

5/14/99

PREPARED IN THE OFFICE OF:



THE WOOTEN COMPANY
120 North Ridge Avenue Raleigh, NC 27603-1423
919.828.9331 Fax: 919.828.2389
License Number: F-4015

PROJECT REFERENCE NO.

B-5639

SHEET NO.

UC-5

DESIGNED BY: DGM

DRAWN BY: TK

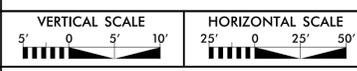
CHECKED BY: CMG

APPROVED BY: DGM

REVISED:

NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION

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



WATER LINE CONSTRUCTION
SHOWN ON THIS SHEET

UTILITY CONSTRUCTION

MATCHLINE -L- STA. 20 + 00.00 SEE SHEET UC-4

665 POUNDS OF DUCTILE IRON
WATER PIPE FITTINGS

PROP. 873' OF 6" WATER LINE
(SEE PROFILE SHEET UC-6)

655' DIRECTIONAL DRILLING OF 6" WATER LINE

WATER LINE STATIONING
(SEE PROFILE SHEET UC-6)

5'-0" MIN.
INSIDE R/W,

ABANDON 846' OF
6" UTILITY PIPE

PROP.
6" PLUG

CONTRACTOR SHALL LOCATE EXIST. 6"
WATER LINE; REVERSE CUT-IN 6" 90
DEGREE BEND AND CONNECT WATER.
STA. 11+92 (WL) =
STA. 28+05 (-L-), 16' RT
(SEE INSET SHEET UC-4)

37' OF 16" STEEL ENCASUREMENT
(OPEN CUT)

ADJUSTMENT OF VALVE BOX

ADJUST VALVES AS NEEDED
FOR DETOUR PAVEMENT AND
FINAL GRADE

END WATER INSTALLATION
STA. 12+18 (WL) =
STA. 28+30 (-L-), 16' RT

PROVIDE THRUST COLLAR PER
DETAIL, SHEET UC-3A, AND
ALLOW CONCRETE TO OBTAIN
3,000 PSI STRENGTH BEFORE
CONNECTION OF NEW WATER
LINE TO EXISTING WATER
LINE WILL BE ALLOWED

+68.89 (-L-)
15.92' LT

6" INSERTION VALVE
TO BE RODDED TO
THRUST COLLAR

+05.00 (-L-)
26.00'+/- RT
2-6" 90 DEGREE BENDS
VERTICAL

+05.00 (-L-)
25.00' LT
6" 90
DEGREE BEND

+53.73 (-L-)
25.00' LT
6" 22.5
DEGREE BEND

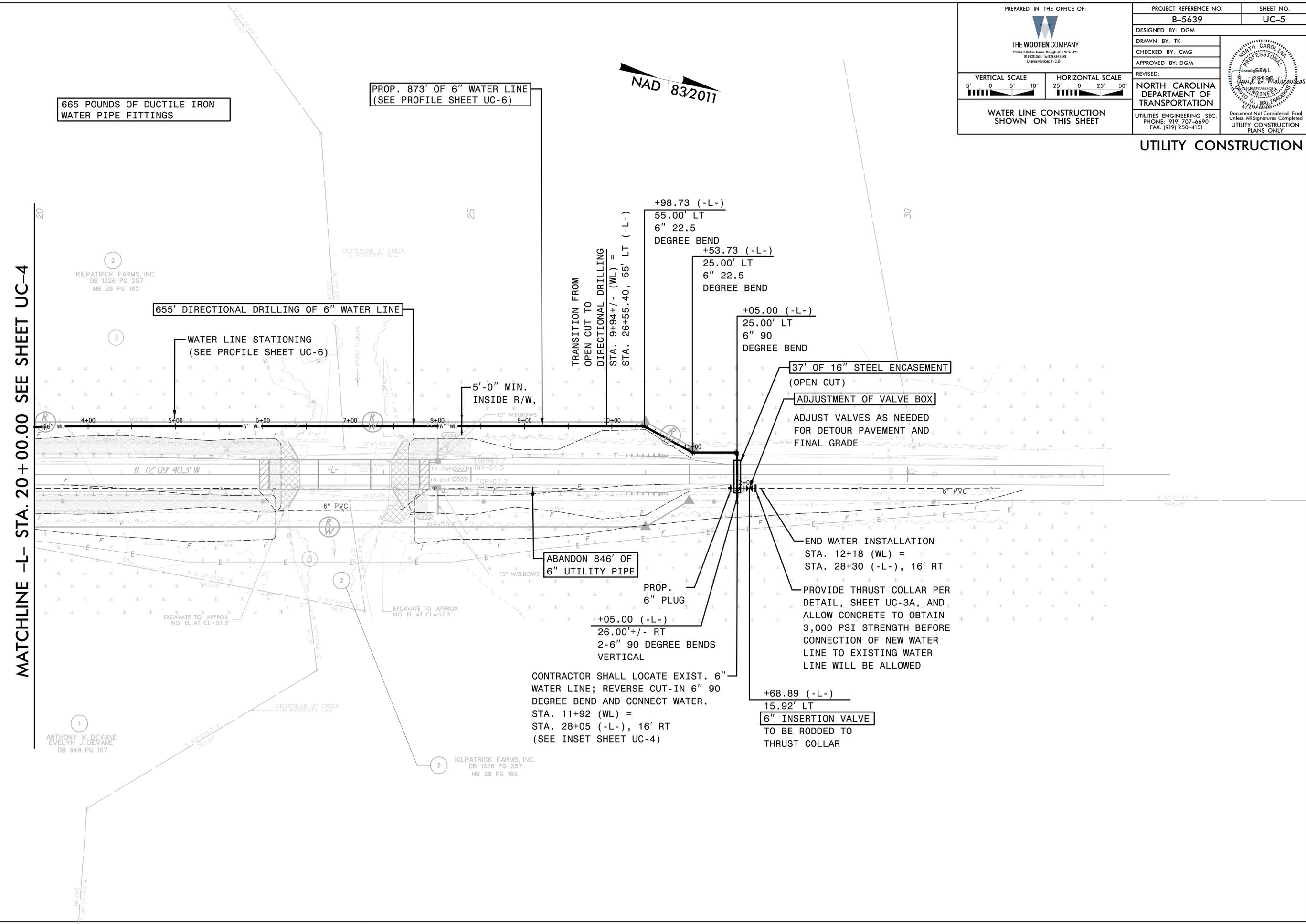
+98.73 (-L-)
55.00' LT
6" 22.5
DEGREE BEND

TRANSITION FROM
OPEN CUT TO
DIRECTIONAL DRILLING
STA. 9+94+/- (WL) =
STA. 26+55.40, 55' LT (-L-)

2
KILPATRICK FARMS, INC.
DB 1326 PG 257
MB 28 PG 185

1
ANTHONY K. DEVANE
EVELYN J. DEVANE
DB 949 PG 157

2
KILPATRICK FARMS, INC.
DB 1326 PG 257
MB 28 PG 185



PRIOR TO COMMENCING ANY WORK ON ANY TRENCHLESS INSTALLATION ON THIS PROJECT, PROVIDE A DESIGN FOR THE TRENCHLESS INSTALLATION CERTIFIED BY AN ENGINEER LICENSED BY THE STATE OF NORTH CAROLINA, AS REQUIRED BY SUBARTICLE 1550-3 (B) OF THE STANDARD SPECIFICATIONS.

PROFILE SHOWN IS BASED ON STATIONING ALONG PROPOSED WATER LINE ALIGNMENT ALONG ROADWAY ALIGNMENT -L- (SEE SHEET UC-4 & UC-5)

6" Water Line

PREPARED IN THE OFFICE OF:

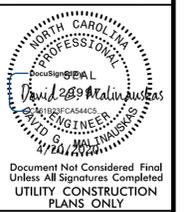


THE WOOTEN COMPANY
120 North Raleigh Avenue Raleigh, NC 27603-1423
919.833.8221 Fax: 919.833.2589
License Number: F-4015

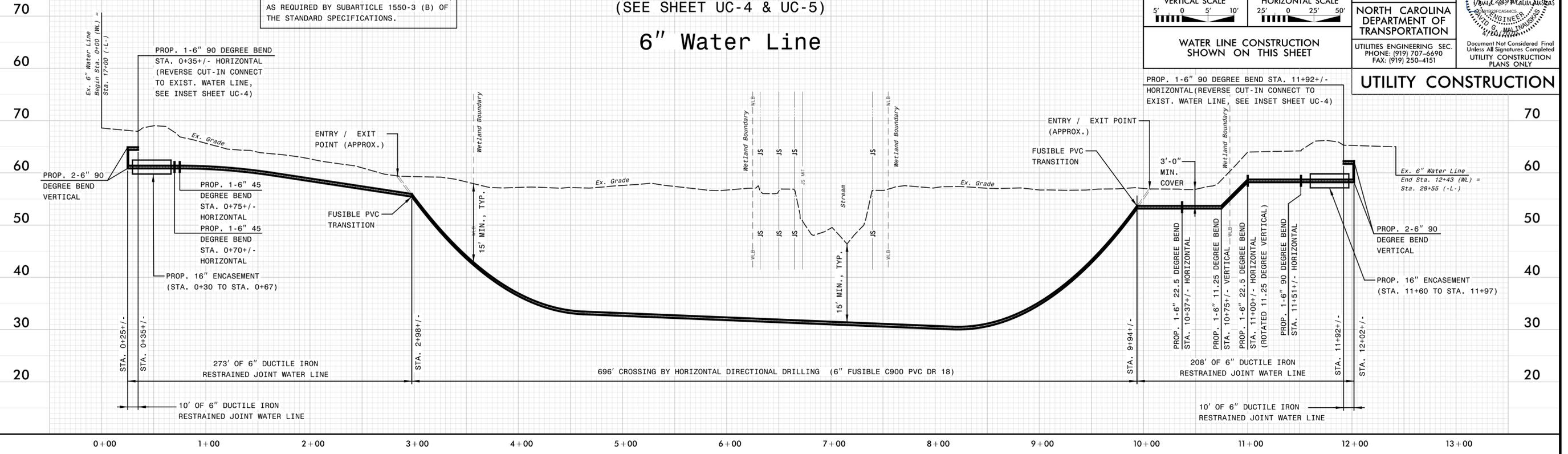


WATER LINE CONSTRUCTION SHOWN ON THIS SHEET

PROJECT REFERENCE NO. B-5639	SHEET NO. UC-6
DESIGNED BY: DGM	
DRAWN BY: TK	
CHECKED BY: CMG	
APPROVED BY: DGM	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	



UTILITY CONSTRUCTION



C:\Users\TK\Documents\Projects\B-5639\UC-6.dwg

5/14/99

UTILITY CONSTRUCTION

GENERAL NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2018 AND ONWASA STANDARD SPECIFICATIONS AND DETAILS.
2. THE EXISTING UTILITIES BELONG TO DUPLIN COUNTY.
3. ALL WATER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, 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 QUALITY, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.
4. THE UTILITY OWNER OWNS THE EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY THE DEPARTMENT. 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.
5. 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 ONE WEEK PRIOR TO SERVICE INTERRUPTION. KEEP UTILITY OWNERS' REPRESENTATIVES INFORMED OF WORK PROGRESS AND PROVIDE OPPORTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.

6. 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.
7. 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.
8. 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.
9. 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.

PROJECT SPECIFIC NOTES:

1. PROPOSED WATER LINE SHALL BE D.I.R.J. (DUCTILE IRON RESTRAINED JOINT) PIPE, AND FUSIBLE PVC C900 FOR HORIZONTAL DIRECTION DRILL (HDD) AS INDICATED ON THE CONSTRUCTION DRAWINGS.
2. 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.
3. TRACER WIRE, WARNING TAPES, AND UTILITY MARKERS SHALL BE INSTALLED WITH ALL PLASTIC PIPE UTILITIES. WIRE, TAPE AND PIPE SHALL BE COLOR CODED ACCORDING TO UTILITY (BLUE FOR WATER) AND SHALL BE IN ACCORDANCE WITH NCDOT SPECIFICATIONS AND ONWASA'S MANUAL OF STANDARDS, SPECIFICATIONS, AND DETAILS.
4. FUSED PVC 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 ALIGNMENT CORRECTIONS TO TAKE PLACE IN THE DIP FITTINGS.
5. THRUST COLLARS ON EXISTING UTILITIES ARE TO BE INSTALLED AND CURED PRIOR TO CONNECTION OF NEW UTILITIES TO EXISTING UTILITIES.
6. MAXIMUM DURATION OF EXISTING WATERLINE SHUTDOWN IS 8 HOURS. CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE SHUTDOWN WITH DUPLIN COUNTY AND HAVING ADEQUATE STAFF AND MATERIALS TO COMPLETE THE CUT-IN CONNECTION DURING THE SPECIFIED DURATION.

PREPARED IN THE OFFICE OF:  THE WOOTEN COMPANY <small>120 North Randle Avenue Raleigh, NC 27603-1423 919.878.0031 Fax 919.878.2089 License Number: F-0115</small>	PROJECT REFERENCE NO.	SHEET NO.
	B-5639	UC-3
DESIGNED BY: DGM		
DRAWN BY: TK		
CHECKED BY: CMG		
APPROVED BY: DGM		
REVISED:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
WATER LINE CONSTRUCTION SHOWN ON THIS SHEET		

UTILITY CONSTRUCTION

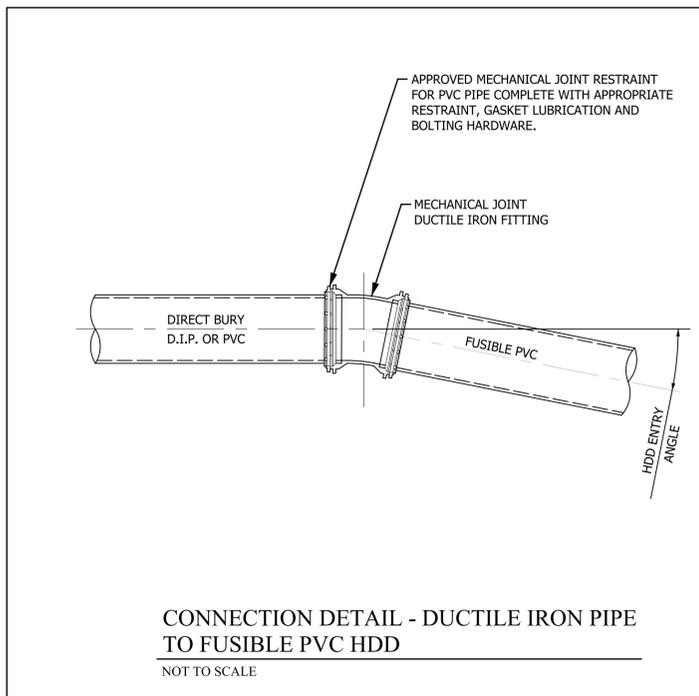
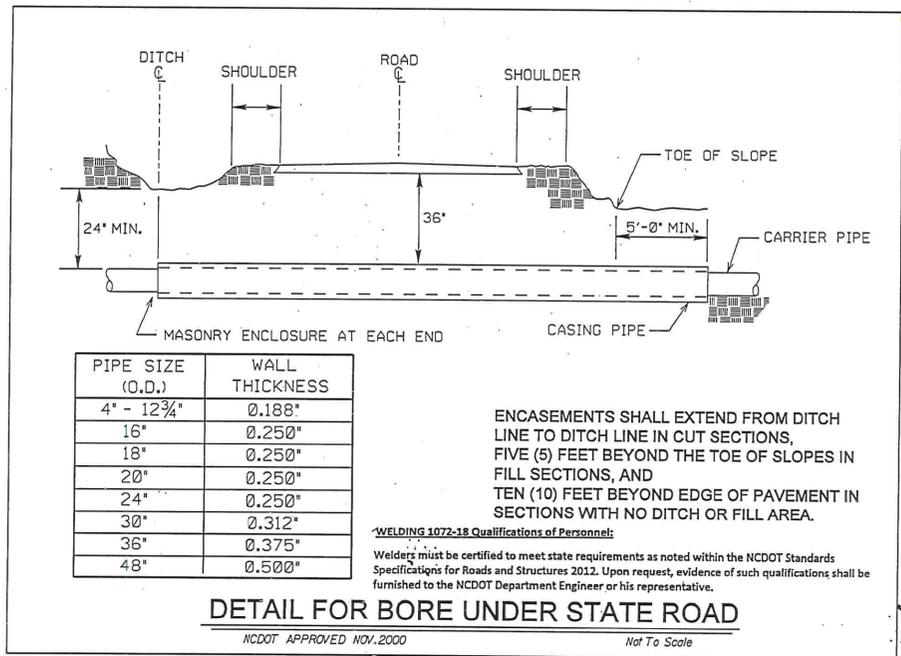
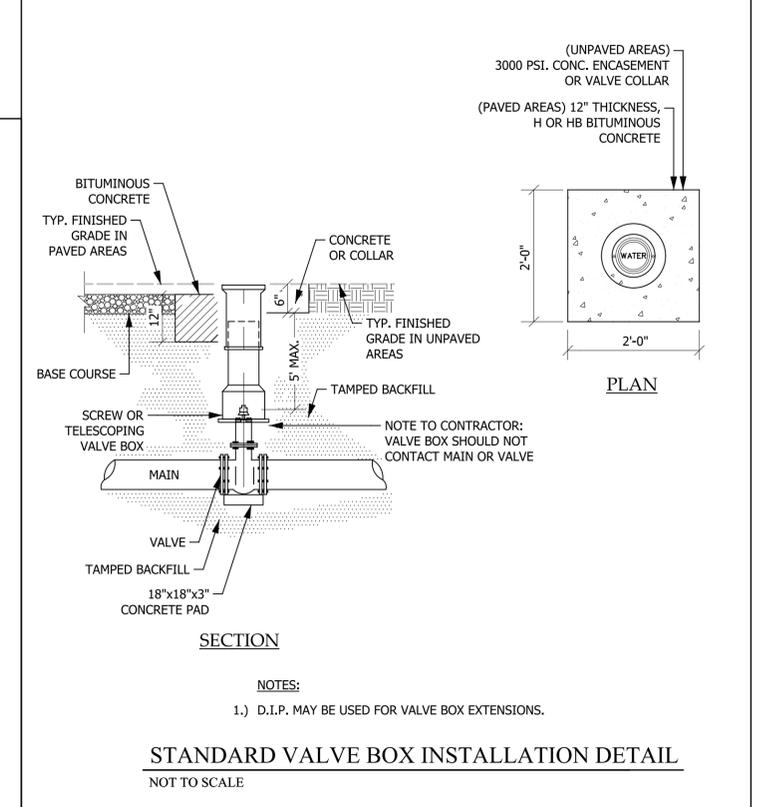
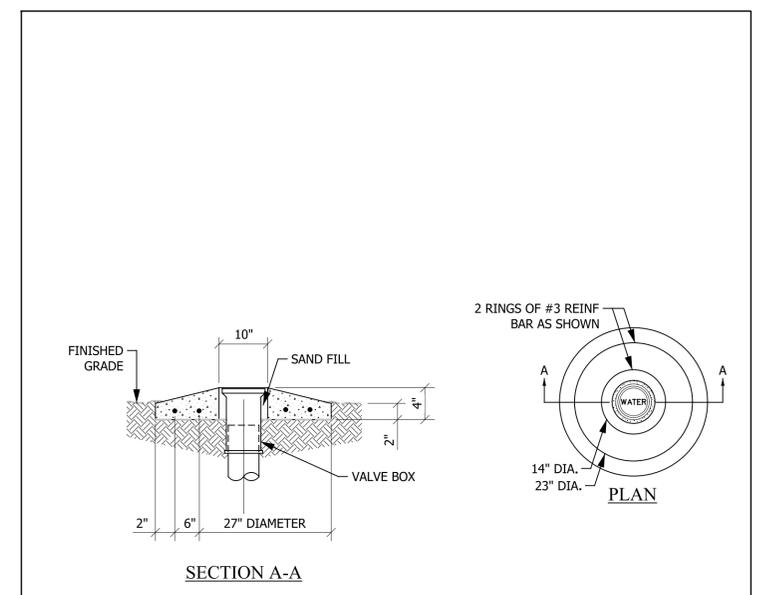
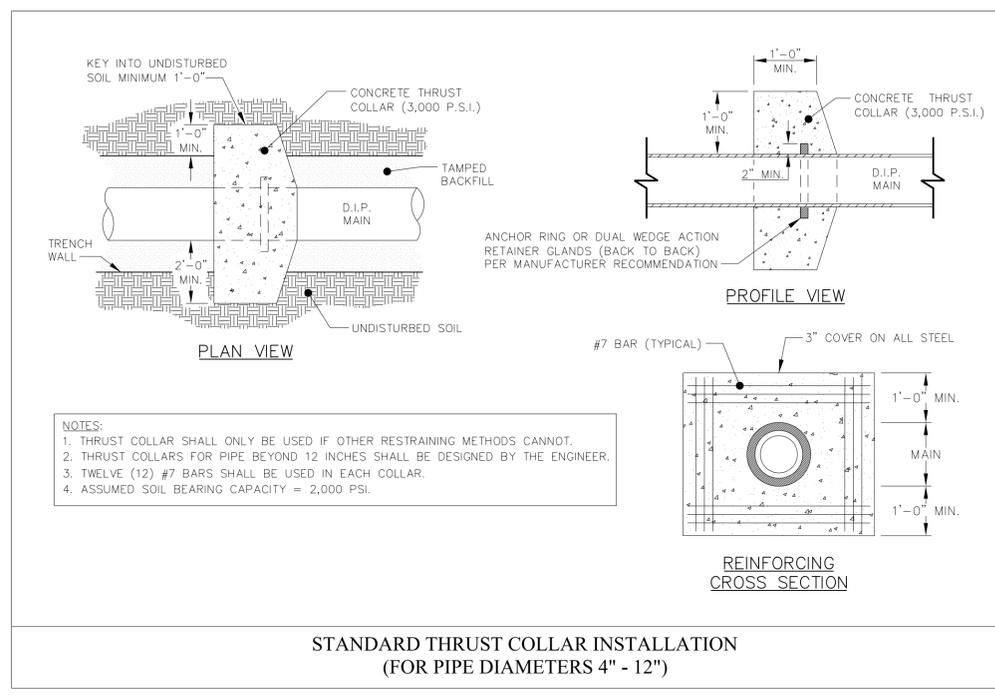
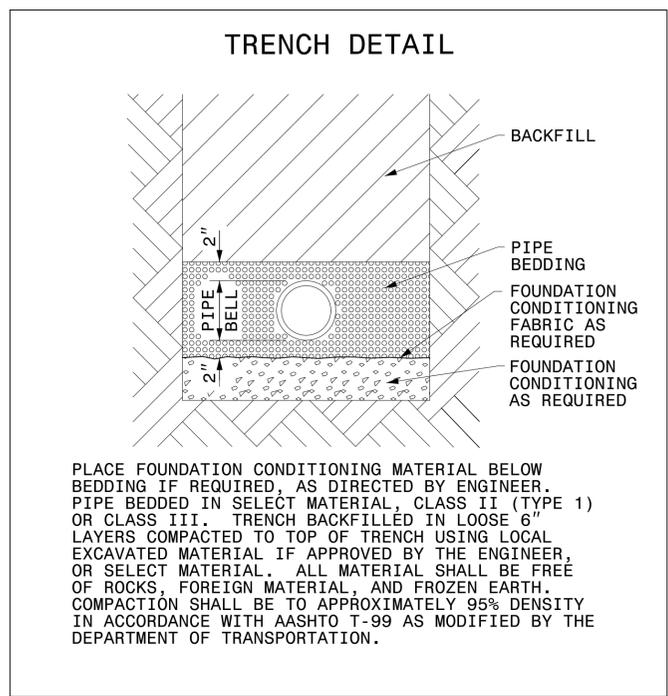
Document Not Considered Final Unless All Signatures Completed UTILITY CONSTRUCTION PLANS ONLY

5/14/99

PROJECT WATER DETAILS

PREPARED IN THE OFFICE OF: THE WOOTEN COMPANY <small>120 North Roper Avenue Raleigh, NC 27603-1423 919.876.0311 Fax 919.876.3109 License Number: F-0115</small>	PROJECT REFERENCE NO. B-5639	SHEET NO. UC-3A
	DESIGNED BY: DGM DRAWN BY: TK CHECKED BY: CMG APPROVED BY: DGM REVISED:	
VERTICAL SCALE 	HORIZONTAL SCALE 	
WATER LINE CONSTRUCTION SHOWN ON THIS SHEET		
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

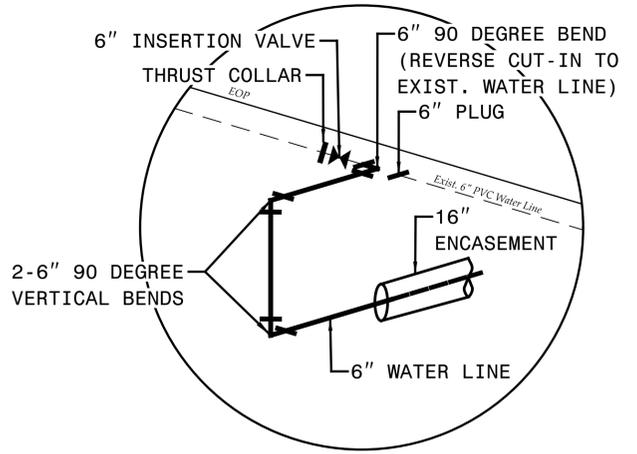
UTILITY CONSTRUCTION



5/14/99

NAD 83/2011

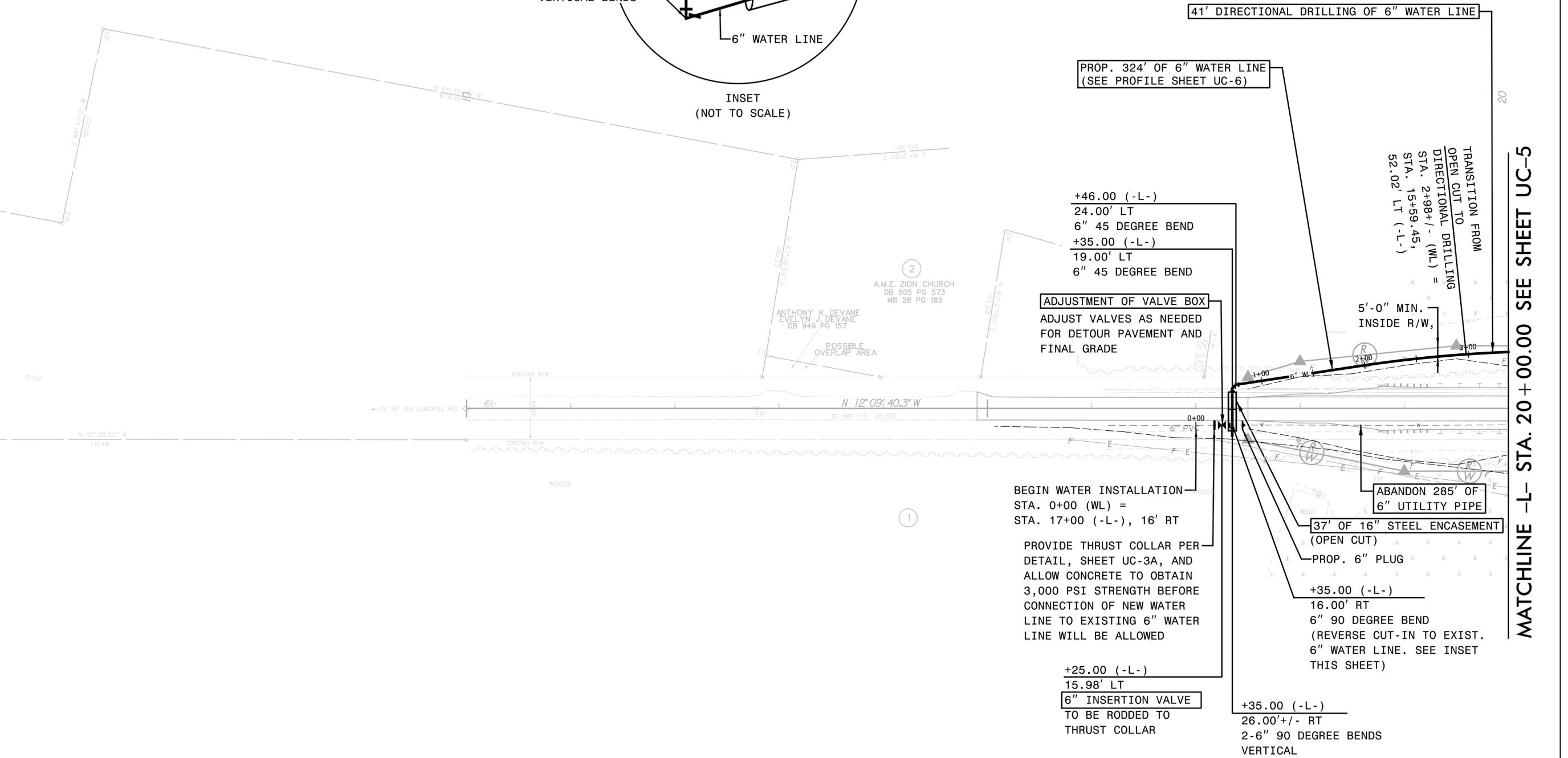
505 POUNDS OF DUCTILE IRON WATER PIPE FITTINGS



INSET (NOT TO SCALE)

PREPARED IN THE OFFICE OF: THE WOOTEN COMPANY <small>120 North Ridge Avenue Raleigh, NC 27603-1423 919.828.9311 fax 919.828.2389 License Number: F-4015</small>	PROJECT REFERENCE NO.	SHEET NO.
	B-5639	UC-4
DESIGNED BY: DGM		
DRAWN BY: TK		
CHECKED BY: CMG		
APPROVED BY: DGM	REVISED: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
WATER LINE CONSTRUCTION SHOWN ON THIS SHEET		

UTILITY CONSTRUCTION



PROP. 324' OF 6" WATER LINE (SEE PROFILE SHEET UC-6)

+46.00 (-L-)
 24.00' LT
 6" 45 DEGREE BEND
 +35.00 (-L-)
 19.00' LT
 6" 45 DEGREE BEND

ADJUSTMENT OF VALVE BOX
 ADJUST VALVES AS NEEDED FOR DETOUR PAVEMENT AND FINAL GRADE

BEGIN WATER INSTALLATION
 STA. 0+00 (WL) =
 STA. 17+00 (-L-), 16' RT

PROVIDE THRUST COLLAR PER DETAIL, SHEET UC-3A, AND ALLOW CONCRETE TO OBTAIN 3,000 PSI STRENGTH BEFORE CONNECTION OF NEW WATER LINE TO EXISTING 6" WATER LINE WILL BE ALLOWED

+25.00 (-L-)
 15.98' LT
6" INSERTION VALVE
 TO BE RODDED TO THRUST COLLAR

+35.00 (-L-)
 16.00' RT
 6" 90 DEGREE BEND (REVERSE CUT-IN TO EXIST. 6" WATER LINE. SEE INSET THIS SHEET)

+35.00 (-L-)
 26.00' +/- RT
 2-6" 90 DEGREE BENDS VERTICAL

TRANSITION FROM OPEN CUT TO DIRECTIONAL DRILLING
 STA. 2+98 +/- (WL) =
 STA. 15+59.45,
 52.02' LT (-L-)

5'-0" MIN. INSIDE R/W,

ABANDON 285' OF 6" UTILITY PIPE

37' OF 16" STEEL ENCASEMENT (OPEN CUT)

PROP. 6" PLUG

MATCHLINE -L- STA. 20 + 00.00 SEE SHEET UC-5

5/14/99