


09/08/99

T.I.P. NO.	SHEET NO.
U-3109A	UC-1

UTILITY CONSTRUCTION PLANS DESIGNED BY:

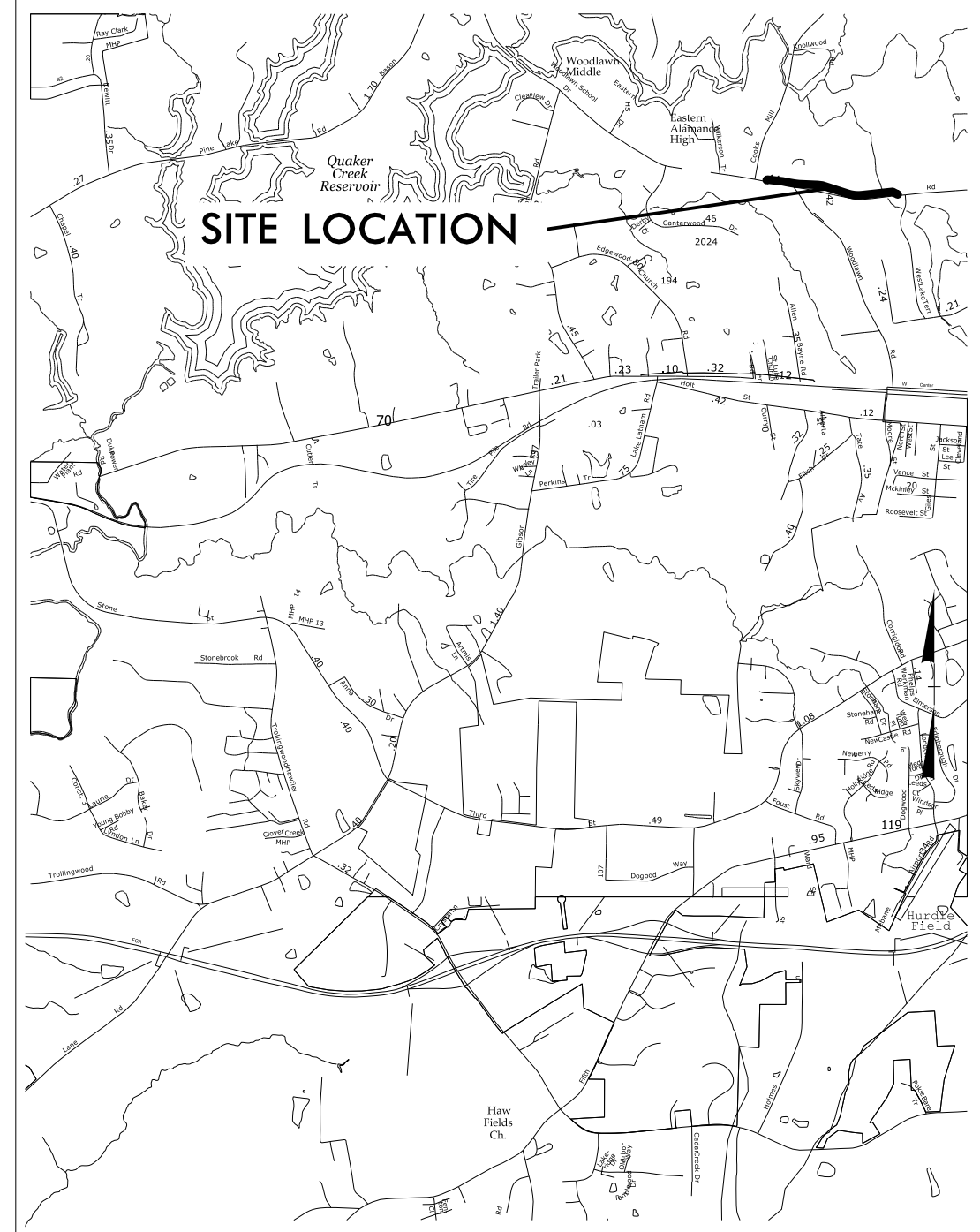


THE WOOTEN COMPANY
 ENGINEERING | PLANNING | ARCHITECTURE
 120 North Boylan Avenue Raleigh, NC 27603-1423
 919.828.0531 fax 919.834.3589
 License Number: F-0115

James R. Gregg UTILITIES PROJECT ENGINEER

TIP PROJECT: U-3109A

CONTRACT: C203658



VICINITY MAP

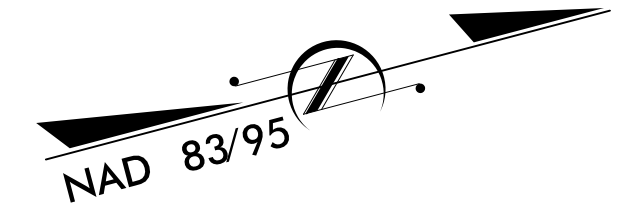
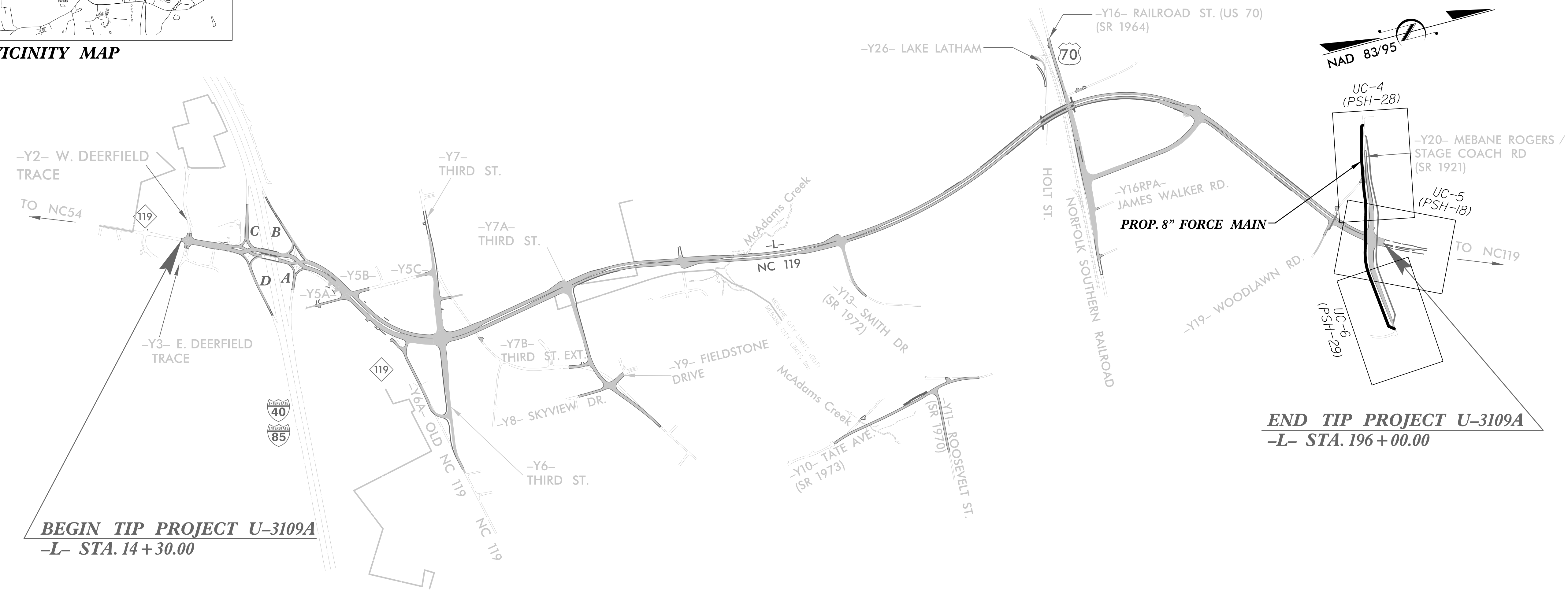
STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

ALAMANCE COUNTY ALAMANCE-BURLINGTON SCHOOL SYSTEM

LOCATION: NC 119 RELOCATION FROM I-40 /85 TO NORTH OF SR 1921
 (MEBANE ROGERS ROAD /STAGE COACH ROAD)

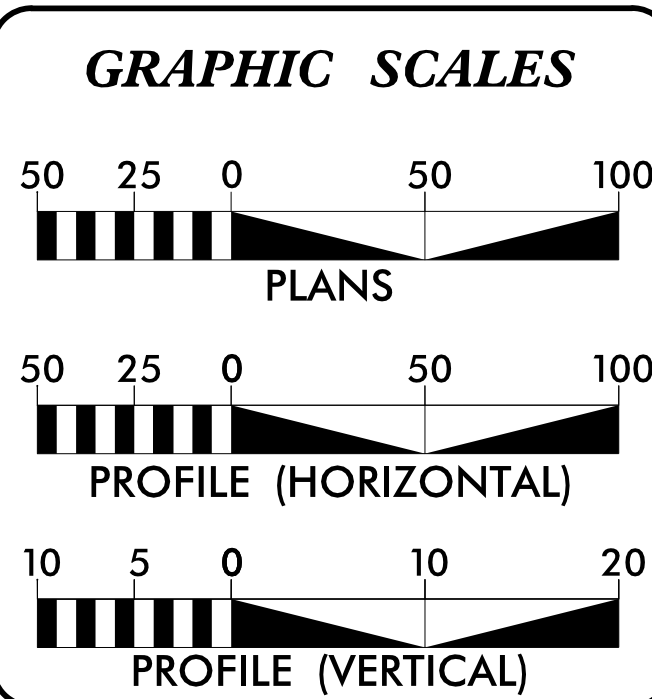
TYPE OF WORK: UTILITY RELOCATION

ALL STATE COST



END TIP PROJECT U-3109A
 -L- STA. 196+00.00

THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.




INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3	NOTES
UC-3A & UC-3B	DETAILS
UC-4, UC-5, & UC-6	UTILITY CONSTRUCTION SHEETS
UC-7 & UC-8	PROFILE SHEETS

SEWER OWNER ON PROJECT

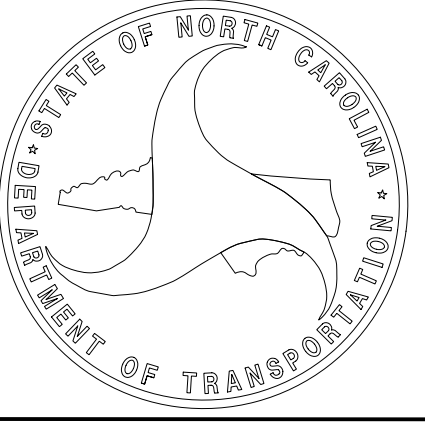
(1) ALAMANCE-BURLINGTON SCHOOL SYSTEM

SEAL



10/20/2016

Document Not Considered Final Unless All Signatures Completed



PREPARED IN THE OFFICE OF:
 DIVISION OF HIGHWAYS
 UTILITIES UNIT
 UTILITIES ENGINEERING

1591 MAIL SERVICES CENTER
 RALEIGH, NC 27699-1591
 PHONE (919) 707-6600
 FAX (919) 250-4151

Donna Jackson, P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER
Jong-Tae Yoon, P.E. UTILITIES PROJECT DESIGNER

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DCN\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	
11¼ Degree Bend	
22½ Degree Bend	
45 Degree Bend	
90 Degree Bend	
Plug	
Tee	
Cross	
Reducer	
Gate Valve	
Butterfly Valve	
Tapping Valve	
Line Stop	
Line Stop with Bypass	
Blow Off	
Fire Hydrant	
Relocate Fire Hydrant	
Remove Fire Hydrant	REM FH
Water Meter	
Relocate Water Meter	
Remove Water Meter	REM WM
Water Pump Station	PS(W)
RPZ Backflow Preventer	
DCV Backflow Preventer	
Relocate RPZ Backflow Preventer	
Relocate DCV Backflow Preventer	

PROPOSED SEWER SYMBOLS

Gravity Sewer Line (Sized as Shown)	
Force Main Sewer Line (Sized as Shown)	
Manhole (Sized per Note)	
Sewer Pump Station	PS(SS)

PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

Power Pole	
Telephone Pole	
Joint Use Pole	
Telephone Pedestal	
Utility Line by Others (Type as Shown)	
Trenchless Installation	
Encasement by Open Cut	
Encasement	

Thrust Block	
Air Release Valve	
Utility Vault	
Concrete Pier	
Steel Pier	
Plan Note	
Pay Item Note	

NOTE
PAY ITEM


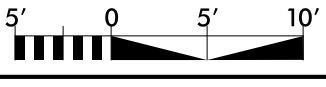
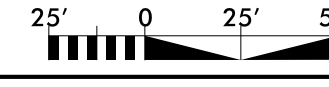
EXISTING UTILITIES SYMBOLS

Power Pole		*Underground Power Line	
Telephone Pole		*Underground Telephone Cable	
Joint Use Pole		*Underground Telephone Conduit	
Utility Pole		*Underground Fiber Optics Telephone Cable	
Utility Pole with Base		*Underground TV Cable	
H-Frame Pole		*Underground Fiber Optics TV Cable	
Power Transmission Line Tower		*Underground Gas Pipeline	
Water Manhole		Aboveground Gas Pipeline	
Power Manhole		*Underground Water Line	
Telephone Manhole		Aboveground Water Line	
Sanitary Sewer Manhole		*Underground Gravity Sanitary Sewer Line	
Hand Hole for Cable		Aboveground Gravity Sanitary Sewer Line	
Power Transformer		*Underground SS Forced Main Line	
Telephone Pedestal		Underground Unknown Utility Line	
CATV Pedestal		SUE Test Hole	
Gas Valve		Water Meter	
Gas Meter		Water Valve	
Located Miscellaneous Utility Object		Fire Hydrant	
Abandoned According to Utility Records	AATUR	Sanitary Sewer Cleanout	
End of Information	E.O.I.		

*For Existing Utilities
Utility Line Drawn from Record (Type as Shown)
Designated Utility Line (Type as Shown)

5/14/99
REV: 2/1/2012

UTILITY CONSTRUCTION

PREPARED IN THE OFFICE OF:  THE WOOTEN COMPANY ENGINEERING PLANNING ARCHITECTURE 120 North Spade Avenue Raleigh, NC 27603-1423 919.878.0311 fax 919.878.5199 License Number: F-0115	PROJECT REFERENCE NO.	SHEET NO.
	U-3109A	UC-3
VERTICAL SCALE 	HORIZONTAL SCALE 	DESIGNED BY: JRG
		DRAWN BY: TK
		CHECKED BY: JRG
		APPROVED BY: MDS
		REVISED:
		NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
SEWER LINE CONSTRUCTION SHOWN ON THIS SHEET		UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151



UTILITY CONSTRUCTION

NCDOT GENERAL NOTES:


- THE EXISTING UTILITIES BELONG TO ALAMANCE-BURLINGTON SCHOOL SYSTEM.
- THE PROPOSED UTILITY CONSTRUCTION IN ALAMANCE COUNTY SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2012.
- ALL FORCE MAINS TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL AND NATURAL RESOURCES, DIVISION OF WATER RESOURCES, PUBLIC WATER SUPPLY SECTION. ALL SEWER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.
- THE UTILITY OWNER OWNS THE EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY THE DEPARTMENT AND THE UTILITY OWNER. THE DEPARTMENT OWNS THE CONSTRUCTION CONTRACT AND HAS ADMINISTRATIVE AUTHORITY. COMMUNICATIONS AND DECISIONS BETWEEN THE CONTRACTOR AND UTILITY OWNER ARE NOT BINDING UPON THE DEPARTMENT OR THIS CONTRACT UNLESS AUTHORIZED BY THE ENGINEER. AGREEMENTS BETWEEN THE UTILITY OWNER AND CONTRACTOR FOR THE WORK THAT IS NOT PART OF THIS CONTRACT OR IS SECONDARY TO THIS CONTRACT ARE ALLOWED, BUT ARE NOT BINDING UPON THE DEPARTMENT.
- PROVIDE ACCESS FOR THE DEPARTMENT PERSONNEL AND THE OWNER'S REPRESENTATIVES TO ALL PHASES OF CONSTRUCTION. NOTIFY DEPARTMENT PERSONNEL AND THE UTILITY OWNER TWO WEEKS PRIOR TO COMMENCEMENT OF ANY WORK AND A MINIMUM OF ONE WEEK PRIOR TO SERVICE INTERRUPTIONS AND TESTING. KEEP UTILITY OWNERS' REPRESENTATIVES INFORMED OF WORK PROGRESS AND PROVIDE OPPROTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.
- THE PLANS DEPICT THE BEST AVAILABLE INFORMATION FOR THE LOCATION, SIZE, AND TYPE OF MATERIAL FOR ALL EXISTING UTILITIES. MAKE INVESTIGATIONS FOR DETERMINING THE EXACT LOCATION, SIZE, AND TYPE MATERIAL OF THE EXISTING FACILITIES AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED UTILITIES AND FOR AVOIDING DAMAGE TO EXISTING FACILITIES. REPAIR ANY DAMAGE INCURRED TO EXISTING FACILITIES TO THE ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE DEPARTMENT.
- MAKE FINAL CONNECTIONS OF THE NEW WORK TO THE EXISTING SYSTEM WHERE INDICATED ON THE PLANS, AS REQUIRED TO FIT THE ACTUAL CONDITIONS, OR AS DIRECTED.
- MAKE CONNECTIONS BETWEEN EXISTING AND PROPOSED UTILITIES AT TIMES MOST CONVENIENT TO THE PUBLIC, WITHOUT ENDANGERING THE UTILITY SERVICE, AND IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. MAKE CONNECTIONS ON WEEKENDS, AT NIGHT, AND ON HOLIDAYS IF NECESSARY.
- ALL UTILITY MATERIALS SHALL BE APPROVED PRIOR TO DELIVERY TO THE PROJECT. SEE 1500-7, " SUBMITTALS AND RECORDS" IN SECTION 1500 OF THE STANDARD SPECIFICATIONS.

NCDOT PROJECT SPECIFIC NOTES:

- PROPOSED SEWER FORCE MAIN SHALL BE PVC C900 DR-18, RJDI CLASS 350 PROTECTO 401 LINED, AND FUSIBLE PVC C900 (FOR HDD) AS INDICATED ON THE CONSTRUCTION DRAWINGS.
- CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107, AND 1550 OF THE STANDARD SPECIFICATIONS CONCERNING TRENCHLESS INSTALLATION. IT IS CONTRACTOR'S RESPONSIBILITY TO HAVE BORE DESIGNED AND SEALED BY A LICENSED NORTH CAROLINA PROFESSIONAL ENGINEER. NO DAMAGE IS ALLOWED TO RIVER, WETLANDS, OR BUFFER ZONES.
- TRACER WIRE AND WARNING TAPE SHALL BE INSTALLED WITH ALL PLASTIC PIPE UTILITIES. WIRE, TAPE, AND PIPE SHALL BE COLOR CODED ACCORDING TO UTILITY (BLUE FOR WATER, GREEN FOR SEWER) AND SHALL BE IN ACCORDANCE WITH NCDOT SPECIFICATIONS.
- EXISTING CONDITIONS SURVEY AND PROPOSED ROADWAY PLANS PROVIDED TO THE WOOTEN COMPANY BY NCDOT, MAY 23, 2016.
- ALL DUCTILE IRON PIPE USED FOR SEWER FORCE MAIN INSTALLATIONS SHALL BE LINED WITH PROTECTO 401.
- FUSED PVC PIPE LENGTHS THAT HAVE BEEN INSTALLED IN THE TRENCH SHALL NOT BE BENT OR JOCKEYED INTO POSITION WITH HEAVY EQUIPMENT IN ORDER TO CONNECT TO FITTINGS. ALL ALIGNMENTS CORRECTIONS SHALL TAKE PLACE IN THE DIP FITTINGS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER DISPOSAL OF ALL SEWAGE IN EXISTING UTILITY LINES WHEN MAKING CONNECTIONS.
- CONTRACTOR MUST UTILIZE MULTIPLE WORK CREWS IN ORDER TO MAKE CONNECTIONS TO EXISTING SEWER SYSTEM TO MINIMIZE SERVICE INTERRUPTION TIME.
- CONTRACTOR SHALL COORDINATE WITH UTILITY OWNERS PRIOR TO MAKING CONNECTIONS, GIVING AT LEAST 24 HOURS NOTICE.
- ALL TIE-RODS AND OTHER ACCESSORIES SHALL BE STAINLESS STEEL MATERIAL.

PROJECT TYPICAL SEWER DETAILS

PREPARED IN THE OFFICE OF:



THE WOOTEN COMPANY
ENGINEERING | PLANNING | ARCHITECTURE
120 North Spide Avenue Raleigh, NC 27603-1423
919.828.0311 fax 919.824.5999
License Number: F-0115

PROJECT REFERENCE NO. **U-3109A** SHEET NO. **UC-3A**

DESIGNED BY: JRG
DRAWN BY: TK
CHECKED BY: JRG
APPROVED BY: MDS

REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

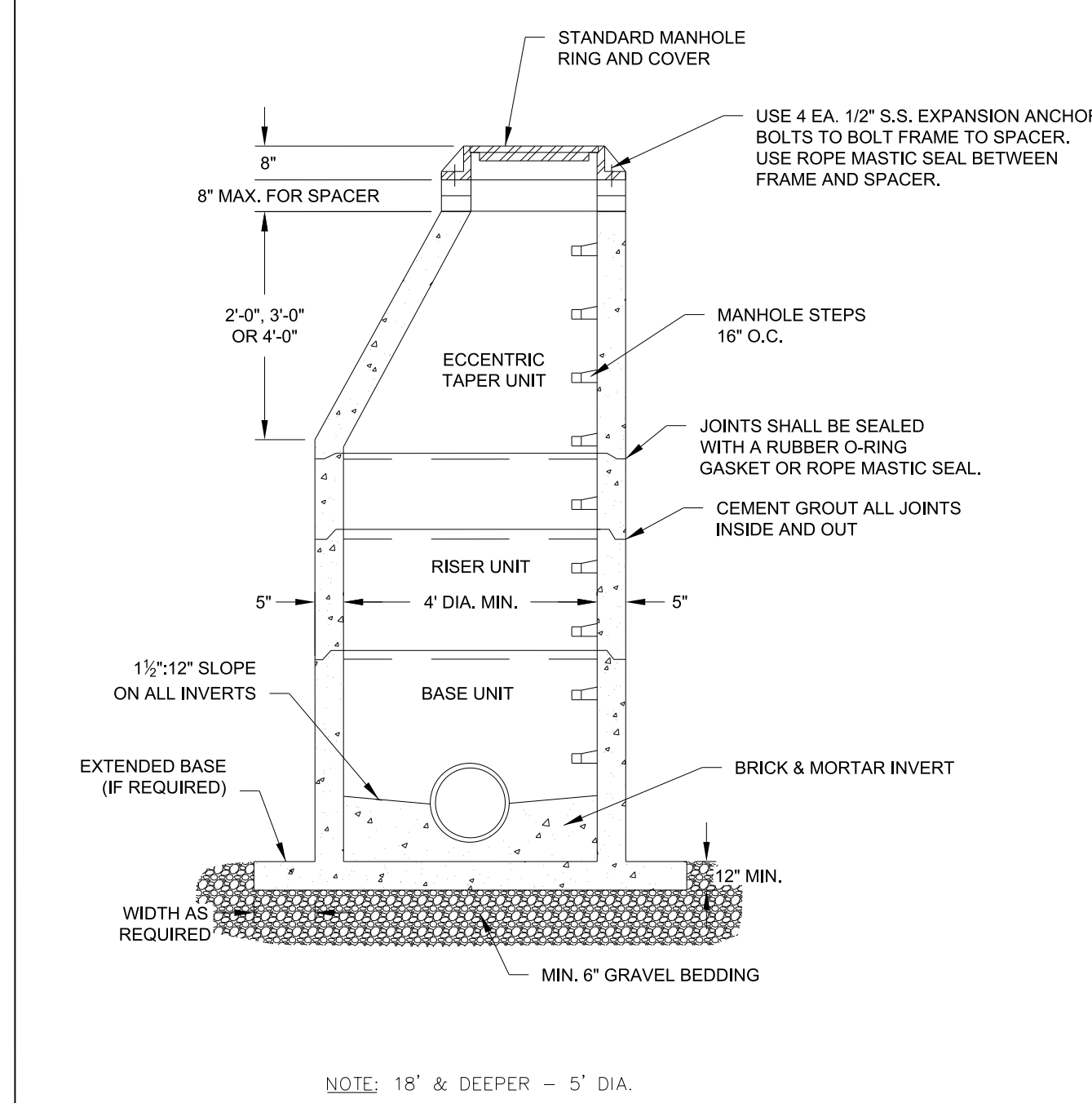
UTILITIES ENGINEERING SEC.
PHONE: (919) 707-6690
FAX: (919) 250-4151

Document Not Considered Final
Unless All Signatures Completed
UTILITY CONSTRUCTION PLANS ONLY

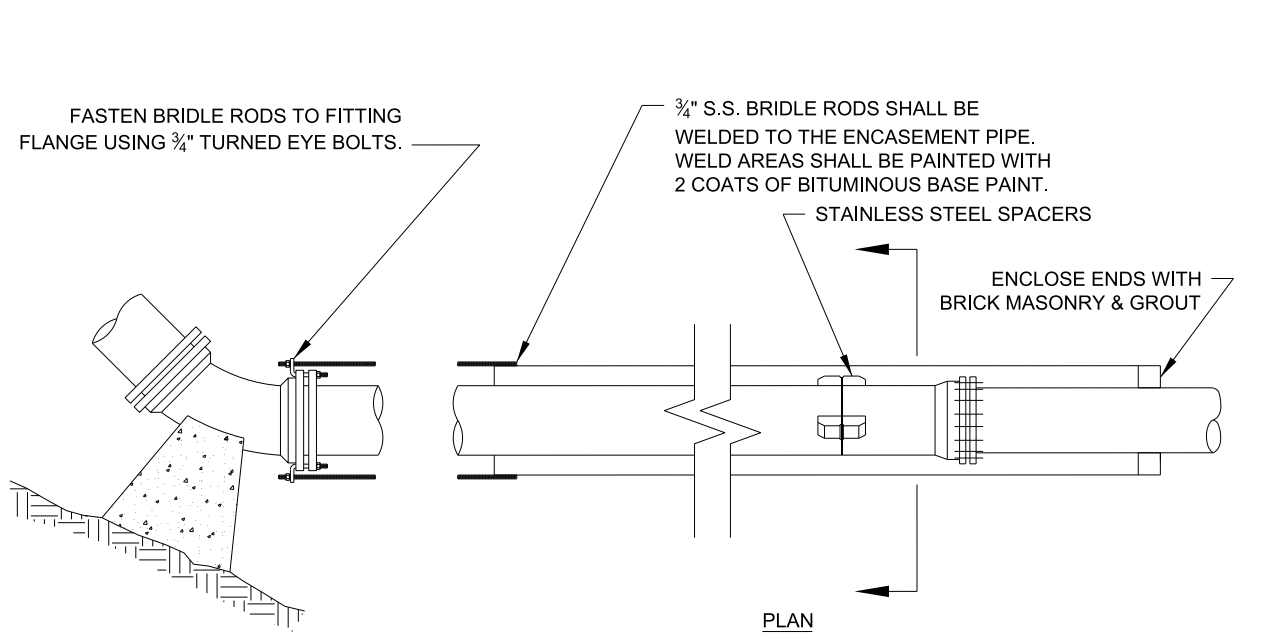
SEWER LINE CONSTRUCTION SHOWN ON THIS SHEET

VERTICAL SCALE: 5' 0 5' 10'
HORIZONTAL SCALE: 25' 0 25' 50'

UTILITY CONSTRUCTION

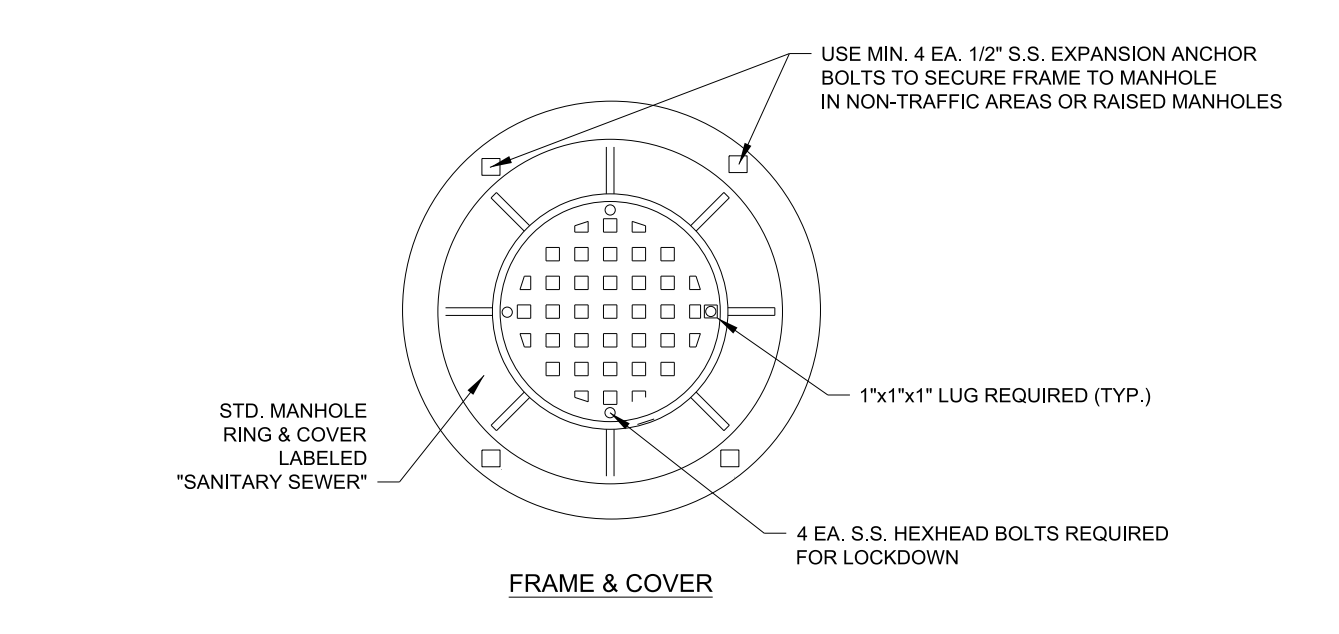


STANDARD PRECAST CONCRETE MANHOLE
NOT TO SCALE

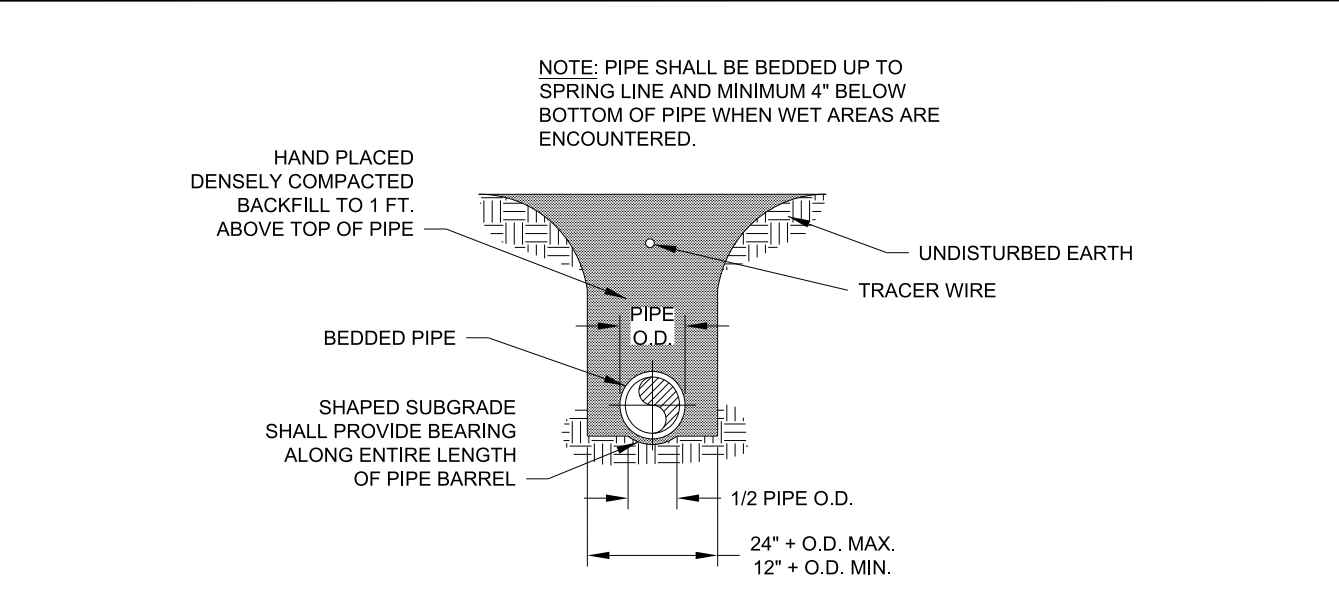


- NOTES:
1. STAINLESS STEEL SPACERS SHALL BE USED. NO TIMBER SKIDS ARE ALLOWED.
 2. TWO SPACERS PER JOINT SHALL BE USED FOR D.I.P. CARRIER PIPE.
 3. ENCASED BORES ALONG GRAVITY COLLECTION SYSTEMS SHALL NOT REQUIRE BRIDLE RODS.
 4. 2 EA. 3/4" S.S. BRIDLE RODS SHALL BE REQUIRED ON ALL LINES 8"Ø AND SMALLER. 4 EA. 3/4" S.S. BRIDLE RODS SHALL BE REQUIRED ON ALL LINES 10"Ø AND LARGER.
 5. CARRIER PIPE SHALL BE INSTALLED USING 'FIELD LOK' GASKETS OR APPROVED EQUAL.

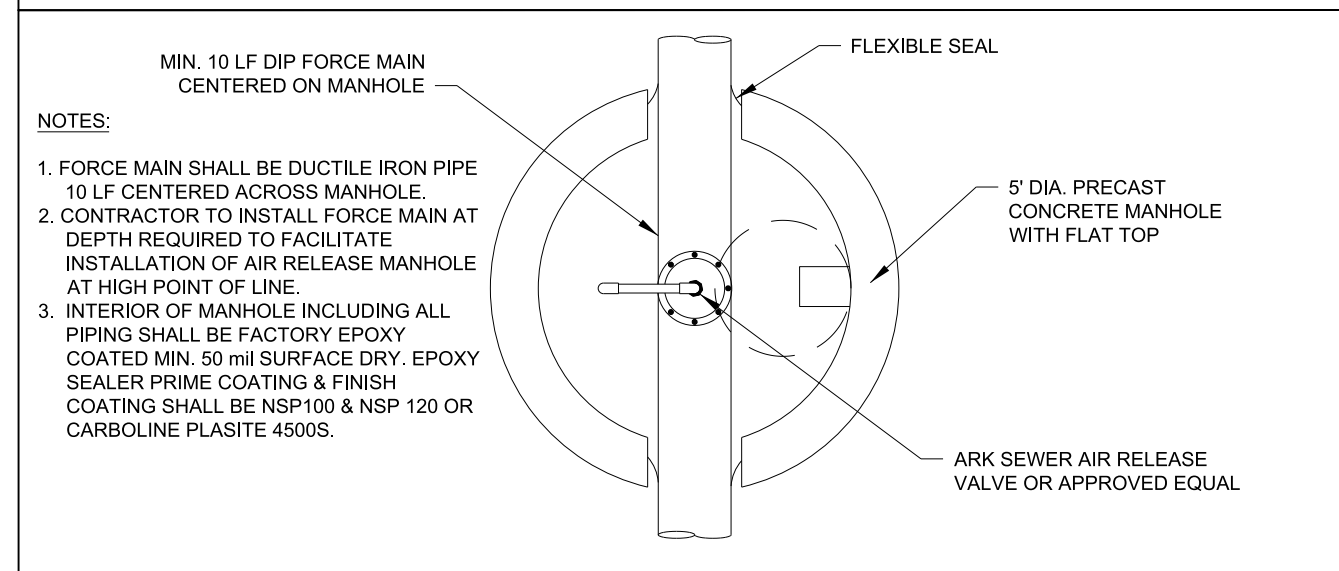
STANDARD BORE ENCASEMENT
NOT TO SCALE



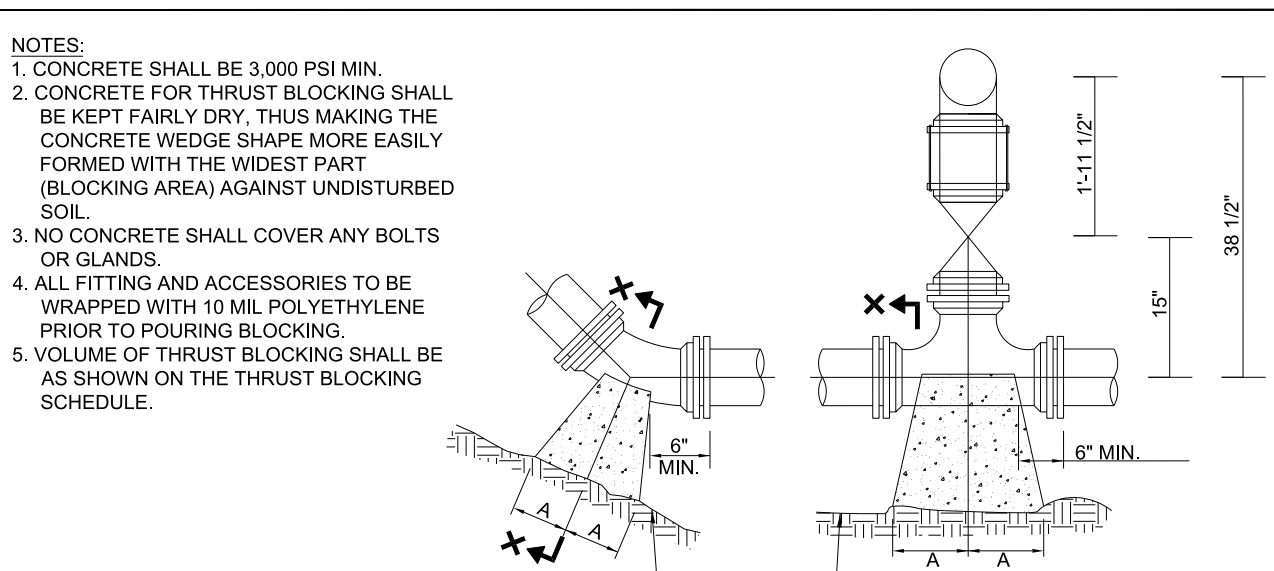
LOCKABLE MANHOLE FRAME & COVER
NOT TO SCALE



PIPE LAYING CONDITION
NOT TO SCALE



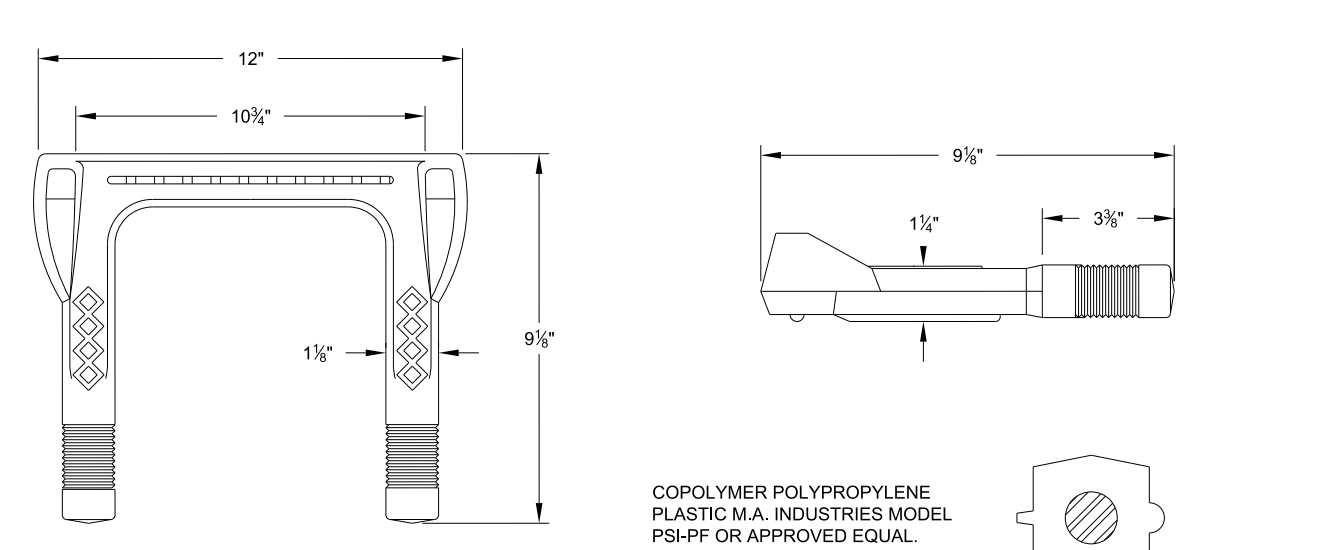
AIR VACUUM/RELEASE MANHOLE FOR FORCE MAIN
NOT TO SCALE



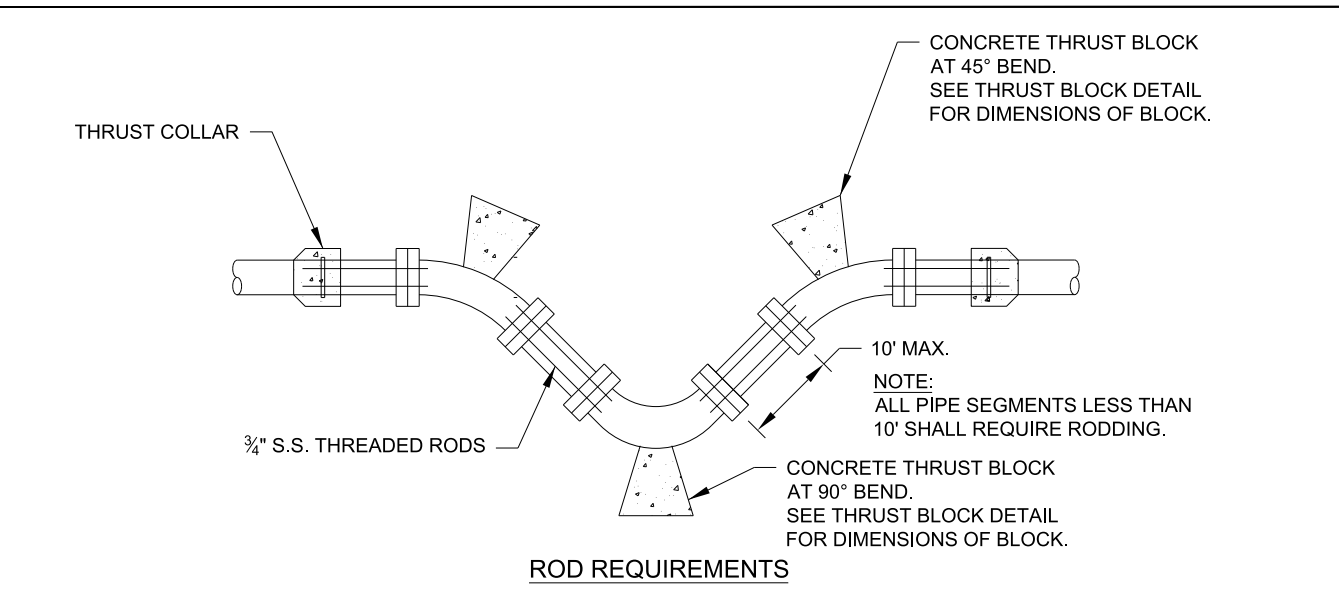
SCHEDULE

PIPE DIAMETER	CONCRETE THRUST COLLAR		ANCHOR COLLAR	RINGS REQUIRED
	A	B		
6" & 8", 12"	1'-0"	1'-0"	2"	ONE
16"	1'-4"	1'-0"	2"	ONE
20"	1'-4"	1'-0"	3"	ONE
24"	1'-4"	1'-0"	3"	TWO
30"	1'-4"	1'-2"	4"	TWO
36"	1'-4"	1'-4"	4"	TWO

THRUST COLLAR INSTALLATION
NOT TO SCALE



POLYPROPYLENE PLASTIC STEP
NOT TO SCALE

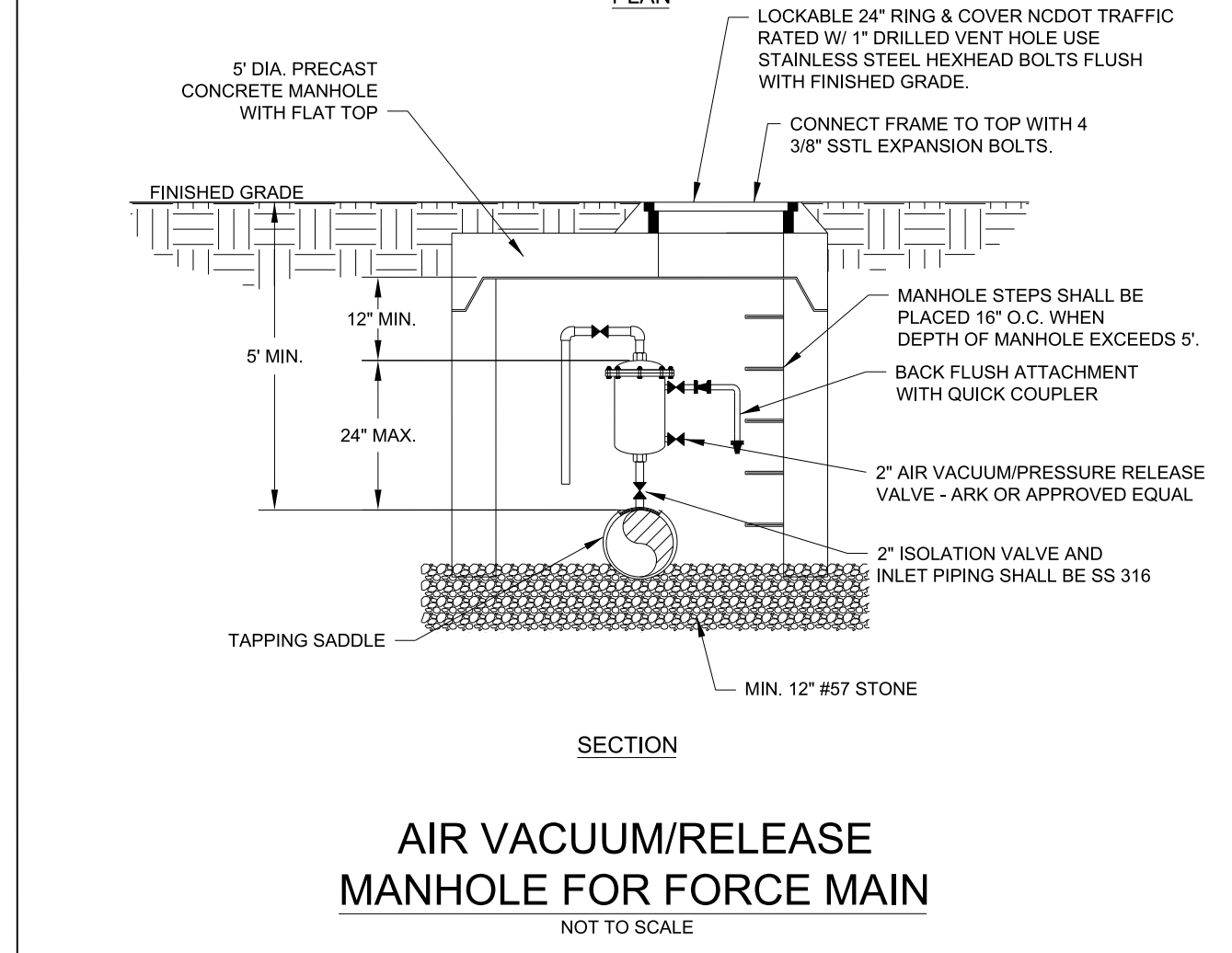


SIZE OF 45° BEND - STATIC THRUST IN POUNDS - NUMBER OF RODS REQUIRED

SIZE	STATIC THRUST IN POUNDS	NUMBER OF RODS REQUIRED
6"	4,328	2
8"	7,694	2
12"	17,312	4
16"	30,779	6
20"	48,091	8
24"	69,252	10


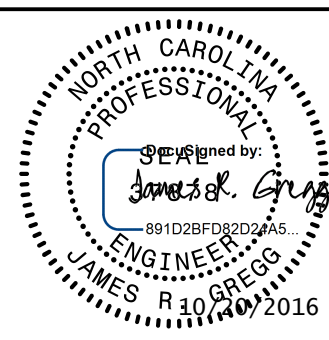
- GENERAL NOTES
1. RODS AND NUTS SHALL BE OF TYPE 304 OR TYPE 316 STAINLESS STEEL.
 2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT BENDS.

VERTICAL BEND RODDING AND BLOCKING DETAIL
NOT TO SCALE

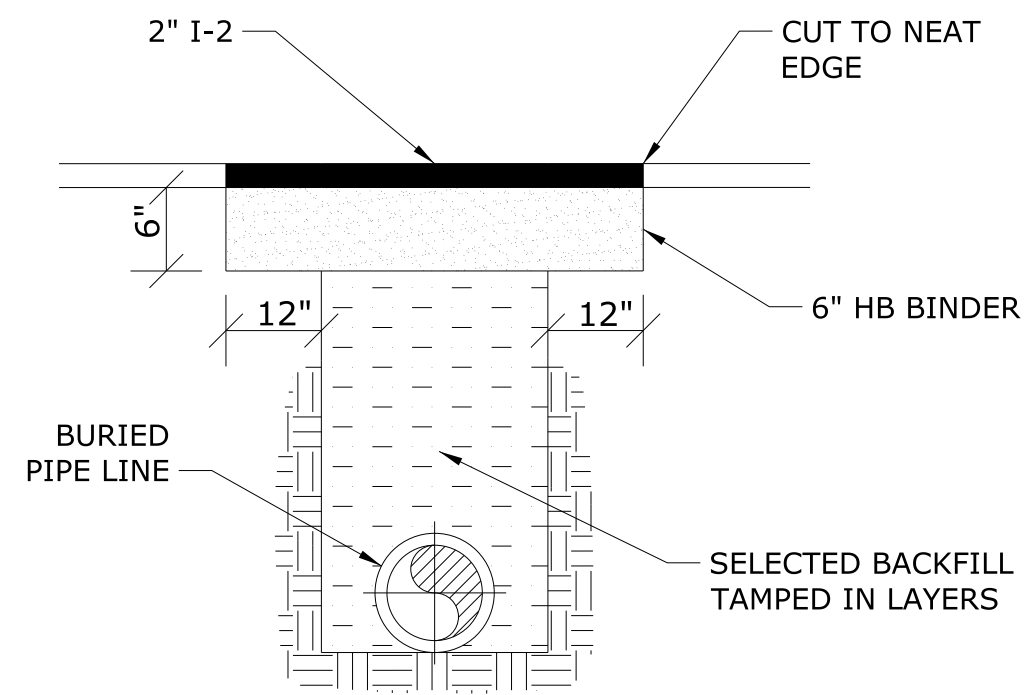


DIRECT BURY FUSIBLE PVC TRANSITION
NOT TO SCALE

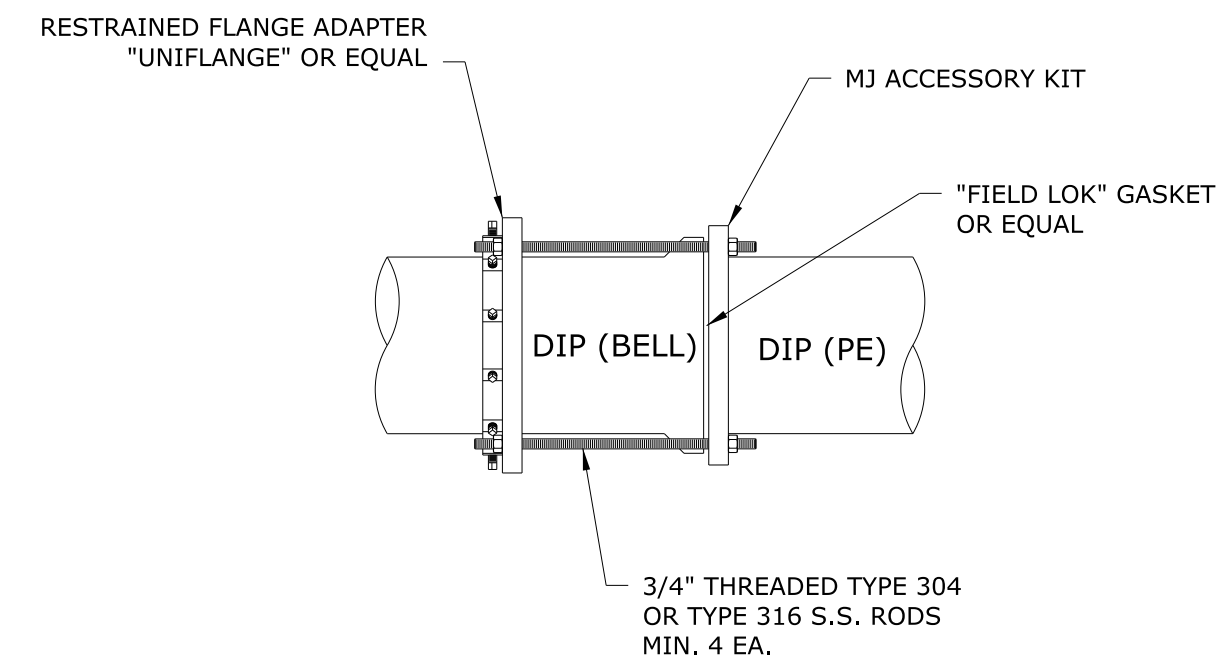
PROJECT TYPICAL SEWER DETAILS

PREPARED IN THE OFFICE OF:  THE WOOTEN COMPANY ENGINEERING PLANNING ARCHITECTURE 120 North Spauldine Avenue Raleigh, NC 27603-1423 919.878.0531 fax 919.878.5989 License Number: F-4035	PROJECT REFERENCE NO.	SHEET NO.
	U-3109A	UC-3B
DESIGNED BY: JRG		
DRAWN BY: TK		
CHECKED BY: JRG		
APPROVED BY: MDS	REVISED: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
VERTICAL SCALE: 5' 0' 5' 10' HORIZONTAL SCALE: 25' 0' 25' 50'		
SEWER LINE CONSTRUCTION SHOWN ON THIS SHEET		
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151		Document Not Considered Final Unless All Signatures Completed UTILITY CONSTRUCTION PLANS ONLY

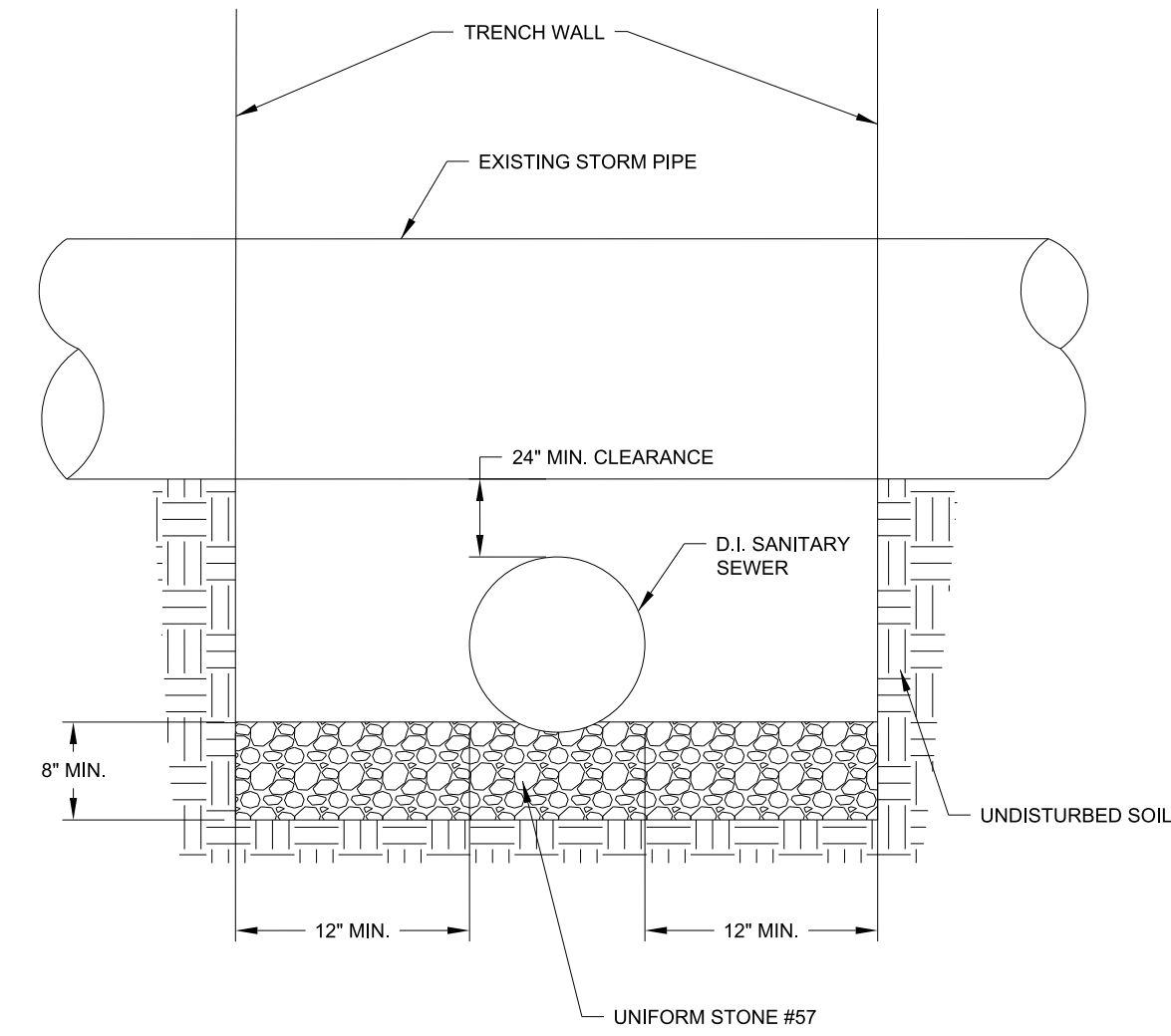
UTILITY CONSTRUCTION



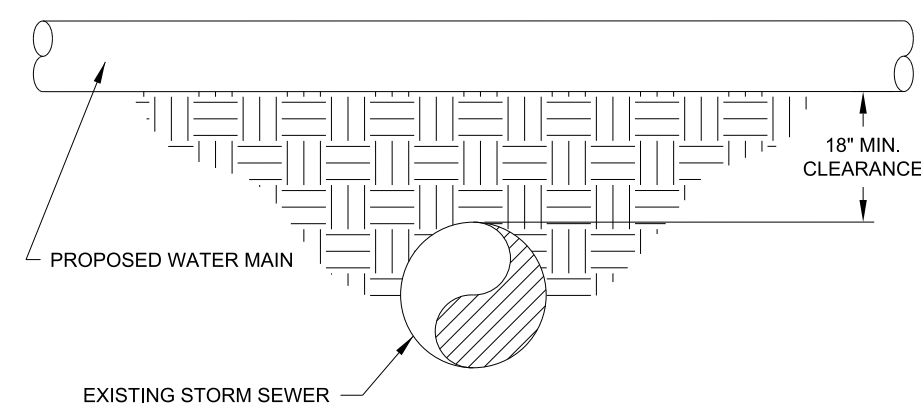
**PAVEMENT REPAIRS FOR
NCDOT ROAD OPEN CUTS**
NOT TO SCALE



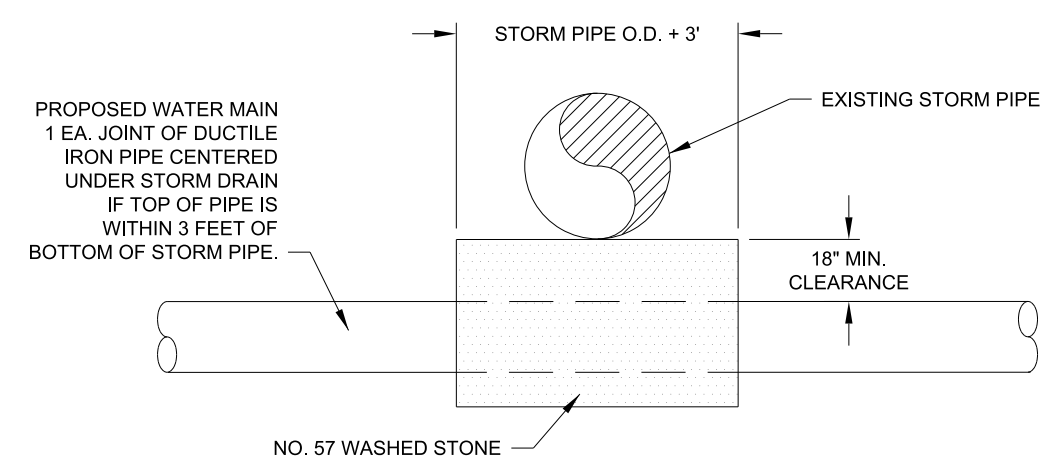
HARNESS RESTRAINT DETAIL
NOT TO SCALE



STORM SEWER CROSSING DETAILS
NOT TO SCALE

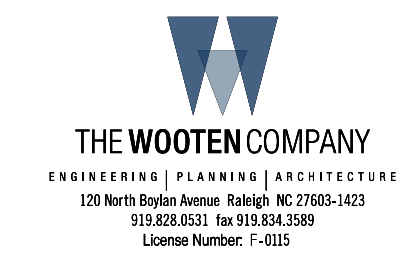


NOTE:
WATER LINE SHALL BE DUCTILE IRON PIPE
AT ALL AREAS WHERE MIN 12" CLEARANCE
CANNOT BE MAINTAINED. INSTALL AT LEAST
ONE JOINT CENTERED OVER STORM DRAIN.



STORM SEWER CROSSING DETAILS
NOT TO SCALE

PREPARED IN THE OFFICE OF:



PROJECT REFERENCE NO.

U-3109A

SHEET NO.

UC-4

DRAWN BY: JRG

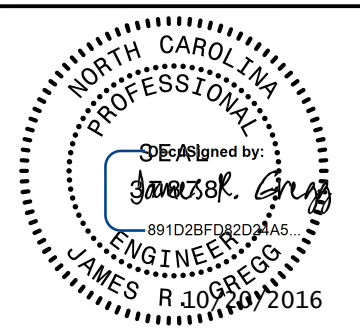
CHECKED BY: JRG

APPROVED BY: MDS

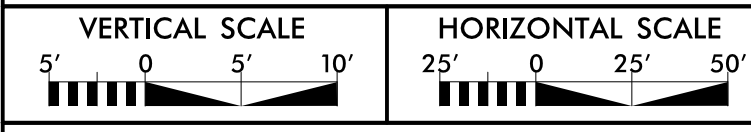
REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151



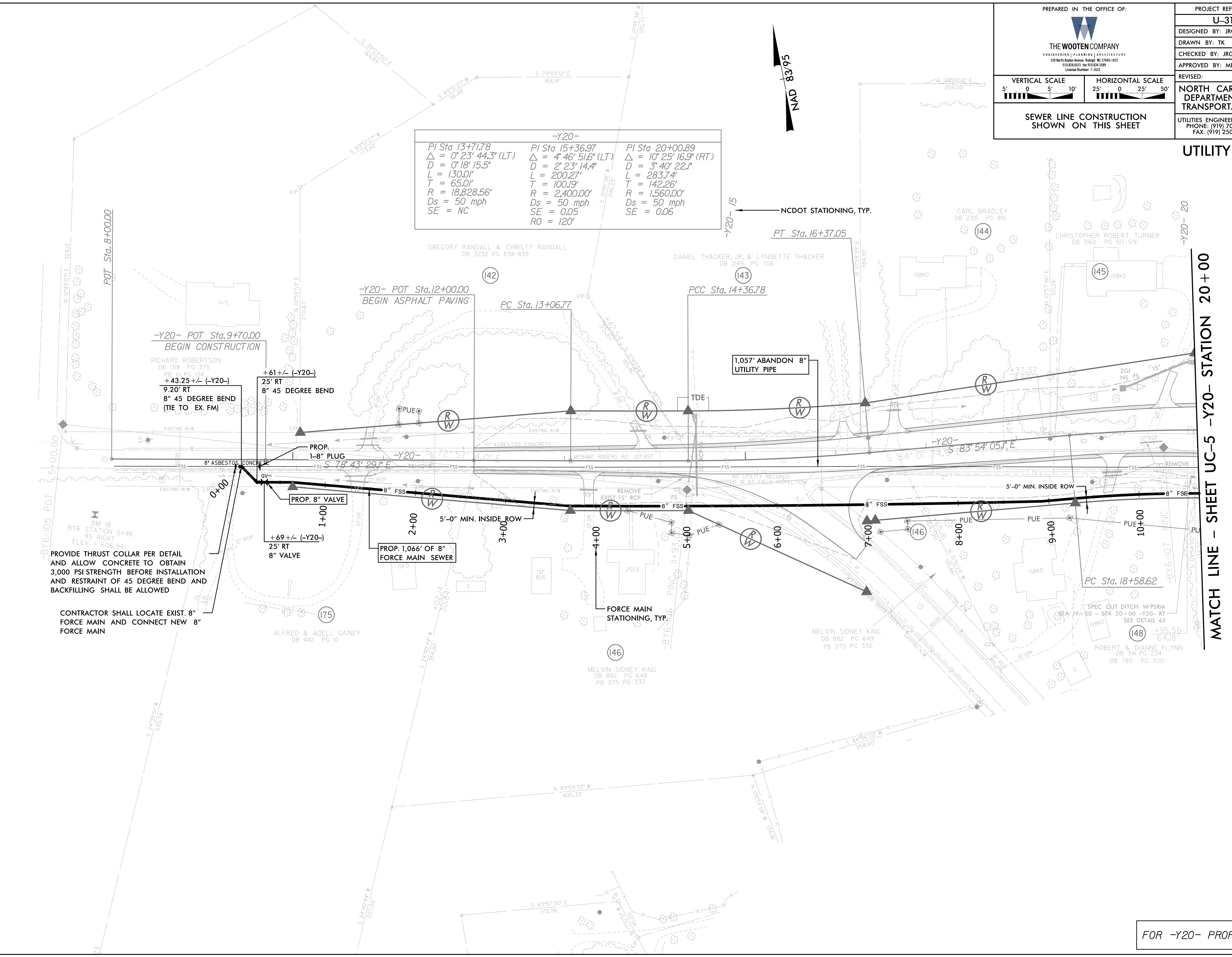
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SEWER LINE CONSTRUCTION SHOWN ON THIS SHEET

UTILITY CONSTRUCTION

-Y20-		
PI Sta 13+71.78	PI Sta 15+36.97	PI Sta 20+00.89
$\Delta = 0^\circ 23' 44.3''$ (LT)	$\Delta = 4^\circ 46' 51.6''$ (LT)	$\Delta = 10^\circ 25' 16.9''$ (RT)
$D = 0^\circ 18' 15.5''$	$D = 2^\circ 23' 14.4''$	$D = 3^\circ 40' 22.1''$
$L = 130.01'$	$L = 200.27'$	$L = 283.74'$
$T = 65.01'$	$T = 100.19'$	$T = 142.26'$
$R = 18,828.56'$	$R = 2,400.00'$	$R = 1,560.00'$
$D_s = 50$ mph	$D_s = 50$ mph	$D_s = 50$ mph
$SE = NC$	$SE = 0.05$	$SE = 0.06$
	$RO = 120'$	



-Y20- POT Sta. 9+70.00
BEGIN CONSTRUCTION

RICHARD ROBERTSON
DB 1318 PG 375
PB 61 PG 134
+43.25 +/- (-Y20-)
9.20' RT
8" 45 DEGREE BEND
(TIE TO EX. FM)

+61 +/- (-Y20-)
25' RT
8" 45 DEGREE BEND

PROVIDE THRUST COLLAR PER DETAIL
AND ALLOW CONCRETE TO OBTAIN
3,000 PSI STRENGTH BEFORE INSTALLATION
AND RESTRAINT OF 45 DEGREE BEND AND
BACKFILLING SHALL BE ALLOWED


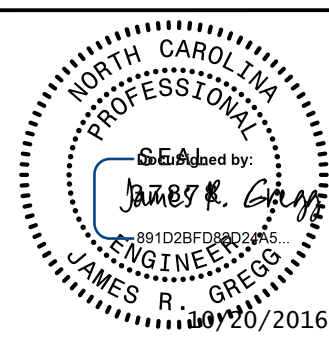
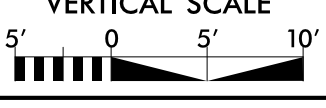

CONTRACTOR SHALL LOCATE EXIST. 8"
FORCE MAIN AND CONNECT NEW 8"
FORCE MAIN

PROP. 1,066' OF 8"
FORCE MAIN SEWER

1,057' ABANDON 8"
UTILITY PIPE

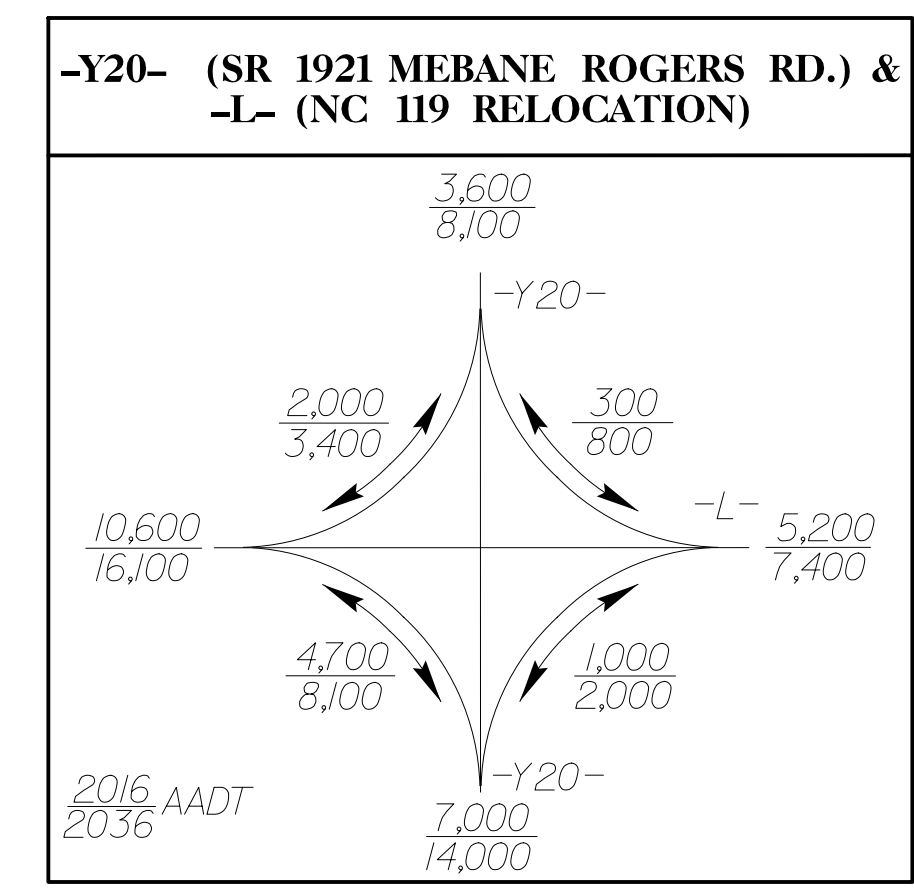
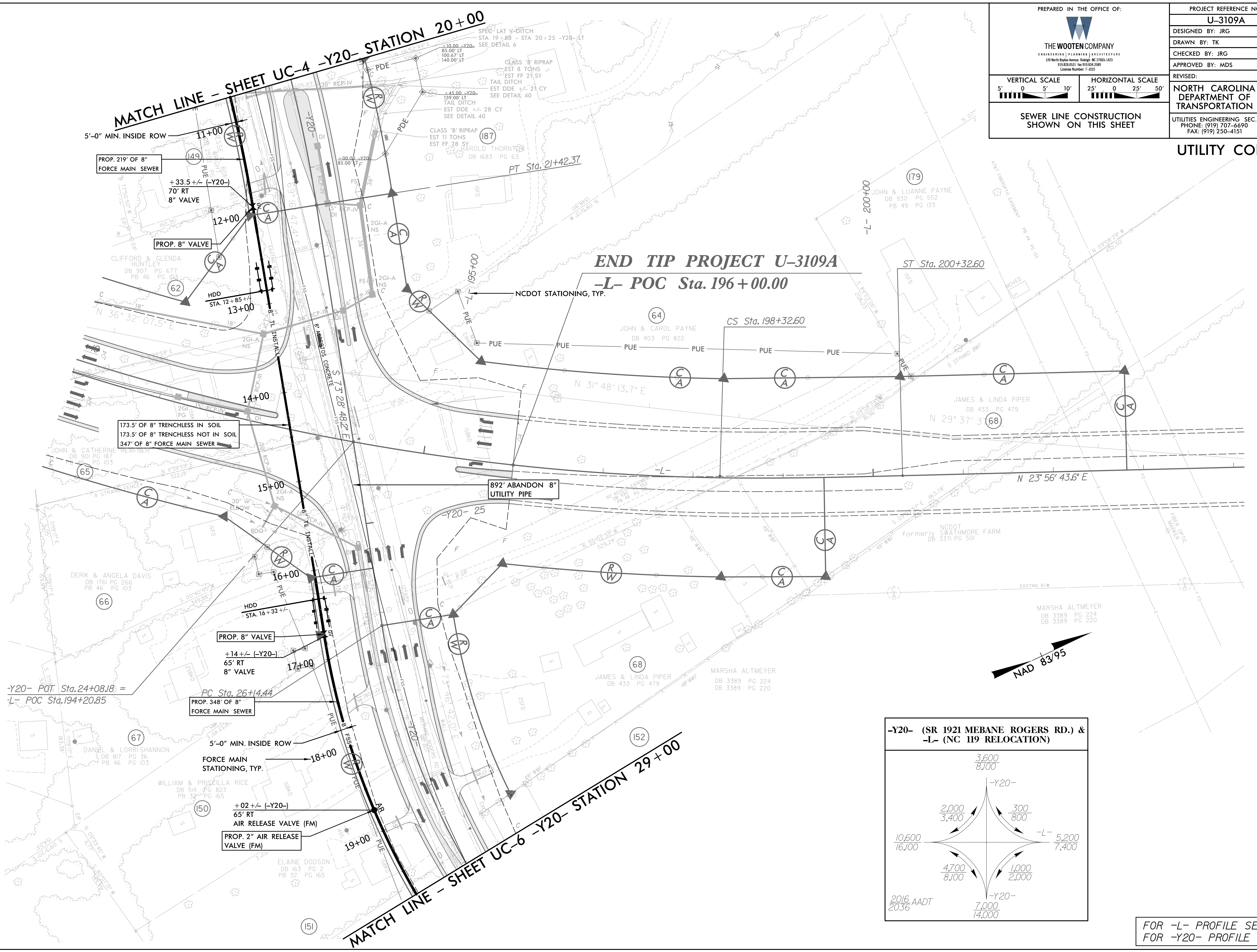
MATCH LINE - SHEET UC-5 -Y20- STATION 20+00

FOR -Y20- PROFILE SEE SHEET 53

PREPARED IN THE OFFICE OF:  THE WOOTEN COMPANY <small>ENGINEERING PLANNING ARCHITECTURE</small> <small>120 North Siler Avenue Raleigh, NC 27603-1423</small> <small>919.878.0311 fax 919.878.1599</small> <small>License Number: F-0115</small>	PROJECT REFERENCE NO.	SHEET NO.
	U-3109A	UC-5
DESIGNED BY: JRG	 <small>Document Not Considered Final Unless All Signatures Completed</small> <small>UTILITY CONSTRUCTION PLANS ONLY</small>	
DRAWN BY: TK		
CHECKED BY: JRG		
APPROVED BY: MDS	REVISIONS: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
VERTICAL SCALE 	HORIZONTAL SCALE 	
SEWER LINE CONSTRUCTION SHOWN ON THIS SHEET		

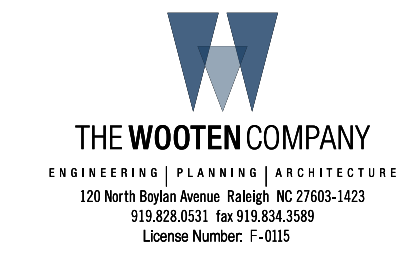
UTILITY CONSTRUCTION

REVISIONS



FOR -L- PROFILE SEE SHEET 38
 FOR -Y20- PROFILE SEE SHEET 53

PREPARED IN THE OFFICE OF:



PROJECT REFERENCE NO.

U-3109A

SHEET NO.

UC-6

DESIGNED BY: JRG

DRAWN BY: TK

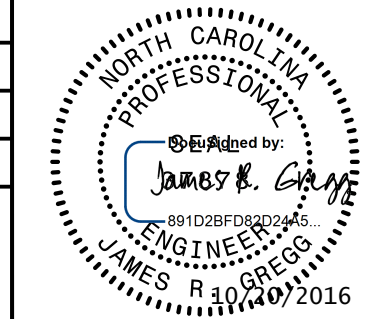
CHECKED BY: JRG

APPROVED BY: MDS

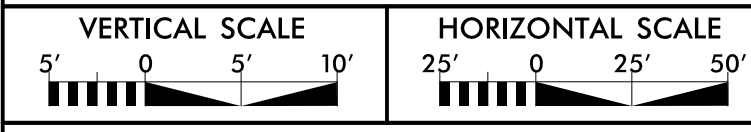
REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151

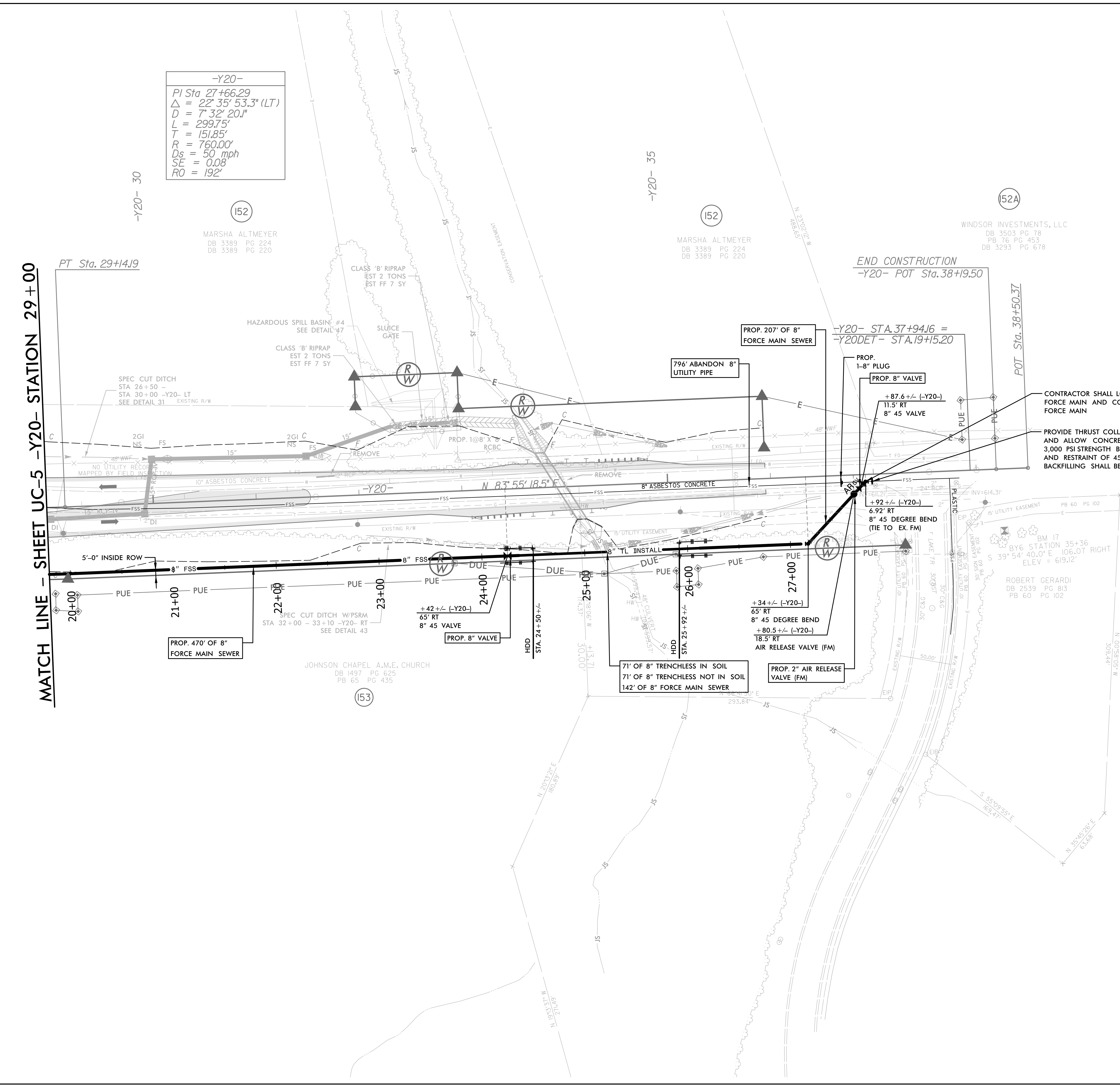


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SEWER LINE CONSTRUCTION SHOWN ON THIS SHEET

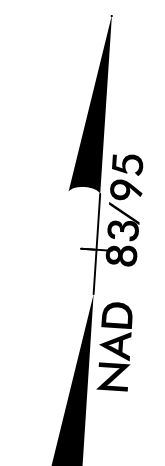
UTILITY CONSTRUCTION



-Y20-

PI Sta 27+66.29
 $\Delta = 22^\circ 35' 53.3"$ (LT)
 $D = 7^\circ 32' 20.1"$
 $L = 299.75'$
 $T = 151.85'$
 $R = 760.00'$
 $D_s = 50$ mph
 $SE = 0.08'$
 $RO = 192'$

MATCH LINE - SHEET UC-5 -Y20- STATION 29+00



CONTRACTOR SHALL LOCATE EXIST. 8" FORCE MAIN AND CONNECT NEW 8" FORCE MAIN


PROVIDE THRUST COLLAR PER DETAIL AND ALLOW CONCRETE TO OBTAIN 3,000 PSI STRENGTH BEFORE INSTALLATION AND RESTRAINT OF 45 DEGREE BEND AND BACKFILLING SHALL BE ALLOWED

FOR -Y20- PROFILE SEE SHEET 53 & 54

5/28/19

PROFILE SHOWN IS BASED ON STATIONING ALONG PROPOSED FORCE MAIN ALIGNMENT ALONG ROADWAY ALIGNMENT -Y20- (SEE SHEET UC-4, UC-5 and UC-6)

PREPARED IN THE OFFICE OF:



THE WOOTEN COMPANY
ENGINEERING | PLANNING | ARCHITECTURE
120 North Siler Street Raleigh, NC 27603-1423
919.838.0311 fax 919.838.0399
License Number: F-0115

PROJECT REFERENCE NO. U-3109A SHEET NO. UC-7

DESIGNED BY: JRG
DRAWN BY: TK
CHECKED BY: JRG
APPROVED BY: MDS

REVISED:

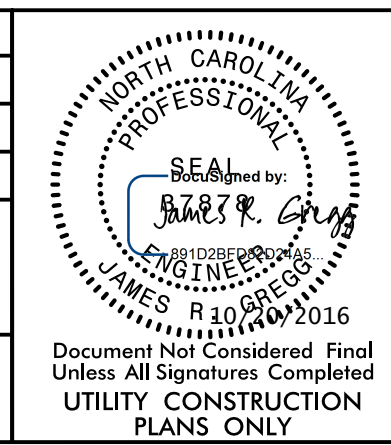
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

UTILITIES ENGINEERING SEC.
PHONE: (919) 707-6690
FAX: (919) 250-4151

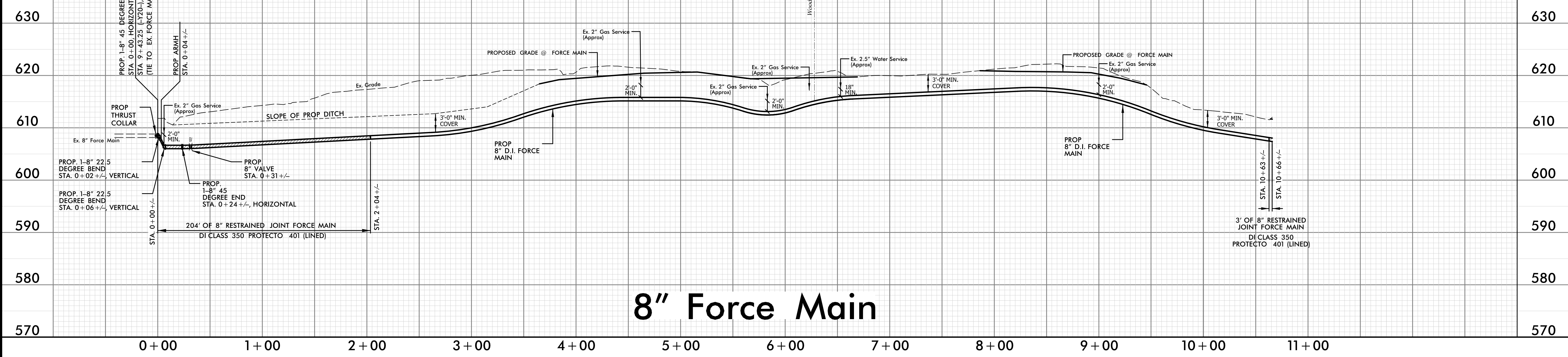
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VERTICAL SCALE 5' 0 5' 10'
HORIZONTAL SCALE 25' 0 25' 50'

SEWER LINE CONSTRUCTION SHOWN ON THIS SHEET

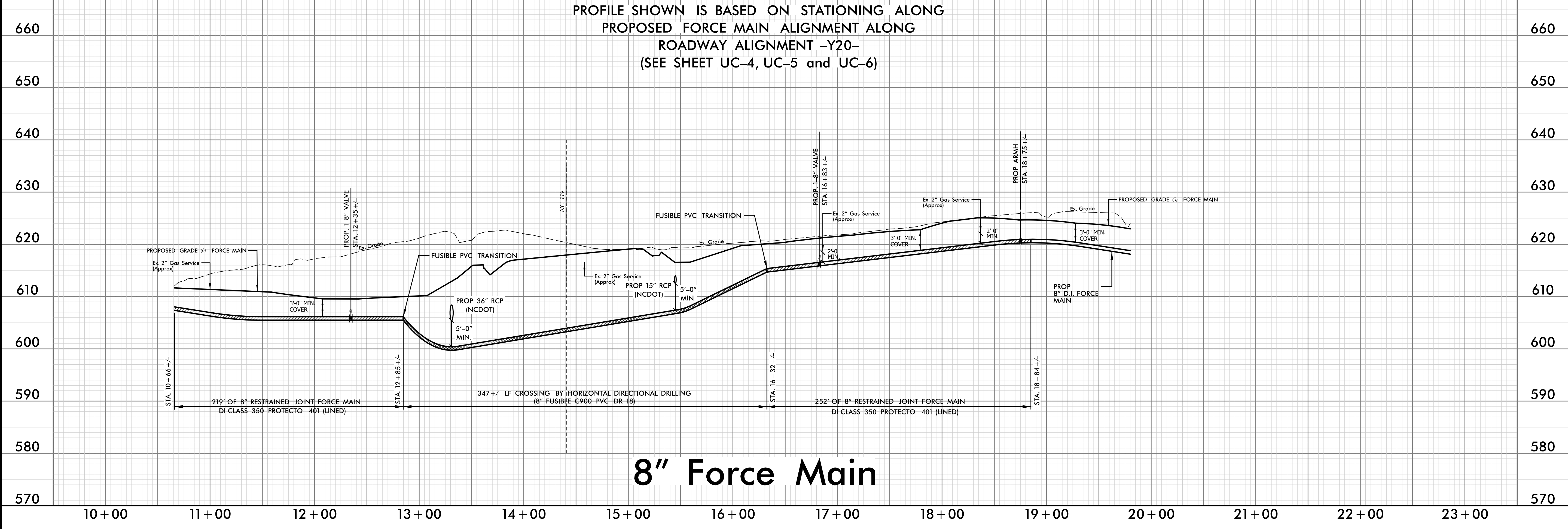


UTILITY CONSTRUCTION



8" Force Main

PROFILE SHOWN IS BASED ON STATIONING ALONG PROPOSED FORCE MAIN ALIGNMENT ALONG ROADWAY ALIGNMENT -Y20- (SEE SHEET UC-4, UC-5 and UC-6)



8" Force Main

5/28/19

5/28/19

PROFILE SHOWN IS BASED ON STATIONING ALONG
PROPOSED FORCE MAIN ALIGNMENT ALONG
ROADWAY ALIGNMENT -Y20-
(SEE SHEET UC-4, UC-5 and UC-6)

PREPARED IN THE OFFICE OF:



THE WOOTEN COMPANY
ENGINEERING | PLANNING | ARCHITECTURE
120 North Siler Street Raleigh, NC 27603-1423
919.838.0531 fax 919.838.1588
License Number: F-0115

PROJECT REFERENCE NO.

U-3109A

SHEET NO.

UC-8

DESIGNED BY: JRG

DRAWN BY: TK

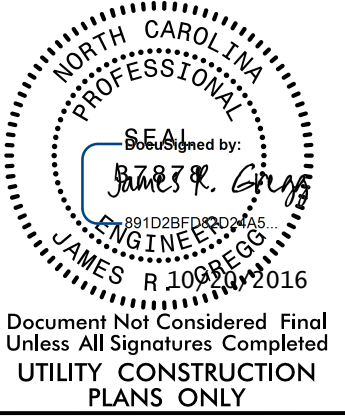
CHECKED BY: JRG

APPROVED BY: MDS

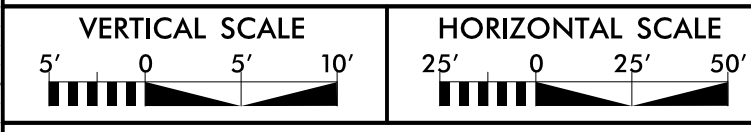
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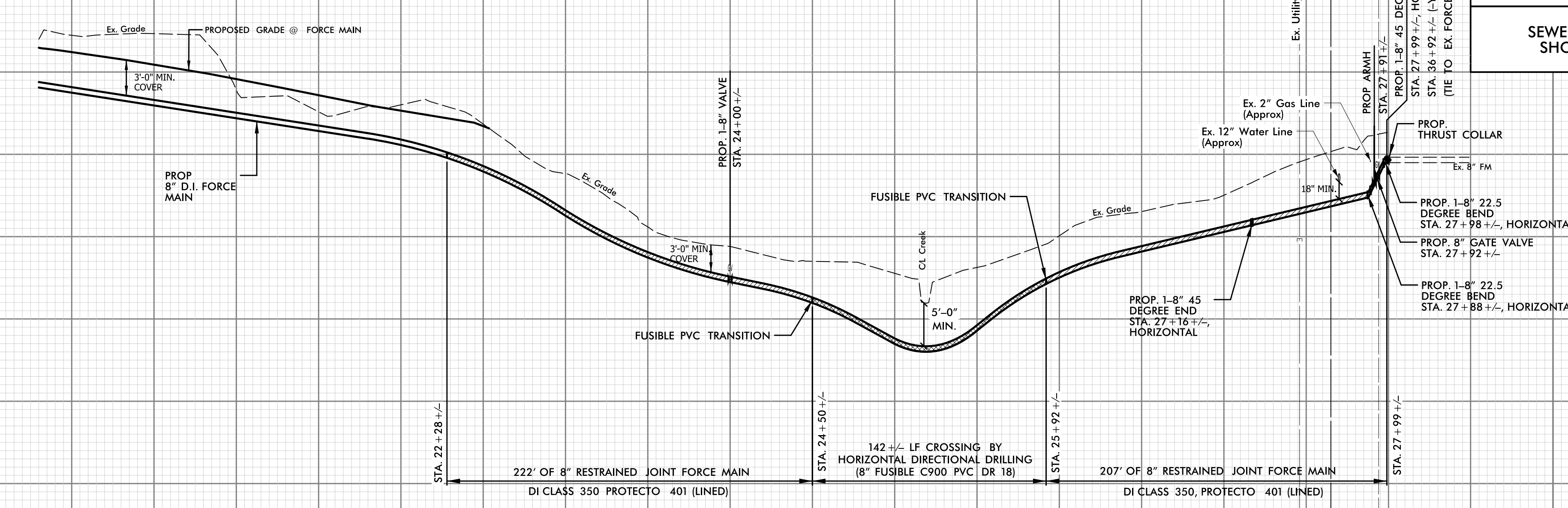
SEWER LINE CONSTRUCTION
SHOWN ON THIS SHEET

UTILITY CONSTRUCTION

610
600
590
580
570
560
550

640
630
620
610
600
590
580
570
560
550

19+00 20+00 21+00 22+00 23+00 24+00 25+00 26+00 27+00 28+00 29+00



8" Force Main

5/28/19