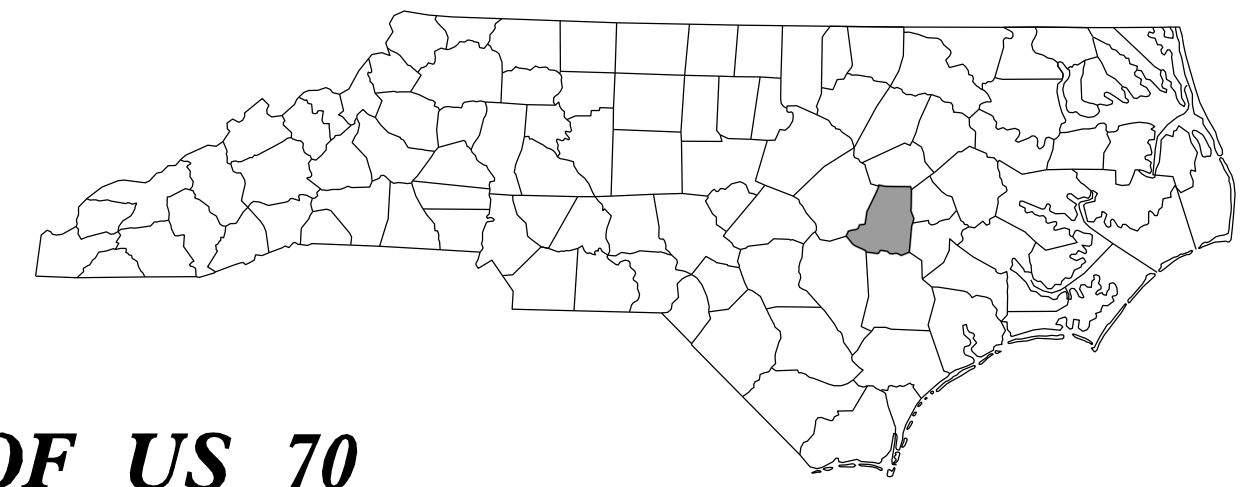


TIP PROJECT: U-2714

T.I.P. NO.	SHEET NO.
U-2714	UC-1

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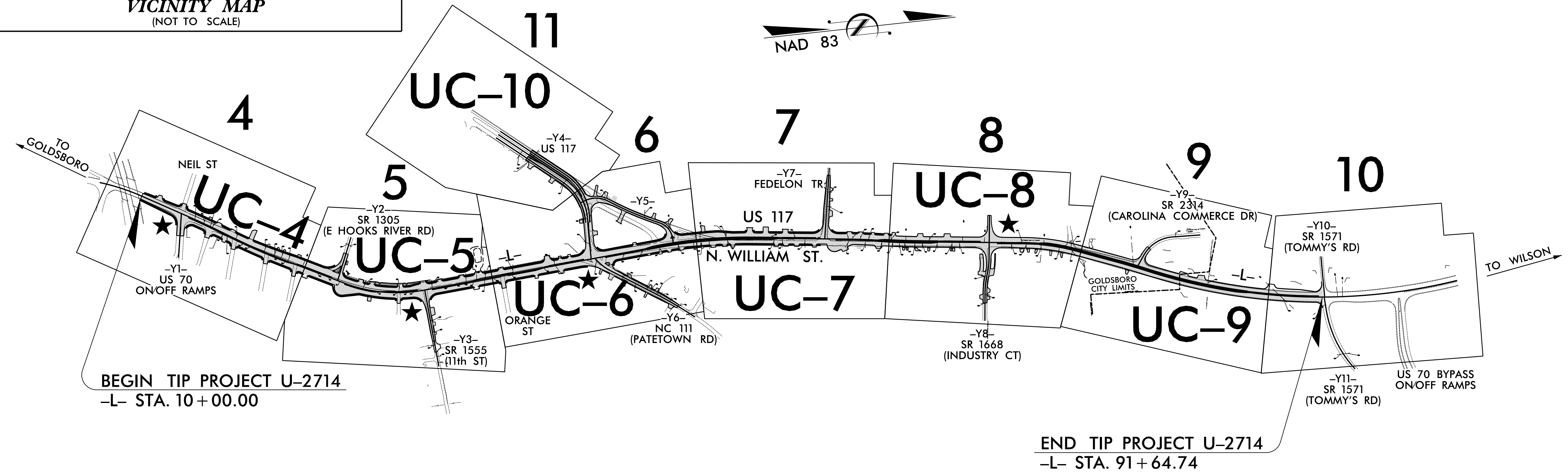
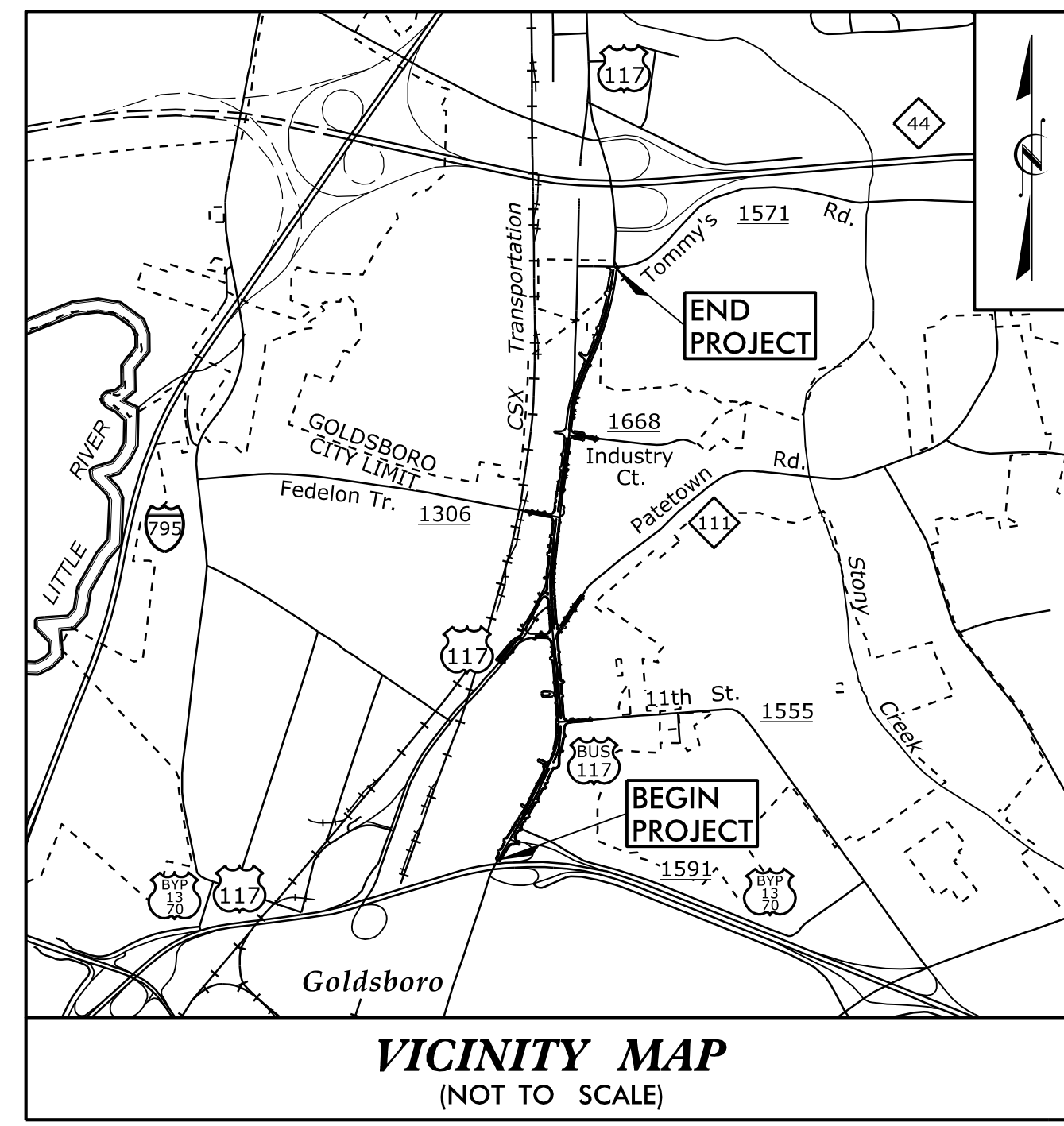


STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

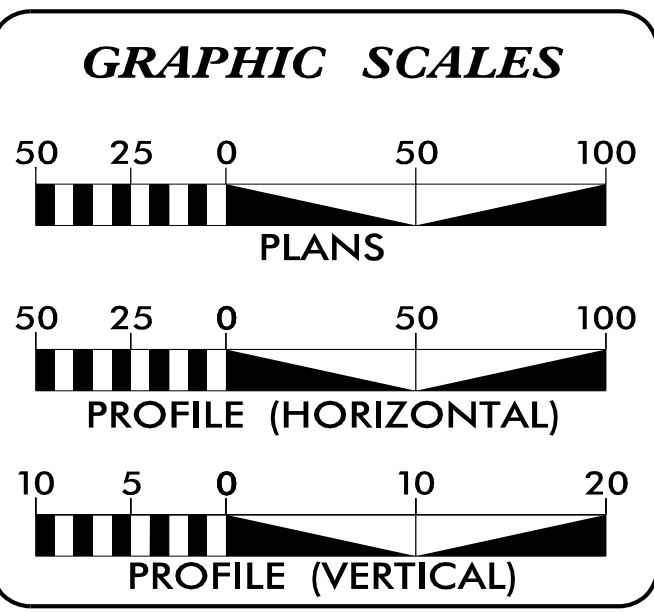
UTILITY CONSTRUCTION PLANS WAYNE COUNTY

LOCATION: US 117 (N. WILLIAM ST.) FROM NORTH OF US 70
TO SR 1571 (TOMMY'S RD.)

TYPE OF WORK: WATER AND SEWER RELOCATIONS



CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III
A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE CITY OF GOLDSBORO



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3	NOTES
UC-3A THRU UC-3E	DETAILS
UC-4 THRU UC-10	UTILITY CONSTRUCTION SHEETS
UC-11 THRU UC-24	PROFILE SHEETS

WATER AND SEWER OWNERS ON PROJECT

(A) CITY OF GOLDSBORO WATER AND SEWER
(B) TOWN OF FREMONT FORCE MAIN

PREPARED IN THE OFFICE OF:

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

Clint L. Stevens, P.E. UTILITIES PROJECT MANAGER
Corey D. Bousquet, P.E. UTILITIES PROJECT ENGINEER
James N. Arnold UTILITIES PROJECT DESIGNER

SEAL

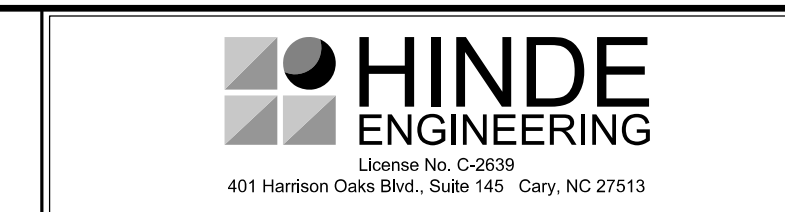
1/3/2020

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

Corey McLamb, P.E. DIVISION CONSTRUCTION ENGINEER
Matt Clarke, P.E. DIVISION PROJCT DEVELOPMENT ENGINEER
Kim Moore DIVISION UTILITY ENGINEER

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STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS



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)

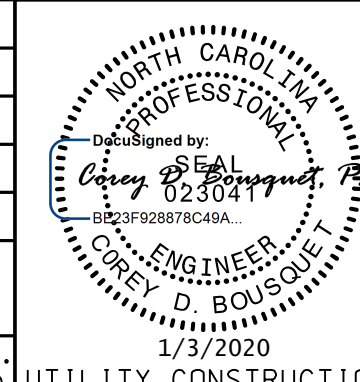
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UTILITY CONSTRUCTION



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

**DOCUMENT NOT CONSIDERED FINAL
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PROJECT REFERENCE NO. U-2714	SHEET NO. UC-3
DESIGNED BY: CDB	
DRAWN BY: JNA	
CHECKED BY: CLS	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

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.
2. THE EXISTING WATER AND GRAVITY SEWER LINES BELONG TO THE CITY OF GOLDSBORO. THE 12" FORCE MAIN AT N. WILLIAMS STREET AND INDUSTRIAL CT. IS OWNED BY THE TOWN OF FREMONT.
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.
10. 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.
11. ALL 12" AND LARGER DI GRAVITY SEWER PIPE SHALL BE LINED WITH PROTECTO 401

PROJECT SPECIFIC NOTES:

1. SEE THE PLANS FOR THE LOCATIONS WHERE THE PROPOSED WATER AND SEWER LINES WILL BE RESTRAINED. USE CONCRETE THRUST BLOCKING AT THE TIE-INS AS SHOWN ON PLANS. RESTRAINED DUCTILE IRON WATER PIPE USE BOLTLESS RESTRAINT EXCEPT AT TIE-IN POINTS TO THE EXISTING WATER LINE RESTRAINED RETAINER GLANDS MAY BE USED.
2. THE PROPOSED WATER AND SEWER LINES INSTALLED BY OPEN CUT NEAR OR IN THE EXISTING ROADWAYS MAY NEED TO BE DONE AT NIGHT OR AS DIRECTED BY THE ENGINEER. MAINTAIN TRAFFIC AS SHOWN IN THE TRAFFIC CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.
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 TEMPORARY - (PIPE, VALVES, FITTINGS AND INCIDENTALS) NECESSARY TO KEEP THE EXISTING AND PROPOSED WATER LINES ACTIVE DURING THE WATER METER AND FIRE HYDRANT RELOCATIONS WILL BE INCIDENTAL TO THE COSTS OF PROPOSED WATER LINES.
4. WHERE PROPERTIES ARE BEING DEMOLISHED THE CITY OF GOLDSBORO WILL DETERMINE IF THE EXISTING SEWER SERVICES WILL BE ABANDONED AND PLUGGED OR RESET AT THE NEW R/W LINE.
5. CITY OF GOLDSBORO REQUIRES MARKING TAPE FOR ALL WATER MAINS AND WATER SERVICES INSTALLED BY OPEN CUT. THE MARKING TAPE SHALL BE INSTALLED DIRECTLY ABOVE THE CENTER OF THE PIPE AND AT LEAST 16" DEEP FROM FINAL GRADE TO A MAXIMUM DEPTH OF 24" BELOW FINAL GRADE. THE WATER MARKING TAPE SHALL BE MADE OF POLYETHYLENE (OR APPROVED EQUIVALENT) MATERIAL, 6" WIDE AND A MINIMUM OF 6 MM THICK. THE TAPE SHALL BE BLUE IN COLOR AND SHALL BE MARKED WITH THE WORDS "CAUTION WATER LINE BURIED BELOW" (OR AN APPROVED EQUIVALENT WORDING). THE WORDING SHALL BE REPETITIVE ALONG THE FULL LENGTH OF TAPE.

6. IF THE WATER SERVICE CANNOT BE INTERRUPTED, THE CITY OF GOLDSBORO WILL NOT ALLOW UNPROTECTED BYPASS AROUND A RELOCATED BACKFLOW PREVENTER, A PARALLEL BACKFLOW PREVENTION ASSEMBLY MUST BE USED UNTIL THE RELOCATED BACKFLOW ASSEMBLY HAS BEEN TESTED AND APPROVED BY THE CITY OF GOLDSBORO. THE COST WILL BE INCIDENTAL TO THE PAY ITEMS FOR RELOCATE BACKFLOW PREVENTERS.

FOLLOWING THE INSTALLATION OF THE RELOCATED BACKFLOW PREVENTER, THE BACKFLOW PREVENTER SHALL BE TESTED BY A CERTIFIED BACKFLOW PREVENTION ASSEMBLY TECHNICIAN APPROVED BY THE CITY OF GOLDSBORO WITHIN 10 DAYS. THE PROPOSED SERVICE LINE CANNOT BE ACTIVATED UNTIL THE TECHNICIAN AND THE CITY OF GOLDSBORO HAS TESTED AND APPROVED THE INSTALLATION OF THE RELOCATED BACKFLOW ASSEMBLY.

ALL CERTIFIED BACKFLOW PREVENTION ASSEMBLY TECHNICIANS MUST OBTAIN AND EMPLOY BACKFLOW PREVENTION ASSEMBLY TEST EQUIPMENT, WHICH HAS BEEN EVALUATED AND/OR APPROVED BY THE CITY OF GOLDSBORO. ALL TEST EQUIPMENT SHALL BE REGISTERED WITH THE CITY OF GOLDSBORO AND SHALL BE CHECKED FOR ACCURACY ANNUALLY (AT A MINIMUM), CALIBRATED IF NECESSARY, AND CERTIFIED TO THE CITY OF GOLDSBORO AS TO SUCH ACCURACY/CALIBRATION, EMPLOYING A CALIBRATION METHOD ACCEPTABLE TO THE CITY OF GOLDSBORO. ALL COSTS ASSOCIATE WITH TESTING AND CERTIFICATION OF THE RELOCATED BACKFLOW PREVENTERS WILL BE INCIDENTAL TO THE PAY ITEMS FOR RELOCATE BACKFLOW PREVENTERS.

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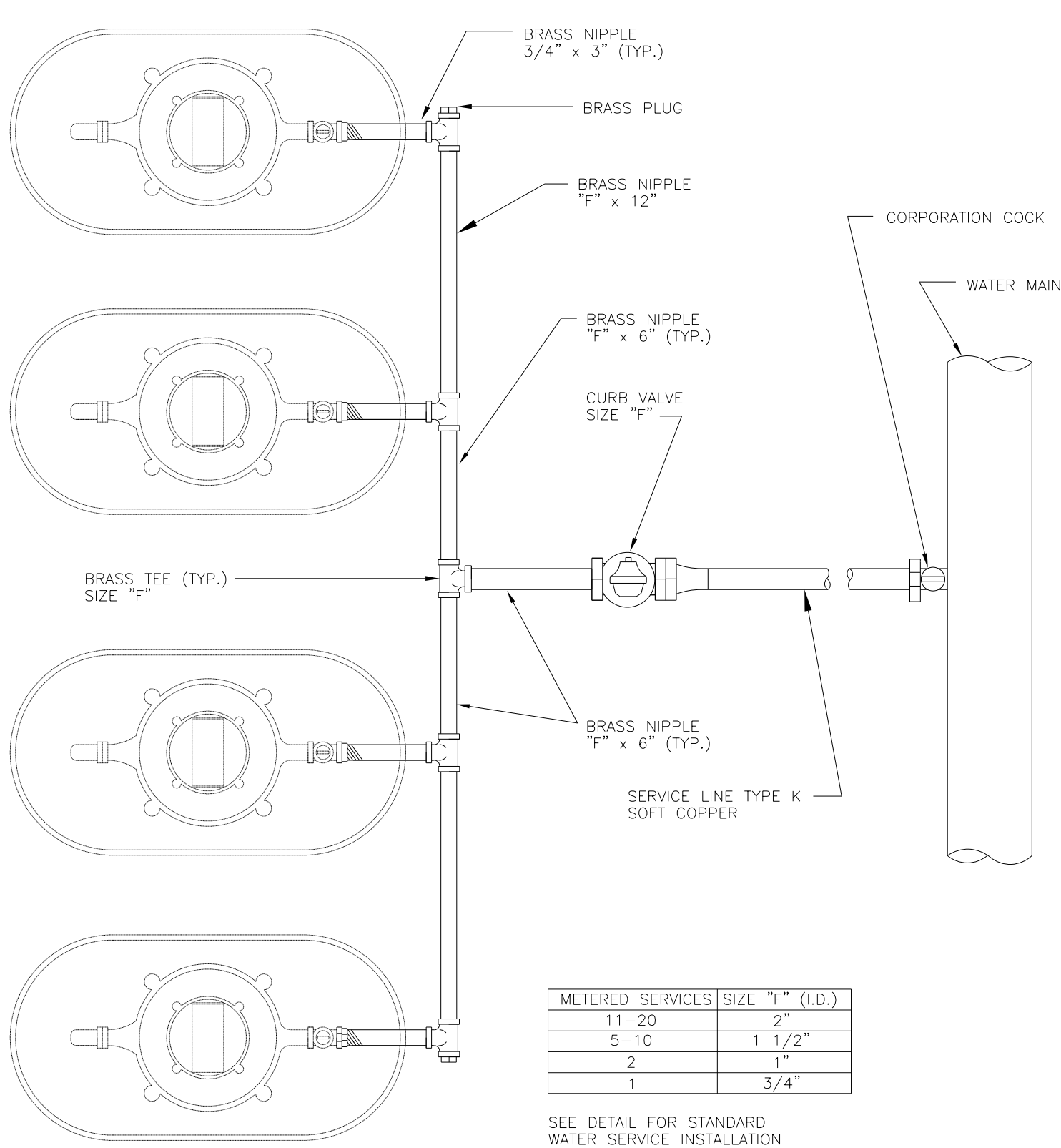
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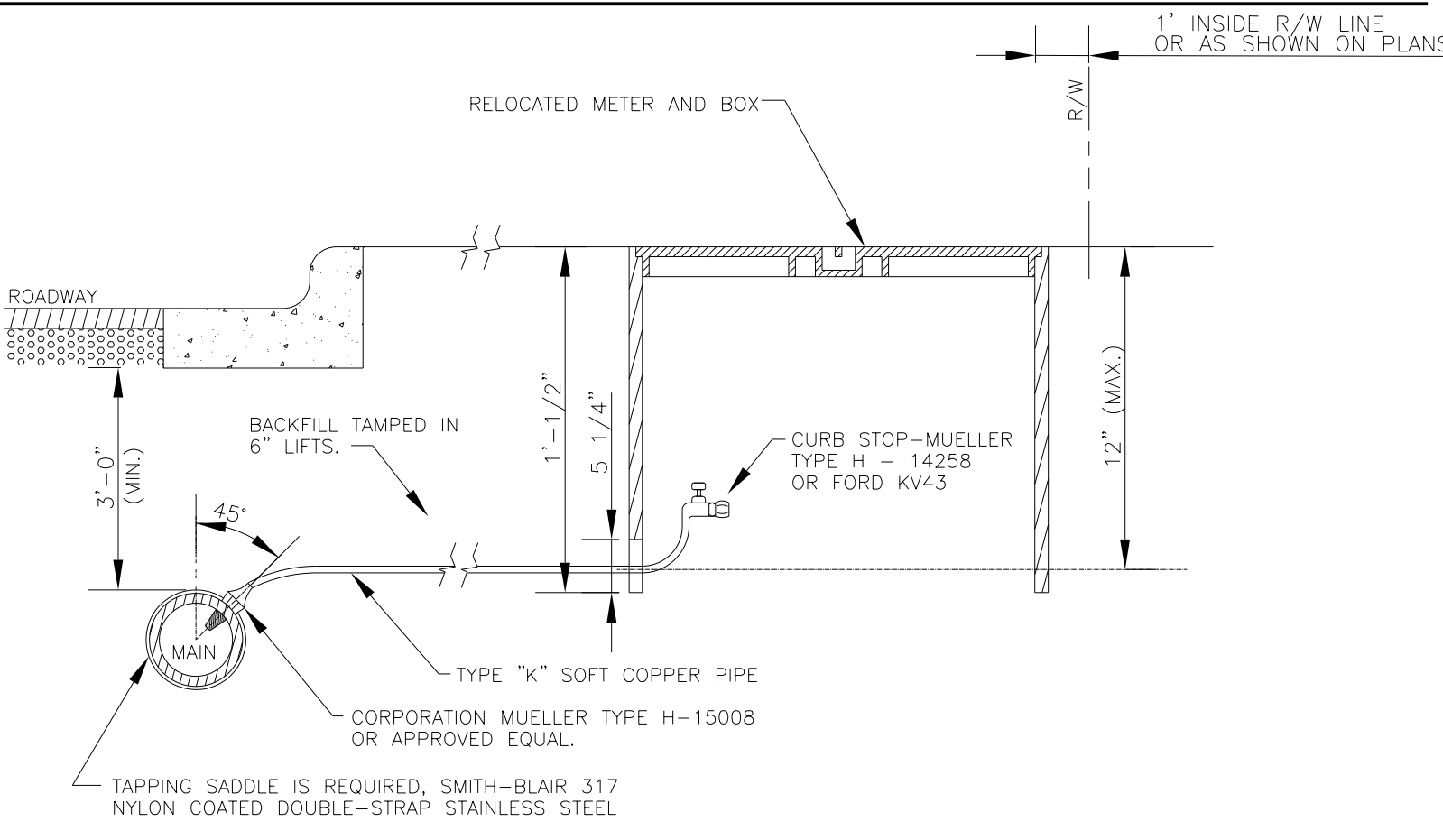
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DESIGNED BY: CDB	
DRAWN BY: JNA	
CHECKED BY: CLS	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

PROJECT TYPICAL DETAILS



STANDARD GANG METER ASSEMBLY

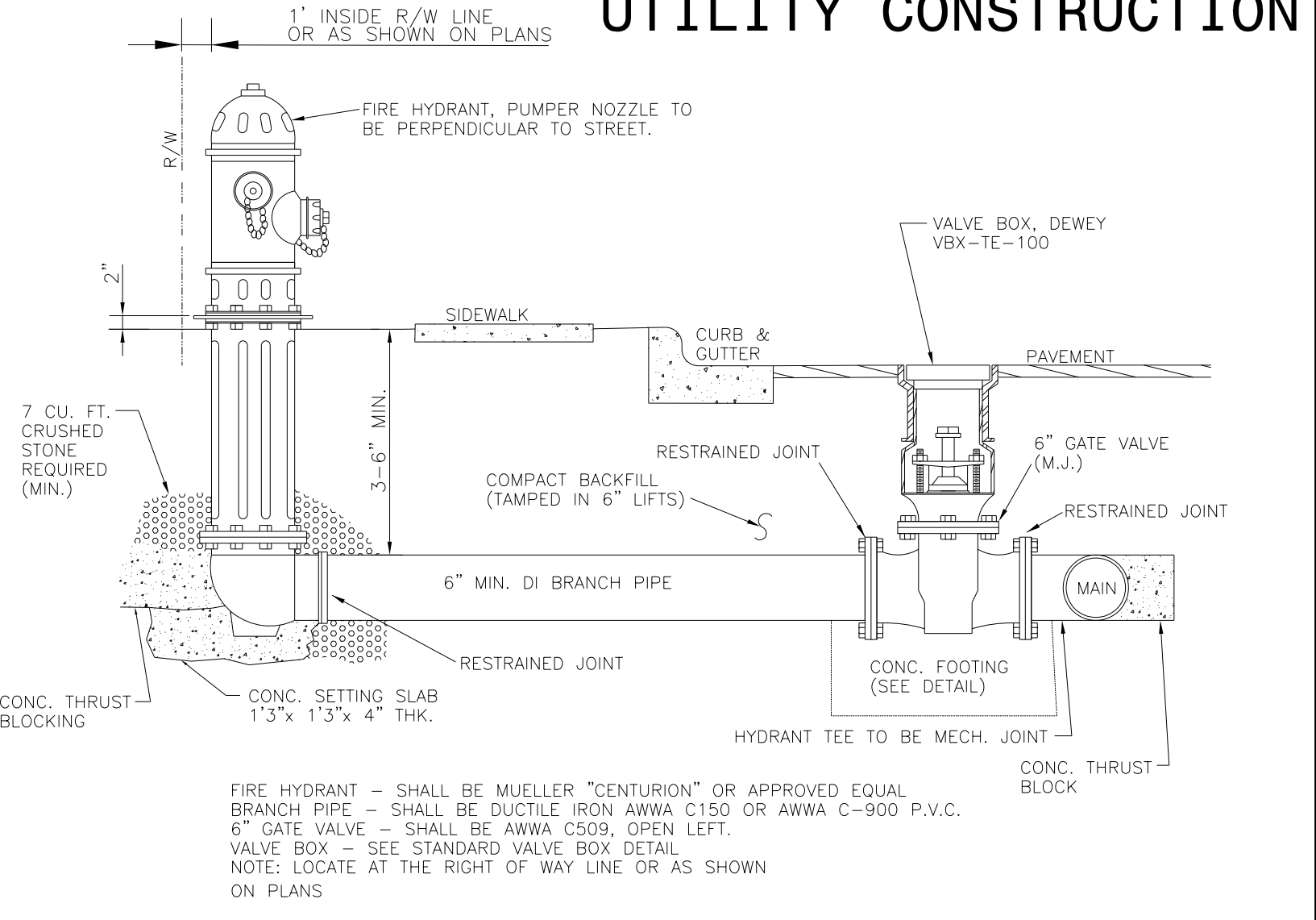
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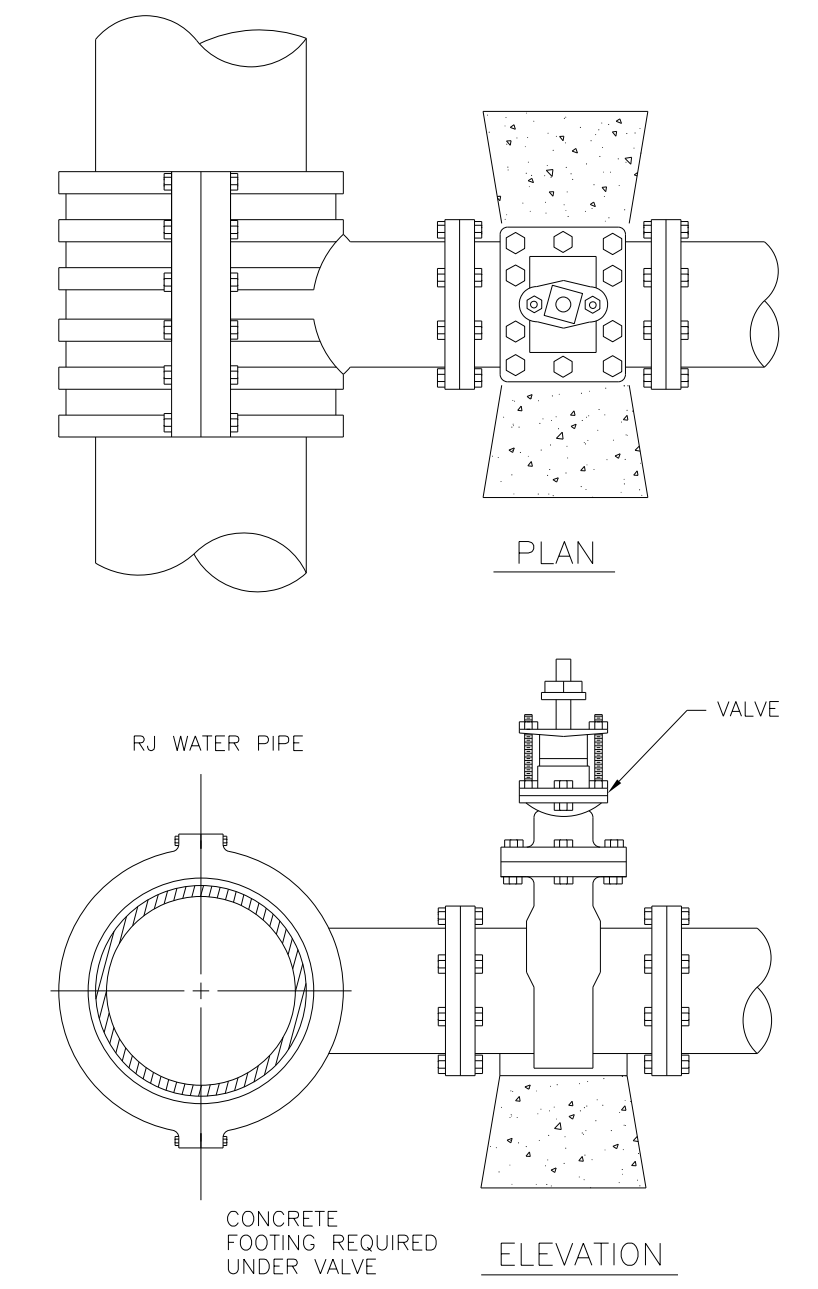
STANDARD WATER SERVICE INSTALLATION

NO SCALE

1. THE CITY RESERVES THE RIGHT TO ADD OR DELETE WATER SERVICE TAPS AND TO CHANGE LOCATIONS FROM THOSE SHOWN.
2. CONTRACTOR TO RELOCATE AND/OR ADJUST WATER METERS AND BOXES AS DIRECTED.
3. RELOCATE BACKFLOW PREVENTERS ON THE PROPERTY OWNER'S SIDE OF THE R/W LINE OR AS SHOWN ON THE PLANS.



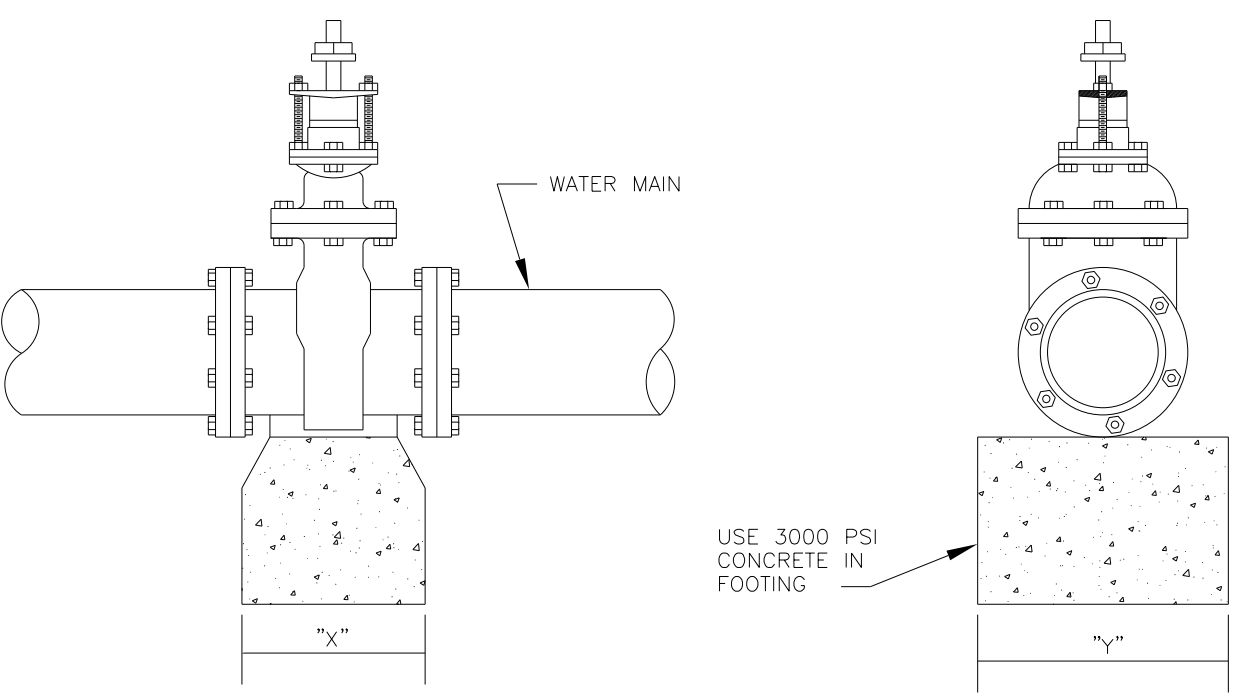
STANDARD FIRE HYDRANT INSTALLATION



STANDARD TAPPING SLEEVE & VALVE ASSEMBLY

NO SCALE

1. VALVES SHALL BE MUELLER OR APPROVED EQUAL. OPEN LEFT, TAPPING SLEEVE AND VALVE AS SPECIFIED IN DETAIL SPECIFICATIONS.
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.

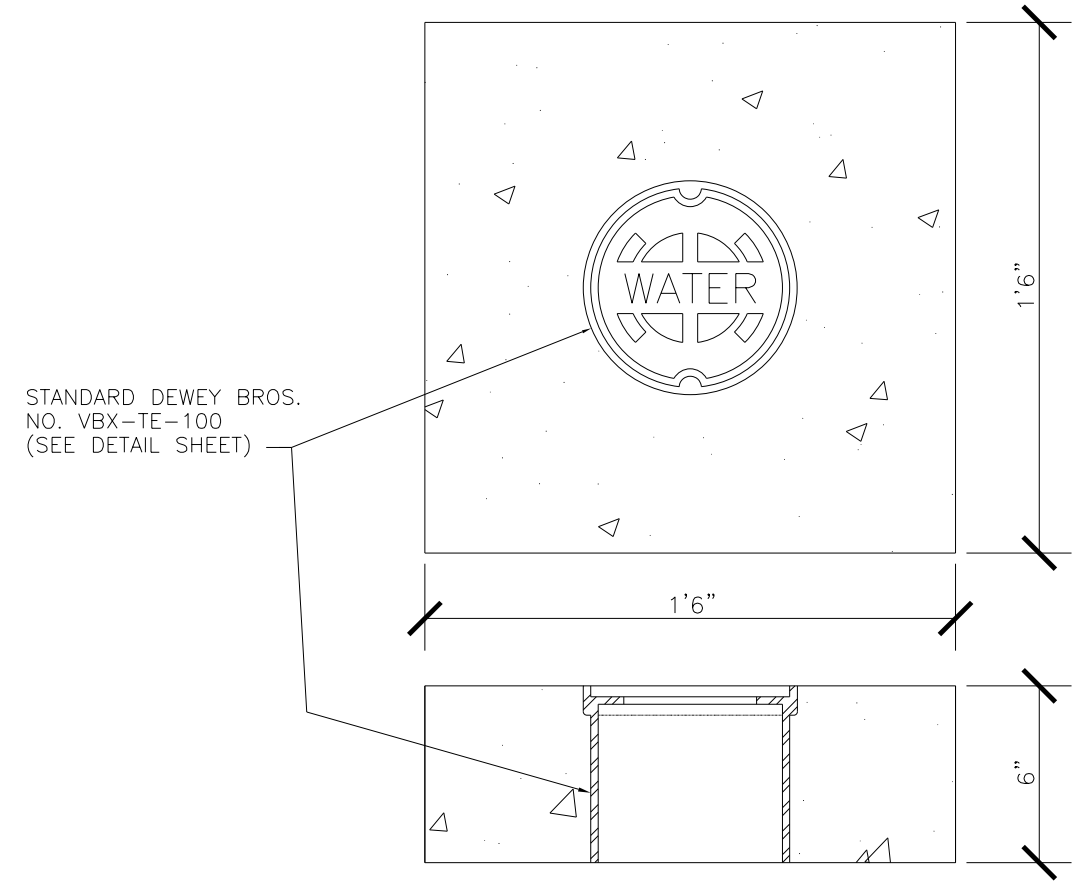


1. "X"x"Y" MUST EQUAL THE SQUARE FOOTAGE OF THE BEARING AREA AS SHOWN IN THE TABLE BELOW.

BEARING SURFACE AREA FOR VALVE FOOTINGS	
VALVE SIZE	6" 8"
QUICKSAND, POOR SOIL (1000 PSF)	7 12
GRAVEL, COURSE SAND (1600 PSF)	5 9
SOFT CLAY (2000 PSF)	4 6
FAIRLY DRY CLAY, CLEAN DRY SAND (4000 PSF)	2 3
DRY CLAY, COMPACT SAND (8000 PSF)	1 2

STANDARD VALVE FTG. FOR WATER MAINS

NO SCALE



STANDARD CONCRETE PAD FOR VALVE BOX

NO SCALE

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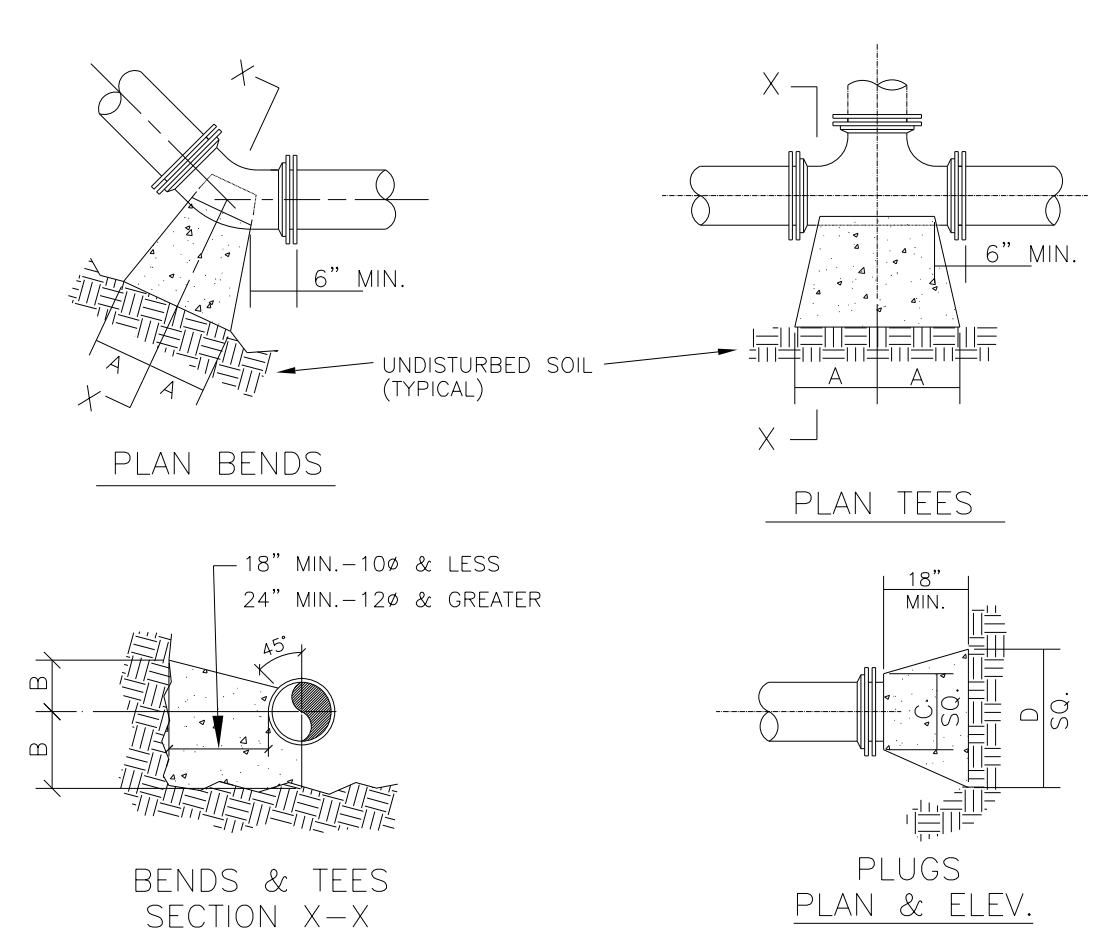
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CHECKED BY: CLS	
APPROVED BY: CDB	
REVISED:	
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UTILITY CONSTRUCTION PLANS ONLY	

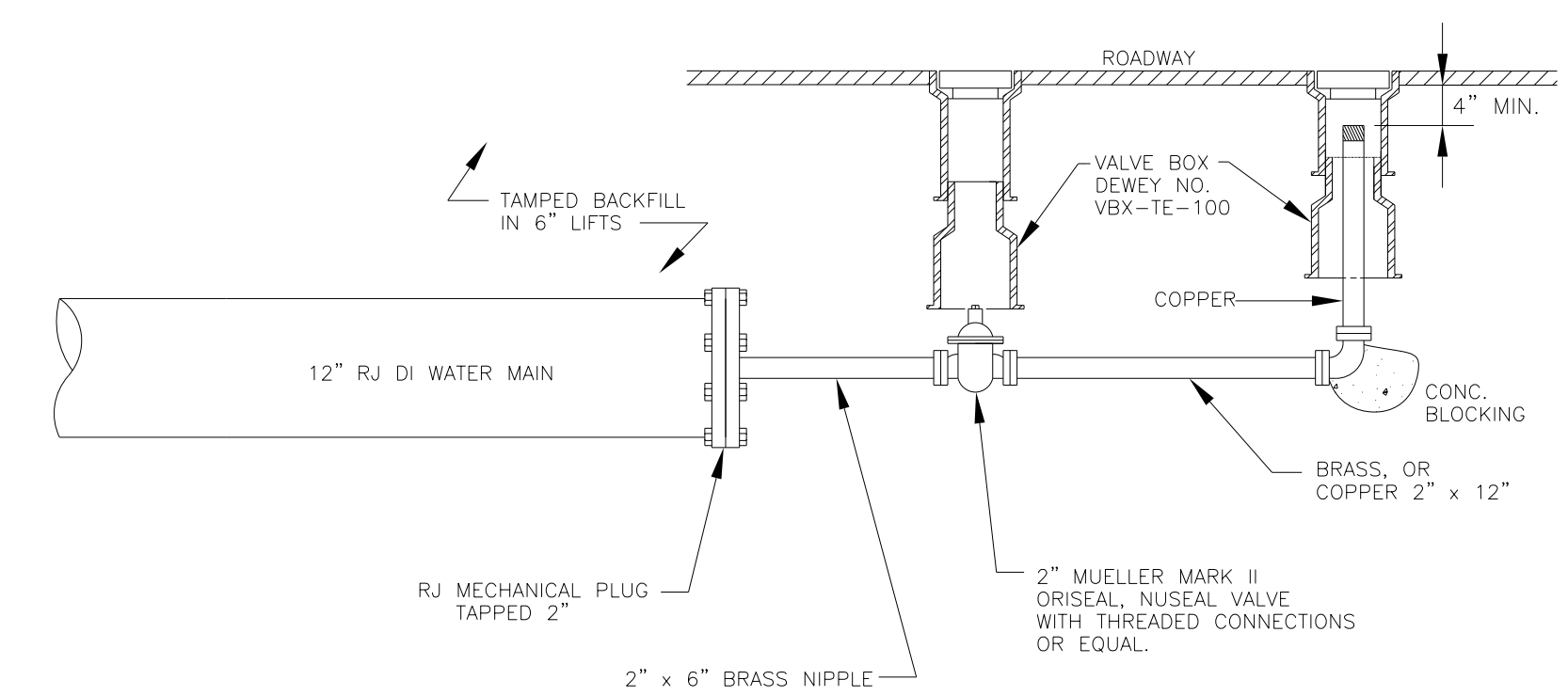
PROJECT TYPICAL DETAILS

UTILITY CONSTRUCTION

PIPE SIZE	90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND		TEE		PLUG	
	A	B	A	B	A	B	A	B	A	B	A	B
4"	8"	12"	8"	8"	6"	6"	6"	6"	8"	9"	6"	10"
6"	10"	12"	8"	10"	6"	8"	6"	8"	10"	10"	10"	12"
8"	15"	13"	10"	10"	8"	8"	8"	8"	10"	12"	12"	24"
10"	16"	14"	10"	12"	6"	10"	6"	10"	11"	14"	14"	25"
12"	19"	16"	12"	14"	8"	11"	8"	11"	14"	16"	16"	30"
16"	26"	20"	16"	18"	11"	13"	11"	13"	18"	20"	20"	36"
20"	30"	24"	31"	22"	21"	16"	12"	15"	36"	24"	24"	68"
24"	60"	28"	38"	26"	25"	20"	14"	17"	36"	28"	28"	70"

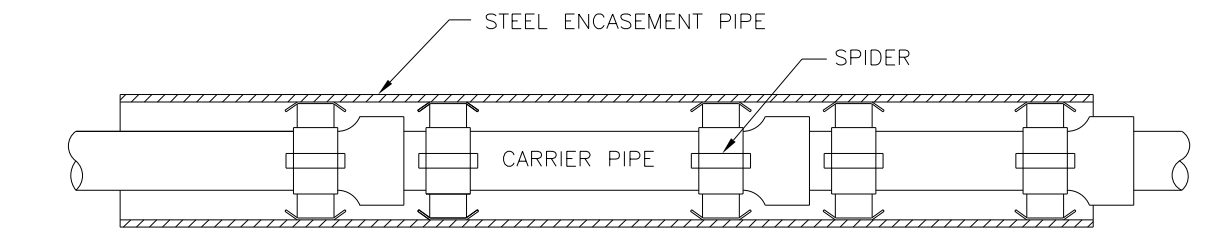
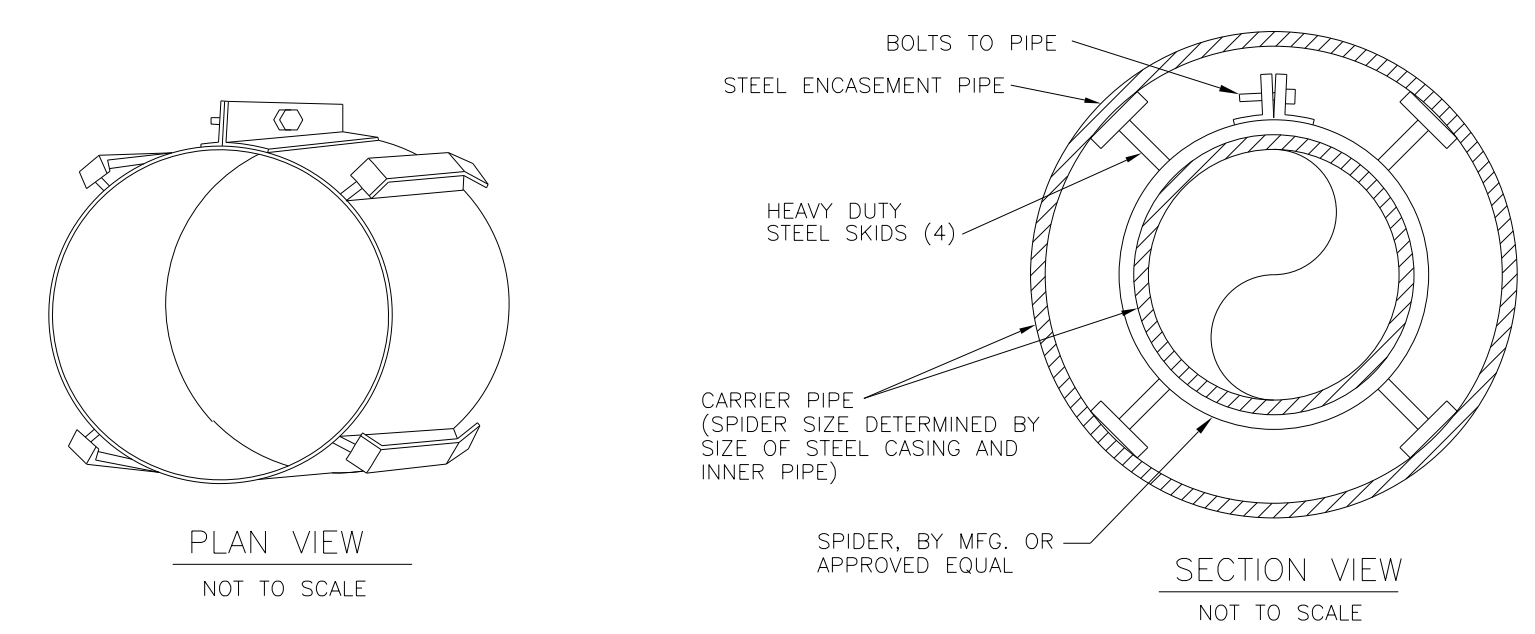


TYPICAL THRUST BLOCK DETAILS
 USE ONLY AT TIE-IN POINTS



STANDARD BLOW OFF DETAIL FOR 6" THRU 16" MAINS - TYPE 1

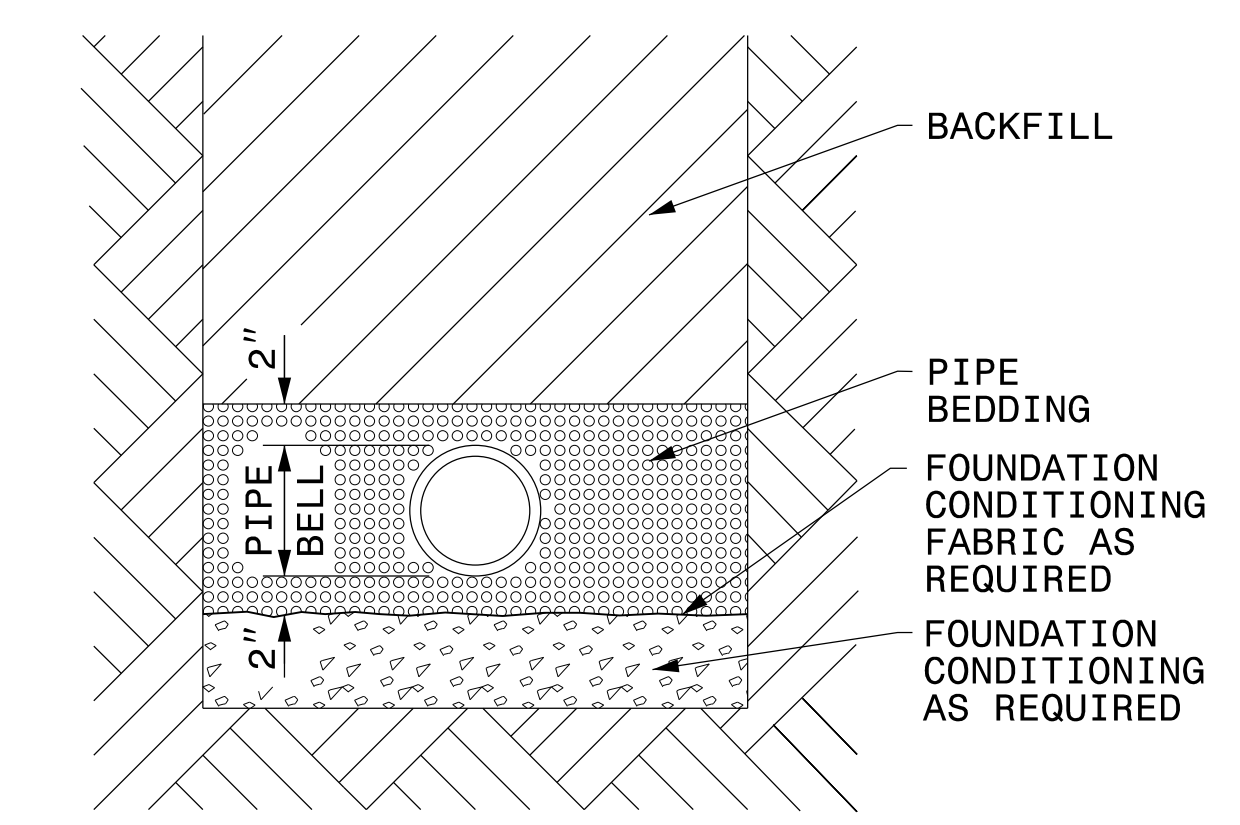
NO SCALE



SPIDER DETAIL

NO SCALE

WATER LINE TRENCH DETAIL



PLACE FOUNDATION CONDITIONING MATERIAL BELOW BEDDING IF REQUIRED, AS DIRECTED BY ENGINEER. PIPE BEDDED IN SELECT MATERIAL, CLASS II (TYPE 1) OR CLASS III. TRENCH BACKFILLED IN LOOSE 6" LAYERS COMPACTED TO TOP OF TRENCH USING LOCAL EXCAVATED MATERIAL IF APPROVED BY THE ENGINEER, OR SELECT MATERIAL. ALL MATERIAL SHALL BE FREE OF ROCKS, FOREIGN MATERIAL, AND FROZEN EARTH. COMPACTION SHALL BE TO APPROXIMATELY 95% DENSITY IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY THE DEPARTMENT OF TRANSPORTATION.

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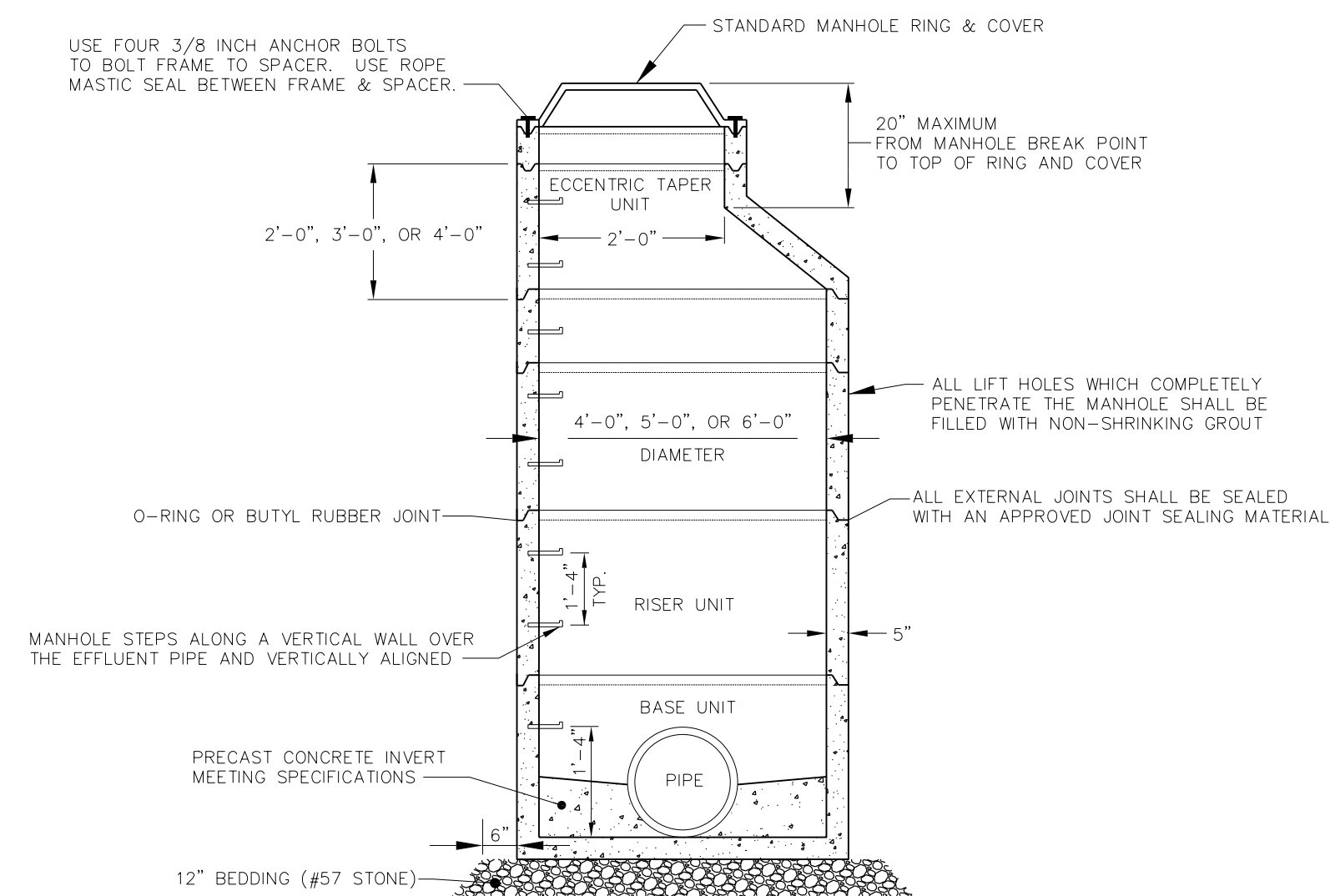
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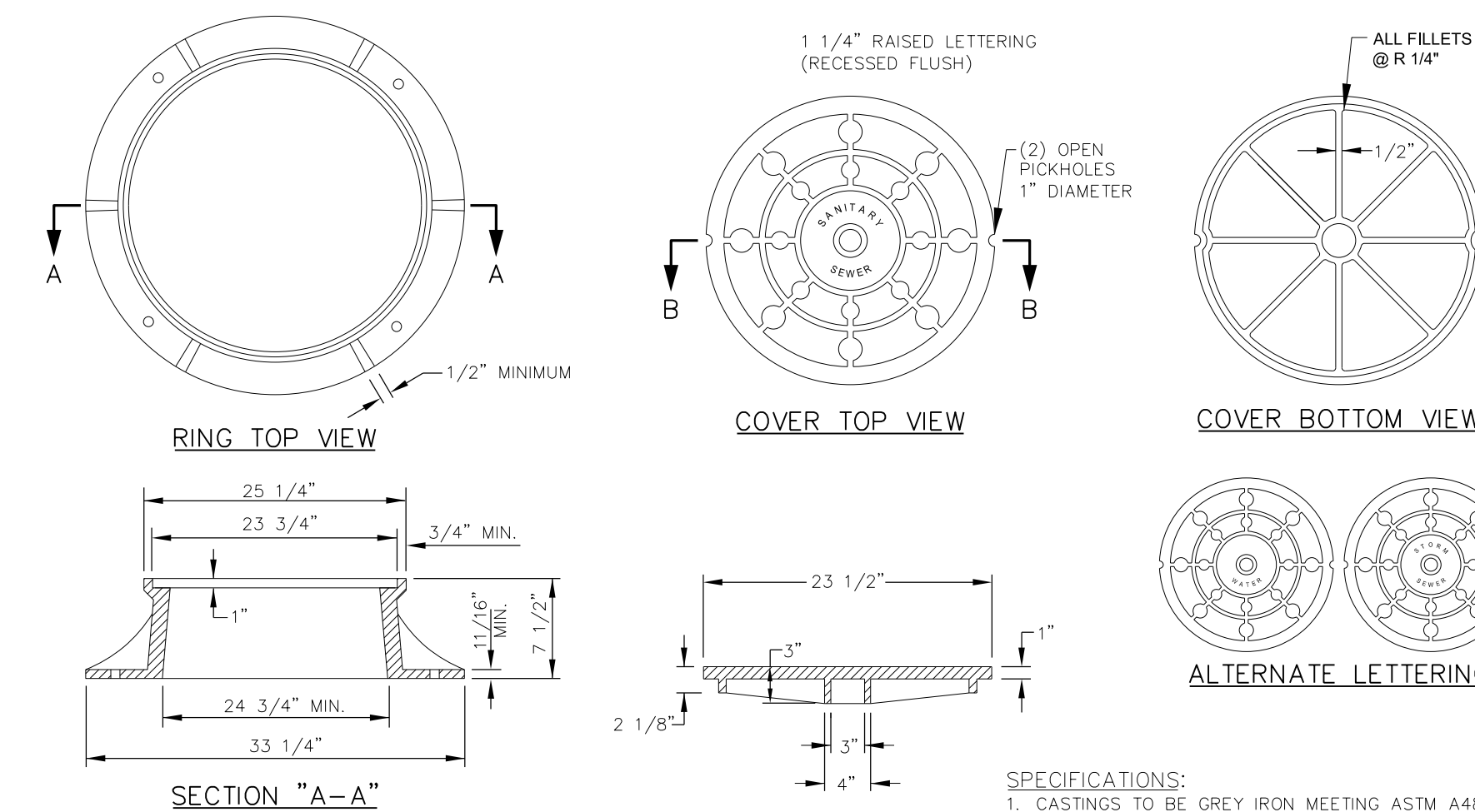
PROJECT REFERENCE NO. U-2714	SHEET NO. UC-3C
DESIGNED BY: CDB	
DRAWN BY: JNA	
CHECKED BY: CLS	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

PROJECT TYPICAL DETAILS

UTILITY CONSTRUCTION



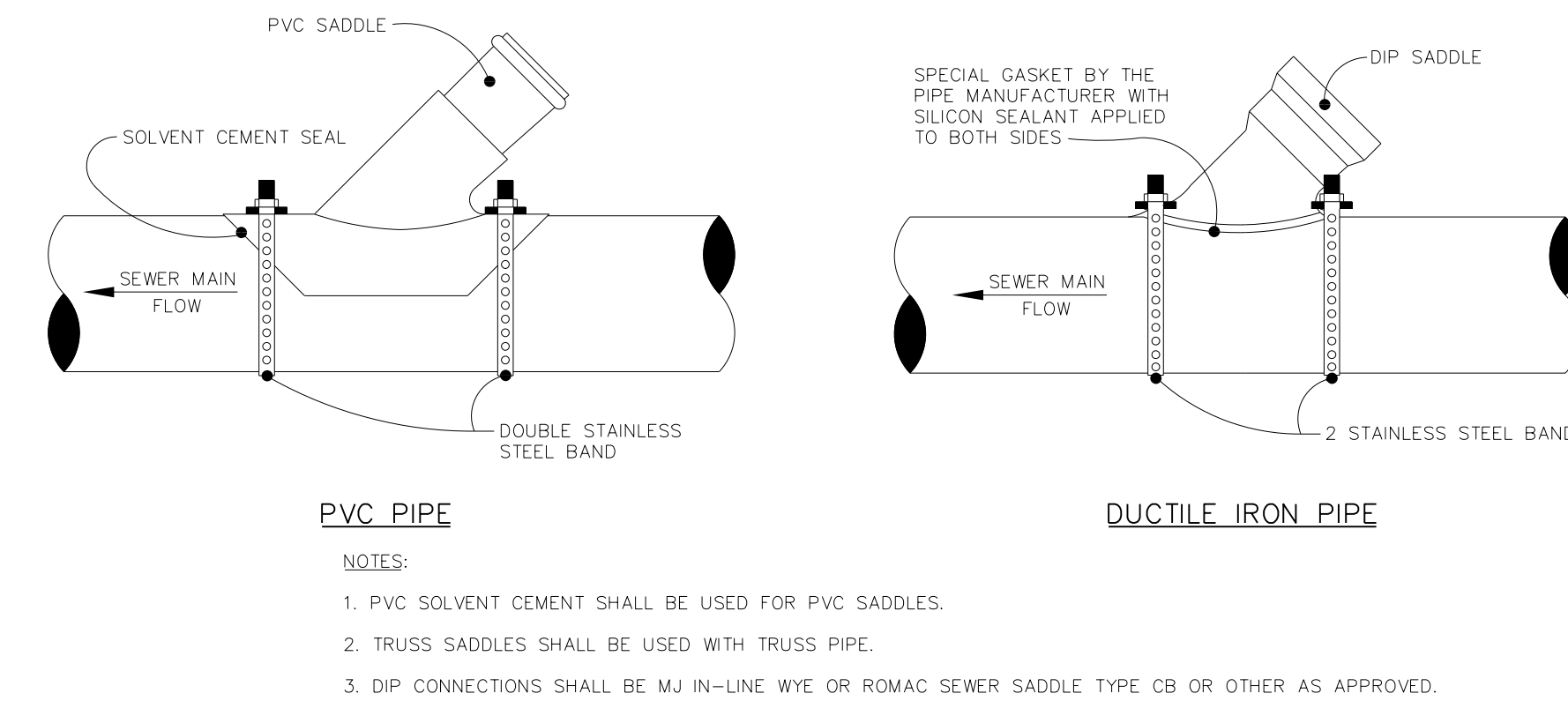
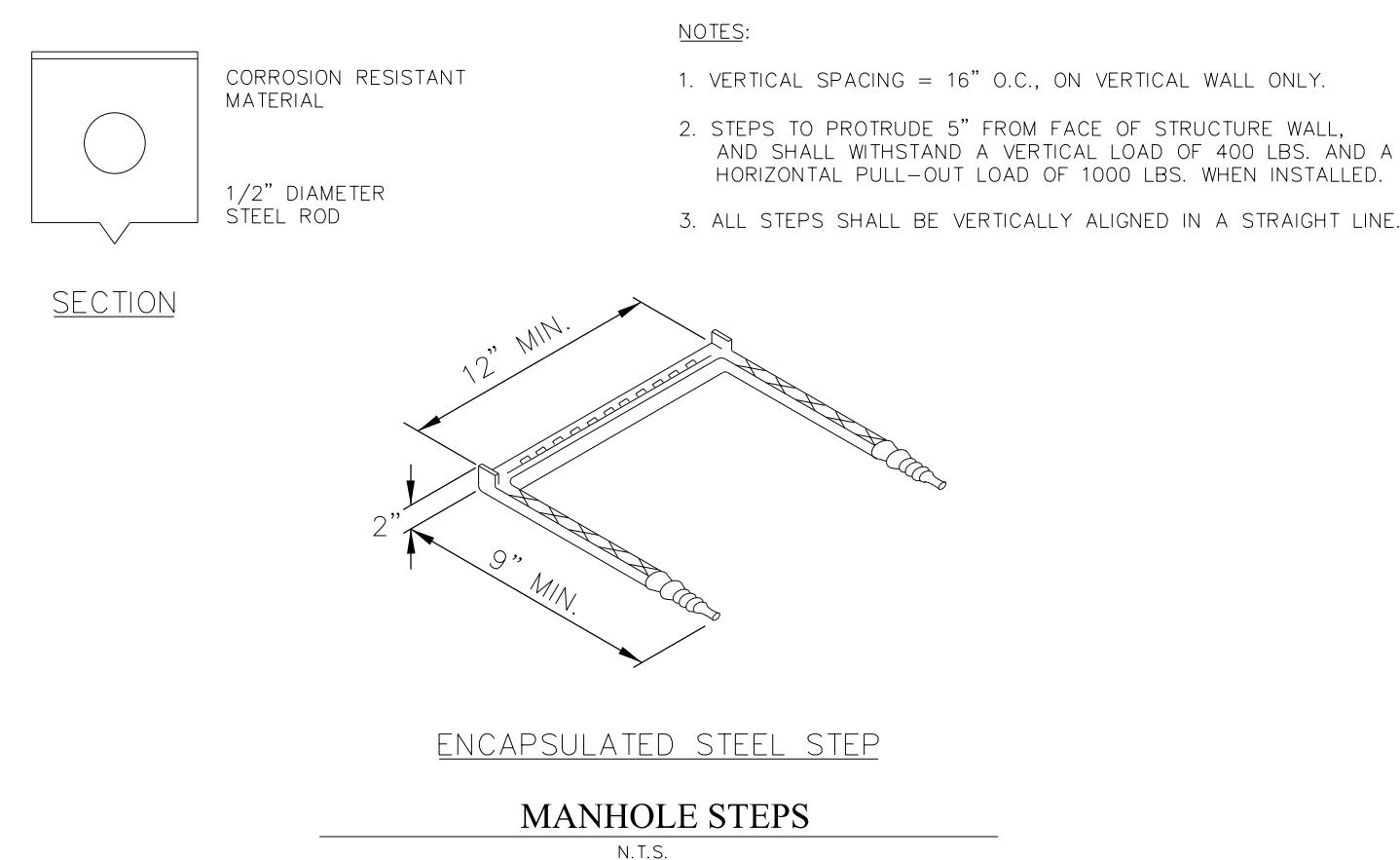
STANDARD PRECAST CONCRETE MANHOLE
N.T.S.



MINIMUM WEIGHTS	
RING	180
COVER	120
TOTAL	300

- SPECIFICATIONS:**
1. CASTINGS TO BE GREY IRON MEETING ASTM A48 CLASS 30.
 2. CASTINGS TO BE PAINTED IN BLACK ENAMEL PAINT.
 3. ALL LETTERING SHALL BE CLEAN, CRISP, AND CLEARLY LEGIBLE.
 4. DOMESTICALLY MADE & MANUFACTURED IN THE USA.

STANDARD MANHOLE RING AND COVER
N.T.S.



STANDARD SANITARY SEWER LATERAL CONNECTIONS
N.T.S.

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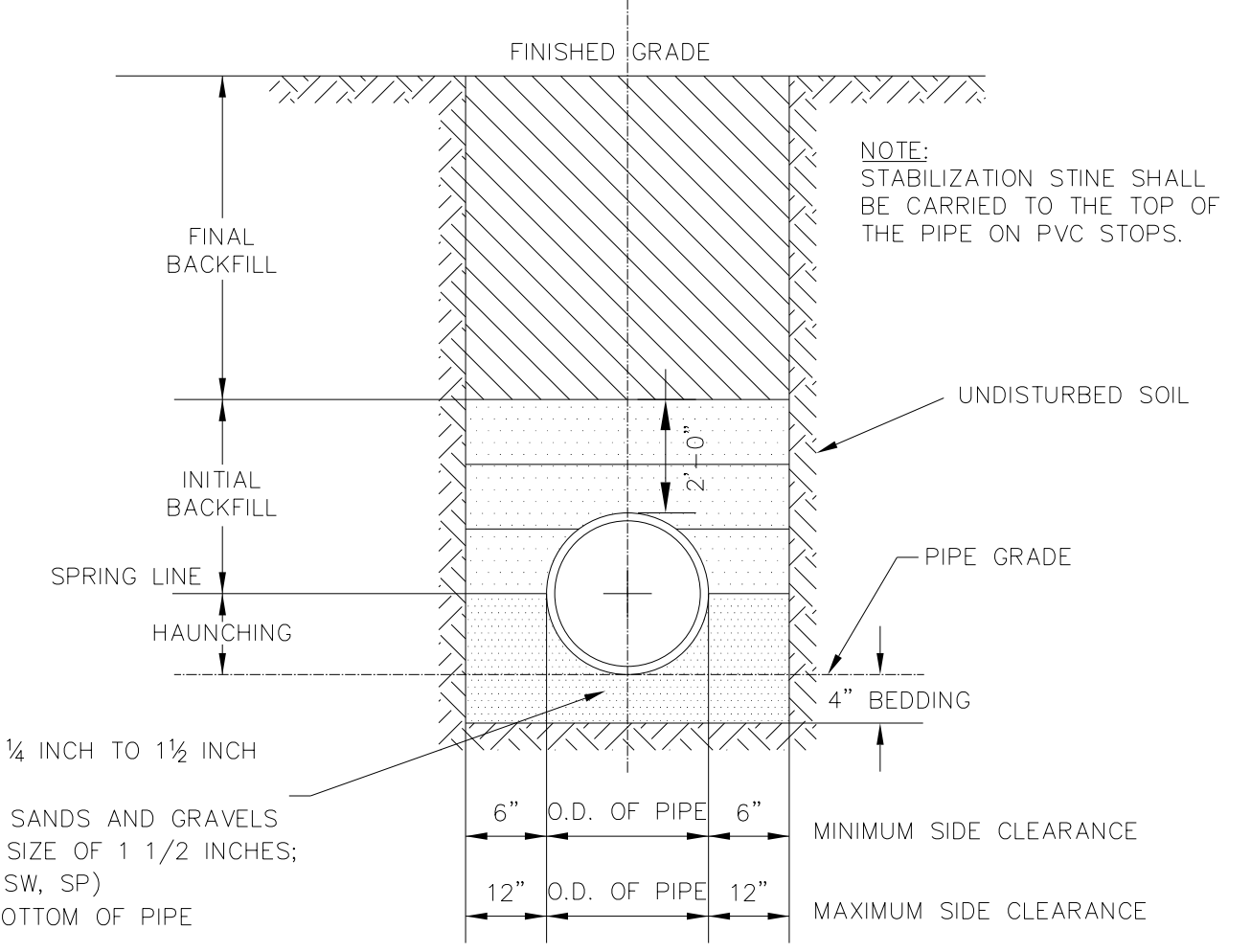
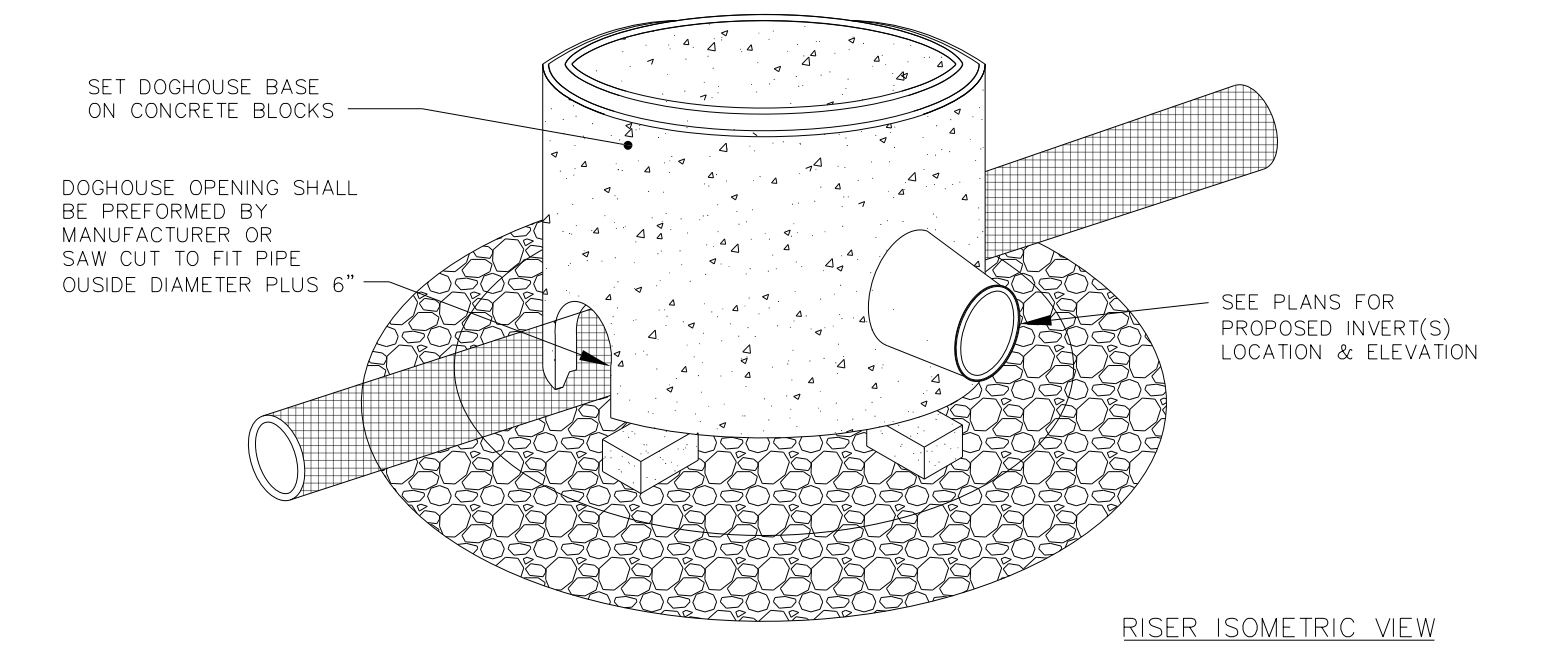
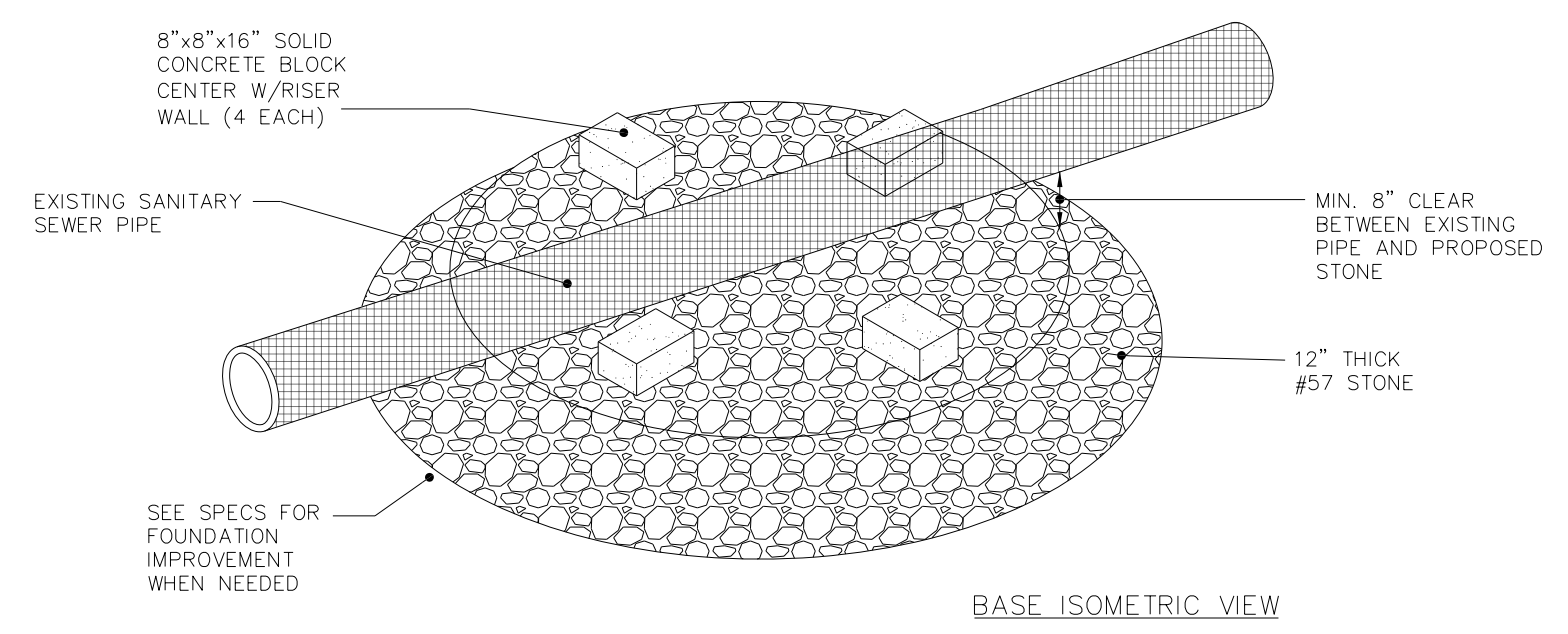
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 License No. C-2639
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PROJECT REFERENCE NO. U-2714	SHEET NO. UC-3D
DESIGNED BY: CDB	
DRAWN BY: JNA	
CHECKED BY: CLS	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC.	
PHONE: (919) 707-6690 FAX: (919) 251-0191	

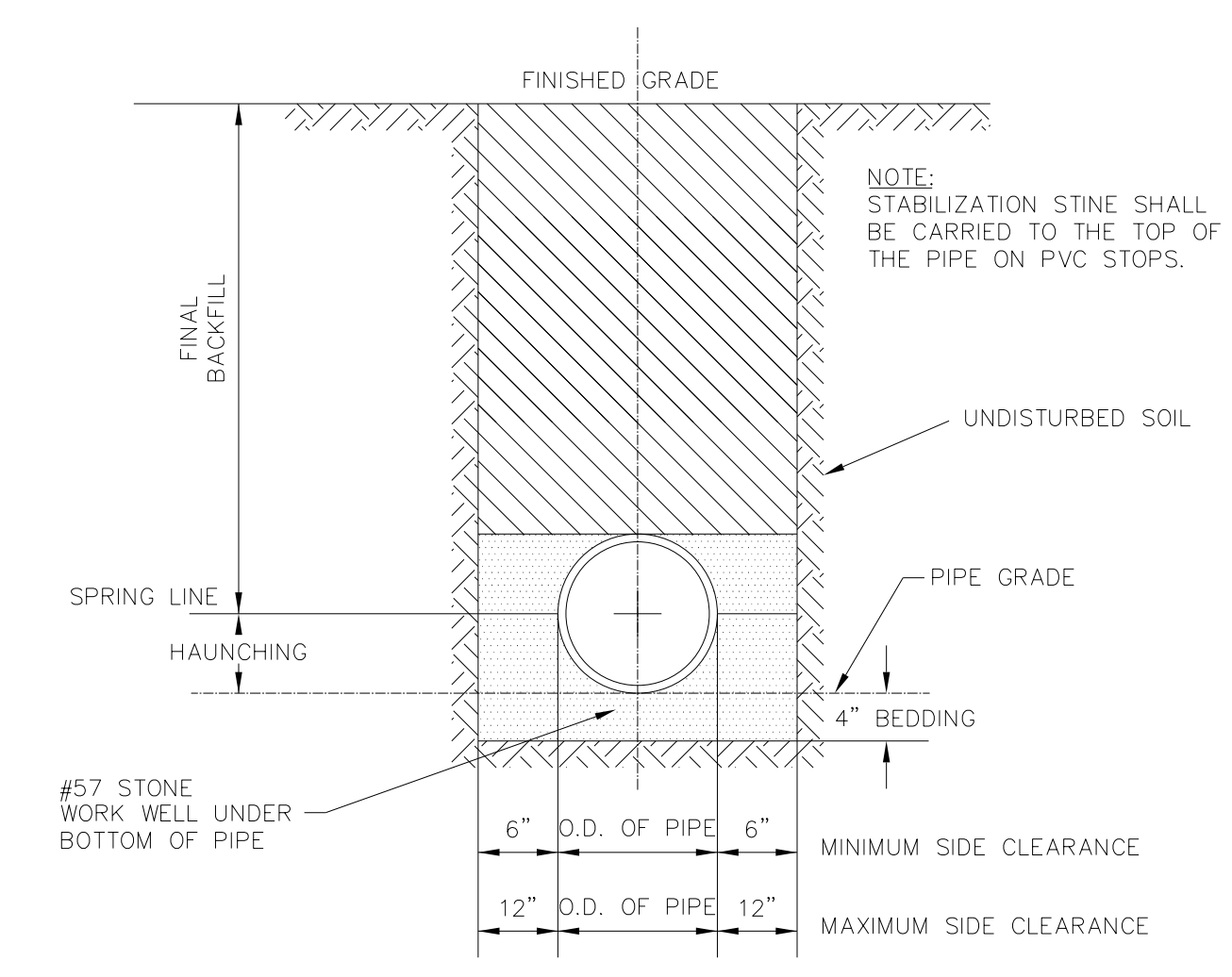
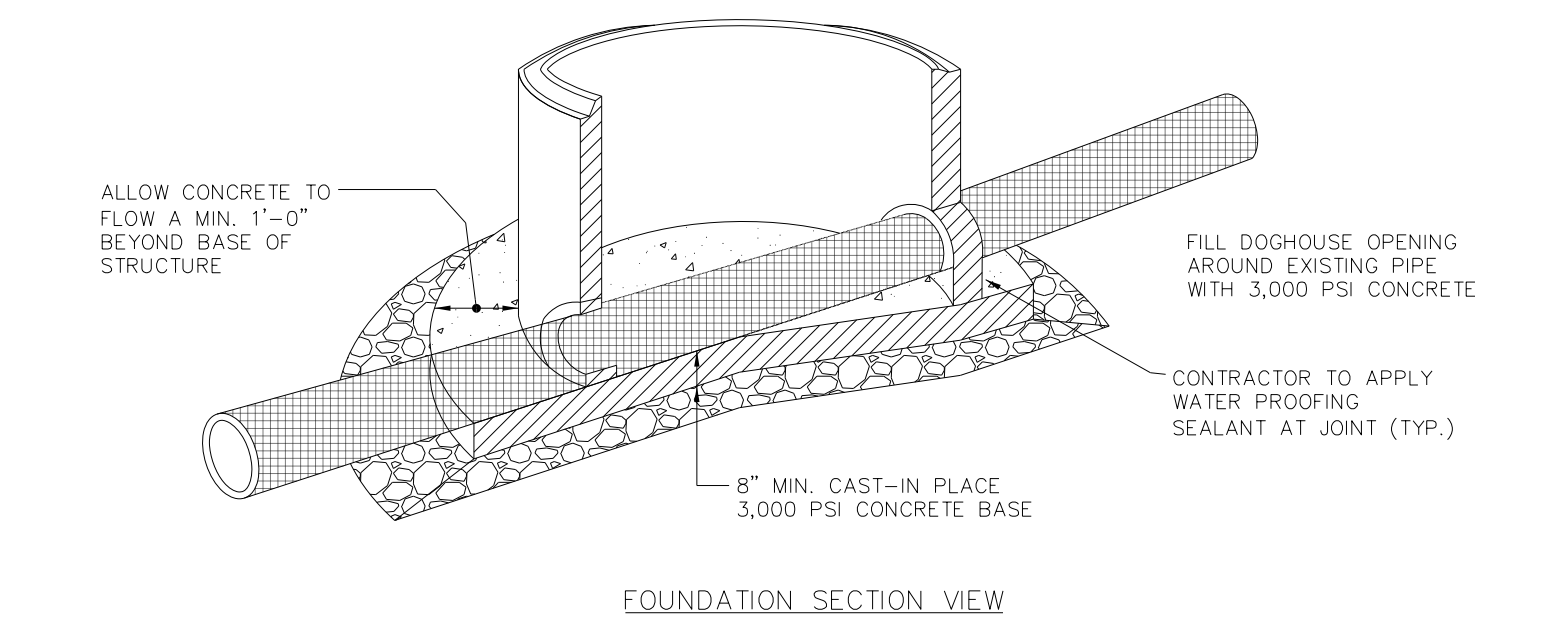
PROJECT TYPICAL DETAILS

UTILITY CONSTRUCTION

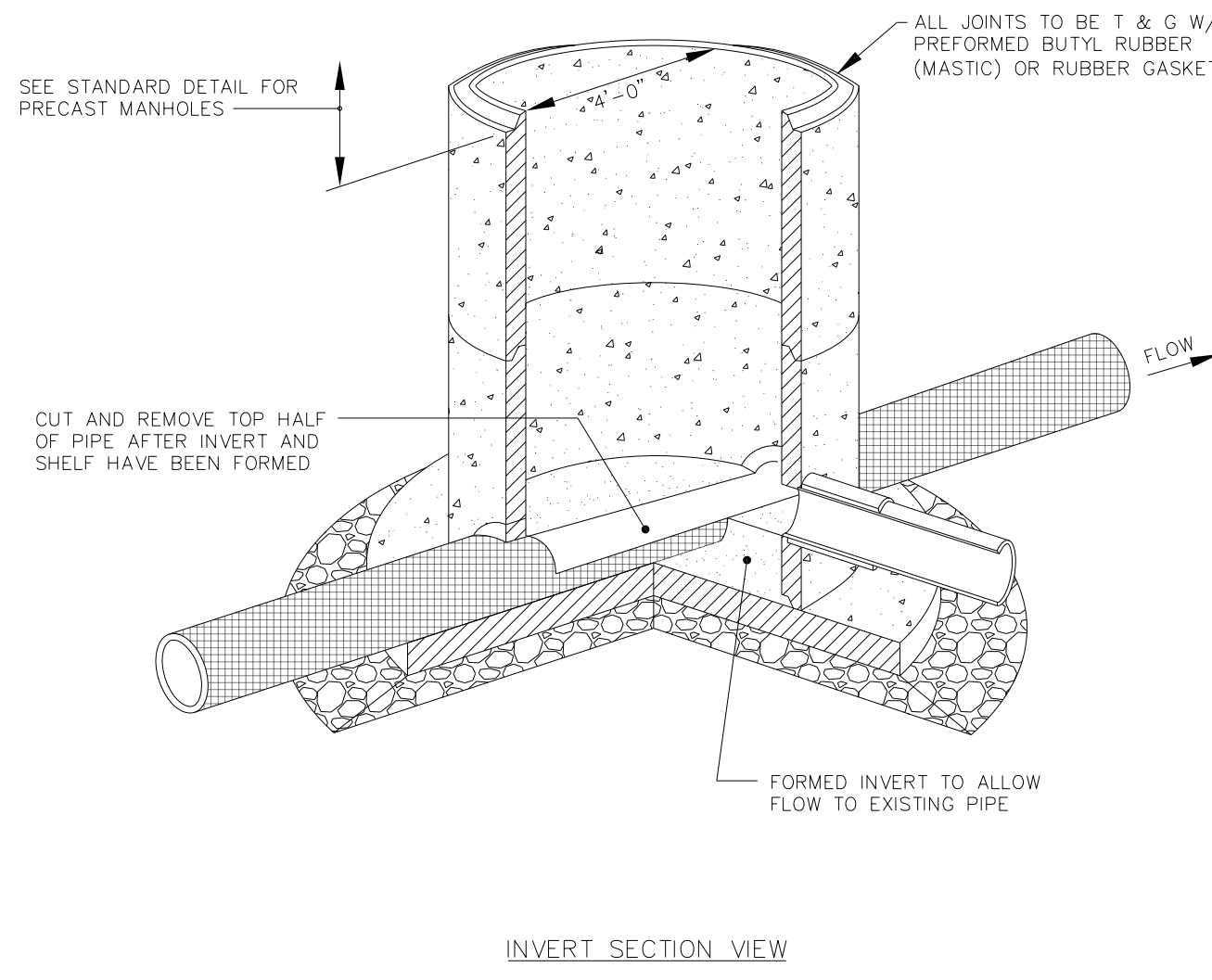
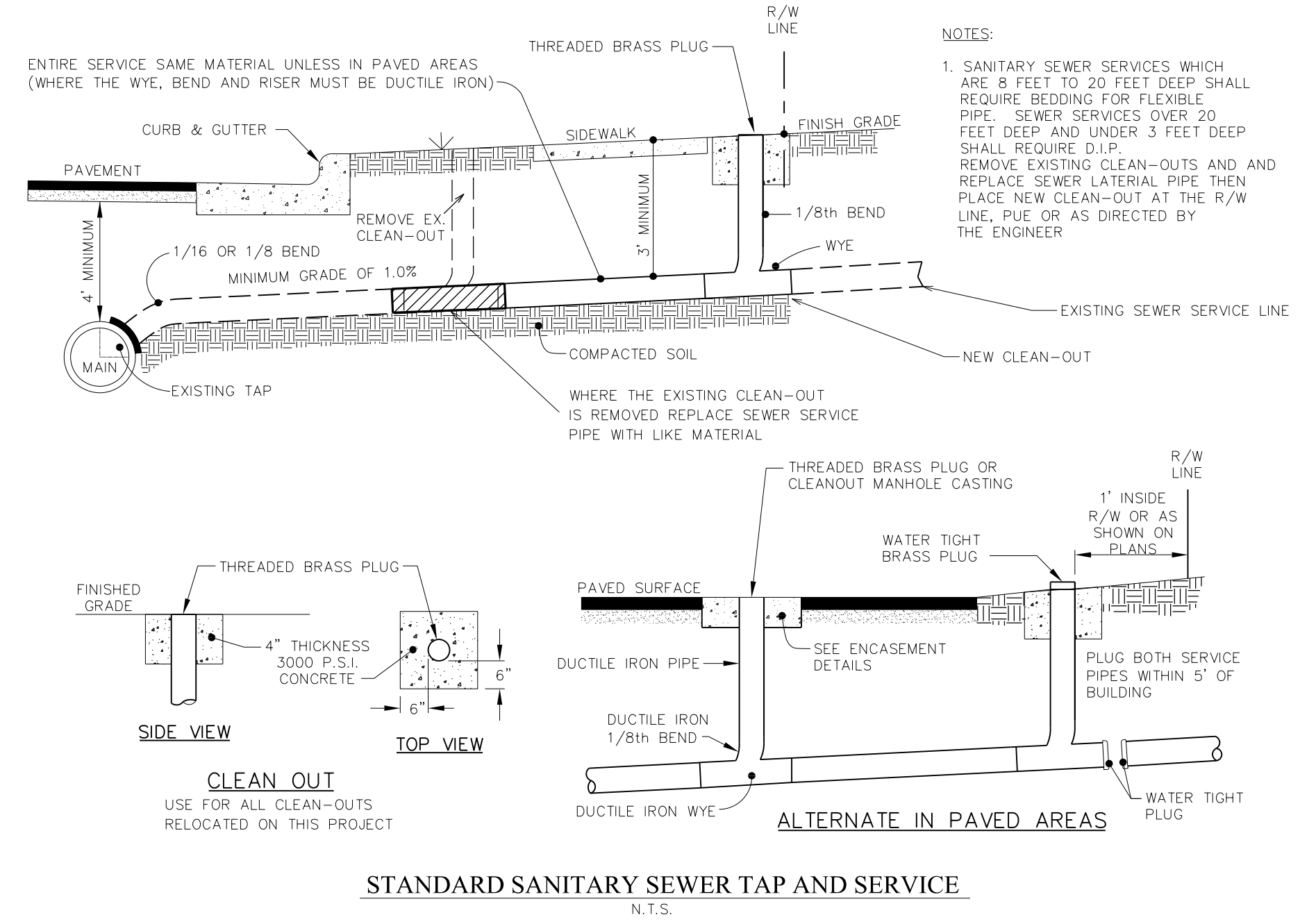


CLASS I - (ANULAR 1/4 INCH TO 1 1/2 INCH GRADE STONE) OR
 CLASS II - (COARSE SANDS AND GRAVELS WITH MAX. PARTICLE SIZE OF 1 1/2 INCHES; SOIL TYPES GW, GP, SW, SP)
 WORK WELL UNDER BOTTOM OF PIPE

STANDARD BACKFILLING REQUIREMENTS & TRENCH BOTTOM DIMENSIONS FOR: ABS COMPOSITE, DI, C-900-PVC PIPE AND PVC GRAVITY PIPE FOR SANITARY SEWER LINES
 N.T.S.



STANDARD BACKFILLING REQUIREMENTS & TRENCH BOTTOM DIMENSIONS FOR: SDR-35 PVC GRAVITY PIPE
 N.T.S.



- NOTES:**
- 1 - FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM INSIDE FACE OF THE SHORING AND BRACING.
 - 2 - STABILIZATION STONE SHALL BE INSTALLED AS SHOWN ABOVE WHEN DIRECTED BY ENGINEER.
 - 3 - NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN THE INITIAL BACKFILL.
 - 4 - ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL, UNLESS SELECT BACKFILL APPROVED BY ENGINEER.
 - 5 - BACKFILL SHALL BE TAMPED IN 6" LAYERS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.

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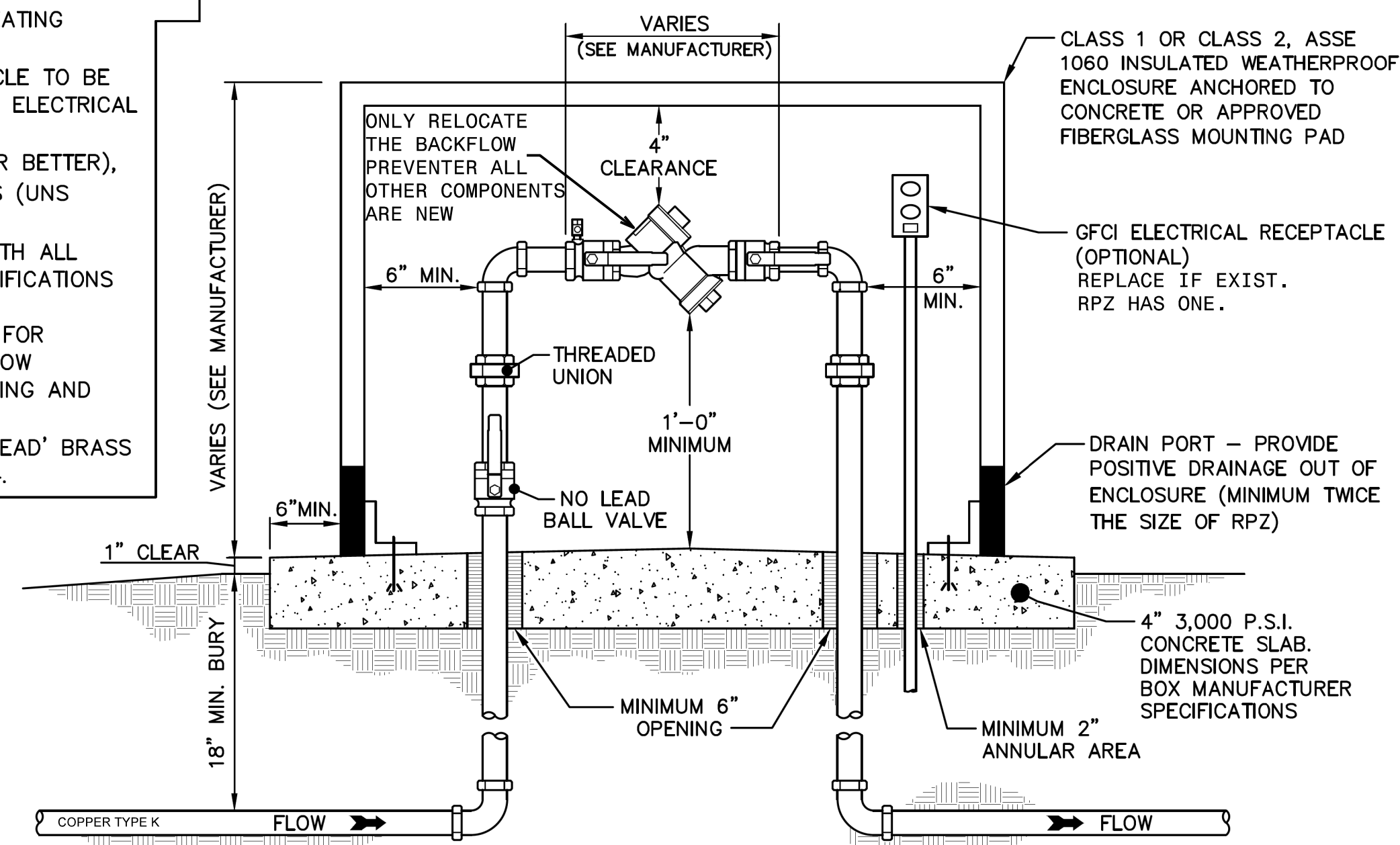
**DOCUMENT NOT CONSIDERED FINAL
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PROJECT REFERENCE NO. U-2714	SHEET NO. UC-3E
DESIGNED BY: CDB	
DRAWN BY: JNA	
CHECKED BY: CLS	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

PROJECT TYPICAL DETAILS

UTILITY CONSTRUCTION

- NOTES:**
1. REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY SHALL COMPLY WITH ASSE 1013 & AWWA C511.
 2. DOUBLE CHECK VALVE BACKFLOW PREVENTION ASSEMBLY SHALL COMPLY WITH ASSE 1015 & AWWA C510.
 3. BACKFLOW PREVENTION ASSEMBLY SHALL BE INSTALLED WITHIN 5 FEET OF THE METER BOX.
 4. BACKFLOW PREVENTION ASSEMBLY SHALL BE CENTERED ON CONCRETE OR APPROVED FIBERGLASS MOUNTING PAD AND CENTERED WITHIN ENCLOSURE.
 5. MINIMUM INSULATED CLASS I OR CLASS II, ASSE 1060 WEATHERPROOF ENCLOSURE REQUIRED (HEATING OPTIONAL).
 6. OPTIONAL 120V GFCI ELECTRICAL RECEPTACLE TO BE INSTALLED IN ACCORDANCE WITH THE N.C. ELECTRICAL CODE FOR OUTDOOR OPERATION.
 7. PIPE MATERIAL SHALL BE PVC (SCH. 80 OR BETTER), C.T.S. POLY-TUBING, OR 'NO LEAD' BRASS (UNS C89833 PER ASTM B584).
 8. INSTALLATION SHALL BE IN COMPLIANCE WITH ALL APPLICABLE TOWN ORDINANCES AND SPECIFICATIONS IN ADDITION TO THE N.C. PLUMBING CODE.
 9. PROPERTY OWNER SHALL BE RESPONSIBLE FOR MAINTENANCE AND OPERATION OF BACKFLOW ASSEMBLY AND COMPLIANCE WITH REPORTING AND TESTING REQUIREMENTS.
 10. ALL BRASS COMPONENTS SHALL BE 'NO LEAD' BRASS MEETING UNS C89833 AS PER ASTM B584.



STANDARD 1" TO 2 1/2" COMMERCIAL OUTDOOR BACKFLOW ASSEMBLY

DETAIL No.
07000.03
SHEET 1 OF 1

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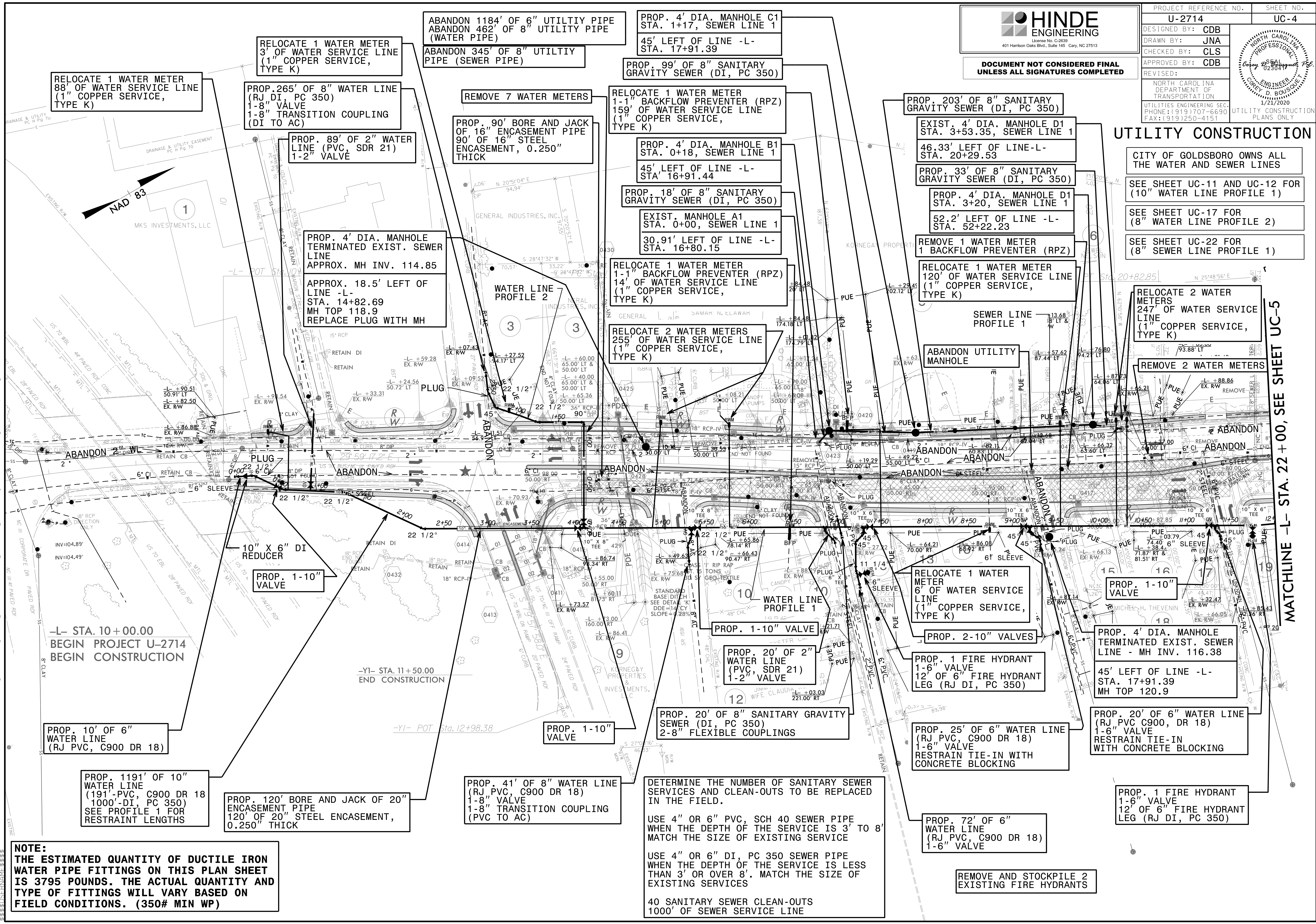
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PROJECT REFERENCE NO.	SHEET NO.
U-2714	UC-4
DESIGNED BY: CDB	
DRAWN BY: JNA	
CHECKED BY: CLS	
APPROVED BY: CDB	
REVISED:	UTILITY CONSTRUCTION PLANS ONLY
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SECTION PHONE: (919) 707-6690 FAX: (919) 250-4151	

UTILITY CONSTRUCTION

- CITY OF GOLDSBORO OWNS ALL THE WATER AND SEWER LINES
- SEE SHEET UC-11 AND UC-12 FOR (10" WATER LINE PROFILE 1)
- SEE SHEET UC-17 FOR (8" WATER LINE PROFILE 2)
- SEE SHEET UC-22 FOR (8" SEWER LINE PROFILE 1)

MATCHLINE -L- STA. 22 + 00, SEE SHEET UC-5



NOTE:
 THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 3795 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS. (350# MIN WP)

DETERMINE THE NUMBER OF SANITARY SEWER SERVICES AND CLEAN-OUTS TO BE REPLACED IN THE FIELD.

USE 4" OR 6" PVC, SCH 40 SEWER PIPE WHEN THE DEPTH OF THE SERVICE IS 3' TO 8' MATCH THE SIZE OF EXISTING SERVICE

USE 4" OR 6" DI, PC 350 SEWER PIPE WHEN THE DEPTH OF THE SERVICE IS LESS THAN 3' OR OVER 8'. MATCH THE SIZE OF EXISTING SERVICES

40 SANITARY SEWER CLEAN-OUTS
 1000' OF SEWER SERVICE LINE

REMOVE AND STOCKPILE 2 EXISTING FIRE HYDRANTS

2: JAN-2020 14:42 PROJECTS\2015\A2015902.00 HDR - U-2714 Wayne County\Design\Utilities\Engineering\UC-Proj\U-2714-ut-rdy-4-UC04_psh.dgn
 2: JAN-2020 14:42 PROJECTS\2015\A2015902.00 HDR - U-2714 Wayne County\Design\Utilities\Engineering\UC-Proj\U-2714-ut-rdy-4-UC04_psh.dgn



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ABANDON 905' OF 6" UTILITY PIPE
ABANDON 1057' OF 10" UTILITY PIPE
ABANDON 438' OF 12" UTILITY PIPE
(WATER PIPE)

ABANDON 156' OF 8" UTILITY PIPE
(SEWER PIPE)

CITY OF GOLDSBORO OWNS ALL
THE WATER AND SEWER LINES

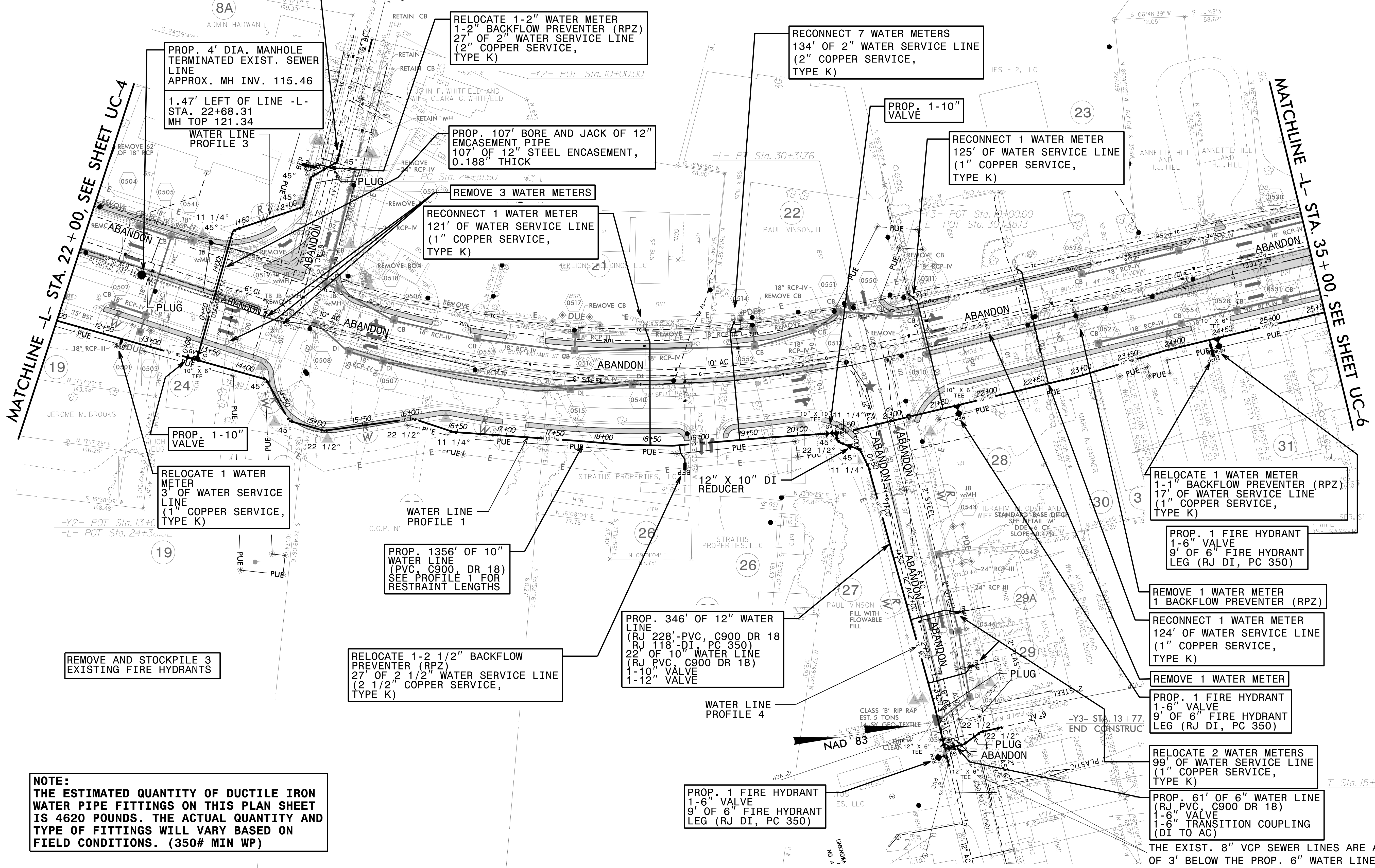
SEE SHEET UC-12 AND UC-13 FOR
(10" WATER LINE PROFILE 1)

SEE SHEET UC-17 FOR
(6" WATER LINE PROFILE 3)

SEE SHEET UC-18 FOR
(12" WATER LINE PROFILE 4)

PROJECT REFERENCE NO.	SHEET NO.
U-2714	UC-5
DESIGNED BY: CDB	
DRAWN BY: JNA	
CHECKED BY: CLS	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



PROP. 296' OF 6" WATER LINE (RJ DI, PC 350) 1-6" VALVE 1-6" TRANSITION COUPLING (DI TO AC)

PROP. 4' DIA. MANHOLE TERMINATED EXIST. SEWER LINE APPROX. MH INV. 115.46

1.47' LEFT OF LINE -L- STA. 22+68.31 MH TOP 121.34 WATER LINE PROFILE 3

RELOCATE 1-2" WATER METER 1-2" BACKFLOW PREVENTER (RPZ) 27' OF 2" WATER SERVICE LINE (2" COPPER SERVICE, TYPE K)

PROP. 107' BORE AND JACK OF 12" EMCASEMENT PIPE 107' OF 12" STEEL ENCASEMENT, 0.188" THICK

REMOVE 3 WATER METERS

RECONNECT 1 WATER METER 121' OF WATER SERVICE LINE (1" COPPER SERVICE, TYPE K)

RECONNECT 7 WATER METERS 134' OF 2" WATER SERVICE LINE (2" COPPER SERVICE, TYPE K)

PROP. 1-10" VALVE

RECONNECT 1 WATER METER 125' OF WATER SERVICE LINE (1" COPPER SERVICE, TYPE K)

PROP. 1-10" VALVE

RELOCATE 1 WATER METER 3' OF WATER SERVICE LINE (1" COPPER SERVICE, TYPE K)

WATER LINE PROFILE 1

PROP. 1356' OF 10" WATER LINE (PVC, C900, DR 18) SEE PROFILE 1 FOR RESTRAINT LENGTHS

PROP. 346' OF 12" WATER LINE (RJ 228'-PVC, C900 DR 18 RJ 118'-DI, PC 350) 22' OF 10" WATER LINE (RJ PVC, C900 DR 18) 1-10" VALVE 1-12" VALVE

WATER LINE PROFILE 4

RELOCATE 1-2 1/2" BACKFLOW PREVENTER (RPZ) 27' OF 2 1/2" WATER SERVICE LINE (2 1/2" COPPER SERVICE, TYPE K)

RELOCATE 1 WATER METER 1-1" BACKFLOW PREVENTER (RPZ) 17' OF WATER SERVICE LINE (1" COPPER SERVICE, TYPE K)

PROP. 1 FIRE HYDRANT 1-6" VALVE 9' OF 6" FIRE HYDRANT LEG (RJ DI, PC 350)

REMOVE 1 WATER METER 1 BACKFLOW PREVENTER (RPZ)

RECONNECT 1 WATER METER 124' OF WATER SERVICE LINE (1" COPPER SERVICE, TYPE K)

REMOVE 1 WATER METER

PROP. 1 FIRE HYDRANT 1-6" VALVE 9' OF 6" FIRE HYDRANT LEG (RJ DI, PC 350)

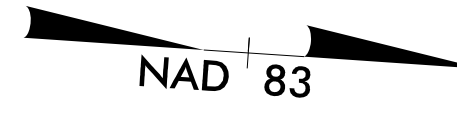
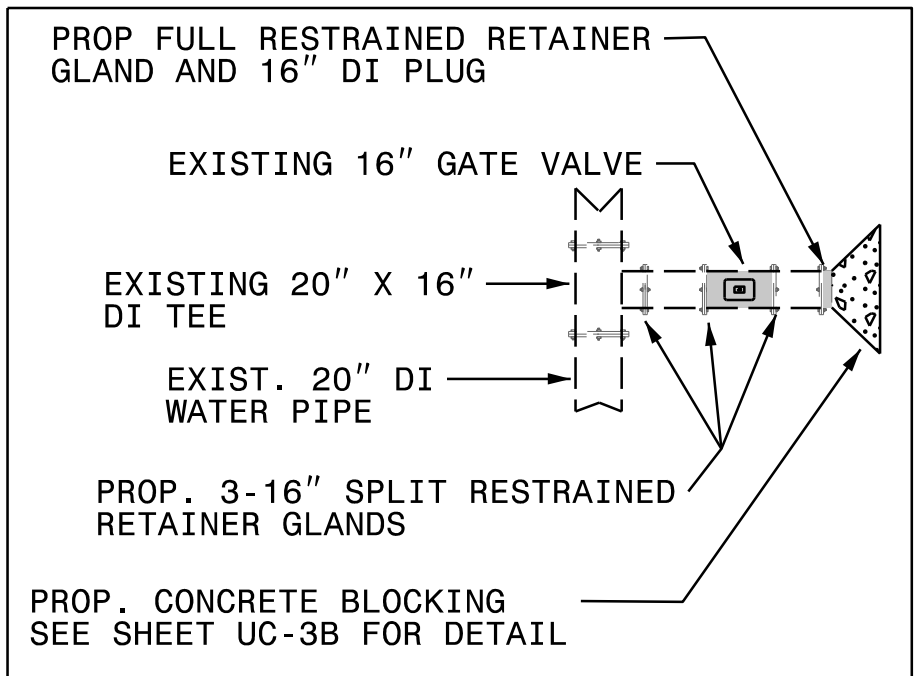
RELOCATE 2 WATER METERS 99' OF WATER SERVICE LINE (1" COPPER SERVICE, TYPE K)

PROP. 61' OF 6" WATER LINE (RJ PVC, C900 DR 18) 1-6" VALVE 1-6" TRANSITION COUPLING (DI TO AC)

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 4620 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS. (350# MIN WP)

THE EXIST. 8" VCP SEWER LINES ARE A MIN. OF 3' BELOW THE PROP. 6" WATER LINE

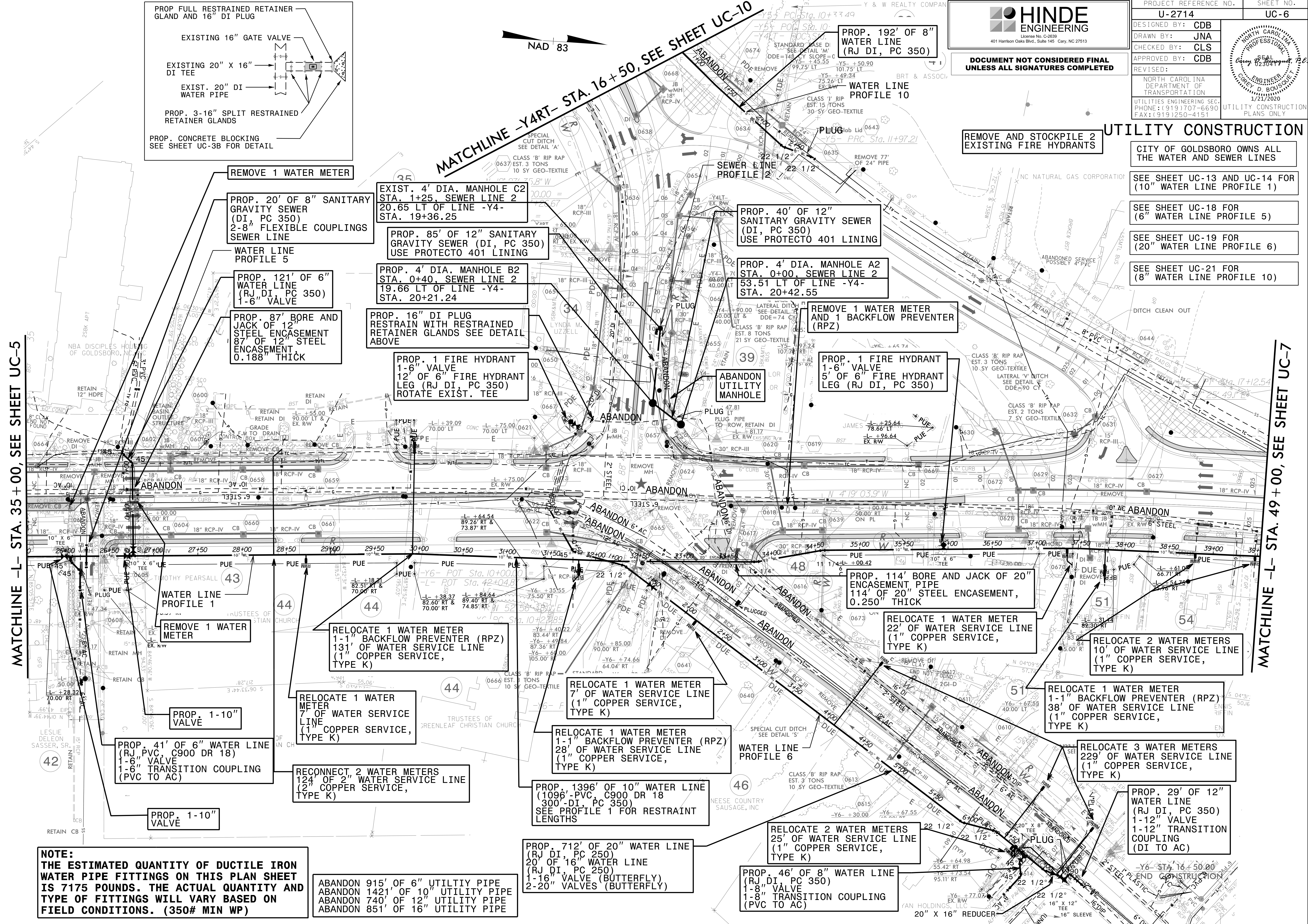
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PROJECT REFERENCE NO.	SHEET NO.
U-2714	UC-6
DESIGNED BY: CDB	
DRAWN BY: JNA	
CHECKED BY: CLS	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SECTION PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	



MATCHLINE -L- STA. 35 + 00, SEE SHEET UC-5

MATCHLINE -L- STA. 49 + 00, SEE SHEET UC-7

MATCHLINE -YART- STA. 16 + 50, SEE SHEET UC-10

REMOVE AND STOCKPILE 2 EXISTING FIRE HYDRANTS

UTILITY CONSTRUCTION

- CITY OF GOLDSBORO OWNS ALL THE WATER AND SEWER LINES
- SEE SHEET UC-13 AND UC-14 FOR (10" WATER LINE PROFILE 1)
- SEE SHEET UC-18 FOR (6" WATER LINE PROFILE 5)
- SEE SHEET UC-19 FOR (20" WATER LINE PROFILE 6)
- SEE SHEET UC-21 FOR (8" WATER LINE PROFILE 10)

NOTE:
 THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 7175 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS. (350# MIN WP)

ABANDON 915' OF 6" UTILITY PIPE
 ABANDON 1421' OF 10" UTILITY PIPE
 ABANDON 740' OF 12" UTILITY PIPE
 ABANDON 851' OF 16" UTILITY PIPE

REMOVE 1 WATER METER

PROP. 20' OF 8" SANITARY GRAVITY SEWER (DI, PC 350)
 2-8" FLEXIBLE COUPLINGS SEWER LINE

WATER LINE PROFILE 5

PROP. 121' OF 6" WATER LINE (RJ DI, PC 350)
 1-6" VALVE

PROP. 87" BORE AND JACK OF 12" STEEL ENCASEMENT
 87' OF 12" STEEL ENCASEMENT
 0.188" THICK

EXIST. 4' DIA. MANHOLE C2
 STA. 1+25, SEWER LINE 2
 20.65 LT OF LINE -Y4-
 STA. 19+36.25

PROP. 85' OF 12" SANITARY GRAVITY SEWER (DI, PC 350)
 USE PROTECTO 401 LINING

PROP. 4' DIA. MANHOLE B2
 STA. 0+40, SEWER LINE 2
 19.66 LT OF LINE -Y4-
 STA. 20+21.24

PROP. 16" DI PLUG RESTRAIN WITH RESTRAINED RETAINER GLANDS SEE DETAIL ABOVE

PROP. 1 FIRE HYDRANT 1-6" VALVE
 12' OF 6" FIRE HYDRANT LEG (RJ DI, PC 350)
 ROTATE EXIST. TEE

PROP. 40' OF 12" SANITARY GRAVITY SEWER (DI, PC 350)
 USE PROTECTO 401 LINING

PROP. 4' DIA. MANHOLE A2
 STA. 0+00, SEWER LINE 2
 53.51 LT OF LINE -Y4-
 STA. 20+42.55

REMOVE 1 WATER METER AND 1 BACKFLOW PREVENTER (RPZ)

PROP. 1 FIRE HYDRANT 1-6" VALVE
 5' OF 6" FIRE HYDRANT LEG (RJ DI, PC 350)

PROP. 114' BORE AND JACK OF 20" ENCASEMENT PIPE
 114' OF 20" STEEL ENCASEMENT,
 0.250" THICK

RELOCATE 1 WATER METER
 22' OF WATER SERVICE LINE (1" COPPER SERVICE, TYPE K)

RELOCATE 2 WATER METERS
 10' OF WATER SERVICE LINE (1" COPPER SERVICE, TYPE K)

RELOCATE 1 WATER METER
 1-1" BACKFLOW PREVENTER (RPZ)
 38' OF WATER SERVICE LINE (1" COPPER SERVICE, TYPE K)

RELOCATE 3 WATER METERS
 229' OF WATER SERVICE LINE (1" COPPER SERVICE, TYPE K)

PROP. 29' OF 12" WATER LINE (RJ DI, PC 350)
 1-12" VALVE
 1-12" TRANSITION COUPLING (DI TO AC)

PROP. 1396' OF 10" WATER LINE (1096' PVC C900 DR 18 300'-DI, PC 350)
 SEE PROFILE 1 FOR RESTRAINT LENGTHS

PROP. 712' OF 20" WATER LINE (RJ DI, PC 250)
 20' OF 16" WATER LINE (RJ DI, PC 250)
 1-16" VALVE (BUTTERFLY)
 2-20" VALVES (BUTTERFLY)

RELOCATE 2 WATER METERS
 25' OF WATER SERVICE LINE (1" COPPER SERVICE, TYPE K)

PROP. 46' OF 8" WATER LINE (RJ DI, PC 350)
 1-8" VALVE
 1-8" TRANSITION COUPLING (PVC TO AC)

PROP. 41' OF 6" WATER LINE (RJ PVC, C900 DR 18)
 1-6" VALVE
 1-6" TRANSITION COUPLING (PVC TO AC)

PROP. 1-10" VALVE

RELOCATE 1 WATER METER
 7' OF WATER SERVICE LINE (1" COPPER SERVICE, TYPE K)

RELOCATE 1 WATER METER
 1-1" BACKFLOW PREVENTER (RPZ)
 131' OF WATER SERVICE LINE (1" COPPER SERVICE, TYPE K)

REMOVE 1 WATER METER

WATER LINE PROFILE 1

REMOVE 1 WATER METER

REMOVE 1 WATER METER

REMOVE 1 WATER METER

REMOVE 1 WATER METER

REMOVE 1 WATER METER

REMOVE 1 WATER METER

REMOVE 1 WATER METER

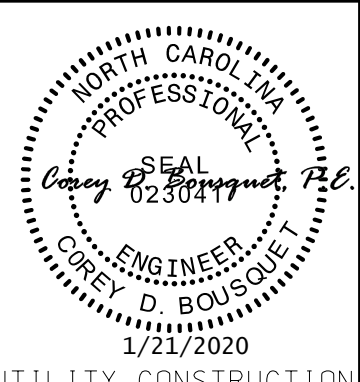
REMOVE 1 WATER METER

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

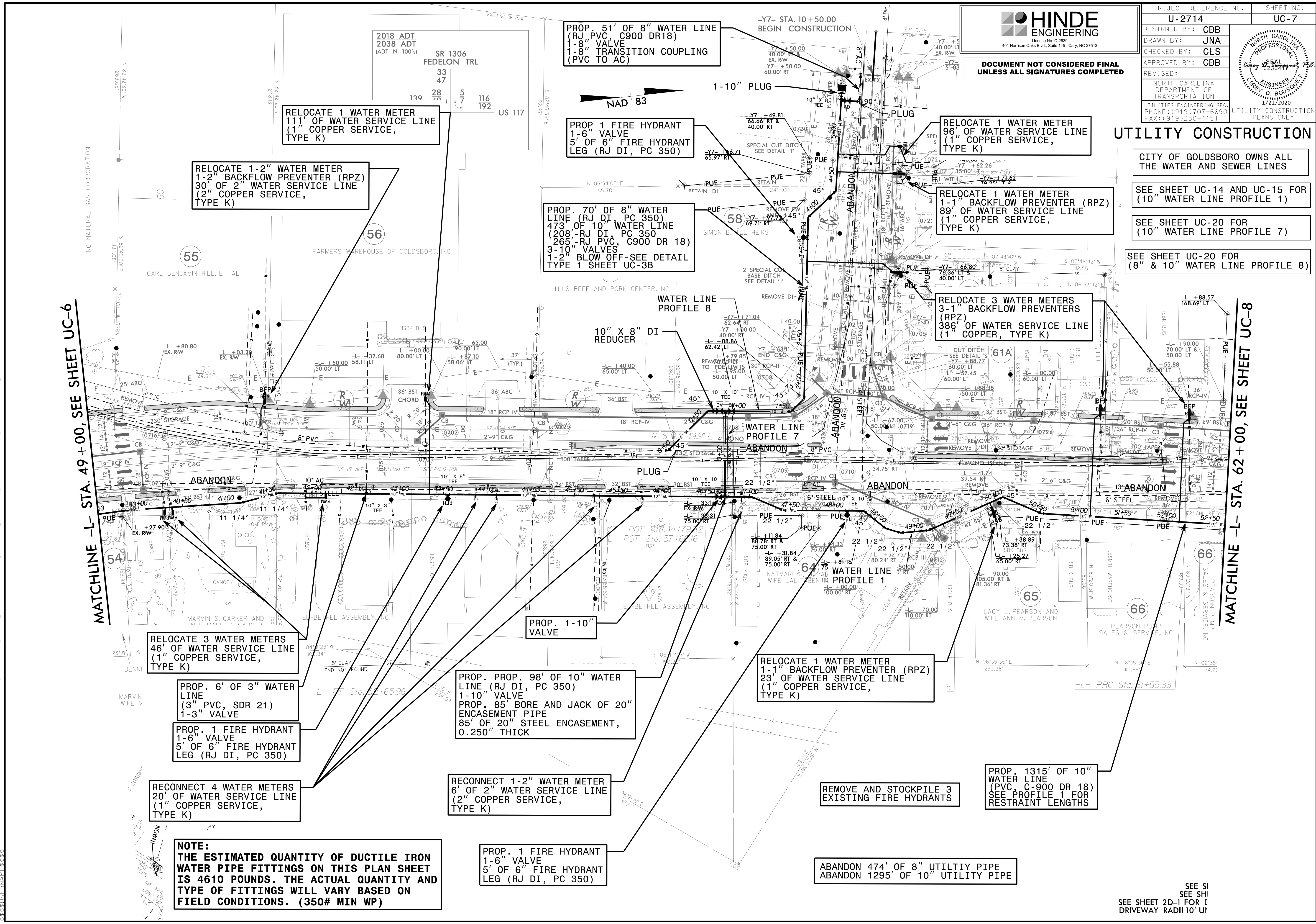


UTILITY CONSTRUCTION

- CITY OF GOLDSBORO OWNS ALL THE WATER AND SEWER LINES
- SEE SHEET UC-14 AND UC-15 FOR (10" WATER LINE PROFILE 1)
- SEE SHEET UC-20 FOR (10" WATER LINE PROFILE 7)
- SEE SHEET UC-20 FOR (8" & 10" WATER LINE PROFILE 8)

MATCHLINE -L- STA. 49 + 00, SEE SHEET UC-6

MATCHLINE -L- STA. 62 + 00, SEE SHEET UC-8



RELOCATE 1 WATER METER
 111' OF WATER SERVICE LINE
 (1" COPPER SERVICE,
 TYPE K)

RELOCATE 1-2" WATER METER
 1-2" BACKFLOW PREVENTER (RPZ)
 30' OF 2" WATER SERVICE LINE
 (2" COPPER SERVICE,
 TYPE K)

PROP. 51' OF 8" WATER LINE
 (RJ PVC, C900 DR18)
 1-8" VALVE
 1-8" TRANSITION COUPLING
 (PVC TO AC)

PROP. 1 FIRE HYDRANT
 5' OF 6" FIRE HYDRANT
 LEG (RJ DI, PC 350)

PROP. 70' OF 8" WATER LINE
 (RJ DI, PC 350)
 473' OF 10" WATER LINE
 (208' RJ DI, PC 350
 265' RJ PVC, C900 DR 18)
 3-10" VALVES
 1-2" BLOW OFF-SEE DETAIL
 TYPE 1 SHEET UC-3B

RELOCATE 1 WATER METER
 96' OF WATER SERVICE LINE
 (1" COPPER SERVICE,
 TYPE K)

RELOCATE 1 WATER METER
 1-1" BACKFLOW PREVENTER (RPZ)
 89' OF WATER SERVICE LINE
 (1" COPPER SERVICE,
 TYPE K)

RELOCATE 3 WATER METERS
 3-1" BACKFLOW PREVENTERS
 (RPZ)
 386' OF WATER SERVICE LINE
 (1" COPPER, TYPE K)

10" X 8" DI
 REDUCER

PROP. 1-10" VALVE

PROP. PROP. 98' OF 10" WATER LINE
 (RJ DI, PC 350)
 1-10" VALVE
 PROP. 85' BORE AND JACK OF 20"
 ENCASEMENT PIPE
 85' OF 20" STEEL ENCASEMENT,
 0.250" THICK

RELOCATE 1 WATER METER
 1-1" BACKFLOW PREVENTER (RPZ)
 23' OF WATER SERVICE LINE
 (1" COPPER SERVICE,
 TYPE K)

PROP. 1315' OF 10"
 WATER LINE
 (PVC, C-900 DR 18)
 SEE PROFILE 1 FOR
 RESTRAINT LENGTHS

RELOCATE 3 WATER METERS
 46' OF WATER SERVICE LINE
 (1" COPPER SERVICE,
 TYPE K)

PROP. 6' OF 3" WATER LINE
 (3" PVC, SDR 21)
 1-3" VALVE

PROP. 1 FIRE HYDRANT
 1-6" VALVE
 5' OF 6" FIRE HYDRANT
 LEG (RJ DI, PC 350)

RECONNECT 4 WATER METERS
 20' OF WATER SERVICE LINE
 (1" COPPER SERVICE,
 TYPE K)

RECONNECT 1-2" WATER METER
 6' OF 2" WATER SERVICE LINE
 (2" COPPER SERVICE,
 TYPE K)

PROP. 1 FIRE HYDRANT
 1-6" VALVE
 5' OF 6" FIRE HYDRANT
 LEG (RJ DI, PC 350)

REMOVE AND STOCKPILE 3
 EXISTING FIRE HYDRANTS

ABANDON 474' OF 8" UTILITY PIPE
 ABANDON 1295' OF 10" UTILITY PIPE

NOTE:
 THE ESTIMATED QUANTITY OF DUCTILE IRON
 WATER PIPE FITTINGS ON THIS PLAN SHEET
 IS 4610 POUNDS. THE ACTUAL QUANTITY AND
 TYPE OF FITTINGS WILL VARY BASED ON
 FIELD CONDITIONS. (350# MIN WP)

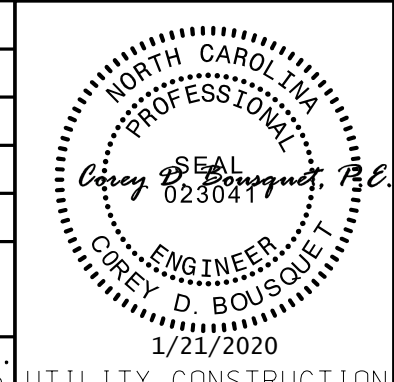
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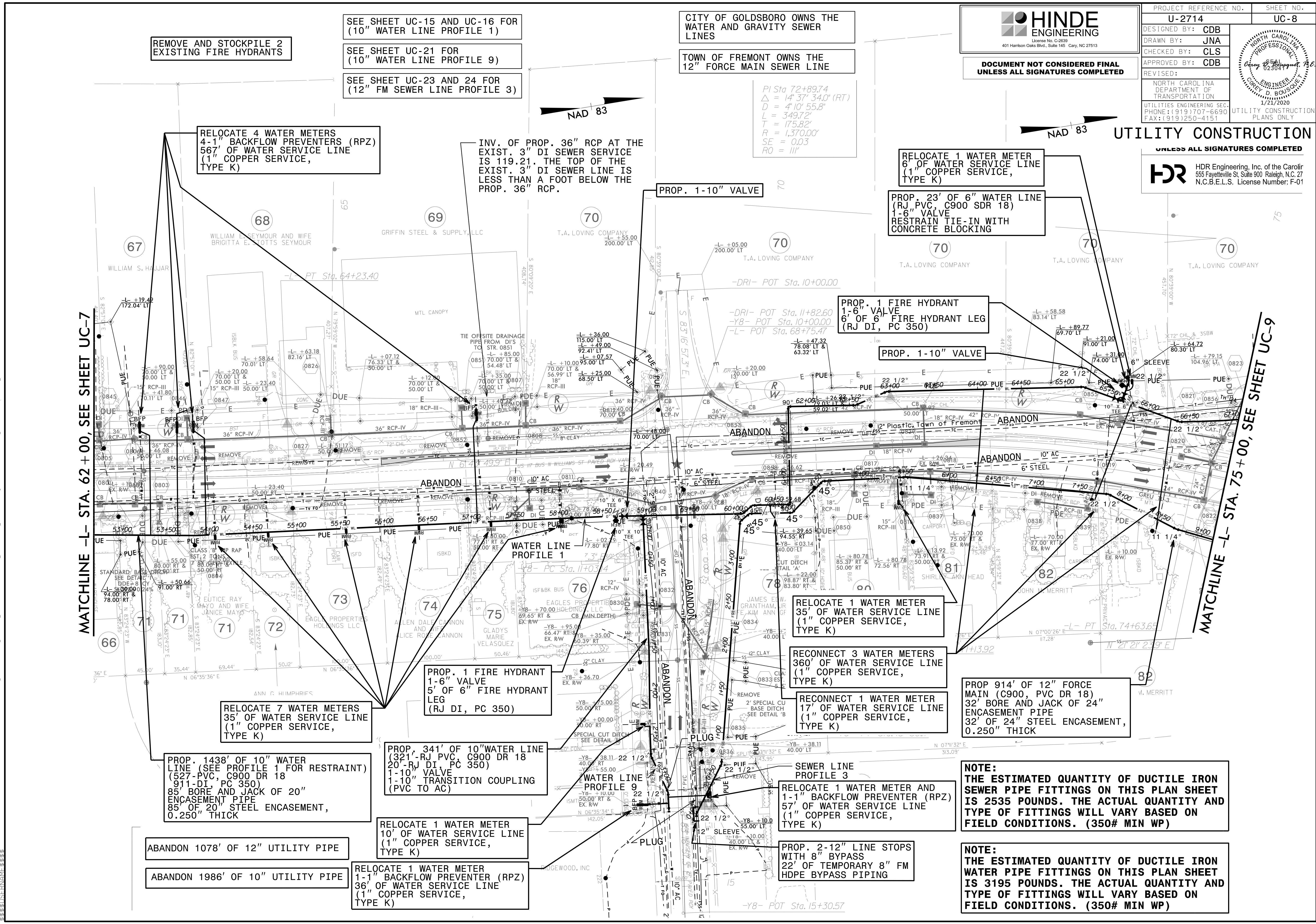
PROJECT REFERENCE NO.	UC-8
SHEET NO.	U-2714
DESIGNED BY:	CDB
DRAWN BY:	JNA
CHECKED BY:	CLS
APPROVED BY:	CDB
REVISED:	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690	UTILITY CONSTRUCTION PLANS ONLY
FAX: (919) 250-4151	



UTILITY CONSTRUCTION

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 555 Fayetteville St. Suite 900 Raleigh, N.C. 27
 N.C.B.E.L.S. License Number: F-01



MATCHLINE -L- STA. 62 + 00, SEE SHEET UC-7

MATCHLINE -L- STA. 75 + 00, SEE SHEET UC-9

SEE SHEET UC-15 AND UC-16 FOR
(10" WATER LINE PROFILE 1)

SEE SHEET UC-21 FOR
(10" WATER LINE PROFILE 9)

SEE SHEET UC-23 AND 24 FOR
(12" FM SEWER LINE PROFILE 3)

CITY OF GOLDSBORO OWNS THE
WATER AND GRAVITY SEWER
LINES

TOWN OF FREMONT OWNS THE
12" FORCE MAIN SEWER LINE

REMOVE AND STOCKPILE 2
EXISTING FIRE HYDRANTS

RELOCATE 4 WATER METERS
4-1" BACKFLOW PREVENTERS (RPZ)
567' OF WATER SERVICE LINE
(1" COPPER SERVICE,
TYPE K)

INV. OF PROP. 36" RCP AT THE
EXIST. 3" DI SEWER SERVICE
IS 119.21. THE TOP OF THE
EXIST. 3" DI SEWER LINE IS
LESS THAN A FOOT BELOW THE
PROP. 36" RCP.

RELOCATE 1 WATER METER
6' OF WATER SERVICE LINE
(1" COPPER SERVICE,
TYPE K)

PROP. 23' OF 6" WATER LINE
(RJ, PVC, C900 SDR 18)
1-6" VALVE
RESTRAIN TIE-IN WITH
CONCRETE BLOCKING

PROP. 1 FIRE HYDRANT
1-6" VALVE
6' OF 6" FIRE HYDRANT LEG
(RJ DI, PC 350)

PROP. 1-10" VALVE

PROP. 1 FIRE HYDRANT
1-6" VALVE
5' OF 6" FIRE HYDRANT
LEG
(RJ DI, PC 350)

RELOCATE 7 WATER METERS
35' OF WATER SERVICE LINE
(1" COPPER SERVICE,
TYPE K)

PROP. 1438' OF 10" WATER
LINE (SEE PROFILE 1 FOR RESTRAINT)
(527' PVC, C900 DR 18
91' DI, PC 350)
85' BORE AND JACK OF 20"
ENCASEMENT PIPE
85' OF 20" STEEL ENCASEMENT,
0.250" THICK

PROP. 341' OF 10" WATER LINE
(321' RJ PVC, C900 DR 18
20' RJ DI, PC 350)
1-10" VALVE
1-10" TRANSITION COUPLING
(PVC TO AC)

RELOCATE 1 WATER METER
10' OF WATER SERVICE LINE
(1" COPPER SERVICE,
TYPE K)

ABANDON 1078' OF 12" UTILITY PIPE

ABANDON 1986' OF 10" UTILITY PIPE

RELOCATE 1 WATER METER
1-1" BACKFLOW PREVENTER (RPZ)
36' OF WATER SERVICE LINE
(1" COPPER SERVICE,
TYPE K)

RELOCATE 1 WATER METER
35' OF WATER SERVICE LINE
(1" COPPER SERVICE,
TYPE K)

RECONNECT 3 WATER METERS
360' OF WATER SERVICE LINE
(1" COPPER SERVICE,
TYPE K)

RECONNECT 1 WATER METER
17' OF WATER SERVICE LINE
(1" COPPER SERVICE,
TYPE K)

PROP 914' OF 12" FORCE
MAIN (C900, PVC DR 18)
32' BORE AND JACK OF 24"
ENCASEMENT PIPE
32' OF 24" STEEL ENCASEMENT,
0.250" THICK

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON
SEWER PIPE FITTINGS ON THIS PLAN SHEET
IS 2535 POUNDS. THE ACTUAL QUANTITY AND
TYPE OF FITTINGS WILL VARY BASED ON
FIELD CONDITIONS. (350# MIN WP)

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON
WATER PIPE FITTINGS ON THIS PLAN SHEET
IS 3195 POUNDS. THE ACTUAL QUANTITY AND
TYPE OF FITTINGS WILL VARY BASED ON
FIELD CONDITIONS. (350# MIN WP)



PI Sta 72+89.74
 $\Delta = 14^{\circ} 37' 34.0''$ (RT)
 $D = 4' 10'' 55.8''$
 $L = 349.72'$
 $T = 175.82'$
 $R = 1,370.00'$
 $SE = 0.03$
 $RO = 111'$

PLAN-2020-1444 PROJECTS-2015-AZ015902-00 HDR - U-2714 Wayne County Utilities Engineering UC-Proj\U-2714-ut-rcj\8_UC08_psh.dgn

ABANDON 496' OF 10" UTILITY PIPE
ABANDON 249' OF 12" UTILITY PIPE

-Y9-
PI Sta 12+19.55
Δ = 56° 46' 43.9" (RT)
D = 23' 40' 33.4"
L = 239.82'
T = 130.79'
R = 242.00'
SE = EX.

PROP. 469' OF 10" WATER LINE
(RJ DI, PC 350)
90' BORE AND JACK OF 20"
ENCASEMENT PIPE
90' OF 20" STEEL ENCASEMENT,
0.250" THICK
(EXIST. 10" WL LINE MAY BE
RESTRAINED AT TIE IN POINT,
IF IT'S NOT, USE CONCRETE BLOCKING
TO RESTRAIN PROP. WATER LINE
TIE-IN)

PROP. 49' OF 6" WATER LINE
(RJ, PVC, C900 DR 18)
1-6" VALVE
RESTRAIN TIE IN WITH
CONCRETE BLOCKING

PROP 452' OF 12" FORCE
MAIN (C900, PVC DR 18)
298' BORE AND JACK OF 24"
ENCASEMENT PIPE
298' OF 24" STEEL ENCASEMENT,
0.250" THICK

PROP. 2-12" LINE STOPS
WITH 8" BYPASS
22' OF TEMPORARY 8" FM
HDPE BYPASS PIPING

PROP. 1-10" VALVE

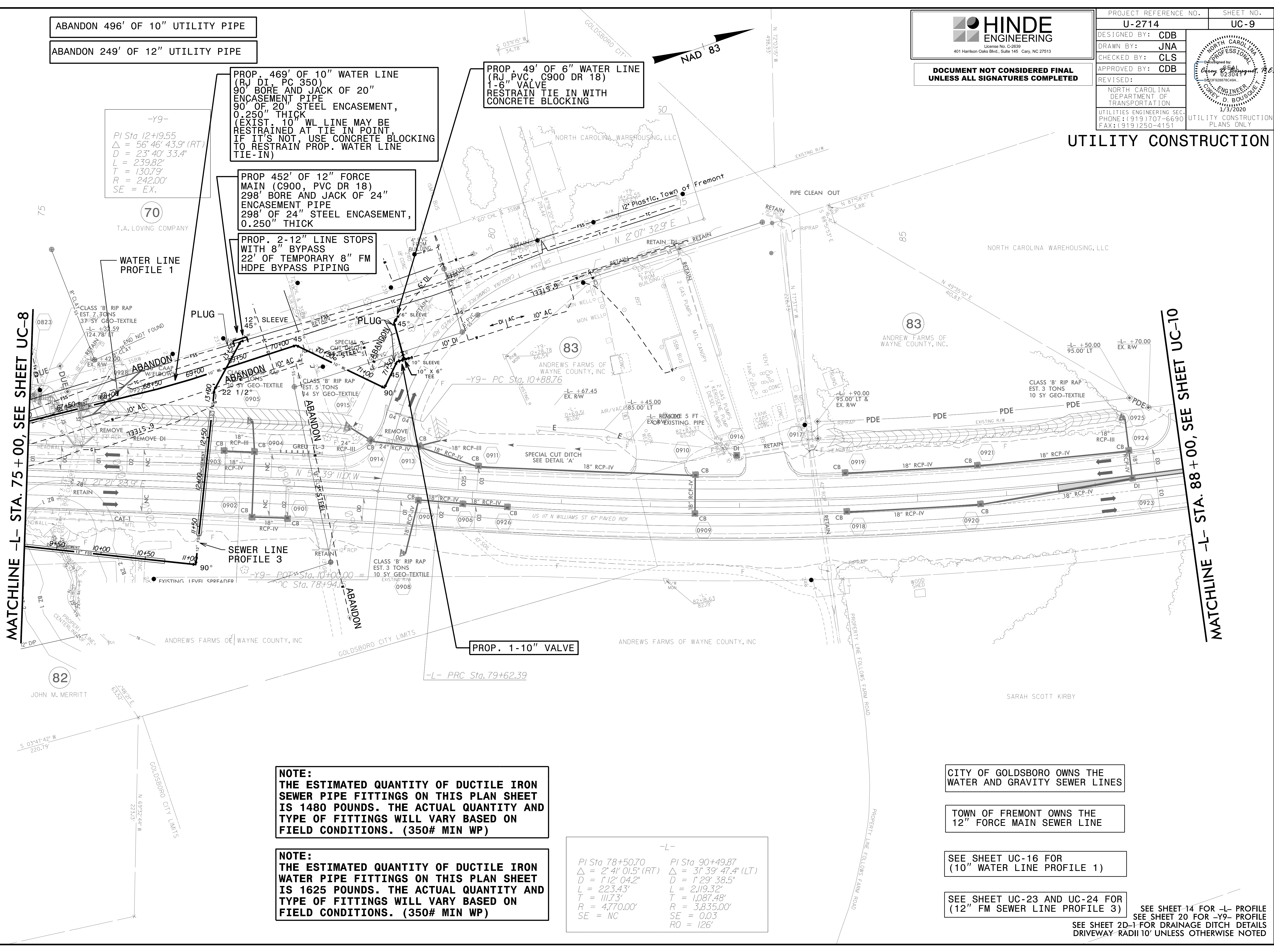
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PROJECT REFERENCE NO.	U-2714	SHEET NO.	UC-9
DESIGNED BY:	CDB		
DRAWN BY:	JNA		
CHECKED BY:	CLS		
APPROVED BY:	CDB		
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		UTILITY CONSTRUCTION PLANS ONLY	
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UTILITY CONSTRUCTION

MATCHLINE -L- STA. 75+00, SEE SHEET UC-8

MATCHLINE -L- STA. 88+00, SEE SHEET UC-10



NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON SEWER PIPE FITTINGS ON THIS PLAN SHEET IS 1480 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS. (350# MIN WP)

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 1625 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS. (350# MIN WP)

-L-
PI Sta 78+50.70 Δ = 2° 41' 01.5" (RT) D = 1' 12' 04.2" L = 223.43' T = 111.73' R = 4,770.00' SE = NC
PI Sta 90+49.87 Δ = 31° 39' 47.4" (LT) D = 1' 29' 38.5" L = 2119.32' T = 1,087.48' R = 3,835.00' SE = 0.03 RO = 126'

CITY OF GOLDSBORO OWNS THE WATER AND GRAVITY SEWER LINES

TOWN OF FREMONT OWNS THE 12" FORCE MAIN SEWER LINE

SEE SHEET UC-16 FOR (10" WATER LINE PROFILE 1)

SEE SHEET UC-23 AND UC-24 FOR (12" FM SEWER LINE PROFILE 3)

SEE SHEET 14 FOR -L- PROFILE
SEE SHEET 20 FOR -Y9- PROFILE
SEE SHEET 2D-1 FOR DRAINAGE DITCH DETAILS
DRIVEWAY RADII 10' UNLESS OTHERWISE NOTED

2015 JAN 20 10:17:59
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388681581

CITY OF GOLDSBORO OWNS ALL THE WATER AND SEWER LINES

SEE SHEET UC-21 FOR (10" WATER LINE PROFILE 10)

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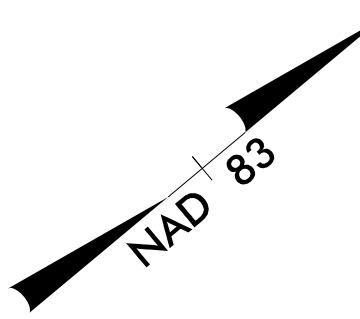
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 SHEET NO. UC-10

DESIGNED BY: CDB
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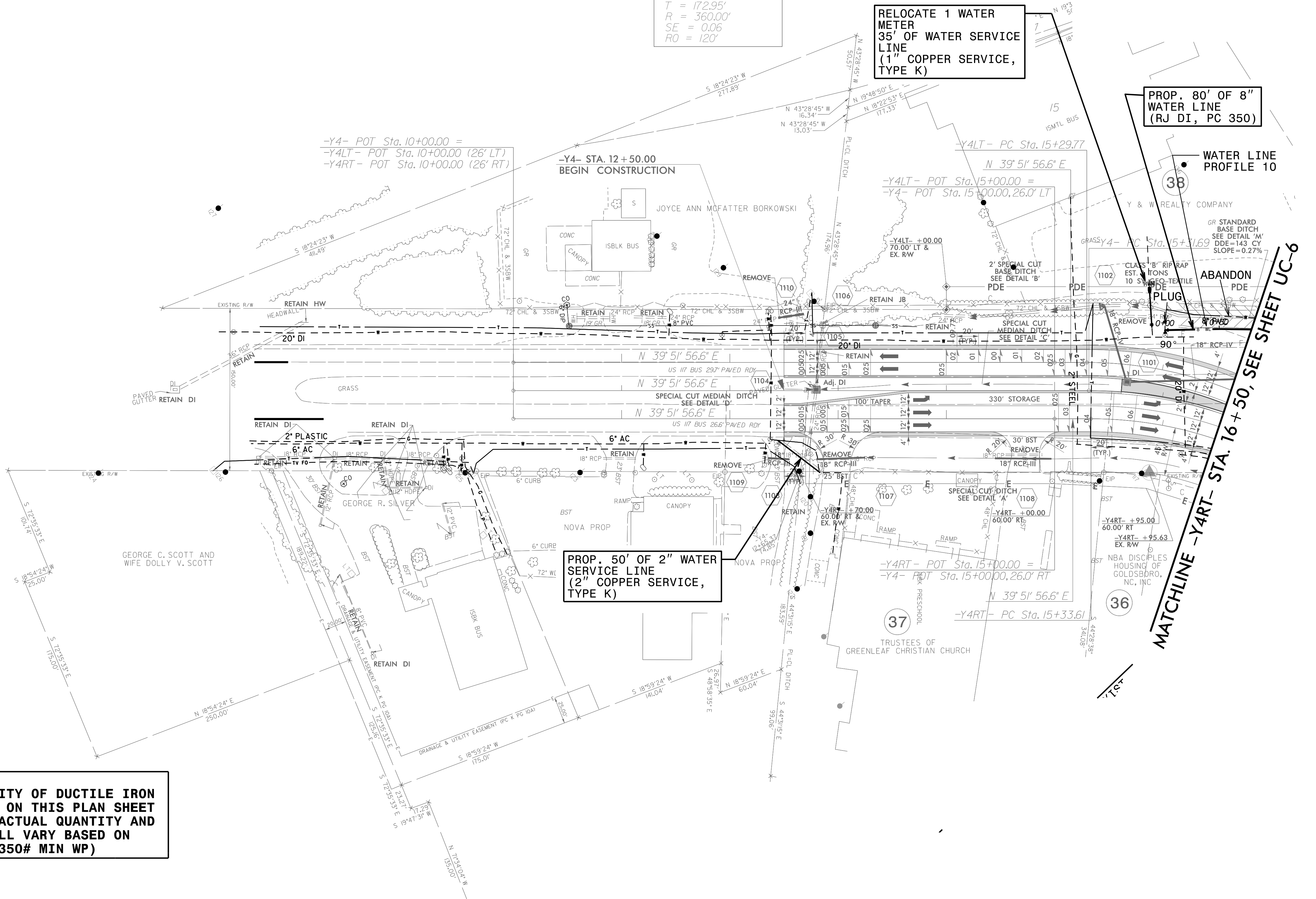
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 1/3/2020



-Y4RT-
 PI Sta 17+06.56
 $\Delta = 51' 19" 16.9"$ (RT)
 $D = 15' 54" 55.8"$
 $L = 322.46'$
 $T = 172.95'$
 $R = 360.00'$
 $SE = 0.06$
 $RO = 70'$

-Y4-
 PI Sta 17+04.64
 $\Delta = 51' 19" 16.9"$ (RT)
 $D = 15' 54" 55.8"$
 $L = 322.46'$
 $T = 172.95'$
 $R = 360.00'$
 $SE = 0.06$

-Y4LT-
 PI Sta 17+02.72
 $\Delta = 51' 19" 16.9"$ (RT)
 $D = 15' 54" 55.8"$
 $L = 322.46'$
 $T = 172.95'$
 $R = 360.00'$
 $SE = 0.06$
 $RO = 120'$



RELOCATE 1 WATER METER
 35' OF WATER SERVICE LINE
 (1" COPPER SERVICE, TYPE K)

PROP. 80' OF 8" WATER LINE
 (RJ DI, PC 350)

PROP. 50' OF 2" WATER SERVICE LINE
 (2" COPPER SERVICE, TYPE K)

NOTE:
 THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 125 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS. (350# MIN WP)

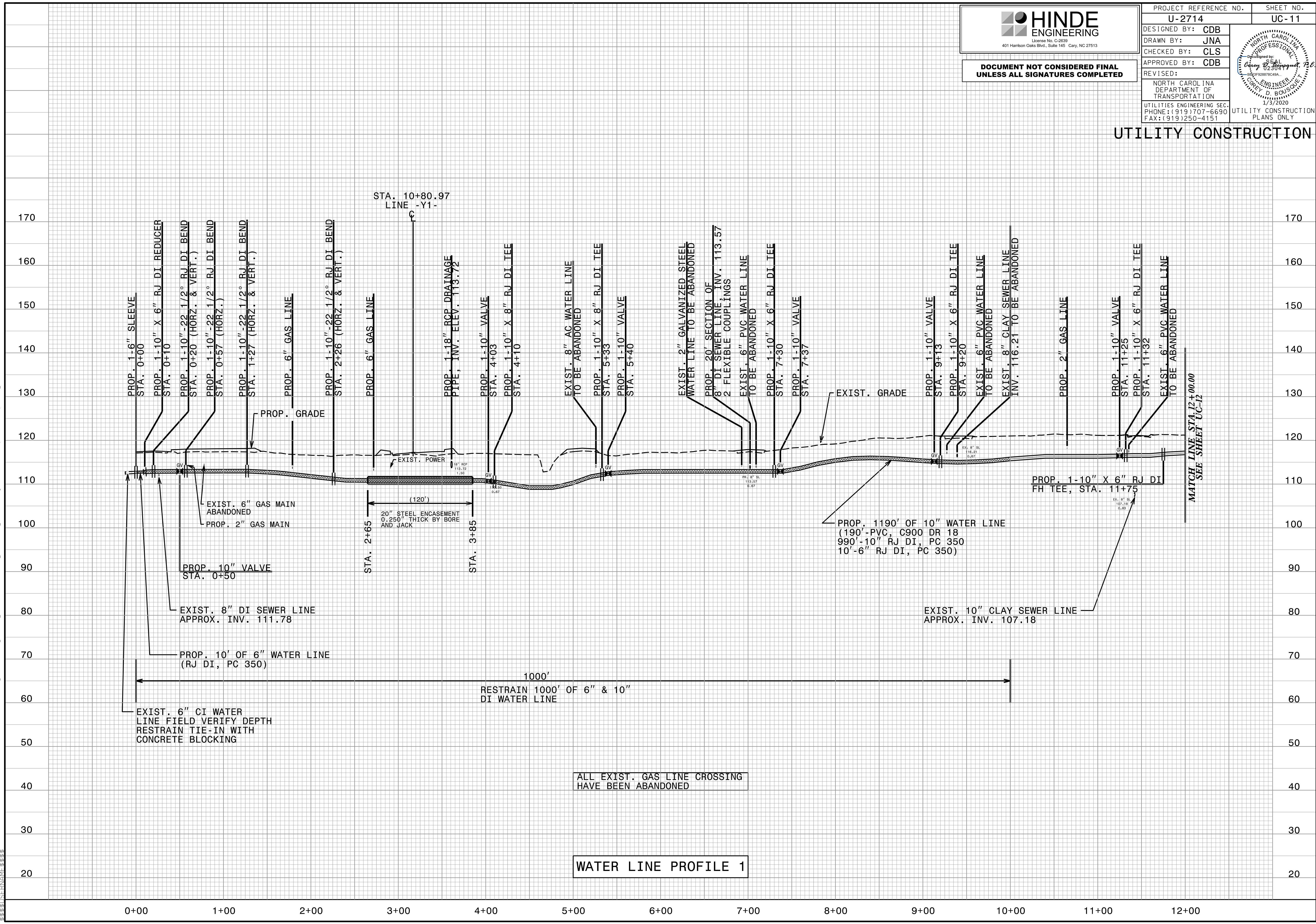
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PROJECT REFERENCE NO. U-2714	SHEET NO. UC-11
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APPROVED BY: CDB	
REVISED:	
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UTILITY CONSTRUCTION



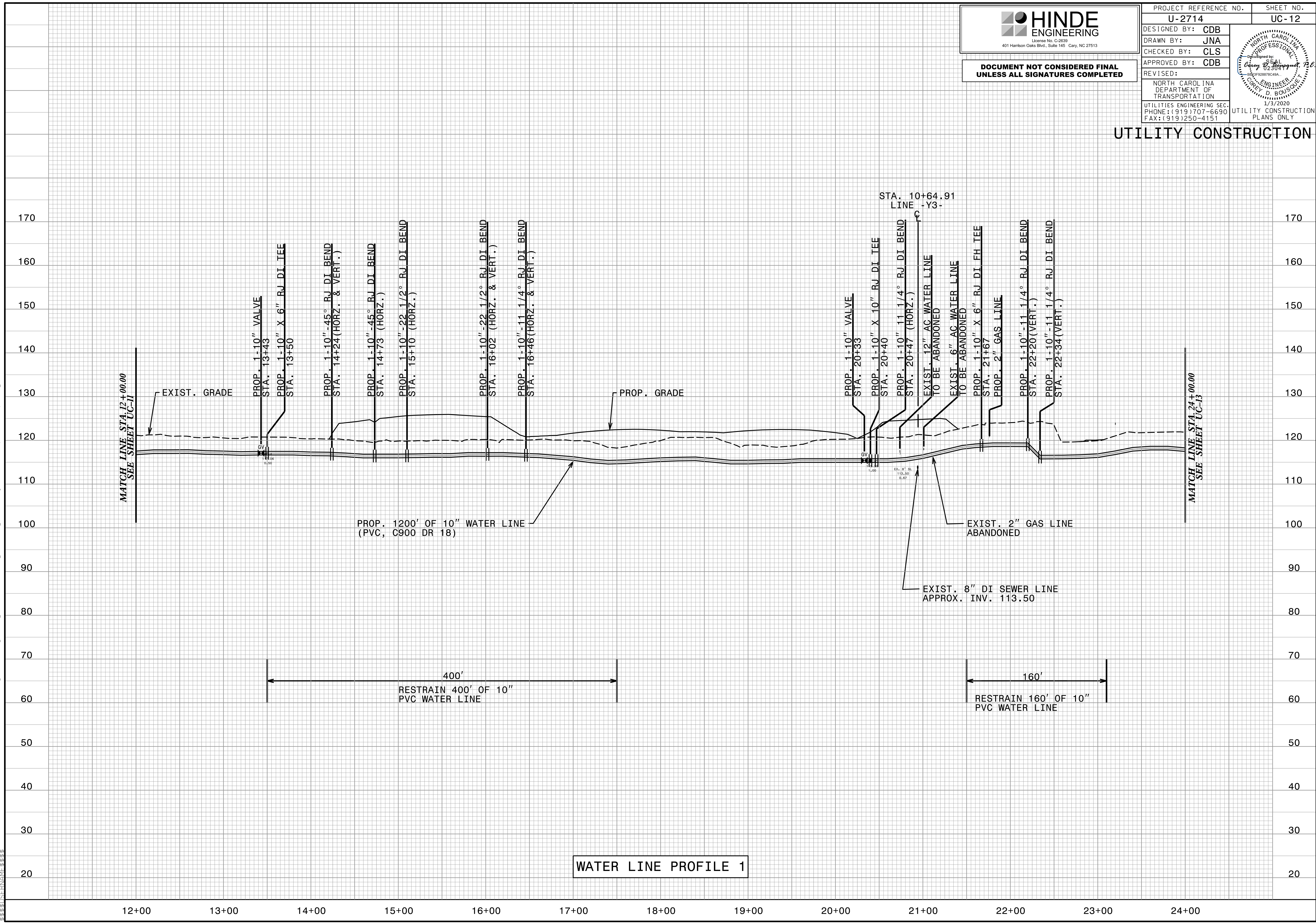
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PROJECT REFERENCE NO. U-2714	SHEET NO. UC-12
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CHECKED BY: CLS	
APPROVED BY: CDB	
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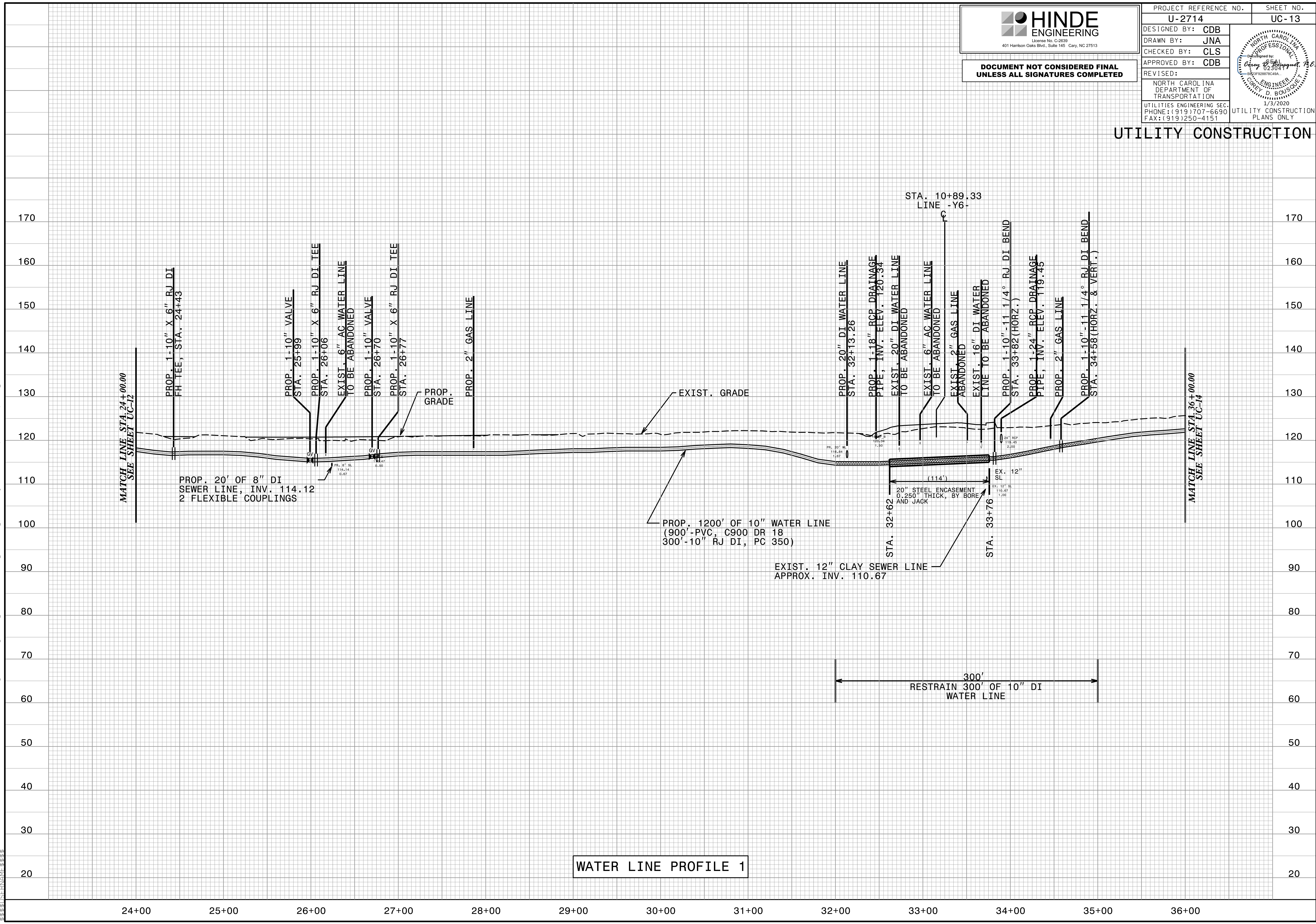
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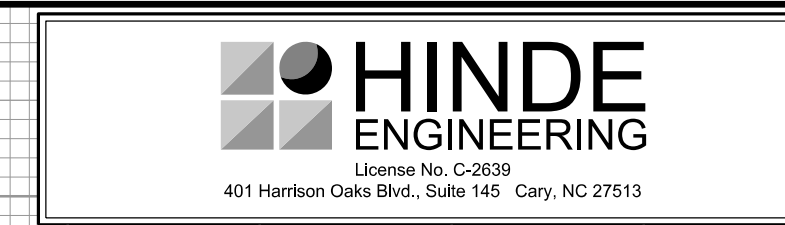
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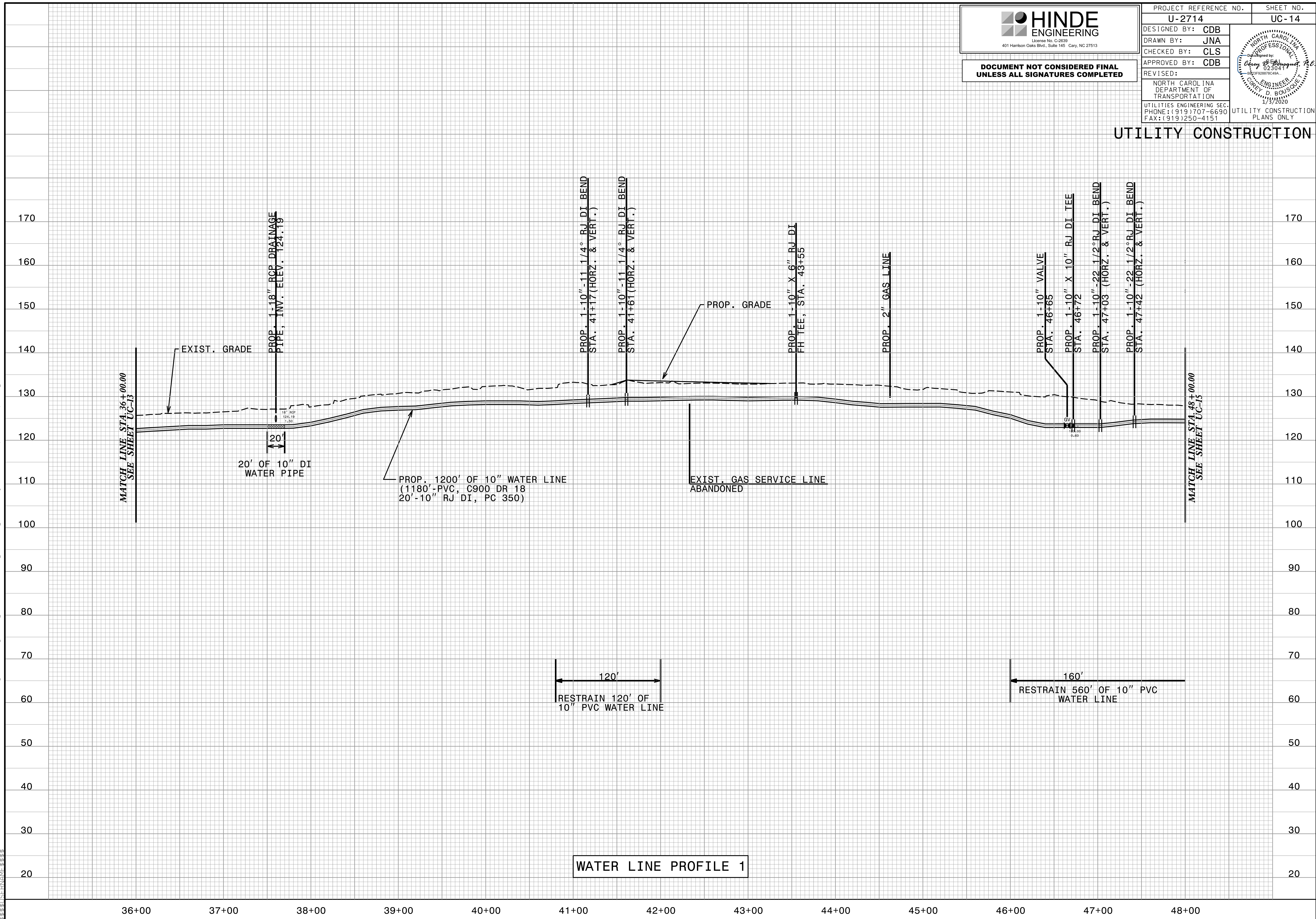
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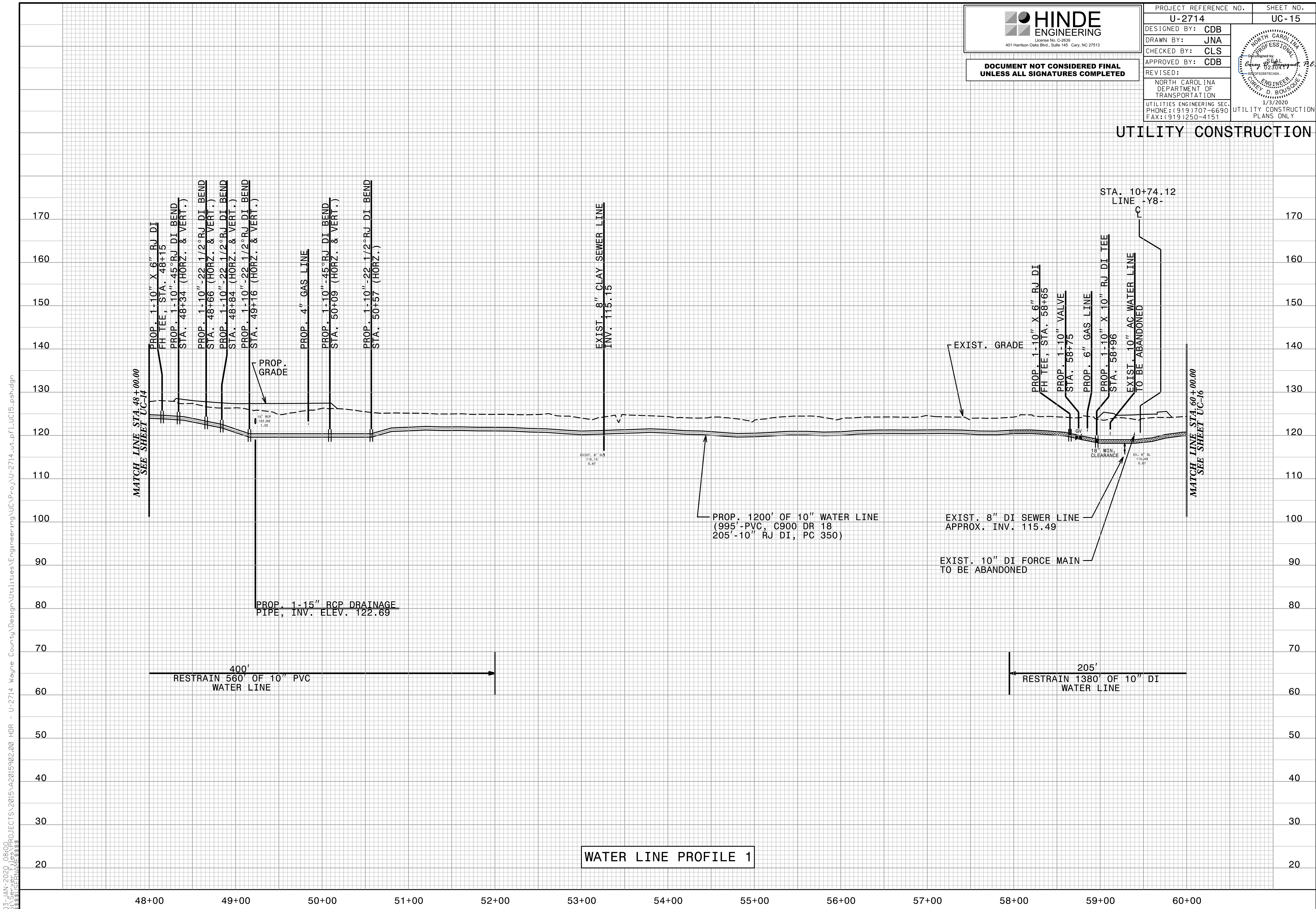
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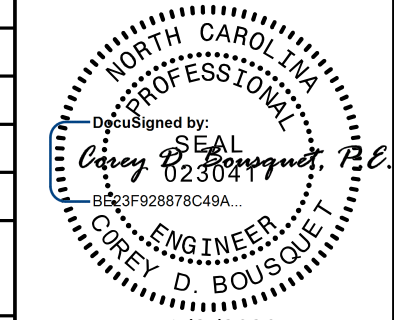
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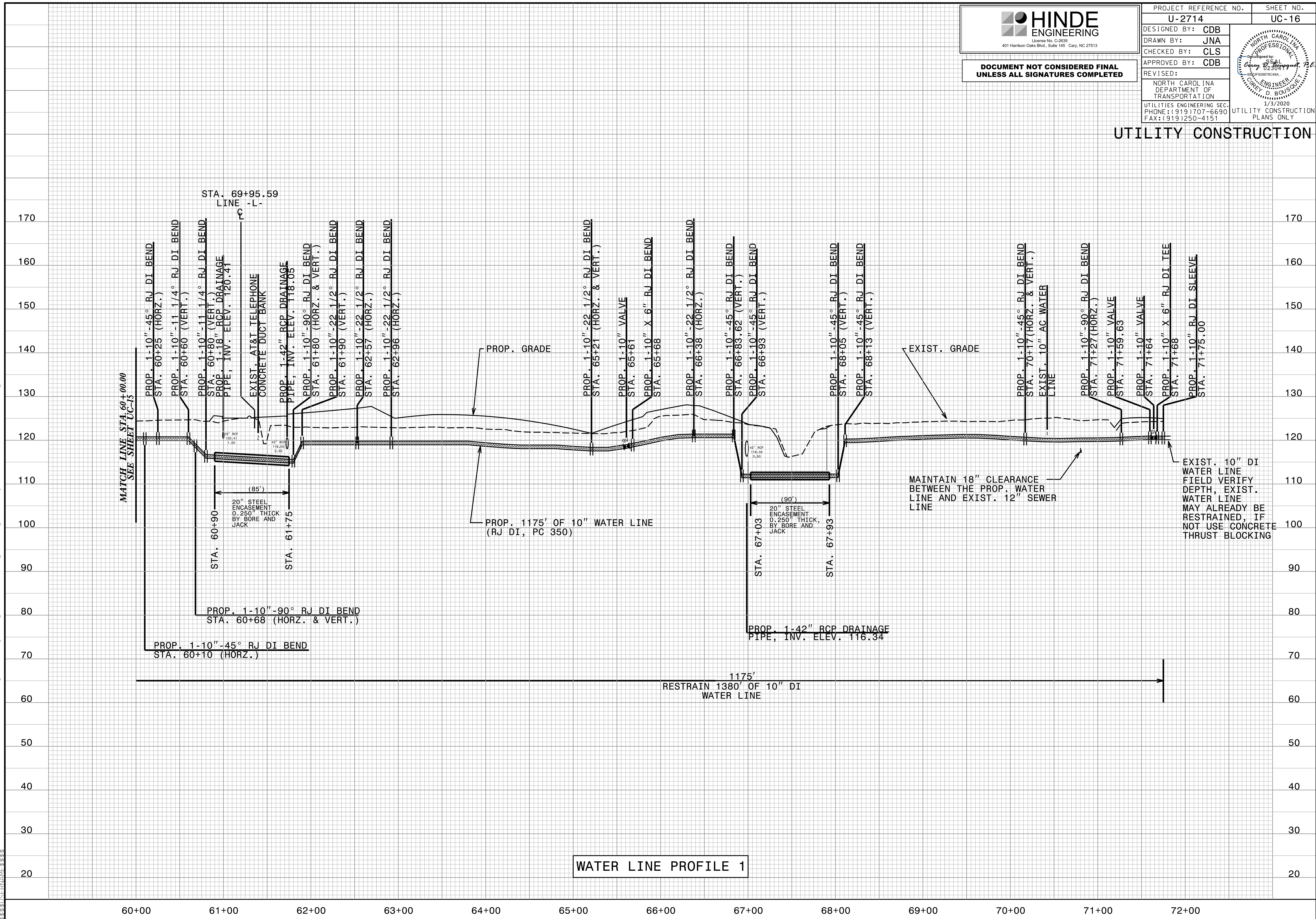
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APPROVED BY: CDB	
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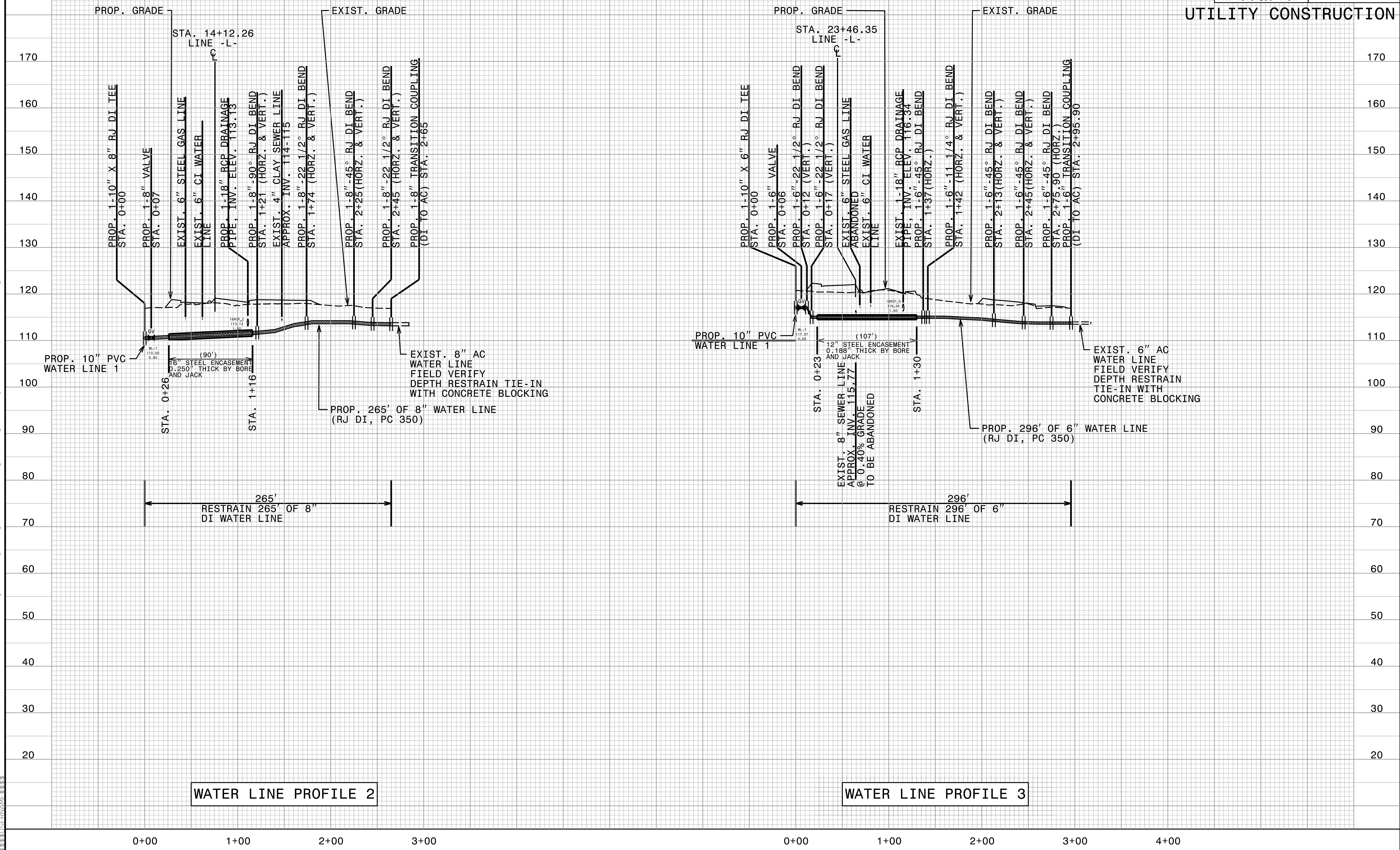
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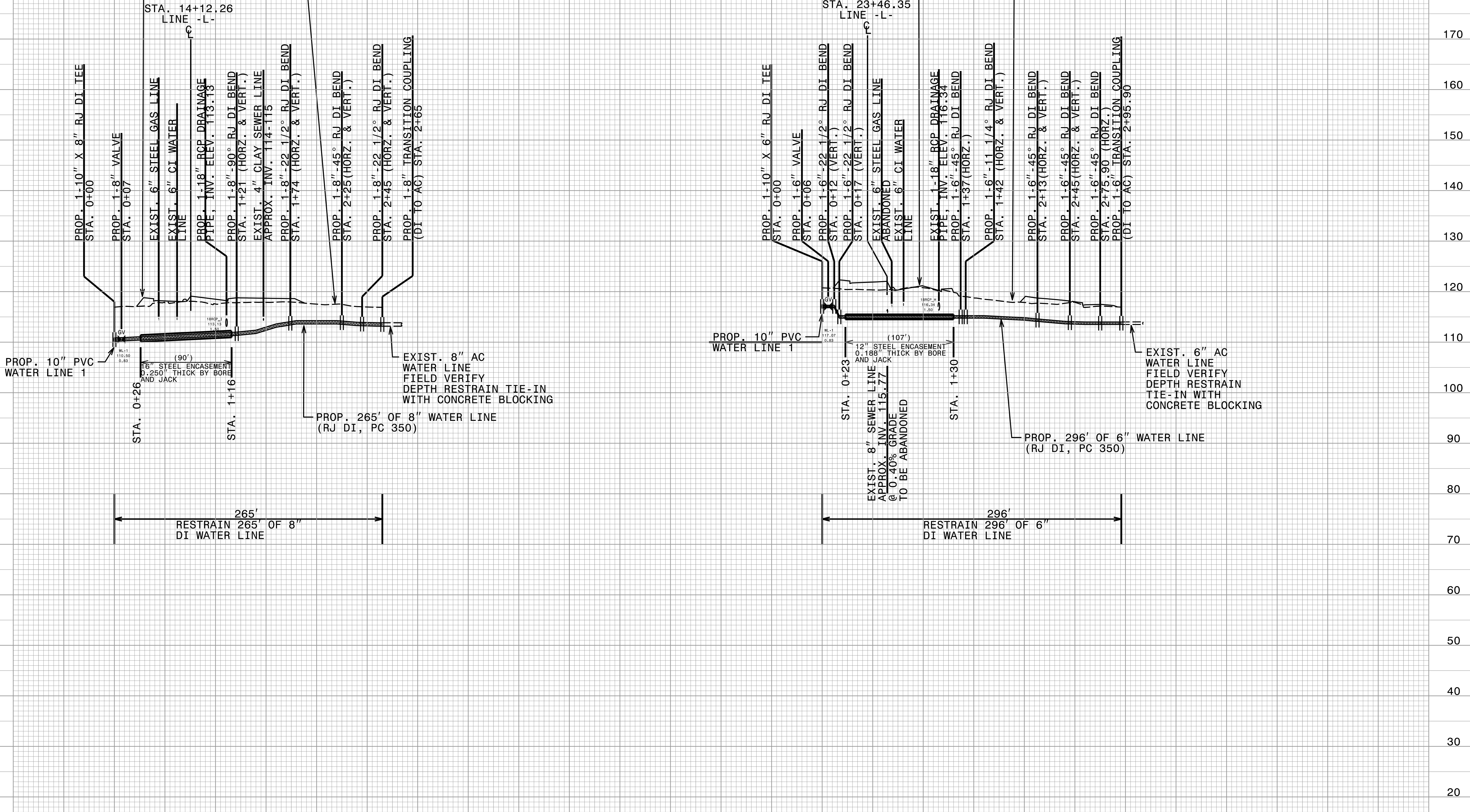
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PROP. GRADE
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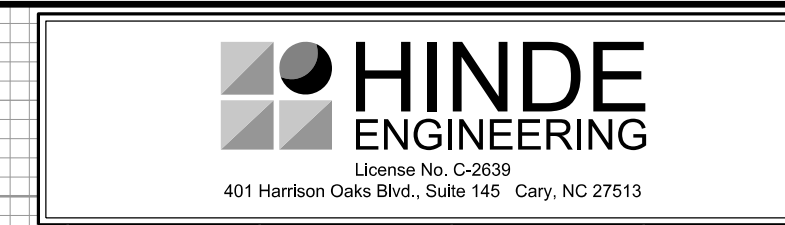


WATER LINE PROFILE 2

WATER LINE PROFILE 3

UTILITY CONSTRUCTION

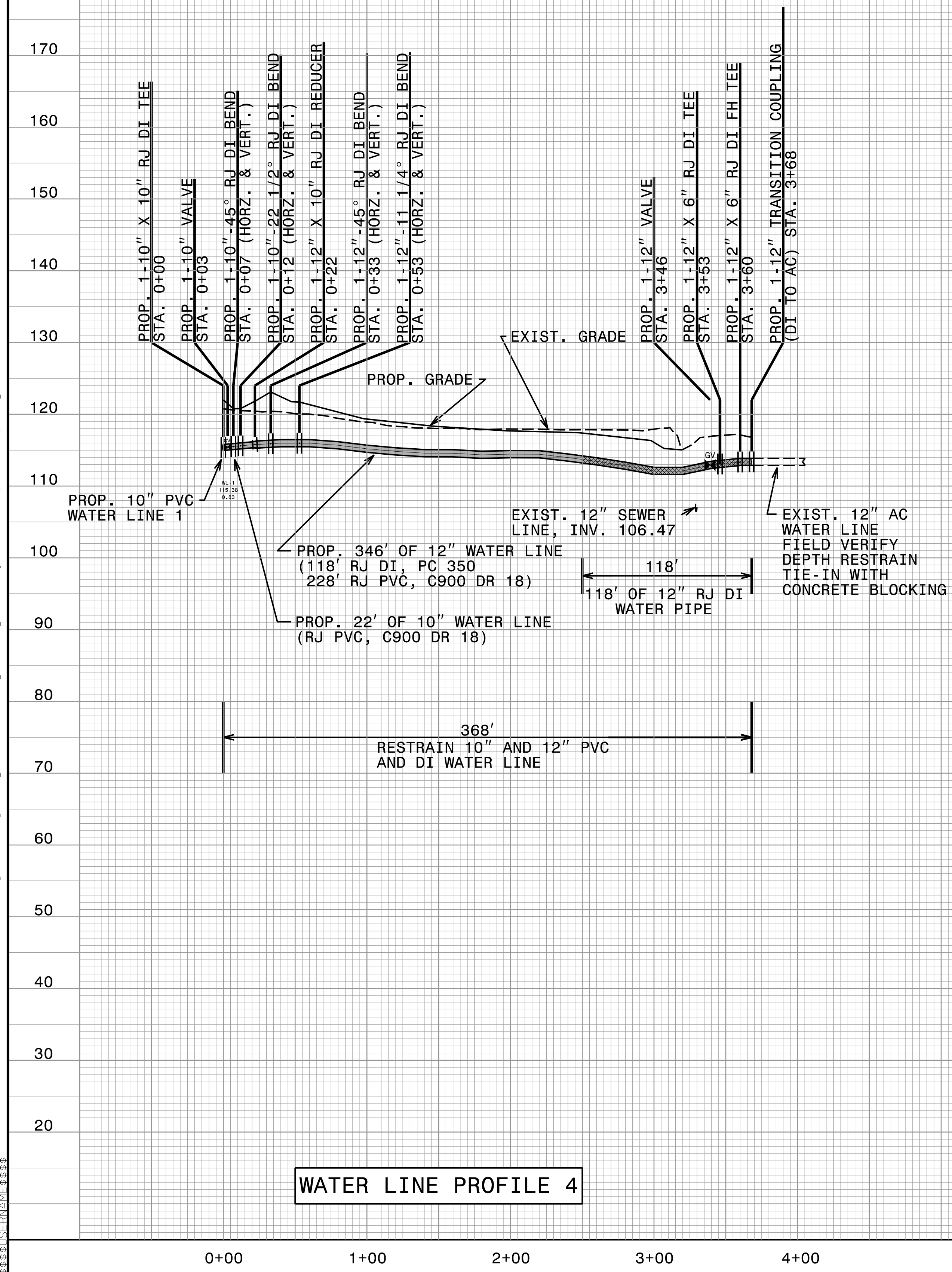
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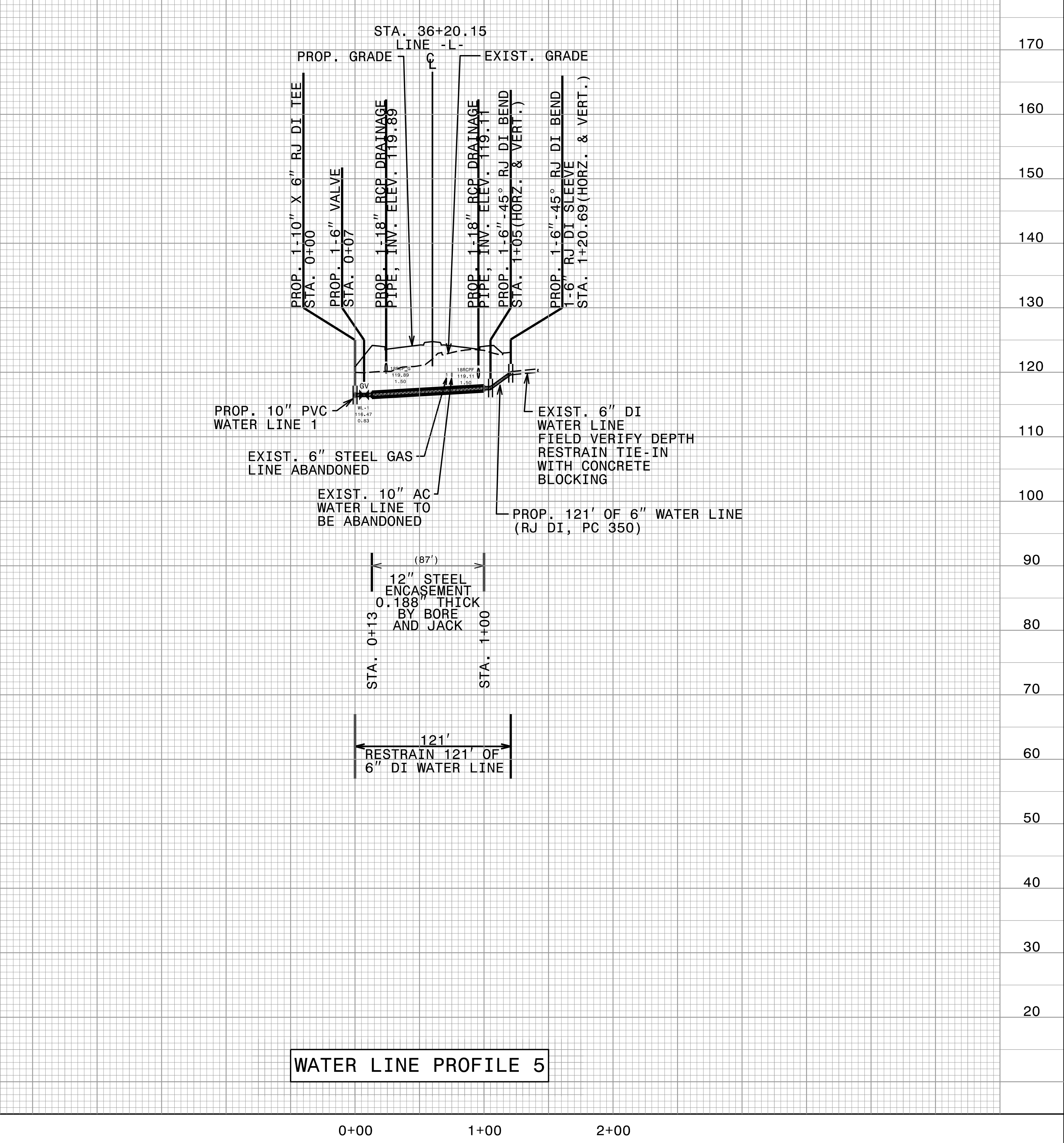
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DESIGNED BY: CDB	
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APPROVED BY: CDB	
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WATER LINE PROFILE 4




WATER LINE PROFILE 5

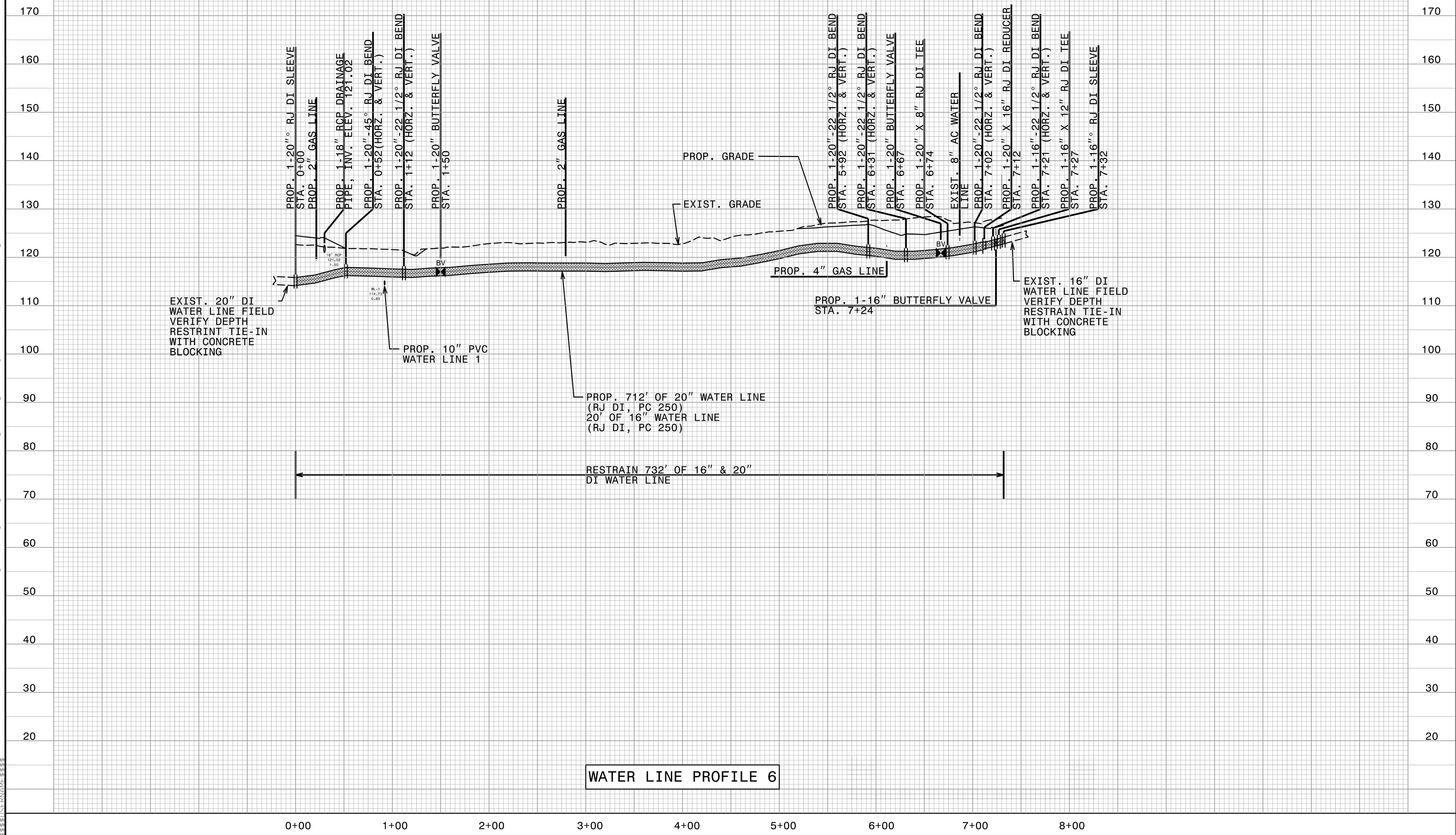
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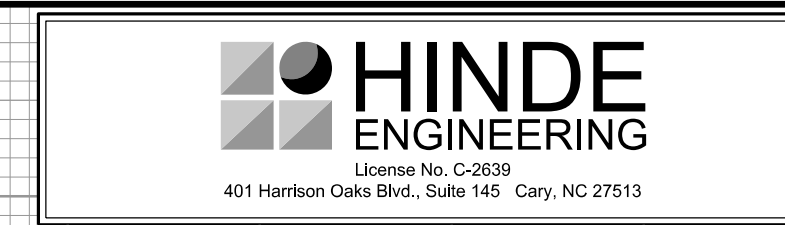
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WATER LINE PROFILE 6

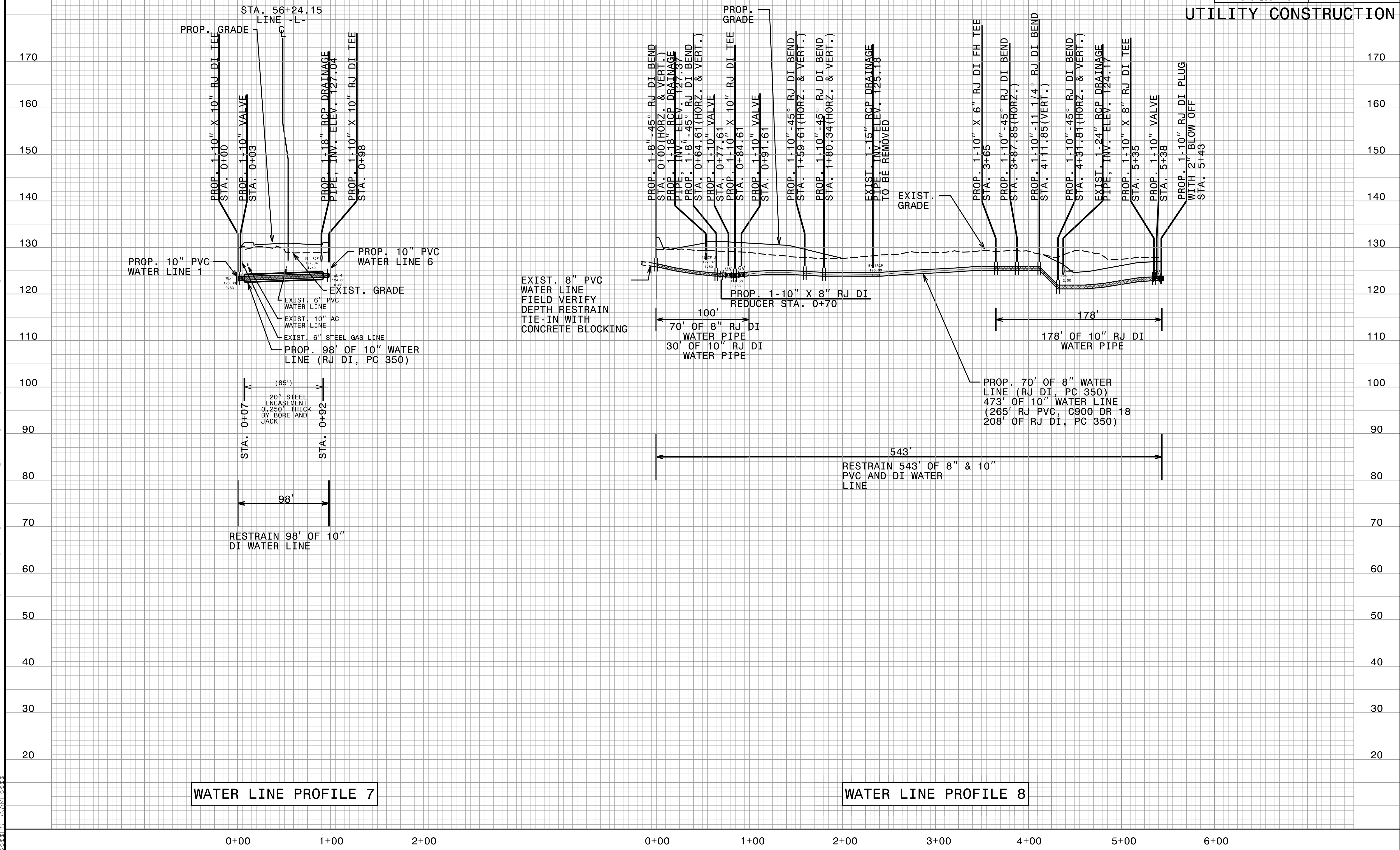
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PROJECT REFERENCE NO.	U-2714	SHEET NO.	UC-20
DESIGNED BY:	CDB		
DRAWN BY:	JNA		
CHECKED BY:	CLS		
APPROVED BY:	CDB		
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		1/3/2020	
UTILITIES ENGINEERING SEC.		PHONE: (919) 707-6690	
FAX: (919) 250-4151		UTILITY CONSTRUCTION PLANS ONLY	

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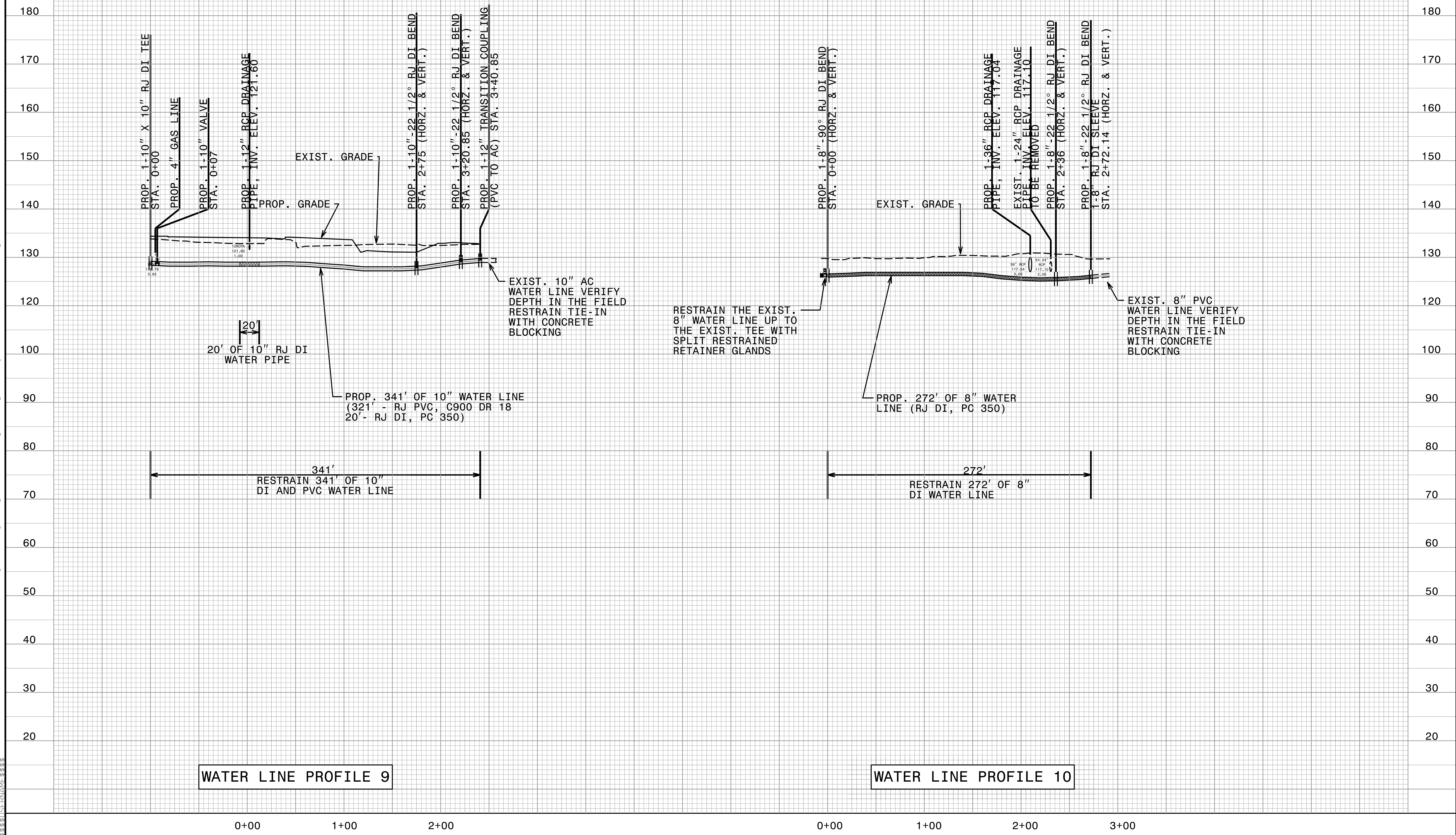
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APPROVED BY: CDB	
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UTILITY CONSTRUCTION



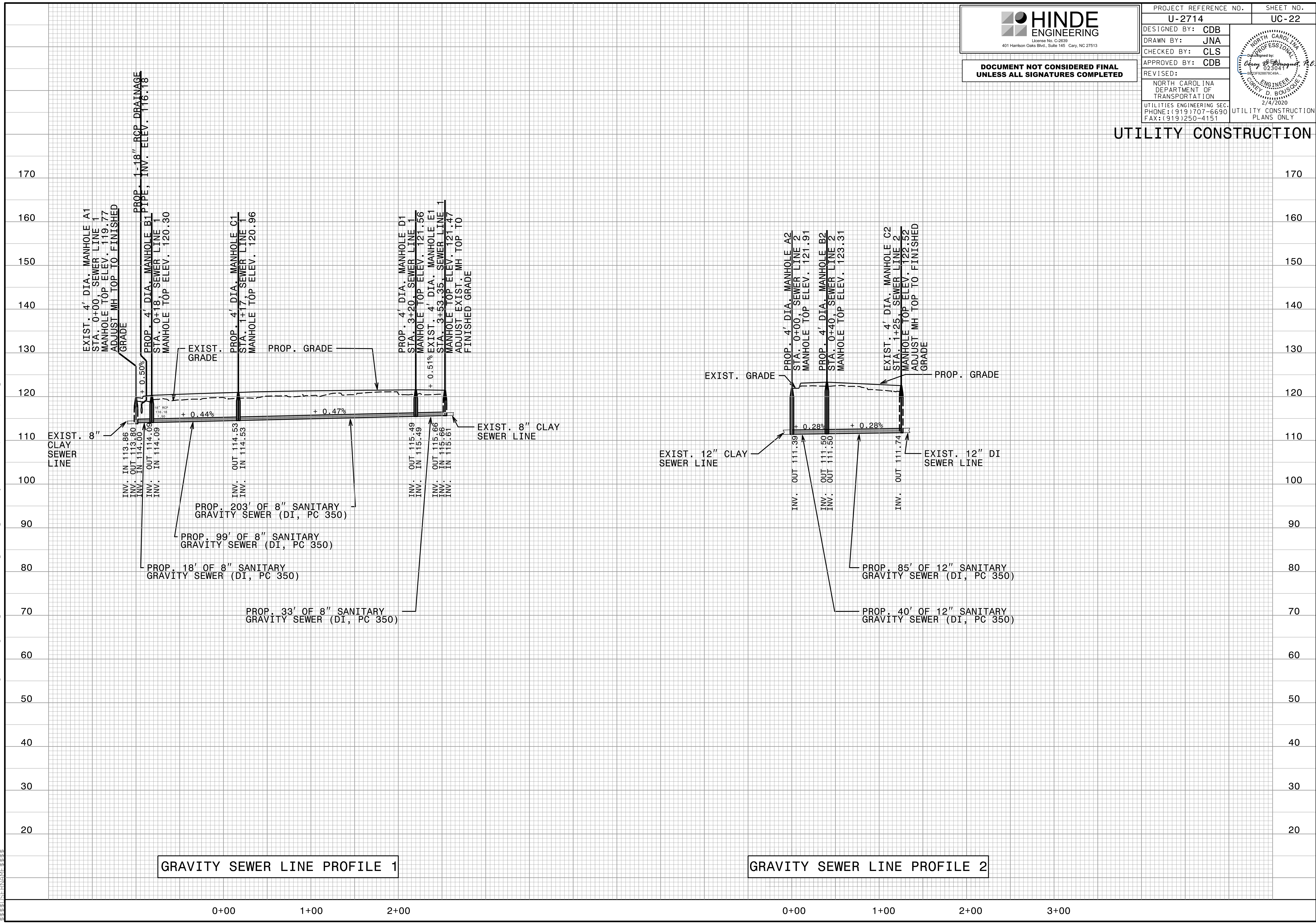
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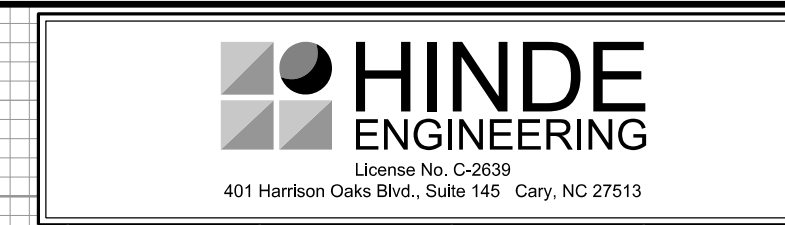
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APPROVED BY: CDB	
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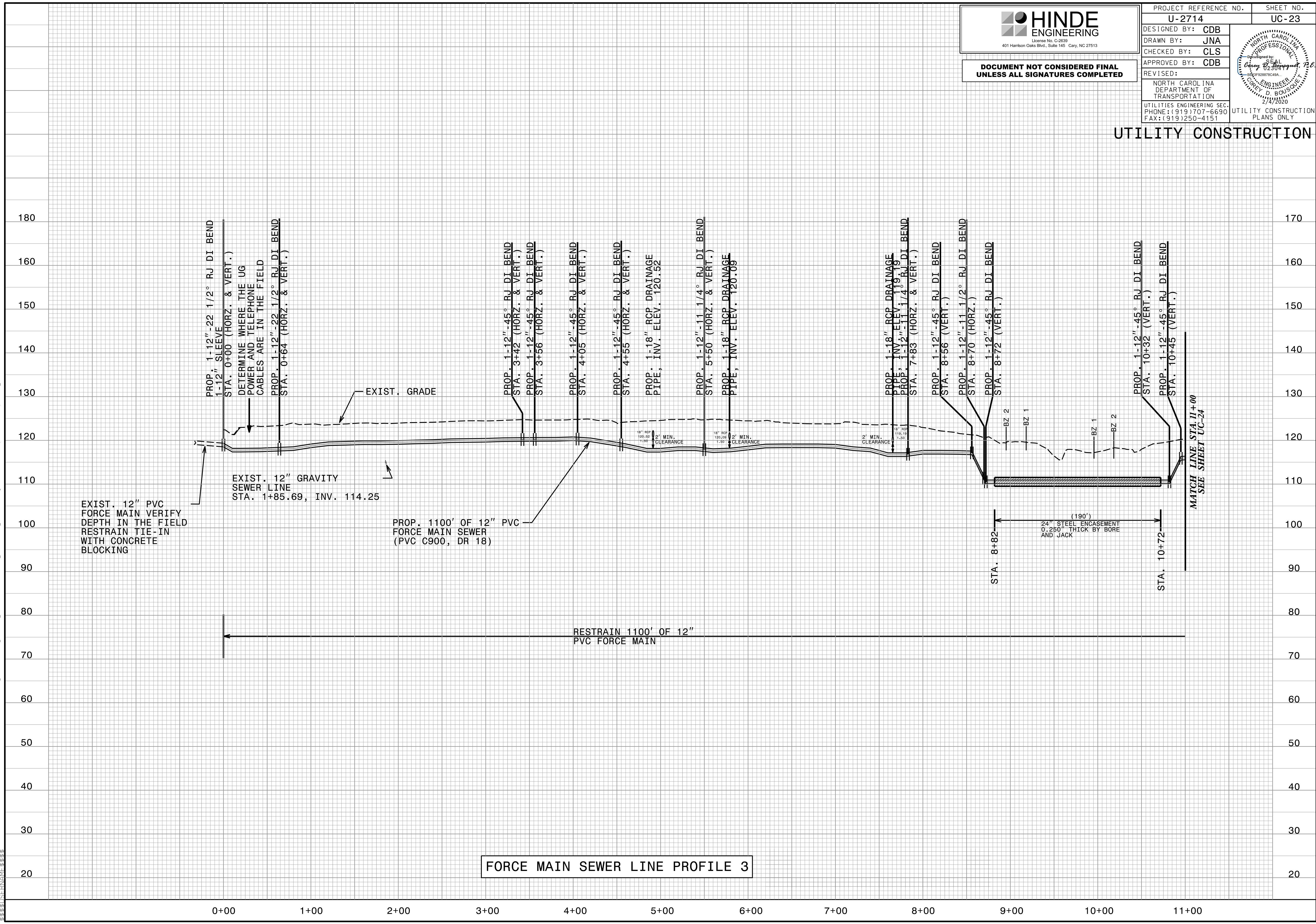
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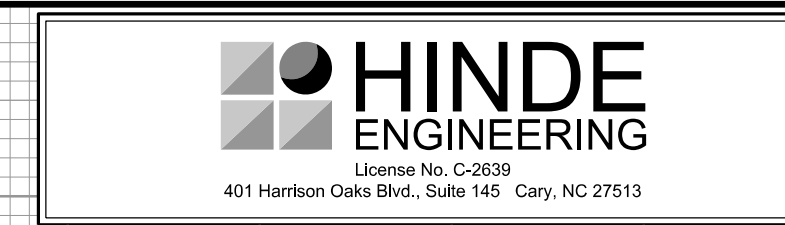
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APPROVED BY: CDB	
REVISED:	
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FORCE MAIN SEWER LINE PROFILE 3

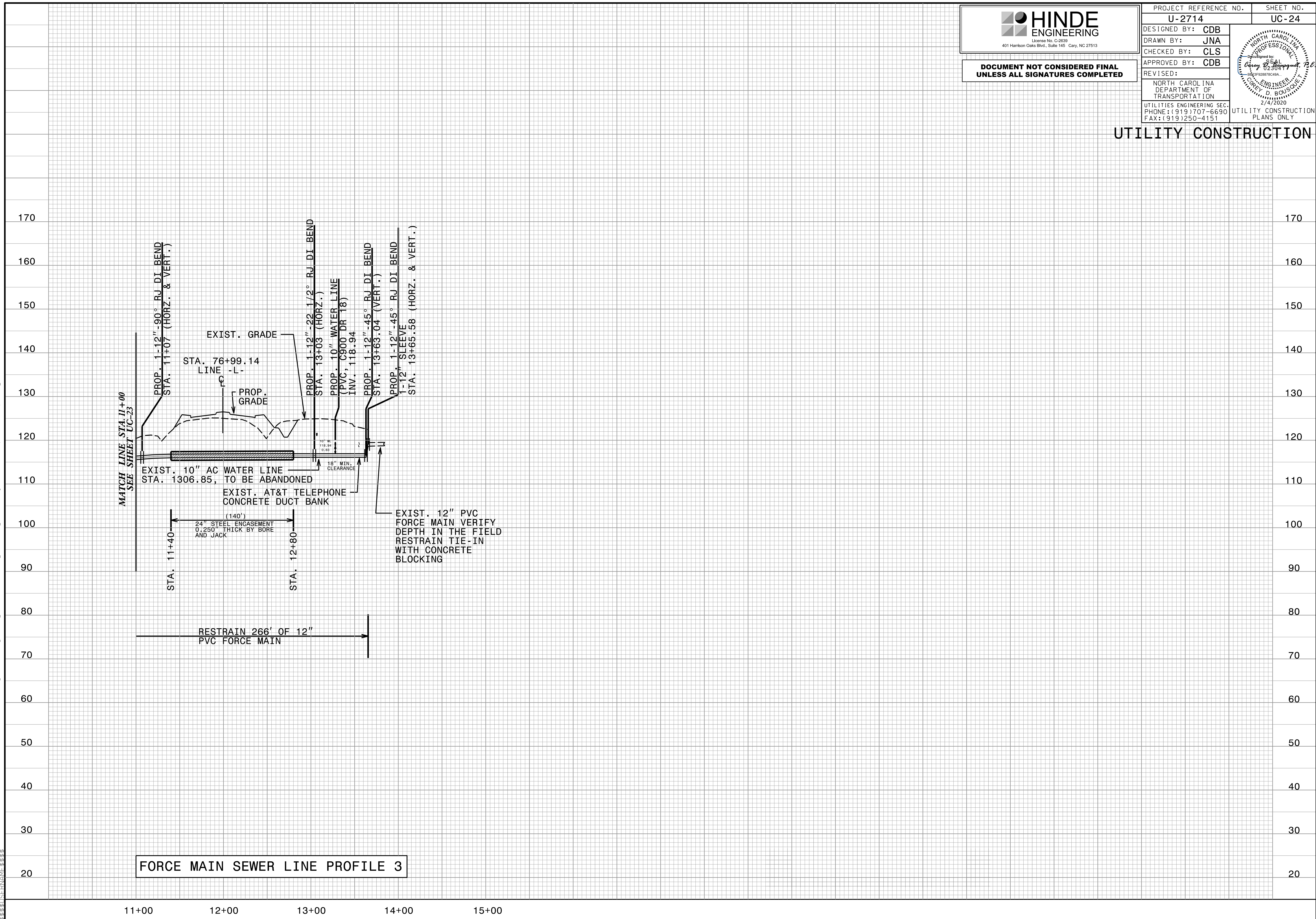
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DRAWN BY: JNA	
CHECKED BY: CLS	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION



24-FEB-2020 14:07 24555 PROJECTS\2015\A2015902.00 HDR - U-2714 Wayne County\Design\Utilities\Engineering\UC\Proj\U-2714_ut.-pf1_UC24_psh.dgn