.53	1.0	0.53
12.00	120.0	0.677	57.6	0.490	0.97	0.54	1.0	0.54
13.00	120.0	0.737	57.6	0.519	0.97	0.56	1.0	0.56
14.00	120.0	0.797	57.6	0.548	0.97	0.57	1.0	0.57
15.00	120.0	0.857	57.6	0.577	0.97	0.58	1.0	0.58
16.00	120.0	0.917	57.6	0.605	0.96	0.59	1.0	0.59
17.00	120.0	0.977	57.6	0.634	0.96	0.60	1.0	0.60
18.00	120.0	1.037	57.6	0.663	0.96	0.60	1.0	0.60
19.00	120.0	1.097	57.6	0.692	0.96	0.61	1.0	0.61
20.00	120.0	1.157	57.6	0.721	0.95	0.62	1.0	0.62
21.00	120.0	1.217	57.6	0.749	0.95	0.62	1.0	0.62
22.00	120.0	1.277	57.6	0.778	0.95	0.63	1.0	0.63
23.00	120.0	1.337	57.6	0.807	0.95	0.63	1.0	0.63
24.00	120.0	1.397	57.6	0.836	0.94	0.64	1.0	0.64
25.00	120.0	1.457	57.6	0.865	0.94	0.64	1.0	0.64
26.00	120.0	1.517	57.6	0.893	0.94	0.64	1.0	0.64
27.00	120.0	1.577	57.6	0.922	0.94	0.65	1.0	0.65
28.00	120.0	1.637	57.6	0.951	0.93	0.65	1.0	0.65
29.00	120.0	1.697	57.6	0.980	0.93	0.65	1.0	0.65
30.00	120.0	1.757	57.6	1.009	0.93	0.65	1.0	0.65
31.00	120.0	1.817	57.6	1.037	0.92	0.65	1.0	0.65
32.00	120.0	1.877	57.6	1.066	0.91	0.65	1.0	0.65
33.00	120.0	1.937	57.6	1.095	0.91	0.65	1.0	0.65
34.00	120.0	1.997	57.6	1.124	0.90	0.64	1.0	0.64
35.00	120.0	2.057	57.6	1.153	0.89	0.64	1.0	0.64
36.00	120.0	2.117	57.6	1.181	0.88	0.64	1.0	0.64
37.00	120.0	2.177	57.6	1.210	0.87	0.63	1.0	0.63
38.00	120.0	2.237	57.6	1.239	0.86	0.63	1.0	0.63
39.00	120.0	2.297	57.6	1.268	0.86	0.63	1.0	0.63
40.00	120.0	2.357	57.6	1.297	0.85	0.62	1.0	0.62
41.00	120.0	2.417	57.6	1.325	0.84	0.62	1.0	0.62
42.00	120.0	2.477	57.6	1.354	0.83	0.61	1.0	0.61
43.00	120.0	2.537	57.6	1.383	0.82	0.61	1.0	0.61
44.00	120.0	2.597	57.6	1.412	0.82	0.60	1.0	0.60
45.00	120.0	2.657	57.6	1.441	0.81	0.60	1.0	0.60
46.00	120.0	2.717	57.6	1.469	0.80	0.60	1.0	0.60
47.00	120.0	2.777	57.6	1.498	0.79	0.59	1.0	0.59
48.00	120.0	2.837	57.6	1.527	0.78	0.59	1.0	0.59
49.00	120.0	2.897	57.6	1.556	0.78	0.58	1.0	0.58
50.00	120.0	2.957	57.6	1.585	0.77	0.58	1.0	0.58

CSR is based on water table at 6.0 during earthquake

CRR Calculation from SPT or BPT data:

Depth CRR7.5 ft	SPT	Cebs	Cr	sigma' tsf	Cn	(N1)60	Fines %	d(N1)60	(N1)60f
0.00	13.00	1.73	0.75	0.000	1.70	28.59	0.00	0.00	28.59 0.36
1.00	13.00	1.73	0.75	0.055	1.70	28.59	0.00	0.00	28.59 0.36
2.00	13.00	1.73	0.75	0.110	1.70	28.59	0.00	0.00	28.59 0.36
3.00	13.00	1.73	0.75	0.165	1.70	28.59	0.00	0.00	28.59 0.36
4.00	13.00	1.73	0.75	0.220	1.70	28.59	0.00	0.00	28.59 0.36
5.00	13.00	1.73	0.75	0.275	1.70	28.59	0.00	0.00	28.59 0.36
6.00	13.00	1.73	0.75	0.330	1.70	28.59	0.00	0.00	28.59 0.36
7.00	13.00	1.73	0.75	0.385	1.61	27.11	0.00	0.00	27.11 0.32
8.00	13.00	1.73	0.75	0.410	1.56	26.28	0.00	0.00	26.28 0.31
9.00	13.00	1.73	0.85	0.436	1.51	28.87	0.00	0.00	28.87 0.37
10.00	13.00	1.73	0.85	0.464	1.47	27.99	0.00	0.00	27.99 0.34
11.00	14.20	1.73	0.85	0.493	1.42	29.67	0.00	0.00	29.67 0.41
12.00	15.40	1.73	0.85	0.521	1.38	31.27	0.00	0.00	31.27 2.00
13.00	16.60	1.73	0.85	0.550	1.35	32.81	0.00	0.00	32.81 2.00
14.00	17.80	1.73	0.85	0.579	1.31	34.30	0.00	0.00	34.30 2.00
15.00	19.00	1.73	0.95	0.608	1.28	39.94	0.00	0.00	39.94 2.00
16.00	21.40	1.73	0.95	0.637	1.25	43.95	0.00	0.00	43.95 2.00
17.00	23.80	1.73	0.95	0.665	1.23	47.81	0.00	0.00	47.81 2.00
18.00	26.20	1.73	0.95	0.694	1.20	51.53	0.00	0.00	51.53 2.00
19.00	28.60	1.73	0.95	0.723	1.18	55.12	0.00	0.00	55.12 2.00
20.00	31.00	1.73	0.95	0.752	1.15	58.59	0.00	0.00	58.59 2.00
21.00	27.60	1.73	0.95	0.781	1.13	51.19	0.00	0.00	51.19 2.00
22.00	24.20	1.73	0.95	0.809	1.11	44.08	0.00	0.00	44.08 2.00
23.00	20.80	1.73	0.95	0.838	1.09	37.23	0.00	0.00	37.23 2.00
24.00	17.40	1.73	0.95	0.867	1.07	30.62	0.00	0.00	30.62 2.00
25.00	14.00	1.73	0.95	0.896	1.06	24.24	0.00	0.00	24.24 0.27
26.00	14.60	1.73	0.95	0.925	1.04	24.88	0.00	0.00	24.88 0.28
27.00	15.20	1.73	0.95	0.953	1.02	25.51	0.00	0.00	25.51 0.29
28.00	15.80	1.73	1.00	0.982	1.01	27.50	0.00	0.00	27.50 0.33
29.00	16.40	1.73	1.00	1.011	0.99	28.14	0.00	0.00	28.14 0.35
30.00	17.00	1.73	1.00	1.040	0.98	28.76	0.00	0.00	28.76 0.37
31.00	20.80	1.73	1.00	1.069	0.97	34.71	0.00	0.00	34.71 2.00
32.00	24.60	1.73	1.00	1.097	0.95	40.51	0.00	0.00	40.51 2.00
33.00	28.40	1.73	1.00	1.126	0.94	46.16	0.00	0.00	46.16 2.00
34.00	32.20	1.73	1.00	1.155	0.93	51.68	0.00	0.00	51.68 2.00
35.00	36.00	1.73	1.00	1.184	0.92	57.07	0.00	0.00	57.07 2.00
36.00	34.60	1.73	1.00	1.213	0.91	54.20	0.00	0.00	54.20 2.00
37.00	33.20	1.73	1.00	1.241	0.90	51.40	0.00	0.00	51.40 2.00
38.00	31.80	1.73	1.00	1.270	0.89	48.67	0.00	0.00	48.67 2.00
39.00	30.40	1.73	1.00	1.299	0.88	46.01	0.00	0.00	46.01 2.00
40.00	29.00	1.73	1.00	1.328	0.87	43.41	0.00	0.00	43.41 2.00
41.00	31.80	1.73	1.00	1.357	0.86	47.10	0.00	0.00	47.10 2.00
42.00	34.60	1.73	1.00	1.385	0.85	50.71	0.00	0.00	50.71 2.00
43.00	37.40	1.73	1.00	1.414	0.84	54.25	0.00	0.00	54.25 2.00
44.00	40.20	1.73	1.00	1.443	0.83	57.73	0.00	0.00	57.73 2.00
45.00	43.00	1.73	1.00	1.472	0.82	61.14	0.00	0.00	61.14 2.00

46.00	44.00	1.73	1.00	1.501	0.82	61.96	0.00	0.00	61.96	2.00
47.00	45.00	1.73	1.00	1.529	0.81	62.77	0.00	0.00	62.77	2.00
48.00	46.00	1.73	1.00	1.558	0.80	63.57	0.00	0.00	63.57	2.00
49.00	47.00	1.73	1.00	1.587	0.79	64.36	0.00	0.00	64.36	2.00
50.00	48.00	1.73	1.00	1.616	0.79	65.14	0.00	0.00	65.14	2.00

CRR is based on water table at 7.0 during In-Situ Testing

Factor of Safety, - Earthquake Magnitude= 6.7:

Depth sigC' CRR7.5x Ksig =CRRv x MSF =CRRm/ CSRfs =F.S.
ft tsf tsf tsf tsf tsf CRRm/CSRfs

0.00	0.00	0.36	1.00	0.36	1.33	0.48	0.40	5.00
1.00	0.04	0.36	1.00	0.36	1.33	0.48	0.40	5.00
2.00	0.07	0.36	1.00	0.36	1.33	0.48	0.40	5.00
3.00	0.11	0.36	1.00	0.36	1.33	0.48	0.40	5.00
4.00	0.14	0.36	1.00	0.36	1.33	0.48	0.40	5.00
5.00	0.18	0.36	1.00	0.36	1.33	0.48	0.40	5.00
6.00	0.21	0.36	1.00	0.36	1.33	0.48	0.40	1.21
7.00	0.25	0.32	1.00	0.32	1.33	0.43	0.43	1.00 *
8.00	0.27	0.31	1.00	0.31	1.33	0.41	0.46	0.88 *
9.00	0.28	0.37	1.00	0.37	1.33	0.49	0.49	1.02
10.00	0.30	0.34	1.00	0.34	1.33	0.46	0.51	0.90 *
11.00	0.32	0.41	1.00	0.41	1.33	0.55	0.53	1.05
12.00	0.34	2.00	1.00	2.00	1.33	2.67	0.54	4.93
13.00	0.36	2.00	1.00	2.00	1.33	2.67	0.56	4.81
14.00	0.38	2.00	1.00	2.00	1.33	2.67	0.57	4.70
15.00	0.40	2.00	1.00	2.00	1.33	2.67	0.58	4.61
16.00	0.41	2.00	1.00	2.00	1.33	2.67	0.59	4.54
17.00	0.43	2.00	1.00	2.00	1.33	2.67	0.60	4.47
18.00	0.45	2.00	1.00	2.00	1.33	2.67	0.60	4.42
19.00	0.47	2.00	1.00	2.00	1.33	2.67	0.61	4.37
20.00	0.49	2.00	1.00	2.00	1.33	2.67	0.62	4.32
21.00	0.51	2.00	1.00	2.00	1.33	2.67	0.62	4.29
22.00	0.53	2.00	1.00	2.00	1.33	2.67	0.63	4.25
23.00	0.54	2.00	1.00	2.00	1.33	2.67	0.63	4.22
24.00	0.56	2.00	1.00	2.00	1.33	2.67	0.64	4.20
25.00	0.58	0.27	1.00	0.27	1.33	0.36	0.64	0.56 *
26.00	0.60	0.28	1.00	0.28	1.33	0.37	0.64	0.58 *
27.00	0.62	0.29	1.00	0.29	1.33	0.39	0.65	0.60 *
28.00	0.64	0.33	1.00	0.33	1.33	0.44	0.65	0.68 *
29.00	0.66	0.35	1.00	0.35	1.33	0.46	0.65	0.71 *
30.00	0.68	0.37	1.00	0.37	1.33	0.49	0.65	0.75 *
31.00	0.69	2.00	1.00	2.00	1.33	2.67	0.65	4.10
32.00	0.71	2.00	1.00	2.00	1.33	2.67	0.65	4.12
33.00	0.73	2.00	1.00	2.00	1.33	2.67	0.65	4.13
34.00	0.75	2.00	1.00	2.00	1.33	2.67	0.64	4.15
35.00	0.77	2.00	1.00	2.00	1.33	2.67	0.64	4.17
36.00	0.79	2.00	1.00	2.00	1.33	2.67	0.64	4.19
37.00	0.81	2.00	1.00	2.00	1.33	2.67	0.63	4.22
38.00	0.83	2.00	1.00	2.00	1.33	2.67	0.63	4.24
39.00	0.84	2.00	1.00	2.00	1.33	2.67	0.63	4.27
40.00	0.86	2.00	1.00	2.00	1.33	2.67	0.62	4.29
41.00	0.88	2.00	1.00	2.00	1.33	2.67	0.62	4.32

42.00	0.90	2.00	1.00	2.00	1.33	2.67	0.61	4.35
43.00	0.92	2.00	1.00	2.00	1.33	2.67	0.61	4.38
44.00	0.94	2.00	1.00	2.00	1.33	2.67	0.60	4.41
45.00	0.96	2.00	1.00	2.00	1.33	2.67	0.60	4.44
46.00	0.98	2.00	1.00	2.00	1.33	2.67	0.60	4.48
47.00	0.99	2.00	1.00	2.00	1.33	2.67	0.59	4.51
48.00	1.01	2.00	1.00	2.01	1.33	2.68	0.59	4.57
49.00	1.03	2.00	1.00	2.00	1.33	2.67	0.58	4.59
50.00	1.05	2.00	1.00	2.00	1.33	2.66	0.58	4.62

* F.S.<1: Liquefaction Potential Zone. (If above water table: F.S.=5)

^ No-liquefiable Soils.

(F.S. is limited to 5, CRR is limited to 2, CSR is limited to 2)

CPT convert to SPT for Settlement Analysis:

Fines Correction for Settlement Analysis:

Depth ft	Ic	qc/N60 tsf	qc1	(N1)60	Fines %	d(N1)60	(N1)60s
0.00	-	-	-	28.59	0.00	0.00	28.59
1.00	-	-	-	28.59	0.00	0.00	28.59
2.00	-	-	-	28.59	0.00	0.00	28.59
3.00	-	-	-	28.59	0.00	0.00	28.59
4.00	-	-	-	28.59	0.00	0.00	28.59
5.00	-	-	-	28.59	0.00	0.00	28.59
6.00	-	-	-	28.59	0.00	0.00	28.59
7.00	-	-	-	27.11	0.00	0.00	27.11
8.00	-	-	-	26.28	0.00	0.00	26.28
9.00	-	-	-	28.87	0.00	0.00	28.87
10.00	-	-	-	27.99	0.00	0.00	27.99
11.00	-	-	-	29.67	0.00	0.00	29.67
12.00	-	-	-	31.27	0.00	0.00	31.27
13.00	-	-	-	32.81	0.00	0.00	32.81
14.00	-	-	-	34.30	0.00	0.00	34.30
15.00	-	-	-	39.94	0.00	0.00	39.94
16.00	-	-	-	43.95	0.00	0.00	43.95
17.00	-	-	-	47.81	0.00	0.00	47.81
18.00	-	-	-	51.53	0.00	0.00	51.53
19.00	-	-	-	55.12	0.00	0.00	55.12
20.00	-	-	-	58.59	0.00	0.00	58.59
21.00	-	-	-	51.19	0.00	0.00	51.19
22.00	-	-	-	44.08	0.00	0.00	44.08
23.00	-	-	-	37.23	0.00	0.00	37.23
24.00	-	-	-	30.62	0.00	0.00	30.62
25.00	-	-	-	24.24	0.00	0.00	24.24
26.00	-	-	-	24.88	0.00	0.00	24.88
27.00	-	-	-	25.51	0.00	0.00	25.51
28.00	-	-	-	27.50	0.00	0.00	27.50
29.00	-	-	-	28.14	0.00	0.00	28.14
30.00	-	-	-	28.76	0.00	0.00	28.76
31.00	-	-	-	34.71	0.00	0.00	34.71
32.00	-	-	-	40.51	0.00	0.00	40.51
33.00	-	-	-	46.16	0.00	0.00	46.16
34.00	-	-	-	51.68	0.00	0.00	51.68

35.00	-	-	-	57.07	0.00	0.00	57.07
36.00	-	-	-	54.20	0.00	0.00	54.20
37.00	-	-	-	51.40	0.00	0.00	51.40
38.00	-	-	-	48.67	0.00	0.00	48.67
39.00	-	-	-	46.01	0.00	0.00	46.01
40.00	-	-	-	43.41	0.00	0.00	43.41
41.00	-	-	-	47.10	0.00	0.00	47.10
42.00	-	-	-	50.71	0.00	0.00	50.71
43.00	-	-	-	54.25	0.00	0.00	54.25
44.00	-	-	-	57.73	0.00	0.00	57.73
45.00	-	-	-	61.14	0.00	0.00	61.14
46.00	-	-	-	61.96	0.00	0.00	61.96
47.00	-	-	-	62.77	0.00	0.00	62.77
48.00	-	-	-	63.57	0.00	0.00	63.57
49.00	-	-	-	64.36	0.00	0.00	64.36
50.00	-	-	-	65.14	0.00	0.00	65.14

(N1)60s has been fines corrected in liquefaction analysis, therefore d(N1)60=0.
 Fines=NoLiq means the soils are not liquefiable.

Settlement of Saturated Sands:

Settlement Analysis Method: Ishihara / Yoshimine*

Depth S	CSRsf	/ MSF*	=CSRmF.S.	Fines	(N1)60sDr	ec	dsz	dsp
ft	tsf		tsf	%	%	%	in.	in.
in.								

49.95	0.58	1.0	0.58	4.62	0.00	65.10	100.00	0.000	0.0E0	0.000
0.000										
49.00	0.58	1.0	0.58	4.59	0.00	64.36	100.00	0.000	0.0E0	0.000
0.000										
48.00	0.59	1.0	0.59	4.57	0.00	63.57	100.00	0.000	0.0E0	0.000
0.000										
47.00	0.59	1.0	0.59	4.51	0.00	62.77	100.00	0.000	0.0E0	0.000
0.000										
46.00	0.60	1.0	0.60	4.48	0.00	61.96	100.00	0.000	0.0E0	0.000
0.000										
45.00	0.60	1.0	0.60	4.44	0.00	61.14	100.00	0.000	0.0E0	0.000
0.000										
44.00	0.60	1.0	0.60	4.41	0.00	57.73	100.00	0.000	0.0E0	0.000
0.000										
43.00	0.61	1.0	0.61	4.38	0.00	54.25	100.00	0.000	0.0E0	0.000
0.000										
42.00	0.61	1.0	0.61	4.35	0.00	50.71	100.00	0.000	0.0E0	0.000
0.000										
41.00	0.62	1.0	0.62	4.32	0.00	47.10	100.00	0.000	0.0E0	0.000
0.000										
40.00	0.62	1.0	0.62	4.29	0.00	43.41	100.00	0.000	0.0E0	0.000
0.000										
39.00	0.63	1.0	0.63	4.27	0.00	46.01	100.00	0.000	0.0E0	0.000
0.000										
38.00	0.63	1.0	0.63	4.24	0.00	48.67	100.00	0.000	0.0E0	0.000
0.000										

37.00	0.63	1.0	0.63	4.22	0.00	51.40	100.00	0.000	0.0E0	0.000
0.000										
36.00	0.64	1.0	0.64	4.19	0.00	54.20	100.00	0.000	0.0E0	0.000
0.000										
35.00	0.64	1.0	0.64	4.17	0.00	57.07	100.00	0.000	0.0E0	0.000
0.000										
34.00	0.64	1.0	0.64	4.15	0.00	51.68	100.00	0.000	0.0E0	0.000
0.000										
33.00	0.65	1.0	0.65	4.13	0.00	46.16	100.00	0.000	0.0E0	0.000
0.000										
32.00	0.65	1.0	0.65	4.12	0.00	40.51	100.00	0.000	0.0E0	0.000
0.000										
31.00	0.65	1.0	0.65	4.10	0.00	34.71	100.00	0.000	0.0E0	0.000
0.000										
30.00	0.65	1.0	0.65	0.75	0.00	28.76	87.32	0.982	5.9E-3	0.024
0.024										
29.00	0.65	1.0	0.65	0.71	0.00	28.14	86.00	1.120	6.7E-3	0.127
0.151										
28.00	0.65	1.0	0.65	0.68	0.00	27.50	84.67	1.246	7.5E-3	0.142
0.293										
27.00	0.65	1.0	0.65	0.60	0.00	25.51	80.70	1.624	9.7E-3	0.185
0.479										
26.00	0.64	1.0	0.64	0.58	0.00	24.88	79.49	1.707	1.0E-2	0.200
0.679										
25.00	0.64	1.0	0.64	0.56	0.00	24.24	78.28	1.781	1.1E-2	0.210
0.889										
24.00	0.64	1.0	0.64	4.20	0.00	30.62	91.48	0.000	0.0E0	0.134
1.022										
23.00	0.63	1.0	0.63	4.22	0.00	37.23	100.00	0.000	0.0E0	0.000
1.022										
22.00	0.63	1.0	0.63	4.25	0.00	44.08	100.00	0.000	0.0E0	0.000
1.022										
21.00	0.62	1.0	0.62	4.29	0.00	51.19	100.00	0.000	0.0E0	0.000
1.022										
20.00	0.62	1.0	0.62	4.32	0.00	58.59	100.00	0.000	0.0E0	0.000
1.022										
19.00	0.61	1.0	0.61	4.37	0.00	55.12	100.00	0.000	0.0E0	0.000
1.022										
18.00	0.60	1.0	0.60	4.42	0.00	51.53	100.00	0.000	0.0E0	0.000
1.022										
17.00	0.60	1.0	0.60	4.47	0.00	47.81	100.00	0.000	0.0E0	0.000
1.022										
16.00	0.59	1.0	0.59	4.54	0.00	43.95	100.00	0.000	0.0E0	0.000
1.022										
15.00	0.58	1.0	0.58	4.61	0.00	39.94	100.00	0.000	0.0E0	0.000
1.022										
14.00	0.57	1.0	0.57	4.70	0.00	34.30	100.00	0.000	0.0E0	0.000
1.022										
13.00	0.56	1.0	0.56	4.81	0.00	32.81	96.80	0.000	0.0E0	0.000
1.022										
12.00	0.54	1.0	0.54	4.93	0.00	31.27	93.00	0.000	0.0E0	0.000
1.022										
11.00	0.53	1.0	0.53	1.05	0.00	29.67	89.31	0.411	2.5E-3	0.012
1.035										
10.00	0.51	1.0	0.51	0.90	0.00	27.99	85.69	0.746	4.5E-3	0.072
1.107										

9.00	0.49	1.0	0.49	1.02	0.00	28.87	87.57	0.481	2.9E-3	0.073
1.179										
8.00	0.46	1.0	0.46	0.88	0.00	26.28	82.21	0.880	5.3E-3	0.062
1.242										
7.00	0.43	1.0	0.43	1.00	0.00	27.11	83.86	0.590	3.5E-3	0.088
1.330										
6.00	0.40	1.0	0.40	1.21	0.00	28.59	86.96	0.283	1.7E-3	0.047
1.377										

Settlement of Saturated Sands=1.377 in.
qc1 and (N1)60 is after fines correction in liquefaction analysis
dsz is per each segment, dz=0.05 ft
dsp is per each print interval, dp=1.00 ft
S is cumulated settlement at this depth

Settlement of Unsaturated Sands:

Depth ec ft in.	sigma' dsz tsf in.	sigC' dsp tsf in.	(N1)60s S	CSRsf tsf	Gmax tsf	g*Ge/Gm	g_eff %	ec7.5	Cec %	
5.95	0.33	0.21	28.59	0.40	630.0	2.1E-4	0.0407	0.0249	0.84	0.0209
2.50E-40.000	0.000	0.000								
5.00	0.28	0.18	28.59	0.40	577.5	1.9E-4	0.0367	0.0224	0.84	0.0188
2.26E-40.005	0.005	0.005								
4.00	0.22	0.14	28.59	0.40	516.6	1.7E-4	0.0374	0.0228	0.84	0.0192
2.30E-40.004	0.009	0.009								
3.00	0.17	0.11	28.59	0.40	447.4	1.5E-4	0.0286	0.0175	0.84	0.0146
1.76E-40.004	0.013	0.013								
2.00	0.11	0.07	28.59	0.40	365.3	1.2E-4	0.0225	0.0137	0.84	0.0115
1.38E-40.003	0.016	0.016								
1.00	0.06	0.04	28.59	0.40	258.3	8.6E-5	0.0155	0.0095	0.84	0.0080
9.56E-50.003	0.019	0.019								
0.00	0.00	0.00	28.59	0.40	3.5	1.2E-6	0.0010	0.0006	0.84	0.0005
6.25E-60.001	0.020	0.020								

Settlement of Unsaturated Sands=0.020 in.

dsz is per each segment, dz=0.05 ft
dsp is per each print interval, dp=1.00 ft
S is cumulated settlement at this depth

Total Settlement of Saturated and Unsaturated Sands=1.397 in.

Differential Settlement=0.698 to 0.922 in.

Units Depth = ft, Stress or Pressure = tsf (atm), Unit Weight = pcf, Settlement
= in.

SPT	Field data from Standard Penetration Test (SPT)
BPT	Field data from Becker Penetration Test (BPT)
qc	Field data from Cone Penetration Test (CPT)
fs	Friction from CPT testing
gamma	Total unit weight of soil

gamma'	Effective unit weight of soil
Fines	Fines content [%]
D50	Mean grain size
Dr	Relative Density
sigma	Total vertical stress [tsf]
sigma'	Effective vertical stress [tsf]
sigC'	Effective confining pressure [tsf]
rd	Stress reduction coefficient
CRRv	CRR after overburden stress correction, $CRRv = CRR_{7.5} * K_{sig}$
CRR7.5	Cyclic resistance ratio (M=7.5)
Ksig	Overburden stress correction factor for CRR7.5
CRRm	After magnitude scaling correction $CRRm = CRRv * MSF$
MSF	Magnitude scaling factor from M=7.5 to user input M
CSR	Cyclic stress ratio induced by earthquake
CSRfs	$CSRfs = CSR * fs_1$ (Default $fs_1 = 1$)
fs1	First CSR curve in graphic defined in #9 of Advanced page
fs2	2nd CSR curve in graphic defined in #9 of Advanced page
F.S.	Calculated factor of safety against liquefaction $F.S. = CRRm / CSRsf$
Cebs	Energy Ratio, Borehole Dia., and Sampling Method Corrections
Cr	Rod Length Corrections
Cn	Overburden Pressure Correction
(N1)60	SPT after corrections, $(N1)60 = SPT * Cr * Cn * Cebs$
d(N1)60	Fines correction of SPT
(N1)60f	(N1)60 after fines corrections, $(N1)60f = (N1)60 + d(N1)60$
Cq	Overburden stress correction factor
qc1	CPT after Overburden stress correction
dqc1	Fines correction of CPT
qc1f	CPT after Fines and Overburden correction, $qc1f = qc1 + dqc1$
qc1n	CPT after normalization in Robertson's method
Kc	Fine correction factor in Robertson's Method
qc1f	CPT after Fines correction in Robertson's Method
lc	Soil type index in Suzuki's and Robertson's Methods
(N1)60s	(N1)60 after settlement fines corrections
CSRm	After magnitude scaling correction for Settlement calculation
$CSRm = CSRsf / MSF^*$	
CSRfs	Cyclic stress ratio induced by earthquake with user inputed fs
MSF*	Scaling factor from CSR, $MSF^* = 1$, base on Item 2 of Page C.
ec	Volumetric strain for saturated sands
dz	Calculation segment, $dz = 0.050$ ft
dsz	Settlement in each segment, dz
dp	User defined print interval
dsp	Settlement in each print interval, dp
Gmax	Shear Modulus at low strain
g_eff	gamma_eff, Effective shear Strain
g^*Ge/Gm	$gamma_eff * G_eff / G_max$, Strain-modulus ratio
ec7.5	Volumetric Strain for magnitude=7.5
Cec	Magnitude correction factor for any magnitude
ec	Volumetric strain for unsaturated sands, $ec = Cec * ec_{7.5}$
NoLiq	No-Liquefy Soils

References:

1. NCEER Workshop on Evaluation of Liquefaction Resistance of Soils. Youd, T.L., and Idriss, I.M., eds., Technical Report NCEER 97-0022.

SP117. Southern California Earthquake Center. Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction in California. University of Southern California. March 1999.

2. RECENT ADVANCES IN SOIL LIQUEFACTION ENGINEERING AND SEISMIC SITE RESPONSE EVALUATION, Paper No. SPL-2, PROCEEDINGS: Fourth International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, San Diego, CA, March 2001.

3. RECENT ADVANCES IN SOIL LIQUEFACTION ENGINEERING: A UNIFIED AND CONSISTENT FRAMEWORK, Earthquake Engineering Research Center, Report No. EERC 2003-06 by R.B Seed and etc. April 2003.

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April 29, 2021

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3413 Ocean Drive
Hollywood Beach, CA 93035

SUBJECT: Revised Coastal Hazard & Wave Runup Study for 3413 Ocean Drive,
Oxnard, California.

Dear Mr. & Mrs. Namm:

The following revised report is in response to your request for a coastal hazard and wave runup study for the proposed residential structure at the subject address on Hollywood Beach, Ventura County. This revised report responds to comments made by the County of Ventura in the April 13, 2021 review letter. The proposed project includes the removal of the existing development and construction of a new residence. The analysis is based upon site elevations, existing published reports concerning the local coastal processes, our site inspection, and knowledge of local coastal conditions. This report constitutes an investigation of the oceanographic conditions expected at the site in consequence of extreme storm and wave action over the next 75 to 100 years, in accordance with the latest State of California Sea Level Rise (SLR) Guidance (November 2018). It includes an analysis of wave runup and overtopping of the existing beach, the resulting impacts on the proposed development, and the potential coastal hazards at the site. The purpose of the study is to provide the necessary information for a Coastal Development Permit as required by the County of Ventura, and the California Coastal Commission (CCC). It also provides a discussion, with conclusions and recommendations, regarding the susceptibility of the proposed development to wave attack and shoreline erosion. The analysis uses design storm conditions typical of the January 18-19, 1988, and 1982-83 type storm waves and beach conditions.

SITE VISIT & INFORMATION REVIEWED

The area was visited on January 18, 2021 by the undersigned. Figure 1 is a 2019 bird's eye aerial photograph of the site downloaded from Bing Maps. The site is currently mapped in the FEMA FIRM (effective January 29, 2021) Shaded X Zone (see Figure 2). In order to determine the potential for wave runup to reach the site, historical aerial photographs over the last several decades were reviewed. None of the photographs examined showed that wave runup reached the site in the past over the several decade

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County of Ventura
Planning Director Hearing
PL21-0027
Exhibit 6 - Revised Coastal
Hazards & Wave Runup Study

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time frame. A review of the aerial photographs showed a very wide beach even though some of the photos were taken in the winter and spring, when the beach is seasonally the narrowest. In addition to aerial photographs, a long term (>40 years) resident stated that the water has not reached the beach front residences over the 40+ years that he has lived there. In addition, the beach fronting the site is stabilized by the Channel Islands Harbor inlet jetty to the southeast. The predominate direction of sand movement along the shoreline in this area is to the southeast, which results in the accumulation of sand in front of the site. Because of the wide beach, even under severely eroded beach conditions and extreme storms, wave runup will not likely reach near the site in the next 75 years.



Figure 1. Subject site and very wide beach in 2019.

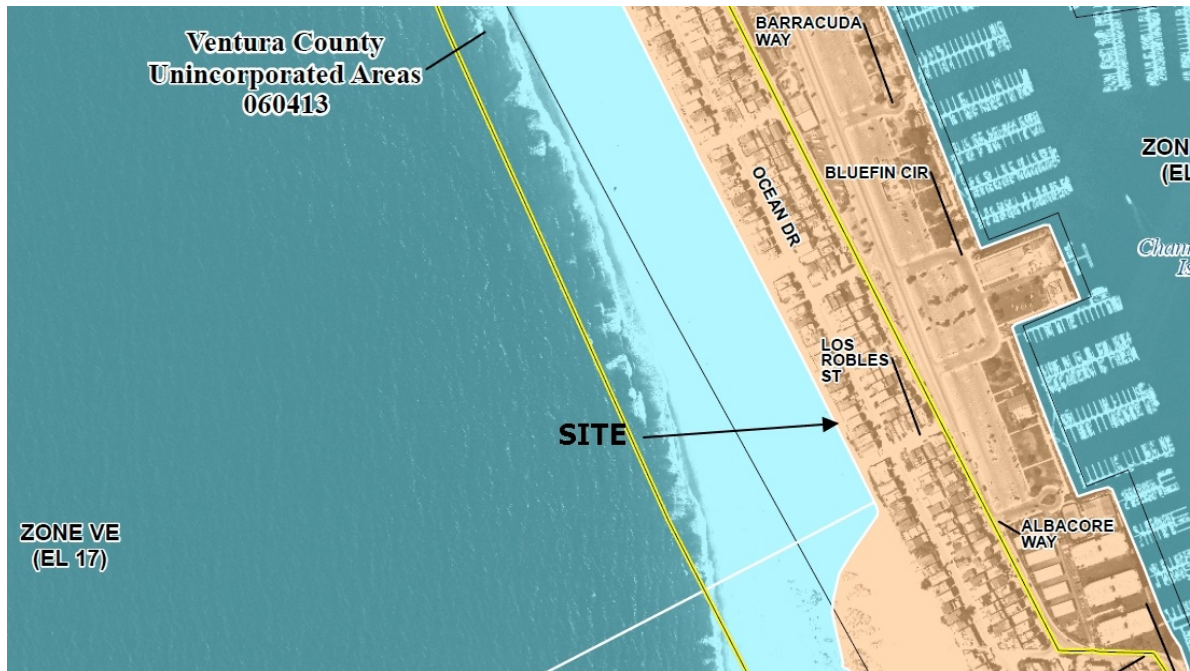


Figure 2. Pending January 2021 FEMA flood zone map for the site area.

The units of measurement in this report are feet (ft), pounds force (lbs), and second (sec). Azimuth Group produced a site topographic map, dated February 1, 2021, with elevations referenced to North American Vertical Datum (NAVD88) (**APPENDIX I**). Development plans were discussed with Mr. Walt Phillips, the project designer. In addition, a section from the shoreline to the Ocean Drive center line is provided (**APPENDIX II**). During the January 2021 site inspection, the distance from the Ocean Drive centerline to the Mean High Water (MHT) line was approximately 750 feet.

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 coastal processes sections of that report remain valid and have been used as a basis for this analysis.

The BEACON study divided the Santa Barbara Littoral Cell into subcells based upon shoreline characteristics and the location of sediment sources and sinks. The subject site, lies within the sub cell from Ventura Harbor to Channel Islands Harbor. This area is characterized as a wide sandy alluvial plain. Private development and harbor construction have played a large role in the historical shoreline evolution in this area. Ventura's Pierpont Bay area was stabilized by groins as early as 1936. Ventura Harbor was completed in 1964. The beaches from McGrath State Beach and Port Hueneme have always been wide and abundant (BEACON 1989). Channel Islands Harbor was completed in 1960 with the material dredged from the harbor used to build up the eroded beach to the east of Port Hueneme (built in 1940). Shoreline erosion problems have been persistent east of Port Hueneme, resulting in the sediment bypassing efforts and the construction of groins in 1967. The BEACON report states that the Hollywood Beach has been "relatively" stable over the past 50 years.

Shoreline Erosion

The California Coastal Commission (CCC) Sea Level Rise (SLR) Guidance suggests the use of the highest erosion rate available for the predication of the future shoreline erosion due to SLR. The United States Geological Survey (USGS, 2006) performed a comprehensive assessment of shoreline change including this section of coastline. Figure 3 is a portion of a figure from USGS 2006 (Figure 35, page 58) and shows the maximum short-term erosion rate at the subject site. There is no long-term erosion at the site. As stated previously, this beach is building out. Even if a short-term rate of 2.5 ft/yr was used as the future long-term rate (this would be very conservative analysis), the retreat would be ~190 feet over the 75 year design life of the development. The site is currently about 750 feet from the shoreline. If the beach retreats 190 feet in the next 75 years then the site will be ~540 feet from the shoreline. A beach width of 200 feet or greater is recognized as sufficient to protect the back shore from extreme events. The site is safe from shoreline erosion over the design life of the development due to the significant setback from the current shoreline and future shoreline with SLR. The proposed development will not need shore protection over the life of the development.

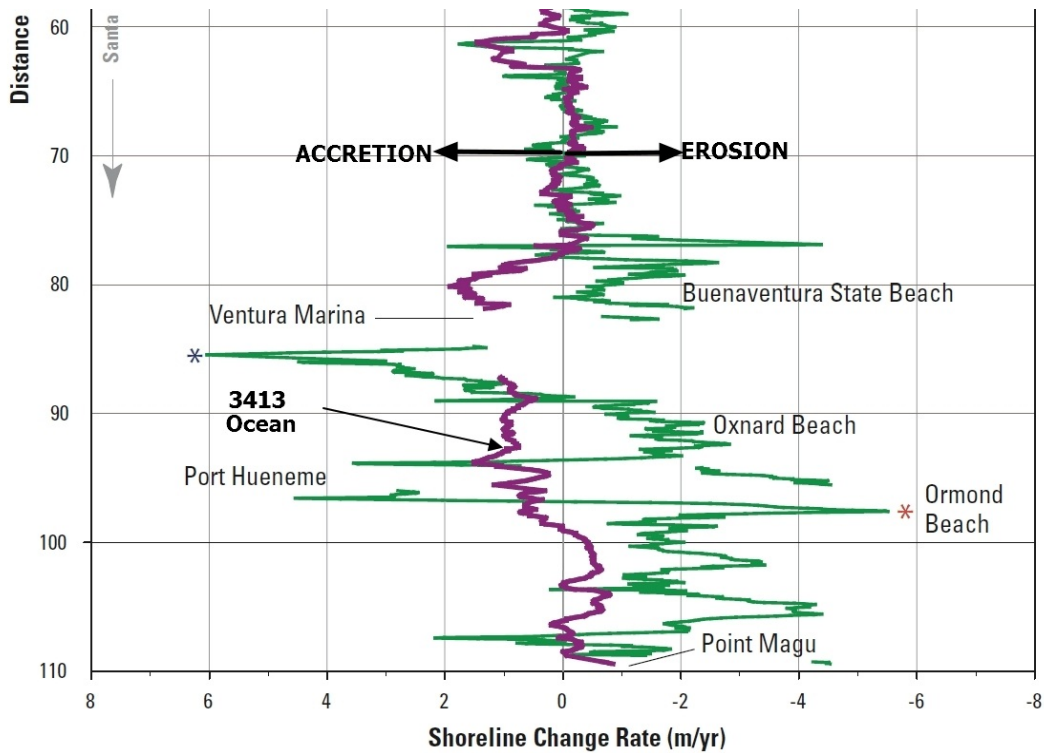


Figure 3. Shoreline change rate in meters per year from USGS 2006.

WAVES AND TIDES

Waves of all periods approach Hollywood Beach shoreline, however, almost all of the energy is contained in the medium and long period waves (approximately 5 to 20 seconds). These waves approach the Southern California Bight and encounter the offshore islands. The offshore islands, such as Santa Cruz, Santa Rosa, Santa Catalina and San Miguel, partially shelter this section of coast from ocean swells. Between these islands are the windows that waves can pass through and approach the Hollywood Beach shoreline. Waves can approach the study area through wave windows from the west and north, and from a small window to the south. The BEACON study contains a summary of historical storms as far back as 1905. These historic storms have resulted in significant damage to some coastal structures such as homes and roadways.

As waves travel into shallower and shallower water the wave crest is bent and becomes nearly parallel to shore, and the wave heights are modified depending on whether waves

are being focused or de-focused at a particular location along the shoreline. This process is called refraction and it is dependent upon the bathymetry, and the wave height, period, and direction. Extreme wave conditions in shallow water have been calculated using historical wave data. The California Department of Boating and Waterways, in partnership with the US Army Corps of Engineers, maintains wave recording buoys throughout Southern California. The record of historical waves for this region, both from direct observation or recording and from hindcast analysis, is extensive. Waves as high as 20 feet were recorded on January 17, 1998 and 14 to 16 foot high waves with period in excess of 20 seconds were recorded during the 1982-83 El Niño.

The datum used in this report is North American Vertical Datum 1988 (NAVD88), which is -2.66 feet Mean Sea Level (MSL). The National Oceanographic and Atmospheric Administration (NOAA) National Ocean Survey (NOS) tidal data station, with the latest Sea Level Rise estimates closest to Hollywood Beach, is located at Santa Barbara. The tidal datum elevations from the NOAA NOS station homepage are as follows:

Highest Water December 13, 2012	7.54 feet
Mean High Water (MHT)	4.55 feet
Mean Sea Level (MSL)	2.70 feet
NAVD88	0.00 feet
Mean Lower Low Water	-0.09 feet

WAVE RUNUP AND OVERTOPPING

As waves encounter the beach at the subject site, water can rush up, and sometimes over, the beach berm. In addition, unprotected beaches can become narrower due to a long term erosion trend. Often, wave runup and overtopping strongly influence the design and the cost of coastal projects. Wave runup is defined as the vertical height above the still water level to which a wave will rise on a structure (beach slope) of infinite height. Overtopping is the flow rate of water over the top of a finite height structure (the beach berm) as a result of wave runup.

Wave runup and overtopping is calculated using the US Army Corps of Engineers Automated Coastal Engineering System, ACES. ACES is an interactive computer based design and analysis system in the field of coastal engineering. The methods to calculate runup and overtopping implemented within this ACES application are discussed in greater detail in Chapter 7 of the Shore Protection Manual (1984). The overtopping estimates calculated herein are corrected for the effect of onshore winds. Figure 4 is a diagram showing the analysis terms.

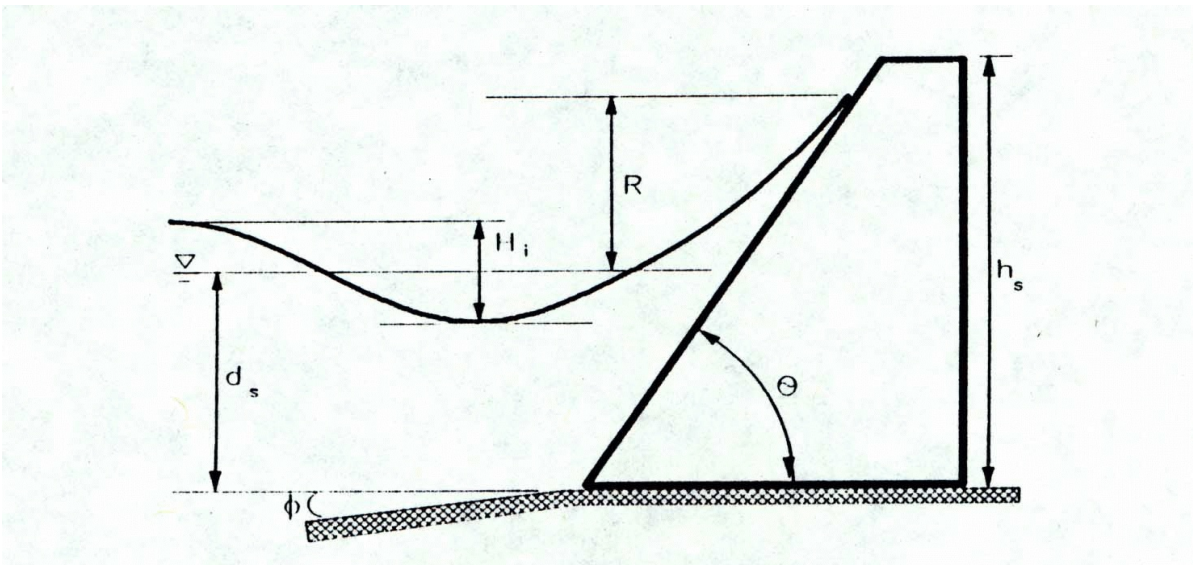


Figure 4. Wave runup terms from ACES manual.

- d_s is the depth of the water at the toe of the beach slope.
- H_i is the breaking wave height at the toe not to be confused with the deep water wave height H_0 .
- R is the height of the wave runup above the still water elevation.
- h_s is the height of the beach above the toe (elevation to the ~ berm elevation).
- Θ is the slope of the beach.
- ϕ is the nearshore slope or slope from the shoreline to beyond the breakers.

The wave, wind and water level data used as input to the ACES runup and overtopping application were taken from the historical data reported in USACOE (1986), BEACON (1989), and updated to include more recent El Niño conditions. The shoreline within the Santa Barbara Channel has experienced a series of extreme storms over the years. These events have variously impacted coastal property and beaches depending upon the severity of the storm, the direction of wave approach and the local shoreline orientation. The onshore wind speed was chosen to be 20 knots for the analysis.

Future Water Levels Due to Sea Level Rise

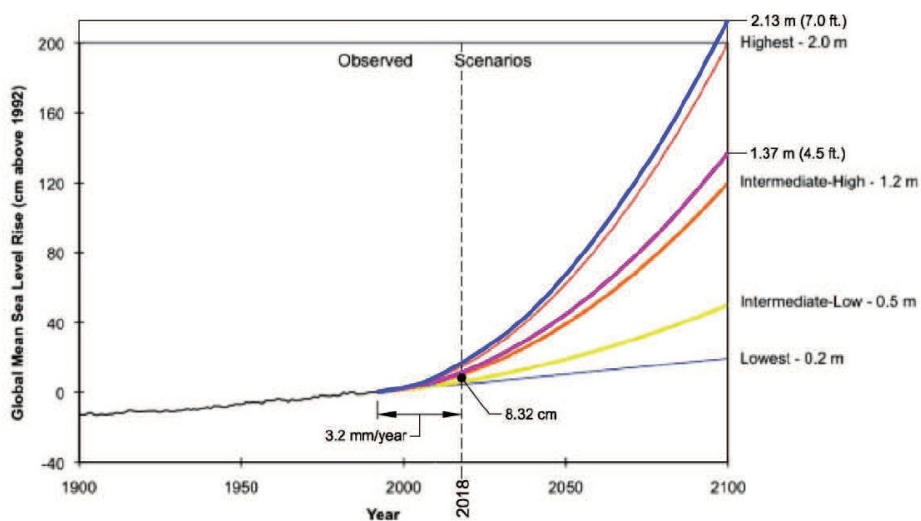
The maximum still water elevation recorded near the site is ~+7.5 feet. This sea level includes short-term effects that would increase sea level, such as wave set up and El Niño. The California Coastal Commission (CCC) SLR Guidance document recommends that a project designer determine the range of SLR using the “best available science.” GSI

respectfully points out that the CCC SLR Guidance is “advisory and not a regulatory document or legal standard for review.” The CCC SLR Guidance is not a check list. The California Ocean Protection Council (OPC) adopted an update to the State’s Sea-Level Rise Guidance in March 2018. These new estimates are based upon a 2014 report entitled “Probabilistic 21st and 22nd century sea-level projections at a global network of tide-gauge sites” by Kopp et al,. This update included SLR estimates and probabilities for Santa Barbara the closest SLR estimates to Hollywood Beach. SLR likelihood estimates are provided below in a table taken from the CCC SLR Guidance November 2018 Update. This simplified version of both the OPC and Kopp SLR tables provided by the CCC uses an arbitrary risk framework to suggest the use of very low probability SLR projections for development projects. The SLR tables in the CCC 2018 Guidance have been modified by the CCC and do not provide the complete data set from the OPC document with the “best available science.”

In contrast, the table below provides the correct (not edited by the CCC) Santa Barbara SLR tables as presented by OPC and Kopp et al. This is the actual probability of various SLR estimates without the CCC omissions and their risk aversion framework. What the actual table shows is that the “likely range” of SLR for the high emissions case in the year 2095 (interpolated) is ~1.9 to ~2.9 feet. This table illustrates the complexity of predicting SLR. To manage this complexity the CCC SLR guidance onerously specifies the use of the very low probability (0.5%) and high emission estimates.

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

Additionally, the Kopp et al. paper used 2009 to 2012 SLR modeling for the probability analysis, which means the “best available science” as determined by the CCC is almost 10 years old. The CCC SLR Guidance requires the use of the “best available science.” Dr. Reinhard Flick from the Scripps Institution of Oceanography has provided information that global sea level from 1992 to 2018 has resulted in 8.32 centimeters of relatively uniform SLR in the past 26 years. This information is shown on Figure 5 taken from the CCC SLR Guidance (2015). This current measurement shows that SLR is tracking more on the intermediate SLR prediction curves, which is more like a 50% (median) probability SLR in the year 2100.



Modified from Figure 5 of the California Coastal Commission Sea Level Rise Policy Guidance document adopted August 12, 2015.

Figure 5. Current global SLR plotted on SLR prediction curves (graphic taken from TerraCosta Consulting).

The project has a design life of 75 years or until about the year 2096. For the analysis the ~5% probability SLR scenario and the high emissions 0.5% SLR scenario will be used (required by the County in the review comment), which represent both reasonable and onerously conservative estimates of future SLR. For the “high emissions” scenario in the year 2096 with 5% probability the SLR estimate is interpolated to be 3.7 feet above the 1991-2009 baseline. For the “high emissions” scenario in the year 2096 with 0.5% probability the SLR estimate is interpolated to be 6 feet above the 1991-2009 baseline. For the wave runup and overtopping analysis the very conservative (~0.5%) SLR of 6 feet will be used for the high SLR. **Using the CCC SLR estimate over the project design life that range in the year ~2096 is between 1.9 feet and 6.0 feet. This is the project sea level rise range for the proposed project.**

Using the highest historical water level of 7.5 feet NAVD88, the design water elevation for the high SLR scenario is 13.5 feet NAVD88. The design scour elevation is typically the elevation of the low tide terrace or +2.0 feet NAVD88. The most critical design wave is the wave that breaks at the toe of the beach when the beach is eroded. The design wave is a “depth limited” wave. If the toe of the beach is at about elevation +2 feet NAVD88, then the design water depth for the 6 feet SLR year recurrence it is 11.5 feet. 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 8.97 feet for the high SLR case. The wave period is 15 seconds which is typical of wave period for extreme wave events in the area.

Using the BEACON survey data at Hollywood Beach (BCN21) provided in Figure 6, the nearshore slope at the site is 1/160, vertical to horizontal, and the beach berm slope is about 1/20. It is our understanding that the beach profile terminate at or near the berm which on Figure 6 appears to be at about elevation +4.6 feet NAVD88 (+15 feet NAVD88). The berm elevation used in the overtopping calculation was +15.0 feet NAVD88, which represents a condition the elevation of the typical top of beach berm shown on Figure 6. The overtopping rate is given as the flow rate per unit length of beach. The ACES printout for the highest SLR cases are provided in the table following Figure 6.

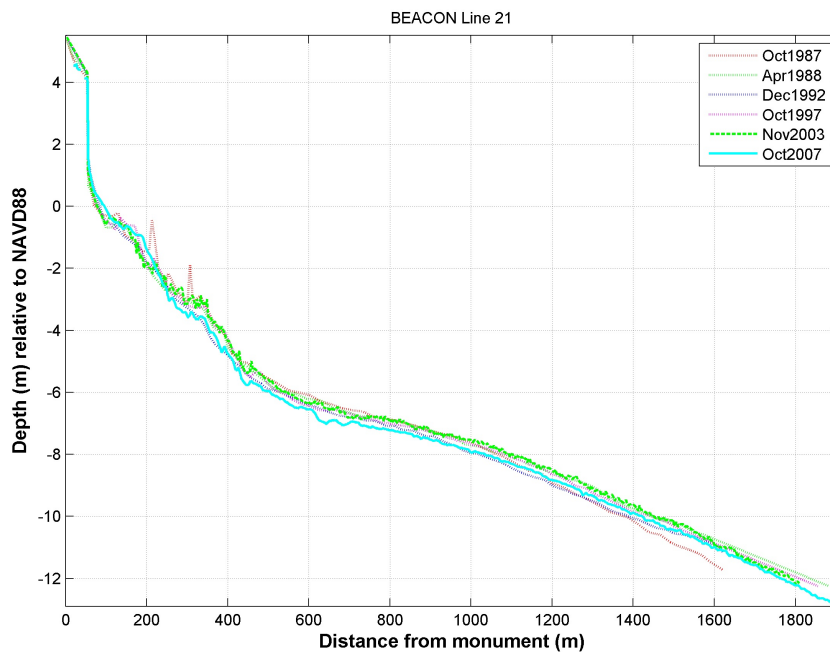


Figure 6. BEACON beach survey data at Hollywood Beach.

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	8.970	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">Smooth Slope Runup and Overtopping</div> <p style="margin-top: 10px;">3413 Ocean Drive</p> <p style="margin-top: 10px;">6 FT SLR</p>	
Wave Period	T: sec	15.000		
COTAN of Nearshore Slope	COT(φ):	160.000		
Water Depth at Structure Toe	ds: ft	11.500		
COTAN of Structure Slope	COT(θ):	20.000		
Structure Height Above Toe	hs: ft	13.000		
Wave Runup	R: ft	5.093		
Onshore Wind Velocity	U: ft/sec	8.439		
Deepwater Wave Height	H0: ft	6.249		
Relative Height	ds/H0:	1.840		
Wave Steepness	H0/(gT ²):	0.000863		
Overtopping Coefficient	α:	0.070000		
Overtopping Coefficient	Qstar0:	0.070000		
Overtopping Rate	Q: ft ³ /s-ft	9.153		

For the calculated overtopping rate ($Q=q$), the height of water and the velocity of this water can be calculated using the following empirical formulas provided by the USACOE (Protection Alternatives for Levees and Floodwalls in Southeast Louisiana, May 2006, equations 3.1 and 3.6).

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

For the 6 feet SLR case with the current beach profile, the water depth is about 2.1 feet and the velocity is 6.6 ft/sec. The Coastal Engineering Manual states that for every 25 feet that wave overtopping travels across the beach the height of the runup bore is reduced by ~1 foot height. Therefore, the velocity would also decrease as the runup bore travels across the beach and towards the site.

COASTAL HAZARD DISCUSSION

There are three different potential oceanographic hazards identified at this site; shoreline erosion, flooding, and waves. For ease of review each of these hazards will be analyzed and discussed separately followed by a summary of the analysis including conclusions and recommendations, as necessary.

Erosion Hazard Including Future Shoreline Erosion

The beach and shoreline fronting the subject site is accreting due to the predominate south east along shore sand drift being stopped by the Channel Island Harbor jetty. The jetties help to hold the beach in place. Analysis of historical aerial photographs contained in the

California Coastal Records Project web site, Google Earth, and from the UC Santa Barbara aerial photograph collection, show very wide beach widths over the last six decades. No photos show that wave runup has come within 400 feet of the site. There is no photographic evidence of an actual long term shoreline erosion in front of the site. As stated in the November 2018 CCC Sea-Level Rise Policy Guidance document, “predictions of future beach, bluff, and dune erosion are complicated by the uncertainty associated with future waves, storms and sediment supply. As a result there is no accepted method for predicating future beach erosion.” There is no long-term erosion at the site. As stated previously, this beach is building out. Even if a short-term rate of 2.5 ft/yr was used as the long-term rate (this would be very conservative analysis), the retreat would be ~190 feet over the 75 year life of the development. The site is currently about 750 feet from the shoreline. If the beach retreats 190 feet in the next 75 years then the site will be ~540 feet from the shoreline. A beach width of 200 feet or greater is recognized as sufficient to protect the back shore from extreme events. The site is safe from shoreline erosion over the design life of the development due to the significant setback from the current shoreline and future shoreline with SLR. The proposed development will not need shore protection over the life of the development.

Flooding Hazard

The proposed residential structure will NOT be subject to short term flooding from wave runup attack due to the setback from the ocean. The proposed finished first floor is at +13.65 feet NAVD88, and is about 2 feet above the adjacent street flow line elevation. This FF elevation is above the ocean level with 6 feet of SLR and will not be subject to flooding from rain runoff. The proposed project is reasonably safe from flooding because of the very wide beach, the finished floor elevation (+13.65 feet NAVD88), and the existing drainage paths away from the structure.

Wave Attack & Wave Runup

The proposed structure is safe from direct breaking wave attack due to its setback from the shoreline even under future eroded shoreline conditions. Wave runup will likely not reach the site but may travel over the beach towards the site. The US Army Corps of Engineers Coastal Engineering Manual states that for every 25 feet wave overtopping travels across a beach it reduces in height by ~1 foot. Due to its location and elevation the proposed residence is safe from wave attack and wave runup.

Tsunami

It should be noted that the site is mapped within the limits of the California Office of Emergency Services (CalOES) tsunami inundation map, Oxnard Quadrangle (State of

California 2009). The tsunami inundation maps are very specific as to their use. Their use is for evacuation planning only. The limitation on the use of the maps is clearly stated in the **PURPOSE OF THIS MAP** on every quadrangle of California coastline. In addition, the following two paragraphs were taken from the CalOES Local Planning Guidance on Tsunami Response concerning the use of the tsunami inundation maps.

In order to avoid the conflict over tsunami origin, inundation projections are based on worst-case scenarios. Since the inundation projections are intended for emergency and evacuation planning, flooding is based on the highest projection of inundation regardless of the tsunami origin. As such, projections are not an assessment of the probability of reaching the projected height (probabilistic hazard assessment) but only a planning tool. Inundation projections and resulting planning maps are to be used for emergency planning purposes only. They are not based on a specific earthquake and tsunami. Areas actually inundated by a specific tsunami can vary from those predicted. The inundation maps are not a prediction of the performance, in an earthquake or tsunami, of any structure within or outside of the projected inundation area.

The CalOES maps model the inundation of a tsunami with an approximate 1,000 year recurrence interval (0.1% event). The Science Application for Risk Reduction (SAFRR) tsunami study headed by USGS investigated a tsunami scenario with a 200-240 year recurrence interval. The SAFRR modeling output is shown in Figure 7 and reveals that the site is not within the more probable (0.4% event) tsunami inundation zone. The City of Oxnard and County of Ventura have clearly marked tsunami evacuation routes for the entire Silver Strand Beach and Oxnard areas.



Figure 7. SAFRR tsunami modeling for the subject site.

SLR & 100 YEAR STORM

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, <http://data.pointblue.org/apps/ocof/cms/>. Using the modeling program the vulnerability of the site to different SLR scenarios and the 100 year storm and shoreline erosion can be assessed. The CCC using the program as a simple check and for illustrating potential future conditions. However, the following are the limitations as to the use of the CoSMoS model.

Inundated areas shown should not be used for navigation, regulatory, permitting, or other legal purposes. The U.S. Geological Survey provides these data “as is” for a quick reference, emergency planning tool but assumes no legal liability or responsibility resulting from the use of this information.

Figure 8 is the output of the CoSMoS program. The modeling shows that, while the main access streets may flood during the 100 year wave event with 5.7 feet (175 centimeters) of SLR, there is no direct flooding of the site from the ocean. Wave runup does not reach the site. The flooding comes from the harbor, which can be controlled, if necessary. In addition, the potential erosion due to SLR still leaves a wide beach. Because the FF elevation (+13.65 feet NAVD88) is above the future ocean/harbor water elevation 13.5 feet NAVD88, the structure will not be subject to flooding. The CoSMoS program validates that the analysis herein is reasonably conservative.



Figure 8. CoSMoS modeling analysis for the subject site.

ADDITIONAL DISCUSSION

The California Coastal Commission (CCC) Sea Level Rise (SLR) Guidance is specific as to the purpose of a coastal hazard analysis. The analysis is not to determine FEMA flood zone designations or base flood elevations (BFE). It is to determine the potential for shoreline erosion, waves, and ocean flooding to impact the proposed development. The referenced GSI hazard analysis determined that the proposed development at 3413 Ocean Drive site would not be subject to coastal hazards over the life of the development and in consideration of SLR. The beach is too wide for future erosion to impact the site in consideration of SLR over the project design life. In addition, the wide beach is sufficient to protect the proposed development from wave runup impacts. Finally, using a future unlikely 0.5% probability design ocean water level of 13.5 feet NAVD88, the proposed development, with a finished floor (FF) at elevation +13.65 feet NAVD88, will be safe from ocean flooding.

With regards to FEMA mapping, the site is currently mapped in the FEMA shaded X Zone because the area (not specifically just this particular site) is within a 1% chance of annual flooding with water depth of less than 1 feet. It should be noted that the site is higher in elevation than the public roads landward of the site. South Harbor Boulevard is about 3 to 4 feet lower than Ocean Drive and the proposed site FF is about 2 feet above Ocean Drive flow line. While the area and public roads may flood with less than 1 feet of water (per FEMA), the site and building is unlikely to flood due to its elevation above the low lying section/roads in this shaded X Zone.

The wave runup calculation assumes an infinite slope, which does not exist at the beach fronting the site. The GSI AO Zone BFE of 17 was calculated by adding the height of the overtopping bore to the beach elevation and rounding to the whole number (+15 feet NAVD88 + 2.1 feet = + 17 feet NAVD88). Using the BFE equation in the FEMA California Coastal Analysis and Mapping Project (BFE = SWL + R (wave runup)) yields (13.5 feet NAVD88 + 5.1 feet = 18.6 feet NAVD88) a BFE of +19 feet NAVD88 for the GSI VE Zone out on the beach. This elevation has been provided on the attached profile (**APPENDIX II**).

CONCLUSIONS AND RECOMMENDATIONS

Prediction of runup and overtopping on a beach during extreme storm events is a very complex problem. The flow rate presented here represents what is defined as flow which is sustained by a continuous volume, even though it will actually occur with the cycle of the waves. Therefore, this analysis can be considered conservative and may over estimate the actual wave runup and overtopping. The calculations made herein use standard

methods, yet they are based on several simplifying assumptions (see Chapter 7 of SPM). There are several facts that indicate that wave runup and overtopping should not adversely impact the structure over the life of the structure.

- There is a wide (~750 feet) sandy beach in front of the site 99.99% of the time.
- A review of aerial photographs over the last six decades shows no overall shoreline retreat in general and a VERY wide sand beach in front of the site even at times when the beach is seasonally at its narrowest.
- The existing residential development has not been subject to any wave runup and overtopping attack in the past.
- Because the future flooding vulnerability is a regional problem from the harbor there is very little that can be done at this site specifically to mitigate the future potential hazard of flooding. The public streets are a few feet lower than the proposed FF elevation of the development so before the actual structure floods, there will be no access to the site.
- The design and materials of the proposed structure are such that waterproofing could be retrofitted in the future, if necessary. The residence can be retrofitted with waterproofing to an elevation above the flooding potential elevation along with flood shields and other flood proofing techniques. While not a requirement, some coastal residential development in flood prone areas incorporates a 6 inch to 18 inch curb at the perimeter walls of the building above the slab elevation.
- The lowest finished floor elevation is about 2 feet above the street flow line which reduces the vulnerability of the residence to emergent groundwater with SLR.
- There is no need for shore protection for the development because the potential flooding problem is not site specific.

In conclusion, wave runup and overtopping will not significantly impact the proposed development over the life of the improvement. The proposed development will neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or adjacent area. There are no other recommendations necessary for wave runup protection or for shore protection over the life of the proposed development. The proposed project minimizes risks from flooding.

LIMITATIONS

Coastal engineering is characterized by uncertainty. Professional judgements presented herein are based partly on our evaluation of the technical information gathered, partly on our understanding of the proposed construction, and partly on our general experience. Our engineering work and judgements have been prepared in accordance with current accepted standards of engineering practice; we do not guarantee the performance of the project in any respect. This warranty is in lieu of all other warranties expressed or implied.

Respectfully Submitted



David W. Skelly MS,PE
RCE#47857



ATTACHMENTS: **APPENDIX I** Topographic Map
APPENDIX II Section

REFERENCES

BEACON (Beach Erosion Authority for Control Operations and Nourishment) 1989, "Main Report, Coastal Sand Management Plan, Santa Barbara/Ventura County Coastline" prepared by Noble Consultants, Irvine CA.

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APPENDIX I

SURVEYOR'S STATEMENT

THIS MAP CORRECTLY REPRESENTS A TOPOGRAPHIC SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH LOCALLY ACCEPTED STANDARDS AND PRACTICES ON JANUARY 29, 2021

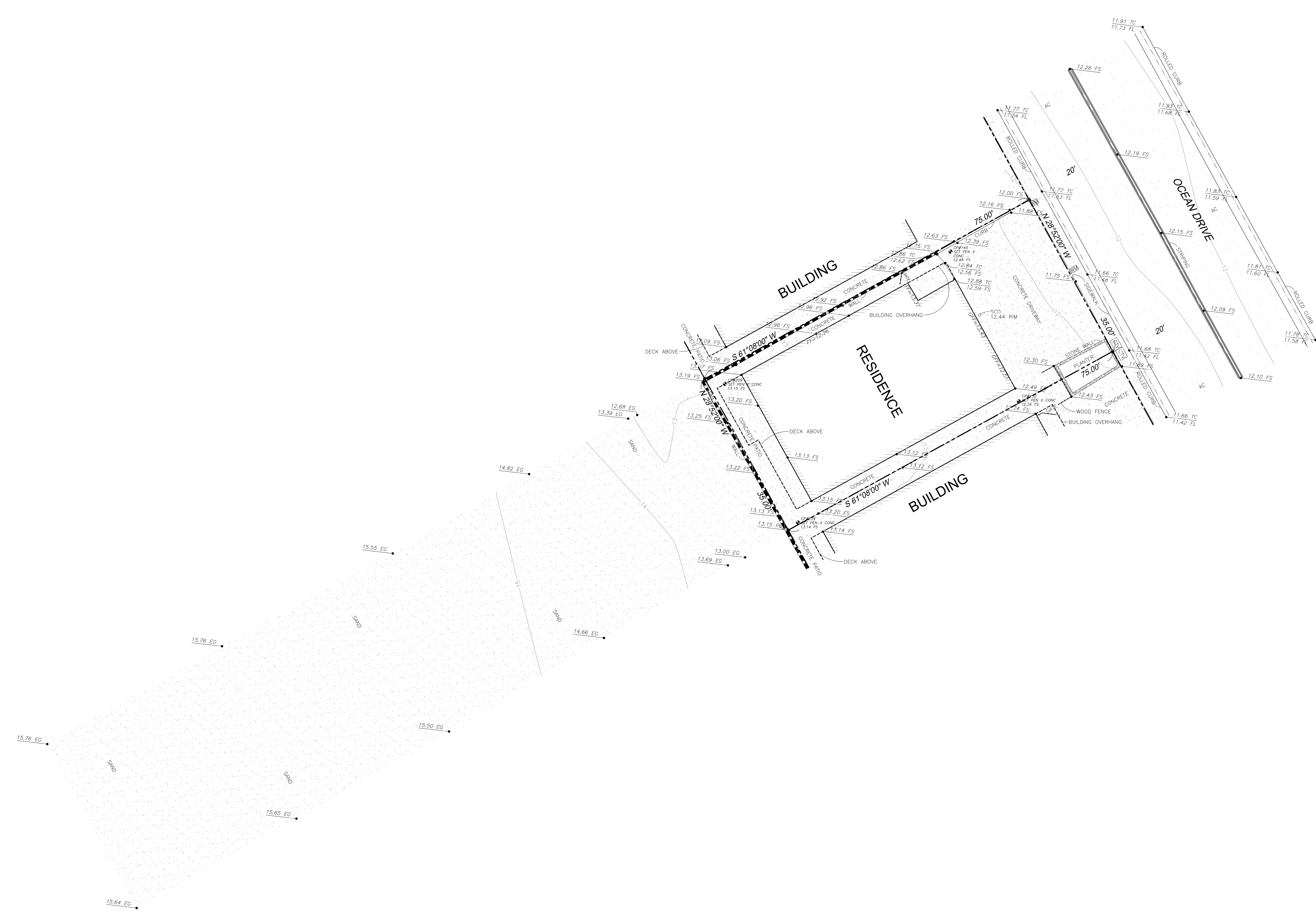
BENCHMARK

BM 32-3 RM 1
ELEVATION: 10.63 (NAVD 88)

AT THE SOUTHWEST CORNER OF HARBOR BOULEVARD AND SANTA ANA AVENUE, 33.1 FEET SOUTHEAST FROM AN EDISON VAULT ON SANTA ANA AVENUE, 10.9 FEET NORTHERLY FROM A SEWER MANHOLE.

NOTES

1. NO ATTEMPT HAS BEEN MADE AS A PART OF THIS TOPOGRAPHIC SURVEY TO OBTAIN OR SHOW DATA CONCERNING EXISTENCE, SIZE, DEPTH, CONDITION, CAPACITY, OR LOCATION OF ANY UTILITY OR MUNICIPAL/PUBLIC SERVICE FACILITY, EXCEPT AS MAY BE SHOWN HEREON. FOR INFORMATION REGARDING THESE UTILITIES OR FACILITIES, CONTACT THE APPROPRIATE AGENCY.
2. EXCEPT AS SPECIFICALLY STATED OR SHOWN ON THIS PLAT, THIS TOPOGRAPHIC SURVEY DOES NOT PURPORT TO REFLECT ANY OF THE FOLLOWING WHICH MAY BE APPLICABLE TO THE SUBJECT REAL ESTATE: EASEMENTS, OTHER THAN POSSIBLE EASEMENTS THAT WERE VISIBLE AT THE TIME OF MAKING THIS SURVEY; BUILDING SETBACK LINES; RESTRICTIVE COVENANTS; ZONING OR OTHER LAND USE REGULATIONS, AND ANY OTHER LAND USE REGULATIONS; AND ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.



SCALE: 1"=10'

0 5 10

LESTER C. EVERARD
NO. 6774
Exp. 9-30-22
STATE OF CALIFORNIA

Prepared by:

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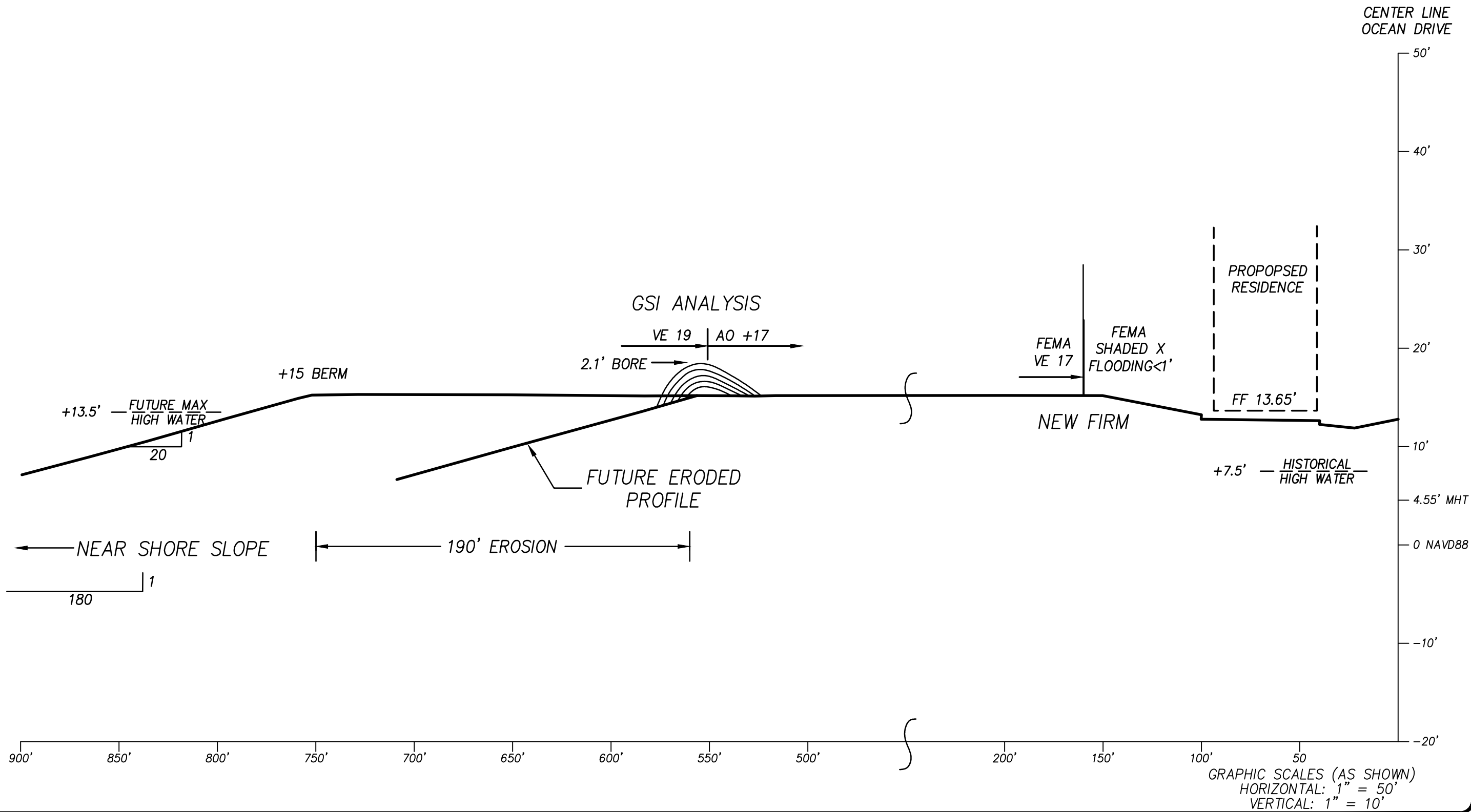
DWG DATE: 2-1-2021

TOPOGRAPHIC SURVEY

3413 OCEAN DRIVE
OXNARD, CA

APPENDIX II

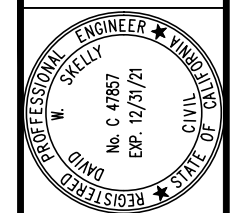
Design Beach Profile 3413 Ocean Drive



GRAPHIC SCALES (AS SHOWN)
HORIZONTAL: 1" = 50'
VERTICAL: 1" = 10'

REVISIONS	BY

DRAFTING BY:



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TITLE: **Design Beach Profile
3413 Ocean Drive
Ventura, CA 93035**
CLIENT: MR & MRS NANN
3413 OCEAN DRIVE
VENTURE CA 93035

DRAWN
CHECKED
DATE 02/5/21
SCALE
JOB NO.
SHEET S1
1 OF 1 SHEETS