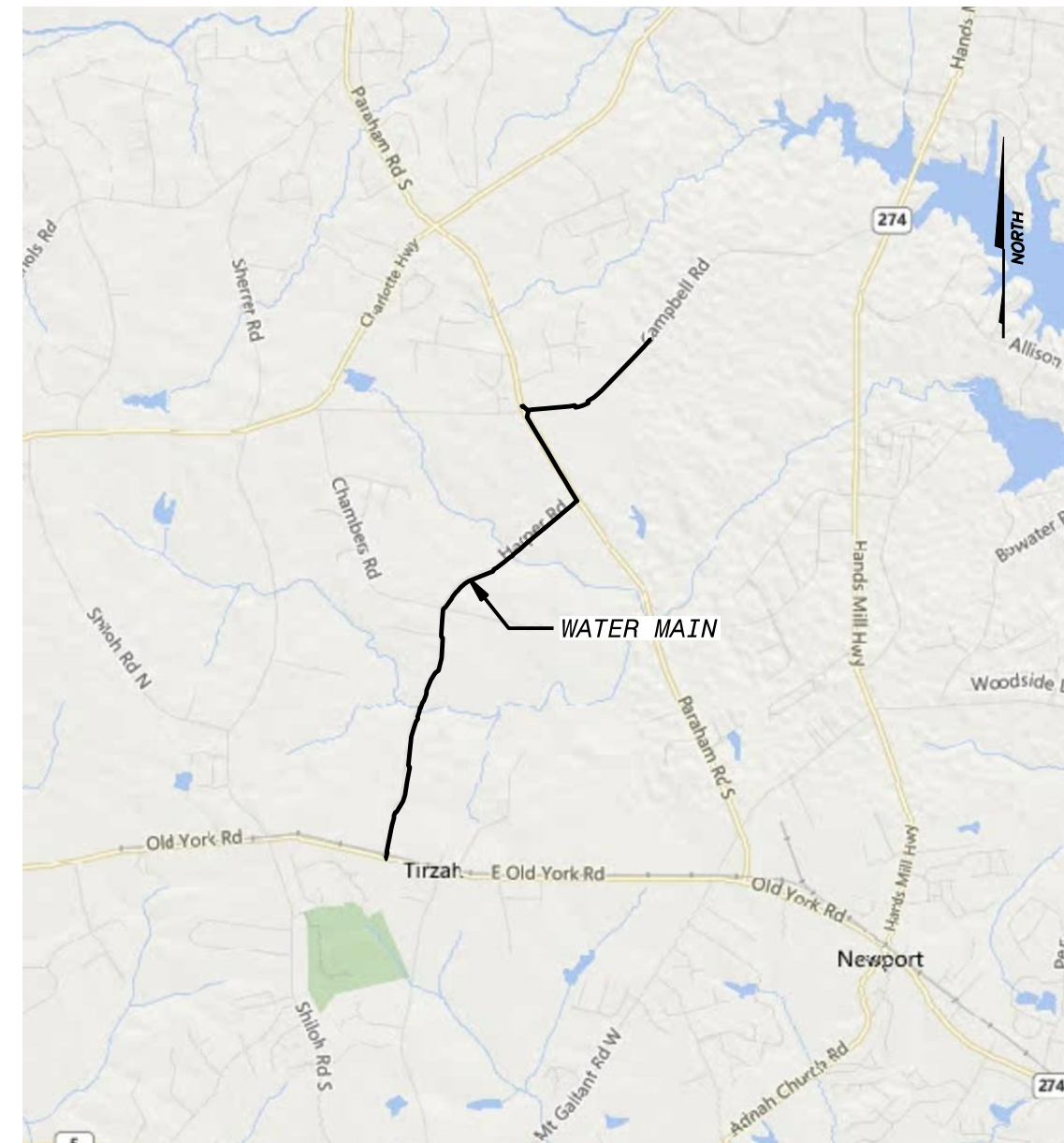


Construction Drawings for Phase 1 North-South Water Transmission Main Harper Road



LOCATION MAP

UTILITY PROVIDERS:

WATER/SEWER

York County
220 Public Works Road
York, S.C. 29745
(866) 541-4098
Contact: Barry McKinnon

CABLE/INTERNET/TELEPHONE

Comporium Communications
P.O. Box 470
Rock Hill, S.C. 29730
Contact: Sam Prete (803-326-6160)
John Collins (803-487-6675)

NATURAL GAS

York County Natural Gas
979 W. Main Street
Rock Hill, S.C. 29730
(803) 329-5255
Contact: Stephen Comer

ELECTRIC

Duke Energy
P.O. Box 1090
Charlotte, N.C. 28201
(888) 721-7877

York Electric Cooperative
1385 East Alexander Love Highway
P.O. Box 150
York, S.C. 29745
(803) 684-4248



YORK COUNTY, SOUTH CAROLINA
YORK TOWNSHIP
DISTRICT #2

OCTOBER 2023



YORK COUNTY COUNCIL

Christi Cox, Chairwoman
Allison Love, Vice Chairwoman
William Roddey
Tommy Adkins
A Watts Huckabee
Debi Cloninger
Tom Audette

YORK COUNTY MANAGERS

David Hudspeth, Manager
Kevin Madden, Assistant Manager
Michael Moore, Assistant Manager

SCDHEC Permit to Construct/Operate # 35287-WS

System Inventory List	
8" Ductile Iron Pipe	3802
8" Restrained Joint Ductile Iron Pipe	494
18" Restrained Joint Ductile Iron Pipe	225
20" Ductile Iron Pipe	11908
20" Restrained Joint Ductile Iron Pipe	3169
36" Steel Casing	280
16" Steel Casing	136

YORK COUNTY ENGINEERING DEPARTMENT
POST OFFICE BOX 148
6 SOUTH CONGRESS STREET
YORK, SOUTH CAROLINA 29745
(803) 684-8571

SHEET LIST

GENERAL SHEET NO.	DRAWING NO.	TITLE
1	G-01	COVER SHEET
2	G-02	LEGEND AND ABBREVIATIONS
3	G-03	GENERAL NOTES
4	G-04	INDEX MAP
CIVIL		
SHEET NO.	DRAWING NO.	TITLE
5	C-01	PIPING PLAN AND PROFILE - STA 10+00 TO STA 18+00
6	C-02	PIPING PLAN AND PROFILE - STA 18+00 TO STA 27+00
7	C-03	PIPING PLAN AND PROFILE - STA 27+00 TO STA 36+00
8	C-04	PIPING PLAN AND PROFILE - STA 36+00 TO STA 45+00
9	C-05	PIPING PLAN AND PROFILE - STA 45+00 TO STA 54+00
10	C-06	PIPING PLAN AND PROFILE - STA 54+00 TO STA 63+00
11	C-07	PIPING PLAN AND PROFILE - STA 63+00 TO STA 72+00
12	C-08	PIPING PLAN AND PROFILE - STA 72+00 TO STA 81+00
13	C-09	PIPING PLAN AND PROFILE - STA 81+00 TO STA 90+00
14	C-10	PIPING PLAN AND PROFILE - STA 90+00 TO STA 99+00
15	C-11	PIPING PLAN AND PROFILE - STA 99+00 TO STA 108+50
16	C-12	PIPING PLAN AND PROFILE - STA 108+50 TO STA 117+50
17	C-13	PIPING PLAN AND PROFILE - STA 117+50 TO STA 127+00
18	C-14	PIPING PLAN AND PROFILE - STA 127+00 TO STA 136+00
19	C-15	PIPING PLAN AND PROFILE - STA 136+00 TO STA 145+00
20	C-16	PIPING PLAN AND PROFILE - STA 145+00 TO STA 154+00
21	C-17	PIPING PLAN AND PROFILE - STA 154+00 TO STA 162+00
22	C-18	PIPING PLAN - STA 162+00 TO STA 180+00
23	C-19	PIPING PLAN - STA 180+00 TO STA 198+00
24	C-20	PIPING PLAN - STA 198+00 TO EOL
25	C-50	STANDARD DETAILS - SHEET 1 OF 11
26	C-51	STANDARD DETAILS - SHEET 2 OF 11
27	C-52	STANDARD DETAILS - SHEET 3 OF 11
28	C-53	STANDARD DETAILS - SHEET 4 OF 11
29	C-54	STANDARD DETAILS - SHEET 5 OF 11
30	C-55	STANDARD DETAILS - SHEET 6 OF 11
31	C-56	STANDARD DETAILS - SHEET 7 OF 11
32	C-57	STANDARD DETAILS - SHEET 8 OF 11
33	C-58	STANDARD DETAILS - SHEET 9 OF 11
34	C-59	STANDARD DETAILS - SHEET 10 OF 11
35	C-60	STANDARD DETAILS - SHEET 11 OF 11

APPLICANT'S CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

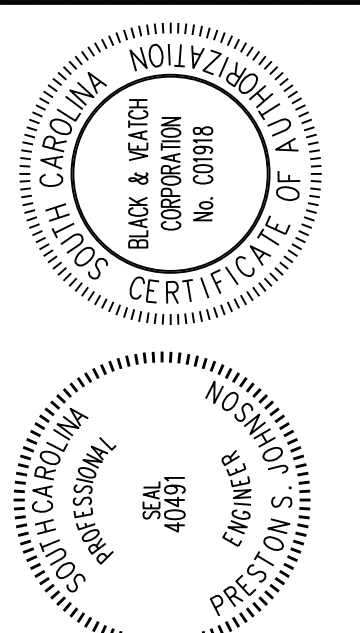
I (We) hereby certify that to the best of my knowledge, these plans contain all information required by the Zoning Ordinance of York County SC and as referenced by this application. I (We) hereby certify that all land disturbing activities including clearing, grading, construction and/or development will be done pursuant to this plan and agree to indemnify any person damaged by failure to comply with the approved plan. County and state authorities will be allowed to enter upon the project site provided the present the appropriate credentials.

Date _____ Permit Applicant _____

PROFESSIONAL'S CERTIFICATION

I hereby certify that this plan is designed to contain sediment on the property concerned and to provide for the control of stormwater runoff from the property and that to the best of my knowledge and belief all the provisions are in accordance with the Stormwater Management and Sediment control Ordinance of York County, South Carolina.

Date _____ Registered Landscape Architect
Registered Tier B Land Surveyor
Registered Professional Engineer

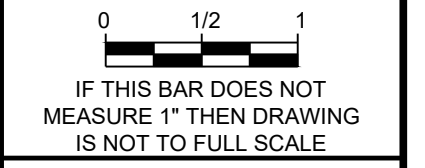


BLACK & VEATCH
Black & Veatch International Company
Business License No. F-0794
10925 David Taylor Drive, Suite 280
Charlotte, North Carolina 28262

YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD

GENERAL
COVER SHEET

DESIGNED: ROW
DETAILED: WMT
CHECKED: CES
APPROVED: PSJ
DATE: FEBRUARY 2023



PROJECT NO.
402615

G-01
SHEET
1 OF 35

FOR BIDDING ONLY - NOT RELEASED FOR CONSTRUCTION

PLOTTED: 10/12/2023 3:43 PM FILE: C:\pw_working\bwv_america\asid068739\G-02.dwg
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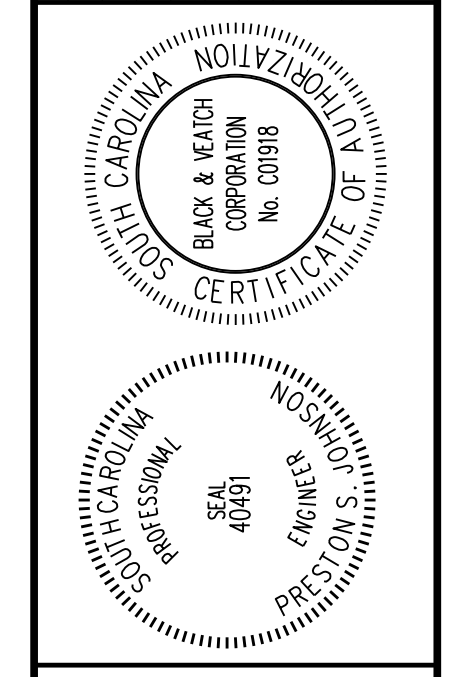
LEGEND

NOTE: EXISTING FACILITIES ARE SHOWN WITH SCREENED LINES, NEW FACILITIES WITH BOLD LINES.	OVERHEAD ELECTRIC, POWER LINE	
TREE LINE	OVERHEAD TELEPHONE LINE	
BUSH	OVERHEAD UTILITY	
TREE OR BUSH TO BE REMOVED	UNDERGROUND FIBER OPTIC LINE	
TREE	UNDERGROUND TELEPHONE LINE	
HEDGE, ROW OF BUSHES	UNDERGROUND ELECTRICAL LINE	
STREAM	UNDERGROUND GAS LINE	
DITCH, WASH (STREAM ON SMALL SCALE)	BOUNDARY BY DEED OR PLAT	
RAILROAD	RIGHT OF WAY	
FENCE	LIMITS OF CONSTRUCTION	
PAVED ROAD OR DRIVE	CREEK OR BRANCH	
UNPAVED ROAD OR DRIVE	MAJOR CONTOURS	
CURB & GUTTER	MINOR CONTOURS	
SURVEY POINT	GUARDRAIL	
NEW MANHOLE	WOODS LINE	
EXISTING MANHOLE	AIR RELEASE VALVE BOX (ARVB)	
EXISTING IRON PIPE	CATCH BASIN	
POWER POLE & GUY ANCHOR	DROP INLET	
CATCH BASIN	FLARED END SECTION	
SIGN	STORM SEWER MANHOLE	
TELEPHONE PEDESTAL	POST	
FIRE HYDRANT	GAS VALVE	
FIRE HYDRANT WITH 6" GATE VALVE	GAS TEST STATION	
EXISTING WATER METER	SANITARY SEWER MANHOLE	
NEW WATER METER	MISCELLANEOUS RAW WATER MH	
WATER VALVE	CLEAN OUT	
MAILBOX	ELECTRIC METER	
LAMP POST	TELEPHONE PEDISTAL	
WATERLINE	FIBER OPTIC PEDISTAL	
SANITARY SEWER LINE	SIGNAL BOX	
SAN SWR FORCE MAIN	EARTH OR GRADE	
UNDERGROUND CABLE TV	GRANULAR FILL OR GRAVEL	
DRAINS OR CULVERTS	EXISTING OR PRECAST CONCRETE	
TUNNEL OR BORED CASING	NEW CONCRETE	
PROPERTY LINE	EROSION CONTROL MATTING	
RIGHT-OF-WAY LINE	CONCRETE FILL	
TEMPORARY CONSTRUCTION EASEMENT LINE	RIP-RAP	
PERMANENT EASEMENT LINE	BRICK	
CENTERLINE OF ROADWAY	METAL (LARGE SCALE)	
EDGE OF PAVEMENT	METAL (SMALL SCALE)	
HOUSE OR BUILDING	PRESSURE GAUGE	
DIRECTION TO DISTANT HOUSE, BUILDING, OR CREEK	LINE SIZE CHANGE (REDUCER)	
CONCRETE REACTION BLOCKING	BALL VALVE	
TEMPORARY BENCH MARK	CHECK VALVE	
EXISTING IRON PIN (AS DESCRIBED)	UNION	
CONCRETE MONUMENT FOUND	BUTTERFLY VALVE	
SPOT ELEVATION	GATE VALVE	
STREET LIGHT	COUPLING	
UTILITY, POWER POLE		
LIGHT POLE		
BORE HOLE		

BLOW-OFF	
DIVERSION DITCH	
SILT FENCE	
SEDIMENT TRAP	
STONE SILT CHECK DAM	
HALF-RING INLET PROTECTION	
ORANGE CONSTRUCTION FENCE	
WATTLE TYPE CHECK DAM	
RIP RAP CHECK DAM	
STORM DRAINAGE PIPE	
STORM DRAINAGE PIPE WITH FLARED END SECTION AND RIPRAP OUTLET PROTECTION	
SECTION No. OR DETAIL LETTER	
DRAWING NUMBER ON WHICH SECTION OR DETAIL APPEARS (OR WHERE SECTION OR DETAIL IS CUT)	
ABANDON IN PLACE	
DEMOLISH AND DISPOSE	
DELINEATED WETLAND	
SEDIMENT TUBE	

ABBREVIATIONS

ACP	ASBESTOS CEMENT PIPE	NCDA	NORTH CAROLINA DEPT OF AGRICULTURE
AC	ACRES	N	NORTH
ALUM	ALUMINUM	NCDOT	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
ARMH	AIR RELEASE MANHOLE	No	NUMBER
ARV	AIR RELEASE VALVE	NTS	NOT TO SCALE
B-B	BACK OF CURB TO BACK OF CURB	OC	ON CENTER
BC	BURIED CABLE	OD	OUTSIDE DIAMETER
BF	BLIND FLANGE	PB	NEWSPAPER BOX
BH	BORE HOLE	PC	POINT OF CURVATURE
BM	BENCH MARK	PE	PLAIN END
BO	BLOW-OFF	PED	PEDESTAL
BV	BALL VALVE	PERM	PERMANENT
BW	BARBED WIRE	PI	POINT OF INTERSECTION
CABC	COMPACTED AGGREGATE BASE COURSE	POC	POINT ON CURVE
CATV	CABLE TELEVISION	POT	POINT ON TANGENT
CB	CATCH BASIN	PP	POWER POLE
CCP	CONCRETE CULVERT PIPE	PT	POINT OF TANGENCY
C&G	CURB AND GUTTER	PVC	POLYVINYL CHLORIDE
CIP	CAST IRON PIPE	PVMT	PAVEMENT
CL	EMBEDMENT OR PIPE CLASS	R, RAD	RADIUS
CL/L	CENTER LINE	R&C	RING AND COVER
CMP	CORRUGATED METAL PIPE	REINF	REINFORCED
CO	CLEANOUT	RCP	REINFORCED CONCRETE PIPE
CONC	CONCRETE	RD	ROAD
CONSTR	CONSTRUCTION	RECP	ROLLED EROSION CONTROL PRODUCT
CM	CONCRETE MONUMENT	RR	RAILROAD
CPLG	COUPLING	RT	RIGHT
CY	CUBIC YARD	R/W	RIGHT-OF-WAY
DET	DETAIL	REQD	REQUIRED
DI	DROP INLET	RWTM	RAW WATER TRANSMISSION MAIN
DIA	DIAMETER	RPZ	REDUCED PRESSURE ZONE
DIP	DUCTILE IRON PIPE	S	SOUTH, SIGN
DOT	DEPARTMENT OF TRANSPORTATION	SB	SEDIMENT BASIN
DR	DRIVE	SF	SQUARE FEET
E	EAST	SHT	SHEET
EF	EACH FACE	SL	SURVEY LINE
EIP	EXIST IRON PIPE	SPK	SPIKE
EL, ELEV	ELEVATION	SQ	SQUARE
ELECT	ELECTRICAL	SR	SECONDARY ROAD (STATE MAINTAINED)
EP	EDGE OF PAVEMENT	SRW	SEGMENTAL RETAINING WALL
ESMT	EASEMENT	SS	SANITARY SEWER
EW	EACH WAY	ST	STREET
EXIST	EXISTING	STA	STATION
EXP	EXPANSION	STL	STEEL
EXT	EXTENSION	SY	SQUARE YARD
ENC	ENCASEMENT	T	TANGENT
FFE	FINISH FLOOR ELEVATION	TBM	TEMPORARY BENCH MARK
FH	FIRE HYDRANT	TCP	TERRA COTTA PIPE
FIN	FINISHED	TEL	TELEPHONE
FL	FLOW LINE, FLOOR ELEVATION	TV	TELEVISION
FLG	FLANGE	TYP	TYPICAL
FM	FORCE MAIN	US	UNITED STATES
FOC	FIBER OPTIC CABLE	VERT	VERTICAL
FP	FLOOD PLAIN	W	WEST, WIDE
FW	FLOOD WAY	W/	WITH
GALV	GALVANIZED	WL	WATERLINE
GRD	GROUND	WM	WATER METER
GR	GRADE	WV	WATER VALVE
GV	GATE VALVE	WTP	WATER TREATMENT PLANT
HDD	HORZ DIR DRILLING	YR	YEAR
HORIZ	HORIZONTAL	YI	YARD INLET
HSE	HOUSE	&	AND
HWY	HIGHWAY	@	AT
INV	INVERT	C/L, CL	CENTERLINE
IP	IRON PIPE	Ø	DIAMETER
LA	LINE AHEAD	#	NUMBER
LB	LINE BACK, POUND	%	PERCENT
LF	LINEAR FEET		
LN	LANE		
LP	LIGHT POLE		
LT	LEFT		
MAX	MAXIMUM		
MB	MAIL BOX		
MC	MECHANICAL COUPLING		
MH	MANHOLE		
MIN	MINIMUM		
MJ	MECHANICAL JOINT		
MON	MONUMENT		



YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD
 GENERAL
 LEGEND AND ABBREVIATIONS

DESIGNED: RGW
DETAILED: WMT
CHECKED: CES
APPROVED: PSJ
DATE: FEBRUARY 2023
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE
PROJECT NO. 402615
G-02 SHEET 2 OF 35

FOR BIDDING ONLY - NOT RELEASED FOR CONSTRUCTION

GENERAL NOTES

- 1. EXISTING UTILITIES AND STRUCTURES (UNDERGROUND, SURFACE, OR OVERHEAD) ARE INDICATED ONLY TO THE EXTENT THAT SUCH INFORMATION WAS KNOWN, MADE AVAILABLE TO, OR DISCOVERED BY THE ENGINEER IN PREPARING THE DRAWINGS. THE LOCATIONS, CONFIGURATIONS, AND ELEVATIONS OF SUBSURFACE FACILITIES AND UTILITIES ARE APPROXIMATE, AND NOT ALL UTILITIES AND FACILITIES MAY BE INDICATED. THE ENGINEERING INVESTIGATIONS, LOCATION, AND DESIGNATION OF SUBSURFACE UTILITIES INDICATED IN THESE CONTRACT DOCUMENTS HAVE BEEN PERFORMED TO QUALITY LEVEL C IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRINCIPLES AND PRACTICES AS OUTLINED IN ASCE STANDARD AND GUIDELINE BULLETIN C/ASCE 38-02 UNLESS OTHERWISE DESIGNATED. WHERE SUCH ACTIVITIES HAVE BEEN PERFORMED TO A HIGHER LEVEL OF QUALITY, THE HIGHER QUALITY LEVEL FOR THE AFFECTED AREAS IS INDICATED IN THE CONTRACT DOCUMENTS.
2. LOCATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE RESPECTIVE UTILITY COMPANY TO OBTAIN A MORE PRECISE LOCATION (BOTH IN PLAN AND PROFILE) OF ALL UTILITIES (GAS, TELEPHONE, WATER, ETC.), PRIOR TO BEGINNING ANY CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY OWNERS OF ANTICIPATED WORK NEAR THEIR LINES AND DEFINE THE REQUIREMENTS AND METHODS REQUIRED TO PROTECT, TEMPORARILY SUPPORT, ADJUST, OR RELOCATE THE UTILITY AFFECTED BY THE PROPOSED NEW WORK. CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES BY PROSPECTING A MINIMUM OF 500 FEET AHEAD OF THE TRENCHING OPERATION. (IN GENERAL, SERVICE CONNECTIONS ARE NOT SHOWN ON THE DRAWINGS.) REPAIR OF ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ADDITIONAL FITTINGS, RESTRAINED JOINT PIPE, BLOCKING, ETC REQUIRED DUE TO CONTRACTOR'S FAILURE TO LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION SHALL BE AT CONTRACTOR'S EXPENSE.
3. ALL PIPING SHALL BE DUCTILE IRON PIPE (DIP) UNLESS OTHERWISE NOTED.
4. FENCES SHALL BE RESTORED OR REPLACED TO EXISTING OR BETTER CONDITIONS IF DAMAGED OR REMOVED DURING CONSTRUCTION. RESTORED/REPAIRED FENCES SHALL BE LOCATED OUTSIDE SCODT RIGHT OF WAY.
5. CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS OF NORFOLK SOUTHERN'S NSCE-8 SPECIFICATIONS.
6. PIPELINE AND CROSSING TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH LAST APPROVED AMERICAN RAILWAY ENGINEERING AND MAINTENANCE OF WAY ASSOCIATION SPECIFICATIONS FOR PIPELINES CONVEYING FLAMMABLE AND NON-FLAMMABLE SUBSTANCES.
7. BLASTING NOT PERMITTED.

WATER/SEWER GENERAL NOTES

- 1. FIRE HYDRANTS SHALL BE YORK COUNTY STANDARD.
2. ALL WATER MAIN VALVES MUST OPEN COUNTERCLOCKWISE IN CONFORMANCE WITH YORK COUNTY STANDARDS.
3. BLOCKING SHALL BE INSTALLED AT ALL BENDS, TEES, VALVES, REDUCERS, BLOW-OFFS, AND HYDRANT LOCATIONS, UNLESS ALTERNATIVES ARE SHOWN ON DETAILS.
4. ASBESTOS CEMENT PIPE SHALL NOT BE USED IN POTABLE WATER SYSTEMS.
5. DIP SHALL BE IN ACCORDANCE WITH AWWA C150/A21.50 & AWWA C151/A21.51
6. NO FLUSHING DEVICE SHALL BE DIRECTLY CONNECTED TO ANY SEWER SYSTEM.
7. CHAMBERS, PITS OR MANHOLES CONTAINING VALVES, BLOW-OFFS, METERS, AIR RELIEF VALVES OR OTHER SUCH APPURTENANCES TO A POTABLE WATER DISTRIBUTION SYSTEM, SHALL NOT BE CONNECTED DIRECTLY TO ANY STORM DRAIN OR SANITARY SEWER.
8. INSTALLATION OF WATER MAINS AND APPURTENANCES SHALL BE CONDUCTED IN ACCORDANCE SECTION C OF THE AWWA STANDARDS AND/OR MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES.
9. A CONTINUOUS AND UNIFORM BEDDING SHALL BE PROVIDED IN THE TRENCH FOR ALL BURIED PIPE. BACK-FILL MATERIAL SHALL BE TAMPED IN LAYERS AROUND THE PIPE AND TO A SUFFICIENT HEIGHT ABOVE THE PIPE TO ADEQUATELY SUPPORT AND PROTECT THE PIPE. STONES, OTHER THAN CRUSHED BEDDING, SHALL NOT COME INTO CONTACT WITH THE PIPE AND SHALL NOT BE WITHIN SIX (6) INCHES OF THE PIPE.
10. ALL WATER MAINS SHALL MEET THE YORK COUNTY WATER SPECIFICATIONS FOR PIPE WARNING TAPE AND TRACING WIRE. REFER TO YORK COUNTY WATER & SEWER STANDARDS TECHNICAL SPECIFICATIONS SECTION 33 05 05, SECTION 2.2 FOR PROPER INSTALLATION.
11. A "W" MUST BE ETCHED INTO THE CURBING SHOWING THE LOCATION OF WATER METERS.
12. A "V" MUST BE ETCHED INTO THE CURBING SHOWING THE LOCATION OF VALVES.
13. VALVES CANNOT BE LOCATED IN SIDEWALKS, CURBING, DRIVEWAYS, OR ASPHALT AREAS.
14. REFER TO YORK COUNTY STANDARD SPECIFICATIONS AND DETAILS REGARDING SERVICE LINE MATERIAL.
15. ALL SERVICE LINES REQUIRE INDIVIDUAL CONNECTIONS TO THE MAIN. MULTIPLE SERVICE LINES INTERCONNECTING WILL NOT BE ALLOWED.
16. WATER MAINS WHICH HAVE BEEN PREVIOUSLY USED FOR CONVEYING POTABLE WATER MAY BE REUSED PROVIDED THEY MEET APPLICABLE CRITERIA FROM AWWA SECTION C, ANS/NSF 61 AND ASTM D1785 OR D2241. THE MAINS MUST BE THOROUGHLY CLEANED AND RESTORED PRACTICALLY TO THEIR ORIGINAL CONDITION.
17. THERMOPLASTIC PIPE SHALL NOT BE USED ABOVE GRADE.
18. NATURAL RUBBER OR OTHER MATERIAL WHICH WILL SUPPORT MICROBIOLOGICAL GROWTH MAY NOT BE USED FOR ANY GASKETS, O-RINGS, AND OTHER PRODUCTS USED FOR JOINTING PIPES, SETTING METERS OR VALVES, OR OTHER APPURTENANCES WHICH WILL EXPOSE THE MATERIAL TO THE WATER.
19. LUBRICANTS WHICH WILL SUPPORT MICROBIOLOGICAL GROWTH SHALL NOT BE USED FOR SLIP-ON JOINTS.
20. THE USE OF VEGETABLE SHORTENING TO LUBRICATE JOINTS IS PROHIBITED.
21. THE USE OF SOLVENT-WELD PVC PIPE AND FITTINGS IN WATER MAINS 4 INCHES AND LARGER IS PROHIBITED.
22. AT NO TIME SHALL A POTABLE WATER LINE PASS THROUGH OR COME INTO CONTACT WITH ANY PART OF A SEWER MANHOLE.
23. AIR RELIEF VALVES SHALL BE PROVIDED IN ACCORDANCE WITH SOUND ENGINEERING PRACTICE AT HIGH POINTS IN WATER MAINS AS REQUIRED. AUTOMATIC AIR RELIEF VALVES SHALL NOT BE USED IN SITUATIONS WHERE FLOODING OF THE INSTALLATION MANHOLE OR CHAMBER MAY OCCUR.
24. BLOW-OFFS SHOULD NOT BE DIRECTED TOWARDS ROADS OR SO THAT THE WATER FROM THE BLOW-OFF FLOWS INTO CREEKS, STREAMS, ETC... DIRECT BLOW-OFFS AT STREAM CROSSINGS AWAY FROM THE STREAM.
25. USE DIP WITH MECHANICAL JOINTS FOR ANY LINES BEING INSTALLED IN ROCK.
26. ANY PIPE, SOLDER, OR FLUX WHICH IS USED IN THE INSTALLATION OR REPAIR OF ANY PUBLIC WATER SYSTEM, USED IN ANY PLUMBING WHICH PROVIDES WATER THROUGH CONNECTION TO A PUBLIC WATER SYSTEM, FOR HUMAN CONSUMPTION, SHALL BE LEAD FREE. LEAD FREE, FOR SOLDER AND FLUX, MEAN THOSE CONTAINING NOT MORE THAN 0.2% LEAD. LEAD FREE, FOR PIPES AND PIPE FITTINGS, AS THOSE CONTAINING NOT MORE THAN 8.0% LEAD. LEADED JOINTS NECESSARY FOR THE REPAIR OF CIP SHALL BE EXEMPT FROM THE ABOVE.
27. THERE SHALL BE NO CONNECTION BETWEEN THE DISTRIBUTIONS SYSTEM AND ANY PIPES, PUMPS, HYDRANTS, OR TANKS WHEREBY UNSAFE WATER OR OTHER CONTAMINATION MATERIALS MAY BE DISCHARGED OR DRAWN INTO THE SYSTEM. NO BY-PASSES SHALL BE ALLOWED, UNLESS THE BYPASS IS ALSO EQUIPPED WITH AN EQUAL, APPROVED BACK-FLOW DEVICE.
28. WATER MAINS LESS THAN 4 INCH IN DIAMETER SHALL BE PVC ASTM D2241 SDR 13.5, CLASS 315. ALL MAINS 4 INCH TO 20 INCH SHALL BE DUCTILE IRON PIPE (DIP) PER SPECIFICATIONS. FITTINGS LESS THAN 4 INCH SHALL BE SLIP JOINT PVC PER SPECIFICATIONS. PVC PIPING SHALL BE INSTALLED WITH APPROVED COPPER LOCATING WIRE.

WATER/SEWER GENERAL NOTES (CONT)

- 29. REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLIES SHALL NOT BE INSTALLED IN ANY AREA LOCATION SUBJECT TO POSSIBLE FLOODING.
30. ALL PIPING UP TO THE INLET OF THE BACKFLOW PREVENTION DEVICE MUST BE SUITABLE FOR POTABLE WATER. THE PIPE MUST BE AWWA OR NSF APPROVED. BLACK STEEL PIPE CANNOT BE USED ON THE INLET SIDE OF THE DEVICE.
31. FIRE LINE SPRINKLERS AND DEDICATED FIRE LINES, EXCEPT THOSE IN THE HIGH HAZARD CATEGORY, SHALL BE PROTECTED BY AN APPROVED DOUBLE CHECK VALVE ASSEMBLY.

NORFOLK SOUTHERN RR NOTES

- 1. ANY EXCAVATION THAT ENCROACHES ZONE 1 OR 2 OF ROADBED PROFILE (NSCE-8 PLATE VIII) WILL REQUIRE SHORING FOR PROTECTION OF THE RAILROAD).
2. PER NSCE-8, ALL PIPE JACKING OPERATIONS MUST BE EXECUTED ON A CONTINUOUS, NON-STOP, 24/7 BASIS UNTIL COMPLETE.
3. TRACK MONITORING WILL BE REQUIRED FOR PROPOSED INSTALLATION AND IF SETTLEMENT OCCURS DURING INSTALLATION, NORFOLK SOUTHERN MAY EXERCISE THEIR RIGHTS TO REQUIRE ADDITIONAL MONITORING POST CONSTRUCTION UP TO 30 DAYS FOR PROTECTION OF THE RAILROAD.
4. AS-BUILTS WILL BE REQUIRED UPON COMPLETION OF CONSTRUCTION TO BE SENT VIA EMAIL TO NS.PERMITTING@RAILPROS.COM. PLEASE COORDINATE WITH PROTECTION SERVICES IF FURTHER ASSISTANCE IS NEEDED.

WATER GENERAL NOTES

- YORK COUNTY ENGINEERING STANDARDS
STD. NO. 10.102
1. FIRE HYDRANTS SHALL BE YORK COUNTY STANDARD.
2. ALL WATER MAIN VALVES MUST OPEN COUNTERCLOCKWISE IN CONFORMANCE WITH YORK COUNTY STANDARDS.
3. BLOCKING SHALL BE INSTALLED AT ALL BENDS, TEES, VALVES, REDUCERS, BLOW-OFFS, AND HYDRANT LOCATIONS, UNLESS ALTERNATIVES ARE SHOWN ON DETAILS.
4. ASBESTOS CEMENT PIPE SHALL NOT BE USED IN POTABLE WATER SYSTEMS EXCEPT IN THE REPAIR OF EXISTING ASBESTOS CEMENT LINES.
5. DIP SHALL BE IN ACCORDANCE WITH AWWA C150/A21.50 & AWWA C151/A21.51.
6. NO FLUSHING DEVICE SHALL BE DIRECTLY CONNECTED TO ANY SEWER SYSTEM.
7. CHAMBERS, PITS OR MANHOLES CONTAINING VALVES, BLOW-OFFS, METERS, AIR RELIEF VALVES, OR OTHER SUCH APPURTENANCES TO A DISTRIBUTION SYSTEM, SHALL NOT BE CONNECTED DIRECTLY TO ANY STORM DRAIN OR SANITARY SEWER.
8. INSTALLATION OF WATER MAINS AND APPURTENANCES SHALL BE CONDUCTED IN ACCORDANCE SECTION C OF THE AWWA STANDARDS AND/OR MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES.
9. A CONTINUOUS AND UNIFORM BEDDING SHALL BE PROVIDED IN THE TRENCH FOR ALL BURIED PIPE. BACK-FILL MATERIAL SHALL BE TAMPED IN LAYERS AROUND THE PIPE AND TO A SUFFICIENT HEIGHT ABOVE THE PIPE TO ADEQUATELY SUPPORT AND PROTECT THE PIPE. STONES, OTHER THAN CRUSHED BEDDING, SHALL NOT COME INTO CONTACT WITH THE PIPE AND SHALL NOT BE WITHIN SIX (6) INCHES OF THE PIPE.
10. ALL WATER MAINS SHALL MEET THE YORK COUNTY WATER SPECIFICATIONS FOR PIPE TRACING WIRE. REFER TO SECTION II, G, 3(E) AND 9 FOR SPECIFICATIONS.
11. A "W" MUST BE ETCHED INTO THE CURBING SHOWING THE LOCATION OF WATER METERS.
12. A "V" MUST BE ETCHED INTO THE CURBING SHOWING THE LOCATION OF WATER VALVES.
13. VALVES CANNOT BE LOCATED IN SIDEWALKS, CURBING, DRIVEWAYS, OR ASPHALT AREAS.
14. REFER TO YORK COUNTY STANDARD SPECIFICATIONS AND DETAILS REGARDING SERVICE LINE PIPE MATERIAL.
15. ALL SERVICE LINES REQUIRE INDIVIDUAL CONNECTIONS TO THE MAIN. MULTIPLE SERVICE LINES INTERCONNECTING WILL NOT BE ALLOWED.

TESTING/INSPECTION GENERAL NOTES

- YORK COUNTY ENGINEERING STANDARDS
STD. NO. 10.104
1. NOTIFY THE ENGINEER OF RECORD AND YORK COUNTY AT LEAST 48 HOURS BEFORE STARTING CONSTRUCTION OF SEWER AND WATER FACILITIES. THE ENGINEER SHALL PERIODICALLY INSPECT THE PROGRESS OF INSTALLATION AND SHALL COMPLETE A FINAL WATER AND SEWER INSPECTION. THE ENGINEER OF RECORD AND YORK COUNTY SHALL WITNESS PRESSURE TESTING OF THE WATER SYSTEM, AND AIR AND MANDREL TESTING OF THE SEWER SYSTEM. THE CONTRACTOR SHALL FURNISH, SECURE, AND PROVIDE ALL NECESSARY TESTING MATERIALS, EQUIPMENT, PROCEDURES AND CERTIFIED LABORATORY TEST RESULTS FOR USE WITH ENGINEERS FINAL CERTIFICATION OF COMPLETION.
2. WATER MAINS AND SEWER FORCE MAINS MUST BE HYDROSTATICALLY TESTED PER YORK COUNTY SPECIFICATIONS AND UNDER THE SUPERVISION OF A YORK COUNTY INSPECTOR AND THE ENGINEER OF RECORD.
3. DISINFECT WATER LINES AND PROVIDE ACCEPTABLE BACTERIOLOGICAL TEST FROM A CERTIFIED TESTING LABORATORY FOR USE WITH THE ENGINEERS CERTIFICATION OF COMPLETION. A MINIMUM OF TWO (2) SAMPLES, COLLECTED AT LEAST TWENTY-FOUR (24) HOURS APART, ARE TO BE TAKEN FROM EACH SAMPLING SITE FOR TOTAL COLIFORM ANALYSIS AND TOTAL CHLORINE RESIDUAL. THE NUMBER OF TEST SITES MUST INCLUDE ALL DEAD-END LINES AND SHALL BE COLLECTED A MINIMUM OF EVERY 1,200 LINEAR FEET.
5. SECURE FINAL OPERATIONAL APPROVAL FROM YORK COUNTY AND SCDHEC PRIOR TO ACTIVATION OF THE SYSTEM. TEST SANITARY SEWER LINES FOR DEFLECTION WITH A 5 % MANDREL NOT LESS THAN 30 DAYS AFTER COMPLETION OF BACKFILL. PERFORM LOW PRESSURE AIR TESTING IN ACCORDANCE WITH ASTM C-828 AND C924 ON ALL SEWER MAINS.
6. TRENCH BACKFILL AND COMPACTION TESTING SHALL BE PERFORMED BY A CERTIFIED SOILS LABORATORY UNDER ALL AREAS WITHIN ROAD AND RAILWAY RIGHTS-OF-WAY. BACKFILL MATERIAL FROM THE BOTTOM OF TRENCH TO WITHIN SIX (6) INCHES OF THE SUBGRADE SHALL HAVE A MINIMUM DRY DENSITY OF 95% AS DEFINED BY THE STANDARD PROCTOR TEST. ALL MATERIAL WITHIN THE TOP 6 INCHES OF THE SUBGRADE LEVEL SHALL HAVE AN IN PLACE DENSITY OF 100%.
7. THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH SEWER AS-BUILTS (LOCATION, ELEVATION, LENGTH, AND SLOPE) PREPARED BY A REGISTERED LAND SURVEYOR AND WATER SERVICE MEASUREMENTS SUITABLE FOR PREPARATION OF FINAL RECORD DRAWINGS.
8. THE ENGINEER SHALL PROVIDE TO YORK COUNTY ENGINEERING A DIGITAL SET OF RECORD DRAWINGS IN AN AUTO-CAD FORMAT THAT IS GEO-REFERENCED TO THE SOUTH CAROLINA STATE PLANE COORDINATE SYSTEM AND A DIGITAL SET OF RECORD DRAWINGS IN A PDF FORMAT.

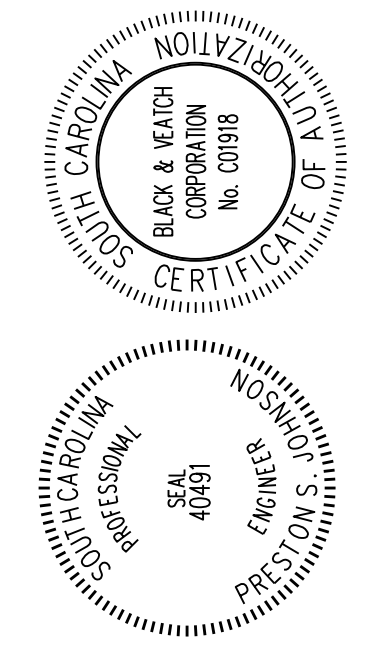
EROSION & SEDIMENTATION GENERAL NOTES

YORK COUNTY ENGINEERING STANDARDS

- 1. IF NECESSARY, SLOPES, WHICH EXCEED EIGHT (8) VERTICAL FEET SHALL BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.
2. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK AS CEASED, EXCEPT AS STATED BELOW.
* WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
* WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.
3. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE EVERY CALENDAR WEEK. IF PERIODIC INSPECTION OR OTHER INFORMATION INDICATES THAT A BMP HAS BEEN INAPPROPRIATELY, OR INCORRECTLY, THE PERMITTEE MUST ADDRESS THE NECESSARY REPLACEMENT OR MODIFICATION REQUIRED TO CORRECT THE BMP WITHIN 48 HOURS OF IDENTIFICATION.
4. PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION. FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE SEDIMENT BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE.
5. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
6. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
7. TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT-LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.
8. ALL WATER OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CAN'T BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS. A 10-FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WOS.
9. LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.
10. A COPY OF THE SWPPP, INSPECTIONS RECORDS, AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT A FINAL STABILIZATION IS REACHED.
11. INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR GREATER) WHERE LAND-DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS.
12. MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.
13. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE.
14. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH APPROPRIATE BMPS (SEDIMENT BASIN, FILTER BAG, ETC.).
15. THE FOLLOWING DISCHARGES FROM SITES ARE PROHIBITED.
* WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL;
* WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FROM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;
* FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND
* SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.
16. AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
17. IF EXISTING BMPS NEED TO BE MODIFIED OR IF ADDITIONAL BMPS ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT AND/OR SC'S WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPS MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.
18. A PRE-CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION SITE WITH AN APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES.
19. RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS SHALL FOLLOW THESE PLANS DURING CONSTRUCTION OR OBTAIN APPROVAL OF AN INDIVIDUAL PLAN IN ACCORDANCE WITH S.C. REG. 72-300 ER SEQ. AND SCR100000.

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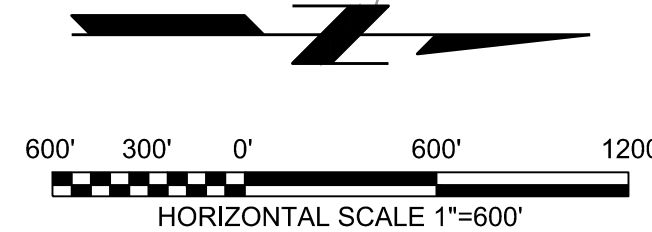


YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD
GENERAL
GENERAL NOTES

DESIGNED: RGW
DETAILED: WMT
CHECKED: CES
APPROVED: PSJ
DATE: FEBRUARY 2023
Scale: 0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE
PROJECT NO. 402615
G-03 SHEET 3 OF 35

FOR BIDDING ONLY - NOT RELEASED FOR CONSTRUCTION

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YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD

GENERAL
 INDEX MAP

DESIGNED: RGW
 DETAILED: WMT
 CHECKED: CES
 APPROVED: PSJ
 DATE: FEBRUARY 2023

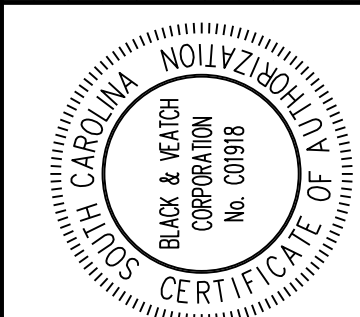
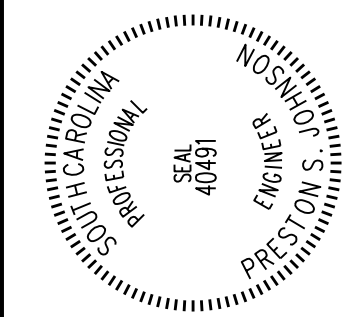
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PROJECT NO.
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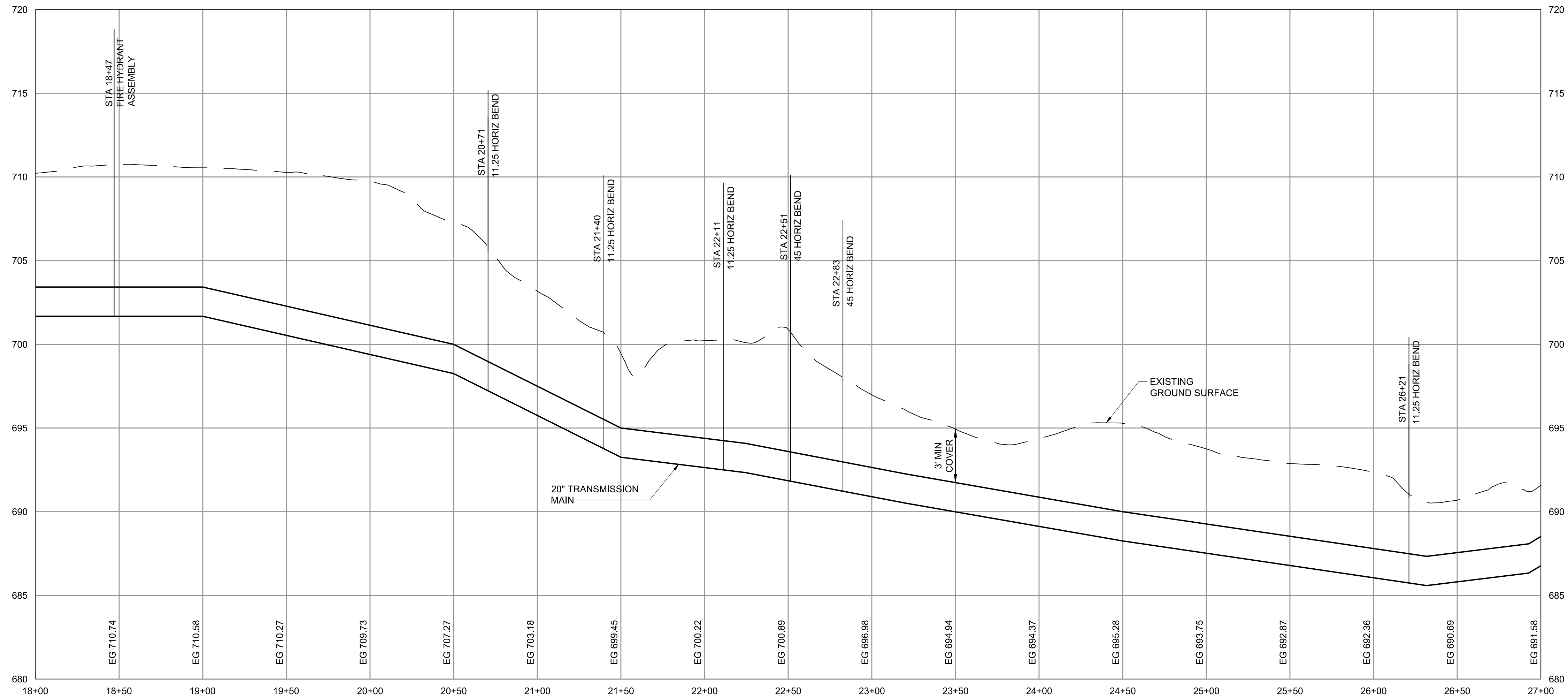
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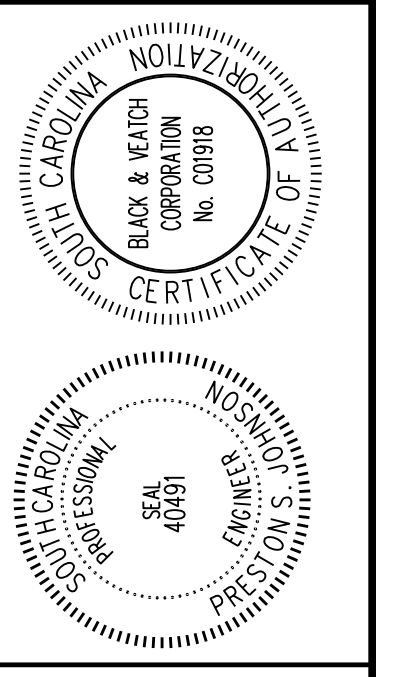
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 10925 David Taylor Drive, Suite 200
 Charlotte, North Carolina 28262



DATE	REVISIONS AND RECORD OF USE	NO.	BY	CHK/APP



- GENERAL NOTES:**
- CONTRACTOR SHALL REPLACE OR REPAIR FENCE TO EXISTING OR BETTER CONDITION IF DAMAGED DURING CONSTRUCTION.
 - INSIDE BOUNDARY OF LIMITS OF DISTURBANCE SHALL ALIGN WITH DRIP LINE OF TREES LINING HARPER ROAD. CONTRACTOR SHALL ADJUST ALIGNMENT AND LIMITS OF DISTURBANCE ACCORDINGLY.
 - RESTORE AREA ADJACENT CONSERVATION EASEMENT TO EXISTING GRADE AND TOP WITH 2 INCHES OF #57 STONE.
 - PROVIDE MINIMUM 2 LF OF RJ DIP BETWEEN ALL FITTINGS.
 - CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AS REQUIRED TO CONTAIN LIVESTOCK WITHIN ENCLOSED AREA.



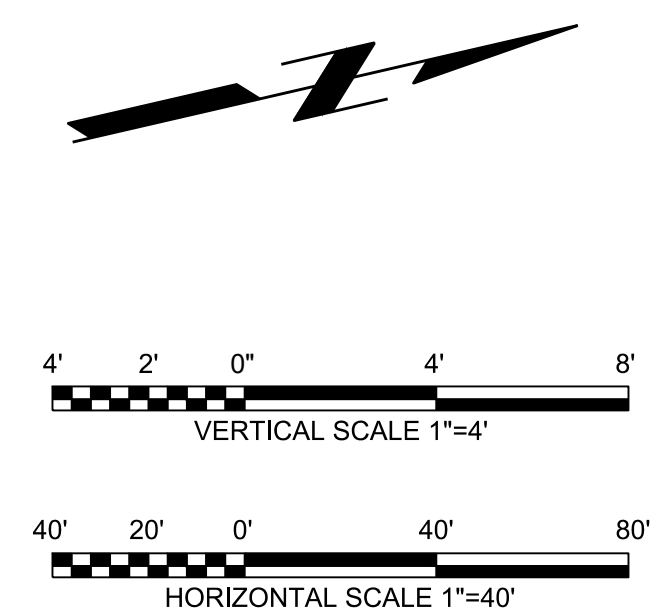
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YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD
 CIVIL
 PLAN AND PROFILE
 STA 18+00 TO STA 27+00

DESIGNED: RGW
 DETAILED: WMT
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 APPROVED: PSJ
 DATE: FEBRUARY 2023

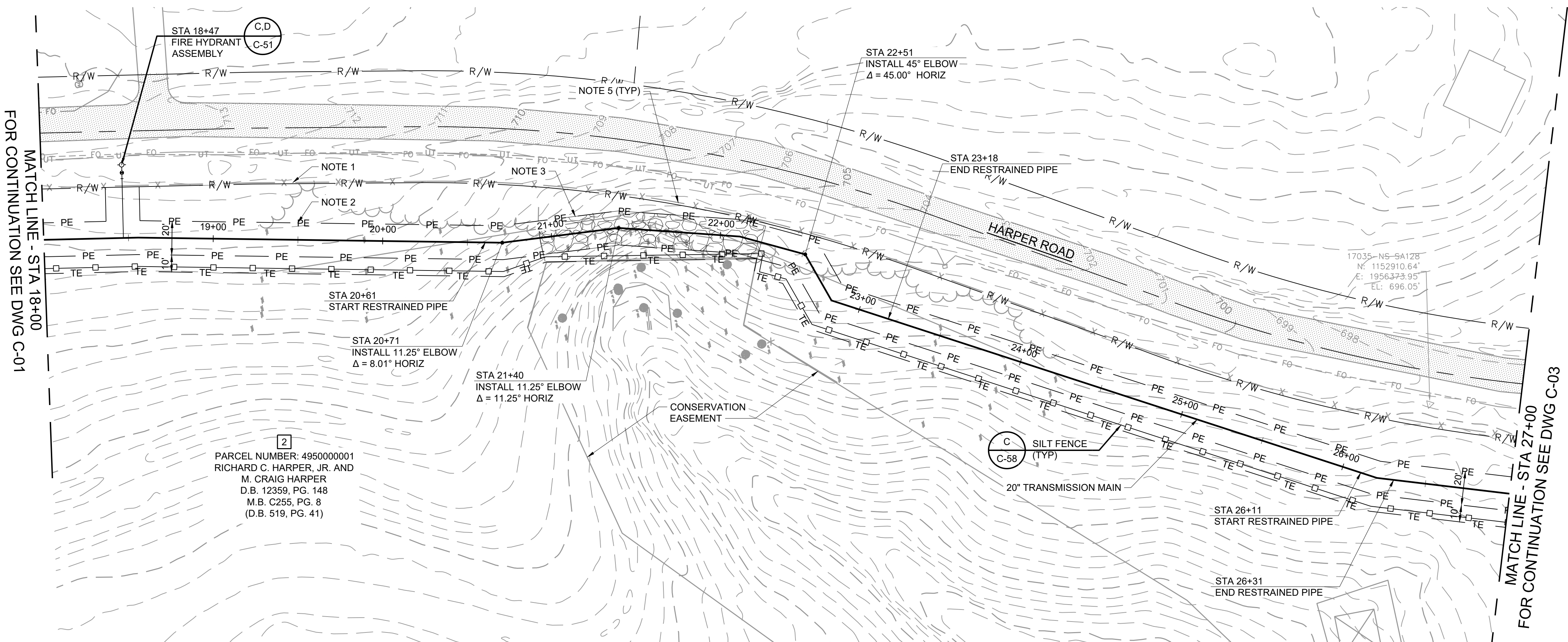
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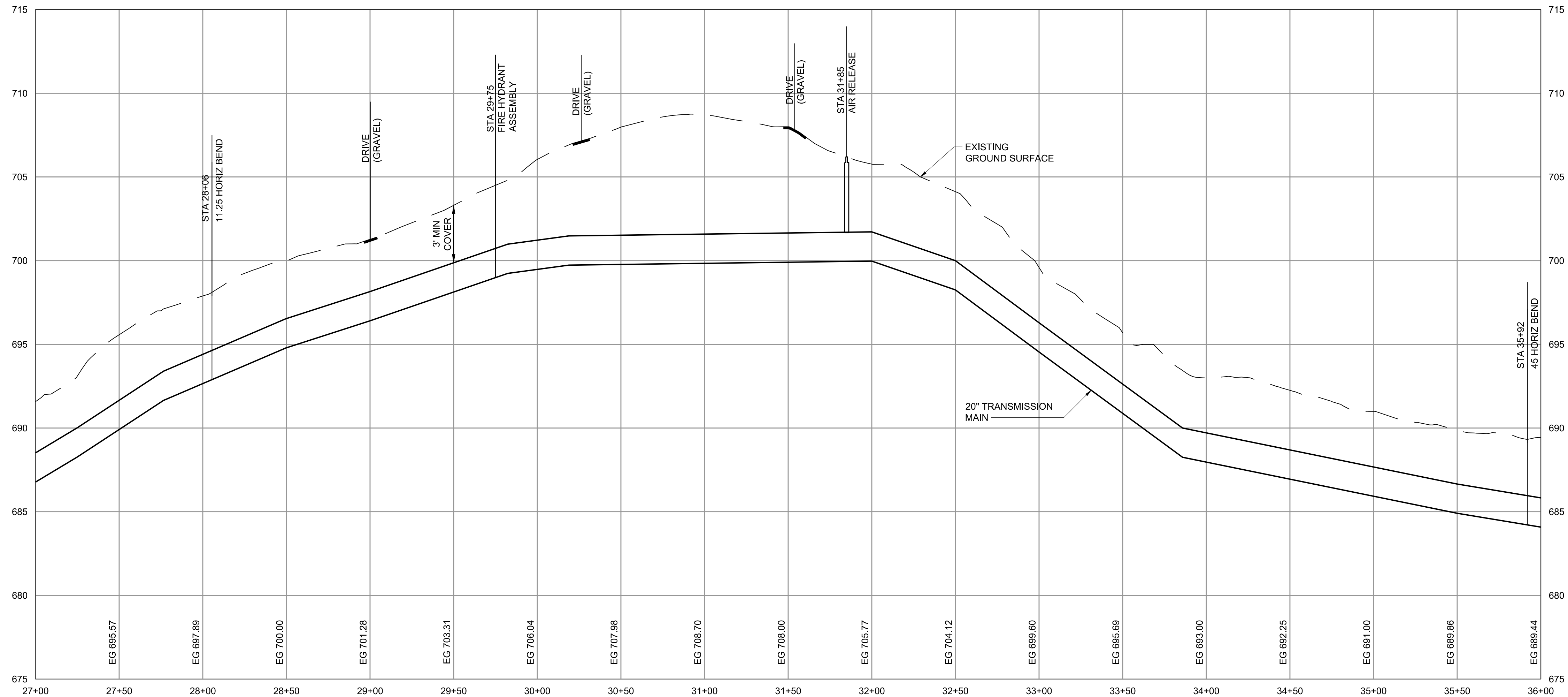


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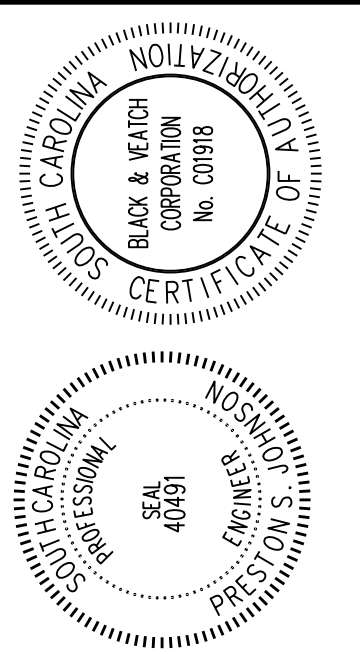
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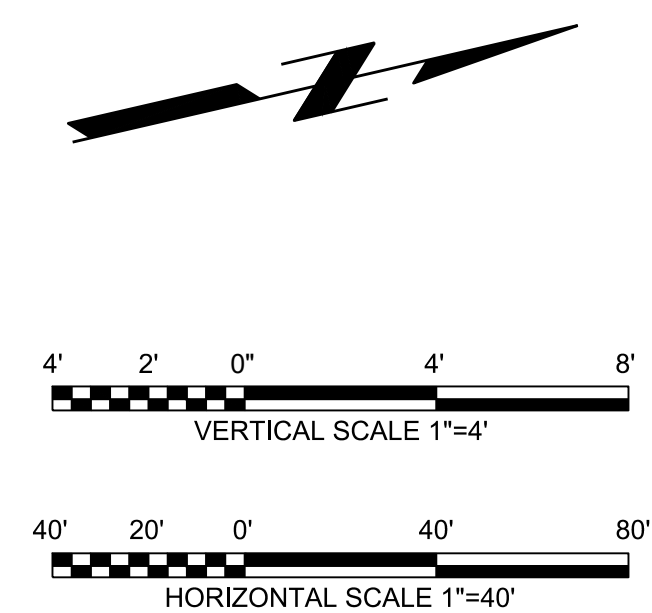
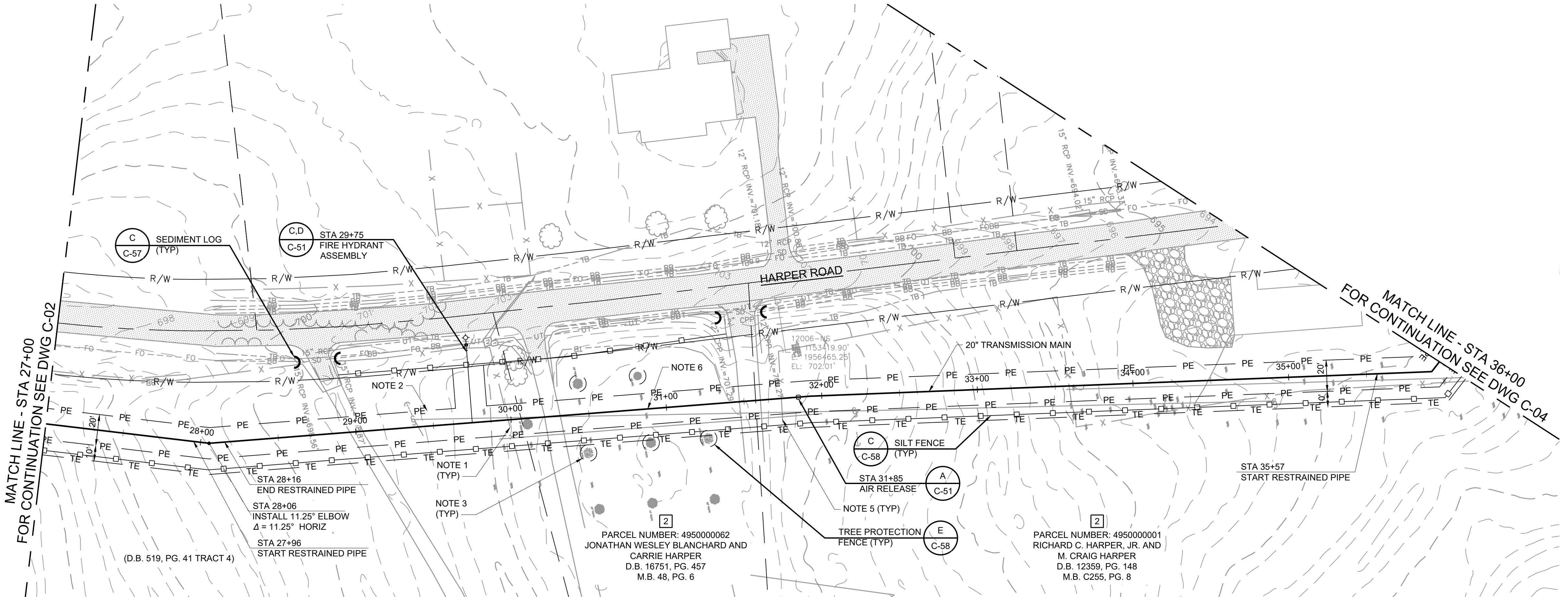
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 PARCEL NUMBER: 495000001
 RICHARD C. HARPER, JR. AND
 M. CRAIG HARPER
 D.B. 12359, PG. 148
 M.B. C255, PG. 8
 (D.B. 519, PG. 41)



- GENERAL NOTES:**
- CONTRACTOR SHALL REPLACE OR REPAIR FENCE TO EXISTING OR BETTER CONDITION IF DAMAGED DURING CONSTRUCTION.
 - INSIDE BOUNDARY OF LIMITS OF DISTURBANCE SHALL ALIGN WITH DRIP LINE OF TREES LINING HARPER ROAD. CONTRACTOR SHALL ADJUST ALIGNMENT AND LIMITS OF DISTURBANCE ACCORDINGLY.
 - CONTRACTOR SHALL PROTECT IDENTIFIED TREES AND ASSOCIATED ROOT SYSTEMS.
 - PROVIDE MINIMUM 2 LF OF RJ DIP BETWEEN ALL FITTINGS.
 - CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AS REQUIRED TO CONTAIN LIVESTOCK WITHIN ENCLOSED AREA.
 - FOR PARCEL #4950000062, CONTRACTOR SHALL SEPARATE TOPSOIL FROM SUBSURFACE SOIL AND SHALL REPLACE TOPSOIL ON TOP OF THE SUBSURFACE SOIL AFTER THE WATERLINE INSTALLATION.



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YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD

CIVIL
 PLAN AND PROFILE
 STA 27+00 TO STA 36+00

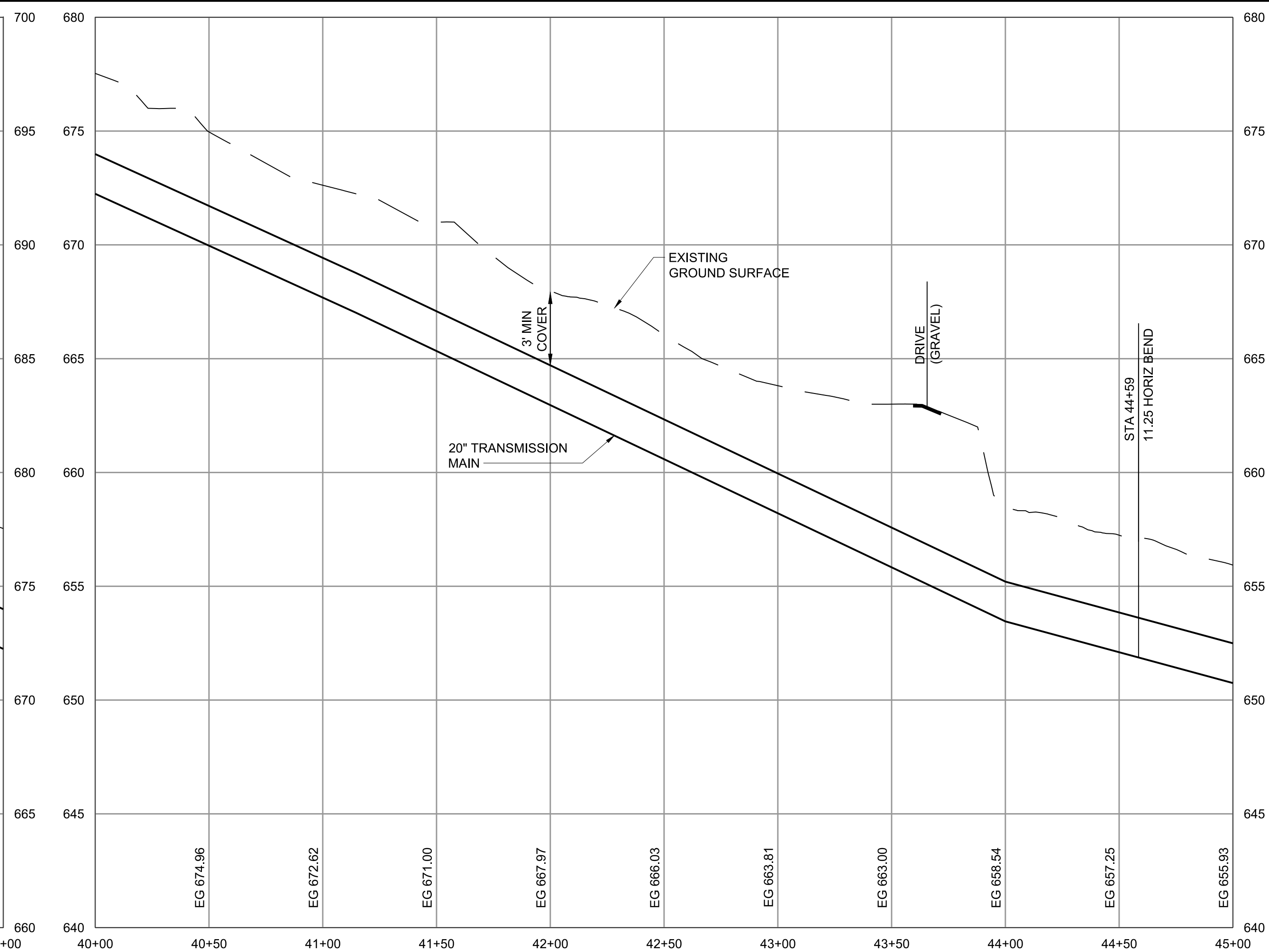
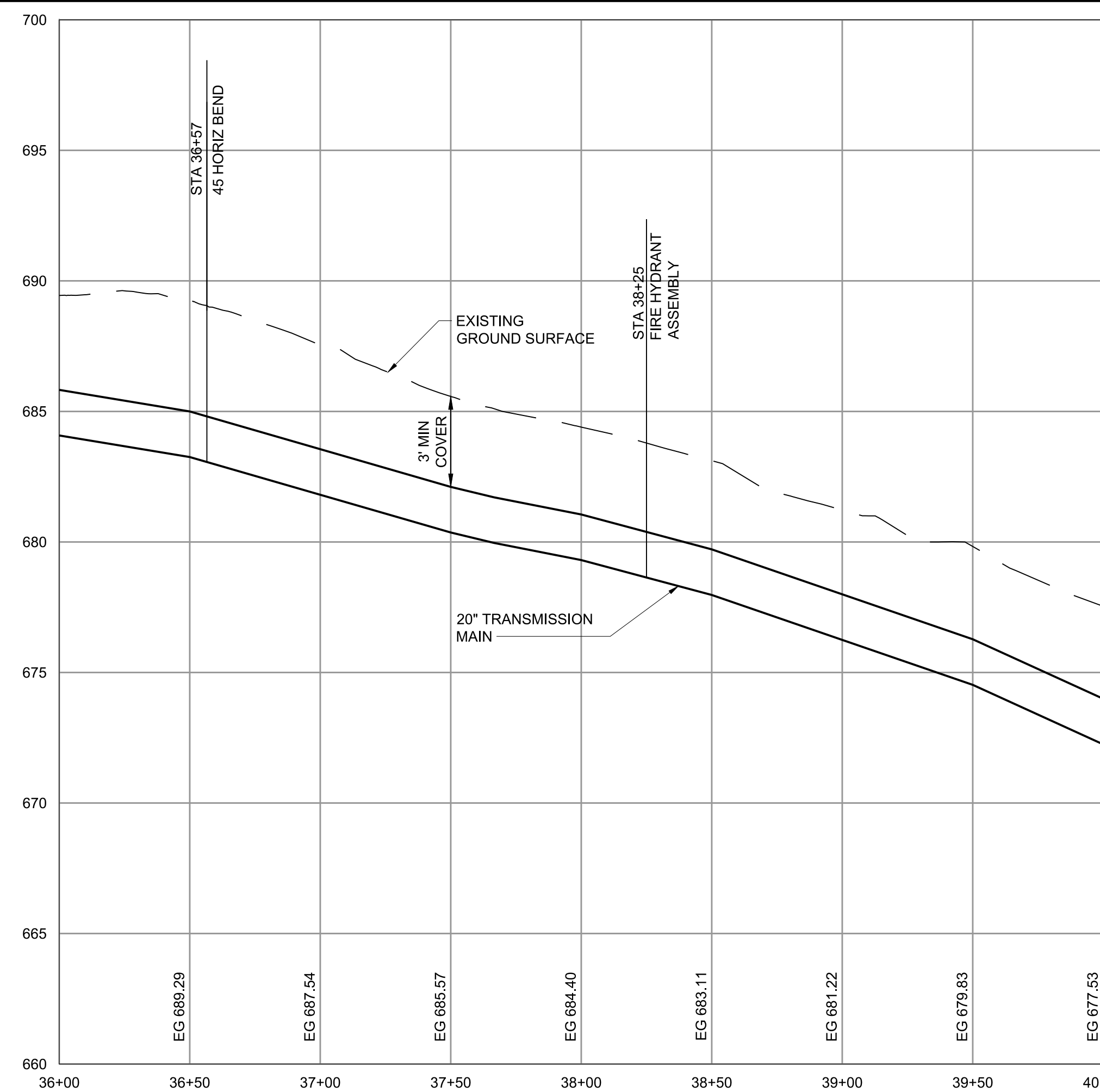
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PROJECT NO.
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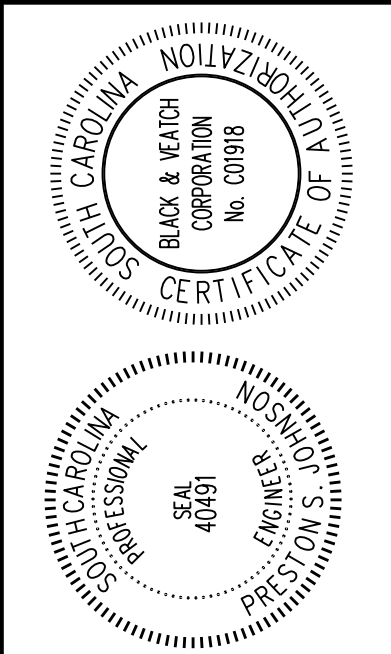
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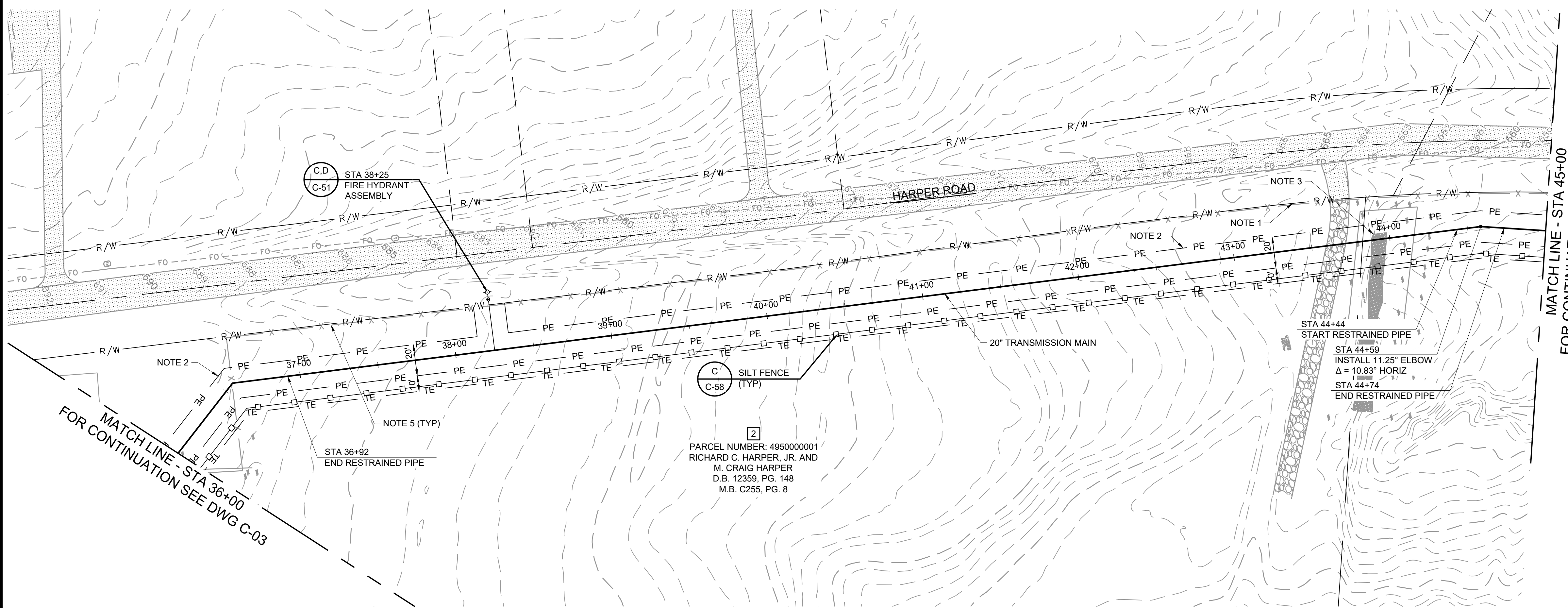
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- GENERAL NOTES:**
- CONTRACTOR SHALL REPLACE OR REPAIR FENCE TO EXISTING OR BETTER CONDITION IF DAMAGED DURING CONSTRUCTION.
 - INSIDE BOUNDARY OF LIMITS OF DISTURBANCE SHALL ALIGN WITH DRIP LINE OF TREES LINING HARPER ROAD. CONTRACTOR SHALL ADJUST ALIGNMENT AND LIMITS OF DISTURBANCE ACCORDINGLY.
 - CONTRACTOR SHALL RESTORE AND STABILIZE ROCK EMBANKMENT AFTER CONSTRUCTION OF WATER MAIN.
 - PROVIDE MINIMUM 2 LF OF RJ DIP BETWEEN ALL FITTINGS.
 - CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AS REQUIRED TO CONTAIN LIVESTOCK WITHIN ENCLOSED AREA.



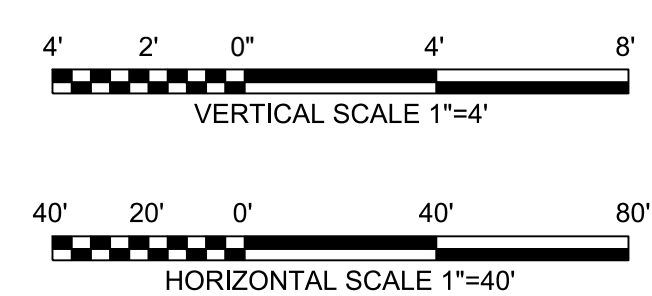
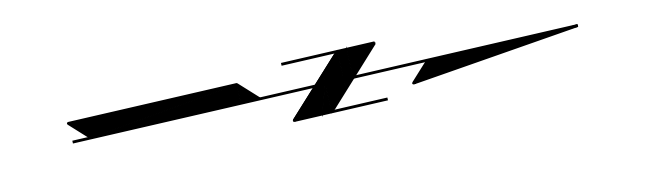
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 Charlotte, North Carolina 28262



MATCH LINE - STA 45+00
 FOR CONTINUATION SEE DWG C-05

MATCH LINE - STA 36+00
 FOR CONTINUATION SEE DWG C-03

PARCEL NUMBER: 4950000001
 RICHARD C. HARPER, JR. AND
 M. CRAIG HARPER
 D.B. 12359, PG. 148
 M.B. C255, PG. 8



YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD

CIVIL
 PLAN AND PROFILE
 STA 36+00 TO STA 45+00

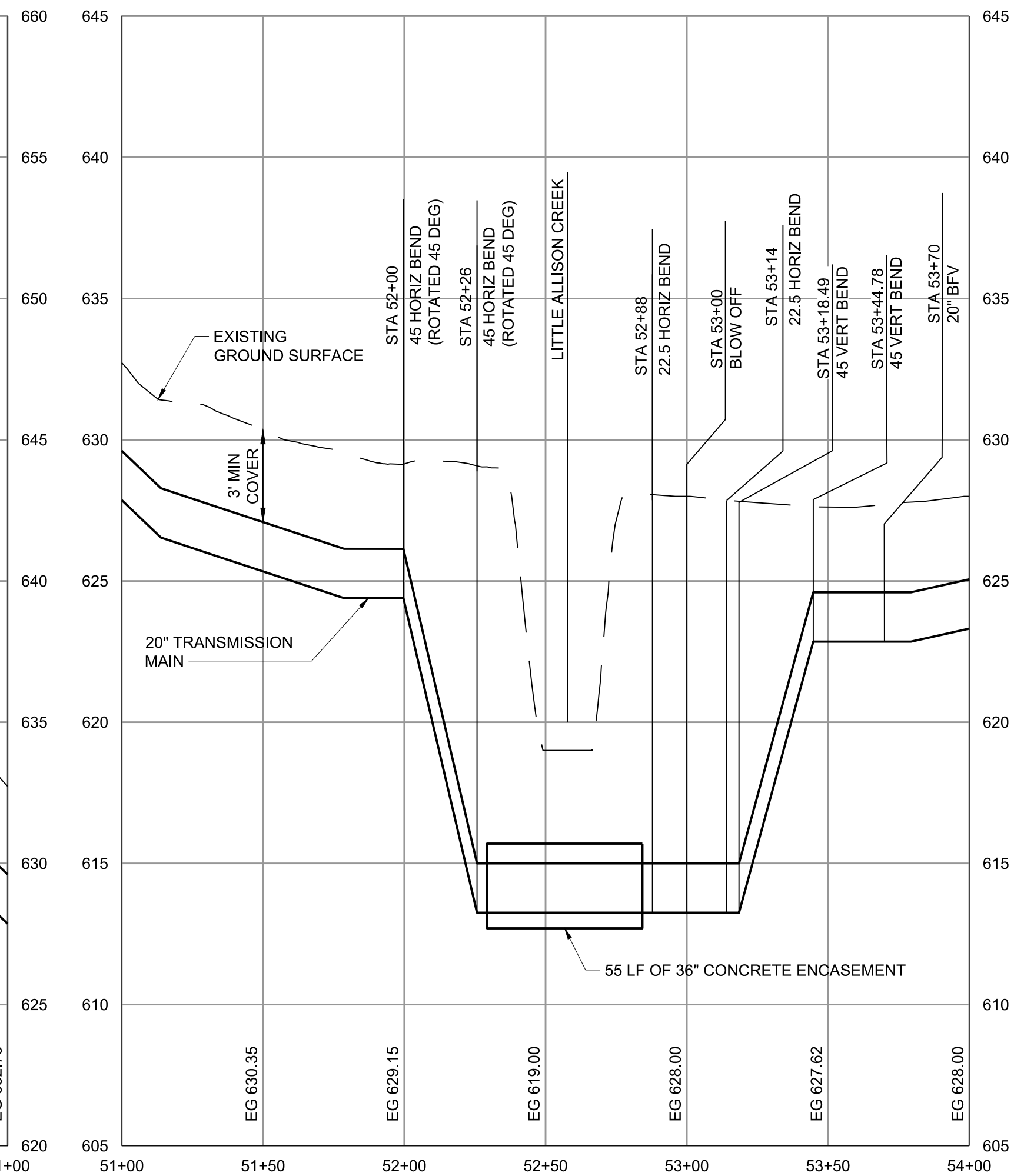
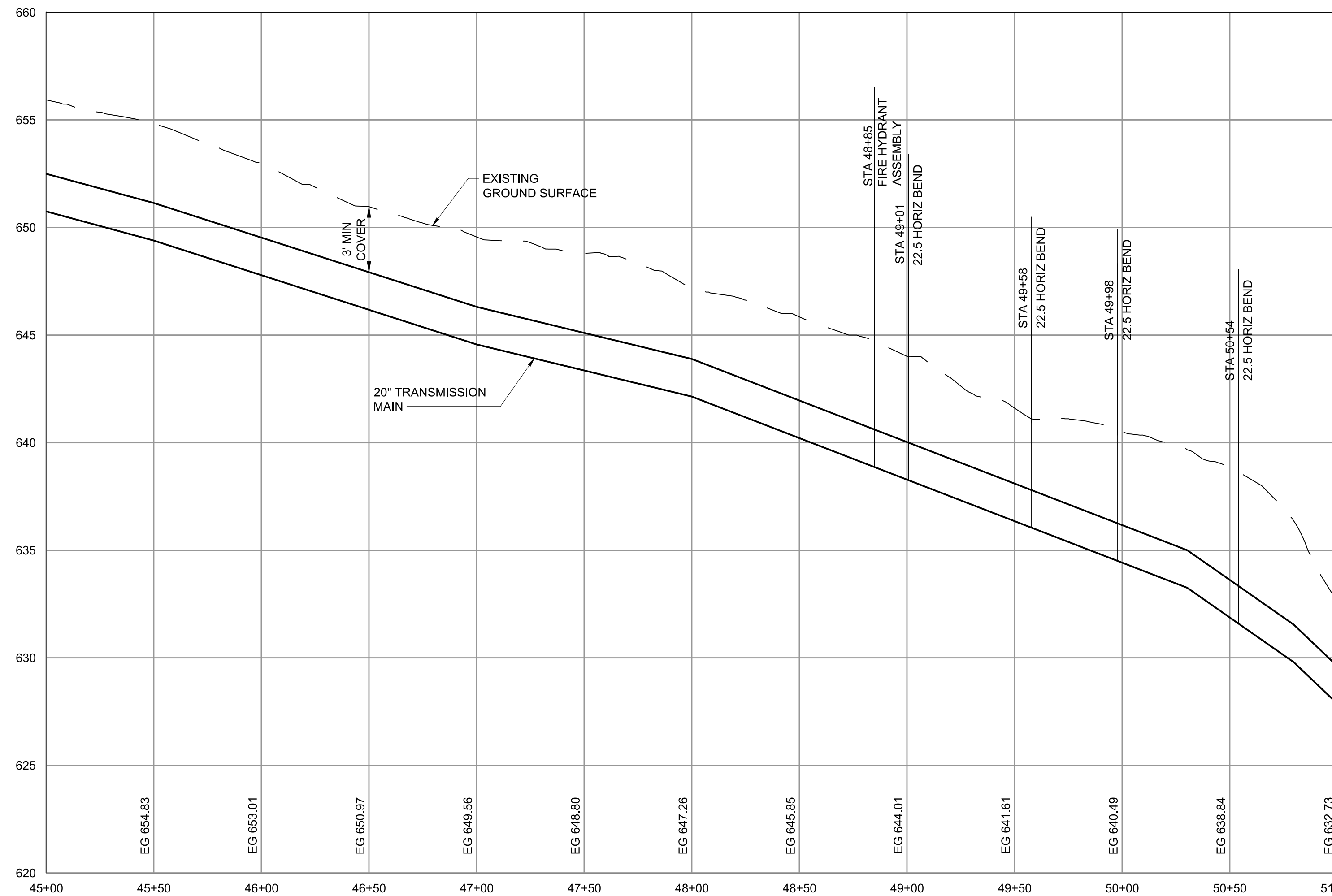
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PROJECT NO.
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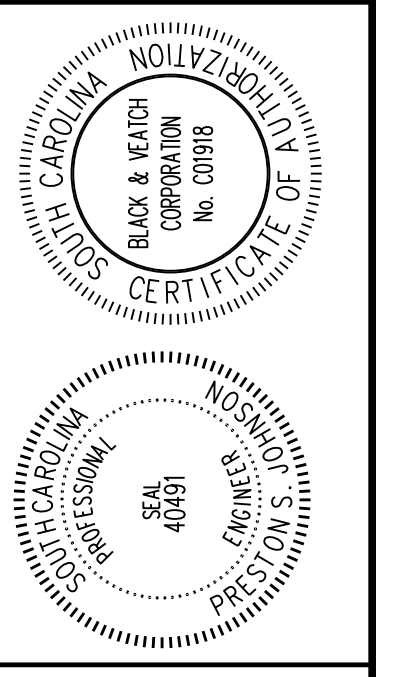
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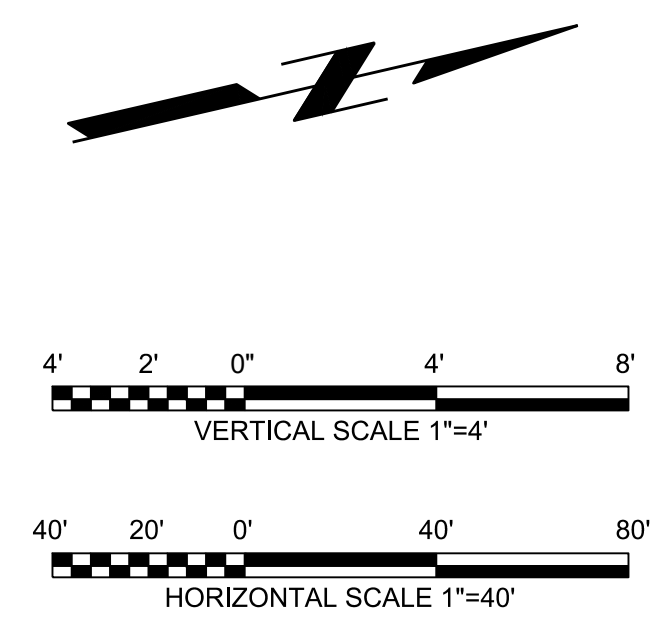
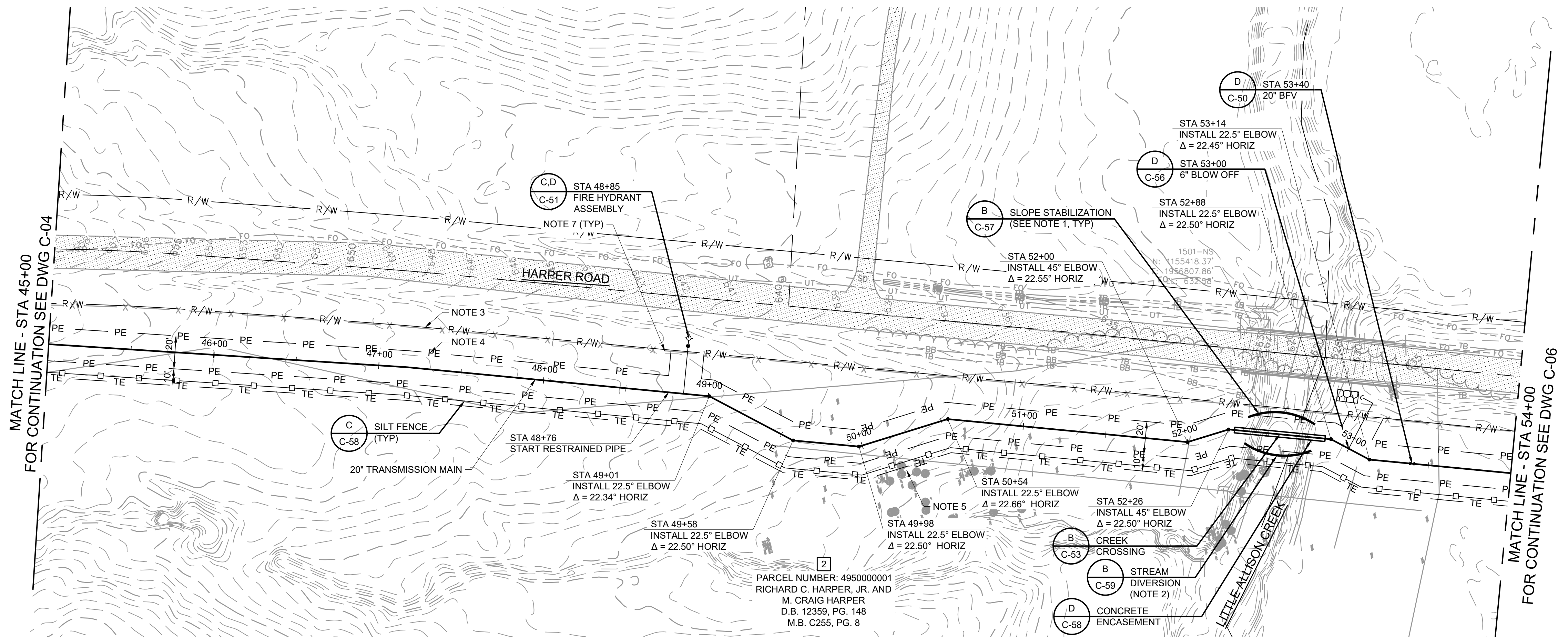
- GENERAL NOTES:**
1. PROVIDE SLOPE STABILIZATION ON BOTH STREAM BANKS AT CREEK CROSSINGS.
 2. LIMIT DISTURBANCE TO 30 LINEAR FEET PER NATIONWIDE PERMIT 12 ISSUED IN RESPONSE TO A PRE-CONSTRUCTION NOTIFICATION SAC-2019-01862.
 3. CONTRACTOR SHALL REPLACE OR REPAIR FENCE TO EXISTING OR BETTER CONDITION IF DAMAGED DURING CONSTRUCTION.
 4. INSIDE BOUNDARY OF LIMITS OF DISTURBANCE SHALL ALIGN WITH DRIP LINE OF TREES LINING HARPER ROAD. CONTRACTOR SHALL ADJUST ALIGNMENT AND LIMITS OF DISTURBANCE ACCORDINGLY.
 5. CONTRACTOR SHALL REMOVE LOWER LIMBS OF TREES AS REQUIRED FOR CONSTRUCTION. CONTRACTOR SHALL PROTECT TREES AND ASSOCIATED ROOT SYSTEM FROM DAMAGE DURING CONSTRUCTION.
 6. PROVIDE MINIMUM 2 LF OF RJ DIP BETWEEN ALL FITTINGS.
 7. CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AS REQUIRED TO CONTAIN LIVESTOCK WITHIN ENCLOSED AREA.



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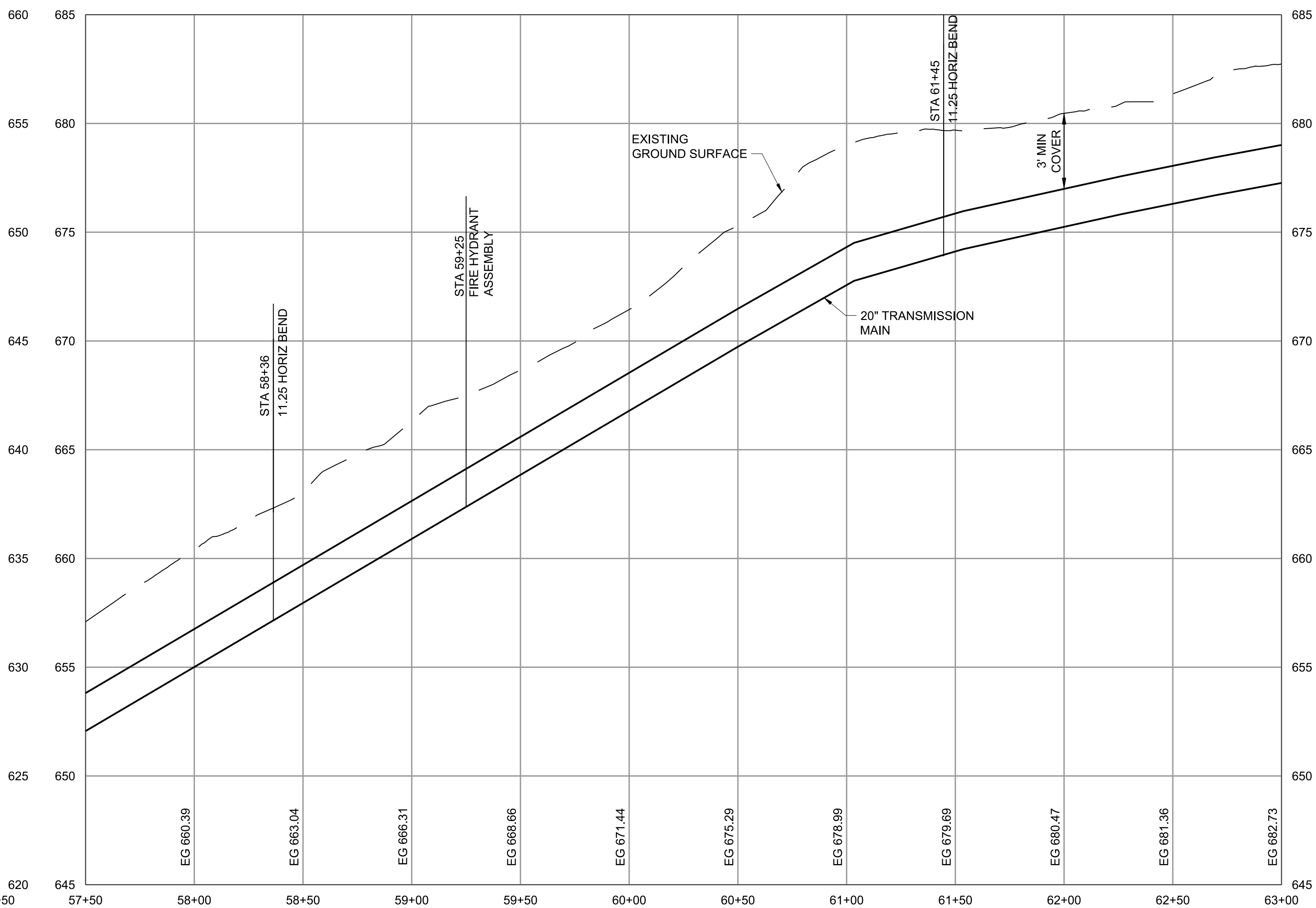
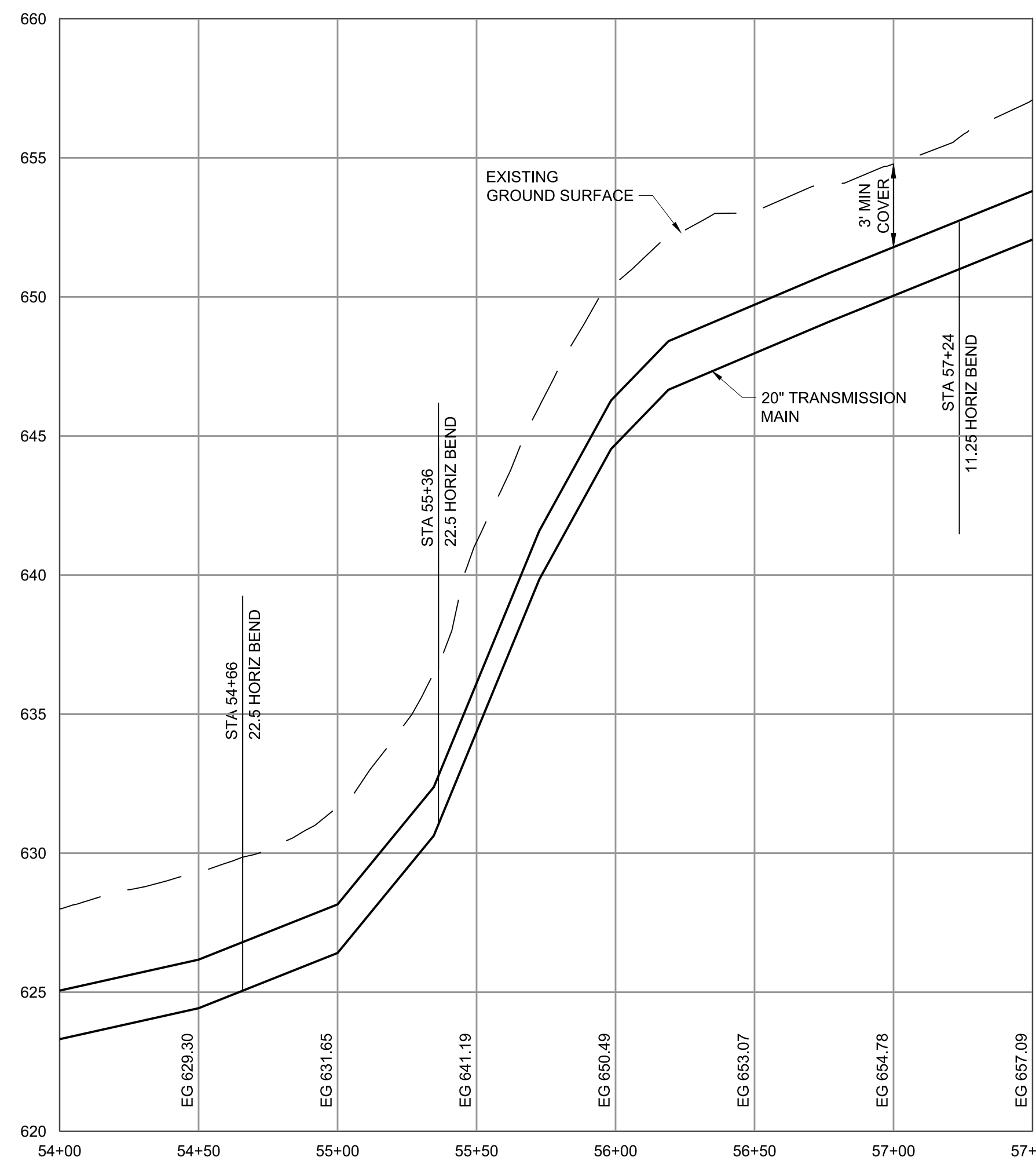
YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD
 CIVIL
 PLAN AND PROFILE
 STA 45+00 TO STA 54+00

DESIGNED: RWG
 DETAILED: WMT
 CHECKED: CES
 APPROVED: PSJ
 DATE: FEBRUARY 2023
 PROJECT NO.
 402615
C-05
 SHEET
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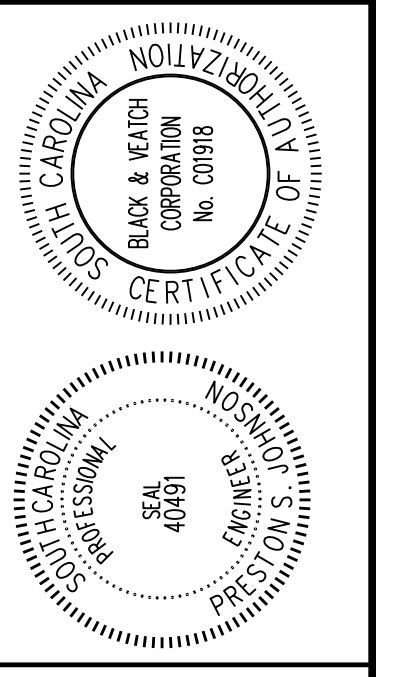


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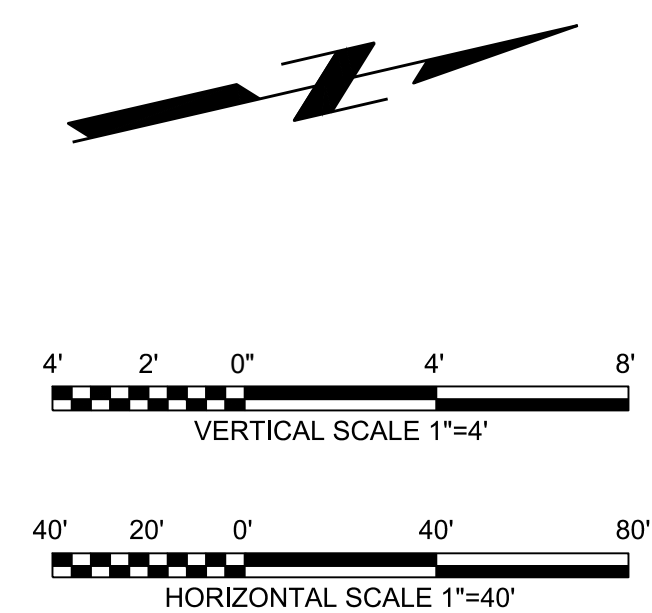
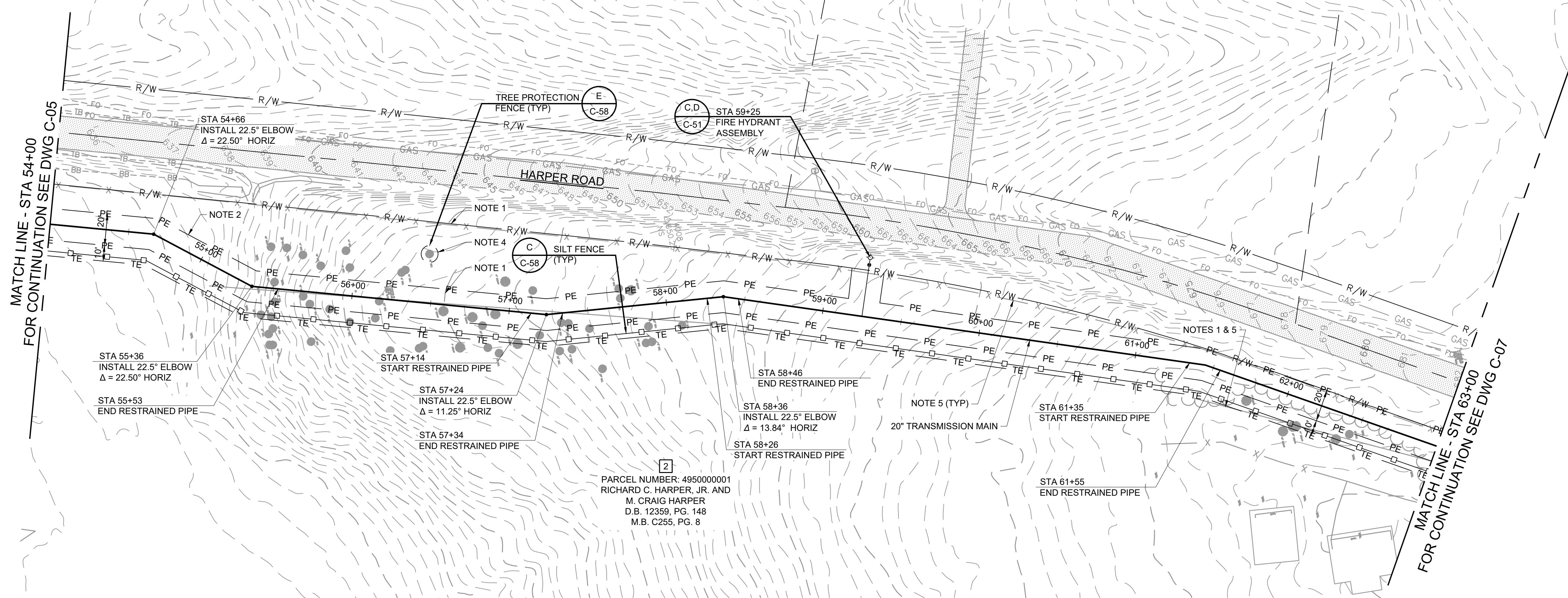
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- GENERAL NOTES:**
- CONTRACTOR SHALL REPLACE OR REPAIR FENCE TO EXISTING OR BETTER CONDITION IF DAMAGED DURING CONSTRUCTION.
 - INSIDE BOUNDARY OF LIMITS OF DISTURBANCE SHALL ALIGN WITH DRIP LINE OF TREES LINING HARPER ROAD. CONTRACTOR SHALL ADJUST ALIGNMENT AND LIMITS OF DISTURBANCE ACCORDINGLY.
 - CONTRACTOR SHALL DEMOLISH AND DISPOSE OF FENCE AS REQUIRED FOR CONSTRUCTION.
 - CONTRACTOR SHALL PROTECT IDENTIFIED TREES AND ASSOCIATED ROOT SYSTEMS.
 - CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AS REQUIRED TO CONTAIN LIVESTOCK WITHIN ENCLOSED AREA.
 - PROVIDE MINIMUM 2 LF OF RJ DIP BETWEEN ALL FITTINGS.



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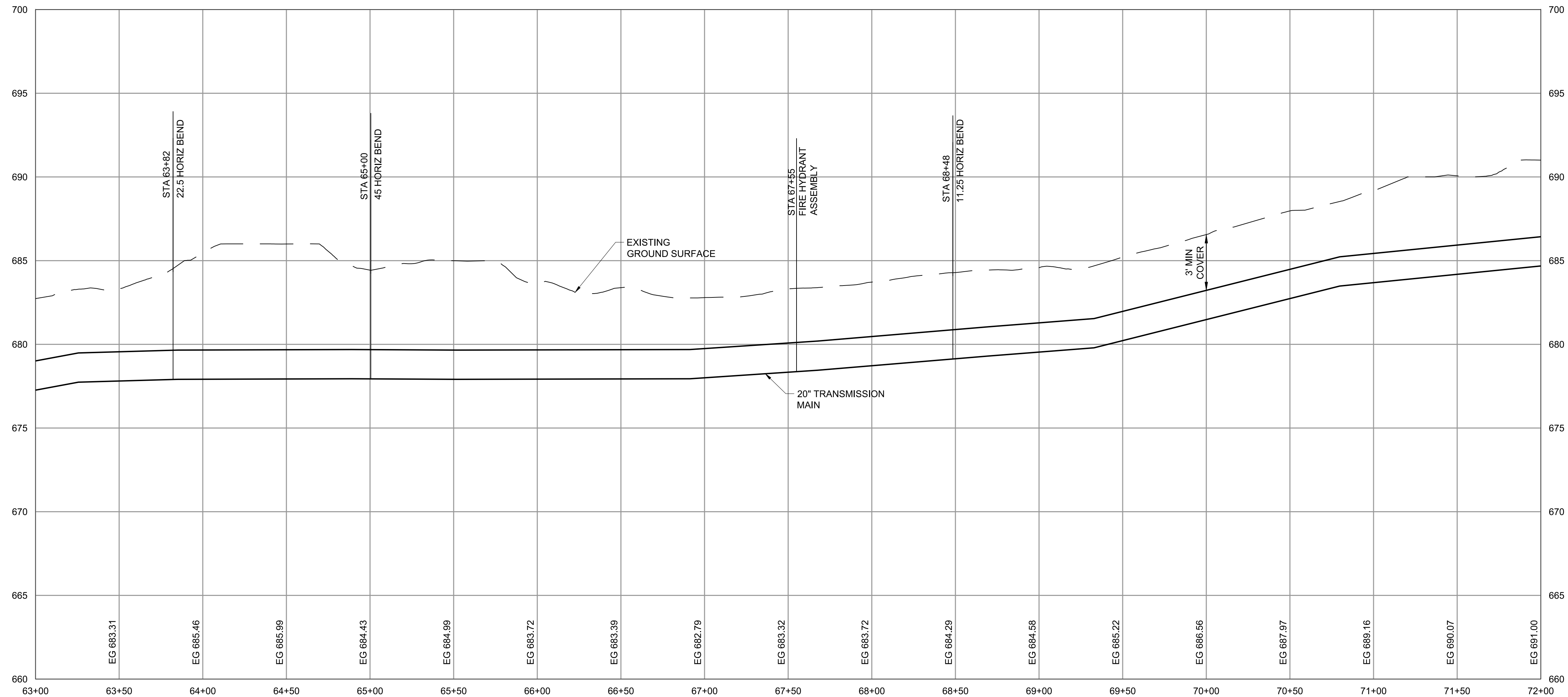
YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD

CIVIL
 PLAN AND PROFILE
 STA 54+00 TO STA 63+00

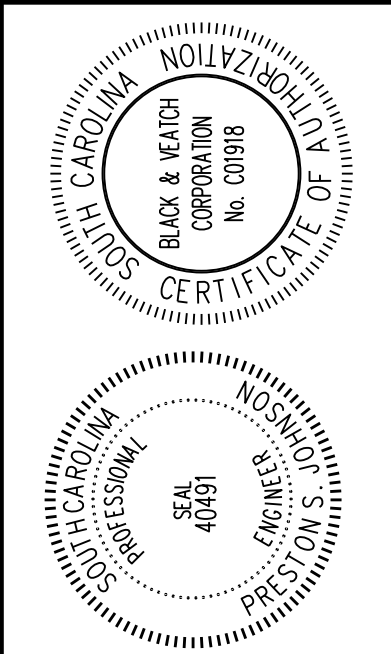
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CHECKED: CES
APPROVED: PSJ
DATE: FEBRUARY 2023
PROJECT NO. 402615
C-06
SHEET 10 OF 35

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PLOTTED: 10/12/2023 4:22 PM FILE: C:\pw_working\bow_america\sd068741C-01_EOL.dwg



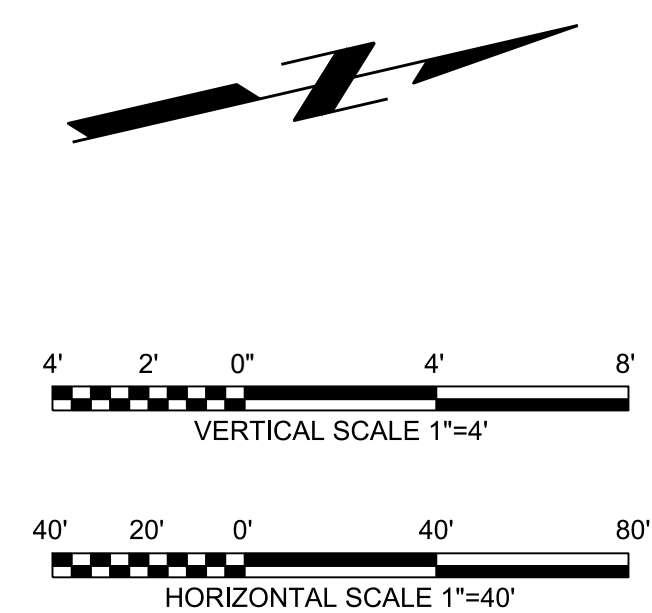
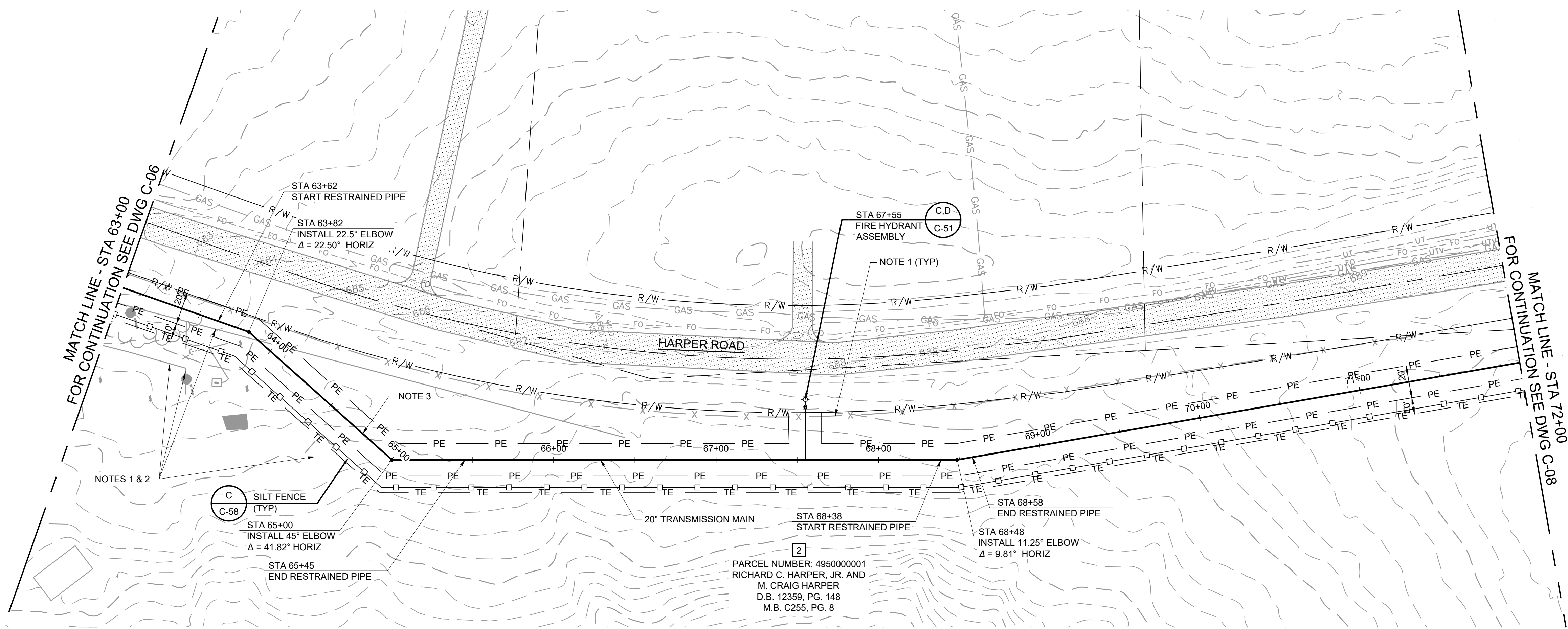
- GENERAL NOTES:**
- CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AS REQUIRED TO CONTAIN LIVESTOCK WITHIN ENCLOSED AREA.
 - CONTRACTOR SHALL REPLACE OR REPAIR FENCE TO EXISTING OR BETTER CONDITION IF DAMAGED DURING CONSTRUCTION.
 - ALIGNMENT SHALL CROSS GRAVEL DRIVEWAY AND LIVESTOCK FENCING INTO OPEN PASTURE. ONCE IN OPEN PASTURE, INSIDE BOUNDARY OF LIMITS OF DISTURBANCE SHALL ALIGN WITH THE DRIP LINE OF TREES LINING HARPER ROAD. CONTRACTOR SHALL ADJUST ALIGNMENT AND LIMITS OF DISTURBANCE ACCORDINGLY.
 - PROVIDE MINIMUM 2 LF OF RJ DIP BETWEEN ALL FITTINGS.



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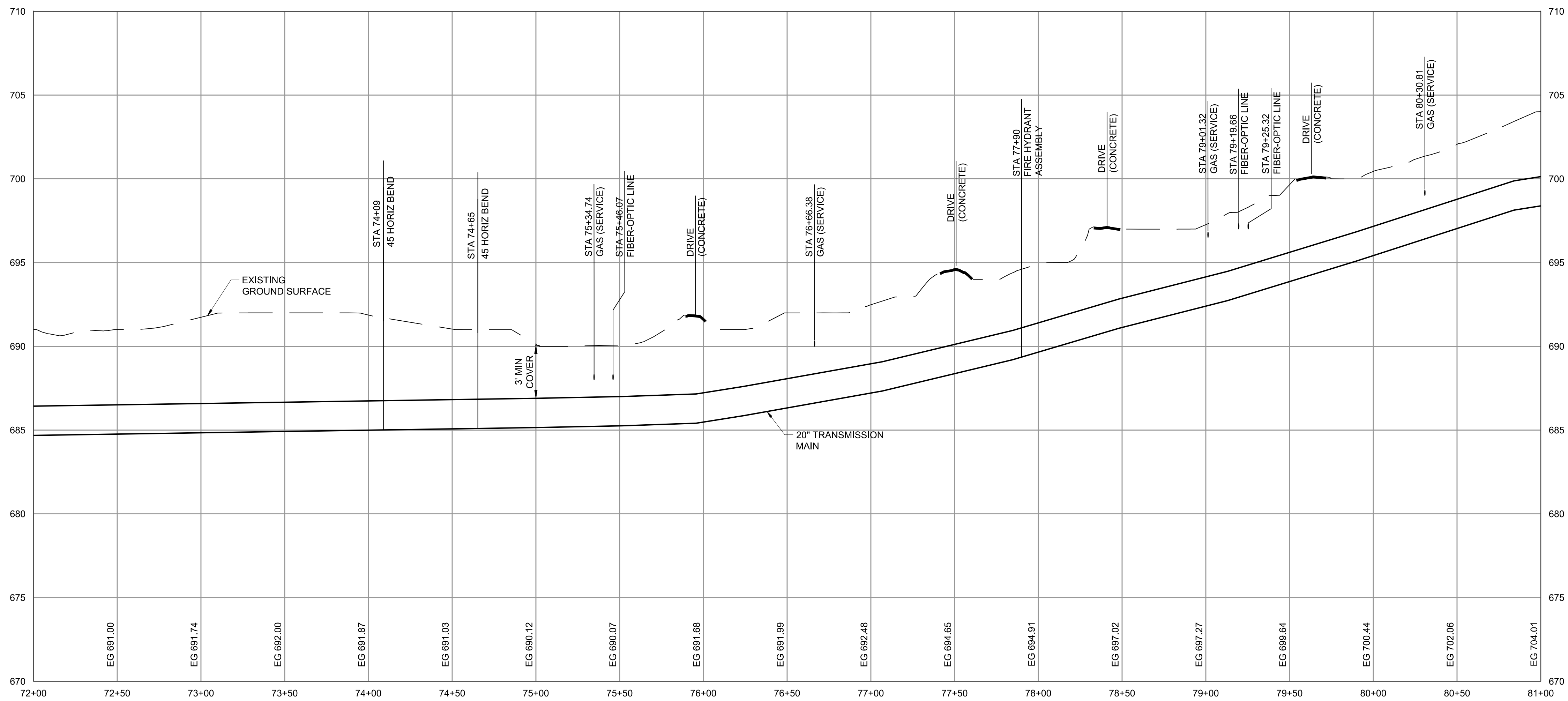
YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD
 CIVIL
 PLAN AND PROFILE
 STA 63+00 TO STA 72+00

DESIGNED: RWG
 DETAILED: WMT
 CHECKED: CES
 APPROVED: PSJ
 DATE: FEBRUARY 2023
 PROJECT NO. 402615
C-07
 SHEET 11 OF 35

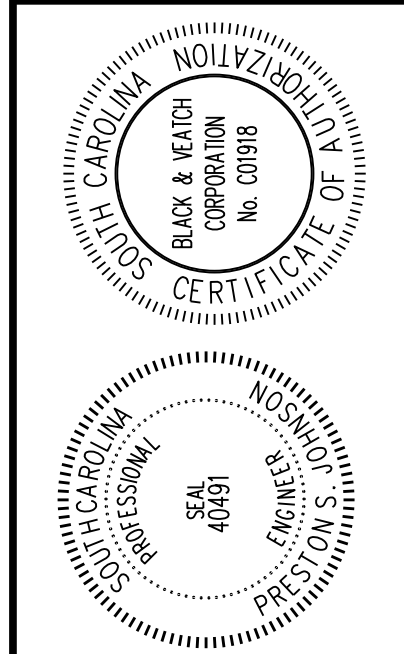


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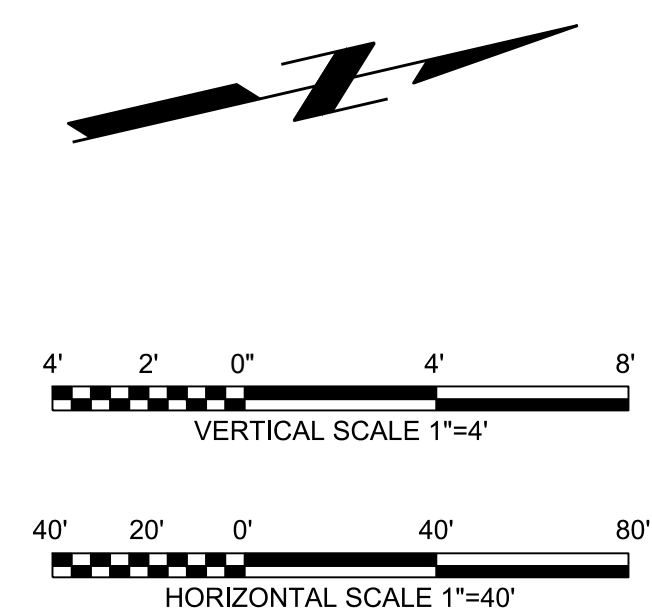
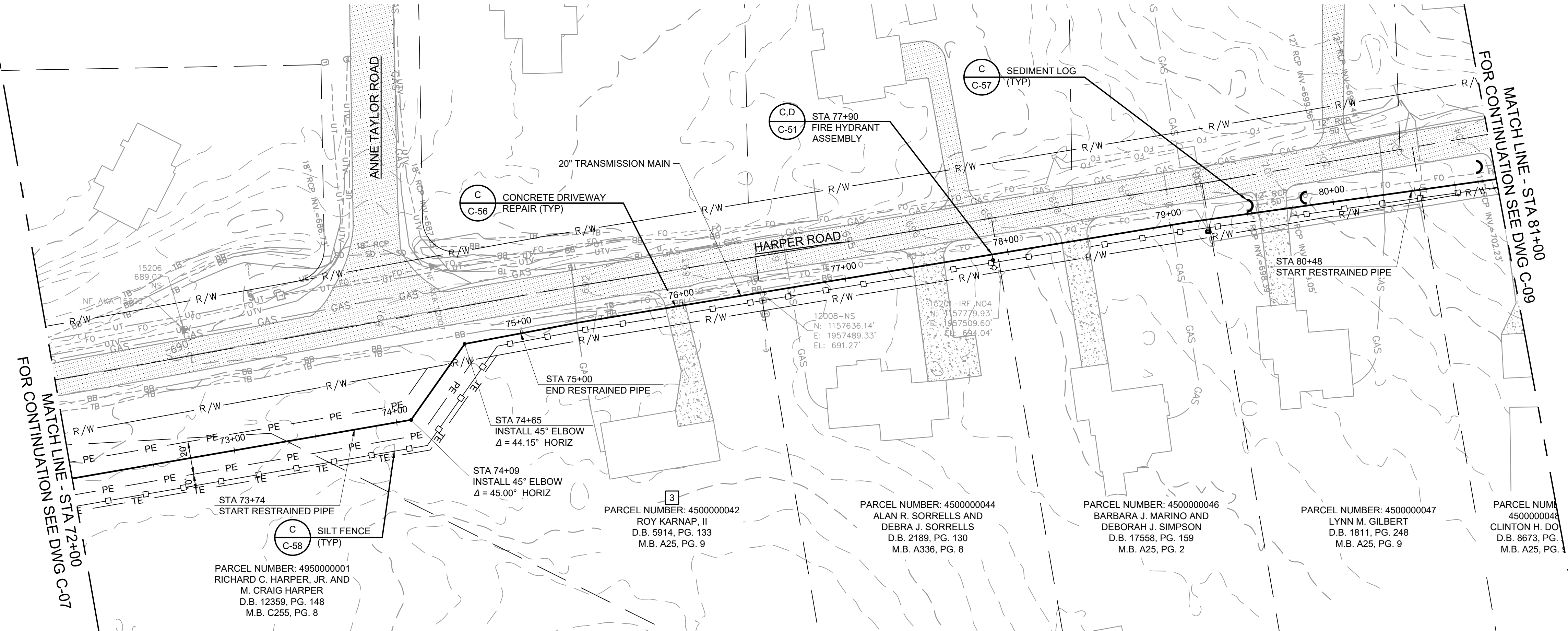


- GENERAL NOTES:**
1. CONTRACTOR TO PLACE SEDIMENT LOGS EVERY 100 FEET WITHIN DITCH THAT IS TO RECEIVE SEDIMENT LADEN RUNOFF FROM CONSTRUCTION ACTIVITIES. REFER TO DETAIL C ON SHEET C-57.
 2. PROVIDE MINIMUM 2 LF OF RJ DIP BETWEEN ALL FITTINGS.
 3. CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AS REQUIRED TO CONTAIN LIVESTOCK WITHIN ENCLOSED AREA.



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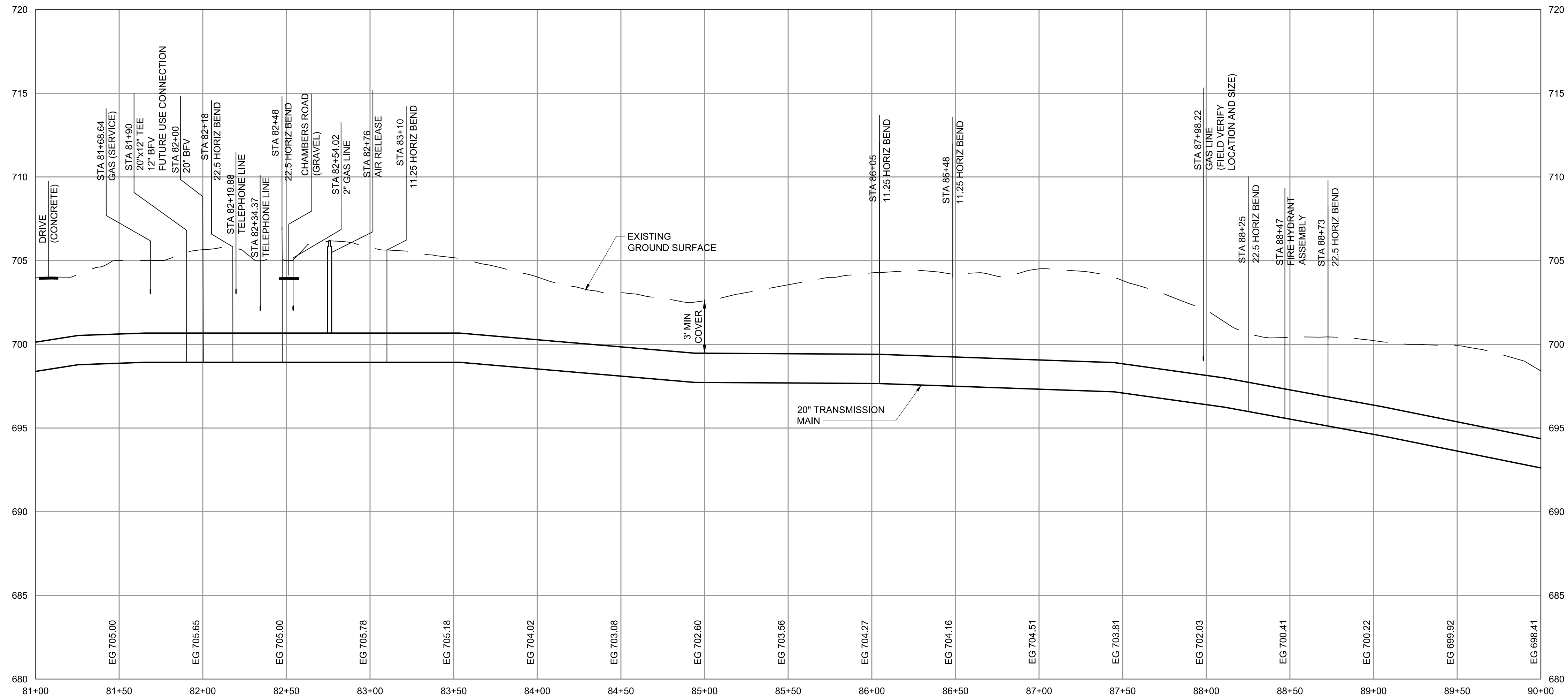
**YORK COUNTY, SOUTH CAROLINA
 PHASE 1 NORTH-SOUTH WATER TM
 HARPER ROAD**
 CIVIL
 PLAN AND PROFILE
 STA 72+00 TO STA 81+00



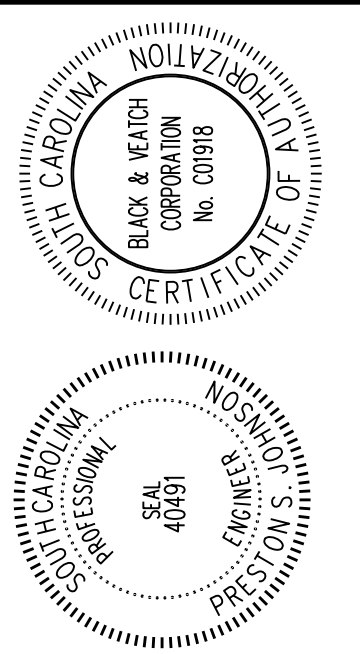
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APPROVED:	PSJ
DATE:	FEBRUARY 2023
PROJECT NO.:	402615
SHEET:	C-08
OF 35:	12 OF 35

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- GENERAL NOTES:**
- CONTRACTOR TO PLACE SEDIMENT LOGS EVERY 100 FEET WITHIN DITCH THAT IS TO RECEIVE SEDIMENT LADEN RUNOFF FROM CONSTRUCTION ACTIVITIES. REFER TO DETAIL C ON SHEET C-57.
 - CONTRACTOR SHALL REPLACE OR REPAIR FENCE TO EXISTING OR BETTER CONDITION IF DAMAGED DURING CONSTRUCTION.
 - CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AS REQUIRED TO CONTAIN LIVESTOCK WITHIN ENCLOSED AREA.
 - CONTRACTOR SHALL PROTECT IDENTIFIED TREES AND ASSOCIATED ROOT SYSTEMS.
 - INSIDE BOUNDARY OF LIMITS OF DISTURBANCE SHALL ALIGN WITH DRIP LINE OF TREES LINING HARPER ROAD. CONTRACTOR SHALL ADJUST ALIGNMENT AND LIMITS OF DISTURBANCE ACCORDINGLY.
 - PROVIDE MINIMUM 2 LF OF RJ DIP BETWEEN ALL FITTINGS.



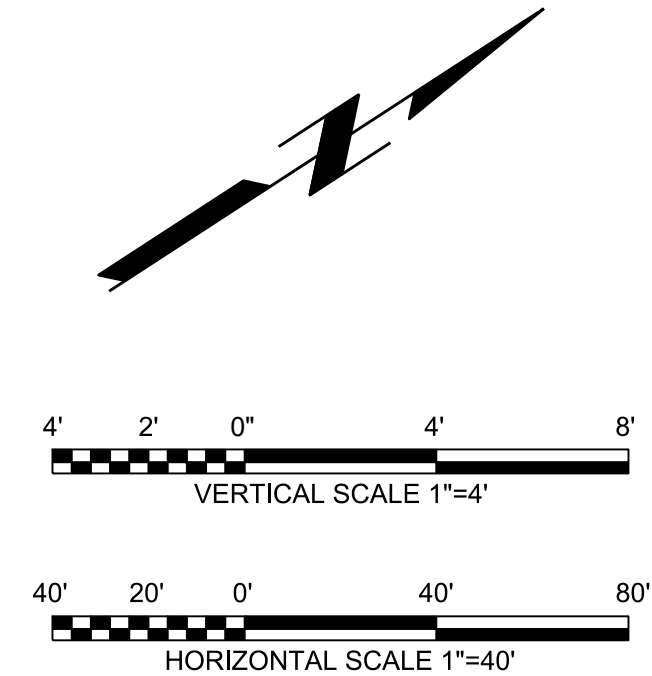
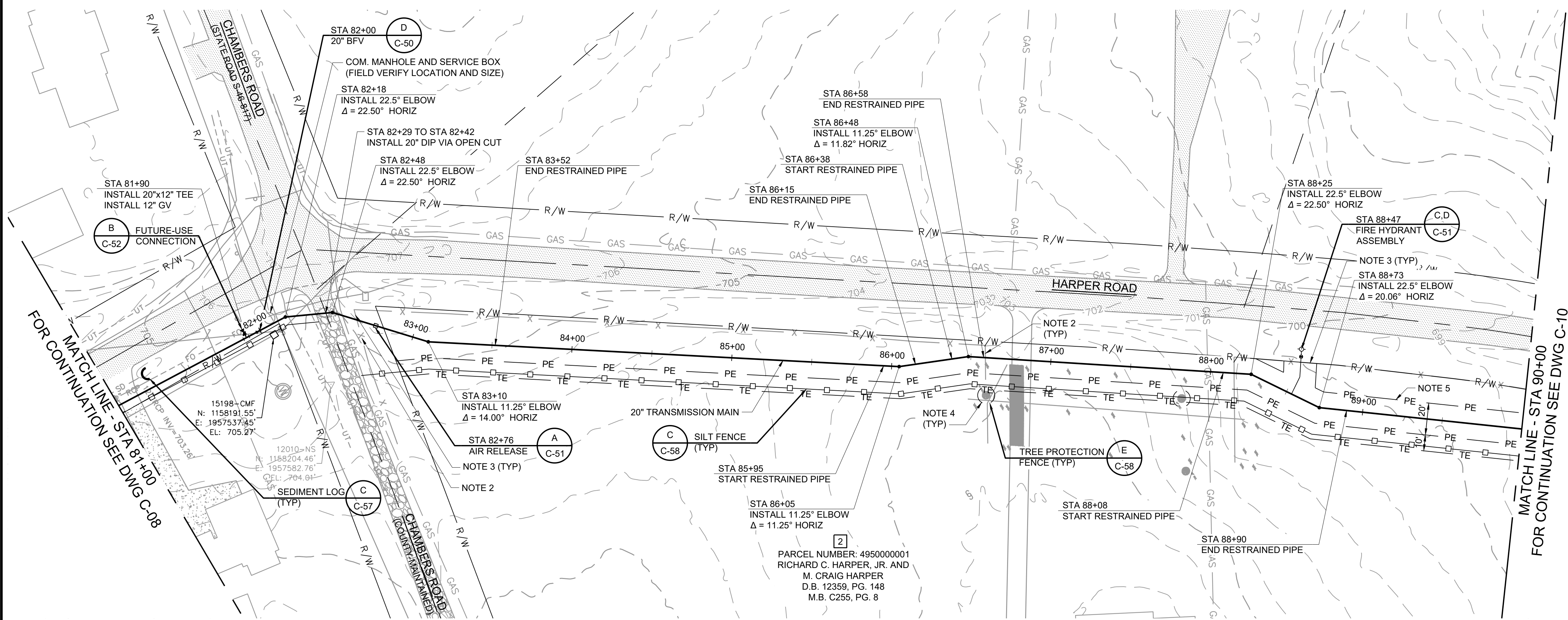
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YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD
 CIVIL
 PLAN AND PROFILE
 STA 81+00 TO STA 90+00

DESIGNED: RGW
 DETAILED: WMT
 CHECKED: CES
 APPROVED: PSJ
 DATE: FEBRUARY 2023

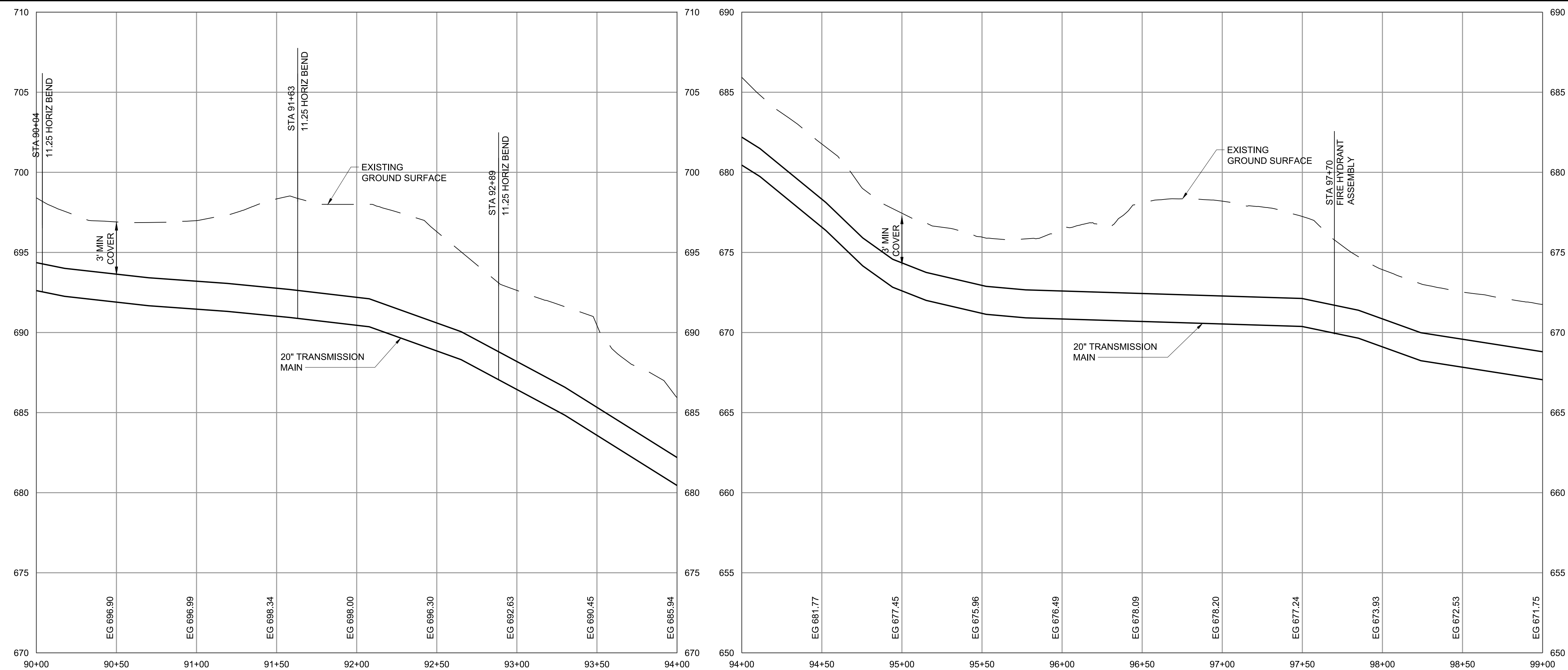
PROJECT NO.
 402615

C-09
 SHEET
 13 OF 35

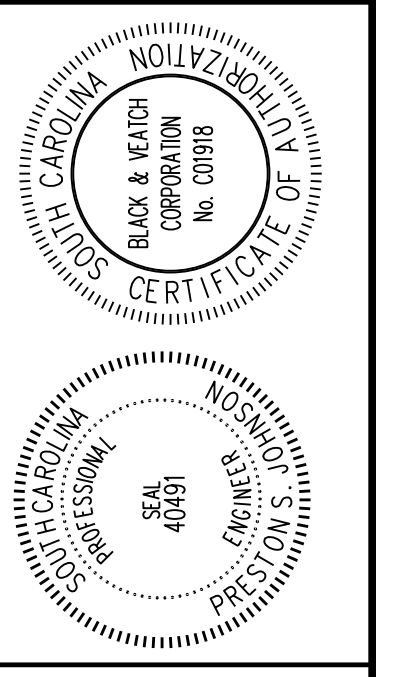


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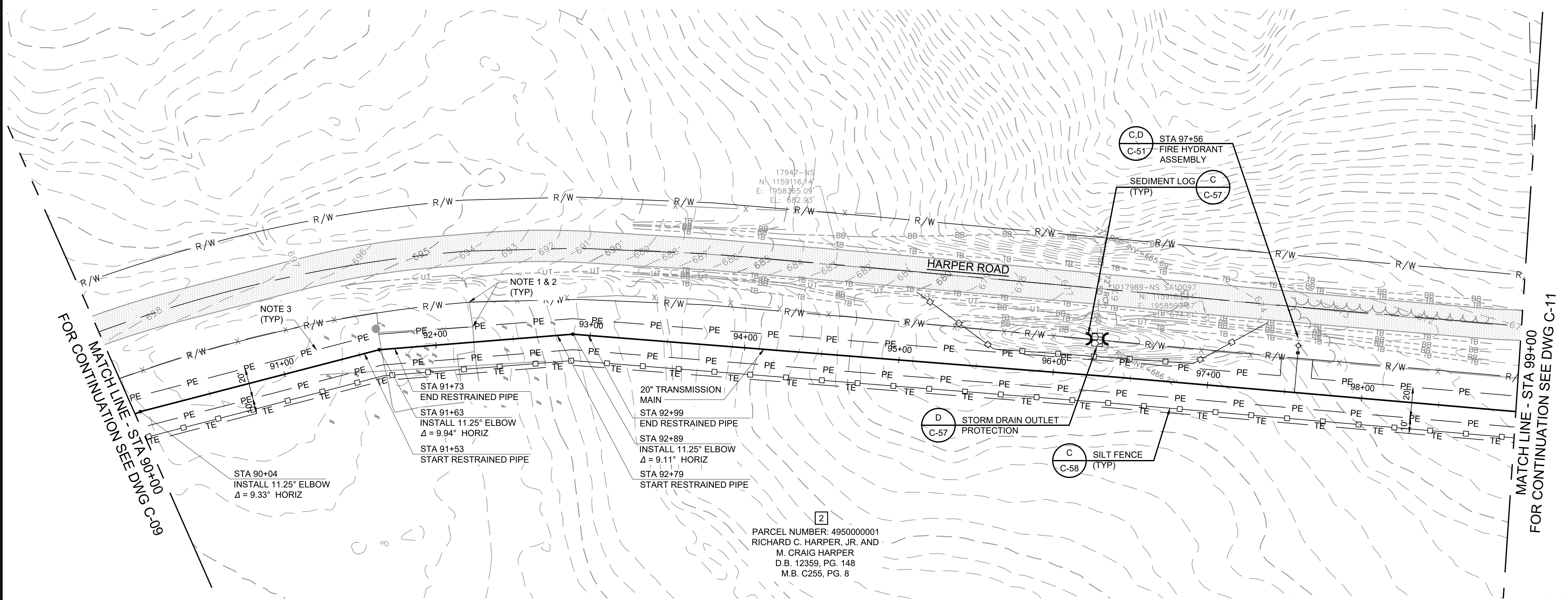
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- GENERAL NOTES:**
- CONTRACTOR SHALL REPLACE OR REPAIR FENCE TO EXISTING OR BETTER CONDITION IF DAMAGED DURING CONSTRUCTION.
 - CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AS REQUIRED TO CONTAIN LIVESTOCK WITHIN ENCLOSED AREA.
 - INSIDE BOUNDARY OF LIMITS OF DISTURBANCE SHALL ALIGN WITH DRIP LINE OF TREES LINING HARPER ROAD. CONTRACTOR SHALL ADJUST ALIGNMENT AND LIMITS OF DISTURBANCE ACCORDINGLY.
 - PROVIDE MINIMUM 2 LF OF RJ DIP BETWEEN ALL FITTINGS.



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YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD

CIVIL
 PLAN AND PROFILE
 STA 90+00 TO STA 99+00

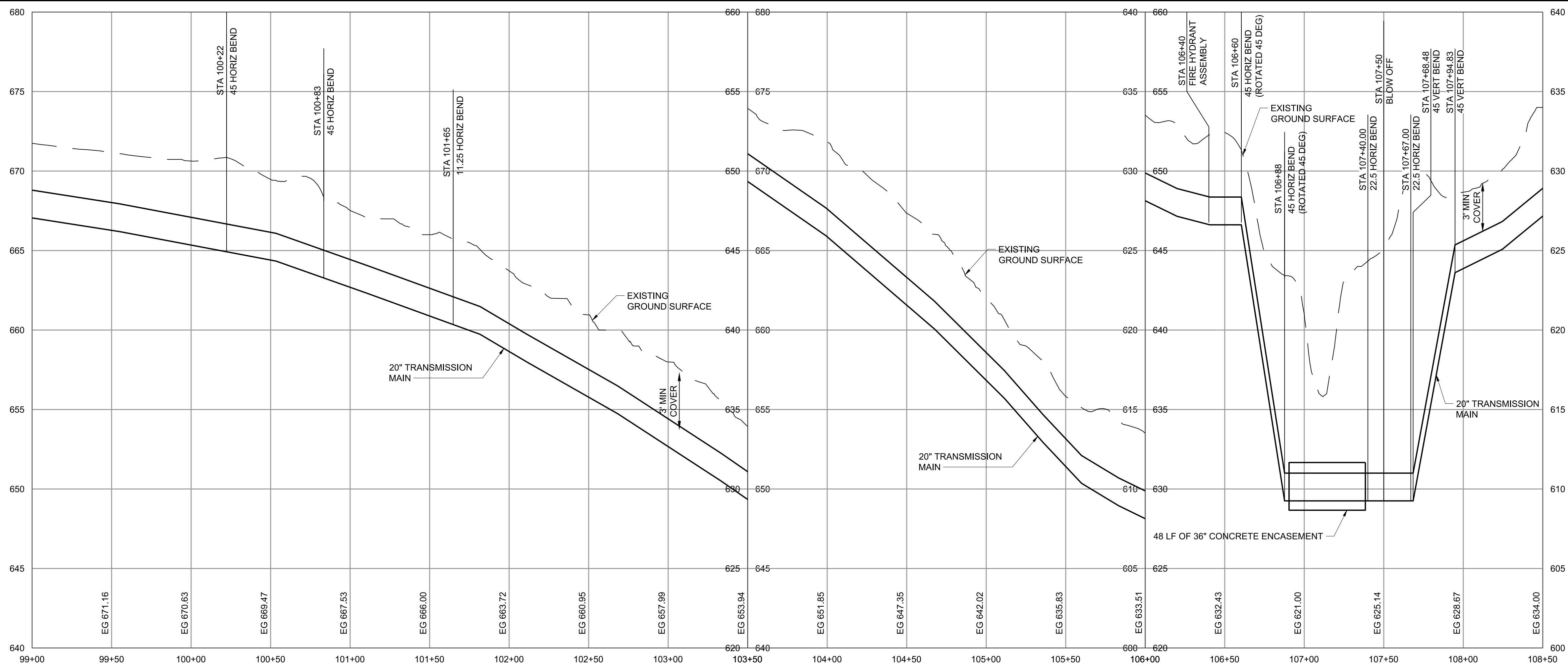
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 DATE: FEBRUARY 2023

PROJECT NO.
 402615

C-10
 SHEET
 14 OF 35

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- GENERAL NOTES:**
- CONTRACTOR TO PLACE SEDIMENT LOGS EVERY 100 FEET WITHIN DITCH THAT IS TO RECEIVE SEDIMENT LADEN RUNOFF FROM CONSTRUCTION ACTIVITIES. REFER TO DETAIL C ON SHEET C-57.
 - PROVIDE SLOPE STABILIZATION ON BOTH STREAM BANKS AT CREEK CROSSINGS.
 - LIMIT DISTURBANCE TO 30 LINEAR FEET PER NATIONWIDE PERMIT 12 ISSUED IN RESPONSE TO A PRE-CONSTRUCTION NOTIFICATION SAC-2019-01862.
 - CONTRACTOR SHALL REPLACE OR REPAIR FENCE TO EXISTING OR BETTER CONDITION IF DAMAGED DURING CONSTRUCTION.
 - CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AS REQUIRED TO CONTAIN LIVESTOCK WITHIN ENCLOSED AREA.
 - PROVIDE MINIMUM 2 LF OF RJ DIP BETWEEN ALL FITTINGS.

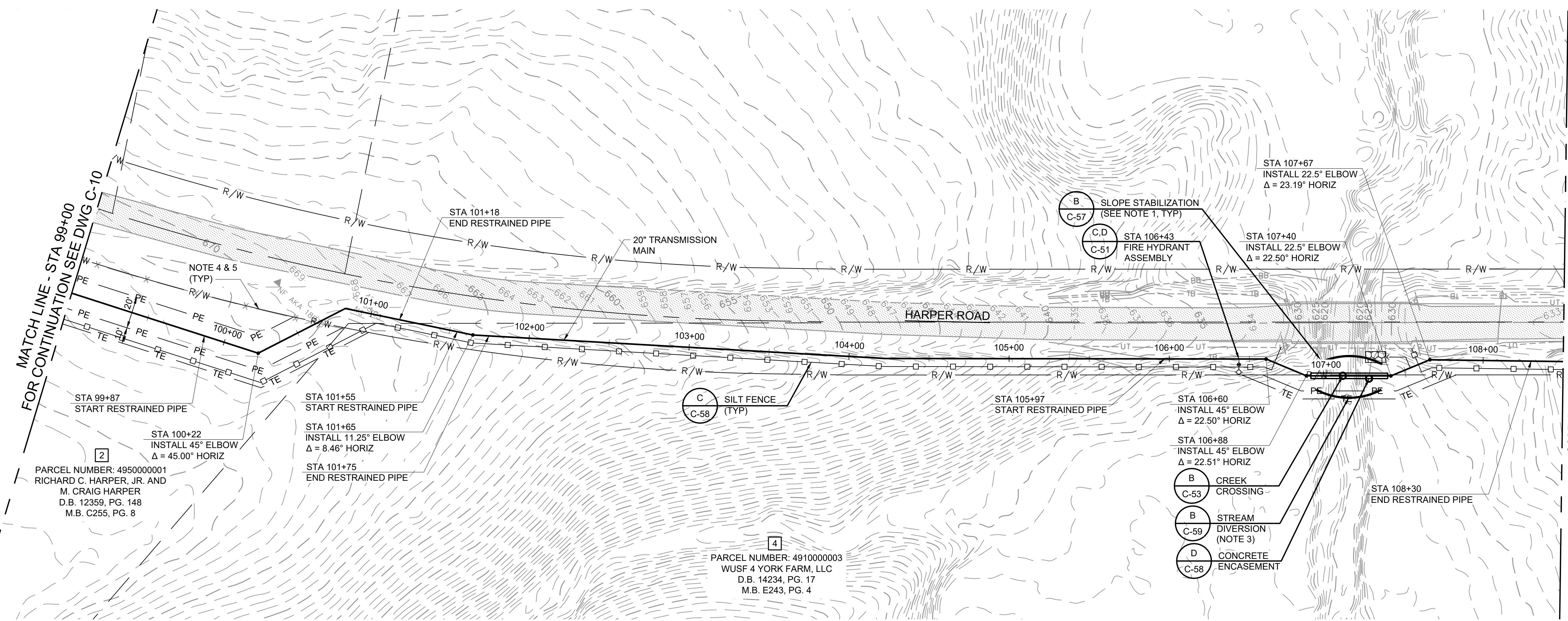
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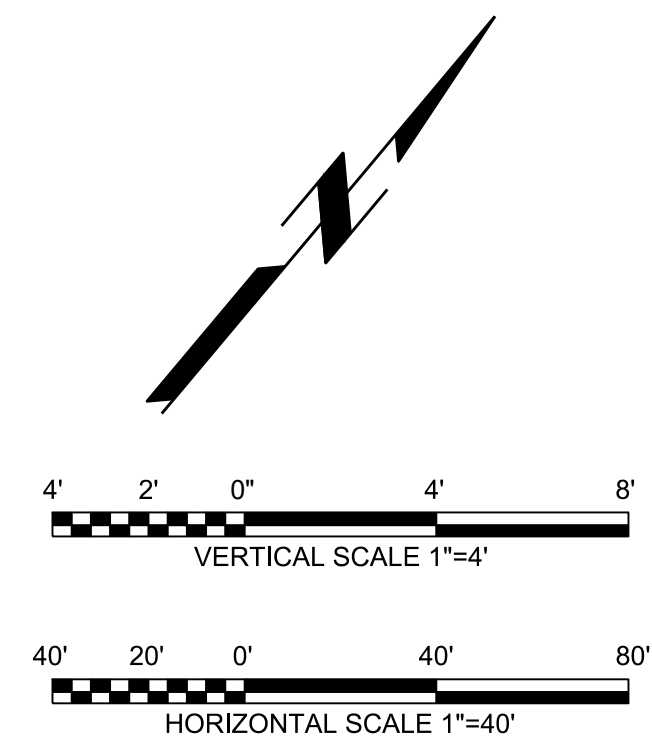
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MATCH LINE - STA 99+00
FOR CONTINUATION SEE DWG C-10

MATCH LINE - STA 108+50
FOR CONTINUATION SEE DWG C-12



YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD

CIVIL
 PLAN AND PROFILE
 STA 99+00 TO STA 108+50

DESIGNED: RGW
 DETAILED: WMT
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 DATE: FEBRUARY 2023

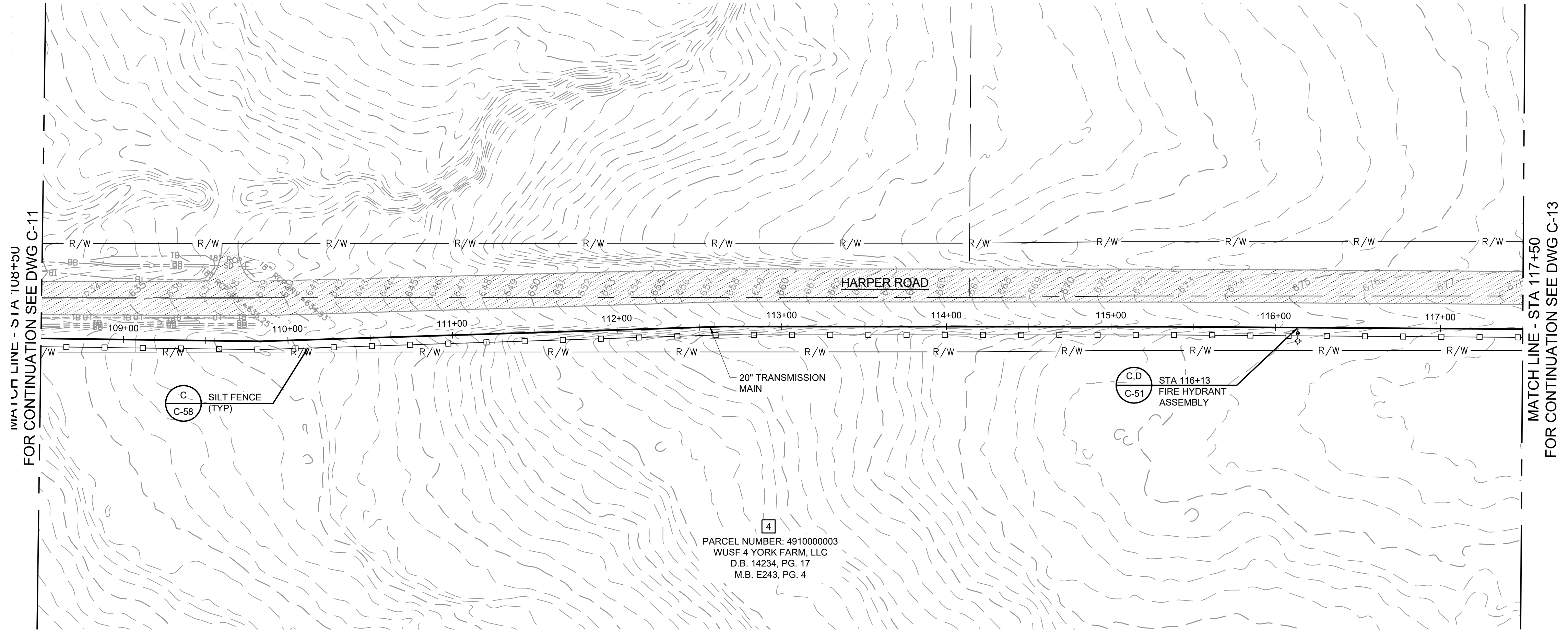
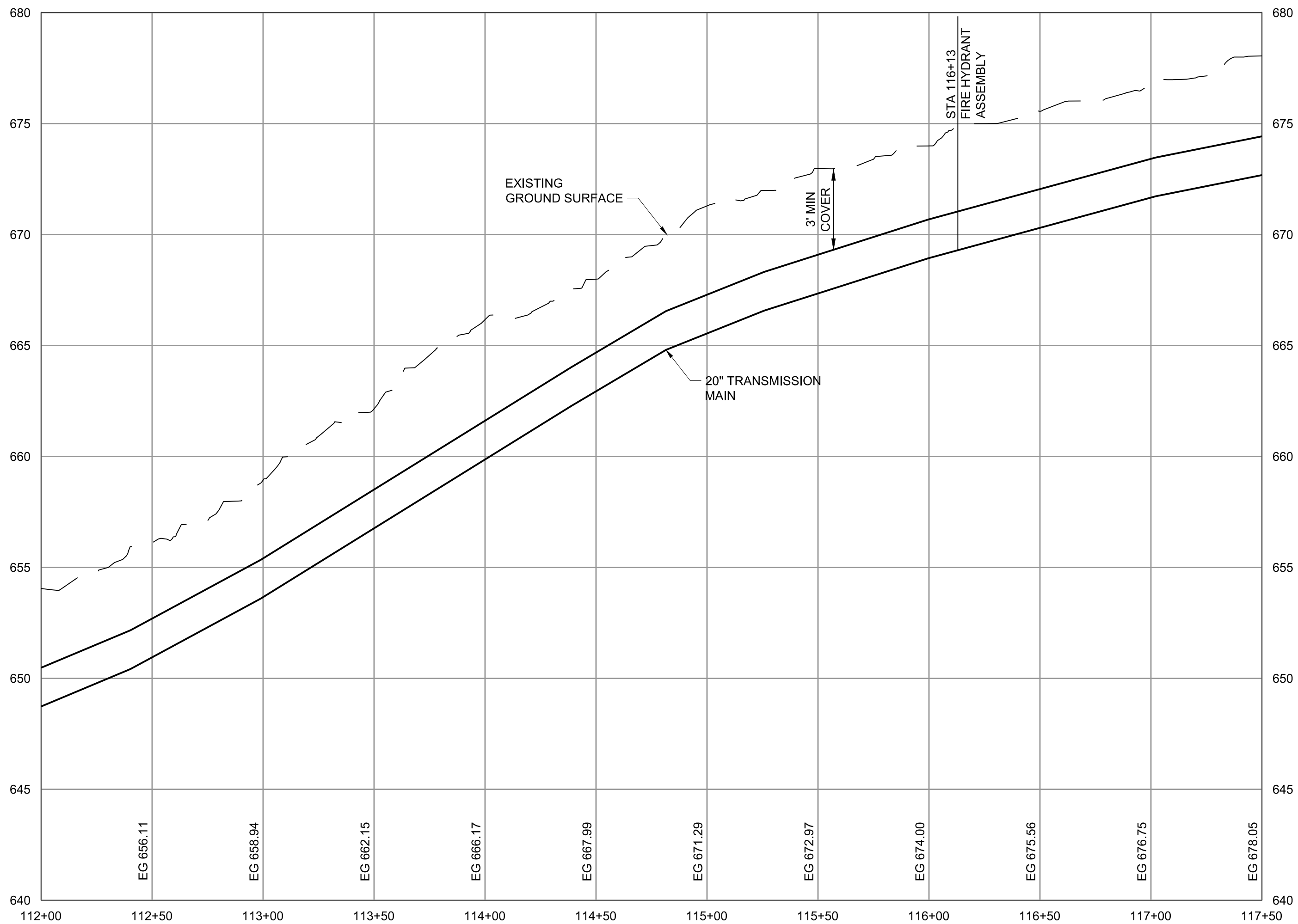
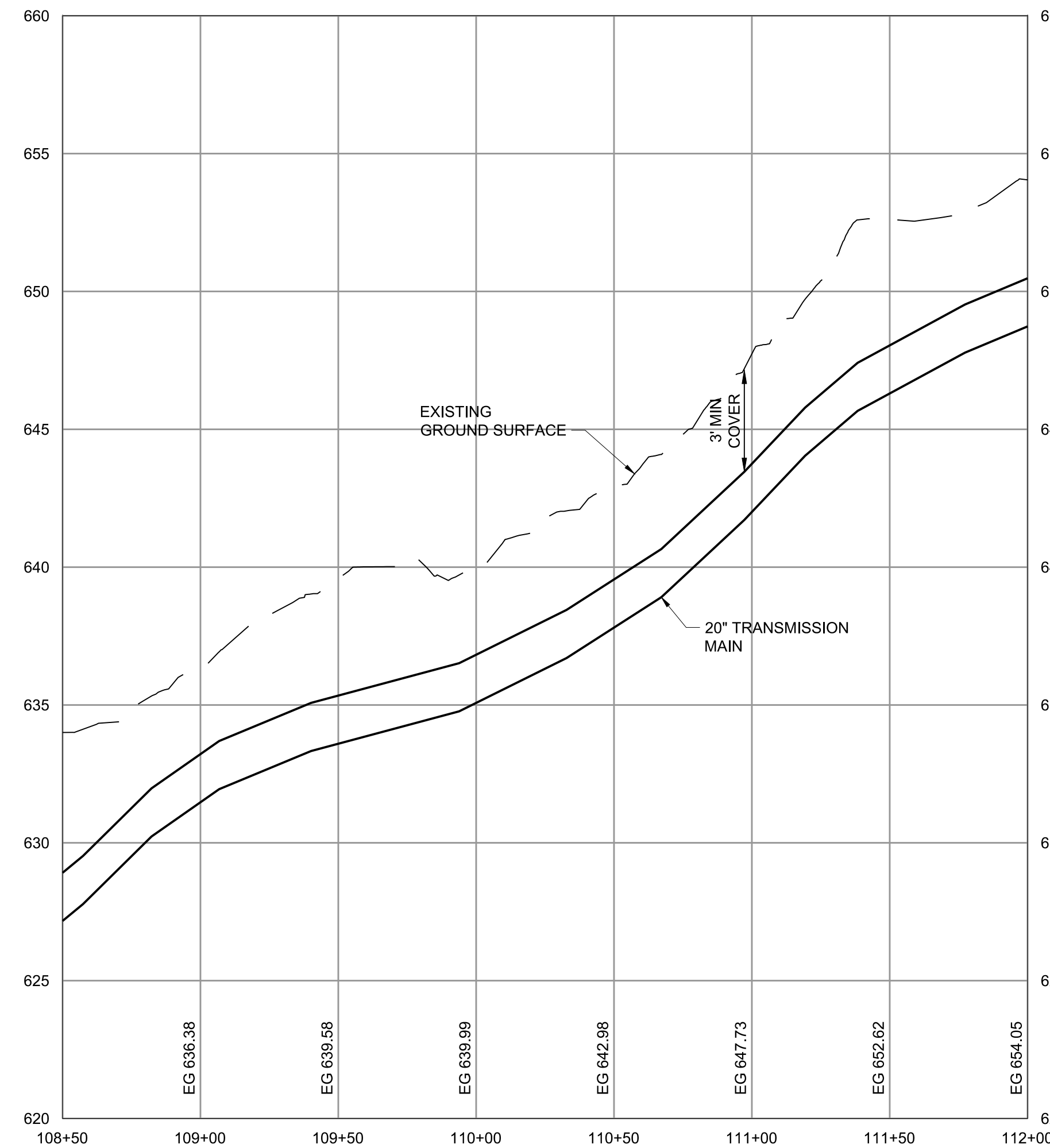
PROJECT NO.
 402615

C-11
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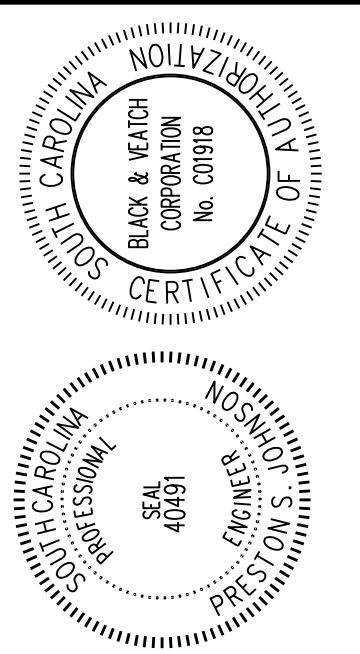
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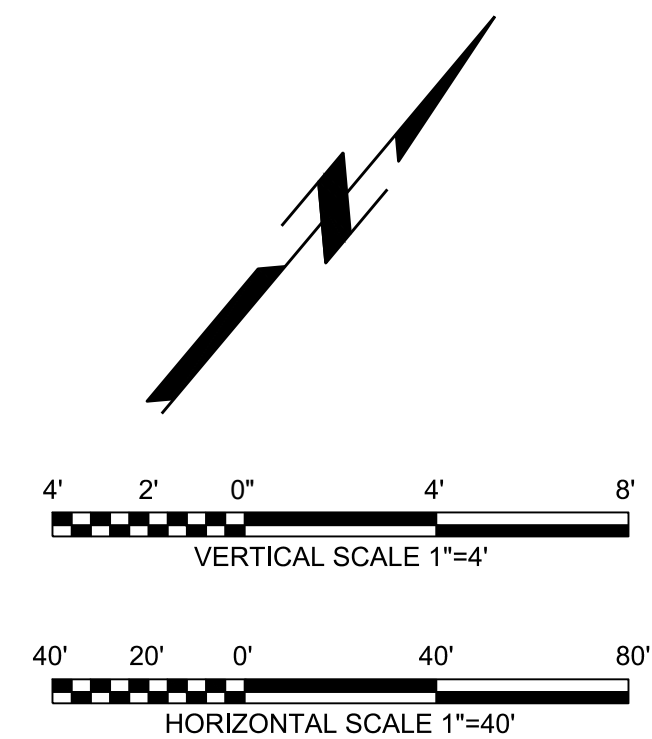
- GENERAL NOTES:**
1. CONTRACTOR TO PLACE SEDIMENT LOGS EVERY 100 FEET WITHIN DITCH THAT IS TO RECEIVE SEDIMENT LADEN RUNOFF FROM CONSTRUCTION ACTIVITIES. REFER TO DETAIL C ON SHEET C-57.
 2. PROVIDE MINIMUM 2 LF OF RJ DIP BETWEEN ALL FITTINGS.
 3. CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AS REQUIRED TO CONTAIN LIVESTOCK WITHIN ENCLOSED AREA.
 4. CONTRACTOR SHALL REPLACE OR REPAIR FENCE TO EXISTING OR BETTER CONDITION IF DAMAGED DURING CONSTRUCTION.



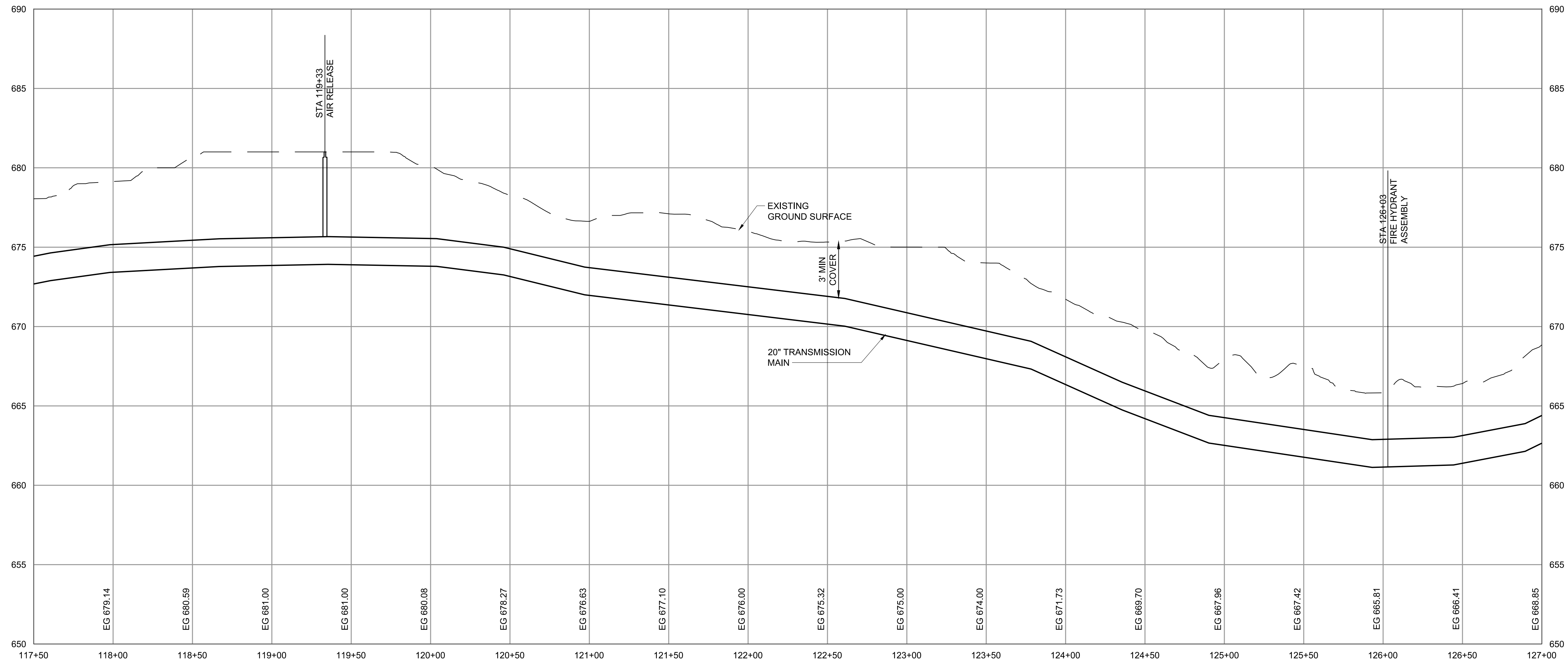
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YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD
 CIVIL
 PLAN AND PROFILE
 STA 108+50 TO STA 117+50

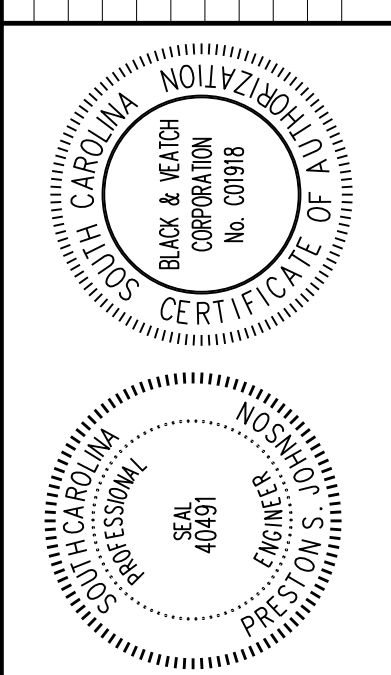
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DATE: FEBRUARY 2023
PROJECT NO. 402615
C-12 SHEET 16 OF 35



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- GENERAL NOTES:**
- CONTRACTOR TO PLACE SEDIMENT LOGS EVERY 100 FEET WITHIN DITCH THAT IS TO RECEIVE SEDIMENT LADEN RUNOFF FROM CONSTRUCTION ACTIVITIES. REFER TO DETAIL C ON SHEET C-57.
 - PROVIDE MINIMUM 2 LF OF RJ DIP BETWEEN ALL FITTINGS.
 - CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AS REQUIRED TO CONTAIN LIVESTOCK WITHIN ENCLOSED AREA.
 - CONTRACTOR SHALL REPLACE OR REPAIR FENCE TO EXISTING OR BETTER CONDITION IF DAMAGED DURING CONSTRUCTION.



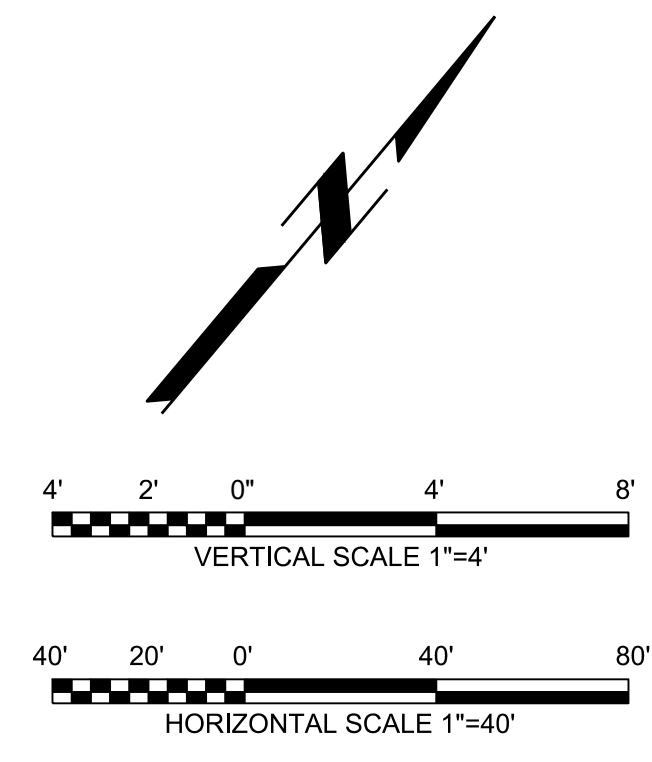
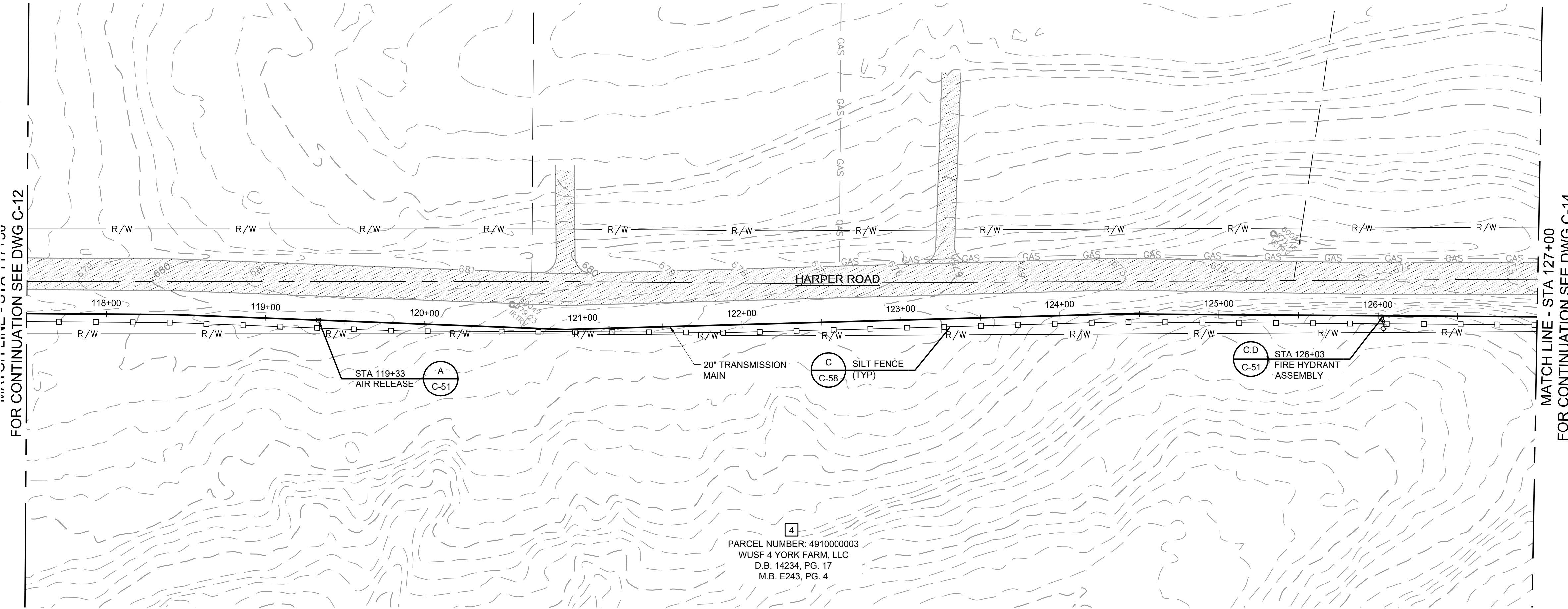
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YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD
 CIVIL
 PLAN AND PROFILE
 STA 117+50 TO STA 127+00

DESIGNED: RWG
 DETAILED: WMT
 CHECKED: CES
 APPROVED: PSJ
 DATE: FEBRUARY 2023

PROJECT NO.
402615

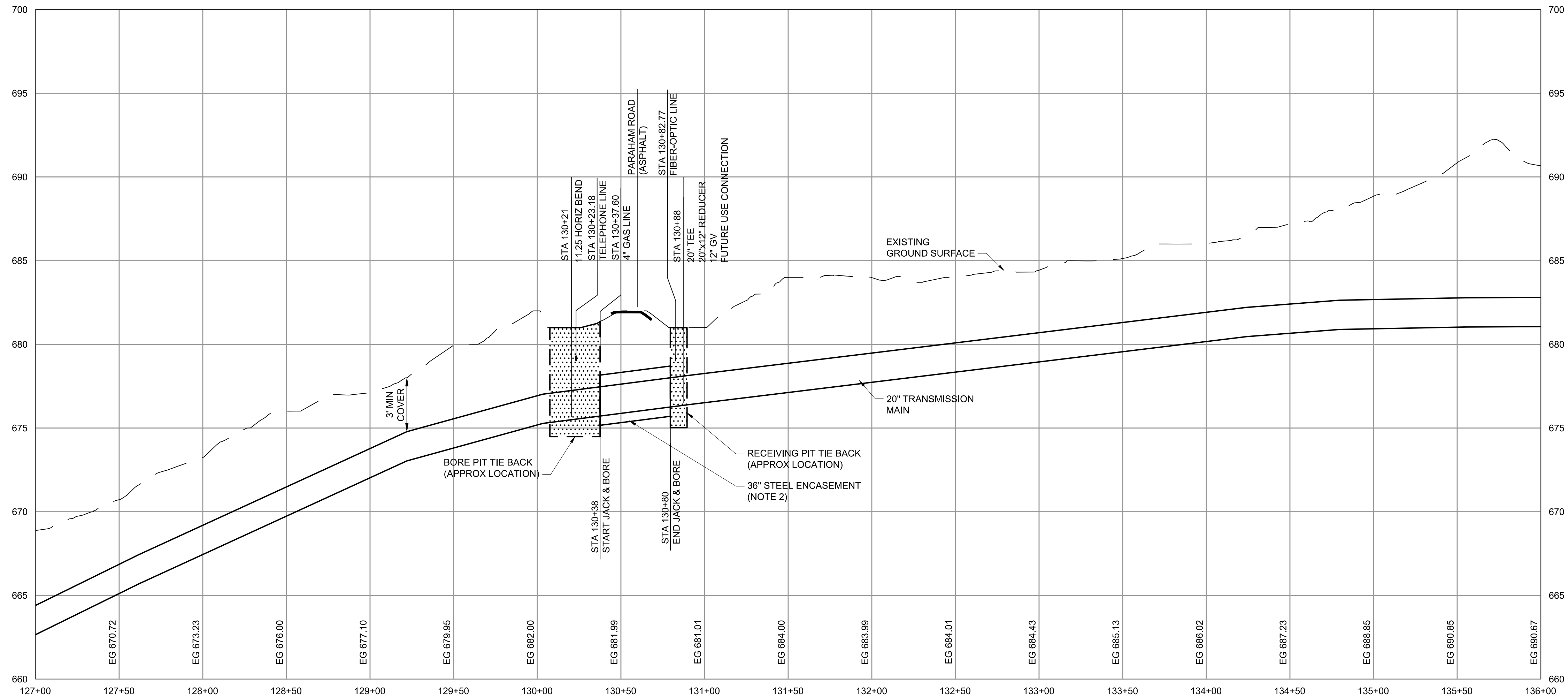
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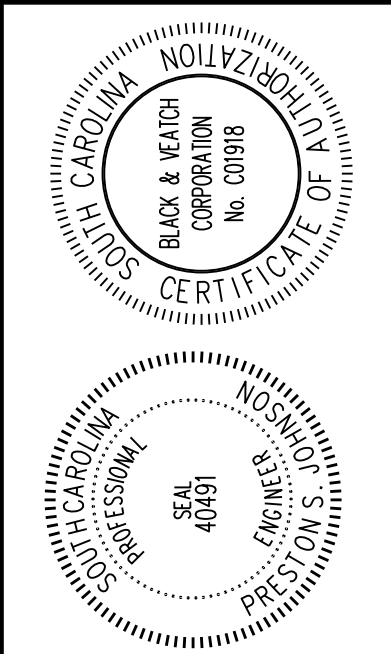
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- GENERAL NOTES:**
- CONTRACTOR TO PLACE SEDIMENT LOGS EVERY 100 FEET WITHIN DITCH THAT IS TO RECEIVE SEDIMENT LADEN RUNOFF FROM CONSTRUCTION ACTIVITIES. REFER TO DETAIL C ON SHEET C-57.
 - 36-INCH STEEL ENCASEMENT PIPE SHALL HAVE A MINIMUM NOMINAL THICKNESS OF 0.250 (SCHEDULE 10).
 - PROVIDE MINIMUM 2 LF OF RJ DIP BETWEEN ALL FITTINGS.
 - CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AS REQUIRED TO CONTAIN LIVESTOCK WITHIN ENCLOSED AREA.
 - CONTRACTOR SHALL REPLACE OR REPAIR FENCE TO EXISTING OR BETTER CONDITION IF DAMAGED DURING CONSTRUCTION.



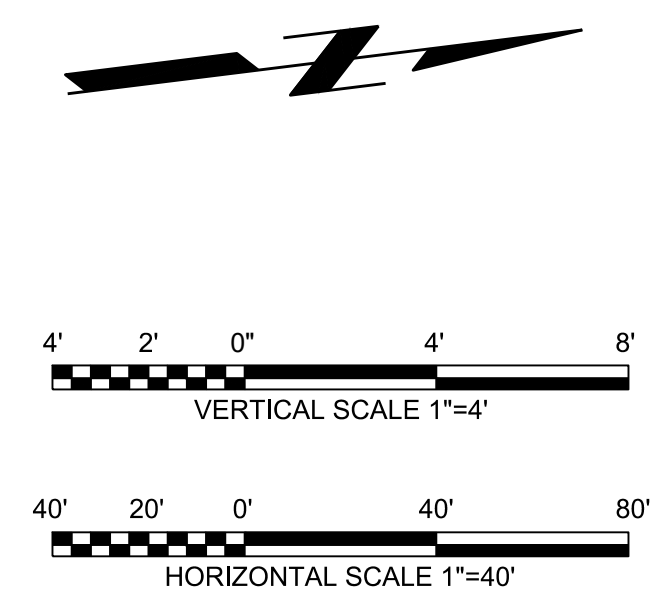
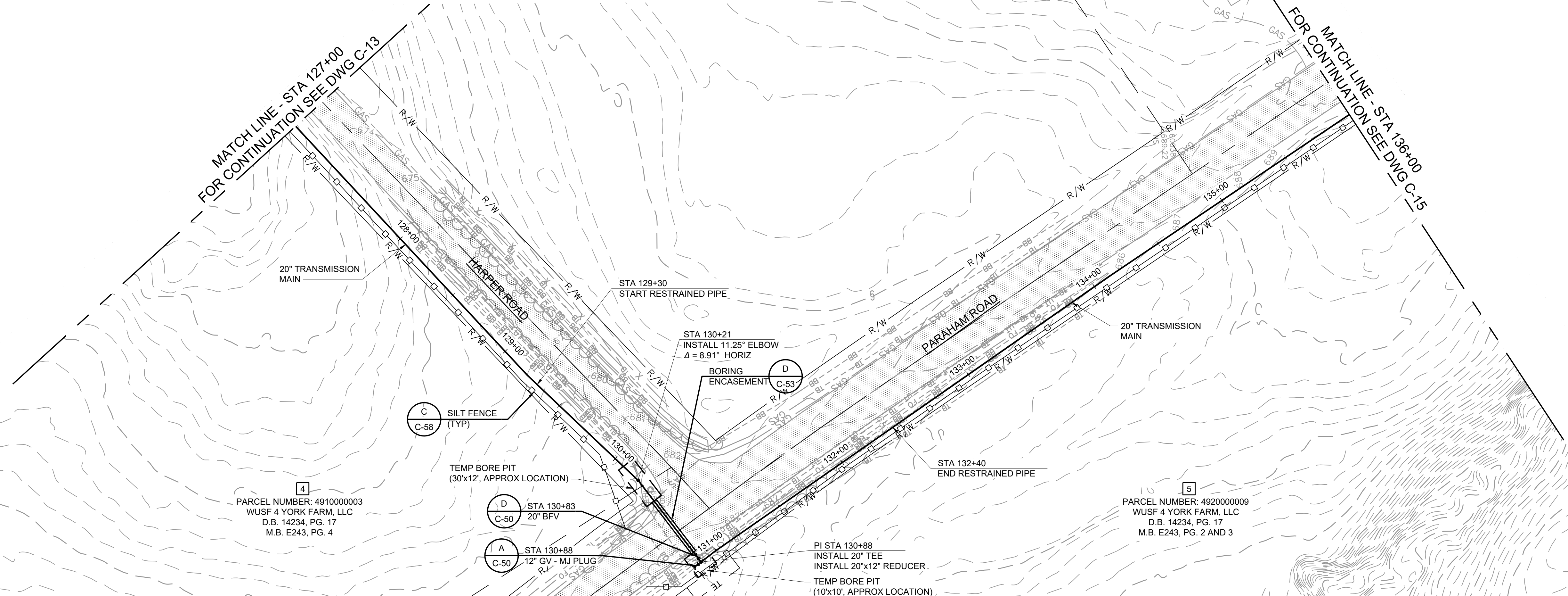
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YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD
 CIVIL
 PLAN AND PROFILE
 STA 127+00 TO STA 136+00

DESIGNED: RWG
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 DATE: FEBRUARY 2023

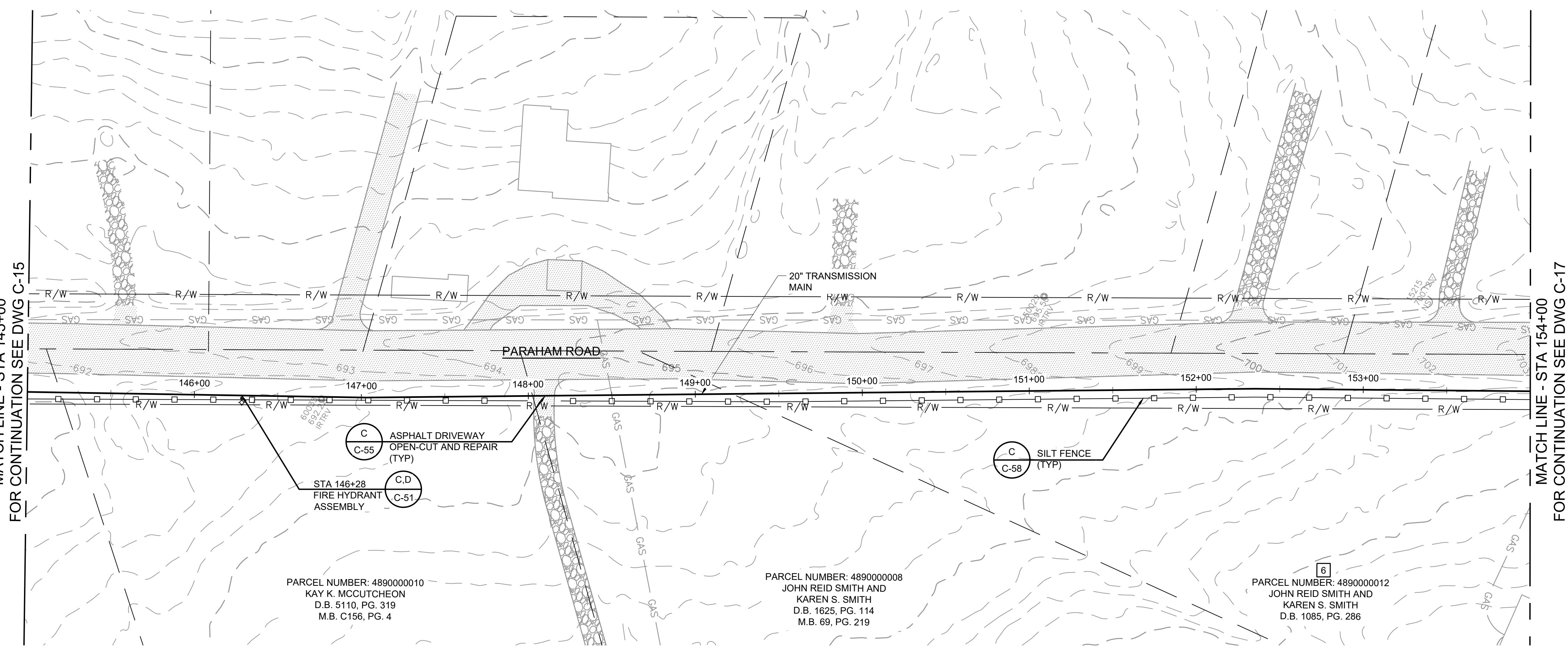
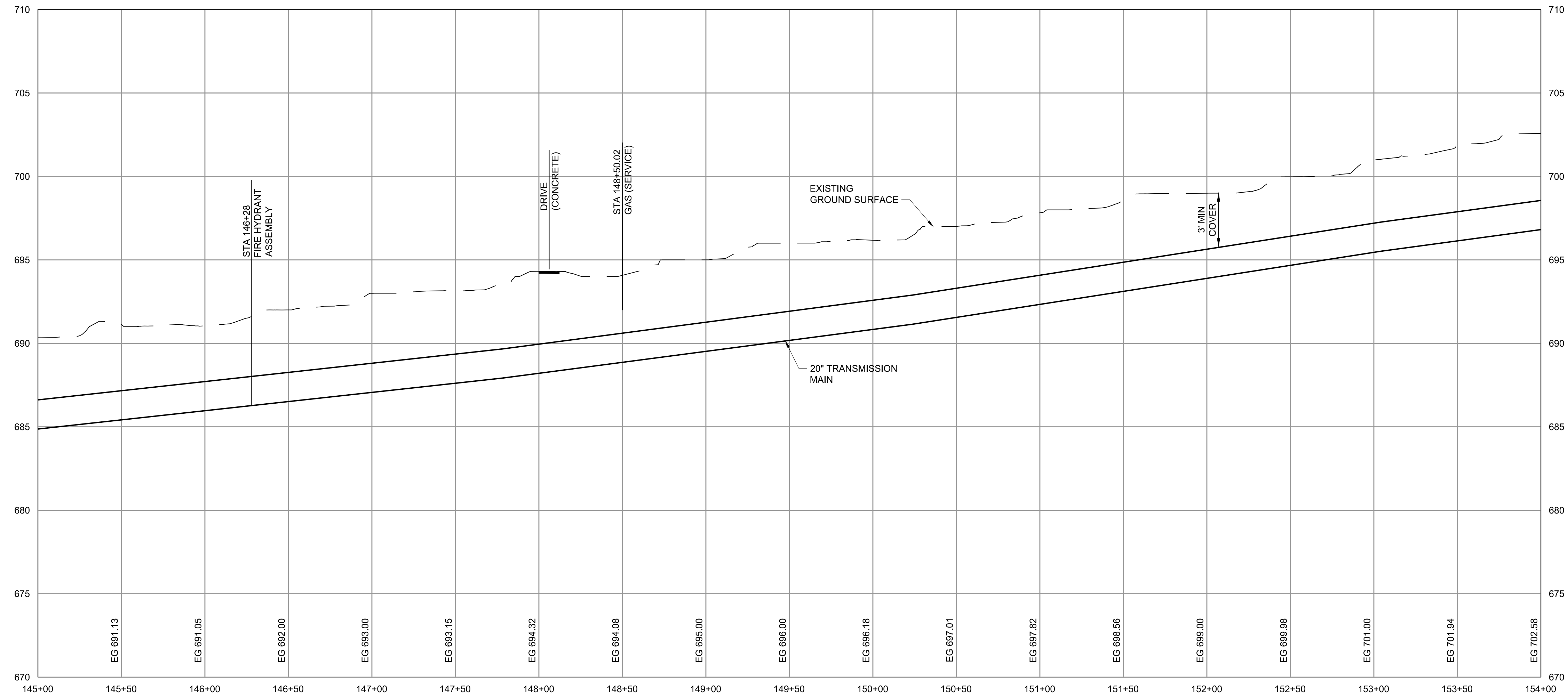
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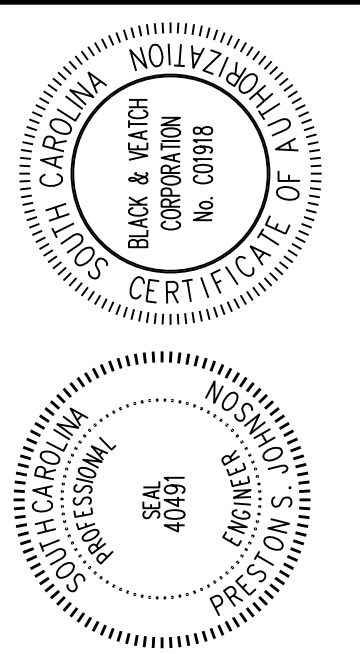


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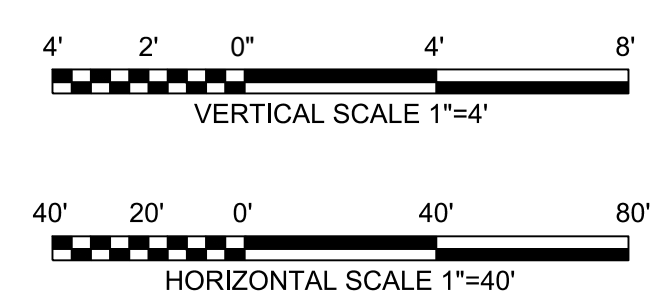
- GENERAL NOTES:**
- CONTRACTOR TO PLACE SEDIMENT LOGS EVERY 100 FEET WITHIN DITCH THAT IS TO RECEIVE SEDIMENT LADEN RUNOFF FROM CONSTRUCTION ACTIVITIES. REFER TO DETAIL C ON SHEET C-57.
 - PROVIDE MINIMUM 2 LF OF RJ DIP BETWEEN ALL FITTINGS.
 - CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AS REQUIRED TO CONTAIN LIVESTOCK WITHIN ENCLOSED AREA.
 - CONTRACTOR SHALL REPLACE OR REPAIR FENCE TO EXISTING OR BETTER CONDITION IF DAMAGED DURING CONSTRUCTION.



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YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD
 CIVIL
 PLAN AND PROFILE
 STA 145+00 TO STA 154+00

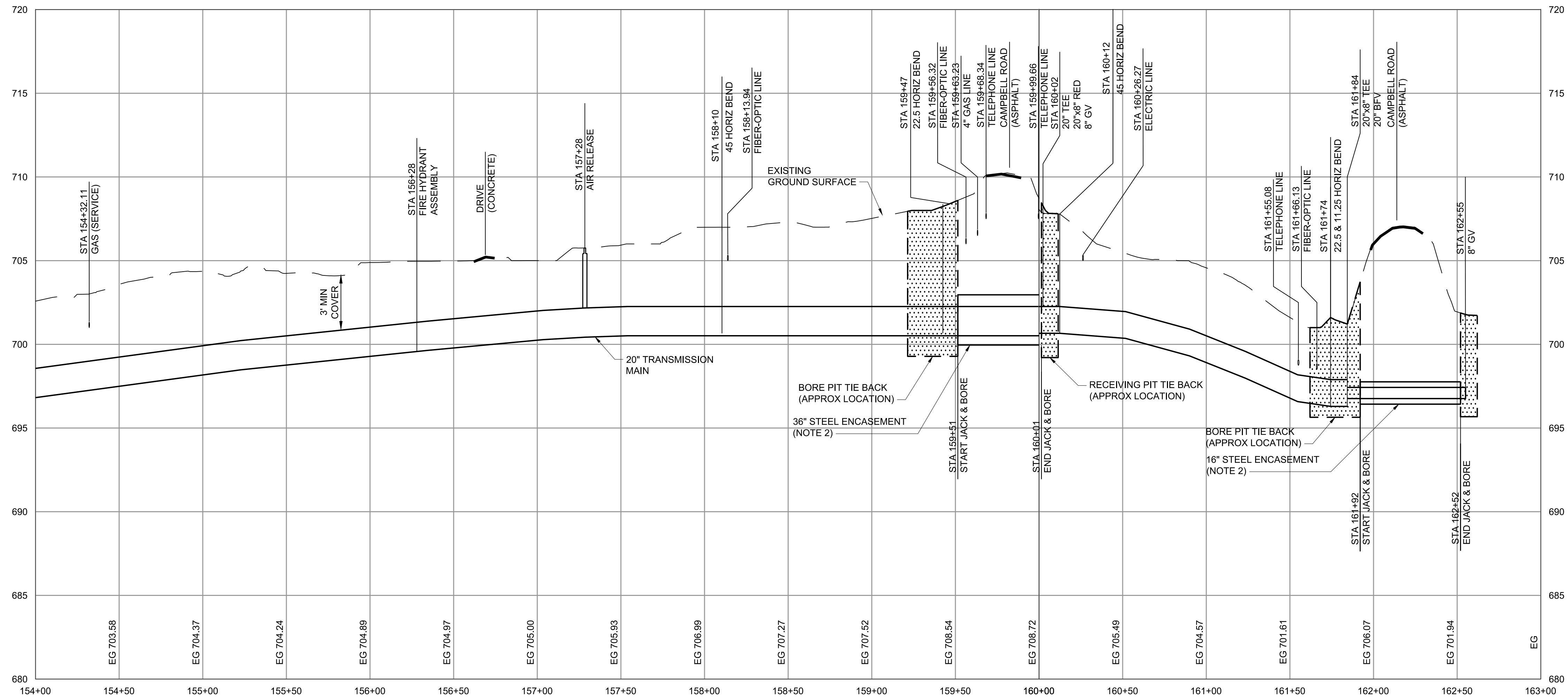
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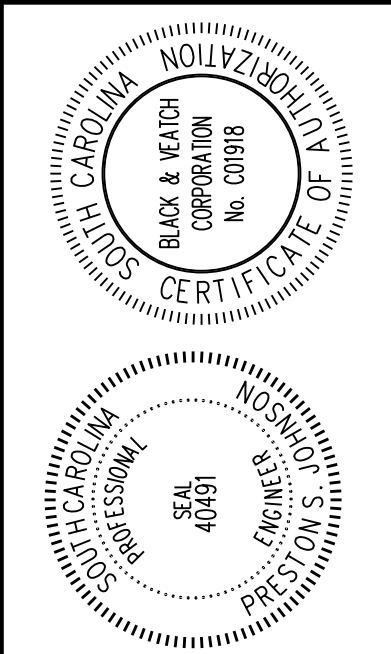
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C-16
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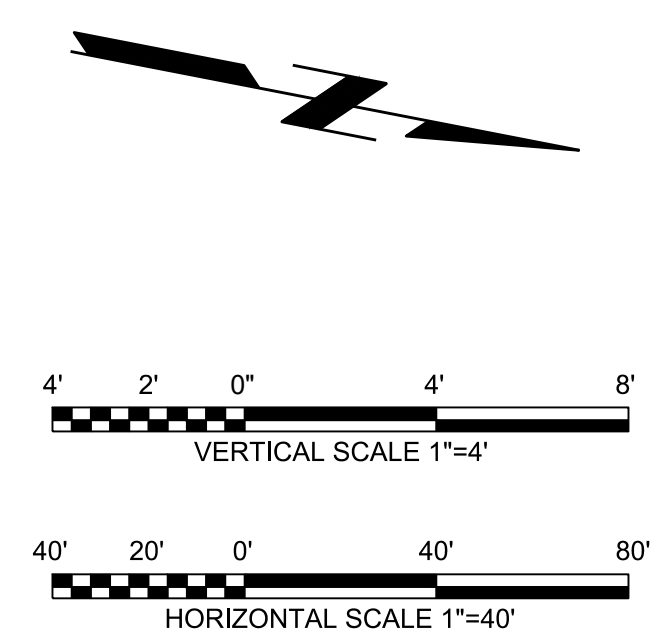
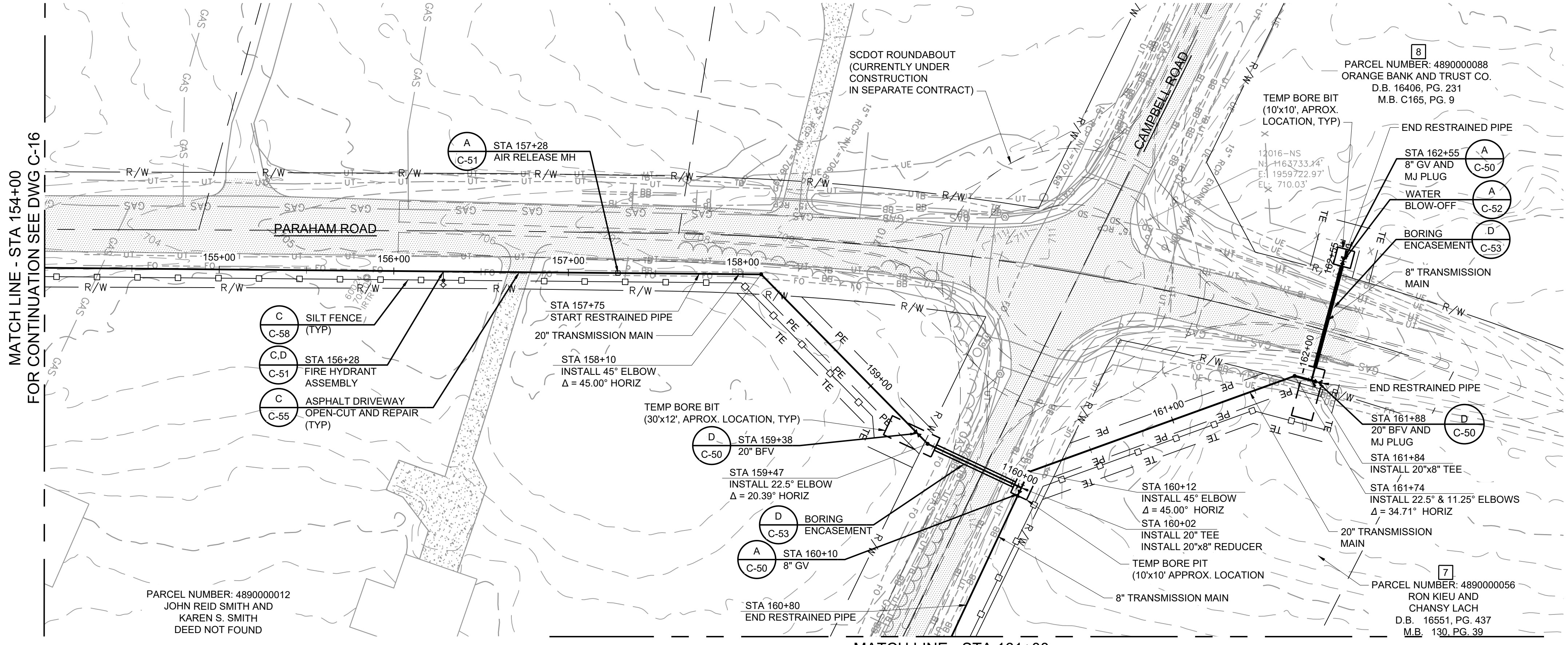
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- GENERAL NOTES:**
- CONTRACTOR TO PLACE SEDIMENT LOGS EVERY 100 FEET WITHIN DITCH THAT IS TO RECEIVE SEDIMENT LADEN RUNOFF FROM CONSTRUCTION ACTIVITIES. REFER TO DETAIL C ON SHEET C-57.
 - 36-INCH STEEL ENCASUREMENT PIPE SHALL HAVE A MINIMUM NOMINAL THICKNESS OF 0.250 (SCHEDULE 10).
 - PROVIDE MINIMUM 2 LF OF RJ DIP BETWEEN ALL FITTINGS.
 - CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AS REQUIRED TO CONTAIN LIVESTOCK WITHIN ENCLOSED AREA.
 - CONTRACTOR SHALL REPLACE OR REPAIR FENCE TO EXISTING OR BETTER CONDITION IF DAMAGED DURING CONSTRUCTION.



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MATCH LINE - STA 154+00
 FOR CONTINUATION SEE DWG C-16

MATCH LINE - STA 161+00
 FOR CONTINUATION SEE DWG C-18

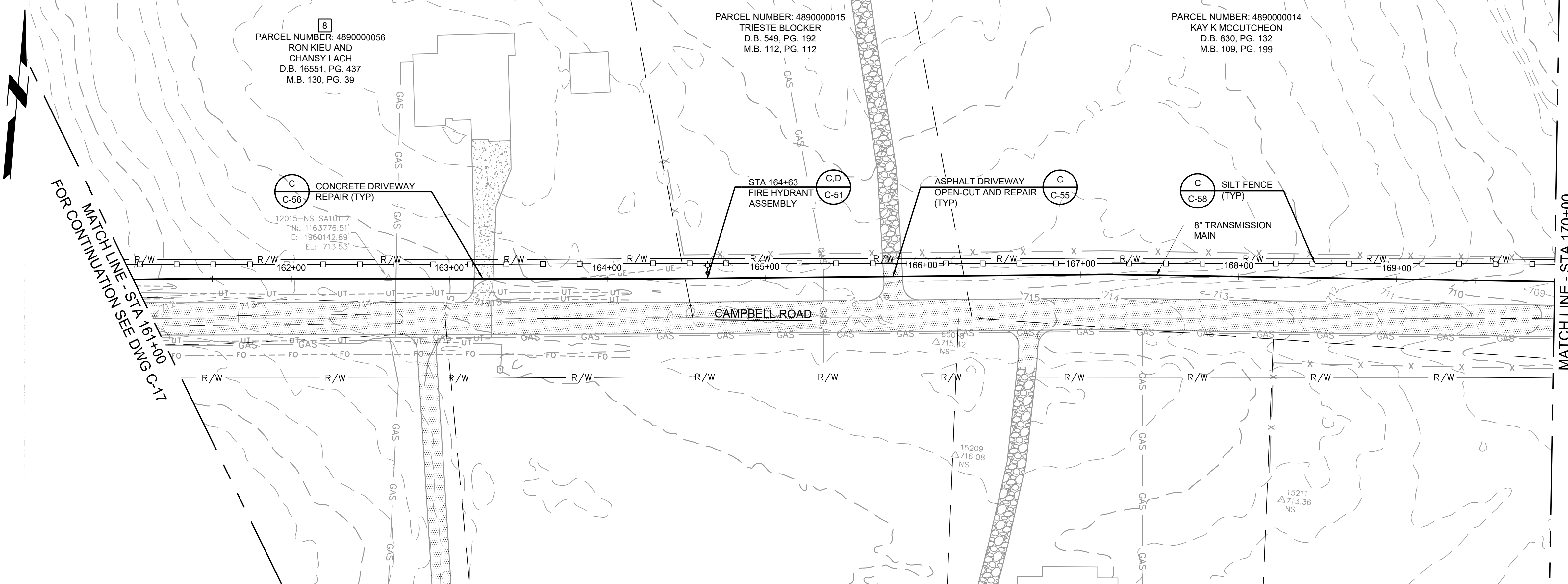
YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD
 CIVIL
 PLAN AND PROFILE
 STA 154+00 TO STA 162+00

DESIGNED: RWG
 DETAILED: WMT
 CHECKED: CES
 APPROVED: PSJ
 DATE: FEBRUARY 2023

PROJECT NO.
402615
C-17
 SHEET
 21 OF 35

FOR BIDDING ONLY - NOT RELEASED FOR CONSTRUCTION

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 D:\1000
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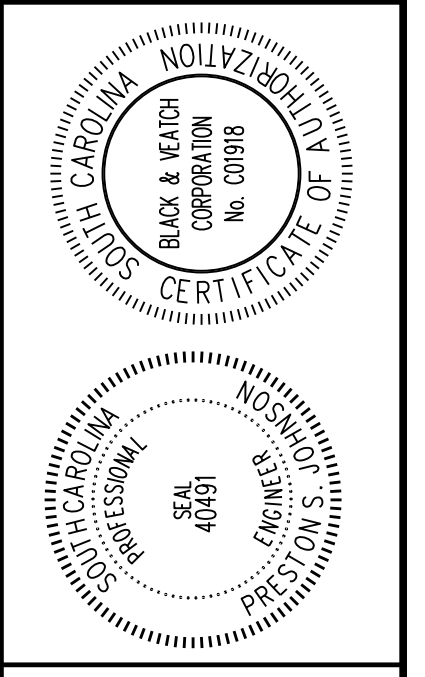


MATCH LINE - STA 170+00
FOR CONTINUATION SEE DWG C-18

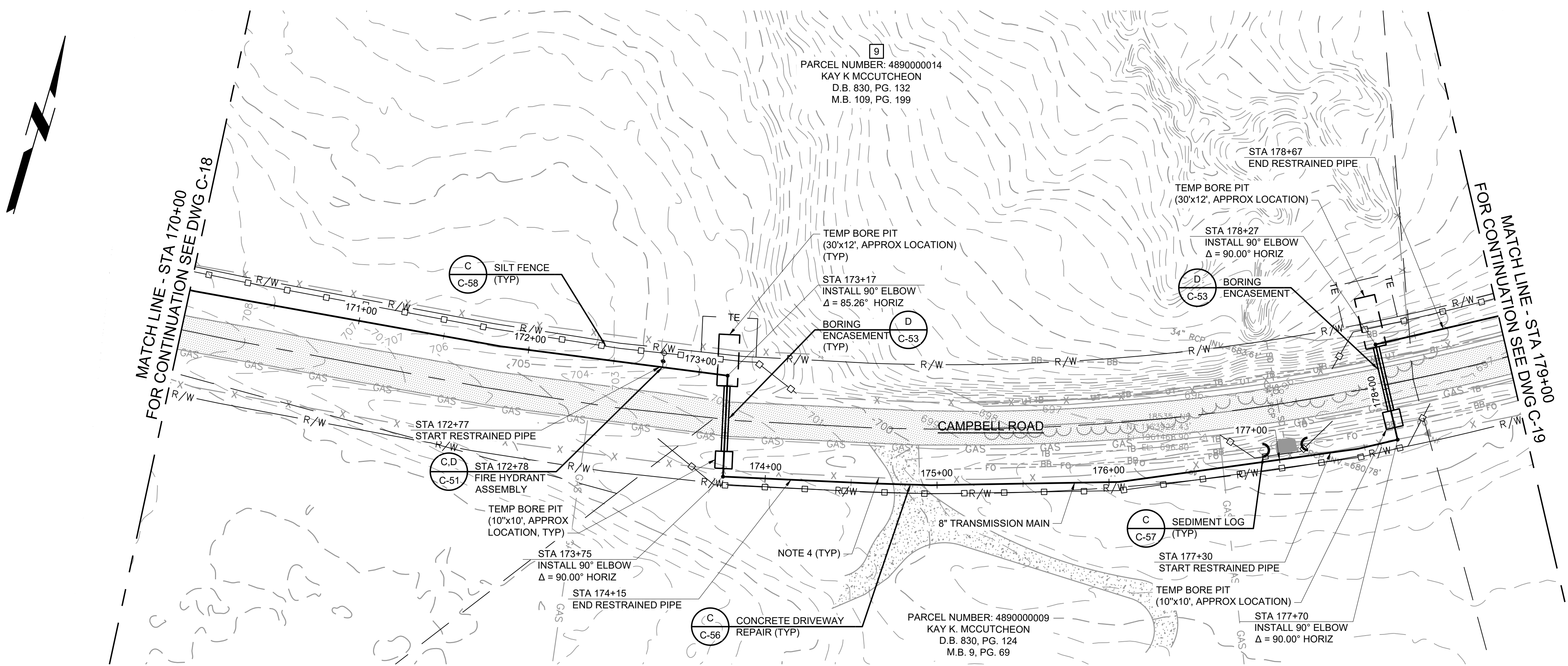
MATCH LINE - STA 161+00
FOR CONTINUATION SEE DWG C-17

- GENERAL NOTES:**
- CONTRACTOR TO PLACE SEDIMENT LOGS EVERY 100 FEET WITHIN DITCH THAT IS TO RECEIVE SEDIMENT LADEN RUNOFF FROM CONSTRUCTION ACTIVITIES. REFER TO DETAIL C ON SHEET C-57.
 - PROVIDE MINIMUM 2 LF OF RJ DIP BETWEEN ALL FITTINGS.
 - CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AS REQUIRED TO CONTAIN LIVESTOCK WITHIN ENCLOSED AREA.
 - CONTRACTOR SHALL REPLACE OR REPAIR FENCE TO EXISTING OR BETTER CONDITION IF DAMAGED DURING CONSTRUCTION.

DATE	REVISIONS AND RECORD OF USE	NO.	BY	CHK/APP.



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 Charlotte, North Carolina 28262



MATCH LINE - STA 179+00
FOR CONTINUATION SEE DWG C-19

MATCH LINE - STA 170+00
FOR CONTINUATION SEE DWG C-18



YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD

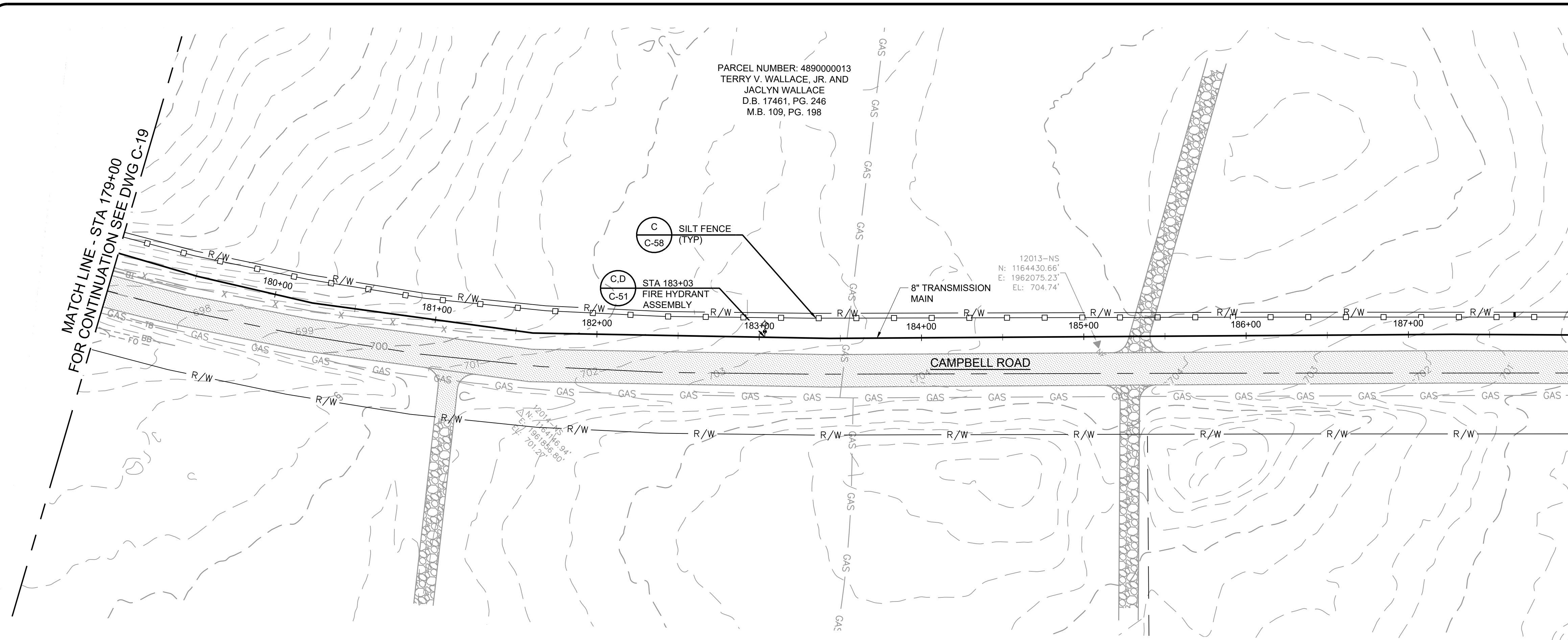
CIVIL
 PLANS
 STA 162+00 TO STA 180+00

DESIGNED: RWG
DETAILED: WMT
CHECKED: CES
APPROVED: PSJ
DATE: FEBRUARY 2023
PROJECT NO. 402615
C-18
SHEET 22 OF 35

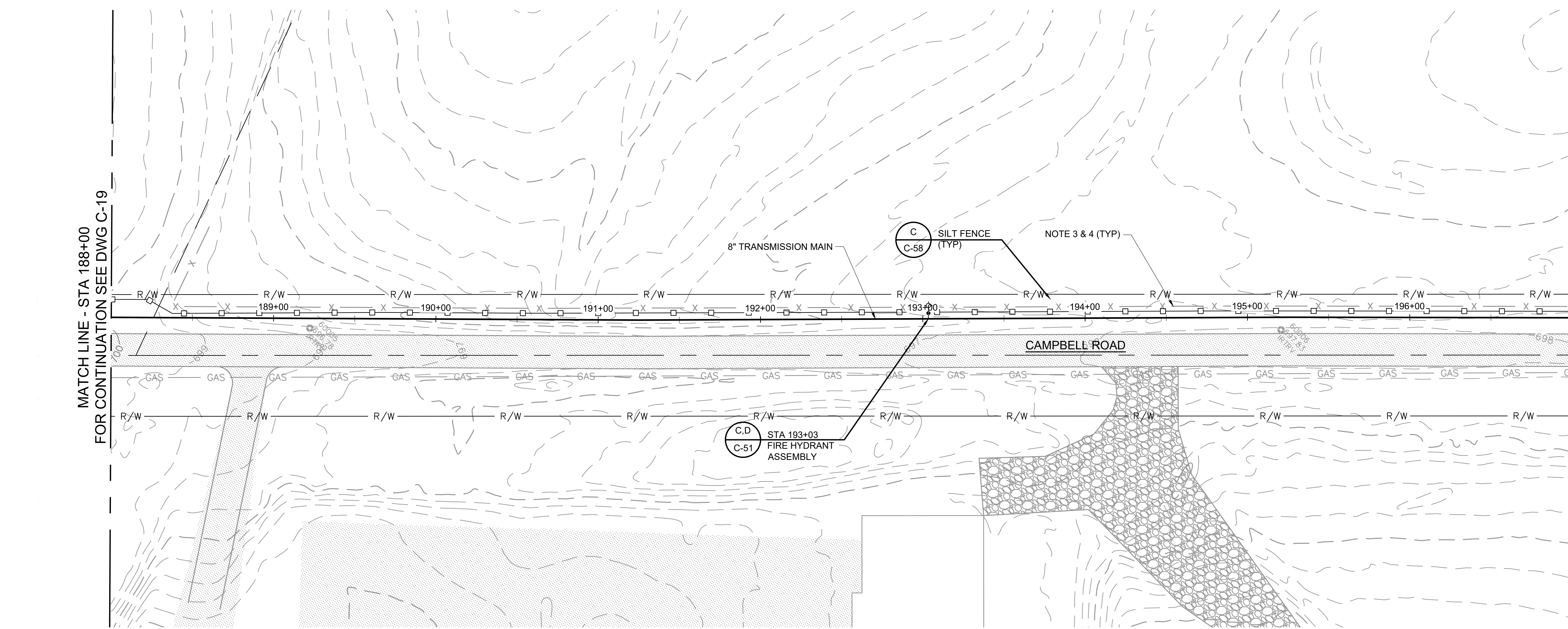
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PLOTTED: 10/12/2023 4:24 PM FILE: C:\pw_working\bw_america\4068754\C-01 - EOL.dwg

FD:\0600
 D:\0600
 PLOTTED: 10/12/2023 4:24 PM FILE: C:\pw_working\bw_america\4068754\01_EOL.dwg



MATCH LINE - STA 188+00
 FOR CONTINUATION SEE DWG C-19

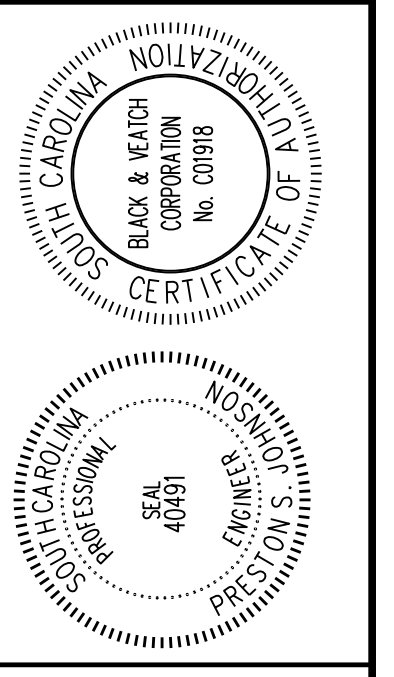


MATCH LINE - STA 197+00
 FOR CONTINUATION SEE DWG C-20

- GENERAL NOTES:**
1. CONTRACTOR TO PLACE SEDIMENT LOGS EVERY 100 FEET WITHIN DITCH THAT IS TO RECEIVE SEDIMENT LADEN RUNOFF FROM CONSTRUCTION ACTIVITIES. REFER TO DETAIL C ON SHEET C-57.
 2. PROVIDE MINIMUM 2 LF OF RJ DIP BETWEEN ALL FITTINGS.
 3. CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AS REQUIRED TO CONTAIN LIVESTOCK WITHIN ENCLOSED AREA.
 4. CONTRACTOR SHALL REPLACE OR REPAIR FENCE TO EXISTING OR BETTER CONDITION IF DAMAGED DURING CONSTRUCTION.

NO.	BY	CHK/APP

REVISIONS AND RECORD OF USE

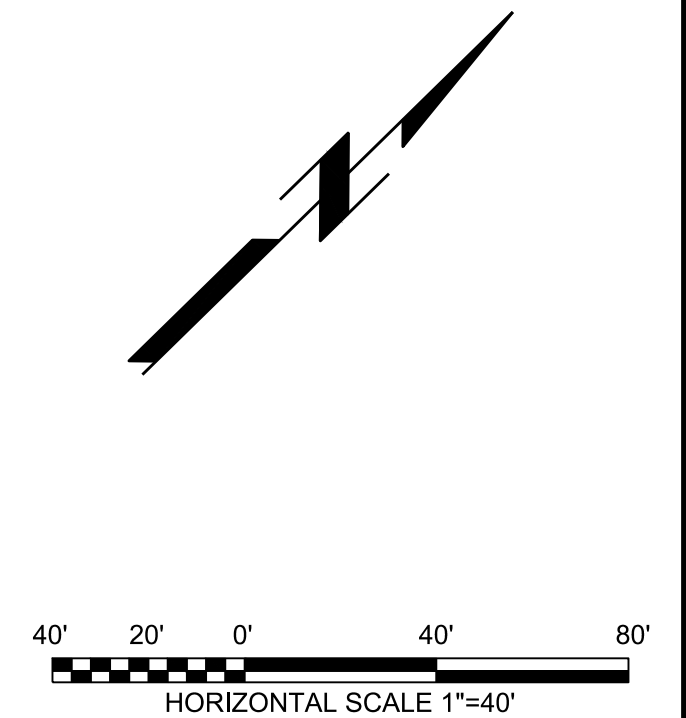


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PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD

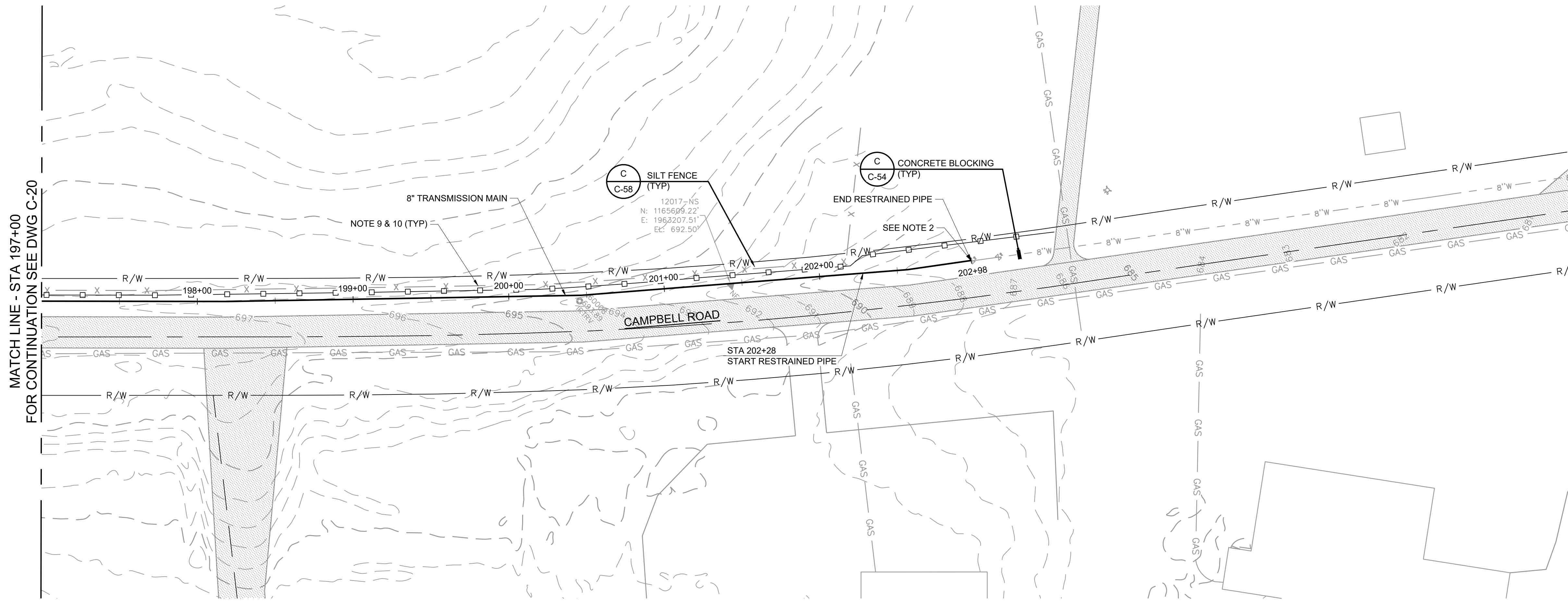
CIVIL PLANS
 STA 180+00 TO STA 198+00

DESIGNED: ROW
DETAILED: WMT
CHECKED: CES
APPROVED: PSJ
DATE: FEBRUARY 2023
PROJECT NO. 402615
C-19 SHEET 23 OF 35



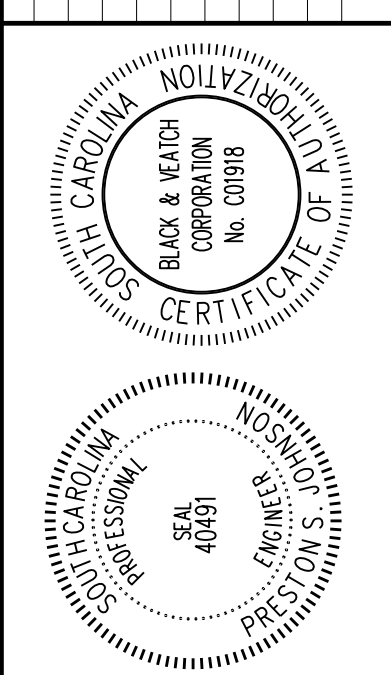
FOR BIDDING ONLY - NOT RELEASED FOR CONSTRUCTION

FD:\0600
 D:\0000
 PLOTTED: 10/12/2023 4:24 PM FILE: C:\pw_working\bow_america\as\0668754\c-01 - EOL.dwg



- GENERAL NOTES:**
- CONTRACTOR TO PLACE SEDIMENT LOGS EVERY 100 FEET WITHIN DITCH THAT IS TO RECEIVE SEDIMENT LADEN RUNOFF FROM CONSTRUCTION ACTIVITIES. REFER TO DETAIL C ON SHEET C-57.
 - REMOVE EXISTING END OF LINE PLUG AND BLOW-OFF AND CONNECT TO EXISTING 8-INCH TRANSMISSION MAIN USING A STANDARD JUMPER CONNECTION (REFER TO DETAIL B ON SHEET 56). CONNECTIONS TO THE EXISTING SYSTEM SHALL BE MADE IN THE PRESENCE OF YORK COUNTY WATER & SEWER INSPECTION PERSONNEL IN ACCORDANCE WITH PARAGRAPH II.B OF YORK COUNTY WATER SPECIFICATIONS. CONNECTION BETWEEN THE EXISTING SYSTEM AND THE NEW EXTENSION CANNOT OCCUR UNTIL TESTING, CHLORINATION, AND SUCCESSFUL SAMPLING OF THE NEW EXTENSION IS COMPLETE.
 - PROVIDE MINIMUM 2 LF OF RJ DIP BETWEEN ALL FITTINGS.
 - CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AS REQUIRED TO CONTAIN LIVESTOCK WITHIN ENCLOSED AREA.
 - CONTRACTOR SHALL REPLACE OR REPAIR FENCE TO EXISTING OR BETTER CONDITION IF DAMAGED DURING CONSTRUCTION.

NO.	BY	CHK/APP



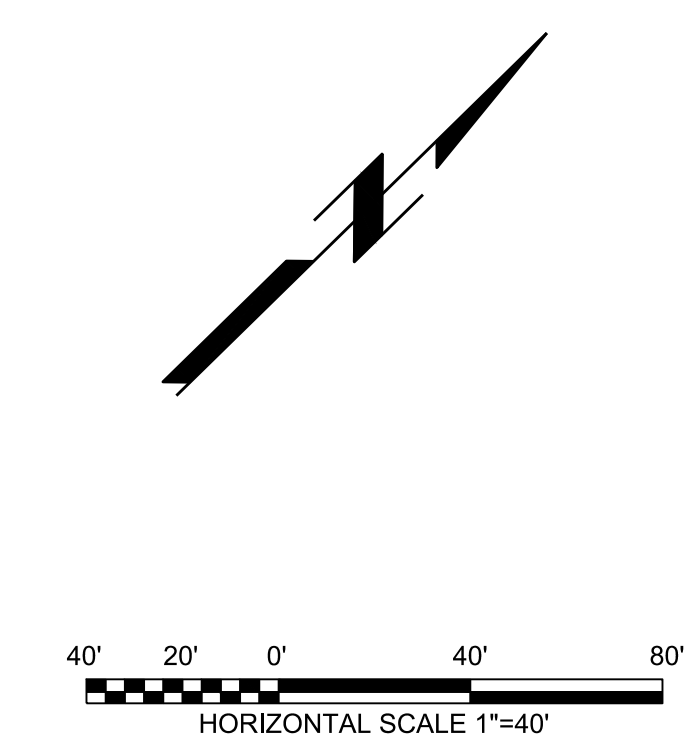
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YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD

CIVIL
 PLAN
 STA 198+00 TO EOL

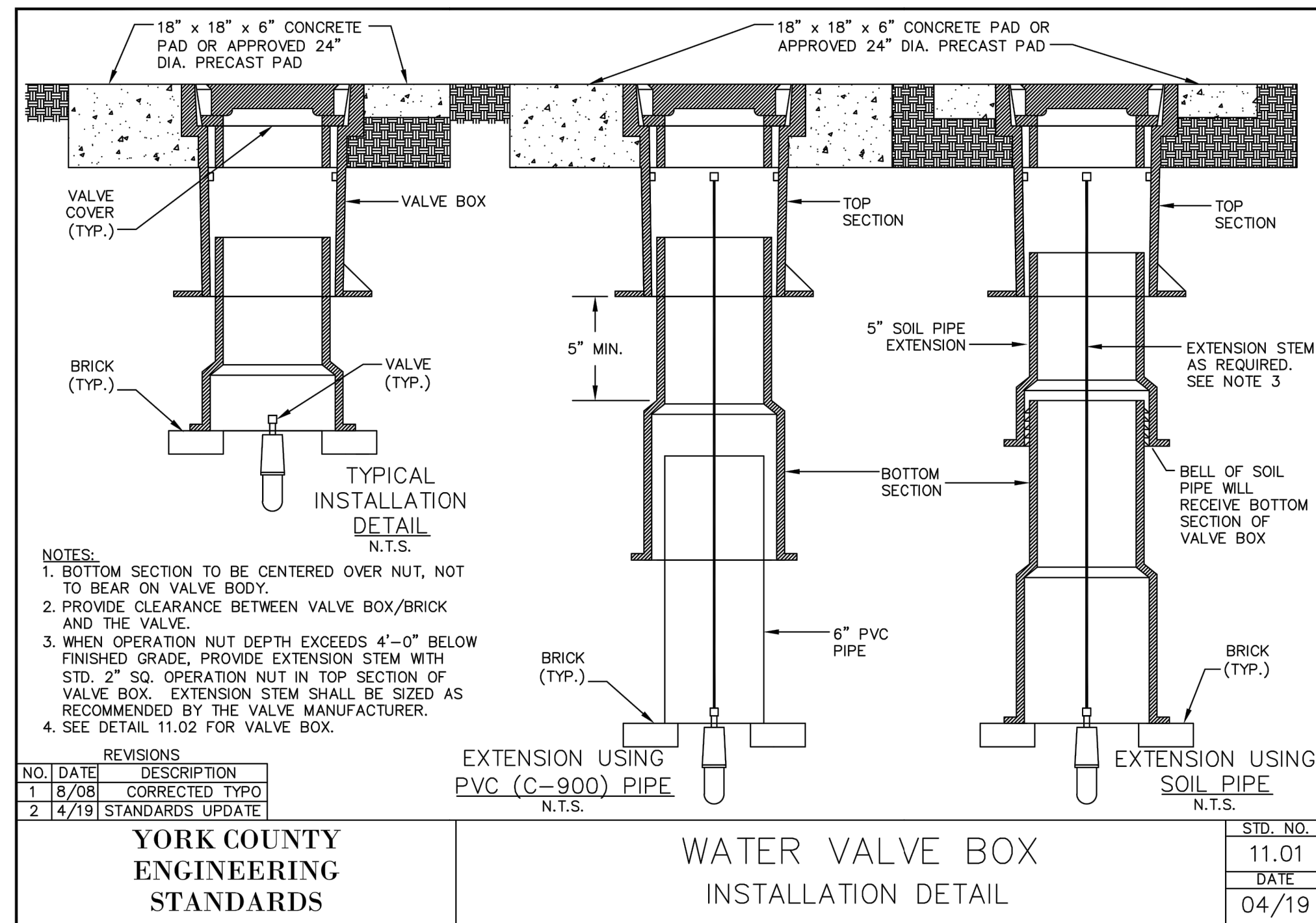
DESIGNED: RWG
 DETAILED: WMT
 CHECKED: CES
 APPROVED: PSJ
 DATE: FEBRUARY 2023



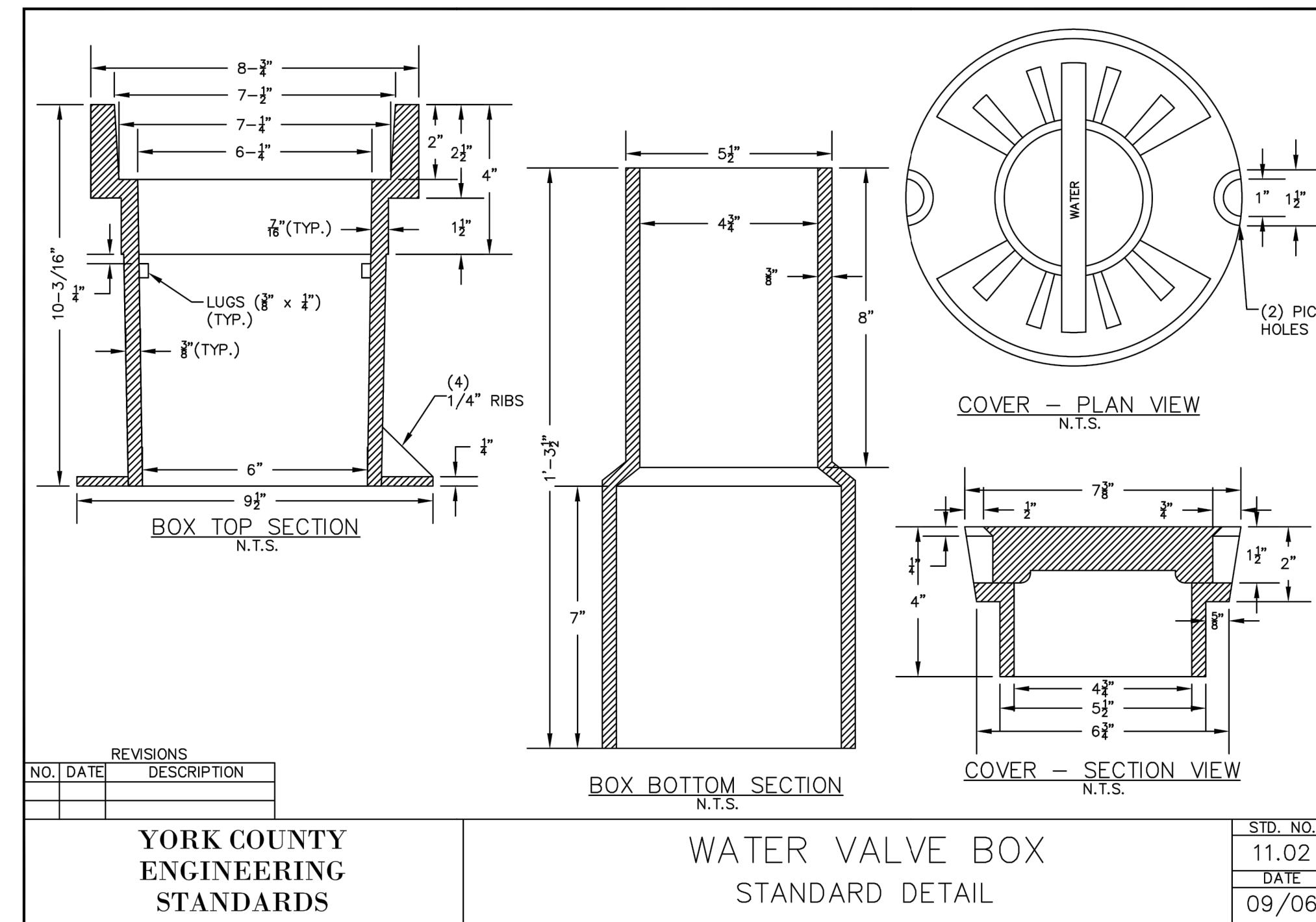
0 1/2 1
 IF THIS BAR DOES NOT
 MEASURE 1" THEN DRAWING
 IS NOT TO FULL SCALE

PROJECT NO.
 402615
C-20
 SHEET
 24 OF 35

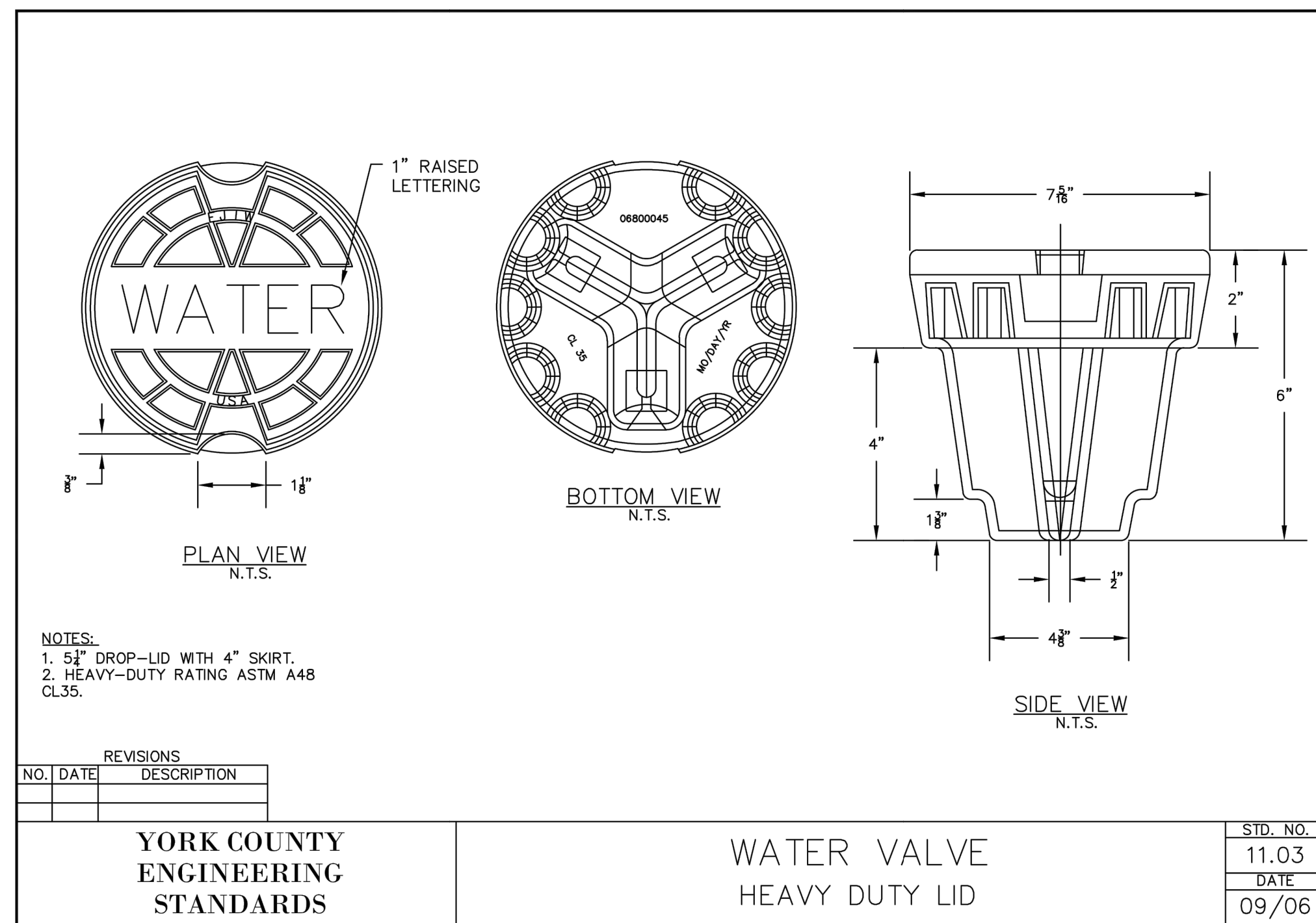
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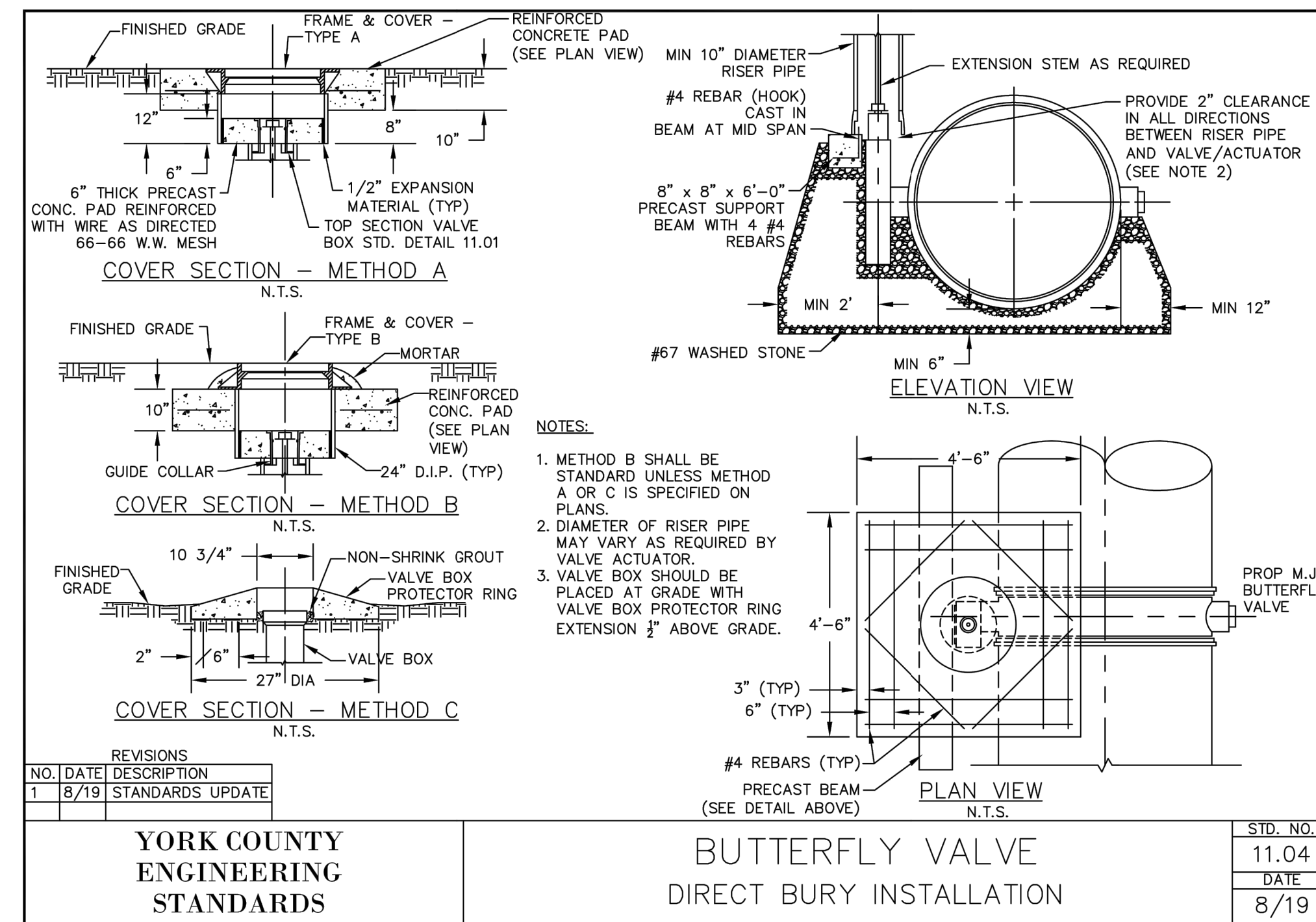
A WATER VALVE BOX INSTALLATION
NO SCALE



B WATER VALVE BOX
NO SCALE



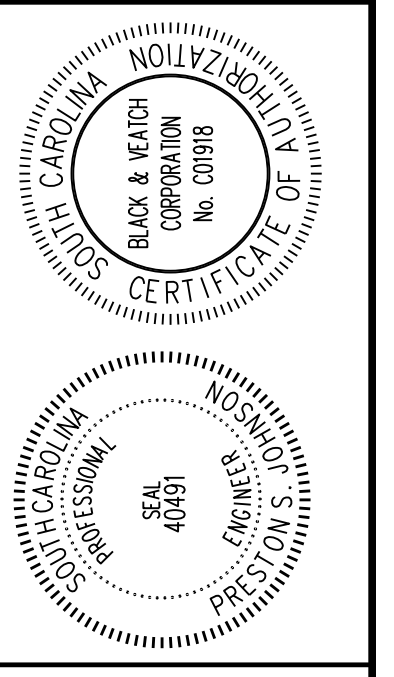
C WATER VALVE HEAVY DUTY LID
NO SCALE



D BUTTERFLY VALVE DIRECT BURY INSTALLATION
NO SCALE

FD:0600
D:1000
PLOTTED: 10/12/2023 4:24 PM FILE: C:\pw_working\bw_america\4068741C-50_Detail Sheets.dwg

NO.	BY	CHK/APP



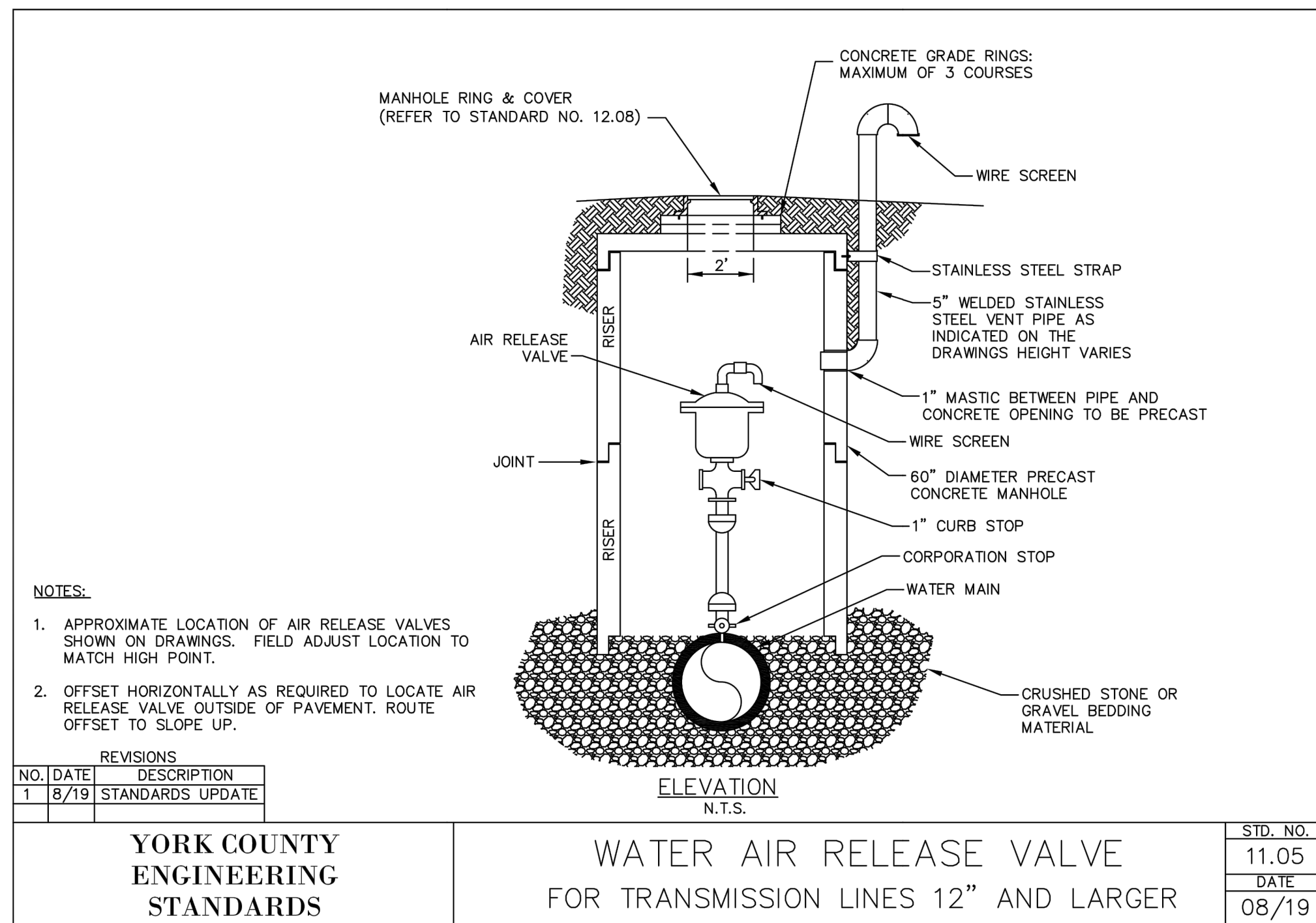
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YORK COUNTY, SOUTH CAROLINA
 PHASE 1 NORTH-SOUTH WATER TM
 HARPER ROAD

CIVIL
 STANDARD DETAILS
 SHEET 1 OF 11

DESIGNED: ROW
DETAILED: WMT
CHECKED: CES
APPROVED: PSJ
DATE: FEBRUARY 2023
PROJECT NO. 402615
C-50 SHEET 25 OF 35

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- NOTES:
- APPROXIMATE LOCATION OF AIR RELEASE VALVES SHOWN ON DRAWINGS. FIELD ADJUST LOCATION TO MATCH HIGH POINT.
 - OFFSET HORIZONTALLY AS REQUIRED TO LOCATE AIR RELEASE VALVE OUTSIDE OF PAVEMENT. ROUTE OFFSET TO SLOPE UP.

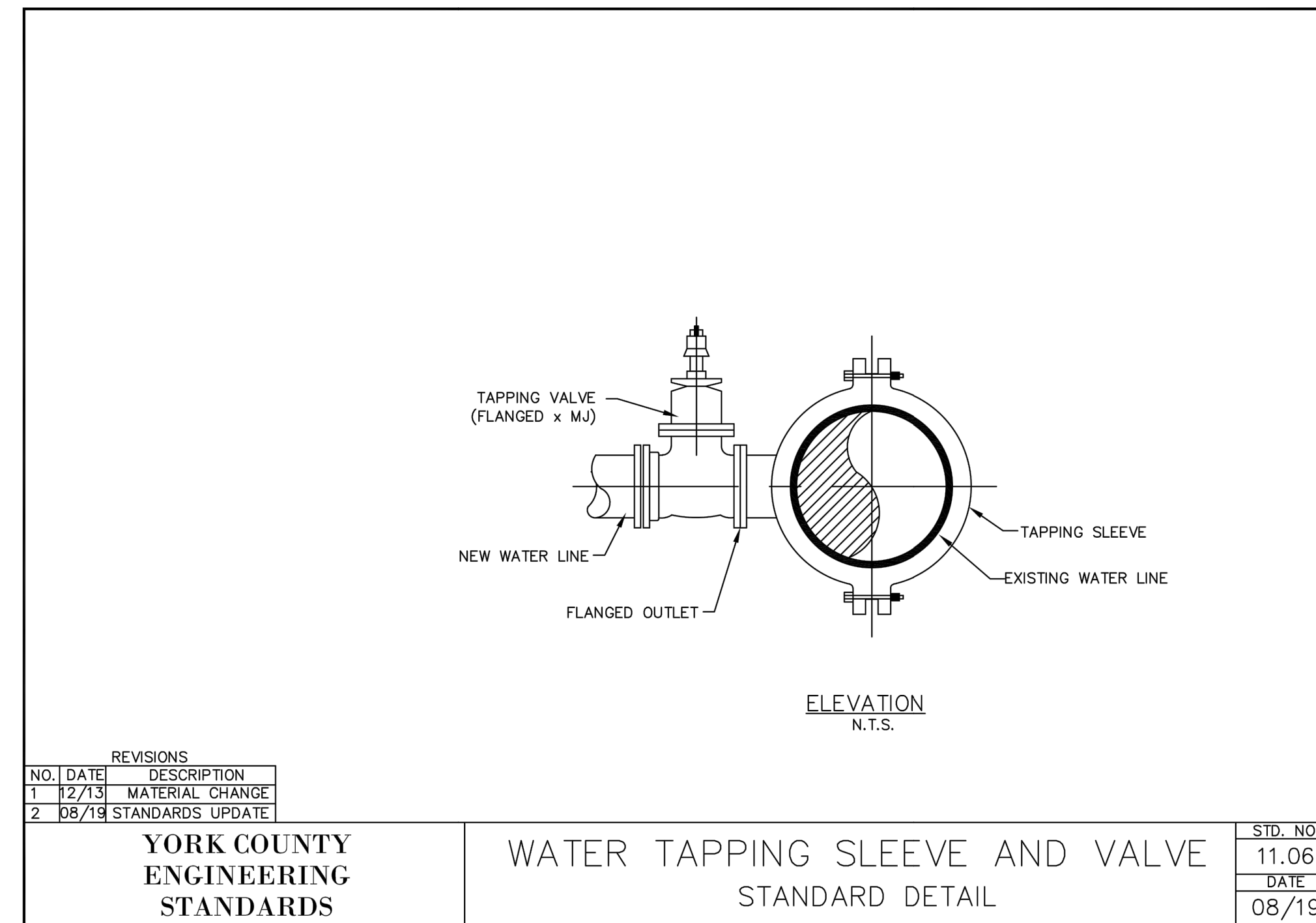
NO.	DATE	DESCRIPTION
1	8/19	STANDARDS UPDATE

YORK COUNTY
ENGINEERING
STANDARDS

WATER AIR RELEASE VALVE
FOR TRANSMISSION LINES 12" AND LARGER

STD. NO.	DATE
11.05	08/19

A WATER AIR RELEASE VALVE
NO SCALE



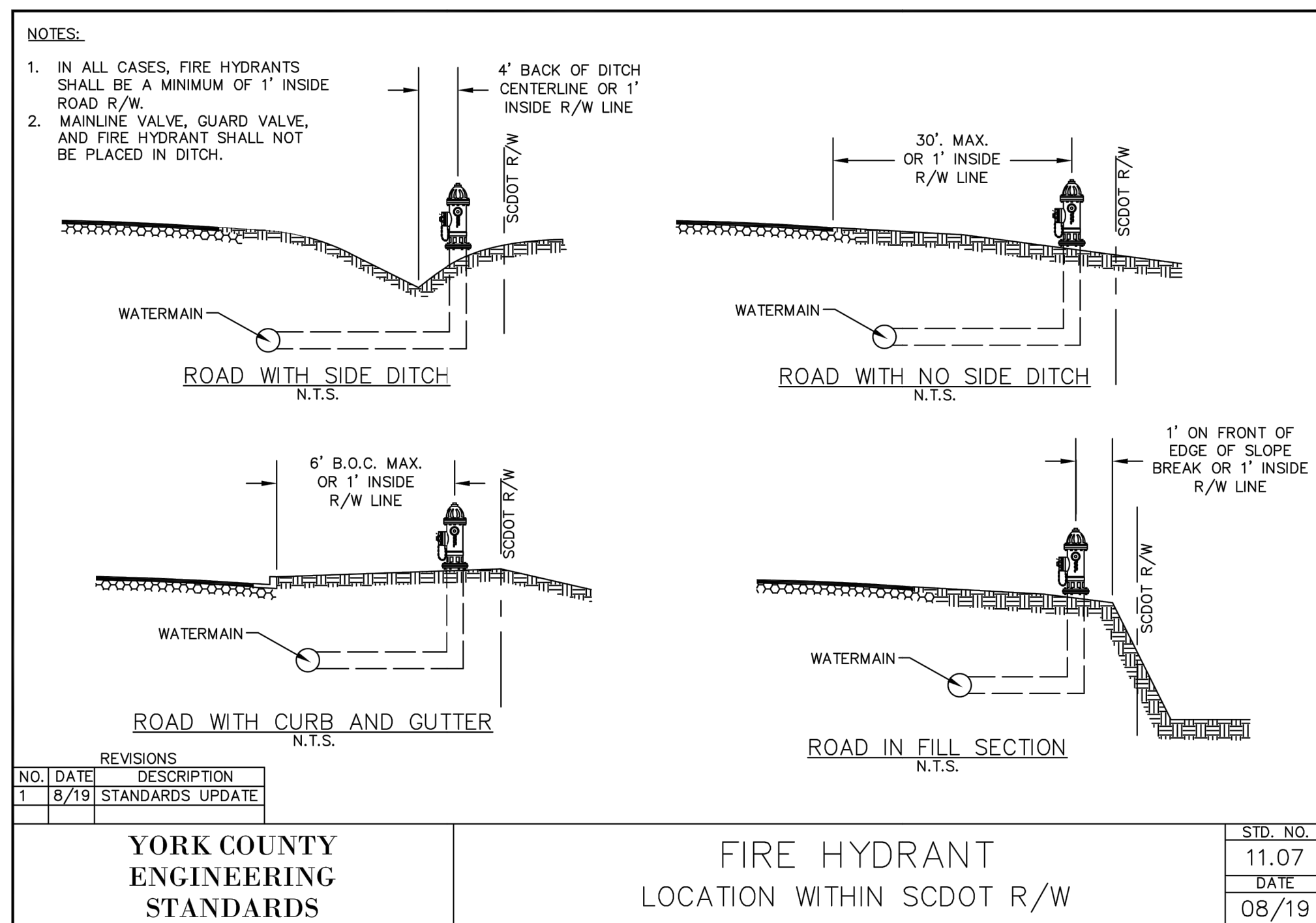
NO.	DATE	DESCRIPTION
1	12/13	MATERIAL CHANGE
2	08/19	STANDARDS UPDATE

YORK COUNTY
ENGINEERING
STANDARDS

WATER TAPPING SLEEVE AND VALVE
STANDARD DETAIL

STD. NO.	DATE
11.06	08/19

B WATER TAPPING SLEEVE AND VALVE
NO SCALE



- NOTES:
- IN ALL CASES, FIRE HYDRANTS SHALL BE A MINIMUM OF 1' INSIDE ROAD R/W.
 - MAINLINE VALVE, GUARD VALVE, AND FIRE HYDRANT SHALL NOT BE PLACED IN DITCH.

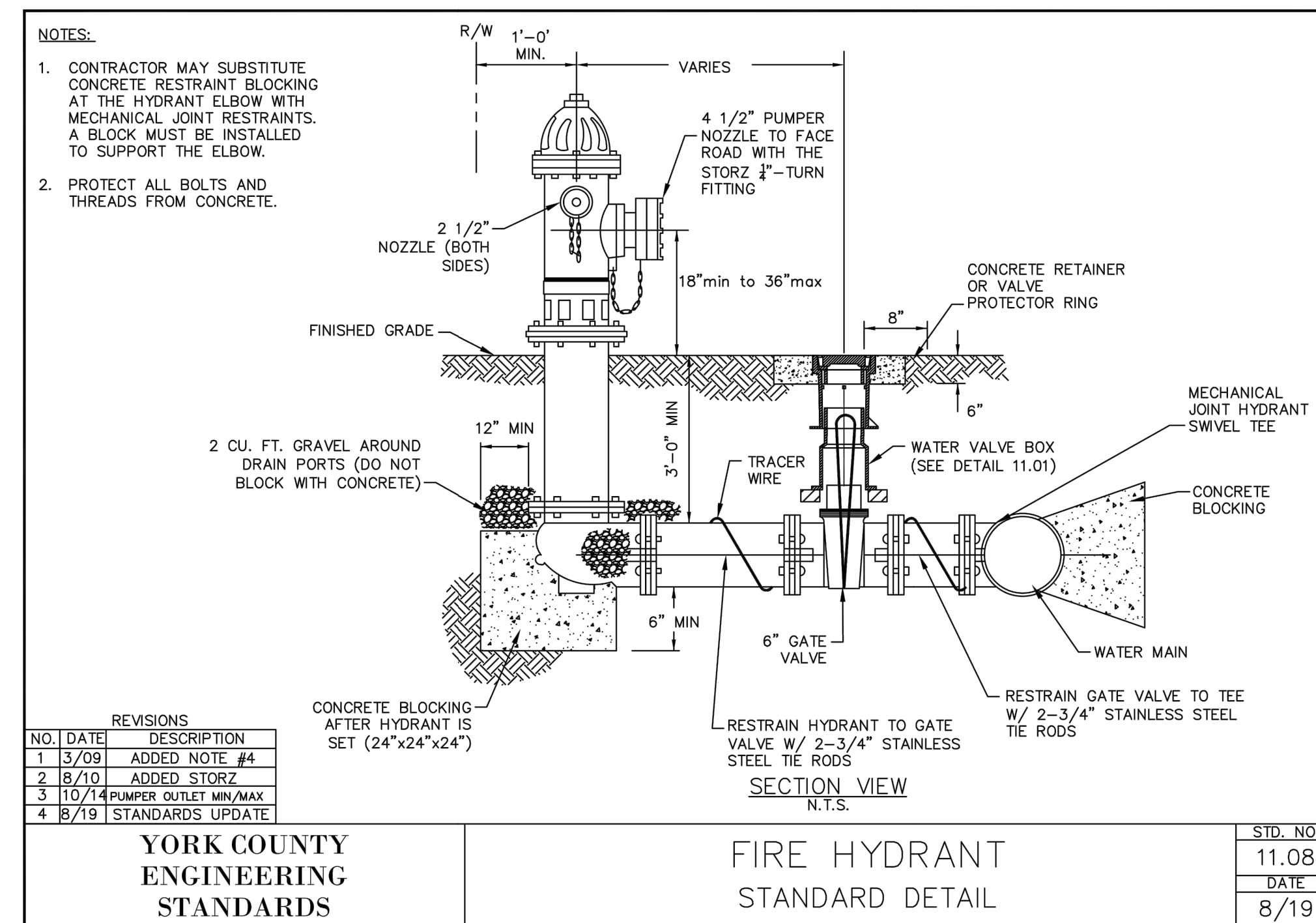
NO.	DATE	DESCRIPTION
1	8/19	STANDARDS UPDATE

YORK COUNTY
ENGINEERING
STANDARDS

FIRE HYDRANT
LOCATION WITHIN SCDOT R/W

STD. NO.	DATE
11.07	08/19

C FIRE HYDRANT LOCATION WITHIN SCDOT R/W
NO SCALE



- NOTES:
- CONTRACTOR MAY SUBSTITUTE CONCRETE RESTRAINT BLOCKING AT THE HYDRANT ELBOW WITH MECHANICAL JOINT RESTRAINTS. A BLOCK MUST BE INSTALLED TO SUPPORT THE ELBOW.
 - PROTECT ALL BOLTS AND THREADS FROM CONCRETE.

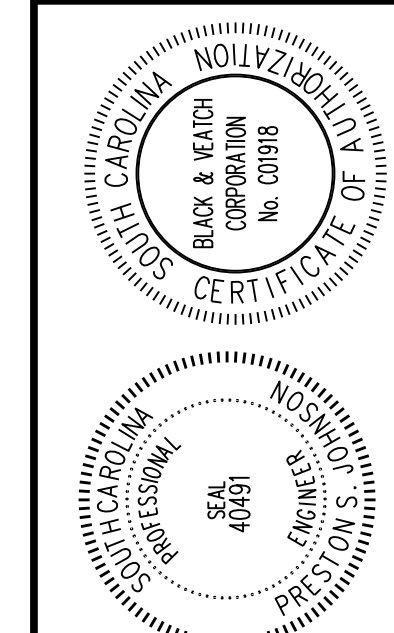
NO.	DATE	DESCRIPTION
1	3/09	ADDED NOTE #4
2	8/10	ADDED STORZ
3	10/14	PUMPER OUTLET MIN/MAX
4	8/19	STANDARDS UPDATE

YORK COUNTY
ENGINEERING
STANDARDS

FIRE HYDRANT
STANDARD DETAIL

STD. NO.	DATE
11.08	8/19

D FIRE HYDRANT
NO SCALE

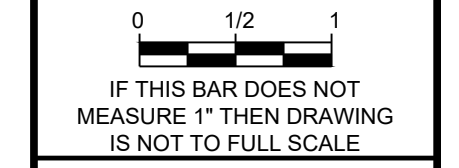


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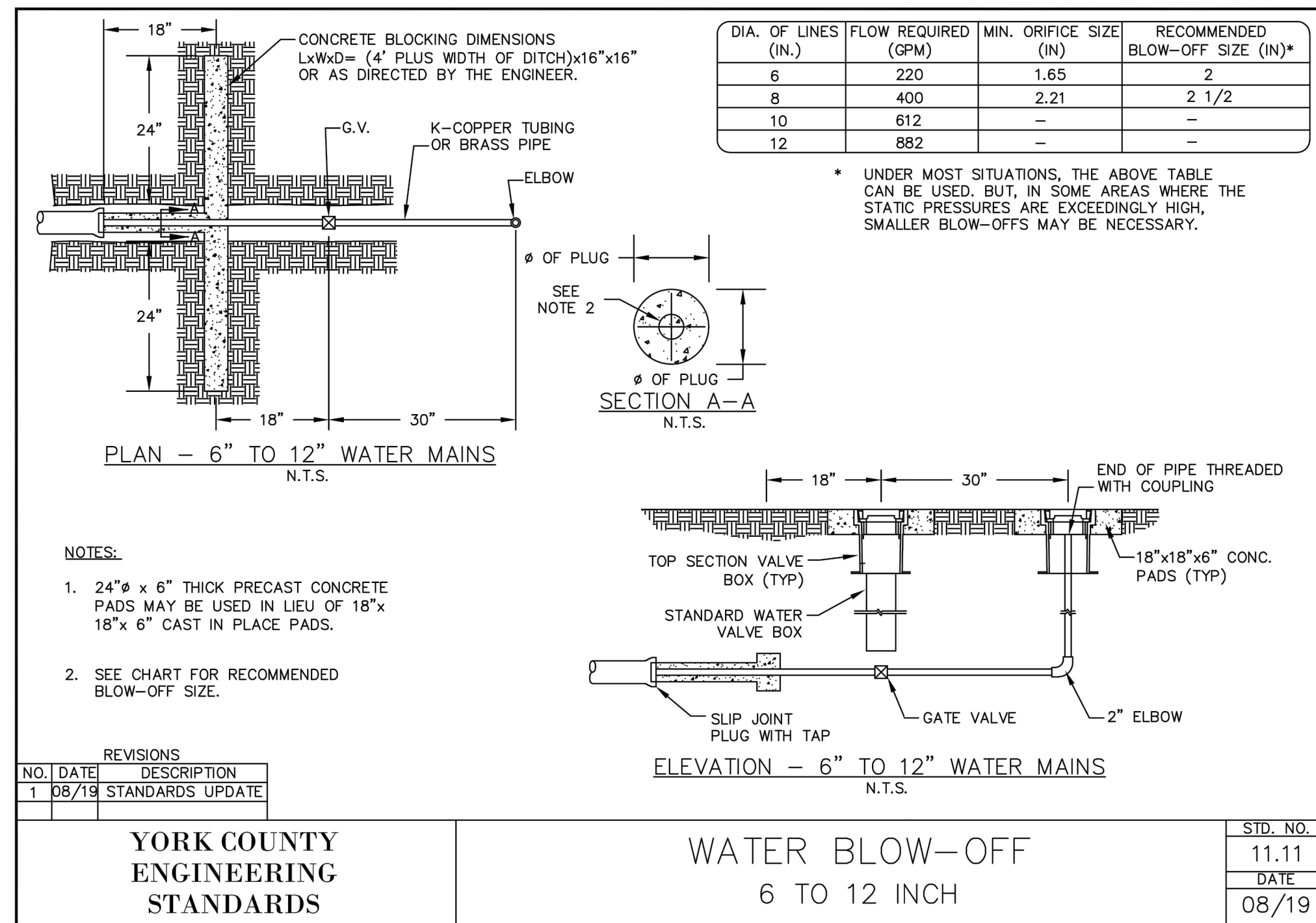
YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD

CIVIL
STANDARD DETAILS
SHEET 2 OF 11

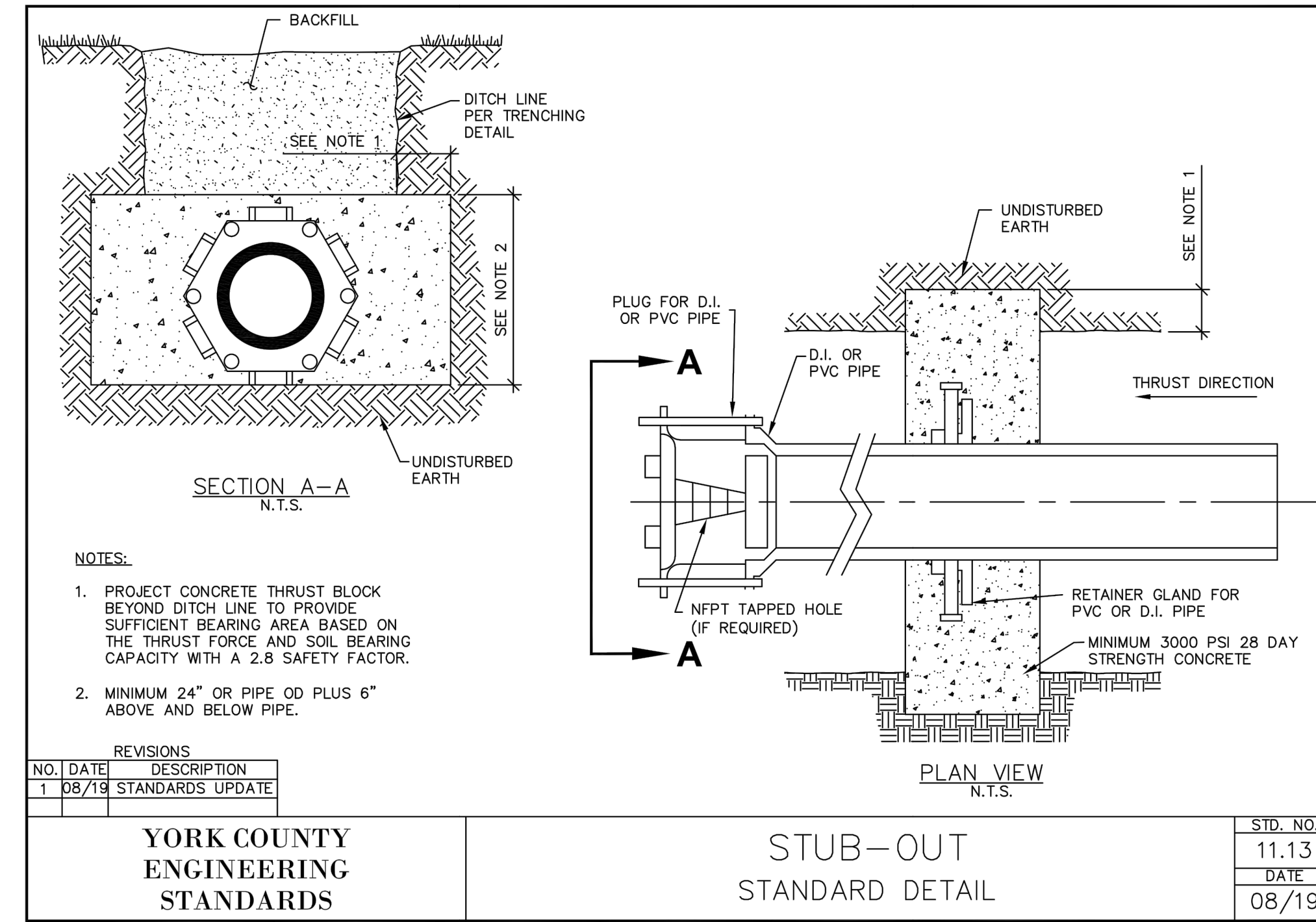
DESIGNED: ROW
DETAILED: WMT
CHECKED: CES
APPROVED: PSJ
DATE: FEBRUARY 2023



PROJECT NO.
402615
C-51
SHEET
26 OF 35



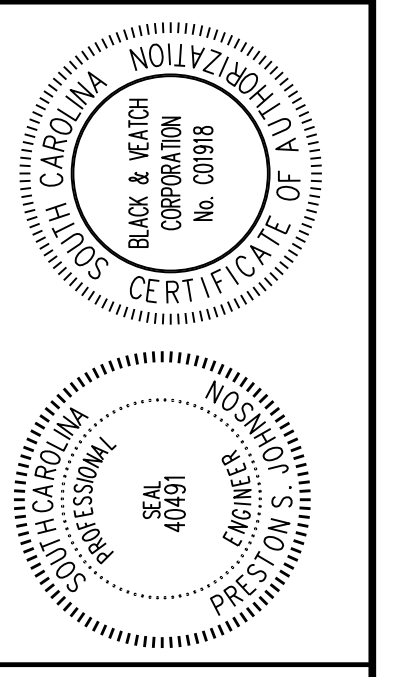
A WATER BLOW-OFF (6 TO 12 INCH)
NO SCALE



B STUB - OUT STANDARD DETAIL
NO SCALE

PLOTTED: 10/12/2023 4:24 PM FILE: C:\pw_working\pw_america\americas\0668754\C-50_Detail Sheets.dwg
 D:\0000
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NO.	BY	CHK/APP

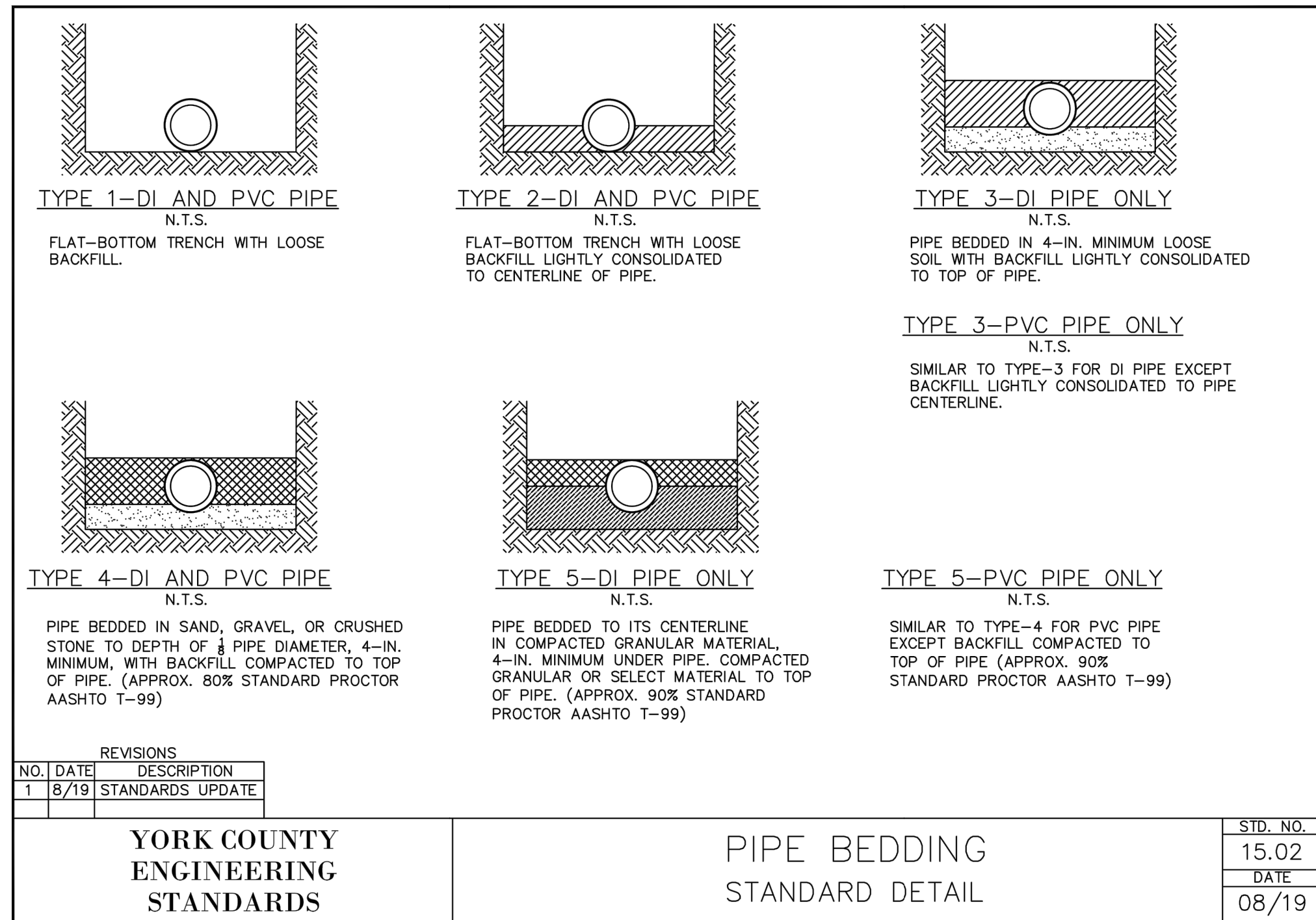


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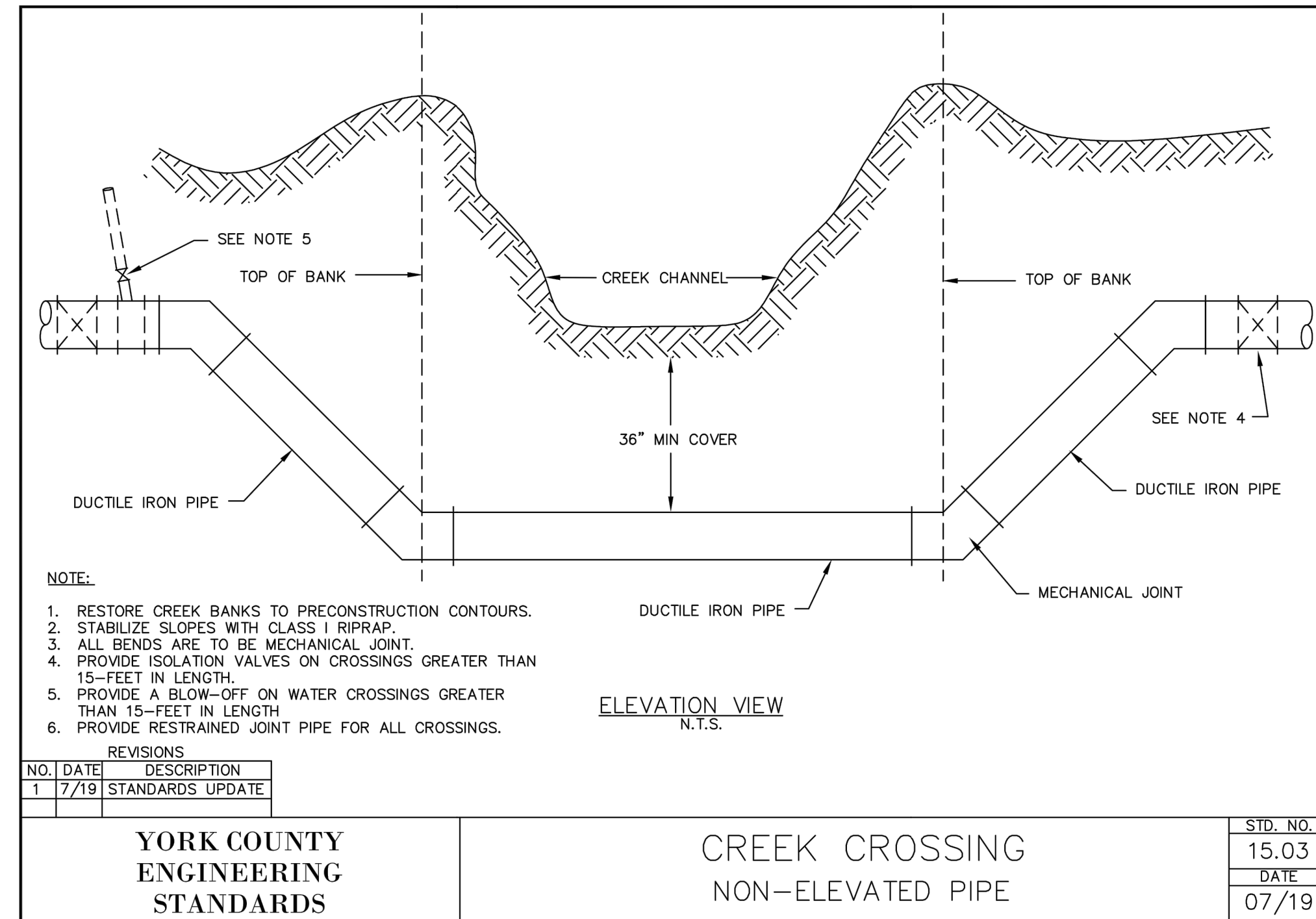
YORK COUNTY, SOUTH CAROLINA
 PHASE 1 NORTH-SOUTH WATER TM
 HARPER ROAD
 CIVIL
 STANDARD DETAILS
 SHEET 3 OF 11

DESIGNED: ROW
DETAILED: WMT
CHECKED: CES
APPROVED: PSJ
DATE: FEBRUARY 2023
PROJECT NO. 402615
C-52 SHEET 27 OF 35

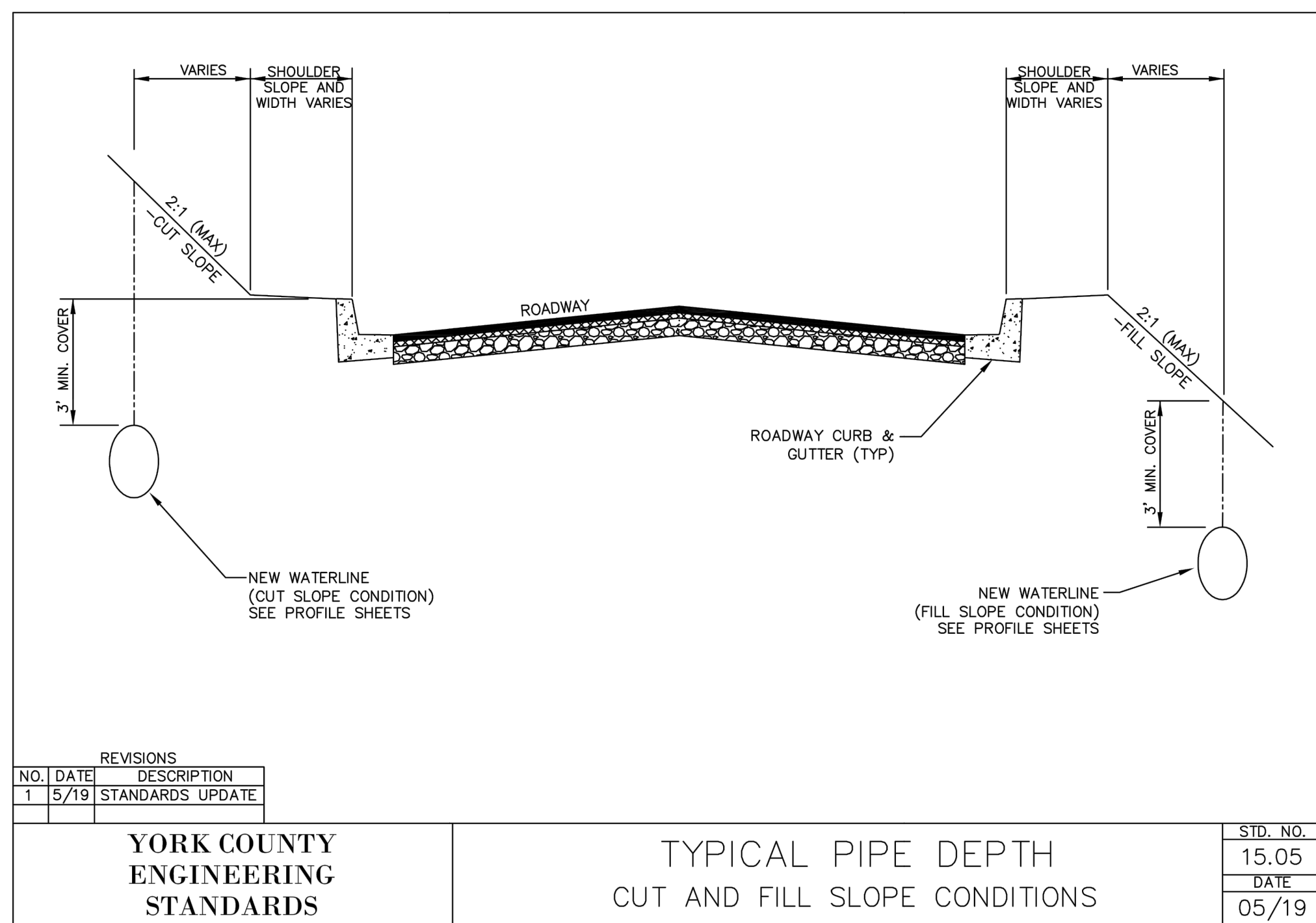
FOR BIDDING ONLY - NOT RELEASED FOR CONSTRUCTION



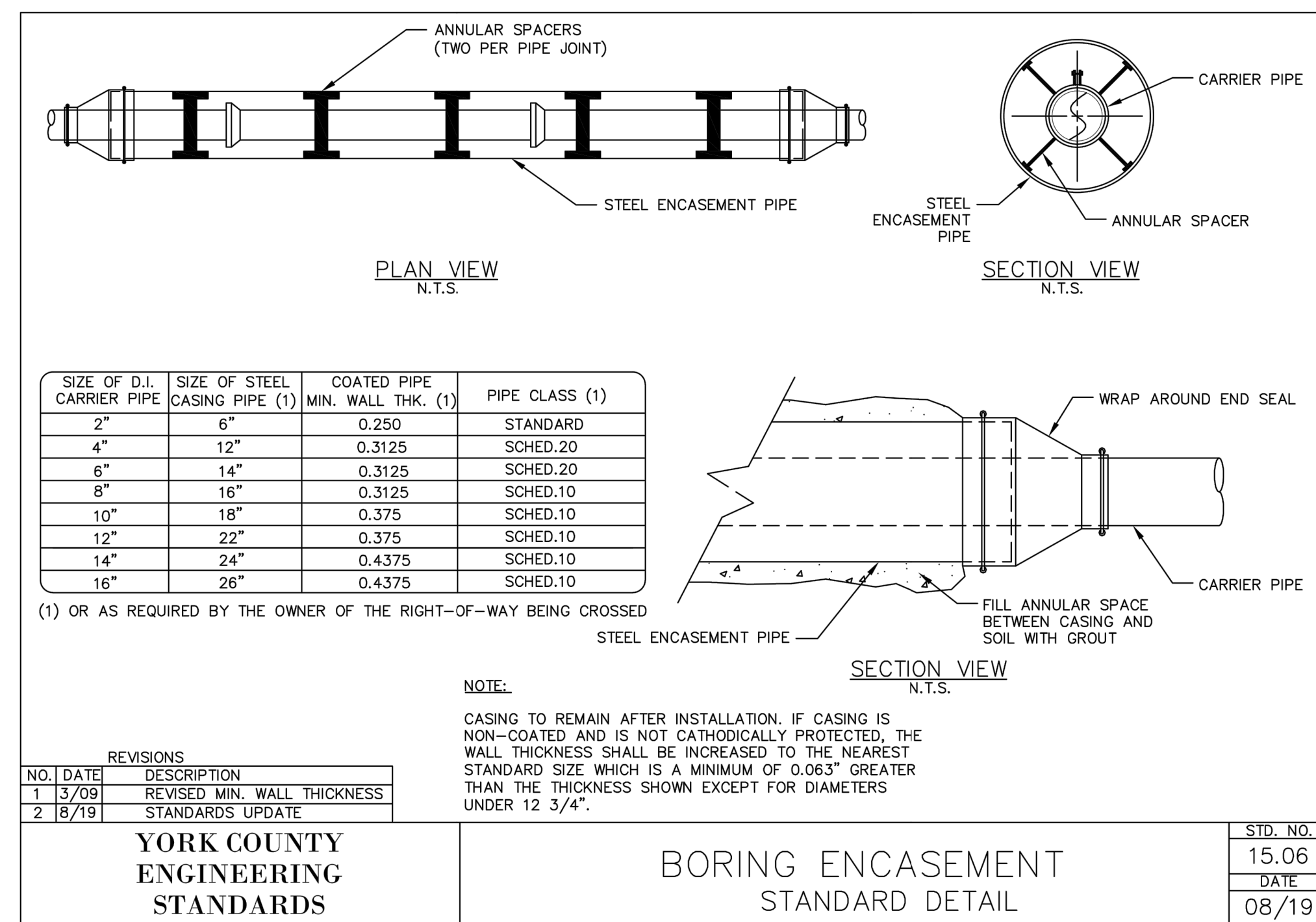
A PIPE BEDDING
NO SCALE



B CREEK CROSSING
NO SCALE



C TYPICAL PIPE DEPTH (CUT AND FILL SLOPE CONDITIONS)
NO SCALE

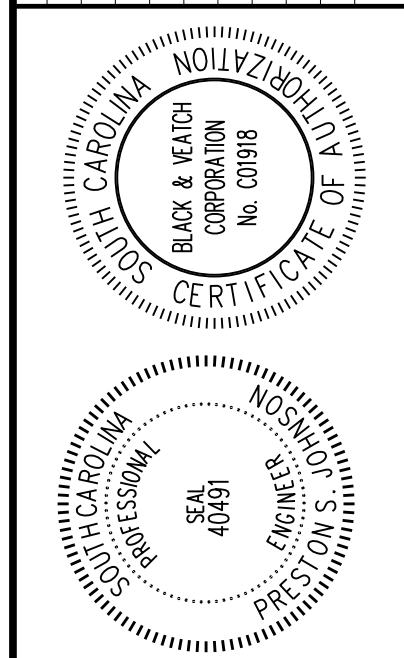


D BORING ENCASMENT
NO SCALE

DETAIL D - GENERAL NOTES:
1. REFER TO TABLE BELOW AND PLAN AND PROFILE DRAWINGS FOR CARRIER PIPES LARGER THAN 16-INCH DIAMETER.

SIZE OF DI CARRIER PIPE	SIZE OF STEEL CASING PIPE	PIPE WALL THK (MIN)
18"	36"	0.532
20"	36"	0.250

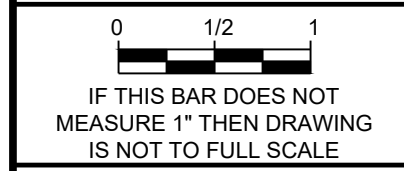
NO.	BY	CHK/APP



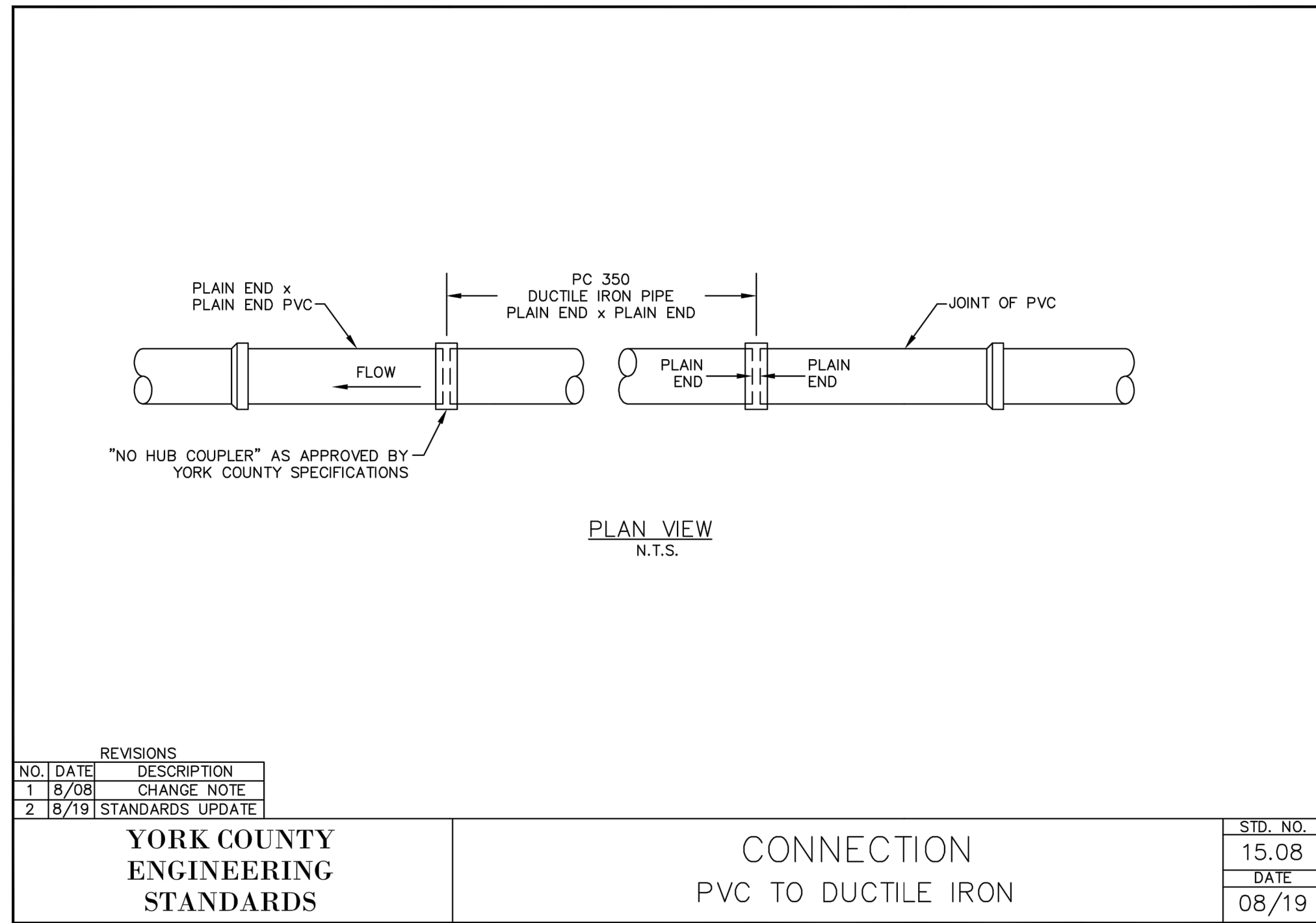
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YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM HARPER ROAD
CIVIL
STANDARD DETAILS
SHEET 4 OF 11

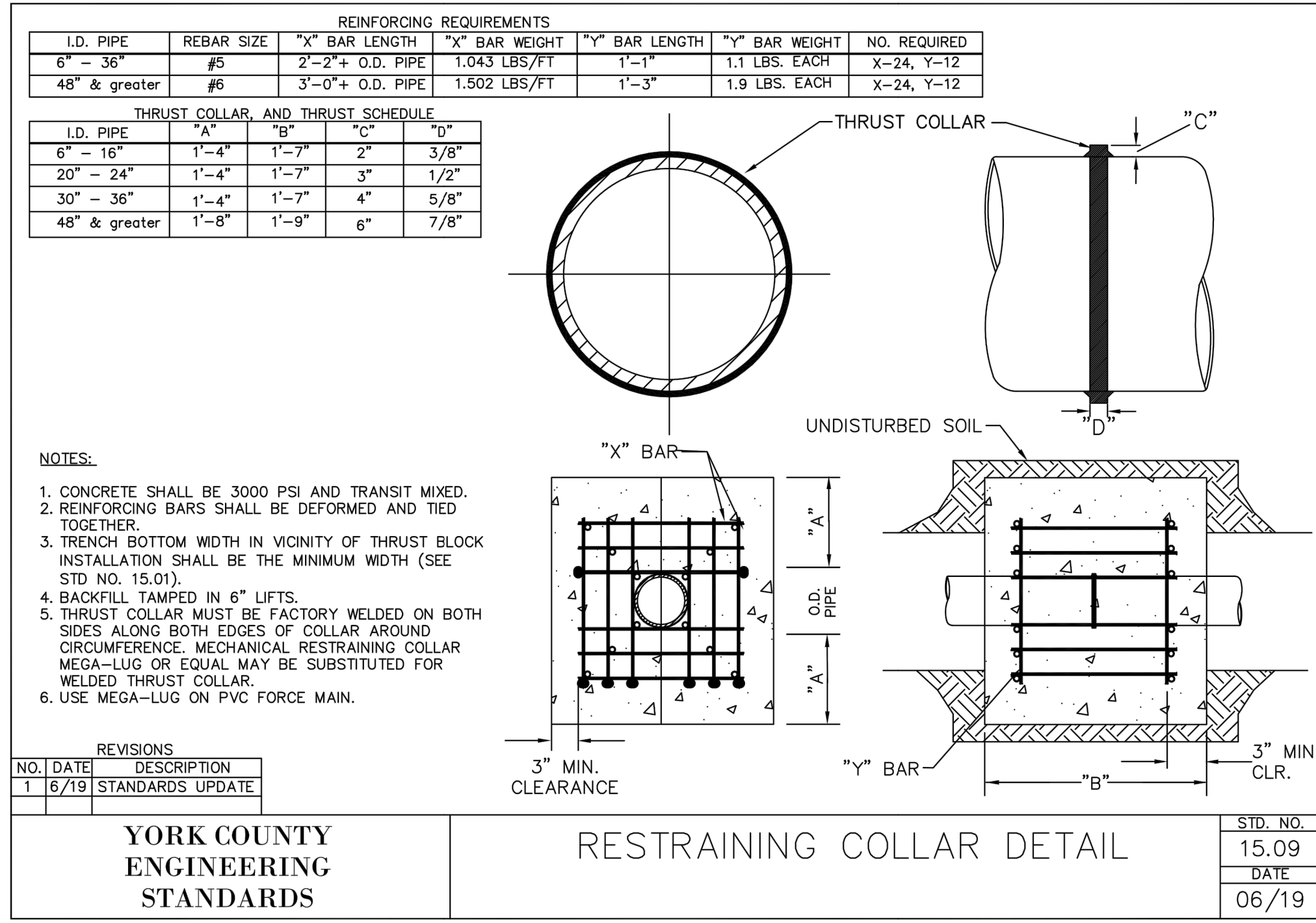
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DETAILED: WMT
CHECKED: CES
APPROVED: PSJ
DATE: FEBRUARY 2023



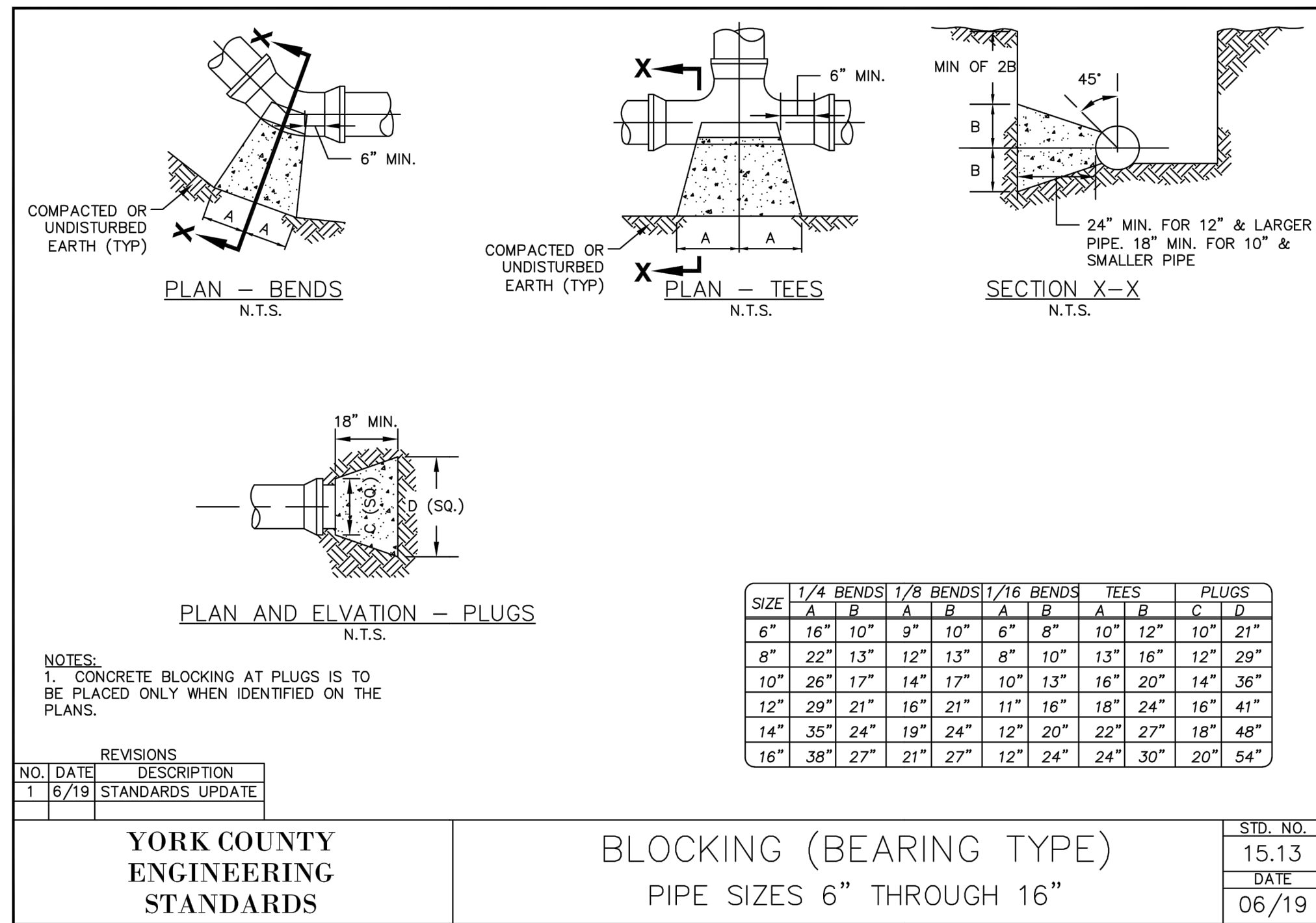
PROJECT NO.
402615
C-53
SHEET
28 OF 35



A PVC TO DUCTILE IRON CONNECTION
NO SCALE

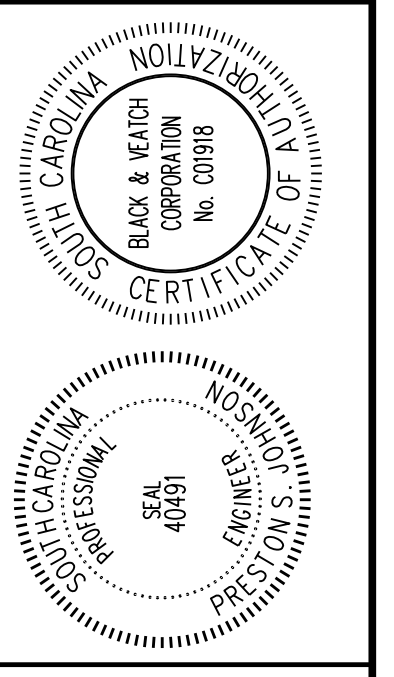


B CONCRETE COLLAR
NO SCALE



C BLOCKING (PIPE SIZES 6" THROUGH 16")
NO SCALE

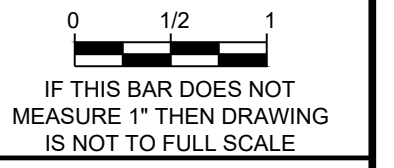
NO.	BY	CHK/APP



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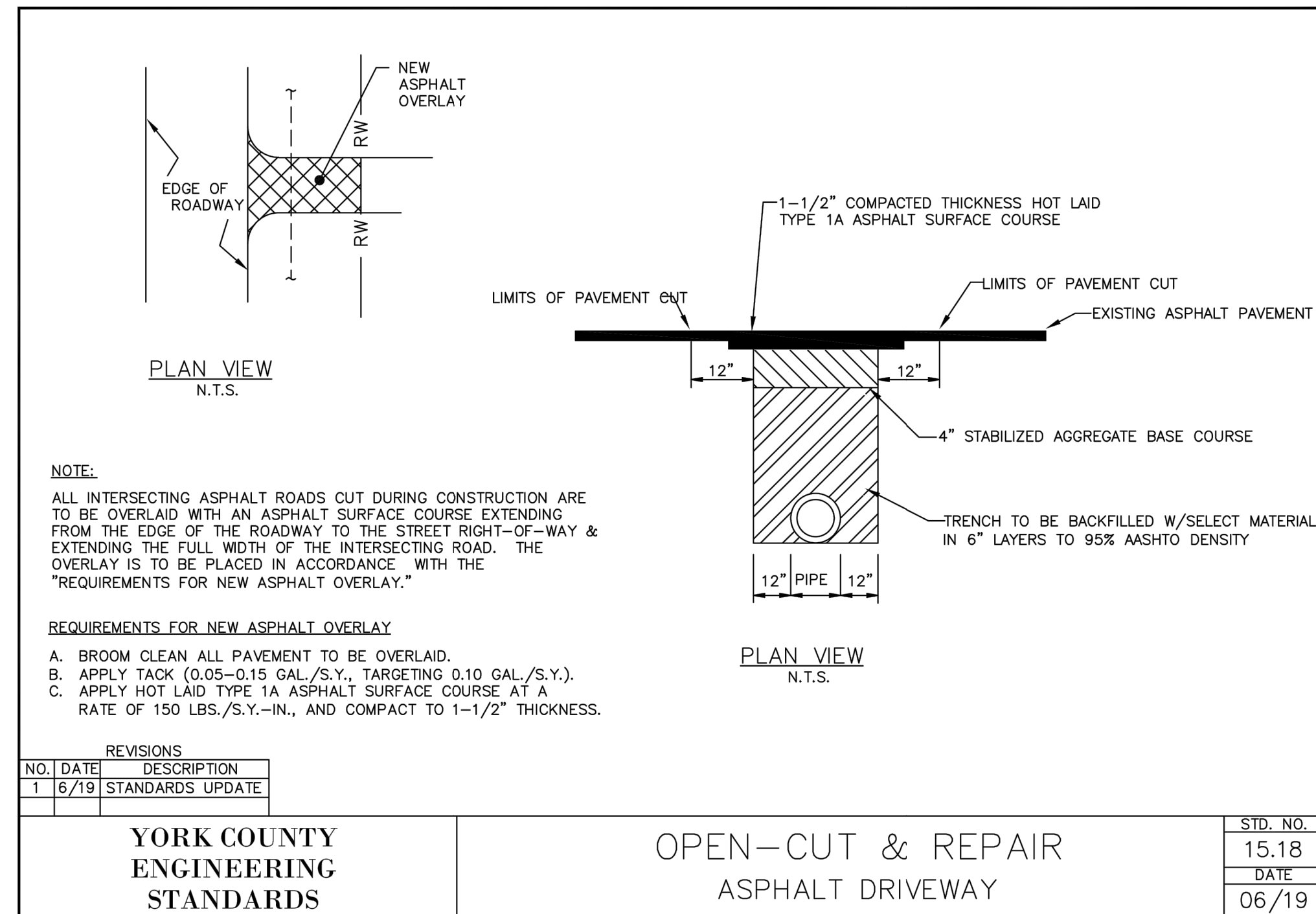
YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD
 CIVIL
 STANDARD DETAILS
 SHEET 5 OF 11

DESIGNED: ROW
DETAILED: WMT
CHECKED: CES
APPROVED: PSJ
DATE: FEBRUARY 2023

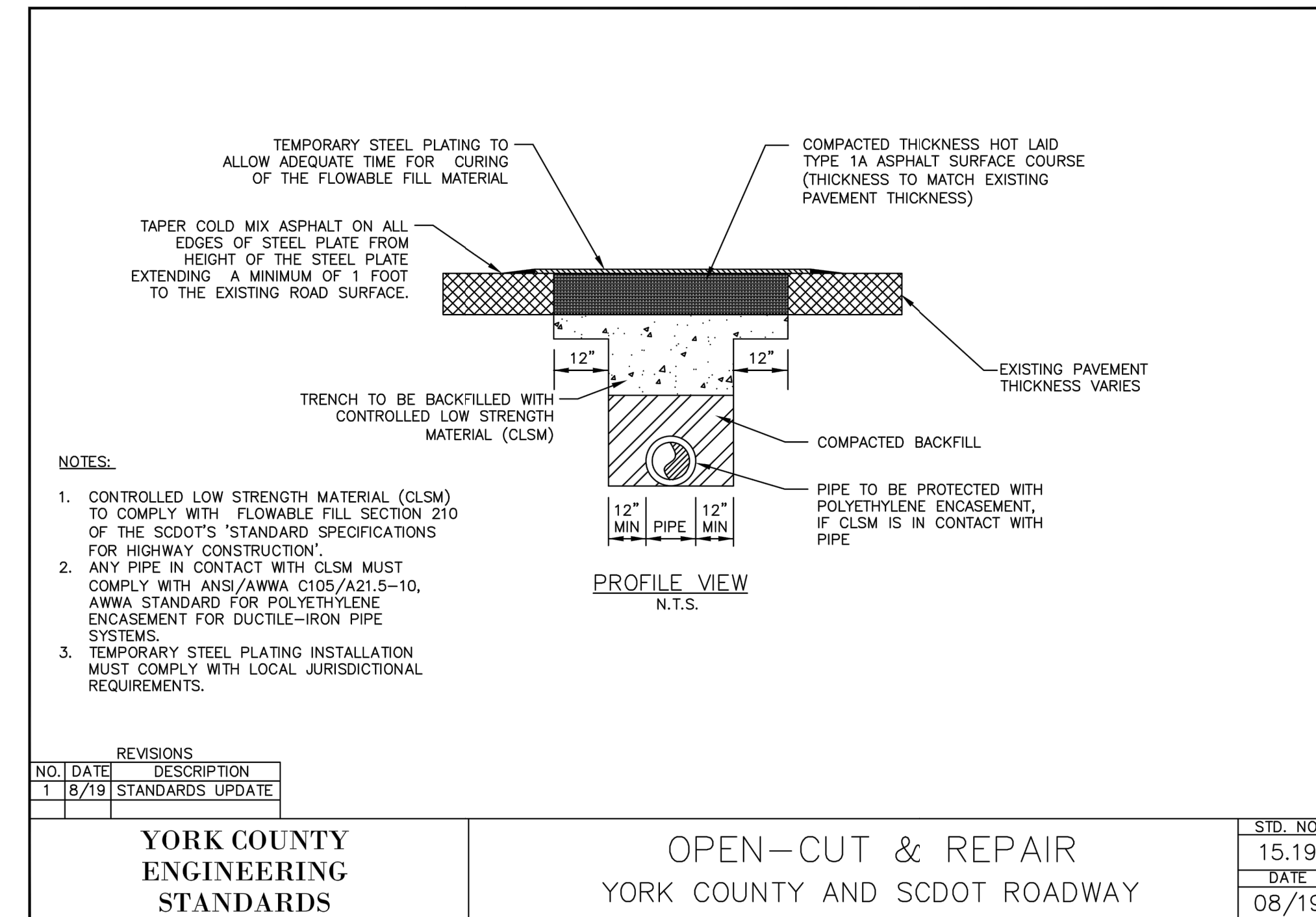


PROJECT NO.
402615
C-54
 SHEET
 29 OF 35

FD:0600
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PLOTTED: 10/12/2023 4:25 PM FILE: C:\pw_working\bow_america\4068754\C-55_Detail Sheets.dwg

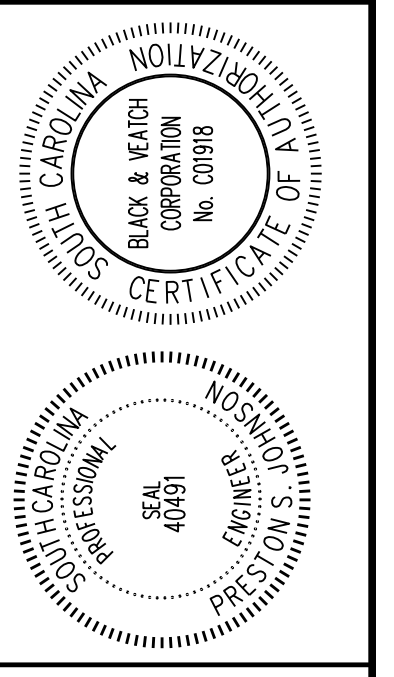


C ASPHALT DRIVEWAY OPEN-CUT AND REPAIR
NO SCALE



D SCDOT ROADWAY OPEN-CUT AND REPAIR
NO SCALE

DATE	REVISIONS AND RECORD OF USE	NO.	BY	CHK/APR

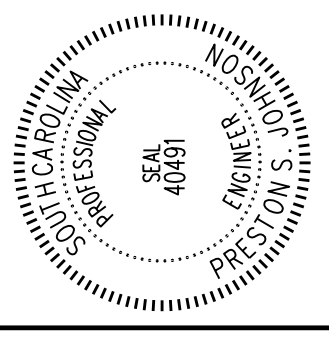
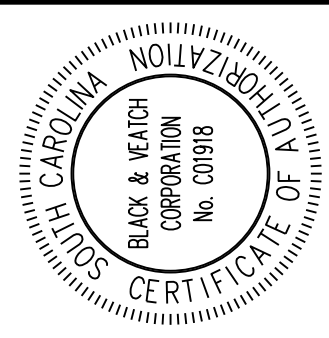


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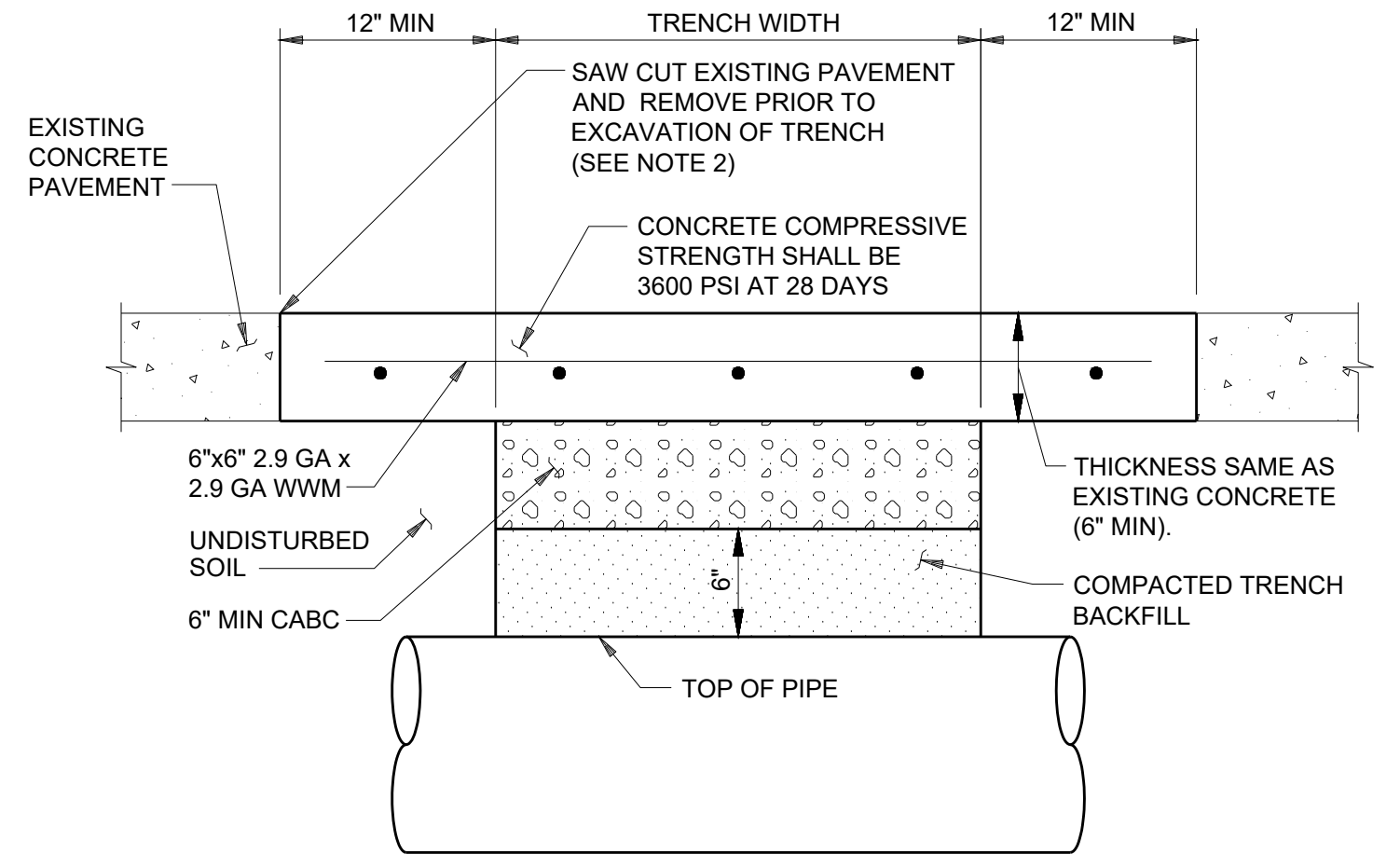
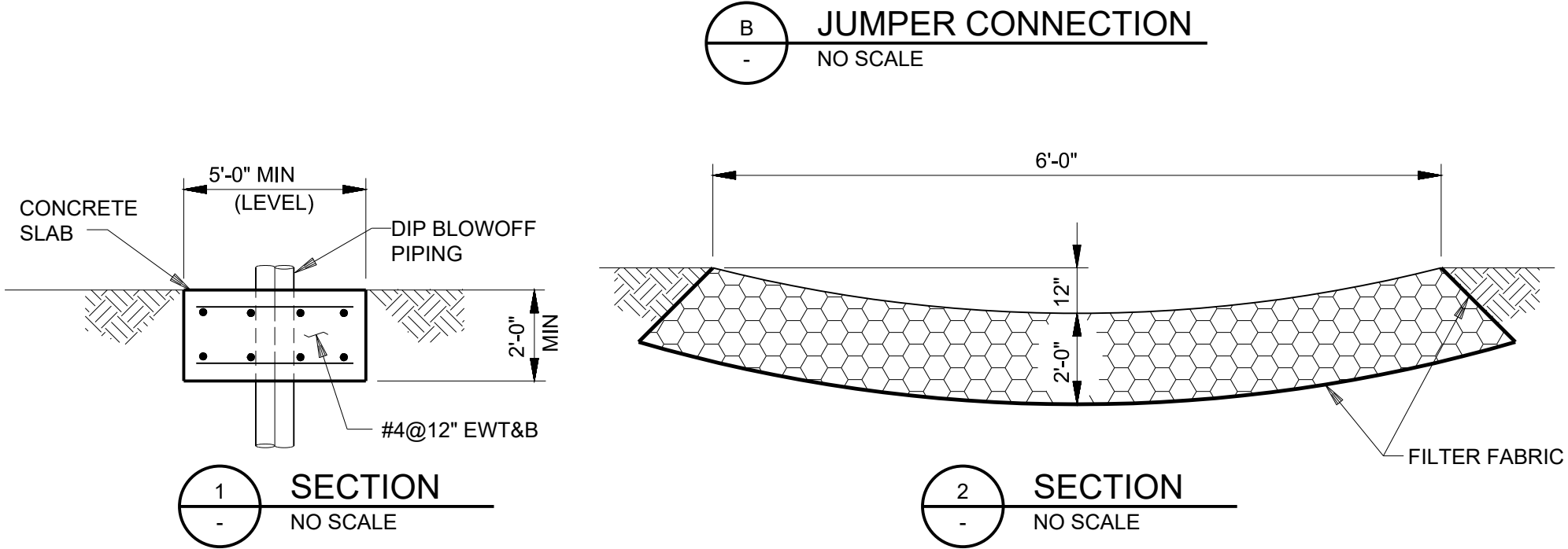
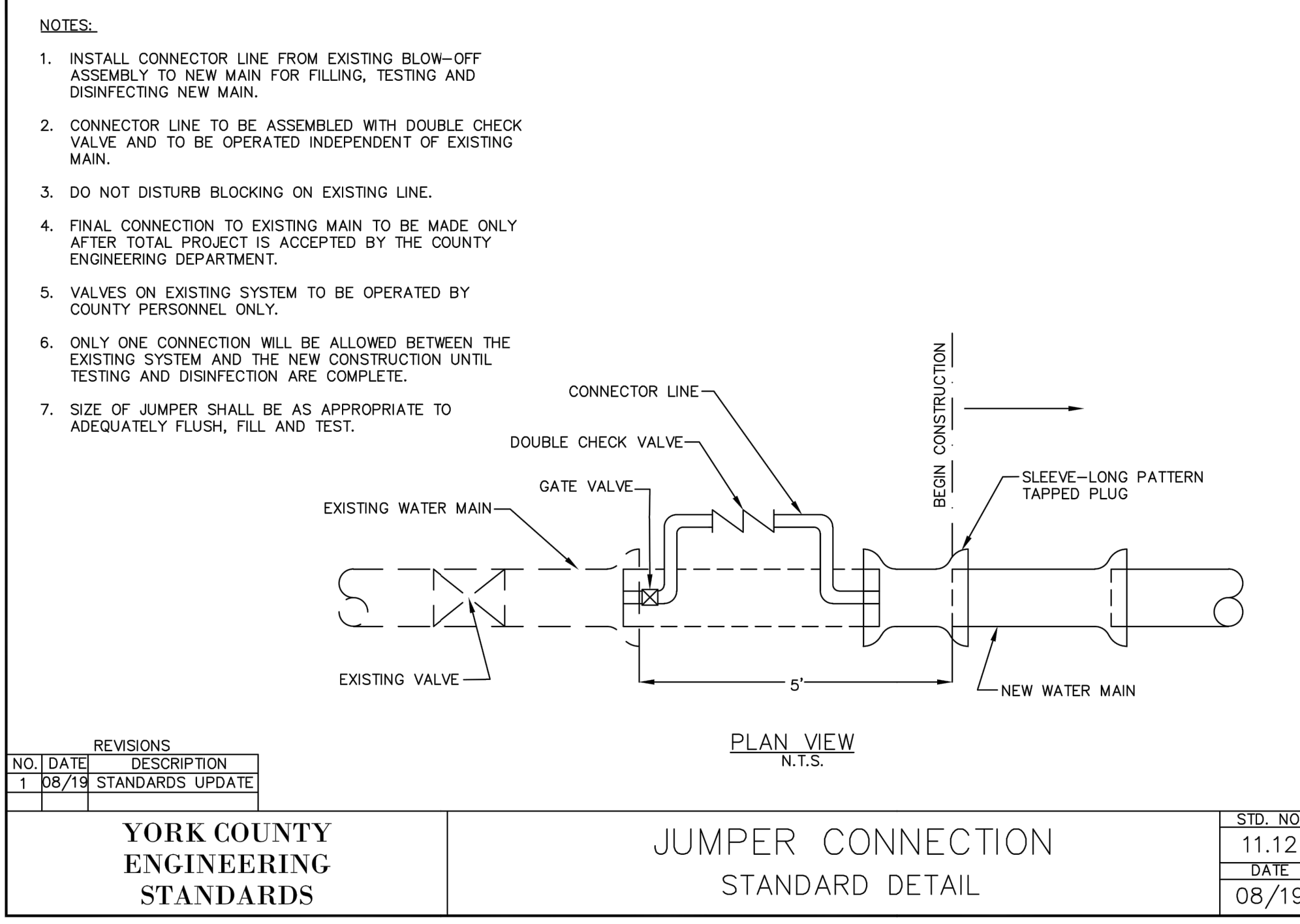
YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD
CIVIL
STANDARD DETAILS
SHEET 6 OF 11

DESIGNED: ROW
DETAILED: WMT
CHECKED: CES
APPROVED: PSJ
DATE: FEBRUARY 2023
PROJECT NO. 402615
C-55 SHEET 30 OF 35

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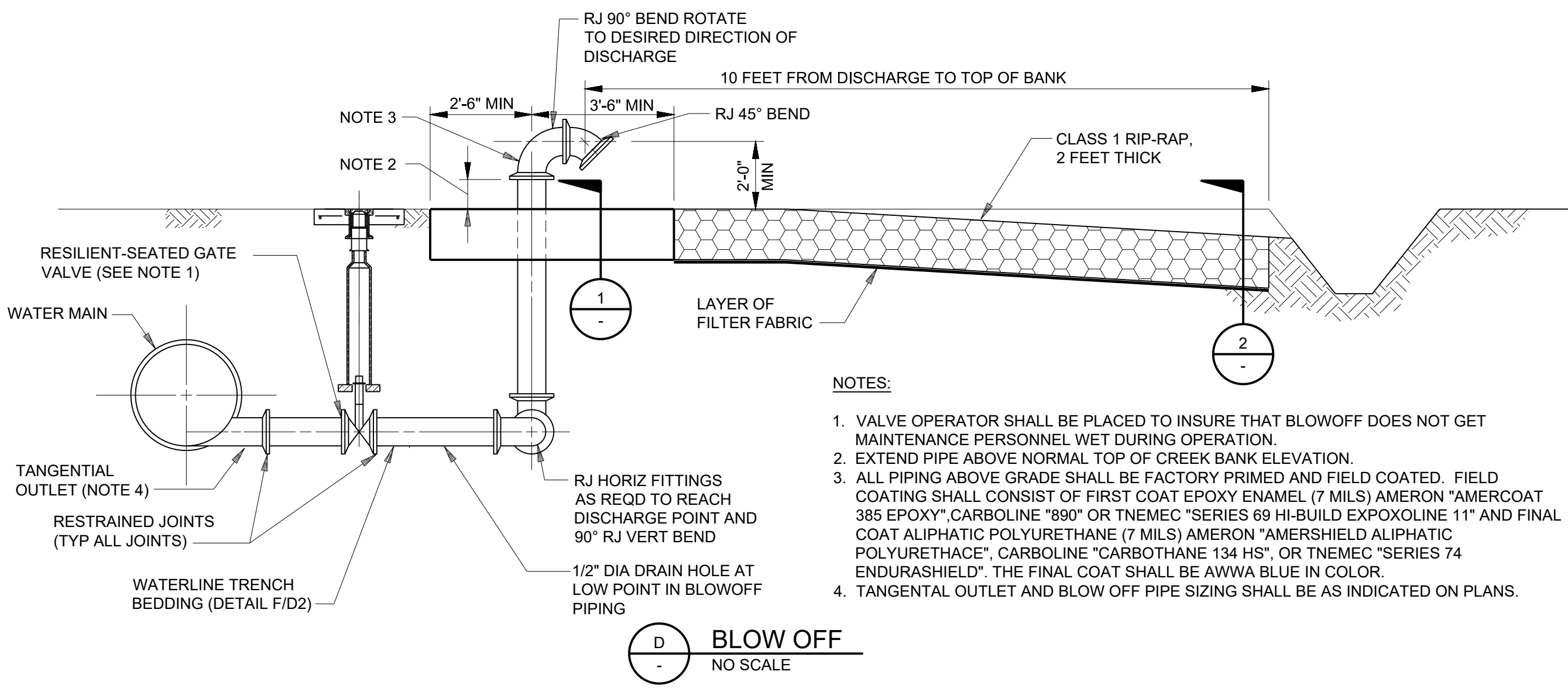


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NOTES:

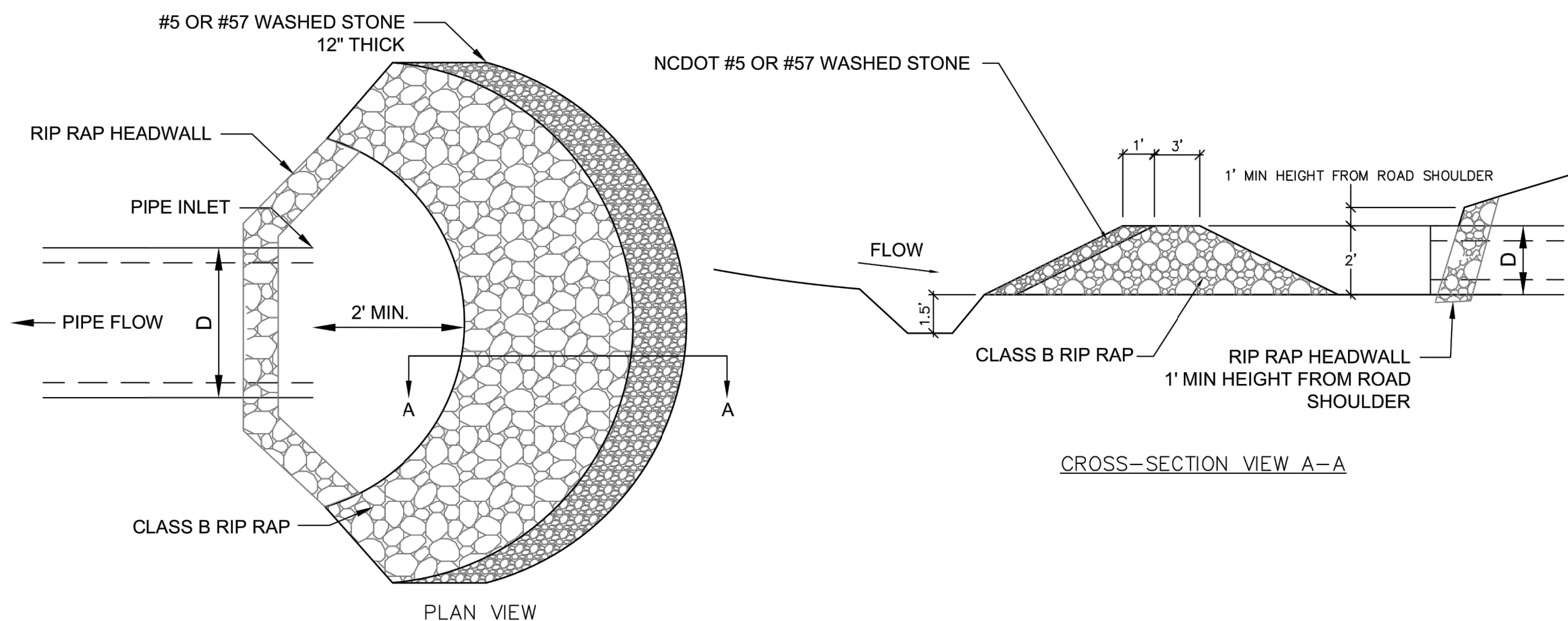
- CONTRACTOR SHALL COMPACT SUB-GRADE TO 100%.
- CONTRACTOR SHALL TO THE NEXT EXPANSION JOINT OR A MINIMUM 5 FEET FROM OUTSIDE TRENCH WALL.



YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER T.M
HARPER ROAD
 CIVIL
 STANDARD DETAILS
 SHEET 7 OF 11

DESIGNED: RWG
 DETAILED: WMT
 CHECKED: CES
 APPROVED: PSJ
 DATE: FEBRUARY 2023

 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE
 PROJECT NO. 402615
C-56
 SHEET 31 OF 35

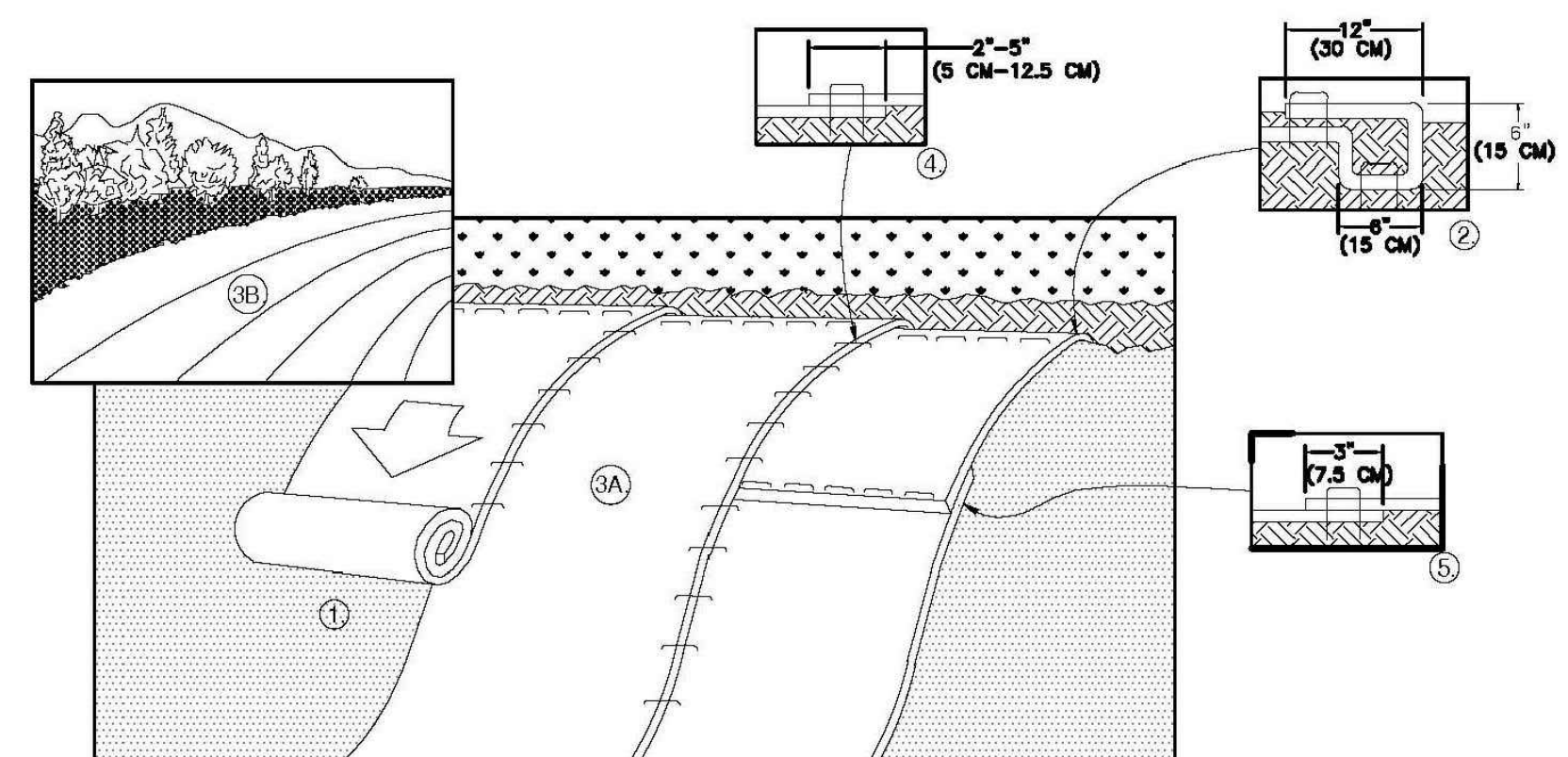


CROSS-SECTION VIEW A-A

NOTES:

1. FILTER BERM TO BE INSTALLED AROUND OFFSITE PIPE INLETS.
2. INSTALL THE STONE AT A MINIMUM HEIGHT OF 2' WITH SLOPES NO STEEPER THAN 2:1
3. THE TOP OF THE STONE SHOULD BE A MINIMUM OF 1' BELOW THE TOP OF THE FILL OVER THE PIPE

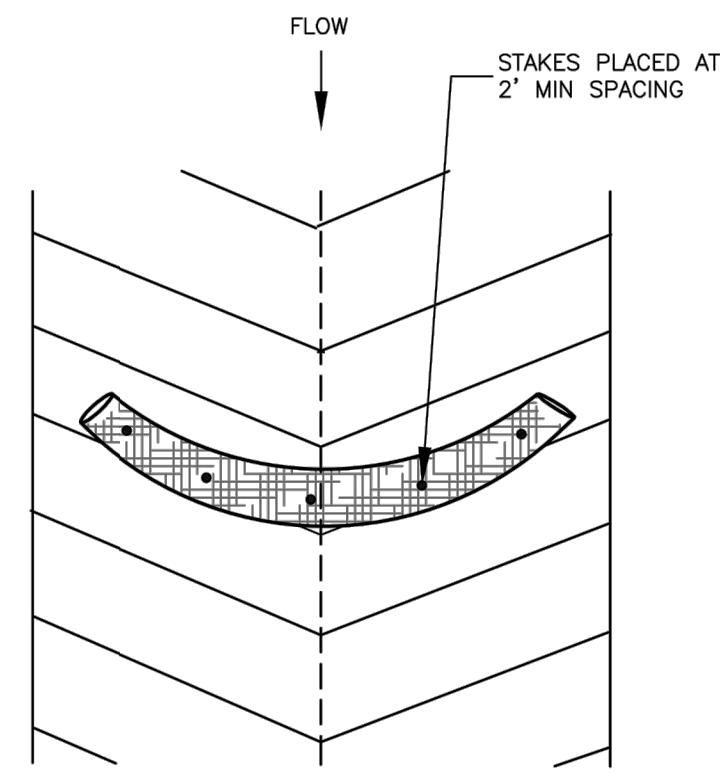
A RIP RAP FILTER BERM
NO SCALE



NOTES:

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP x 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5cm - 12.5cm) OVERLAP DEPENDING ON BLANKET TYPE.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5cm) OVERLAP. STAPLE THROUGH OVERLAPPED ARE, APPROXIMATELY 12" (30cm) APART ACROSS ENTIRE BLANKET WIDTH. NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 8" (15cm) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

B STREAMBANK STABILIZATION
NO SCALE



TOP VIEW OF DITCH

SEDIMENT TUBE

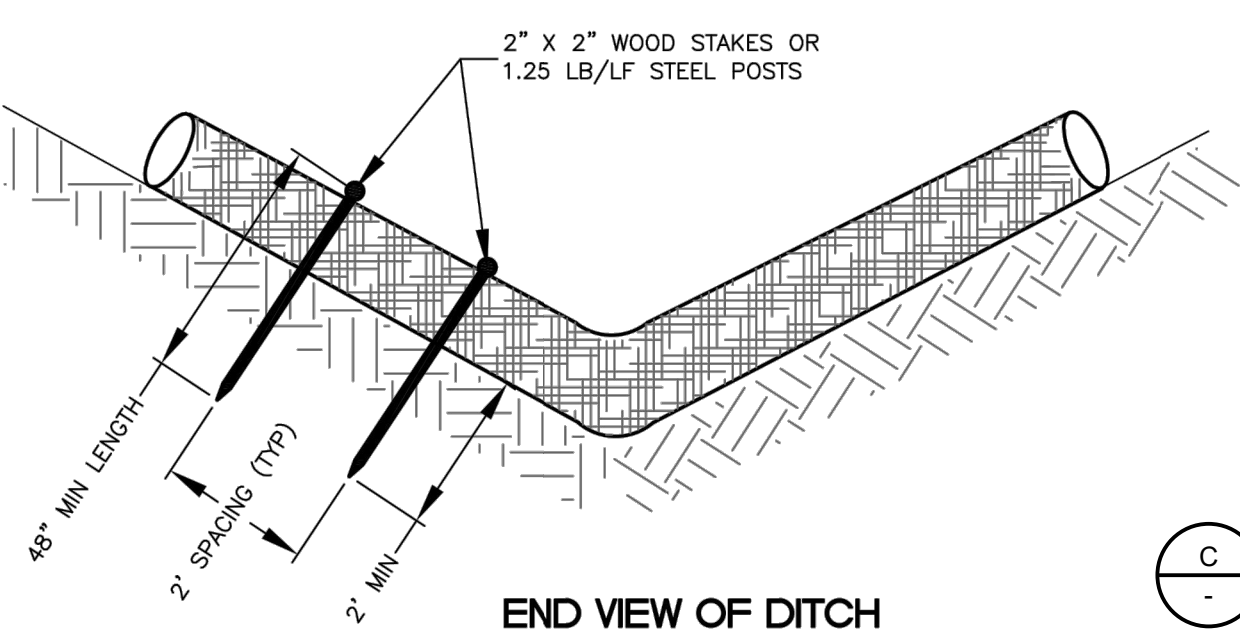
DESCRIPTION: SEDIMENT TUBES ARE ELONGATED TUBES OF COMPACTED GEOTEXTILES, CURLED EXCELSIOR WOOD, NATURAL COCONUT FIBER OR HARDWOOD MULCH. STRAW, PINE NEEDLE, AND LEAF MULCH-FILLED SEDIMENT TUBES ARE NOT PERMITTED UNDER THIS SPECIFICATION.

WHEN AND WHERE TO USE IT: INSTALL SEDIMENT TUBES ALONG CONTOURS, IN DRAINAGE CONVEYANCE SWALES, AND AROUND INLETS TO HELP REDUCE THE EFFECTS OF SOIL EROSION BY ENERGY DISSIPATION AND RETAIN SEDIMENT.

MATERIALS: SEDIMENT TUBES FOR DITCH CHECKS AND TYPE A INLET STRUCTURE FILTERS EXHIBIT THE FOLLOWING PROPERTIES:
 PRODUCED BY A MANUFACTURER EXPERIENCED IN SEDIMENT TUBE MANUFACTURING.
 COMPOSED OF COMPACTED GEOTEXTILES, CURLED EXCELSIOR WOOD, NATURAL COCONUT FIBERS, HARDWOOD MULCH OR A MIX OF THESE MATERIALS ENCLOSED BY A SEAMLESS HIGH-DENSITY POLYETHYLENE NON-DEGRADABLE MATERIALS. DIAMETER RANGING FROM 18" TO 24".
 CURLED EXCELSIOR WOOD OR NATURAL COCONUT ROLLED DIAMETER CONTROL PRODUCTS THAT ARE ROLLED UP TO CREATE A SEDIMENT TUBE ARE NOT ALLOWED UNDER THIS SPECIFICATION.

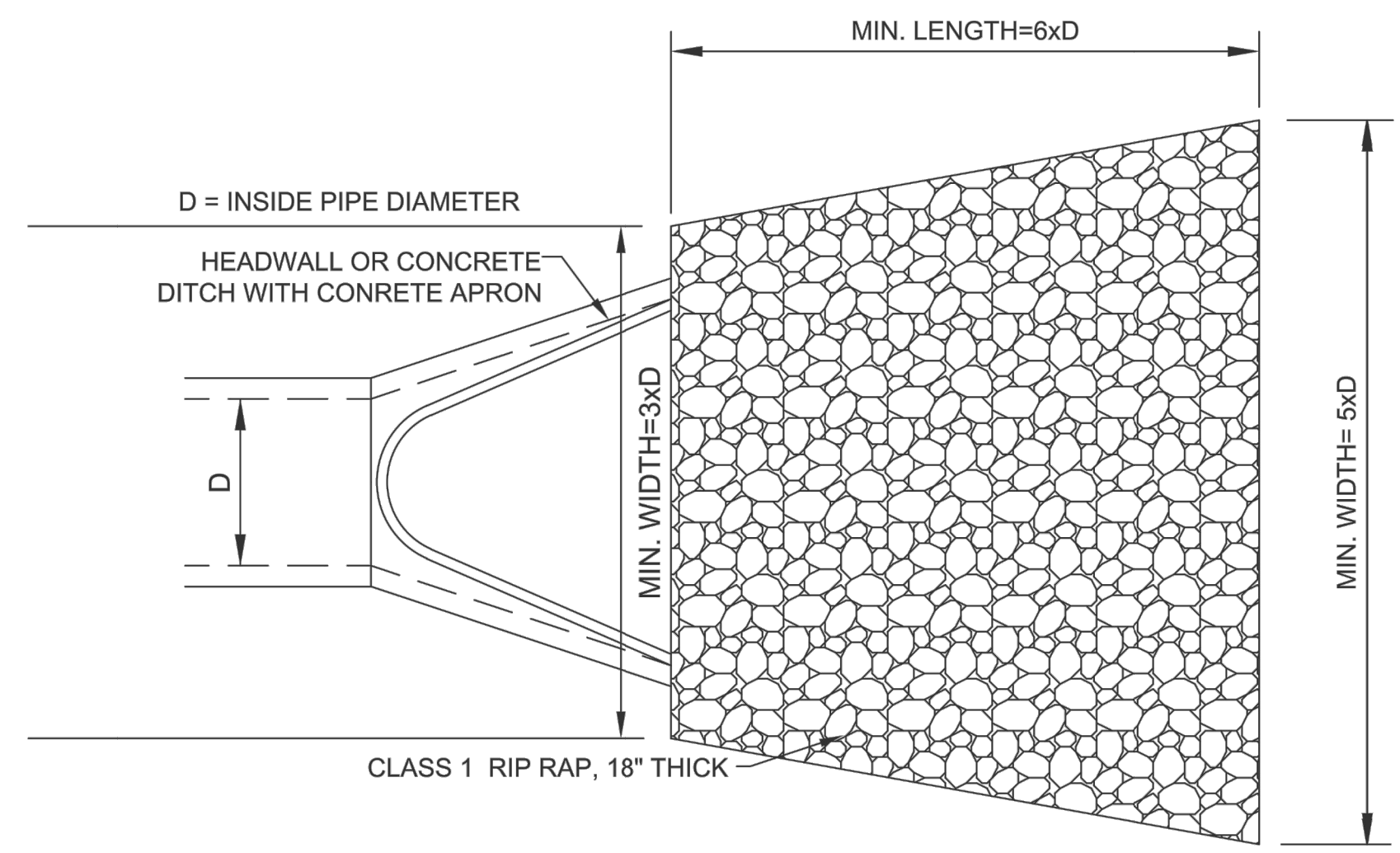
INSTALLATION: INSTALL OVER BARE SOIL, MULCHED AREAS OR EROSION CONTROL BLANKETS. BE COMPOSED OF GEOTEXTILES, CURLED EXCELSIOR WOOD, NATURAL COCONUT FIBER OR HARDWOOD MULCH ENCLOSED BY A FLEXIBLE NETTING MATERIAL. STRAW, STRAW BALES, PINE NEEDLES, AND LEAF MULCH ARE NOT ALLOWED. THE MIN DIAMETER SHOULD BE 18". SEDIMENT TUBES SHOULD BE STAKED USING WOODEN STAKES (2" X 2") OR STEEL POSTS (STANDARD "U" OR "T" SECTIONS W/ A MIN WEIGHT OF 1.25 LB/LF) A MIN OF 48" IN LENGTH PLACED ON 2' CENTERS. STAKES SHOULD BE INTERTWINED WITH THE OUTER MESH ON THE DOWNSTREAM SIDE AND DRIVEN IN THE GROUND TO A MIN DEPTH OF 1.5' LEAVING LESS THAN 1' OF STAKE EXPOSED ABOVE THE SEDIMENT TUBE. ALWAYS REFER TO THE MANUFACTURER'S RECOMMENDATIONS FOR THE STAKING DETAIL. INSTALL ALL SEDIMENT TUBES INSURING THAT NO GAPS EXIST BETWEEN THE SOIL AND THE BOTTOM OF THE SEDIMENT TUBE. THE ENDS OF ADJACENT TUBES SHOULD BE LAPPED 6" TO PREVENT FLOW AND SEDIMENT FROM PASSING THROUGH THE FIELD JOINT. IN NO SITUATIONS SHOULD SEDIMENT TUBES BE STACKED ON TOP OF ONE ANOTHER. CONSTRUCT A TRENCH THAT IS 20% OF THE TUBE DIAMETER TO INSTALL THE TUBE IN. AVOID DAMAGE TO SEDIMENT TUBES WHILE INSTALLING THEM. IF THE SEDIMENT TUBE BECOMES DAMAGED DURING INSTALLATION, A STAKE SHOULD BE PLACED ON BOTH SIDES OF THE DAMAGED AREA TERMINATING THE TUBE SEGMENT AND A NEW TUBE SEGMENT SHOULD BE INSTALLED. SEDIMENT TUBES SHOULD BE INSTALLED IN SWALES AND DITCHES PERPENDICULAR TO THE FLOW OF WATER. SEDIMENT TUBES SHOULD CONTINUE UP THE SIDE SLOPES A MIN OF 1' ABOVE THE DESIGN FLOW DEPTH. SEDIMENT TUBES SHOULD BE SPACED ACCORDING TO THE TABLE BELOW. SEDIMENT TUBE LENGTH SELECTED SHOULD MINIMIZE THE NUMBER OF SEDIMENT TUBES NEEDED TO SPAN THE WIDTH OF THE DRAINAGE CONVEYANCE. IF THE DITCH CHECK LENGTH (PERPENDICULAR TO THE WATER FLOW) IS 15', THEN ONE 15' SEDIMENT TUBE IS PREFERRED COMPARED TO TWO OVERLAPPING 10' SEDIMENT TUBES. SEDIMENT TUBES FOR DITCH CHECKS SHOULD REMAIN IN PLACE UNTIL FULLY ESTABLISHED VEGETATION AND ROOT SYSTEMS HAVE COMPLETELY DEVELOPED AND CAN SURVIVE ON THEIR OWN.

INSPECTION AND MAINTENANCE: CHECK DAMS SHOULD BE INSPECTED EVERY 7 CALENDAR DAYS AND WITHIN 24-HRS AFTER EACH STORM THAT PRODUCES 1/2" INCH OR MORE OF RAIN TO ENSURE CONTINUED EFFECTIVENESS. LARGE DEBRIS, TRASH, AND LEAVES SHOULD BE REMOVED. IF EROSION CAUSES THE EDGES TO FALL TO A HEIGHT EQUAL TO OR BELOW THE HEIGHT OF THE CENTER, REPAIRS SHOULD BE MADE IMMEDIATELY. REMOVE ACCUMULATED SEDIMENT FROM THE UPSTREAM SIDE OF THE SEDIMENT TUBE WHEN THE SEDIMENT HAS REACHED A HEIGHT OF APPROXIMATELY 1/2" OF THE EXPOSED HEIGHT OF THE TUBE (MEASURED AT THE CENTER). ACCUMULATED SEDIMENT SHOULD BE REMOVED PRIOR TO REMOVING SEDIMENT TUBES. SEDIMENT TUBE REMOVAL SHOULD BE COMPLETED ONLY AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN COMPLETELY STABILIZED. PERMANENT VEGETATION SHOULD REPLACE AREAS FROM WHICH GRAVEL, STONE, SEDIMENT TUBES, OR OTHER MATERIALS HAVE BEEN REMOVED.



END VIEW OF DITCH

C SEDIMENT LOG
NO SCALE



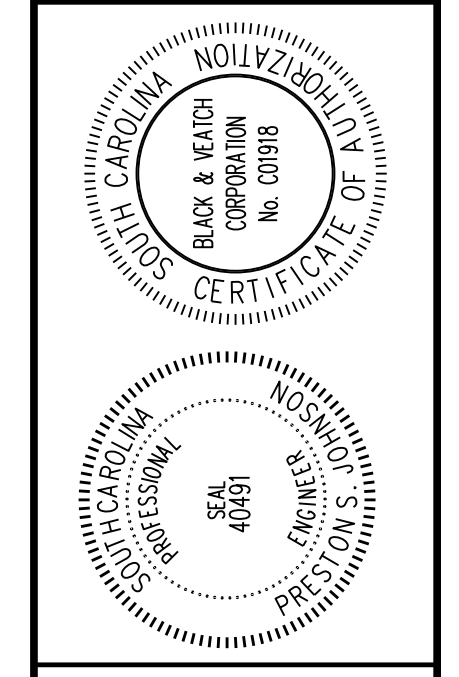
NOTES:

1. IN WELL DEFINED CHANNELS EXTEND RIP-RAP UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
2. A FILTER FABRIC SHALL BE INSTALLED BETWEEN THE STONE AND SOIL FOUNDATION.

D STORM DRAIN OUTLET PROTECTION
NO SCALE

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DATE	REVISIONS AND RECORD OF USE	



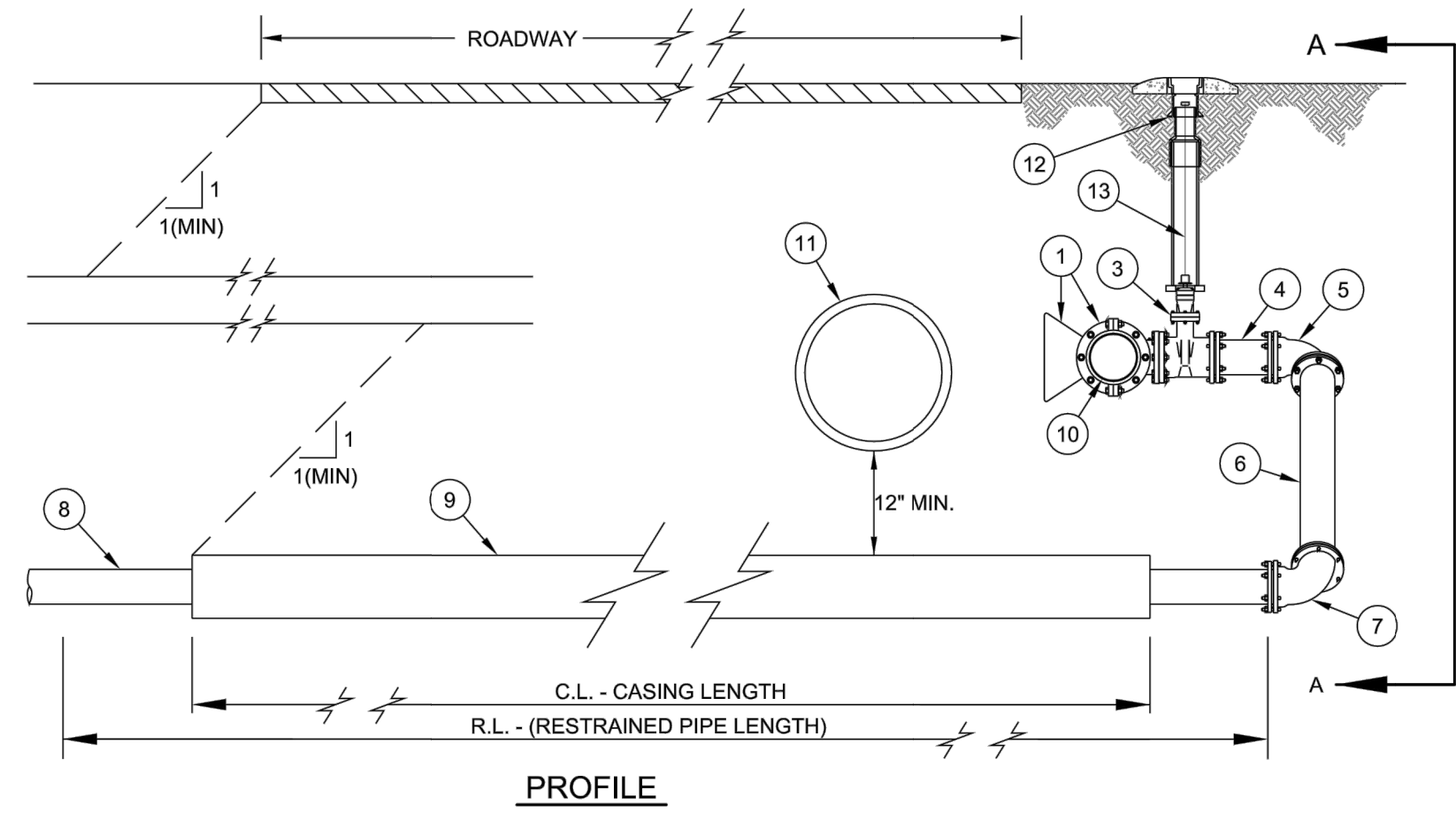
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 Black & Veatch International Company
 Business License No. F-0794
 10925 David Taylor Drive, Suite 280
 Charlotte, North Carolina 28262

YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TREATMENT PLANT
HARPER ROAD

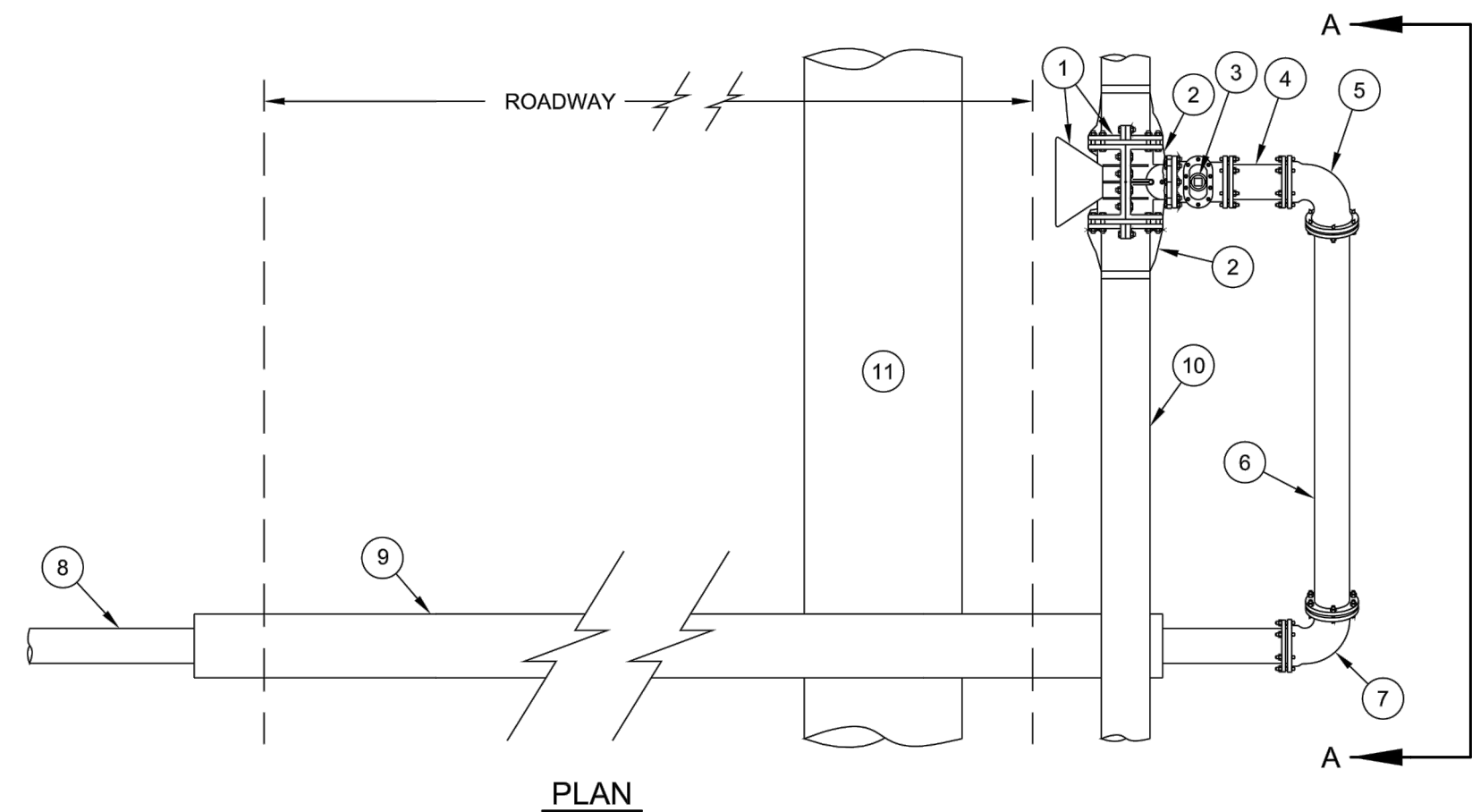
CIVIL
 STANDARD DETAILS
 SHEET 8 OF 11

DESIGNED: RGW
DETAILED: WMT
CHECKED: CES
APPROVED: PSJ
DATE: FEBRUARY 2023
0 1/2 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE
PROJECT NO. 402615
C-57 SHEET 32 OF 35

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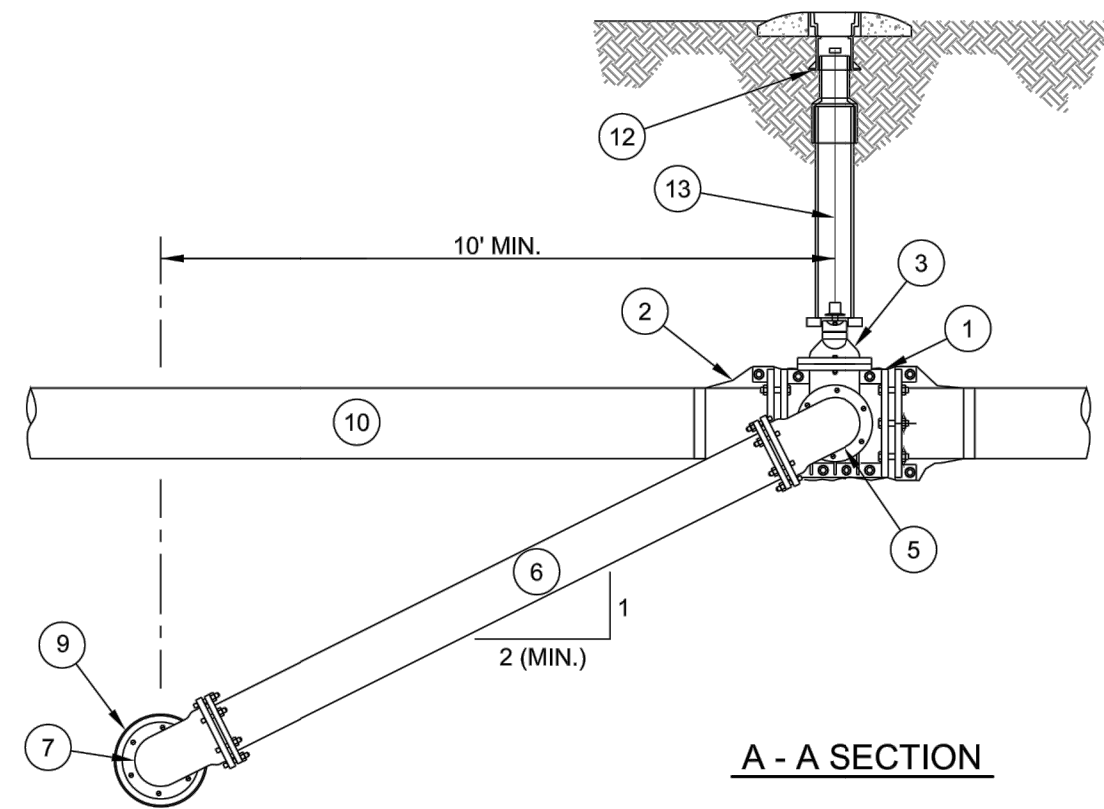


PROFILE



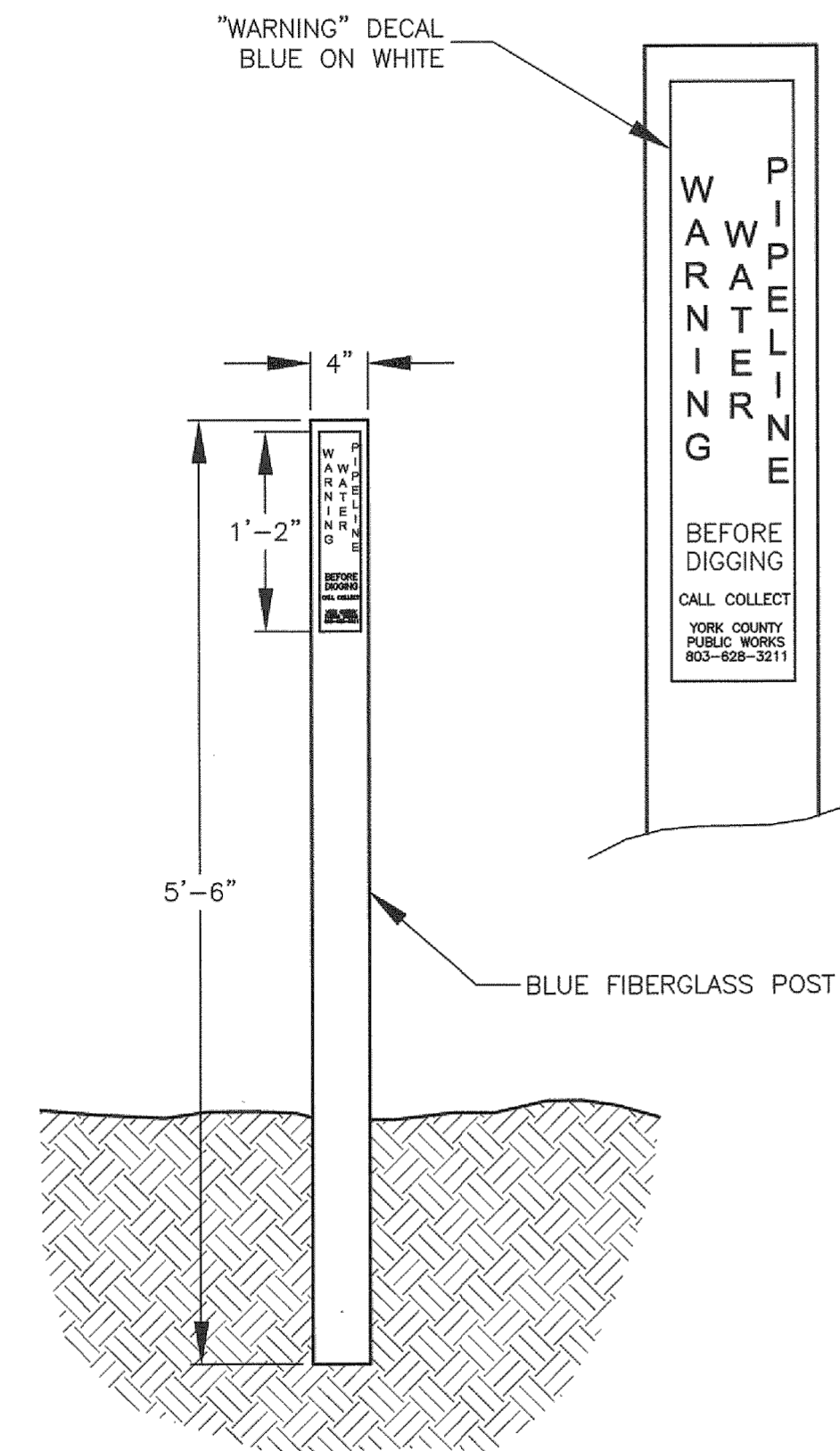
PLAN

- NO. DESCRIPTION
- TAPPING SLEEVE WITH CONCRETE THRUST BLOCKING (REQUIRED). (A) SEE SPECIFICATIONS FOR APPROVED MODELS. (B) SIZE ON SIZE TAPPING SLEEVES SHALL BE MECHANICAL JOINT FULL BODY DUCTILE / CAST IRON ONLY.
 - WRAP TAPPING SLEEVE WITH 2 LAYERS HDPE PLASTIC FILM (HDCLPE PER AWWA C-105) - 4 MILS. EACH LAYER - EXTEND HDPE 3 FT. EACH WAY FROM FITTINGS - DUCT TAPE ENDS.
 - TAPPING VALVE - FLANGE x R.M.J.
 - D.I.P. SHORT L \geq 18"
 - R.M.J. DUCTILE IRON 90° BEND - ROTATE DOWN, AS APPROVED.
 - DUCTILE IRON PIPE - RESTRAINED.
 - R.M.J. DUCTILE IRON 90° BEND - ROTATE UP, AS APPROVED, CONCRETE THRUST BLOCKING MAY ALSO BE REQUIRED. SEE NOTE 14.
 - DUCTILE IRON PIPE - RESTRAINED.
 - STEEL CASING.
 - EXISTING WATER MAIN.
 - EXISTING INFRASTRUCTURE THAT PREVENTS FRONT SIDE TAP - BACKSIDE TAP WILL BE PERMITTED ONLY WHERE EXISTING INFRASTRUCTURES PREVENTS FRONT SIDE TAP, AND REQUIRES APPROVAL OF THE ENGINEER.
 - STANDARD VALVE BOX ASSEMBLY.
 - VALVE EXTENSION (WHEN OPERATING NUT IS GREATER THAN 4.5 FEET DEEP).
 - CONCRETE THRUST BLOCK (WRAP BEND PER (B)) REQUIRED AT BOTTOM BEND (C), IF REQUIRED RESTRAINED LENGTH (R.L.) CAN NOT BE COMPLETELY INSTALLED.



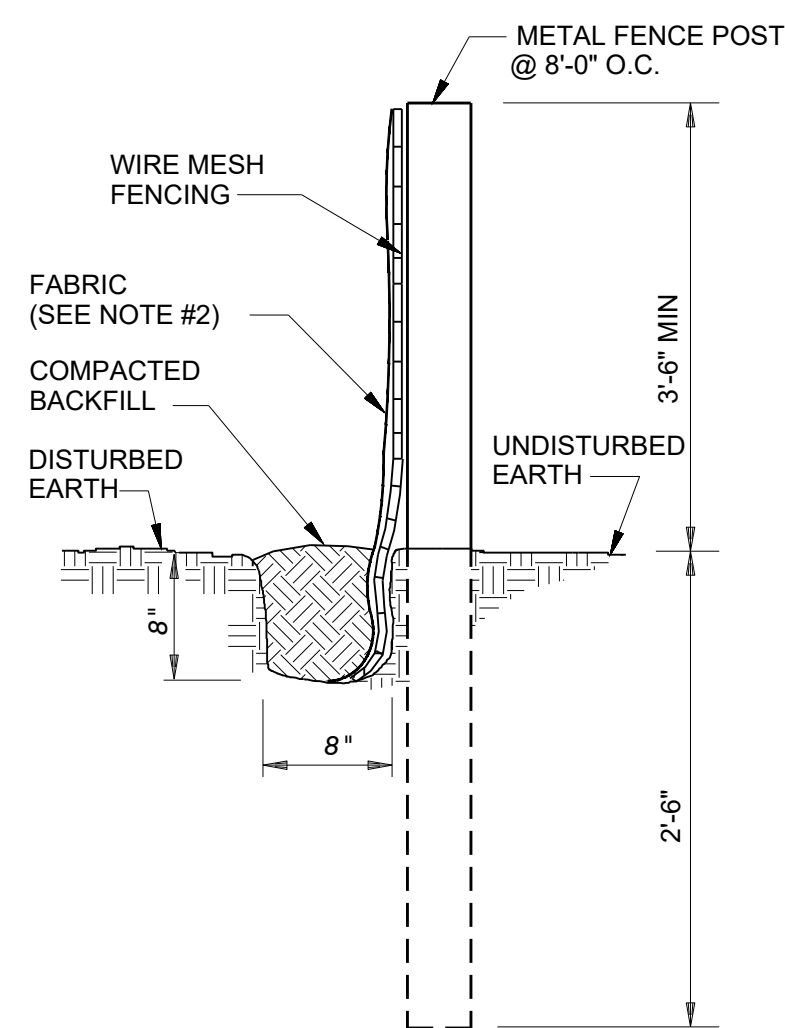
A - A SECTION

(A) BACKSIDE TAP DETAIL
NO SCALE



- NOTES:
- CONTRACTOR SHALL PLACE MARKER AS DIRECTED BY THE ENGINEER

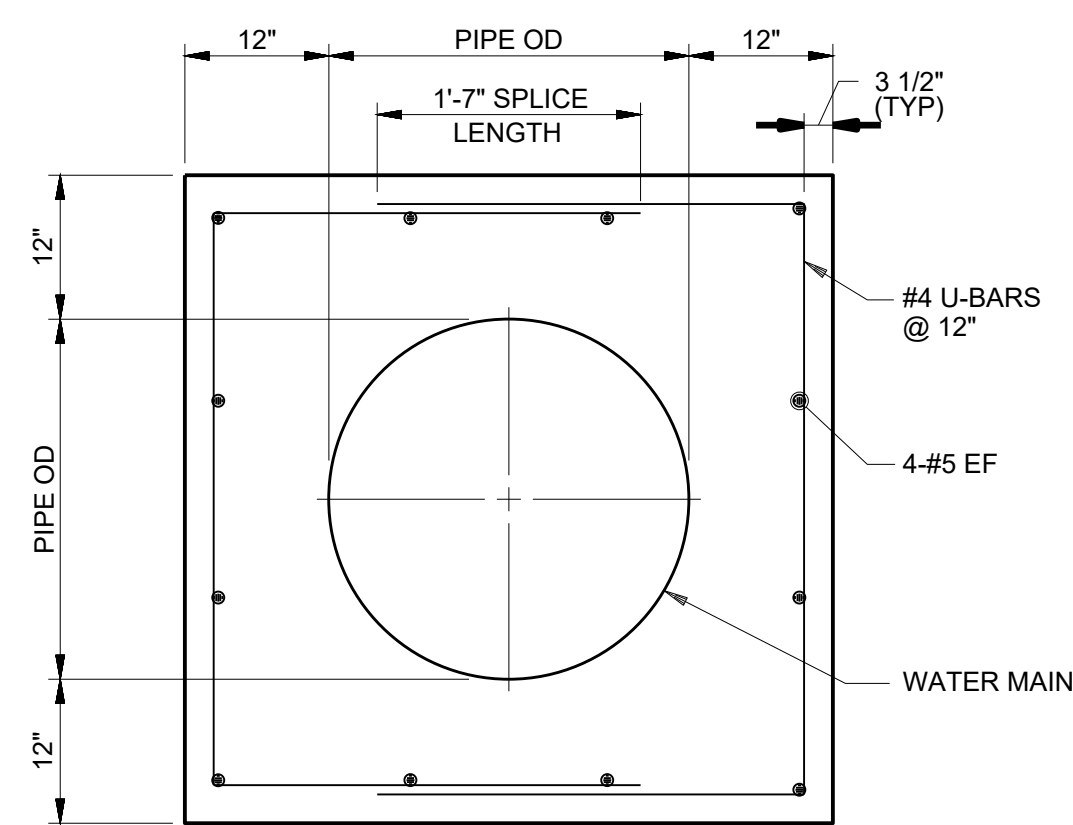
(B) FIBERGLASS MARKER POST
NO SCALE



NOTES:

- FENCING TO BE PLACED AT EXTREME LIMIT OF AREA TO BE DISTURBED.
- USE SYNTHETIC FILTER FABRIC IN LIEU OF BURLAP WHEN SILT FENCE IS TO BE USED MORE THAN 45 DAYS.
- REMOVE SEDIMENT DEPOSITS PRIOR TO REACHING 1/3 HEIGHT OF FENCE.
- WHERE CONSTRUCTION FENCE IS CALLED OUT ON THE PLANS, INSTALL FENCE PRIOR TO ANY LAND DISTURBING ACTIVITIES. CONSTRUCTION FENCE SHALL BE COMPOSED OF ORANGE, CONTRACTOR-GRADE MATERIAL AT LEAST 4' HIGH. STUDDED STEEL TEE POSTS SHALL BE UTILIZED TO SUPPORT THE CONSTRUCTION FENCE AT 10' SPACING. METAL POSTS SHOULD HAVE PLASTIC CAP FOR SAFETY. CONSTRUCTION FENCE SHALL BE SECURELY FASTENED TO THE TOP, MIDDLE, AND BOTTOM OF EACH POST.

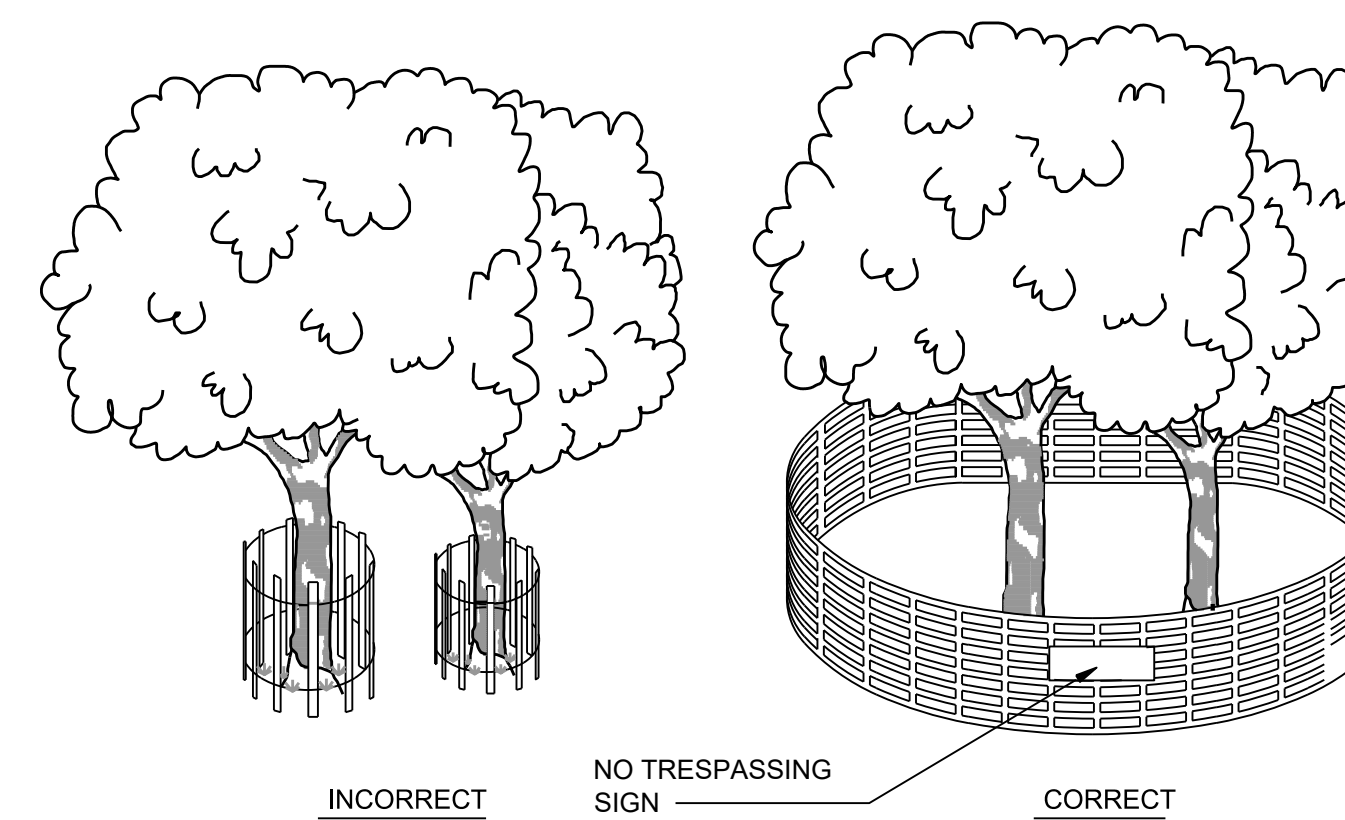
(C) SILT FENCE
NO SCALE



NOTES:

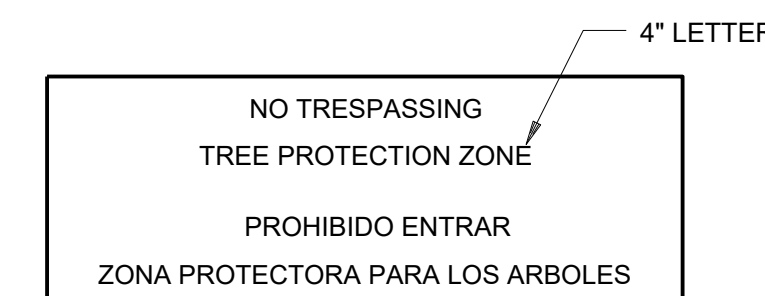
- USE 3000 PSI CONCRETE.
- CONTRACTOR SHALL PROVIDE A PIPE JOINT A MAXIMUM OF 2' FROM EACH END OF THE CONCRETE ENCASEMENT.

(D) CONCRETE ENCASEMENT DETAIL
NO SCALE



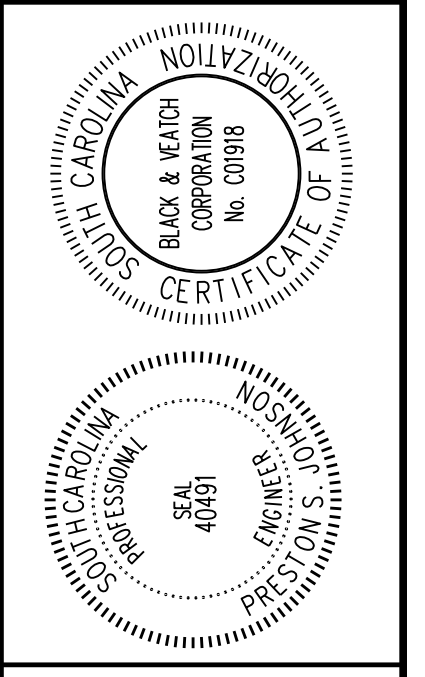
NOTES:

- BARRIER SHOULD BE INSTALLED AT THE DRIP LINE OF TREE BRANCHES. (SEE PLAN) FENCE SHALL BE OF MATERIAL RESISTANT TO DEGRADATION BY SUN, WIND AND MOISTURE FOR THE DURATION OF THE CONSTRUCTION. 4' ORANGE PLASTIC CONSTRUCTION FENCING
- ALL TREE PROTECTION SHALL BE DIRECTED IN THE FIELD BY THE OWNERS REPRESENTATIVE.
- NO TRESPASSING SIGN MAX. 75' APART AND A MIN. ONE EACH SIDE OF AREA. SIGN TO BE IN ENGLISH AND SPANISH AS SHOWN BELOW



(E) TREE PROTECTION FENCE DETAIL
NO SCALE

DATE	REVISIONS AND RECORD OF USE	NO.	BY	CHK/APP



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 Charlotte, North Carolina 28262

YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD

CIVIL
 STANDARD DETAILS
 SHEET 9 OF 11

DESIGNED: ROW
 DETAILED: WMT
 CHECKED: CES
 APPROVED: PSJ
 DATE: FEBRUARY 2023

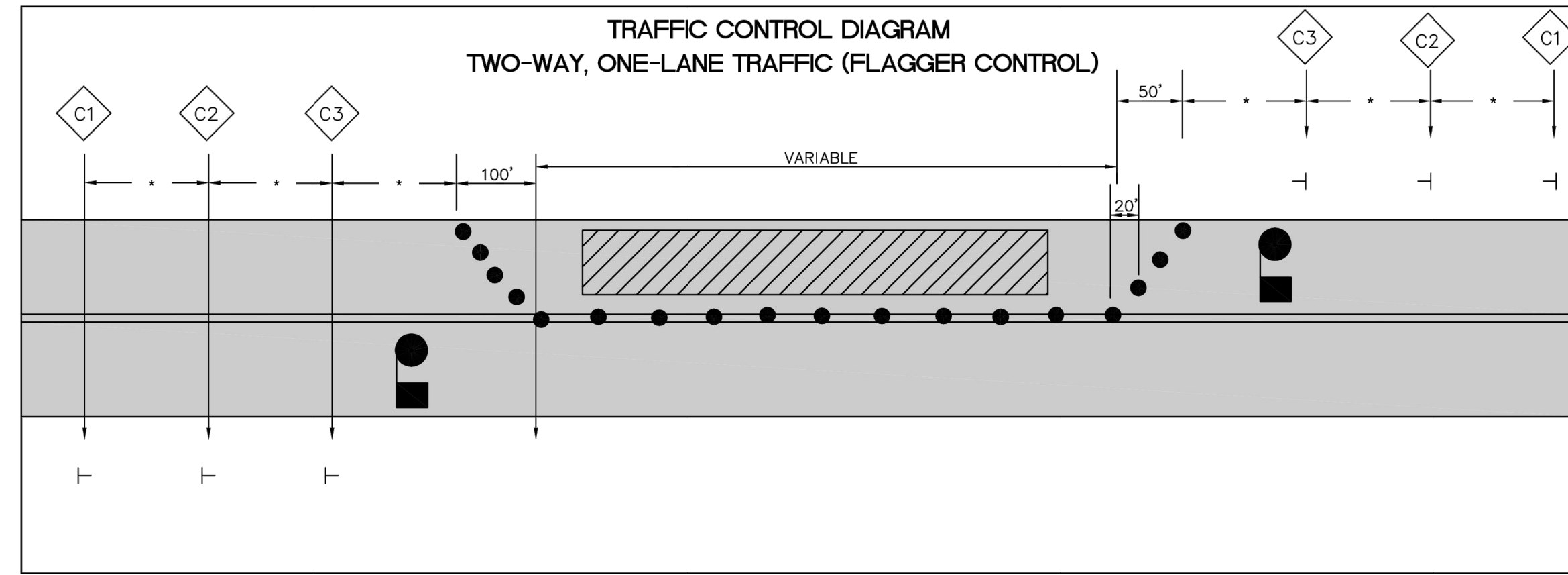
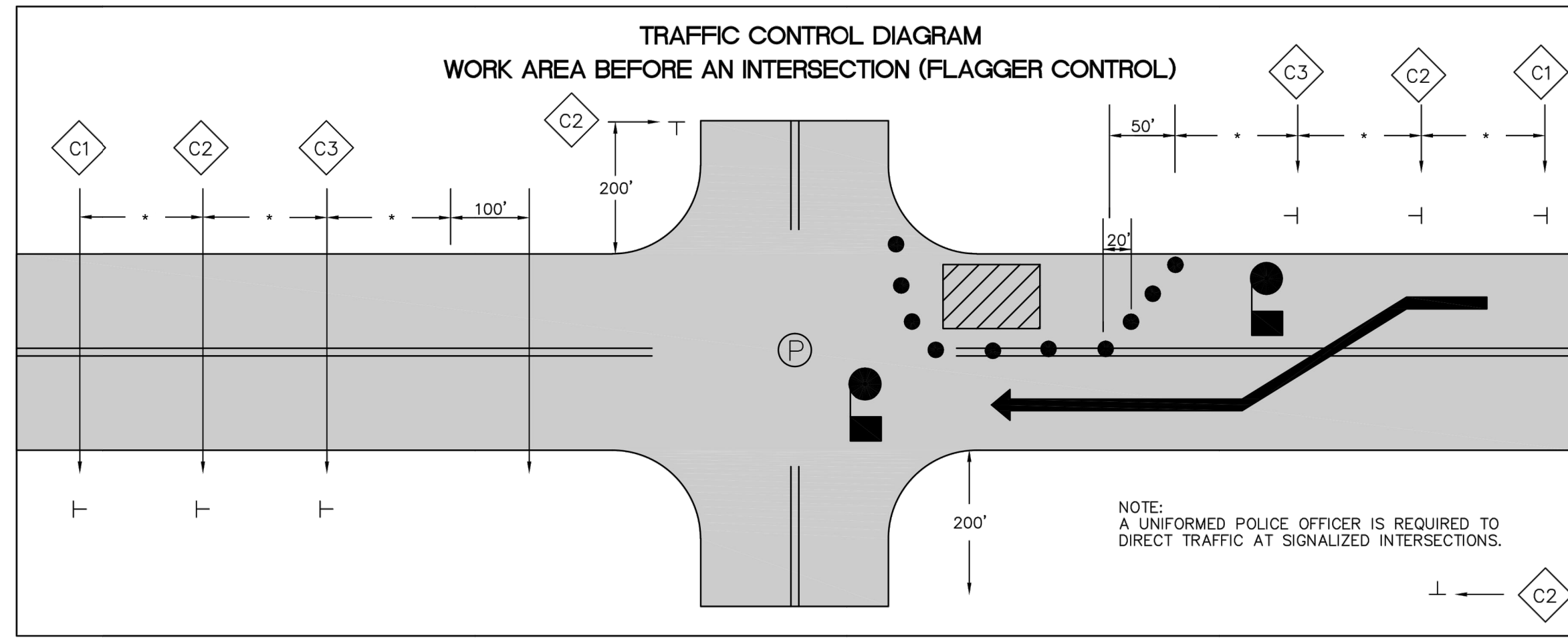
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PROJECT NO.
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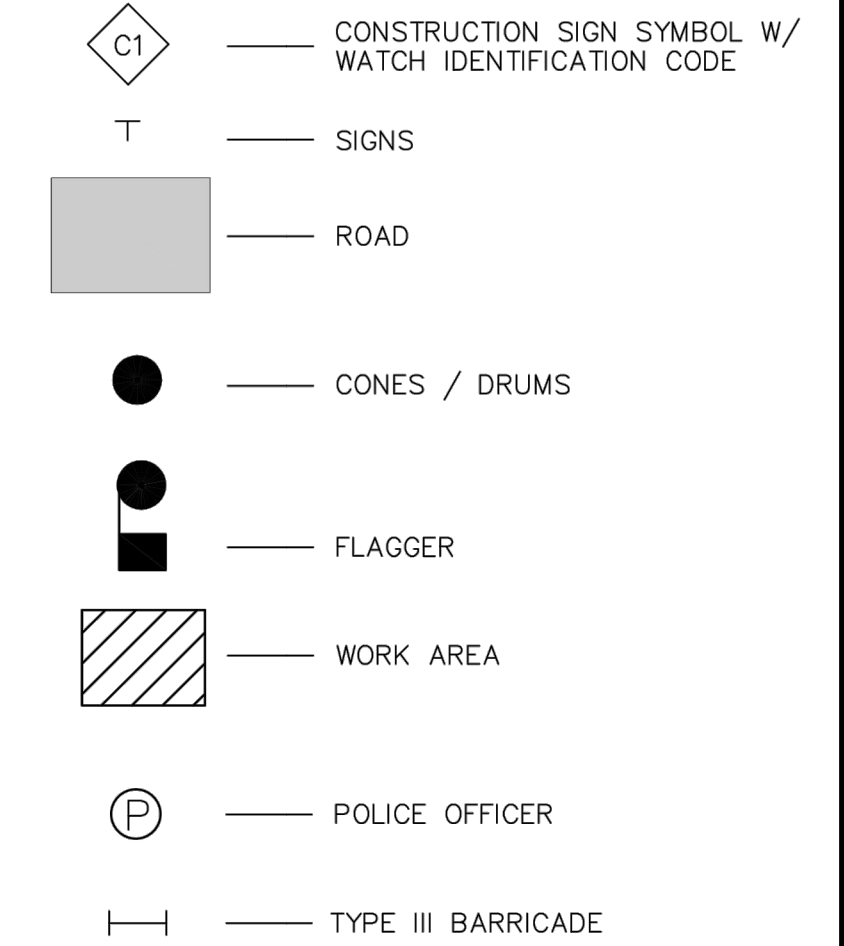
C-58
 SHEET
 33 OF 35

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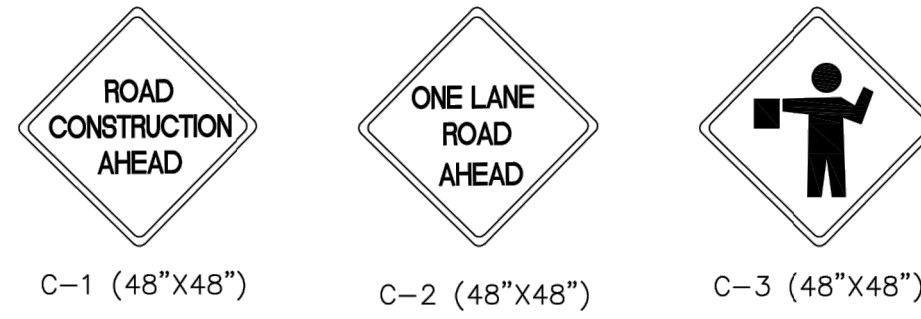
PLAN LEGEND



NOTES FOR LANE CLOSURES:

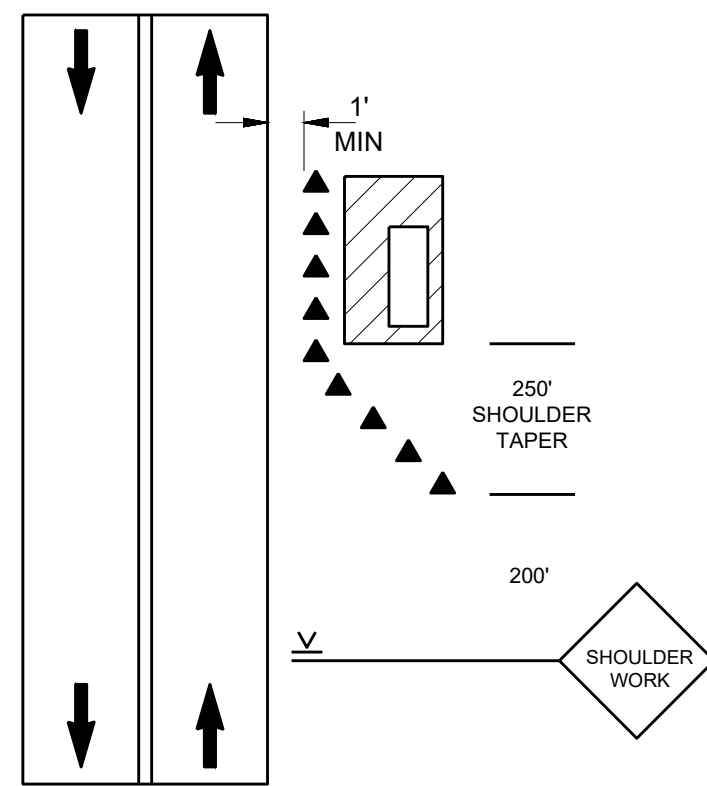
- THIS TYPICAL APPLICATION APPLIES TO FLAGGING OPERATIONS CONDUCTED DURING DAYTIME HOURS ONLY.
- FOR LOW-SPEED (35 MPH OR LESS) CONDITIONS, A 200-FOOT SIGN SPACING MAY BE USED. FOR SPEEDS OF 40 TO 50 MPH A 350-FOOT SIGN SPACING MAY BE USED.
- AN ARRAY OF 3 ADVANCE WARNING SIGNS IS REQUIRED IN EACH DIRECTION. THIS SIGN ARRAY WILL INCLUDE "ROAD WORK AHEAD", "ONE LANE ROAD AHEAD", AND "FLAGGER" SYMBOL SIGN.
- A "BE PREPARED TO STOP" SIGN MAY BE ADDED TO THE SIGN SERIES, LOCATED BETWEEN THE "FLAGGER" SYMBOL AND THE "ONE LANE ROAD AHEAD" SIGNS. IF USED, THEN THE SPACING OF ALL FOUR SIGNS IN THE SERIES WILL BE SPACED AT EQUAL INTERVAL BASED ON SPEED (SEE NOTE 2).
- GENERALLY, THE USE OF "END ROAD WORK" SIGNS IS OPTIONAL FOR SHORT DURATION WORK SITES, OPERATIONS OF 60 MINUTES OR LESS. HOWEVER, IF THE WORK SITE ITSELF IS LONG, OR THE BEGINNING AND END OF THE WORK SITE ARE NOT VISIBLE TO A DRIVER PASSING THROUGH IT, THEN "END ROAD WORK" SIGNS SHOULD BE USED.

SIGN PLACEMENT INTERVALS			
SPEED LIMIT	•	•	•
LOW SPEED ≤ 35 MPH	200'	200'	200'
INTERMEDIATE SPEED 40 - 50 MPH	350'	350'	350'
HIGH SPEED ≥ 55 MPH	500'	500'	500'

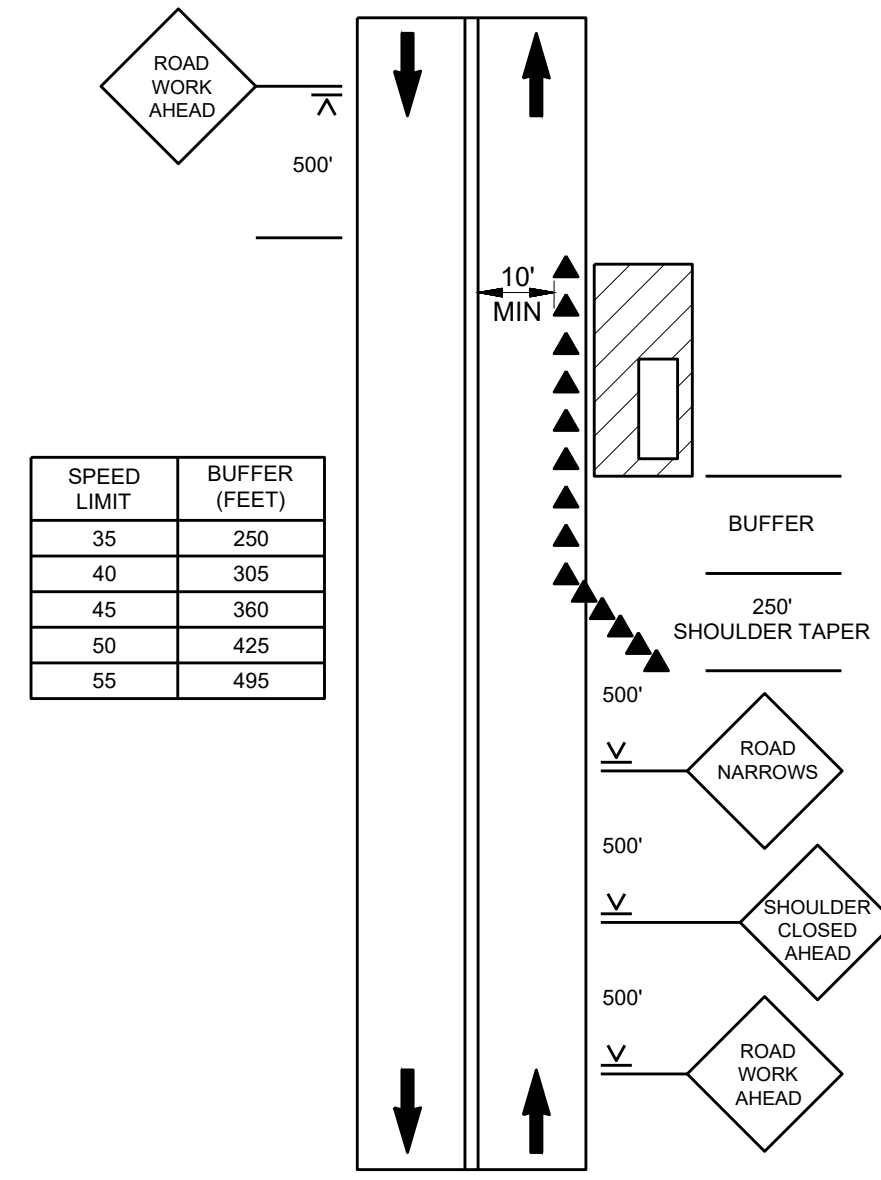


- STEP 1
THE CONTRACTOR SHALL PLACE ALL CONSTRUCTION WARNING SIGNS ONE WEEK PRIOR TO THE BEGINNING OF WORK. THE SIGNS ARE TO REMAIN COVERED UNTIL ROAD CONSTRUCTION BEGINS. THE APPROACH WARNING SIGNS SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED.
- STEP 2
THE CONTRACTOR SHALL USE DIAGRAM, "TWO-WAY, ONE-LANE TRAFFIC (FLAGGER CONTROL)" IN LEFT VIEW ON THIS SHEET AND THE DETAILS SHOWN TO INSTALL TRAFFIC CONTROL DEVICES AND TEMPORARY PAVEMENT MARKING.
- STEP 3
CONSTRUCT ALL PROPOSED WORK.
- STEP 4
REMOVE TRAFFIC CONTROL DEVICES AND REESTABLISH PAVEMENT AND MARKINGS.

A TRAFFIC CONTROL PLANS
NO SCALE



SHOULDER WORK
(1' - 15' FROM EDGE OF PAVEMENT)
(SHORT-TERM STATIONARY - 1 TO 2 HOURS)



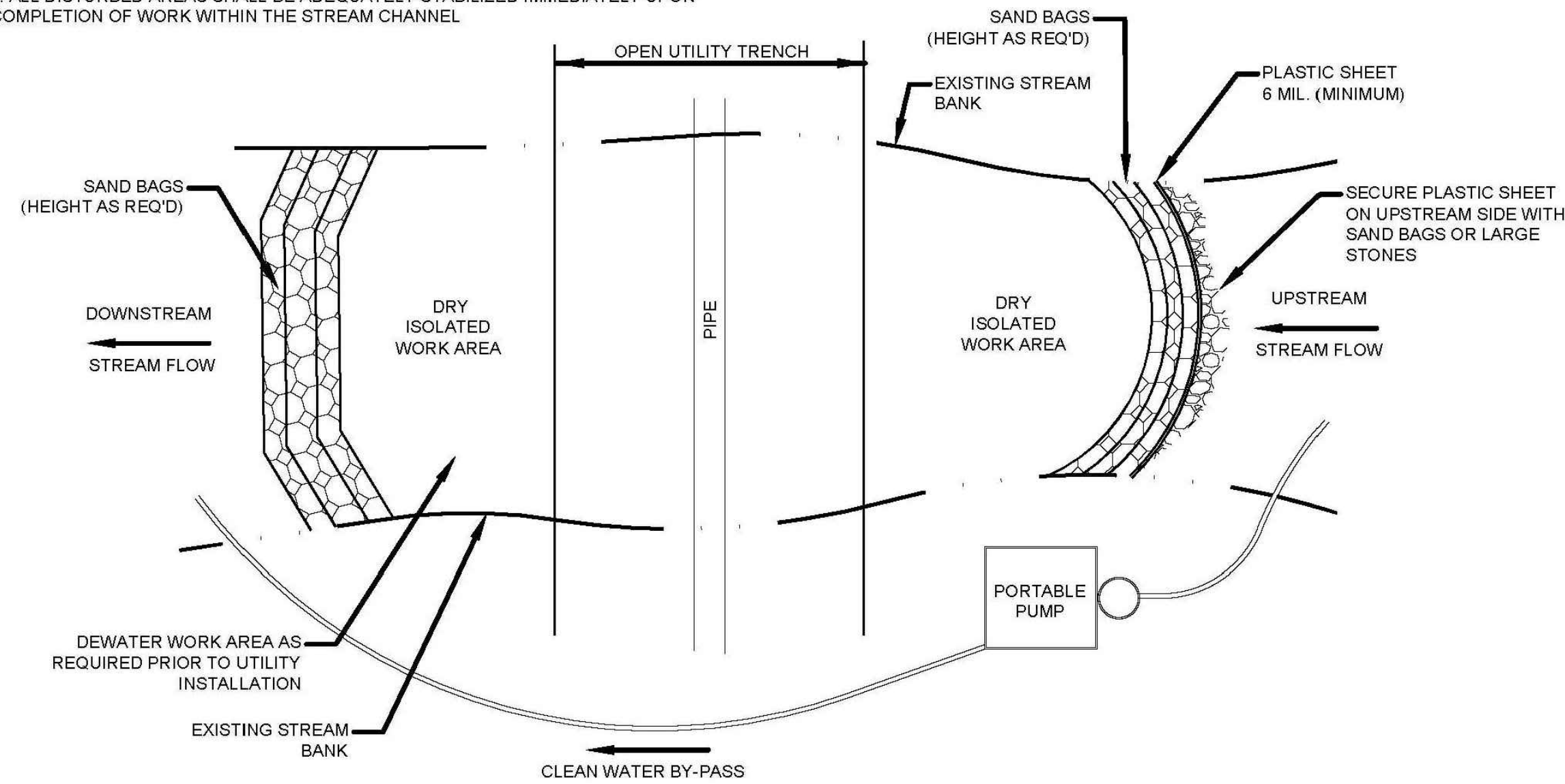
SHOULDER WORK WITH MINOR ENCROACHMENT

- NOTES:
- THIS TYPICAL APPLICATION APPLIES TO ROADWAYS WITH POSTED SPEED LIMITS OF 55 MPH OR LESS.
 - MAINTAIN A MINIMUM LANE WIDTH OF 10'. HOWEVER, ON A LOW VOLUME ROADWAY, A MINIMUM LANE WIDTH OF 9' IS ACCEPTABLE IF TRAFFIC DOES NOT INCLUDE WIDE LOADS.
 - FOR LOW SPEED CONDITIONS (35 MPH OR LESS), A 200-FOOT SIGN SPACING MAY BE USED AND FOR INTERMEDIATE SPEED CONDITIONS (40 TO 50 MPH), A 350-FOOT SIGN SPACING MAY BE USED.
 - AN ARRAY OF 3 ADVANCE WARNING SIGNS IS REQUIRED. THIS SIGN ARRAY WILL INCLUDE "ROAD WORK AHEAD", "RIGHT (LEFT) SHOULDER CLOSED AHEAD", AND "LANE NARROWS".

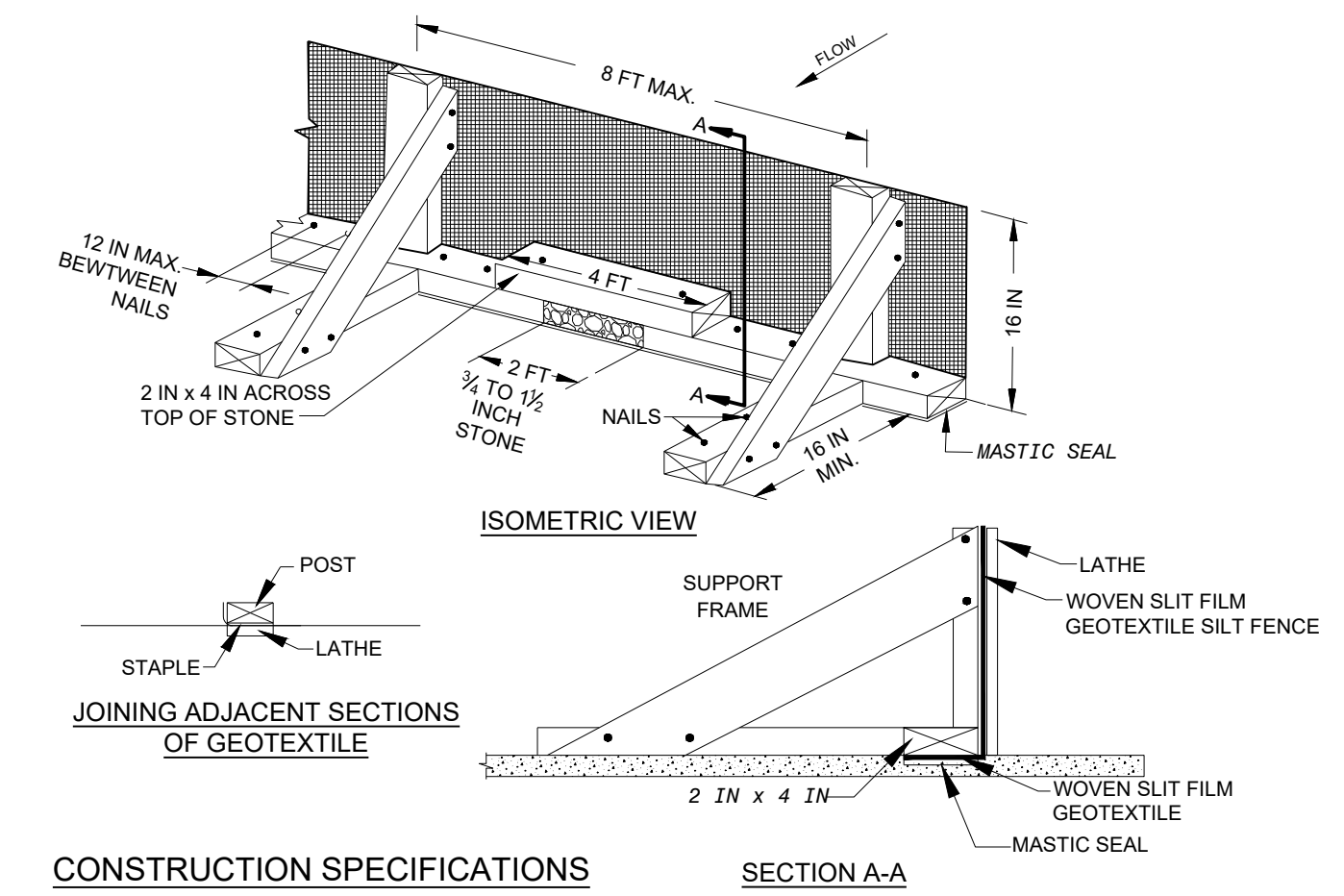
A TRAFFIC CONTROL PLANS (CONTINUED)
NO SCALE

NOTES:

- PORTABLE PUMP CAPACITY SHALL BE SUFFICIENT TO HANDLE HIGH WATER FLOWS WITHIN THE STREAM CHANNEL.
- THE WORK AREA SHALL BE DE-WATERED PRIOR TO OPEN TRENCH EXCAVATION AND UTILITY INSTALLATION.
- PUMPING SHALL BE MONITORED AT ALL TIMES DURING STREAM CHANNEL DIVERSION.
- STREAM CHANNEL SHALL BE RETURNED TO EXISTING CONDITIONS UPON COMPLETION OF CONSTRUCTION ACTIVITIES.
- ALL DISTURBED AREAS SHALL BE ADEQUATELY STABILIZED IMMEDIATELY UPON COMPLETION OF WORK WITHIN THE STREAM CHANNEL.



B STREAM DIVERSION DETAIL
NO SCALE

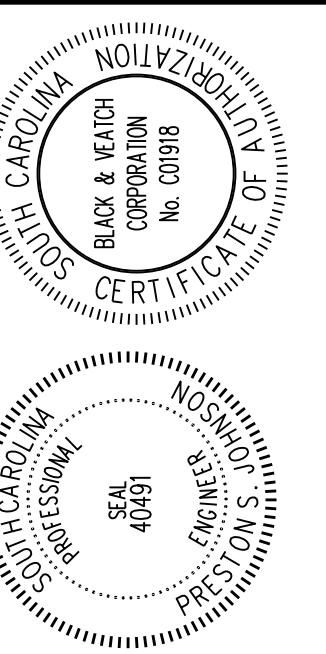


CONSTRUCTION SPECIFICATIONS

- USE NOMINAL 2 INCH X 4 INCH LUMBER.
- STANDARD STRENGTH FILTER FABRIC REQUIRES REINFORCEMENT VIA WIRE FENCE WITH A MINIMUM 14 GAUGE AND MAXIMUM MESH SPACING OF 6 INCHES. EXTRA STRENGTH FILTER FABRIC WITH 6 FEET POST SPACING (AS APPROVED BY ENGINEERS) DOES NOT REQUIRE WIRE MESH SUPPORT FENCE).
- PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- SPACE UPRIGHT SUPPORTS NO MORE THAN 10 FEET APART.
- PROVIDE A TWO FOOT OPENING BETWEEN EVERY SET OF SUPPORTS AND PLACE STONE IN THE OPENING OVER GEOTEXTILE.
- KEEP SILT FENCE TAUT AND SECURELY STAPLE TO THE UPSLOPE SIDE OF UPRIGHT SUPPORTS. EXTEND GEOTEXTILE UNDER 2x4.
- WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, FOLD, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL. ATTACH LATHE.
- PROVIDE A MASTIC SEAL BETWEEN PAVEMENT, GEOTEXTILE, AND 2x4 TO PREVENT SEDIMENT-LADEN WATER FROM ESCAPING BENEATH SILT FENCE INSTALLATION.
- SECURE BOARDS TO PAVEMENT WITH 40D 5 INCH MINIMUM LENGTH NAILS.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. MAINTAIN WATER TIGHT SEAL ALONG BOTTOM. REPLACE STONE IF DISPLACED.

C SILT FENCE ON PAVEMENT
NO SCALE

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**YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD**

CIVIL
STANDARD DETAILS
SHEET 10 OF 11

DESIGNED: RGW
DETAILED: WMT
CHECKED: CES
APPROVED: PSJ
DATE: FEBRUARY 2023

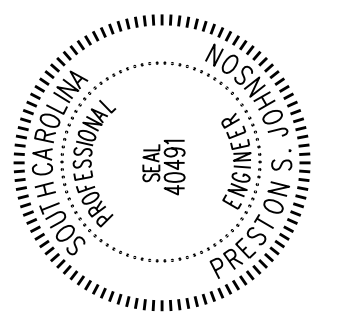
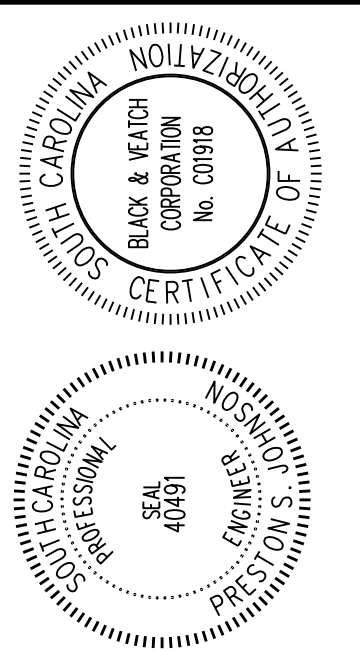
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IS NOT TO FULL SCALE

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402615
C-59
SHEET
34 OF 35

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CONSTRUCTION SEQUENCE

1. SET UP A ON-SITE PRECONSTRUCTION CONFERENCE WITH EROSION CONTROL INSPECTOR AND SCDHEC TO DISCUSS EROSION CONTROL MEASURES. FAILURE TO SCHEDULE SUCH CONFERENCE 48 HOURS PRIOR TO ANY LAND DISTURBING ACTIVITY IS A VIOLATION OF THE COUNTY CODE AND IS SUBJECT TO FINE.
2. INSTALL SILT FENCE, INLET PROTECTION, SEDIMENT TRAPS, DIVERSION DITCHES, TREE PROTECTION, AND OTHER MEASURES AS SHOWN ON PLANS, CLEARING ONLY AS NECESSARY TO INSTALL THESE DEVICES.
3. CALL 803-684-8571 FOR AN ON-SITE INSPECTION BY ENGINEERING INSPECTOR. WHEN APPROVED, ENGINEERING INSPECTOR ISSUES THE GRADING PERMIT. BEGIN CLEARING AND GRUBBING AFTER PERMIT ISSUANCE.
4. MAINTAIN EROSION CONTROL DEVICES AS NEEDED.
5. STABILIZE SITE AS AREAS ARE BROUGHT TO FINISHED GRADE.
6. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SCDHEC BMP MANUAL, U.S.DEPT. OF AGRICULTURE, U.S. SOIL CONSERVATION SERVICE.
7. THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES TO MINIMIZE EROSION.
8. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE TRAP. REMOVE SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA IN SUCH A MANNER THAT IT WILL NOT ERODE.
9. THE TRAP SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NECESSARY.
10. CONSTRUCTION OPERATION SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
11. SEDIMENT BASIN EMBANKMENTS SHALL BE SEEDED OR OTHERWISE PROPERLY STABILIZED IMMEDIATELY FOLLOWING CONSTRUCTION.
12. STORAGE AREA IS SHOWN AS RECTANGULAR FOR ILLUSTRATIVE PURPOSES ONLY, AND MAY BE CONSTRUCTED IN ANY SHAPE PROVIDED THE MINIMUM STORAGE VOLUME REQUIREMENT IS MET. THE BASIN SHOULD ALSO BE ORIENTED SUCH THAT THE FILTER AND THE MAIN FLOW OF WATER AND SEDIMENT ARE ON OPPOSITE ENDS ON THE LONGER BASIN DIMENSIONS.
13. REQUIRED SEDIMENT STORAGE IS 1800 CUBIC FEET OF STORAGE VOLUME PER DENUDED ACRE. SEE SEDIMENT TRAP DETAIL FOR WEIR SIZE AND DIMENSIONS OF EACH TRAP.
14. WHENEVER TOPOGRAPHY ALLOWS, THE TRAP LENGTH SHOULD BE TWICE (2X) THE BASIN WIDTH, TO ALLOW FOR SETTLING.
15. ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE SCDHEC EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
16. SAFETY FENCING 3' HIGH SHOULD BE PLACED AROUND ALL SEDIMENT BASINS.
17. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAT 15 DAYS AFTER WORK HAS CEASED, UNLESS ACTIVITY IN THAT PORTION OF THE SITE WILL RESUME WITHIN 30 DAYS OF DISTURBANCE. TEMPORARY GROUND COVER ON EXPOSED SLOPES SHALL BE PROVIDED WITHIN 21 CALENDAR DAYS UPON COMPLETION OF ANY PHASE OF GRADING.
18. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED EVERY 7 DAYS OR AFTER EACH RAINFALL OCCURRENCE THAT EXCEEDS 1/2 INCH. DAMAGED OR INEFFECTIVE DEVICES SHALL BE REPAIRED OR REPLACED, AS NECESSARY.
19. STOCKPILE MATERIAL SHALL BE PROVIDED WITH GROUND COVER 15 WORKING DAYS UPON COMPLETION OF ANY PHASE OF WORK.
20. ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF SCDHEC.
21. ONCE THE SITE HAS ACHIEVED FINAL STABILIZATION PER THE YORK COUNTY ENVIRONMENTAL INSPECTOR, SUBMIT THE NOT TO YORK COUNTY AND WITH THEIR APPROVAL, SUBMIT THE NOT AND MS4 CERTIFICATION LETTER TO SCDHEC.



BLACK & VEATCH
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YORK COUNTY, SOUTH CAROLINA
PHASE 1 NORTH-SOUTH WATER TM
HARPER ROAD
 CIVIL
 STANDARD DETAILS
 SHEET 11 OF 11

DESIGNED: RGW
 DETAILED: WMT
 CHECKED: CES
 APPROVED: PSJ
 DATE: FEBRUARY 2023

0 1/2 1
 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

PROJECT NO.
 402615

C-60
 SHEET
 35 OF 35

FOR BIDDING ONLY - NOT RELEASED FOR CONSTRUCTION