IMPROVEMENT PLANS FOR

ATRIA PARK OF LAFAYETTE - MAIN ROAD RETROFIT

CITY OF LAFAYETTE, CONTRA COSTA COUNTY, STATE OF CALIFORNIA
1545 PLEASANT HILL ROAD, LAFAYETTE, CA 95816

APN: 169-090-002

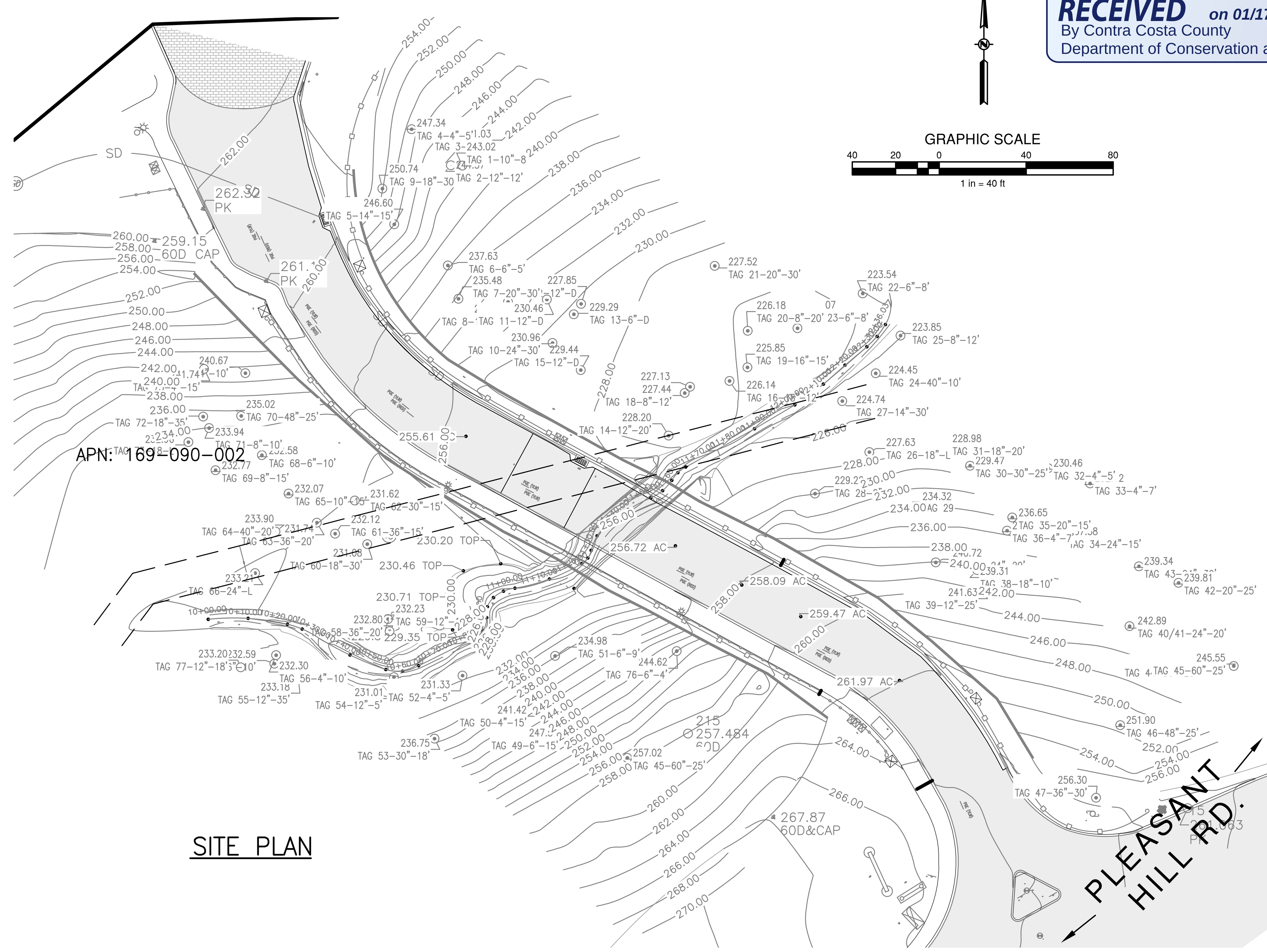
REVISED
RECEIVED on 01/17/2024 CDDP20-03005
By Contra Costa County
Department of Conservation and Development

LEGEND

DESCRIPTION	EXISTING	PROPOSED
LOT LINES		
EASEMENT		
PROPERTY LINE		
CENTERLINE		
CURB & GUTTER		
DITCH		
STORM DRAIN	XX"SD	SD
SANITARY SEWER	XX"SS	SS
WATER	XX"W	W
GAS LINE	G	G
FIRE SERVICE		FS
CULVERT		
SDMH		
AREA DRAIN		
DROP INLET		
DIRECTION OF SURFACE FLOW		
SSMH		
SSCO		
SEWER SERVICE		
BLOW OFF	BO	
FIRE HYDRANT		
WATER VALVE		
WATER METER	WM	
MONUMENT		
UTILITY POLE		
UTILITY POLE WITH LIGHT		
STREET LIGHT		
POST TOP STREET LIGHT		
FENCE	X X	X X
INDEX CONTOUR	25	25
INTERMEDIATE CONTOUR		
HEDGE		
JUNCTION/PULL BOX	PB	PB
SIGN		
GRADE BREAK LINE		GB
FINISH GRADE ELEVATION	+114.55	57.20
TREE & DRIPLINE		

ABBREVIATIONS

AC ASPHALT CONCRETE
AD AREA DRAIN
A.E. APPROVED EQUAL
AP ANGLE POINT
ARV AIR RELEASE VALVE
BK BOOK
BOC BACK OF CURB
BOV BLOW-OFF VALVE
BOW BACK OF WALK
BW BOTTOM OF WALL
CG CURB AND GUTTER
CL CENTERLINE
CMP CORRUGATED METAL PIPE
CO CLEANOUT
CONC CONCRETE
CP CAR POOL
DETL DETAIL
DI DROP INLET
DIP DUCTILE IRON PIPE
DIST DISTRICT
DWG DRAWING
(E) EXISTING OR EAST
EG EXISTING GRADE
ELEV ELEVATION
EP EDGE OF PAVEMENT
ESMT EASEMENT
EX EXISTING
EXIST EXISTING
EV ELECTRIC VEHICLE
FF FINISH FLOOR
FG FINISH GRADE
FS FIRE SERVICE
FDC FIRE DEPARTMENT CONNECTION
FES FLARED END SECTION
FH FIRE HYDRANT
FL FLOW LINE
FP FINISH PAVEMENT
G GAS
GB GRADE BREAK
GR GRATE
HDPE HIGH DENSITY POLYETHYLENE
HP HIGH POINT
INTX INTERSECTION
INV INVERT
IRR IRRIGATION
LF LINEAR FEET
LT LEFT
NFPA NATIONAL FIRE PREVENTION ACT
NO NUMBER
NG NATIVE GROUND
NTS NOT TO SCALE
OG ORIGINAL GROUND
OMP OPEN METAL PIPE
P PAVERS
PIV POST INDICATOR VALVE
(P) PROPOSED
PROP PROPOSED
PCC PORTLAND CEMENT CONCRETE
POC POINT OF CONNECTION
PL PROPERTY LINE
PG PAGE
PUE PUBLIC UTILITY EASEMENT
PVC POLYVINYL CHLORIDE
RCP REINFORCED CONCRETE PIPE
RT RIGHT
ROW RIGHT-OF-WAY
SD STORM DRAIN
SDMH STORM DRAIN MANHOLE
SDWK SIDEWALK
S.O. SIDE OPENING
SS SANITARY SEWER
SSCO SANITARY SEWER CLEAN OUT
SSMH SANITARY SEWER MANHOLE
STD STANDARD
SVC SERVICE
SW SIDEWALK
TBW TOP BACK OF WALK
TC TOP OF CURB
TOE TOP OF BOTTOM SLOPE
TOE WALL TOP OF BOTTOM WALL
TYP TYPICAL
TS TOP OF SLOPE
TW TOP OF WALL
W WATER
WV WATER VALVE
WM WATER METER



SITE PLAN

VICINITY MAP

SHEET INDEX

SURVEY NOTE

1. TOPOGRAPHIC SURVEY FOR THIS PROJECT WAS PREPARED BY:

   GEO-LEGAL
   8850 GREENBACK LANE, STE C
   ORANGEVALE, CA 95662
   P: (916) 871-4789

2. CONSTRUCTION STAKING FOR THIS PROJECT SHALL NOT OCCUR UNTIL AFTER THE PARTY CHIEF FOR THE FIRM PERFORMING THE CONSTRUCTION STAKING HAS NOTIFIED THE ENGINEER OF RECORD, IN WRITING, THAT HE HAS PERFORMED A TOPOGRAPHIC CHECK OF THE SITE AND THAT THE ELEVATION FOR THE REFERENCED BENCH MARK MATCHES THE SITE TOPOGRAPHY. IF IT IS DETERMINED THAT THE SITE TOPOGRAPHY IDENTIFIED ON THE PLANS DOES NOT MATCH THE IDENTIFIED BENCH MARK FOR THE SITE, THEN THE ENGINEER, CONTRACTOR AND CONSTRUCTION STAKER SHALL MEET AND DETERMINE HOW TO RESOLVE THE DISCREPANCY. UNDER NO CIRCUMSTANCES SHALL THE SITE BE STAKED UNTIL THE ENGINEER OF RECORD ISSUES A LETTER TO THE CONTRACTOR, CONSTRUCTION STAKER AND TO THE OWNER THAT THE SITE TOPO AND BENCH MARK MATCH.

BENCH MARK

BASIS OF ELEVATION: CONTRA COSTA COUNTY BENCHMARK #978 – CONTRA COSTA COUNTY BRONZE DISK SET IN THE NORTHEAST CORNER OF BRIDGE ON PLEASANT HILL ROAD OVER PLEASANT HILL OVERPASS.

ELEV: 342.839

GEOTECHNICAL REPORT

1. A GEOTECHNICAL REPORT FOR THE EXISTING ROAD WAS PREPARED BY GEOTECHNICA ON 06/08/18 PROJECT #172370.
2. AN ADDENDUM TO THE REPORT LISTED ABOVE WAS PREPARED ON 04/16/19, 04/24/23 AND 06/14/23

UTILITY REPRESENTATIVES

UTILITY	COMPANY	CONTACT	PHONE
GAS	PG&E		800-743-5000
ELECTRICITY	LAFAYETTE UTILITIES SYSTEM	DARLINE HOBACK	337-291-8972
TELEPHONE	AT&T		800-750-2355
WATER	LAFAYETTE UTILITIES SYSTEM	STEVE DRONET	337-291-5865
SEWER	CENTRAL CONTRA COSTA SANITARY DISTRICT	CHRIS CARPENTER	925-229-7200
DRAINAGE	CONTRA COSTA COUNTY	BRIAN M.BALBAS	925-313-2315
FIRE	CONTRA COSTA COUNTY FIRE PROTECTION DISTRICT	LEWIS BROSCHARD	925-941-3300
CABLE T.V.	COMCAST		800-945-2288

OWNER:

ATRIA PARK OF LAFAYETTE
1545 PLEASANT HILL RD
LAFAYETTE CA 95816
CONTACT:JAYMES DELGADO
☎ 650-226-6515

STRUCTURAL ENGINEER:

MOORADIAN & ASSOCIATES
4578 N.FIRST STREET #140
TUCSON AZ 85718
520-408-8117

EARTHWORK

SITE EARTHWORK CALCULATED PER FOLLOWING CRITERIA AND NOT ADJUSTED FOR COMPACTION OR EXPANSION.

FILL: 0.00 CY

CUT: 450 CY (CULVERT ONLY)

APPROVED BY: EXPIRES IN 1 YEAR	APPROVED BY: EXPIRES IN 1 YEAR
CONTRA COSTA COUNTY FIRE DISTRICT DATE	CONTRA COSTA COUNTY – COUNTY ENGINEER DATE

CONTRA COSTA COUNTY MUNICIPAL SERVICES	
PROJECT NAME: 1545 PLEASANT HILL ROAD	
APN'S: 169-090-002	
COUNTY FILE: #TP19-0057 & #DP88-3007	
APPROVED:	
ORDER No. N/A	DRAINAGE FEE: N/A
CHECKED BY:	DRAINAGE APPROVAL:

WDID: N/A			
CONSTRUCTION START DATE:	N/A		
FINAL STABILIZATION DATE:	N/A		
AREA OF DISTURBANCE (AC.):	N/A		
VOL. OF CUT (CY):	N/A	VOL. OF FILL (CY):	N/A
POST-CONST. STORMWATER BMP'S REQ? (Y/N):			

TRAFFIC NOTE:

NOTE: THE CONTRACTOR SHALL PREPARE, SUBMIT & OBTAIN APPROVAL ON A TRAFFIC/TRANSPORTATION MANAGEMENT PLAN. THE PLAN SHALL DESCRIBE ANTICIPATED IMPACTS TO TRAFFIC ON PLEASANT HILL RD. AND POTENTIAL CLOSURE/DETOUR FOR THE MAIN ENTRY ROAD.

CALL BEFORE YOU DIG
CA: 800-227-2600

REVISIONS:

REGISTERED PROFESSIONAL ENGINEER BOBBIE F. BROWN 48856 Exp. 09-30-2024 CIVIL STATE OF CALIFORNIA

THE OLYMPUS GROUP
ENGINEERING, PLANNING & SURVEYING
8850 GREENBACK LANE, SUITE C ORANGEVALE, CA 95662-4092
PHONE 916-286-6228 WWW.OLYMPUSGROUPNET

DRAWN BY: IANA T.
DESIGNED BY: B.FRANCIS
CHECKED BY: B.F.BROWN
DATE: JANUARY, 2024
SCALE: AS SHOWN
PROJECT NO: 23-001

ATRIA LAFAYETTE
APN 169-090-002
TITLE SHEET
CONTRA COSTA COUNTY, CALIFORNIA, CALIFORNIA

C1

GENERAL NOTES:

1. FIELD CONFLICTS: THESE PLANS SHOW EXISTING FEATURES INCLUDING BUT NOT LIMITED TO TREES, UTILITIES, AND STRUCTURES THAT MAY BE AFFECTED BY THE CONSTRUCTION OR PLACEMENT OF THE PROPOSED ENGINEERED IMPROVEMENTS. THE CONTRACTOR WILL IMMEDIATELY NOTIFY THE ENGINEER IF THERE ARE ANY EXISTING FEATURES, WHETHER SHOWN OR NOT SHOWN ON THESE PLANS, THAT COULD IN ANY WAY BE IN POTENTIAL CONFLICT WITH THE DESIGN OF THESE PLANS. ALL WORK WITHIN THE VICINITY OF A POTENTIAL CONFLICT SHALL CEASE UNTIL AN ADEQUATE AND APPROPRIATE SOLUTION IS DETERMINED BY THE ENGINEER AND APPROVED BY THE PUBLIC WORKS DEPARTMENT.
2. SHOULD IT APPEAR THAT THE WORK TO BE DONE, OR ANY MATTER RELATIVE THERETO, IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT ______________________ (NAME OF PROJECT ENGINEER), FOR SUCH FURTHER EXPLANATIONS AS MAY BE NECESSARY.
3. BASIS OF ELEVATION DATUM: CONTRA COSTA COUNTY BENCHMARK #978– CONTRA COSTA COUNTY BRONZE DISK SET IN THE NORTHEAST CORNER OF BRIDGE ON PLEASANT HILL ROAD OVER PLEASANT HILL ROAD OVER PLEASANT HILL OVERPASS.

   ELEV: 342.839
4. ALL STREET IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF TITLE 9 OF THE CURRENT COUNTY ORDINANCE CODE, COUNTY STANDARD SPECIFICATIONS AND STANDARD PLANS. ALL PEDESTRIAN IMPROVEMENTS SHALL CONFORM WITH THE REQUIREMENTS OF TITLE 24 OF THE CALIFORNIA CODE OF REGULATIONS AND THE AMERICANS WITH DISABILITIES ACT. THE IMPROVEMENTS ARE SUBJECT TO THE INSPECTION AND APPROVAL OF THE PUBLIC WORKS DEPARTMENT. CONTACT THE PUBLIC WORKS DESIGN / CONSTRUCTION DIVISION AT 313–2320, AT LEAST 48 HOURS PRIOR TO THE START OF ANY WORK, TO ARRANGE FOR INSPECTION. ANY WORK PERFORMED WITHOUT PROVIDING THIS ADVANCED NOTICE WILL BE REJECTED AND THE DEVELOPER/CONTRACTOR MAY BE REQUIRED TO REMOVE THE IMPROVEMENTS AND MAY BE SUBJECT TO PAYMENT OF FINES AS DETERMINED BY THE PUBLIC WORKS DIRECTOR.
5. QUALITY CONTROL PLAN: THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING THE QUALITY OF MATERIAL ENTERING THE WORK AND THE WORK PERFORMED, AND SHALL PERFORM TESTING TO ENSURE CONTROL. PRIOR TO START OF WORK THE CONTRACTOR SHALL SUBMIT A QUALITY CONTROL PLAN THAT MUST DESCRIBE THE METHODS AND FREQUENCY OF TESTING, IMPLEMENTATION OF CORRECTIVE ACTIONS AS NECESSARY, AND REPORTING OF TEST RESULTS, SPECIFIC TO EACH MATERIAL TO BE USED.
6. PLAN REVISIONS: ALL REVISIONS TO THIS PLAN MUST BE REVIEWED BY THE PUBLIC WORKS DEPARTMENT PRIOR TO CONSTRUCTION AND SHALL BE ACCURATELY SHOWN ON REVISED PLANS, STAMPED AND DISTRIBUTED BY THE ENGINEERING SERVICES DIVISION, PRIOR TO ACCEPTANCE OF THE WORK AS COMPLETE.
7. 7. EXCAVATION: THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT AT 811OR (800) 227–2600 TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION. THE USA AUTHORIZATION NUMBER SHALL BE KEPT AT THE JOB SITE.
8. ALL UTILITY DISTRIBUTION SERVICES SHALL BE PLACED UNDERGROUND.
9. UTILITY CLEARANCE: PRIOR TO PLACING CURB, SIDEWALK, ASPHALT CONCRETE, SUBBASE OR BASE MATERIAL, ALL UNDERGROUND UTILITIES WITHIN THE RIGHT OF WAY SHALL BE INSTALLED, BACKFILL COMPLETED AND THE PUBLIC WORKS DEPARTMENT'S CONSTRUCTION DIVISION NOTIFIED, BY EACH OF THE UTILITY COMPANIES HAVING FACILITIES WITHIN THE WORK AREA, THAT THE UTILITY INSTALLATION HAS SATISFACTORILY PASSED ACCEPTANCE TESTS.
10. ALL MANHOLES OR INLETS OVER 4 FEET IN DEPTH SHALL BE PROVIDED WITH LADDER STEPS. LADDER STEPS SHALL BE INTEGRALLY CAST INTO THE WALLS OF THE MANHOLE OR INLET WHETHER PRECAST OR FIELD CAST IN ACCORDANCE WITH COUNTY SPECIFICATIONS. LADDER STEPS SHALL BE STEEL REINFORCED COPOLYMER POLYPROPYLENE PLASTIC OR EQUIVALENT.
11. PAVEMENT WIDENING: WHEN WIDENING THE PAVEMENT ON AN EXISTING ROAD, THE EXISTING PAVEMENT SHALL BE CUT TO A NEAT LINE AND REMOVED TO AN EXISTING ADEQUATE STRUCTURAL SECTION. AN EXPLORATORY TRENCH, OR POTHOLING, MAY BE REQUIRED TO DETERMINE THE LIMITS OF PAVEMENT REMOVAL.
12. RETAINING WALLS: RETAINING WALLS WITHIN PUBLIC ROAD RIGHTS OF WAY WILL BE INSPECTED BY THE PUBLIC WORKS DEPARTMENT.

A. A BUILDING PERMIT WILL BE REQUIRED FOR RETAINING WALLS, OUTSIDE PUBLIC ROAD RIGHTS OF WAY, THAT ARE 4 FEET OR HIGHER, OR THAT ARE 3 FEET OR HIGHER WITH SURCHARGE. PRIOR TO ACCEPTANCE OF THE IMPROVEMENTS AS COMPLETE, VERIFICATION THAT THE BUILDING INSPECTION DEPARTMENT HAS SIGNED OFF ON THE PERMIT SHALL BE PROVIDED TO THE CONSTRUCTION INSPECTOR.

B. RETAINING WALLS UNDER 4 FEET HIGH (3 FEET HIGH WITH SURCHARGE) SHOWN ON THE IMPROVEMENT PLAN TO BE OUTSIDE OF PUBLIC ROAD RIGHT OF WAY, WILL BE INSPECTED BY (NAME OF ENGINEERING FIRM). A LETTER STATING THAT ALL WALLS WERE CONSTRUCTED IN ACCORDANCE WITH THE STRUCTURAL AND/OR GEOTECHNICAL ENGINEERS' RECOMMENDATIONS MUST BE SUBMITTED TO THE PUBLIC WORKS DEPARTMENT, PRIOR TO ACCEPTANCE OF IMPROVEMENTS AS COMPLETE.

13. REPRODUCIBLE 610MM X 920MM (24" X 36") MYLAR "AS BUILT" RECORD DRAWINGS ARE REQUIRED FOR ENGINEERED STRUCTURES WITHIN PUBLIC RIGHTS OF WAY OR EASEMENTS. STRUCTURES INCLUDE: BRIDGES, RETAINING WALLS, TIE BACKS, SUBDRAINS, ETC.
14. TREES: NO TREES SHALL BE REMOVED UNLESS THEY ARE SHOWN AND NOTED TO BE REMOVED ON THE IMPROVEMENT PLANS. IF ANY TREES ARE TO BE REMOVED, THE IMPROVEMENT PLANS MUST BE REVIEWED AND ACKNOWLEDGED BY THE COMMUNITY DEVELOPMENT DEPARTMENT. ALL TREES CONFLICTING WITH GRADING, UTILITIES, OR OTHER IMPROVEMENTS, OR OVERHANGING THE SIDEWALK OR PAVEMENT SO AS TO FORM A NUISANCE OR HAZARD, SHALL BE TRIMMED, PROPERLY TREATED AND SEALED. A TREE PERMIT MAY BE NECESSARY AND CAN BE OBTAINED FROM THE COMMUNITY DEVELOPMENT DEPARTMENT.
15. GRADES LESS THAN 1 PERCENT: WATER TESTING IS REQUIRED FOR ALL CURB GRADES LESS THAN ONE PERCENT.
16. ALL ASPHALT CONCRETE PAVING OF PUBLIC ROADS IS SUBJECT TO TESTS REQUIRED BY AMENDED SECTION 39–HOT MIX ASPHALT OF THE CONTRA COSTA COUNTY STANDARD SPECIFICATIONS DATED OCTOBER 16, 2014. BASED ON THESE TESTS, ADDITIONAL PAVEMENT TREATMENT MAY BE NECESSARY.
17. EXISTING CURB AND SIDEWALK WITHIN THE PROJECT LIMITS THAT ARE DAMAGED OR DISPLACED, EVEN THOUGH NOT PROPOSED TO BE REMOVED, SHALL BE REPAIRED OR REPLACED, EVEN IF DAMAGE OR DISPLACEMENT OCCURRED PRIOR TO ANY WORK PERFORMED BY THE CONTRACTOR.
18. EROSION CONTROL: IF PAVING AND STORM DRAIN IMPROVEMENTS ARE NOT COMPLETED BY OCTOBER 1ST, TEMPORARY SILT AND DRAINAGE CONTROL FACILITIES SHALL BE INSTALLED TO CONTROL AND CONTAIN EROSION–CAUSED SILT DEPOSITS AND TO PROVIDE FOR THE SAFE DISCHARGE OF STORM WATERS INTO EXISTING STORM WATER FACILITIES. DESIGN OF THESE FACILITIES MUST BE APPROVED BY THE BUILDING INSPECTION DEPARTMENT.
19. PAVEMENT STRUCTURAL SECTION: THE THICKNESS OF SUB–BASE, BASE AND SURFACING WILL BE DETERMINED BY THE COUNTY PUBLIC WORKS DEPARTMENT BASED ON THE TRAFFIC INDEX AND SOILS TESTS FOR "R" VALUE.
20. PAVEMENT STRIPING: ALL TRAFFIC STRIPING AND MARKINGS SHALL BE THERMOPLASTIC UNLESS THESE PLANS DESIGNATE THE USE OF TRAFFIC PAINT.
21. ALL STRIPING ON MAJOR ROADS SHALL BE CAT TRACKED PRIOR TO FINAL INSTALLATION. FINAL INSTALLATION OF STRIPING WILL BE ALLOWED ONLY AFTER APPROVAL OF THE STRIPING LAYOUT BY THE CONSTRUCTION INSPECTOR.
22. ALL SUBDIVISION STREETS THAT ARE STUBBED OUT FOR FUTURE USE SHALL HAVE A SIGN POSTED AT THE END OF THE DEAD END STREET THAT READS: "THIS STREET PLANNED TO BE EXTENDED." THE SIGN SHALL BE REFLECTORIZED WITH BLACK 2–INCH CAPITAL SERIES "E" LETTERS ON A WHITE BACKGROUND, MEASURING 18 INCHES HIGH BY 36 INCHES WIDE. INSTALL WITH W31 ("END") SIGN BEHIND STANDARD END OF STREET BARRICADE. SEE COUNTY STANDARD PLAN CA 30.
23. THE CONTRACTOR SHALL COMPLY WITH ALL RULES, REGULATIONS AND PROCEDURES OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) FOR MUNICIPAL CONSTRUCTION AND INDUSTRIAL ACTIVITIES AS PROMULGATED BY THE CALIFORNIA STATE WATER RESOURCE CONTROL BOARD OR ANY OF ITS REGIONAL WATER QUALITY CONTROL BOARDS.
24. THE CONTRACTOR IS RESPONSIBLE FOR PRESERVATION AND/OR PERPETUATION OF ALL EXISTING MONUMENTS (THAT CONTROL SUBDIVISIONS, TRACTS, STREETS OR HIGHWAYS, OR PROVIDE SURVEY CONTROL) WHICH WILL BE DISTURBED OR REMOVED DUE TO CONTRACTOR'S WORK. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 10 WORKING DAYS NOTICE, TO PROJECT ENGINEER/SURVEYOR, PRIOR TO DISTURBANCE OR REMOVAL OF EXISTING MONUMENTS. PROJECT ENGINEER/SURVEYOR SHALL COORDINATE WITH THE CONTRACTOR TO RESET MONUMENTS OR PROVIDE PERMANENT WITNESS MONUMENTS AND FILE THE REQUIRED DOCUMENTATION WITH THE COUNTY SURVEYOR, PER BUSINESS AND PROFESSIONS CODE SECTION 8771.
25. ANY MATERIAL IMPORTED FOR THE CONSTRUCTION OF EMBANKMENTS OR AS BACKFILL FOR STRUCTURES, CULVERTS AND OTHER FACILITIES SHALL MEET THE FOLLOWING REQUIREMENTS:

PH*	>5.5 (>7.3**)
WATER SOLUBLE SULFATE***	<0.2%
RESISTIVITY (R)*	>3000 OHM/CM**

* PER CALIFORNIA TEST 532 & 643. ** FOR BACKFILL AROUND METAL PIPE/CONDUIT.

*** REPORTED AS SO4

26. ENCROACHMENT PERMIT: THE CONTRACTOR IS REQUIRED TO OBTAIN AN ENCROACHMENT PERMIT FOR ALL WORK WITHIN EXISTING COUNTY ROAD RIGHTS OF WAY. APPLICATIONS FOR ENCROACHMENT PERMIT, SUBMITTED MORE THAN 120 DAYS PAST THE PUBLIC WORKS "REVIEWED" DATE STAMP, MAY REQUIRE UP TO FOUR WEEKS TO PROCESS. FOR FURTHER PERMIT INFORMATION, CONTACT THE APPLICATION AND PERMIT CENTER AT (925) 674–7744.
27. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE COUNTY AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.

EROSION AND SEDIMENT CONTROL NOTES:

1. THE CONTRACTOR SHALL FOLLOW CONTRA COSTA COUNTY GUIDELINES FOR GRADING AND EROSION AND SEDIMENT CONTROL" FOR THE MEASURES SHOWN OR STATED ON THESE PLANS.
2. CONTRACTOR MUST ENSURE THAT THE CONSTRUCTION SITE IS PREPARED PRIOR TO THE ONSET OF ANY STORM. CONTRACTOR SHALL HAVE ALL EROSION AND SEDIMENT CONTROL MEASURES IN PLACE FOR THE WINTER MONTHS PRIOR TO OCTOBER 1.
3. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED. CHANGES TO THIS EROSION AND SEDIMENT CONTROL PLAN SHALL BE MADE TO MEET FIELD CONDITIONS ONLY WITH THE APPROVAL OF OR AT THE DIRECTION OF A REPRESENTATIVE OF THE DEPARTMENT OF UTILITIES.
4. THIS PLAN MAY NOT COVER ALL THE SITUATIONS THAT ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. VARIATIONS MAY BE MADE TO THE PLAN IN THE FIELD SUBJECT TO THE APPROVAL OF OR AT THE DIRECTION OF A REPRESENTATIVE OF THE DEPARTMENT OF UTILITIES.
5. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED BEFORE AND AFTER ALL STORMS TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
6. CONTRACTOR SHALL MAINTAIN A LOG AT THE SITE OF ALL INSPECTIONS OR MAINTENANCE OF BMPS, AS WELL, ANY CORRECTIVE CHANGES TO THE BMPS OR EROSION AND SEDIMENT CONTROL PLAN.
7. IN AREAS WHERE SOIL IS EXPOSED, PROMPT REPLANTING WITH NATIVE COMPATIBLE, DROUGHT–RESITANT VEGETATION SHALL BE PERFORMED. NO AREAS WILL BE LEFT EXPOSED OVER THE WINTER SEASON.
8. THE CONTRACTOR SHALL INSTALL THE STABILIZED CONSTRUCTION ENTRANCE PRIOR TO COMMENCEMENT OF GRADING. LOCATION OF THE ENTRANCE MAY BE ADJUSTED BY THE CONTRACTOR TO FACILITATE GRADING OPERATIONS. ALL CONSTRUCTION TRAFFIC ENTERING THE PAVED ROAD MUST CROSS THE STABILIZED CONSTRUCTION ENTRANCE. THE STABILIZED CONSTRUCTION ENTRANCE SHALL REMAIN IN PLACE UNTIL THE ROAD BASE ROCK COURSE IS COMPLETED.
9. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE SWEPT AT THE END OF EACH WORKING DAY OR AS NECESSARY.
10. CONTRACTOR SHALL PLACE GRAVEL BAGS AROUND ALL NEW DRAINAGE STRUCTURE OPENINGS IMMEDIATELY AFTER THE STRUCTURE OPENING IS CONSTRUCTED. THESE GRAVEL BAGS SHALL BE MAINTAINED AND REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED.
11. CONTRACTOR SHALL IMPLEMENT HOUSEKEEPING PRACTICES AS FOLLOWS:
    - A. SOLID WASTE MANAGEMENT: PROVIDE DESIGNATED WASTE COLLECTION AREAS AND CONTAINERS. ARRANGE FOR REGULAR REMOVAL AND DISPOSAL. CLEAR SITE OF TRASH INCLUDING ORGANIC DEBRIS, PACKAGING MATERIALS, SCRAP OR SURPLUS BUILDING MATERIALS AND DOMESTIC WASTE DAILY.
    - B. MATERIAL DELIVERY AND STORAGE: PROVIDE A DESIGNATED MATERIAL STORAGE AREA WITH SECONDARY CONTAINMENT SUCH AS BERMING. STORE MATERIAL ON PALLETS AND PROVIDE COVERING FOR SOLUBLE MATERIALS. RELOCATE STORAGE AREA INTO BUILDING SHELL WHEN POSSIBLE. INSPECT AREA WEEKLY.
    - C. CONCRETE WASTE: PROVIDE A DESIGNATED AREA FOR A TEMPORARY PIT TO BE USED FOR CONCRETE TRUCK WASH–OUT. DISPOSE OF HARDENED CONCRETE OFFSITE. AT NO TIME SHALL A CONCRETE TRUCK DUMP ITS WASTE AND CLEAN ITS TRUCK INTO THE CITY STORM DRAINS VIA CURB AND GUTTER. INSPECT DAILY TO CONTROL RUNOFF, AND WEEKLY FOR REMOVAL OF HARDENED CONCRETE.
    - D. PAINT AND PAINTING SUPPLIES: PROVIDE INSTRUCTION TO EMPLOYEES AND SUBCONTRACTORS REGARDING REDUCTION OF POLLUTANTS INCLUDING MATERIAL STORAGE, USE, AND CLEAN UP. INSPECT SITE WEEKLY FOR EVIDENCE OF IMPROPER DISPOSAL.
    - E. VEHICLE FUELING, MAINTENANCE AND CLEANING: PROVIDE A DESIGNATED FUELING AREA WITH SECONDARY CONTAINMENT SUCH AS BERMING. DO NOT ALLOW MOBILE FUELING OF EQUIPMENT. PROVIDE EQUIPMENT WITH DRIP PANS. RESTRICT ONSITE MAINTENANCE AND CLEANING OF EQUIPMENT TO A MINIMUM. INSPECT AREA WEEKLY.
    - F. HAZARDOUS WASTE MANAGEMENT: PREVENT THE DISCHARGE OF POLLUTANTS FROM HAZARDOUS WASTES TO THE DRAINAGE SYSTEM THROUGH PROPER MATERIAL USE, WASTE DISPOSAL AND TRAINING OF EMPLOYEES. HAZARDOUS WASTE PRODUCTS COMMONLY FOUND ON–SITE INCLUDE BUT ARE NOT LIMITED TO PAINTS & SOLVENTS, PETROLEUM PRODUCTS, FERTILIZERS, HERBICIDES & PESTICIDES, SOIL STABILIZATION PRODUCTS, ASPHALT PRODUCTS AND CONCRETE CURING PRODUCTS.
12. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL REPAIR/RESTORE THE CHANNEL BOTTOM AND SIDE BANKS TO PRE–PROJECT CONDITION. ANY EXPOSED SOILS SHALL BE HYDROSEEDED WITH GRASSES NATIVE TO THE AREA.

PRECONSTRUCTION & STAKING NOTES:

1. PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL ARRANGE A PRE–CONSTRUCTION MEETING AT THE PROJECT SITE WITH THE CIVIL AND ARCHITECTURAL CONSULTANT, IN ORDER TO WALK THE SITE AND FIELD VERIFY OR CLARIFY ANY CONSTRUCTION OR DESIGN RELATED ISSUES PRIOR TO WORK BEGINNING.
2. WHEN REQUESTING CONSTRUCTION STAKES, THE CONTRACTOR IS REQUIRED TO NOTIFY THE PROJECT ENGINEER 48 HOURS IN ADVANCE. THE OLYMPUS GROUP, INC. ASSUMES NO RESPONSIBILITY FOR ANY COSTS INCURRED FOR CONSTRUCTION SHUTDOWNS OR DELAYS WHEN NOT GIVEN THIS ADVANCE NOTICE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS OR MARKERS DESTROYED OR LOST DURING CONSTRUCTION. ALL SUCH MONUMENTS OR MARKERS DESTROYED OR LOST DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTORS EXPENSE AND WILL REQUIRE 48 HOURS NOTICE FROM THE CONTRACTOR TO REPLACE SAID MONUMENTS.
4. THE CONTRACTOR WILL NOT PERFORM ANY CORRECTIVE WORK DUE TO STAKING ERRORS WITHOUT FIRST CONSULTING WITH THE PROJECT ENGINEER. IN THE EVENT THE COST OF ANY ITEM OF CORRECTIVE WORK EXCEEDS $500.00, PERMISSION TO PROCEED MUST BE RECEIVED IN WRITING FROM THE PROJECT ENGINEER. NO LIABILITY WILL BE ASSUMED BY THE PROJECT ENGINEER FOR THE COSTS OF WORK PERFORMED IN VIOLATION OF THIS PROVISION.
5. THE OLYMPUS GROUP, INC. ASSUMES NO LIABILITY FOR ANY WORK CONSTRUCTED IF STAKED BY OTHERS.
6. WHENEVER THE NOTE "VERIFY" IS INDICATED ON THESE PLANS, THE CONTRACTOR SHALL EXPOSE THESE FACILITIES PRIOR TO THE START OF ANY CONSTRUCTION. AFTER THE CONTRACTOR HAS COMPLETED EXPOSING SAID FACILITIES, HE SHALL NOTIFY THE PROJECT ENGINEER AND REQUEST THEY VERIFY THAT THE HORIZONTAL, VERTICAL ALIGNMENTS, MEASUREMENT. ETC., ARE IN SUBSTANTIAL CONFORMANCE WITH THESE PLANS TO THE PROJECT ENGINEERS SATISFACTION. IN THE EVENT THAT SAID FACILITIES ARE DETERMINED NOT TO BE IN SUBSTANTIAL CONFORMANCE, THE PROJECT ENGINEER RESERVES THE RIGHT TO REVISE THESE PLANS TO REFLECT THE FOUND CONDITIONS.

GRADING:

1. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH FHA STANDARDS.
2. CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CONTRA COSTA COUNTY & CALTRANS STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL OBTAIN AND USE ALL APPLICABLE ADDENDUMS.
3. ALL GRADING SHALL COMPLY WITH THE RECOMMENDATIONS OF THE SOIL AND GEOLOGICAL INVESTIGATION.
4. ALL SLOPE BANKS ARE 2:1 MAXIMUM UNLESS OTHERWISE NOTED.
5. ALL GRADING SHALL BE IN CONFORMANCE WITH THE CONTRA COSTA COUNTY GRADING, EROSION, AND SEDIMENT CONTROL SPECIFICATIONS.
6. GRADING, TRENCHING, CUTTING AND/OR FILLING WITHIN THE DRIP LINE OF THOSE TREES, DESIGNATED ON THE SITE PLAN FOR PRESERVATION, SHALL NOT OCCUR. NO ACTIONS SHALL BE TAKEN THAT WILL HARM THE HEALTH, VITALITY OR LONGEVITY OF THOSE TREES IDENTIFIED ON THE SITE PLAN FOR PRESERVATION.

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REVISIONS:

ATRIA LAFAYETTE
APN 169-090-002
GENERAL NOTES
CONTRA COSTA COUNTY, CALIFORNIA , CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BOBBIE F. BROWN II
No. 48856
Exp. 09-30-2024
CIVIL
STATE OF CALIFORNIA

THE OLYMPUS GROUP
ENGINEERING, PLANNING & SURVEYING
8850 GREENBACK LANE SUITE C | PHONE 916-396-6228
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DRAWN BY: IANA T.
DESIGNED BY: R.FRANCIS
CHECKED BY: B.F.BROWNII
DATE: JANUARY, 2024
SCALE: AS SHOWN

PROJECT NO: 23-001

C2

P:\23-001 ATRIA LAFAYETTE - MAIN ROAD RETROFIT\CADD\ENGR\IMPROVEMENT PLANS\IMPROVEMENT PLANS\23001IP_C02-GN01.DWG Jan 16, 2024-03:20 pm OWNER

P:\23-001 ATRIA LAFAYETTE - MAIN ROAD RETROFIT\CADD\ENGR\IMPROVEMENT PLANS\23001IP_C03-OV.DWG Jan 16, 2024-03:21 pm OWNER

NOTE: SITE PLAN WAS CREATED USING RECORD INFORMATION AS FOUND ON THE CONTRA COSTA COUNTY "CCMAP", TOGETHER WITH RECORD DATA TAKEN FROM THE CONTRA COSTA COUNTY TAX ASSESSOR'S MAPS.

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REVISIONS:

ATRIA LAFAYETTE
APN 169-090-002
OVERALL SITE PLAN
CONTRA COSTA COUNTY, CALIFORNIA , CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BOBBIE F. BROWNII
No. 48856
Exp. 09-30-2024
CIVIL
STATE OF CALIFORNIA

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DRAWN BY: IANA T.
DESIGNED BY: R.FRANCIS
CHECKED BY: B.F.BROWNII
DATE: JANUARY, 2024
SCALE: AS SHOWN

PROJECT NO: 23-001

C3

TOPOGRAPHIC SURVEY

CITY OF LAFAYETTE, CONTRA COSTA COUNTY, STATE OF CALIFORNIA
1545 PLEASANT HILL ROAD, LAFAYETTE, CA 95816: ATRIA PARK

JUNE 2023

0' 5' 10'
Scale: 1"=10'

SURVEYORS STATEMENT:

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE PROFESSIONAL LAND SURVEYORS' ACT AT THE REQUEST OF OWNER IN APRIL 2018.

CHRISTOPHER D. JOHNSON, PLS 7576 DATE:
EXPIRATION DATE: 12/31/19

PROFESSIONAL LAND SURVEYOR · CHRISTOPHER D. JOHNSON · LS 7576 · EXP. 12/31/23 · STATE OF CALIFORNIA

BENCHMARK

BASIS OF ELEVATION: CONTRA COSTA COUNTY BENCHMARK #978 – CONTRA COSTA COUNTY BRONZE DISK SET IN THE NORTHEAST CORNER OF BRIDGE ON PLEASANT HILL ROAD OVER PLEASANT HILL OVERPASS.

ELEV: 342.839

LEGEND

	SURVEY CONTROL
	WATER VALVE
	SIGN
	POWER POLE
WM	WATER METER
E	ELECTRIC PULL BOX
	ELECTROLIER
AC	ASPHALT CONCRETE
BW	BACK OF WALK
CONC	CONCRETE
EP	EDGE OF PAVEMENT
FL	FLOW LINE
FG	FACE OF GUTTER
GR	GUARDRAIL
PB	PULL BOX
PP	POWER PLUG
SL	STREET LIGHT
TBC	TOP BACK OF CURB
TW	TOP OF WALL
TAG NO.–XX"–XX'	TREE TAG TAG NO.–TREE DIA.–TREE CANAOPY/DRIP LINE L=LEANING, D=DEAD
SD	STORM DRAIN
	EASEMENT

DETAIL A
BASIS OF BEARING

N14°59'39"W 998.59'
N64°45'45"E 12,863.67'
(BASIS OF BEARING)

DETAIL B
SEE SHEET 3

DETAIL B
SEE SHEET 4

MATCHLINE - SEE SHEET C5

LAND SURVEYING
MAPPING
LEGAL DOCUMENTS

8850 GREENBACK LN. STE. C
ORANGEVALE CA 95662
916-871-4789

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REVISIONS:

ATRIA LAFAYETTE
APN 169-090-002
TOPOGRAPHIC SURVEY
CONTRA COSTA COUNTY, CALIFORNIA , CALIFORNIA

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DRAWN BY: INNA T.
DESIGNED BY: B.FRANCIS
CHECKED BY: B.FRANCIS
DATE: JANUARY, 2024
SCALE: AS SHOWN

PROJECT NO: 23-001

C4
SHEET 4 OF 30

TOPOGRAPHIC SURVEY

CITY OF LAFAYETTE, CONTRA COSTA COUNTY, STATE OF CALIFORNIA
1545 PLEASANT HILL ROAD, LAFAYETTE, CA 95816: ATRIA PARK

JUNE 2023

SURVEYORS STATEMENT:

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CHRISTOPHER D. JOHNSON, PLS 7576 DATE:
EXPIRATION DATE: 12/31/19

PROFESSIONAL LAND SURVEYOR · CHRISTOPHER D. JOHNSON · LS 7576 · EX. 12/31/24 · STATE OF CALIFORNIA

BENCHMARK

BASIS OF ELEVATION: CONTRA COSTA COUNTY BENCHMARK #978 – CONTRA COSTA COUNTY BRONZE DISK SET IN THE NORTHEAST CORNER OF BRIDGE ON PLEASANT HILL ROAD OVER PLEASANT HILL OVERPASS.

ELEV: 342.839

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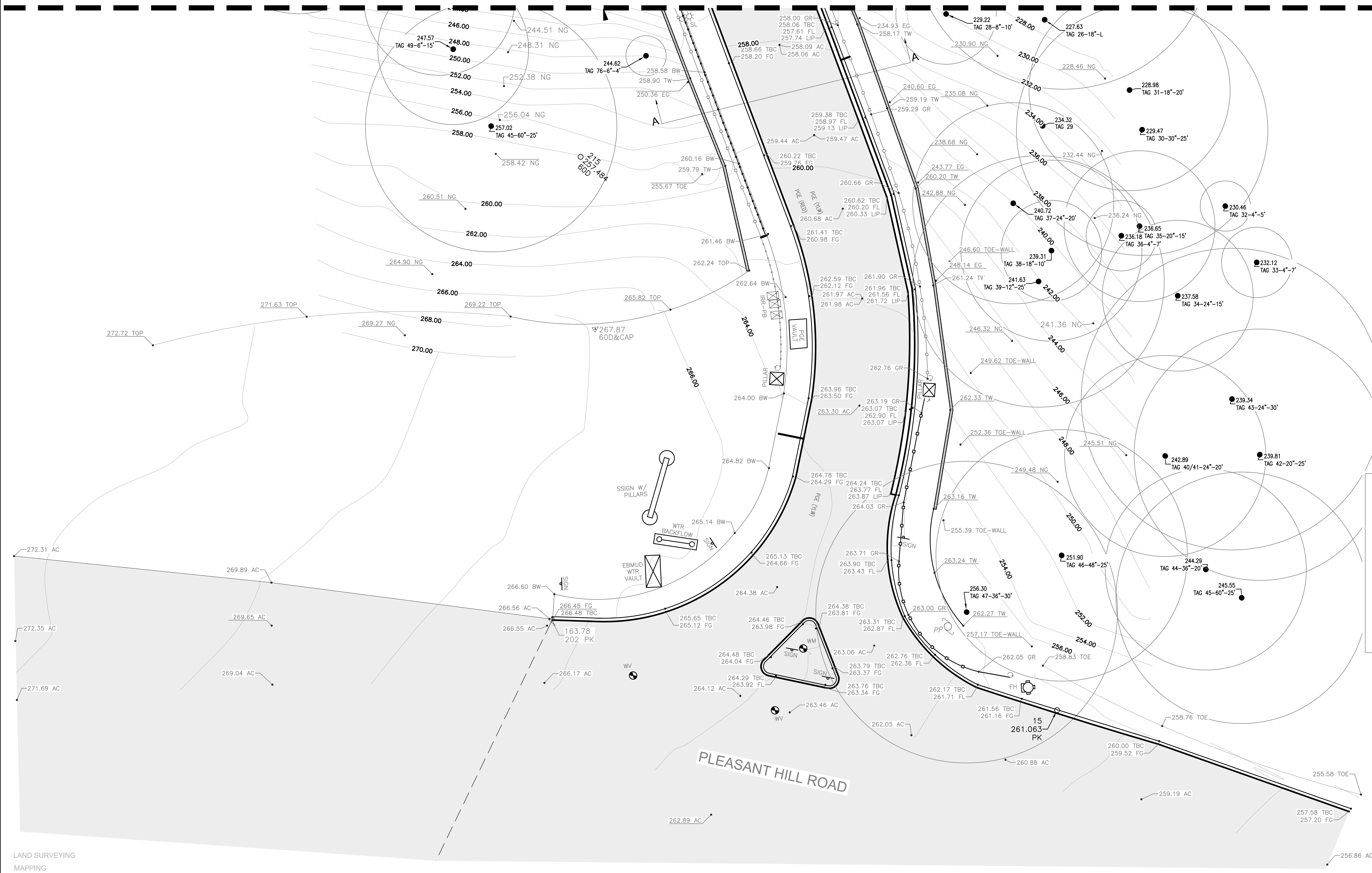
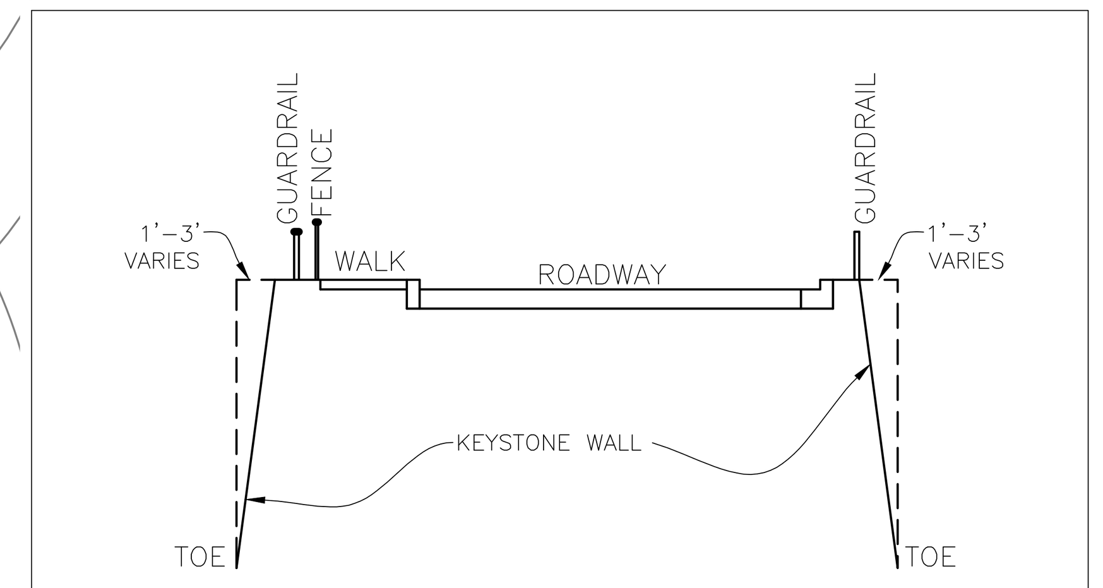
REVISIONS:

MATCHLINE - SEE SHEET C4



LEGEND

△	SURVEY CONTROL
⋈	WATER VALVE
	SIGN
	POWER POLE
WM	WATER METER
	ELECTRIC PULL BOX
	ELECTROLIER
AC	ASPHALT CONCRETE
BW	BACK OF WALK
CONC	CONCRETE
EP	EDGE OF PAVEMENT
FL	FLOW LINE
FG	FACE OF GUTTER
GR	GUARDRAIL
PB	PULL BOX
PP	POWER POLE
SL	STREET LIGHT
TBC	TOP BACK OF CURB
TW	TOP OF WALL
TAG NO.-XX"-XX'	TREE TAG TAG NO.-TREE DIA.-TREE CANOPY/DRIP LINE L=LEANING, D=DEAD
—SD—	STORM DRAIN
— — —	EASEMENT



SECTION A-A

ATRIA LAFAYETTE
APN 169-090-002
TOPOGRAPHIC SURVEY
CONTRA COSTA COUNTY, CALIFORNIA , CALIFORNIA

LAND SURVEYING
MAPPING
LEGAL DOCUMENTS
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DRAWN BY: IANA T.
DESIGNED BY: R.FRANCIS
CHECKED BY: B.F.BROWN
DATE: JANUARY, 2024
SCALE: AS SHOWN
PROJECT NO.: 23-001

C5

TREE SURVEY

CITY OF LAFAYETTE, CONTRA COSTA COUNTY, STATE OF CALIFORNIA
1545 PLEASANT HILL ROAD, LAFAYETTE, CA 95816: ATRIA PARK

BENCHMARK

BASIS OF ELEVATION: CONTRA COSTA COUNTY BENCHMARK #978 – CONTRA COSTA COUNTY BRONZE DISK SET IN THE NORTHEAST CORNER OF BRIDGE ON PLEASANT HILL ROAD OVER PLEASANT HILL OVERPASS.
ELEV: 342.839

NOTE:
1. SEE ARBORIST REPORT FOR TREE INFORMATION, PROTECT OR PRUNED.

TOTAL PROTECTED TREES TO BE REMOVED = 6
SEE ARBORIST REPORT

NOTE:
TREES 78–81, 84 ARE OUTSIDE OF THE SCOPE OF THIS PROJECT

NOTE:
TREES 87, 93 & 95 ARE OUTSIDE OF THE SCOPE OF THIS PROJECT

NOTE: TREE #44 IS PARTIALLY OBSCURED ON THIS PLAN, IS OUTSIDE THE SCOPE OF THIS PROJECT & WILL NOT BE REMOVED

BOUNDARY NOTE:
APPROXIMATE R/W LINE. A BOUNDARY SURVEY WAS NOT PERFORMED FOR THIS PROJECT. THE SITE PLAN WAS CREATED USING RECORD INFORMATION AS FOUND ON THE CONTRA COSTA COUNTY "CCMAP", TOGETHER WITH RECORD DATA TAKEN FROM THE CONTRA COSTA COUNTY TAX ASSESSOR'S MAPS.

0' 5' 10'
Scale: 1"=10'

LEGEND

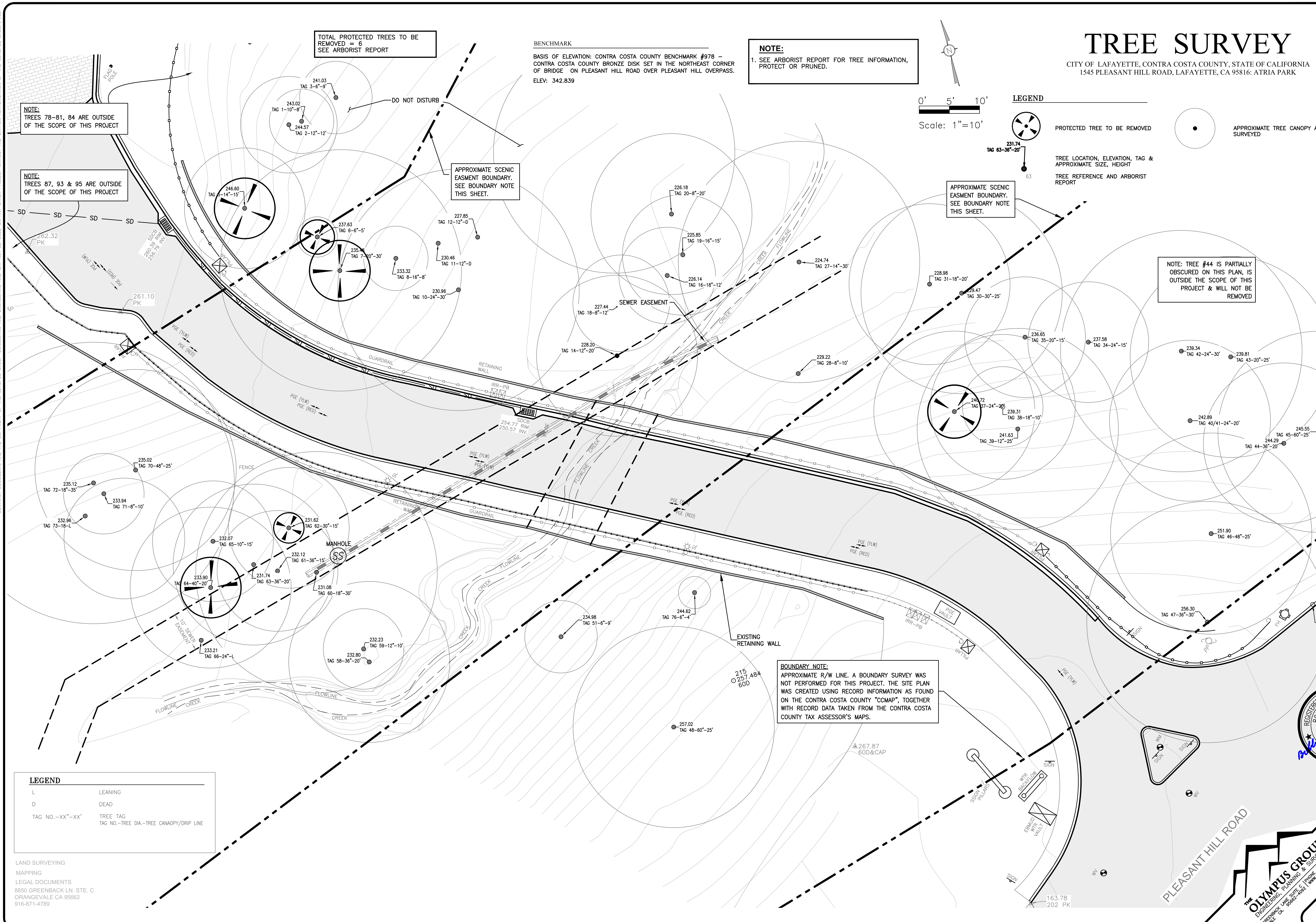
PROTECTED TREE TO BE REMOVED

APPROXIMATE TREE CANOPY AS SURVEYED

231.74
TAG 63-36"-20'
63

TREE LOCATION, ELEVATION, TAG & APPROXIMATE SIZE, HEIGHT

TREE REFERENCE AND ARBORIST REPORT



LEGEND

L	LEANING
D	DEAD
TAG NO.–XX"–XX'	TREE TAG TAG NO.–TREE DIA.–TREE CANOPY/DRIP LINE

LAND SURVEYING
MAPPING
LEGAL DOCUMENTS
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ORANGEVALE CA 95662
916-871-4789

REVISIONS:

ATRIA LAFAYETTE
APN 169-090-002
TREE SURVEY AND REMOVAL PLAN
CONTRA COSTA COUNTY, CALIFORNIA , CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BOBBIE F. BROWNE
48856
Exp. 09-30-2024
CIVIL
STATE OF CALIFORNIA

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DRAWN BY: IANA T.
DESIGNED BY: B.FRANCIS
CHECKED BY: B.F.BROWNE
DATE: JANUARY, 2024
SCALE: AS SHOWN
PROJECT NO.: 23-001

C6
SHEET 6 OF 30

CALL BEFORE YOU DIG
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P:\23-001 ATRIA LAFAYETTE - MAIN ROAD RETROFIT\CADD\ENGR\IMPROVEMENT PLANS\23001P_C06_TR01.DWG Jan 17, 2024-03:00 pm OWNER

CREEK SURVEY

CITY OF LAFAYETTE, CONTRA COSTA COUNTY, STATE OF CALIFORNIA
1545 PLEASANT HILL ROAD, LAFAYETTE, CA 95816: ATRIA PARK

JUNE 2023

SURVEYORS STATEMENT:

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE PROFESSIONAL LAND SURVEYORS' ACT AT THE REQUEST OF OWNER IN APRIL 2018.

CHRISTOPHER D. JOHNSON, PLS 7576 DATE:
EXPIRATION DATE: 12/31/19

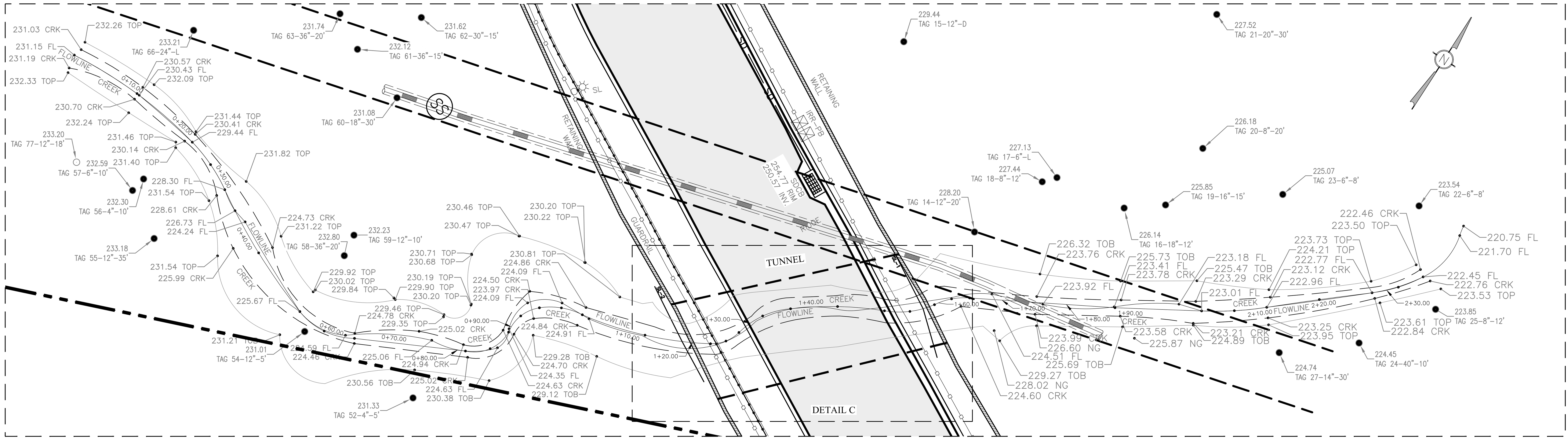
PROFESSIONAL LAND SURVEYOR
CHRISTOPHER D. JOHNSON
LS 7576
EX. 12/31/24
STATE OF CALIFORNIA

BENCHMARK

BASIS OF ELEVATION: CONTRA COSTA COUNTY BENCHMARK #978 – CONTRA COSTA COUNTY BRONZE DISK SET IN THE NORTHEAST CORNER OF BRIDGE ON PLEASANT HILL ROAD OVER PLEASANT HILL OVERPASS.

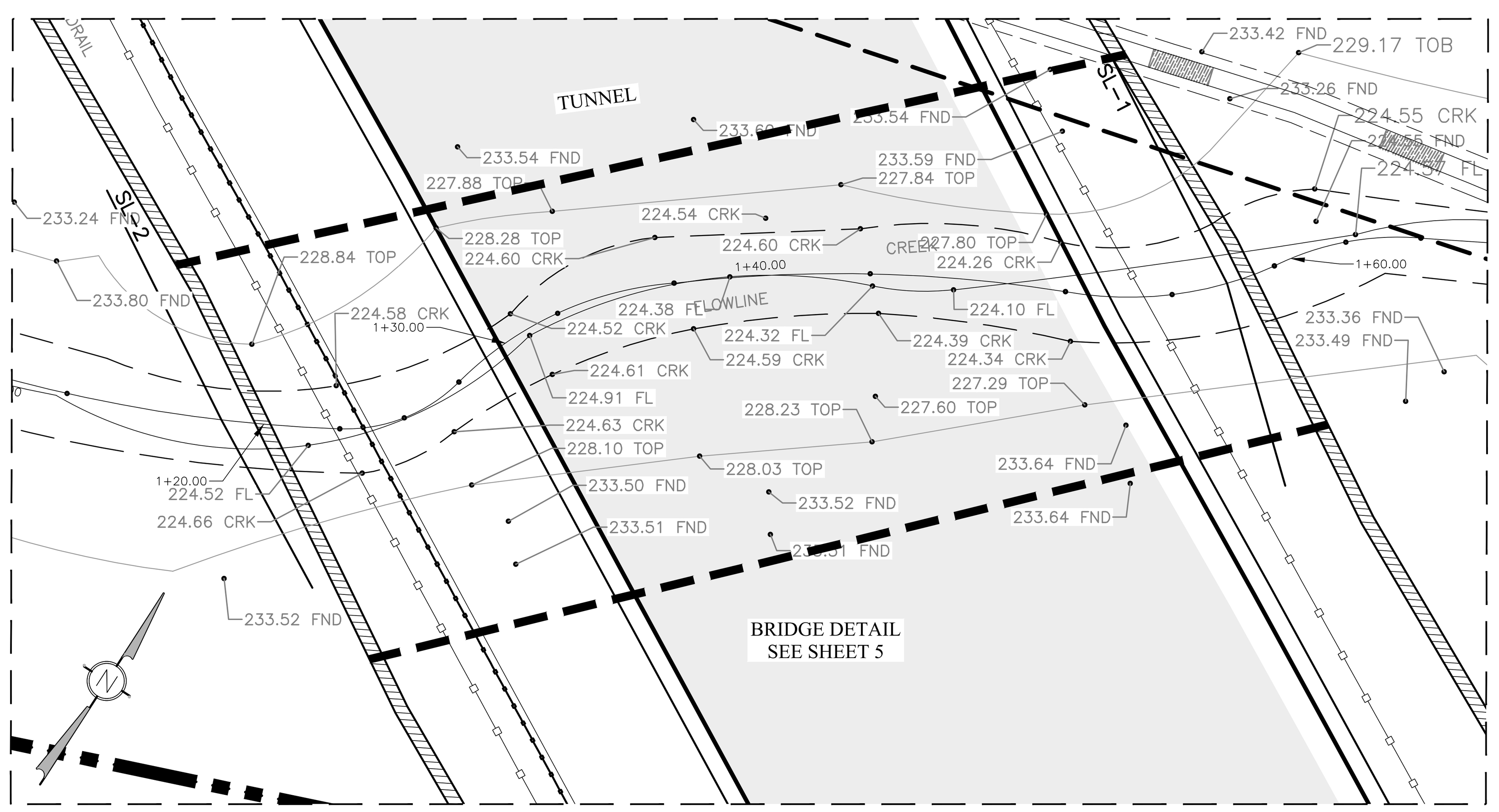
ELEV: 342.839

DETAIL B

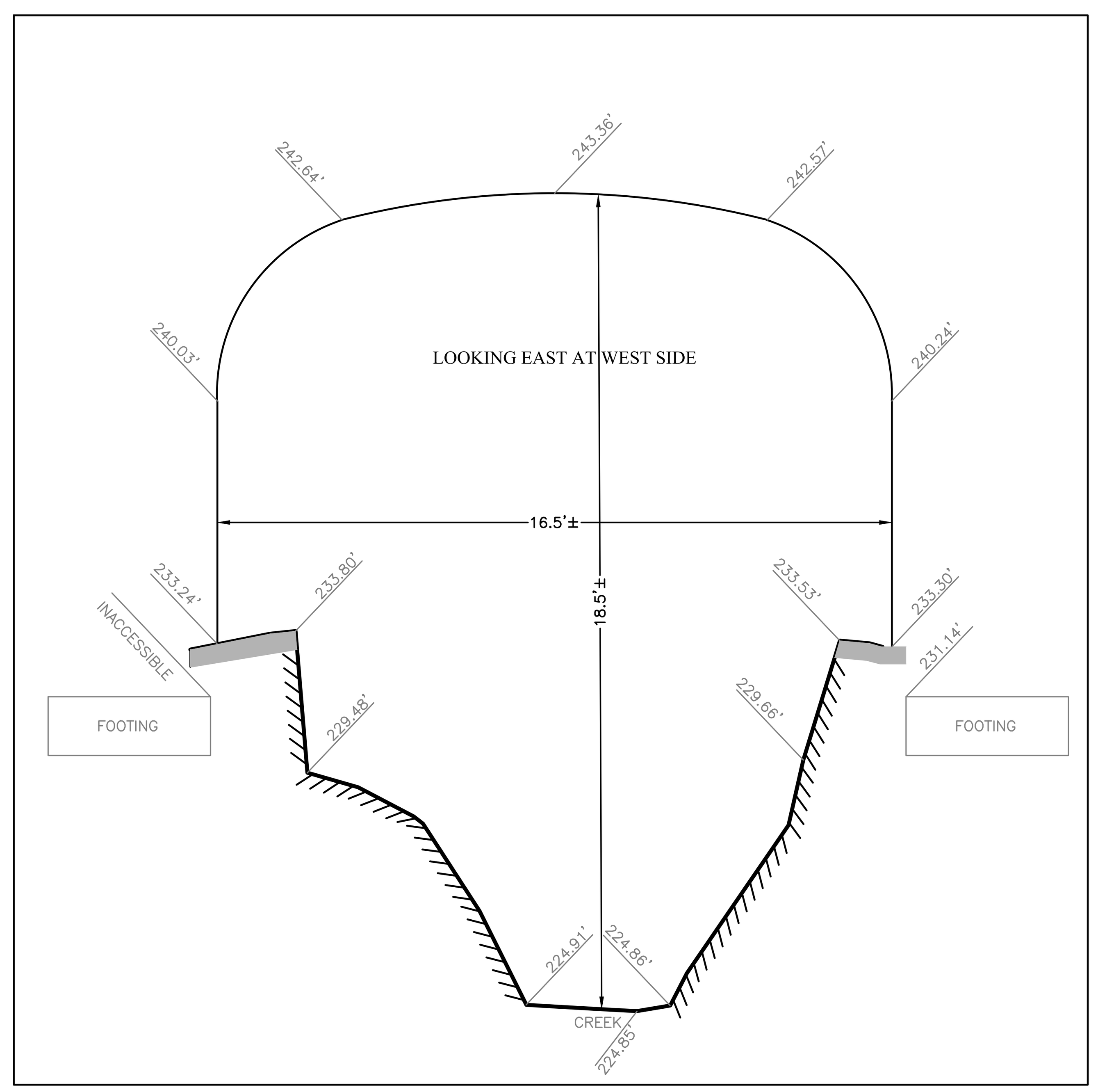


SCALE : 1" = 10'

DETAIL C

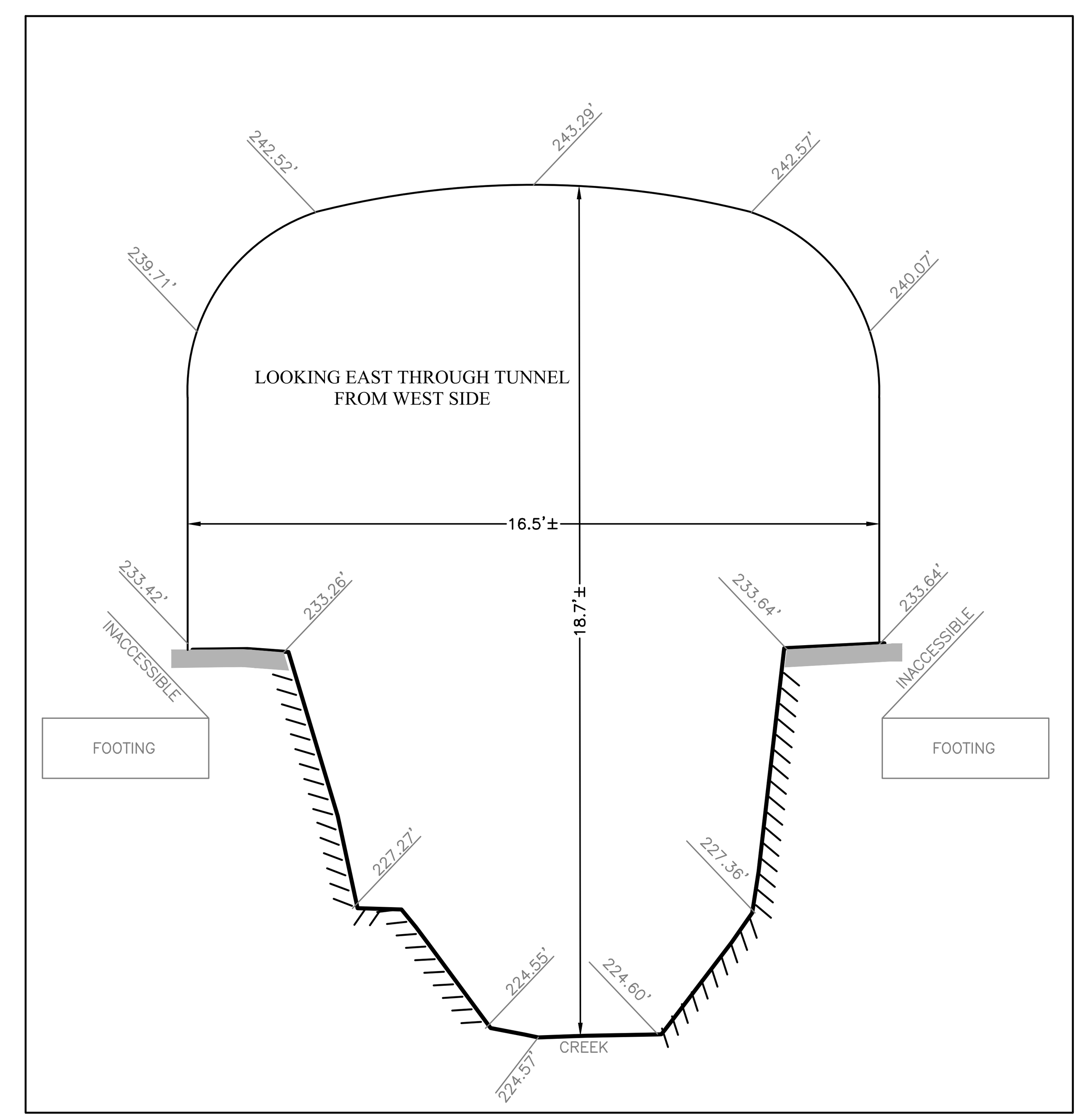


SCALE : 1" = 5'



SL-2: SECTION AT WEST SIDE

SCALE : 1" = 3'



SL-1: SECTION AT EAST SIDE

SCALE : 1" = 3'

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REVISIONS:

ATRIA LAFAYETTE
APN 169-090-002
CREEK SURVEY
CONTRA COSTA COUNTY, CALIFORNIA, CALIFORNIA

LAND SURVEYING
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DRAWN BY: IANA T.
DESIGNED BY: R.FRANCIS
CHECKED BY: B.F.BROWN
DATE: JANUARY, 2024
SCALE: AS SHOWN
PROJECT NO: 23-001

C7

P:\23-001 ATRIA LAFAYETTE - MAIN ROAD RETROFIT\CADD\ENGR\IMPROVEMENT PLANS\23001P_C04-C08-TP01.DWG Jan 16, 2024-03:24 pm OWNER

BRIDGE SURVEY

CITY OF LAFAYETTE, CONTRA COSTA COUNTY, STATE OF CALIFORNIA
1545 PLEASANT HILL ROAD, LAFAYETTE, CA 95816: ATRIA PARK

JUNE 2023

SURVEYORS STATEMENT:

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE PROFESSIONAL LAND SURVEYORS' ACT AT THE REQUEST OF OWNER IN APRIL 2018.

CHRISTOPHER D. JOHNSON, PLS 7576 DATE:
EXPIRATION DATE: 12/31/19

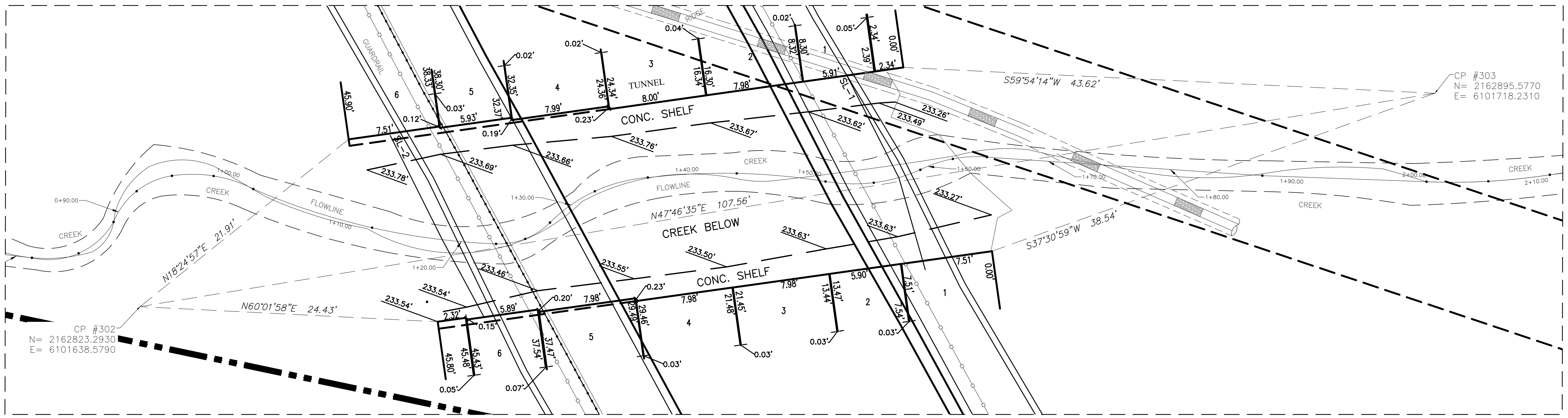
PROFESSIONAL LAND SURVEYOR CHRISTOPHER D. JOHNSON LS 7576 EX. 12/31/21 STATE OF CALIFORNIA

BENCHMARK

BASIS OF ELEVATION: CONTRA COSTA COUNTY BENCHMARK #978 – CONTRA COSTA COUNTY BRONZE DISK SET IN THE NORTHEAST CORNER OF BRIDGE ON PLEASANT HILL ROAD OVER PLEASANT HILL OVERPASS.
ELEV: 342.839

N

0' 2.5' 5'
Scale: 1"=5'



BRIDGE DETAIL

REVISIONS:

ATRIA LAFAYETTE
APN 169-090-002
BRIDGE SURVEY
CONTRA COSTA COUNTY, CALIFORNIA, CALIFORNIA

THE OLYMPUS GROUP
ENGINEERING, PLANNING & SURVEYING
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PHONE 916-286-6228
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DRAWN BY: IANA T.
DESIGNED BY: R.FRANCIS
CHECKED BY: B.F.BROWNI
DATE: JANUARY, 2024
SCALE: AS SHOWN

PROJECT NO: 23-001

C8

LAND SURVEYING
MAPPING
LEGAL DOCUMENTS
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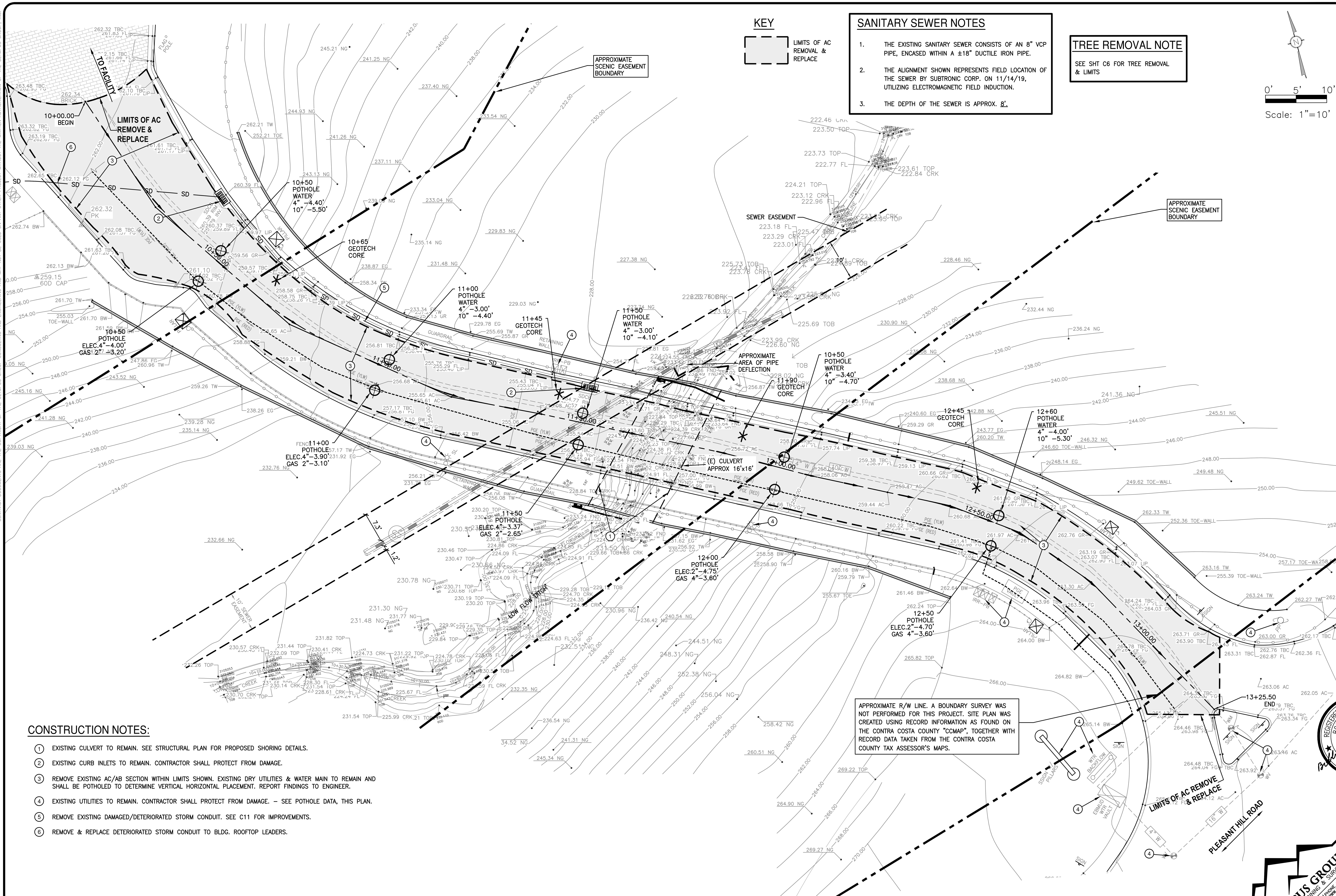
916-871-4789

ATRIA LAFAYETTE
APN 169-090-002
ASPHALT DEMOLITION AND REPLACEMENT PLAN
CONTRA COSTA COUNTY, CALIFORNIA, CALIFORNIA



KEY

LIMITS OF AC REMOVAL & REPLACE

SANITARY SEWER NOTES

1. THE EXISTING SANITARY SEWER CONSISTS OF AN 8" VCP PIPE, ENCASED WITHIN A ±18" DUCTILE IRON PIPE.
2. THE ALIGNMENT SHOWN REPRESENTS FIELD LOCATION OF THE SEWER BY SUBTRONIC CORP. ON 11/14/19, UTILIZING ELECTROMAGNETIC FIELD INDUCTION.
3. THE DEPTH OF THE SEWER IS APPROX. 8'.

TREE REMOVAL NOTE

SEE SHT C6 FOR TREE REMOVAL & LIMITS

CONSTRUCTION NOTES:

1. EXISTING CULVERT TO REMAIN. SEE STRUCTURAL PLAN FOR PROPOSED SHORING DETAILS.
2. EXISTING CURB INLETS TO REMAIN. CONTRACTOR SHALL PROTECT FROM DAMAGE.
3. REMOVE EXISTING AC/AB SECTION WITHIN LIMITS SHOWN. EXISTING DRY UTILITIES & WATER MAIN TO REMAIN AND SHALL BE POTHOLED TO DETERMINE VERTICAL HORIZONTAL PLACEMENT. REPORT FINDINGS TO ENGINEER.
4. EXISTING UTILITIES TO REMAIN. CONTRACTOR SHALL PROTECT FROM DAMAGE. – SEE POTHOLE DATA, THIS PLAN.
5. REMOVE EXISTING DAMAGED/DETERIORATED STORM CONDUIT. SEE C11 FOR IMPROVEMENTS.
6. REMOVE & REPLACE DETERIORATED STORM CONDUIT TO BLDG. ROOFTOP LEADERS.

CALL BEFORE YOU DIG — USA UNDERGROUND SERVICE ALERT — CA: 800-227-2600

REVISIONS:

REGISTERED PROFESSIONAL ENGINEER — BOBBIE F. BROWN II — No. 48856 — Exp. 09-30-2024 — CIVIL — STATE OF CALIFORNIA

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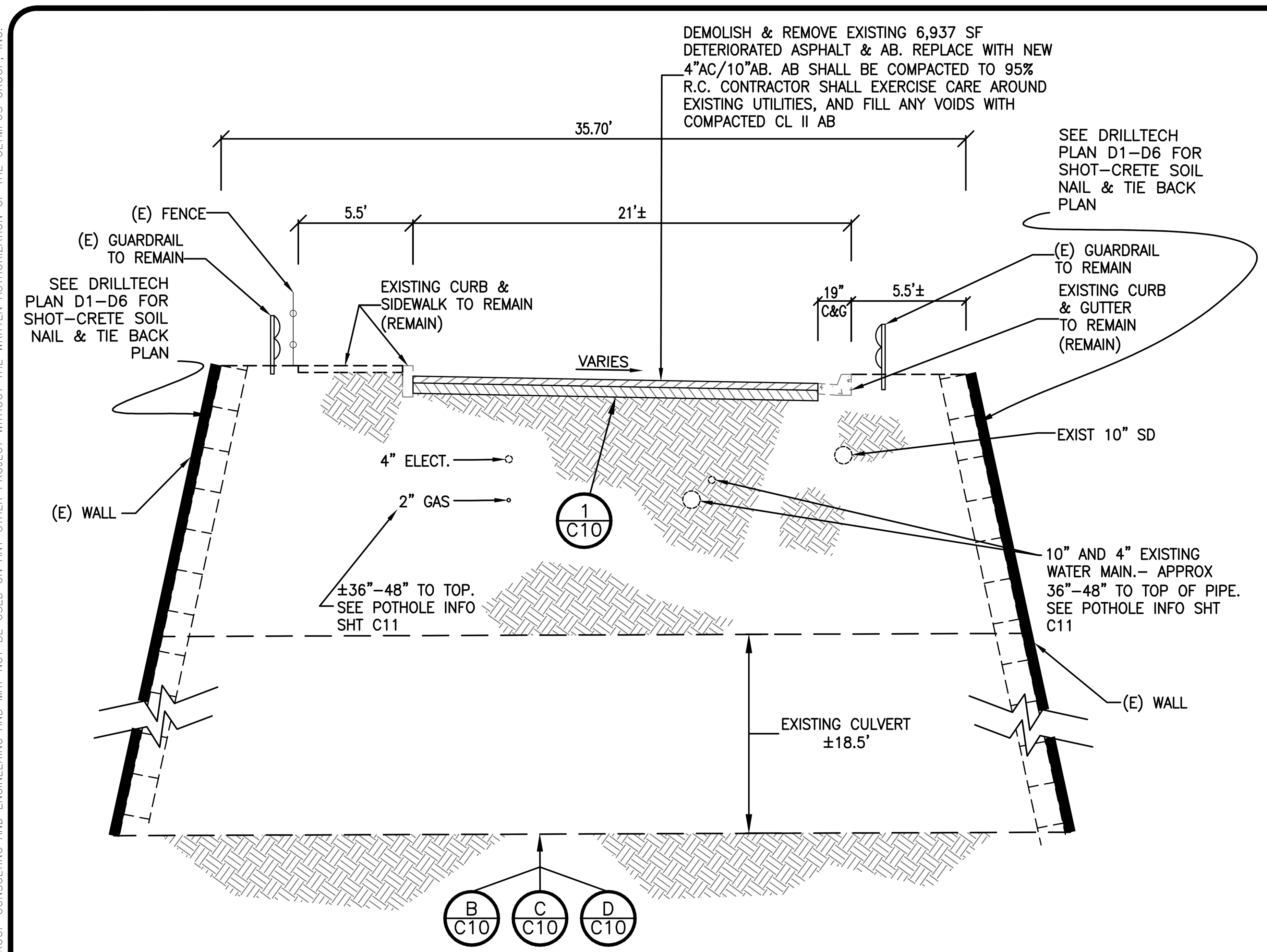
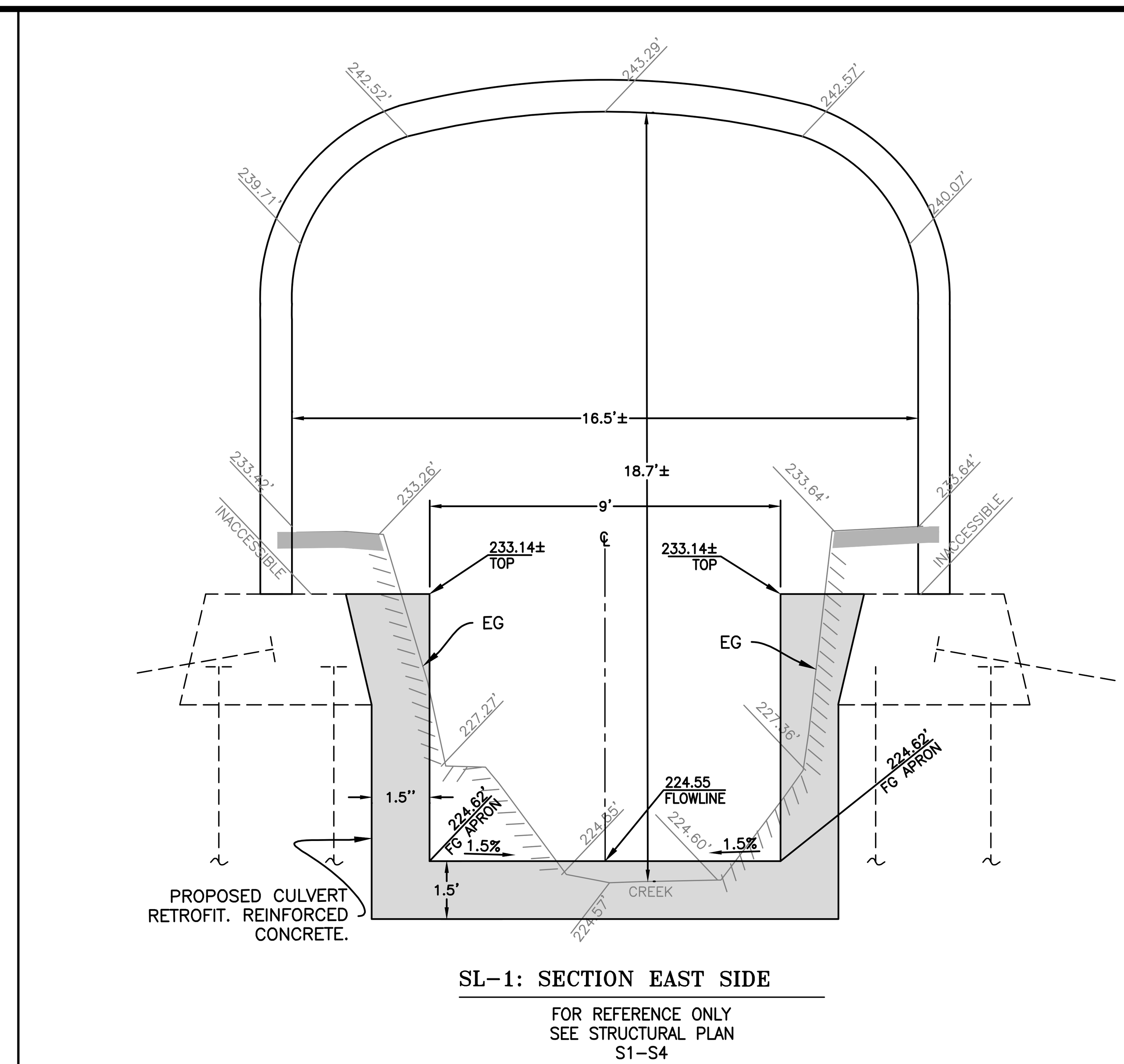
DRAWN BY: IANA T.
DESIGNED BY: B.FRANCIS
CHECKED BY: B.F.BROWN
DATE: JANUARY, 2024
SCALE: AS SHOWN
PROJECT NO.: 23-001



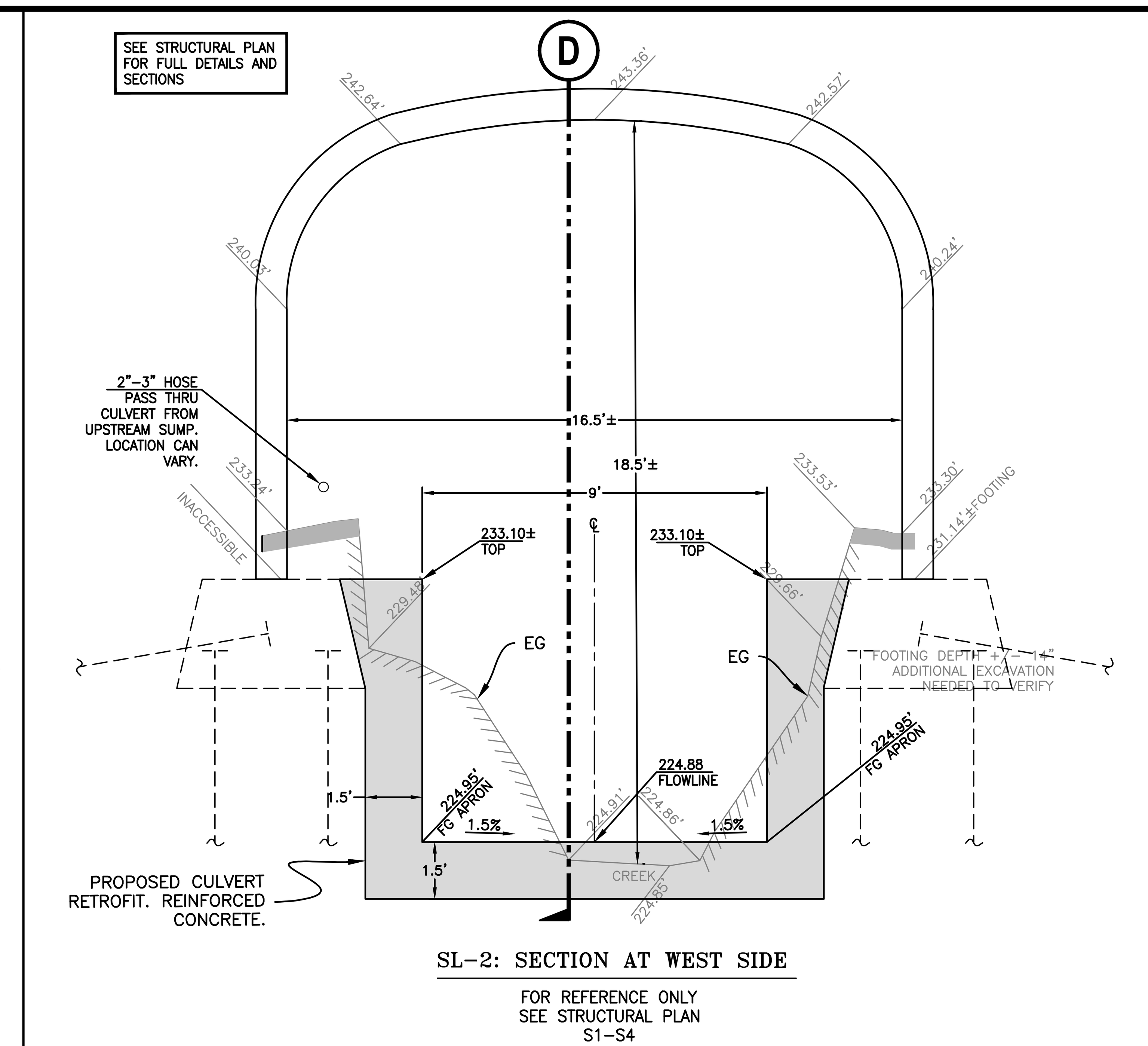
A ROADWAY SECTION REPLACEMENT

NTS



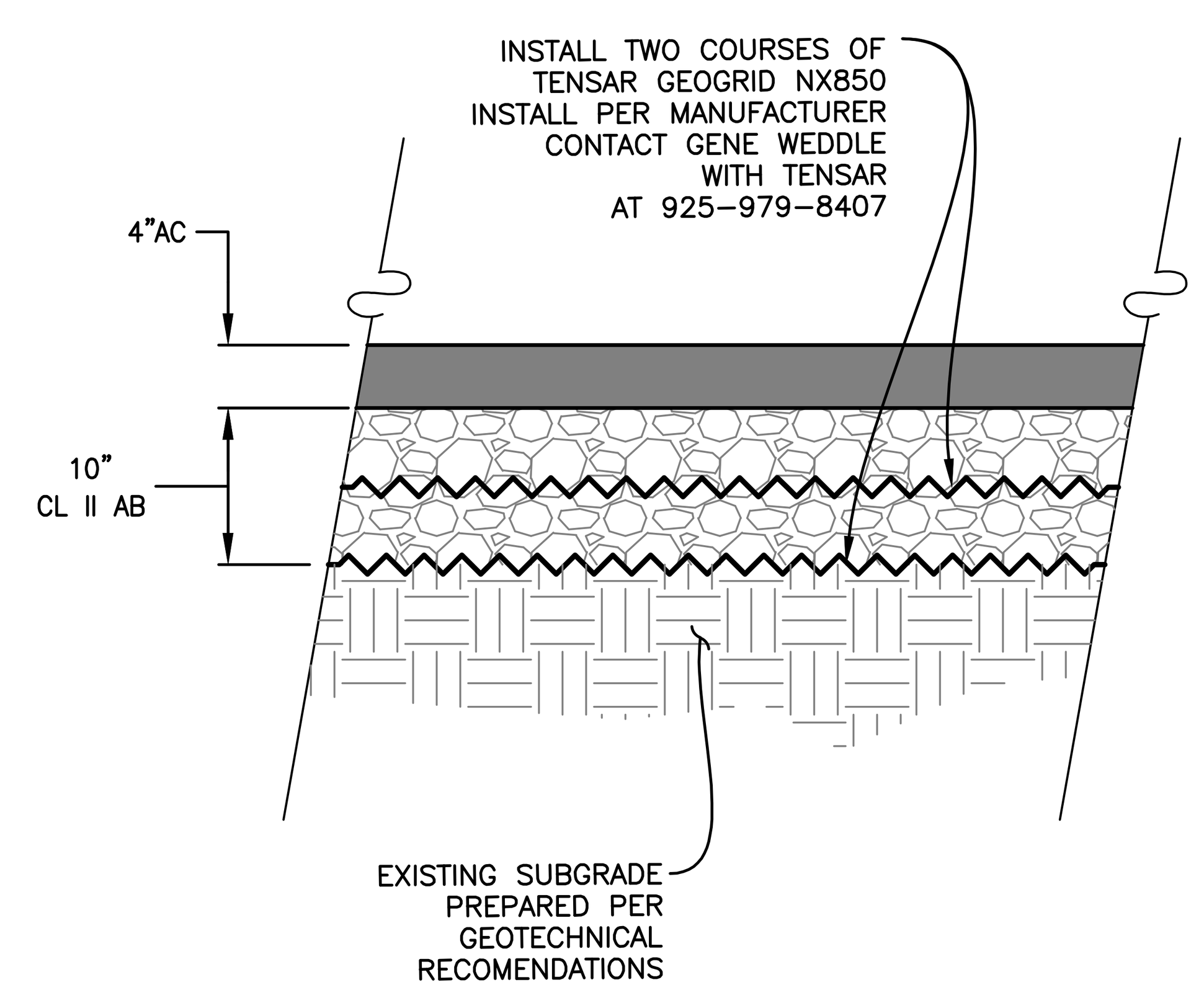
B SECTION EAST SIDE

SCALE : 1" = 3'



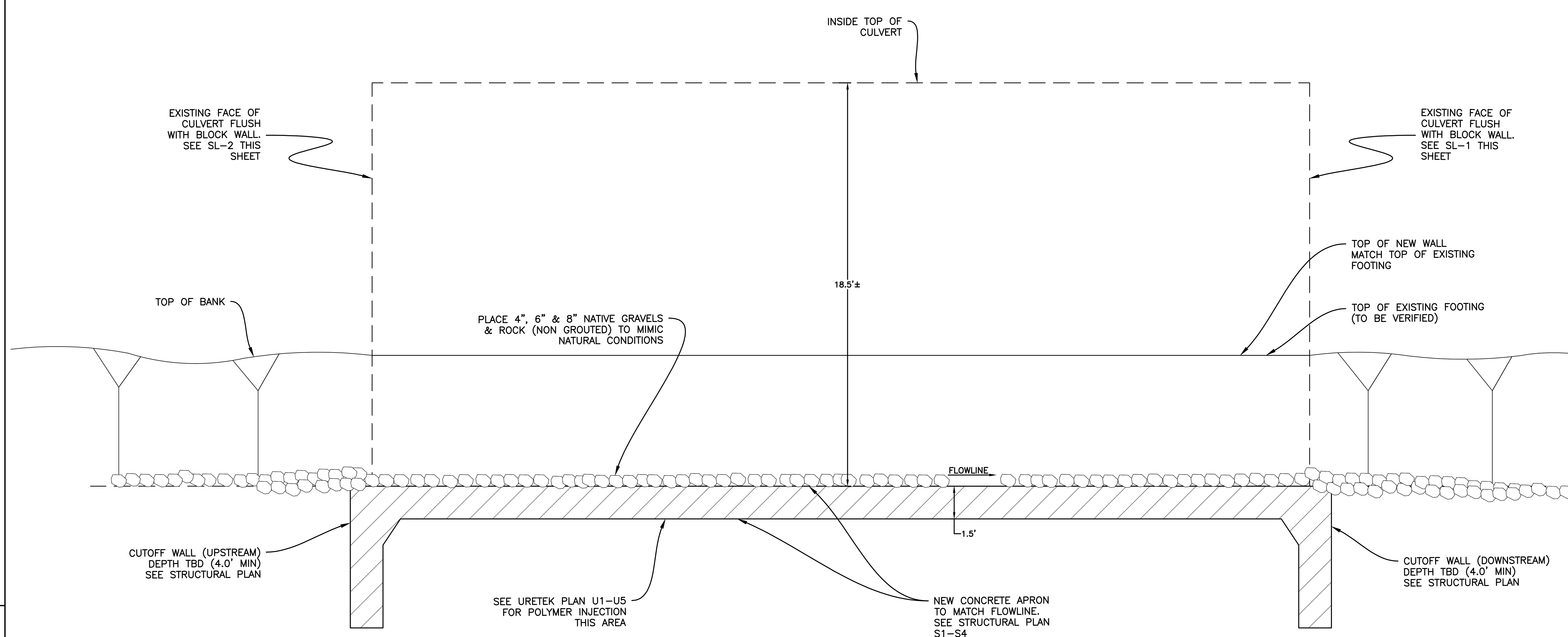
C SECTION WEST SIDE

SCALE : 1" = 3'



1 ASPHALT SECTION

NTS



SECTION A

FOR REFERENCE ONLY
SEE STRUCTURAL PLAN
S1-S4

D ROADWAY SECTION REPLACEMENT

SCALE : 1" = 3'

CALL BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
CA: 800-227-2600

REVISIONS:

ATRIA LAFAYETTE

APN 227-0142-018

SECTIONS & DETAILS

CONTRA COSTA COUNTY, CALIFORNIA , CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BOBBIE F. BROWN II
No. 48856
Exp. 09-30-2024
CIVIL
STATE OF CALIFORNIA

THE OLYMPUS GROUP
ENGINEERING, PLANNING & SURVEYING
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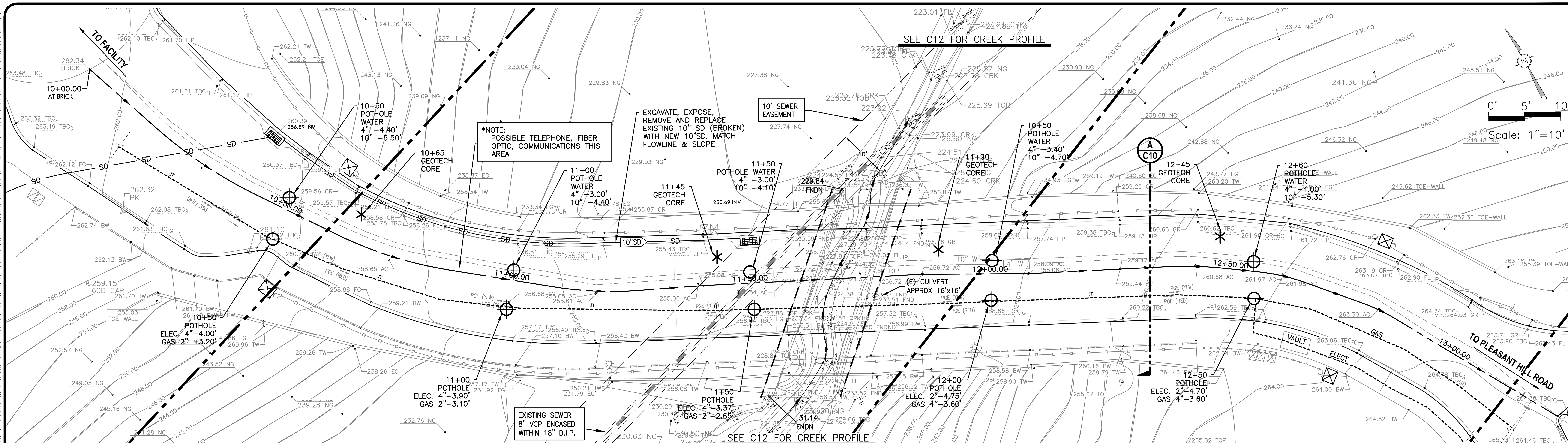
DRAWN BY: IANA T.
DESIGNED BY: R.FRANCIS
CHECKED BY: B.F.BROWNII
DATE: JANUARY, 2024
SCALE: AS SHOWN

PROJECT NO. 23-001

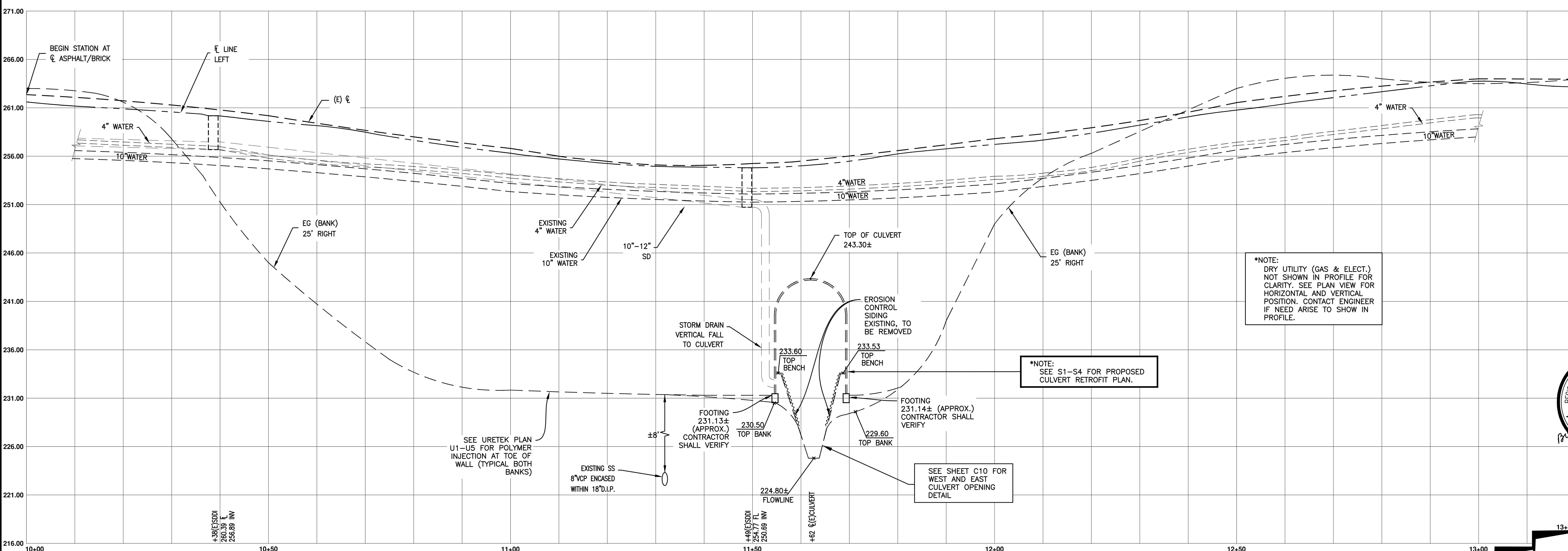
C10

SHEET 10 OF 30

P:\23-001 ATRIA LAFAYETTE -MAIN ROAD RETROFIT\CADD\ENGR\IMPROVEMENT PLANS\IMPROVEMENT PLANS\23001IP_C10-DT01.DWG Jan 16, 2024-03:27 pm OWNER



PLAN VIEW 1"=10'



PROFILE 1"=5' VERTICAL; 1"=10' HORIZ.

CALL BEFORE YOU DIG — CA: 800-227-2600

REVISIONS:

ATRIA LAFAYETTE
APN 169-090-002
BRIDGE EXISTING PLAN AND PROFILE
CONTRA COSTA COUNTY, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — BOBBIE F. BROWN II — No. 48856 — Exp. 09-30-2024 — CIVIL — STATE OF CALIFORNIA

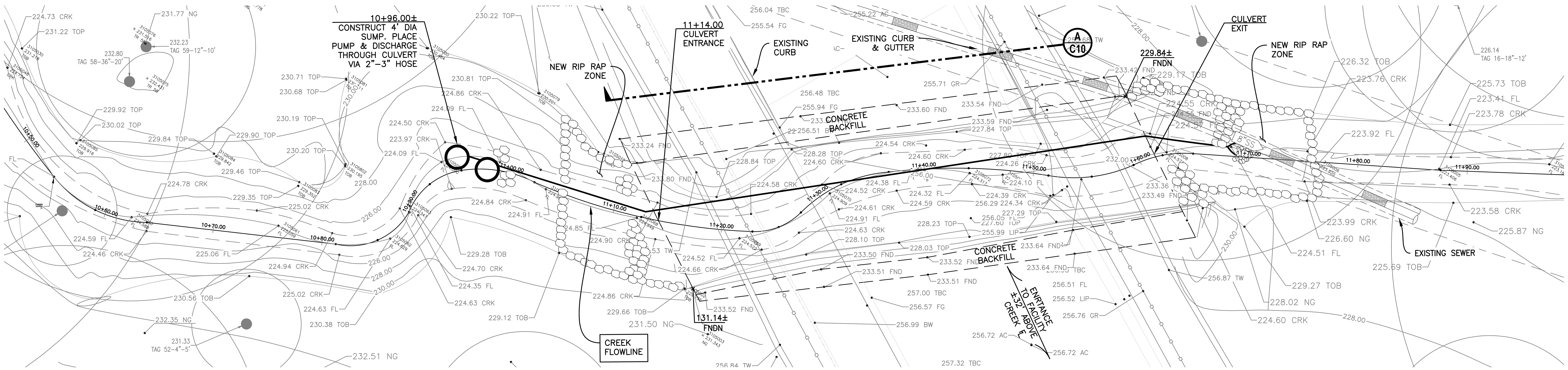
THE OLYMPUS GROUP — ENGINEERING, PLANNING & SURVEYING — 8850 GREENBACK LANE, SUITE C, ORANGEVALE, CA 95662-4092 — PHONE 916-966-6228 — WWW.OLYGROUP.NET

DRAWN BY: IANA T. DESIGNED BY: R.FRANCIS CHECKED BY: B.F.BROWN II DATE: JANUARY, 2024 SCALE: AS SHOWN

PROJECT NO.: 23-001

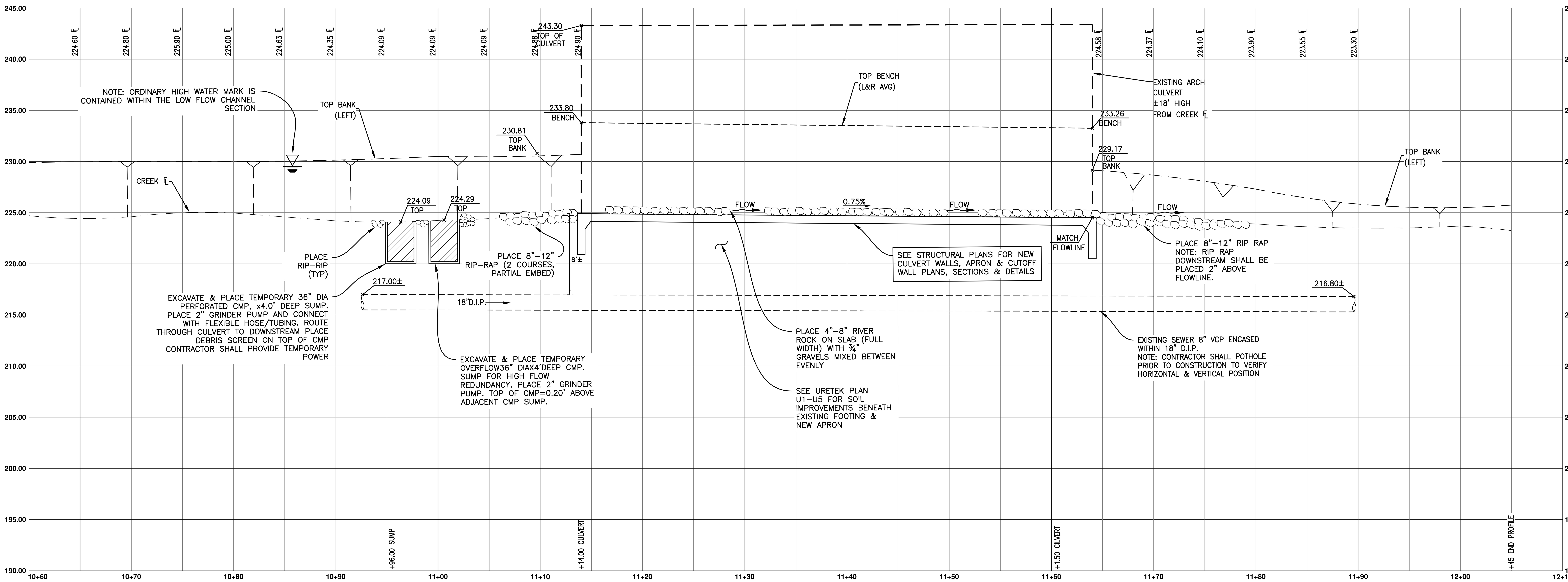
C11
SHEET 11 OF 30

P:\23-001 ATRIA LAFAYETTE - MAIN ROAD RETROFIT\CADD\ENGR\IMPROVEMENT PLANS\IMPROVEMENT PLANS\23001P_C11-PP01.DWG Jan 16, 2024-03:27 pm OWNER



PLAN VIEW 1"=5'

0' 2.5' 5'
Scale: 1"=5'



PROFILE 1"=5' VERTICAL; 1"=5' HORIZ.

CALL BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
CA: 800-227-2600

REVISIONS:

ATRIA LAFAYETTE
APN 169-090-002
CREEK/CULVERT PLAN AND PROFILE
CONTRA COSTA COUNTY, CALIFORNIA , CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BOBBIE F. BROWNING
No. 48856
Exp. 09-30-2024
CIVIL
STATE OF CALIFORNIA

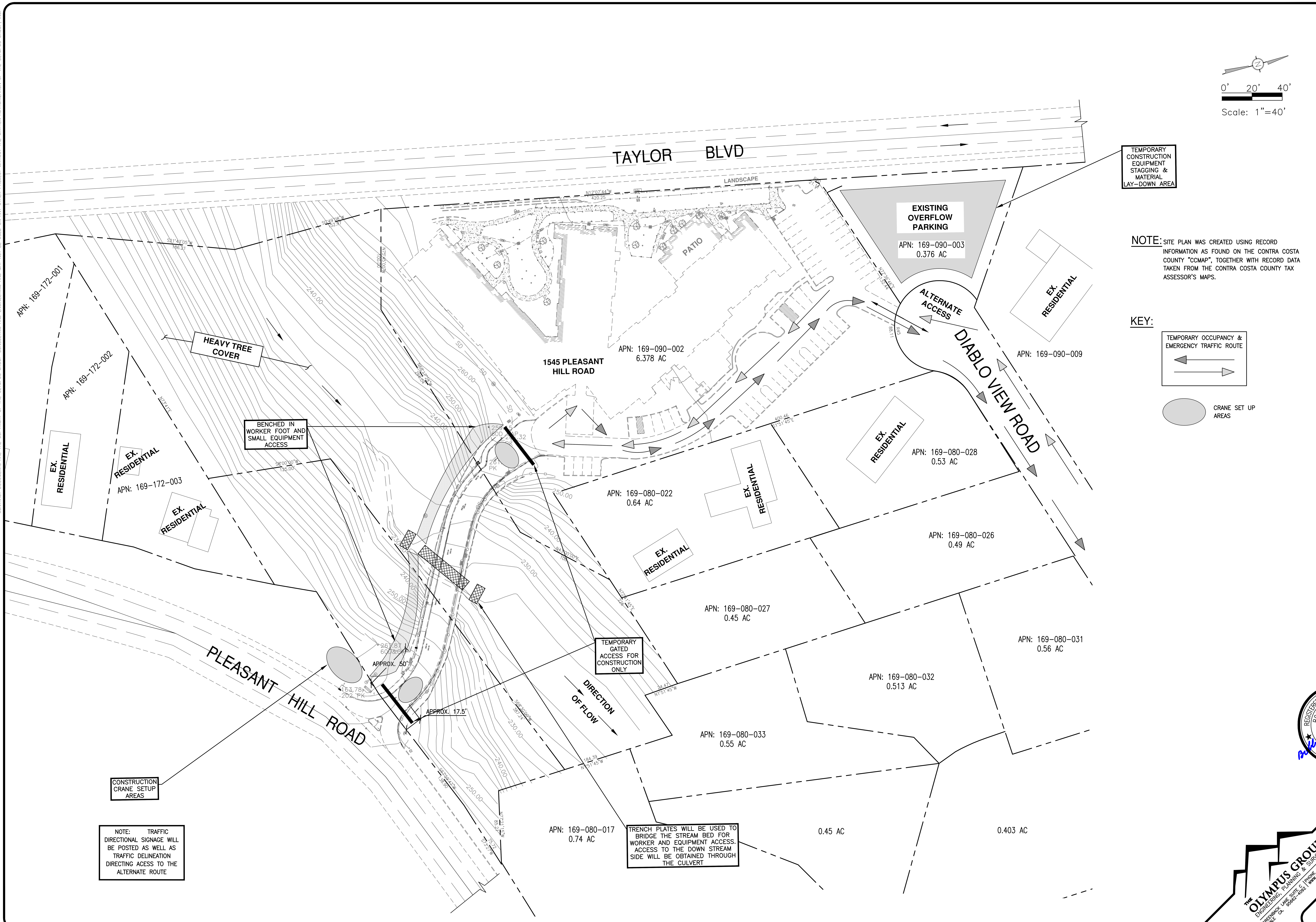
DRAWN BY: IANA T.
DESIGNED BY: R.FRANCIS
CHECKED BY: B.F.BROWNI
DATE: JANUARY, 2024
SCALE: AS SHOWN

THE OLYMPUS GROUP
ENGINEERING, PLANNING & SURVEYING
8850 GREENBACK LANE, SUITE C | PHONE 916-596-6228
ORANGEVALE, CA 95662-4092 | WWW.OLYGROUP.NET

PROJECT NO: 23-001

C12
SHEET 12 OF 30

P:\23-001 ATRIA LAFAYETTE - MAIN ROAD RETROFIT\CADD\ENGR\IMPROVEMENT PLANS\IMPROVEMENT PLANS\23001P_C12-PP02.DWG Jun 16, 2024-03:28 pm OWNER



NOTE: SITE PLAN WAS CREATED USING RECORD INFORMATION AS FOUND ON THE CONTRA COSTA COUNTY "CCMAP", TOGETHER WITH RECORD DATA TAKEN FROM THE CONTRA COSTA COUNTY TAX ASSESSOR'S MAPS.

KEY:

- TEMPORARY OCCUPANCY & EMERGENCY TRAFFIC ROUTE
- CRANE SET UP AREAS

CALL BEFORE YOU DIG — UNDERGROUND SERVICE ALERT — CA: 800-227-2600

REVISIONS:

ATRIA LAFAYETTE
APN 169-090-002
ACCESS PLAN
CONTRA COSTA COUNTY, CALIFORNIA , CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — BOBBIE F. BROWNII — No. 48856 — Exp. 09-30-2024 — CIVIL — STATE OF CALIFORNIA

THE OLYMPUS GROUP
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DRAWN BY: IANA T.
DESIGNED BY: R.FRANCIS
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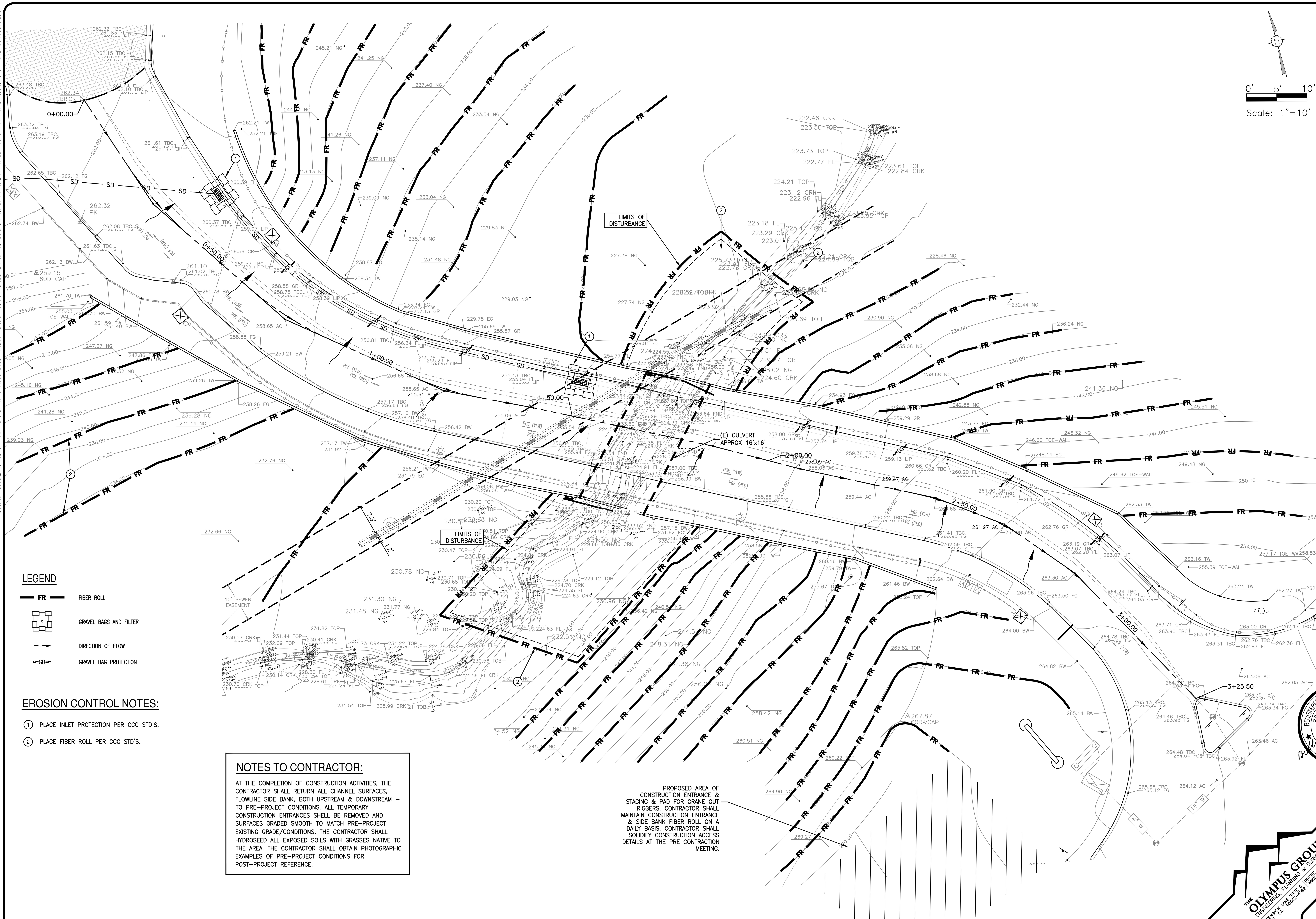
DATE: JANUARY, 2024
SCALE: AS SHOWN

PROJECT NO: 23-001

C13



LEGEND

—FR—	FIBER ROLL
(symbol)	GRAVEL BAGS AND FILTER
→	DIRECTION OF FLOW
—GB—	GRAVEL BAG PROTECTION

EROSION CONTROL NOTES:

1. PLACE INLET PROTECTION PER CCC STD'S.
2. PLACE FIBER ROLL PER CCC STD'S.

NOTES TO CONTRACTOR:

AT THE COMPLETION OF CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL RETURN ALL CHANNEL SURFACES, FLOWLINE SIDE BANK, BOTH UPSTREAM & DOWNSTREAM – TO PRE-PROJECT CONDITIONS. ALL TEMPORARY CONSTRUCTION ENTRANCES SHELL BE REMOVED AND SURFACES GRADED SMOOTH TO MATCH PRE-PROJECT EXISTING GRADE/CONDITIONS. THE CONTRACTOR SHALL HYDROSEED ALL EXPOSED SOILS WITH GRASSES NATIVE TO THE AREA. THE CONTRACTOR SHALL OBTAIN PHOTOGRAPHIC EXAMPLES OF PRE-PROJECT CONDITIONS FOR POST-PROJECT REFERENCE.

CALL BEFORE YOU DIG
CA: 800-227-2600

REVISIONS:

ATRIA LAFAYETTE

APN 169-090-002

EROSION CONTROL PLAN

CONTRA COSTA COUNTY, CALIFORNIA, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BOBBIE F. BROWN II
No. 48856
Exp. 09-30-2024
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DRAWN BY: IANA T.
DESIGNED BY: R.FRANCIS
CHECKED BY: B.F.BROWNII
DATE: JANUARY, 2024
SCALE: AS SHOWN

PROJECT NO: 23-001

C14

P:\23-001 ATRIA LAFAYETTE - MAIN ROAD RETROFIT\CADD\ENGR\IMPROVEMENT PLANS\23001IP_C14-ER01.DWG Jan 16, 2024-03:30 pm OWNER

NOTE:

STRAW MULCH SHALL BE USED IN CONJUNCTION WITH HYPROSEEDING DURING THE WET SEASON FOR SOIL STABILIZATION. HYDROSEEDING ALONE MAY BE USED IF THERE IS ADEQUATE TIME TO ENSURE VEGETATION ESTABLISHMENT BEFORE THE START OF THE RAIN SEESON.

POST CONSTRUCTION DRAINAGE SWALE NOTES:

1. AT COMPLETION OF PROJECT AND PRIOR TO A STORM EVENT. PROVIDE POST CONSTRUCTION STABILIZATION OF DRAINAGE SWALES.
2. PROVIDE HYDROSEEDING 10 PER CONTRA COSTA COUNTY STD'S OR EROSION CONTROL BLANKET ALONG FLOWLINE & SIDE SLOPES OF DITCH.

DUST CONTROL:

1. DUST SHALL BE CONTROLLED BY WATERING THROUGHOUT THE EXCAVATION AND GRADING PROCESS. THE CONTRACTOR SHALL ARRANGE AND PAY FOR CONSTRUCTION WATER AS APPLICABLE.

MAINTENANCE NOTES:

HYDROSEEDING:
1. ALL SLOPES SHALL BE MAINTAINED TO PREVENT EROSION.
2. SEEDED AREAS SHALL BE INSPECTED FOR FAILURES AND RE-SEEDED, FERTILIZED, AND MULCHED WITHIN THE PLANTING SEASON. ANY TEMPORARY REVEGETATION EFFORTS THAT DO NOT PROVIDE ADEQUATE COVER MUST BE REVEGETATED AS REQUIRED BY THE COUNTY ENGINEER.

PRESERVATION OF EXITING VEGETATION (AS APPLICABLE):
IRRIGATION AND MAINTENANCE REQUIREMENTS SHALL BE SPECIFIED ON THE PLANS. IRRIGATION SHALL BE PROVIDED AS NEEDED TO MAINTAIN THE VEGETATION YEAR ROUND.

STABILIZED CONSTRUCTION ACCESS:
1. INSPECT STABILIZED CONSTRUCTION ACCESS DAILY FOR DAMAGE AND EFFECTIVENESS OF PREVENTING SOIL, SEDIMENT, AND CONSTRUCTION DEBRIS FROM BEING TRACKED ONTO PUBLIC STREETS. STREETS ADJACENT TO STABILIZED CONSTRUCTION ACCESS AREAS SHALL BE SWEPT DAILY TO REMOVE LOOSE MATERIALS.
2. REMOVE AGGREGATE, SEPARATE, AND DISPOSED OF SEDIMENT IF CONSTRUCTION ACCESS IS CLOGGED WITH SEDIMENT OR AS DIRECTED BY THE COUNTY INSPECTOR.

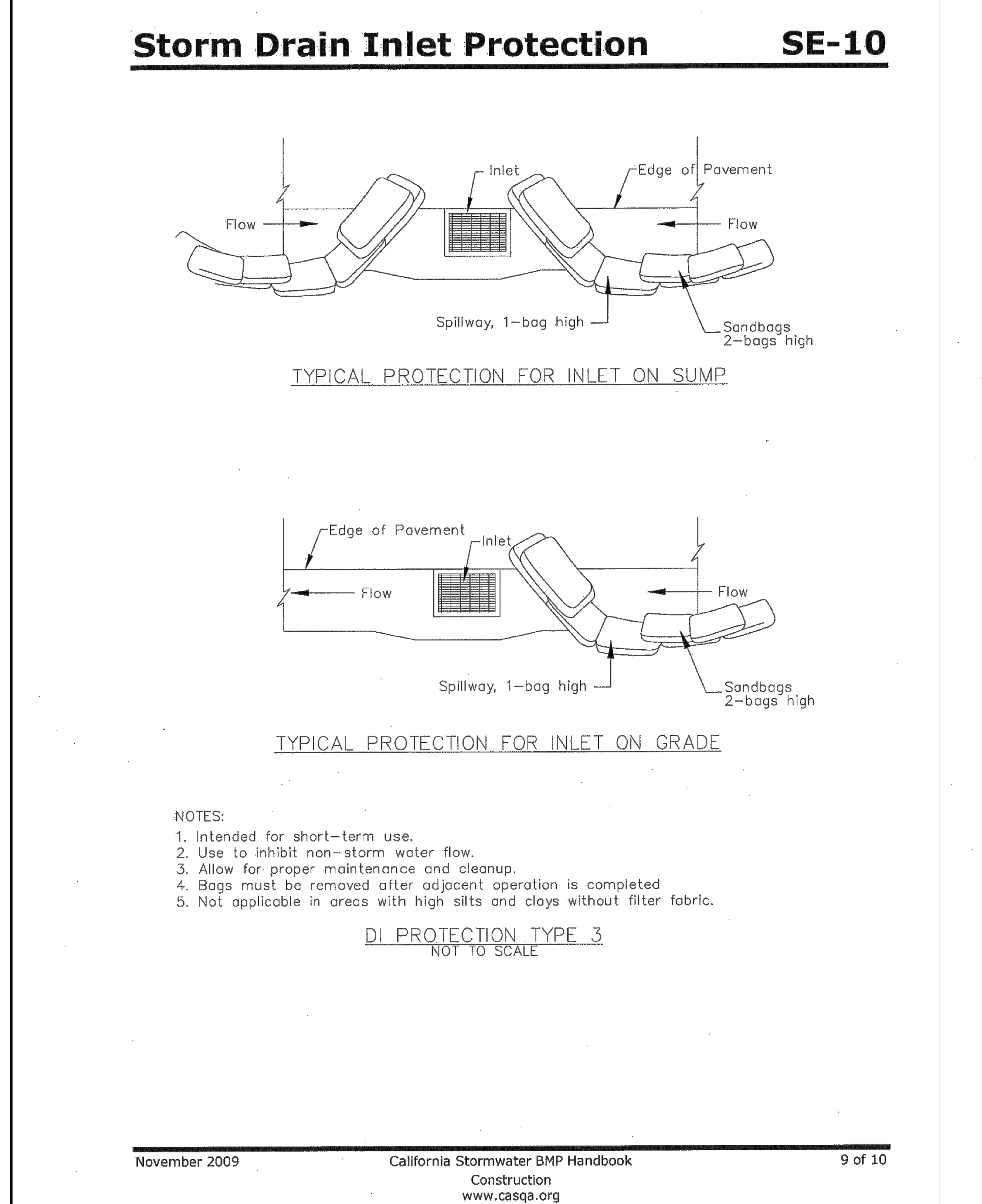
SOIL BINDERS:
1. AVOID VEHICULAR AND PEDESTRIAN TRAFFIC ON TREATED AREAS.
2. INSPECT HIGH TRAFFIC AREAS DAILY. LOW TRAFFIC AREAS SHOULD BE INSPECTED WEEKLY. DURING WET WEATHER INSPECTIONS SHOULD BE COMPLETED DAILY AND LOGGED IN THE SWPPP MAINTENANCE LOG. 3. FAILED SLOPES SHALL BE REPAIRED IMMEDIATELY. 4. REAPPLY SOIL BINDER AS NECESSARY FOR PROPER MAINTENANCE.

GEOTEXTILES, PLASTIC COVERS, AND EROSION CONTROL BLANKETS/MATS:
1. ALL BLANKETS SHALL BE INSPECTED PERIODICALLY AFTER INSTALLATION.
2. INSPECT INSTALLATIONS AFTER SIGNIFICANT RAINFALLS TO CHECK FOR EROSION AND UNDERMINING. REPAIR FAILURES IMMEDIATELY. DAMAGE TO SLOPES OR CHANNELS SHALL BE REPAIRED PRIOR TO REINSTALLING BLANKETS/MATS.

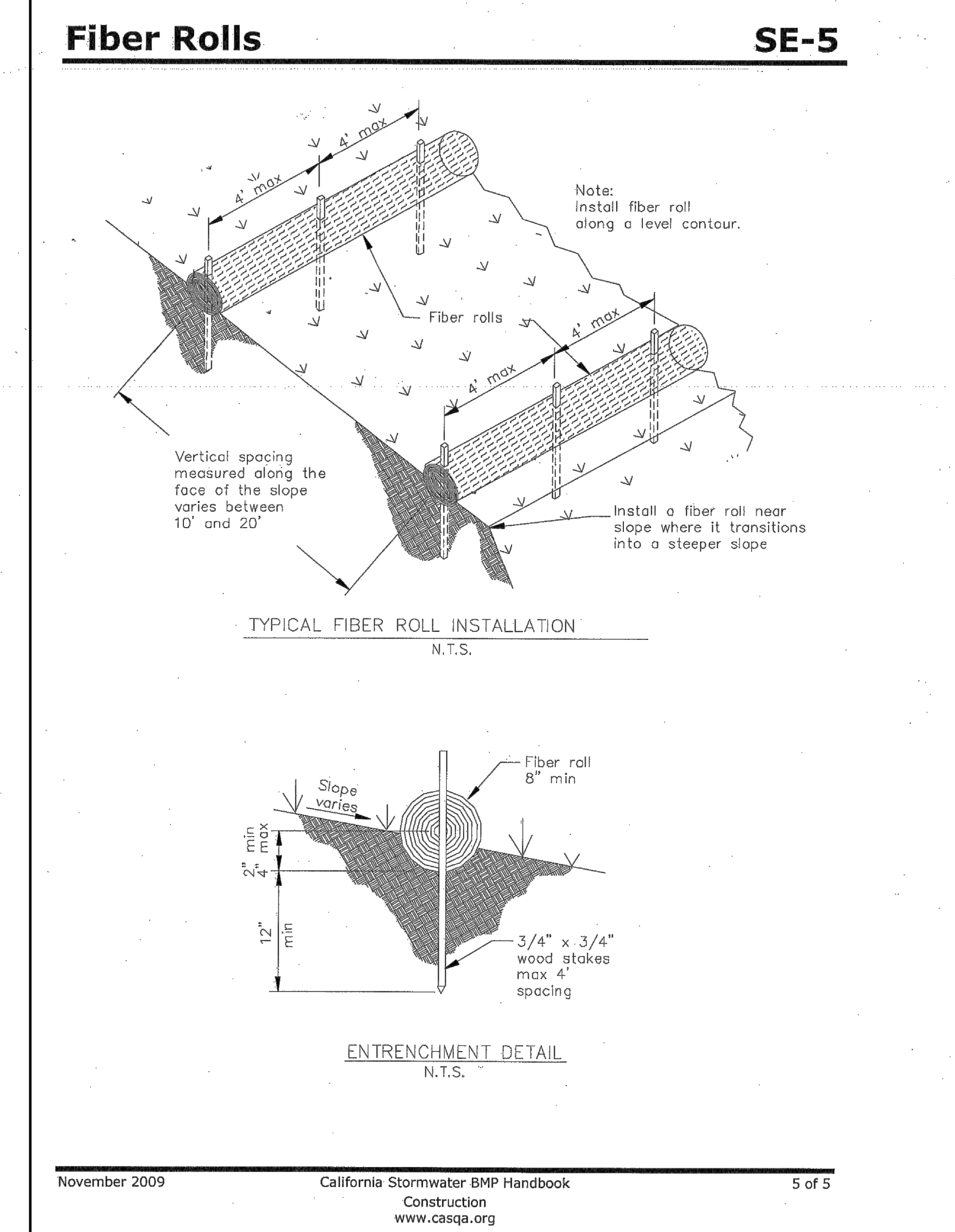
CONCRETE WASHOUT:
1. INSPECT CONCRETE WASHOUTS DAILY.
2. CONCRETE WASHOUTS SHALL BE MAINTAINED TO PROVIDE HOLDING CAPACITY WITH A MINIMUM FREEBOARD OF 4 INCHES. HARDENED CONCRETE SHALL BE REMOVED AND DISPOSED OF PROPERLY AND THE WASHOUT FACILITIES RETURNED TO A FUNCTIONAL CONDITION.
3. CONCRETE WASHOUTS SHALL BE CLEANED WHEN THE WASTE VOLUME IN THE WASHOUT REACHES 75 PERCENT OF CAPACITY.

STRAW MULCH:
1. REAPPLICATION OF STRAW MULCH AND TACKIFIER MAY BE REQUIRED BY THE COUNTY ENGINEER TO MAINTAIN EFFECTIVE SOIL STABILIZATION OVER DISTURBED AREAS AND SLOPES.
2. SLOPES SHALL BE MAINTAINED AND REPAIRED IMMEDIATELY AFTER ANY RAINFALL EVENT.

FIBER ROLLS:
1. REPAIR OR REPLACE SPLIT, TORN, UNRAVELING, OR SLUMPING FIBER ROLLS.
2. INSPECT FIBER ROLLS WHEN RAIN IS FORECAST.
3. IN ACTIVE CONSTRUCTION AREAS WHERE FIBER ROLLS ARE REMOVED DURING THE WORK DAY, RETURN OR REPLACE THE FIBER ROLL TO ITS PROPER PLACE AND STAKE IT DOWN AT THE END OF EACH WORKDAY DURING THE WET SEASON.



C TYPICAL SECTION NTS



E TYPICAL SECTION NTS

BMP SCHEDULE

CONSTRUCTION PHASE	WET SEASON (OCT 15 – APR 30)				YEAR ROUND								
	HYDROSEEDING	STRAW MULCHING & TACTIFIER BLANKETS	PRESERVATION OF EXISTING VEGETATION	CONTAINMENT BASINS/V-DITCHES (OR 100% EROSION CONTROL)	FIBER ROLLS	CONCRETE WASHOUT	DUST CONTROL	SAND/GRAVEL BAG BARRIERS	STORM DRAIN INLET PROTECTION	DEWATERING	DI STENCILING	STABILIZED CONSTRUCTION ENTRANCE	MATERIAL & WASTE DISPOSAL LOCATION
PRE-GRADING			●		●		●		●	N/A	N/A	●	●
ON-SITE EARTHWORK	●	●	●	●	●	●	●	●	●	●	↓	●	●
FOUNDATION/HARDSCAPE	N/A	●	●	●	●	●	●	●	●	●	↓	●	●
STORM DRAINAGE IMPROVEMENTS	●	●	●	●	●	●	●	●	●	●	↓	●	●
PUBLIC STREET IMPROVEMENTS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	↓	N/A	N/A
PAVEOUT	N/A	N/A	N/A	N/A	↓	↓	↓	↓	↓	↓	↓	↓	●
POST-CONSTRUCTION	●	●	●	●	●	↓	↓	↓	↓	↓	↓	↓	N/A

ADDITIONAL EROSION AND SEDIMENT CONTROL NOTES

1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE CURRENT EDITION OF THE CONTRA COSTA COUNTY IMPROVEMENT STANDARDS.
2. EROSION CONTROL BEST MANAGEMENT PRACTICES (BMPS) SHALL BE INSTALLED AND MAINTAINED DURING THE WET SEASON (OCTOBER 1 THROUGH APRIL 30). SEDIMENT CONTROL BMPS SHALL BE INSTALLED AND MAINTAINED YEAR ROUND.
3. ALL DRAINAGE INLETS IMMEDIATELY DOWNSTREAM OF THE WORK AREAS AND WITHIN THE WORK AREAS SHALL BE PROTECTED WITH SEDIMENT CONTROL YEAR ROUND. SEDIMENT CONTROL PROTECTION SHALL BE REMOVED FROM THE DRAINAGE INLETS PRIOR TO ACCEPTANCE OF THE PUBLIC IMPROVEMENTS BY THE COUNTY.
4. ALL STABILIZED CONSTRUCTION ACCESS LOCATIONS SHALL BE CONSTRUCTED PER CONTRA COSTA COUNTY STD'S WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES PAVED AREAS. THE STABILIZED ACCESS SHALL BE MAINTAINED ON A YEAR ROUND BASIS UNTIL THE COMPLETION OF CONSTRUCTION.
5. ALL AREAS DISTURBED DURING CONSTRUCTION BY GRADING, TRENCHING, OR OTHER ACTIVITIES, SHALL BE PROTECTED FROM EROSION DURING THE WET SEASON (OCTOBER 1 THROUGH APRIL 30). HYDROSEED, IF UTILIZED, MUST BE PLACED BY SEPTEMBER 15. HYDROSEED PLACED DURING THE WET SEASON SHALL USE A SECONDARY EROSION PROTECTION METHOD.
6. SENSITIVE AREAS AND AREAS WHERE EXISTING VEGETATION IS BEING PRESERVED SHALL BE PROTECTED WITH CONSTRUCTION FENCING. SEDIMENT CONTROL BMPS SHALL BE INSTALLED WHERE ACTIVE CONSTRUCTION AREAS DRAIN INTO SENSITIVE OR PRESERVED VEGETATION AREAS.
7. SEDIMENT CONTROL BMPS SHALL BE PLACED ALONG THE PROJECT PERIMETER WHERE DRAINAGE LEAVES THE PROJECT. SEDIMENT CONTROL BMPS SHALL BE MAINTAINED YEAR ROUND UNTIL THE CONSTRUCTION IS COMPLETE OR THE DRAINAGE PATTERN HAS BEEN CHANGED AND NO LONGER LEAVES THE SITE.
8. EROSION AND SEDIMENT CONTROL MEASURES FOR THE PROJECT SHOULD BE IN SUBSTANTIAL COMPLIANCE AT ALL TIMES WITH THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED FOR THE PROJECT IN ACCORDANCE WITH THE STATE OF CALIFORNIA GENERAL CONSTRUCTION PERMIT. THIS PERMIT REQUIRES THAT THE SWPPP BE KEPT UP TO DATE TO REFLECT THE CHANGING SITE CONDITIONS AND THE SWPPP TO BE AVAILABLE ON SITE AT ALL TIMES FOR REVIEW BY STATE INSPECTORS (IF APPLICABLE).
9. EFFECTIVE EROSION CONTROL BMPS SHALL BE IN PLACE PRIOR TO ANY STORM EVENTS.
10. IF COLLOIDAL SOILS ARE ENCOUNTERED, REMOVAL OF COLLOIDAL SUSPENSIONS BY A COUNTY APPROVED METHOD BEFORE DISCHARGE IS REQUIRED.

CONTRA COSTA COUNTY EROSION AND SEDIMENT CONTROL NOTES:

- 88-11.820 – DRAINAGE, EROSION AND SEDIMENT CONTROL.

SHARE LINK TO SECTIONPRINT SECTIONDOWNLOAD (DOCX) OF SECTIONSEMAIL SECTION (A)

ANY TEMPORARY STREAM OR WATERSHED DIVERSION SHALL BE RESTORED IN FINAL RECLAMATION TO ITS CONDITION PRIOR TO SURFACE MINING OPERATIONS, UNLESS THE PLANNING AGENCY DETERMINES RESTORATION IS UNNECESSARY. (B)

REGRADING AND REVEGETATION SHALL BE DESIGNED AND CARRIED OUT TO MINIMIZE EROSION, TO PROVIDE FOR DRAINAGE TO NATURAL OUTLETS OR INTERIOR BASINS DESIGNED FOR WATER STORAGE, AND TO ELIMINATE CLOSED DEPRESSIONS AND SIMILAR CATCHMENTS THAT COULD SERVE AS BREEDING AREAS FOR INSECTS. (C)

SILT BASINS, WHICH HAVE OUTLET TO LOWER GROUND AND WILL OR MAY STORE WATER DURING PERIODS OF SURFACE RUNOFF, SHALL BE EQUIPPED WITH SEDIMENT CONTROL AND REMOVAL FACILITIES, AND WITH PROTECTED SPILLWAYS DESIGNED TO MINIMIZE EROSION. (D)

FINAL GRADING AND DRAINAGE SHALL BE DESIGNED TO PREVENT DISCHARGE OF SEDIMENT LOADS HIGHER THAN BEFORE MINING OPERATIONS. (E)

UPON RECLAMATION, THE OPERATOR SHALL PRECLUDE OR ELIMINATE ANY CONDITION WHICH WILL OR COULD LEAD TO THE DEGRADATION OF WATER QUALITY BELOW APPLICABLE STANDARDS OF THE REGIONAL WATER QUALITY CONTROL BOARD OR ANY OTHER AGENCY WITH AUTHORITY OVER WATER QUALITY.

(ORD. 79-114).

EARTHWORK

STRIPPING/DEMO	= APPROX. XX±	CU. YDS.
EXCAVATION/IMPORT	= APPROX. XX	CU. YDS.
EXPORT	= APPROX. 0	CU. YDS.

EROSION CONTROL RESPONSIBLE PERSON

NAME ____________ CONTACT NUMBER ____________

TOTAL DISTURBED AREA = XX,XXX SF ±

NOTE:

THIS PROJECT DISTURBS LESS THAN 1 ACRE (40548.55 SF) THEREFORE A SWPPP IS NOT NEEDED.

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USA
UNDERGROUND SERVICE ALERT
CA: 800-227-2600

REVISIONS:

ATRIA LAFAYETTE
APN 169-090-002
EROSION CONTROL NOTES
CONTRA COSTA COUNTY, CALIFORNIA, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BOBBIE F. BROWNII
No. 48856
Exp. 09-30-2024
CIVIL
STATE OF CALIFORNIA

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WWW.OLYGROUP.NET

DRAWN BY: IANA T.
DESIGNED BY: R.FRANCIS
CHECKED BY: B.F.BROWNII
DATE: JANUARY, 2024
SCALE: 1"=20'

PROJECT NO: 23-001

C15

INTENT OF DRAWINGS

1. TYPICAL DETAILS AND GENERAL NOTES ON THESE DRAWINGS APPLY TO ALL PARTS OF THE JOB EXCEPT WHERE SPECIFICALLY DETAILED OR NOTED OTHERWISE ON THEIR SHEET.
2. RESOLVE ANY CONFLICTS ON THE DRAWINGS WITH THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. DIMENSIONS TAKE PRECEDENCE OVER SCALE OF DRAWINGS. HOWEVER, ANY SIGNIFICANT CONFLICTS SHOULD BE RESOLVED AS NOTED ABOVE.
3. VERIFY ALL DIMENSIONS AND CONDITIONS ON THE JOB. RESOLVE ANY CONFLICTS BETWEEN EXISTING CONDITIONS AND INFORMATION SHOWN ON THESE DRAWINGS WITH THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.
4. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE MEANS OR METHODS OR SEQUENCES OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY BRACING, SHORING AND SUPPORT NECESSARY TO ACHIEVE THE FINISHED STRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING AND ENFORCING ALL CONSTRUCTION LOAD LIMITS ON THE STRUCTURE.

GENERAL

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE DRAWINGS AND GENERAL NOTES AND SPECIFICATIONS.
2. ALL APPLICABLE REQUIREMENTS OF THE CALIFORNIA CONSTRUCTION AND GENERAL INDUSTRY SAFETY ORDERS, THE OCCUPATIONAL SAFETY AND HEALTH ACT AND THE CONSTRUCTION SAFETY ACT SHALL BE MET.
3. ALL ERECTION PROCEDURES SHALL CONFORM TO OSHA STANDARDS. ANY DEVIATION MUST BE APPROVED BY OSHA PRIOR TO ERECTION.
4. ALL NECESSARY PERMITS, LICENSES, APPROVALS, FEES, NOTICES, ETC, SHALL BE OBTAINED PRIOR TO BEGINNING CONSTRUCTION.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE STRUCTURE DURING THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL RETAIN A CALIFORNIA REGISTERED CIVIL ENGINEER TO DESIGN ALL TEMPORARY SHORING, BRACING AND GUYS REQUIRED DURING CONSTRUCTION IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES.
6. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITIES AGENCIES AS TO THE LOCATION OF ALL UNDERGROUND FACILITIES FOR THE PROTECTION OF AND REPAIR OF DAMAGE TO THEM. CALL "UNDERGROUND SERVICE ALERT" FORTY-EIGHT HOURS BEFORE DIGGING.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND SHALL BE RESOLVED BEFORE PROCEEDING WITH THE WORK.
9. SHOP DRAWINGS REQUIRED BY THE CONTRACT DOCUMENTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION. ALL SHOP DRAWINGS SHALL BE REVIEWED BY THE GENERAL CONTRACTOR BEFORE SUBMITTAL. THE ENGINEER'S REVIEW IS TO BE FOR CONFORMANCE WITH THE DESIGN CONCEPT AND GENERAL COMPLIANCE WITH THE RELEVANT CONTRACT DOCUMENTS. THE ENGINEER'S REVIEW DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW, CHECK AND COORDINATE THE SHOP DRAWINGS PRIOR TO SUBMISSION. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, DIMENSIONS, ETC.
10. ALL DETAILS DESIGNATED AS STANDARD OR TYPICAL SHALL APPLY TO ALL APPLICABLE CONDITIONS IN ADDITION TO OTHER SPECIFICALLY REFERENCED DETAILS AND SECTIONS.
11. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW BY THE ENGINEER
12. REFER TO CIVIL, MECHANICAL, HVAC, PLUMBING AND ELECTRICAL DRAWINGS FOR SIZE AND LOCATION OF ALL OPENINGS REQUIRED FOR DUCTS, PIPES AND PIPE SLEEVES, ELECTRICAL CONDUITS AND OTHER ITEMS TO BE EMBEDDED IN CONCRETE OR OTHERWISE INCORPORATED IN STRUCTURAL WORK. NO PIPES OR DUCTS SHALL BE EMBEDDED INTO STRUCTURAL MEMBERS UNLESS SHOWN ON THE PLANS.
13. CIVIL, MECHANICAL, PLUMBING AND ELECTRICAL PLANS ARE CONSIDERED A PART OF THE STRUCTURAL DESIGN DRAWINGS AND ARE TO BE USED TO DEFINE DETAIL CONFIGURATIONS INCLUDING, BUT NOT LIMITED TO RELATIVE LOCATION OF MEMBERS, ELEVATIONS, LOCATION OF ALL OPENINGS, ETC.
14. REFER TO CIVIL PLANS FOR FLOOR DEPRESSIONS, OPENINGS, SLOPES, DRAINS, CURBS, PADS, EMBEDDED ITEMS
15. REFER TO CIVIL DRAWINGS FOR ALL SIDEWALK LOCATIONS AND DETAILING REQUIREMENTS. SIDEWALK INFORMATION IS NOT SHOWN ON STRUCTURAL DRAWINGS.

TESTS AND INSPECTIONS

STRUCTURAL TESTS AND SPECIAL INSPECTIONS SHALL BE PROVIDED BY A QUALIFIED TESTING AND INSPECTION AGENCY AS REQUIRED BELOW AND SHALL CONFORM TO THE REQUIREMENTS OF CHAPTER 17 OF THE CBC.

<u>TESTS:</u>

- ☒ FILL COMPACTION
- ☒ REINFORCING STEEL
- ☒ CONCRETE
- ☒ STRUCTURAL STEEL
- ☐ MASONRY
- ☐ GROUT AND MORTAR
- ☒ EPOXY AND EXPANSION ANCHORS
- ☐ SHOTCRETE

<u>INSPECTIONS:</u>

- ☒ SPECIAL GRADING, EXCAVATION AND FILLING
- ☐ PILE/PIER INSTALLATION
- ☒ REINFORCEMENT PLACEMENT
- ☒ CONCRETE PLACEMENT
- ☐ SHOP WELDING
- ☐ FIELD WELDING
- ☐ HIGH STRENGTH BOLTING
- ☐ MASONRY PLACEMENT AND GROUTING
- ☐ SHEAR STUD INSTALLATION
- ☒ EPOXY AND EXPANSION ANCHORS
- ☐ SHOTCRETE
- ☐ ANCHOR BOLT SIZE AND PLACEMENT

DESIGN CRITERIA

1. CODES AND STANDARDS:

   2019 CALIFORNIA BUILDING CODE (CBC)

   ACI 318-14 ACI BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE

2. SEISMIC DESIGN PARAMETERS;

   SITE CLASS D
   SEISMIC DESIGN CATEGORY D
   RISK CATEGORY III

   $S_S = 0.59g$ $F_a = 1.33$ $S_{DS} = 0.52g$
   $S_1 = 0.26g$ $F_v = 2.08$ $S_{D1} = 0.36g$
   $I = 1.00$

3. WIND LOADS

   RISK CATEGORY = II
   BASIC WIND SPEED = 95 MPH
   EXPOSURE CATEGORY = C

GEOTECHNICAL DESIGN PARAMETERS

1. THE STRUCTURAL DESIGN IS BASED ON THE GEOTECHNICAL RECOMMENDATIONS STATED IN THE FOLLOWING GEOTECHNICAL ENGINEERING REPORT:

   TITLE GEOTECHNICAL STUDY
   DISTRESSED ENTRANCE ACCESS
   ROAD AT ATRIA PARK
   1545 PLEASANT HILL ROAD
   LAFAYETTE, CALIFORNIA
   BY GEOTECNIA CONSULTING GEOTECHNICAL ENGINEERS
   PROJ No. 172370
   DATE JUNE 8, 2018

2. GEOTECHNICAL DESIGN PARAMETERS

   <u>ALLOWABLE BEARING PRESSURES</u>

   DEAD+LIVE = 1500 PSF
   DEAD+LIVE+TRANSIENT = 2000 PSF

   <u>LATERAL EARTH PRESSURES</u>

   ACTIVE PRESSURE (IN-SITU) = 132 PSF/FT
   ACTIVE PRESSURE (URETEK STABALIZED) = 105 PSF/FT

DETAIL AND SECTION REFERENCE TAGS

DETAIL REFERENCE TAG (XX / S-X) — XX: DETAIL LETTER; S-X: DRAWING WHERE DETAIL OCCURS

DETAILS ARE **NOT** CROSS REFERENCED BACK TO SHEETS WHERE DETAIL REFERENCE TAG OCCURS

SECTION REFERENCE TAG (XX / S-X) — XX: SECTION NUMBER; S-X: DRAWING WHERE SECTION OCCURS

SECTIONS ARE CROSS REFERENCED BACK TO SHEETS WHERE SECTION REFERENCE TAG OCCURS

(X / S-X) **SECTION**
SCALE: DRAWING WHERE SECTION IS REFERENCE ON PLAN — **S-X**

FOUNDATION AND EARTHWORK

1. THE FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL RECOMMENDATIONS STATED IN THE GEOTECHNICAL ENGINEERING REPORT. REFER TO GEOTECHNICAL DESIGN PARAMETERS **NOTE 1** ON SHEET **S-1**.
2. UNLESS OTHERWISE INDICATED, FOUNDATION WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REFERENCED GEOTECHNICAL ENGINEERING REPORT. THIS REPORT IS SUPPLEMENTAL INFORMATION AND SHOULD BE KEPT ON THE JOB SITE AT ALL TIMES.
3. IT IS RECOMMENDED THAT THE FOUNDATION EXCAVATIONS BE EXAMINED AND APPROVED BY THE GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE PRIOR TO THE PLACEMENT OF ANY REINFORCING STEEL OR CONCRETE.
4. UNEXPECTED SOIL CONDITIONS: FOUNDATION DESIGN IS BASED UPON SOIL CONDITIONS SHOWN BY TEST BORINGS IN THE REFERENCED GEOTECHNICAL ENGINEERING REPORT. ANY SUBSURFACE CONDITIONS NOT IN ACCORDANCE WITH THE REFERENCED GEOTECHNICAL REPORTS SHALL BE REPORTED TO THE GEOTECHNICAL ENGINEER IMMEDIATELY FOR RESOLUTION PRIOR TO CONTINUING ANY WORK.
5. FOUNDATIONS SHALL BEAR ON APPROVED COMPACTED SUB-BASE OR COMPACTED FILL AS REQUIRED BY GEOTECHNICAL ENGINEERING REPORT. SOIL SHALL BE COMPACTED UNDER AND AROUND THE SIDES OF ALL FOOTINGS AND SLABS.
6. COMPACTED FILL: AREAS TO RECEIVE FILL SHOULD BE STRIPPED OF ANY VEGETATION, DEBRIS, ANIMAL BURROWS, EXISTING UNENGINEERED FILL, OR OTHER DELETERIOUS MATERIAL. THE APPROVED EXPOSED SURFACE SHOULD BE SCARIFIED TO A DEPTH OF 8 INCHES; MOISTURE CONDITIONS TO AT, OR ABOVE, THE OPTIMUM MOISTURE, AND COMPACTED TO AT LEAST 90% OF THE ASTM D1557 MAXIMUM DRY DENSITY. FILL SHALL CONSIST OF ON-SITE, OR SIMILAR, SOIL WHICH IS FREE OF DELETERIOUS MATERIAL AND HAS AN ORGANIC CONTENT LESS THAN 3% BY WEIGHT (ASTM D2321). FILL SHOULD BE MOISTURE CONDITIONED TO AT, OR ABOVE, THE OPTIMUM MOISTURE; SPREAD IN HORIZONTAL LIFTS COMPATIBLE WITH THE COMPACTION EQUIPMENT; AND, UNIFORMLY COMPACTED TO AT LEAST 90% OF THE MAXIMUM DENSITY.
7. COMPACTED BACKFILL: BACKFILL FOR STRUCTURES CAN CONSIST OF EXCAVATED ON SITE, OR SIMILAR, SOIL THAT MEETS THE CRITERIA SPECIFIED IN THE GEOTECHNICAL ENGINEERING REPORT OF THE CONTRACT DOCUMENTS. THE AREA SHALL BE CLEARED OF ALL CONSTRUCTION DEBRIS PRIOR TO BACKFILLING. BACKFILL SHOULD BE MOISTURE CONDITIONED TO, OR ABOVE, THE OPTIMUM MOISTURE; SPREAD IN HORIZONTAL LIFTS; AND, COMPACTED TO AT LEAST 90% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557. LIFT THICKNESS SHOULD BE SUFFICIENTLY THIN TO ALLOW FOR UNIFORM COMPACTION THROUGHOUT THE LIFT. ANY LOOSE SOIL ON CONSTRUCTION SLOPES SHOULD BE REMOVED BY USE OF SMALL NOTCHES (MAXIMUM 2'-0" IN HEIGHT) AS THE FILL IS BROUGHT UP. THE INTENT IS FOR BACKFILL TO BE BONDED INTO COMPETENT UNDISTURBED NATURAL SOIL OR PREVIOUSLY COMPACTED FILL.
8. FORM FOUNDATIONS AS NECESSARY TO ACHIEVE MINIMUM DIMENSIONS SHOWN ON THESE DRAWINGS. EARTH FORMS CAN BE USED IF SOIL CONDITIONS PERMIT EXCAVATION WITHOUT SOIL SLOUGHING DURING STEEL AND CONCRETE PLACEMENT. IF EARTH FORMS ARE USED, INCREASE WIDTH OF FOOTING ONE INCH ON EACH SIDE FROM SIZE SHOWN ON DRAWINGS.
9. BOTTOM OF FOUNDATIONS SHALL BE STEPPED AS NECESSARY TO PROVIDE LEVEL BEARING. CONTRACTOR SHALL PROVIDE PROPOSED STEPS WHERE REQUIRED BY SITE CONDITIONS AND BURIED UTILITY LOCATIONS IN ADDITION TO LOCATIONS SPECIFICALLY NOTED ON THE PLANS AND DETAILS FOR REVIEW AND APPROVAL.
10. FOUNDATION EXCAVATIONS SHALL BE CLEANED OF ANY LOOSENED SOILS, DEBRIS AND STANDING WATER BEFORE PLACING STEEL OR CONCRETE.

ANCHORAGE TO EXISTING CONCRETE

1. UON EPOXY ANCHORS AND DOWELS SHALL BE HILTI HIT HY-150 OR EQUIVALENT WITH ENGINEERS PRIOR APPROVAL. WHERE DOWELS ARE THROUGH DOWELS USE SIKADUR 35, HI MOD LV OR EQUAL.
2. ALL EPOXY GROUTED WORK AND SURFACE PREPARATION AND INSTALLATION SHALL FOLLOW MANUFACTURER'S PRINTED INSTRUCTIONS.
3. DRILL HOLES TO THE DEPTH AND DIAMETER AS SPECIFIED IN THE PRODUCT LITERATURE. HOLES ARE TO BE CLEANED PER SPECIFICATION AND SHALL BE DRY.
4. POST INSTALLED ANCHORS, (EXPANSION AND ADHESIVE TYPE ANCHORS LOADED WITH EITHER PULLOUT OR SHEAR), SHALL HAVE 10% OF THE ANCHORS TESTED WITH A DIRECT TENSION PULL TEST. THE TENSION TEST LOAD SHALL BE 1.25 TIMES THE MAXIMUM DESIGN STRENGTH OR 80% OF THE YIELD STRENGTH OF THE ANCHOR, (0.8 Ab Fy), WHICHEVER IS LESS. THE MAXIMUM DESIGN STRENGTH IS AS DETERMINED IN ACCORDANCE WITH ACI 318 APPENDIX D PROVISIONS. THE SPECIAL INSPECTOR MAY OBTAIN THE DESIGN STRENGTH FROM THE EQUIPMENT ANCHORAGE DEFERRED SUBMITTAL CALCULATIONS. THE SPECIAL INSPECTOR SHALL SELECT THE ANCHORS TO BE TESTED AT RANDOM. IF ANY ANCHOR FAILS TESTING, ALL ANCHORS OF THE SAME TYPE NOT PREVIOUSLY TESTED SHALL BE TESTED UNTIL 20 CONSECUTIVE ANCHORS PASS. THEN RESUME INITIAL TESTING FREQUENCY.
   Ab = AREA OF ANCHOR (in^2)
   Fy = YIELD STRENGTH OF BOLT (PSI)
5. THE REINFORCEMENT IN EXISTING CONCRETE SHALL NOT BE CUT OR DAMAGED BY THE NEW CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT A PROCEDURE FOR IDENTIFICATION OF EXISTING REINFORCEMENT FOR THE ENGINEER'S APPROVAL BEFORE DRILLING.
6. THE REINFORCING BARS SHALL BE FREE OF OILS, PAINTS, DIRT OR OTHER COATINGS THAT WILL REDUCE THE BOND.

REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL CONFORM TO ASTM STANDARD AS NOTED:

   TYPICAL REBAR: A615 GRADE 60
   REBAR WHERE SPECIFICALLY NOTED: A615 GRADE 40
   REBAR TO BE WELDED: A706 GRADE 60

2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185. MINIMUM LAP AT SPLICES SHALL BE 12 INCHES.
3. ALL CONCRETE SHALL BE REINFORCED UNLESS SPECIFICALLY NOTED "NOT REINFORCED" IN THE DRAWINGS. IF REINFORCING BARS ARE NOT SHOWN OR NOTED, PROVIDE SAME REINFORCEMENT AS FOR SIMILAR CONDITIONS ELSEWHERE IN THE WORK, OR AS DIRECTED BY THE ENGINEER.
4. REINFORCEMENT BARS #5 AND LARGER SHALL NOT BE SPLICED EXCEPT AS DETAILED AND LOCATED ON DRAWINGS. #4 AND SMALLER BARS WITH LENGTH NOT SHOWN SHALL BE CONTINUOUS, LAPPING IN CONCRETE 1'-6" MINIMUM. WALL HORIZONTAL REINFORCEMENT SPLICES SHALL BE STAGGERED, VERTICAL REINFORCEMENT SHALL BE SPLICED ONLY AT HORIZONTAL SUPPORTS, SUCH AS ROOF OR FLOOR UNLESS OTHERWISE NOTED ON DRAWINGS. ALL SPLICES SHALL BE CLASS B U.O.N.
5. ANCHOR BOLTS, DOWELS AND OTHER EMBEDDED ITEMS SHALL BE ACCURATELY SET IN PLACE AND FIRMLY SUPPORTED BEFORE CONCRETE IS POURED.
6. REINFORCEMENT BARS SHALL BE ACCURATELY PLACED AND FIRMLY SUPPORTED USING TIES AND SUPPORT BARS IN ADDITION TO REINFORCEMENT SHOWN WHERE FIRM AND ACCURATE PLACING IS NECESSARY AS SPECIFIED IN THE ACI STANDARDS. DOWELS SHOULD BE PROVIDED TO MATCH ALL REINFORCEMENT AT CONSTRUCTION JOINTS UNLESS OTHERWISE NOTED.
7. NO REINFORCEMENT WELDING (TACK WELDING INCLUDED) SHALL BE DONE UNLESS SHOWN ON THE DRAWINGS OR APPROVED BY THE ENGINEER.
8. ALL DIMENSIONS SHOWN FOR LOCATION OF REINFORCING ARE TO THE FACE OF BARS AND DENOTE CLEAR COVERAGE UNLESS OTHERWISE NOTED.
9. MINIMUM CONCRETE COVERAGE OF REINFORCING STEEL SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED ON PLANS:

   CONCRETE CAST AGAINST EARTH 3"

   FORMED CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6-#18 BARS 2"
   #5 BAR AND SMALLER 1 ½"

   SLABS ON GRADE: ¾" (FROM TOP)

10. DRAWINGS SHOW TYPICAL REINFORCING CONDITIONS. CONTRACTOR SHALL PREPARE DETAILED PLACEMENT DRAWINGS OF ALL CONDITIONS SHOWING QUANTITY, SPACING, SIZES, CLEARANCE, LAPS, INTERSECTIONS AND COVERAGE REQUIRED BY STRUCTURAL DETAILS, APPLICABLE CODE AND TRADE STANDARDS. CONTRACTOR SHALL NOTIFY REINFORCING INSPECTOR OF ANY ADJUSTMENTS FROM TYPICAL CONDITIONS WHICH ARE PROPOSED IN PLACEMENT DRAWINGS TO FACILITATE FIELD PLACEMENT OF REINFORCING STEEL AND CONCRETE.

CONCRETE

1. ALL STRUCTURAL CONCRETE SHALL HAVE A DENSITY AFTER CURING BASED ON WEIGHT CLASSIFICATION AS SHOWN BELOW, UON:

   NORMAL WEIGHT: DENSITY = 145 PCF

2. ALL CONCRETE SHALL BE NORMAL WEIGHT UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.
3. ALL STRUCTURAL CONCRETE SHALL BE MADE FROM AGGREGATES BASED ON WEIGHT CLASSIFICATION AS SHOWN BELOW, UON.:
   NORMAL WEIGHT: ASTM C33 WITH PROVEN SHRINKAGE CHARACTERISTICS OF LESS THAN 0.05%
4. ALL CONCRETE SHALL CONFORM TO THE MINIMUM COMPRESSIVE STRENGTHS AND WATER/CEMENTITIOUS MATERIAL RATIOS TABULATED BELOW:

	f'c (28 DAY)
RETAINING WALL STRUCTURES	5000 PSI
FOOTING AND SLAB ON GROUND	5000 PSI

5. ALL CEMENT SHALL CONFORM TO ASTM C150 TYPE II OR V, UON.
6. CONCRETE MIX DESIGNS SHALL BE PREPARED BY AN INDEPENDENT LABORATORY AND REVIEWED BY THE STRUCTURAL ENGINEER.
7. ADMIXTURES SHALL COMPLY WITH ASTM C494 AND BE OF A TYPE THAT INCREASES THE WORKABILITY OF THE CONCRETE, BUT SHALL NOT BE CONSIDERED TO REDUCE THE SPECIFIED MINIMUM CEMENT CONTENT. CALCIUM CHLORIDE SHALL NOT BE USED.
8. PLACEMENT OF CONCRETE SHALL BE IN CONFORMANCE WITH ACI 304.
9. CONTROL JOINTS SHALL BE LOCATED AND FORMED AS SHOWN ON THE DRAWINGS. SLAB CONTROL JOINTS SHALL BE PLACED AT POINTS OF LOW STRESS AS WELL AS LOCATED TO MINIMIZE EFFECTS OF SHRINKAGE. KEY AND DOWEL SLAB CONSTRUCTION JOINTS AS SHOWN ON THE PLANS. ALL CONSTRUCTION JOINTS SHALL BE CLEANED THOROUGHLY AND ALL LAITANCE SHALL BE REMOVED FROM THE SURFACE. ALL VERTICAL JOINTS SHALL BE THOROUGHLY WETTED AND SLUSHED WITH A COAT OF NEAT CEMENT OR BONDING AGENT IMMEDIATELY BEFORE POURING NEW CONCRETE.
10. SET FLOOR SCREEDS TO REQUIRED ELEVATIONS DURING CONCRETE POURING TO COMPENSATE FOR FORM SETTLEMENT.

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REVISIONS:

ATRIA LAFAYETTE
GENERAL STRUCTURAL NOTES
APN 169-090-002
CONTRA COSTA COUNTY, CALIFORNIA , CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — Gerardo V Calvillo Jr. — No. 2920 — Exp. 6-30-24 — STRUCTURAL — STATE OF CALIFORNIA

100% SUBMITTAL

DRAWN BY: IANA T.
DESIGNED BY: R.FRANCIS
CHECKED BY: B.F.BROWNII
DATE: JULY, 2023
SCALE: AS SHOWN

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PROJECT NO: 23-001

S-1

CONDUITS AND PIPES EMBEDDED IN REINFORCED CONCRETE STRUCTURES

1. THE CONTRACTOR SHALL NOT INSTALL ANY CONDUITS, PIPES, DUCTS, OR SLEEVES THAT ARE NOT SHOWN ON THE PLANS OR NOT APPROVED BY THE ENGINEER.
2. CONDUITS AND PIPES OF ALUMINUM SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE.
3. PIPING AND CONDUIT SHALL BE SO FABRICATED AND INSTALLED SUCH THAT CUTTING, BENDING, OR DISPLACEMENT OF REINFORCEMENT FROM IT'S PROPER LOCATION WILL NOT BE REQUIRED.
4. PIPES PASSING THROUGH WALLS OF A LIQUID CONTAINING STRUCTURE SHALL INCLUDE AN INTEGRAL WATERSTOP.
5. LIQUID, GAS, OR VAPOR, EXCEPT WATER NOT EXCEEDING 90° F NOR 50 PSI PRESSURE, SHALL "NOT" BE PLACED UNTIL THE CONCRETE HAS ATTAINED ITS DESIGN STRENGTH.
6. PIPE AND CONDUIT SIZE AND SPACING SHALL BE PER STANDARD DETAILS DESCRIBED WITHIN.

NON-SHRINK GROUT

1. NON-SHRINK GROUT SHALL BE MASTER BUILDERS EMBECO 713, OR SIKA GROUT 212, OR U.S. GROUT FIVE STAR, OR EQUIVALENT WITH ENGINEER'S PRIOR APPROVAL.
2. SURFACE PREPARATION SHALL FOLLOW MANUFACTURER'S PAINTED INSTRUCTIONS. PROPER SURFACE CLEANING AND MOIST CURING IS ESSENTIAL.
3. SAND-BLASTING: REMOVE ALL DIRT, OIL, GREASE, AND OTHER BOND-INHIBITING MATERIALS. CONCRETE MUST BE SAND-BLASTED AND ROUGHENED TO PROMOTE MECHANICAL ADHESION. PRIOR TO POURING, SURFACE SHOULD BE BROUGHT TO A SATURATED SURFACE CONDITION.
4. FORMING: FOR POURABLE GROUT, CONSTRUCT FORMS TO RETAIN GROUT WITHOUT LEAKAGE. FORMS SHOULD BE LINED OR COATED WITH BOND-BREAKER FOR EASY REMOVAL.
5. MIXING: MIX MECHANICALLY WITH LOW-SPEED DRILL (400-600 RPM) AND A MIXING PADDLE AND FOLLOW MANUFACTURER'S RECOMMENDATIONS.
6. NON-SHRINK GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 4,000 PSI PER ASTM C109. TESTING REQUIREMENTS SHALL FOLLOW ACI AND ASTM STANDARDS.

STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITIONS OF AISC SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS, AND CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.
2. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS AND GRADES:
   - WIDE FLANGE BEAMS AND COLUMNS: ASTM A992, GRADE 50
   - CHANNELS, ANGLES AND PLATES: ASTM A36
   - ROUND STEEL PIPE: ASTM A53, TYPE E OR S, GRADE B
   - RECTANGULAR STRUCTURAL TUBING: ASTM A500, GRADE B
3. MACHINE BOLTS SHALL BE GRADE "A" CONFORMING TO ASTM A307, UON. ANCHOR BOLTS SHALL BE GRADE 36 CONFORMING TO ASTM F1554, UON. NUTS SHALL BE STANDARD HEX, GRADE A, CONFORMING TO ASTM A563.
4. WELDING SHALL BE DONE BY A PROCESS APPROVED BY THE ENGINEER AND THE BUILDING DEPARTMENT. WELDERS SHALL BE CERTIFIED IN ACCORDANCE WITH AWS D1.1 LATEST EDITION.
5. A SEQUENCE OF FIELD WELDING SHALL BE PLANNED TO MINIMIZE LOCKED-IN STRESSES AND DISTORTION.
6. WELDING SHALL CONFORM TO AWS D1.1 LATEST EDITION.
7. LENGTHS OF WELDS SHOWN ARE EFFECTIVE LENGTHS AS SPECIFIED IN AWS D1.1. WHERE LENGTH OF WELD IS NOT SHOWN IT SHALL BE FULL LENGTH OF JOINT. ALL BUTT WELDS SHALL BE FULL PENETRATION UNLESS NOTED OTHERWISE.
8. WHERE MINIMUM AISC FILLET WELD THICKNESS REQUIREMENTS EXCEED WELDS SHOWN ON DETAILS, PROVIDE MINIMUM AISC WELD.
9. ALL SHOP WELDING SHALL BE PERFORMED IN AN APPROVED FABRICATOR'S SHOP IN ACCORDANCE WITH CBC 1704.2.5.2.
10. ELECTRODES: AWSD1.1 E70XX SERIES AS REQUIRED FOR INTENDED USE.
11. AFTER FABRICATION, ALL STEEL SHALL BE CLEARED FREE OF RUST, LOOSE MILL SCALE AND OIL AND HOT DIPPED GALVANIZED.
12. SHOP DRAWINGS: CONTRACTOR SHALL PREPARE STEEL SHOP DRAWINGS INDICATING PROFILES, SIZES, SPACING, LOCATIONS OF STRUCTURAL MEMBERS, OPENINGS, ATTACHMENTS, CONNECTIONS AND CAMBERS.

ABBREVIATIONS

AB ANCHOR BOLT
ABV ABOVE
ACI AMERICAN CONCRETE INSTITUTE
ADDL ADDITIONAL
AISC AMERICAN INSTITUTE OF STEEL CONSTRUCTION

ALT ALTERNATE
ALUM ALUMINUM
ANCH ANCHOR, ANCHORAGE
APPROX APPROXIMATE
ARCH ARCHITECT, ARCHITECTURAL
A/E ARCHITECT/ENGINEER
ASPH ASPHALT
ASTM AMERICAN SOCIETY FOR TESTING AND MATERIALS

AWS AMERICAN WELDING SOCIETY

BD BOARD
BN BOUNDARY NAILING
BTWN BETWEEN
BLDG BUILDING
BLKG BLOCKING
BLW BELOW
BM BEAM
BOT BOTTOM
BP BASE PLATE
BRG BEARING
BRKT BRACKET
BOF BOTTOM OF FRAMING
BOS BOTTOM OF STEEL

CC CENTER TO CENTER
CANT CANTILEVER
CAP CAPACITY
CIP CAST-IN-PLACE
CJ CONTROL JOINT
℄ CENTERLINE
CLR CLEAR
CLSM CONTROLLED LOW STRENGTH MATERIAL
CMU CONCRETE MASONRY UNIT
COL COLUMN
CONC CONCRETE
CONST CONSTRUCTION
CONN CONNECTION
CONT CONTINUOUS
CTR CENTER
CF CUBIC FEET
CY CUBIC YARD

DBL DOUBLE
DEMO DEMOLITION
DET DETAIL
DIAG DIAGONAL
DIA DIAMETER
DIM DIMENSION
DO DITTO (REPEAT)
d BAR DIAMETER
DWGS DRAWINGS

EA EACH
EF EACH FACE
EJ EXPANSION JOINT
EL ELEVATION
EN EDGE NAILING
ENGR ENGINEER
EOR ENGINEER OF RECORD
EQ EQUAL
EQUIP EQUIPMENT
EW EACH WAY
(E) EXISTING
EXP EXPANSION
EXT EXTERIOR

FDN FOUNDATION
FIN FINISH, FINISHED
FLR FLOOR
FN FIELD NAILING
FO FACE OF
FOC FACE OF CONCRETE
FOF FACE OF FINISH
FOM FACE OF MASONRY
FOS FACE OF STUD
FOW FACE OF WALL
FP FIREPROOF
FS FAR SIDE
FT FOOT, FEET
FTG FOOTING, FITTING

GA GAUGE, GAGE
GALV GALVANIZED
GLB GLUE LAMINATED BEAM
GYP BD GYPSUM BOARD

HDR HEADER
HEX HEXAGONAL
HGR HANGER
HT HEIGHT
HORIZ HORIZONTAL
HSB HIGH STRENGTH BOLTS
HSS HOLLOW STRUCTURAL SECTION

IBC INTERNATIONAL BUILDING CODE
ID INSIDE DIAMETER
IF INSIDE FACE
IN INCH
INT INTERIOR

JF JOINT FILLER
JST JOIST
JT JOINT

KIP KILOPOUND (1000 POUNDS)
KO KNOCKOUT
KS KING STUD
L ANGLE
LAM LAMINATED
LAT LATERAL
LB POUND (WEIGHT)
LONG LONGITUDINAL
LLH LONG LEG HORIZONTAL
LLV LONG LEG VERTICAL
LT WT LIGHTWEIGHT
LVL LAMINATED VENEER LUMBER
LWC LIGHT WEIGHT CONCRETE

MAS MASONRY
MAT MATERIAL
MAX MAXIMUM
MB MACHINE BOLT
MBM METAL BUILDING MANUFACTURER

MECH MECHANICAL
MEMB MEMBRANE
MEZZ MEZZANINE
MFR MANUFACTURER
MIN MINIMUM
MISC MISCELLANEOUS
MTL METAL

(N) NEW
NS NEAR SIDE
NTS NOT TO SCALE
NO NUMBER

oc ON CENTER
OD OUTSIDE DIAMETER
OF OUTSIDE FACE
OPNG OPENING
OPP OPPOSITE
OH OPPOSITE HAND

PAF POWDER ACTUATED FASTENERS
PAR PARALLEL
PARTN PARTITION
PCF POUNDS PER CUBIC FOOT
PERIM PERIMETER
PERP PERPENDICULAR
℘ PLATE
PLF POUNDS PER LINEAL FOOT
PLYWD PLYWOOD
PN PLATE NAILING
PP PARTIAL PEN
PSF POUNDS PER SQUARE FOOT
PSI POUNDS PER SQUARE INCH
PSL PARALLEL STRAND LUMBER
PT PRESERVATIVE/PRESSURE TREATED

QUAL QUALITY
QTY QUANTITY

R RADIUS
RCP REINFORCED CONCRETE PIPE
REINF REINFORCEMENT
REQD REQUIRED
REV REVISION

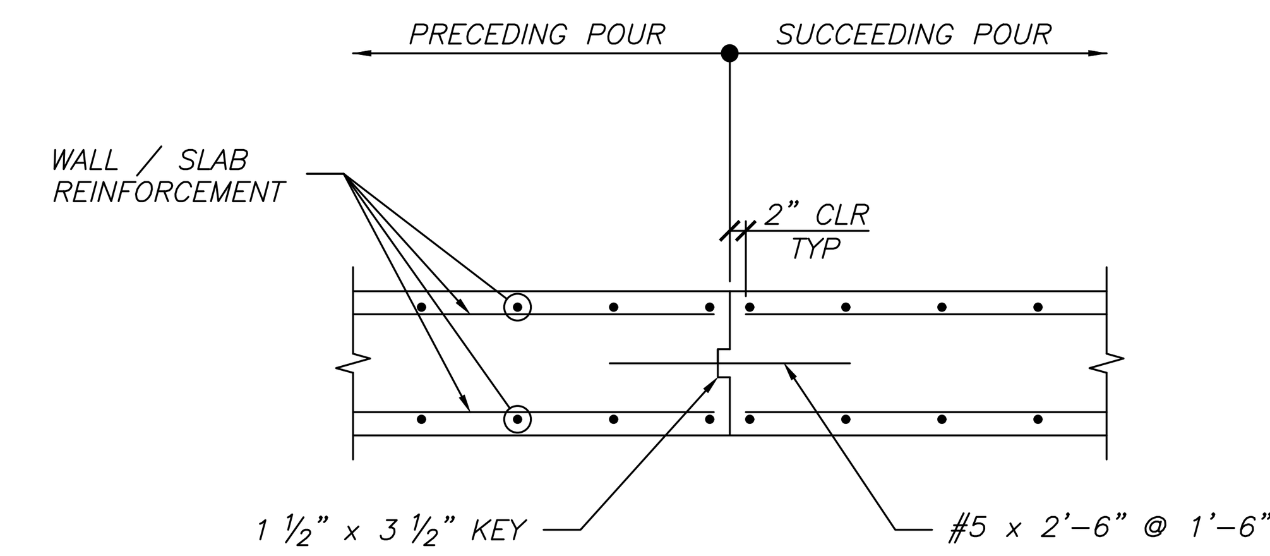
SAD SEE ARCHITECTURAL DRAWINGS
SCH SCHEDULE
SECT SECTION
SF SQUARE FOOT
SHTG SHEATHING
SIM SIMILAR
SMS SHEET METAL SCREW
SN SOLE NAILING
SOG SLAB ON GROUND
SPECS SPECIFICATIONS
SQ SQUARE
SS STAINLESS STEEL
STD STANDARD
STGR STAGGER
STIFF STIFFENER
STL STEEL
STRUCT STRUCTURAL
SUSP SUSPENDED
SW SHEARWALL
SYM SYMMETRICAL

T&B TOP AND BOTTOM
T&G TONGUE AND GROOVE
THK THICK, THICKNESS
THRU THROUGH
TOC TOP OF CONCRETE
TOF TOP OF FRAMING
TOS TOP OF STEEL
TR TRIMMER
TYP TYPICAL

UON UNLESS OTHERWISE NOTED

VERT VERTICAL

w/ WITH
w/o WITHOUT
WD WOOD
WF WIDE FLANGE
WDW WINDOW
WP WORKING POINT
WTPF WATERPROOF
WS WATER STOP
WT WEIGHT
WWF WELDED WIRE FABRIC

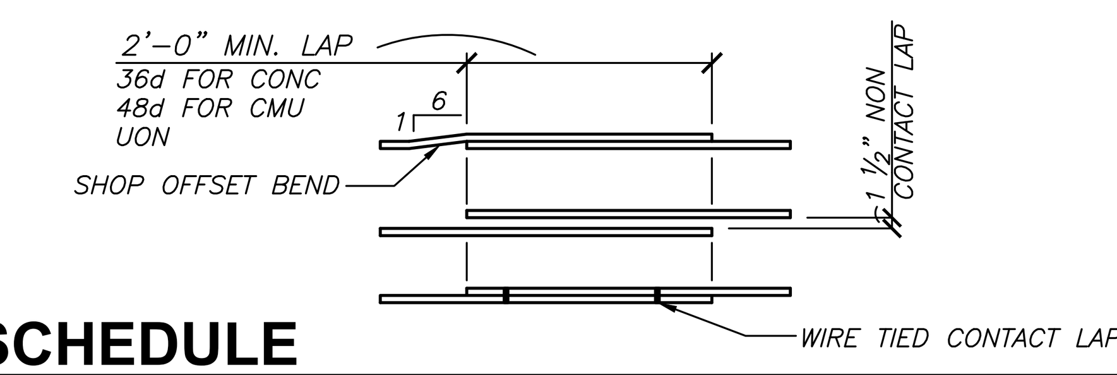


1 / S-2 **EXPANSION JOINT**
SCALE: ??=??

NOTES

1. REINFORCEMENT TABLE IS BASED ON THE CURRENT EDITION OF ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
2. HORIZONTAL REINFORCEMENT PLACED SUCH THAT 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE DEVELOPMENT LENGTH OR SPLICE.
3. EMBEDMENT AND LAP LENGTH IS BASED ON NORMAL WEIGHT CONCRETE. FOR LIGHT WEIGHT CONCRETE MULTIPLY THE TENSION DEVELOPMENT AND SPLICE LENGTHS BY 1.3.
4. THE DEVELOPMENT AND LAP SPLICE SCHEDULE CAN BE USED FOR NON CONTACT LAP SPLICE WHEN BAR SPACING IS LESS THAN 6".
5. IF FIELD CONDITIONS PRECLUDES MEETING ACI REQUIRED CLEAR COVER AND/OR CLEAR SPACING REQUIREMENTS. THE CONTRACTOR SHALL CONTACT THE ENGINGEER FOR MODIFIED LAP SPLICE LENGTHS.
6. ALL BAR TENSION LAP SPLICES ARE CLASS B UNLESS OTHERWISE NOTED.
7. FOR 3 BAR BUNDLE MULTIPLY THE TENSION LAP SPLICE BY 1.2. FOR 4 BAR BUNDLE MULTIPLE THE TENSION LAP SPLICE BY 1.33.
8. FOR BAR SIZES #14 AND #18 USE MECHANICAL SPLICES.
9. TENSION LAP SPLICES MAY BE SUBSTITUTED WITH MECHANICAL SPLICES WITH APPROVAL BY THE ENGINEER.

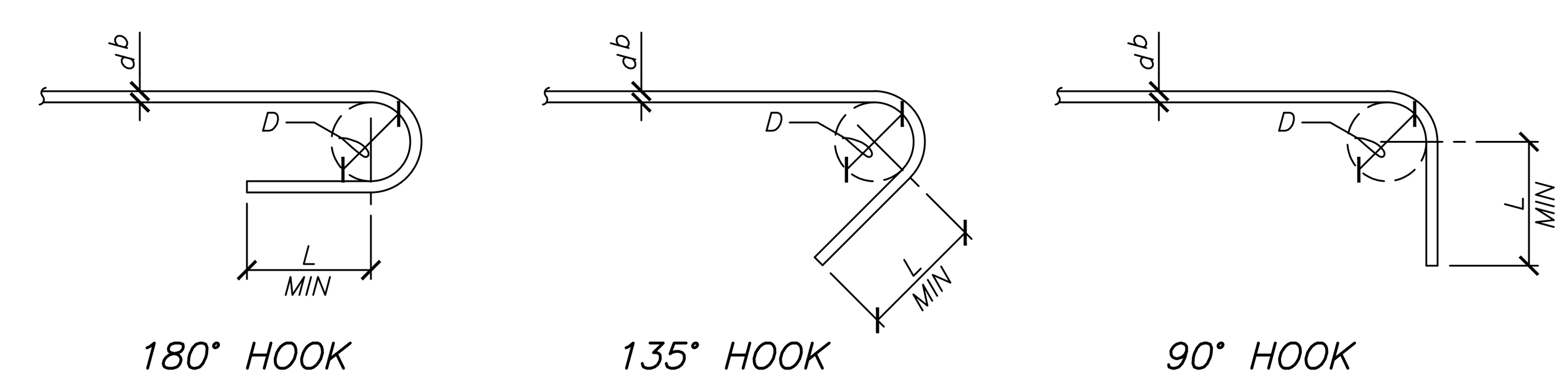
			#11	#10	#9	#8	#7	#6	#5	#4		#3	
REINFORCEMENT PROPERTIES	BAR SIZE		#11	#10	#9	#8	#7	#6	#5	#4		#3	
	REINF GRADE (ksi)		60	60	60	60	60	60	60	60	40	60	40
	NOMINAL AREA (in)		1.56	1.27	1.00	0.79	0.60	0.44	0.31	0.20	0.20	0.11	0.11
	WEIGHT (lb/ft)		5.313	4.303	3.400	2.670	2.044	1.502	1.043	0.668	0.668	0.376	0.376
	NOMINAL DIA (in)		1.410	1.270	1.128	1.000	0.875	0.750	0.625	.500	.500	.375	.375
DEVELOPMENT OR CLASS A TENSION LAP SPLICE LENGTH IN INCHES.	3000	TYPICAL	78	70	62	55	48	33	28	22	15	17	12
		SEE NOTE 2	101	91	81	72	63	43	36	29	19	22	15
	4000	TYPICAL	67	61	54	48	42	29	24	19	13	15	12
		SEE NOTE 2	87	79	70	62	54	37	31	25	17	19	13
	4500	TYPICAL	63	57	51	45	39	27	23	18	12	14	12
		SEE NOTE 2	82	74	66	58	51	35	27	23	16	18	12
CLASS B TENSION LAP SPLICE LENGTH IN INCHES.	3000	TYPICAL	101	91	81	72	63	43	36	29	19	22	15
		SEE NOTE 2	131	118	105	93	81	56	47	37	25	28	19
	4000	TYPICAL	87	79	70	62	54	37	31	25	17	19	13
		SEE NOTE 2	113	102	91	81	71	49	41	33	22	24	16
	4500	TYPICAL	82	74	66	58	51	35	29	23	16	18	12
		SEE NOTE 2	101	91	81	72	63	43	36	28	19	22	14
COMPRESSION LAP SPLICE LENGTH IN INCHES.	<3000		55	50	44	39	35	30	25	20	13	15	12
	>3000		43	39	34	30	26	23	19	15	12	12	12
STANDARD HOOK DEVELOPMENT LENGTH IN INCHES.	3000		31	28	25	22	20	17	13	11	8	8	6
	4000		26	24	22	19	17	15	12	10	7	7	6
	4500		25	23	20	18	16	14	11	9	7	7	6



8 / S-2 **TYPICAL DEVELOPMENT AND LAP SPLICE SCHEDULE**
SCALE: N.T.S. (SF = 24)

BARS OTHER THAN STIRRUPS, TIES, HOOPS AND CROSS-TIES				
BAR SIZE	"D"	180° "L"	135° "L"	90° "L"
#3	2 ¼	2 ½	2 ½	4 ½
#4	3	2 ½	3	6
#5	3 ¾	2 ½	3 ¾	7 ½
#6	4 ½	3	4 ½	9
#7	5 ¼	3 ½	5 ¼	10 ½
#8	6	4	6	12
#9	9 ½	4 ½	6 ¾	13 ½
#10	10 ¾	5 ¼	7 ¾	15 ¼
#11	12	5 ¾	8 ½	17
#14	18 ¼	7	10 ½	21
#18	24	9	13 ½	27
STIRRUPS, TIES, HOOPS AND CROSS-TIES				
#3	1 ½	–	4	4
#4	2	–	4	4
#5	2 ½ (1)	–	4	4
#6	4 ½	–	4 ½	9
#7	5 ¼	–	5 ¼	10 ½
#8	6	–	6	12
(1) USE 3 ¾" IN CONC. BLK. CONSTRUCTION				

NOTE: ALL DIMENSIONS GIVEN ARE IN INCHES.



LEGEND FOR REINF. BENDS (NOT SHOWN TO SCALE)

- INDICATES 90° BEND IN PLANE OF DRAWING
- INDICATES 90° BEND PERPENDICULAR TO PLANE OF DRAWING
- INDICATES 135° BEND IN PLANE OF DRAWING
- INDICATES 180° BEND IN PLANE OF DRAWING
- INDICATES 135° OR 180° BEND PERPENDICULAR TO PLANE OF DRAWING
- INDICATES OFFSET IN PLANE OF DRAWING

9 / S-2 **TYPICAL REINFORCING BAR BENDS AND HOOKS**
SCALE: N.T.S. (SF = 16)

CALL BEFORE YOU DIG
CA: 800-227-2600

REVISIONS:

ATRIA LAFAYETTE
TYPICAL STRUCTURAL DETAILS
APN 169-090-002
CONTRA COSTA COUNTY, CALIFORNIA , CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER Gerardo V Calvillo Jr. No. 2920 Exp. 6-30-24 STRUCTURAL STATE OF CALIFORNIA

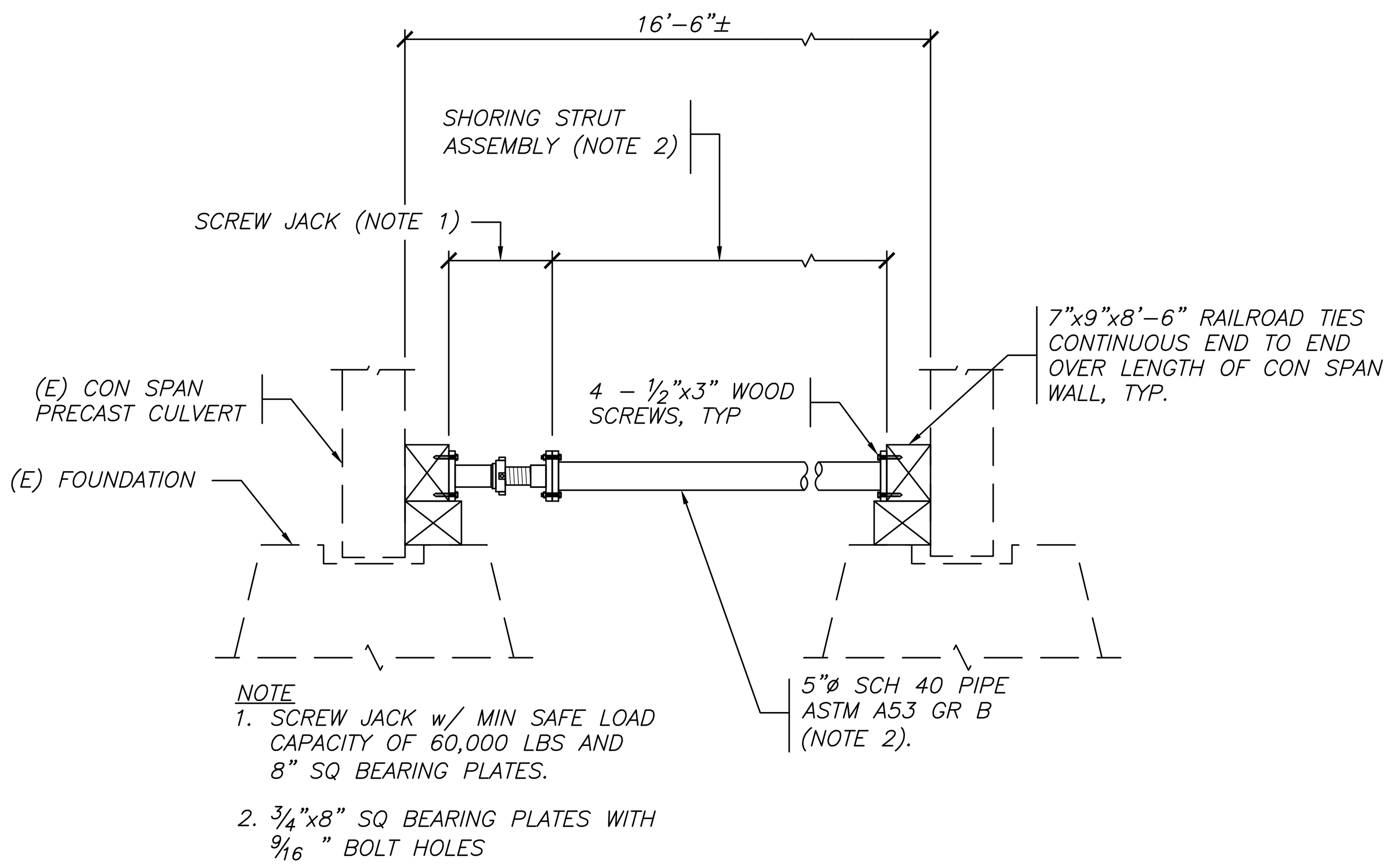
100% SUBMITTAL

THE OLYMPUS GROUP
ENGINEERING, PLANNING & SURVEYING
8850 GREENBACK LANE SUITE C ORANGEVALE CA. 95662-4092
PHONE 916-396-6228
WWW.OLYGROUP.NET

DRAWN BY: IANA T.
DESIGNED BY: R.FRANCIS
CHECKED BY: B.F.BROWNII
DATE: JULY, 2023
SCALE: AS SHOWN

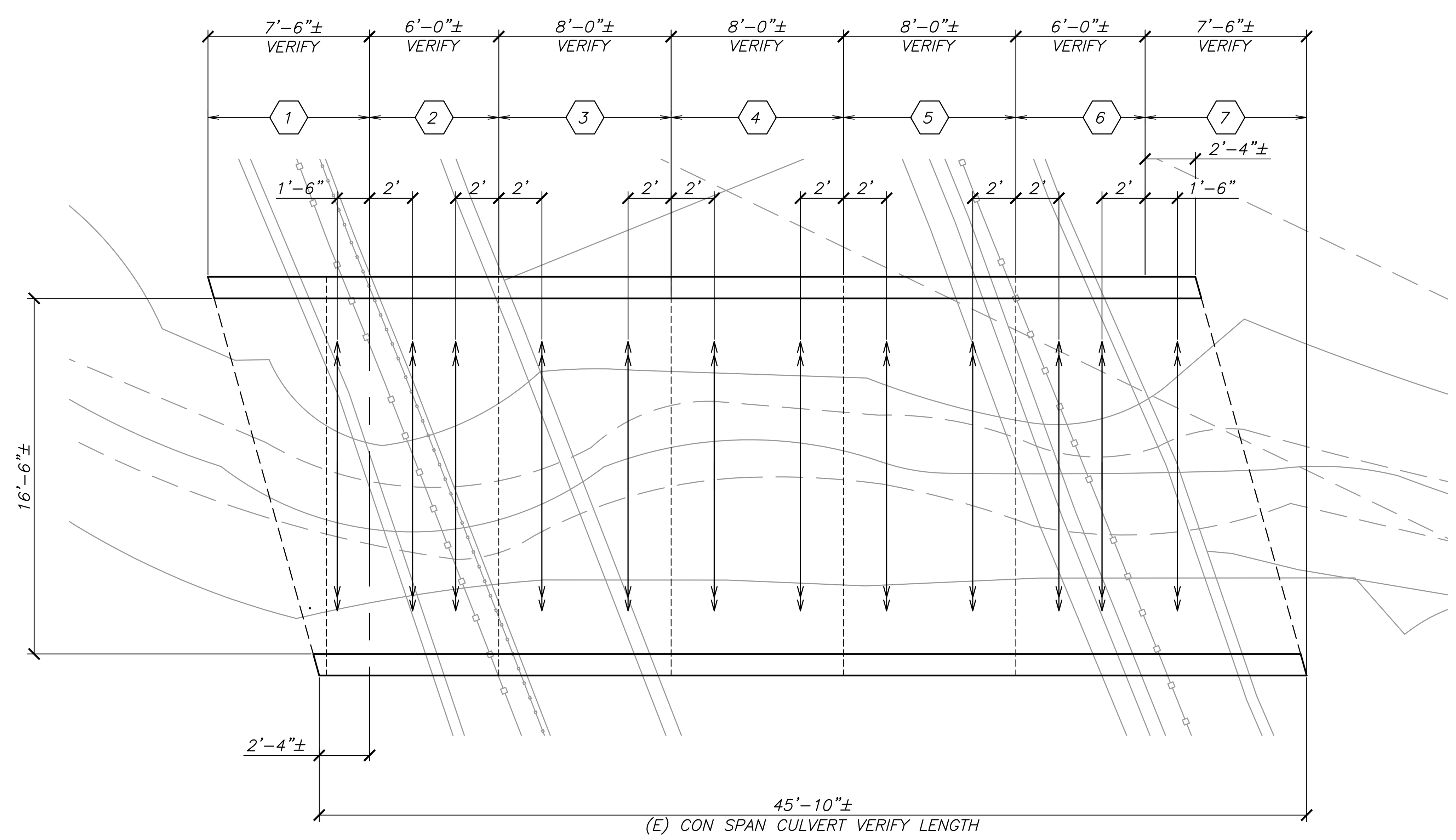
PROJECT NO: 23-001

S-2



1/S-3 SHORING STRUT ASSEMBLY

SCALE: NO SCALE



A/S-3 TEMPORARY SHORING PLAN

SCALE: 1" = 5'-0"

←→ DENOTES COMPRESSION SHORING STRUT ASSEMBLY DET3 (1/S-3)

(1) DENOTES CON SPAN SPAN SEGMENT MARK NUMBER

NOTES

1. SOIL STABILIZATION IMPROVEMENT SHALL BE PERFORMED BEFORE EXCAVATION PROCEEDS. REFER TO URETEK STABILIZATION PLANS AND SPECIFICATIONS.
2. UPON COMPLETION OF SOIL STABILIZATION, THE CONTRACTOR SHALL SEQUENCE CONSTRUCTION IN 4'-0" SEGMENTS, FOLLOWING THE "ACTIVE SLOT" METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT A DETAILED CONSTRUCTION METHODOLOGY PRIOR TO CONSTRUCTION.

INTENT OF DRAWINGS

1. REVIEW INTENDED SHORING METHODS WITH ADJACENT PROPERTY OWNERS AND RECEIVE WRITTEN APPROVAL PRIOR TO STARTING ANY WORK. WRITTEN APPROVAL SHALL INCLUDE EXPLICIT APPROVAL OF INSTALLATION OF SOIL IMPROVEMENTS AND FOOTING ELEMENTS TO BE PLACED UNDER EXISTING STRUCTURES. APPROVAL LETTERS SHALL BE PROVIDED TO THE REVIEWING AGENCIES FOR INCLUSION IN THE PROJECT FILE.
2. GENERAL CONTRACTOR SHALL MONITOR THE ADJACENT STRUCTURES FOR ANY MOVEMENT AND SHALL STOP ALL ACTIONS IF MOVEMENT OCCURS AND NOTIFY ENGINEER. THE BUILDING OWNER/GENERAL CONTRACTOR ACCEPTS ALL LIABILITY OF ADJACENT STRUCTURE DAMAGES IF OCCURS.
3. THESE DRAWINGS REPRESENT STANDARD SHORING PRACTICES TO SUPPORT ADJACENT STRUCTURAL SYSTEMS WHILE UNDERMINING THEIR SUPPORT DURING THE CONSTRUCTION PROCESS. IT IS THE OWNER'S RESPONSIBILITY TO GAIN APPROVAL FROM THE ADJACENT STRUCTURES' OWNERS FOR THESE SHORING PRACTICES AND TO MONITOR THE ADJACENT STRUCTURE DURING THE SHORING PROCESS.
4. RESOLVE ANY CONFLICTS ON THE DRAWINGS WITH THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. DIMENSIONS TAKE PRECEDENCE OVER SCALE OF DRAWINGS. HOWEVER, ANY SIGNIFICANT CONFLICTS SHOULD BE RESOLVED AS NOTED ABOVE.

SHORING SEQUENCE

1. MONITOR ADJACENT STRUCTURES FOR MOVEMENT AS REQUIRED.
2. SOIL ENGINEER SHALL REVIEW AND APPROVE SHORING PARAMETERS AND TECHNIQUES PRIOR TO STARTING ANY WORK.
3. DRAINAGE OR BYPASS SYSTEM SHALL BE DISCUSSED AND PLACED AS REQUIRED PRIOR TO STARTING ANY WORK.
4. SOIL STABILIZATION IMPROVEMENT SHALL BE PERFORMED BEFORE EXCAVATION PROCEEDS, REFER TO URETEK STABILIZATION PLANS AND SPECIFICATIONS.
5. UPON COMPLETION OF SOIL STABILIZATION, THE CONTRACTOR SHALL SEQUENCE CONSTRUCTION IN SEGMENTS, FOLLOWING THE "ACTIVE SLOT" METHOD OF CONSTRUCTION.
6. EXCAVATE/GRADE STARTER 6' STRIP NEXT TO EXISTING ADJACENT FOUNDATION SUPPORTED BY SOIL STABILIZATION IMPROVEMENT NO DEEPER THAT NEW FOUNDATION DEPTH AT CHANNEL.
7. THE 6' STRIPS WILL BE SHARED BY AN "ACTIVE SLOT" – 4' WIDE AND "ADJACENT UNACTIVE SLOT" – 2' WIDE.
8. INSTALL UNDERPINNING REINFORCING FOR "ACTIVE SLOT" AND PROVIDE UNDERPINNING DOWELS BETWEEN SLOT CUT "ACTIVE SLOT" AND ADJACENT "UNACTIVE SLOT".
9. AFTER "ACTIVE SLOT" CONCRETE IS INSTALLED EXCAVATE/GRADE NEW 4' STRIP STARTING AT "UNACTIVE SLOT", AT ANYTIME THE "ACTIVE LOT" AND "UNACTIVE SLOT" DOES NOT EXCEED 6' WIDE.
10. THE CONTRACTOR MAY SUBMIT AN ALTERNATE DETAILED CONSTRUCTION METHODOLOGY PRIOR TO CONSTRUCTION FOR REVIEW BY THE ENGINEER OF RECORD AND GEOTECHNICAL ENGINEER.

CALL BEFORE YOU DIG — USA — UNDERGROUND SERVICE ALERT — CA: 800-227-2600

REVISIONS:

ATRIA LAFAYETTE

TEMPORARY SHORING PLAN

APN 169-090-002

CONTRA COSTA COUNTY, CALIFORNIA , CALIFORNIA

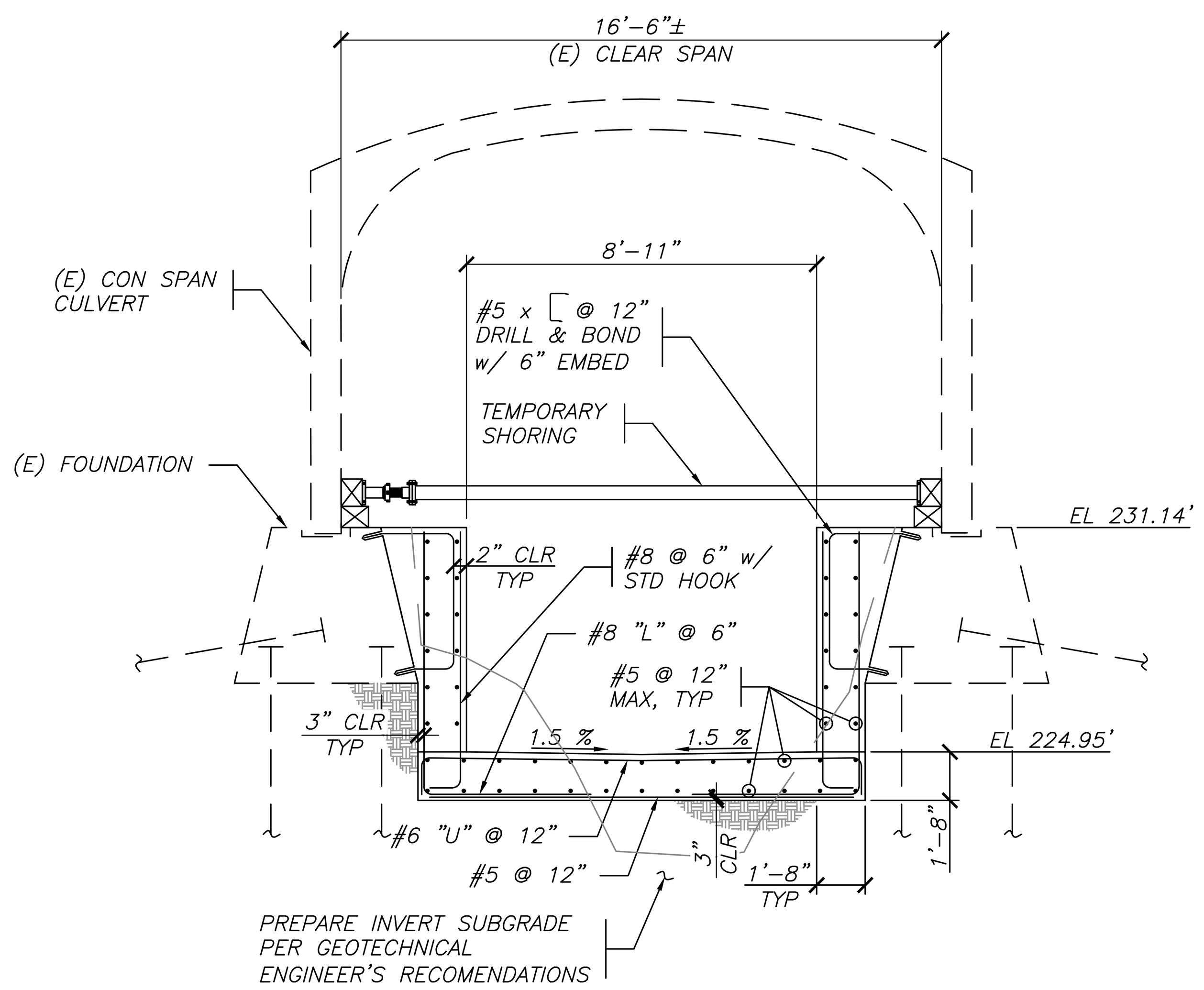
REGISTERED PROFESSIONAL ENGINEER — Gerardo V Calvillo Jr. — No. 2920 — Exp. 6-30-24 — STRUCTURAL — STATE OF CALIFORNIA

100% SUBMITTAL

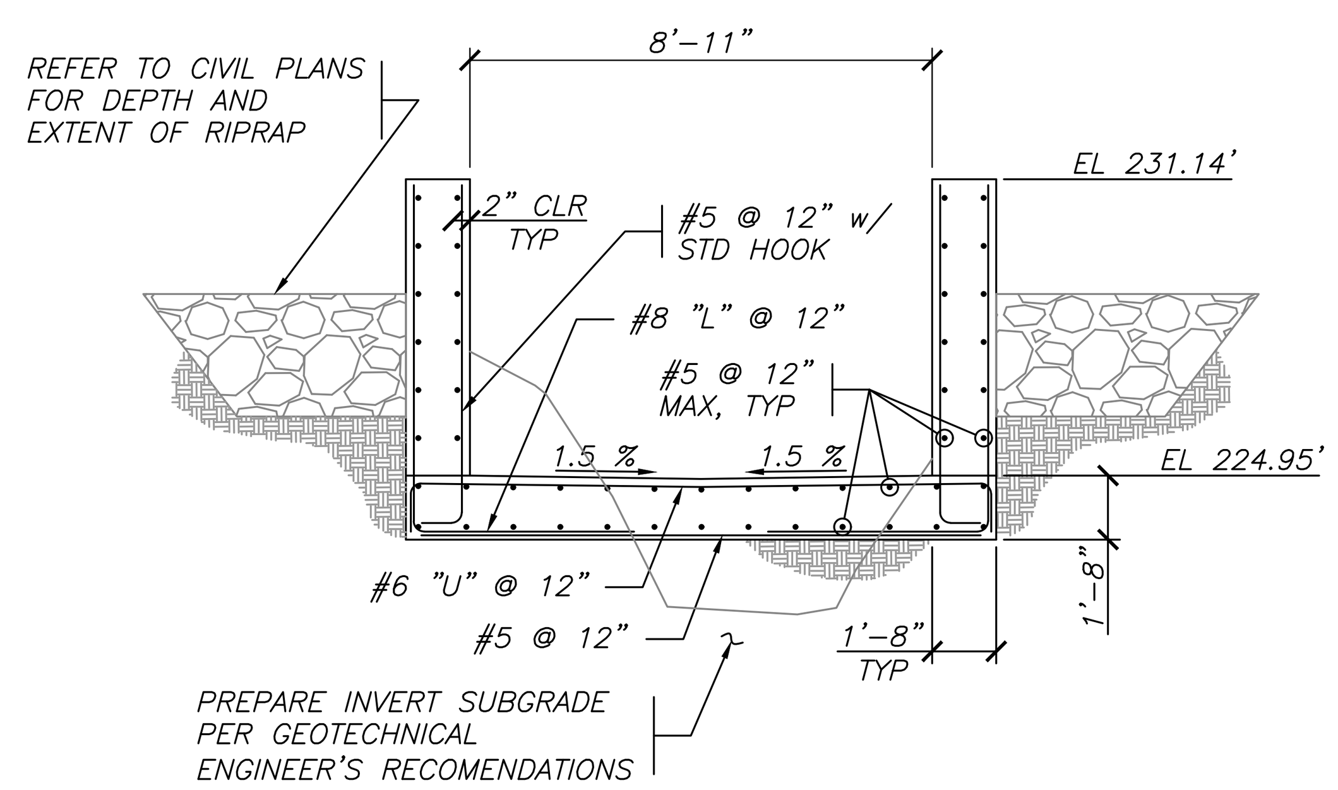
THE OLYMPUS GROUP
ENGINEERING, PLANNING & SURVEYING
8850 GREENBACK LANE SUITE C ORANGEVALE CA. 95662-4092 | PHONE 916-396-6228 WWW.OLYGROUP.NET

DRAWN BY: IANA T.
DESIGNED BY: R.FRANCIS
CHECKED BY: B.F.BROWNII
DATE: JULY, 2023
SCALE: AS SHOWN
PROJECT NO: 23-001

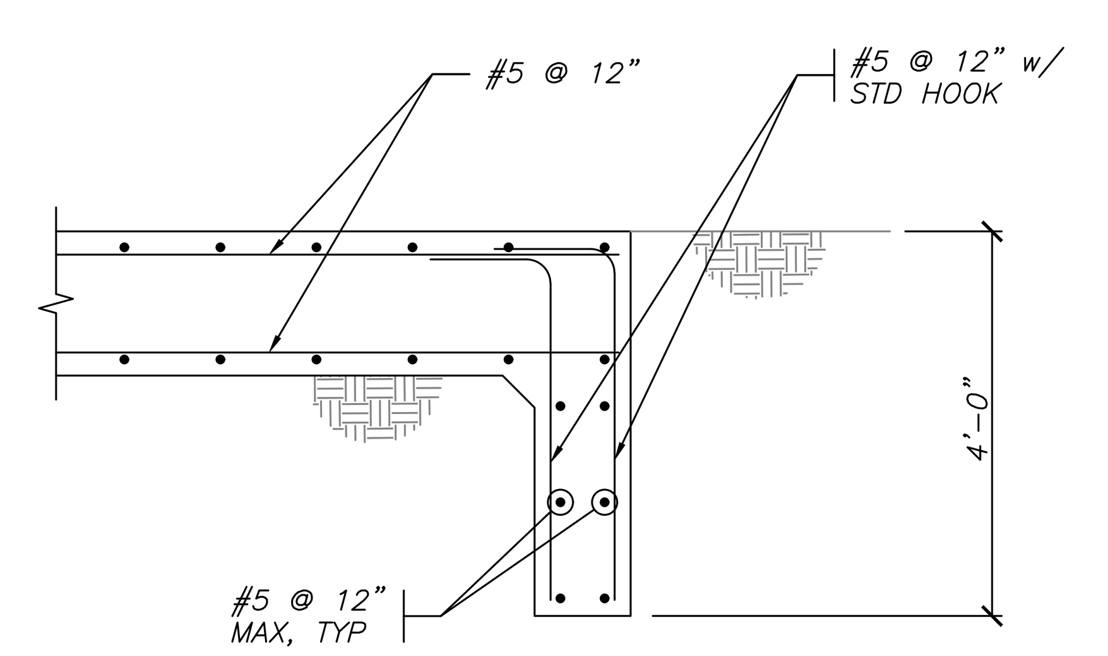
S-3



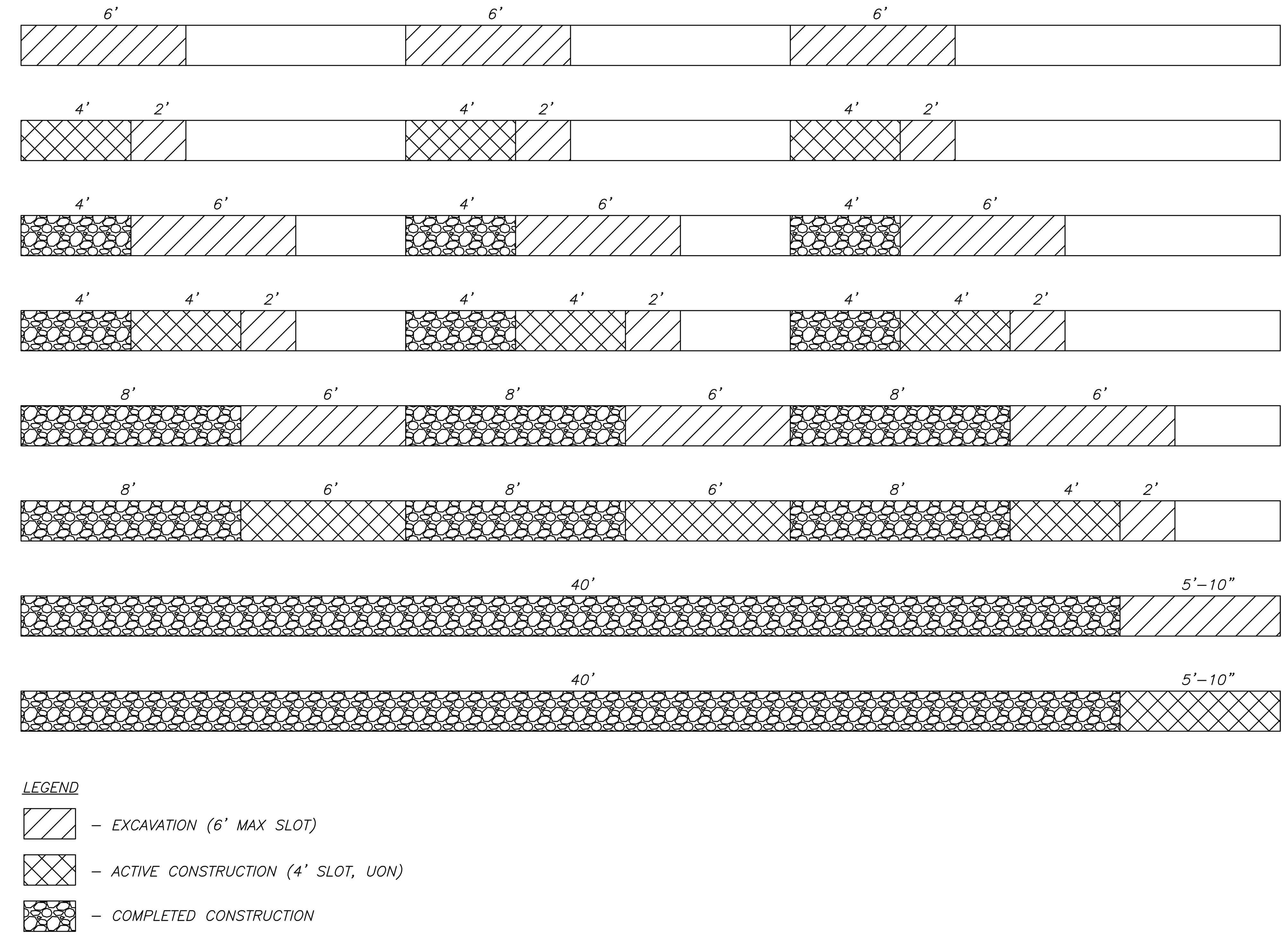
1 / S-4 **CULVERT INVERT RETROFIT**
SCALE: ??=??



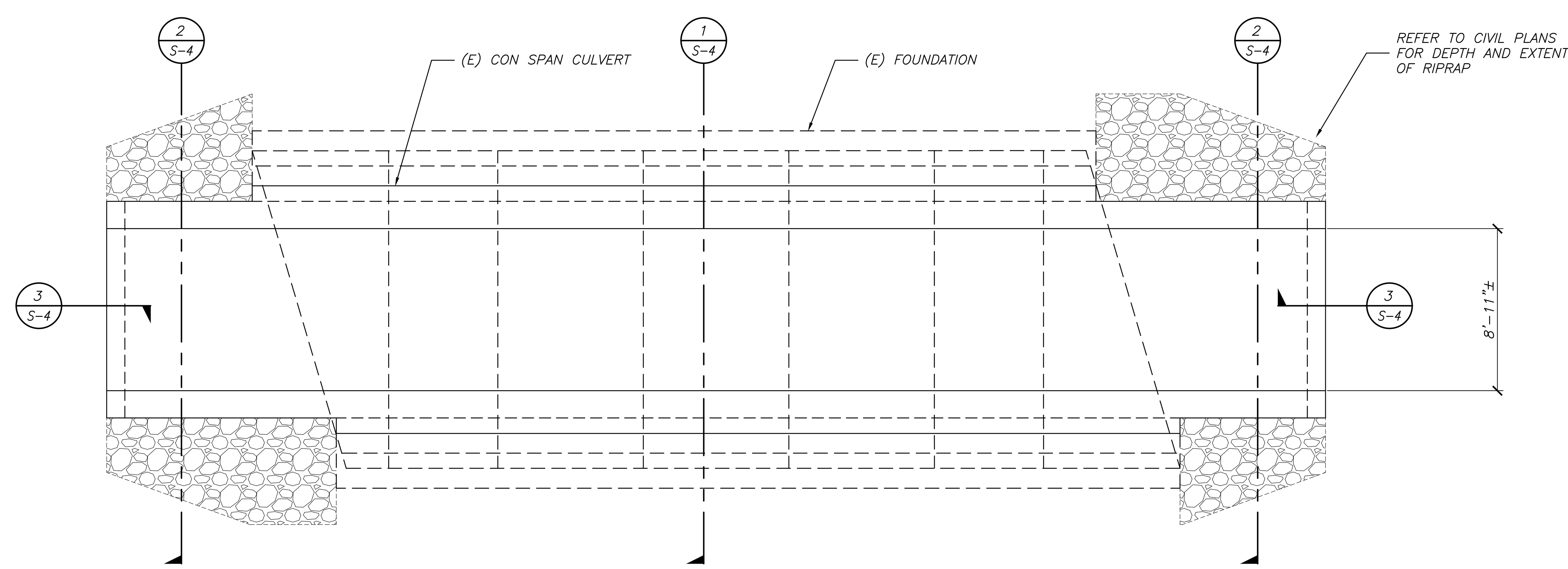
2 / S-4 **CULVERT INVERT RETROFIT**
SCALE: ??=??



3 / S-4 **CULVERT INVERT CUTOFF WALL**
SCALE: ??=??



B / S-4 **ACTIVE SLOT CONSTRUCTION SCHEMATIC**
SCALE: NO SCALE



A / S-4 **FOUNDATION PLAN**
SCALE: 1" = 5'-0"

CALL BEFORE YOU DIG
CA: 800-227-2600

REVISIONS:

ATRIA LAFAYETTE
FOUNDATION PLAN
APN 169-090-002
CONTRA COSTA COUNTY, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER No. 2920 Exp. 6-30-24 STRUCTURAL STATE OF CALIFORNIA

100% SUBMITTAL

DRAWN BY: IANA T.
DESIGNED BY: R.FRANCIS
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ORANGEVALE CA. 95662-4092
PHONE 916-396-6228
WWW.OLYGROUP.NET

PROJECT NO: 23-001

GENERAL NOTES:

1. ALL MATERIALS AND WORKMANSHIP TO BE IN ACCORDANCE WITH THE THESE SPECIFICATIONS AND THE 2019 EDITIONS OF THE CALIFORNIA BUILDING CODE. WHERE CONFLICTS OCCUR, THESE SPECIFICATIONS SHALL PREVAIL.

2. THE SOIL NAIL WALL STRUCTURES HAVE BEEN DESIGNED IN ACCORDANCE WITH THE SLD (SERVICE LOAD DESIGN) PROCEDURES CONTAINED IN THE FHWA "MANUAL FOR DESIGN AND CONSTRUCTION MONITORING OF SOIL NAIL WALLS", REPORT NO. FHWA-SA-96-069, "SOIL NAIL WALLS REFERENCE MANUAL", REPORT NO. FHWA-NHI-14-007 AND THE CALTRANS "SNAIL" DESIGN PROGRAM.

3. THE DESIGN IS THE PROPERTY OF DRILL TECH DRILLING & SHORING, INC. (DTDS) AND ASSUMES THAT THE CONTRACTOR WILL BE DIRECTLY RESPONSIBLE TO THE DESIGN ENGINEER. THEREFORE THIS DESIGN IS ONLY VALID IF CONSTRUCTED BY DTDS.

4. REFERENCE MATERIALS:

   A. "REPORT–SUPPLEMENTAL GEOTECHNICAL STUDY, DISTRESSED ENTRANCE ROAD AT ATRIA PARK" PREPARED BY GEOTECHNIA DATED APRIL 16, 2019.
   B. "REPORT–FOUR ADDITIONAL BORINGS, DISTRESSED ENTRANCE ROAD AT ATRIA PARK" PREPARED BY GEOTECHNIA DATED APRIL 24, 2023.
   C. "RECOMMENDED UNIT WEIGHTS AND STRENGTH PARAMETERS, DISTRESSED ENTRANCE ROAD AT ATRIA PARK" PREPARED BY GEOTECHNIA DATED JUNE 14, 2023.
   D. IMPROVEMENT PLANS FOR "ATRIA PARK OF LAFAYETTE – MAIN ROAD RETROFIT, 1545 PLEASANT HILL ROAD, LAFAYETTE, CA 95816" PREPARED BY THE OLYMPUS GROUP DATED 7/10/23

5. DESIGN PARAMETERS FOR SOIL NAIL WALLS ARE IN ACCORDANCE WITH THE REFERENCED GEOTECHNICAL LETTER:

MATERIAL	FRICTION ANGLE (DEGREES)	COHESION (PSF)	UNIT WEIGHT (PCF)	ALLOWABLE SOIL/GROUT BOND STRENGTH, Qd (K/FT)*
EMBANKMENT FILL	35	0	130	1.13
NATIVE SOIL	18	200	120	1.13
BEDROCK	40	0	140	2.26

* TO BE VERIFIED BY SOIL NAIL TESTING

6. THE GENERAL CONTRACTOR SHALL VERIFY ALL GRADES AND DIMENSIONS. SEE CONTRACT DRAWINGS AND SPECIFICATIONS FOR ALL INFORMATION RELATIVE TO THE NEW AND EXISTING CONSTRUCTION AND CONDITIONS. THE GENERAL CONTRACTOR SHALL RESOLVE CONFLICTS BETWEEN THESE DRAWINGS AND OTHER CONTRACT DRAWINGS WITH THE RETAINING WALL ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.

7. DESIGN OF TEMPORARY AND PERMANENT SLOPES ARE NOT INCLUDED IN THE SCOPE OF THESE DRAWINGS. SLOPES SHOULD BE DESIGNED BY OTHERS AND SHOULD CONFORM TO APPLICABLE CAL OSHA SAFETY ORDERS.

8. A SAFETY RAILING ABOVE THE WALL WALL SHALL BE MAINTAINED BY THE GENERAL CONTRACTOR AS LONG AS THE WALL PRESENTS A FALL HAZARD.

EXCAVATION NOTES:

1. EXCAVATION SHOULD BE PERFORMED UNDER THE DIRECTION OF THE GENERAL CONTRACTOR AND TO THE GRADES SHOWN IN THE PROJECT CIVIL PLANS.

2. ALL UTILITIES SHALL BE POTHOLED AND FIELD LOCATED BY THE GENERAL CONTRACTOR PRIOR TO EXCAVATION AND DRILLING. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY CONFLICTS WITH RETAINING WALL ELEMENTS.

3. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR SURVEY CONTROL.

SOIL NAIL NOTES:

1. NAIL GROUT: f'c = 3,000 PSI MIN. PER AASHTO T106/ASTM C109

2. NAIL BARS: OPTION 1: EPOXY COATED (ASTM A775 OR A934) OR SHEATHED AND GROUTED (DCP) GRADE 75 BARS (ASTM A615)
   OPTION 2: GALVANIZED R38N HOLLOW BAR

3. LAYOUT OF SOIL NAILS IS AS SHOWN. ADJUSTMENTS MAY BE MADE TO ACCOMMODATE FIELD CONDITIONS AS APPROVED BY THE ENGINEER. ADJUSTMENTS OF UP TO ONE FOOT ON ISOLATED NAILS MAY BE MADE WITHOUT NOTIFYING THE ENGINEER. ELEVATION GRADES ARE BASED ON THE REFERENCED GRADING PLAN.

4. NAILS IN A GIVEN VERTICAL SECTION SHALL BE INSTALLED ACCORDING TO THE TYPICAL SECTION, DESIGN SCHEDULE, AND THE REFERENCED DETAILS.

5. TOTAL LENGTH OF THE TEST SOIL NAIL ASSEMBLY EQUALS EMBEDMENT LENGTH PLUS EXTRA LENGTH REQUIRED FOR JACKING EQUIPMENT.

6. TESTING: PROOF TESTING OF THE SOIL NAILS SHALL BE PERFORMED ON A MINIMUM OF 5 PERCENT OF THE NAILS IN ACCORDANCE WITH THE SPECIFICATIONS. MAXIMUM TEST LOADS ARE SHOWN ON THE SOIL NAIL TEST SCHEDULE. VERIFICATION TESTS SHALL BE PERFORMED AT THE LOCATIONS INDICATED, ALSO IN ACCORDANCE WITH THE SPECIFICATIONS PROVIDED. A VERIFICATION TEST NAIL MAY TAKE THE PLACE OF A PROOF TEST NAIL FOR THE PURPOSE OF SATISFYING THE ONE TEST PER 20 NAIL REQUIREMENT. ALL TEST NAILS ARE SACRIFICAL.

SHOTCRETE NOTES:

1. REINFORCEMENT AND SHOTCRETE: fy = 60,000 PSI (REBAR PER AASHTO M3 1/ ASTM A615)
   fy = 65,000 PSI (WWF PER ASTM A82/A185
   f'c = 4,000 PSI (28 DAY SHOTCRETE COMPRESSIVE STRENGTH)

2. CEMENT FOR SHOTCRETE SHALL CONFORM TO AASHTO M85/ASTMC150 TYPE I,II,III, OR V. FINE AGGREGATE SHALL CONFORM TO AASHTO M6/ASTM C33.

3. UNLESS OTHERWISE NOTED ON THE PLANS, MINIMUM SHOTCRETE COVER MEASURED FROM THE FACE OF THE SHOTCRETE TO THE FACE OF ANY REINFORCING BAR SHALL BE 2 INCHES.

4. A SHOTCRETE TEST PANEL SHALL BE MADE FOR EACH DAY OF SHOTCRETE APPLICATION. THESE PANELS SHALL BE CORED AND THE CORES SHALL BE TESTED FOR COMPRESSIVE STRENGTH.

5. MINIMUM LAP SPLICE OF STEEL REINFORCEMENT SHALL BE AS FOLLOWS: REBAR:48 BAR DIAMETERS, WWF:2 SQUARES

6. MINIMUM LAP SPLICE FOR GEOCOMPOSITE DRAINAGE SHALL BE 12 INCHES.

7. GEOCOMPOSITE DRAIN BOARDS SHALL BE SECURED TO THE SLOPE IN SUCH A MANNER THAT PREVENTS SHOTCRETE FROM GETTING BETWEEN THE CUT SLOPE AND THE GEOCOMPOSITE DRAIN.

8. THE INTEGRITY OF THE GEOCOMPOSITE DRAIN TO WEEPHOLE CONNECTION SHALL BE MAINTAINED WHILE SHOTCRETING.

SOIL NAIL TESTING:

TEST NAIL UNBONDED LENGTH

1. PROVIDE TEMPORARY UNBONDED LENGTHS FOR EACH TEST NAIL. THE MINIMUM UNBONDED LENGTH SHALL BE 3 FEET. ISOLATE THE TEST NAIL BAR FROM THE SHOTCRETE FACING AND/OR THE REACTION FRAME USED DURING TESTING. ISOLATION OF A TEST NAIL THROUGH THE SHOTCRETE FACING SHALL NOT AFFECT THE LOCATION OF THE REINFORCING STEEL UNDER THE BEARING PLATE.

TESTING EQUIPMENT

2. TESTING EQUIPMENT SHALL INCLUDE DIAL OR DIGITAL GAUGES, GAUGE SUPPORT, JACK AND PRESSURE GAUGE, AND A REACTION FRAME. THE TESTING REACTION FRAME SHALL BE SUFFICIENTLY RIGID AND OF ADEQUATE DIMENSIONS SUCH THAT EXCESSIVE DEFORMATION OF THE TESTING EQUIPMENT DOES NOT OCCUR. IF THE REACTION FRAME WILL BEAR DIRECTLY ON THE SHOTCRETE FACING, IT SHALL PREVENT CRACKING OF THE SHOTCRETE. INDEPENDENTLY SUPPORT AND CENTER THE JACK OVER THE NAIL BAR SO THAT THE BAR DOES NOT CARRY THE WEIGHT OF THE TESTING EQUIPMENT. ALIGN THE JACK, BEARING PLATES, AND STRESSING ANCHORAGE WITH THE BAR SUCH THAT UNLOADING AND REPOSITIONING OF THE EQUIPMENT WILL NOT BE REQUIRED DURING THE TEST.

3. APPLY AND MEASURE THE TEST LOAD WITH A HYDRAULIC JACK AND PRESSURE GAUGE. THE PRESSURE GAUGE SHALL BE GRADUATED IN 100 PSI OR LESS INCREMENTS. JACK RAM TRAVEL SHALL BE SUFFICIENT TO ALLOW THE TEST TO BE DONE WITHOUT RESETTING THE EQUIPMENT.

4. MEASURE THE NAIL HEAD MOVEMENT WITH A DIAL OR DIGITAL GAUGE CAPABLE OF MEASURING TO 0.001 INCHES. THE GAUGE SHALL HAVE A TRAVEL SUFFICIENT TO ALLOW THE TEST TO BE DONE WITHOUT HAVING TO RESET THE GAUGE. VISUALLY ALIGN THE GAUGE TO BE PARALLEL WITH THE AXIS OF THE NAIL AND SUPPORT THE GAUGE INDEPENDENTLY FROM THE JACK, WALL OR REACTION FRAME.

VERIFICATION TESTING

5. THE VERIFICATION TEST NAIL LOCATIONS ARE SHOWN ON THE DEVELOPED ELEVATIONS FOR REFERENCE, HOWEVER THE LOCATION OF EACH TEST NAIL SHALL BE DETERMINED IN THE FIELD BY A DRILL TECH REPRESENTATIVE.

6. TEST NAILS SHALL HAVE BOTH BONDED AND UNBONDED LENGTHS. THE UNBONDED LENGTH OF THE TEST NAIL SHALL BE A MINIMUM OF 3 FEET. THE BONDED LENGTH OF THE TEST NAIL SHALL BE MINIMUM 10 FEET.

7. THE ALLOWABLE BAR STRUCTURAL LOAD DURING TESTING SHALL NOT EXCEED 80% OF THE ULTIMATE STRENGTH FOR GRADE 75 BAR AND 80% OF THE ULTIMATE STRENGTH FOR GRADE 150 BAR.

8. THE DESIGN TEST LOAD (DTL) DURING VERIFICATION TESTING SHALL BE DETERMINED BY THE FOLLOWING EQUATION:

   DTL = Design Test Load (kips) = LBL x Qd
   LBL = As-built bonded test length (feet)
   Qd = Allowable pullout resistance (kips per foot of grouted nail length)
   MTL = 2.0 x DTL = Maximum Test Load (kips)

9. VERIFICATION TESTS SHALL BE PERFORMED BY INCREMENTALLY LOADING THE TEST NAIL TO A MAXIMUM TEST LOAD OF 200 PERCENT OF THE DESIGN TEST LOAD (DTL). THE NAIL MOVEMENT AT EACH LOAD SHALL BE MEASURED AND RECORDED BY THE ENGINEER. THE TEST LOAD SHALL BE MONITORED BY A JACK PRESSURE GAUGE WITH A SENSITIVITY AND RANGE MEETING THE REQUIREMENTS OF PRESSURE GAUGES USED FOR VERIFICATION TEST NAILS. AT LOAD INCREMENTS BELOW 1.5 DTL, THE LOAD SHALL BE HELD LONG ENOUGH TO OBTAIN A STABLE READING. INCREMENTAL LOADING FOR TESTS SHALL BE IN ACCORDANCE WITH THE FOLLOWING LOADING SCHEDULE. THE SOIL NAIL MOVEMENTS SHALL BE RECORDED AT EACH LOAD INCREMENT.

   VERIFICATION TEST LOADING SCHEDULE

LOAD	HOLD TIME
AL (.10 DTL)	UNTIL STABLE
0.25 DTL	UNTIL STABLE
0.50 DTL	UNTIL STABLE
0.75 DTL	UNTIL STABLE
1.00 DTL	UNTIL STABLE
1.25 DTL	UNTIL STABLE
1.50 DTL	60 MINUTES
1.75 DTL	UNTIL STABLE
2.00 DTL	UNTIL STABLE

10. THE ALIGNMENT LOAD (AL) SHOULD BE THE MINIMUM LOAD REQUIRED TO ALIGN THE TESTING APPARATUS. DIAL GAUGES SHOULD BE SET TO "ZERO" AFTER THE ALIGNMENT LOAD HAS BEEN APPLIED.

11. ALL LOAD INCREMENTS SHALL BE MAINTAINED WITHIN 5 PERCENT OF THE INTENDED LOAD. A 60-MINUTE CREEP TEST SHALL BE PERFORMED AT 1.50 DTL. THE CREEP PERIOD SHALL START AS SOON AS THE TEST LOAD IS APPLIED AND THE NAIL MOVEMENT SHALL BE MEASURED AND RECORDED AT 1, 2, 3, 5, 6, 10, 20, 30, 50, AND 60 MINUTES.

PROOF TESTING OF PRODUCTION NAILS

12. PERFORM PROOF TESTING FOR 5 PERCENT (1 IN 20) OF THE PRODUCTION NAILS AND 1 PER DISTINCT SOIL TYPE. THE PROOF TEST NAIL LOCATIONS ARE SHOWN ON THE DEVELOPED ELEVATIONS FOR REFERENCE, HOWEVER THE LOCATION OF EACH TEST NAIL SHALL BE DETERMINED IN THE FIELD BY A DRILL TECH REPRESENTATIVE.

13. TEST NAILS SHALL HAVE BOTH BONDED AND UNBONDED LENGTHS. THE UNBONDED LENGTH OF THE TEST NAIL SHALL BE AT LEAST 3 FEET AND THE BONDED LENGTH OF THE TEST NAIL SHALL BE 10 FEET.

14. THE ALLOWABLE BAR STRUCTURAL LOAD DURING TESTING SHALL NOT EXCEED 80% OF THE ULTIMATE STRENGTH FOR GRADE 75 BAR AND 80% OF THE ULTIMATE STRENGTH FOR GRADE 150 BAR.

15. THE DESIGN TEST LOAD (DTL) DURING PROOF TESTING SHALL BE DETERMINED BY THE FOLLOWING EQUATION:

   DTL = Design Test Load (kips) = LBL x Qd
   LBL = As-built bonded test length (feet)
   Qd = Allowable pullout resistance (kips per foot of grouted nail length)
   MTL = 1.5 x DTL = Maximum Test Load (kips)

16. PROOF TESTS SHALL BE PERFORMED BY INCREMENTALLY LOADING THE PROOF TEST NAIL TO A MAXIMUM TEST LOAD OF 150 PERCENT OF THE DESIGN TEST LOAD (DTL). THE NAIL MOVEMENT AT EACH LOAD SHALL BE MEASURED AND RECORDED BY THE CONTRACTOR. THE TEST LOAD SHALL BE MONITORED BY A JACK PRESSURE GAUGE. AT LOAD INCREMENTS OTHER THAN MAXIMUM TEST LOAD, THE LOAD SHALL BE HELD LONG ENOUGH TO OBTAIN A STABLE READING. INCREMENTAL LOADING FOR PROOF TESTS SHALL BE IN ACCORDANCE WITH THE FOLLOWING LOADING SCHEDULE. THE SOIL NAIL MOVEMENTS SHALL BE RECORDED

   PROOF TEST LOADING SCHEDULE

LOAD	HOLD TIME
AL (.10 DTL)	UNTIL STABLE
0.25 DTL	UNTIL STABLE
0.50 DTL	UNTIL STABLE
0.75 DTL	UNTIL STABLE
1.00 DTL	UNTIL STABLE
1.25 DTL	UNTIL STABLE
1.50 DTL	10 OR 60 MINUTES

17. THE ALIGNMENT LOAD (AL) SHOULD BE THE MINIMUM LOAD REQUIRED TO ALIGN THE TESTING APPARATUS. DIAL GAUGES SHOULD BE SET TO "ZERO" AFTER THE ALIGNMENT LOAD HAS BEEN APPLIED.

18. ALL LOAD INCREMENTS SHALL BE MAINTAINED WITHIN 5 PERCENT OF THE INTENDED LOAD. DEPENDING ON PERFORMANCE, EITHER 10 MINUTE OR 60 MINUTE CREEP TESTS SHALL BE PERFORMED AT THE MAXIMUM TEST LOAD (1.50 DTL). THE CREEP PERIOD SHALL START AS SOON AS THE MAXIMUM TEST LOAD IS APPLIED AND THE NAIL MOVEMENT SHALL BE MEASURED AND RECORDED AT 1, 2, 3, 5, 6, AND 10 MINUTES. WHERE THE NAIL MOVEMENT BETWEEN 1 MINUTE AND 10 MINUTES EXCEEDS 0.04 INCH, THE MAXIMUM TEST LOAD SHALL BE MAINTAINED AN ADDITIONAL 50 MINUTES AND MOVEMENTS SHALL BE RECORDED AT 20 MINUTES, 30, 50, AND 60 MINUTES.

19. TEST NAIL ACCEPTANCE CRITERIA – A TEST NAIL SHALL BE CONSIDERED ACCEPTABLE WHEN:

   19.A. TOTAL CREEP MOVEMENT OF LESS THAN 0.04 INCH IS MEASURED BETWEEN THE 1 AND 10 MINUTE READINGS, OR A TOTAL CREEP MOVEMENT OF LESS THAN 0.08 INCHES IS MEASURED BETWEEN THE 6 AND 60 MINUTE READINGS.
   19.B. THE TOTAL MEASURED MOVEMENT AT THE MAXIMUM TEST LOAD EXCEEDS 80 PERCENT OF THE THEORETICAL ELASTIC ELONGATION OF THE TEST NAIL UNBONDED LENGTH.
   19.C. A PULLOUT FAILURE DOES NOT OCCUR AT THE MAXIMUM TEST LOAD. PULLOUT FAILURE IS DEFINED AS THE LOAD AT WHICH ATTEMPTS TO FURTHER INCREASE THE TEST LOAD SIMPLY RESULT IN CONTINUED PULLOUT MOVEMENT OF THE TEST NAIL. THE PULLOUT FAILURE LOAD SHALL BE RECORDED AS PART OF THE TEST DATA.

20. TEST NAIL REJECTION – IF A TEST NAIL DOES NOT SATISFY THE ACCEPTANCE CRITERION, THE CONTRACTOR SHALL DETERMINE THE CAUSE. THE NEED FOR DESIGN AND/OR CONSTRUCTION PROCEDURE MODIFICATIONS SHALL BE DETERMINED BY THE DESIGN ENGINEER. THE DESIGN ENGINEER MAY REQUIRE ADDITIONAL NAILS IN THE AREA OF THE FAILED VERIFICATION TESTS AND/OR IN THE NEXT LOWER ROW OF NAILS, LONGER NAILS, THE INSTALLATION OF ADDITIONAL TEST NAILS, INCREASED DRILL HOLE DIAMETERS, MODIFIED INSTALLATION OR GROUTING METHODS, OR CLOSER NAIL SPACINGS. ALTERNATIVELY, THE DESIGN ENGINEER MAY REQUIRE THE INSTALLATION AND TESTING OF ADDITIONAL VERIFICATION OR PROOF TEST NAILS TO VERIFY THAT ADJACENT PREVIOUSLY INSTALLED PRODUCTION NAILS HAVE SUFFICIENT LOAD CARRYING CAPACITY.

SPECIAL INSPECTION REQUIREMENTS:

PER CBC 2019 CHAPTER 17

INSPECTION TASK	CONTINUOUS*	PERIODICALLY
1. INSPECT REINFORCING STEEL.		X
2. VERIFY SHOTCRETE STRENGTH PER NOTE 4 OF SHOTCRETE NOTES.		X
3. OBSERVE SHOTCRETE PLACEMENT.	X	
4. OBSERVE SOIL NAIL LOAD TESTING.	X	

* CONTINUOUS DURING TASK LISTED

DRAWING LIST:

REVISION:	DATE:	DESCRIPTION/REASON:	DESIGN BY:	SCALE:
			SM	AS SHOWN
			CHECKED BY:	JOB NUMBER:
			DB	23016
			DATE:	CONTRACT NO:
			AUGUST 23, 2023	

REGISTERED PROFESSIONAL ENGINEER
STEPHEN R. MCCULLOUGH
No. C86618
Exp. 06/24
CIVIL
STATE OF CALIFORNIA

DRILL TECH
DRILLING & SHORING, INC.
2200 Wymore Way – Antioch, CA 94509-8518
Phone: 925/978-2060 – Fax: 925/978-2063

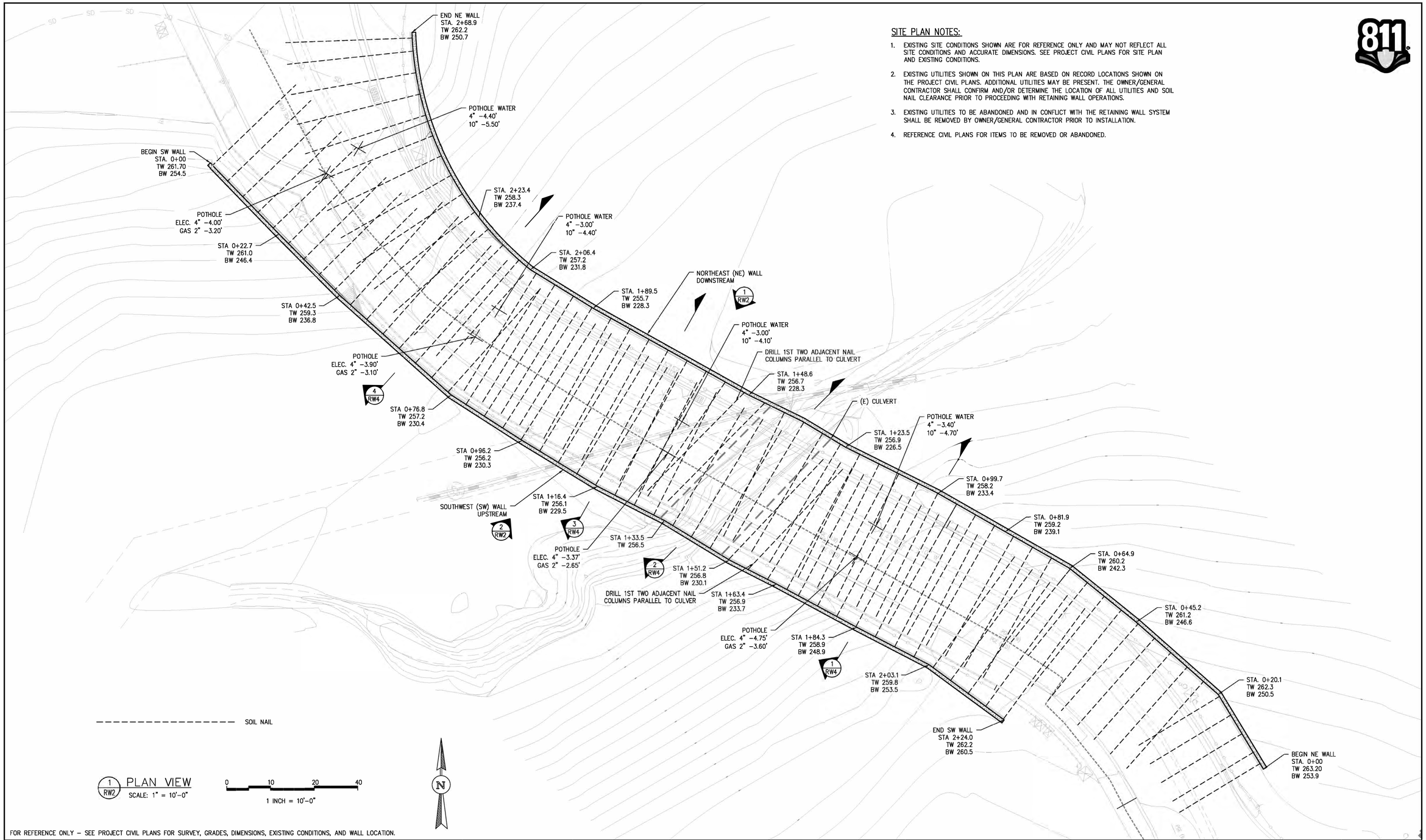
ATRIA PARK OF LAFAYETTE

SOIL NAIL RETROFIT OF EXISTING WALL
1545 PLEASANT HILL ROAD, LAFAYETTE, CA

NOTES

SHEET: D1

SHEET	OF
20	30



SITE PLAN NOTES:

1. EXISTING SITE CONDITIONS SHOWN ARE FOR REFERENCE ONLY AND MAY NOT REFLECT ALL SITE CONDITIONS AND ACCURATE DIMENSIONS. SEE PROJECT CIVIL PLANS FOR SITE PLAN AND EXISTING CONDITIONS.
2. EXISTING UTILITIES SHOWN ON THIS PLAN ARE BASED ON RECORD LOCATIONS SHOWN ON THE PROJECT CIVIL PLANS. ADDITIONAL UTILITIES MAY BE PRESENT. THE OWNER/GENERAL CONTRACTOR SHALL CONFIRM AND/OR DETERMINE THE LOCATION OF ALL UTILITIES AND SOIL NAIL CLEARANCE PRIOR TO PROCEEDING WITH RETAINING WALL OPERATIONS.
3. EXISTING UTILITIES TO BE ABANDONED AND IN CONFLICT WITH THE RETAINING WALL SYSTEM SHALL BE REMOVED BY OWNER/GENERAL CONTRACTOR PRIOR TO INSTALLATION.
4. REFERENCE CIVIL PLANS FOR ITEMS TO BE REMOVED OR ABANDONED.

FOR REFERENCE ONLY – SEE PROJECT CIVIL PLANS FOR SURVEY, GRADES, DIMENSIONS, EXISTING CONDITIONS, AND WALL LOCATION.

REVISION:	DATE:	DESCRIPTION/REASON:	DESIGN BY:	SCALE:
			SM	AS SHOWN
			CHECKED BY:	JOB NUMBER:
			DB	23016
			DATE:	CONTRACT NO:
			AUGUST 23, 2023	

REGISTERED PROFESSIONAL ENGINEER
JEREMY R. MCCLELLEN
No. C66618
Exp. 06/24
CIVIL
STATE OF CALIFORNIA

DRILL TECH
DRILLING & SHORING, INC.
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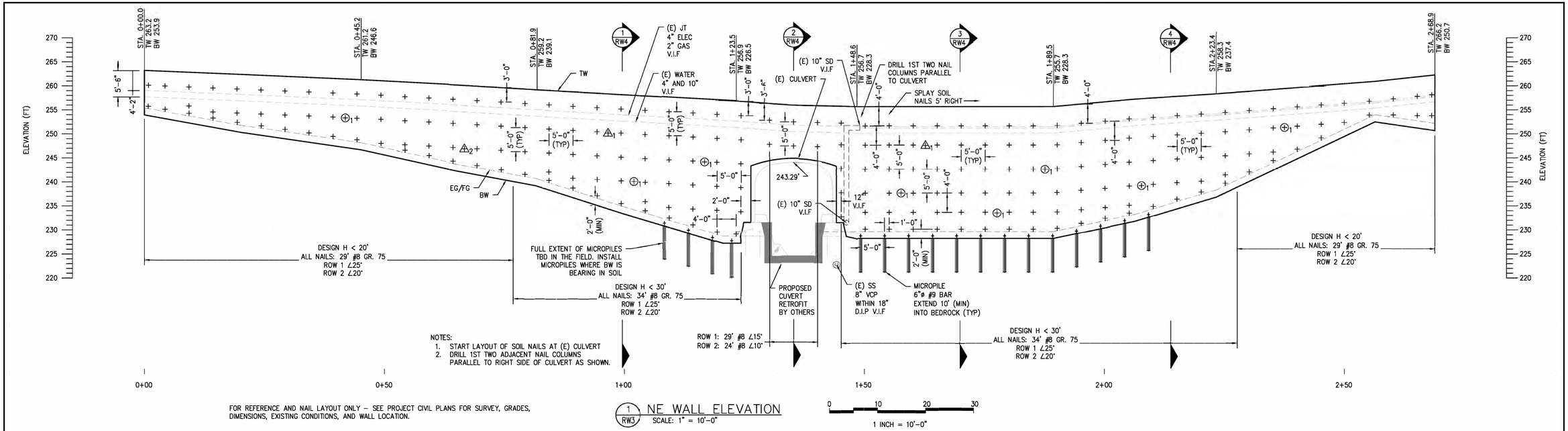
ATRIA PARK OF LAFAYETTE

SOIL NAIL RETROFIT OF EXISTING WALL
1545 PLEASANT HILL ROAD, LAFAYETTE, CA

PLAN VIEW

SHEET: D2

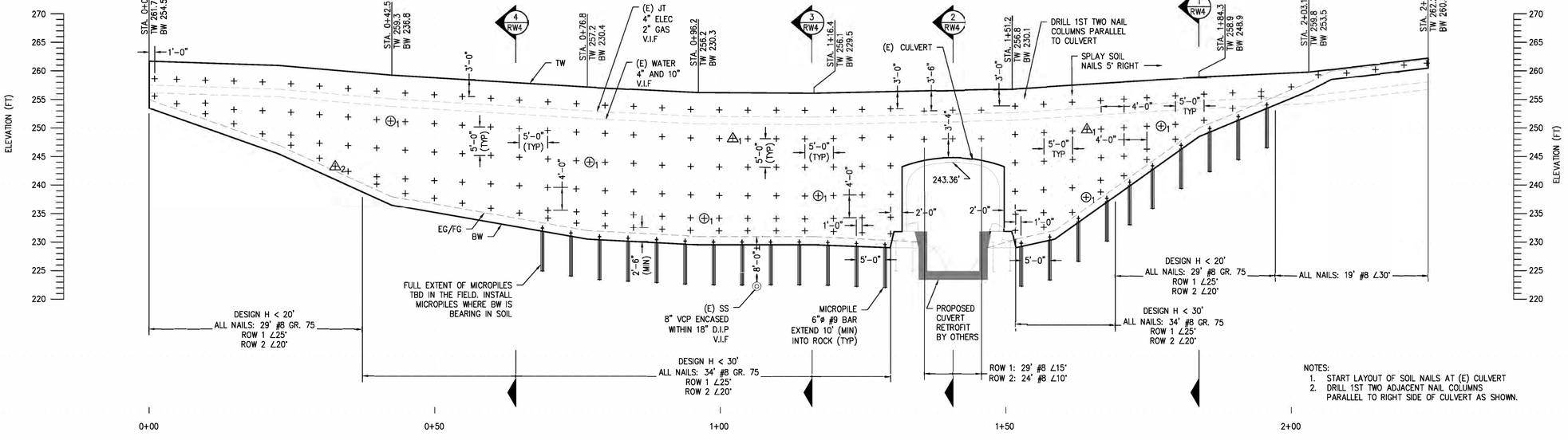
SHEET	OF
21	30



FOR REFERENCE AND NAIL LAYOUT ONLY – SEE PROJECT CIVIL PLANS FOR SURVEY, GRADES, DIMENSIONS, EXISTING CONDITIONS, AND WALL LOCATION.

1 RW3 NE WALL ELEVATION
SCALE: 1" = 10'-0"

0 10 20 30
1 INCH = 10'-0"



LEGEND	
+	SOIL NAIL
⊕	PROOF TEST SOIL NAIL
⚠	VERIFICATION TEST SOIL NAIL
STA	WALL STATION
TW	TOP OF WALL
BW	BOTTOM OF WALL
EG/FG	EXISTING/FINISHED GRADE

FOR REFERENCE AND NAIL LAYOUT ONLY – SEE PROJECT CIVIL PLANS FOR SURVEY, GRADES, DIMENSIONS, EXISTING CONDITIONS, AND WALL LOCATION

2 RW3 SW WALL ELEVATION
SCALE: 1" = 10'-0"

0 10 20 30
1 INCH = 10'-0"

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DESIGN BY: SM	SCALE: AS SHOWN
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STEPHEN R. MCCLELLAN
No. C66618
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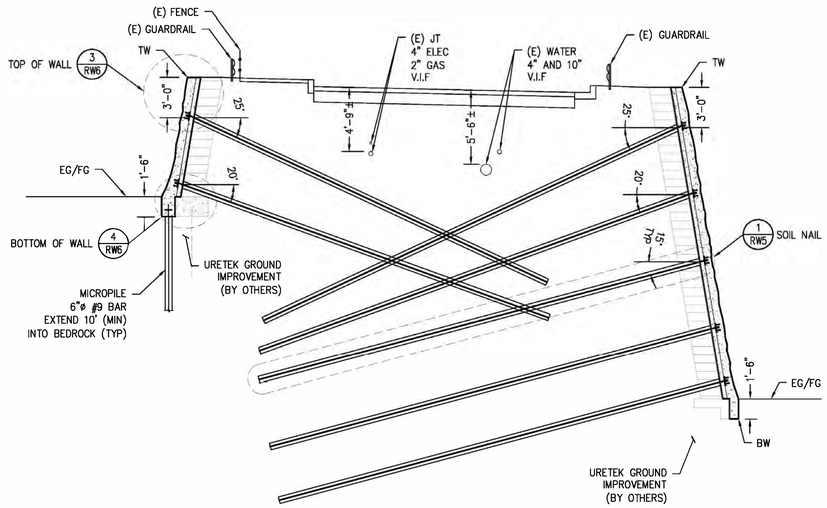
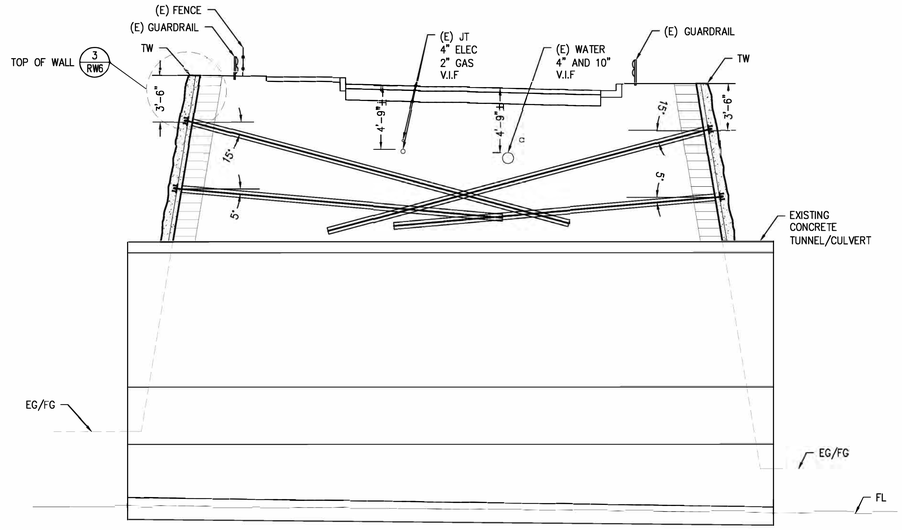
ATRIA PARK OF LAFAYETTE
SOIL NAIL RETROFIT OF EXISTING WALL
1545 PLEASANT HILL ROAD, LAFAYETTE, CA

WALL ELEVATIONS

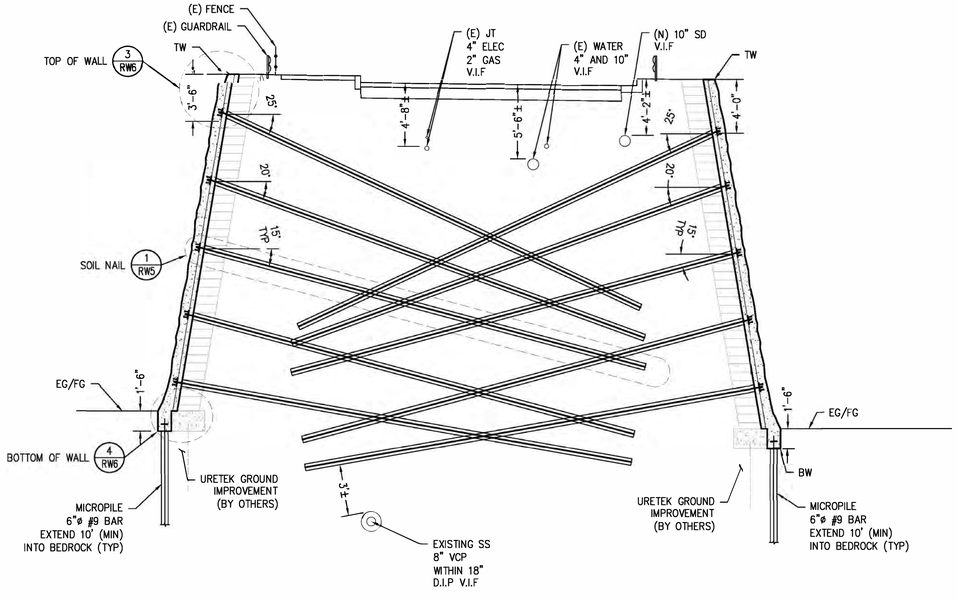
SHEET: D3



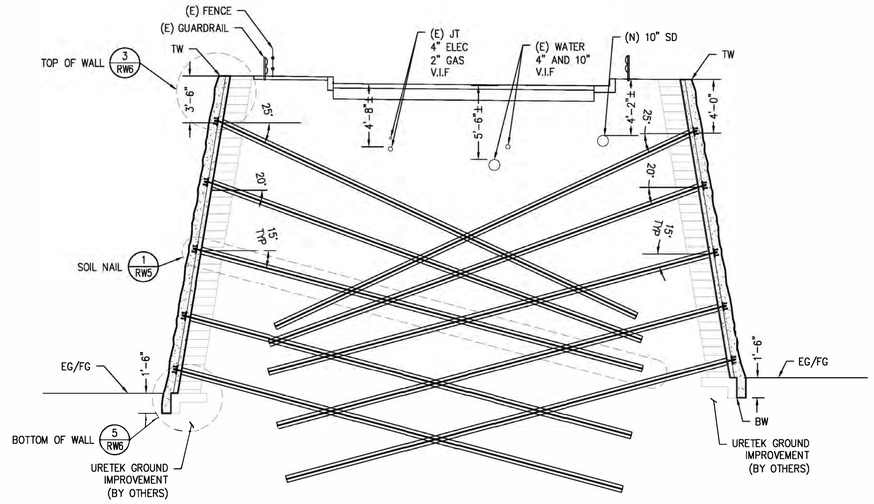
1 RW4 WALL – SECTION
SCALE: 1/8" = 1'-0"



2 RW4 WALL – SECTION
SCALE: 1/8" = 1'-0"



3 RW4 WALL – SECTION
SCALE: 1/8" = 1'-0"



4 RW4 WALL – SECTION
SCALE: 1/8" = 1'-0"

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			CHECKED BY: DB	JOB NUMBER: 23016
			DATE: AUGUST 23, 2023	CONTRACT NO:

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ATRIA PARK OF LAFAYETTE

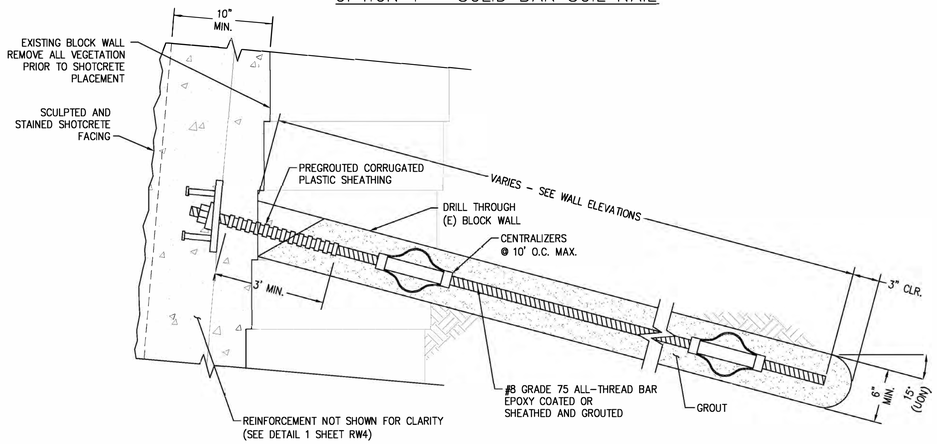
SOIL NAIL RETROFIT OF EXISTING WALL
1545 PLEASANT HILL ROAD, LAFAYETTE, CA

WALL SECTIONS

SHEET: D4

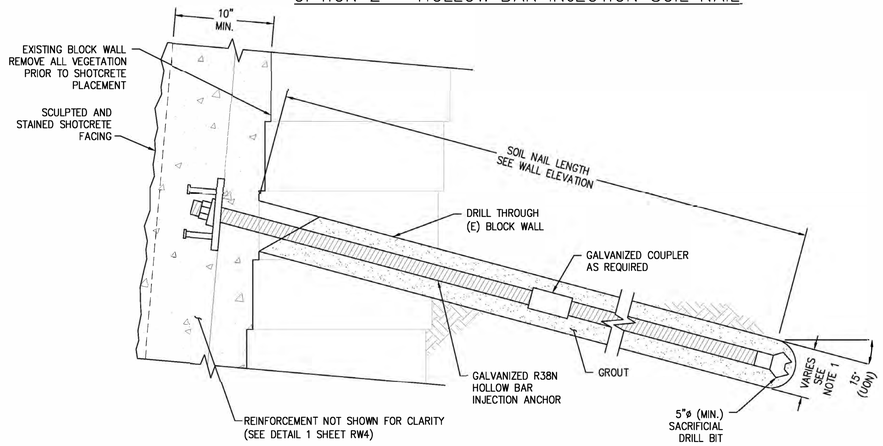
SHEET	OF
23	30

OPTION 1 – SOLID BAR SOIL NAIL



1 SOIL NAIL ASSEMBLY – SECTION
NO SCALE

OPTION 2 – HOLLOW BAR INJECTION SOIL NAIL



1 HOLLOW BAR INJECTION SOIL NAIL ASSEMBLY – SECTION
NO SCALE

2 TEST NAIL ASSEMBLY – SECTION
NO SCALE

HOLLOW BAR INJECTION
2 TEST NAIL ASSEMBLY – SECTION
NO SCALE

HOLLOW BAR INJECTION ANCHOR INSTALLATION NOTES:

1. GROUTED HOLE DIAMETER TYPICALLY VARIES FROM 1.5X TO 2X THE DRILL BIT DIAMETER.
2. THE GROUTING AND DRILLING OPERATIONS WILL BE PERFORMED SIMULTANEOUSLY FROM THE POINT OF ENTRY UNTIL THE REQUIRED DEPTH IS ACHIEVED. THE GROUT WILL BE INJECTED THROUGH THE TOP OF THE BAR AT A CONTINUOUS RATE AND BE DISTRIBUTED EVENLY THROUGHOUT THE HOLE THROUGHT GROUT PORTS ON THE SACRIFICAL BIT.
3. AFTER THE DESIGN DEPTH IS ACHIEVED, PUMP ADDITIONAL GROUT AS NECESSARY TO FLUSH ANY RESIDUAL SOIL SPOILS FROM THE HOLE UNTIL CLEAN GROUT IS OBSERVED.
2. TEST NAILS SHALL BE INSTALLED AT THE SAME INCLINATION AS ADJACENT PRODUCTION NAILS.
3. FOR TEST NAILS: USE A PVC PIPE WITH A FLUSHING END TO WASH OUT THE GROUT FROM THE SURFACE DOWN TO THE BONDED LIMIT LINE. THE PVC FLUSHING PIPE SHALL BE MARKED AT THE PRESCRIBED UNDBONDED LENGTH TO INSURE CORRECT WASHED LENGTH AND BONDED LENGTH.

SOIL NAIL TEST SCHEDULE

SOIL/ROCK TYPE	DESIGN LOAD (KIPS)*	MAX. PROOF TEST LOAD (KIPS)*	MAX. VERIFICATION TEST LOAD (KIPS)*
1. FILL/NATIVE SOIL	11.3	17.0	22.6
2. BEDROCK	22.6	34.0	45.2

* BASED ON 10' BONDED LENGTH. IF AS-BUILT BONDED LENGTH DIFFERS FROM THIS VALUE, THE ENGINEER SHALL BE NOTIFIED AND WILL MODIFY THE TEST LOADS.

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REGISTERED PROFESSIONAL ENGINEER – STEPHEN R. MCCLELLEN – No. C66618 Exp. 06/24 – CIVIL – STATE OF CALIFORNIA

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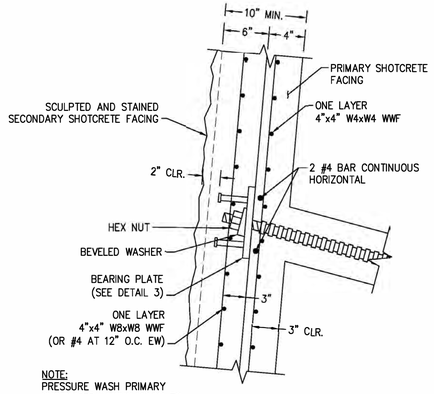
ATRIA PARK OF LAFAYETTE

SOIL NAIL WALL RETROFIT
1545 PLEASANT HILL ROAD, LAFAYETTE, CA

SOIL NAIL DETAILS

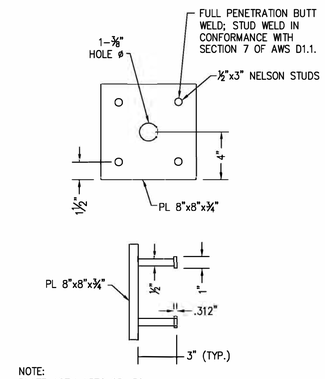
SHEET: D5

SHEET	OF
24	30



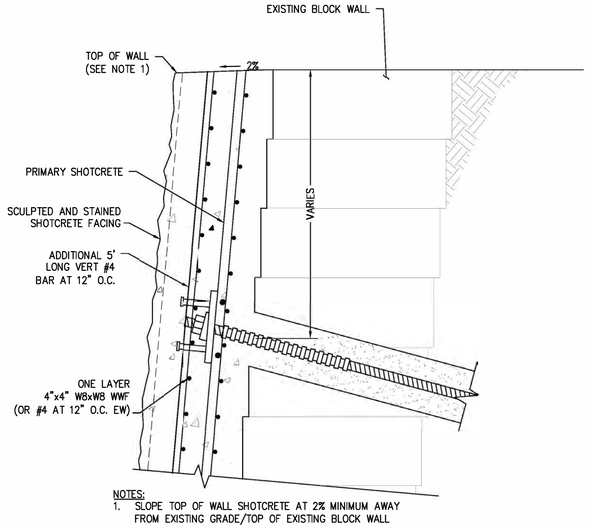
NOTE:
PRESSURE WASH PRIMARY SHOTCRETE FACING PRIOR TO PLACING SECONDARY SHOTCRETE.

1 NAIL ANCHORAGE ASSEMBLY AND SHOTCRETE FACING DETAIL
NO SCALE



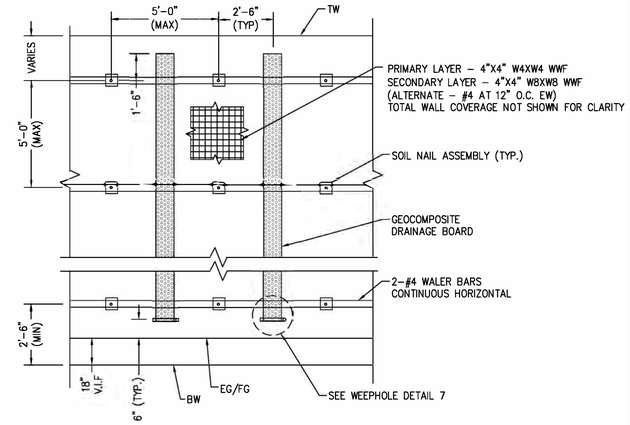
NOTE:
PLATE ASTM A572 GR. 50

2 BEARING PLATE DETAIL
NO SCALE



NOTES:
1. SLOPE TOP OF WALL SHOTCRETE AT 2% MINIMUM AWAY FROM EXISTING GRADE/TOP OF EXISTING BLOCK WALL

3 TOP OF WALL DETAIL
NO SCALE

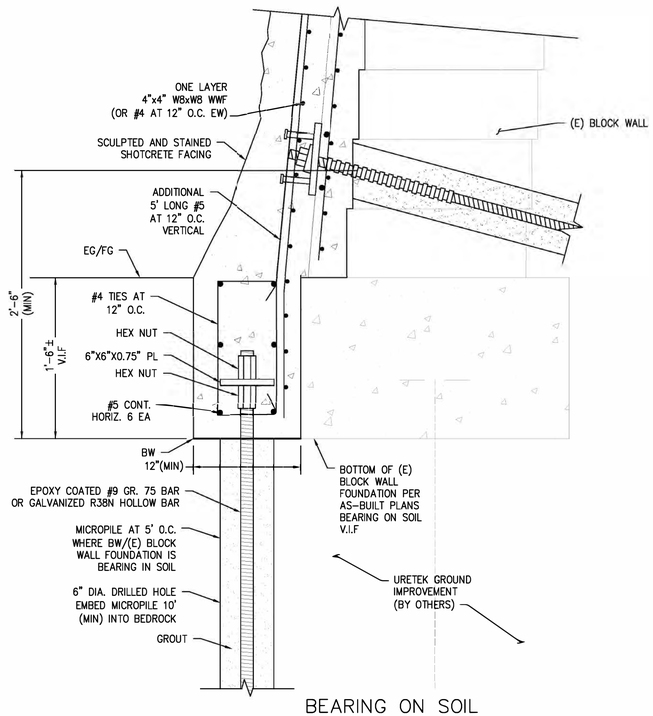


NOTES:

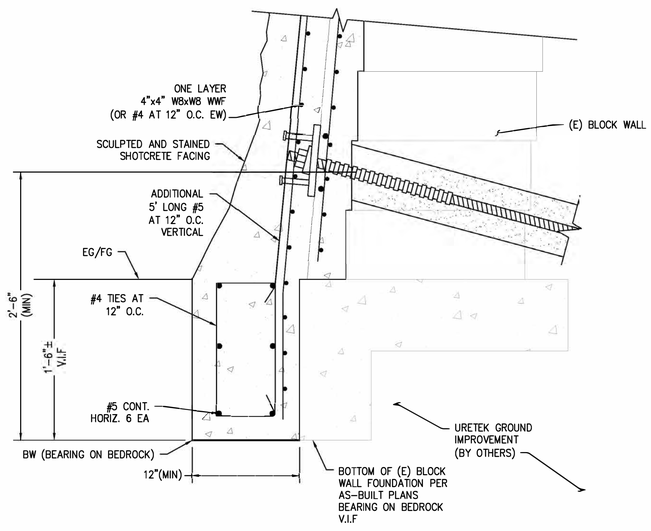
1. NAIL LOCATION MAY VARY IN ISOLATED CASES UP TO 12" FROM DESIGN LOCATION.

2. OVERLAP GEOCOMPOSITE DRAINS AT BOTTOM OF WALL TO "WRAP AROUND" WEEP HOLE PIPE.

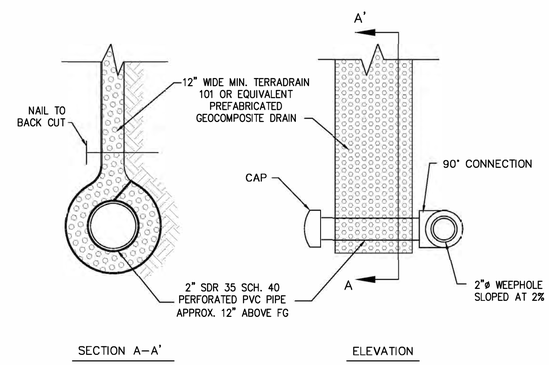
6 PARTIAL ELEVATION
NO SCALE



4 BEARING ON SOIL BOTTOM OF WALL DETAIL
NO SCALE



5 BEARING ON BEDROCK BOTTOM OF WALL DETAIL
NO SCALE



7 WEEPHOLE DETAIL
NO SCALE

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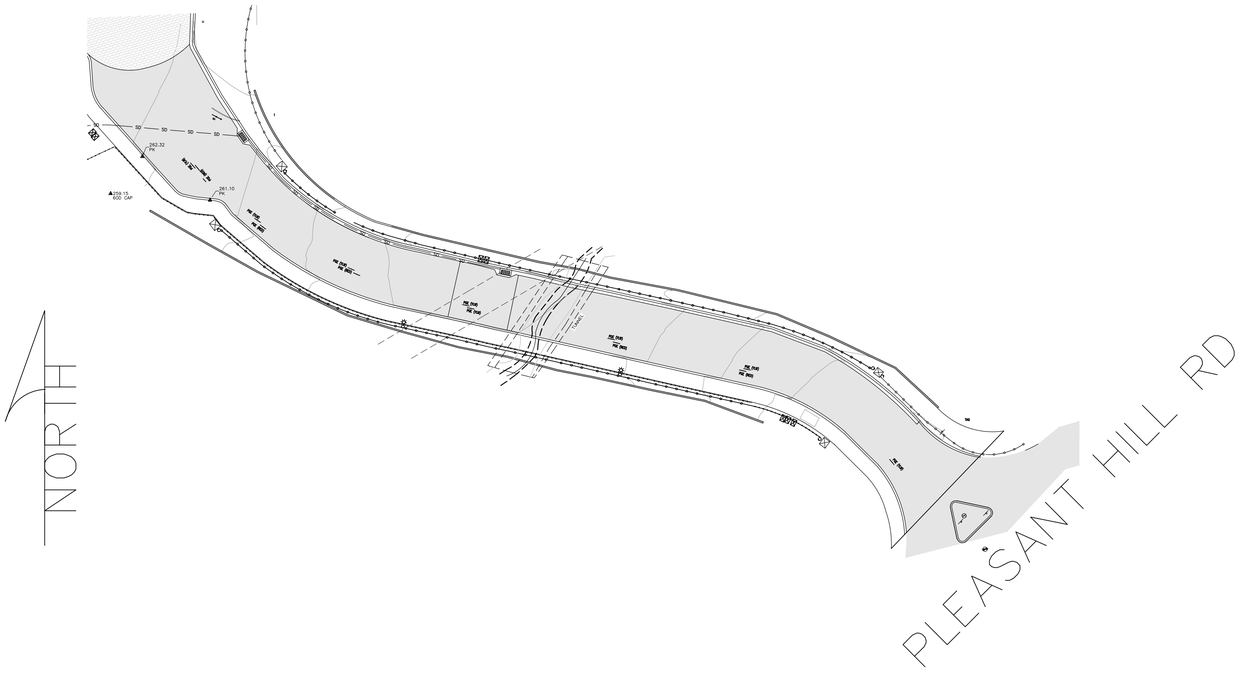
ATRIA PARK OF LAFAYETTE
SOIL NAIL WALL RETROFIT
1545 PLEASANT HILL ROAD, LAFAYETTE, CA

DETAILS

SHEET: D6

SHEET	OF
25	30



SCALE: 1"= 20'

0' 10' 20' 30' 40' 50'

SITE PLAN

WORK SCOPE

1. GROUND IMPROVEMENT WITH CHEMICAL GROUTING (POLYURETHANE)

PROPERTY DATA

1. OCCUPANCY: N/A (ROADWAY)
2. TYPE OF CONSTRUCTION: N/A
3. STORIES: N/A
4. OWNER'S NAME: ATRIA SENIOR LIVING
5. APN: 169-090-002

SHEET INDEX

NO.	DESCRIPTION
1	SITE PLAN/ SHEET INDEX
2	GROUND IMPROVEMENT POLYURETHANE DEEP INJECTION

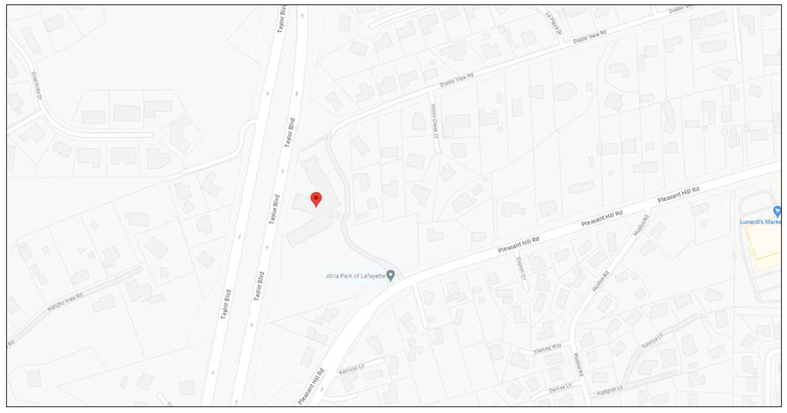
CURRENT CODES

CALIFORNIA BUILDING STANDARD CODES
2019 CALIFORNIA BUILDING CODE (CBC)
2019 CAL EXIST BUILDING CODE

CITY REQUIREMENTS

1. PERIODIC INSPECTION REQUIRED FOR ALL DEEP INJECTION.
2. THE ISSUE OF A PERMIT SHALL NOT PREVENT THE BUILDING OFFICIAL FROM REQUIRING CORRECTIONS OF ERRORS ON THE PLANS OF FROM PREVENTING ANY VIOLATION OF THE CODES ADOPTED BY THE CITY, RELEVANT LAWS, ORDINANCES, RULES AND/OR REGULATIONS.

VICINITY MAP



SLOPE SOIL IMPROVEMENT
ATRIA BRIDGE SLOPE STABILITY
1545 PLEASANT HILL RD.
LAFAYETTE, CA 94549

URETEK USA, INC.
1925 E HIGHLAND COURT
ONTARIO, CA 91764-1626
PH: 909-816-4038

DATE:
8-26-2023

DRAWN BY:
K.O.

REV:

SHEET
U1

FIELD NOTES

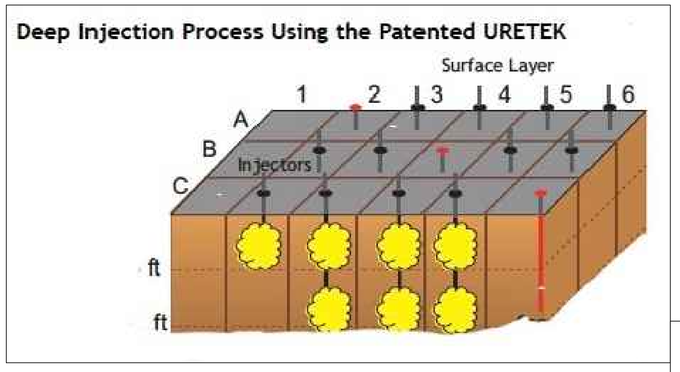
1. PERFORM LEAK DETECTION TEST TO DETERMINE IF EXISTING LEAKS OR CRACKS EXIST WITHIN PLUMBING AND DRAINAGE. ANY (E) LEAKS MAY RESULT IN POLYMER INTRUSION
2. PERFORM LEAK DETECTION TEST FOLLOWING INJECTIONS. POLYMERS MAY INVADE PLUMBING AND DRAINAGE LINES, AND IT MUST BE CLEANED PRIOR TO RETURNING TO SERVICE.

CONSTRUCTION NOTES

1. INJECTION SPACING NOT TO EXCEED 4'–0" OC.
2. CONTACT PROJECT MANAGER FOR ANY UNFORESEEN CONDITIONS.
3. LOCATE AND PROTECT ALL UNDERGROUND AND OVERHEAD UTILITY LINES PRIOR TO CONSTRUCTION.

MATERIAL NOTES

1. HYDRO–INSENSITIVE PROPERTIES WILL REDUCE SWELL POTENTIAL OF EXPANSIVE CLAY SOIL. PRODUCT MUST DISPLAY PASSING TEST RESULTS OF NYDOT'S GTP–9 PANEL TEST.
2. TESTING AT TTCI FACILITY DISPLAYS REDUCTION OF LATERAL EARTH PRESSURE BY APPROXIMATELY 40%.
3. MATERIAL SPECIFIED MUST BE LOS ANGELES LISTING PRODUCT THROUGH LOS ANGELES RESEARCH BUREAU, (RESEARCH REPORT #26197) TO COMPLY WITH ACCREDITED TESTING OF THE PRODUCTS THROUGH ACCREDITED AGENCIES.



SPECIFICATIONS

STRUCTURE AND FOUNDATION SOILS
STABILIZATION, AND LIFTING WHERE NECESSARY, UTILIZING A TWO-PART 1:1 BY VOLUME, WATER RESISTANT, HIGH-DENSITY POLYURETHANE FOAM (HDPF)

DESCRIPTION:

This work shall consist of soil densification to strengthen base and sub-base soils under flexible asphalt, concrete, or composite pavement, and structures such as bridge approaches with sleeper slabs, by furnishing and injecting expansive polyurethane material into the foundation soils beneath the pavement through holes or injection tubes inserted into drilled holes at locations and depths, as shown on the plans or as directed by the Engineer, while monitoring for movement at the surface. If necessary, injection of material shall continue as needed to lift the pavement to grade.

MATERIAL:

1. High Density Polyurethane Foam.

Certify that the material conforms to the following requirements listed in this section:

PROPERTY	TEST	RESULTS
• Density, lbs./cu. ft.	ASTM D-1622	3.5 - 4.5
• Compressive Strength, psi (min.)	ASTM D-1621	55
• Tensile Strength, psi (min.)	ASTM D-1623	90
• Shear Strength, psi (min.)	ASTM C-273	45
• Flexural Strength, psi (min.)	ASTM D-790	90
• Closed Cell content (%)	ASTM D-1940	+85

HDPF shall reach 90% compressive strength within 30 minutes of injection. The material used shall be a two-part 1:1 by volume HDPF, such as URETEK 486 STAR. Other polyurethanes submitted must meet all of the required specifications and be preapproved by the Owner. The material shall be water blown, not chemically blown. The material shall be a polyurethane-forming mixture, having water insoluble diluents, which permits the formation of polyurethanes in the presence of water. Water insoluble diluents shall provide polyurethane foam with improved dimensional stability properties. The presence of water insoluble diluents and the characteristics and properties listed above must be certified by the manufacturer (paragraph 3). The certification from the polyurethane manufacturer must be submitted with the bid documents.

2. Aquatic and Terrestrial Toxicity Testing.

Polyurethane must pass aquatic and terrestrial toxicity testing and chemical analysis (RCRA metals, TOC, and COD). The polyurethane must show a lack of toxicity at 200 ppm TCLP leachate and show non-toxic for all test species. Testing must have been performed by an independent third-party testing laboratory. The certification from the independent third-party testing laboratory must be submitted with the bid documents.

3. Panel Test for Hydro-Insensitivity of High-Density Polyurethane Grout.

Polyurethane must pass the Panel Test for Hydro-Insensitivity of High-Density Polyurethane Grout (see the attached testing protocol). The Panel Test must be performed by an independent third-party testing laboratory, under the supervision and review of a licensed Professional Engineer, and must certify that the polyurethane material meets or exceeds the limits set forth in the panel test specification. The certification from the independent third-party testing laboratory must be submitted with the bid documents.

4. ASTM D1621 and ASTM D1622 Requirements.

Prior to beginning work and with the inspector observing, the Contractor must prepare 5 machine mixed field samples for density and compressive strength determination. The samples shall then be transported to an independent third-party testing laboratory at the Contractor's expense. At the laboratory, a nominal 2" by 2" by 2" sample shall be taken from the center of each of the field samples and the density of the material shall be determined in accordance with ASTM D1622. The compressive strength shall then be determined by testing in accordance with ASTM D1621.

The Contractor shall submit electronic copies to the Owner's Representative of the stress strain curves (ASTM D1621 showing force, lbs. vs. deflection, %) as well as density calculations, including measured specimen dimensions (ASTM D1622) for each specimen tested. Field samples shall be prepared and sent for testing for each individual batch/lot number of resin component used on the project.

The compressive strength and density determined from ASTM D1621 and ASTM D1622 shall be used to determine the percent of pay for this item as outlined in Measurement and Payment.

5. Non-shrink grout to patch drill holes.

Non-shrink grout must be supplied by a manufacturer on the approved products list and must be used within the shelf life and temperature limitation set by the manufacturer.

EQUIPMENT:

1. Portable Dynamic Cone Penetrometer (DCP).

Provide a portable DCP for on-site soils investigation to assist in location and depth of weak foundation soils and determination of correct injection pattern and injection elevations through tubes to densify weak soils. The DCP must be a Pagani DPM 30 or similar, capable of taking readings up to 30 feet below grade. DCP testing may be required, as directed by the Owner's Representative, to confirm existing sub-grade soil conditions. The name, model number, and description of the DCP unit(s) intended for use must be submitted with the bid documents.

2. Pumping Units.

Ensure that all pumping units used are equipped with certified flow meters to precisely measure the amount of each component injected, so that the 1:1 ratio by volume is maintained for quality control and a certified volume of injected polyurethane material is obtained for proper payment. Flow meters must be recertified annually (once every 12 months) to ensure accuracy. Certifications from the manufacturer (or an independent third party) demonstrating that each flow meter intended for use has been tested within the past 12 months must be submitted with the bid documents.

QUALITY MANAGEMENT:

1. Drilling Holes and Installation of Injection Tubes.

Drill injection holes in the pattern shown on the Standard Drawings, or as indicated on the approved field Quality Control (QC) plan, as approved by the Owner's Representative. Drill 5/8" to 2" diameter holes, vertical and round, and to a depth indicated on the approved field QC plan. Install injection tubes to the prescribed injection depth(s). Tubes must be pushed a minimum of 4" below the grade of the road and/or runway prior to the commencement of injections.

2. Injection of the HDPF.

Inject the HDPF through holes, via injection tubes when needed, to fill voids and into the foundation soils beneath the pavement to the prescribed injection depth(s). Continuously monitor for movement of the structure. Foundations soils are sufficiently stabilized when movement of the structure is detected. If necessary, injection of material shall continue as needed to lift the pavement to grade.

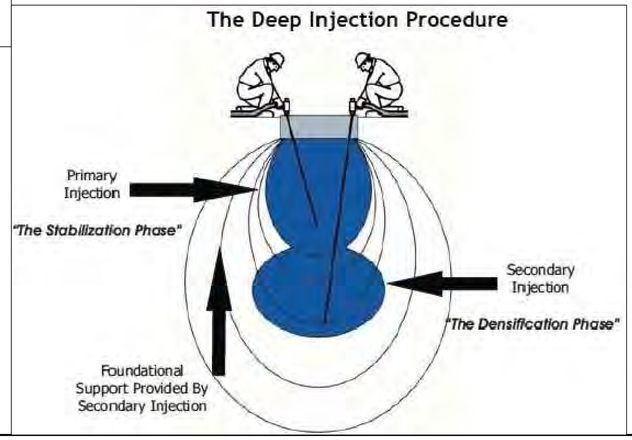
3. Hole Patching.

Install a rapid set, non-shrink patching material into the drilled-out hole and strike patches flush with the surface of the surrounding pavement.

EXPERIENCE:

Have a minimum 3 years of experience injecting 1:1 by volume, two-part, expansive polyurethane through holes or tubes into soils while monitoring at the surface of the pavement for movement to demonstrate sufficient densification of the soils. Evidence of prior experience must be submitted with the bid documents: 5 awarded contracts within each of the previous 3 years.

Have as an employee of the company, a licensed Professional Engineer (P.E.) with a minimum of 3 years of experience in stabilization of pavement foundation soils by injecting 1:1 by volume, two-part, expansive polyurethane through holes or tubes into soils while monitoring at the surface of the pavement for movement to demonstrate sufficient densification of the soils. The name, hire date, and resume of the licensed Professional Engineer must be submitted with the bid documents.



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LAFAYETTE, CA 94549

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PH: 909-816-4038

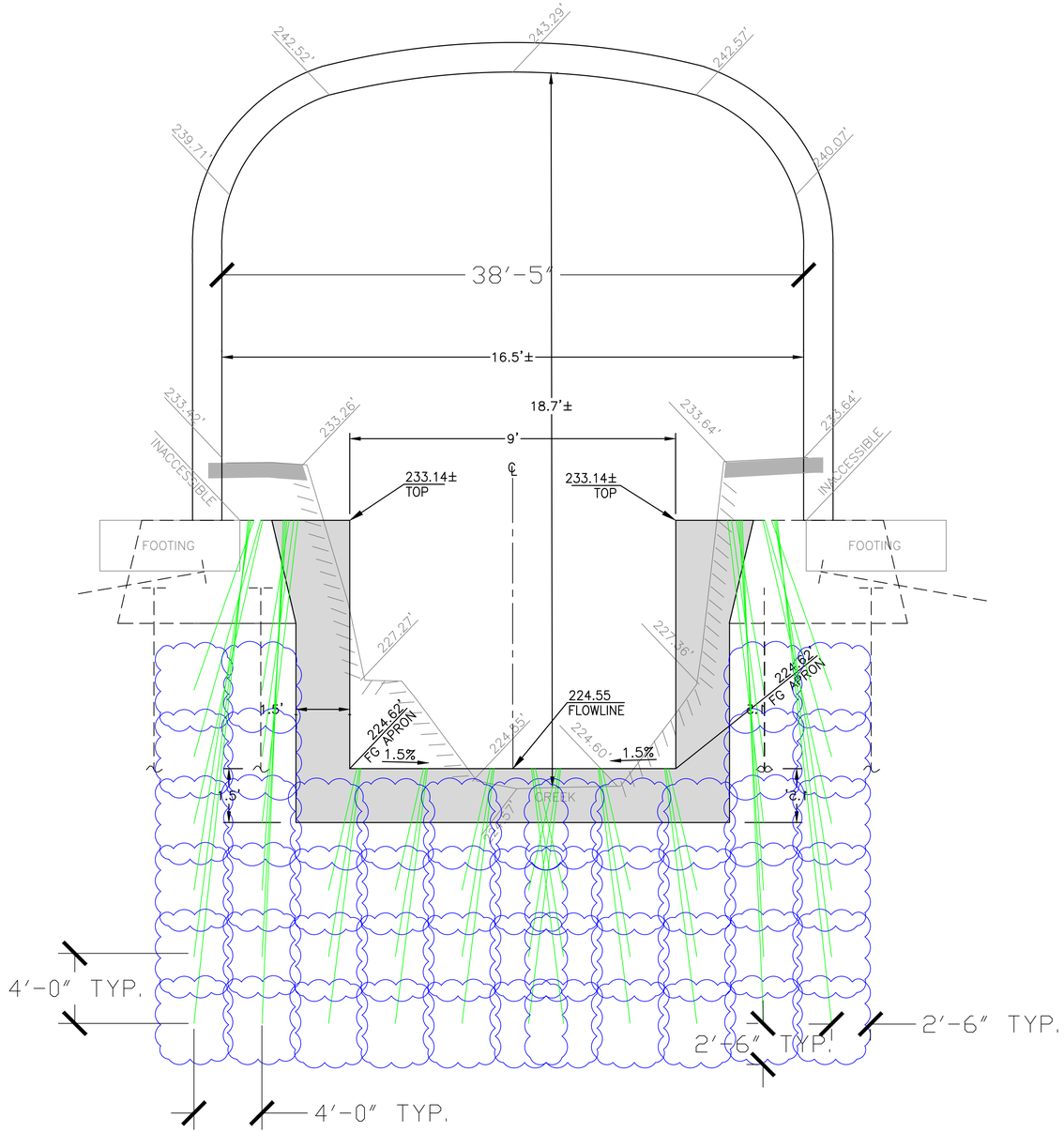
DATE:
8-26-2023

DRAWN BY:
K.O.

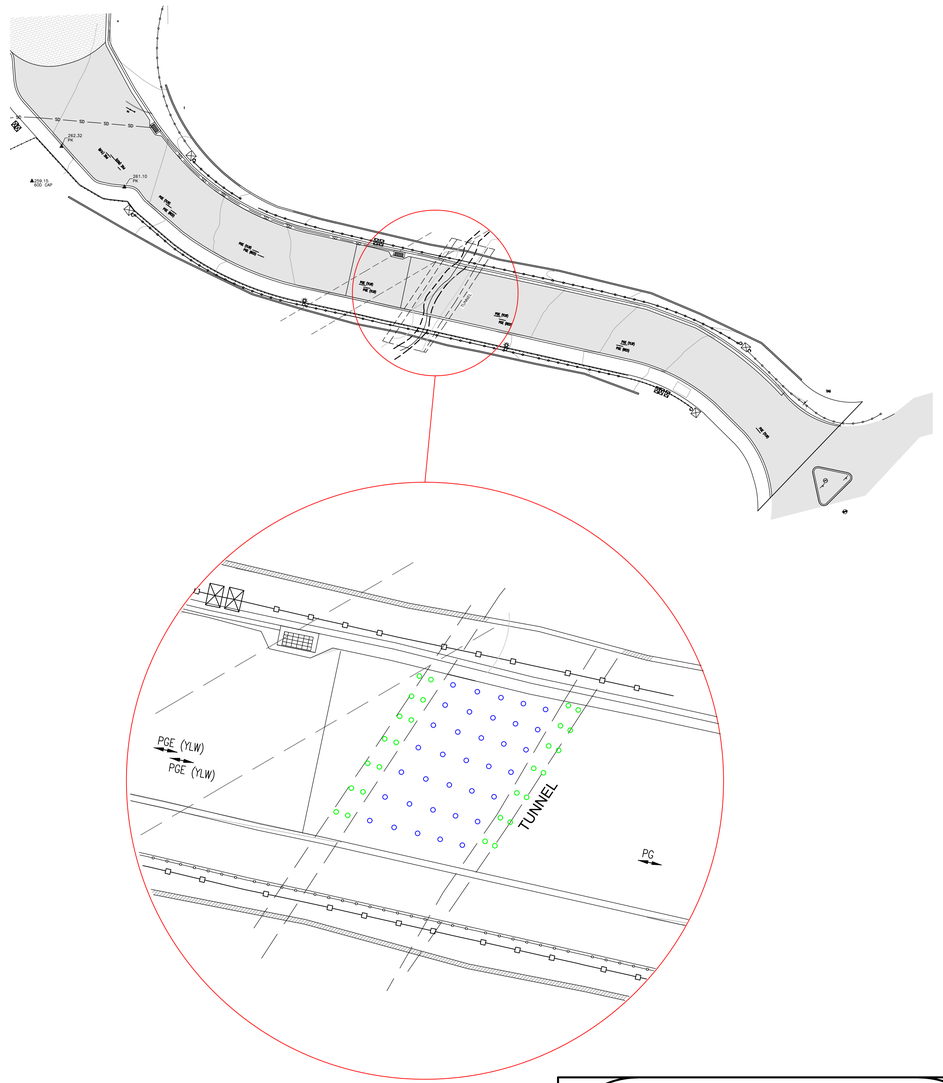
REV:

SHEET
U2

PROFILE VIEW



PLAN VIEW



LEGEND

- INJECTION TUBE
- INJECTION INFLUENCE
- SLAB INJ. (3 DEPTHS)
- PER. INJ. (6 DEPTHS)

*NOTE: DEPTH OF INJECTIONS REQUIRE ARE BASED ON BEDROCK DEPTH(S) NOTED IN GEO REPORT

CULVERT INJECTION

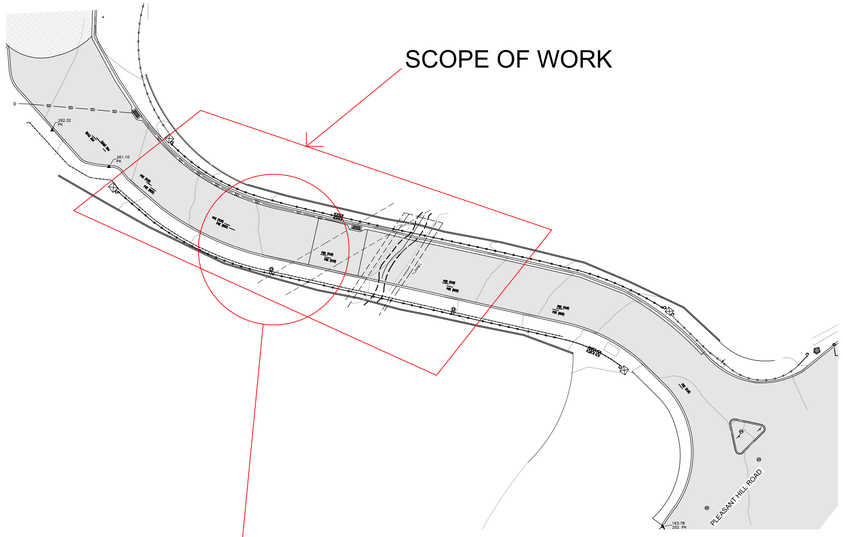
ATRIA BRIDGE SLOPE STABILITY
1545 PLEASANT HILL RD.
LAFAYETTE, CA 94549

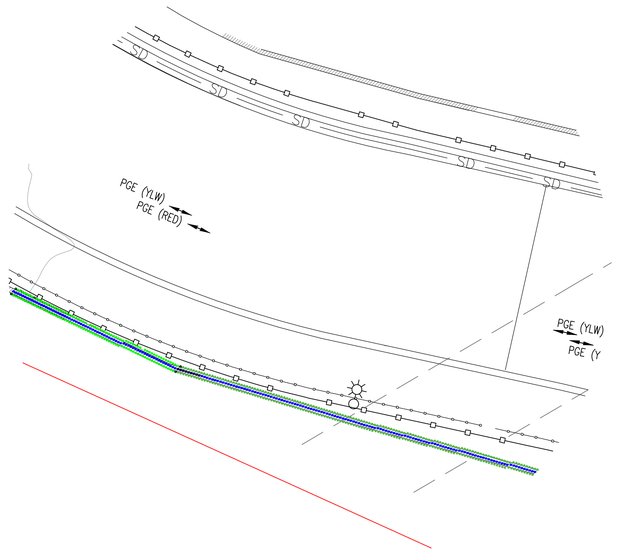
URETEK USA, INC.
1925 E HIGHLAND COURT
ONTARIO, CA 91764-1626
PH: 909-816-4038

DATE:
8-26-2023

DRAWN BY:
K.O.

SHEET
U3

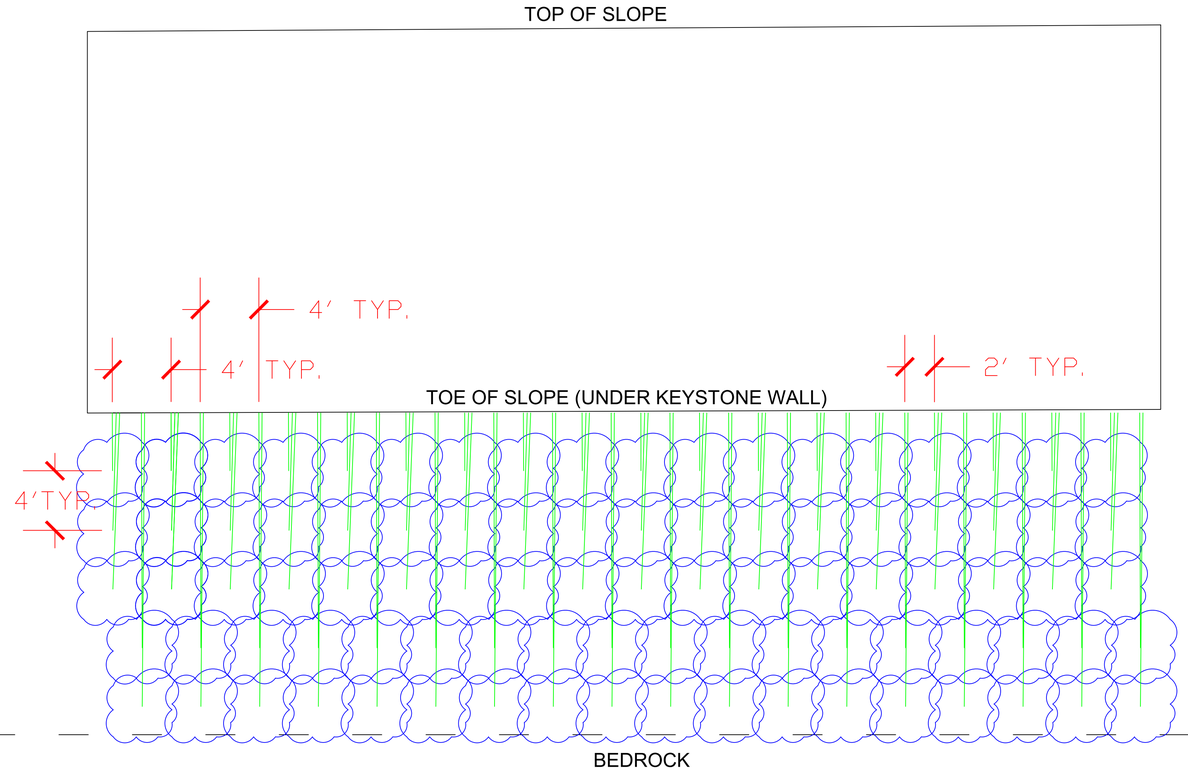




LEGEND:

4'-0" AND 8'-0" INJECTIONS

12'-0" AND 16'-0" INJECTIONS



SLOPE SOIL IMPROVEMENT
ATRIA BRIDGE SLOPE STABILITY
1545 PLEASANT HILL RD.
LAFAYETTE, CA 94549

URETEK USA, INC.
1925 E HIGHLAND COURT
ONTARIO, CA 91764-1626
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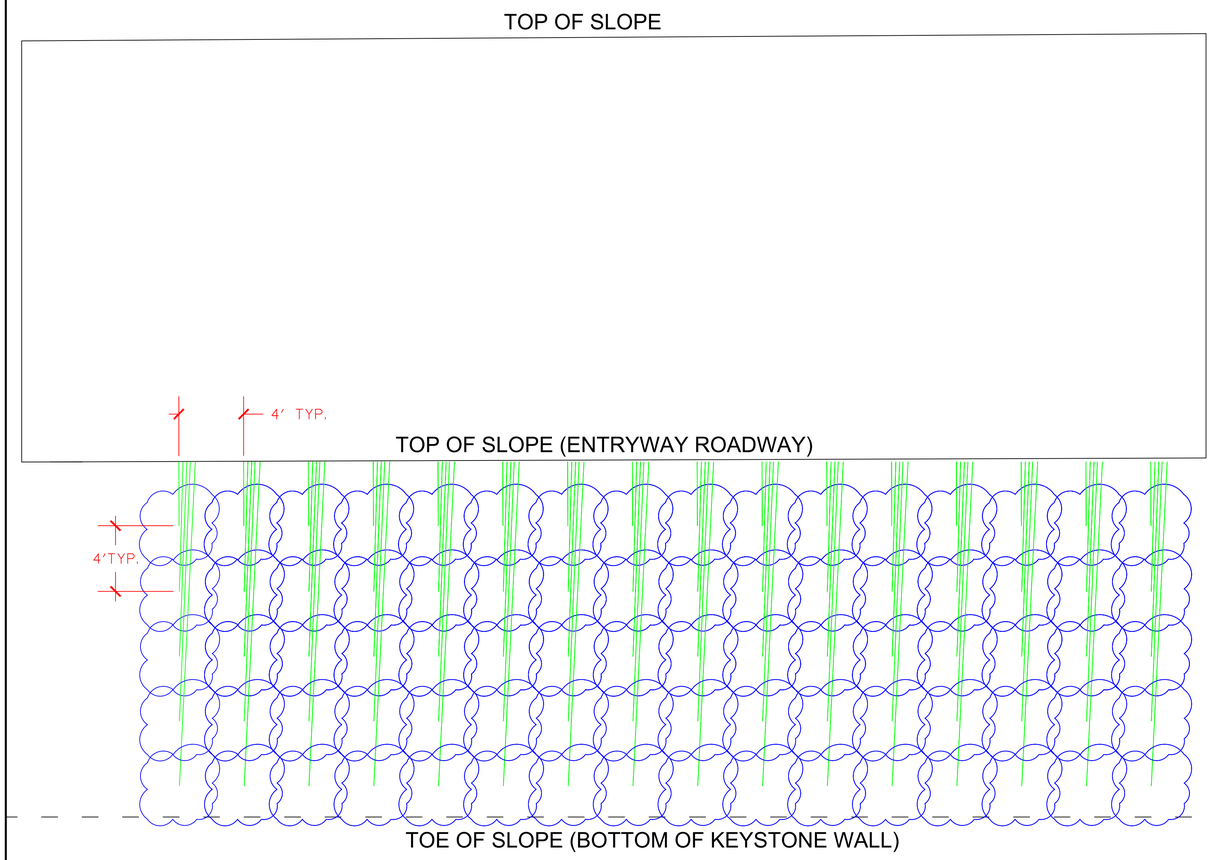
DRAWN BY:
K.O.

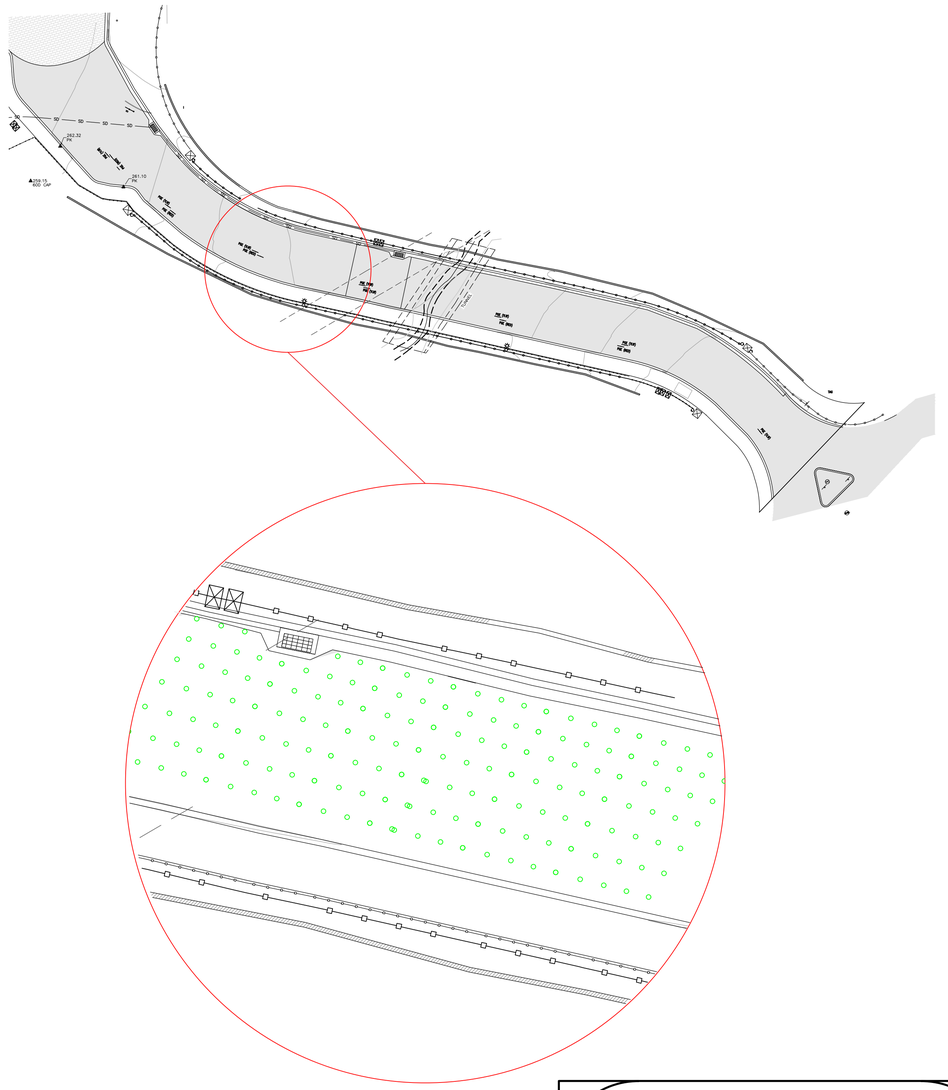
REV:

SHEET
U4

PROFILE VIEW



PLAN VIEW



*NOTE: DEPTH OF INJECTIONS REQUIRE ARE BASED ON BEDROCK DEPTH(S) NOTED IN GEO REPORT

LEGEND

- INJECTION TUBE
- INJECTION INFLUENCE
- SLAB INJ. (3 DEPTHS)
- PER. INJ. (6 DEPTHS)

CULVERT INJECTION

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U5