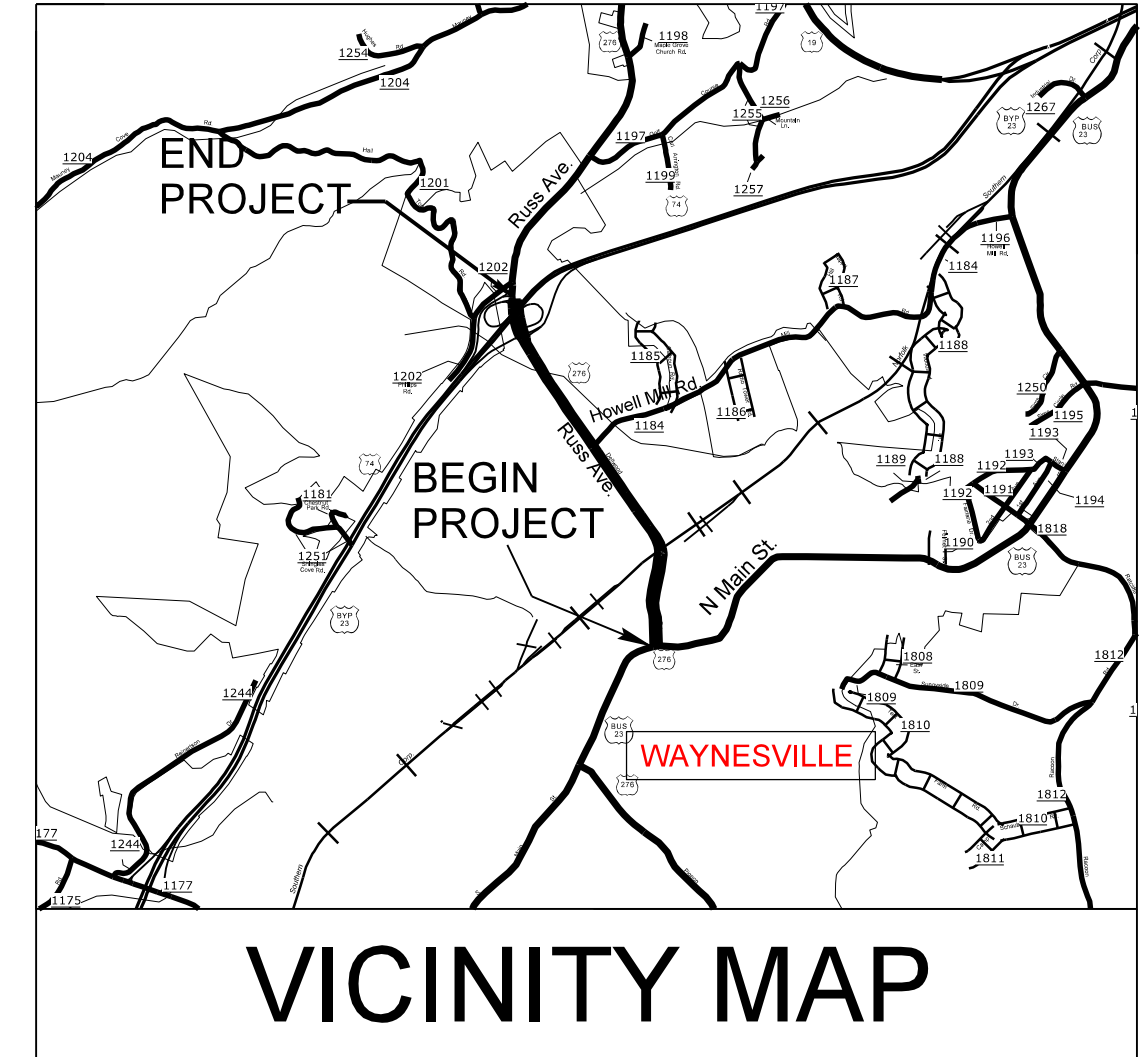


See Sheet 1A For Index of Sheets

| | |
|--|-----------|
| T.I.P. NO. | SHEET NO. |
| U-5839 | UC-1 |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | |

TIP PROJECT: U-5839



VICINITY MAP

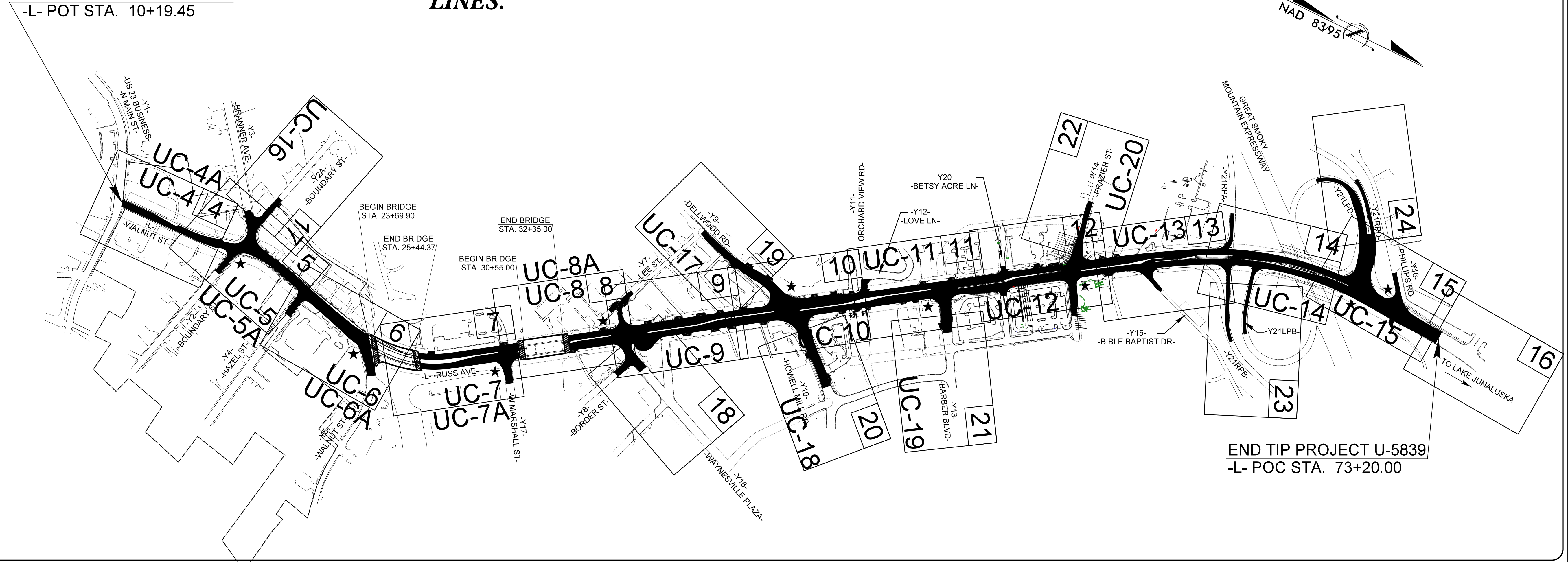
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITY CONSTRUCTION PLANS HAYWOOD COUNTY

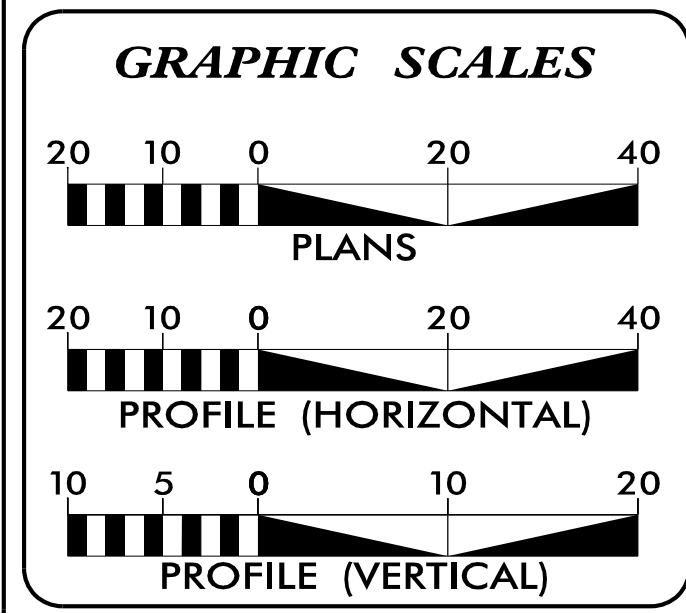
**LOCATION: US-276 (RUSS AVENUE) FROM US 23 /74 BUSINESS
(MAIN STREET) UPGRADE CORRIDOR**

**TYPE OF WORK: WATER AND SEWER LINE RELOCATIONS;
CONDUIT INSTALLATIONS FOR POWER AND COMMUNICATION
LINES.**

BEGIN TIP PROJECT U-5839
-L- POT STA. 10+19.45



END TIP PROJECT U-5839
-L- POC STA. 73+20.00



INDEX OF SHEETS

| SHEET NO. | DESCRIPTION |
|------------------|-----------------------------|
| UC-1 | TITLE SHEET |
| UC-2 | UTILITY SYMBOLOGY |
| UC-3 | NOTES |
| UC-3A THRU UC-3K | DETAILS |
| UC-4 THRU UC-20 | UTILITY CONSTRUCTION SHEETS |
| UC-4A THRU UC-8A | UC CONDUIT SHEETS |
| UC-21 THRU UC-54 | PROFILE SHEETS |

WATER, SEWER AND DUCT BANK OWNERS ON PROJECT

(A) TOWN OF WAYNESVILLE - WATER, SEWER AND POWER
 (B) AT&T - COMMUNICATIONS
 (C) SPECTRUM - COMMUNICATIONS
 (D) NCDOT - SIGNALS
 (E) HAYWOOD COUNTY - COMMUNICATIONS

PREPARED IN THE OFFICE OF:

HINDE ENGINEERING
 License No. C-2639
 401 Harrison Oaks Blvd., Suite 220 Cary, NC 27513
 Ph. (919) 853-0001

| | |
|-------------------------|----------------------------|
| Clint L. Stevens, P.E. | UTILITIES PROJECT MANAGER |
| Corey D. Bousquet, P.E. | UTILITIES PROJECT ENGINEER |
| Jordan K. Chapman | UTILITIES PROJECT DESIGNER |

SEAL

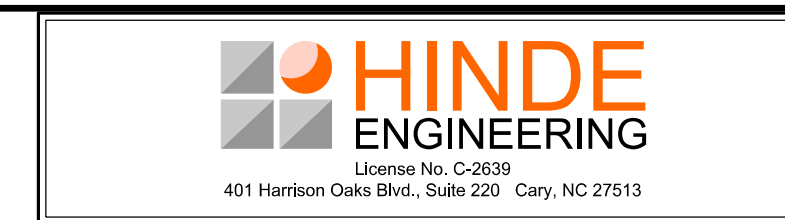
4/10/2023

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

| | |
|-----------------------|------------------------------|
| Wanda Austin, P.E. | DIVISION ENGINEER |
| Mitchell Bishop, P.E. | DIVISION CONSTRUCT. ENGINEER |
| Nathan Tamer, PE | DISTRICT RESIDENT ENGINEER |
| Bob Golding | 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) | |
| 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 | 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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 803.00 888.88 888.88 888.88

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 SEWER LINES BELONG TO THE TOWN OF WAYNESVILLE. THE CONTACT FOR THE TOWN IS:

JEFF STINES
PUBLIC SERVICES DIRECTOR
PH: 828-646-1281

CONTACTS FOR THE PROPOSED DUCT BANKS ARE:

POWER LINES DUCT BANK:

TOWN OF WAYNESVILLE
JEFF STINES
PH: 828-646-1281

COMMUNICATION LINES DUCT BANK:

CHARTER/SPECTRUM
BRIAN COOPER
PH: 864-545-4165

AT&T
DANNY LITTLE
PH: 704-764-7343

STEVE MODE
EMAIL: steve_mode@telics.com

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.

10. ALL CONDUITS SHALL BE PVC, SCHEDULE 40, RIGID HEAVY WALL.

11. LATERAL SEPARATION OF SEWERS AND WATER MAINS. WATER MAINS SHALL BE LAID AT LEAST 10 FEET Laterally FROM EXISTING OR PROPOSED SEWERS, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10-FOOT LATERAL SEPARATION, IN WHICH CASE:

ALL WATER LINE THAT CROSS A SEWER LINE SHALL BE INSTALLED A MINIMUM OF 18" BELOW OR ABOVE THE SEWER LINE WITH THE PREFERENCE TO BE ABOVE THE SEWER LINE.

IF LOCAL CONDITIONS OR BARRIERS PREVENT AN 18" VERTICAL SEPARATION, CONSTRUCT BOTH THE WATER AND SEWER FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT CROSSING WITH FERROUS PIPE.

ALL OTHER UTILITIES THE WATER LINES SHALL MAINTAIN 12" OF SEPARATION

NOTES TO THE CONTRACTOR:

1. SEE THE PLANS FOR THE LOCATIONS WHERE THE PROPOSED WATER AND SEWER LINES WILL BE RESTRAINED. USE BOLTLESS RESTRAINT TO RESTRAINED DUCTILE IRON WATER OR SEWER PIPES EXCEPT AT THE PROPOSED FITTINGS WHERE RESTRAINED RETAINER GLANDS CAN BE USED. USE CONCRETE THRUST BLOCKING AT ALL TIE-IN POINTS TO THE EXISTING WATER LINES.

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. IF THE WATER SERVICE CANNOT BE INTERRUPTED, THE TOWN OF WAYNESVILLE 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 TOWN OF WAYNESVILLE. THE COST WILL BE INCIDENTAL TO THE PAY ITEMS FOR RELOCATE BACKFLOW PREVENTERS.

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

6. ALL BYPASS PUMPING NECESSARY TO MAINTAIN THE EXISTING SEWER FLOW DURING THE TIE-IN OF PROPOSED SEWER LINES WILL BE INCIDENTAL TO THE COST OF THE PROPOSED SEWER LINES.

| | | |
|---|--|--|
|  License No. C-2639 401 Harrison Oaks Blvd., Suite 220 Cary, NC 27513 | PROJECT REFERENCE NO. U-5839 | SHEET NO. UC-3 |
| | DESIGNED BY: JKC DRAWN BY: JKC CHECKED BY: CLS APPROVED BY: CDB REVISED: | |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | |  COREY D. BOUSSARD ENGINEER 6/5/2023 |
| UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151 | | |

UTILITY CONSTRUCTION

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

8. TOWN OF WAYNESVILLE SHALL OPEN AND CLOSE ALL VALVES.

9. CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107, AND 1550 OF THE STANDARD SPECIFICATIONS CONCERNING TRENCHLESS INSTALLATION. IT IS CONTRACTOR'S RESPONSIBILITY TO HAVE BORE DESIGNED AND SEALED BY A LICENSED NORTH CAROLINA PROFESSIONAL ENGINEER. NO DAMAGE IS ALLOWED TO RIVER, WETLANDS, OR BUFFER ZONES.

10. TOWN OF WAYNESVILLE MUST BE PRESENT DURING THE BORE SETUP AND OPERATION, PRESSURE AND LEAKAGE TEST, CHLORINATION TEST, AND FLUSHING.

11. CERTIFIED BACTERIOLOGICAL AND CONTAMINANT TEST SHALL BE PERFORMED BY TOWN OF WAYNESVILLE. IF THE SAMPLE FAILS RECHLORINATE THE WATER LINE AS STATED IN THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.

12. USE # 12 AWG SOLID-COPPER WIRE WITH BLUE INSULATION FOR TRACER WIRE. SEE TRACER WIRE DETAIL FOR LOCATION AND PLACEMENT ON SHEET UC-3A AND UC-3B. CONTRACTOR SHALL CONDUCT THE CONTINUITY TEST ONCE THE TRACER WIRES ARE INSTALLED.

13. THE AS-BUILT PLANS SHALL INCLUDE: SIZE AND TYPE MATERIAL INSTALLED, COORDINATES OF UTILITY CONTROLS AND VERTICAL AND HORIZONTAL LOCATIONS OF THE PIPING. PROVIDE 2 COPIES TO THE TOWN OF WAYNEVILLE AND THE ENGINEER.

14. THE AS-BUILT PLANS SHOULD ALSO INCLUDE THE BORE LOG FOR THE DIRECTIONAL BORE OF THE 16" HDPE WATER PIPE.

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LIST OF STANDARD DRAWINGS

- 1515.01 WATER METER
- 1515.02 FIRE HYDRANT
- 1525.06 PRECAST CONCRETE SANITARY SEWER MANHOLE WITH CAST-IN-PLACE BOTTOM

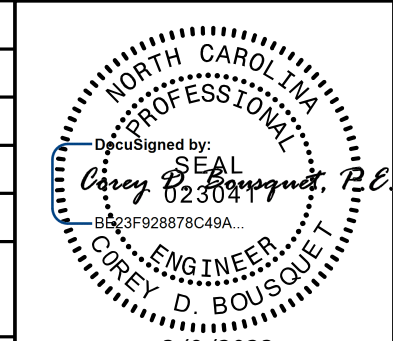
PROJECT TYPICAL DETAILS

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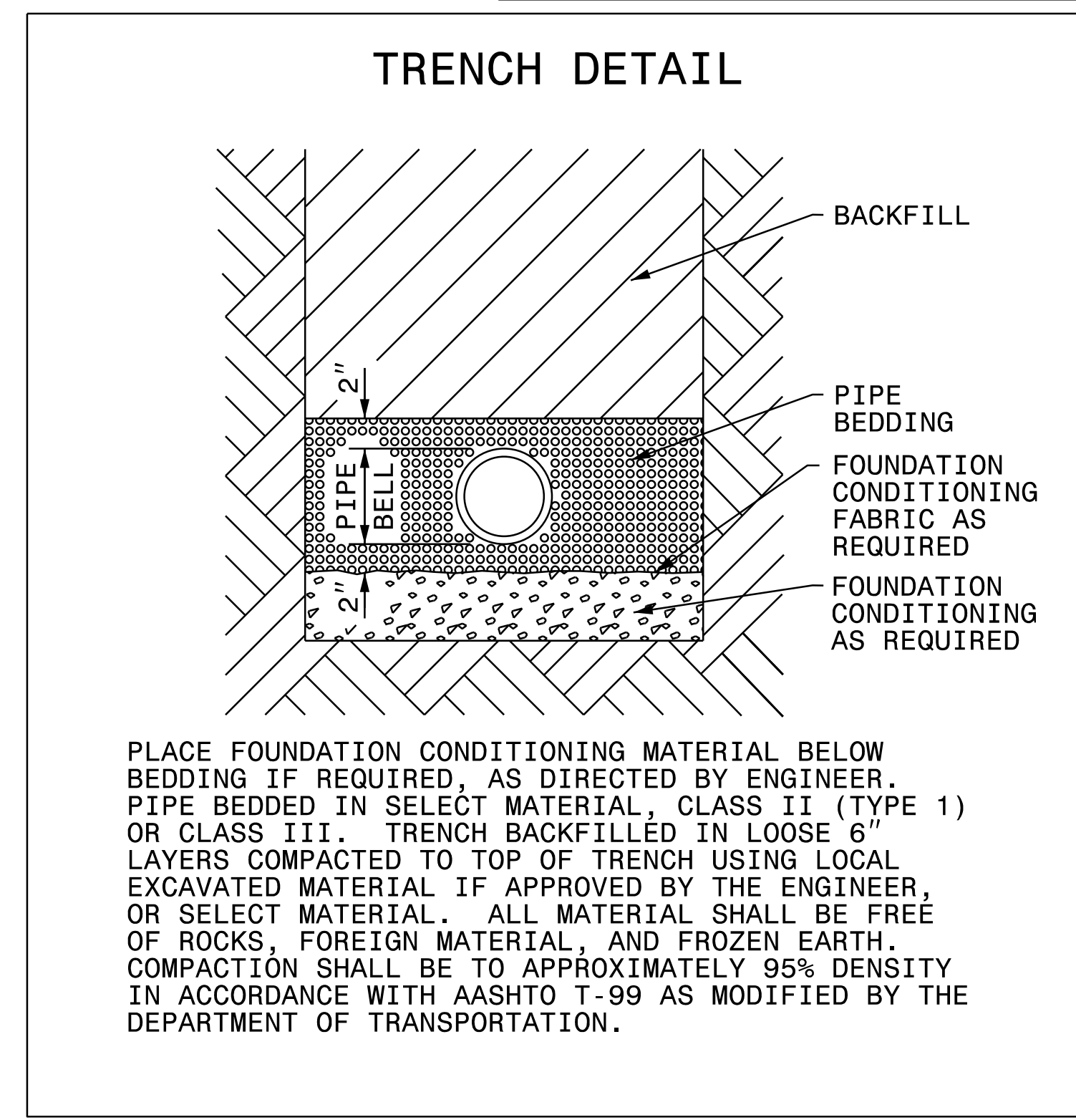
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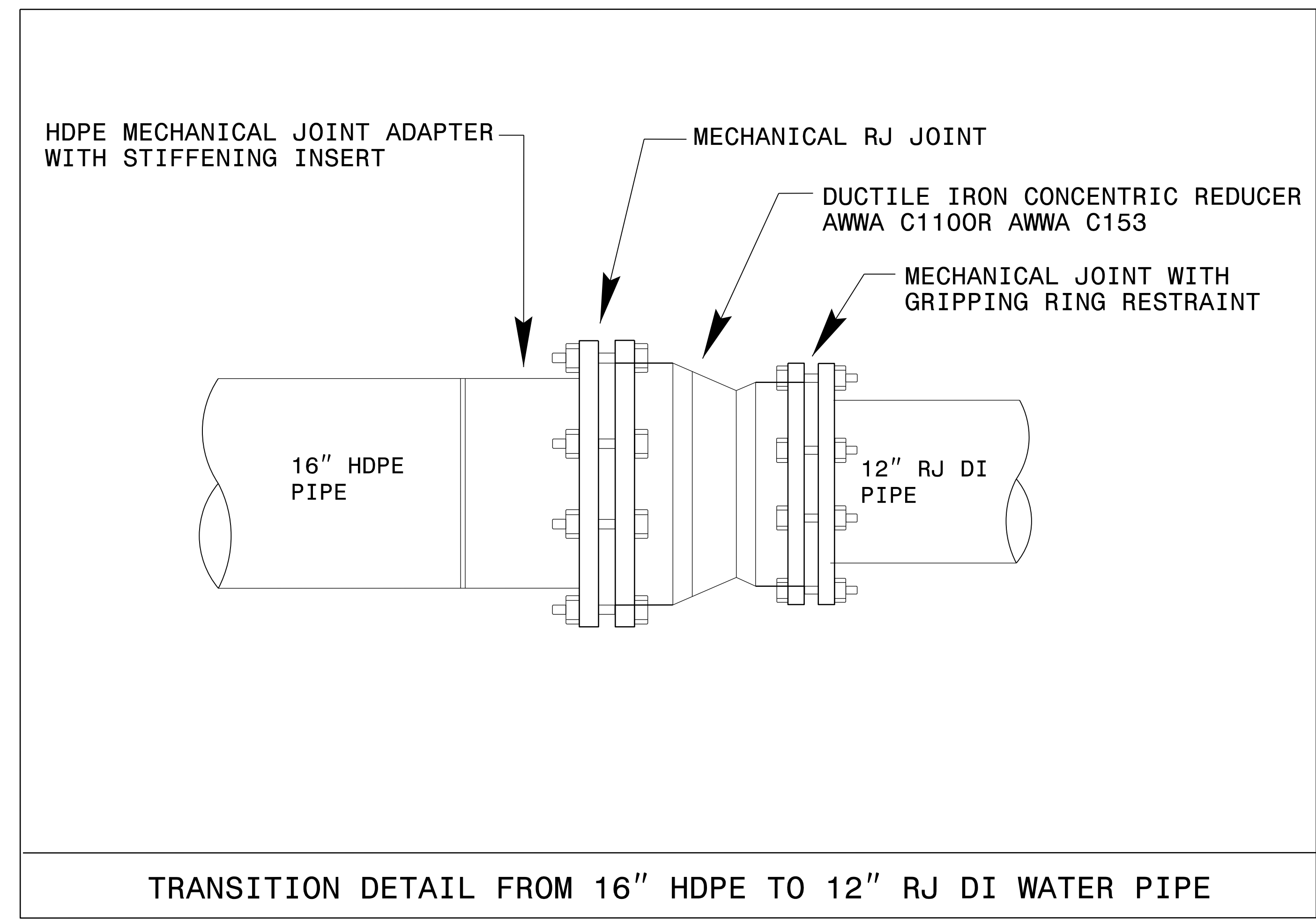
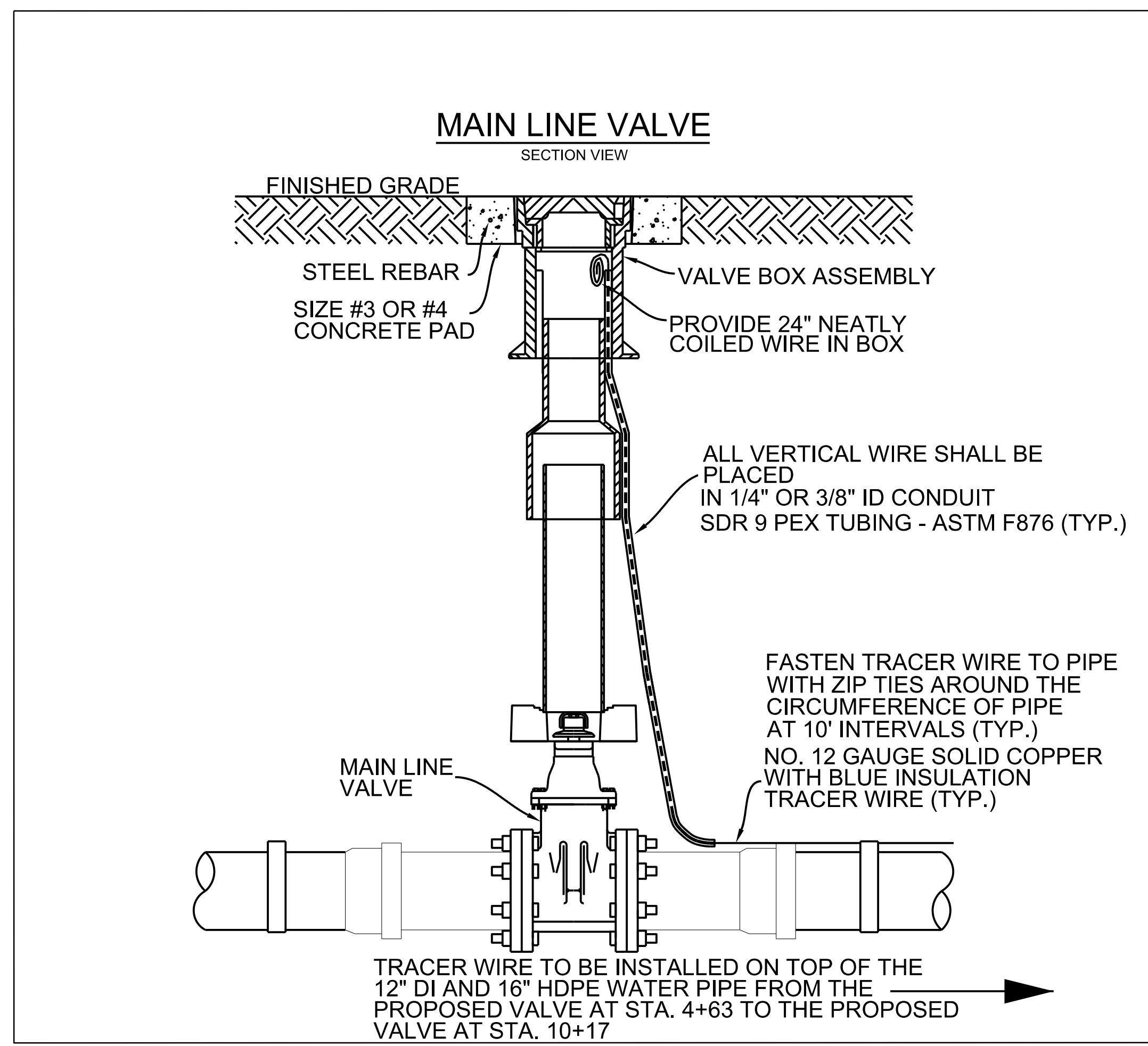
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| DESIGNED BY: JKC |  |
| DRAWN BY: ASW | |
| CHECKED BY: CLS | |
| APPROVED BY: CDB | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151 | |
| UTILITY CONSTRUCTION PLANS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

WATER AND SEWER PLANS

| 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 | | |

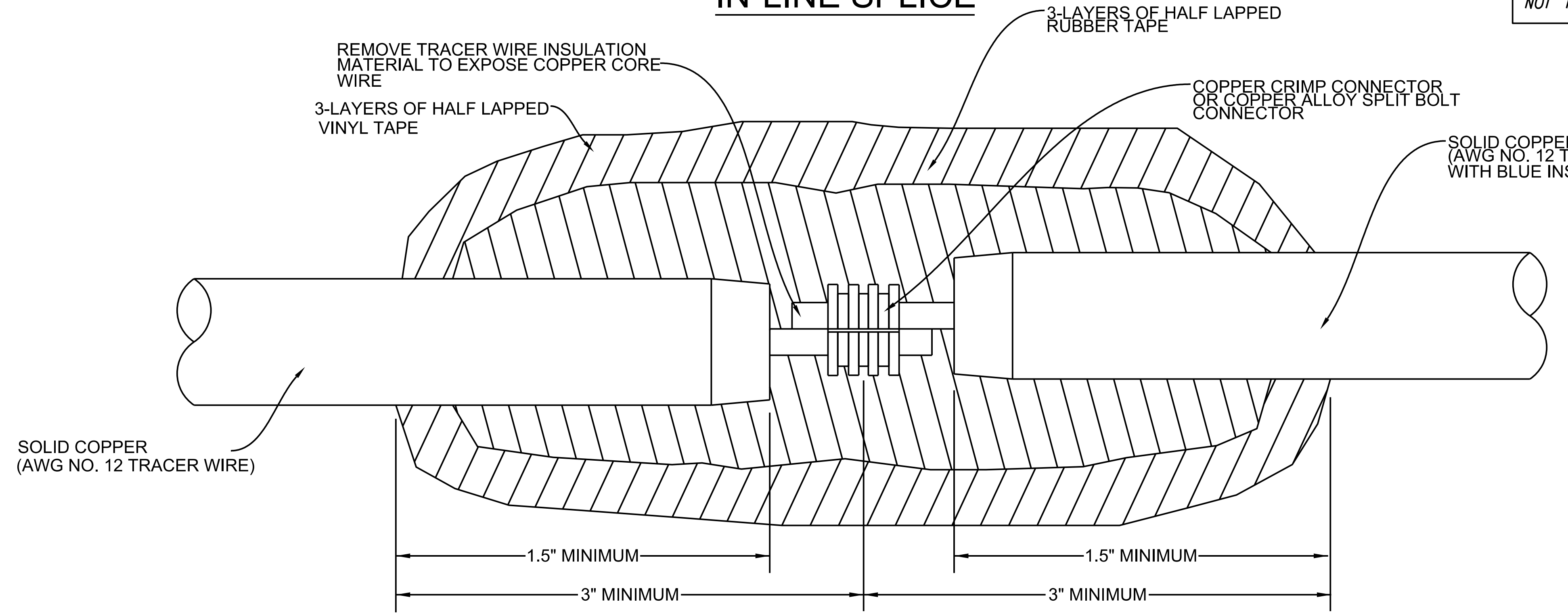


UTILITY CONSTRUCTION



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 5839 UC3A PSH.dgn

IN-LINE SPLICE



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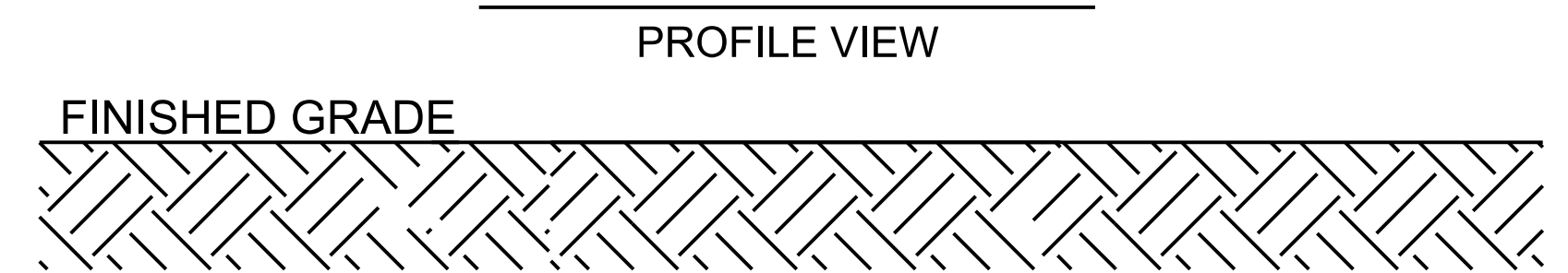
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WATER AND SEWER PLANS

| | |
|---|---------------------------|
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| DESIGNED BY: JKC | |
| DRAWN BY: ASW | |
| CHECKED BY: CLS | |
| APPROVED BY: CDB | |
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| UTILITY CONSTRUCTION PLANS ONLY | |

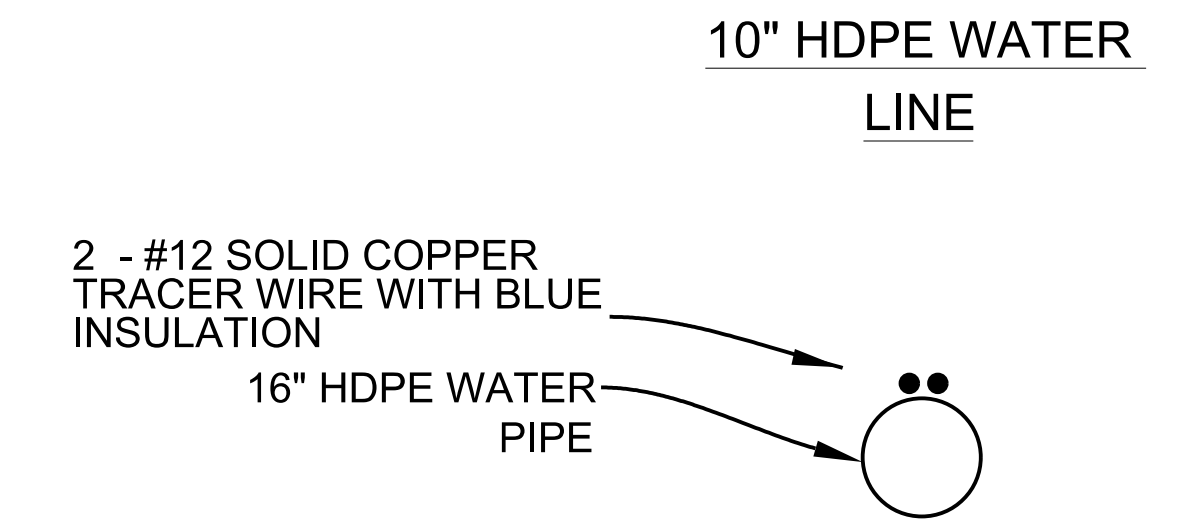
UTILITY CONSTRUCTION

BORE DETAIL



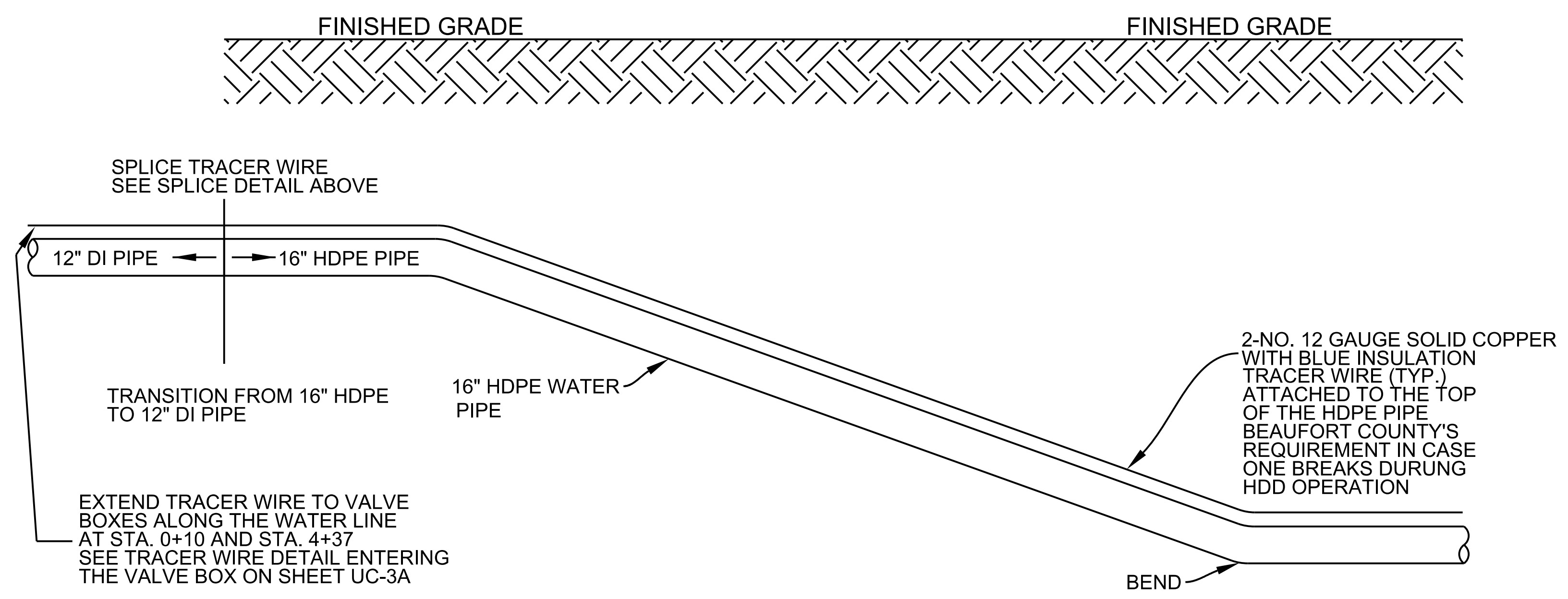
NOTES:

1. IN LINE SPLICES SHALL BE LIMITED TO THE GREATEST EXTENT POSSIBLE. TRACER WIRE SHALL BE AS CONTINUOUS AS POSSIBLE WITHOUT SPLICES.
2. INLINE SPLICES SHALL INCLUDE 3 FEET OF SLACK WIRE ON EACH SIDE OF EACH SPLICE.



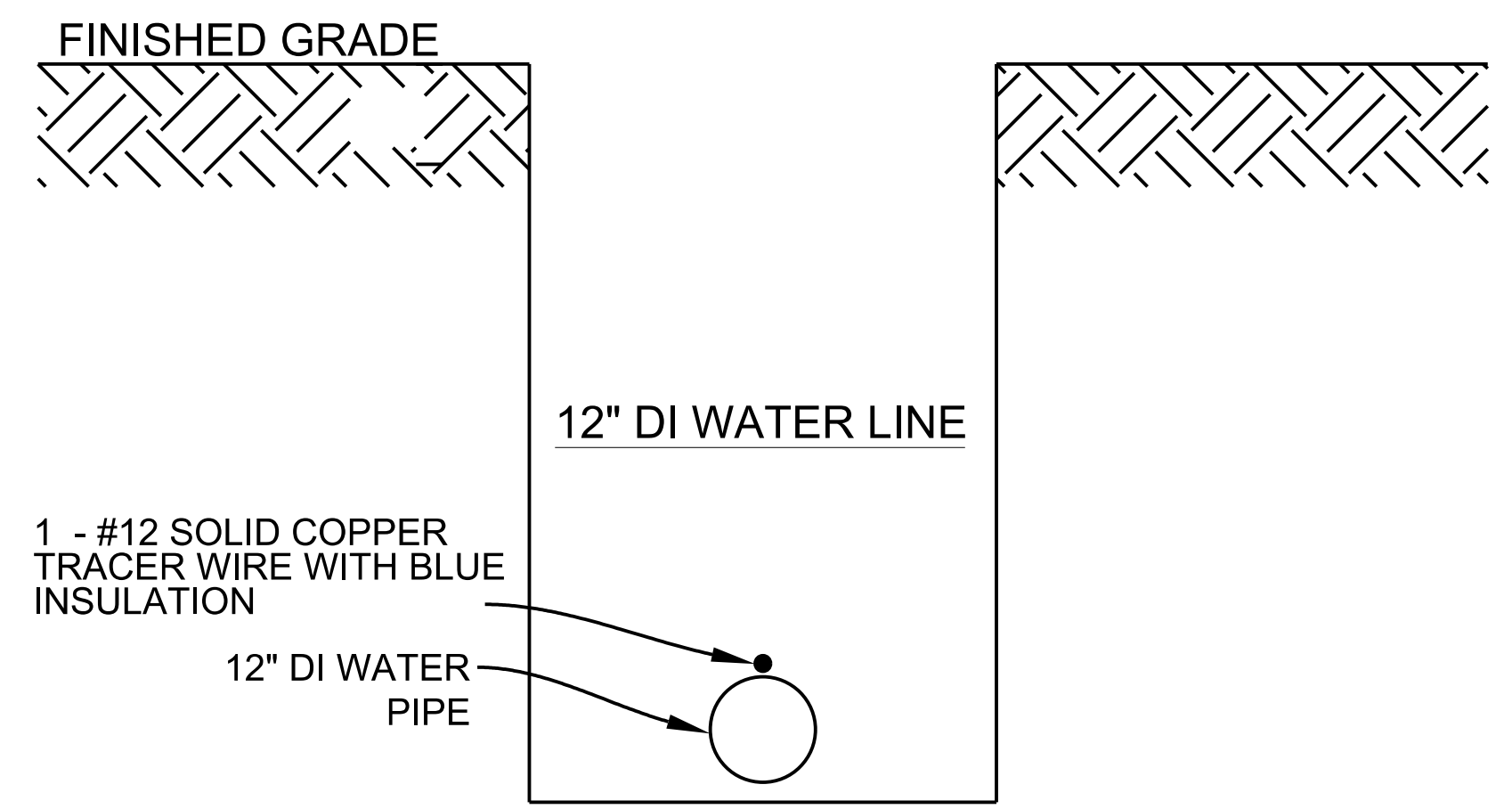
TRACER WIRE FOR WATER MAIN

SECTION VIEW



TRENCH DETAIL

PROFILE VIEW



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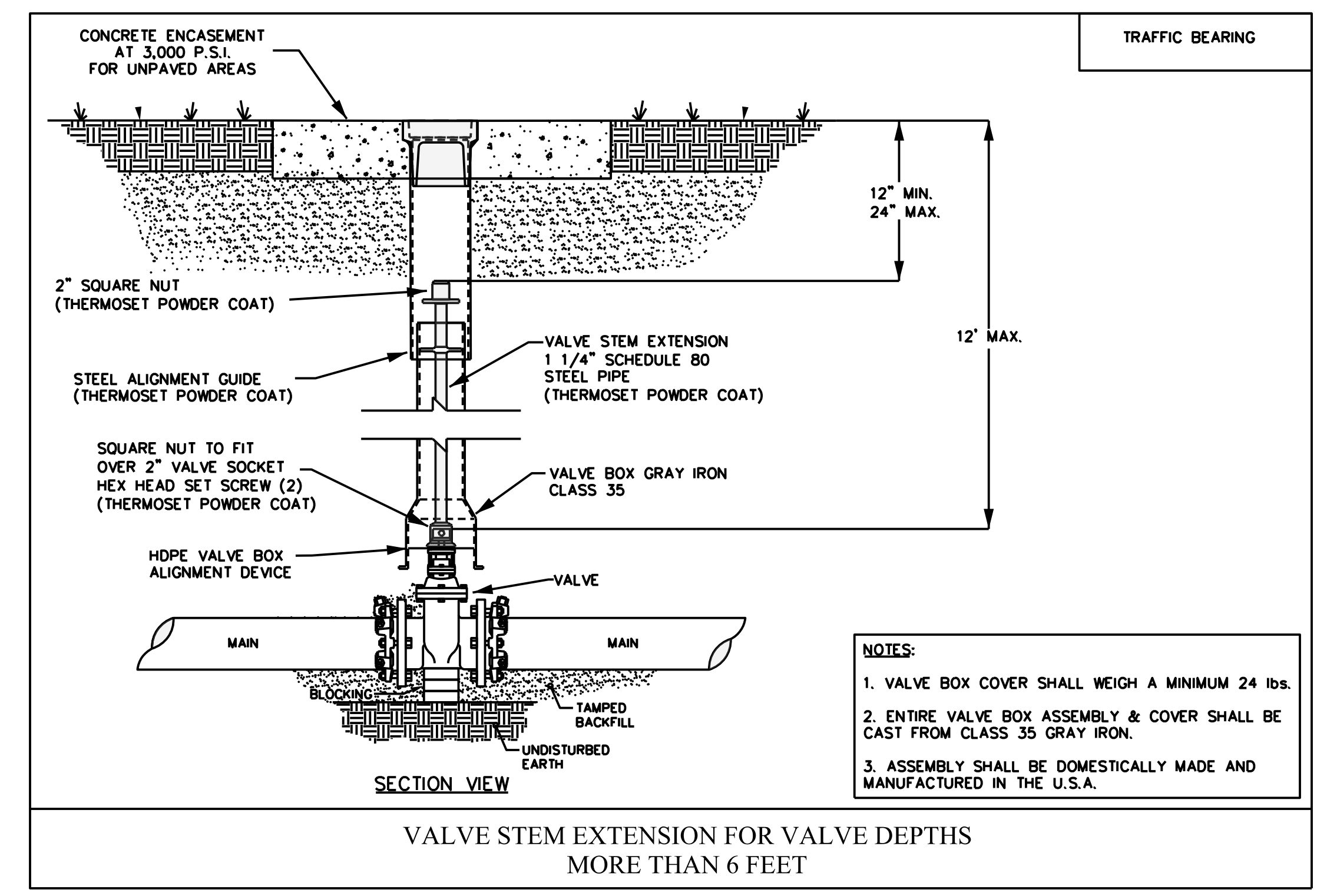
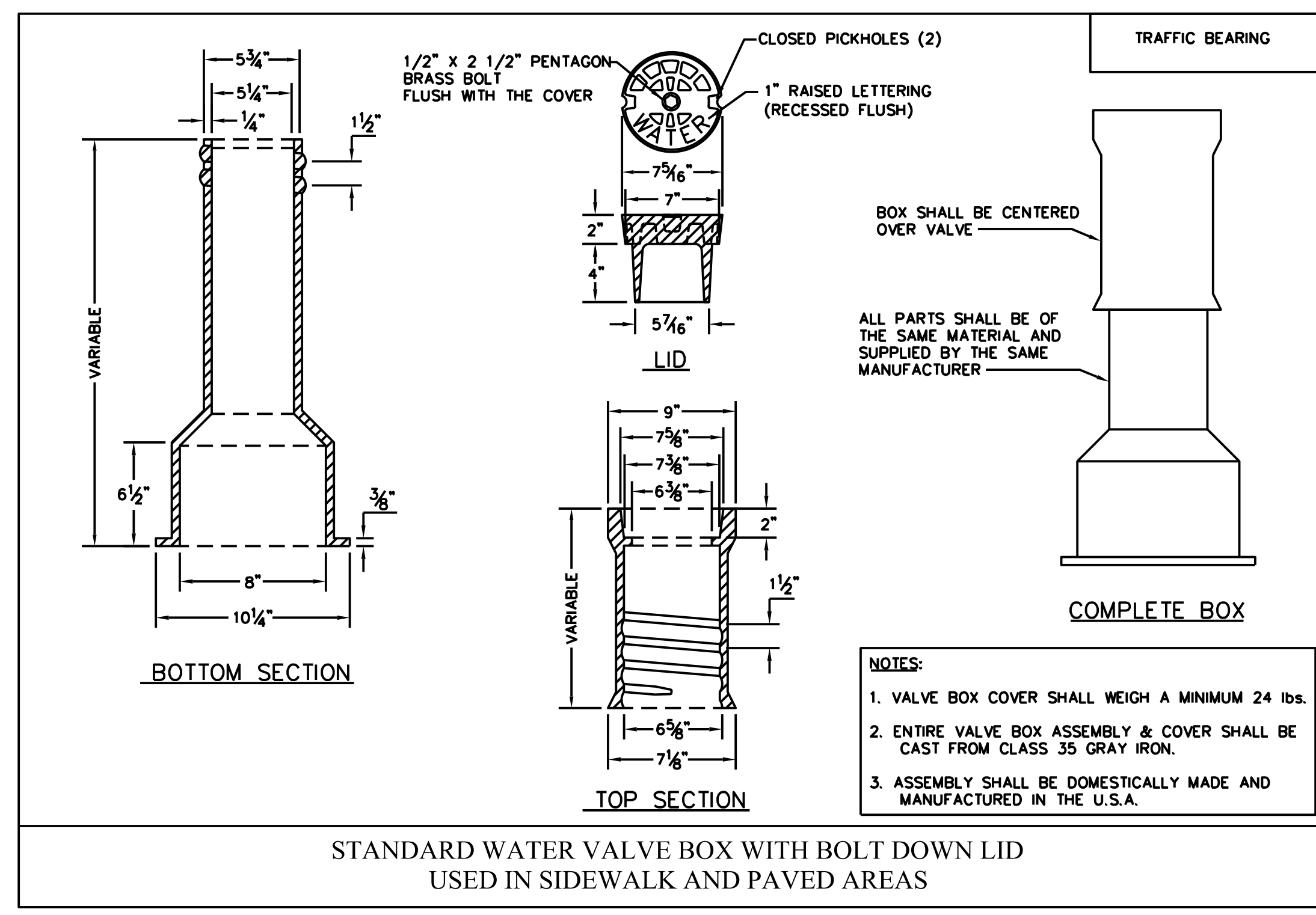
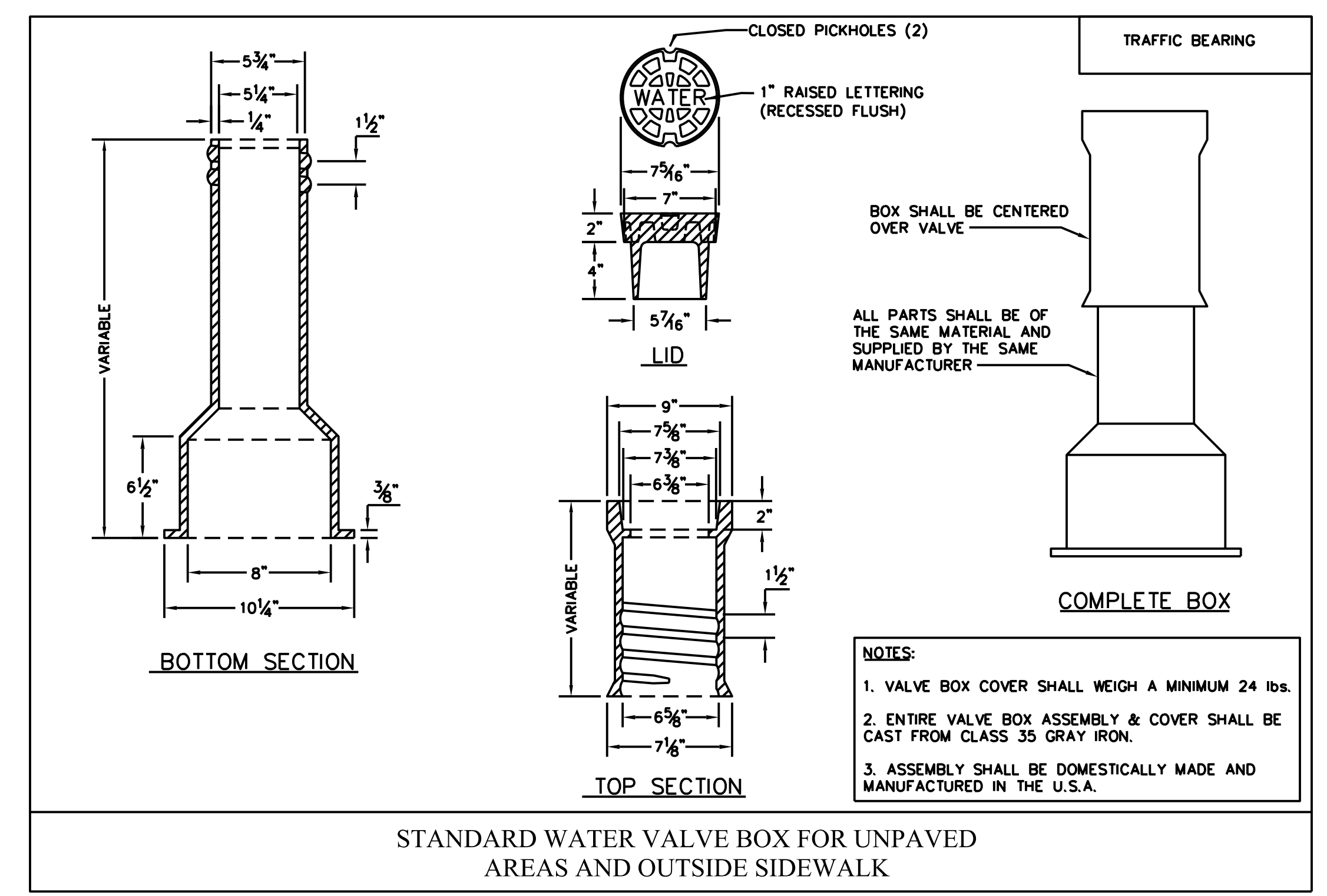
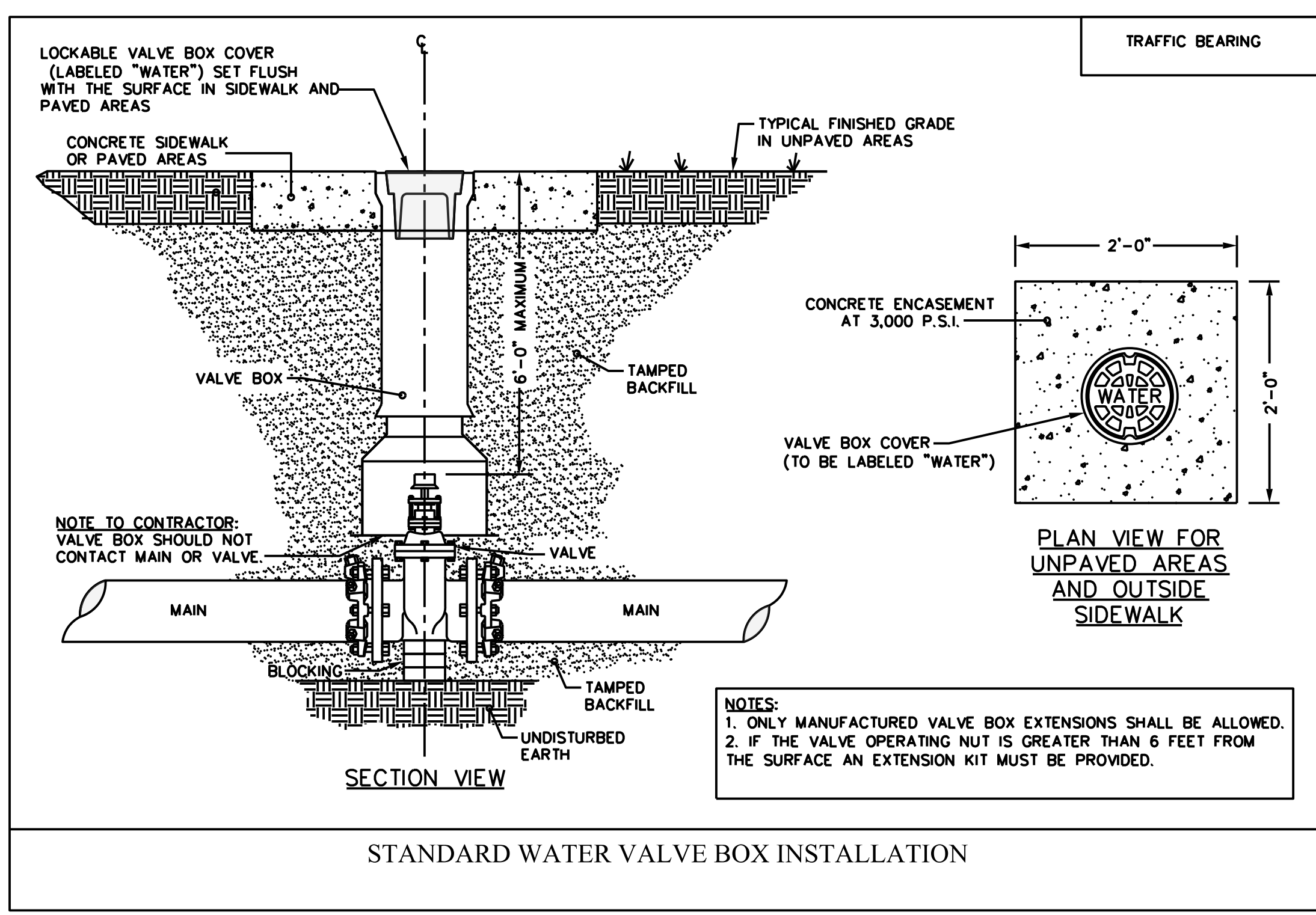
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WATER AND SEWER PLANS

| | |
|---|---------------------------|
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| DESIGNED BY: JKC | |
| DRAWN BY: ASW | |
| CHECKED BY: CLS | |
| APPROVED BY: CDB | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151 | |
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PROJECT TYPICAL DETAILS

UTILITY CONSTRUCTION



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WATER AND SEWER PLANS

| | |
|---|---------------------------|
| PROJECT REFERENCE NO. U-5839 | SHEET NO. UC-3D |
| DESIGNED BY: JKC | |
| DRAWN BY: ASW | |
| CHECKED BY: CLS | |
| APPROVED BY: CDB | |
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PROJECT TYPICAL DETAILS

UTILITY CONSTRUCTION

DETAIL A

COUNTERSUNK BRASS PLUG
 IRON BODY CLEANOUT
 DOUBLE HUB WITH RUBBER GASKET (2)
 TO C.I.P./D.I.P.

1. ALL SERVICE LATERALS SHALL BE CAST IRON SOIL PIPE. USE DI PIPE IF THERE IS LESS THAN 1 FOOT OF CLEARANCE BETWEEN THE STORM DRAINAGE AND SEWER LATERAL, LESS THAN 3 FEET OF COVER OR NOTED ON PLANS.
 2. PLACE CLEANOUT 1' INSIDE NCDOT R/W.
 3. NO ADDITIONAL BENDS WILL BE ALLOWED ALONG THE SEWER SERVICE WITHOUT THE APPROVAL FROM THE TOWN OF WAYNESVILLE.

| SIZE (IN) | A (IN) | B (IN) | C (IN) | WEIGHT (LBS) |
|-----------|--------------------------------|---------------------------------|--------|--------------|
| 4 X 4 | 9 | 12 ¹ / ₁₆ | 12 | 20 |
| 6 X 4 | 10 | 12 | 12 | 25 |
| 6 X 6 | 12 ⁷ / ₈ | 16 ¹ / ₁₆ | 15 | 35 |

LONG TURN SWEEP COMBINATION WYE & EIGHTH BEND

SANITARY SEWER SERVICE

COVER TOP VIEW

(3) HEX HEAD $\frac{3}{8}$ "-16 ZINC PLATED BOLT WITH ZINC WASHER & ZINC COATED STAINLESS STEEL NUT
 2-1" VENT HOLES
 1 1/2" RAISED LETTERING (RECESSED FLUSH)
 (4) 1" DIA. HANDLING HOLES ON A 29 3/4" DIA. B.C.

COVER SECTION B-B

5 5/16"
 CAST-IN STAINLESS STEEL ROD
 11 5/8"

FRAME SECTION B-B

CAST-IN GROOVE FOR 1/4" DIAMETER NEOPRENE GASKET
 5"

COVER SECTION A-A

25 3/8"
 25 1/4"
 28"
 32"
 27"
 2 3/16"
 3/4"

FOR ALL OTHER MANHOLE FRAMES AND COVERS SEE NCDOT ROADWAY STANDARD DRAWING

STANDARD MANHOLE RING AND COVER (ONLY IN SIDEWALK OR PAVED AREAS)

PROJECT TYPICAL DETAILS

NOT TO SCALE

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

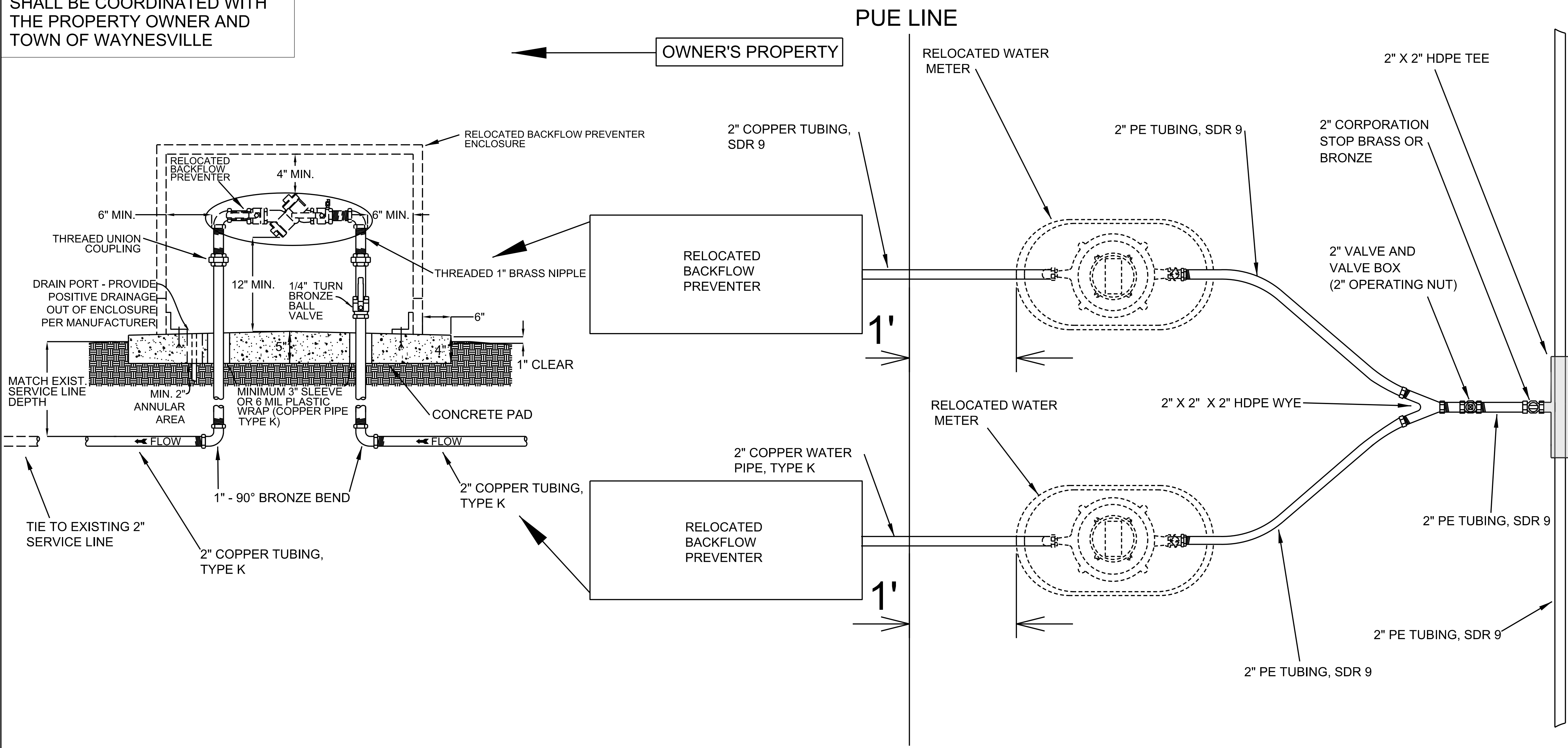
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

WATER AND SEWER PLANS

| | |
|---|--------------------|
| PROJECT REFERENCE NO. U-5839 | SHEET NO. UC-3E |
| DESIGNED BY: JKC | |
| DRAWN BY: JKC | |
| 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

RELOCATION OF WATER METERS AND BACKFLOW PREVENTERS SHALL BE COORDINATED WITH THE PROPERTY OWNER AND TOWN OF WAYNESVILLE



ALL FITTINGS, TAPPING SADDLES, CORPORATION STOPS AND BALL VALVES ARE INCIDENTAL TO RELOCATE WATER METER, RELOCATE RPZ BACKFLOW PREVENTION ASSEMBLY AND WATER SERVICE LINE PAY ITEMS

WATER METER AND BACKFLOW PREVENTER RELOCATION

PLACE 3" OF #57 OR #78 WASHED STONE BENEATH RELOCATED WATER METERS

20-MAR-2023 15:20 PROJECTS\2015\A2015803.00 Mulkey - U-5839\Design\Utilities\Engineering\UC\Proj\U5839_ut_dtl_UC3E_psh.dgn
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PROJECT TYPICAL DETAILS

NOT TO SCALE

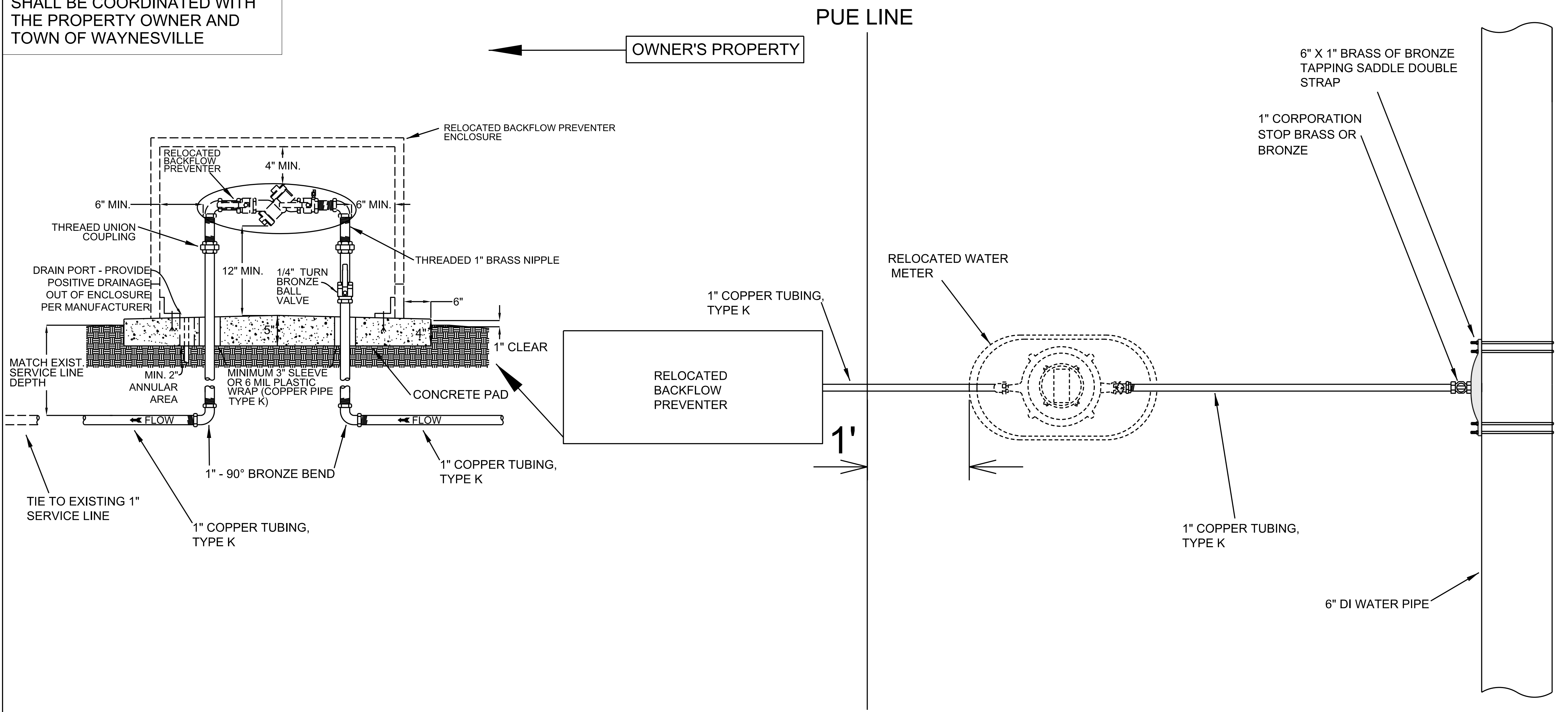
HINDE ENGINEERING
 License No. C-2639
 401 Harrison Oaks Blvd., Suite 220 Cary, NC 27513

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

WATER AND SEWER PLANS

| | |
|---|--------------------|
| PROJECT REFERENCE NO. U-5839 | SHEET NO. UC-3F |
| DESIGNED BY: JKC | |
| DRAWN BY: JKC | |
| 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 | |

RELOCATION OF WATER METERS AND BACKFLOW PREVENTERS SHALL BE COORDINATED WITH THE PROPERTY OWNER AND TOWN OF WAYNESVILLE



ALL FITTINGS, TAPPING SADDLES, CORPORATION STOPS AND BALL VALVES ARE INCIDENTAL TO RELOCATE WATER METER, RELOCATE RPZ BACKFLOW PREVENTION ASSEMBLY AND WATER SERVICE LINE PAY ITEMS

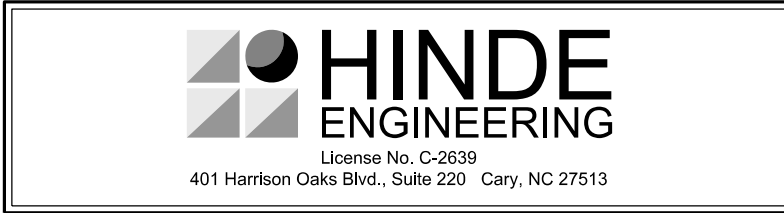
WATER METER AND BACKFLOW PREVENTER RELOCATION

PLACE 3" OF #57 OR #78 WASHED STONE BENEATH RELOCATED WATER METERS

20-MAR-2023 15:20 PROJECTS\2015\A2015803.00 Mulkey - U-5839\Design\Utilities\Engineering\UC\Proj\U5839_ut_dtl_UC3F_psh.dgn

PROJECT TYPICAL DETAILS

NOT TO SCALE

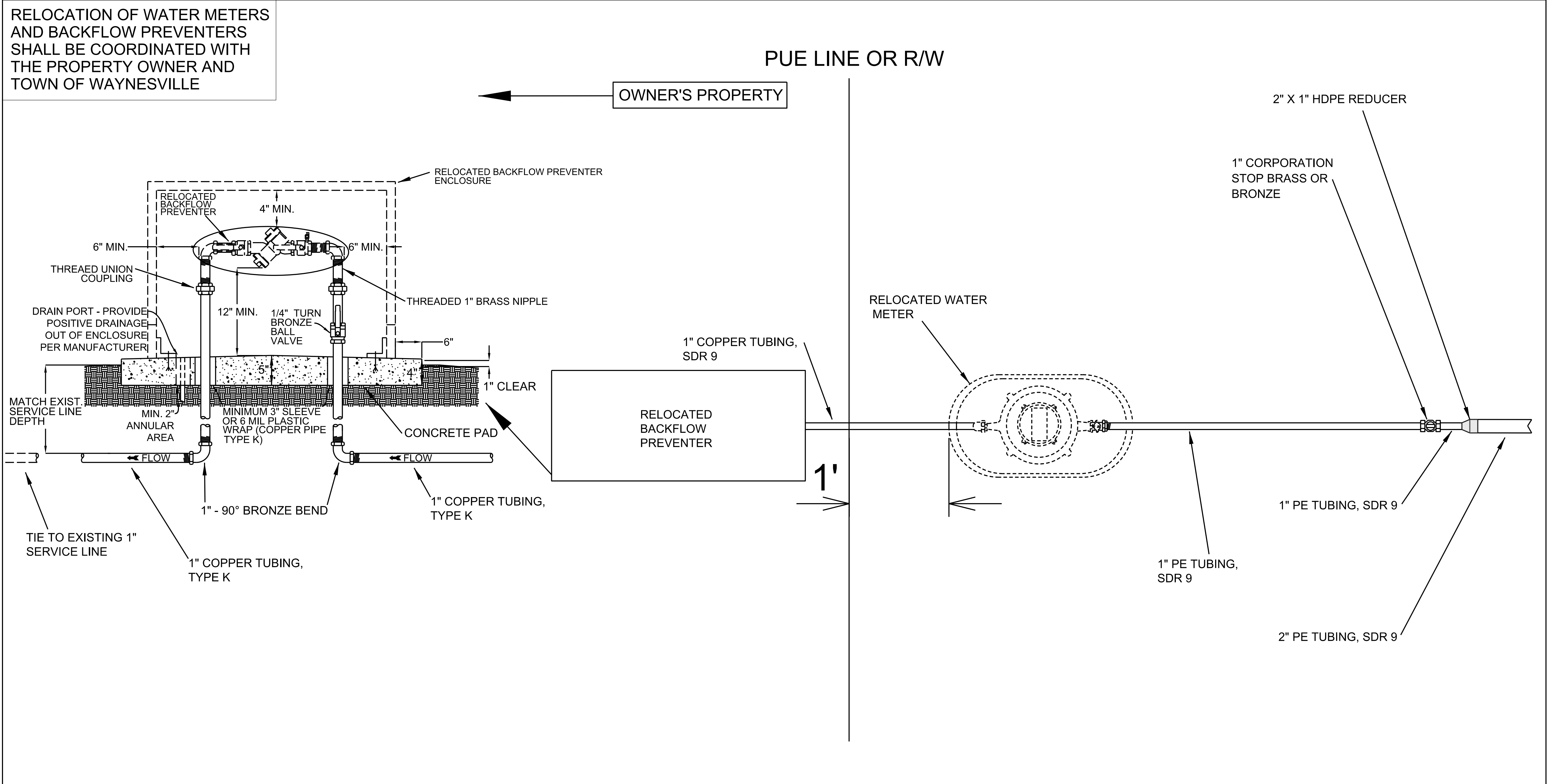


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WATER AND SEWER PLANS

| | |
|---|---------------------------|
| PROJECT REFERENCE NO. U-5839 | SHEET NO. UC-3G |
| DESIGNED BY: JKC | |
| DRAWN BY: JKC | |
| 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



RELOCATION OF WATER METERS AND BACKFLOW PREVENTERS SHALL BE COORDINATED WITH THE PROPERTY OWNER AND TOWN OF WAYNESVILLE

OWNER'S PROPERTY

PUE LINE OR R/W

ALL FITTINGS, TAPPING SADDLES, CORPORATION STOPS AND BALL VALVES ARE INCIDENTAL TO RELOCATE WATER METER, RELOCATE RPZ BACKFLOW PREVENTION ASSEMBLY AND WATER SERVICE LINE PAY ITEMS

WATER METER AND BACKFLOW PREVENTER RELOCATION

PLACE 3" OF #57 OR #78 WASHED STONE BENEATH RELOCATED WATER METERS

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PROJECT TYPICAL DETAILS

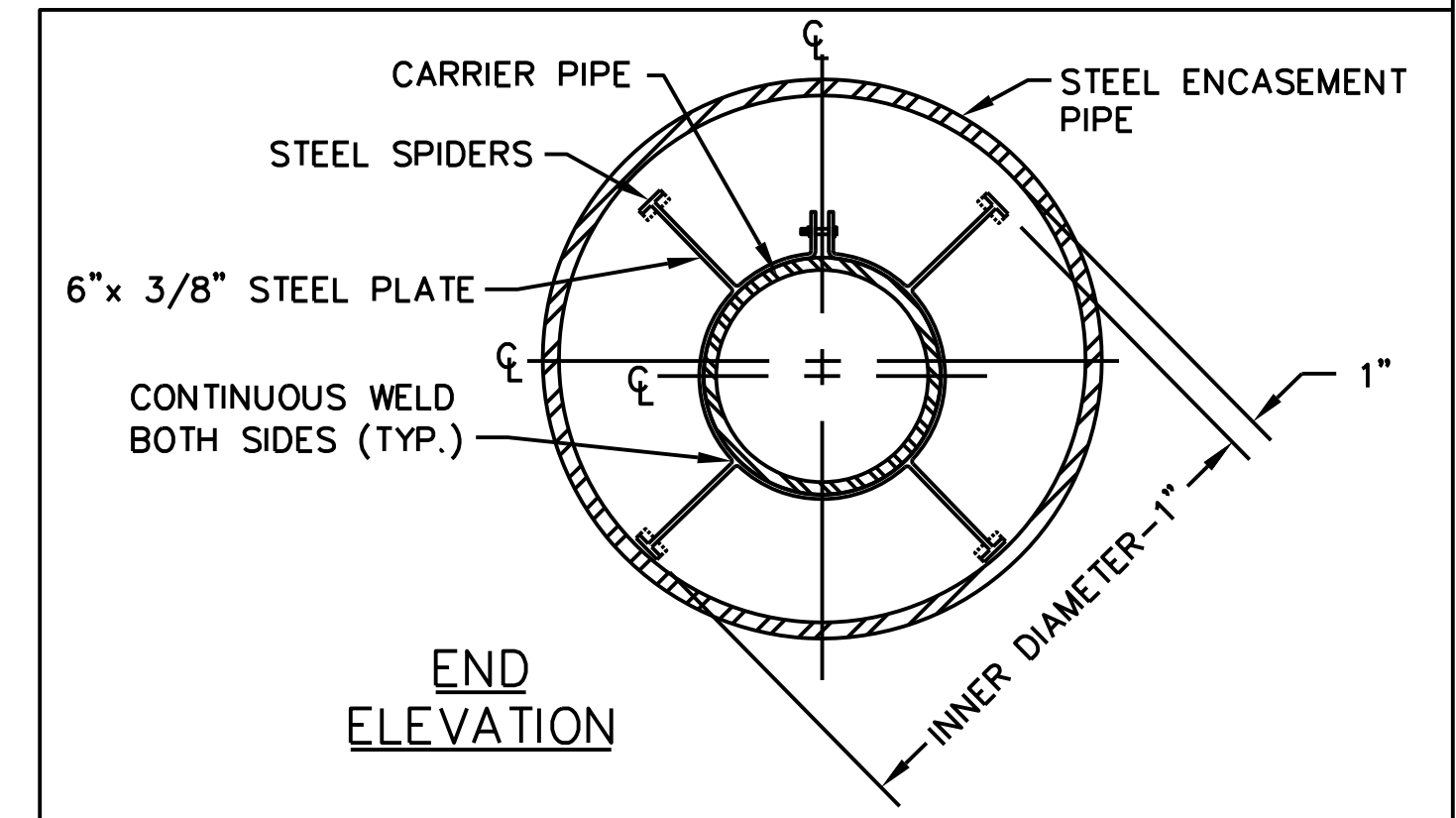
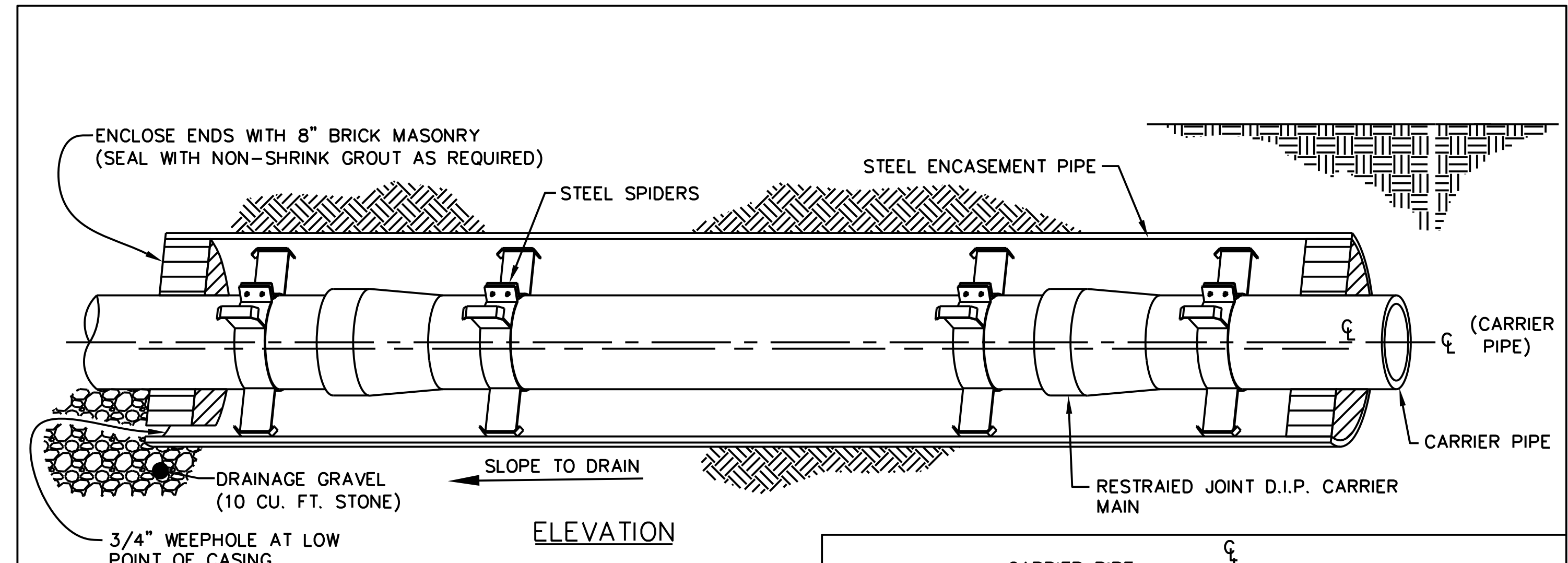
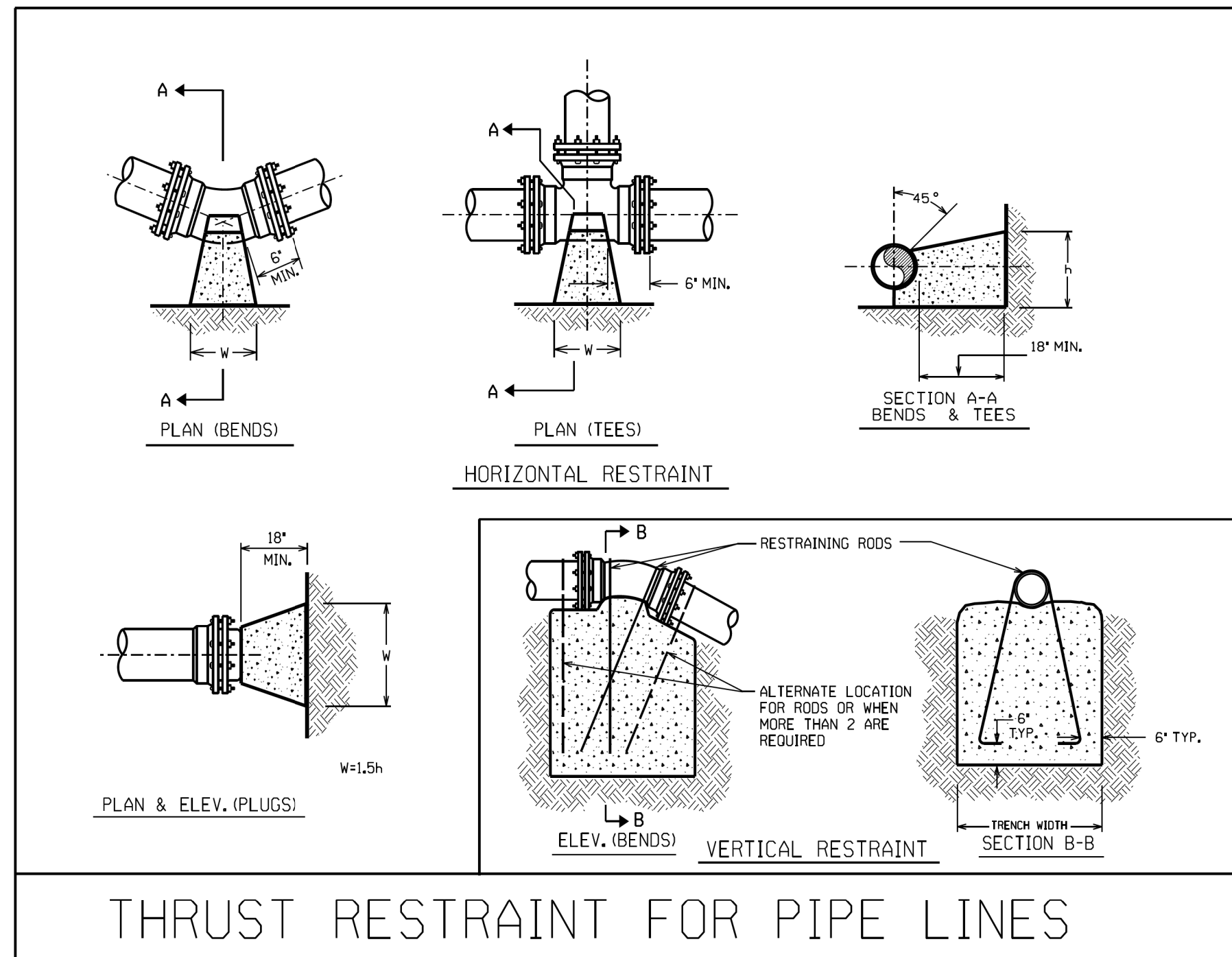
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 License No. C-2639
 401 Harrison Oaks Blvd., Suite 220 Cary, NC 27513

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WATER AND SEWER PLANS

| | |
|--|---------------------------|
| PROJECT REFERENCE NO. U-5839 | SHEET NO. UC-3H |
| DESIGNED BY: JKC | |
| DRAWN BY: JKC | |
| CHECKED BY: CLS | |
| APPROVED BY: CDB | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 3/9/2023 UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151 UTILITY CONSTRUCTION PLANS ONLY | |



- NOTES:**
1. STEEL "SPIDERS" SHALL BE USED FOR SUPPORT OF THE CARRIER PIPE WITHIN THE CASING PIPE.
 2. A MINIMUM SPACING OF 2 SPIDERS PER JOINT OF CARRIER PIPE SHALL BE REQUIRED.
 3. THE SPIDERS SHALL BE SPACED EVENLY ALONG THE CARRIER PIPE SUCH THAT EACH SPIDER SUPPORTS THE SAME UNIT WEIGHT OF THE CARRIER MAIN.
 4. FOR CASING SIZE SEE STANDARD SPECIFICATION SECTION 05000.
 5. RECLAIMED LINE SHALL BE PVC WITH RESTRAINED JOINT PIPE.

STEEL ENCASEMENT & CARRIER PIPE

BASED ON TEST PRESSURE OF 200 P.S.I.

| HORIZONTAL RESTRAINT (ALL AREAS GIVEN ARE IN SQUARE FEET) | | | | | | | | VERTICAL RESTRAINT (ALL VOLUMES GIVEN ARE IN CUBIC YARDS)** | | | | | | | | | | |
|--|----------------|-----------------------|------------------------------|------|------|------|------|--|------|------|-----------|----------------------|----------------|-----------------|---------|---------|-----|---|
| PIPE SIZE | DEGREE OF BEND | LBS. STATIC THRUST ** | ALLOWABLE SOIL BEARING (PSF) | | | | | | | | PIPE SIZE | RESTRAINING RODS NO. | DEGREE OF BEND | RESTR. ROD DIA. | 11 1/4" | 22 1/2" | 45" | |
| | | | 1000 | 2000 | 3000 | 4000 | 5000 | 6000 | 7000 | 8000 | | | | | | | | |
| 4" | 11 1/4" | 615 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 22 1/2" | 1,226 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 45° | 2,452 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 6" | TEE/PLUG | 3,143 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 11 1/4" | 1,385 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 22 1/2" | 2,768 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 8" | 45° | 3,399 | 5 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | TEE/PLUG | 7,068 | 3 | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 22 1/2" | 4,304 | 5 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 10" | 45° | 3,619 | 10 | 5 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | TEE/PLUG | 12,586 | 12 | 6 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | 11 1/4" | 1,681 | 8 | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 12" | 45° | 15,028 | 15 | 8 | 5 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | TEE/PLUG | 27,768 | 28 | 14 | 9 | 7 | 6 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 11 1/4" | 1,643 | 6 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 14" | 22 1/2" | 10,327 | 11 | 6 | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 45° | 12,544 | 22 | 11 | 7 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | TEE/PLUG | 38,387 | 40 | 20 | 13 | 10 | 8 | 7 | 6 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 16" | 22 1/2" | 28,774 | 28 | 14 | 9 | 7 | 6 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 11 1/4" | 1,544 | 8 | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 45° | 15,016 | 15 | 8 | 5 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 16" | TEE/PLUG | 54,426 | 56 | 27 | 18 | 14 | 11 | 9 | 8 | 7 | 6 | 5 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 11 1/4" | 3,854 | 10 | 5 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 22 1/2" | 15,512 | 20 | 10 | 7 | 5 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 16" | 45° | 38,471 | 38 | 17 | 11 | 8 | 6 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | 90° | 1,195 | 7 | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | TEE/PLUG | 50,285 | 50 | 25 | 15 | 10 | 8 | 7 | 6 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |

**INCLUDES 1.50 SAFETY FACTOR

GENERAL NOTES:
 1. CONCRETE SHALL BE CLASS "B".
 2. CONCRETE SHALL NOT CONTACT BOLTS ENDS OF MECHANICAL JOINT FITTINGS.
 3. CONSULT WITH ENGINEER FOR CONCRETE REQUIREMENTS ON MAINS LARGER THAN 16 INCHES.
 (FOR VERTICAL & HORIZONTAL BENDS)
 4. ALLOWABLE SOIL BEARING SHALL BE DETERMINED BY THE ENGINEER.

REVISIONS
 NO. DATE DESCRIPTION

SHEET 2 OF 2

THRUST RESTRAINT FOR WATER MAINS

U-5839\Design\Utilities\Engineering\UC-Proj\U5839_ut_dtl_UC3H_psh.dgn
 20-MAR-2023 15:20
 PROJECTS\2015\A2015803.00 Mulkey - U-5839\Design\Utilities\Engineering\UC-Proj\U5839_ut_dtl_UC3H_psh.dgn

PROJECT TYPICAL DETAILS

NOT TO SCALE



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WATER AND SEWER PLANS

| | |
|--|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| U-5839 | UC-3I |
| DESIGNED BY: JKC | |
| DRAWN BY: JKC | |
| CHECKED BY: CLS | |
| APPROVED BY: CDB | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | |
| UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151 | |
| 3/9/2023 UTILITY CONSTRUCTION PLANS ONLY | |

PAY ITEMS - (2 SIGNS)

- S 4025000000 901 CONTRACTOR FURNISHED, TYPE D SIGN 4 SF
- S 4072000000 903 SUPPORTS, 3-LB STEEL U-CHANNEL 18 LF
- S 4096000000 904 SIGN ERECTION, TYPE D 2 EA

| <p>SIGN NUMBER: SP23009 TYPE: D QUANTITY: <u>2</u> SIGN WIDTH: 1'-0" HEIGHT: 1'-6" TOTAL AREA: 1.5 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0" WIDTH: 0.38" RADII: 1.5" NO. Z BARS: LENGTH:</p> | <p>BACKG COLOR: White COPY COLOR: Black</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>SYMBOL</th> <th>X</th> <th>Y</th> <th>WID</th> <th>HT</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table> <p>MAT'L: 0.125" (3.2 mm) ALUMINUM</p> | SYMBOL | X | Y | WID | HT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | <p>DESIGN BY: EEW PROJECT ID: U-5839</p> | <p>CHECKED BY: LOCATION: Jan 18, 2023 DIV: 14</p> | <p style="font-size: small;">BORDER R=1.5" TH=0.38" Spacing Factor is 1 unless specified otherwise</p> |
|---|---|--------|-----|----|-----|----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|--|
| SYMBOL | X | Y | WID | HT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

LETTER POSITIONS

| Letter spacings are to start of next letter | | | | | | | | | | | | | | | | | | | | | | | Series/Size | |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------|--------|
| | | | | | | | | | | | | | | | | | | | | | | | Text Length | |
| | | P | I | P | E | L | I | N | E | | | | | | | | | | | | | | B 2000 | |
| | 1.1 | 1.5 | 0.7 | 1.5 | 1.4 | 1.3 | 0.7 | 1.6 | 1.1 | 1.1 | | | | | | | | | | | | | 9.8 | |
| | | 1 | 6 | | S | O | U | T | H | | M | A | I | N | | S | T | R | E | E | T | | B 2000 | |
| | | 3.1 | 0.2 | 0.2 | 0.5 | 0.3 | 0.3 | 0.3 | 0.2 | 0.5 | 0.3 | 0.3 | 0.2 | 0.2 | 0.5 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 3.1 | 5.8 | |
| | | T | O | W | N | | O | F | | W | A | Y | N | E | S | V | I | L | L | E | | | B 2000 | |
| | | 3.2 | 0.2 | 0.3 | 0.4 | 0.2 | 0.5 | 0.3 | 0.2 | 0.5 | 0.4 | 0.3 | 0.3 | 0.2 | 0.3 | 0.3 | 0.2 | 0.3 | 0.2 | 0.3 | 0.2 | 3.2 | 5.7 | |
| | | 1 | 2 | " | | D | I | | | W | A | T | E | R | | M | A | I | N | (| 1 | 5 | 0 | B 2000 |
| | | 2.1 | 0.2 | 0.3 | 0.2 | 0.5 | 0.3 | 0.1 | 0.5 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.5 | 0.3 | 0.3 | 0.2 | 0.2 | 0.5 | 0.2 | 0.2 | 0.3 | 7.7 |
| | | W | A | Y | N | E | S | V | I | L | L | E | , | | N | C | | 2 | 8 | 7 | 8 | 6 | | B 2000 |
| | | 3 | 0.4 | 0.3 | 0.3 | 0.3 | 0.2 | 0.3 | 0.3 | 0.2 | 0.3 | 0.3 | 0.3 | 0.1 | 0.5 | 0.3 | 0.2 | 0.5 | 0.3 | 0.3 | 0.3 | 0.2 | 3 | 5.9 |
| | | 4 | ' | - | O | " | | B | E | L | O | W | | G | R | A | D | E | | | | | | B 2000 |
| | | 3.5 | 0.3 | 0.1 | 0.2 | 0.3 | 0.2 | 0.5 | 0.3 | 0.3 | 0.2 | 0.3 | 0.3 | 0.5 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 3.5 | | | 5 | |
| | | F | O | R | | I | N | F | O | R | M | A | T | I | O | N | | O | R | | I | N | | B 2000 |
| | | 2.9 | 0.2 | 0.3 | 0.2 | 0.5 | 0.2 | 0.3 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.3 | 0.2 | 0.5 | 0.3 | 0.2 | 0.5 | 0.2 | 0.2 | 2.9 | 6.2 |
| | | C | A | S | E | | O | F | | R | U | P | T | U | R | E | | C | A | L | L | | B 2000 | |
| | | 3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.5 | 0.3 | 0.2 | 0.5 | 0.3 | 0.3 | 0.2 | 0.3 | 0.3 | 0.2 | 0.5 | 0.3 | 0.3 | 0.3 | 0.2 | 3 | 6.1 | |
| | | W | E | E | K | D | A | Y | | (| 8 | 2 | 8 |) | | 4 | 5 | 6 | - | 3 | 7 | 0 | B 2000 | |
| | | 2.8 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.5 | 0.2 | 0.3 | 0.2 | 0.3 | 0.1 | 0.5 | 0.3 | 0.3 | 0.2 | 0.3 | 0.3 | 0.2 | 2.8 | 6.3 |
| | | W | E | E | K | E | N | D | | (| 8 | 2 | 8 |) | | 4 | 5 | 6 | - | 5 | 3 | 6 | B 2000 | |
| | | 2.9 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.5 | 0.2 | 0.3 | 0.3 | 0.3 | 0.1 | 0.5 | 0.3 | 0.3 | 0.3 | 0.2 | 0.3 | 0.3 | 0.2 | 2.9 | 6.2 |
| | | E | V | E | N | I | N | G | | (| 8 | 2 | 8 |) | | 4 | 5 | 6 | - | 5 | 3 | 6 | B 2000 | |
| | | 3 | 0.2 | 0.3 | 0.3 | 0.3 | 0.2 | 0.3 | 0.2 | 0.5 | 0.2 | 0.3 | 0.3 | 0.3 | 0.1 | 0.5 | 0.3 | 0.3 | 0.3 | 0.2 | 0.3 | 0.3 | 3 | 6 |

Misc Guidsign 2022

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CONDUIT DETAILS

NOT TO SCALE



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CONDUIT PLANS

| | |
|---|---------------------------|
| PROJECT REFERENCE NO. U-5839 | SHEET NO. UC-3J |
| DESIGNED BY: JKC | |
| DRAWN BY: JKC | |
| CHECKED BY: CLS | |
| APPROVED BY: CDB | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 3/9/2023 UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151 | |
| UTILITY CONSTRUCTION PLANS ONLY | |

NOTES TO THE CONTRACTOR:

UTILITY CONSTRUCTION

1. THE CONTRACTOR SHALL ONLY SUPPLY AND INSTALL THE PROPOSED PVC CONDUIT, FITTINGS AND PULL STRINGS AS SHOWN IN THE PLANS. THE CABLES, PEDESTALS, PULL BOXES, HANDHOLES, TRANSFORMERS, SWITCHGEARS, LIGHT POLES AND JUNCTION BOXES WILL BE INSTALLED BY OTHERS.
2. THE CONTRACTOR WILL BE RESPONSIBLE TO DETERMINE THE DEPTH OF THE CONDUITS TO AVOID CONFLICTS WITH THE PROPOSED GAS, WATER, SEWER, DRAINAGE AND ROADWAY UNDERCUT.
3. A ELECTRICAL STRING SHALL BE INSTALLED IN EACH CONDUIT. THE ELECTRICAL STRING SHALL BE CONTINUOUS FOR THE LENGTH OF EACH CONDUIT. EXTEND THE ELECTRICAL STRING 3 FEET BEYOND THE ENDS OF EACH CONDUIT. THE ELECTRICAL STRING WILL BE USED TO PULL IN POLYESTER WOVEN MULE TAPE.

ITEMS TO BE INSTALLED BY OTHERS

COMMUNICATION

- SPECTRUM HAND HOLE BOX - (SPEC HH)
- AT&T HAND HOLE BOX - (ATT HH)
- AT&T PEDESTAL - (ATT PED)
- SPECTRUM PEDESTAL - (SPEC PED)
- AT&T PULL BOX - (ATT PB)
- SPECTRUM PULL BOX - (SPEC PB)
- SIGNAL PULL BOX - (SIGNAL PB)

POWER

- TOWN OF WAYNESVILLE POWER TRANSFORMER - (TOW PT)
- TOWN OF WAYNESVILLE PRIMARY SWITCHGEAR - (TOW PSG)
- TOWN OF WAYNESVILLE LIGHT POLE - (LT POLE)
- TOWN OF WAYNESVILLE POWER JUNCTION BOX - (TOW PJB)

CONDUIT DETAILS

THE CONTRACTOR SHALL DEVELOP A METHOD TO MARK THE OWNER OF EACH CONDUIT. THIS CAN BE DONE WITH SPRAY PAINT AND PERMANENT MAKERS (UV LIGHT AND WEATHER RESISTANT).

WHERE THE CONDUITS ARE TERMINATED AND PLUGGED ABOVE GRADE, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND UTILITY COMPANIES THE NUMBER OF JOINTS/FITTINGS PRIOR TO THE PLUG NOT GLUED FOR FUTURE MUNIPULATION.

RIGID PVC CONDUIT, SCH. 40, (HEAVY WALL)

- 2" PVC WALL THICKNESS = 0.154"
- 4" PVC WALL THICKNESS = 0.237"
- 6" PVC WALL THICKNESS = 0.280"

CONDUIT COLORS

| | |
|----------------------------------|-------|
| TOWN OF WAYNESVILLE (POWER) - | GRAY |
| AT&T (COMMUNICATIONS) - | WHITE |
| SPECTRUM (COMMUNICATIONS) - | WHITE |
| NCDOT SIGNALS (COMMUNICATIONS) - | WHITE |

CONDUIT DETAILS

NOT TO SCALE

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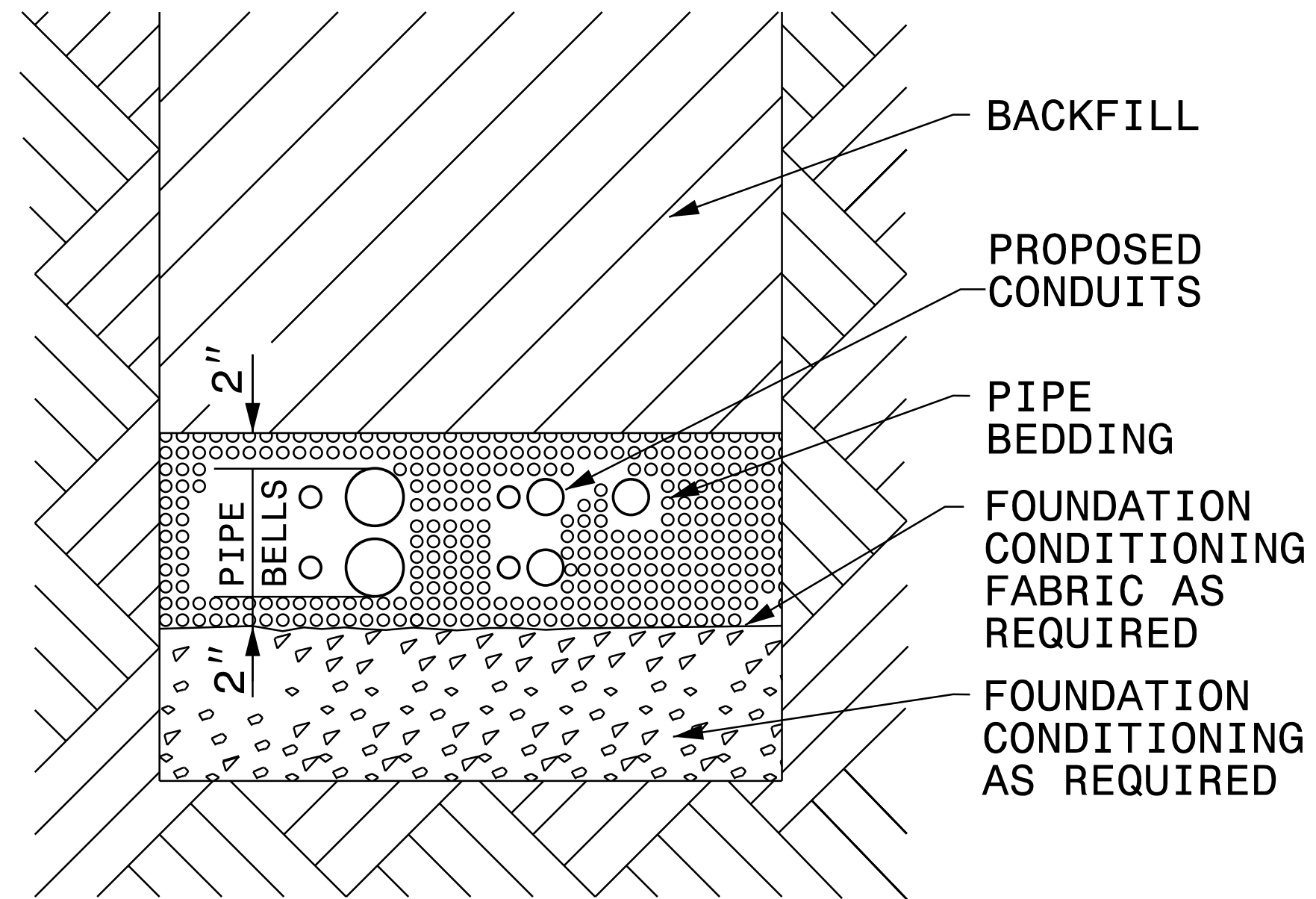
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

CONDUIT PLANS

| | |
|---|---------------------------|
| PROJECT REFERENCE NO. U-5839 | SHEET NO. UC-3K |
| DESIGNED BY: JKC | |
| DRAWN BY: JKC | |
| 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

CONDUIT 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.

C:\MAR-2023\152\PROJECTS\2015\A2015803.00 Mulkey - U-5839\Design\Utilities\Engineering\UC\Proj\U5839_ut_dtl_UC3K_psh.dgn
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LIST OF EXISTING WATER LINE LENGTHS TO BE ABANDONED THROUGHOUT THE PROJECT LIMITS

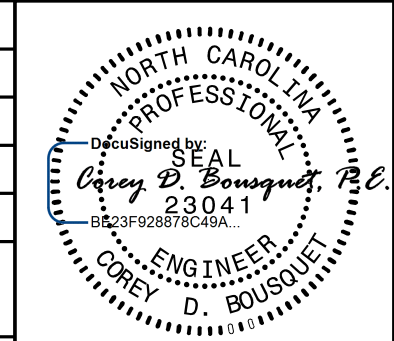
| | |
|--------------------------|-----------|
| ABANDON 6" UTILITY PIPE | - 2150 LF |
| ABANDON 8" UTILITY PIPE | - 50 LF |
| ABANDON 10" UTILITY PIPE | - 3850 LF |
| ABANDON 12" UTILITY PIPE | - 2500 LF |

WATER AND SEWER PLANS

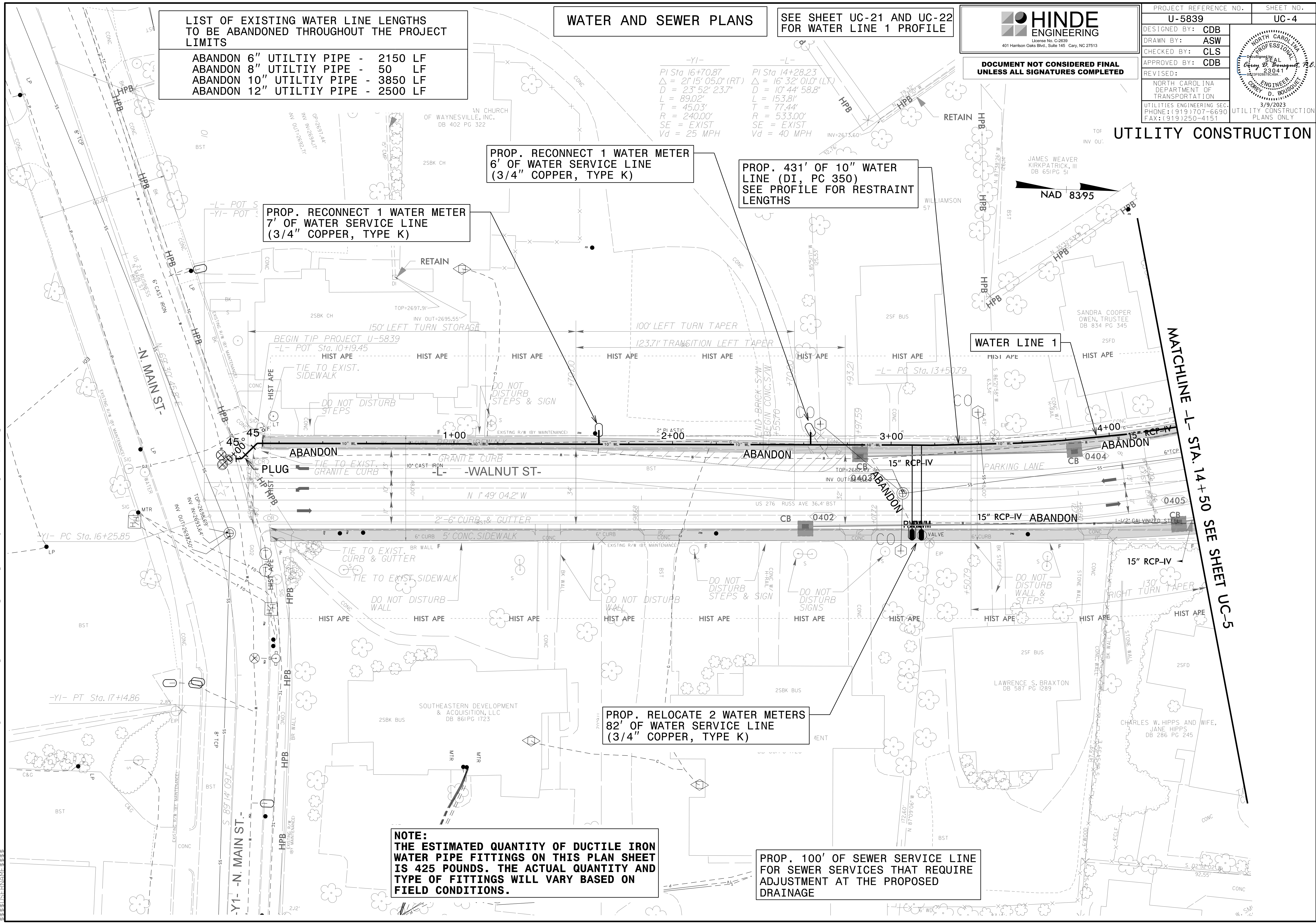
SEE SHEET UC-21 AND UC-22 FOR WATER LINE 1 PROFILE

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| | | | |
|--|--------|--|------|
| PROJECT REFERENCE NO. | U-5839 | SHEET NO. | UC-4 |
| DESIGNED BY: | CDB |  | |
| DRAWN BY: | ASW | | |
| CHECKED BY: | CLS | | |
| APPROVED BY: | CDB | | |
| REVISED: | | | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | | 3/9/2023 | |
| UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151 | | UTILITY CONSTRUCTION PLANS ONLY | |

UTILITY CONSTRUCTION



PROP. RECONNECT 1 WATER METER
6' OF WATER SERVICE LINE
(3/4" COPPER, TYPE K)

PROP. 431' OF 10" WATER LINE (DI, PC 350)
SEE PROFILE FOR RESTRAINT LENGTHS

PROP. RECONNECT 1 WATER METER
7' OF WATER SERVICE LINE
(3/4" COPPER, TYPE K)

PROP. RELOCATE 2 WATER METERS
82' OF WATER SERVICE LINE
(3/4" COPPER, TYPE K)

PROP. 100' OF SEWER SERVICE LINE FOR SEWER SERVICES THAT REQUIRE ADJUSTMENT AT THE PROPOSED DRAINAGE

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 425 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

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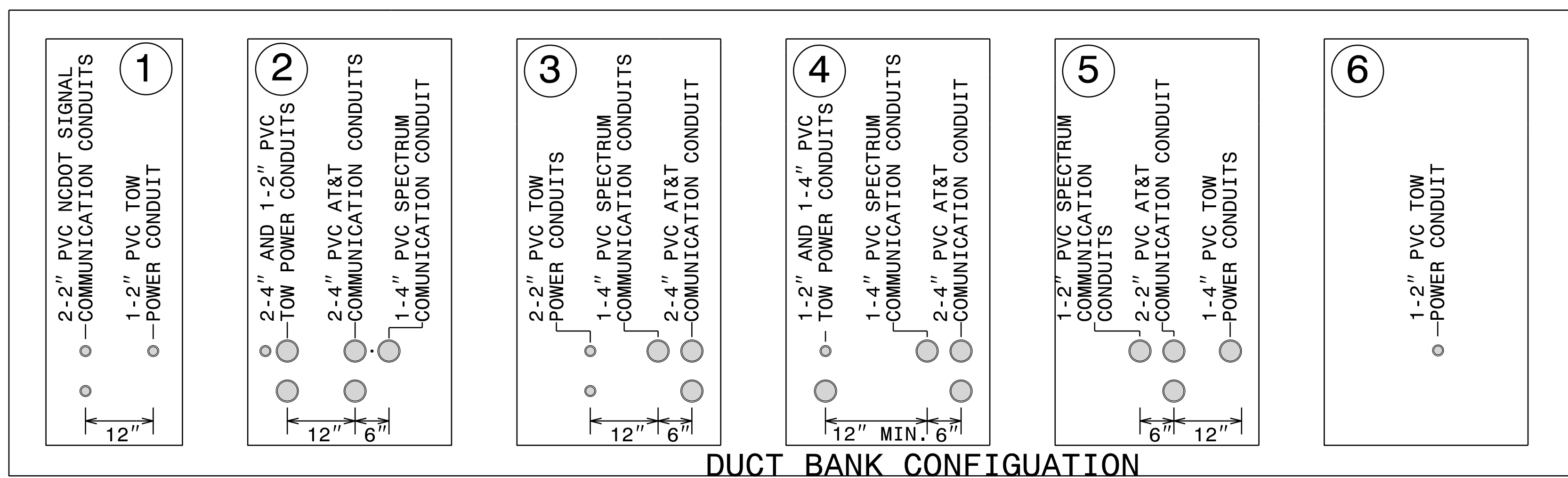
MATCHLINE -L- STA. 14+50 SEE SHEET UC-5

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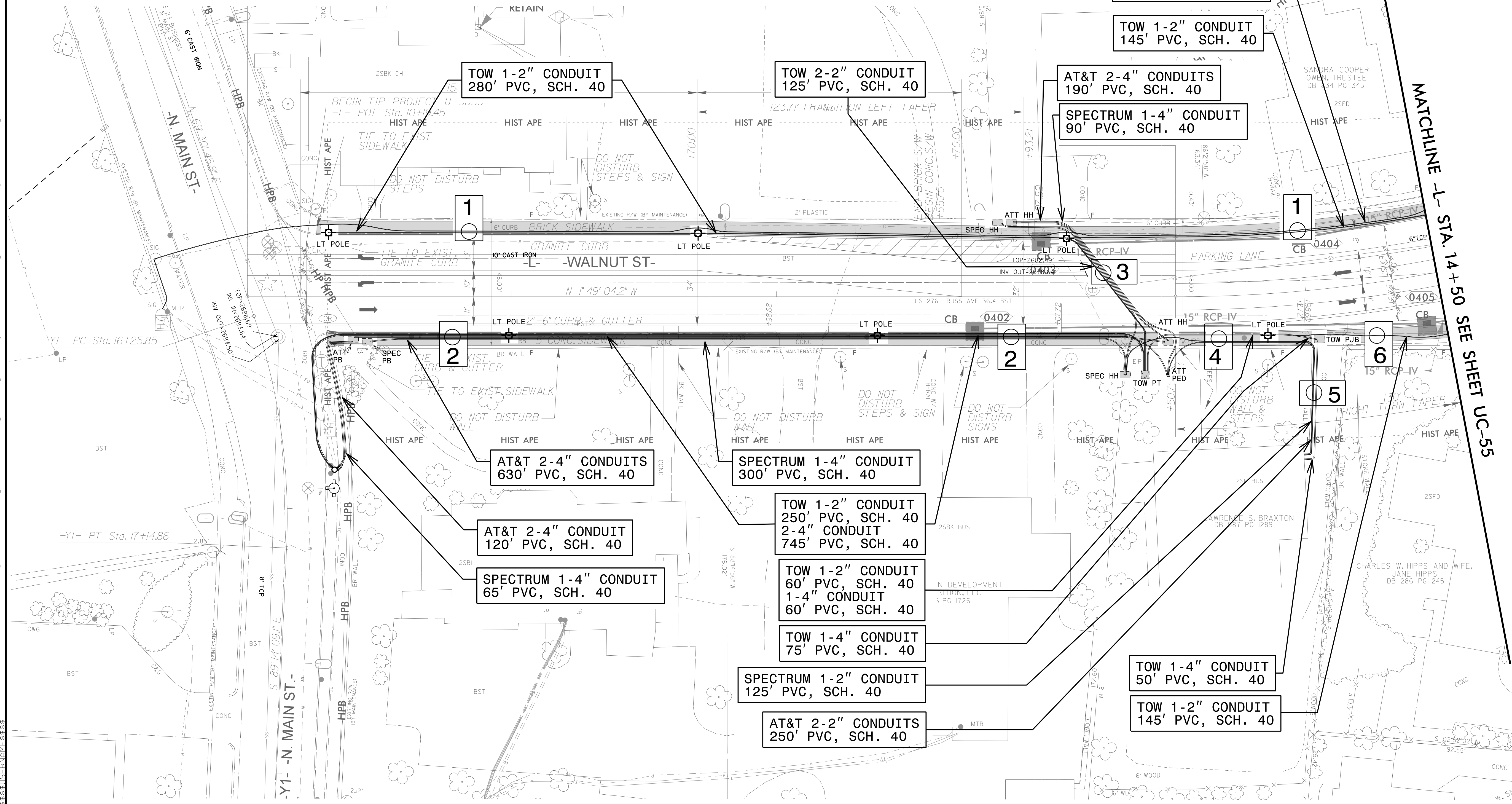
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 UNLESS ALL SIGNATURES COMPLETED**

CONDUIT PLANS

| | |
|---|---------------------------|
| PROJECT REFERENCE NO. U-5839 | SHEET NO. UC-4A |
| DESIGNED BY: CDB | |
| DRAWN BY: ASW | |
| CHECKED BY: CLS | |
| APPROVED BY: CDB | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151 | |



DUCT BANK CONFIGURATION



UTILITY CONSTRUCTION

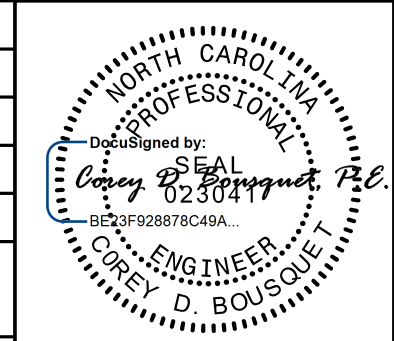
MATCHLINE - STA. 14+50 SEE SHEET UC-55

03-MAR-2023 15:22 PROJECTS\2015\A2015803\00 Mulkey - U-5839\Design\Utilities\Engineering\UC-Proj\Duct-Bank-Design\U5839_Ut_rdy4_UC4A_psh.dgn

WATER AND SEWER PLANS

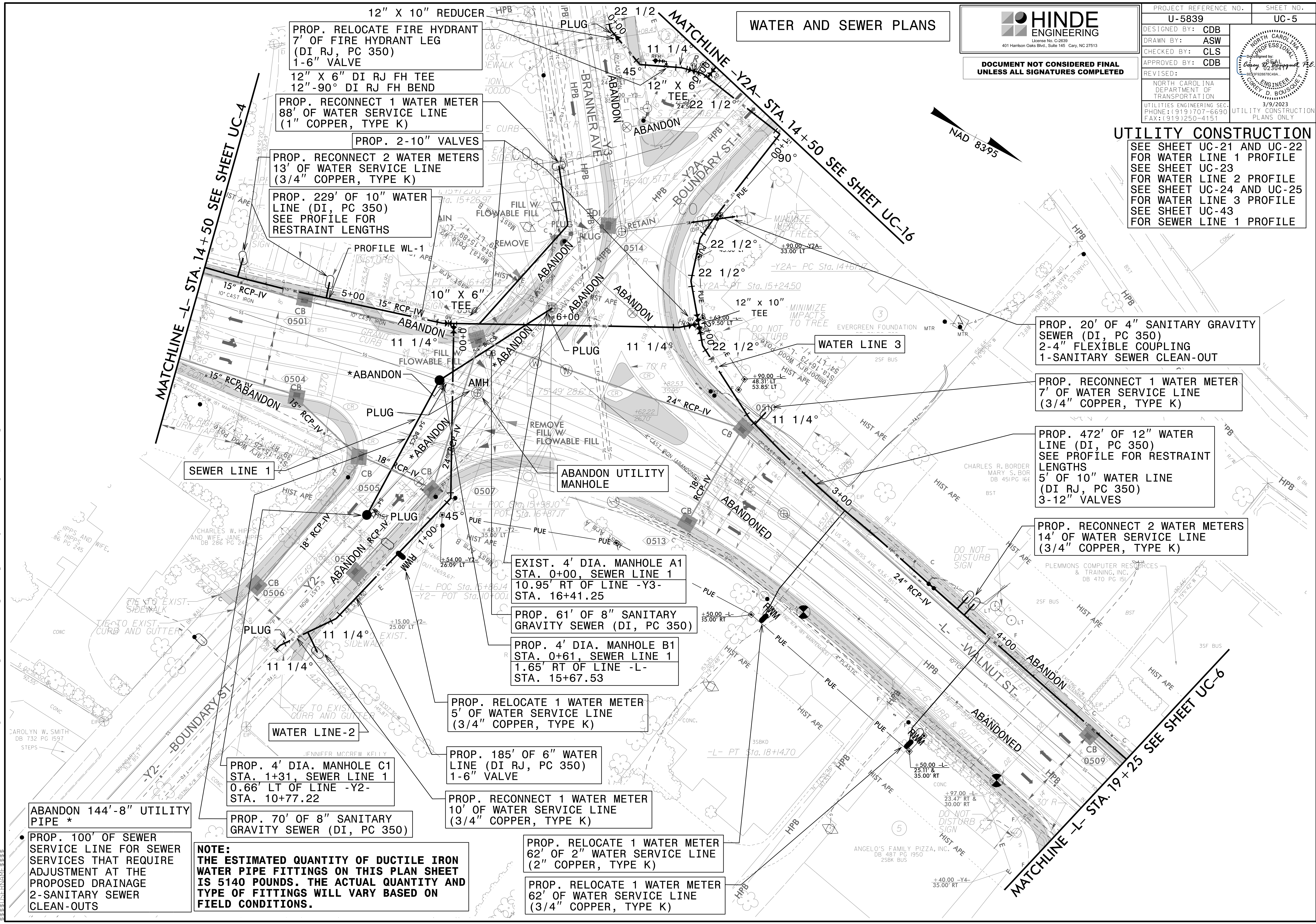
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| PROJECT REFERENCE NO. | SHEET NO. |
|--|--|
| U-5839 | UC-5 |
| DESIGNED BY: CDB |  |
| DRAWN BY: ASW | |
| CHECKED BY: CLS | |
| APPROVED BY: CDB | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | 3/9/2023 |
| UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151 | UTILITY CONSTRUCTION PLANS ONLY |

UTILITY CONSTRUCTION

- SEE SHEET UC-21 AND UC-22 FOR WATER LINE 1 PROFILE
- SEE SHEET UC-23 FOR WATER LINE 2 PROFILE
- SEE SHEET UC-24 AND UC-25 FOR WATER LINE 3 PROFILE
- SEE SHEET UC-43 FOR SEWER LINE 1 PROFILE



12" X 10" REDUCER
 PROP. RELOCATE FIRE HYDRANT
 7' OF FIRE HYDRANT LEG
 (DI RJ, PC 350)
 1-6" VALVE

12" X 6" DI RJ FH TEE
 12"-90° DI RJ FH BEND
 PROP. RECONNECT 1 WATER METER
 88' OF WATER SERVICE LINE
 (1" COPPER, TYPE K)

PROP. 2-10" VALVES

PROP. RECONNECT 2 WATER METERS
 13' OF WATER SERVICE LINE
 (3/4" COPPER, TYPE K)

PROP. 229' OF 10" WATER
 LINE (DI, PC 350)
 SEE PROFILE FOR
 RESTRAINT LENGTHS

PROP. 20' OF 4" SANITARY GRAVITY
 SEWER (DI, PC 350)
 2-4" FLEXIBLE COUPLING
 1-SANITARY SEWER CLEAN-OUT

PROP. RECONNECT 1 WATER METER
 7' OF WATER SERVICE LINE
 (3/4" COPPER, TYPE K)

PROP. 472' OF 12" WATER
 LINE (DI, PC 350)
 SEE PROFILE FOR RESTRAINT
 LENGTHS
 5' OF 10" WATER LINE
 (DI RJ, PC 350)
 3-12" VALVES

PROP. RECONNECT 2 WATER METERS
 14' OF WATER SERVICE LINE
 (3/4" COPPER, TYPE K)

EXIST. 4' DIA. MANHOLE A1
 STA. 0+00, SEWER LINE 1
 10.95' RT OF LINE -Y3-
 STA. 16+41.25

PROP. 61' OF 8" SANITARY
 GRAVITY SEWER (DI, PC 350)

PROP. 4' DIA. MANHOLE B1
 STA. 0+61, SEWER LINE 1
 1.65' RT OF LINE -L-
 STA. 15+67.53

PROP. RELOCATE 1 WATER METER
 5' OF WATER SERVICE LINE
 (3/4" COPPER, TYPE K)

PROP. 185' OF 6" WATER
 LINE (DI RJ, PC 350)
 1-6" VALVE

PROP. RECONNECT 1 WATER METER
 10' OF WATER SERVICE LINE
 (3/4" COPPER, TYPE K)

PROP. RELOCATE 1 WATER METER
 62' OF 2" WATER SERVICE LINE
 (2" COPPER, TYPE K)

PROP. RELOCATE 1 WATER METER
 62' OF WATER SERVICE LINE
 (3/4" COPPER, TYPE K)

NOTE:
 THE ESTIMATED QUANTITY OF DUCTILE IRON
 WATER PIPE FITTINGS ON THIS PLAN SHEET
 IS 5140 POUNDS. THE ACTUAL QUANTITY AND
 TYPE OF FITTINGS WILL VARY BASED ON
 FIELD CONDITIONS.

ABANDON 144'-8" UTILITY
 PIPE *

PROP. 100' OF SEWER
 SERVICE LINE FOR SEWER
 SERVICES THAT REQUIRE
 ADJUSTMENT AT THE
 PROPOSED DRAINAGE
 2-SANITARY SEWER
 CLEAN-OUTS

20-MAR-2023 15:22:02 PROJECTS\2015\A2015803.00 Mulkey - U-5839\Utilities\Engineering\UC-Proj\U5839_Ut_rdy5_UC5_psh.dgn

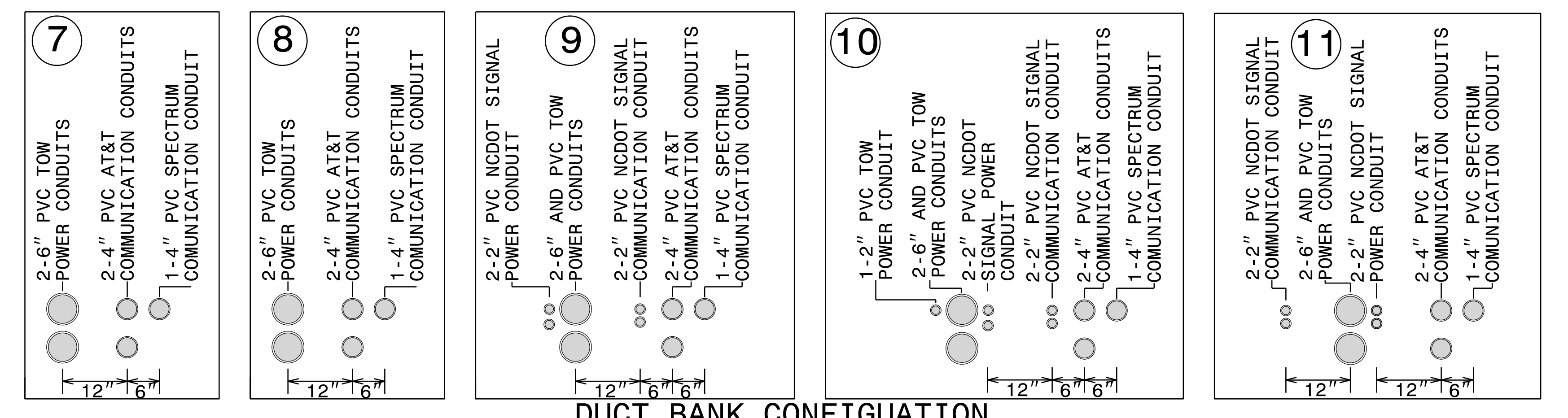
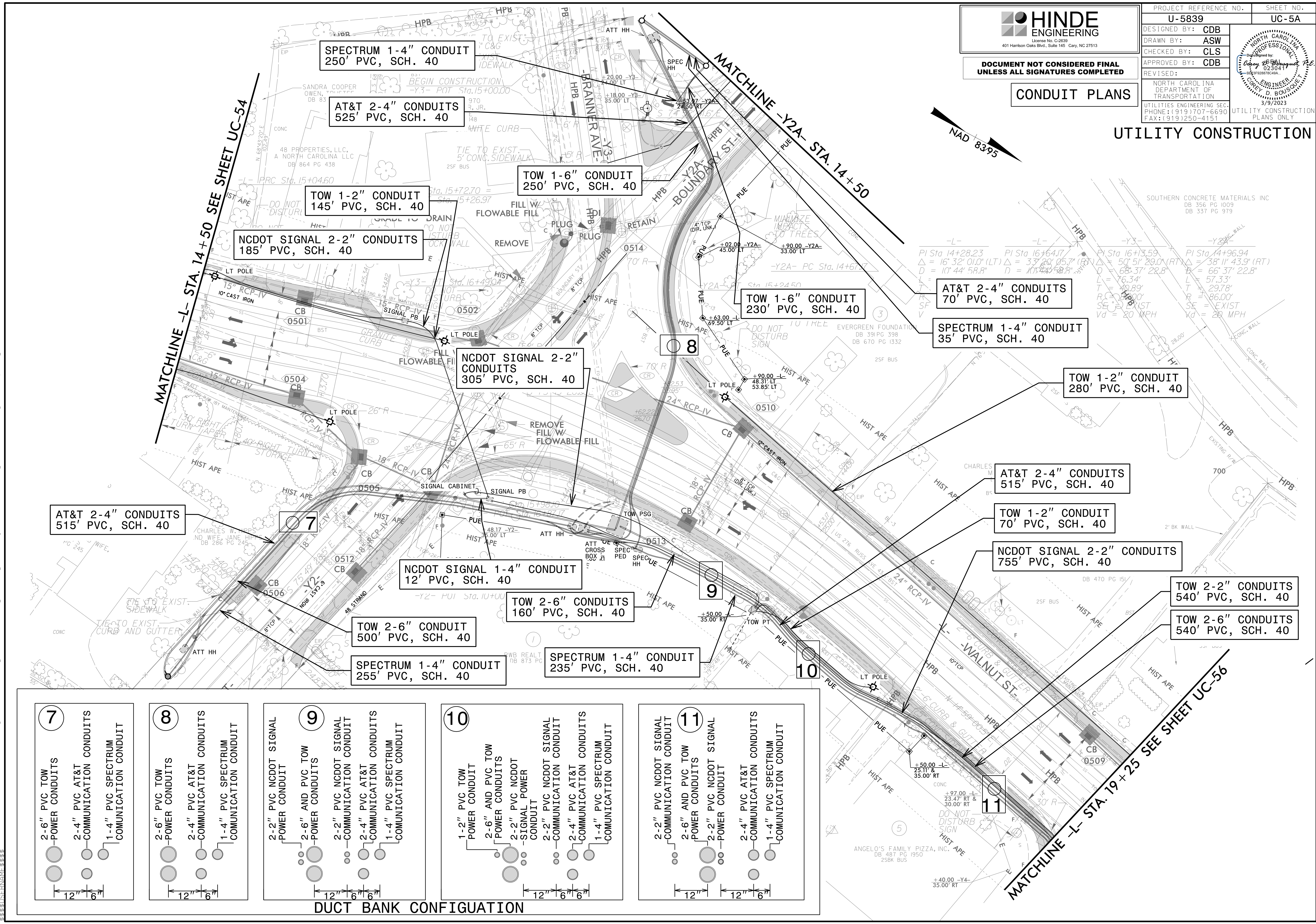
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| | |
|--|---------------------------|
| PROJECT REFERENCE NO. U-5839 | SHEET NO. UC-5A |
| DESIGNED BY: CDB | |
| DRAWN BY: ASW | |
| CHECKED BY: CLS | |
| APPROVED BY: CDB | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SECTION PHONE: (919) 707-6690 FAX: (919) 250-4151 | |

CONDUIT PLANS

UTILITY CONSTRUCTION

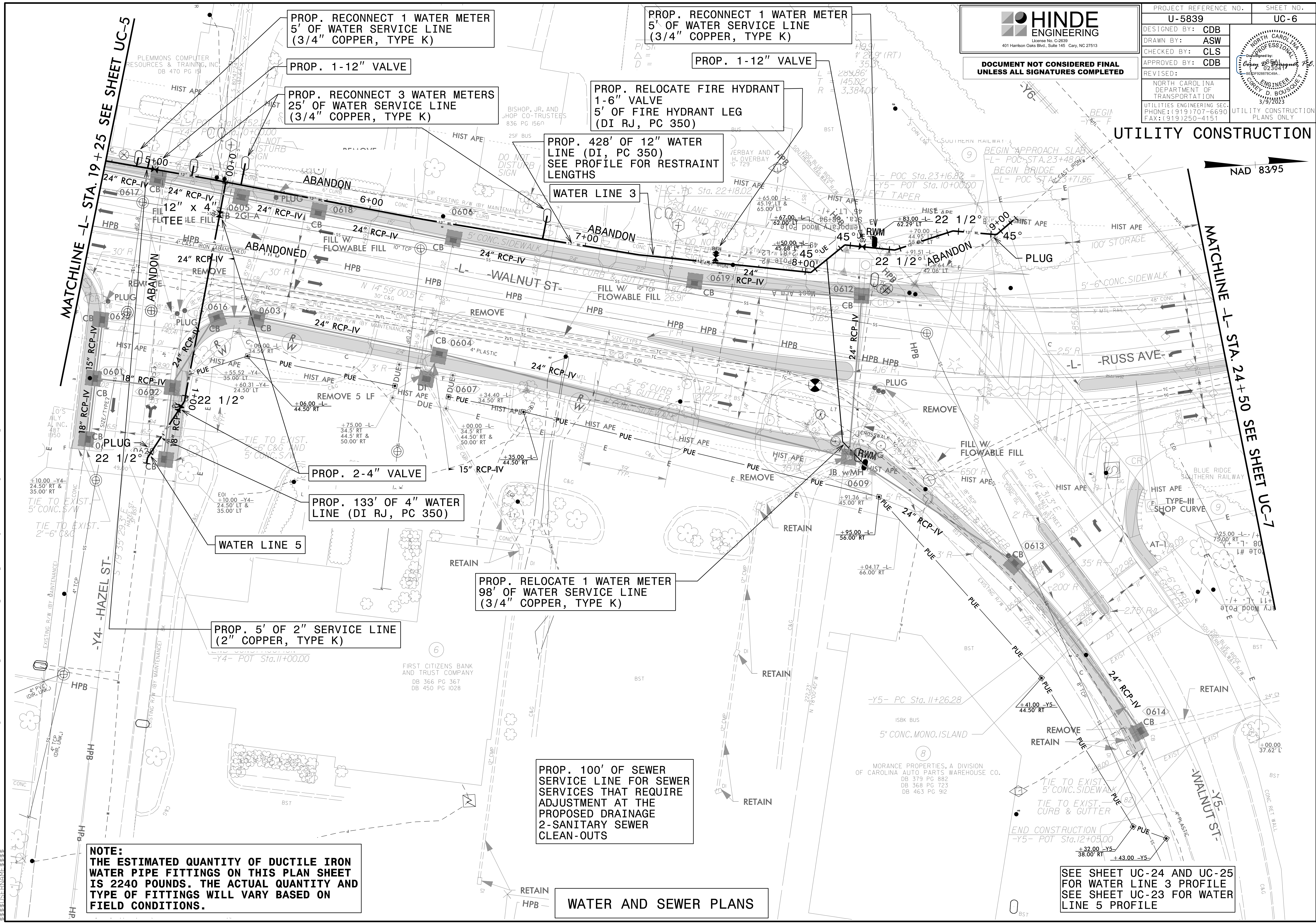


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| | |
|--|---|
| PROJECT REFERENCE NO. U-5839 | SHEET NO. UC-6 |
| DESIGNED BY: CDB | |
| DRAWN BY: ASW | |
| CHECKED BY: CLS | |
| APPROVED BY: CDB | |
| REVISED: | NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151 |
| UTILITY CONSTRUCTION PLANS ONLY | |



PROP. RECONNECT 1 WATER METER
 5' OF WATER SERVICE LINE
 (3/4" COPPER, TYPE K)

PROP. RECONNECT 1 WATER METER
 5' OF WATER SERVICE LINE
 (3/4" COPPER, TYPE K)

PROP. 1-12" VALVE

PROP. 1-12" VALVE

PROP. RECONNECT 3 WATER METERS
 25' OF WATER SERVICE LINE
 (3/4" COPPER, TYPE K)

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

PROP. 428' OF 12" WATER
 LINE (DI, PC 350)
 SEE PROFILE FOR RESTRAINT
 LENGTHS

PROP. 2-4" VALVE

PROP. 133' OF 4" WATER
 LINE (DI RJ, PC 350)

PROP. RELOCATE 1 WATER METER
 98' OF WATER SERVICE LINE
 (3/4" COPPER, TYPE K)

PROP. 5' OF 2" SERVICE LINE
 (2" COPPER, TYPE K)

PROP. 100' OF SEWER
 SERVICE LINE FOR SEWER
 SERVICES THAT REQUIRE
 ADJUSTMENT AT THE
 PROPOSED DRAINAGE
 2-SANITARY SEWER
 CLEAN-OUTS

NOTE:
 THE ESTIMATED QUANTITY OF DUCTILE IRON
 WATER PIPE FITTINGS ON THIS PLAN SHEET
 IS 2240 POUNDS. THE ACTUAL QUANTITY AND
 TYPE OF FITTINGS WILL VARY BASED ON
 FIELD CONDITIONS.

WATER AND SEWER PLANS

SEE SHEET UC-24 AND UC-25
 FOR WATER LINE 3 PROFILE
 SEE SHEET UC-23 FOR WATER
 LINE 5 PROFILE

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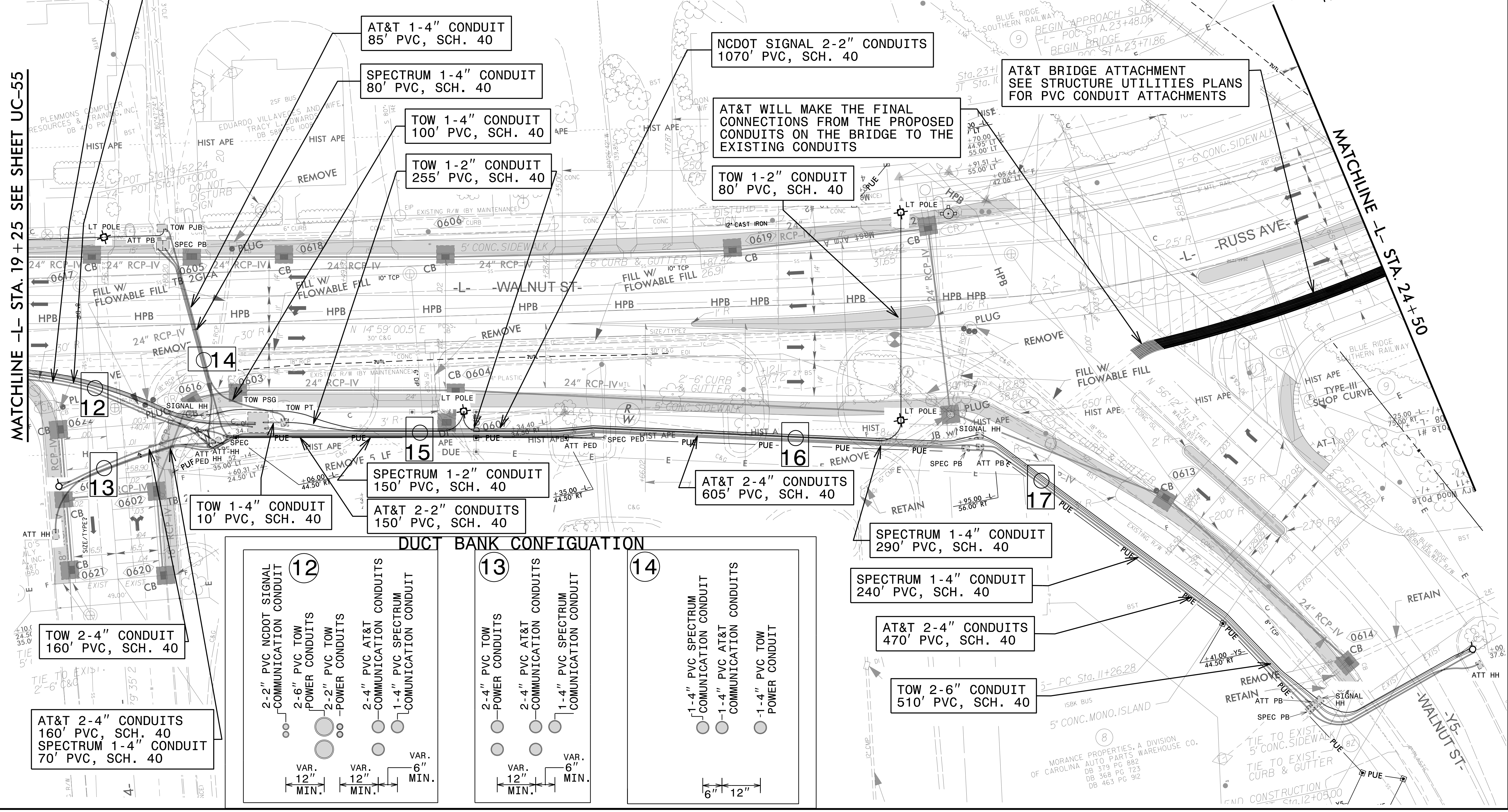
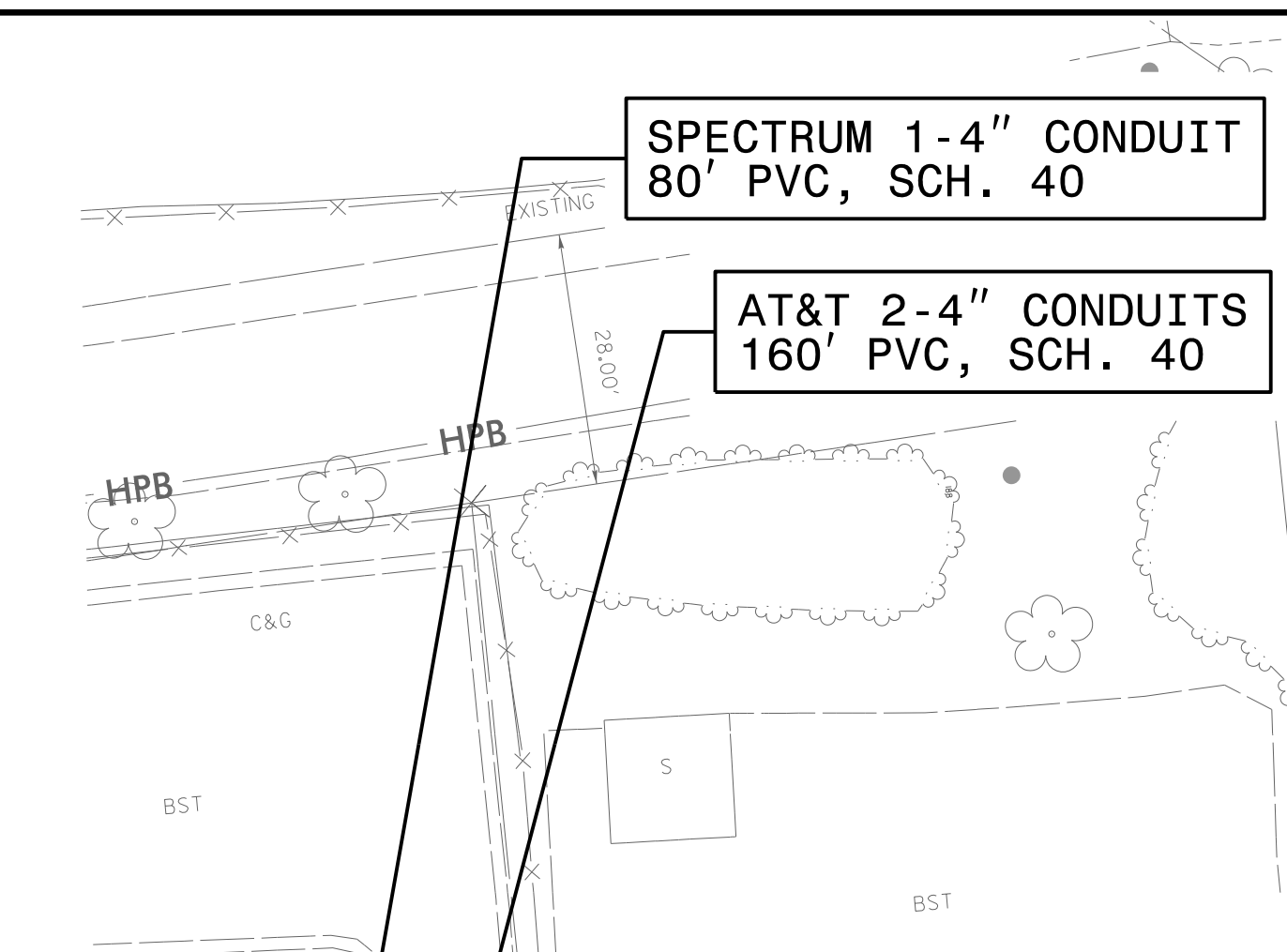
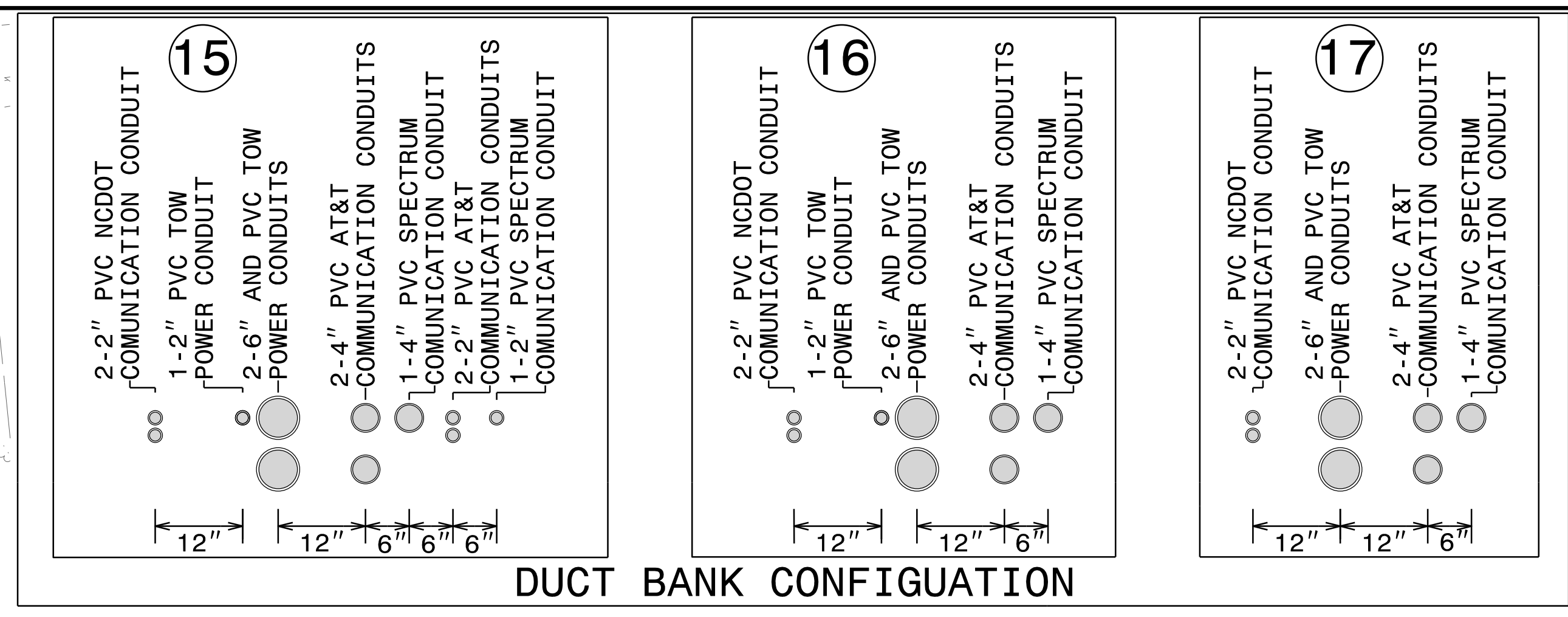
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 401 Harrison Oaks Blvd., Suite 145 Cary, NC 27513

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| | |
|---|---------------------------|
| PROJECT REFERENCE NO. U-5839 | SHEET NO. UC-6A |
| DESIGNED BY: CDB | |
| DRAWN BY: ASW | |
| CHECKED BY: CLS | |
| APPROVED BY: CDB | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151 | |
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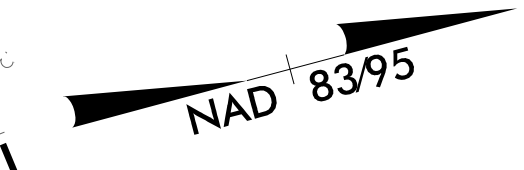
CONDUIT PLANS

UTILITY CONSTRUCTION



MATCHLINE -L- STA. 19 + 25 SEE SHEET UC-55

MATCHLINE -L- STA. 24 + 50



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REMOVE EXIST. 12" WATER LINE INSIDE RR R/W THAT WILL BE ABANDONED AFTER THE PROPOSED WATER LINE IS INSTALLED

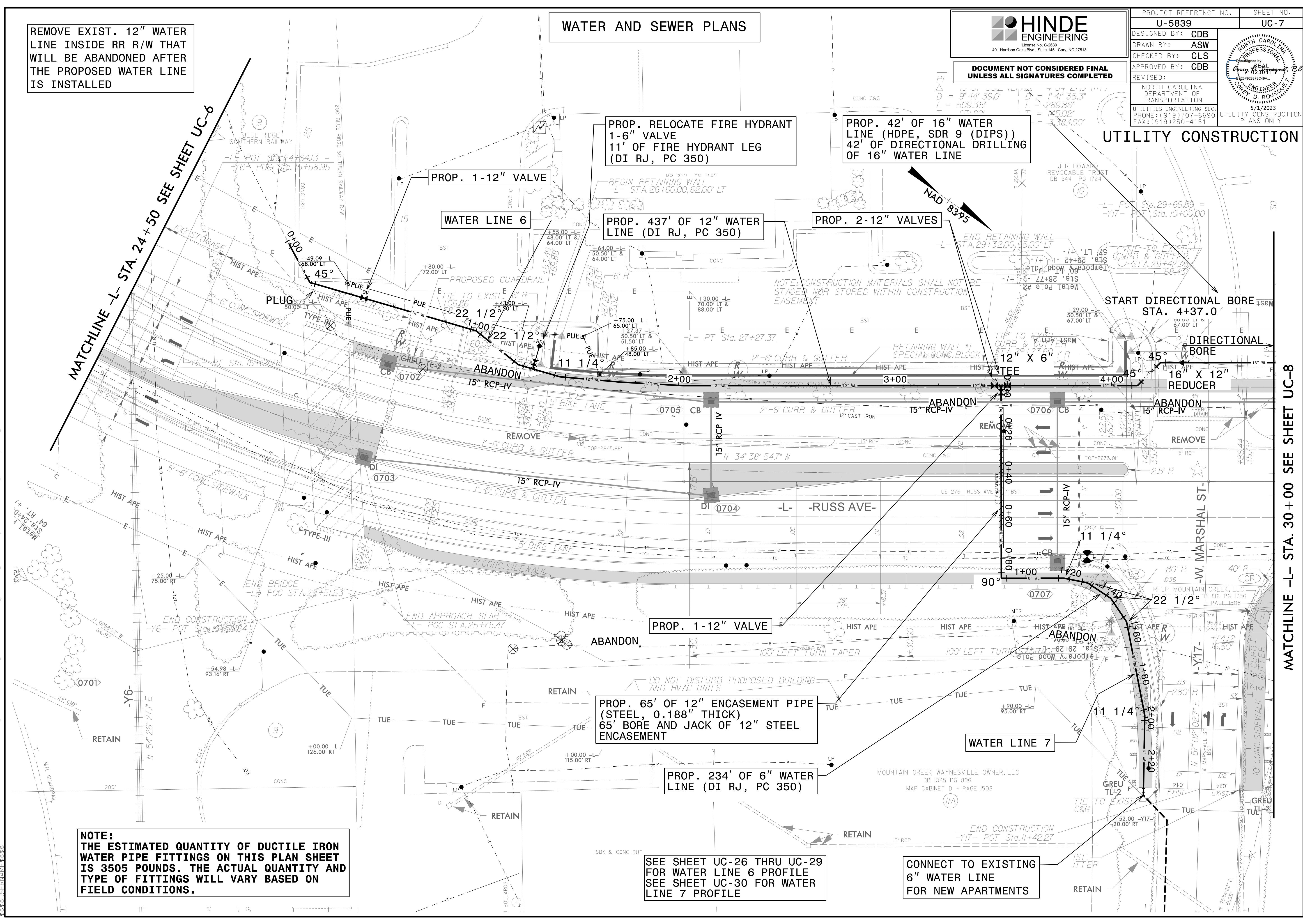
WATER AND SEWER PLANS

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| | | | |
|----------------------------|-----------------------|---|------|
| PROJECT REFERENCE NO. | U-5839 | SHEET NO. | UC-7 |
| DESIGNED BY: | CDB | | |
| DRAWN BY: | ASW | | |
| CHECKED BY: | CLS | | |
| APPROVED BY: | CDB | | |
| REVISED: | | NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | |
| UTILITIES ENGINEERING SEC. | PHONE: (919) 707-6690 | UTILITY CONSTRUCTION PLANS ONLY | |
| | FAX: (919) 250-4151 | | |

UTILITY CONSTRUCTION



MATCHLINE -L- STA. 24+50 SEE SHEET UC-6

MATCHLINE -L- STA. 30+00 SEE SHEET UC-8

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 3505 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

PROP. 65' OF 12" ENCASEMENT PIPE (STEEL, 0.188" THICK)
65' BORE AND JACK OF 12" STEEL ENCASEMENT

PROP. 234' OF 6" WATER LINE (DI RJ, PC 350)

SEE SHEET UC-26 THRU UC-29 FOR WATER LINE 6 PROFILE
SEE SHEET UC-30 FOR WATER LINE 7 PROFILE

CONNECT TO EXISTING 6" WATER LINE FOR NEW APARTMENTS

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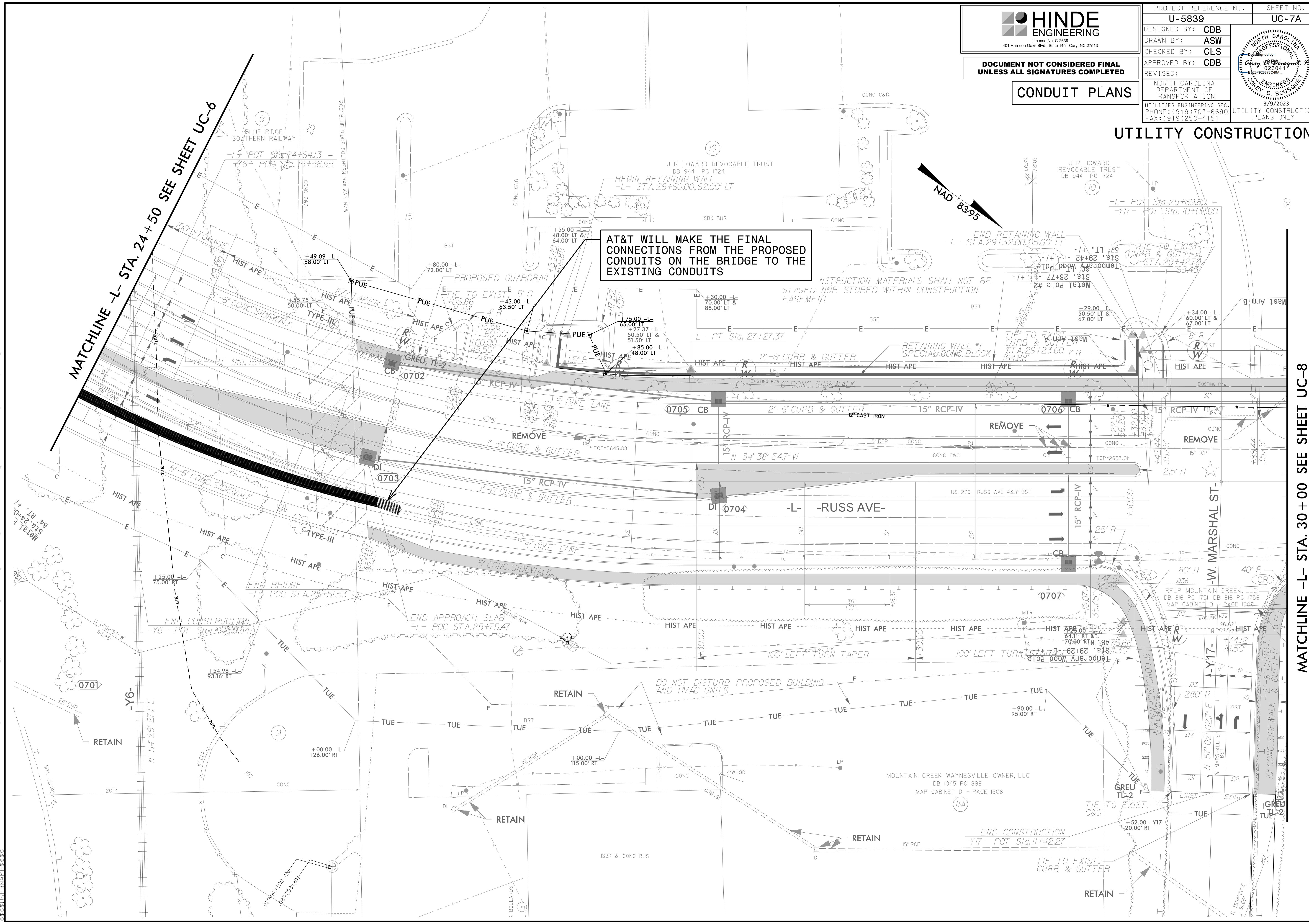
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|--|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| U-5839 | UC-7A |
| DESIGNED BY: CDB | |
| DRAWN BY: ASW | |
| CHECKED BY: CLS | |
| APPROVED BY: CDB | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151 UTILITY CONSTRUCTION PLANS ONLY | |

CONDUIT PLANS

UTILITY CONSTRUCTION

MATCHLINE -L- STA. 24+50 SEE SHEET UC-6

MATCHLINE -L- STA. 30+00 SEE SHEET UC-8



AT&T WILL MAKE THE FINAL CONNECTIONS FROM THE PROPOSED CONDUITS ON THE BRIDGE TO THE EXISTING CONDUITS

NAD 8395

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NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 2390 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

SEE SHEET UC-26 THRU UC-29 FOR WATER LINE 6 PROFILE
SEE SHEET UC-30 FOR WATER LINE 8 PROFILE
SEE SHEET UC-31 FOR WATER LINE 9 PROFILE
SEE SHEET UC-44 FOR SEWER LINE 2 PROFILE
SEE SHEET UC-45 FOR SEWER LINE 3 & 4 PROFILES

WATER AND SEWER PLANS

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401 Harrison Oaks Blvd., Suite 145 Cary, NC 27513

| | | | |
|--|--------|---------------------------------|------|
| PROJECT REFERENCE NO. | U-5839 | SHEET NO. | UC-8 |
| DESIGNED BY: | CDB | | |
| DRAWN BY: | ASW | | |
| CHECKED BY: | CLS | | |
| APPROVED BY: | CDB | | |
| REVISED: | | | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | | UTILITY CONSTRUCTION PLANS ONLY | |
| UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151 | | | |

PROP. 5' DIA. MANHOLE E3
STA. 2+70, SEWER LINE 3
83.05' LT OF LINE -L-
STA. 31+92.39

PROP. 5' DIA. MANHOLE D2
STA. 2+80, SEWER LINE 2
74.18' LT OF LINE -L-
STA. 31+82.70

PROP. 88' OF 30" SANITARY GRAVITY SEWER (DI, PC 250)

PROP. 5' DIA. MANHOLE C2
STA. 1+92, SEWER LINE 2
60.91' LT OF LINE -L-
STA. 32+69.69

PROP. 5' DIA. MANHOLE D3
STA. 1+79, SEWER LINE 3
69.76' LT OF LINE -L-
STA. 32+82.41

PROP. 91' OF 18" SANITARY GRAVITY SEWER (DI, PC 250)

PROP. 74' OF 6" WATER LINE (DI RJ, PC 350)
1-6" VALVE

PROP. RECONNECT 1 WATER METER
89' OF WATER SERVICE LINE
(3/4" COPPER, TYPE K)

PROP. 8" X 6" FLEXIBLE COUPLING

PROP. 4' DIA. MANHOLE B4
STA. 0+82, SEWER LINE 4
50.73' LT OF LINE -L-
STA. 33+64.48

PROP. 102' OF 8" SANITARY GRAVITY SEWER (DI, PC 350)

PROP. 5' DIA. MANHOLE EQ1
STA. 1+00, SEWER LINE 3
STA. 0+00, SEWER LINE 4
50.76' LT OF LINE -L-
STA. 32+82.42

PROP. 19' OF 18" SANITARY GRAVITY SEWER (DI, PC 250)

PROP. 54' OF 12" WATER LINE (DI RJ, PC 350)
1-12" VALVE

ABANDON 7 UTILITY MANHOLES
ABANDON 106'-6" UTILITY PIPE
ABANDON 210'-18" UTILITY PIPE
ABANDON 170'-30" UTILITY PIPE

MATCHLINE -L- STA. 30+00 SEE SHEET UC-7

WATER LINE 6

PROP. 122' OF 30" SANITARY GRAVITY SEWER (DI RJ, PC 250)
80' OF 48" ENCASUREMENT PIPE (STEEL, 0.500" THICK)
80' BORE AND JACK OF 48" STEEL ENCASUREMENT

PROP. 5' DIA. MANHOLE B2
STA. 0+70, SEWER LINE 2
61.09' RT OF LINE -L-
STA. 32+69.71

SEWER LINE 4

SEWER LINE 3

PROP. 76' OF 18" SANITARY GRAVITY SEWER (DI, PC 250)

PROP. 6' DIA. MANHOLE C3
STA. 0+84, SEWER LINE 3
25.24' RT OF LINE -L-
STA. 32+82.42

PROP. 1-12" VALVE
1-6" VALVE

PROP. 5' DIA. MANHOLE A2
STA. 0+00, SEWER LINE 2
79.25' RT OF LINE -L-
STA. 32+02.10

PROP. 70' OF 30" SANITARY GRAVITY SEWER (DI, PC 250)

PROP. 6' DIA. MANHOLE B3
STA. 0+41, SEWER LINE 3
68.24' RT OF LINE -L-
STA. 32+82.43

PROP. 41' OF 18" SANITARY GRAVITY SEWER (DI, PC 250)

PROP. 90' OF 12" ENCASUREMENT PIPE (STEEL, 0.188" THICK)
90' BORE AND JACK OF 12" STEEL ENCASUREMENT

PROP. 449' OF 16" WATER LINE (HDPE, SDR 9 (DIPS))
449' OF DIRECTIONAL DRILLING OF 16" WATER LINE

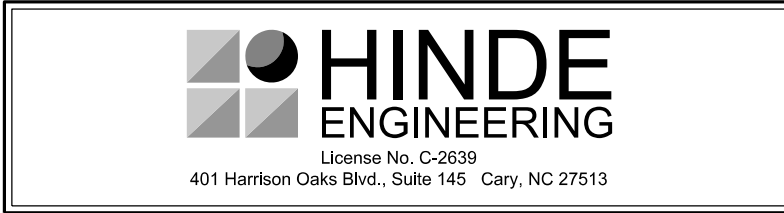
PROP. 5' DIA. MANHOLE A3
STA. 0+00, SEWER LINE 3
78.88' RT OF LINE -L-
STA. 32+42.83

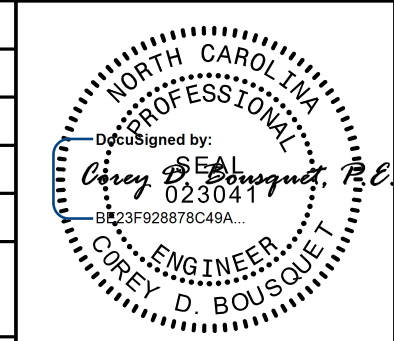
PROP. 208' OF 6" WATER LINE (DI RJ, PC 350)

WATER LINE 8

MATCHLINE -L- STA. 35+00 SEE SHEET UC-9

U:\5839\Design\Utilities\Engineering\UC\Proj\U5839_Ut_rdy8_UC8_psh.dgn
MAY-2023 09:54
PROJECTS\2015\A2015803.00 Mulkey - U-5839\Utilities\Engineering\UC\Proj\U5839_Ut_rdy8_UC8_psh.dgn



| | | | |
|--|--------|--|-------|
| PROJECT REFERENCE NO. | U-5839 | SHEET NO. | UC-8A |
| DESIGNED BY: | CDB |  | |
| DRAWN BY: | ASW | | |
| CHECKED BY: | CLS | | |
| APPROVED BY: | CDB | | |
| REVISED: | | | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | | 3/9/2023 | |
| UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151 | | UTILITY CONSTRUCTION PLANS ONLY | |

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CONDUIT PLANS

UTILITY CONSTRUCTION

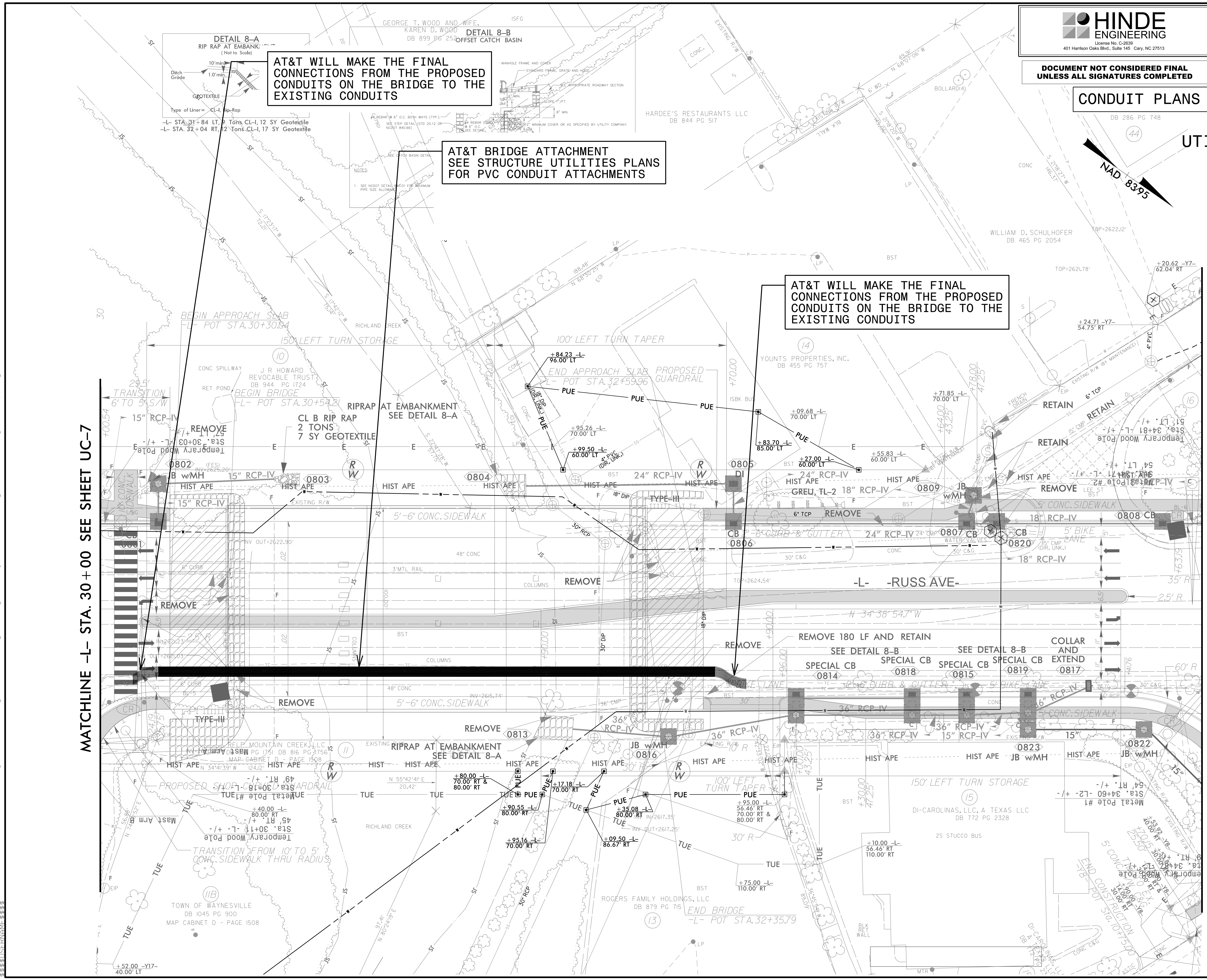
AT&T WILL MAKE THE FINAL CONNECTIONS FROM THE PROPOSED CONDUITS ON THE BRIDGE TO THE EXISTING CONDUITS

AT&T BRIDGE ATTACHMENT SEE STRUCTURE UTILITIES PLANS FOR PVC CONDUIT ATTACHMENTS

AT&T WILL MAKE THE FINAL CONNECTIONS FROM THE PROPOSED CONDUITS ON THE BRIDGE TO THE EXISTING CONDUITS

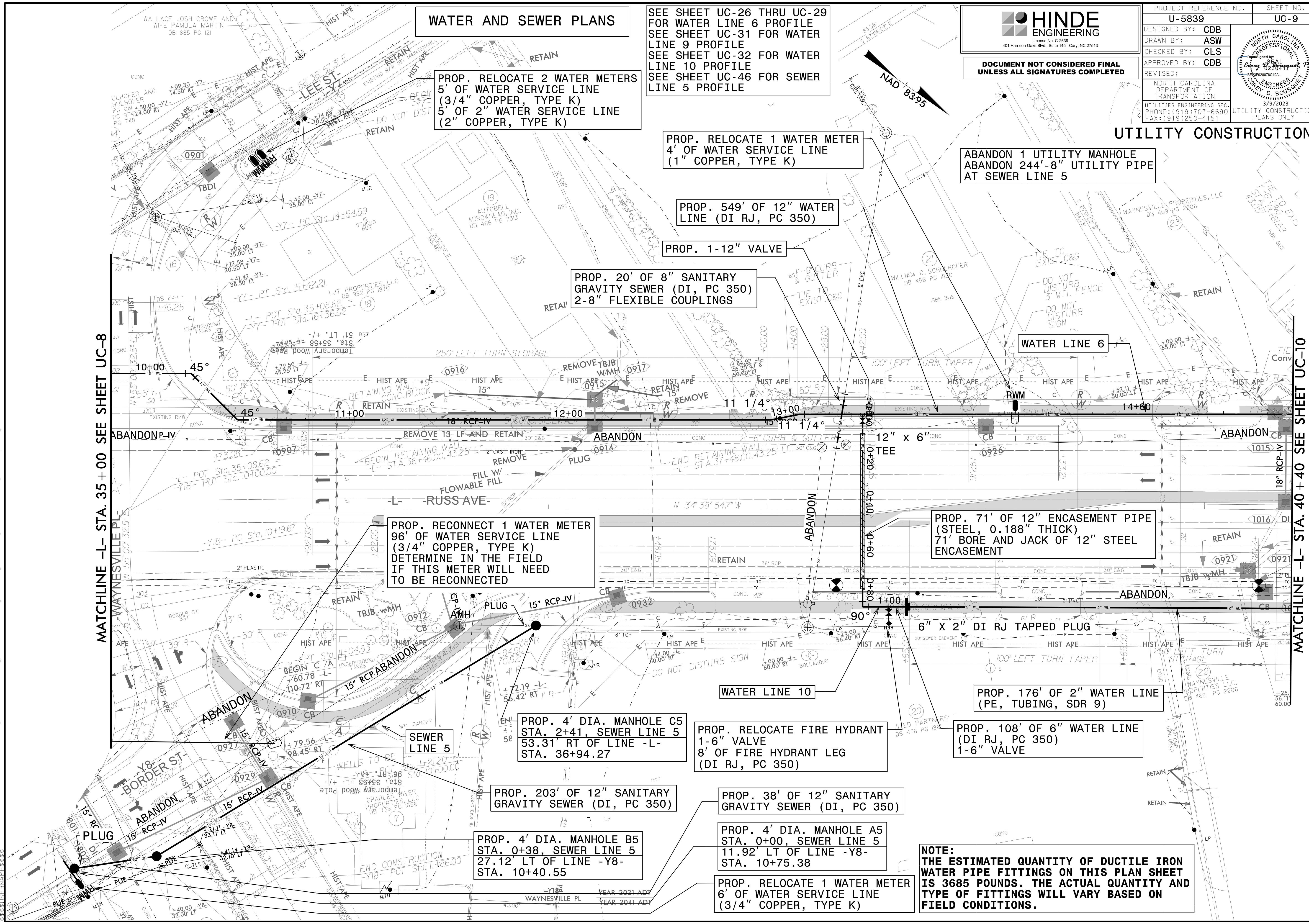
MATCHLINE -L- STA. 30+00 SEE SHEET UC-7

MATCHLINE -L- STA. 34+75 SEE SHEET UC-9



U:\5839\Design\Utilities\Engineering\UC\Proj\Nduct_Bank_Design\U5839_Ut_rdy8_UC8A_psh.dgn

03-MAR-2023 15:27



WATER AND SEWER PLANS

SEE SHEET UC-26 THRU UC-29 FOR WATER LINE 6 PROFILE
 SEE SHEET UC-31 FOR WATER LINE 9 PROFILE
 SEE SHEET UC-32 FOR WATER LINE 10 PROFILE
 SEE SHEET UC-46 FOR SEWER LINE 5 PROFILE

PROP. RELOCATE 2 WATER METERS
 5' OF WATER SERVICE LINE (3/4" COPPER, TYPE K)
 5' OF 2" WATER SERVICE LINE (2" COPPER, TYPE K)

PROP. RELOCATE 1 WATER METER
 4' OF WATER SERVICE LINE (1" COPPER, TYPE K)

PROP. 549' OF 12" WATER LINE (DI RJ, PC 350)

PROP. 1-12" VALVE

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

ABANDON 1 UTILITY MANHOLE
 ABANDON 244'-8" UTILITY PIPE AT SEWER LINE 5

MATCHLINE -L- STA. 35+00 SEE SHEET UC-8

MATCHLINE -L- STA. 40+40 SEE SHEET UC-10

PROP. 71' OF 12" ENCASEMENT PIPE (STEEL, 0.188" THICK)
 71' BORE AND JACK OF 12" STEEL ENCASEMENT

PROP. RECONNECT 1 WATER METER
 96' OF WATER SERVICE LINE (3/4" COPPER, TYPE K)
 DETERMINE IN THE FIELD IF THIS METER WILL NEED TO BE RECONNECTED

PROP. 4' DIA. MANHOLE C5
 STA. 2+41, SEWER LINE 5
 53.31' RT OF LINE -L- STA. 36+94.27

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

PROP. 108' OF 6" WATER LINE (DI RJ, PC 350)
 1-6" VALVE

PROP. 203' OF 12" SANITARY GRAVITY SEWER (DI, PC 350)

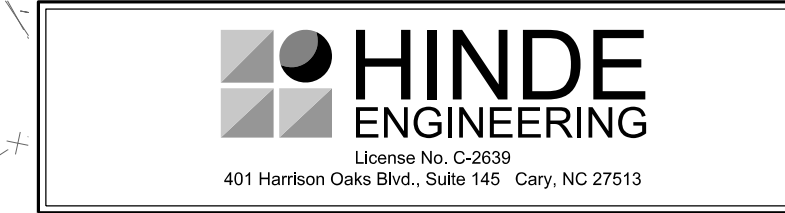
PROP. 38' OF 12" SANITARY GRAVITY SEWER (DI, PC 350)

PROP. 4' DIA. MANHOLE B5
 STA. 0+38, SEWER LINE 5
 27.12' LT OF LINE -Y8- STA. 10+40.55

PROP. 4' DIA. MANHOLE A5
 STA. 0+00, SEWER LINE 5
 11.92' LT OF LINE -Y8- STA. 10+75.38

PROP. RELOCATE 1 WATER METER
 6' OF WATER SERVICE LINE (3/4" COPPER, TYPE K)

NOTE:
 THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 3685 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.



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| | | | |
|--|--------|---------------------------------|------|
| PROJECT REFERENCE NO. | U-5839 | SHEET NO. | UC-9 |
| DESIGNED BY: | CDB | | |
| DRAWN BY: | ASW | | |
| CHECKED BY: | CLS | | |
| APPROVED BY: | CDB | | |
| REVISED: | | | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | | 3/9/2023 | |
| UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151 | | UTILITY CONSTRUCTION PLANS ONLY | |

UTILITY CONSTRUCTION

29-MAR-2023 15:27 PROJECTS\2015\A2015803\00_Mulkey - U-5839\Design\Utilities\Engineering\UC-Proj\U5839_Ut_rdy9_UC-9_psh.dgn
 3/9/2023 15:27 PROJECTS\2015\A2015803\00_Mulkey - U-5839\Design\Utilities\Engineering\UC-Proj\U5839_Ut_rdy9_UC-9_psh.dgn



SEE SHEET UC-32 FOR WATER LINE 11 PROFILE
SEE SHEET UC-33 THRU UC-40 FOR WATER LINE 12 PROFILE
SEE SHEET UC-41 FOR WATER LINE 13 PROFILE
SEE SHEET UC-48 FOR SEWER LINE 6 PROFILE

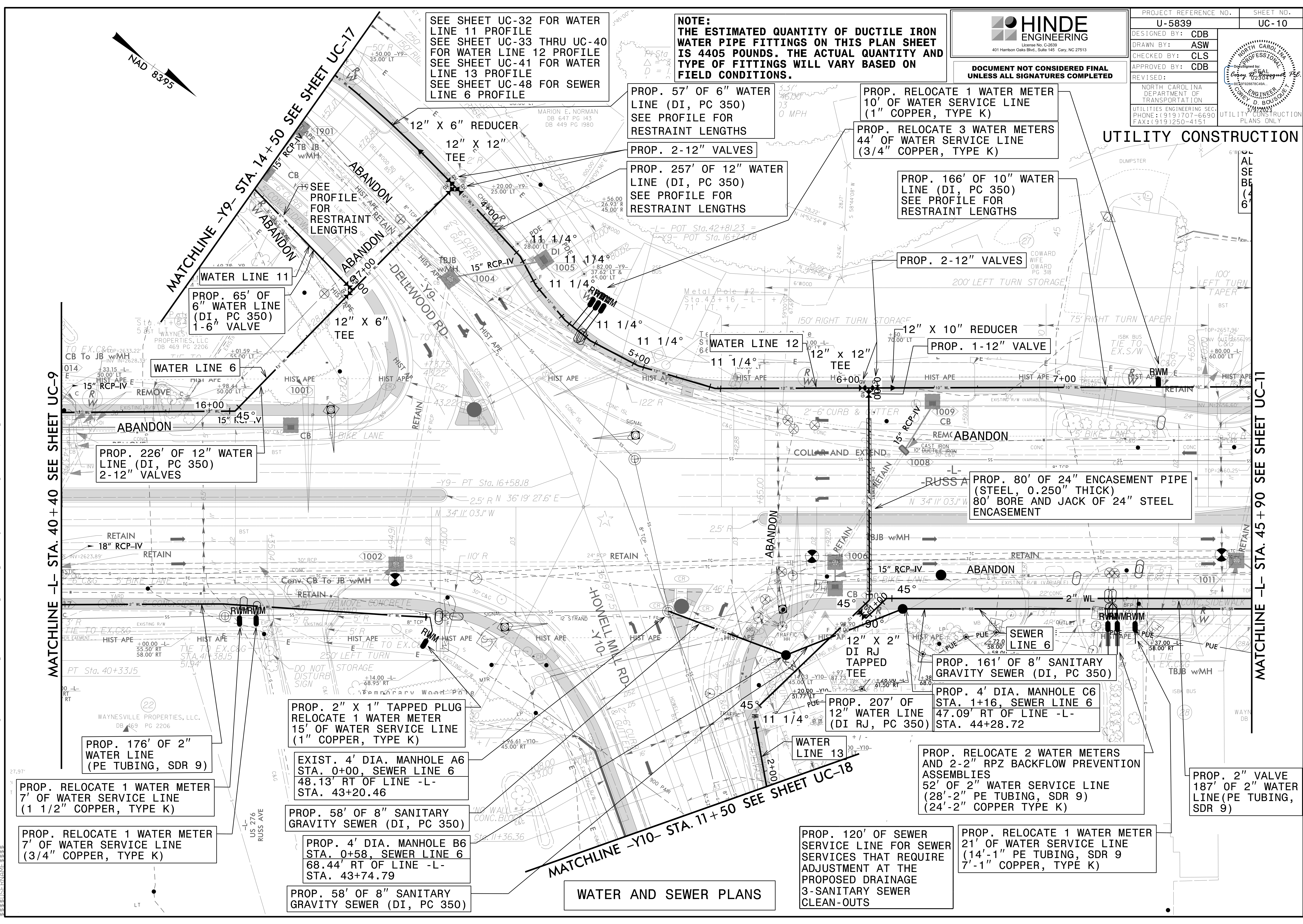
NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 4405 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

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

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| | |
|--|---------------------------|
| PROJECT REFERENCE NO. U-5839 | SHEET NO. UC-10 |
| DESIGNED BY: CDB | |
| DRAWN BY: ASW | |
| 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



MATCHLINE -L- STA. 40 + 40 SEE SHEET UC-9

MATCHLINE -Y9- STA. 14 + 50 SEE SHEET UC-17

MATCHLINE -Y10- STA. 11 + 50 SEE SHEET UC-18

MATCHLINE -L- STA. 45 + 90 SEE SHEET UC-11

WATER AND SEWER PLANS

PROP. RELOCATE 1 WATER METER
7' OF WATER SERVICE LINE
(1 1/2" COPPER, TYPE K)

PROP. RELOCATE 1 WATER METER
7' OF WATER SERVICE LINE
(3/4" COPPER, TYPE K)

PROP. 176' OF 2" WATER LINE
(PE TUBING, SDR 9)

PROP. 2" X 1" TAPPED PLUG
RELOCATE 1 WATER METER
15' OF WATER SERVICE LINE
(1" COPPER, TYPE K)

EXIST. 4' DIA. MANHOLE A6
STA. 0+00, SEWER LINE 6
48.13' RT OF LINE -L-
STA. 43+20.46

PROP. 58' OF 8" SANITARY
GRAVITY SEWER (DI, PC 350)

PROP. 4' DIA. MANHOLE B6
STA. 0+58, SEWER LINE 6
68.44' RT OF LINE -L-
STA. 43+74.79

PROP. 58' OF 8" SANITARY
GRAVITY SEWER (DI, PC 350)

PROP. 57' OF 6" WATER
LINE (DI, PC 350)
SEE PROFILE FOR
RESTRAINT LENGTHS

PROP. 257' OF 12" WATER
LINE (DI, PC 350)
SEE PROFILE FOR
RESTRAINT LENGTHS

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

PROP. RELOCATE 3 WATER METERS
44' OF WATER SERVICE LINE
(3/4" COPPER, TYPE K)

PROP. 166' OF 10" WATER
LINE (DI, PC 350)
SEE PROFILE FOR
RESTRAINT LENGTHS

PROP. 2-12" VALVES

WATER LINE 12
11 1/4" TEE

12" X 10" REDUCER
PROP. 1-12" VALVE

PROP. 80' OF 24" ENCASEMENT PIPE
(STEEL, 0.250" THICK)
80" BORE AND JACK OF 24" STEEL
ENCASEMENT

PROP. 161' OF 8" SANITARY
GRAVITY SEWER (DI, PC 350)

PROP. 4' DIA. MANHOLE C6
STA. 1+16, SEWER LINE 6
47.09' RT OF LINE -L-
STA. 44+28.72

PROP. RELOCATE 2 WATER METERS
AND 2-2" RPZ BACKFLOW PREVENTION
ASSEMBLIES
52' OF 2" WATER SERVICE LINE
(28'-2" PE TUBING, SDR 9)
(24'-2" COPPER TYPE K)

PROP. 2" VALVE
187' OF 2" WATER
LINE (PE TUBING,
SDR 9)

PROP. 120' OF SEWER
SERVICE LINE FOR SEWER
SERVICES THAT REQUIRE
ADJUSTMENT AT THE
PROPOSED DRAINAGE
3-SANITARY SEWER
CLEAN-OUTS

PROP. RELOCATE 1 WATER METER
21' OF WATER SERVICE LINE
(14'-1" PE TUBING, SDR 9)
7'-1" COPPER, TYPE K)

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SEE SHEET UC-33 THRU UC-40 FOR WATER LINE 12 PROFILE
SEE SHEET UC-48 FOR SEWER LINE 6 PROFILE
SEE SHEET UC-49 FOR SEWER LINE 7 PROFILE
SEE SHEET UC-50 AND UC-51 FOR SEWER LINE 8 PROFILE
SEE SHEET UC-52 FOR SEWER LINE 9 PROFILE

PROP. 4' DIA. MANHOLE B7 STA. 0+40, SEWER LINE 7
41.13' RT OF LINE -L- STA. 48+62.29

PROP. 40' OF 10" SANITARY GRAVITY SEWER (DI, PC 350)

EXIST. 4' DIA. MANHOLE F6 STA. 4+68.02, SEWER LINE 6
67.20' RT OF LINE -L- STA. 47+76.16

PROP. 565' OF 10" WATER LINE (DI, PC 350)
1-10" VALVE
SEE PROFILE FOR RESTRAINT LENGTHS

PROP. RELOCATE 2 WATER METERS
20' OF WATER SERVICE LINE (10'-1" PE TUBING, SDR 9,
10'-COPPER TYPE K)

PROP. 44' OF 8" SANITARY GRAVITY SEWER (DI, PC 350)

PROP. 4' DIA. MANHOLE E6 STA. 4+17, SEWER LINE 6
66.64' RT OF LINE -L- STA. 47+25.13

PROP. 4' DIA. MANHOLE D6 STA. 3+73, SEWER LINE 6
47.10' RT OF LINE -L- STA. 46+85.72

PROP. 96' OF 8" SANITARY GRAVITY SEWER (DI, PC 350)

WATER AND SEWER PLANS

PROP. 4' DIA. MANHOLE A8 STA. 0+00, SEWER LINE 8
21.95' LT OF LINE -L- STA. 48+41.28

PROP. 52' OF 8" SANITARY GRAVITY SEWER (DI, PC 350)

PROP. 4' DIA. MANHOLE B9 STA. 0+45, SEWER LINE 9
94.10' LT OF LINE -L- STA. 48+82.68

PROP. 45' OF 8" SANITARY GRAVITY SEWER (DI, PC 350)

PROP. 4' DIA. MANHOLE EQ2 STA. 0+52, SEWER LINE 8
STA. 0+00, SEWER LINE 9
49.20' LT OF LINE -L- STA. 48+85.57

PROP. 18' OF 8" SANITARY GRAVITY SEWER (DI, PC 350)

PROP. 4' DIA. MANHOLE B8 STA. 0+70, SEWER LINE 8
58.63' LT OF LINE -L- STA. 49+00.90

PROP. 135' OF 8" SANITARY GRAVITY SEWER (DI, PC 350)

ABANDON & PLUG

SEWER LINE 9

ABANDON

PLUG

ABANDON

ABANDON

PLUG

ABANDON

PROP. 4' DIA. MANHOLE A7 STA. 0+00, SEWER LINE 7
61.94' RT OF LINE -L- STA. 48+28.12

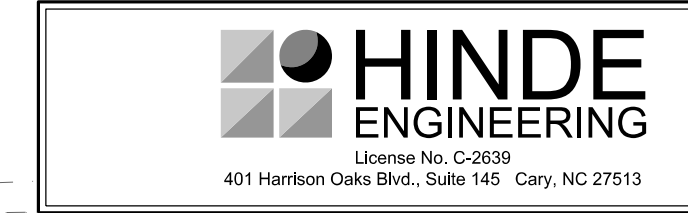
PROP. 51' OF 8" SANITARY GRAVITY SEWER (DI, PC 350)

PROP. 2" X 1" HDPE REDUCER
RELOCATE 1 WATER METER
33' OF WATER SERVICE LINE (20'-1" PE TUBING, SDR 9,
13'-COPPER TYPE K)
1" RPZ BACKFLOW PREVENTION ASSEMBLY

PROP. 176' OF 10" SANITARY GRAVITY SEWER (DI, PC 350)

PROP. 4' DIA. MANHOLE C7 STA. 2+15.48, SEWER LINE 7
47.00' RT OF LINE -L- STA. 50+37.67

HDPE FITTINGS ARE INCIDENTAL TO RELOCATE WATER METERS
ALONG THE 2" PE TUBING



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ABANDON 3 UTILITY MANHOLES
ABANDON 84'-4" UTILITY PIPE
ABANDON 112'-6" UTILITY PIPE
ABANDON 713'-8" UTILITY PIPE
AT SEWER LINE 6,7,8 AND 9

UTILITY CONSTRUCTION

PROP. 4' DIA. MANHOLE C8 STA. 2+05, SEWER LINE 8
59.72' LT OF LINE -L- STA. 50+35.90

PROP. 18' OF 6" WATER LINE (DI RJ, PC 350)
1-6" VALVE

PROP. 60' OF 8" SANITARY GRAVITY SEWER (DI, PC 350)

PROP. 57' OF 8" SANITARY GRAVITY SEWER (DI, PC 350)

PROP. 4' DIA. MANHOLE D8 STA. 2+62, SEWER LINE 8
41.49' LT OF LINE -L- STA. 50+89.90

PROP. 12" X 6" TEE
PLUG

PROP. 18' RCP-IV

PROP. 18' RCP-IV

PROP. 18' RCP-IV

PROP. 18' RCP-IV

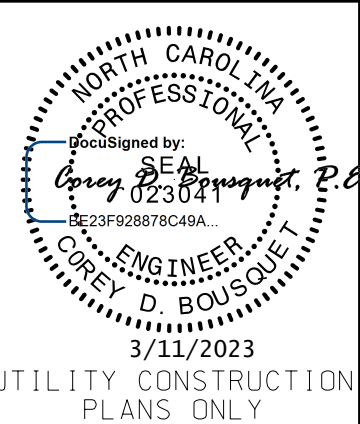
PROP. 78' OF 10" SANITARY GRAVITY SEWER (DI, PC 350)

PROP. 4' DIA. MANHOLE D7 STA. 2+93.48, SEWER LINE 7
46.76' RT OF LINE -L- STA. 51+15.67

PROP. 34' OF 10" SANITARY GRAVITY SEWER (DI, PC 350)

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 1395 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

| | |
|--|--------|
| PROJECT REFERENCE NO. | U-5839 |
| SHEET NO. | UC-11 |
| DESIGNED BY: | CDB |
| DRAWN BY: | ASW |
| 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 | |



MATCHLINE -L- STA. 45 + 90 SEE SHEET UC-10

MATCHLINE -L- STA. 51 + 50 SEE SHEET UC-12

MATCHLINE -Y13- STA. 11 + 40 SEE SHEET UC-19

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SEE SHEETS UC-33 TO 40 FOR WATER LINE 12 PROFILE
SEE SHEET UC-50 TO 51 FOR SEWER LINE 8 PROFILE
SEE SHEET UC-52 FOR SEWER LINE 10 PROFILE
SEE SHEET UC-53 FOR SEWER LINE 11 PROFILE

WATER AND SEWER PLANS

PROP. 104' OF 8" SANITARY GRAVITY SEWER (DI, PC 350)

PROP. 4' DIA. MANHOLE E8 STA. 4+26, SEWER LINE 8
40.14' LT OF LINE -L- STA. 52+53.90

PROP. 39' OF 8" SANITARY GRAVITY SEWER (DI, PC 350)
PROP. 4' DIA. MANHOLE F8 STA. 4+65, SEWER LINE 8
54.39' LT OF LINE -L- STA. 52+90.20

PROP. 45' OF 8" SANITARY GRAVITY SEWER (DI, PC 350)

PROP. 568' OF 10" WATER LINE (DI, PC 350)
SEE PROFILE FOR RESTRAINT LENGTHS

PROP. 4' DIA. MANHOLE G8 STA. 5+10, SEWER LINE 8
40.74' LT OF LINE -L- STA. 53+33.08

WATER LINE 12

ABANDON 1 UTILTIY MANHOLE

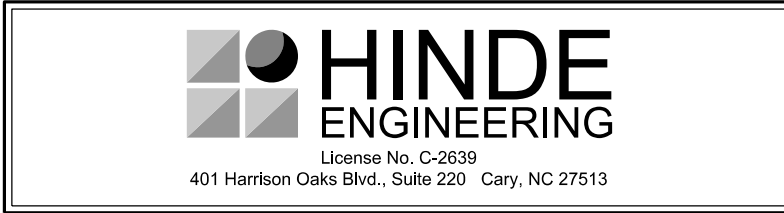
PROP. 201' OF 8" SANITARY GRAVITY SEWER (DI, PC 350)
PROP. RELOCATE 1 WATER METER
17' OF WATER SERVICE LINE (3/4" COPPER, TYPE K)

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

EXIST. 4' DIA. MANHOLE C10 STA. 3+38.32, SEWER LINE 10
87.66' LT OF LINE -L- STA. 55+88.67

PROP. 170' OF 10" SANITARY GRAVITY SEWER (DI RJ, PC 350)
124' OF 24" ENCASEMENT PIPE (STEEL, 0.250" THICK)
124' BORE AND JACK OF 24" STEEL ENCASEMENT

PROP. 1-10" VALVE



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| | | | |
|--|--------|---------------------------------|-------|
| PROJECT REFERENCE NO. | U-5839 | SHEET NO. | UC-12 |
| DESIGNED BY: | CDB | DRAWN BY: | ASW |
| CHECKED BY: | CLS | APPROVED BY: | CDB |
| REVISED: | | | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | | UTILITY CONSTRUCTION PLANS ONLY | |
| UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151 | | | |

MATCHLINE UTILITY CONSTRUCTION STA. 12+80 SEE SHEET UC-20

MATCHLINE -L- STA. 51+50 SEE SHEET UC-11

MATCHLINE -L- STA. 57+10 SEE SHEET UC-13

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 1430 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

PROP. RELOCATE 1 WATER METER
15' OF WATER SERVICE LINE (1" COPPER, TYPE K)
STA. 55+30.18, 49.88 LEFT OF LINE -L- *

EXIST. 4' DIA. MANHOLE E7 STA. 3+53.48, SEWER LINE 7
41.80' RT OF LINE -L- STA. 51+75.46

PROP. 26' OF 10" SANITARY GRAVITY SEWER (DI, PC 350)

PROP. 168' OF 10" SANITARY GRAVITY SEWER (DI, PC 350)
PROP. 4' DIA. MANHOLE A10 STA. 0+00, SEWER LINE 10
42.37' RT OF LINE -L- STA. 53+31.19

PROP. RECONNECT 1 WATER METER
20' OF WATER SERVICE LINE (1" COPPER, TYPE K)

ABANDON 1 UTILTIY MANHOLE
PROP. RELOCATE 3 WATER METERS
80' OF WATER SERVICE LINE (1" COPPER, TYPE K)

ABANDON 1 UTILTIY MANHOLE
PROP. 4' DIA. MANHOLE EQ3 STA. 1+68, SEWER LINE 10
STA. 0+00, SEWER LINE 11
56.88' RT OF LINE -L- STA. 54+98.56

PROP. 4' DIA. MANHOLE B11 STA. 0+60.97, SEWER LINE 11
TO BE INSTALLED BY OTHERS, SEE UBO PLANS
104.89' RT OF LINE -L- STA. 55+36.15

PROP. 1-SANITARY SEWER CLEAN-OUT (DI)
10' OF SEWER SERVICE LINE (4" DI, CLASS 51)

PROP. 4' DIA. MANHOLE H8 STA. 7+11, SEWER LINE 8
40.74' LT OF LINE -L- STA. 55+34.08

PROP. 10" x 2" DI RJ TAPPED TEE
2" VALVE - 86' OF 2" WATER LINE (PE TUBING, SDR 9)

PROP. RELOCATE 1 WATER METER
15' OF WATER SERVICE LINE (3/4" COPPER, TYPE K)

PROP. 91' OF 6" WATER LINE (DI RJ, PC 350)
1-6" VALVE

PROP. 2-SANITARY SEWER CLEAN-OUTS (DI)
20' OF SEWER SERVICE LINE (3" DI, CLASS 51)

PROP. 4' DIA. FLAT TOP MANHOLE B12 STA. 0+99.07, SEWER LINE 12
83.52' RT OF LINE -L- STA. 55+93.99

PROP. 40' OF 4" SANITARY GRAVITY SEWER (DI, PC 350)
60' OF 4" SANITARY GRAVITY SEWER LINE TO BE INSTALLED BY OTHERS, SEE UBO PLANS

ABANDON 85'-4" UTILITY PIPE
ABANDON 623'-8" UTILITY PIPE
ABANDON 226'-10" UTILITY PIPE
AT SEWER LINE 8, 10, 11 AND 12

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SEE SHEET UC-33 THRU UC-40 FOR WATER LINE 12 PROFILE

WATER AND SEWER PLANS

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

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| | |
|--|---------------------------------|
| PROJECT REFERENCE NO. U-5839 | SHEET NO. UC-13 |
| DESIGNED BY: CDB | |
| DRAWN BY: ASW | |
| CHECKED BY: CLS | |
| APPROVED BY: CDB | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | |
| UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151 | UTILITY CONSTRUCTION PLANS ONLY |

MATCHLINE -L- STA. 57+10 SEE SHEET UC-12

MATCHLINE -L- STA. 62+40 SEE SHEET UC-14

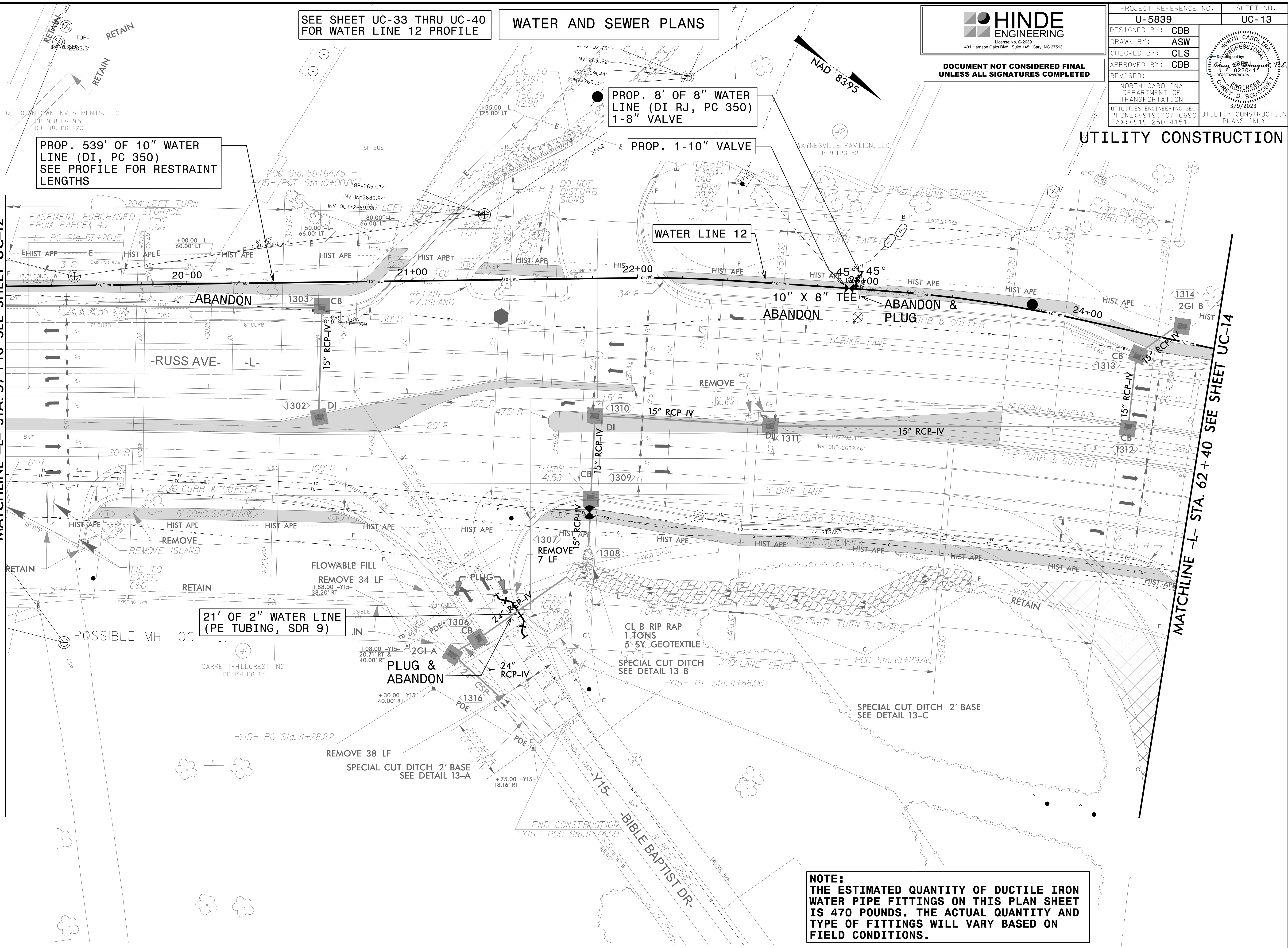
PROP. 539' OF 10" WATER LINE (DI, PC 350) SEE PROFILE FOR RESTRAINT LENGTHS

PROP. 8' OF 8" WATER LINE (DI RJ, PC 350) 1-8" VALVE

PROP. 1-10" VALVE

21' OF 2" WATER LINE (PE TUBING, SDR 9)

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 470 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.



20-MAR-2023 15:24 C:\PROJECTS\2015\A2015803\00_Mulkey - U-5839\Design\Utilities\Engineering\UC-Proj\U5839_Ut_-r.dwg UC13_psh.dgn

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| | |
|---|---------------------------|
| PROJECT REFERENCE NO. U-5839 | SHEET NO. UC-14 |
| DESIGNED BY: CDB | |
| DRAWN BY: ASW | |
| CHECKED BY: CLS | |
| APPROVED BY: CDB | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151 | |
| 3/9/2023 UTILITY CONSTRUCTION PLANS ONLY | |

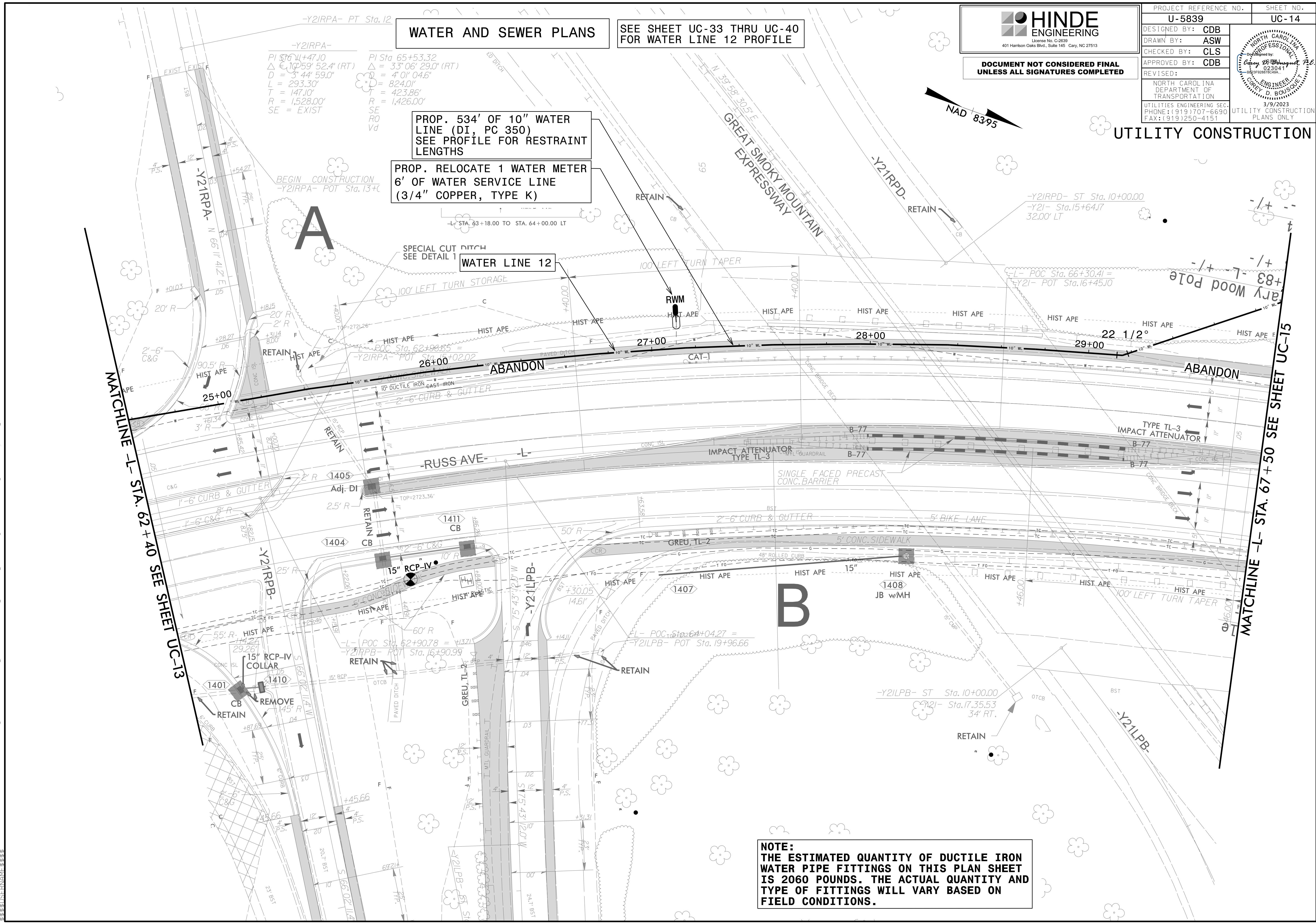
WATER AND SEWER PLANS

SEE SHEET UC-33 THRU UC-40 FOR WATER LINE 12 PROFILE

PROP. 534' OF 10" WATER LINE (DI, PC 350)
SEE PROFILE FOR RESTRAINT LENGTHS

PROP. RELOCATE 1 WATER METER 6' OF WATER SERVICE LINE (3/4" COPPER, TYPE K)

WATER LINE 12



NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 2060 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

MATCHLINE -L- STA. 62+40 SEE SHEET UC-13

MATCHLINE -L- STA. 67+50 SEE SHEET UC-15

UTILITY CONSTRUCTION

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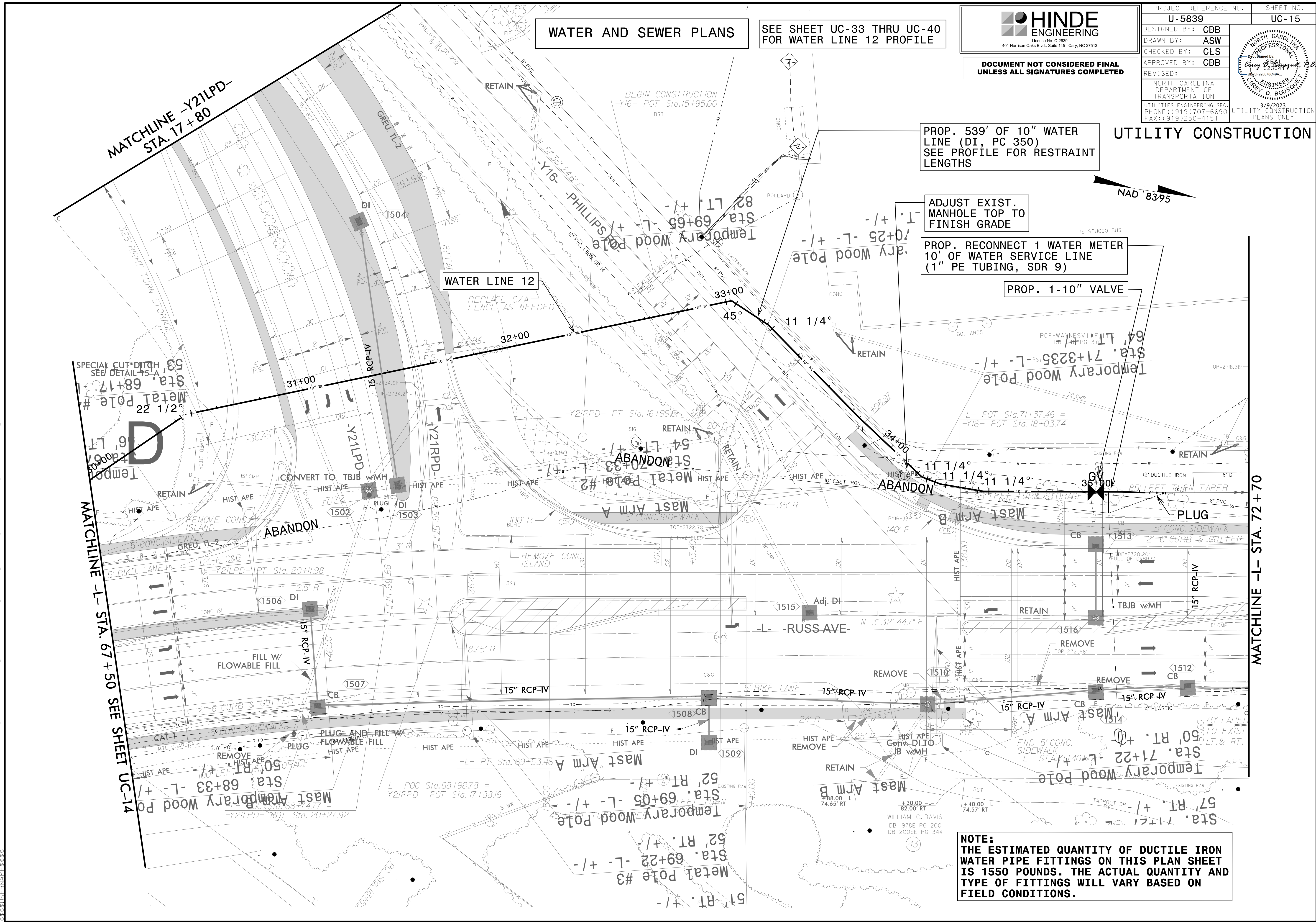
WATER AND SEWER PLANS

SEE SHEET UC-33 THRU UC-40 FOR WATER LINE 12 PROFILE



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| | |
|--|--------------------|
| PROJECT REFERENCE NO. U-5839 | SHEET NO. UC-15 |
| DESIGNED BY: CDB | |
| DRAWN BY: ASW | |
| CHECKED BY: CLS | |
| APPROVED BY: CDB | |
| REVISED: | |
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PROP. 539' OF 10" WATER LINE (DI, PC 350) SEE PROFILE FOR RESTRAINT LENGTHS

ADJUST EXIST. MANHOLE TOP TO FINISH GRADE

PROP. RECONNECT 1 WATER METER 10' OF WATER SERVICE LINE (1" PE TUBING, SDR 9)

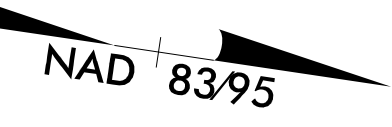
PROP. 1-10" VALVE

NOTE: THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 1550 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

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MATCHLINE -L- STA. 67 + 50 SEE SHEET UC-14

MATCHLINE -L- STA. 72 + 70



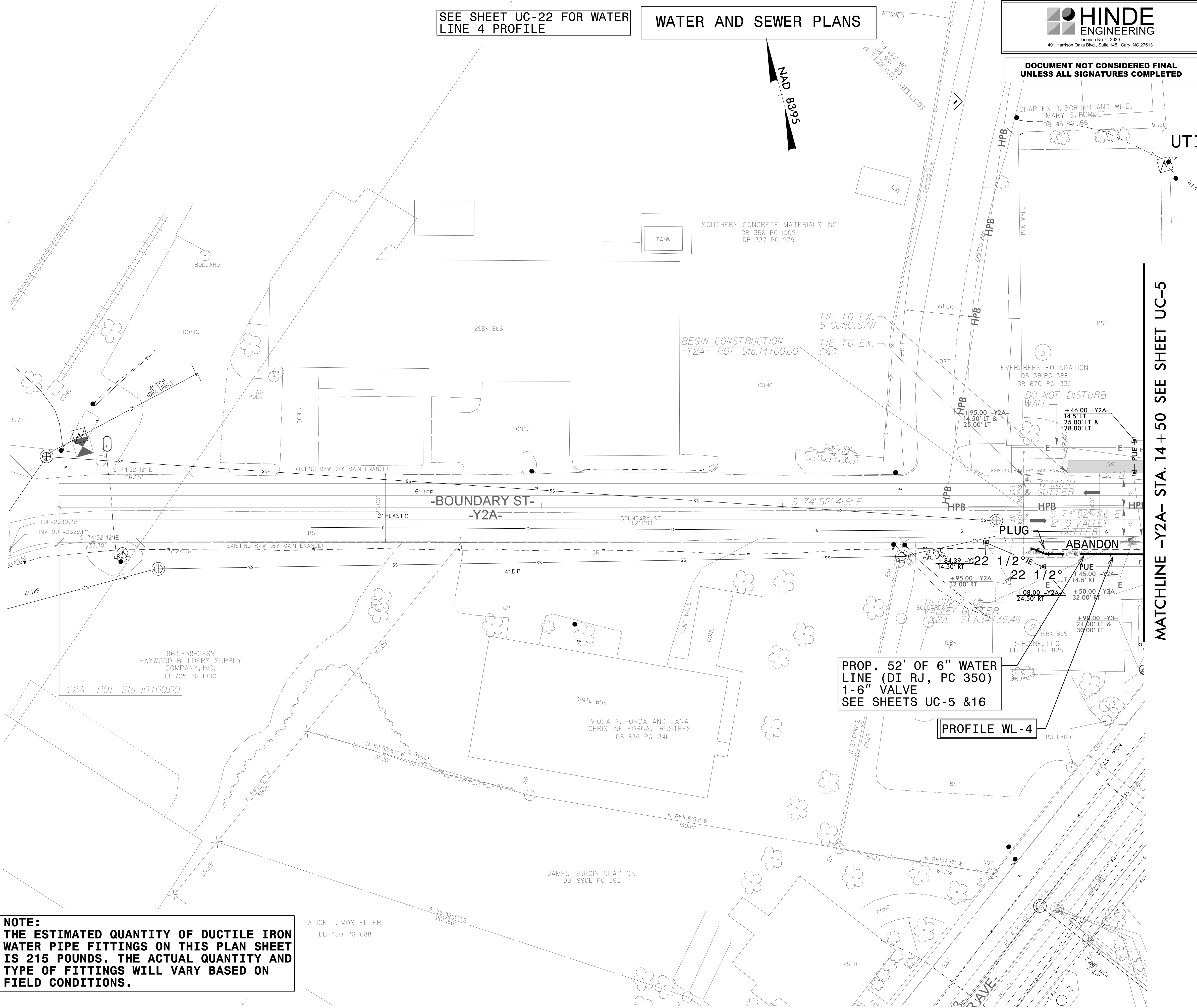
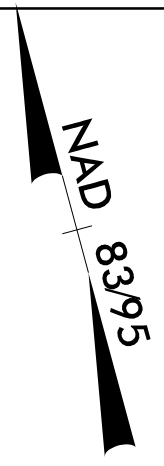
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| PROJECT REFERENCE NO. | SHEET NO. |
| U-5839 | UC-16 |
| DESIGNED BY: CDB | |
| DRAWN BY: ASW | |
| CHECKED BY: CLS | |
| APPROVED BY: CDB | |
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SEE SHEET UC-22 FOR WATER LINE 4 PROFILE

WATER AND SEWER PLANS



MATCHLINE -Y2A- STA. 14 +50 SEE SHEET UC-5

PROP. 52' OF 6" WATER LINE (DI RJ, PC 350) 1-6" VALVE SEE SHEETS UC-5 & 16

PROFILE WL-4

NOTE:
 THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 215 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

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| -Y9- | -Y9- | -Y9- |
|-------------------------------------|--------------------------------------|--------------------------------------|
| PI Sta 11+03.95 | PI Sta 13+19.87 | PI Sta 15+48.02 |
| $\Delta = 3^{\circ} 04' 15.7" (LT)$ | $\Delta = 15^{\circ} 56' 26.3" (LT)$ | $\Delta = 35^{\circ} 10' 22.8" (RT)$ |
| $D = 1^{\circ} 28' 38.8"$ | $D = 7^{\circ} 09' 43.1"$ | $D = 15^{\circ} 26' 37.0"$ |
| $L = 207.86'$ | $L = 222.57'$ | $L = 227.75'$ |
| $T = 103.95'$ | $T = 112.01'$ | $T = 117.59'$ |
| $R = 3,878.00'$ | $R = 800.00'$ | $R = 371.00'$ |
| $SE = EXIST$ | $SE = 04$ | $SE = 04$ |
| | $Vd = 35 MPH$ | $Vd = 35 MPH$ |

SEE SHEET UC-32 FOR WATER LINE 11 PROFILE
 SEE SHEET UC-33 THRU UC-40 FOR WATER LINE 12 PROFILE
 SEE SHEET UC-47 FOR SEWER LINE 5A PROFILE

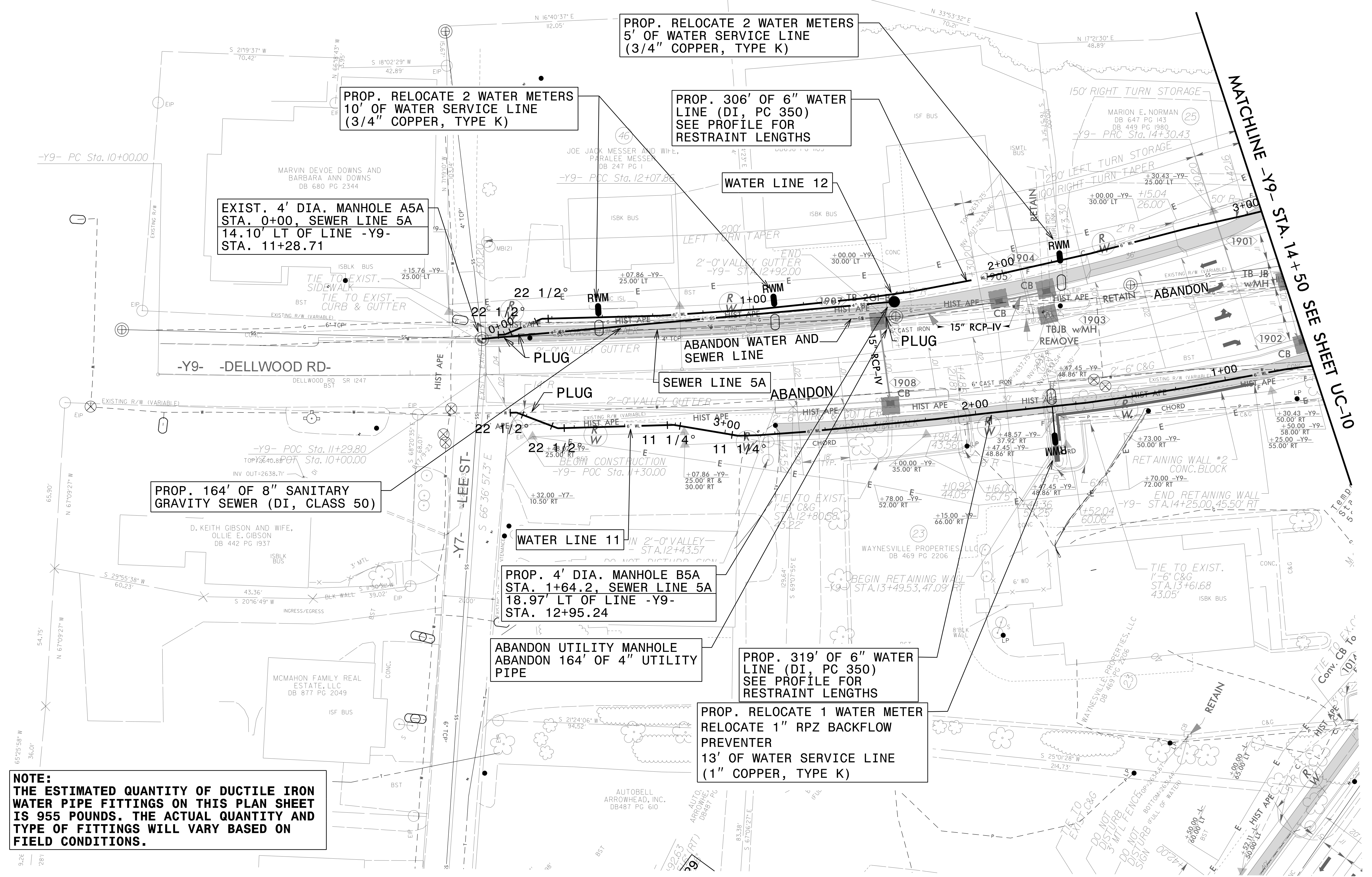
WATER AND SEWER PLANS

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| PROJECT REFERENCE NO. | SHEET NO. |
|--|-----------|
| U-5839 | UC-17 |
| DESIGNED BY: CDB | |
| DRAWN BY: ASW | |
| CHECKED BY: CLS | |
| APPROVED BY: CDB | |
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UTILITY CONSTRUCTION



NOTE:
 THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 955 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

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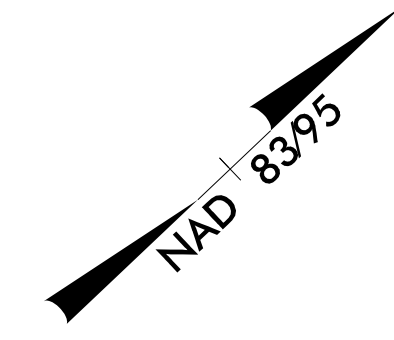
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| PROJECT REFERENCE NO. | SHEET NO. |
| U-5839 | UC-18 |
| DESIGNED BY: CDB | |
| DRAWN BY: ASW | |
| CHECKED BY: CLS | |
| APPROVED BY: CDB | |
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WATER AND SEWER PLANS

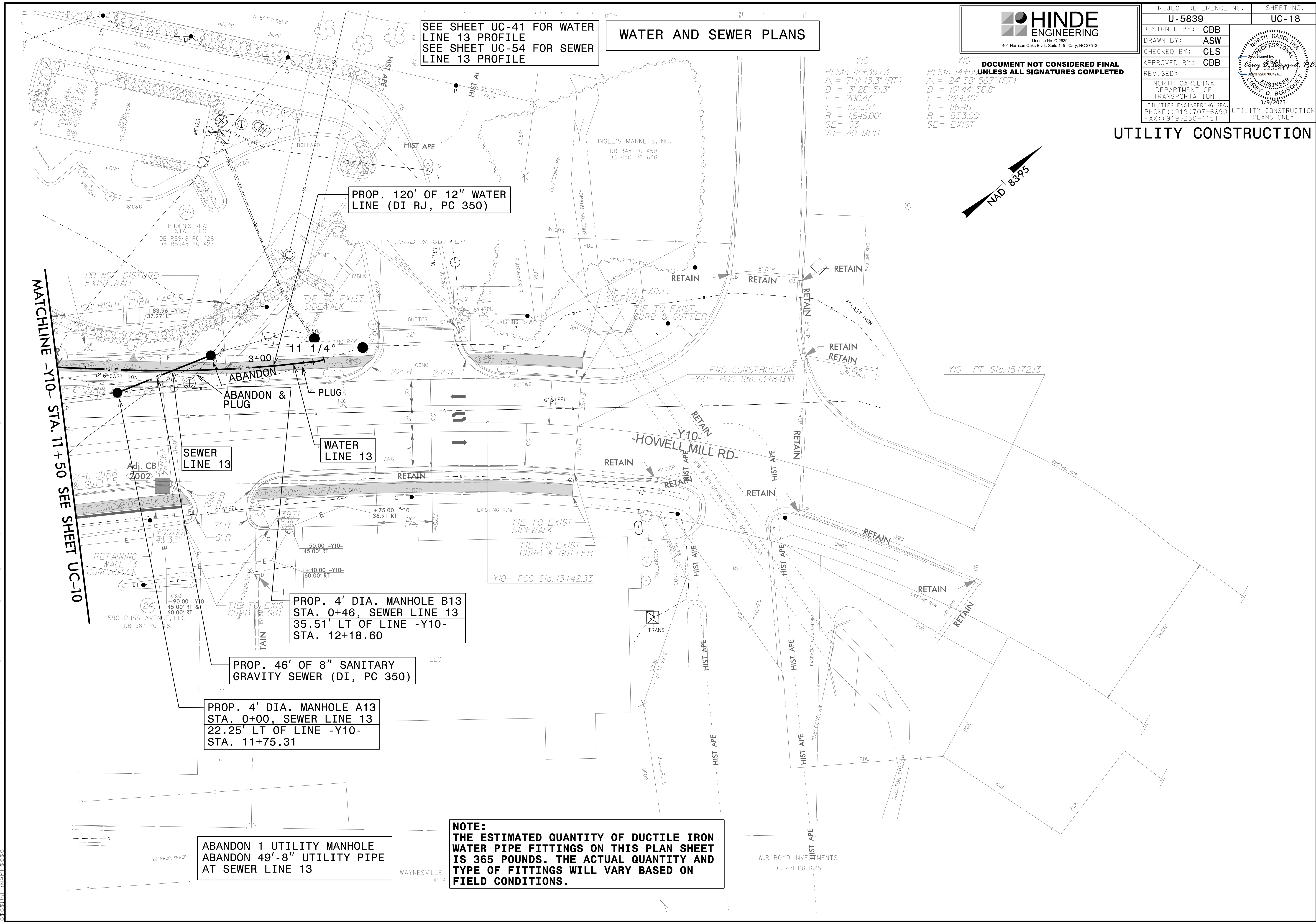
SEE SHEET UC-41 FOR WATER LINE 13 PROFILE
 SEE SHEET UC-54 FOR SEWER LINE 13 PROFILE

-Y10-
 PI Sta. 12+39.73
 $\Delta = 7' 11" 13.3" (RT)$
 $D = 3' 28' 51.3"$
 $L = 206.47'$
 $T = 103.37'$
 $R = 1,646.00'$
 $SE = 03$
 $Vd = 40 MPH$

-Y10-
 PI Sta. 14+59.00
 $\Delta = 24' 58' 56.7" (RT)$
 $D = 10' 44' 58.8"$
 $L = 229.30'$
 $T = 116.45'$
 $R = 533.00'$
 $SE = EXIST$



UTILITY CONSTRUCTION



PROP. 120' OF 12" WATER LINE (DI RJ, PC 350)

PROP. 4' DIA. MANHOLE B13
 STA. 0+46, SEWER LINE 13
 35.51' LT OF LINE -Y10-
 STA. 12+18.60

PROP. 46' OF 8" SANITARY GRAVITY SEWER (DI, PC 350)

PROP. 4' DIA. MANHOLE A13
 STA. 0+00, SEWER LINE 13
 22.25' LT OF LINE -Y10-
 STA. 11+75.31

ABANDON 1 UTILITY MANHOLE
 ABANDON 49'-8" UTILITY PIPE
 AT SEWER LINE 13

NOTE:
 THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 365 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

MATCHLINE -Y10- STA. 11+50 SEE SHEET UC-10

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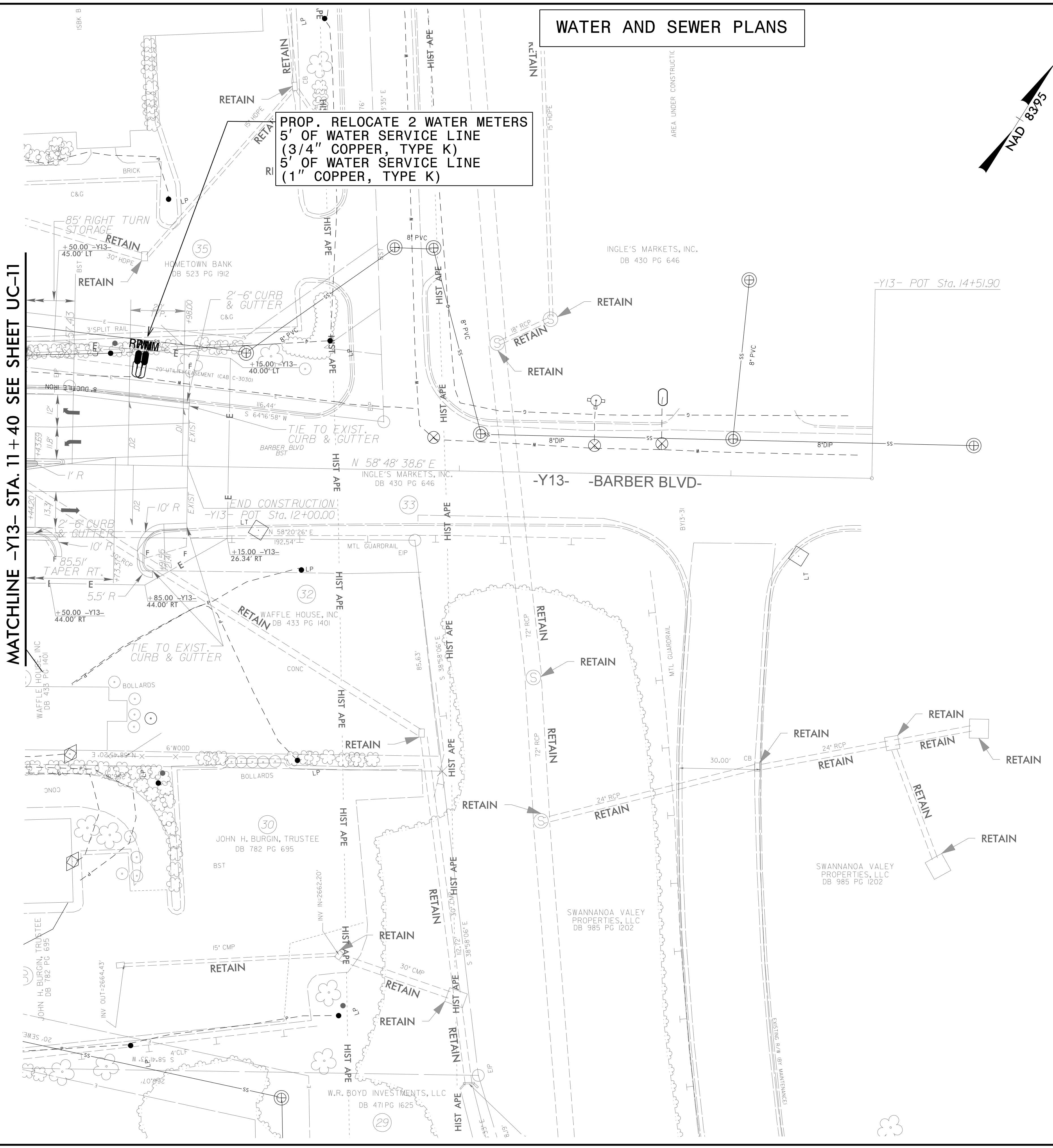
WATER AND SEWER PLANS

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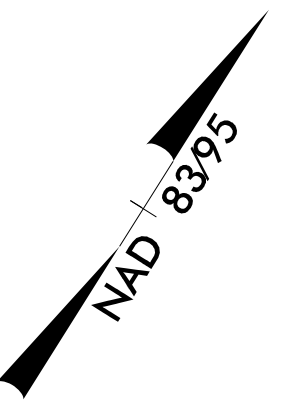
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| PROJECT REFERENCE NO. | SHEET NO. |
| U-5839 | UC-19 |
| DESIGNED BY: CDB | |
| DRAWN BY: ASW | |
| CHECKED BY: CLS | |
| APPROVED BY: CDB | |
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UTILITY CONSTRUCTION



**PROP. RELOCATE 2 WATER METERS
 5' OF WATER SERVICE LINE
 (3/4" COPPER, TYPE K)
 5' OF WATER SERVICE LINE
 (1" COPPER, TYPE K)**

MATCHLINE -Y13- STA. 11 + 40 SEE SHEET UC-11



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