## SECTION # 1 - GENERAL REQUIREMENTS

1. ALL WORK SHALL COMPLY WITH THE 2014 EDITION OF THE CALIFORNIA BUILDING CODE, ALONG WITH THE MOST CURRENT EDITIONS OF THE UMC, UPC, AND THE NEC CODES.
2. THE GENERAL CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS AT PROJECT SITE BEFORE EXECUTING ANY WORK. THE GENERAL CONTRACTOR SHALL NOTIFY THE OWNER AND/OR THE AUTHORIZED AGENT OF THE OWNER OF ANY AND ALL DISCREPANCIES BEFORE PROCEEDING.
3. EACH CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS REQUIRED BY THE LEGAL AUTHORITIES BEFORE PROCEEDING WITH THEIR PROSPECTIVE INSTALLATION. HE/SHE SHALL ALSO ARRANGE & PAY FOR ALL INSPECTORS & EXAMINATIONS REQUIRED BY THOSE AUTHORITIES (UNLESS ARRANGEMENT WITH THE OWNER STATES OTHERWISE).
4. ALL WORK AND MATERIALS ARE TO COMPLY IN EVERY RESPECT WITH THE LATEST REQUIREMENTS OF ALL APPLICABLE CITY, COUNTY, AND STATE CODES, LOCAL REGULATIONS, AND THE DIRECTION OF THE BUILDING INSPECTOR FOR SUCH BUILDING LAWS, REGULATIONS AND DIRECTIONS ARE TO BE CONSIDERED AS PART OF THESE SPECIFICATIONS AND PLANS, EXCEPT WHERE EXCEEDED HEREIN.
5. THE STRUCTURAL PLANS SHALL BE USED IN CONJUNCTION WITH, MECHANICAL, PLUMBING, AND ELECTRICAL PLANS.
6. THE PROJECT ENGINEER SHALL INTERPRET THE INTENT OF THE DOCUMENTS IN ANY CASE OF CONFLICT OR DISCREPANCY BETWEEN STRUCTURAL AND OTHER DISCIPLINES.
7. DETAILS NOTED AS "TYPICAL" OR "TYP" SHALL APPLY TO ALL CASES WHETHER OR NOT SPECIFICALLY REFERENCED IN THE DRAWINGS.
8. NUMERICAL DIMENSIONS SHALL TAKE PRIORITY OVER SCALED DIMENSIONS.
9. THE STRUCTURE IS DESIGNED AS A STABLE UNIT AFTER ALL COMPONENTS ARE IN PLACE. THEREFORE, THE CONTRACTOR SHALL PROVIDE ALL SHORING AND BRACING NECESSARY TO INSURE THE STABILITY OF ANY AND ALL PARTS OF THE BUILDING DURING CONSTRUCTION.

DEPUTY INSPECTIONS

- DEPUTY INSPECTIONS AND SUBSEQUENT REPORTS SHALL BE PREPARED IN CONFORMANCE WITH SECTION 1701 OF THE UNIFORM BUILDING CODE AND THE PROJECT SPECIFICATIONS.

ALL DEPUTY INSPECTIONS SHALL BE MADE BY AN INSPECTOR CERTIFIED FOR THE FOLLOWING TYPES OF WORK:

A. ALL FOOTING EXCAVATIONS PRIOR TO PLACEMENT OF REINFORCEMENT.
B. ALL SHOP WELDING OF STRUCTURAL STEEL AND REINFORCEMENT, UNLESS FABRICATON POSSES A TYPE 1, FABRICATORS LICENSE. SUBMIT EVIDENCE OF SUCH TO STRUCTURAL ENGINEER PRIOR TO FABRICATION.
C. ALL FIELD WELDING.
D. ALL CONCRETE WORK WHEN f'c EXCEEDS 2500 PSI @ 28 DAYS.

## SECTION # 2 - DESIGN DATA

### DESIGN CRITERIA

Design Criteria:
Foundation design is based upon the geotechnical investigation by:
SCHICK GEOTECHNICAL, INC.
Report dated: MAR. 24, 2016
Job number: SG 7430-W

| SOIL PROPERTIES | |
|---|---|
| Maximum Allowable Soil Bearing: | 8,000 psf |
| Active Pressure: | 30 pcf level |
| Passive Pressure: | 800 pcf |
| Coeff. Of Friction: | 0.3 |
| Soil Weight: | 125 pcf |
| Min. Pile Dia.: | 3 Ft. |
| Fixity: | 3 Ft. into Bedrock |
| Max Pile Spacing: | 3 Ft. into Bedrock |

SEISMIC COEFFICIENTS (2013 CBC)

Latitude: 34.041deg. N
Longitude: 118.5775deg. W

| | SHORT PERIOD (0.2s) | ONE-SEC PERIOD (0.2s) |
|---|---|---|
| Bearing Material/Site Class table 1613.5.2 & sect. 1613.5.2 | D | [illegible] |
| Spectral Acceleration fig. 1613.5(3) & 1613.5(4) & | $S_s$ = 2.260 (g) | $S_1$ = 0834 (g) |
| Site Coefficient Table 1613.5(1) & 1613.5.3(2) & | $F_a$ = 1.0 | F = 1.3 |
| Spectral Response Accelerations EQ. 16-37 & 16-40 | $S_{ms}$ = 2.260 (g) | $S_{m1}$ = 1.252 (g) |
| Design Acceleration EQ. 16-39 & 16-40 | $S_{ds}$ = 1.506 (g) | $S_{d1}$ = 1.834 (g) |

Spectral Response Acceleration Parameter: S1>.2g, $S_1$ <.75g
Therefore Seismic Design Category: D
Important Factor, I: 1.0 Occupancy Category: II

- SOILS REPORT IS PART OF THE PLANS AND SHALL BE KEPT AT THE JOB SITE AT ALL TIMES.

## SECTION # 3 - CONCRETE

- ALL CONCRETE SHALL ATTAIN THE FOLLOWING MINIMUM STRENGTHS AT 28 DAYS: ALL SHOTCRETE WORK = 3000 PSI
CONVENTIONAL FOOTING = 2500 PSI / CONCRETE WALL = 3000 PSI / PILES = 4000 PSI GRADE BEAMS=3000 PSI
- PORTLAND CEMENT SHALL BE TYPE II, LOW ALKALI, CONFORMING TO UBC STD. 19-1. TYPE V CEMENT SHALL BE USED WHERE HIGH SULFATE RESISTANCE IS REQUIRED (REFER TO SOIL REPORT).
  1. 1/5 NARROWEST DIMENSION BETWEEN SIDES OF FORM
  2. 1/3 THE DEPTH OF SLAB
  3. 3/4 THE MINIMUM CLEAR SPACING BETWEEN REBARS
- AGGREGATE FOR HARDROCK CONCRETE SHALL CONFORM TO ASTM C 33. SIZE LIMITATION SHALL BE AS FOLLOWS:
- CORING OF CONCRETE IS NOT PERMITTED EXCEPT AS NOTED. NOTIFY THE STRUCTURAL ENGINEER IN ADVANCE OF CONDITIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
- BEFORE CONCRETE IS PLACED, CHECK WITH ALL TRADES TO INSURE PROPER PLACEMENT OF ALL OPENINGS, SLEEVES, CONDUITS, CURBS, ETC., RELATING TO THE WORK.
- ALL WATER SHALL BE REMOVED FROM FOUNDATION EXCAVATIONS PRIOR TO PLACING CONCRETE.
- BAR SPLICES IN CONCRETE SHALL BE LAP 48 BAR DIAMETERS MINIMUM, AND MAY BE WIRED TOGETHER UNLESS OTHERWISE NOTED ON PLANS.

## SECTION # 4 - REINFORCING STEEL

- ALL REINFORCING STEEL SHALL BE PLACED IN CONFORMANCE WITH THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318 LATEST), AND THE "MANUAL OF STANDARD PRACTICE FOR REINFORCED CONCRETE CONSTRUCTION (LATEST EDITION) BY THE C.R.S.I.
- REINFORCING BARS SHALL CONFORM TO THE FOLLOWING ASTM RATING AND GRADE TYPE FOR BAR SIZES LISTED:
  #3 AND SMALLER — ASTM A 615 GRADE 40 (MIN)
  #4 AND LARGER — ASTM A 615 GRADE 60
- WELDING OF REINFORCEMENT SHALL BE WITH E70XX LOW HYDROGEN ELECTRODES IN CONFORMANCE WITH THE "RECOMMENDED PRACTICES FOR WELDING REINFORCING STEEL, ETC., AMERICAN WELDING SOCIETY, AWS D.4 (LATEST EDITION).
- ALL REINFORCING BARS SHALL BE BENT COLD. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT EXCEPT AS SHOWN ON DRAWINGS OR PERMITTED BY THE BUILDING OFFICIAL.
- SPLICES IN CONCRETE: MINIMUM OF 48 BAR DIAMETERS OR 24 INCHES, WHICHEVER IS GREATER.
- SPLICES IN MASONRY: MINIMUM OF 40 BAR DIAMETERS OR 20 INCHES, WHICHEVER IS GREATER.
- CONCRETE PROTECTION FOR REINFORCEMENT: REINFORCING STEEL SHALL HAVE THE FOLLOWING MINIMUM CONCRETE COVERAGE (EXCEPT AS NOTED) ON STRUCTURAL DRAWINGS:
  A) CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH=3"
  B) CONCRETE EXPOSED TO EARTH OR WEATHER:
  #6 THROUGH #18 BARS=2"
  #5 BAR AND SMALLER=1-1/2"

## SECTION # 5 - STRUCTURAL OBSERVATION

- STRUCTURAL OBSERVATION IS REQUIRED FOR THE STRUCTURAL SYSTEM IN ACCORDANCE WITH CBC 110. STRUCTURAL OBSERVATION IS THE VISUAL OBSERVATION OF THE ELEMENTS AND CONNECTONS OF THE STRUCTURAL SYSTEM AT SIGNIFICANT CONSTRUCTION STAGES AND THE COMPLETED STRUCTURE FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATIONS. STRUCTURAL OBSERVATION DOES NOT WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED OF THE BUILDING INSPECTOR OR THE DEPUTY INSPECTOR.
- THE OWNER SHALL EMPLOY A CIVIL OR STRUCTURAL ENGINEER TO PERFORM THE STRUCTURAL OBSERVATION. THE ENGINEER OR ARCHITECT SHALL BE REGISTERED OR LICENSED IN THE STATE OF CALIFORNIA. THE DEPARTMENT OF BUILDING AND SAFETY RECOMMENDS THE USE OF THE ENGINEER OR ARCHITECT RESPONSIBLE FOR THE STRUCTURAL DESIGN WHEN THEY ARE INDEPENDENT OF CONTRACTOR.
- THE STRUCTURAL OBSERVER SHALL PROVIDE EVIDENCE OF EMPLOYMENT BY THE OWNER. A LETTER FROM THE OWNER OR A COPY OF THE AGREEMENT FOR SERVICES SHALL BE SENT TO THE BUILDING INSPECTOR BEFORE THE FIRST SITE VISIT. THE STRUCTURAL OBSERVER SHALL ALSO INFORM THE OWNER OF THE REQUIREMENTS FOR A PRECONSTRUCTION MEETING AND SHALL PROVIDE OVER THIS MEETING.
- THE OWNER OR OWNER'S REPRESENTATIVE SHALL COORDINATE AND CALL FOR A MEETING BETWEEN THE ENGINEER RESPONSIBLE FOR THE STRUCTURAL DESIGN, STRUCTURAL OBSERVER, CONTRACTOR, AFFECTED SUBCONTRACTORS AND DEPUTY INSPECTORS. THE PURPOSE OF THE MEETING SHALL BE TO IDENTIFY THE MAJOR STRUCTURAL ELEMENTS AND CONNECTIONS THAT AFFECT THE VERTICAL AND LATERAL LOAD SYSTEMS OF THE STRUCTURE AND TO REVIEW SCHEDULING OF THE REQUIRED OBSERVATIONS. A RECORD OF THE MEETING SHALL BE INCLUDED IN THE FIRST OBSERVATION REPORT SUBMITTED TO THE BUILDING INSPECTOR.

THE STRUCTURAL OBSERVER SHALL PERFORM SITE VISITS AT THOSE STEPS IN THE PROGRESS OF THE WORK THAT ALLOW FOR CORRECTION DEFICIENCIES WITHOUT SUBSTANTIAL EFFORT OR UNCOVERING OF WORK INVOLVED. AT A MINIMUM, THE FOLLOWING SIGNIFICANT CONSTRUCTION STAGES REQUIRE A SITE VISIT AND AN OBSERVATION REPORT FROM THE STRUCTURAL OBSERVER:

| CONSTRUCTION STAGES | ELEMENTS/CONNECTIONS TO BE OBSERVED |
|---|---|
| (1) PRIOR TO POURING OF FOUNDATIONS | FOUNDATON REINF., TIES, DOWELS, EMBEDDED HARDWARE, ANCHOR BOLTS |
| (2) PRIOR TO POURING OF CONC. CAP | REINF. STIRRUPS @ CONC. CAP, DOWELS |
| (3) PRIOR TO POURING OF RETAINING WALLS | WALL REINF. |
| (4) PRIOR TO SHOTCRETE OF RETAINING WALL | WALL REINF. & SLAB REINF. |

- THE STRUCTURAL OBSERVER SHALL PREPARE A REPORT ON THE DEPARTMENT FORM SHOWN ON THIS PAGE FOR EACH SIGNIFICANT STAGE OF CONSTRUCTION OBSERVED. THE ORIGINAL OF THE OBSERVATION REPORT SHALL BE SENT TO THE BUILDING INSPECTOR'S OFFICE AND SHALL BE SIGNED AND SEALED (WET STAMP) BY THE RESPONSIBLE STRUCTURAL OBSERVER. ONE COPY OF THE OBSERVATION REPORT SHALL BE ATTACHED TO THE APPROVED PLANS. THE COPY ATTACHED TO THE PLANS NEED NOT BE SEALED BUT SHALL BE SIGNED BY THE RESPONSIBLE STRUCTURAL OBSERVER OR THEIR DESIGNEE. COPIES OF THE REPORT SHALL ALSO BE GIVEN TO THE OWNER, CONTRACTOR, AND DEPUTY INSPECTOR.
- A FINAL OBSERVATION REPORT MUST BE SUBMITTED WHICH SHOWS THAT ALL OBSERVED DEFICIENCIES WERE RESOLVED AND THE STRUCTURAL SYSTEM GENERALLY CONFORMS WITH THE APPROVED PLANS AND SPECIFICATIONS. THE DEPARTMENT OF BUILDING & SAFETY WILL NOT ACCEPT THE STRUCTURAL WORK WITHOUT THIS FINAL OBSERVATION REPORT AND THE CORRECTION OF SPECIFIC DEFICIENCIES NOTED DURING NORMAL BUILDING AND DEPUTY INSPECTION.
- THE STRUCTURAL OBSERVER SHALL SEND THE ORIGINAL OBSERVATION REPORT TO THE FOLLOWING INSPECTION OFFICE:
INSPECTION GROUP NAME: ____________
STREET ADDRESS: ____________
COMMUNITY OF LA, CA, ZIP CODE ____________
- WHEN THE OWNER ELECTS TO CHANGE THE STRUCTURAL OBSERVER OF RECORD, THE OWNER SHALL:
(1) NOTIFY THE BUILDING INSPECTOR IN WRITING BEFORE THE NEXT INSPECTION,
(2) CALL AN ADDITIONAL PRECONSTRUCTION MEETING, AND
(3) FURNISH THE REPLACEMENT STRUCTURAL OBSERVER WITH A COPY OF ALL PREVIOUS OBSERVATION REPORTS.
- THE ENGINEER OF RECORD SHALL DEVELOP ALL CHANGES RELATING TO THE STRUCTURAL SYSTEMS. THE BUILDING DEPARTMENT SHALL REVIEW AND APPROVE ALL CHANGES TO THE APPROVED PLANS AND SPECIFICATONS.

## SECTION # 6 - SHOTCRETE

- PROPORTIONS AND MATERIALS: SHOTCRETE PROPORTIONS SHALL BE SELECTED THAT ALLOW SUITABLE PLACEMENT PROCEDURES USING THE DELIVERY EQUIPMENT SELECTED AND SHALL RESULT IN FINISHED IN-PLACE HARDENED SHOTCRETE MEETING THE STRENGTH REQUIREMENTS SPECIFIED.
- AGGREGATE: COURSE AGGREGATE, IF USED, SHALL NOT EXCEED 3/4 INCH.
- REINFORCEMENT: THE MAXIMUM SIZE OF REINFORCEMENT SHALL BE NO. 5 BARS UNLESS IT CAN BE DEMONSTRATED BY PRECONSTRUCTION TESTS THAT ADEQUATE ENCASEMENT OF LARGER BARS CAN BE ACHIEVED. WHEN NO.5 OR SMALLER BARS ARE USED, THERE SHALL BE A MINIMUM CLEARANCE BETWEEN PARALLEL REINFORCEMENT BARS OF 2 1/2 INCHES. WHEN BARS LARGER THAN NO. 5 ARE PERMITTED, THERE SHALL BE A MINIMUM CLEARANCE BETWEEN PARALLEL BARS EQUAL TO SIX DIAMETERS OF THE BARS USED. WHEN TWO CURTAINS OF STEEL ARE PROVIDED, THE CURTAIN NEAREST THE NOZZLE SHALL HAVE A MINIMUM SPACING EQUAL TO 12 BAR DIAMETERS AND THE REMAINING CURTAIN SHALL HAVE A MINIMUM SPACING OF SIX BAR DIAMETERS.

LAP SPLICES IN REINFORCING BARS SHALL BE BY THE NONCONTACT LAP SPLICE METHOD WITH AT LEAST 2 INCHES CLEARANCE BETWEEN BARS. THE BUILDING OFFICIAL MAY PERMIT THE USE OF CONTACT LAP SPLICES WHEN NECESSARY FOR THE SUPPORT OF THE REINFORCING PROVIDED IT CAN BE DEMONSTRATED BY MEANS OF PRECONSTRUCTION TESTING, THAT ADEQUATE ENCASEMENT OF THE BARS AT THE SPLICE CAN BE ACHIEVED, AND PROVIDED THAT THE SPLICES ARE PLACED SO THAT A LINE THROUGH THE CENTER OF THE TWO SPLICED BARS IS PERPENDICULAR TO THE SURFACE OF THE SHOTCRETE WORK.

- PRECONSTRUCTION TESTS: WHEN REQUIRED BY THE BUILDING OFFICIAL A TEST PANEL SHALL BE SHOT, CURED, CORED OR SAWN, EXAMINED AND TESTED PRIOR TO COMMENCEMENT OF THE PROJECT. THE SAMPLE PANEL SHALL BE REPRESENTATIVE OF THE PROJECT AND SIMULATE JOB CONDITIONS AS CLOSELY AS POSSIBLE. THE PANEL THICKNESS AND REINFORCING SHALL REPRODUCE THE THICKEST AND MOST CONGESTED AREA SPECIFIED IN THE STRUCTURAL DESIGN. IT SHALL BE SHOT AT THE SAME ANGLE, USING THE SAME NOZZLEMAN AND WITH THE SAME CONCRETE MIX DESIGN THAT WILL BE USED ON THE PROJECT.
- REBOUND: ANY REBOUND OR ACCUMULATED LOOSE AGGREGATE SHALL BE REMOVED FROM THE SURFACES TO BE COVERED PRIOR TO PLACING THE INITIAL OR ANY SUCCEEDING LAYERS OF SHOTCRETE. REBOUND SHALL NOT BE REUSED AS AGGREGATE.
- JOINTS: EXCEPT WHERE PERMITTED HEREIN, UNFINISHED WORK SHALL NOT BE ALLOWED TO STAND FOR MORE THAN 30 MINUTES UNLESS ALL EDGES ARE SLOPED TO A THIN EDGE. BEFORE PLACING ADDITIONAL MATERIAL ADJACENT TO PREVIOUSLY APPLIED WORK, SLOPING AND SQUARE EDGES SHALL BE CLEANED AND WETTED.
- DAMAGE: AN IN-PLACE SHOTCRETE WHICH EXHIBITS SAGS OR SLOUGHS, SEGREGATION, HONEYCOMBING, SAND POCKETS OR OTHER OBVIOUS DEFECTS SHALL BE REMOVED AND REPLACED.
- CURING: DURING THE CURING PERIODS SPECIFIED HEREIN, SHOTCRETE SHALL BE MAINTAINED ABOVE 40°F AND IN MOIST CONDITION. IN INITIAL CURING, SHOTCRETE SHALL BE KEPT CONTINUOUSLY MOIST FOR 24 HOURS AFTER PLACEMENT IS COMPLETE. FINAL CURING SHALL CONTINUE FOR SEVEN DAYS AFTER SHOTCRETING, FOR THREE DAYS IF HIGH-EARLY-STRENGTH CEMENT IS USED, OR UNTIL THE SPECIFIED STRENGTH IS OBTAINED. FINAL CURING SHALL CONSIST OF A FOG SPRAY OR AN APPROVED MOISTURE-RETAINING COVER OR MEMBRANE. IN SECTIONS OF A DEPTH IN EXCESS OF 12 INCHES, FINAL CURING SHALL BE THE SAME AS THAT FOR INITIAL CURING.

## SECTION # 7 - NOTES TO CONTRACTOR

- CONSTRUCTION SHALL COMPLY WITH THE LATEST EDITION OF THE APPLICABLE CODE OR BUILDING ORDINANCE.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE. ENGINEER SHALL BE CONSULTED IN CASE OF SPECIAL CONDITIONS NOT COVERED BY DETAILS ON THESE DRAWINGS.
- SEE DRAINAGE PER SHT. S-3 AND S-5.
- PROVIDE HYDROSTATIC PRESSURE RELIEF VALVE AT LOW POINT IN "WATER TABLE" AREAS.
- SEPARATE PERMIT IS REQUIRED FOR PLUMBING, HEATING AND ELECTRICAL WORK.
- JUNCTION BOX SHALL BE LOCATED NOT LESS THAN 8" ABOVE GROUND, AND NOT LESS THAN 4'-0" FROM PERIMETER OF CAP.
- TYPE V CEMENT SHALL BE USED UNLESS A SOILS REPORT SHOWING SULFATE CONCENTRATION OF LESS THAN 0.2% IS PROVIDED.
- PNEUMATICALLY PLACED CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS WITH NOT MORE THAN 4-1/2 PARTS TO ONE PART CEMENT BY VOLUME AND 3 GALLONS OF WATER PER SACK OF CEMENT U.N.O.
- PLACE GUNITE AGAINST UNDISTURBED NATURAL SOIL, SITE BEDROCK, OR CERTIFIED COMPACTED FILL, UNLESS FREESTANDING WALLS ARE USED.
- WET MIX SHOTCRETE MAY BE USED.
- REINFORCING SHALL CONFORM TO THE LATEST A.S.T.M. SPECIFICATION A-615, GRADE 40.
- LAP ALL BARS MINIMUM 40 DIAMETER AT SPLICES AND CORNERS.
- PROVIDE A MECHANICAL DEVICES TO HOLD STEEL IN PLACE AND TO MAINTAIN THE REQUIRED CLEARANCE BETWEEN STEEL AND EARTH.
- GRADING INSPECTOR SHALL BE NOTIFIED OF DUMP LOCATION PRIOR TO EXCAVATION.

## SECTION # - DEPUTY INSPECTION

1. DEPUTY INSPECTION AND ALL SUBSEQUENT REPORTS SHALL BE PREPARED IN CONFORMANCE WITH CHAPTER 17 OF THE CALIFORNIA BUILDING CODE AND THE PROJECT SPECIFICATIONS AT THE OWNERS EXPENSE.
2. ALL DEPUTY INSPECTIONS SHALL BE PERFORMED BY AN INDEPENDENT AGENCY AUTHORIZED TO PERFORM INSPECTIONS OF THE SPECIFIC BUILDING COMPONENT AND SUBJECT TO APPROVAL BY THE GOVERNING BUILDING DEPARTMENT.
3. DEPUTY INSPECTION REPORTS SHALL BE SUBMITTED TO THE OWNER, ENGINEER, AND DEPARTMENT OF BUILDING AND SAFETY NO LATER THAN (7) WORKING DAYS FROM THE DATE OF OBSERVATION.
4. THE FOLLOWING WORK SHALL BE PERFORMED IN THE PRESENCE OF AN APPROVED DEPUTY INSPECTOR:
   A. PLACEMENT OF CONCRETE GREATER THAN f'c > 2500 psi
   B. ANY INSTALLATION OF EPOXY GROUTED RODS OR REINFORCING
   C. FIELD WELDING OF STRUCTURAL STEEL
   D. ANY MASONRY NOTED AS REQUIRING SPECIAL INSPECTION.
   E. SEISMIC FORCE RESISTING SYSTEM(S) I.E. WOOD DIAPHRAMS, WOOD SHEAR WALLS, HARDY FRAMES, MOMENT FRAME, CANTILEVER COLUMNS

### County of Los Angeles
DEPARTMENT OF PUBLIC WORKS BUILDING & SAFETY DIVISION
Los Angeles Regional Uniform Code Program

### STRUCTURAL OBSERVATION PROGRAM
AND DESIGNATION OF THE
STRUCTURAL OBSERVER

PERMIT APPL. NO.:

| | |
|---|---|
| Project Address: | 3929 MALIBU VISTA DRIVE |
| Description of Work: | EMERGENCY HILLSIDE RETENTION SYSTEM |
| Owner: NATASHA ROIT & REBECCA RICKLEY | Architect: NONE |
| Engineer of Record: | T ENGINEERING GROUP, INC. |

STRUCTURAL OBSERVATION (ONLY CHECKED ITEMS ARE REQUIRED)
Firm or Individual to be responsible for the Structural Observation:
Name ____ Phone ____ Calif. Registration ____

| FOUNDATION | WALL | FRAME | DIAPHRAGM |
|---|---|---|---|
| ☒ Footing, Stem Walls, Piers | ☐ Concrete | ☐ Steel Moment Frame | ☐ Concrete |
| ☐ Mat Foundation | ☐ Masonry | ☐ Steel Braced Frame | ☐ Steel Deck |
| ☒ Caisson, Piles, Grade Beams | ☐ Wood | ☐ Concrete Moment Frame | ☐ Wood |
| ☐ Retaining Foundation, Hillside Special Anchors | ☒ Others: | ☐ Masonry Wall Frame | ☐ Others: |
| ☐ Others | | ☐ Others: | |

DECLARATION BY OWNER
I the Owner of the project, declare that the above listed firm or individual is hired by me to be the Structural Observer.

Signature ____ Date ____

DECLARATION BY ARCHITECT OR ENGINEER OF RECORD
I the Architect or Engineer of record for the project declare that the above listed firm or Individual is designated by me to be responsible for the Structural Observation.

Signature ____ License No. ____ Date ____

## DRAINAGE NOTES:

1. PROVISIONS SHALL BE MADE FOR CONTRIBUTORY DRAINAGE AT ALL TIMES.
2. OWNER WILL MAINTAIN ALL DRAINAGE DEVICES AND KEEP FREE OF DEBRIS.
   TOTAL PROPOSED LANDSCAPE AREA 0.00 SQUARE FEET.
3. TOTAL TURF AREA 0.00%
4. TOTAL DROUGHT TOLERANT LANDSCAPING AREA 0.00%

The following project information and grading notes as applicable must be shown on all grading plans.
PROJECT INFORMATION: (Required on Title Sheet of all Grading Plans)

(General Information)
Grading Permit Application No. GR ____ *
Earthwork Volumes: Cut 18 (cy), Fill 02 (cy) *
Over Excavation/ Alluvial Removal & Compaction ____ (cy) *
Export 16 (cy), Export Location: LOS HILLS LANDFILL *
Total Disturbed Area 0.01 (Acres) *
Total Proposed Landscape Area 0 Square Feet *
Total Turf Area 0 % (Percent of Total Proposed Landscaping) *
Total Drought Tolerant Landscaping Area 0 % (Percent of Total Proposed Landscaping) *
Pre-Development Impervious area 0.12 (Acres) *
Post-Development Impervious area 0.146 (Acres) *
Waste Discharge Identification Number (WDID #) ____
- Construction & Demolition Debris Recycling and Reuse Plan (RPP ID) ____ *
- Post-construction BMP feature(s) GPS coordinates x ____, y ____

(Property Information)
Property Address 3929 MALIBU VISTA DR. (If exist *)
Tract / Parcel Map No. 28458 Lot/Parcel No. PORTION OF LOT 7
Property Owner BECKY RICKLEY & NATASHA ROIT *
Assessors ID Number(s) 4443-003-012 *

(Zoning, Regional Planning, and other Agency Information)
Property Zoning: ____ *
Intended Land Use: SINGLE FAMILY RESIDENCE *
(For proposed graded areas - i.e. ... Single Family Residence )
Certificate of Compliance: CC NO. ____
Plot Plan Number: PP NO. ____
Conditional Use Permit: CUP NO. ____ Expiration Date: ____
Oak Tree Permit Number: OTP NO. ____ Expiration Date: ____
Community Standards District: ____
California Coastal Commission Area: ____ Yes, ____ No Approved volume: ____ (cy)
Coastal Development Permit CDP ____ Expiration Date: ____
Note: Items marked * are required on all grading plan.

## PLANTING AND IRRIGATION NOTES:

1. Planting and irrigation on graded slopes must comply with the following minimum guidelines:
   a. The surface of all cut slopes more than 5 feet in height and fill slopes more than 3 feet in height shall be protected against damage by erosion by planting with grass or groundcover plants. Slopes exceeding 15 feet in vertical height shall also be planted with shrubs, spaced at not to exceed 10 feet on centers; or trees, spaced at not to exceed 20 feet on centers, or a combination of shrubs and trees at equivalent spacing, in addition to the grass or groundcover plants. The plants selected and planting methods used shall be suitable for the soil and climatic conditions of the site. Plant material shall be selected which will produce a coverage of permanent planting effectively controlling erosion. Consideration shall be given to deep-rooted planting material needing limited watering, maintenance, high root to shoot ratio, wind susceptibility and fire-retardant characteristics. All plant materials must be approved by the building official. (Section J110.3 of the County of Los Angeles Building Code)
   Note: Planting may be modified for the site if specific recommendations are provided by both the Soils Engineer and a Landscape Architect. Specific recommendations must consider soils and climatic conditions, irrigation requirements, planting methods, fire retardant characteristics, water efficiency, maintenance needs, and other regulatory requirements. Recommendations must include a finding that the alternative planting will provide a permanent and effective method of erosion control. Modifications to planting must be approved by the Building Official prior to installation.
   b. Slopes required to be planted by Section J110.3 shall be provided with an approved system of irrigation that is designed to cover all portions of the slope. Irrigation system plans shall be submitted and approved prior to installation. A functional test of the system may be required. For slopes less than 20 feet in vertical height, hose bibs to permit hand watering will be acceptable if such hose bibs are installed at conveniently accessible locations where a hose no longer than 50 feet is necessary for irrigation. The requirements for permanent irrigation systems may be modified upon specific recommendation of a landscape architect or equivalent authority that, because of the type of plants selected, the planting methods used and the soil and climatic conditions at the site, irrigation will not be necessary for the maintenance of the slope planting. (Section J110.4 of the County of Los Angeles Building Code)
   c. Other governmental agencies may have additional requirements for landscaping and irrigation. It is the responsibility of the applicant to coordinate with other agencies to meet their requirements while maintaining compliance with the County of Los Angeles Building Code.
48. The planting and irrigation systems shall be installed as soon as practical after rough grading. Prior to final grading approval all required slope planting must be well established. (Section J110.7of the County of Los Angeles Building Code)
49. Landscape irrigation system shall be designed and maintained to prevent spray on structures. (Title 31, Section 5.407.2.1)
50. Prior to rough grade approval this project requires a landscape permit. Landscape plans in compliance with the "Model Water Efficient Landscape Ordinance" Title 23, Chapter 2.7 of California Code of Regulations (AB 1881) must be submitted to the Department of Public Works, Land Development Division. (900 S. Fremont Ave, Alhambra - 3RD Floor, CA 91803 (626) 458-4921). To obtain Landscape permit approved plans and Water Purveyor acknowledgment form must be submitted to the local Building and Safety office.

ATTACHMENTS

Best Management Practice Notes (BMP Notes) to be added to all Grading Plans

BEST MANAGEMENT PRACTICE NOTES:

1. Every effort should be made to eliminate the discharge of non-stormwater from the project site at all times.
2. Eroded sediments and other pollutants must be retained on-site and may not be transported from the site via sheet flow, swales, area drains, natural drainage courses or wind.
3. Stockpiles of earth and other construction related materials must be protected from being transported from the site by the forces of wind or water.
4. Fuels, oils, solvents, and other toxic materials must be stored in accordance with their listing and are not to contaminate the soil and surface waters. All approved storage containers are to be protected from the weather. Spills must be cleaned up immediately and disposed of in a proper manner. Spills may not be washed into the drainage system.
5. Excess or waste concrete may not be washed into the public way or any other drainage system. Provisions shall be made to retain concrete wastes on-site until they can be disposed of as solid waste.
6. Trash and construction related solid wastes must be deposited into a covered receptacle to prevent contamination of rainwater and dispersal by wind.
7. Sediments and other materials may not be tracked from the site by vehicle traffic. The construction entrance roadways must be stabilized so as to inhibit sediments from being deposited into the public way. Accidental depositions must be swept up immediately and may not be washed down by rain or other means.
8. Any slopes with disturbed soils or denuded of vegetation must be stabilized so as to inhibit erosion by wind and water.
9. "I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that submitting false and/ or inaccurate information, failing to update the ESCP to reflect current conditions, or failing to properly and/ or adequately implement the ESCP may result in revocation of grading and/or other permits or other sanctions provided by law."

Print Name ____________
(Owner or authorized agent of the owner)

Signature ____________ Date ____________
(Owner or authorized agent of the owner)

The following BMPs as outlined in, but not limited to, the latest edition of the CASQA Construction BMP Online Handbook or Caltrans Stormwater Quality Handbooks (Construction Site BMP Manual), may apply during the construction of this project (additional measures may be required if deemed appropriate by the Project Engineer or the Building Official)

EROSION CONTROL
EC1 - SCHEDULING
EC2 - PRESERVATION OF EXISTING VEGETATION
EC3 - HYDRAULIC MULCH
EC4 - HYDROSEEDING
EC5 - SOIL BINDERS
EC6 - STRAW MULCH
EC7 - GEOTEXTILES & MATS
EC8 - WOOD MULCHING
EC9 - EARTH DIKES AND DRAINAGE SWALES
EC10 - VELOCITY DISSIPATION DEVICES
EC11 - SLOPE DRAINS
EC12 - STREAMBANK STABILIZATION
EC13 - RESERVED
EC14 - COMPOST BLANKETS
EC15 - SOIL PREPARATION/ROUGHENING
EC16 - NON-VEGETATED STABILIZATION

TEMPORARY SEDIMENT CONTROL
SE1 - SILT FENCE
SE2 - SEDIMENT BASIN
SE3 - SEDIMENT TRAP
SE4 - CHECK DAM
SE5 - FIBER ROLLS
SE6 - GRAVEL BAG BERM
SE7 - STREET SWEEPING AND VACUUMING
SE8 - SANDBAG BARRIER
SE9 - STRAW BALE BARRIER
SE10 - STORM DRAIN INLET PROTECTION
SE11 - ACTIVE TREATMENT SYSTEMS
SE12 - TEMPORARY SILT DIKE
SE13 - COMPOST SOCKS & BERMS
SE14 - BIOFILTER BAGS

WIND EROSION CONTROL
WM10 - LIQUID WASTE MANAGEMENT

EQUIPMENT TRACKING CONTROL
TC1 - STABILIZED CONSTRUCTION ENTRANCE EXIT
TC2 - STABILIZED CONSTRUCTION ROADWAY
TC3 - ENTRANCE/OUTLET TIRE WASH

NON-STORMWATER MANAGEMENT
NS1 - WATER CONSERVATION PRACTICES
NS2 - DEWATERING OPERATIONS
NS3 - PAVING AND GRINDING OPERATIONS
NS4 - TEMPORARY STREAM CROSSING
NS5 - CLEAR WATER DIVERSION
NS6 - ILLICIT CONNECTION/DISCHARGE
NS7 - POTABLE WATER/IRRIGATION
NS8 - VEHICLE AND EQUIPMENT CLEANING
NS9 - VEHICLE AND EQUIPMENT FUELING
NS10 - VEHICLE AND EQUIPMENT MAINTENANCE
NS11 - PILE DRIVING OPERATIONS
NS12 - CONCRETE CURING
NS13 - CONCRETE FINISHING
NS14 - MATERIAL AND EQUIPMENT USE
NS15 - DEMOLITION ADJACENT TO WATER
NS16 - TEMPORARY BATCH PLANTS

WASTE MANAGEMENT & MATERIAL POLLUTION CONTROL
WM1 - MATERIAL DELIVERY AND STORAGE
WM2 - MATERIAL USE
WM3 - STOCKPILE MANAGEMENT
WM4 - SPILL PREVENTION AND CONTROL
WM5 - SOLID WASTE MANAGEMENT
WM6 - HAZARDOUS WASTE MANAGEMENT
WM7 - CONTAMINATION SOIL MANAGEMENT
WM8 - CONCRETE WASTE MANAGEMENT
WM9 - SANITARY/SEPTIC WASTE MANAGEMENT
WM10 - LIQUID WASTE MANAGEMENT

## GENERAL NOTES:

1. All grading and construction shall conform to the 2014 County of Los Angeles Building Codes and the State Model Water Efficiency Landscape Ordinance unless specifically noted on these plans.
2. Any modifications of or changes to approved grading plans must be approved by the Building Official.
3. No grading shall be started without first notifying the Building Official. A Pre-grading meeting at the site is required before the start of the grading with the following people present: Owner, grading contractor, design civil engineer, soils engineer, geologist, County grading inspector(s) or their representatives, and when required the archeologist or other jurisdictional agencies. Permittee or his agent are responsible for arranging Pre-grade meeting and must notify the Building Official at least two business days prior to proposed pre-grade meeting.
4. Approval of these plans reflect solely the review of plans in accordance with the County of Los Angeles Building Codes and does not reflect any position by the County of Los Angeles or the Department of Public Works regarding the status of any title issues relating to the land on which the improvements may be constructed. Any disputes relating to title are solely a private matter not involving the County of Los Angeles or the Department of Public Works.
5. All grading and construction activities shall comply with County of Los Angeles Code, Title 12, Section 12.12.030 that controls and restricts noise from the use of construction and grading equipment from the hours of 8:00 PM to 6:30 AM, and on Sundays and Holidays. (More restrictive construction activity times may govern, as required by the Department of Regional Planning and should be shown on the grading plans when applicable.)
6. California Public Resources Code (Section 5097.98) and Health and Safety Code (Section 7050.5) address the discovery and disposition of human remains. In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, the law requires that grading immediately stops and no further excavation or disturbance of the site, or any nearby area where human remains may be located, occur until the following has been measures have been taken:
   a. The County Coroner has been informed and has determined that no investigation of the cause of death is required, and
   b. If the remains are of Native American origin, the descendants from the deceased Native Americans have made a recommendation for the means of treating or disposing, with appropriate dignity, of the human remains and any associated grave goods.
7. The location and protection of all utilities is the responsibility of the Permittee.
8. All export of material from the site must go to a permitted site approved by the Building Official or a legal dumpsite. Receipts for acceptance of excess material by a dumpsite are required and must be provided to the Building Official upon request.
9. A copy of the grading permit and approved grading plans must be in the possession of a responsible person and available at the site at all times.
10. Site boundaries, easements, drainage devices, restricted use areas shall be located per construction staking by Field Engineer or licensed surveyor. Prior to grading, as requested by the Building Official, all property lines, easements, and restricted use areas shall be staked.
11. No grading or construction shall occur within the protected zone of any oak tree as required per Title Chapter 22.56 of the County of Los Angeles Zoning Code. The protected zone shall mean that area within the drip line of an oak tree extending there from a point at least five feet outside the drip line, or 15 feet from the trunk(s) of a tree, whichever is greater.
   If an oak tree permit is obtained: (Add the following Note :)
   All grading and construction within the protected zone of all oak trees shall be per oak tree permit no.________. All recommendations in the permit and associated oak tree report must be complied with and are a part of the grading plan. A copy of the oak tree permit and associated reports shall be maintained in the possession of a responsible person and available at the site at all times.
12. The standard retaining wall details shown on the grading plans are for reference only. Standard retaining walls are not checked, permitted, or inspected per the Grading Permit. A separate retaining wall permit is required for all standard retaining walls.
   Note: *This note only applies to standard retaining walls. Geogrid fabric and segmental retaining walls do not require a separate retaining wall permit. Details and construction notes for all Geogrid walls must be on the grading plan.*
13. A preventive program to protect the slopes from potential damage from burrowing rodents is required per Section J101.8 of the County of Los Angeles Building Code. Owner is to inspect slopes periodically for evidence of burrowing rodents and a first evidence of their existence shall employ an exterminator for their removal.
14. Where a grading permit is issued and the Building Official determines that the grading will not be completed prior to November 1, the owner of the site on which the grading is being performed shall, on or before October 1, file or cause to be filed with the Building Official an ESCP per Section J110.8.3 of the County of Los Angeles Building Code.
15. Transfer of Responsibility: If the Field Engineer, the Soils Engineer, or the Engineering Geologist of record is changed during grading, the work shall be stopped until the replacement has agreed in writing to accept their responsibility within the area of technical competence for approval upon completion of the work. It shall be the duty of the permittee to notify the Building Official in writing of such change prior to the recommencement of such grading.

INSPECTION NOTES

16. The permittee or his agent shall notify the Building Official at least one working day in advance of required inspections at following stages of the work. (Section J105.7 of the Building Code.)
   (a) Pre-grade - Before the start of any earth disturbing activity or construction.
   (b) Initial - When the site has been cleared of vegetation and unapproved fill has been scarified, benched or otherwise prepared for fill. Fill shall not be placed prior to this inspection. Note: Prior to any construction activities, including grading, all storm water pollution prevention measures including erosion control devices which contain sediments must be installed.
   (c) Rough - When approximate final elevations have been established; drainage terraces, swales and berms installed at the top of the slope; and the statements required in this Section have been received.
   (d) Final - When grading has been completed; all drainage devices installed; slope planting established, irrigation systems installed and the As-Built plans, required statements, and reports have been submitted and approved.
17. In addition to the inspection required by the Building Official for grading, reports and statements shall be submitted to the Building Official in accordance with Section J105 of the County of Los Angeles Building Code.
18. Unless otherwise directed by the Building Official, the Field Engineer for all engineered grading projects shall prepare routine inspection reports as required under Section J105.11 of the County of Los Angeles Building Code. These reports, known as "Report of Grading Activities", shall be submitted to the Building Official as follows:
1. Bi-weekly during all times when grading of 400 cubic yards or more per week is occurring on the site;
2. Monthly, at all other times; and
3. at any time when requested in writing by the Building Official.
   Such "Report of Grading Activities" shall certify to the Building Official that the Field Engineer has inspected the grading site and related activities and has found them in compliance with the approved grading plans and specifications, the building code, all grading permit conditions, and all other applicable ordinances and requirements. This form is available at the following website http://dpw.lacounty.gov/bsd/dg/default.aspx. "Report of Grading Activities" may be scanned and uploaded at the website or faxed to (310) 530-5482. Failure to provide required inspection reports will result in a "Stop Work Order."
19. All graded sites must have drainage swales, berms, and other drainage devices installed prior to rough grading approval per Section J105.7 of the County of Los Angeles Building Code.
20. The grading contractor shall submit the statement to the grading inspector as required by Section J105.12 of the County of Los Angeles Building Code at the completion of rough grading.
21. Final grading must be approved before occupancy of buildings will be allowed per Section J105 of the County of Los Angeles Building Code.

DRAINAGE NOTES

22. Roof drainage must be diverted from graded slopes.
23. Provisions shall be made for contributory drainage at all times.
24. All construction and grading within a storm drain easement are to be done per Private Drain PD No.________ or miscellaneous Transfer Drain MTD No. ________.
25. All storm drain work is to be done under continuous inspection by the Field Engineer. Status reports required under note 18 and Section J105.11 of the County of Los Angeles Building Code shall include inspection information and reports on the storm drain installation.

AGENCY NOTES (Add - Applicable Notes)

26. An encroachment permit from (County of Los Angeles Department of Public Works) (CALTRANS) (City of ________) is required for all work within or affecting road right of way. All work within Road right of way shall conform to (County of Los Angeles Department of Public Works)(CALTRANS) (City of ________) encroachment permit.
27. An encroachment permit /connection permit is required from the County of Los Angeles Flood Control District for all work within the County of Los Angeles Flood Control District Right of Way. All work shall conform to conditions set by the Permit.
28. Permission to operate in Very High Fire Hazard Severity Zone must be obtained from the Fire Prevention Bureau or the local Fire Station prior to commencing work.
29. All work within the streambed and areas outlined on grading plans shall conform to:
   Army Corp 404 Permit Number: ________.
   California Fish & Wildlife Permit No.: ________.
30. All construction/demolition, grading, and storage of bulk materials must comply with the local AQMD rule 403 for Fugitive Dust. Information on rule 403 is available at AQMD's website http://www.avaqmd.com.

GENERAL GEOTECHNICAL NOTES

31. All work must be in compliance with the recommendations included in the geotechnical consultant's report(s) and the approved grading plans and specifications.
32. Grading operations must be conducted under periodic inspections by the geotechnical consultants with monthly inspection reports to be submitted to the Geology and Soils Section. (900 S. Fremont, Alhambra CA 91803 - 3rd Floor )
33. The Soil Engineer shall provide sufficient inspections during the preparation of the natural ground and the placement and compaction of the fill to be satisfied that the work is being performed in accordance with the plan and applicable Code requirements.
34. Rough grading must be approved by a final engineering geology and soils engineering report. An As-Built Geologic Map must be included in the final geology report. Provide a final report statement that verifies work was done in accordance with report recommendations and code provisions (Section J105.12 of the County of Los Angeles Building Code). The final report(s) must be submitted to the Geotechnical and Materials Engineering Division for review and approval.
35. Foundation, wall and pool excavations must be inspected and approved by the consulting geologist and soil engineer, prior to the placing of steel or concrete.
36. Building pads located in cut/fill transition areas shall be over-excavated a minimum of three (3) feet below the proposed bottom of footing.

## FILL NOTES

1. All fill shall be compacted to the following minimum relative compaction criteria:
   a. 90 percent of maximum dry density within 40 feet below finish grade.
   b. 93 percent of maximum dry density deeper than 40 feet below finish grade, unless a lower relative compaction (not less than 90 percent of maximum dry density) is justified by the geotechnical engineer.
   The relative compaction shall be determined by A.S.T.M. soil compaction test D1557-91 where applicable: Where not applicable, a test acceptable to the Building Official shall be used. (Section J107.5 of the County of Los Angeles Building Code.)
   c. 95 percent of maximum dry density is required for all Fire lanes unless otherwise approved by the Fire Department.
38. Field density shall be determined by a method acceptable to the Building Official. (Section J107.5 of the County of Los Angeles Building Code.) However, not less than 10% of the required density test, uniformly distributed, and shall be obtained by the Sand Cone Method.
39. Sufficient tests of the fill soils shall be made to determine the relative compaction of the fill in accordance with the following minimum guidelines:
   a. One test for each two-foot vertical lift.
   b. One test for each 1,000 cubic yards of material placed.
   c. One test at the location of the final fill slope for each building site (lot) in each four-foot vertical lift or portion thereof.
   d. One test in the vicinity of each building pad for each four-foot vertical lift or portion thereof.
40. Sufficient tests of fill soils shall be made to verify that the soil properties comply with the design requirements, as determined by the Soil Engineer including soil types, shear strengths parameters and corresponding unit weights in accordance with the following guidelines:
   a. Prior and subsequent to placement of the fill, shear tests shall be taken on each type of soil or soil mixture to be used for all fill slopes steeper than three (3) horizontal to one vertical.
   b. Shear test results for the proposed fill material must meet or exceed the design values used in the geotechnical report to determine slope stability requirements. Otherwise, the slope must be reevaluated using the actual shear test value of the fill material that is in place.
   c. Fill soils shall be free of deleterious materials.
41. Fill shall not be placed until stripping of vegetation, removal of unsuitable soils, and installation of subdrain (if any) have been inspected and approved by the Soil Engineer. The Building Official may require a "Standard Test Method for moisture, ash, organic matter, peat or other organic soils" ASTM D-2974-87 on any suspect material. Detrimental amounts of organic material shall not be permitted in fills. Soil containing small amounts of roots may be allowed provided that the roots are in a quantity and distributed in a manner that will not be detrimental to the future use of the site and the soils engineer approves the use of such material.
42. Rock or similar material greater than 12 inches in diameter shall not be placed in the fill unless recommendations for such placement have been submitted by the Soil Engineer and approved in advance by the Building Official. Location, extent, and elevation of rock disposal areas must be shown on an "As Built" grading plan.
43. Continuous inspection by the Soil Engineer, or a responsible representative, shall be provided during all fill placement and compaction operations where fills have a depth greater than 30 feet or slope surface steeper than 2:1. (Section J107.8 of the County of Los Angeles Building Code)
44. Continuous inspection by the Soil Engineer, or a responsible representative, shall be provided during all subdrain installation. (Section J107.2 of the County of Los Angeles Building Code)
45. All subdrain outlets are to be surveyed for line and elevation. Subdrain information must be shown on an "As Built" grading plan.
46. Fill slopes in excess of 2:1 steepness ratio are to be constructed by the placement of soil at sufficient distance beyond the proposed finish slope to allow compaction equipment to be operated at the outer limits of the final slope surface. The excess fill is to be removed prior to completion of rough grading. Other construction procedures may be used when it is demonstrated to the satisfaction of the Building Official that the angle of slope, construction method and other factors will have equivalent effect. (Section J107.5 of the County of Los Angeles Building Code.)

**DETAILED PROJECT DESCRIPTION:**

| | LENGTH | MAX HEIGHT | AVE. HEIGHT | # OF PILES | APPLICATION # |
|---|---|---|---|---|---|
| RETAINING WALL 1 | 233' | 9.91' | 5.18' | 24 | BL1602230057 |
| | | | | | |

| DESCRIPTION | AREA | DEPTH |
|---|---|---|
| NORTH POOL CAP | 433 SQ.FT | 4' AVE, 5' MAX |
| SOUTH POOL CAP | 433 SQ.FT | 4' AVE, 5' MAX |

**PROPERTY OWNER:**
**NATASHA ROIT & REBECCA RICKLEY**
**3929 MALIBU VISTA DR.**
**MALIBU, CA.**

| # | REVISIONS | DATE |
|---|---|---|
| | | |

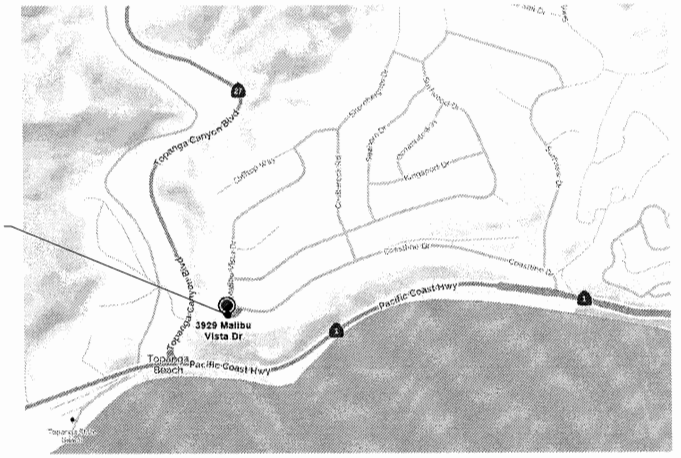
# RETAINING WALL PLAN
## 3929 MALIBU VISTA DR.
## MALIBU, CA.

QUANG T. TRAN
R.C.E. 70629
EXPIRES 06/30/17

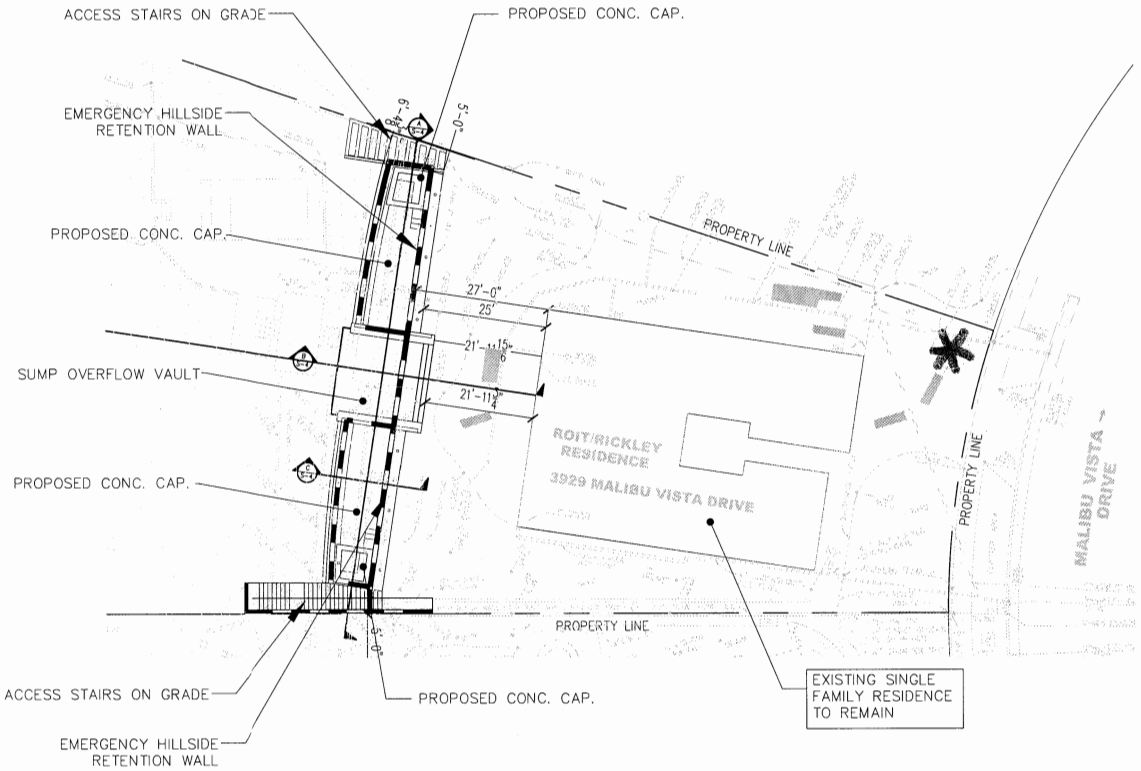

ENGINEERING GROUP, INC.
2219 E. THOUSAND OAKS BLVD., SUITE 405
THOUSAND OAKS, CA 91362
(818)383-3656
(805) 419-4893 FAX


| | |
|---|---|
| PROJECT NO. | 1356 |
| DRAWN BY: | QT |
| CHECKED BY: | QT |
| DATE | MAY 02, 2016 |

SHEET
S-1




VICINITY MAP




SITE PLAN

SCALE: 1" = 10'

| REVISIONS | DATE |
|---|---|
| 1 | |

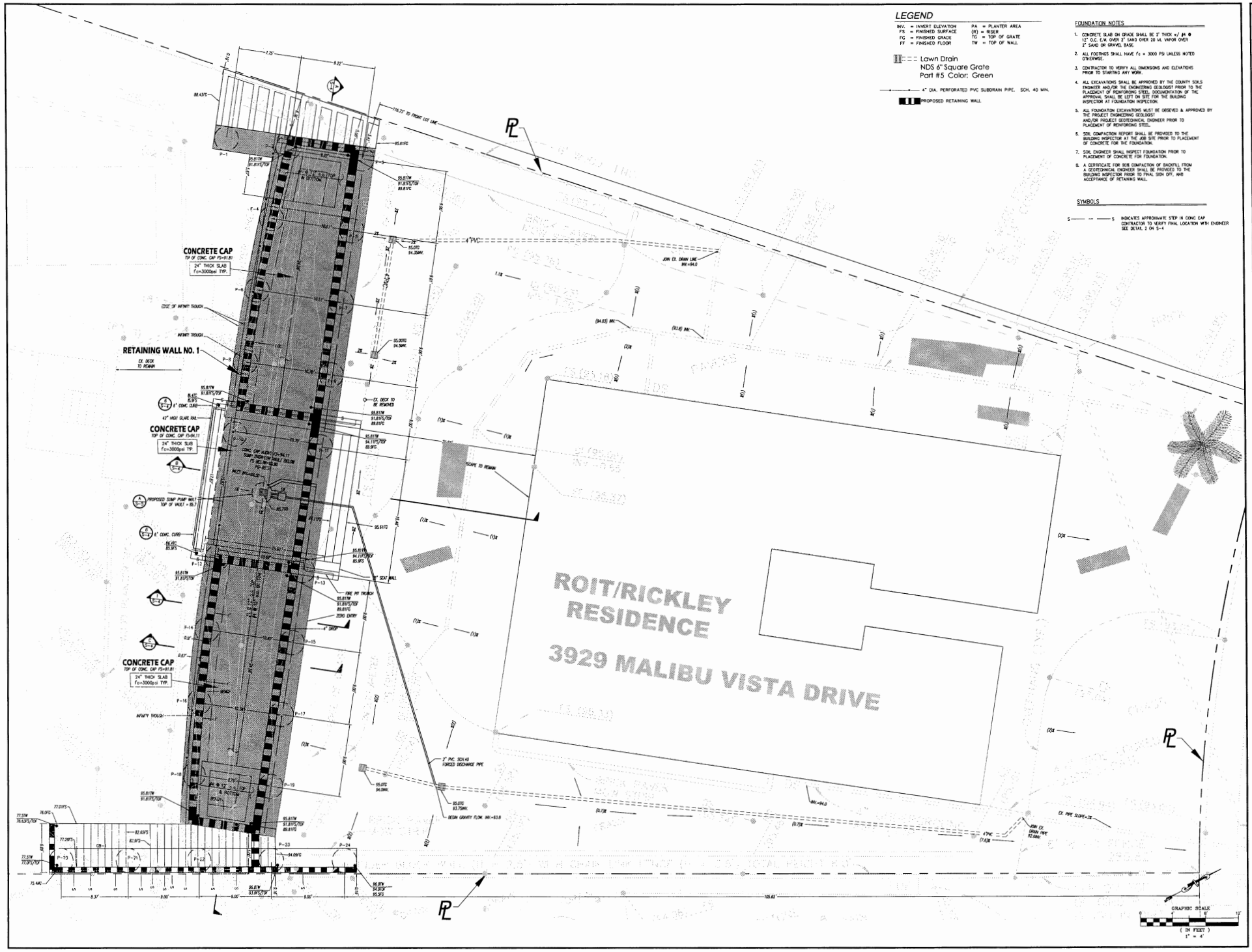
SITE PLAN + VICINITY MAP
3929 MALIBU VISTA DR.
MALIBU, CA.

QUANG T. TRAN
R.C.E. 70929
EXPIRES: 06/30/17

ENGINEERING GROUP, INC.
2219 E. THOUSAND OAKS BLVD., SUITE 4B
THOUSAND OAKS, CA 91362
(818) 879-3006
(805) 419-4837 FAX

| | |
|---|---|
| PROJECT NO. | 1356 |
| DRAWN BY: | QT |
| CHECKED BY: | QT |
| DATE | MAY 02, 2016 |

SHEET
S-2
2 OF 5 SHEETS




## LEGEND

| | | | |
|---|---|---|---|
| INV. | = INVERT ELEVATION | PA | = PLANTER AREA |
| FS | = FINISHED SURFACE | (R) | = RISER |
| FG | = FINISHED GRADE | TG | = TOP OF GRATE |
| FF | = FINISHED FLOOR | TW | = TOP OF WALL |

= = = Lawn Drain
NDS 6" Square Grate
Part #5 Color: Green

4" DIA. PERFORATED PVC SUBDRAIN PIPE. SCH. 40 M/N.

PROPOSED RETAINING WALL.

## FOUNDATION NOTES

1. CONCRETE SLAB ON GRADE SHALL BE 2" THICK w/ #4 @ 12" O.C. E.W. OVER 2" SAND OVER 20 ML VAPOR OVER 2" SAND OR GRAVEL BASE.
2. ALL FOOTINGS SHALL HAVE f'c = 3000 PSI UNLESS NOTED OTHERWISE.
3. CONTRACTOR TO VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO STARTING ANY WORK.
4. ALL EXCAVATIONS SHALL BE APPROVED BY THE COUNTY SOILS ENGINEER AND/OR THE ENGINEERING GEOLOGIST PRIOR TO THE PLACEMENT OF REINFORCING STEEL. DOCUMENTATION OF THE APPROVAL SHALL BE LEFT ON SITE FOR THE BUILDING INSPECTOR AT FOUNDATION INSPECTION.
5. ALL FOUNDATION EXCAVATIONS MUST BE OBSERVED & APPROVED BY THE PROJECT ENGINEERING GEOLOGIST AND/OR PROJECT GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF REINFORCING STEEL.
6. SOIL COMPACTION REPORT SHALL BE PROVIDED TO THE BUILDING INSPECTOR AT THE JOB SITE PRIOR TO PLACEMENT OF CONCRETE FOR THE FOUNDATION.
7. SOIL ENGINEER SHALL INSPECT FOUNDATION PRIOR TO PLACEMENT OF CONCRETE FOR FOUNDATION.
8. A CERTIFICATE FOR 90% COMPACTION OF BACKFILL FROM A GEOTECHNICAL ENGINEER SHALL BE PROVIDED TO THE BUILDING INSPECTOR PRIOR TO FINAL SIGN OFF, AND ACCEPTANCE OF RETAINING WALL.

## SYMBOLS

S —— -- —— S INDICATES APPROXIMATE STEP IN CONC CAP. CONTRACTOR TO VERIFY FINAL LOCATION WITH ENGINEER SEE DETAIL 2 ON S-4

| REVISIONS | DATE |
|---|---|
| 1 | |

# RETAINING WALL + PILE CAP PLAN
## 3929 MALIBU VISTA DR.
## MALIBU, CA.

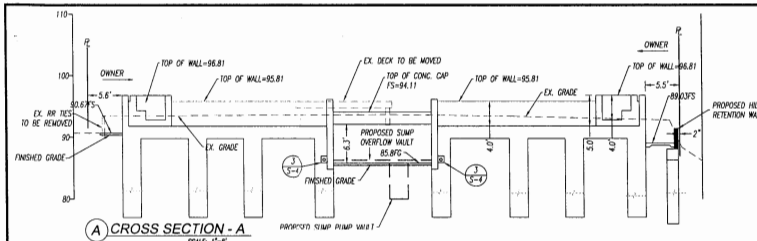
REGISTERED PROFESSIONAL ENGINEER
No. 76929
DR. 06-30-17
CIVIL
STATE OF CALIFORNIA

QUANG T. TRAN
R.C.E. 76929
EXPIRES: 06/30/17

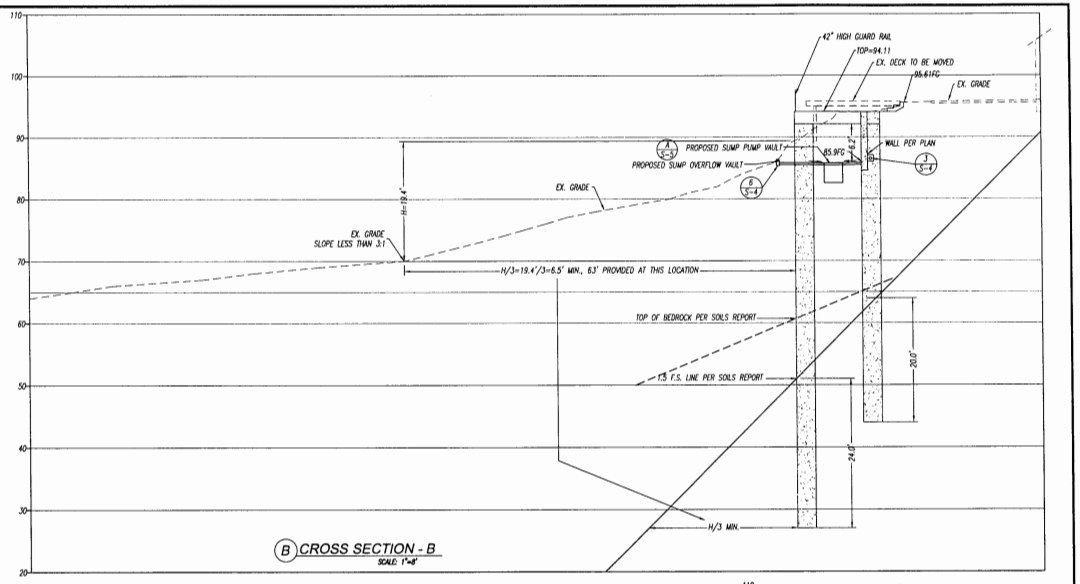

ENGINEERING GROUP, INC.
2019 E. THOUSAND OAKS BLVD., SUITE 405
THOUSAND OAKS, CA. 91362
(818)583-3006
(805)418-4893 FAX


| | |
|---|---|
| PROJECT NO. | 1356 |
| DRAWN BY: | QT |
| CHECKED BY: | QT |
| DATE | MAY 02, 2016 |

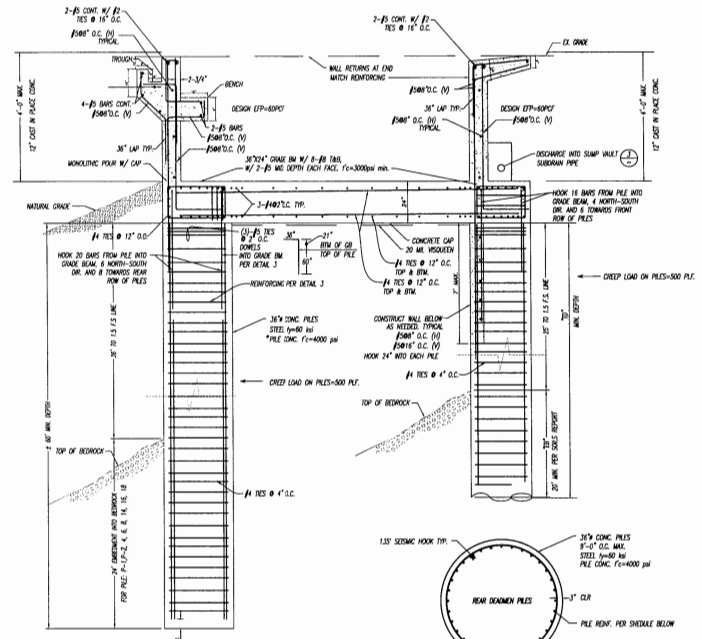
SHEET
S-3
3 OF 5 SHEETS




A CROSS SECTION - A
SCALE: 1"=8'

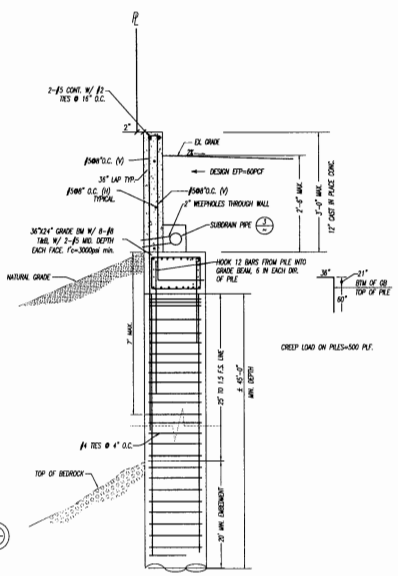



B CROSS SECTION - B
SCALE: 1"=8'

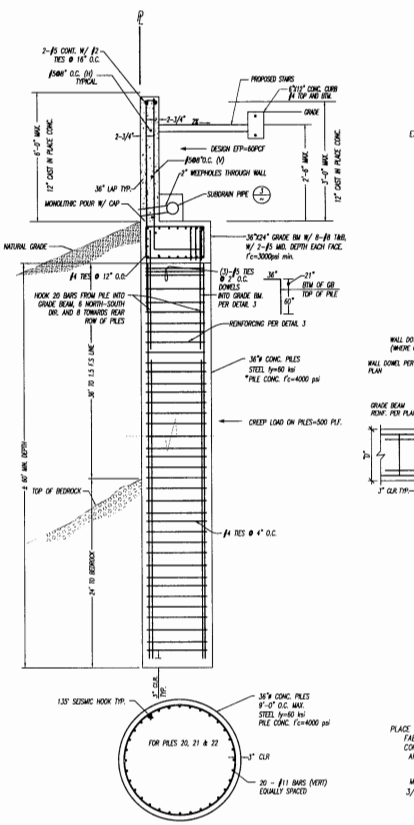



| PILE SCHEDULE | | | | |
|---|---|---|---|---|
| PILE NO. | EB | TD | PILE REINF. | NOTE |
| P-1,2,4,6,8,14,16,18,20,21, 22 | 24' | 60' | 20-#11 BARS | N/A |
| P-10 & 12 | 30' | 61' | 32-#14 BARS | BUNDLE BARS OF 2 |
| P-11 & 13 | 25' | 50' | 22-#11 BARS | N/A |
| P-3,5,7,9,15,17,19,23, 24 | 20' | 45' | 16-#10 BARS | N/A |

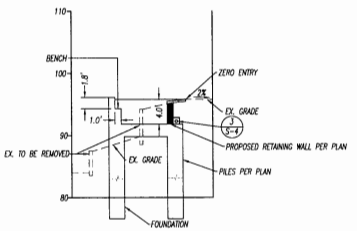
1 PILE AND CONC. CAP DETAIL
SCALE: NTS



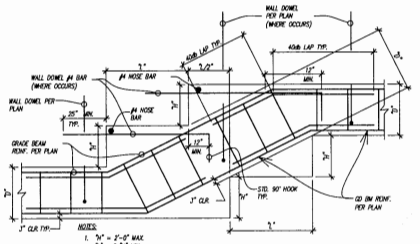

5 RETAINING WALL DETAIL
SCALE: NTS



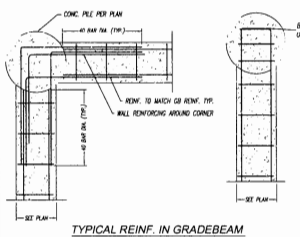

4 RETAINING WALL DETAIL
SCALE: NTS



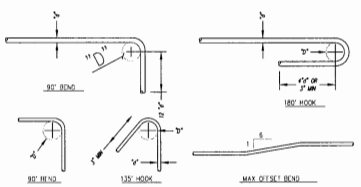

C CROSS SECTION - C
SCALE: 1"=8'




2 STEPPED GRADE BEAM DETAIL
SCALE: NTS



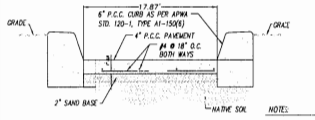

TYPICAL REINF. IN GRADEBEAM
SCALE: NTS




| "D" = 6d FOR #3 TO #8 "D" = 8d FOR #9 TO #11 "D" = 10d FOR #14 TO #18 | MIN. "D" = 1 1/2" FOR #3 MIN. "D" = 2" FOR #4 MIN. "D" = 2 1/2" FOR #5 |
|---|---|
| PRINCIPLE REINFORCING | TIE OR STIRRUP |

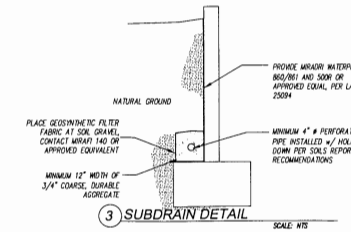
NOTE: ALL BENDS SHALL BE MADE COLD

TYPICAL BAR BEND INFO.
SCALE: NTS




6 CONC. CURB & SLAB DETAIL
SCALE: NTS

NOTES:
1. PORTLAND CEMENT CONCRETE, 520-C-2500




3 SUBDRAIN DETAIL
SCALE: NTS

| # | REVISIONS | DATE |
|---|---|---|
| 1 | | |

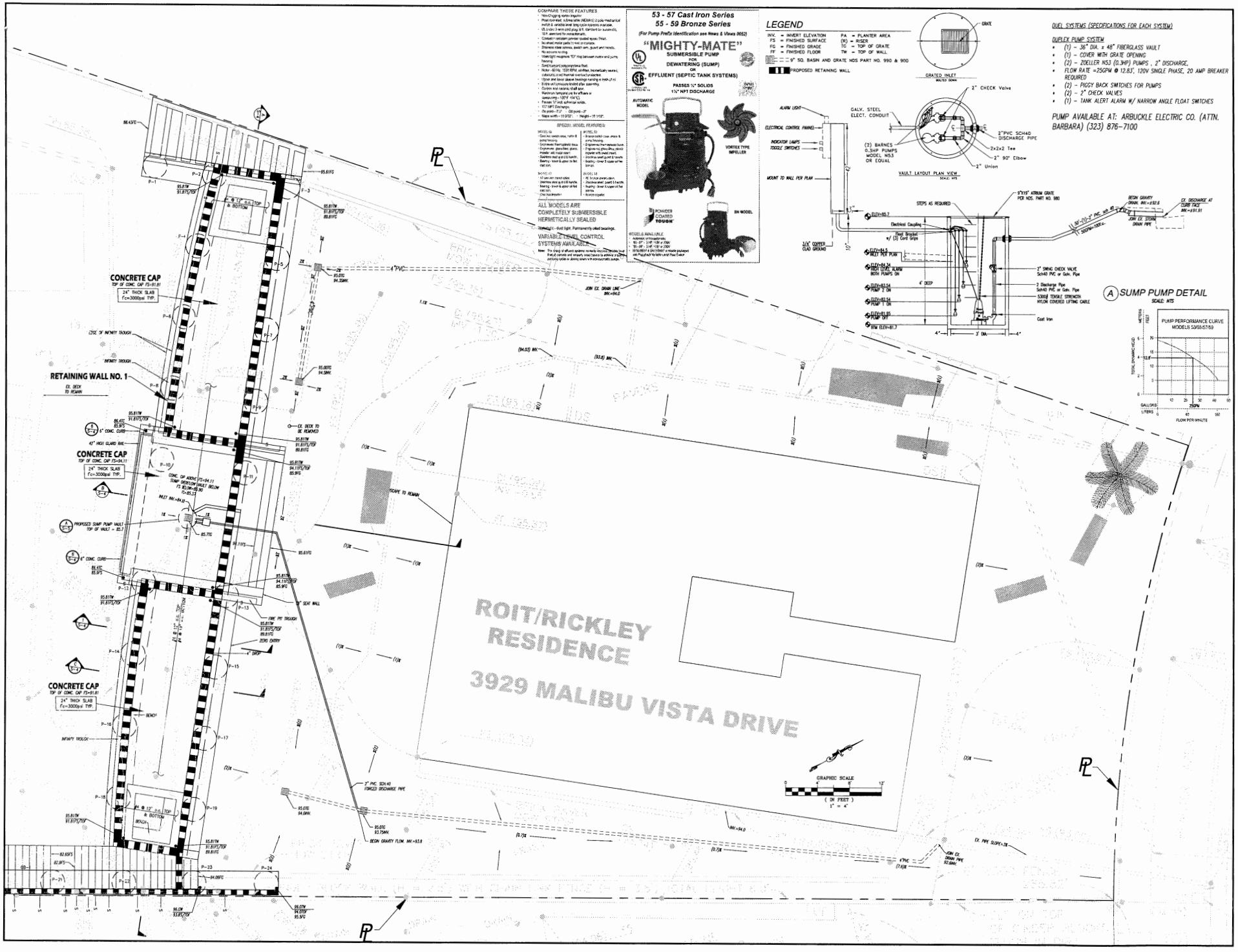
SECTIONS + DETAIL PAGE FOR:
3929 MALIBU VISTA DR.
MALIBU, CA.

QUANG T. TRAN
R.C.E. 70929
EXPIRES: 06/30/17

ENGINEERING GROUP, INC.
2215 E. THOUSAND OAKS BLVD., SUITE 403 THOUSAND OAKS, CA 91362
(P) 805.373.3058
(FAX) 818.480.7104

| | |
|---|---|
| PROJECT NO. | 1358 |
| DRAWN BY: | QT |
| CHECKED BY: | QT |
| DATE | APR. 20, 2016 |

SHEET
S-4
4 OF 5 SHEETS




DRAINAGE PLAN
3929 MALIBU VISTA DR.
MALIBU, CA.

QUANG T. TRAN
R.C.E. 70929
EXPIRES: 06/30/17

ENGINEERING GROUP, INC.
3210 E. THOUSAND OAKS BLVD., SUITE 403 (818)383-3656
THOUSAND OAKS, CA 91362 (805)419-4857 FAX

| | |
|---|---|
| PROJECT NO. | 1356 |
| DRAWN BY: | GT |
| CHECKED BY: | GT |
| DATE | MAY 02, 2016 |

SHEET
S-5
5 OF 5 SHEETS