Staff Report to the Zoning Administrator

Application Number: 221365

Applicant: Haro Kasunich and Associates
Owner: Victor and Marie Tsang
APN: 042-057-05
Site Address: 113 Glenn Drive, Aptos

Agenda Date: 12/01/23
Agenda Item #: 1
Time: After 9:00 a.m.

Project Description: Proposal to install a 13-foot high by 40 foot long landslide debris fence to mitigate landslide hazards. Requires a Coastal Development Permit and Over-height Fence Permit for construction of a fence in excess of eight feet in the side yard.

Location: Property located on the north side of Glen Drive (113 Glen Drive), approximately 130 feet northwest of the Aptos Creek Bridge at Winfield Way.

Permits Required: Coastal Development Permit and Over-height Fence Permit

Supervisorial District: Second District (District Supervisor: Zach Friend)

Staff Recommendation:

- Determine that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.
- Approval of Application 221365, based on the attached findings and conditions.

Project Description & Setting

The subject property is approximately 4,600 square feet in size and developed with an existing 1,200 square foot two-story single-family dwelling. The project site is situated along a narrow private right of way (Glen Drive) and contains a steep uphill slope. Due to the topography of the surrounding area and the narrowness of the meandering right of way, the surrounding pattern of development is staggered in terms of setbacks and each of the homes in the vicinity is unique in terms of architectural design.

This is a proposal to construct a 13-foot-high landslide debris fence spanning the width of the subject parcel behind the existing single-family dwelling. The subject property has a documented history of slope instability, and the project would mitigate potential hazards associated with future landslides. The project would include revegetation of the area surrounding the proposed fence to further reduce slope instability and potential visual impacts.

On February 14, 2019, Planning staff posted the existing single-family dwelling at 113 Glen Drive as unsafe to occupy due to the failure of an upslope retaining wall system behind the

existing residence. The failed retaining walls within the rear yard of the subject property resulted in a debris flow that impacted the back of the home and continued downslope to Glen Drive. The home has remained unoccupied since the slope failed however; this project intends to address potential future landslide hazards and reinstate the habitability of the dwelling on site.

Several designs have been considered in the preparation of the current proposal. Due to the ease of construction, reduced site disturbance, and ability to further modify the landslide protection through implementation of other mitigation measures, the proposed project was deemed superior. A revegetation plan shall be incorporated into the final plans to further stabilize the slope behind the home and ensure that adverse impacts to scenic resources are minimized.

Over-height Fence

SCCC 13.10.525 (Fence and Retaining walls) limits the height of fencing and retaining walls within the required side yard to a maximum height of eight feet. As proposed, the project would include construction of a new landslide debris fence that is 13 feet in height within the side yard. The increased height of the fence requires an over-height fence approval.

The project would be sited and designed to minimize site disturbance and would not adversely impact public views or public access to the beach in that the project would be situated in a private yard behind an existing home, the height of which is sufficient to obscure the fence from public view. As proposed, the project will not adversely impact public views and scenic character of the surrounding area.

Zoning, General Plan & Local Coastal Program Consistency

The subject property is approximately 4,600 square feet in size, located in the R-1-4 (Single Family Residential (4,000 square foot minimum parcel)) zone district, a designation which allows residential uses and associated improvements. The proposed debris fence is an allowed use within the zone district. The project is consistent with the site's R-UM (Urban Medium Residential Desnity) General Plan designation.

The proposed debris impact fence is in conformance with the County's certified Local Coastal Program, in that the project has been designed to minimize impacts to coastal views. The structure has been sited behind the existing residence and at an elevation that optimizes the safety of the occupants of the home and is not readily visible from the public beach.

Geologic and geotechnical (soils) reports have been reviewed and accepted by the County of Santa Cruz (Exhibit G). The project has been conditioned to ensure all work is performed in conformance with the recommendations of the project Geologist and Geotechnical Engineer.

The project site is located between the shoreline and the first public road however; the project will not interfere with public access to the beach or ocean in that existing public access to the beach is located at Rio Del Mar State Beach which is approximately 800 feet west of the project site. The project site is not identified as a priority acquisition site in the County’s Local Coastal Program.

Conclusion

As proposed and conditioned, the project is consistent with all applicable codes and policies of the Zoning Ordinance and General Plan/LCP. Please see Exhibit "B" ("Findings") for a complete listing of findings and evidence related to the above discussion.

Staff Recommendation

- Determine that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.

- **APPROVAL** of Application Number **221365,** based on the attached findings and conditions.

Supplementary reports and information referred to in this report are on file and available for viewing at the Santa Cruz County Planning Division, and are hereby made a part of the administrative record for the proposed project.

The County Code and General Plan, as well as hearing agendas and additional information are available online at: www.sccoplanning.com

Report Prepared By: Nathan MacBeth
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Exhibits

A. Categorical Exemption (CEQA determination)
B. Findings
C. Conditions
D. Project plans & Color Materials
E. Assessor's, Location, Zoning and General Plan Maps
F. Parcel information
G. Report review letter
H. Comments & Correspondence

CALIFORNIA ENVIRONMENTAL QUALITY ACT
NOTICE OF EXEMPTION

The Santa Cruz County Planning Division has reviewed the project described below and has determined that it is exempt from the provisions of CEQA as specified in Sections 15061 - 15332 of CEQA for the reason(s) which have been specified in this document.

Application Number: 221365
Assessor Parcel Number: 042-057-05
Project Location: 113 Glenn Drive, Aptos

Project Description: Proposal to construct a 13-foot tall by 40 foot long landslide debris fence intended to proteect an existing single family dwelling.

Person or Agency Proposing Project: Haro Kasunich and Associates Attn Moses Cuprill

Contact Phone Number: (831)722-4175

A. _____ The proposed activity is not a project under CEQA Guidelines Section 15378.

B. _____ The proposed activity is not subject to CEQA as specified under CEQA Guidelines Section 15060 (c).

C. _____ **Ministerial Project** involving only the use of fixed standards or objective measurements without personal judgment.

D. _____ **Statutory Exemption** other than a Ministerial Project (CEQA Guidelines Section 15260 to 15285).

E. X Categorical Exemption

Specify type: Class 3 - New Construction or Conversion of Small Structures (Section 15303)

F. Reasons why the project is exempt:

Construction of coastal bluff debris impact fence above existing single family dwellings in an area designated for residential uses.

In addition, none of the conditions described in Section 15300.2 apply to this project.

_____ Date:_____
Nathan MacBeth, Project Planner

EXHIBIT A

Coastal Development Permit Findings

1. That the project is a use allowed in one of the basic zone districts that are listed in LCP Section 13.10.170(D) as consistent with the LCP Land Use Plan designation of the site.

This finding can be made, in that the property is zoned R-1-4 (Single Family Residential (4,000 square foot minimum parcel)), a designation which allows residential uses. The proposed debris fence is an allowed use, ancillary to a principal permitted residential use within the zone district, and the zoning is consistent with the site's R-UM (Urban Medium Residential Desnity) General Plan designation.

The proposed debris impact fence is consistent with General Plan Policy 6.2.16 in that it is necessary to ensure the safety of the home located at the base of the slope including life and safety of occupants and residents in the vicinity. Detailed technical studies have been reviewed and accepted which demonstrate the need for the proposed impact fencing. The project would not reduce or restrict existing beach access which is located approximately 800 feet west of the project site.

2. That the project does not conflict with any existing easement or development restrictions such as public access, utility, or open space easements.

This finding can be made, in that no such easements or restrictions are known to encumber the project site.

3. That the project is consistent with the design criteria and special use standards and conditions of this chapter pursuant to SCCC 13.20.130 and 13.20.140 et seq.

This finding can be made, in that the project is sited and designed to be visually compatible with the surrounding land uses and character of the neighborhood. The location of the debris impact fencing will not be readily visible from any nearby public viewshed in that it is situated in a private yard behind an existing home located at 113 Glen Drive. Further, the project site will be revegetated to ensure the project would not result in an adverse impact to scenic resources. The development site is not on a prominent ridge, beach, or bluff top. As proposed and conditioned, the project will not adversely impact public views and scenic character of the surrounding area.

4. That the project conforms with the public access, recreation, and visitor-serving policies, standards and maps of the LCP Land Use Plan, including Chapter 2: Section 2.5 and Chapter 7.

This finding can be made, in that the project site is not identified as a priority acquisition site in the County Local Coastal Program and public beach access is available at Rio Del Mar State Beach which is approximately 800 feet west of the project site.

5. That the project conforms to all other applicable standards of the certified LCP.

This finding can be made, in that the structure is sited and once revegetated, will be visually compatible and integrated with the character of the surrounding neighborhood. Additionally, residential uses are allowed uses in the R-1-4 (Single Family Residential (4,000 square foot

minimum parcel)) zone district, as well as the General Plan and Local Coastal Program land use designation. Developed parcels in the area contain single family dwellings and ancillary structures such as retaining walls and fencing. The design of the debris fence is consistent with the type of structure necessary to mitigate slope instability in areas surrounded by residential uses. As proposed, the project will not adversely impact public views and scenic character of the surrounding area.

6. If the project is located between the nearest through public road and the sea or the shoreline of any body of water located within the Coastal Zone, that the project conforms to the public access and public recreation policies of Chapter 3 of the Coastal Act.

This finding can be made, in that the project site is located between the shoreline and the first public road however, the debris fence will not interfere with public access to the beach, ocean, or any nearby body of water in that the fence will be located in the rear yard of the subject property. Further, the nearest public access to the beach is approximately 800 feet west on the project site which is not identified as a priority acquisition site in the County Local Coastal Program.

Development Permit Findings

1. That the proposed location of the project and the conditions under which it would be operated or maintained will not be detrimental to the health, safety, or welfare of persons residing or working in the neighborhood or the general public, and will not result in inefficient or wasteful use of energy, and will not be materially injurious to properties or improvements in the vicinity.

This finding can be made, in that the project is located in an area designated for residential uses. Construction will comply with prevailing building technology, the California Building Code, and the County Building ordinance to ensure the optimum in safety and the conservation of energy and resources. The project has been conditioned to ensure all recommendations of the approved soils and geology report are met and recordation of a maintenance agreement shall be required to ensure long-term functionality of the debris fence.

2. That the proposed location of the project and the conditions under which it would be operated or maintained will be consistent with all pertinent County ordinances and the purpose of the zone district in which the site is located.

This finding can be made, in that the proposed location of the debris fence and the conditions under which it would be operated or maintained will be consistent with all pertinent County ordinances and the purpose of the R-1-4 (Single Family Residential (4,000 square foot minimum parcel)) zone district as the primary use of the property will continue to be one single family dwelling with and ancillary debris fence that meets all current site standards for the zone district.

3. That the proposed use is consistent with all elements of the County General Plan and with any specific plan which has been adopted for the area.

This finding can be made, in that the project has been designed in accordance with General Plan Policy 6.2.10 (Site development to Minimize Hazards). The Geotechnical Investigation prepared by Haro, Kasunich, and Associates dated November 16, 2021 and Focused Geologic Investigation prepared by Easton Geology dated November 16, 2021 (REV221051), accepted by County staff (Exhibit G) concluded that potential further failure of the hillside would result in a significant threat to the existing home at the base of the hillside.

A specific plan has not been adopted for this portion of the County.

4. That the proposed use will not overload utilities, and will not generate more than the acceptable level of traffic on the streets in the vicinity.

This finding can be made, in that the construction of the proposed debris fence is to be constructed on an existing developed lot intended to protect the existing home and occupants from further erosion and potential hazard associated with the instability of the slope behind the home. Beyond the construction phase, the project will not require the use of utilities and will not generate additional traffic on the streets in the vicinity.

5. That the proposed project will complement and harmonize with the existing and proposed land uses in the vicinity and will be compatible with the physical design aspects, land use

intensities, and dwelling unit densities of the neighborhood.

This finding can be made, in that the project is located along a hillside which has a documented history of slope instability. The subject parcel is developed with an existing single-family dwelling. In terms of design, the project is consistent with the type of debris fencing necessary to mitigate such risks of landslide. The proposed project will be located behind and below the roofline of the existing home, and therefore, will not result in potential impacts to visual resources. Construction of debris fence to protect the existing home, does result in any change to the existing land use intensity and density of the neighborhood.

6. The proposed development project is consistent with the Design Standards and Guidelines (sections 13.11.070 through 13.11.076), and any other applicable requirements of this chapter.

This finding can be made, in that the debris fence has been located behind existing single-family dwellings and at an elevation that screens the structure from public view to the greatest extent feasible while providing the necessary protection to the home at the base of the hillside. Consequently, the project does not result in adverse impacts to coastal views and is consistent with the Design Standards and Guidelines in SCC 13.11.070 through 13.11.076.

Conditions of Approval

Exhibit D: Project plans, prepared by Haro Kasunich and Associates, dated September 2022.

I. This permit authorizes the construction of a 13-foot high by 40-foot long landslide debris fence as indicated on the approved Exhibit "D" for this permit. This approval does not confer legal status on any existing structure(s) or existing use(s) on the subject property that are not specifically authorized by this permit. Prior to exercising any rights granted by this permit including, without limitation, any construction or site disturbance, the applicant/owner shall:

A. Sign, date, and return to Santa Cruz County Planning one copy of the approval to indicate acceptance and agreement with the conditions thereof.

B. Obtain a Building Permit from the Santa Cruz County Building Official.

1. Any outstanding balance due to Santa Cruz County Planning (Including Code Enforcement fees) must be paid prior to making a Building Permit application. Applications for Building Permits will not be accepted or processed while there is an outstanding balance due.

C. Obtain an Encroachment Permit from the Department of Public Works for all off-site work performed in the County road right-of-way.

II. Prior to issuance of a Building Permit the applicant/owner shall:

A. Submit final architectural plans for review and approval by Santa Cruz County Planning. The final plans shall be in substantial compliance with the plans marked Exhibit "D" on file with Santa Cruz County Planning. Any changes from the approved Exhibit "D" for this development permit on the plans submitted for the Building Permit must be clearly called out and labeled by standard architectural methods to indicate such changes. Any changes that are not properly called out and labeled will not be authorized by any Building Permit that is issued for the proposed development. The final plans shall include the following additional information:

1. A copy of the text of these conditions of approval incorporated into the full size sheets of the architectural plan set.

2. Grading, drainage, and erosion control plans.

3. Details showing compliance with fire department requirements.

B. Meet all requirements of the County Department of Public Works, Stormwater Management. Drainage fees will be assessed on the net increase in impervious area.

1. The application submittal shall adhere to the County Design Criteria, 2022

version (CDC). Safe stormwater overflow shall be incorporated into the project design.

2. Existing and proposed drainage infrastructure and drainage patterns shall be shown on the site and in the site vicinity.

3. A tributary area drainage map designating the area of runoff that flows toward the site shall be submitted. The tributary drainage map shall contain topographic information and/or site inspection notes supporting the watershed boundaries shown on the map.

4. A downstream impact assessment shall be performed. The assessment shall include an analysis and description of the overflow path to a safe point of release to ensure that any changes to the existing drainage system will not adversely impact neighboring properties, roadways, or drainage pathways. If deficiencies and/or restrictions are found, then additional analysis and improvements may be required.

5. Per Section F of the CDC, a recorded document shall be provided that acknowledges that the parcel does and will continue to receive upstream runoff from an adjacent drainage area and that the property owner is responsible for maintenance of the drainage pathway/s through the parcel, and that the County and Flood Control District are not responsible for the direct upstream runoff or for maintenance of the drainage pathways.

C. Meet all requirements of the Soquel Creek Water District. Proof of water service availability is required prior to application for a Building Permit.

D. Meet all requirements of the Santa Cruz County Sanitation District. Proof of sanitary sewer service availability is required prior to application for a Building Permit.

E. Meet all requirements of the Environmental Planning section of Santa Cruz County Planning.

F. Meet all requirements and pay any applicable plan check fee of the Central Fire Protection District.

G. Submit 3 copies of plan review letters prepared and stamped by the project Geotechnical Engineer.

H. Submit a written statement signed by an authorized representative of the school district in which the project is located confirming payment in full of all applicable developer fees and other requirements lawfully imposed by the school district.

I. Submit a maintenance and monitoring plan for the debris fence prepared by the project geotechnical engineer. A maintenance and monitoring agreement shall be recorded prior to final inspection of the building permit for the debris fence.

III. All construction shall be performed according to the approved plans for the Building Permit. Prior to final building inspection, the applicant/owner must meet the following conditions:

A. All site improvements shown on the final approved Building Permit plans shall be installed.

B. All inspections required by the building permit shall be completed to the satisfaction of the County Building Official.

C. The project must comply with all recommendations of the approved soils and geology reports.

D. A 'Notice of Geologic Hazards, Acceptance of Risk, Liability Release and Indemnification' form shall be signed, notarized and recorded prior to final inspection of the debris fence.

E. Pursuant to Sections 16.40.040 and 16.42.080 of the County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this development, any artifact or other evidence of an historic archaeological resource or a Native American cultural site is discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the Sheriff-Coroner if the discovery contains human remains, or the Planning Director if the discovery contains no human remains. The procedures established in Sections 16.40.040 and 16.42.080, shall be observed.

IV. Operational Conditions

A. In the event that future County inspections of the subject property disclose noncompliance with any Conditions of this approval or any violation of the County Code, the owner shall pay to the County the full cost of such County inspections, including any follow-up inspections and/or necessary enforcement actions, up to and including permit revocation.

V. Indemnification

The applicant/owner shall indemnify, defend with counsel approved by the COUNTY, and hold harmless the COUNTY, its officers, employees, and agents from and against any claim (including reasonable attorney's fees, expert fees, and all other costs and fees of litigation), against the COUNTY, its officers, employees, and agents arising out of or in connection to this development approval or any subsequent amendment of this development approval which is requested by the applicant/owner, regardless of the COUNTY's passive negligence, but excepting such loss or damage which is caused by the sole active negligence or willful misconduct of the COUNTY. Should the COUNTY in its sole discretion find the applicant's/owner's legal counsel unacceptable, then the

applicant/owner shall reimburse the COUNTY its costs of defense, including without limitation reasonable attorney's fees, expert fees, and all other costs and fees of litigation. The applicant/owner shall promptly pay any final judgment rendered against the COUNTY (and its officers, employees, and agents) covered by this indemnity obligation. It is expressly understood and agreed that the foregoing provisions are intended to be as broad and inclusive as is permitted by the law of the State of California and will survive termination of this development approval.

A. The COUNTY shall promptly notify the applicant/owner of any claim, action, or proceeding against which the COUNTY seeks to be defended, indemnified, or held harmless. The COUNTY shall cooperate fully in such defense.

B. Nothing contained herein shall prohibit the COUNTY from participating in the defense of any claim, action, or proceeding if both of the following occur:

1. COUNTY bears its own attorney's fees and costs; and

2. COUNTY defends the action in good faith.

C. Settlement. The applicant/owner shall not be required to pay or perform any settlement unless such applicant/owner has approved the settlement. When representing the COUNTY, the applicant/owner shall not enter into any stipulation or settlement modifying or affecting the interpretation or validity of any of the terms or conditions of the development approval without the prior written consent of the COUNTY.

D. Successors Bound. The "applicant/owner" shall include the applicant and/or the owner and the successor'(s) in interest, transferee(s), and assign(s) of the applicant and/or the owner.

Minor variations to this permit which do not affect the overall concept or density may be approved by the Planning Director at the request of the applicant or staff in accordance with Chapter 18.10 of the County Code.

Please note: This permit expires three years from the effective date listed below unless a building permit (or permits) is obtained for the primary structure described in the development permit (does not include demolition, temporary power pole or other site preparation permits, or accessory structures unless these are the primary subject of the development permit). Failure to exercise the building permit and to complete all of the construction under the building permit, resulting in the expiration of the building permit, will void the development permit, unless there are special circumstances as determined by the Planning Director.

Approval Date: _____

Effective Date: _____

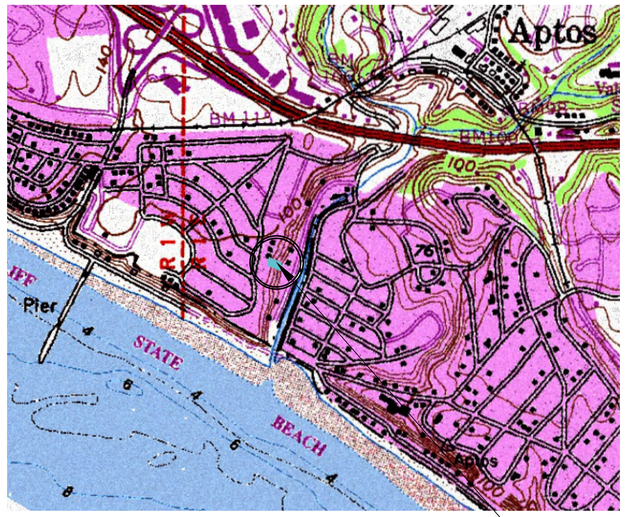
Expiration Date: _____

_____
Deputy Zoning Administrator

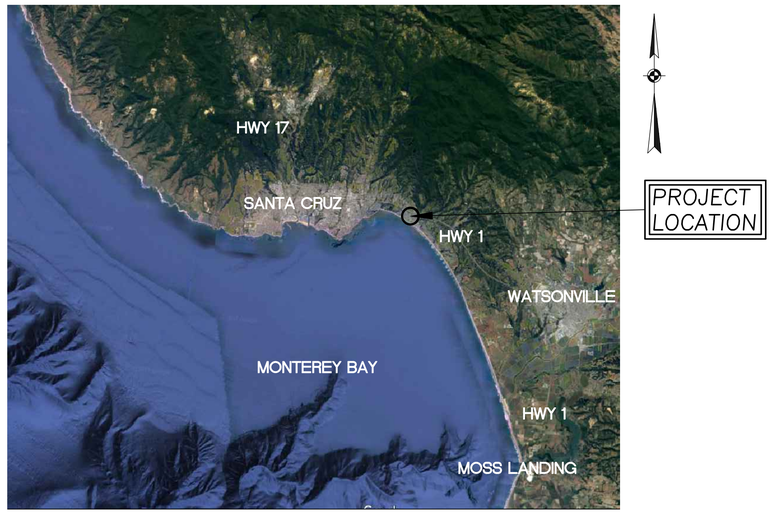
Appeals: Any property owner, or other person aggrieved, or any other person whose interests are adversely affected by any act or determination of the Zoning Administrator, may appeal the act or determination to the Planning Commission in accordance with chapter 18.10 of the Santa Cruz County Code.

PROPOSED DEBRIS IMPACT AND CATCHMENT WALL SYSTEM

113 GLEN DRIVE
APTOS, CA 95003
APN: 042-057-05



VICINITY MAP
N.T.S. (USGS)



REGIONAL MAP
N.T.S. (GOOGLE)

SHEET INDEX

GENERAL NOTES

1. TOPOGRAPHIC MAP WAS PERFORMED BY:
   BRIDGETTE LAND SURVEYING
   80 ASPEN WAY, SUITE A
   WATSONVILLE, CA 95076
   PROJECT DATE: 14 MAY 2019
2. ELEVATION DATUM: TOPOGRAPHIC MAP
3. BASIS OF BEARINGS: TOPOGRAPHIC MAP
4. CONTOUR INTERVAL IS ONE (1) FOOT. ELEVATIONS AND DISTANCES SHOWN ARE IN DECIMAL FEET.
5. GEOTECHNICAL REPORT AND CIVIL PLANS/DESIGNS PREPARED BY:
   HARO, KASUNICH AND ASSOCIATES, INC.
   116 EAST LAKE AVE.
   WATSONVILLE, CA 95076
   PROJECT NO.: SC9363.1
6. STRUCTURAL ENGINEER:
   KYLER ENGINEERING
   PO BOX 1863
   MONTEREY, CA 93942
   PROJECT NO.: 20-079
7. OWNER:
   DR. VICTOR TSANG
   7192 WOODED LAKE DRIVE
   SAN JOSE, CALIFORNIA 95120
8. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE 2019 EDITION OF THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS PLANS, ISSUED BY THE DEPARTMENT OF TRANSPORTATION.
9. ALL WORK INDICATED ON THE PLANS SHALL CONFORM WITH THE FOLLOWING CODES; 2019 CALIFORNIA BUILDING STANDARDS CODE (CCR TITLE 24) WITH COUNTY OF SANTA CRUZ ADOPTED AMENDMENTS AND CAL GREEN.

ABBREVIATIONS

AD	AREA DRAIN
AVG.	AVERAGE
CC	CONCRETE
CO	CLEAN OUT
CY	CUBIC YARDS
AVG.	DIAMETER
E	EXISTING
EG	EXISTING GROUND
ELEV.	ELEVATION
FG	FINISHED GRADE
FT	FEET
INV	INVERT
IN	INCH
MIN.	MINIMUM
N	NEW
NTS	NOT TO SCALE
O.C.	ON CENTER
SF	SQUARE FOOT
T	TREE
T.B.D.	TO BE DETERMINED
TYP.	TYPICAL

PROJECT DESCRIPTION

THE PURPOSE OF THESE LANDSLIDE REPAIR PLANS IS TO LESSEN THE HAZRDS FROM POENTIAL LANDSLIDING AND INCREASE THE STABILITY OF THE SLOPE ABOVE THE RESIDENCE AT 113 GLEN DRIVE, APTOS, CALIFORNIA.

THESE DRAWINGS PROVIDE DETAILS FOR THE CONSTRUCTION OF AN APPROXIMATELY 40 FEET GEOBRUGG SHALLOW LANDSLIDE BARRIER SL-150 DEBRIS WALL UP SLOPE THE EXISTING SINGLE-FAMILY RESIDENCE. THE DEBRIS WALL SYSTEM EXTEND 13 FEET ABOVE GRADE. THE BELOW GRADE PORTION OF THE WALL WILL CONSIST OF TIED-BACK HELICAL ANCHOR AND VERTICAL HELICAL PIER SUPPORTED GRADE BEAM.

SECTION AND DETAIL CONVENTION

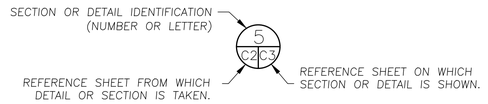


EXHIBIT D

811 Know what's below. Call before you dig.

REGISTERED PROFESSIONAL ENGINEER
JAMES E. KYLER
No. 18904
Exp. 3/22
CIVIL
STATE OF CALIFORNIA

DATE	REVISION	BY

HARO, KASUNICH & ASSOCIATES
GEOTECHNICAL AND COASTAL ENGINEERS
116 EAST LAKE AVENUE, WATSONVILLE, CALIFORNIA 95076
(831) 722 4175 PHONE AND (831) 722-3202 FAX

TITLE SHEET
VICTOR TSANG
113 GLEN DRIVE
APTOS, CA 95003
APN 042-057-06

PROJECT:	SC9363.1
DATE:	SEP 2022
DESIGN:	MC
DRAWN:	AJB
SCALE:	AS SHOWN

C1

NOTES:

GENERAL NOTES

1. ALL CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS OF THE **GEOTECHNICAL REPORT** PREPARED BY HARO, KASUNICH AND ASSOCIATES, INC. (HKA) PROJECT NO. SC9363.1 AND THE REQUIREMENTS OF THE COUNTY OF **SANTA CRUZ**.
2. THE NEW GEOBRUGG DEBRIS WALL SHOULD BE SUPPORTED BY VERTICAL AND LATERAL HELICAL ANCHORS TIED TO A FOUNDATION BRACKET EMBEDDED INTO PURISIMA SANDSTONE BEDROCK.
3. DETERMINING THE EXISTENCE, LOCATION, AND DEPTH OF UNDERGROUND UTILITIES IS THE RESPONSIBLY OF THE CONTRACTOR. THIS SHOULD BE DONE PRIOR TO COMMENCEMENT OF WORK. THE ENGINEER SHOULD BE NOTIFIED IF ANY DISCREPANCIES OR CONFLICTS ARE ENCOUNTERED.
4. ALL WORK SHALL CONFORM TO APPROVED SPECIFICATIONS PRESENTED HEREIN OR CONTAINED IN THE GEOTECHNICAL REPORT OR GEOBRUGG SHALLOW LANDSLIDE BARRIER SL-150 INSTALLATION MANUAL.
5. HELICAL ANCHORS SHALL BE OBSERVED AND TESTED BY THE SOIL ENGINEER PRIOR TO PLACEMENT OF GRADE BEAM.
6. HKA SHALL BE NOTIFIED AT LEAST (4) WORKING DAYS BEFORE BEGINNING WORK AT TELEPHONE NUMBER (831)722-4175, EXT. 104. HKA SHALL NOT BE RESPONSIBLE FOR WORK THAT HAS NOT BEEN OBSERVED AND DOCUMENTED BY HKA.
7. THE CONTRACTOR SHALL OBTAIN INSPECTION OF ALL WORK BY THE CONTROLLING AGENCY.
8. IF, DURING THE COURSE OF CONSTRUCTION, CULTURAL, ARCHAEOLOGICAL, HISTORICAL OR PALEONTOLOGIST RESOURCES ARE UNCOVERED AT THE SITE (SURFACE OR SUBSURFACE RESOURCES) WORK SHALL BE HALTED IMMEDIATELY WITHIN 50 METERS OF THE FIND UNTIL A QUALIFIED PROFESSIONAL ARCHAEOLOGIST CAN EVALUATE IT. SANTA CRUZ COUNTY – PLANNING AND A QUALIFIED ARCHAEOLOGIST (IE.E, AN ARCHAEOLOGIST REGISTERED WITH THE RESISTER OF PROFESSIONAL ARCHAEOLOGISTS) SHALL BE IMMEDIATELY CONTACTED BY THE RESPONSIBLE INDIVIDUAL PRESENT ON-SITE. WHEN CONTACTED, THE PROJECT PLANNER AND THE ARCHAEOLOGIST SHALL IMMEDIATELY VISIT THE SITE TO DETERMINE THE EXTENT OF THE RESOURCES AND TO DEVELOP PROPER MITIGATION MEASURES REQUIRED FOR RECOVERY (PLANING).
9. IF DISCREPANCIES ARE DISCOVERED BETWEEN THE CONDITIONS EXISTING IN THE FIELD AND THE INFORMATION SHOWN ON THESE DRAWINGS, NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
10. PROTECT TREES ADJACENT TO PROJECT FROM POTENTIAL DAMAGE.
11. EXCAVATED SOILS SHOULD BE HAULED OFFSIDE.
12. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE FULLY INFORMED OF AND TO COMPLY WITH ALL LAWS, ORDINANCES, CODES, REQUIREMENTS AND STANDARDS WHICH IN ANY MANNER AFFECT THE COURSE OF CONSTRUCTION OF THIS PROJECT, THOSE ENGAGED OR EMPLOYED IN THE CONSTRUCTION AND THE MATERIALS USED IN THE CONSTRUCTION.
13. ANY TESTS, INSPECTIONS, SPECIAL OR OTHERWISE, THAT ARE REQUIRED BY THE BUILDING CODES, LOCAL BUILDING DEPARTMENTS, OR THESE PLANS, SHALL BE DONE BY AN INDEPENDENT INSPECTION COMPANY. JOB SITE VISITS BY THE ENGINEER DO NOT CONSTITUTE AN OFFICIAL INSPECTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE REQUIRED TESTS AND INSPECTIONS ARE PERFORMED.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN, PERMITTING, INSTALLATION, AND MAINTENANCE OF ANY AND ALL TRAFFIC CONTROL MEASURES DEEMED NECESSARY.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GENERAL SAFETY DURING CONSTRUCTION. ALL WORK SHALL CONFORM TO PERTINENT SAFETY REGULATIONS AND CODES. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR FURNISHING, INSTALLING, AND MAINTAINING ALL WARNING SIGNS AND DEVICES NECESSARY TO SAFEGUARD THE GENERAL PUBLIC AND THE WORK, AND PROVIDE FOR THE PROPER AND SAFE ROUTING OF VEHICULAR AND PEDESTRIAN TRAFFIC DURING THE PERFORMANCE OF THE WORK.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING AND LAYOUT, UNLESS OTHERWISE SPECIFIED.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND PRESERVATION OF ALL SURVEY MONUMENTS OR PROPERTY CORNERS. DISTURBED MONUMENTS SHALL BE RESTORED BACK TO THEIR ORIGINAL LOCATION AND SHALL BE CERTIFIED BY A REGISTERED CIVIL ENGINEER OR LAND SURVEYOR AT THE SOLE EXPENSE OF THE CONTRACTOR.
18. EXISTING UNDERGROUND UTILITY LOCATIONS:
    - A. CALL UNDERGROUND SERVICE ALERT (811) TO LOCATE ALL UNDERGROUND UTILITY LINES PRIOR TO COMMENCING CONSTRUCTION.
    - B. PRIOR TO BEGINNING WORK, CONTACT ALL UTILITIES COMPANIES WITH REGARD TO WORKING OVER, UNDER, OR AROUND EXISTING FACILITIES AND TO OBTAIN INFORMATION REGARDING RESTRICTIONS THAT ARE REQUIRED TO PREVENT DAMAGE TO THE FACILITIES.
    - C. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE LOCATION AND/OR PROTECTION OF ALL EXISTING AND PROPOSED PIPING, UTILITIES, TRAFFIC SIGNAL EQUIPMENT (BOTH ABOVE GROUND AND BELOW GROUND), STRUCTURES, AND ALL OTHER EXISTING IMPROVEMENTS THROUGHOUT CONSTRUCTION.
    - D. PRIOR TO COMMENCING FABRICATION OR CONSTRUCTION, DISCOVER OR VERIFY THE ACTUAL DIMENSIONS, SIZES, MATERIALS, LOCATIONS, AND ELEVATIONS OF ALL EXISTING UTILITIES AND POTHOLE THOSE AREAS WHERE POTENTIAL CONFLICTS ARE LIKELY OR DATA IS OTHERWISE INCOMPLETE.
    - E. TAKE APPROPRIATE MEASURES TO PROTECT EXISTING UTILITIES DURING CONSTRUCTION OPERATIONS. CONTRACTOR IS SOLELY RESPONSIBLE FOR THE COST OF REPAIR/REPLACEMENT OF ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.
    - F. UPON LEARNING OF THE EXISTENCE AND/OR LOCATIONS OF ANY UNDERGROUND FACILITIES NOT SHOWN OR SHOWN INACCURATELY ON THE PLANS OR NOT PROPERLY MARKED BY THE UTILITY OWNER, IMMEDIATELY NOTIFY THE UTILITY OWNER AND THE CITY BY TELEPHONE AND IN WRITING.
    - G. UTILITY RELOCATIONS REQUIRED FOR THE CONSTRUCTION OF THE PROJECT FACILITIES WILL BE PERFORMED BY THE UTILITY COMPANY, UNLESS OTHERWISE NOTED.

DIMENSIONS

19. DIMENSIONS UNLESS OTHERWISE SHOWN ARE TO CONFORMED TO THE STRUCTURAL PLANS.
20. CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB SITE. PLEASE NOTIFY PROJECT ENGINEERS OF ANY DIMENSION VARIATIONS PRIOR TO THE START OF CONSTRUCTION.

MAINTENANCE

21. DEBRIS ACCUMULATED BEHIND THE WALL MUST BE REMOVED AFTER EACH MAJOR SLIDE OCCURRENCE AND SEASONALLY BEFORE EACH RAIN SEASON TO MAINTAIN STORAGE CAPACITY TO COLLECT FUTURE LANDSLIDE DEBRIS.

DRAINAGE

22. THE DRAIN LINES ALONG WITH ANY OTHER DRAINAGE FEATURES ON THE SLOPE ABOVE THE RESIDENCE ON THE SUBJECT PROPERTY SHOULD BE RELOCATED TO THEIR RESPECTIVE PROPERTIES SUCH THAT IT DISCHARGES ONTO GLEN DRIVE AT THE BASE OF THE SLOPE.

LEGEND

- 2560 — EXISTING CONTOURS
- 2560 — PROPOSED CONTOURS
- 2559 — STRAW WATTLE
- PROPERTY BOUNDARY

811 Know what's below. Call before you dig.

GRADING AND DRAINAGE PLAN
SCALE: 1" = 10'

EXHIBIT D

0 10 20
SCALE: 1" = 10'

REGISTERED PROFESSIONAL ENGINEER
ANDREW E. CARR
No. 78904
Exp. 3/22
CIVIL
STATE OF CALIFORNIA

DATE	REVISION	BY

HARO, KASUNICH & ASSOCIATES
GEOTECHNICAL AND COASTAL ENGINEERS
116 EAST LAKE AVENUE, WATSONVILLE, CALIFORNIA 95076
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RETAINING WALL SITE PLAN

VICTOR TSANG
113 GLEN DRIVE
APTOS, CA 95003
APN 042-057-06

PROJECT:	SC9363.1
DATE:	SEP 2022
DESIGN:	MC
DRAWN:	AJB
SCALE:	1" = 10'

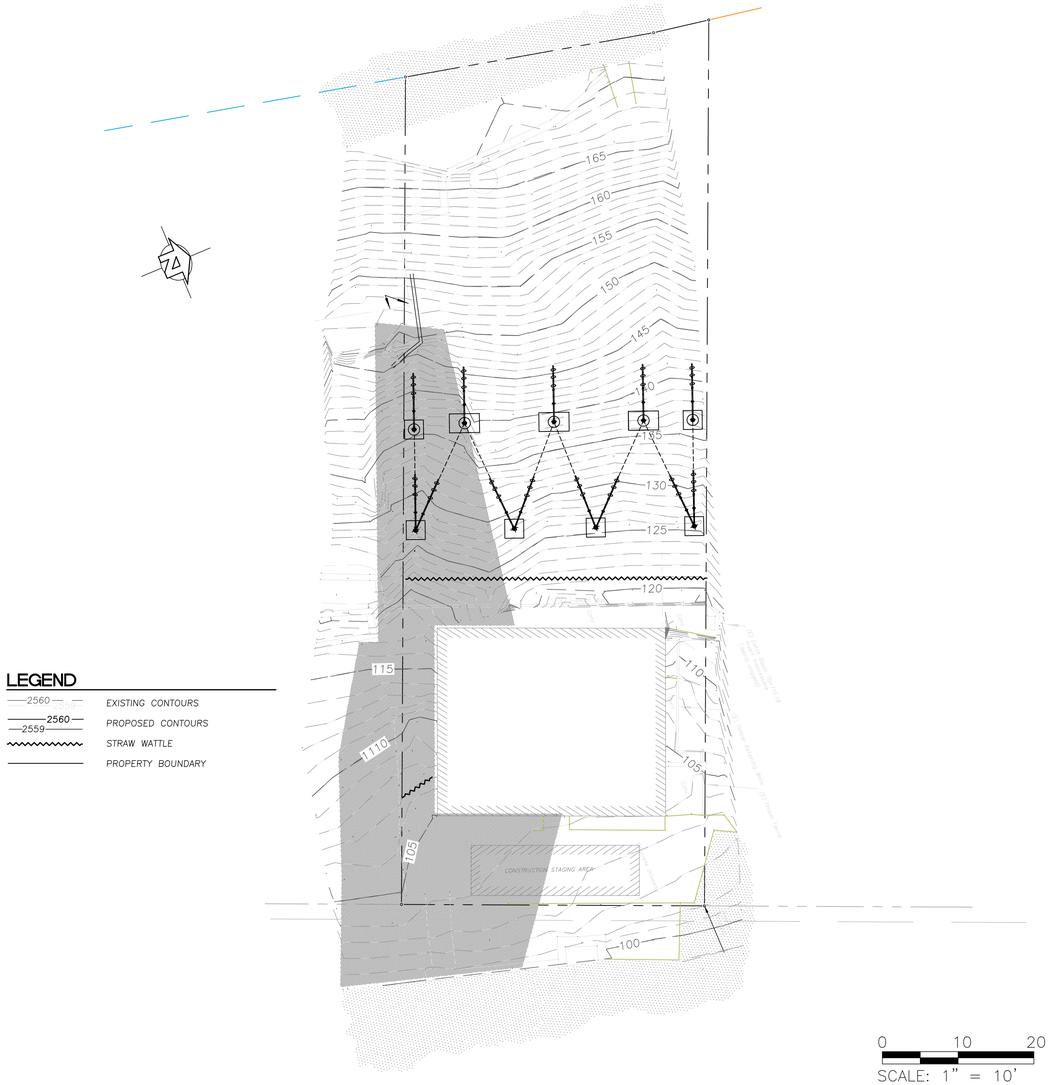
C2

SPECIAL TESTS AND INSPECTION SCHEDULE

THE FOLLOWING ITEMS SHALL BE INSPECTED. "SPECIAL INSPECTION" SHALL CONFORM TO 2016 CBC 1704.7. SPECIAL INSPECTION AGENCIES AND/OR INDIVIDUALS SHALL BE RETAINED BY THE OWNER AND APPROVED BY THE BUILDING OFFICIAL PRIOR TO ANY WORK. FOR MATERIAL TESTING REQUIREMENTS, SEE SPECIFICATIONS AND/OR GENERAL NOTES. TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE BUILDING OFFICIAL AND ENGINEER.

ITEM	REQ.	REMARKS
HELICAL ANCHORS OBS AND TESTING	YES	BY SOIL ENGINEER / PERIODIC
HELICAL TIEBACKS OBS AND TESTING	YES	BY SOIL ENGINEER / PERIODIC
CLASSIFICATION OF FILL MATERIAL	YES	BY SOIL ENGINEER / PERIODIC
OBSERVATION OF FILL MATERIAL/MECHNICAL TAMPING	YES	BY SOIL ENGINEER / PERIODIC

SOILS ENGINEER TO PROVIDE OBSERVATION DURING GRADING AND FOUNDATION PHASE OF CONSTRUCTION
HARO KASUNICH AND ASSOCIATES 831-722-4175, EXT. 104



EROSION CONTROL PLAN
SCALE: 1" = 10'

EROSION CONTROL NOTES

1. BETWEEN OCTOBER 15 AND APRIL 15, EXPOSED SOIL SHALL BE PROTECTED FROM EROSION AT ALL TIMES. DURING CONSTRUCTION, SUCH PROTECTION MAY CONSIST OF MULCHING AND/OR PLANTING OF NATIVE VEGETATION OF ADEQUATE DENSITY. BEFORE COMPLETION OF THE PROJECT, ANY EXPOSED SOIL ON DISTURBED SLOPES SHALL BE PERMANENTLY PROTECTED FROM EROSION.
2. A STANDBY CREW FOR EMERGENCY WORK SHALL BE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON (OCTOBER 15 THROUGH APRIL 15). NECESSARY MATERIALS SHALL BE AVAILABLE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES.
3. THE CONTRACTOR SHALL INCORPORATE ADEQUATE DRAINAGE PROCEDURES DURING THE CONSTRUCTION PROCESS TO ELIMINATE EXCESSIVE PONDING AND EROSION.
4. CONSTRUCT AND MAINTAIN EROSION CONTROL MEASURES TO PREVENT THE DISCHARGE OF EARTHEN MATERIALS TO WATERCOURSES FROM DISTURBED AREAS UNDER CONSTRUCTION AND FROM COMPLETED CONSTRUCTION AREAS.
5. INSTALL ALL PROTECTIVE DEVICES AT THE END OF EACH WORK DAY WHEN THE FIVE-DAY RAIN PROBABILITY EQUALS OR EXCEEDS 50 PERCENT AS DETERMINED FROM THE NATIONAL WEATHER SERVICE FORECAST OFFICE: WWW.SRH.NOAA.GOV.
6. AFTER A RAINSTORM, ALL SILT AND DEBRIS SHALL BE REMOVED FROM INLETS, CATCH BASINS, SILT FENCES, FIBER ROLLS, ETC. AND INSPECTED FOR ANY DAMAGE. REPAIR ANY BMP THAT IS DAMAGED OR NOT FUNCTIONING.
7. THE CONTRACTOR IS RESPONSIBLE TO KEEP IN FORCE ALL EROSION CONTROL DEVICES AND TO MODIFY THOSE DEVICES AS SITE PROGRESS DICTATES.
8. THE CONTRACTOR SHALL MONITOR THE EROSION CONTROL DEVICES DURING STORMS AND MODIFY THEM IN ORDER TO PREVENT PROGRESS OF ANY ONGOING EROSION.
9. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING ANY EROSION OR DEBRIS SPILLING ONTO A PUBLIC STREET.
10. CONTRACTOR SHALL BE FAMILIAR WITH THE CONDITIONS OF APPROVAL OF ALL REQUIRED PROJECT PERMITS AND SHALL IMPLEMENT ALL REQUIRED BMP'S PRIOR TO COMMENCING GRADING OPERATIONS.
11. EROSION AND SEDIMENT CONTROL BMPS SHALL BE IN PLACE AND IMPLEMENTED, AS APPROPRIATE, PRIOR TO COMMENCING GRADING OR VEGETATION REMOVAL. THESE MEASURES SHALL BE MAINTAINED ON ALL DISTURBED AREAS IN ORDER TO MINIMIZE THE RELEASE OF SEDIMENT IN A SITE'S STORM WATER DISCHARGE.
12. PROTECT AND PRESERVE TOPSOIL TO MINIMIZE EROSION AND RETAIN INFILTRATION CAPACITY.
13. MINIMIZE LAND DISTURBANCE SUCH AS CUTS AND FILLS. STABILIZE SLOPES AND ALL DISTURBED AREAS AS SOON AS GRADING IS FINISHED OR CUT-AND-FILLS ARE MADE.
14. COVER BARE SOILS AND SLOPES AS SOON AS POSSIBLE. USE ONE OR MORE OF THE FOLLOWING TO REDUCE THE EROSION POTENTIAL FROM BARE, EXPOSED, OR DISTURBED SOIL: ROLLED EROSION CONTROL PRODUCTS (E.G. FILTER FABRIC, EROSION CONTROL BLANKETS, GEOTEXTILES), HYDRAULIC MULCH OR HYDROSEEDING, STRAW OR WOOD MULCH, SEEDING, VEGETATION PLANTING, OR OTHER APPROPRIATE COVER MATERIAL.
15. ESTABLISH A UNIFORM VEGETATIVE COVER WITH A MINIMUM OF 70 PERCENT COVERAGE.
16. PROPERLY INSTALL AND MAINTAIN ALL ON-SITE EROSION CONTROL MEASURES AND STRUCTURAL DEVICES, BOTH TEMPORARY AND PERMANENT. PROMPTLY REPAIR OR REINSTALL ANY EROSION CONTROL MEASURES AND STRUCTURAL DEVICES THAT WERE DAMAGED DURING CONSTRUCTION AND MAINTAIN THEM SO THAT THEY DO NOT BECOME NUISANCES WITH STAGNANT WATER, ODORS, INSECT BREEDING, HEAVY ALGAE GROWTH, DEBRIS, AND/OR SAFETY HAZARDS.
17. A QUALIFIED PERSON SHOULD CONDUCT INSPECTIONS OF ALL ON-SITE BMPS DURING EACH RAINSTORM, IF POSSIBLE, AND AFTER A STORM IS OVER TO ENSURE THAT THE BMPS ARE FUNCTIONING PROPERLY.

SEDIMENT CONTROL NOTES:

1. USE FIBER ROLLS DOWNSLOPE AS PERIMETER CONTROL TO PREVENT SEDIMENT FROM LEAVING THE SITE DURING THE WINTER SEASON. FIBER ROLLS ARE APPROPRIATE IN COMBINATION WITH EROSION CONTROL COVER ON SLOPES TO SHORTEN SLOPE LENGTH AND SPREAD RUNOFF AS SHEET FLOW.
2. SILT FENCES ARE NOT APPROPRIATE IN CONCENTRATED RUNOFF FLOW AREAS (STREAMS, SWALES, GULLIES, ETC.), IN AREAS WHERE FLOODING IS A CONCERN, OR ALONG SLOPES.
3. LONG-TERM SEDIMENT CONTROL MEASURES ARE REQUIRED TO ENSURE THAT EROSION AND SEDIMENTATION DO NOT BECOME AN ISSUE ONCE THE PROJECT IS COMPLETED. THE FOLLOWING MEASURES CAN BE EFFECTIVE FOR LONG TERM SEDIMENT CONTROL ONCE THE PLANTINGS AND ROOTS HAVE GROWN TO SUFFICIENT SIZE:
   - 3.1. SEEDING SLOPES BY HYDRO-SEEDING OR WITH SEEDED BLANKETS; PREFERABLY USING NATIVE SEEDS WITH WINTER BARLEY OR OATS.
   - 3.2. LANDSCAPING WITH PLANT SPECIES THAT GROW RAPIDLY AND HAVE ROOT SYSTEMS THAT ARE EFFECTIVE AT "HOLDING" SOIL

DUST CONTROL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUOUS DUST CONTROL, THROUGHOUT THE CONSTRUCTION, IN ACCORDANCE WITH THE PERMIT CONDITIONS OF APPROVAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REGULAR CLEANING OF ALL MUD, DIRT, DEBRIS, ETC., FROM ANY AND ALL ADJACENT ROADS AND SIDEWALKS, AT LEAST ONCE EVERY 24 HOURS WHEN OPERATIONS ARE OCCURRING.
2. ALL DISTURBED AREAS, INCLUDING UNPAVED ACCESS ROADS OR STORAGE PILES, NOT BEING ACTIVELY UTILIZED FOR CONSTRUCTION PURPOSES, SHALL BE EFFECTIVELY STABILIZED OF DUST EMISSIONS USING WATER, CHEMICAL STABILIZER/SUPPRESSANT, OR VEGETATIVE GROUND COVER.
3. ALL GROUND-DISTURBING ACTIVITIES (E.G., CLEARING, GRUBBING, SCRAPING, AND EXCAVATION) SHALL BE EFFECTIVELY CONTROLLED OF FUGITIVE DUST EMISSIONS UTILIZING APPLICATION OF WATER OR BY PRE-SOAKING.
4. ALL MATERIALS TRANSPORTED OFFSITE SHALL BE COVERED OR EFFECTIVELY WETTED TO LIMIT DUST EMISSIONS.
5. FOLLOWING THE ADDITION OF MATERIALS TO, OR THE REMOVAL OF MATERIALS FROM, THE SURFACES OF OUTDOOR STORAGE PILES, SAID PILES SHALL BE EFFECTIVELY STABILIZED OF FUGITIVE DUST EMISSIONS UTILIZING SUFFICIENT WATER OR CHEMICAL STABILIZER/SUPPRESANT.
6. ONSITE VEHICLE SPEED ON UNPAVED SURFACES SHALL BE LIMITED TO 10 MPH.
7. DISTURBED AREAS SHALL BE SEEDED PRIOR TO OCTOBER 15TH OR EARLIER AS REQUIRED BY THE APPLICABLE PERMIT CONDITIONS.

SITE HOUSEKEEPING NOTES

EQUIPMENT AND VEHICLE MAINTENANCE AND CLEANING

1. INSPECT EQUIPMENT AND VEHICLES FREQUENTLY AND REPAIR ANY LEAKS AS SOON AS POSSIBLE. CONTAIN AND CLEAN UP LEAKS, SPILLS, AND DRIPS OF HAZARDOUS MATERIALS AND CHEMICALS AS QUICKLY AS POSSIBLE TO MINIMIZE RUN-OFF OR SOAK IN. THIS INCLUDES FUEL AND MOTOR OIL, HYDRAULIC FLUID, AND GLYCOL BASED ANTI-FREEZE FROM VEHICLES. USE DRY CLEANUP METHODS IF POSSIBLE. PERFORM MAJOR MAINTENANCE AND REPAIRS OFF-SITE.
2. IF REPAIR OR REFUELING OF VEHICLES AND EQUIPMENT MUST BE DONE ON-SITE, USE A DESIGNATED LOCATION AWAY FROM STORM DRAIN INLETS, WATER BODIES, AND OTHER SENSITIVE AREAS.
3. IF EQUIPMENT IS WASHED ON-SITE, WASH WATER MAY NOT BE DISCHARGED TO THE STORM DRAIN SYSTEM. IF POSSIBLE, WASH VEHICLES AT AN APPROPRIATE OFF-SITE FACILITY.
4. RECYCLE USED MOTOR OIL, OTHER VEHICLE FLUIDS, AND VEHICLE PARTS WHENEVER POSSIBLE.

MATERIAL STORAGE AND SOIL STOCKPILES

5. LOCATE MATERIAL AND SOIL STOCKPILES AWAY FROM GUTTERS, STORM DRAIN INLETS, AND WATER BODIES. IN ADDITION, KEEP STOCKPILES AWAY FROM STEEP SLOPES AND UNSTABLE SOIL IN ORDER TO MINIMIZE THE CHANCE OF AN ACCIDENTAL RELEASE TO THE ENVIRONMENT.
6. ALL LOOSE STOCKPILED MATERIAL THAT ARE NOT BEING ACTIVELY USED, SHALL BE UNDER COVER AND/OR BERMED AND PROTECTED FROM WIND, RAIN, AND RUNOFF.
7. STORE OPEN BAGS OF PARTICULATE, GRANULAR, OR POWDER MATERIALS (SUCH AS PLASTER OR CONCRETE) INDOORS IF POSSIBLE. IF STORED OUTSIDE, THEY MUST BE COVERED OR CLOSED, AND DURING THE RAINY SEASON THEY MUST BE KEPT WITHIN SECONDARY CONTAINMENT.
8. STORE PAINTS, CHEMICALS, SOLVENTS, AND OTHER HAZARDOUS MATERIALS INSIDE OR WITHIN A SHED WITH DOUBLE CONTAINMENT.
9. KEEP DUMPSTER LIDS CLOSED AND SECURED. FOR DUMPSTERS OR BINS THAT DON'T HAVE A LID, COVER THEM WITH PLASTIC SHEETING OR A TARP DURING RAINY OR WINDY WEATHER.

WASTE MANAGEMENT: BUILDING MATERIALS, DEMOLITION WASTE, AND VEGETATION

10. ONSITE STORAGE OF CONSTRUCTION MATERIALS. STORE WASTES IN CONTAINERS OR A DUMPSTER WHENEVER POSSIBLE. COVER PILES OF UNCONTAINED WASTES AND WASTES STORED IN OPEN CONTAINERS DURING WINDY CONDITIONS AND PRIOR TO SIGNIFICANT FORECASTED RAIN (0.25 INCHES IN A 24-HOUR PERIOD). DO NOT HOSE DUMPSTERS OUT ON THE CONSTRUCTION SITE.
11. USE CONSTRUCTION PRODUCTS MADE FROM OR PACKAGED IN POLYSTYRENE/PLASTIC FOAM IN A MANNER PREVENTING THE POLYSTYRENE/PLASTIC FOAM FROM BEING RELEASED INTO THE ENVIRONMENT.
12. NEVER LEAVE OR ABANDON MATERIALS OR EXCAVATION SPOILS AT A PROJECT SITE. AT THE END OF A CONSTRUCTION PROJECT, COLLECT ALL UNUSED OR WASTE MATERIALS AND DISPOSE OF PROPERLY. DO NOT LEAVE DISCARDED BUILDING MATERIALS, DEMOLITION WASTES, WASTE VEGETATION, SOIL, MULCH, VEGETATION, AND OTHER LANDSCAPE PRODUCTS IN A STREET, GULLY, OR WATERWAY.

PORTABLE TOILET FACILITIES

13. ALL SANITARY WASTES SHALL BE COLLECTED AND MANAGED THROUGH THE USE OF PORTABLE TOILET FACILITIES. ENSURE THAT THE LEASING COMPANY PROPERLY MAINTAINS THE TOILETS AND PROMPTLY MAKES REPAIRS AS NEEDED. CONDUCT VISUAL INSPECTIONS FOR LEAKS.
14. PLACE PORTABLE TOILETS ON A LEVEL SURFACE AND AT A SAFE DISTANCE AWAY FROM PAVED AREAS AND, TO THE EXTENT PRACTICAL, STORM DRAIN INLETS. SECURE THEM TO PREVENT BLOWING OVER.
15. PROVIDE SECONDARY CONTAINMENT FOR PORTABLE TOILETS LOCATED WITHIN 20 FEET OF A STREAM, STORM DRAIN, OR STREET.
16. DURING PUMP-OUT, TAKE APPROPRIATE MEASURES TO AVOID SPILLAGE. IF SPILLAGE OCCURS IT SHALL BE CLEANED UP IMMEDIATELY.

SITE CLEANUP

17. WHEN CLEANING UP, SWEEP WHENEVER POSSIBLE. LITTER AND DEBRIS MUST BE PICKED UP AND DISPOSED OF PROPERLY.
18. IN THE ROADWAY AND/OR ON THE SIDEWALK, MATERIAL STOCKPILES MUST BE REMOVED AND CLEANED UP BY THE END OF EACH DAY.
35. SWEEP AND REMOVE ANY SOLID WASTE THAT ACCUMULATES AT EROSION AND SEDIMENT CONTROL DEVICES AS SOON AS POSSIBLE.
36. DO NOT CLEAN THE STREET, SIDEWALK, OR OTHER PAVED AREAS BY WASHING OR BY DIRECTING SEDIMENT, CONCRETE, ASPHALT, OR OTHER PARTICLES INTO THE STORM DRAIN SYSTEM. IF USING WATER, DIRECT IT TO A LANDSCAPED OR GRASSY AREA LARGE ENOUGH TO ABSORB ALL THE WATER.

MASONRY AND CONCRETE WORK

37. CONCRETE, CEMENT, AND MASONRY PRODUCTS MAY NEVER BE DISCHARGED INTO THE STORM DRAIN SYSTEM. CONCRETE, CEMENT, AND MASONRY MIXING CONTAINERS MAY NOT BE WASHED OR RINSED INTO THE STREET OR STORM DRAIN SYSTEM. IF A CONCRETE TRANSIT MIXER IS USED, A SUITABLE WASHOUT BOX, EXCAVATION OR SELF-WASHING MIXER ABLE TO CONTAIN THE WASTE MATERIAL SHALL BE PROVIDED ON-SITE.
38. DO NOT MIX FRESH CONCRETE OR CEMENT MORTAR IN A GUTTER, OVER A STORM DRAIN INLET, OR IMMEDIATELY ADJACENT TO A WATER BODY.
39. STORE MATERIALS UNDER COVER AND PROTECTED FROM WIND, RAIN, AND RUNOFF.
40. SMALL AMOUNTS OF EXCESS CONCRETE, GROUT, AND MORTAR MAY BE DISPOSED OF IN THE TRASH.
41. WASH OUT FROM CONCRETE MIXERS MAY NEVER BE DISPOSED OF IN THE STREET OR STORM DRAIN SYSTEM. IF POSSIBLE, PUMP THE WASHOUT BACK INTO THE MIXER FOR REUSE.

SIDEWALK AND ROADWORK

42. IF IT RAINS UNEXPECTEDLY, TAKE APPROPRIATE ACTION TO PREVENT POLLUTION OF STORM WATER RUNOFF (E.G., DIVERT RUNOFF AROUND WORK AREAS, COVER MATERIALS).
43. THE DISCHARGE OF SLURRY TO THE STORM DRAIN SYSTEM IS PROHIBITED. TAKE MEASURES TO CONTAIN THE SLURRY AND, IF NECESSARY, PROTECT NEARBY CATCH BASINS OR GUTTERS. IF SLURRY ENTERS THE STORM DRAIN SYSTEM, REMOVE MATERIAL IMMEDIATELY.
44. PARK PAVING MACHINES OVER DRIP PANS OR ABSORBENT MATERIALS IF THEY HAVE A DRIP OR LEAK.
45. NEVER WASH SWEEPINGS FROM EXPOSED AGGREGATE CONCRETE INTO A STREET OR A STORM DRAIN INLET. COLLECT AND RETURN TO AGGREGATE BASE STOCKPILE OR DISPOSE OF IN THE TRASH.
46. REMOVE AND CLEAN UP MATERIAL STOCKPILES (E.G., STEEL I-BEAMS, LAGGING, SAND) BY THE END OF EACH WEEK OR, IF DURING THE RAINY SEASON, THE END OF THE DAY. STOCKPILES MUST BE REMOVED BY THE END OF EACH DAY IF THEY ARE LOCATED IN A PUBLIC RIGHT-OF-WAY.

EXHIBIT D

REGISTERED PROFESSIONAL ENGINEER
JAMES E. CAERL
No. 78904
Exp. 3/22
CIVIL
STATE OF CALIFORNIA

DATE	REVISION	BY

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EROSION CONTROL PLAN

VICTOR TSANG
113 GLEN DRIVE
APTOS, CA 95003
APN 042-057-06

PROJECT:	SC9363.1
DATE:	SEP 2022
DESIGN:	MC
DRAWN:	AJB
SCALE:	1"=10'

C3

GENERAL STRUCTURAL NOTES

1. ALL DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2019 EDITION OF THE CALIFORNIA BUILDING CODE (CBC): TITLE 24, PART 2 OF THE CALIFORNIA CODE OF REGULATIONS (CCR), INCLUDING LATEST SUPPLEMENTS AND ERRATA, AND ANY LOCAL CODE REQUIREMENTS. ALL DETAILS, SECTIONS AND NOTES SHOWN ON DRAWINGS ARE INTENDED TO BE TYPICAL AND APPLY TO SIMILAR SITUATIONS ELSEWHERE, UNLESS OTHERWISE NOTED.

2. CHECK ALL DIMENSIONS IN RELATION TO SITE CONDITIONS BEFORE STARTING WORK. THE CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND SHALL BE RESOLVED BEFORE PROCEEDING WITH THE WORK. SEE ARCHITECTURAL DRAWINGS FOR DUCTS PIPES AND CONDUITS AND ITEMS EMBEDDED IN CONCRETE. DURING CONSTRUCTION PHASE THE CONTRACTOR IS RESPONSIBLE FOR THE SAFETY OF BUILDING AND PERSONNEL. PROVIDE ADEQUATE SHORING, BRACING IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES.

3. DESIGNS FOR FOUNDATION SYSTEMS ARE BASED ON THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY HARO KASUNICH AND ASSOCIATES, PROJECT NO. SC9396.1. THE FOLLOWING PARAMETERS WERE INCORPORATED FROM THIS REPORT:

a) DEBRIS CATCHMENT IMPACT ZONE SHALL BE MINIMUM 11-FEET SIX-INCHES TALL
b) DESIGN IMPACT LOADING SHALL BE 1,118 psf, THIS FORCE CORRESPONDS TO AN IMPACT VELOCITY OF 20 FT/SEC
c) THE WALL IS EXPECTED TO EXPAND LATERALLY UP TO 8-FEET
d) THE GEOBRUGG WALL INSTALLATION **WILL MITIGATE DAMAGE TO THE EXISTING WOOD-FRAMED RESIDENCE FROM THE DESIGN LANDSLIDE EVENTS DEFINED IN THE GEOTECHNICAL AND GEOLOGIC REPORTS PREPARED FOR THIS PROJECT**, THE RISK OF DAMAGE, **AS A RESULT OF LARGER UNCOMMON LANDSLIDE EVENTS,** WILL NOT BE COMPLETELY ELIMINATED AFTER THE INSTALLATION OF THE DEBRIS CATCHMENT WALL.
e) HELICAL PIERS AND ANCHORS:
i) INDIVIDUAL ULTIMATE BEARING CAPACITY OF EACH PLATE MAY BE DETERMINED FROM THE EQN:
$Q_{ULT} = A^*(900 + 3600^*D)$
Q_{ULT} = INDIVIDUAL BEARING CAPACITY (lbs)
A = AREA OF HELICAL PLATE (ft^2)
D = DEPTH OF EMBEDMENT (ft) MEASURED VERTICALLY FROM THE GROUND SURFACE TO THE CENTER OF THE PLATE IN QUESTION
BEARING/PULL-OUT CAPACITY OF EACH HELICAL PIER/ANCHOR IS DETERMINED BY APPLYING THE EQUATION ABOVE TO THE AREA OF THE HELICAL PLATE

FS_{STATIC} = 2.0 STATIC FACTOR OF SAFETY FOR STATIC LOADING CONDITION
$FS_{DYNAMIC}$ = 1.2 DYNAMIC FACTOR OF SAFETY FOR DYNAMIC LOADING CONDITION

WORKING LOADS SHALL BE ACHIEVED DURING HELIX INSTALLATION AS A FUNCTION OF INSTALLATION TORQUE, CONFIRMED BY THE SOIL ENGINEER DURING CONSTRUCTION

ii) VERTICAL HELICAL PIERS SHALL BE EMBEDDED 20-ft MIN. INTO PURISMA BEDROCK PLUS THE LENGTH OF THE HELIXES ON EACH ANCHOR
iii) HELICAL ANCHORS SHALL BE EMBEDDED 21-ft MIN. INTO PURISMA BEDROCK PLUS THE LENGTH OF THE HELIXES ON EACH ANCHOR
iv) INDIVIDUAL HELIX PLATES ATTACHED TO A MULTI-PLATE ANCHOR SHOULD BE SPACED A MIN OF 5-FEET OR 5-DIAMETERS, WHICHEVER IS LESS
v) IT IS RECOMMENDED AT LEAST ONE VERTICAL TEST ANCHOR BE INSTALLED PRIOR TO FULL SCALE PRODUCTION IN ORDER TO VERIFY BOTH DESIGN LOADS AND INSTALLATION TORQUE REQUIREMENTS. TESTING SHOULD BE PERFORMED UNDER OBSERVATION OF THE GEOTECHNICAL CONSULTANT.
vi) ALL PIERS AND ANCHORS MUST BE OBSERVED AND APPROVED BY THE GEOTECHNICAL CONSULTANT, ANY ANCHORS INSTALLED WITHOUT THE FULL KNOWLEDGE AND OBSERVATION OF THE GEOTECHNICAL CONSULTANT WILL RENDER THE RECOMMENDATIONS OF THEIR REPORT INVALID AND WOULD NULLIFY THE RECOMMENDATIONS IN THESE STRUCTURAL ENGINEERING DOCUMENTS.
f) HELICAL TIE-BACK ANCHORS
i) HELICAL TIE-BACK ANCHORS SHALL BE EMBEDDED 20-ft MIN. INTO PURISMA BEDROCK PLUS THE LENGTH OF THE HELIXES ON EACH ANCHOR
ii) HELICAL TIE-BACK ANCHORS SHALL HAVE A MINIMUM OVERBURDEN DEPTH OF 10-ft BELOW GROUND SURFACE, OVER OVERBURDEN DEPTH IS MEASURED FROM THE GROUND SURFACE DIRECTLY ABOVE THE PLATE CLOSEST TO THE WALL
iii) CAPACITY OF THE TIE-BACK ANCHORS MAY BE CALCULATED USING SAME EQUATION AS VERTICAL HELICAL PIERS. IN THE CASE OF THE TIE-BACK ANCHORS, EMBEDMENT DEPTH, D, IS MEASURED FROM THE GROUND SURFACE DIRECTLY ABOVE THE PLATE BEING EVALUATED

4. FORMWORK FOR CAST IN PLACE CONCRETE: SOUND, UNDAMAGED LUMBER OR D.F. PLYWOOD. FORM RELEASE AGENT: COLORLESS & NON-STAINING TO CONCRETE OR INTENDED COATINGS, APPLY PRIOR TO PLACING REINFORCING STEEL. KEEP UNTREATED FORM SURFACES WET PRIOR TO PLACING CONCRETE.

5. REINFORCING STEEL ASTM A-615 DEFORMED, UNCOATED GRADE 60. ALL OTHER BARS #4 AND SMALLER MAY BE GRADE 40. TIE WIRE: 16GA ANNEALED. ALL BARS AND REINFORCING SHALL BE SPLICED IN ACCORDANCE WITH CHAPTER 19 OF THE CBC. ALL STEEL SHALL BE RIGIDLY HELD IN PLACE WITH APPROVED METAL DEVICES PRIOR TO POURING CONCRETE. HOOKS, BENDS, FABRICATION AND PLACING SHALL BE IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCING CONCRETE STRUCTURES," ACI. NO. 315. ALL REINFORCING STEEL BE OBSERVED BY THE ENGINEER OF RECORD PRIOR TO THE PLACEMENT OF CONCRETE AND PRIOR TO REQUESTING A BUILDING DEPARTMENT FOUNDATION INSPECTION.

6. CONCRETE SHALL DEVELOP A 28-DAY MIN. ULTIMATE COMPRESSIVE STRENGTH OF 2,500 PSI FOR ALL CONCRETE; MIN. 5-SACKS OF CEMENT PER CUBIC YARD. SUBMIT CONCRETE MIX DESIGNS TO ENGINEER FOR APPROVAL. ALL CEMENT SHALL COMPLY WITH ASTM C-150, TYPE II CEMENT.
CONCRETE COVERAGE (FACE OF BAR TO FACE OF CONCRETE) SHALL BE AS FOLLOWS:

CONCRETE SURFACE AGAINST EARTH ..... 3" MIN.
CONCRETE WHEN POURED AGAINST FORMS ..... 2" MIN.
ALL OTHERS ..... SEE DETAILS

7. ANCHOR BOLTS SHALL BE HOT-DIPPED ZINC-COATED STEEL AND SHALL HAVE A BOLT HEAD OR AN EQUAL DEFORMITY AT THE EMBEDDED END UNLESS NOTED OTHERWISE. A 3-INCH SQUARE x 0.229" PLATE WASHER SHALL BE USED IN ALL BEARINGS OF ANCHOR BOLT NUTS AGAINST WOOD. ANCHOR BOLTS SHALL BE RIGIDLY HELD IN PLACE DURING THE CONCRETE POUR. ANCHOR BOLTS SHALL BE ATTACHED TO OR HOOKED AROUND REINFORCING STEEL: REFER TO DETAILS.

8. ENGINEER OF RECORD SHALL PROVIDE STRUCTURAL OBSERVATION AND PERIODIC REPORTS FOR: FRAMING AND STRUCTURAL FRAMING HARDWARE; AND ALL STRUCTURAL SHEATHING INSTALLATION AND NAILING.

9. NON-SHRINK, NON-FERROUS HIGH STRENGTH GROUT, IF USED, SHALL CONFORM TO ASTM C1107. USE BURKE #7010 OR EQUIVALENT.

11. ALL STRUCTURAL STEEL FABRICATION AND ERECTION SHALL BE:

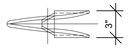
IN ACCORDANCE WITH EUROCODE-3, WITHIN THE FOLLOWING PARAMETERS:

STEEL TYPE:	S235JR (CONSTRUCTION STEEL)	
TENSILE STRENGTH:	360 - 510 MPa	(52 - 74 ksi)
YIELD STRENGTH:	235 MPa	(34 ksi)

CATALOG NUMBER	PILE MODEL	ASD ALLOWABLE STRENGTHS IN COMPRESSION (KIPS)											
		2500 PSI CONCRETE				3000 PSI CONCRETE				4000 PSI CONCRETE			
		FIRM SOIL		SOFT SOIL		FIRM SOIL		SOFT SOIL		FIRM SOIL		SOFT SOIL	
		PINNED	FIXED	PINNED	FIXED	PINNED	FIXED	PINNED	FIXED	PINNED	FIXED	PINNED	FIXED
C1500465G	SS5	32.6	33.7	8.1	16.0	32.6	34.6	8.1	16.0	32.6	36.4	8.1	16.0
C1500468G	SS5	32.6	33.7	8.1	16.0	32.6	34.6	8.1	16.0	32.6	36.4	8.1	16.0

CATALOG NUMBER	PILE MODEL	ASD ALLOWABLE STRENGTHS IN TENSION (KIPS)		
		2500 PSI CONCRETE	3000 PSI CONCRETE	4000 PSI CONCRETE
		ALLOW	ALLOW	ALLOW
C1500465G	SS5	28.1	28.1	28.1

1. Refer to Section 4.1.3 of ESR-2794 for descriptions of fixed condition, pinned condition, soft soil and firm soil.
2. Strength ratings include an allowance for corrosion over a 50-year service life and presume the supported structure is braced In accordance with IBC Section 1808.2.2 of the 2018
3. Capacities apply to the specific pile cap and pile models listed
4. The fixed end condition requires that the foundation itself be fixed and that the pile and pile cap be embedded in the foundation with adequate concrete cover and reinforcing to resist 56.4 kip-in. or 116 kip-In nominal bending moment for SS5 and SS175 pile models respectively. The center of the shaft must be at least 6-inches away from the end/corner of the concrete footing.
5. See Section 4.1.2 of ESR-2794 for applicable limit states that must be evaluated by a registered design professional.
6. Refer to the specified compressive strength of concrete at 28 days.



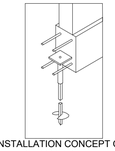
HELIX MUST BE FORMED BY MATCHING METAL DIE

SIDE VIEW

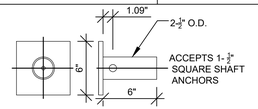
NOTES

1. FINISH: HOT DIP GALVANIZED PER ASTM-A153 (LATEST REVISION)
2. MATERIAL SPECIFICATIONS:
PIPE: BLACK UNCOATED ROUND STEEL TUBE PER ASTM A513 TYPE 5, GRADE 1026
PLATE: PER ASTM A572 GRADE 50
3. TENSION RATING VALID ONLY IF USING COUPLING BOLT AND NUT SPECIFIED IN CHART BELOW OR THEIR MECHANICAL EQUIVALENT
4. THESE ABOVE RATINGS ARE VALID ONLY IF THE PIER CAP DETAIL HAS BEEN DESIGNED TO ENSURE ADEQUATE LOAD TRANSFER FROM REINFORCED CONCRETE FOUNDATION TO SCREW PIER, AND IN ACCORDANCE WITH EXISTING LOCAL CODE REQUIREMENTS AND /OR ESTABLISHED LOCAL PRACTICES.
5. HOLE INCLUDED ON C1500467G ONLY.

COUPLING BOLT AND NUT *			
BOLT DIA.	BOLT LENGTH (MIN.)	BOLT GRADE	BOLT NUT
3/4"	4.25"	ASTM A325 TYPE 1	3/4" MATCHING HEX NUT



INSTALLATION CONCEPT OF PIER CAP DETAIL



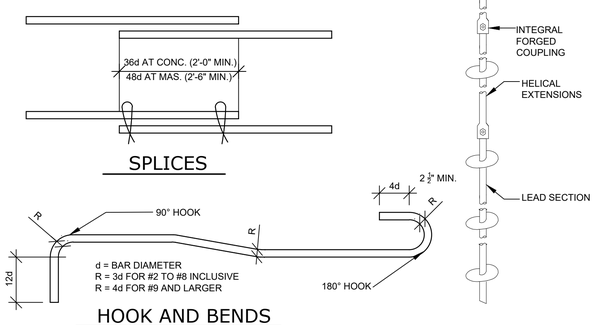
TORQUE STRENGTH RATING-5,700 FT-LB
ULTIMATE CAPACITY* (TENSION/COMPRESSION)-57 KIP
*BASED ON A TORQUE FACTOR (Kt)=10
PER ICC-ES AC358 SECTION 3.13.2
NOMINAL TENSION STRENGTH (COUPLING BOLT)-70 KIP

LEAD SECTION						
CAT. NO.	"A"	"B"	"C"	"D"	"F"	ICC-ES LISTED ESR-2794
C150-0001	82-1/4"	8"			76-1/4"	x
C150-0002	59"	8"			53"	x
C150-0003	82-1/4"	10"			76-1/4"	x
C150-0004	82-1/4"	12"			76-1/4"	x
C150-0005	82-1/4"	14"			76-1/4"	x
C150-0030	82-1/4"	6"	8"		58-1/4"	
C150-0006	82-1/4"	8"	10"		52-1/4"	x
C150-0031	123"	8"	10"		93"	x
C150-0007	63-1/4"	8"	10"	12"	5-3/4"	x
C150-0058	59"	10"			53"	x
T150-0086	35-3/4"	6"	6"		11-3/4"	x
C150-0051	82-1/4"	10"	12"		46-1/4"	x
C150-0160	35-3/4"	8"	10"		5-3/4"	x
C150-0161	42"	10"	12"		6"	x
C150-0242	59"	12"			53"	x
C150-0243	59"	14"			53"	x
C150-0244	35-3/4"	6"	8"		11-3/4"	
C150-0397	82-1/4"	8"	10"	12"	22-1/4"	x
C150-0398	123"	10"	12"	14"	51"	x
C150-0399	123"	12"	14"	16"	39"	x
C150-0489	82-1/4"	10"	12"	14"	10-1/4"	x
T150-0000✖	82-1/4"	8"	10"	12"	6-1/2"	x
C150-0156	25"	8"			21-1/2"	x

* HELIX ARE SPACED 3-FEET APART

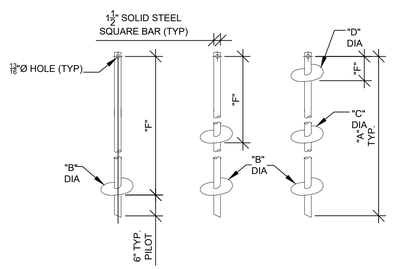
NOTES

1. HOT DIP GALVANIZED PER ASTM A153-(LATEST REV.)
2. LEAD AND EXTENSION SECTION AND PILOT POINT LENGTHS ARE NOMINAL PILOT FOR T150-0000 AND C150-0156 IS 3.75' AND 2.5' RESPECTIVELY
3. SHAFT MATERIAL-HOT ROLLED ROUND-CORNERED SQUARE (RCS) SOLID STEEL BARS PER ASTM A29, MINIMUM YIELD STRENGTH=70 KSI
4. HELIX MATERIAL-HOT ROLLED LOW CARBON STEEL SHEET, STRIP, OR PLATE PER ASTM A572, OR A1018, OR A656, MINIMUM YIELD STRENGTH=50 KSI, 3/8" THICK.
5. COUPLING BOLTS, 3/4" DIAMETERx3" LONG HEX HEAD PER ASTM A325 TYPE 1.
6. NOMINAL SPACING BETWEEN HELICAL PLATES IS THREE TIMES THE DIAMETER OF THE LOWER HELIX.
7. MANUFACTURER TO HAVE IN EFFECT INDUSTRY RECOGNIZED WRITTEN QUALITY CONTROL FOR ALL MATERIALS AND MANUFACTURING PROCESSES.
8. ALL WELDING TO BE DONE BY WELDERS CERTIFIED UNDER SECTION 5 OF THE AWS CODE D1.1
9. SEE ICC EVALUATION SERVICE INC, EVALUATION REPORT ESR-2794 FOR NOMINAL, DESIGN, AND ALLOWABLE STRENGTH VALUES AND/OR CONDITIONS OF USE CONCERNING INFORMATION PRESENTED ON THIS DRAWING.
10. ALL HELIX HAVE A SHARPENED LEADING EDGE.
11. REFER TD DRAWING SA150-0047 FOR PLAIN EXTENSIONS AND TERMINATIONS.

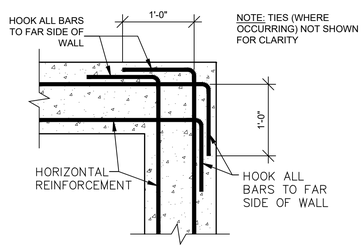


SPLICES

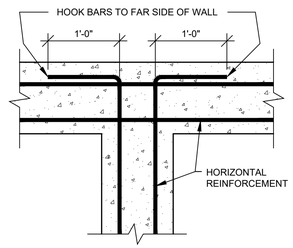
HOOK AND BENDS



SINGLE TWIN TRIPLE LEAD SECTIONS



CORNER



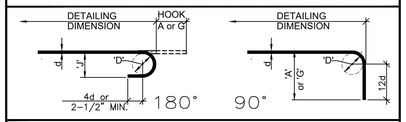
INTERSECTION

STRUCTURAL TESTS & INSPECTIONS SCHEDULE

THE FOLLOWING ITEMS SHALL BE INSPECTED. "SPECIAL INSPECTION" SHALL CONFORM TO 2019 CBC. SPECIAL INSPECTION AGENCIES AND/OR INDIVIDUALS SHALL BE APPROVED BY THE BUILDING DEPARTMENT PRIOR TO ANY WORK. FOR MATERIAL TESTING REQUIREMENTS, SEE SPECIFICATIONS AND/OR GENERAL NOTES. TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ENGINEER.

ITEM	REQUIRED	REMARKS
SOIL DENSITY (ONLY IF STRUCTURAL FILL IS PLACED)	X	APPROVAL BY G.E. REQUIRED
GRADING AND EXCAVATIONS	X	APPROVAL BY G.E. REQUIRED
REINFORCEMENT PLACEMENT	X	E.O.R. TO INSPECT FINAL PLACEMENT
ANCHOR BOLTS, INSERTS	X	E.O.R. TO INSPECT FINAL PLACEMENT

ACI STANDARD HOOKS

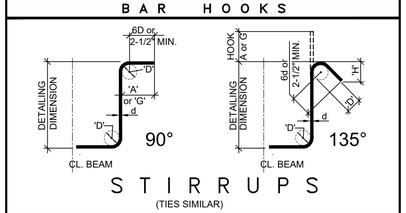


SIZES OF 180-DEG HOOKS		SIZES OF 90-DEG HOOKS
GRADES 50-60-75 ksi D=6d for #3 through #8 D=8d for #9, #10 and #11 D=10d for #14 and #18	GRADE 40 ksi D=5d for #3 through #11 D=10d for #14 and #18	ALL GRADES D=6d for #3 through #8 D=8d for #9, #10 and #11 D=10d for #14 and #18

RECOMMENDED END HOOK DIMENSIONS

BAR SIZE	180° HOOKS				90° HOOKS
	GRADES 50-60-70		GRADE 40		ALL GRADES
	"A" or "G"	"J"	"A" or "G"	"J"	"A" or "G"
#3	5	3	5	2-1/2	6
#4	6	4	6	3-1/2	8
#5	7	5	7	4-1/2	10
#6	8	6	8	5-1/4	1-0
#7	10	7	9	6-1/4	1-2
#8	11	8	10	7	1-4
#9	1-3	11-1/4	1-0	8	1-7
#10	1-5	1-0-3/4	1-1	9	1-10
#11	1-7	1-0-3/4	1-1	9	2-0

BAR HOOKS



STIRRUPS
(TIES SIMILAR)

RECOMMENDED STIRRUP & TIE DIMENSIONS
GRADES 40-50-60 ksi

BAR SIZE	"D" (IN)	90 HOOK	135 HOOK	
		HOOK "A" or "G"	HOOK "A" or "G"	APPROX. "H"
#3	1-1/2	4	4	2-1/2
#4	2	4-1/2	4-1/2	3
#5	2-1/2	6	5-1/2	3-1/2
#6	3	6-1/2	6-1/2	4-1/2

STIRRUP & TIE HOOKS

3 S1.1 REINFORCEMENT BAR DETAILS
SCALE: NONE

2 S1.1 HELIX ANCHOR/PILE ASSEMBLY
SCALE: 3/4" = 1'-0"

1 S1.1 FOOTING INTERSECTIONS
SCALE: 1" = 1'-0"

EXHIBIT D

KYLER Engineering
P.O. BOX 1863
Monterey, CA 93942
Tel 415-264-2554
matthewk@kyleengineering.com

REGISTERED PROFESSIONAL ENGINEER — MATTHEW R. KYLER — C 77322 — EXP. 06-30-23 — CIVIL — STATE OF CALIFORNIA

Not Valid Without Wet Signature

Project / Owner

Tsang-Geobrugg Fence Installation

113 Glen Drive,
Aptos, CA 95003

KE Project Number	20-079
DRAWN BY	MRK
DATE	10/12/2022
Revision	Date
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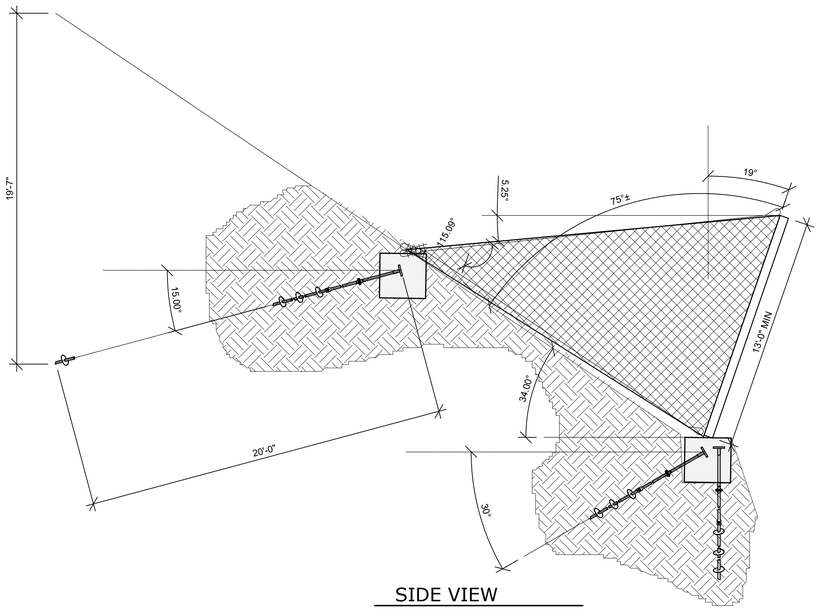
PRINT DATE:	10/12/2022

Sheet Title

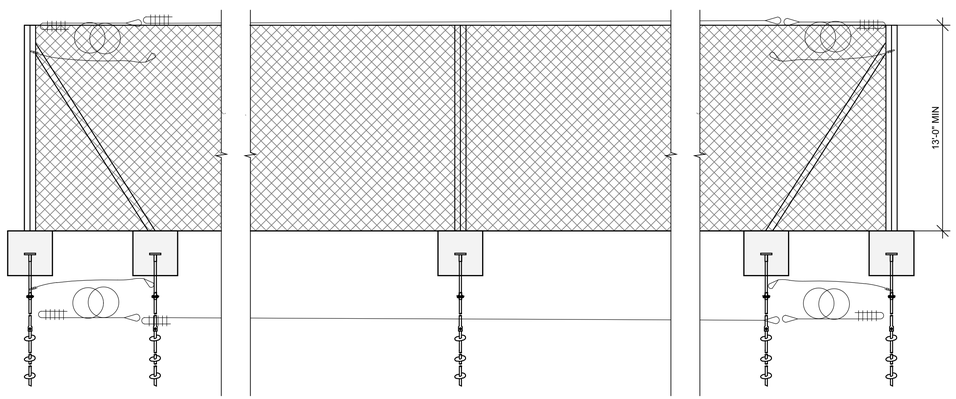
Structural General Notes and Typical Details

Sheet Number

S1.1



SIDE VIEW



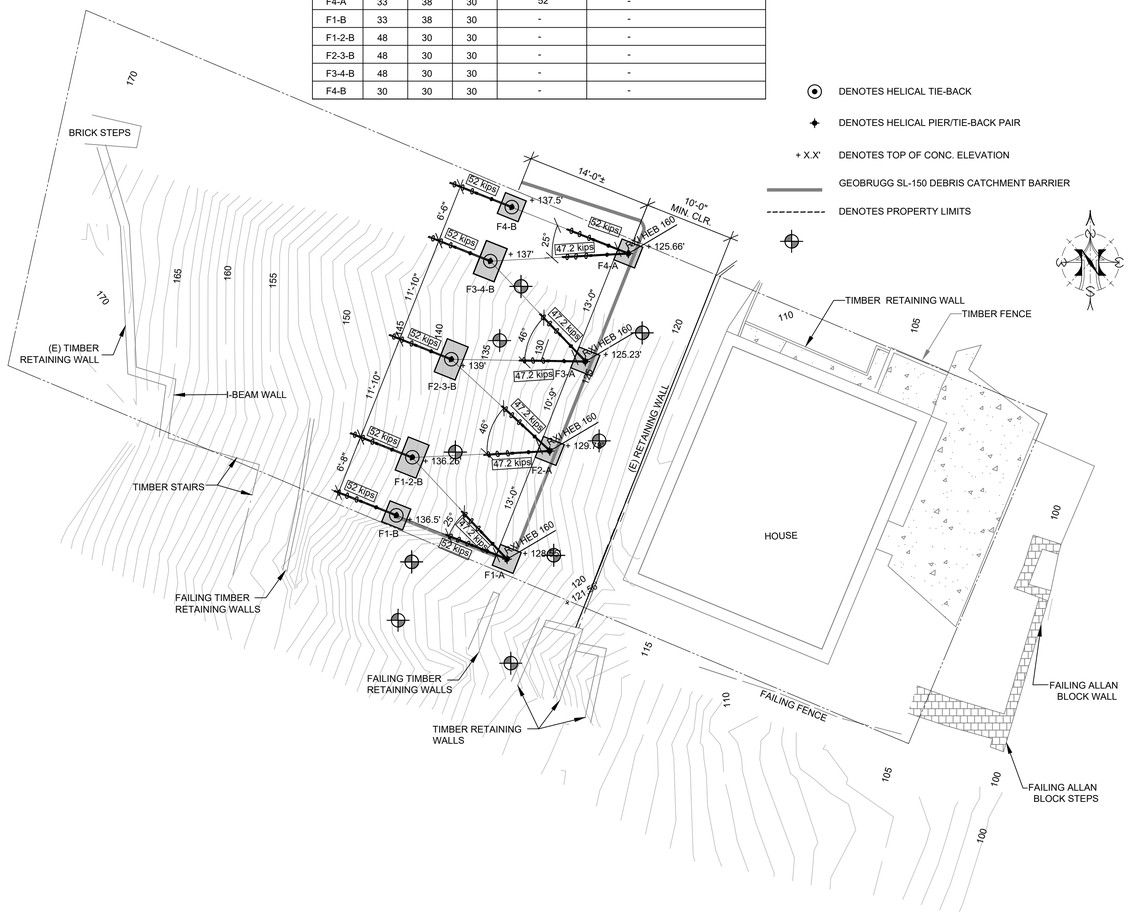
FRONT VIEW

2 S2.1 FENCE SECTION VIEW

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

FOOTING SCHEDULE

FOOTING MARK	LENGTH (IN)	WIDTH (IN)	DEPTH (IN)	VERTICAL DEMAND (kips)	NOTES
F1-A	33	38	30	52	-
F2-A	33	38	30	52	-
F3-A	33	38	30	52	-
F4-A	33	38	30	52	-
F1-B	33	38	30	-	-
F1-2-B	48	30	30	-	-
F2-3-B	48	30	30	-	-
F3-4-B	48	30	30	-	-
F4-B	30	30	30	-	-



1 S2.1 STRUCTURAL PLAN

SCALE: 1/8" = 1'-0"

EXHIBIT D

KYLER Engineering

P.O. BOX 1863
Monterey, CA 93942
Tel 415-264-2554
matthewk@kylerengineering.com

REGISTERED PROFESSIONAL ENGINEER
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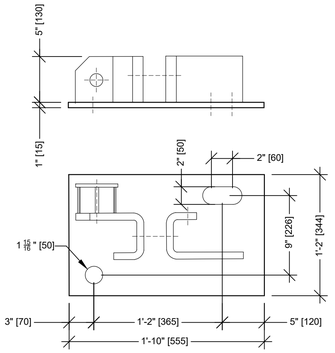
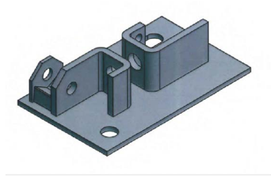
Sheet Title

Structural Plan

Sheet Number

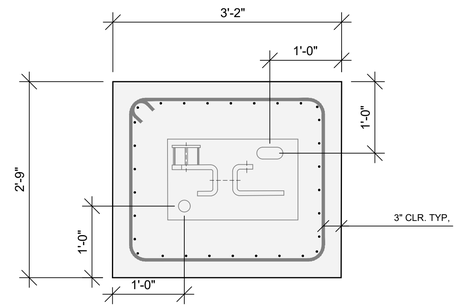
S2.1



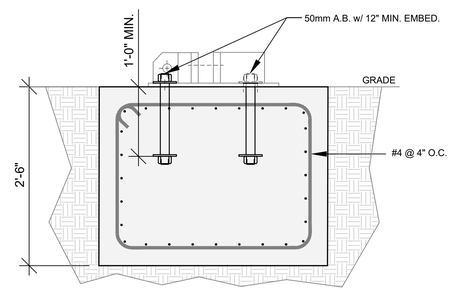


3 S2.1 BASE PLATE DETAIL

SCALE: 1'-1/2" = 1'-0"



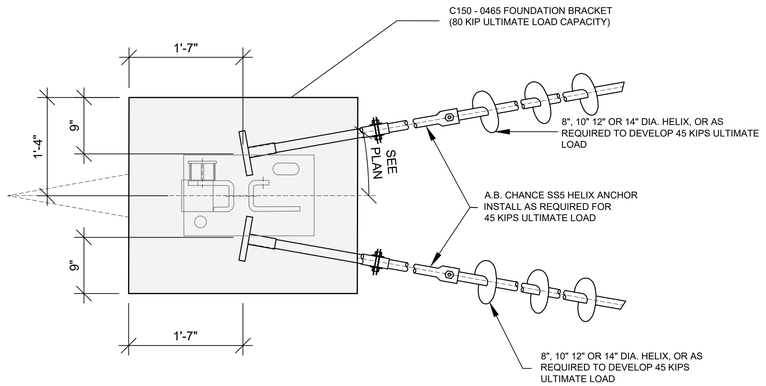
PLAN VIEW



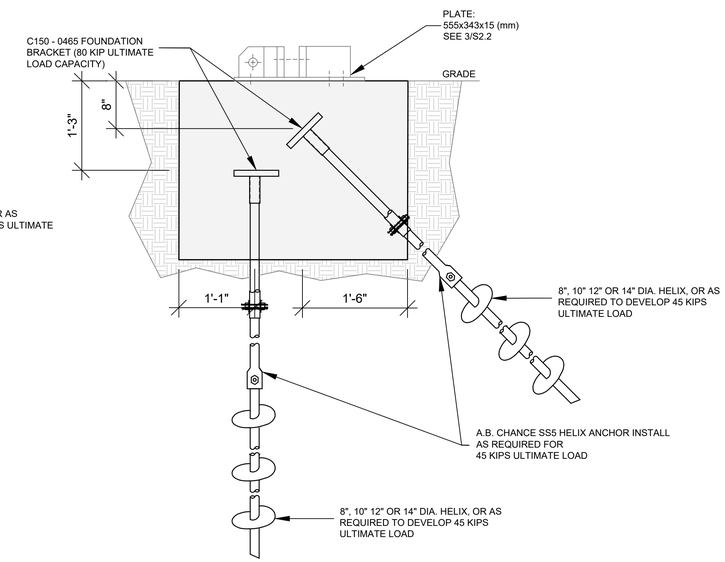
ELEVATION VIEW

2 S2.2 HELICAL PIER CAP REINFORCING DETAIL

SCALE: 1" = 1'-0"



PLAN VIEW



ELEVATION VIEW

1 S2.2 HELICAL PIER CAP DETAIL

SCALE: 1" = 1'-0"

KYLER Engineering
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Sheet Title

Structural Details

Sheet Number

S2.2

EXHIBIT D

Sample Color and Materials

EXHIBIT D

POR. APTOS RANCHO

W. 1/2 SEC. 18, T.11S., R.1E., M.D.B. & M.

Tax Area Code
69-270 69-273

42-05

FOR TAX PURPOSES ONLY

SEACLIFF TERRACE Tr# 244
36M50 11/15/1960

12PM21
8/9/1973

46M09
10/17/1966

APTOS BEACH COUNTRY CLUB SUB #2
23M04 8/20/1925

APTOS BEACH C.C.
SUB. NO. 9
24M29 9/20/1928

SEACLIFF PARK SUB #8
23M24 5/25/1926

41M38
7/2/1965

SEACLIFF TERRACE DR
SEACLIFF WY
SEACLIFF DR
CREEK DR
GLEN DR
P.G. & E. R/W
PARKING EASE.
20' R/W
5' P.G.&E. R/W
EL CAMINO
KELP LN
CENTER AVE
SANTA CLARA AVE
DEL MAR AVE
VALENCIA DR

Rev 10/28/09 CB (Renumberd Blk 2 to 7)
Rev 10/28/09 CB (9-0035180, Sp 7-30)
Rev 10/28/09 CB (9-0035181, Sp 7-13)
Rev 10/28/09 CB (9-0035182, Sp 7-35)
Rev 10/28/09 CB (9-0035183, Sp 7-34)
Rev 10/28/09 CB (9-0035184, Sp 7-12)
Rev 10/16/13 CB (13-0022818, Sp 7-49)
Rev 10/16/13 CB (13-0022819, Sp 7-50)
Rev 10/16/13 CB (13-0022820, Sp 7-51)
Rev 10/16/13 CB (13-0022821, Sp 7-52)
Rev 10/13/17 jg (cor. blk K)
Rev 8/26/2022 CJTC (Cor. parcel line 7-51 & 29)

Electronically Redrawn 1/27/99 RW
Rev. 1/27/99 (Por. to pg. 6) rw
Rev. 5/12/99 CB (Tax Consolidation)
Rev. 8/30/00 (street names) mvm
Rev. 5/17/01 mvm (changed page refs.)
Rev. 1/24/03 DD (2-0097932 LBA, 2-93 & 94)
Rev. 4/7/03 DD (corr. 2-93 & 94)
Rev. 9/8/04 CB (Cor arrow for 2-66)
Rev. 8/1/06 mvm (Cor. to parcel bndy, 2-88)

Note - Assessor's Parcel & Block Numbers Shown in Circles.

EXHIBIT E

Assessor's Map No. 42-05
County of Santa Cruz, Calif.
Jan. 1999

SANTA CRUZ COUNTY PLANNING DEPARTMENT

Parcel Location Map

Parcel: 04205705

- Study Parcel
- Assessor Parcel Boundary
- Existing Park

Map printed: 30 Oct. 2023

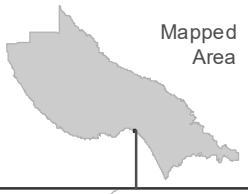
EXHIBIT E

N

0 20 40
Feet

SANTA CRUZ COUNTY PLANNING DEPARTMENT

Parcel General Plan Map



R-UM

042-057-05
(R-UM)

O-R

O-R *Parks, Recreation & Open Space*

R-UM *Res. Urban Medium Density*

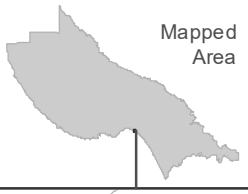
N

0 20 40
Feet

EXHIBIT E

SANTA CRUZ COUNTY PLANNING DEPARTMENT

Parcel Zoning Map



R-1-4

042-057-05
(R-1-4)

PR

PR *Parks, Recreation, & Open Space*

R-1 *Single-Family Residential*

N

0 20 40

Feet

EXHIBIT E

Parcel Information

Services Information

Urban/Rural Services Line:	_X_ Inside __ Outside
Water Supply:	Soquel Creek Water District
Sewage Disposal:	County Sanitation District
Fire District:	Central Fire Protection District
Drainage District:	Flood control District 6

Parcel Information

Parcel Size:	4,617 square feet
Existing Land Use - Parcel:	Residential
Existing Land Use - Surrounding:	Residential
Project Access:	Glenn Drive
Planning Area:	Aptos
Land Use Designation:	R-UM (Urban Medium Residential Desnity)
Zone District:	R-1-4 (Single Family Residential (4,000 square foot minimum parcel))
Coastal Zone:	_X_ Inside __ Outside
Appealable to Calif. Coastal Comm.	_X_ Yes __ No

Technical Reviews: Geotechnical and Geologic report review (REV221051)

Environmental Information

Geologic Hazards:	Slope instability
Fire Hazard:	Not a mapped constraint
Slopes:	Steep slope
Env. Sen. Habitat:	No physical evidence on site
Grading:	No grading proposed
Tree Removal:	No trees proposed to be removed
Scenic:	Mapped scenic resource
Archeology:	Not mapped/no physical evidence on site

County of Santa Cruz

DEPARTMENT OF COMMUNITY DEVELOPMENT AND INFRASTRUCTURE

701 OCEAN STREET, FOURTH FLOOR, SANTA CRUZ, CA 95060-4070
Planning (831) 454-2580 Public Works (831) 454-2160

Matt Machado, Deputy CAO, Director of Community Development and Infrastructure

Carolyn Burke	Stephanie Hansen	Kent Edler	Steve Wiesner	Travis Cary	Kim Moore
Assistant Director	*Assistant Director*	*Assistant Director*	*Assistant Director*	*Director*	*Assistant Director*
Unified Permit Center	*Housing & Policy*	*Special Services*	*Transportation*	*Capital Projects*	*Administration*

23 May 2022

Victor and Marie Tsang
7192 Wooded Lake Drive
San Jose, CA 95120

Subject: Review of the Geotechnical Investigation for Geobrugg Debris Catchment Wall at 113 Glen Drive, Rio Del Mar/APN 042-057-05 in Santa Cruz County, California dated 16 November 2021 by Haro, Kasunich, and Associates
Project No. SC9363.1

Review of: Focused Geologic Investigation, Tsang Property, 113 Glenn Drive, Aptos, California/APN 042-057-05 dated 16 November 2021 by Easton Geology
Job #G19021

Project Site: 113 Glen Drive
APN 042-057-05
Application No. REV221051
Owner: Victor and Marie Tsang

Dear Applicant:

The purpose of this letter is to inform you that the Planning Department has accepted the subject reports and the following items shall be required:

1. All project design and construction shall comply with the recommendations of the reports.

2. Final plans shall reference the subject reports by titles, authors, and dates. Final Plans should also include a statement that the project shall conform to the reports' recommendations.

3. After plans are prepared that are acceptable to all reviewing agencies, please request both your project engineering geologist and geotechnical engineer submit a completed Consultant Plan Review Form (PLG300) to Environmental Planning.

EXHIBIT G

The authors of the geology and geotechnical reports shall sign and stamp their completed forms. Please note that the plan review forms must reference the final plan set by last revision date.

Any updates to report recommendations necessary to address conflicts between the reports and plans must be provided via a separate addendum to the soils report and/or geology report.

Electronic copies of all forms required to be completed by the Geotechnical Engineer may be found on our website: www.sccoplanning.com, under "Environmental", "Geology & Soils", and "Assistance & Forms".

After building permit issuance the soils engineer and engineering geologist *must remain involved with the project* during construction. Please review the Notice to Permits Holders (attached).

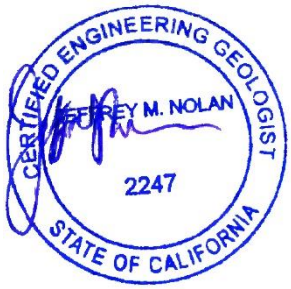
Our acceptance of the reports is limited to their technical content. Other project issues such as zoning, fire safety, septic or sewer approval, etc. may require resolution by other agencies.

Please note that this determination may be appealed within 14 calendar days of the date of service. Additional information regarding the appeals process may be found online at: http://www.sccoplanning.com/html/devrev/plnappeal_bldg.htm

Please contact Rick Parks at (831) 454-3168/email: Rick.Parks@santacruzcounty.us or Jeff Nolan at (831) 454-3175/Jeffrey.Nolan@santacruzcounty.us if we can be of any further assistance.

Respectfully,

Rick Parks, GE 2603
Civil Engineer – Environmental Planning
County of Santa Cruz Planning Department



Jeffrey Nolan, CEG 2247
County Geologist– Environmental Planning
County of Santa Cruz Planning Department

Cc: Moses Cuprill, Haro, Kasunich, and Associates
Greg Easton, Easton Geology
Environmental Planning, Attn: Jessica deGrassi

Attachments: Notice to Permit Holders

EXHIBIT G

NOTICE TO PERMIT HOLDERS WHEN SOILS AND GEOLOGY REPORTS HAVE BEEN PREPARED, REVIEWED AND ACCEPTED FOR THE PROJECT

After issuance of the building permit, the County requires your soils engineer and engineering geologist to be involved during construction.

1. **At the completion of construction,** a *Soils (Geotechnical) Engineer Final Inspection Form* and a *Geologist Final Inspection Form* are required to be submitted to Environmental Planning that includes copies of all observations made during construction and is stamped and signed, certifying that the project was constructed in conformance with the recommendations of the soils and geology reports.

   If the *Final Inspection Form* identifies any portions of the project that were not observed by the soils engineer and/or geologist, you may be required to perform destructive testing in order for your permit to obtain a final inspection. The soils engineer and/or geologist then must complete and initial an *Exceptions Addendum Form* that certifies that the features not observed will not pose a life safety risk to occupants.

EXHIBIT G