

TIP PROJECT: R-3421B

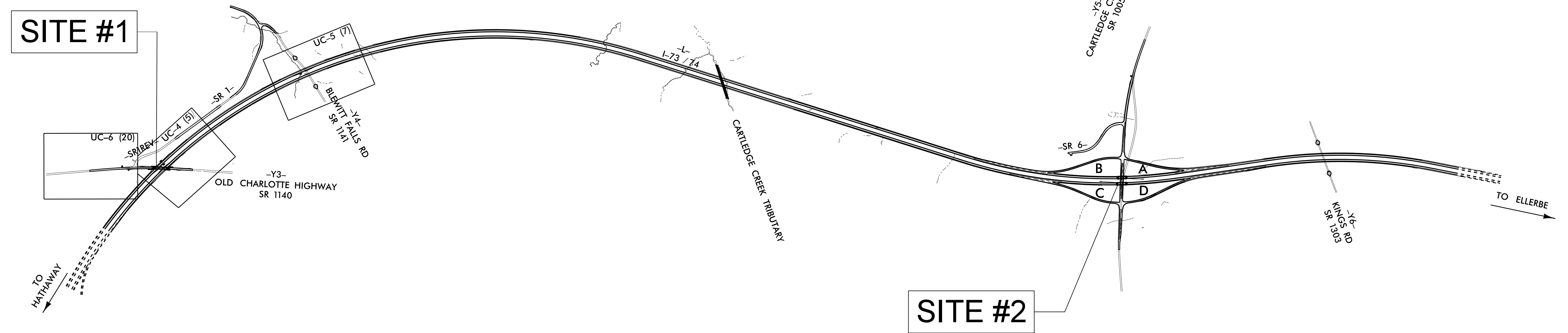
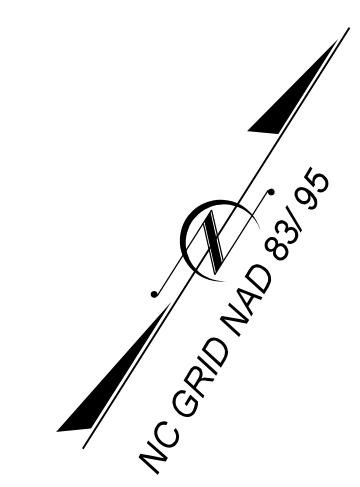
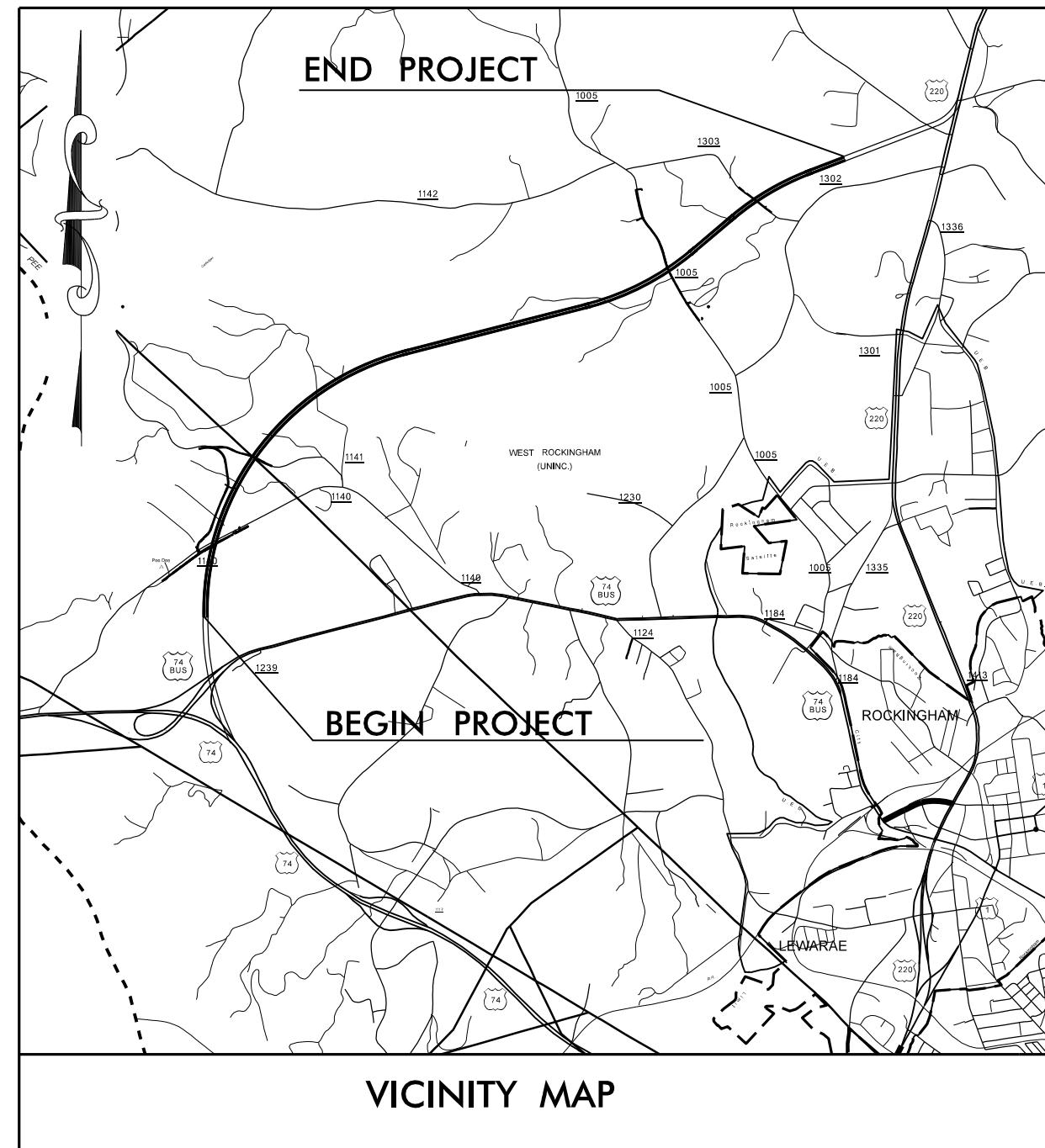
T.I.P. NO.	SHEET NO.
R-3421B	UC-1

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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

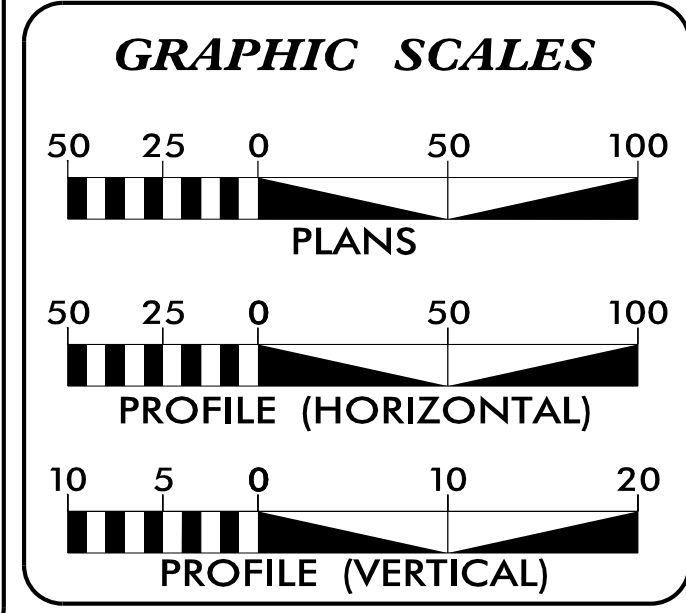
**UTILITY CONSTRUCTION PLANS
RICHMOND COUNTY**

**LOCATION: I-73/74 FROM SOUTH OF SR 1140 (OLD CHARLOTTE HWY)
TO SOUTHWEST OF SR 1304 (HARRINGTON RD)**
TYPE OF WORK: WATER LINE RELOCATON



NOTE:
THIS PROJECT IS A CONTROLLED ACCESS PROJECT
WITH ACCESS LIMITED TO THE INTERCHANGE.

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INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3	NOTES
UC-3A	DETAILS
UC-4 THRU UC-6	UTILITY CONSTRUCTION SHEETS
UC-7 THRU UC-8	PROFILE SHEETS

WATER AND SEWER OWNERS ON PROJECT

(A) WATER - RICHMOND COUNTY

PREPARED IN THE OFFICE OF:

HINDE ENGINEERING
License No. C-2639
401 Harrison Oaks Blvd., Suite 220 Cary, NC 27513
Ph. (919) 653-0001

Clint L. Stevens, P.E. UTILITIES PROJECT MANAGER
R. B. Wilkins, P.E. UTILITIES PROJECT ENGINEER
Jordan Chapman UTILITIES PROJECT DESIGNER

SEAL

5/20/2019

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

Travis L. Morgan, P.E. DIVISION CONTACT #1
James D. Yow DIVISION CONTACT #2
Xxxxx X.Xxxxx DIVISION CONTACT #3
Xxxxx X.Xxxxx DIVISION CONTACT #4

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	..... +x
45 Degree Bend	..... +X
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	..... PFH
Relocate Fire Hydrant	..... RFH
Remove Fire Hydrant	..... REM FH
Water Meter	..... PWM
Relocate Water Meter	..... RWM
Remove Water Meter	..... REM WM
Water Pump Station	..... PST(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	..... PST(SS)

PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

Power Pole	..... 0
Telephone Pole	..... -0-
Joint Use Pole	..... -0-
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	..... •	*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	..... A/G Gas
Power Manhole	..... ⊗	*Underground Water Line	.....
Telephone Manhole	..... ⊗	Aboveground Water Line	..... A/G Water
Sanitary Sewer Manhole	..... ⊗	*Underground Gravity Sanitary Sewer Line	..... ss
Hand Hole for Cable	..... ☒	Aboveground Gravity Sanitary Sewer Line	..... A/G Sanitary Sewer
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) _____

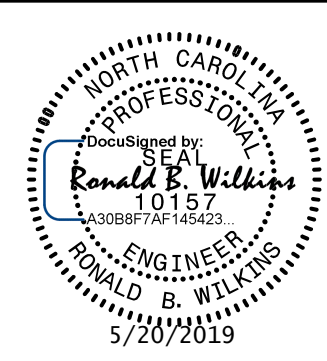
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UTILITY CONSTRUCTION



License No. C-2639
7520 E. Independence Blvd., Suite 230 Charlotte, NC 28227

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PROJECT REFERENCE NO.	SHEET NO.
R-3421B	UC-3
DESIGNED BY: RBW	
DRAWN BY: RBW	
CHECKED BY: CLS	
APPROVED BY: RBW	
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 UTILITIES BELONG TO RICHMOND COUNTY. THE CONTACT FOR THE COUNTY IS:

 MR. JERRY AUSTIN
 PUBLIC WORKS DIRECTOR
 910-997-8338

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.

LIST OF STANDARD DRAWINGS

1515.02 FIRE HYDRANT

UTILITY CONSTRUCTION

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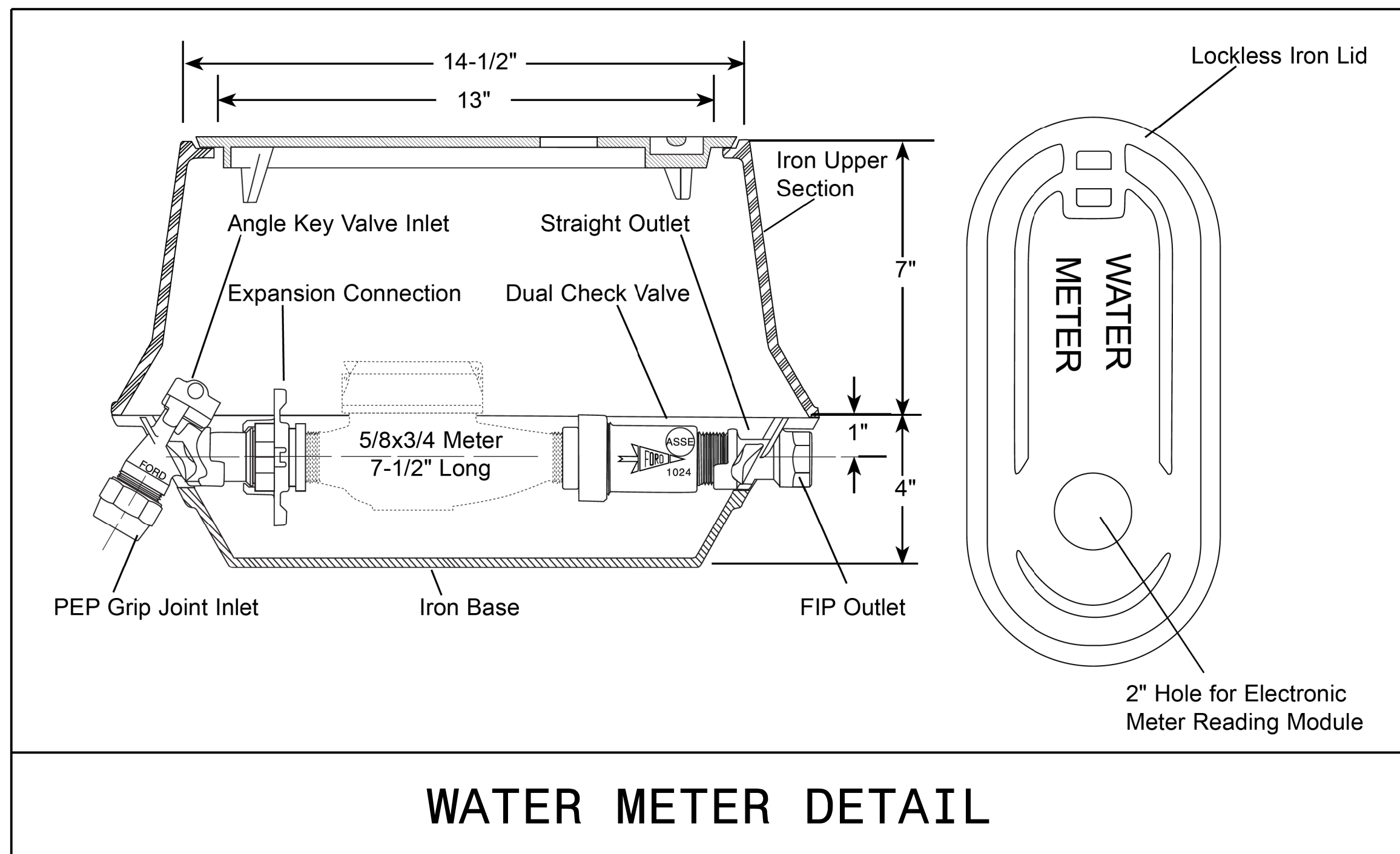
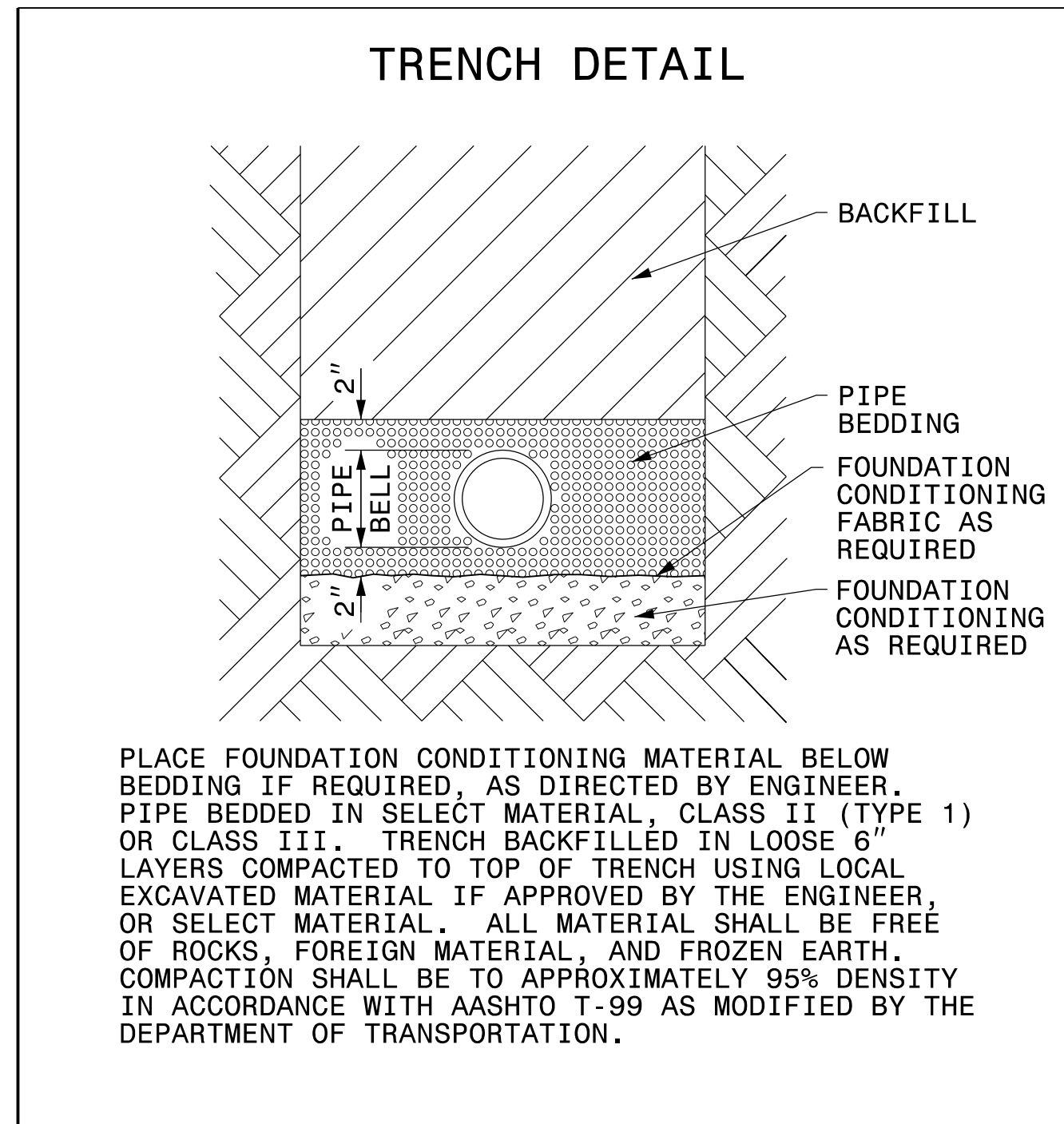


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PROJECT REFERENCE NO. R-3421B	SHEET NO. UC-3A
DESIGNED BY: RBW	
DRAWN BY: JKC	
CHECKED BY: CLS	
APPROVED BY: RBW	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)	NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)
4	28	20	44
6	30	24	48
8	32	30	54
10	34	36	60
12	36	42	66
14	38	48	72
16	40	54	78
18	42		



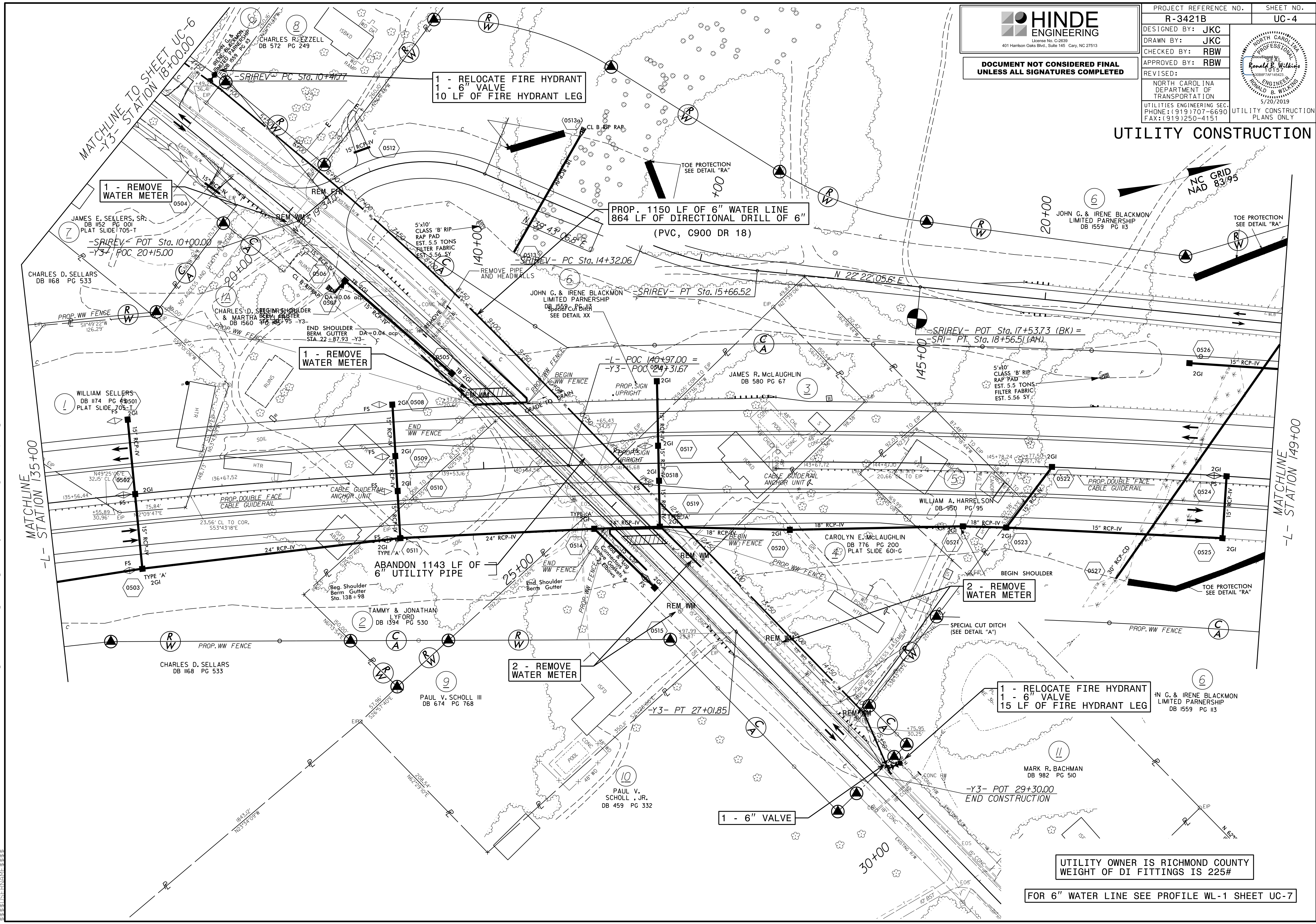
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PROJECT REFERENCE NO. R-3421B	SHEET NO. UC-4
DESIGNED BY: JKC	
DRAWN BY: JKC	
CHECKED BY: RBW	
APPROVED BY: RBW	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



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UTILITY OWNER IS RICHMOND COUNTY
 WEIGHT OF DI FITTINGS IS 225#

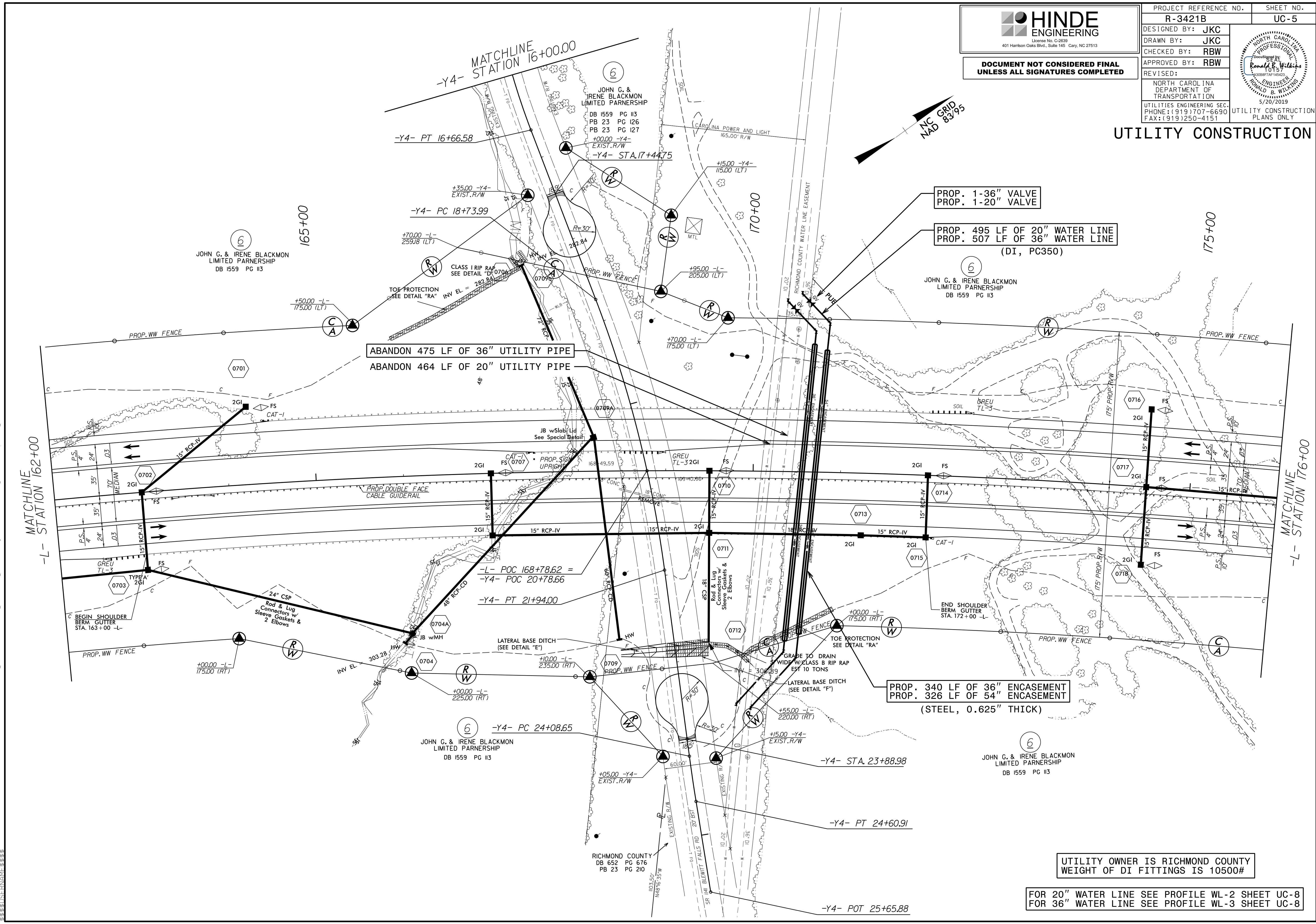
FOR 6" WATER LINE SEE PROFILE WL-1 SHEET UC-7

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PROJECT REFERENCE NO. R-3421B	SHEET NO. UC-5
DESIGNED BY: JKC	
DRAWN BY: JKC	
CHECKED BY: RBW	
APPROVED BY: RBW	
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UTILITY CONSTRUCTION



ABANDON 475 LF OF 36" UTILITY PIPE
ABANDON 464 LF OF 20" UTILITY PIPE

PROP. 1-36" VALVE
PROP. 1-20" VALVE

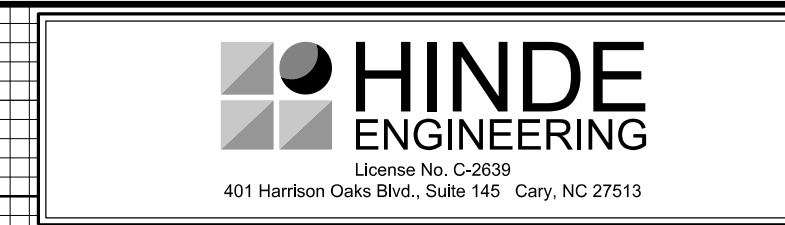
PROP. 495 LF OF 20" WATER LINE
PROP. 507 LF OF 36" WATER LINE
 (DI, PC350)

PROP. 340 LF OF 36" ENCASEMENT
PROP. 326 LF OF 54" ENCASEMENT
 (STEEL, 0.625" THICK)

UTILITY OWNER IS RICHMOND COUNTY
WEIGHT OF DI FITTINGS IS 10500#

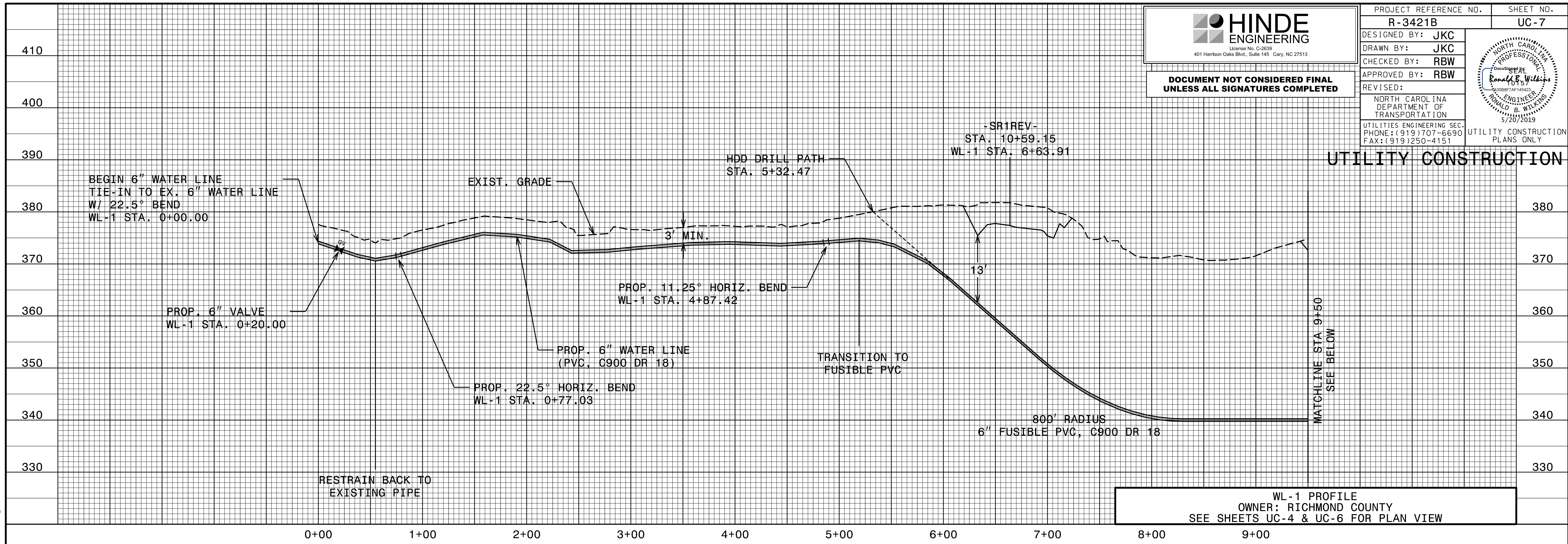
FOR 20" WATER LINE SEE PROFILE WL-2 SHEET UC-8
FOR 36" WATER LINE SEE PROFILE WL-3 SHEET UC-8

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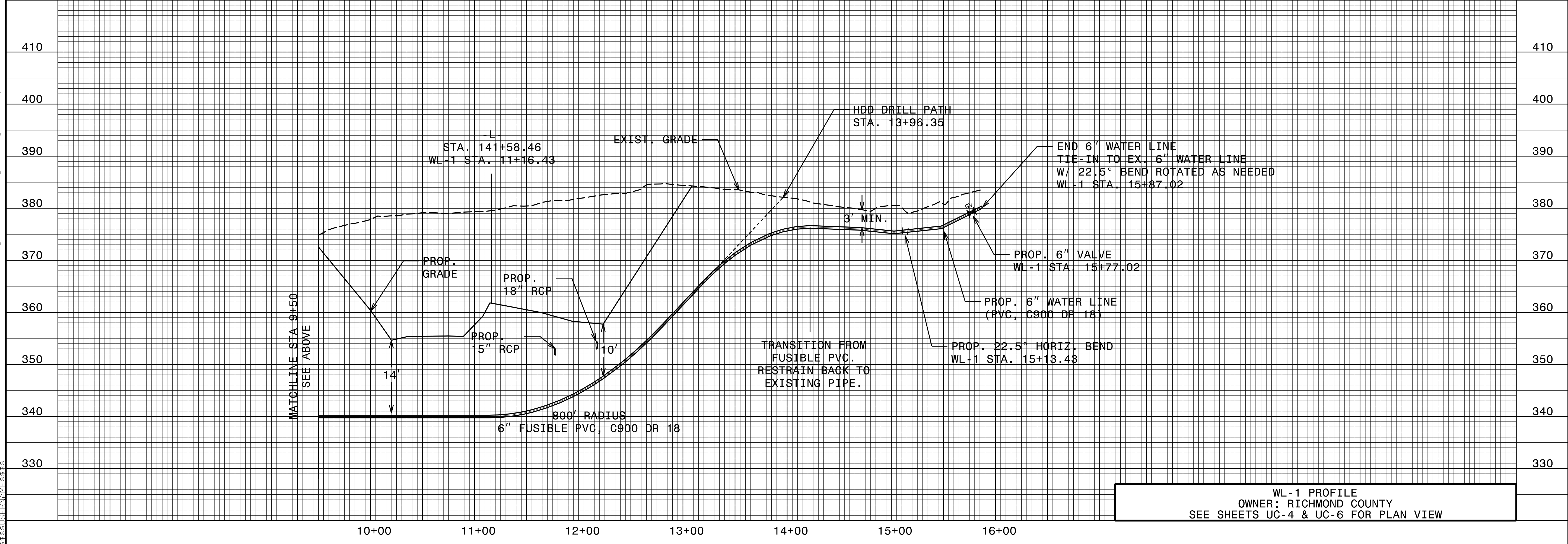


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UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	



WL-1 PROFILE
OWNER: RICHMOND COUNTY
SEE SHEETS UC-4 & UC-6 FOR PLAN VIEW



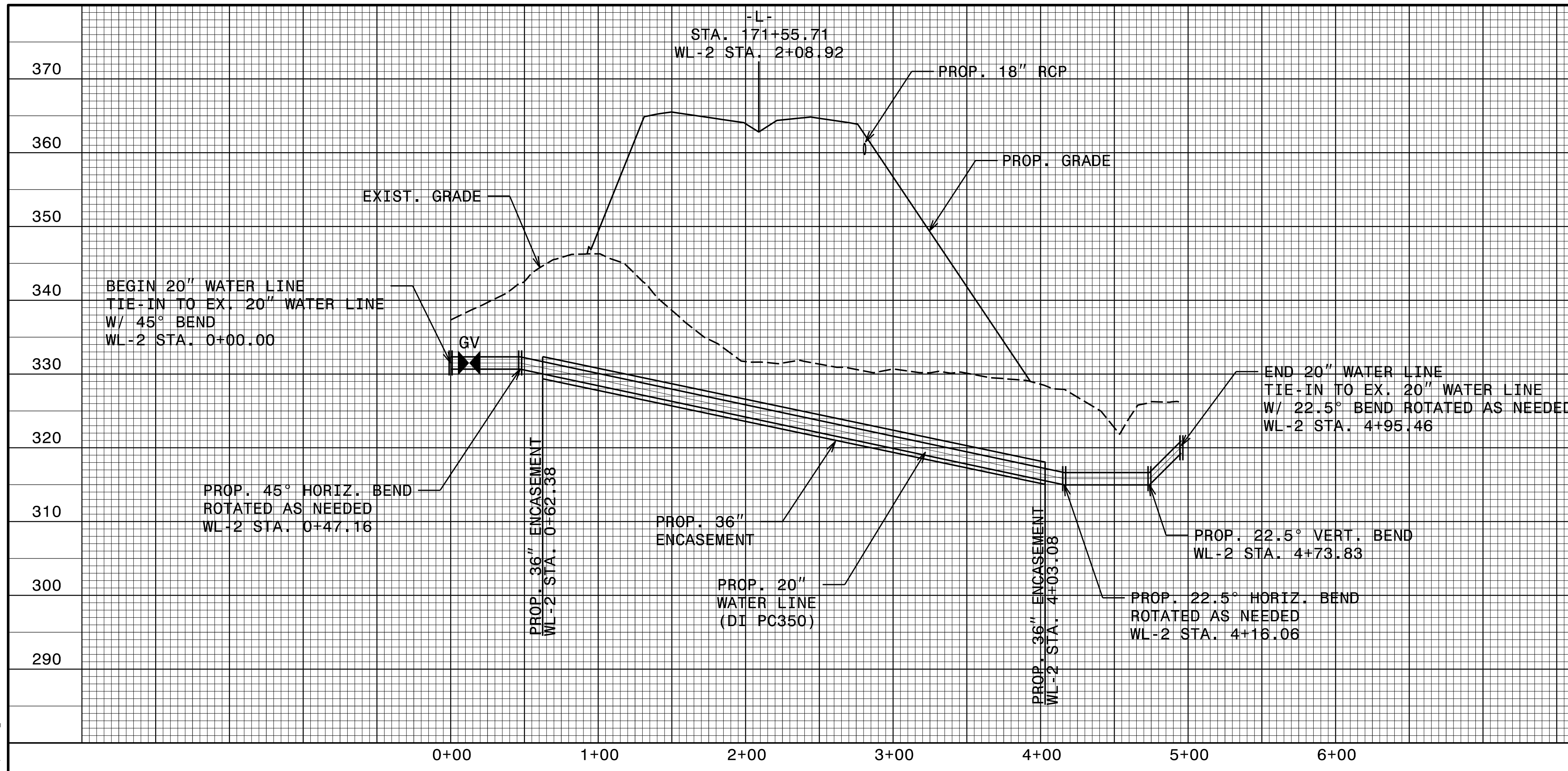
WL-1 PROFILE
OWNER: RICHMOND COUNTY
SEE SHEETS UC-4 & UC-6 FOR PLAN VIEW

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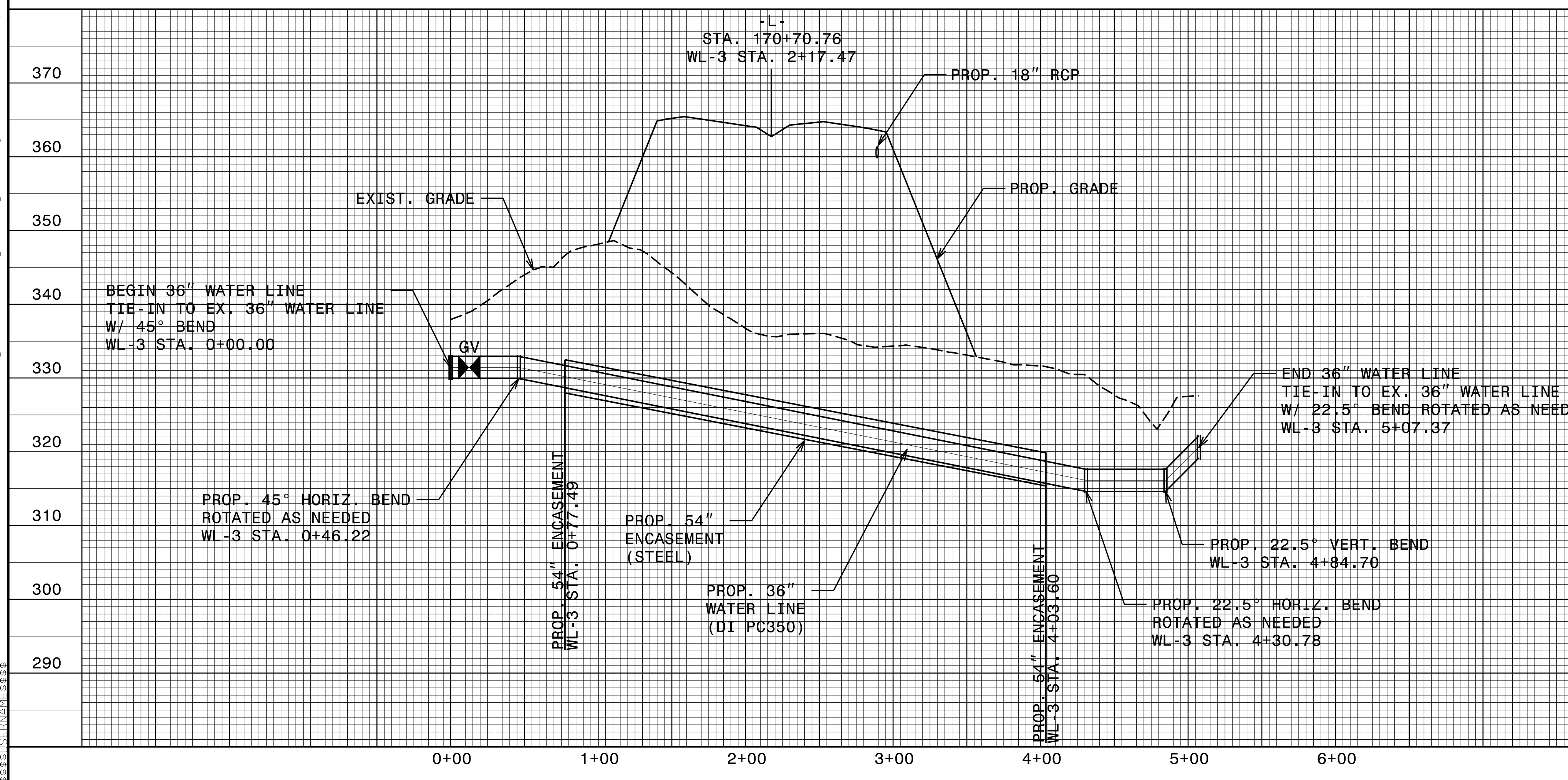
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UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY



WL-2 PROFILE
 OWNER: RICHMOND COUNTY
 SEE SHEET UC-5 FOR PLAN VIEW



WL-3 PROFILE
 OWNER: RICHMOND COUNTY
 SEE SHEET UC-5 FOR PLAN VIEW

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