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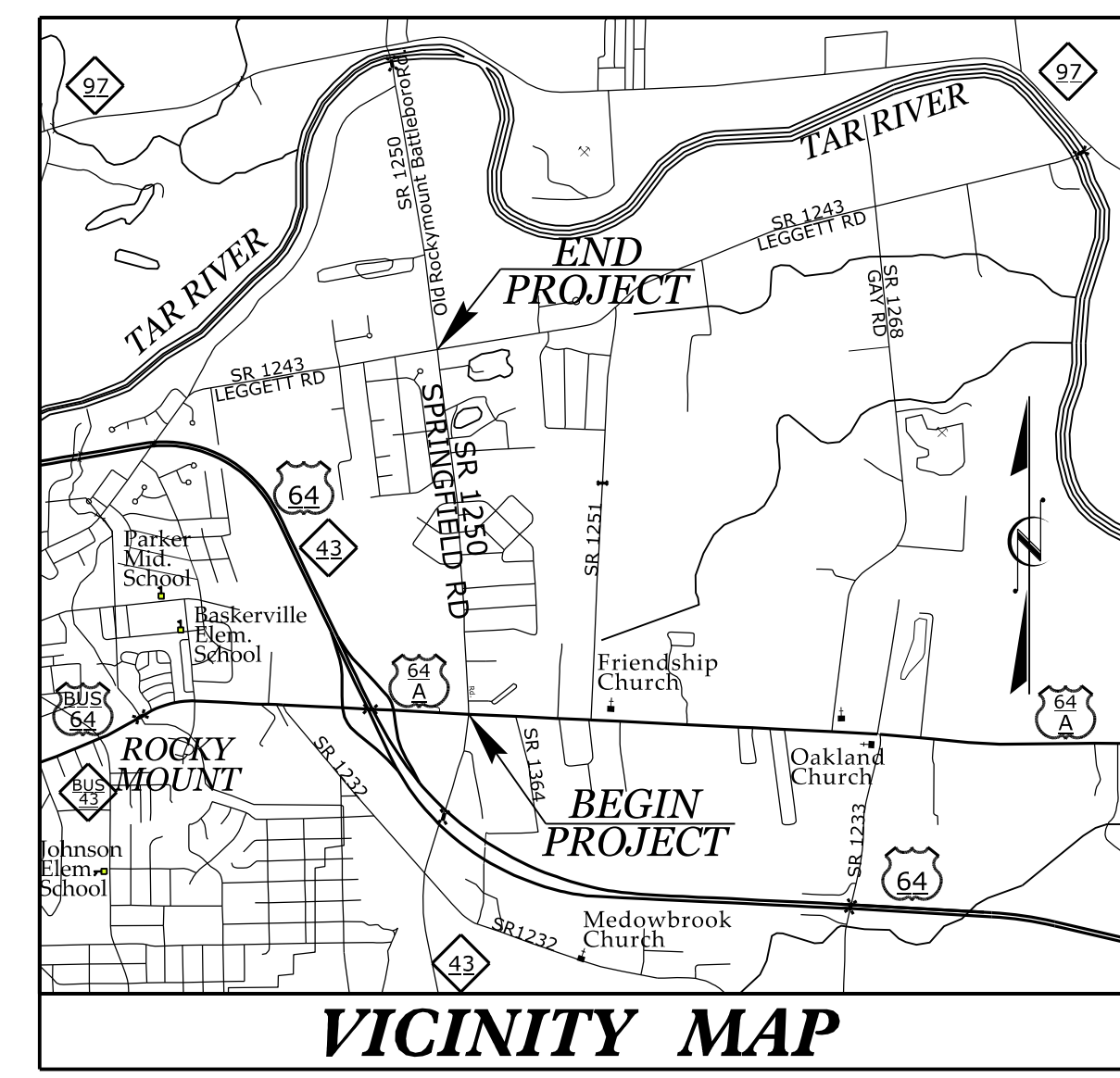
**TIP PROJECT: U-4762**

T.I.P. NO.	SHEET NO.
<b>U-4762</b>	<b>UC-1</b>
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STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**UTILITY CONSTRUCTION PLANS  
EDGEcombe COUNTY**

**LOCATION: SR 1250 (SPRINGFIELD ROAD) FROM US-64 ALTERNATE  
TO SR 1243 (LEGGETT ROAD)**  
**TYPE OF WORK: WATER AND SEWER RELOCATIONS**



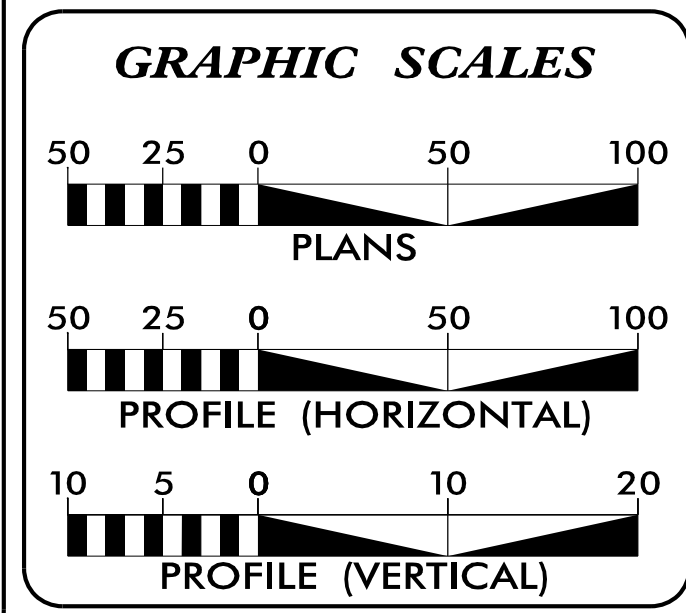
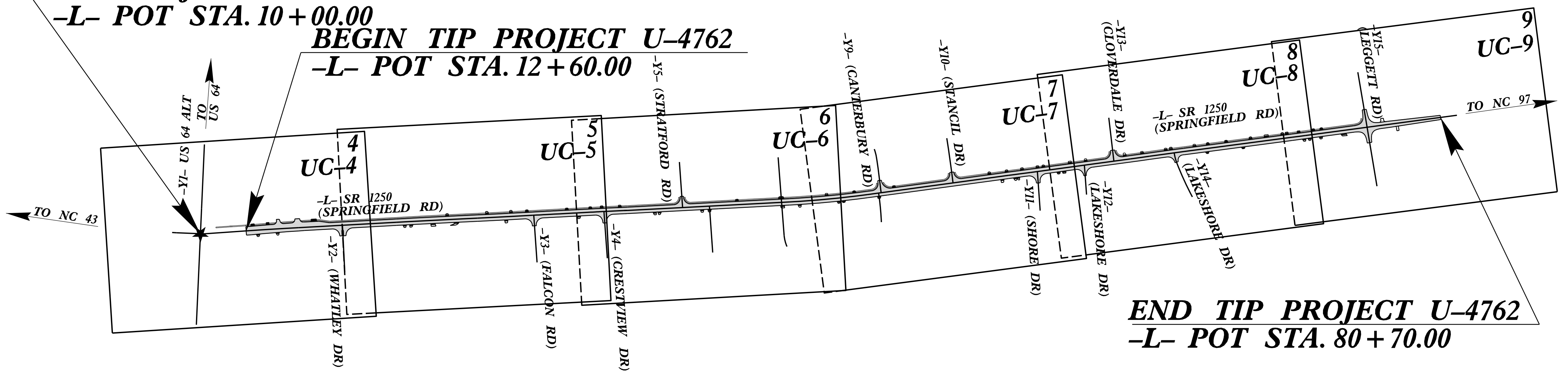
**VICINITY MAP**



**BEGIN CONSTRUCTION  
TIP PROJECT U-4762  
-L- POT STA. 10+00.00**

**BEGIN TIP PROJECT U-4762  
-L- POT STA. 12+60.00**

**END TIP PROJECT U-4762  
-L- POT STA. 80+70.00**



**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3	NOTES
UC-3A THRU UC-3G	DETAILS
UC-4 THRU UC-9	UTILITY CONSTRUCTION SHEETS
UC-10 THRU UC-16	PROFILE SHEETS

**WATER AND SEWER OWNERS ON PROJECT**

(A) CITY OF ROCKY MOUNT

PREPARED IN THE OFFICE OF:

**HINDE ENGINEERING**  
License No. C-2639  
401 Harrison Oaks Blvd., Suite 145 Cary, NC 27513  
Ph. (919) 853-0001

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<u>James N. Arnold</u>	UTILITIES PROJECT DESIGNER

SEAL

**DIVISION OF HIGHWAYS  
UTILITIES UNIT**  
1555 MAIL SERVICES CENTER  
RALEIGH, NC 27699-1555  
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<u>Brandon Herring, P.E.</u>	DEPUTY DIVISION CONSTRUCTION ENGINEER
<u>Matt Clark, P.E.</u>	DIVISION PROJECT ENGINEER

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# UTILITIES PLAN SHEET SYMBOLS

## PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	
11 1/4 Degree Bend	
22 1/2 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 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

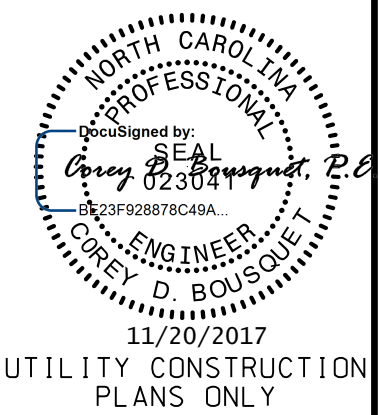
Utility Line Drawn from Record (Type as Shown)	
Designated Utility Line (Type as Shown)	

# UTILITY CONSTRUCTION



License No. C-2639  
401 Harrison Oaks Blvd., Suite 145 Cary, NC 27513

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PROJECT REFERENCE NO. <b>U-4762</b>	SHEET NO. <b>UC-3</b>
DESIGNED BY: <b>CDB</b>	
DRAWN BY: <b>JNA</b>	
CHECKED BY: <b>CDB</b>	
APPROVED BY: <b>CLS</b>	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

### 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 2012.
  
2. THE EXISTING UTILITIES BELONG TO CITY OF ROCKY MOUNT .
  
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. SEE PROFILES FOR THE LOCATIONS WHERE THE PROP. WATER LINES WILL BE RESTRAINED. USE RESTRAINED RETAINER GLANDS AND 3/4" BITUMINOUS COATED STEEL RODS AS SHOWN IN THE DETAIL ON SHEET UC-3G. ONLY USE THE THRUST COLLAR DETAIL SHOWN ON SHEET UC-3F WHERE THE PROP. WATER LINE TIES BACK TO THE EXISTING WATER LINES.
  
2. TO INSTALL THE WATER AND SEWER LINES ACROSS SPINGFIELD ROAD THE CONTRACTOR WILL NEED TO WORK AT NIGHT OR AS DIRECTED BY THE ENGINEER. ONE LANE OF TRAFFIC SHOULD BE MAINTAINED DURING THE ALL INSTALLATIONS.
  
3. DUE TO THE NUMBER OF WATER SERVICES BEING RELOCATED, THE CONTRACTOR MAY NEED TO KEEP THE EXISTING AND PROPOSED WATER LINES ACTIVE AT THE SAME TIME UNTIL ALL WATER SERVICES ARE RELOCATED TO THE NEW WATER LINE. THE COST TO INSTALL VALVES, FITTINGS AND INCIDENTALS NECESSARY TO KEEP THE EXISTING AND PROPOSED WATER LINES ACTIVE DURING THE WATER METER RELOCATIONS WILL BE INCIDENTAL TO THE COSTS OF PROPOSED WATER LINES.

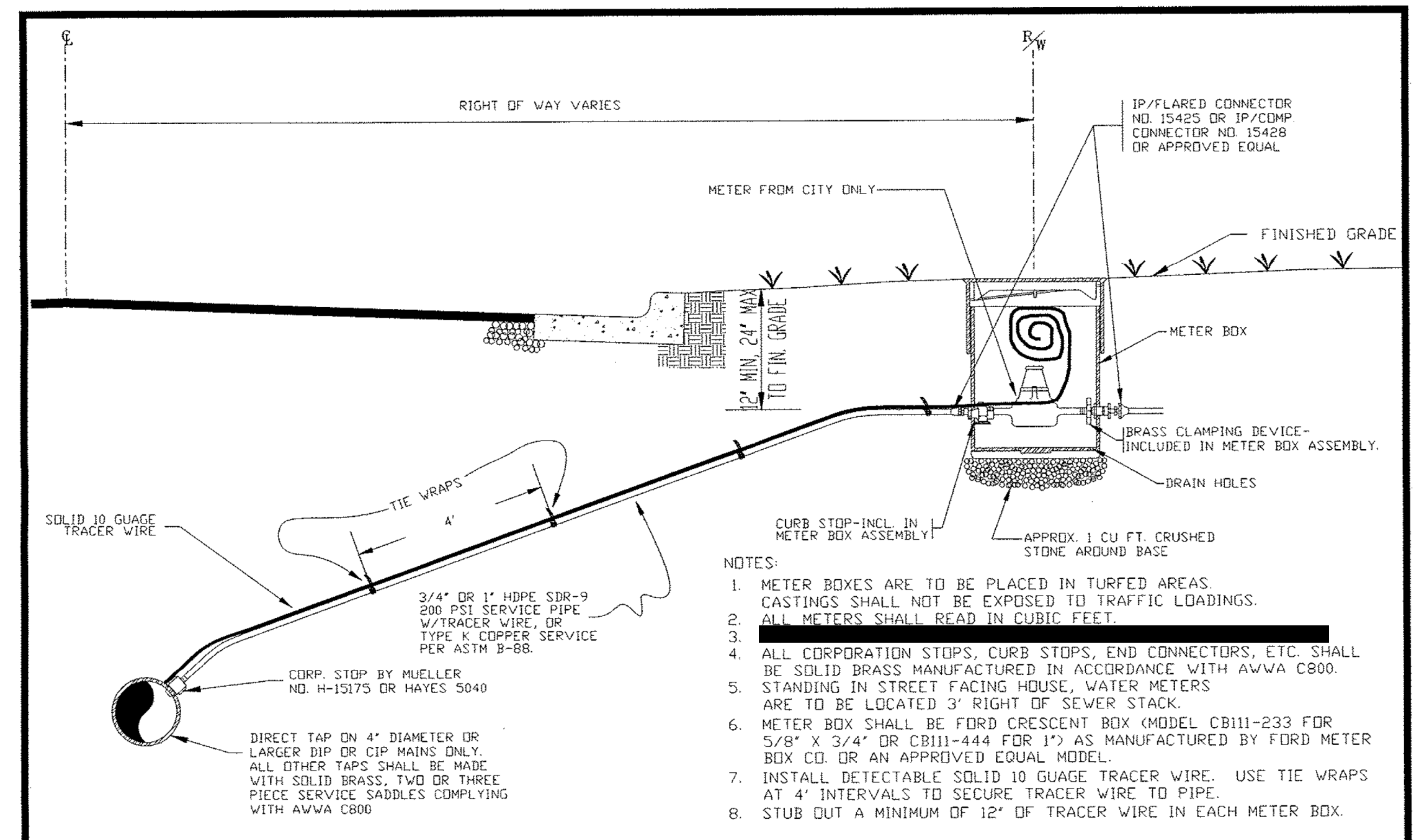
### UTILITY CONSTRUCTION

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### UTILITY CONSTRUCTION

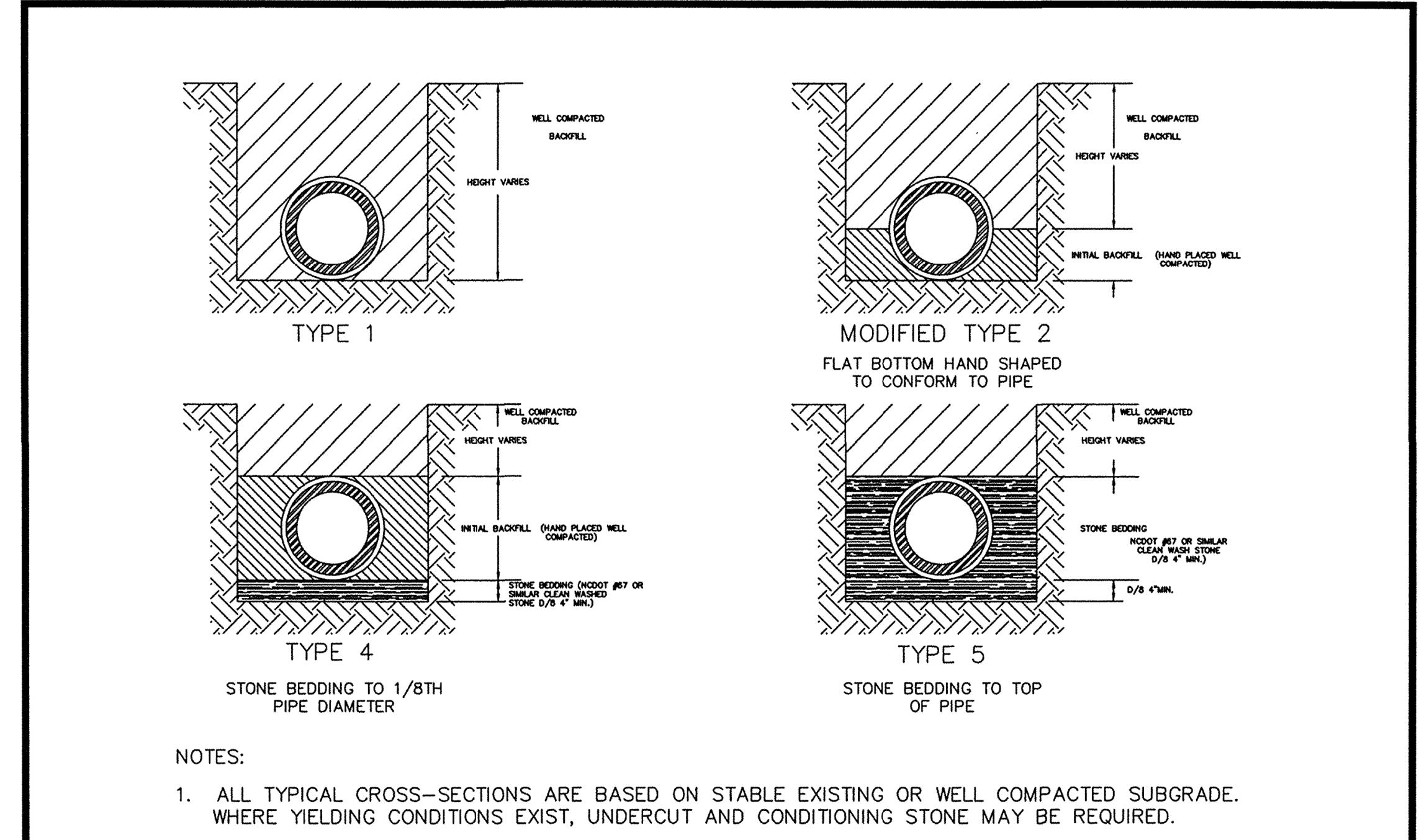


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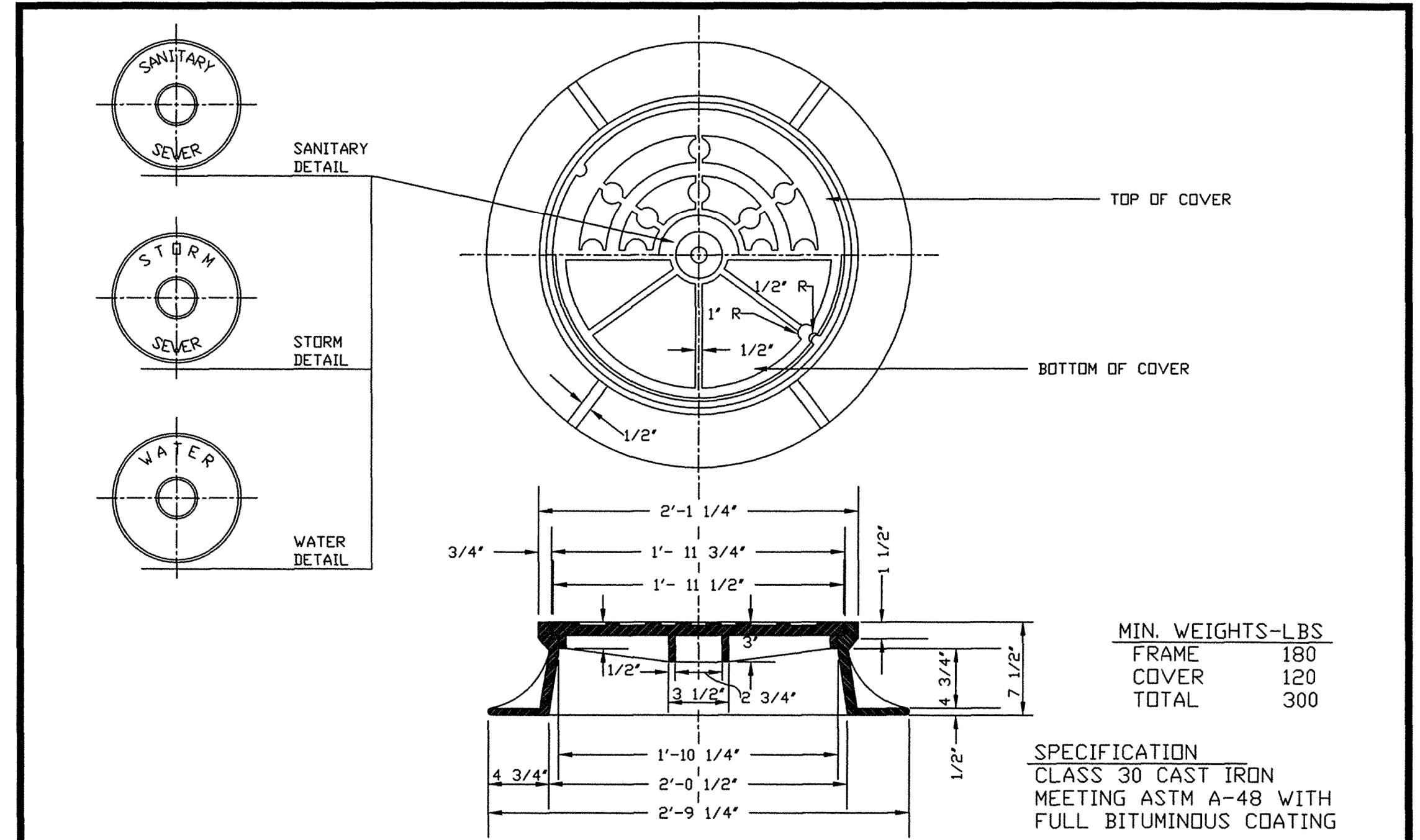
- NOTES:
- METER BOXES ARE TO BE PLACED IN TURFED AREAS. CASTINGS SHALL NOT BE EXPOSED TO TRAFFIC LOADINGS.
  - ALL METERS SHALL READ IN CUBIC FEET.
  - 
  - ALL CORPORATION STOPS, CURB STOPS, END CONNECTORS, ETC. SHALL BE SOLID BRASS MANUFACTURED IN ACCORDANCE WITH AWWA C800. STANDING IN STREET FACING HOUSE, WATER METERS ARE TO BE LOCATED 3' RIGHT OF SEWER STACK.
  - METER BOX SHALL BE FORD CRESCENT BOX (MODEL CB111-233 FOR 5/8" X 3/4" OR CB111-444 FOR 1") AS MANUFACTURED BY FORD METER BOX CO. OR AN APPROVED EQUAL MODEL.
  - INSTALL DETECTABLE SOLID 10 GAUGE TRACER WIRE. USE TIE WRAPS AT 4' INTERVALS TO SECURE TRACER WIRE TO PIPE.
  - STUB OUT A MINIMUM OF 12" OF TRACER WIRE IN EACH METER BOX.

5/8" x 3/4" & 1" WATER SERVICE		APPROVED	STD. NO.
CITY OF ROCKY MOUNT DEPT. OF ENGINEERING		-	5.5
		DATE	REVISION
		6-30-09	-

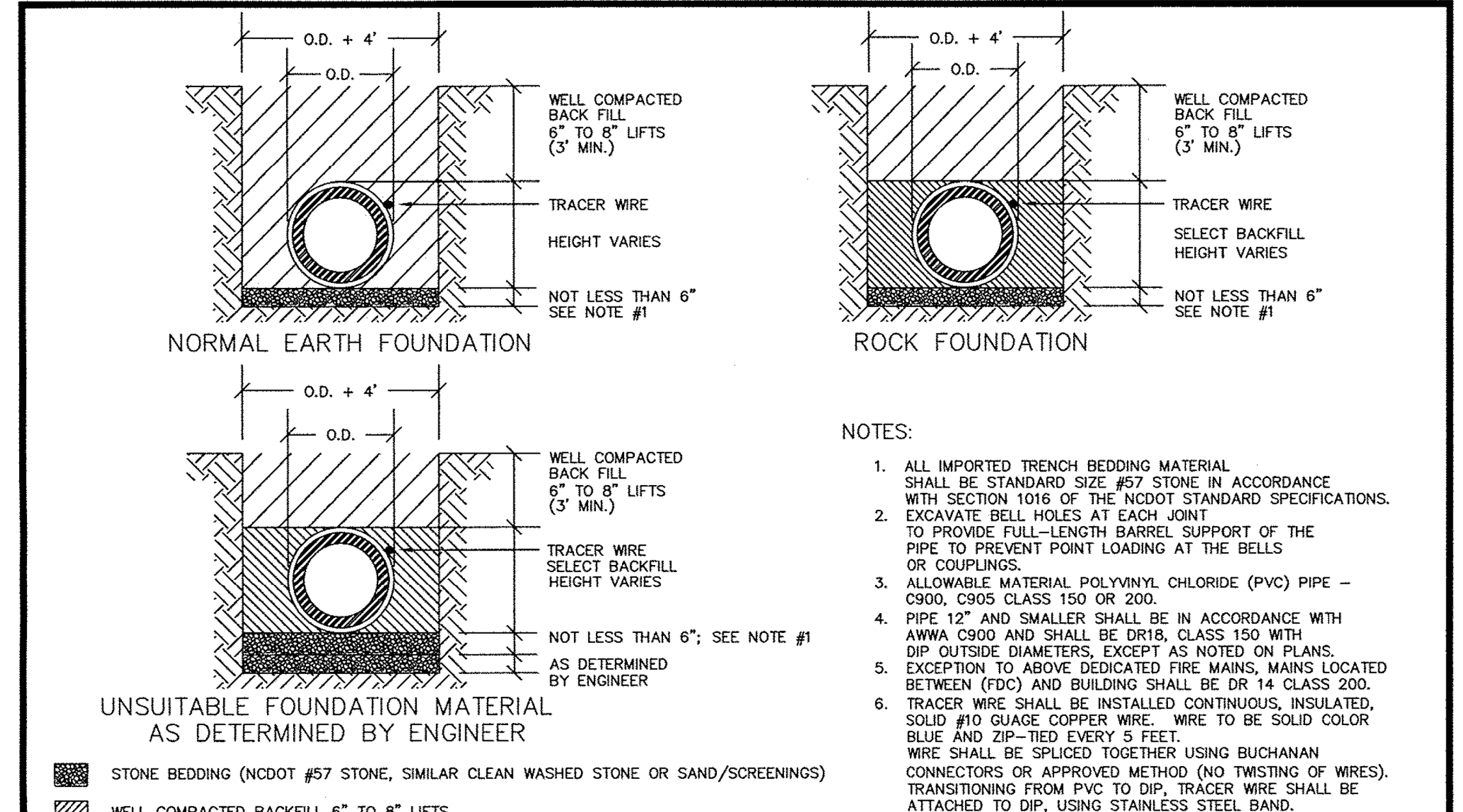


- NOTES:
- ALL TYPICAL CROSS-SECTIONS ARE BASED ON STABLE EXISTING OR WELL COMPACTED SUBGRADE. WHERE YIELDING CONDITIONS EXIST, UNDERCUT AND CONDITIONING STONE MAY BE REQUIRED.

BEDDING DETAIL FOR DUCTILE IRON PIPE		APPROVED	STD. NO.
CITY OF ROCKY MOUNT DEPT. OF ENGINEERING		-	1.4
		DATE	REVISION
		04-14-04	-



STANDARD MANHOLE RING & COVER		APPROVED	STD. NO.
CITY OF ROCKY MOUNT DEPT. OF ENGINEERING		-	4.6
		DATE	REVISION
		02-19-03	-



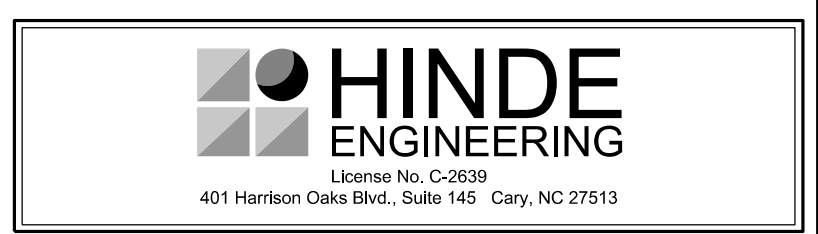
- NOTES:
- ALL IMPORTED TRENCH BEDDING MATERIAL SHALL BE STANDARD SIZE #57 STONE IN ACCORDANCE WITH SECTION 1016 OF THE NCDOT STANDARD SPECIFICATIONS.
  - EXCAVATE BELL HOLES AT EACH JOINT TO PROVIDE FULL-LENGTH BARREL SUPPORT OF THE PIPE TO PREVENT POINT LOADING AT THE BELLS OR COUPLINGS.
  - ALLOWABLE MATERIAL POLYVINYL CHLORIDE (PVC) PIPE - C900, C905 CLASS 150 OR 200.
  - PIPE 12" AND SMALLER SHALL BE IN ACCORDANCE WITH AWWA C900 AND SHALL BE DR18, CLASS 150 WITH DIP OUTSIDE DIAMETERS, EXCEPT AS NOTED ON PLANS. EXCEPTION TO ABOVE DEDICATED FIRE MAINS, MAINS LOCATED BETWEEN (FDC) AND BUILDING SHALL BE DR 14 CLASS 200.
  - TRACER WIRE SHALL BE INSTALLED CONTINUOUS, INSULATED, SOLID #10 GAUGE COPPER WIRE. WIRE TO BE SOLID COLOR BLUE AND ZIP-TIED EVERY 5 FEET. WIRE SHALL BE SPLICED TOGETHER USING BUCHANAN CONNECTORS OR APPROVED METHOD (NO TWISTING OF WIRES). TRANSITIONING FROM PVC TO DIP, TRACER WIRE SHALL BE ATTACHED TO DIP, USING STAINLESS STEEL BAND.

BEDDING DETAIL FOR POLYVINYL CHLORIDE PIPE-WATERLINES ONLY		APPROVED	STD. NO.
CITY OF ROCKY MOUNT DEPT. OF ENGINEERING		-	1.4A
		DATE	REVISION
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PROJECT REFERENCE NO.	SHEET NO.
U-4762	UC-3B
DESIGNED BY: RBW	
DRAWN BY: JNA	
CHECKED BY: RBW	
APPROVED BY: CLS	
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

**UTILITY CONSTRUCTION**



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**NOTES:**

1. PRECAST CONCRETE MANHOLES SHALL MEET OR EXCEED THE REQUIREMENTS OF ASTM C 478. ALL SURFACES SHALL BE SMOOTH AND EVEN TEXTURED WITH A MINIMUM OF HONEYCOMB, FIN, AND OTHER IMPERFECTIONS.
2. JOINTS BETWEEN MANHOLE SECTIONS SHALL BE SEALED WATERTIGHT USING EITHER O-RING GASKETS CONFORMING WITH ASTM C 443 OR BUTYL RESIN CONFORMING WITH AASHTO M-198.
3. HOLES FOR CONNECTION OF PIPE TO MANHOLE SHALL BE PRECAST OR CORED. DIAMETER OF HOLE SHALL NOT EXCEED OUTSIDE DIAMETER OF PIPE BY MORE THAN 3 INCHES.
4. CONNECTIONS OF PIPE TO MANHOLE SHALL BE MADE WATERTIGHT USING RESILIENT CONNECTORS CONFORMING TO ASTM C 923 OR NEOPRENE BOOTS EMBEDDED IN PRECAST BASE WITH STAINLESS STEEL COMPRESSION BANDS.
5. MANHOLE INVERTS SHALL BE INSTALLED USING BRICK AND MORTAR, OR MANHOLES MAY BE PRECAST, MONOLITHIC SECTIONS WITH FORMED INVERTS.
6. LIFT HOLES SHALL BE PLUGGED AND FILLED FLUSH WITH MORTAR.
7. ALL BRICK AND MORTAR SHALL RECEIVE A 1/2" MORTAR PARGE COAT ON INSIDE AND OUTSIDE.

**PRECAST CONCRETE MANHOLE NOTES**

REVISIONS		APPROVED	STD. NO.
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**CITY OF ROCKY MOUNT  
DEPT. OF ENGINEERING**

**HYDRANT GENERAL CONSTRUCTION NOTES**

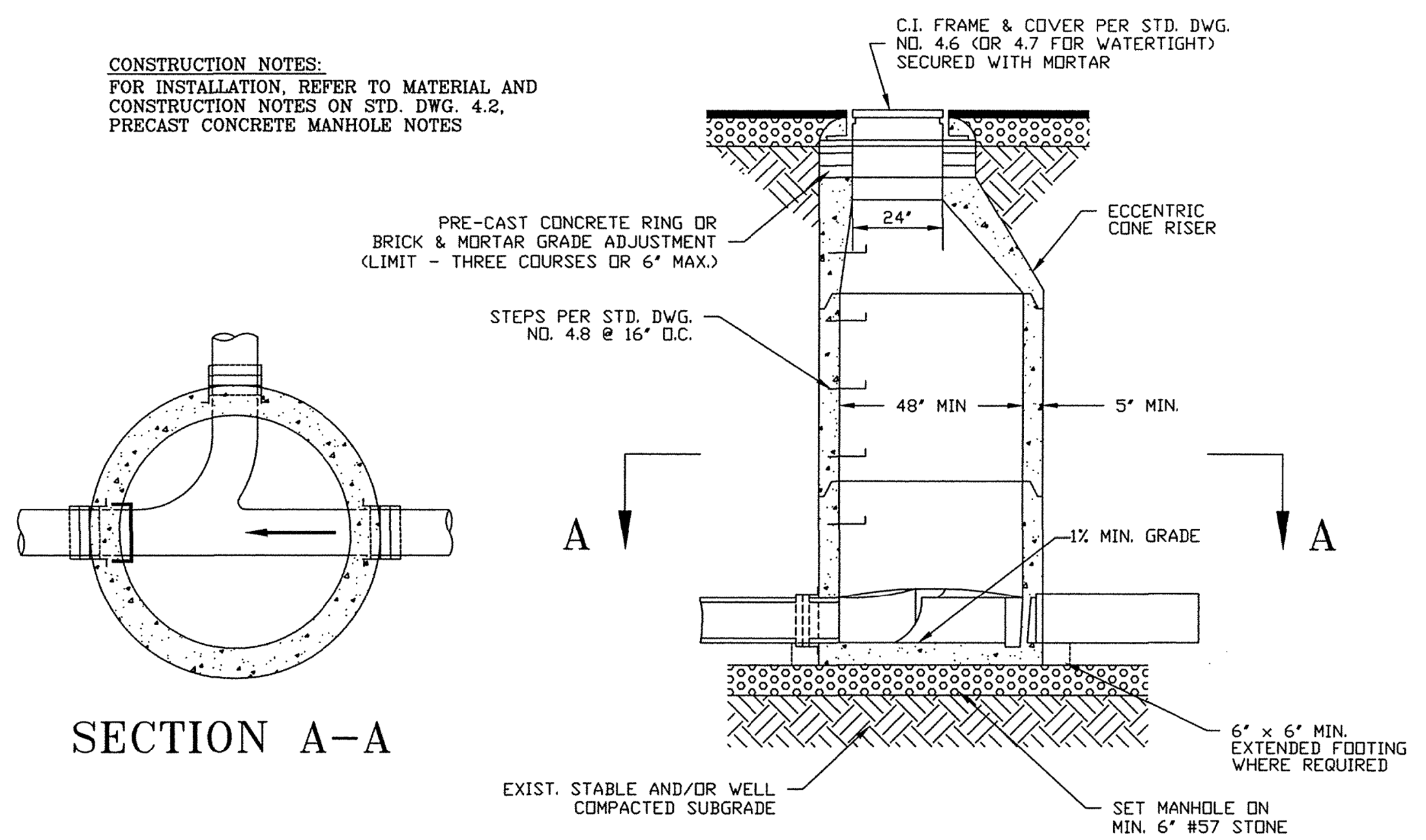
- FIRE HYDRANT:** HYDRANT SHALL BE AWWA C502, DRY BARRELL, DRY BONNET, THREE-WAY HYDRANT WITH 3' 6" MIN. BURY, 4 1/2" MIN. MAIN VALVE OPENING, 4 1/2" PUMPER NOZZLE, TWO EACH 2 1/2" HOZE NOZZLES, REPLACEABLE BRONZE NOZZLES WITH NATIONAL STANDARD THREADS, BREAK-AWAY TRAFFIC FEATURE, AND BRONZE ON BRONZE SEAT RINGS. HYDRANT SHALL HAVE PENTAGON SHAPED (5 SIDED) OPERATING NUT AND SHALL OPEN TURNING LEFT (COUNTER-CLOCKWISE.)
- MANUFACTURERS:** AMERICAN DARLING MK-73-1      FRANKLIN  
MUELLER CENTURION A421      CLOW  
KENNEDY GUARDIAN  
WATEROUS TREND 100
- PAINT:** CHAINS SHALL BE REMOVED, AND HYDRANT SHALL BE PAINTED WITH RUSTOLEUM #964 FEDERAL SAFETY RED. NOZZLE CAPS AND BONNET SHALL ALSO RECEIVE A COAT OF ALERT SERIES 1440 SILVER WHITE AS MANUFACTURED BY FERRO, INC.
- OIL/GREASE:** HYDRANT SHALL BE OILED OR GREASED AS RECOMMENDED BY MANUFACTURER AFTER INSTALLATION.
- RESTRAINT:** ALL INSTALLATIONS SHALL HAVE CLASS A CONCRETE BLOCKING PLACED BEHIND BOTH TEE AND HYDRANT. EN LIEU OF THREADED BRIDLE RODS, APPROVED GRIP RING OR LOCKING FLANGE CONNECTIONS MAY BE USED. BOTH GRIP RINGS AND LOCKING FLANGES SHALL BE U.L. LISTED AND F.M. APPROVED WITH A RATED WORKING PRESSURE OF NOT LESS THAN 350 PSI WITH A MIN. SAFETY FACTOR OF 2:1. LOCKING FLANGE CONNECTIONS SHALL ONLY BE PERMITTED WHERE PROPER PLACEMENT AND GRADE ADJUSTMENT CAN BE PROVIDED.

**HYDRANT CONSTRUCTION NOTES (SHEET 2 OF 2)**

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**CITY OF ROCKY MOUNT  
DEPT. OF ENGINEERING**

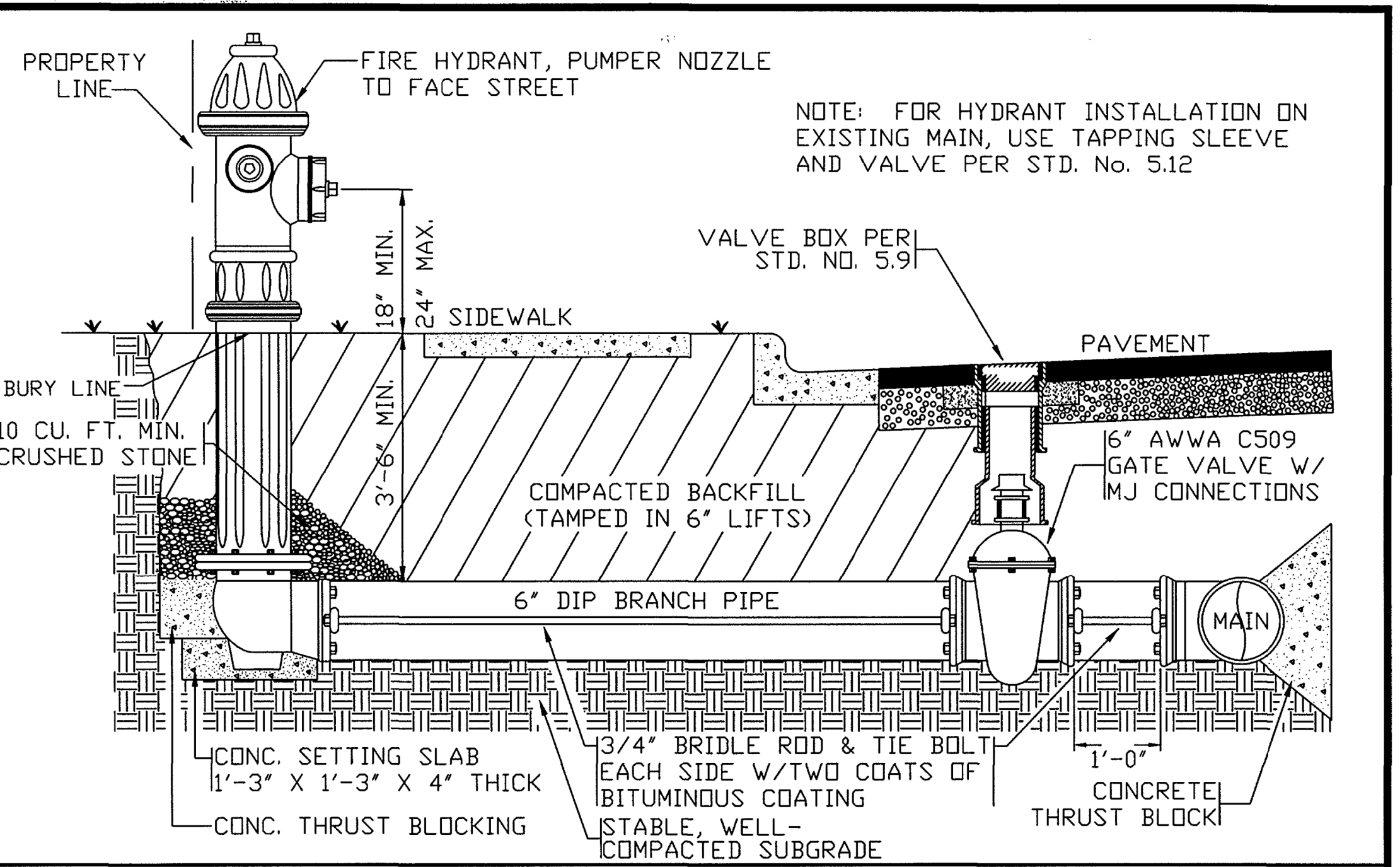
**CONSTRUCTION NOTES:**  
FOR INSTALLATION, REFER TO MATERIAL AND CONSTRUCTION NOTES ON STD. DWG. 4.2, PRECAST CONCRETE MANHOLE NOTES



**PRECAST CONCRETE MANHOLE**

REVISIONS		APPROVED	STD. NO.
NO.	DATE DESCRIPTION		
			4.1
		DATE	REVISION
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**CITY OF ROCKY MOUNT  
DEPT. OF ENGINEERING**



**HYDRANT INSTALLATION (SHEET 1 OF 2)**

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		DATE	REVISION
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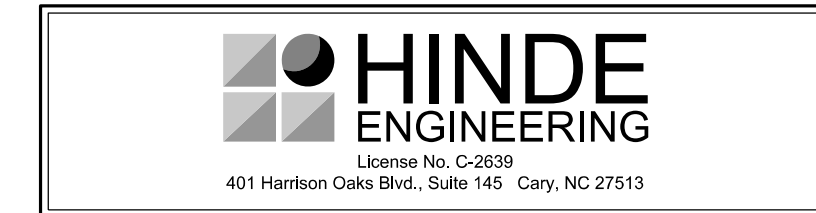
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DEPT. OF ENGINEERING**

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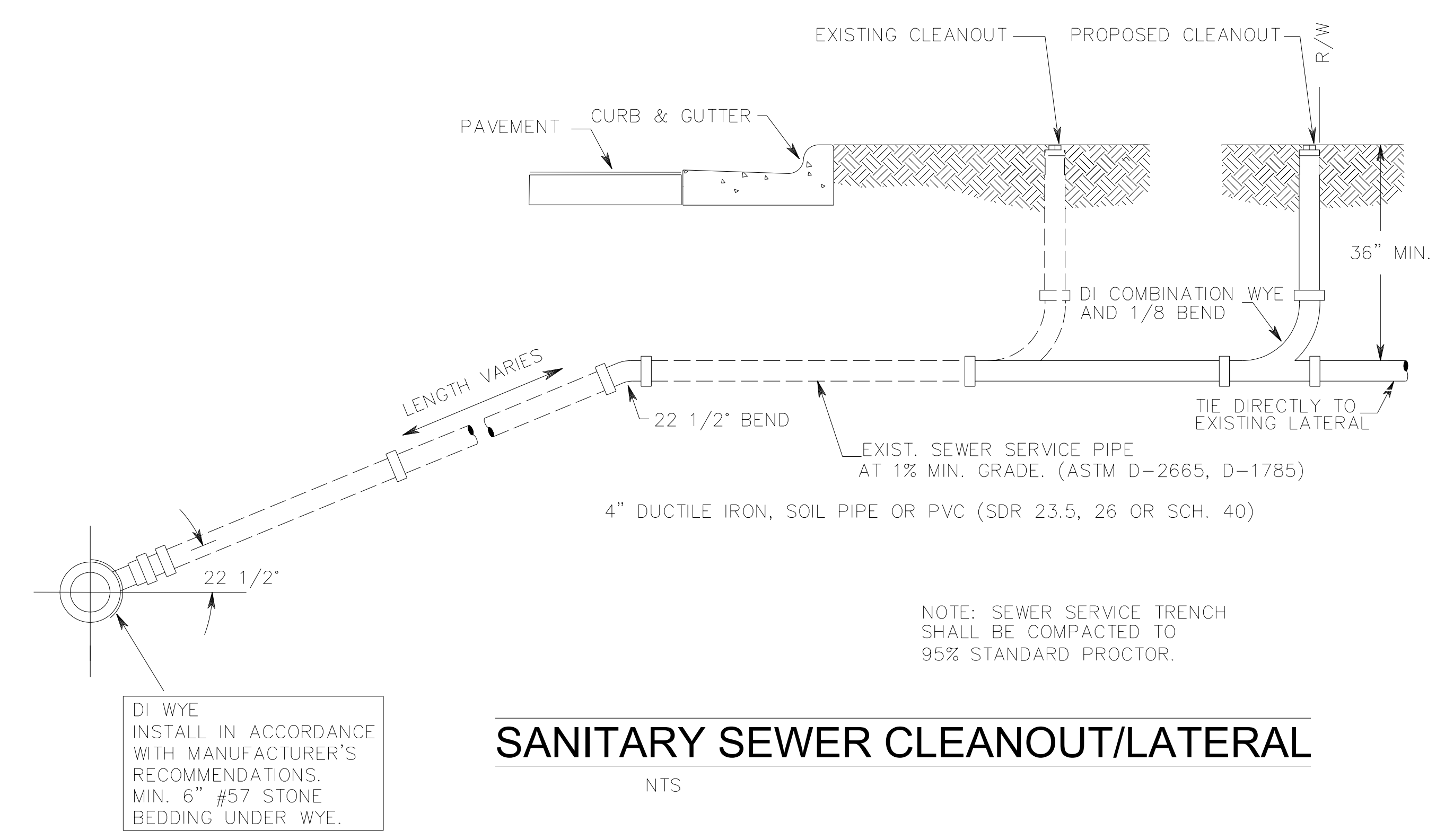
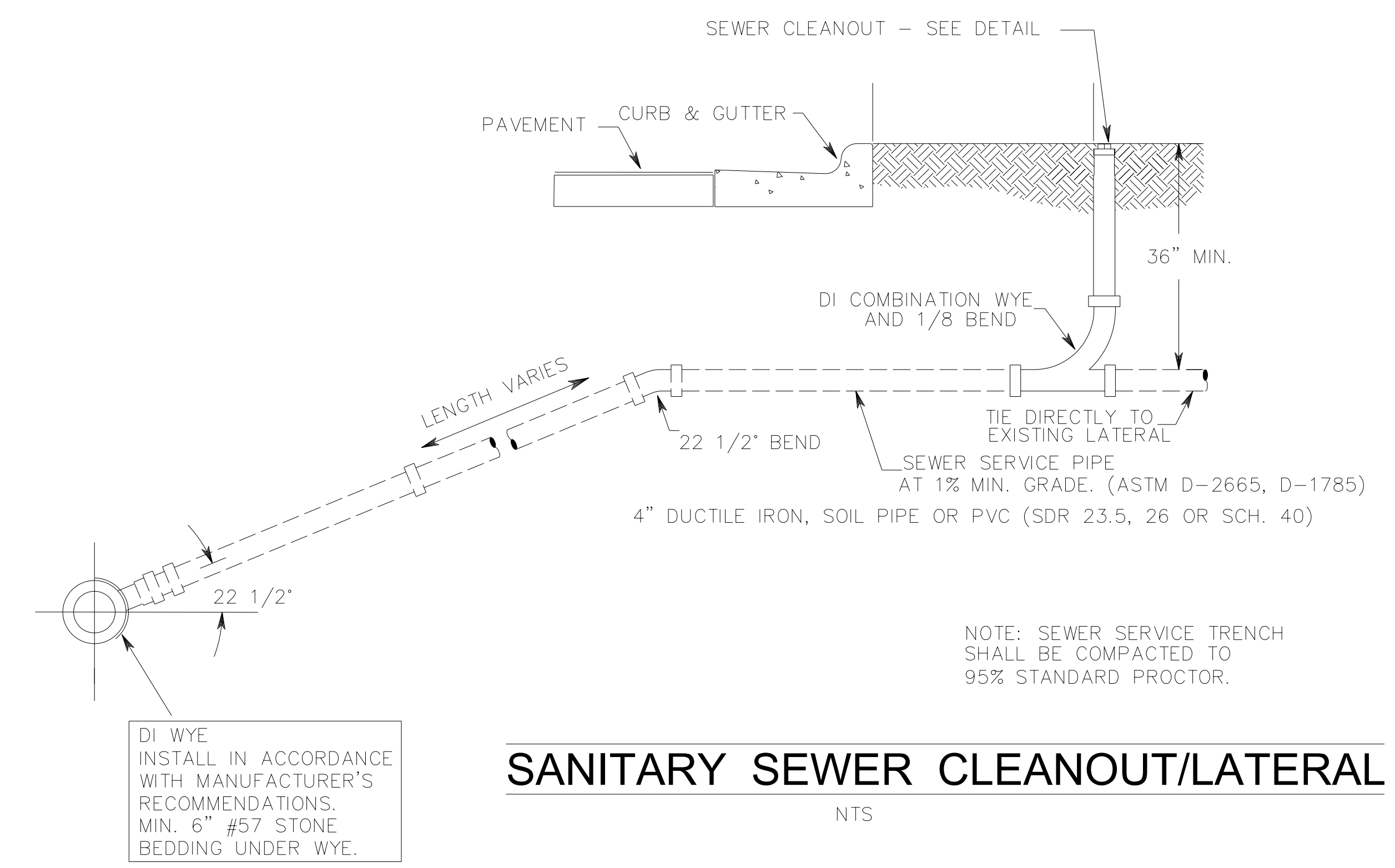


PROJECT REFERENCE NO.	SHEET NO.
U-4762	UC-3D
DESIGNED BY: RBW	
DRAWN BY: JNA	
CHECKED BY: RBW	
APPROVED BY: CLS	
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	UTILITY CONSTRUCTION PLANS ONLY
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

**UTILITY CONSTRUCTION**



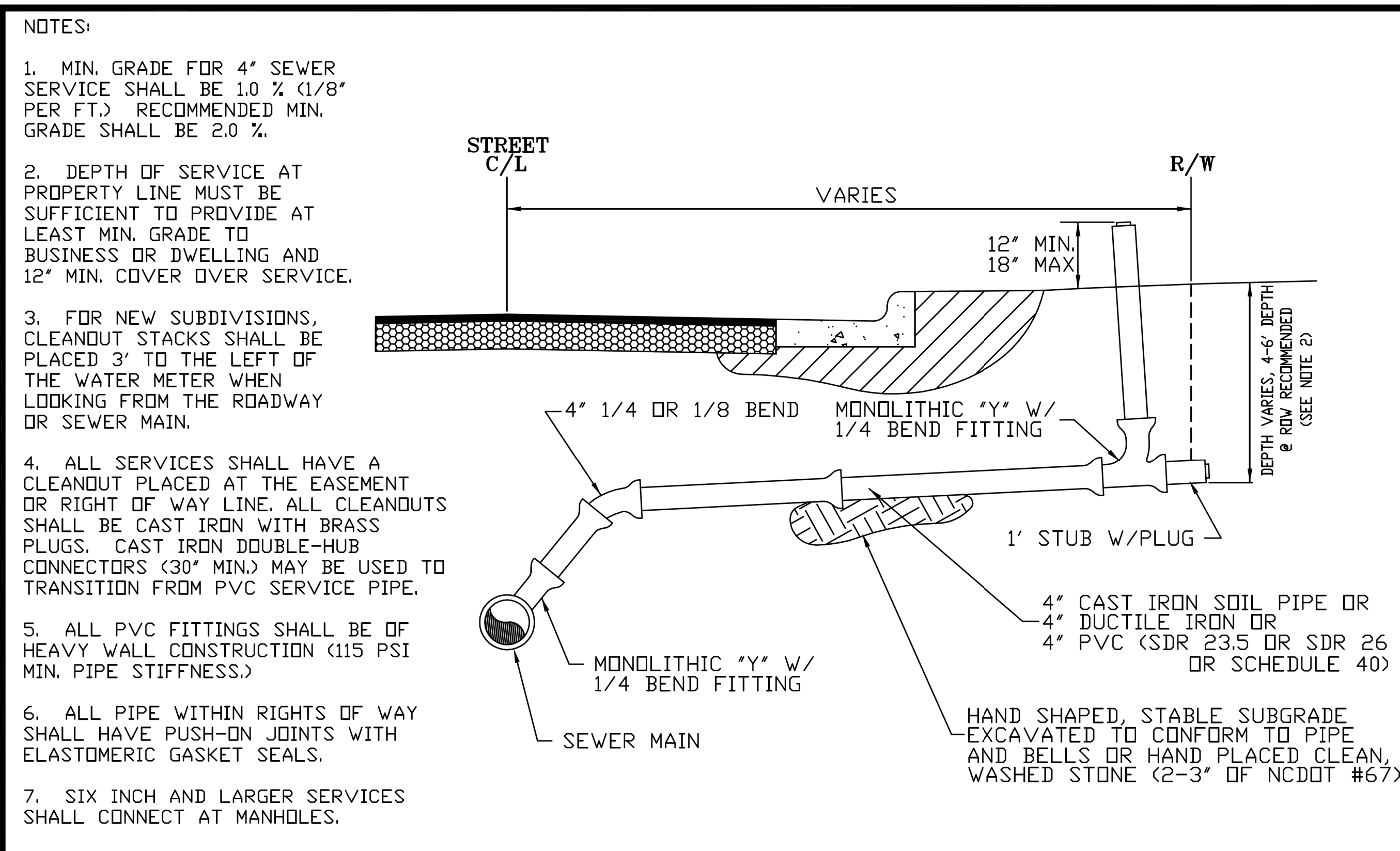
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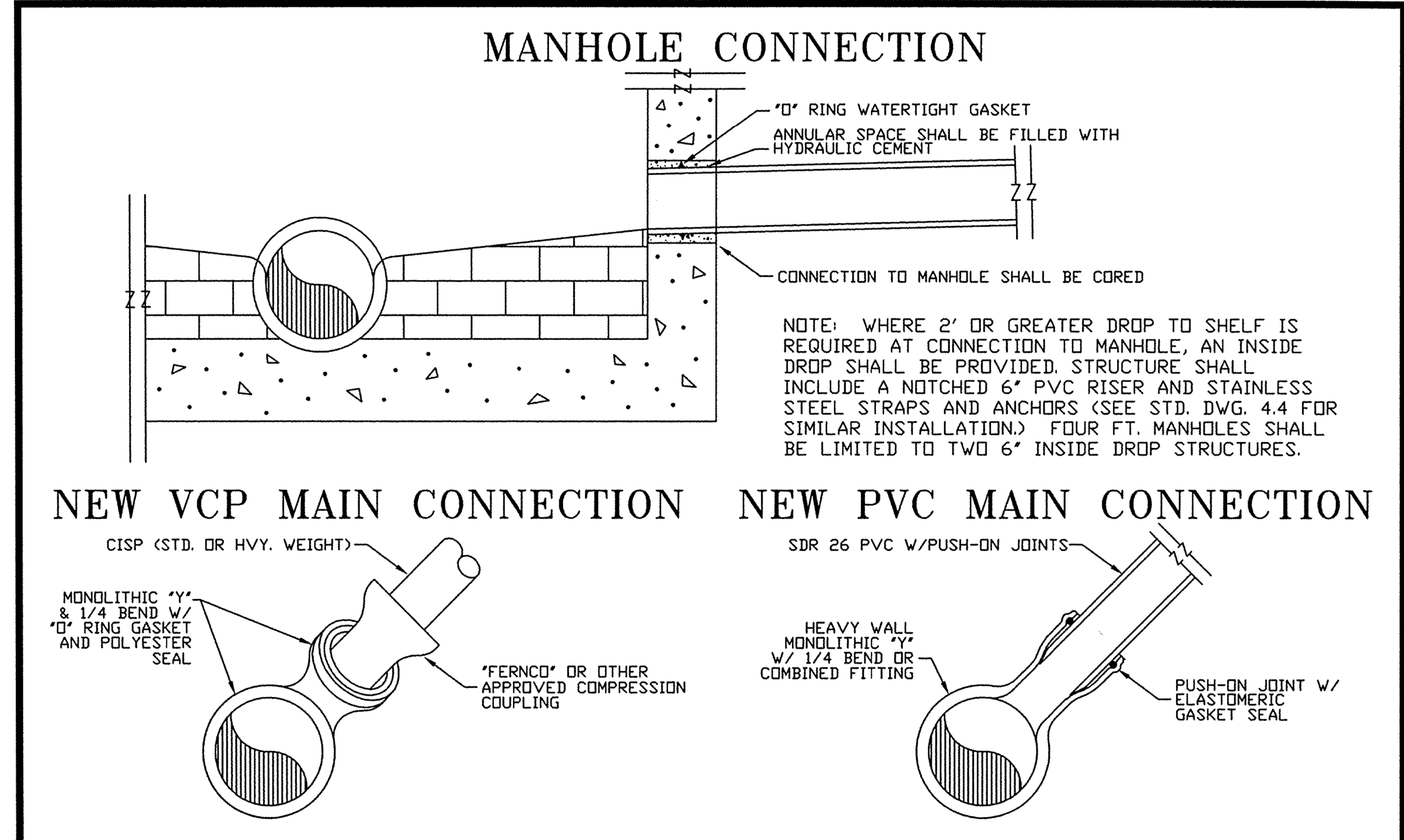
**UTILITY CONSTRUCTION**



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**STANDARD 4" SERVICE LATERAL**

**CITY OF ROCKY MOUNT  
 DEPT. OF ENGINEERING**



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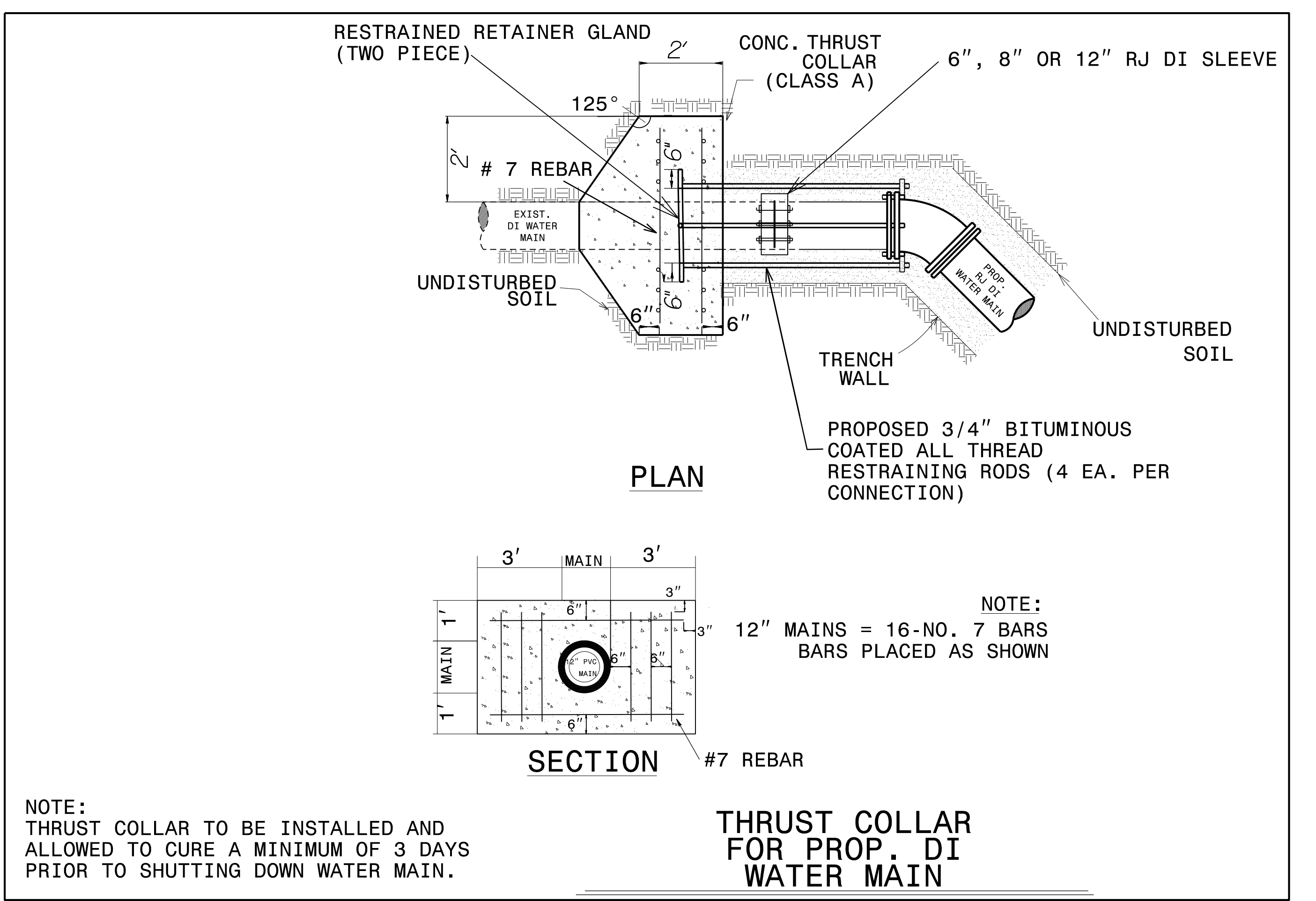
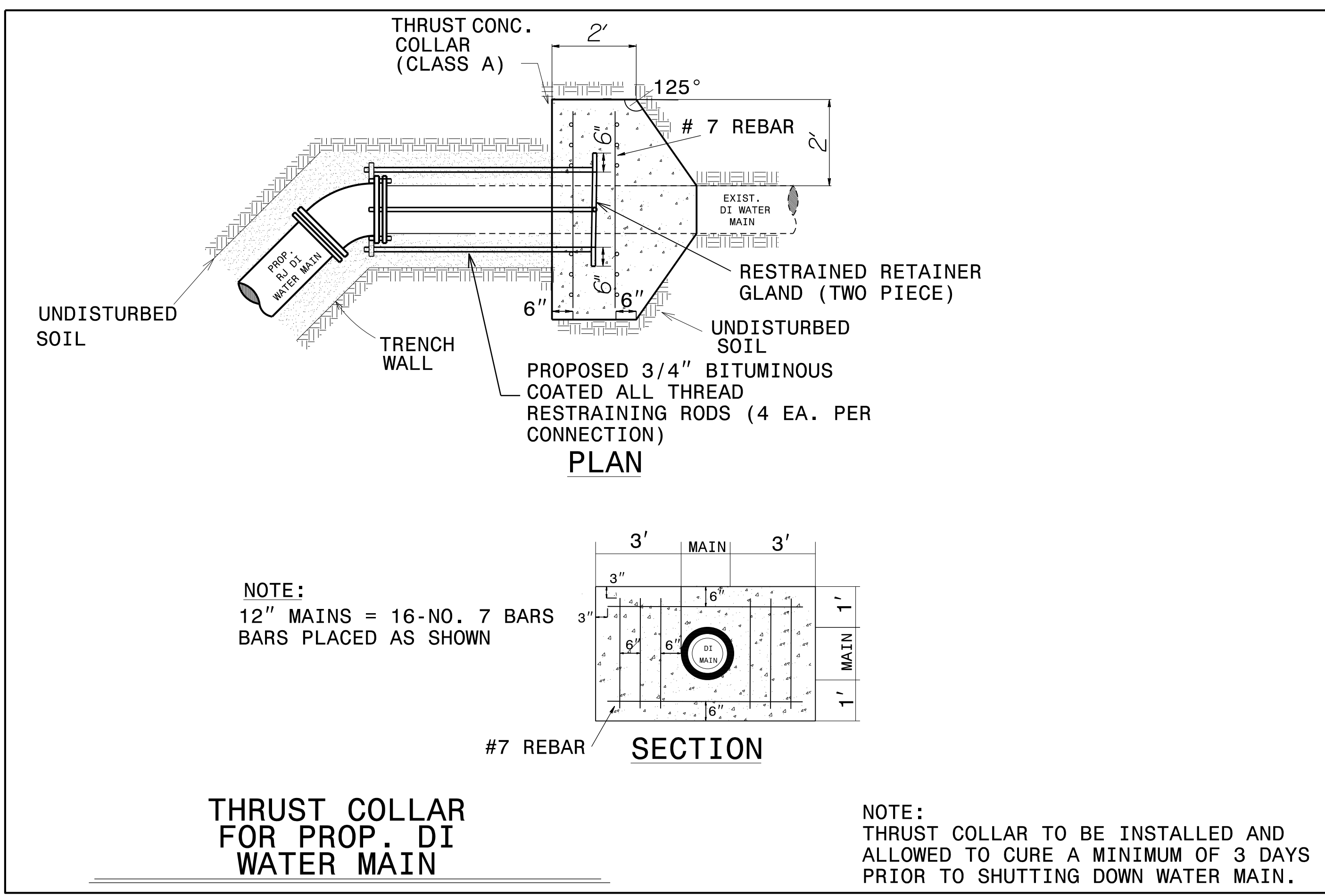
**CITY OF ROCKY MOUNT  
 DEPT. OF ENGINEERING**

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PROJECT REFERENCE NO. <b>U-4762</b>	SHEET NO. <b>UC-3F</b>
DESIGNED BY: <b>RBW</b>	
DRAWN BY: <b>JNA</b>	
CHECKED BY: <b>RBW</b>	
APPROVED BY: <b>CLS</b>	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

**UTILITY CONSTRUCTION**

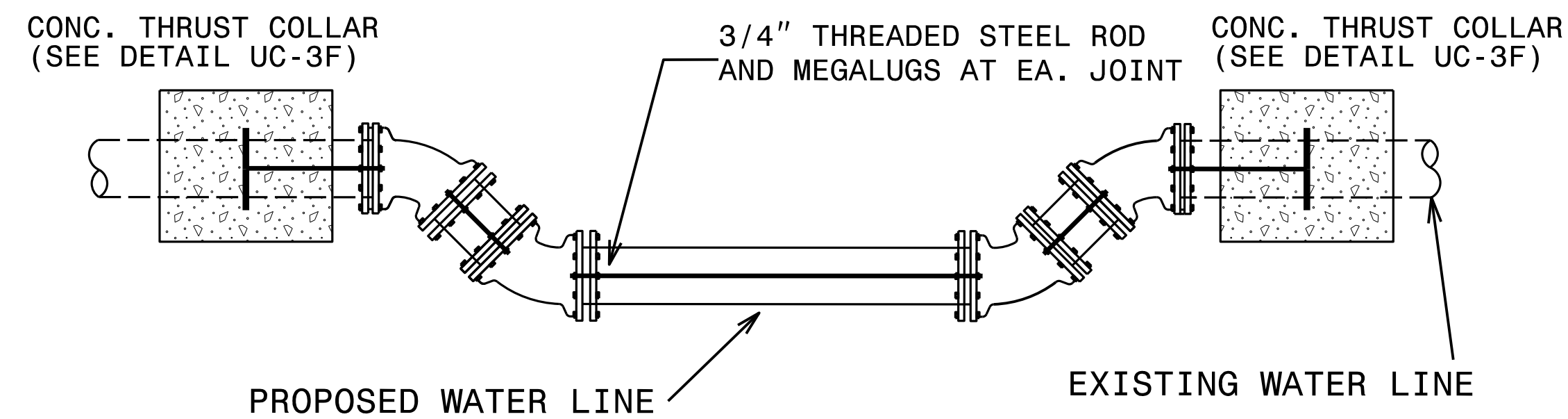


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**UTILITY CONSTRUCTION**



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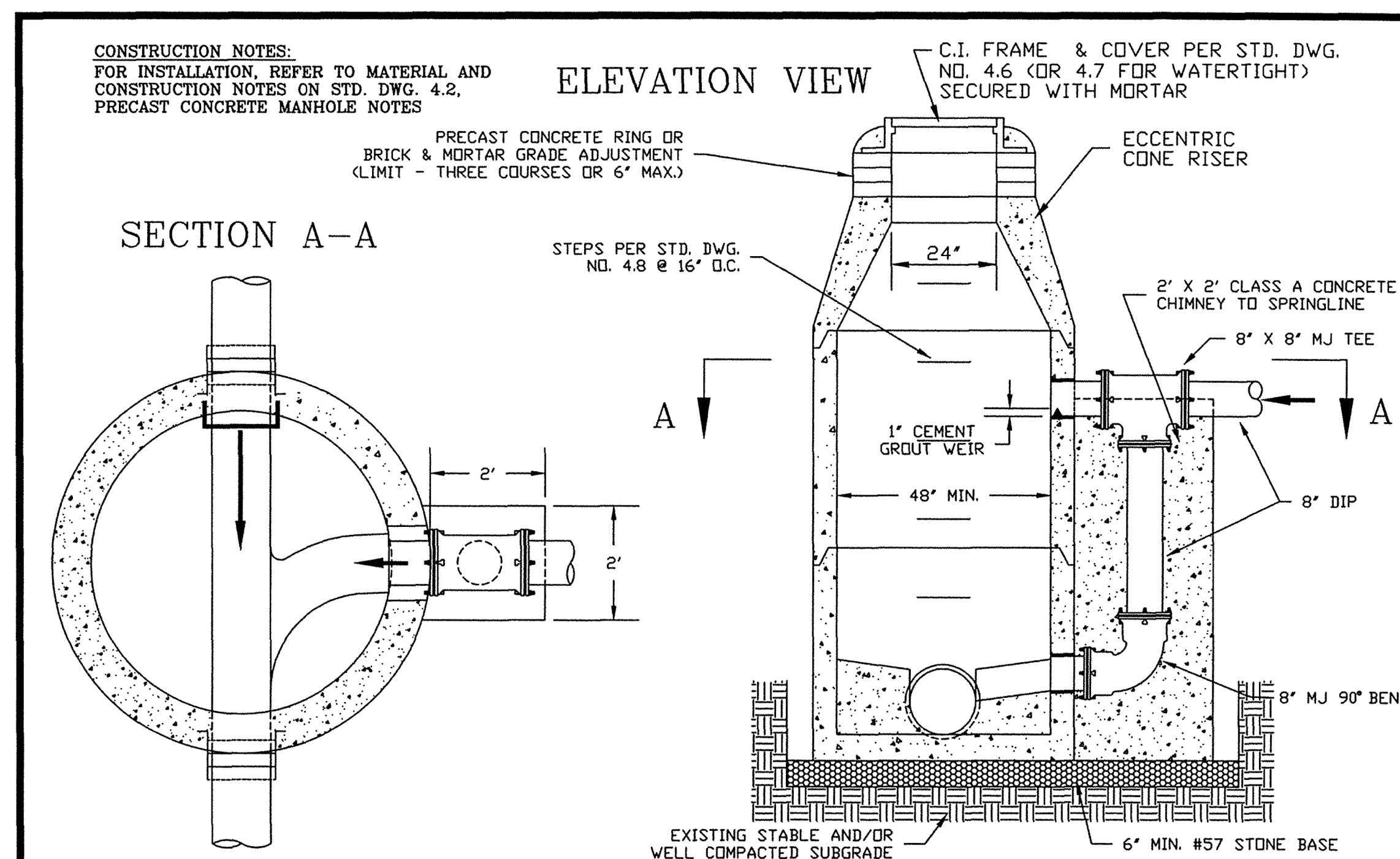
**ROD REQUIREMENTS:**

PIPE SIZE	STATIC THRUST (POUNDS)	RODS REQUIRED
6"	4328	2
8"	7694	2
12"	17312	2
16"	30779	4
20"	48091	6

1. ONCE INSTALLED AND TIGHT, THE STEEL RODS AND BOLTS SHALL BE COATED WITH 2 COATS OF BITUMINOUS BASE PAINT.
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT BENDS.

**WATER LINE RESTRAINT**

**CONSTRUCTION NOTES:**  
FOR INSTALLATION, REFER TO MATERIAL AND CONSTRUCTION NOTES ON STD. DWG. 4.2, PRECAST CONCRETE MANHOLE NOTES



**PRECAST CONCRETE MANHOLE WITH OUTSIDE DROP**

<table border="1"> <thead> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <th>NO.</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>		REVISIONS		NO.	DESCRIPTION							<b>CITY OF ROCKY MOUNT</b> <b>DEPT. OF ENGINEERING</b>	<table border="1"> <tr> <td>APPROVED</td> <td>STD. NO.</td> </tr> <tr> <td> </td> <td>4.3</td> </tr> <tr> <td>DATE</td> <td>REVISION</td> </tr> <tr> <td>04-10-99</td> <td> </td> </tr> </table>	APPROVED	STD. NO.		4.3	DATE	REVISION	04-10-99	
REVISIONS																					
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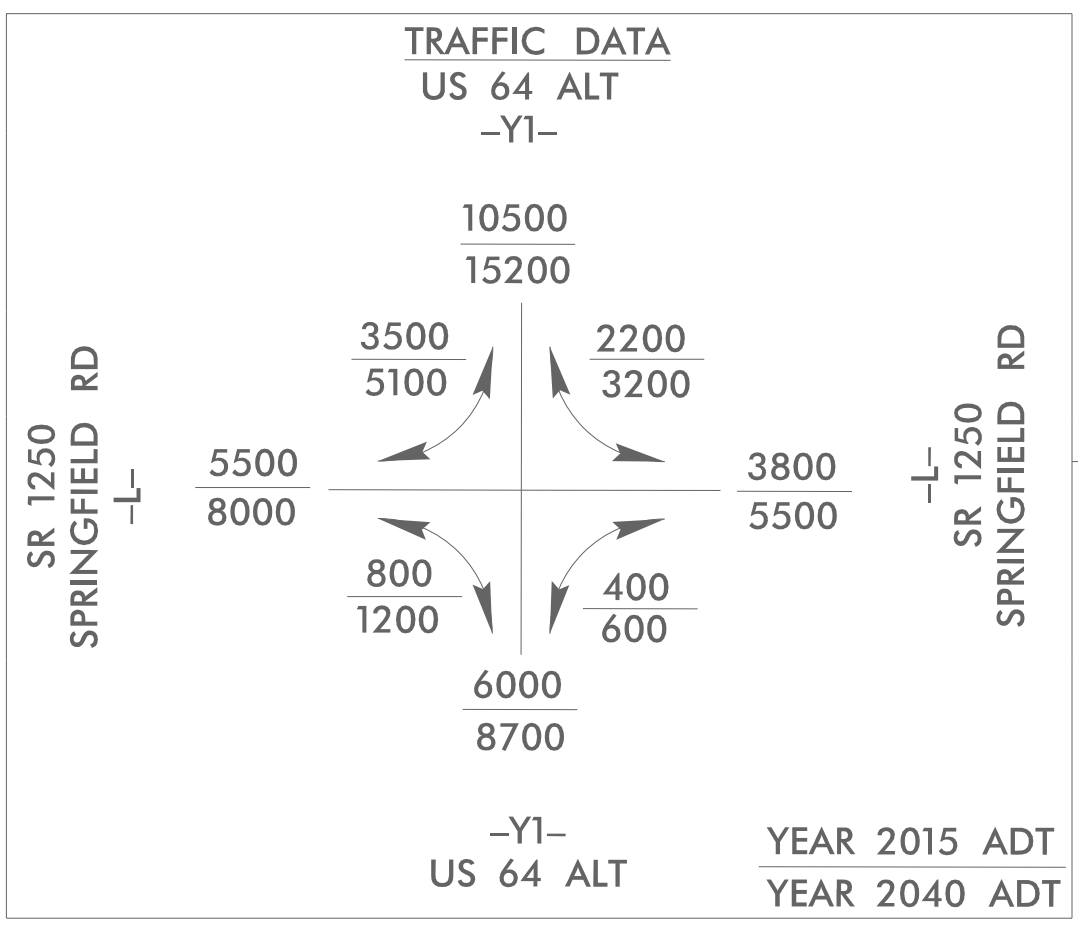
PROJECT REFERENCE NO.	U-4762	SHEET NO.	UC-4
DESIGNED BY:	CDB		
DRAWN BY:	JNA		
CHECKED BY:	CDB		
APPROVED BY:	CLS		
REVISED:		NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	11/20/2017
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151		UTILITY CONSTRUCTION PLANS ONLY	

**HINDE ENGINEERING**  
 License No. C-2639  
 401 Harrison Oaks Blvd., Suite 145 Cary, NC 27513

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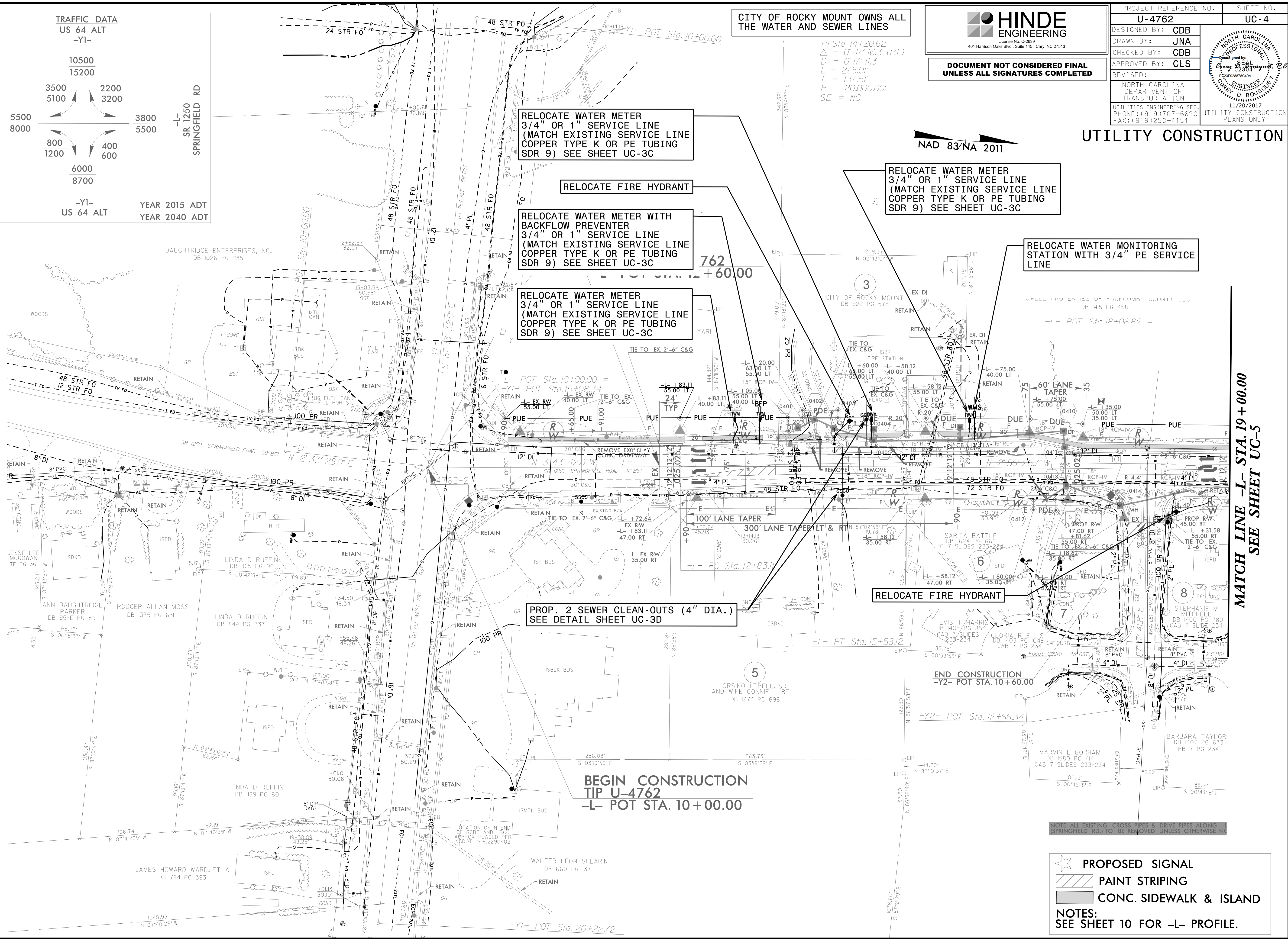
CITY OF ROCKY MOUNT OWNS ALL THE WATER AND SEWER LINES

PI Sta 14+20.62  
 $\Delta = 0^\circ 47' 16.3" (RT)$   
 $D = 0^\circ 17' 11.3"$   
 $L = 275.0'$   
 $T = 137.5'$   
 $R = 20,000.00'$   
 $SE = NC$



NAD 83/NA 2011

**UTILITY CONSTRUCTION**



RELOCATE WATER METER  
 3/4" OR 1" SERVICE LINE  
 (MATCH EXISTING SERVICE LINE  
 COPPER TYPE K OR PE TUBING  
 SDR 9) SEE SHEET UC-3C

RELOCATE FIRE HYDRANT

RELOCATE WATER METER WITH  
 BACKFLOW PREVENTER  
 3/4" OR 1" SERVICE LINE  
 (MATCH EXISTING SERVICE LINE  
 COPPER TYPE K OR PE TUBING  
 SDR 9) SEE SHEET UC-3C

RELOCATE WATER METER  
 3/4" OR 1" SERVICE LINE  
 (MATCH EXISTING SERVICE LINE  
 COPPER TYPE K OR PE TUBING  
 SDR 9) SEE SHEET UC-3C

RELOCATE WATER METER  
 3/4" OR 1" SERVICE LINE  
 (MATCH EXISTING SERVICE LINE  
 COPPER TYPE K OR PE TUBING  
 SDR 9) SEE SHEET UC-3C

RELOCATE WATER MONITORING  
 STATION WITH 3/4" PE SERVICE  
 LINE

PROP. 2 SEWER CLEAN-OUTS (4" DIA.)  
 SEE DETAIL SHEET UC-3D

RELOCATE FIRE HYDRANT

BEGIN CONSTRUCTION  
 TIP U-4762  
 -L- POT STA. 10+00.00

NOTE: ALL EXISTING CROSS PIPES & DRIVE PIPES ALONG SPRINGFIELD RD TO BE REMOVED UNLESS OTHERWISE NOTED

- PROPOSED SIGNAL
  - PAINT STRIPING
  - CONC. SIDEWALK & ISLAND
- NOTES:  
 SEE SHEET 10 FOR -L- PROFILE.

MATCH LINE -L- STA. 19+00.00 SEE SHEET UC-5

20 NOV 2017 08:15 PROJECTS\2015\A2015900000 Mulkey - U-4762\Design\Utilities\Engineering\UC-Proj\U4762-ut-rd\04\_UC04\_psh.dgn



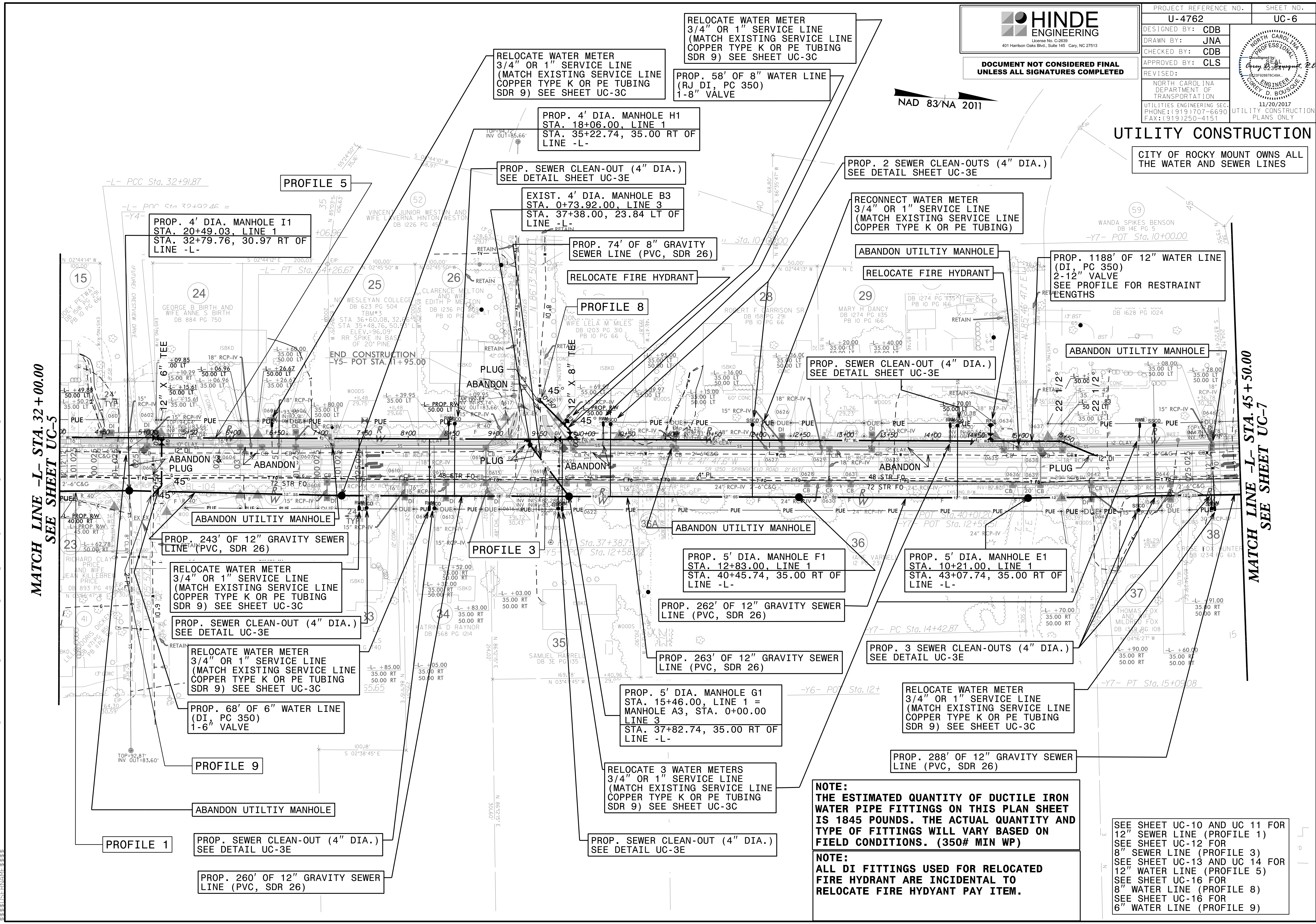
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NAD 83/NA 2011

**UTILITY CONSTRUCTION**

CITY OF ROCKY MOUNT OWNS ALL THE WATER AND SEWER LINES



MATCH LINE -L- STA. 32+00.00  
SEE SHEET UC-5

MATCH LINE -L- STA. 45+50.00  
SEE SHEET UC-7

**NOTE:**  
 THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 1845 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS. (350# MIN WP)

**NOTE:**  
 ALL DI FITTINGS USED FOR RELOCATED FIRE HYDRANT ARE INCIDENTAL TO RELOCATE FIRE HYDRANT PAY ITEM.

SEE SHEET UC-10 AND UC 11 FOR 12" SEWER LINE (PROFILE 1)  
 SEE SHEET UC-12 FOR 8" SEWER LINE (PROFILE 3)  
 SEE SHEET UC-13 AND UC 14 FOR 12" WATER LINE (PROFILE 5)  
 SEE SHEET UC-16 FOR 8" WATER LINE (PROFILE 8)  
 SEE SHEET UC-16 FOR 6" WATER LINE (PROFILE 9)

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PROJECT REFERENCE NO. U-4762	SHEET NO. UC-7
DESIGNED BY: CDB	
DRAWN BY: JNA	
CHECKED BY: CDB	
APPROVED BY: CLS	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

NAD 83/NA 2011

**UTILITY CONSTRUCTION**

CITY OF ROCKY MOUNT OWNS ALL THE WATER AND SEWER LINES

SEE SHEET UC-10 AND UC 11 FOR 12" SEWER LINE (PROFILE 1)  
 SEE SHEET UC-12 FOR 8" SEWER LINE (PROFILE 4)

MATCH LINE -L- STA. 45+50.00  
 SEE SHEET UC-6

MATCH LINE -L- STA. 59+00.00  
 SEE SHEET UC-8

RELOCATE WATER METER  
 3/4" OR 1" SERVICE LINE  
 (MATCH EXISTING SERVICE LINE  
 COPPER TYPE K OR PE TUBING  
 SDR 9) SEE SHEET UC-3C

PROP. SEWER CLEAN-OUT (4" DIA.)  
 SEE DETAIL SHEET UC-3E

RELOCATE WATER METER  
 3/4" OR 1" SERVICE LINE  
 (MATCH EXISTING SERVICE LINE  
 COPPER TYPE K OR PE TUBING  
 SDR 9) SEE SHEET UC-3C

PROP. SEWER CLEAN-OUT (4" DIA.)  
 SEE DETAIL SHEET UC-3E

RELOCATE FIRE HYDRANT

PROP. 24' OF 6" WATER LINE  
 (RJ DI, PC 350) SEE DETAIL  
 ON SHEET UC-3G

PROP. 4' DIA. MANHOLE B4  
 STA. 0+79.25, LINE 4  
 STA. 48+72.86 - 41.67 LT OF  
 LINE -L-

PROP. 79' OF 8" GRAVITY SEWER  
 LINE (PVC, SDR 26)

PROP. SEWER CLEAN-OUT (4" DIA.)  
 SEE DETAIL SHEET UC-3E

RELOCATE WATER METER  
 3/4" OR 1" SERVICE LINE  
 (MATCH EXISTING SERVICE LINE  
 COPPER TYPE K OR PE TUBING  
 SDR 9) SEE SHEET UC-3C

ABANDON UTILITY MANHOLE

EXIST. 4' DIA. MANHOLE A1  
 STA. 0+00.00, LINE 1  
 STA. 52+78.98 - 48.63 LT OF  
 LINE -L-

RELOCATE FIRE HYDRANT

PROP. 2 SEWER CLEAN-OUTS (4" DIA.)  
 SEE DETAIL SHEET UC-3D

PROP. 1 SEWER CLEAN-OUT (4" DIA.)  
 SEE DETAIL SHEET UC-3E - (4" DIA.) FM  
 ENTERING THE EXISTING MANHOLE AFTER  
 THE NEW CLEAN-OUT IS INSTALLED, THE  
 OWNER IS RESPONSIBLE FOR CONNECTING  
 THE 2" FM AND BACKFLOW PREVENTER  
 TO THE CLEAN-OUT AT THE R/W LINE

PROP. 3 SEWER CLEAN-OUTS (4" DIA.)  
 SEE DETAIL SHEET UC-3D

PROFILE 1

PROFILE 4

PROP. 98' OF 12" GRAVITY SEWER  
 LINE (DI, PC 350, EPOXY LINING)

RECONNECT WATER METER  
 3/4" OR 1" SERVICE LINE  
 (MATCH EXISTING SERVICE LINE  
 COPPER TYPE K OR PE TUBING)

PROP. 4' DIA. MANHOLE B1  
 STA. 0+98.00, LINE 1  
 STA. 52+27.90, 35.00 RT OF  
 LINE -L-

RELOCATE WATER METER  
 3/4" OR 1" SERVICE LINE  
 (MATCH EXISTING SERVICE LINE  
 COPPER TYPE K OR PE TUBING  
 SDR 9) SEE SHEET UC-3C

PROP. 335' OF 12" GRAVITY SEWER  
 LINE (PVC, SDR 26)

RELOCATE FIRE HYDRANT

RELOCATE WATER METER  
 3/4" OR 1" SERVICE LINE  
 (MATCH EXISTING SERVICE LINE  
 COPPER TYPE K OR PE TUBING  
 SDR 9) SEE SHEET UC-3C

ABANDON UTILITY MANHOLE

PROP. 300' OF 12" GRAVITY SEWER  
 LINE (PVC, SDR 26)

RELOCATE WATER METER  
 3/4" OR 1" SERVICE LINE  
 (MATCH EXISTING SERVICE LINE  
 COPPER TYPE K OR PE TUBING  
 SDR 9) SEE SHEET UC-3C

PROP. 2 SEWER CLEAN-OUTS (4" DIA.)  
 SEE DETAIL SHEET UC-3E

RELOCATE WATER METER  
 3/4" OR 1" SERVICE LINE  
 (MATCH EXISTING SERVICE LINE  
 COPPER TYPE K OR PE TUBING  
 SDR 9) SEE SHEET UC-3C

PROP. 5' DIA. MANHOLE D1  
 STA. 7+33.00, LINE 1  
 STA. 45+94.15, 35.00 RT OF  
 LINE -L-

PROP. 5' DIA. MANHOLE C1  
 STA. 4+33.00, LINE 1 =  
 MANHOLE A4, STA. 0+00.00  
 LINE 4  
 STA. 48+92.90, 35.00 RT OF  
 LINE -L-

**NOTE:**  
 THE ESTIMATED QUANTITY OF DUCTILE IRON  
 WATER PIPE FITTINGS ON THIS PLAN SHEET  
 IS 300 POUNDS. THE ACTUAL QUANTITY AND  
 TYPE OF FITTINGS WILL VARY BASED ON  
 FIELD CONDITIONS. (350# MIN WP)

**NOTE:**  
 ALL DI FITTINGS USED FOR RELOCATED  
 FIRE HYDRANT ARE INCIDENTAL TO  
 RELOCATE FIRE HYDRANT PAY ITEM.

PROP. SEWER CLEAN-OUT (4" DIA.)  
 SEE DETAIL SHEET UC-3D

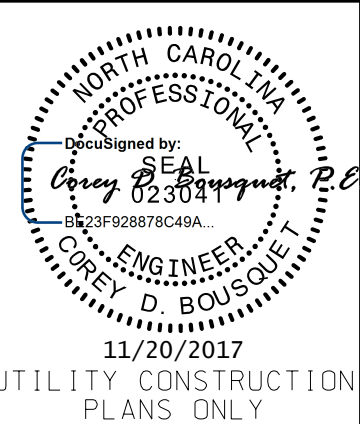
CONC. SIDEWALK & ISLAND

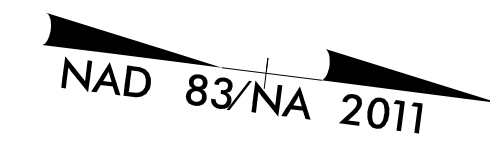
NOTES:  
 SEE SHEET 11 FOR -L- PROFILE.

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PROJECT REFERENCE NO. <b>U-4762</b>	SHEET NO. <b>UC-8</b>
DESIGNED BY: <b>CDB</b>	
DRAWN BY: <b>JNA</b>	
CHECKED BY: <b>CDB</b>	
APPROVED BY: <b>CLS</b>	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151 UTILITY CONSTRUCTION PLANS ONLY	



**UTILITY CONSTRUCTION**

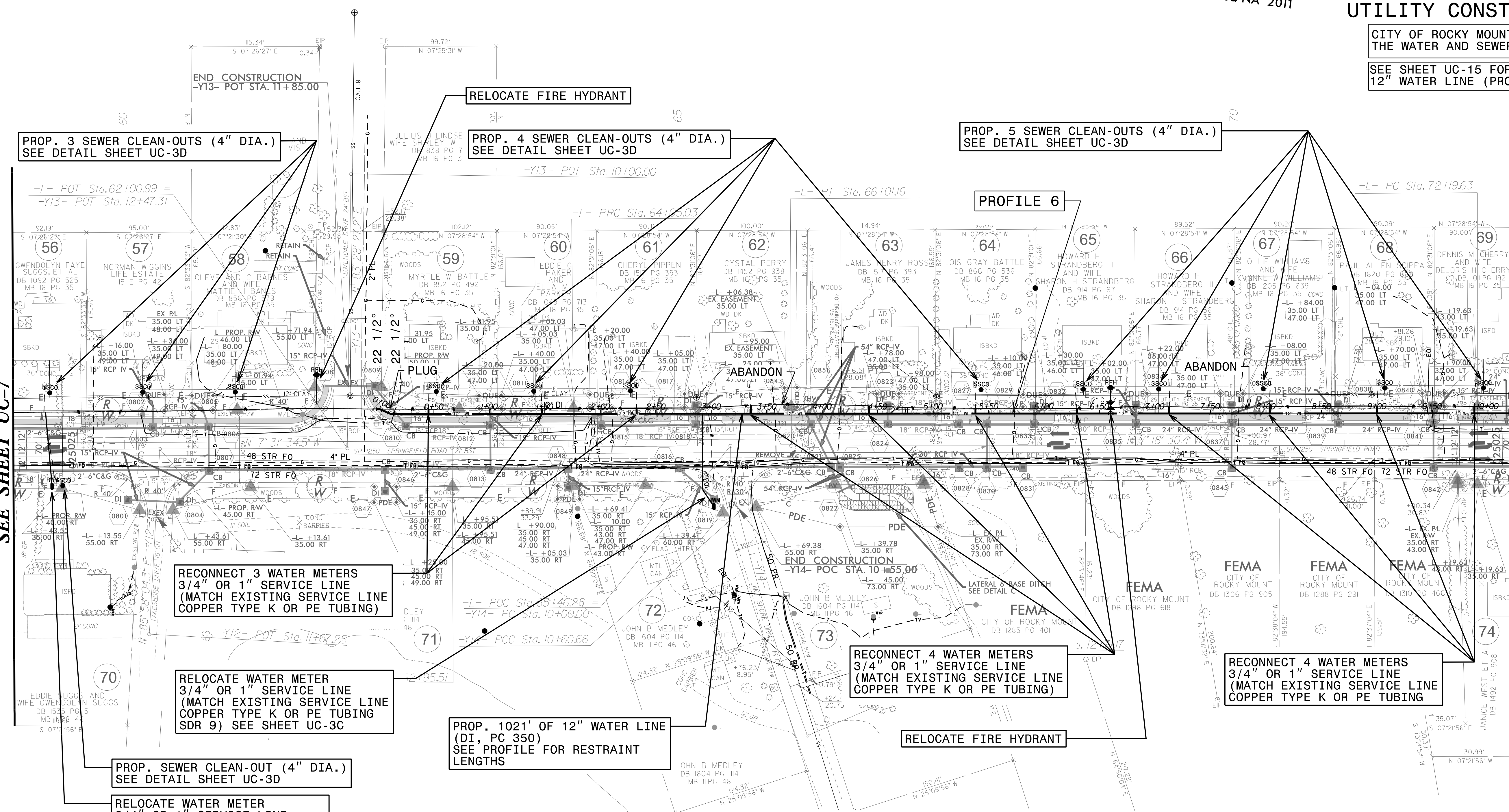
CITY OF ROCKY MOUNT OWNS ALL THE WATER AND SEWER LINES

SEE SHEET UC-15 FOR 12" WATER LINE (PROFILE 6)

-L-			-Y14-	
PI Sta 63+50.27 Δ = 0° 16' 31.6" (LT) D = 0° 15' 05.4" L = 109.52' T = 54.76' R = 22,780.85' SE = NC	PI Sta 65+03.10 Δ = 0° 29' 35.8" (RT) D = 0° 15' 05.4" L = 196.13' T = 98.06' R = 22,780.85' SE = NC	PI Sta 72+57.89 Δ = 0° 06' 34.6" (LT) D = 0° 08' 35.7" L = 76.51' T = 38.26' R = 40,000.00' SE = NC	PI Sta 10+30.48 Δ = 13° 54' 05.2" (LT) D = 22° 55' 05.9" L = 60.66' T = 30.48' R = 250.00' SE = EXIST.	PI Sta 11+66.02 Δ = 6° 27' 06.9" (LT) D = 3° 03' 53.6" L = 210.51' T = 105.37' R = 1,869.43' SE = EXIST.

MATCH LINE -L- STA. 59 + 00.00  
SEE SHEET UC-7

MATCH LINE -L- STA. 72 + 50.00  
SEE SHEET UC-9



PROP. 3 SEWER CLEAN-OUTS (4" DIA.)  
SEE DETAIL SHEET UC-3D

RELOCATE FIRE HYDRANT

PROP. 4 SEWER CLEAN-OUTS (4" DIA.)  
SEE DETAIL SHEET UC-3D

PROP. 5 SEWER CLEAN-OUTS (4" DIA.)  
SEE DETAIL SHEET UC-3D

PROFILE 6

RECONNECT 3 WATER METERS  
3/4" OR 1" SERVICE LINE  
(MATCH EXISTING SERVICE LINE  
COPPER TYPE K OR PE TUBING)

RELOCATE WATER METER  
3/4" OR 1" SERVICE LINE  
(MATCH EXISTING SERVICE LINE  
COPPER TYPE K OR PE TUBING  
SDR 9) SEE SHEET UC-3C

PROP. SEWER CLEAN-OUT (4" DIA.)  
SEE DETAIL SHEET UC-3D

RELOCATE WATER METER  
3/4" OR 1" SERVICE LINE  
(MATCH EXISTING SERVICE LINE  
COPPER TYPE K OR PE TUBING  
SDR 9) SEE SHEET UC-3C

PROP. 1021' OF 12" WATER LINE  
(DI, PC 350)  
SEE PROFILE FOR RESTRAINT  
LENGTHS

RECONNECT 4 WATER METERS  
3/4" OR 1" SERVICE LINE  
(MATCH EXISTING SERVICE LINE  
COPPER TYPE K OR PE TUBING)

RELOCATE FIRE HYDRANT

RECONNECT 4 WATER METERS  
3/4" OR 1" SERVICE LINE  
(MATCH EXISTING SERVICE LINE  
COPPER TYPE K OR PE TUBING)

**NOTE:**  
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 1320 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS. (350# MIN WP)

**NOTE:**  
ALL DI FITTINGS USED FOR RELOCATED FIRE HYDRANT ARE INCIDENTAL TO RELOCATED FIRE HYDRANT PAY ITEM.

CONC. SIDEWALK & ISLAND

NOTES:  
SEE SHEETS 11 & 12 FOR -L- PROFILE.

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**UTILITY CONSTRUCTION**

CITY OF ROCKY MOUNT OWNS ALL THE WATER AND SEWER LINES

SEE SHEET UC-15 FOR 12" WATER LINE (PROFILE 6)

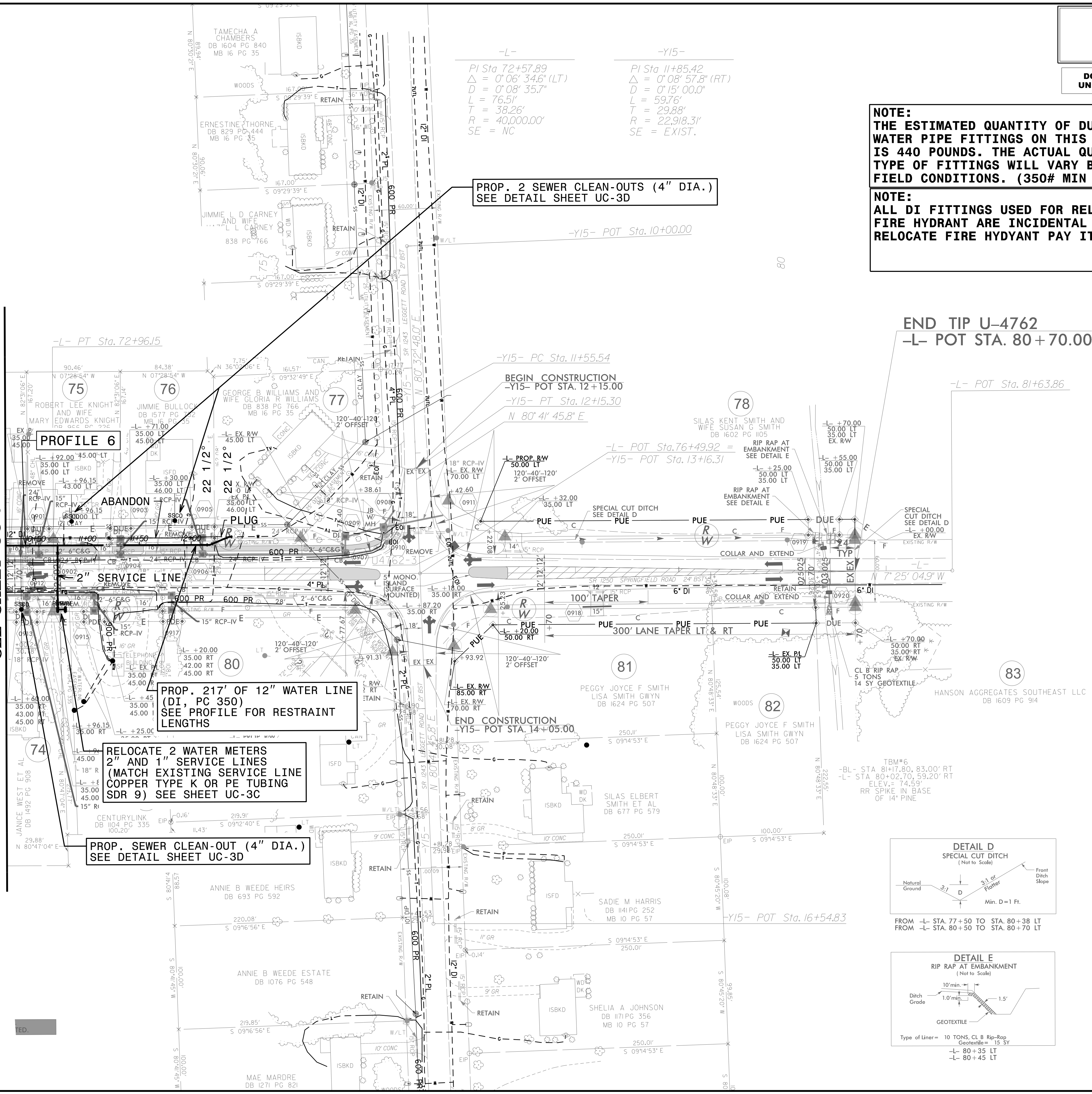
**NOTE:**  
 THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 440 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS. (350# MIN WP)

**NOTE:**  
 ALL DI FITTINGS USED FOR RELOCATED FIRE HYDRANT ARE INCIDENTAL TO RELOCATE FIRE HYDRANT PAY ITEM.

**-L-**  
 PI Sta 72+57.89  
 $\Delta = 0^{\circ}06'34.6"$  (LT)  
 $D = 0^{\circ}08'35.7"$   
 $L = 76.5'$   
 $T = 38.26'$   
 $R = 40,000.00'$   
 SE = NC

**-Y15-**  
 PI Sta 11+85.42  
 $\Delta = 0^{\circ}08'57.8"$  (RT)  
 $D = 0^{\circ}15'00.0"$   
 $L = 59.76'$   
 $T = 29.88'$   
 $R = 22,918.31'$   
 SE = EXIST.

MATCH LINE -L- STA. 72 + 50.00  
 SEE SHEET UC-8



END TIP U-4762  
 -L- POT STA. 80 + 70.00

-L- POT Sta. 81+63.86

BEGIN CONSTRUCTION  
 -Y15- POT STA. 12+15.00  
 -Y15- PT Sta. 12+15.30  
 N 80° 41' 45.8" E

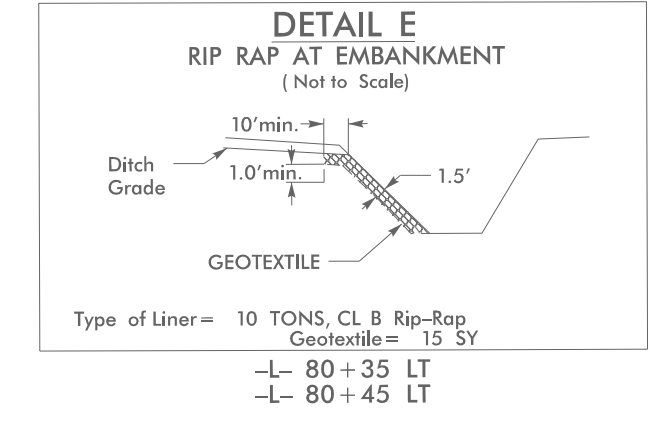
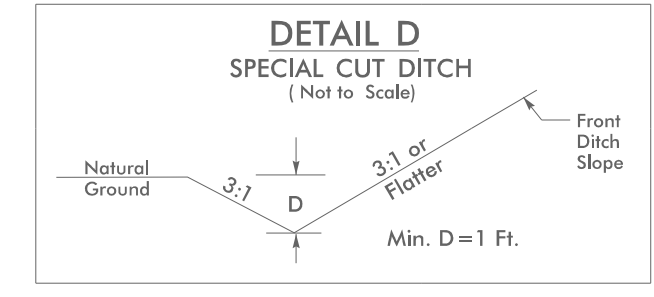
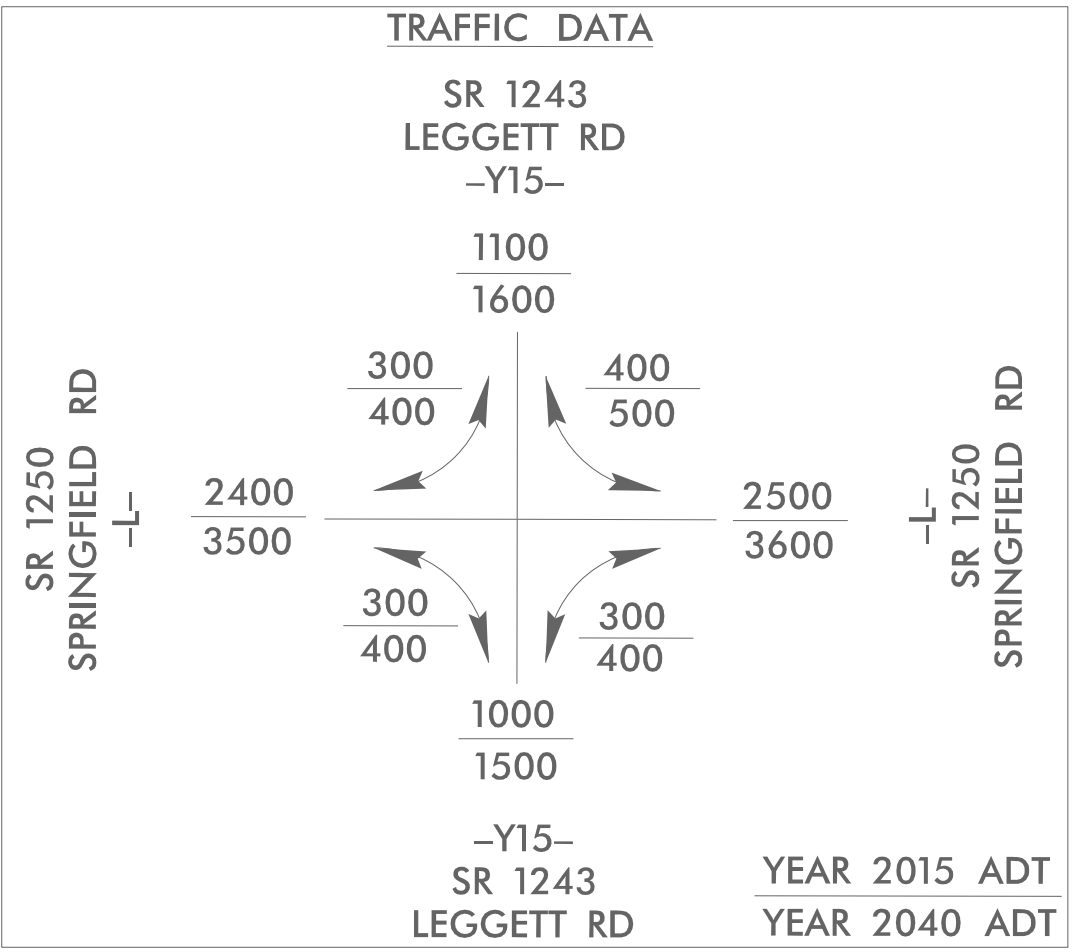
END CONSTRUCTION  
 -Y15- POT STA. 14+05.00

RELOCATE 2 WATER METERS  
 2" AND 1" SERVICE LINES  
 (MATCH EXISTING SERVICE LINE  
 COPPER TYPE K OR PE TUBING  
 SDR 9) SEE SHEET UC-3C

PROP. SEWER CLEAN-OUT (4" DIA.)  
 SEE DETAIL SHEET UC-3D

PROP. 217' OF 12" WATER LINE  
 (DI, PC 350)  
 SEE PROFILE FOR RESTRAINT  
 LENGTHS

PROP. 2 SEWER CLEAN-OUTS (4" DIA.)  
 SEE DETAIL SHEET UC-3D



CONC. SIDEWALK & ISLAND  
 PAINT STRIPING

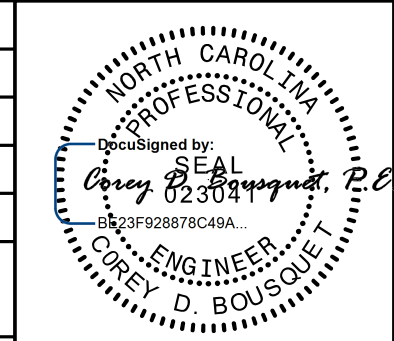
**NOTES:**  
 SEE SHEET 12 FOR -L- PROFILE.

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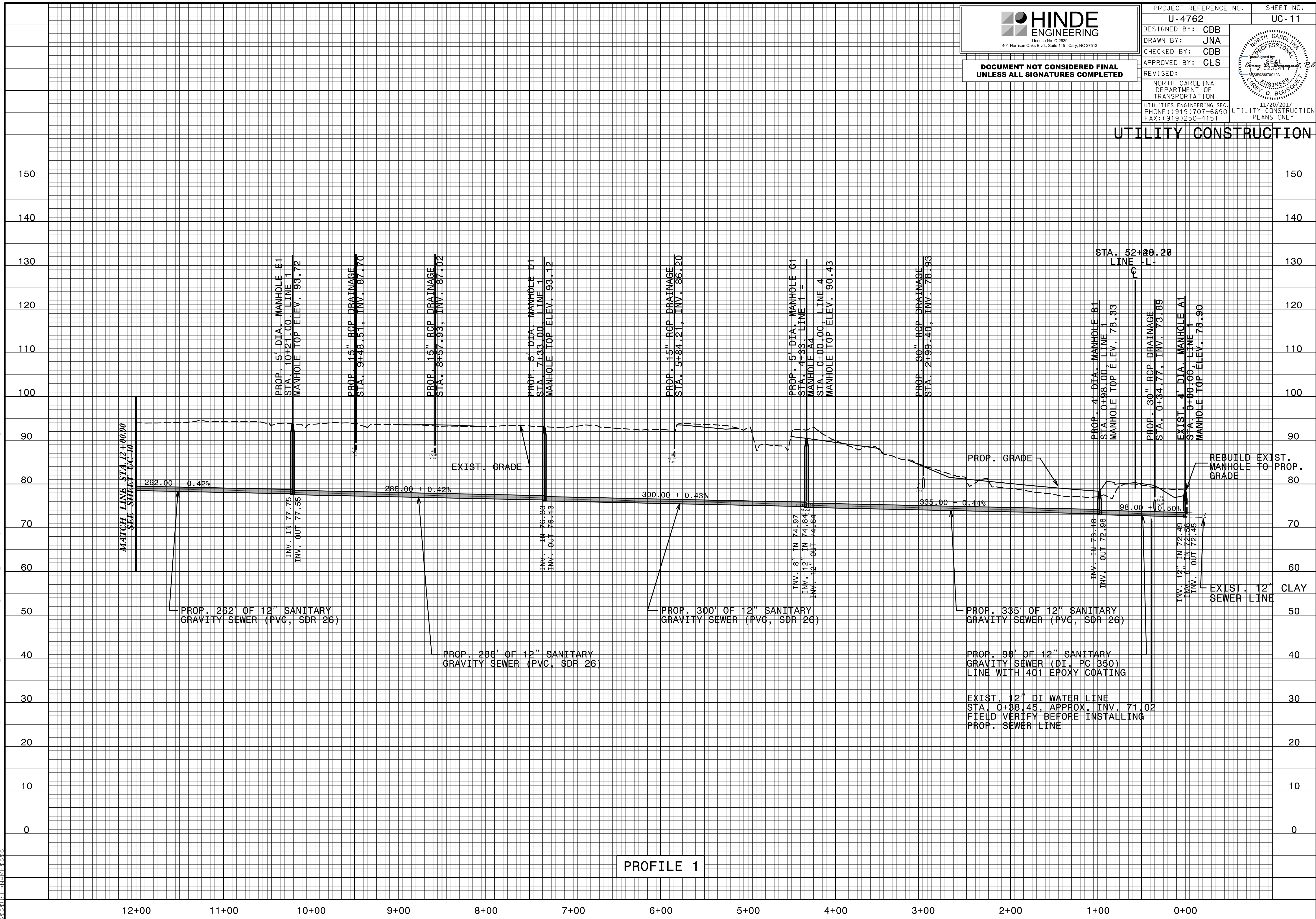


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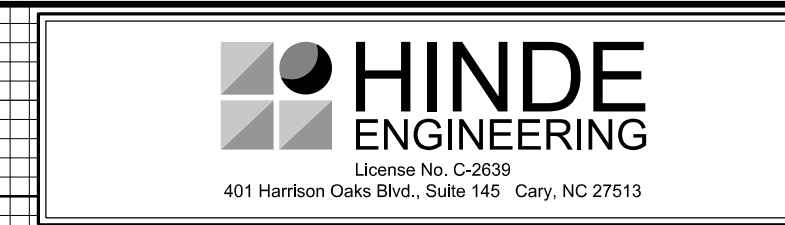
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PROJECT REFERENCE NO. <b>U-4762</b>	SHEET NO. <b>UC-11</b>
DESIGNED BY: <b>CDB</b>	
DRAWN BY: <b>JNA</b>	
CHECKED BY: <b>CDB</b>	
APPROVED BY: <b>CLS</b>	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
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**UTILITY CONSTRUCTION**



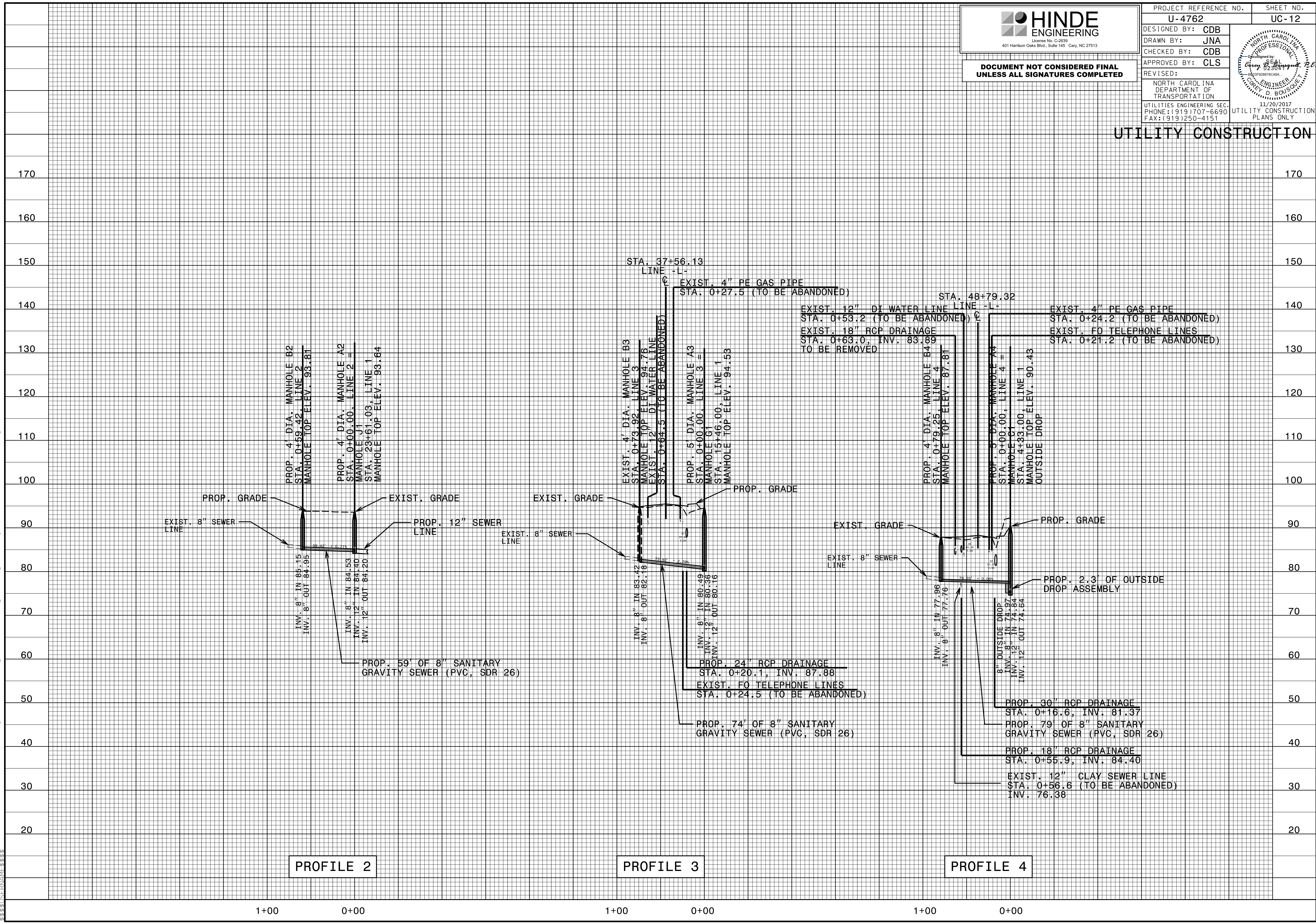
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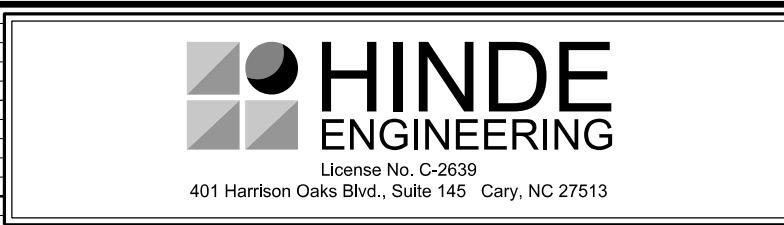
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PROJECT REFERENCE NO. U-4762	SHEET NO. UC-12
DESIGNED BY: CDB	
DRAWN BY: JNA	
CHECKED BY: CDB	
APPROVED BY: CLS	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	11/20/2017 UTILITY CONSTRUCTION PLANS ONLY

# UTILITY CONSTRUCTION



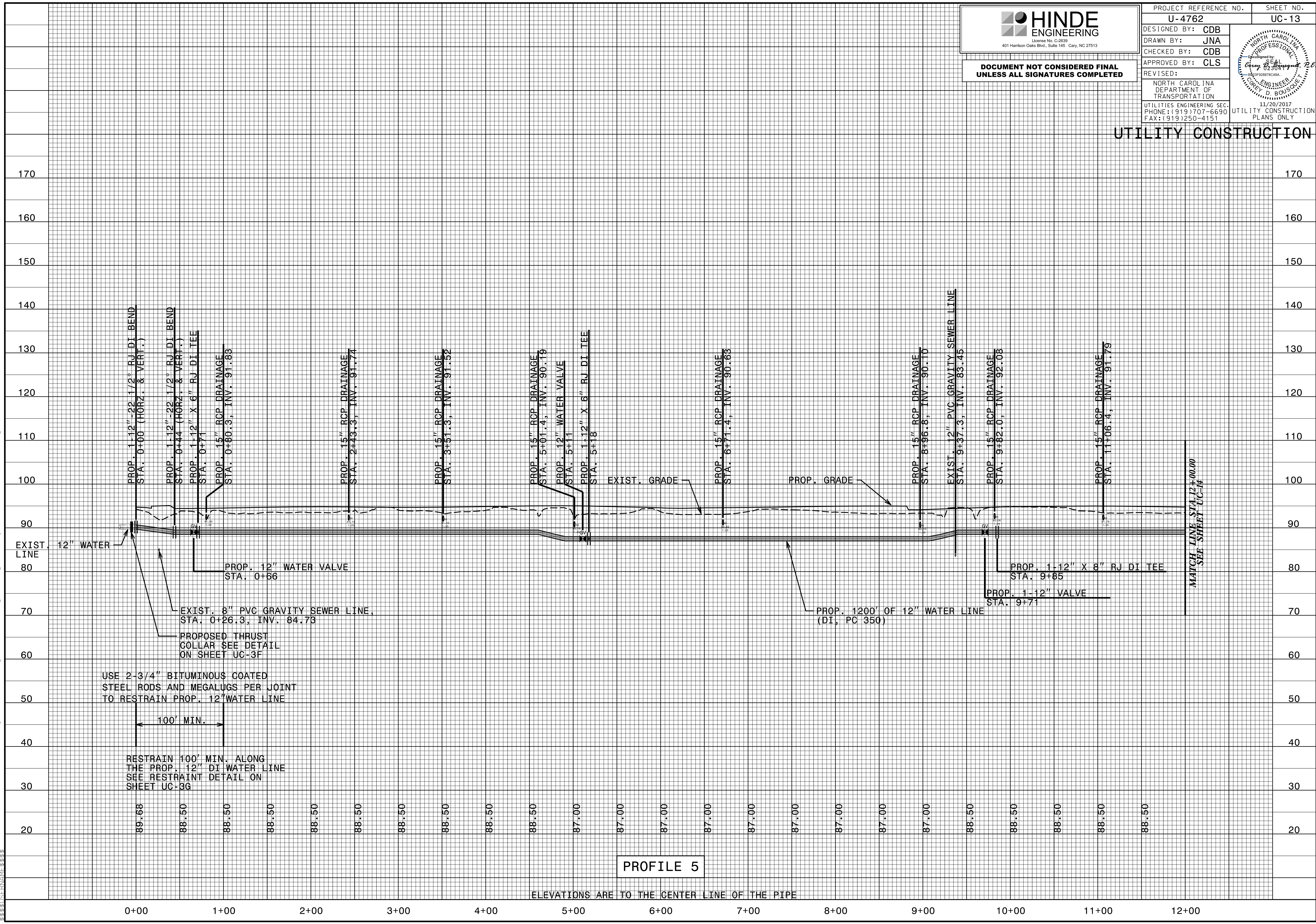
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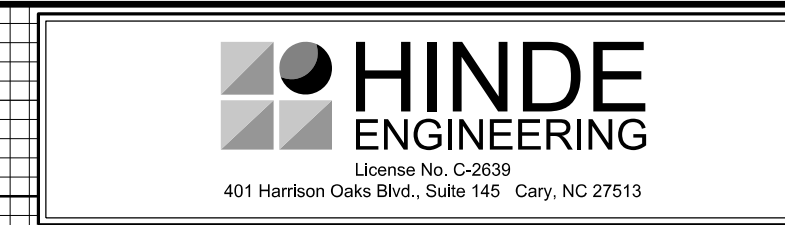
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PROJECT REFERENCE NO. U-4762	SHEET NO. UC-13
DESIGNED BY: CDB	
DRAWN BY: JNA	
CHECKED BY: CDB	
APPROVED BY: CLS	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	11/20/2017 UTILITY CONSTRUCTION PLANS ONLY


### UTILITY CONSTRUCTION



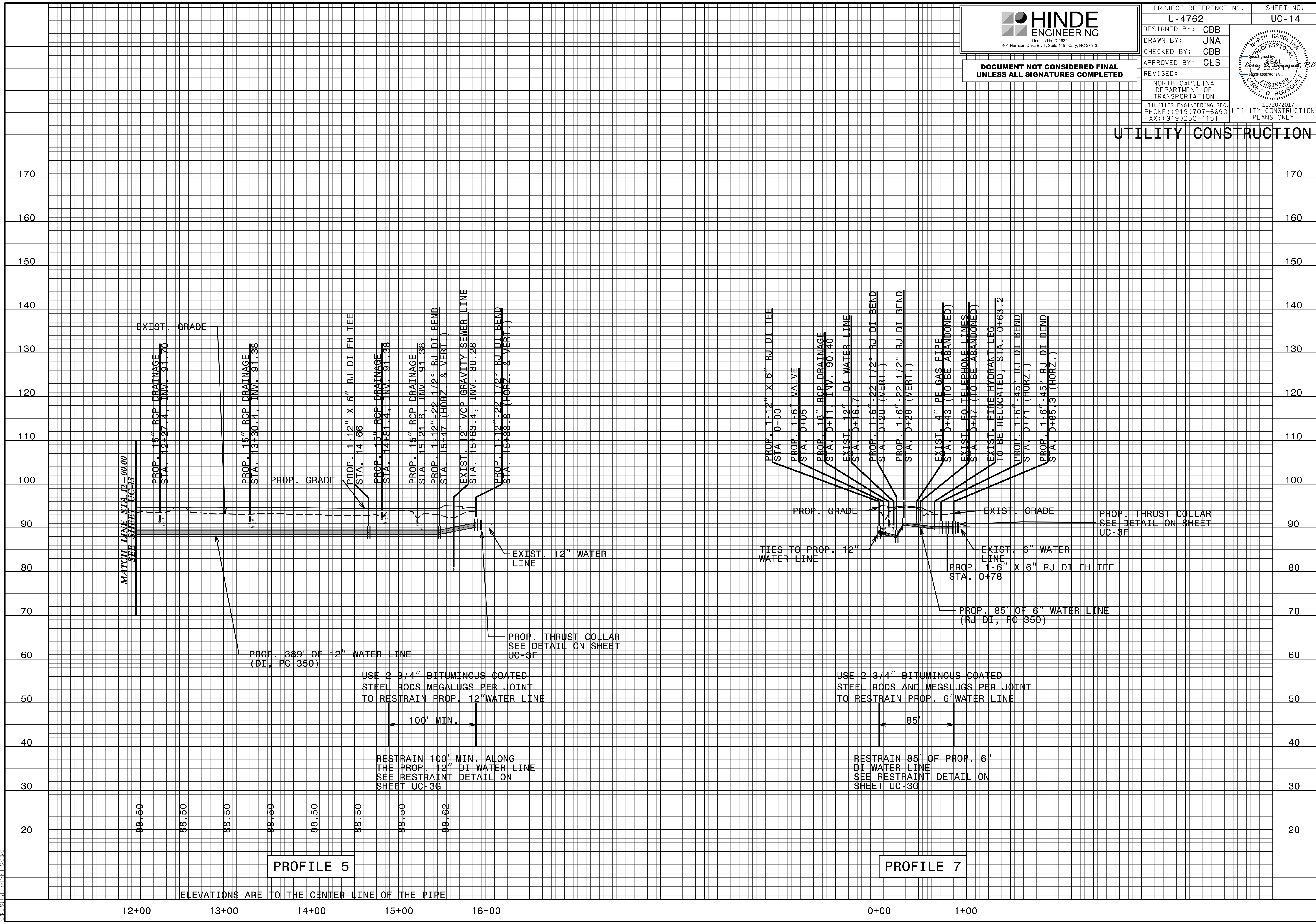
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PROJECT REFERENCE NO. <b>U-4762</b>	SHEET NO. <b>UC-14</b>
DESIGNED BY: <b>CDB</b>	
DRAWN BY: <b>JNA</b>	
CHECKED BY: <b>CDB</b>	
APPROVED BY: <b>CLS</b>	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	11/20/2017 UTILITY CONSTRUCTION PLANS ONLY

**UTILITY CONSTRUCTION**



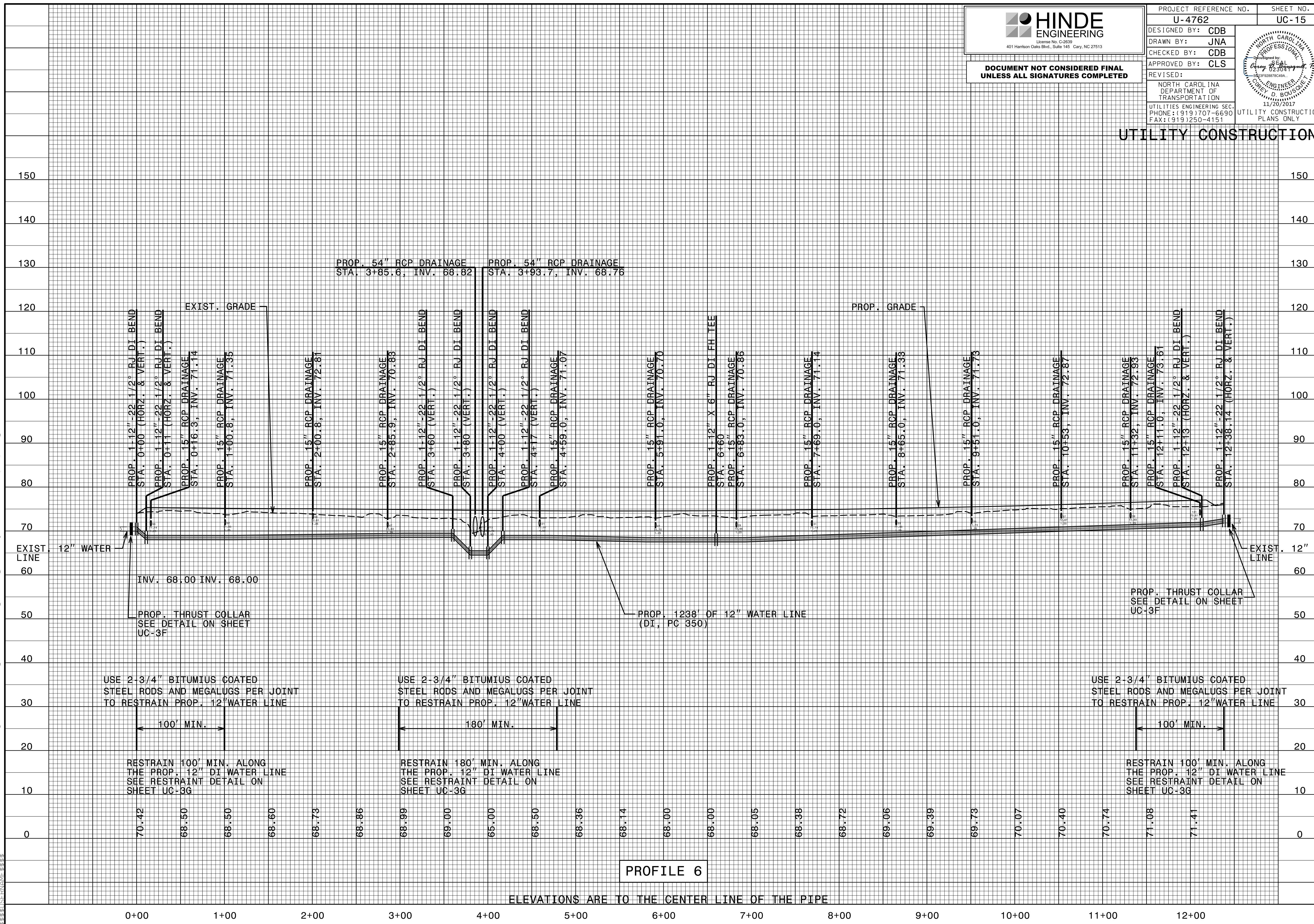
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 338513178

ELEVATIONS ARE TO THE CENTER LINE OF THE PIPE

**DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED**

PROJECT REFERENCE NO. <b>U-4762</b>	SHEET NO. <b>UC-15</b>
DESIGNED BY: <b>CDB</b>	
DRAWN BY: <b>JNA</b>	
CHECKED BY: <b>CDB</b>	
APPROVED BY: <b>CLS</b>	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
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**UTILITY CONSTRUCTION**



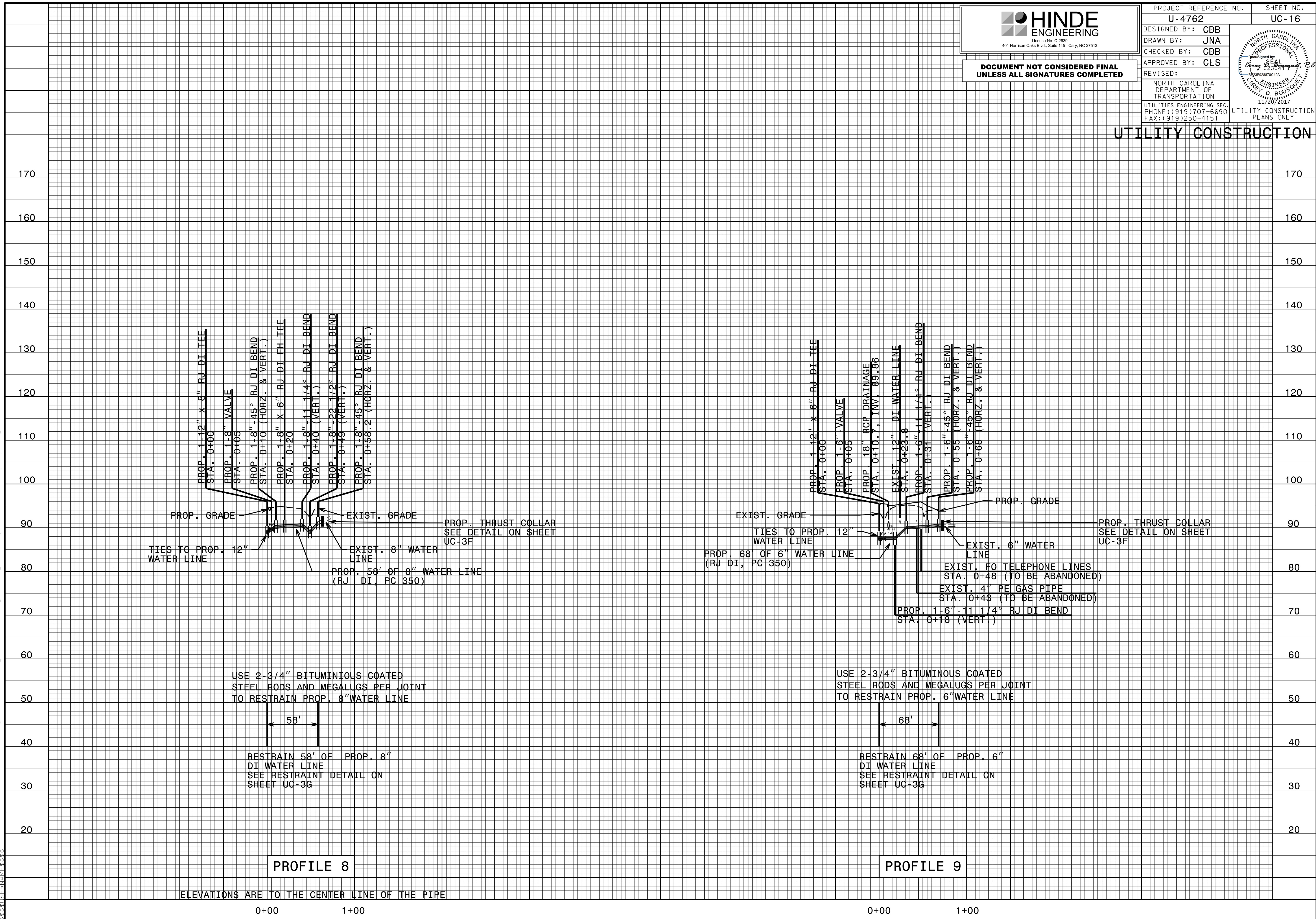
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PROJECT REFERENCE NO. U-4762	SHEET NO. UC-16
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REVISED:	
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### UTILITY CONSTRUCTION



PROFILE 8

PROFILE 9

ELEVATIONS ARE TO THE CENTER LINE OF THE PIPE

0+00 1+00

0+00 1+00

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