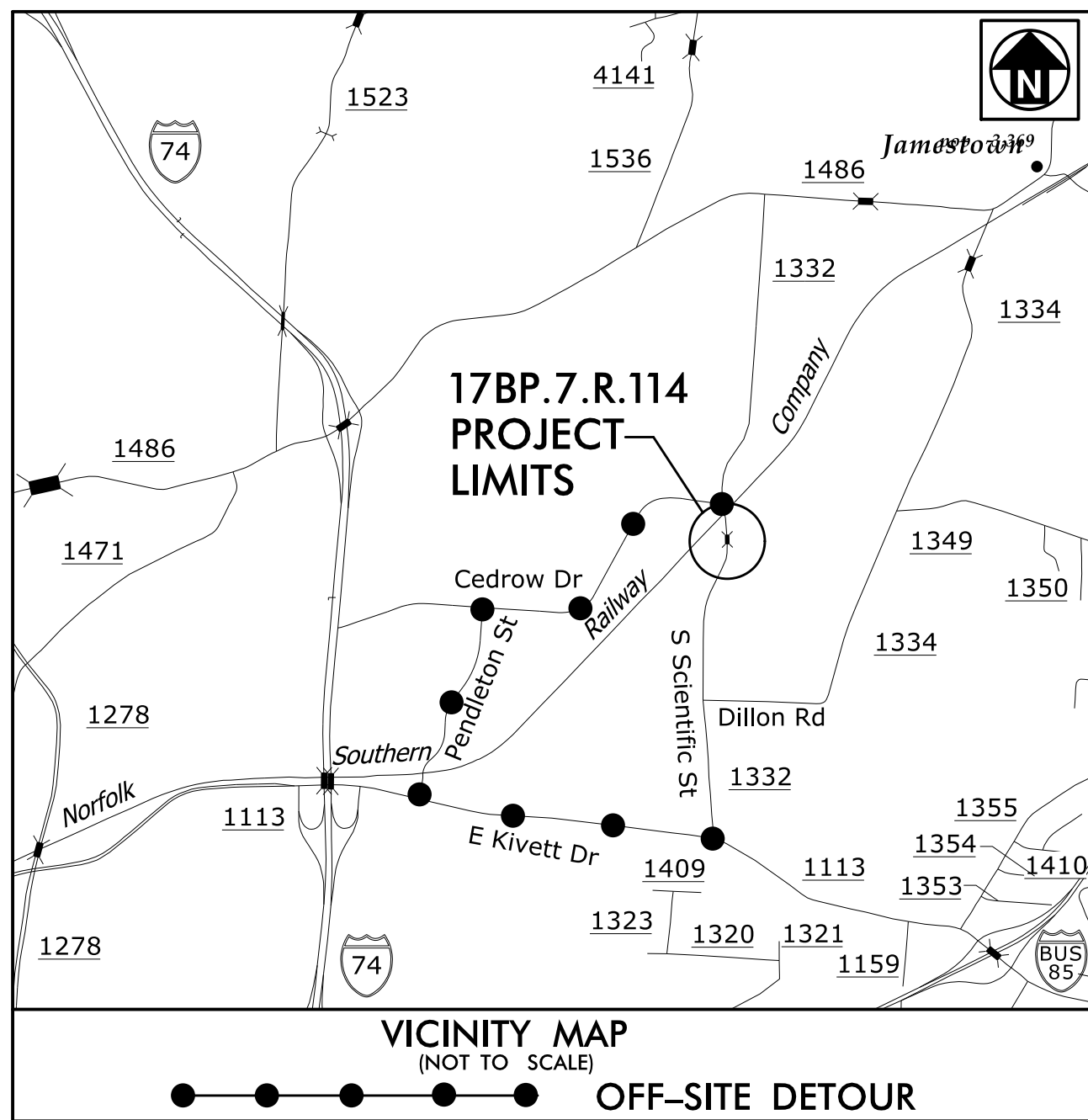


09/08/99
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USERNAME

TIP PROJECT: 17BP.7.R.114



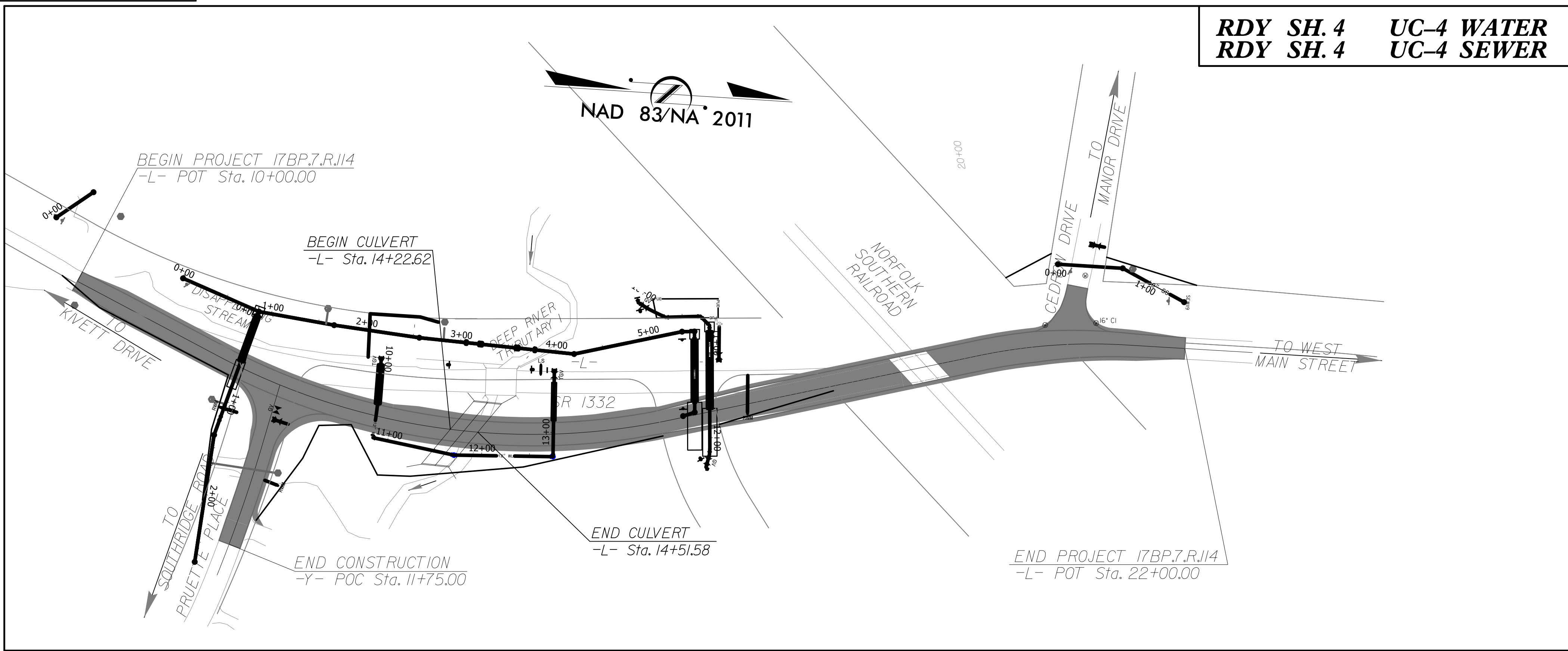
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITY CONSTRUCTION PLANS
GUILFORD COUNTY

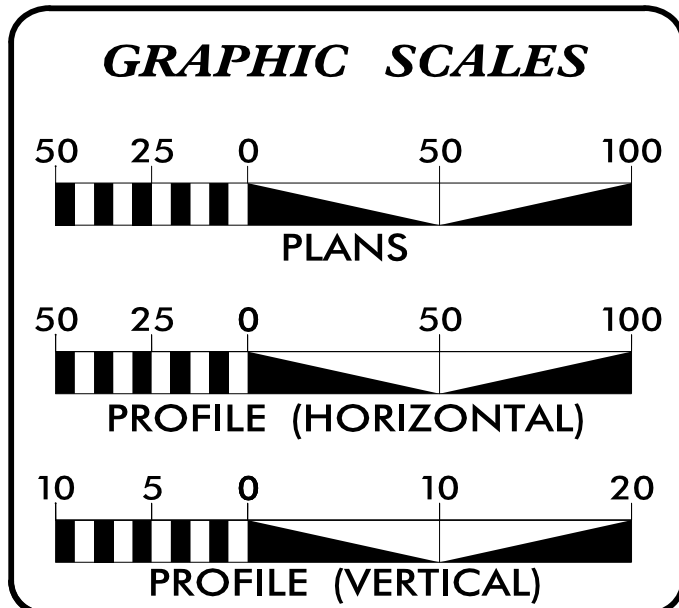
LOCATION: BRIDGE NO. 52 OVER DEEP RIVER TRIBUTARY 1 ON SR 1332 (SCIENTIFIC STREET)

TYPE OF WORK: WATER AND SEWER LINE RELOCATION

RDY SH. 4 UC-4 WATER
RDY SH. 4 UC-4 SEWER



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-3D	DETAILS
UC-4 WATER	UTILITY CONSTRUCTION SHEETS
UC-4 SEWER	UTILITY CONSTRUCTION SHEETS
UC-5	PROFILE SHEETS

UTILITY OWNERS ON PROJECT

- (A) SANITARY SEWER (CITY OF HIGH POINT)
(B) WATER (CITY OF HIGH POINT)

PREPARED IN THE OFFICE OF

Wooten

119 Brookstown Avenue, Suite 100 • Winston-Salem, NC 27101
(336) 722-5326 • thewootencompany.com
License Number : F-0115

John C. Grey, P.E. CONSULTANT CONTACT #1
CONSULTANT CONTACT #2
CONSULTANT CONTACT #3

SEAL

06/03/2026

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UTILITY CONSTRUCTION
PLANS ONLY

**DIVISION OF HIGHWAYS
UTILITIES UNIT**
1555 MAIL SERVICES CENTER
RALEIGH NC 27699-1555
PHONE (919) 707-6690
FAX (919) 250-4151

Brian Ketner, P.E. UTILITIES TEAM LEAD
Daniel Dagenhart, P.E. BRIDGE PROGRAM MANAGER
James B. Yates, MS, P.E. DIV. UTILITIES ENGINEER

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
17BP.7.B.114	UC-2

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	12" WL
11¼ Degree Bend	
22½ Degree Bend	
45 Degree Bend	
90 Degree Bend	
Plug	
Tee	
Cross	
Reducer	
Gate Valve	GV
Butterfly Valve	BV
Tapping Valve	TGV
Line Stop	LS
Line Stop with Bypass	LS/BP
Blow Off	BO
Fire Hydrant	PEH
Relocate Fire Hydrant	REH
Remove Fire Hydrant	REM FH
Water Meter	PWM
Relocate Water Meter	REW
Remove Water Meter	REM WM
Water Pump Station	PS(W)
RPZ Backflow Preventer	PRPZ
DCV Backflow Preventer	PBFP
Relocate RPZ Backflow Preventer	RRPZ
Relocate DCV Backflow Preventer	RBFP

PROPOSED SEWER SYMBOLS

Gravity Sewer Line (Sized as Shown)	12" SS
Force Main Sewer Line (Sized as Shown)	12" FSS
Manhole (Sized per Note)	
Sewer Pump Station	PS(SS)

PROPOSED MISCELLANOUS UTILITIES SYMBOLS

Power Pole	
Telephone Pole	
Joint Use Pole	
Telephone Pedestal	TEL PED
Utility Line by Others (Type as Shown)	PROP O/H POW LINES
Trenchless Installation	12" TL INSTALL
Encasement by Open Cut	24" ENCAS BY OC
Encasement	24" ENCASUREMENT

Thrust Block	
Air Release Valve	AR
Utility Vault	UV
Concrete Pier	CP
Steel Pier	SP
Plan Note	NOTE
Pay Item Note	PAY ITEM

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	A/G Gas
*Underground Water Line	
Aboveground Water Line	A/G Water
*Underground Gravity Sanitary Sewer Line	
Aboveground Gravity Sanitary Sewer Line	A/G Sanitary Sewer
*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)	

5/14/99

5/14/99

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 2024.
2. THE EXISTING WATER & SEWER UTILITIES BELONG TO CITY OF HIGH POINT.
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 AND 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 DEPARTMENT. 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 WITHOUT ENDANGERING THE UTILITY SERVICE AND IN ACCORDANCE WITH UTILITY OWNER'S REQUIREMENTS. ALL EXISTING WATER MAINS MUST REMAIN ACTIVE AT ALL TIMES DURING CONSTRUCTION. EXISTING WATER MAINS SHALL NOT BE TAKEN OUT OF SERVICE UNTIL NEW MAINS HAVE BEEN TESTED, DISINFECTED AND CERTIFIED. ALL SEWER MAINS AND SERVICES MUST REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR SHALL BYPASS PUMP OR UTILIZE OTHER MEANS TO ENSURE NO SANITARY SEWER OVERFLOWS OCCUR. AN EXAMPLE CONSTRUCTION SEQUENCE IS PROVIDED IN THE PROJECT SPECIAL CONDITIONS. THIS IS PROVIDED AS A GUIDE ONLY AND IS NOT INTENDED TO BE BINDING. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ADEQUATE SEQUENCING AND BYPASS PUMPING.
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. NEW WATER MAIN AND APPURTENANCES MUST BE CONSTRUCTED, TESTED, APPROVED FOR SERVICE PRIOR TO EXISTING WATER MAIN BEING TAKEN OUT OF SERVICE.
2. NEW WATER MAIN AND SANITARY SEWER MAY BE CONSTRUCTED IN PHASES TO FACILITATE ROADWAY CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARATION OF A PHASING PLAN CLEARLY IDENTIFYING EACH PHASE AND SUBMIT FOR APPROVAL PRIOR TO BEGINNING CONSTRUCTION. EACH COMPLETED PHASE MUST RECEIVE NCDEQ FINAL APPROVAL PRIOR TO BEING PLACED INTO SERVICE.
3. DUCTILIE IRON PIPE FOR GRAVITY SEWER SHALL BE DESIGNED FOR A MINIMUM WORKING PRESSURE OF 250 PSI, AND SHALL BE MANUFACTURED IN 18-FOOT OR 20-FOOT LENGTHS IN ACCORDANCE WITH ANSI A21.51. PIPE JOINTS SHALL BE PUSH-ON TYPE AS PER ANSI A21.51, SECTION 51-2-6. THE INTERIOR OF THE PIPE SHALL BE COATED TO A MINIMUM DRY THICKNESS OF 24 MILS WITH AN APPROVED COAL-TAR EPOXY HAVING AN EPOXY RESIN CONTENT OF THIRTY-FIVE PERCENT (35%) BY WEIGHT IN THE DRY FILM AND A MINIMUM SOLIDS CONTENT OF SEVENTY-FOUR PERCENT (74%) BY VOLUME. THE EXTERIOR OF THE PIPE COATING SHALL BE A MINIMUM OF 1 MIL BITUMINOUS PAINT IN ACCORDING TO ANSI/AWWA 151/A21.51, SECTION 51-8-1.
4. EXISTING 12” WATER LINE TO REMAIN IN SERVICE UNTIL NEW 12” WATER LINE IS CONSTRUCTED AND TESTED. NEW 12” TAPPING SLEEVES AND VALVES ARE TO BE INSTALLED ONCE TEMPORARY STREAM PIPING HAS BEEN CONSTRUCTED. NEW 12” WATER LINE TO BE INSTALLED BY OPEN CUT ACROSS STREAM AND BY OPEN CUT IN CASINGS ACROSS PROPOSED REROUTE OF SCIENTIFIC ST. TEMPORARY TAPS ARE TO BE INSTALLED ON NEW LINE FOR THE PURPOSE OF TESTING AND DISINFECTING. ONCE LINE HAS PASSED TESTING AND DISINFECTION AND HAS BEEN CERTIFIED, OPEN TAPPING VALVES, INSTALL LINE STOP AND ABANDON TEMPORARY TAPS. NOTED EXISTING GATE VALVE TO BE PLACED IN CLOSED POSITION AND ABANDONED. EXISTING LINE TO THEN BE ABANDONED BETWEEN STA 14+17 TO 15+07 AND MAY BE REMOVED AS NECESSARY FOR INSTALLATION OF NEW CULVERT.
5. REMOVAL OF ALL ASBESTOS CEMENT (AC) PIPE SHALL BE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS. CONTACT JEFF DELLINGER (919-707-5950) WITH NCDHHS FOR FURTHER INFORMATION.
6. ENCASEMENT PIPES LARGER THAN 24" DIAMETER SHALL BE DESIGNED BY NC PE THAT THE ENCASEMENT IS DESIGNED FOR 100 YEAR LIFESPAN.

PREPARED IN THE OFFICE OF:

Wooten

119 Brookstown Ave, Suite 100 • Winston-Salem, NC 27101
(336) 722-5326 • thewootencompany.com
License Number : F-0115

VERTICAL SCALE

5' 0 5' 10'

HORIZONTAL SCALE

25' 0 25' 50'

PROJECT REFERENCE NO.	SHEET NO.
17BP.7.R.114	UC-3
DESIGNED BY: JCG	
DRAWN BY: BTH	
CHECKED BY: JCG	
APPROVED BY: JCG	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

6/3/2026

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6/3/2026

UTILITIES ENGINEERING SEC. JOHN C. GREY

UTILITY CONSTRUCTION

5/14/2024

PROJECT TYPICAL DETAILS

PREPARED IN THE OFFICE OF:
Wooten
119 Brookstown Ave, Suite 100 • Winston-Salem, NC 27101
(336) 722-5326 • thewootencompany.com
License Number: F-0115

PROJECT REFERENCE NO.
17BP.7.R.114

SHEET NO.
UC-3A

DESIGNED BY: JCG
DRAWN BY: BTH
CHECKED BY: JCG
APPROVED BY: JCG

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'

**WATER LINE CONSTRUCTION
SHOWN ON THIS SHEET**

UTILITY CONSTRUCTION

STREET SIDE VIEW

TOP VIEW

STREET FRONT VIEW

NOTES:

A. THE CITY SERVICE LATERAL SHALL EXTEND PERPENDICULAR FROM THE WATER MAIN TO THE METER SETTER AND MAINTAIN THE SAME COVER AS REQUIRED FOR THE WATER MAIN. THE ONLY EXCEPTION IS IN A CUL-DE-SAC. IN THIS CASE, ONE HORIZONTAL BEND WILL BE ALLOWED. HOWEVER, THE BEND MUST BE FIELD LOCATED AND SHOWN ON THE AS-BUILTS.

B. ALL WATER TAPS SHALL BE WET TAPS.

C. ALL 1 1/2" AND 2" WATER TAPS REQUIRE DUCTILE IRON, DOUBLE STRAP, SERVICE SADDLES.

D. APPROVED PARTS:
1 1/2" & 2" SERVICE SADDLE:
-SWIN BLUM MODEL #13
-MUELLER DR2A SERIES
-FORD FAJ2 SERIES
-ROMAC STYLE #202

E. FOR HIGHWAY PAVEMENT ROADS, THE WATER METER BOX AND SETTER SHALL BE LOCATED WITHIN THE GRASS STRIP, WHICH IS LOCATED 2' INSIDE OF THE RIGHT-OF-WAY LINE.

F. NO KINKS ALLOWED IN THE SERVICE. ANY KINKED OR DAMAGED TUBING SHALL BE REMOVED AND REPLACED.

CITY OF HIGH POINT
NORTH CAROLINA
ENGINEERING SERVICES DEPARTMENT
APPROVED: FEBRUARY 1, 2022
DIRECTOR

ISSUED 02-01-07
REVISIONS
5-15-10
2-6-14

STANDARD DRAWING FOR
1 1/2" AND 2" SERVICE LINE INSTALLATION (NEW)
FOR 1 1/2" AND 2" WATER SERVICES

1.5_21NSNEW.DWG
213.00
SHEET 1 OF 1

DUCTILE IRON WATER PIPE

6" - 10" D.I. 48" MIN. COVER
12" - 36" D.I. 54" MIN. COVER

CITY OF HIGH POINT
NORTH CAROLINA
ENGINEERING SERVICES DEPARTMENT
APPROVED: FEBRUARY 1, 2022
DIRECTOR

ISSUED 02-01-07
REVISIONS

STANDARD DRAWING FOR
WATER PIPE COVER REQUIREMENTS
FOR 6" - 36" D.I. WATER PIPE - PRESSURE CLASS 350

COVER.DWG
230.00
SHEET 1 OF 1

WATER MAIN INSTALLATION TRENCH

MECHANICAL JOINT

PUSH ON JOINT

NOTES:

1. CONCRETE SHALL BE 3000 PSI.

2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.

3. ALL BENDS AND INTERSECTIONS SHALL HAVE CONCRETE THRUST BLOCKING.

4. USE 6" 90° BEND VALUE FOR HYDRANTS FOR ADDITIONAL SAFETY FACTORS.

CITY OF HIGH POINT
NORTH CAROLINA
ENGINEERING SERVICES DEPARTMENT
APPROVED: FEBRUARY 1, 2022
DIRECTOR

ISSUED 02-01-07
REVISIONS

STANDARD DRAWING FOR
MAXIMUM JOINT DEFLECTION
FOR DUCTILE IRON WATER LINE

DEFLECT.DWG
231.00
SHEET 1 OF 1

REACTION BEARING AREAS FOR HORIZONTAL WATER PIPE BENDS											
BASED ON TEST PRESSURE OF 200 PSI											
SIZE AND DEGREE OF BEND	9" AT 10' THRUST IN POUNDS	FAIRLY DRY CLAY 4,000 LB/SQ FT	SOFT CLAY 2,000 LB/SQ FT	GRAVEL COARSE 16,000 LB/SQ FT	DRY CLAY ALWAYS DRY 8,000 LB/SQ FT	SAND 10,000 LB/SQ FT	CONC. 8,000 LB/SQ FT	8" SAND/CLAY 10,000 LB/SQ FT	DRY 4,000 LB/SQ FT	ROCK 16,000 LB/SQ FT	THE ROADS REQUIRED
6"	11.25° 1108	1	1	1	1	1	1	1	1	1	
22.50°	2207	1	2	2	1	1	1	1	1	1	
45°	4328	2	3	3	1	1	1	2	1	1	
90°	7906	2	4	5	1	1	2	1	1	1	
PLUG	5665	2	3	4	1	1	2	1	2-1/2" DIA.		
8"	11.25° 1970	1	1	2	1	1	2	1			
22.50°	3822	1	2	3	1	1	3	1			
45°	7694	2	4	5	1	1	5	1			
90°	14215	4	8	9	2	2	8	2			
PLUG	10053	3	5	6	2	2	6	1	2-5/8" DIA.		
12"	11.25° 4433	2	3	3	1	1	2	1			
22.50°	8826	3	5	6	2	2	3	1			
45°	17312	5	9	11	3	3	5	2			
90°	31983	8	16	19	4	4	8	4			
PLUG	22619	6	12	14	3	3	6	3	4-3/4" DIA.		

REACTION BEARING AREAS ARE IN SQUARE FEET MEASURED IN A VERTICAL PLANE IN THE TRENCH SIDE AT AN ANGLE OF 90° TO THE THRUST VECTOR

CITY OF HIGH POINT
NORTH CAROLINA
ENGINEERING SERVICES DEPARTMENT
APPROVED: FEBRUARY 1, 2022
DIRECTOR

ISSUED 02-01-07
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STANDARD DRAWING FOR
THRUST BLOCKING
FOR 6" - 12" WATER LINE

THRUSTBLOCK.DWG
232.00
SHEET 1 OF 1

MOD. TYPE 1

MOD. TYPE 2

MOD. TYPE 3

MOD. TYPE 4

NOTES:

A. THE BASE SHALL BE CENTERED OVER THE VALVE. TWO (2) BRICKS ARE TO BE PLACED AS SHOWN UNDER THE BASE AT 180°.

B. VALVE BOX SHALL CONFORM TO ASTM A48, CLASS 30B.

C. EXTENSIONS:

1. VALVE BOX EXTENSIONS SHALL BE 5" DIAMETER SOIL PIPE.

2. WHEN OPERATING NUT DEPTH EXCEEDS 5'-0" BELOW FINISHED GRADE, PROVIDE EXTENSION STEM WITH 2" SQUARE OPERATING NUT. THE EXTENSION STEM SHALL BE PART OF A MANUFACTURER APPROVED EXTENSION KIT.

D. APPROVED MANUFACTURERS/MODELS INCLUDE:

1. BINGHAM & TAYLOR - MODEL # 5562-S, 5662-S, 5664-A, AND 5668-S.

2. CHARLOTTE - MODEL # 562-A.

3. TILLEY - SERIES 6805, MODEL # 562-A, 564-A, AND 664-A.

4. EAW - 8555 SERIES, MODEL # 562-A, 564-A, AND 664-A.

5. OR APPROVED EQUAL.

CITY OF HIGH POINT
NORTH CAROLINA
ENGINEERING SERVICES DEPARTMENT
APPROVED: FEBRUARY 1, 2022
DIRECTOR

ISSUED 02-01-07
REVISIONS

STANDARD DRAWING FOR
D.I. PIPE BEDDING & MAXIMUM
DEPTH OF COVER

BED_DEPTH.DWG
233.00
SHEET 1 OF 2

WATERLINES						SEWER LINES					
D.I. PIPE SIZE, PC 350						D.I. PIPE SIZE, PC 250					
D.I. PIPE SIZE, ANSI THICKNESS CLASS 51						D.I. PIPE SIZE, ANSI THICKNESS CLASS 51					
SAFE COVER	3"	4"	6"	8"	12"	SAFE COVER	8"	12"	16"	18"	24"
0'											
2'											
4'											
6'											
8'											
10'											
12'											
14'											
16'											
18'											
20'											

CITY OF HIGH POINT
NORTH CAROLINA
ENGINEERING SERVICES DEPARTMENT
APPROVED: FEBRUARY 1, 2022
DIRECTOR

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REVISIONS

STANDARD DRAWING FOR
D.I. PIPE BEDDING & MAXIMUM
DEPTH OF COVER

THICK_VS_PSI.DWG
233.00
SHEET 2 OF 2

SECTION B-B

SECTION A-A

NOTES:

A. THE CARRIER PIPE SUPPORTS SHALL BE MADE OF STRUCTURAL STEEL LOW CARBON HOT ROLLED FLAT PLATE ACCORDING TO ASTM A 36/A.

B. THE CARRIER PIPE SUPPORTS SHALL BE MANUFACTURED BY SPIDER MANUFACTURING, INC. OR AN APPROVED EQUAL.

C. 4" - 16" CARRIER PIPE REQUIRES THREE "SPIDER" SUPPORTS PER SECTION OF PIPE.

D. 18" - 36" CARRIER PIPE REQUIRES THREE "SPIDER" SUPPORTS PER SECTION OF PIPE.

E. 18" AND LARGER CARRIER PIPE SUPPORTS ARE MANUFACTURED AS TWO-PIECE COMPONENTS.

F. INSULATING LINER SHALL BE EPDM NON-CONDUCTIVE RUBBER 3/16" ± 1/16" THICKNESS (ASTM D-2000 75E).

CITY OF HIGH POINT
NORTH CAROLINA
ENGINEERING SERVICES DEPARTMENT
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DIRECTOR

ISSUED 02-01-07
REVISIONS

STANDARD DRAWING FOR
SPIDER SUPPORT
FOR DUCTILE IRON PIPE INSTALLED IN STEEL ENCASUREMENT PIPE

SPIDER.DWG
234.00
SHEET 1 OF 1

VALVE BOX

HALF PLAN VIEWS

NOTES:

A. THE BASE SHALL BE CENTERED OVER THE VALVE. TWO (2) BRICKS ARE TO BE PLACED AS SHOWN UNDER THE BASE AT 180°.

B. VALVE BOX SHALL CONFORM TO ASTM A48, CLASS 30B.

C. EXTENSIONS:

1. VALVE BOX EXTENSIONS SHALL BE 5" DIAMETER SOIL PIPE.

2. WHEN OPERATING NUT DEPTH EXCEEDS 5'-0" BELOW FINISHED GRADE, PROVIDE EXTENSION STEM WITH 2" SQUARE OPERATING NUT. THE EXTENSION STEM SHALL BE PART OF A MANUFACTURER APPROVED EXTENSION KIT.

D. APPROVED MANUFACTURERS/MODELS INCLUDE:

1. BINGHAM & TAYLOR - MODEL # 5562-S, 5662-S, 5664-A, AND 5668-S.

2. CHARLOTTE - MODEL # 562-A.

3. TILLEY - SERIES 6805, MODEL # 562-A, 564-A, AND 664-A.

4. EAW - 8555 SERIES, MODEL # 562-A, 564-A, AND 664-A.

5. OR APPROVED EQUAL.

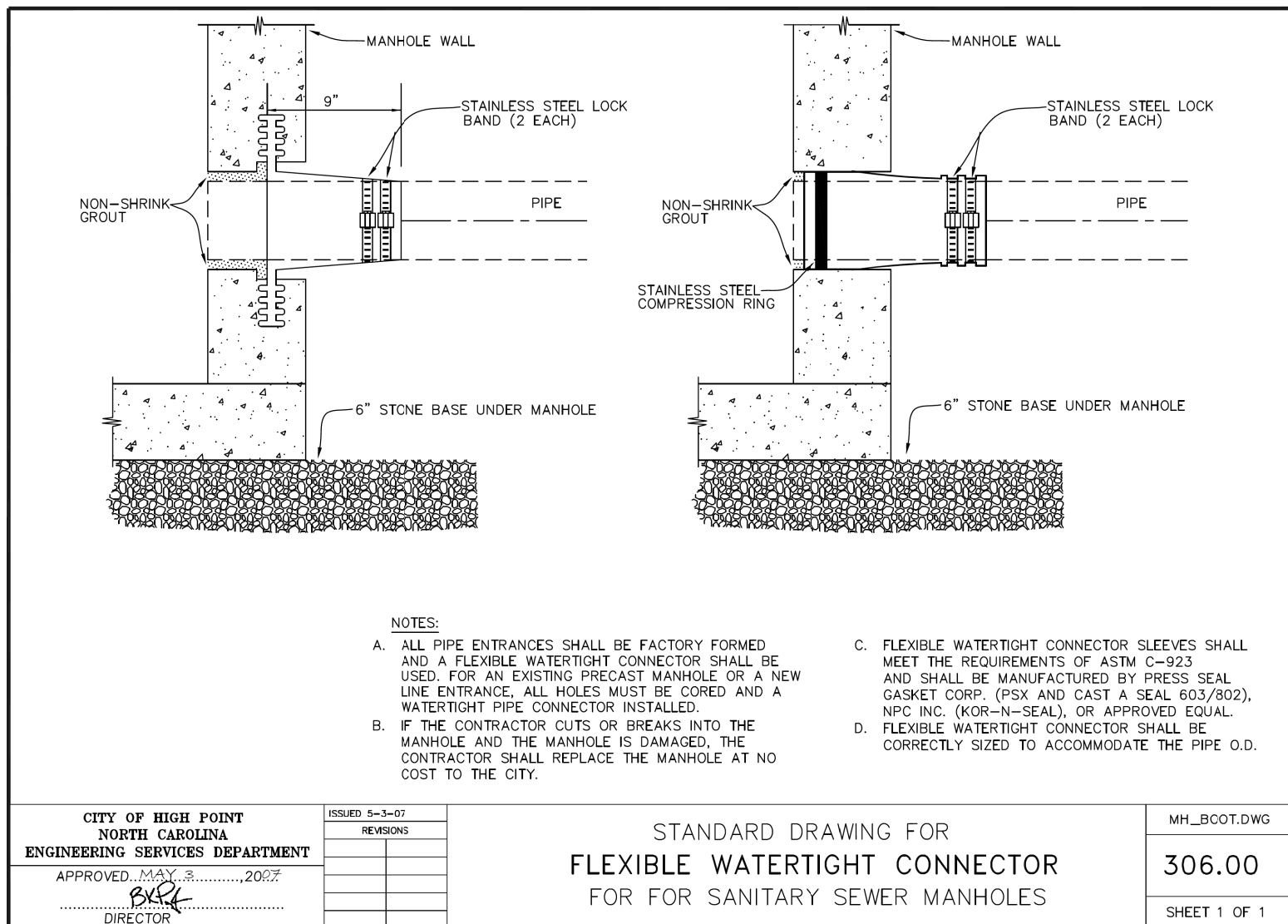
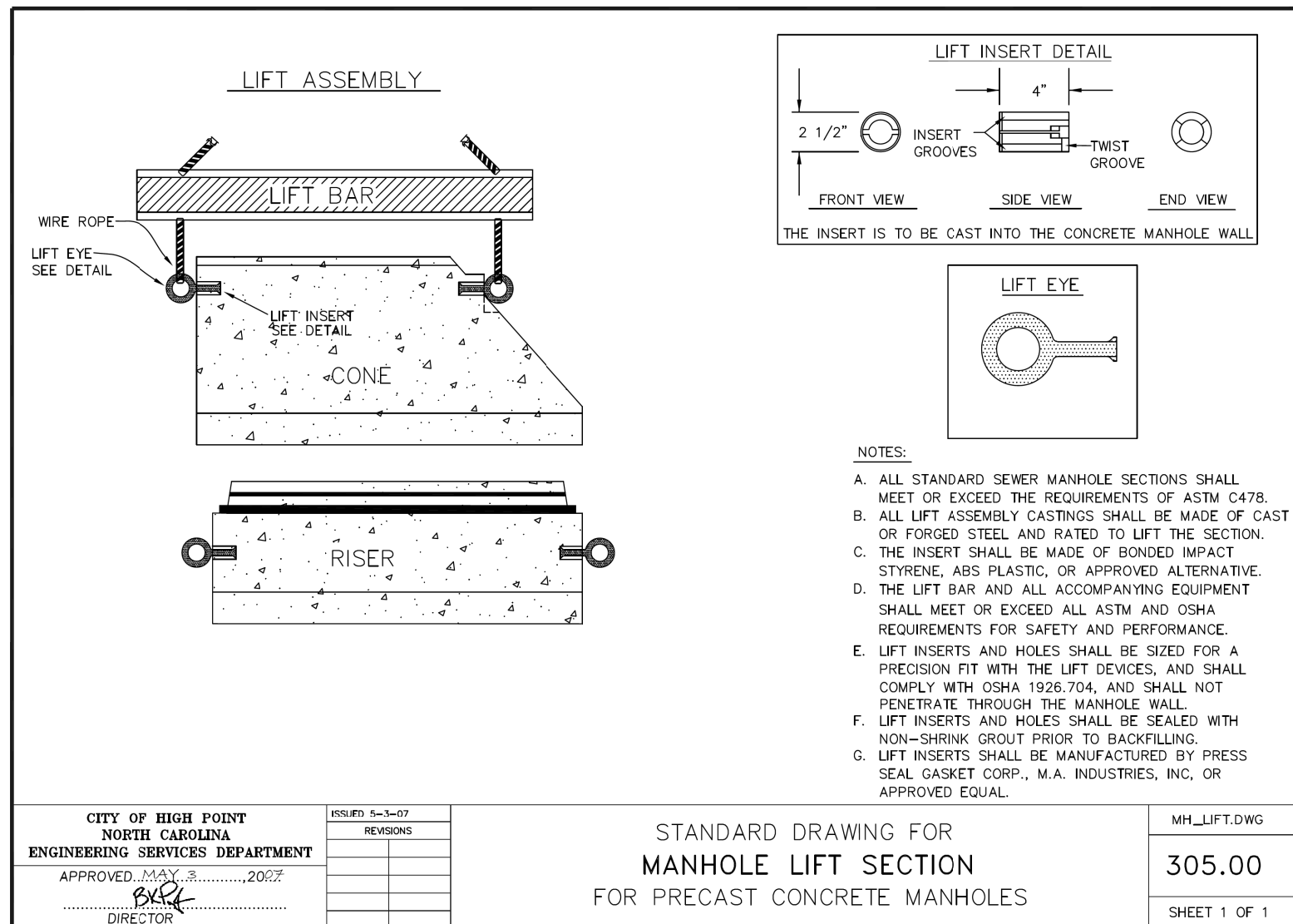
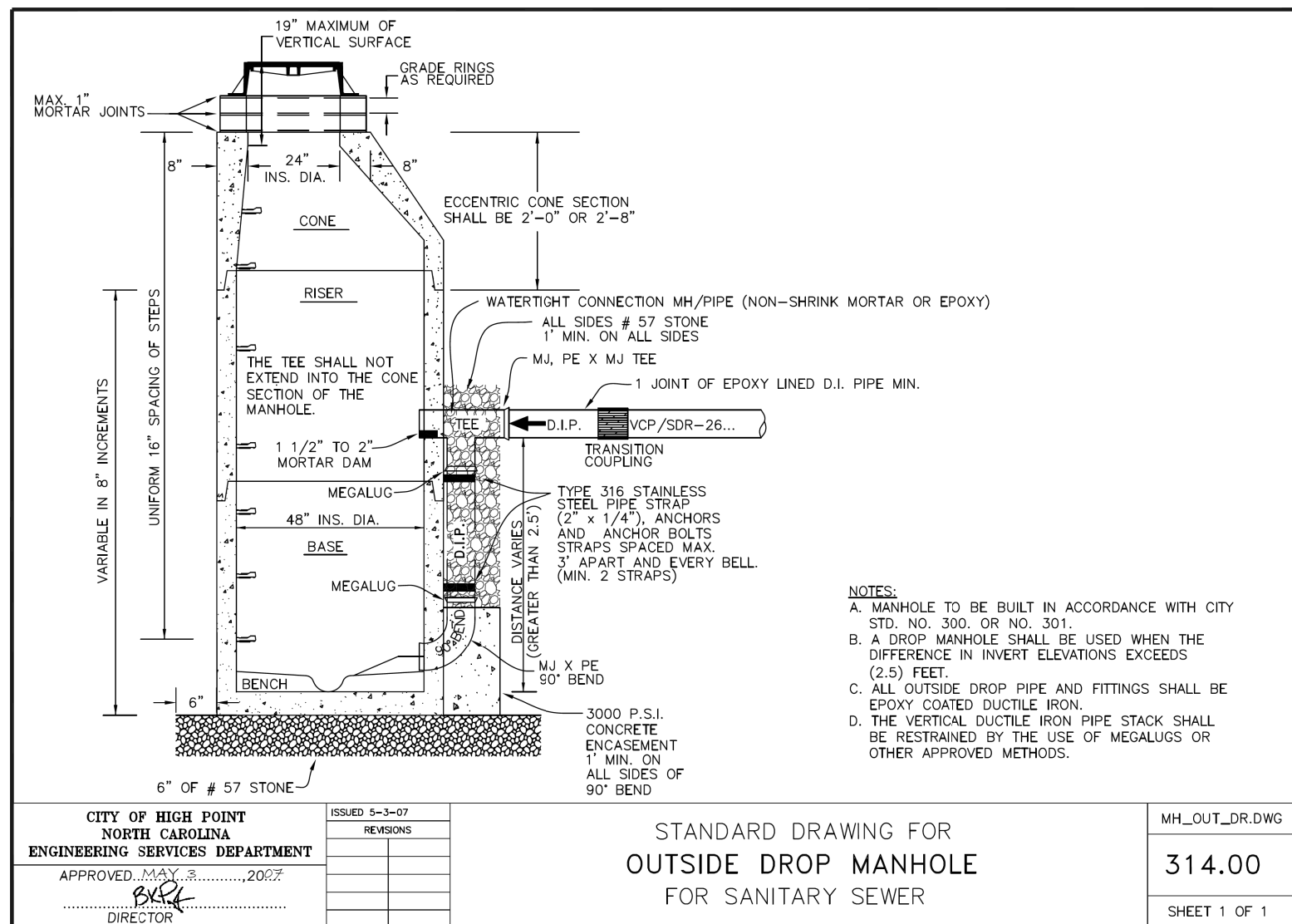
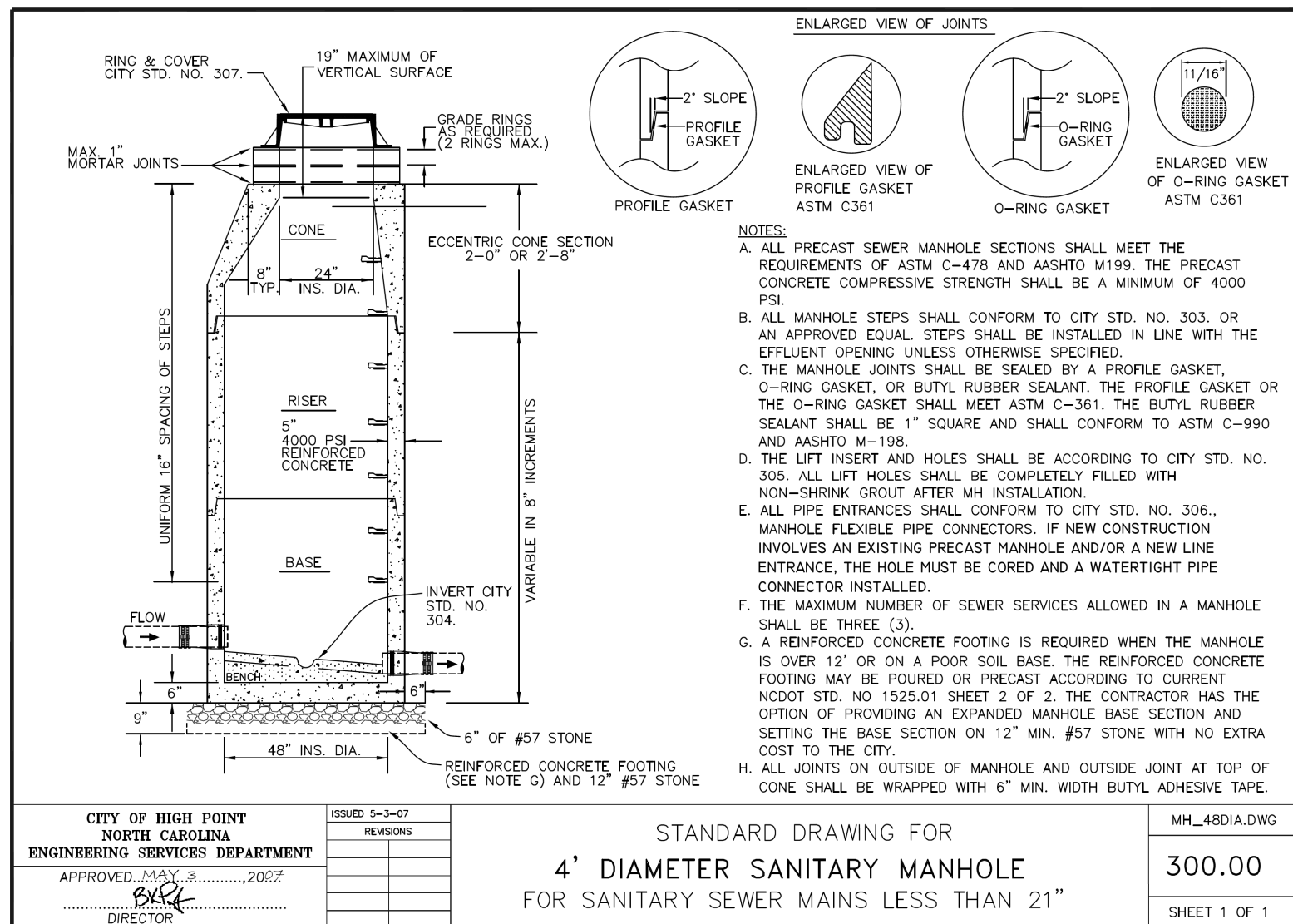
CITY OF HIGH POINT
NORTH CAROLINA
ENGINEERING SERVICES DEPARTMENT
APPROVED: FEBRUARY 1, 2022
DIRECTOR

ISSUED 02-01-07
REVISIONS

STANDARD DRAWING FOR
WATER VALVE BOX
FOR ROADWAY AND UNPAVED AREAS

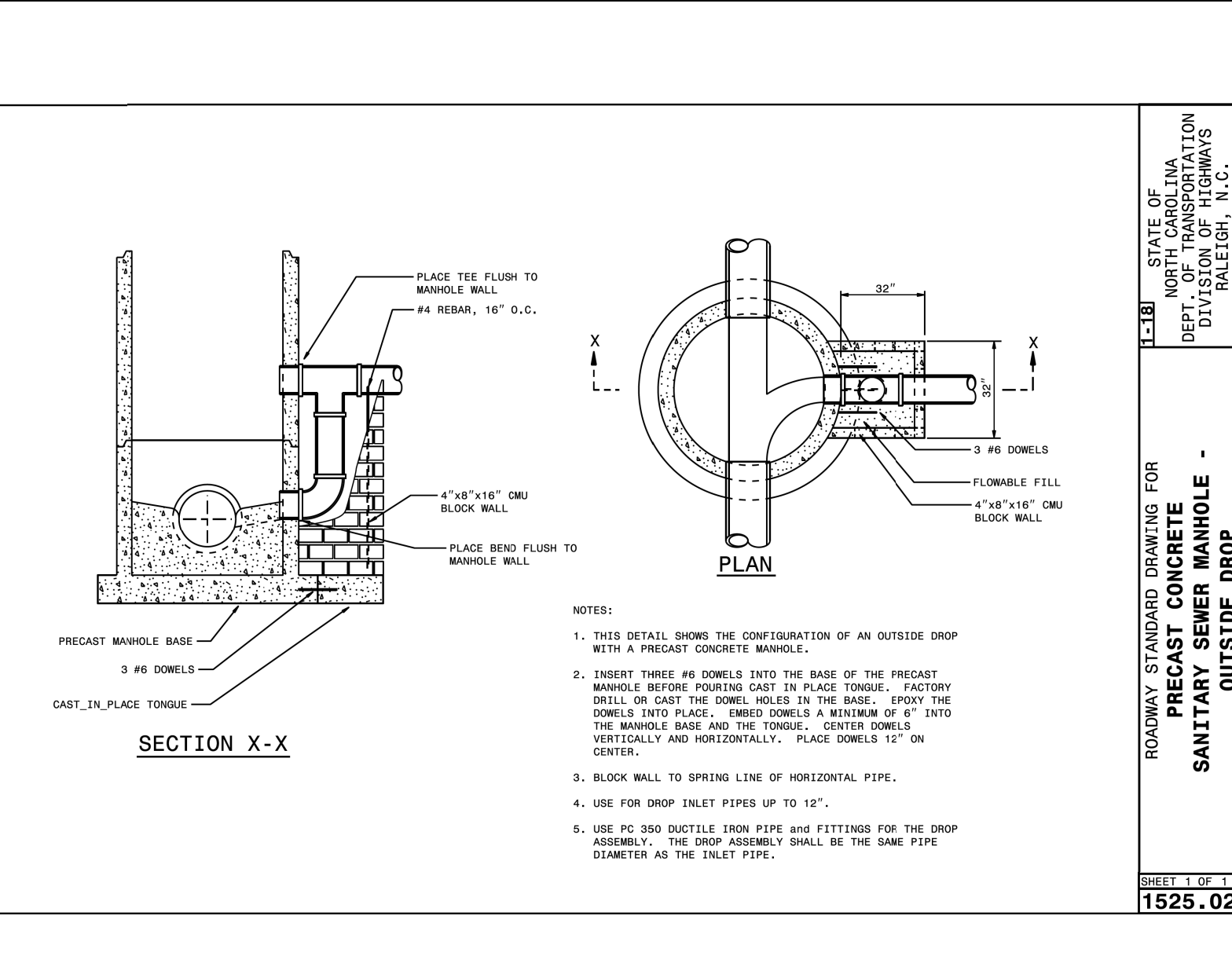
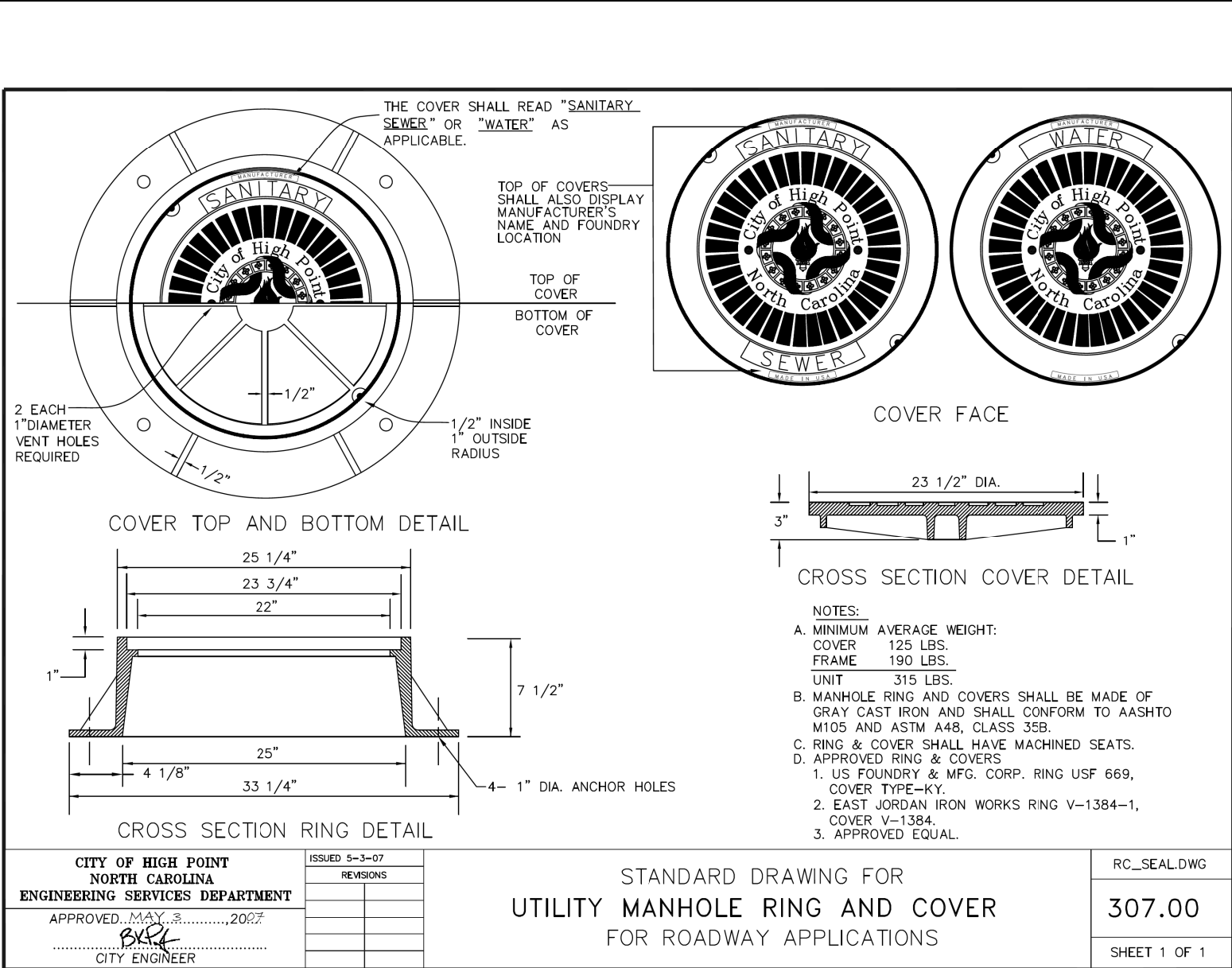
VLVBOX.DWG
237.00
SHEET 1 OF 1

PREPARED IN THE OFFICE OF:		PROJECT REFERENCE NO.: 17BP.7.R.114		SHEET NO.: UC-3B	
DESIGNED BY: JCG		DRAWN BY: BTH			
CHECKED BY: JCG		APPROVED BY: JCG			
REVISED:		NORTH CAROLINA DEPARTMENT OF TRANSPORTATION			
WATER LINE AND SEWER LINE CONSTRUCTION SHOWN ON THIS SHEET		UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151			
UTILITY CONSTRUCTION PLANS ONLY					



5/14/99

PROJECT TYPICAL DETAILS



PREPARED IN THE OFFICE OF:

Wooten

119 Brookstown Ave, Suite 100 • Winston-Salem, NC 27101
(336) 722-5326 • thewootencompany.com
License Number: F-0115

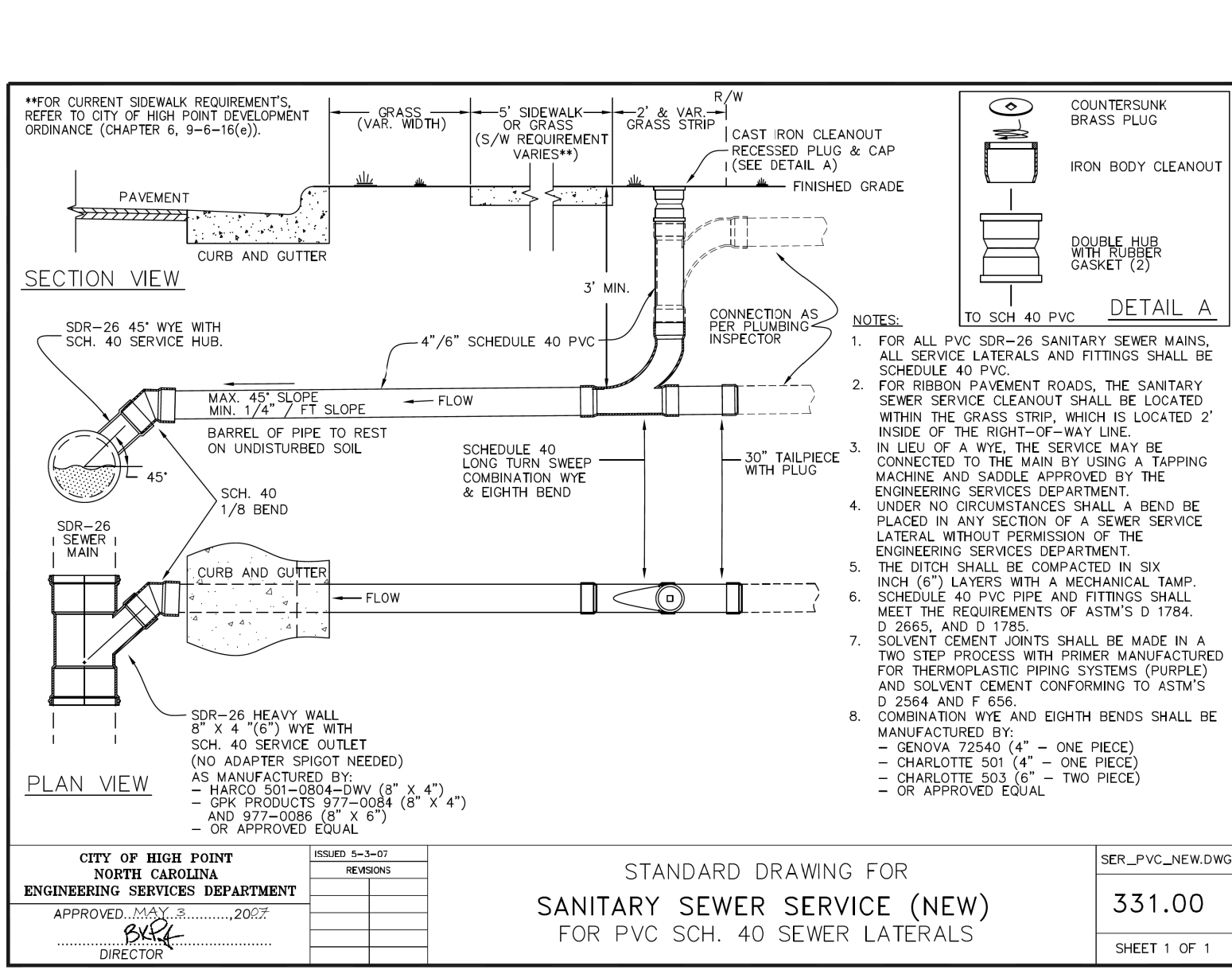
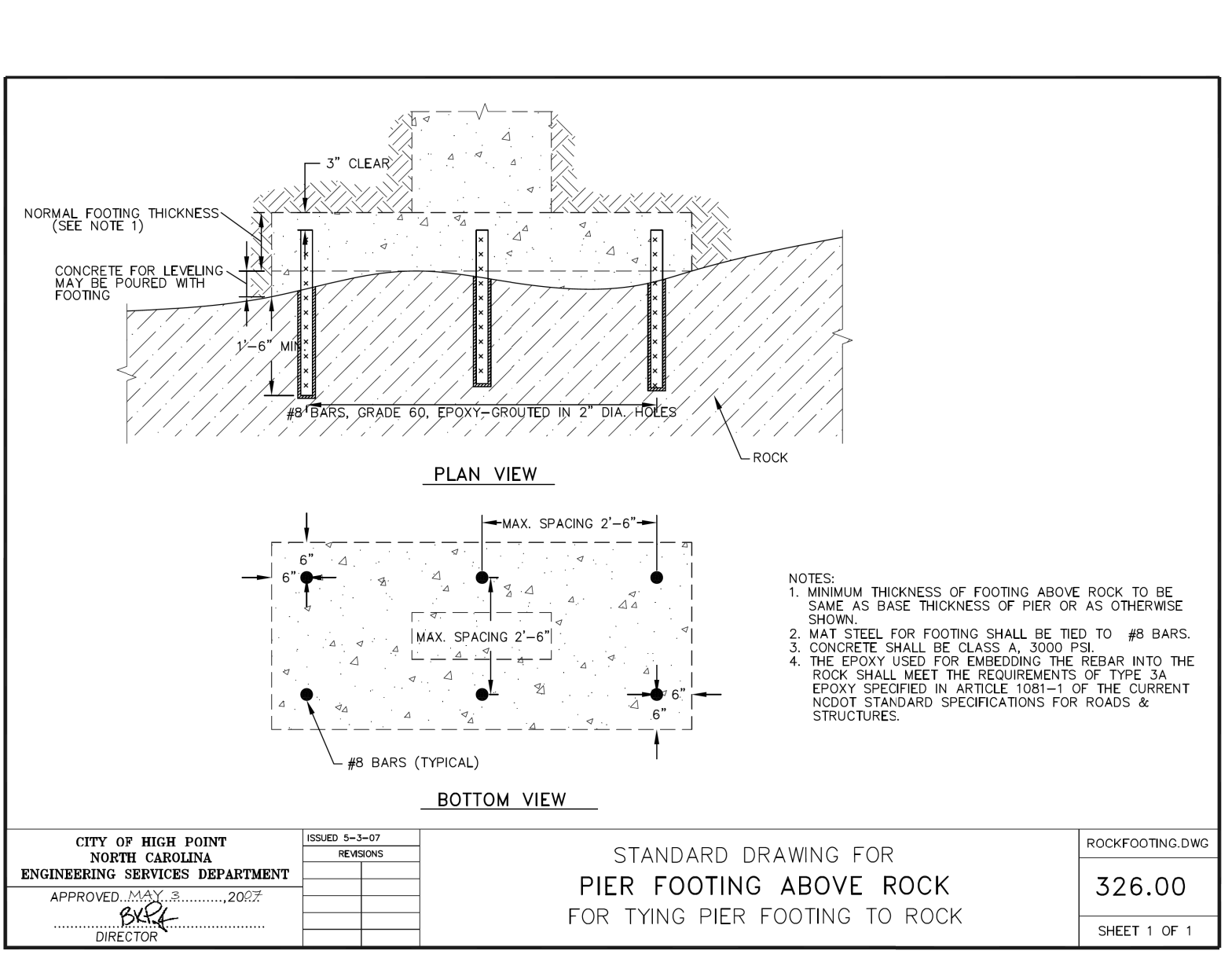
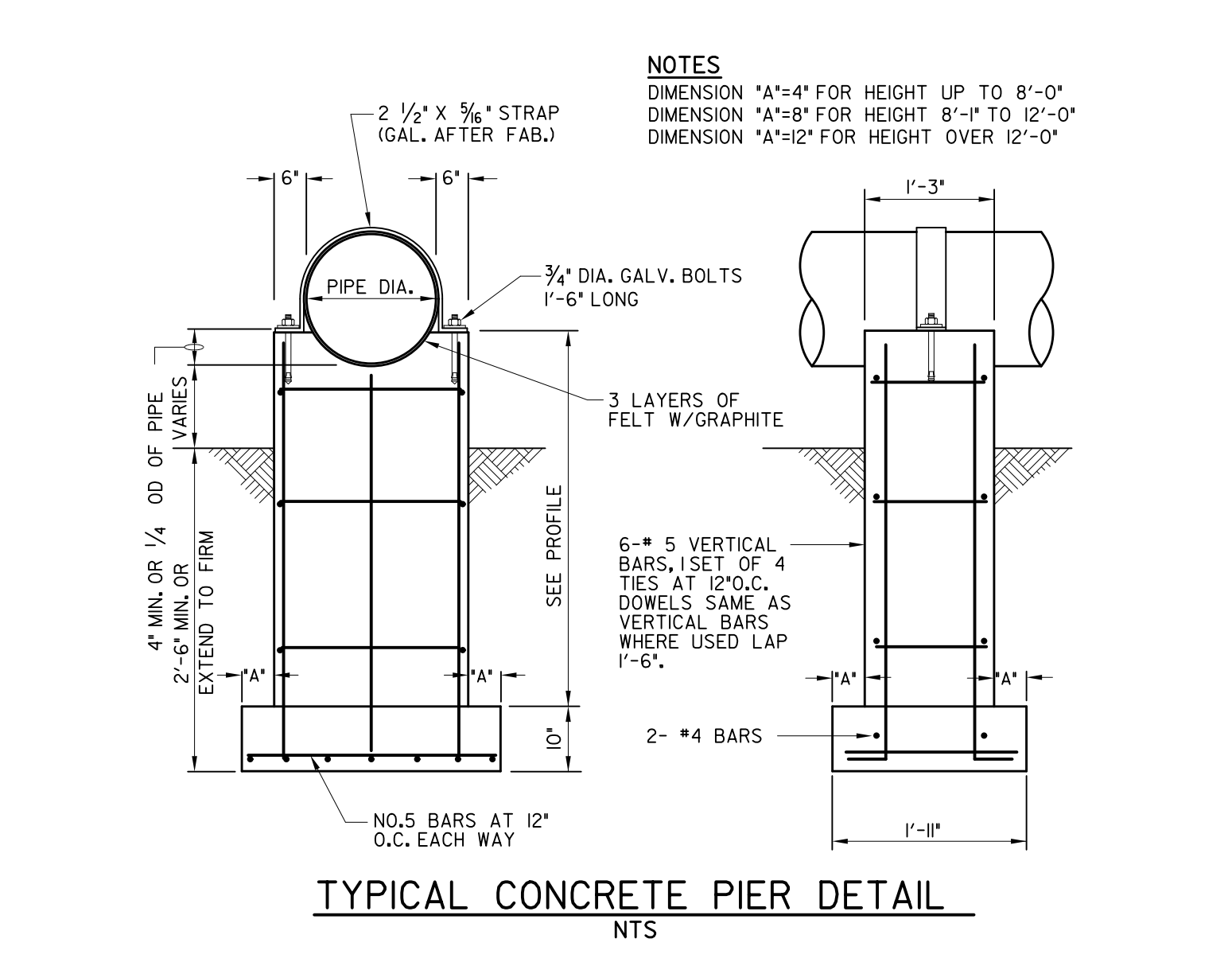
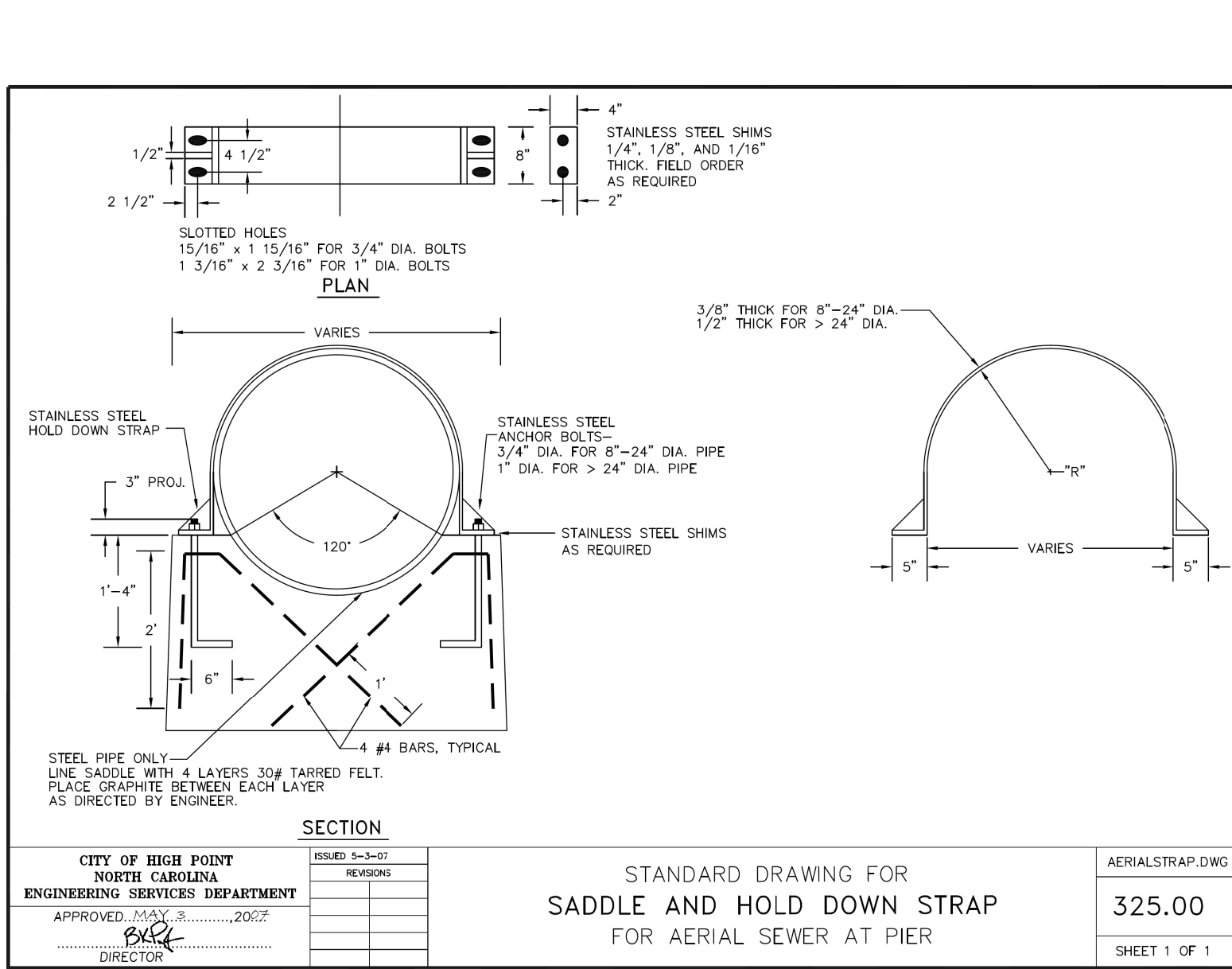
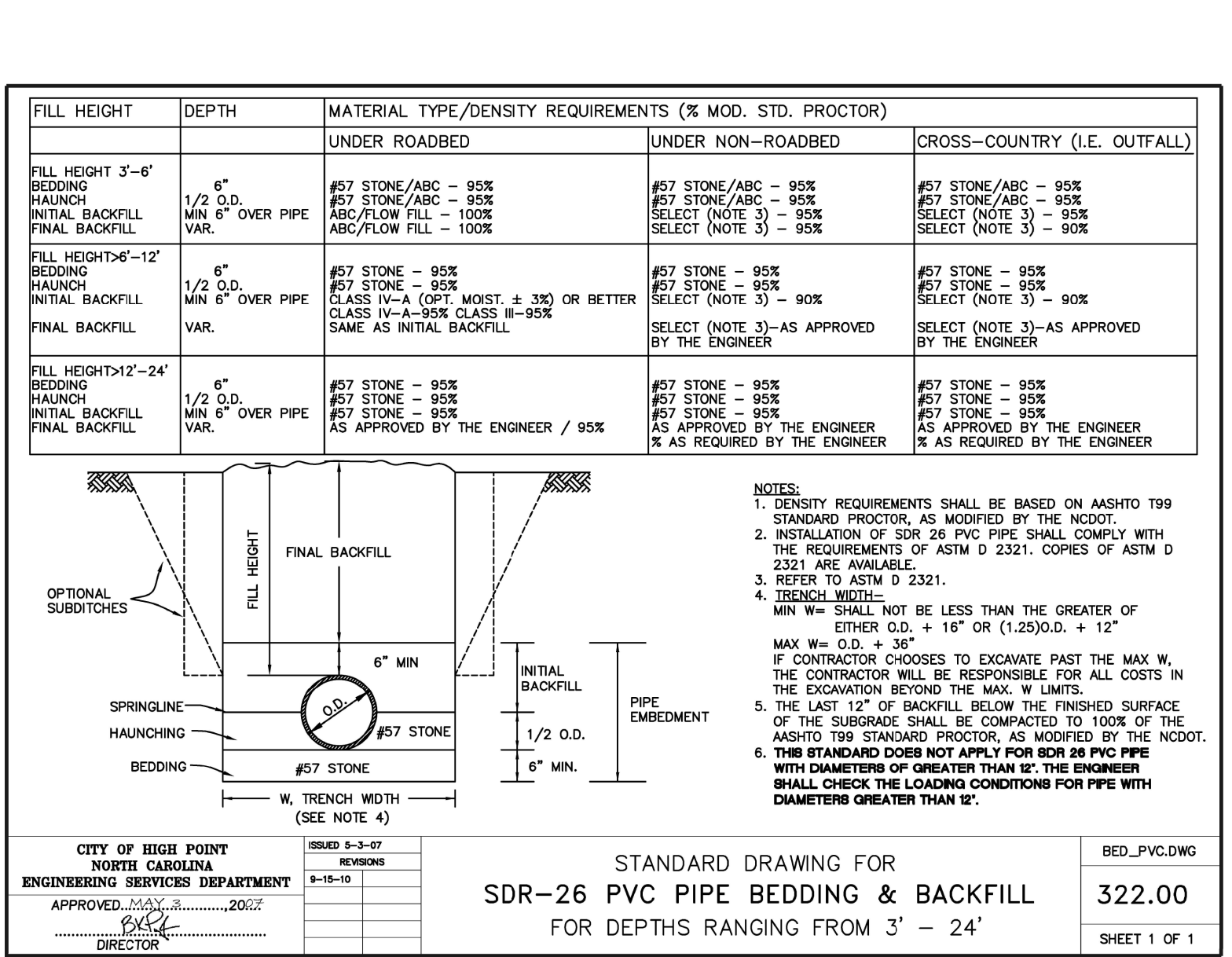
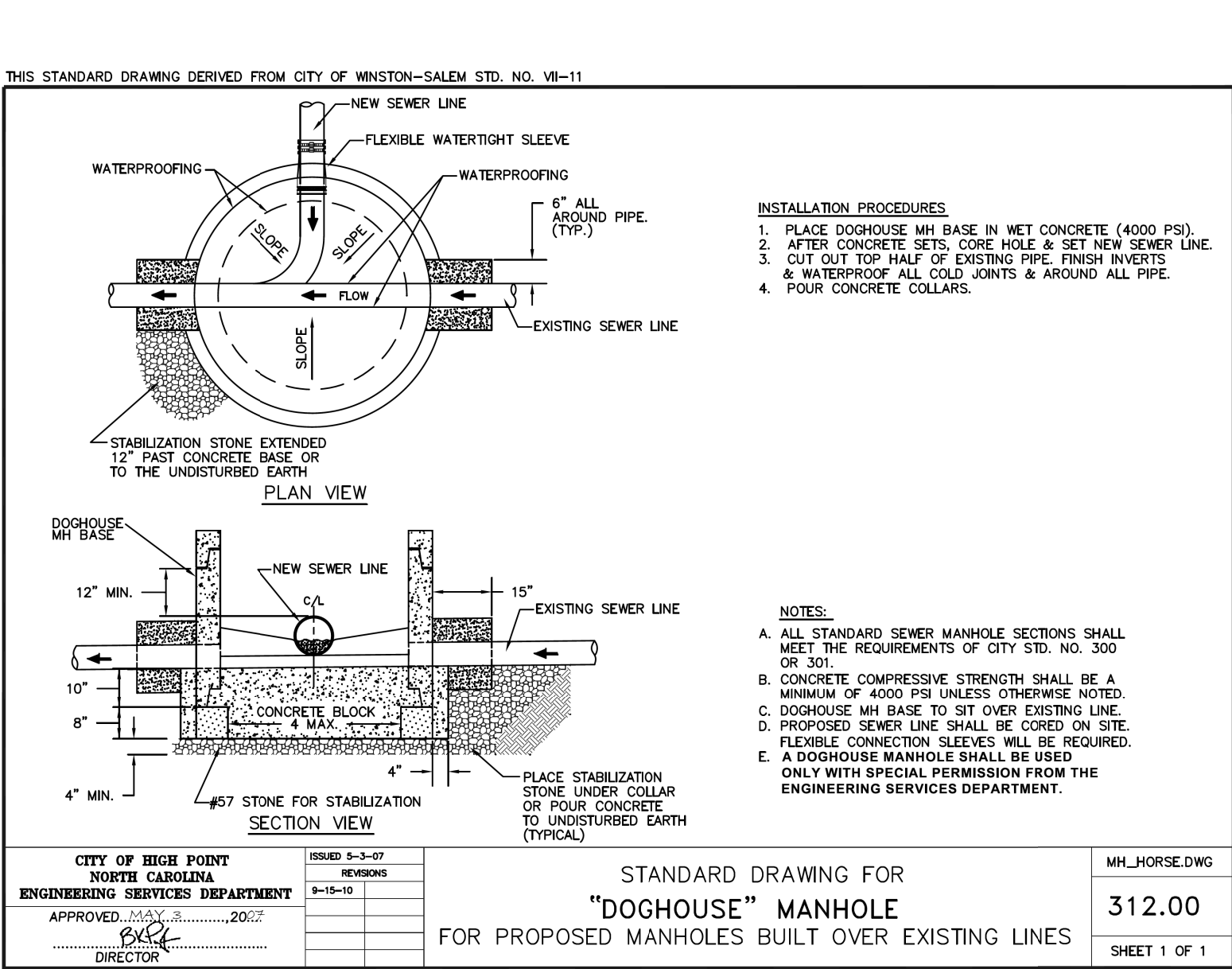
VERTICAL SCALE
5' 0' 5' 10'

HORIZONTAL SCALE
25' 0' 25' 50'

**SEWER LINE CONSTRUCTION
SHOWN ON THIS SHEET**

PROJECT REFERENCE NO.		SHEET NO.
17BP.7.R.114		UC-3C
DESIGNED BY: JCG		
DRAWN BY: BTH		
CHECKED BY: JCG		
APPROVED BY: JCG		
REVISED:		
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151		
UTILITY CONSTRUCTION PLANS ONLY		

Document Not Considered Final
Unless All Signatures Completed
8/16/2024
JOHN C. GREY



PROJECT TYPICAL DETAILS

PREPARED IN THE OFFICE OF:
Wooten
119 Brookstown Ave, Suite 100 • Winston-Salem, NC 27101
(336) 722-5326 • thewootencompany.com
License Number: F-0115

VERTICAL SCALE
5' 0 5' 10'

HORIZONTAL SCALE
25' 0 25' 50'

WATER LINE AND SEWER LINE
CONSTRUCTION
SHOWN ON THIS SHEET

PROJECT REFERENCE NO.
17BP.7.R.114

SHEET NO.
UC-3D

DESIGNED BY: JCG

DRAWN BY: BTH

CHECKED BY: JCG

APPROVED BY: JCG

REVISED:

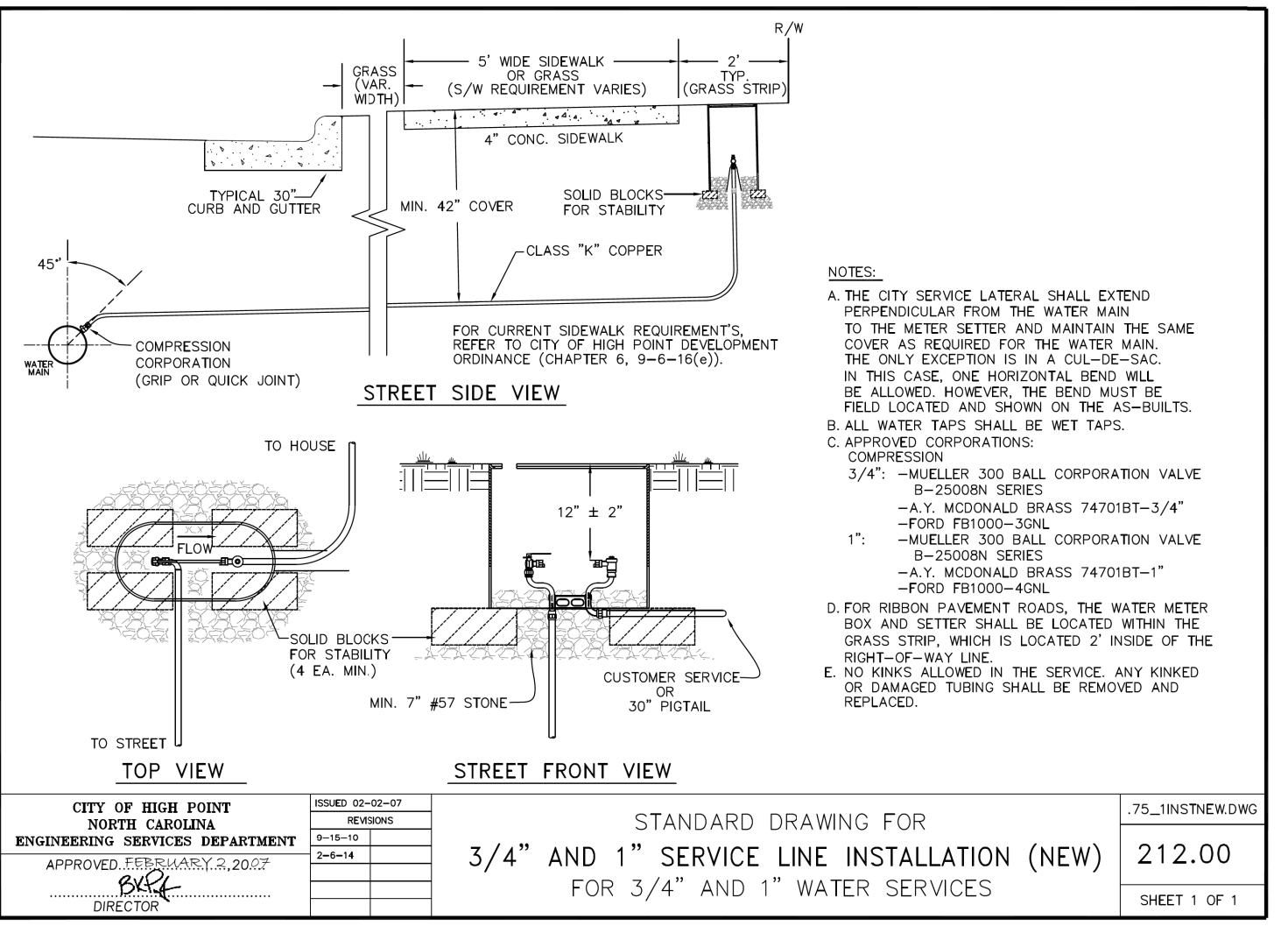
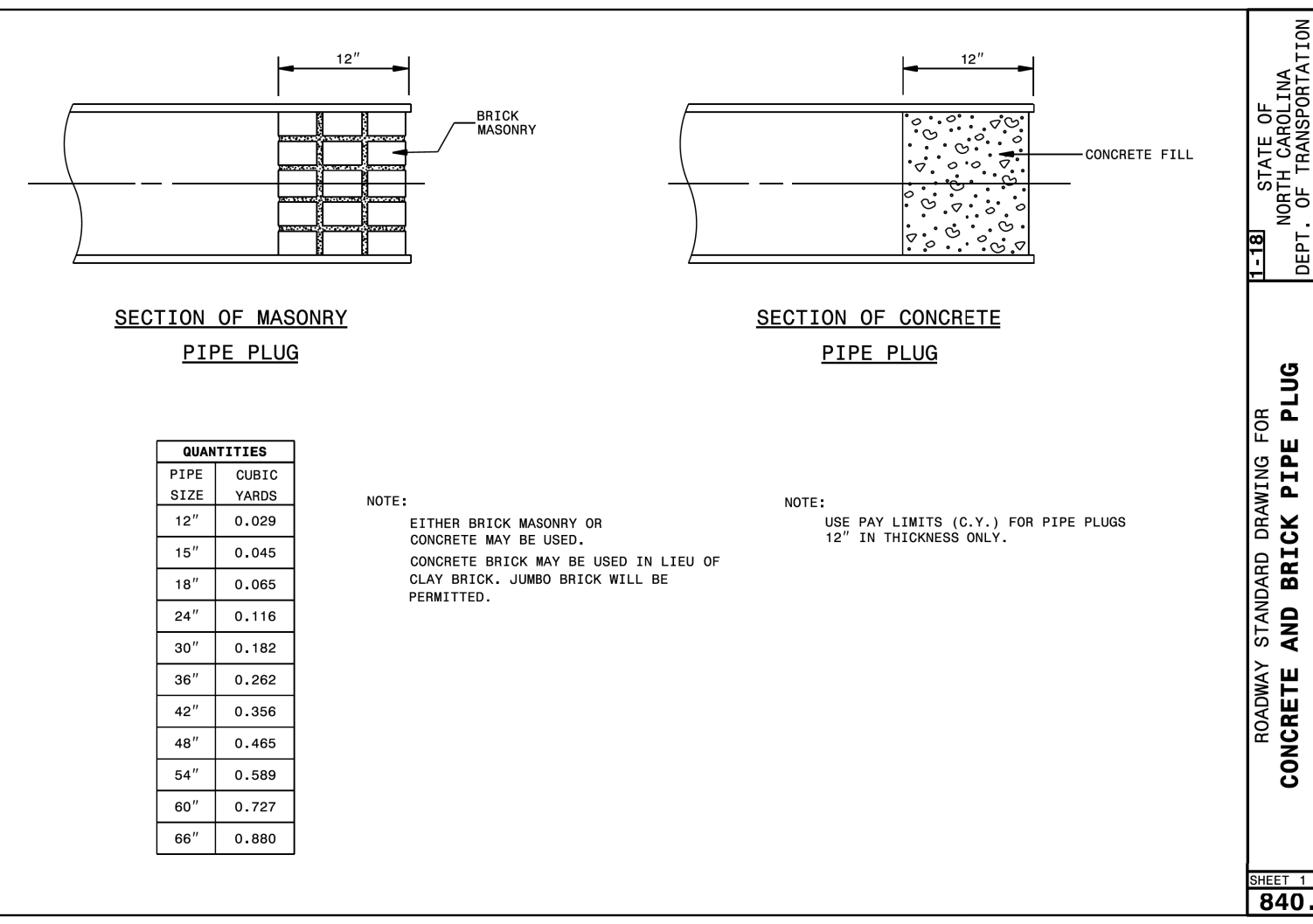
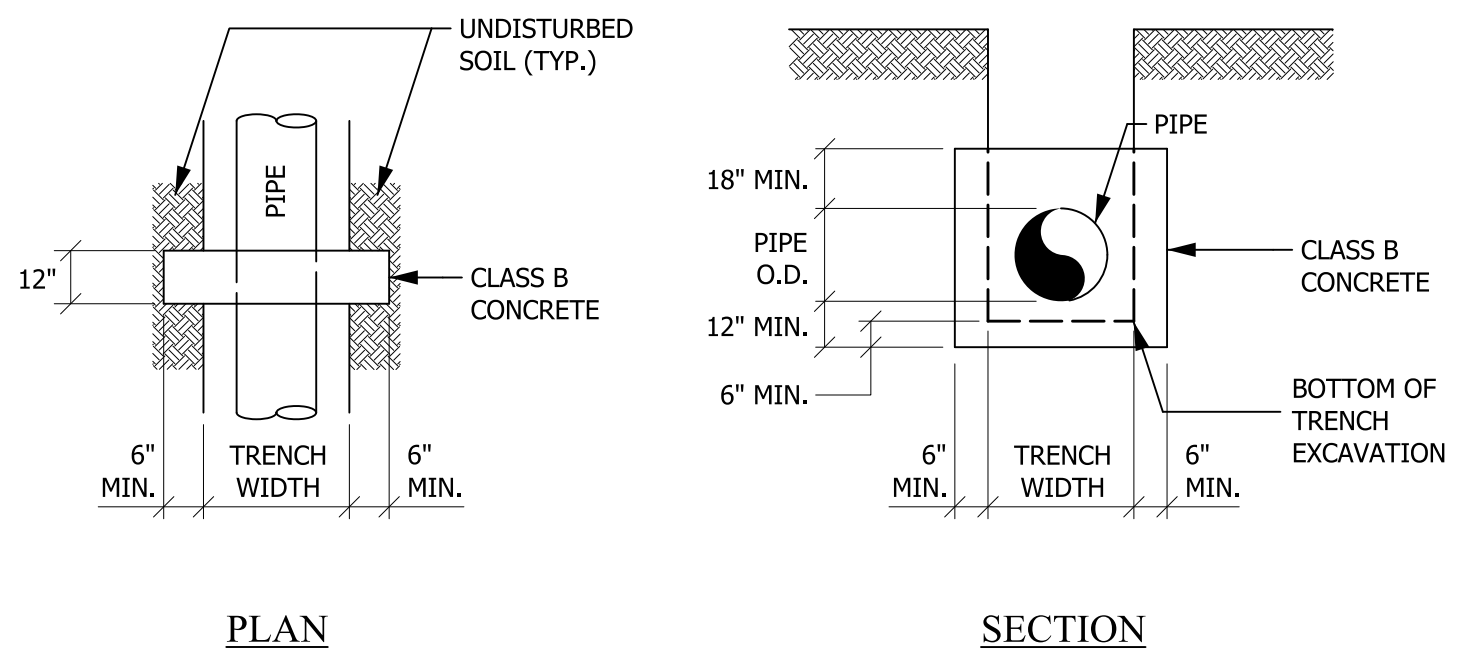
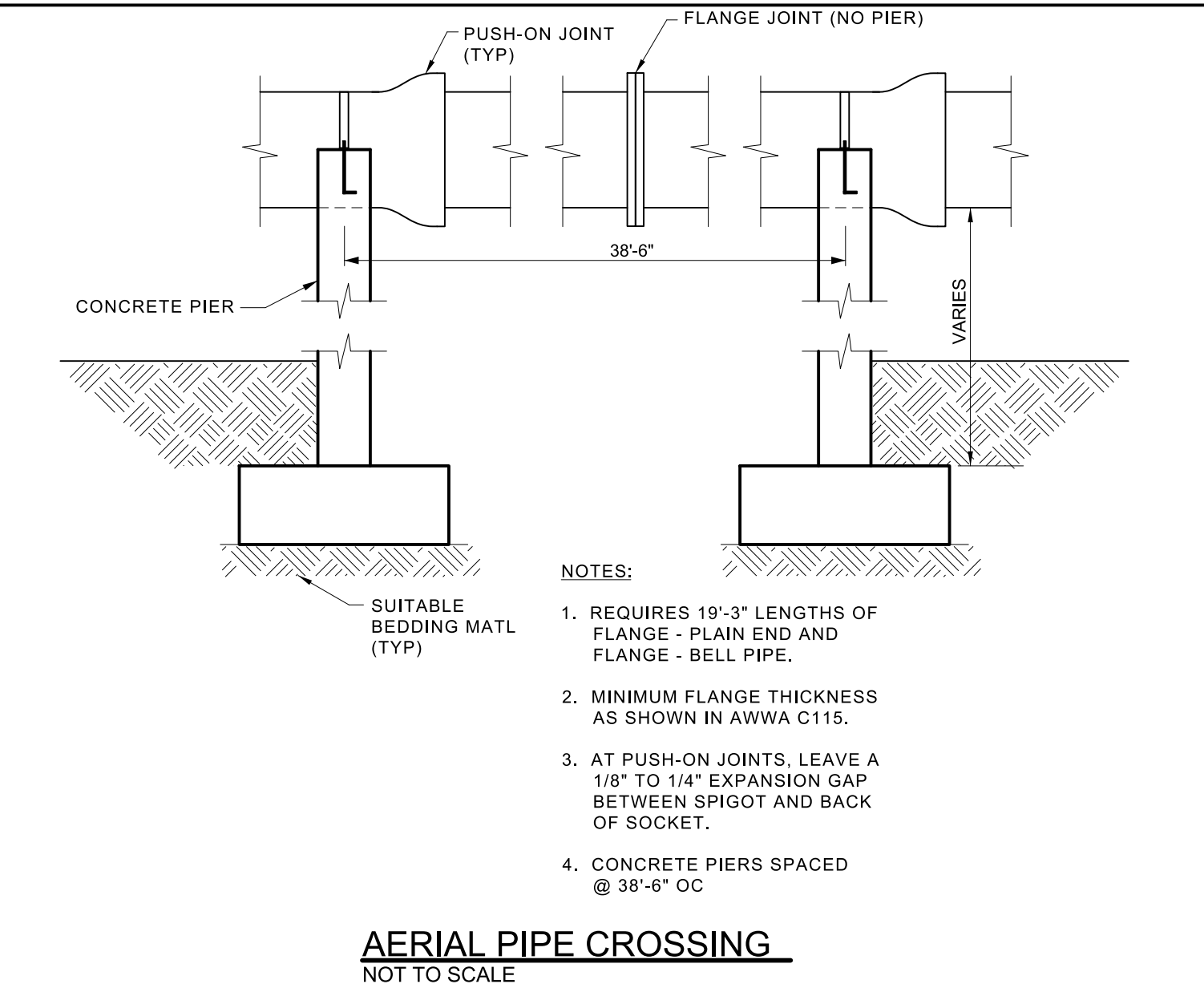
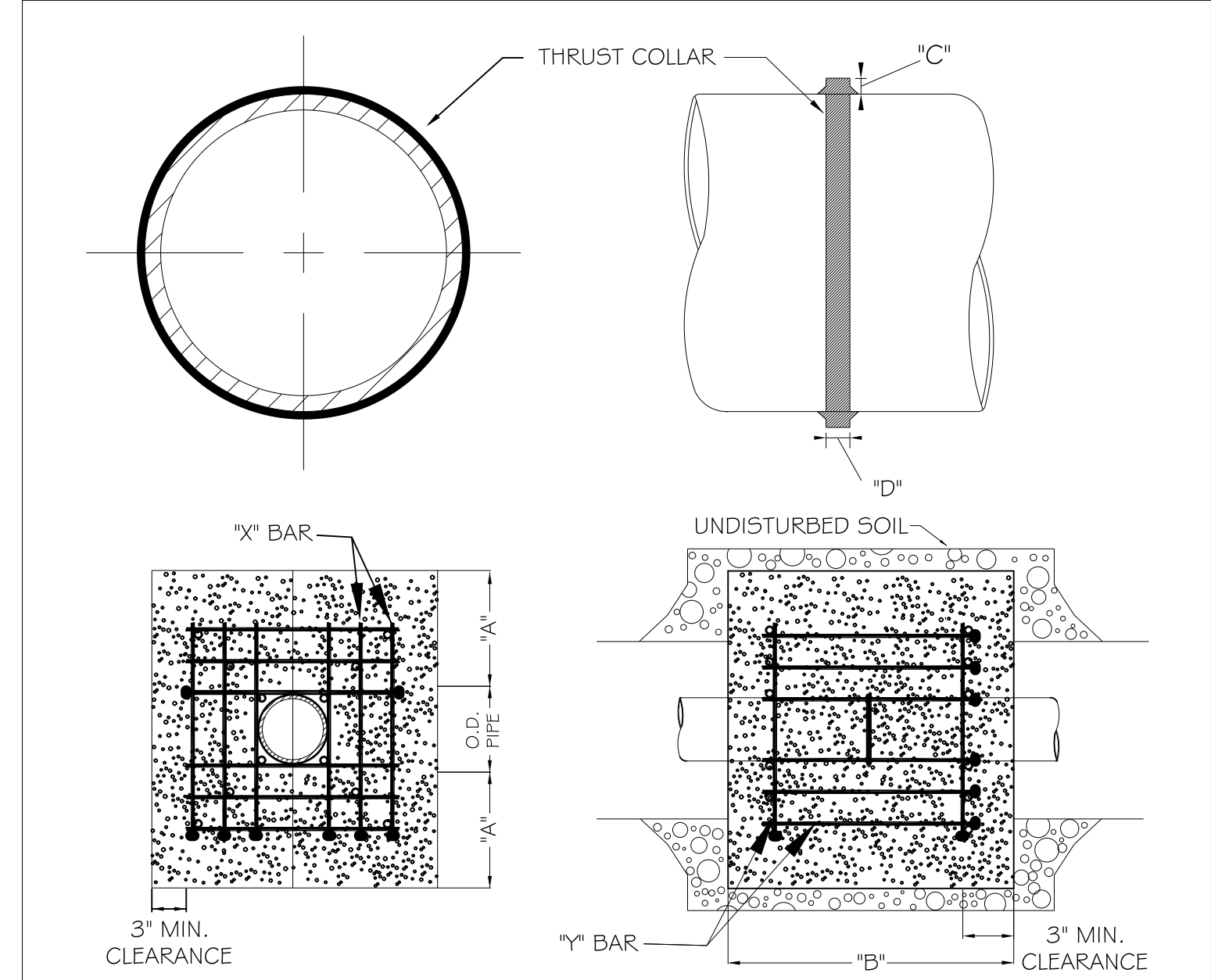
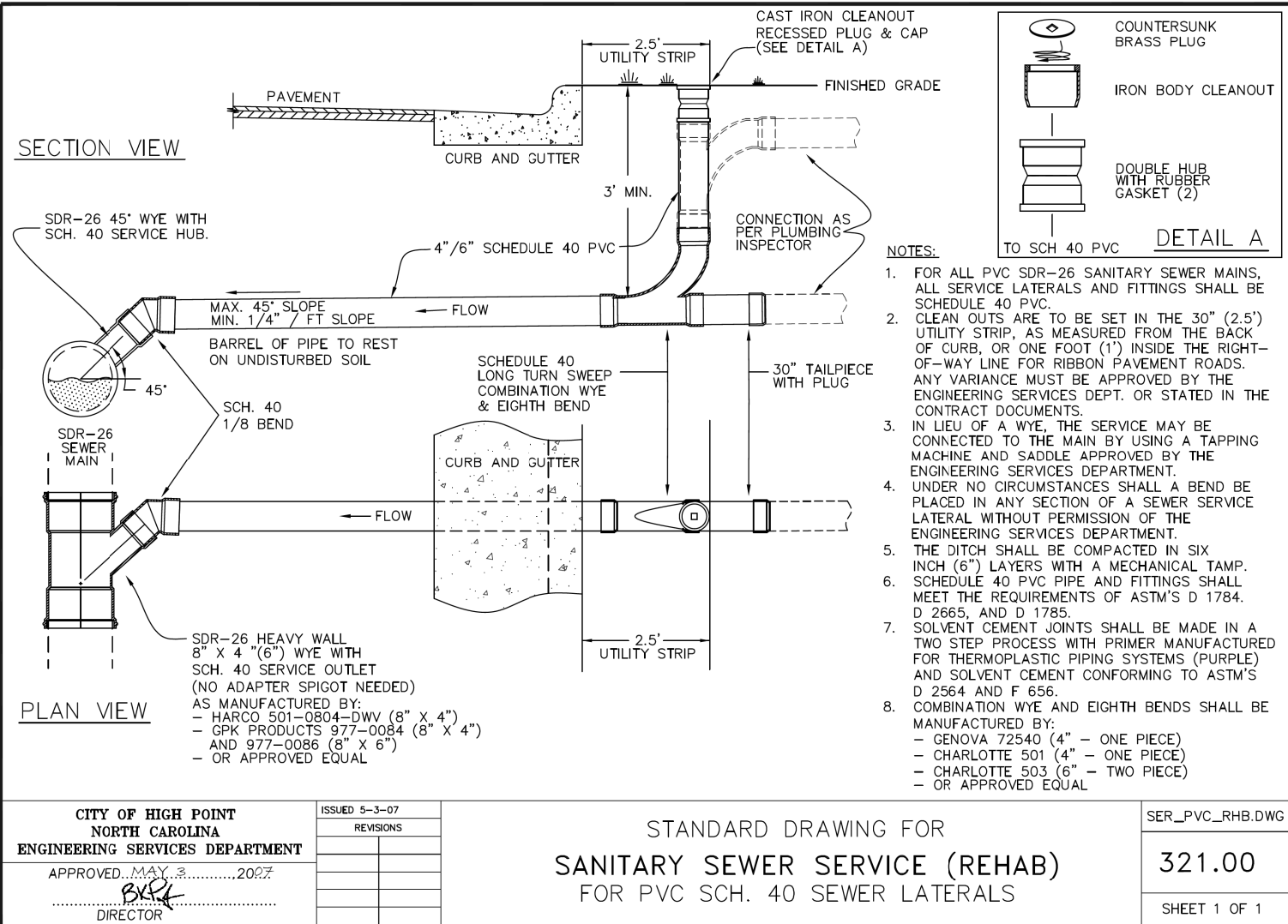
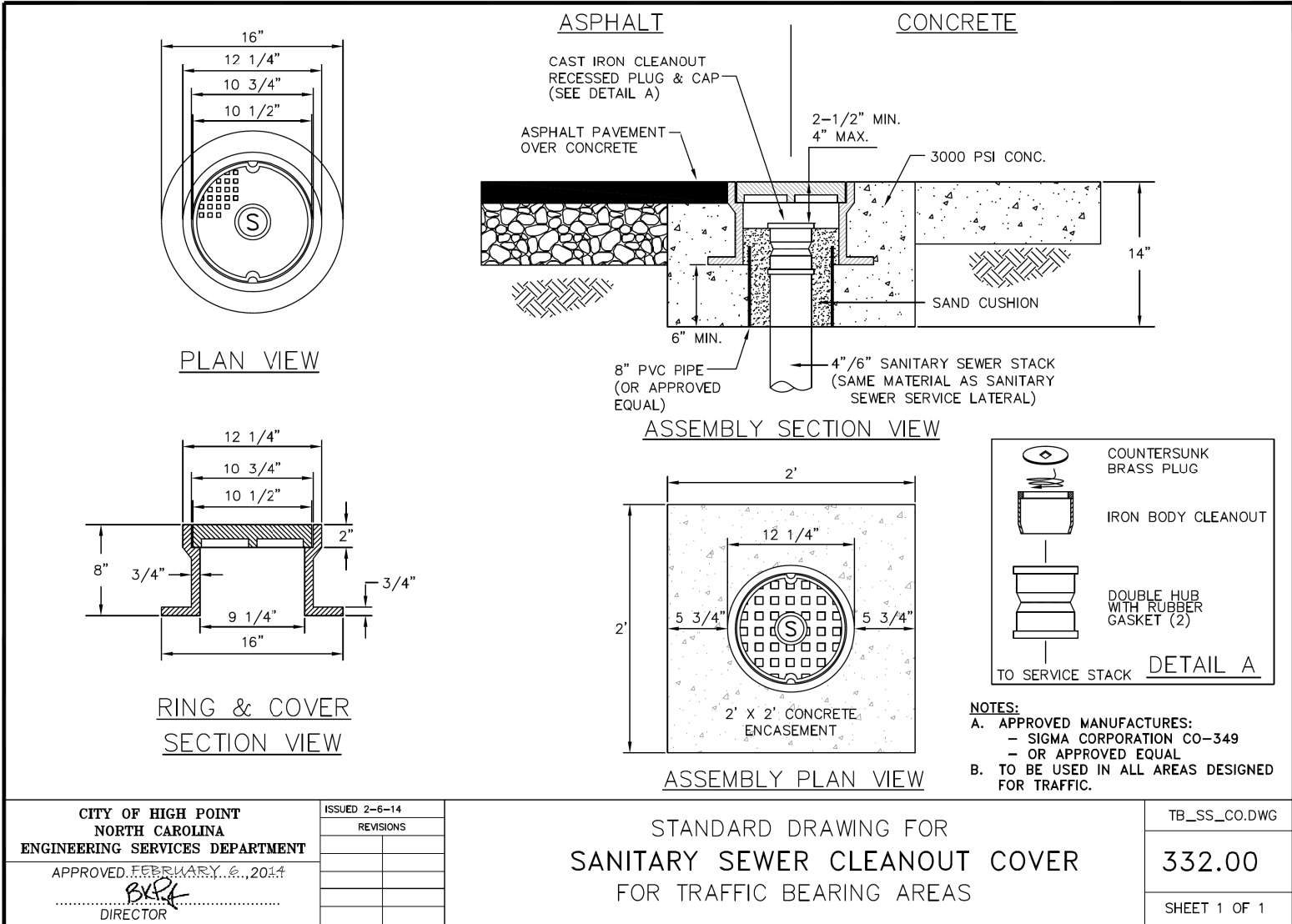
**NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION**

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

UTILITY CONSTRUCTION

PROFESSIONAL
ENGINEER
NORTH CAROLINA
10/31/2025
JOHN C. GREY

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Unless All Signatures Completed
UTILITY CONSTRUCTION
PLANS ONLY



5/14/99

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 15,690 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

PROP. 12" TAPPING SLEEVE AND VALVE

40' OF OF 24" STEEL ENCASEMENT WITH 0.25" WALL THICKNESS INSTALLED BY OPEN CUT

INSET "A"
(2X ENLARGEMENT)

WATER LINE (WL-1)

INSTALL 1-12" PLUG AND REMOVE PIPE AS NEEDED TO INSTALL NEW CULVERT

PROP. 12" LINE STOP

ABANDON 12" GATE VALVE

PROP. 118' OF 2" WATER SERVICE LINE

JAMESTOWN MANOR APARTMENTS LLC
DB 7033 PG 3004

BEGIN PROJECT 17BP.7.RJ.14
-L- POT Sta. 10+00.00

ABANDON UTILITY MANHOLE

ABANDON 12" GATE VALVE IN OPEN POSITION

ABANDON 8" GATE VALVE IN OPEN POSITION

+70.93 (-Y-)
15.00' RT
8"x6" TEE

RELOCATE WATER METER

PROP. 16' OF 3/4" WATER SERVICE LINE

PROP. 10' OF FIRE HYDRANT LEG

RELOCATE FIRE HYDRANT FROM NCDOT STA. 11+87.41 (-L-) TO NCDOT STA. 10+70.93 (-Y-)

PROP. 13' OF 3/4" WATER SERVICE LINE

RELOCATE WATER METER

WATER LINE (WL-1)
OPEN CUT
ACROSS STREAM

ERNEST D COOLEY & MARY A COOLEY
DB 6734 PG 2825
PB 28 PG 51

BOBBY R GLOVER
DB 2099 PG 173
PB 28 PG 51

40' LF OF OUTLET CHANNEL IMPROVEMENTS
EST. 125 TONS RIP RAP
EST. 155 SY GEOTEXTILE

RECONNECT WATER METER

INSTALL 12" PLUG AND REMOVE PIPE AS NEEDED TO INSTALL NEW CULVERT

ABANDON 162' OF 12" DIP UTILITY PIPE

PROP. 365' 12" RJ DIP WATER LINE (WL-1) ROADWAY ALIGNMENT (-L-) W/MARKER BALLS AT EVERY ±30'

SEE NOTE

SEE INSET A (THIS SHEET)

SEE INSET B (THIS SHEET)

+28.58 (-L-)
59.00' RT
12" 90 DEGREE BEND

+33.10 (-L-)
62.00' RT
12" 11.25 DEGREE BEND

WATER LINE (WL-2)

+54.67 (-L-)
78.54' RT
11.25 DEGREE RJDI BEND

PROP. 36" VALVE

+61.29 (-L-)
91.72' RT
45 DEGREE RJDI BEND (CONNECT TO EXISTING 36" RJDI RAW WATER LINE)

REMOVE EXISTING RETAINING WALL

CLASS II RIP RAP ON FLOOD BENCH BORDER

95' LF OF OUTLET IMPROVEMENTS
TIONS RIP RAP
SY GEOTEXTILE

70' OF CASING

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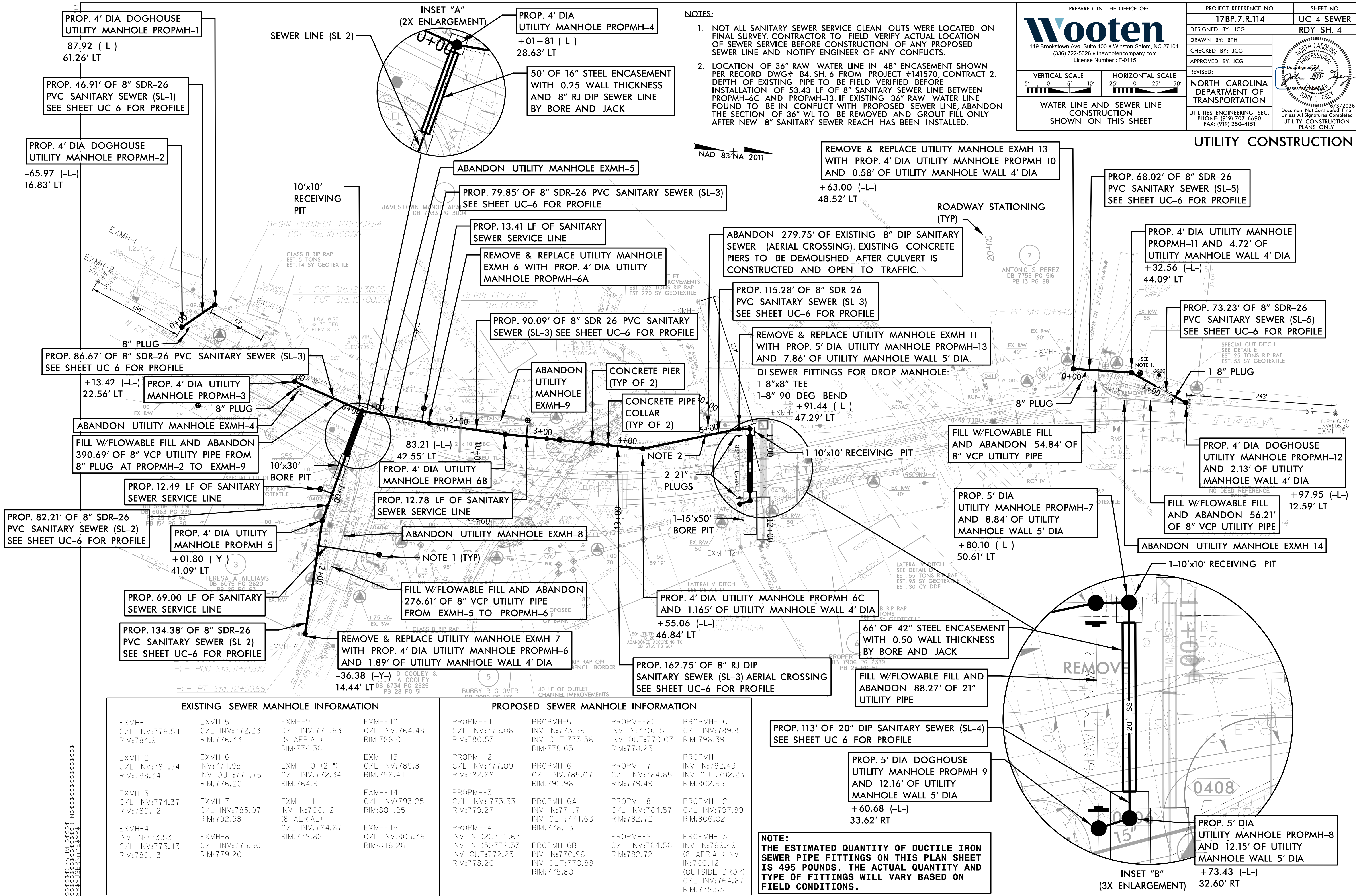
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48" CASING



5/28/24

TIME 00:00
DATE 05/28/24
BY JCG
CHECKED BY JCG
APPROVED BY JCG
REVISIONS
1. LOCATION OF 36" RAW WATER LINE IN 48" ENCASUREMENT SHOWN PER RECORD DWG# 84, SH. 6 FROM PROJECT #141570, CONTRACT 2. DEPTH OF PIPE TO BE FIELD VERIFIED BEFORE INSTALLATION OF 115.28 LF OF 8" SDR-26 BETWEEN PROPMH-6C AND PROPMH-13. IF EXISTING 36" RAW WATER LINE FOUND TO BE IN CONFLICT WITH PROPOSED SEWER LINE, REMOVE PORTION OF ABANDONED 36" WATER LINE AS NEEDED. PLUG AND FLOWABLE FILL ANY REMAINING ABANDONED 36" WATER LINE.

