GRADING PLANS FOR THE LANDS OF BAGNAS

COUNTY OF SANTA CLARA GENERAL CONSTRUCTION SPECIFICATIONS:

GENERAL CONDITIONS
1. ALL CONSTRUCTION WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE SOILS AND/OR GEOTECHNICAL REPORT PREPARED BY E2C DATED FEBRUARY 11, 2005, FILE NO. 2171SC01 AND SUBSEQUENT UPDATES BY APPLIED WATER RESOURCES LETTER DATED JULY 2, 2014. THIS REPORT IS SUPPLEMENTED BY: 1) THESE PLANS AND SPECIFICATIONS, 2) THE COUNTY OF SANTA CLARA STANDARD DETAILS. 3) THE COUNTY OF SANTA CLARA STANDARD SPECS, 4) STATE OF CALIFORNIA STANDARD DETAILS, 5) STATE OF CALIFORNIA STANDARD SPECIFICATIONS. IN THE EVENT OF CONFLICT THE FORMER SHALL TAKE PRECEDENCE OVER THE LATTER. THE PERFORMANCE AND COMPLETION OF ALL WORK MUST BE TO THE SATISFACTION OF THE COUNTY.
2. DEVELOPER IS RESPONSIBLE FOR INSTALLATION OF THE IMPROVEMENTS SHOWN ON THESE PLANS AND HE OR HIS SUCCESSOR PROPERTY OWNERS ARE RESPONSIBLE FOR THEIR CONTINUED MAINTENANCE.
3. DEVELOPER SHALL BE RESPONSIBLE FOR CORRECTION OF ANY ERRORS OR OMISSIONS IN THESE PLANS. THE COUNTY ENGINEER SHALL BE AUTHORIZED TO REQUIRE DISCONTINUANCE OF ANY WORK AND SUCH CORRECTION AND MODIFICATION OF PLANS AS MAY BE NECESSARY TO COMPLY WITH COUNTY STANDARDS OR CONDITIONS OF DEVELOPMENT APPROVAL.
4. DEVELOPER SHALL OBTAIN ENCROACHMENT PERMITS FROM THE SANTA CLARA VALLEY WATER DISTRICT AND CALIFORNIA DEPARTMENT OF TRANSPORTATION WHERE NEEDED. COPIES OF THESE PERMITS SHALL BE KEPT AT THE JOB SITE FOR REVIEW BY THE COUNTY'S INSPECTOR.
5. DEVELOPER SHALL REMOVE OR TRIM ALL TREES TO PROVIDE AN UNOBSTRUCTED FIFTEEN (15) FOOT VERTICAL CLEARANCE FOR ROADWAY AREA.
6. THIS PLAN AUTHORIZES THE REMOVAL OF ONLY THOSE TREES WITH TRUNK DIAMETERS GREATER THAN 12 INCHES MEASURED 4.5 FEET ABOVE THE GROUND THAT ARE SHOWN TO BE REMOVED UNLESS AN AMENDED PLAN IS APPROVED OR A SEPARATE TREE REMOVAL PERMIT IS OBTAINED FROM THE PLANNING OFFICE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT REMOVAL OF ADDITIONAL TREES HAS BEEN PERMITTED.
7. DEVELOPER SHALL PROVIDE ADEQUATE DUST CONTROL AS REQUIRED BY THE COUNTY INSPECTOR.
8. ALL PERSONS MUST COMPLY WITH SECTION 4442 OF THE PUBLIC RESOURCES CODE AND SECTION 13005 OF THE HEALTH AND SAFETY CODE RELATING TO THE USE OF SPARK ARRESTERS.
9. UPON DISCOVERING OR UNEARTHING ANY BURIAL SITE AS EVIDENCED BY HUMAN SKELETAL REMAINS OR ARTIFACTS, THE PERSON MAKING SUCH DISCOVERY SHALL IMMEDIATELY NOTIFY THE COUNTY CORONER AT (4008) 454-2520 AND LAND DEVELOPMENT ENGINEERING OFFICE AT (408) 299-5730. NO FURTHER DISTURBANCE OF THE SITE MAY BE MADE EXCEPT AS AUTHORIZED BY THE LAND DEVELOPMENT OFFICE IN ACCORD WITH PROVISIONS OF THIS ORDINANCE (COUNTY ORDINANCE CODE SECTION B6-18).
10. THESE PLANS ARE FOR THE WORK DESCRIBED IN THE SCOPE OF WORK ONLY. A SEPARATE PERMIT WILL BE REQUIRED FOR THE SEPTIC LINE CONSTRUCTION.
11. ANY DEVIATION FROM THESE APPROVED PLANS SHALL BE RE-APPROVED IN WRITING BY THE COUNTY ENGINEER PRIOR TO CONSTRUCTION.

CONSTRUCTION STAKING
1. THE DEVELOPER'S ENGINEER IS RESPONSIBLE FOR THE INITIAL PLACEMENT AND REPLACEMENT OF CONSTRUCTION GRADE STAKES. THE STAKES ARE TO BE ADEQUATELY IDENTIFIED, LOCATED, STABILIZED, ETC. FOR THE CONVENIENCE OF CONTRACTORS. LATERAL OFFSET OF STAKES SET FOR CURBS AND GUTTERS SHALL NOT EXCEED 2 1/2 FEET FROM BACK OF CURB.
2. ANY PROPERTY LINE STAKES OR ROAD MONUMENTS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY DEVELOPER'S ENGINEER AND LICENSED LAND SURVEYOR.
3. PROPERTY LINE STAKING MUST BE PERFORMED BY THE PROJECT ENGINEER OR LAND SURVEYOR TO ESTABLISH OR RE-ESTABLISH THE PROJECT BOUNDARY AND SHALL BE INSPECTED BY THE COUNTY INSPECTOR PRIOR TO THE BEGINNING OF THE WORK.
4. PROPER CONSTRUCTION STAKES SHALL BE SET IN THE FIELD BY THE PROJECT ENGINEER OR LAND SURVEYOR AND VERIFIED BY THE COUNTY INSPECTOR PRIOR TO THE COMMENCEMENT OF GRADING.

CONSTRUCTION INSPECTION
1. CONTRACTOR SHALL NOTIFY PERMIT INSPECTION UNIT, SANTA CLARA COUNTY PRIOR TO COMMENCING WORK AND FOR FINAL INSPECTION OF WORK AND SITE.
2. THE COUNTY REQUIRES A MINIMUM OF 24 HOURS ADVANCE NOTICE FOR GENERAL INSPECTION, 48 HOURS FOR ASPHALT CONCRETE INSPECTION.
3. INSPECTION BY SANTA CLARA COUNTY SHALL BE LIMITED TO INSPECTION OF MATERIALS AND PROCESSES OF CONSTRUCTION TO OBSERVE THEIR COMPLIANCE WITH PLANS & SPECIFICATIONS BUT DOES NOT INCLUDE RESPONSIBILITY FOR THE SUPERINTENDENT OF CONSTRUCTION, SITE CONDITIONS, EQUIPMENT OR PERSONNEL. CONTRACTOR SHALL NOTIFY THE COUNTY LAND DEVELOPMENT INSPECTOR AT PHONE (408) 299-6868 AT LEAST 24 HOURS PRIOR TO COMMENCING WORK AND FOR FINAL INSPECTION OF WORK AND SITE.
4. DEVELOPER AND/OR HIS AUTHORIZED REPRESENTATIVE MUST SUBMIT WRITTEN REQUEST FOR FINAL INSPECTION AND ACCEPTANCE. SAID REQUEST SHALL BE DIRECTED TO THE INSPECTION OFFICE NOTED ON THE PERMIT FORM.
5. THE CONTRACTOR SHALL PROVIDE TO THE COUNTY CONSTRUCTION INSPECTOR WITH PAD ELEVATION AND LOCATION CERTIFICATES, PREPARED BY THE PROJECT ENGINEER OR LAND SURVEYOR, PRIOR TO COMMENCEMENT OF THE BUILDING FOUNDATION.

SITE PREPARATION/CLEARING AND GRUBBING
1. EXISTING TREES AUTHORIZED FOR REMOVAL, ROOTS, AND FOREIGN MATERIAL IN AREAS TO BE IMPROVED WILL BE REMOVED TO AN AUTHORIZED DISPOSAL SITE AS FOLLOWS:
A) TO A MINIMUM DEPTH OF TWO FEET BELOW THE FINISHED GRADE OF PROPOSED ROADWAYS (EITHER PRIVATE OR TO BE DEDICATED TO PUBLIC USE)
B) FROM AREAS AFFECTED BY THE PROPOSED GRADING EXCEPT WHERE NOTED ON THE PLANS.
2. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO MOVE OR RELOCATE UTILITY POLES AND OTHER OBSTRUCTIONS IN THE WAY OF CONSTRUCTION.

UTILITY LOCATION, TRENCHING & BACKFILL
1. CONTRACTOR SHALL NOTIFY USA (UNDERGROUND SERVICE ALERT) AT 1-800-277-2600 A MINIMUM OF 24 HOURS BEFORE BEGINNING UNDERGROUND WORK FOR VERIFICATION OF THE LOCATION OF UNDERGROUND UTILITIES.
2. ACCURATE VERIFICATION AS TO SIZE, LOCATION, AND DEPTH OF EXISTING UNDERGROUND CONDUITS OR FACILITIES SHALL BE THE INDIVIDUAL CONTRACTORS RESPONSIBILITY. PLAN LOCATIONS ARE APPROXIMATE AND FOR GENERAL INFORMATION ONLY.
3. ALL UNDERGROUND INSTALLATIONS SHALL BE IN PLACE AND THE TRENCH BACKFILLED AND COMPACTED BEFORE PLACING AGGREGATE BASE MATERIAL OR SURFACE STRUCTURES. SURFACING MAY BE DONE IF THE UTILITY COMPANY CONCERNED INDICATES BY LETTER THAT IT WILL BE DONE. UNLESS SPECIFICALLY AUTHORIZED BY THE COUNTY, GAS AND WATER MAINS SHALL BE INSTALLED OUTSIDE THE PAVED AREAS.
4. TRENCH BACKFILL IN EXISTING PAVEMENT AREAS SHALL BE SAND MATERIAL IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE STATE SPECIFICATIONS. THE STRUCTURAL SECTION FOR TRENCH REPLACEMENT SHALL CONSIST OF NOT LESS THAN 12 INCHES OF APPROVED AGGREGATE BASE MATERIAL COMPACTED TO A RELATIVE COMPACTION OF AT LEAST 95% AND 4 INCHES OF HOT ASPHALT CONCRETE PLACED IN TWO LIFTS. TRENCH RESTORATION FOR HIGHER TYPE PAVEMENTS SHALL BE MADE IN KIND OR AS DIRECTED BY THE COUNTY.
5. TRENCH BACKFILL IN NEW CONSTRUCTION AREAS SHALL BE SAND MATERIAL COMPACTED TO A RELATIVE COMPACTION OF AT LEAST 90%. THE REQUIREMENT FOR SELECT MATERIAL MAY BE WAIVED BY COUNTY IF THE NATIVE SOIL IS SUITABLE FOR USE AS TRENCH BACKFILL BUT THE COMPACTION REQUIREMENTS WILL NOT BE THEREBY WAIVED.
6. BACKFILL AND TRENCH RESTORATION REQUIREMENTS SHALL APPLY AS MINIMUM STANDARDS TO ALL UNDERGROUND FACILITIES INSTALLED BY OTHER FIRMS OR PUBLIC AGENCIES.

GRADING
1. EXCAVATED MATERIAL SHALL BE PLACED IN THE FILL AREAS DESIGNATED OR SHALL BE HAULED AWAY FROM THE SITE TO A COUNTY APPROVED DISPOSAL SITE. WHERE FILL MATERIAL IS TO BE PLACED ON NATURAL GROUND, IS SHALL BE STRIPPED OF ALL VEGETATION TO ACHIEVE A PROPER BOND WITH THE FILL MATERIAL, THE SURFACE OF THE GROUND SHALL BE SCARIFIED TO DEPTH OF 6" BEFORE FILL IS PLACED. WHERE NATURAL GROUND IS STEEPER THAN 5:1, IT SHALL BE BENCHED AND THE FILL KEYED IN TO ACHIEVE STABILITY. WHERE NEW FILL IS TO BE PLACED ON EXISTING FILL THE EXISTING FILL SHALL BE REMOVED UNTIL MATERIAL COMPACTED TO 90% RELATIVE COMPACTION IS EXPOSED. THEN THE NEW FILL MATERIAL SHALL BE PLACED AS PER THESE CONSTRUCTION NOTES. FILL MATERIAL SHALL BE PLACED IN UNIFORM LIFTS NOT EXCEEDING 6" IN UNCOMPACTED THICKNESS. BEFORE COMPACTION BEGINS, THE FILL SHALL BE BROUGHT TO A WATER CONTENT THAT WILL PERMIT PROPER COMPACTION BY EITHER 1) AERATING THE FILL IF IT IS TOO WET OR 2) MOISTENING THE FILL WITH WATER IF IT IS TOO DRY. EACH LIFT SHALL BE THOROUGHLY MIXED BEFORE COMPACTION TO ENSURE A UNIFORM DISTRIBUTION OF MOISTURE.
2. EXCESS CUT MATERIAL SHALL NOT BE SPREAD OR STOCKPILED ON THE SITE.
3. SURPLUS EARTH FILL MATERIAL SHALL BE PLACED IN A SINGLE (8" MAX) THICK LAYER COMPACTED TO WITHSTAND WEATHERING IN THE AREA(S) DELINEATED ON THE PLAN.
4. NO ORGANIC MATERIAL SHALL BE PLACED IN ANY FILL. NO TREES SHALL BE REMOVED OUTSIDE OF CUT, FILL OR ROADWAY AREAS.
5. THE UPPER 6" OF SUBGRADE BELOW DRIVEWAY ACCESS ROAD OR PARKING AREA SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY.
6. MAXIMUM CUT SLOPE SHALL BE 2 HORIZONTAL TO 1 VERTICAL. MAXIMUM FILL SLOPE SHALL BE 2 HORIZONTAL TO 1 VERTICAL.
7. NOTIFY SOILS ENGINEER TWO (2) DAYS PRIOR TO COMMENCEMENT OF ANY GRADING WORK TO COORDINATE THE WORK IN THE FIELD.
8. ALL MATERIALS FOR FILL SHOULD BE APPROVED BY THE SOILS ENGINEER BEFORE IT IS BROUGHT TO THE SITE.
9. THE UPPER 6" OF THE SUBGRADE SOIL SHALL BE SCARIFIED, MOISTURE CONDITIONED AND COMPACTED TO A MINIMUM RELATIVE COMPACTION OF 95%
10. ALL AGGREGATE BASE MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% RELATIVE COMPACTION.
11. THE GEOTECHNICAL PLAN REVIEW LETTER MUST BE REVIEWED AND APPROVED BY THE COUNTY GEOLOGIST PRIOR TO FINAL APPROVAL BY THE COUNTY ENGINEER FOR BUILDING OCCUPANCY.
12. THE PROJECT GEOTECHNICAL ENGINEER SHALL PERFORM COMPACTION TESTING AND PRESENT THE RESULTS TO THE COUNTY ENGINEERING INSPECTOR PRIOR TO THE APPROVAL OF ANY PAVED AREA.
13. GRADING WORK BETWEEN OCTOBER 15TH AND APRIL 15TH IS AT THE DISCRETION OF THE SANTA CLARA COUNTY GRADING OFFICIAL.
14. TOTAL DISTURBED AREA FOR THE PROJECT IS 17,000 SF.
15. WDID NO.____
16. THE INSPECTOR MAY VERIFY THAT A VALID NOTICE OF INTENT (NOI) HAS BEEN ISSUED BY THE STATE AND THAT A CURRENT AND UP TO DATE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS AVAILABLE ON SITE.

RETAINING WALLS
1. REINFORCED CONCRETE AND CONCRETE MASONRY UNIT RETAINING WALLS SHALL HAVE FOUNDATION AND REINFORCEMENT INSPECTED BY THE COUNTY ENGINEERING INSPECTOR AND ENGINEER OF RECORD PRIOR TO POURING THE FOUNDATION AND FORMING THE WALL.
2. SEGMENTAL BLOCK RETAINING WALLS SHALL HAVE FOUNDATION AND REINFORCEMENT INSPECTED BY THE COUNTY ENGINEERING INSPECTOR.

AIR QUALITY, LANDSCAPING AND EROSION CONTROL
1. WATER ALL ACTIVE CONSTRUCTION AREAS AT LEAST TWICE DAILY.
2. COVER ALL TRUCKS HAULING SOIL, SAND, AND OTHER LOOSE MATERIALS OR REQUIRE ALL TRUCKS TO MAINTAIN AT LEAST TWO FEET OF FREEBOARD.
3. PAVE, APPLY WATER THREE TIMES DAILY, OR APPLY (NON-TOXIC) SOIL STABILIZERS ON ALL UNPAVED ACCESS ROADS, PARKING AREAS AND STAGING AREAS AT CONSTRUCTION SITES.
4. SWEEP DAILY (WITH WATER SWEEPERS) ALL PAVED ACCESS ROADS, PARKING AREAS AND STAGING AREAS AT CONSTRUCTION SITES. THE USE OF DRY POWDER SWEEPING IS PROHIBITED.
5. SWEEP STREETS DAILY (WITH WATER SWEEPERS) IF VISIBLE SOIL MATERIAL IS CARRIED ONTO ADJACENT PUBLIC STREETS. THE USE OF DRY POWDER SWEEPING IS PROHIBITED.
6. ALL CONSTRUCTION VEHICLES, EQUIPMENT AND DELIVERY TRUCKS SHALL HAVE A MAXIMUM IDLING TIME OF 5 MINUTES (AS REQUIRED BY THE CALIFORNIA AIRBORNE TOXIC CONTROL MEASURE TITLE 13, SECTION 2485 OF CALIFORNIA CODE OF REGULATIONS (CCR)). ENGINES SHALL BE SHUT OFF IF CONSTRUCTION REQUIRES LONGER IDLING TIME UNLESS NECESSARY FOR PROPER OPERATION OF THE VEHICLE.
7. ALL VEHICLE SPEEDS ON UNPAVED ROADS SHALL BE LIMITED TO 15 MILES PER HOUR.
8. ALL CONSTRUCTION EQUIPMENT SHALL BE MAINTAINED AND PROPERLY TUNED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. ALL EQUIPMENT SHALL BE CHECKED BY A CERTIFIED MECHANIC AND DETERMINED TO BE RUNNING IN PROPER CONDITION PRIOR TO OPERATION.
9. POST A SIGN THAT IS AT LEAST 32 SQUARE FEET MINIMUM 2 INCHES LETTER HEIGHT VISIBLE NEAR THE ENTRANCE OF CONSTRUCTION SITE THAT IDENTIFIES THE FOLLOWING REQUIREMENTS. OBTAIN ENCROACHMENT PERMIT FOR SIGN FROM ROADS DEPARTMENT OR OTHER APPLICABLE AGENCY IF REQUIRED.
A. 15 MILES PER HOUR (MPH) SPEED LIMIT
B. 5 MINUTES MAXIMUM IDLING TIME OF VEHICLES
C. TELEPHONE NUMBER TO CONTACT THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT REGARDING DUST COMPLAINTS. NOTE PHONE NUMBER OF THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT AIR POLLUTION COMPLAIN HOTLINE OF 1-800-334-6367.
10. ALL FILL SLOPES SHALL BE COMPACTED AND LEFT IN A SMOOTH AND FIRM CONDITION CAPABLE OF WITHSTANDING WEATHERING.
11. ALL EXPOSED DISTURBED AREAS SHALL BE SEEDED WITH BROME SEED SPREAD AT THE RATE OF 5 LB. PER 1000 SQUARE FEET (OR APPROVED EQUAL). SEEDING AND WATERING SHALL BE MAINTAINED AS REQUIRED TO ENSURE GROWTH.
12. ALL DITCHES SHALL BE LINED PER COUNTY STANDARD SD8.
13. ALL STORM DRAINAGE STRUCTURES SHALL BE INSTALLED WITH EFFECTIVE ENTRANCE & OUTFALL EROSION CONTROLS E.G. SACKED CONCRETE RIP-RAP. ENERGY DISSIPATERS SHALL BE INSTALLED AT ALL DITCH OUTFALLS. WHERE OUTFALLS ARE NOT INTO AN EXISTING CREEK OR WATER COURSE, RUNOFF SHALL BE RELEASED TO SHEET FLOW.
14. PRIOR TO GRADING COMPLETION AND RELEASE OF THE BOND, ALL GRADED AREAS SHALL BE RESEEDED IN CONFORMANCE WITH THE COUNTY GRADING ORDINANCE TO MINIMIZE THE VISUAL IMPACTS OF THE GRADE SLOPES AND REDUCE THE POTENTIAL FOR EROSION OF THE SUBJECT SITE.
15. PERMANENT LANDSCAPING SHOWN ON THE ATTACHED LANDSCAPE PLAN MUST BE INSTALLED AND FIELD APPROVED BY THE COUNTY PLANNING OFFICE PRIOR TO FINAL APPROVAL BY THE COUNTY ENGINEER, AND FINAL OCCUPANCY RELEASE BY THE BUILDING INSPECTION OFFICE.
16. THE OWNER SHALL PREPARE AND PRESENT A WINTERIZATION REPORT TO THE COUNTY INSPECTOR FOR REVIEW PRIOR TO OCTOBER 15TH OF EVERY YEAR.
17. THE OWNER, CONTRACTOR, AND ANY PERSON PERFORMING CONSTRUCTION ACTIVITIES SHALL INSTALL AND MAINTAIN CONSTRUCTION BEST MANAGEMENT PRACTICES (BMPS) ON THE PROJECT SITE AND WITHIN THE SANTA CLARA COUNTY ROAD RIGHT-OF-WAY THROUGHOUT THE DURATION OF THE CONSTRUCTION AND UNTIL THE ESTABLISHMENT OF PERMANENT STABILIZATION AND SEDIMENT CONTROL TO PREVENT THE DISCHARGE OF POLLUTANTS INCLUDING SEDIMENT, CONSTRUCTION MATERIALS, EXCAVATED MATERIALS, AND WASTE INTO THE SANTA CLARA COUNTY RIGHT-OF-WAY, STORM SEWER WATERWAYS, ROADWAY INFRASTRUCTURE. BMPS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING;
A. PREVENTION OF POLLUTANTS IN STORM WATER DISCHARGES FROM THE CONSTRUCTION SITE AND THE CONTRACTOR'S MATERIAL AND EQUIPMENT LAYDOWN / STAGING AREAS.
B. PREVENTION OF TRACKING OF MUD, DIRT, AND CONSTRUCTION MATERIALS ONTO THE PUBLIC ROAD RIGHT-OF-WAY.
C. PREVENTION OF DISCHARGE OF WATER RUN-OFF DURING DRY AND WET WEATHER CONDITIONS ONTO THE PUBLIC ROAD RIGHT-OF-WAY.
18. THE OWNER, CONTRACTOR, AND ANY PERSON PERFORMING CONSTRUCTION ACTIVITIES SHALL ENSURE THAT ALL TEMPORARY CONSTRUCTION FACILITIES, INCLUDING BUT NOT LIMITED TO CONSTRUCTION MATERIALS, DELIVERIES, HAZARDOUS AND NON-HAZARDOUS MATERIAL STORAGE, EQUIPMENT, TOOLS, PORTABLE TOILETS, CONCRETE WASHOUT, GARBAGE CONTAINERS, LAYDOWN YARDS, SECONDARY CONTAINMENT AREAS, ETC. ARE LOCATED OUTSIDE THE SANTA CLARA COUNTY ROAD RIGHT-OF-WAY.
19. EROSION CONTROL PLAN IS A GUIDE AND SHALL BE AMENDED AS NECESSARY TO PREVENT EROSION AND ILLICIT DISCHARGES ON A YEAR AROUND BASIS, DEPENDING ON THE SEASON, WEATHER, AND FIELD CONDITIONS. EROSION CONTROL MEASURES IN ADDITION TO THOSE NOTED IN THE PERMITTED PLANS MAY BE NECESSARY. FAILURE TO INSTALL SITE SITE AND SITUATIONALY APPROPRIATE EROSION CONTROL MEASURES MAY RESULT IN VIOLATIONS, FINES, AND A STOPPAGE OF WORK.

TREE PROTECTION
1. FOR ALL TREES TO BE RETAINED WITH A CANOPY IN THE DEVELOPMENT AREA OR INTERFACES WITH THE LIMITS OF GRADING FOR ALL PROPOSED DEVELOPMENT ON SITE, THE TREES SHALL BE PROTECTED BY THE PLACEMENT OF RIGID TREE PROTECTIVE FENCING, CONSISTENT WITH THE COUNTY INTEGRATED LANDSCAPE GUIDELINES, AND INCLUDE THE FOLLOWING:
A. FENCING SHOULD BE PLACED ALONG THE OUTSIDE EDGE OF THE DRIPLINE OF THE TREE OR GROVE OF TREES.
B. THE FENCING SHALL BE MAINTAINED THROUGHOUT THE SITE CONSTRUCTION PERIOD AND SHALL BE INSPECTED PERIODICALLY FOR DAMAGE AND PROPER FUNCTION.
C. FENCING SHALL BE REPAIRED, AS NECESSARY, TO PROVIDE A PHYSICAL BARRIER FROM CONSTRUCTION ACTIVITIES.
D. SIGNAGE STATING, "WARNING- THIS FENCING SHALL NOT BE REMOVED WITHOUT PERMISSION FROM THE SANTA CLARA COUNTY PLANNING OFFICE (408) 299-5770. COUNTY OF SANTA CLARA TREE PROTECTION MEASURES MAY BE FOUND AT http://www.sccplanning.gov." SHALL BE PLACED ON THE TREE PROTECTIVE FENCING UNTIL FINAL OCCUPANCY.
2. PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITY, TREE PROTECTIVE FENCING SHALL BE SECURELY IN PLACED AND INSPECTED BY THE LAND DEVELOPMENT ENGINEERING INSPECTOR.
3. SEE EXISTING TREE PROTECTION DETAILS FOR MORE INFORMATION.

ACCESS ROADS AND DRIVEWAYS
1. DRIVEWAY LOCATIONS SHALL BE AS SHOWN ON THE IMPROVEMENT PLANS WITH CENTERLINE STATIONING. THE MINIMUM CONCRETE THICKNESS SHALL BE 6 INCHES THROUGHOUT (WITH A MAXIMUM APPROACH SLOPE OF 1 1/4 INCHES PER FOOT). ALL DRIVEWAY OR COMMON ACCESS ROAD SECTIONS IN EXCESS OF 16 PERCENT SLOPE SHALL HAVE A GROOVED SURFACE.
2. ALL DRIVEWAY OR COMMON ACCESS ROAD SECTIONS IN EXCESS OF 15 LONGITUDINAL SLOPE MUST BE PAVED WITH A MINIMUM 2-INCH ASPHALT LIFT OR FULL DEPTH CONCRETE LIFT PRIOR TO ANY COMBUSTIBLE FRAMING.
3. ALL DRIVEWAYS OR COMMON ACCESS ROAD SECTIONS SHALL BE MADE OF AN "ALL WEATHER" MATERIAL DESIGNED TO SUPPORT 75,000 POUNDS (37.5 TONS). SUCH MATERIAL SHALL BE PORTLAND CEMENT OR ASPHALT CONCRETE ENGINEERED WITH A GROOVED SURFACE.
4. THE OWNER AND PRIME CONTRACTOR ARE RESPONSIBLE FOR MAINTAINING PROJECT SITE ACCESS AND NEIGHBORHOOD ACCESS FOR EMERGENCY VEHICLES AND LOCAL RESIDENTS.
5. ROADWAYS DESIGNATED AS NOT COUNTY MAINTAINED ROADS AS SHOWN ON THE PLAN WILL NOT BE ELIGIBLE FOR COUNTY MAINTENANCE UNTIL THE ROADWAYS ARE IMPROVED (AT NO COST TO THE COUNTY) TO THE PUBLIC MAINTENANCE ROAD STANDARDS APPROVED BY THE BOARD OF SUPERVISORS AND IN EFFECT AT SUCH TIME THAT THE ROADWAYS ARE CONSIDERED FOR ACCEPTANCE INTO THE COUNTY'S ROAD SYSTEM.
6. ALL WORK IN THE COUNTY ROAD RIGHT-OF-WAY REQUIRES AN ENCROACHMENT PERMIT FROM THE ROADS AND AIRPORTS DEPARTMENT. EACH INDIVIDUAL ACTIVITY REQUIRES A SEPARATE PERMIT - I.E. CABLE, ELECTRICAL, GAS, SEWER, WATER, RETAINING WALLS, DRIVEWAY APPROACHES, FENCES, LANDSCAPING, TREE REMOVAL, STORM DRAINAGE IMPROVEMENTS, ETC.

STREET LIGHTING
1. PACIFIC GAS & ELECTRIC ELECTROLIER SERVICE FEE SHALL BE PAID BY THE DEVELOPER AND/OR HIS AUTHORIZED REPRESENTATIVE.

SANITARY SEWER
1. THE SANITARY SEWER AND WATER UTILITIES SHOWN ON THESE PLANS ARE NOT PART OF THIS GRADING PERMIT AND ARE SHOWN FOR REFERENCE ONLY.
2. ALL MATERIALS AND METHODS OF CONSTRUCTION OF SANITARY SEWERS SHALL CONFORM TO THE SPECIFICATIONS OF THE JURISDICTION INVOLVED. INSPECTION OF SANITARY SEWER WORK SHALL BE DONE BY SAID JURISDICTION.

PORTLAND CEMENT CONCRETE
1. CONCRETE USED FOR STRUCTURAL PURPOSES SHALL BE CLASS "A" (6 SACK PER CUBIC YARD) AS SPECIFIED IN THE STATE STANDARD SPECIFICATIONS. CONCRETE PLACED MUST DEVELOP A MINIMUM STRENGTH FACTOR OF 2800 PSI IN A SEVEN-DAY PERIOD. THE CONCRETE MIX DESIGN SHALL BE UNDER THE CONTINUAL CONTROL OF THE COUNTY INSPECTOR.

STORM DRAINAGE AND STORMWATER MANAGEMENT
1. DEVELOPER IS RESPONSIBLE FOR ALL NECESSARY DRAINAGE FACILITIES WHETHER SHOWN ON THE PLANS OR NOT AND HE OR HIS SUCCESSOR PROPERTY OWNERS ARE RESPONSIBLE FOR THE ADEQUACY AND CONTINUED MAINTENANCE OF THESE FACILITIES IN A MANNER WHICH WILL PRECLUDE ANY HAZARD TO LIFE, HEALTH, OR DAMAGE TO ADJOINING PROPERTY, CONSISTENT WITH NPDES PERMIT CAS612008 / ORDER NO. R2-2009-0047 AND NPDES PERMIT CAS000004/ ORDER NO. 2013-0001-DWQ.
2. DROP INLETS SHALL BE COUNTY STANDARD TYPE 5 UNLESS OTHERWISE NOTED ON THE PLANS. THE DEVELOPER'S ENGINEER SHALL BE RESPONSIBLE FOR THE PROPER LOCATION OF DROP INLETS. WHERE STREET PROFILE GRADE EXCEEDS 6% DROP INLETS SHALL BE SET AT 500 ANGLE CURB LINE TO ACCEPT WATER OR AS SHOWN ON THE PLANS.
3. WHERE CULVERTS ARE INSTALLED THE DEVELOPER SHALL BE RESPONSIBLE FOR GRADING THE OUTLET DITCH TO DRAIN TO AN EXISTING SWALE OR TO AN OPEN AREA FOR SHEET FLOW.
4. UPON INSTALLATION OF DRIVEWAY CONNECTIONS, PROPERTY OWNERS SHALL PROVIDE FOR THE UNINTERRUPTED FLOW OF WATER IN ROADSIDE DITCHES.
5. THE COUNTY SHALL INSPECT UNDERGROUND DRAINAGE IMPROVEMENTS AND STORMWATER MANAGEMENT FEATURES PRIOR TO BACKFILL.

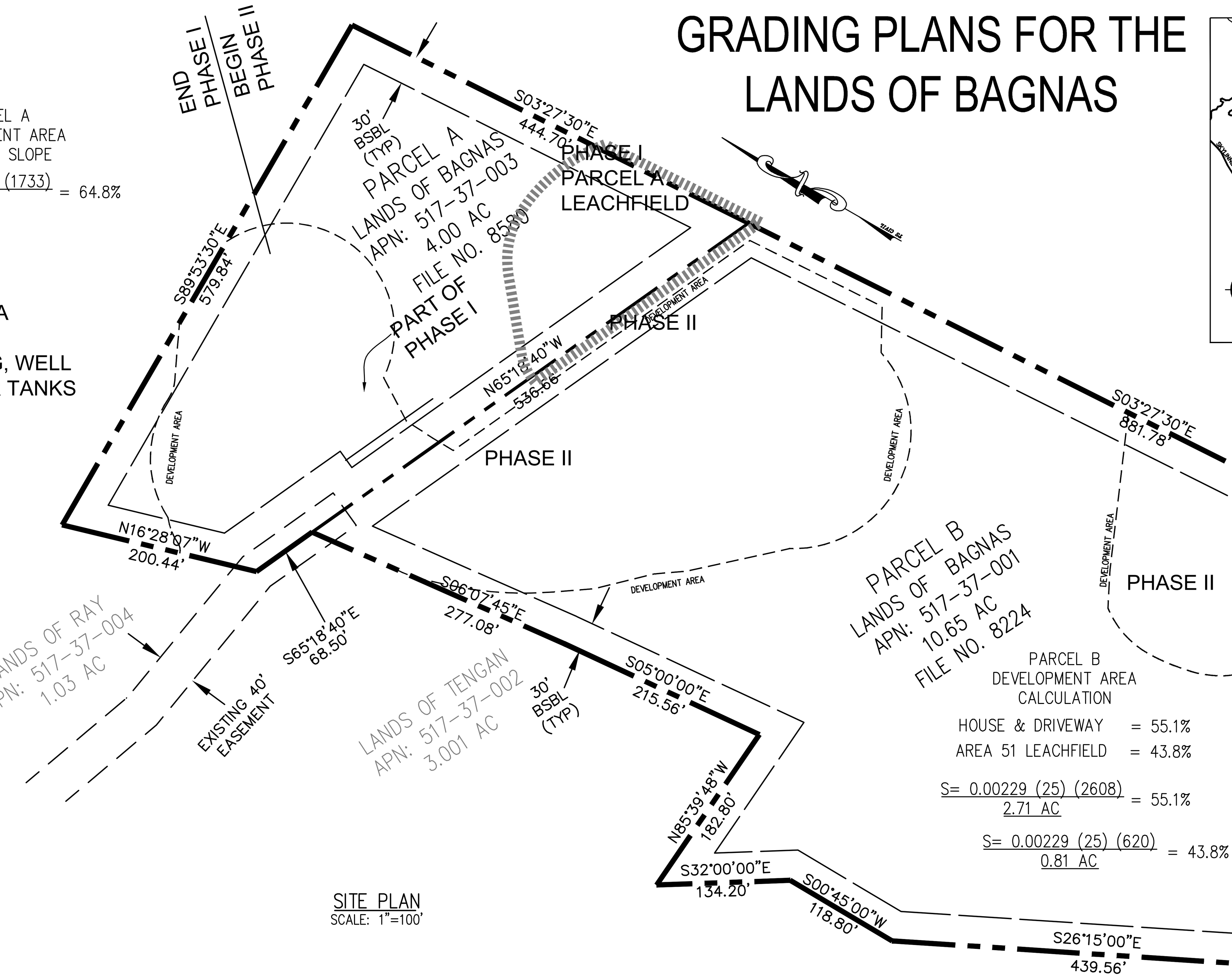
ABBREVIATIONS

BW	BOTTOM WALL
BSBL	BUILDING SETBACK LINE
CB/DB	CATCH BASIN/DRAIN BASIN
EP	EDGE OF PAVEMENT
EX	EXISTING
FF	FINISH FLOOR
FG	FINISH GRADE
FL	FLOW LINE
GB	GRADE BREAK
HP	HIGH POINT
INV	INVERT
	JOINT POLE
L	LENGTH
LP	LOW POINT
PL	PROPERTY LINE
PVC	POLY VINYL CHLORIDE
RTW	RETAINING WALL
S	SLOPE
STD	STANDARD
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
TW	TOP OF WALL
P.U.E.	PUBLIC UTILITY EASEMENT
CD	CURTAIN DRAIN
SBD	SUBDRAIN

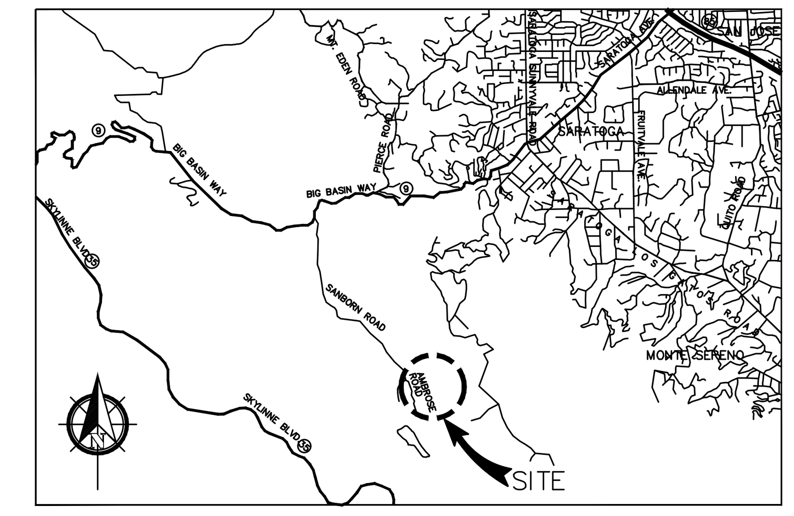
PARCEL A
DEVELOPMENT AREA
AVERAGE SLOPE

$$S=\frac{0.00229\ (25)\ (1733)}{1.53\ AC}=64.8\%$$

PHASE I
PARCEL A
ACCESS,
GRADING, WELL
& WATER TANKS



SITE PLAN
SCALE: 1"=100'



VICINITY MAP
SCALE: N.T.S.

BASIS OF ELEVATION

THE BENCHMARK FOR THIS PROJECT IS "X" CUT IN HEAD WALL, WEST SIDE OF AMBROSE ROAD, OPPOSITE ACCESS DRIVEWAY; ELEVATION = 100.00'

BASIS OF BEARINGS:

THE BEARING N 80°40'10"W OF THE CENTERLINE OF THE 40' R/W AS SHOWN ON THE RECORD OF SURVEY BOOK 140 MAPS PAGE 51; SANTA CLARA COUNTY RECORDS WAS TAKEN AS THE BASIS OF BEARINGS AS SHOWN ON THESE PLANS.

LEGEND

530	EX. CONTOUR MAJOR
534	EX. CONTOUR MINOR
	EX. BUILDING, DRIVEWAY
	EX. ROAD
SD	EX. STORM DRAIN LINE
OHW	EX. OVERHEAD WIRE
	EX. AC BERM
TOP	EX. TOP OF BANK
TOE	EX. TOE OF BANK
	EX. CREEK FLOWLINE
X	EX. FENCE
SD	PROPOSED STORM DRAIN
	PROPOSED RETAINING WALL
534	PROPOSED CONTOUR
	PROPOSED BUILDING
	PROPOSED SUBDRAIN SYSTEM
	PROPOSED WALKWAY/DWY
	PROPOSED VEGETATION SWALE/FLOW LINE
	BUILDING SETBACK LINES
	PROPERTY LINE
	STREET CENTER LINE
	EX. P.U.E, WATER, & INGESS EGRESS EASEMENT
	LEACHFIELD LIMITS
	ADJACENT PROPERTY LINE
SW	STRAW WADDLE
SF	SILT FENCE
	DAYLIGHT

COUNTY ENGINEER'S NOTE:

ISSUANCE OF A PERMIT AUTHORIZING CONSTRUCTION DOES NOT RELEASE THE DEVELOPER, PERMITTEE OR ENGINEER FROM RESPONSIBILITY FOR THE CORRECTION OF ERRORS OR OMISSIONS CONTAINED IN THE PLANS. IF, DURING THE COURSE OF CONSTRUCTION, THE PUBLIC INTEREST REQUIRES A MODIFICATION OF (OR A DEPARTURE FROM) THE SPECIFICATIONS OR THE PLANS, THE COUNTY SHALL HAVE THE AUTHORITY TO REQUIRE THE SUSPENSION OF WORK AND THE NECESSARY MODIFICATION OR DEPARTURE AND TO SPECIFY THE MANNER IN WHICH THE SAME IS TO BE MADE.

CHRISTOPHER L. FREITAS SIGNATURE DATE
42107/03-31-20
R.C.E NO./EXPIRATION

ENGINEER'S STATEMENT:

I HEREBY STATE THAT THESE PLANS ARE IN COMPLIANCE WITH ADOPTED COUNTY STANDARDS, THE APPROVED TENTATIVE MAP (OR PLAN) AND CONDITIONS OF APPROVAL PERTAINING THERETO.

DATED
8580-20-52-10BA-10G-11V
8224-20-52-10BA-10G
FILE(S) NO. FILE(S) NO.

EKUNDAYO SOWUNMI SIGNATURE
22573/12-31-19
R.C.E NO./EXPIRATION

AS-BUILT PLANS STATEMENT

THIS IS A TRUE COPY OF THE AS-BUILT PLANS. THERE (___ WERE) (___ WERE NOT) MINOR FIELD CHANGES - MARKED WITH THE SYMBOL (^). THERE (___WERE) (___ WERE NOT) PLAN REVISIONS INDICATING SIGNIFICANT CHANGES REVIEWED BY THE COUNTY ENGINEER AND MARKED WITH THE SYMBOL △.

DATE SIGNATURE

NOTE: THIS STATEMENT IS TO BE SIGNED BY THE PERSON AUTHORIZED BY THE COUNTY ENGINEER TO PERFORM THE INSPECTION WORK. A REPRODUCIBLE COPYOF THE AS-BUILT PLANS MUST BE FURNISHED TO THE COUNTY ENGINEER AFTERCONSTRUCTION.

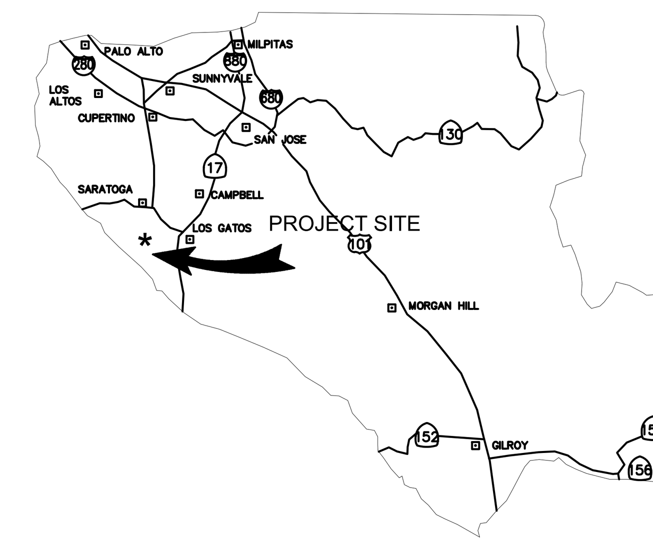
ESTIMATED VOLUMES:

EARTHWORK SUMMARY	CUT	FILL	MAX CUT	MAX FILL
JOINT ACCESS ROAD (UP TO PCL A GARAGE) @ STA:15+25	1,755	131	20	12.5
PARCEL A HOUSE	239	--	19	--
PARCEL A GARAGE	24	--	18	--
DRIVEWAY TO PCL B CONTAINED WITHIN PCL A	3436	0	25	--
HAIRPIN TURN	579	0	18	--
PACEL A SUBTOTAL	6033	131		
DRIVEWAY TO PCL B HOUSE WITHIN PCL B	2000	450	17	9
FIRE DEPT. TURNAROUND	0	3400		20'
PARCEL B HOUSE	1000	1000	10'	9'
PARCEL B GARAGE	50	--	2'	11'
PARCEL B ATTACHED UNIT: HOUSE (INCL W/GARAGE)		--		
YARD	250	150	10'	10'
PARCEL B SUBTOTAL	3300	5000		
SLIDE REPAIR PCL B	1000	4700	10	20

GRAND TOTAL 10,333 9,831
EXCESS MATERIAL SHALL BE OFF HAULED TO A COUNTY APPROVED DUMP SITE.

APPROVED FOR ISSUANCE

REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERS



COUNTY LOCATION MAP

PHASE I - PARCEL A
SCOPE OF GRADING PERMIT WORK

A. THE DEVELOPER IS RESPONSIBLE FOR THE INSTALLATION OF THE WORK PROPOSED ON THE EROSION CONTROL PLAN. THE ENGINEER OF RECORD IS RESPONSIBLE FOR THE DESIGN OF THE EROSION CONTROL PLANS AND ANY MODIFICATIONS OF THE EROSION COTROL PLANS TO PREVENT ILLICIT DISCHARGES FROM THE SITE DURING CONSTRUCTION.

B. CONSTRUCT NEW ACCESS DRIVEWAY TO SD5 STDS FROM SANBORN ROAD TO STATION 16+23.

C. CONSTRUCT RETAINING WALLS.

D. ROCK FENCE TO PROTECT TENGAN, DUST FENCE.

E. DRAINAGE IMPROVEMENTS.

F. STORM DETENTION SYSTEM.

G. TEMPORARY & PERMANENT EROSION CONTROL.

FOR DETAILED PHASING SEE SHEET C27 "CONSTRUCTION PHASING"

OTHER PERMITS
(NOT APPROVED HERE WITH GRADING PERMIT)

A. BRIDGE BUILDING PERMIT

B. LEACHFIELD PERMITS (2 RESIDENCES)

C. BLDG. PERMITS FOR 2 RESIDENCES

COUNTY OF SANTA CLARA
LAND DEVELOPMENT ENGINEERING & SURVEYING

GRADING / DRAINAGE PERMIT NO. ____________
ISSUED BY: ____________ DATE: ____________

COUNTY OF SANTA CLARA DEPT. OF ROADS AND AIRPORTS

ISSUED BY: ____________ DATE: ____________
ENCROACHMENT PERMIT NO. ____________

NO WORK SHALL BE DONE IN THE COUNTY'S RIGHT-OF-WAY WITHUOT AN ENCROACHEMENT PERMIT, INCLUDING THE STAGING OF CONSTRUCTION MATERIAL AND THE PLACEMENT OF PORTABLE TOILETS.

GEOTECHNICAL ENGINEER OF RECORD

KENDALL W. PRICE CEG, REA
REGIONAL MANAGER/PRINCIPAL CONSULTANT
APPLIED WATER RESOURCES (AWR), CORP.
1046 WEST TAYLOR STREET, SUITE 105
SAN JOSE, CA 95126
PHONE: 408-496-0801
EMAIL: kprice@awrcorp.net

GEOTECHNICAL ENGINEER OBSERVATION

A CONSTRUCTION OBSERVATION LETTER FROM THE RESPONSIBLE GEOTECHNICAL ENGINEER AND ENGINEERING GEOLOGIST DETAILING CONSTRUCTION OBSERVATIONS AND CERTIFYING THAT THE WORK WAS DONE IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL AND GEOLOGIC REPORTS SHALL BE SUBMITTED PRIOR TO THE GRADING COMPLETION AND RELEASE OF THE BOND.

SHEET INDEX

WDID NOTE

PHASE I - PARCEL GRADING/DISTURBANCE IS LIMITED TO THE FOLLOWING:

NEW ACCESS ROAD FROM EXISTING BRIDGE TO STA 16+50	7,500 SF
BUILDING PAD AREA	9,000 SF
WATER TANKS	200 SF
SEPTIC TANK AREA	300 SF
TOTAL	17,000 SF

NOTE: TOTAL DISTURBED AREA IS LESS THAN ONE ACRE (43,560 SF)

SEAL:

REGISTERED PROFESSIONAL ENGINEER
EKUNDAYO AKIN SOWUNMI
No. 22573
Exp. 12-31-21
CIVIL
STATE OF CALIFORNIA

ACKLAND INTERNATIONAL, INC.
333 Hegenberger Road, Suite 206
Oakland, CA 94621
510.564.4284 (tel)
510.633.2431 (fax)

NO.	DATE	DESCRIPTION	BY
7	07/06/20	RESUBMITTAL FOR BSA APPLICATION	ES
6	02/06/20	RESUBMITTAL FOR BSA APPLICATION	ES
5	10/24/19	RESUBMITTAL FOR BSA APPLICATION	ES
4	05/14/19	RESUBMITTAL FOR BSA APPLICATION	ES
3	02/09/19	RESUBMITTAL FOR BSA APPLICATION	ES
2	08/21/18	RESUBMITTAL FOR BSA APPLICATION	ES
1	06/11/18	CONFORM LIMIT REVISED TO EASEMENT LINE	ES

REVISION

PROJECT NAME:
LANDS OF BAGNAS
16501 AND 16503 SANBORN RD.
SARATOGA, CA

CLIENT NAME & ADDRESS:
MANNY BAGNAS
10692 CULVER ROAD
CUPERTINO, CA 95014

SHEET TITLE
COVER SHEET
LANDS OF BAGNAS

PROJECT NO.	S18046
DRAWN BY:	DS
CHECKED BY:	ES
SCALE:	AS SHOWN
DATE:	04/29/2018

SHEET NO.
C1

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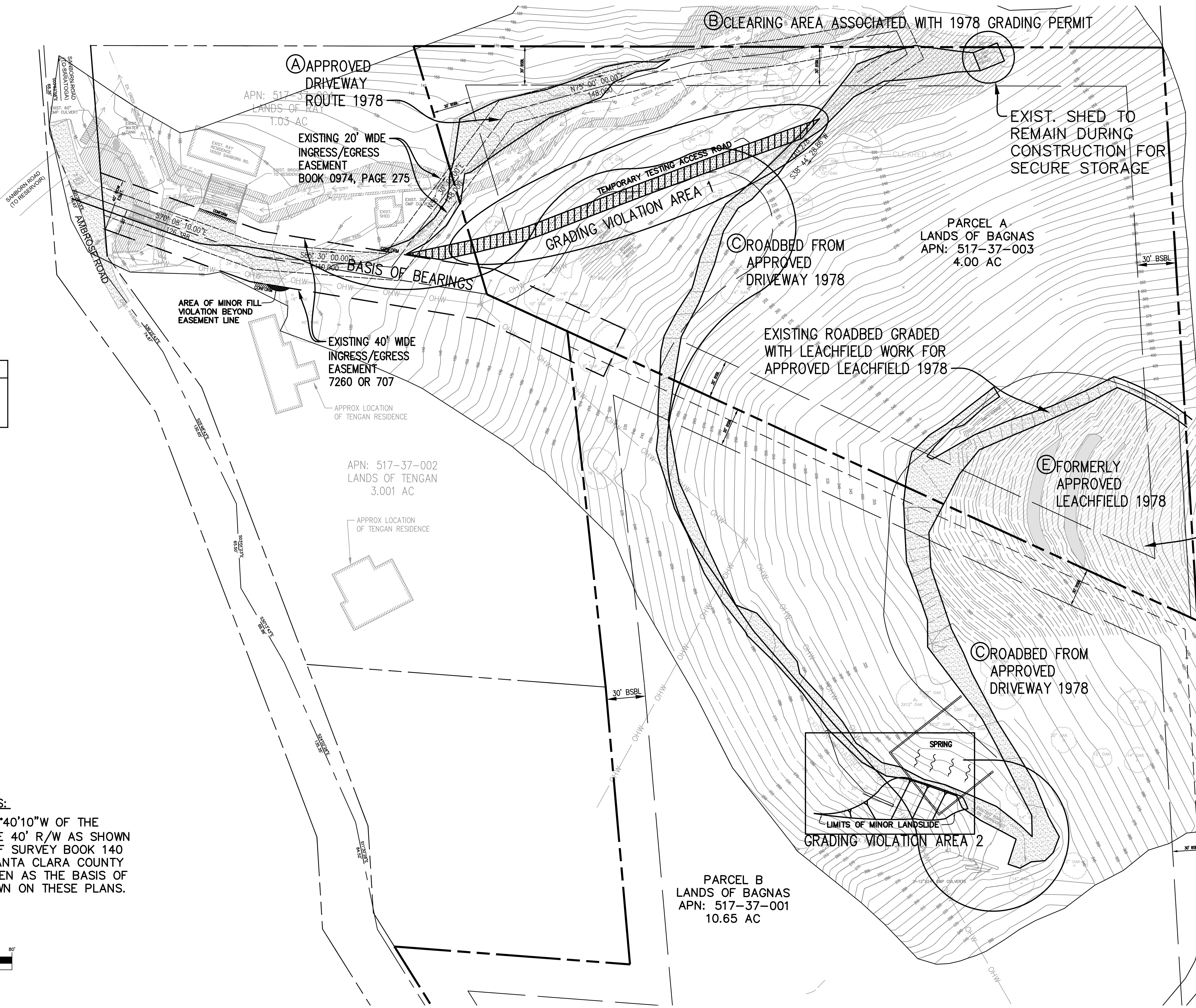
NOTE AS TO GRADING VIOLATIONS:

1. AREA 1 TO BE ABATED BY EXCAVATION FOR ULTIMATE ACCESS ROAD

2. AREA 2 TO BE ABATED WITH SLIDE REPAIR AND PARCEL B DRIVEWAY GRADING.

APPROVED FOR ISSUANCE
REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERS



EXIST. ROADBED

CREEK BANK OR EXIST. GRADING

BASIS OF BEARINGS:

THE BEARING N 80°40'10"W OF THE CENTERLINE OF THE 40' R/W AS SHOWN ON THE RECORD OF SURVEY BOOK 140 MAPS PAGE 51; SANTA CLARA COUNTY RECORDS WAS TAKEN AS THE BASIS OF BEARINGS AS SHOWN ON THESE PLANS.

GRAPHIC SCALE

20' 0 10' 20' 40' 80'

(IN FEET)
1 inch = 20 ft.

SEAL: REGISTERED PROFESSIONAL ENGINEER EHUNDAYO AKIN SOWUNMI No. 22573 Exp. 12-31-21 CIVIL STATE OF CALIFORNIA

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333 Hegenberger Road, Suite 206
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REVISION

PROJECT NAME: LANDS OF BAGNAS 16501 AND 16503 SANBORN RD. SARATOGA, CA

CLIENT NAME & ADDRESS: MANNY BAGNAS 10692 CULVER ROAD CUPERTINO, CA 95014

SHEET TITLE: **PRIOR GRADING PERMIT, PENDING GRADING VIOLATIONS & EXISTING & TOPOGRAPHY & EASEMENTS**

PROJECT NO.	S18046
DRAWN BY:	DS
CHECKED BY:	ES
SCALE:	AS SHOWN
DATE:	04/29/2018

SHEET NO. **C2**

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SEAL:	ACKLAND INTERNATIONAL, INC. 333 Hegenberger Road, Suite 206 Oakland, CA 94621 510.564.4284 (tel) 510.633.2431 (fax)
REGISTERED PROFESSIONAL ENGINEER, EKUNDAYO AKIN SOWUNMI, No. 22573, Exp. 12-31-21, CIVIL, STATE OF CALIFORNIA	

NO.	DATE	DESCRIPTION	BY
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REVISION

PROJECT NAME:
LANDS OF BAGNAS
16501 AND 16503 SANBORN RD.
SARATOGA, CA

CLIENT NAME & ADDRESS:
MANNY BAGNAS
10692 CULVER ROAD
CUPERTINO, CA 95014

SHEET TITLE
BUILDING SITE APPROVAL PARCEL A

PROJECT NO.	S18046
DRAWN BY:	DS
CHECKED BY:	ES
SCALE:	AS SHOWN
DATE:	04/29/2018

SHEET NO. **C3**

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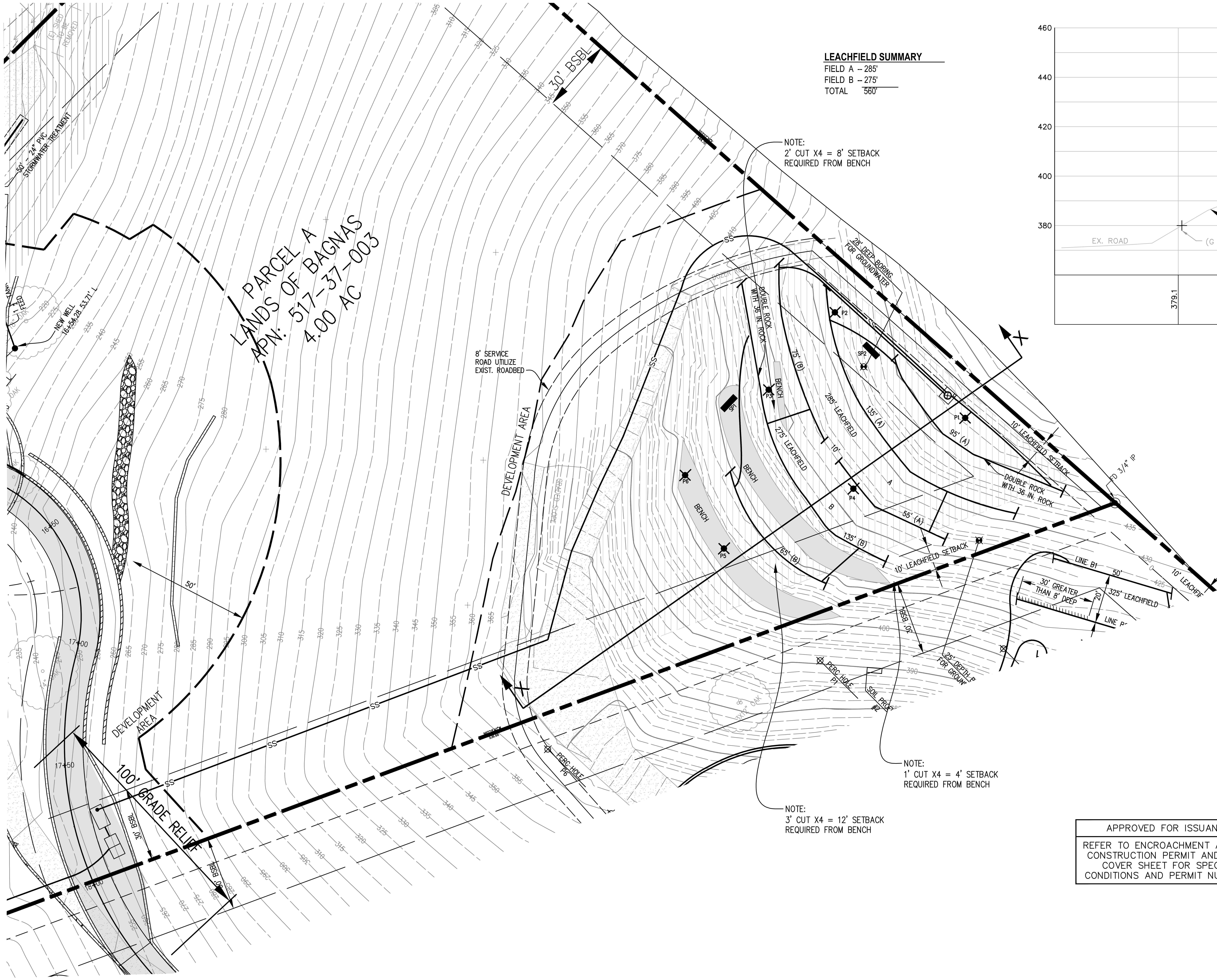

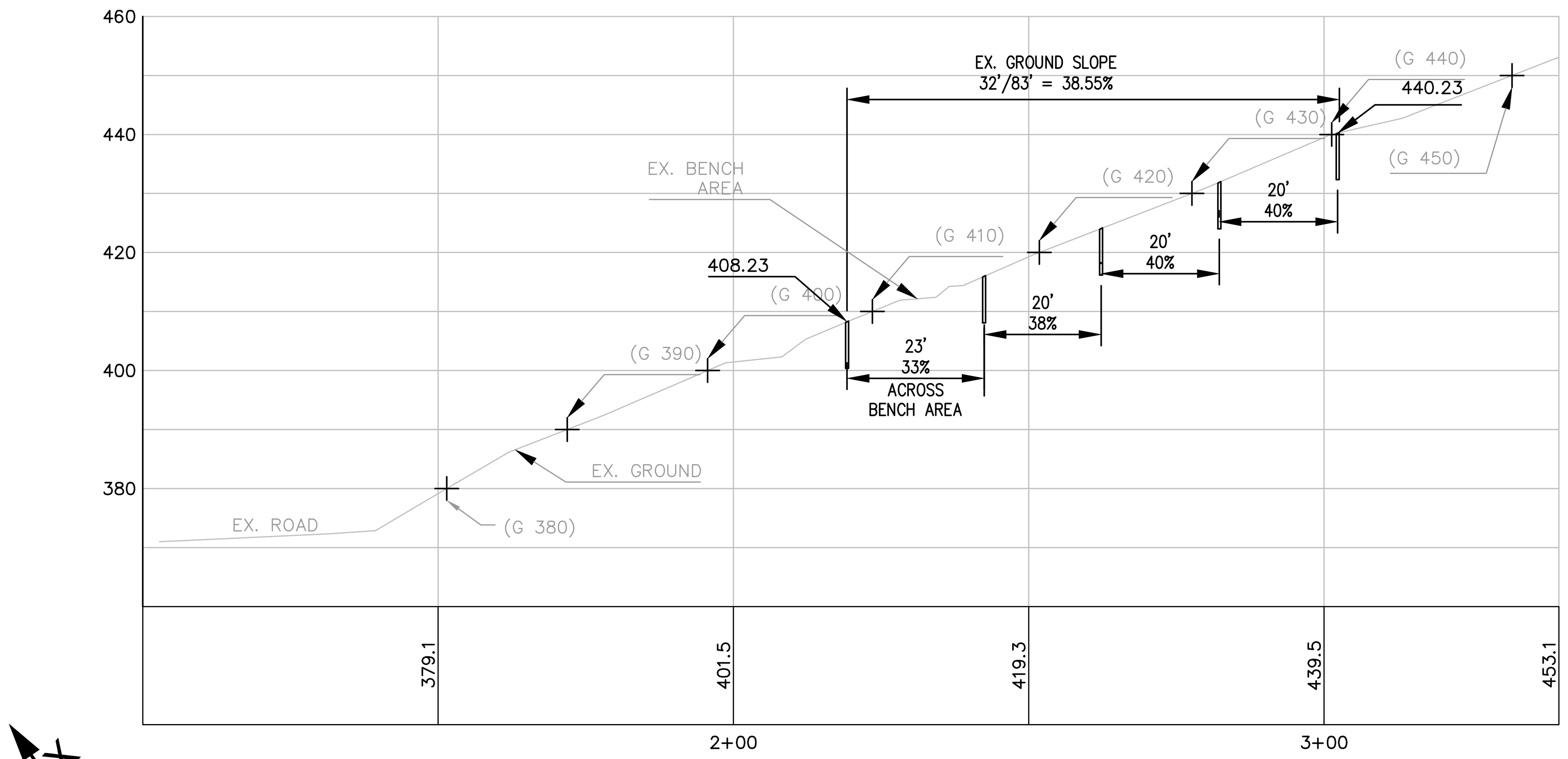

SECTION X–X
LEACHFIELD 4 ACRES
SCALE 1"=20'

APPROVED FOR ISSUANCE

REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERS

GRAPHIC SCALE
(IN FEET)
1" = 20'

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SEAL:
REGISTERED PROFESSIONAL ENGINEER
EKUNDAYO AKIN SOWUNMI
No. 22573
Exp. 12-31-21
CIVIL
STATE OF CALIFORNIA

ACKLAND
INTERNATIONAL, INC.
333 Hegenberger Road, Suite 206
Oakland, CA 94621
510.564.4284 (tel)
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		LEACH LINES COMBINED, SETBACKS FROM BENCHES SHOWN 4-26-09	

REVISION

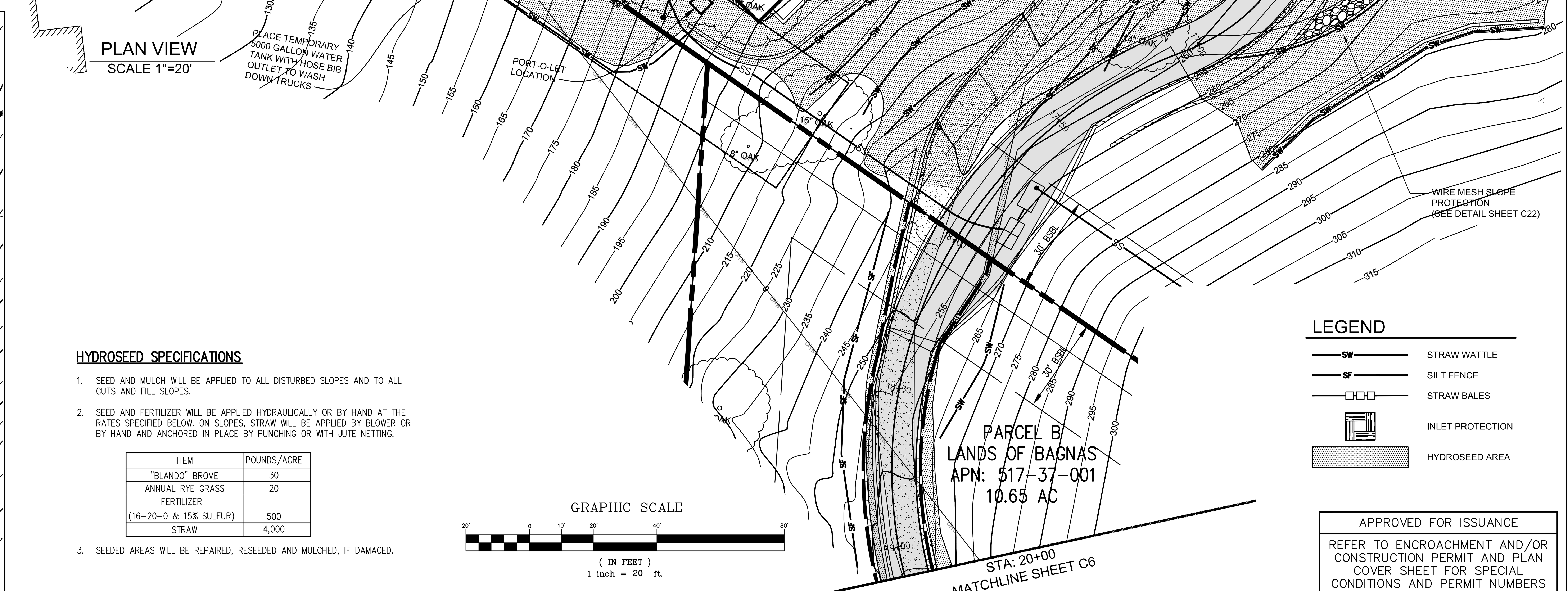
PROJECT NAME:
LANDS OF BAGNAS
16501 AND 16503 SANBORN RD.
SARATOGA, CA

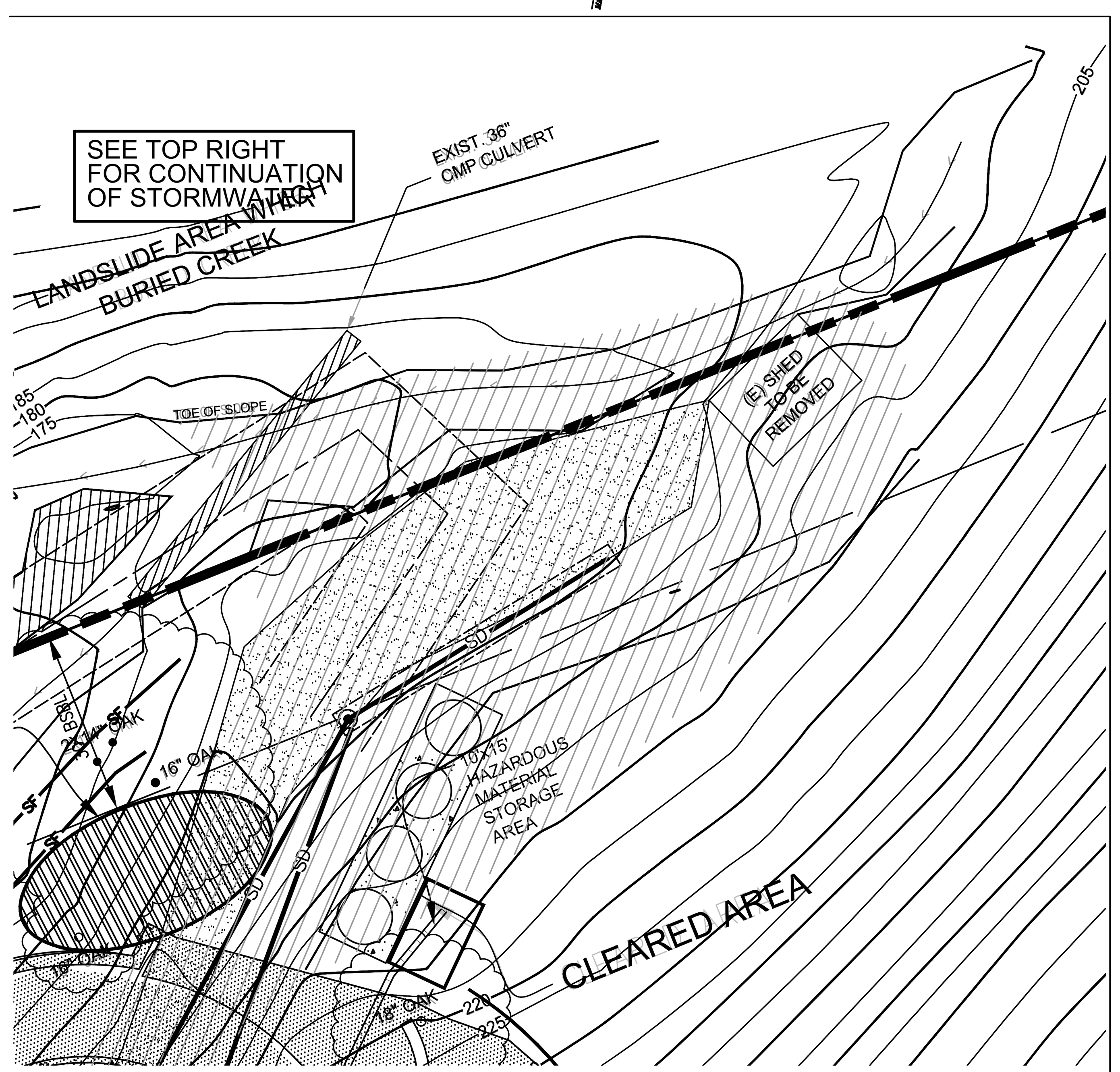
CLIENT NAME & ADDRESS:
MANNY BAGNAS
10692 CULVER ROAD
CUPERTINO, CA 95014

SHEET TITLE
PARCEL A- LEACHFIELD AREA

PROJECT NO. S18046
DRAWN BY: DS
CHECKED BY: ES
SCALE: AS SHOWN
DATE: 04/29/2018

SHEET NO.
C4





STORMWATER TREATMENT PLAN

SCALE 1"=20'

HYDROSEED SPECIFICATIONS

1. SEED AND MULCH WILL BE APPLIED TO ALL DISTURBED SLOPES AND TO ALL CUTS AND FILL SLOPES.
2. SEED AND FERTILIZER WILL BE APPLIED HYDRAULICALLY OR BY HAND AT THE RATES SPECIFIED BELOW. ON SLOPES, STRAW WILL BE APPLIED BY BLOWER OR BY HAND AND ANCHORED IN PLACE BY PUNCHING OR WITH JUTE NETTING.

ITEM	POUNDS/ACRE
"BLANDO" BROME	30
ANNUAL RYE GRASS	20
FERTILIZER (16-20-0 & 15% SULFUR)	500
STRAW	4,000

3. SEEDED AREAS WILL BE REPAIRED, RESEEDED AND MULCHED, IF DAMAGED.

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

LEGEND

- STRAW WATTLE
- SILT FENCE
- STRAW BALES
- INLET PROTECTION
- HYDROSEED AREA

APPROVED FOR ISSUANCE

REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERS

SEAL:

REGISTERED PROFESSIONAL ENGINEER EKUNDAYO AKIN SOWUNMI No. 22573 Exp. 12-31-21 CIVIL STATE OF CALIFORNIA

Ekundayo Sowunmi

ACKLAND INTERNATIONAL, INC.
333 Hegenberger Road, Suite 206
Oakland, CA 94621
510.564.4284 (tel)
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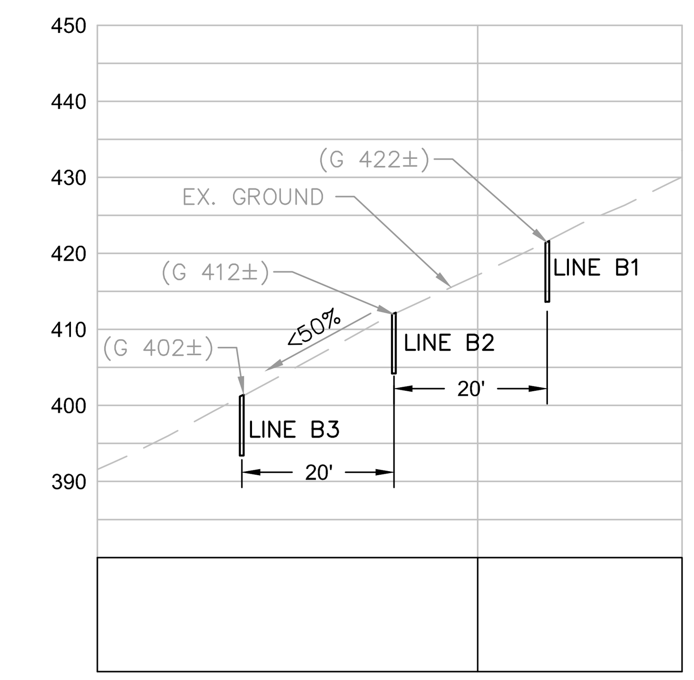
CLIENT NAME & ADDRESS:
MANNY BAGNAS
10692 CULVER ROAD
CUPERTINO, CA 95014

SHEET TITLE
EROSION AND SEDIMENT CONTROL PLAN PARCEL A

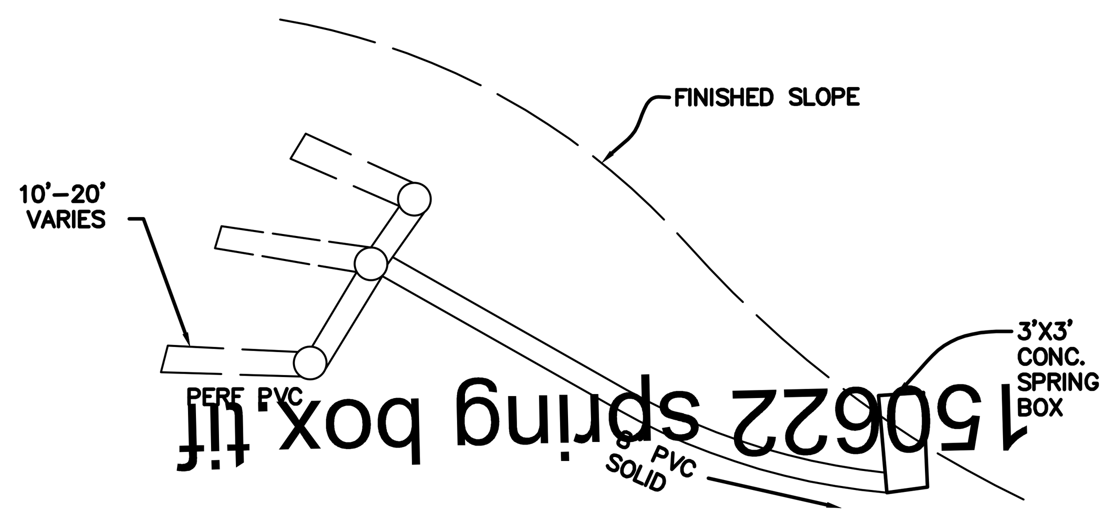
PROJECT NO.	S18046
DRAWN BY:	DS
CHECKED BY:	ES
SCALE:	AS SHOWN
DATE:	04/29/2018

SHEET NO.
C5



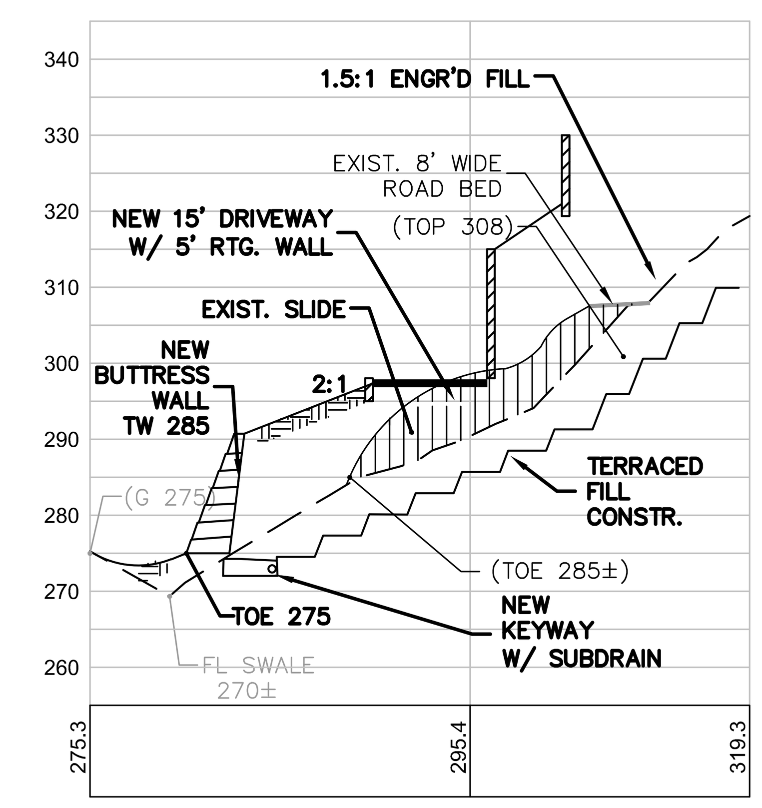
LEACHFIELD SECTION K-K

SCALE: 1"=20' VERT. 1"=20' HORIZ.



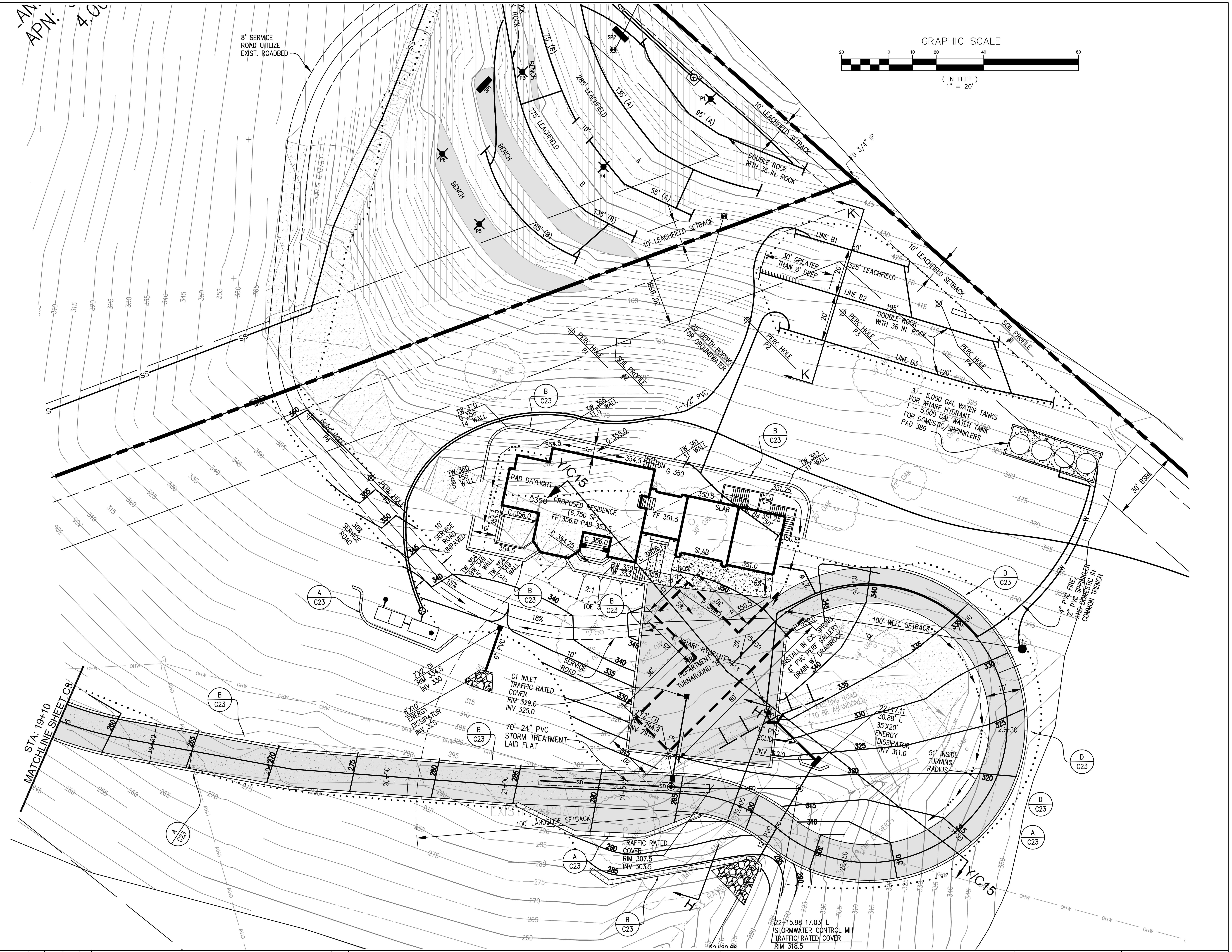
SPRING GALLERY & BOX

SCALE: N.T.S.



SLIDE REPAIR SECTION H-H

SCALE: 1"=20' VERT. 1"=20' HORIZ.



APPROVED FOR ISSUANCE
REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERS

SEAL:

REGISTERED PROFESSIONAL ENGINEER EKUNDAYO AKIN SOWUNMI No. 22573 Exp. 12-31-21 CIVIL STATE OF CALIFORNIA

ACKLAND INTERNATIONAL, INC.
333 Hegenberger Road, Suite 206
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REVISION

PROJECT NAME:
LANDS OF BAGNAS
16501 AND 16503 SANBORN RD.
SARATOGA, CA

CLIENT NAME & ADDRESS:
MANNY BAGNAS
10692 CULVER ROAD
CUPERTINO, CA 95014

SHEET TITLE

BUILDING SITE APPROVAL PLAN PARCEL B

PROJECT NO. S18046
DRAWN BY: DS
CHECKED BY: ES
SCALE: AS SHOWN
DATE: 04/29/2018

SHEET NO.

C6

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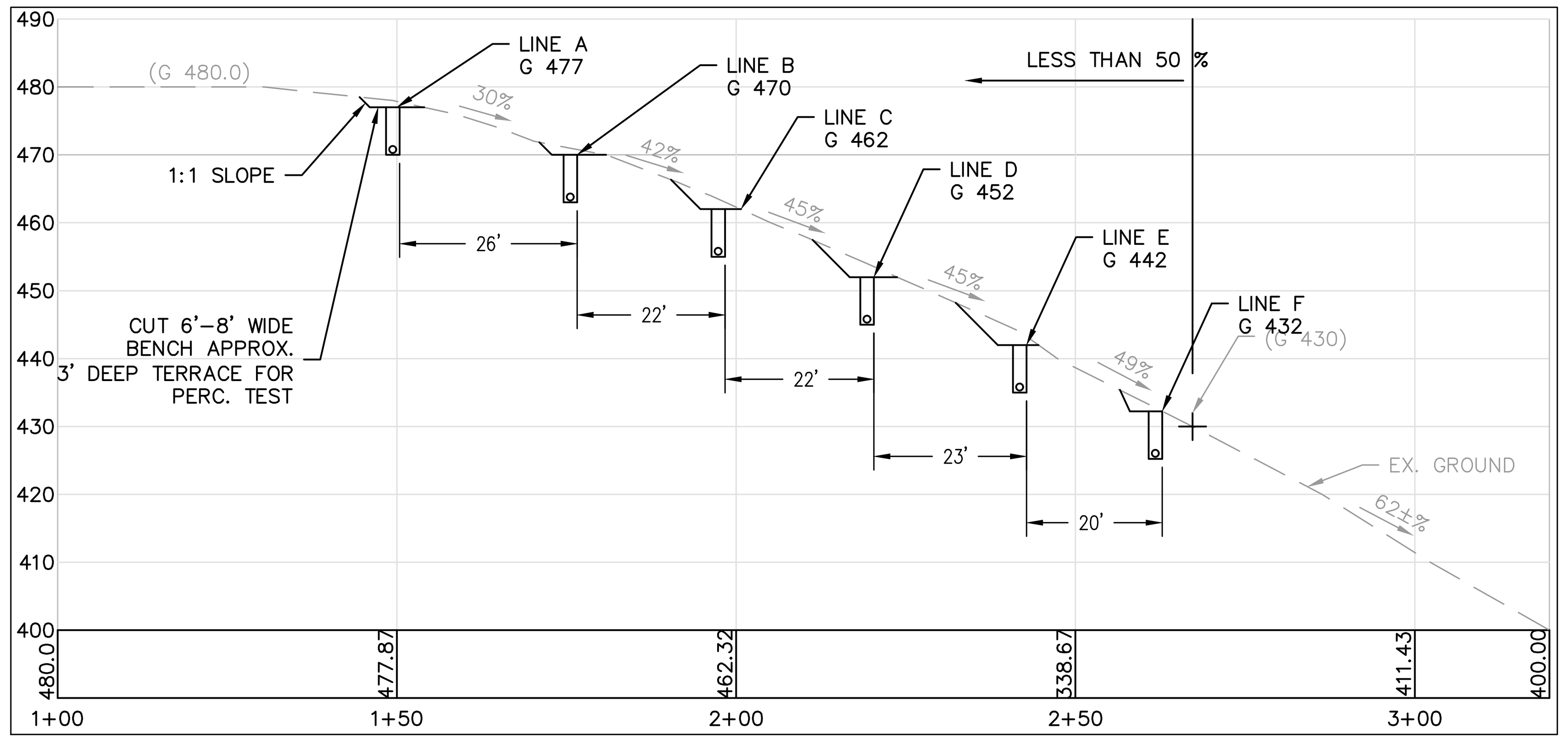
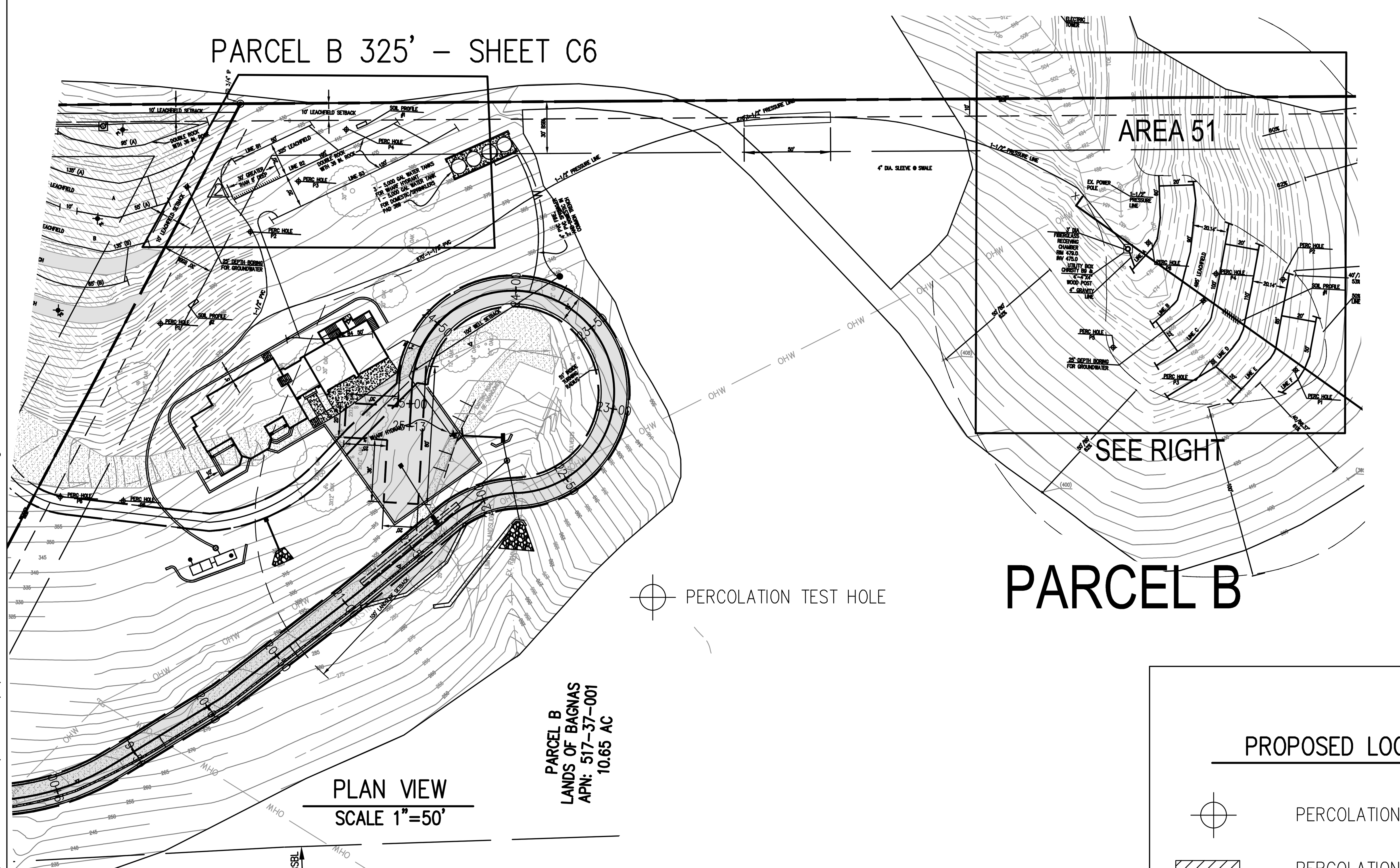


SECTION X-X
SCALE 1"=20'

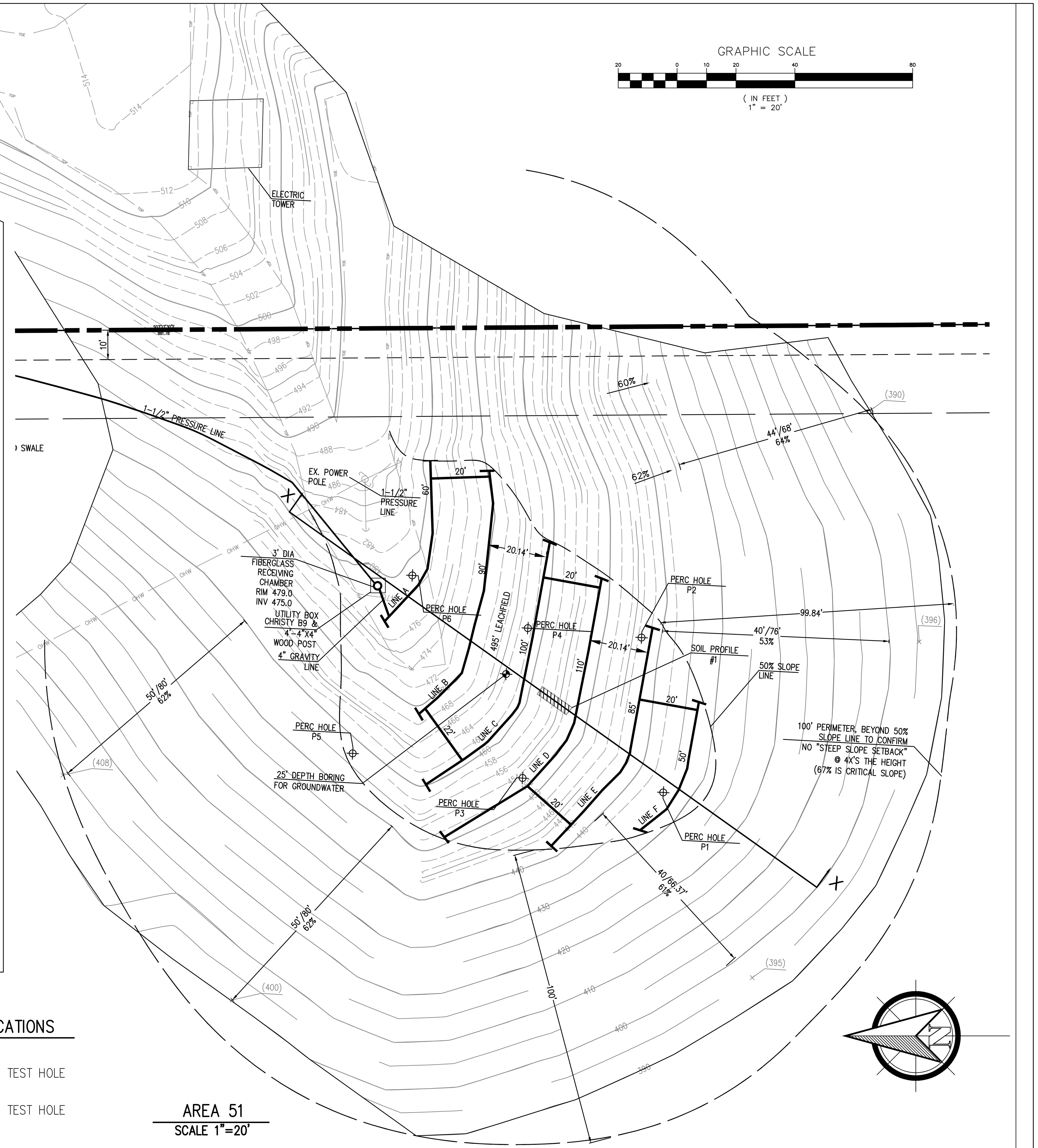


PLAN VIEW
SCALE 1"=50'

PROPOSED LOCATIONS

PERCOLATION TEST HOLE

PERCOLATION TEST HOLE



AREA 51
SCALE 1"=20'

C:\Users\esowu\Dropbox_MANNY BAGNAS PLANS\CURRENT-021220\11-245 C7 LEACHFIELD AREA PARCEL B_021220.dwg

SEAL:

REGISTERED PROFESSIONAL ENGINEER
OLUWADAYO AKIN SOWUNMI
No. 22573
Exp. 12-31-21
CIVIL
STATE OF CALIFORNIA

ACKLAND INTERNATIONAL, INC.
333 Hegenberger Road, Suite 206
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REVISION

PROJECT NAME:
LANDS OF BAGNAS
16501 AND 16503 SANBORN RD.
SARATOGA, CA

CLIENT NAME & ADDRESS:
MANNY BAGNAS
10692 CULVER ROAD
CUPERTINO, CA 95014

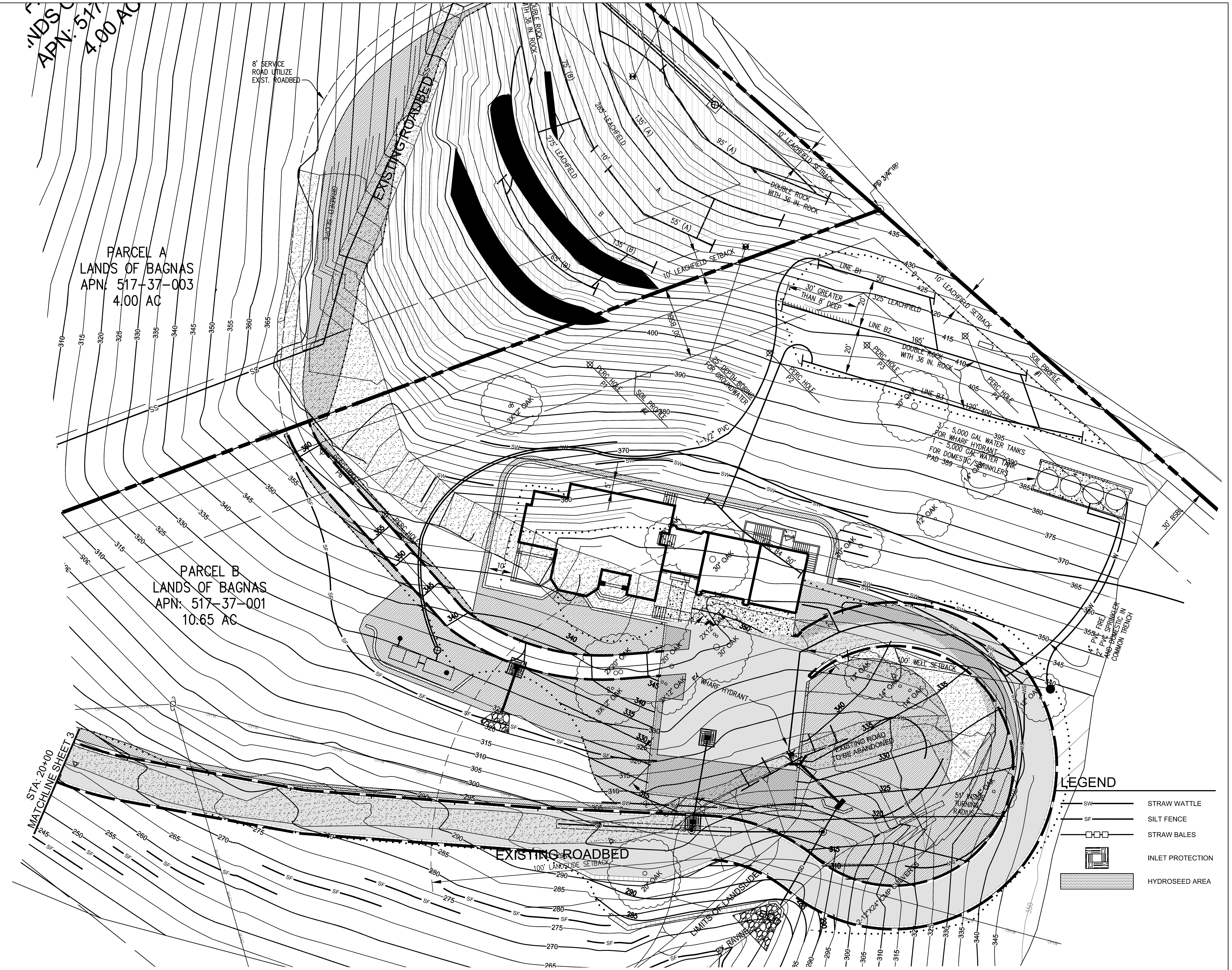
SHEET TITLE
PARCEL B LEACHFIELD AREA 51

PROJECT NO. S18046
DRAWN BY: DS
CHECKED BY: ES
SCALE: AS SHOWN
DATE: 04/29/2018

SHEET NO.
C7

APPROVED FOR ISSUANCE

REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERS



GRAPHIC SCALE

20' 0 10' 20' 40' 80'

(IN FEET)
1 inch = 20 ft.

SEAL:

REGISTERED PROFESSIONAL ENGINEER
EKUNDAYO AKIN SOWUNMI
No. 22573
Exp. 12-31-21
CIVIL
STATE OF CALIFORNIA

ACKLAND INTERNATIONAL, INC.
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LANDS OF BAGNAS
16501 AND 16503 SANBORN RD.
SARATOGA, CA

CLIENT NAME & ADDRESS:
MANNY BAGNAS
10692 CULVER ROAD
CUPERTINO, CA 95014

SHEET TITLE

EROSION & SEDIMENT CONTROL PLAN PARCEL B

PROJECT NO. S18046
DRAWN BY: DS
CHECKED BY: ES
SCALE: AS SHOWN
DATE: 04/29/2018

SHEET NO.

C8

SEAL:

No. 22573
Exp. 12-31-21
CIVIL
STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER

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REVISION

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LANDS OF BAGNAS
16501 AND 16503 SANBORN RD.
SARATOGA, CA

CLIENT NAME & ADDRESS:
MANNY BAGNAS
10692 CULVER ROAD
CUPERTINO, CA 95014

SHEET TITLE
EROSION & SEDIMENT CONTROL PLAN
PARCEL B LEACHFIELD AREA

PROJECT NO. S18046
DRAWN BY: DS
CHECKED BY: ES
SCALE: AS SHOWN
DATE: 04/29/2018

SHEET NO.
C9

NOTES- PARCEL A

1. SEWAGE DISPOSAL SYSTEM TO CONSIST OF 2000 GALLON CONCRETE SEPTIC TANK WITH WATERTIGHT ACCESS RISERS TO GRADE, A 2000 GALLON PUMP TANK WITH 1 RISER (BOTH TANKS TO BE TESTED AS WATERTIGHT), AN OSI PUMP IN A BIOTUBE PUMP VAULT, OSI CONTROL PANEL, 600 LF OF 2.0" SCH 40 PVC PRESSURE MAIN, A BULL-RUN DIVERSION VALVE, TWO 275 LF DRAINFIELDS WITH INSPECTION RISERS TO GRADE. EFFECTIVE DEPTH OF SYSTEM IS 7.0-8.0 FEET. SLOPE IN DRAINFIELD AREA IS 33 TO 40%.
2. SYSTEM TO SERVE A CURRENT PROPOSED 4 BEDROOM, 4500 SQFT. RESIDENCE. ONLY 550 FEET OF LEACHFIELD IS REQUIRED FOR 4 BEDROOMS, HOWEVER, 560' LEACHFIELD IS DESIGNED AND IS TO BE INSTALLED. MINIMUM REQUIREMENT FOR LEACHFIELD LENGTH PER NUMBER OF ROOMS IN RESIDENCE IS: 3 BRDM=400' LF/ 4 BDRM= 550' LF/ 5 BRDM= 700' LF.
** PARCEL A IS 140' SHORT FOR A 5 BEDROOM HOUSE. THEREFORE, ADD 36" OF ROCK ON 135' (B) AND 95 (A) LINES=230'~=140' MORE NEEDED.
**IF ADDITIONAL ROCK IS INSTALLED THEN DEH HAS APPROVED THIS SEPTIC SYSTEM TO SERVE A 5 BEDROOM HOME FOR PARCEL A.
3. INSTALLATION OF SYSTEM TO CONFORM TO SANTA CLARA CO. SEWAGE DISPOSAL ORDINANCE AND BULLETIN A. CALL SANTA CLARA CO. DEPARTMENT OF ENVIRONMENTAL HEALTH 24 HOURS MIN. PRIOR TO START OF WORK FOR INSPECTION. (408) 918-3400.
4. DRAINFIELDS TO BE INSTALLED AS SHOWN ON PLAN AND TO FOLLOW THE SITE CONTOURS.
5. SPREAD EXCESS DIRT ON SITE.
6. INSTALL AN ORENCO SYSTEMS BIOTUBE EASYPAK (BEP10DD), WITH AN OSI PF1010, 230 V 1 SINGLE PHASE 1.0 HP PUMP, IN THE 2000 GAL. PUMP TANK, AND A S1RO CONTROL PANEL WITH SB4 JUNCTION BOX (TO BE INSTALLED IN A SUITABLE LOCATION). (ALL COMPONENTS TO PURCHASED FROM PAT GILL (831) 432-8022).
7. NOTIFY TS/CIVIL ENGINEERING AND CO. OF SANTA CLARA DEH TO SCHEDULE PUMP TEST (48 HOURS MIN. NOTICE PRIOR TO PUMP TEST).
8. ALL ELECTRICAL WORK MUST BE DONE UNDER PERMIT AND INSPECTION OF COUNTY OF SANTA CLARA BUILDING DEPARTMENT.
9. ALL WORK IS TO BE PERFORMED BY AN APPROPRIATELY LICENSED CONTRACTOR.
10. ALL PIPE FOR PRESSURE SYSTEM TO BE SCH 40 PVC.
11. PRIOR TO STARTING CONSTRUCTION, CONTRACTOR SHALL LOCATE AND MARK ALL UNDERGROUND UTILITIES.
12. PUMP REQUIREMENTS: 265 FT OF TOTAL HEAD @ 10 GPM. (SEE ORENCO PUMP CALC. SHEET).
13. OWNER TO CHANGE DIVERSION VALVE ANNUALLY.
14. PUMP SYSTEM SHOULD BE INSPECTED AND TESTED (BY INSTALLER) EVERY 1 TO 2 YEARS TO INSURE PROPER OPERATION.
15. SEPTIC TANK TO BE INSPECTED EVERY 2 TO 3 YEARS AND PUMPED AS NECESSARY.
16. USER TO ELIMINATE DISPOSAL OF ALL OILS, GREASE AND UNNECESSARY SOLID WASTE TO SEPTIC SYSTEM.
17. A GARAGE DISPOSAL IS NOT RECOMMENDED, IF ONE IS INSTALLED USE IT SPARINGLY.
18. SOIL PROFILES BY E.C. PERC TEST BY BEC.
19. PUMP SETTINGS: PUMP OFF------------------------------------ 22" ABOVE FLOOR OF TANK
PUMP ON------------------------------------ 24" ABOVE FLOOR OF TANK
HEIGHT WATER ALARM---------------- 26" ABOVE FLOOR OF TANK
20. PERCOLATION RATES: AVG. OF 6 TESTS=4.2 MPI..
21. MARK CAPS OF BULL RUN VALVE (D V) AND RISERS (R) WITH A PERMANENT MARKER OR LABEL.

PARCEL A

Parameters

Discharge Assembly Size	1.25	inches
Transport Length	507	feet
Transport Pipe Class	40	
Transport Line Size	1.00	inches
Distributing Valve Model	None	
Max Elevation Lift	192	feet
Design Flow Rate	10	gpm
Flow Meter	None	inches
'Add-on' Friction Losses	2.3	feet

Calculations

Transport Velocity	3.7	fps

Frictional Head Losses

Loss through Discharge	0.7	feet
Loss in Transport	27.9	feet
Loss through Valve	0.0	feet
Loss through Flowmeter	0.0	feet
'Add-on' Friction Losses	2.3	feet

Pipe Volumes

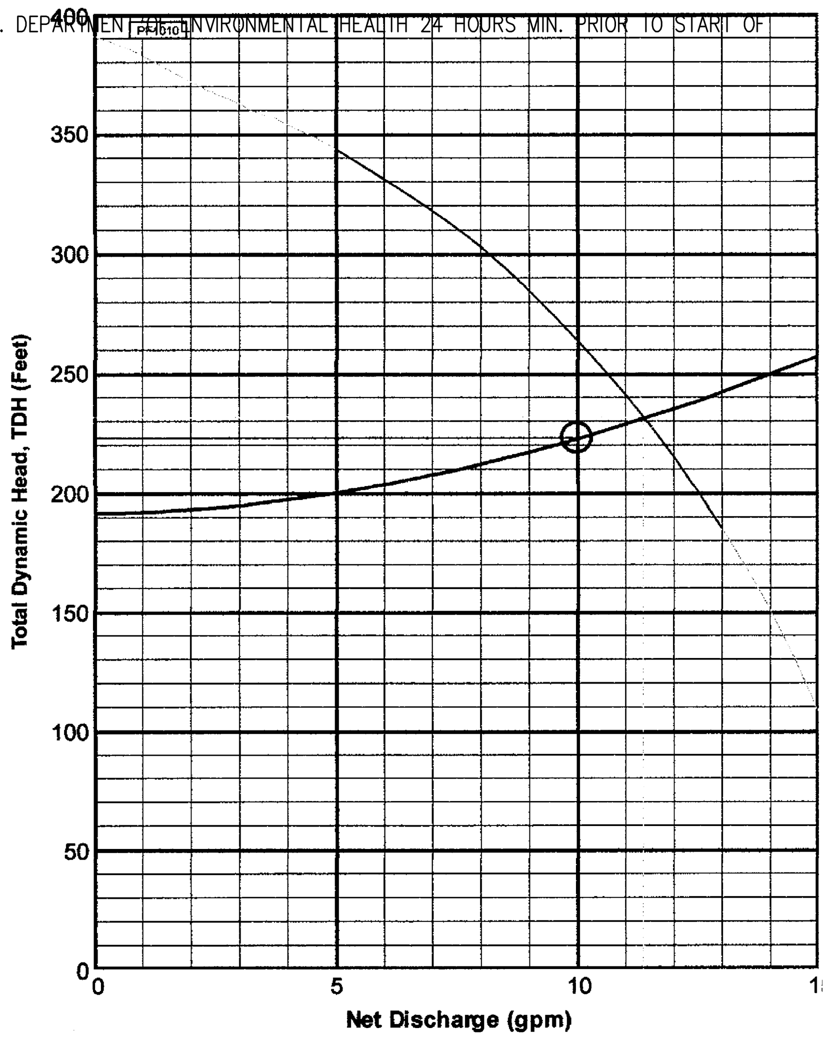
Vol of Transport Line	22.8	gals

Size Pump For

Design Flow Rate	10.0	gpm
Total Dynamic Head	222.9	feet

PumpData

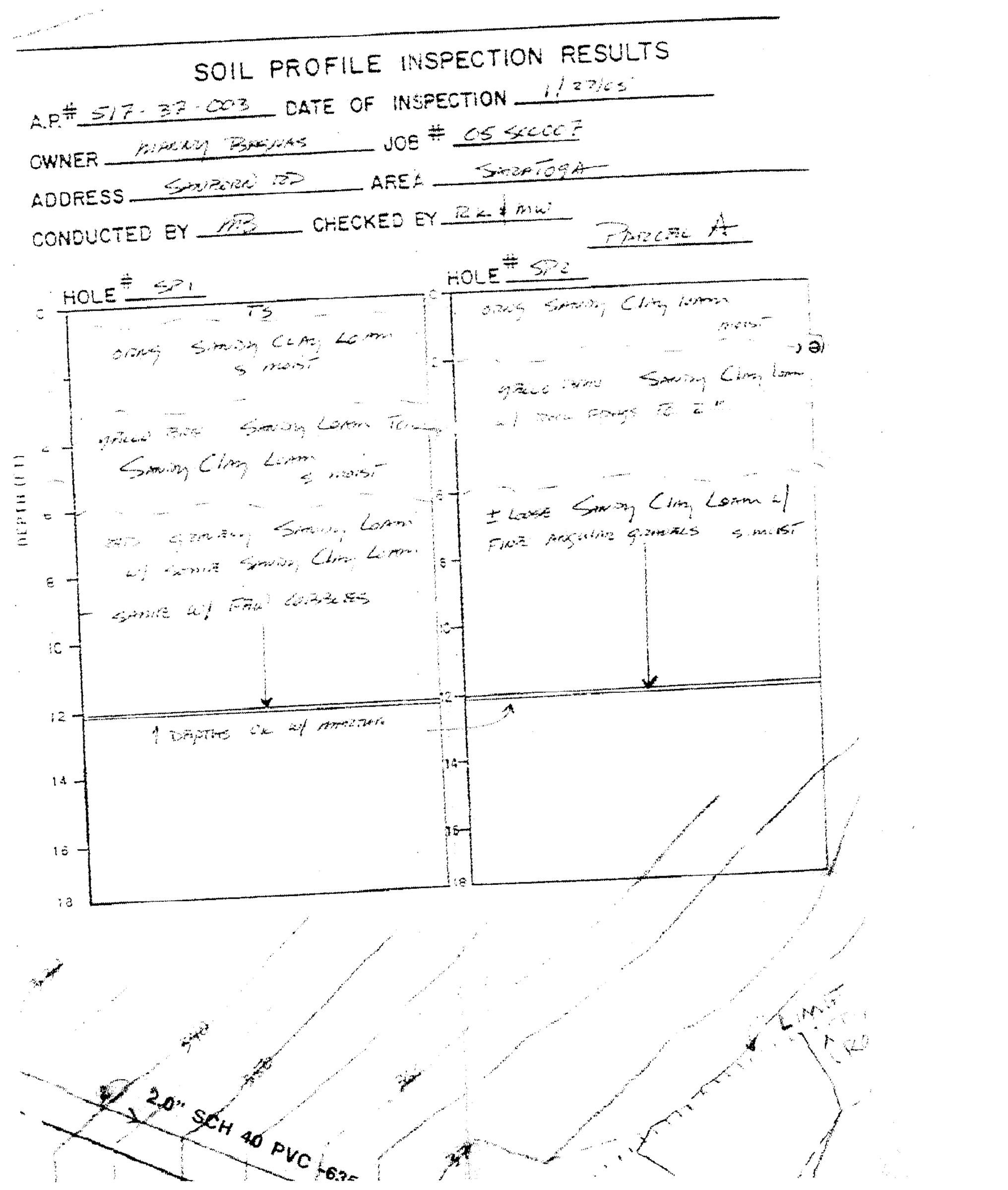
PF1010 High Head Effluent Pump
10 GPM, 1HP
230V 1Ø 60Hz, 200V 3Ø 60Hz



OWNER/APPLICANT: Manny Bagnas
CONDUCTED BY: MB
CHECKED BY: Ross Kakinani
BEC FILE No.: 05-SCC-007
SITE LOCATION: Sanborn Rd "Lot A"
DATE: 02/03/05
APN:

Hole #	Stabilized Rate (MPI)	Adj. factor is 1.4 Adjusted Rate (MPI)	Hole Depth
P1	5.9	8.26	8'
P2	2.03	2.84	8'
P3	1.77	2.48	7.5'
P4	2.58	3.61	8'
P5	3.14	4.40	8'
P6	2.49	3.49	8'
Average (6 Tests)		4.18	

TEST PITS



NOTES- PARCEL B

1. SEWAGE DISPOSAL SYSTEM TO CONSIST OF 2000 GALLON CONCRETE SEPTIC TANK WITH WATERTIGHT ACCESS RISERS TO GRADE, A 2000 GALLON PUMP TANK WITH 1 RISER (BOTH TANKS TO BE TESTED AS WATERTIGHT), AN OSI PUMP IN A BIOTUBE PUMP VAULT, OSI CONTROL PANEL, 550 LF OF 2.0" SCH 40 PVC PRESSURE MAIN, A BULL-RUN DIVERSION VALVE, 800 LF DRAINFIELDS WITH INSPECTION RISERS TO GRADE. EFFECTIVE DEPTH OF SYSTEM IS 7.0-8.0 FEET. SLOPE IN DRAINFIELD AREA IS 33 TO 40%.
2. SYSTEM TO SERVE A CURRENT PROPOSED 5 BEDROOM, 4500 SQFT. RESIDENCE AND ATTACHED ONE BEDROOM SECONDARY UNIT. ONLY 560 FEET OF LEACHFIELD IS REQUIRED FOR 6 BEDROOMS, HOWEVER, 850' LEACHFIELD IS DESIGNED. MINIMUM REQUIREMENT FOR LEACHFIELD LENGTH PER NUMBER OF ROOMS IN RESIDENCE IS: 3 BRDM=400' LF/ 4 BDRM= 550' LF/ 5 BRDM= 700' LF, 6 BRDM= 800' LF / 7 BRDM= 950' LF.
** PARCEL B IS 130' SHORT FOR A 7 BEDROOM HOUSE. THEREFORE, ADD 36" OF ROCK ON 105' (B2) AND 120 (B3) LINES=225'~=130' MORE NEEDED.
**IF ADDITIONAL ROCK IS INSTALLED THEN DEH HAS APPROVED THIS SEPTIC SYSTEM TO SERVE A 7 BEDROOM HOME FOR PARCEL B.
3. INSTALLATION OF SYSTEM TO CONFORM TO SANTA CLARA CO. SEWAGE DISPOSAL ORDINANCE AND BULLETIN A. CALL SANTA CLARA CO. DEPARTMENT OF ENVIRONMENTAL HEALTH 24 HOURS MIN. PRIOR TO START OF WORK FOR INSPECTION. (408) 918-3400.
4. DRAINFIELDS TO BE INSTALLED AS SHOWN ON PLAN AND TO FOLLOW THE SITE CONTOURS.
5. SPREAD EXCESS DIRT ON SITE.
6. INSTALL AN ORENCO SYSTEMS BIOTUBE EASYPAK (BEP10DD), WITH AN OSI PF0010, 230 V 1 SINGLE PHASE 1.0 HP PUMP, IN THE 2000 GAL. PUMP TANK, AND A S1RO CONTROL PANEL WITH SB4 JUNCTION BOX (TO BE INSTALLED IN A SUITABLE LOCATION). (ALL COMPONENTS TO PURCHASED FROM PAT GILL (831) 432-8022).
7. NOTIFY TS/CIVIL ENGINEERING AND CO. OF SANTA CLARA DEH TO SCHEDULE PUMP TEST (48 HOURS MIN. NOTICE PRIOR TO PUMP TEST).
8. ALL ELECTRICAL WORK MUST BE DONE UNDER PERMIT AND INSPECTION OF COUNTY OF SANTA CLARA BUILDING DEPARTMENT.
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10. ALL PIPE FOR PRESSURE SYSTEM TO BE SCH 40 PVC.
11. PRIOR TO STARTING CONSTRUCTION, CONTRACTOR SHALL LOCATE AND MARK ALL UNDERGROUND UTILITIES.
12. PUMP REQUIREMENTS: 265 FT OF TOTAL HEAD @ 10 GPM. (SEE ORENCO PUMP CALC. SHEET).
13. OWNER TO CHANGE DIVERSION VALVE ANNUALLY.
14. PUMP SYSTEM SHOULD BE INSPECTED AND TESTED (BY INSTALLER) EVERY 1 TO 2 YEARS TO INSURE PROPER OPERATION.
15. SEPTIC TANK TO BE INSPECTED EVERY 2 TO 3 YEARS AND PUMPED AS NECESSARY.
16. USER TO ELIMINATE DISPOSIL OF ALL OILS, GREASE AND UNECESSARY SOLID WASTE TO SEPTIC SYSTEM.
17. A GARAGE DISPOSAL IS NOT RECOMMENDED, IF ONE IS INSTALLED USE IT SPARINGLY.
18. SOIL PROFILES BY E.C. PERC TEST BY BEC.
19. PUMP SETTINGS: PUMP OFF------------------------------------ 22" ABOVE FLOOR OF TANK
PUMP ON------------------------------------ 24" ABOVE FLOOR OF TANK
HIGHT WATER ALARM------------------------ 26" ABOVE FLOOR OF TANK
20. PERCOLATION RATES: AVG. OF 4 TESTS=10 MPI. N.E. CORNER & 3.4 MPI. AREA 51.
21. MARK CAPS OF BULL RUN VALVE (D V) AND RISERS (R) WITH A PERMANENT MARKER OR LABEL.

Parameters

Discharge Assembly Size	1.25	inches
Transport Length	720	feet
Transport Pipe Class	40	
Transport Line Size	1.00	inches
Distributing Valve Model	None	
Max Elevation Lift	155	feet
Design Flow Rate	10	gpm
Flow Meter	None	inches
'Add-on' Friction Losses	2.3	feet

Calculations

Transport Velocity	3.7	fps

Frictional Head Losses

Loss through Discharge	0.7	feet
Loss in Transport	39.7	feet
Loss through Valve	0.0	feet
Loss through Flowmeter	0.0	feet
'Add-on' Friction Losses	2.3	feet

Pipe Volumes

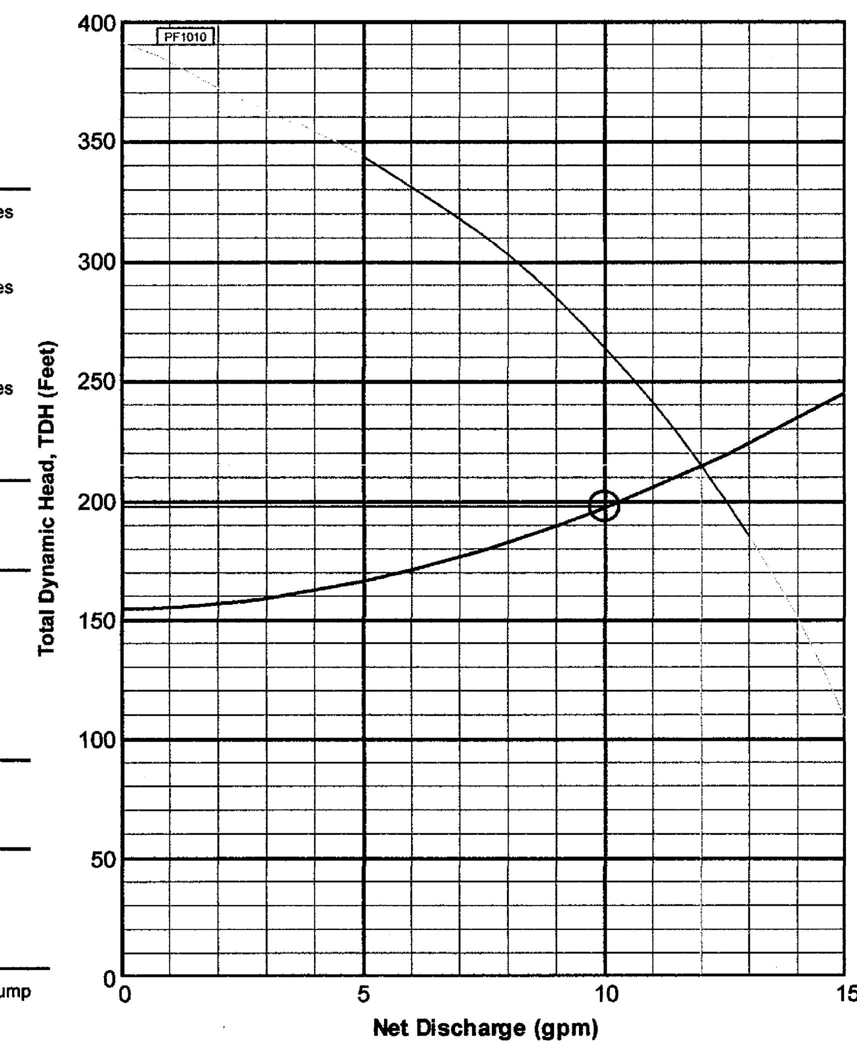
Vol of Transport Line	32.3	gals

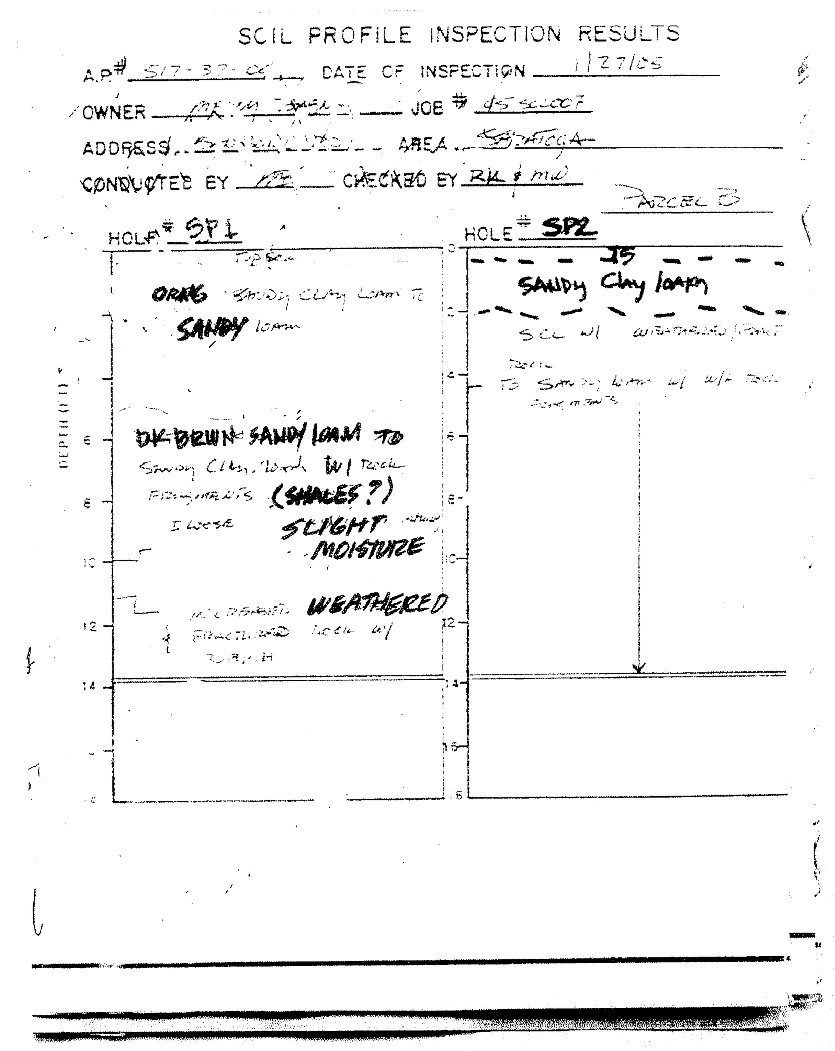
Size Pump For

Design Flow Rate	10.0	gpm
Total Dynamic Head	197.7	feet

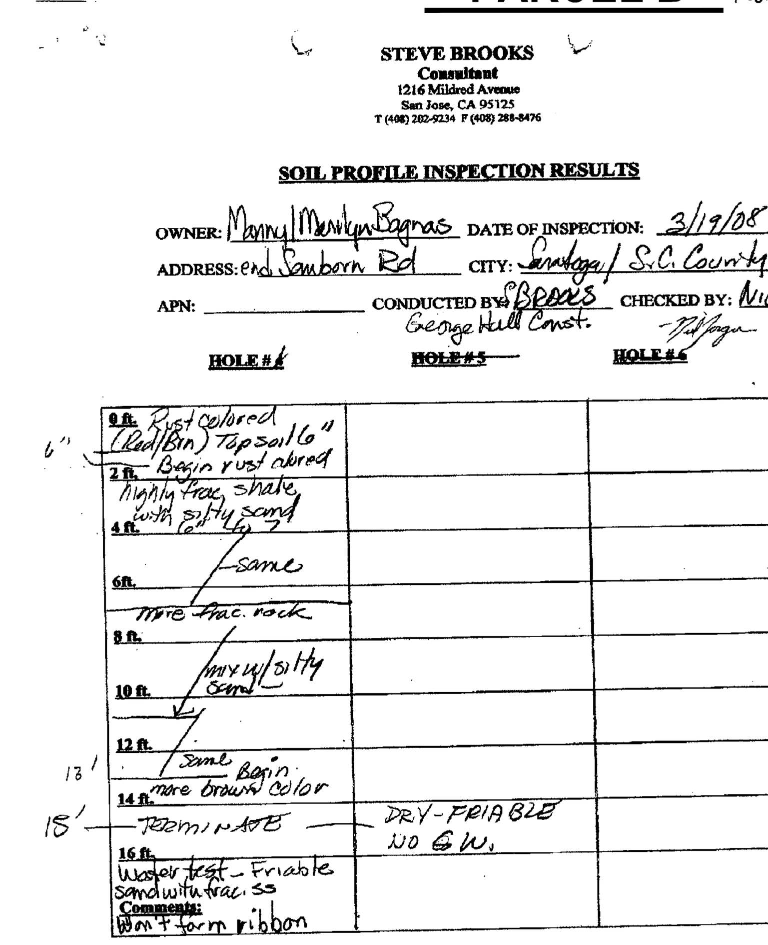
PumpData

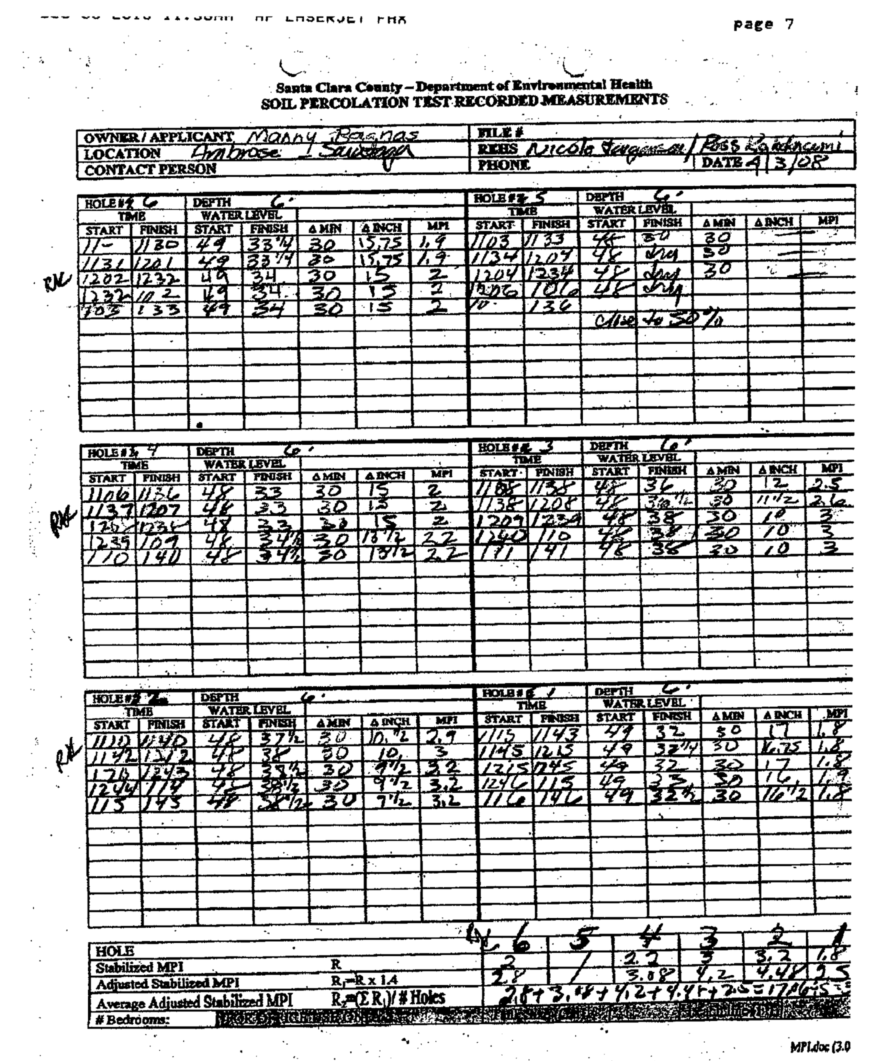
PF1010 High Head Effluent Pump
10 GPM, 1HP
230V 1Ø 60Hz, 200V 3Ø 60Hz

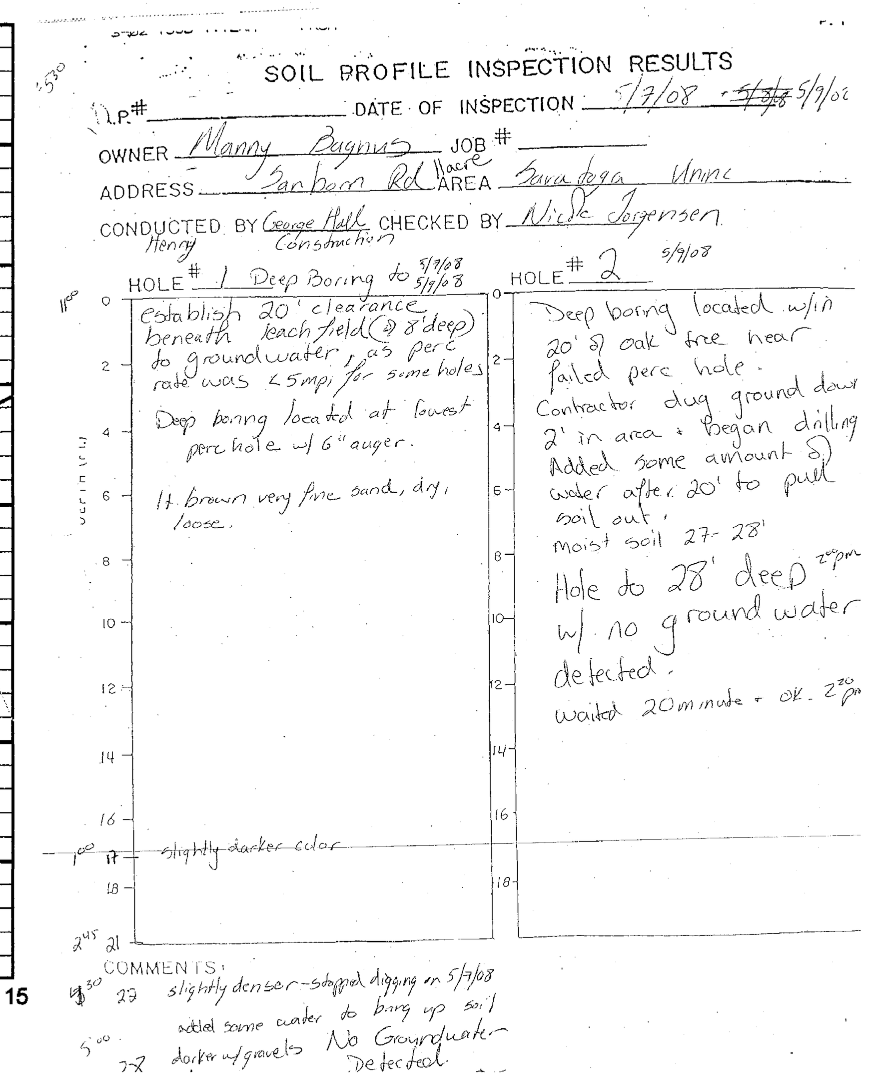


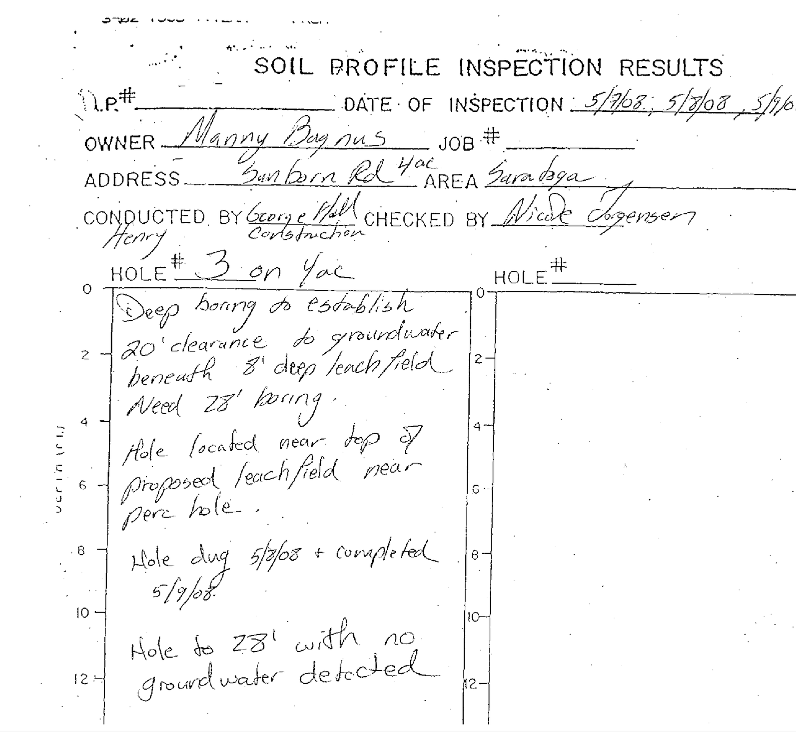


PARCEL B





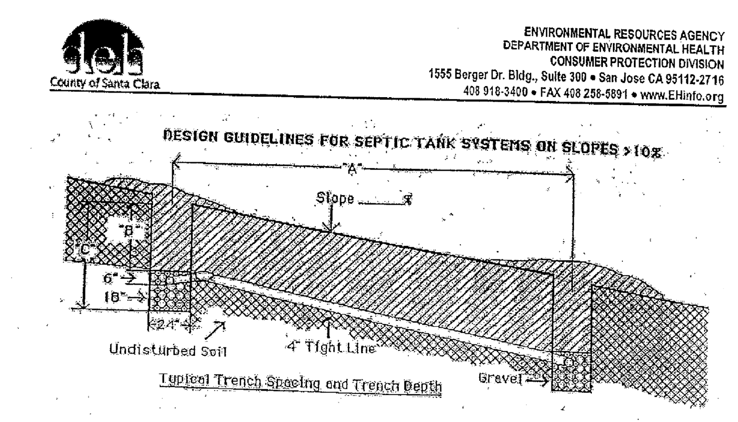




OWNER/APPLICANT: Manny Bagnas
CONDUCTED BY:
CHECKED BY: Ross Kakinani
BEC FILE No.: 05-SCC-007
SITE LOCATION: Sanborn Rd. "Lot B"
DATE: 02/03/05
APN:

Hole #	Stabilized Rate (MPI)	Adj. factor is 1.4 Adjusted Rate (MPI)	Hole Depth
P1	1.05	1.47	8'
P2	19.38	27.13	8'
P3	6.68	9.35	8'
P4	1.81	2.53	8'
P5		0.00	8'
P6		0.00	8'
Average (4 Tests)		10.12	

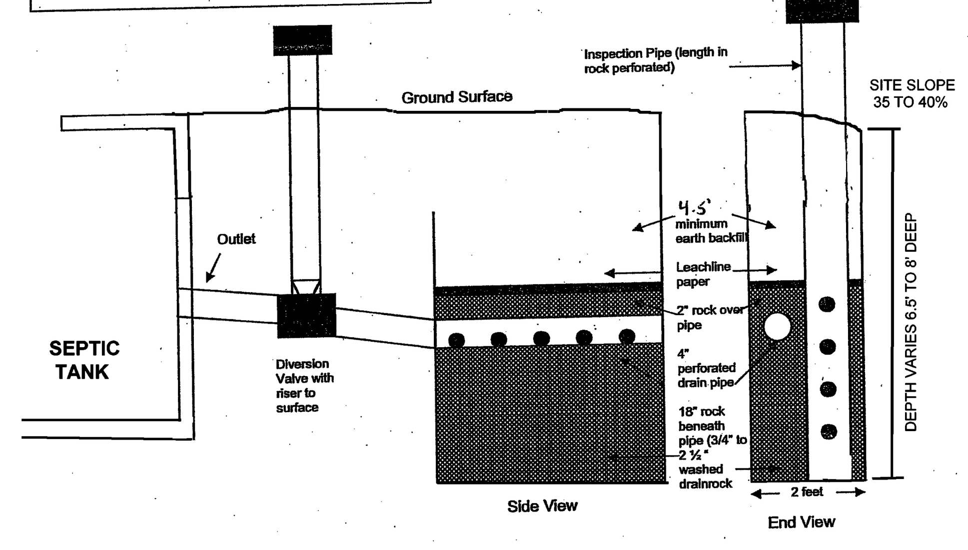
TEST PITS



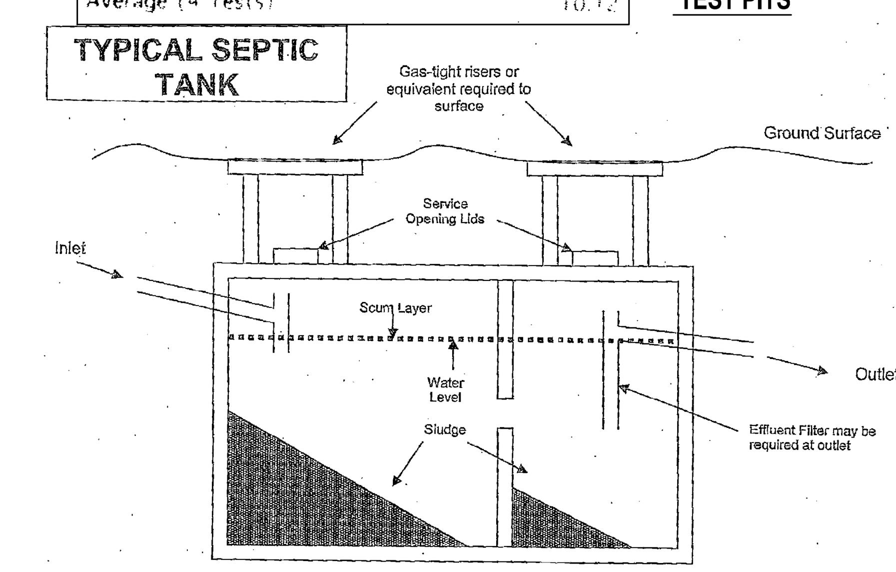
Slope %	Min. O. C. Spacing "A" (ft.)	Min. Cover "B" (ft.)	Min Trench Depth "C" (ft.)
10	12	1.5	3.5
15	13	2.0	4.0
20*	14	2.5	4.5
25*	15	3.0	5.0
30*	16	3.5	5.5
35*	18	4.0	6.0
40*	20	4.5	6.5
50*	25	6.0	8.0
>50	Exceeds maximum acceptable slope		

Plot plan and drawings are to include

DRAINLINE DETAIL



TYPICAL SEPTIC TANK



SEAL:

REGISTERED PROFESSIONAL ENGINEER
EKUNDAYO AKIN SOWUNMI
No. 22573
Exp. 12-31-21
CIVIL
STATE OF CALIFORNIA
Ekundayo Sowunmi

ACKLAND
INTERNATIONAL, INC.
333 Hegenberger Road, Suite 206
Oakland, CA 94621
510.564.4284 (tel)
510.633.2431 (fax)

NO.	DATE	DESCRIPTION	BY
7	07/06/20	RESUBMITTAL FOR BSA APPLICATION	ES
6	02/06/20	RESUBMITTAL FOR BSA APPLICATION	ES
5	10/24/19	RESUBMITTAL FOR BSA APPLICATION	ES
4	05/14/19	RESUBMITTAL FOR BSA APPLICATION	ES
3	02/09/19	RESUBMITTAL FOR BSA APPLICATION	ES
2	08/21/18	RESUBMITTAL FOR BSA APPLICATION	ES
1	06/11/18	CONFORM LIMIT REVISED TO EASEMENT LINE	ES

REVISION

PROJECT NAME:
LANDS OF BAGNAS
16501 AND 16503 SANBORN RD.
SARATOGA, CA

CLIENT NAME & ADDRESS:
MANNY BAGNAS
10692 CULVER ROAD
CUPERTINO, CA 95014

SHEET TITLE
LEACHFIELD NOTES, SOIL PROFILES AND PUMP SELECTION

PROJECT NO. S18046
DRAWN BY: DS
CHECKED BY: ES
SCALE: AS SHOWN
DATE: 04/29/2018

SHEET NO.
C10

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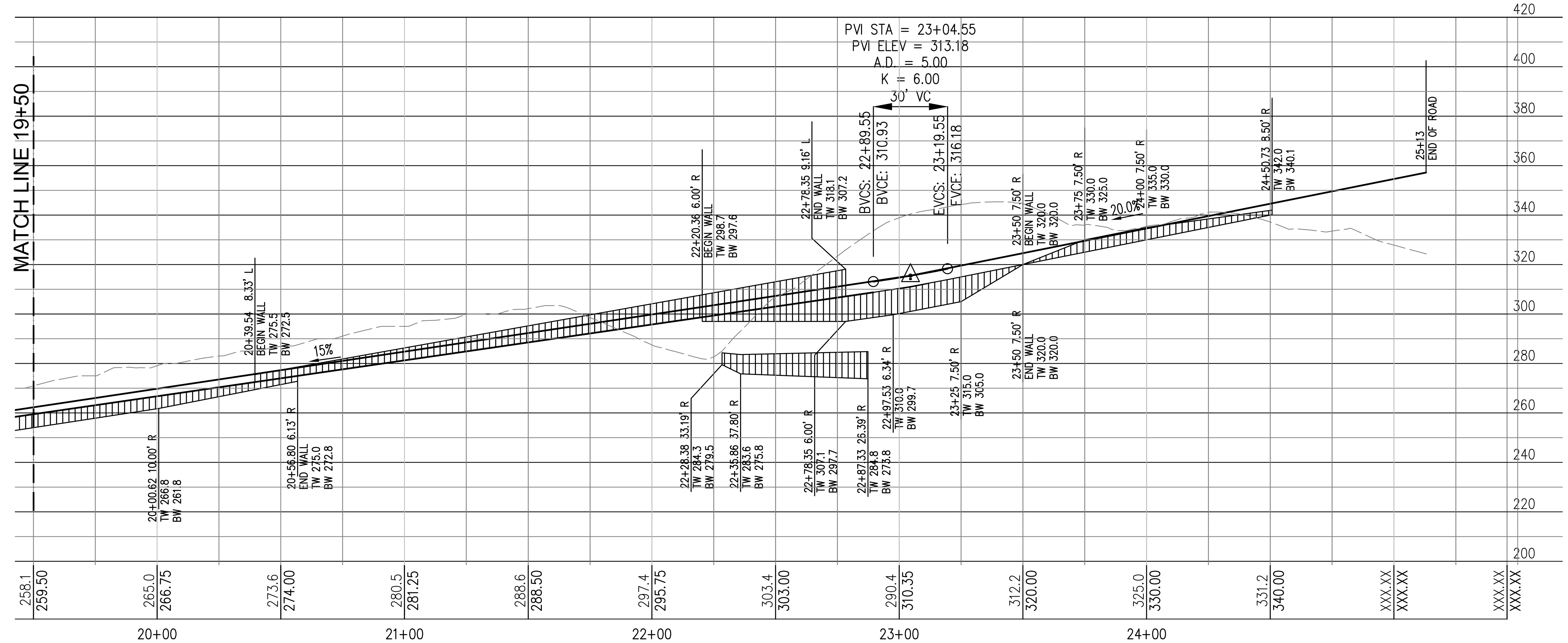
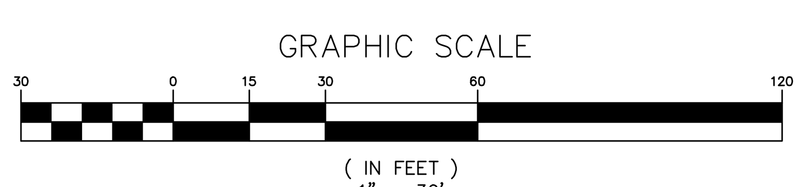
ROADWAY PROFILE – PARCEL A

H: 1" = 30'
V: 1" = 30'



ROADWAY PROFILE – PARCEL B

H: 1" = 30'
V: 1" = 30'



SEAL:

REGISTERED PROFESSIONAL ENGINEER
EKUNDAYO AKIN SOWUNMI
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1	06/11/18	CONFORM LIMIT REVISED TO EASEMENT LINE	ES

REVISION

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16501 AND 16503 SANBORN RD.
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MANNY BAGNAS
10692 CULVER ROAD
CUPERTINO, CA 95014

SHEET TITLE
ROADWAY PROFILE

PROJECT NO. S18046
DRAWN BY: DS
CHECKED BY: ES
SCALE: AS SHOWN
DATE: 04/29/2018

SHEET NO.
C11

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SEAL:

No. 22573
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333 Hegenberger Road, Suite 206
Oakland, CA 94621
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510.633.2431 (fax)

NO.	DATE	DESCRIPTION	BY
7	07/06/20	RESUBMITTAL FOR BSA APPLICATION	ES
6	02/06/20	RESUBMITTAL FOR BSA APPLICATION	ES
5	10/24/19	RESUBMITTAL FOR BSA APPLICATION	ES
4	05/14/19	RESUBMITTAL FOR BSA APPLICATION	ES
3	02/09/19	RESUBMITTAL FOR BSA APPLICATION	ES
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1	06/11/18	CONFORM LIMIT REVISED TO EASEMENT LINE	ES

REVISION

PROJECT NAME:
LANDS OF BAGNAS
16501 AND 16503 SANBORN RD.
SARATOGA, CA

CLIENT NAME & ADDRESS:
MANNY BAGNAS
10692 CULVER ROAD
CUPERTINO, CA 95014

SHEET TITLE
ROADWAY CROSS SECTIONS PARCEL A

PROJECT NO. S18046
DRAWN BY: DS
CHECKED BY: ES
SCALE: AS SHOWN
DATE: 04/29/2018

SHEET NO.
C12

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SEAL:

No. 22573
Exp. 12-31-21
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7	07/06/20	RESUBMITTAL FOR BSA APPLICATION	ES
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REVISION

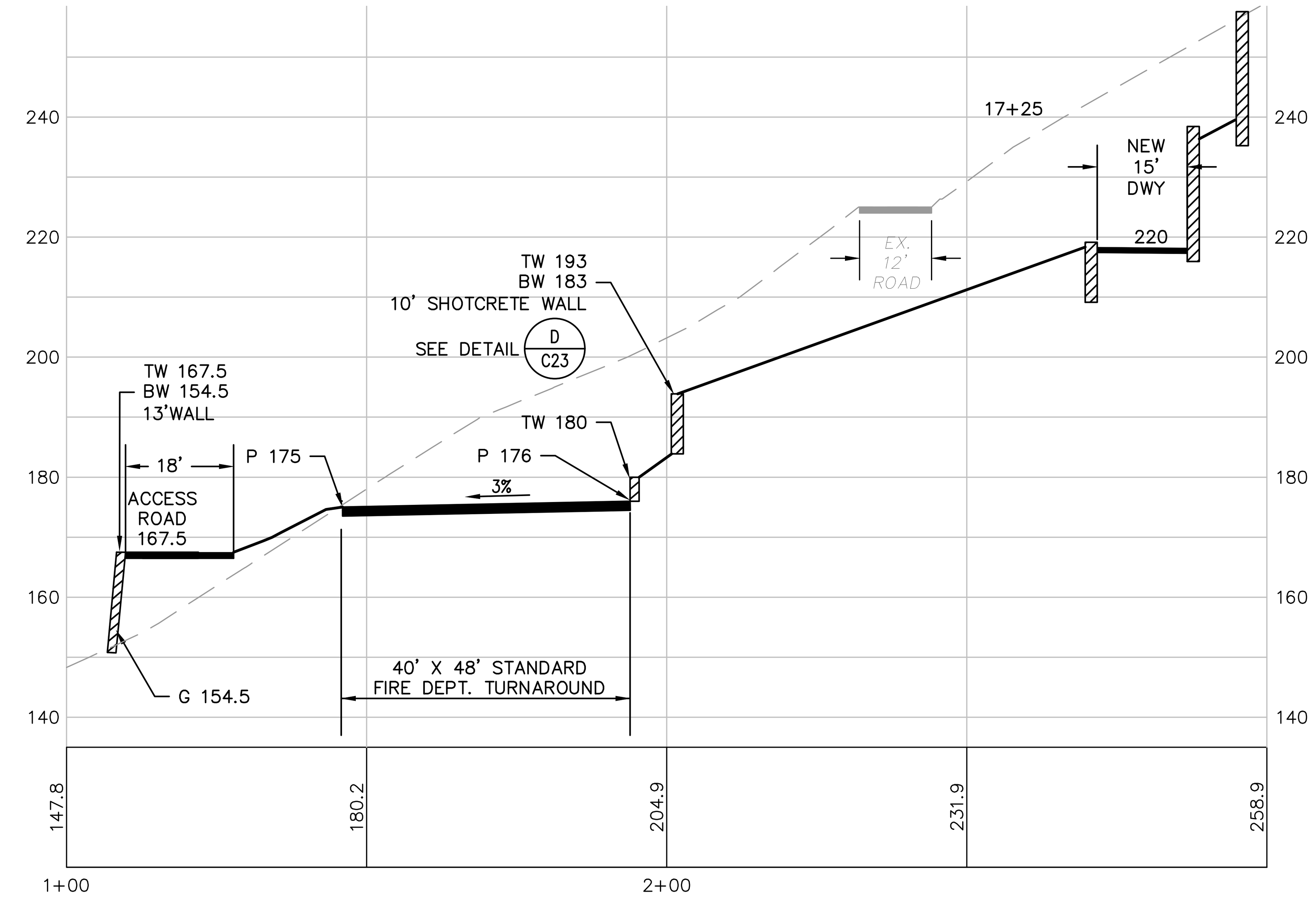
PROJECT NAME:
LANDS OF BAGNAS
16501 AND 16503 SANBORN RD.
SARATOGA, CA

CLIENT NAME & ADDRESS:
MANNY BAGNAS
10692 CULVER ROAD
CUPERTINO, CA 95014

SHEET TITLE
ROADWAY CROSS SECTIONS PARCEL B

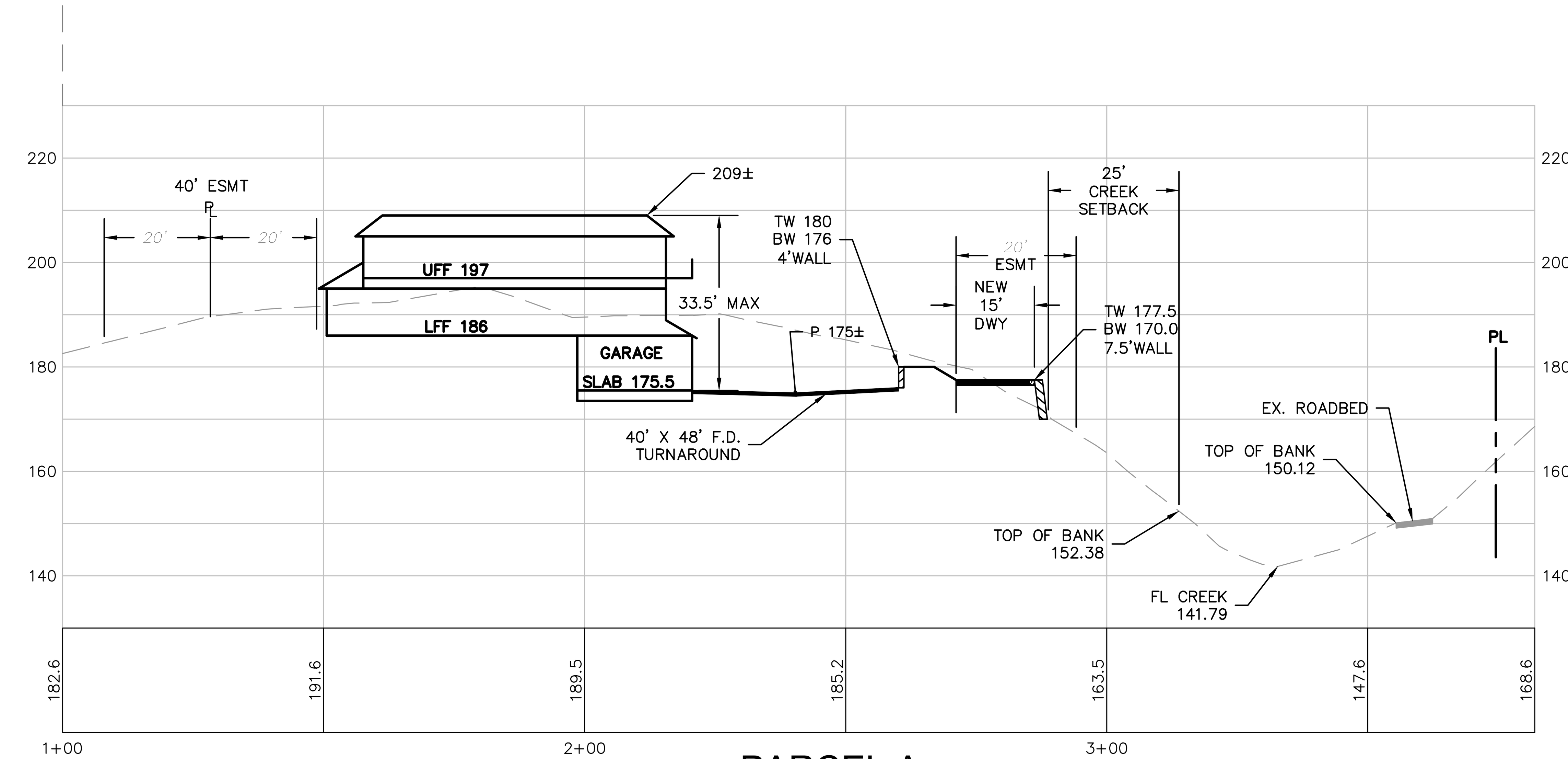
PROJECT NO. S18046
DRAWN BY: DS
CHECKED BY: ES
SCALE: AS SHOWN
DATE: 04/29/2018

SHEET NO.
C13



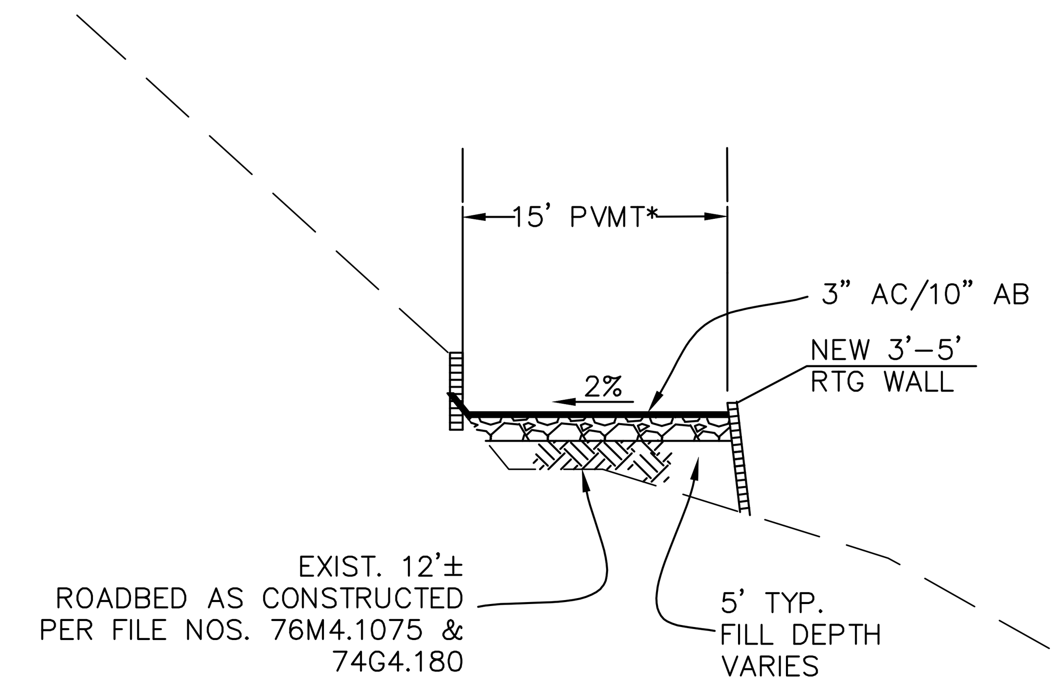
PARCEL A
CROSS SECTION A-A

HORIZONTAL: 1" = 20'
VERTICAL: 1" = 20'



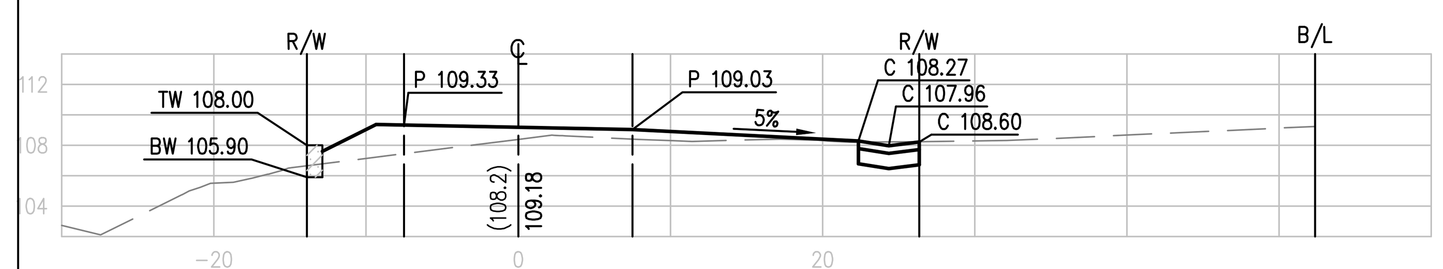
PARCEL A
CROSS SECTION B-B

HORIZONTAL: 1" = 20'
VERTICAL: 1" = 20'



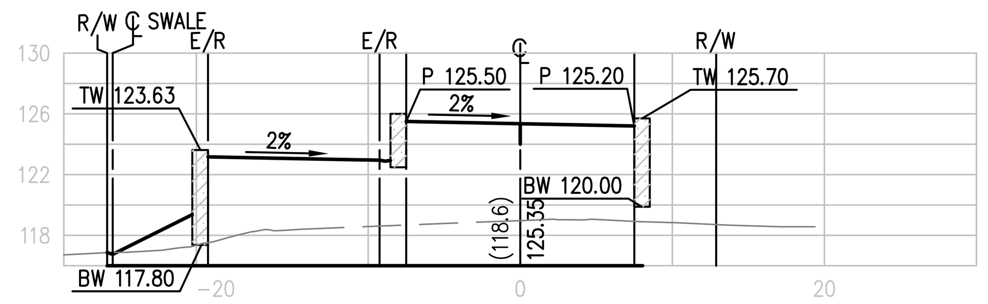
18+00 TO 19+35
TYPICAL SECTION
SINGLE DRIVEWAY

(TO PARCEL B)
APPROX. STA 19+50
*THE 1976 BUILDING SITE APPROVAL
WAS PERFECTED WITH THE
CONSTRUCTION OF THE EXIST. ROAD AT 12',
15' PAVED IS PROPOSED.



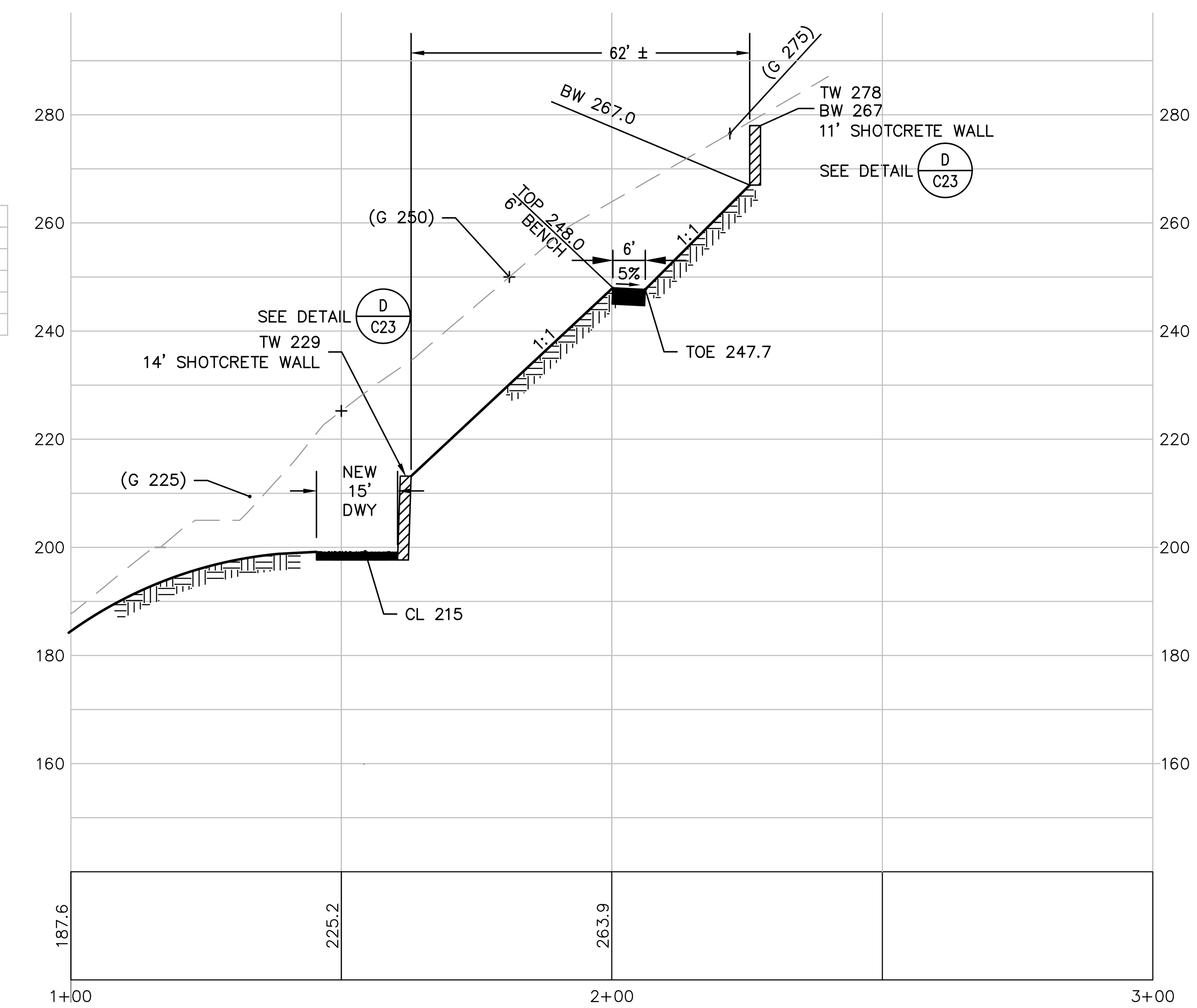
PARCEL A
CROSS SECTION C-C

HORIZONTAL: 1" = 10'
VERTICAL: 1" = 10'



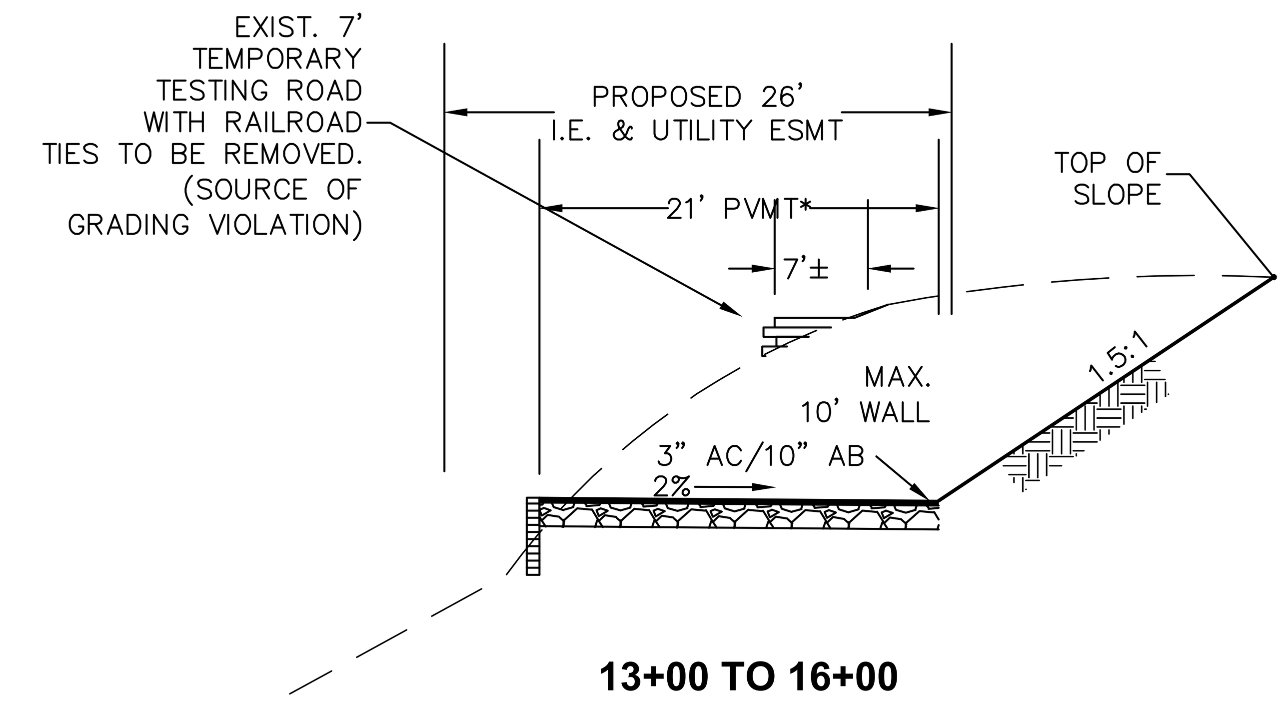
PARCEL A
CROSS SECTION D-D

HORIZONTAL: 1" = 10'
VERTICAL: 1" = 10'



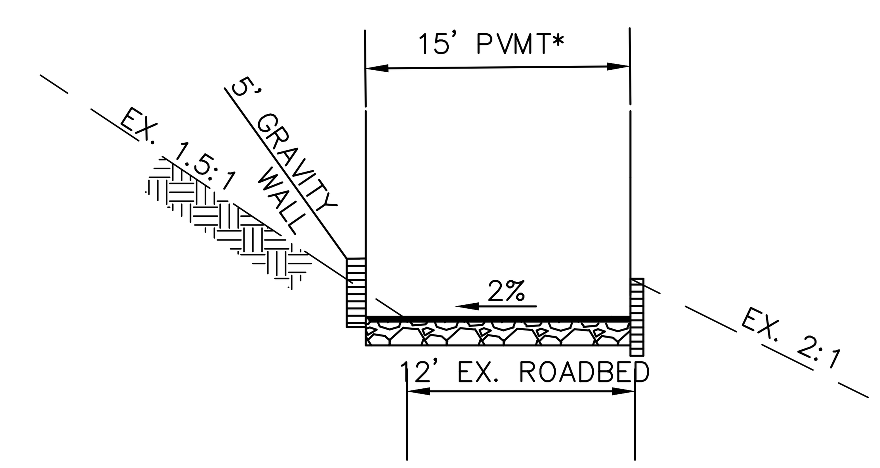
PARCEL A
CROSS SECTION E-E

HORIZONTAL: 1" = 20'
VERTICAL: 1" = 20'



13+00 TO 16+00
TYPICAL SECTION
PRIVATE ACCESS ROAD

(2 LOTS)
APPROX. STA 13+40
COUNTY DETAIL SD-2



20+00 TO 22+20
TYPICAL SECTION

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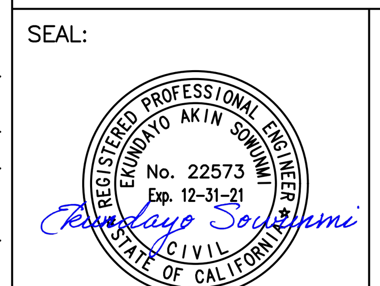
SEAL:



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INTERNATIONAL, INC.
333 Hegenberger Road, Suite 206
Oakland, CA 94621
510.564.4284 (tel)
510.633.2431 (fax)

NO.	DATE	DESCRIPTION	BY
7	07/06/20	RESUBMITTAL FOR BSA APPLICATION	ES
6	02/06/20	RESUBMITTAL FOR BSA APPLICATION	ES
5	10/24/19	RESUBMITTAL FOR BSA APPLICATION	ES
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2	08/21/18	RESUBMITTAL FOR BSA APPLICATION	ES
1	06/11/18	CONFORM LIMIT REVISED TO EASEMENT LINE	ES

REVISION

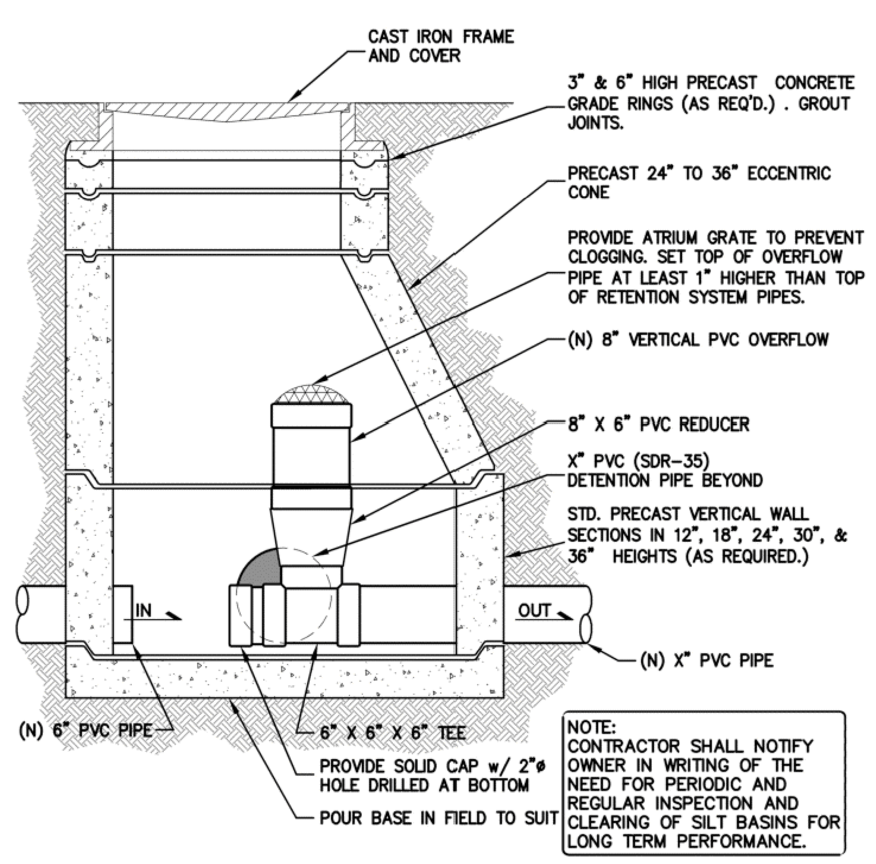
PROJECT NAME:
LANDS OF BAGNAS
16501 AND 16503 SANBORN RD.
SARATOGA, CA

CLIENT NAME & ADDRESS:
MANNY BAGNAS
10692 CULVER ROAD
CUPERTINO, CA 95014

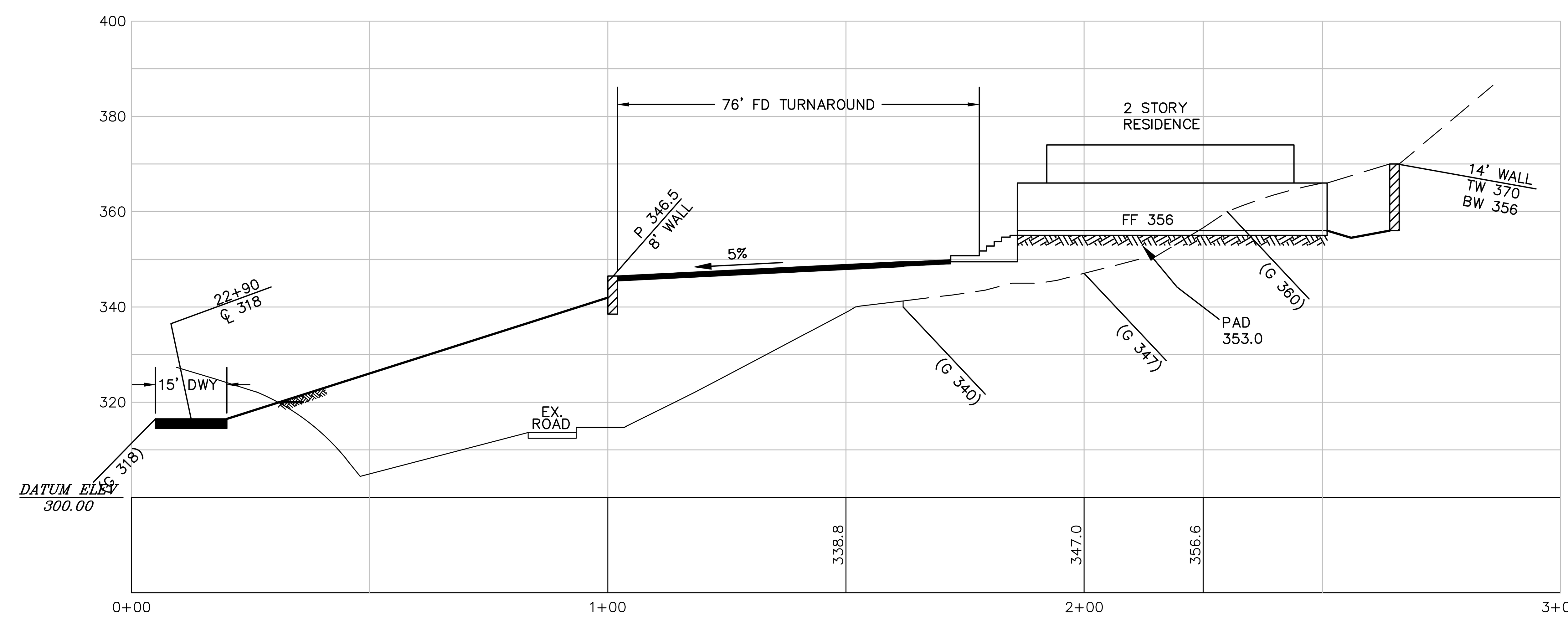
SHEET TITLE
CROSS SECTIONS

PROJECT NO.	S18046
DRAWN BY:	DS
CHECKED BY:	ES
SCALE:	AS SHOWN
DATE:	04/29/2018

SHEET NO.
C14



STORMWATER CONTROL MANHOLE
N.T.S.



PARCEL B
CROSS SECTION Y–Y
HORIZONTAL 1" = 20'
VERTICAL 1" = 20'

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

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SEAL:

REGISTERED PROFESSIONAL ENGINEER
EKUNDAYO AKIN SOWUNMI
No. 22573
Exp. 12-31-21
CIVIL
STATE OF CALIFORNIA
Ekundayo Sowunmi

ACKLAND
INTERNATIONAL, INC.
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MANNY BAGNAS
10692 CULVER ROAD
CUPERTINO, CA 95014

SHEET TITLE
CROSS SECTIONS

PROJECT NO. S18046
DRAWN BY: DS
CHECKED BY: ES
SCALE: AS SHOWN
DATE: 04/29/2018

SHEET NO.
C15

FOR CONTINUATION SEE SHEET C18

PARCEL A - TREE REMOVAL

(NOTE: ALL OAKS - COAST LIVE OAK)

#	SIZE/ SPECIES	HEALTH	IMPACT	ACTION OR MITIGA
1	18" OAK	FAIR	FULL REMOVAL	PLANT 2-24" BOX
2	10" OAK	"	"	"
3	10" OAK	"	"	"
4	8" OAK	"	"	"
5	12" BAY	"	"	NO MITIGATION
6	10" OAK	"	"	"
7	15" OAK	"	"	"
8	12" OAK	"	"	"
9	12" OAK	"	"	"
10	14" OAK	"	"	"
11	12" OAK	"	"	"
12	14" OAK	"	"	"
13	12" OAK	"	"	"
14	14" OAK	"	"	"
15	20" OAK	GOOD	8' WALL @ 5'	TRIM UP, HAND DIG
16	16" OAK	GOOD	FULL REMOVAL	PLANT 2-24" B
17	18" OAK	"	"	PLANT 3
18	14" OAK	"	"	PLANT 2
19	12" OAK	"	"	"
20	12" OAK	"	"	"
21	DBL 12" OAK	"	"	"
22	DBL 12" OAK	"	"	"
23	DBL 18" OAK	"	"	"
24	DBL 12" OAK	"	"	"
25	4x12" OAK	"	"	"
26	14" OAK	"	"	"
27	14" OAK	"	"	"
28	30" OAK	"	" "	PLANT 3
29	30" OAK	"	" "	PLANT 3
TOTAL	28			PLANT 40-24" BOX

LEGEND

TREE PROTECTION FENCING

BACCHARIS PILULARIS - "COYOTE BRUSH"
1 GAL. (5' O.C.) - FOR SUNNY LOCATIONS

RIBES VIBURNIFOLIUM - "EVERGREEN CURRANT"
1 GAL. (10' O.C.) - FOR SHADY LOCATIONS

MITIGATION MEASURE

3-24" BOX
LIVE OAKS

13 EACH GROUPINGS OF
3-24" BOX OAKS= 39 TREES PLANTED

FOR CONTINUATION SEE SHEET C17

GRAPHIC SCALE
20' 0 10' 20' 40' 80'
(IN FEET)
1 inch = 20 ft.

SEAL:

REGISTERED PROFESSIONAL ENGINEER
EKUNDAYO AKIN SOWUNMI
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16501 AND 16503 SANBORN RD.
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10692 CULVER ROAD
CUPERTINO, CA 95014

SHEET TITLE
LANDSCAPE PLAN - PARCEL A

PROJECT NO.	S18046
DRAWN BY:	DS
CHECKED BY:	ES
SCALE:	AS SHOWN
DATE:	04/29/2018

SHEET NO.
C16

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PARCEL B – TREE REMOVAL

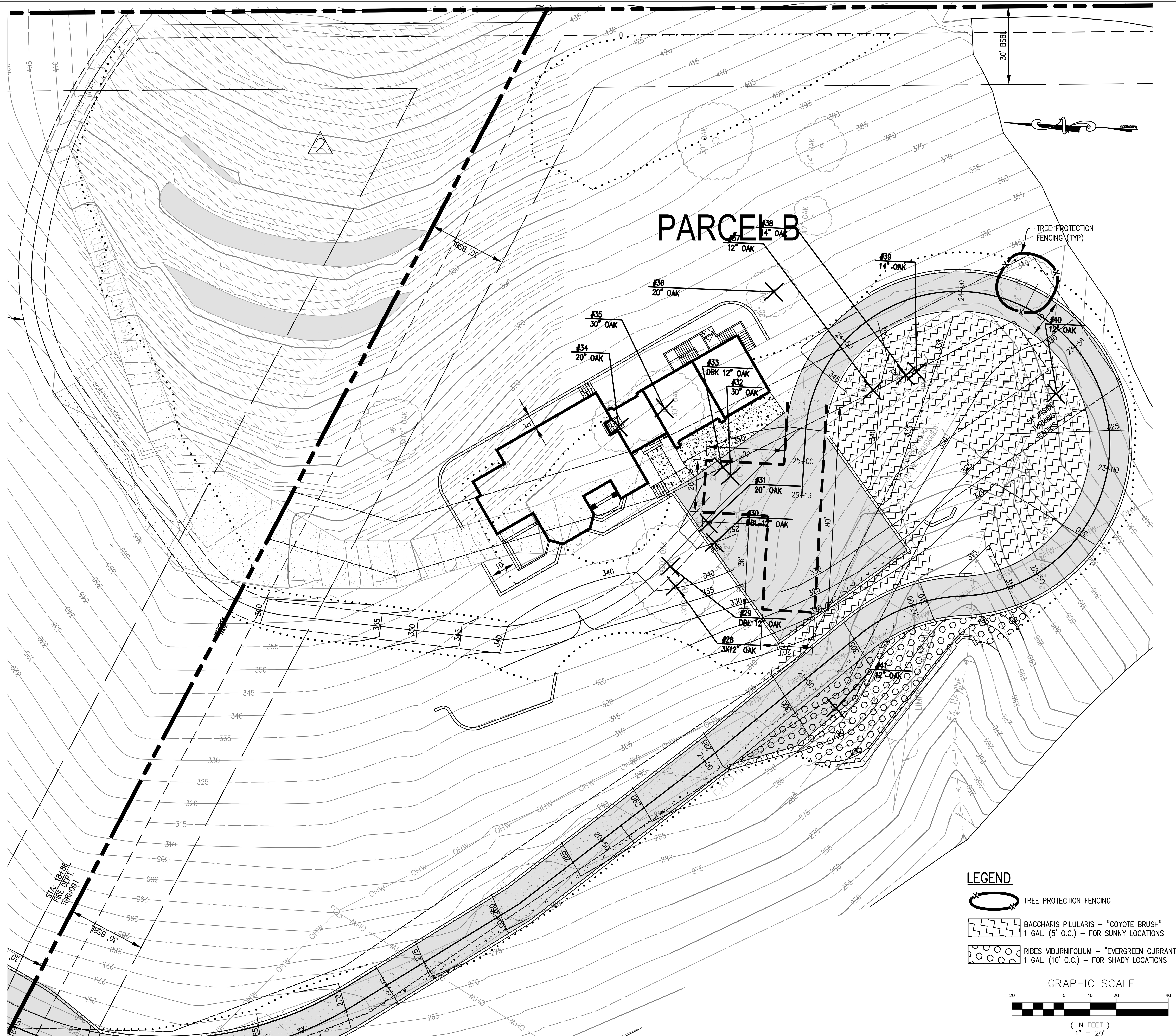
#	SIZE/SPECIES	HEALTH		MITIGATION
28	3X12" OAK	GOOD	FULL REMOVAL	4
29	DBL 20" OAK	"	"	4
30	DBL 12" OAK	"	"	3
31	20" OAK	"	"	3
32	30" OAK	"	"	4
33	DBL 12" OAK	"	"	3
34	20" OAK	"	"	3
35	30" OAK	"	"	4
36	20" OAK	"	"	3
37	12" OAK	"	"	2
38	14" OAK	"	"	2
39	14" OAK	"	"	2
40	12" OAK	"	"	2
41	20" OAK	"	"	3
TOTAL	14 REMOVALS			42-24" BOX OAKS

NOTE: ALL OAKS ARE COAST LIVE OAK

MITIGATION MEASURE

PLANT 42–24" BOX LIVE OAKS

14 EACH GROUPINGS OF 3–24" BOX OAKS = 42 TREES PLANTED



FOR CONTINUATION
SEE SHEET C16

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SEAL:

REGISTERED PROFESSIONAL ENGINEER
EKUNDAYO AKIN SOWUNMI
No. 22573
Exp. 12-31-21
CIVIL
STATE OF CALIFORNIA
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SHEET TITLE
LANDSCAPE PLAN - PARCEL B

PROJECT NO. S18046
DRAWN BY: DS
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SCALE: AS SHOWN
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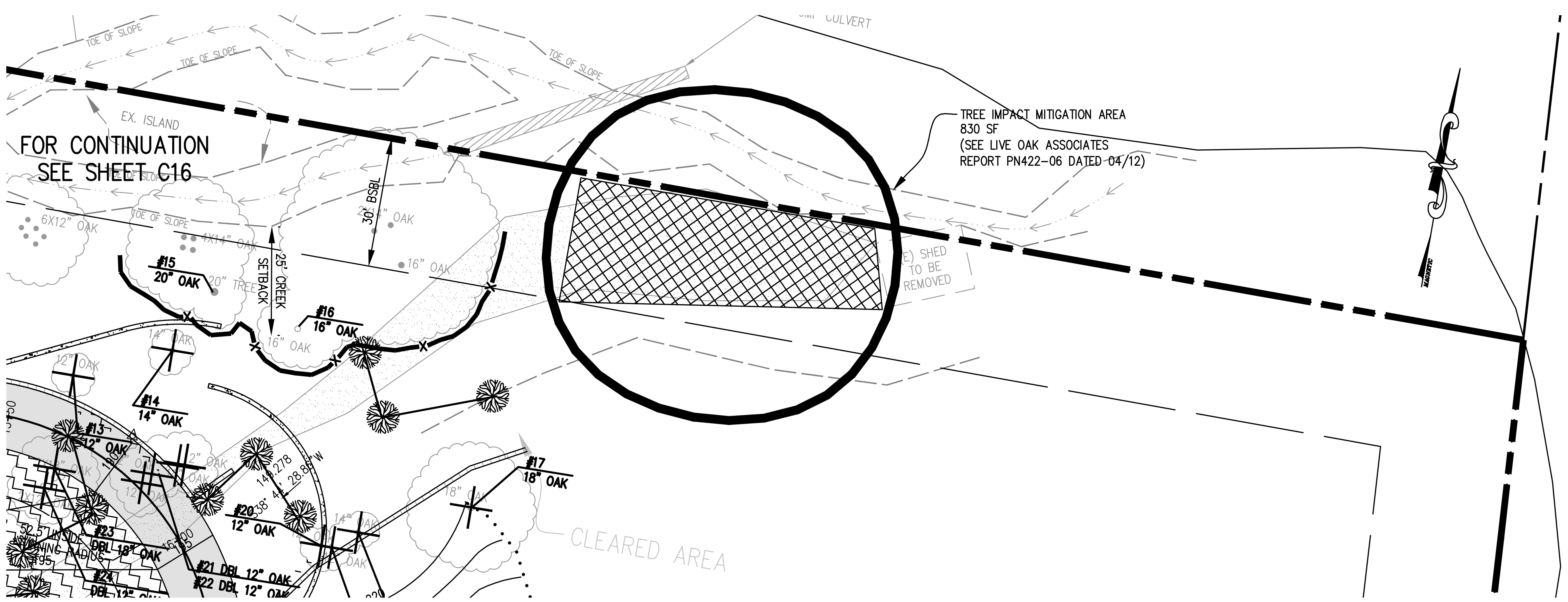
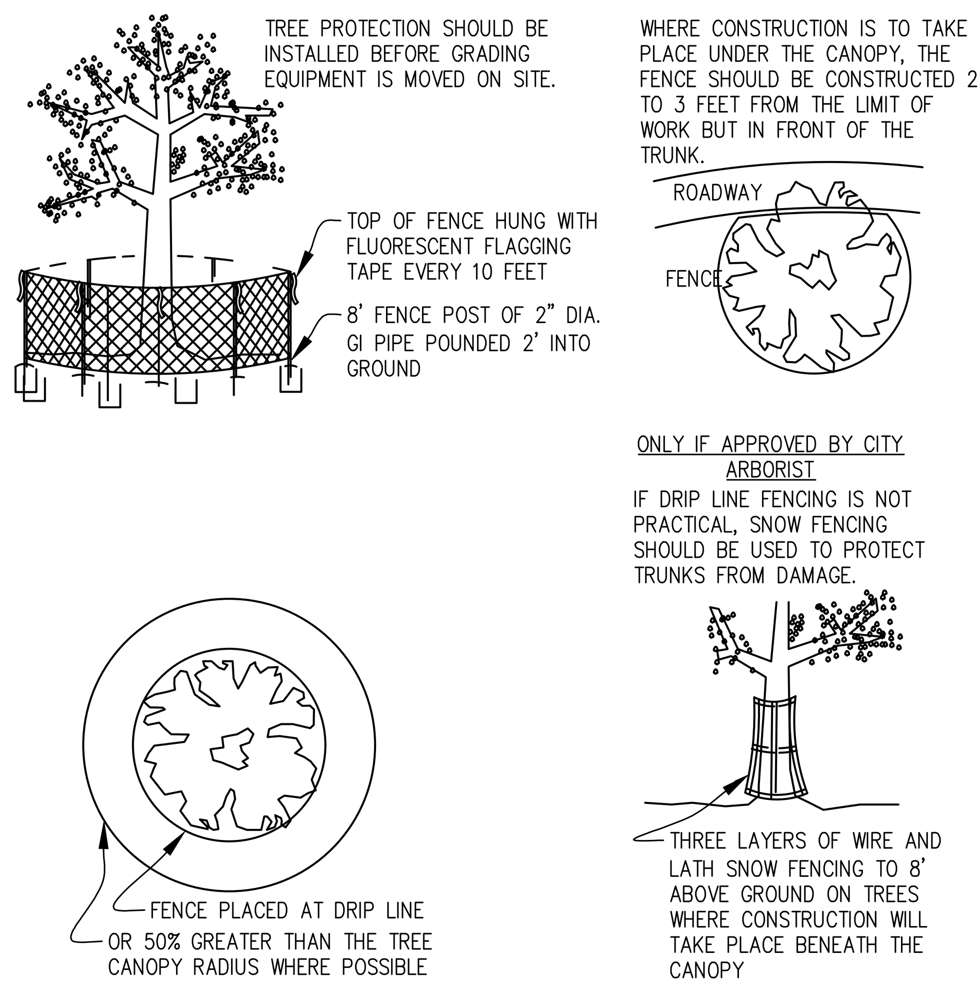
SHEET NO.
C17





TREE PROTECTIVE NOTES:

1.) TREE PROTECTIVE FENCING SHALL BE INSTALLED AS SHOWN ON THE PLAN AND ESTABLISHED PRIOR TO THE ARRIVAL OF CONSTRUCTION EQUIPMENT OR MATERIALS ON SITE. IT SHALL BE COMPRISED OF SIX-FOOT HIGH CHAIN LINK FENCING MOUNTED ON EIGHT-FOOT TALL, TWO-INCH DIAMETER GALVANIZED POSTS, DRIVEN 24 INCHES INTO THE GROUND AND SPACED NO MORE THAN 10 FEET APART. ONCE ESTABLISHED, THE FENCING MUST REMAIN UNDISTURBED AND BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS UNTIL FINAL INSPECTION

2.) UNLESS OTHERWISE APPROVED, ALL CONSTRUCTION ACTIVITES MUST BE CONDUCTED OUTSIDE THE DESIGNATED FENCED AREA (EVEN AFTER FENCING IS REMOVED). THESE ACTIVITIES INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, THE FOLLOWING: DEMOLTION, GRADING, TRENCHING, EQUIPMENT CLEANING, STOCKPILING, AND DUMPING MATERIALS (INCLUDING SOIL FILL), AND EQUIPMENT/VEHICLE OPERATION AND PARKING.

3.) ANY APPROVED GRADING OR TRENCHING BENEATH THE TREES' CANOPIES SHALL BE MANUALLY PERFORMED USING SHOVELS.

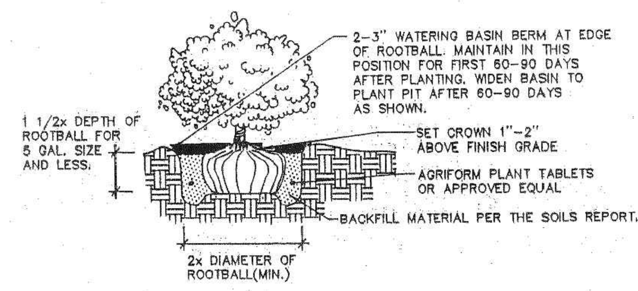
4.) ANY PRUNING OF TREES ON SITE MUST BE PERFORMED UNDER THE SUPERVISION OF AN ISA CERTIFIED ARBORIST AND ACCORDING TO ISA STANDARDS.

5.) THE DISPOSAL OF HARMFUL PRODUCTS (SUCH AS CHEMICALS, OIL AND GASOLINE) IS PROHIBITED BENEATH TREE CANOPIES OR ANYWHERE ON SITE THAT ALLOWS DRAINAGE BENEATH TREE CANOPIES. ADDITIONALLY, FUEL SHALL NOT BE STORED NOR SHALL ANY REFUELING OR MAINTENANCE OF EQUIPMENT OCCUR WITHIN 20 FEET OF THE TREES' TRUNKS.

6.) HERBICIDES SHALL NOT BE APPLIED BENEATH THE TREE CANOPIES. WHERE USED ON SITE, THEY MUST BE LABELED FOR SAFE USE NEAR TREES.

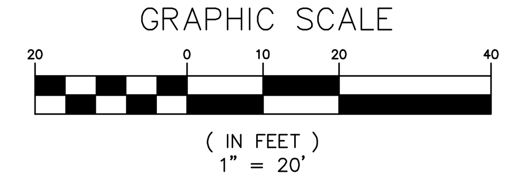
TREE PROTECTION

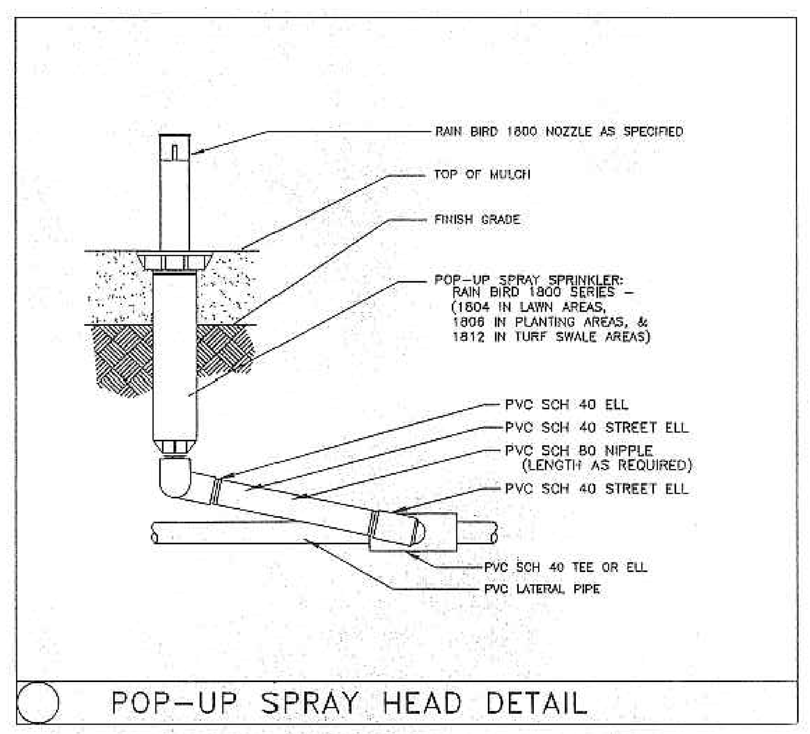
N.T.S.



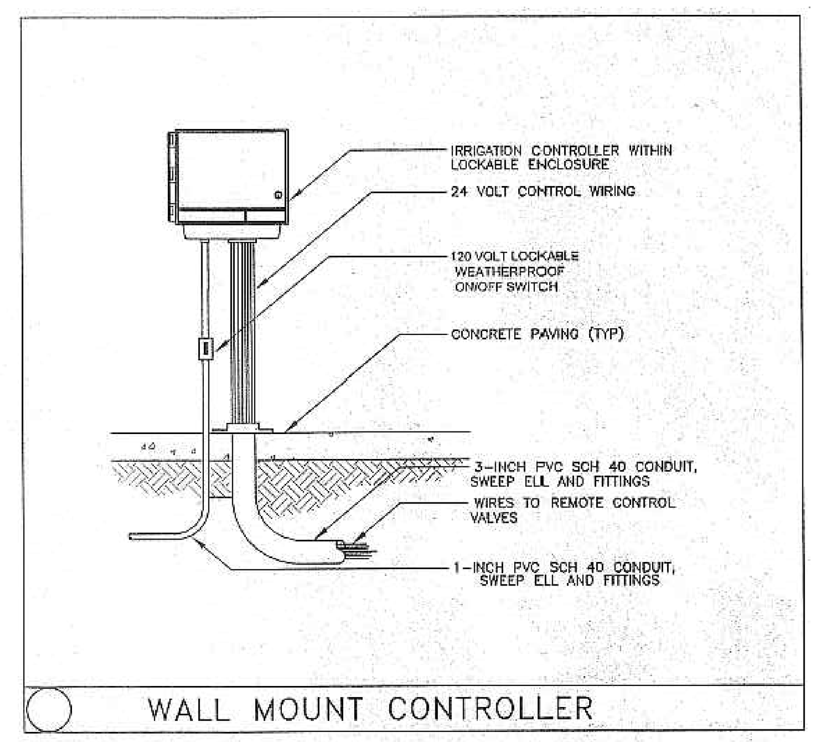
SHRUB PLANTING DETAIL

N.T.S.

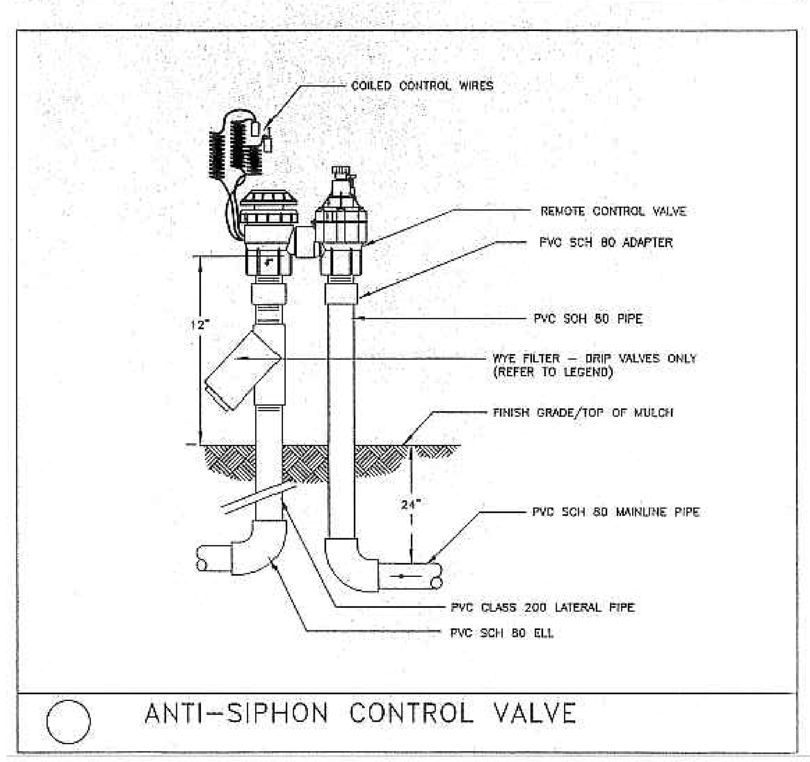




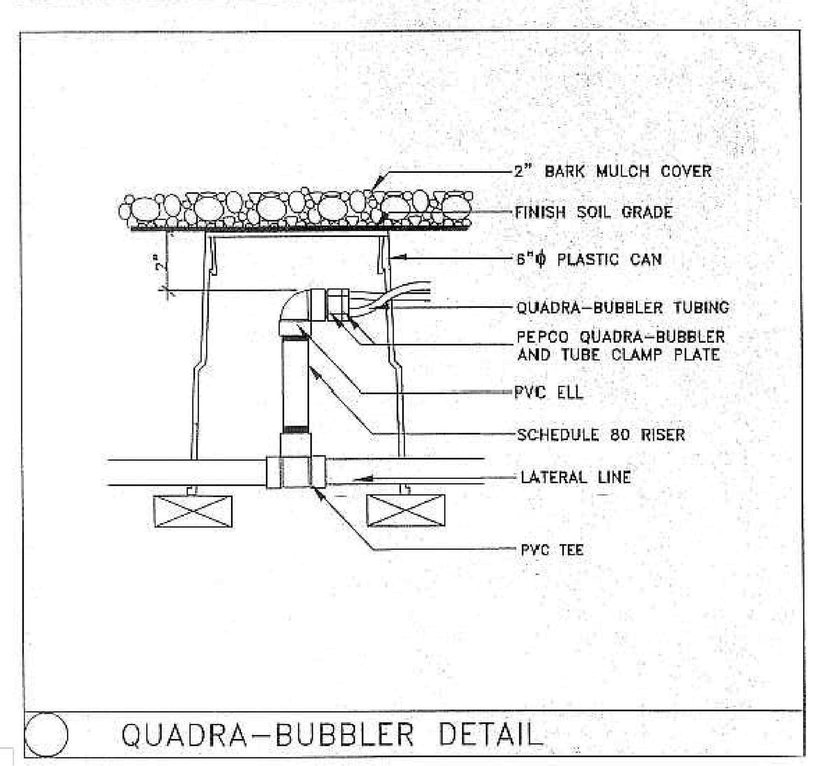
POP-UP SPRAY HEAD DETAIL



WALL MOUNT CONTROLLER



ANTI-SIPHON CONTROL VALVE



QUADRA-BUBBLER DETAIL

PLANTING NOTES:

GENERAL NOTES: The Landscape Contractor shall inspect the site and be familiar with existing site conditions prior to submitting his bid. Contractor shall not willfully proceed with construction as shown when it is obvious that obstructions, landscape area and/or grade differences exist that may not have been known during design. Such conditions shall immediately be brought to the attention of the Landscape Architect. The contractor shall assume full responsibility for all necessary revisions due to failure to give such notification. Contractor shall be responsible for making himself familiar with all underground utilities, pipes, structures and obstructions. Contractor shall take sole responsibility for all costs incurred due to damage and/or replacement of these items. Contractor shall be responsible for coordination between trades and subcontractors as required to accomplish landscape operations. The Landscape Contractor shall be responsible for any damage to existing facilities caused by or during the performance of his work. All repairs shall be made at no cost the Owner. Planting shall be installed in conformance with all applicable local codes and ordinances by experienced workmen and a licensed Landscape Contractor who shall obtain all necessary permits and pay all required fees.

SOIL PREPARATION: The Landscape Contractor shall be responsible for finish grading and all planting drainage. Positive drainage away from the building as per County codes shall be maintained. No low spots which hold standing water will be accepted. The Landscape Contractor shall incorporate backfill soil mixes in planting areas as noted below. Where backfill is not possible, incorporate all amendments into top 6 inches with hand tools. After installation of irrigation system, all planting areas are to be fine graded to within 2 inches and slightly mounded away from edges of top of planter, curb, walk, header, etc. and raked smooth with all rocks and debris over 1 inch in diameter removed.

BACKFILL SOIL MIXES: The Landscape Contractor shall amend existing soil, by rototilling, 6 cu. yd. soil conditioner (with a pH of 6.5–7.5) and 16 lbs. granular fertilizer (12–12–12) per 1,000 sq. ft. into the top 6 inches of soil in all planting areas. Pot Planting Mix: for trees and shrubs mix 1/3 organic amendment, 2/3 amended topsoil as noted above. Acid Backfill Mix: all pot planting mix, 1/2 sphagnum peat moss, 49er Brand Acid Food (4–8–5) at manufacturer's suggested application rate.

TREE PLANTING: The trees are to be planted as per detail on plan. Tree backfill shall be the 'Pot Planting Mix' as noted above. All trees shall receive (4) Agriform 21 gram (20–20–5) fertilizer tablets.

ROOT BARRIERS: All trees within 5 ft. of paved surface or wall shall receive root barrier installation of 'Deep Root' Barrier #L6–18–2 linear panels; Install panels extending 6 ft. in either direction front tree trunk along adjacent paving edges.

SHRUB PLANTING: The shrubs shall be potted as per plan and the locations approved prior to the digging of the holes. Shrub backfill shall be the 'Pot Planting Mix' as noted in 'Backfill Soil Mixes'. All shrubs shall receive Agriform 21 gram (20–20–5) fertilizer tablets at the following rates: For 5 gallon shrubs: 3 tablets, for 1 gallon shrubs: 1 tablet. Thoroughly water shrubs immediately after planting.

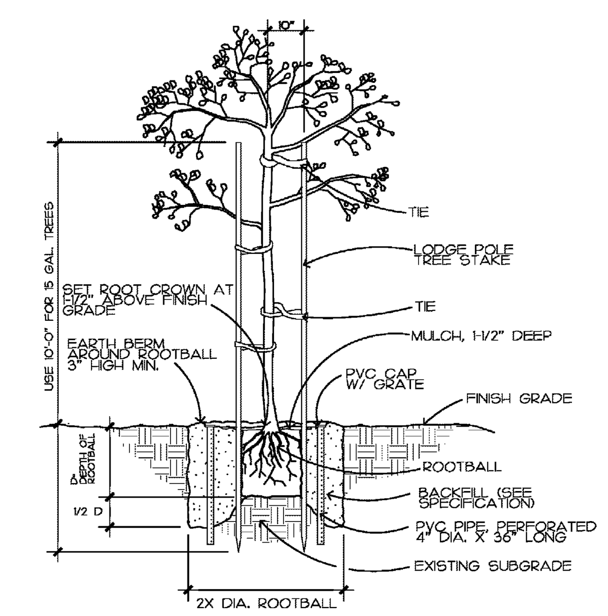
MULCHING & PRE-EMERGENT: All planting areas are to be treated with a pre-emergent. Mulch all planting areas, excluding lawn, having a slope less than 2:1 with a 2 inch minimum depth of 1/2"–3/4" fir bark (nugget, not shredded material) with a pH no higher than 5.0 and free of noxious weeds and foreign materials.

SUBSTITUTIONS: Requests for substitutions of plant varieties shall be made to the Landscape Architect within 15 days after signing of contract.

GUARANTEE: All construction, trees and shrubs by the Landscape Contractor and/or his subcontractors shall be guaranteed for one year after beginning of maintenance period. The contractor shall replace, at no expense to the Owner, any and all landscape materials that are in an unacceptable condition at time of use and trees or shrubs that are dead or not in a vigorous, healthy growing condition; within two weeks of notification of such condition. Replacement shall be of the same kind and size as the originally specified item and shall be replaced as originally described on the drawings. The Contractor shall not be held liable for loss of plant materials during the guarantee period due to vandalism, accidental causes or acts of neglect by others than the Contractor, his agents and employees.

CLEAN UP: At the end of each work day, at the inspection for substantial completion and before acceptance of project, the Contractor shall clean paved areas that are dirtied or stained by construction operations, by sweeping or washing, and remove defacements and stains. Remove construction equipment, excess materials and tools. Haul from Owner's property the debris resulting from construction and dispose of legally. Remove remaining temporary protection at time of acceptance by Owner unless otherwise agreed.

EXISTING TREES TO REMAIN: Provide temporary fencing, barricades or guards as necessary to protect existing trees or other plants which are to remain, from above-grade damage. Protect root systems from smothering. Do not store construction materials, debris, or excavated material within drip line (outer perimeter of tree branches). Restrict vehicular and foot traffic within drip line to prevent excessive compaction of soil over root systems. Arborist's report, when present, takes precedence over these notes.



6 TREE PLANTING DETAIL

NOTE: PLANT 8 EACH CRAPE MYRTLE (LAGERSTROEMIA I. 'TUSCARORA') 24" BOX

IRRIGATION NOTES:

GENERAL NOTES: Do not willfully install the irrigation system as shown on the drawings when it is obvious in the field that obstructions, grade differences or differences in area dimensions exist that might not have been considered in the design of the system. Such obstructions or differences should be brought to the attention of the Landscape Architect. Notify Landscape Architect of any aspects of layout, which will provide incomplete or insufficient water coverage of plant material and do not proceed until the instructions are obtained. In the event this notification is not performed, the Irrigation Contractor shall assume full responsibility for any revisions necessary. It is the responsibility of the Irrigation Contractor to familiarize himself with all the grade differences, location of walks, retaining walls, etc. Prior to construction, it shall be the Contractor's responsibility to protect in place (by all means necessary) all existing utilities unless otherwise specified on the parts. City standard drawings, specifications, specific notes & detail drawings and the soils report take precedence over general drawings and plans unless otherwise directed. Any deviation from approved plans during construction will require 48 hours prior notice to the Landscape Architect. At least one set of plans shall be on the site at all times for inspection. Irrigation Contractor shall comply with all State, County and City laws and ordinances; and regulations of the Department of industrial Relations, O.S.H.A. and Industrial Accident Commission relating to the safety and character of work, equipment and labor personnel. The Irrigation Consultant assumes no responsibility beyond the adequacy of the design contained herein.

DRAWINGS: Due to the scale of drawings, it is not possible to indicate all offsets, fittings, sleeves, etc., which may be required. The Contractor shall also carefully investigate the structural and finished conditions affecting all of his work, plan his work accordingly and furnish such fittings, etc. as may be necessary to meet such conditions. Drawings are generally diagrammatic and indicative of the work to be installed. The work shall be installed In such a manner as to avoid conflicts between irrigation System; planting and architectural features. All piping, valves, etc. shown within paved areas are for design clarification only and shall be Installed in planting areas where possible.

CONTROLLER irrigation Contractor is to program timing of stations on controller to irrigate in the most efficient, water conserving manner possible. It is the responsibility of the Landscape Maintenance Contractor and/or the owner to program the Irrigation Controllers to provide the minimum amount of water needed to sustain proper plant health. This includes making adjustments to the program for seasonal weather changes, plant material needs, water requirements, changes in elevation, sun, shade and wind exposures. Contractor shall assume responsibility for any damage, erosion, puddling, etc. due to improper programming. Electrical Contractor to supply 120-VOLT A.C. (2.5 AMP) service & disconnect, junction box and conduit, as necessary, to controller location. Irrigation Contractor to make final connection from electrical stub-out to controller. Install new 9-VOLT Duracell battery(s) in controller (if required) to retain program in memory during temporary power failures. Controller shall have ground wire as per manufacturer's Instructions.

VALVES: Isolation and Control Valve locations shown are diagrammatic. Install in groundcover/shrub areas where possible (not in lawn area), and at the edges of the planting areas so as to not interfere with plant hole excavation. Install 'valves 12 inches from and perpendicular to: walks, curbs, etc. and each valve shall be 12 inches apart. If pressure exceeds 80 PSI, Contractor shall Install Pressure Reducing equipment as required.

WIRING: Control wires shall be U.L. approved for direct burial in ground, Copper size #14-1. Common ground wire shall have white insulation jacket. Control wire shall have insulation jacket of color other than white. Splicing shall be done with 3M #3570 Scotchlok seal packs. Splicing of 24-VOLT wires will not be permitted except at valves. Leave a 24 inch coil of excel wire at each splice and at 100 feet on center along wire run. Tape wire in bundles at 10 feet on center. No taping permitted In sleeves. Install a control wire for each extra station left on the controller and a spare control wire of a different color along the entire main line. Loop 24 inches of excess wire at each single valve.

PIPING/TRENCHING: Install main line piping with concrete thrust blocks as per manufacturer's recommendation. Main and lateral lines shall be surrounded with a minimum of 2" of sand or rock free soil. Pipe sealant compound shall be Rector Seal T+2, Permatex 51 or Lasco #905305. Pressure the Main Line @ 150 PSI for 2 hours and the Lateral lines @ 100 PSI for 2 hours, where it is necessary to excavate adjacent to existing trees, the contractor shall use all possible care to avoid injury to trees. and tree root systems. Excavation in area where two (2) inch and larger roots exist shall be done by hand. Cut roots one (1) inch and larger in diameter shall be painted with two coats of tree seal, or equal. Trenches adjacent to trees should be closed within twenty-four (24) hours; and where this Is not possible, the side of the trench adjacent to the tree shall be kept shaded with wet burlap or canvas.

SLEEVES: The Irrigation Contractor shall coordinate with the General Contractor and other Subcontractors for the location and the installation of sleeves, conduit or pipe through walls, under roadways, paving, structures, etc. prior to construction. In addition to the sleeves and conduits shown on the drawings, the Irrigation Contractor shall be responsible for the coordination and/or installation of sleeves and conduits of sufficient size under all paved areas.

GUARANTEE: All construction, parts and products by the Landscape Contractor and/or his subcontractors shall be guaranteed for one (1) full year after the beginning of the maintenance period. The contractor shall replace (at no expense to the Owner) any and all irrigation products that are in an unacceptable condition for the time of use. Replacement of any items shall match original description of item(s) on construction plans and shall be installed per specification. The Contractor shall not be held liable for loss of irrigation parts or products due to vandalism, accidental causes, or acts of neglect by others than the Contractor, his agents or employees.

DO NOT BID, ORDER MATERIALS OR INSTALL ANY OR ALL OF SYSTEM BEFORE READING THE IRRIGATION NOTES IN THEIR ENTIRETY. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL CHANGES, REVISIONS AND OR ADDITIONS TO SYSTEM DUE TO FAILURE TO DO SO.'

SEAL:

REGISTERED PROFESSIONAL ENGINEER
EKUNDAYO AKIN SOWEMIMO
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STATE OF CALIFORNIA

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REVISION

PROJECT NAME:
LANDS OF BAGNAS
16501 AND 16503 SANBORN RD.
SARATOGA, CA

CLIENT NAME & ADDRESS:
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10692 CULVER ROAD
CUPERTINO, CA 95014

SHEET TITLE
LANDSCAPE NOTES AND DETAILS

PROJECT NO.	S18046
DRAWN BY:	DS
CHECKED BY:	ES
SCALE:	AS SHOWN
DATE:	04/29/2018

SHEET NO.
C18

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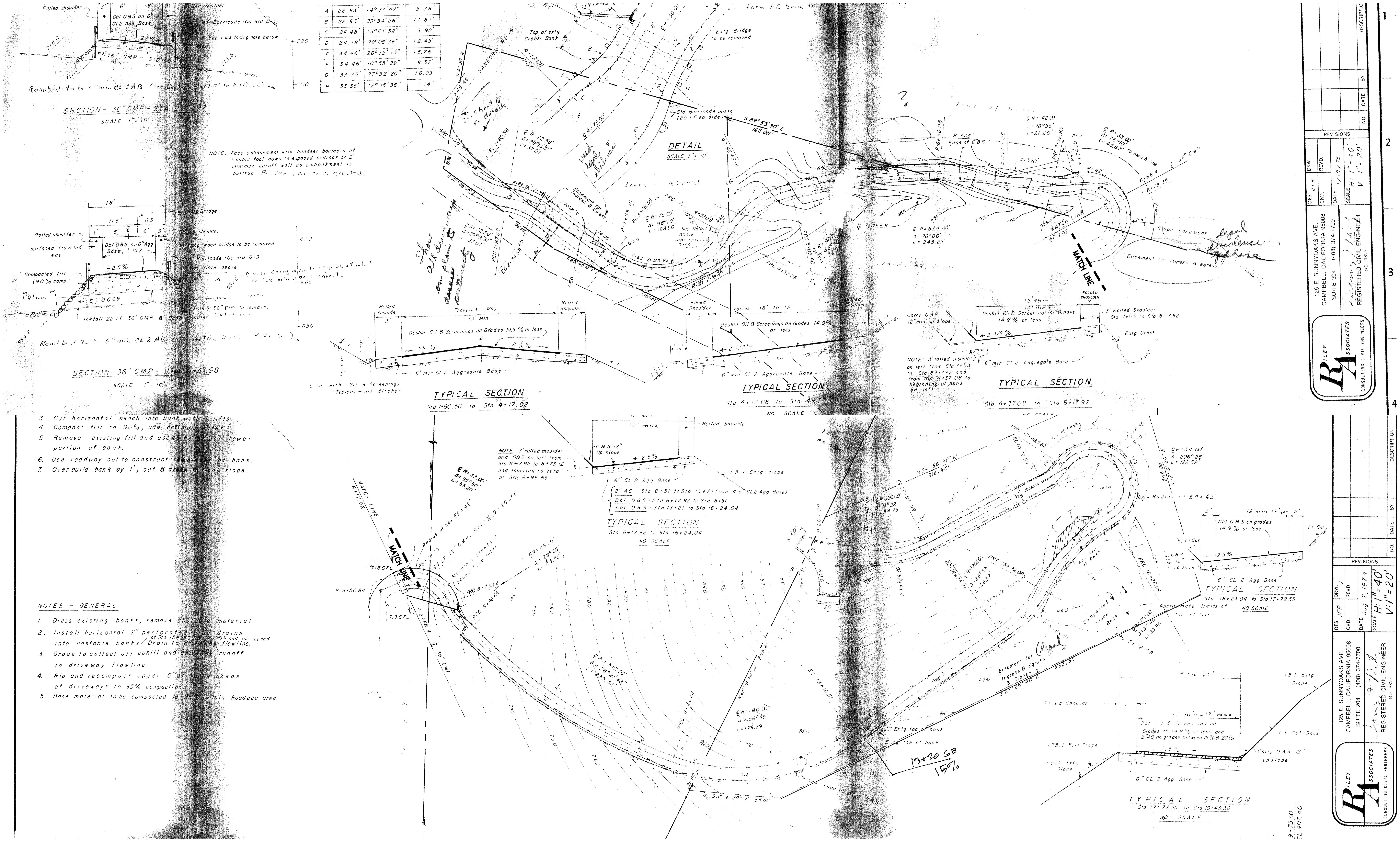


A	22.63'	14°37'43"	5.78
B	22.63'	29°54'26"	11.81
C	24.48'	13°51'52"	5.92'
D	24.48'	29°08'36"	12.45'
E	34.46'	26°12'13"	15.76
F	34.46'	10°55'29"	6.57
G	33.35'	27°32'20"	16.03
H	33.35'	12°15'36"	7.14

SEAL:

REGISTERED PROFESSIONAL ENGINEER
No. 22573
Exp. 12-31-21
CIVIL
STATE OF CALIFORNIA

ACKLAND INTERNATIONAL, INC.
333 Hegenberger Road, Suite 206
Oakland, CA 94621
510.564.4284 (tel)
510.633.2431 (fax)

NO.	DATE	DESCRIPTION	BY
7	07/06/20	RESUBMITTAL FOR BSA APPLICATION	ES
6	02/06/20	RESUBMITTAL FOR BSA APPLICATION	ES
5	10/24/19	RESUBMITTAL FOR BSA APPLICATION	ES
4	05/14/19	RESUBMITTAL FOR BSA APPLICATION	ES
3	02/09/19	RESUBMITTAL FOR BSA APPLICATION	ES
2	08/21/18	RESUBMITTAL FOR BSA APPLICATION	ES
1	06/11/18	CONFORM LIMIT REVISED TO EASEMENT LINE	ES

REVISION

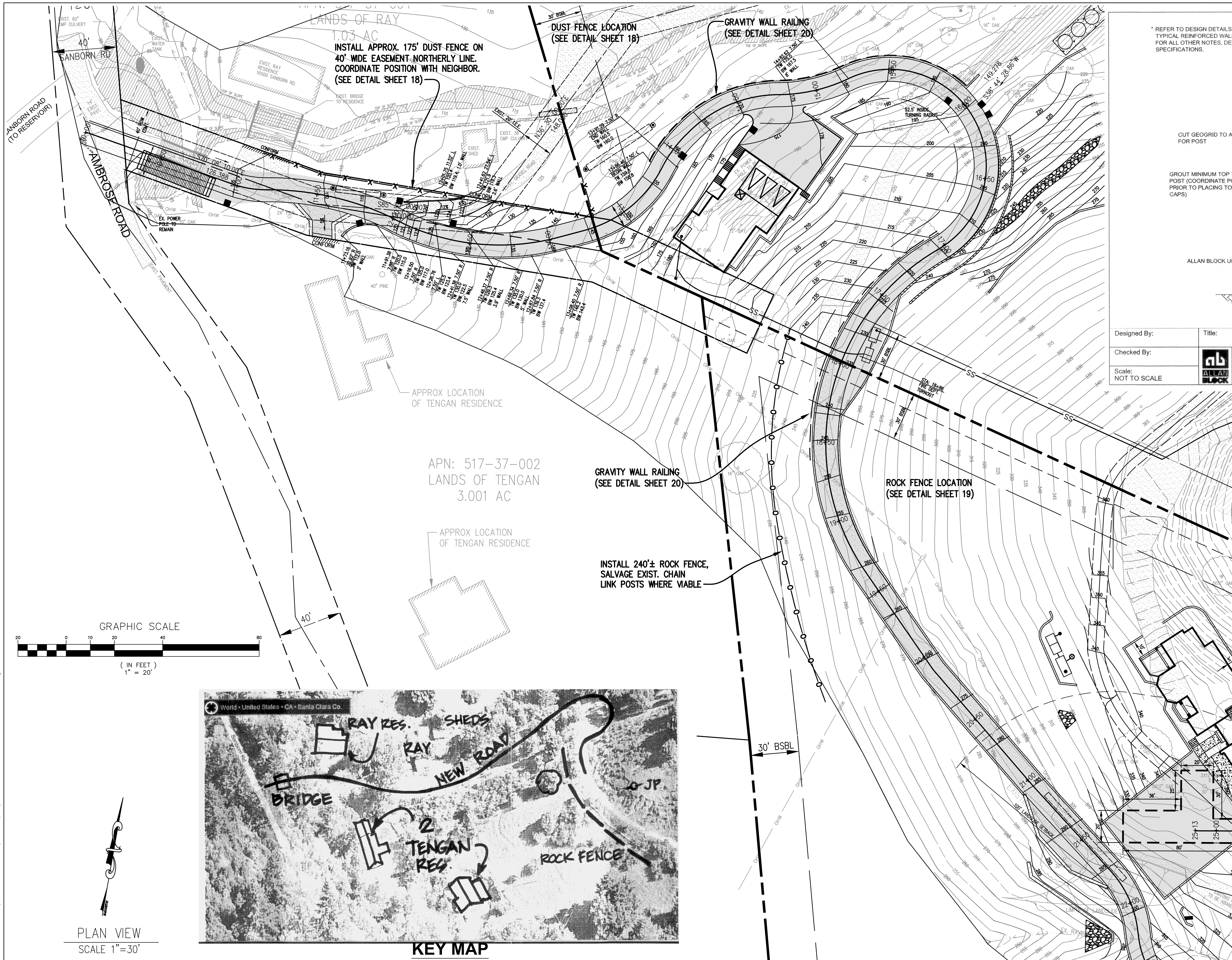
PROJECT NAME:
LANDS OF BAGNAS
16501 AND 16503 SANBORN RD.
SARATOGA, CA

CLIENT NAME & ADDRESS:
MANNY BAGNAS
10692 CULVER ROAD
CUPERTINO, CA 95014

SHEET TITLE
EXISTING ROAD PLANS BY RILEY ASSOCIATES

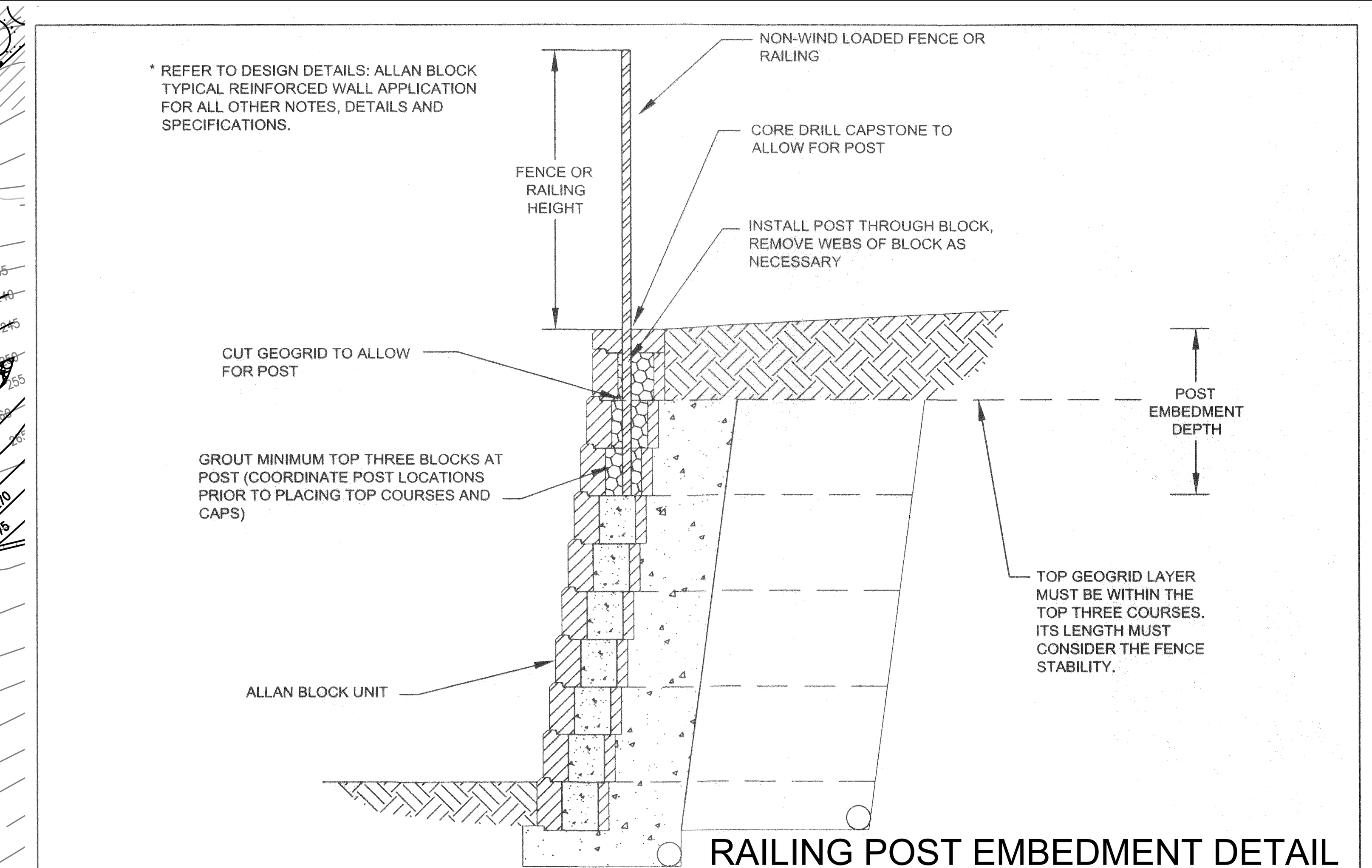
PROJECT NO. S18046
DRAWN BY: DS
CHECKED BY: ES
SCALE: AS SHOWN
DATE: 04/29/2018

SHEET NO.
C19



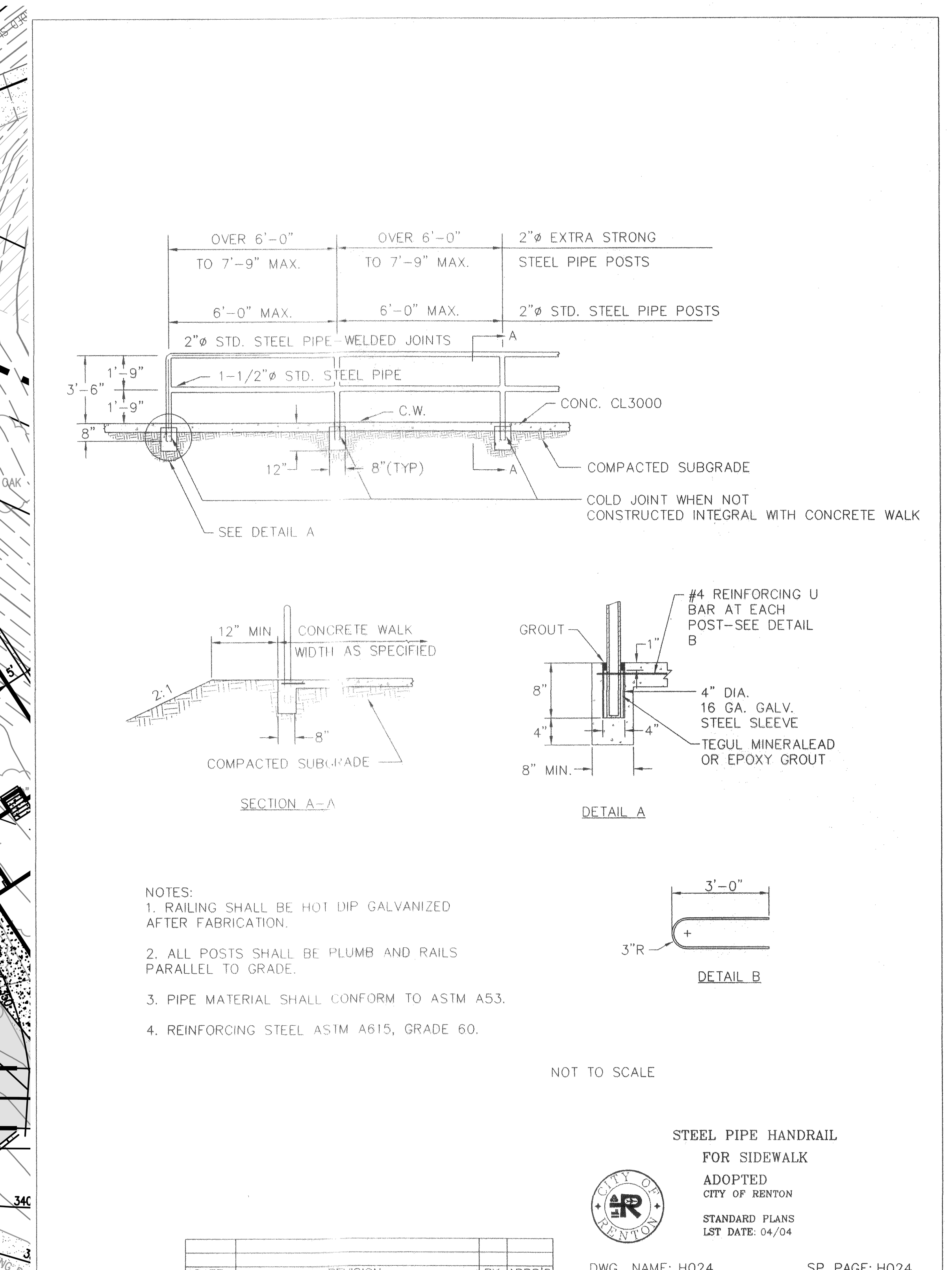
KEY MAP

N.T.S.



RAILING POST EMBEDMENT DETAIL

Designed By:	Title: NO WIND FENCE WALL SECTION 2	Date:
Checked By:	The purpose of this drawing is for preliminary design only. This drawing should not be used for final design or construction without the certification of a professional engineer registered in the state in which the wall will be built. The accuracy and use of details contained in this document are the sole responsibility of the user. The user must verify each detail for accuracy as they pertain to their particular project. © 2005 Allan Block	Project No:
Scale: NOT TO SCALE		Drawing No:



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REGISTERED PROFESSIONAL ENGINEER
EKUNDAYO AKIN SOWEMIMO
No. 22573
Exp. 12-31-21
CIVIL
STATE OF CALIFORNIA

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333 Hegenberger Road, Suite 206
Oakland, CA 94621
510.564.4284 (tel)
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2	08/21/18	RESUBMITTAL FOR BSA APPLICATION	ES
1	06/11/18	CONFORM LIMIT REVISED TO EASEMENT LINE	ES

REVISION

PROJECT NAME:
LANDS OF BAGNAS
16501 AND 16503 SANBORN RD.
SARATOGA, CA

CLIENT NAME & ADDRESS:
MANNY BAGNAS
10692 CULVER ROAD
CUPERTINO, CA 95014

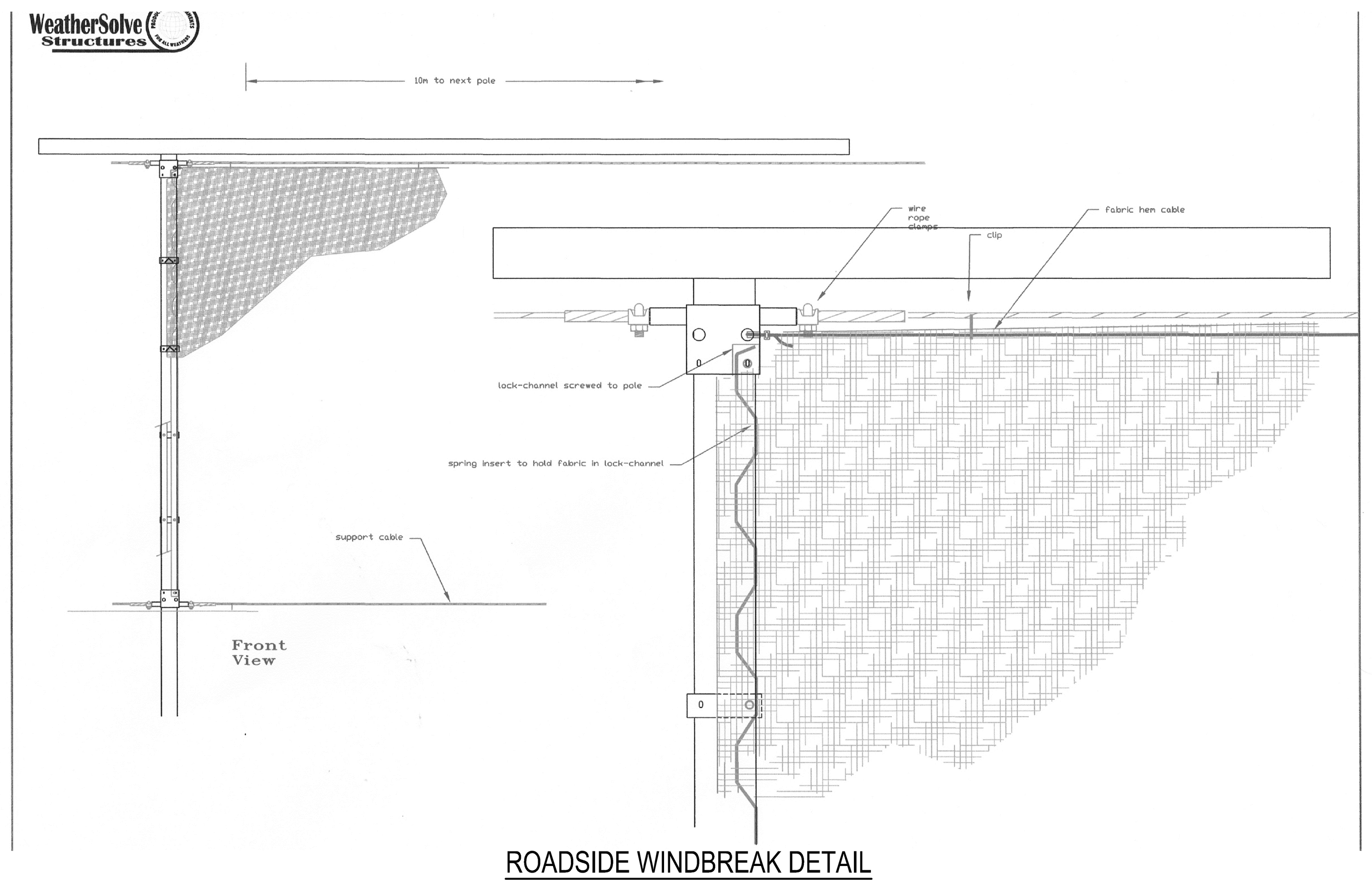
SHEET TITLE

DUST FENCE, ROCK FENCE & RAILINGS LAYOUT PARCEL A

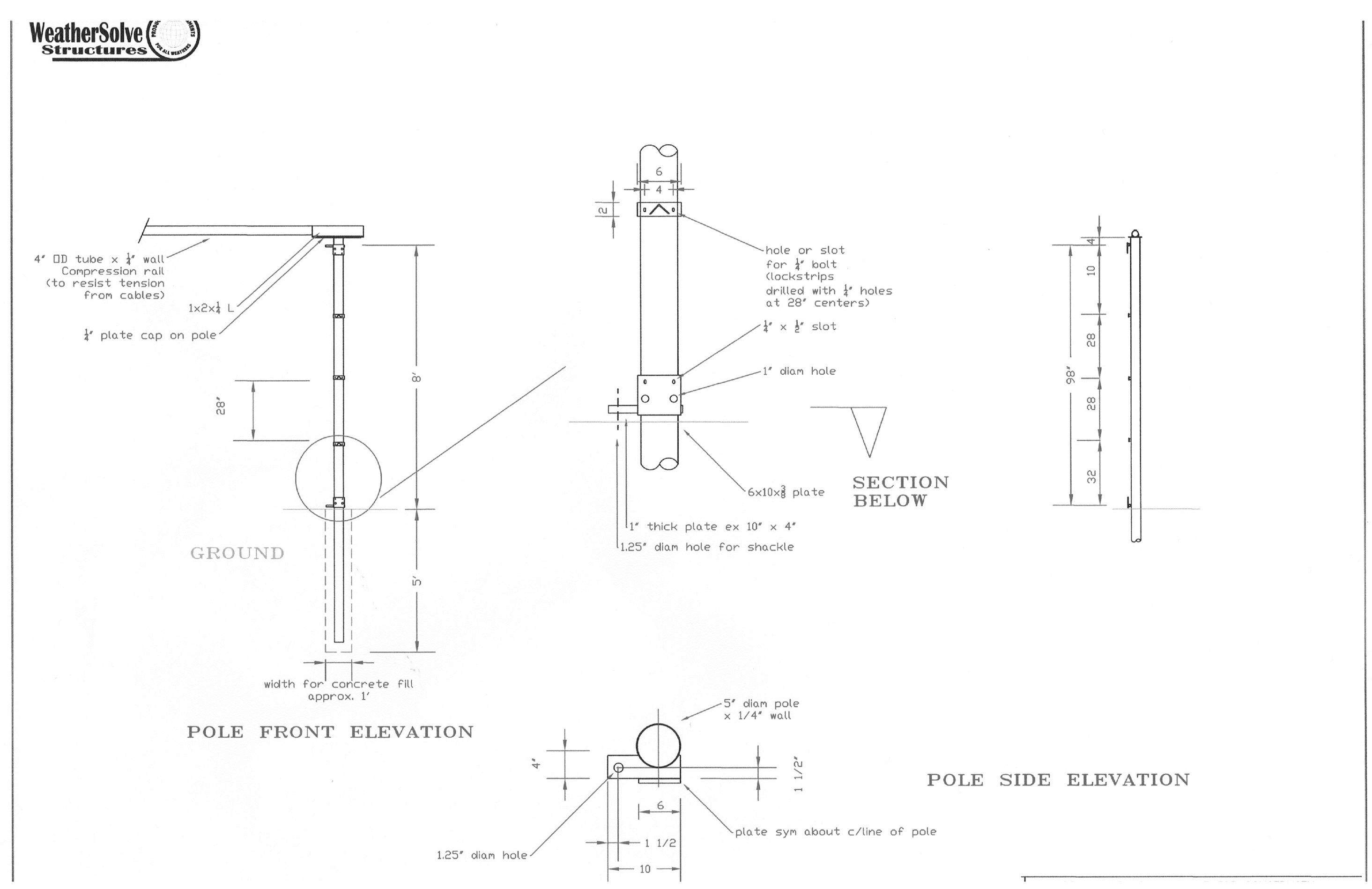
PROJECT NO. S18046
DRAWN BY: DS
CHECKED BY: ES
SCALE: AS SHOWN
DATE: 04/29/2018

SHEET NO.

C20



ROADSIDE WINDBREAK DETAIL
N.T.S.



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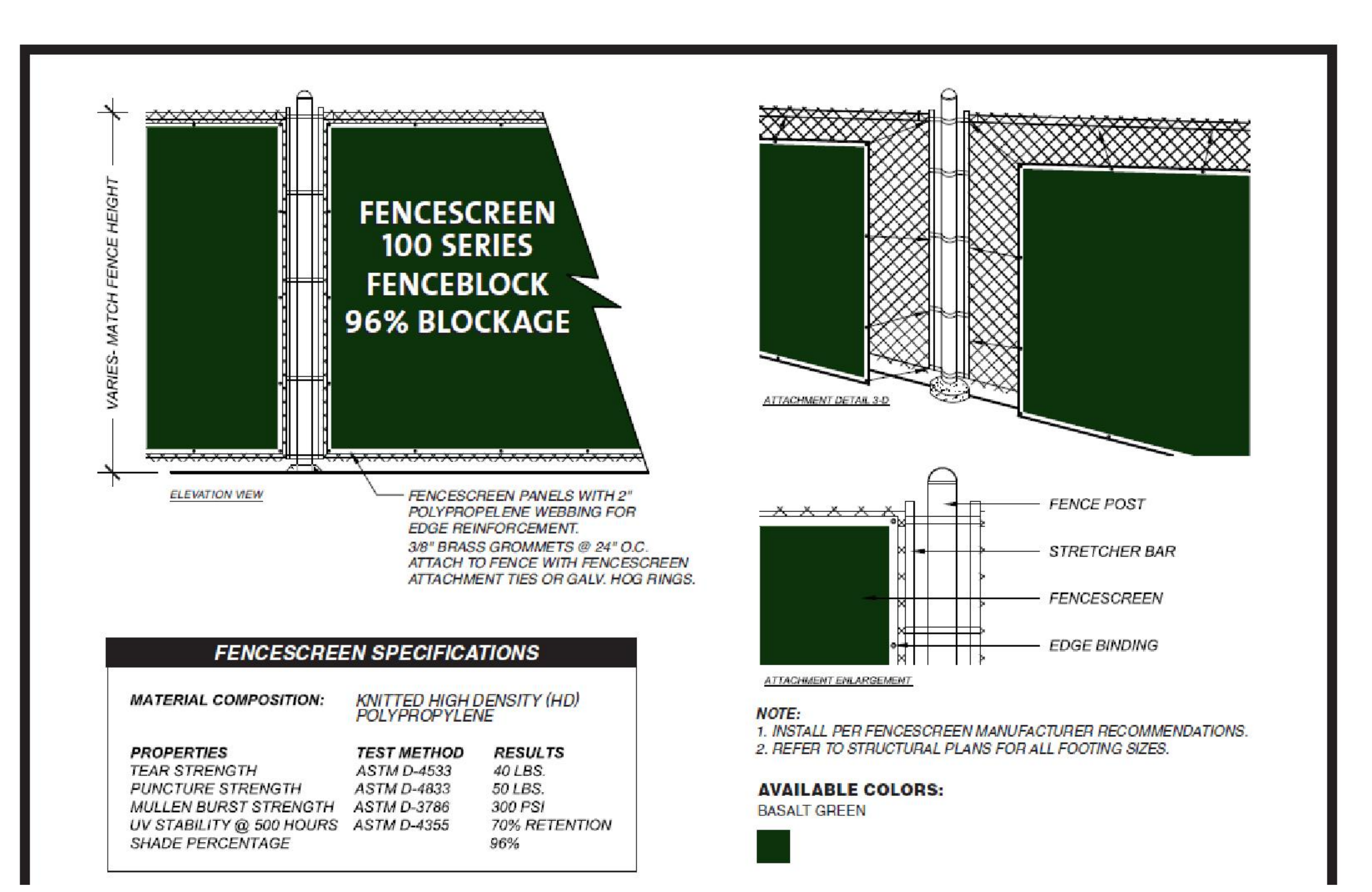
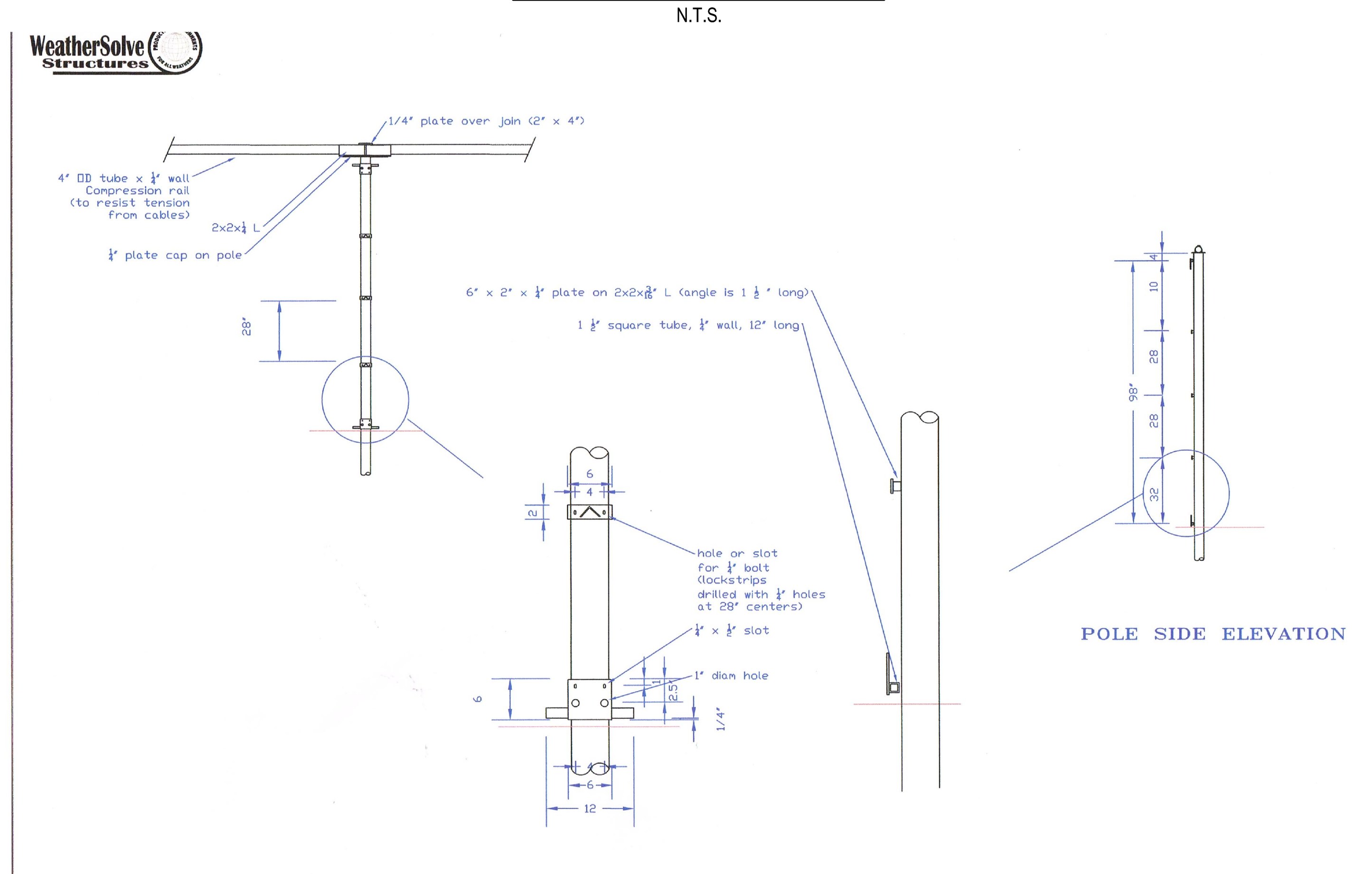
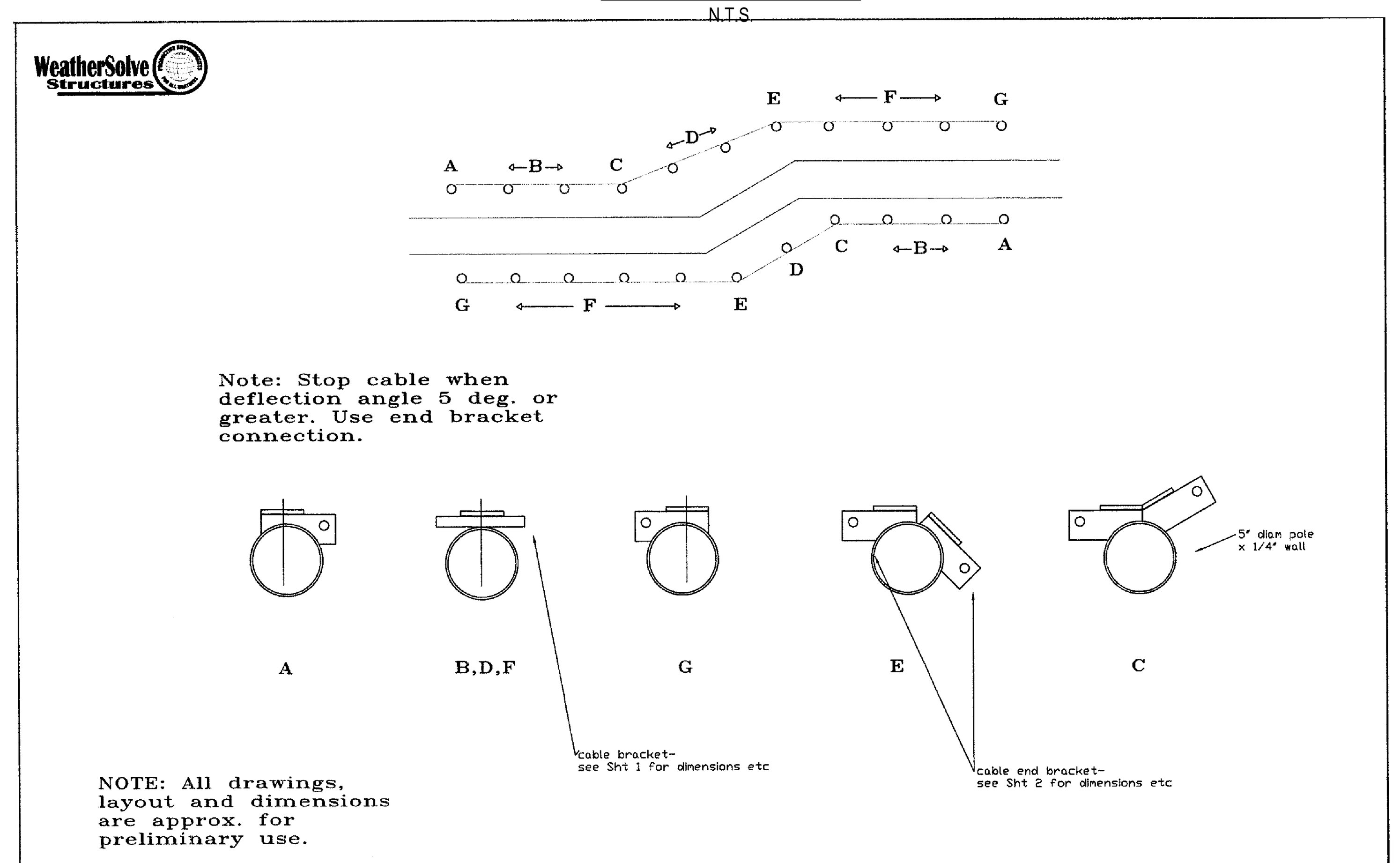


DUST FENCE DETAILS
N.T.S.



ROADSIDE WINDBREAK DETAIL
N.T.S.



ROADSIDE WINDBREAK DETAIL
N.T.S.

C:\Users\esowu\Dropbox_MANNY BAGNAS PLANS\CURRENT-021220\11-245 12 DUST FENCE DETAILS_021220.dwg

SEAL:

PROFESSIONAL ENGINEER No. 22573 Exp. 12-31-21 CIVIL STATE OF CALIFORNIA

ACKLAND INTERNATIONAL, INC.
333 Hegenberger Road, Suite 206
Oakland, CA 94621
510.564.4284 (tel)
510.633.2431 (fax)

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2	08/21/18	RESUBMITTAL FOR BSA APPLICATION	ES
1	06/11/18	CONFORM LIMIT REVISED TO EASEMENT LINE	ES

REVISION

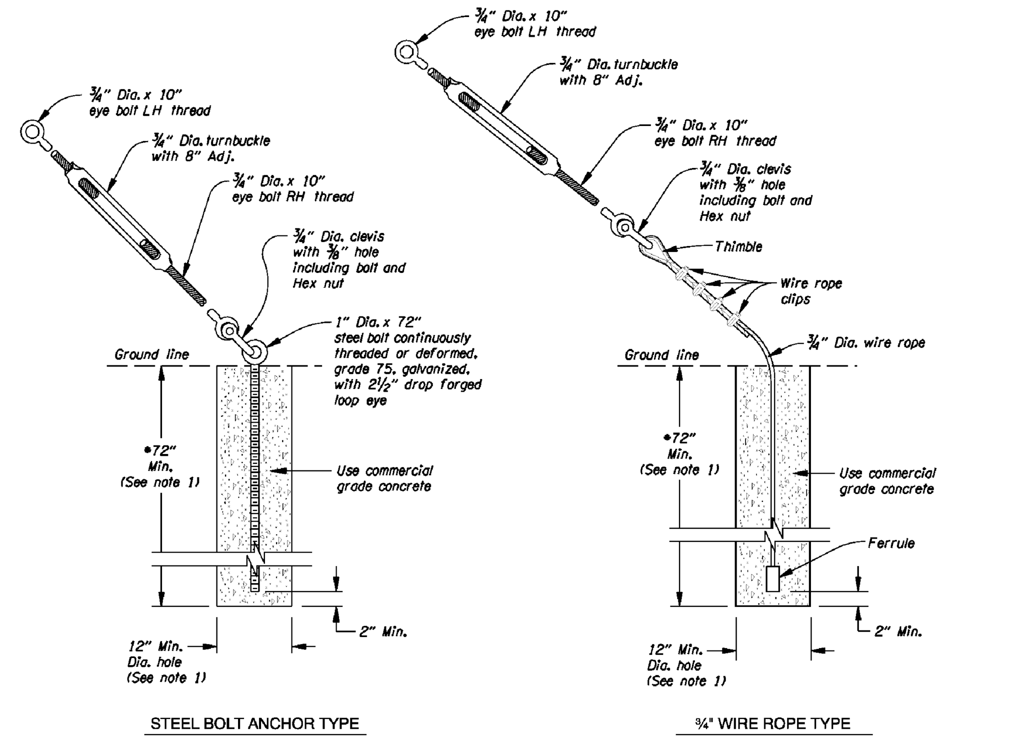
PROJECT NAME:
LANDS OF BAGNAS
16501 AND 16503 SANBORN RD.
SARATOGA, CA

CLIENT NAME & ADDRESS:
MANNY BAGNAS
10692 CULVER ROAD
CUPERTINO, CA 95014

SHEET TITLE
DUST FENCE DETAILS

PROJECT NO. S18046
DRAWN BY: DS
CHECKED BY: ES
SCALE: AS SHOWN
DATE: 04/29/2018

SHEET NO.
C21

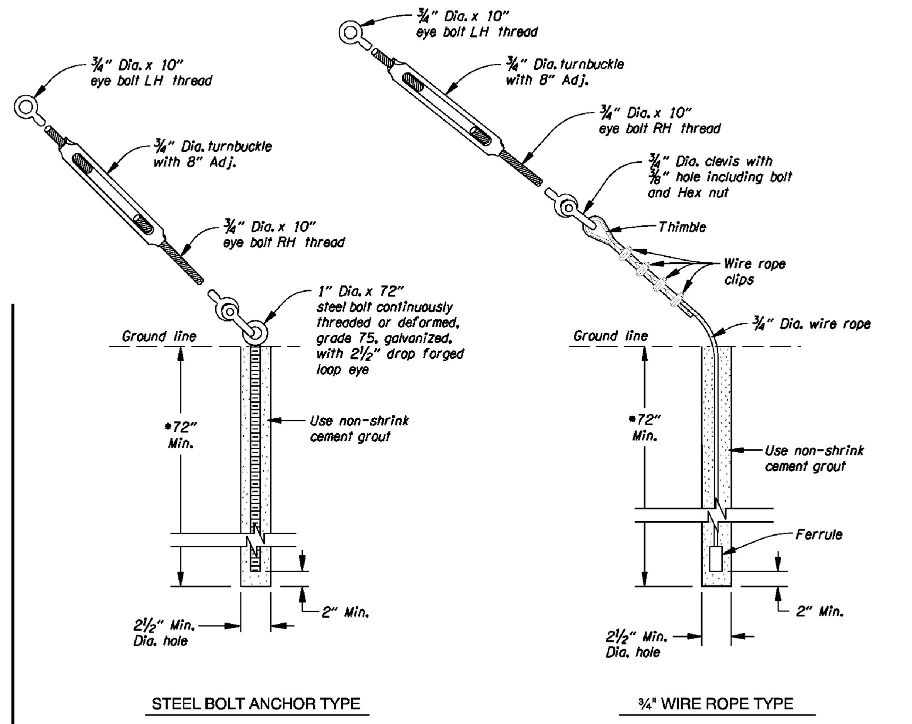


END AND POST RETAINING CABLE ANCHOR IN SOIL

Notes:

1. *Minimum dimension. If rock is encountered before these dimensions are obtained, then use method shown for rock anchors.*
2. *Contractor may select from these options where anchors are installed in soil.*

* *Minimum depth*



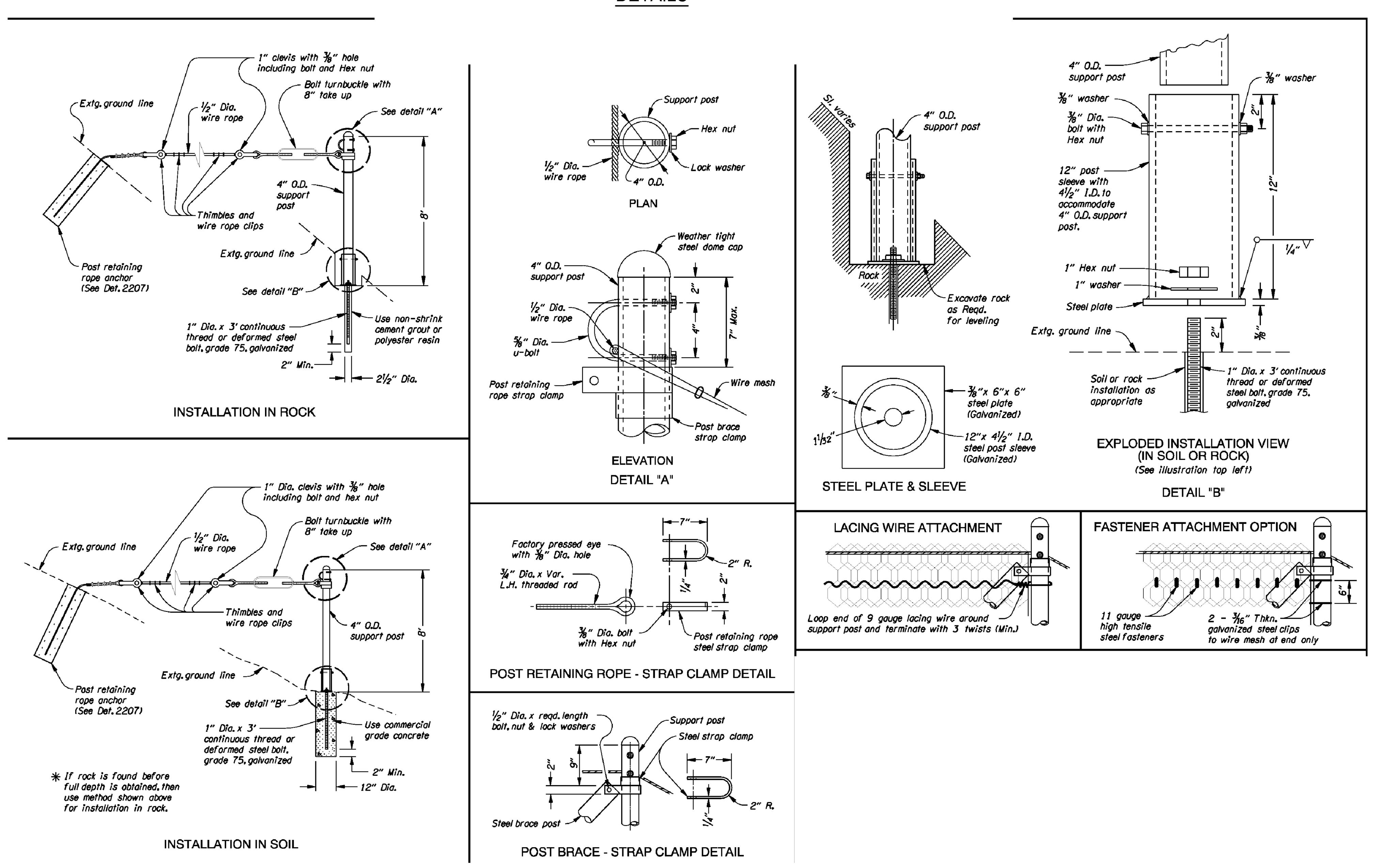
END AND POST RETAINING ROPE ANCHOR IN ROCK

Notes:

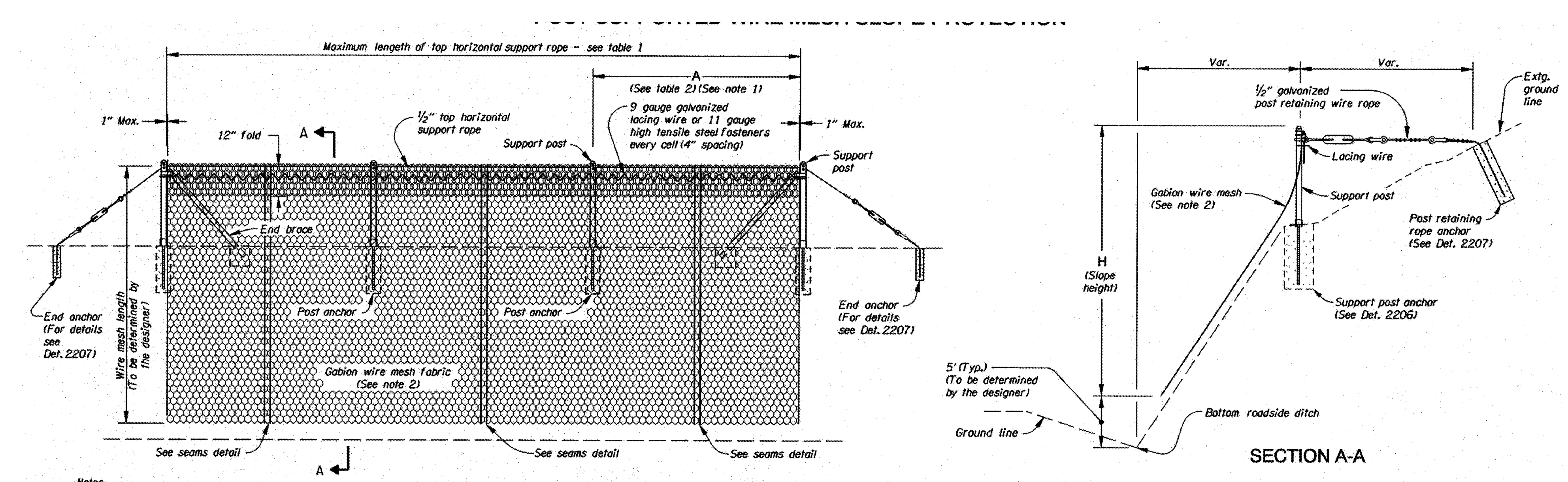
1. *Contractor may select from these options where anchors are installed in rock.*

* *Minimum depth*

POST-SUPPORTED WIRE MESH SLOPE PROTECTION AND POST-SUPPORTED ROCK PROTECTION SCREEN ANCHOR DETAILS



POST-SUPPORTED WIRE MESH SLOPE PROTECTION DETAILS



Notes:

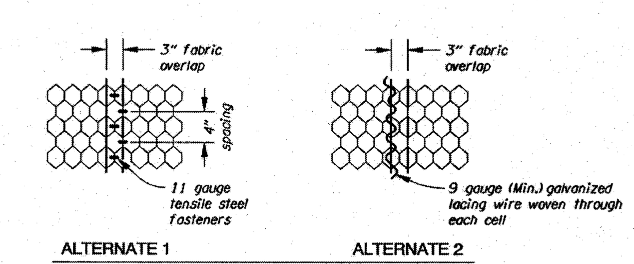
1. *To the designer - maximum post and anchor spacing (A) for debris and impact loads required as per table for a minimum allowable anchor capacity of 20,000 Lbf. System subjected to snow loads may require narrower maximum spacing.*
2. *Designer must select either 11 gauge galvanized or 12 gauge PVC coated gabion wire mesh.*

TABLE 1

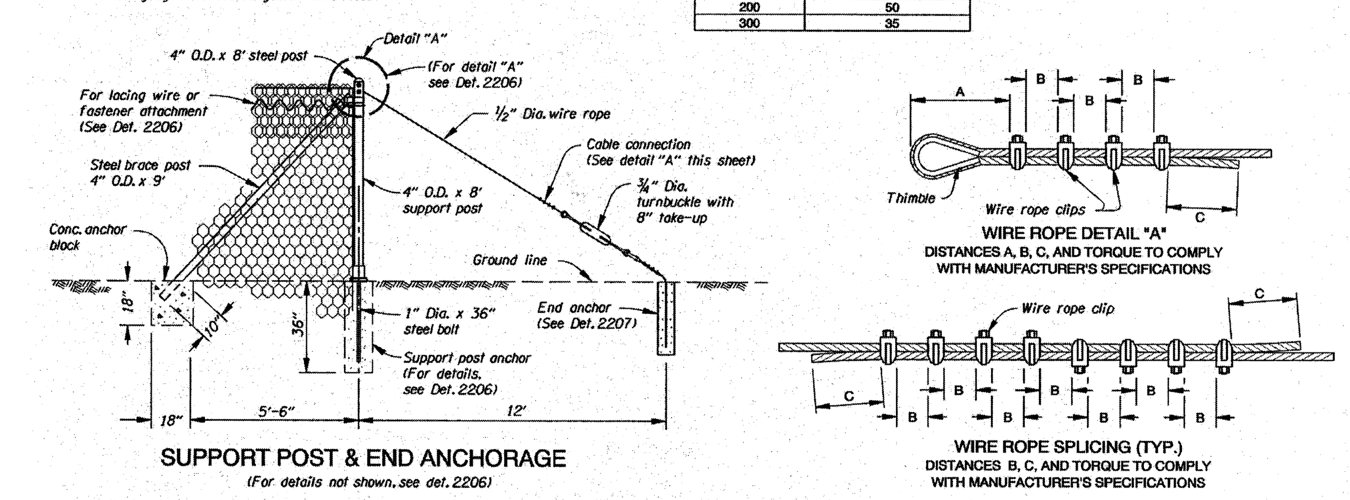
Maximum length for top horizontal support rope v. slope height for wire mesh	
Slope height H (Ft.)	Max. length for ½" cable fabric weight only (Ft.)
50	200
100	100
200	50
300	35

TABLE 2

MAXIMUM ANCHOR SPACING	
H (Ft.)	A (Ft.)
0 - 100	35
100 - 200	25
200 - 300	20



SEAMS



SUPPORT POST & END ANCHORAGE

(For details not shown, see det. 2206)

POST-SUPPORTED WIRE MESH SLOPE PROTECTION DETAILS

SEAL:

No. 22573
Exp. 12-31-21
CIVIL
STATE OF CALIFORNIA

ACKLAND
INTERNATIONAL, INC.
333 Hegenberger Road, Suite 206
Oakland, CA 94621
510.564.4284 (tel)
510.633.2431 (fax)

NO.	DATE	DESCRIPTION	BY
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1	06/11/18	CONFORM LIMIT REVISED TO EASEMENT LINE	ES

REVISION

PROJECT NAME:
LANDS OF BAGNAS
16501 AND 16503 SANBORN RD.
SARATOGA, CA

CLIENT NAME & ADDRESS:
MANNY BAGNAS
10692 CULVER ROAD
CUPERTINO, CA 95014

SHEET TITLE
ROCK FENCE DETAILS

PROJECT NO. S18046
DRAWN BY: DS
CHECKED BY: ES
SCALE: AS SHOWN
DATE: 04/29/2018

SHEET NO.
C22

WALL A—LOCATION (A / C23)

5 of 92

DESIGN OF VIKING BLOCK
RETAINING WALLS
LANDS OF BAGNAS
SARATOGA, CALIFORNIA

GEOGRID TABLE FOR
WALLS RETAINING FILLS

INCLUDING:

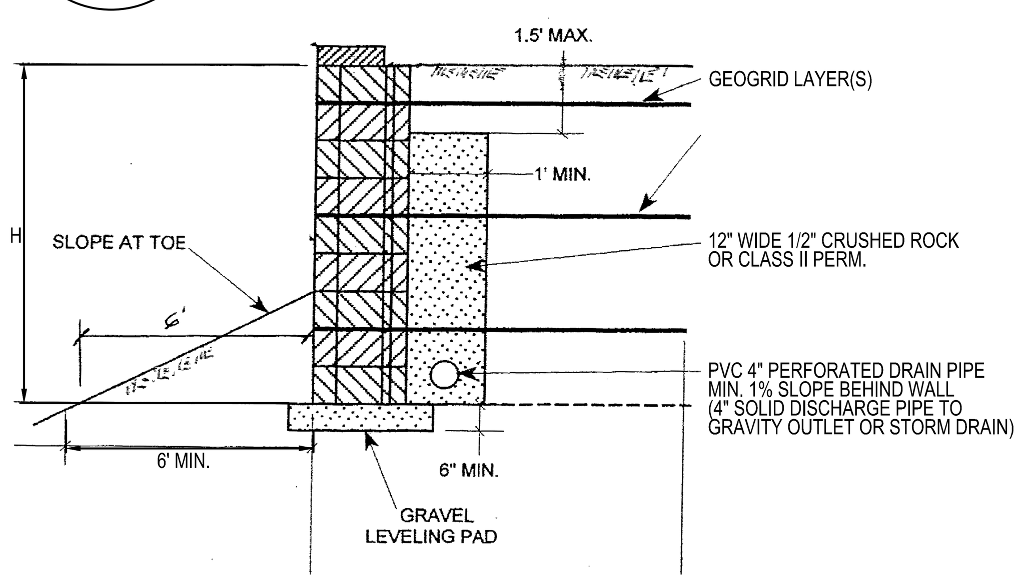
APPROXIMATE ROAD STATIONS 11+30 – 12+80, 12+75 – 16+50,

WALL BEHIND UPPER HOUSE

4 of 92

DESIGN OF VIKING
BLOCK RETAINING WALLS
LANDS OF BAGNAS
SARATOGA, CALIFORNIA

FLAT BACKFILL



5 of 92

DESIGN OF VIKING BLOCK
RETAINING WALLS
LANDS OF BAGNAS
SARATOGA, CALIFORNIA

GEOGRID TABLE
WALLS RETAINING FILL

WALL HEIGHT H (ft)	GEOGRID LENGTH L (ft)	NUMBER OF GEOGRIDS	GEOGRID HEIGHTS hg (ft)	GEOGRID TYPE
20	12	2	0'-8, 1'-4	MIRAFI 5XT
		13	2'-8, 4'-0, 5'-4, 6'-8, 8'-0, 9'-3, 10'-8, 12'-0, 13'-4, 14'-8, 16'-0, 17'-4, 18'-8	MIRAFI 3XT
18	11	13	0'-8, 2'-0, 3'-4, 4'-8, 6'-0, 7'-4, 8'-8, 10'-0, 11'-4, 12'-8, 14'-0, 15'-4, 16'-8	MIRAFI 3XT
16	10	12	0'-8, 1'-4, 2'-8, 4'-0, 5'-4, 6'-8, 8'-0, 9'-4, 10'-8, 12'-0, 13'-4, 14'-8	MIRAFI 3XT
14	9	10	0'-8, 2'-0, 3'-4, 4'-8, 6'-0, 7'-4, 8'-8, 10'-0, 11'-4, 12'-8	MIRAFI 3XT
12	8	8	1'-4, 2'-8, 4'-0, 5'-4, 6'-8, 8'-0, 9'-4, 10'-8	MIRAFI 3XT

6 of 92

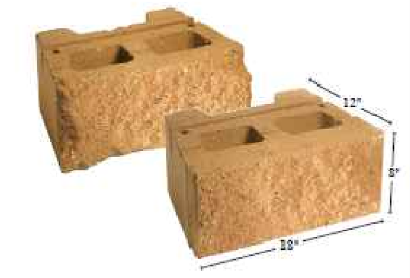
DESIGN OF VIKING BLOCK
RETAINING WALLS
LANDS OF BAGNAS
SARATOGA, CALIFORNIA

GEOGRID TABLE
WALLS RETAINING FILL

WALL HEIGHT H (ft)	GEOGRID LENGTH L (ft)	NUMBER OF GEOGRIDS	GEOGRID HEIGHTS hg (ft)	GEOGRID TYPE
10	7	7	0'-8, 2'-0, 3'-4, 4'-8, 6'-0, 7'-4, 8'-8	MIRAFI 3XT
8	6	5	1'-4, 2'-8, 3'-4, 4'-8	MIRAFI 3XT
6	4.5	4	0'-8, 2'-0, 2'-8, 4'-0, 5'-4	MIRAFI 3XT
4	4	2	1'-4, 2'-8	MIRAFI 3XT
2'-8	4	1	1'-4	MIRAFI 3XT
2	-	-	-	-

SQUARE FOOT SPECIFICATIONS

Height: 8"
Width (face): 18"
Depth: 12"
Face area: 1 sq. ft.
Weight (without aggregate fill): 87 lbs.
Minimum outside radius: 4' 6"
Setback: 1" (7 degrees) or 1/4" (1.8 degrees)



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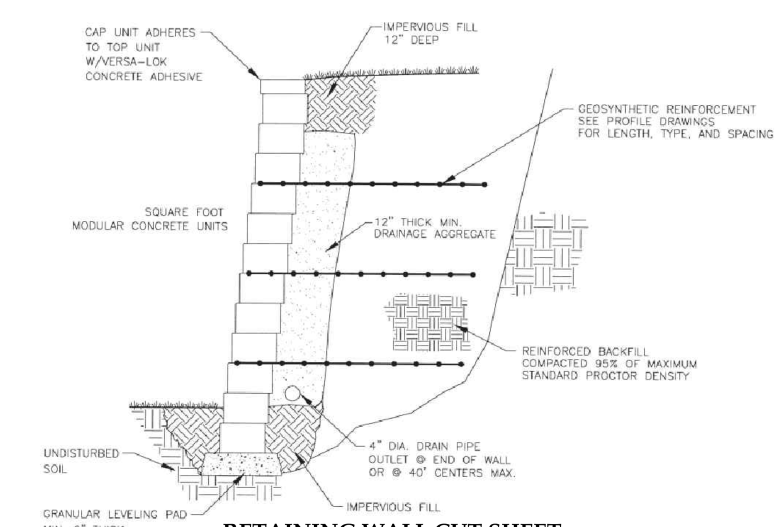
Retaining Wall Systems
Solid Solutions.™



RETAINING WALL CUT SHEET

1 of 92

DESIGN OF VIKING
BLOCK RETAINING WALLS
LANDS OF BAGNAS
SARATOGA, CALIFORNIA

FOR

MR. MANNY BAGNAS
10629 CARVER DRIVE
CUPERTINO, CALIFORNIA 95014

BY

MICHAEL J. MERRILL
CONSULTING ENGINEER
R. C. E. 27544 R. G. E. 955
P. O. BOX 1123
SAN RAMON, CALIFORNIA 94583
(925) 577-3232

NOVEMBER 12, 2011

WALL B—LOCATION (B / C23)

31 of 92

DESIGN OF VIKING BLOCK
RETAINING WALLS
LANDS OF BAGNAS
SARATOGA, CALIFORNIA

GEOGRID TABLE FOR
WALLS RETAINING CUTS

INCLUDING:

APPROXIMATE ROAD STATIONS 11+80 – 12+80, 13+10 – 13+15,

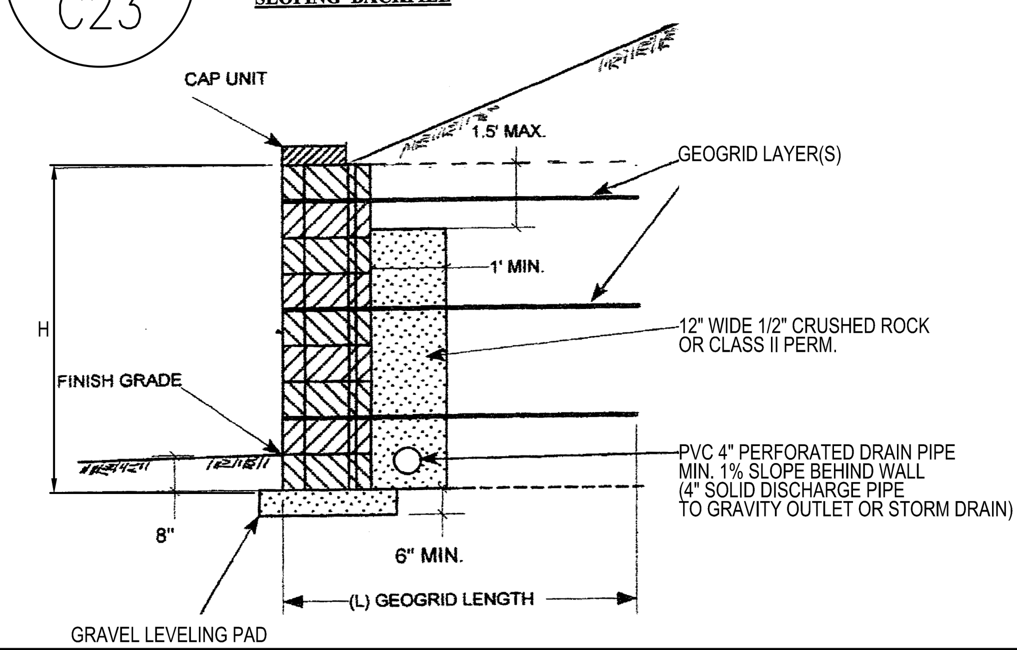
WALL BEHIND LOWER HOUSE,

WALL BEHIND UPPER HOUSE

32 of 92

DESIGN OF VIKING
BLOCK RETAINING WALLS
LANDS OF BAGNAS
SARATOGA, CALIFORNIA

SLOPING BACKFILL



33 of 92

DESIGN OF VIKING BLOCK
RETAINING WALLS
LANDS OF BAGNAS
SARATOGA, CALIFORNIA

GEOGRID TABLE
WALLS RETAINING CUTS

WALL HEIGHT H (ft)	GEOGRID LENGTH L (ft)	NUMBER OF GEOGRIDS	GEOGRID HEIGHTS hg (ft)	GEOGRID TYPE
16	11	3	0'-8, 2'-0, 3'-4,	MIRAFI 5XT
		9	4'-8, 6'-0, 7'-4, 8'-8, 10'-0, 11'-4 12'-8, 14'-0, 15'-4	MIRAFI 3XT
14	11	3	0'-8, 1'-4, 2'-8,	MIRAFI 5XT
		8	4'-0, 5'-4, 6'-8, 8'-0, 9'-4, 10'-8, 12'-0, 13'-4	"
12	9.5	9	0'-8, 2'-0, 3'-4, 4'-8, 6'-0, 7'-4, 8'-8, 10'-0, 11'-4	MIRAFI 3XT
10	8	8	0'-8, 1'-4, 2'-8, 4'-0, 5'-4, 6'-8, 8'-0, 9'-4	MIRAFI 3XT
8	6	6	0'-8, 2'-0, 3'-4, 4'-8, 6'-0, 7'-4	MIRAFI 3XT
6	5	5	0'-8, 2'-0, 2'-8, 4'-0, 5'-4	MIRAFI 3XT
4	4	3	0'-8, 2'-0, 3'-4	MIRAFI 3XT

34 of 92

DESIGN OF VIKING BLOCK
RETAINING WALLS
LANDS OF BAGNAS
SARATOGA, CALIFORNIA

GEOGRID TABLE
WALLS RETAINING CUTS

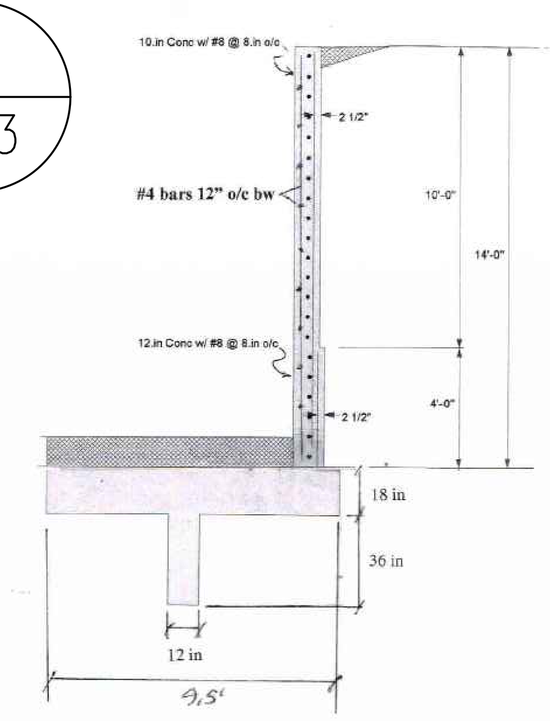
WALL HEIGHT H (ft)	GEOGRID LENGTH L (ft)	NUMBER OF GEOGRIDS	GEOGRID HEIGHTS hg (ft)	GEOGRID TYPE
3'-4	4	2	1'-4, 2'-8	MIRAFI 3XT
2'-8	4	1	1'-4	MIRAFI 3XT
2	4	1	1'-4	MIRAFI 3XT
1'-4	-	-	-	-

D / C23

20 of 25

LANDS OF BAGNAS
SANBORN ROAD
SARATOGA, CALIFORNIA

14 FT. WALL (SHOTCRETE)



2 of 92

DESIGN OF VIKING
BLOCK RETAINING WALLS
LANDS OF BAGNAS
SARATOGA, CALIFORNIA

GENERAL NOTES

1. ALL MODULAR BLOCK TO CONSIST OF VIKING 8 INCH HIGH UNITS AND CAPS.
2. GEOGRID SHALL CONSIST OF MIRAFI 3XT AND MIRAFI 5XT OR APPROVED EQUIVALENT.
3. ALL BACKFILL IN REINFORCED ZONE BEHIND RETAINING WALLS TO BE COMPACTED TO A MINIMUM DEGREE OF COMPACTION OF 90 PERCENT BASED ON TEST METHOD ASTM D-1557-70.
4. ALL SUBSURFACE DRAINAGE PIPE TO CONSIST OF SDR 35 PERFORATED PIPE OR APPROVED EQUAL. DRAINAGE GRAVEL TO CONSIST OF ½ INCH CRUSHED ROCK OR CLASS 2 PERMEABLE MATERIAL. FILTER FABRIC IS NOT RECOMMENDED AROUND DRAINAGE GRAVEL.
5. ALL SUBSURFACE DRAINS TO BE PROVIDED WITH CLEAN OUTS AT REGULAR INTERVALS.
6. THE RETAINING WALL DESIGNS HEREIN ARE BASED ON THE LOADING CONDITIONS ASSUMED HEREIN. ANY OTHER LOADING CONDITIONS COULD INVALIDATE THIS DESIGN.

WALL C—LOCATION (C / C23)

55 of 92

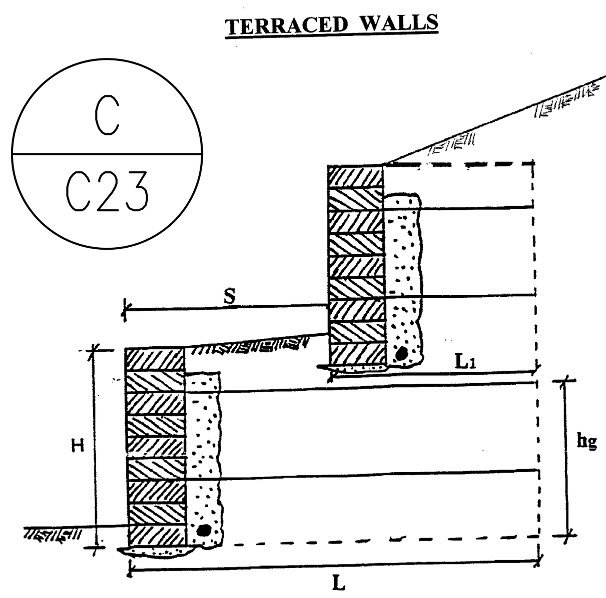
DESIGN OF VIKING BLOCK
RETAINING WALLS
LANDS OF BAGNAS
SARATOGA, CALIFORNIA

DESIGN OF DOUBLE TERRACED
RETAINING WALLS

56 of 92

DESIGN OF VIKING
BLOCK RETAINING WALLS
LANDS OF BAGNAS
SARATOGA, CALIFORNIA

TERRACED WALLS



NOTE:

Determine L1 from Terraced Walls – Upper Wall Geogrid Table

L should be equal to or greater than L shown on attached Geogrid Table for Lower Wall – Terraced Walls

57 of 92

DESIGN OF VIKING BLOCK
RETAINING WALLS
LANDS OF BAGNAS
SARATOGA, CALIFORNIA

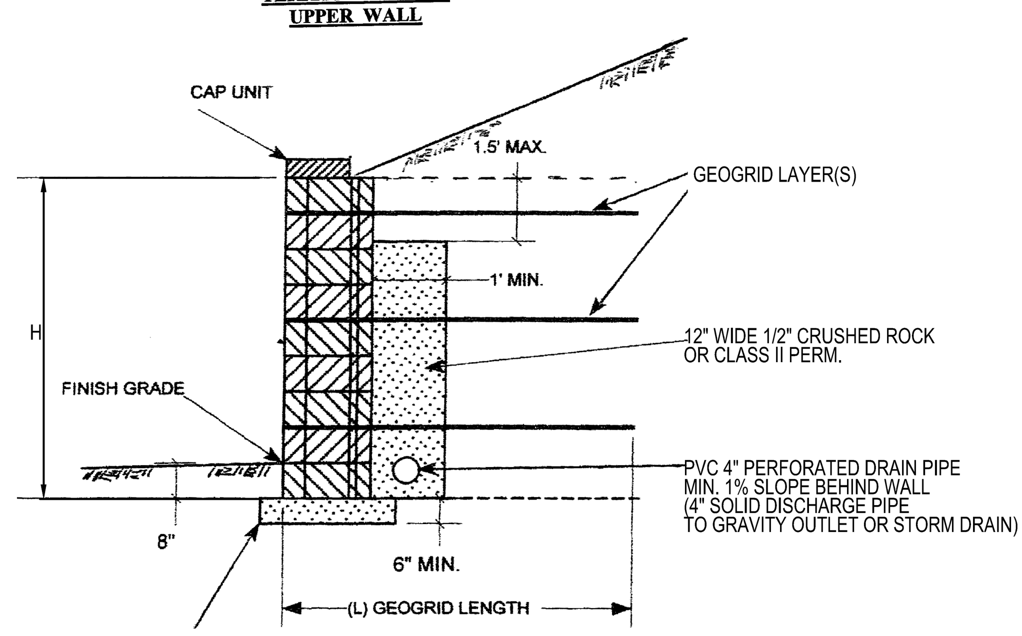
GEOGRID TABLE
DOUBLE TERRACED WALL
LOWER WALL

WALL HEIGHT H (ft)	GEOGRID LENGTH L (ft)	NUMBER OF GEOGRIDS	GEOGRID HEIGHTS hg (ft)	GEOGRID TYPE
10	13	7	0'-8, 2'-8, 3'-4, 4'-8, 6'-0, 7'-4, 8'-8	MIRAFI 3XT
8	13	5	1'-4, 2'-8, 4'-0, 5'-4, 6'-8	MIRAFI 3XT
6	13	4	0'-8, 2'-0, 3'-4, 4'-8	MIRAFI 3XT
4	4	2	1'-4, 2'-8	MIRAFI 3XT
2'-8	4	1	1'-4	MIRAFI 3XT
2'-0	-	-	-	-

64 of 92

DESIGN OF VIKING
BLOCK RETAINING WALLS
LANDS OF BAGNAS
SARATOGA, CALIFORNIA

TERRACED WALLS
UPPER WALL



SEAL:

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INTERNATIONAL, INC.
333 Hegenberger Road, Suite 206
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510.564.4284 (tel)
510.633.2431 (fax)

NO.	DATE	DESCRIPTION	BY
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2	08/21/18	RESUBMITTAL FOR BSA APPLICATION	ES
1	06/11/18	CONFORM LIMIT REVISED TO EASEMENT LINE	ES

REVISION

PROJECT NAME:
LANDS OF BAGNAS
16501 AND 16503 SANBORN RD.
SARATOGA, CA

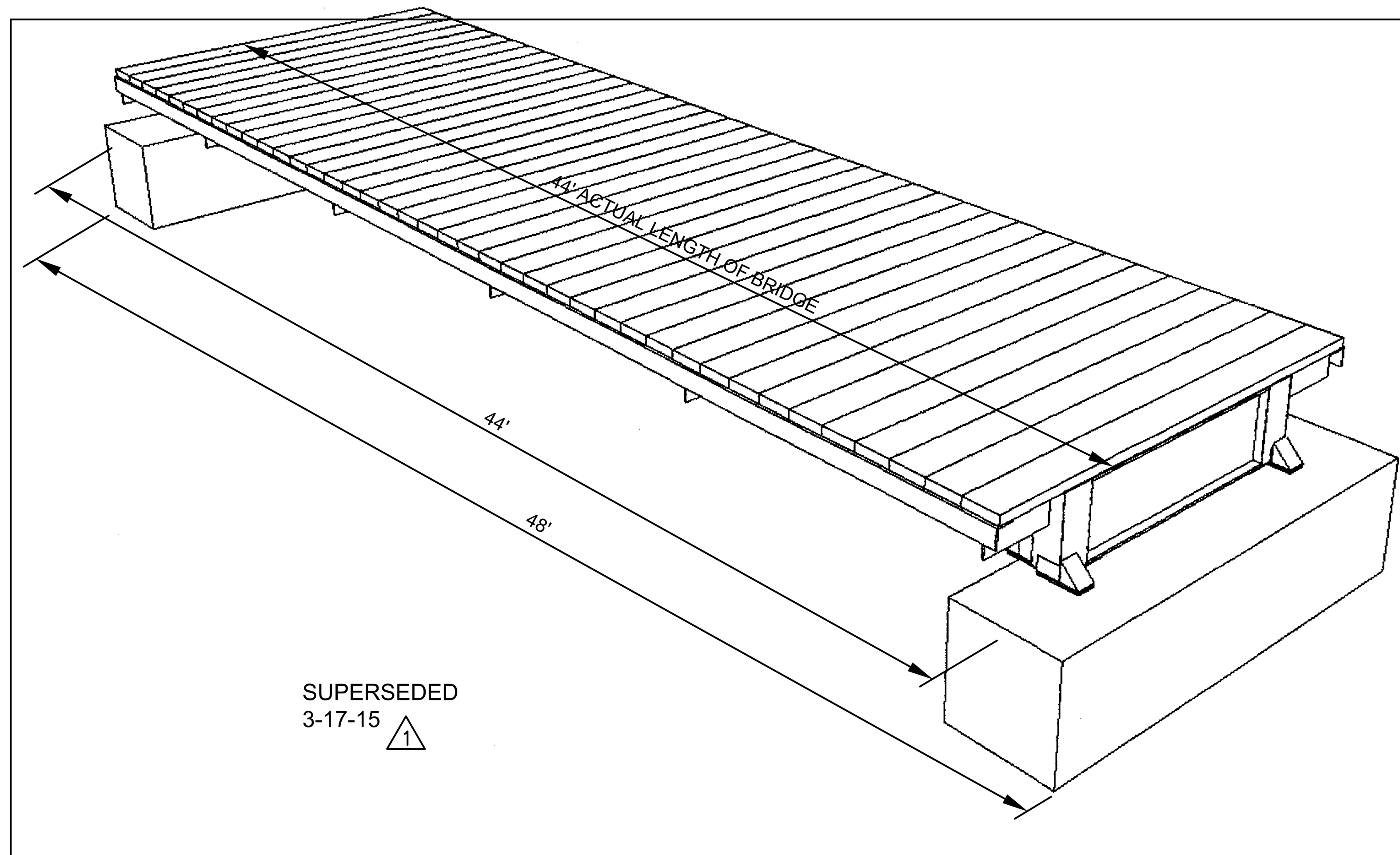
CLIENT NAME & ADDRESS:
MANNY BAGNAS
10692 CULVER ROAD
CUPERTINO, CA 95014

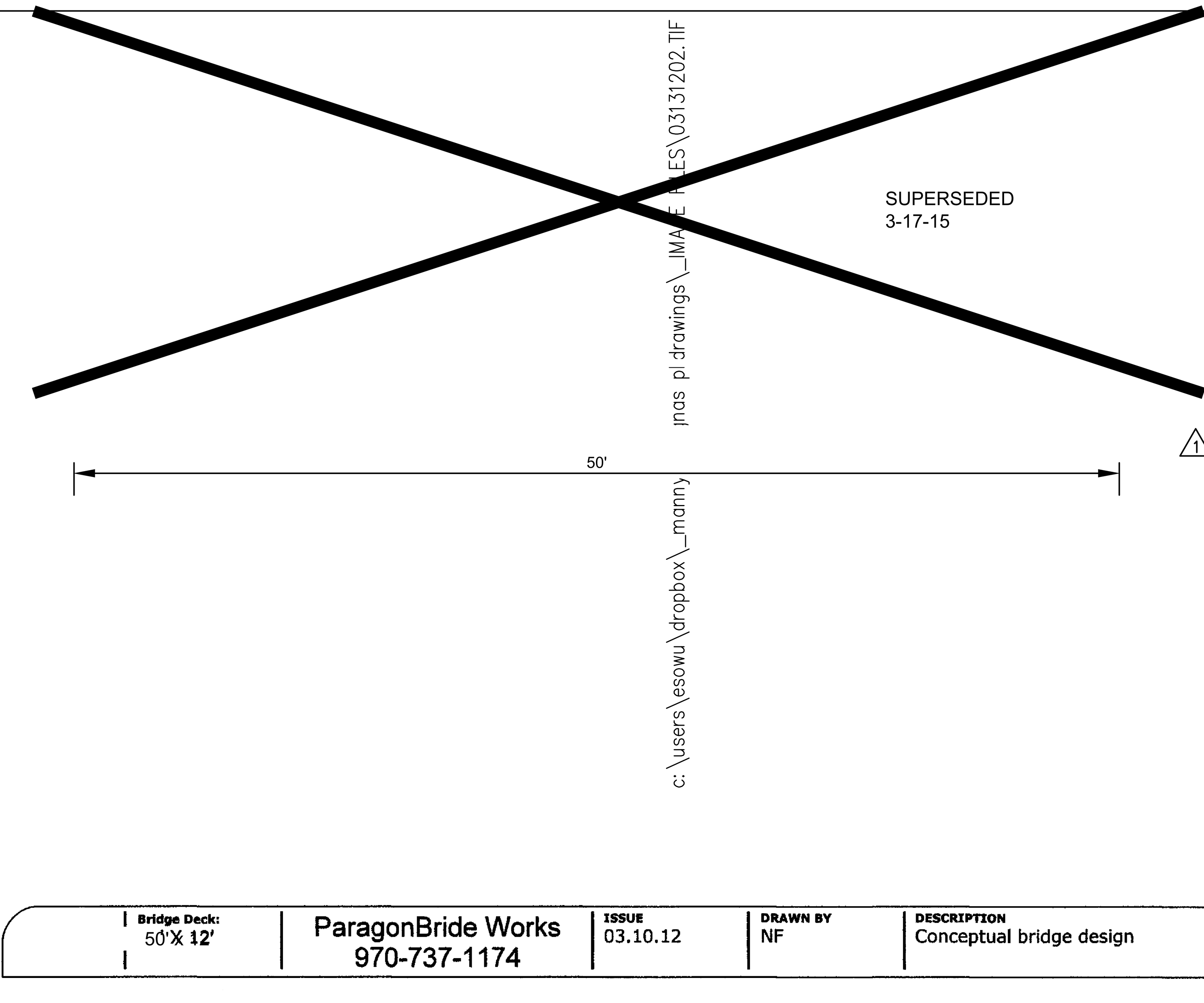
SHEET TITLE
SITE RETAINING WALLS

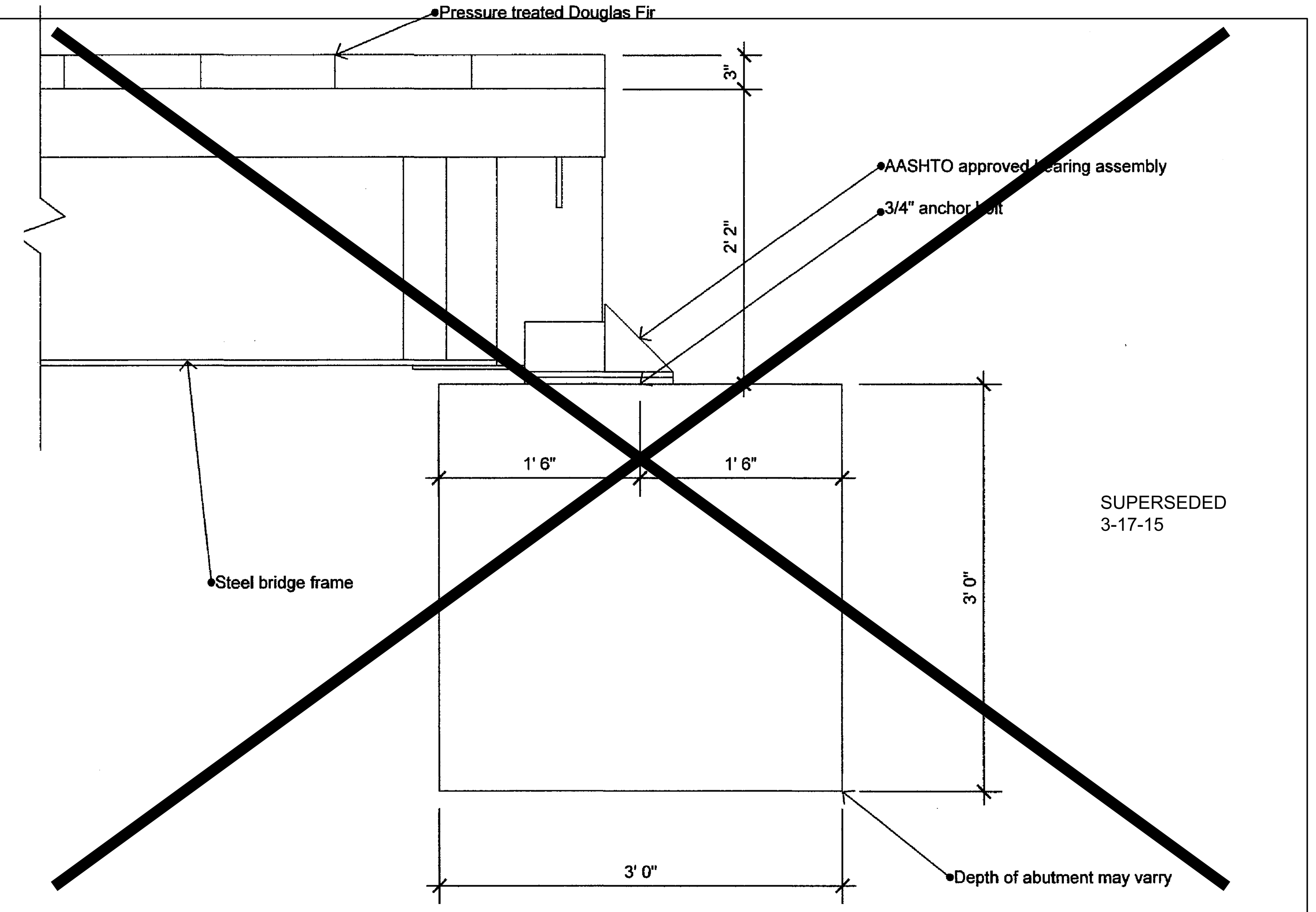
PROJECT NO. S18046
DRAWN BY: DS
CHECKED BY: ES
SCALE: AS SHOWN
DATE: 04/29/2018

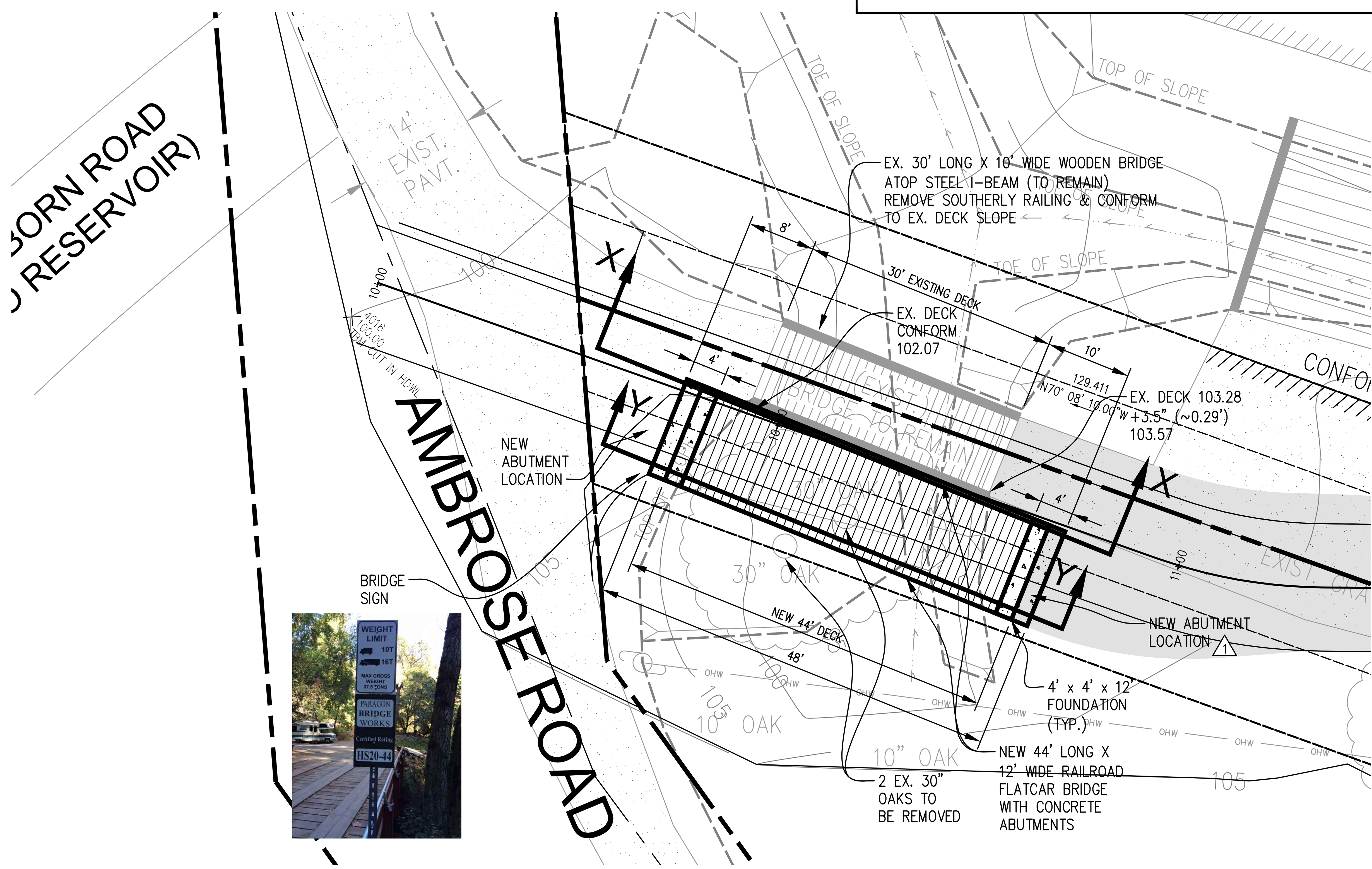
SHEET NO.
C23

C:\Users\esowu\Dropbox_MANNY BAGNAS PLANS\CURRENT-021220\11-245 SITE RETAINING WALLS_021220.dwg

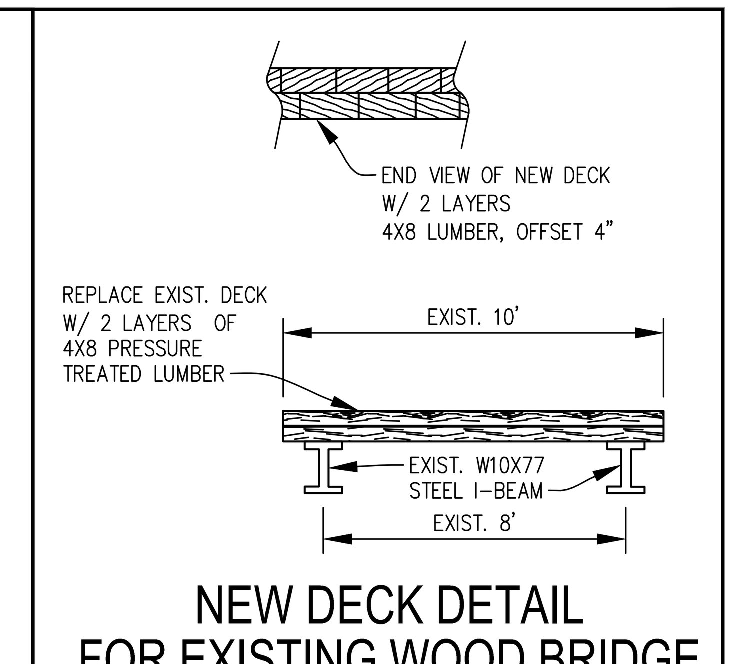




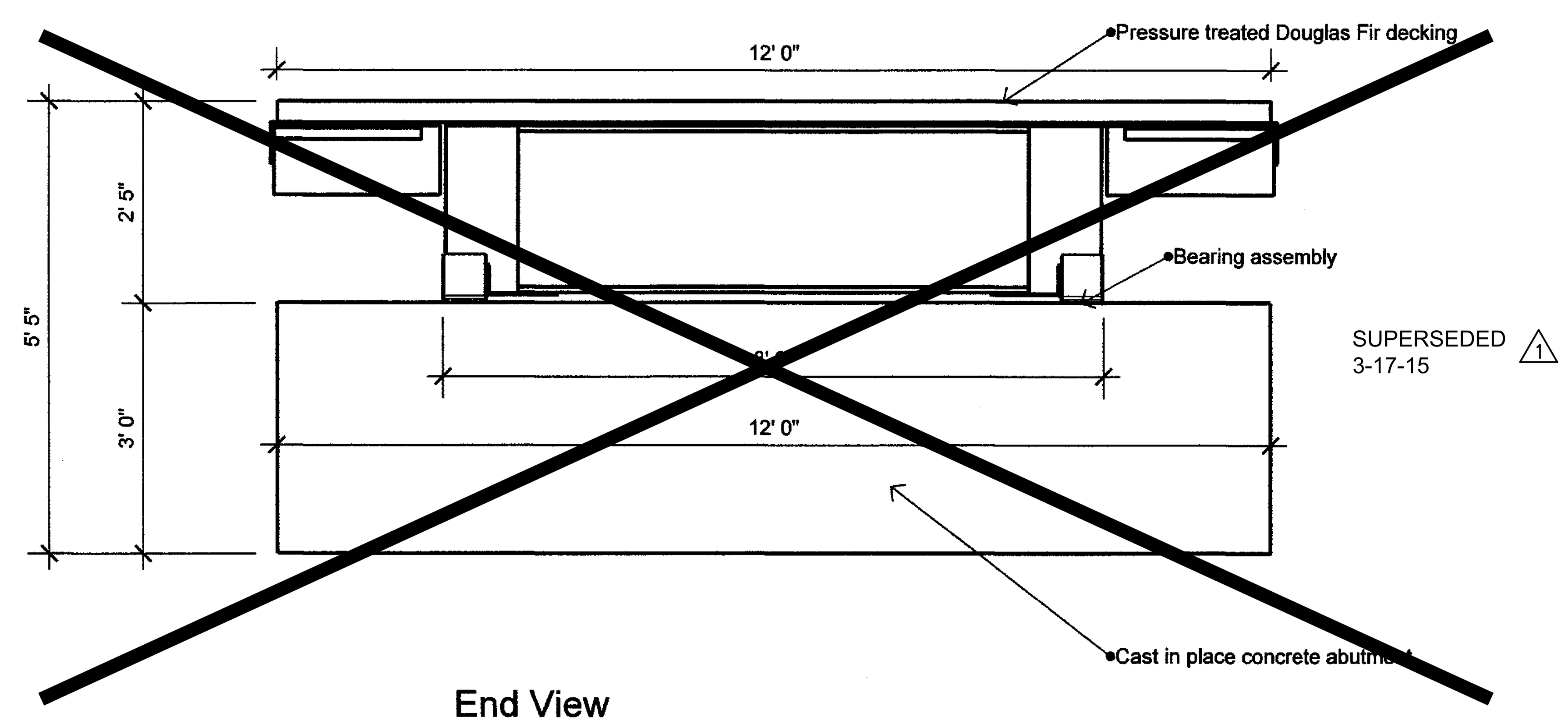




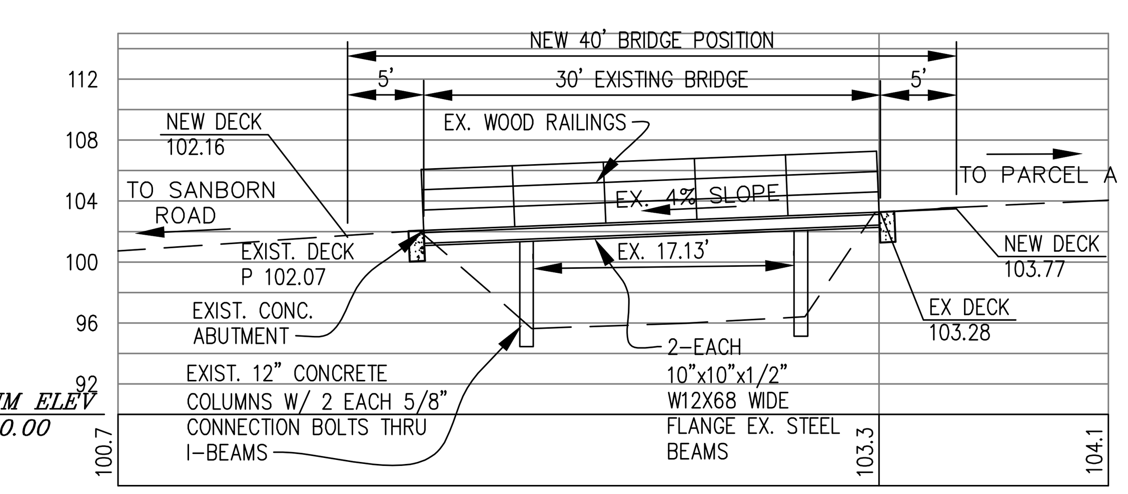
PROPOSED BRIDGE - PLAN VIEW
SCALE 1"=10'



NEW DECK DETAIL
FOR EXISTING WOOD BRIDGE
(10' WIDE)
SCALE 1/4"=1'



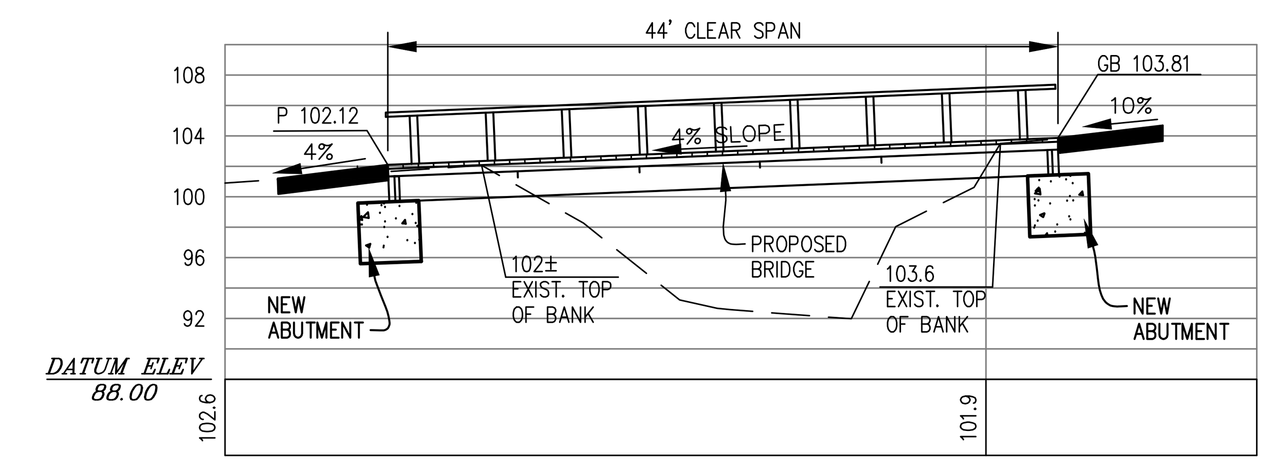
EXISTING WOOD BRIDGE 10' WIDE (TO BE REPLACED IF STRUCTURALLY INADEQUATE FOR FIRETRUCK LOADS)



SECTION X-X
SCALE: 1"=10' VERT. 1"=10' HORIZ.

EXISTING BRIDGE PROFILE

PROPOSED STEEL BRIDGE 12' WIDE



SECTION Y-Y
SCALE: 1"=10' VERT. 1"=10' HORIZ.

PROPOSED BRIDGE PROFILE

SEAL:

ACKLAND INTERNATIONAL, INC.
333 Hegenberger Road, Suite 206
Oakland, CA 94621
510.564.4284 (tel)
510.633.2431 (fax)

NO.	DATE	DESCRIPTION	BY
7	07/06/20	RESUBMITTAL FOR BSA APPLICATION	ES
6	02/06/20	RESUBMITTAL FOR BSA APPLICATION	ES
5	10/24/19	RESUBMITTAL FOR BSA APPLICATION	ES
4	05/14/19	RESUBMITTAL FOR BSA APPLICATION	ES
3	02/09/19	RESUBMITTAL FOR BSA APPLICATION	ES
2	08/21/18	RESUBMITTAL FOR BSA APPLICATION	ES
1	06/11/18	CONFORM LIMIT REVISED TO EASEMENT LINE	ES

REVISION

PROJECT NAME:
LANDS OF BAGNAS
16501 AND 16503 SANBORN RD.
SARATOGA, CA

CLIENT NAME & ADDRESS:
MANNY BAGNAS
10692 CULVER ROAD
CUPERTINO, CA 95014

SHEET TITLE
PROPOSED BRIDGE

PROJECT NO. S18046
DRAWN BY: DS
CHECKED BY: ES
SCALE: AS SHOWN
DATE: 04/29/2018

3-17-15 SHEET NO.
C24

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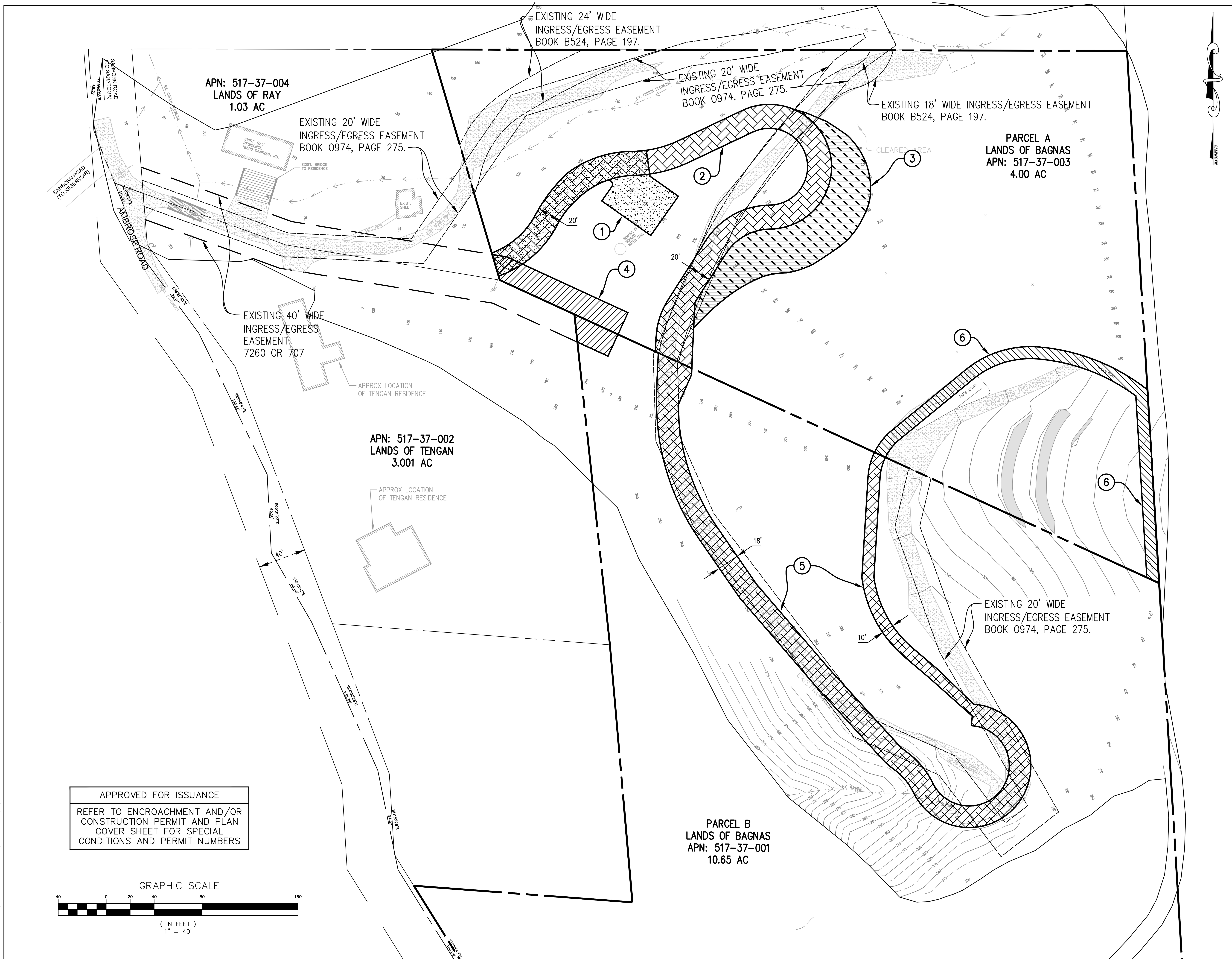

APPROVED FOR ISSUANCE
REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERS

LIST OF PROPOSED EASEMENTS & DEDICATIONS

1. DEDICATION TO COUNTY. (DOC. NO. 22835189) (INCLUDING FIRE DEPARTMENT TURNAROUND)
2. 20' ROAD EASEMENT. (DOC. NO. 22835188)
3. SLOPE EASEMENT. (DOC NO. 22835188)
4. QUITCLAIM EASEMENT. (BAGNAS ONLY)
5. 10' TO 18' WIDE LEACHFIELD ACCESS EASEMENT FROM PARCEL B TO PARCEL A.
6. 10' WIDE INGRESS/EGRESS EASEMENT FOR LEACHFIELD ACCESS FROM PARCEL A TO PARCEL B.

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SEAL: REGISTERED PROFESSIONAL ENGINEER EKUNDAYO AKIN SOWUNMI No. 22573 Exp. 12-31-21 CIVIL STATE OF CALIFORNIA

ACKLAND INTERNATIONAL, INC.
333 Hegenberger Road, Suite 206
Oakland, CA 94621
510.564.4284 (tel)
510.633.2431 (fax)

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REVISION

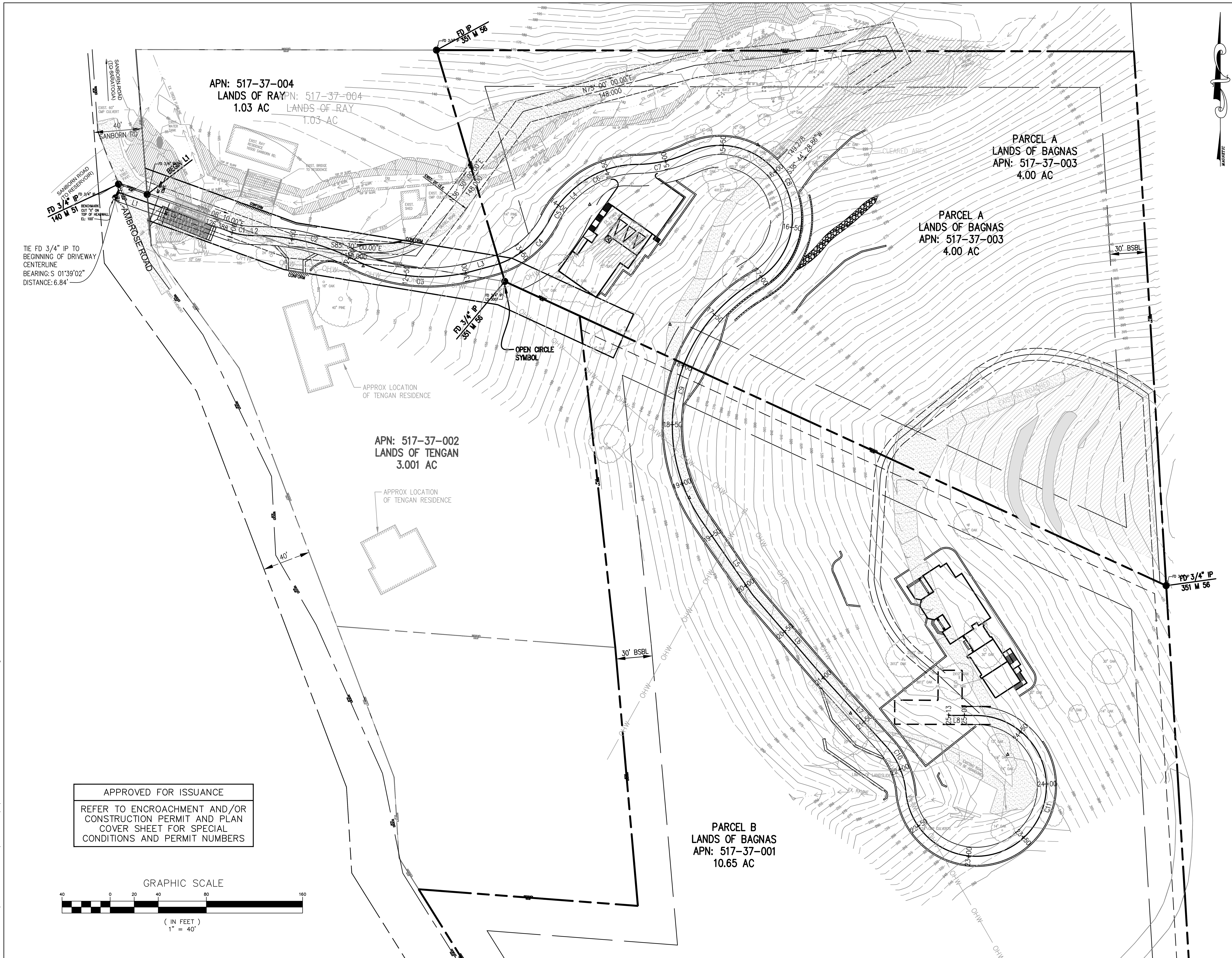
PROJECT NAME: LANDS OF BAGNAS
16501 AND 16503 SANBORN RD.
SARATOGA, CA

CLIENT NAME & ADDRESS: MANNY BAGNAS
10692 CULVER ROAD
CUPERTINO, CA 95014

SHEET TITLE: **EXISTING & PROPOSED EASEMENTS EXHIBIT**

PROJECT NO.	S18046
DRAWN BY:	DS
CHECKED BY:	ES
SCALE:	AS SHOWN
DATE:	04/29/2018

SHEET NO. **C25**



LINE TABLE: ALIGNMENT		
LINE #	LENGTH	DIRECTION
L1	97.32	S70°31'17"E
L2	3.89	S89°24'35"E
L3	16.97	N75°05'54"E
L4	2.50	N45°32'57"E
L5	73.78	S34°38'02"E
L6	95.30	S40°40'41"E
L7	71.52	S42°22'57"E
L8	23.15	N89°45'41"W

CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	19.78	60.00	S79°57'56"E
C2	82.01	179.41	S76°18'51"E
C3	102.58	141.00	S84°03'37"E
C4	63.81	76.00	N51°02'44"E
C5	25.91	80.00	N36°16'16"E
C6	61.39	80.00	N67°31'52"E
C7	45.10	104.00	N77°05'23"E
C8	183.55	60.00	S27°41'42"E
C9	231.10	140.00	S12°39'18"W
C10	43.25	66.50	S23°45'05"E
C11	270.20	58.50	N42°33'33"E

C:\Users\esowu\Dropbox_MANNY BAGNAS PLANS\CURRENT-021220\11-245 HORIZONTAL CONTROL BASELINE_021220.dwg

SEAL:

REGISTERED PROFESSIONAL ENGINEER
EKUNDAYO AKIN SOWUNMI
No. 22573
Exp. 12-31-21
CIVIL
STATE OF CALIFORNIA

ACKLAND INTERNATIONAL, INC.
333 Hegenberger Road, Suite 206
Oakland, CA 94621
510.564.4284 (tel)
510.633.2431 (fax)

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REVISION

PROJECT NAME:
LANDS OF BAGNAS
16501 AND 16503 SANBORN RD.
SARATOGA, CA

CLIENT NAME & ADDRESS:
MANNY BAGNAS
10692 CULVER ROAD
CUPERTINO, CA 95014

SHEET TITLE
HORIZONTAL CONTROL BASELINE

PROJECT NO. S18046
DRAWN BY: DS
CHECKED BY: ES
SCALE: AS SHOWN
DATE: 04/29/2018

SHEET NO.
C26

APPROVED FOR ISSUANCE

REFER TO ENCROACHMENT AND/OR CONSTRUCTION PERMIT AND PLAN COVER SHEET FOR SPECIAL CONDITIONS AND PERMIT NUMBERS

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SEAL:

REGISTERED PROFESSIONAL ENGINEER EKUNDAYO AKIN SOWUNMI No. 22573 Exp. 12-31-21 CIVIL STATE OF CALIFORNIA

ACKLAND INTERNATIONAL, INC.
333 Hegenberger Road, Suite 206
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LANDS OF BAGNAS
16501 AND 16503 SANBORN RD.
SARATOGA, CA

CLIENT NAME & ADDRESS:
MANNY BAGNAS
10692 CULVER ROAD
CUPERTINO, CA 95014

SHEET TITLE
CONSTRUCTION PHASING PLAN
INTERIM GRADING FOR PHASE I CONFORM

PROJECT NO. S18046
DRAWN BY: DS
CHECKED BY: ES
SCALE: AS SHOWN
DATE: 04/29/2018

SHEET NO.
C27