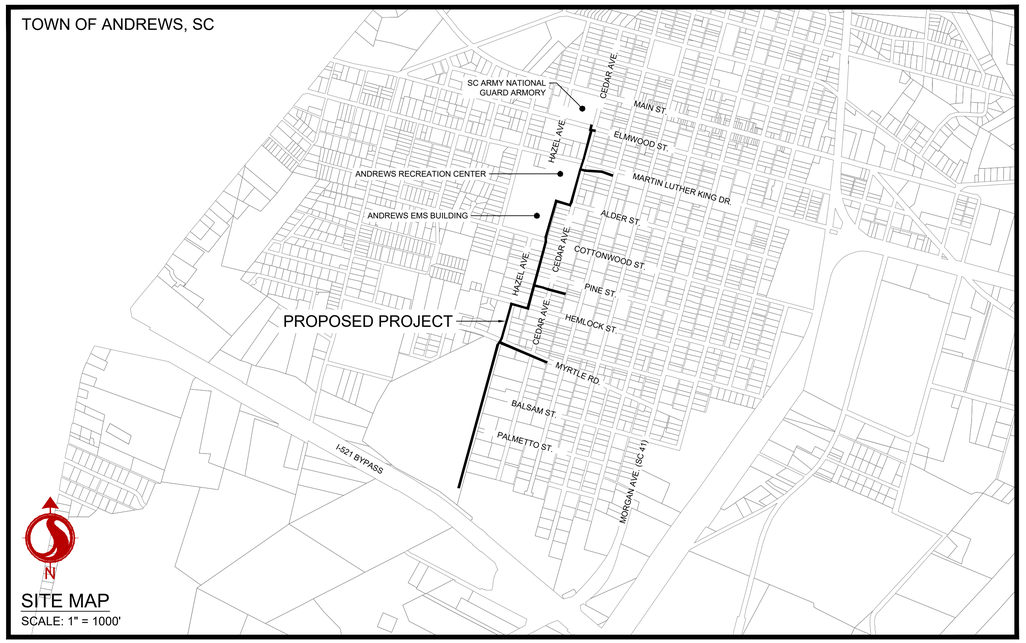
Stantec
STANTEC CONSULTING SERVICES INC.
4969 CENTRE POINTE DRIVE, SUITE 200
NORTH CHARLESTON, SC 29417
TEL 843.740.7700

CLIENT: GEORGETOWN COUNTY

108 SCREVEN STREET
GEORGETOWN, SC 29442
TRACY JONES | 843-545-3258

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS - PHASE 2

TOWN OF ANDREWS,
GEORGETOWN COUNTY,
SOUTH CAROLINA



SITE MAP
SCALE: 1" = 1000'

SHEET LIST		
SHEET	TITLE	REVISION
C0-00	COVER	1
C0-01	PROJECT NOTES	
C2-00	SHEET INDEX AND STAGING AREAS	
C2-01	DEMOLITION AND EROSION CONTROL PLAN	
C2-02	DEMOLITION AND EROSION CONTROL PLAN	
C2-03	DEMOLITION AND EROSION CONTROL PLAN	
C2-04	DEMOLITION AND EROSION CONTROL PLAN	
C2-05	DEMOLITION AND EROSION CONTROL PLAN	
C2-06	DEMOLITION AND EROSION CONTROL PLAN	
C2-07	DEMOLITION AND EROSION CONTROL PLAN	1
C2-08	DEMOLITION AND EROSION CONTROL PLAN	
C2-09	DEMOLITION AND EROSION CONTROL PLAN	
C2-10	DEMOLITION AND EROSION CONTROL PLAN	
C2-11	DEMOLITION AND EROSION CONTROL PLAN	
C2-12	DEMOLITION AND EROSION CONTROL PLAN	
C2-13	DEMOLITION AND EROSION CONTROL PLAN	
C2-14	DEMOLITION AND EROSION CONTROL PLAN	
C2-15	DEMOLITION AND EROSION CONTROL PLAN	
C2-16	DEMOLITION AND EROSION CONTROL PLAN	1
C2-17	DEMOLITION AND EROSION CONTROL PLAN	
C3-00	EROSION CONTROL DETAILS	
C3-01	EROSION CONTROL DETAILS	
C4-00	GRADING OVERALL INDEX	
C4-01	DRAINAGE PLAN AND PROFILE	
C4-02	DRAINAGE PLAN AND PROFILE	
C4-03	DRAINAGE PLAN AND PROFILE	
C4-04	DRAINAGE PLAN AND PROFILE	
C4-05	DRAINAGE PLAN AND PROFILE	
C4-06	DRAINAGE PLAN AND PROFILE	
C4-07	DRAINAGE PLAN AND PROFILE	1
C4-08	DRAINAGE PLAN AND PROFILE	
C4-09	DRAINAGE PLAN AND PROFILE	
C4-10	DRAINAGE PLAN AND PROFILE	
C4-11	DRAINAGE PLAN AND PROFILE	
C4-12	DRAINAGE PLAN AND PROFILE	1
C4-13	DRAINAGE PLAN AND PROFILE	1
C4-14	DRAINAGE PLAN AND PROFILE	
C4-15	DRAINAGE PLAN AND PROFILE	1
C4-16	DRAINAGE PLAN AND PROFILE	1
C4-17	DRAINAGE PLAN AND PROFILE	
C5-00	DRAINAGE DETAILS	
C5-01	DRAINAGE DETAILS	
C5-02	DRAINAGE DETAILS	
C5-03	DRAINAGE DETAILS	
C6-00	ROADWAY OVERALL INDEX	
C6-01	ROADWAY PLAN	
C6-02	ROADWAY PLAN	
C6-03	ROADWAY PLAN	
C6-04	ROADWAY PLAN	
C6-05	ROADWAY PLAN	
C6-06	ROADWAY PLAN	
C6-07	ROADWAY PLAN	
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C6-13	ROADWAY PLAN	
C6-14	ROADWAY PLAN	
C6-15	ROADWAY PLAN	
C6-16	ROADWAY PLAN	
C6-17	ROADWAY PLAN	
C7-00	ROADWAY DETAILS	
C7-01	ROADWAY DETAILS	
C8-00	TRAFFIC CONTROL PLAN	
C9-00	TRAFFIC CONTROL DETAILS	

ISSUED FOR CONSTRUCTION

PSR BID ADDENDUM #1	RMW	BK	2022.12.21
Revision	By	Appd	YYYY.MM.DD
ISSUED FOR CONSTRUCTION	RMW	BK	2022.06.28
Issued	By	Appd	YYYY.MM.DD
File Name: 1035_C0_COVER	SGC	SGC	BK 2020.10.09
	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal

SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 35915 MARSHALL WILKINS ROBINSON

06/28/2022

811 Know what's below. Call before you dig.

PROJECT NUMBER: 178421035

PROJECT CONTACTS			
SERVICE	MUNICIPALITY/UTILITY PROVIDER	CONTACT	PHONE
STORMWATER	GEORGETOWN COUNTY STORMWATER DIVISION	JACOB NESMITH	(843) - 545-3218
WATER AND SEWER	TOWN OF ANDREWS PUBLIC WORKS	KETRICK PORTER	(803) - 760-0083
POWER	SANTEE COOPER	JIM POSTON	(843) - 347-3399
GAS	DOMINION ENERGY TRANSMISSION	DAVID ETHRIDGE	(843)-833-2460
ROAD	SCDOT - PERMIT MANAGER	RYAN ANDERSON	(843)-546-2406

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ORIGINAL SHEET - ARCH D

GENERAL NOTES:

1. OWNER: GEORGETOWN COUNTY
TRACY JONES
108 SCREVEN STREET
GEORGETOWN, SC 29442
(843) 545-3258

2. ENGINEER: STANTEC CONSULTING SERVICES, INC
MARSHALL WYNNE, P.E.
4969 CENTRE POINTE DR, SUITE 200
NORTH CHARLESTON, SC 29418
TEL: (843) 740-7700

3. BOUNDARY, TOPOGRAPHIC & EXISTING CONDITIONS INFORMATION TAKEN FROM "TOPOGRAPHIC SURVEY SHOWING VARIOUS RIGHT OF WAYS, ALLEYS AND EASEMENTS", PREPARED FOR STANTEC CONSULTING SERVICES, INC." BY PARKER LAND SURVEYING, LLC, DATED SEPTEMBER, 2020. VERTICAL DATUM USED WAS NAVD 88.

4. CRITICAL LINE FLAGGED BY ECS LLP, INC. ON AUGUST 10, 2020.

5. GEORGETOWN COUNTY WILL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY WETLAND IMPACT PERMITS.

6. WETLANDS, CRITICAL AREAS, OTHER INDICATED ENVIRONMENTALLY SENSITIVE AREAS AND UNDISTURBED BUFFERS SHALL NOT BE DISTURBED EXCEPT WHERE SPECIFICALLY INDICATED WITHIN THESE CONSTRUCTION DOCUMENTS AND/OR AS AUTHORIZED BY THE USACE AND SCDHEC-OCRM.

7. GEORGETOWN COUNTY WILL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY EASEMENTS.

8. ALL DRAINAGE EASEMENTS TO BE DEDICATED TO GEORGETOWN COUNTY.

9. CONTRACTOR IS TO VERIFY ALL INFORMATION CONTAINED HEREIN PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OR OWNER OF ANY DISCREPANCY PRIOR TO CONSTRUCTION.

10. ALL CONSTRUCTION, METHODS, MATERIALS, AND WORKMANSHIP, NOT OTHERWISE INDICATED IN THESE PLANS, SHALL CONFORM TO GEORGETOWN COUNTY SPECIFICATIONS, LATEST EDITION. WHERE CONFLICT OCCURS BETWEEN CONSTRUCTION PLANS, SPECIFICATIONS, AND/OR FIELD CONDITIONS, CONTRACTOR IS TO CONTACT ENGINEER OR OWNER FOR CLARIFICATION PRIOR TO CONSTRUCTION.

11. CONTRACTOR TO COORDINATE WITH OWNER AND ENSURE ALL APPLICABLE CONSTRUCTION AND LAND DISTURBANCE PERMITS HAVE BEEN OBTAINED PRIOR TO COMMENCING ANY WORK.

12. CONTRACTOR TO NOTIFY TOWN OF ANDREWS PUBLIC WORKS A MINIMUM OF 48 HOURS BEFORE ANY WATER OR SEWER WORK IS TO BEGIN.

TRAFFIC NOTES:

1. LANE CLOSURES ARE REQUIRED FOR ALL WORK WITHIN ONE FOOT OF THE TRAVEL WAY. SHOULDER CLOSURES ARE REQUIRED FOR ALL WORK FROM ONE FOOT TO FIFTEEN FEET FROM THE TRAVEL WAY.

SEQUENCE OF CONSTRUCTION:

1. RECEIVE NPDES COVERAGE FROM SCDHEC.
2. NOTIFY SCDOT, PRE-CONSTRUCTION MEETING.
3. NOTIFY DHEC EQC REGIONAL OFFICE 48 HOURS PRIOR TO BEGINNING LAND-DISTURBING ACTIVITIES.
4. INSTALLATION OF TREE PROTECTION, PERIMETER SILT FENCE, AND EROSION CONTROL MEASURES.
5. POTHOLE UTILITY LOCATIONS AS SHOWN ON THE PLANS, LOCATE SEWER SERVICES FOR EACH RESIDENCE, AND NOTIFY OWNER/ENGINEER OF CONFLICTS.
6. INSTALLATION OF COFFERDAMS (AS REQUIRED)
7. INSTALLATION OF NEW STORMWATER PIPES AND STRUCTURES.
8. CONSTRUCT DIVERSION SWALES AS NECESSARY TO CONVEY THE STORM WATER BEFORE THE PROPOSED STORM DRAINAGE SYSTEM IS FULLY FUNCTIONAL, INSTALLING SEDIMENT TUBES IF NECESSARY.
9. INSTALL PERIMETER SILT FENCE WHERE SEDIMENT IS OBSERVED TO BE LEAVING CONSTRUCTION AREAS. MAINTAIN PERIMETER SILT FENCE, DIVERSIONS, AND SEDIMENT TUBES.
10. PERMANENT/FINAL STABILIZATION OF DITCHES/SWALES WITH SEEDING AND/OR SOD.
11. REPLACE DAMAGED OR DEMOLISHED HARDSCAPE AND LANDSCAPE IN-KIND AS REQUIRED.
12. MAINTENANCE OF SEDIMENT AND EROSION CONTROL MEASURES MUST CONTINUE UNTIL THE SITE IS PERMANENTLY STABILIZED AND THE CONTROLS ARE REMOVED.
13. CONTACT GEORGETOWN COUNTY FOR FINAL INSPECTION AND CLOSE-OUT OF PROJECT. AS-BUILT, VIDEO AND CLOSE-OUT APPLICATION TO BE SUBMITTED FOR REVIEW AND APPROVAL AS REQUIRED BY GEORGETOWN COUNTY.
14. REMOVAL OF TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES AFTER ENTIRE WORK AREA IS FINALLY STABILIZED (THE DEPARTMENT RECOMMENDS THAT THE PROJECT OWNER/OPERATOR HAVE THE SWPPP PREPARER OR REGISTRATION EQUIVALENT APPROVE THE REMOVAL OF TEMPORARY STRUCTURES).
15. SUBMIT TO DHEC FOR N.O.T. WITHIN 30 DAYS OF FINAL STABILIZATION.

SAFETY NOTES:

1. DURING THE CONSTRUCTION AND MAINTENANCE OF THE THIS PROJECT, ALL SAFETY REGULATIONS SHALL BE ENFORCED. THE CONTRACTOR OR HIS REPRESENTATIVE SHALL BE RESPONSIBLE FOR THE CONTROL AND SAFETY OF THE TRAVELING PUBLIC AND THE SAFETY OF HIS PERSONNEL.
2. THE CONTRACTOR'S MAINTENANCE OF TRAFFIC PLAN MUST BE SUBMITTED AND APPROVED BY THE SCDOT AND APPLICABLE LOCAL AGENCIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
3. LABOR SAFETY REGULATIONS SHALL CONFORM TO THE PROVISIONS SET FORTH BY OSHA IN THE FEDERAL REGISTER OF THE DEPARTMENT OF TRANSPORTATION.
4. CONTRACTOR SHALL PROVIDE AND MAINTAIN HIS OWN SAFETY EQUIPMENT IN ACCORDANCE WITH HIS HEALTH AND SAFETY PROGRAM AND ALL OTHER APPLICABLE LEGAL AND HEALTH AND SAFETY REQUIREMENTS. THE CONTRACTOR IS ALSO RESPONSIBLE FOR PROVIDING IT'S EMPLOYEES AND SUB CONTRACTORS WITH ADEQUATE INFORMATION AND TRAINING TO ENSURE THAT ALL EMPLOYEES AND SUB CONTRACTORS AND SUB CONTRACTOR'S EMPLOYEES COMPLY WITH ALL APPLICABLE REQUIREMENTS. CONTRACTOR SHALL REMAIN IN COMPLIANCE WITH ALL OCCUPATION SAFETY AND HEALTH REGULATIONS AS WELL AS THE ENVIRONMENTAL PROTECTION LAWS. THE FOLLOWING IS NOT TO BE PERCEIVED AS THE ENTIRE SAFETY PROGRAM BUT JUST BASIC REQUIREMENTS.
5. ALL EXCAVATIONS BY THE CONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF THE DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AN REGULATIONS. PARTICULAR ATTENTION MUST BE PAID TO THE CONSTRUCTION STANDARDS FOR EXCAVATIONS, 29 CFR PART 1926, SUBPART P.
6. THE MINIMUM STANDARDS AS SET FORTH IN THE CURRENT EDITION OF "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) BE FOLLOWED IN THE DESIGN APPLICATION, INSTALLATION, MAINTENANCE AND REMOVAL OF ALL TRAFFIC CONTROL DEVICES, WARNING DEVICES AND BARRIERS NECESSARY TO PROTECT THE PUBLIC AND WORKMEN FROM HAZARDS WITHIN THE PROJECT LIMITS.
7. ALL TRAFFIC CONTROL MARKINGS AND DEVICES SHALL CONFORM TO THE PROVISIONS SET FORTH IN THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PREPARED BY THE US DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION. ALL SOUTH CAROLINA AMENDMENTS SHALL APPLY.
8. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY AND ENFORCE ALL APPLICABLE SAFETY REGULATION. THE ABOVE INFORMATION HAS BEEN PROVIDED FOR THE CONTRACTOR'S INFORMATION ONLY AND DOES NOT IMPLY THAT THE OWNER OR ENGINEER WILL INSPECT AND/OR ENFORCE SAFETY REGULATION.
9. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN AREAS OF BURIED UTILITIES AND SHALL PROVIDE AT LEAST 48 HOURS NOTICE TO THE UTILITY COMPANIES PRIOR TO CONSTRUCTION TO OBTAIN FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES.
10. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FACILITIES, ABOVE OR BELOW GROUND, THAT MAY OCCUR AS A RESULT OF THE WORK PERFORMED BY THE CONTRACTOR CALLED FOR IN THIS CONTRACT.

CLEARING AND DEMOLITION:

1. THE CONTRACTOR SHALL CLEAR AND GRUB ONLY THOSE PORTIONS OF THE SITE NECESSARY FOR CONSTRUCTION. DISTURBED AREAS WILL BE SEEDED, MULCHED, SODDED OR PLANTED WITH OTHER APPROVED LANDSCAPE MATERIAL IMMEDIATELY FOLLOWING CONSTRUCTION.
2. THE TOP 6" OF GROUND REMOVED DURING CLEARING AND GRUBBING SHALL BE STOCKPILED AT A SITE DESIGNATED BY THE OWNER OR THE OWNER'S ENGINEER, UNLESS OTHERWISE DIRECTED BY THE OWNER OR THE OWNER'S ENGINEER. THE REMAINING EARTHWORK THAT RESULTS FROM CLEARING AND GRUBBING OR SITE EXCAVATION IS TO BE UTILIZED ON-SITE IF REQUIRED, PROVIDED THAT THE MATERIAL IS DEEMED SUITABLE FOR CONSTRUCTION BY THE OWNER'S SOILS TESTING COMPANY. EXCESS MATERIAL IS TO BE EITHER STOCKPILED ON THE SITE AS DIRECTED BY THE OWNER, OR REMOVED FROM THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING EXCESS EARTHWORK FROM THE SITE.
3. ALL CONSTRUCTION DEBRIS AND OTHER WASTE MATERIALS SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH APPLICABLE REGULATORY AGENCY REQUIREMENTS OR AS DIRECTED BY THE OWNER.

SHOP DRAWING SUBMITTAL:

1. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE OWNER'S ENGINEER; 2 SETS OF HARD COPIES AND 1 ELECTRONIC FOR REVIEW.
   1.1. THE CONTRACTOR, OR THE CONTRACTORS SUPPLIER, MUST INCLUDE WITH THE SHOP DRAWING SUBMITTAL A REFERENCE TO THE GOVERNING MUNICIPALITIES STANDARDS SHOWING COMPLIANCE WITH SAID MUNICIPALITIES REQUIREMENTS.
      1.1.1. ie, SHOP DRAWING SUBMITTAL FOR A FIRE HYDRANT SHALL INCLUDE A REFERENCE TO "CHARLESTON WATER SYSTEM - MINIMUM STANDARDS FOR THE DESIGN AND CONSTRUCTION OF WATER AND SANITARY SEWER SYSTEM - SECTION 10.B.1.o". OR MORE SIMPLY "CWS - 10.B.1.o"
      1.1.2. THIS SHALL BE COMPLETED FOR EVERY SUBMITTAL TO ASSURE AN EXPEDITED REVIEW OF SHOP DRAWINGS.
2. SHOP DRAWINGS WILL BE REVIEWED AND RETURNED TO THE CONTRACTOR WITHIN 15 BUSINESS DAYS FROM CONFIRMED RECEIPT BY THE OWNER OR THE OWNERS ENGINEER.
3. SHOP DRAWINGS NOT RECEIVED IN THE PROPER FORMAT WILL BE RETURNED TO THE CONTRACTOR FOR REVISIONS PRIOR TO REVIEW.

AS-BUILT NOTE:

THE CONTRACTOR SHALL PROVIDE AN AS-BUILT SURVEY OF THE SITE (TIED TO THE STATE PLANE COORDINATE SYSTEM), TO INCLUDE ALL STORM DRAINAGE LINES, BOTH EXISTING AND NEWLY INSTALLED. SURVEY SHALL ALSO INCLUDE THE PIPE SIZE, MATERIAL, AND INVERT ELEVATIONS, IN COMPLIANCE WITH THE GEORGETOWN COUNTY REQUIREMENTS AND NPDES PERMIT.

NO GEOTECHNICAL REPORT:

1. ASPHALT/PAVEMENT SECTIONS SHOWN ON PLANS AND DETAILS ARE ASSUMED AND SHALL BE VERIFIED WITH GEOTECHNICAL ANALYSIS BY THE CONTRACTOR PRIOR TO INSTALLATION.
2. CONTRACTOR TO ASSUME 12 INCHES OF UNDERCUT AND BACKFILL TO BRING TO GRADE.
3. OWNER TO PROCURE GEOTECHNICAL REPORT

WATER AND SEWER NOTES:

1. ALL WATER AND SEWER RELOCATIONS SHALL COMPLY WITH GEORGETOWN COUNTY WATER AND SEWER DISTRICT (GCWSD) LATEST GUIDELINES AND STANDARDS.
2. SEE DETAILS FOR TYPICAL UTILITY CROSSING REQUIREMENTS.
3. CONTRACTOR TO COORDINATE PRE-CONSTRUCTION MEETING WITH TOWN OF ANDREWS PUBLIC WORKS BEFORE UTILITY RELOCATIONS COMMENCE.
4. WATER LINE AND WASTEWATER UTILITY LINE SHALL BE PVC UNLESS VERTICAL SEPARATION DISTANCE BETWEEN STORMWATER LINE IS LESS THAN 18", THEN USE DIP.
5. ALL UTILITY LINES SHALL BE CENTERED TO ALLOW FOR THE GREATEST DISTANCE BETWEEN PIPE JOINTS.
6. MATERIAL BETWEEN LINES SHALL BE COMPACTED TO PREVENT SETTLING OF ABOVE PIPING.
7. USE PVC UNLESS SEPARATION DISTANCE BETWEEN WATER AND SANITARY SEWER LINE IS LESS THAN 18". IF SEPARATION DISTANCE CAN NOT BE MAINTAINED, THEN USE D.I.P.
8. WHEN POSSIBLE, POTABLE WATER LINE SHALL CROSS ABOVE SANITARY SEWER LINE.

PAVING AND GRADING

1. ALL DELETERIOUS SUBSURFACE MATERIAL (I.E. MUCK, PEAR, BURIED DEBRIS) IS TO BE EXCAVATED IN ACCORDANCE WITH THESE PLANS OR AS DIRECTED BY THE OWNER, THE OWNER'S ENGINEER, OR OWNER'S SOIL TESTING COMPANY. DELETERIOUS MATERIAL IS TO BE STOCKPILED OR REMOVED FROM THE SITE AS DIRECTED BY THE OWNER OR THE OWNER'S ENGINEER. EXCAVATED AREAS TO BE BACKFILLED WITH APPROVED MATERIALS AND COMPACTED AS SHOWN ON THESE PLANS. CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING DELETERIOUS MATERIAL FROM THE SITE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND WILL PROVIDE BRACING SHEETING OR SHORING AS NECESSARY. DEWATERING METHODS SHALL BE USED AS REQUIRED TO KEEP TRENCHES DRY WHILE PIPE AND APPURTENANCES ARE BEING PLACED.
3. ALL NECESSARY FILL AND EMBANKMENT THAT IS PLACED DURING CONSTRUCTION SHALL CONSIST OF MATERIAL SPECIFIED BY THE OWNER'S SOIL TESTING COMPANY OR ENGINEER AND BE PLACED AND COMPACTED ACCORDING TO THESE PLANS OR THE REFERENCED SOILS REPORT.
4. PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADE UNLESS OTHERWISE NOTED ON DRAWINGS.
5. UNLESS OTHERWISE NOTED, ALL GRADING, ROCKING AND PAVING TO CONFORM TO SCDOT STANDARD SPECIFICATIONS, LATEST EDITION.
6. CLEAR AND GRUB WITHIN WORK LIMITS ALL SURFACE VEGETATION, TREES, STUMPS, BRUSH, ROOTS, ETC. DO NOT DAMAGE OR REMOVE TREES EXCEPT AS APPROVED BY THE APPROPRIATE MUNICIPAL AUTHORITY OR AS SHOWN ON THE DRAWINGS. PROTECT ALL ROOTS.
7. STRIP WORK LIMITS, REMOVING ALL ORGANIC MATTER WHICH CANNOT BE COMPACTED INTO A STABLE MASS. ALL TREES, BRUSH AND DEBRIS ASSOCIATED WITH CLEARING, STRIPPING OR GRADING SHALL BE REMOVED AND DISPOSED OF OFF-SITE BY THE CONTRACTOR.
8. IMMEDIATELY FOLLOWING FINE GRADING OPERATIONS, COMPACT SUBGRADE TO 95% OF THE MAXIMUM DRY DENSITY PER AASHTO T-180.
9. ALL FILLS WITHIN PUBLIC RIGHT-OF-WAYS AND EASEMENTS SHALL BE ENGINEERED. ADDITIONALLY, ANY FILLS OUTSIDE OF PUBLIC RIGHT-OF-WAYS WHICH ARE OVER 2 FEET IN DEPTH SHALL BE ENGINEERED. ENGINEERED FILLS SHALL BE CONSTRUCTED IN 6" LIFTS. EACH LIFT SHALL BE COMPACTED TO 95 % OF THE MAXIMUM DRY DENSITY PER AASHTO T-180 TEST METHOD (MODIFIED PROCTOR).
10. UNLESS OTHERWISE SHOWN ON THE DRAWINGS, STRAIGHT GRADES SHALL BE RUN BETWEEN ALL FINISH GRADE ELEVATIONS AND/OR FINISH CONTOUR LINES SHOWN. FINISH PAVEMENT GRADES AT TRANSITION TO EXISTING PAVEMENT SHALL MATCH EXISTING PAVEMENT GRADES OR BE FEATHERED PAST JOINTS WITH EXISTING PAVEMENT AS REQUIRED TO PROVIDE A SMOOTH, FREE DRAINING SURFACE.
11. CRUSHED ROCK SHALL CONFORM TO THE REQUIREMENTS OF SECTION 02630 (BASE AGGREGATE) SCDOT STANDARD SPECIFICATIONS. COMPACT TO 95% OF THE MAXIMUM DRY DENSITY PER AASHTO T-180 TEST METHOD (MODIFIED PROCTOR). A.C. PAVEMENT SHALL CONFORM TO SECTION 00745 (ASPHALT CONCRETE PAVEMENT) SCDOT STANDARD SPECIFICATIONS FOR STANDARD DUTY MIX. A.C. PAVEMENT SHALL BE COMPACTED TO A MINIMUM OF 91% OF MAXIMUM DENSITY AS DETERMINED BY THE RICE STANDARD METHOD.
12. ALL EXISTING OR CONSTRUCTED MANHOLES, CLEANOUTS, MONUMENTS, GAS VALVES, WATER VALVES AND SIMILAR STRUCTURES SHALL BE ADJUSTED TO MATCH FINISH GRADE OF THE PAVEMENT, SIDEWALK, LANDSCAPED AREA WHEREIN THEY LIE.
13. IF WIND EROSION BECOMES SIGNIFICANT DURING CONSTRUCTION, THE CONTRACTOR SHALL STABILIZE THE AFFECTED AREA USING SPRINKLING, IRRIGATION OR OTHER ACCEPTABLE METHODS.
14. ENGINEERED FILL MATERIAL SHALL NOT CONTAIN ROCKS OR HARD LUMPS GREATER THAN 3 INCHES IN MAXIMUM DIMENSIONS AND SHALL BE FREE OF VEGETATION, ORGANIC MATTER, DEBRIS, RUBBLE AND OTHER UNSUITABLE MATERIALS AND SHALL BE APPROVED BY GEOTECHNICAL ENGINEER.
15. IMPORTED SOILS FOR USE AS ENGINEERED FILL SHALL BE NON-EXCLUSIVE MATERIALS AND SHALL NOT CONTAIN ROCKS OR HARD LUMPS GREATER THAN 3 INCHES IN MAXIMUM DIMENSIONS AND SHALL BE FREE OF VEGETATION, ORGANIC MATTER, DEBRIS, RUBBLE, AND OTHER UNSUITABLE MATERIALS.
16. AGGREGATE BASE MATERIAL SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

SIEVE SIZE (PER ASTM D422)	PERCENT PASSING BY WEIGHT
1 INCH	100
3/4	90-100
No. 8	35-55
No. 200	0-8

17. ALL AREAS TO RECEIVE FILL, AND AREAS OF STRUCTURES AND PAVEMENTS, SHALL BE STRIPPED OF VEGETATION, ORGANIC MATER, DEBRIS, RUBBLE, AND OTHER UNSUITABLE MATERIALS. STRIPPED SOILS SHALL NOT BE USED IN ENGINEERED FILL, BUT MAY BE USED IN LANDSCAPE AREAS.

- ENGINEERED FILL MATERIAL SHALL BE COMPACTED TO AT LEAST THE FOLLOWING PERCENTAGES OF MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT, PER ASTM D698 (STANDARD PROCTOR)

ENGINEERED FILL MATERIAL	MINIMUM PERCENT COMPACTION	MOISTURE CONTENT (RANGE)
NATIVE SOIL	90%	OPTIMUM TO OPTIMUM PLUS 3%
ENGINEERED FILL UNDER STRUCTURES AND BEHIND RETAINING WALLS	95%	OPTIMUM TO OPTIMUM PLUS 3%
ENGINEERED FILL UNDER PAVEMENTS	95%	OPTIMUM TO OPTIMUM PLUS 2%
FILL IN LANDSCAPE AREAS	95%	2 TO 5% ABOVE OPTIMUM

- AGGREGATE BASE COURSE SHALL BE COMPACTED TO AT LEAST THE FOLLOWING PERCENTAGES OF MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT, PER AASHTO T180 (MODIFIED PROCTOR)

ENGINEERED FILL MATERIAL	MINIMUM PERCENT COMPACTION	MOISTURE CONTENT (RANGE)
AGGREGATE BASE MATERIAL OR IMPORTED GRANULAR SOIL IN BUILDING AND PAVEMENT AREAS	100%	OPTIMUM PLUS OR MINUS 2%

- NOTE: MOISTURE CONTENT OF ENGINEERED FILL MATERIAL MAY REQUIRE ADJUSTMENT DURING CONSTRUCTION TO PREVENT SOIL PUMPING.

18. ENGINEERED FILL SHALL BE PLACED IN LIFTS NO GREATER THAN 6 INCHES THICK (LOOSE).
19. THE TOP 6 INCHES OF SOIL EXPOSED AT THE BOTTOM OF THE EXCAVATIONS SHALL BE COMPACTED, SCARIFIED AND COMPACTED AS ENGINEERED FILL PRIOR TO PLACEMENT OF ADDITIONAL FILL.
20. IF SOFT OR LOOSE SOIL IS PRESENT AT THE BASE OF EXCAVATIONS, IT SHALL BE EXCAVATED AND/OR COMPACTED AS ENGINEERED FILL OR AS RECOMMENDED BY THE GEOTECHNICAL FIELD REPRESENTATIVE.
21. IF SUBGRADE SOILS EXHIBIT PUMPING DURING COMPACTION, THE AREA SHALL BE ALLOWED TO DRY UNTIL THE SOLIDS BECOME WORKABLE WITHOUT PUMPING. THE MOISTURE CONTENT OF THE SOILS SHALL BE ADJUSTED TO PREVENT PUMPING.
22. EXPOSURE TO THE ENVIRONMENT MAY REDUCE THE STRENGTH OF SOILS IN PAVED AREAS. IF THIS OCCURS, THE SOFTENED SOILS SHALL BE REMOVED AND REWORKED IMMEDIATELY PRIOR TO CONCRETE PLACEMENT. IF RAINFALL IS EXPECTED AT A TIME WHEN BEARING SOILS IN FOOTING AREAS ARE EXPOSED, A 2 TO 4 INCH THICK LAYER OF LEAN CONCRETE MAY BE PLACED IN SUCH AREA.
23. THE SITE SHALL BE GRADED TO TRANSPORT SURFACE RUNOFF AWAY FROM THE PAVED AREAS. WATER SHALL NOT BE ALLOWED TO ACCUMULATE (POND) ON PAVED AREAS.
24. BACKFILL AND FILL SHALL CONFORM TO THE GENERAL REQUIREMENTS FOR SOIL MATERIALS ABOVE AND SHALL BE CLASSIFIED AS GW, GP, GM, GC, SW, SP, SM, SC, ML, CL BY ASTM D2487 AND SHALL CONFORM TO THE FOLLOWING:
   24.1. SHALL BE CAPABLE OF BEING COMPACTED TO THE SPECIFIED DEGREE OF COMPACTION WHEN THE MOISTURE CONTENT IS WITHIN 3 PERCENTAGE POINTS OF THE OPTIMUM PERCENT MOISTURE.
   24.2. LIQUID LIMIT SHOULD NOT EXCEED 40 PERCENT WHEN TESTED IN ACCORDANCE WITH ASTM D4318.
   24.3. PLASTICITY INDEX SHOULD NOT BE GREATER THAN 30 PERCENT WHEN TESTED IN ACCORDANCE WITH ASTM D4318.
   24.4. NO MORE THAN 75 PERCENT BY WEIGHT SHALL BE FINER THAN NO. 200 SIEVE WHEN TESTED IN ACCORDANCE WITH ASTM D1140.
25. UNSUITABLE SOIL SHALL BE ANY SOIL MATERIALS DETERMINED BY THE INDEPENDENT GEOTECHNICAL LABORATORY AS NOT CONFORMING TO THE REQUIREMENTS DESCRIBED ABOVE FOR BACKFILL AND FILL. A MOISTURE CONTENT WHICH IS MORE THAN 3 PERCENTAGE POINTS FROM OPTIMUM SHALL NOT BE CONSIDERED UNSUITABLE IF SUCH MATERIALS WOULD OTHERWISE BE SUITABLE IF THE MOISTURE CONTENT WERE ADJUSTED. ADJUSTMENTS TO THE SOIL MOISTURE CONTENT BY DRYING, MIXING, ADDING WATER, OR OTHER MEANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
26. MEASUREMENT OF UNSUITABLE MATERIAL: THE VOLUME OF UNSUITABLE MATERIAL EXCAVATION SHALL BE DETERMINED BY A LICENSED SURVEYOR BY THE AVERAGE END AREA METHOD. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A SCALED PLAN WITH SUFFICIENT ELEVATION POINTS TO ACCURATELY DEFINE THE VOLUME OF UNSUITABLE MATERIAL EXCAVATED. THE EXTENT OF UNSUITABLE MATERIAL EXCAVATION SHALL BE DETERMINED BY THE INDEPENDENT GEOTECHNICAL LABORATORY.

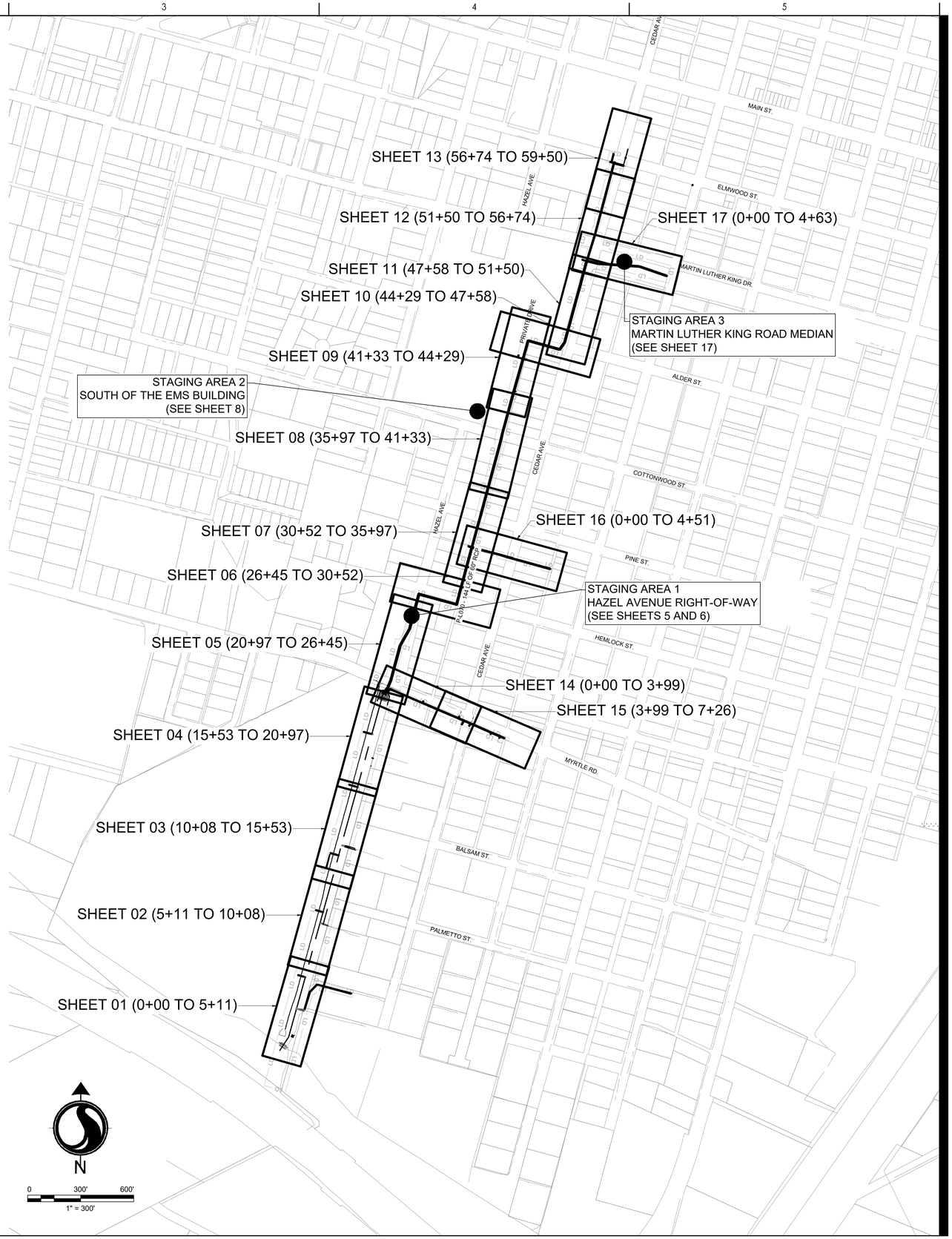
DRAINAGE NOTES:

1. ALL NEW STORM PIPES, BEDDING, TRENCHING, STORM BOXES, ETC. IN THE RIGHTS-OF-WAY AND/OR CITY OWNED AND MAINTAINED DRAINAGE EASEMENTS SHALL BE INSTALLED PER CURRENT SCDOT SPECIFICATIONS. LOCATED ON THE INTERNET AT http://www.scdot.org/doing/construction_standardspec.aspx. STANDARD SCDOT DETAIL DRAWINGS CAN BE LOCATED AT THE FOLLOWING WEBSITE, http://www.scdot.org/doing/sd_book.aspx.
2. ALL REINFORCED CONCRETE PIPE SHALL, AT A MINIMUM, BE ASTM C76, CLASS III.
3. REINFORCED CONCRETE PIPE INSTALLED UNDER PAVEMENT AND/OR PARALLEL TO THE EDGE OF PAVEMENT IN PUBLIC RIGHTS-OF-WAY SHALL HAVE O-RING JOINTS IN ACCORDANCE WITH ASTM C443 AND/OR AASHTO M315. THE JOINTS SHALL BE SECURELY WRAPPED WITH FILTER FABRIC 18" IN WIDTH.
4. SUBMERGED DRAINAGE SYSTEMS SHALL HAVE O-RING JOINTS IN ACCORDANCE WITH ASTM C C443 AND/OR AASHTO M315. THE JOINTS SHALL BE SECURELY WRAPPED WITH FILTER FABRIC 18" IN WIDTH.
5. WHERE TONGUE AND GROOVE STORM PIPE IS ALLOWED, REINFORCED CONCRETE PIPE SHALL BE PER ASTM C 76, CLASS III. JOINTS SHALL BE SEALED WITH RAMNECK OR EQUIVALENT PER AASHTO M198. THE JOINTS SHALL BE SECURELY WRAPPED WITH FILTER FABRIC 18" IN WIDTH.
6. ALL NEW STORM DRAINAGE LINES SHALL BE LAID UPGRADE AFTER CONFIRMATION OF EXISTING INVERT ELEVATION.
7. GEORGETOWN COUNTY MAINTAINS THE RIGHT TO ALLOW ALTERNATE PIPE INSTALLATIONS OR TYPE OF PIPE FOR ALL PROJECTS ON A CASE-BY-CASE BASIS FOR ANY PIPES TO BE INSTALLED IN AN EXISTING OR PROPOSED CITY ROAD RIGHT-OF-WAY AND-OR DRAINAGE EASEMENT.
8. PIPE LENGTHS SHOWN ARE APPROXIMATE AND CENTER TO CENTER ON DRAINAGE STRUCTURES OR TO END OF PIPE. CONTRACTOR SHALL VERIFY ALL QUANTITIES PRIOR TO SUBMITTAL OF BID.
9. ALL STORM DRAIN PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER PRIOR TO THE PLACEMENT OF BACKFILL. CONTRACTOR TO NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE INSPECTIONS.
10. THE CONTRACTOR SHALL MAINTAIN AND PROTECT FROM MUD, DIRT, DEBRIS, ETC THE STORM DRAINAGE SYSTEM UNTIL FINAL ACCEPTANCE OF THE PROJECT. THE CONTRACTOR MAY BE REQUIRED TO RECLEAN PIPES AND INLETS FOR THESE PURPOSES.
11. FOR CONSTRUCTION OF THE DROP INLET WALLS EITHER BRICK MASONRY OR CLASS 3000 CONCRETE MAY BE USED. FOR CONCRETE THE WALLS ARE TO BE 6" THICK WITH A REINFORCING STEEL AREA OF 0.20 SQ. INCH PER FT. FOR BRICK THE WALLS ARE TO BE 8" THICK.
12. THE BOTTOM SLAB OF THE BOX SHALL BE A MINIMUM OF 6 IN. THICK CLASS 3000 CONCRETE WITH A REINFORCING STEEL AREA OF 0.20 SQ. INCH PER FT. WIRE MESH MAY BE USED IN LIEU OF STEEL BARS PROVIDED A MINIMUM OF 0.20 SQ. IN. PER FT. IS MET.
13. MORTAR SHALL BE TYPE S OR M.
14. IF DESIRED THESE ITEMS MAY BE PRECAST PRIOR TO INSTALLATION IN LIEU OF BEING CAST IN PLACE. THE USE OF PRECAST UNITS WILL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF OBTAINING SATISFACTORY INSTALLATIONS. SEE SCDOT STANDARD DRAWINGS FOR PRECAST CONCRETE DRAINAGE BOX FOR ADDITIONAL DETAILS AND SPECIFICATIONS.
15. REINFORCING STEEL SHALL BE DEFORMED AND SHALL CONFORM TO AASHTO M 31, GRADE 60. WIRE MESH SHALL CONFORM TO AASHTO M 55 AND M 221.
16. IF STRUCTURE DEPTH EXCEEDS 4'-6", METAL STEPS ARE TO BE PLACED ON WALL. SEE STEP STANDARD DRAWING 719-16.
17. CASTING SHALL CONFORM TO AASHTO M 105, CLASS 35B AND THE ALTERNATE LOAD TEST OF AASHTO M 306. CASTINGS SHALL ALSO MEET THE LOADING REQUIREMENTS OF FEDERAL SPECIFICATION RR-F-621 (LATEST EDITEDN).
   a. STEEL GRATES AND FRAME MAY BE USED IN LIEU OF CAST IRON AS LONG AS THE LOADING AND HYDRAULIC REQUIREMENTS ARE MET, AND ARE ON SCDOT LIST OF APPROVED SUPPLIERS.
   b. STEEL GRATES SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH AASHTO M 111.
   c. STEEL GRATES AND FRAMES SHALL BE DIMENSIONED TO BE INTERCHANGEABLE WITH EACH PIECE OF THE CAST IRON GRATE AND FRAME SHOWN, MUST HAVE A POSITIVE MEANS TO RETAIN THE GRATE IN THE FRAME.
   d. STRENGTH REQUIREMENTS OF STEEL GRATES AND FRAMES MUST MEET FEDERAL SPECIFICATION RR-F-621 (LATEST EDITION).
18. THE LONGEST DIMENSIONS OF THE OPENING IN THE IRON GRATE SHOULD BE ORIENTED IN THE DIRECTION OF FLOW IF PRACTICAL.
19. AS SHOWN BY THIS DRAWING THE FRAME IS SET LEVEL, BUT THE ENGINEER MAY SET SAME ON SLOPE AS REQUIRED BY LOCAL DRAINAGE CONDITIONS.
20. AFTER THE FRAME IS SET IN ITS FINAL POSITION, IT IS TO BE ENCASED WITH CONCRETE AS SHOWN BY DRAWING.
21. THE INSIDE OF THE OUTLET PIPE SHALL BE FLUSH WITH FLOOR OF BASIN, UNLESS OTHERWISE SHOWN ON PLANS (SUMP).
22. THE SOFFIT (INSIDE TOP OF PIPE) OF THE OUTLET PIPE SHOULD BE NO HIGHER THAN THE SOFFIT OF THE INLET PIPE, UNLESS OTHERWISE SHOWN ON PLANS.
23. SHOULD THE CONTRACTOR ENCOUNTER UNSUITABLE MATERIAL, THEN THE CONTRACTOR WILL ENGAGE AN INDEPENDENT GEOTECHNICAL ENGINEER TO VERIFY UNSUITABLE MATERIAL AND MAKE RECOMMENDATIONS ON THE REMOVAL AND THE PLACEMENT AND TYPE OF NEW BEDDING AND BACKFILL MATERIAL. THE RECOMMENDATIONS BY THE INDEPENDENT GEOTECHNICAL ENGINEER SHALL BE SUBMITTED TO THE OWNER AND CIVIL ENGINEER FOR CONCURRENCE PRIOR TO PROCEEDING WITH WORK.

EROSION CONTROL NOTES:

1. IF NECESSARY, SLOPES WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD 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

STAGING NOTES:
1. STAGING AREAS ARE PROVIDED AS POSSIBLE OPTIONS ONLY. PERMISSION AND APPROVAL REQUIRED FROM THE TOWN OF ANDREWS AND GEORGETOWN COUNTY BEFORE AREAS ARE UTILIZED.
2. CONTRACTOR TO COORDINATE WITH TOWN OF ANDREWS AND GEORGETOWN COUNTY ON PREFERRED STAGING AREAS.
3. CONTRACTOR TO RESTRICT ACCESS TO STAGING AREAS WITH MINIMUM 6 FOOT CHAIN LINK FENCE AND LOCKED ACCESS GATE.
4. CONTRACTOR SHALL HYDROSEED AND REPAIR ANY DISTURBED AREA DUE TO STAGING AND LAYDOWN ACTIVITY.



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PER BID ADDENDUM #1	RMW	BK	2022.12.21
ISSUED FOR CONSTRUCTION	RMW	BK	2022.06.28
Issued	By	Appd	YYYY.MM.DD
File Name: 1035_C2_DEMO_STAGING_INDEX	SGC	SGC	BK 2020.10.09
	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION STANTEC CONSULTING SERVICES, INC. No. C003101

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 35501 ROBERT MARSHALL WYNNE

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
SHEET INDEX AND STAGING AREAS

Project No.
178421035

Scale

Revision

Sheet
C2-00 of 65

Drawing No.
C2-00

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ORIGINAL SHEET - ARCH D

DEMOLITION AND EROSION CONTROL NOTES

1. TOTAL LIMITS OF DISTURBANCE: 13.2 AC
2. CONTRACTOR TO POTHOLE & VERIFY EX. UTILITY LOCATIONS AND DEPTHS BEFORE CONSTRUCTION BEGINS. NOTIFY ENGINEER/OWNER OF CONFLICTS.
3. CONTRACTOR TO COORDINATE RELOCATIONS WITH PERTINENT UTILITY COMPANIES.
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5. CONTRACTOR TO CREATE SWALES AS NEEDED TO DIVERT STORMWATER TO CATCH BASIN EROSION CONTROL INLET FILE

LIMITS OF DISTURBANCE

TRANSITION TO DOUBLE ROW SILT FENCE

LYNNE T. CASSADY
TMS 01-0401-048-00-00
DB 1738, PG 114

WETLAND JURISDICTIONAL

MATCH LINE STA 5+11 SHEET 01

NO EROSION CONTROL MEASURES WITHIN EX. CANAL. CONSTRUCTION SHALL NOT IMPEDE FLOW WITHIN EX. CANAL.

WETLAND W5 JURISDICTIONAL 0.20 AC.

ROCK CHECK DAM

CLEAR THROUGH LIMITS OF DISTURBANCE

EX. CANAL

REDIRECT EX. DITCH TO TIE INTO PROPOSED DITCH

DOUBLE ROW SILT FENCE

ONCE PROPOSED OUTFALL DITCH IS COMPLETE, DEMOLISH EX. 24" RCP AND EX. DITCH TO BE FILLED AND REGRADED TO ENSURE POSITIVE DRAINAGE TOWARD NEW OUTFALL DITCH. SEE DRAINAGE PLAN.

REDIRECT EX. DITCH TO ALLOW OVERFLOW DRAINAGE FROM WETLAND. SEE DRAINAGE PLAN

DITCH TO BE FILLED AND REGRADED TO ENSURE POSITIVE DRAINAGE TOWARD NEW OUTFALL DITCH. SEE DRAINAGE PLAN.

RIP RAP

WETLAND JURISDICTIONAL 0.09 AC.

PORTION OF FAIRCLOTH S/D
FREDDRICK L. TIMMONS
TMS 01-0401-082-27-00
RB 3772, PG 278

DITCH TO BE FILLED AND GRADED TOWARD NEW OUTFALL DITCH. DITCH FILLING TO AVOID WETLAND AREA. TYP. SEE DRAINAGE PLAN

PORTION OF FAIRCLOTH S/D
DAVID LEE MOORE
TMS 01-0401-082-29-00
RB 3806, PG 2065

WETLAND JURISDICTIONAL 0.21 AC.

PORTION OF FAIRCLOTH S/D
WETLAND W3 Rs BYRD
JURISDICTIONAL
TMS 01-0401-082-29-80
0.21 AC. RB 3519, PG 292

MATCH LINE STA 9+54+11 SHEET 01

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1" = 20'

ORIGINAL SHEET - ARCH D

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File Name: 1035_C2_DEMO_ESC	SGC	SGC	BK	2020.10.09
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Permit/Seal

SOUTH CAROLINA — STANTEC CONSULTING SERVICES, INC. No. C02310 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 35501 ROBERT MARSHALL WYNNE JR.

06/28/2022

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Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DEMOLITION AND EROSION CONTROL PLAN

Project No.
178421035

Scale

Revision

Sheet
C2-01 of 65

Drawing No.
C2-01

DEMOLITION AND EROSION CONTROL NOTES

1. TOTAL LIMITS OF DISTURBANCE: 13.2 AC
2. CONTRACTOR TO POTHOLE & VERIFY EX. UTILITY LOCATIONS AND DEPTHS BEFORE CONSTRUCTION BEGINS. NOTIFY ENGINEER/OWNER OF CONFLICTS.
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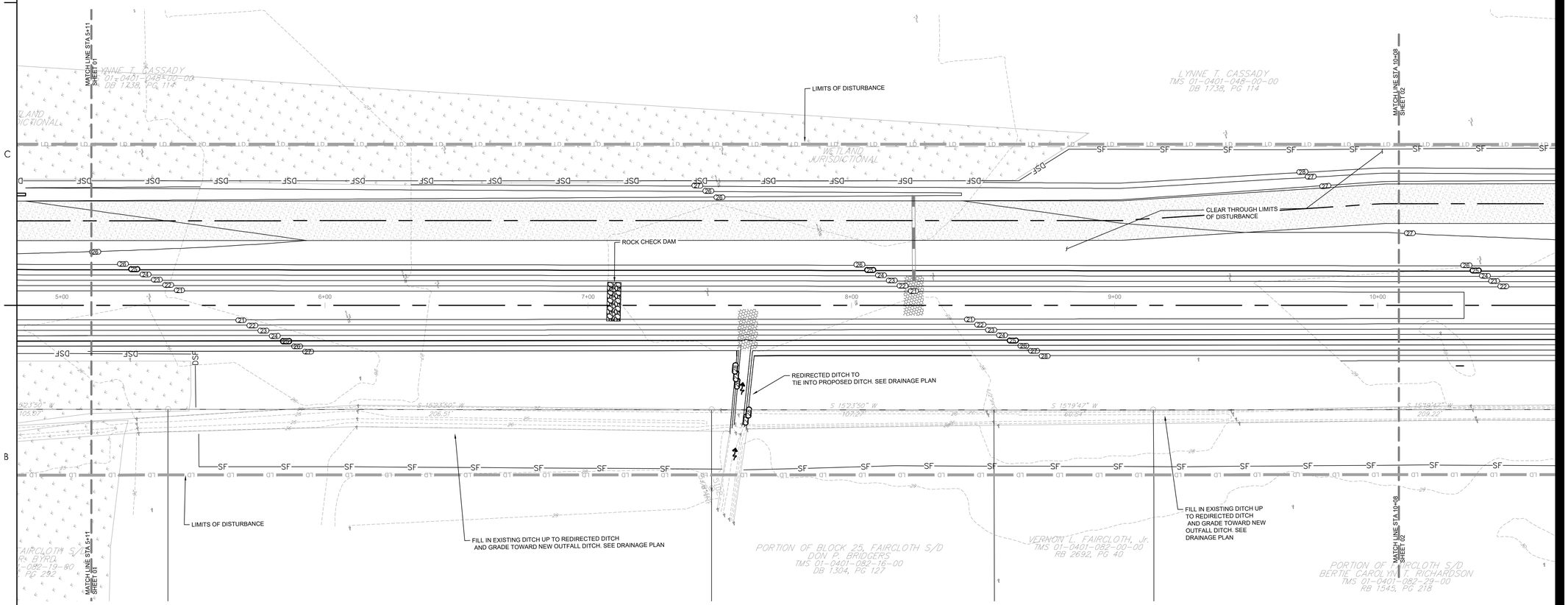

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SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 35150 — ROBERT MARSHALL WYNNE, JR.

06/28/2022

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GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DEMOLITION AND EROSION CONTROL PLAN

Project No. 178421035
Scale
Revision ----
Sheet C2-02 of 65
Drawing No. C2-02

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ORIGINAL SHEET - ARCH D

DEMOLITION AND EROSION CONTROL NOTES

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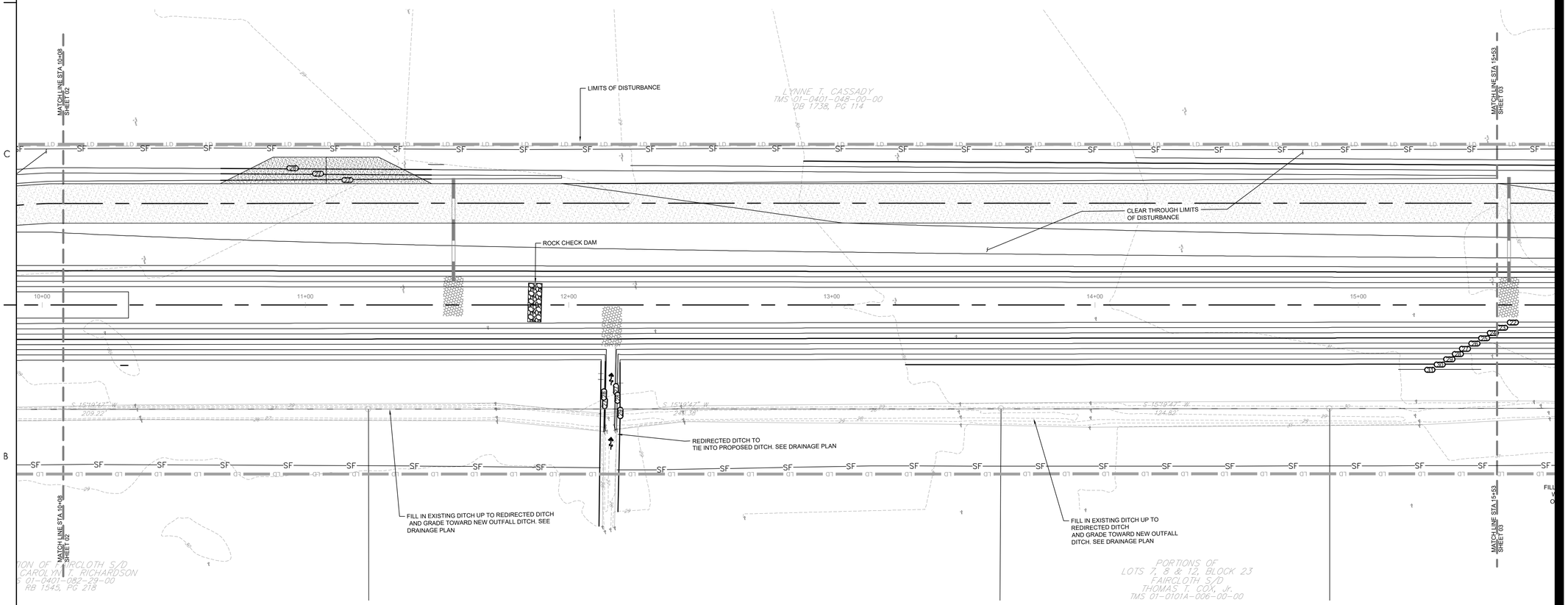

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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 35501 ROBERT MARSHALL WYMAN JR.

06/28/2022

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Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DEMOLITION AND EROSION CONTROL PLAN

Project No.
178421035

Scale

Revision

Sheet
C2-03 of 65

Drawing No.
C2-03

DEMOLITION AND EROSION CONTROL NOTES

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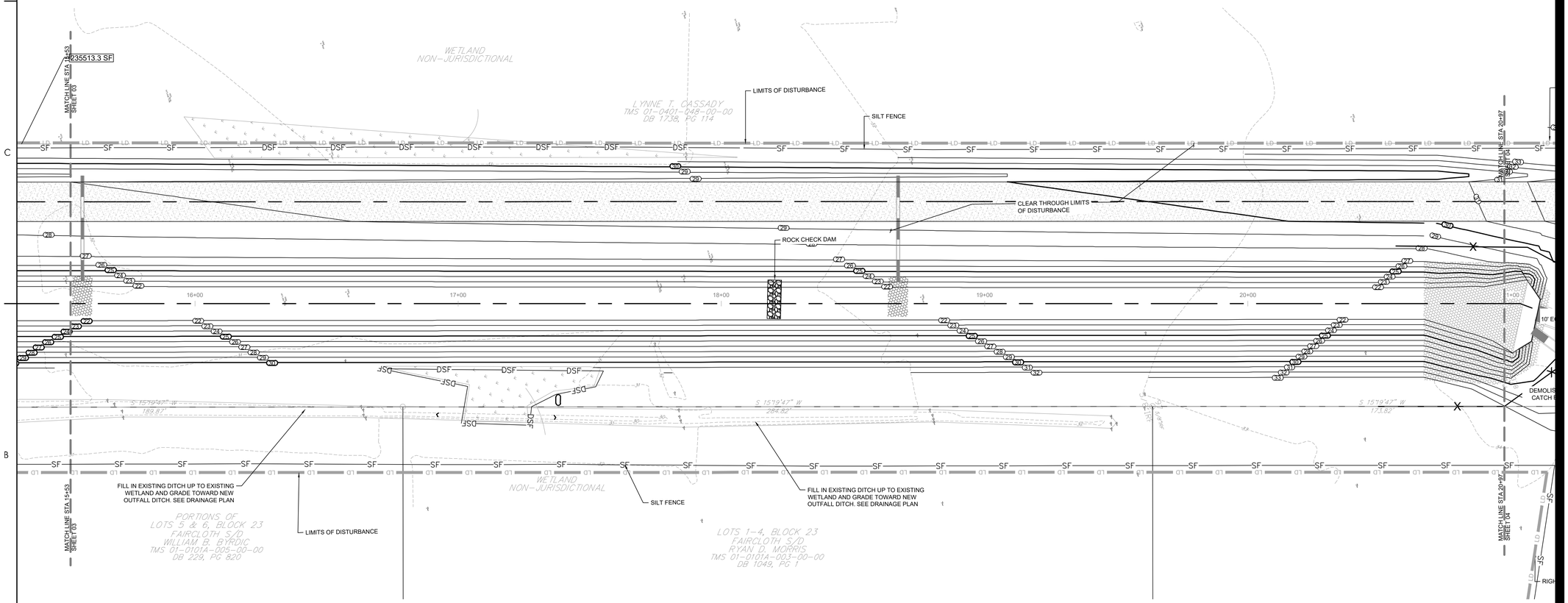

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File Name: 1035_C2_DEMO_ESC	SGC	SGC	BK 2020.10.09
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SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION STANTEC CONSULTING SERVICES, INC. No. C02310

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER ROBERT MARSHALL WYNNE No. 35101

06/28/2022

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GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DEMOLITION AND EROSION CONTROL PLAN

Project No.	Scale
178421035	
Revision: ----	Sheet: C2-04 of 65
	Drawing No.: C2-04

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ORIGINAL SHEET - ARCH D

DEMOLITION AND EROSION CONTROL NOTES

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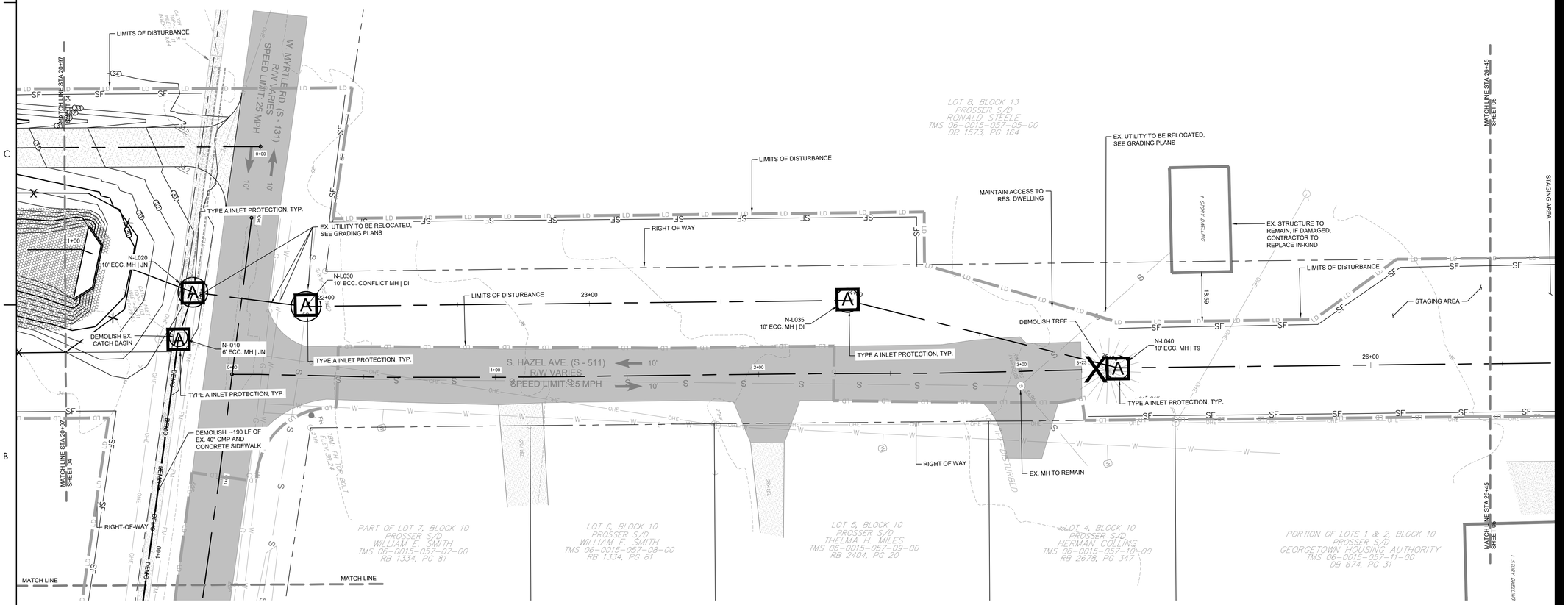

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811 Know what's below. Call before you dig.

Legend

- LIMITS OF DISTURBANCE
- EXISTING CONTOURS
- PROPOSED CONTOUR
- SILT FENCE
- DOUBLE ROW SILT FENCE
- DRAINAGE FLOW ARROW
- SILT FENCE J-HOOK
- TREE DEMOLITION
- STRUCTURE DEMOLITION
- ROCK CHECK DAM
- PIPE DEMOLITION
- SEDIMENT TUBE
- TYPE A INLET PROTECTION
- TS TEMPORARY SEEDING
- M MULCHING
- DC DUST CONTROL
- PS PERMANENT STABILIZATION

Revision	By	Appd	YYYY.MM.DD
PER BID ADDENDUM #1	RMW	BK	2022.12.21
ISSUED FOR CONSTRUCTION	RMW	BK	2022.06.28
File Name: 1035_C2_DEMO_ESC	SGC Dwn.	SGC Dsgn.	BK Chkd. 2020.10.09 YYYY.MM.DD

Permit/Seal

SOUTH CAROLINA — STANTEC CONSULTING SERVICES, INC. — No. COA2310 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 33502 — ROBERT MARSHALL WYNN

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DEMOLITION AND EROSION CONTROL PLAN

Project No.
178421035

Scale

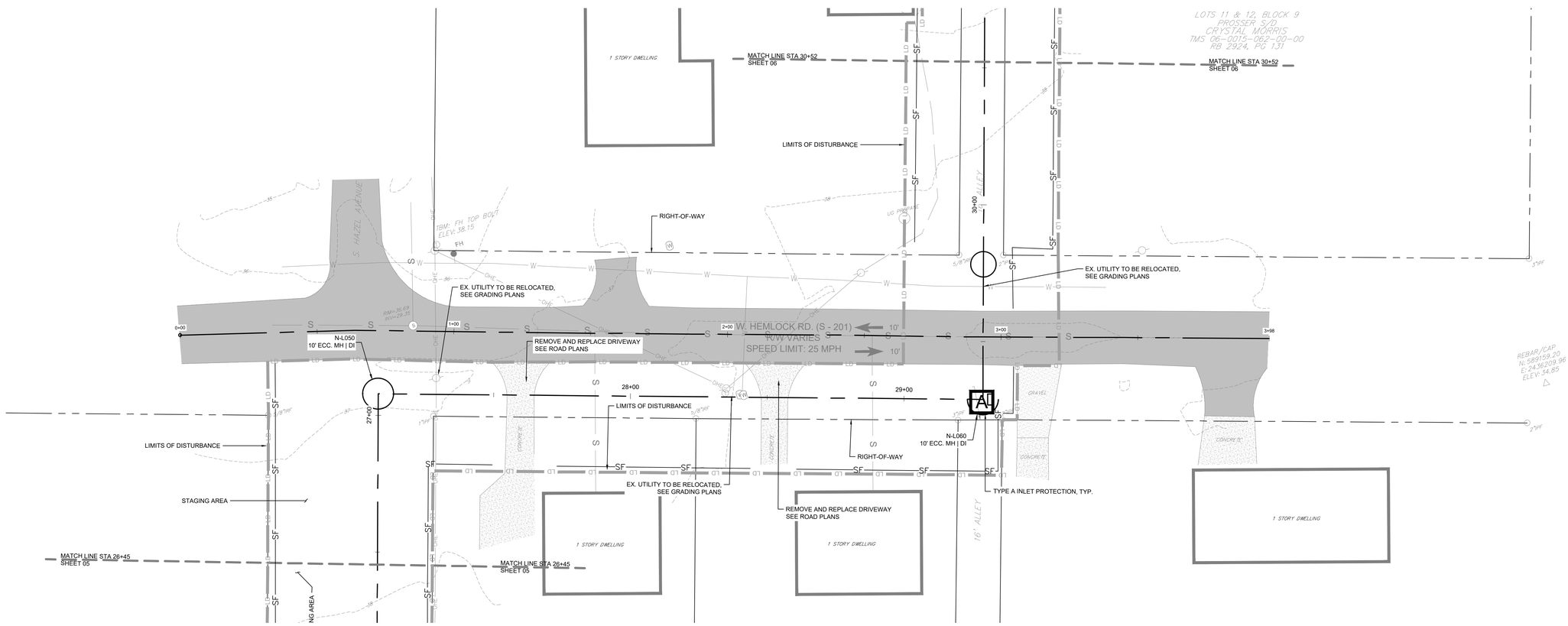
Revision ----

Sheet
C2-05 of 65

Drawing No.
C2-05

DEMOLITION AND EROSION CONTROL NOTES

1. TOTAL LIMITS OF DISTURBANCE: 13.2 AC
2. CONTRACTOR TO POTHOLE & VERIFY EX. UTILITY LOCATIONS AND DEPTHS BEFORE CONSTRUCTION BEGINS. NOTIFY ENGINEER/OWNER OF CONFLICTS.
3. CONTRACTOR TO COORDINATE RELOCATIONS WITH PERTINENT UTILITY COMPANIES.
4. SEE PROJECT NOTES SHEET FOR CONSTRUCTION SEQUENCE, DRAINAGE NOTES, WATER NOTES, SEWER NOTES, AND STANDARD EROSION AND SEDIMENT CONTROL NOTES.
5. CONTRACTOR TO CREATE SWALES AS NEEDED TO DIVERT STORMWATER TO CATCH BASIN EROSION CONTROL INLET FILE



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Legend

LD	LIMITS OF DISTURBANCE
15	EXISTING CONTOURS
20	PROPOSED CONTOUR
SF	SILT FENCE
DSF	DOUBLE ROW SILT FENCE
	DRAINAGE FLOW ARROW
	SILT FENCE J-HOOK
X	TREE DEMOLITION
	STRUCTURE DEMOLITION
	ROCK CHECK DAM
DEMO	PIPE DEMOLITION
ST	SEDIMENT TUBE
A	TYPE A INLET PROTECTION
TS	TEMPORARY SEEDING
M	MULCHING
DC	DUST CONTROL
PS	PERMANENT STABILIZATION

Revision	By	Appd	YYYY.MM.DD
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File Name: 1035_C2_DEMO_ESC	SGC	SGC	BK 2020.10.09
	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal

SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02316 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA No. 32501 REGISTERED PROFESSIONAL ENGINEER ROBERT MARSHALL WYBLE, JR.

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DEMOLITION AND EROSION CONTROL PLAN

Project No.
178421035

Scale

Revision ----

Sheet
C2-06 of 65

Drawing No.
C2-06

LOT 3, BLOCK 9 - FRONT OF LOT, CLEAR TREES OUT OF ROAD RIGHT OF WAY TO UTILITY POLE.

~~STRUCTURE REPLACEMENT NOTES:~~

~~1. EX. STRUCTURE TO BE REPLACED WITH PREFABRICATED METAL CANOPY.~~
~~2. MANUFACTURER AND MODEL NUMBER TO BE PROVIDED TO GEORGETOWN COUNTY.~~
~~3. CONTRACTOR SHALL INSTALL CANOPY PER MANUFACTURERS RECOMMENDED INSTALLATION.~~
~~4. CONTRACTOR SHALL INCLUDE CONCRETE PAD AS REQUIRED FOR THE CANOPY.~~
~~5. PLACEMENT OF THE NEW STRUCTURE SHALL MEET TOWN OF ANDREWS SETBACK REQUIREMENTS OF 10 FEET ON SIDE AND REAR LOT.~~
~~6. CONTRACTOR TO PROVIDE SHOP DRAWING TO OWNER/ENGINEER.~~
~~7. CONTRACTOR TO COORDINATE WITH OWNER A MINIMUM 5 DAYS BEFORE INSTALLATION.~~

DEMOLITION AND EROSION CONTROL NOTES

1. TOTAL LIMITS OF DISTURBANCE: 13.2 AC
2. CONTRACTOR TO POTHOLE & VERIFY EX. UTILITY LOCATIONS AND DEPTHS BEFORE CONSTRUCTION BEGINS. NOTIFY ENGINEER/OWNER OF CONFLICTS.
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5. CONTRACTOR TO CREATE SWALES AS NEEDED TO DIVERT STORMWATER TO CATCH BASIN EROSION CONTROL INLET FILE

LOTS 5 & 6, BLOCK 9 PROSSER S/D LEWIS H. SMITH, III TMS 06-0015-057-15-00 DB 291, PG 322

LOT 4, BLOCK 9 PROSSER S/D BETSY T. PROSSER TMS 06-0015-057-16-00 DB 1068, PG 163

LOT 3, BLOCK 9 PROSSER S/D BETSY T. PROSSER TMS 06-0015-057-17-00 DB 3935, PG 376

LOTS 1 & 2, BLOCK 9 PROSSER S/D MICHELLE L. BREWINGTON TMS 06-0015-057-06-00 RB 2430, PG 83

LOTS 5 & 6, BLOCK 8 PROSSER S/D EDGAR E. WALTERS, III TMS 06-0015-007-00-00 RB 1365, PG 219

LOTS 11 & 12, BLOCK 9 PROSSER S/D CRYSTAL MORRIS TMS 06-0015-062-00-00 DB 2924, PG 131

LOT 10, BLOCK 9 PROSSER S/D BOBBIE E. NEWTON, LIFE ESTATE TMS 06-0015-061-00-00 RB 1588, PG 330

LOT 9, BLOCK 9 PROSSER S/D BOBBIE E. NEWTON, LIFE ESTATE TMS 06-0015-060-00-00 RB 1588, PG 330

LOT 12, BLOCK 8 PROSSER S/D ANTHONY P. LAVINE TMS 06-0015-018-00-00 RB 2072, PG 19

LOT 11, BLOCK 8 PROSSER S/D STEPHEN R. MCCANTS TMS 06-0015-017-00-00 RB 3047, PG 21

MATCH LINE STA 30+52 SHEET 06

MATCH LINE STA 35+92 SHEET 07

MATCH LINE STA 30+52 SHEET 06

MATCH LINE STA 35+92 SHEET 07

EX. STRUCTURE TO REMAIN, IF DAMAGED, CONTRACTOR TO REPLACE IN-KIND

EX. STRUCTURE TO REMAIN, IF DAMAGED, CONTRACTOR TO REPLACE IN-KIND

LOT 3, BLOCK 9 - EXISTING TREES AND BRUSH TO BE CLEARED FROM RIGHT OF WAY TO BACK OF PERMANENT EASEMENT. SEE GRADING PLAN.

EX. UTILITY TO BE RELOCATED, SEE GRADING PLANS

TYPE A INLET PROTECTION, TYP.

EX. STRUCTURE TO REMAIN, IF DAMAGED, CONTRACTOR TO REPLACE IN-KIND

DEMOLISH EX. 36" PINE

LIMITS OF DISTURBANCE

EX. UTILITY TO BE RELOCATED, SEE GRADING PLANS

W. PINE ST. (S. 200bm) RW VARIES SPEED LIMIT 25 MPH

DEMOLISH ~22 LF OF EX. 15" RCP

N-L070 8' ECC. MH | T9

N-L080 8' ECC. MH | T9

N-L090 8' ECC. CONFLICT MH | DI

N-L100 8' ECC. MH | DI

31+00

32+00

33+00

34+00

35+00

36+00

TYPE A INLET PROTECTION, TYP.

22.68

DEMO

TYPE A INLET PROTECTION, TYP.

TYPE A INLET PROTECTION, TYP.

DEMOLISH ~37 LF OF EX. 15" RCP

EX. WOOD FENCE TO BE REPLACED IN-KIND

EX. STRUCTURE TO REMAIN, IF DAMAGED, CONTRACTOR TO REPLACE IN-KIND

EX. CHAIN LINK FENCE TO BE REPLACED IN-KIND

LIMITS OF DISTURBANCE

MATCH LINE

MATCH LINE

EX. STRUCTURE TO REMAIN, IF DAMAGED, CONTRACTOR TO REPLACE IN-KIND

N-O003 5'X5' BOX | DI

EX. UTILITIES TO REMAIN AND BE PROTECTED IN PLACE. NOTIFY ENGINEER OF ANY CONFLICTS

16' ALLEY

99.36

1+00

0 20' 40'

1" = 20'

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	By	Appd	YYYY.MM.DD
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ISSUED FOR CONSTRUCTION	RMW	BK	2022.06.28
Issued			

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File Name: 1035_C2_DEMO_ESC	SGC	SGC	BK	2020.10.09

Permit/Seal

SOUTH CAROLINA — STANTEC CONSULTING SERVICES, INC. No. C02310 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 35501 — ROBERT MARSHALL WYNNE, JR.

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DEMOLITION AND EROSION CONTROL PLAN

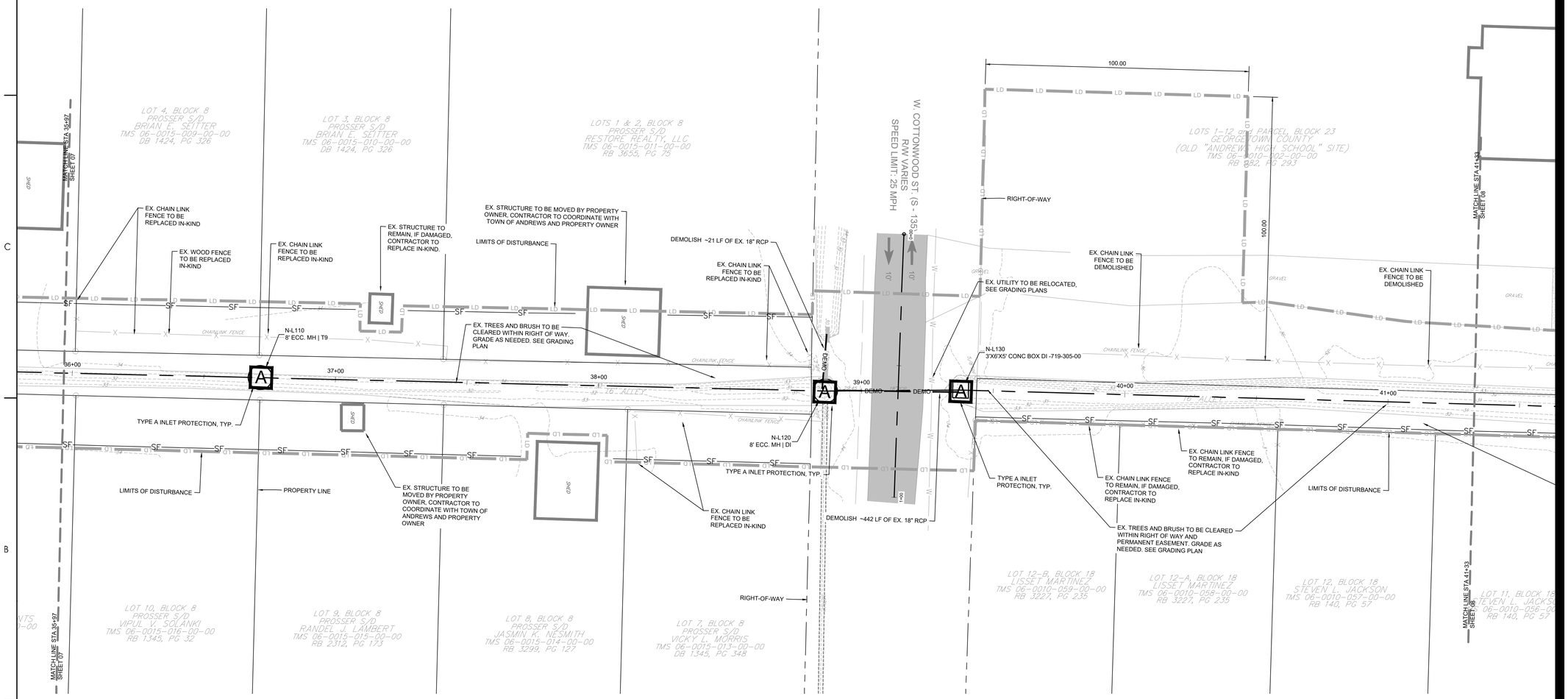
Project No.
178421035

Scale

Revision 1

Sheet
C2-07 of 65

Drawing No.
C2-07



DEMOLITION AND EROSION CONTROL NOTES

1. TOTAL LIMITS OF DISTURBANCE: 13.2 AC
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5. CONTRACTOR TO CREATE SWALES AS NEEDED TO DIVERT STORMWATER TO CATCH BASIN EROSION CONTROL INLET FILE

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1" = 20'

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PER BID ADDENDUM #1 △	RMW	BK	2022.12.21
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File Name: 1035_C2_DEMO_ESC	SGC	SGC	BK 2020.10.09
	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION — STANTEC CONSULTING SERVICES, INC. No. C02318

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER — No. 32100 — ROBERT MARSHALL WYNNE JR

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DEMOLITION AND EROSION CONTROL PLAN

Project No.	Scale
178421035	
Revision: ----	Sheet: C2-08 of 65
Drawing No.	C2-08

DEMOLITION AND EROSION CONTROL NOTES

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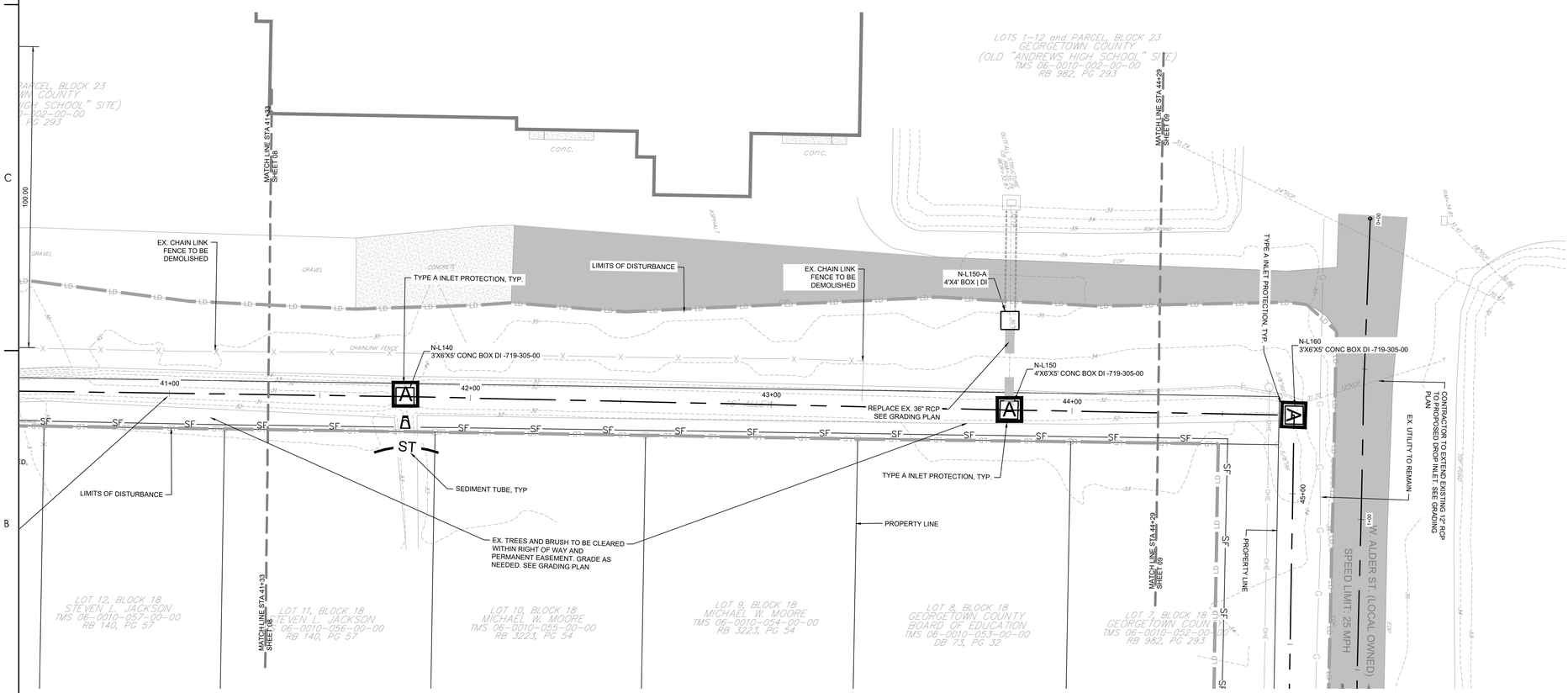

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Permit/Seal

SOUTH CAROLINA — STANTEC CONSULTING SERVICES, INC. No. C02316 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — No. 35501 — REGISTERED PROFESSIONAL ENGINEER — ROBERT MARSHALL WYNNE, JR.

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DEMOLITION AND EROSION CONTROL PLAN

Project No.
178421035

Scale

Revision

Sheet
C2-09 of 65

Drawing No.
C2-09

DEMOLITION AND EROSION CONTROL NOTES

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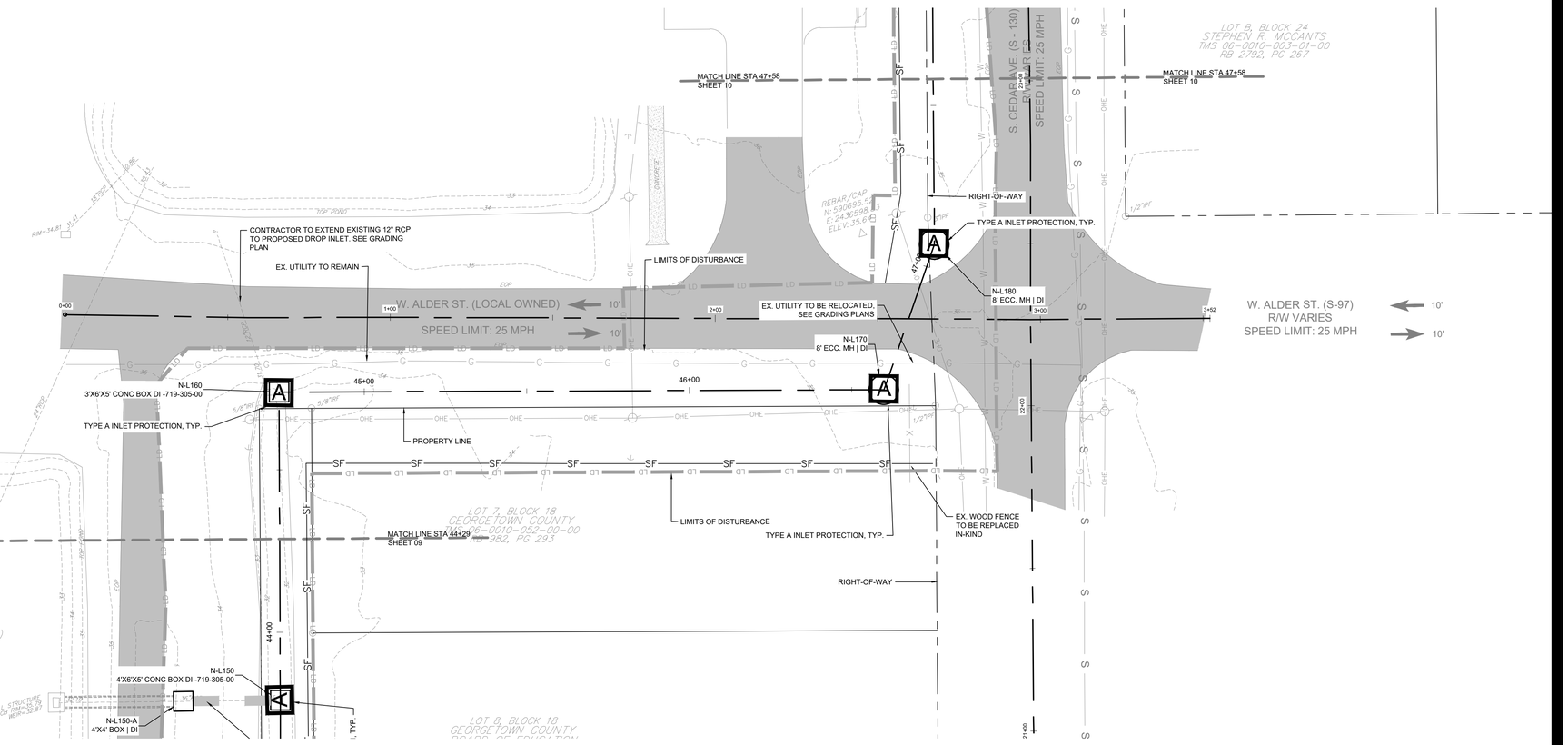

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SOUTH CAROLINA — STANTEC CONSULTING SERVICES, INC. — No. C02310 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — No. 35501 — LICENSED PROFESSIONAL ENGINEER — ROBERT MARSHALL WYNNE, JR.

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DEMOLITION AND EROSION CONTROL PLAN

Project No.
178421035

Scale

Revision ----

Sheet
C2-10 of 65

Drawing No.
C2-10

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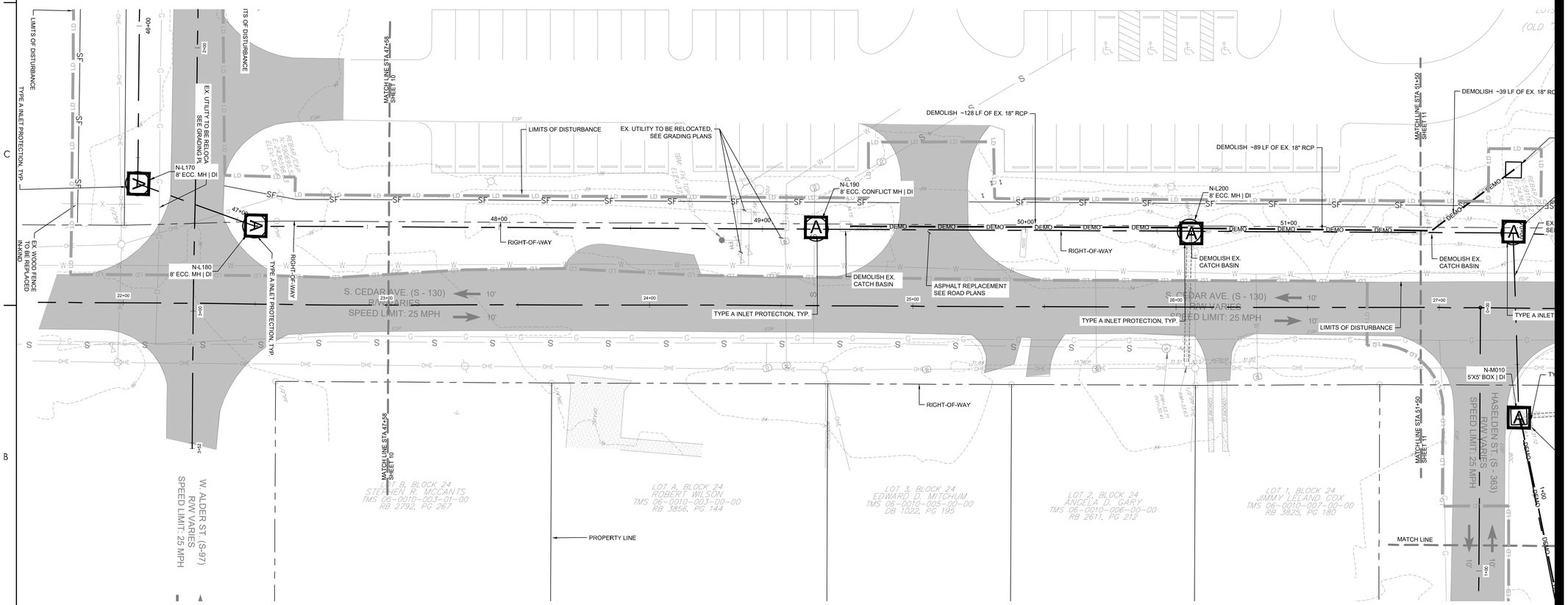

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Permit/Seal

STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION SOUTH CAROLINA

LICENSED PROFESSIONAL ENGINEER ROBERT MARSHALL WYNNE JR No. 35501

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DEMOLITION AND EROSION CONTROL PLAN

Project No.
178421035

Scale

Revision

Sheet
C2-11of 65

Drawing No.
C2-11

DEMOLITION AND EROSION CONTROL NOTES

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4. SEE PROJECT NOTES SHEET FOR CONSTRUCTION SEQUENCE, DRAINAGE NOTES, WATER NOTES, SEWER NOTES, AND STANDARD EROSION AND SEDIMENT CONTROL NOTES.
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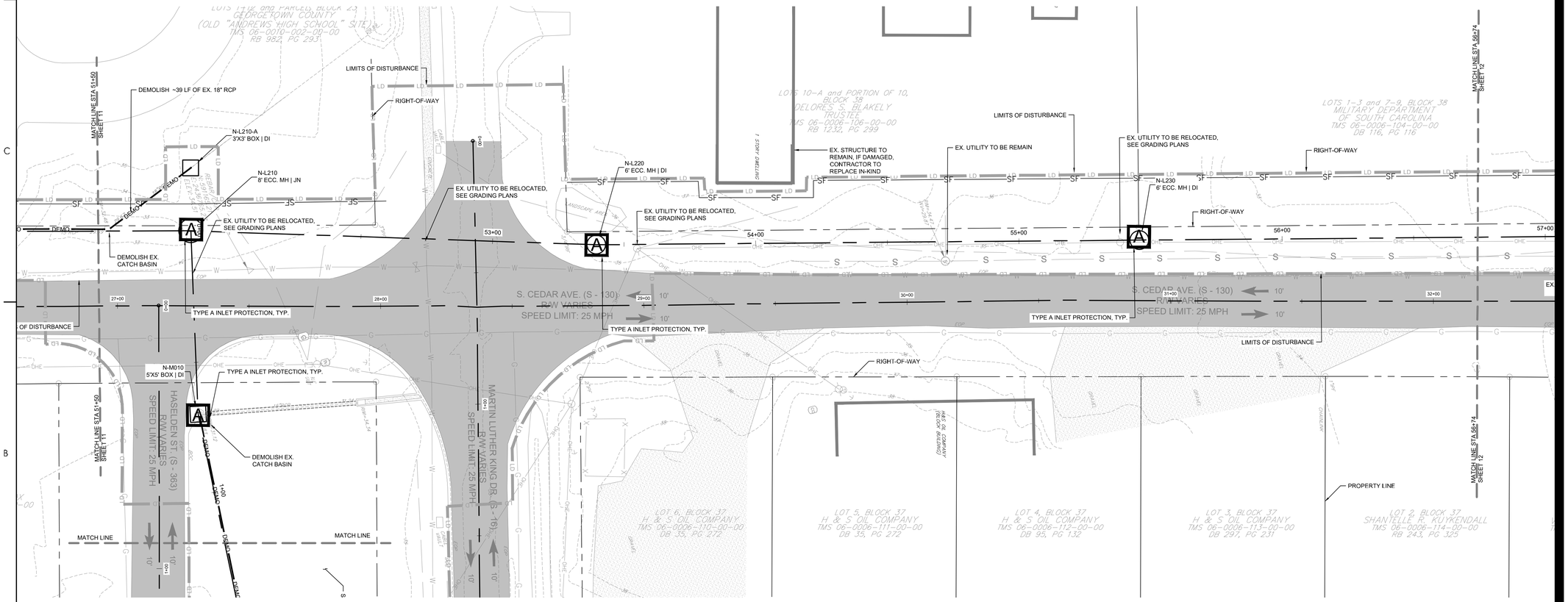

Legend

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- DRAINAGE FLOW ARROW
- SILT FENCE J-HOOK
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- ROCK CHECK DAM
- PIPE DEMOLITION
- SEDIMENT TUBE
- TYPE A INLET PROTECTION
- TS TEMPORARY SEEDING
- M MULCHING
- DC DUST CONTROL
- PS PERMANENT STABILIZATION

Revision	By	Appd	YYYY.MM.DD
PER BID ADDENDUM #1	RMW	BK	2022.12.21
ISSUED FOR CONSTRUCTION	RMW	BK	2022.06.28
File Name: 1035_C2_DEMO_ESC	SGC Dwn.	SGC Dsgn.	BK Chkd. 2020.10.09 YYYY.MM.DD

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SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION STANTEC CONSULTING SERVICES, INC. No. C02310

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 35510 ROBERT MARSHALL WYNNE

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DEMOLITION AND EROSION CONTROL PLAN

Project No.	Scale
178421035	

Revision	Sheet	Drawing No.
---	C2-12 of 65	C2-12

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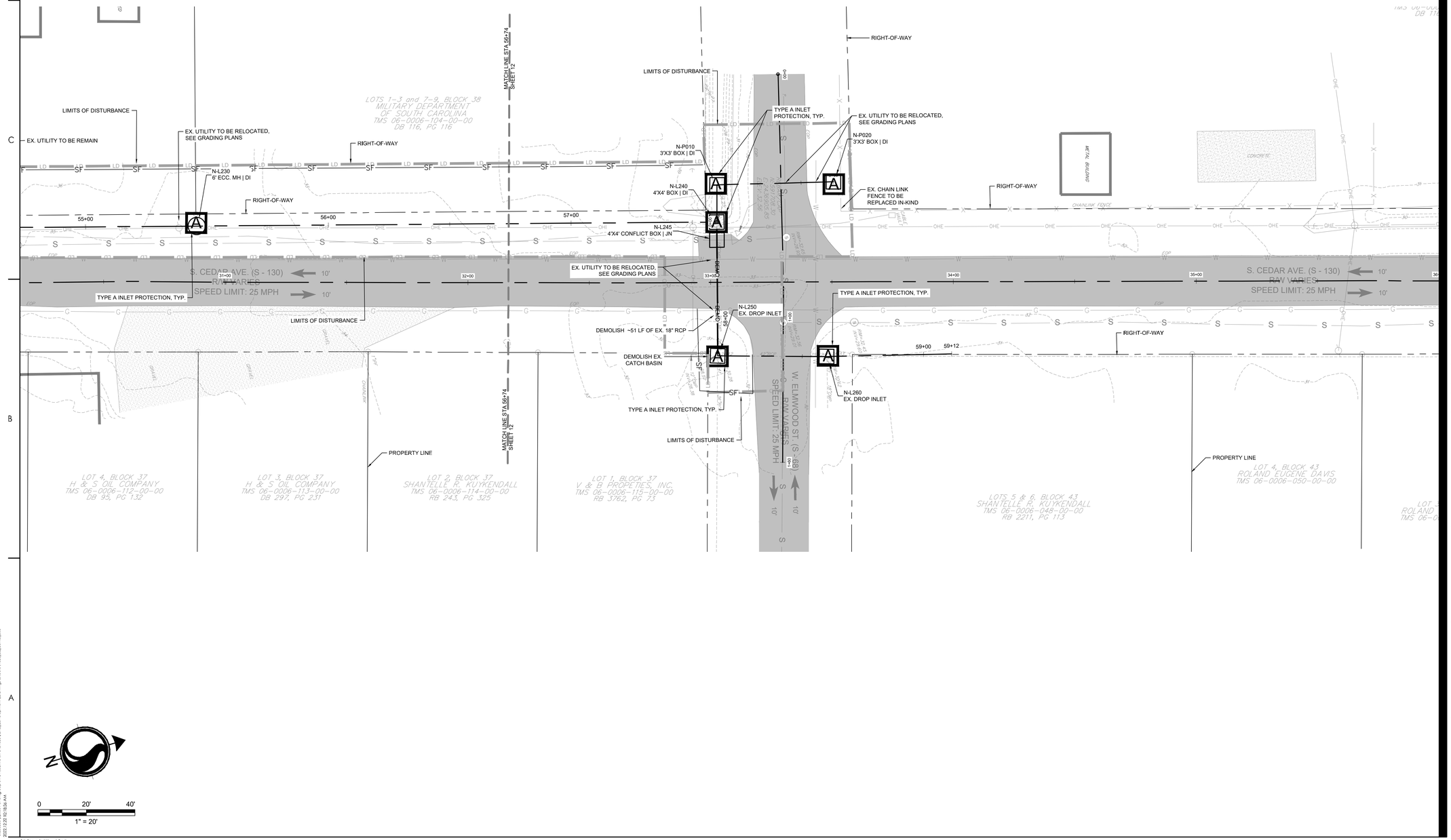

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06/28/2022

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GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DEMOLITION AND EROSION CONTROL PLAN

Project No.
178421035

Scale

Revision ----

Sheet
C2-13 of 65

Drawing No.
C2-13

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DEMOLITION AND EROSION CONTROL NOTES

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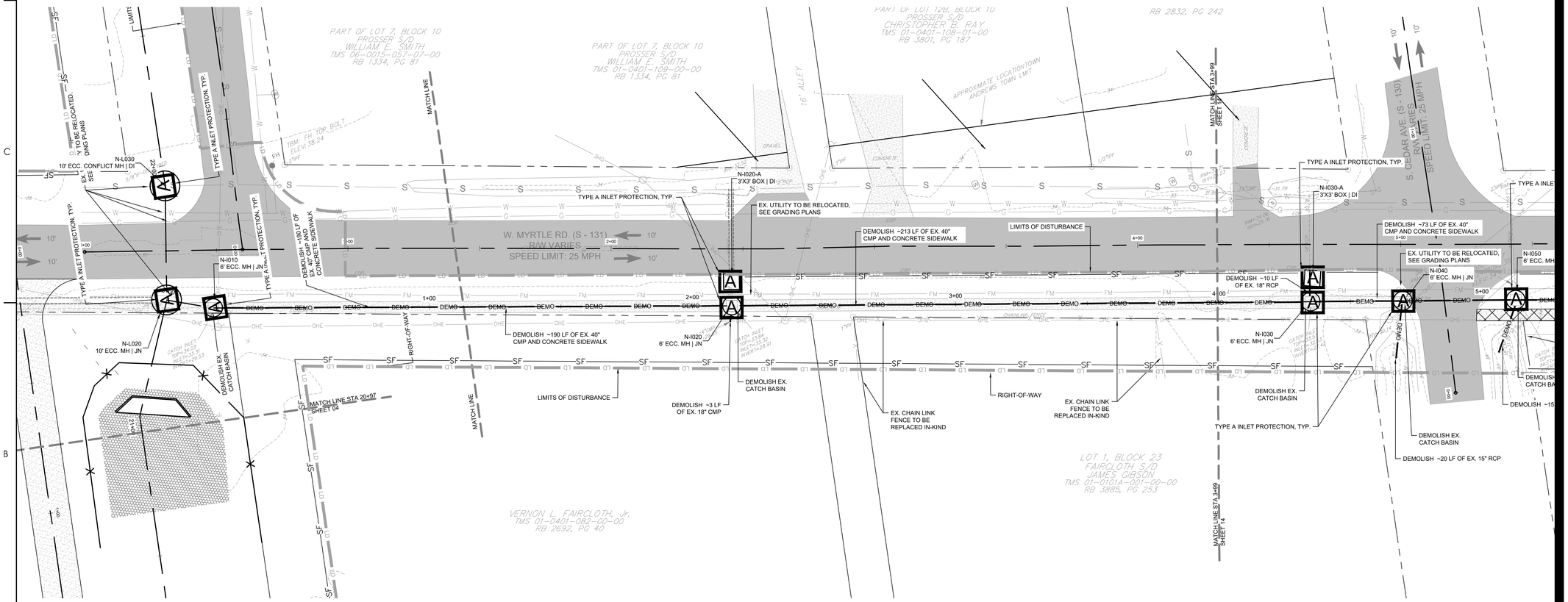

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TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DEMOLITION AND EROSION CONTROL PLAN

Project No.
178421035

Scale

Revision

Sheet
C2-14 of 65

Drawing No.
C2-14

DEMOLITION AND EROSION CONTROL NOTES

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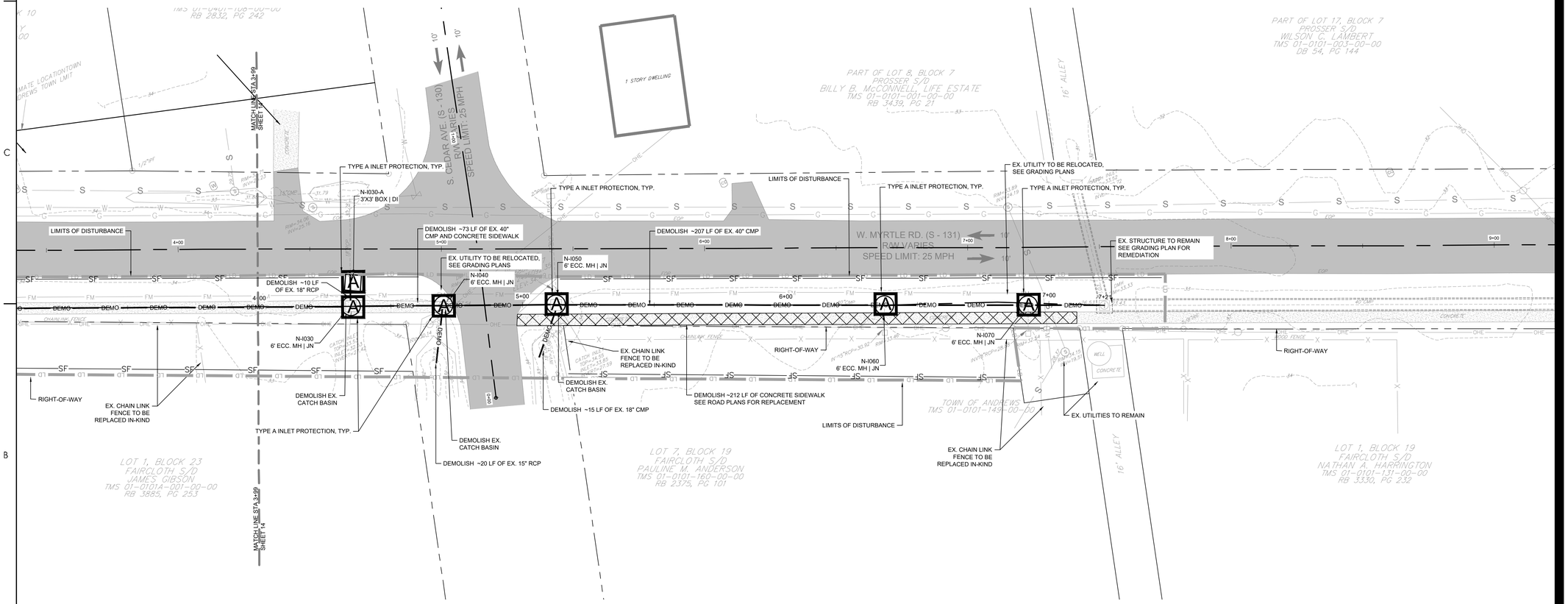

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	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER ROBERT MARSHALL WYNNE No. 32501

06/28/2022

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TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DEMOLITION AND EROSION CONTROL PLAN

Project No. 178421035
Scale

Revision ---
Sheet C2-15 of 65
Drawing No. C2-15

DEMOLITION AND EROSION CONTROL NOTES

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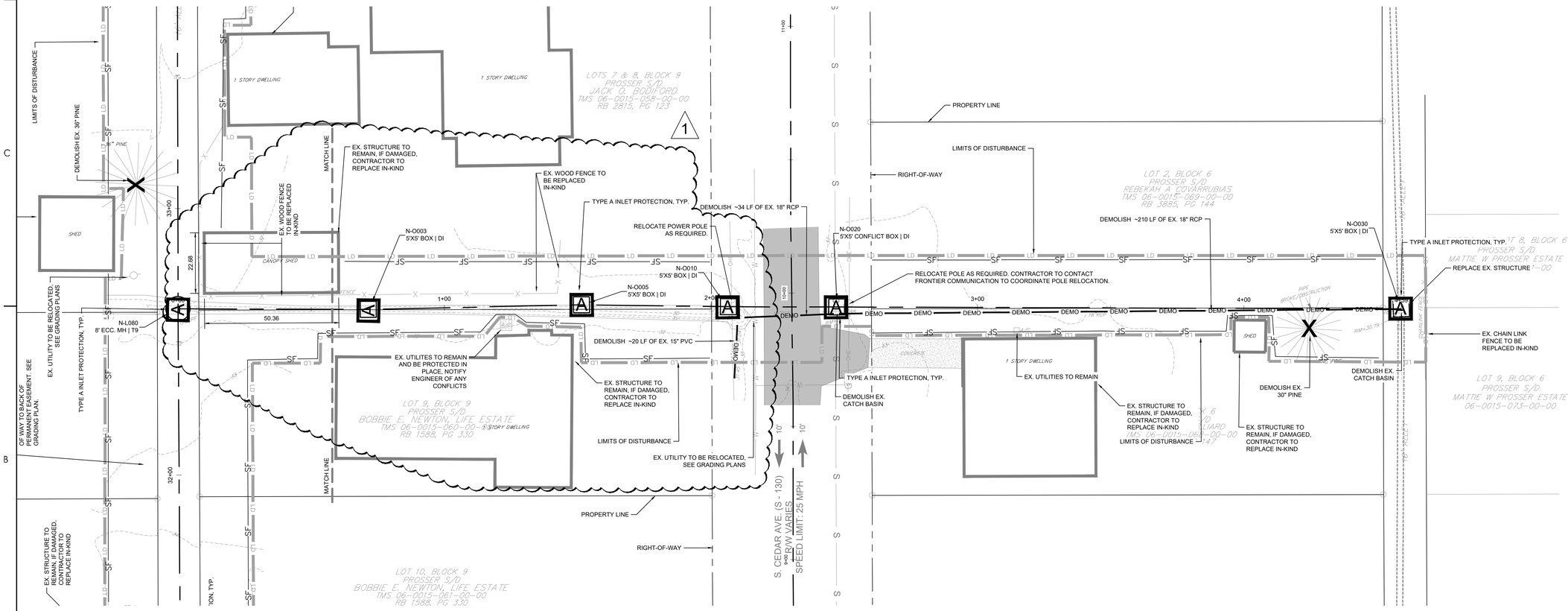

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06/28/2022

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GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DEMOLITION AND EROSION CONTROL PLAN

Project No.	Scale
178421035	
Revision: 1	Sheet: C2-16 of 65
Drawing No.	C2-16

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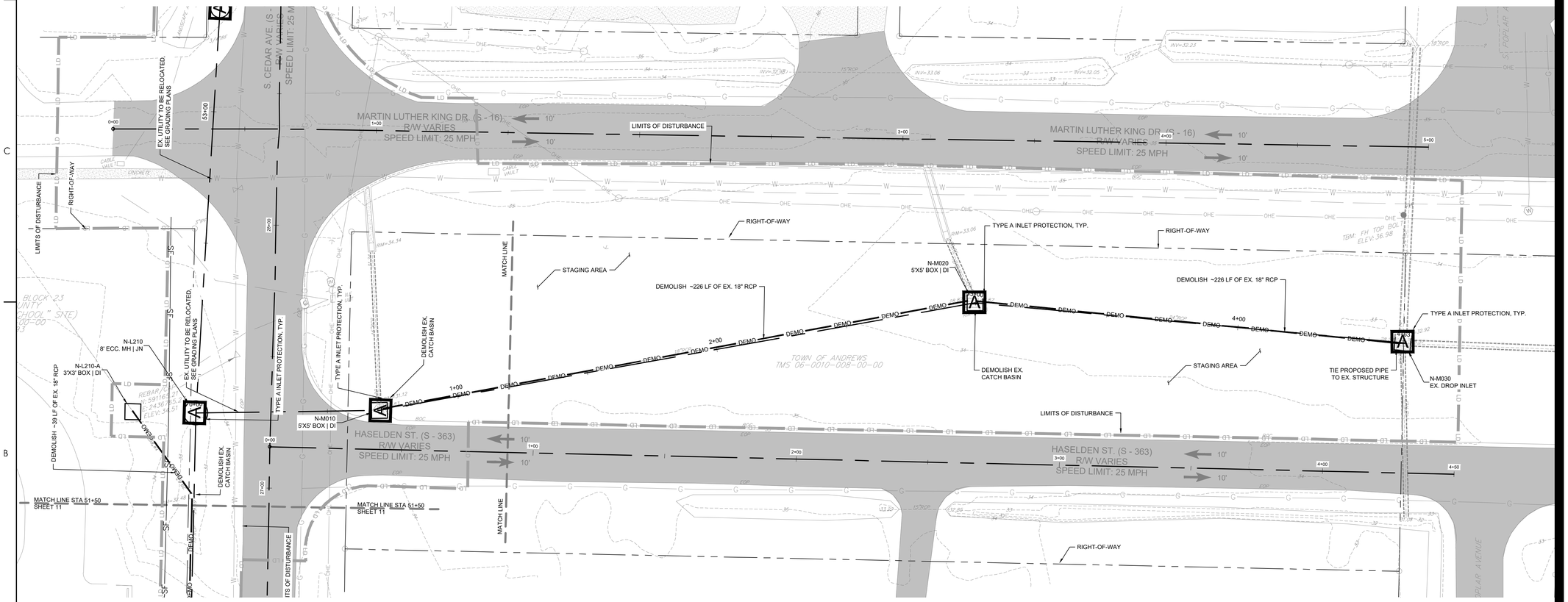

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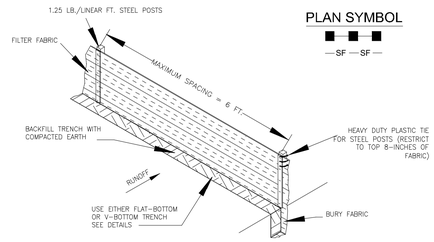
TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DEMOLITION AND EROSION CONTROL PLAN

Project No.	Scale
178421035	
Revision: ---	Sheet: C2-17 of 65
Drawing No.	C2-17

SILT FENCE INSTALLATION



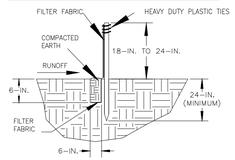
PLAN SYMBOL

—SF—SF—

SILT FENCE - GENERAL NOTES

1. Do not place silt fence across channels or in other areas subject to concentrated flows. Silt fence should not be used as a velocity control BMP. Concentrated flows are any flows greater than 0.5 cfs.
2. Maximum sheet or overland flow path length to the silt fence shall be 100-feet.
3. Maximum slope steepness (normal [perpendicular] to the fence line) shall be 2:1.
4. Silt fence joints, when necessary, shall be completed by one of the following options:
   - Wrap each fabric together at a support post with both ends fastened to the post, with a 1-foot minimum overlap;
   - Overlap silt fence by installing 3-feet passed the support post to which the new silt fence roll is attached. Attach old roll to new roll with heavy-duty plastic ties; or,
   - Overlap entire width of each silt fence roll from one support post to the next support post.
5. Attach filter fabric to the steel posts using heavy-duty plastic ties that are evenly spaced within the top 8-inches of the fabric.
6. Install the silt fence perpendicular to the direction of the stormwater flow and place the silt fence the proper distance from the toe of steep slopes to provide sediment storage and access for maintenance and cleanout.
7. Install Silt Fence Checks (Tie-Backs) every 50-100 feet, dependent on slope, along silt fence that is installed with slope and where concentrated flows are expected or are documented along the proposed/installed silt fence.

FLAT-BOTTOM TRENCH DETAIL



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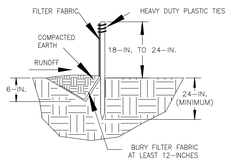


South Carolina Department of Health and Environmental Control

SILT FENCE

STANDARD DRAWING NO. SC-03 Page 1 of 2

NOT TO SCALE — DATE: FEBRUARY 2014

SILT FENCE - POST REQUIREMENTS

1. Silt Fence posts must be 48-inch long steel posts that meet, at a minimum, the following physical characteristics.
   - Composed of a high strength steel with a minimum yield strength of 50,000 psi.
   - Include a standard "T" section with a nominal face width of 1.38-inches and a nominal "T" length of 1.48-inches.
   - Weigh 1.25 pounds per foot (± 8%)
2. Posts shall be equipped with projections to aid in fastening of filter fabric.
3. Steel posts may need to have a metal soil stabilization plate welded near the bottom when installed along steep slopes or installed in loose soils. The plate should have a minimum cross section of 17-square inches and be composed of 15 gauge steel, at a minimum. The metal soil stabilization plate should be completely buried.
4. Install posts to a minimum of 24-inches. A minimum height of 1- to 2- inches above the fabric shall be maintained, and a maximum height of 3 feet shall be maintained above the ground.
5. Post spacing shall be at a maximum of 6-feet on center.

SILT FENCE - FABRIC REQUIREMENTS

1. Silt fence must be composed of woven geotextile filter fabric that consists of the following requirements:
   - Composed of fibers consisting of long chain synthetic polymers of at least 85% by weight of polyolefins, polyesters, or polyamides that are formed into a network such that the filaments or yarns retain dimensional stability relative to each other;
   - Free of any treatment or coating which might adversely alter its physical properties after installation;
   - Free of any defects or flaws that significantly affect its physical and/or filtering properties; and,
   - Have a minimum width of 36-inches.
2. Use only fabric appearing on SC DOT's Qualified Products Listing (QPL), Approval Sheet #34, meeting the requirements of the most current edition of the SC DOT Standard Specifications for Highway Construction.
3. 12-inches of the fabric should be placed within excavated trench and toed in when the trench is backfilled.
4. Filter Fabric shall be purchased in continuous rolls and cut to the length of the barrier to avoid joints.
5. Filter Fabric shall be installed at a minimum of 24-inches above the ground.

SILT FENCE - INSPECTION & MAINTENANCE

1. The key to functional silt fence is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of silt fence shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
3. Attention to sediment accumulations along the silt fence is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when it reaches 1/3 the height of the silt fence.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
6. Check for areas where stormwater runoff has eroded a channel beneath the silt fence, or where the fence has sagged or collapsed due to runoff overtopping the silt fence. Install checks/tie-backs and/or reinstall silt fence, as necessary.
7. Check for tears within the silt fence, areas where silt fence has begun to decompose, and for any other circumstance that may render the silt fence ineffective. Removed damaged silt fence and reinstall new silt fence immediately.
8. Silt fence should be removed within 30 days after final stabilization is achieved and once it is removed, the resulting disturbed area shall be permanently stabilized.

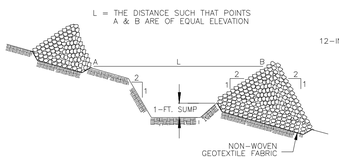
South Carolina Department of Health and Environmental Control

SILT FENCE

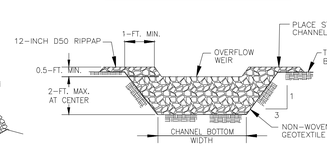
STANDARD DRAWING NO. SC-03 PAGE 2 of 2

GENERAL NOTES — DATE: FEBRUARY 2014

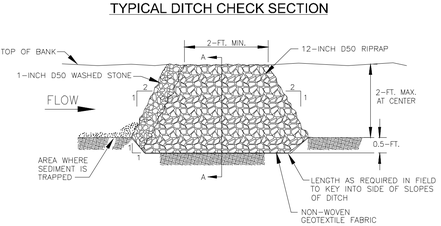
SPACING BETWEEN DITCH CHECK



CROSS SECTION A-A THRU STONE DITCH CHECK



TYPICAL DITCH CHECK SECTION



PLAN SYMBOL

OR

South Carolina Department of Health and Environmental Control

ROCK DITCH CHECK

STANDARD DRAWING NO. SC-04 PAGE 1 of 2

NOT TO SCALE — DATE: FEBRUARY 2014

ROCK DITCH CHECK - GENERAL NOTES

1. Rock Ditch Checks should not be placed in Waters of the State or USGS blue-line streams (unless approved by Federal Authorities).
2. Rock Ditch Checks should be installed in steeply sloped channels where adequate vegetation cannot be established. This BMP measure should only be used in small open channels.
3. A non-woven geotextile fabric shall be installed over the soil surface where the rock ditch check is to be placed.
4. The body of the rock ditch check shall be composed of 12-inch D50 Riprap. The upstream face may be composed of 1-inch D50 washed stone.
5. Rock Ditch Checks should not exceed a height of 2-feet at the centerline of the channel.
6. Rock Ditch Checks should have a minimum top flow length of 2-feet.
7. Riprap should be placed over channel banks to prevent water from cutting around the ditch check.
8. The riprap should be placed by hand or mechanical placement (no dumping of rock to form dam) to achieve complete coverage of the channel. Doing so will also ensure that the center of the check is lower than the edges.
9. The maximum spacing between the dams should be such that the toe of the upstream check is at the same elevation as the top of the downstream check.

ROCK DITCH CHECK - INSPECTION & MAINTENANCE

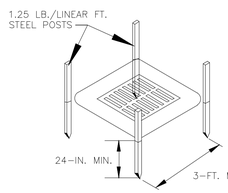
1. The key to functional rock ditch check is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of rock ditch checks shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
3. Attention to sediment accumulations in front of the rock ditch check is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when it reaches 1/3 the height of the rock ditch check.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
6. Inspect Rock Ditch Checks' edges for erosion and evidence of runoff bypassing the installed check. If evident repair promptly as necessary to prevent erosion and bypassing.
7. In the case of grass-lined ditches, channels, and swales, rock ditch checks should be removed when the grass has matured sufficiently to protect the ditch or swale unless the slope of the swale is greater than 4%.
8. After construction is completed and final stabilization is reached, the entirety of the rock ditch check should be removed if vegetation will be used for permanent erosion control measures. The area beneath the removed rock ditch check must be addressed with permanent stabilization measures.

South Carolina Department of Health and Environmental Control

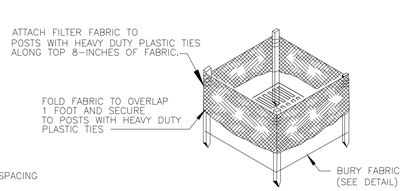
ROCK DITCH CHECK

STANDARD DRAWING NO. SC-04 PAGE 2 of 2

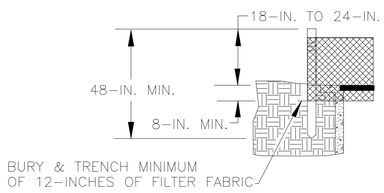
GENERAL NOTES — DATE: FEBRUARY 2014



POST INSTALLATION DETAIL



FILTER FABRIC INSTALLATION DETAIL



FILTER FABRIC BURIAL DETAIL

PLAN SYMBOL

A

South Carolina Department of Health and Environmental Control

Type A

FILTER FABIC INLET PROTECTION

STANDARD DRAWING NO. SC-07 PAGE 1 of 2

NOT TO SCALE — DATE: FEBRUARY 2014

TYPE A - FILTER FABRIC REQUIREMENTS

1. Silt fence must be composed of woven geotextile filter fabric that consists of the following requirements:
   - Composed of fibers consisting of long chain synthetic polymers of at least 85% by weight of polyolefins, polyesters, or polyamides that are formed into a network such that the filaments or yarns retain dimensional stability relative to each other;
   - Free of any treatment or coating which might adversely alter its physical properties after installation;
   - Free of any defects or flaws that significantly affect its physical and/or filtering properties; and,
   - Have a minimum width of 36-inches.
2. Use only fabric appearing on SC DOT's Qualified Products Listing (QPL), Approval Sheet #34, meeting the requirements of the most current edition of the SC DOT Standard Specifications for Highway Construction.
3. 12-inches of the fabric should be placed within excavated trench and toed in when the trench is backfilled.
4. Filter Fabric shall be purchased in continuous rolls and cut to the length of the barrier to avoid joints.
5. Filter Fabric shall be installed at a minimum of 24-inches above the ground.

TYPE A - POST REQUIREMENTS

1. Silt Fence posts must be 48-inch long steel posts that meet, at a minimum, the following physical characteristics.
   - Composed of a high strength steel with a minimum yield strength of 50,000 psi.
   - Include a standard "T" section with a nominal face width of 1.38-inches and a nominal "T" length of 1.48-inches.
   - Weigh 1.25 pounds per foot (± 8%)
2. Posts shall be equipped with projections to aid in fastening of filter fabric.
3. Install posts to a minimum of 24-inches. A minimum height of 1- to 2- inches above the fabric shall be maintained, and a maximum height of 3 feet shall be maintained above the ground.
4. Post spacing shall be at a maximum of 3-feet on center.

TYPE A - INSPECTION & MAINTENANCE

1. The key to functional inlet protection is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of inlet protection shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
3. Attention to sediment accumulations along the filter fabric is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when it reaches 1/3 the height of the filter fabric. When a sump is installed in front of the fabric, sediment should be removed when it fills approximately 1/3 the depth of the sump.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
6. Check for areas where stormwater runoff has eroded a channel beneath the filter fabric, or where the fabric has sagged or collapsed due to runoff overtopping the inlet protection.
7. Check for tears within the filter fabric, areas where fabric has begun to decompose, and for any other circumstance that may render the inlet protection ineffective. Removed damaged fabric and reinstall new filter fabric immediately.
8. Inlet protection structures should be removed after all the disturbed areas are permanently stabilized. Remove all construction material and sediment, and dispose of them properly. Grade the disturbed area to the elevation of the drop inlet structure crest. Stabilize all bare areas immediately.

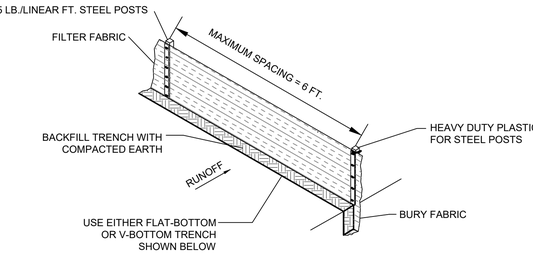
South Carolina Department of Health and Environmental Control

Type A

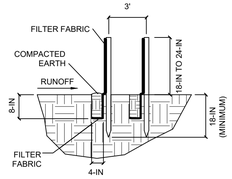
FILTER FABIC INLET PROTECTION

STANDARD DRAWING NO. SC-07 PAGE 2 of 2

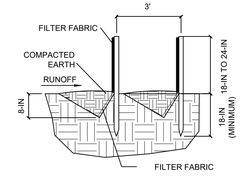
GENERAL NOTES — DATE: FEBRUARY 2014



SILT FENCE INSTALLATION (SINGLE ROW)



FLAT-BOTTOM TRENCH DETAIL (DOUBLE ROW)



V-SHAPED TRENCH DETAIL (DOUBLE ROW)

DOUBLE ROW SILT FENCE

N.T.S.

Stantec
4969 Centre Pointe Drive, Suite 200
North Charleston, SC, 29418
Tel: 843.740.7700
www.stantec.com

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Legend

PER BID ADDENDUM #1	RMW By	BK Appd	2022.12.21 YYYY.MM.DD
Revision			
ISSUED FOR CONSTRUCTION	RMW By	BK Appd	2022.06.28 YYYY.MM.DD
Issued			
File Name: 1035_C3_ESC_DETAILS	SGC Dwn.	SGC Dsgn.	BK Chkd. 2020.10.09 YYYY.MM.DD

Permit/Seal

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION STANTEC CONSULTING SERVICES, INC. No. C.O.2316

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER ROBERT MARSHALL WYNNE No. 32100

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
EROSION CONTROL DETAILS

Project No.	Scale
178421035	

Revision	Sheet	Drawing No.
---	C3-00 of 65	C3-00

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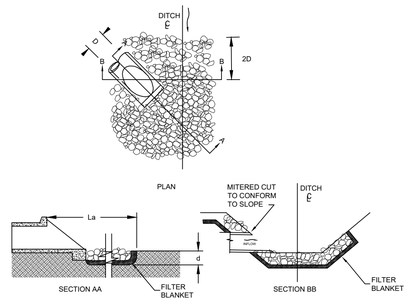
2022/12/22 10:27 AM By: Wynne, Robert

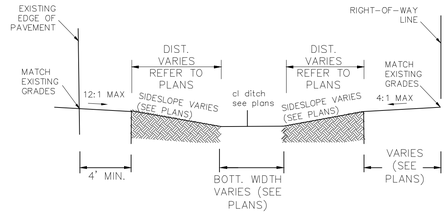
	PIPE DIA. (IN)	PIPES (FT)	3D (FT)	La (FT)	W (FT)	AVG. ROCK DIA (IN)	d (FT.)
1	12	1	3.00	6	5.00	6	0.75
2	15	1	3.75	8	6.25	6	0.75
3	18	1	4.50	10	7.50	6	0.75
4	21	1	5.25	12	8.75	6	0.75
5	24	1	6.00	14	10.00	6	0.75
6	27	1	6.75	14	11.25	6	0.75
7	30	1	7.50	16	12.50	6	0.75
8	36	1	9.00	20	15.00	8	1.00
9	42	1	10.50	22	17.50	8	1.00
10	48	1	12.00	26	20.00	10	1.25
11	54	1	13.50	30	22.50	12	1.50

ANGLED PIPE OUTLET TO WELL-DEFINED CHANNEL



NOTES:
1. La IS THE LENGTH OF THE RIPRAP APRON.
2. d=1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".
3. IN A WELL-DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

OUTLET STABILIZATION STRUCTURE
N.T.S.



GRASSED TRAPEZOIDAL DITCH DETAIL
N.T.S.

SEQUENCE OF CONSTRUCTION:

1. RECEIVE NPDES COVERAGE FROM SCDHEC.
2. NOTIFY SCDOT, PRE-CONSTRUCTION MEETING.
3. NOTIFY DHEC EQC REGIONAL OFFICE 48 HOURS PRIOR TO BEGINNING LAND-DISTURBING ACTIVITIES.
4. INSTALLATION OF TREE PROTECTION, PERIMETER SILT FENCE, AND EROSION CONTROL MEASURES.
5. POTHOLE UTILITY LOCATIONS AS SHOWN ON THE PLANS, LOCATE SEWER SERVICES FOR EACH RESIDENCE, AND NOTIFY OWNER/ENGINEER OF CONFLICTS.
6. INSTALLATION OF COFFERDAMS (AS REQUIRED)
7. INSTALLATION OF NEW STORMWATER PIPES AND STRUCTURES.
8. CONSTRUCT DIVERSION SWALES AS NECESSARY TO CONVEY THE STORM WATER BEFORE THE PROPOSED STORM DRAINAGE SYSTEM IS FULLY FUNCTIONAL, INSTALLING SEDIMENT TUBES IF NECESSARY.
9. INSTALL PERIMETER SILT FENCE WHERE SEDIMENT IS OBSERVED TO BE LEAVING CONSTRUCTION AREAS. MAINTAIN PERIMETER SILT FENCE, DIVERSIONS, AND SEDIMENT TUBES.
10. PERMANENT/FINAL STABILIZATION OF DITCHES/SWALES WITH SEEDING AND/OR SOD.
11. REPLACE DAMAGED OR DEMOLISHED HARDSCAPE AND LANDSCAPE IN-KIND AS REQUIRED.
12. MAINTENANCE OF SEDIMENT AND EROSION CONTROL MEASURES MUST CONTINUE UNTIL THE SITE IS PERMANENTLY STABILIZED AND THE CONTROLS ARE REMOVED.
13. CONTACT GEORGETOWN COUNTY FOR FINAL INSPECTION AND CLOSE-OUT OF PROJECT. AS-BUILT, VIDEO AND CLOSE-OUT APPLICATION TO BE SUBMITTED FOR REVIEW AND APPROVAL AS REQUIRED BY GEORGETOWN COUNTY.
14. REMOVAL OF TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES AFTER ENTIRE WORK AREA IS FINALLY STABILIZED (THE DEPARTMENT RECOMMENDS THAT THE PROJECT OWNER/OPERATOR HAVE THE SWPPP PREPARER OR REGISTRATION EQUIVALENT APPROVE THE REMOVAL OF TEMPORARY STRUCTURES).
15. SUBMIT TO DHEC FOR N.O.T. WITHIN 30 DAYS OF FINAL STABILIZATION.

TEMPORARY VEGETATION SCHEDULE

SPECIES	RATE (LBS/AC)	OPTIMUM DATES TO PLANT	REMARKS
BROWNTOP MILLET (ALONE)	40	APRIL 20 - AUGUST 15	QUICK, DENSE COVER
BROWNTOP MILLET (MIX)*	10	APRIL 20 - AUGUST 15	QUICK, DENSE COVER
RYE GRAIN (ALONE)	56	FEBRUARY - MARCH, AUGUST 15 - NOVEMBER 20	QUICK COVER
RYE GRAIN (MIX)*	10	FEBRUARY - MARCH, AUGUST 15 - NOVEMBER 20	QUICK COVER
RYE GRASS (ALONE)	50	AUGUST 10 - OCTOBER 10	COMPETITIVE, DENSE
RYE GRASS (MIX)*	8	AUGUST 10 - OCTOBER 10	COMPETITIVE, DENSE

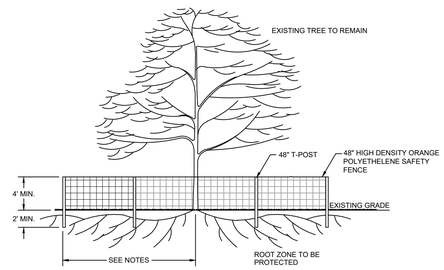
* FOR DETAILS ON MIXES CONSULT THE CLEMSON UNIVERSITY HOME AND GARDEN INFORMATION CENTER AT (888) 656-9988 OR AT HTTP://HGIC.CLEMSON.EDU.

PERMANENT VEGETATION SCHEDULE

SPECIES	RATE (LBS/AC)	OPTIMUM DATES TO PLANT	REMARKS
BERMUDA GRASS (HULLED) (ALONE)	8-12	APRIL - JULY 15	QUICK COVER, SOD FORMING, PARTIAL WINTER KILL
BERMUDA GRASS (HULLED) (MIX)*	4-6	APRIL - JULY 15	QUICK COVER, SOD FORMING, PARTIAL WINTER KILL
FESCUE, TALL (KY31) ALONE	40	AUGUST 15 - OCTOBER	SELDOM SEEDED ALONE, NOT FOR DRY OR WET SITES
FESCUE, TALL (KY31) MIX*	20	AUGUST 15 - OCTOBER	SELDOM SEEDED ALONE, NOT FOR DRY OR WET SITES
ANNUAL RYE GRASS	15	AUGUST 15 - FEBRUARY	GOOD FOR SUPPRESSING WEEDS. DO NOT USE ITALIAN RYE GRASS.
CENTIPEDE	10	MARCH 1 - APRIL 15	REQUIRES LOW MAINTENANCE AND FEWER CUTS.

* FOR DETAILS ON MIXES CONSULT THE CLEMSON UNIVERSITY HOME AND GARDEN INFORMATION CENTER AT (888) 656-9988 OR AT HTTP://HGIC.CLEMSON.EDU.

SEEDING SCHEDULE



NOTES:

1. ALL TREE PROTECTION BARRICADES MUST HAVE TWO HORIZONTAL CROSS RAILS.

2. BARRICADES SHALL BE ERECTED AT A MINIMUM DISTANCE FROM THE BASE OF PROTECTED TREES AND GRAND TREES ACCORDING TO THE FOLLOWING STANDARDS.

A. FOR GRAND TREES THE BARRICADE SHALL BE PLACED AT THE DRIPLINE OF THE TREE.

B. FOR PROTECTED TREES TEN INCHES (10") OR LESS D.B.H. (DIAMETER BREAST HEIGHT). PROTECTIVE BARRICADES SHALL BE PLACED A MINIMUM DISTANCE OF TEN FEET (10') FROM THE BASE OF EACH PROTECTED TREE, OR TO THE EDGE OF THE DRIP LINE, WHICHEVER IS GREATER

C. FOR PROTECTED TREES GREATER THAN TEN INCHES (10") D.B.H., PROTECTIVE BARRICADES SHALL PROVIDE A DIAMETER OF PROTECTION AROUND THE TREE EQUAL TO THE DIAMETER BREAST HEIGHT OF THE TREE (i.e., A 24" DIAMETER TREE WOULD REQUIRE A 24 FOOT DIAMETER PROTECTIVE BARRICADE), OR TO THE EDGE OF THE DRIP LINE, WHICHEVER IS GREATER.

D. CONTRACTOR TO INSTALL SILT FENCING ON THE SIDE OF THE TREE ADJACENT TO THE ROADWAY.

3. ALL GRADING AROUND PROTECTED TREES IS TO BE DONE BY HAND. CONTRACTOR SHALL NOT OPERATE HEAVY EQUIPMENT WITHIN THE TREE PROTECTION BARRIERS.

4. CONTRACTOR SHALL NOTIFY CITY OF NORTH CHARLESTON UPON INSTALLATION OF TREE PROTECTION FOR INSPECTION AND APPROVAL PRIOR TO LAND DISTURBANCE.

TREE PROTECTION DETAIL
N.T.S.

Stantec
4969 Centre Pointe Drive, Suite 200
North Charleston, SC, 29418
Tel: 843.740.7700
www.stantec.com

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Legend

Revision	By	Appd	YYYY.MM.DD
PER BID ADDENDUM #1 △	RMW	BK	2022.12.21
ISSUED FOR CONSTRUCTION	RMW	BK	2022.06.28
File Name: 1035_C3_ESC_DETAILS	SGC Dwn.	SGC Dsgn.	BK Chkd. 2020.10.09

Permit/Seal

SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 32510 ROBERT MARSHALL WYNNE
06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
EROSION CONTROL DETAILS

Project No. 178421035
Scale

Revision ---
Sheet C3-01 of 65
Drawing No. C3-01

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2022/12/22 10:21 AM By: TYPHE, KASEY
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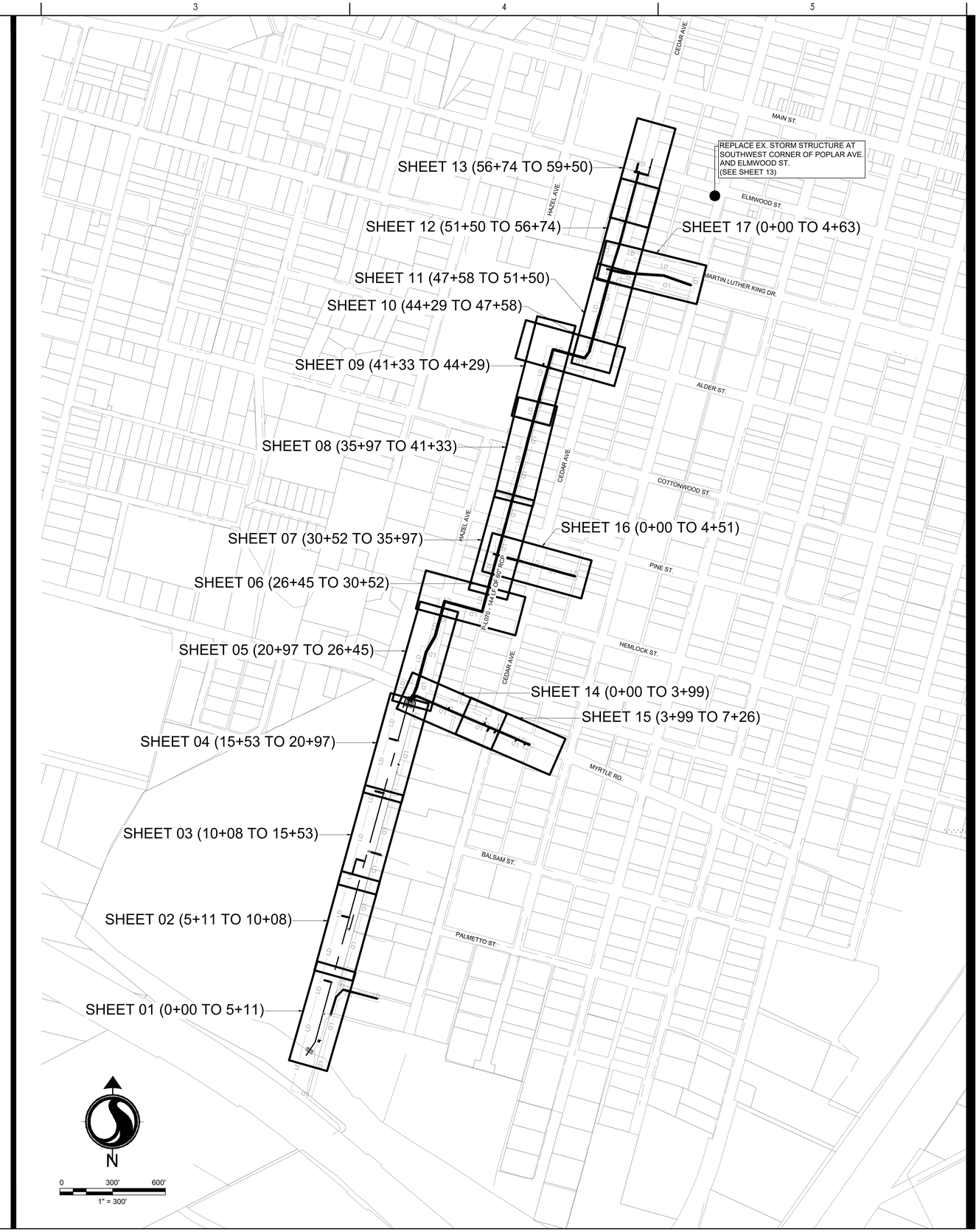
STORM DRAINAGE STUCTURES			
STRUCTURE ID	DETAILS	STRUCTURE | INLET	TOTAL DEPTH
N-I010	TOP = 33.60 P-I020 INV IN = 22.69 P-I010 INV OUT = 22.69	6' ECC. MH | JN	11.2
N-I020	TOP = 33.16 P-I030 INV IN = 23.47 P-I020-A INV IN = 31.00 P-I020 INV OUT = 23.47	6' ECC. MH | JN	10.1
N-I020-A	TOP = 34.08 P-X020 INV IN = 31.88 P-I020-A INV OUT = 31.88	3'X3' BOX | DI	2.2
N-I030	TOP = 33.18 P-I040 INV IN = 24.35 P-I030-A INV IN = 30.00 P-I030 INV OUT = 24.35	6' ECC. MH | JN	9.4
N-I030-A	TOP = 34.27 P-X015 INV IN = 30.80 P-I030-A INV OUT = 30.50	3'X3' BOX | DI	9.7
N-I040	TOP = 34.00 P-I050 INV IN = 24.49 P-I040-A INV IN = 29.90 P-I040 INV OUT = 24.49	6' ECC. MH | JN	9.9
N-I050	TOP = 34.30 P-I060 INV IN = 24.67 P-X010 INV IN = 27.60 P-I050-A INV IN = 30.50 P-I050 INV OUT = 24.67	6' ECC. MH | JN	10.1
N-I060	TOP = 33.85 P-I070 INV IN = 25.17 P-I060-A INV IN = 30.50 P-I060 INV OUT = 25.17	6' ECC. MH | JN	9.1
N-I070	TOP = 33.29 P-I080 INV IN = 25.38 P-I070-A INV IN = 28.50 P-I070 INV OUT = 25.38	6' ECC. MH | JN	8.3
N-I080	TOP = 33.40 P-X070 INV IN = 24.03 P-X085 INV IN = 23.43 P-I080 INV OUT = 25.50	EX. DROP INLET	10.0
N-L020	TOP = 33.54 P-L030 INV IN = 21.62 P-X045 INV IN = 25.00 P-L020 INV OUT = 21.62	10' ECC. MH | JN	14.4
N-L030	TOP = 34.86 P-L035 INV IN = 21.68 P-L030 INV OUT = 21.68	10' ECC. CONFLICT MH | DI	13.2
N-L035	TOP = 37.44 P-L040 INV IN = 21.98 P-L035 INV OUT = 21.98	10' ECC. MH | DI	16.0
N-L040	TOP = 38.44 P-L050 INV IN = 22.13 P-L040 INV OUT = 22.13	10' ECC. MH | T9	16.3
N-L050	TOP = 36.93 P-L060 INV IN = 22.43 P-L050 INV OUT = 22.43	10' ECC. MH | DI	14.5
N-L060	TOP = 38.67 P-L065 INV IN = 22.75 P-L060 INV OUT = 22.75	10' ECC. MH | DI	16.4
N-L065	TOP = 38.42 P-L070 INV IN = 22.82 P-L065 INV OUT = 22.82	8' ECC. MH | DI	15.6
N-L070	TOP = 35.35 P-L080 INV IN = 23.03 P-L070 INV OUT = 23.03	8' ECC. MH | T9	17.8
N-L080	TOP = 31.51 P-L090 INV IN = 23.24 P-0003 INV IN = 24.35 P-L080-A INV IN = 28.50 P-L080 INV OUT = 23.24	8' ECC. MH | T9	8.8
N-L090	TOP = 33.46 P-L100 INV IN = 23.46 P-L090 INV OUT = 23.46	8' ECC. CONFLICT MH | DI	10.5
N-L100	TOP = 33.87 P-L110 INV IN = 23.51 P-L100 INV OUT = 23.51 P-L100-A INV OUT = 31.00	8' ECC. MH | DI	10.9
N-L110	TOP = 33.03 P-L120 INV IN = 23.83 P-L110 INV OUT = 23.83	8' ECC. MH | T9	9.7
N-L120	TOP = 33.52 P-L130 INV IN = 24.15 P-L120-A INV IN = 29.00 P-X040 INV IN = 29.66 P-L120 INV OUT = 24.15	8' ECC. MH | DI	9.9
N-L130	TOP = 32.00 P-L140 INV IN = 24.22 P-L130 INV OUT = 24.22	3'X6'X5' CONC BOX DI -719-305-00	8.4
N-L140	TOP = 32.71 P-L150 INV IN = 24.57 P-L140-A INV IN = 30.00 P-L140 INV OUT = 24.57	3'X6'X5' CONC BOX DI -719-305-00	8.9
N-L140-A	TOP = 32.15 P-L140-A INV OUT = 32.00	18" FLARED END SECT.	???
N-L150	TOP = 32.83 P-L160 INV IN = 24.87 P-L150-A INV IN = 28.50 P-L150 INV OUT = 24.87	4'X6'X5' CONC BOX DI -719-305-00	8.5
N-L150-A	TOP = 34.85 P-X075 INV IN = 32.00 P-L150-A INV OUT = 31.00	4'X4' BOX | DI	3.8
N-L160	TOP = 34.56 P-L170 INV IN = 25.01 P-L160 INV OUT = 25.01	3'X6'X5' CONC BOX DI -719-305-00	9.7
N-L170	TOP = 35.21 P-L180 INV IN = 25.29 P-L170 INV OUT = 25.29	8' ECC. MH | DI	10.6
N-L180	TOP = 35.49 P-L190 INV IN = 25.36 P-L180 INV OUT = 25.36	8' ECC. MH | DI	10.6
N-L190	TOP = 33.77 P-L200 INV IN = 25.67 P-L190 INV OUT = 25.67	8' ECC. CONFLICT MH | DI	8.8
N-L200	TOP = 33.61 P-L210 INV IN = 25.88 P-X025 INV IN = 30.05 P-L200 INV OUT = 25.88	8' ECC. MH | DI	8.1
N-L210	TOP = 33.51 P-L220 INV IN = 26.06 P-M010 INV IN = 26.06 P-L210-A INV IN = 29.70 P-L210 INV OUT = 26.06	8' ECC. MH | JN	8.1
N-L210-A	TOP = 33.30 P-L210-A INV OUT = 28.00	3'X3' BOX | DI	5.3
N-L220	TOP = 34.26 P-L230 INV IN = 26.28 P-L220 INV OUT = 26.28	6' ECC. MH | DI	8.2
N-L230	TOP = 33.55 P-L240 INV IN = 26.49 P-L230 INV OUT = 26.49	6' ECC. MH | DI	7.6
N-L240	TOP = 30.99 P-L245 INV IN = 26.70 P-P010 INV IN = 26.70 P-L240 INV OUT = 26.70	4'X4' BOX | DI	4.3
N-L245	TOP = 32.55 P-L250 INV IN = 26.91 P-L245 INV OUT = 26.91	4'X4' CONFLICT BOX | JN	6.0
N-L250	TOP = 30.53 P-L260 INV IN = 26.32 P-X080 INV IN = 26.30 P-L250 INV OUT = 26.97	EX. DROP INLET	4.2
N-L260	TOP = 31.25 P-L280 INV IN = 24.15 P-L260 INV OUT = 25.07	EX. DROP INLET	7.1
N-M010	TOP = 34.41 P-M020 INV IN = 26.16 P-X005 INV IN = 31.22 P-M010 INV OUT = 26.16	5'X5' BOX | DI	8.3
N-M020	TOP = 33.48 P-M030 INV IN = 26.51 P-X035 INV IN = 29.46 P-M020 INV OUT = 26.51	5'X5' BOX | DI	7.4
N-M030	TOP = 33.20 P-X065 INV IN = 28.14 P-X060 INV IN = 28.37 P-X030 INV IN = 29.72 P-M030 INV OUT = 26.75	EX. DROP INLET	6.4
N-0003	TOP = 31.20 P-0005 INV IN = 24.53 P-0003 INV OUT = 24.53	5'X5' BOX | DI	6.7
N-0005	TOP = 31.50 P-0010 INV IN = 24.73 P-0005 INV OUT = 24.73	5'X5' BOX | DI	6.8
N-0010	TOP = 31.57 P-0020 INV IN = 24.87 P-0010 INV OUT = 24.87	5'X5' BOX | DI	6.7
N-0020	TOP = 33.34 P-0030 INV IN = 24.97 P-0020 INV OUT = 24.97	5'X5' CONFLICT BOX | DI	8.4
N-0030	TOP = 31.24 P-X050 INV IN = 25.80 P-0030 INV OUT = 25.50 P-X055 INV OUT = 25.80	5'X5' BOX | DI	5.7
N-P010	TOP = 31.06 P-P020 INV IN = 26.73 P-P015 INV IN = 26.20 P-P010 INV OUT = 26.73	3'X3' BOX | DI	4.9

STORM DRAINAGE STUCTURES			
STRUCTURE ID	DETAILS	STRUCTURE | INLET	TOTAL DEPTH
N-P020	TOP = 32.57 P-P020 INV OUT = 26.83	3'X3' BOX | DI	5.7
N-0010	TOP = 0.00	5'X5' BOX | DI	5.0
N-R010	TOP = 25.00 L-R020 INV IN = 22.72 L-R010 INV OUT = 22.72	3'X3' BOX | DI	2.3
N-R020	TOP = 25.11 L-R030 INV IN = 22.90 L-R020 INV OUT = 22.90	3'X3' BOX | DI	2.2

STORM DRAIN PIPES			
Pipe Name	DESCRIPTION	Length	Slope
P-0040	12" RCP	33	6.13%
P-0050	12" RCP	32	0.62%
P-0020	12" RCP	40	7.48%
P-0010	12" RCP	40	11.15%
P-0030	12" RCP	39	6.87%
P-I070-A	15" RCP	10	3.07%
P-I060-A	15" RCP	9	4.26%
L-R030	18" RCP	200	2.32%
L-R020	18" RCP	59	0.30%
L-R010	18" RCP	106	0.30%
P-L210-A	18" RCP	24	7.10%
P-L080-A	18" RCP	20	11.73%
P-I030-A	18" RCP	9	5.60%
P-I020-A	18" RCP	9	9.52%
P-L140-A	18" RCP	9	22.81%
P-P020	18" RCP	48	0.20%
P-P010	18" RCP	15	0.20%
P-L100-A	18" RCP	16	6.32%
P-I050-A	18" RCP	16	3.54%
P-I040-A	18" RCP	24	1.24%
P-L120-A	18" RCP	24	4.10%
P-P015	24" RCP	8	0.00%
P-L250	36" RCP	48	0.15%
P-0005	36" RCP	80	0.25%
P-0010	36" RCP	55	0.25%
P-L240	36" RCP	214	0.10%
P-0030	36" RCP	212	0.25%
P-L150-A	36" RCP	30	8.39%
P-0020	36" RCP	41	0.25%
P-0003	36" RCP	71	0.25%
P-I020	36" RCP	197	0.40%
P-I080	36" RCP	29	0.40%
P-I070	36" RCP	55	0.40%
P-I060	36" RCP	125	0.40%
P-I050	36" RCP	43	0.40%
P-I040	36" RCP	35	0.40%
P-I030	36" RCP	220	0.40%
P-I010	36" RCP	40	0.14%
P-L245	36" RCP	7	2.74%
P-L230	36" RCP	206	0.10%
P-L220	36" RCP	154	0.15%
P-M030	48" RCP	163	0.15%
P-M020	48" RCP	230	0.15%
P-M010	48" RCP	70	0.15%
P-L070	60" RCP	144	0.14%
P-L065	60" RCP	49	0.15%
P-L080	60" RCP	140	0.15%
P-L120	60" RCP	215	0.15%
P-L150	60" RCP	201	0.15%
P-L200	60" RCP	142	0.15%
P-L190	60" RCP	213	0.15%
P-L090	60" RCP	153	0.15%
P-L210	60" RCP	123	0.15%
P-L160	60" RCP	95	0.15%
P-L180	60" RCP	47	0.15%
P-L170	60" RCP	186	0.15%
P-L140	60" RCP	241	0.15%
P-L130	60" RCP	51	0.14%
P-L110	60" RCP	219	0.15%
P-L100	60" RCP	37	0.15%
P-L060	60" RCP	221	0.15%
P-L040	72" RCP	106	0.15%
P-L030	72" RCP	43	0.15%
P-L050	72" RCP	204	0.15%
P-L035	72" RCP	206	0.15%
P-L020	72" RCP	38	0.14%
P-X005	EX. 15" RCP	60	0.03%
P-X040	EX. 18" RCP	208	0.02%
P-X035	EX. 18" RCP	26	0.73%
P-X030	EX. 18" RCP	66	2.06%
P-X025	EX. 18" RCP	49	0.53%
P-X020	EX. 18" RCP	35	2.16%
P-X015	EX. 18" RCP	32	0.00%
P-X010	EX. 18" RCP	40	0.00%
P-X060	EX. 24" RCP	260	0.52%
P-X055	EX. 24" RCP	287	0.00%
P-X050	EX. 24" RCP	152	0.00%
P-X045	EX. 24" RCP	86	1.16%
P-X065	EX. 30" RCP	112	0.12%
P-X075	EX. 36" RCP	36	0.52%
P-X080	EX. 36" RCP	66	0.00%
P-X070	EX. 36" RCP	45	0.60%
P-L280	EX. 36" RCP	51	0.10%
P-L260	EX. 36" RCP	45	2.79%
P-X085	EX. 48" RCP	205	0.34%



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Legend

LD	LIMITS OF DISTURBANCE
15	EXISTING CONTOURS
29	PROPOSED CONTOUR
SF	SILT FENCE
DSF	DOUBLE ROW SILT FENCE
	DRAINAGE FLOW ARROW
	RIPRAP
	PROPOSED PERMANENT EASEMENT
	PROPOSED TEMPORARY EASEMENT
	PROPOSED TEMPORARY EASEMENT
	PROPOSED PERMANENT EASEMENT
DI	INLET ADAPTOR - 24"X36" DROP INLET PER SCDOT 719-110-01
JN	INLET ADAPTOR - MANHOLE PER SCDOT 719-505-03
T9	INLET ADAPTOR - TYPE 9 PER SCDOT 719-009-04
EG	EXISTING GRADE
FG	FINISHED GRADE
EOP	EDGE OF PAVEMENT
EG 5.0	SPOT ELEVATION

Revision	By	Appd	YYYY.MM.DD
PER BID ADDENDUM #1	RMW	BK	2022.12.21
ISSUED FOR CONSTRUCTION	RMW	BK	2022.06.28
Issued	By	Appd	YYYY.MM.DD
File Name: 1035_C4_GRADING_INDEX	SGC	SGC	BK 2020.10.09
	Dwn.	Dsgn.	Cnkd. YYYY.MM.DD

Permit/Seal

SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. COA2310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 33501 ROBERT MARSHALL WYNN JR.

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DRAINAGE PLAN SHEET INDEX

Project No.
178421035

Scale

Revision ----

Sheet
C4-00 of 65

Drawing No.
C4-00

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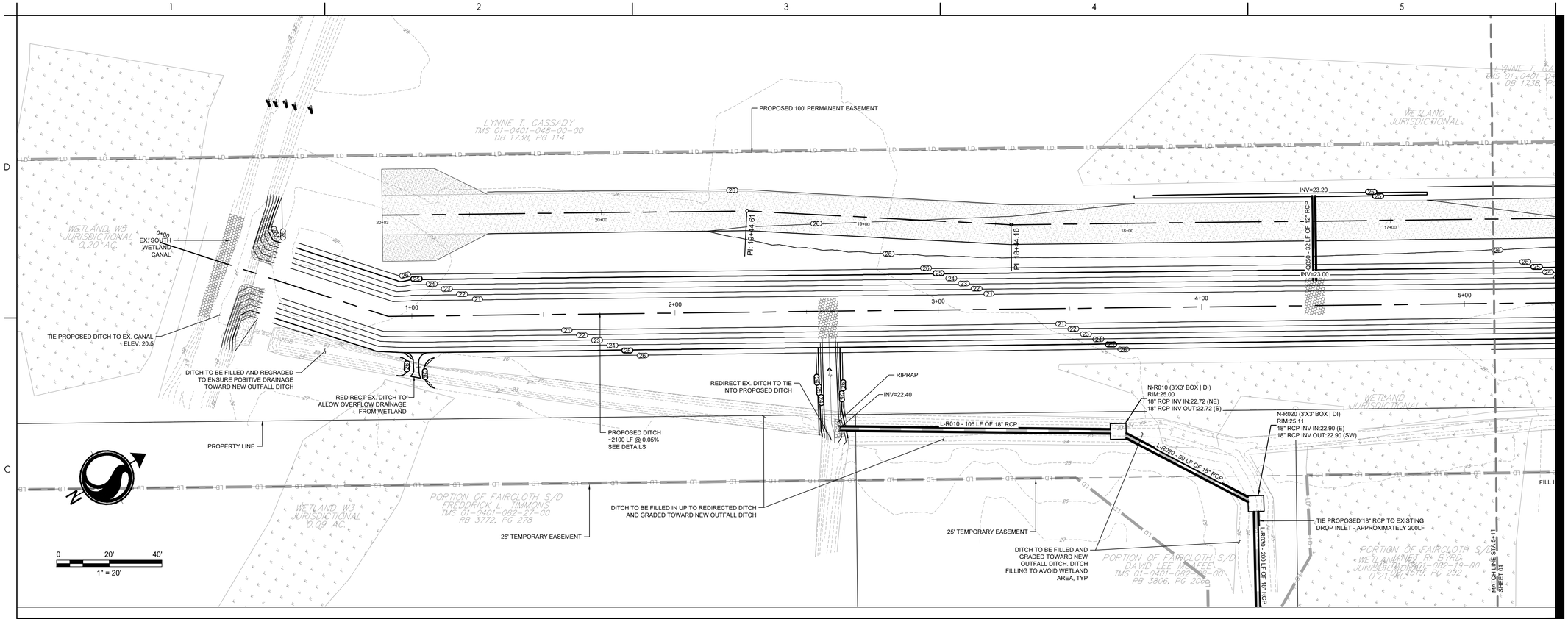

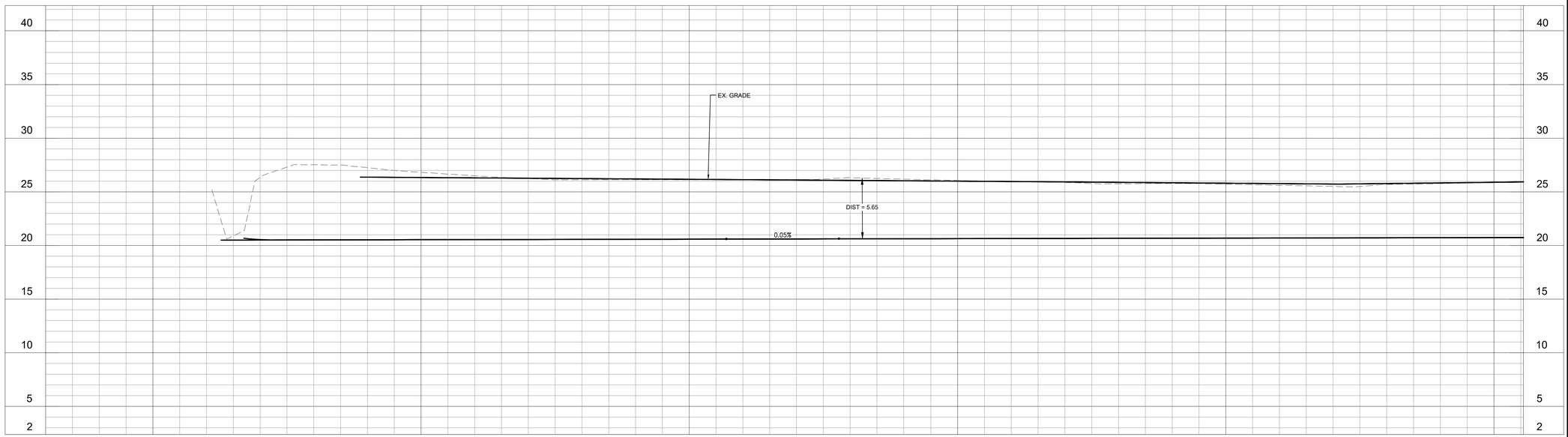

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Legend

- LD — LIMITS OF DISTURBANCE
- 15 — EXISTING CONTOURS
- 29 — PROPOSED CONTOUR
- SF — SILT FENCE
- DSF — DOUBLE ROW SILT FENCE
- DRAINAGE FLOW ARROW
- RIPRAP
- PROPOSED PERMANENT EASEMENT
- PROPOSED TEMPORARY EASEMENT
- PROPOSED TEMPORARY EASEMENT
- PROPOSED PERMANENT EASEMENT
- DI — INLET ADAPTOR - 24"X36" DROP INLET PER SCDOT 719-110-01
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- EG — EXISTING GRADE
- FG — FINISHED GRADE
- EOP — EDGE OF PAVEMENT
- 15.50 — SPOT ELEVATION

Revision	By	Appd	YYYY.MM.DD
PER BID ADDENDUM #1	RMW	BK	2022.12.21
ISSUED FOR CONSTRUCTION	RMW	BK	2022.06.28
File Name: 1035_C4_GRADING	SGC Dwn.	SGC Dsgn.	BK Chkd. 2020.10.09 YYYY.MM.DD

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SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 35101 — ROBERT MARSHALL WYNNE JR.

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DRAINAGE PLAN AND PROFILE

Project No. 178421035
Scale

Revision ----
Sheet C4-01 of 65
Drawing No. C4-01

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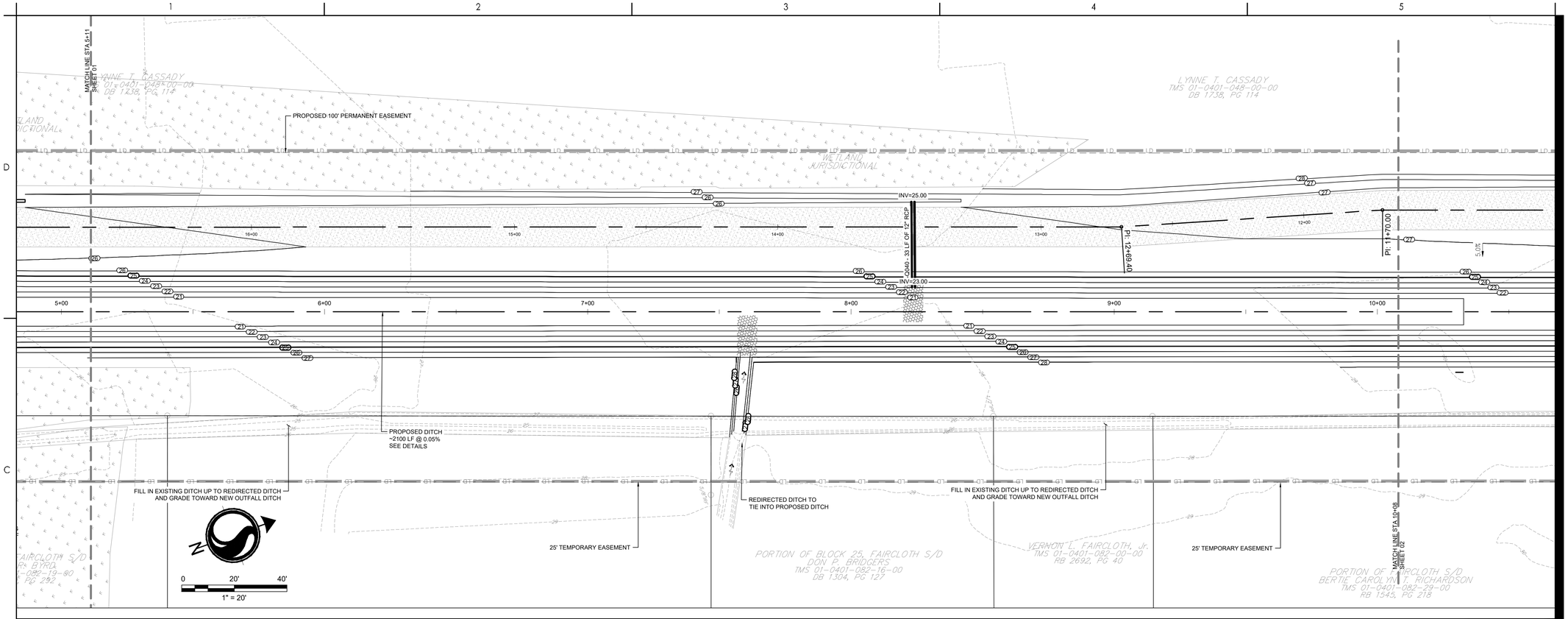

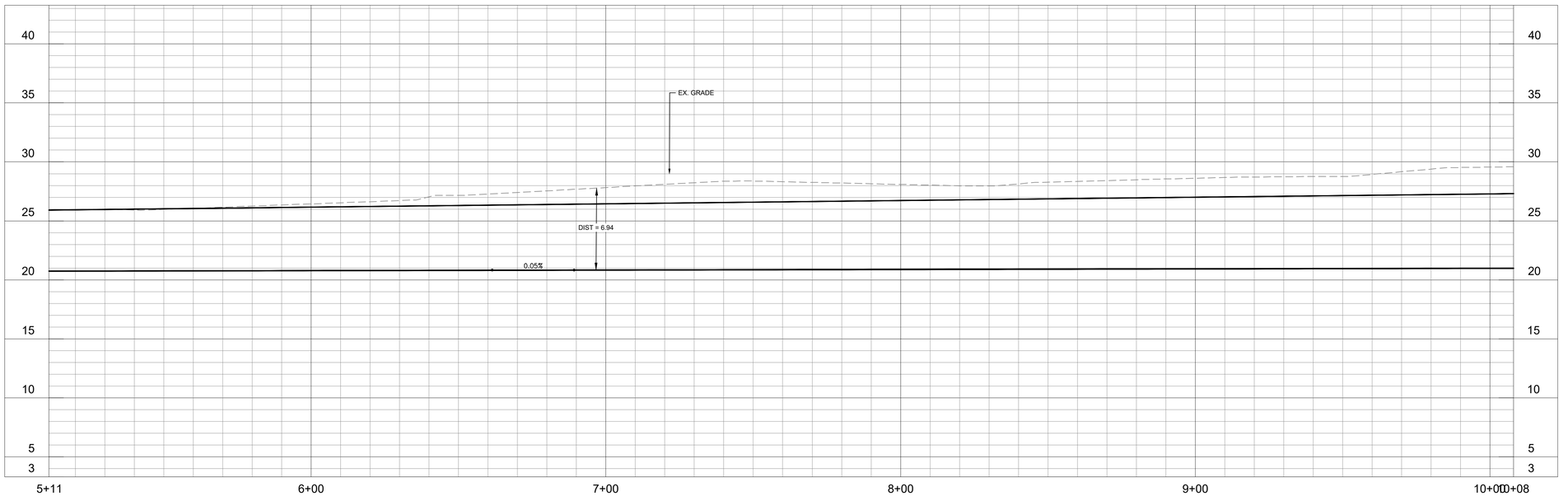

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Legend

LD	LIMITS OF DISTURBANCE
15	EXISTING CONTOURS
23	PROPOSED CONTOUR
SF	SILT FENCE
DSF	DOUBLE ROW SILT FENCE
	DRAINAGE FLOW ARROW
	RIPRAP
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EG	EXISTING GRADE
FG	FINISHED GRADE
EOP	EDGE OF PAVEMENT
15.50	SPOT ELEVATION

Revision	By	Appd	YYYY.MM.DD
PER BID ADDENDUM #1	RMW	BK	2022.12.21
ISSUED FOR CONSTRUCTION	RMW	BK	2022.06.28
File Name: 1035_C4_GRADING	SGC Dwn.	SGC Dsgn.	BK Chkd. 2020.10.09

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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 32510 ROBERT MARSHALL WYBRANT JR

06/28/2022

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Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DRAINAGE PLAN AND PROFILE

Project No. 178421035
Scale
Revision ----
Sheet C4-02 of 65
Drawing No. C4-02

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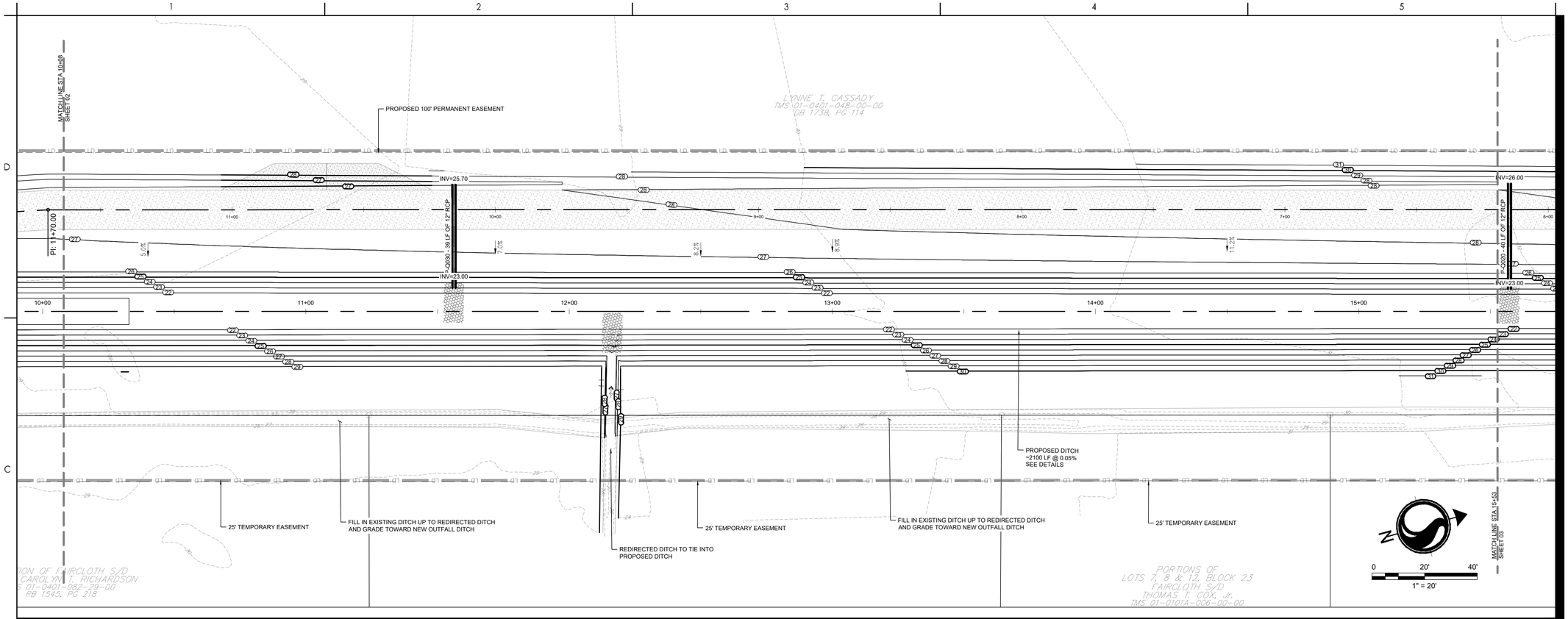

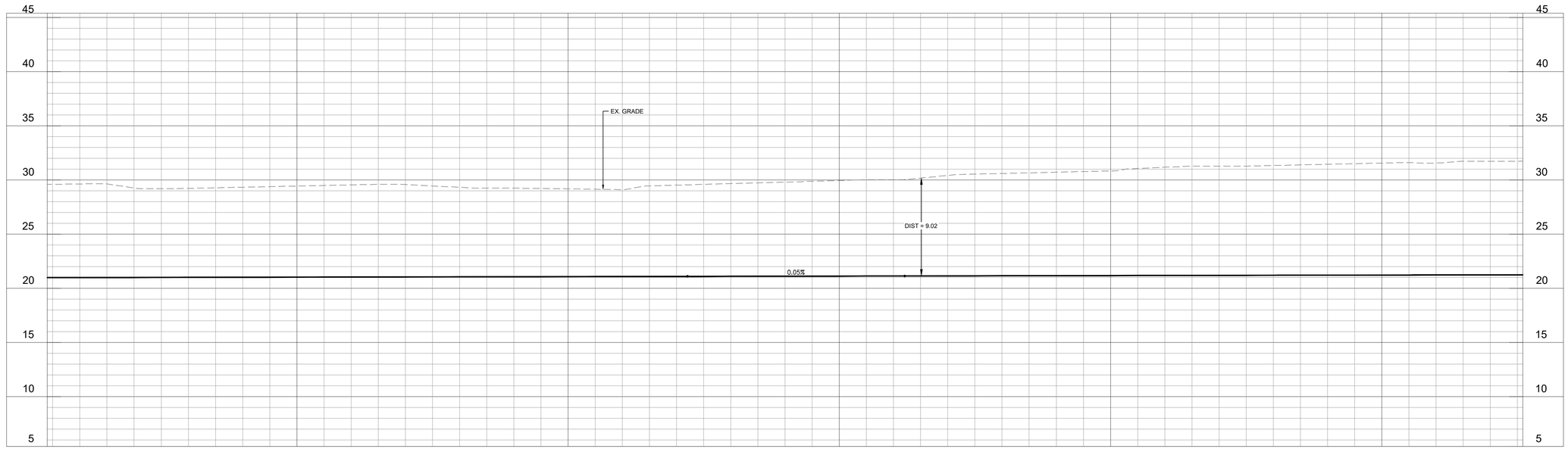

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PER BID ADDENDUM #1	RMW	BK	2022.12.21
Revision	By	Appd	YYYY.MM.DD
ISSUED FOR CONSTRUCTION	RMW	BK	2022.06.28
Issued	By	Appd	YYYY.MM.DD
File Name: 1035_C4_GRADING	SGC	SGC	BK 2020.10.09
	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

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06/28/2022

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Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DRAINAGE PLAN AND PROFILE

Project No.	Scale
178421035	
Revision: ----	Sheet: C4-03 of 65
Drawing No.	C4-03

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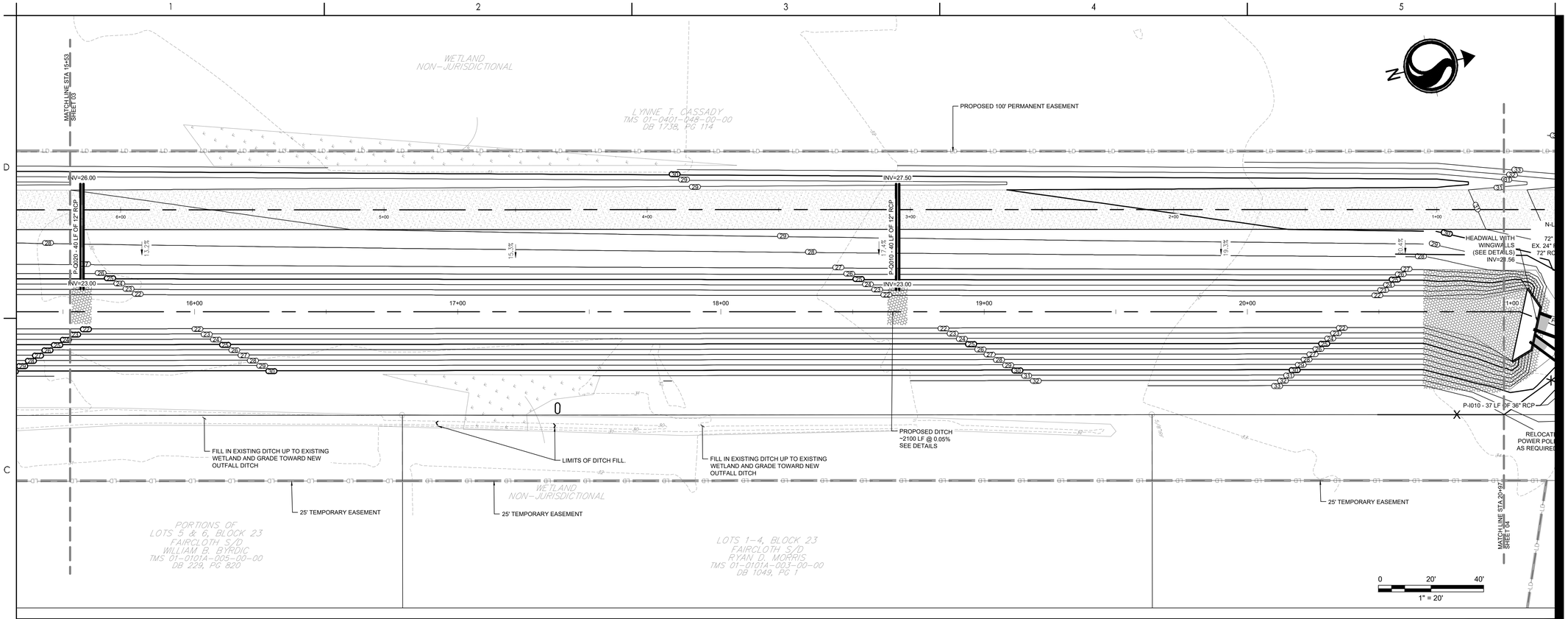

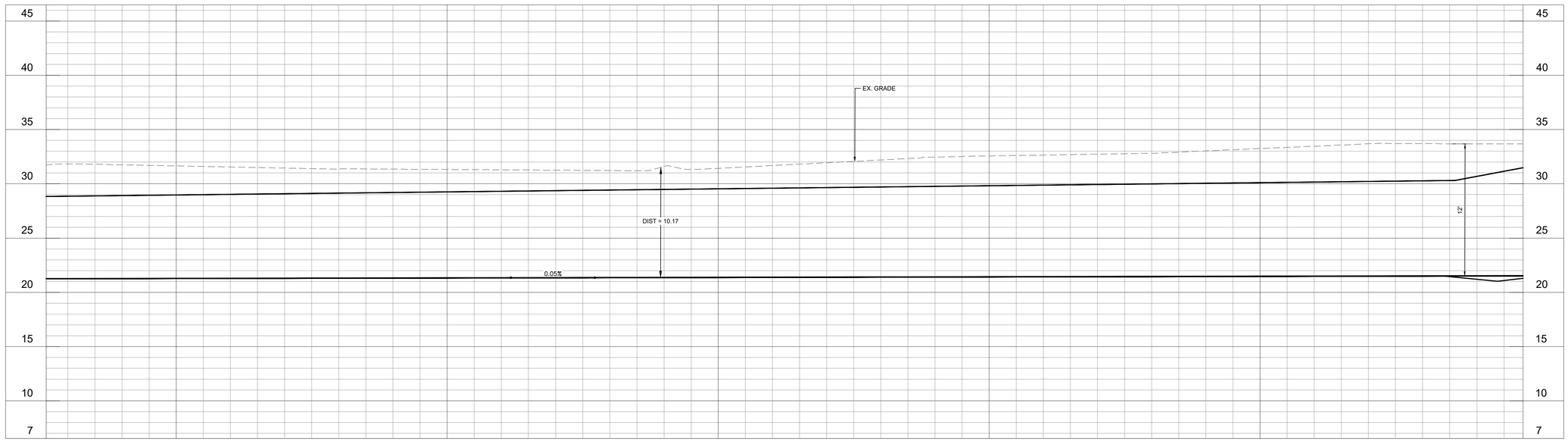

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Revision	By	Appd	
PER BID ADDENDUM #1	RMW	BK	2022.12.21
ISSUED FOR CONSTRUCTION	RMW	BK	2022.06.28
File Name: 1035_C4_GRADING	SGC Dwn.	SGC Dsgn.	BK Chkd. 2020.10.09

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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER ROBERT MARSHALL WYBRANT No. 32510

06/28/2022

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Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DRAINAGE PLAN AND PROFILE

Project No. 178421035
Scale

Revision ----
Sheet C4-04 of 65
Drawing No. C4-04

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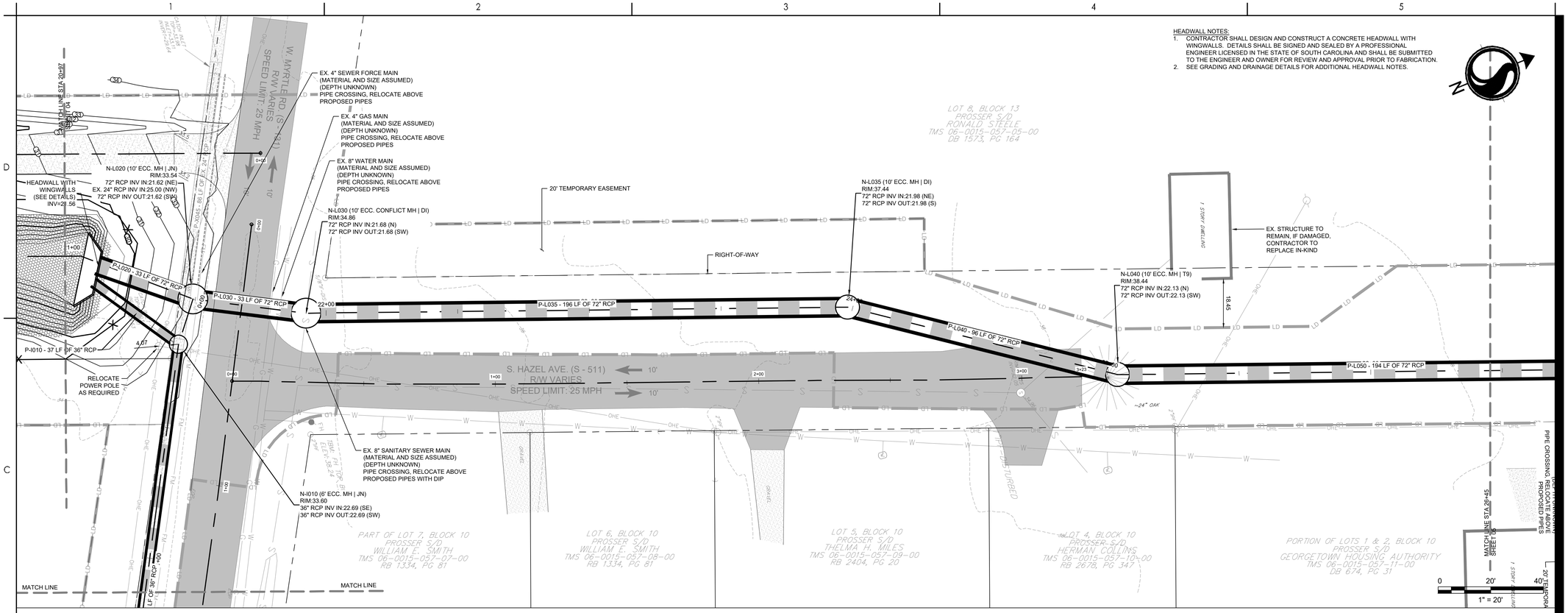
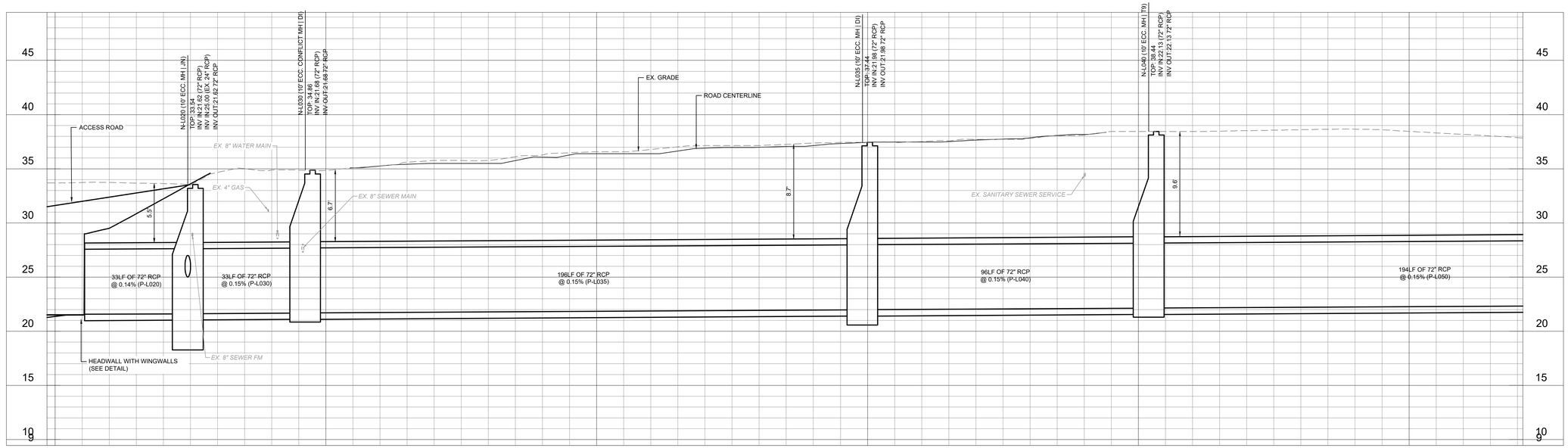
HEADWALL NOTES:
1. CONTRACTOR SHALL DESIGN AND CONSTRUCT A CONCRETE HEADWALL WITH WINGWALLS. DETAILS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF SOUTH CAROLINA AND SHALL BE SUBMITTED TO THE ENGINEER AND OWNER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
2. SEE GRADING AND DRAINAGE DETAILS FOR ADDITIONAL HEADWALL NOTES.





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Legend

- LD — LIMITS OF DISTURBANCE
- 15 — EXISTING CONTOURS
- 23 — PROPOSED CONTOUR
- SF — SILT FENCE
- DSF — DOUBLE ROW SILT FENCE
- DRAINAGE FLOW ARROW
- RIPRAP
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- PROPOSED TEMPORARY EASEMENT
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- T9 — INLET ADAPTOR - TYPE 9 PER SCDOT 719-009-04
- EG — EXISTING GRADE
- FG — FINISHED GRADE
- EOP — EDGE OF PAVEMENT
- 15.50 — SPOT ELEVATION

Revision	By	Appd	YYYY.MM.DD
PER BID ADDENDUM #1	RMW	BK	2022.12.21
ISSUED FOR CONSTRUCTION	RMW	BK	2022.06.28
Issued	By	Appd	YYYY.MM.DD
File Name: 1035_C4_GRADING	SGC Dwn.	SGC Dsgn.	BK Chkd. 2020.10.09 YYYY.MM.DD

Permit/Seal

SOUTH CAROLINA — STANTEC CONSULTING SERVICES, INC. — No. C02318 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 32510 — ROBERT MARSHALL WYBRANT JR.

06/28/2022

Client/Project Logo

Client/Project

GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DRAINAGE PLAN AND PROFILE

Project No.	Scale
178421035	

Revision	Sheet	Drawing No.
----	C4-05 of 65	C4-05

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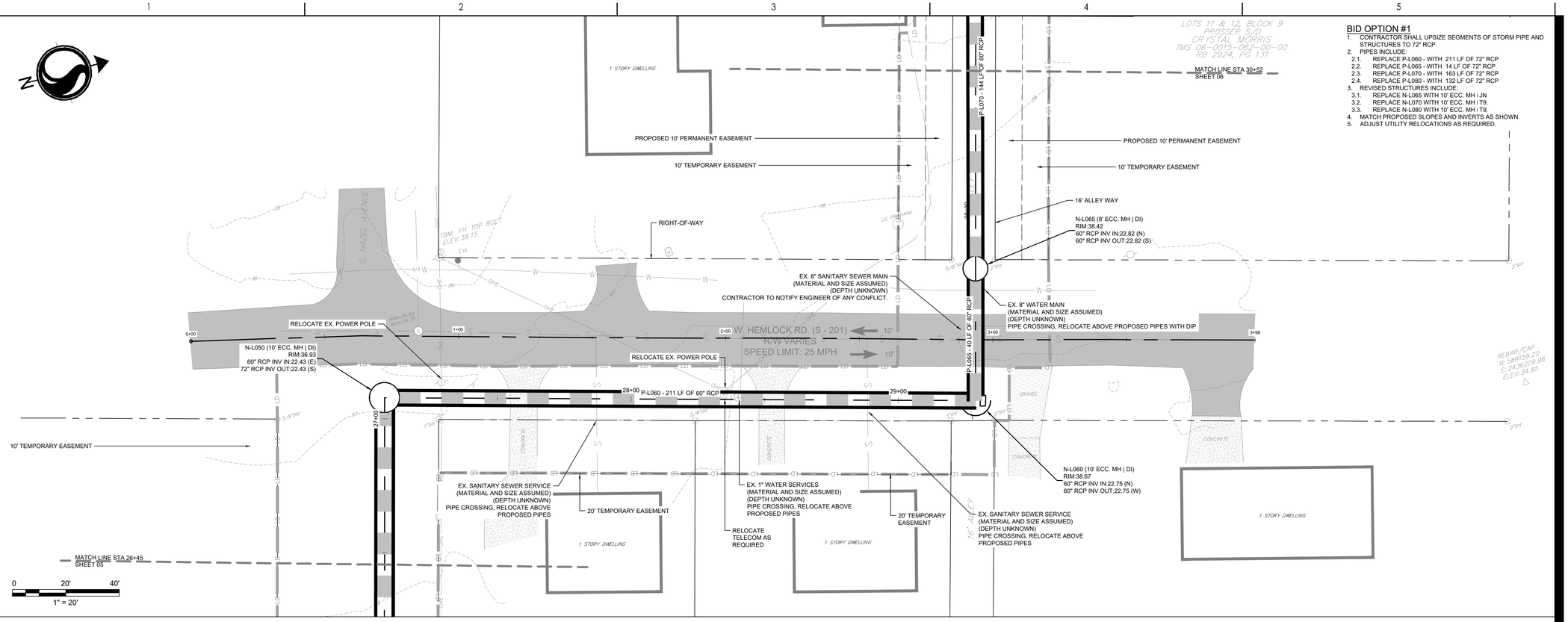

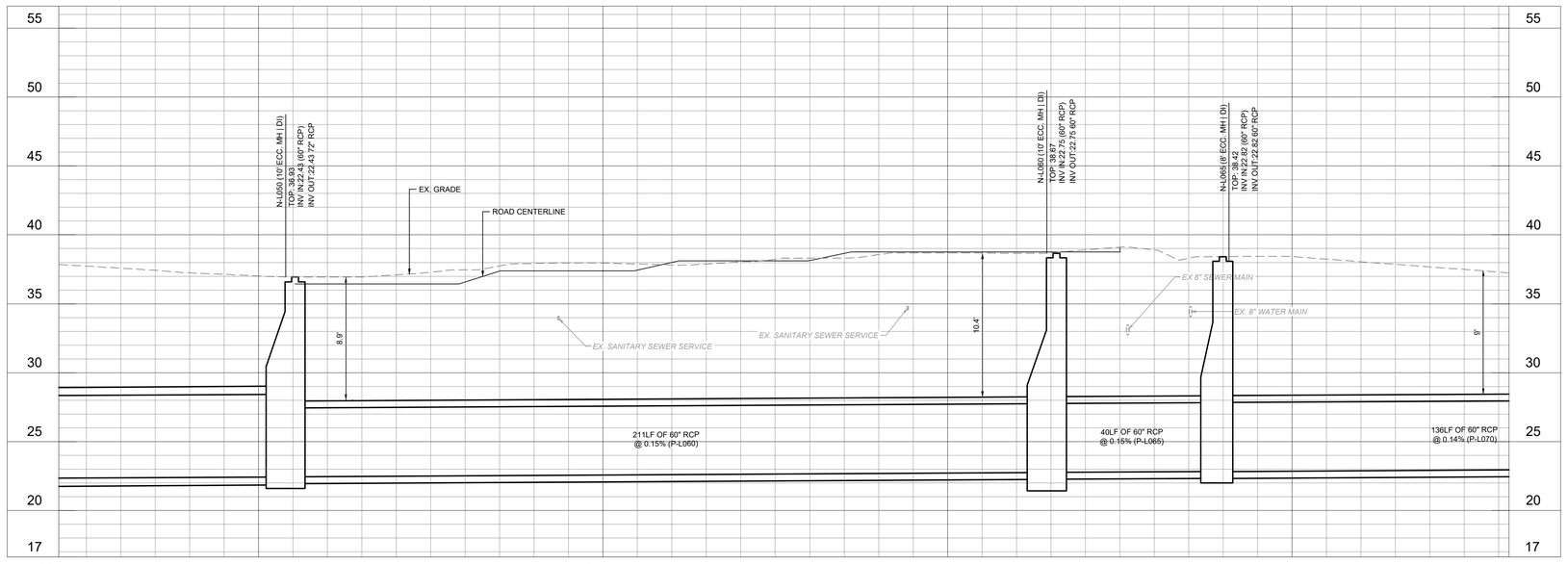

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Permit/Seal

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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 32510 ROBERT MARSHALL WYBRANIEC JR

06/28/2022

Client/Project Logo

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GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DRAINAGE PLAN AND PROFILE

Project No. 178421035
Scale

Revision ----
Sheet C4-06 of 65
Drawing No. C4-06

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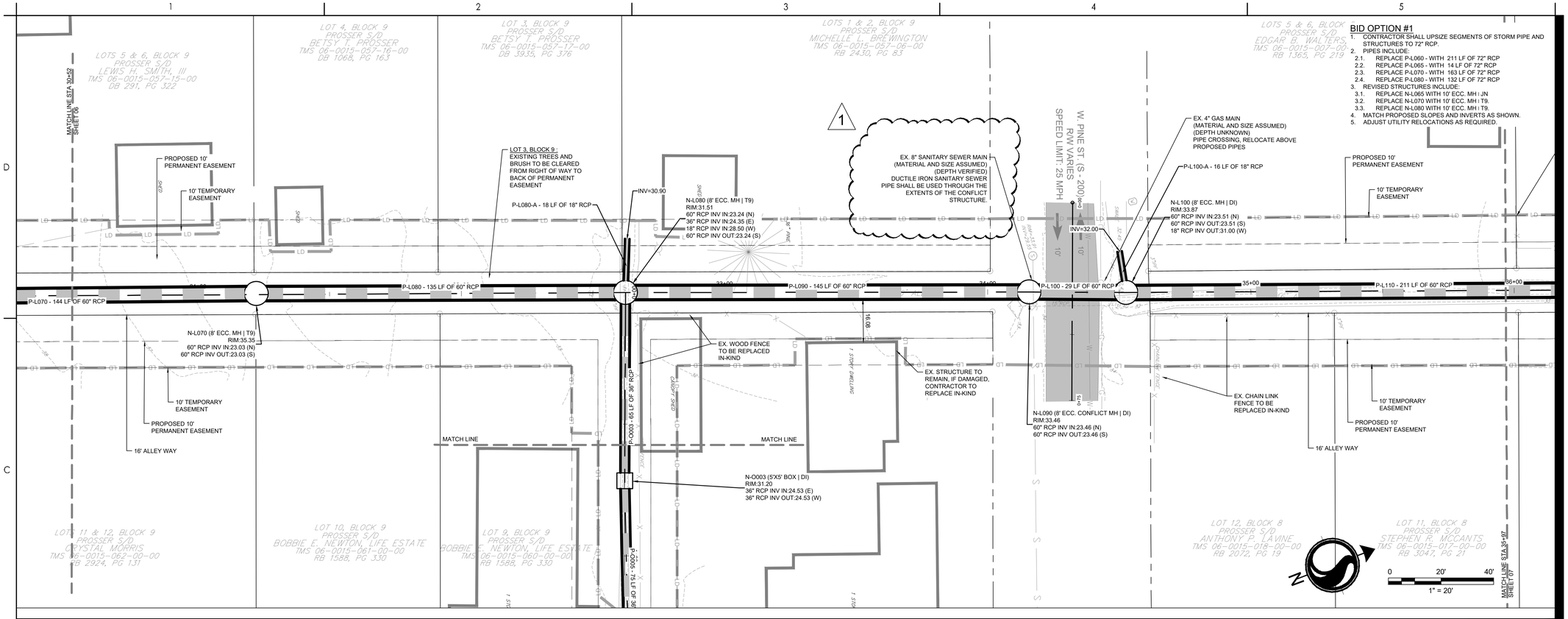
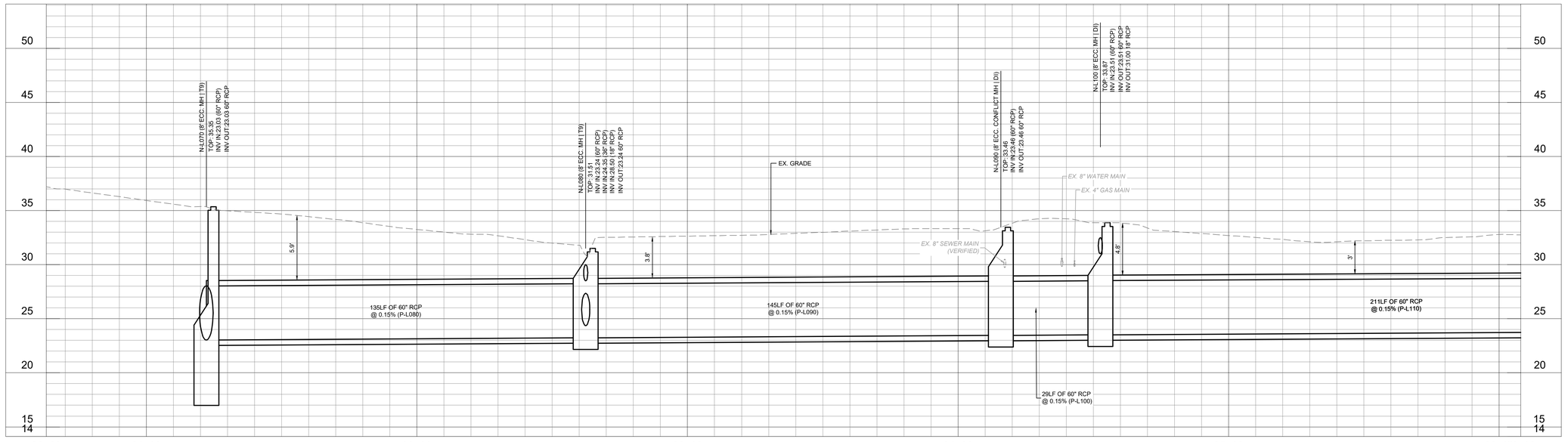


BID OPTION #1

1. CONTRACTOR SHALL UPSIZE SEGMENTS OF STORM PIPE AND STRUCTURES TO 72" RCP.
2. PIPES INCLUDE:
   - 2.1. REPLACE P-L060 - WITH 211 LF OF 72" RCP
   - 2.2. REPLACE P-L065 - WITH 14 LF OF 72" RCP
   - 2.3. REPLACE P-L070 - WITH 163 LF OF 72" RCP
   - 2.4. REPLACE P-L080 - WITH 132 LF OF 72" RCP
3. REVISED STRUCTURES INCLUDE:
   - 3.1. REPLACE N-L065 WITH 10' ECC. MH | JN
   - 3.2. REPLACE N-L070 WITH 10' ECC. MH | T9.
   - 3.3. REPLACE N-L080 WITH 10' ECC. MH | T9.
4. MATCH PROPOSED SLOPES AND INVERTS AS SHOWN.
5. ADJUST UTILITY RELOCATIONS AS REQUIRED.



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06/28/2022

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Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DRAINAGE PLAN AND PROFILE

Project No. 178421035
Scale

Revision 1
Sheet C4-07 of 65
Drawing No. C4-07

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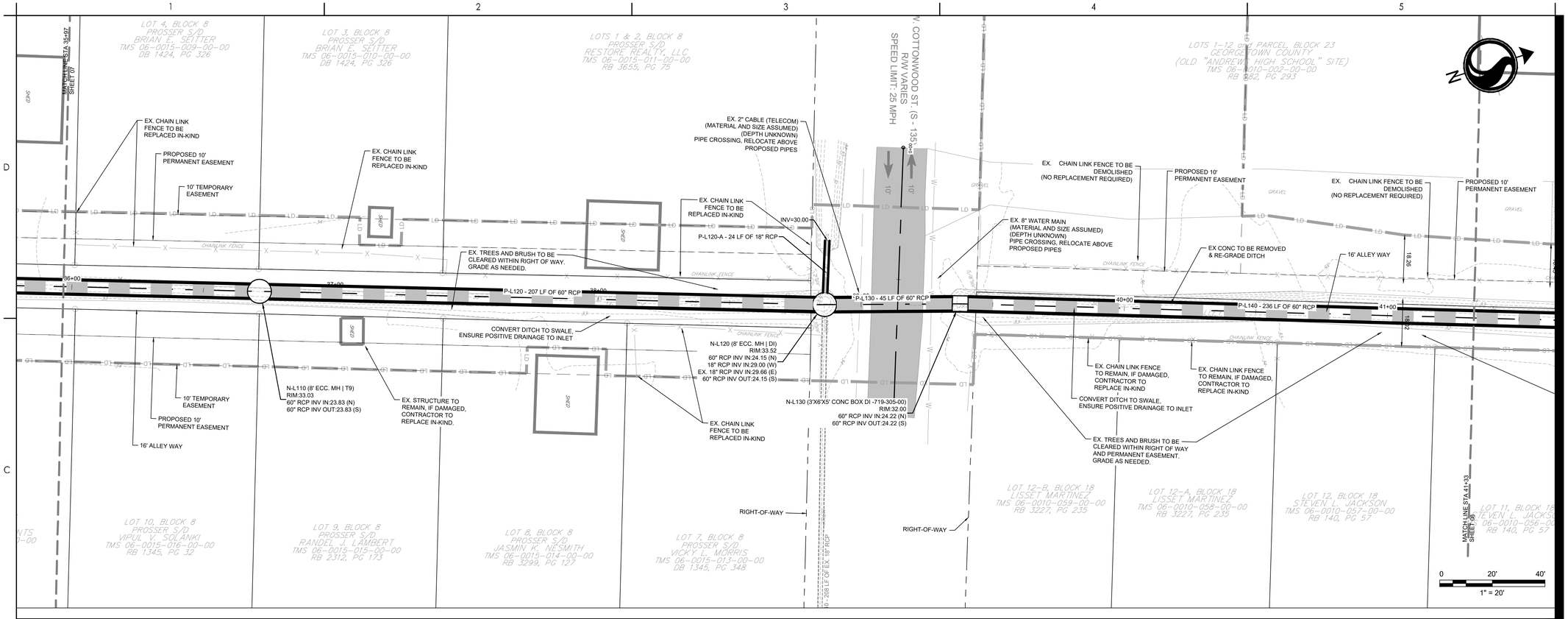

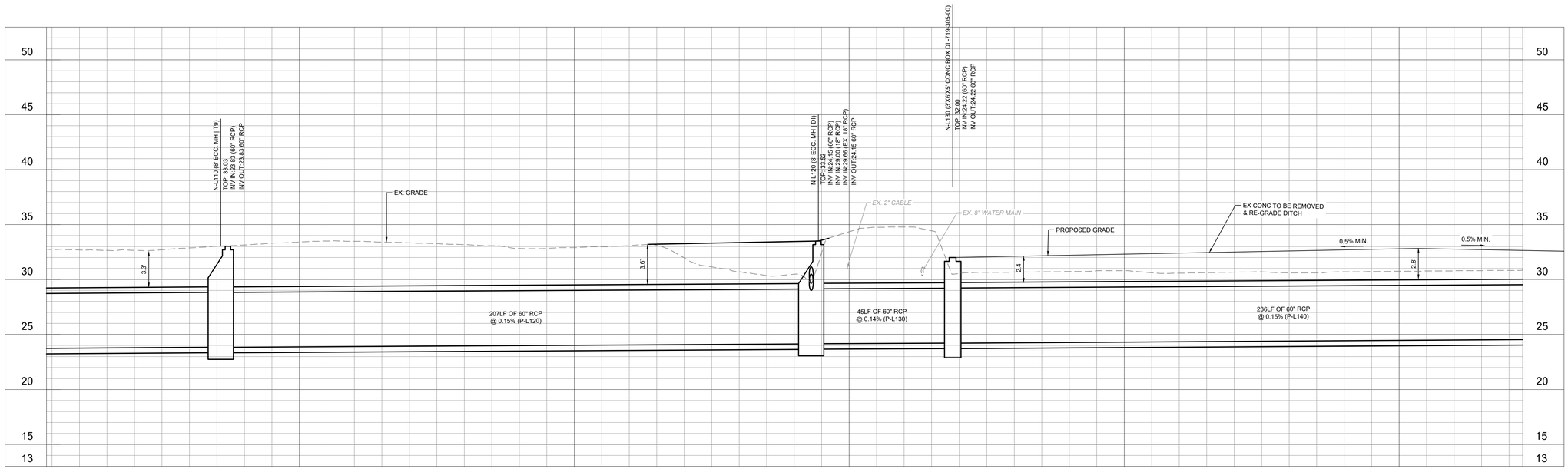

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SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 32510 — ROBERT MARSHALL WYBRANT JR.

06/28/2022

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Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DRAINAGE PLAN AND PROFILE

Project No. 178421035
Scale

Revision ----
Sheet C4-08 of 65
Drawing No. C4-08

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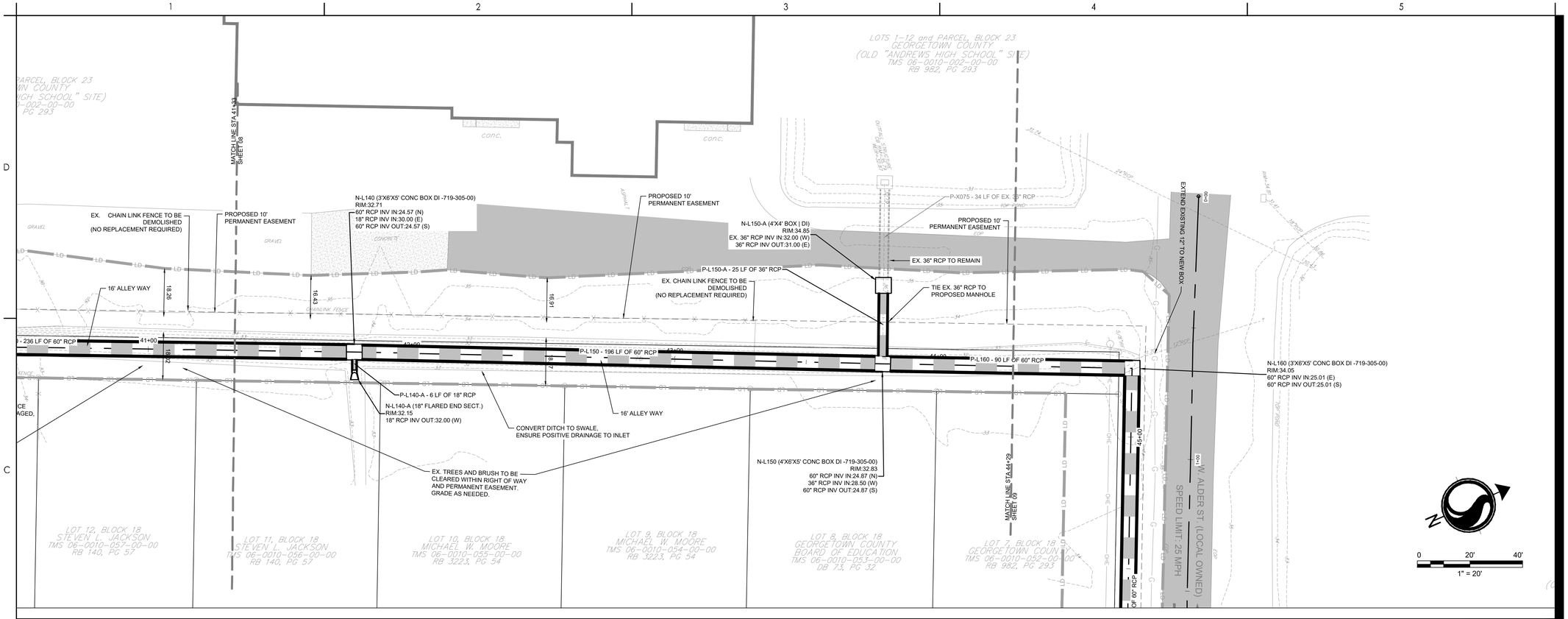

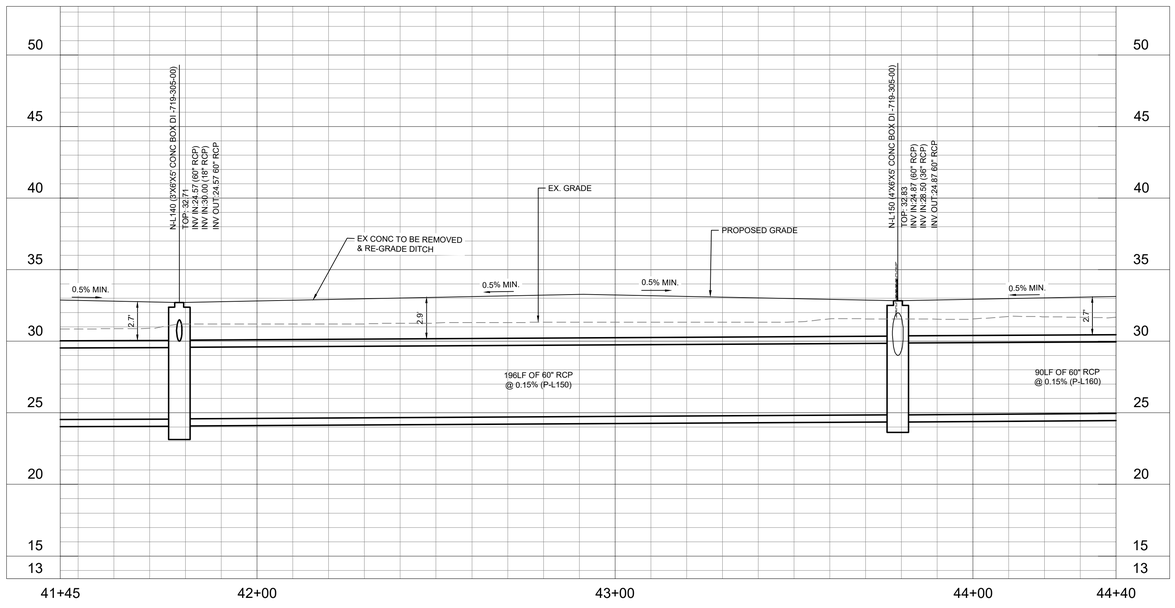

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06/28/2022

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Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DRAINAGE PLAN AND PROFILE

Project No. 178421035
Scale

Revision ----
Sheet C4-09 of 65
Drawing No. C4-09

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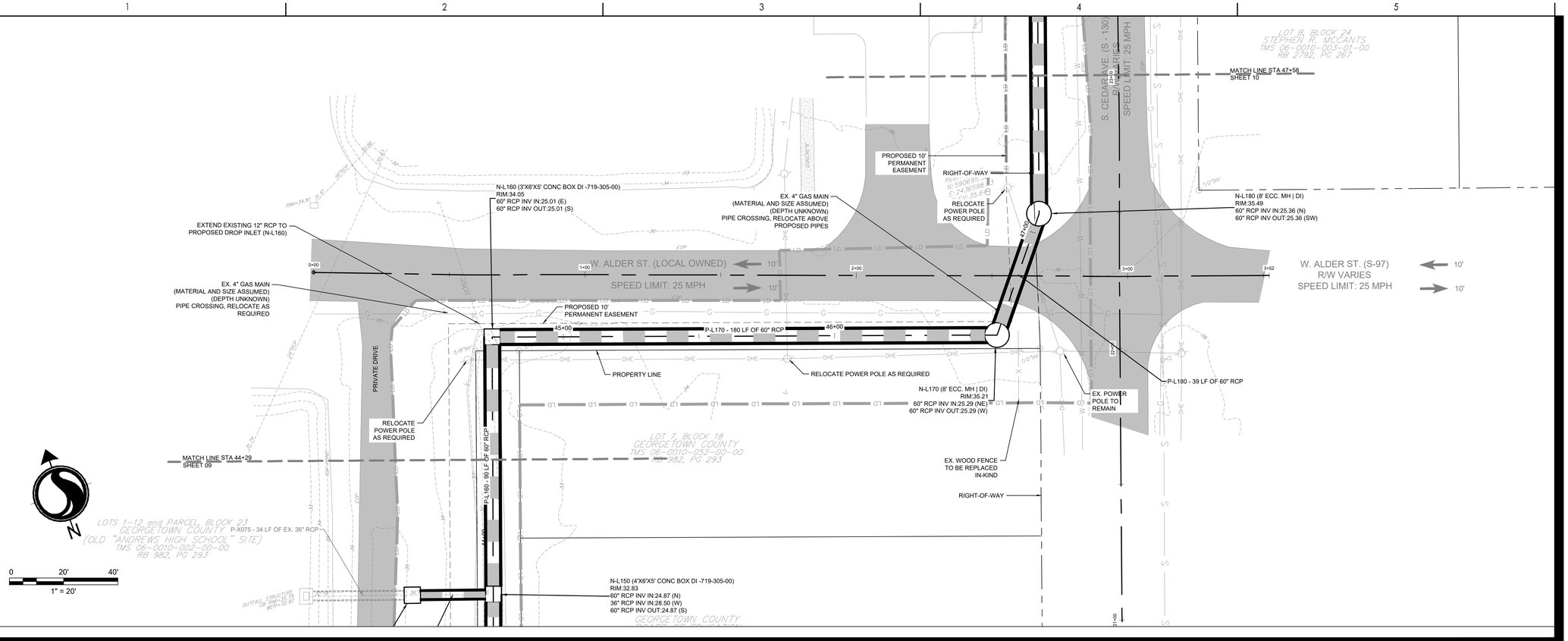

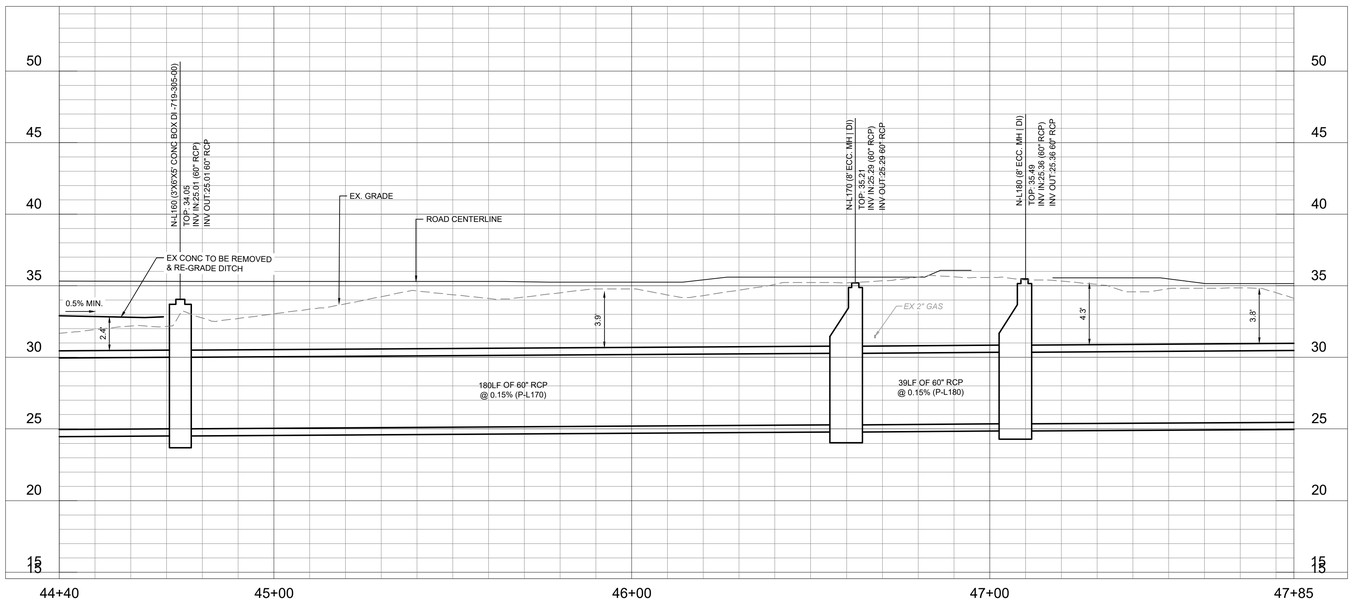

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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 32540 ROBERT MARSHALL WYNNE

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DRAINAGE PLAN AND PROFILE

Project No. 178421035
Scale

Revision ----
Sheet C4-10 of 65
Drawing No. C4-10

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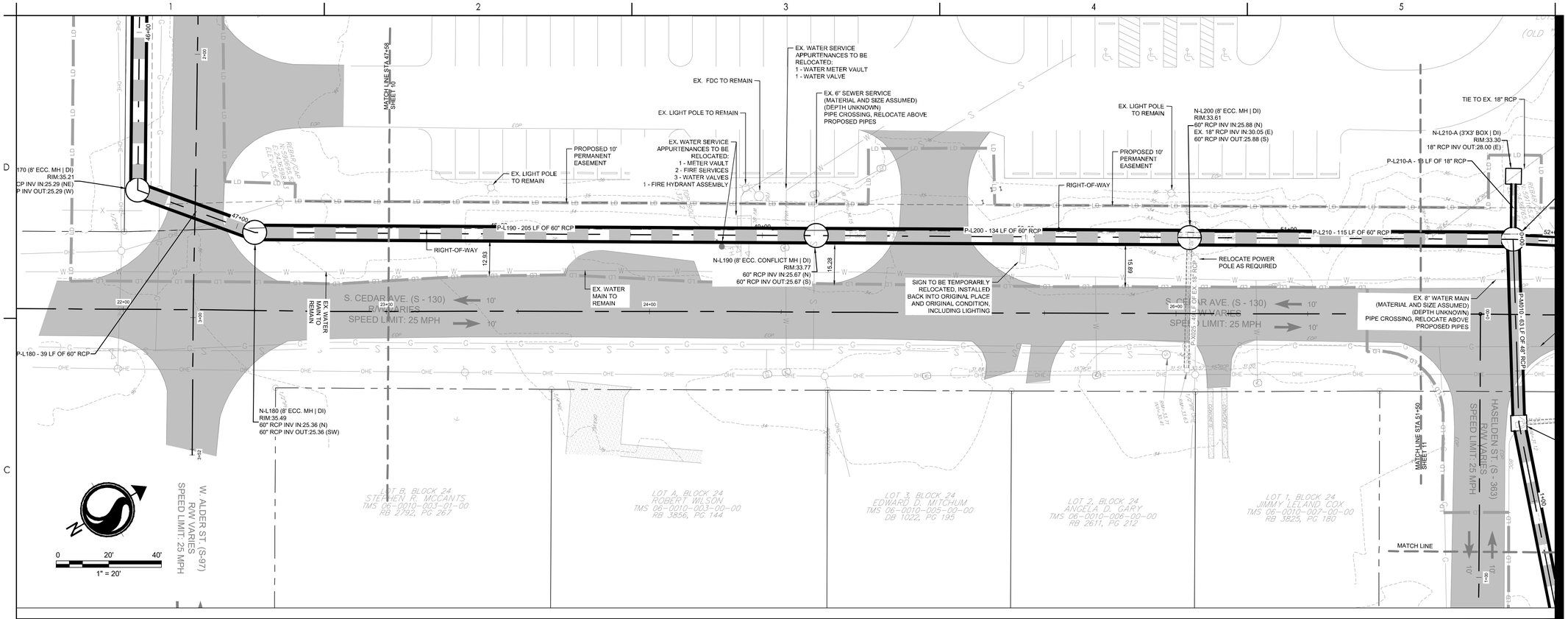

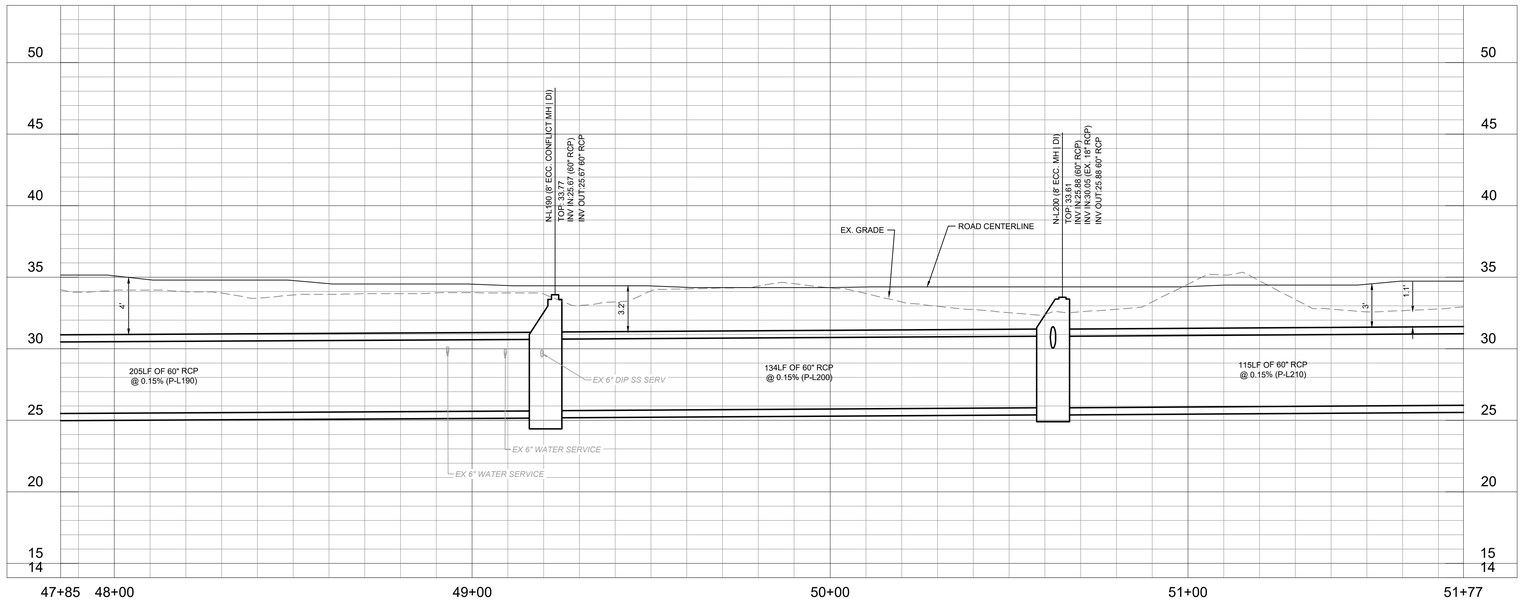

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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 32510 ROBERT MARSHALL WYBRANT

06/28/2022

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Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DRAINAGE PLAN AND PROFILE

Project No. 178421035
Scale

Revision ----
Sheet C4-11of 65
Drawing No. C4-11

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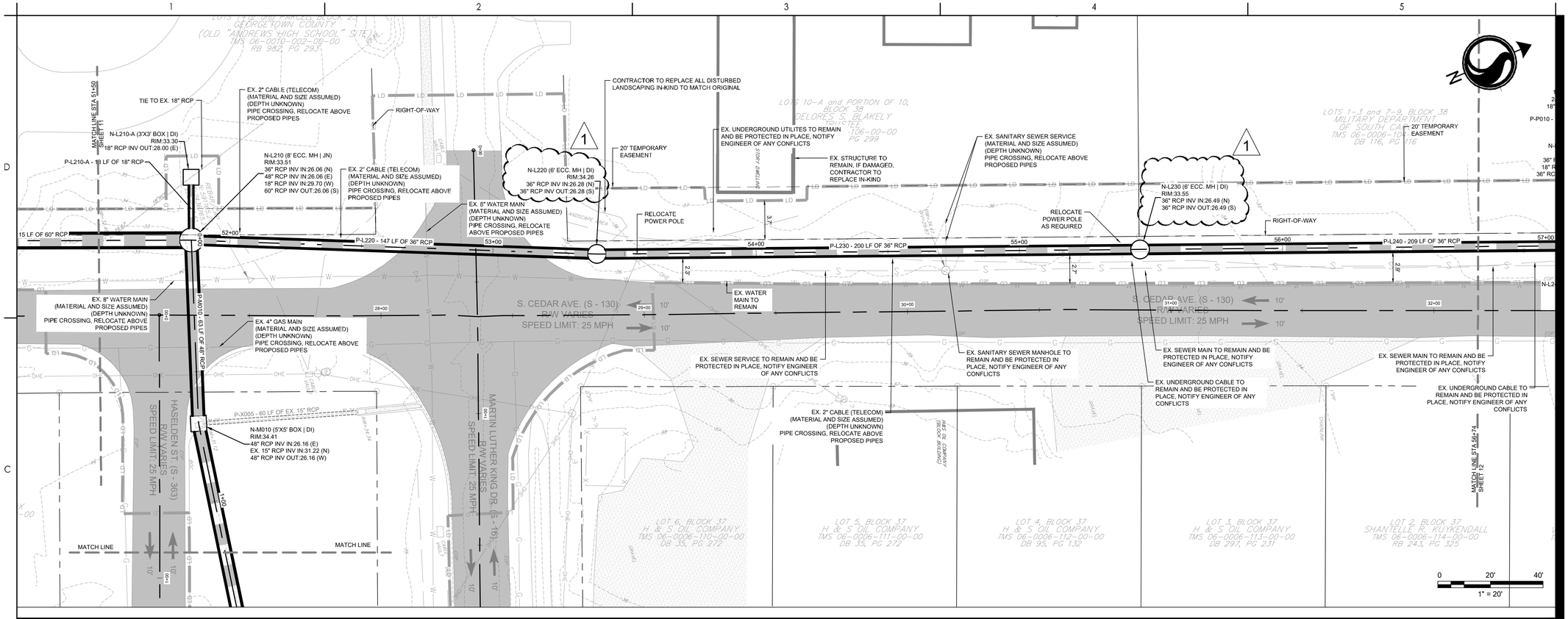

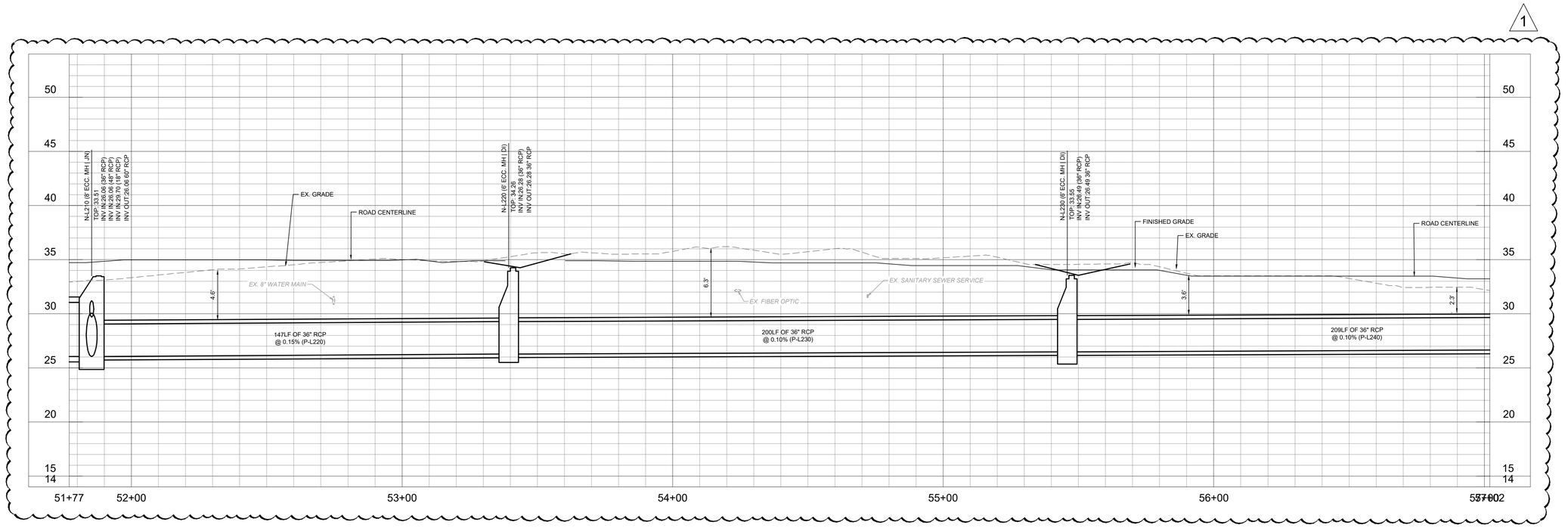

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ISSUED FOR CONSTRUCTION	RMW	BK	2022.06.28
Issued	By	Appd	YYYY.MM.DD
File Name: 1035_C4_GRADING	SGC Dwn.	SGC Dsgn.	BK Chkd. 2020.10.09 YYYY.MM.DD

Permit/Seal

SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02315 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 35510 MARSHALL WYNNE JR.
06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DRAINAGE PLAN AND PROFILE

Project No.
178421035

Scale

Revision 1
Sheet C4-12 of 65

Drawing No.
C4-12

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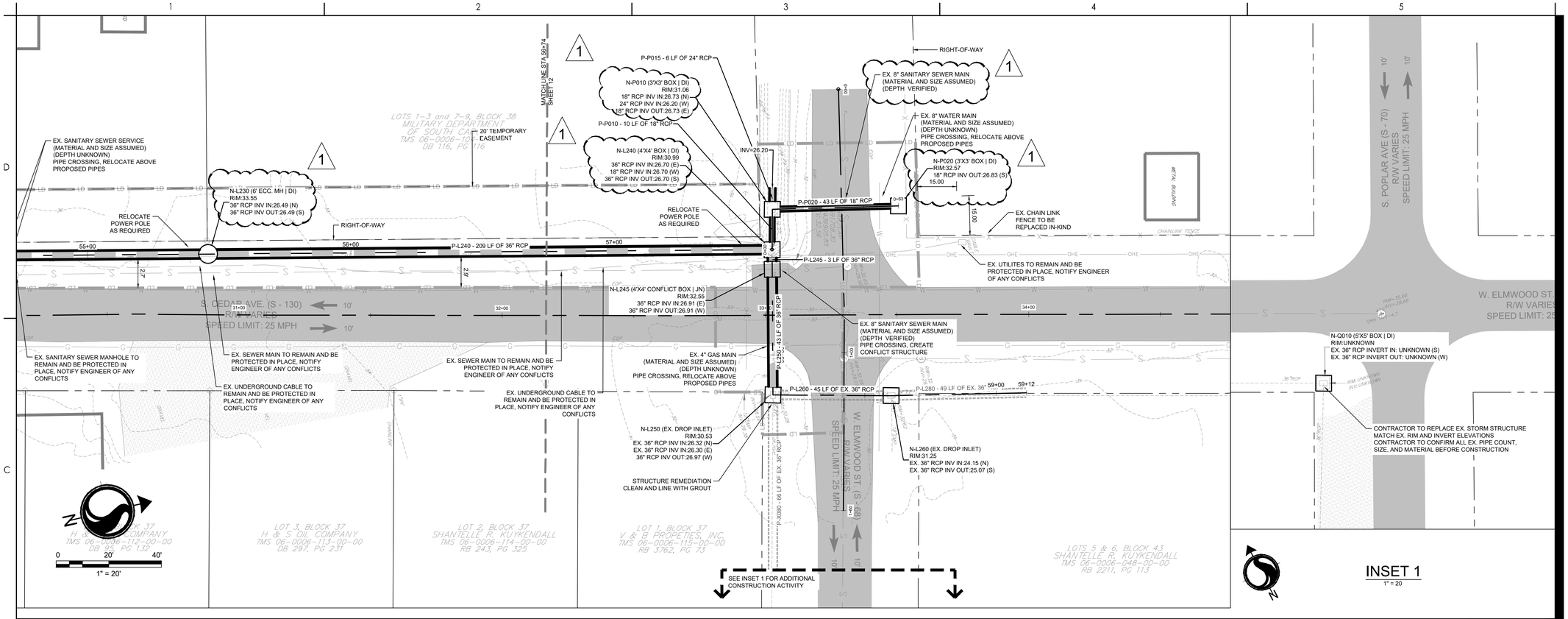

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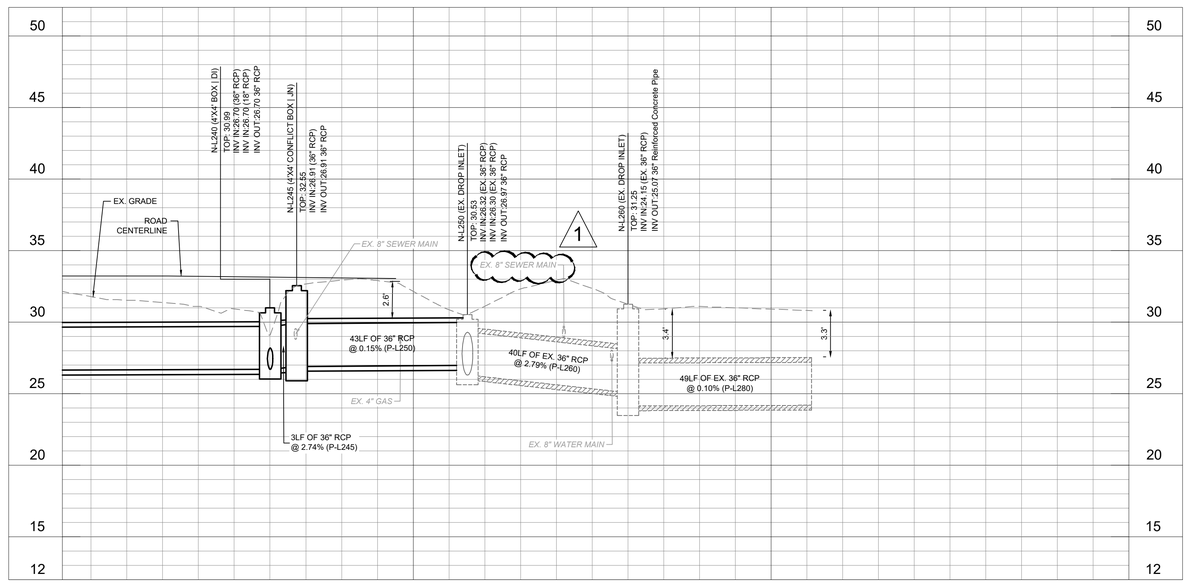

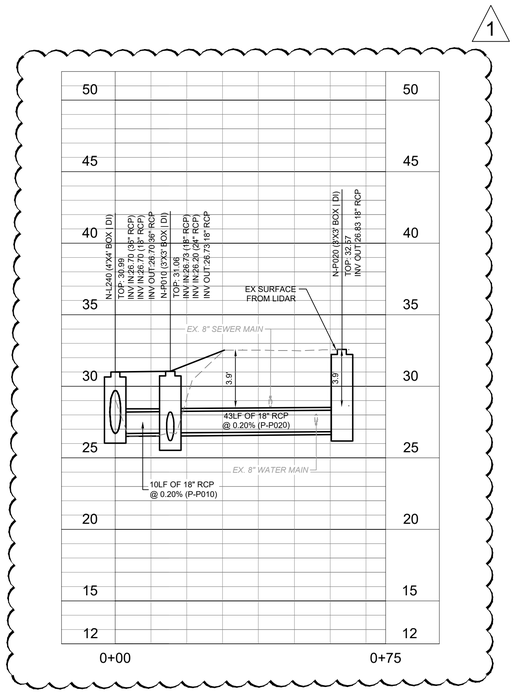

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Consultant

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Legend

LD	LIMITS OF DISTURBANCE
15	EXISTING CONTOURS
20	PROPOSED CONTOUR
SF	SILT FENCE
DSF	DOUBLE ROW SILT FENCE
	DRAINAGE FLOW ARROW
	RIPRAP
	PROPOSED PERMANENT EASEMENT
	PROPOSED TEMPORARY EASEMENT
	PROPOSED TEMPORARY EASEMENT
	PROPOSED PERMANENT EASEMENT
DI	INLET ADAPTOR - 24"X36" DROP INLET PER SCDOT 719-110-01
JN	INLET ADAPTOR - MANHOLE PER SCDOT 719-505-03
T9	INLET ADAPTOR - TYPE 9 PER SCDOT 719-009-04
EG	EXISTING GRADE
FG	FINISHED GRADE
EOP	EDGE OF PAVEMENT
16.58	SPOT ELEVATION

Revision	By	Appd	YYYY.MM.DD
PER BID ADDENDUM #1	RMW	BK	2022.12.21
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File Name: 1035_C4_GRADING	SGC Dwn.	SGC Dsgn.	BK Chkd. 2020.10.09

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SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02318 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 32501 ROBERT MARSHALL WYMAN, JR.

06/28/2022

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Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DRAINAGE PLAN AND PROFILE

Project No. 178421035
Scale

Revision 1
Sheet C4-13 of 65
Drawing No. C4-13

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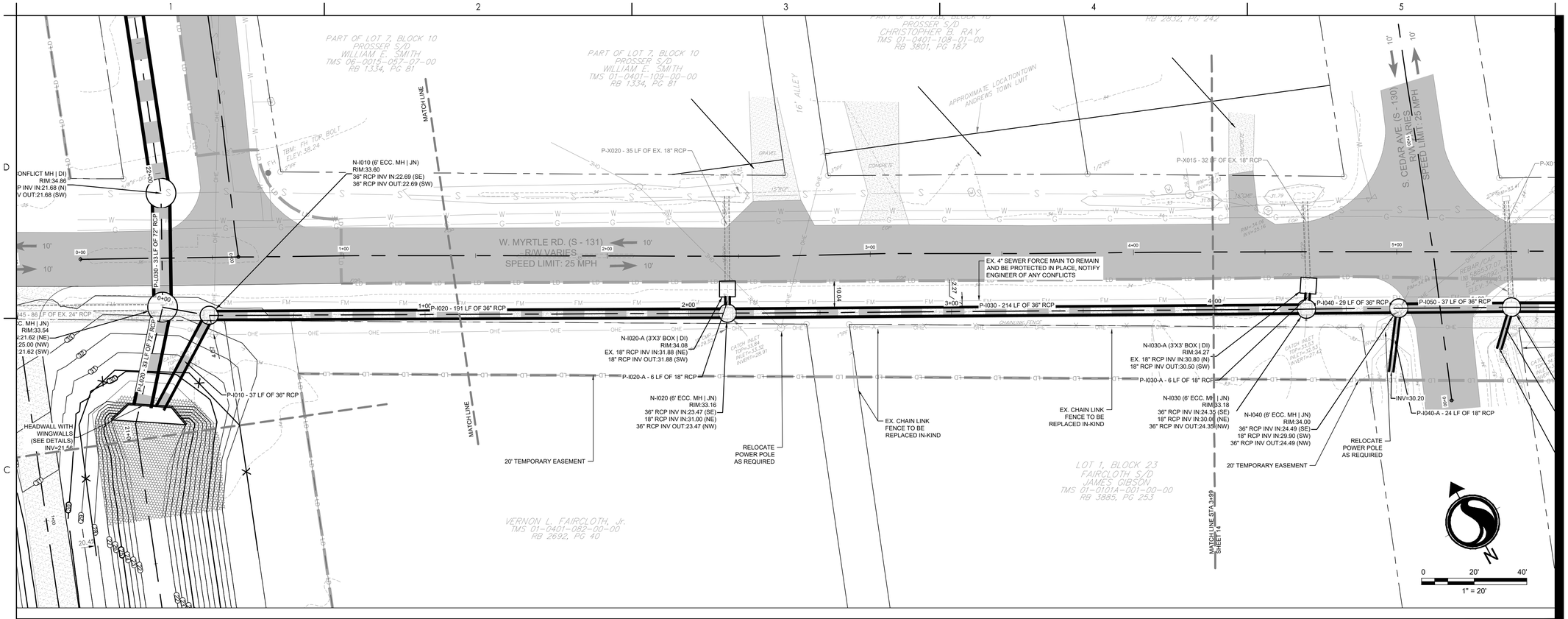

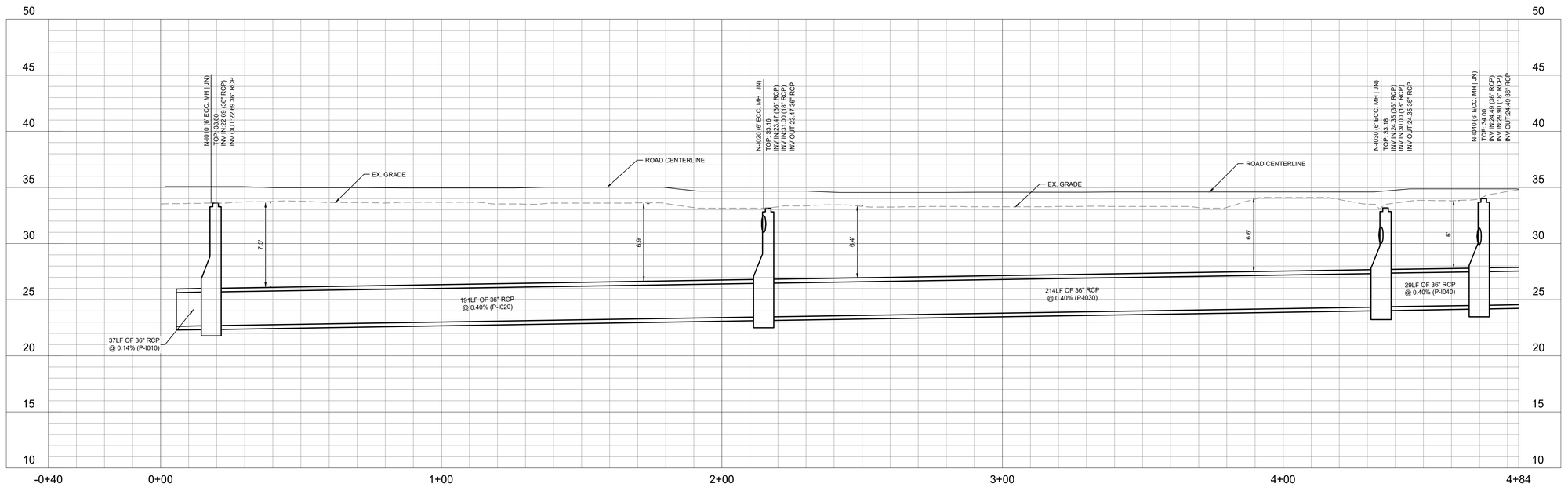

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Legend

LD	LIMITS OF DISTURBANCE
15	EXISTING CONTOURS
23	PROPOSED CONTOUR
SF	SILT FENCE
DSF	DOUBLE ROW SILT FENCE
	DRAINAGE FLOW ARROW
	RIPRAP
	PROPOSED PERMANENT EASEMENT
	PROPOSED TEMPORARY EASEMENT
	PROPOSED TEMPORARY EASEMENT
	PROPOSED PERMANENT EASEMENT
DI	INLET ADAPTOR - 24"X36" DROP INLET PER SCDOT 719-110-01
JN	INLET ADAPTOR - MANHOLE PER SCDOT 719-505-03
T9	INLET ADAPTOR - TYPE 9 PER SCDOT 719-009-04
EG	EXISTING GRADE
FG	FINISHED GRADE
EOP	EDGE OF PAVEMENT
15.50	SPOT ELEVATION

Revision	By	Appd	
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SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION STANTEC CONSULTING SERVICES, INC. No. C02318

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER ROBERT MARSHALL WYBRANT No. 32501

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DRAINAGE PLAN AND PROFILE

Project No.	Scale
178421035	

Revision ----
Sheet C4-14 of 65
Drawing No. C4-14

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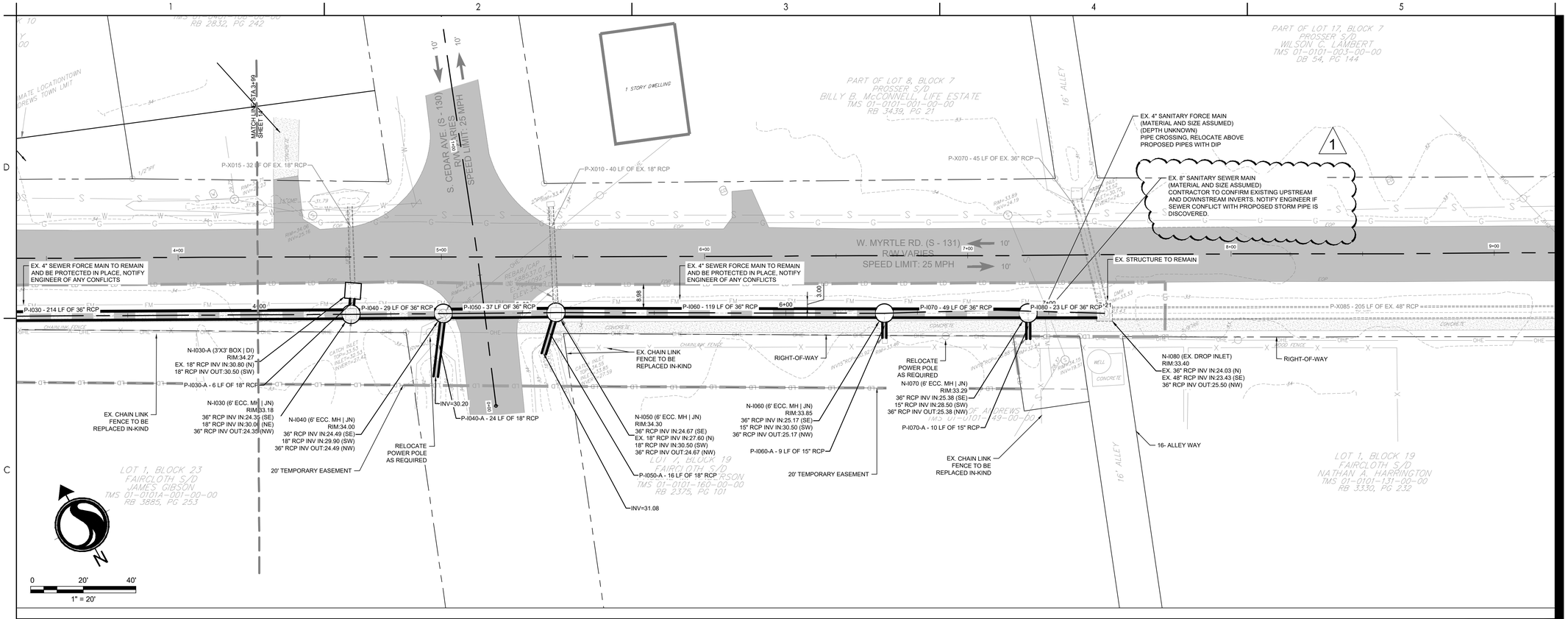

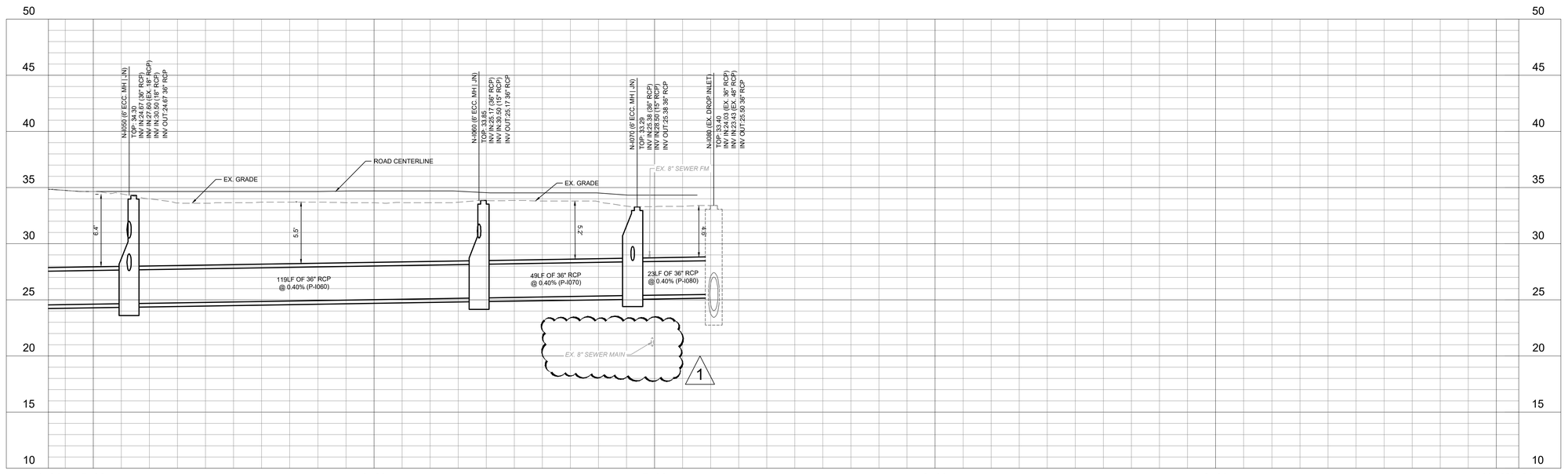

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Legend

- LIMITS OF DISTURBANCE
- EXISTING CONTOURS
- PROPOSED CONTOUR
- SILT FENCE
- DOUBLE ROW SILT FENCE
- DRAINAGE FLOW ARROW
- RIPRAP
- PROPOSED PERMANENT EASEMENT
- PROPOSED TEMPORARY EASEMENT
- PROPOSED TEMPORARY EASEMENT
- PROPOSED PERMANENT EASEMENT
- DI — INLET ADAPTOR - 24"X36" DROP INLET PER SCDOT 719-110-01
- JN — INLET ADAPTOR - MANHOLE PER SCDOT 719-505-03
- T9 — INLET ADAPTOR - TYPE 9 PER SCDOT 719-009-04
- EG — EXISTING GRADE
- FG — FINISHED GRADE
- EOP — EDGE OF PAVEMENT
- SPOT ELEVATION

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SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 32501 — ROBERT MARSHALL WYBRANT JR

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DRAINAGE PLAN AND PROFILE

Project No.	Scale
178421035	
Revision: 1	Sheet: C4-15 of 65
Drawing No.	C4-15

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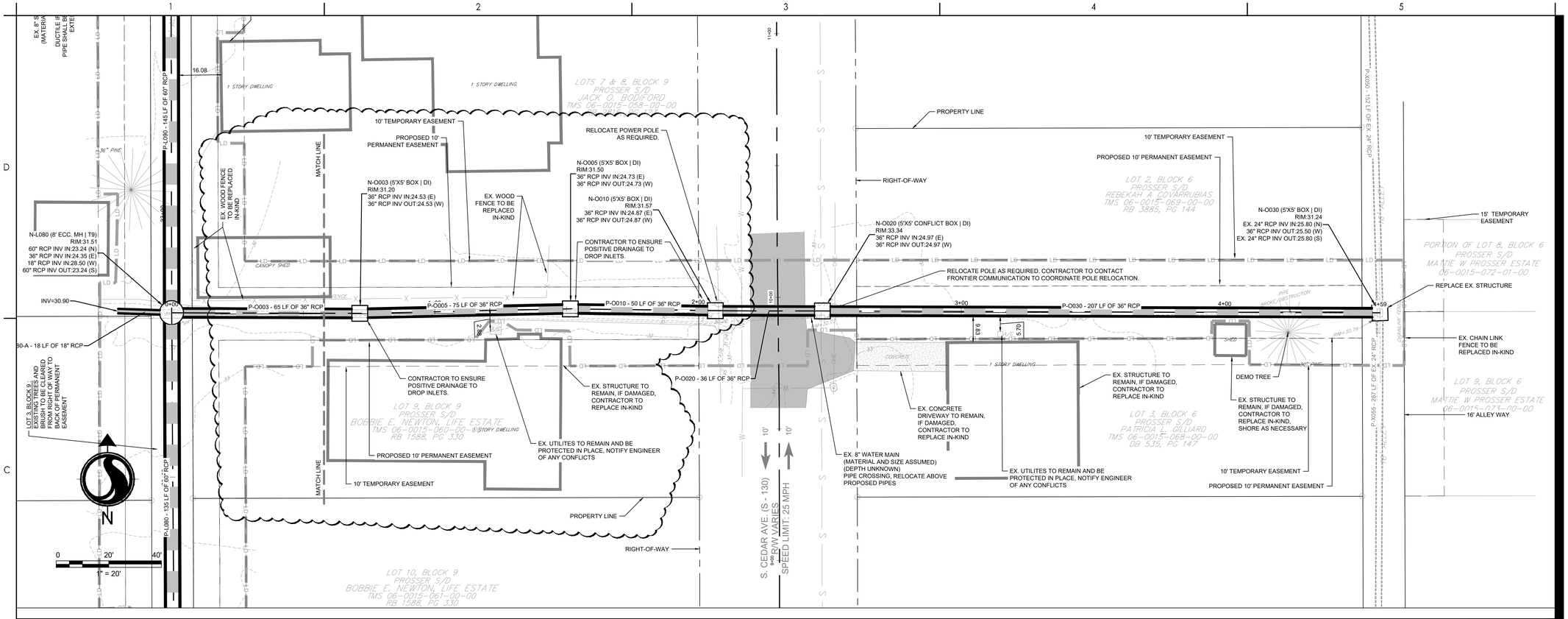

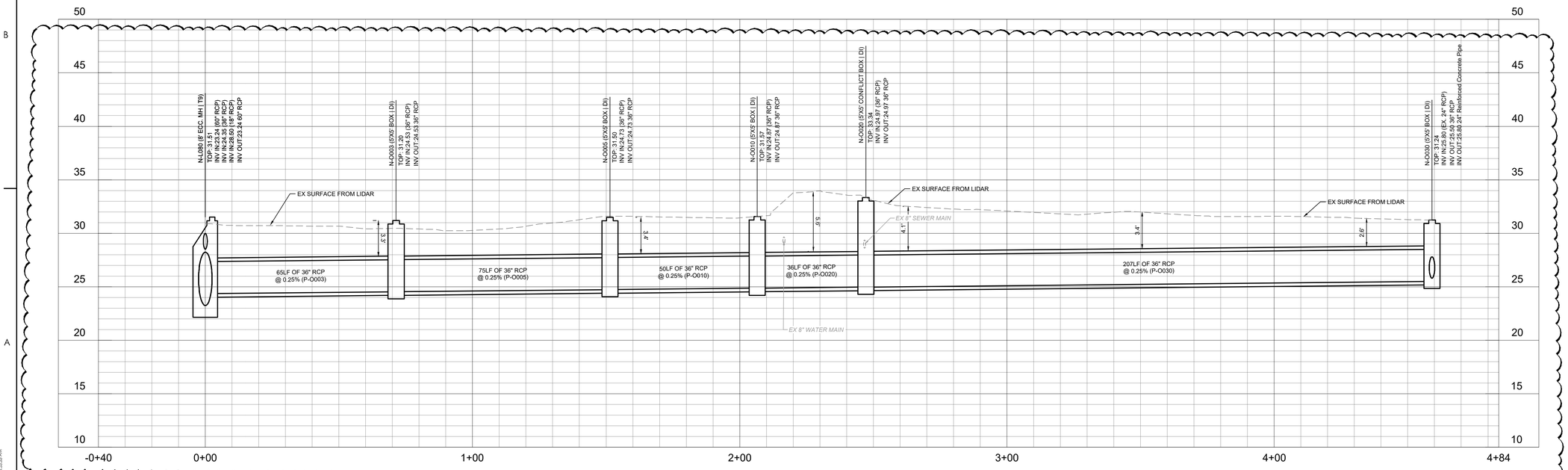

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- LD — LIMITS OF DISTURBANCE
- 15 — EXISTING CONTOURS
- 23 — PROPOSED CONTOUR
- SF — SILT FENCE
- DSF — DOUBLE ROW SILT FENCE
- DRAINAGE FLOW ARROW
- RIPRAP
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- 15.50 — SPOT ELEVATION

Revision	By	Appd	Date
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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 32510 ROBERT MARSHALL WYBRANT JR

06/28/2022

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Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DRAINAGE PLAN AND PROFILE

Project No.	Scale
178421035	
Revision 1	Sheet C4-16 of 65
Drawing No.	C4-16

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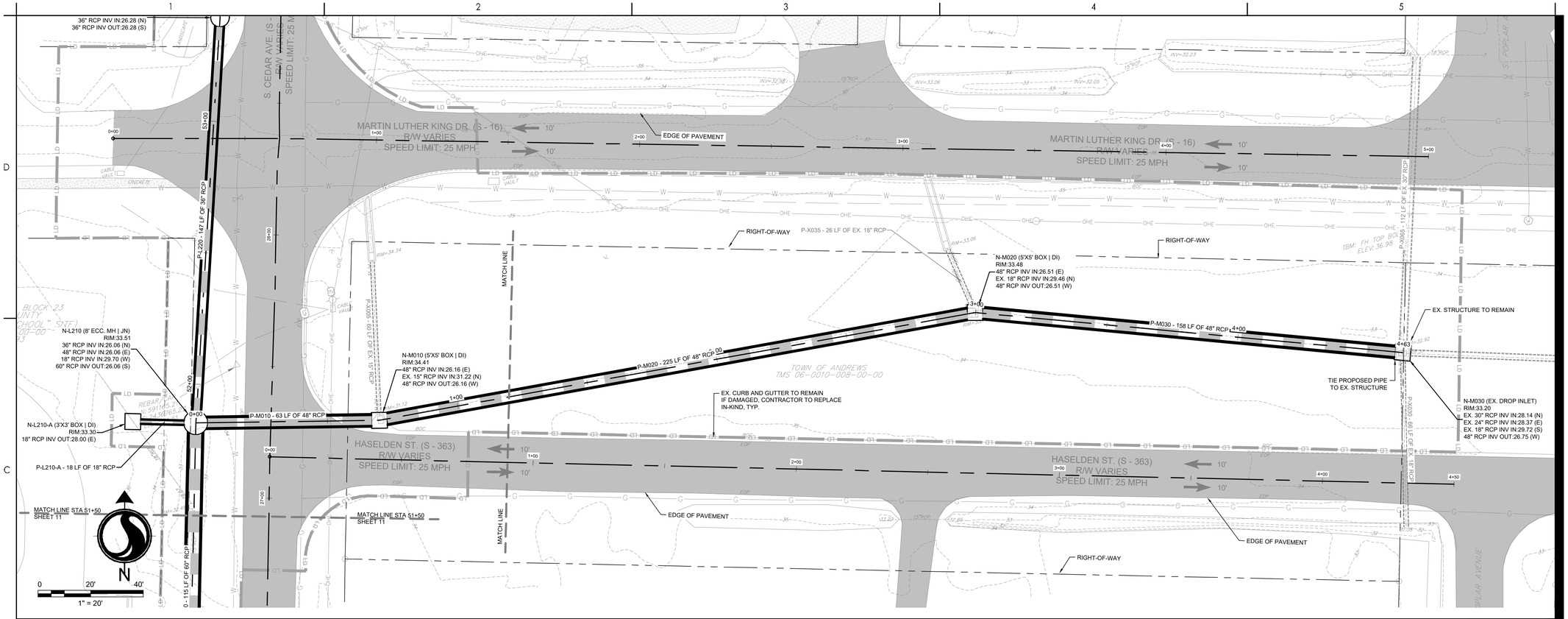

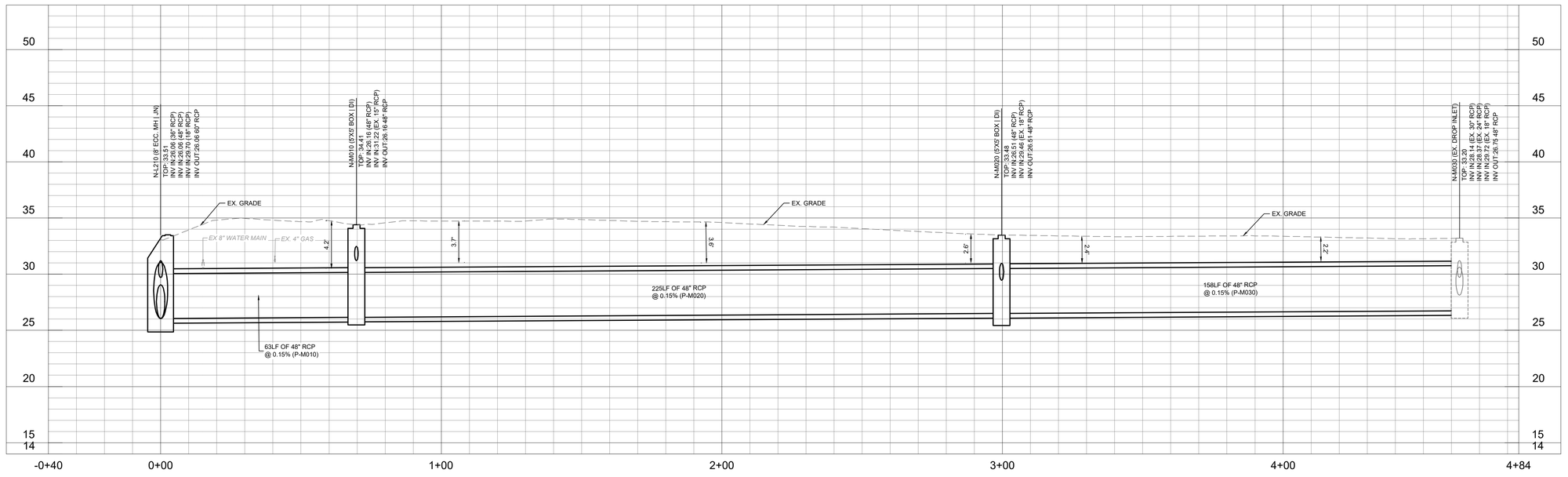

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15	EXISTING CONTOURS
25	PROPOSED CONTOUR
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DSF	DOUBLE ROW SILT FENCE
	DRAINAGE FLOW ARROW
	RIPRAP
	PROPOSED PERMANENT EASEMENT
	PROPOSED TEMPORARY EASEMENT
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EOP	EDGE OF PAVEMENT
15.50	SPOT ELEVATION

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	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

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SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION STANTEC CONSULTING SERVICES, INC. Reg. C02318

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 32510 ROBERT MARSHALL WYBO

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DRAINAGE PLAN AND PROFILE

Project No.
178421035

Scale

Revision ----

Sheet
C4-17 of 65

Drawing No.
C4-17

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REFERENCES

NATIONAL DOCUMENTS

SCDOT DOCUMENTS
SD-M-714
EDM 24
INSTRUCTIONAL BULLETIN 2010-1
QUALIFIED PRODUCT LISTS 14, 69

RELATED DRAWINGS & KEYWORDS
714-005-00
714-110-00
714-205-00

THIS DRAWING IS ONLY VALID FOR CONSTRUCTION WHEN SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF SOUTH CAROLINA. CHECK WWW.SCDOT.ORG FOR LATEST UPDATE.

SOUTH CAROLINA PROFESSIONAL ENGINEER JAMES W. KENDALL JR. NO. 21242

SIGNATURE
10/22/2015
DATE

#	DATE	CHK	DESCRIPTION
6	---	---	---
5	---	---	---
4	8/2012	DSO	SCDOT LETTER 3/12
3	3/2010	JBH	GENERAL REVISIONS
2	3/2009	HJC	COMPLETE TABLE
1	7/2008	HJC	GENERAL REVISIONS
0	3/2008	DSO	NEW STANDARD

SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING
PIPE CULVERTS
RIGID PIPE
COMPLETED
TRENCH
(STANDARD
FOUNDATION)

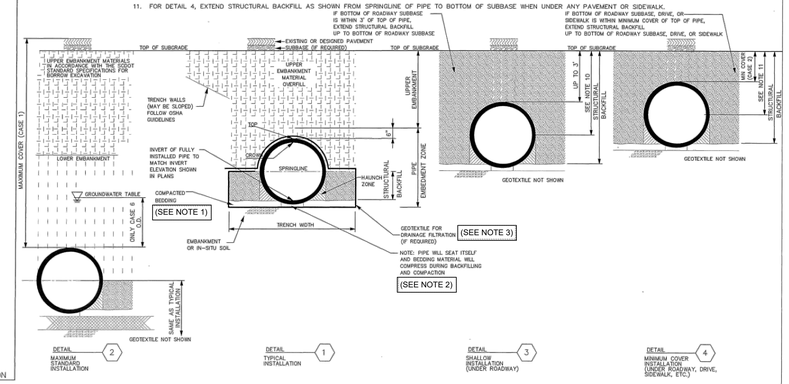
714-105-00
EFFECTIVE LETTING DATE: JAN. 2015

THIS DRAWING IS NOT TO SCALE

NOTES:
1. USE MATERIALS AND METHODS OF CONSTRUCTION FOR PERMANENT PIPE IN CONFORMANCE WITH SCDOT SUPPLEMENTAL SPECIFICATION SC-M-714.
2. SEE SHEET 714-205-XX FOR RCP FILL HEIGHT TABLES.
3. WHEN CONNECTING DISSIMILAR PIPE, USE DRAINAGE STRUCTURE OR DESIGN INTERFACE. DO NOT MIX PIPE TYPE, CLASS, OR DETAILS WITHIN A SINGLE RUN OF PIPE BETWEEN DRAINAGE STRUCTURES. SEE QUALIFIED PRODUCT LIST 14 FOR PRECAST REINFORCED CONCRETE DRAINAGE STRUCTURES.
4. USE AT LEAST THE MINIMUM CLASS OR GAGE REQUIRED TO CARRY THE FILL HEIGHT AS SPECIFIED IN THE STANDARD DRAWING FILL HEIGHT TABLES. WHEN PIPE CLASS IS SPECIFIED IN THE PLANS, CONFIRM THAT THE SPECIFIED CLASS CAN CARRY THE INSTALLED MAXIMUM COVER BEFORE BACKFILLING THE PIPE. IF INSTALLED GRADES VARY FROM THOSE SHOWN IN THE PLANS, CONFIRM THAT PIPE CLASS IS SUFFICIENT TO CARRY THE INSTALLED FILL HEIGHTS. DO NOT REDUCE THE PIPE CLASS BELOW THE CLASS SHOWN IN THE PLANS UNLESS DIRECTED BY THE ENGINEER.
5. USE RIPRAP, BEVELED ENDS, REINFORCED CONCRETE SLAB, WINGWALLS, OR END TREATMENT AS DESCRIBED IN THE PLANS, SCDOT SUPPLEMENTAL SPECIFICATION SC-M-714, OR SCDOT STANDARD DRAWINGS.
6. PIPE EMBEDMENT ZONE BACKFILL MUST MEET OR EXCEED THE MINIMUM MATERIAL AND COMPACTION REQUIREMENTS OF THE ROADWAY EMBANKMENT FOR THE SPECIFIED BURIAL DEPTH WITHOUT DAMAGING THE PIPE.
7. FOR SHALLOW INSTALLATIONS (PAVEMENT ON MINIMUM COVER), INSTALL PIPE EMBEDMENT ZONE MATERIAL TO PREVENT SETTLEMENT AROUND THE PIPE. IF REQUIRED, USE STRUCTURAL BACKFILL MATERIAL OR CLSM TO PREVENT THIS SETTLEMENT.
8. USE THIS INSTALLATION ONLY IN LOCATIONS ABOVE GROUNDWATER TABLE. USE THIS INSTALLATION IN LOCATIONS WHERE PIPE SYSTEM IS NOT SUBJECTED TO PRESSURE HEAD.
9. FOR DETAILS 1 & 2, INSTALL STRUCTURAL BACKFILL AS SHOWN, AND USE BORROW EXCAVATION REQUIREMENTS FOR SOIL ABOVE PIPE EMBEDMENT ZONE.
10. FOR DETAIL 3, EXTEND STRUCTURAL BACKFILL AS SHOWN FROM SPRINGLINE OF PIPE TO BOTTOM OF SUBBASE WHEN UNDER ROADWAY PAVEMENT (INCLUDING PAVED SHOULDERS). USE DETAIL 2 INSTALLATION WHEN NOT UNDER ROADWAY PAVEMENT.
11. FOR DETAIL 4, EXTEND STRUCTURAL BACKFILL AS SHOWN FROM SPRINGLINE OF PIPE TO BOTTOM OF SUBBASE WHEN UNDER ANY PAVEMENT OR SIDEWALK.

CUSTOM DESIGN IS REQUIRED WHEN MAXIMUM COVER VALUES SHOWN IN FILL HEIGHT CHARTS.

DEEP INSTALLATION



DETAIL 2 MAXIMUM STANDARD INSTALLATION
DETAIL 1 TYPICAL INSTALLATION
DETAIL 3 SHALLOW INSTALLATION (UNDER ROADWAY)
DETAIL 4 MINIMUM COVER INSTALLATION (UNDER ROADWAY, DRIVE, SIDEWALK, ETC.)

STANDARD TRENCH TERMINOLOGY
(COMPLETED RIGID PIPE INSTALLATION)

NOTES::
1. FOR PIPES GREATER THAN 60" RCP, CONTRACTOR TO PROIVIDE MINIMUM 6" COURSE #57 GRANITE BEDDING STONE, OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER; WHICHEVER IS GREATER.
2. CONTRACTOR TO OVEREXCAVATE BEDDING AT PIPE JOINTS TO ALLOW BELL JOINT TO PROPERLY FIT WITHIN BEDDING MATERIAL.
3. GEOTEXTILE WRAP SHALL BE REQUIRED FOR ALL PIPE, AND OVERLAP A MINIMUM 18 INCHES AT ALL SPLICES

USE ONLY WHEN AN IMPROVED FOUNDATION IS REQUIRED

NOTES:
1. USE MATERIALS AND METHODS OF CONSTRUCTION FOR PERMANENT PIPE IN CONFORMANCE WITH SCDOT SUPPLEMENTAL SPECIFICATION SC-M-714.
2. SEE SHEET 714-205-XX FOR RCP FILL HEIGHT TABLES.
3. WHEN CONNECTING DISSIMILAR PIPE, USE DRAINAGE STRUCTURE OR DESIGN INTERFACE. DO NOT MIX PIPE TYPE, CLASS, OR DETAILS WITHIN A SINGLE RUN OF PIPE BETWEEN DRAINAGE STRUCTURES. SEE QUALIFIED PRODUCT LIST 14 FOR PRECAST REINFORCED CONCRETE DRAINAGE STRUCTURES.
4. USE AT LEAST THE MINIMUM CLASS OR GAGE REQUIRED TO CARRY THE FILL HEIGHT AS SPECIFIED IN THE STANDARD DRAWING FILL HEIGHT TABLES. WHEN PIPE CLASS IS SPECIFIED IN THE PLANS, CONFIRM THAT THE SPECIFIED CLASS CAN CARRY THE INSTALLED MAXIMUM COVER BEFORE BACKFILLING THE PIPE. IF INSTALLED GRADES VARY FROM THOSE SHOWN IN THE PLANS, CONFIRM THAT PIPE CLASS IS SUFFICIENT TO CARRY THE INSTALLED FILL HEIGHTS. DO NOT REDUCE THE PIPE CLASS BELOW THE CLASS SHOWN IN THE PLANS UNLESS DIRECTED BY THE ENGINEER.
5. USE RIPRAP, BEVELED ENDS, REINFORCED CONCRETE SLAB, WINGWALLS, OR END TREATMENT AS DESCRIBED IN THE PLANS, SCDOT SUPPLEMENTAL SPECIFICATION SC-M-714, OR SCDOT STANDARD DRAWINGS.
6. PIPE EMBEDMENT ZONE BACKFILL MUST MEET OR EXCEED THE MINIMUM MATERIAL AND COMPACTION REQUIREMENTS OF THE ROADWAY EMBANKMENT FOR THE SPECIFIED BURIAL DEPTH WITHOUT DAMAGING THE PIPE.
7. FOR SHALLOW INSTALLATIONS (PAVEMENT ON MINIMUM COVER), INSTALL PIPE EMBEDMENT ZONE MATERIAL TO PREVENT SETTLEMENT AROUND THE PIPE. IF REQUIRED, USE STRUCTURAL BACKFILL MATERIAL OR CLSM TO PREVENT THIS SETTLEMENT.
8. USE THIS INSTALLATION ONLY IN LOCATIONS ABOVE GROUNDWATER TABLE. USE THIS INSTALLATION IN LOCATIONS WHERE PIPE SYSTEM IS NOT SUBJECTED TO PRESSURE HEAD.
9. DESIGN PIPE AND MINIMUM COVER DIMENSION IN ACCORDANCE WITH LOAD CASES DESCRIBED IN SCDOT INSTRUCTIONAL BULLETIN 2007-4.
10. FOR DETAILS 1& 2 INSTALL STRUCTURAL BACKFILL AS SHOWN, AND USE BORROW EXCAVATION REQUIREMENTS FOR SOIL ABOVE PIPE EMBEDMENT ZONE.
11. FOR DETAIL 3, EXTEND STRUCTURAL BACKFILL AS SHOWN FROM SPRINGLINE OF PIPE TO BOTTOM OF SUBBASE WHEN UNDER ROADWAY PAVEMENT (INCLUDING PAVED SHOULDERS). USE DETAIL 2 INSTALLATION WHEN NOT UNDER ROADWAY PAVEMENT.
12. FOR DETAIL 4, EXTEND STRUCTURAL BACKFILL AS SHOWN FROM SPRINGLINE OF PIPE TO BOTTOM OF SUBBASE WHEN UNDER ANY PAVEMENT OR SIDEWALK.

REFERENCES

NATIONAL DOCUMENTS

SCDOT DOCUMENTS
SD-M-714
EDM 24
INSTRUCTIONAL BULLETIN 2010-1
QUALIFIED PRODUCT LISTS 14, 69

RELATED DRAWINGS & KEYWORDS
714-020-00
714-110-00
714-205-00
714-990-MO

THIS DRAWING IS ONLY VALID FOR CONSTRUCTION WHEN SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF SOUTH CAROLINA. CHECK WWW.SCDOT.ORG FOR LATEST UPDATE.

SOUTH CAROLINA PROFESSIONAL ENGINEER JAMES W. KENDALL JR. NO. 21242

SIGNATURE
10/22/2015
DATE

#	DATE	CHK	DESCRIPTION
6	---	---	---
5	---	---	---
4	---	---	---
3	---	---	---
2	1/2016	DSO	DET.3,4 UNDER PVMT
1	7/2009	DSO	NOTE 2
0	7/2008	DSO	NEW STANDARD

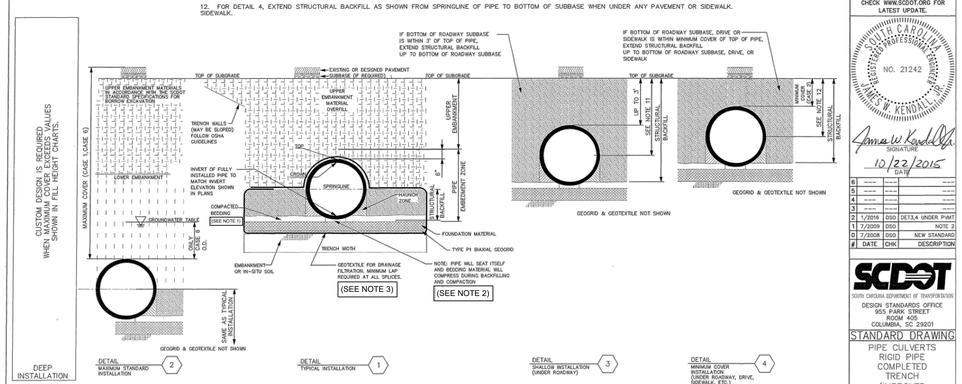
SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING
PIPE CULVERTS
RIGID PIPE
COMPLETED
TRENCH
(IMPROVED
FOUNDATION)

714-120-00
EFFECTIVE LETTING DATE: JAN. 2015

CUSTOM DESIGN IS REQUIRED WHEN MAXIMUM COVER VALUES SHOWN IN FILL HEIGHT CHARTS.

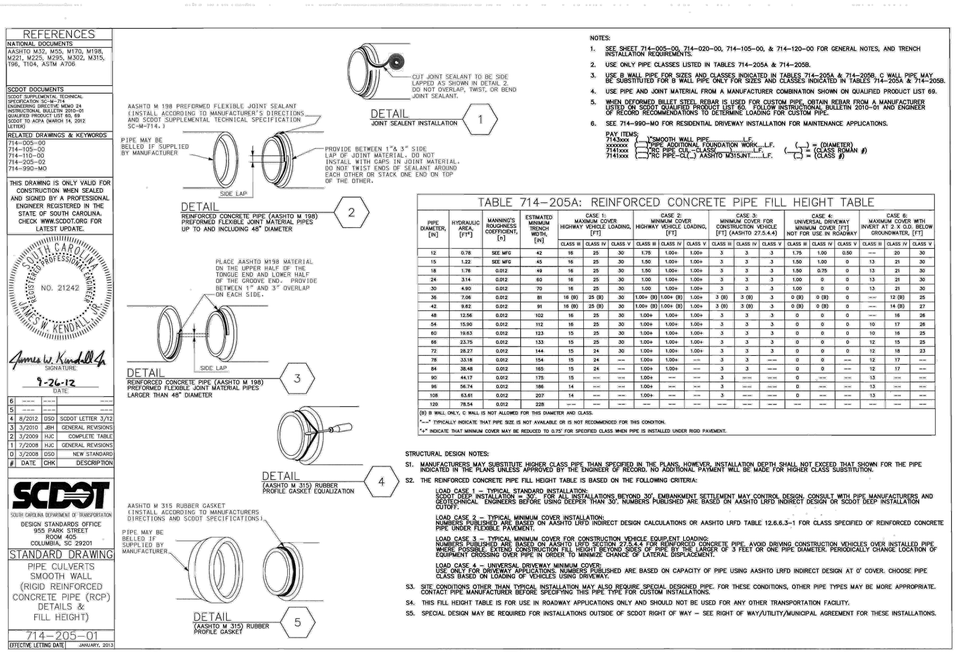
DEEP INSTALLATION



DETAIL 2 MAXIMUM STANDARD INSTALLATION
DETAIL 1 TYPICAL INSTALLATION
DETAIL 3 SHALLOW INSTALLATION (UNDER ROADWAY)
DETAIL 4 MINIMUM COVER INSTALLATION (UNDER ROADWAY, DRIVE, SIDEWALK, ETC.)

TRENCH TERMINOLOGY WITH IMPROVED FOUNDATION
(COMPLETED RIGID PIPE INSTALLATION)

NOTES::
1. FOR PIPES GREATER THAN 60" RCP, CONTRACTOR TO PROVIDE MINIMUM 6" COURSE #57 GRANITE BEDDING STONE, OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER; WHICHEVER IS GREATER.
2. CONTRACTOR TO OVEREXCAVATE BEDDING AT PIPE JOINTS TO ALLOW BELL JOINT TO PROPERLY FIT WITHIN BEDDING MATERIAL.
3. GEOTEXTILE WRAP SHALL BE REQUIRED FOR ALL PIPE, AND OVERLAP A MINIMUM 18 INCHES AT ALL SPLICES



NOTES:
1. SEE SHEET 714-005-00, 714-020-00, 714-105-00, & 714-120-00 FOR GENERAL NOTES, AND TRENCH INSTALLATION REQUIREMENTS.
2. USE ONLY PIPE CLASSES LISTED IN TABLES 714-205A & 714-205B.
3. USE B WALL PIPE FOR SIZES AND CLASSES INDICATED IN TABLES 714-205A & 714-205B. C WALL PIPE MAY BE SUBSTITUTED FOR B WALL PIPE ONLY FOR SIZES AND CLASSES INDICATED IN TABLES 714-205A & 714-205B.
4. USE PIPE AND JOINT MATERIAL FROM A MANUFACTURER COMBINATION SHOWN ON QUALIFIED PRODUCT LIST 69.
5. WHEN RECOMMENDED BILLET STEEL REBAR IS USED FOR CUSTOM PIPE, OBTAIN REBAR FROM A MANUFACTURER LISTED ON QUALIFIED PRODUCT LIST 65. REBAR SHALL BE FABRICATED FROM BILLET STEEL PER SCDOT INSTRUCTIONAL BULLETIN 2010-01 AND ENGINEER OF RECORD RECOMMENDATIONS TO DETERMINE LOADING FOR CUSTOM PIPE.
6. SEE 714-990-MO FOR RESIDENTIAL DRIVEWAY INSTALLATION FOR MAINTENANCE APPLICATIONS.

PAY ITEMS:
714XXXX ___"SMOOTH WALL PIPE _____L.F.
XXXXXXX ___"PIPE ADDITIONAL FOUNDATION WORK__L.F. (___ = DIAMETER)
714YYYY ___"RC PIPE-CL(___) AASHTO M170M_____L.F. (___ = ROMAN #)
714YYXX ___"RC PIPE-CL(___) AASHTO M315(M)_____L.F. (___ = CLASS #)

TABLE 714-205A: REINFORCED CONCRETE PIPE FILL HEIGHT TABLE

PIPE DIAMETER, [in]	HYDRAULIC AREA, [FT²]	MANNING'S ROUGHNESS COEFFICIENT, [n]	ESTIMATED MINIMUM TRENCH WIDTH, [ft]	CASE 1: MAXIMUM COVER HIGHWAY VEHICLE LOADING, [FT]			CASE 2: MINIMUM COVER HIGHWAY VEHICLE LOADING, [FT]			CASE 3: MINIMUM COVER FOR CONSTRUCTION VEHICLE [FT] (AASHTO 27.5.4.4) NOT FOR USE IN ROADWAY			CASE 4: UNIVERSAL DRIVEWAY MINIMUM COVER [FT] NOT FOR USE IN ROADWAY			CASE 5: MAXIMUM COVER INVERT AT 0.1 O.D. BELOW GROUNDWATER, [FT]		
				CLASS III	CLASS IV	CLASS V	CLASS III	CLASS IV	CLASS V	CLASS III	CLASS IV	CLASS V	CLASS III	CLASS IV	CLASS V	CLASS III	CLASS IV	CLASS V
12	0.78	SEE MFG	42	18	25	30	1.00+	1.00+	3	3	3	1.75	1.00	0.50	---	20	30	
15	1.22	SEE MFG	45	16	25	30	1.50	1.00+	1.00+	3	3	3	1.50	1.00	0	13	21	30
18	1.78	0.012	49	16	25	30	1.50	1.00+	1.00+	3	3	3	1.50	0.75	0	13	21	30
24	3.14	0.012	60	16	25	30	1.00	1.00+	1.00+	3	3	3	1.00	0	0	13	21	30
30	4.90	0.012	70	16	25	30	1.00	1.00+	1.00+	3	3	3	1.00	0	0	13	21	30
36	7.06	0.012	81	14 (B)	25 (B)	30	1.00+ (B)	1.00+ (B)	1.00+	3 (B)	3 (B)	3	0 (B)	0 (B)	0	---	12 (B)	25
42	9.62	0.012	91	14 (B)	25 (B)	30	1.00+ (B)	1.00+ (B)	1.00+	3 (B)	3 (B)	3	0 (B)	0 (B)	0	---	14 (B)	27
48	12.56	0.012	102	16	25	30	1.00+	1.00+	1.00+	3	3	3	0	0	0	---	16	28
54	15.90	0.012	112	16	25	30	1.00+	1.00+	1.00+	3	3	3	0	0	0	10	17	28
60	19.63	0.012	123	15	25	30	1.00+	1.00+	1.00+	3	3	3	0	0	0	10	16	25
66	23.75	0.012	133	15	25	30	1.00+	1.00+	1.00+	3	3	3	0	0	0	12	15	25
72	28.27	0.012	144	15	24	30	1.00+	1.00+	1.00+	3	3	3	0	0	0	12	19	23
78	33.18	0.012	154	15	24	---	1.00+	1.00+	---	3	3	---	0	0	---	12	17	---
84	38.48	0.012	165	15	24	---	1.00+	1.00+	---	3	3	---	0	0	---	12	17	---
90	44.17	0.012	175	15	---	---	1.00+	---	---	3	---	---	0	---	---	13	---	---
96	50.74	0.012	186	14	---	---	1.00+	---	---	3	---	---	0	---	---	13	---	---
108	63.61	0.012	207	14	---	---	1.00+	---	---	3	---	---	0	---	---	13	---	---
120	78.54	0.012	228	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

(B) B WALL ONLY, C WALL IS NOT ALLOWED FOR THIS DIAMETER AND CLASS.
"---" TYPICALLY INDICATE THAT PIPE SIZE IS NOT AVAILABLE OR IS NOT RECOMMENDED FOR THIS CONDITION.
"+" INDICATE THAT MINIMUM COVER MAY BE REDUCED TO 0.75' FOR SPECIFIED CLASS WHEN PIPE IS INSTALLED UNDER RIGID PAVEMENT.

STRUCTURAL DESIGN NOTES:
S1. MANUFACTURERS MAY SUBSTITUTE HIGHER CLASS PIPE THAN SPECIFIED IN THE PLANS, HOWEVER, INSTALLATION DEPTH SHALL NOT EXCEED THAT SHOWN FOR THE PIPE INDICATED IN THE PLANS UNLESS APPROVED BY THE ENGINEER OF RECORD. NO ADDITIONAL PAYMENT WILL BE MADE FOR HIGHER CLASS SUBSTITUTION.
S2. THE REINFORCED CONCRETE PIPE FILL HEIGHT TABLE IS BASED ON THE FOLLOWING CRITERIA:
LOAD CASE 1 — TYPICAL STANDARD INSTALLATION:
SCDOT DEEP INSTALLATION + 30". FOR ALL INSTALLATIONS BEYOND 30' EMBANKMENT SETTLEMENT MAY CONTROL DESIGN. CONSULT WITH PIPE MANUFACTURERS AND GEOTECHNICAL ENGINEERS BEFORE USING DEPTHS GREATER THAN 30'. NUMBERS PUBLISHED ARE BASED ON AASHTO LRFD INDIRECT DESIGN OR SCDOT DEEP INSTALLATION CUTOFF.
LOAD CASE 2 — TYPICAL MINIMUM COVER INSTALLATION:
NUMBERS PUBLISHED ARE BASED ON AASHTO LRFD INDIRECT DESIGN CALCULATIONS OR AASHTO LRFD TABLE 12.6.6.3-1 FOR CLASS SPECIFIED OF REINFORCED CONCRETE PIPE UNDER FLEXIBLE PAVEMENT.
LOAD CASE 3 — TYPICAL MINIMUM COVER FOR CONSTRUCTION VEHICLE EQUIPMENT LOADING:
NUMBERS PUBLISHED ARE BASED ON AASHTO LRFD SECTION 27.5.4.4 FOR REINFORCED CONCRETE PIPE. AVOID DRIVING CONSTRUCTION VEHICLES OVER INSTALLED PIPE WHERE PURPOSELY EXTEND CONSTRUCTION FILL HEIGHT BEYOND DESIGN OVERFILL BY A MINIMUM OF 3 FEET OR ONE PIPE DIAMETER. PERIODICALLY CHANGE LOCATION OF EQUIPMENT CROSSING OVER PIPE IN ORDER TO MINIMIZE CHANCE OF LATERAL DISPLACEMENT.
LOAD CASE 4 — UNIVERSAL DRIVEWAY MINIMUM COVER:
FOR USE IN DRIVEWAYS ONLY. NUMBERS PUBLISHED ARE BASED ON CAPACITY OF PIPE USING AASHTO LRFD INDIRECT DESIGN AT 0' COVER. CHOOSE PIPE CLASS BASED ON LOADING OF VEHICLES USING DRIVEWAY.
S3. SITE CONDITIONS OTHER THAN TYPICAL INSTALLATION MAY ALSO REQUIRE SPECIAL DESIGNED PIPE. FOR THESE CONDITIONS, OTHER PIPE TYPES MAY BE MORE APPROPRIATE. CONTACT PIPE MANUFACTURER BEFORE SPECIFYING THIS PIPE TYPE FOR CUSTOM INSTALLATIONS.
S4. THIS FILL HEIGHT TABLE IS FOR USE IN ROADWAY APPLICATIONS ONLY AND SHOULD NOT BE USED FOR ANY OTHER TRANSPORTATION FACILITY.
S5. SPECIAL DESIGN MAY BE REQUIRED FOR INSTALLATIONS OUTSIDE OF SCDOT RIGHT OF WAY — SEE RIGHT OF WAY/UTILITY/MUNICIPAL AGREEMENT FOR THESE INSTALLATIONS.

NOTE:
1. CONTRACTOR SHALL NOT USE MASTIC AS A PIPE JOINT SEALANT.
2. ALL JOINT CONNECTIONS SHALL BE WATER TIGHT WITH "O-RING" GASKETS IN ACCORDANCE WITH ASTM C443 (AASHTO M315).

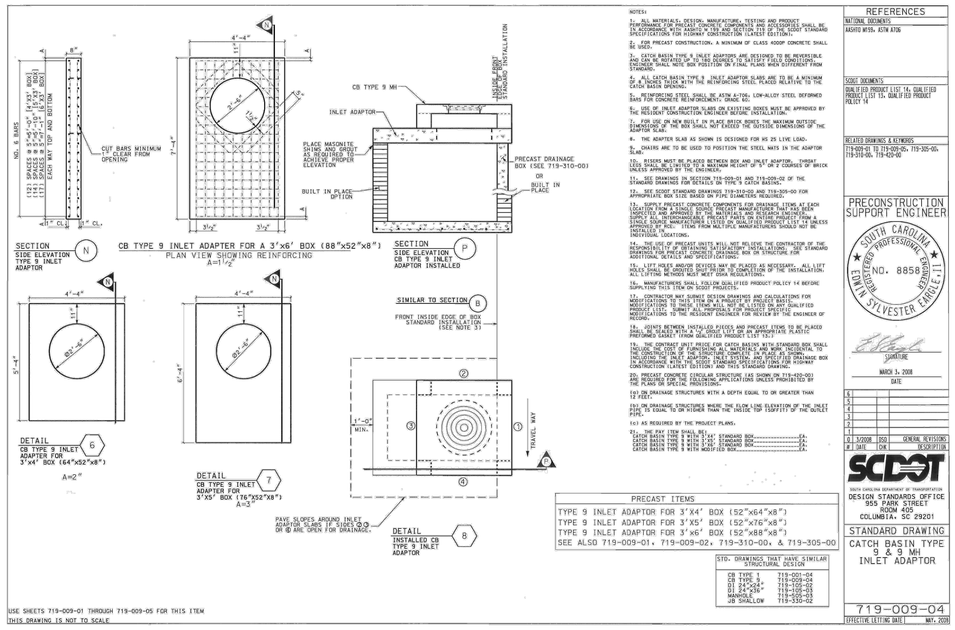
TABLE 714-205B
REINFORCED CONCRETE PIPE (RCP) SMOOTH WALL PIPE
AASHTO M170 B & C WALL PIPE WITH CIRCULAR REINFORCEMENT ONLY (AS NOTED)
LOADING FROM SCDOT INSTRUCTIONAL BULLETIN 2010-01 HL-93 LOAD CASES 1, 2, AND 4.

		INDIRECT DESIGN PIPE DIAMETER [IN]																	
		12	15	18	24	30	36	42	48	54	60	66	72	78	84	90	96	108	120
******DEPTH OF COVER (FEET)****** AT LEAST	0.00	NA	V^	V^	IV^	IV^	III^ (B)	III^ (B)	III^	III^	III^	III^	III^	III^	III^	III^	III^	III^	CUSTOM
	0.50	V^	V^	V^	IV^	IV^	III^ (B)	III^ (B)	III^	III^	III^	III^	III^	III^	III^	III^	III^	III^	CUSTOM
	0.75	V+	V+	IV+	IV+	IV+	III+ (B)	III+ (B)	III+	III+	III+	III+	III+	III+	III+	III+	III+	III+	CUSTOM
	1.00	IV	IV	IV	III	III	III (B)	III (B)	III	III	III	III	III	III	III	III	III	III	CUSTOM
	1.25	IV	IV	IV	III	III	III (B)	III (B)	III	III	III	III	III	III	III	III	III	III	CUSTOM
	1.50	IV	III	III	III	III	III (B)	III (B)	III	III	III	III	III	III	III	III	III	III	CUSTOM
	1.75	III	III	III	III	III	III (B)	III (B)	III	III	III	III	III	III	III	III	III	III	CUSTOM
	2.00	III	III	III	III	III	III (B)	III (B)	III	III	III	III	III	III	III	III	III	III	CUSTOM
	2.25	III	III	III	III	III	III (B)	III (B)	III	III	III	III	III	III	III	III	III	III	CUSTOM
	2.50	III	III	III	III	III	III (B)	III (B)	III	III	III	III	III	III	III	III	III	III	CUSTOM
	2.75	III	III	III	III	III	III (B)	III (B)	III	III	III	III	III	III	III	III	III	III	CUSTOM
	3.00	III	III	III	III	III	III (B)	III (B)	III	III	III	III	III	III	III	III	III	III	CUSTOM
	4.00	III	III	III	III	III	III (B)	III (B)	III	III	III	III	III	III	III	III	III	III	CUSTOM
	5.00	III	III	III	III	III	III (B)	III (B)	III	III	III	III	III	III	III	III	III	III	CUSTOM
	6.00	III	III	III	III	III	III (B)	III (B)	III	III	III	III	III	III	III	III	III	III	CUSTOM
	7.00	III	III	III	III	III	III (B)	III (B)	III	III	III	III	III	III	III	III	III	III	CUSTOM
	8.00	III	III	III	III	III	III (B)	III (B)	III	III	III	III	III	III	III	III	III	III	CUSTOM
	9.00	III	III	III	III	III	III (B)	III (B)	III	III	III	III	III	III	III	III	III	III	CUSTOM
	10.00	III	III	III	III	III	III (B)	III (B)	III	III	III	III	III	III	III	III	III	III	CUSTOM
	11.00	III	III	III	III	III	III (B)	III (B)	III	III	III	III	III	III	III	III	III	III	CUSTOM
	12.00	III	III	III	III	III	III (B)	III (B)	III	III	III	III	III	III	III	III	III	III	CUSTOM
	13.00	III	III	III	III	III	III (B)	III (B)	III	III	III	III	III	III	III	III	III	III	CUSTOM
	14.00	III	III	III	III	III	III (B)	III (B)	III	III	III	III	III	III	III	III	III	III	CUSTOM
	15.00	III	III	III	III	III	III (B)	III (B)	III	III	III	III	III	III	III	III	CUSTOM	CUSTOM	CUSTOM
	16.00	III	III	III	III	III	III (B)	III (B)	III	III	III	IV	IV	IV	IV	IV	CUSTOM	CUSTOM	CUSTOM
	17.00	IV	IV	IV	IV	IV	IV (B)	IV (B)	IV	IV	IV	IV	IV	IV	IV	IV	CUSTOM	CUSTOM	CUSTOM
	18.00	IV	IV	IV	IV	IV	IV (B)	IV (B)	IV	IV	IV	IV	IV	IV	IV	IV	CUSTOM	CUSTOM	CUSTOM
	19.00	IV	IV	IV	IV	IV	IV (B)	IV (B)	IV	IV	IV	IV	IV	IV	IV	IV	CUSTOM	CUSTOM	CUSTOM
	20.00	IV	IV	IV	IV	IV	IV (B)	IV (B)	IV	IV	IV	IV	IV	IV	IV	IV	CUSTOM	CUSTOM	CUSTOM
	21.00	IV	IV	IV	IV	IV	IV (B)	IV (B)	IV	IV	IV	IV	IV	IV	IV	IV	CUSTOM	CUSTOM	CUSTOM
	22.00	IV	IV	IV	IV	IV	IV (B)	IV (B)	IV	IV	IV	IV	IV	IV	IV	IV	CUSTOM	CUSTOM	CUSTOM
	23.00	IV	IV	IV	IV	IV	IV (B)	IV (B)	IV	IV	IV	IV	IV	IV	IV	IV	CUSTOM	CUSTOM	CUSTOM
	24.00	IV	IV	IV	IV	IV	IV (B)	IV (B)	IV	IV	IV	IV	IV	IV	IV	IV	CUSTOM	CUSTOM	CUSTOM
	25.00	IV	IV	IV	IV	IV	IV (B)	IV (B)	IV	IV	IV	IV	V	CUSTOM	CUSTOM	CUSTOM	CUSTOM	CUSTOM	CUSTOM
	26.00	V	V	V	V	V	V	V	V	V	V	V	V	CUSTOM	CUSTOM	CUSTOM	CUSTOM	CUSTOM	CUSTOM
	27.00	V	V	V	V	V	V	V	V	V	V	V	V	CUSTOM	CUSTOM	CUSTOM	CUSTOM	CUSTOM	CUSTOM
	28.00	V	V	V	V	V	V	V	V	V	V	V	V	CUSTOM	CUSTOM	CUSTOM	CUSTOM	CUSTOM	CUSTOM
	29.00	V	V	V	V	V	V	V	V	V	V	V	V	CUSTOM	CUSTOM	CUSTOM	CUSTO

REFERENCES
NATIONAL DOCUMENTS
ASTM C55, ASTM A706, AASHTO M31, AASHTO M55, AASHTO M105, AASHTO M306, AASHTO M111

SCDOT DOCUMENTS
QUALIFIED PRODUCT LIST 14, QUALIFIED PRODUCT LIST 15

RELATED DRAWINGS & KEYWORDS
719-110-00-01, 719-111-00, 719-120-01, 719-120-02, 719-120-03, 719-120-04, 719-120-05, 719-120-06, 719-120-07, 719-120-08, 719-120-09, 719-120-10, 719-120-11, 719-120-12, 719-120-13, 719-120-14, 719-120-15, 719-120-16, 719-120-17, 719-120-18, 719-120-19, 719-120-20, 719-120-21, 719-120-22, 719-120-23, 719-120-24, 719-120-25, 719-120-26, 719-120-27, 719-120-28, 719-120-29, 719-120-30, 719-120-31, 719-120-32, 719-120-33, 719-120-34, 719-120-35, 719-120-36, 719-120-37, 719-120-38, 719-120-39, 719-120-40,



NOTES:

1. ALL MATERIALS, DESIGN, MANUFACTURE, TESTING AND PRODUCT PERFORMANCE FOR PRECAST CONCRETE COMPONENTS AND ACCESSORIES SHALL BE IN ACCORDANCE WITH AASHTO M 199 AND SECTION 210 OF THE SCDOT STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTION (LATEST EDITION).
2. FOR PRECAST CONSTRUCTION, A MINIMUM OF CLASS 4000P CONCRETE SHALL BE USED.
3. CATCH BASIN TYPE 9 INLET ADAPTORS ARE DESIGNED TO BE REVERSIBLE FOR USE ON EITHER SIDE OF THE CATCH BASIN. THE CONTRACTOR OR THE ENGINEER SHALL NOTE BOX POSITION ON FINAL PLANS WHEN DIFFERENT FROM STANDARD.
4. ALL CB TYPE 9 INLET ADAPTORS CLASS ARE TO BE A MINIMUM SIZE TO SPAN WITH THE MATCHING STEEL PLACED PARALLEL TO THE CATCH BASIN OPENING.
5. REINFORCED STEEL SHALL BE ASTM A-706, LOW-ALLOY STEEL DEFORMED BARS FOR CONCRETE REINFORCEMENT, GRADE 60.
6. WHERE STEEL REINFORCING DOWELING DOES NOT BE APPROVED BY THE RESIDENT CONSTRUCTION ENGINEER BEFORE INSTALLATION.
7. TYPE 9 SIDE OR NEW BUILT IN PLACE BRICK BOXES THE MAXIMUM OUTSIDE DIMENSIONS OF THE BOX SHALL NOT EXCEED THE OUTSIDE DIMENSIONS OF THE ADAPTOR SLAB.
8. THE ADAPTER SLAB AS SHOWN IS DESIGNED FOR HS 25 LIVE LOAD.
9. GASKETS ARE TO BE USED TO POSITION THE STEEL MATS IN THE ADAPTOR SLAB.
10. RISERS MUST BE PLACED BETWEEN BOX AND INLET ADAPTOR. THROAT LESS SHALL BE LIMITED TO A MAXIMUM HEIGHT OF 8" WITH 2 COURSES OF BRICK UNLESS APPROVED BY THE ENGINEER.
11. SEE DRAWINGS IN SECTION 719-009-02 AND 719-009-03 OF THE STANDARD DRAWINGS FOR DETAILS ON TYPE 9 CATCH BASINS.
12. SEE SCDOT STANDARD DRAWINGS 719-310-00 AND 719-315-00 FOR APPROPRIATE BOX SIZE BASED ON PIPE DIAMETERS REQUIRED.
13. SUPPLY PRECAST CONCRETE COMPONENTS FOR DRAINAGE ITEMS AT EACH LOCATION FROM A SINGLE SOURCE. PRECAST MANUFACTURER SHALL HAVE BEEN QUALIFIED IN ACCORDANCE WITH SCDOT QUALIFIED PRODUCT POLICY 14. DO NOT SUPPLY ALL INTERCHANGEABLE PRECAST PARTS ON SYSTEM PROJECT FROM A MIXTURE OF MANUFACTURERS. DO NOT SUPPLY PRECAST PRODUCTS NOT SPECIFICALLY APPROVED BY SCDOT. ITEMS FROM MULTIPLE MANUFACTURERS SHOULD NOT BE INSTALLED IN ADJACENT LOCATIONS.
14. THE USE OF PRECAST UNITS WILL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF OBTAINING SATISFACTORY INSTALLATIONS. SEE STANDARD DRAWINGS FOR PRECAST CONCRETE DRAINAGE BOX OR STRUCTURE FOR ADDITIONAL DETAILS AND SPECIFICATIONS.
15. LIFT HOLES AND/OR DEVICES MAY BE PLACED AS NECESSARY. ALL LIFT HOLES SHALL BE GROUTED SHUT PRIOR TO COMPLETION OF THE INSTALLATION. ALL LIFTING METHODS MUST MEET OSHA REGULATIONS.
16. MANUFACTURERS SHALL FOLLOW QUALIFIED PRODUCT POLICY 14 BEFORE SUPPLYING THIS ITEM ON SCDOT PROJECTS.
17. CONTRACTOR MAY SUBMIT DESIGN DRAWINGS AND CALCULATIONS FOR MODIFICATIONS TO ITEMS SHOWN ON THIS DRAWING. CONTRACTOR MAY SUBMIT MODIFICATIONS TO THESE ITEMS WILL NOT BE LISTED ON QUALIFIED PRODUCT LIST. SUBMIT ALL PROPOSALS FOR PRODUCT SPECIFIC DESIGNS/MODIFICATIONS TO THE RESIDENT CONSTRUCTION ENGINEER OR THE ENGINEER OF RECORD.
18. JOINTS BETWEEN INSTALLED PIECES AND PRECAST ITEMS TO BE PLACED SHALL BE SEALED WITH A 1/4" GROUT LIFT OR AN APPROPRIATE PLASTIC PREFORMED GASKET FROM QUALIFIED PRODUCT LIST 13.7.
19. THE CONTRACT UNIT PRICE FOR CATCH BASINS WITH STANDARD BOX SHALL INCLUDE THE COST OF FURNISHING ALL MATERIALS AND MAKE INCIDENTAL TO THE CONSTRUCTION OF THE STRUCTURE COMPLETE IN PLACE AS SHOWN IN ACCORDANCE WITH THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (LATEST EDITION) AND THIS STANDARD DRAWING.
20. PRECAST CONCRETE CIRCULAR STRUCTURE (AS SHOWN ON 719-420-00) ARE REQUIRED FOR THE FOLLOWING APPLICATIONS UNLESS PROHIBITED BY THE PLANS OR SPECIAL PROVISIONS.

(a) ON DRAINAGE STRUCTURES WITH A DEPTH EQUAL TO OR GREATER THAN 12 FEET.

(b) ON DRAINAGE STRUCTURES WHERE THE FLOW LINE ELEVATION OF THE INLET PIPE IS EQUAL TO OR HIGHER THAN THE INSIDE TOP (SOFFIT) OF THE OUTLET PIPE.

(c) AS REQUIRED BY THE PROJECT PLANS.

21. THE PAY ITEM SHALL BE:
CATCH BASIN TYPE 9 WITH 3'x4' STANDARD BOX ----------EA.
CATCH BASIN TYPE 9 WITH 3'x5' STANDARD BOX ----------EA.
CATCH BASIN TYPE 9 WITH MODIFIED BOX ----------EA.

PRECAST ITEMS

TYPE 9 INLET ADAPTOR FOR 3'X4' BOX (52"x64"x8")
TYPE 9 INLET ADAPTOR FOR 3'X5' BOX (52"x76"x8")
TYPE 9 INLET ADAPTOR FOR 3'x6' BOX (52"x88"x8")
SEE ALSO 719-009-01, 719-009-02, 719-310-00, & 719-305-00

STD. DRAWINGS THAT HAVE SIMILAR STRUCTURAL DESIGN	
CB TYPE 1	719-001-04
DI 24"x24"	719-005-02
DI 24"x36"	719-005-03
DI 24"x36"	719-105-03
MANHOLE	719-505-03
JB SHALLOW	719-330-02

USE SHEETS 719-009-01 THROUGH 719-009-05 FOR THIS ITEM
THIS DRAWING IS NOT TO SCALE

REFERENCES
NATIONAL DOCUMENTS
AASHTO M199, ASTM A706
SCDOT DOCUMENTS
QUALIFIED PRODUCT LIST 14; QUALIFIED PRODUCT LIST 13
RELATED DRAWINGS & KEYWORDS
719-420-00, 719-550-00

PRECONSTRUCTION SUPPORT ENGINEER
SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER
No. 8858
ELMER SYLVESTER EARGLE, III
SIGNATURE
MARCH 3, 2008
DATE

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0	3/2008	BSO	GENERAL REVISIONS
#	DATE	CHK	DESCRIPTION

SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING
CATCH BASIN TYPE 9 & 9 MH INLET ADAPTOR

719-009-04
EFFECTIVE LETTING DATE: MAY, 2020

REFERENCES
NATIONAL DOCUMENTS
ASTM C55, ASTM A706, AASHTO M55 AASHTO M207, AASHTO M105, AASHTO M306
SCDOT DOCUMENTS
QUALIFIED PRODUCT LIST 14; QUALIFIED PRODUCT LIST 13
RELATED DRAWINGS & KEYWORDS
719-420-00, 719-550-00

PRECONSTRUCTION SUPPORT ENGINEER
SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER
No. 8858
ELMER SYLVESTER EARGLE, III
SIGNATURE
MARCH 3, 2008
DATE

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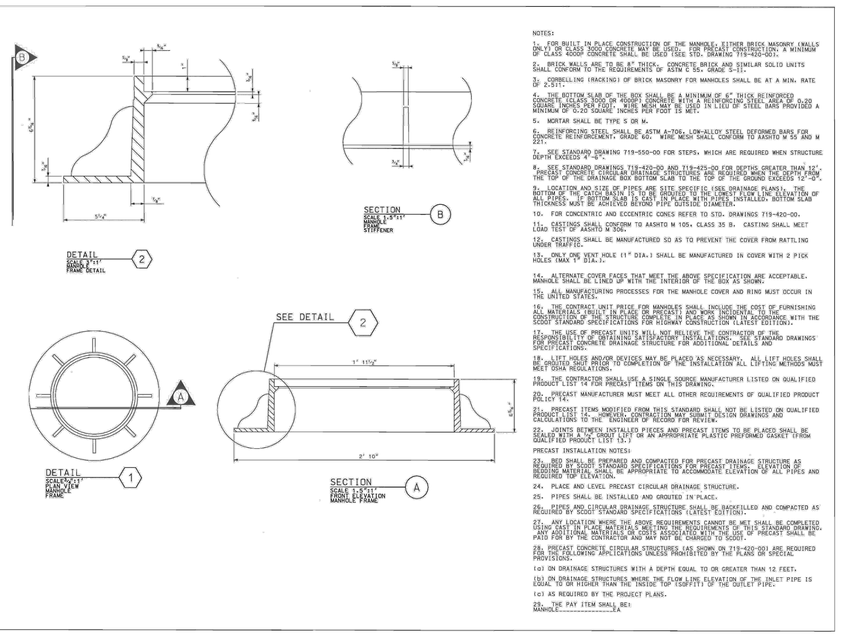
0	3/2008	BSO	GENERAL REVISIONS
#	DATE	CHK	DESCRIPTION

SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING
DRAINAGE ACCESS MANHOLE HEAVY DUTY CASTING

719-505-03
EFFECTIVE LETTING DATE: MAY, 2020



NOTES:

1. FOR BUILT IN PLACE CONSTRUCTION OF THE MANHOLE, EITHER BRICK MASONRY WALLS OR CLASS 3000 CONCRETE MAY BE USED. FOR PRECAST CONSTRUCTION, A MINIMUM OF CLASS 4000P CONCRETE SHALL BE USED (SEE STD. DRAWING 719-420-00).
2. BRICK WALLS ARE TO BE 8" THICK. CONCRETE BRICK AND SIMILAR SOLID UNITS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C 55, GRADE S-II.
3. CORBELLING (RACKING) OF BRICK MASONRY FOR MANHOLES SHALL BE AT A MIN. RATE OF 2:1T.
4. THE BOTTOM SLAB OF THE BOX SHALL BE A MINIMUM OF 6" THICK REINFORCED CONCRETE (CLASS 3000 OR 4000P) CONCRETE WITH A REINFORCING STEEL AREA OF 0.20 SQUARE INCHES PER FOOT. WIRE MESH MAY BE USED IN LIEU OF STEEL BARS PROVIDED A MINIMUM OF 0.20 SQUARE INCHES PER FOOT IS MET.
5. MORTAR SHALL BE TYPE S OR M.
6. REINFORCING STEEL SHALL BE ASTM A-706, LOW-ALLOY STEEL DEFORMED BARS FOR CONCRETE REINFORCEMENT, GRADE 60. WIRE MESH SHALL CONFORM TO AASHTO M 55 AND M 221.
7. SEE STANDARD DRAWING 719-550-00 FOR STEPS, WHICH ARE REQUIRED WHEN STRUCTURE DEPTH EXCEEDS 4'-6".
8. SEE STANDARD DRAWINGS 719-420-00 AND 719-425-00 FOR DEPTHS GREATER THAN 10'. FOR DEPTHS GREATER THAN 12'-0", THE CONTRACTOR MAY ELECT TO INSTALL A RISER BETWEEN THE TOP OF THE DRAINAGE BOX BOTTOM SLAB TO THE TOP OF THE GROUND EXCEEDS 12'-0".
9. LOCATION AND SIZE OF PIPES ARE SITE SPECIFIC (SEE DRAINAGE PLANS). THE BOTTOM OF THE CATCH BASIN IS TO BE GROOVED TO THE LOWEST FLOW LINE ELEVATION OF ALL PIPES. IF BOTTOM SLAB IS CAST IN PLACE WITH PIPES INSTALLED, BOTTOM SLAB THICKNESS MUST BE ACHIEVED BEYOND PIPE OUTSIDE DIAMETER.
10. FOR CONCENTRIC AND ECCENTRIC CONES REFER TO STD. DRAWINGS 719-420-00.
11. CASTINGS SHALL CONFORM TO AASHTO M 105, CLASS 35 B. CASTING SHALL MEET LOAD TEST OF AASHTO M 306.
12. CASTINGS SHALL BE MANUFACTURED SO AS TO PREVENT THE COVER FROM RATTLING UNDER TRAFFIC.
13. ONLY ONE VENT HOLE (1" DIA.) SHALL BE MANUFACTURED IN COVER WITH 2 PICK HOLES (MAX 1" DIA.).
14. ALTERNATE COVER FACES THAT MEET THE ABOVE SPECIFICATION ARE ACCEPTABLE. MANHOLE SHALL BE LINED UP WITH THE INTERIOR OF THE BOX AS SHOWN.
15. ALL MANUFACTURING PROCESSES FOR THE MANHOLE COVER AND RING MUST OCCUR IN THE UNITED STATES.
16. THE CONTRACT UNIT PRICE FOR MANHOLES SHALL INCLUDE THE COST OF FURNISHING ALL MATERIALS AND MAKE INCIDENTAL TO THE CONSTRUCTION OF THE STRUCTURE COMPLETE IN PLACE AS SHOWN IN ACCORDANCE WITH THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (LATEST EDITION).
17. THE USE OF PRECAST UNITS WILL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF OBTAINING SATISFACTORY INSTALLATIONS. SEE STANDARD DRAWINGS FOR PRECAST CONCRETE DRAINAGE STRUCTURE FOR ADDITIONAL DETAILS AND SPECIFICATIONS.
18. LIFT HOLES AND/OR DEVICES MAY BE PLACED AS NECESSARY. ALL LIFT HOLES SHALL BE GROUTED SHUT PRIOR TO COMPLETION OF THE INSTALLATION ALL LIFTING METHODS MUST MEET OSHA REGULATIONS.
19. THE CONTRACTOR SHALL USE A SINGLE SOURCE MANUFACTURER LISTED ON QUALIFIED PRODUCT LIST 14 FOR PRECAST ITEMS ON THIS DRAWING.
20. PRECAST MANUFACTURER MUST MEET ALL OTHER REQUIREMENTS OF QUALIFIED PRODUCT POLICY 14.
21. PRECAST ITEMS MODIFIED FROM THIS STANDARD SHALL NOT BE LISTED ON QUALIFIED PRODUCT LIST 14. HOWEVER, CONTRACTOR MAY SUBMIT DESIGN DRAWINGS AND CALCULATIONS TO THE ENGINEER OF RECORD FOR REVIEW.
22. JOINTS BETWEEN INSTALLED PIECES AND PRECAST ITEMS TO BE PLACED SHALL BE SEALED WITH A 1/4" GROUT LIFT OR AN APPROPRIATE PLASTIC PREFORMED GASKET FROM QUALIFIED PRODUCT LIST 13.7

PRECAST INSTALLATION NOTES:

23. BED SOIL SHALL BE PREPARED AND COMPACTED FOR PRECAST DRAINAGE STRUCTURE AS REQUIRED BY SCDOT STANDARD SPECIFICATIONS FOR PRECAST ITEMS. ELEVATION OF BEDDING MATERIAL SHALL BE APPROPRIATE TO ACCOMODATE ELEVATION OF ALL PIPES AND REQUIRED TOP ELEVATION.
24. PLACE AND LEVEL PRECAST CIRCULAR DRAINAGE STRUCTURE.
25. PIPES SHALL BE INSTALLED AND GROUTED IN PLACE.
26. PIPES AND CIRCULAR DRAINAGE STRUCTURE SHALL BE BACKFILLED AND COMPACTED AS REQUIRED BY SCDOT STANDARD SPECIFICATIONS (LATEST EDITION).
27. ANY LOCATION WHERE THE ABOVE REQUIREMENTS CANNOT BE MET SHALL BE COMPLETED USING CAST IN PLACE MATERIALS MEETING THE REQUIREMENTS OF THIS STANDARD DRAWING. ANY ADDITIONAL MATERIALS OR COSTS ASSOCIATED WITH THE USE OF PRECAST SHALL BE PAID FOR BY THE CONTRACTOR AND MAY NOT BE CHARGED TO SCDOT.
28. PRECAST CONCRETE CIRCULAR STRUCTURES (AS SHOWN ON 719-420-00) ARE REQUIRED FOR THE FOLLOWING APPLICATIONS UNLESS PROHIBITED BY THE PLANS OR SPECIAL PROVISIONS.

(a) ON DRAINAGE STRUCTURES WITH A DEPTH EQUAL TO OR GREATER THAN 12 FEET.

(b) ON DRAINAGE STRUCTURES WHERE THE FLOW LINE ELEVATION OF THE INLET PIPE IS EQUAL TO OR HIGHER THAN THE INSIDE TOP (SOFFIT) OF THE OUTLET PIPE.

(c) AS REQUIRED BY THE PROJECT PLANS.

29. THE PAY ITEM SHALL BE:
MANHOLE----------EA

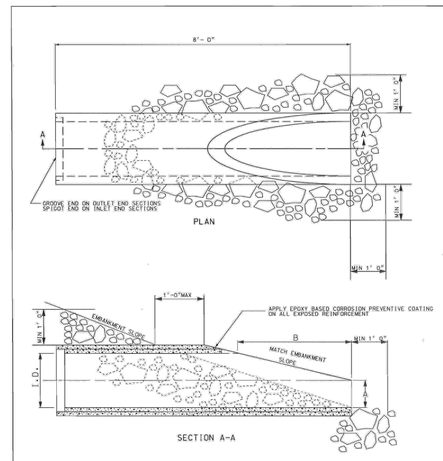


CHART 719-610B RIPRAP PLACEMENT		
CLASS	D_{50}(FT)	MINIMUM THICKNESS (FT)
B	0.75	1.50
C	1.30	2.60

TABLE 719-610A EMBANKMENT SLOPE						
	6:1	5:1	4:1	3:1	2:1	
	6	5	4	3	2	
E.D.(IN)	A(IN)	B (BEVELED LENGTH) (IN)				
15	6	54	45	36	27	18
18	9	54	45	36	27	18
24	10	NA	70	56	42	28
30	12	NA	NA	72	54	36
36	15	NA	NA	NA	63	42
42	20	NA	NA	NA	65	44
48	24	NA	NA	NA	72	48
54	24	NA	NA	NA	NA	60
60	24	NA	NA	NA	NA	72

THIS DRAWING IS NOT TO SCALE

REFERENCES
NATIONAL DOCUMENTS
SCDOT DOCUMENTS
SCDOT SUPPLEMENTAL TECHNICAL SPECIFICATION SC-M-714

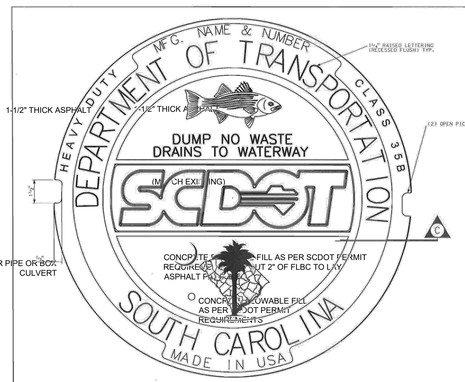
PRECONSTRUCTION SUPPORT ENGINEER
SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER
No. 21242
JAMES W. KENDALL, JR.
SIGNATURE
AUGUST 23, 2012
DATE

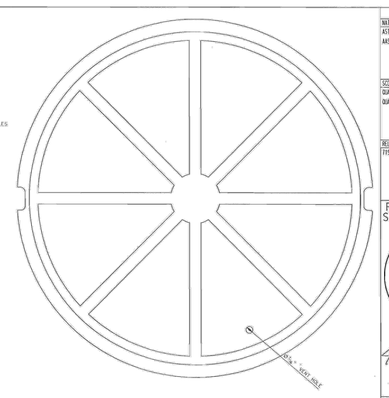
5			
4			
3	8/2012	KNB	PAY ITEMS, RIPRAP NOTES, SECTION A-A EPOXY
2	1/2010	DSO	GENERAL REVISIONS
1	6/2008	SDW	CHART 719-610B
0	3/2008	DSO	GENERAL REVISIONS
#	DATE	CHK	DESCRIPTION

SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING
END TREATMENT (RCP BEVELED END)

719-610-00
EFFECTIVE LETTING DATE: JAN., 2013





REFERENCES
NATIONAL DOCUMENTS
ASTM C55, ASTM A706, AASHTO M55 AASHTO M207, AASHTO M105, AASHTO M306
SCDOT DOCUMENTS
QUALIFIED PRODUCT LIST 14, QUALIFIED PRODUCT LIST 13
RELATED DRAWINGS & KEYWORDS
719-420-00, 719-550-00

PRECONSTRUCTION SUPPORT ENGINEER
SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER
No. 21242
JAMES W. KENDALL, JR.
SIGNATURE
AUGUST 23, 2012
DATE

5			
4			DETAIL 4 NEW
3	8/2012	DSO	DIMENSION
2	1/2010	DSO	GENERAL REVISIONS
1	1/2009	DSO	GENERAL REVISIONS
0	1/2008	DSO	GENERAL REVISIONS
#	DATE	CHK	DESCRIPTION

SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING
DRAINAGE ACCESS MANHOLE HEAVY DUTY CASTING

719-505-04
EFFECTIVE LETTING DATE: JAN., 2013

Stantec
4969 Centre Pointe Drive, Suite 200
North Charleston, SC, 29418
Tel: 843.740.7700
www.stantec.com

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Consultant

811 Know what's below. Call before you dig.

Legend

Revision	By	Appd	
PER BID ADDENDUM #1	RMW	BK	2022.12.21
ISSUED FOR CONSTRUCTION	RMW	BK	2022.06.28
Issued	By	Appd	YYYY.MM.DD
File Name: 1035_C5_GRADING_DETAILS	SGC Dwn.	SGC Dsgn.	BK Chkd. 2020.10.09 YYYY.MM.DD

Permit/Seal

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION STANTEC CONSULTING SERVICES, INC. No. C02310

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER ROBERT MARSHALL WYNNE No. 32510
06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DRAINAGE DETAILS

Project No. 178421035
Scale
Revision ---
Sheet C5-02 of 65
Drawing No. C5-02

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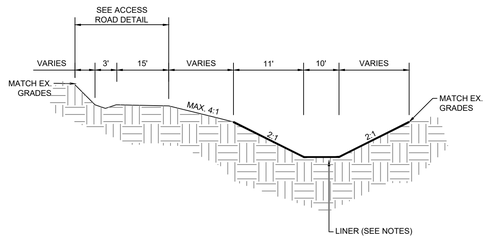
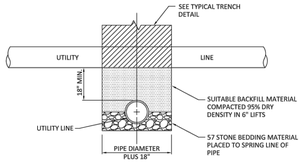


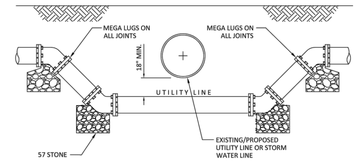
NOTE:
1. NORTH AMERICAN GREEN SC150 LINER SHALL BE INSTALLED IN ALL DITCH AND SWALE SECTIONS.

TRAPEZOIDAL DITCH DETAIL
NOT TO SCALE



NOTES:
1. UTILITY LINES IN THIS DRAWING CONSIST OF WATER, WASTEWATER, AND STORMWATER LINES.
2. WATER LINE AND WASTEWATER UTILITY LINE SHALL BE PVC UNLESS VERTICAL SEPARATION DISTANCE BETWEEN LINES ARE LESS THAN 18", THEN USE DIP.
3. ALL UTILITY LINES SHALL BE CENTERED TO ALLOW FOR THE GREATEST DISTANCE BETWEEN PIPE JOINTS.
4. MATERIAL BETWEEN LINES SHALL BE COMPACTED TO PREVENT SETTLING OF ABOVE PIPING.

GEORGETOWN COUNTY WATER & SEWER DISTRICT		
UTILITY LINE CROSSING NO. 1		
UPDATED 10/02/14	SCALE N.T.S.	NO.
DRAWN A.J.K.	CHECKED	

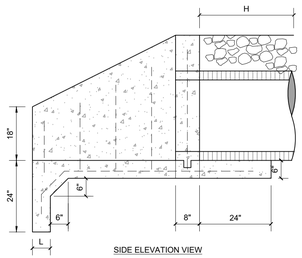


NOTES:
1. USE DIP FOR WATER VERTICAL SEPARATION.
2. IF CROSSING A STORM PIPE, PROPOSED UTILITY LINE SHALL ALSO BE OFFSET A MINIMUM OF 36" HORIZONTALLY FROM END OF STORM PIPE.
3. WHEN POSSIBLE, POTABLE WATER LINE SHALL CROSS ABOVE SANITARY SEWER LINE.

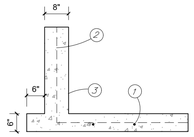
BETWEEN WATER
N 18". IF SEPARATION
EEN USE D.I.P.
UTILITY LINE SHALL
ORIZONTALLY FROM

SHALL CROSS ABOVE

GEORGETOWN COUNTY WATER & SEWER DISTRICT		
UTILITY LINE CROSSING NO. 2		
UPDATED 10/02/14	SCALE N.T.S.	NO. 12 - W
DRAWN A.J.K.	CHECKED	

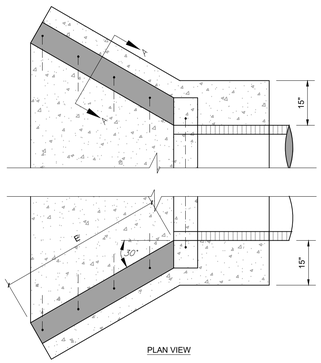


SIDE ELEVATION VIEW

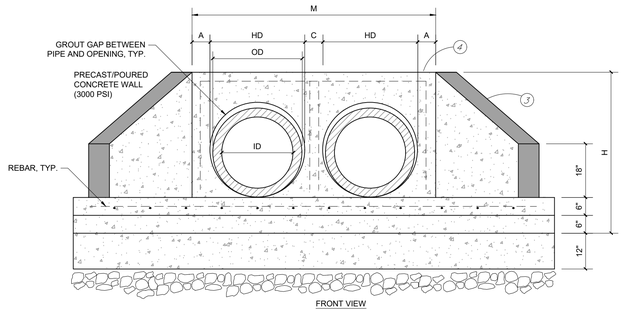


SECTION A-A

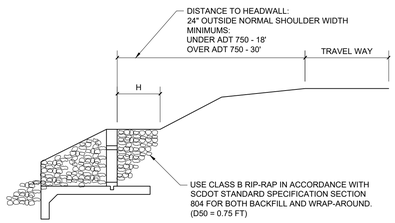
1. #4 REBARS 12" O.C.E.W. APRON SLAB & FOOTING
2. #4 REBARS 12" O.C. WITH 18" LEG INTO APRON
3. WING WALL (3000 PSI CONCRETE)
4. HEADWALL (3000 PSI CONCRETE)



PLAN VIEW



FRONT VIEW



INSTALLATION

NOTES:
1. CONTRACTOR SHALL DESIGN AND CONSTRUCT A CONCRETE HEADWALL WITH WINGWALLS. DETAILS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF SOUTH CAROLINA AND SHALL BE SUBMITTED TO THE ENGINEER AND OWNER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
2. FOR BUILT IN PLACE CONSTRUCTION OF THE STRAIGHT CONCRETE HEADWALL CLASS 4000 CONCRETE SHALL BE USED, FOR PRECAST CONSTRUCTION, A MINIMUM OF CLASS 4000P CONCRETE MEETING THE REQUIREMENTS OF SECTION 701 OF THE SCOOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (LATEST EDITION).
3. REINFORCING STEEL SHALL BE ASTM A-706, LOW-ALLOY STEEL DEFORMED BARS FOR CONCRETE REINFORCEMENT, GRADE 60.
4. GROUT SHALL BE TYPE M MORTAR MATERIAL IN ACCORDANCE WITH SECTION 718 OF THE SCOOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (LATEST EDITION).
5. IN THE EVENT THE HEADWALL IS SKEWED TO THE PIPE, THE PORTION OF PIPE THAT PROTRUDES BEYOND THE EXPOSED FACE OF THE HEADWALL SHALL BE CUT FLUSH AND GROUTED SMOOTH WITH THE EXPOSED FACE OF THE HEADWALL.
6. FOR THREE OR MORE LINES OF PIPE THE WIDTH (MI SHALL BE INCREASED BY THE 'HD' AND 'C' DIMENSIONS AND THE REINFORCING STEEL SHALL INCREASE ACCORDINGLY.
7. WHEN PIPES OF DIFFERENT DIAMETERS ARE USED DESIGN SHOULD COMPLY WITH DESIGN OF LARGEST PIPE.

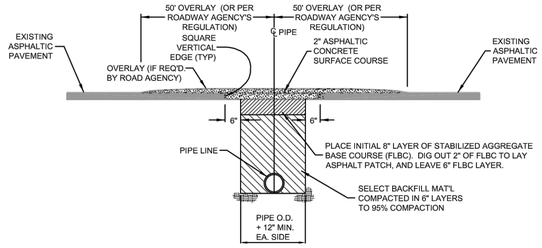
PRECAST NOTES:
1. THE USE OF PRECAST UNITS WILL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF OBTAINING SATISFACTORY INSTALLATIONS.
2. LIFT HOLES AND/OR DEVICES MAY BE PLACED AS NECESSARY. ALL LIFT HOLES SHALL BE GROUTED SHUT PRIOR TO COMPLETION OF THE INSTALLATION. ALL LIFTING METHODS MUST MEET OSHA REGULATIONS.

PRECAST INSTALLATION NOTES:
3. BED SHALL BE PREPARED AND COMPACTED FOR STRAIGHT CONCRETE HEADWALL AS REQUIRED BY SCOOT STANDARD SPECIFICATIONS FOR PRECAST ITEMS. ELEVATION OF BEDDING MATERIAL SHALL BE APPROPRIATE TO ACCOMMODATE ELEVATION OF PIPE.
4. PLACE AND LEVEL PRECAST HEADWALL.
5. PIPES SHALL BE BRICKED AND GROUTED IN PLACE.
6. PIPES AND HEADWALL SHALL BE BACKFILLED AND COMPACTED AS REQUIRED BY SCOOT STANDARD SPECIFICATIONS. 15. BRICK AND MORTAR SHALL BE USED TO ADJUST ELEVATIONS OF THROAT WALLS AS REQUIRED TO MEET ELEVATION AND CROSS SLOPES.
7. ANY LOCATION WHERE THE ABOVE REQUIREMENTS CANNOT BE MET SHALL BE COMPLETED USING CAST IN PLACE MATERIALS MEETING THE REQUIREMENTS OF THIS STANDARD DRAWING. ANY ADDITIONAL MATERIALS OR COSTS ASSOCIATED WITH THE USE OF PRECAST SHALL BE PAID FOR BY THE CONTRACTOR AND MAY NOT BE CHARGED TO SCOOT.
8. THE CONTRACT UNIT PRICE FOR STRAIGHT HEADWALL FOR CIRCULAR PIPE SHALL INCLUDE THE COST OF FURNISHING ALL MATERIALS (BUILT IN PLACE OR PRECAST) AND WORK INCIDENTAL TO THE CONSTRUCTION OF THE STRUCTURE COMPLETE IN PLACE AS SHOWN (INCLUDING CLASS B RIP-RAP) IN ACCORDANCE WITH THE SCOOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (LATEST EDITION).

SINGLE PIPE HEADWALL									MULTIPLE PIPE HEADWALL			
INSIDE DIA. IN. (ID)	MAX OUTSIDE DIA. IN. (OD)	MINIMUM OPENING IN. (HD)	HEADWALL HEIGHT (H)	WINGWALL LENGTH (E)	MINIMUM TOE WIDTH (L)	(A)	WALL WIDTH (S)	REBAR SIZE	WALL WIDTH (M) [1]	PIPE SPACE (C)	ADDITIONAL REBAR PER PIPE [2]	REBAR SIZE
15	21	24	3'-6"	3'-0"	0'-6"	1'-7 1/2"	5'-3"	4	7'-9"	0'-6"	2	4
18	25	28	3'-10"	3'-0"	0'-6"	1'-7"	5'-6"	4	8'-6"	0'-8"	2	4
24	32	34	4'-4"	3'-0"	0'-6"	1'-7"	6'-0"	4	9'-6"	0'-8"	2	4
30	39	42	5'-0"	3'-7"	0'-6"	1'-6"	6'-6"	4	11'-0"	1'-0"	2	4
36	46	49	5'-7"	4'-2"	0'-6"	1'-5 1/2"	7'-0"	4	12'-0"	1'-0"	2	4
42	53	56	6'-2"	5'-1"	0'-6"	1'-11"	8'-6"	4	14'-6"	1'-4"	2	4
48	60	64	6'-10"	5'-9"	1'-0"	1'-10"	9'-0"	4	15'-6"	1'-2"	2	4
54	67	71	7'-5"	6'-11"	1'-0"	2'-3 1/2"	10'-6"	4	18'-0"	1'-7"	2	4
60	74	78	8'-0"	8'-2"	1'-0"	2'-3"	11'-0"	4	19'-0"	1'-6"	2	4
72	86	90	8'-6"	8'-6"	1'-0"	2'-3"	11'-6"	4	20'-0"	1'-6"	2	4

1. (M) SHOWN IS FOR 2 PIPES OF THE SAME DIAMETER. ADJUST (M) AS REQUIRED FOR MULTIPLE PIPES OR PIPES OF VARIOUS DIAMETER.
2. ADD REBAR FOR EACH ADDITIONAL PIPE

HEADWALL WITH WINGWALLS DETAIL
N.T.S.



NOTES:
1. PAVEMENT CUT TO EXTEND 6" BEYOND EDGES OF TRENCH AS SHOWN. PAVEMENT SHALL BE CUT TO TRUE LINE AND REMOVED BEFORE TRENCH IS CUT. ALL PAVEMENT REPAIRS TO BE IN ACCORDANCE WITH ROAD AGENCY SPECS.
2. ROAD AGENCY MAY REQUIRE A CUT & PATCH OF TRENCH AREA AND AN OVERLAY OF ENTIRE APRON OR ENTRANCE FROM THE EDGE OF THE MAIN ROAD TO THE EDGE OF THE ROAD RIGHT-OF-WAY (SEE ENCROACHMENT PERMIT).
3. WHERE EXISTING PAVEMENT IS INSUFFICIENT THICKNESS TO DEVELOP TIGHT SEAL WITH NEW SURFACE, NEW PAVEMENT SHALL LAP EXISTING SURFACE WITH AT LEAST A 10' OVERLAP ON BOTH SIDES FOR SMOOTH TRANSITION OR AS PER SPEC'S. OF ROAD AGENCY.

OPEN CUT REPAIR FOR LOW VOLUME ASPHALT PAVEMENT

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North Charleston, SC, 29418
Tel: 843.740.7700
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Legend

Revision	By	Appd	YYYY.MM.DD
PER BID ADDENDUM #1	RMW	BK	2022.12.21
ISSUED FOR CONSTRUCTION	RMW	BK	2022.06.28
Issued	By	Appd	YYYY.MM.DD
File Name: 1035_C5_GRADING_DETAILS	SGC	SGC	BK 2020.10.09
	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

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SOUTH CAROLINA — No. 32500 — LICENSED PROFESSIONAL ENGINEER — ROBERT MARSHALL WYNNE, JR. — 06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
DRAINAGE DETAILS

Project No. 178421035
Scale
Revision ----
Sheet C5-03 of 65
Drawing No. C5-03

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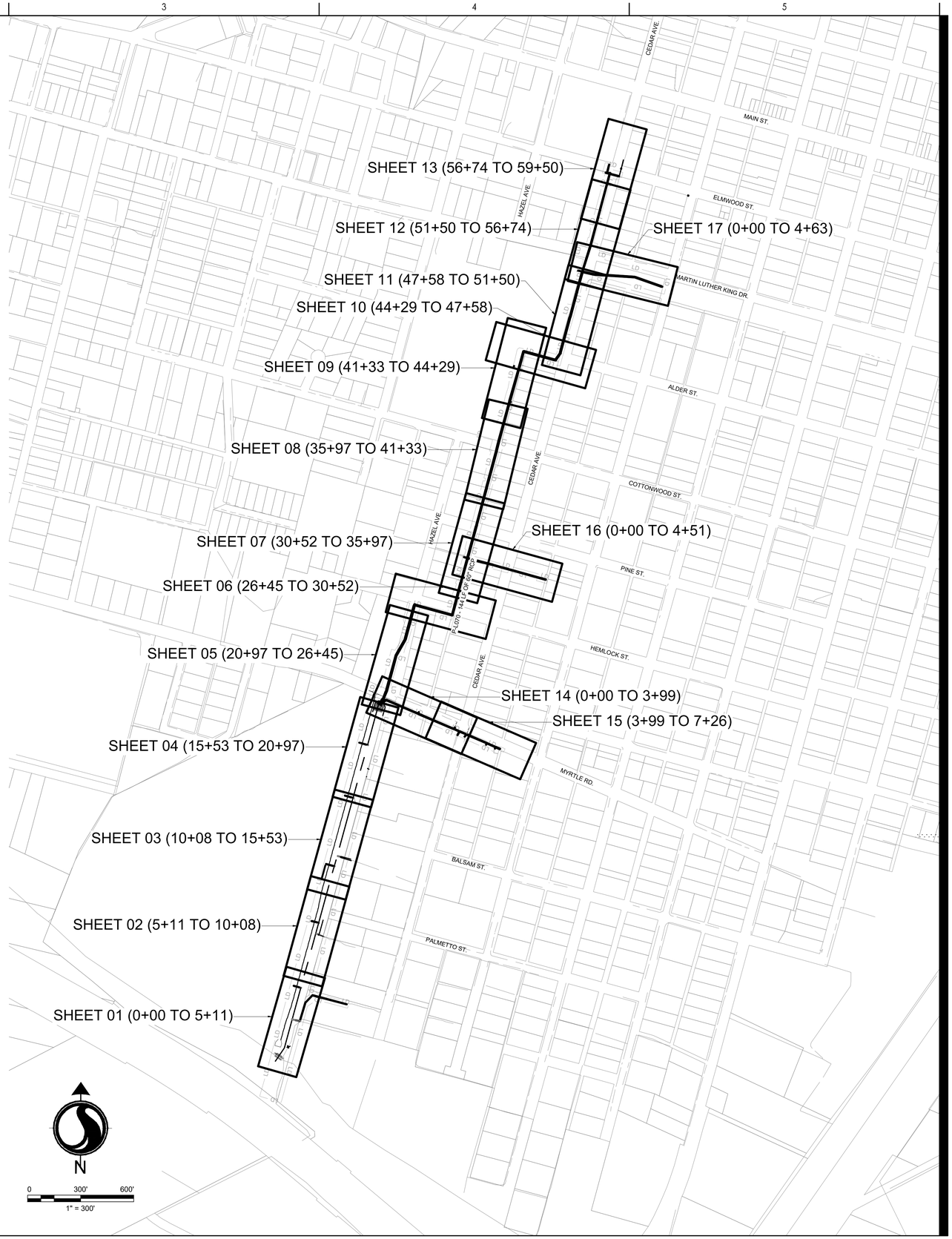

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PER BID ADDENDUM #1	RMW	BK	2022.12.21
ISSUED FOR CONSTRUCTION	RMW	BK	2022.06.28
File Name: 1035_C6_ROAD_INDEX	SGC Dwn.	SGC Dsgn.	BK Chkd. 2020.10.09

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06/28/2022

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GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
ROADWAY OVERALL INDEX

Project No.
178421035

Scale

Revision ----

Sheet
C6-00 of 65

Drawing No.
C6-00

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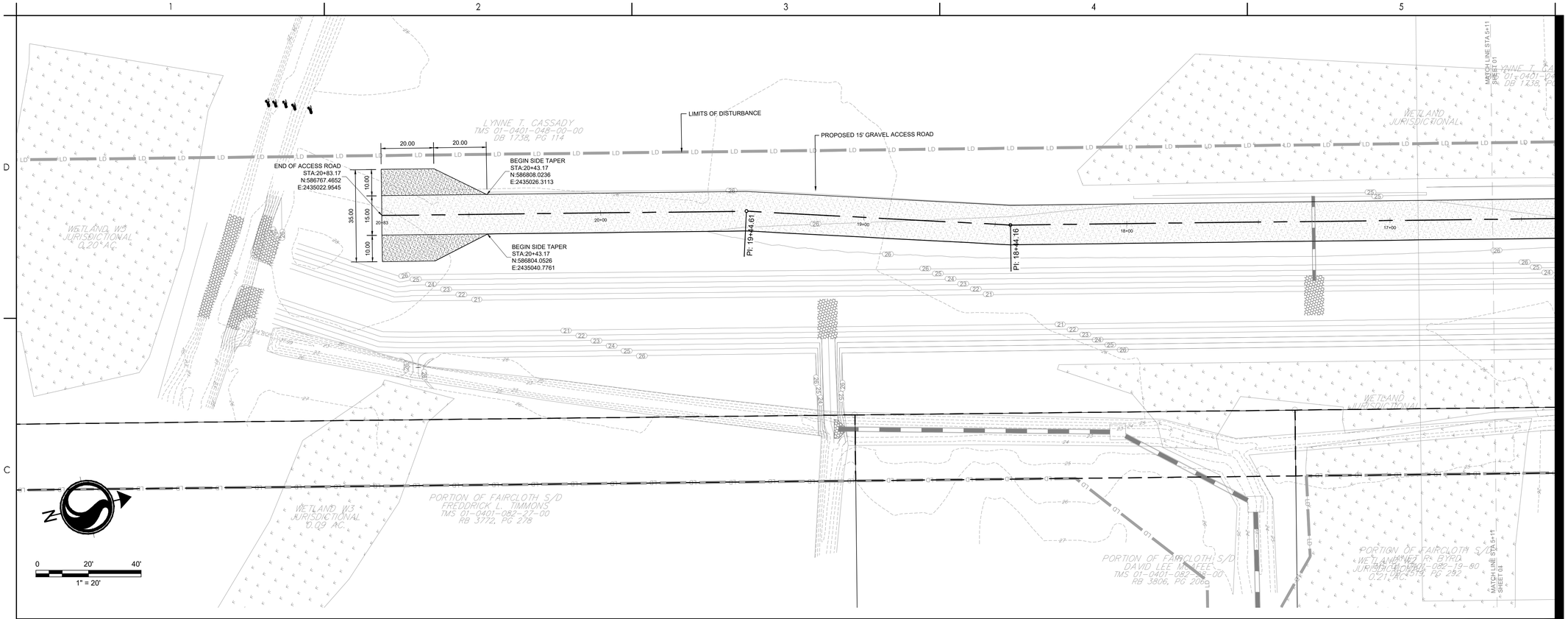

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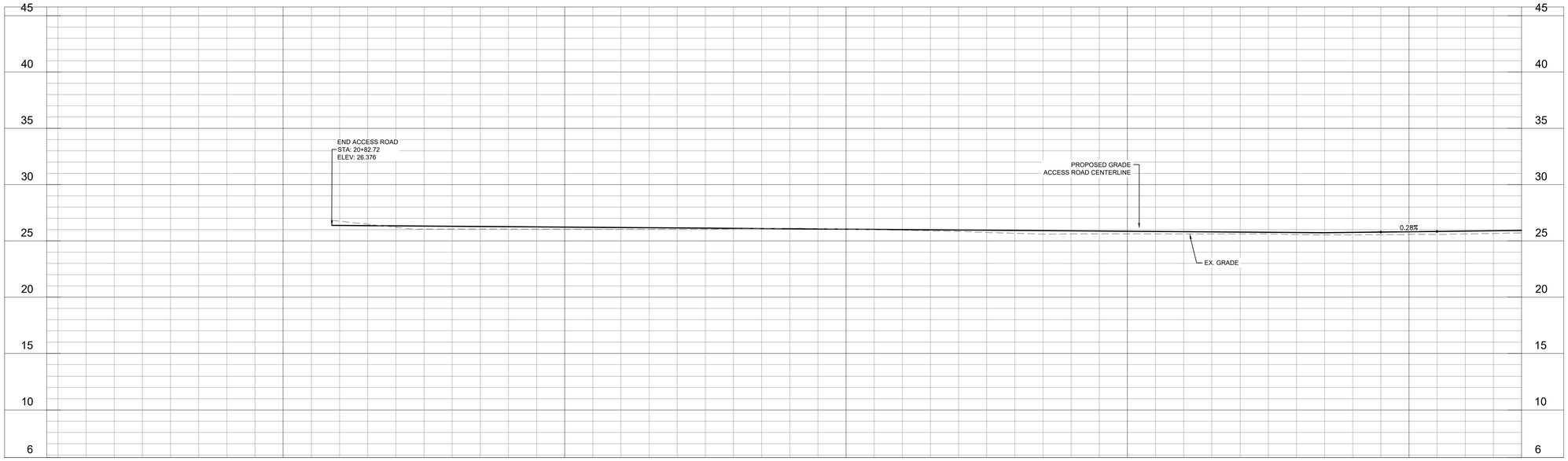

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Revision	By	Appd	YYYY.MM.DD
PER BID ADDENDUM #1	RMW	BK	2022.12.21
ISSUED FOR CONSTRUCTION	RMW	BK	2022.06.28
Issued	By	Appd	YYYY.MM.DD
File Name: 1035_C6_ROAD	SGC Dwn.	SGC Dsgn.	BK Chkd. 2020.10.09 YYYY.MM.DD

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TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
ROADWAY PLAN

Project No.
178421035

Scale

Revision

Sheet
C6-01 of 65

Drawing No.
C6-01

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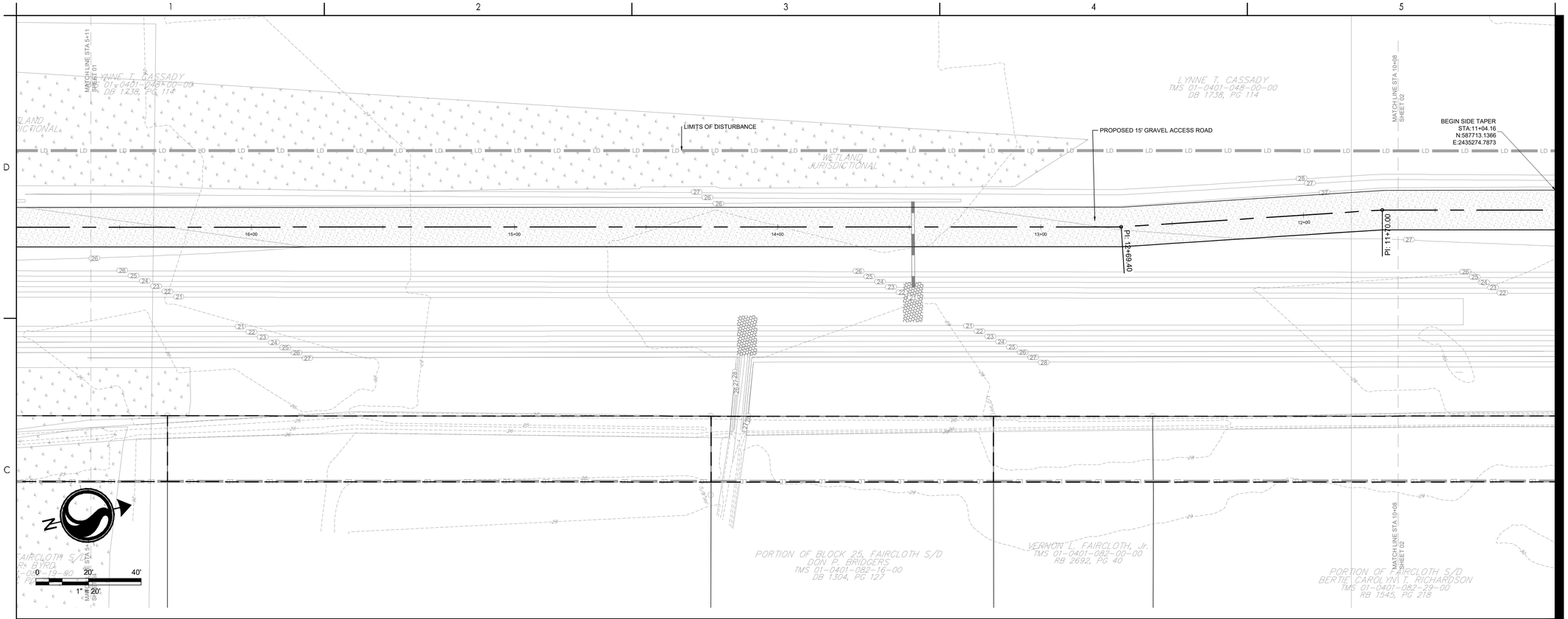

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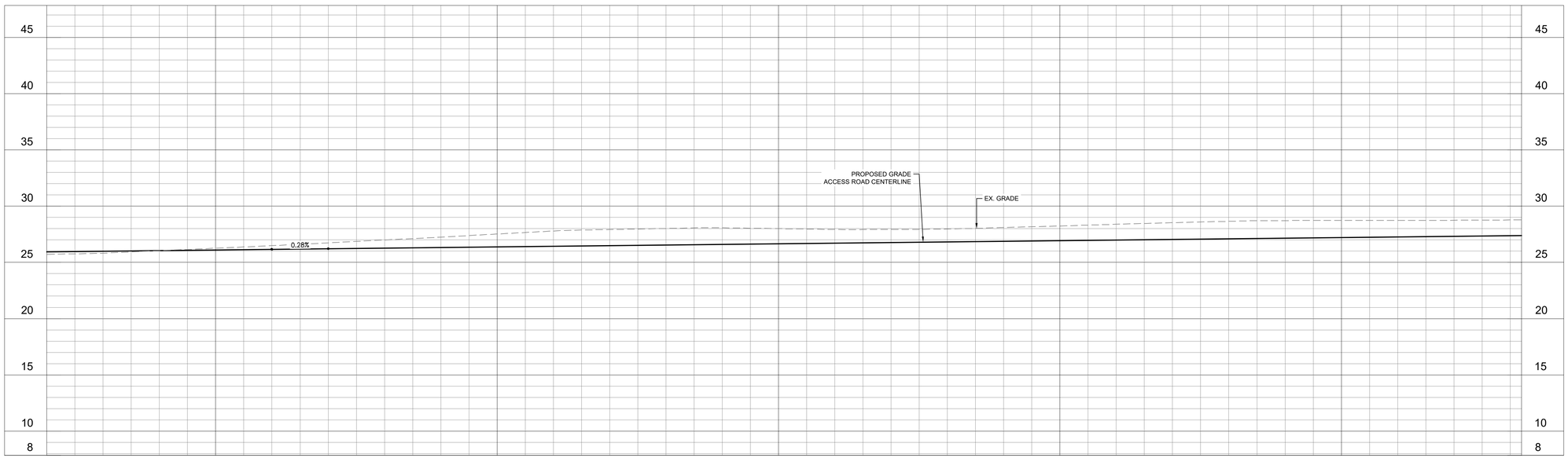

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Revision	By	Appd	YYYY.MM.DD
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Issued	By	Appd	YYYY.MM.DD
File Name: 1035_C6_ROAD	SGC	SGC	BK 2020.10.09
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TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
ROADWAY PLAN

Project No.
178421035

Scale

Revision

Sheet
C6-02 of 65

Drawing No.
C6-02

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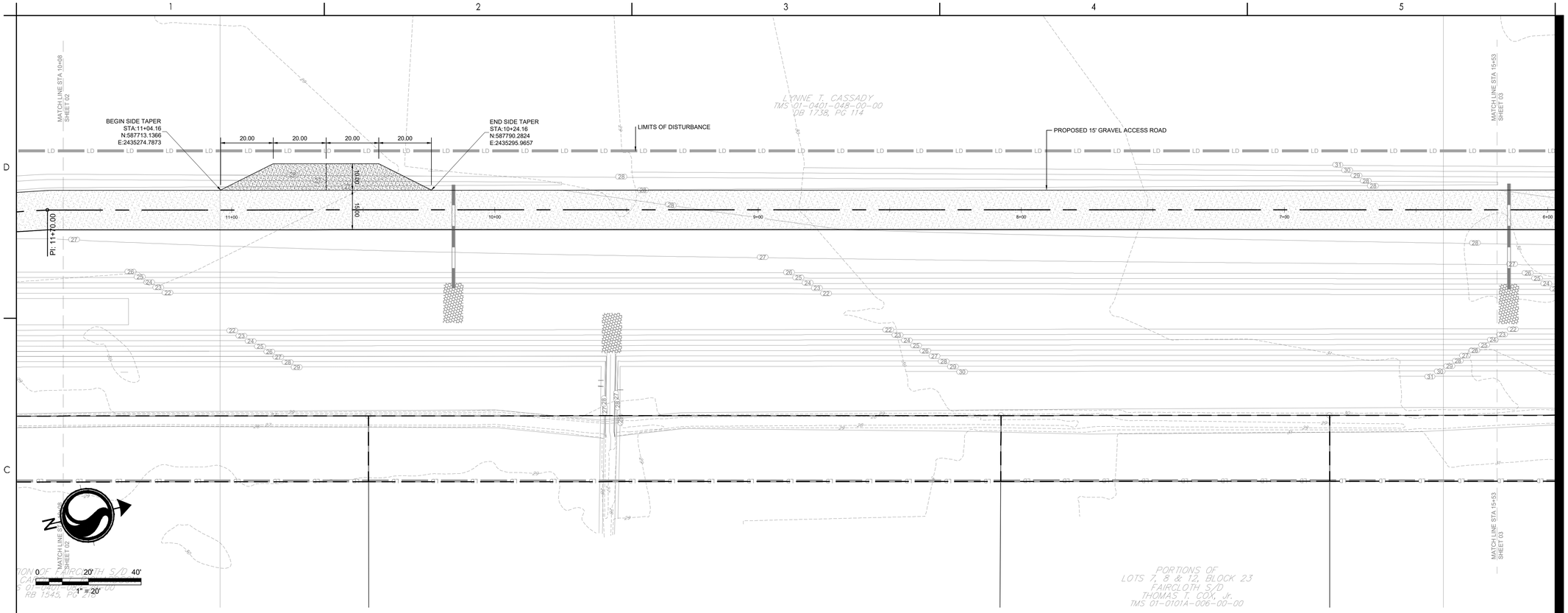

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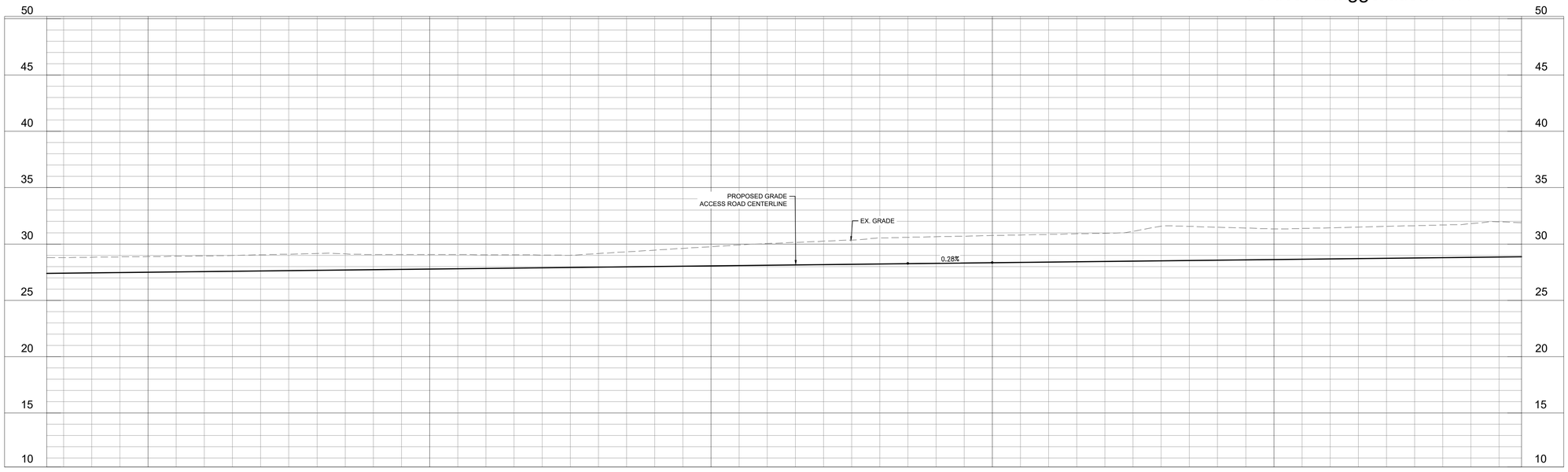

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TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
ROADWAY PLAN

Project No.
178421035

Scale

Revision ----

Sheet
C6-03 of 65

Drawing No.
C6-03

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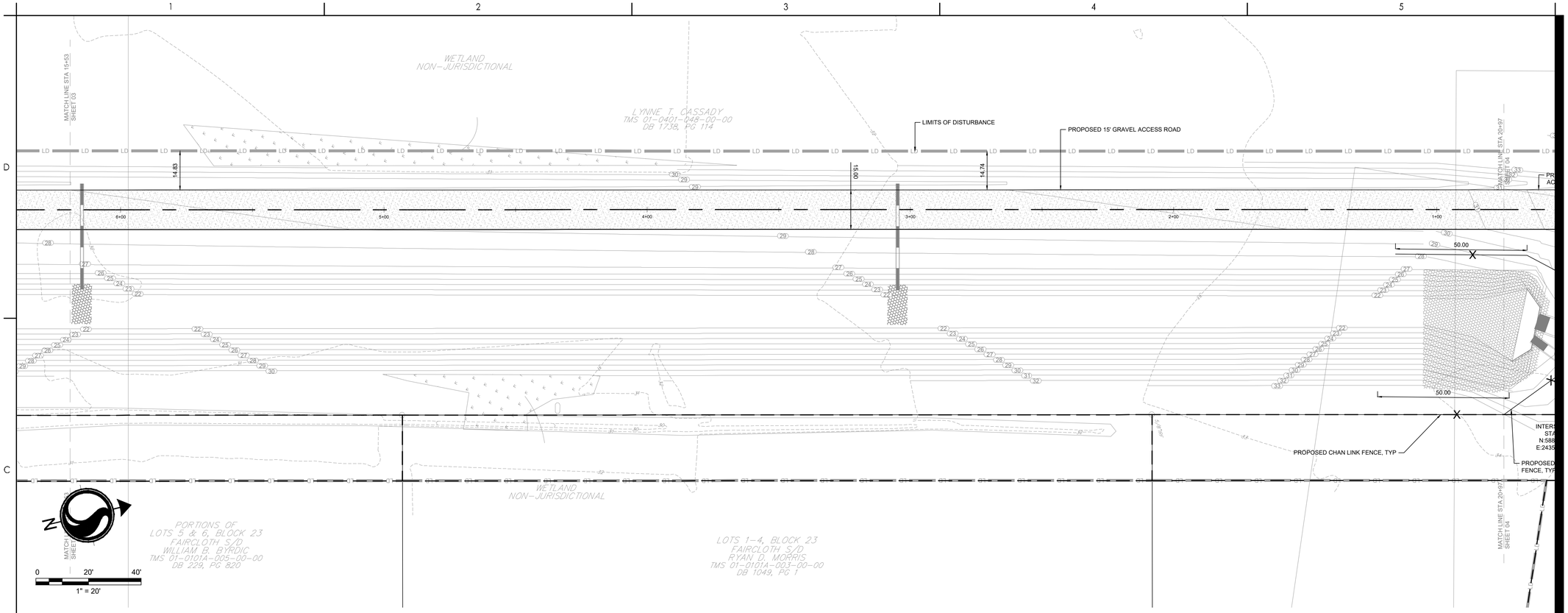

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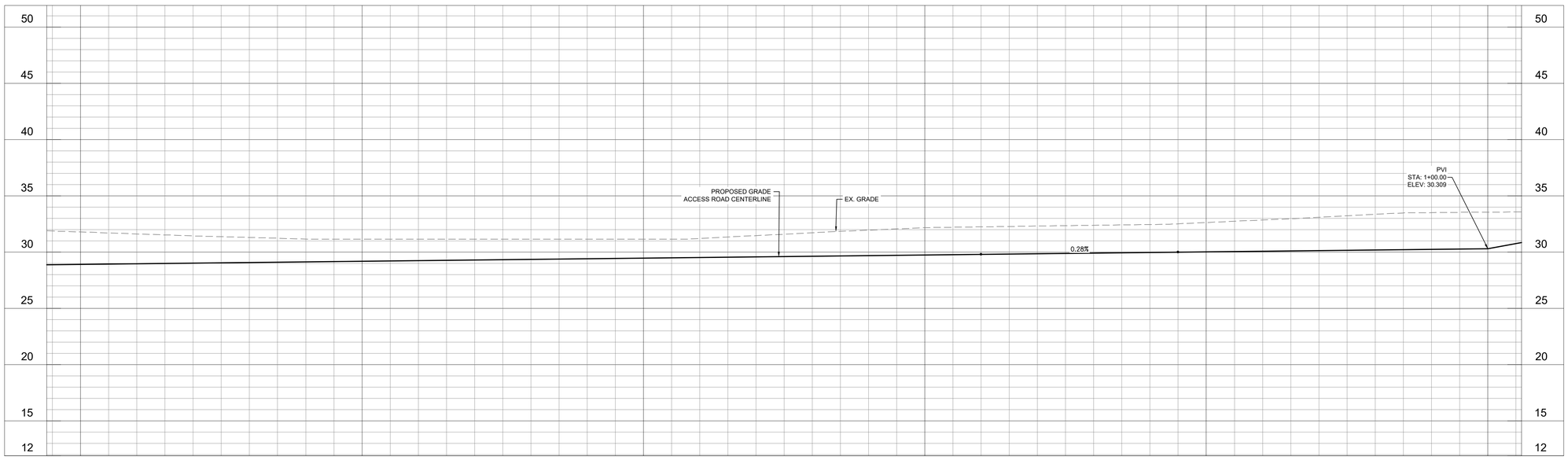

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Revision	By	Appd	YYYY.MM.DD
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Issued			
ISSUED FOR CONSTRUCTION	RMW	BK	2022.06.28
File Name: 1035_C6_ROAD	SGC Dwn.	SGC Dsgn.	BK Chkd. 2020.10.09

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TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
ROADWAY PLAN

Project No.
178421035

Scale

Revision

Sheet
C6-04 of 65

Drawing No.
C6-04

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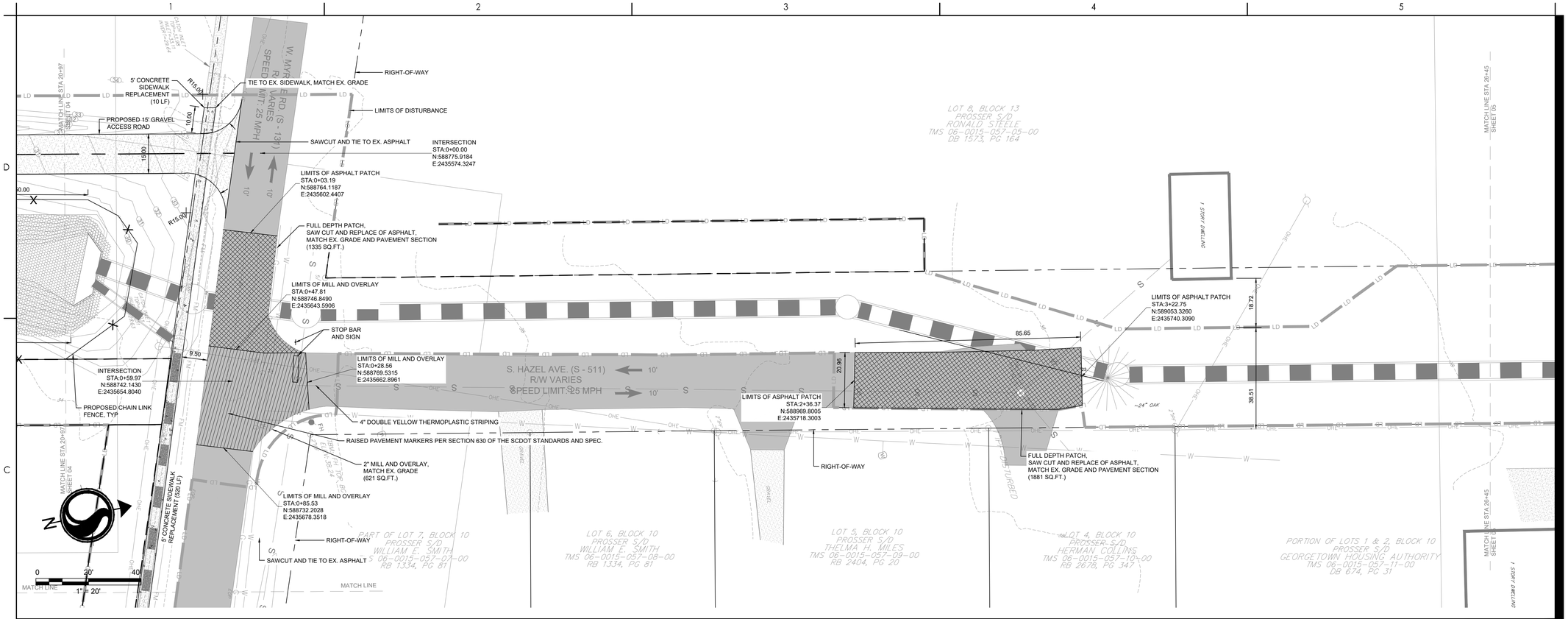

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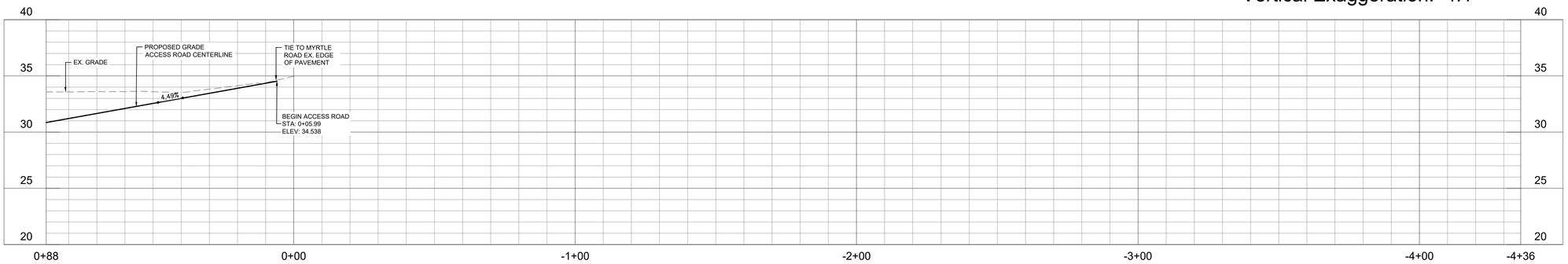

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PER BID ADDENDUM #1	RMW	BK	2022.12.21
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Issued	By	Appd	YYYY.MM.DD
File Name: 1035_C6_ROAD	SGC	SGC	BK	2020.10.09
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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 32501 ROBERT MARSHALL WYBRANT JR

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
ROADWAY PLAN

Project No.
178421035

Scale

Revision

Sheet
C6-05 of 65

Drawing No.
C6-05

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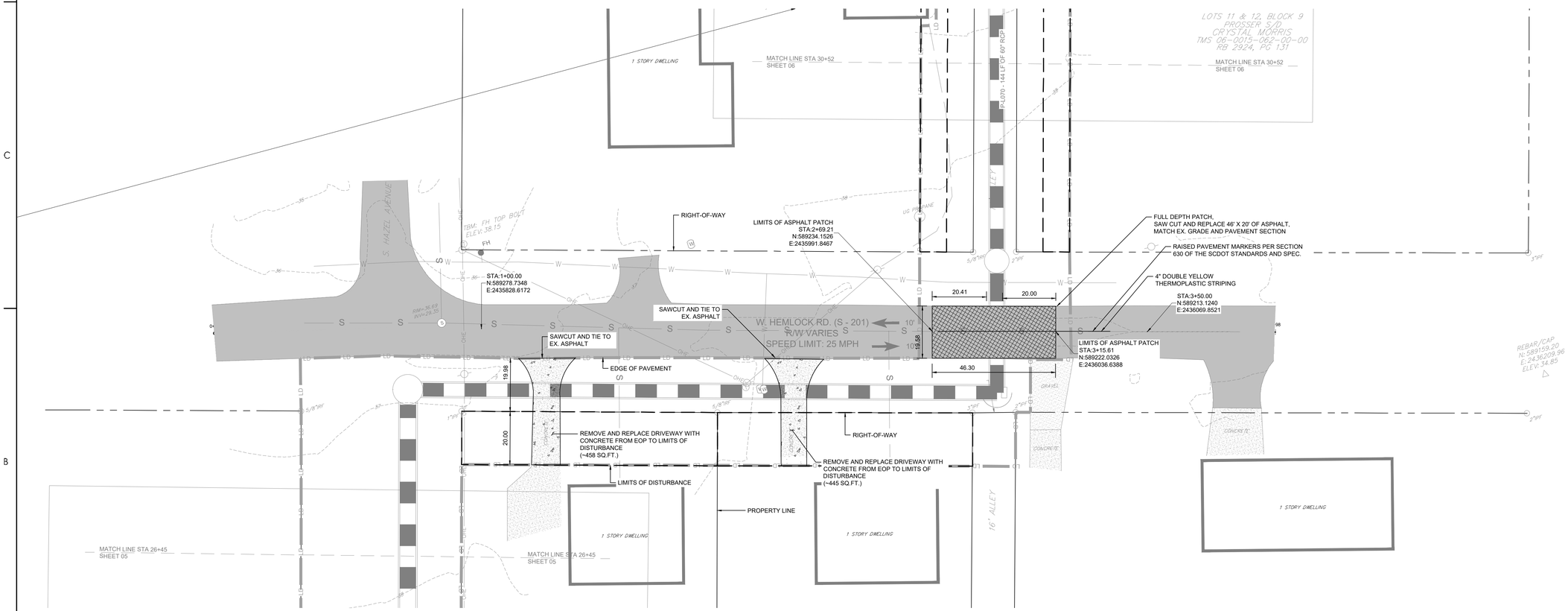

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Revision	By	Appd	YYYY.MM.DD
PER BID ADDENDUM #1	RMW	BK	2022.12.21
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Issued	By	Appd	YYYY.MM.DD
File Name: 1035_C6_ROAD	SGC	SGC	BK 2020.10.09
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06/28/2022

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Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
ROADWAY PLAN

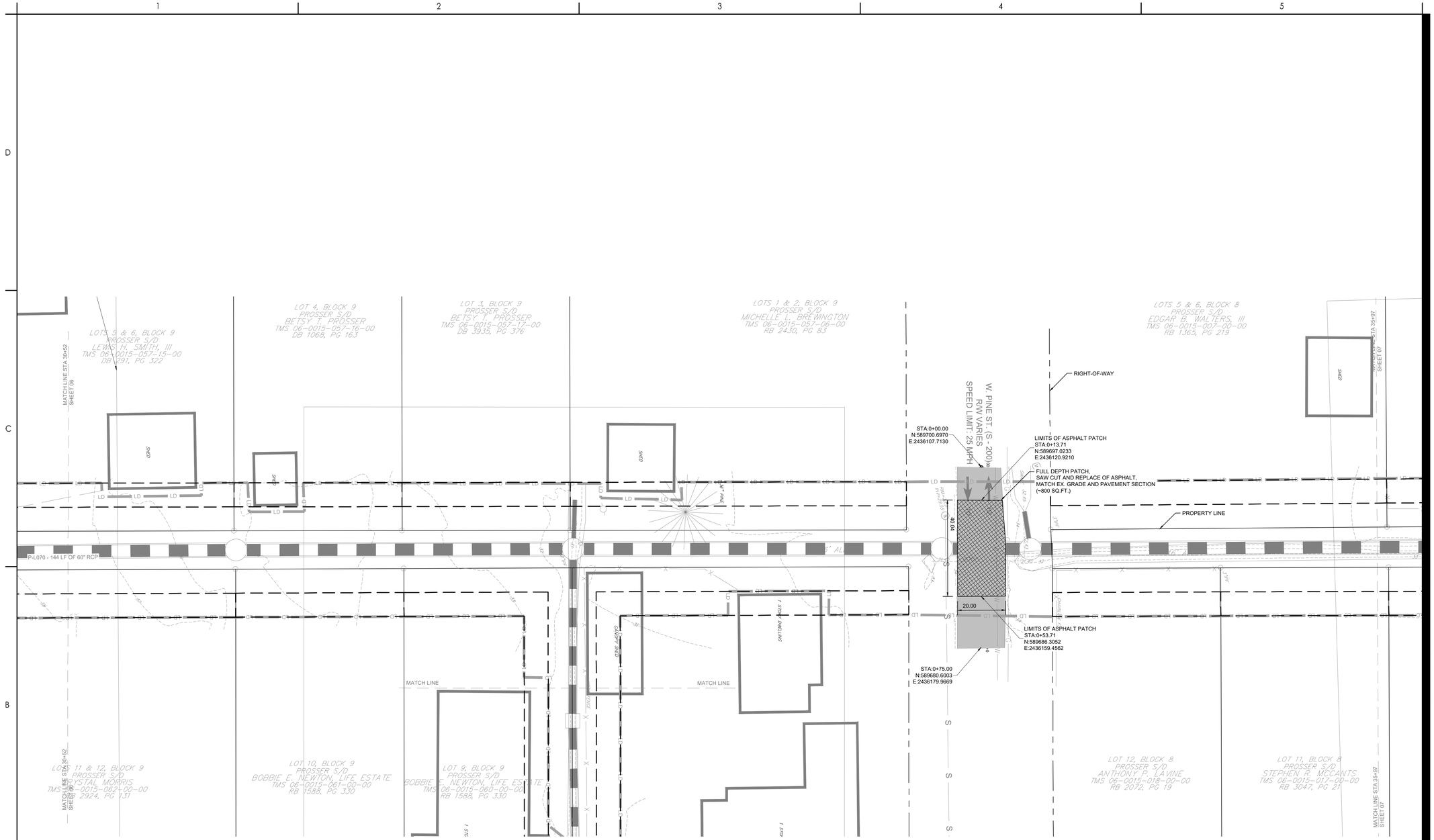
Project No.
178421035

Scale

Revision ----

Sheet
C6-06 of 65

Drawing No.
C6-06



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Revision	By	Appd	YYYY.MM.DD
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06/28/2022

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Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
ROADWAY PLAN

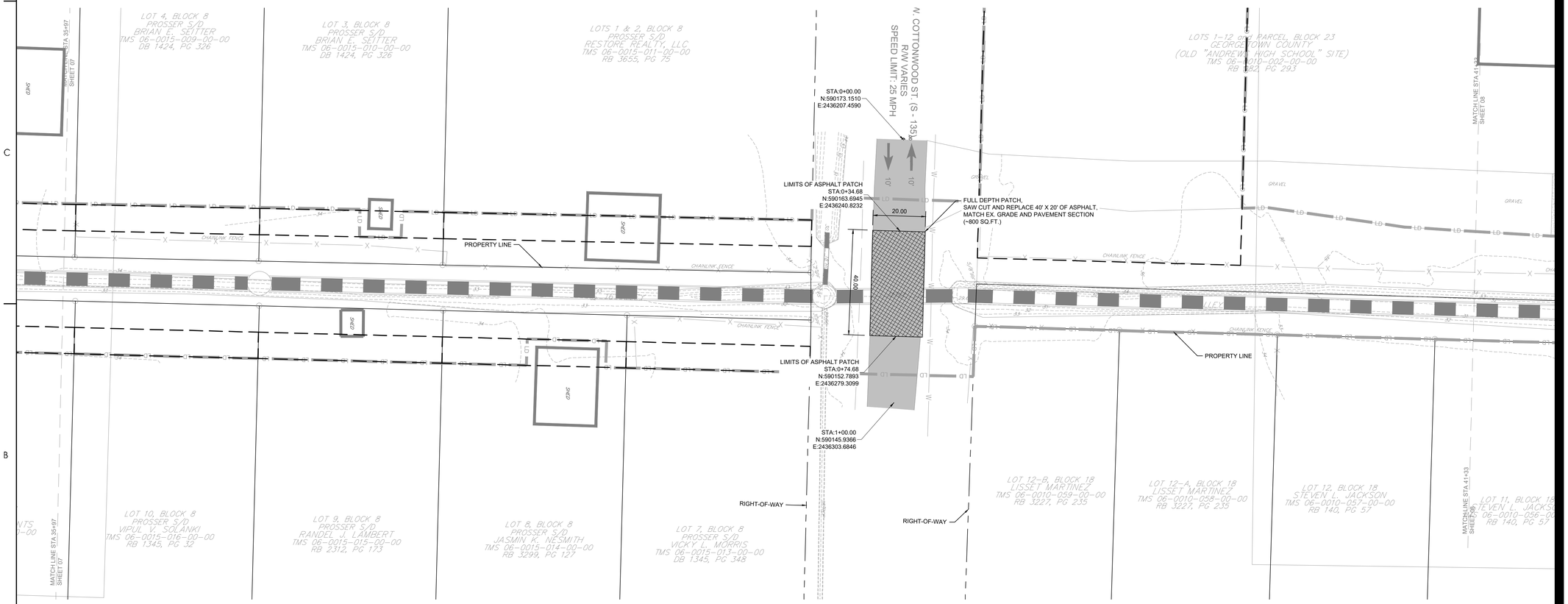
Project No.
178421035

Scale

Revision

Sheet
C6-07 of 65

Drawing No.
C6-07



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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 33501 ROBERT MARSHALL WYANDT

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS
PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
ROADWAY PLAN

Project No.	Scale
178421035	

Revision	Sheet	Drawing No.
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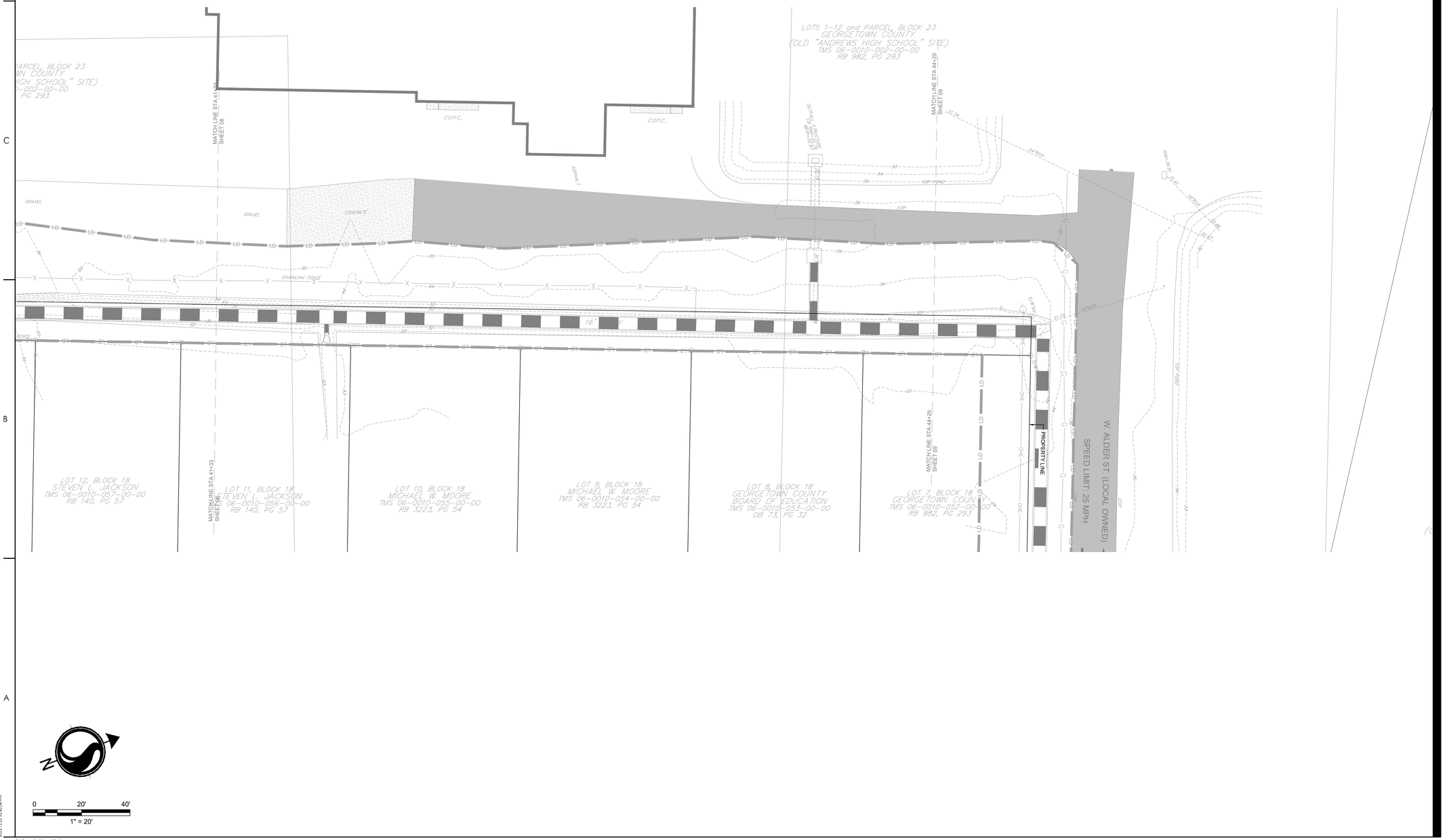

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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER — No. 35501 — ROBERT MARSHALL WITHE

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
ROADWAY PLAN

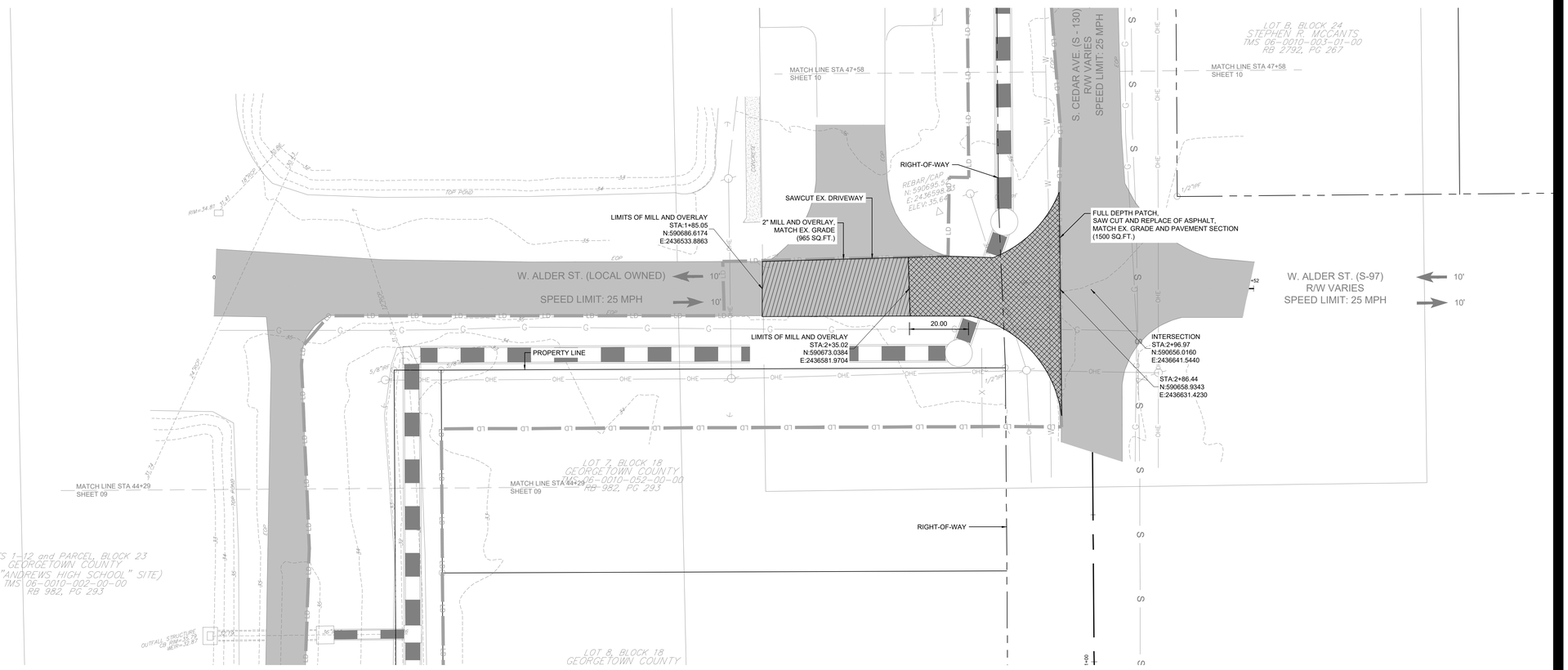
Project No.
178421035

Scale

Revision

Sheet
C6-09 of 65

Drawing No.
C6-09



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0 20' 40'

1" = 20'

ORIGINAL SHEET - ARCH D

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Legend

- PROPOSED MILL AND OVERLAY
- PROPOSED FULL DEPTH REPLACEMENT
- PROPOSED CONCRETE
- PROPOSED GRAVEL

Revision	By	Appd	YYYY.MM.DD
PER BID ADDENDUM #1	RMW	BK	2022.12.21
ISSUED FOR CONSTRUCTION	RMW	BK	2022.06.28
File Name: 1035_C6_ROAD	SGC Dwn.	SGC Dsgn.	BK Chkd. 2020.10.09

Permit/Seal

SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02316 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA No. 35501 REGISTERED PROFESSIONAL ENGINEER ROBERT MARSHALL WYNNE, JR.

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
ROADWAY PLAN

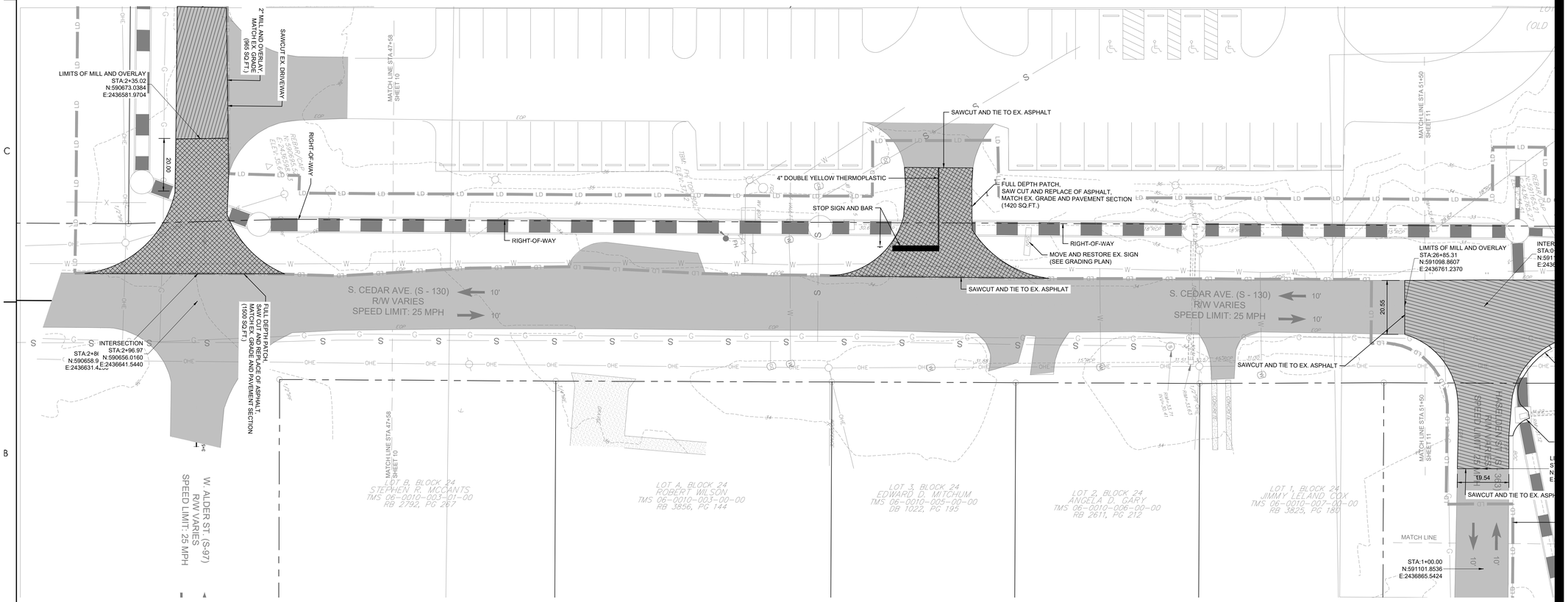
Project No.
178421035

Scale

Revision

Sheet
C6-10 of 65

Drawing No.
C6-10



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1" = 20'

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	Dwn.	Dsgn.	Chkd.	YYYY.MM.DD

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SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION STANTEC CONSULTING SERVICES, INC. No. C02310

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER ROBERT MARSHALL WYNNE JR No. 33501

06/28/2022

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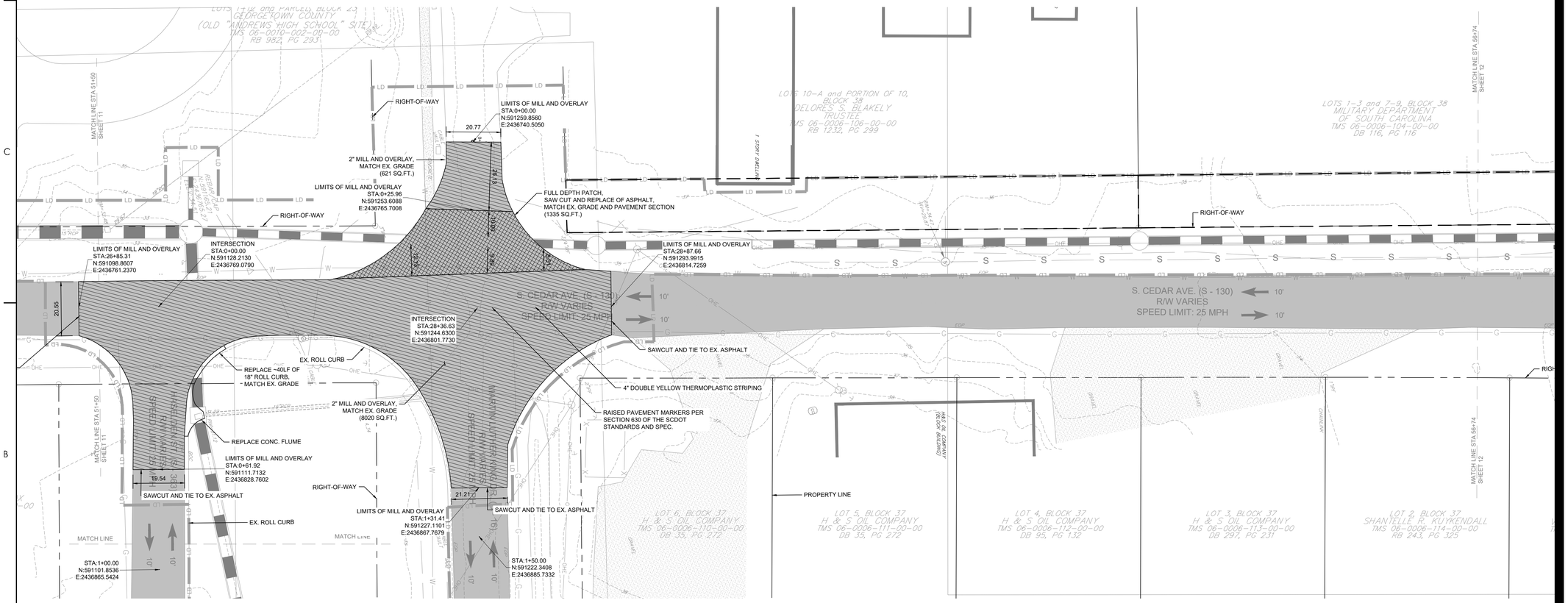
Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
ROADWAY PLAN

Project No.	Scale
178421035	
Revision: ---	Sheet: C6-11of 65
Drawing No.	C6-11



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	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER — No. 35510 — ROBERT MARSHALL WYNNE

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

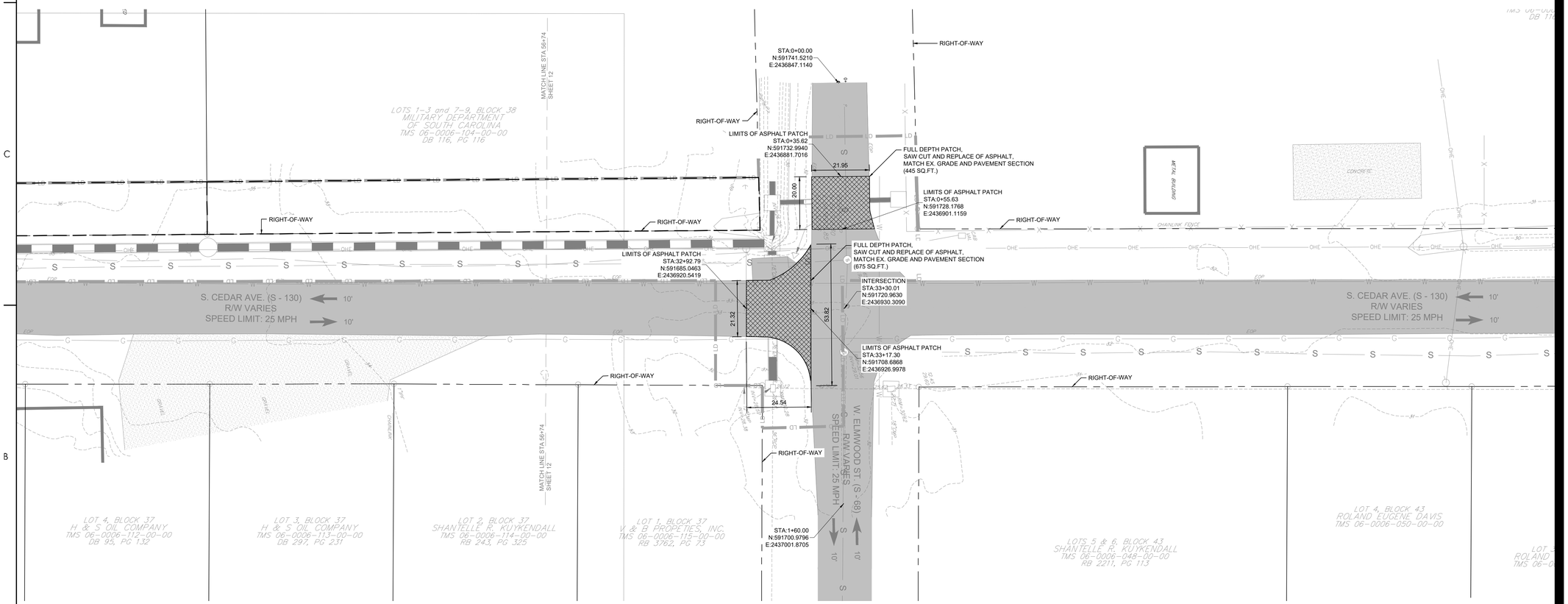
TOWN OF ANDREWS DRAINAGE IMPROVEMENTS
PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
ROADWAY PLAN

Project No.	Scale
178421035	

Revision	Sheet	Drawing No.
---	C6-12 of 65	C6-12



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Revision			
ISSUED FOR CONSTRUCTION	RMW By	BK Appd	2022.06.28 YYYY.MM.DD
Issued			
File Name: 1035_C6_ROAD	SGC Dwn.	SGC Dsgn.	BK Chkd. 2020.10.09 YYYY.MM.DD

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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER — No. 32501 — ROBERT MARSHALL WYNNE JR

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

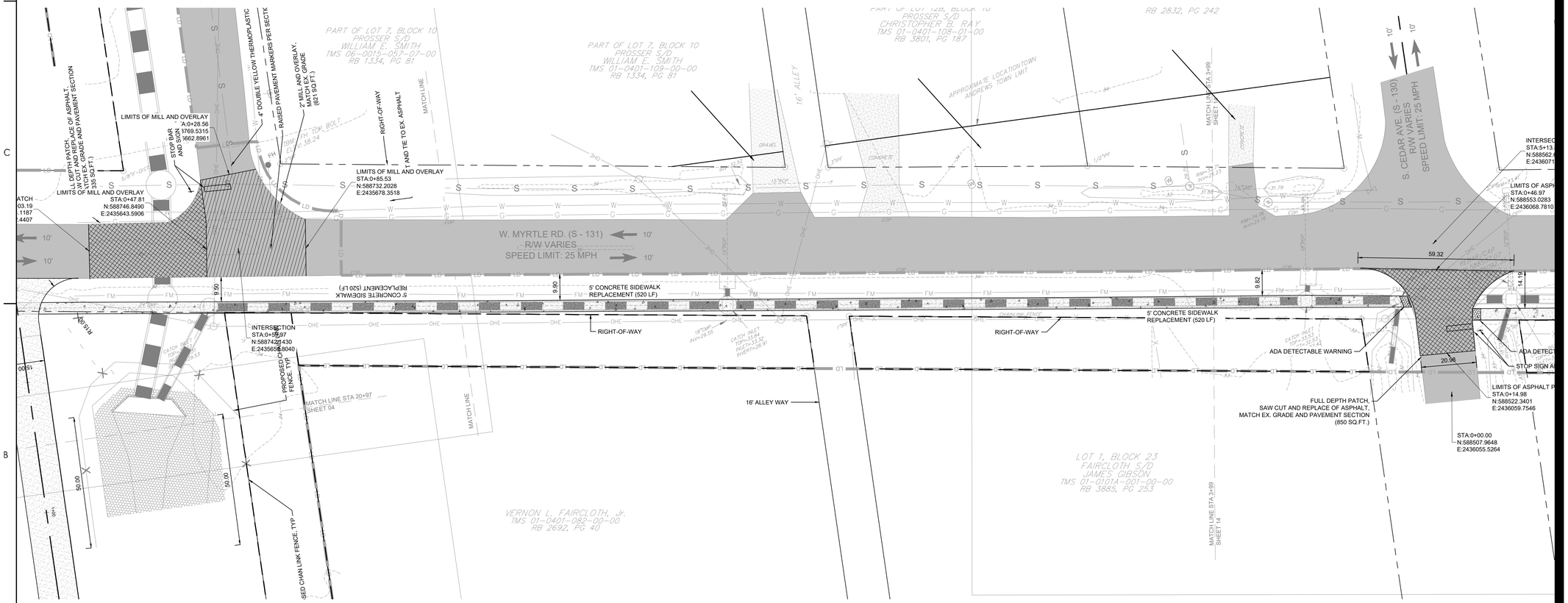
TOWN OF ANDREWS DRAINAGE IMPROVEMENTS
PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
ROADWAY PLAN

Project No.	Scale
178421035	

Revision	Sheet	Drawing No.
---	C6-13 of 65	C6-13



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File Name: 1035_C6_ROAD	SGC	SGC	BK 2020.10.09
	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

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SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION STANTEC CONSULTING SERVICES, INC. No. C02310

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 35501 ROBERT MARSHALL WYNNE, JR.

06/28/2022

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Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
ROADWAY PLAN

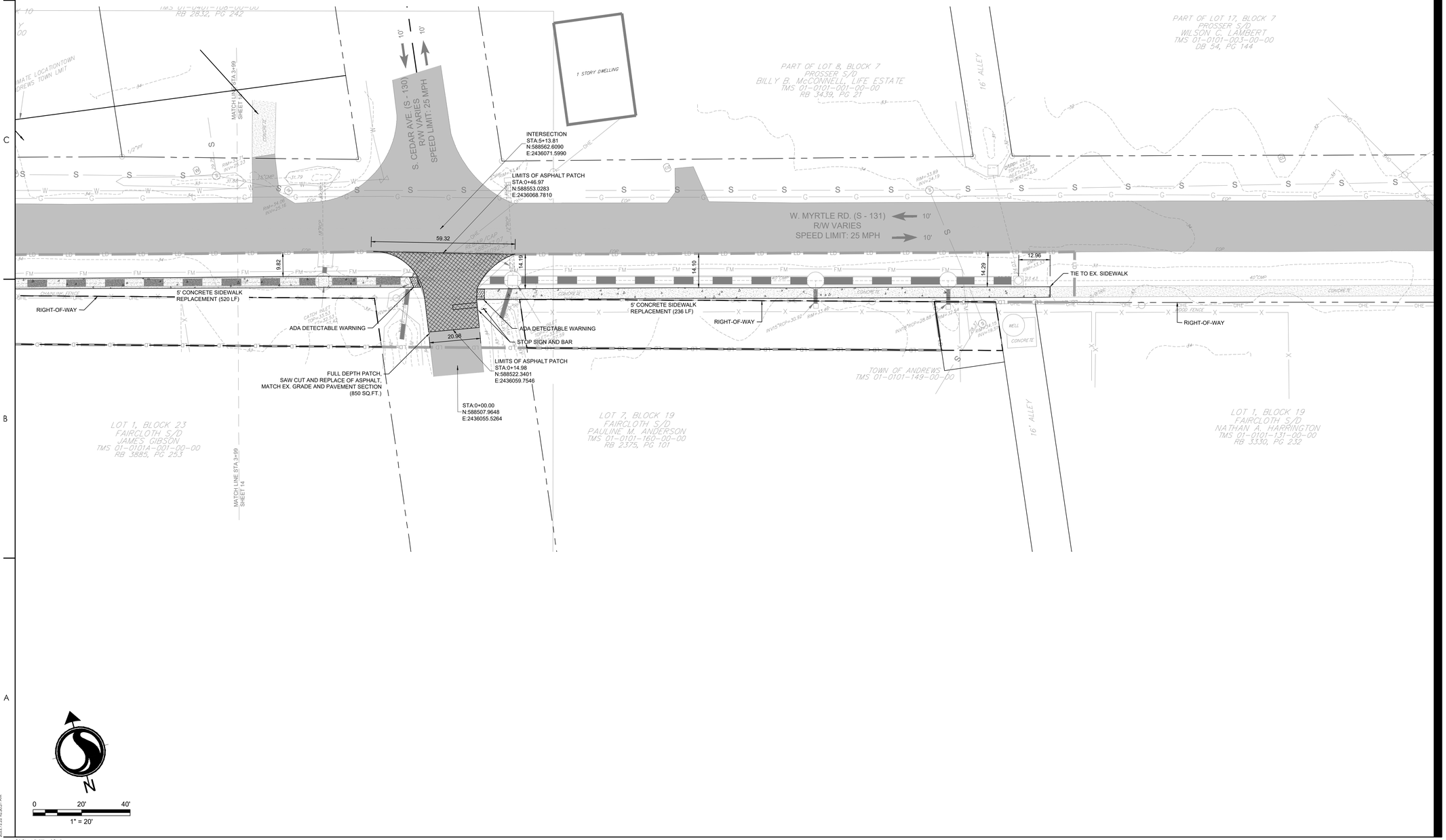
Project No.
178421035

Scale

Revision

Sheet
C6-14 of 65

Drawing No.
C6-14



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	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 33501 ROBERT MARSHALL WYANDT

06/28/2022

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Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
ROADWAY PLAN

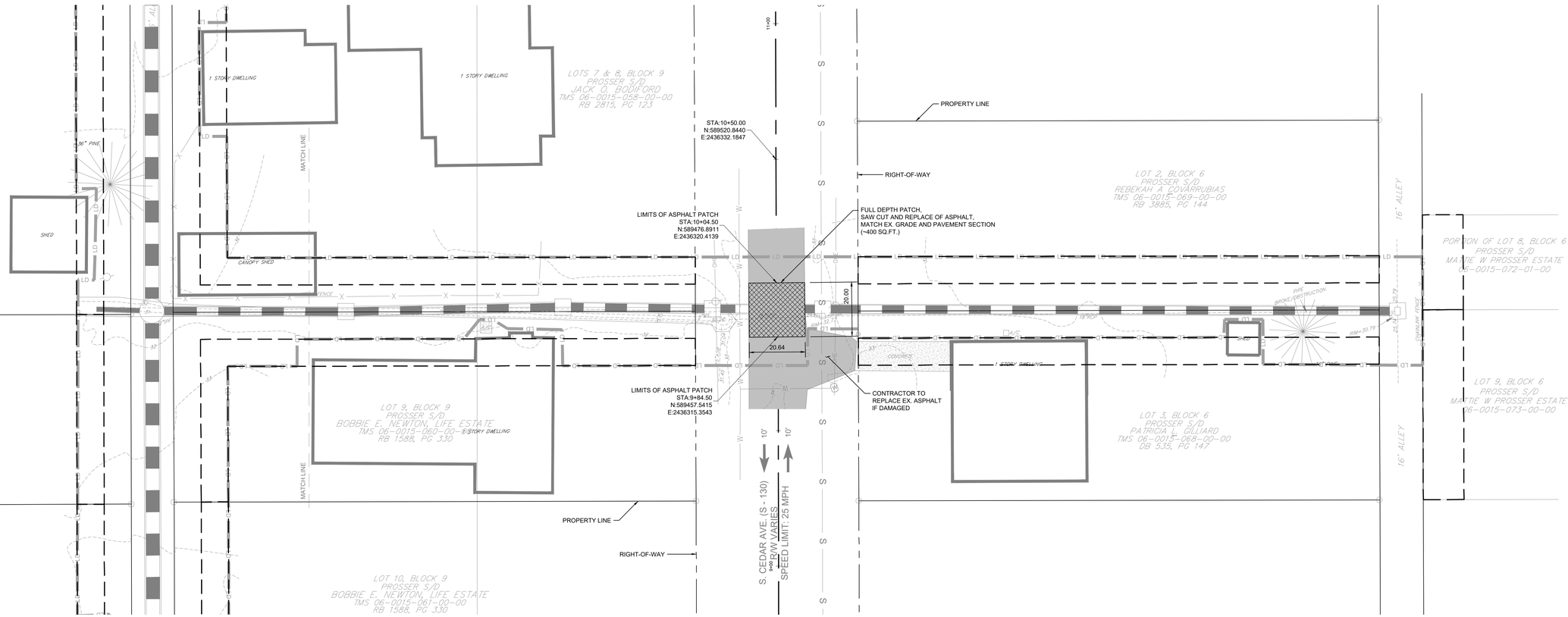
Project No.
178421035

Scale

Revision ----

Sheet
C6-15 of 65

Drawing No.
C6-15



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File Name: 1035_C6_ROAD	SGC	SGC	BK 2020.10.09
	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

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SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02316 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 33501 MARSHALL WYNNE JR

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
ROADWAY PLAN

Project No.
178421035

Scale

Revision

Sheet
C6-16 of 65

Drawing No.
C6-16

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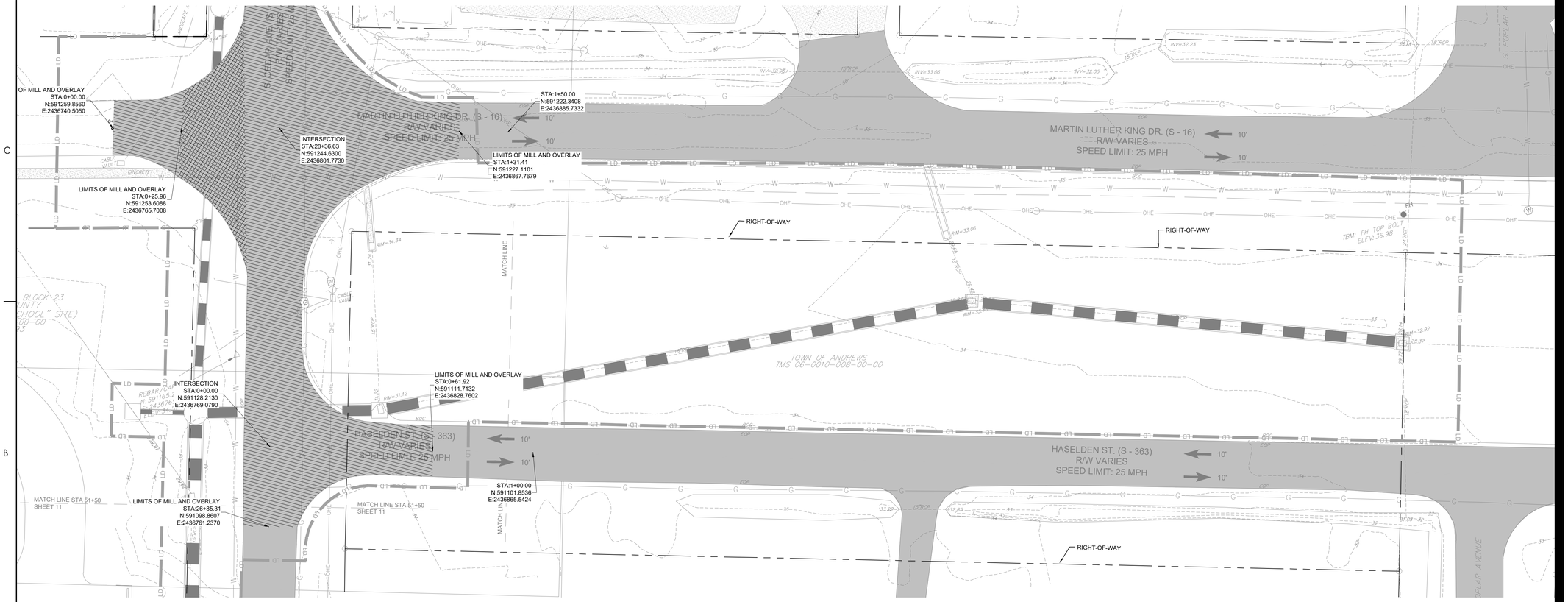

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	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

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SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION STANTEC CONSULTING SERVICES, INC. No. C02310

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 32301 MARSHALL WYNNE

06/28/2022

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Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
ROADWAY PLAN

Project No.
178421035

Scale

Revision

Sheet
C6-17 of 65

Drawing No.
C6-17

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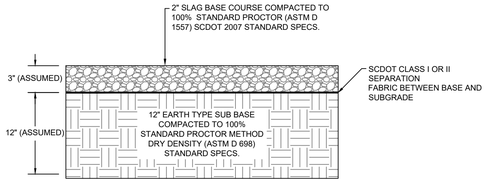
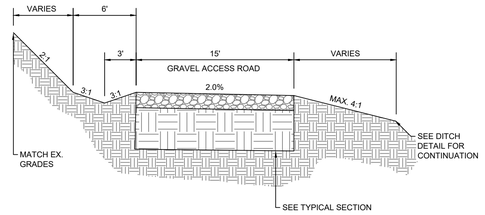


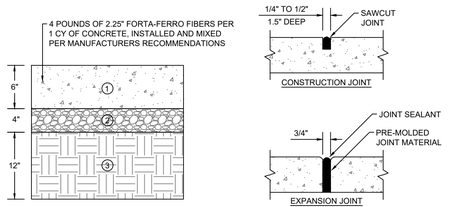
NOTE:
1. ASSUMED DIMENSIONS ARE FOR BIDDING PURPOSES ONLY, AND DO NOT REPRESENT FINAL DESIGN REQUIREMENTS.
2. REFER TO GEOTECHNICAL REPORT FOR COMPLETE PAVEMENT DESIGN REQUIREMENTS.

SLAG PAVEMENT SECTION DETAIL
NOT TO SCALE



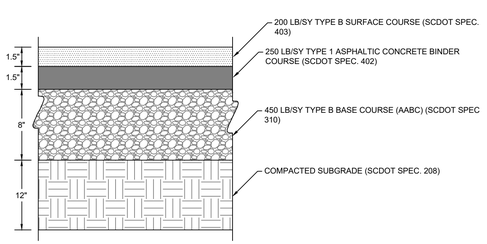
NOTE:
1. REFER TO GEOTECHNICAL REPORT FOR COMPLETE RIGID PAVEMENT DESIGN REQUIREMENTS.

ACCESS ROAD TYPICAL SECTION
NOT TO SCALE



1. FIBER REINFORCED CONCRETE (4000 PSI)
2. STABILIZED AGGREGATE BASE COURSE COMPACTED TO 100% STANDARD PROCTOR (ASTM D 1557) STANDARD SPECS.
3. EARTH TYPE SUB BASE COMPACTED TO 100% STANDARD PROCTOR METHOD DRY DENSITY (ASTM D 698) STANDARD SPECS.

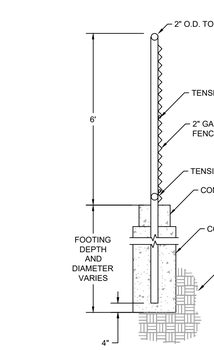
CONCRETE PAVEMENT SECTION AND JOINT
NOT TO SCALE



NOTE:

1. SECTION TO BE PLACED WITHIN THE SCDOT RIGHT OF WAY.
2. ALL SPECIFICATION REFERENCES TO BE PER THE LATEST REVISION AND SUPPLEMENTS OF SCDOT STANDARDS AND GUIDELINES.

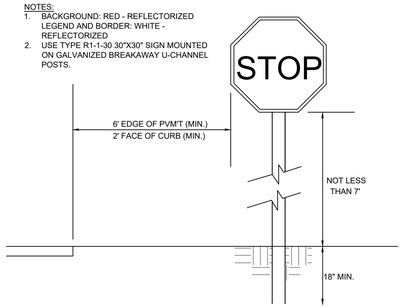
ASPHALT PAVEMENT IN RIGHT-OF-WAY SECTION
NOT TO SCALE



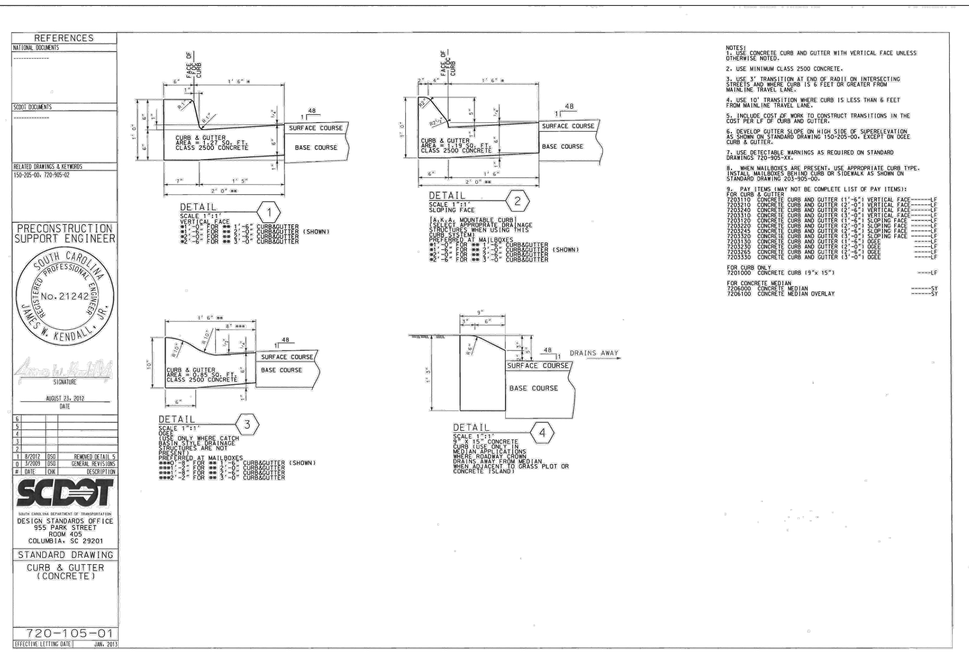
6' CHAIN LINK FENCE DETAIL
NOT TO SCALE

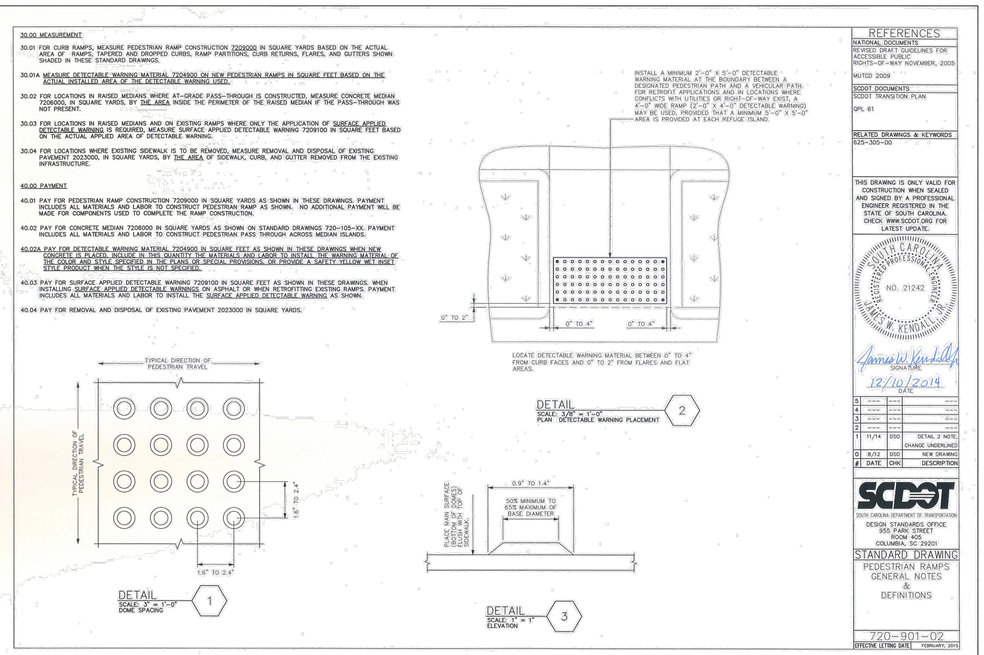
NOTE:
1. THE "DESIRED STOPPING POINT" IS THE LOCATION BASED ON SITE CONDITIONS THAT BEST ALLOWS THE STOPPED VEHICLE TO VIEW THE APPROACHING TRAFFIC.
2. STOP BAR MATERIAL TO BE THERMOPLASTIC. COLOR TO BE WHITE.
3. PAVEMENT MARKINGS SHALL COMPLY WITH THE SOUTH CAROLINA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

STOP BAR DETAIL
NOT TO SCALE



STOP SIGN DETAIL
NOT TO SCALE





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File Name: 1035_C7_ROAD_DETAILS	SGC	SGC	BK	2020.10.09
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SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION STANTEC CONSULTING SERVICES, INC. No. C02310

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 35105 RICHARD MARSHALL WYNN, JR.
06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
ROADWAY DETAILS

Project No.
178421035

Scale

Revision ----

Sheet
C7-00 of 65

Drawing No.
C7-00

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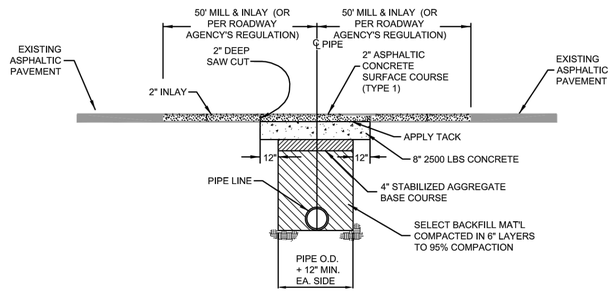
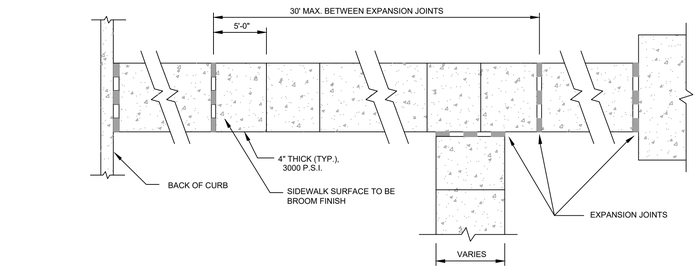
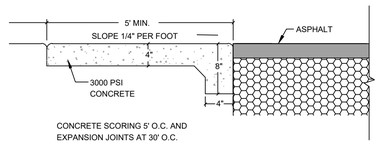


NOTES:
1. PAVEMENT CUT TO EXTEND 12" BEYOND EDGES OF TRENCH AS SHOWN. PAVEMENT SHALL BE CUT TO TRUE LINE AND REMOVED BEFORE TRENCH IS CUT. ALL PAVEMENT REPAIRS TO BE IN ACCORDANCE WITH ROAD AGENCY SPECS.

2. IF PAVEMENT CUT IS ON A HIGH VOLUME MAIN ROAD NEAR A PAVED INTERSECTION, AND THE EDGE OF THE INTERSECTING ROAD IS ONLY A FEW FEET BEYOND THE NORMAL 50' (ONE SIDE DIMENSION) INLAY, THE INLAY IS TO BE EXTENDED TO THE EDGE OF THE INTERSECTING ROAD.

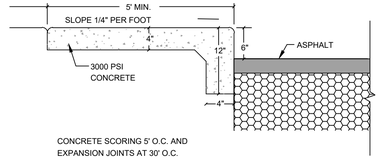
OPEN CUT REPAIR FOR HIGH VOLUME ASPHALT PAVEMENT





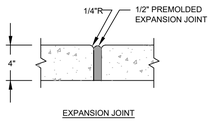
CONCRETE SCORING 5' O.C. AND EXPANSION JOINTS AT 30' O.C.

STANDARD SIDEWALK

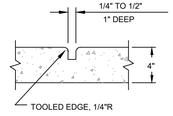


CONCRETE SCORING 5' O.C. AND EXPANSION JOINTS AT 30' O.C.

TURN-DOWN SIDEWALK



EXPANSION JOINT



CONTROL JOINT

CONCRETE SIDEWALK
NOT TO SCALE

Stantec
4969 Centre Pointe Drive, Suite 200
North Charleston, SC, 29418
Tel: 843.740.7700
www.stantec.com

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Legend

PER BID ADDENDUM #1	RMW	BK	2022.12.21
Revision	By	Appd	YYYY.MM.DD
ISSUED FOR CONSTRUCTION	RMW	BK	2022.06.28
Issued	By	Appd	YYYY.MM.DD
File Name: 1035_C7_ROAD_DETAILS	SGC	SGC	BK 2020.10.09
	Dwn.	Dsgn.	Chkd. YYYY.MM.DD

Permit/Seal

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION STANTEC CONSULTING SERVICES, INC. No. C02310

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 35100 ROBERT MARSHALL WYNNE

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
ROADWAY DETAILS

Project No.	Scale
178421035	

Revision	Sheet	Drawing No.
----	C7-01 of 65	C7-01

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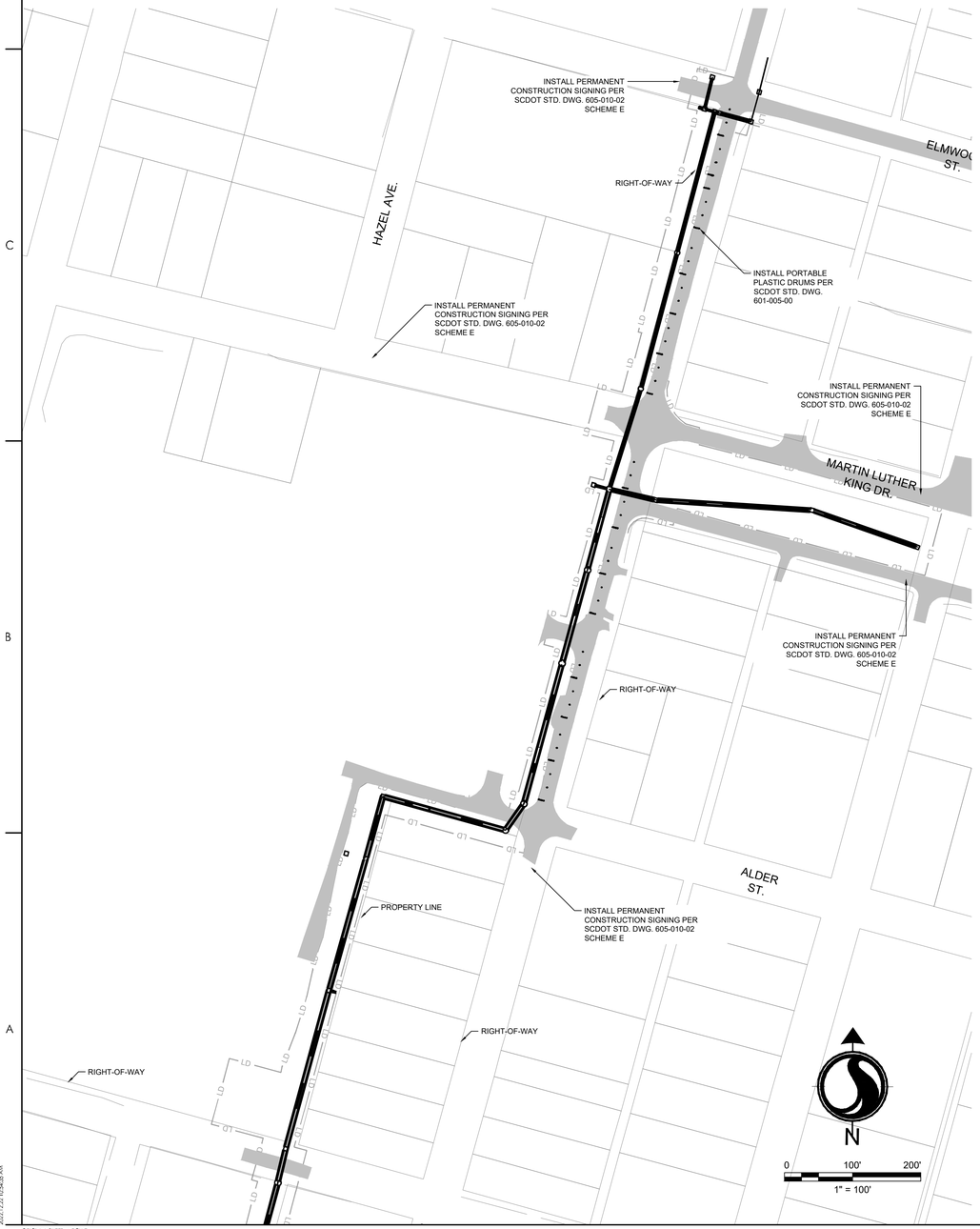
ORIGINAL SHEET - ARCH D

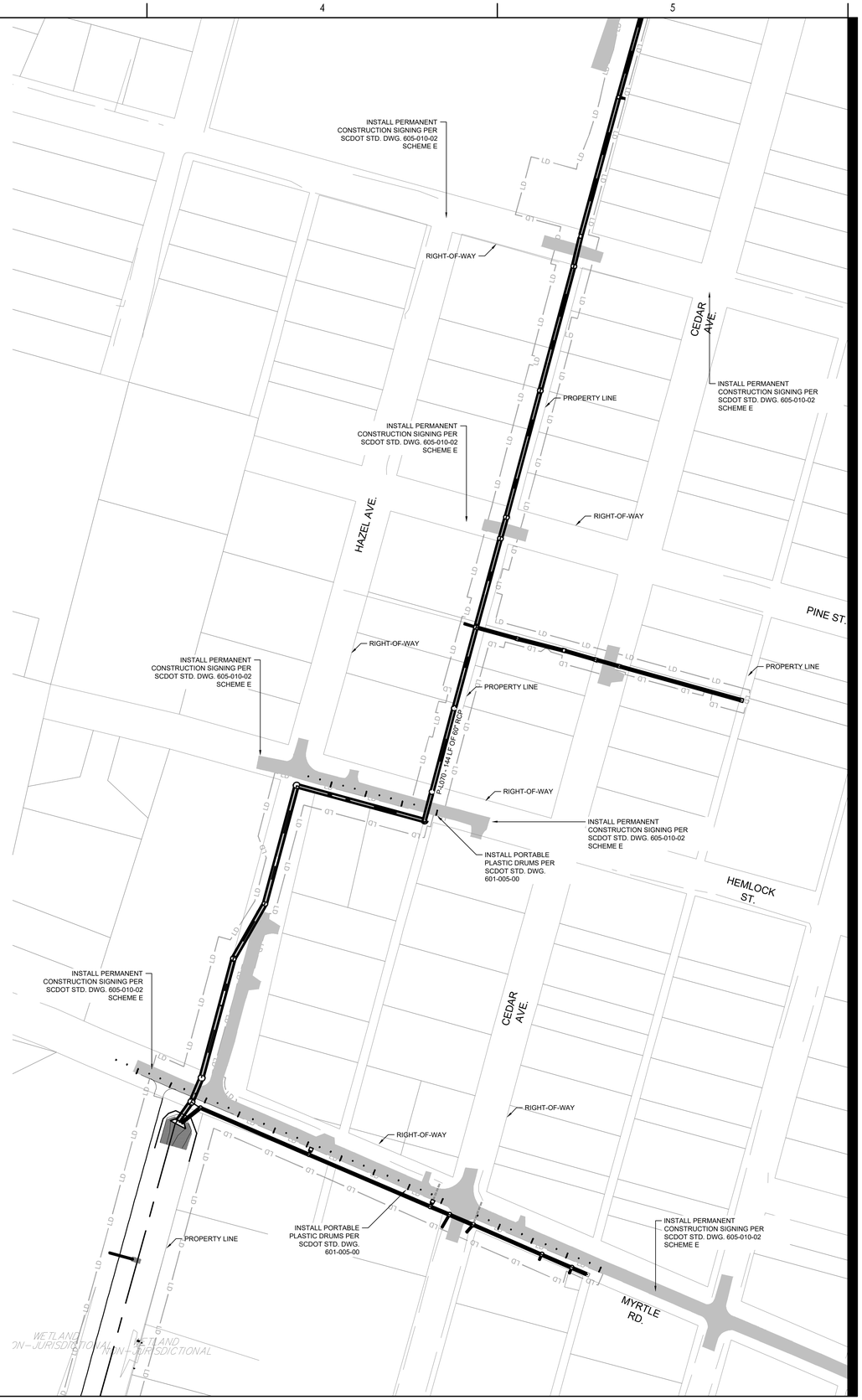
CONSTRUCTION NOTES:

1. PORTABLE PLASTIC DRUMS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DRAWING NUMBER 601-005-00, AND AS DIRECTED BY THE PLANS.
2. CONSTRUCTION OF THIS PROJECT REFERENCES THE FOLLOWING SCDOT STANDARD DRAWINGS:
   - 2.1. 601-005-00 WIDENING PROJECTS NEW ROADWAY CONSTRUCTION PRIMARY ROUTES
   - 2.2. 605-005-01 CONSTRUCTION SIGNING GROUND MOUNTED ASSEMBLY U CHANNEL POSTS - BREAKAWAY INSTALLATION
   - 2.3. 605-010-02 CONSTRUCTION SIGNING PERMANENT PRIMARY ROUTES
   - 2.4. 605-025-01 CONSTRUCTION SIGNING SPECIAL SIGNS LET 'EM WORK LET 'EM LIVE
   - 2.5. 605-030-02 CONSTRUCTION SIGNING "ROAD WORK" SIGNS "END ROAD WORK"
   - 2.6. 610-015-00 LANE CLOSURE NIGHT TIME URBAN LOW SPEED (<35 MPH)
   - 2.7. 610-205-00 RIGHT SHOULDER CLOSURE (CASE I/CASE II) PRIMARY ROUTES

CONSTRUCTION SEQUENCE:

1. INSTALL PERMANENT CONSTRUCTION SIGNS.
2. INSTALL PORTABLE PLASTIC DRUMS.
3. MAINTAIN MINIMUM ONE LANE OF TRAFFIC IN EACH DIRECTION ON EXISTING LANES, UTILIZING FLAGMEN.
4. CONSTRUCT SHADED PORTION OF MILL AND OVERLAY AS SHOWN.





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Legend

Revision	By	Appd	YYYY.MM.DD
PER BID ADDENDUM #1	RMW	BK	2022.12.21
Issued			
ISSUED FOR CONSTRUCTION	RMW	BK	2022.06.28
File Name: 1035_C8_TRAFFIC	SGC Dwn.	SGC Dsgn.	BK Chkd. 2020.10.09 YYYY.MM.DD

Permit/Seal

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION STANTEC CONSULTING SERVICES, INC. No. C02316

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER ROBERT MARSHALL WYNNE No. 32100

06/28/2022

Client/Project Logo

Client/Project
GEORGETOWN COUNTY

TOWN OF ANDREWS DRAINAGE IMPROVEMENTS PHASE 2

TOWN OF ANDREWS
GEORGETOWN COUNTY, SOUTH CAROLINA

Title
TRAFFIC CONTROL PLAN

Project No.	Scale
178421035	
Revision: ----	Sheet: C8-00 of 65
	Drawing No.: C8-00

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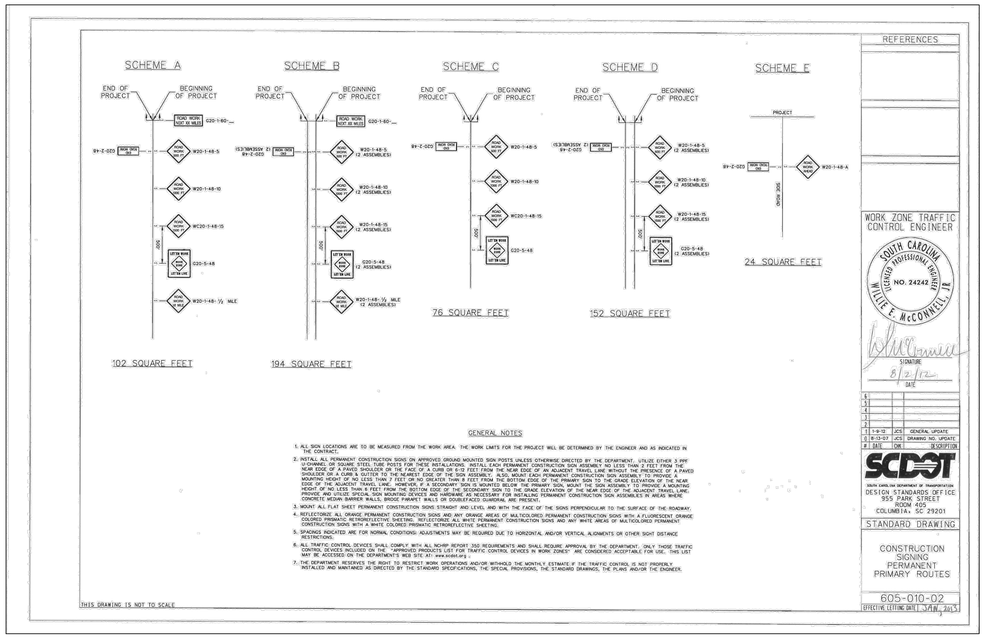
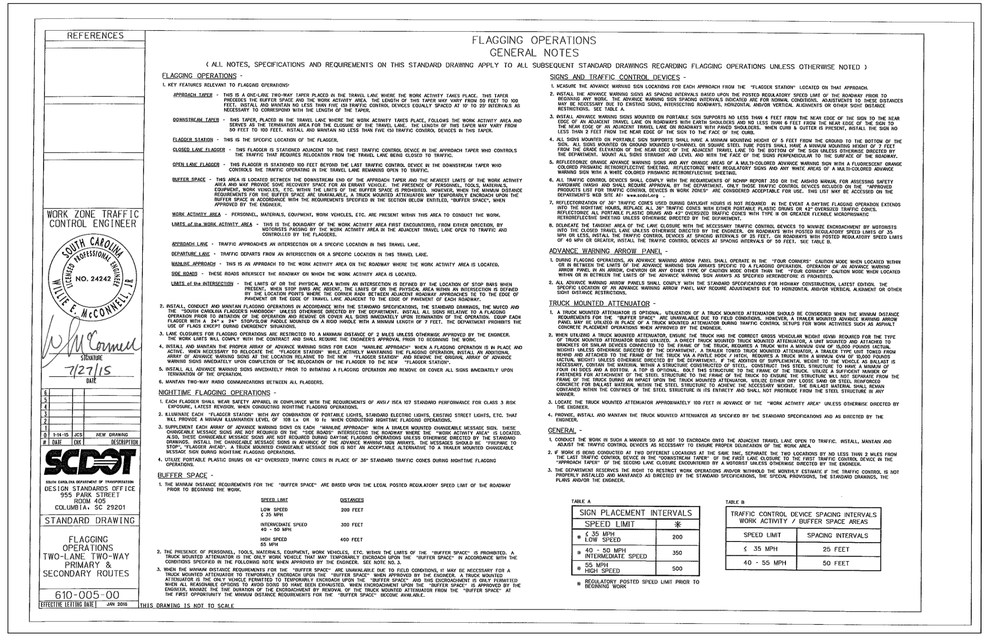



REFERENCES
WORK ZONE TRAFFIC CONTROL ENGINEER
SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
WILLIE E. McCONNELL, JR.
NO. 24242
SIGNATURE
7/27/15
DATE
SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201
STANDARD DRAWING
RIGHT SHOULDER CLOSURE
(CASE I / CASE II)
PRIMARY ROUTES
610-205-00
EFFECTIVE LETTING DATE: APR 2015
FLAGGING OPERATIONS
GENERAL NOTES
(ALL NOTES, SPECIFICATIONS AND REQUIREMENTS ON THIS STANDARD DRAWING APPLY TO ALL SUBSEQUENT STANDARD DRAWINGS REGARDING FLAGGING OPERATIONS UNLESS OTHERWISE NOTED)
FLAGGING OPERATIONS -
1. KEY FEATURES RELEVANT TO FLAGGING OPERATIONS:
APPROACH TAPER - THIS IS A ONE-LANE TWO-WAY TAPER PLACED IN THE TRAVEL LANE WHERE THE WORK ACTIVITY TAKES PLACE. THIS TAPER PRECEDES THE BUFFER SPACE AND THE WORK ACTIVITY AREA. THE LENGTH OF THIS TAPER MAY VARY FROM 20 FEET TO 100 FEET. INSTALL AND MAINTAIN NO LESS THAN FIVE (5) TRAFFIC CONTROL DEVICES EQUALLY SPACED AT 10' TO 20' INTERVALS AS NECESSARY TO COMMUNICATE WITH THE LENGTH OF THE TAPER.
DOWNSTREAM TAPER - THIS TAPER, PLACED IN THE TRAVEL LANE WHERE THE WORK ACTIVITY TAKES PLACE, FOLLOWS THE WORK ACTIVITY AREA AND SERVES AS THE TERMINATION AREA FOR THE CLOSURE OF THE TRAVEL LANE. THE LENGTH OF THIS TAPER MAY VARY FROM 50 FEET TO 100 FEET. INSTALL AND MAINTAIN NO LESS THAN FIVE (5) TRAFFIC CONTROL DEVICES IN THIS TAPER.
FLAGGER STATION - THIS IS THE SPECIFIC LOCATION OF THE FLAGGER.
CLOSED LANE FLAGGER - THIS FLAGGER IS STATIONED ADJACENT TO THE FIRST TRAFFIC CONTROL DEVICE IN THE APPROACH TAPER WHO CONTROLS THE TRAFFIC THAT REQUIRES RELOCATION FROM THE TRAVEL LANE BEING CLOSED TO TRAFFIC.
OPEN LANE FLAGGER - THIS FLAGGER IS STATIONED 100 FEET BEYOND THE LAST TRAFFIC CONTROL DEVICE IN THE DOWNSTREAM TAPER WHO CONTROLS THE TRAFFIC OPERATIONS IN THE TRAVEL LANE BEING OPEN TO TRAFFIC.
BUFFER SPACE - THIS AREA IS LOCATED BETWEEN THE DOWNSTREAM END OF THE APPROACH TAPER AND THE NEAREST LIMITS OF THE WORK ACTIVITY AREA AND MAY PROVIDE SOME NECESSARY SPACE FOR AN ERRANT VEHICLE. THE PRESENCE OF PERSONNEL, TOOLS MATERIALS, EQUIPMENT, WORK VEHICLES, ETC. WITHIN THE LIMITS OF THE BUFFER SPACE IS PROHIBITED. HOWEVER, WHEN THE MINIMUM DISTANCE REQUIREMENTS FOR THE "BUFFER SPACE" ARE UNAVAILABLE DUE TO FIELD CONDITIONS, IT MAY BE NECESSARY TO ENCROACH UPON THE BUFFER SPACE. IN ACCORDANCE WITH THE REQUIREMENTS SPECIFIED IN THE SECTION BELOW ENTITLED, "BUFFER SPACE", WHEN APPROVED BY THE ENGINEER.
WORK ACTIVITY AREA - PERSONNEL, MATERIALS, EQUIPMENT, WORK VEHICLES, ETC. ARE PRESENT WITHIN THIS AREA TO CONDUCT THE WORK.
LIMITS of the WORK ACTIVITY AREA - THIS IS THE BOUNDARY OF THE WORK ACTIVITY AREA FIRST ENCOUNTERED, FROM EITHER DIRECTION, BY MOTORISTS PASSING BY THE WORK ACTIVITY AREA IN THE ADJACENT TRAVEL LANE OPEN TO TRAFFIC AND CONTROLLED BY THE FLAGGERS.
APPROACH LANE - TRAFFIC APPROACHES AN INTERSECTION OR A SPECIFIC LOCATION IN THIS TRAVEL LANE.
DEPARTURE LANE - TRAFFIC DEPARTS FROM AN INTERSECTION OR A SPECIFIC LOCATION IN THIS TRAVEL LANE.
MAINLINE APPROACH - THIS IS AN APPROACH TO THE WORK ACTIVITY AREA ON THE ROADWAY WHERE THE WORK ACTIVITY AREA IS LOCATED.
SIDE ROADS - THESE ROADS INTERSECT THE ROADWAY ON WHICH THE WORK ACTIVITY AREA IS LOCATED.
Limits of the INTERSECTION - THE LIMITS OF THE PHYSICAL AREA WITHIN AN INTERSECTION IS DEFINED BY THE LOCATION OF STOP BARS WHEN PRESENT. WHEN STOP BARS ARE ABSENT, THE LIMITS OF GIR THE PHYSICAL AREA WITHIN AN INTERSECTION IS DEFINED BY THE LOCATION POINTS WHERE THE CORNER RADII BETWEEN ADJACENT ROADWAY APPROACHES TIE TO THE EDGE OF PAVEMENT OR THE EDGE OF TRAVEL LANE ADJACENT TO THE EDGE OF PAVEMENT OF EACH ROADWAY.
2. INSTALL, CONDUCT AND MAINTAIN FLAGGING OPERATIONS IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, THESE STANDARD DRAWINGS, THE NOTES AND REQUIREMENTS SHOWN ON THE PLANS AND/OR AS DIRECTED BY THE ENGINEER. INSTALL AND MAINTAIN ALL TRAFFIC CONTROL DEVICES AS REQUIRED FOR A FLAGGING OPERATION PRIOR TO INITIATION OF THE OPERATION AND REMOVE OR COVER ALL SIGNS IMMEDIATELY UPON TERMINATION OF THE OPERATION. COVER EACH SIGN WITH A 24" x 24" OPAQUE/COLOR MATCHED MASKING MATERIAL OR A SIGN BLANK WITH A MINIMUM LENGTH OF 7 FEET. THE DEPARTMENT PROHIBITS THE USE OF BLACK PLASTIC BAGS OVER SIGNS.
3. LANE CLOSURES FOR FLAGGING OPERATIONS ARE RESTRICTED TO A MAXIMUM DISTANCE OF 2 MILES UNLESS OTHERWISE APPROVED BY THE ENGINEER. THE WORK LIMITS WILL COMPLY WITH THE CONTRACT AND SHALL REQUIRE THE ENGINEER'S APPROVAL PRIOR TO BEGINNING THE WORK.
4. INSTALL AND MAINTAIN THE PROPER ARRAY OF ADVANCE WARNING SIGNS FOR EACH "MAINLINE APPROACH". WHEN A FLAGGING OPERATION IS IN PLACE AND ACTIVE, WHEN NECESSARY TO RELOCATE THE "FLAGGER STATION" WHILE ACTIVELY MAINTAINING THE CLOSURE, INSTALL AN ADDITIONAL ARRAY OF ADVANCE WARNING SIGNS AT THE LOCATION RELATIVE TO THE NEW "FLAGGER STATION" AND REMOVE THE ORIGINAL ARRAY OF ADVANCE WARNING SIGNS IMMEDIATELY UPON COMPLETION OF THE RELOCATION OF THE FLAGGER TO THE NEW "FLAGGER STATION".
5. INSTALL ALL ADVANCE WARNING SIGNS IMMEDIATELY PRIOR TO INITIATING A FLAGGING OPERATION AND REMOVE OR COVER ALL SIGNS IMMEDIATELY UPON TERMINATION OF THE OPERATION.
6. MAINTAIN TWO-WAY RADIO COMMUNICATIONS BETWEEN ALL FLAGGERS.
NIGHTTIME FLAGGING OPERATIONS -
1. EACH FLAGGER SHALL WEAR SAFETY APPAREL IN COMPLIANCE WITH THE REQUIREMENTS OF ANSI/ ISEA 107 STANDARD PERFORMANCE FOR CLASS 3 RISK EXPOSURE, LATEST REVISION, WHEN CONDUCTING NIGHTTIME FLAGGING OPERATIONS.
2. ILLUMINATE EACH "FLAGGER STATION" WITH ANY COMBINATION OF PORTABLE LIGHTS, STANDARD ELECTRIC LIGHTS, EXISTING STREET LIGHTS, ETC. THAT WILL PROVIDE A MINIMUM ILLUMINATION LEVEL OF 108 Lux OR 10 fc WHEN CONDUCTING NIGHTTIME FLAGGING OPERATIONS.
3. SUPPLEMENT EACH ARRAY OF ADVANCE WARNING SIGNS ON EACH "MAINLINE APPROACH" WITH A SMALLER MOUNTED CHANGEABLE MESSAGE SIGN. STATIC MESSAGES SHALL READ "FLAGGER AHEAD". A TRUCK MOUNTED CHANGEABLE MESSAGE SIGN IS NOT AN ACCEPTABLE ALTERNATIVE TO A TRAILER MOUNTED CHANGEABLE MESSAGE SIGN AND MUST BE REMOVED DURING NIGHTTIME FLAGGING OPERATIONS UNLESS OTHERWISE DIRECTED BY THE STANDARD DRAWINGS. INSTALL THE CHANGEABLE MESSAGE SIGNS IN ADVANCE OF THE ADVANCE WARNING SIGN ARRAYS. THE MESSAGES SHOULD BE: "PREPARE TO STOP AHEAD" AND "FLAGGER AHEAD". A TRUCK MOUNTED CHANGEABLE MESSAGE SIGN IS NOT AN ACCEPTABLE ALTERNATIVE TO A TRAILER MOUNTED CHANGEABLE MESSAGE SIGN DURING NIGHTTIME FLAGGING OPERATIONS.
4. UTILIZE 28 INCH PORTABLE PLASTIC DRUMS OR 42" OVERSIZED TRAFFIC CONES IN PLACE OF 36" STANDARD TRAFFIC CONES DURING NIGHTTIME FLAGGING OPERATIONS.
BUFFER SPACE -
1. THE MINIMUM DISTANCE REQUIREMENTS FOR THE "BUFFER SPACE" ARE BASED UPON THE LOCAL POSTED REGULATORY SPEED LIMIT OF THE ROADWAY PRIOR TO BEGINNING THE WORK.

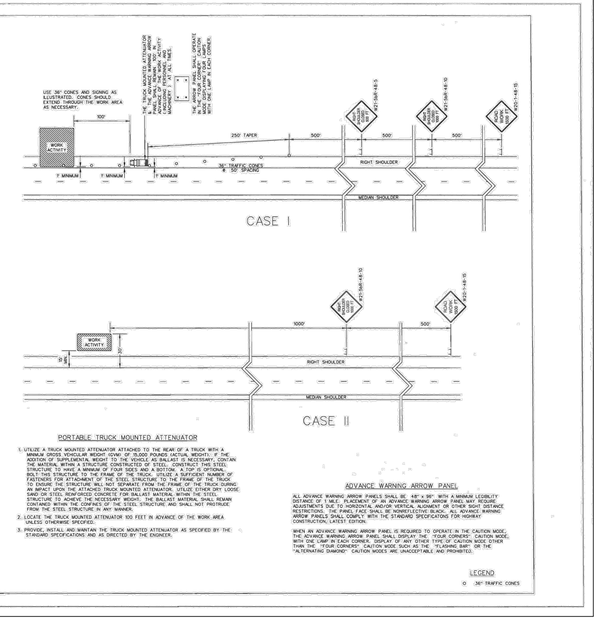
SPEED LIMIT	DISTANCES
LOW SPEED ≤ 25 MPH	200 FEET
INTERMEDIATE SPEED 30 - 50 MPH	300 FEET
HIGH SPEED 55 MPH	400 FEET

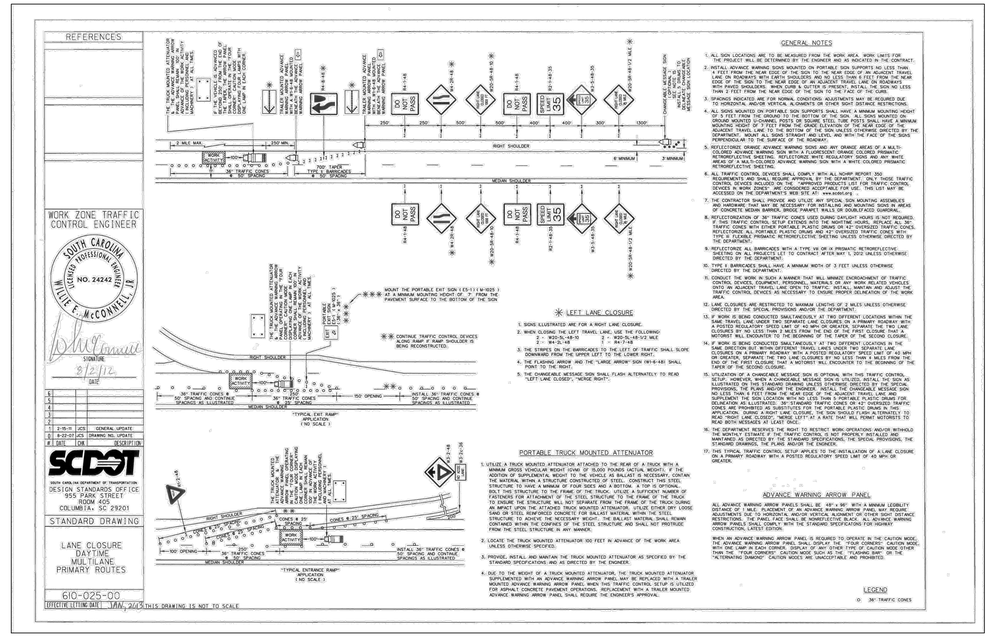
2. THE PRESENCE OF PERSONNEL, TOOLS, MATERIALS, EQUIPMENT, WORK VEHICLES, ETC. WITHIN THE LIMITS OF THE "BUFFER SPACE" IS PROHIBITED. A TRUCK MOUNTED ATTENUATOR TO TEMPORARILY ENCROACH UPON THE "BUFFER SPACE" WHEN APPROVED BY THE ENGINEER IS ACCEPTABLE WITH THE CONDITIONS SPECIFIED IN THE FOLLOWING NOTE WHEN APPROVED BY THE ENGINEER. SEE NOTE NO.3.
3. WHEN THE MINIMUM DISTANCE REQUIREMENTS FOR THE "BUFFER SPACE" ARE UNAVAILABLE DUE TO FIELD CONDITIONS, IT MAY BE NECESSARY FOR A TRUCK MOUNTED ATTENUATOR TO TEMPORARILY ENCROACH UPON THE "BUFFER SPACE" WHEN APPROVED BY THE ENGINEER. A TRUCK MOUNTED ATTENUATOR IS THE ONLY VEHICLE PERMITTED TO TEMPORARILY ENCROACH UPON THE "BUFFER SPACE" AND THIS ENCROACHMENT IS ONLY PERMITTED WHEN THE WORK ACTIVITY AREA IS NOT OCCUPIED BY PERSONNEL, TOOLS, MATERIALS, EQUIPMENT, WORK VEHICLES, ETC. WHEN APPROVED BY THE ENGINEER, MINIMIZE THE TIME DURATION OF THE ENCROACHMENT BY REMOVAL OF THE TRUCK MOUNTED ATTENUATOR FROM THE "BUFFER SPACE" AT THE FIRST OPPORTUNITY THE MINIMUM DISTANCE REQUIREMENTS FOR THE "BUFFER SPACE" BECOME AVAILABLE.
SIGNS AND TRAFFIC CONTROL DEVICES -
1. MEASURE THE ADVANCE WARNING SIGN LOCATIONS FOR EACH APPROACH FROM THE "FLAGGER STATION" LOCATED ON THAT APPROACH.
2. INSTALL THE ADVANCE WARNING SIGNS AS SPACING INTERVALS BASED UPON THE POSTED REGULATORY SPEED LIMIT OF THE ROADWAY PRIOR TO BEGINNING ANY WORK. THE ADVANCE WARNING SIGN SPACING INTERVALS INDICATED ARE FOR NORMAL CONDITIONS. ADJUSTMENTS TO THESE DISTANCES MAY BE NECESSARY DUE TO EXISTING SIGNS, INTERSECTING ROADWAYS, HORIZONTAL AND/OR VERTICAL ALIGNMENTS OR OTHER SIGHT DISTANCE RESTRICTIONS. SEE TABLE A.
3. INSTALL ADVANCE WARNING SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS NO LESS THAN 4 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH PAVED SHOULDERS. WHEN CURB & GUTTER IS PRESENT, INSTALL THE SIGN NO LESS THAN 2 FEET FROM THE NEAR EDGE OF THE SIGN TO THE FACE OF THE CURB. ON ROADWAYS WITH EARTH SHOULDERS, AND NO LESS THAN 8 FEET FROM THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH PAVED SHOULDERS. WHEN CURB & GUTTER IS PRESENT, INSTALL THE SIGN NO LESS THAN 2 FEET FROM THE NEAR EDGE OF THE SIGN TO THE FACE OF THE CURB.
4. ALL SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 5 FEET FROM THE GROUND TO THE BOTTOM OF THE SIGN. ALL SIGNS MOUNTED ON GROUND MOUNTED U-CHANNEL OR SQUARE STEEL TUBE POSTS SHALL HAVE A SIMILAR MOUNTING HEIGHT OF 7 FEET FROM THE GROUND TO THE BOTTOM OF THE SIGN. INSTALL SIGNS SUCH THAT THE BOTTOM EDGE OF THE SIGN IS NO LESS THAN 7 FEET FROM THE NEAR EDGE OF THE ADJACENT TRAVEL LANE. HOWEVER, IF A SECONDARY SIGN IS MOUNTED BELOW THE PRIMARY SIGN, MOUNT THE SIGN ASSEMBLY TO PROVIDE A MOUNTING HEIGHT OF NO LESS THAN 6 FEET FROM THE BOTTOM EDGE OF THE SECONDARY SIGN TO THE GRADE ELEVATION OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE. INSTALL ADDITIONAL SIGNS AT HEIGHTS GREATER THAN THE MINIMUM AS NECESSARY FOR INSTALLING PERMANENT CONSTRUCTION SIGN ASSEMBLIES IN AREAS WHERE CONCRETE MEDIAN BARRIER WALLS, BRIDGE PARAPET WALLS OR DOUBLE-FACED GUARDRAIL ARE PRESENT.
5. REFLECTORIZE ORANGE ADVANCE WARNING SIGNS AND ANY ORANGE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WITH A FLUORESCENT ORANGE RETROREFLECTIVE SHEETING. REFLECTORIZE WHITE REGULATORY SIGNS AND ANY WHITE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WITH A WHITE COLORED PRISMATIC RETROREFLECTIVE SHEETING.
6. ALL TRAFFIC CONTROL DEVICES SHALL COMPLY WITH ALL NCHRP REPORT 350 REQUIREMENTS AND SHALL REQUIRE APPROVAL BY THE DEPARTMENT. ONLY THOSE TRAFFIC CONTROL DEVICES INCLUDED ON THE "APPROVED PRODUCTS LIST FOR TRAFFIC CONTROL DEVICES IN WORK ZONES" ARE CONSIDERED ACCEPTABLE FOR USE. THIS LIST MAY BE ACCESSED ON THE DEPARTMENTS WEB SITE AT: www.scdot.org
7. THE CONTRACTOR SHALL PROVIDE AND UTILIZE ANY SPECIAL SIGN MOUNTING ASSEMBLIES REQUIRED FOR INSTALLING PERMANENT CONSTRUCTION SIGN ASSEMBLIES IN AREAS WHERE CONCRETE MEDIAN BARRIER, BRIDGE PARAPET WALLS OR DOUBLE-FACED GUARDRAIL ARE PRESENT.
8. THE PRIMARY TRAFFIC CONTROL DEVICES UTILIZED FOR DAYTIME SHOULDER CLOSURES ARE 28" CONES. THE PRIMARY TRAFFIC CONTROL DEVICES UTILIZED FOR NIGHTTIME SHOULDER CLOSURES ARE PORTABLE PLASTIC DRUMS. DURING DAYTIME SHOULDER CLOSURES, 42" OVERSIZED CONES MAY BE UTILIZED IN PLACE OF 36" STANDARD CONES. DURING NIGHTTIME SHOULDER CLOSURES, 42" OVERSIZED CONES ARE PROHIBITED FOR USE. IF THE TRAFFIC CONTROL SETUP EXTENDS INTO THE HOURS OF DARKNESS, REPLACE ALL CONES, 36" OR 42", OVERSIZED, WITH PORTABLE PLASTIC DRUMS.
9. THE 28" CONES UTILIZED DURING DAYLIGHT HOURS ARE NOT REQUIRED TO BE REFLECTORIZED. IF THE TRAFFIC CONTROL SETUP EXTENDS INTO THE HOURS OF DARKNESS, SHOULDER CLOSURES WITH TYPE III OR LESS PRIMARY MOUNTED WITH REFLECTORIZED SHEETING UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. REFLECTORIZE ALL PORTABLE PLASTIC DRUMS AND 42" OVERSIZED TRAFFIC CONES WITH TYPE III OR GREATER FLEXIBLE WIDEPRISMATIC RETROREFLECTIVE SHEETING UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.
10. THE DEPARTMENT PROHIBITS CONDUCTING WORK ON PRIMARY AND SECONDARY ROUTES WITHIN 1' OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE UNDER A SHOULDER CLOSURE. ALL WORK THAT MAY REQUIRE THE PRESENCE OF EQUIPMENT, PERSONNEL, MATERIALS OR OTHER WORK VEHICLES WITHIN 1' OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE SHALL BE CONDUCTED UNDER A LANE CLOSURE.
CASE I: WHENEVER ANY PORTION OF THE SHOULDER-AREA WITHIN 1' BUT NOT CLOSER THAN 1' OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE MUST BE OCCUPIED BY EQUIPMENT, PERSONNEL, MATERIALS OR WORK VEHICLES TO CONDUCT THE WORK, INSTALL AND MAINTAIN THE SIGNING AND TRAFFIC CONTROL DEVICES AS ILLUSTRATED.
CASE II: WHENEVER THE WORK IS CONDUCTED BEYOND 1' BUT WITHIN 30' OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE, INCLUDING THE PRESENCE OF EQUIPMENT, PERSONNEL, MATERIALS OR WORK VEHICLES, INSTALL AND MAINTAIN THE SIGNING AND TRAFFIC CONTROL DEVICES AS ILLUSTRATED.
12. CONDUCT THE WORK IN SUCH A MANNER THAT WILL NOT REQUIRE ENCROACHMENT OF TRAFFIC INTO THE LIMITS OF THE WORK ACTIVITY AREA BY MOTORISTS OR OTHER WORK RELATED PERSONNEL. THE WORK ACTIVITY AREA IS NOT PART OF THE ADJACENT TRAVEL LANE.
13. PLACE THE TRUCK MOUNTED ATTENUATOR AT A LOCATION 100' IN ADVANCE OF THE WORK ACTIVITY AND NO CLOSER THAN 1' FROM THE NEAR EDGE OF THE ADJACENT TRAVEL LANE.
14. FOR A CASE I SCENARIO IN THE RIGHT SHOULDER CLOSURE AREA, ADJUST THE TAPER AS NECESSARY TO FIT THE WIDTH OF THE SHOULDER WHILE MAINTAINING THE REQUIRED 250' TAPER LENGTH.
15. IF WORK IS BEING CONDUCTED SIMULTANEOUSLY AT TWO DIFFERENT LOCATIONS AT THE SAME TIME UNDER CASE I SHOULDER CLOSURES, SEPARATE THE TWO LOCATIONS BY NO LESS THAN 1 MILE FROM THE END OF THE FIRST CASE I CLOSURE THAT A MOTORIST WILL ENCOUNTER. IF WORK IS BEING CONDUCTED UNDER CASE I AND CASE II SCENARIOS, A MINIMUM SEPARATION DISTANCE OF ONE-HALF MILE IS RECOMMENDED BETWEEN SHOULDER CLOSURES WHEN ONE OR BOTH SHOULDER CLOSURES IS A CASE II CLOSURE.
16. THE DEPARTMENT RESERVES THE RIGHT TO RESTRICT WORK OPERATIONS AND/OR WITHHOLD THE MONTHLY ESTIMATE IF THE TRAFFIC CONTROL IS NOT PROPERLY INSTALLED AND MAINTAINED AS DIRECTED BY THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, THE STANDARD DRAWINGS, THE PLANS AND/OR THE ENGINEER.
17. THIS TYPICAL TRAFFIC CONTROL SETUP APPLIES TO THE INSTALLATION OF SHOULDER CLOSURES IN THE RIGHT SHOULDER AREAS OF PRIMARY AND SECONDARY ROADWAYS.
TABLE A
SIGN PLACEMENT INTERVALS

SPEED LIMIT	※
≤ 30 MPH LOW SPEED	200
40 - 50 MPH INTERMEDIATE SPEED	350
55 MPH HIGH SPEED	500

※ REGULATORY POSTED SPEED LIMIT PRIOR TO BEGINNING WORK
TABLE B
TRAFFIC CONTROL DEVICE SPACING INTERVALS
WORK ACTIVITY / BUFFER SPACE AREAS

SPEED LIMIT	SPACING INTERVALS
≤ 35 MPH	25 FEET
40 - 55 MPH	50 FEET




REFERENCES
WORK ZONE TRAFFIC CONTROL ENGINEER
SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
WILLIE E. McCONNELL, JR.
NO. 24242
SIGNATURE
8/2/12
DATE
SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201
STANDARD DRAWING
LANE CLOSURE
MULTILANE
PRIMARY ROUTES
610-025-00
EFFECTIVE LETTING DATE: JAN 2013
GENERAL NOTES
1. ALL SIGN LOCATIONS ARE TO BE MEASURED FROM THE WORK AREA. WORK LIMITS FOR THE PROJECT WILL BE DETERMINED BY THE ENGINEER AND AS INDICATED IN THE CONTRACT.
2. INSTALL ADVANCE WARNING SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS NO LESS THAN 4 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH PAVED SHOULDERS. WHEN CURB & GUTTER IS PRESENT, INSTALL THE SIGN NO LESS THAN 2 FEET FROM THE NEAR EDGE OF THE SIGN TO THE FACE OF THE CURB.
3. SPACINGS INDICATED ARE FOR NORMAL CONDITIONS. ADJUSTMENTS MAY BE REQUIRED DUE TO HORIZONTAL AND/OR VERTICAL ALIGNMENTS OR OTHER SIGHT DISTANCE RESTRICTIONS.
4. ALL SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 5 FEET FROM THE GROUND TO THE BOTTOM OF THE SIGN. ALL SIGNS MOUNTED ON GROUND MOUNTED U-CHANNEL POSTS OR SQUARE STEEL TUBE POSTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 7 FEET FROM THE GROUND TO THE BOTTOM OF THE SIGN. INSTALL SIGNS SUCH THAT THE BOTTOM EDGE OF THE SIGN IS NO LESS THAN 7 FEET FROM THE NEAR EDGE OF THE ADJACENT TRAVEL LANE. HOWEVER, IF A SECONDARY SIGN IS MOUNTED BELOW THE PRIMARY SIGN, MOUNT THE SIGN ASSEMBLY TO PROVIDE A MOUNTING HEIGHT OF NO LESS THAN 6 FEET FROM THE BOTTOM EDGE OF THE SECONDARY SIGN TO THE GRADE ELEVATION OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE. INSTALL ADDITIONAL SIGNS AT HEIGHTS GREATER THAN THE MINIMUM AS NECESSARY FOR INSTALLING PERMANENT CONSTRUCTION SIGN ASSEMBLIES IN AREAS WHERE CONCRETE MEDIAN BARRIER WALLS, BRIDGE PARAPET WALLS OR DOUBLE-FACED GUAR