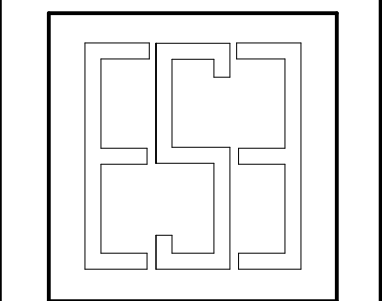


SUB-CONTRACTORS SHALL: ENSURE THAT ALL WORK IS DONE IN A PROFESSIONAL AND WORKMANLIKE MANNER BY SKILLED MECHANICS AND SHALL REPLACE ANY MATERIALS OF ITEMS DAMAGED BY SUB-CONTRACTORS PERFORMANCE. SUB CONTRACTORS AND SUPPLIERS ARE HEREBY NOTIFIED THAT THEY ARE TO CONFER AND COOPERATE FULLY WITH EACH OTHER DURING THE COURSE OF CONSTRUCTION. AND DETERMINE THE EXACT EXTENT ANY OVERLAP OF EACH OTHERS WORK AND TO ASSURE THAT EACH OTHERS WORK BE OF QUALITY TO PASS INSPECTIONS OF THE LOCAL AUTHORITIES, LENDING INSTITUTIONS, ARCHITECT OR BUILDER. ANY OR ALL OF THE ABOVE INSPECTORS MAY INSPECT AT ANY TIME, AND ANY CORRECTIONS NEEDED TO ENHANCE THE QUALITY OF BUILDING WILL BE DONE IMMEDIATELY. EACH SUB-CONTRACTOR, UNLESS SPECIFICALLY EXEMPTED BY THE TERMS OF HIS SUB-CONTRACT AGREEMENT. SHALL BE RESPONSIBLE FOR CLEANING UP AND REMOVING, FROM THE JOB SITE ALL EXCESS MATERIAL AND DEBRIS NOT LEFT BY OTHER SUB- CONTRACTORS. BUILDER WILL DETERMINE HOW SOON AFTER THE SUBCONTRACTOR COMPLETES EACH PHASE OF HIS WORK THAT TRASH AND DEBRIS WILL BE REMOVED.

[illegible]



TOP OF COUPLA
ELEV. 25.767' (25'-11 23/32")
TOP OF COUPLA CEILING
ELEV. 23.777' (23'-9 5/16")
TOP OF HIGH RIDGE
ELEV. 808.875' (20'-10 1/2")

TOP OF 2x8 CAP ON C-BLOCK WL.
ELEV. 798.125' WL (10'-1 1/2")

GRADE
792.0 ft
EXISTING GRADE @SOUTH SIDE OF GARAGE

TOP OF GARAGE FIN FLOOR
ELEV. 788.00' NOM.
BOTTOM OF LOWEST FOUNDATION

SOUTH ELEVATION

TOP OF COUPLA
ELEV. 25.767' (25'-11 23/32")
TOP OF COUPLA CEILING
ELEV. 23.777' (23'-9 5/16")
TOP OF HIGH RIDGE
ELEV. 808.875' (20'-10 1/2")

TOP OF 2x8 CAP ON C-BLOCK WL.
ELEV. 800.125' WL (12'-1 1/2")
TOP OF 2x8 CAP ON C-BLOCK WL.
ELEV. 798.125' WL (10'-1 1/2")

TOP OF LOW RIDGE
ELEV. 805.5' (17'-6")

INTERSECTION DORMER WALL & ROOF
ELEV. 800.5' (12'-6")

TOP OF GARAGE FIN FLOOR
ELEV. 788.00' NOM.

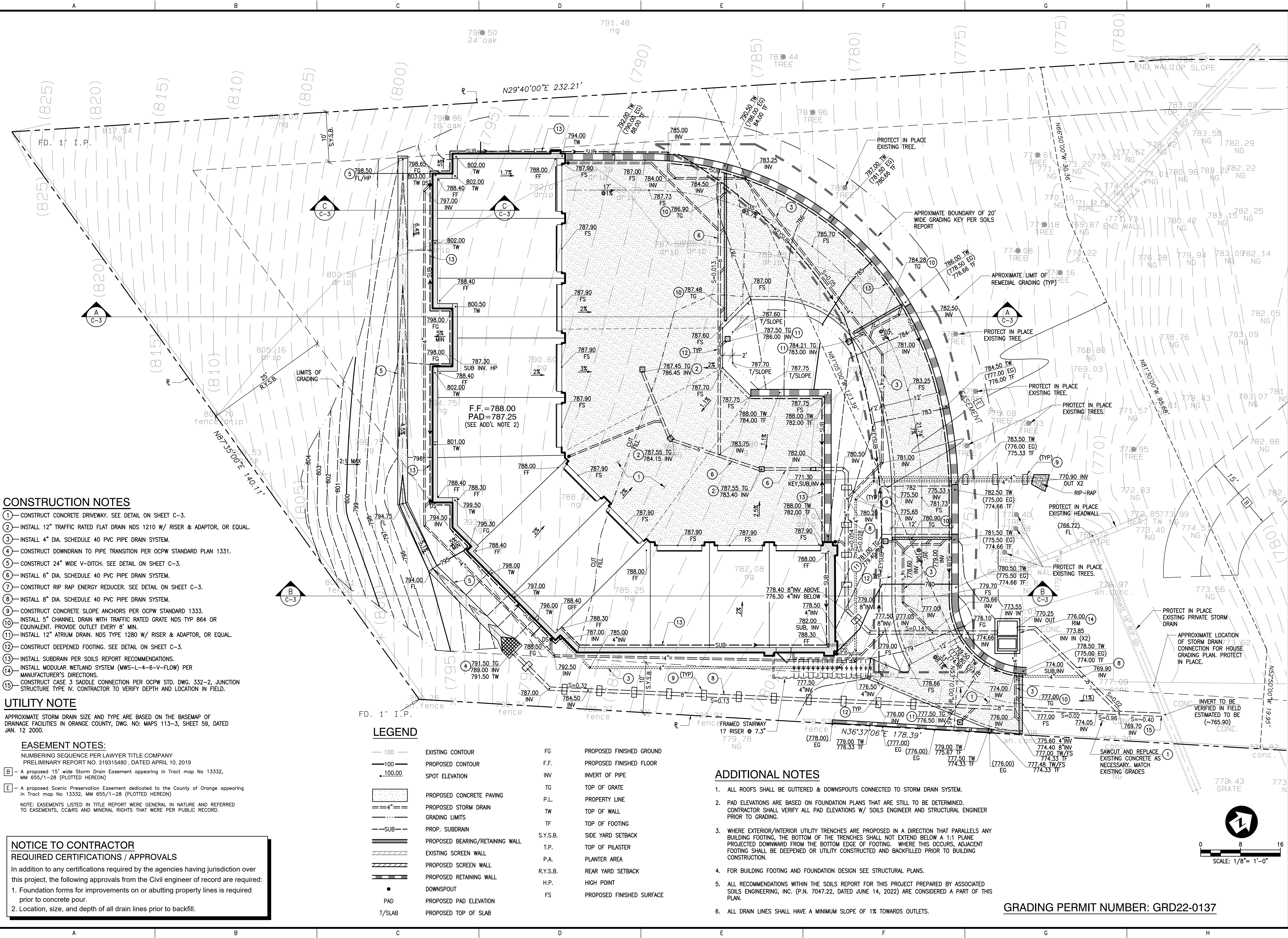
ELEV. 777.00' (-11'-00")

TOP OF GRADE N/NW CORNER
784.4

NORTH ELEVATION

- (1) ALL WORK SHALL BE IN ACCORDANCE WITH THE GRADING CODE OF THE COUNTY OF ORANGE AND ANY SPECIAL REQUIREMENTS OF THE PERMIT. A COPY OF THE GRADING CODE AND MANUAL SHALL BE RETAINED ON THE JOB SITE WHILE WORK IS IN PROGRESS. WHEN REFERENCE ON THE PLANS, A COPY OF OCPW STANDARD PLANS SHALL BE RETAINED ON THE SITE.
- (2) GRADING SHALL NOT BE STARTED WITHOUT FIRST NOTIFYING THE DISTRICT GRADING INSPECTOR. A PRE-GRADING MEETING ON THE SITE IS REQUIRED BEFORE START OF GRADING WITH THE FOLLOWING PEOPLE PRESENT: OWNER, GRADING CONTRACTOR, DESIGN CIVIL ENGINEER, SOIL ENGINEER, GEOLOGIST, DISTRICT GRADING INSPECTOR AND WHEN REQUIRED THE ARCHAEOLOGIST AND PALEONTOLOGIST. THE REQUIRED INSPECTIONS FOR GRADING WILL BE EXPLAINED AT THIS MEETING.
- (3) ISSUANCE OF A GRADING PERMIT DOES NOT ELIMINATE THE NEED FOR PERMITS FROM OTHER AGENCIES WITH REGULATORY RESPONSIBILITIES FOR CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE WORK AUTHORIZED ON THIS PLAN.
- (4) THE GRADING PERMIT AND AN APPROVED COPY OF THE GRADING PLAN SHALL BE ON THE PERMITTED SITE WHILE WORK IS IN PROGRESS.
- (5) PRELIMINARY SOIL AND GEOLOGY REPORTS AND ALL SUBSEQUENT REPORTS AS APPROVED BY THE OC PLANNING, GRADING SECTION, ARE CONSIDERED A PART OF THE APPROVED GRADING PLAN.
- (6) THE SOIL ENGINEER AND THE ENGINEERING GEOLOGIST SHALL PERFORM SUFFICIENT INSPECTIONS AND BE AVAILABLE DURING GRADING AND CONSTRUCTION TO VERIFY COMPLIANCE WITH THE PLANS, SPECIFICATIONS AND THE CODE WITHIN THEIR PURVIEW.
- (7) THE CIVIL ENGINEER SHALL BE AVAILABLE DURING GRADING TO VERIFY COMPLIANCE WITH THE PLANS, SPECIFICATIONS, CODE AND ANY SPECIAL CONDITIONS OF THE PERMIT WITHIN THEIR PURVIEW.
- (8) THE ENGINEERING GEOLOGIST AND SOIL ENGINEER SHALL, AFTER CLEARING AND PRIOR TO THE PLACEMENT OF FILL IN CANYONS, INSPECT EACH CANYON FOR AREAS OF ADVERSE STABILITY AND TO DETERMINE THE PRESENCE OR ABSENCE OF SUBSURFACE WATER OR SPRING FLOW. IF NEEDED, SUBDRAINS WILL BE DESIGNED AND CONSTRUCTED PRIOR TO THE PLACEMENT OF FILL IN EACH RESPECTIVE CANYON.
- (9) SUBDRAIN OUTLETS SHALL BE COMPLETED AT THE BEGINNING OF THE SUBDRAIN CONSTRUCTION.
- (10) THE EXACT LOCATION OF THE SUBDRAINS SHALL BE SURVEYED IN THE FIELD FOR LINE/GRADE AND SHOWN ON AS-GRADED PLANS.
- (11) AREAS TO RECEIVE FILL SHALL BE PROPERLY PREPARED AND APPROVED IN WRITING BY THE SOILS ENGINEER AND THE BUILDING OFFICIAL PRIOR TO PLACING FILL.
- (12) FILLS SHALL BE BENCHMARKED INTO COMPETENT MATERIAL PER OCPW STANDARD PLAN NO. 1322.
- (13) ALL EXISTING FILLS SHALL BE APPROVED BY THE BUILDING OFFICIAL OR REMOVED PRIOR TO PLACING ADDITIONAL FILLS.
- (14) FILLS SHALL BE COMPACTED THROUGHOUT TO A MINIMUM OF 90% RELATIVE DENSITY. AGGREGATE BASE FOR ASPHALTIC AREAS SHALL BE COMPACTED TO MINIMUM OF 95% RELATIVE DENSITY. MAXIMUM DENSITY SHALL BE DETERMINED BY USING A BUILDING OFFICIAL STANDARD NO. 70-1 OR APPROVED EQUIVALENT, AND FIELD DENSITY BY UNIFORM BUILDING CODE STANDARD NO. 70-2 OR APPROVED EQUIVALENT.
- (15) CUT AND FILL SLOPES SHALL BE NO STEEPER THAN 2 FOOT HORIZONTAL TO 1 FOOT VERTICAL (2:1) EXCEPT WHERE SPECIFICALLY APPROVED OTHERWISE.
- (16) ALL CUT SLOPES SHALL BE INVESTIGATED BOTH DURING AND AFTER GRADING BY THE ENGINEERING GEOLOGIST TO DETERMINE IF ANY SLOPE STABILITY PROBLEM EXISTS. SHOULD EXCAVATION DISCLOSE ANY GEOLOGICAL HAZARDS OR POTENTIAL GEOLOGICAL HAZARDS, THE ENGINEERING GEOLOGIST SHALL SUBMIT RECOMMENDED TREATMENTS TO THE BUILDING OFFICIAL FOR APPROVAL.
- (17) WHERE SUPPORT OR BUTTRESSING OF CUT AND NATURAL SLOPE IS DETERMINED TO BE NECESSARY BY THE ENGINEERING GEOLOGIST AND SOIL ENGINEER, THE SOIL ENGINEER SHALL SUBMIT DESIGN, LOCATIONS AND CALCULATIONS TO THE BUILDING OFFICIAL PRIOR TO CONSTRUCTION. THE ENGINEERING GEOLOGIST AND SOIL ENGINEER SHALL INSPECT AND CONTROL THE CONSTRUCTION OF THE BUTTRESSING AND CERTIFY TO THE STABILITY OF SLOPE AND ADJACENT STRUCTURES UPON COMPLETION.
- (18) WHEN CUT PADS ARE BROUGHT NEAR GRADE, THE ENGINEERING GEOLOGIST SHALL DETERMINE IF THE BEDROCK IS EXTENSIVELY FRACTURED OR FAULTED AND WILL READILY TRANSMIT WATER. IF CONSIDERED NECESSARY BY THE ENGINEERING GEOLOGIST AND SOIL ENGINEER A COMPACTED FILL BLANKET WILL BE PLACED.
- (19) ALL TRENCH BACKFILLS SHALL BE TESTED AND APPROVED BY THE SOIL ENGINEER PER THE GRADING CODE.
- (20) ANY EXISTING IRRIGATION LINES AND CISTERNS SHALL BE REMOVED, OR CRUSHED IN PLACE, AND APPROVED BY THE BUILDING OFFICIAL AND SOIL ENGINEER.
- (21) ANY EXISTING WATER WELLS SHOULD BE ABANDONED IN COMPLIANCE WITH THE SPECIFICATIONS APPROVED BY ORANGE COUNTY, HEALTH CARE AGENCY, AND DIVISION OF ENVIRONMENTAL HEALTH.
- (22) ANY EXISTING CESSPOOLS AND SEPTIC TANKS SHALL BE ABANDONED IN COMPLIANCE WITH THE UNIFORM PLUMBING CODE TO THE APPROVAL OF OC PLANNING/BUILDING INSPECTION.
- (23) STOCKPILING OF EXCESS MATERIAL SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO EXCAVATION.
- (24) EXPORT SOIL MUST BE TRANSPORTED TO A LEGAL DUMP OR TO A PERMITTED SITE APPROVED BY THE DISTRICT GRADING INSPECTOR.
- (25) THE PERMITTEE SHALL COMPLY WITH THE GRADING CODE REQUIREMENTS FOR HAUL ROUTES WHEN AN EXCESS OF 5,000 CUBIC YARDS OR EARTH IS TRANSPORTED TO OR FROM A PERMITTED SITE ON PUBLIC ROADWAYS.
- (26) THE PERMITTEE IS RESPONSIBLE FOR DUST CONTROL MEASURES.
- (27) THE PERMITTEE SHALL GIVE REASONABLE NOTICE TO THE OWNER OF ADJOINING LANDS AND BUILDINGS PRIOR TO BEGINNING EXCAVATIONS WHICH MAY AFFECT THE LATERAL AND SUBJACENT SUPPORT OF THE ADJOINING PROPERTY. THE NOTICE SHALL STATE THE INTENDED DEPTH OF EXCAVATION AND WHEN THE EXCAVATION WILL COMMENCE. THE ADJOINING OWNER SHALL BE ALLOWED AT LEAST 30 DAYS AND REASONABLE ACCESS ON THE PERMITTED PROPERTY TO PROTECT HIS STRUCTURE, IF HE SO DESIRES, UNLESS OTHERWISE PROTECTED BY LAW.
- (28) ALL CONCRETE STRUCTURES THAT COME IN CONTACT WITH THE ON-SITE SOILS SHALL BE CONSTRUCTED WITH TYPE V CEMENT, UNLESS DEEMED UNNECESSARY BY SOLUBLE SULPHATE-CONTENT TESTS CONDUCTED BY THE SOIL ENGINEER.
- (29) SLOPES EXCEEDING 5 FEET IN HEIGHT SHALL BE PLANTED WITH AN APPROVED PLANT MATERIAL. IN ADDITION, SLOPES EXCEEDING 15 FEET IN HEIGHT SHALL BE PROVIDED WITH AN APPROVED IRRIGATION SYSTEM, UNLESS OTHERWISE APPROVED BY THE BUILDING OFFICIAL.
- (30) ALL EXISTING DRAINAGE COURSES THROUGH THIS SITE SHALL REMAIN OPEN UNTIL FACILITIES TO HANDLE STORM WATER ARE PROVIDED AND FUNCTIONAL. HOWEVER, IN ANY CASE, THE PERMITTEE SHALL BE HELD LIABLE FOR ANY DAMAGE DUE TO OBSTRUCTING NATURAL DRAINAGE PATTERNS.
- (31) SANITARY FACILITIES SHALL BE MAINTAINED ON THE SITE.
- (32) THE LOCATION AND PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE PERMITTEE.
- (33) APPROVED PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS SHALL BE USED TO PROTECT ADJOINING PROPERTIES DURING GRADING.
- (34) GRADING OPERATIONS INCLUDING MAINTENANCE OF EQUIPMENT WITHIN ONE-HALF MILE OF A HUMAN OCCUPANCY SHALL NOT BE CONDUCTED BETWEEN THE HOURS OF 8:00 P.M. AND 7:00 A.M. DAILY, ON SUNDAY OR IN A FEDERAL HOLIDAY.
- (35) STOCKPILING AND/OR VEHICLE STAGING AREAS SHALL BE LOCATED AS FAR AS PRACTICABLE FROM DWELLINGS AND WITHIN THE LIMITS OR GRADING PERMIT.
36. GRADING AND EXCAVATION SHALL BE HALTED DURING PERIODS OF HIGH WINDS. ACCORDING TO AQMD MEASURES F-4, HIGH WINDS ARE DEFINED AS 30 MPH OR GREATER. THIS LEVEL OCCURS ONLY UNDER UNUSUALLY EXTREME CONDITIONS, SUCH AS SANTA ANA WIND CONDITIONS.
37. ASPHALT SECTIONS MUST BE PER CODE: PARKING STALLS = 3" A/C OVER 6" A/B, DRIVES 3: A/C OVER 10" (COMM) 12" (INDUSTRIAL). OR: PRIOR TO ROUGH GRADE RELEASE FOR BUILDING PERMITS BY THE DISTRICT GRADING INSPECTOR. THE SOIL ENGINEER SHALL SUBMIT FOR APPROVAL, PAVEMENT SECTION RECOMMENDATIONS BASED ON "R" VALUE ANALYSIS OF THE SUBGRADE SOILS, AND EXPECTED TRAFFIC INDICES.
38. ASPHALT CONCRETE SHALL BE CONSTRUCTED PER THE REQUIREMENTS OF OCPW STANDARD PLAN 1805.
39. AGGREGATE BASE SECTION SHALL BE CONSTRUCTED PER OCPW STANDARD PLAN 1804.
40. ROOF GUTTERS SHALL BE INSTALLED TO PREVENT ROOF DRAINAGE FROM FALLING ON MANUFACTURED SLOPES.
41. THE CIVIL ENGINEER, AS A CONDITION OF ROUGH GRADE APPROVAL, SHALL PROVIDE A BLUE TOP WITH ACCOMPANYING WITNESS STAKE, SET AT THE CENTER OF EACH PAD REFLECTING THE PAD ELEVATION FOR PRECISE PERMITS AND A BLUE TOP WITH WITNESS STAKE SET AT THE DRAINAGE SWALE HIGH POINT REFLECTING THE HIGH POINT ELEVATION FOR PRELIMINARY PERMITS.
42. PRIOR TO FINAL APPROVAL, THE CIVIL ENGINEER SHALL CERTIFY TO THE BUILDING OFFICIAL THE AMOUNT OF EARTH MOVED DURING THE GRADING OPERATION.
43. THE ENGINEERING GEOLOGIST SHALL PERFORM PERIODIC INSPECTIONS AND SUBMIT A COMPLETE REPORT AND MAP UPON COMPLETION OF THE ROUGH GRADING.
44. THE GRADING CONTRACTOR SHALL SUBMIT A STATEMENT OF COMPLIANCE TO THE APPROVED GRADING PLAN PRIOR TO FINAL APPROVAL.
45. THE COMPACTION REPORT AND APPROVAL FROM THE SOIL ENGINEER SHALL INDICATE THE TYPE OF FIELD TESTING PERFORMED. THE METHOD OF OBTAINING THE IN-PLACE DENSITY SHALL BE IDENTIFIED WHETHER SAND CONE, DRIVE RING, OR NUCLEAR, AND SHALL BE NOTED FOR EACH TEST. SUFFICIENT MAXIMUM DENSITY DETERMINATIONS SHALL BE PERFORMED TO VERIFY THE ACCURACY OF THE MAXIMUM DENSITY CURVES USED BY THE FIELD TECHNICIAN.
46. IN THE EVENT THAT SOIL CONTAMINATION IS DISCOVERED DURING EXCAVATION AND REMOVAL OF AN EXISTING TANK, WORK SHALL BE STOPPED UNTIL A SITE ASSESSMENT AND MITIGATION PLAN HAS BEEN PREPARED, SUBMITTED AND APPROVED BY HCA/ENVIRONMENTAL HEALTH AND OC PLANNING/GRADING.

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CONSTRUCTION NOTES

1. CONSTRUCT CONCRETE DRIVEWAY. SEE DETAIL ON SHEET C-3.
2. INSTALL 12" TRAFFIC RATED FLAT DRAIN NDS 1210 W/ RISER & ADAPTOR, OR EQUAL.
3. INSTALL 4" DIA. SCHEDULE 40 PVC PIPE DRAIN SYSTEM.
4. CONSTRUCT DOWNDRAIN TO PIPE TRANSITION PER OCPW STANDARD PLAN 1331.
5. CONSTRUCT 24" WIDE V-DITCH. SEE DETAIL ON SHEET C-3.
6. INSTALL 6" DIA. SCHEDULE 40 PVC PIPE DRAIN SYSTEM.
7. CONSTRUCT RIP RAP ENERGY REDUCER. SEE DETAIL ON SHEET C-3.
8. INSTALL 8" DIA. SCHEDULE 40 PVC PIPE DRAIN SYSTEM.
9. CONSTRUCT CONCRETE SLOPE ANCHORS PER OCPW STANDARD 1333.
10. INSTALL 5" CHANNEL DRAIN WITH TRAFFIC RATED GRATE NDS TYP 864 OR EQUIVALENT. PROVIDE OUTLET EVERY 8' MIN.
11. INSTALL 12" ATRIUM DRAIN. NDS TYPE 1280 W/ RISER & ADAPTOR, OR EQUAL.
12. CONSTRUCT DEEPENED FOOTING. SEE DETAIL ON SHEET C-3.
13. INSTALL SUBDRAIN PER SOILS REPORT RECOMMENDATIONS.
14. INSTALL MODULAR WETLAND SYSTEM (MWS-L-4-6-V-FLOW) PER MANUFACTURER'S DIRECTIONS.
15. CONSTRUCT CASE 3 SADDLE CONNECTION PER OCPW STD. DWG. 332-2, JUNCTION STRUCTURE TYPE IV. CONTRACTOR TO VERIFY DEPTH AND LOCATION IN FIELD.

UTILITY NOTE

APPROXIMATE STORM DRAIN SIZE AND TYPE ARE BASED ON THE BASEMAP OF DRAINAGE FACILITIES IN ORANGE COUNTY, DWG. NO: MAPS 113-3, SHEET 59, DATED JAN. 12 2000.

EASEMENT NOTES:

NUMBERING SEQUENCE PER LAWYER TITLE COMPANY
PRELIMINARY REPORT NO. 319315480, DATED APRIL 10, 2019

- [B] - A proposed 15' wide Storm Drain Easement appearing in Tract map No 13332, MM 655/1-28 (PLOTTED HEREON)
- [E] - A proposed Scenic Preservation Easement dedicated to the County of Orange appearing in Tract map No 13332, MM 655/1-28 (PLOTTED HEREON)

NOTE: EASEMENTS LISTED IN TITLE REPORT WERE GENERAL IN NATURE AND REFERRED TO EASEMENTS, CC&RS AND MINERAL RIGHTS THAT WERE PER PUBLIC RECORD.

NOTICE TO CONTRACTOR

REQUIRED CERTIFICATIONS / APPROVALS

In addition to any certifications required by the agencies having jurisdiction over this project, the following approvals from the Civil engineer of record are required:

1. Foundation forms for improvements on or abutting property lines is required prior to concrete pour.
2. Location, size, and depth of all drain lines prior to backfill.

LEGEND

	EXISTING CONTOUR	FG	PROPOSED FINISHED GROUND
	PROPOSED CONTOUR	F.F.	PROPOSED FINISHED FLOOR
	SPOT ELEVATION	INV	INVERT OF PIPE
	PROPOSED CONCRETE PAVING	TG	TOP OF GRATE
	PROPOSED STORM DRAIN	P.L.	PROPERTY LINE
	GRADING LIMITS	TW	TOP OF WALL
	PROP. SUBDRAIN	TF	TOP OF FOOTING
	PROPOSED BEARING/RETAINING WALL	S.Y.S.B.	SIDE YARD SETBACK
	EXISTING SCREEN WALL	T.P.	TOP OF PILASTER
	PROPOSED SCREEN WALL	P.A.	PLANTER AREA
	PROPOSED RETAINING WALL	R.Y.S.B.	REAR YARD SETBACK
	DOWNSPOUT	H.P.	HIGH POINT
	PROPOSED PAD ELEVATION	FS	PROPOSED FINISHED SURFACE
	T/SLAB		
	PROPOSED TOP OF SLAB		

ADDITIONAL NOTES

1. ALL ROOFS SHALL BE GUTTERED & DOWNSPOUTS CONNECTED TO STORM DRAIN SYSTEM.
2. PAD ELEVATIONS ARE BASED ON FOUNDATION PLANS THAT ARE STILL TO BE DETERMINED. CONTRACTOR SHALL VERIFY ALL PAD ELEVATIONS W/ SOILS ENGINEER AND STRUCTURAL ENGINEER PRIOR TO GRADING.
3. WHERE EXTERIOR/INTERIOR UTILITY TRENCHES ARE PROPOSED IN A DIRECTION THAT PARALLELS ANY BUILDING FOOTING, THE BOTTOM OF THE TRENCHES SHALL NOT EXTEND BELOW A 1:1 PLANE PROJECTED DOWNWARD FROM THE BOTTOM EDGE OF FOOTING. WHERE THIS OCCURS, ADJACENT FOOTING SHALL BE DEEPEMED OR UTILITY CONSTRUCTED AND BACKFILLED PRIOR TO BUILDING CONSTRUCTION.
4. FOR BUILDING FOOTING AND FOUNDATION DESIGN SEE STRUCTURAL PLANS.
5. ALL RECOMMENDATIONS WITHIN THE SOILS REPORT FOR THIS PROJECT PREPARED BY ASSOCIATED SOILS ENGINEERING, INC. (P.N. 7047.22, DATED JUNE 14, 2022) ARE CONSIDERED A PART OF THIS PLAN.
6. ALL DRAIN LINES SHALL HAVE A MINIMUM SLOPE OF 1% TOWARDS OUTLETS.

GRADING PERMIT NUMBER: GRD22-0137

PLANS PREPARED BY:

TOAL
ENGINEERING, INC.



CIVIL ENGINEERING
LAND SURVEYING
STORMWATER QUALITY

139 Avenida Navarro
San Clemente, CA 92672
949.492.8586
www.toalengineering.com



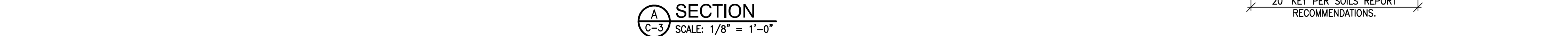
Caleb Rios
CALEB RIOS
R.C.E. 57587
DATE: 5-15-23

PREPARED FOR:
FRANK PISANO
3 LORJEN, COTO DE CAZA

REVISIONS	BY	DATE	APVD.	DATE

PRECISE GRADING & DRAINAGE
PLAN

DATE: 05/15/2023	H. SCALE: 1"=8'
SURVEY DATE: 08-07-15	V. SCALE: N/A
DRN.: A.V.	DWG. NO.
CHD.: C.R.	C-2
APPD.: C.R.	
JOB NO. 18212	SHEET 2 OF 5



-

* PER SOILS ENGINEER'S DIRECTION

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-

- ①—CONSTRUCT CONCRETE DRIVEWAY. SEE DETAIL ON SHEET C-3.
- ②—INSTALL 12" TRAFFIC RATED FLAT DRAIN NDS 1210 W/ RISER & ADAPTOR, OR EQUAL.
- ③—INSTALL 4" DIA. SCHEDULE 40 PVC PIPE DRAIN SYSTEM.
- ④—CONSTRUCT DOWNDRAIN TO PIPE TRANSITION PER PCPW STANDARD PLAN 1331.
- ⑤—CONSTRUCT 24" WIDE V-DITCH. SEE DETAIL ON SHEET C-3.
- ⑥—INSTALL 6" DIA. SCHEDULE 40 PVC PIPE DRAIN SYSTEM.
- ⑦—CONSTRUCT RIP RAP ENERGY REDUCER. SEE DETAIL ON SHEET C-3.
- ⑧—INSTALL 8" DIA. SCHEDULE 40 PVC PIPE DRAIN SYSTEM.
- ⑨—CONSTRUCT CONCRETE SLOPE ANCHORS PER PCPW STANDARD 1333.
- ⑩—INSTALL 5" CHANNEL DRAIN WITH TRAFFIC RATED GRATE NDS TYP 864 OR EQUIVALENT. PROVIDE OUTLET EVERY 8' MIN.
- ⑪—INSTALL 12" ATRIUM DRAIN. NDS TYPE 1280 W/ RISER & ADAPTOR, OR EQUAL.
- ⑫—CONSTRUCT DEEPEENED FOOTING. SEE DETAIL ON SHEET C-3.
- ⑬—INSTALL SUBDRAIN PER SOILS REPORT RECOMMENDATIONS.
- ⑭—INSTALL MODULAR WETLAND SYSTEM (MWS-L-4-6-V-FLOW) PER MANUFACTURER'S DIRECTIONS.
- ⑮—CONSTRUCT CASE 3 SADDLE CONNECTION PER PCPW STD. DWG. 332-2, JUNCTION STRUCTURE TYPE IV. CONTRACTOR TO VERIFY DEPTH AND LOCATION IN FIELD.

In addition to any certifications required by the agencies having jurisdiction over this project, the following approvals from the Civil engineer of record are required

1. Foundation forms for improvements on or abutting property lines is required prior to concrete pour.
2. Location, size, and depth of all drain lines prior to backfill.



PLAN VIEW

LEFT END VIEW

INSTALLATION NOTES

-
- The technical drawings illustrate the 1000 Series Flow Control Riser. The **ELEVATION VIEW** shows a side profile of the unit with a total height of 77.6 inches (RIM/FG) and a base height of 77.1 inches (IE OUT). It features a 77.5 inch IE IN inlet on the left and a 77.1 inch IE OUT outlet on the right. The unit is 6 inches wide, with a 4-foot-0-inch section in the middle and a 5-foot-0-inch section at the bottom. A **FLOW CONTROL RISER** is indicated. The **RIGHT END VIEW** shows the unit's depth, which varies, and a 6-inch minimum base. It also shows the 77.5 inch IE IN inlet and the 77.1 inch IE OUT outlet. The unit is shown installed in a trench with a concrete base and a gravel bed.

TREATMENT FLOW (CFS)	0.071
OPERATING HEAD (FT)	3.3
PRETREATMENT LOADING RATE (GPM/SF)	1.2
WETLAND MEDIA LOADING RATE (GPM/SF)	1.0

GENERAL NOTES

1. MANUFACTURER TO PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS AND CAPACITIES ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS AND ACCESSORIES PLEASE CONTACT BIO CLEAN.

PROPRIETARY AND CONFIDENTIAL:

THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE SOLE PROPERTY OF FORTERRA AND ITS COMPANIES. THIS DOCUMENT NOR ANY PART THEREOF, MAY BE USED, REPRODUCED OR MODIFIED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF FORTERRA.

Bio Clean
A Forterra Company

MWS-L-4-6-V
STORMWATER BIOFILTRATION SYSTEM
STANDARD DETAIL

Compacted, cohesive soil backfill, compacted to min. 90% relative compaction per approved by the Geotechnical Consultant*

Retaining wall per structural plan

"Very Low" expansive soil ($EI \leq 10$) backfill, compacted to min. 90% relative compaction per approved by the Geotechnical Consultant*

4" (min.) diameter perforated PVC pipe (Schedule 40, SDR 35 or equivalent) with perforations oriented down as depicted. Min. 1% gradient to suitable outlet.

Finish grade

Compacted Fill

Retaining wall footing

18" min.

"Very Low" expansive backfill zone per the Soils Report & Note 2 below.

1' min.

6" min. overlap

1' min.

3" min.

Native Soils (slope gradient for back cut to follow that of temporary excavation stipulated in the Soils Report)

3/4" - 1 1/2" clean gravel**

Filter fabric envelope (Mirafit 140E or approved equivalent)

Limit of area where 1/3 and 1/2 of the loading from nearby buildings/structural features should be accounted for in cantilevered and top-restrained retaining wall design, respectively.

Competent bedrock, native soils or certified compacted fill per approved by the Geotechnical Consultant

SPECIFICATIONS FOR CALTRANS CLASS II PERMEABLE MATERIAL

U.S. STANDARD SIEVE SIZE	% PASSING
1"	100
3/4"	90 ~ 100
3/8"	40 ~ 100
No. 4	25 ~ 40
No. 8	18 ~ 33
No. 30	5 ~ 15
No. 50	0 ~ 7
No. 200	0 ~ 3

Sand Equivalent > 75

*** Based on ASTM D-1557-02**

**** If Caltrans Class II permeable material (see gradation to left) is used in place of 3/4" - 1 1/2" gravel, filter fabric may be deleted. Caltrans Class II permeable material should be compacted to minimum 90% percent relative compaction. Unless otherwise specified, a minimum of 1 cubic foot of gravel should be used for each 1 foot run of drain.**

Note 1: Composite drainage products such as Contech C-Drain, Miradrain or I-Drain may be used as alternative to gravel or Class II. Installation should be performed in accordance with manufacturer's specifications.

Note2: Min. Extent of "Very Low" expansion backfill zone should be as per indicated by the red-dotted wedge area behind retaining wall.

Schematic Not To Scale

13 DETAIL
SUBDRAIN DETAIL
NOT TO SCALE
PER SOILS REPORT BY ASSOCIATED SOILS
ENGINEERING, INC., P.N. 7047.22, DATED 6/14/2022

CONSTRUCTION NOTES

- (1) — CONSTRUCT CONCRETE DRIVEWAY. SEE DETAIL ON SHEET C-3.
- (2) — INSTALL 12" TRAFFIC RATED FLAT DRAIN NDS 1210 W/ RISER & ADAPTOR, OR EQUAL.
- (3) — INSTALL 4" DIA. SCHEDULE 40 PVC PIPE DRAIN SYSTEM.
- (4) — CONSTRUCT DOWNDRAIN TO PIPE TRANSITION PER PCWP STANDARD PLAN 1331.
- (5) — CONSTRUCT 24" WIDE V-DITCH. SEE DETAIL ON SHEET C-3.
- (6) — INSTALL 6" DIA. SCHEDULE 40 PVC PIPE DRAIN SYSTEM.
- (7) — CONSTRUCT RIP RAP ENERGY REDUCER. SEE DETAIL ON SHEET C-3.
- (8) — INSTALL 8" DIA. SCHEDULE 40 PVC PIPE DRAIN SYSTEM.
- (9) — CONSTRUCT CONCRETE SLOPE ANCHORS PER PCWP STANDARD 1333.
- (10) — INSTALL 5" CHANNEL DRAIN WITH TRAFFIC RATED GRATE NDS TYP 864 OR EQUIVALENT. PROVIDE OUTLET EVERY 8' MIN.
- (11) — INSTALL 12" ATRIUM DRAIN. NDS TYPE 1280 W/ RISER & ADAPTOR, OR EQUAL.
- (12) — CONSTRUCT DEEPEENED FOOTING. SEE DETAIL ON SHEET C-3.
- (13) — INSTALL SUBDRAIN PER SOILS REPORT RECOMMENDATIONS.
- (14) — INSTALL MODULAR WETLAND SYSTEM (MWS-L-4-6-V-FLOW) PER MANUFACTURER'S DIRECTIONS.
- (15) — CONSTRUCT CASE 3 SADDLE CONNECTION PER PCWP STD. DWG. 332-2, JUNCTION STRUCTURE TYPE IV. CONTRACTOR TO VERIFY DEPTH AND LOCATION IN FIELD.



GRADING PERMIT NUMBER: GRD22-0137

PLANS PREPARED BY:

TOAL
ENGINEERING, INC.



CIVIL ENGINEERING
LAND SURVEYING
STORMWATER QUALITY

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CALEB RIOS
R.C.E. 57587
DATE: 5-15-23

PREPARED FOR:
FRANK PISANO
3 LORJEN, COTO DE CAZA

[illegible]

GARAGE ADDITION

DETAILS (2)

LOT 75 TRACT 13332
3 LORJEN, COTO DE CAZA

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DATE:	05/15/2023
SURVEY DATE:	08-07-15
DRN.:	A.V.
CHD.:	C.R.
APPD.:	C.R.
JOB NO.	18212

H. SCALE: N/A	
V. SCALE: N/A	
DWG. NO. C-4	
SHEET 4	OF 5

