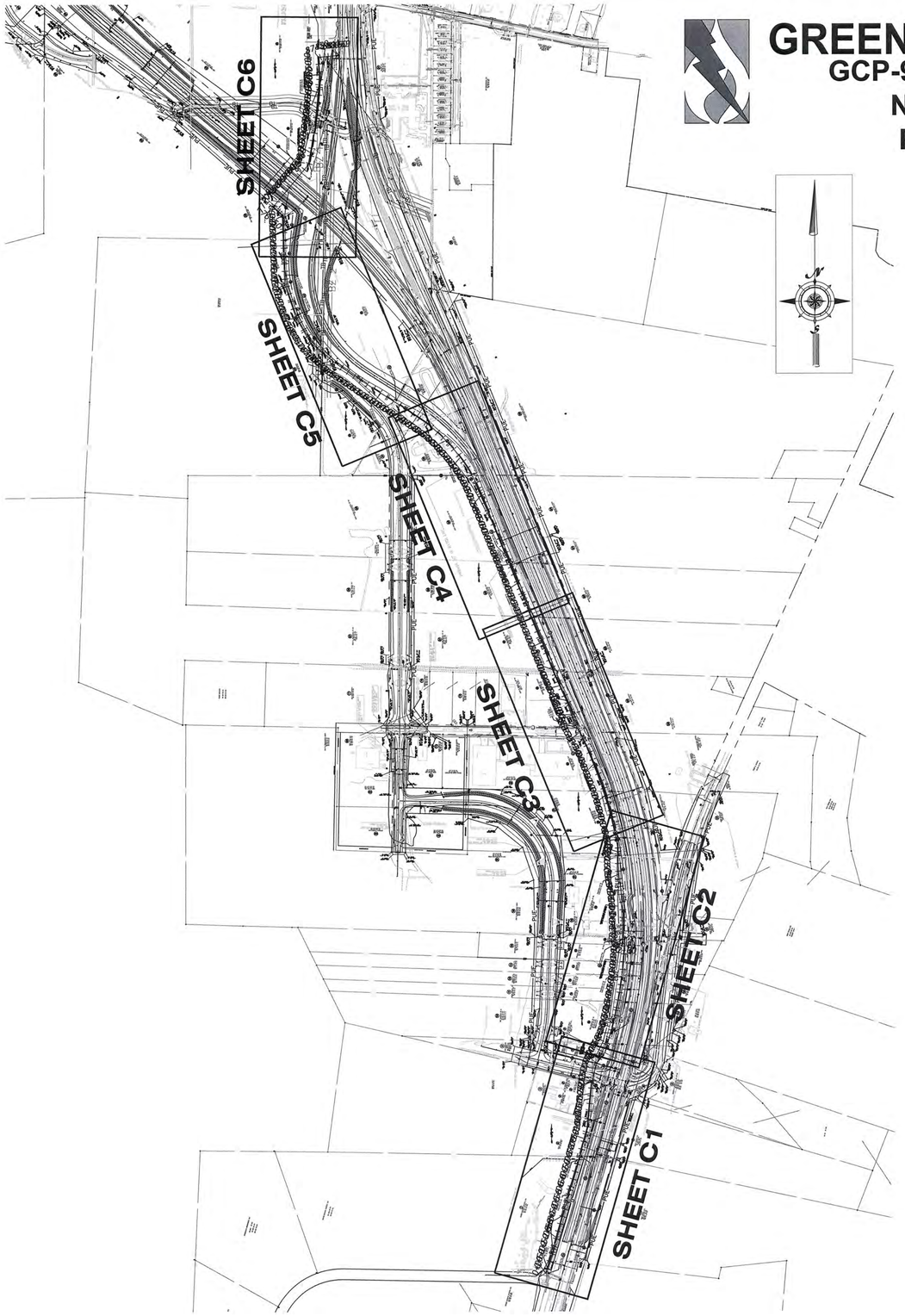
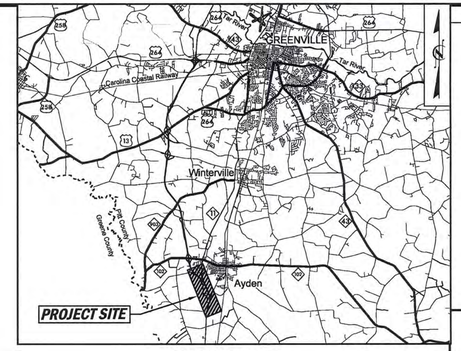
GREENVILLE UTILITES COMMISSION
GCP-93 GREENVILLE SOUTHWEST BYPASS
NATURAL GAS MAIN RELOCATION
PITT COUNTY, NORTH CAROLINA





VICINITY MAP

LEGEND

	TEMPORARY BENCH MARK
	PROP. GAS MAIN
—G—	EXIST. GAS MAIN
	EXIST. GAS VALVE
	PROP. WATER MAIN (BY OTHERS)
—W—	EXIST. WATER MAIN
	EXIST. FIRE HYDRANT
—PROP O/H POW—	PROP. OVERHEAD POWER (BY OTHERS)
—EXIST O/H POW—	EXIST. OVERHEAD POWER
—T—	EXIST. UG TELEPHONE CABLE
—SS—	EXIST. SANITARY SEWER
OPP	UTILITY POLE
TPED	TELEPHONE PED
TBOX	TELEPHONE BOX
TVLT	TELEPHONE VAULT
TVPED	CABLE TV PED
EDT	ELECTRICAL TRANSFORMER
FO	FIBER OPTIC PED
R/W	RIGHT OF WAY
	CENTERLINE R/W
C/A	CONTROLLED ACCESS
	EXIST. PROPERTY LINE
	EXIST. SIGN
XX" RCP	EXIST. CULVERT
	DRIVEWAY (CONCRETE OR ASPHALT)
	DETAIL NUMBER
	SHEET NUMBER
0+00	STATION
PROP.	PROPOSED
EXIST.	EXISTING
#	PARCEL NUMBER DESIGNATION (SEE EASEMENT SUMMARY SHEET T3)

INDEX TO SHEETS

T1	Cover and Legend
T2	General Notes and Erosion Control
T3	Bill Of Materials, and Easement Summary Sheet
C1	Plan-Profile - Sta. 0+00 to Sta. 14+50
C2	Plan-Profile - Sta. 14+50 to Sta. 29+19
C3	Plan-Profile - Sta. 29+19 to Sta. 44+19
C4	Plan-Profile - Sta. 44+19 to Sta. 59+19
C5	Plan-Profile - Sta. 59+19 to Sta. 74+17
C6	Plan-Profile - Sta. 74+17 to End
D1	Traffic Control Details
D2	Erosion Control and Miscellaneous Details
D3	Miscellaneous Details

REVISIONS:

REV.	DESCRIPTION	DATE	APPD

Greenville Utilities

COVER AND LEGEND

GREENVILLE UTILITIES COMMISSION
GCP-93 GREENVILLE SOUTHWEST BYPASS
NATURAL GAS MAIN RELOCATION
PITT COUNTY NORTH CAROLINA

Rivers & ASSOCIATES, INC.
NC License: F-0334
riversandassociates.com
107 East Second Street
Greenville, NC 27858
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Engineers
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NORTH CAROLINA PROFESSIONAL SEAL 17695 ENGINEER FREDERICK L. SHAW

7/7/17

SURVEY		DRAFT	JML
DESIGN	FS	CHECK	FS
PROJECT No.	2016004		
DRAWING No.	W-3674		
SCALE:	NOT TO SCALE		
SHEET No.	T1	OF	12

RELEASED FOR BIDDING

P:\Land\GUC - Southwest Bypass Bin Sewer Gas Main Relocation - 2016004\CAD_DWG\W3674 - GUC SW Bypass Gas Relocate.dwg<TB, LUSZKA\17-Jul-17 @ 3:47:32 PM

GENERAL NOTES

1. *ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE CURRENT SPECIFICATIONS AND STANDARDS OF GREENVILLE UTILITIES AND BE IN CONFORMANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) REQUIREMENTS.*
2. *TEMPORARY DRAINAGE DURING CONSTRUCTION SHALL BE PROVIDED BY THE CONTRACTOR TO RELIEVE AREAS THAT MAY CAUSE DAMAGE TO THE ROADWAYS OR IMPEDE TRAFFIC AS DIRECTED BY THE NCDOT WITHIN THE PROJECT LIMITS.*
3. *PRIOR TO CONSTRUCTION OR EXCAVATION, THE CONTRACTOR SHALL ASSUME THE RESPONSIBILITY OF LOCATING ANY UNDERGROUND UTILITIES (PUBLIC AND/ OR PRIVATE) THAT MAY EXIST IN THE AREA OF CONSTRUCTION. UTILITY OWNERS SHALL BE NOTIFIED 72 HOURS IN ADVANCE OF ANY EXCAVATION IN THE PROXIMITY OF THE UTILITIES. THE CONTRACTOR, AT HIS OWN EXPENSE SHALL BE RESPONSIBLE FOR THE REPAIR OF EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.*
4. *THE CONTRACTOR SHALL CONTACT THE NC 811 CENTER AT 1-800-632-4949 72 HOURS IN ADVANCE OF ANY CONSTRUCTION.*
5. *ALL DRAINAGE PIPES AND STRUCTURES SHALL BE CLEANED OF DEBRIS AND ERODED MATERIALS RESULTING FROM CONSTRUCTION. THESE PIPES AND STRUCTURES SHALL BE MAINTAINED CLEAN DURING THE PERIOD OF CONSTRUCTION.*
6. *ALL DISTURBED SLOPES SHALL BE RESTORED TO EXISTING GRADES AND STABILIZED WITH SEED & MULCH AND TACKED IF APPROPRIATE.*
7. *THE GAS MAIN SHALL BE INSTALLED SO AS TO PROVIDE A MINIMUM OF TWELVE (12") INCHES OF CLEARANCE TO ALL OTHER UNDERGROUND UTILITIES AND STRUCTURES. WHERE THIS IS NOT POSSIBLE APPROPRIATE PROTECTION SHALL BE PROVIDED. GAS MAINS INSTALLED BY HDD MUST MAINTAIN, AT A MINIMUM, 24" OF CLEARANCE FROM THE BOTTOM OF RCPs 36" AND LARGER.*
8. *ALL EXISTING PAVEMENT DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS BY THE CONTRACTOR ACCORDING TO THE DETAILS PROVIDED IN THE PLANS.*
9. *REFERENCE TO DEMLR REFERS TO THE STANDARDS AND SPECIFICATIONS CONTAINED IN THE NORTH CAROLINA DIVISION OF ENERGY, MINERAL AND LAND RESOURCES, EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.*
10. *CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES AS DESCRIBED ON THE PROJECT PLANS AND DETAILS DURING CONSTRUCTION AND SURFACE RESTORATION UNTIL SUCH MEASURES ARE NOT NECESSARY. WHERE ADDITIONAL MEASURES ARE NECESSARY, THE CONTRACTOR SHALL INSTALL AND MAINTAIN THE APPROPRIATE MEASURES ACCORDING TO THE NORTH CAROLINA DIVISION OF ENERGY, MINERAL AND LAND RESOURCES DESIGN MANUAL.*
11. *REFER TO NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.*
12. *THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES AND/ OR PENALTIES RESULTING FROM ALL NON-COMPLIANCE WITH FEDERAL, STATE, AND LOCAL PERMITS AND ENCROACHMENT AGREEMENTS.*
13. *REPLACE ALL DAMAGED DRAIN CULVERTS WITH NEW CULVERTS OF THE SAME SIZE AND MATERIAL.*

EROSION CONTROL NOTES

1. ALL WORK WILL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY. NO LAND DISTURBING ACTIVITY BEYOND THAT REQUIRED TO INSTALL THE APPROPRIATE EROSION CONTOL MEASURE MAY PROCEED UNTIL MEASURES ARE INSPECTED AND APPROVED.
2. SEED BED PREPARATION SHALL BE CONDUCTED ACCORDING TO NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES (NCDOT) WHERE APPLICABLE. THE GROUND SURFACE SHALL BE CLEARED OF STUMPS, STONES, ROOTS, CABLES, WIRE, GRADE STAKES, AND OTHER MATERIALS THAT MIGHT HINDER PROPER GRADING, TILLAGE, SEEDING OR SUBSEQUENT MAINTENANCE OPERATIONS. GRADES ON THE AREA TO BE SEEDED SHALL BE MAINTAINED IN A TRUE AND EVEN CONDITION. MAINTENANCE SHALL INCLUDE ANY NECESSARY REPAIRS TO PREVIOUSLY GRADED AREAS. ALL GRADED AREAS SHALL BE THOROUGHLY TILLED TO A DEPTH OF AT
   LEAST FOUR (4) INCHES BY PLOWING, DISKING, HARROWING, OR OTHER APPROVED METHODS UNTIL THE CONDITION OF THE SOIL IS ACCEPTABLE. ON SITES WHERE SOIL CONDITIONS ARE SUCH THAT HIGH CLAY CONTENT AND EXCESSIVE COMPACTION CAUSE DIFFICULTY IN GETTING CLODS AND LUMPS EFFECTIVELY PULVERIZED, THE CONTRACTOR SHALL USE THE ROTARY TILLAGE MACHINERY UNTIL THE MIXING OF THE SOIL IS ACCEPTABLE AND NO CLODS OR CLUMPS REMAIN LARGER THAN 1 1/2 INCHES IN DIAMETER. A FIRM AND COMPACT
   SEED BED IS REQUIRED AND AFTER BEING GRADED, THE SEED BED SHALL BE LIGHTLY COMPACTED WITH A LAND ROLLER, SUCH AS A CULTIPACKER, BEFORE AND AFTER SEEDING. LIMESTONE SHALL BE DOLOMITIC AGRICULTURE GROUND LIMESTONE CONTAINING NOT LESS THAN 10 PERCENT MAGNESIUM OXIDE. LIME SHALL BE UNIFORMLY APPLIED AT THE RATE OF 2 TONS PER ACRE AS TESTING REQUIRES PER THE SPECIFICATIONS. IF REQUIRED PER SPECIFICATIONS, FERTILIZER SHALL BE INCORPORATED INTO THE UPPER THREE OR FOUR INCHES OF PREPARED SEED BED JUST PRIOR TO THE LAST TILLAGE OPERATION, BUT IN NO CASE SHALL IT BE APPLIED MORE THAN THREE DAYS PRIOR TO SEEDING. FERTILIZER SHALL BE USED IMMEDIATELY AFTER DELIVERY OR STORED IN A MANNER THAT WILL NOT PERMIT IT TO HARDEN OR DESTROY ITS EFFECTIVENESS.

PERMANENT SEEDING: REFER TO SECTION 329200- TURF AND GRASSES IN THE SPECIFICATIONS FOR REQUIREMENTS.

TEMPORARY SEEDING:

SEED IN ACCORDANCE WITH SOIL CONSERVATION SERVICE RECOMMENDATIONS WITH REGARD TO SEED TYPE, RATE OF APPLICATION, FERTILIZER, ETC.

PROVIDE TEMPORARY SEEDING IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

PLANTING DATE	SEEDING MIXTURE AND RATE
DEC. 1- APR. 15	120#/ACRE RYE (GRAIN), AND 50#/ACRE KOBE LESPEDEZA

SOIL AMENDMENTS

FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.

MULCH

APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE

REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

APR. 15- AUG. 15	40#/ACRE GERMAN MILLET

SOIL AMENDMENTS

FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.

MULCH

APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE

REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

AUG. 15- DEC. 30	120#/ACRE RYE (GRAIN)

SOIL AMENDMENTS

FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 LB/ACRE 10-10-10 FERTILIZER.

MULCH

APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE

REPAIR AND REFERTILIZE DAMAGED AREAS IMMEDIATELY. TOPDRESS WITH 50 LB/ACRE OF NITROGEN IN MARCH. IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 LB/ACRE KOBE LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.

4. GROUND STABILIZATION (PER NCG010000)
   A. SOIL STABILIZATION SHALL BE ACHIEVED ON ANY AREA OF A SITE WHERE LAND-DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED ACCORDING TO THE FOLLOWING SCHEDULE:
      I. ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.
      II. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND- DISTURBING ACTIVITY.
   B. CONDITIONS - IN MEETING THE STABILIZATION REQUIREMENTS ABOVE, THE FOLLOWING CONDITIONS OR EXEMPTIONS SHALL APPLY:
      I. EXTENSIONS OF TIME MAY BE APPROVED BY THE PERMITTING AUTHORITY BASED ON WEATHER OR OTHER SITE- SPECIFIC CONDITIONS THAT MAKE COMPLIANCE IMPRACTICABLE.
      II. ALL SLOPES 50' IN LENGTH OR GREATER SHALL APPLY THE GROUND COVER WITHIN 7 DAYS EXCEPT WHEN THE SLOPE IS FLATTER THAN 4:1. SLOPES LESS THAN 50' SHALL APPLY GROUND COVER WITHIN 14 DAYS EXCEPT WHEN SLOPES ARE STEEPER THAN 3:1, THE 7 DAY-REQUIREMENT APPLIES.
      III. ANY SLOPED AREA FLATTER THAN 4:1 SHALL BE EXEMPT FROM THE 7-DAY GROUND COVER REQUIREMENT.
      IV. SLOPES 10' OR LESS IN LENGTH SHALL BE EXEMPT FROM THE 7-DAY GROUND COVER REQUIREMENT EXCEPT WHEN THE SLOPE IS STEEPER THAN 2:1.
      V. ALTHOUGH STABILIZATION IS USUALLY SPECIFIED AS GROUND COVER, OTHER METHODS, SUCH AS CHEMICAL STABILIZATION, MAY BE ALLOWED ON A CASE-BY-CASE BASIS.
      VI. FOR PORTIONS OF PROJECTS WITHIN ONE MILE AND DRAINING TO TROUT WATERS AND HIGH QUALITY WATERS AS CLASSIFIED BY THE ENVIRONMENTAL MANAGEMENT COMMISSION, STABILIZATION WITH GROUND COVER SHALL BE ACHIEVED AS SOON AS PRACTICABLE BUT IN ANY EVENT ON ALL AREAS OF THE SITE WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACT.
      VII. FOR PORTIONS OF PROJECTS LOCATED IN OUTSTANDING RESOURCE WATERS WATERSHEDS AS CLASSIFIED BY THE ENVIRONMENTAL MANAGEMENT COMMISSION, STABILIZATION WITH GROUND COVER SHALL BE ACHIEVED AS SOON AS PRACTICABLE BUT IN ANY EVENT ON ALL AREAS WITHIN 7 CALENDAR DAYS FROM THE LAST LAND- DISTURBING ACT.
      VIII. PORTIONS OF A SITE THAT ARE LOWER IN ELEVATION THAN ADJACENT DISCHARGE LOCATIONS AND ARE NOT EXPECTED TO DISCHARGE DURING CONSTRUCTION MAY BE EXEMPT FROM THE TEMPORARY GROUND COVER REQUIREMENTS IF IDENTIFIED ON THE APPROVED E&SC PLAN OR ADDED BY THE PERMITTING AUTHORITY.

5. SELF INSPECTION AND REPORTING REQUIREMENTS (PER NCG010000) MINIMUM SELF INSPECTION AND REPORTING REQUIREMENTS ARE AS FOLLOWS UNLESS OTHERWISE APPROVED IN WRITING BY THE DIVISION OF WATER QUALITY.
   A. A RAIN GAUGE SHALL BE MAINTAINED IN GOOD WORKING ORDER ON THE SITE UNLESS ANOTHER RAIN MONITORING DEVICE HAS BEEN APPROVED BY THE PERMITTING AUTHORITY.
   B. A WRITTEN RECORD OF THE DAILY RAINFALL AMOUNTS SHALL BE RETAINED AND ALL RECORDS SHALL BE MADE AVAILABLE TO DWQ OR AUTHORIZED AGENT UPON REQUEST (NOTE: IF NO RAINFALL OCCURRED, THE PERMITTEE MUST RECORD "ZERO").
   C. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. INSPECTION RECORDS MUST BE MAINTAINED FOR EACH INSPECTION EVENT AND FOR EACH MEASURE. AT A MINIMUM, INSPECTION OF MEASURES MUST OCCUR AT THE FREQUENCY INDICATED BELOW:
      I. ALL EROSION AND SEDIMENTATION CONTROL MEASURES MUST BE INSPECTED BY OR UNDER THE DIRECTION OF THE PERMITTEE AT LEAST ONCE EVERY SEVEN CALENDAR DAYS, AND
      II. ALL EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSPECTED BY OR UNDER THE DIRECTION OF THE PERMITTEE WITHIN 24 HOURS AFTER ANY STORM EVENT OF GREATER THAN 0.50 INCHES OF RAIN PER 24 HOUR PERIOD.
      III. TIMES WHEN A DETERMINATION THAT ADVERSE WEATHER CONDITIONS PREVENTED INSPECTIONS SHOULD BE DOCUMENTED ON THE INSPECTION RECORD.
   D. ONCE LAND DISTURBANCE HAS BEGUN ON THE SITE, STORMWATER RUNOFF DISCHARGE OUTFALLS SHALL BE INSPECTED BY OBSERVATION FOR EROSION, SEDIMENTATION AND OTHER STORMWATER \ DISCHARGE CHARACTERISTICS SUCH AS CLARITY, FLOATING SOLIDS, AND OIL SHEENS. INSPECTIONS OF THE OUTFALLS SHALL BE MADE AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT OF GREATER THAN 0.50 INCHES OF RAIN PER 24 HOUR PERIOD.
   E. INSPECTIONS ARE ONLY REQUIRED TO BE MADE DURING NORMAL BUSINESS HOURS. WHEN ADVERSE WEATHER CONDITIONS WOULD CAUSE THE SAFETY OF THE INSPECTION PERSONNEL TO BE IN JEOPARDY, THE INSPECTION CAN BE DELAYED UNTIL IT IS DEEMED SAFE TO PERFORM THESE DUTIES. IF THE INSPECTION CANNOT BE DONE ON THAT DAY, IT MUST BE COMPLETED ON THE FOLLOWING BUSINESS DAY.
   F. TWENTY-FOUR HOUR REPORTING FOR VISIBLE SEDIMENT DEPOSITION
      I. THE PERMITTEE SHALL REPORT TO THE DIVISION OF WATER QUALITY CENTRAL OFFICE OR THE APPROPRIATE REGIONAL OFFICE ANY VISIBLE SEDIMENT BEING DEPOSITED IN ANY STREAM OR WETLAND OR ANY NONCOMPLIANCE WHICH MAY ENDANGER HEALTH OR THE ENVIRONMENT. (SEE SECTION IX OF THIS PERMIT FOR CONTACT INFORMATION.) ANY INFORMATION SHALL BE PROVIDED ORALLY OR ELECTRONICALLY WITHIN 24 HOURS FROM THE TIME THE PERMITTEE BECAME AWARE OF THE CIRCUMSTANCES. VISIBLE DISCOLORATION OR SUSPENDED SOLIDS IN THE EFFLUENT SHOULD BE RECORDED ON THE INSPECTION RECORD AS PROVIDED BELOW.
      II. A WRITTEN SUBMISSION SHALL BE PROVIDED TO THE APPROPRIATE REGIONAL OFFICE OF THE DWQ WITHIN 5 DAYS OF THE TIME THE PERMITTEE BECOMES AWARE OF THE CIRCUMSTANCES. THE WRITTEN SUBMISSION SHALL CONTAIN A DESCRIPTION OF THE SEDIMENT DEPOSITION AND ACTIONS TAKEN TO ADDRESS THE CAUSE OF THE DEPOSITION. THE DIVISION OF WATER QUALITY STAFF MAY WAIVE THE REQUIREMENT FOR A WRITTEN REPORT ON A CASE-BY-CASE BASIS.
   G. RECORDS OF INSPECTIONS MADE DURING THE PREVIOUS 30 DAYS SHALL REMAIN ON THE SITE AND AVAILABLE FOR AGENCY INSPECTORS AT ALL TIMES DURING NORMAL WORKING HOURS, UNLESS THE PERMITTING AUTHORITY PROVIDES A SITE-SPECIFIC EXEMPTION BASED ON UNIQUE SITE CONDITIONS THAT MAKE THIS REQUIREMENT NOT PRACTICAL. OLDER RECORDS MUST BE MAINTAINED FOR A PERIOD OF ONE YEAR AFTER PROJECT COMPLETION AND MADE AVAILABLE UPON REQUEST. THE RECORDS MUST PROVIDE THE DETAILS OF EACH INSPECTION INCLUDING OBSERVATIONS, AND ACTIONS TAKEN IN ACCORDANCE WITH THIS PERMIT. THE PERMITTEE SHALL RECORD THE REQUIRED RAINFALL AND MONITORING OBSERVATIONS ON THE "INSPECTION RECORD FOR ACTIVITIES UNDER STORMWATER GENERAL PERMIT NCG010000" FORM PROVIDED BY THE DIVISION OR A SIMILAR INSPECTION FORM THAT IS INCLUSIVE OF ALL OF THE ELEMENTS CONTAINED IN THE DIVISION'S FORM. ELECTRONIC STORAGE OF RECORDS WILL BE ALLOWED IF APPROVED BY THE PERMITTING AUTHORITY.
   H. INSPECTION RECORDS MUST INCLUDE, AT A MINIMUM, THE FOLLOWING:
      I. CONTROL MEASURE INSPECTIONS: INSPECTION RECORDS MUST INCLUDE AT A MINIMUM:
         1. IDENTIFICATION OF THE MEASURES INSPECTED,
      II. STORMWATER DISCHARGE INSPECTIONS: INSPECTION RECORDS MUST INCLUDE AT A MINIMUM:
         1. IDENTIFICATION OF THE DISCHARGE OUTFALL INSPECTED,
         2. DATE AND TIME OF THE INSPECTION,
         3. NAME OF THE PERSON PERFORMING THE INSPECTION,
         4. EVIDENCE OF INDICATORS OF STORMWATER POLLUTION SUCH AS OIL SHEEN, FLOATING OR SUSPENDED SOLIDS OR DISCOLORATION,
         5. INDICATION OF VISIBLE SEDIMENT LEAVING THE SITE,
         6. ACTIONS TAKEN TO CORRECT/PREVENT SEDIMENTATION AND
         7. DATE OF ACTIONS TAKEN.
      III. VISIBLE SEDIMENTATION FOUND OUTSIDE THE SITE LIMITS: INSPECTION RECORDS MUST INCLUDE:
         1. AN EXPLANATION AS TO THE ACTIONS TAKEN TO CONTROL FUTURE RELEASES,
         2. ACTIONS TAKEN TO CLEAN UP OR STABILIZE THE SEDIMENT THAT HAS LEFT THE SITE LIMITS AND
         3. THE DATE OF ACTIONS TAKEN.
      IV. VISIBLE SEDIMENTATION FOUND IN STREAMS OR WETLANDS: ALL INSPECTIONS SHOULD INCLUDE EVALUATION OF STREAMS OR WETLANDS ONSITE OR OFFSITE (WHERE ACCESSIBLE) TO DETERMINE IF VISIBLE SEDIMENTATION HAS OCCURRED.
   I. VISIBLE STREAM TURBIDITY - IF THE DISCHARGE FROM A SITE RESULTS IN VISIBLE STREAM TURBIDITY, INSPECTION RECORDS MUST RECORD THAT EVIDENCE AND ACTIONS TAKEN TO REDUCE SEDIMENT CONTRIBUTIONS. SITES DISCHARGING TO STREAMS NAMED ON THE STATE'S 303(D) LIST AS IMPAIRED FOR SEDIMENT-RELATED CAUSES MAY BE REQUIRED TO PERFORM ADDITIONAL MONITORING, INSPECTIONS OR APPLICATION OF MORE-STRINGENT MANAGEMENT PRACTICES IF IT IS DETERMINED THAT THE ADDITIONAL REQUIREMENTS ARE NEEDED TO ASSURE COMPLIANCE WITH THE FEDERAL OR STATE IMPAIRED-WATERS CONDITIONS. IF A DISCHARGE COVERED BY THIS PERMIT ENTERS A STREAM SEGMENT THAT IS LISTED ON THE IMPAIRED STREAM LIST FOR SEDIMENT-RELATED CAUSES, AND A TOTAL MAXIMUM DAILY LOAD (TMDL) HAS BEEN PREPARED FOR THOSE POLLUTANTS, THE PERMITTEE MUST IMPLEMENT MEASURES TO ENSURE THAT THE DISCHARGE OF POLLUTANTS FROM THE SITE IS CONSISTENT WITH THE ASSUMPTIONS AND MEETS THE REQUIREMENTS OF THE APPROVED TDML. THE DWQ 303(D) LIST CAN BE FOUND AT:
      HTTP://H20.ENR.STATE.NC.ES/TMDL/GENERAL_303D.HTM
6. IN THE EVENT OF A CONFLICT BETWEEN THE REQUIREMENTS OF THE SEDIMENTATION POLLUTION CONTROL ACT, THE SUBMITTED PLAN AND/OR THE CONTRACT SPECIFICATIONS, THE MORE RESTRICTIVE REQUIREMENT SHALL PREVAIL. THE LAND-DISTURBING ACTIVITY SHALL BE CONDUCTED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN.
7. THE LATEST APPROVED EROSION AND SEDIMENTATION CONTROL PLAN WILL BE USED DURING PERIODIC UNANNOUNCED INSPECTIONS TO DETERMINE COMPLIANCE AND A COPY OF THE PLAN MUST BE ON FILE AT THE JOB SITE. IF IT IS DETERMINED THAT THE IMPLEMENTED PLAN IS INADEQUATE, THIS OFFICE MAY REQUIRE THE INSTALLATION OF ADDITIONAL MEASURES AND/OR THAT THE PLAN BE REVISED TO COMPLY WITH STATE LAW.
8. THE CERTIFICATE OF PLAN APPROVAL MUST BE POSTED AT THE PRIMARY ENTRANCE TO THE JOB SITE AND REMAIN UNTIL THE SITE IS PERMANENTLY STABILIZED.
9. A BUFFER ZONE, SUFFICIENT TO RESTRAIN VISIBLE SEDIMENTATION WITHIN THE FIRST 25% OF THE WIDTH CLOSEST TO THE LAND DISTURBANCE, MUST BE PROVIDED AND MAINTAINED BETWEEN THE LAND-DISTURBING ACTIVITY AND ANY ADJACENT PROPERTY OR WATERCOURSE.
10. IN ORDER TO COMPLY WITH THE INTENT OF THE ACT, THE SCHEDULING OF THE LAND-DISTURBING ACTIVITIES IS TO BE SUCH THAT BOTH THE AREA OF EXPOSURE AND THE TIME BETWEEN LAND DISTURBANCE AND PROVIDING GROUND COVER IS MINIMIZED.
11. UNLESS A TEMPORARY, MANUFACTURED, LINING MATERIAL HAS BEEN SPECIFIED, A CLEAN STRAW MULCH MUST BE APPLIED, AT A MINIMUM RATE OF 2 TONS/ACRE, TO ALL SEEDED AREAS. THE MULCH MUST COVER AT LEAST 80% OF THE SEEDED AREA AFTER IT IS EITHER TACKED WITH AN ACCEPTABLE TACKING MATERIAL, OR CRIMPED IN PLACE.
12. ADEQUATE AND APPROPRIATE MEASURES MUST BE PROPERLY INSTALLED DOWNSTREAM, WITHIN THE LIMITS OF DISTURBANCE, OF ANY LAND-DISTURBING ACTIVITY TO PREVENT SEDIMENT FROM LEAVING THE LIMITS OF DISTURBANCE, ENTERING EXISTING DRAINAGE SYSTEMS, IMPACTING AN ON-SITE NATURAL WATERCOURSE OR ADJOINING PROPERTY.
13. SILT FENCES, INCLUDING OUTLET SECTIONS, ARE NOT APPROPRIATE FOR AREAS OF CONCENTRATED FLOW SUCH AS SWALES OR DITCHES. PROVIDE ADEQUATE AND APPROPRIATE MEASURES FOR ALL CONSTRUCTION WITHIN AREAS OF CONCENTRATED FLOW.
14. ALL SLOPES AFFECTED DURING THE INSTALLATION/CLEANUP PROCESS MUST BE PROVIDED ON A GRADE THAT CAN BE RETAINED BY VEGETATIVE OR OTHER APPROPRIATE COVER.
15. AT ANY GIVEN TIME WITHIN THE PROJECT AREA, THE MAXIMUM AFFECTED, EXPOSED AND "UNRESTORED" AREA IS LIMITED TO THE LESSER OF 2 (TWO) ACRES OR THE EFFECTIVE LENGTH ALONG ANY GIVEN ROAD SECTION LIMITED TO THE LESSER OF 2 (TWO) ACRES OR THE EFFECTIVE LENGTH ALONG ANY GIVEN ROAD SECTION (APPROXIMATELY 2 MILES). A ROAD SECTION BEING DEFINED AS A CONTINUOUS SECTION OF ROAD HAVING THE SAME SR NUMBER OR ROAD NAME.
16. INSTALL SILT FENCE OVER AND AROUND THE TOP OF EXISTING PIPES AND INLETS AT DISTURBED AREAS.
17. ALL DISTURBED AREAS SHALL BE GRADED TO MINIMIZE RUNOFF.
18. INSTALL SILT FENCE AROUND SPOIL PILES AND ALONG TRENCHES TO MINIMIZE SEDIMENT FROM ENTERING ROADSIDE DITCHES AND EXISTING DRAINAGE OUTLETS.
19. PROVIDE EROSION CONTROL MEASURES AROUND STOCK/WASTE PILES AND STAGING AREAS AS NEEDED OR AS DIRECTED BY ENGINEER.
20. PROTECT STORM PIPE INLETS FROM SEDIMENT RUNOFF FROM LAND DISTURBING ACTIVITIES WITH SILT FENCE, STONE CHECK DAM, OR ABC FILTER AS APPROPRIATE FOR SITE CONDITIONS.
21. REPLACE DISTURBED STORM PIPE OUTLET PROTECTION WITH EQUAL OR GREATER AMOUNT OF RIP-RAP WITHIN 15 DAYS OF DISTURBANCE -OR AS REQUIRED BY NCDENR-DEMLR.
22. WHERE THE AREA AROUND AN OUTLET IS DISTURBED AND NO OUTLET PROTECTION EXISTS, CLASS "1" RIP-RAP SHALL BE PLACED AROUND PIPE OUTLET AS DIRECTED BY THE ENGINEER.
23. PROVIDE EROSION CONTROL MATTING WHERE INDICATED UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
24. PROVIDE PERMANENT SEEDING IN ACCORDANCE WITH THE SEEDING SCHEDULE.
25. REPORT EROSION CONTROL DEFICIENCIES TO THE ENGINEER IMMEDIATELY.
26. ALL EROSION AND SEDIMENTATION CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL ALL SEEDING IS ESTABLISHED AND CONSTRUCTION AREAS HAVE BEEN STABILIZED.
27. CONTRACTOR SHALL INSPECT AND MAINTAIN AS NEEDED ALL EROSION CONTROL DEVICES ON A WEEKLY BASIS AND AFTER EACH MAJOR STORM EVENT. WHEN INSPECTION REVEALS THE TRAP TO BE REDUCED TO 50% OF DESIGN CAPACITY OR THE DEVICE TO BE DEFICIENT IN ITS INTENDED PURPOSE SUCH AS FABRIC DETERIORATION FOR SILT FENCES THE CONTRACTOR SHALL RESTORE THE DEVICE TO ITS ORIGINAL CONDITION. FAILURE TO KEEP ALL EROSION CONTROL DEVICES IN PROPER WORKING ORDER MAY RESULT IN A STOP WORK ORDER OR CIVIL PENALTIES UP TO $5,000.00 PER DAY OF VIOLATION.

REVISIONS:

REV.	DESCRIPTION	DATE	APPD

Greenville Utilities

GENERAL NOTES AND EROSION CONTROL

GREENVILLE UTILITIES COMMISSION
GCP-93 GREENVILLE SOUTHWEST BYPASS
NATURAL GAS MAIN RELOCATION

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NORTH CAROLINA PROFESSIONAL SEAL 18795 ENGINEER FREDERICK L. STOTT

7/17/17

SURVEY		DRAFT	JML
DESIGN	FS	CHECK	FS
PROJECT No.	2016004		
DRAWING No.	W-3674		
SCALE:	AS NOTED		
SHEET No.	T2	OF	12

RELEASED FOR BIDDING

P:\Auto\GUC - Southwest Bypass Nc Gold Gas Main Relocation - 2016004\CAD_DWG\W3674 - GUC SW Bypass Gas Relocate.dwg-T2, LUSZCKA17, Jul-17 @ 3:48:29 PM

BILL OF MATERIALS

Item	Plan Qty.	Unit	Specification
8" PE	9,000	LF	ASTM D2513, 0.784" min. wall thickness, 8.625" o.d., SDR 11, PE 2708, 40 lf sticks, MARKED DOT SECT. 192.63, ENDS CAPPED
8" PE Cap	2	EA	ASTM D2513 & ASTM D2683, Butt fuse, injection molded, SDR 11, PE 2406, ASTM MARKED DOT SECT. 192.63
6" Valve Box	5	EA	Flush Mounted Valve Box W/ "GAS" Lid
Cocrete Collar	5	EA	Pre-Cast Concrete Collar
8" 45 deg ELL	30	EA	ASTM D2513 & ASTM D2683, Butt fuse, injection molded, SDR 11, PE 2406, ASTM MARKED DOT SECT. 192.63
8" x 6" Reducer	2	EA	ASTM D2513 & ASTM D2683, Butt fuse, injection molded, SDR 11, PE 2406, ASTM MARKED DOT SECT. 192.63
6" x 4" Reducer	2	EA	ASTM D2513 & ASTM D2683, Butt fuse, injection molded, SDR 11, PE 2406, ASTM MARKED DOT SECT. 192.63
4" Elecrofusion Coupling	4	EA	ASTM D2513 & ASTM D2683, injection molded, SDR 11, PE 2406
4" PE	20	LF	ASTM D2513, .391" min. wall thickness, 4.5" o.d., SDR 11.5, PE 2406, 40 LF sticks, MARKED DOT SECT. 192.63, ENDS CAPPED
4" PE Ball Valve	2	EA	Polyethylene ball valve body must be PE2406, min. pressure rating 80 PSIG, valve stub ends prepared to butt fusion with SDR11.5 PE pipe, must meet or exceed requirements of USDOT 49CFR-part 192 for natural gas distribution.
8" x 2" High Vol. Tapping tee	1	EA	ASTM D2513 & ASTM D2683, SDR 11, PE2406
2" PE	10	LF	ASTM D2513, .216" min. wall thickness, 2.375" o.d., SDR 11, PE 2406, 500 LF coil, MARKED DOT SECT. 192.63, ENDS CAPPED
2" Elecrofusion Coupling	2	EA	ASTM D2513 & ASTM D2683, injection molded, SDR 11, PE 2406
2" PE Ball Valve	1	EA	Polyethylene ball valve body must be PE2406, min. pressure rating 80 PSIG, valve stub ends prepared to butt fusion with SDR11.5 PE pipe, must meet or exceed requirements of USDOT 49CFR-part 192 for natural gas distribution.
8" 90 deg ELL	8	EA	ASTM D2513 & ASTM D2683, Butt fuse, injection molded, SDR 11, PE 2406, ASTM MARKED DOT SECT. 192.63
8" PE Tee	3	EA	ASTM D2513 & ASTM D2683, Butt fuse, injection molded, SDR 11, PE 2406, ASTM MARKED DOT SECT. 192.63
Pipeline Marker	2	EA	Fiberglass Pipeline marker
8" PE Valve	2	EA	Polyethylene ball valve body must be PE2406, min. pressure rating 80 PSIG, valve stub ends prepared to butt fusion with SDR11.5 PE pipe, must meet or exceed requirements of USDOT 49CFR-part 192 for natural gas distribution.
8" Electrofusion Coupling	25	EA	ASTM D2513 & ASTM D2683, injection molded, SDR 11, PE 2406
8" Transition Fitting	1	EA	SDR 11, 0.322" min. wall
8" Bottom Out Stopper	1	EA	Mueller, Model H-17260

EASMENT SUMMARY

PARCEL 1 MINGES BUILDING ACCOUNT, LLC PARCEL NUMBER: 65284 DB 1344 / PG 202 MB 049 / PG 006 STATUS: EASEMENT RECORDED DB 3555 / PG 348 NO SPECIAL CONDITIONS OR REQUIREMENTS	PARCEL 10 RAY EDWARDS, ET AL PARCEL NUMBER: 07377 DB 062 / PG 247 MB 003 / PG 232 TRACTS NO. 2 &3 STATUS: PUE UNDER NEGOTIATION DB _____ / PG _____ NO SPECIAL CONDITIONS OR REQUIREMENTS	PARCEL 16 CURCELIA COLLINS HEIRS (NCDOT OWNED) PARCEL NUMBER: 06181 DB 2615 / PG 848 MB 71/ PG 145 STATUS: ENCROACHMENT RECORDED DB 3463 / PG 344 UTILITY ENCROACHMENT REQUIRED	PARCEL 23 BURNEY LAVERNE HAWKINS PARCEL NUMBER: 52212 DB 2972 / PG 490 MB 511 / PG 210 STATUS: EASEMENT RECORDED DB 3555 / PG 348 NO SPECIAL CONDITIONS OR REQUIREMENTS	PARCEL 31 S&K PROPERTIES (NCDOT OWNED) PARCEL NUMBER: 34706 DB 969 / PG 416 MB 52/ PG 73 STATUS: ENCROACHMENT CONDEMNED DB 3442 / PG 823 UTILITY ENCROACHMENT REQUIRED
PARCEL 2 TOWN OF AYDEN PARCEL NUMBER: 35973 DB F48 / PG 046 STATUS: EASEMENT RECORDED DB 3570 / PG 71 NO SPECIAL CONDITIONS OR REQUIREMENTS	PARCEL 11 RUBEN HASSELL, JR PARCEL NUMBER: 10563 DB 297 / PG 385 MB 12 / PG 89 STATUS: PUE RECORDED DB 3461 / PG 214-217 NO SPECIAL CONDITIONS OR REQUIREMENTS	PARCEL 18 GREGORY L. ANDERSON, ET UX PARCEL NUMBER: 26206 DB 832 / PG 750 MB 38 / PG 157 STATUS: PUE UNDER NEGOTIATION DB _____ / PG _____ NO SPECIAL CONDITIONS OR REQUIREMENTS	PARCEL 27 BILLY P. MCLAWHORN, ET UX PARCEL NUMBER: 16222 DB P40 / PG 182 MB 021 / PG 050 TRACT NO. 1 STATUS: EASEMENT UNDER NEGOTIATION DB _____ / PG _____ NO SPECIAL CONDITIONS OR REQUIREMENTS	PARCEL 31 S&K PROPERTIES (NCDOT OWNED) PARCEL NUMBER: 49615 DB 1356 / PG 150 MB 540/ PG 308 STATUS: ENCROACHMENT CONDEMNED DB 3442 / PG 823 UTILITY ENCROACHMENT REQUIRED
PARCEL 3 CAROLINA CLASSICS PARCEL NUMBER: 44758 DB 126 / PG 090 STATUS: PUE RECORDED DB 3543 / PG 378-380 NO SPECIAL CONDITIONS OR REQUIREMENTS	PARCEL 13 MARTIN VAN BUREN STEWART PARCEL NUMBER: 21173 DB L40 / PG 354 MB 12 / PG 89 STATUS: PUE RECORDED DB 3526 / PG 625-630 NO SPECIAL CONDITIONS OR REQUIREMENTS	PARCEL 18 GREGORY L. ANDERSON, ET UX PARCEL NUMBER: 26206 DB 832 / PG 750 MB 38 / PG 157 STATUS: EASEMENT UNDER NEGOTIATION DB _____ / PG _____ NO SPECIAL CONDITIONS OR REQUIREMENTS	PARCEL 28 HAPPY TRAIL FARMS, LLC PARCEL NUMBER: 08364 DB 3075 / PG 707 MB 33 / PG 199 STATUS: EASEMENT UNDER NEGOTIATION DB _____ / PG _____ NO SPECIAL CONDITIONS OR REQUIREMENTS	PARCEL 32 COX BROTHERS PARCEL NUMBER: 25615 DB 303 / PG 591 STATUS: PUE CONDEMNED DB 3463 / PG 333 NO SPECIAL CONDITIONS OR REQUIREMENTS
PARCEL 5 GREGORY STEWART (NCDOT OWNED) PARCEL NUMBER: 30814 DB 2014E / PG 553 STATUS: ENCROACHMENT CONDEMNED DB 3488/ PG 186 UTILITY ENCROACHMENT REQUIRED	PARCEL 14 RICHARD W. HARDY HEIRS PARCEL NUMBER: 09870 MB 12 / PG 69 STATUS: PUE UNDER NEGOTIATION DB _____ / PG _____ NO SPECIAL CONDITIONS OR REQUIREMENTS	PARCEL 19 LEVI G. WORTHINGTON HEIRS PARCEL NUMBER: 25843 DB Z35 / PG 175 DB A38 / PG 88 MB 38 / PG 157 STATUS: EASEMENT RECORDED DB 3572 / PG 500 NO SPECIAL CONDITIONS OR REQUIREMENTS	PARCEL 29 JOYCE BYRUM McLAWHORN PARCEL NUMBER: 41347 DB S52 / PG 794 STATUS: EASEMENT RECORDED DB 3570 / PG 67 NO SPECIAL CONDITIONS OR REQUIREMENTS	PARCEL 33 COX FARM PROPERTIES, LLC PARCEL NUMBER: 05088 DB 1208 / PG 445 STATUS: PUE CONDEMNED DB 3460 / PG 801 NO SPECIAL CONDITIONS OR REQUIREMENTS
PARCEL 6 DAN STEWART (NCDOT OWNED) PARCEL NUMBER: 21167 DB 04 / PG 275 MB 003/ PG232 TRACT NO. 1 STATUS: ENCROACHMENT CONDEMNED DB 3498/ PG 577 UTILITY ENCROACHMENT REQUIRED	PARCEL 15 DELORES KING HECTOR PARCEL NUMBER: 12998 DB G50 / PG 134 MB 12 / PG 89 STATUS: PUE RECORDED DB 3537 / PG 377-381 NO SPECIAL CONDITIONS OR REQUIREMENTS	PARCEL 20 CORFAC INDUSTRIES, LLC PARCEL NUMBER: 47979 DB 2741 / PG 616 MB 38 / PG 157 STATUS: EASEMENT UNDER NEGOTIATION DB _____ / PG _____ NO SPECIAL CONDITIONS OR REQUIREMENTS	PARCEL 30 ANN B. MACGILL (NCDOT OWNED) PARCEL NUMBER: 01166 DB 2988 / PG 119 MB 49/ PG 21 STATUS: ENCROACHMENT CONDEMNED DB 3442 / PG 800 UTILITY ENCROACHMENT REQUIRED	PARCEL 33 COX FARM PROPERTIES, LLC PARCEL NUMBER: 05088 DB 1208 / PG 445 STATUS: EASEMENT UNDER NEGOTIATION DB _____ / PG _____ NO SPECIAL CONDITIONS OR REQUIREMENTS

REVISIONS:

REV.	DESCRIPTION	DATE	APPD

Greenville Utilities

BILL OF MATERIALS AND EASEMENT SUMMARY SHEET

GREENVILLE UTILITIES COMMISSION
GCP-93 GREENVILLE SOUTHWEST BYPASS
NATURAL GAS MAIN RELOCATION

PITT COUNTY NORTH CAROLINA

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NORTH CAROLINA PROFESSIONAL SEAL 17695 ENGINEER FREDERICK L. STONE

7/17/17

SURVEY		DRAFT	JML
DESIGN	FS	CHECK	FS
PROJECT No.	2016004		
DRAWING No.	W-3674		
SCALE:	AS NOTED		
SHEET No.		OF	12

T3

RELEASED FOR BIDDING

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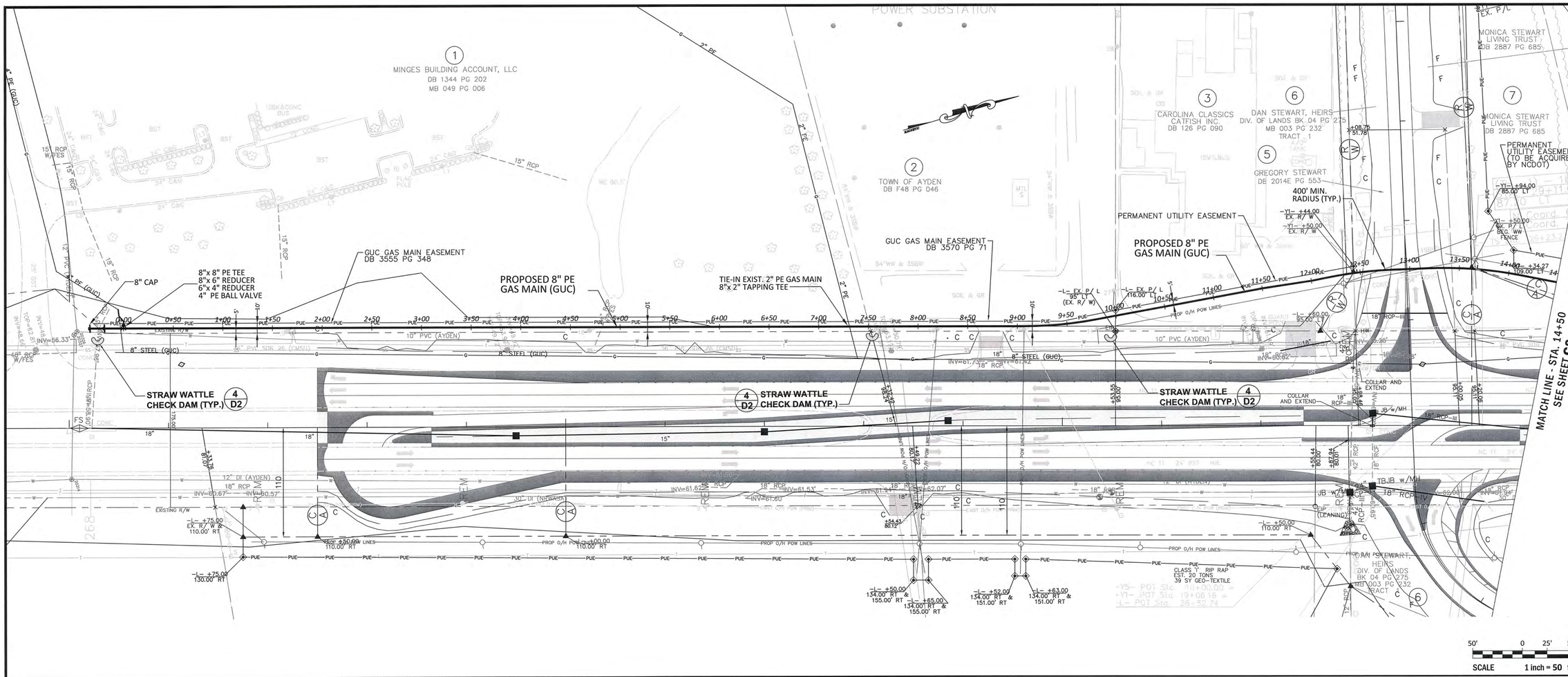

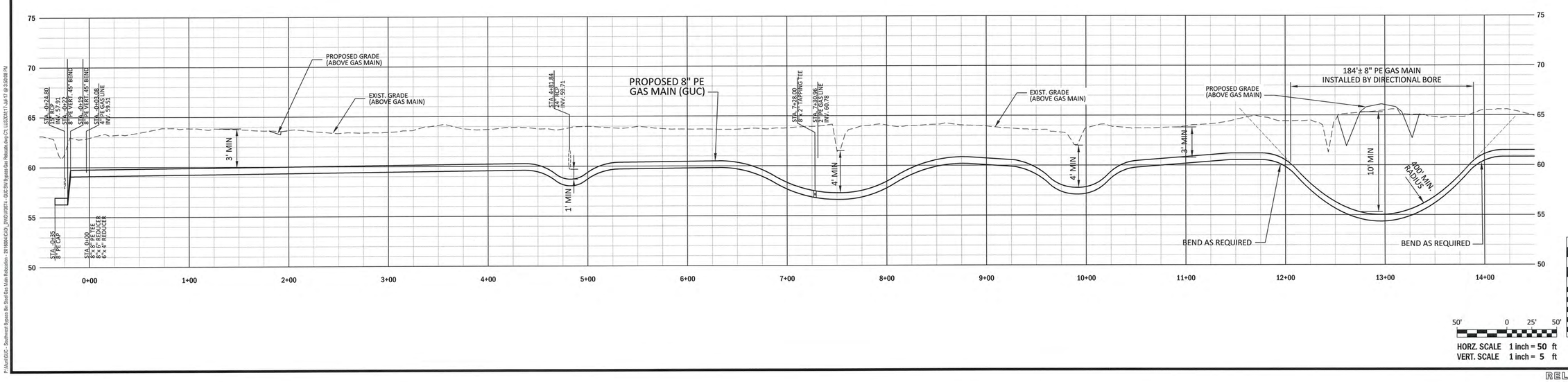

REVISIONS:

REV.	DESCRIPTION	DATE	APPD

Greenville Utilities

PLAN-PROFILE - STA. 0+00 TO STA. 14+50

GREENVILLE UTILITIES COMMISSION
GCP-93 GREENVILLE SOUTHWEST BYPASS
NATURAL GAS MAIN RELOCATION

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7/7/17

SURVEY	NCDOT	DRAFT	LC/ML
DESIGN	FS	CHECK	FS
PROJECT No.	2016004		
DRAWING No.	W-3674		
SCALE:	AS NOTED		
SHEET No.	C1	OF	12

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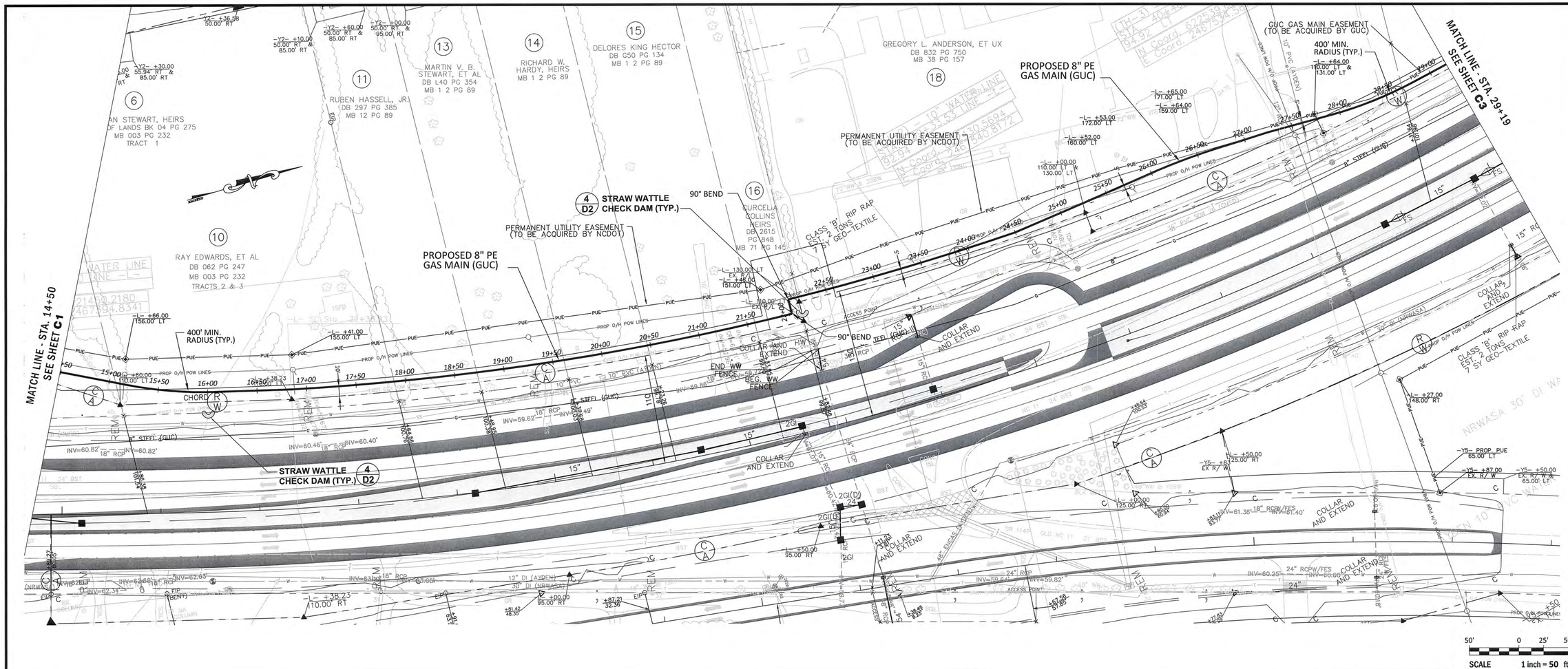

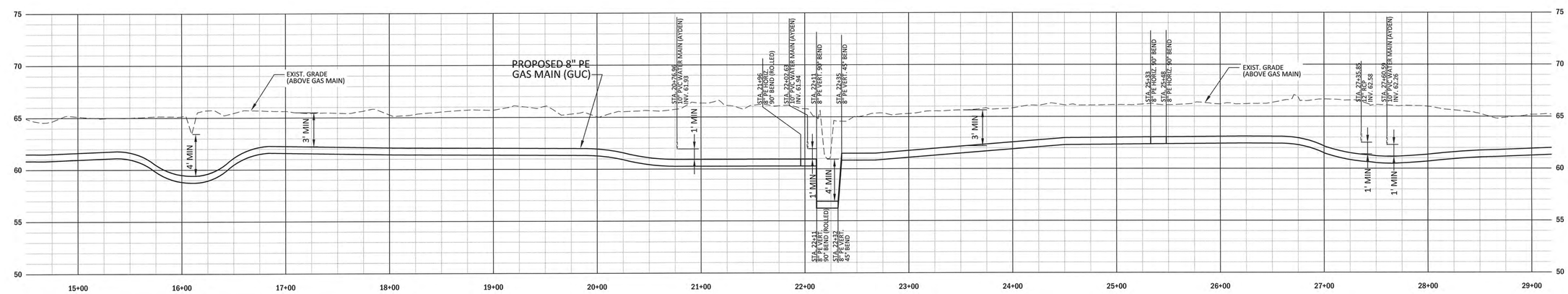

REVISIONS:

REV.	DESCRIPTION	DATE	APPD

Greenville Utilities

PLAN-PROFILE - STA. 14+50 TO STA. 29+19

GREENVILLE UTILITIES COMMISSION
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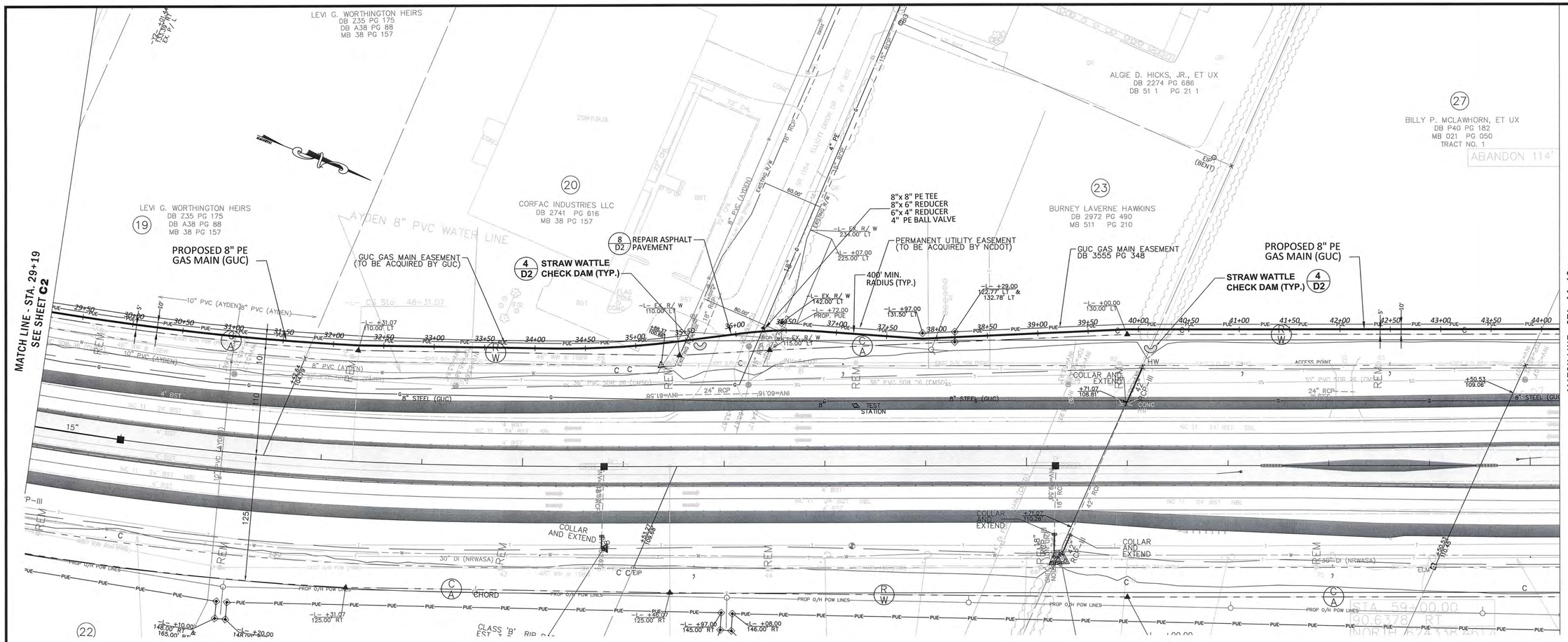
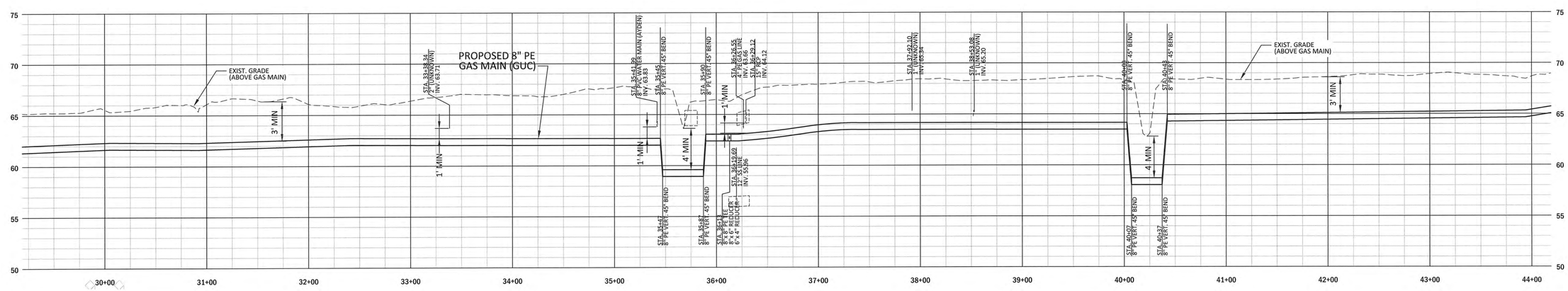
7/7/17

SURVEY	NCDOT	DRAFT	LC/ML
DESIGN	FS	CHECK	FS
PROJECT No.	2016004		
DRAWING No.	W-3674		
SCALE:	AS NOTED		
SHEET No.	C2	OF	12

RELEASED FOR BIDDING





REVISIONS:

REV.	DESCRIPTION	DATE	APPD

Greenville Utilities

PLAN-PROFILE - STA. 29+19 TO STA. 44+19

GREENVILLE UTILITIES COMMISSION
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7/17/17

SURVEY	NCDOT	DRAFT	LC/ML
DESIGN	FS	CHECK	FS
PROJECT No.	2016004		
DRAWING No.	W-3674		
SCALE:	AS NOTED		
SHEET No.	C3	OF	12

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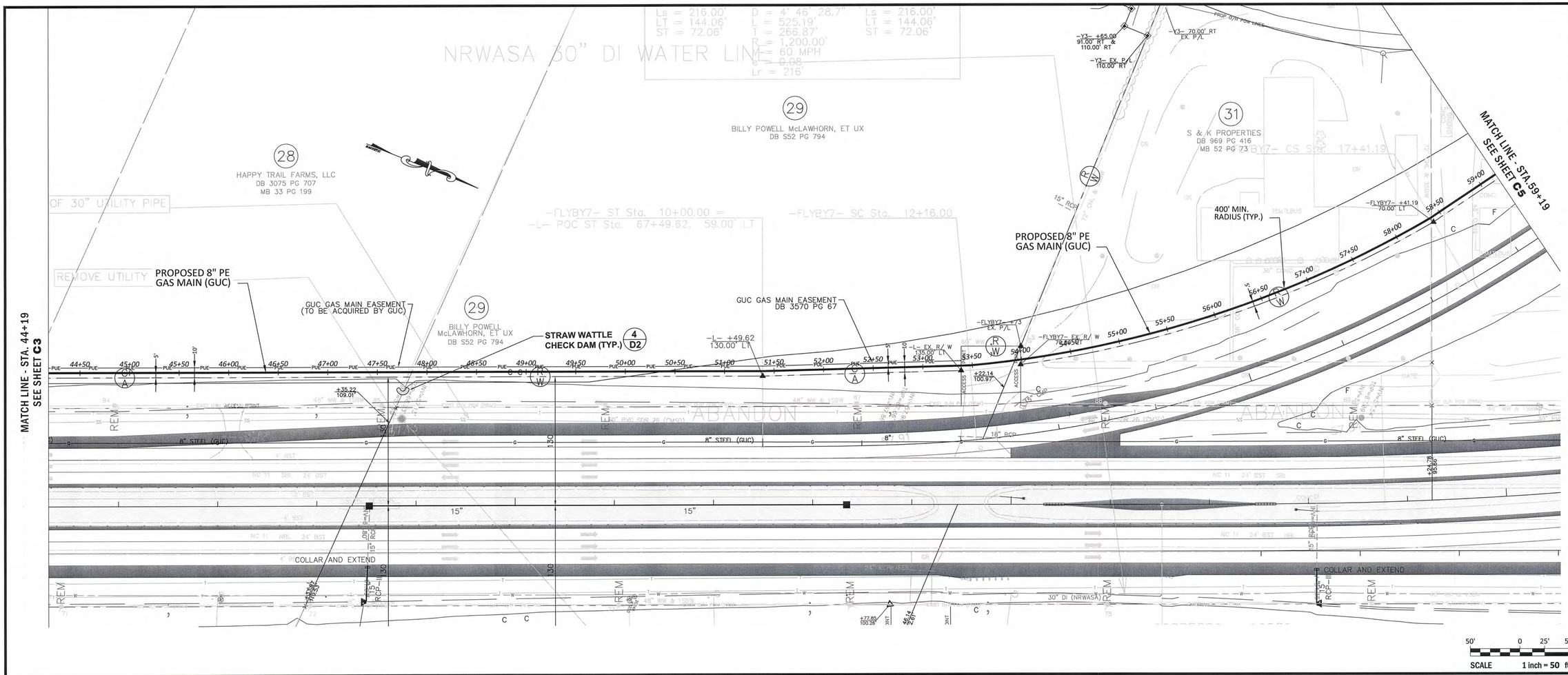

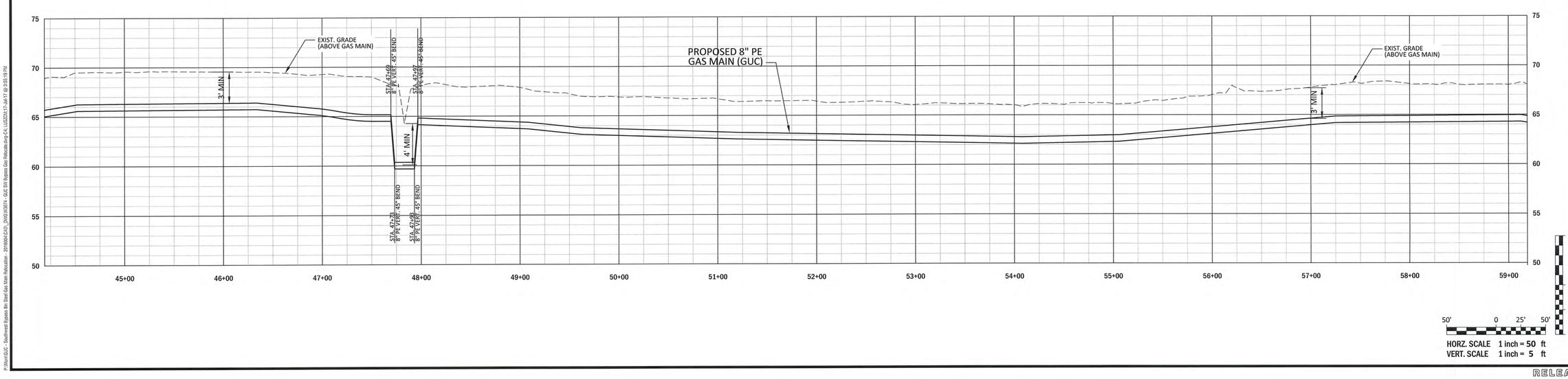

REVISIONS:

REV.	DESCRIPTION	DATE	APPD

Greenville Utilities

PLAN-PROFILE - STA. 44+19 TO STA. 59+19

GREENVILLE UTILITIES COMMISSION
GCP-93 GREENVILLE SOUTHWEST BYPASS
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NORTH CAROLINA PROFESSIONAL SEAL 17659 ENGINEER FREDERICK L. SUTTON

7/17/17

SURVEY	NCDOT	DRAFT	LC/ML
DESIGN	FS	CHECK	FS
PROJECT No.	2016004		
DRAWING No.	W-3674		
SCALE:	AS NOTED		
SHEET No.	C4	OF	12

RELEASED FOR BIDDING

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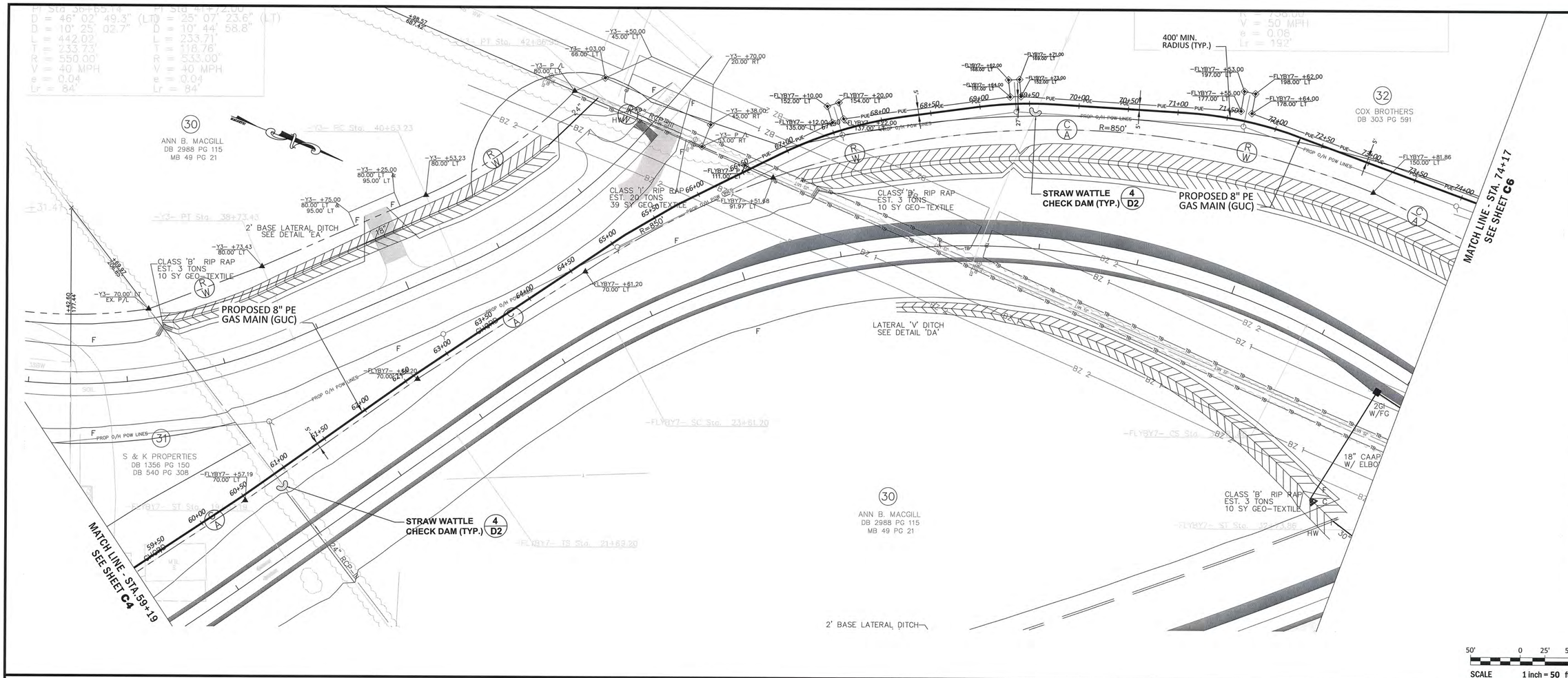

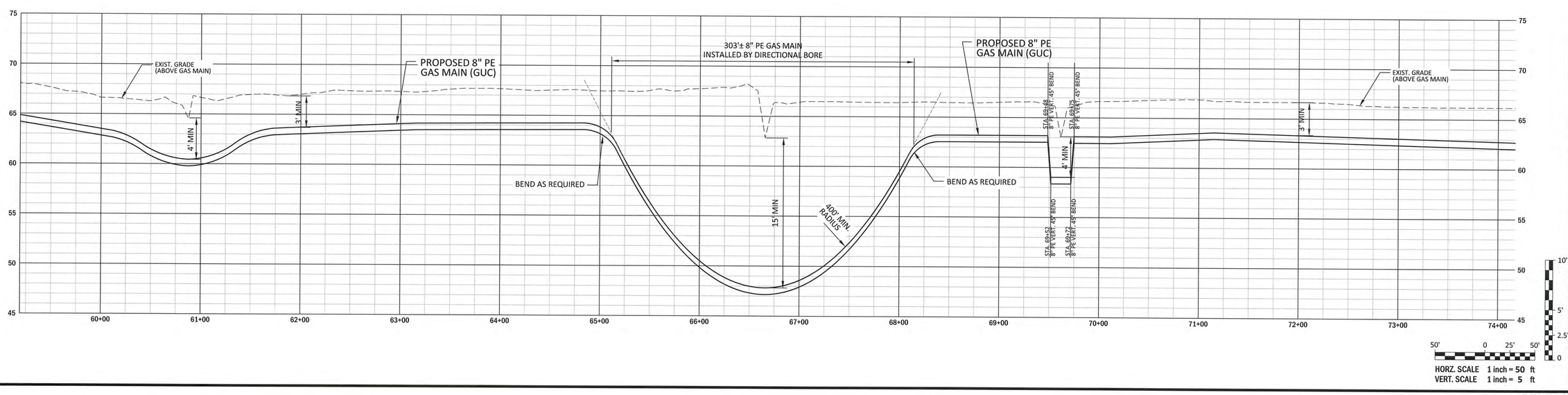

REVISIONS:

REV.	DESCRIPTION	DATE	APPD

Greenville Utilities

PLAN-PROFILE - STA. 59+19 TO STA. 74+17

GREENVILLE UTILITIES COMMISSION
GCP-93 GREENVILLE SOUTHWEST BYPASS
NATURAL GAS MAIN RELOCATION

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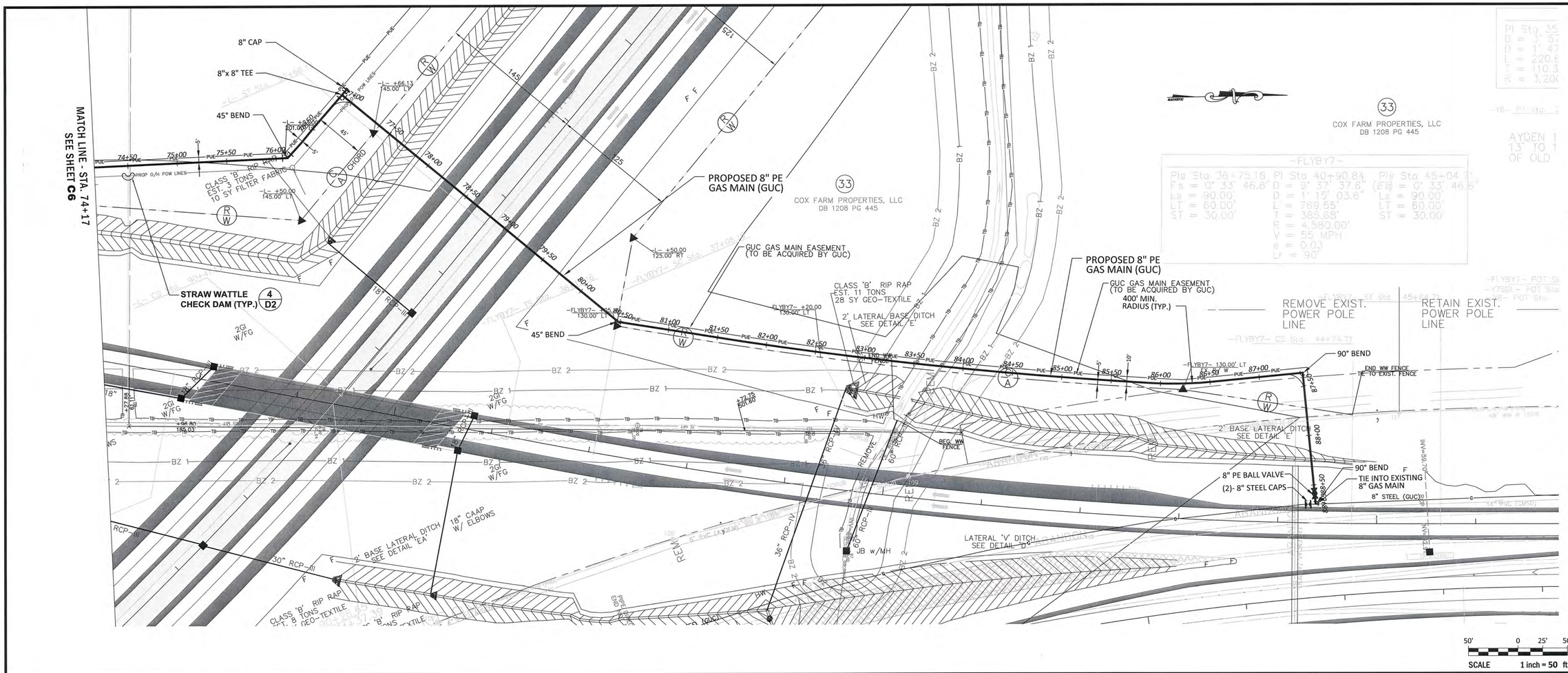
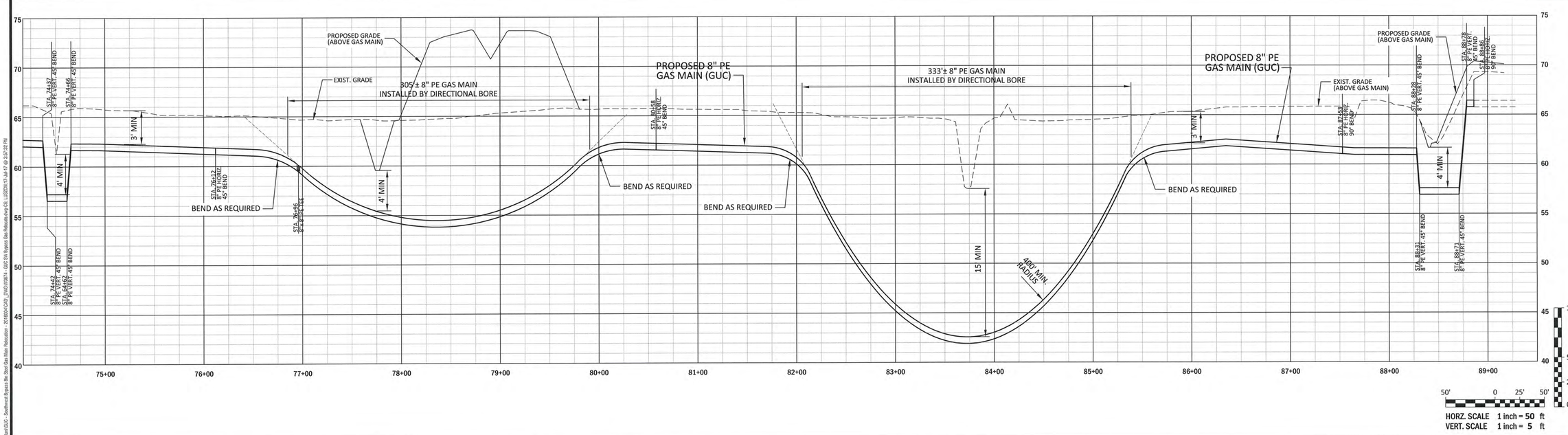
NORTH CAROLINA PROFESSIONAL SEAL 17695 ENGINEER FREDERICK L. STOW
7/17/17

SURVEY	NCDOT	DRAFT	LC/ML
DESIGN	FS	CHECK	FS
PROJECT No.	2016004		
DRAWING No.	W-3674		
SCALE:	AS NOTED		
SHEET No.	C5	OF	12

RELEASED FOR BIDDING





REVISIONS:

REV.	DESCRIPTION	DATE	APPD

Greenville Utilities

PLAN-PROFILE - STA. 74+17 TO END

GREENVILLE UTILITIES COMMISSION
GCP-93 GREENVILLE SOUTHWEST BYPASS
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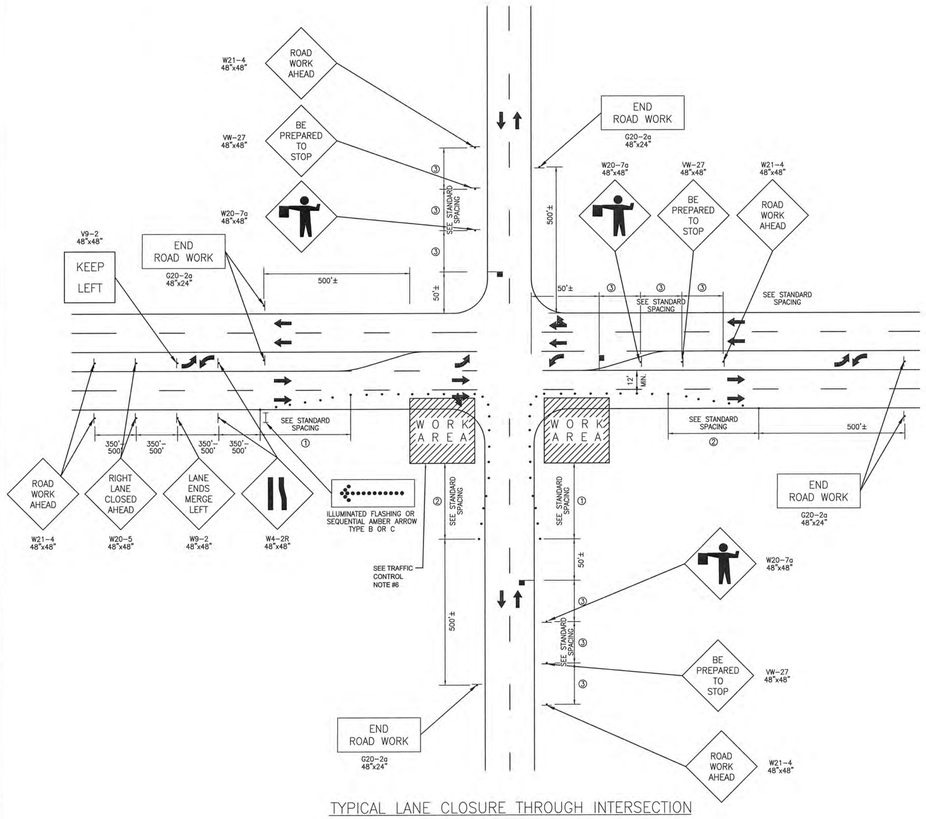
NORTH CAROLINA PROFESSIONAL SEAL 17696 ENGINEER PATRICK L. STOTTS

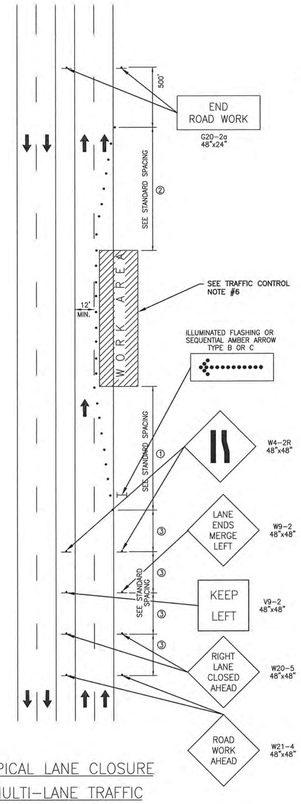
7/7/17

SURVEY	NCDOT	DRAFT	LC/ML
DESIGN	FS	CHECK	FS
PROJECT No.	2016004		
DRAWING No.	W-3674		
SCALE:	AS NOTED		
SHEET No.	C6	OF	12

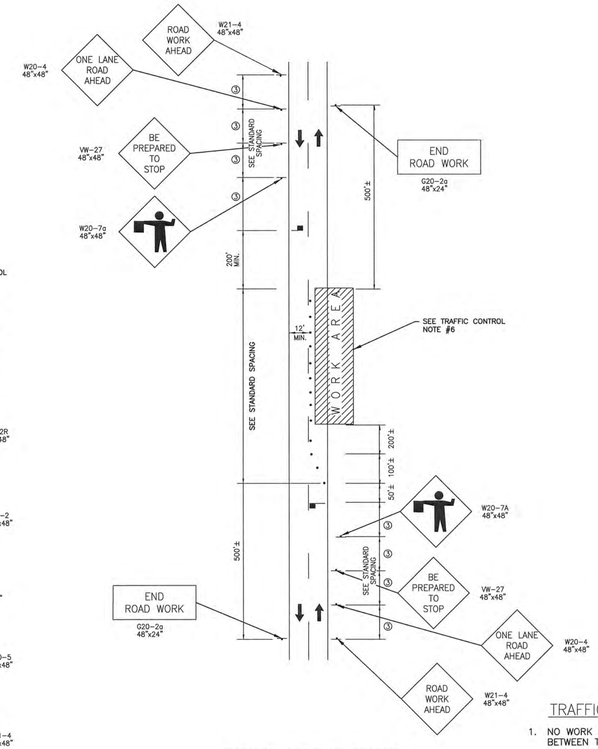
RELEASED FOR BIDDING



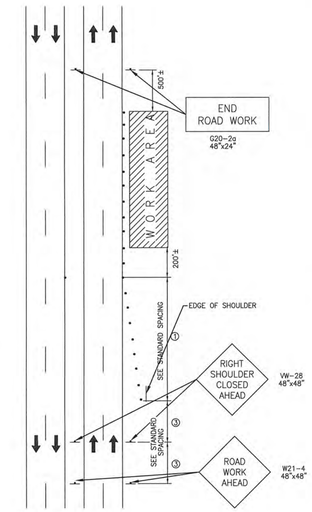
TYPICAL LANE CLOSURE THROUGH INTERSECTION



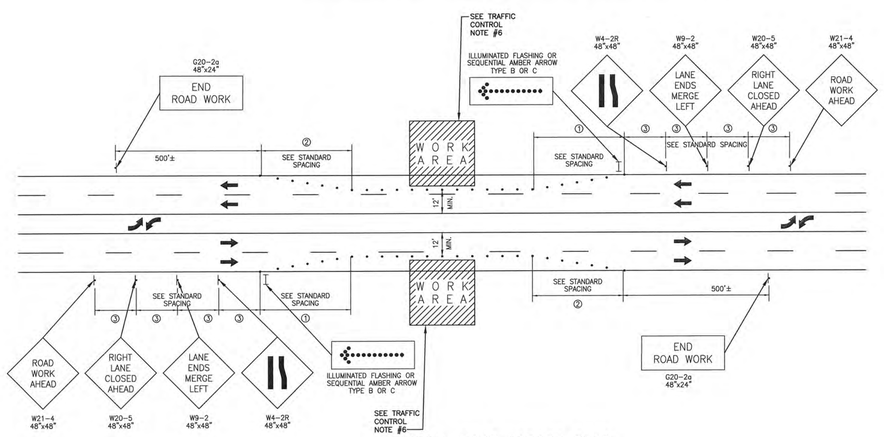
TYPICAL LANE CLOSURE
MULTI-LANE TRAFFIC



TYPICAL LANE CLOSURE
SINGLE LANE TRAFFIC



TYPICAL SHOULDER CLOSURE



TYPICAL BORE ACROSS ROAD

LEGEND

- WORK AREA
- DIRECTION OF TRAFFIC
- TEMPORARY WARNING SIGN
- CHANNELING DEVICE (BARREL OR CONE)
- FLAGGER STATION
- * LT. & RT. SIGNS REQ'D. WHERE MEDIAN EXCEEDS 8 FT.

STANDARD SPACING

SPACE TYPE	35 MPH	45 MPH
BARRELS – TRAVELWAY SPACING	40'	80'
BARRELS – TRAVELWAY SPACING	20'	40'
① ENTRANCE TAPER	245'	540'
② EXIT TAPER	80'	80'
③ SIGN SPACING	350'–500'	350'–500'

TRAFFIC CONTROL NOTES

1. NO WORK SHALL BE DONE WITHIN 300 FEET OF PRIMARY ROAD INTERSECTIONS BETWEEN THE HOURS OF 7:00 A.M. – 9:00 A.M. AND 4:00 P.M. – 6:00 P.M.
2. UNLESS SPECIAL PERMISSION HAS BEEN GRANTED BY ANY AND ALL CONTROLLING AUTHORITIES, ALL LANES MUST BE RESTORED TO NORMAL WIDTHS AT THE CONCLUSION OF EACH CONSTRUCTION DAY.
3. CHANNELIZING DEVICES MUST SEPARATE THE WORK AREA FROM THE TRAVELED WAY AND BE EXTENDED TO WHERE THEY ARE VISIBLE TO ONCOMING TRAFFIC.
4. SHOULD SPECIAL PERMISSION BE GRANTED TO EXTEND WORKING HOURS SUCH THAT CONSTRUCTION IS CARRIED ON AFTER SUNSET OR BEFORE SUNRISE, THE CONTRACTOR SHALL PROVIDE:
   A. FLOODLIGHTS TO MARK FLAGGER STATIONS.
   B. STEADY–BURN WARNING LIGHTS ON CHANNELIZING DEVICES.
   C. BLINKING LIGHTS ON WARNING SIGNS.
5. ALL TRAFFIC CONTROL METHODS AND DEVICES SHALL CONFORM TO THE MOST CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREET AND HIGHWAYS ISSUED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION AND THE MOST CURRENT NORTH CAROLINA WORK AREA PROTECTION MANUAL.
6. A TRUCK WITH EITHER AN ARROW BOARD OPERATING IN THE CAUTION MODE, OR AT LEAST ONE ROTATING AMBER LIGHT OR HIGH INTENSITY AMBER STROBE LIGHT SHALL BE PARKED 50'–100' IN ADVANCE OF THE FIRST WORK CREW. WHEN POSTED SPEED LIMIT IS 45 MPH OR GREATER, A TRUCK MOUNTED ATTENUATOR SHALL BE USED.
7. THE CONTRACTOR IS RESPONSIBLE FOR REPLACEMENT OF ANY PAVEMENT MARKINGS DAMAGED BY CONSTRUCTION.
8. ACCESS TO ALL PARCELS AFFECTED BY CONSTRUCTION SHALL BE MAINTAINED AT ALL TIMES.
9. THE CONTRACTOR SHALL OBTAIN WRITTEN CONSENT FROM THE CONTROLLING AUTHORITY PRIOR TO CLOSING ONE LANE OF A TWO LANE ROADWAY.
10. THIS PLAN IS PROVIDED BY GREENVILLE UTILITIES COMMISSION IN AN EFFORT TO PROVIDE THE CONTRACTOR WITH AN UNDERSTANDING OF THE MINIMUM REQUIREMENTS FOR TRAFFIC CONTROL WHICH MUST BE MET AND TO AID IN THE INCLUSION OF THOSE COSTS IN THE PREPARATION OF HIS BID. THIS PLAN AND THE USE THEREOF DOES NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES OF PROTECTION OF THE WORK AND THE PUBLIC'S SAFETY. IT IS A SPECIFIC CONTRACT REQUIREMENT THAT THE CONTRACTOR INDEMNIFY AND HOLD HARMLESS THE OWNER AND THE ENGINEER AGAINST ALL LOSSES INCURRED IN THE EXECUTION OF THE WORK AND IN THE GUARDING OF IT. THIS REQUIREMENT INCLUDES BUT IS NOT LIMITED TO THE USE OF THIS PLAN.

REVISIONS:

REV.	DESCRIPTION	DATE	APP'D

Greenville Utilities

TRAFFIC CONTROL DETAILS

GREENVILLE UTILITIES COMMISSION
GCP-93 GREENVILLE SOUTHWEST BYPASS
NATURAL GAS MAIN RELOCATION

PITT COUNTY NORTH CAROLINA

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NORTH CAROLINA PROFESSIONAL SEAL 17698 ENGINEER FREDERICK L. STOTT

7/17/17

SURVEY		DRAFT	JML
DESIGN	FS	CHECK	FS
PROJECT No.	2016004		
DRAWING No.	W-3674		
SCALE:	AS NOTED		
SHEET No.	D1	OF	12

RELEASED FOR BIDDING

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CONSTRUCTION SPECIFICATIONS

1. SYNTHETIC FILTER FABRIC SHALL BE A PERVIOUS SHEET PROPYLENE, NYLON, POLYESTER OR ETHYLENE YARN AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE FOLLOWING REQUIREMENTS:

PHYSICAL PROPERTY	TEST	REQUIREMENTS
FILTERING EFFICIENCY	ASTM 5141	85% (MIN.)
TENSILE STRENGTH AT 20% (MAX.) ELONGATION	VTM-52	EXTRA STRENGTH- 50 LBS./LIN.IN. (MIN.)
FLOW RATE	ASTM 5141	0.3 GAL./SQ.FT./MIN. (MIN.)
ULTRAVIOLET RADIATION STABILITY %	ASTM G-26	90% (MIN.)

SEE DEHNR TABLE 6.62b

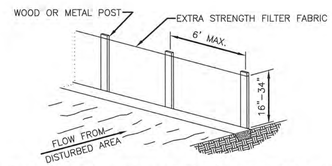
2. SYNTHETIC FILTER FABRIC SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0°F TO 120°F.
3. IF WOODEN STAKES ARE UTILIZED FOR SILT FENCE CONSTRUCTION, THEY MUST HAVE A DIAMETER OF 2 INCHES WHEN OAK IS USED AND 4 INCHES WHEN PINE IS USED. WOODEN STAKES MUST HAVE A MINIMUM LENGTH OF 5 FEET.
4. IF STEEL POSTS (STANDARD "U" OR "T" SECTION) ARE UTILIZED FOR SILT FENCE CONSTRUCTION, THEY MUST HAVE A MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT AND SHALL HAVE A MINIMUM LENGTH OF 5 FEET AND SHALL HAVE PROJECTIONS FOR FASTENING FABRIC.
5. WIRE FENCE REINFORCEMENT FOR SILT FENCES USING STANDARD-STRENGTH FILTER CLOTH SHALL BE A MINIMUM 14 GAUGE AND SHALL HAVE A MAXIMUM MESH SPACING OF 6 INCHES.

INSTALLATION

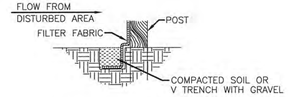
1. THE HEIGHT OF A SILT FENCE SHALL BE A MINIMUM OF 16 INCHES. ABOVE THE ORIGINAL GROUND SURFACE AND SHALL NOT EXCEED 34 INCHES ABOVE GROUND ELEVATION.
2. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE UNAVOIDABLE, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6-FOOT OVERLAP, AND SECURELY SEALED.
3. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE LINE OF POSTS AND UPSLOPE SIDE OF THE PROPOSED LOCATION OF THE MEASURE.
4. POSTS SHALL BE PLACED A MAXIMUM OF 6 FEET APART. THE FILTER FABRIC SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING ONE INCH LONG (MINIMUM) HEAVY-DUTY WIRE STAPLES OR TIE WIRES AND TWELVE INCHES OF FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
5. THE 8 INCH BY 4 INCH TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC.
6. SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.

MAINTENANCE

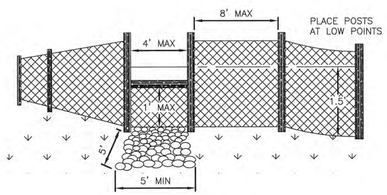
1. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
2. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCE RESULTING FROM END RUNS AND UNDERCUTTING.
3. SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
4. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
5. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.



SHEET FLOW INSTALLATION (PERSPECTIVE VIEW)



TRENCH OF A SILT FENCE

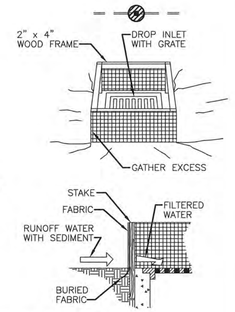


TYPICAL SILT FENCES

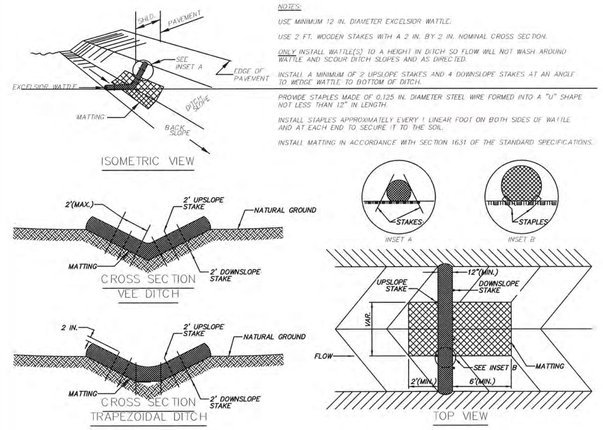
1/D2 TEMPORARY SILT FENCE
NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. SILT FENCE DROP INLET PROTECTION
   - A. SILT FENCE SHALL CONFORM TO THE CONSTRUCTION SPECIFICATIONS FOR "EXTRA STRENGTH" DEHNR 6.51 AND SHALL BE CUT FROM A CONTINUOUS ROLL TO AVOID JOINTS.
   - B. STAKES SHALL BE 2 x 4-INCH WOOD (PREFERRED) OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3 FEET.
   - C. SPACE STAKES EVENLY AROUND THE PERIMETER OF THE INLET A MAXIMUM OF 3-FEET APART, AND SECURELY DRIVE THEM INTO THE GROUND, APPROXIMATELY 18-INCHES DEEP.
   - D. TO PROVIDE NEEDED STABILITY TO THE INSTALLATION, FRAME WITH 2 x 4-INCH WOOD STRIPS AROUND THE CREST OF THE OVERFLOW AREA AT A MAXIMUM OF 1 1/2 FEET ABOVE THE DROP INLET CREST.
   - E. PLACE THE BOTTOM 12 INCHES OF THE FABRIC IN A TRENCH AND BACKFILL THE TRENCH WITH 12 INCHES OF COMPACTED SOIL.
   - F. FASTEN FABRIC SECURELY BY STAPLES OR WIRE TO THE STAKES AND FRAME. JOINTS MUST BE OVERLAPPED TO THE NEXT STAKE.
   - G. IT MAY BE NECESSARY TO BUILD A TEMPORARY DIKE ON THE DOWNSLOPE SIDE OF THE STRUCTURE TO PREVENT BYPASS FLOW.



3/D2 STORM DRAIN INLET PROTECTION
NOT TO SCALE



NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

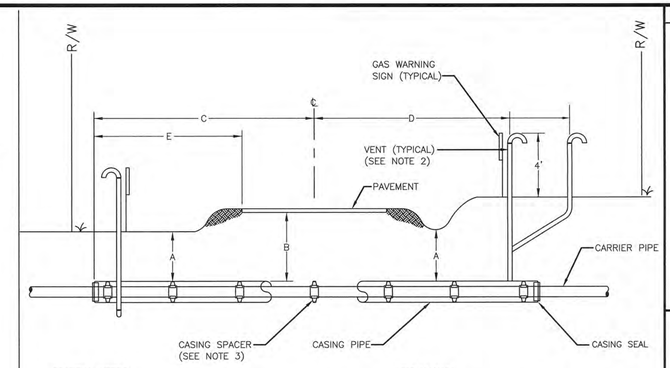
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A "U" SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

4/D2 EXCELSIOR WATTLE DETAIL
NOT TO SCALE



GENERAL NOTES:

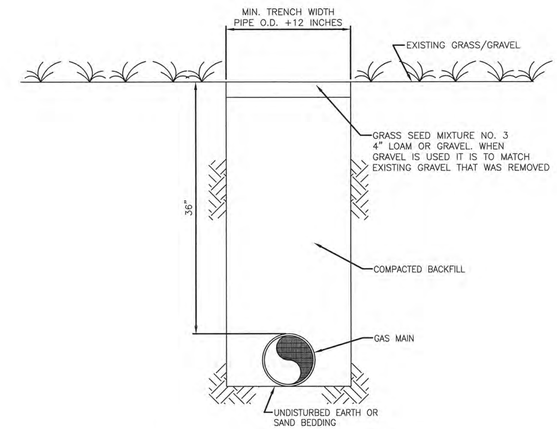
1. CASING FOR EACH CROSSING SHALL BE WELDED INTO ONE CONTINUOUS LENGTH.
2. ALL VENT CONNECTIONS SHALL BE WELDED. COUPLINGS SHALL NOT BE ALLOWED.
3. CASING SPACERS ARE TO BE PLACED A MAXIMUM OF 0'-6" FROM EACH END OF THE CASING AND A MAXIMUM OF 10'-0" ON CENTER FOR THE REMAINING LENGTH OF THE CASING.

DIMENSIONS:

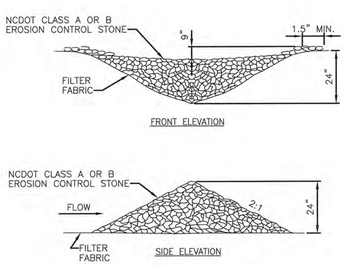
FOR ROADWAY CROSSINGS

"A" = FOUR (4) FEET MINIMUM
"B" = FOUR (4) FEET MINIMUM
"C" = AS SHOWN ON PLANS
"D" = TO THE RIGHT-OF-WAY LINE
"E" = MINIMUM 5' FROM END OF CASING TO EDGE OF PAVEMENT

6/D2 CASING DETAIL
NOT TO SCALE

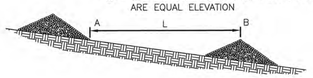


7/D2 TYPICAL TRENCH SECTION IN GRASS/ GRAVEL AREA
NOT TO SCALE



ROCK CHECK DAM

L = THE DISTANCE SUCH THAT POINTS A AND B ARE EQUAL ELEVATION



SPACING BETWEEN CHECK DAMS

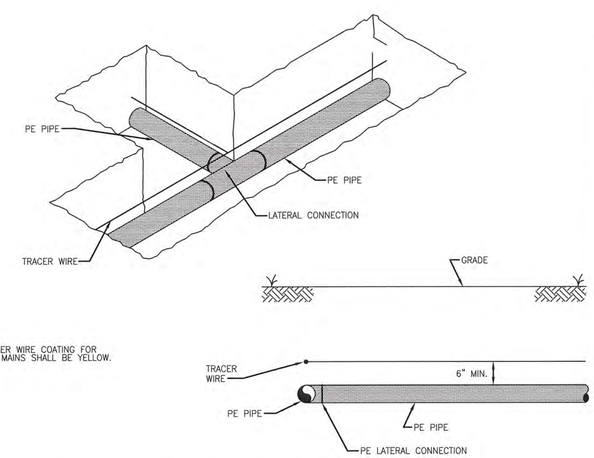
CONSTRUCTION SPECIFICATIONS

1. PLACE STONE TO THE LINES AND DIMENSIONS SHOWN IN THE PLAN ON A FILTER FABRIC FOUNDATION.
2. KEEP THE CENTER STONE SECTION AT LEAST 9 INCHES BELOW NATURAL GROUND LEVEL WHERE THE DAM ABUTS THE CHANNEL BANKS.
3. EXTEND STONE AT LEAST 1.5 FT. BEYOND THE DITCH BANKS TO KEEP OVERFLOW WATER FROM UNDERCUTTING THE DAM AS IT RE-ENTERS THE CHANNEL.
4. SET SPACING BETWEEN DAMS TO ASSURE THAT THE ELEVATION AT THE TOP OF THE LOWER DAM IS THE SAME AS THE TOE ELEVATION OF THE UPPER DAM.
5. PROTECT THE CHANNEL DOWNSTREAM FROM THE LOWEST CHECK DAM, CONSIDERING THAT WATER WILL FLOW OVER AND AROUND THE DAM.
6. MAKE SURE THAT THE CHANNEL REACH ABOVE THE MOST UPSTREAM DAM IS STABLE.
7. ENSURE THAT CHANNEL APPURTENANCES, SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS, ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONES.

MAINTENANCE

1. INSPECT CHECK DAMS AND CHANNELS FOR DAMAGE AFTER EACH RUNOFF EVENT.
2. ANTICIPATE SUBMERGENCE AND DEPOSITION ABOVE THE CHECK DAM AND EROSION FROM HIGH FLOWS AROUND THE EDGES OF THE DAM. CORRECT ALL DAMAGE IMMEDIATELY. IF SIGNIFICANT EROSION OCCURS BETWEEN DAMS, INSTALL A PROTECTIVE RIPRAP LINER IN THAT PORTION OF THE CHANNEL.
3. REMOVE SEDIMENT ACCUMULATED BEHIND THE DAMS AS NEEDED TO PREVENT DAMAGE TO CHANNEL VEGETATION, ALLOW THE CHANNEL TO DRAIN THROUGH THE STONE CHECK DAM, AND PREVENT LARGE FLOWS FROM CARRYING SEDIMENT OVER THE DAM. ADD STONES TO DAMS AS NEEDED TO MAINTAIN DESIGN HEIGHT AND CROSS SECTION.

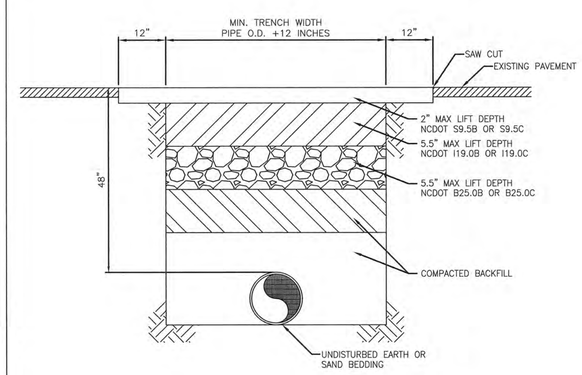
2/D2 TEMPORARY ROCK SILT CHECK DAM
NOT TO SCALE



NOTES:

1. TRACER WIRE COATING FOR GAS MAINS SHALL BE YELLOW.

5/D2 TYPICAL LOCATING DEVICE INSTALLATION FOR SINGLE TRENCH INSTALLATION
NOT TO SCALE



8/D2 TYPICAL PAVEMENT REPAIR ON NCDOT MAINTAINED ROADS
NOT TO SCALE

REVISIONS:

REV.	DESCRIPTION	DATE	APPD

Greenville Utilities

EROSION CONTROL AND MISCELLANEOUS DETAILS

GREENVILLE UTILITIES COMMISSION
GCP-93 GREENVILLE SOUTHWEST BYPASS
NATURAL GAS MAIN RELOCATION

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PROJECT No.	2016004		
DRAWING No.	W-3674		
SCALE:	AS NOTED		
SHEET No.	D2	OF	12

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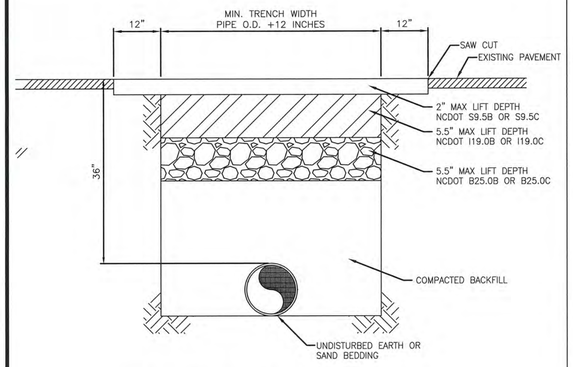
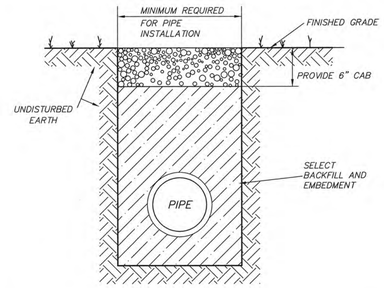
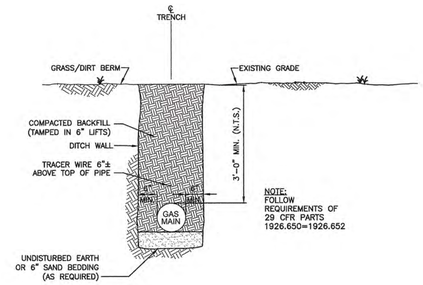


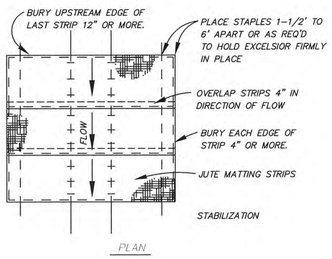
1 D3 TYPICAL PAVEMENT REPAIR ON CITY MAINTAINED ROADS NOT TO SCALE



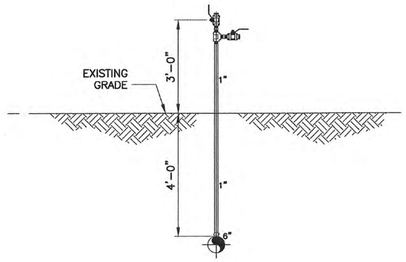
5 D3 TYP. SOIL AND STONE DRIVE CONSTRUCTION NOT TO SCALE



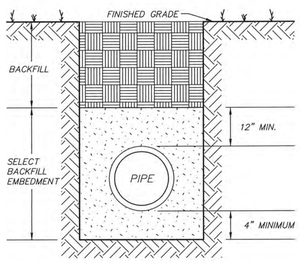
9 D3 TYPICAL POLYETHYLENE (PE) PIPE TRENCH INSTALLATION DETAIL NOT TO SCALE



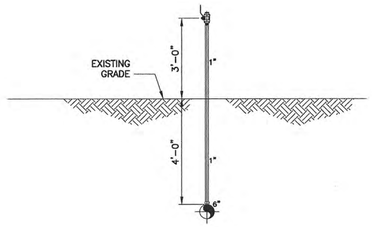
2 D3 SLOPE STABILIZATION W/ EXCELSIOR MATTING NOT TO SCALE



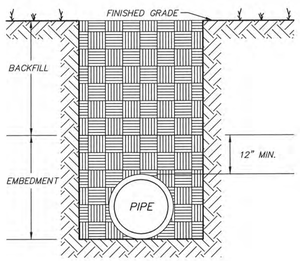
6 D3 AIR RELEASE VALVE ASSEMBLY W PRESSURE GAUGE DETAIL NOT TO SCALE



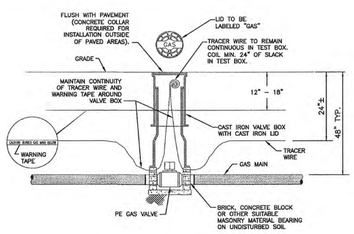
3 D3 CLASS "E" BEDDING NOT TO SCALE



7 D3 TYPICAL AIR RELEASE VALVE ASSEMBLY DETAIL NOT TO SCALE



4 D3 CLASS "F" BEDDING NOT TO SCALE



8 D3 TYPICAL PLASTIC GAS VALVE INSTALLATION DETAIL NOT TO SCALE

REVISIONS:

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Greenville Utilities

MISCELLANEOUS DETAILS

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D3

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