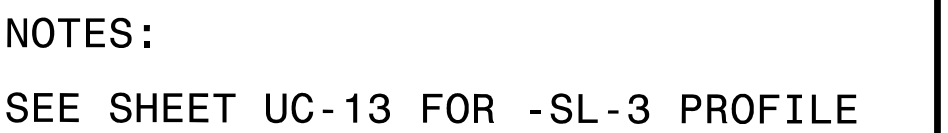




SEE SHEET UC-09 AND UC-10 FOR -WL-1 PROFILE
SEE SHEET UC-10 FOR -WL-2 PROFILE
SEE SHEET UC-11 AND UC-12 FOR -WL-3 PROFILE
SEE SHEET UC-12 FOR -WL-4 PROFILE
SEE SHEET UC-12 FOR -WL-6 PROFILE

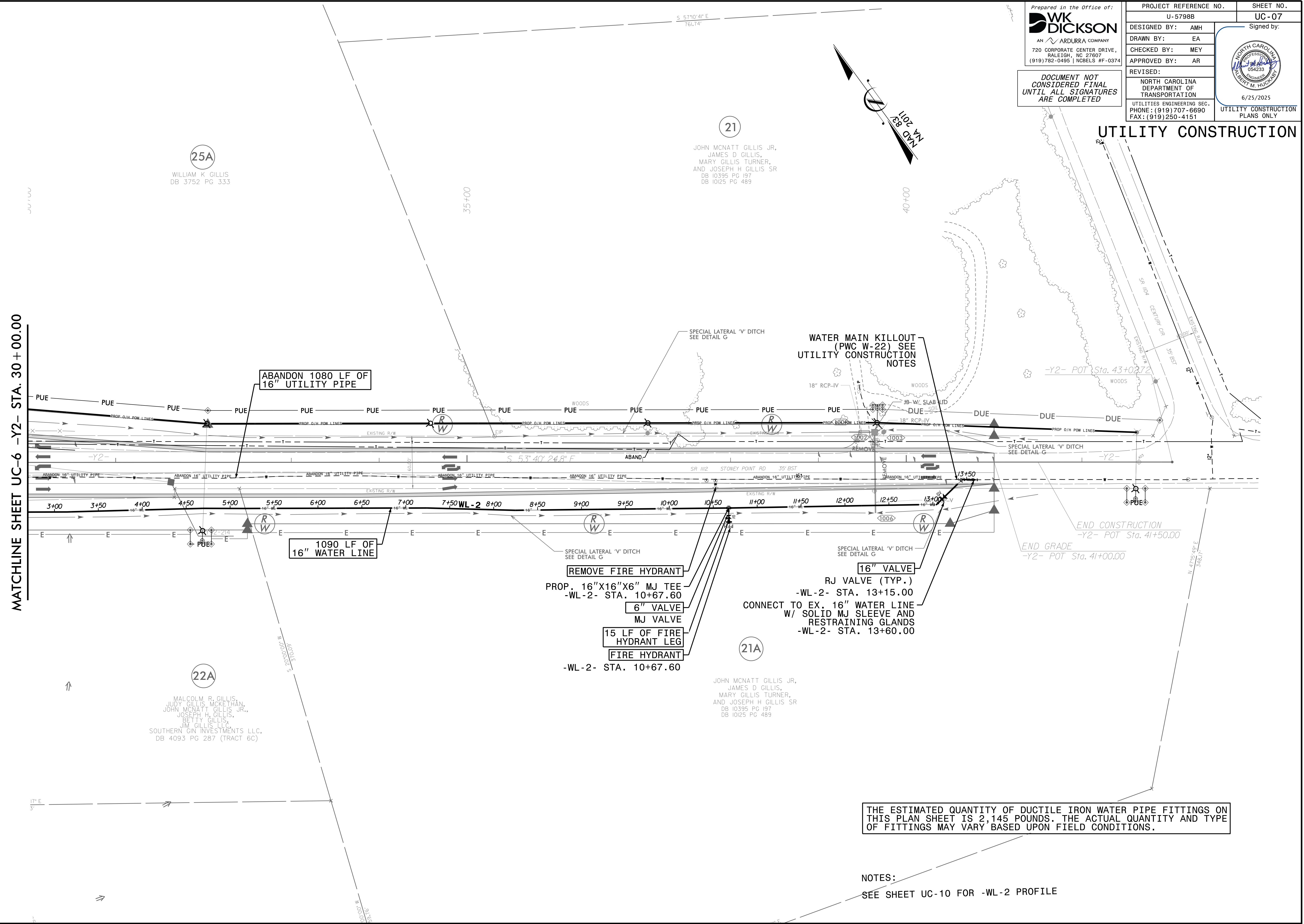
UTILITY CONSTRUCTION

UTILITY CONSTRUCTION



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ARE COMPLETED

UTILITY CONSTRUCTION



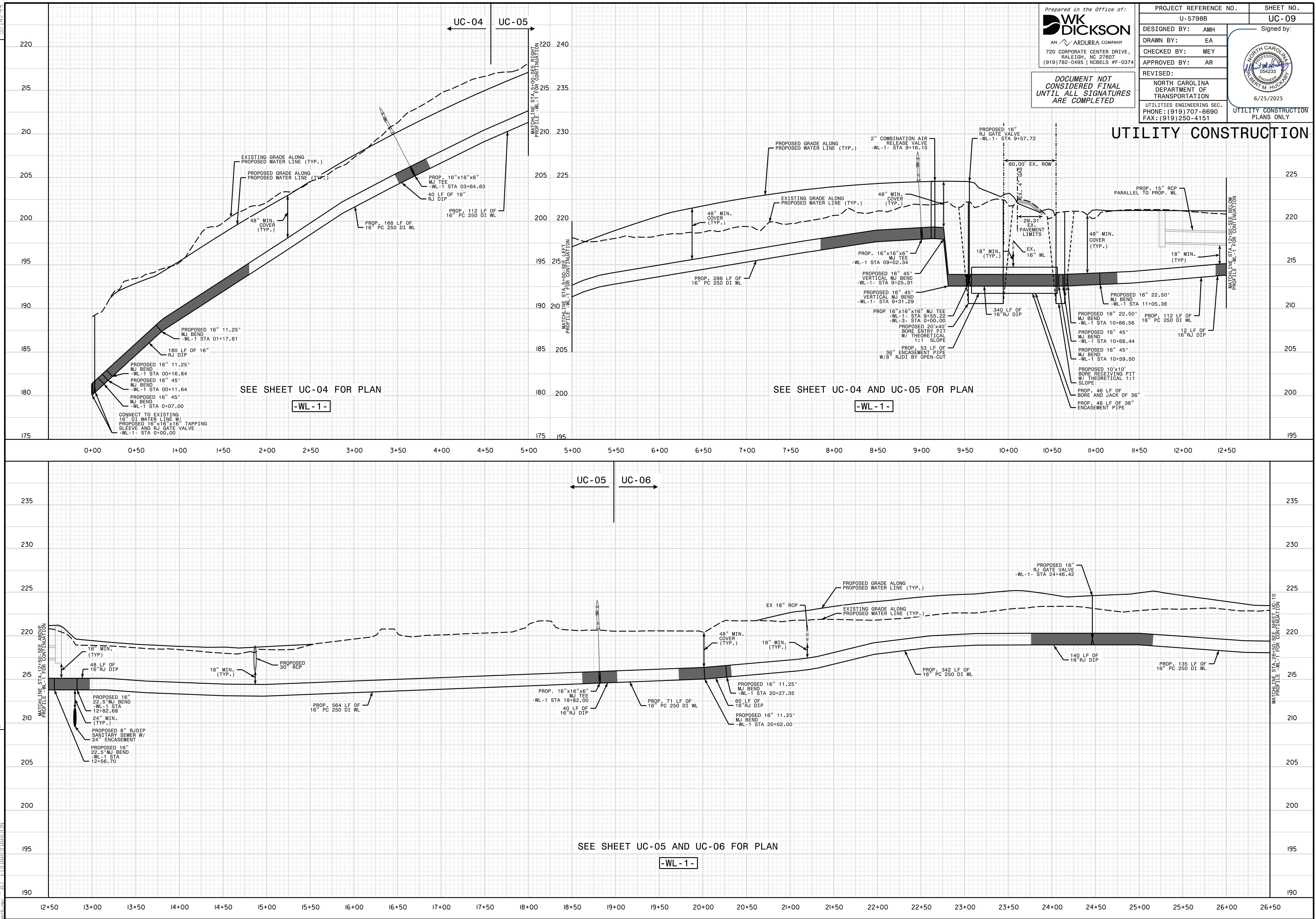
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SEE SHEET UC-10 FOR -WL-2 PROFILE

MATCHLINE SHEET UC-6 -Y2- STA. 22 + 00.00

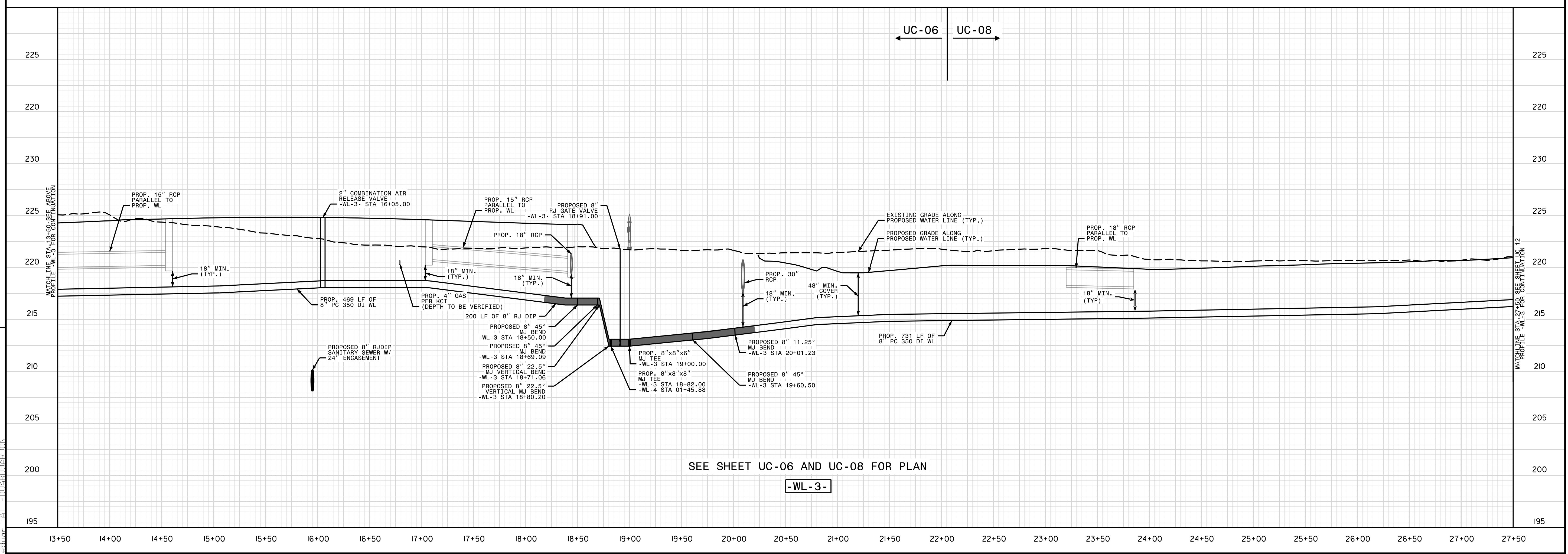
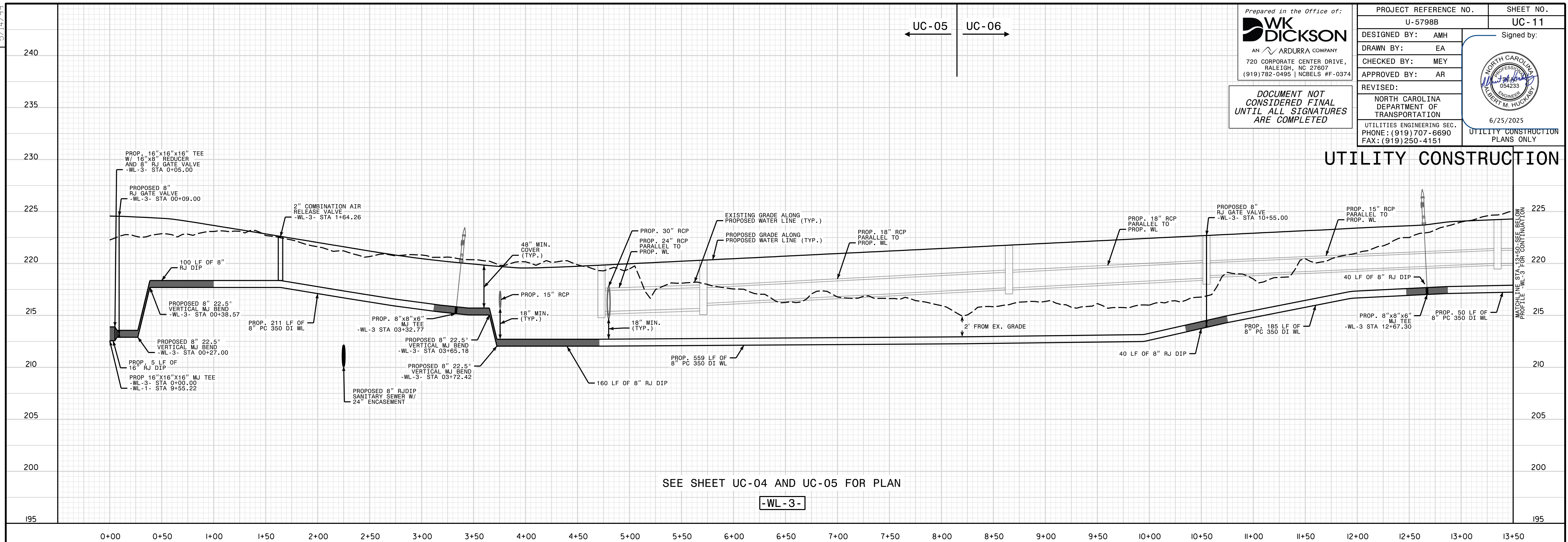


NOTES:
SEE SHEET UC-11 AND UC-12 FOR -WL-3 PROFILE
SEE SHEET UC-12 FOR -WL-5 PROFILE
SEE SHEET UC-12 FOR -WL-6 PROFILE

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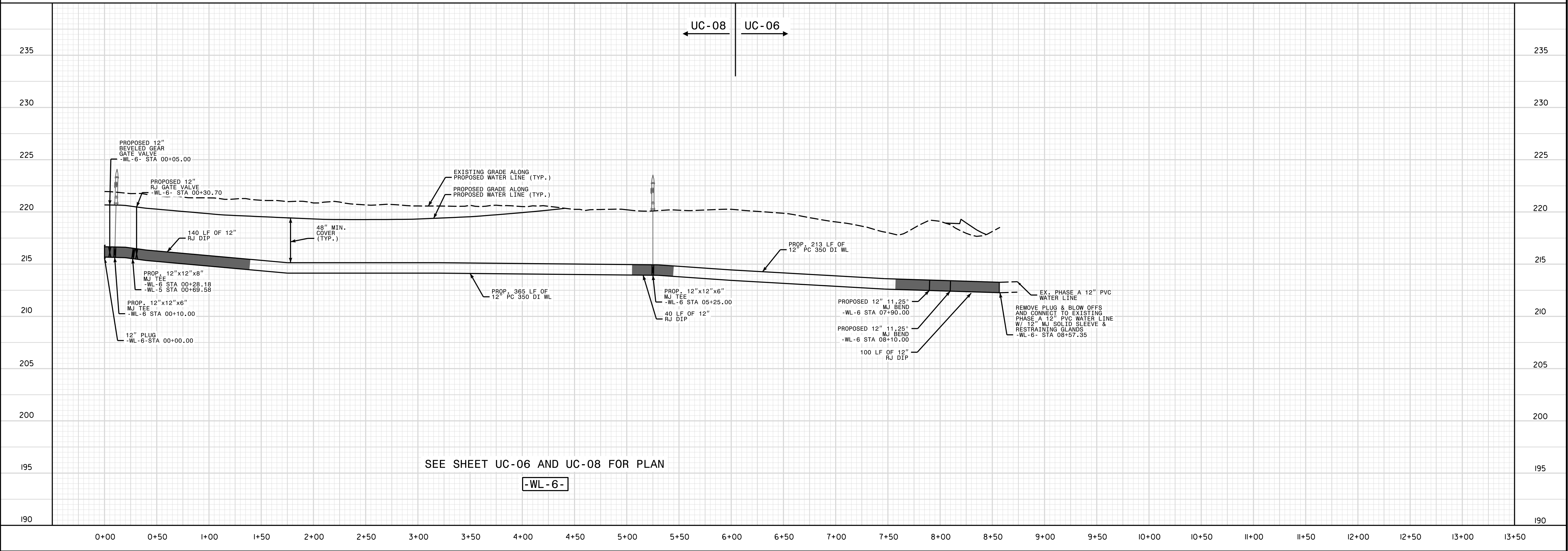
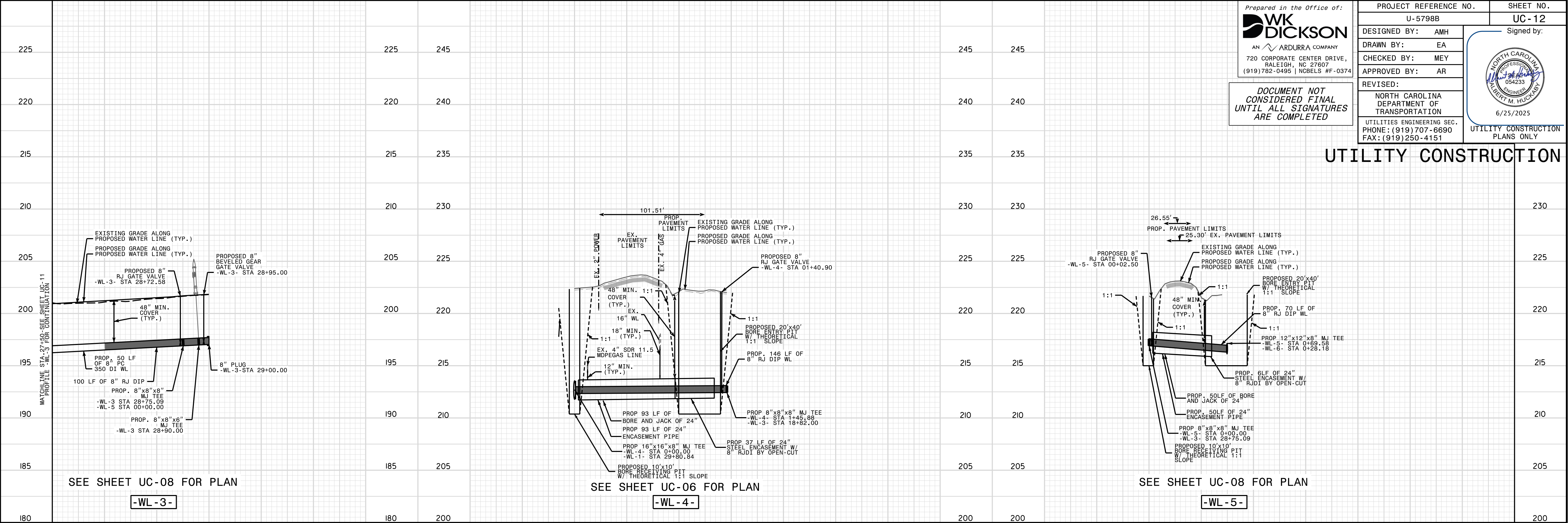
REVISIONS

Prepared in the Office of:
WK DICKSON
AN ARDURRA COMPANY
720 CORPORATE CENTER DRIVE,
RALEIGH, NC 27607
(919)782-0495 | NCBELS #F-0374

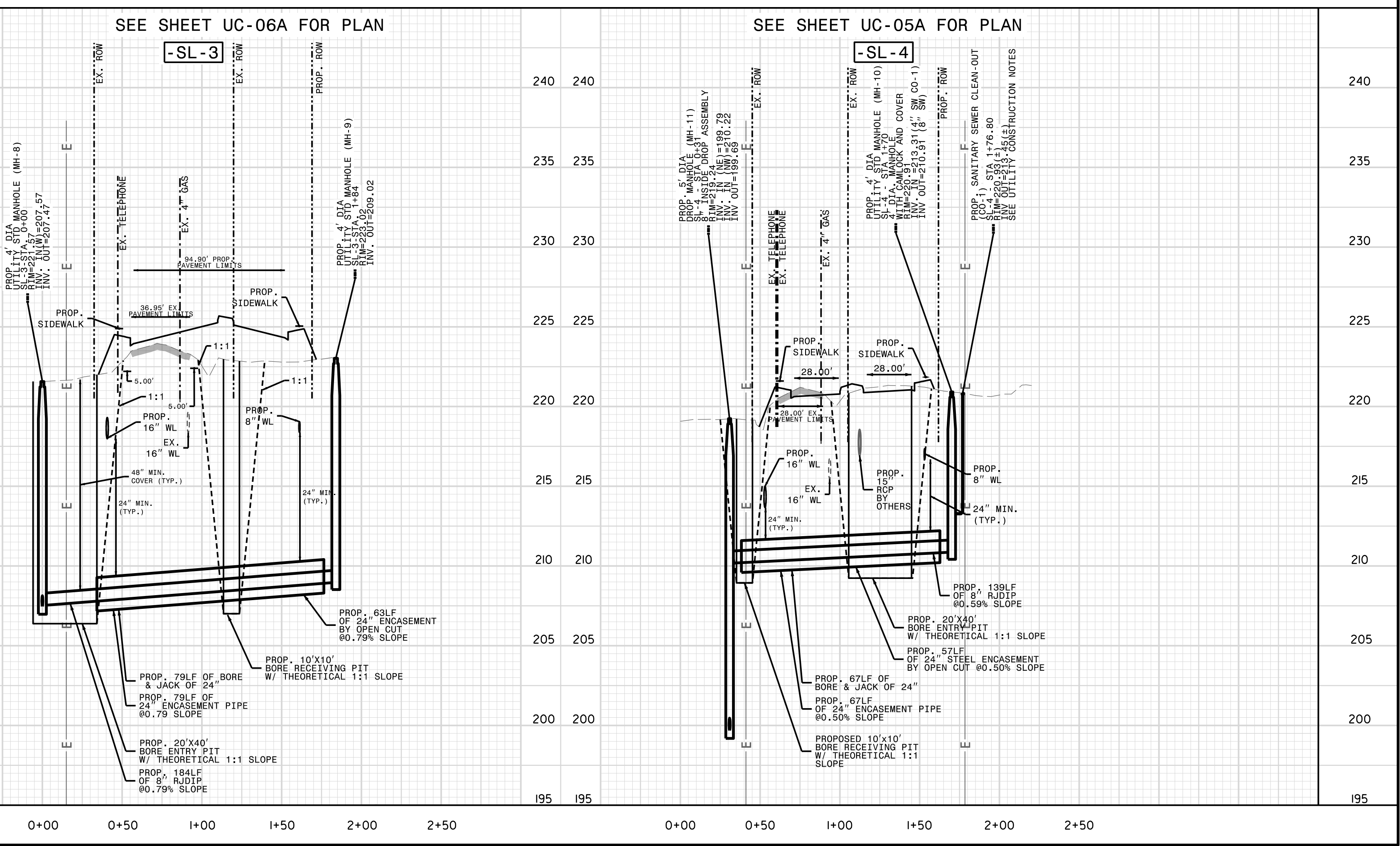
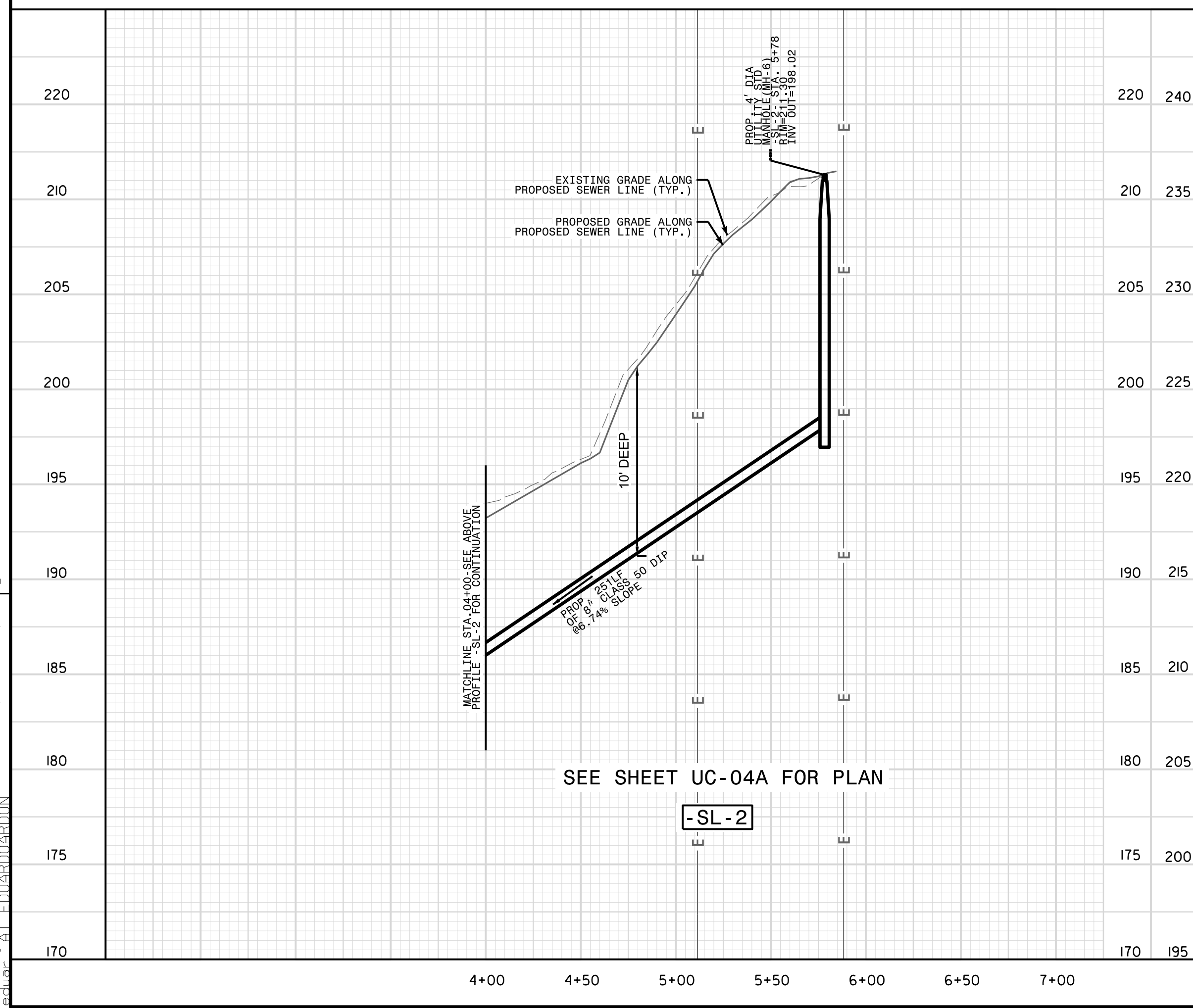
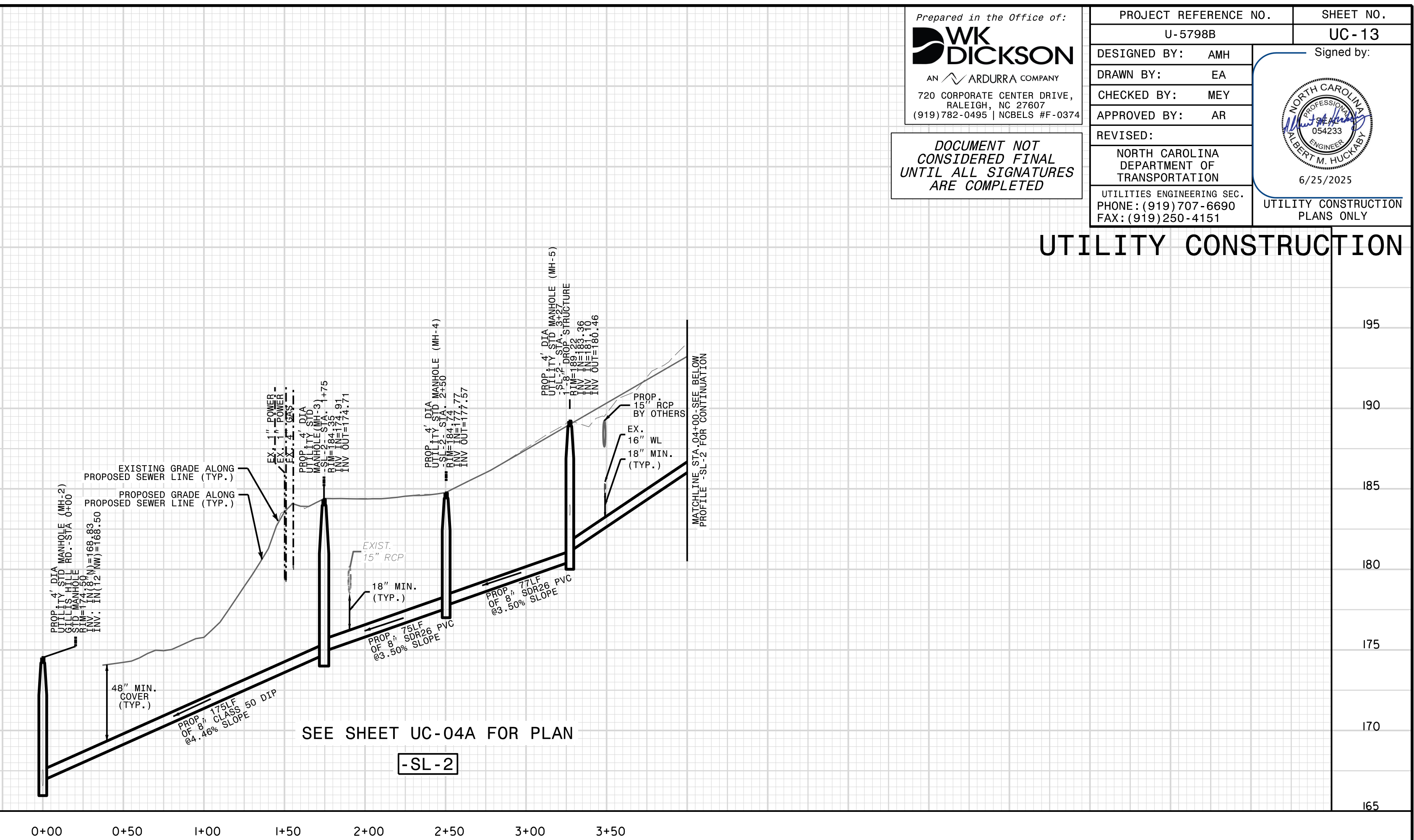
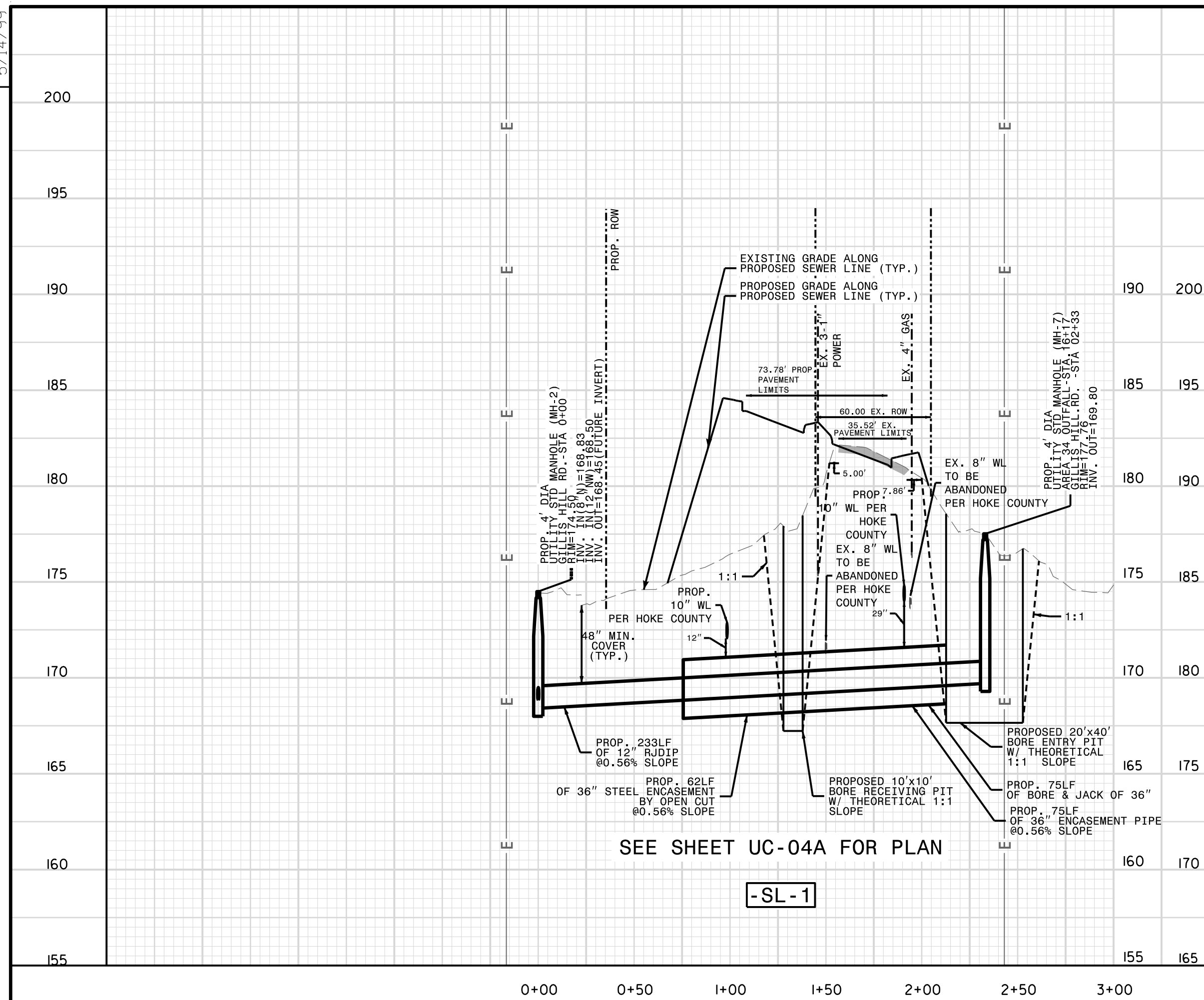
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ARE COMPLETED**

PROJECT REFERENCE NO.		SHEET NO.
U-57988		UC-12
DESIGNED BY: AMH	Signed by:  6/25/2025	
DRAWN BY: EA		
CHECKED BY: MEY		
APPROVED BY: AR		
REVISED:		
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151		
		UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION



UTILITY CONSTRUCTION



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CONSIDERED FINAL
UNTIL ALL SIGNATURES
ARE COMPLETED

DOCUMENT NOT
CONSIDERED FINAL
UNTIL ALL SIGNATURES
ARE COMPLETED

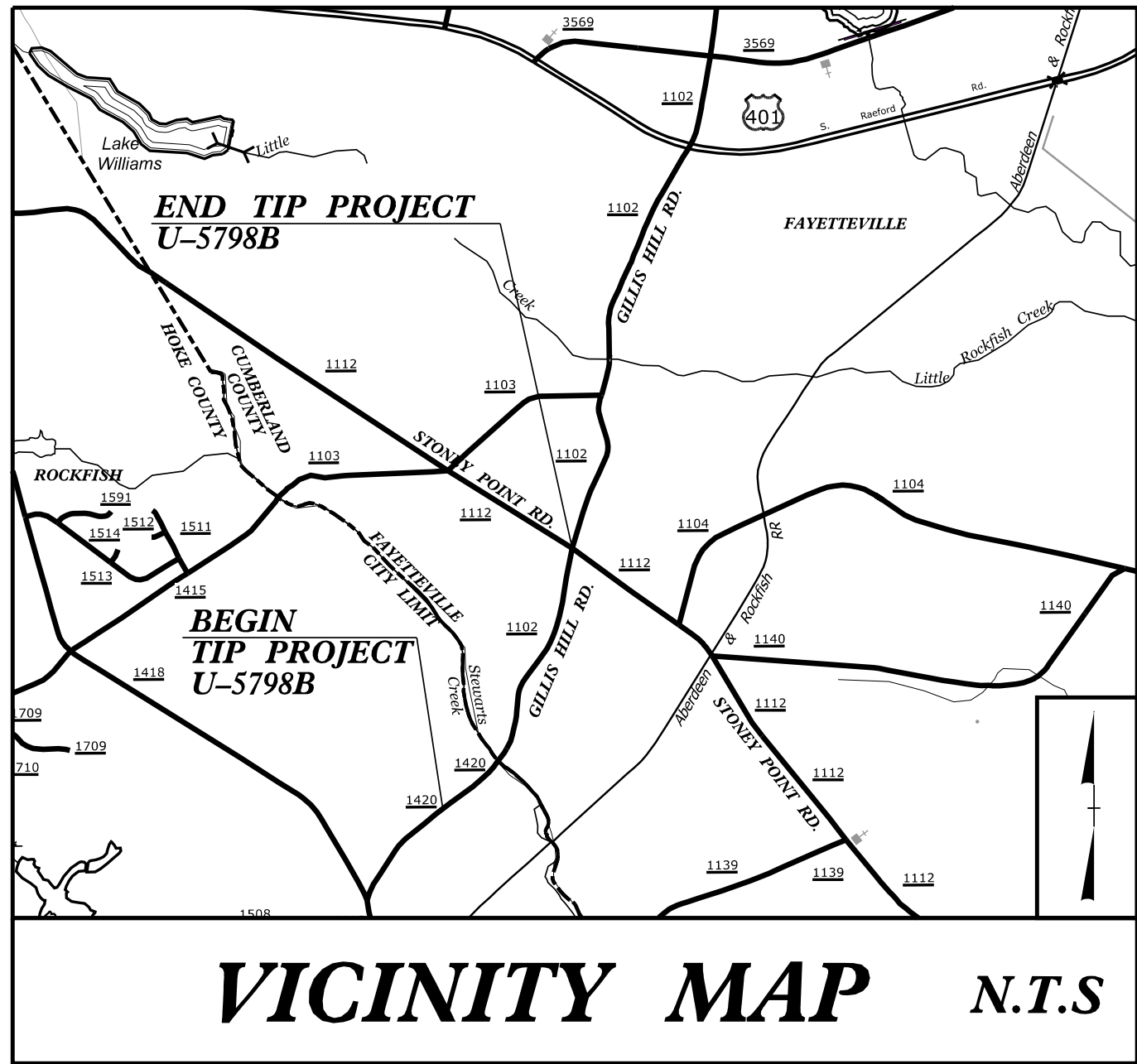
REVISED.	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC.	

UTILITY CONSTRUCTION

09.08/25

TIP PROJECT: U-5798B

T.I.P. NO.	SHEET NO.
U-5798B	UC-1-H

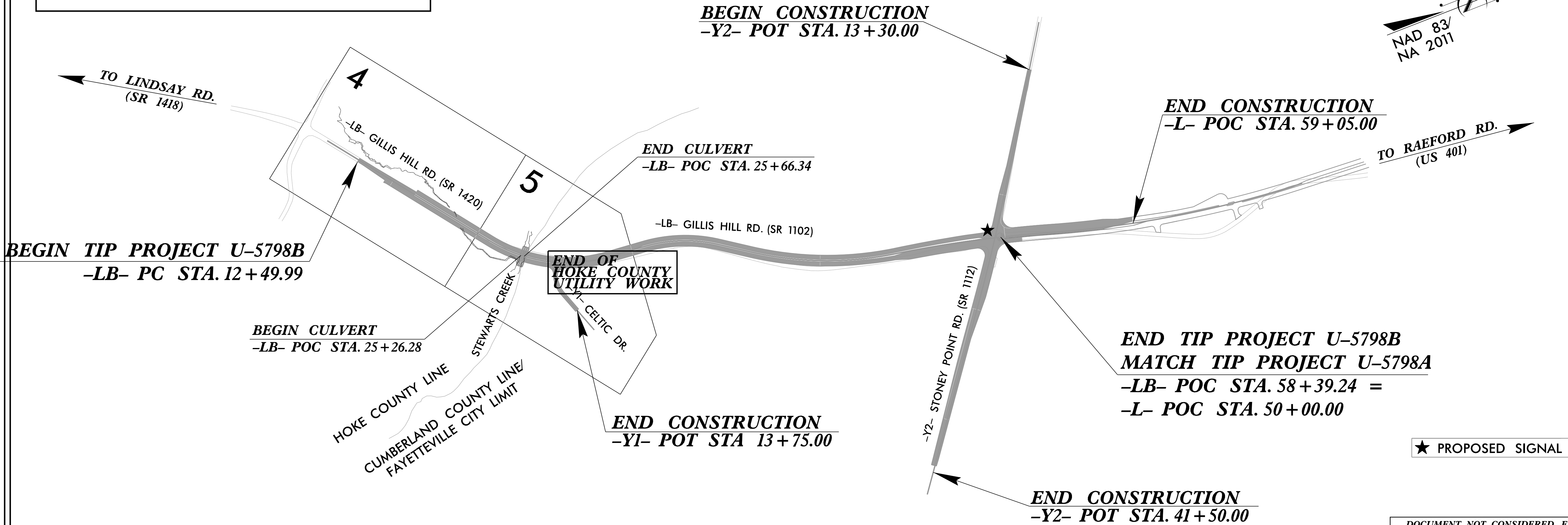
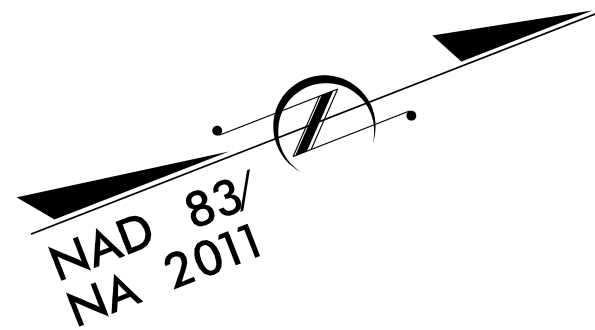
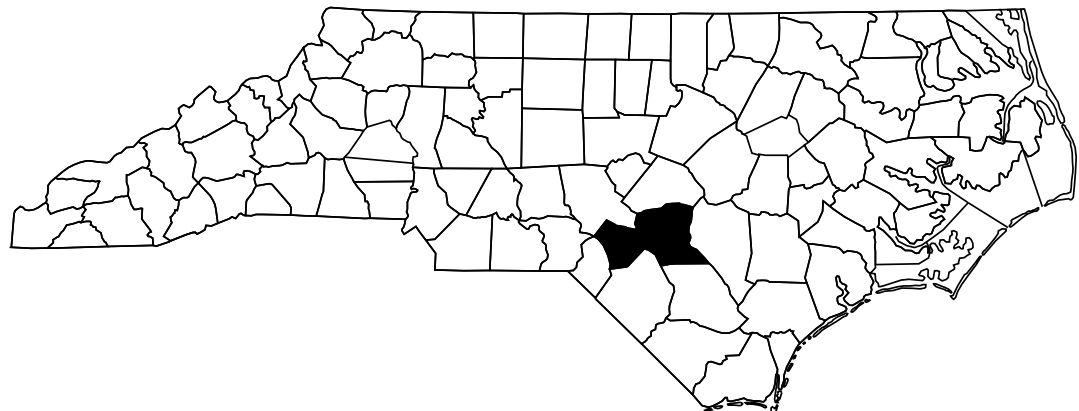


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITY CONSTRUCTION PLANS HOKE COUNTY USE AND OCCUPANCY AGREEMENT PLANS

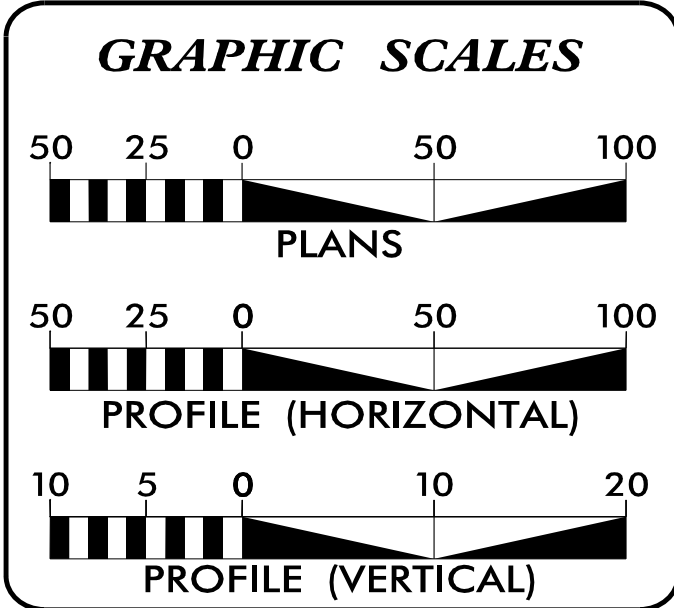
LOCATION: SR 1102 (GILLIS HILL ROAD) FROM SOUTH
OF CELTIC DRIVE TO NORTH OF
SR 1112 (STONEY POINT ROAD).

TYPE OF WORK: RELOCATION OF WATER UTILITIES



★ PROPOSED SIGNAL

DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED



INDEX OF SHEETS	
SHEET NO.:	DESCRIPTION:
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3	NOTES
UC-3A THRU UC-3B	DETAILS
UC-4 THRU UC-5	UTILITY PLAN /PROFILE SHEETS

WATER AND SEWER OWNERS ON PROJECT

(A) WATER - HOKE COUNTY WATER

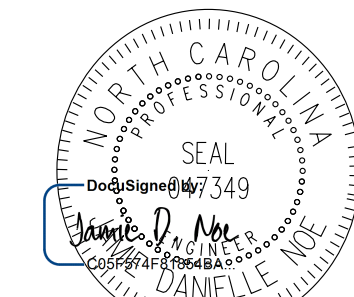
PREPARED IN THE OFFICE OF



3508 TRENT RD. UNIT A
NEW BERN, NC 28562
(252) 631-5115

Jamie Noe, PE PROJECT UTILITY ENGINEER
Emily Morris, EIT UTILITY DESIGN ENGINEER
Shane Waidner UTILITY DESIGN ENGINEER

SEAL



6/18/2025 | 6:40:17 AM EDT



DIVISION OF HIGHWAYS
UTILITIES DIVISION 8
121 DOT DRIVE
GARTHAGE, NC 28327
PHONE (910) 773-8000
FAX (910) 947-3873

Micheal E. Ricketts DIVISION UTILITY ENGINEER
Trent E. Caviness SENIOR DIVISION 8
UTILITY COORDINATOR

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	
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	

PROPOSED MISCELLANOUS 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	

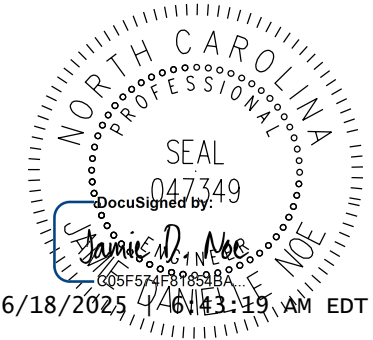
EXISTING UTILITIES SYMBOLS

Power Pole	
Telephone Pole	
Joint Use Pole	
Utility Pole	
Utility Pole with Base	
H-Frame Pole	
Power Transmission Line Tower	
Water Manhole	
Power Manhole	
Telephone Manhole	
Sanitary Sewer Manhole	
Hand Hole for Cable	
Power Transformer	
Telephone Pedestal	
CATV Pedestal	
Gas Valve	
Gas Meter	
Located Miscellaneous Utility Object	
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

*Underground Power Line	
*Underground Telephone Cable	
*Underground Telephone Conduit	
*Underground Fiber Optics Telephone Cable	
*Underground TV Cable	
*Underground Fiber Optics TV Cable	
*Underground Gas Pipeline	
Aboveground Gas Pipeline	
*Underground Water Line	
Aboveground Water Line	
*Underground Gravity Sanitary Sewer Line	
Aboveground Gravity Sanitary Sewer Line	
*Underground SS Forced Main Line	
Underground Unknown Utility Line	
SUE Test Hole	
Water Meter	
Water Valve	
Fire Hydrant	
Sanitary Sewer Cleanout	

*For Existing Utilities

Utility Line Drawn from Record (Type as Shown)	
Designated Utility Line (Type as Shown)	

PROJECT REFERENCE NO.		SHEET NO.	
U-5798B		UC-3-H	
DESIGNED BY: ELM			
DRAWN BY: ELM			
CHECKED BY: JDN			
APPROVED BY: JDN			
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		6/18/2025 4:06:13 PM EDT	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151		UTILITY CONSTRUCTION PLANS ONLY	
DOCUMENT NOT CONSIDERED FINAL UNTIL ALL SIGNATURES ARE COMPLETED			
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 2024
2. THE EXISTING UTILITIES BELONG TO HOKE COUNTY. PLEASE CONTACT MR. JAMES W. MCQUEEN - UTILITIES DIRECTOR, 227 N MAIN ST, RAEFORD, NC 28376, (910) 875-8751 JMCQUEEN@HOKECOUNTY.ORG
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. 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.

UTILITY CONSTRUCTION

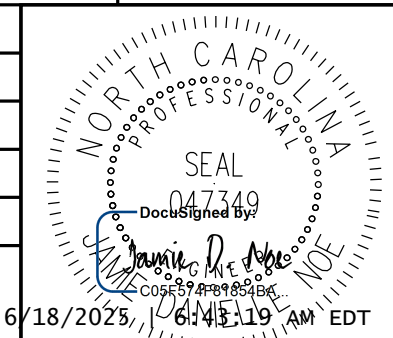
7. MAKE FINAL CONNECTIONS OF THE NEW WORK TO THE EXISTING SYSTEM WHERE INDICATED ON THE PLANS, AS REQUIRED TO FIT THE ACTUAL CONDITIONS, OR AS DIRECTED.
8. MAKE CONNECTIONS BETWEEN EXISTING AND PROPOSED UTILITIES AT TIMES MOST CONVENIENT TO THE PUBLIC, WITHOUT ENDANGERING THE UTILITY SERVICE, AND IN 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. ALL FITTINGS SHALL BE DUCTILE IRON MECHANICAL JOINT USING GRIP RINGS. NO GLUE OR PUSH-ON FITTINGS ARE ALLOWED. THRUST BLOCKING IS REQUIRED.
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 SHALL BE ALLOWED TO RIVER, WETLANDS OR BUFFER ZONES.
3. SANITARY SEWER LATERALS AND WATER METER LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO RELOCATION DUE TO FIELD LOCATIONS. UNDER NO CIRCUMSTANCE WILL CLEANOUTS AND METERS BE LOCATED IN DRIVEWAYS, SIDEWALKS OR UNDER PAVEMENT OF ANY TYPE.
4. CONTRACTOR IS FULLY RESPONSIBLE FOR CONTACTING ALL APPROPRIATE PARTIES ASSURING THAT UTILITIES ARE LOCATED PRIOR TO COMMENCEMENT OF CONSTRUCTION. CALL NORTH CAROLINA 811 (1-800-632-4949) FOR UTILITY LOCATING SERVICES AS REQUIRED BY LAW PRIOR TO COMMENCEMENT OF ANY WORK. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.
5. WATER AND SEWER LINE CONSTRUCTION SHALL BE IN ACCORDANCE WITH NCDEQ, NCDOT, ALONG WITH THE PROJECT SPECIAL PROVISIONS.
6. CONTRACTOR SHALL COORDINATE ALL WORK WITH UTILITY OWNER AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION, OR AS OTHERWISE SPECIFIED HEREIN.
7. ALL NCDEQ AND LOCAL TESTING MUST BE COMPLETED AND APPROVED PRIOR TO CONNECTING THE NEW CONSTRUCTION TO THE EXISTING WATER LINES.
8. HOKE COUNTY SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE BEGINNING OF WATER WORK.
9. HOKE COUNTY MAY HAVE A REPRESENTATIVE ON SITE DURING ALL WATER LINE CONSTRUCTION ACTIVITIES.
10. SERVICE INTERRUPTION SHALL NOT EXCEED 2 HOURS.
11. BOOSTER PUMP STATION MUST REMAIN IN SERVICE DURING WORK.

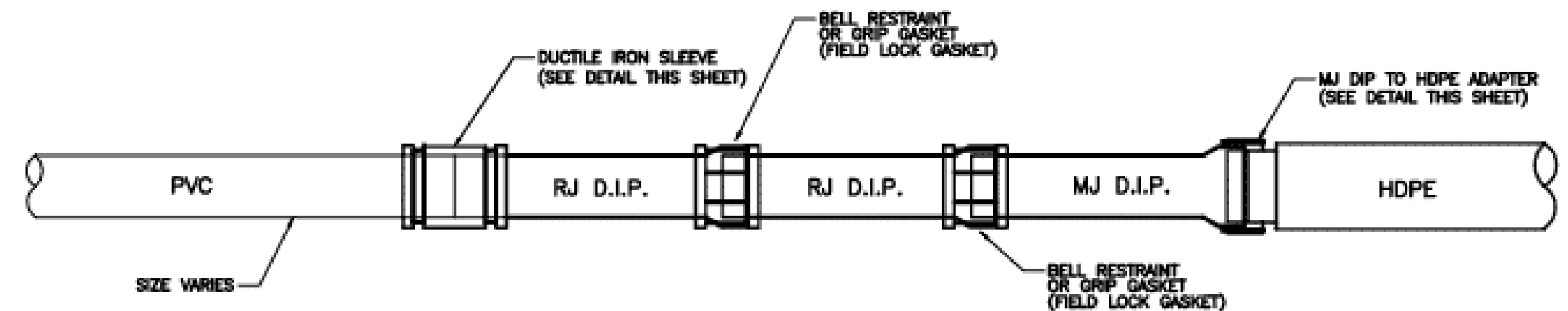


PROJECT TYPICAL DETAILS

PROJECT REFERENCE NO.		SHEET NO.	
U-5798B		UC-3A-H	
DESIGNED BY: ELM			
DRAWN BY: ELM			
CHECKED BY: JDN			
APPROVED BY: JDN			
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		6/18/2025 6:43:19 AM EDT	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151		UTILITY CONSTRUCTION PLANS ONLY	

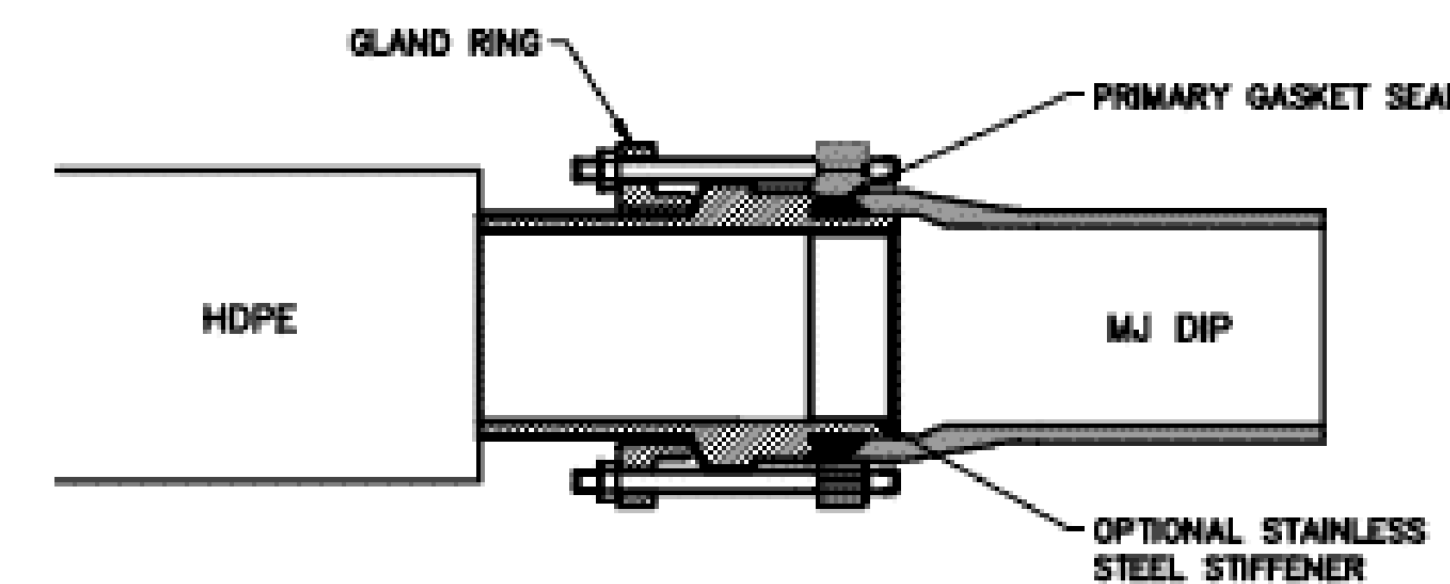
UTILITY CONSTRUCTION

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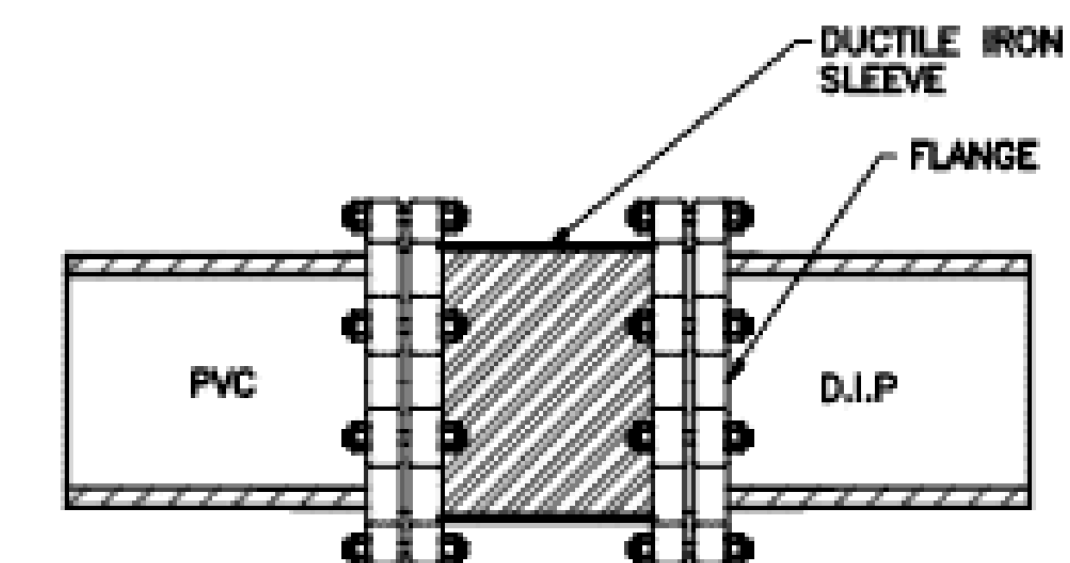
DIRECTIONAL BORE PIPE RESTRAINT

N.T.S.



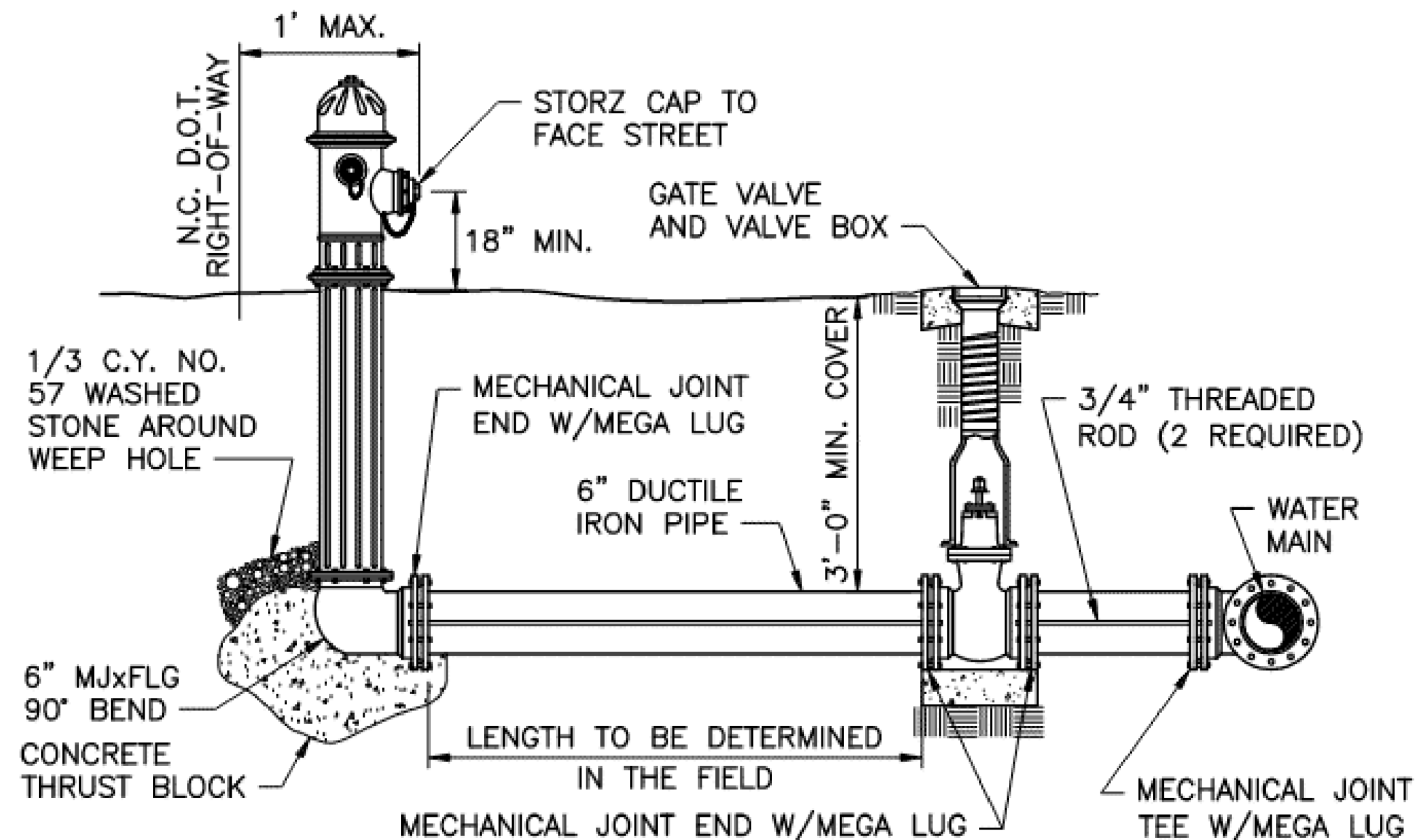
HDPE TO MECHANICAL JOINT ADAPTER

N.T.S.



DIP/PVC TRANSITION ASSEMBLY

N.T.S.



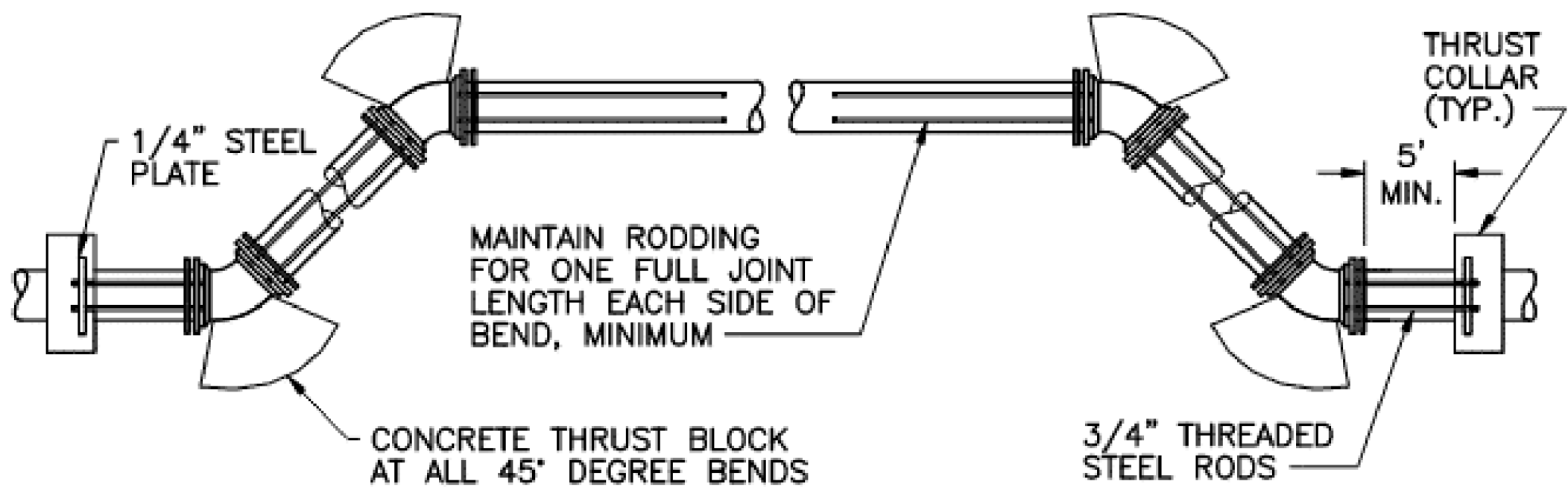
NOTES:

1. FIRE HYDRANTS SHALL BE INSTALLED NO MORE THAN ONE FOOT WITHIN THE N.C. D.O.T. RIGHT-OF-WAY.
2. THE DISTANCE FROM THE WATER MAIN TO THE FIRE HYDRANT VARIES. THE CONTRACTORS BID PRICE FOR FIRE HYDRANT ASSEMBLIES SHALL INCLUDE THE COST FOR THE VARYING FIRE HYDRANT LEG LENGTH.
3. COSTS TO INSTALL THE FIRE HYDRANT TO GRADE SHALL BE PAID BY THE CONTRACTOR.

FIRE HYDRANT AND VALVE DETAIL

N.T.S.

PROJECT TYPICAL DETAILS

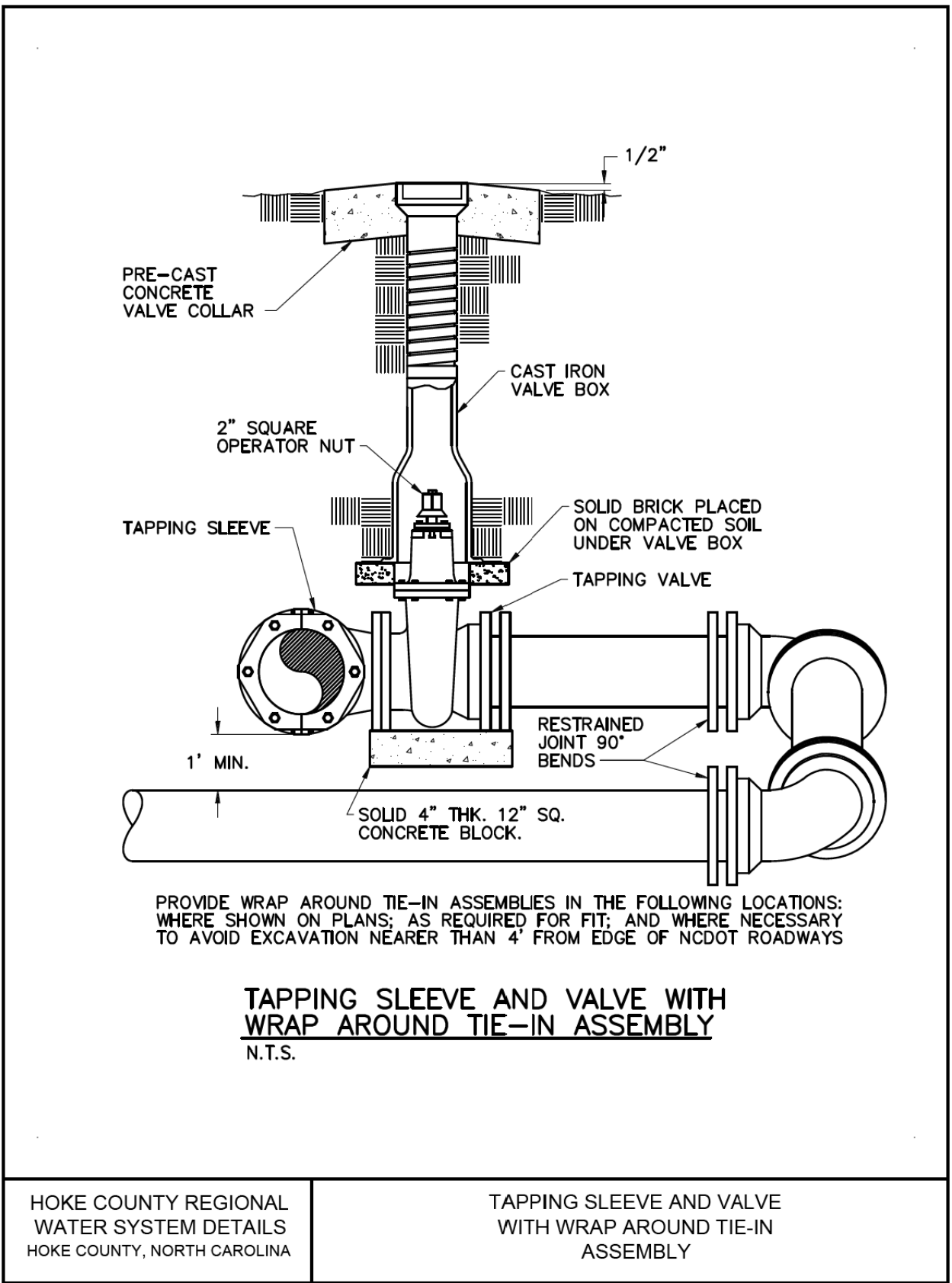


STATIC THRUST SIZE OF 45° BEND	NUMBER OF IN POUNDS	NUMBER OF RODS REQUIRED
6"	4,328	2
8"	7,694	2
12"	17,312	4
16"	30,779	4
20"	48,091	6
24"	69,252	8

NOTES:

- ONCE INSTALLED AND TIGHT, THE STEEL RODS AND BOLTS SHALL RECIEVE 2 COATS OF BITUMINOUS MATERIAL OR SHALL BE GALVANIZED.
- CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT BENDS.

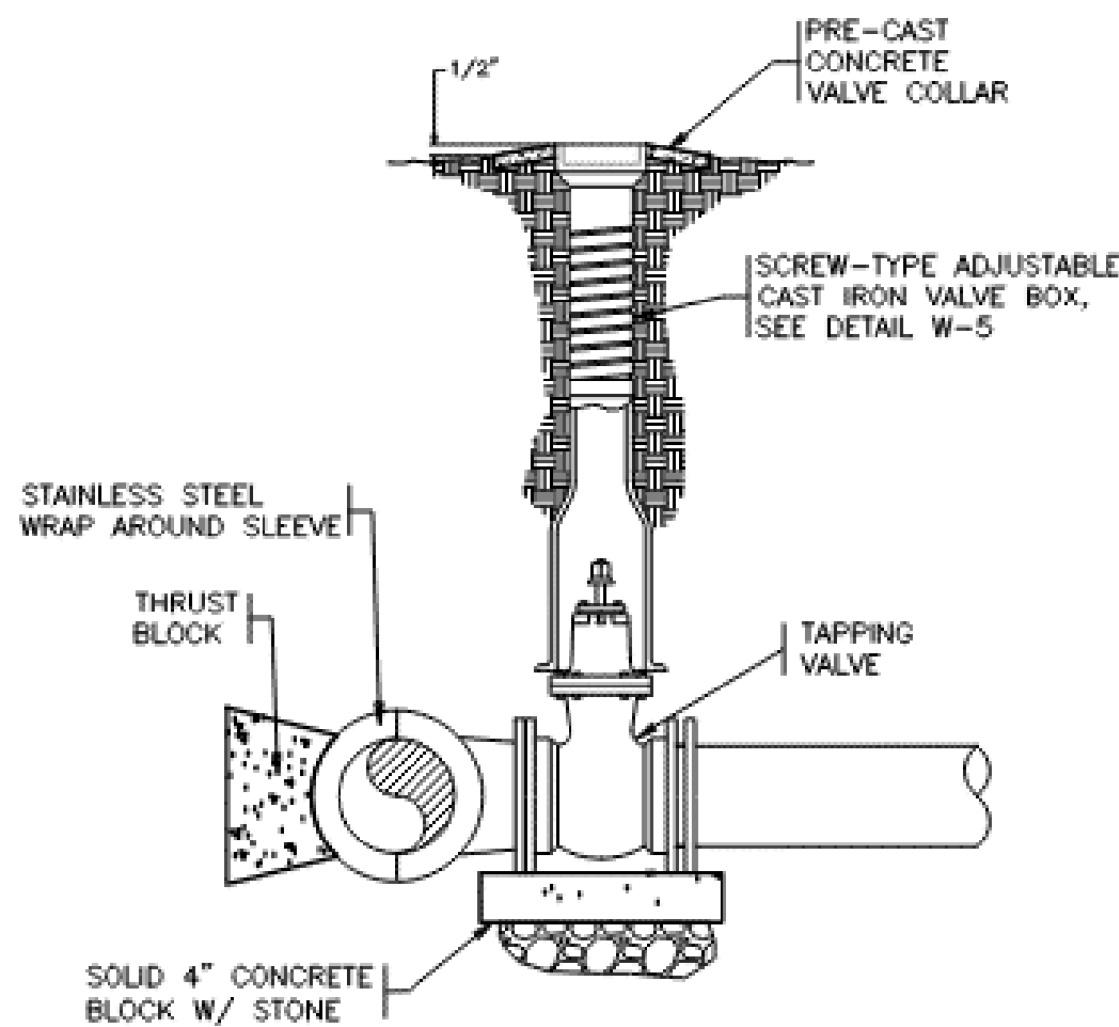
VERTICAL BENDS
N.T.S.



HOKE COUNTY REGIONAL
WATER SYSTEM DETAILS
HOKE COUNTY, NORTH CAROLINA

TAPPING SLEEVE AND VALVE
WITH WRAP AROUND TIE-IN
ASSEMBLY
N.T.S.

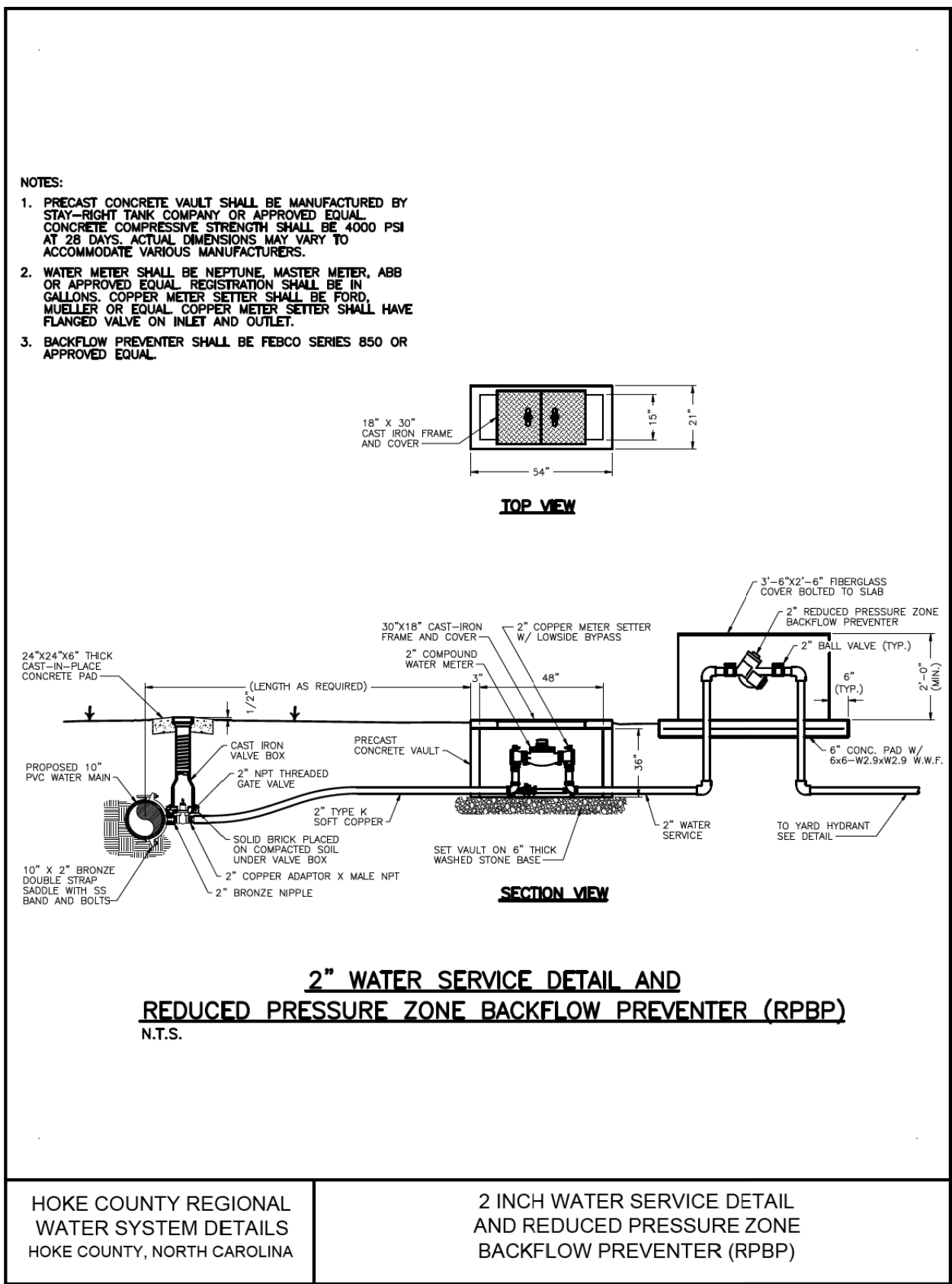
UTILITY CONSTRUCTION
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TAPPING SLEEVE AND VALVE ASSEMBLY
N.T.S.

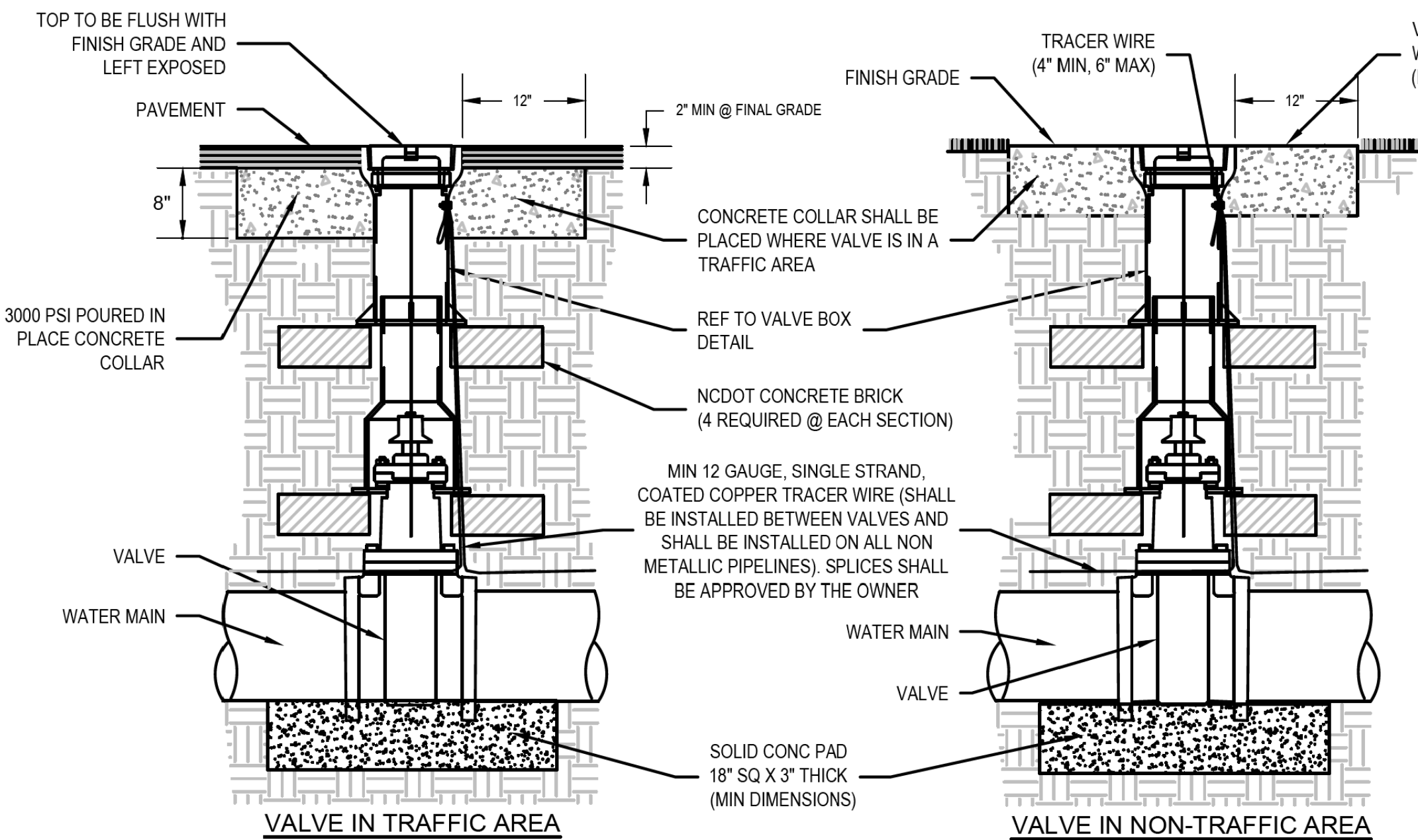
NOTES:

- TAPPING SLEEVE SHALL BE STAINLESS STEEL WRAP-AROUND TYPE AS MANUFACTURED BY FORD, MUELLER, OR ROMAC.
- PLACE TAPPING VALVE ON 4" CONCRETE BLOCK. PLACE BLOCK ON 6" COMPACTED #57 STONE. BACKFILL AROUND SLEEVE AND VALVE WITH STONE TO TOP OF PIPE.
- FULL CIRCLE SS BODY AS MANUFACTURED BY SMITH/BLAIR OR ROMAC



HOKE COUNTY REGIONAL
WATER SYSTEM DETAILS
HOKE COUNTY, NORTH CAROLINA

2 INCH WATER SERVICE DETAIL
AND REDUCED PRESSURE ZONE
BACKFLOW PREVENTER (RPBP)
N.T.S.



1 GATE VALVE DETAIL (TYP)
N.T.S.

NOTES:

- ALL MATERIALS SHALL BE IN ACCORDANCE WITH OWNER STANDARDS.
- RESILIENT WEDGE GATE VALVE SHALL BE AS MANUFACTURED BY MUELLER CORP, AMERICAN DARLING OR CLOW CORP.
- ALL VALVES SHALL HAVE 2" SQUARE OPERATING NUT AND SHALL OPEN COUNTERCLOCKWISE.
- VALVE BODY, BONNET AND GATE SHALL BE IN ACCORDANCE WITH AWWA C-509/C-515 AND NSF61.
- VALVE BODY AND BONNET SHALL BE COATED ON ALL INTERIOR AND EXTERIOR SURFACES WITH A FUSION BONDED EPOXY IN ACCORDANCE WITH AWWA C-550-90.
- ALL VALVES 24" AND SMALLER SHALL HAVE A SAFE WORKING PRESSURE OF 250 PSI.
- REF TO VALVE BOX DETAIL FOR ADDITIONAL INFORMATION.
- REF TO VALVE BOX DETAIL FOR ADDITIONAL INFORMATION.
- VALVE BOX SECTIONS ARE REQUIRED. THE USE OF PIPE IN LIEU OF VALVE BOX SECTIONS SHALL NOT BE PERMITTED.
- THE SOLID CONCRETE PAD UNDER VALVE MAY BE PROVIDED BY A PRECAST MANUFACTURER OR CAST-IN-PLACE IN THE FIELD. THE PADS MAY NOT BE CAST-IN-PLACE IN THE PIPE TRENCH. CONNECTION TO PIPE SHALL BE SUCH THAT THERE SHALL BE NO STRESS AT THE JOINT CAUSED BY MISALIGNMENT OR INADEQUATE SUPPORT OF PIPE OR VALVE.

PROJECT REFERENCE NO.
U-5798B

SHEET NO.
UC-3C-H

DESIGNED BY: **ELM**

DRAWN BY: **ELM**

CHECKED BY: **JDN**

APPROVED BY: **JDN**

REVISED:

SEAL
047349
NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION
6/18/2029 8:43:11 AM EDT

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

UTILITY CONSTRUCTION
PLANS ONLY

UTILITY CONSTRUCTION

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PROJECT TYPICAL DETAILS

**ASPHALT DRIVEWAY
OPEN, CUT AND PATCH**
N.T.S.

**CONCRETE DRIVEWAY
OPEN, CUT AND PATCH**
N.T.S.

HOKE COUNTY REGIONAL
WATER SYSTEM DETAILS
HOKE COUNTY, NORTH CAROLINA

OPEN CUT AND PATCH DETAILS

**CONCRETE THRUST BLOCK DETAIL
FOR HORIZONTAL BENDS AND TEES**
N.T.S.

HOKE COUNTY REGIONAL
WATER SYSTEM DETAILS
HOKE COUNTY, NORTH CAROLINA

CONCRETE THRUST BLOCK DETAIL
FOR HORIZONTAL BENDS AND TEES

**PAVEMENT REPAIRS ON ROADS TO BE RESURFACED
(PIPE IS PLACED UNDER EXISTING PAVEMENT)**
N.T.S.

**PAVEMENT REPAIRS ON ROADS NOT TO BE RESURFACED
(PIPE IS TO BE PLACED UNDER EXISTING PAVEMENT)**
N.T.S.

D	X	W
12"	1'-4"	7'-4"
15"	1'-7"	7'-7"
18"	1'-10"	7'-10"
24"	2'-8"	8'-8"
30"	3'-1"	9'-1"
36"	3'-8"	9'-8"
42"	4'-5"	10'-5"
48"	5'-0"	11'-0"

HOKE COUNTY REGIONAL
WATER SYSTEM DETAILS
HOKE COUNTY, NORTH CAROLINA

OPEN CUT AND PATCH AT
CROSSINGS AND INTERSECTIONS

**PAVEMENT REPAIRS ON ROADS TO BE RESURFACED
(PIPE IS PLACED UNDER EXISTING PAVEMENT)**
N.T.S.

**PAVEMENT REPAIRS ON ROADS NOT TO BE RESURFACED
(PIPE IS TO BE PLACED UNDER EXISTING PAVEMENT)**
N.T.S.

NOMINAL D.I. CARRIER PIPE DIA. (INCHES)	STEEL CASING MINIMUM O.D. (INCHES)	MIN. WALL THICKNESS FOR HIGHWAYS (INCHES)	MIN. WALL THICKNESS FOR RAILROADS (INCHES)
3	8.625	0.250	0.250
4	10.750	0.250	0.250
6	14.0	0.250	0.250
8	16.0	0.250	0.312
10	18.0	0.250	0.312
12	20.0	0.250	0.375
14	24.0	0.250	0.375
16	26.0	0.312	0.500
18	28.0	0.312	0.500
20	30.0	0.312	0.500
24	34.0	0.500	0.625

HOKE COUNTY REGIONAL
WATER SYSTEM DETAILS
HOKE COUNTY, NORTH CAROLINA

TYPICAL BORING DETAIL UNDER
HIGHWAYS

**PAVEMENT REPAIRS ON ROADS TO BE RESURFACED
(PIPE IS PLACED UNDER EXISTING PAVEMENT)**
N.T.S.

**PAVEMENT REPAIRS ON ROADS NOT TO BE RESURFACED
(PIPE IS TO BE PLACED UNDER EXISTING PAVEMENT)**
N.T.S.

D	X	W
12"	1'-4"	7'-4"
15"	1'-7"	7'-7"
18"	1'-10"	7'-10"
24"	2'-8"	8'-8"
30"	3'-1"	9'-1"
36"	3'-8"	9'-8"
42"	4'-5"	10'-5"
48"	5'-0"	11'-0"

HOKE COUNTY REGIONAL
WATER SYSTEM DETAILS
HOKE COUNTY, NORTH CAROLINA

TYPICAL BORING DETAIL UNDER
HIGHWAYS

PROJECT TYPICAL DETAILS

PROJECT REFERENCE NO.
U-5798B

SHEET NO.
UC-3D-H

DESIGNED BY: **ELM**

DRAWN BY: **ELM**

CHECKED BY: **JDN**

APPROVED BY: **JDN**

REVISED:

NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION

SEAL
047349

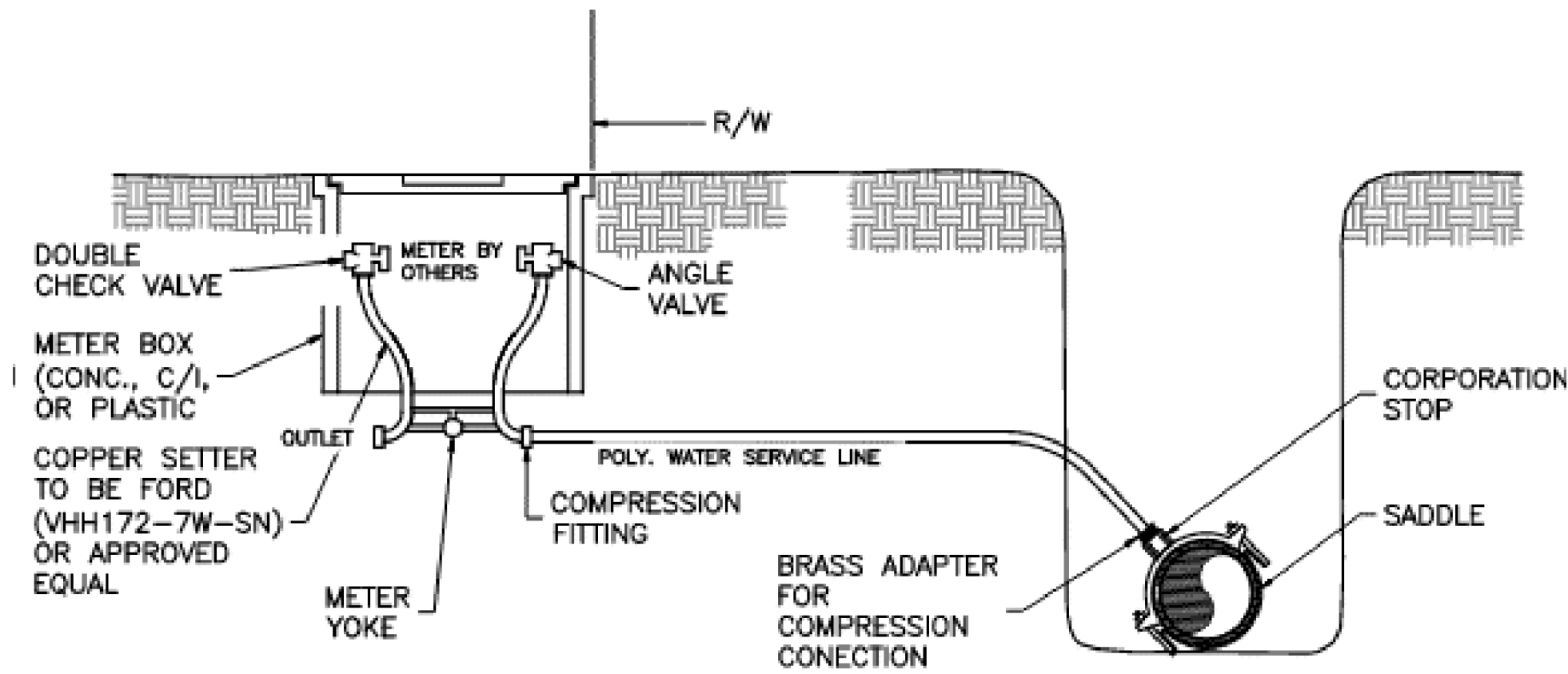
James D. McNeill
Professional Engineer
No. 047349
Exp. 12/31/2025

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

UTILITY CONSTRUCTION
PLANS ONLY

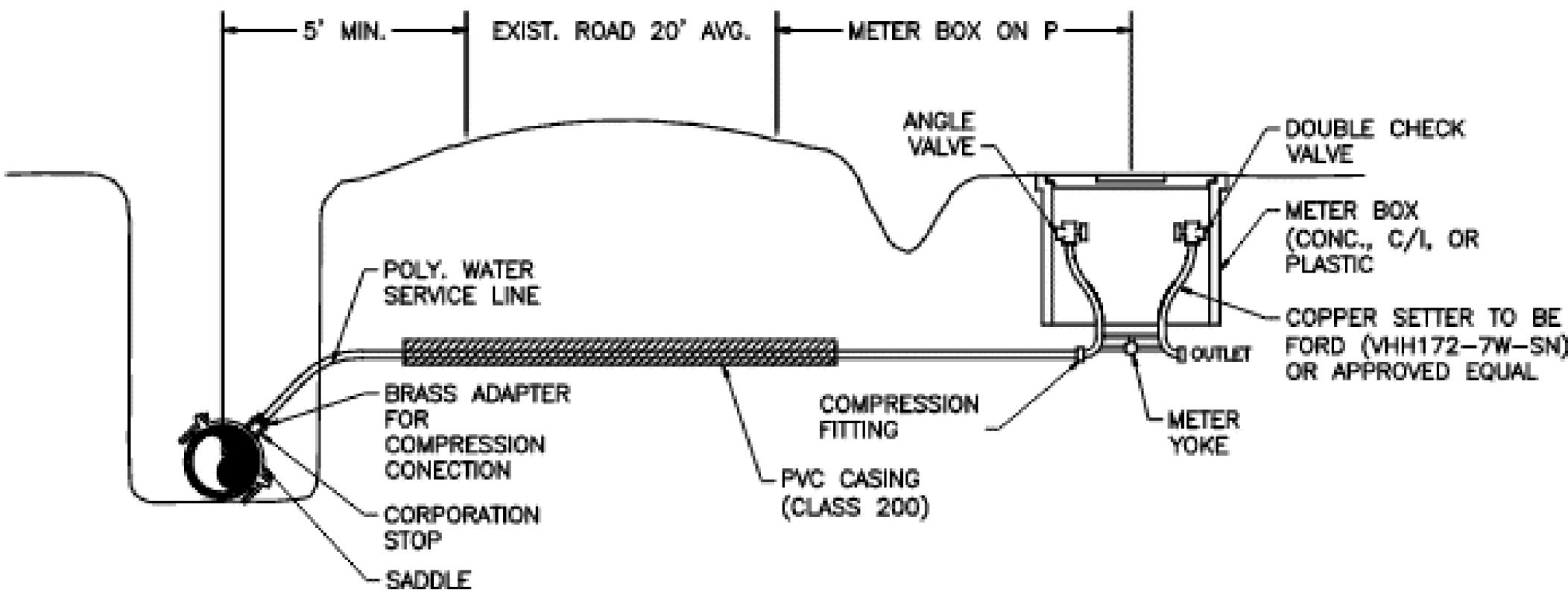
UTILITY CONSTRUCTION

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UNLESS ALL SIGNATURES COMPLETED



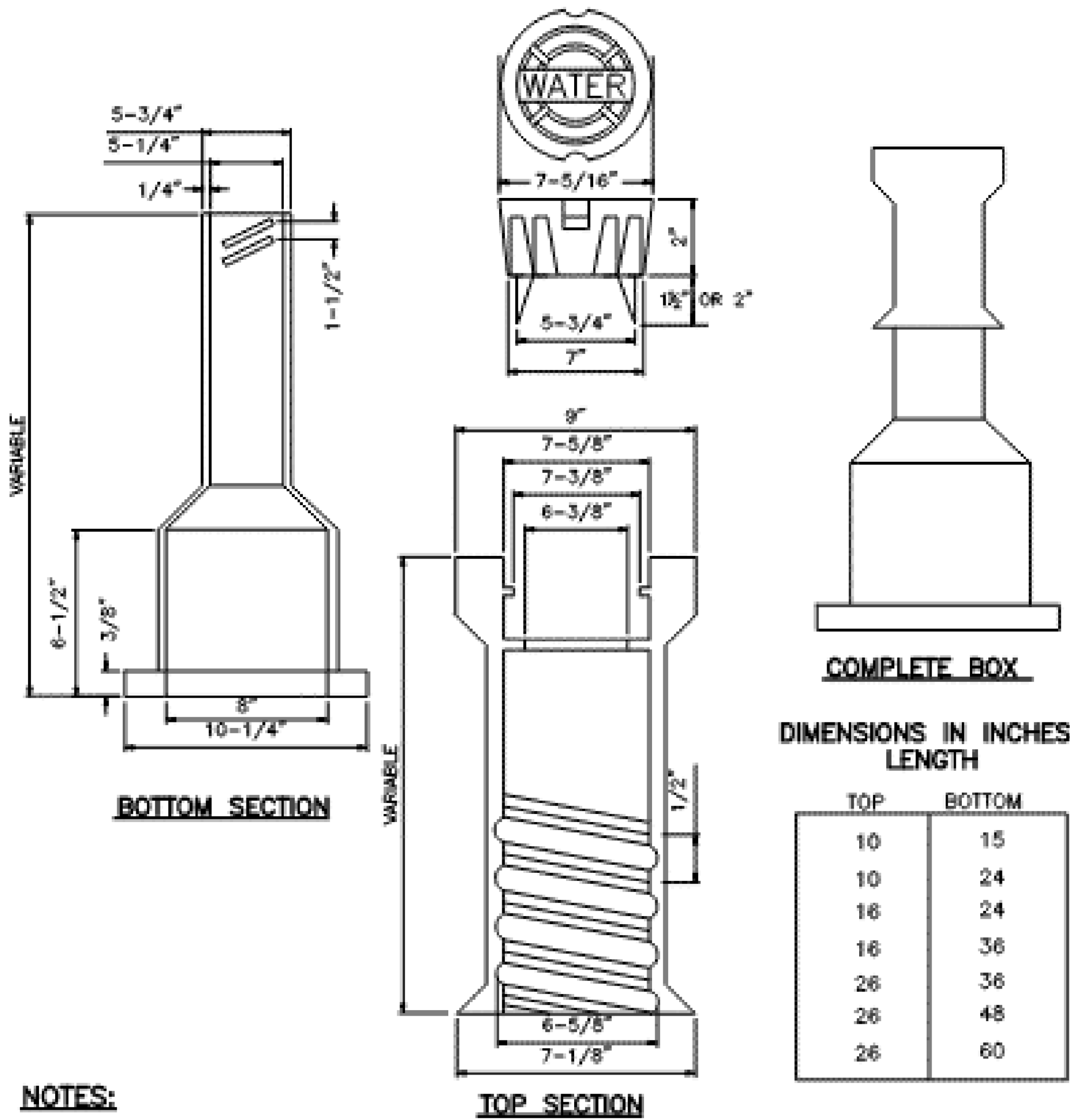
TYPICAL HOUSE SERVICE DETAIL (SHORT)
N.T.S.

- NOTES:
- 1. INLETS WILL HAVE A BRASS ADAPTER AS REQUIRED FOR A COMPRESSION FITTING TO "IPS" WATER SERVICE PIPE.
 - 2. YOE WILL HAVE CHECK VALVE THAT SHALL HAVE SPRING ASSISTED SEATING, AND THE SEAT SHALL BE OF BUNA-N-RUBBER.
 - 3. OUTLET SHALL BE FORD DOUBLE PURPOSE COUPLING OR APPROVED EQUAL.
 - 4. METER YOKE SHALL BE SUPPORTED AS CALLED FOR IN SPECIAL PROVISIONS.



TYPICAL HOUSE SERVICE DETAIL (LONG)
N.T.S.

- NOTES:
- 1. INLETS WILL HAVE A BRASS ADAPTER AS REQUIRED FOR A COMPRESSION FITTING TO "IPS" WATER SERVICE PIPE.
 - 2. YOE WILL HAVE CHECK VALVE THAT SHALL HAVE SPRING ASSISTED SEATING, AND THE SEAT SHALL BE OF BUNA-N-RUBBER.
 - 3. OUTLET SHALL BE FORD DOUBLE PURPOSE COUPLING OR APPROVED EQUAL.
 - 4. METER YOKE SHALL BE SUPPORTED AS CALLED FOR IN SPECIAL PROVISIONS.



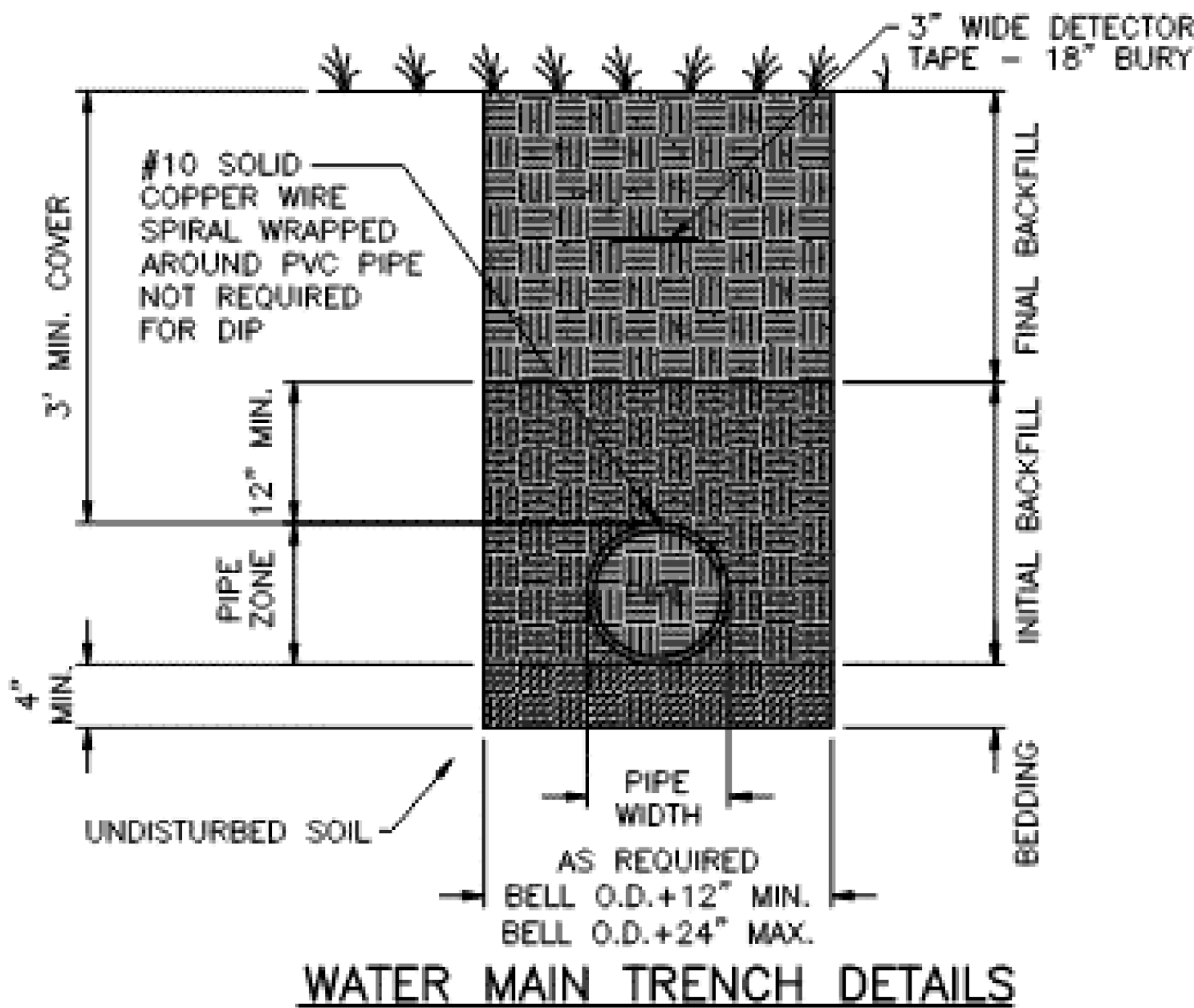
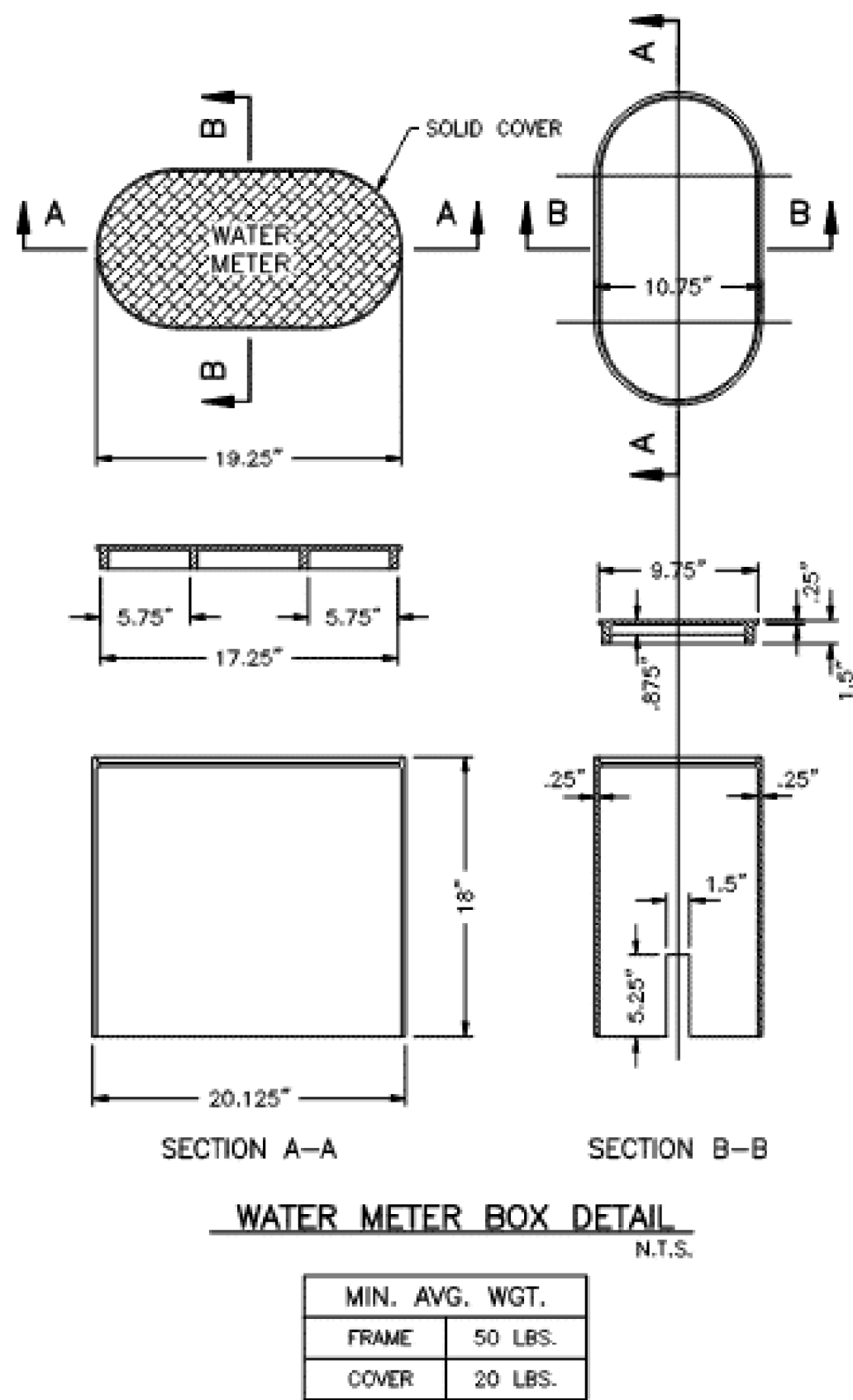
- NOTES:
- 1. VALVE BOX SHALL HAVE RAISED LETTERS "WATER" CAST INTO COVER.
 - 2. VALVE BOX ACCOMMODATES 4" THRU 12" VALVES.
 - 3. VALVE BOX SHALL HAVE 3/8" HOLE DRILLED IN TOP SECTION THRU WHICH A 1/2" X 1 1/2" GALVANIZED BOLT SHALL BE USED TO SECURE A 12GA. THIN TRACER WIRE FOR NON-FERROUS PIPE. A 1/2" WASHER SHALL BE USED BETWEEN NUT AND INSIDE OF BOX. TIGHTEN HAND TIGHT.
 - 4. SCREW TYPE VALVE BOXES ARE REQUIRED.
 - 5. DIMENSIONS SHOWN MAY VARY DEPENDING UPON THE MANUFACTURER.

VALVE BOX DETAIL
NTS

DIMENSIONS IN INCHES
LENGTH

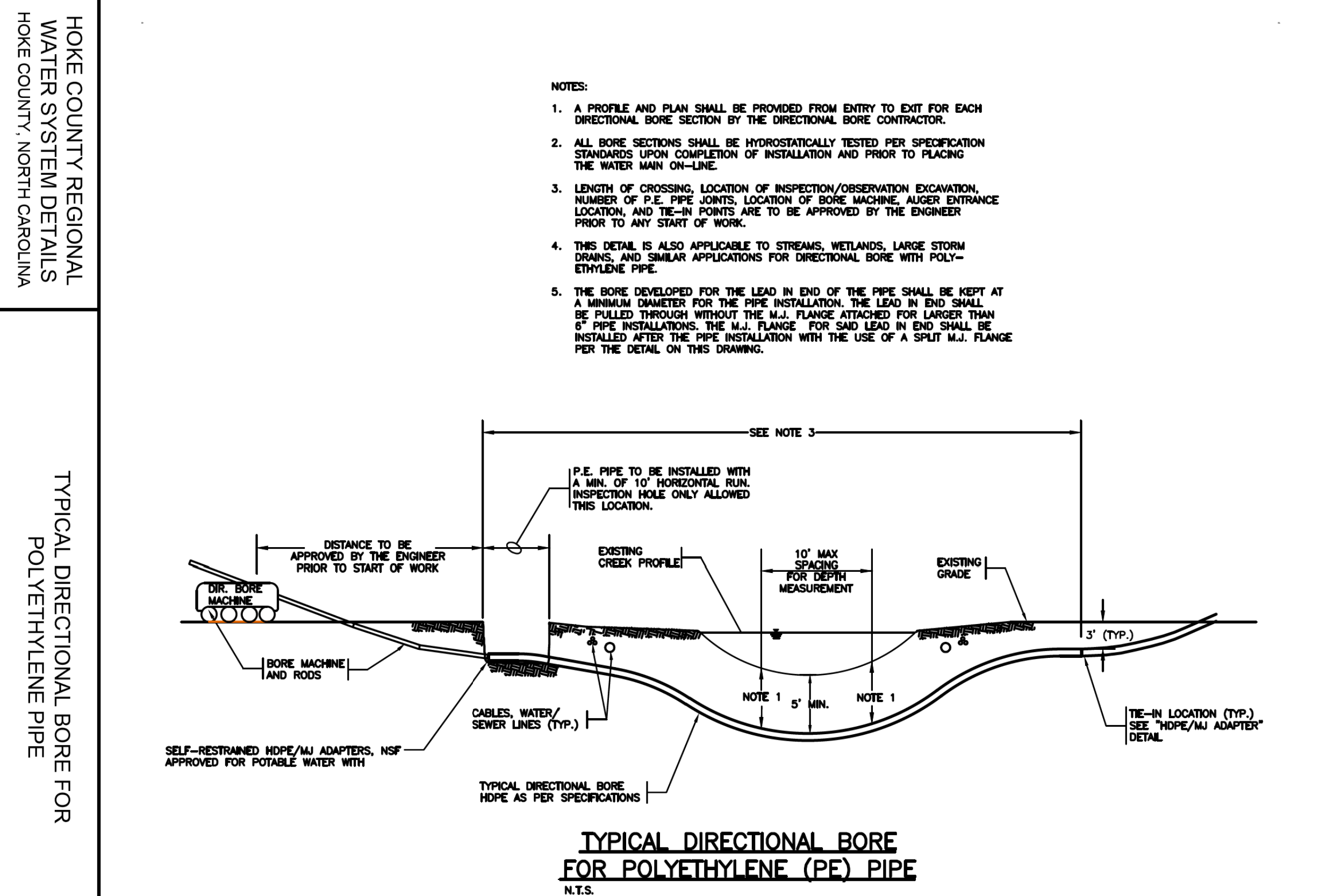
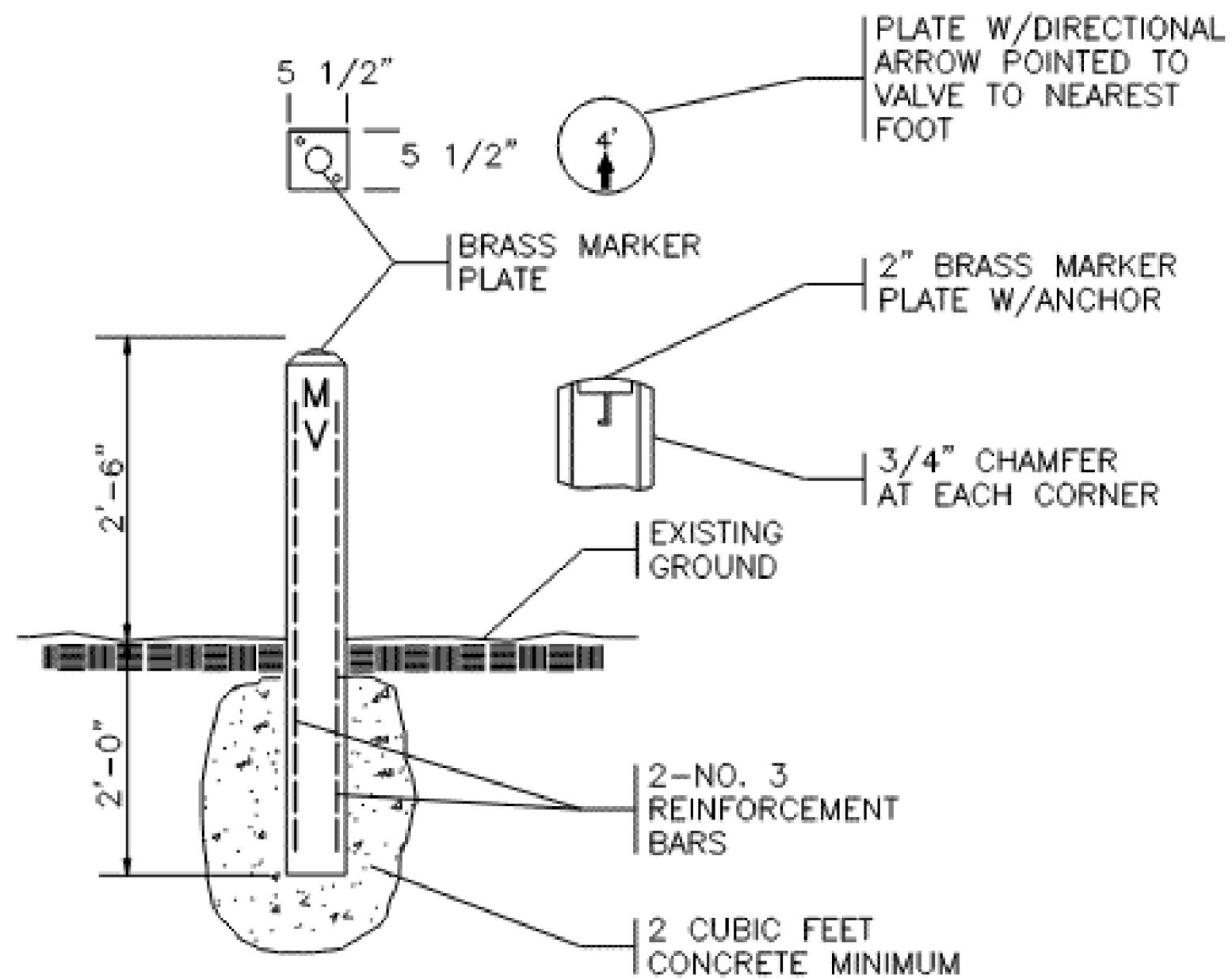
TOP	BOTTOM
10	15
10	24
16	24
16	36
26	36
26	48
26	60

PROJECT TYPICAL DETAILS



NOTES:

- 1.)INSTALL MARKER POSTS ON EDGE OF THE DOT R/W LINE.
- 2.)PROVIDE MARKER POSTS AT ALL LINE VALVES.
- 3.)ABBREVIATIONS STAMPED ON POST AS FOLLOWS:
MV = MAIN VALVE
BO=BLOW OFF VALVE



UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL
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PROJECT REFERENCE NO.	SHEET NO.
U-5798B	UC-3E-H
DESIGNED BY: ELM	
DRAWN BY: ELM	
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REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

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User:BWilson

THE ESTIMATED QUANTITY OF DUCTILE IRON
WATER PIPE FITTINGS ON THIS PLAN SHEET
IS 3,501 POUNDS. THE ACTUAL QUANTITY
AND TYPE OF FITTINGS WILL VARY BASED
ON FIELD CONDITIONS.

