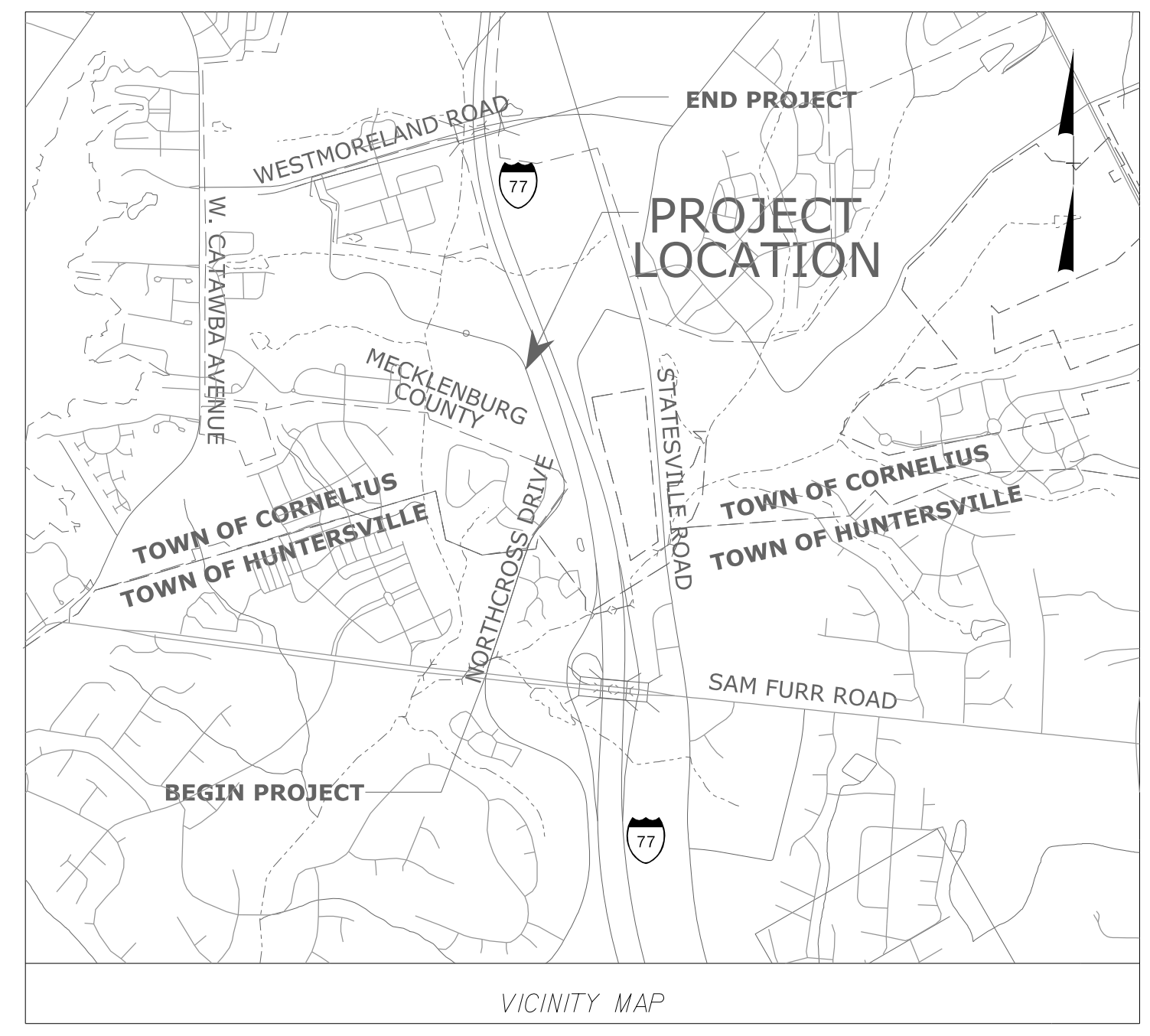


TIP PROJECT: U-5108

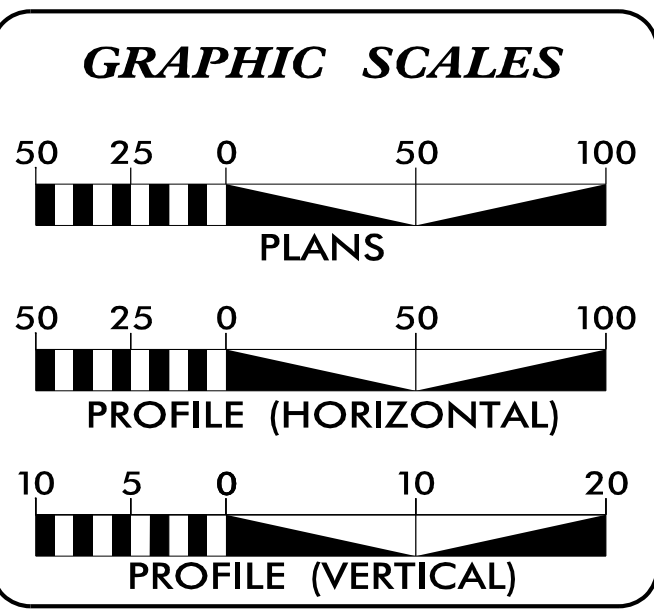
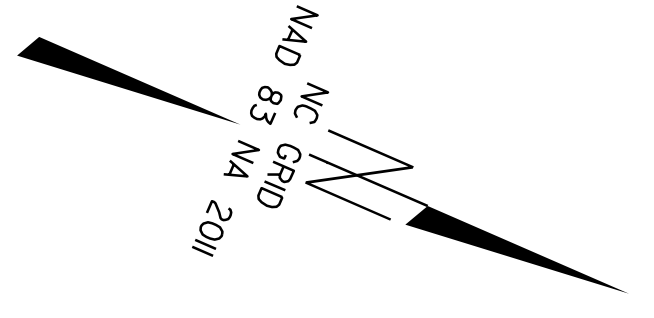
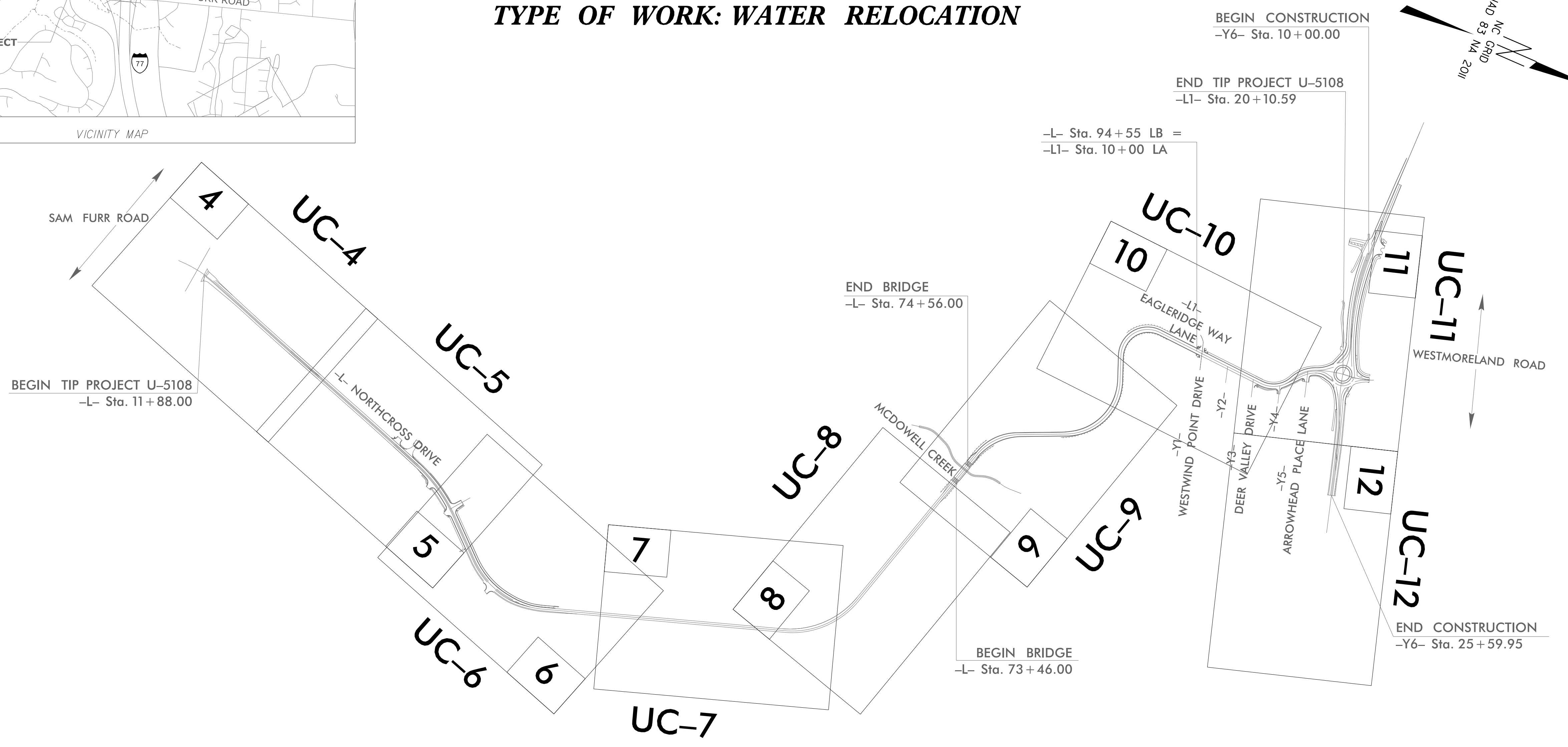


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
U-5108	UC-1
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

**UTILITY CONSTRUCTION PLANS
MECKLENBURG COUNTY**

LOCATION: NORTHCROSS DR.
TYPE OF WORK: WATER RELOCATION



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3	NOTES
UC-3A THRU UC-3B	DETAILS
UC-4 THRU UC-12	UTILITY CONSTRUCTION SHEETS
UC-13 THRU UC-17	PROFILE SHEETS

WATER AND SEWER OWNERS ON PROJECT

(A) WATER - CHARLOTTE WATER

PREPARED IN THE OFFICE OF:

HINDE ENGINEERING
License No. C-2639
10815 Sikes Place, Suite 210 Charlotte, NC 28277
Ph. (704) 814-4407

Clint L. Stevens, P.E. UTILITIES PROJECT MANAGER
Jordan K. Chapman, E.I. UTILITIES PROJECT ENGINEER
James N. Arnold UTILITIES PROJECT DESIGNER

SEAL

**DIVISION OF HIGHWAYS
DIVISION 10**
716 W. Main St.
Albemarle, NC 28001
PHONE (704) 983-4400
FAX (704) 982-3146

Brett D. Canipe, P.E. DIVISION ENGINEER
Rick W. Baucom, P.E. DIVISION CONSTRUCTION ENGR
Lynn Basinger DIVISION UTILITY ENGINEER
Terry Burleson DM-STIP PROJECT ENGINEER

06-MAR-2024 09:24 S:\Server\Files\PROJECTS\2018\A201840100_NCDOT_U-5108\Design\Utilities\Engineering\UC\Proj\U-5108_Ut_1_tsh_UC01.psh.dgn

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)

05-MAR-2014 08:24
 8401.00 U:\05-1108-210-UC-2\Drawings\Utilities\Engineering\UC-2\U-5108-UC-2-sym-UC2.psh.dgn
 REV: 2/1/2012



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

PROJECT REFERENCE NO.	SHEET NO.
U-5108	UC-2A
DESIGNED BY: JKC	
DRAWN BY: JNA	
CHECKED BY: JKC	
APPROVED BY: CLS	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	3/6/2024
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

APPLICATION FOR PERMIT FOR WATER MAIN EXTENSION

PROJECT NAME: NCDOT TIP U-5108

CLTWater PROJECT NO.: CPM-20-25-236

PROJECT DESCRIPTION: PROPOSED 151 L.F. OF 6" WATER MAIN WITH IT'S ASSOCIATED FITTINGS
PROPOSED 243 L.F. OF 8" WATER MAIN WITH IT'S ASSOCIATED FITTINGS
PROPOSED 881 L.F. OF 12" WATER MAIN WITH IT'S ASSOCIATED FITTINGS
PROPOSED 7,219 L.F. OF 24" WATER MAIN WITH IT'S ASSOCIATED FITTINGS
PROPOSED 751 L.F. OF 36" WATER MAIN WITH IT'S ASSOCIATED FITTINGS
ALONG THE NEW NORTHCROSS DRIVE EXTENSION TO WESTMORELAND ROAD

DESIGNED BY: FIRM: HINDE ENGINEERING, INC.

ENGINEER: CLINT L. STEVENS, PE

ADDRESS: 10815 SIKES PLACE, SUITE 210
CHARLOTTE, NORTH CAROLINA 28277

PHONE: (704) 814-4407

THIS APPLICATION IS MADE UNDER AND IN FULL ACCORD WITH THE PROVISIONS OF CHAPTER 130A-317 OF THE NORTH CAROLINA GENERAL STATUTES, AND SUCH OTHER STATUTES AS RELATED TO PUBLIC WATER SYSTEMS. CLTWater HAS BEEN GRANTED AUTHORITY TO ISSUE PERMITS FOR EXTENSION OF WATER MAINS PURSUANT TO 15A NCAC 18C.1801. THE APPLICANT AGREES THAT NO SIGNIFICANT CHANGE OR DEVIATION FROM THE PLANS AND SPECIFICATIONS APPROVED BY CLTWater WILL BE MADE WITHOUT THE WRITTEN CONSENT AND APPROVAL OF CLTWater OR ITS AUTHORIZED REPRESENTATIVE. A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF NORTH CAROLINA SHALL SUBMIT A STATEMENT REFLECTING THAT ADEQUATE OBSERVATIONS DURING AND UPON COMPLETION OF CONSTRUCTION INDICATES THAT CONSTRUCTION WAS COMPLETED IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS.

PERMIT NO. _____

APPROVED: _____ DATE _____

JOSEPH C WILSON, PE, CHIEF ENGINEER
 CHARLOTTE WATER
 5100 BROOKSHIRE BLVD.
 CHARLOTTE, NORTH CAROLINA 28216

C:\MAR-2024_09\24\PROJECTS\2018\A2018401.00_NCDOT_U-5108\Design\Utilities\Engineering\UC\Pro\U-5108_ut_permit_UC02A_psh.dgn
 \$\$\$\$
 \$\$\$\$
 \$\$\$\$
 \$\$\$\$

UTILITY CONSTRUCTION

HINDE ENGINEERING
 License No. C-2639
 10815 Sikes Place, Suite 210 Charlotte, NC 28277

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

PROJECT REFERENCE NO.	SHEET NO.
U-5108	UC-3
DESIGNED BY: JKC	
DRAWN BY: JNA	
CHECKED BY: JKC	
APPROVED BY: CLS	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	3/6/2024
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 2024.
2. THE EXISTING WATER AND SEWER FACILITIES BELONG TO CHARLOTTE WATER.
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. ALL 12-INCH AND SMALLER DIAMETER PIPE SHALL BE DUCTILE IRON RESTRAINED JOINT PRESSURE CLASS 350, UNLESS OTHERWISE NOTED ON THE UTILITY CONSTRUCTION PLANS.
2. ALL 16-INCH AND LARGER DIAMETER PIPE SHALL BE DUCTILE IRON RESTRAINED JOINT PRESSURE CLASS 250, UNLESS OTHERWISE NOTED ON THE UTILITY CONSTRUCTION PLANS.
3. ALL VALVES ON WATER MAINS SHALL BE DIRECT BURY GATE VALVES, UNLESS OTHERWISE NOTED ON THE UTILITY CONSTRUCTION PLANS.
4. DUCTILE IRON RESTRAINED JOINT PIPE SHALL BE USED IN LIEU OF THRUST BLOCKING ON PROPOSED WATER LINE RELOCATIONS.
5. CONCRETE THRUST BLOCKING (WALL BLOCKING) SHALL BE USED ON EXISTING WATER LINES AT THE PROPOSED RELOCATION TIE-IN POINTS.
6. CONTRACTOR SHALL CONNECT ALL WATER LINES AND SERVICE CONNECTIONS USING NECESSARY FITTINGS.
7. SPLICING OF EXISTING WATER SERVICES IS NOT ALLOWED. ALL WATER METER RELOCATIONS AND RECONNECTS SHALL TIE IN AT THE EXISTING CORPORATION STOP.
8. ALL BACKFLOW PREVENTORS ARE THE RESPONSIBILITY OF THE PROPERTY OWNER.
9. THE CHARLOTTE WATER (CLTWATER) STANDARD DETAILS LOCATED ON THEIR WEBSITE AT: <https://www.charlottenc.gov/water/DevelopmentProjects/Design-Manual> SHALL SUPERCEDE ANY CLTWATER DETAILS SHOWN IN THIS PLAN SET.
10. FOR FIRE HYDRANTS TO BE REMOVED, THE CONTRACTOR SHALL CONTACT CLTWATER TO DETERMINE A SUITABLE LOCATION TO STOCKPILE THE FIRE HYDRANT AND ASSOCIATED ITEMS.
11. CONTRACTOR IS REQUIRED TO CONTACT LOGAN HEDRICK, CLTWATER ENGINEERING PROJECT MANAGER, AT (980)253-4390 AT LEAST 2 WEEKS PRIOR TO ANY WATER AND SEWER CONSTRUCTION.

UTILITY CONSTRUCTION

12. THE CONTRACTOR SHALL PROVIDE THE ANODE TEST STATION AND CATHODIC PROTECTION DESIGN PLANS AND SPECIFICATIONS SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA. THE PLANS SHALL BE REVIEWED AND APPROVED BY NCDOT AND CHARLOTTE WATER PRIOR TO THE ANODE STATION AND CATHODIC PROTECTION BEING INSTALLED.

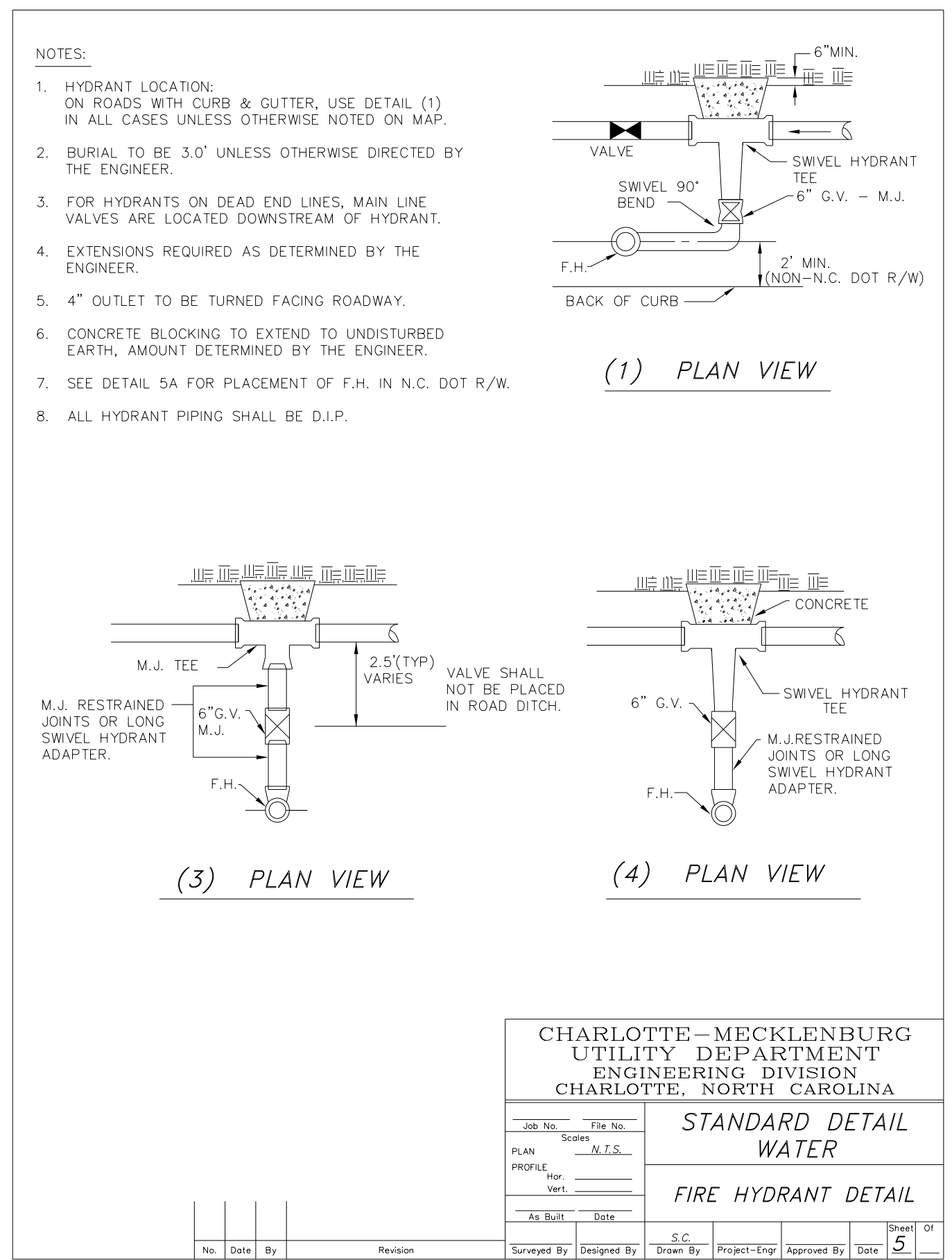
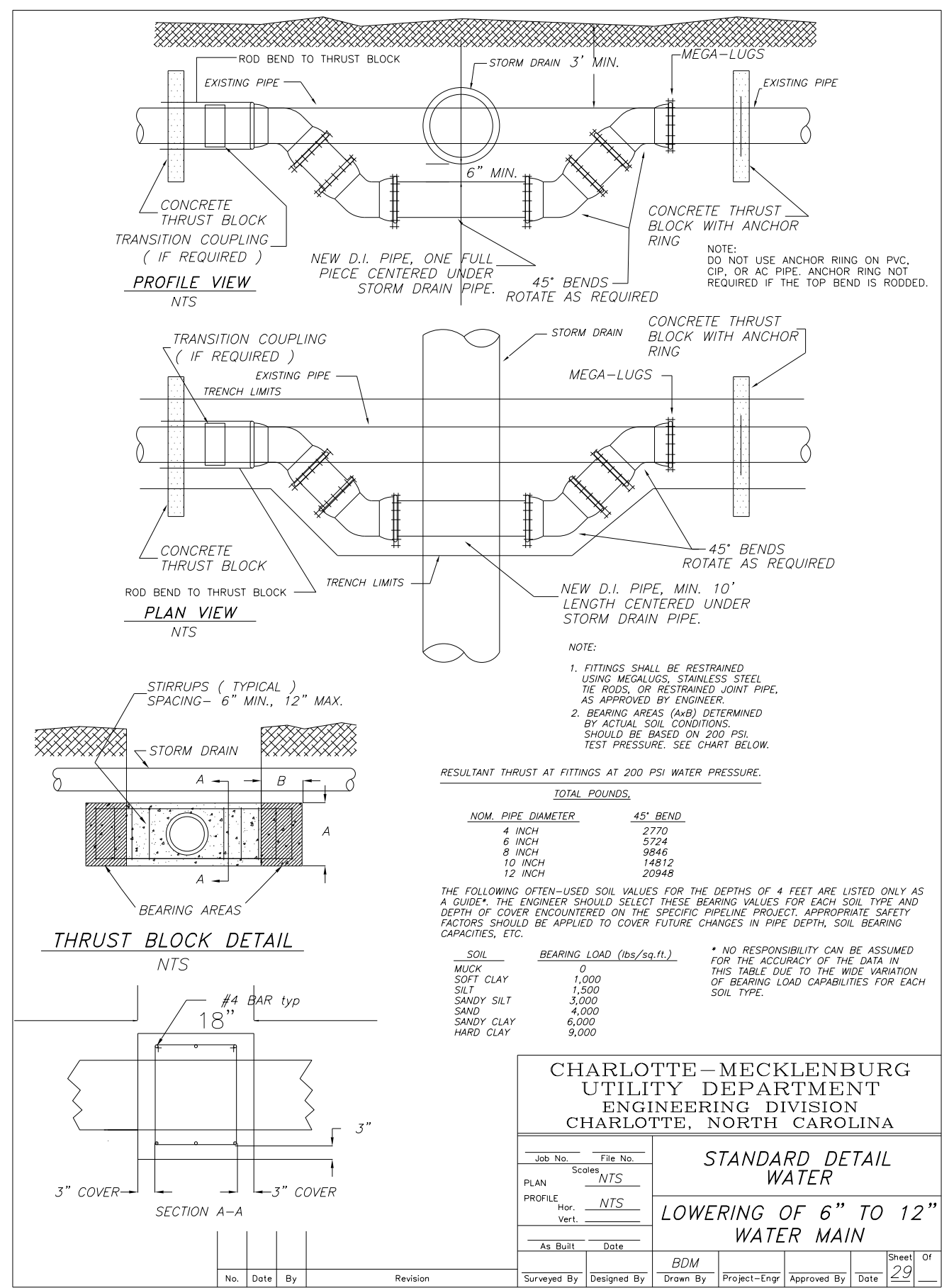
C:\MAR-2024\0924\PROJECTS\2018\A2018401.001_NCDOT_U-5108\Design\Utilities\Engineering\UC-Proj_U-5108_ut_noctes_UC03_psh.dgn

HINDE ENGINEERING
 License No. C-2639
 10815 Sikes Place, Suite 210 Charlotte, NC 28277

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

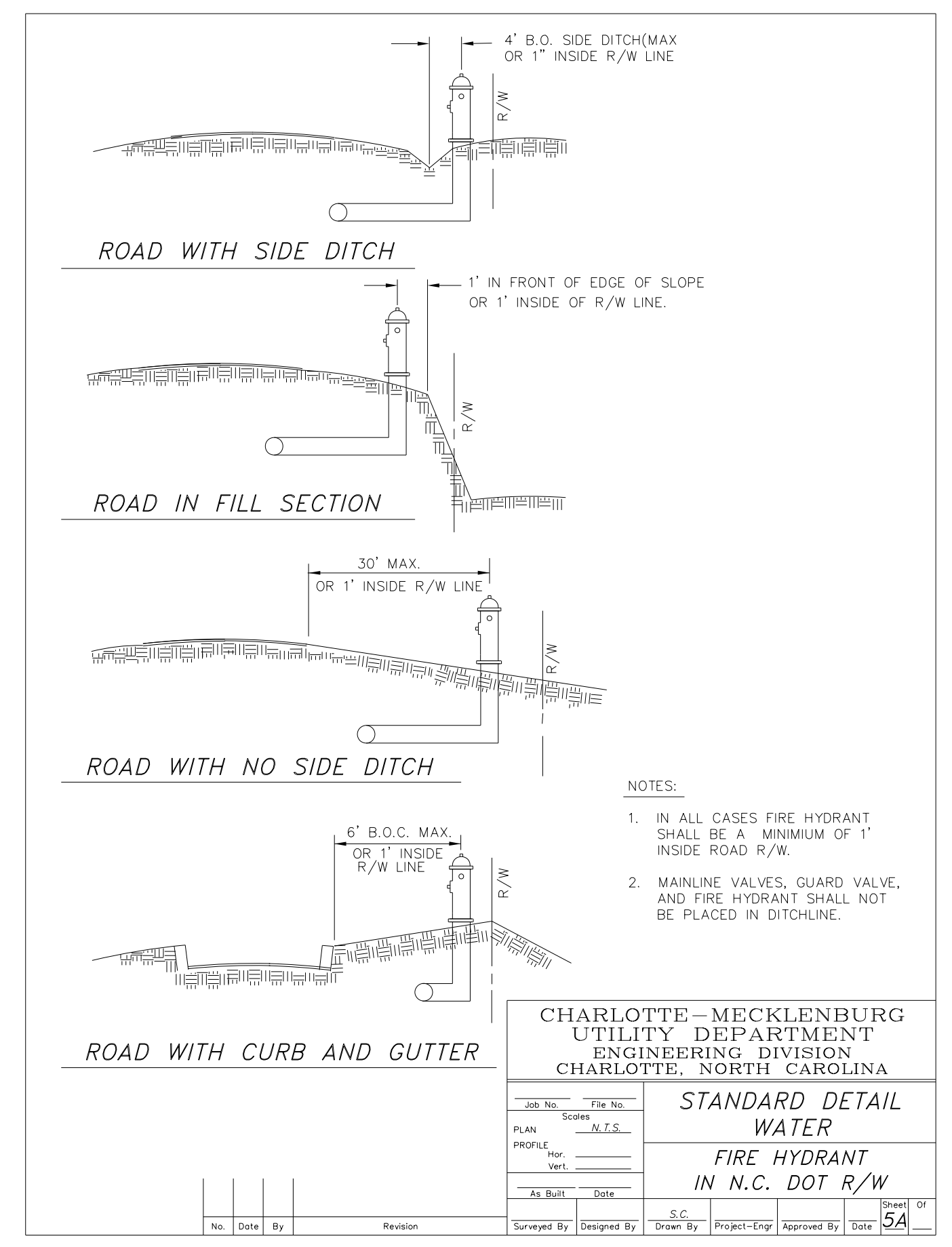
PROJECT REFERENCE NO. U-5108	SHEET NO. UC-3A
DESIGNED BY: JKC	
DRAWN BY: JNA	
CHECKED BY: JKC	
APPROVED BY: CLS	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



LIST OF CLTW STANDARD DETAILS

- WATER:**
- AA PRECAST CONCRETE METER BOX - 0.75-INCH DOMESTIC WATER SERVICE
 - BB PRECAST CONCRETE METER BOX 1-INCH DOMESTIC AND IRRIGATION WATER SERVICE
 - FF CAST IRON VALVE BOX 12-INCH AND SMALLER VALVES
 - GG VALVE BOX ADJUSTMENT FOR PAVEMENT RESURFACING
 - HH VALVE BOX ASSEMBLY INSTALLATION 12-INCH AND SMALLER VALVES
 - J MULTIPLE WATER SERVICES - SCHEMATIC
 - K-1 3-4THS AND 1-INCH DOMESTIC WATER SERVICE CONNECTION PART ONE
 - K-2 3-4THS AND 1-INCH DOMESTIC WATER SERVICE CONNECTION PART TWO
 - LL DEAD END THRUST - WALL BLOCKING WITH 2-INCH BLOW-OFF 14 TO 30-INCH MAINS
 - MM 1.5 INCH DOMESTIC WATER SERVICE CONNECTION
 - MM VALVE BOX CONCRETE GRADE RINGS AND FOOTINGS
 - OO PLASTIC WATER METER BOX AND LID - 0.75-INCH DOMESTIC WATER SERVICE
 - PP WATER METER BOX - PLASTIC LID - 0.75 AND 1-INCH DOMESTIC WATER SERVICES
 - R 2-INCH DOMESTIC WATER SERVICE CONNECTION
 - SS TYPE 6 20.5-INCH MANHOLE COVER - USE WITH 16-INCH AND LARGER VALVES
 - TT TYPE F 20.5-INCH MANHOLE FRAME 7-INCH TALL
 - TW1-3 WATER TRACER DETAILS
 - VV FIRE HYDRANT PAINT COLOR SCHEMES - CMUD-CFD STANDARDS - PUBLIC AND PRIVATE HYDRANTS



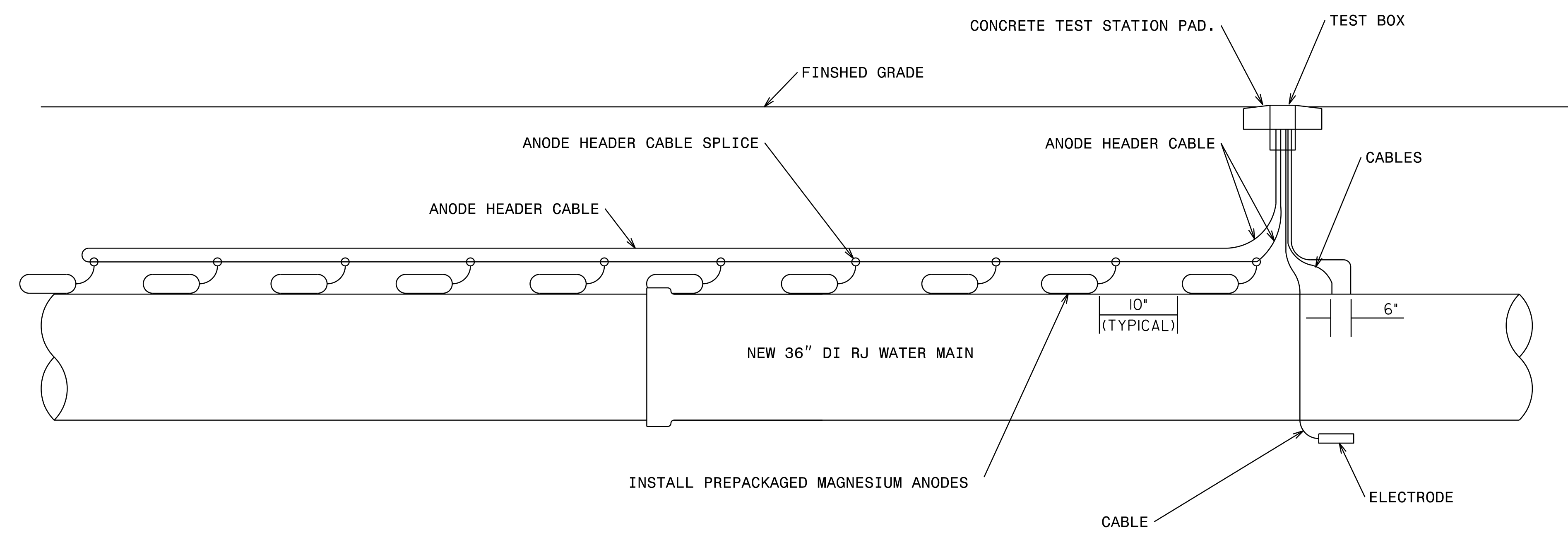
C:\MAR-2024_09\24\PROJECTS\2018\A2018401.00_NC DOT_U-5108\Design\Utilities\Engineering\UC-Proj\U-5108_Ut_dtl_UC03A_psh.dgn

HINDE ENGINEERING
 License No. C-2639
 10815 Sikes Place, Suite 210 Charlotte, NC 28277

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

PROJECT REFERENCE NO.	SHEET NO.
U-5108	UC-3B
DESIGNED BY: JKC	
DRAWN BY: JNA	
CHECKED BY: JKC	
APPROVED BY: CLS	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	3/6/2024
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY

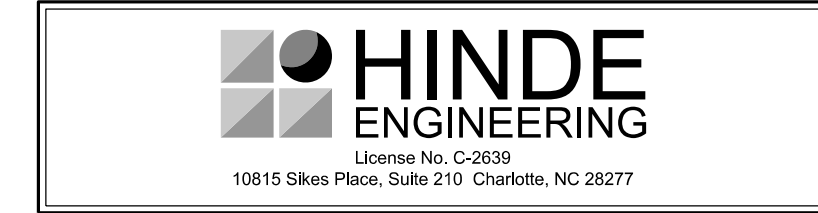
UTILITY CONSTRUCTION



TEST STATION (ANODE)
 NOT TO SCALE

THE ANODE TEST STATION DETAIL IS A GENERAL REPRESENTATION, THE CONTRACTOR WILL BE RESPONSIBLE TO PREPARE DESIGN PLANS AND SPECIFICATIONS FOR THE PROPOSED CATHODIC PROTECTION SIGNED AND SEALED BY A NORTH CAROLINA PROFESSIONAL ENGINEER. THE CONTRACTOR SHALL HAVE A CERTIFIED CATHODIC PROTECTION SPECIALIST TO INSTALL THE TEST STATION AND CATHODIC PROTECTION.

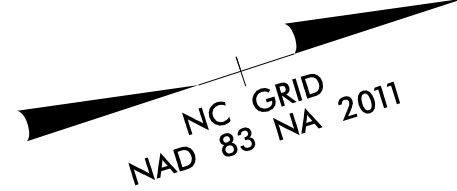
26-MAR-2024 09:24
 C:\S\PROJECTS\2018\A2018401.00_NCDOT_U-5108\Design\Utilities\Engineering\UC-Proj\U-5108_Ut_dtl_UC03B_psh.dgn
 11:58:38 AM
 11:58:38 AM



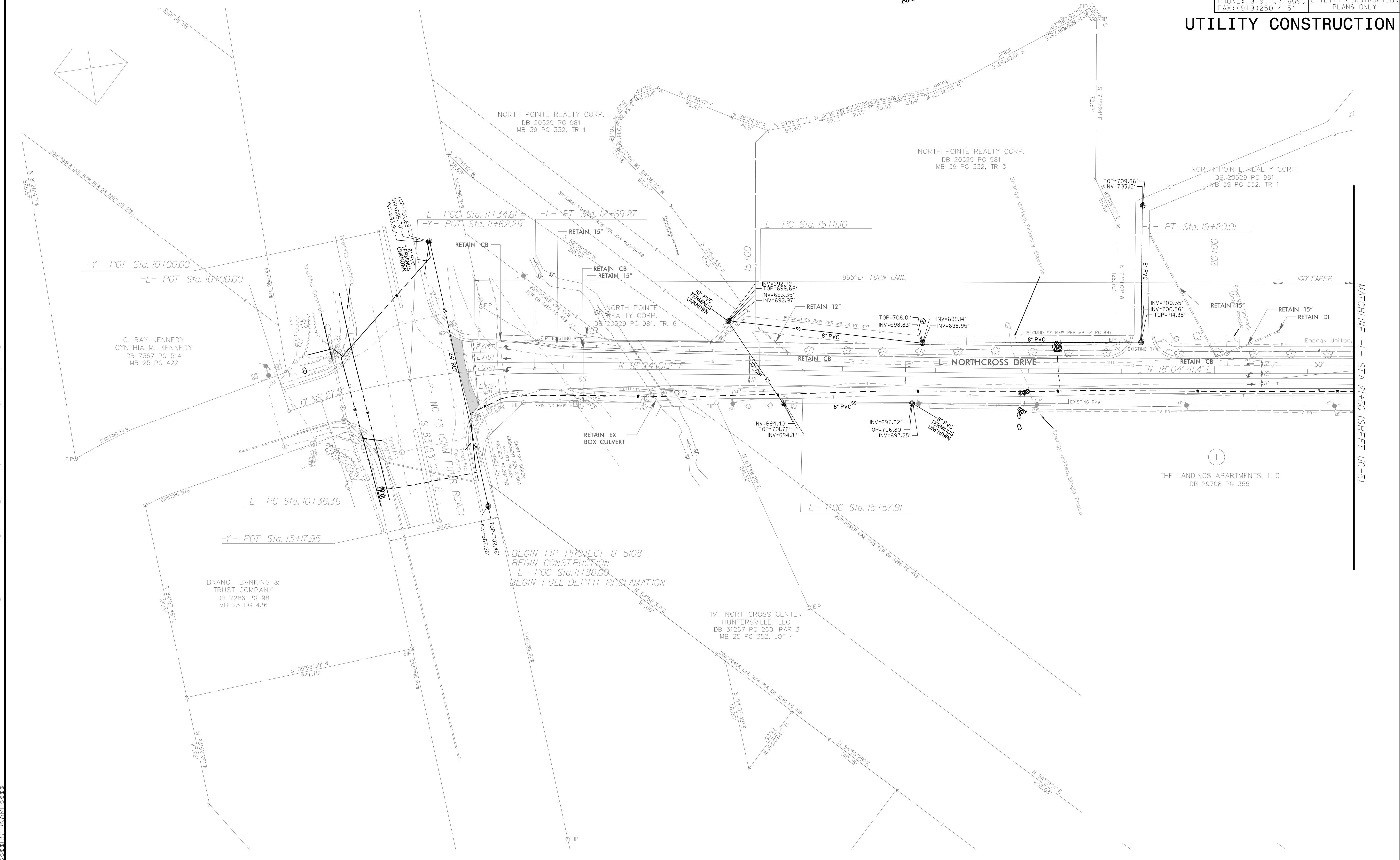
PROJECT REFERENCE NO.	U-5108	SHEET NO.	UC-4
DESIGNED BY:	JKC		
DRAWN BY:	JNA		
CHECKED BY:	JKC		
APPROVED BY:	CLS		
REVISED:		DATE	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		UTILITIES ENGINEERING SECTION	
PHONE: (919) 707-6690		FAX: (919) 250-4151	
		UTILITY CONSTRUCTION PLANS ONLY	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NO UTILITY CONFLICTS EXPECTED THIS SHEET

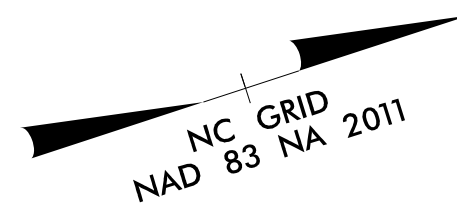


UTILITY CONSTRUCTION



C:\MAR-2024_09\24\PROJECTS\2018\A2018401\001\001\NCDDOT_U-5108\Design\Utilities\Engineering\UC\ProJ\U-5108_Ut_rdy4_UC04_psh.dgn

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 12,512 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

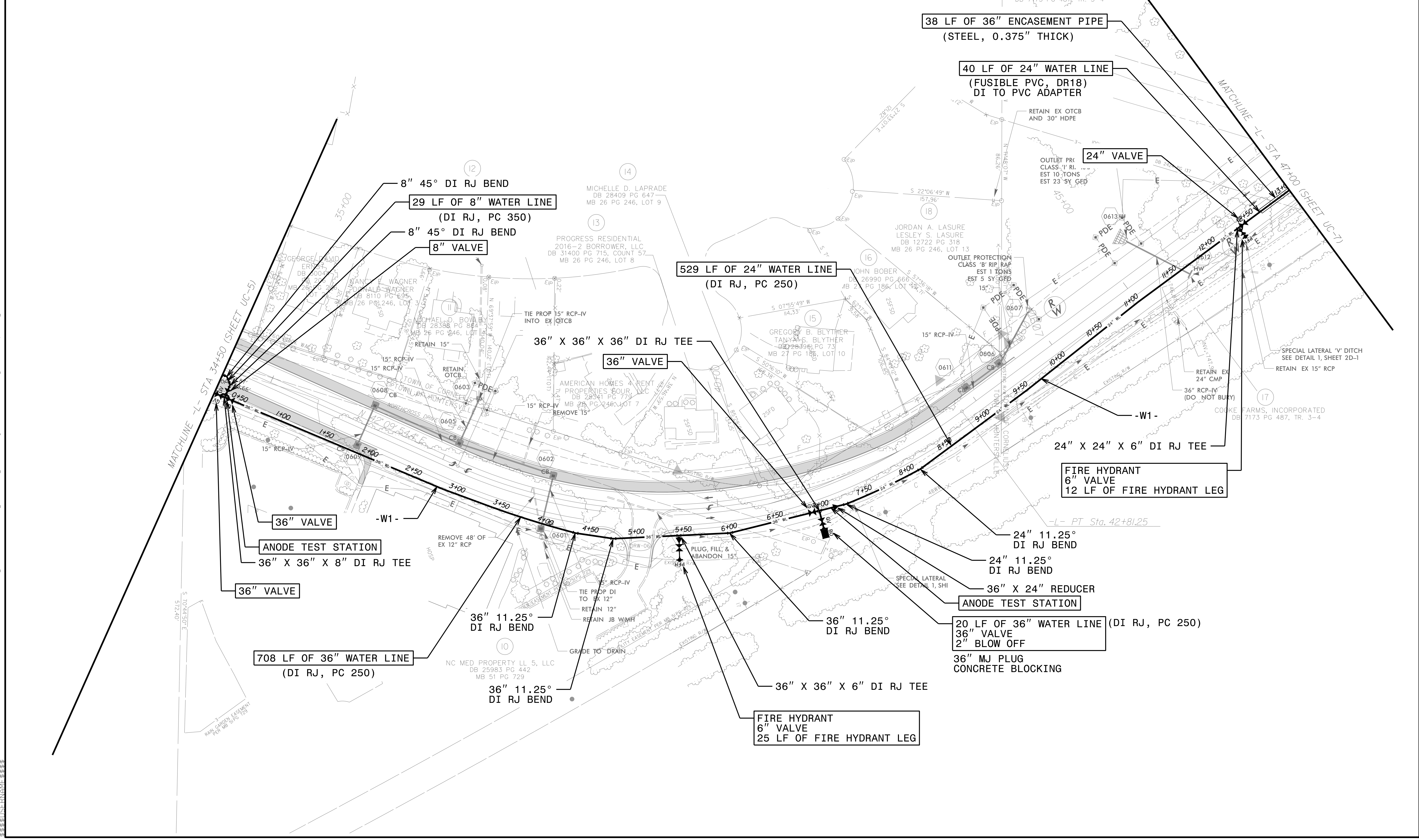


HINDE ENGINEERING
License No. C-2639
10815 Sikes Place, Suite 210 Charlotte, NC 28277

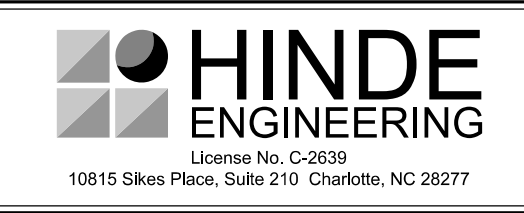
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT REFERENCE NO. U-5108	SHEET NO. UC-6
DESIGNED BY: JKC	
DRAWN BY: JNA	
CHECKED BY: JKC	
APPROVED BY: CLS	
REVISED:	3/6/2024
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	UTILITY CONSTRUCTION PLANS ONLY
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

UTILITY CONSTRUCTION



C:\MAR-2024_09\PROJECTS\2018\A2018401\00_NCDDOT_U-5108\Design\Utilities\Engineering\UC-Proj\U-5108_Ut_rdyf6_UC06_psh.dgn

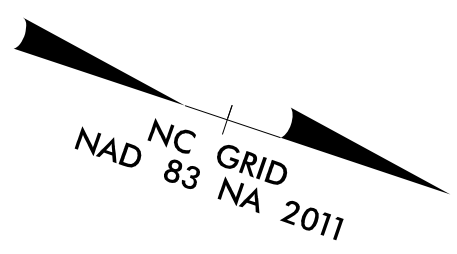


**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

PROJECT REFERENCE NO. U-5108	SHEET NO. UC-7
DESIGNED BY: JKC	
DRAWN BY: JNA	
CHECKED BY: JKC	
APPROVED BY: CLS	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

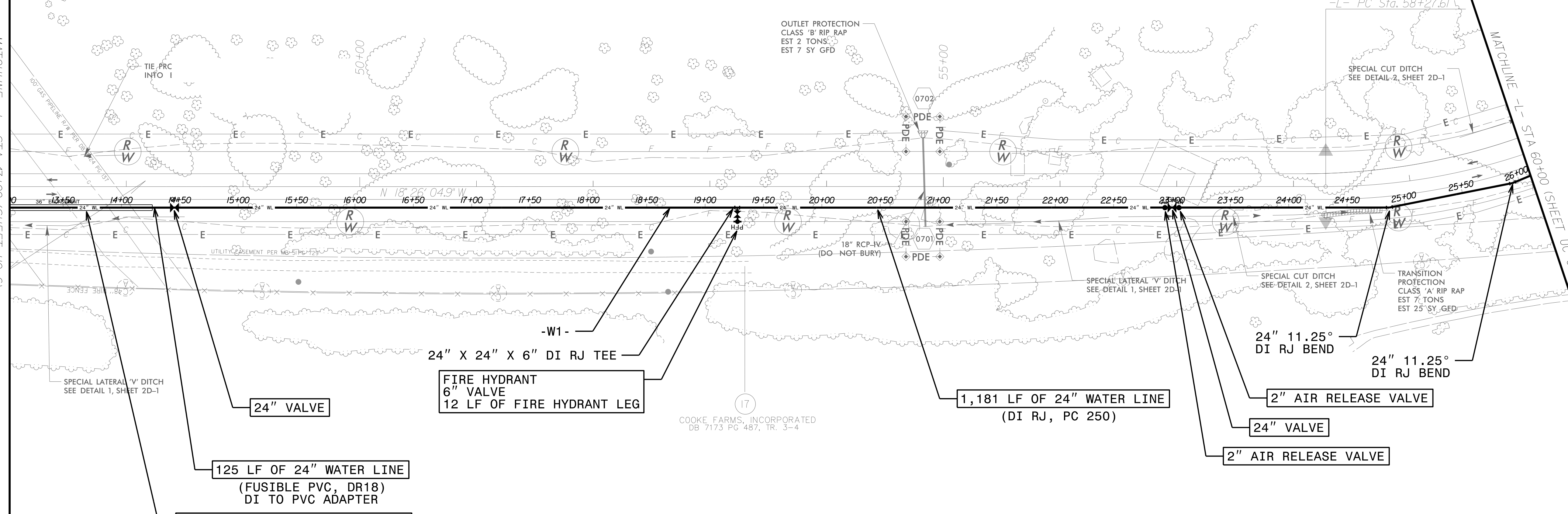
COOKE FARMS, INCORPORATED
DB 7173 PG 487, TR. 3-4



CONTRACTOR SHALL CONTACT DAVID CHASTAIN AT 704-975-2635
AT LEAST ONE WEEK PRIOR TO ANY WATER LINE CONSTRUCTION
CROSSING THE WILLIAMS GAS LINE EASEMENT.

MATCHLINE -L- STA 47+00 (SHEET UC-6)

MATCHLINE -L- STA 60+00 (SHEET UC-8)



24" VALVE

FIRE HYDRANT
6" VALVE
12 LF OF FIRE HYDRANT LEG

1,181 LF OF 24" WATER LINE
(DI RJ, PC 250)

2" AIR RELEASE VALVE

24" VALVE

2" AIR RELEASE VALVE

125 LF OF 24" WATER LINE
(FUSIBLE PVC, DR18)
DI TO PVC ADAPTER

122 LF OF 36" ENCASEMENT PIPE
(STEEL, 0.375" THICK)

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON
WATER PIPE FITTINGS ON THIS PLAN SHEET
IS 2,190 POUNDS. THE ACTUAL QUANTITY
AND TYPE OF FITTINGS WILL VARY BASED ON
FIELD CONDITIONS.

26-MAR-2024 09:25
C:\S\PROJECTS\2018\A2018401\00_NCDDT_U-5108\Design\Utilities\Engineering\UC-Proj_U-5108_Ut_rdy7_UC07_psh.dgn
33868112

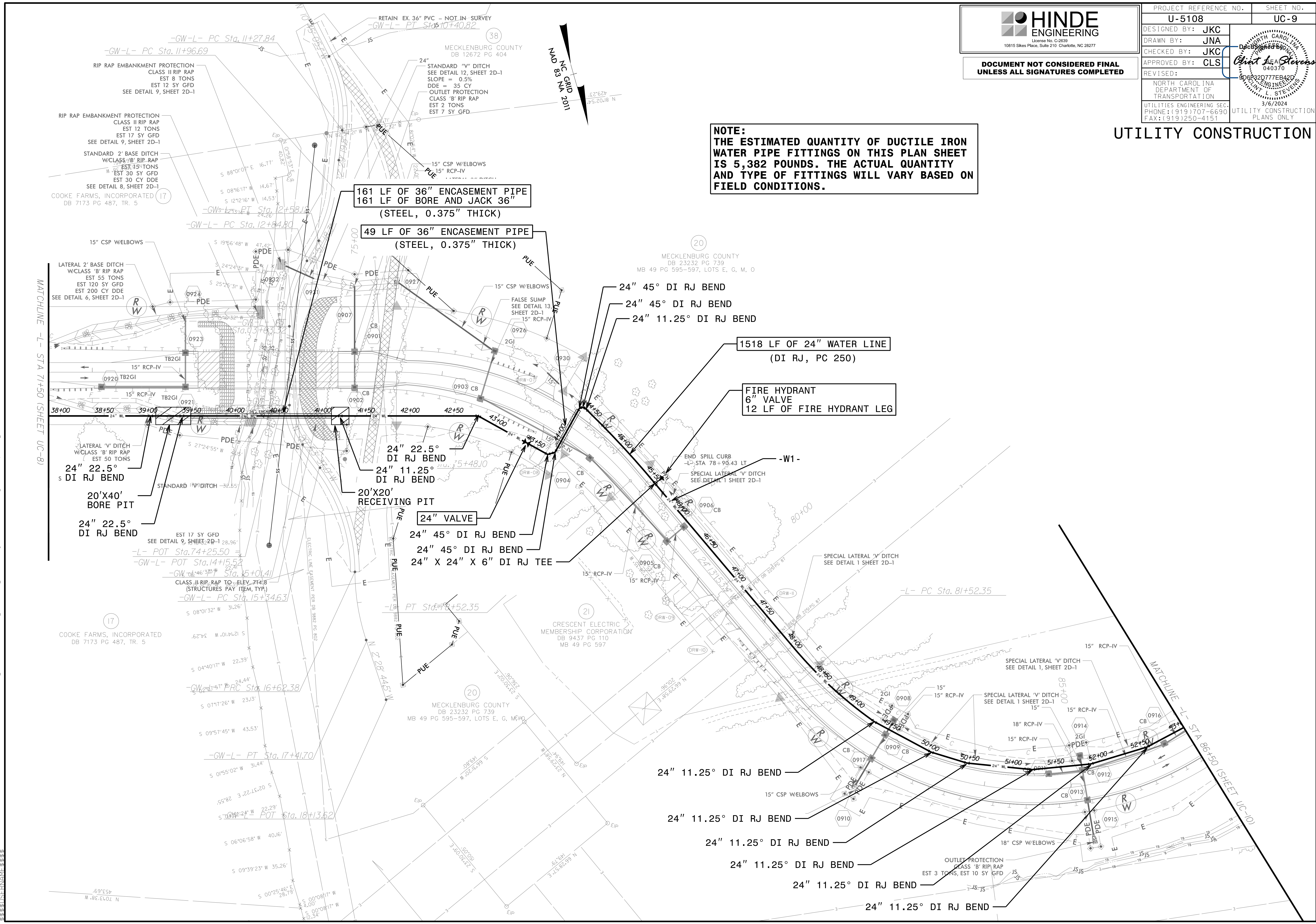
HINDE ENGINEERING
 License No. C-2639
 10815 Sikes Place, Suite 210 Charlotte, NC 28277

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

PROJECT REFERENCE NO.	U-5108	SHEET NO.	UC-9
DESIGNED BY:	JKC		
DRAWN BY:	JNA		
CHECKED BY:	JKC		
APPROVED BY:	CLS		
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		3/6/2024	UTILITY CONSTRUCTION PLANS ONLY
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151			

UTILITY CONSTRUCTION

NOTE:
 THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 5,382 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.



161 LF OF 36" ENCASEMENT PIPE
 161 LF OF BORE AND JACK 36"
 (STEEL, 0.375" THICK)

49 LF OF 36" ENCASEMENT PIPE
 (STEEL, 0.375" THICK)

1518 LF OF 24" WATER LINE
 (DI RJ, PC 250)

FIRE HYDRANT
 6" VALVE
 12 LF OF FIRE HYDRANT LEG

MATCHLINE -L- STA 71+50 (SHEET UC-8)

MATCHLINE -L- STA 86+50 (SHEET UC-10)

26-MAR-2024 09:55:00 PROJECTS\2018\A2018401.00-NC DOT_U-5108\Design\Utilities\Engineering\UC-Proj\U-5108_Ut_rdy_1_UC09_psh.dgn

HINDE ENGINEERING
 License No. C-2639
 10815 Sikes Place, Suite 210 Charlotte, NC 28277

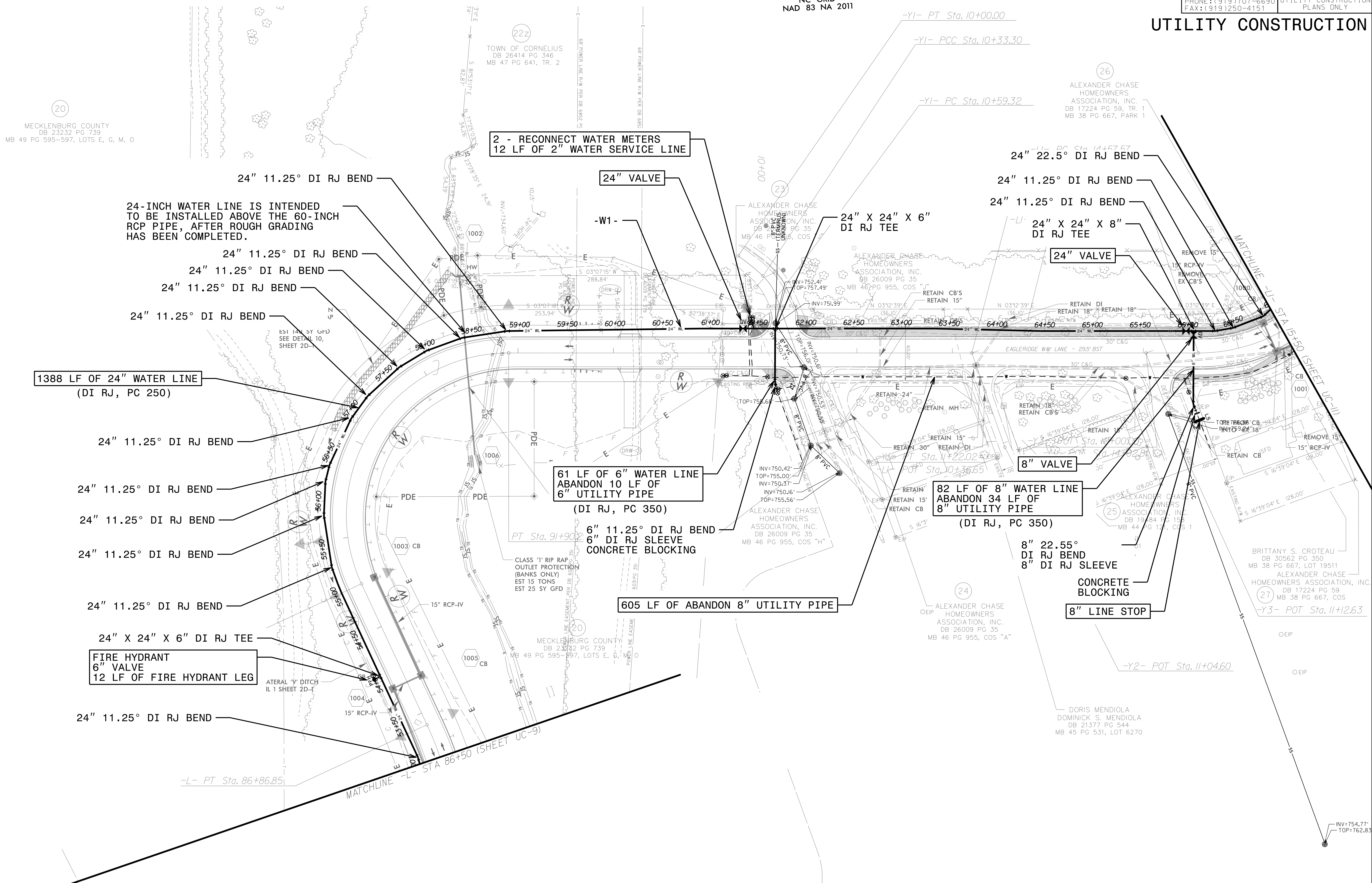
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

PROJECT REFERENCE NO.	SHEET NO.
U-5108	UC-10
DESIGNED BY: JKC	
DRAWN BY: JNA	
CHECKED BY: JKC	
APPROVED BY: CLS	
REVISED:	3/6/2024
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	UTILITY CONSTRUCTION PLANS ONLY
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

**NOTE:
 THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 6,227 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.**



UTILITY CONSTRUCTION



20
 MECKLENBURG COUNTY
 DB 23232 PG 739
 MB 49 PG 595-597, LOTS E, G, M, O

2 - RECONNECT WATER METERS
 12 LF OF 2" WATER SERVICE LINE

1388 LF OF 24" WATER LINE
 (DI RJ, PC 250)

61 LF OF 6" WATER LINE
 ABANDON 10 LF OF
 6" UTILITY PIPE
 (DI RJ, PC 350)

82 LF OF 8" WATER LINE
 ABANDON 34 LF OF
 8" UTILITY PIPE
 (DI RJ, PC 350)

605 LF OF ABANDON 8" UTILITY PIPE

FIRE HYDRANT
 6" VALVE
 12 LF OF FIRE HYDRANT LEG

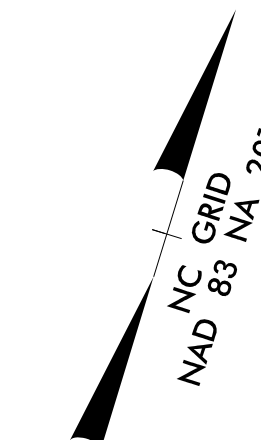
26-MAR-2024 09:25
 C:\Users\jstevens\OneDrive\Documents\Projects\2018\A2018401.00\NCDDT_U-5108\Design\Utilities\Engineering\UC-Proj_U-5108_Ut_redj10_UC10_psh.dgn



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

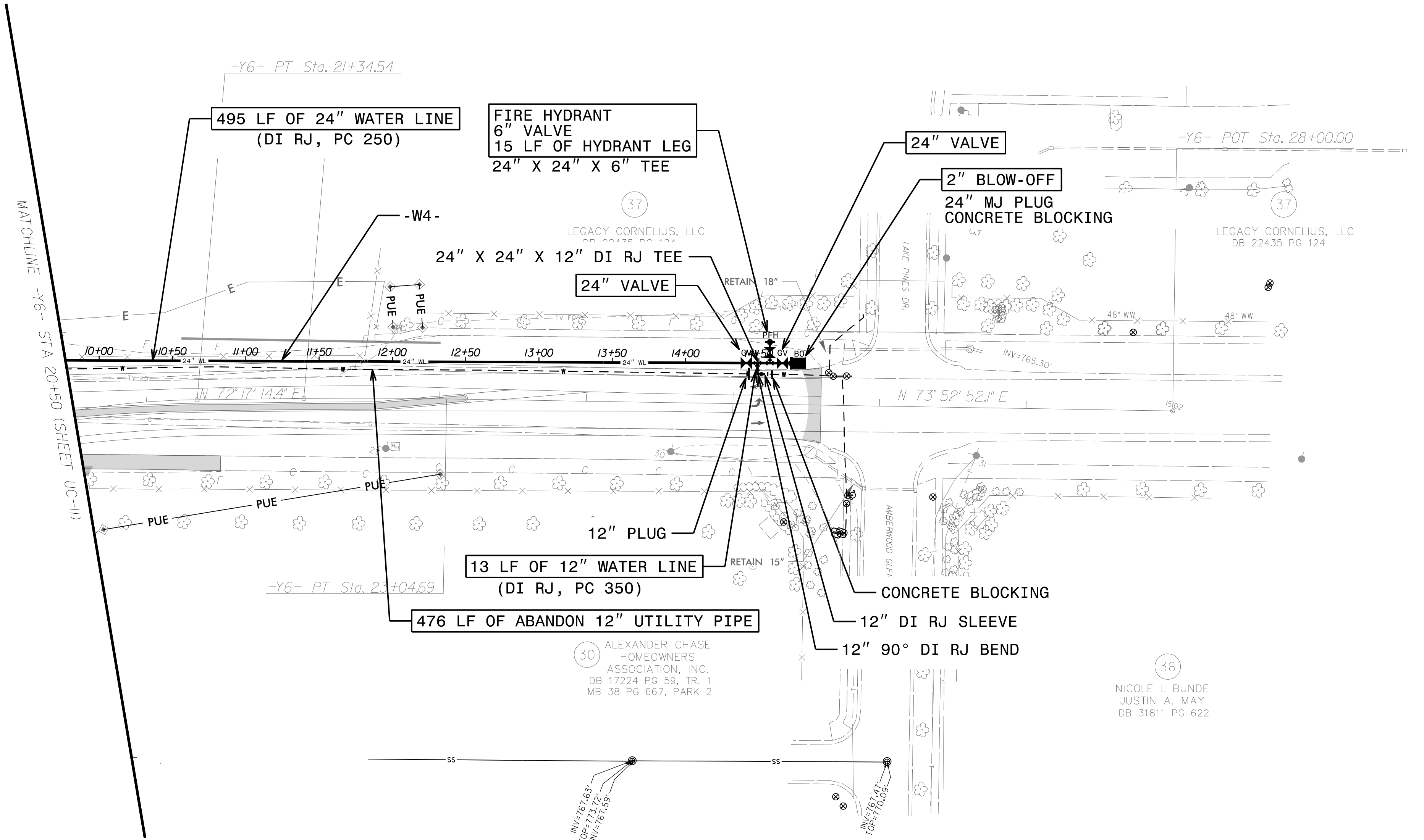
PROJECT REFERENCE NO.	SHEET NO.
U-5108	UC-12
DESIGNED BY: JKC	
DRAWN BY: JNA	
CHECKED BY: JKC	
APPROVED BY: CLS	
REVISED:	06/2024
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	3/6/2024
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION



WESTMORELAND PROJECT LLC
DB 36928 PG 225

25+00



MATCHLINE -Y6- STA 20+50 (SHEET UC-11)

-Y6- PT Sta. 21+34.54

10+00 11+00 12+00 13+00 14+00

-Y6- PT Sta. 23+04.69

-Y6- POT Sta. 28+00.00

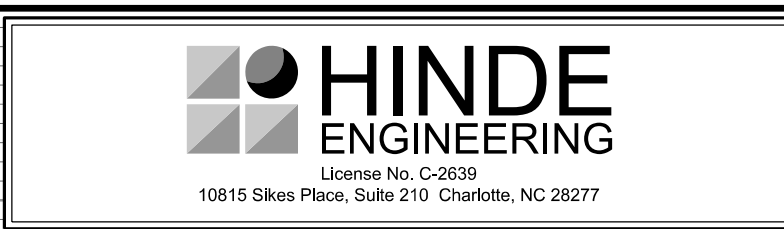
ALEXANDER CHASE HOMEOWNERS ASSOCIATION, INC.
DB 17224 PG 59, TR. 1
MB 38 PG 667, PARK 2

NICOLE L. BUNDE
JUSTIN A. MAY
DB 31811 PG 622

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 1,661 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

26-MAR-2024 09:25
C:\S\PROJECTS\2018\A2018401.00_NCDOT_U-5108\Design\Utilities\Engineering\UC-Proj\U-5108_Ut_rdy12_UC12_psh.dgn

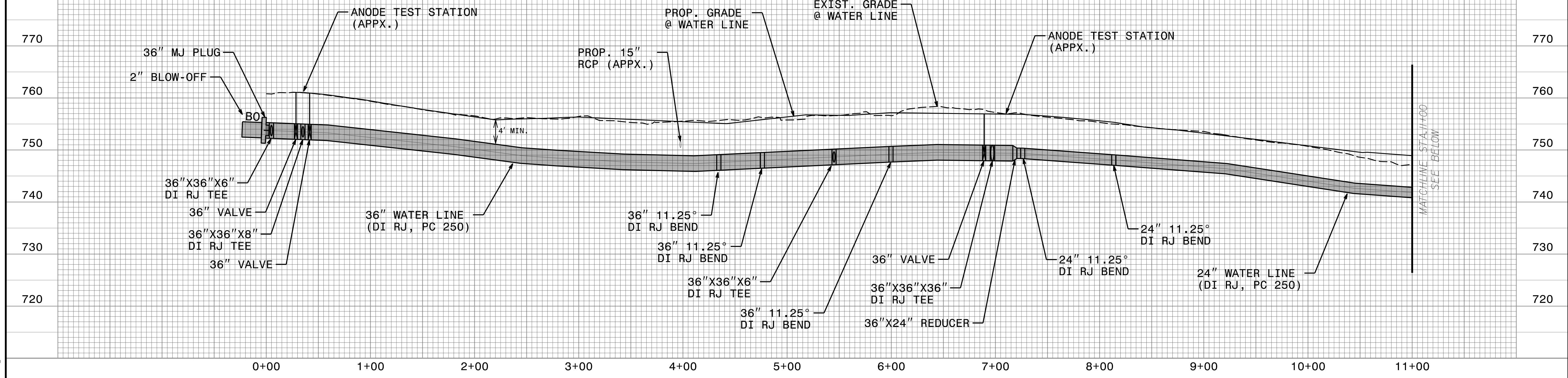
-W1-



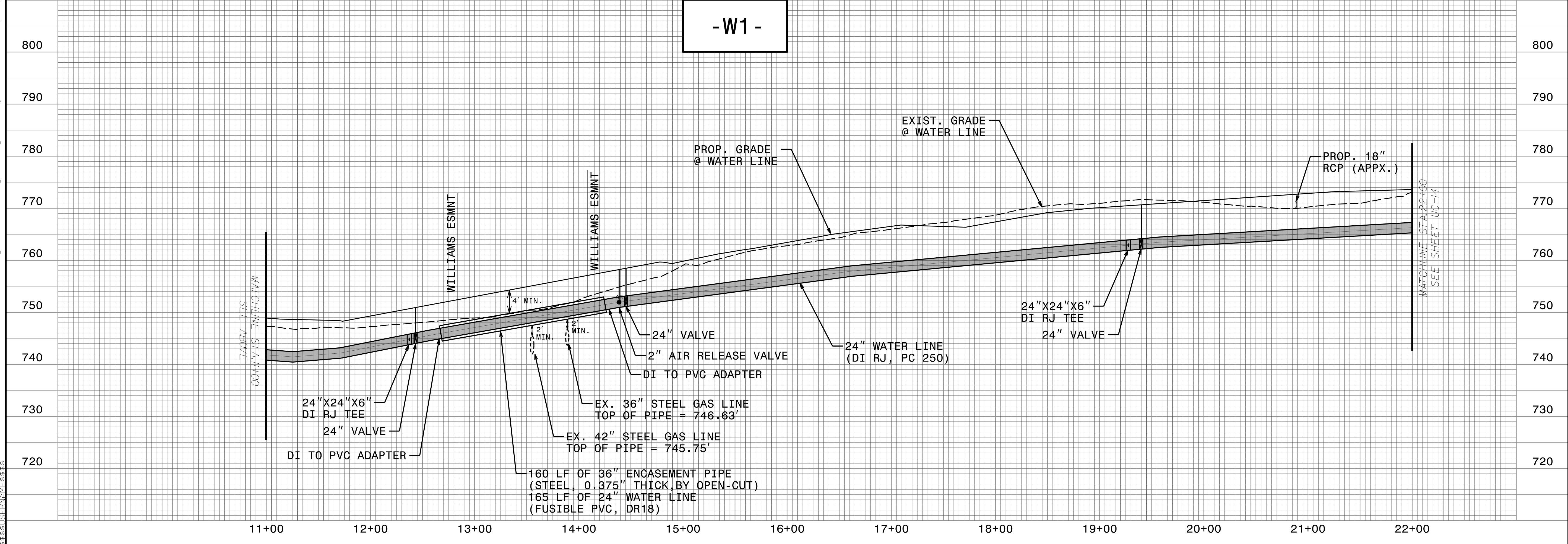
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PROJECT REFERENCE NO.	SHEET NO.
U-5108	UC-13
DESIGNED BY: JKC	
DRAWN BY: JNA	
CHECKED BY: JKC	
APPROVED BY: CLS	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	3/6/2024 UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION



-W1-



26-MAR-2024 09:55:55 PROJ: UC-13 UC-13.pfl L.psh.dgn

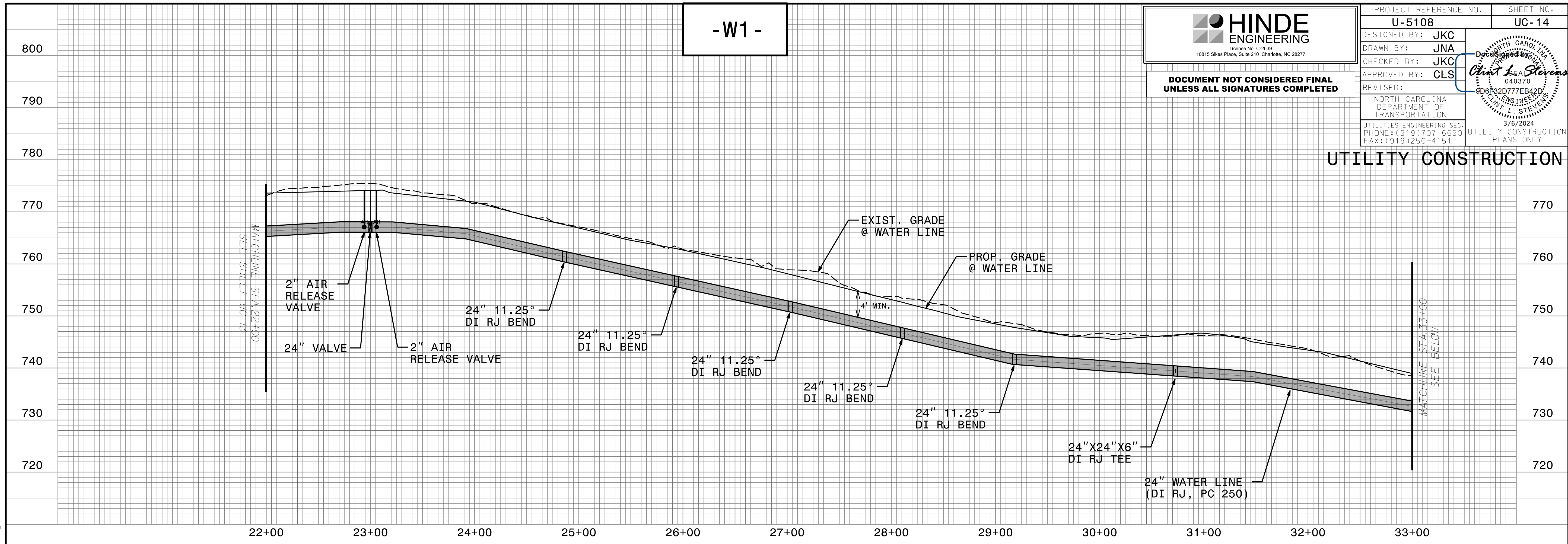
-W1-

HINDE ENGINEERING
 License No. C-2639
 10815 Sikes Place, Suite 210 Charlotte, NC 28277

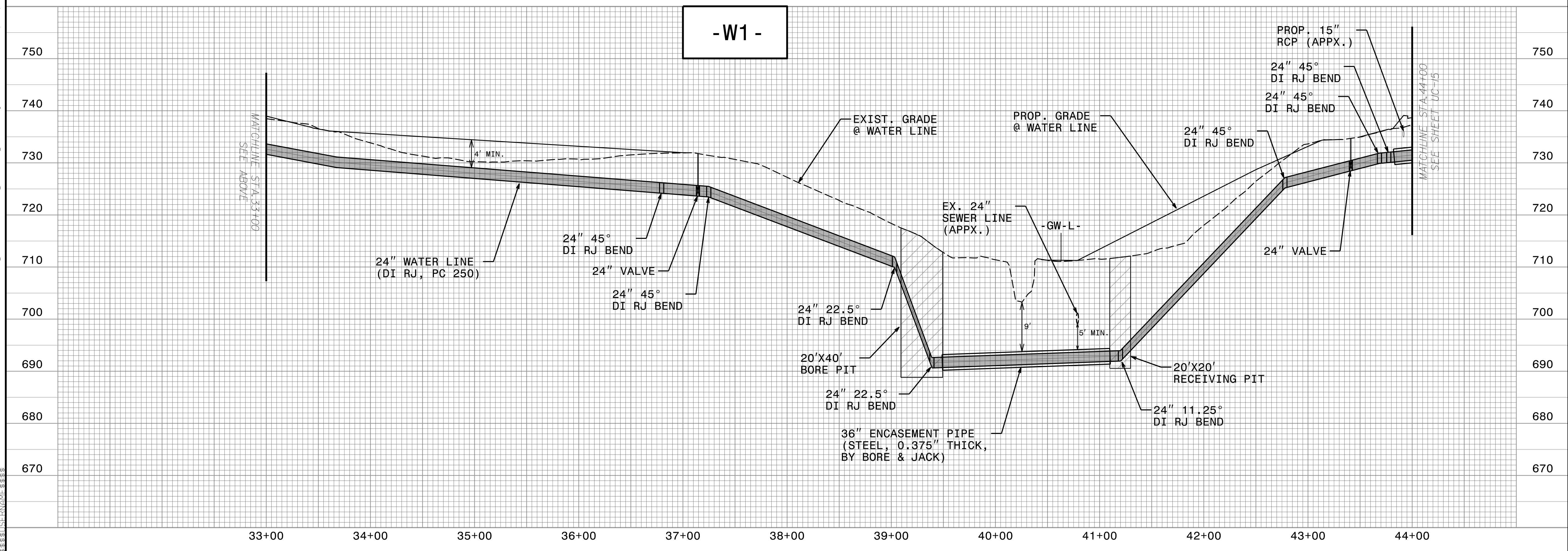
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PROJECT REFERENCE NO. U-5108	SHEET NO. UC-14
DESIGNED BY: JKC	
DRAWN BY: JNA	
CHECKED BY: JKC	
APPROVED BY: CLS	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
3/6/2024 UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



-W1-



26-MAR-2024 09:25
C:\Users\jstevens\OneDrive\Documents\Projects\2018\A2018401.001_NCDOT_U-5108\Design\Utilities\Engineering\UC-Proj\U-5108_Ut_UC14.pfl.psh.dgn

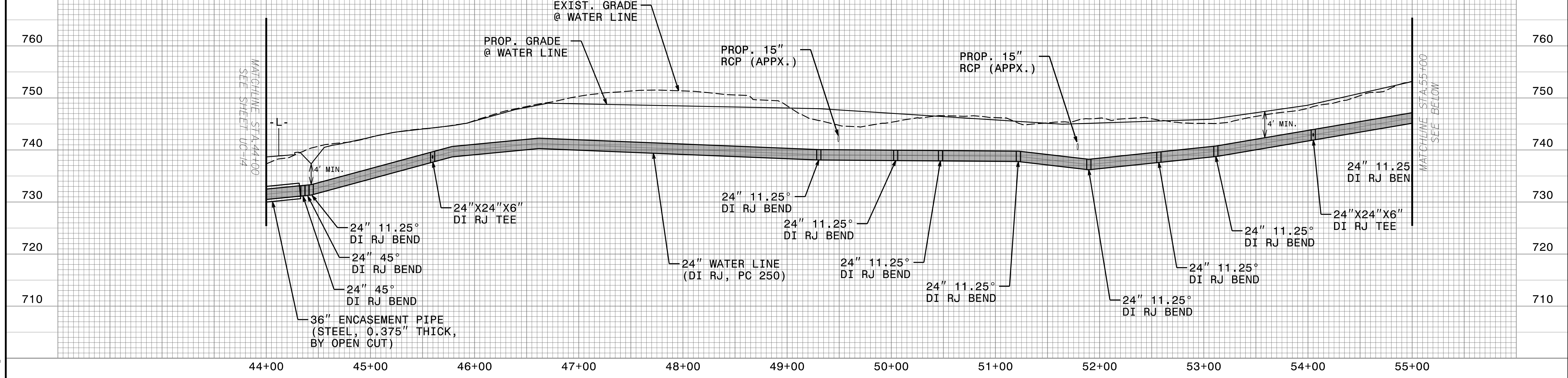
-W1-

HINDE ENGINEERING
 License No. C-2639
 10815 Sikes Place, Suite 210 Charlotte, NC 28277

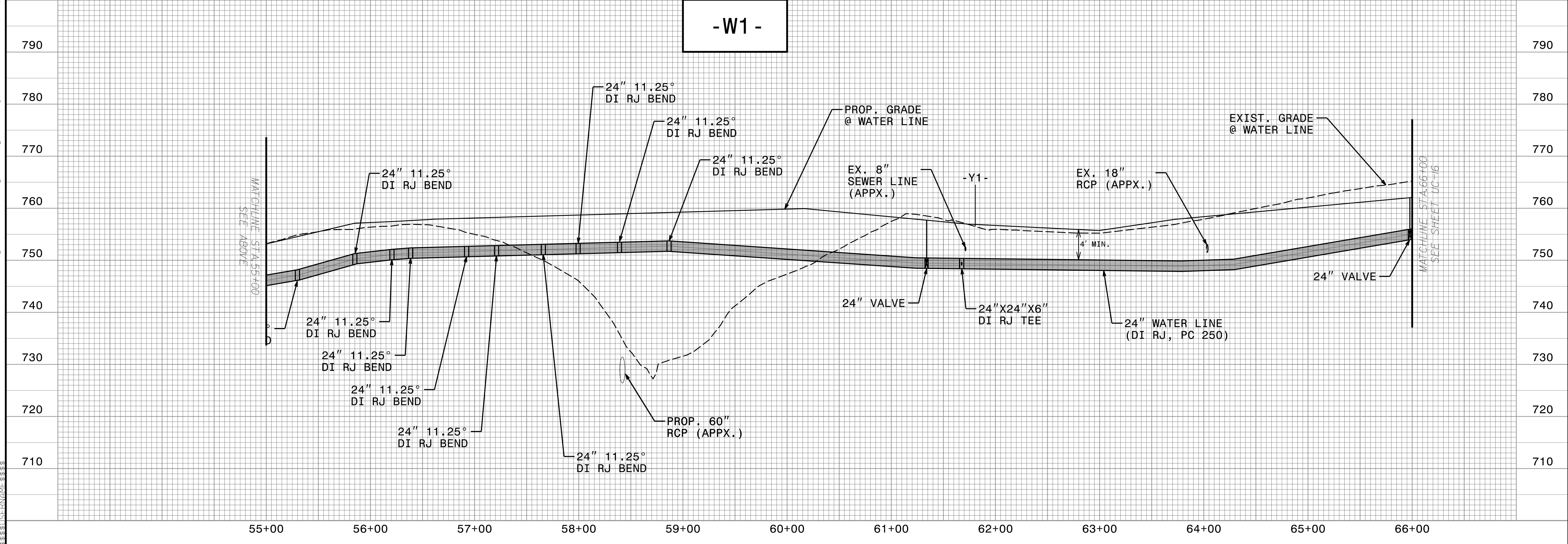
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

PROJECT REFERENCE NO. U-5108	SHEET NO. UC-15
DESIGNED BY: JKC	
DRAWN BY: JNA	
CHECKED BY: JKC	
APPROVED BY: CLS	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

UTILITY CONSTRUCTION



-W1-



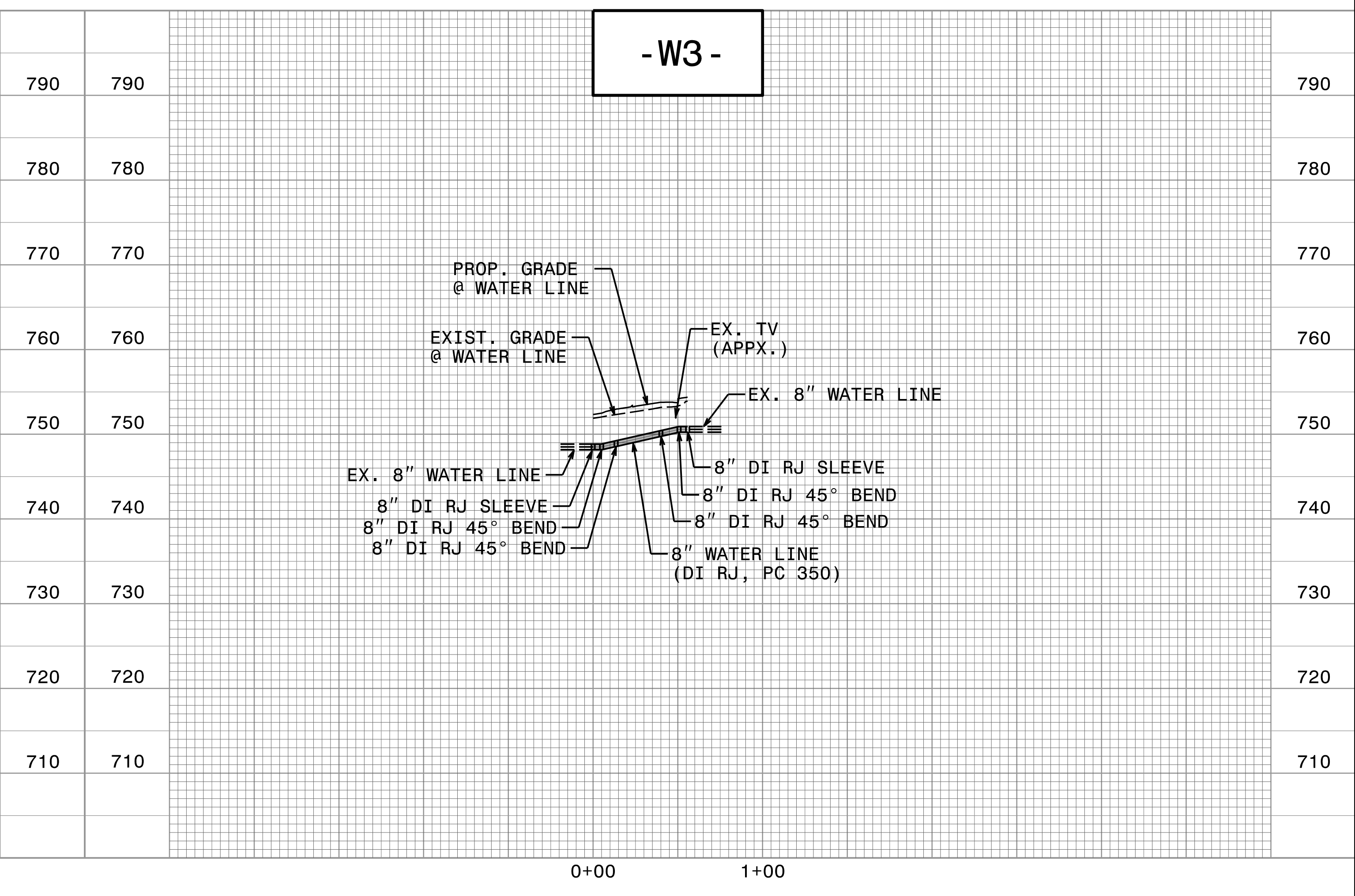
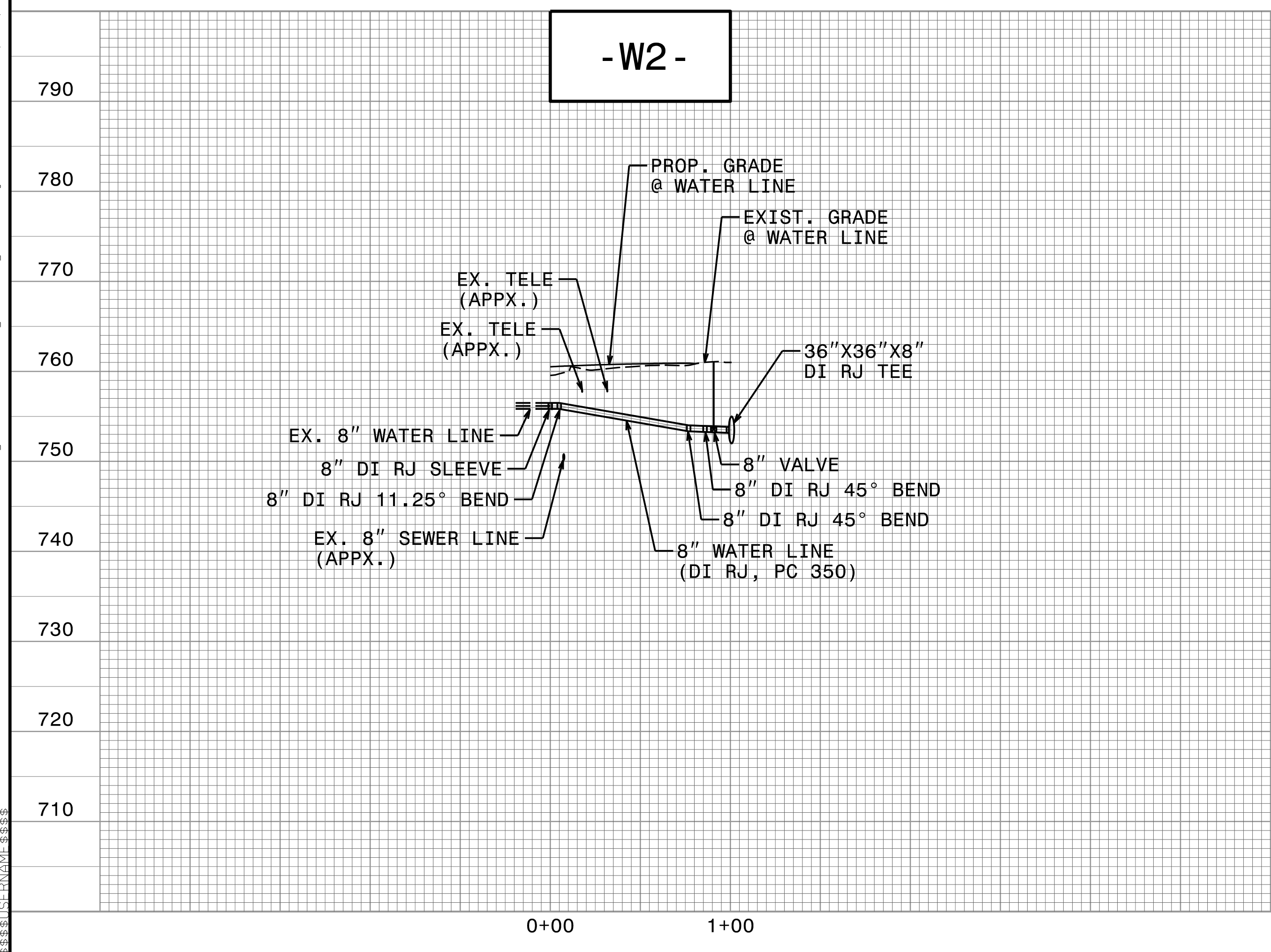
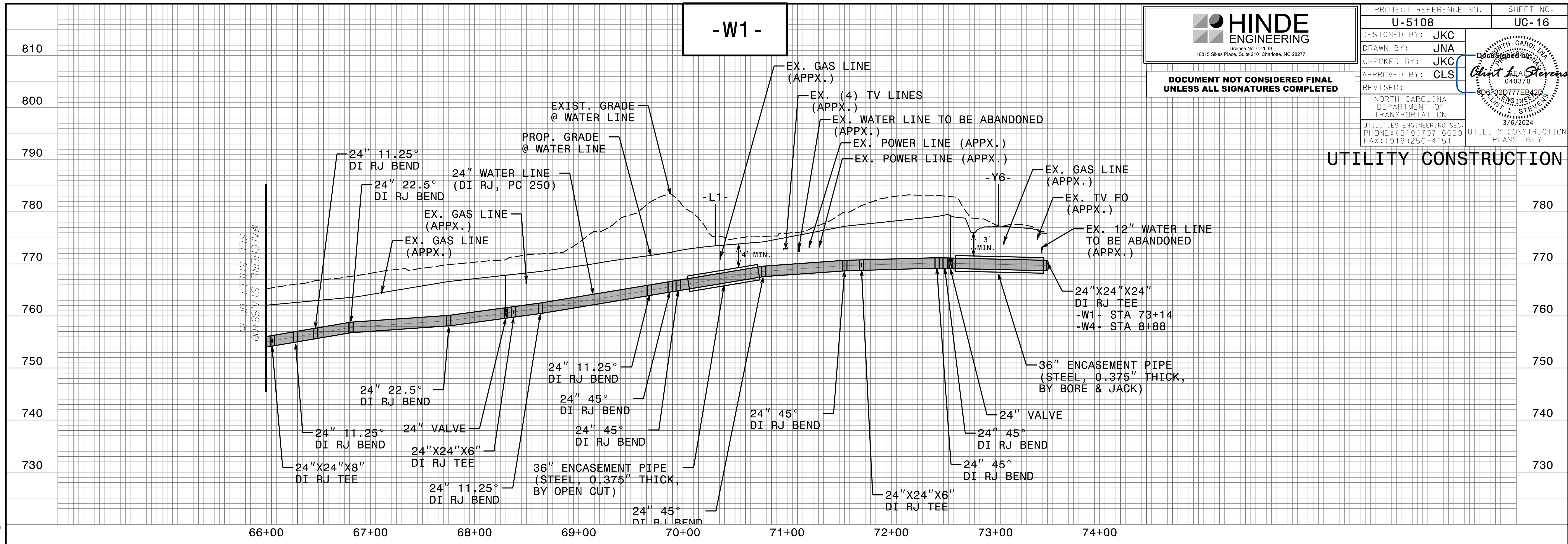
26-MAR-2024 09:25 C:\Users\jstevens\Documents\Projects\U-5108\U-5108-Ut-UC15-pl.psd.dgn



PROJECT REFERENCE NO. U-5108	SHEET NO. UC-16
DESIGNED BY: JKC	
DRAWN BY: JNA	
CHECKED BY: JKC	
APPROVED BY: CLS	
REVISED:	DATE: 3/5/2024
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY

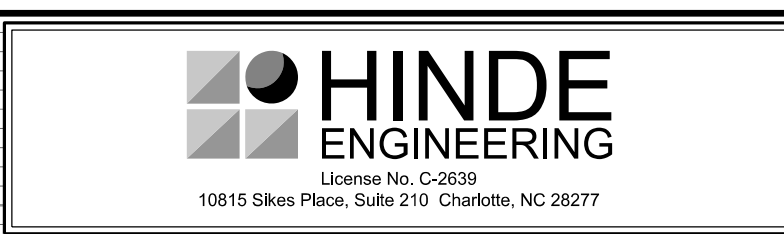
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

UTILITY CONSTRUCTION



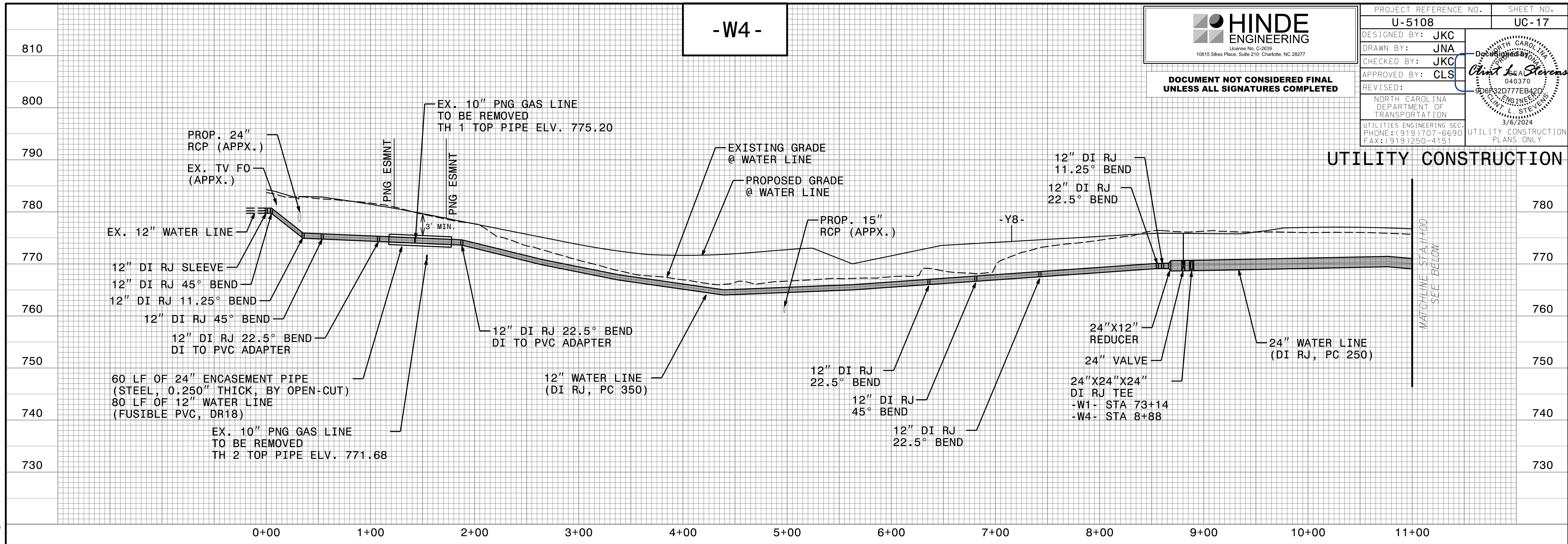
26-MAR-2024 09:25 C:\S\PROJECTS\2018\A2018401\001\NCDDT_U-5108\Design\Utilities\Engineering\UC\Pro\U-5108_Ut_UC16.pfl.psh.dgn

-W4-

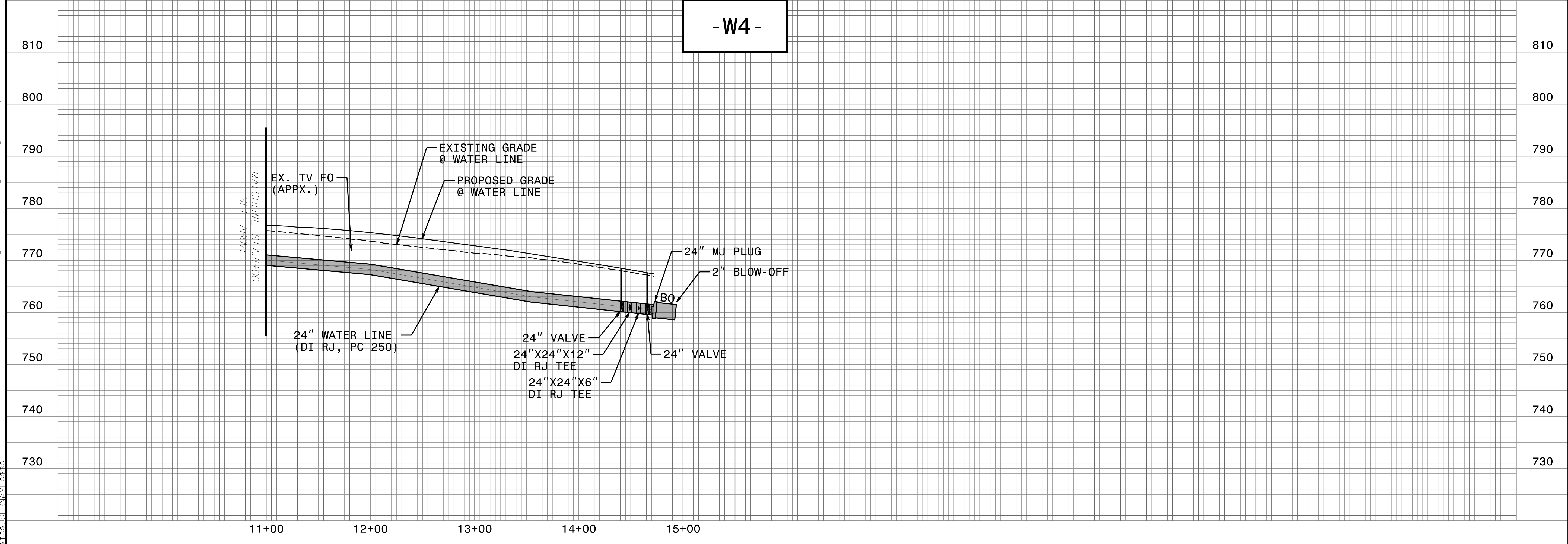


PROJECT REFERENCE NO.	SHEET NO.
U-5108	UC-17
DESIGNED BY: JKC	
DRAWN BY: JNA	
CHECKED BY: JKC	
APPROVED BY: CLS	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



-W4-



26-MAR-2024 09:25 C:\Users\jkc\Documents\Projects\2018\A2018401\001\NCDDT_U-5108\Design\Utilities\Engineering\UC\Pro\U-5108_Ut_UC17_pfl.psh.dgn