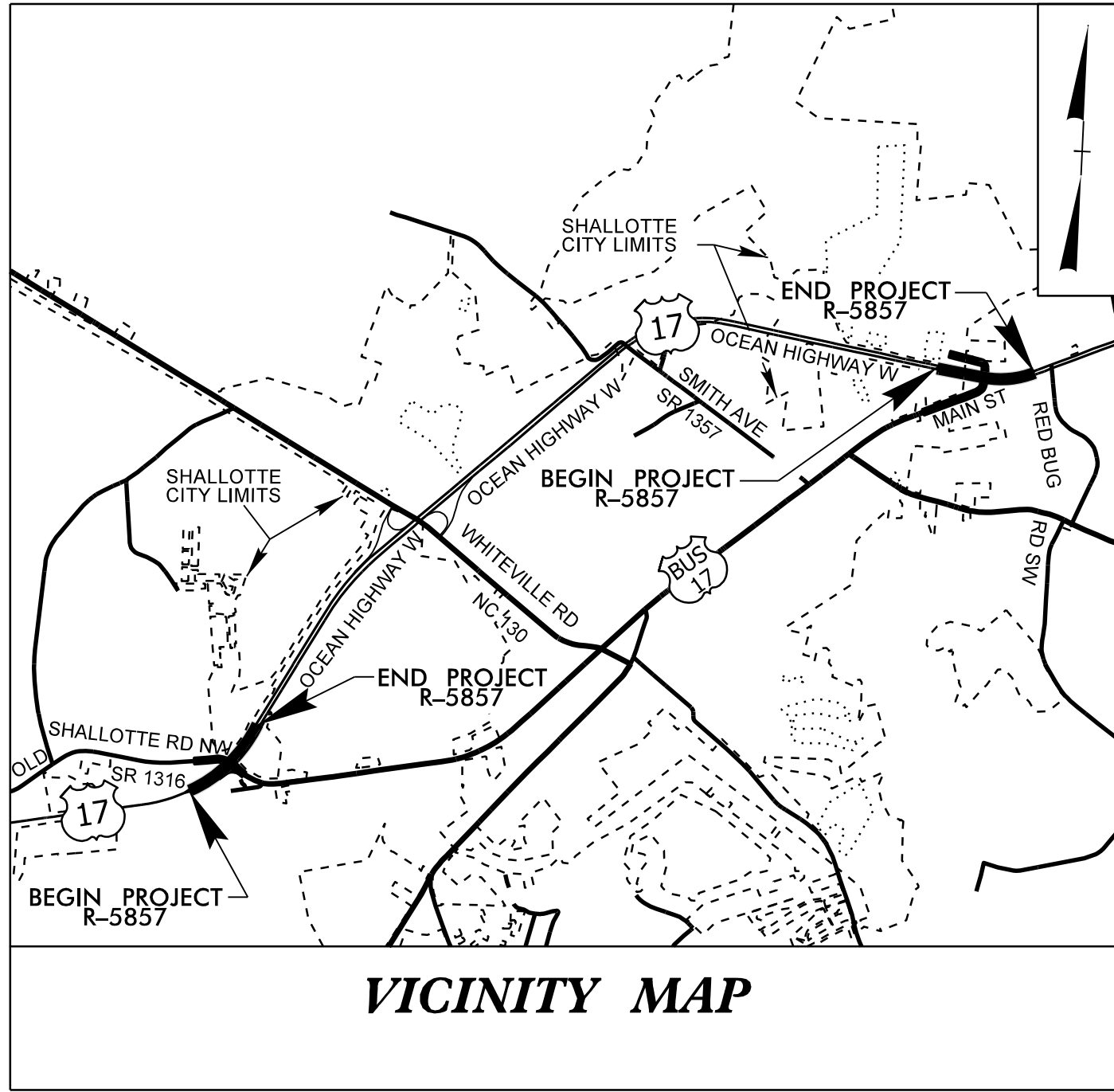


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\$\$\$\$\$USERNAME\$\$\$\$\$

TIP PROJECT: R-5857



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

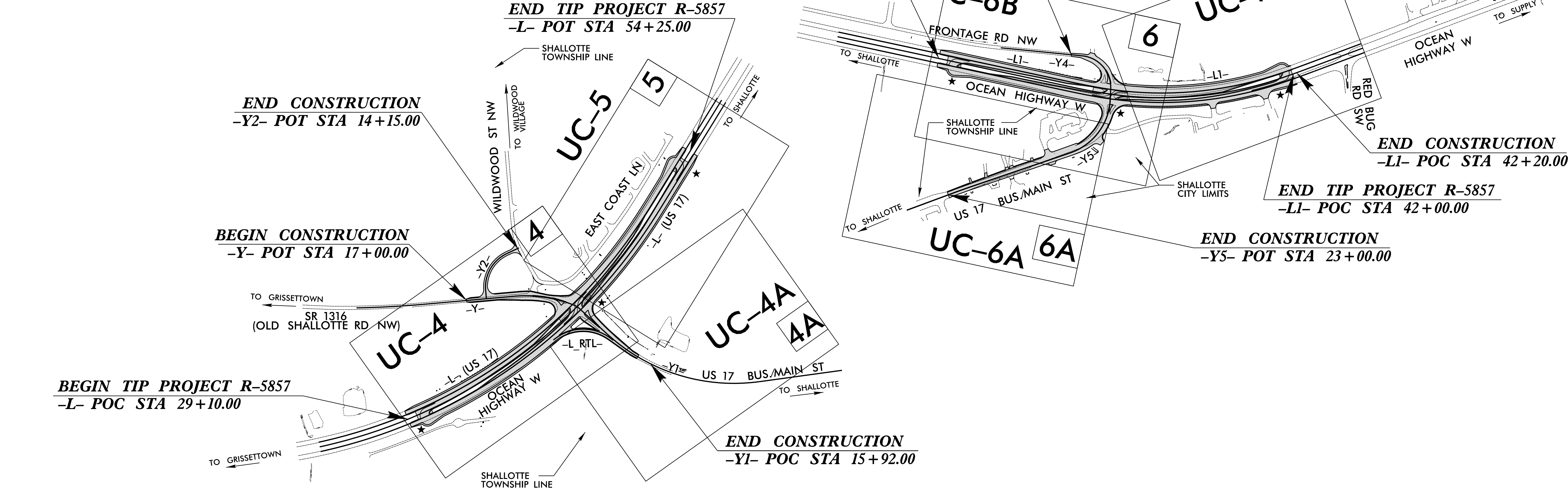
UTILITY CONSTRUCTION PLANS
BRUNSWICK COUNTY

LOCATION: US 17 AT US 17 BUSINESS SOUTH AND NORTH
OF SHALLOTTE. CONVERT INTERSECTIONS TO SUPERSTREETS

TYPE OF WORK: WATER AND SEWER RELOCATIONS

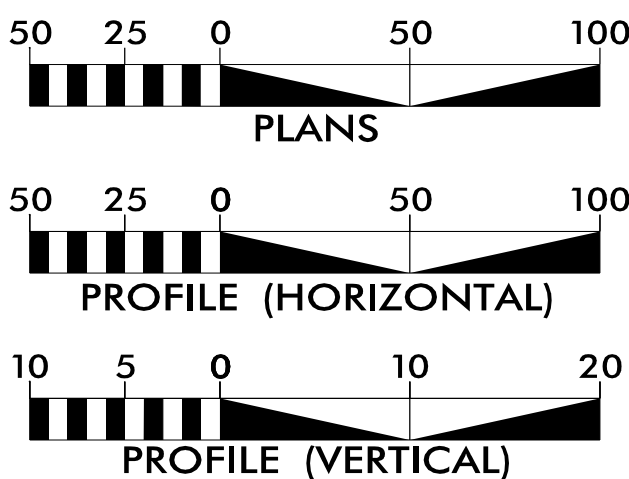
BEGIN TIP PROJECT R-5857
-L- POT STA 19+09.00

BEGIN CONSTRUCTION
-Y4- POT STA 14+50.00



★ DENOTES SIGNAL

GRAPHIC SCALES



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-7	UTILITY CONSTRUCTION SHEETS
UC-8 THRU UC-11	PROFILE SHEETS

WATER AND SEWER
OWNERS ON PROJECT

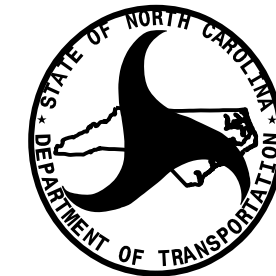
- (A) BRUNSWICK COUNTY (WATER)
(B) BRUNSWICK COUNTY (SEWER)
(C) TOWN OF SHALLOTTE (SEWER)

PREPARED IN THE OFFICE OF:



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 3
5501 BARBADOS BLVD.
CASTLE HAYNE NC 28429
PHONE (910) 341-2001
FAX (910) 675-0143

Zachary R. Howard, E.I. PROJECT MANAGER
Timothy G. Godwin DIV. UTILITY ENGINEER
Anthony W. Law DIV. CONSTRUCTION ENGINEER
Roy C. Sutton DIV. UTILITY COORDINATOR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS



PROJECT REFERENCE NO.
R-5857

SHEET NO.
UC-2

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	
11¼ Degree Bend	
22½ 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	
Water Meter	
Relocate Water Meter	
Remove Water Meter	
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	

EXISTING UTILITIES SYMBOLS

Power Pole	
Telephone Pole	
Joint Use Pole	
Utility Pole	
Utility Pole with Base	
H-Frame Pole	
Power Transmission Line Tower	
Water Manhole	
Power Manhole	
Telephone Manhole	
Sanitary Sewer Manhole	
Hand Hole for Cable	
Power Transformer	
Telephone Pedestal	
CATV Pedestal	
Gas Valve	
Gas Meter	
Located Miscellaneous Utility Object	
Abandoned According to Utility Records	
End of Information	

*Underground Power Line	
*Underground Telephone Cable	
*Underground Telephone Conduit	
*Underground Fiber Optics Telephone Cable	
*Underground TV Cable	
*Underground Fiber Optics TV Cable	
*Underground Gas Pipeline	
Aboveground Gas Pipeline	
*Underground Water Line	
Aboveground Water Line	
*Underground Gravity Sanitary Sewer Line	
Aboveground Gravity Sanitary Sewer Line	
*Underground SS Forced Main Line	
Underground Unknown Utility Line	
SUE Test Hole	
Water Meter	
Water Valve	
Fire Hydrant	
Sanitary Sewer Cleanout	

*For Existing Utilities
Utility Line Drawn from Record (Type as Shown)
Designated Utility Line (Type as Shown)

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204.004 PLOT
REV: 2/1/2012

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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 UTILITIES BELONG TO BRUNSWICK COUNTY AND TOWN OF SHALLOTTE. THE CONTACT PERSONS ARE:

BRUNSWICK COUNTY PUBLIC UTILITIES
(ALL WATER & 24" SEWER)
BOB TWEEDY, P.E.
PROJECT MANAGER
910-253-2460

TOWN OF SHALLOTTE
(4" TO 8" SEWER)
DAN FORMYDUVAL
PUBLIC WORKS UTILITY SUPERVISOR
910-754-4032
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.

UTILITY CONSTRUCTION

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 WATER VALVES SHALL BE DIRECT BURY GATE VALVES.
2. THE CONTRACTOR SHALL NOT OPERATE VALVES OR HYDRANTS OWNED BY BRUNSWICK COUNTY WITHOUT PRIOR APPROVAL OF THE COUNTY STAFF.
3. BRUNSWICK COUNTY FACILITIES HAVE SEASONAL RESTRICTIONS. REFER TO THE PROJECT SPECIAL PROVISIONS FOR BRUNSWICK COUNTY REQUIREMENTS.
4. WATER SERVICE TO THE CHICK-FIL-A (PARCEL 21) ON FRONTAGE ROAD MUST BE MAINTAINED AT ALL TIMES DURING OPERATING HOURS.



HINDE

ENGINEERING

License No. C-2639
401 Harrison Oaks Blvd., Suite 220 Cary, NC 27513

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PROJECT REFERENCE NO.
R-5857

SHEET NO.
UC-3

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

NORTH CAROLINA
PROFESSIONAL
ENGINEER

DocuSign Envelope ID: 040376

Obert L. Stevens

4/7/2025

UTILITY CONSTRUCTION
PLANS ONLY

STANDARD DETAILS FOR BRUNSWICK COUNTY



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PROJECT REFERENCE NO.

R-5857

SHEET NO.

UC-3B

DESIGNED BY: JKC

DRAWN BY: JNA

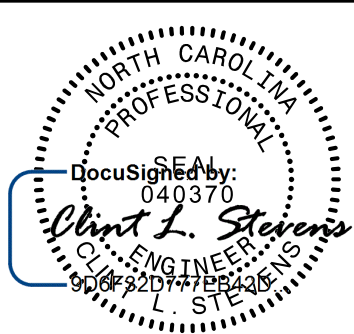
CHECKED BY: JKC

APPROVED BY: CLS

REVISED:

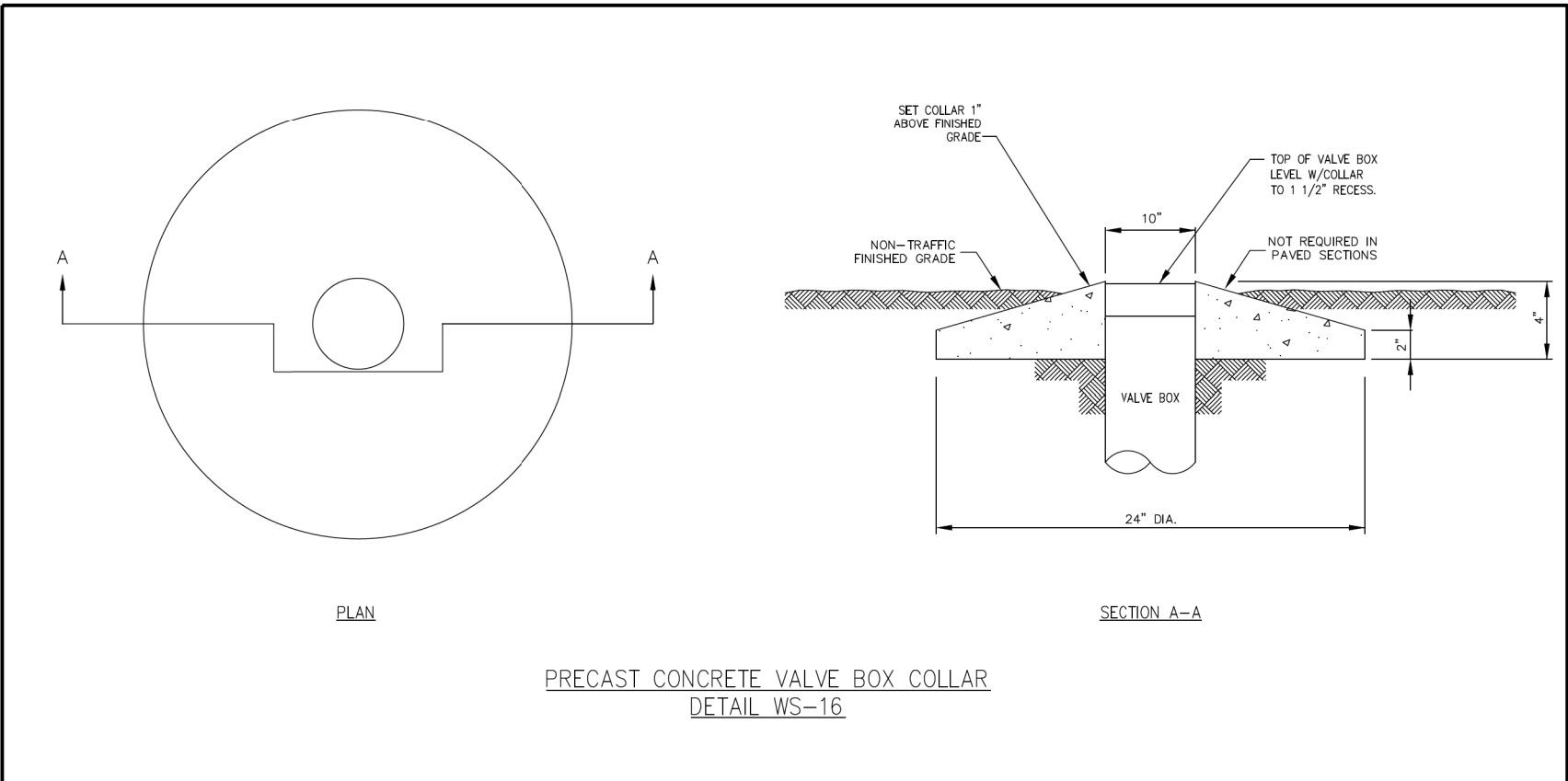
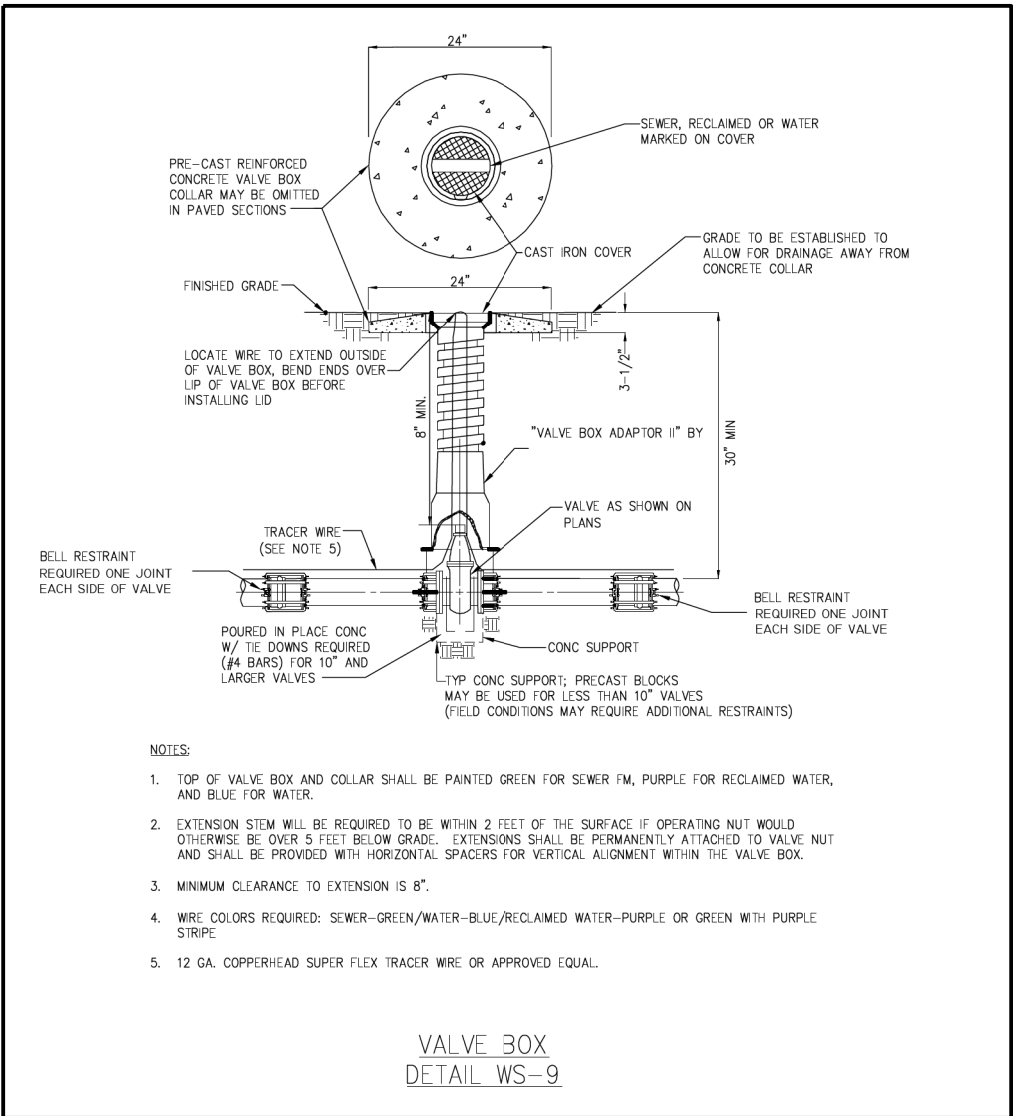
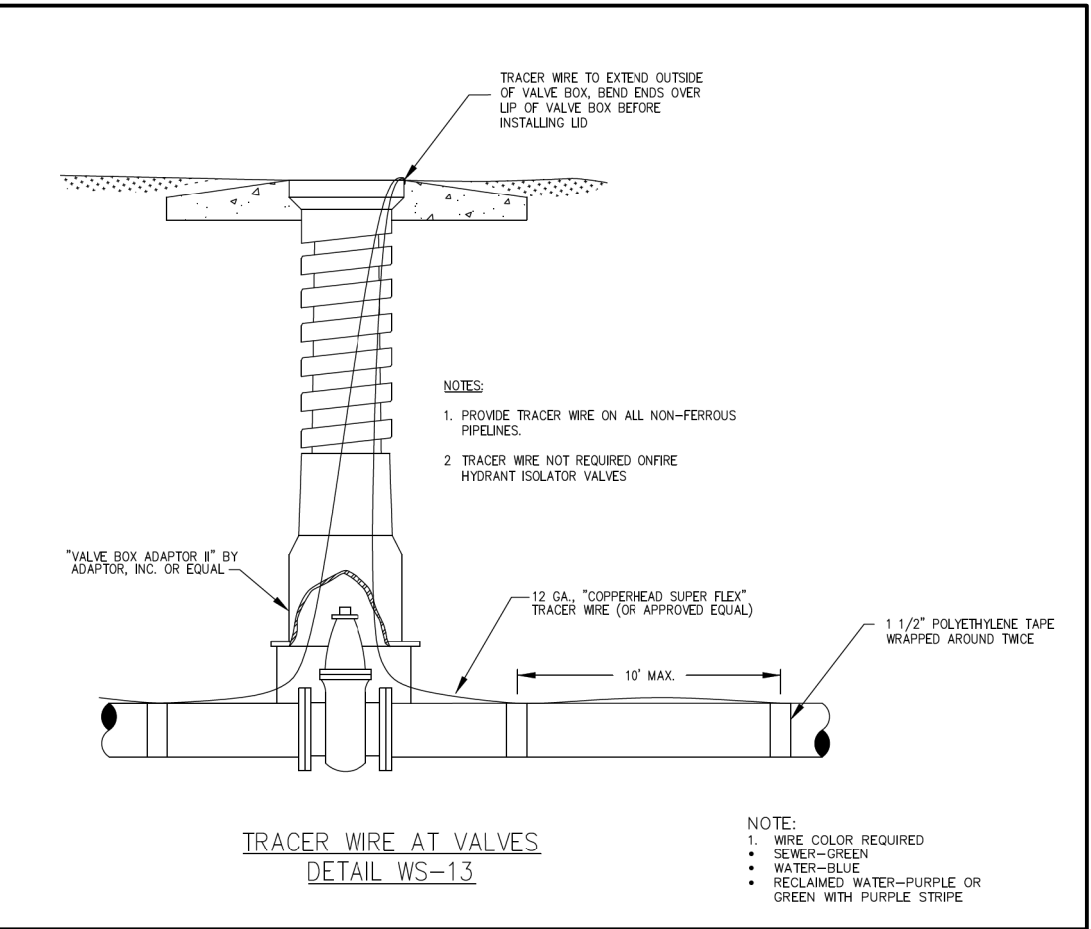
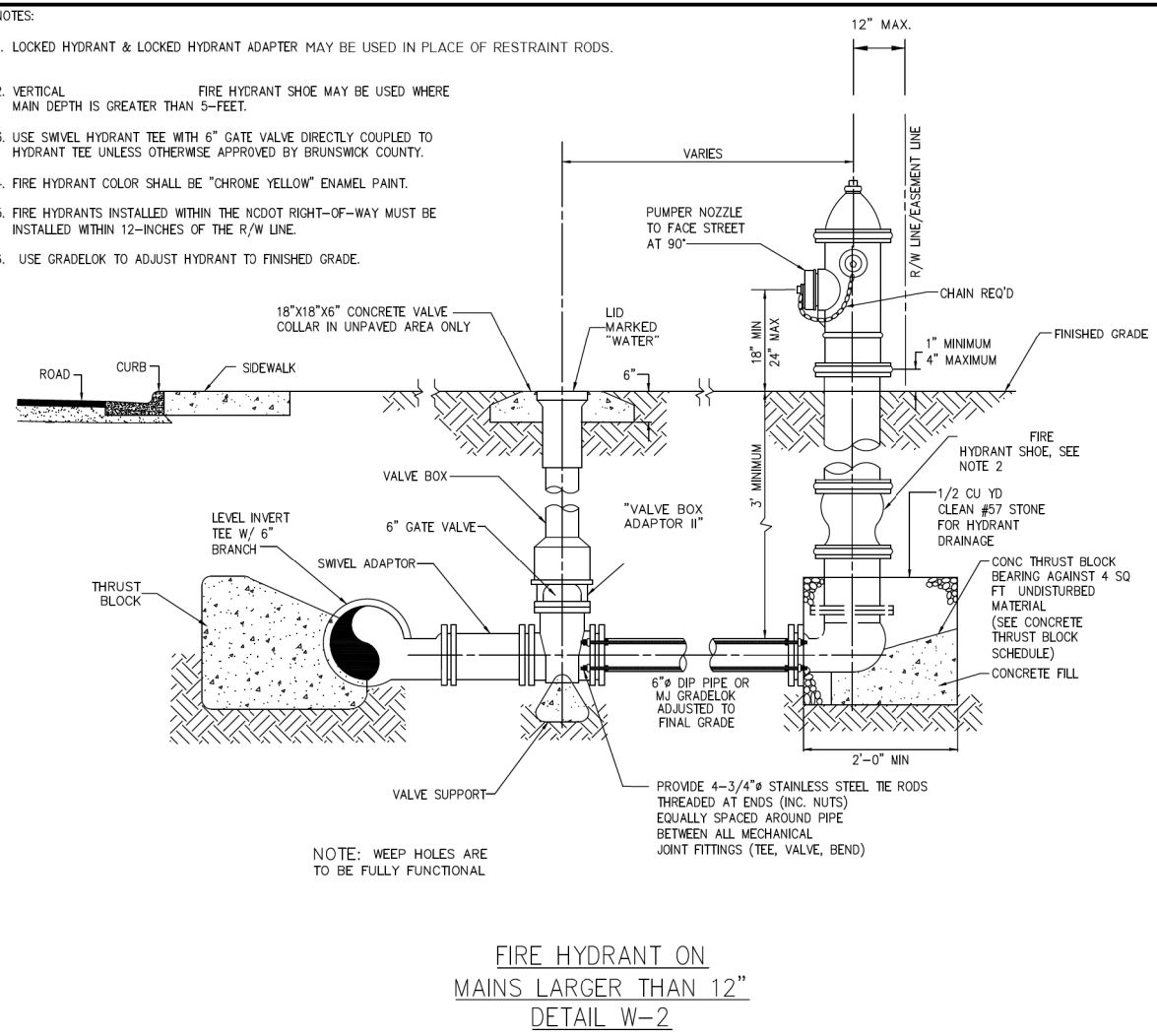
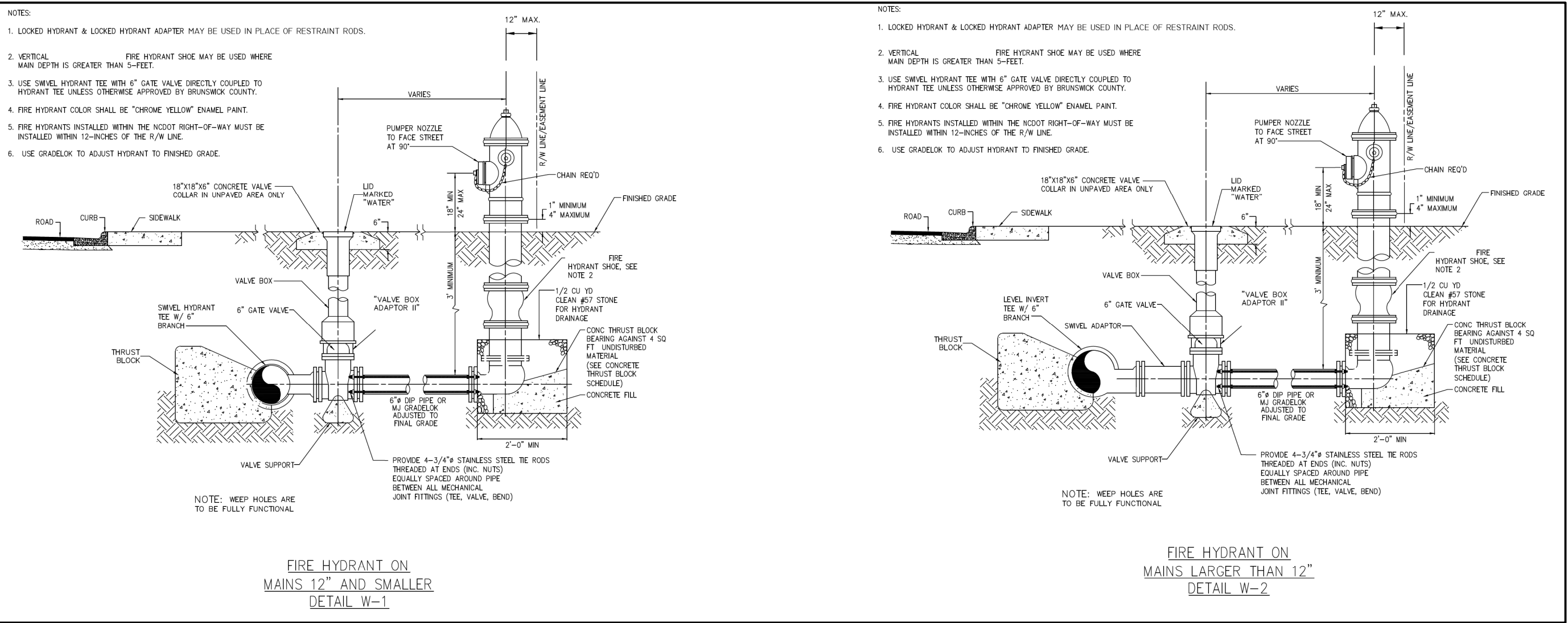
NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION

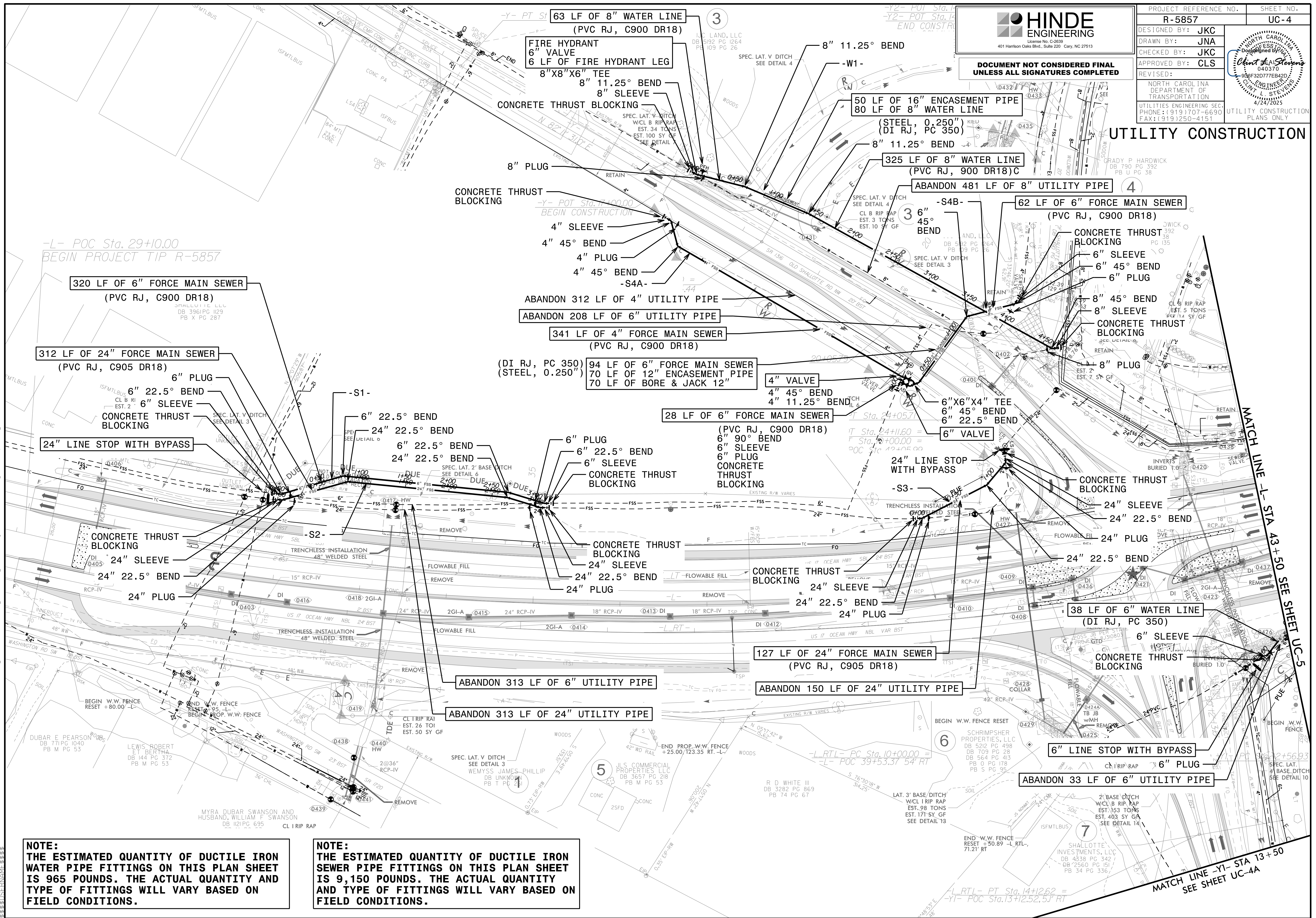
UTILITIES ENGINEERING SEC.
PHONE: (919) 707-6690
FAX: (919) 250-4151



UTILITY CONSTRUCTION
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PROJECT REFERENCE NO.
R-5857

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

SHEET NO.
UC-4A

NORTH CAROLINA
PROFESSIONAL
ENGINEER
Seal
4/7/2025
004822777

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NO UTILITY CONFLICTS
EXPECTED THIS SHEET

UTILITY CONSTRUCTION

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The plan shows a road layout with various utility features. Key elements include:

- Match Line:** -YI- STA 13+50 SEE SHEET UC-4
- Property Lines:** SHALLOTTE INVESTMENTS, LLC (DB 4338 PG 342, DB 256A PG 361, PB 34 PG 336) and SCHRIMPSHER PROPERTIES, LLC (DB 5212 PG 498, DB 709 PG 28, DB 564 PG 413, PB 0 PG 178, PB S PG 95).
- Utility Details:**
 - PIPE OUTLET CHANNEL EST. 120 CY DDE SLOPE=1.0% SEE DETAIL 12
 - CL 1 RIP RAP EST. 57 TONS EST. 104 SY GF
 - REMOVE 16 LF OF 42" RCP
 - TRENCHLESS INSTALLATION 72" WELDED STEEL
 - PIPE INLET CHANNEL W/CL 1" RIP RAP (BANKS ONLY) SLOPE=0.5% EST. 17 CY DDE SEE DETAIL 24
 - INVERTS BURIED 1.0'
 - SPEC. LAT. 4" BASE CHANNEL RELOC. SEE DETAIL 21
- Other Features:** STEEL FUEL TANK ON CONC PAD, WOODS, DISK, R/W VARIES, NAD 83/2011, PT STA 23+02.08, N 79°.



PROJECT REFERENCE NO.		SHEET NO.	
R-5857		UC-5	
DESIGNED BY: JKC			
DRAWN BY: JNA			
CHECKED BY: JKC			
APPROVED BY: CLS			
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		UTILITIES CONSTRUCTION PLANS ONLY	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151		4/24/2025	

UTILITY CONSTRUCTION

**NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON
WATER PIPE FITTINGS ON THIS PLAN SHEET
IS 165 POUNDS. THE ACTUAL QUANTITY AND
TYPE OF FITTINGS WILL VARY BASED ON
FIELD CONDITIONS.**

★ DENOTES SIGNAL

SEE SHEETS 8 & 9 FOR -L- PROFILES
SEE SHEET 2B-1 FOR DITCH DETAILS

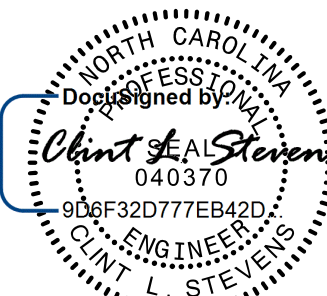
JAMES CAMPAGNA
SUSAN CAMPAGNA
STEVEN J COHEN
KATHLEEN L COHEN
DB 2271PG 630

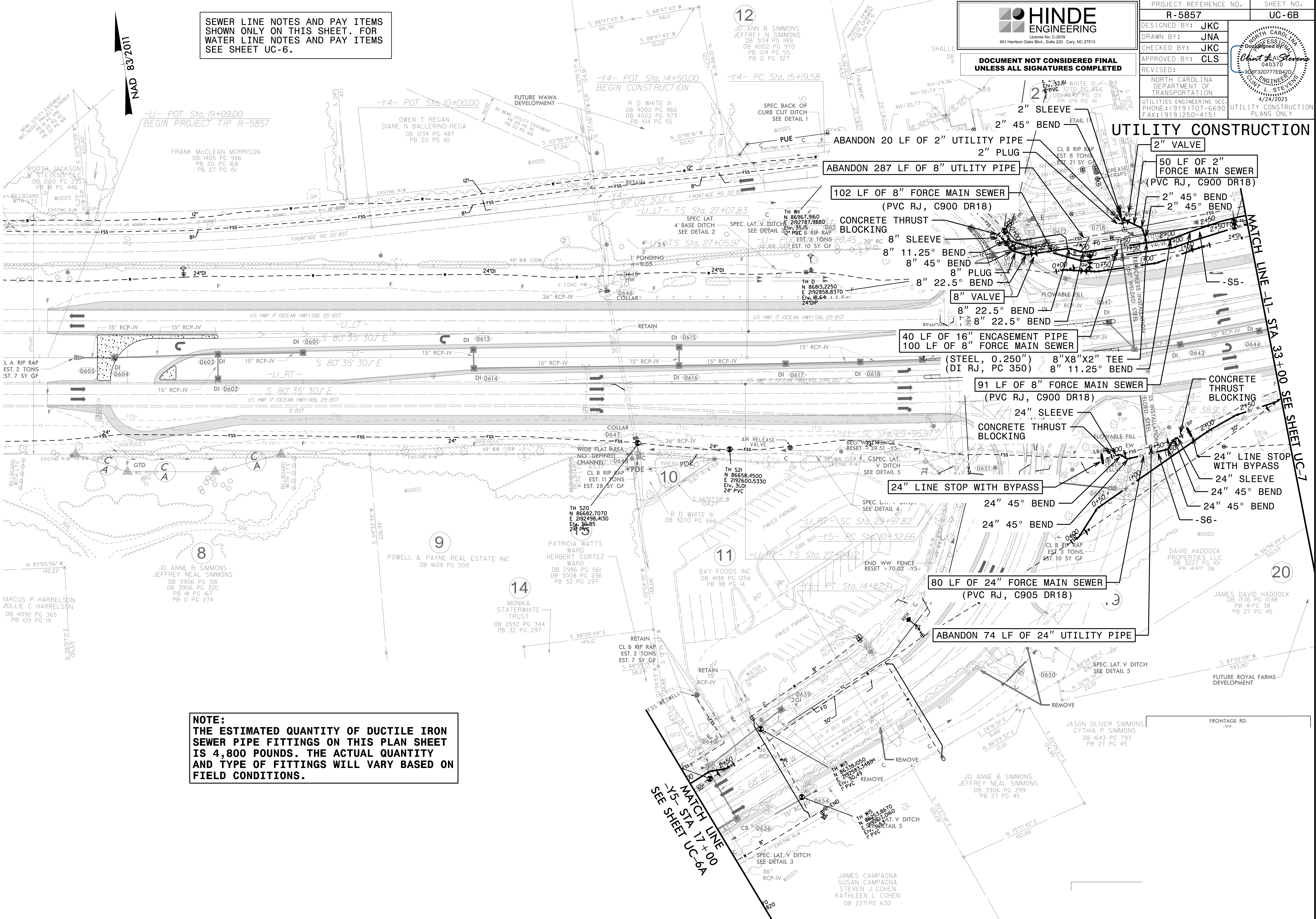
SEWER LINE NOTES AND PAY ITEMS
SHOWN ONLY ON THIS SHEET. FOR
WATER LINE NOTES AND PAY ITEMS
SEE SHEET UC-6.



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PROJECT REFERENCE NO.		SHEET NO.		
R-5857		UC-6B		
DESIGNED BY:	JKC		UTILITY CONSTRUCTION PLANS ONLY	
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				



NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON
SEWER PIPE FITTINGS ON THIS PLAN SHEET
IS 4,800 POUNDS. THE ACTUAL QUANTITY
AND TYPE OF FITTINGS WILL VARY BASED ON
FIELD CONDITIONS.

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PROJECT REFERENCE NO.

R-5857

SHEET NO.

UC-7

DESIGNED BY:

JKC

DRAWN BY:

JNA

CHECKED BY:

JKC

APPROVED BY:

CLS

REVISED:

NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION

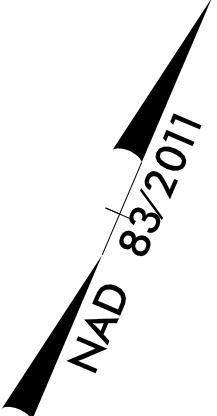
UTILITIES ENGINEERING SEC.
PHONE: (919) 707-6690
FAX: (919) 250-4151

UTILITY CONSTRUCTION
PLANS ONLY

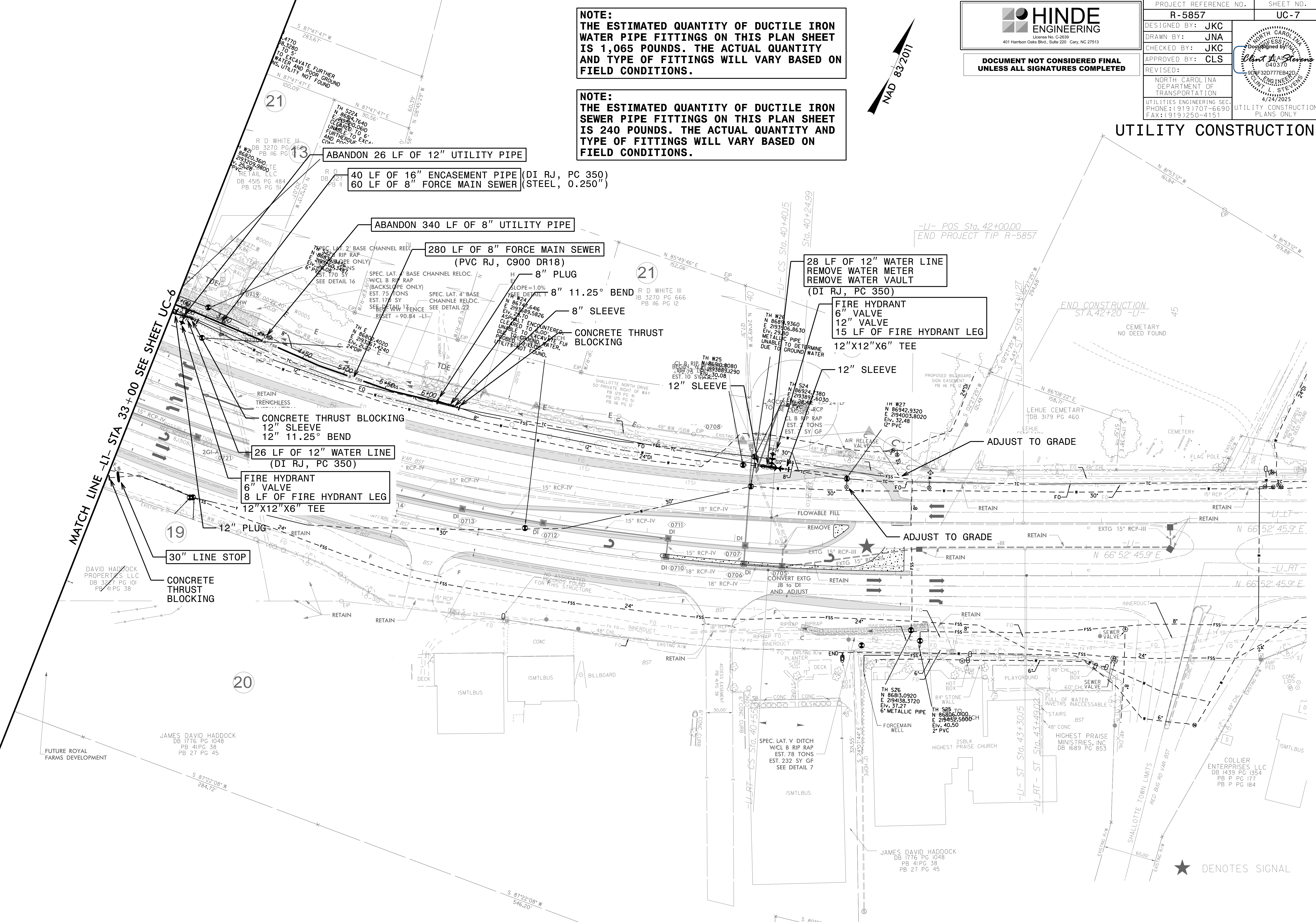
North Carolina
Professional Engineer
C. L. STEVENS
040370
00RF320777EB42D
4/24/2025

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON
WATER PIPE FITTINGS ON THIS PLAN SHEET
IS 1,065 POUNDS. THE ACTUAL QUANTITY
AND TYPE OF FITTINGS WILL VARY BASED ON
FIELD CONDITIONS.

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON
SEWER PIPE FITTINGS ON THIS PLAN SHEET
IS 240 POUNDS. THE ACTUAL QUANTITY AND
TYPE OF FITTINGS WILL VARY BASED ON
FIELD CONDITIONS.



UTILITY CONSTRUCTION



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★ DENOTES SIGNAL







