

09_08/2019

T.I.P. NO.	SHEET NO.
U-5813	UC-1

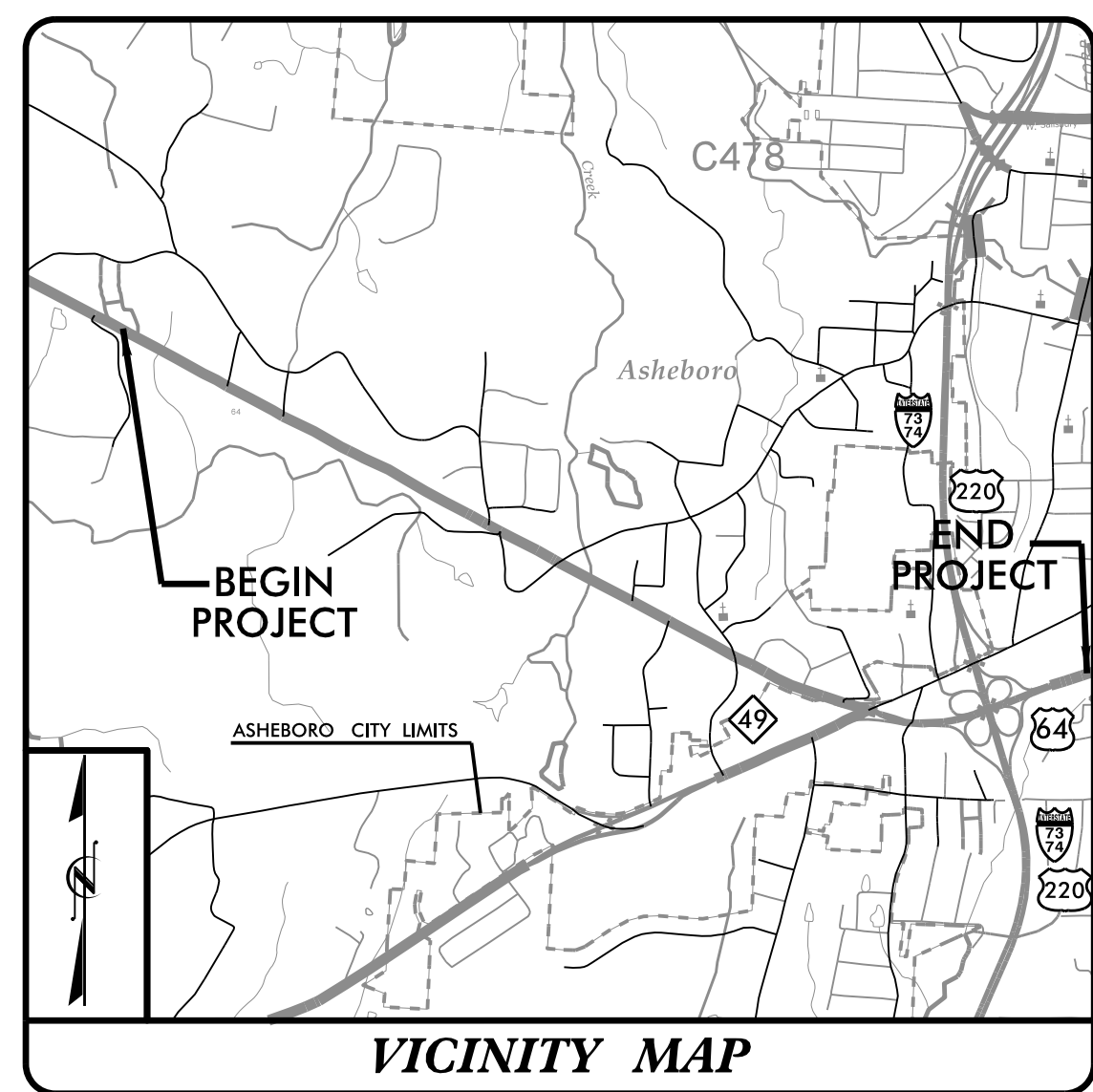
TIP PROJECT: U-5813

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

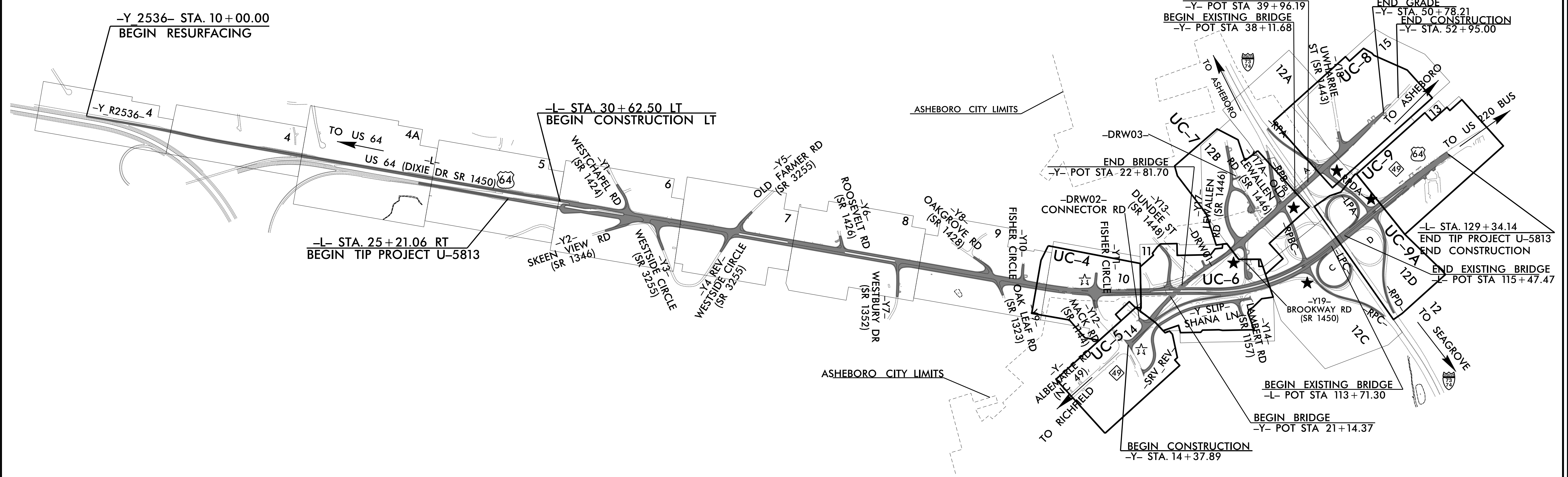
UTILITY CONSTRUCTION PLANS
RANDOLPH COUNTY

LOCATION: US 64 FROM ASHEBORO BYPASS TO
EAST OF I-73/1-74/US 220 TO ASHEBORO

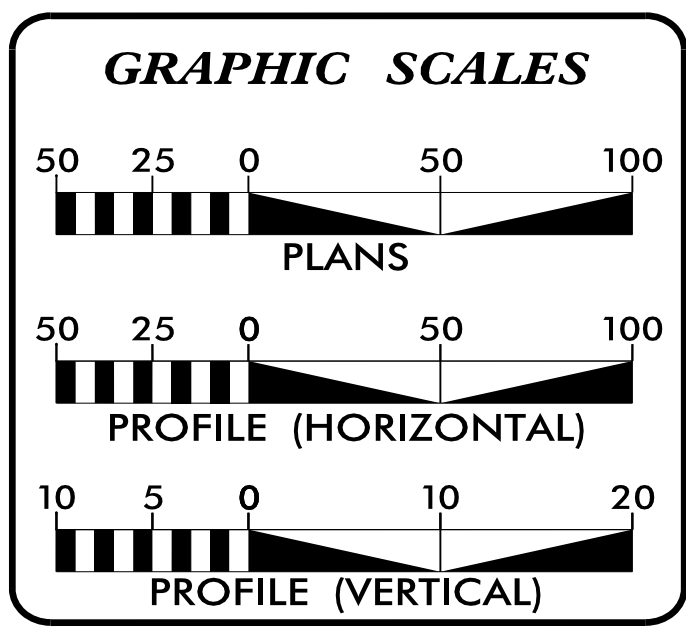
TYPE OF WORK: WATER LINE AND
SANITARY SEWER RELOCATIONS



- ☆ EXISTING SIGNAL
- ★ PROPOSED SIGNAL



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



INDEX OF SHEETS

SHEET NO.:	DESCRIPTION:
UC-1	TITLE SHEET
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UC-4 THRU UC-9A	UTILITY PLAN SHEETS
UC-10 THRU UC-12	SAN. SEWER PROFILE SHEETS
UC-13 THRU UC-16	WATER LINE PROFILE SHEETS

WATER AND SEWER OWNERS ON PROJECT

(A) WATER - CITY OF ASHEBORO
(B) SANITARY SEWER - CITY OF ASHEBORO

PREPARED IN THE OFFICE OF
Weston & Sampson
2052 Energy Drive
Apex, NC 27502
Phone: 919.297.0220
NC License: C-46947

FOR
HNTB
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No. C-1554

KEVIN ZDEB, PE PROJECT ENGINEER
KEVIN HUTCHENS, PE PROJECT DESIGN ENGINEER

SEAL

11/20/2023

DIVISION OF HIGHWAYS
DIVISION 8
121 DOT DRIVE
GARHAGE, NC 28327
PHONE (910) 773-8000
FAX (910) 947-3873

REUBEN BLAKLEY, PE DIVISION CONSTRUCTION ENGR
TRAVIS L. MORGAN, PE DIVISION UTILITY ENGINEER
JAMIE YOW DIVISION UTILITY COORDINATOR

9/12/2023
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STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. U-5813	SHEET NO. UC-2
Weston & Sampson WSE of North Carolina, PC 598 East Chatham Street Suite 137 Phone: 919.297.0220	
NC License: C-4647 Cary, NC 27511 Fax: 919.297.0221	

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	
11 1/4 Degree Bend	
22 1/2 Degree Bend	
45 Degree Bend	
90 Degree Bend	
Plug	
Tee	
Cross	
Reducer	
Gate Valve	
Butterfly Valve	
Tapping Valve	
Line Stop	
Line Stop with Bypass	
Blow Off	
Fire Hydrant	
Relocate Fire Hydrant	
Remove Fire Hydrant	REM FH
Water Meter	
Relocate Water Meter	
Remove Water Meter	REM WM
Water Pump Station	
RPZ Backflow Preventer	
DCV Backflow Preventer	
Relocate RPZ Backflow Preventer	
Relocate DCV Backflow Preventer	

PROPOSED SEWER SYMBOLS

Gravity Sewer Line (Sized as Shown)	
Force Main Sewer Line (Sized as Shown)	
Manhole (Sized per Note)	
Sewer Pump Station	

PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

Power Pole	
Telephone Pole	
Joint Use Pole	
Telephone Pedestal	
Utility Line by Others (Type as Shown)	
Trenchless Installation	
Encasement by Open Cut	
Encasement	

Thrust Block	
Air Release Valve	
Utility Vault	
Concrete Pier	
Steel Pier	
Plan Note	
Pay Item Note	

EXISTING UTILITIES SYMBOLS

Power Pole		*Underground Power Line	
Telephone Pole		*Underground Telephone Cable	
Joint Use Pole		*Underground Telephone Conduit	
Utility Pole		*Underground Fiber Optics Telephone Cable	
Utility Pole with Base		*Underground TV Cable	
H-Frame Pole		*Underground Fiber Optics TV Cable	
Power Transmission Line Tower		*Underground Gas Pipeline	
Water Manhole		Aboveground Gas Pipeline	
Power Manhole		*Underground Water Line	
Telephone Manhole		Aboveground Water Line	
Sanitary Sewer Manhole		*Underground Gravity Sanitary Sewer Line	
Hand Hole for Cable		Aboveground Gravity Sanitary Sewer Line	
Power Transformer		*Underground SS Forced Main Line	
Telephone Pedestal		Underground Unknown Utility Line	
CATV Pedestal		SUE Test Hole	
Gas Valve		Water Meter	
Gas Meter		Water Valve	
Located Miscellaneous Utility Object		Fire Hydrant	
Abandoned According to Utility Records	AATUR	Sanitary Sewer Cleanout	
End of Information	E.O.I.		

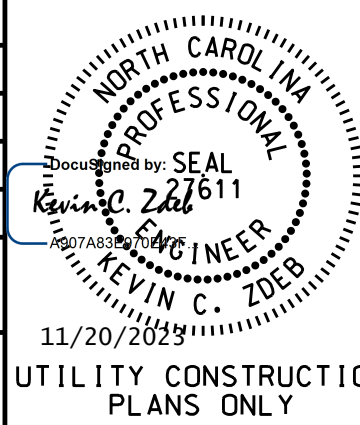
*For Existing Utilities
 Utility Line Drawn from Record (Type as Shown)
 Designated Utility Line (Type as Shown)

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UTILITY CONSTRUCTION

Weston & Sampson
 WSE of North Carolina, PC
 2052 Energy Drive
 Phone: 919.297.0220

NC Licensee:
 C-4847
 Apex, NC 27502
 westonandsampson.com

PROJECT REFERENCE NO.	SHEET NO.
U-5813	UC-3
DESIGNED BY: KCZ	
DRAWN BY: KCZ	
CHECKED BY: KSH	
APPROVED BY: KCZ	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SECTION PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

GENERAL NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S (THE DEPARTMENT) "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2024.
2. THE EXISTING WATER AND SEWER UTILITIES BELONG TO THE CITY OF ASHEBORO (COA).

 CONTACT: MICHAEL RHONEY (WATER)
 PHONE: 336-626-1201 EXT. 2358

 CONTACT: MICHAEL LEONARD (SAN. SEWER)
 PHONE: 336-626-1201 EXT. 2328
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 ENVIRONMENTAL QUALITY, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.
4. THE UTILITY OWNER OWNS THE EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY THE DEPARTMENT. THE DEPARTMENT OWNS THE CONSTRUCTION CONTRACT AND HAS ADMINISTRATIVE AUTHORITY. COMMUNICATIONS AND DECISIONS BETWEEN THE CONTRACTOR AND UTILITY OWNER ARE NOT BINDING UPON THE DEPARTMENT OR THIS CONTRACT UNLESS AUTHORIZED BY THE ENGINEER. AGREEMENTS BETWEEN THE UTILITY OWNER AND CONTRACTOR FOR THE WORK THAT IS NOT PART OF THIS CONTRACT OR IS SECONDARY TO THIS CONTRACT ARE ALLOWED, BUT ARE NOT BINDING UPON THE DEPARTMENT.
5. PROVIDE ACCESS FOR THE DEPARTMENT PERSONNEL AND THE OWNER'S REPRESENTATIVES TO ALL PHASES OF CONSTRUCTION. NOTIFY DEPARTMENT PERSONNEL AND THE UTILITY OWNER TWO WEEKS PRIOR TO COMMENCEMENT OF ANY WORK AND ONE WEEK PRIOR TO SERVICE INTERRUPTION. KEEP UTILITY OWNERS' REPRESENTATIVES INFORMED OF WORK PROGRESS AND PROVIDE OPPORTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.

6. THE PLANS DEPICT THE BEST AVAILABLE INFORMATION FOR THE LOCATION, SIZE, AND TYPE OF MATERIAL FOR ALL EXISTING UTILITIES. MAKE INVESTIGATIONS FOR DETERMINING THE EXACT LOCATION, SIZE, AND TYPE OF 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.

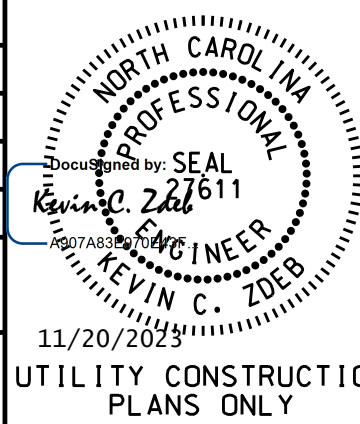
PROJECT SPECIFIC NOTES:

1. CONTRACTOR'S ATTENTION IS DIRECTED TO THE UTILITY CONSTRUCTION SPECIAL PROVISIONS PROVIDED ALONG WITH THIS PLAN SET.
2. THERE ARE EXISTING WATER LINES WITHIN THIS PROJECT CORRIDOR THAT ARE OF ASBESTOS CEMENT (AC) MATERIAL. THESE WATER LINES ARE TO BE REMOVED ONCE THE NEW WATER LINES ARE PLACED INTO SERVICE. ALL WORKERS SHALL BE ADEQUATELY TRAINED TO WORK WITH ASBESTOS CEMENT PIPE AND WEAR PROPER PPE AT ALL TIMES WHEN WORKING WITH AC PIPE. ALL REMOVED AC PIPE SHALL BE BAGGED/WAPPED IN PLASTIC COVERING AND PLACED IN A SEPARATE DUMPSTER SPECIFICALLY FOR AC PIPE ONLY. THE DUMPSTER SHALL BE TRANSPORTED TO A LOCAL HAZARDOUS WASTE LANDFILL THAT ACCEPTS AC PIPE. CONTRACTOR SHALL PROVIDE HAULING TICKETS TO THE RESIDENT ENGINEER CERTIFYING THAT THE AC PIPE WAS DISPOSED OF AT THE APPROPRIATE LANDFILL. THIS WORK SHALL BE CONDUCTED IN ACCORDANCE WITH ALL INDUSTRY, LOCAL, STATE, AND FEDERAL REQUIREMENTS.
3. CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107, AND 1550 OF THE STANDARD SPECIFICATIONS CONCERNING TRENCHLESS INSTALLATION. IT IS THE 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.
4. WATER LINE 4-INCHES AND LARGER SHALL BE DUCTILE IRON PIPE AND BE EITHER THICKNESS CLASS 50 OR PRESSURE CLASS 350.
5. 1.5-INCH AND 2-INCH WATER LINE SHALL BE PVC PIPE, CLASS 315 SDR-13.5 WITH ELASTOMERIC GASKET COUPLINGS. PIPE AND FITTINGS SHALL BE PRODUCED BY THE SAME MANUFACTURER. PIPE SHALL BE NSF CERTIFIED AND BEAR THE NSF LOGO.
6. VALVES ON WATER LINE 4-INCH THROUGH 12-INCH SHALL BE GATE VALVES.
7. VALVES ON 1.5-INCH AND 2-INCH WATER LINE SHALL BE BRASS BALL TYPE CURB VALVES.
8. PVC PIPE MANUFACTURED MORE THAN 12 MONTHS BEFORE INSTALLATION DATE WILL NOT BE ACCEPTED.
9. ALL PVC PIPE INSTALLED ON THE PROJECT SHALL BE INSTALLED WITH A CONTINUOUS TRACER WIRE FOR LOCATION PURPOSES BY MEANS OF AN ELECTONIC TRACING DEVICE.
10. ALL FORCE MAIN PIPE INSTALLED ON THE PROJECT SHALL BE OF THE SAME SIZE AND PIPE MATERIAL AS THE EXISTING PIPE. CONTRACTOR SHALL CONFIRM SIZE AND PIPE MATERIAL BEFORE STARTING ANY WORK.
11. GRAVITY SEWER 4-INCHES AND LARGER SHALL BE DUCTILE IRON PIPE AND BE EITHER THICKNESS CLASS 50 OR PRESSURE CLASS 350, OR PVC SDR-35.
12. GRAVITY SEWER SERVICE LINES 4-INCH AND 6-INCH SHALL BE SCHEDULE 40 PVC-DWV. SERVICE LINES SHALL BE INSTALLED WITH AT LEAST THE FOLLOWING MINIMUM SLOPES: 2% SLOPE FOR 4-INCH PIPE; 1% SLOPE FOR 6-INCH PIPE.
13. EXISTING PVC FORCE MAIN SEWERS SHALL BE EXCAVATED AND FIELD BENT AS NEEDED TO PROVIDE FOR HORIZONTAL AND/OR VERTICAL TRANSITION AND TIE-IN TO PROPOSED PIPE, AS DIRECTED BY THE RESIDENT ENGINEER.
14. ALL WATER LINE FITTINGS 4-INCH THROUGH 24-INCH DIAMETER SHALL BE DUCTILE IRON WITH MECHANICAL JOINTS OR RESTRAINED JOINTS AND HAVE A MINIMUM PRESSURE RATING OF 350 PSI.
15. ALL PROPOSED FITTINGS (BENDS, TEES, CROSSES, REDUCERS, PLUGS, ETC.) SHALL BE ADEQUATELY RESTRAINED BY THE USE OF RESTRAINED JOINT CONSTRUCTION AND/OR CAST IN PLACE CONCRETE THRUST RESTRAINTS AS DETAILED ON THESE DRAWINGS, OR AS DIRECTED BY THE RESIDENT ENGINEER.
16. ALL PROPOSED WATER LINE AND SANITARY SEWER PIPE SHALL BE DUCTILE IRON PIPE WHERE INSTALLED WITH: LESS THAN 3 FEET OF COVER; OR GREATER THAN 20 FEET OF COVER; OR LESS THAN 2 FEET OF SEPARATION FROM A BOX CULVERT.

UTILITY CONSTRUCTION

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PROJECT REFERENCE NO. U-5813	SHEET NO. UC-3A
DESIGNED BY: K CZ	
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
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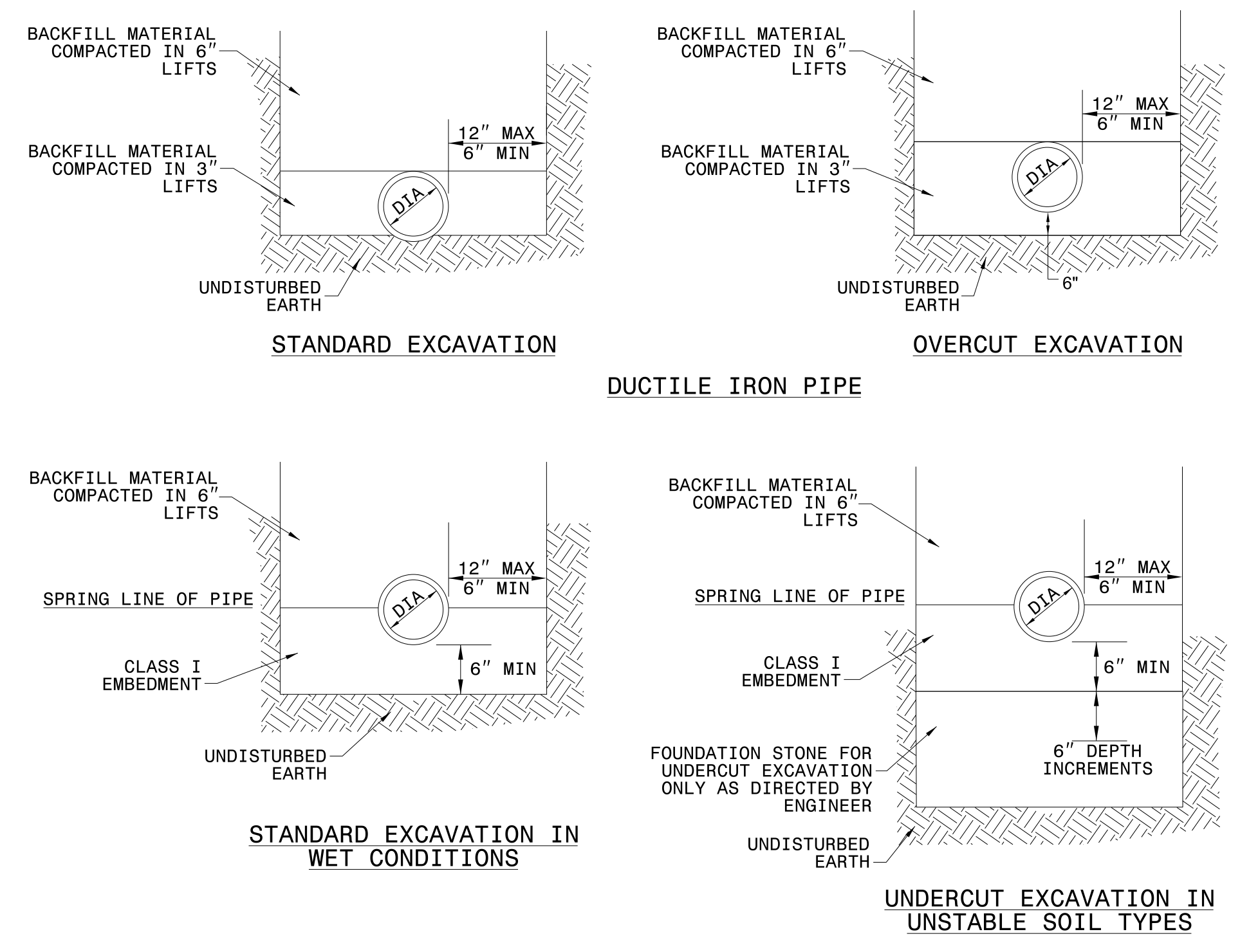
PROJECT SPECIFIC NOTES (CONT'D):

- 17. DUCTILE IRON PIPE SHALL BE EITHER PUSH-ON JOINT, MECHANICAL JOINT, OR RESTRAINED JOINT CONSTRUCTION.
- 18. CARRIER PIPE INSIDE OF STEEL ENCASMENT PIPES SHALL BE DUCTILE IRON PIPE WITH RESTRAINED JOINT CONSTRUCTION.
- 19. ALL PROPOSED WATER LINE AND SANITARY SEWER PIPE SHALL BE INSTALLED WITH A MINIMUM OF 3 FEET OF COVER, UNLESS OTHERWISE SHOWN ON THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER.
- 20. FLEXIBLE COUPLINGS SHALL NOT BE USED AS TRANSITION COUPLINGS BETWEEN DIFFERENT PIPE TYPES.
- 21. CONTRACTOR SHALL COORDINATE WITH THE UTILITY OWNER AND ALL PROPERTY OWNERS TO DETERMINE THE LOCATION OF ALL EXISTING WATER SERVICE LINES AND SEWER SERVICE LINES BEFORE STARTING CONSTRUCTION.
- 22. IN THE EVENT THAT EXCESSIVE GROUNDWATER OR SPRINGS ARE ENCOUNTERED DURING PIPE CONSTRUCTION, THE CONTRACTOR SHALL EMPLOY ALL METHODS NECESSARY TO KEEP THE TRENCHES DRY, AS DIRECTED BY THE RESIDENT ENGINEER.
- 23. WATER SERVICE LINES SHALL BE SEAMLESS COPPER TYPE K AS SPECIFIED BY ASTM B88.
- 24. ALL STAINLESS STEEL FASTENERS SHALL BE OF GRADE 316.
- 25. EXISTING WATER METERS TO REMAIN SHALL BE RECONNECTED TO THE EXISTING / PROPOSED WATER LINE WITH NEW WATER SERVICE LINES.
- 26. NEW AND RELOCATED WATER METERS SHALL BE CONNECTED TO THE EXISTING / PROPOSED WATER LINE WITH NEW WATER SERVICE LINES.
- 27. NEW AND RELOCATED WATER METERS SHALL BE INSTALLED WITH THE BACK OF THE METER BOX (CUSTOMER SIDE) AT THE RIGHT-OF-WAY LINE OR PUE LINE, UNLESS OTHERWISE DIRECTED BY THE RESIDENT ENGINEER.
- 28. WATER METER BOXES SHALL NOT BE INSTALLED WITHIN A PAVED AREA, DRIVEWAY, OR SIDEWALK, UNLESS OTHERWISE DIRECTED BY THE RESIDENT ENGINEER AND APPROVED BY THE UTILITY OWNER.

- 22. CONTRACTOR SHALL RECONNECT CUSTOMER SIDE WATER SERVICE LINE TO THE NEW OR RELOCATED WATER METER. THIS WORK IS INCIDENTAL TO THE PAY ITEM. ALL WORK SHALL BE CONDUCTED WITH LIKE PIPE MATERIALS AS THE EXISTING PIPES UNLESS THE EXISTING MATERIALS ARE FOUND TO BE UNSUITABLE (I.E. GALVANIZED OR LEAD), THEN CONTRACTOR SHALL USE WATER SERVICE PIPE AND TUBING AS NOTED ABOVE.
- 23. EXISTING WATER SERVICE LINES TO BE ABANDONED SHALL BE DONE IN ACCORDANCE WITH SECTION 1530 OF THE NCDOT SPECIFICATIONS OR AS DIRECTED BY THE RESIDENT ENGINEER.
- 24. ALL HYDRANTS, PROPOSED OR RELOCATED, SHALL BE INSTALLED 2 FEET BEHIND THE SIDEWALK, OR WITHIN ONE FOOT OF THE R/W LINE, OR AS DIRECTED BY THE RESIDENT ENGINEER.
- 25. HYDRANTS AND WATER METERS LABELLED TO BE REMOVED SHALL NOT BE USED AS NEW MATERIALS IN THE PROPOSED CONSTRUCTION UNLESS APPROVED BY THE UTILITY OWNER.
- 26. EXISTING HYDRANTS AND WATER METERS TO BE REMOVED AND/OR RELOCATED SHALL BE RETURNED TO THE UTILITY OWNER FOR INSPECTION. CONTRACTOR SHALL DELIVER THESE UTILITY ITEMS TO A MUTUALLY AGREED UPON LOCATION. ALL OTHER PARTS, PIPING, AND METER BOXES REMOVED FROM THE SYSTEM SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AND BE PROPERLY DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.
- 27. PROPOSED SANITARY CLEAN OUTS SHALL BE INSTALLED AT THE RIGHT-OF-WAY LINE, UNLESS OTHERWISE DIRECTED BY THE RESIDENT ENGINEER.
- 28. EXISTING SANITARY SEWER CLEANOUTS TO REMAIN SHALL BE RECONNECTED TO THE PROPOSED SANITARY SEWER PIPE WITH NEW SEWER SERVICE LINES.
- 29. CONTRACTOR SHALL RECONNECT THE EXISTING CUSTOMER SIDE SEWER SERVICE LINE TO THE NEW SANITARY SEWER CLEAN OUT. THIS WORK IS INCIDENTAL TO THE PAY ITEM. ALL WORK SHALL BE CONDUCTED WITH LIKE PIPE MATERIALS AS THE EXISTING PIPE.

- 30. EXISTING SEWER SERVICE LINES TO BE ABANDONED SHALL BE DONE IN ACCORDANCE WITH SECTION 1530 OF THE NCDOT SPECIFICATIONS OR AS DIRECTED BY THE RESIDENT ENGINEER.
- 31. EXISTING SEWER SERVICE LINES ARE ASSUMED TO BE 4-INCH DIAMETER PIPE.
- 32. WHERE A NEW MANHOLE IS INSTALLED ALONG A RUN OF EXISTING VITRIFIED CLAY PIPE (VCP) GRAVITY SEWER MAIN, THE EXISTING VCP SHALL BE REPLACED WITH EITHER PVC PIPE OR D.I. PIPE FOR A MINIMUM OF 10 LF FROM THE MANHOLE.
- 33. SANITARY MANHOLES SHALL BE PRECAST REINFORCED CONCRETE WITH A MONOLITHIC BASE AND 5-INCH THICK WALLS.
- 34. ALL NEW SANITARY MANHOLES SHALL BE VACUUM TESTED FOR LEAKAGE IN THE PRESENCE OF A CITY INSPECTOR.
- 35. FORCE MAIN SEWER PIPE TIE-IN WORK SHALL BE DONE AT PERIODS OF LOW FLOW. CONTRACTOR SHALL COORDINATE SHUT DOWN OF THE AFFECTED PUMP STATION WITH THE PARCEL OWNER. CONTRACTOR SHALL OBTAIN A PUMP AND HAUL PERMIT AND HAVE OPERATION PLAN IN PLACE TO PUMP OUT THE WET WELL AND HAUL FLOW TO THE DOWNSTREAM MANHOLE AND REINTRODUCE THE FLOW INTO THE GRAVITY SYSTEM.
- 36. GRAVITY SEWER PIPE TIE-IN WORK SHALL BE DONE AT PERIODS OF LOW FLOW. CONTRACTOR SHALL COORDINATE TIMING OF THE WORK WITH THE CITY OF ASHEBORO. CONTRACTOR SHALL OBTAIN A PUMP AND HAUL PERMIT AND HAVE OPERATION PLAN IN PLACE TO PUMP OUT FLOW FROM A MANHOLE UPSTREAM OF THE TIE-IN WORK AND HAUL FLOW TO A MANHOLE DOWNSTREAM OF THE TIE-IN WORK AND REINTRODUCE THE FLOW INTO THE GRAVITY SYSTEM.
- 37. CONTRACTOR SHALL NOT OPERATE ANY VALVES ON THE EXISTING UTILITY SYSTEMS. CONTRACTOR SHALL CONTACT THE UTILITY OWNER TO CONDUCT STRATEGIC OPERATION OF VALVES FOR SERVICE INTERRUPTION IN ORDER TO PERFORM SPECIFIC WORK.
- 38. CONTRACTOR SHALL CONTACT THE UTILITY OWNER PRIOR TO PERFORMING SYSTEM FLUSHING OR BLOW-OFF OPERATIONS.

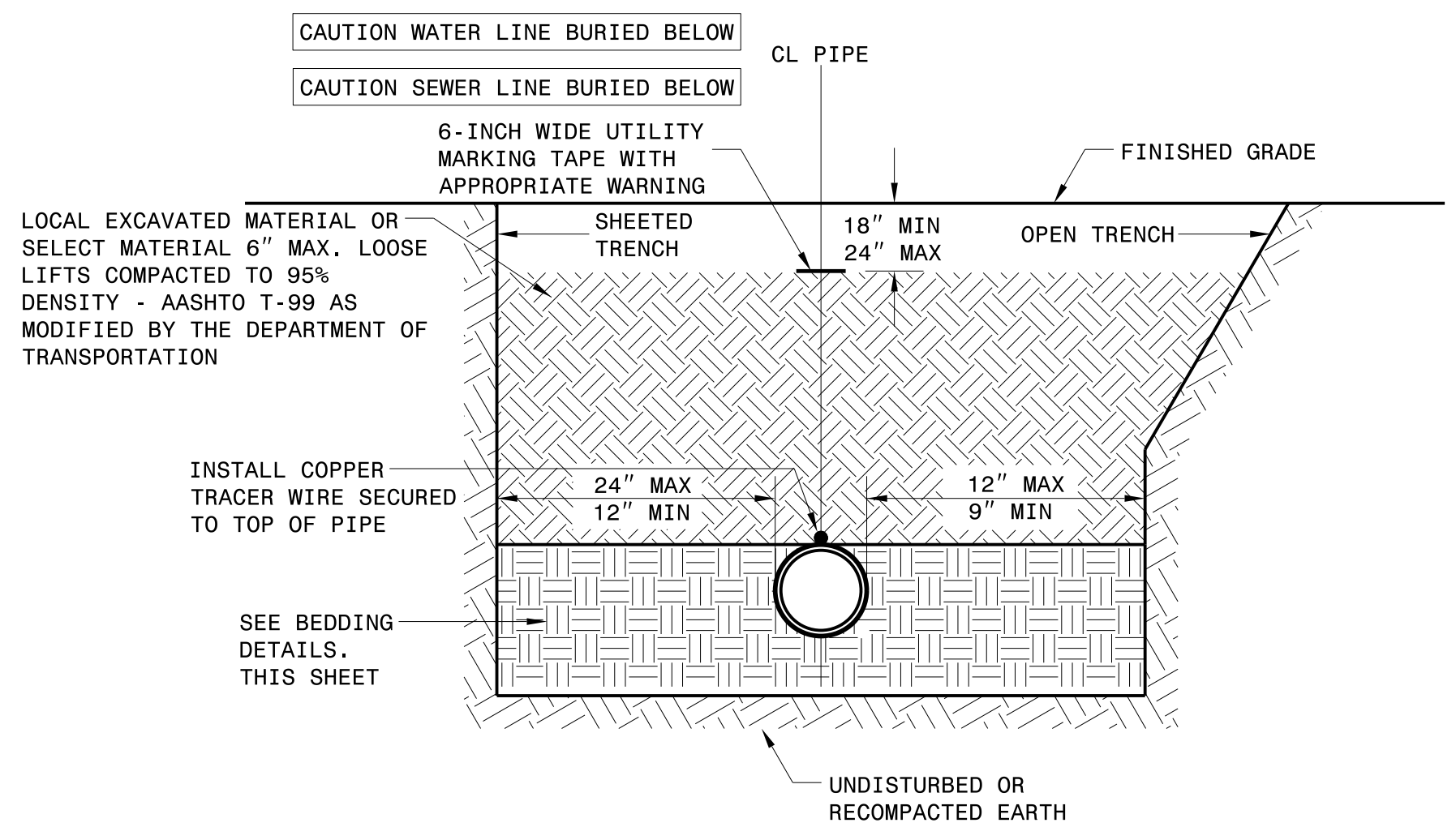
5/14/2013



UTILITY PIPE IN WET OR UNSTABLE CONDITIONS
ALL PIPE TYPES
(AS DIRECTED BY ENGINEER)

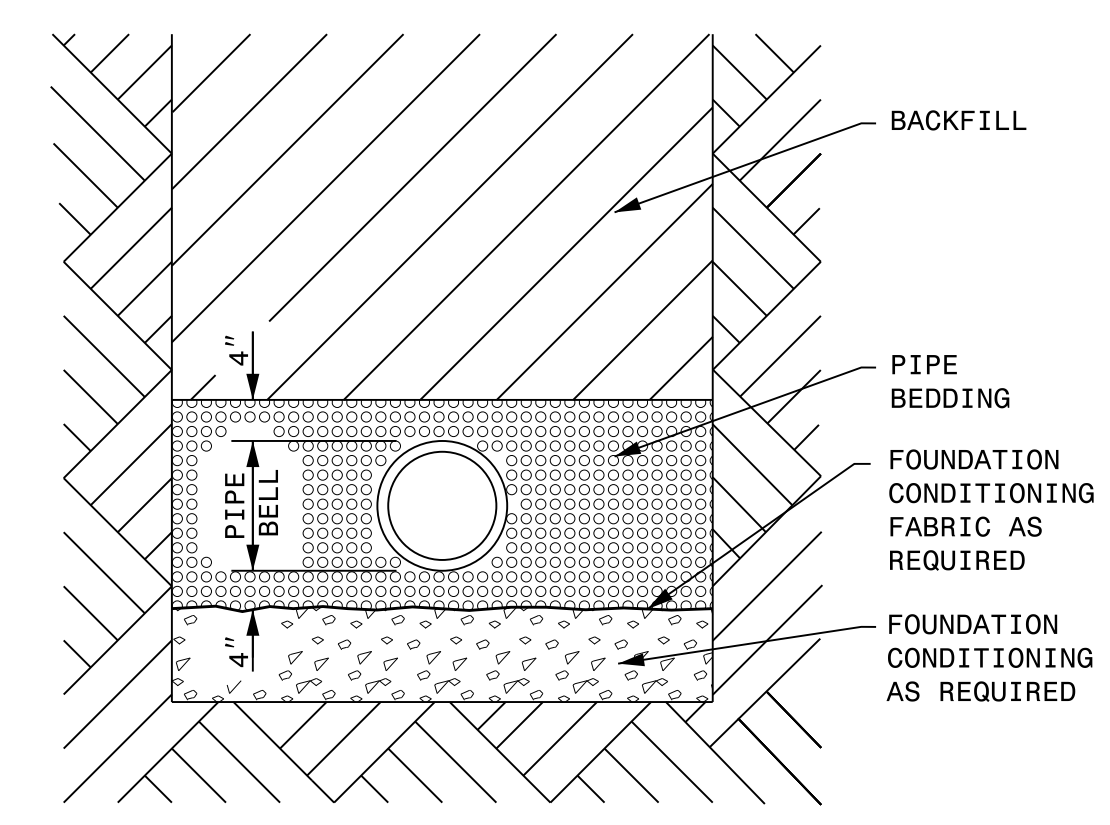
- NOTES:
- CONSTRUCTION OF TRENCHES SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL SAFETY AND HEALTH REGULATIONS WHICH HAVE JURISDICTION AT THE PROJECT SITE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH THE APPLICABLE REGULATIONS AND FOLLOW THEM ACCORDINGLY.
 - CLASS I EMBEDMENT SHALL BE NCDOT STANDARD # 67 STONE OR APPROVED EQUAL. FOUNDATION STONE SHALL BE NCDOT STANDARD # 57 OR # 67 STONE OR APPROVED EQUAL.

UTILITY PIPE TRENCH DETAILS



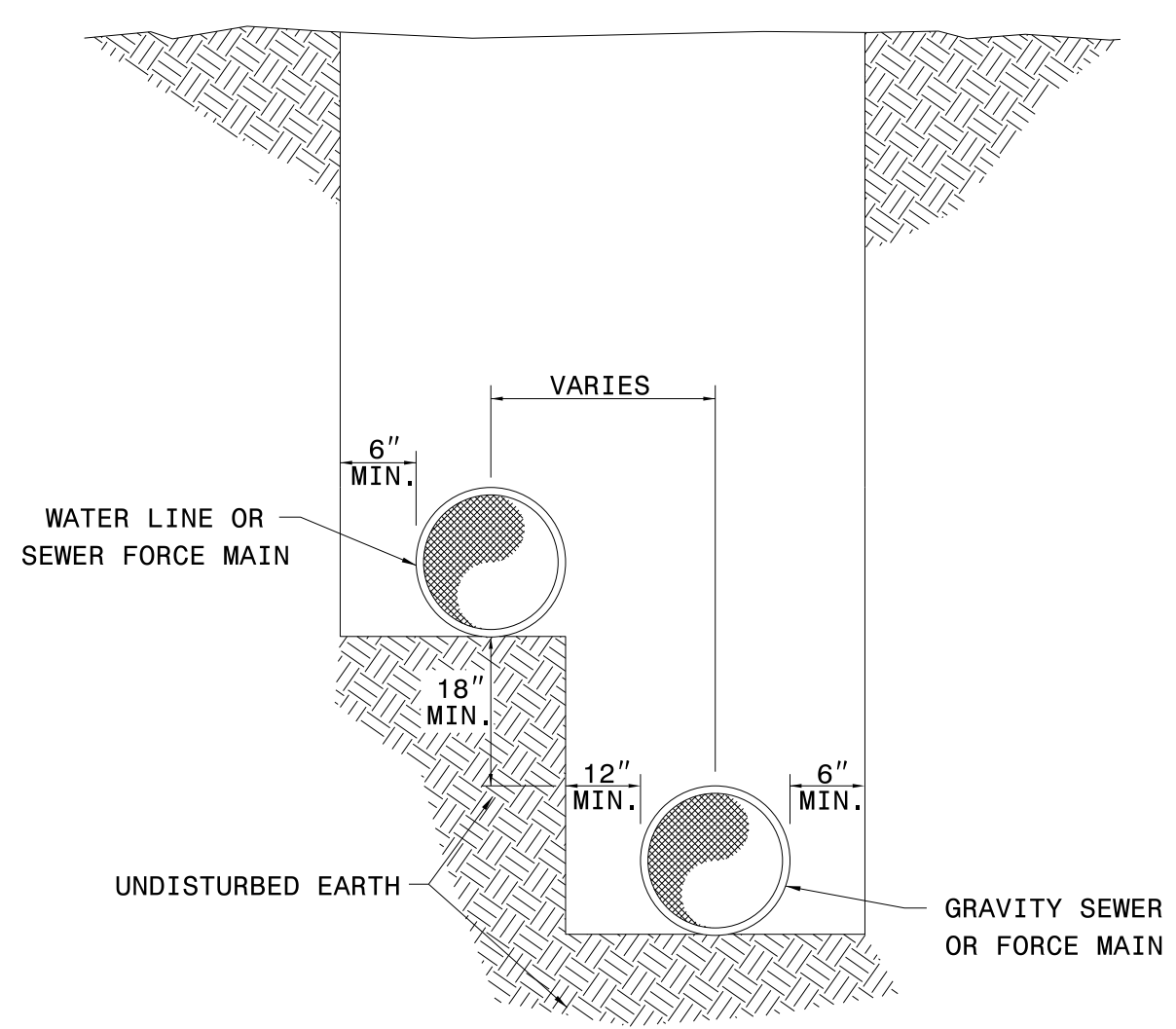
- NOTES:
- ALL SHORING & TRENCHING SHALL COMPLY WITH OSHA SAFETY STANDARDS FOR THE CONSTRUCTION INDUSTRY.
 - BELL HOLES NOT SHOWN.
 - ALL BACKFILL MATERIAL SHALL BE FREE OF ROCKS, FOREIGN MATERIAL, AND FROZEN EARTH.

GENERAL TRENCH DETAIL



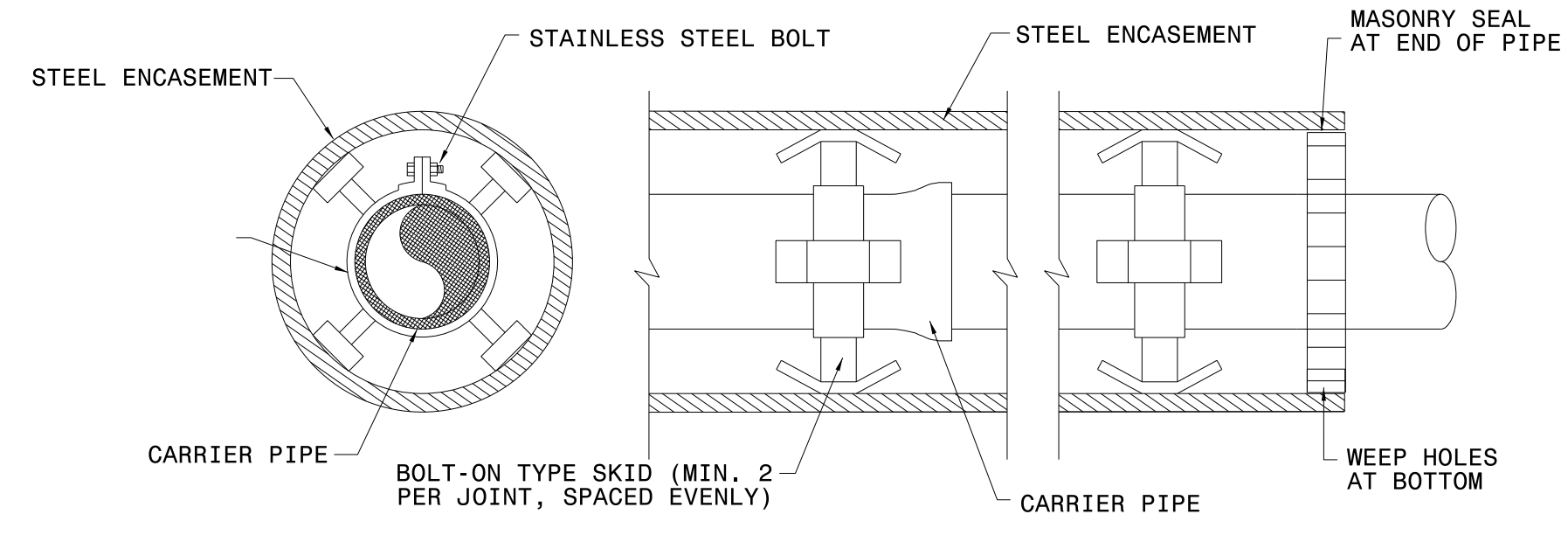
- NOTES:
- PLACE FOUNDATION CONDITIONING MATERIAL BELOW BEDDING IF REQUIRED, AS DIRECTED BY ENGINEER.
 - PIPE BEDDED IN NCDOT #57 STONE.
 - TRENCH BACKFILLED IN LOOSE 6" LAYERS COMPACTED TO TOP OF TRENCH USING LOCAL EXCAVATED MATERIAL IF APPROVED BY THE ENGINEER, OR SELECT MATERIAL. ALL MATERIAL SHALL 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.

BEDDING DETAIL FOR
POLYVINYL CHLORIDE (PVC) PIPE



- NOTES:
- CONSTRUCTION OF TRENCHES SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL SAFETY AND HEALTH REGULATIONS WHICH HAVE JURISDICTION AT THE PROJECT SITE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH THE APPLICABLE REGULATIONS AND FOLLOW THEM ACCORDINGLY.

TYPICAL TRENCHING DETAIL
TWO PIPES IN SAME TRENCH



SINGLE CARRIER PIPE ENCASEMENT DETAIL
STEEL ENCASEMENT PIPE DETAILS

- NOTES:
- STAINLESS STEEL "SPIDERS" SHALL BE USED FOR SUPPORT OF THE CARRIER PIPE WITHIN THE STEEL ENCASEMENT PIPE. SPIDERS MANUFACTURED BY CASCADE WATERWORKS MFG. COMPANY, CCI PIPELINE SYSTEMS, OR APPROVED EQUAL.
 - SINGLE CARRIER PIPE SHALL BE CENTERED AND RESTRAINED INSIDE ENCASEMENT PIPE.
 - SPIDERS FOR DOUBLE CARRIER PIPE INSTALLATION SHALL BE CCI PIPELINE SYSTEMS MODEL CSS8-04X08X24-CL, OR APPROVED EQUAL.
 - PROVIDE A MINIMUM OF 2 SPIDERS PER JOINT OF CARRIER PIPE, OR AS PER MANUFACTURER RECOMMENDATIONS.
 - THE SPIDERS SHALL BE SPACED EVENLY ALONG THE CARRIER PIPE SUCH THAT EACH SPIDER SUPPORTS THE SAME UNIT WEIGHT OF THE CARRIER MAIN.
 - CARRIER PIPE SHALL BE DUCTILE IRON RESTRAINED JOINT PIPE.
 - FORCE MAIN TRACING WIRE SHALL BE ROUTED INSIDE THE ENCASEMENT PIPE AT THE BOTTOM OF THE PIPE TO AVOID CONFLICT WITH PIPE REMOVAL.
 - REFER TO PLAN SHEETS AND PROFILE SHEETS FOR LENGTH AND DIAMETER OF PROPOSED STEEL ENCASEMENT PIPES FOR EACH CROSSING.
 - STEEL ENCASEMENT PIPES SHALL EXTEND A MINIMUM OF 3 FEET BEHIND THE BACK OF CURB OR AS SHOWN ON THE PLANS.
 - STEEL ENCASEMENT PIPES SHALL HAVE A SPECIFIED MINIMUM YIELD STRENGTH OF AT LEAST 35,000 PSI.
 - THE INSIDE DIAMETER OF THE ENCASEMENT PIPE SHALL BE AT LEAST 2 INCHES GREATER THAN THE LARGEST OUTSIDE DIAMETER OF THE CARRIER PIPE JOINTS OR COUPLINGS FOR CARRIER PIPE LESS THAN 6 INCHES IN DIAMETER; AND AT LEAST 4 INCHES GREATER FOR CARRIER PIPE 6 INCHES AND LARGER IN DIAMETER.
 - UNCOATED AND UNPROTECTED STEEL ENCASEMENT PIPE SHALL HAVE A MINIMUM WALL THICKNESS PER THE O.D. PIPE SIZE NOTED BELOW:
0.280 INCH FOR 6.625"
0.250 INCH FOR 8.625"; 10.75"; 12.75"
0.250 INCH FOR 14" TO 24"
0.312 INCH FOR 28" TO 30"
0.375 INCH FOR 36"
0.500 INCH FOR 42"

GENERAL UTILITY DETAILS

PROJECT REFERENCE NO. U-5813	SHEET NO. UC-3B
DESIGNED BY: KCZ	
DRAWN BY: KCZ	
CHECKED BY: KSH	
APPROVED BY: KCZ	
REVISID:	11/20/2013
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	UTILITY CONSTRUCTION PLANS ONLY
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

UTILITY CONSTRUCTION

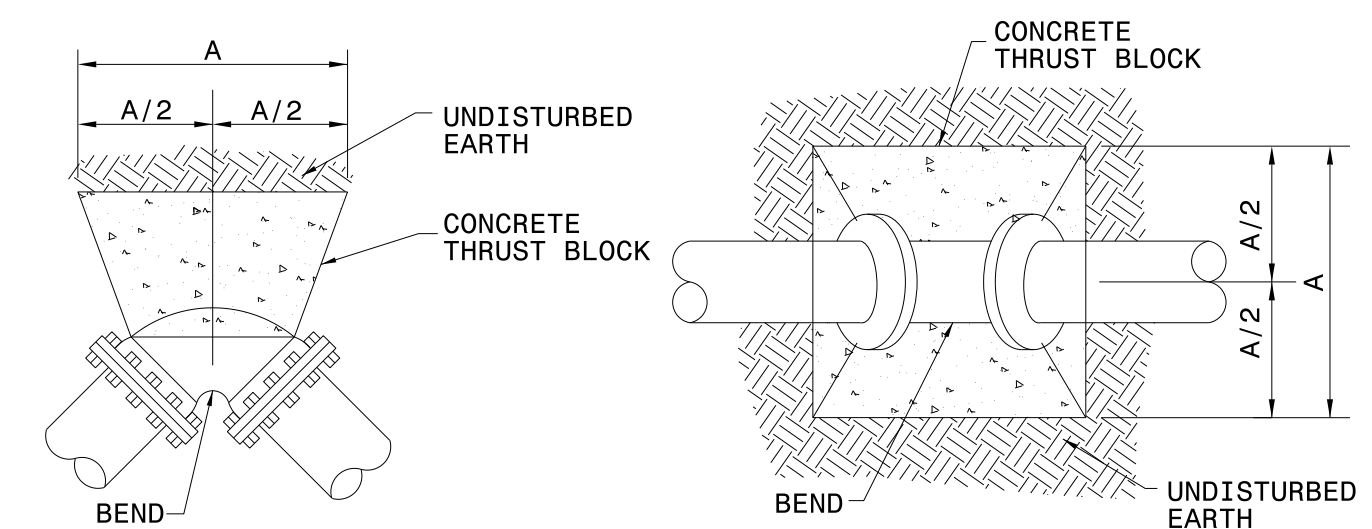
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

Weston & Sampson
WSE of North Carolina, PC
2052 Energy Drive
Phone: 919.297.0220

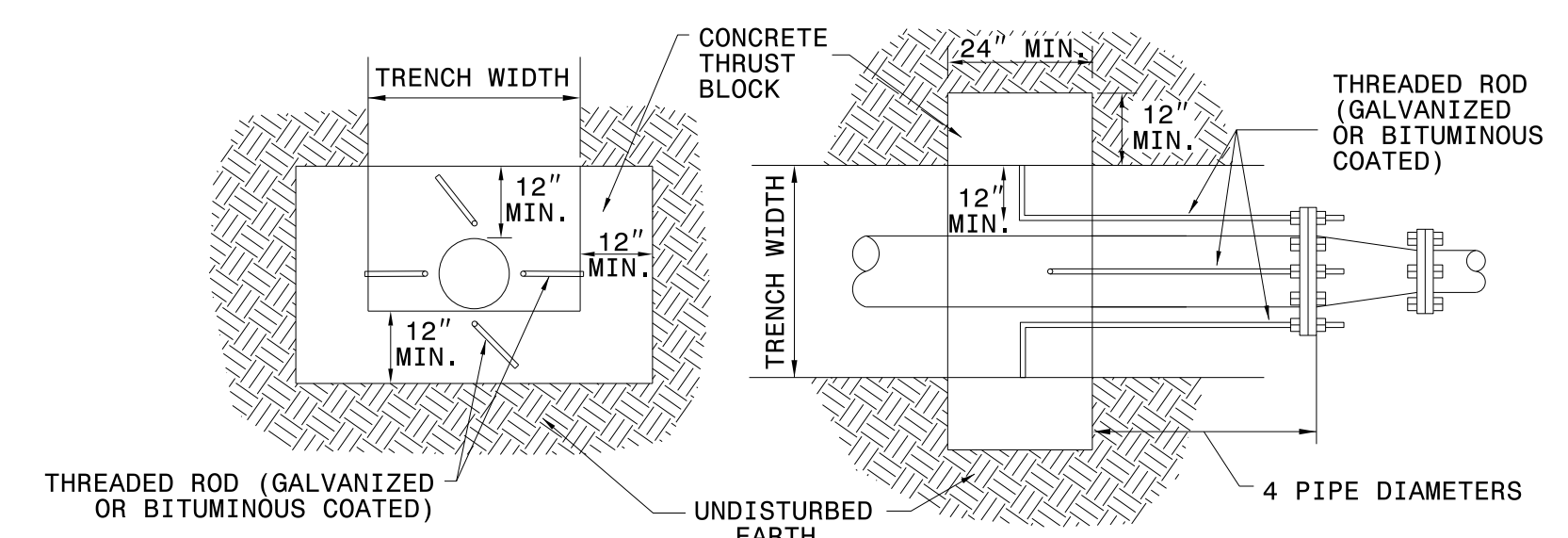
NC License: C-4847
Apex, NC 27502
westonandsampson.com

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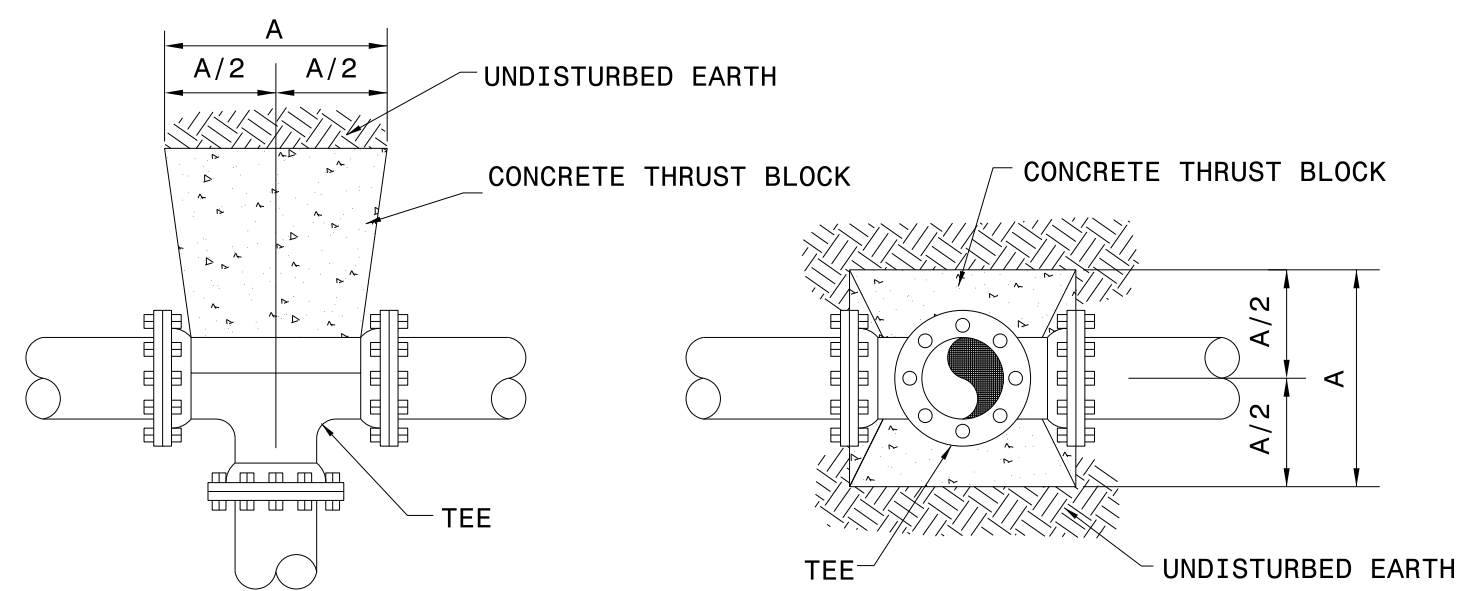
5/14/09



TYPICAL THRUST BLOCK FOR BENDS



TYPICAL THRUST BLOCK FOR REDUCERS



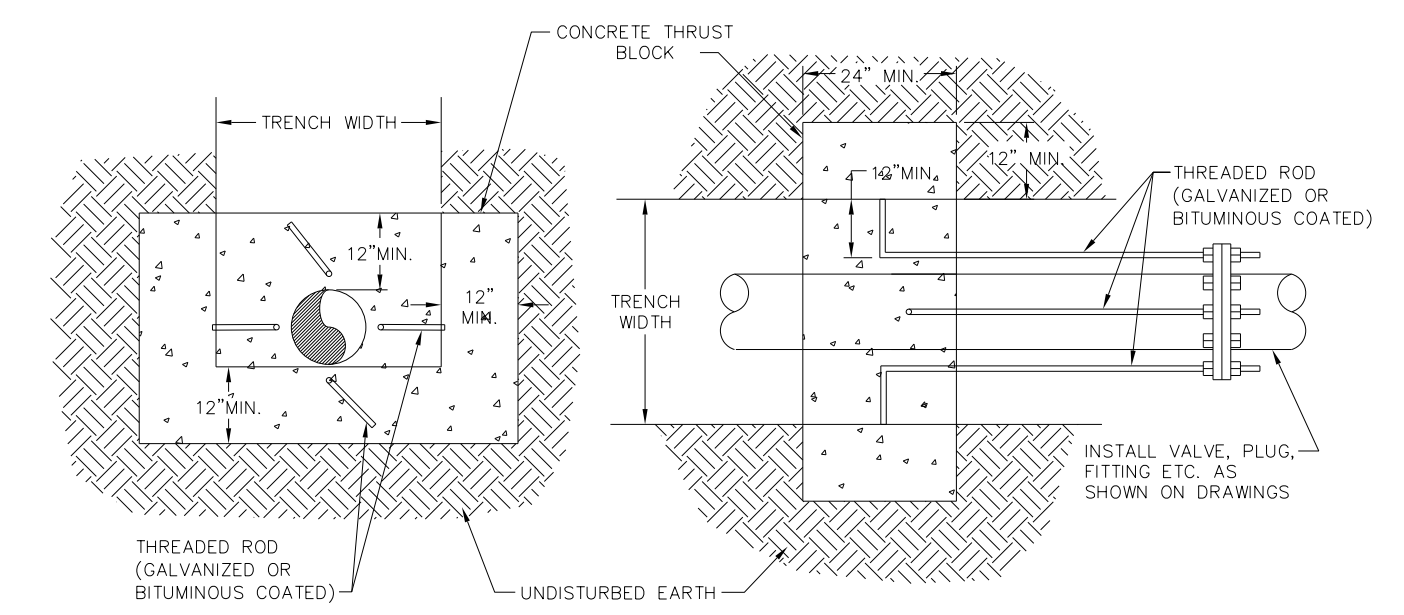
TYPICAL THRUST BLOCK FOR TEES

SIZE	11-1/4" BEND	22-1/2" BEND	45° BEND	90° BEND	TEE	PLUG
2-6	12	12	12	16	16	14
8	12	12	16	22	22	18
10	12	14	20	28	28	22
12	12	18	24	32	32	28
14	14	20	28	38	38	32
16	16	22	32	42	42	36
18	18	26	36	48	48	40
20	20	28	40	52	52	44
24	24	34	46	64	64	54
30	30	42	58	78	78	66
36	36	50	70	94	94	80
42	42	58	80	108	108	92
48	46	66	90	124	124	104

THRUST BLOCK DIMENSION "A"

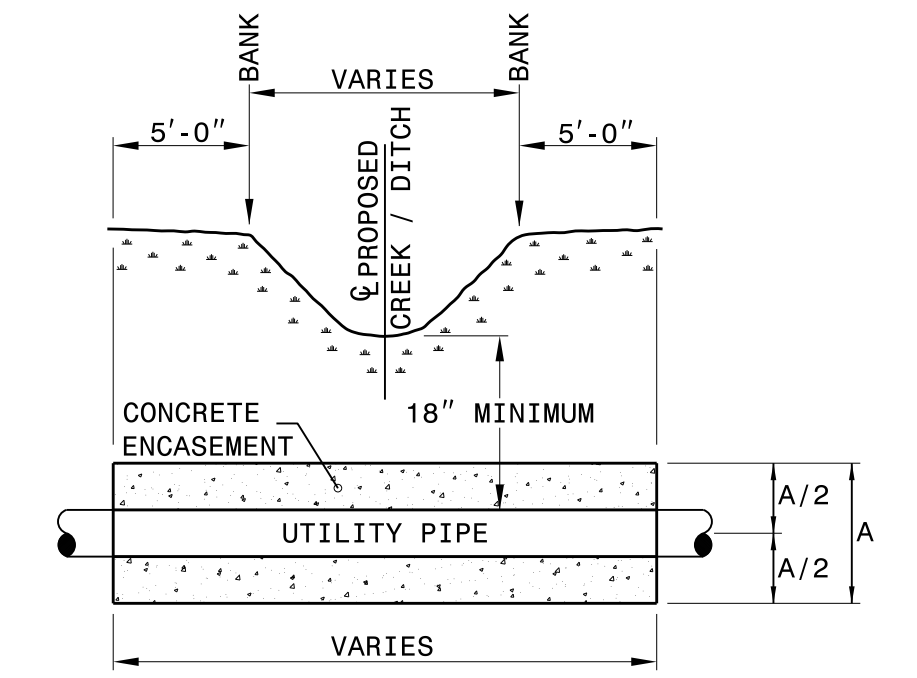
- NOTES:
- FITTING JOINTS SHALL NOT BE POURED IN CONCRETE OR HAVE CONCRETE SPILLED ON THE BOLTS OR NUTS. THE FITTING SHALL BE WRAPPED IN A LAYER OF POLYETHYLENE PLASTIC PRIOR TO POURING THE THRUST BLOCK.
 - ROD AND EYE BOLT DIAMETER SHALL BE A MINIMUM OF 3/4" AND SHALL MATCH THE SIZE OF THE BOLT PROVIDED WITH THE FITTING.
 - CONTRACTOR SHALL REPLACE FITTING BOLTS WITH THREADED ROD FOR 1/2 OF THE BOLTS SUPPLIED WITH EACH FITTING. RODS SHALL BE EQUALLY SPACED.

THRUST BLOCK DETAILS



- NOTES:
- FITTING JOINTS SHALL NOT BE POURED IN CONCRETE OR HAVE CONCRETE SPILLED ON THE BOLTS OR NUTS. THE FITTING SHALL BE WRAPPED IN A LAYER OF POLYETHYLENE PLASTIC PRIOR TO POURING THE THRUST BLOCK.
 - ROD AND EYE BOLT DIAMETER SHALL BE A MINIMUM OF 3/4" AND SHALL MATCH THE SIZE OF THE BOLT PROVIDED WITH THE FITTING.
 - CONTRACTOR SHALL REPLACE FITTING BOLTS WITH THREADED ROD FOR 1/2 OF THE BOLTS SUPPLIED WITH EACH FITTING. RODS SHALL BE EQUALLY SPACED.

TYPICAL DEADMAN
REVISION DATE - NOVEMBER 3, 2008



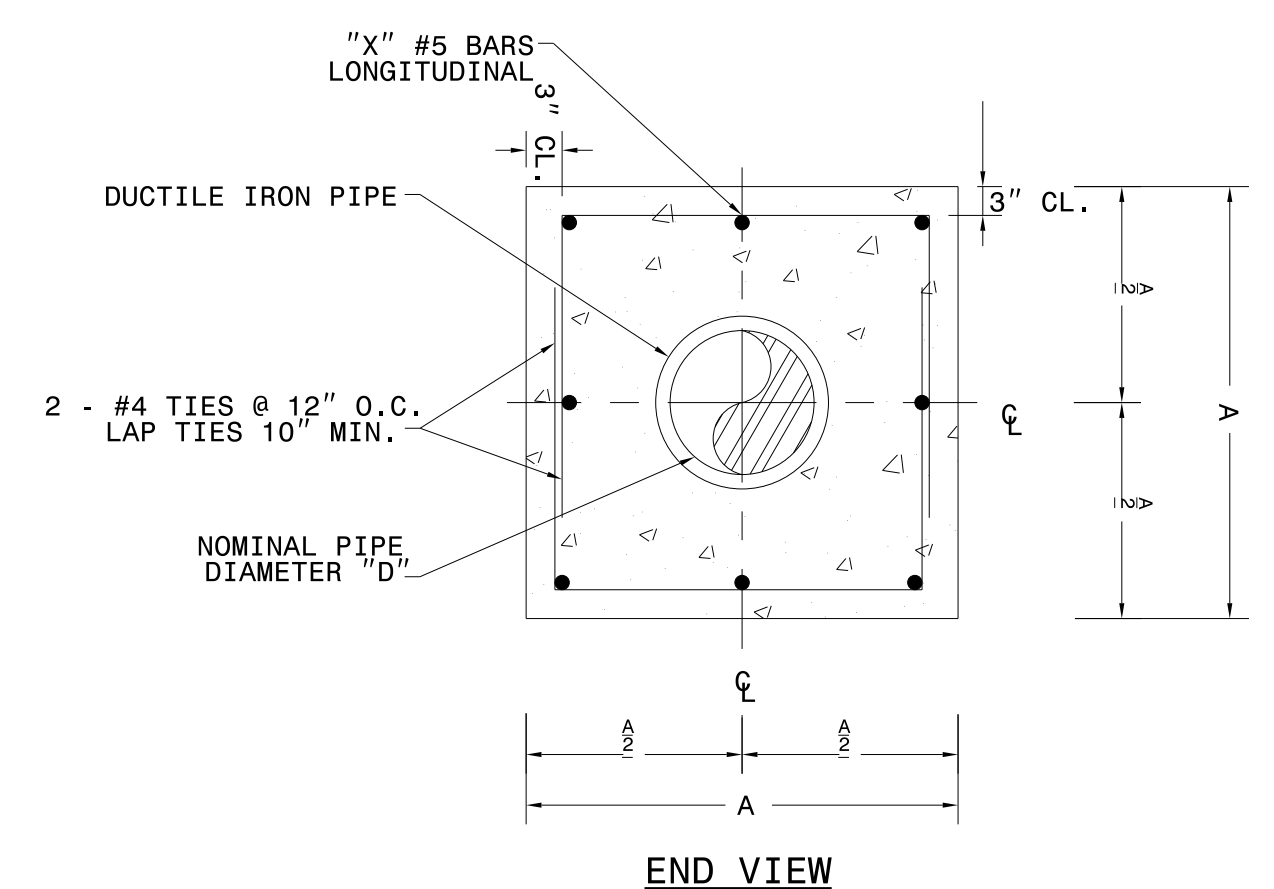
CROSS SECTION

NOMINAL DIA. "D"	CONCRETE ENCASUREMENT "A"	LONGITUDINAL STEEL "X"
8"-10"	2'-0"	8
12"-14"	2'-6"	8
16"-18"	3'-0"	12
20"-24"	3'-6"	12

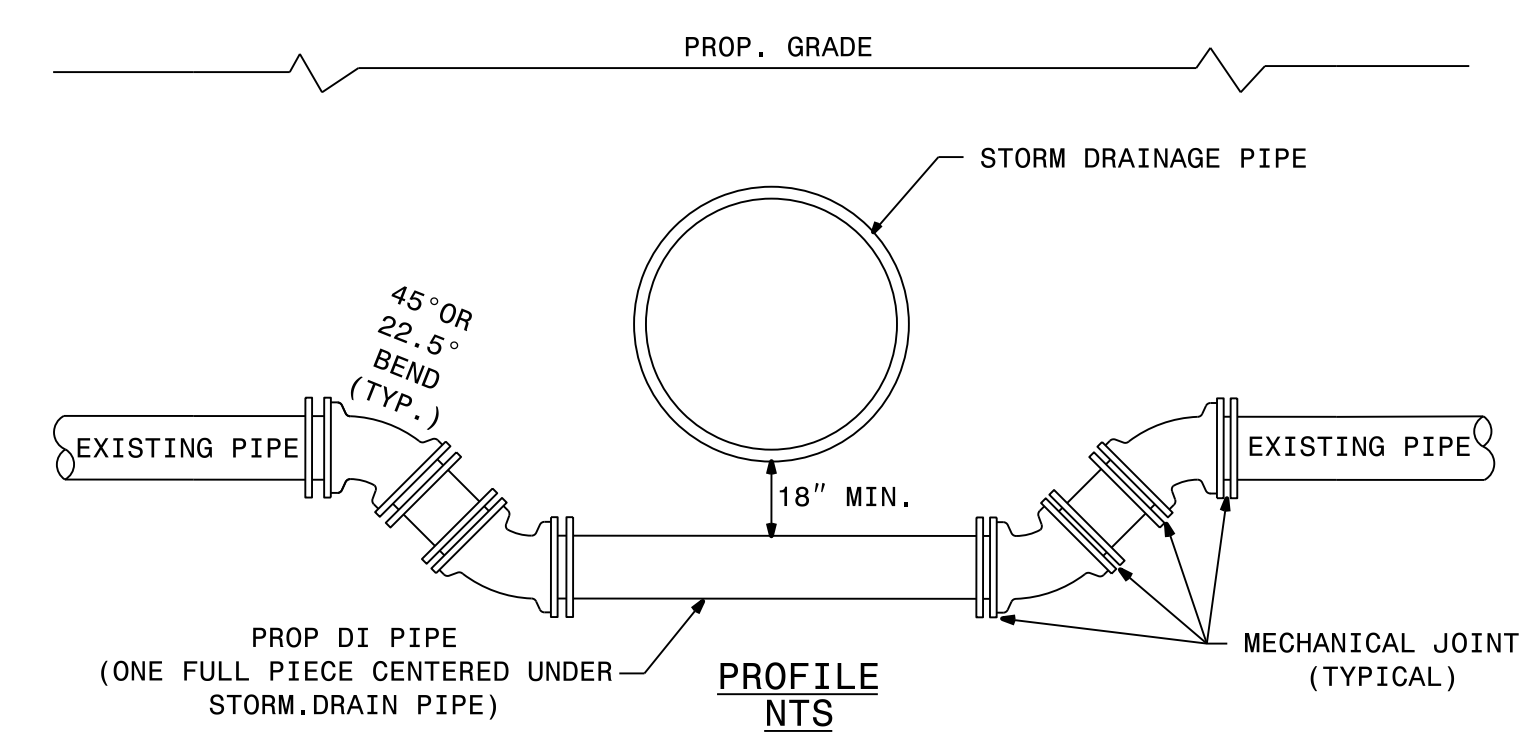
NOTES

- CONCRETE SHALL BE CLASS A - 3,000 P.S.I. MIN. COMPRESSIVE STRENGTH.
- CONCRETE ENCASUREMENT IS NOT REQUIRED WHEN PIPE IS AT LEAST THREE (3) FEET UNDER CREEK / DITCH BOTTOM.

UTILITY PIPE CONCRETE ENCASUREMENT FOR DITCH/CREEK/STREAM CROSSING



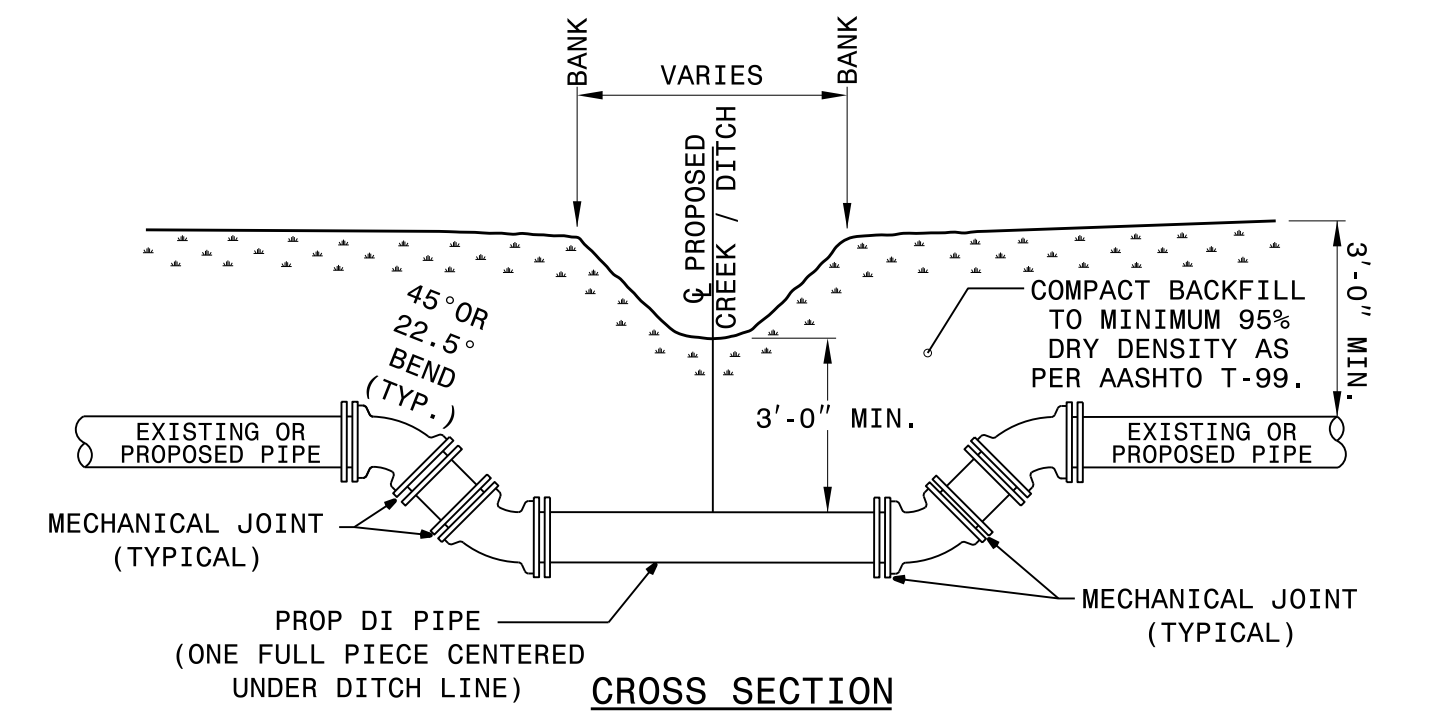
END VIEW



NOTES:

- ALL BEND FITTINGS SHALL BE RESTRAINED WITH THE USE OF D.I. RESTRAINED JOINT PIPE AND FITTINGS, RESTRAINING RETAINER GLANDS, OR THRUST BLOCKS WITH THREADED RODS BETWEEN THE BEND FITTINGS, AS APPROVED BY THE UTILITY OWNER AND/OR AS DIRECTED BY RESIDENT ENGINEER.

UTILITY LINE CROSSING UNDER STORM DRAINAGE PIPE



NOTES:

- ALL BEND FITTINGS SHALL BE RESTRAINED WITH THE USE OF D.I. RESTRAINED JOINT PIPE AND FITTINGS, RESTRAINING RETAINER GLANDS, OR THRUST BLOCKS WITH THREADED RODS BETWEEN THE BEND FITTINGS, AS APPROVED BY THE UTILITY OWNER AND/OR AS DIRECTED BY RESIDENT ENGINEER.

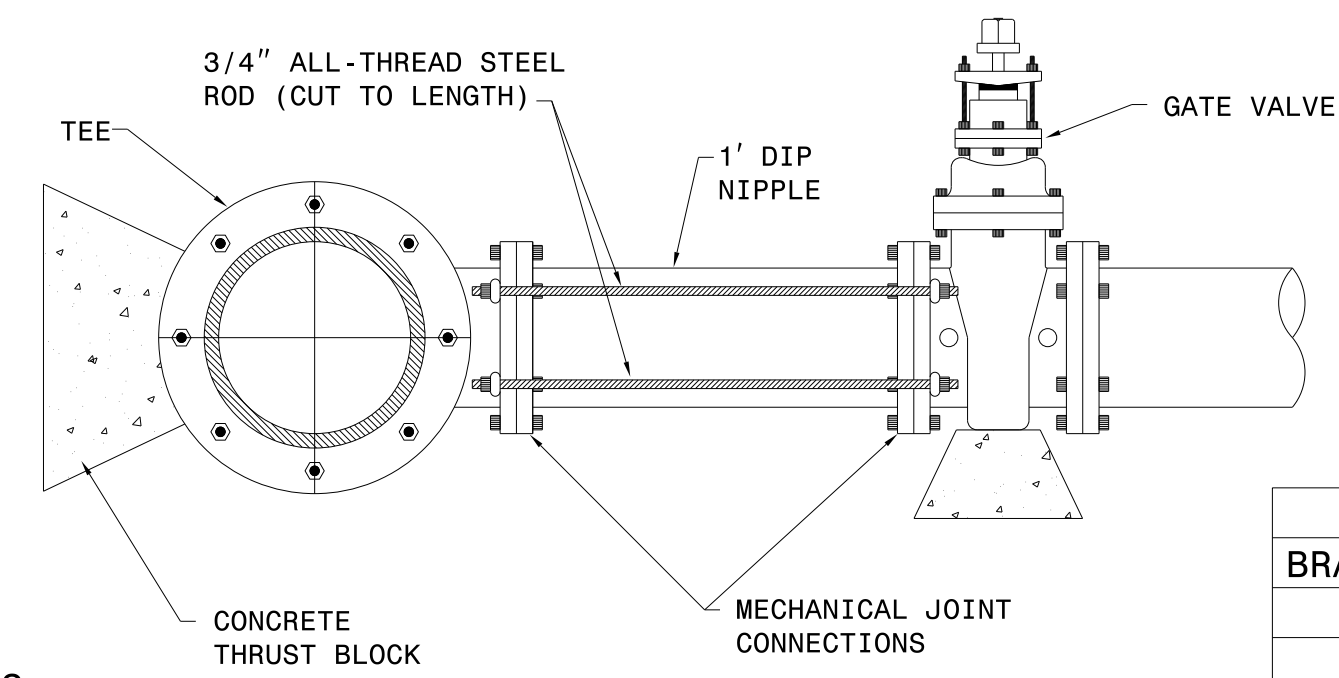
UTILITY LINE AT DITCH/STREAM/CREEK CROSSING

PROJECT REFERENCE NO. U-5813	SHEET NO. UC-3C
DESIGNED BY: KCZ	
DRAWN BY: KCZ	
CHECKED BY: KSH	
APPROVED BY: KCZ	
REVISED:	11/20/2009
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	
UTILITY CONSTRUCTION DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
Weston & Sampson WSE of North Carolina, PC 2052 Energy Drive Phone: 919.297.0220	
NC License: C-4847 Apex, NC 27502 westonandsampson.com	

GENERAL UTILITY DETAILS

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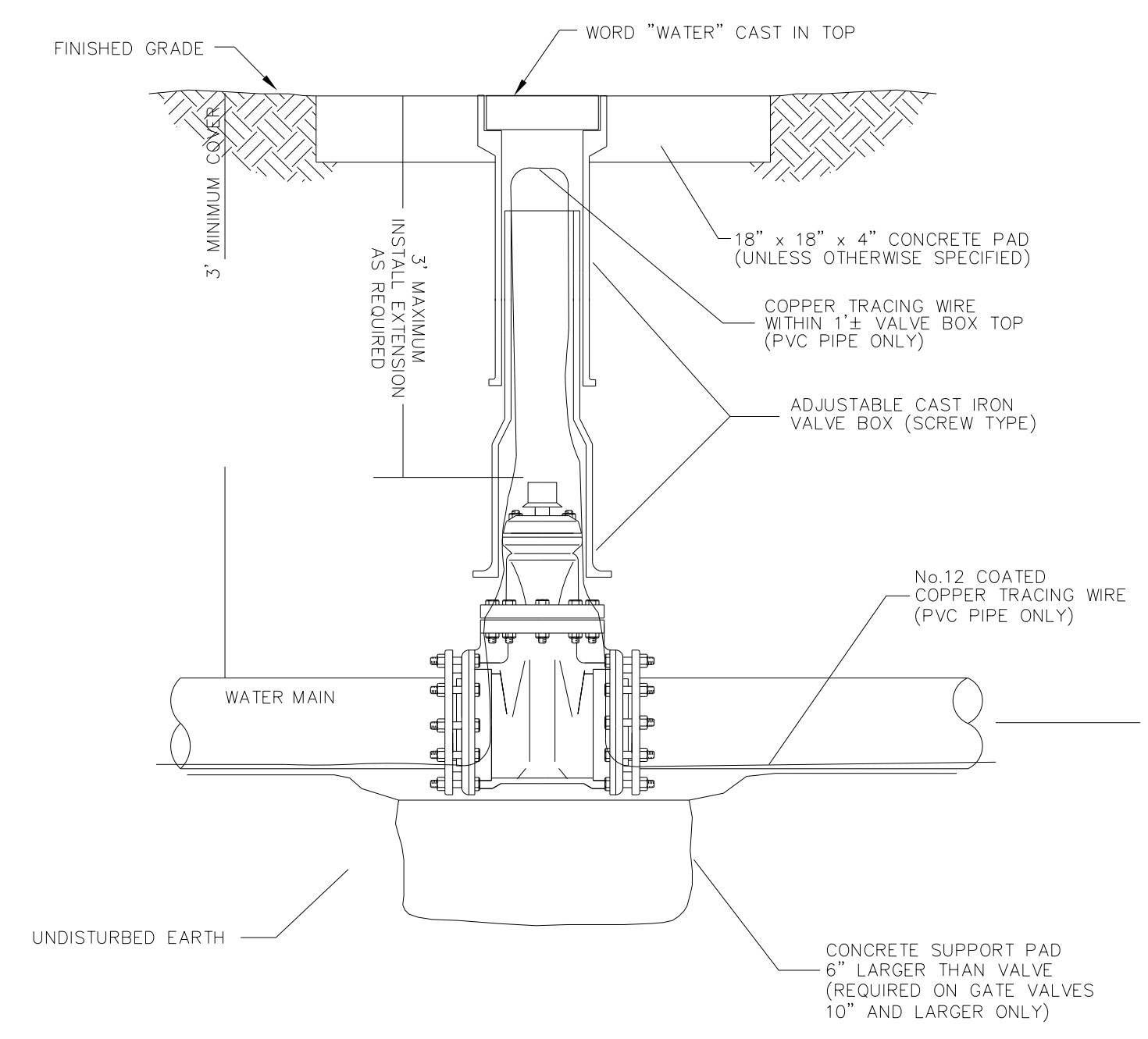
5/14/99



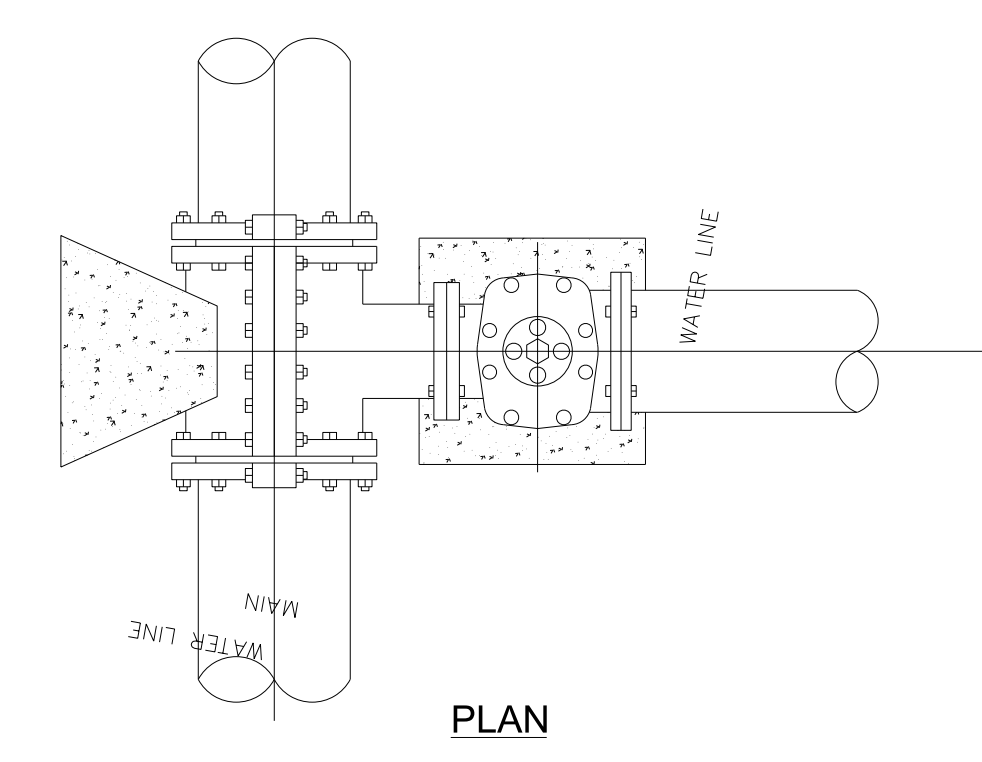
ROD REQUIREMENTS		
BRANCH SIZE	# OF RODS	
4"	2 EACH	
6"	2 EACH	
8"	2 EACH	
12"	2 EACH	
16"	2 EACH	
20"	4 EACH	
24"	4 EACH	

- NOTES:
1. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF THE MECHANICAL JOINT FITTINGS.
 2. REFER TO THRUST BLOCK DETAILS.
 3. 2,500 P.S.I. CLASS B CONCRETE REQUIRED.
 4. ONCE INSTALLED AND TIGHTENED, THE STEEL RODS AND BOLTS SHALL BE COATED WITH TWO (2) COATS OF BITUMINOUS BASE PAINT.

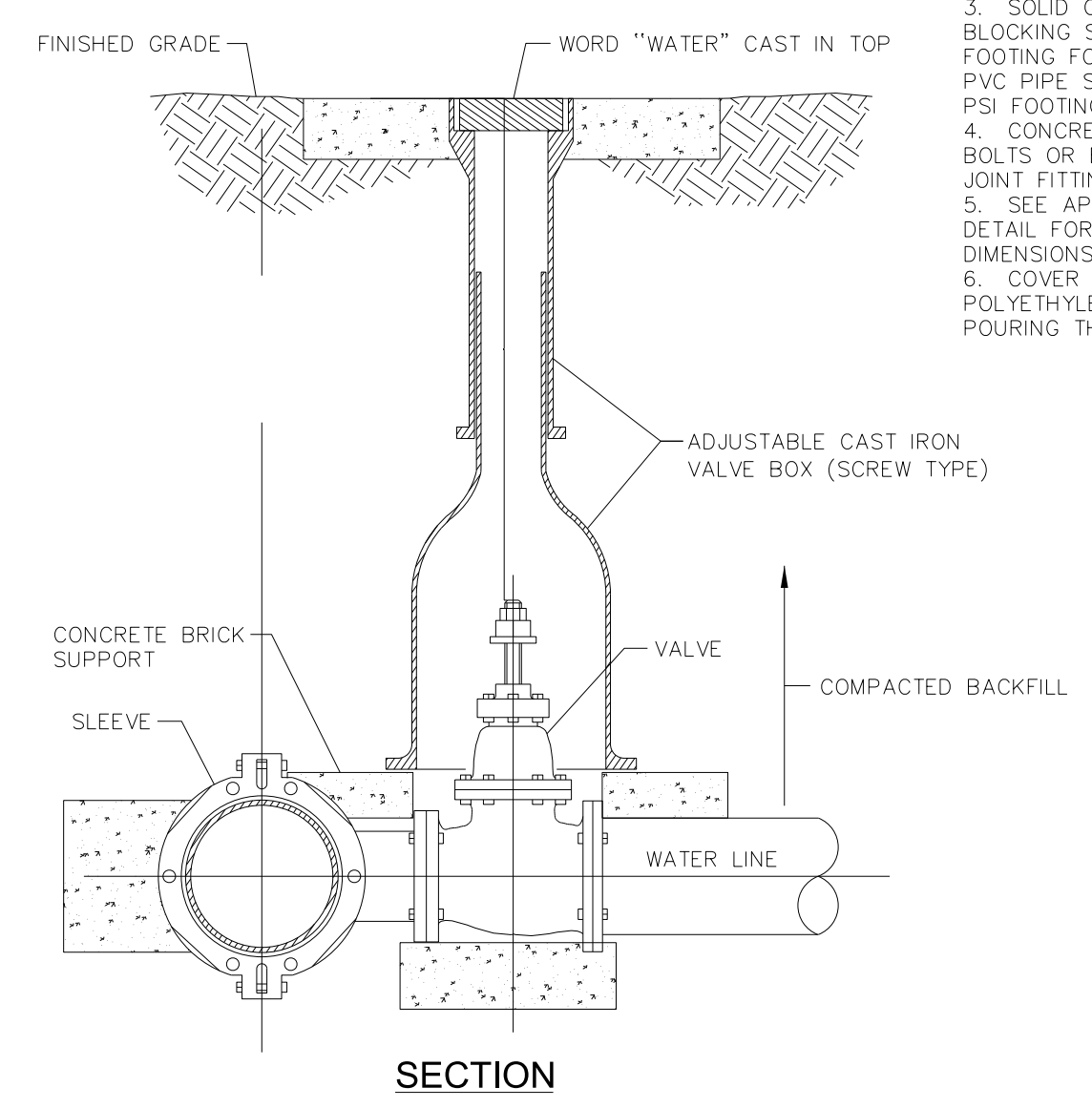
RESTRAINED TEE AND VALVE FOR BRANCH LINES



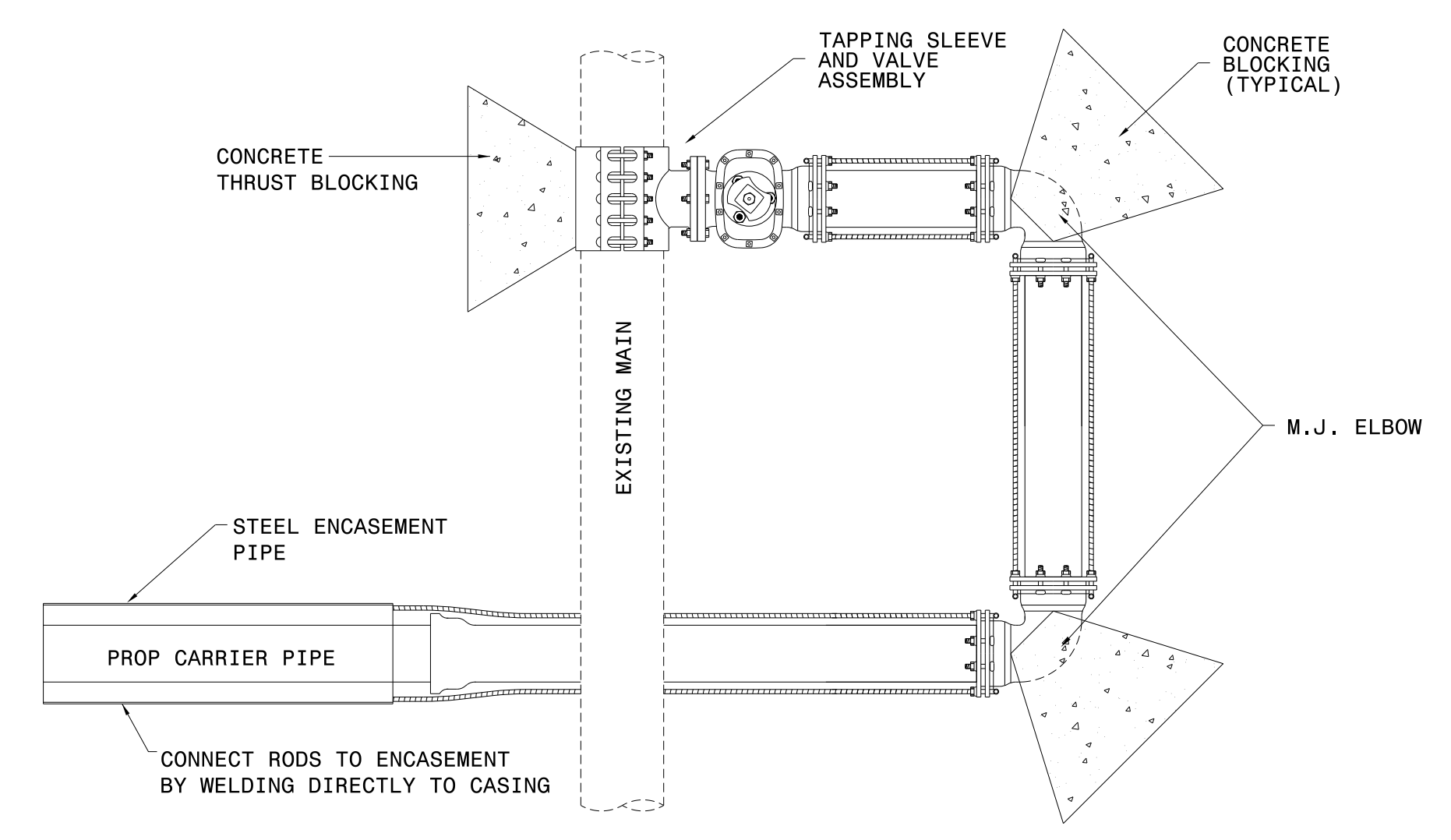
TYPICAL VERTICAL GATE VALVE INSTALLATION



- NOTES:
1. TAPPING SLEEVE SHALL BE MUELLER, CLOW, AMERICAN OR APPROVED EQUAL.
 2. TAPPING VALVE SHALL BE MUELLER, CLOW, AMERICAN OR APPROVED EQUAL.
 3. SOLID CONCRETE OR BRICK BLOCKING SHALL BE USED AS FOOTING FOR DUCTILE IRON PIPE. PVC PIPE SHALL REQUIRE A 3000 PSI FOOTING.
 4. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
 5. SEE APPROPRIATE STANDARD DETAIL FOR THRUST BLOCK DIMENSIONS.
 6. COVER FITTINGS WITH POLYETHYLENE PLASTIC PRIOR TO POURING THRUST BLOCKS



TAPPING SLEEVE AND VALVE WITH BOX INSTALLATION
REVISION DATE - NOVEMBER 3, 2008



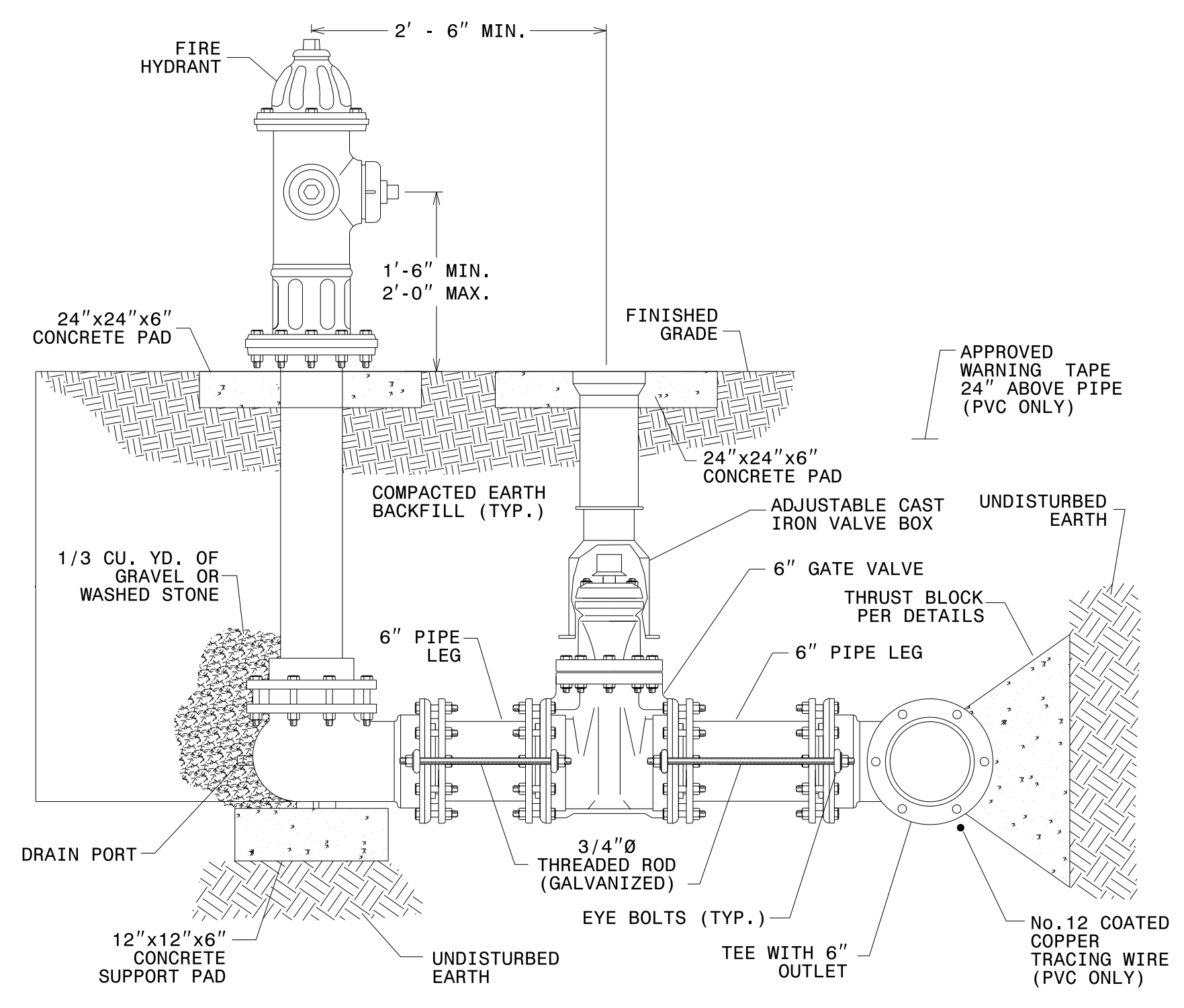
OFFSET BORE AND JACK WITH REVERSE TAP

PROJECT REFERENCE NO. U-5813	SHEET NO. UC-3D
DESIGNED BY: KCZ	
DRAWN BY: KCZ	
CHECKED BY: KSH	
APPROVED BY: KCZ	
REVISED:	11/20/2009
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	UTILITY CONSTRUCTION PLANS ONLY
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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WSE of North Carolina, PC 2052 Energy Drive Phone: 919.297.0220	Apex, NC 27502 westonandsampson.com

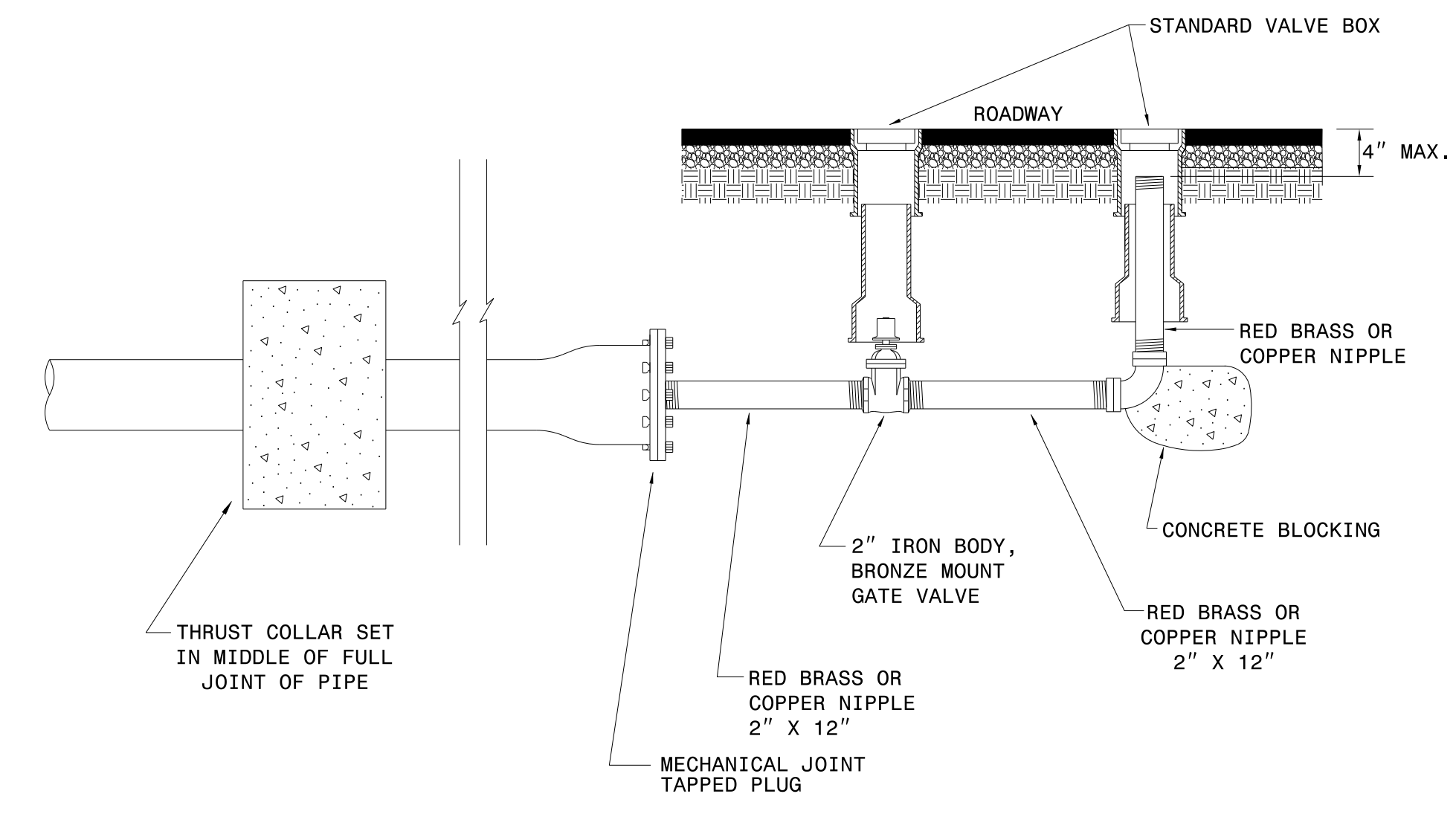
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WATER LINE DETAILS

5/14/09



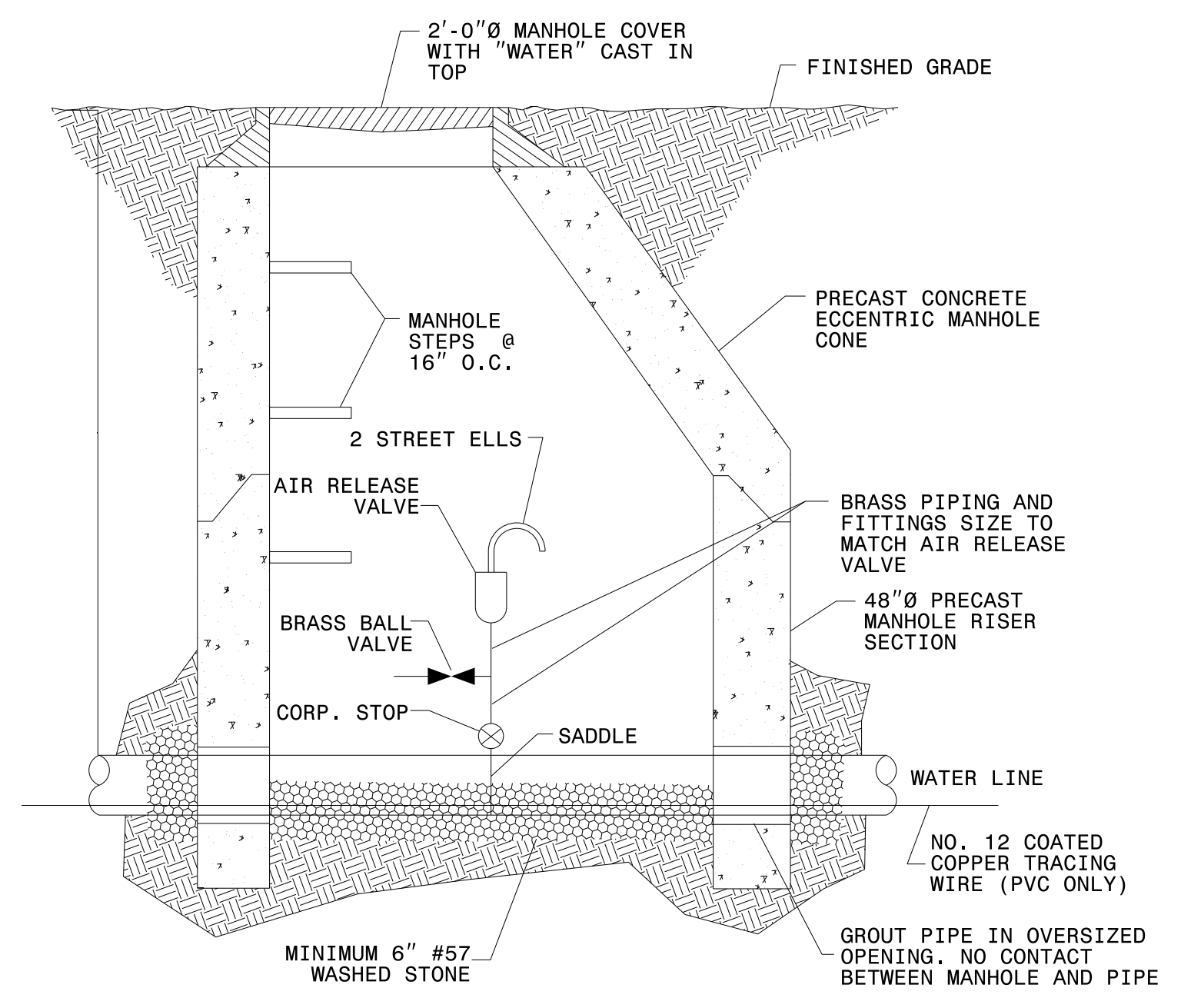
TYPICAL FIRE HYDRANT ASSEMBLY DETAIL



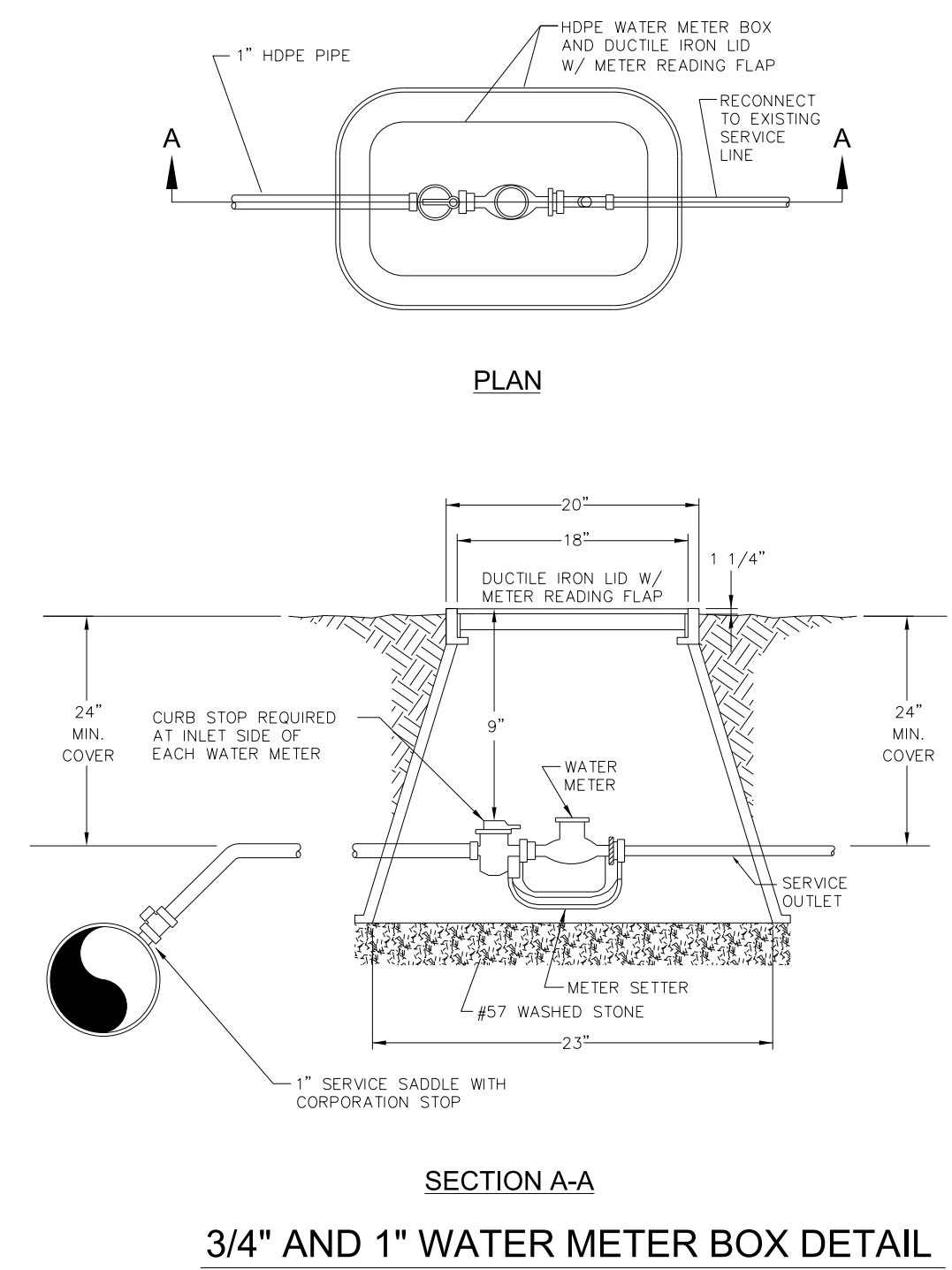
STANDARD 2" BLOW OFF DETAIL

PROJECT REFERENCE NO. U-5813	SHEET NO. UC-3E
DESIGNED BY: KCZ	
DRAWN BY: KCZ	
CHECKED BY: KSH	
APPROVED BY: KCZ	
REVISER:	11/20/2009
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	UTILITY CONSTRUCTION PLANS ONLY
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
Weston & Sampson	NC License: C-4847 Apex, NC 27502 westonandsampson.com
WSE of North Carolina, PC 2052 Energy Drive Phone: 919.297.0220	

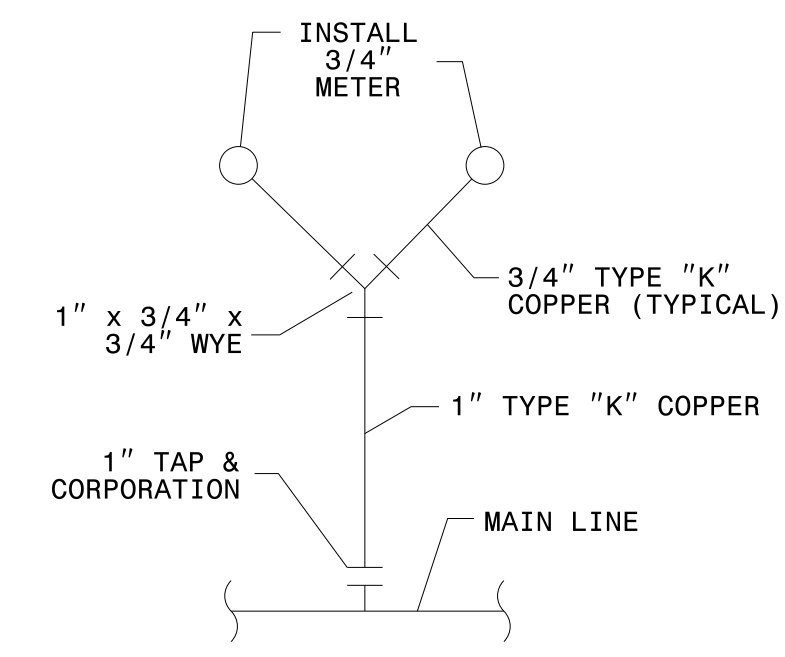
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TYPICAL AIR RELEASE VALVE INSTALLATION



- NOTES:**
1. CITY OF ASHEBORO TO PROVIDE THE WATER METER.
 2. METER SETTER SHALL BE SET AS LEVEL AS POSSIBLE.
 3. THE EDGE OF THE METER BOX SHALL BE SET A MINIMUM OF 1 FOOT FROM THE EDGE OF CUT SLOPE OR FILL SLOPE LINE.
 4. SERVICE SADDLE SHALL BE DOUBLE STRAP WITH NEOPRENE GASKET.



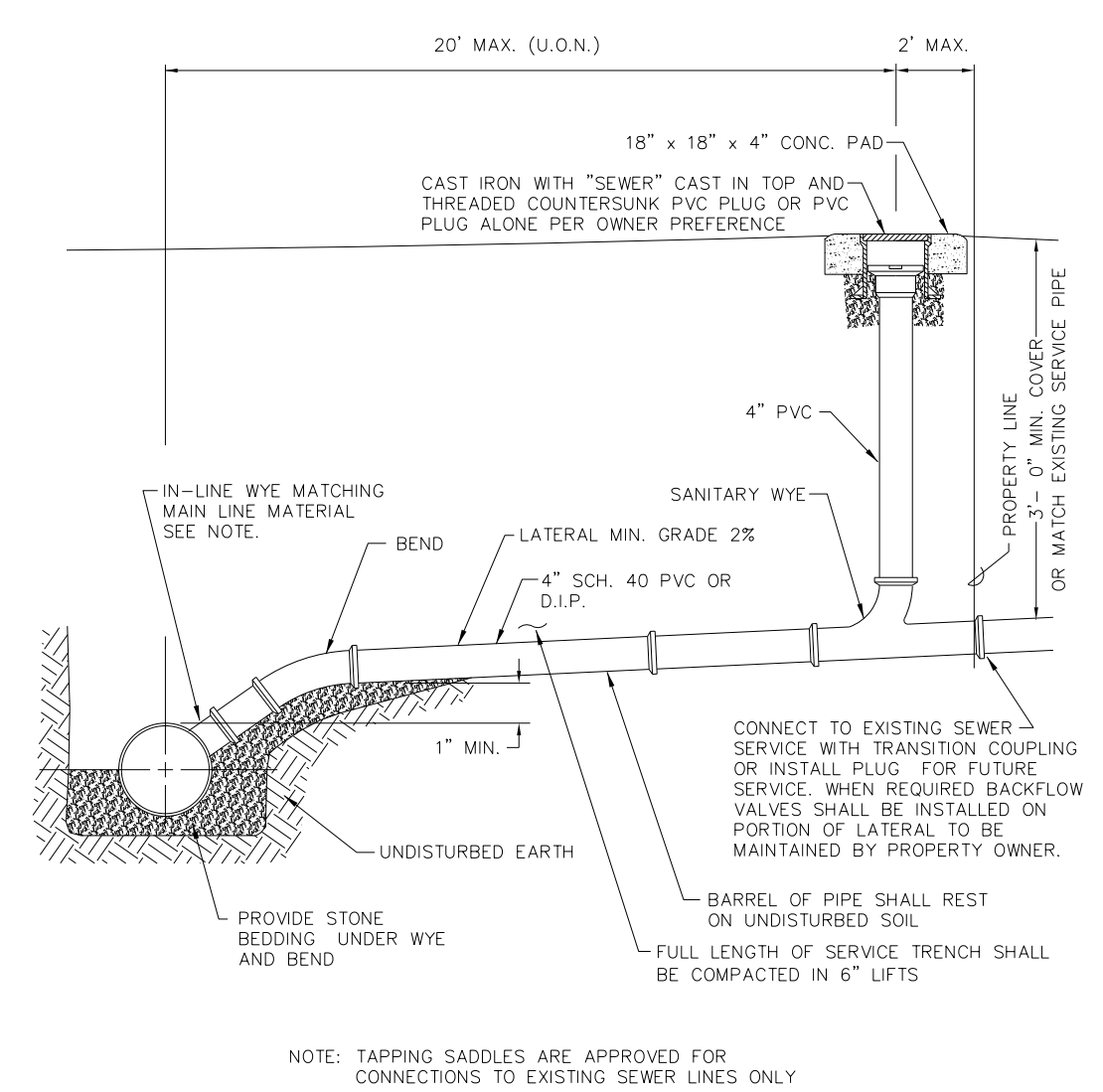
TYPICAL DOUBLE SERVICE CONNECTION

WATER LINE DETAILS

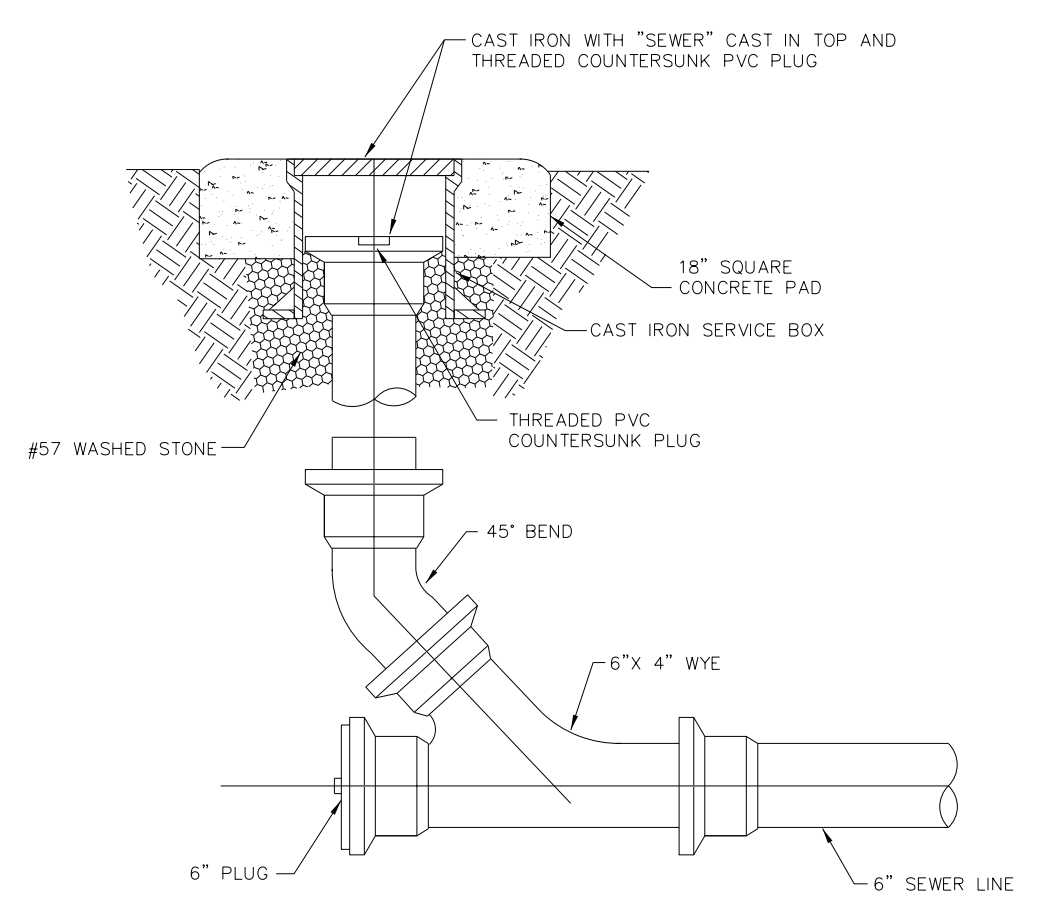
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PROJECT REFERENCE NO.	SHEET NO.
U-5813	UC-3F
DESIGNED BY: KCZ	
DRAWN BY: KCZ	
CHECKED BY: KSH	
APPROVED BY: KCZ	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	
UTILITY CONSTRUCTION DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
WSE of North Carolina, PC 2052 Energy Drive Phone: 919.297.0220	
NC License: C-4847 Apex, NC 27502 westonandsampson.com	

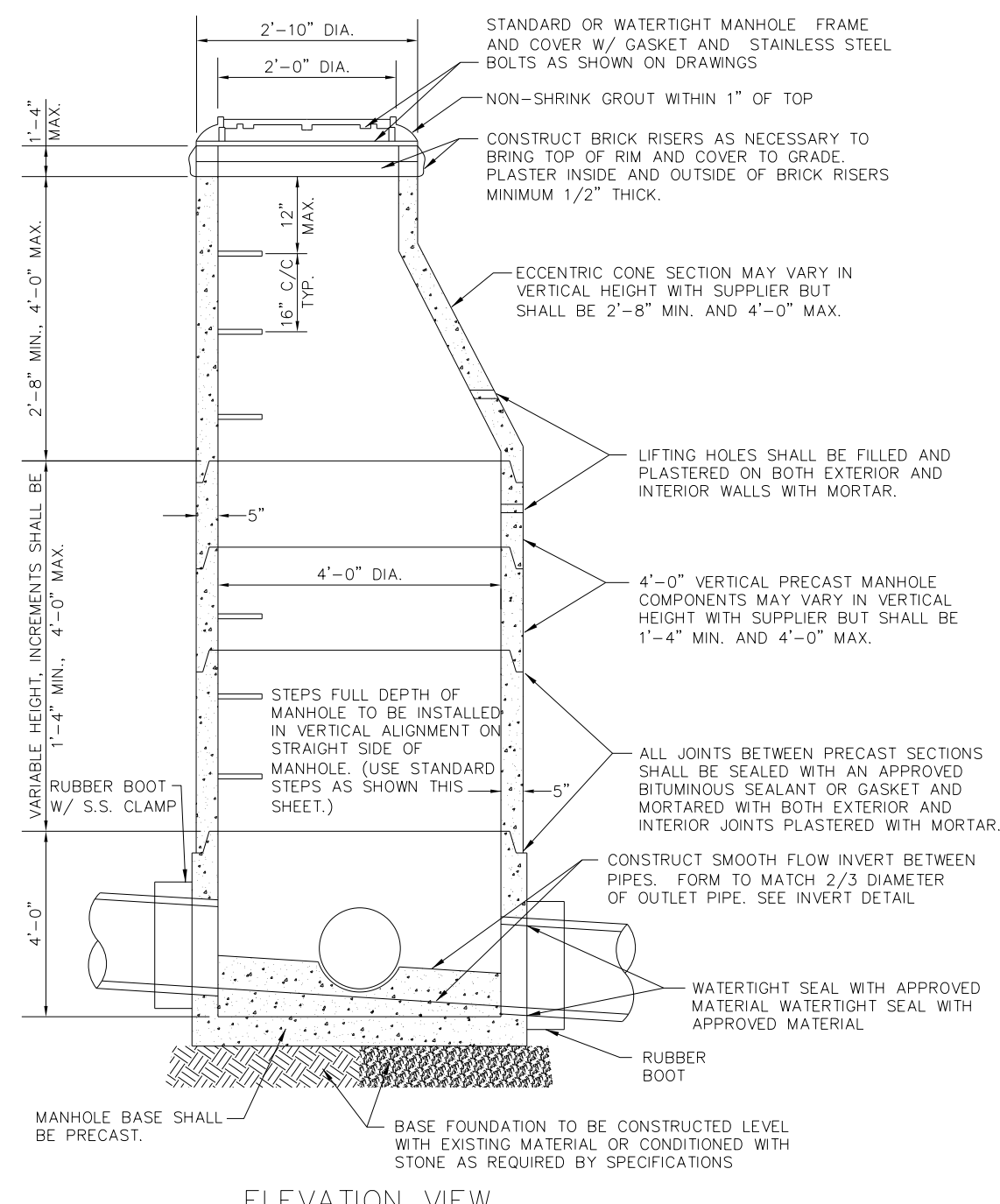


SANITARY SEWER SERVICE



CLEANOUT DETAIL

GRAVITY SEWER DETAILS

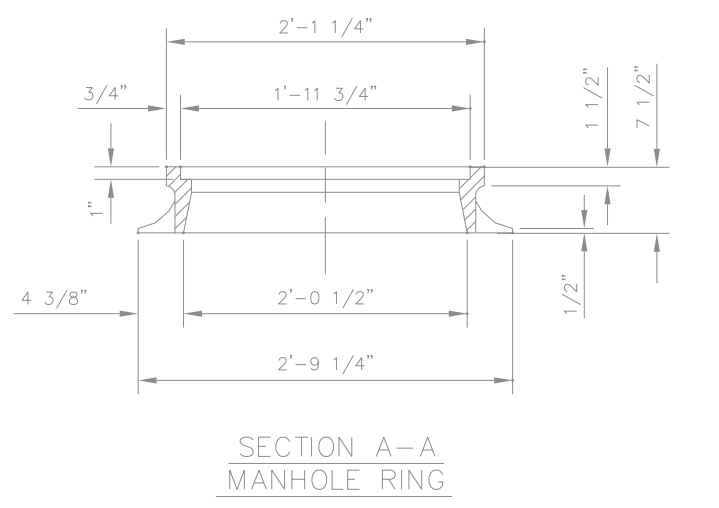
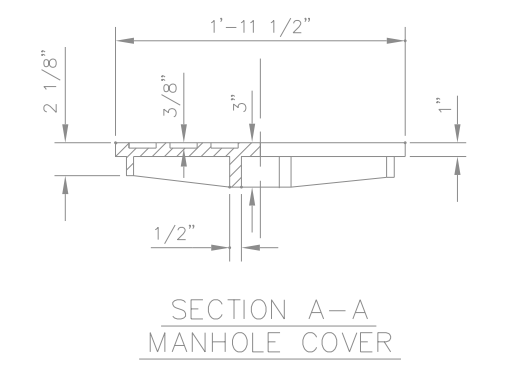
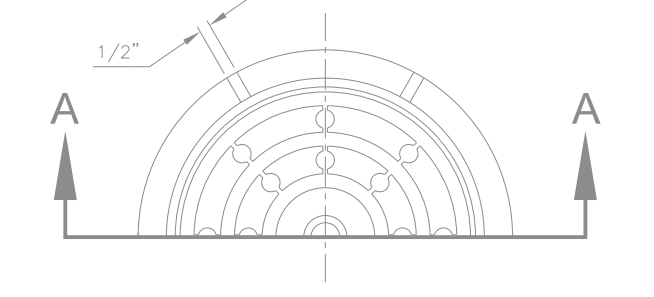


ELEVATION VIEW

PRECAST MANHOLE NOTES:

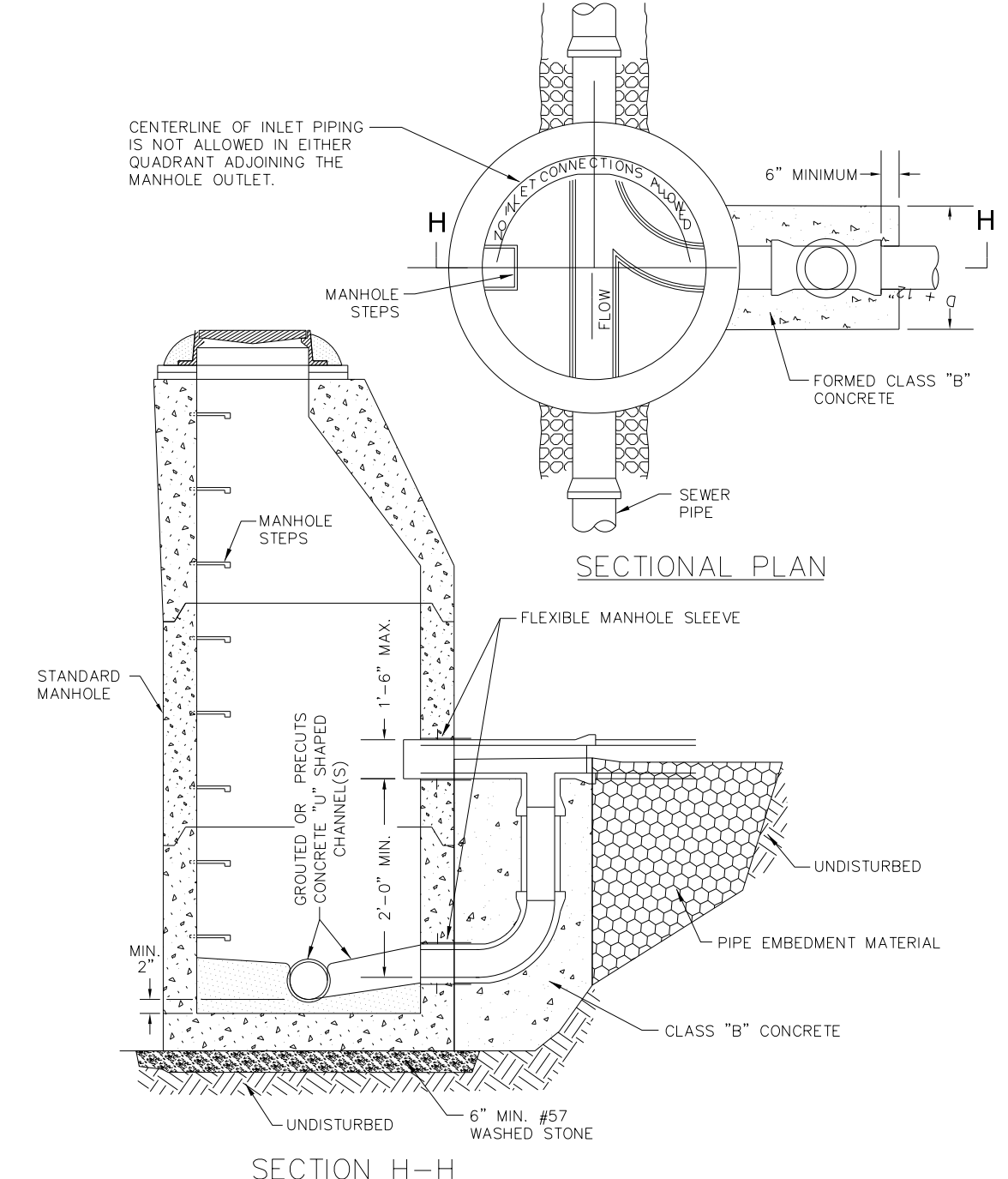
1. ALL PRECAST MANHOLE COMPONENTS SHALL MEET REQUIREMENTS OF ASTM C-478, LATEST REVISION.
2. ALL MANHOLES SHALL BE CONSTRUCTED PLUMB.
3. ALL MANHOLE GRADES SHOWN ON THE PLANS ARE FOR THE INVERT OF THE MANHOLE CENTER.
4. IF MANHOLE IS SET IN LOCATION OF HIGH WATER TABLE OR UNDERGROUND WATER IS ENCOUNTERED, THE CONTRACTOR SHALL INSTALL UNDERDRAINS AND STONE AS DIRECTED IN THE FIELD BY THE ENGINEER.
5. STEPS SHALL BE INSTALLED ON STRAIGHT SIDE OF MANHOLE.

PRECAST CONCRETE MANHOLE



NOTE: TRAFFIC BEARING RING AND COVER.
MINIMUM WEIGHT 315 POUNDS

MANHOLE RINGS AND COVER

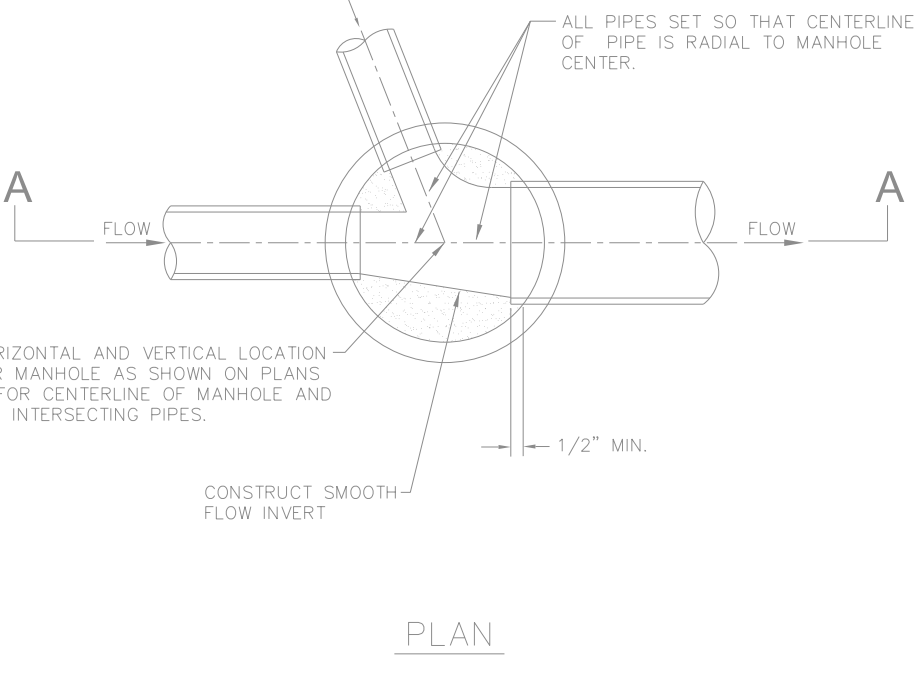
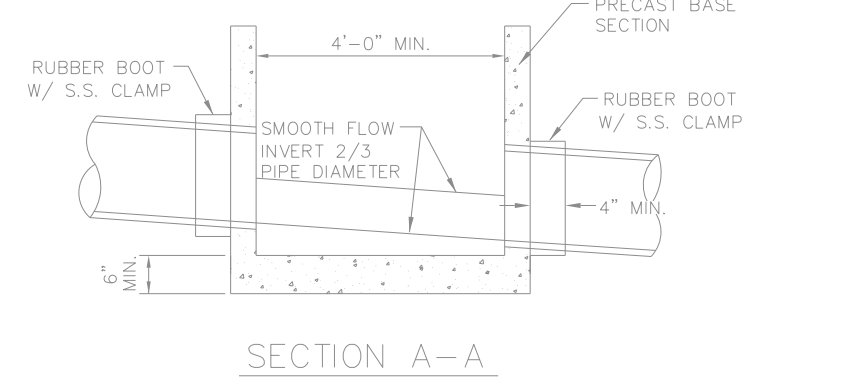


SECTION H-H

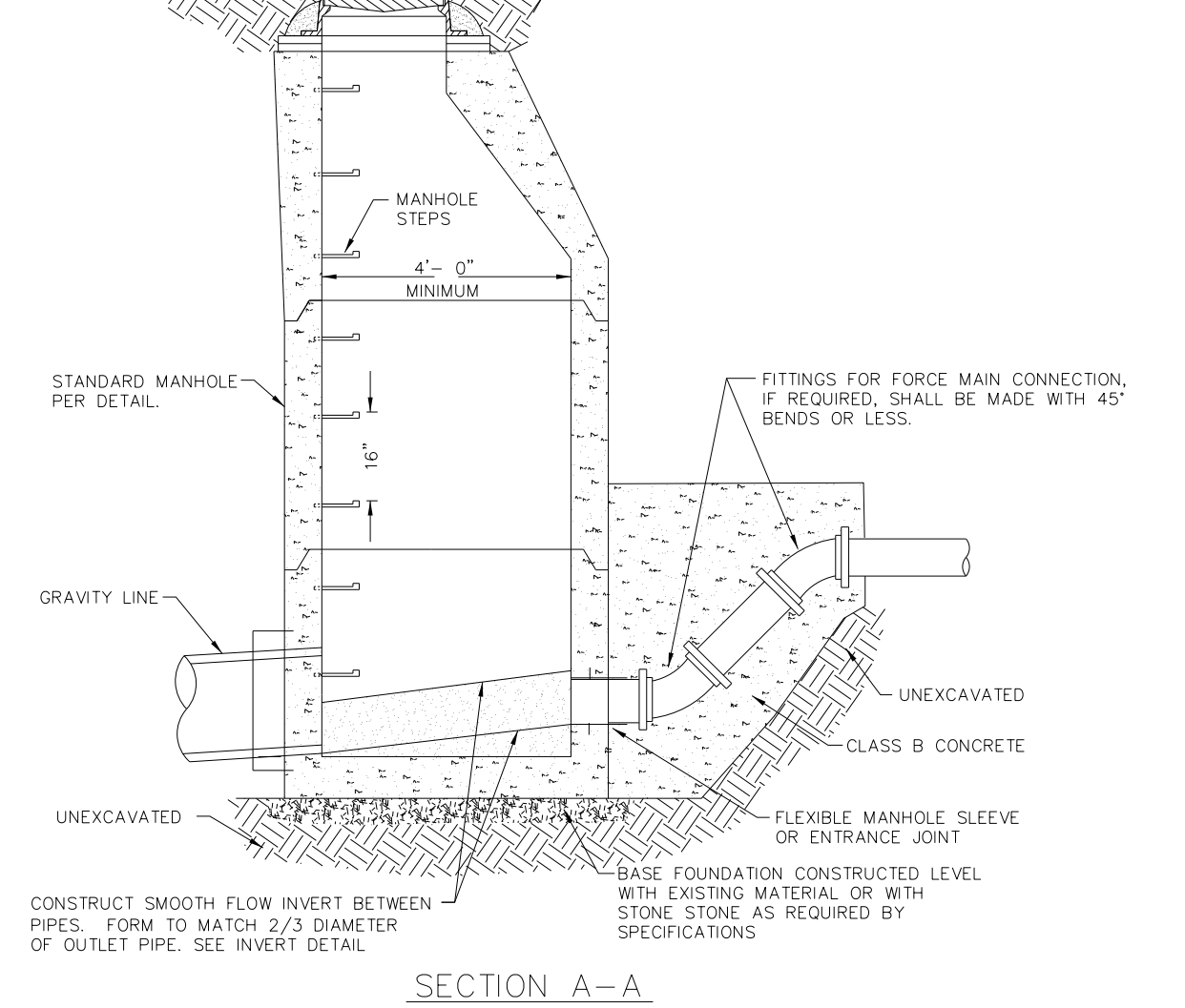
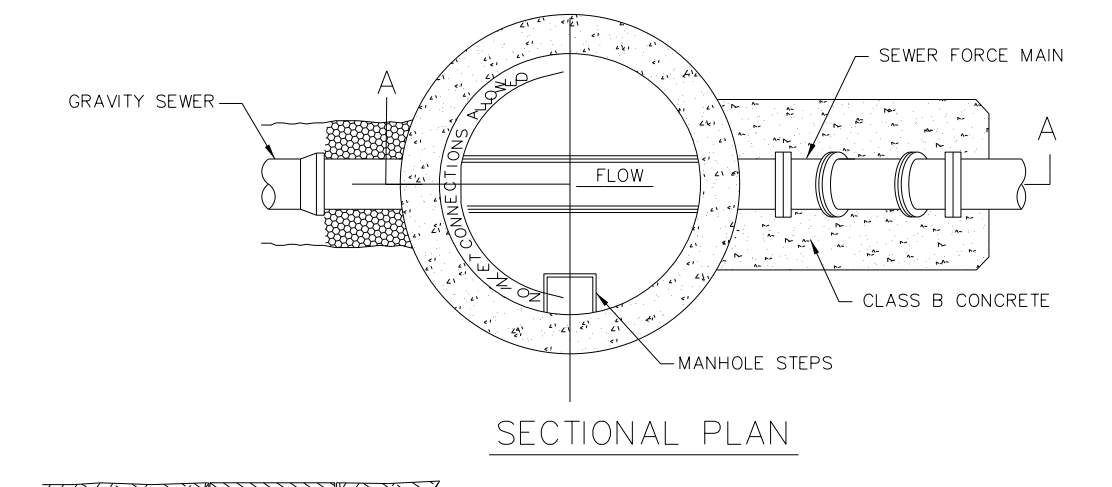
NOTE:

1. DROP CONNECTION IS NOT PERMITTED FOR HIGH VELOCITY SEWER MAINS. MAINTAIN MINIMUM OF 8" OF CLEARANCE BETWEEN DROP CONNECTION AND MANHOLE STEPS.
2. BASE FOUNDATION TO CONSTRUCTED LEVEL WITH EXISTING MATERIAL OR CONDITIONED WITH STONE AS REQUIRED BY SPECIFICATIONS.

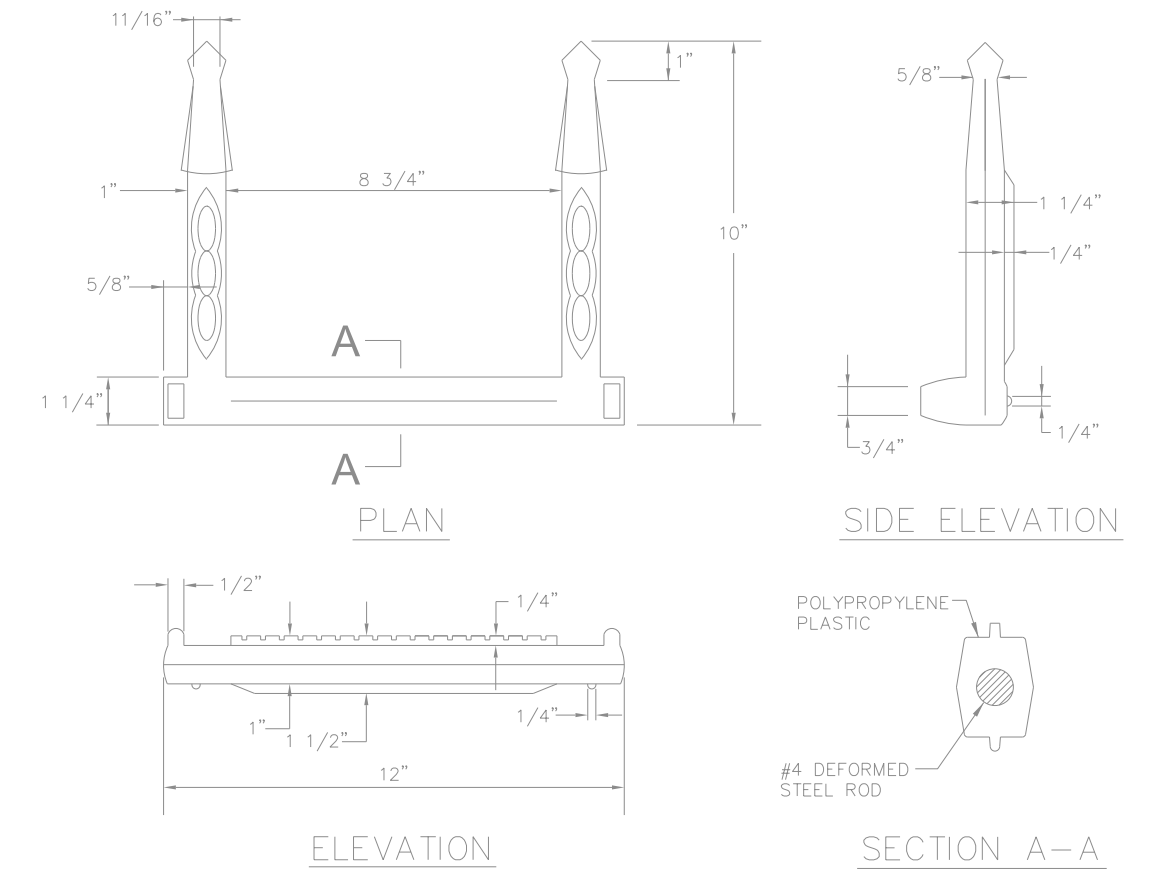
OUTSIDE DROP MANHOLE



MANHOLE INVERTS



FORCE MAIN CONNECTION



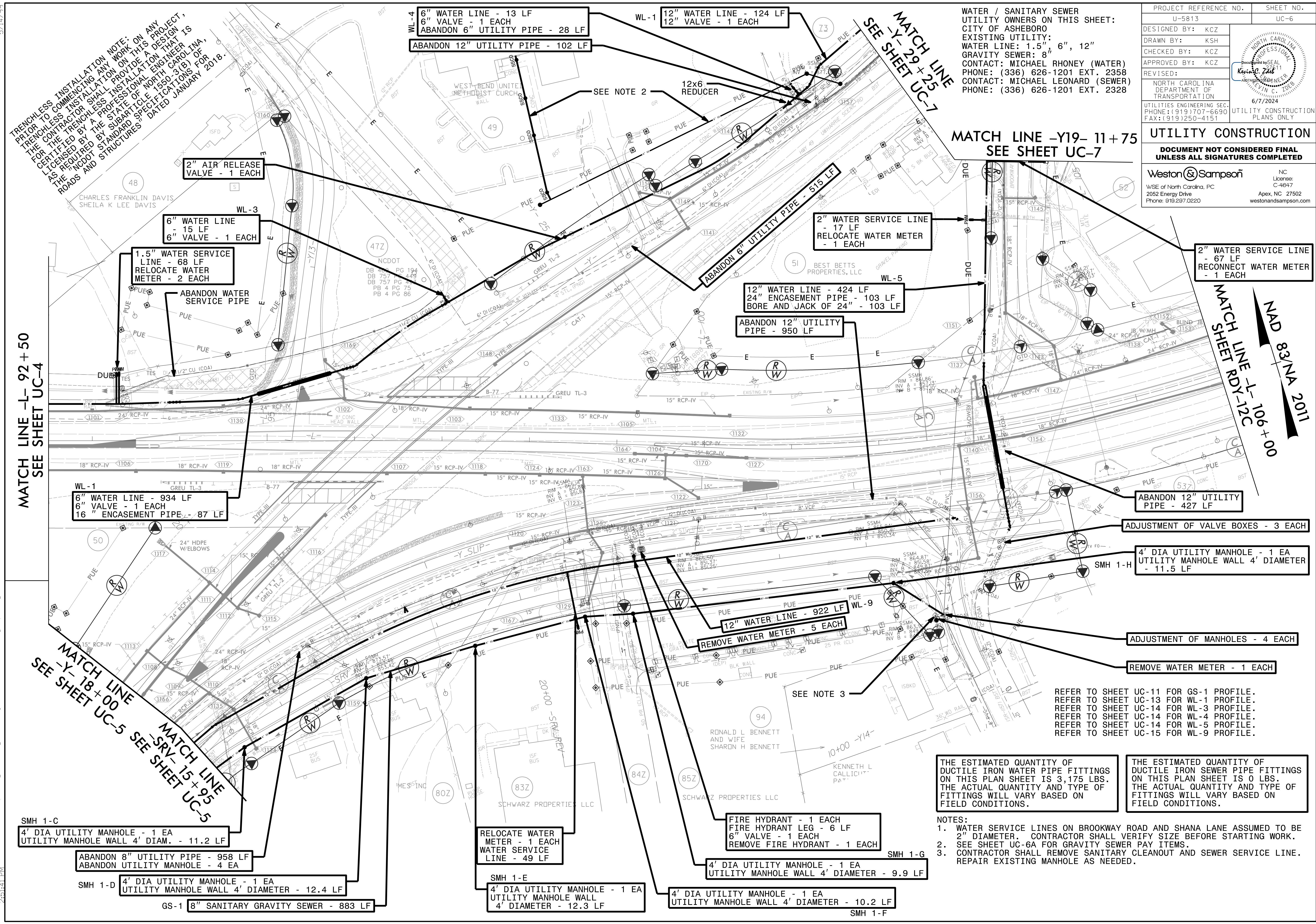
CONSTRUCTION NOTES

1. ALL STEPS SHALL PROTRUDE A MINIMUM OF 5" AND A MAXIMUM OF 7" FROM INSIDE FACE OF STRUCTURE WALL.
2. STEPS DIFFERING IN DIMENSIONS, CONFIGURATION, OR MATERIALS FROM THOSE SHOWN MAY ALSO BE USED PROVIDED THE CONTRACTOR HAS FURNISHED THE ENGINEER WITH DETAILS OF THE PROPOSED STEPS AND HAS RECEIVED PRIOR WRITTEN APPROVAL FROM THE ENGINEER FOR THE USE OF SAID STEPS.

MANHOLE STEPS

PROJECT REFERENCE NO. U-5813	SHEET NO. UC-3G
DESIGNED BY: KCZ	
DRAWN BY: KCZ	
CHECKED BY: KSH	
APPROVED BY: KCZ	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	11/20/2022 UTILITY CONSTRUCTION PLANS ONLY
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
Weston & Sampson WSE of North Carolina, PC 2052 Energij Drive Phone: 919.297.0220	NC License: C-4847 Apex, NC 27502 westonandsampson.com

5/14/2019



TRENCHLESS INSTALLATION NOTE:
 PRIOR TO COMMENCING ANY WORK ON ANY
 TRENCHLESS INSTALLATION ON THIS PROJECT,
 THE CONTRACTOR SHALL PROVIDE A DESIGN,
 FOR THE TRENCHLESS INSTALLATION THAT IS
 CERTIFIED BY A PROFESSIONAL ENGINEER
 LICENSED BY THE STATE OF NORTH CAROLINA,
 AS REQUIRED BY SUBARTICLE 1550-3(B) OF
 THE "NCDOT STANDARD SPECIFICATIONS FOR
 ROADS AND STRUCTURES" DATED JANUARY 2018.

MATCH LINE -L- 92+50
 SEE SHEET UC-4

MATCH LINE -Y- 18+00
 SEE SHEET UC-5

MATCH LINE -SRV- 15+95
 SEE SHEET UC-5

MATCH LINE
 SEE SHEET UC-7

MATCH LINE -Y19- 11+75
 SEE SHEET UC-7

MATCH LINE RDY-12C
 SEE SHEET RDY-12C

PROJECT REFERENCE NO.	SHEET NO.
U-5813	UC-6
DESIGNED BY: KCZ	
DRAWN BY: KSH	
CHECKED BY: KCZ	
APPROVED BY: KCZ	
REVISED:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151
UTILITY CONSTRUCTION PLANS ONLY	
UTILITY CONSTRUCTION DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
NC License: C-4847 Apex, NC 27502 westonandsampson.com	

WATER / SANITARY SEWER
 UTILITY OWNERS ON THIS SHEET:
 CITY OF ASHEBORO
 EXISTING UTILITY:
 WATER LINE: 1.5", 6", 12"
 GRAVITY SEWER: 8"
 CONTACT: MICHAEL RHONEY (WATER)
 PHONE: (336) 626-1201 EXT. 2358
 CONTACT: MICHAEL LEONARD (SEWER)
 PHONE: (336) 626-1201 EXT. 2328

SMH 1-C
 4' DIA UTILITY MANHOLE - 1 EA
 UTILITY MANHOLE WALL 4' DIAM. - 11.2 LF

ABANDON 8" UTILITY PIPE - 958 LF
 ABANDON UTILITY MANHOLE - 4 EA

SMH 1-D
 4' DIA UTILITY MANHOLE - 1 EA
 UTILITY MANHOLE WALL 4' DIAMETER - 12.4 LF

GS-1 8" SANITARY GRAVITY SEWER - 883 LF

RELOCATE WATER METER - 1 EACH
 WATER SERVICE LINE - 49 LF

SMH 1-E
 4' DIA UTILITY MANHOLE - 1 EA
 UTILITY MANHOLE WALL 4' DIAMETER - 12.3 LF

FIRE HYDRANT - 1 EACH
 FIRE HYDRANT LEG - 6 LF
 6" VALVE - 1 EACH
 REMOVE FIRE HYDRANT - 1 EACH

4' DIA UTILITY MANHOLE - 1 EA
 UTILITY MANHOLE WALL 4' DIAMETER - 9.9 LF

SMH 1-G
 4' DIA UTILITY MANHOLE - 1 EA
 UTILITY MANHOLE WALL 4' DIAMETER - 10.2 LF

SMH 1-F

REFER TO SHEET UC-11 FOR GS-1 PROFILE.
 REFER TO SHEET UC-13 FOR WL-1 PROFILE.
 REFER TO SHEET UC-14 FOR WL-3 PROFILE.
 REFER TO SHEET UC-14 FOR WL-4 PROFILE.
 REFER TO SHEET UC-14 FOR WL-5 PROFILE.
 REFER TO SHEET UC-15 FOR WL-9 PROFILE.

THE ESTIMATED QUANTITY OF
 DUCTILE IRON WATER PIPE FITTINGS
 ON THIS PLAN SHEET IS 3,175 LBS.
 THE ACTUAL QUANTITY AND TYPE OF
 FITTINGS WILL VARY BASED ON
 FIELD CONDITIONS.

THE ESTIMATED QUANTITY OF
 DUCTILE IRON SEWER PIPE FITTINGS
 ON THIS PLAN SHEET IS 0 LBS.
 THE ACTUAL QUANTITY AND TYPE OF
 FITTINGS WILL VARY BASED ON
 FIELD CONDITIONS.

NOTES:
 1. WATER SERVICE LINES ON BROOKWAY ROAD AND SHANA LANE ASSUMED TO BE 2" DIAMETER. CONTRACTOR SHALL VERIFY SIZE BEFORE STARTING WORK.
 2. SEE SHEET UC-6A FOR GRAVITY SEWER PAY ITEMS.
 3. CONTRACTOR SHALL REMOVE SANITARY CLEANOUT AND SEWER SERVICE LINE. REPAIR EXISTING MANHOLE AS NEEDED.

Division 8: Utilities Engineering VUC-Proj\U-5813_Randolph\Engineering\UUC-Proj\U-5813.ut_UC-06-8672E89CF43.dgn
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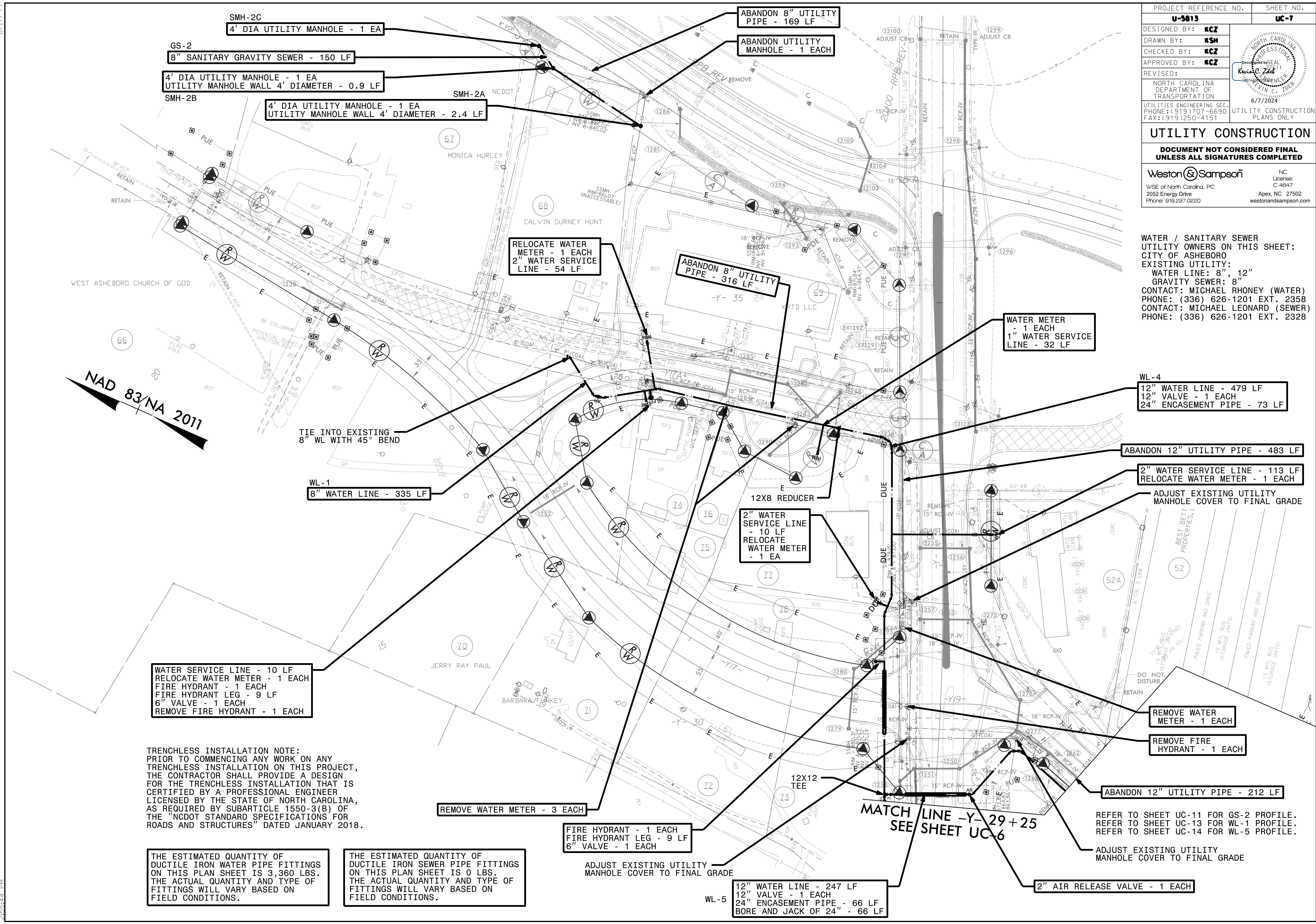
PROJECT REFERENCE NO.	SHEET NO.
U-5813	UC-7
DESIGNED BY: KCZ	
DRAWN BY: KSM	
CHECKED BY: KCZ	
APPROVED BY: KCZ	
REVISED:	6/7/2024
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	UTILITY CONSTRUCTION PLANS ONLY
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Weston & Sampson
 NC License: C-4847
 2052 Energy Drive, Apex, NC 27502
 Phone: 919.297.0220, westonsandsampson.com

WATER / SANITARY SEWER UTILITY OWNERS ON THIS SHEET:
 CITY OF ASHEBORO
 EXISTING UTILITY:
 WATER LINE: 8", 12"
 GRAVITY SEWER: 8"
 CONTACT: MICHAEL RHONEY (WATER)
 PHONE: (336) 626-1201 EXT. 2358
 CONTACT: MICHAEL LEONARD (SEWER)
 PHONE: (336) 626-1201 EXT. 2328



TRENCHLESS INSTALLATION NOTE:
 PRIOR TO COMMENCING ANY WORK ON ANY TRENCHLESS INSTALLATION ON THIS PROJECT, THE CONTRACTOR SHALL PROVIDE A DESIGN FOR THE TRENCHLESS INSTALLATION THAT IS CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED BY THE STATE OF NORTH CAROLINA, AS REQUIRED BY SUBARTICLE 1550-3(B) OF THE "NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2018.

THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 3,360 LBS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

THE ESTIMATED QUANTITY OF DUCTILE IRON SEWER PIPE FITTINGS ON THIS PLAN SHEET IS 0 LBS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

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5/14/2019

THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 2010 LBS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

THE ESTIMATED QUANTITY OF DUCTILE IRON SEWER PIPE FITTINGS ON THIS PLAN SHEET IS 0 LBS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

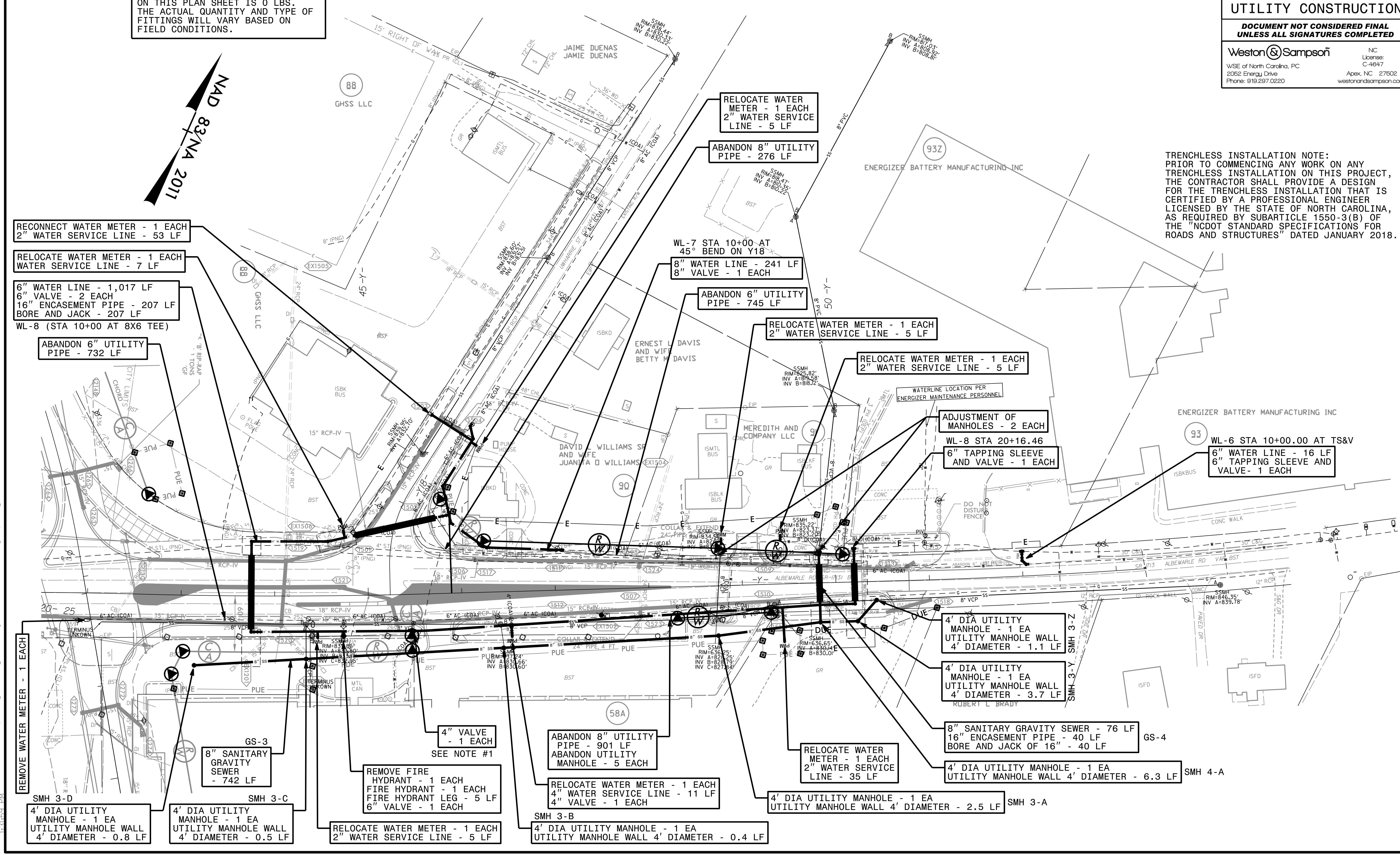
NOTES:
1. RECONNECT EXISTING WATER SERVICE LINE TO NEW 6" WATER LINE WITH 4" VALVE.

REFER TO SHEET UC-12 FOR GS-3 PROFILE.
REFER TO SHEET UC-12 FOR GS-4 PROFILE.
REFER TO SHEET UC-16 FOR WL-6 PROFILE.
REFER TO SHEET UC-16 FOR WL-7 PROFILE.
REFER TO SHEET UC-15 FOR WL-8 PROFILE.

WATER / SANITARY SEWER
UTILITY OWNERS ON THIS SHEET:
CITY OF ASHEBORO
EXISTING UTILITY:
WATER LINE: 6", 8"
GRAVITY SEWER: 8"
CONTACT: MICHAEL RHONEY (WATER)
PHONE: (336) 626-1201 EXT. 2358
CONTACT: MICHAEL LEONARD (SEWER)
PHONE: (336) 626-1201 EXT. 2328

PROJECT REFERENCE NO.	U-5813	SHEET NO.	UC-8
DESIGNED BY:	KCZ		
DRAWN BY:	KSH		
CHECKED BY:	KCZ		
APPROVED BY:	KCZ		
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151		UTILITY CONSTRUCTION PLANS ONLY
UTILITY CONSTRUCTION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
		NC License: C-4847 Apex, NC 27502 westonsampson.com	

TRENCHLESS INSTALLATION NOTE:
PRIOR TO COMMENCING ANY WORK ON ANY TRENCHLESS INSTALLATION ON THIS PROJECT, THE CONTRACTOR SHALL PROVIDE A DESIGN FOR THE TRENCHLESS INSTALLATION THAT IS CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED BY THE STATE OF NORTH CAROLINA, AS REQUIRED BY SUBARTICLE 1550-3(B) OF THE "NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2018.



RECONNECT WATER METER - 1 EACH
2" WATER SERVICE LINE - 53 LF

RELOCATE WATER METER - 1 EACH
WATER SERVICE LINE - 7 LF

6" WATER LINE - 1,017 LF
6" VALVE - 2 EACH
16" ENCASUREMENT PIPE - 207 LF
BORE AND JACK - 207 LF
WL-8 (STA 10+00 AT 8X6 TEE)

ABANDON 6" UTILITY PIPE - 732 LF

RELOCATE WATER METER - 1 EACH
2" WATER SERVICE LINE - 5 LF

ABANDON 8" UTILITY PIPE - 276 LF

WL-7 STA 10+00 AT 45° BEND ON Y18
8" WATER LINE - 241 LF
8" VALVE - 1 EACH

ABANDON 6" UTILITY PIPE - 745 LF

RELOCATE WATER METER - 1 EACH
2" WATER SERVICE LINE - 5 LF

RELOCATE WATER METER - 1 EACH
2" WATER SERVICE LINE - 5 LF

ADJUSTMENT OF MANHOLES - 2 EACH

WL-8 STA 20+16.46
6" TAPPING SLEEVE AND VALVE - 1 EACH

WL-6 STA 10+00.00 AT TS&V
6" WATER LINE - 16 LF
6" TAPPING SLEEVE AND VALVE - 1 EACH

REMOVE WATER METER - 1 EACH

SMH 3-D
4' DIA UTILITY MANHOLE - 1 EA
UTILITY MANHOLE WALL 4' DIAMETER - 0.8 LF

SMH 3-C
4' DIA UTILITY MANHOLE - 1 EA
UTILITY MANHOLE WALL 4' DIAMETER - 0.5 LF

SMH 3-B
4' DIA UTILITY MANHOLE - 1 EA
UTILITY MANHOLE WALL 4' DIAMETER - 0.4 LF

GS-3
8" SANITARY GRAVITY SEWER - 742 LF

REMOVE FIRE HYDRANT - 1 EACH
FIRE HYDRANT - 1 EACH
FIRE HYDRANT LEG - 5 LF
6" VALVE - 1 EACH

RELOCATE WATER METER - 1 EACH
2" WATER SERVICE LINE - 5 LF

RELOCATE WATER METER - 1 EACH
4" WATER SERVICE LINE - 11 LF
4" VALVE - 1 EACH

SMH 3-B
4' DIA UTILITY MANHOLE - 1 EA
UTILITY MANHOLE WALL 4' DIAMETER - 0.4 LF

ABANDON 8" UTILITY PIPE - 901 LF
ABANDON UTILITY MANHOLE - 5 EACH

RELOCATE WATER METER - 1 EACH
2" WATER SERVICE LINE - 35 LF

4' DIA UTILITY MANHOLE - 1 EA
UTILITY MANHOLE WALL 4' DIAMETER - 2.5 LF

4' DIA UTILITY MANHOLE - 1 EA
UTILITY MANHOLE WALL 4' DIAMETER - 1.1 LF

4' DIA UTILITY MANHOLE - 1 EA
UTILITY MANHOLE WALL 4' DIAMETER - 3.7 LF

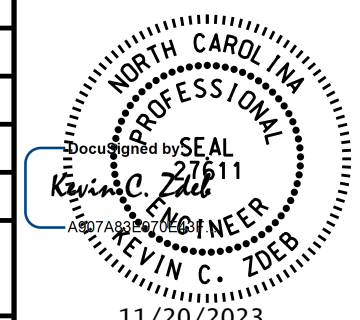

8" SANITARY GRAVITY SEWER - 76 LF
16" ENCASUREMENT PIPE - 40 LF
BORE AND JACK OF 16" - 40 LF

4' DIA UTILITY MANHOLE - 1 EA
UTILITY MANHOLE WALL 4' DIAMETER - 6.3 LF

SMH 4-A

Division 8:\Projects\Engineering\UC_Proj\U5813_U-5813_Randolph\Engineering\UC_Proj\U5813_U-5813_rndj15_psh.dgn

5/14/2017

PROJECT REFERENCE NO.	SHEET NO.
U-5813	UC-9
DESIGNED BY: KCZ	
DRAWN BY: KSH	
CHECKED BY: KCZ	
APPROVED BY: KCZ	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151 UTILITY CONSTRUCTION PLANS ONLY	
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
	
WSE of North Carolina, PC 2052 Energy Drive Phone: 919.297.0220	
NC License: C-4847 Apex, NC 27502 westonandsampson.com	

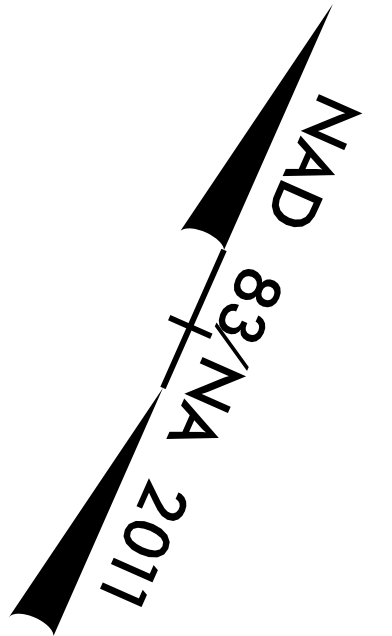
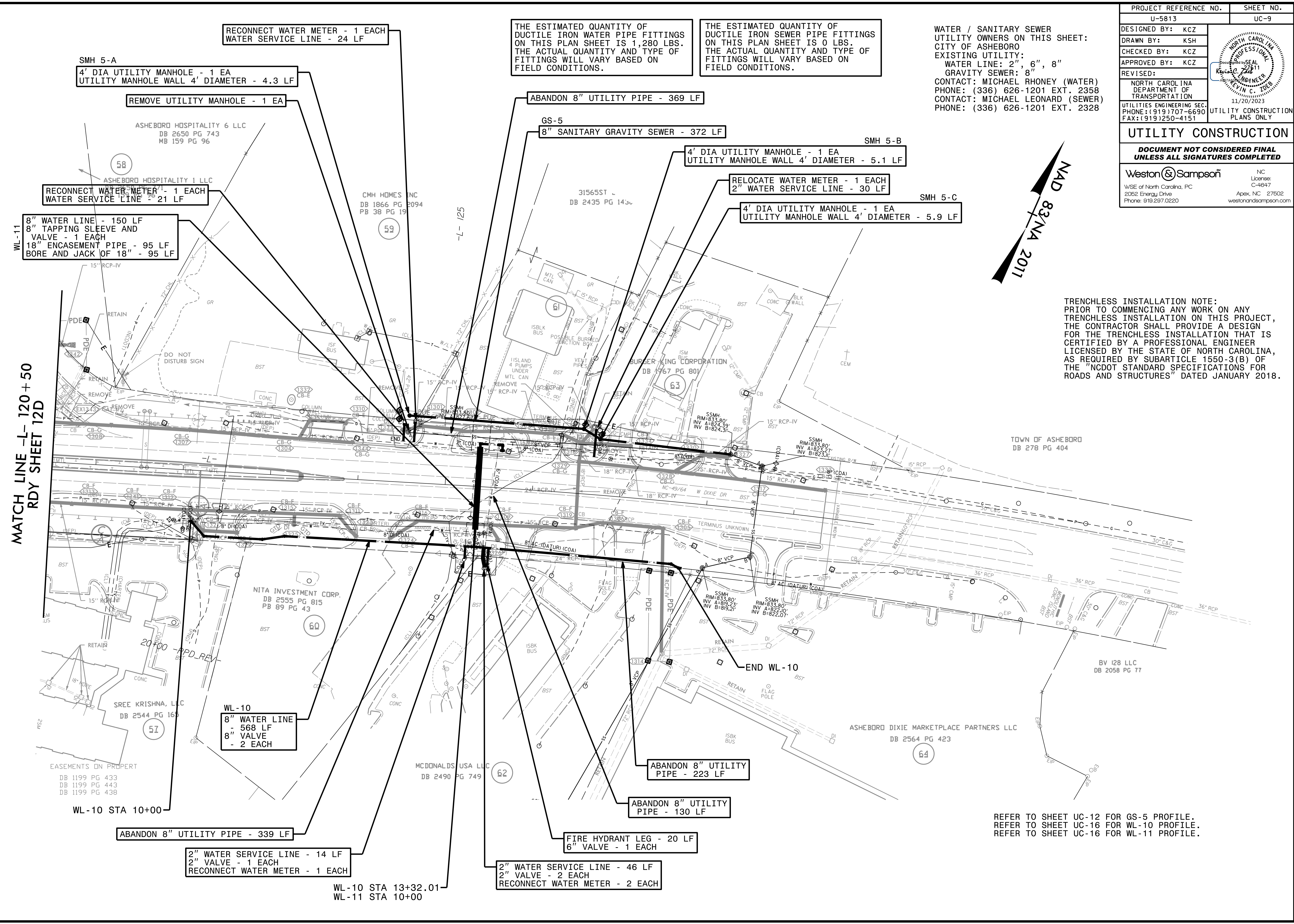
WATER / SANITARY SEWER UTILITY OWNERS ON THIS SHEET:
 CITY OF ASHEBORO
 EXISTING UTILITY:
 WATER LINE: 2", 6", 8"
 GRAVITY SEWER: 8"
 CONTACT: MICHAEL RHONEY (WATER)
 PHONE: (336) 626-1201 EXT. 2358
 CONTACT: MICHAEL LEONARD (SEWER)
 PHONE: (336) 626-1201 EXT. 2328

THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 1,280 LBS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

THE ESTIMATED QUANTITY OF DUCTILE IRON SEWER PIPE FITTINGS ON THIS PLAN SHEET IS 0 LBS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

MATCH LINE -L- 120 +50
RDY SHEET 12D

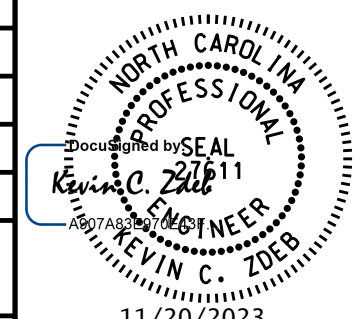

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TRENCHLESS INSTALLATION NOTE:
 PRIOR TO COMMENCING ANY WORK ON ANY TRENCHLESS INSTALLATION ON THIS PROJECT, THE CONTRACTOR SHALL PROVIDE A DESIGN FOR THE TRENCHLESS INSTALLATION THAT IS CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED BY THE STATE OF NORTH CAROLINA, AS REQUIRED BY SUBARTICLE 1550-3(B) OF THE "NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2018.

REFER TO SHEET UC-12 FOR GS-5 PROFILE.
 REFER TO SHEET UC-16 FOR WL-10 PROFILE.
 REFER TO SHEET UC-16 FOR WL-11 PROFILE.

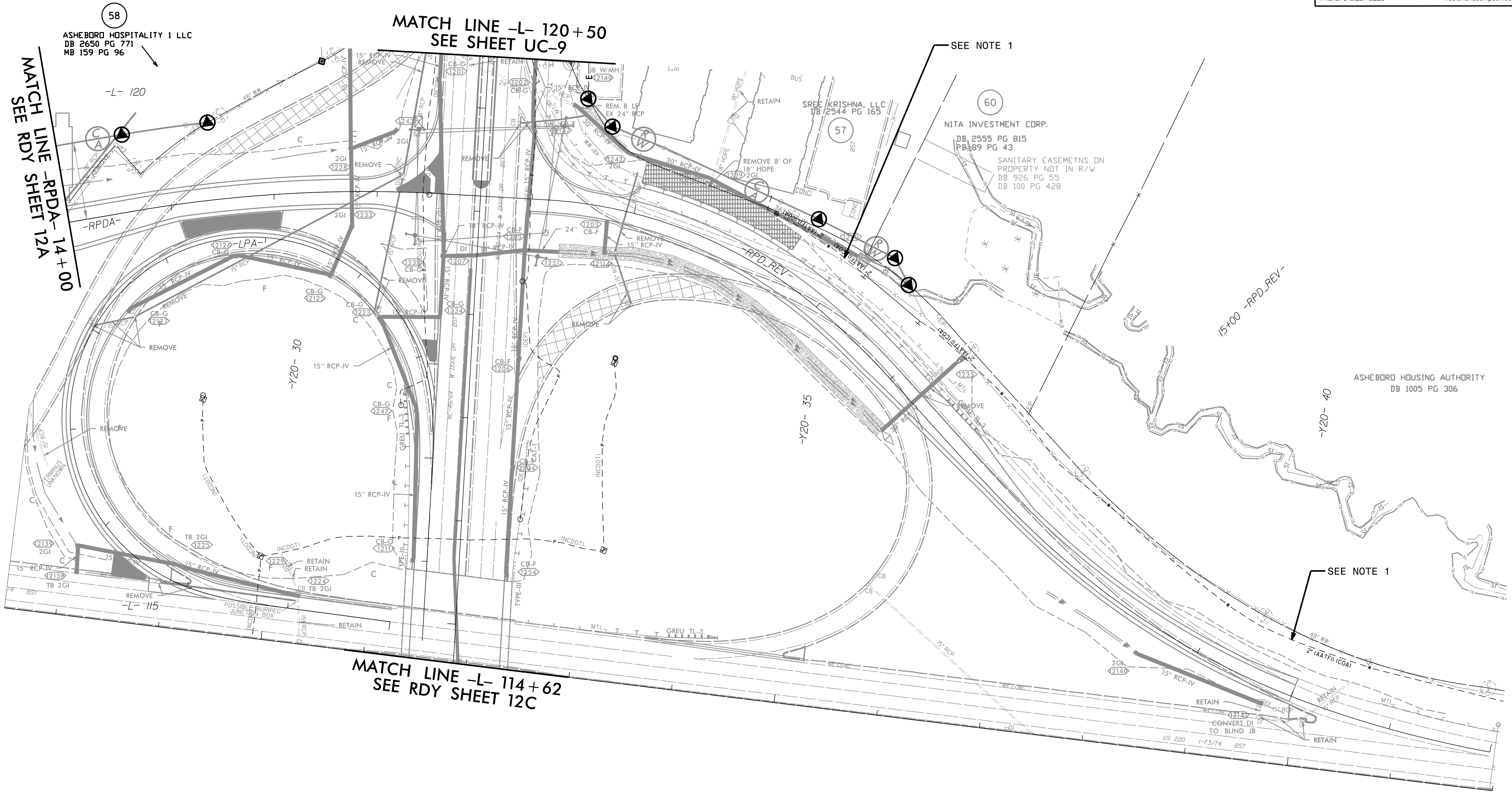
5/14/23

PROJECT REFERENCE NO. U-5813	SHEET NO. UC-9A
DESIGNED BY: KCZ	
DRAWN BY: KSH	
CHECKED BY: KCZ	
APPROVED BY: KCZ	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	11/20/2023
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
	
WSE of North Carolina, PC 2052 Energy Drive Phone: 919.297.0220	
NC License: C-4847 Apex, NC 27502 westonandsampson.com	

WATER / SANITARY SEWER
 UTILITY OWNERS ON THIS SHEET:
 CITY OF ASHEBORO
 EXISTING UTILITY:
 WATER LINE: 2"
 CONTACT: MICHAEL RHONEY (WATER)
 PHONE: (336) 626-1201 EXT. 2358

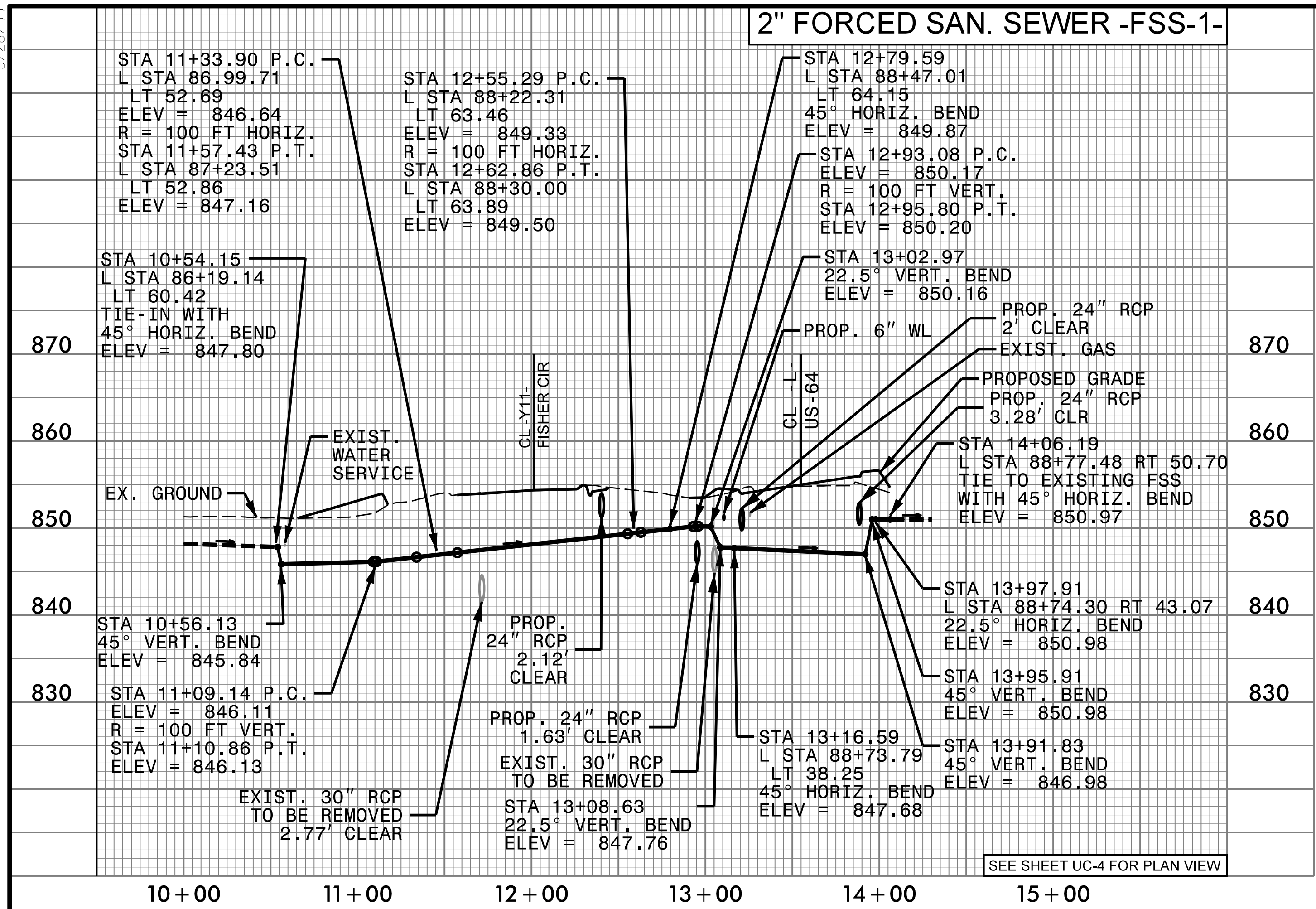
NAD 83/NA 2011

- NOTES:
 1. ACCORDING TO THE CITY OF ASHEBORO, THEY DO NOT HAVE A RECORD OF A WATER LINE ALONG RAMP D AND THE WATER LINE SHOWN ON THIS SHEET AND IN THE FS FILE SHOULD BE CONSIDERED ABANDONED.



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 Weston

5/28/99



- NOTES:
- EXISTING PIPE AT TIE-IN LOCATIONS ARE ESTIMATED ASSUMING 3 FEET OF COVER. CONTRACTOR SHALL FIELD VERIFY PIPE LOCATION BEFORE STARTING WORK.
 - ALL PROPOSED PIPE ELEVATIONS IN PROFILE REFER TO CENTER OF PIPE UNLESS INDICATED AS INVERT.
 - OPEN TRENCH CONSTRUCTION SHALL PROVIDE 3 FEET MINIMUM COVER FROM FINAL GRADE TO TOP OF PIPE.
 - PROPOSED FSS SHALL HAVE MINIMUM 2' CLEARANCE WHEN CROSSING UNDER DRAINAGE PIPES.

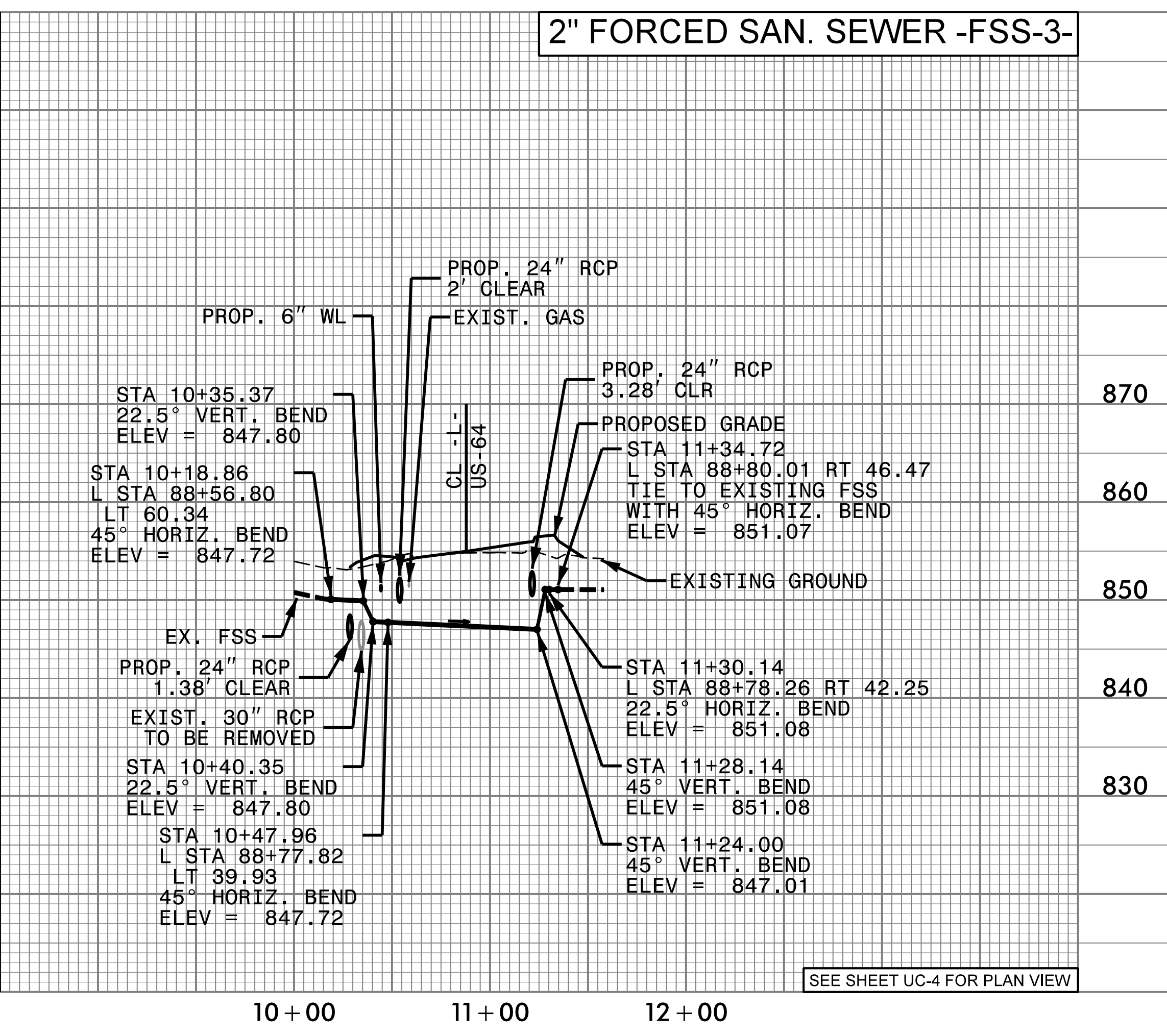
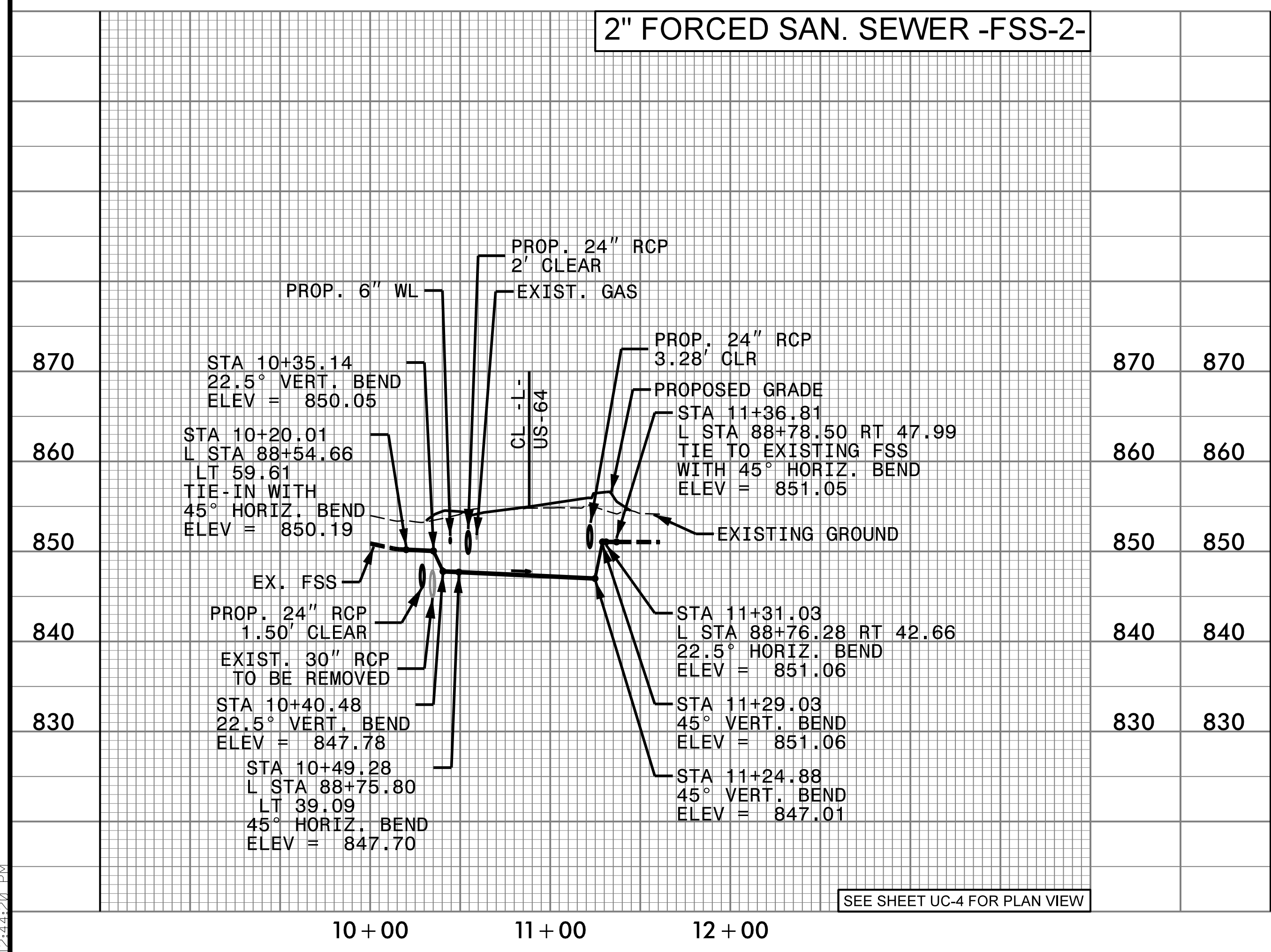
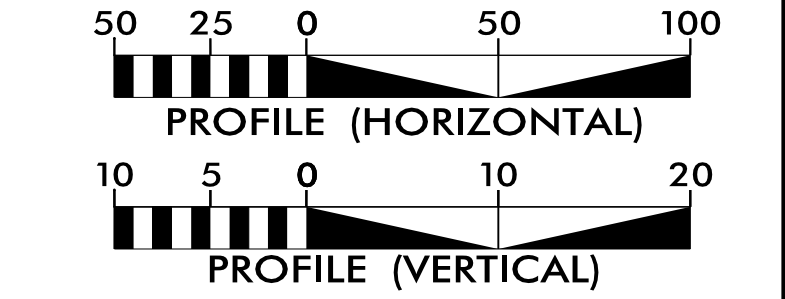
PROJECT REFERENCE NO. U-5813	SHEET NO. UC-10
DESIGNED BY: KCZ	
DRAWN BY: KCZ	
CHECKED BY: KSH	
APPROVED BY: KCZ	
REVISER:	11/20/2023
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

Weston & Sampson
 WSE of North Carolina, PC
 2052 Energy Drive
 Phone: 919.297.0220

NC License: C-4847
 Apex, NC 27602
 westonandsampson.com

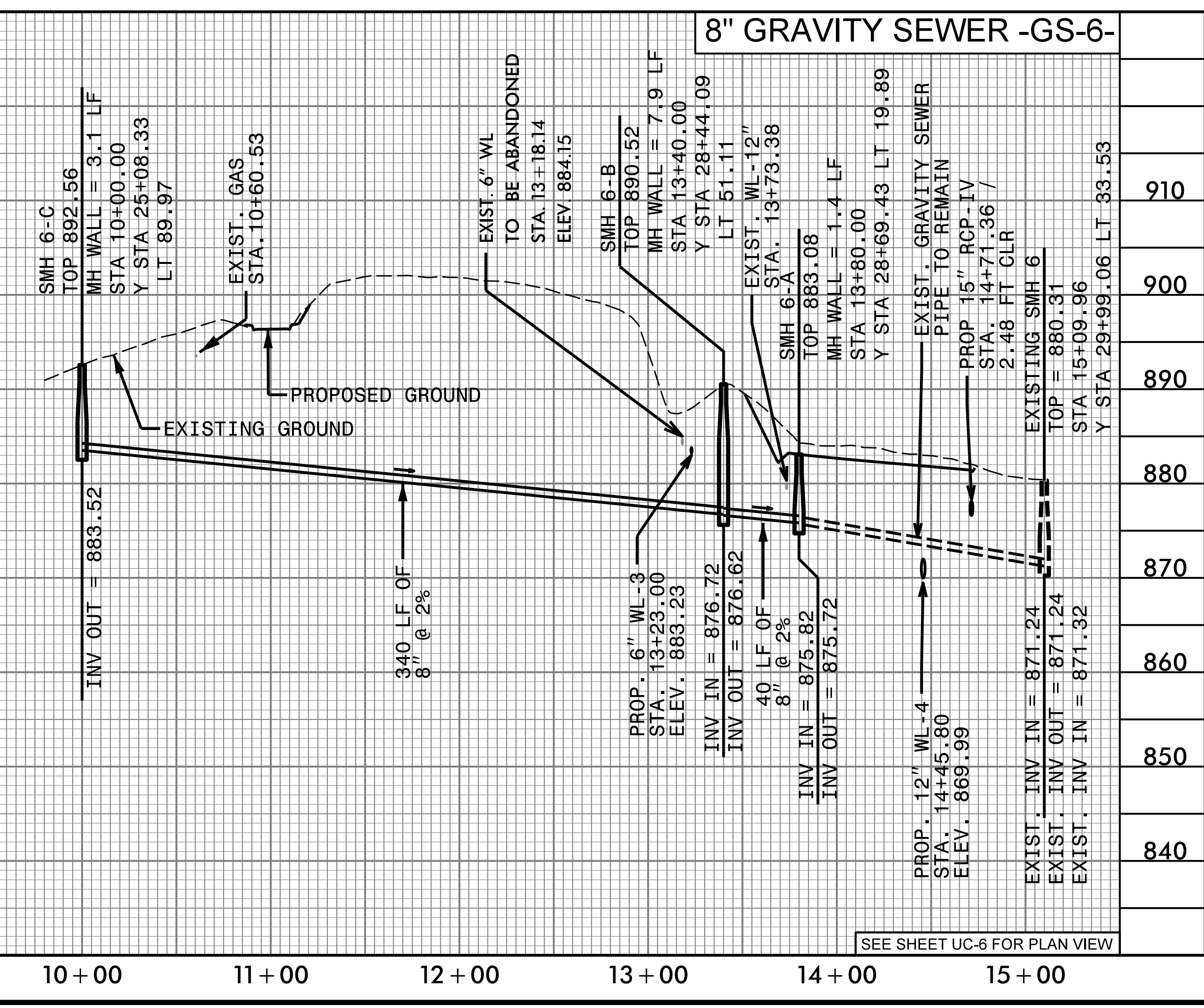
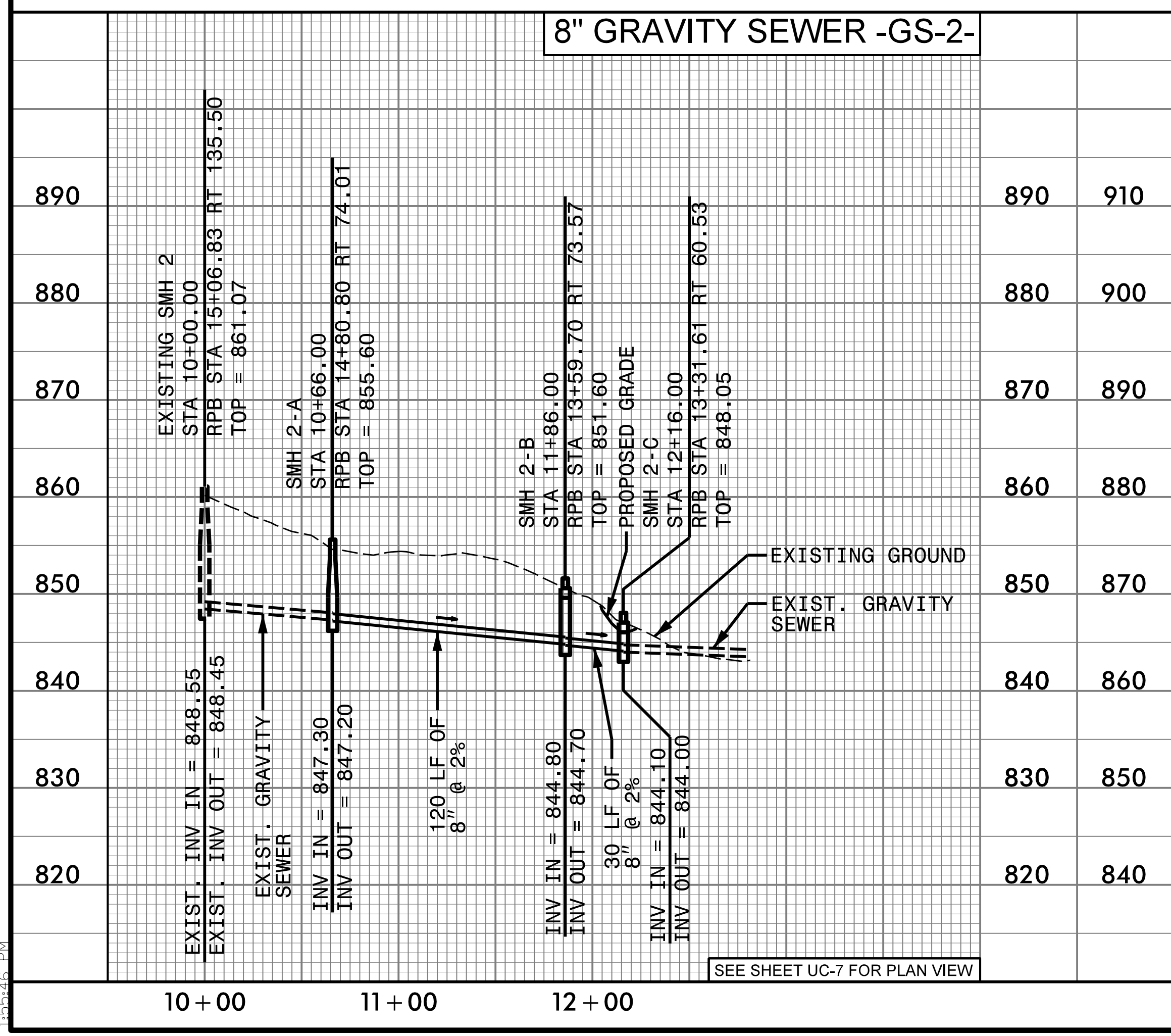
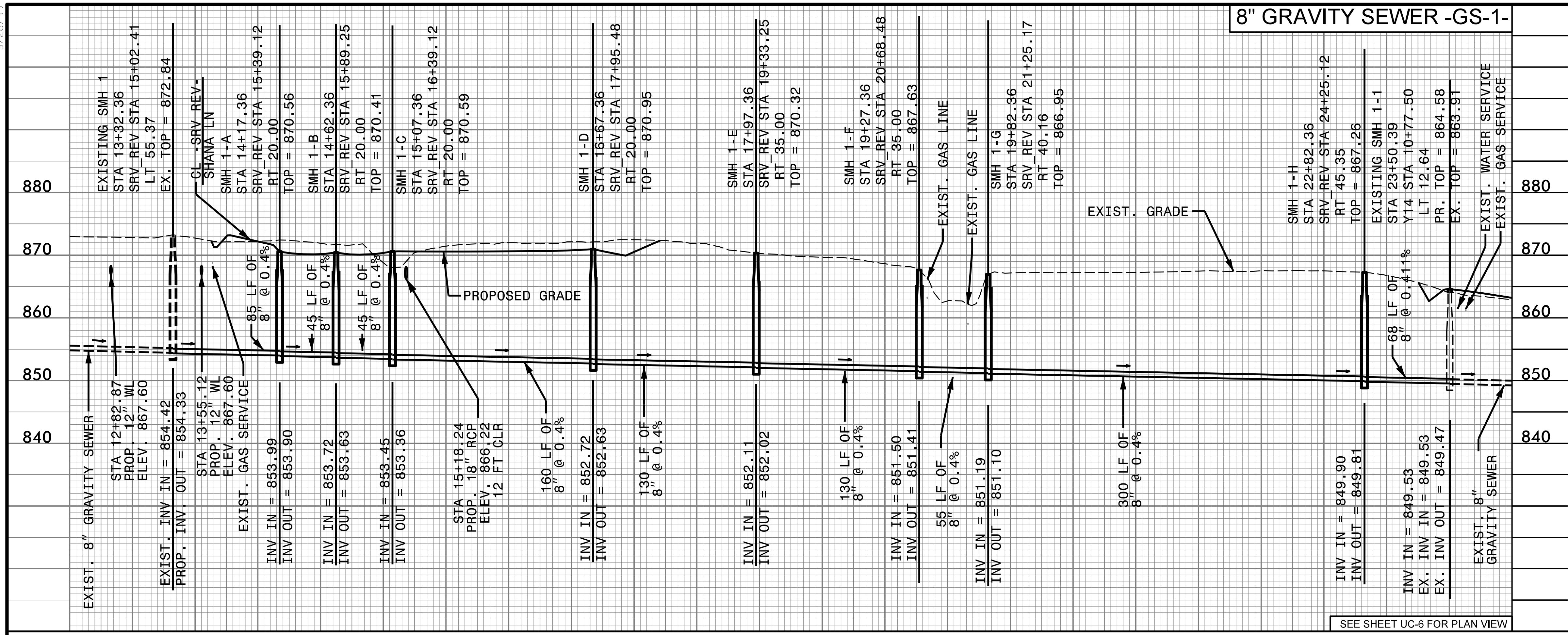


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FORCED SANITARY SEWER PROFILES

5/28/99

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11/21/06



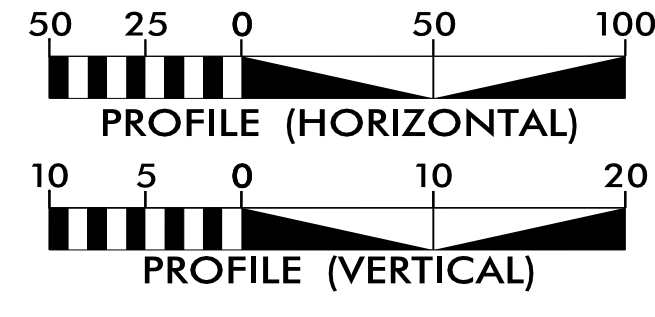
NOTES:
 1. EXISTING PIPE INVERTS AT TIE-IN LOCATIONS ARE ESTIMATED BASED ON SURVEY INFORMATION.
 2. CONTRACTOR IS RESPONSIBLE TO LOCATE ALL EXISTING SEWER SERVICE LINES WITHIN THE GRAVITY SEWER RELOCATION AREA TO ENSURE THE SERVICE LINES ARE RECONNECTED TO THE NEW GRAVITY SEWER. CONTRACTOR SHALL COORDINATE WITH THE UTILITY OWNER.
 3. ALL PROPOSED GRAVITY SEWER ELEVATIONS ARE INVERT OF PIPE.
 4. PIPE LENGTHS ARE MEASURED TO CENTER OF MANHOLE.
 5. PIPE INVERTS ARE CALCULATED AT CENTER OF MANHOLE.
 6. WHERE GRAVITY SEWER HAS LESS THAN 3 FEET OF COVER FROM FINAL GRADE TO TOP OF PIPE, THE PIPE SHALL BE OF DUCTILE IRON PIPE MATERIAL.
 7. CONTRACTOR SHALL RECONSTRUCT THE COVING INSIDE MANHOLES WHEN CONDUCTING TIE-INS AT EXISTING MANHOLES FOR THE NEW FLOW PATTERN.
 8. CONTRACTOR SHALL SEAL MANHOLES APPROPRIATELY WHERE EXISTING PIPES ARE REMOVED OR ABANDONED WHEN CONDUCTING TIE-INS AT EXISTING MANHOLES.
 9. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY PUMP AND HAUL PERMITS NEEDED BEFORE CONDUCTING TIE-INS AT EXISTING MANHOLES. COORDINATE WITH UTILITY OWNER.
 10. IN PROFILE GS-2, THE INVERTS AT EXISTING SMH-2 WERE ESTIMATED FROM SURVEY INFORMATION AS THIS MANHOLE WAS INACCESSIBLE.

PROJECT REFERENCE NO. U-5813	SHEET NO. UC-11
DESIGNED BY: KCZ	
DRAWN BY: KCZ	
CHECKED BY: KSH	
APPROVED BY: KCZ	
REVISED:	UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151

UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

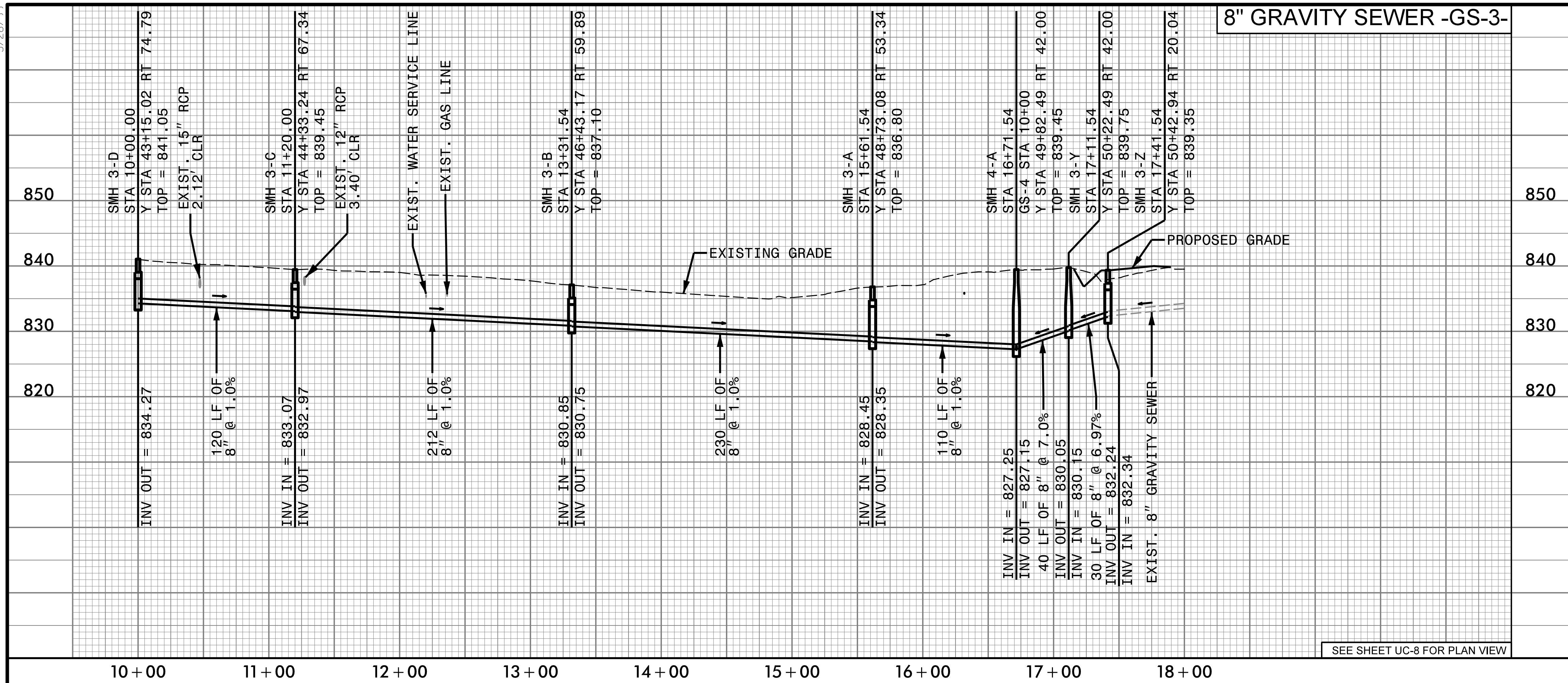
Weston & Sampson
 WSE of North Carolina, PC
 2052 Energy Drive
 Phone: (919) 297-0220
 NC License: C-4847
 Apex, NC 27602
 westonandsampson.com



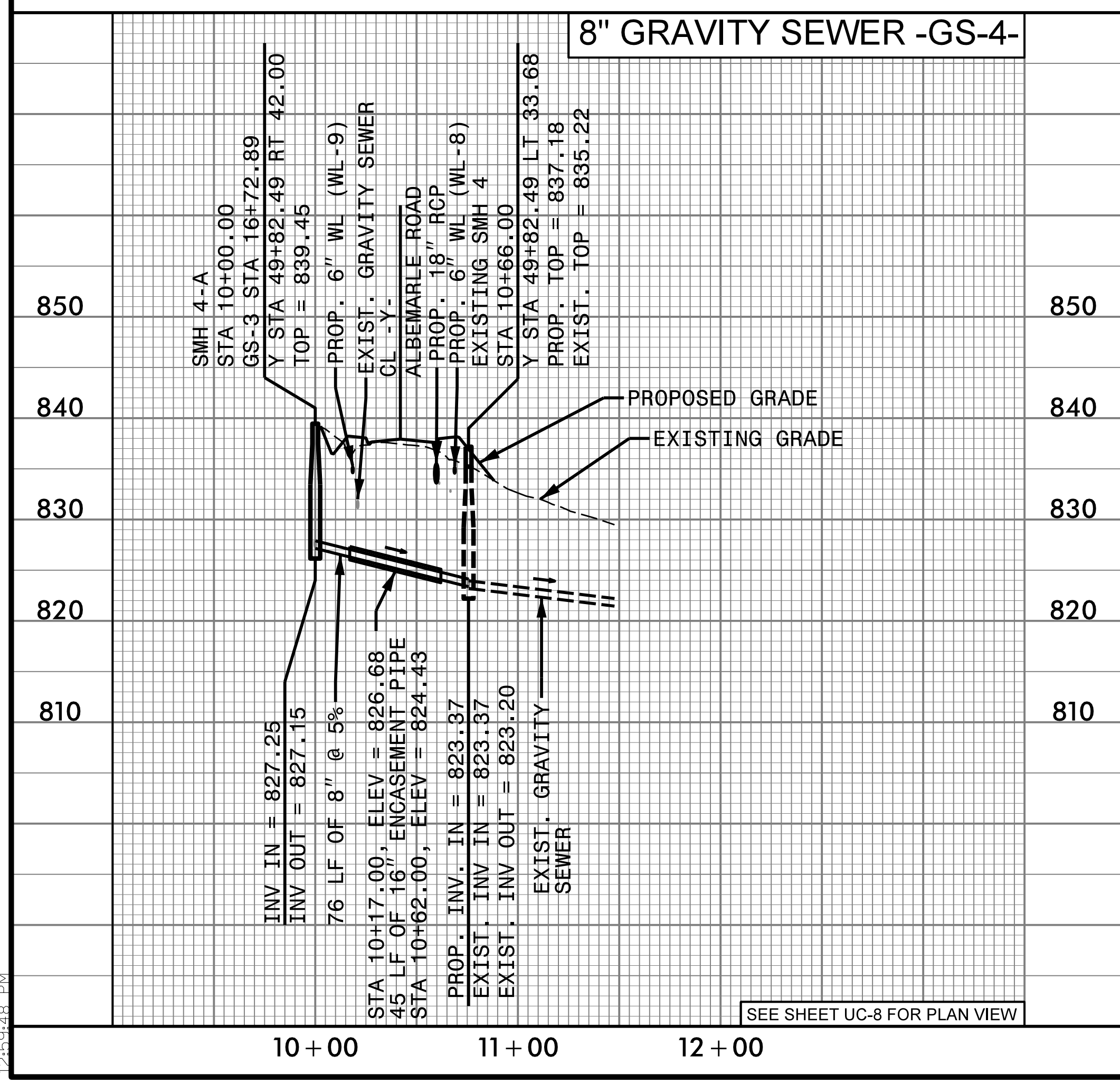
GRAVITY SEWER PROFILES

5/28/99

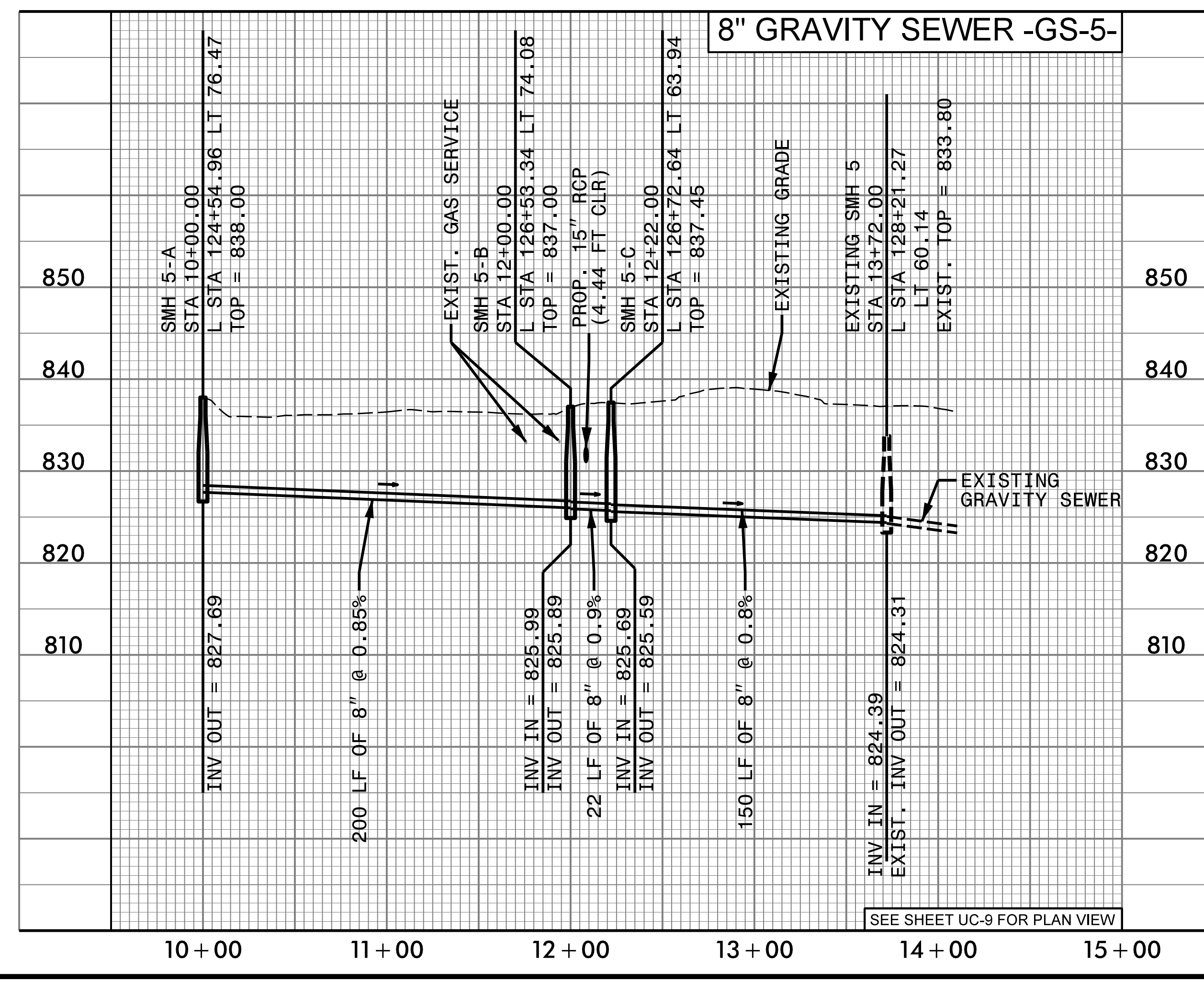
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SEE SHEET UC-8 FOR PLAN VIEW



SEE SHEET UC-8 FOR PLAN VIEW



SEE SHEET UC-9 FOR PLAN VIEW

8" GRAVITY SEWER -GS-3-

8" GRAVITY SEWER -GS-4-

8" GRAVITY SEWER -GS-5-

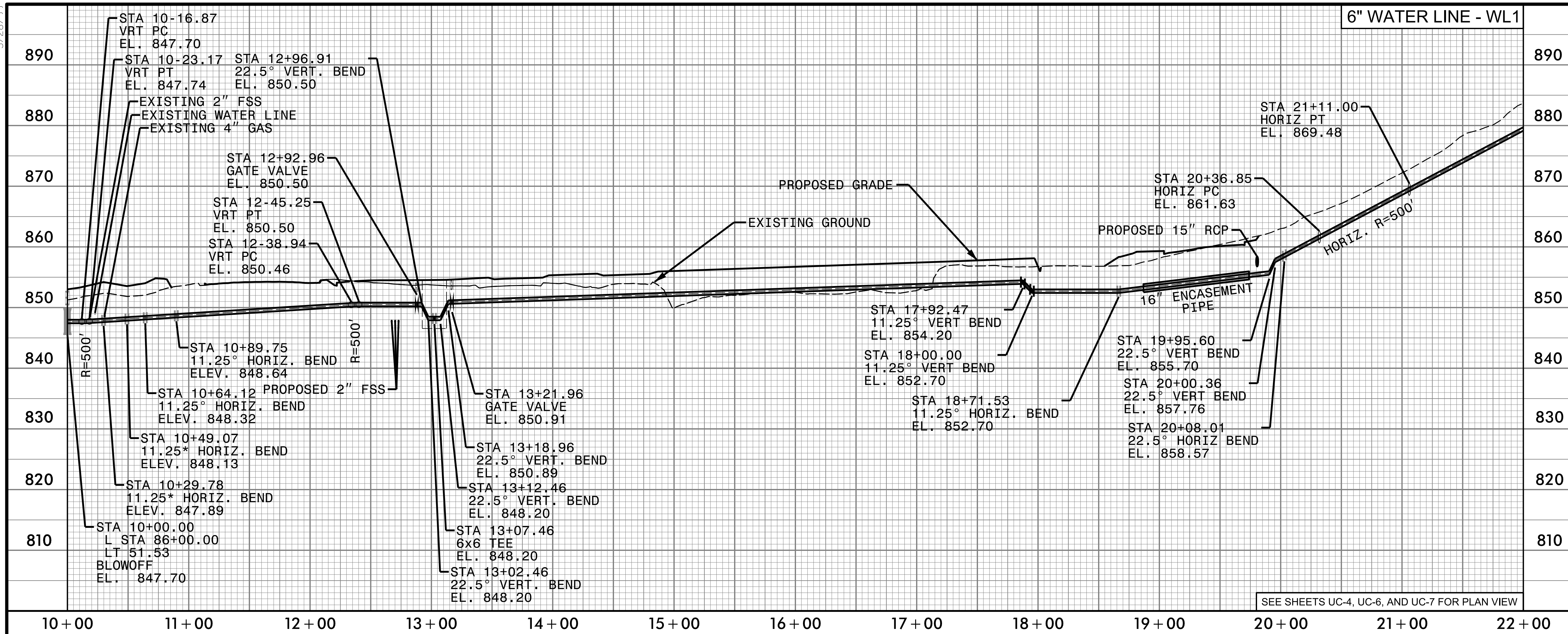
- NOTES:
- EXISTING PIPE INVERTS AT TIE-IN LOCATIONS ARE ESTIMATED BASED ON SURVEY INFORMATION.
 - CONTRACTOR IS RESPONSIBLE TO LOCATE ALL EXISTING SEWER SERVICE LINES WITHIN THE GRAVITY SEWER RELOCATION AREA TO ENSURE THE SERVICE LINES ARE RECONNECTED TO THE NEW GRAVITY SEWER. CONTRACTOR SHALL COORDINATE WITH THE UTILITY OWNER.
 - ALL PROPOSED GRAVITY SEWER ELEVATIONS ARE INVERT OF PIPE.
 - PIPE LENGTHS ARE MEASURED AT CENTER OF MANHOLE.
 - WHERE GRAVITY SEWER HAS LESS THAN 3 FEET OF COVER FROM FINAL GRADE TO TOP OF PIPE, THE PIPE SHALL BE OF DUCTILE IRON PIPE MATERIAL.
 - CONTRACTOR SHALL RECONSTRUCT THE COVER INSIDE MANHOLES WHEN CONDUCTING TIE-INS AT EXISTING MANHOLES FOR THE NEW FLOW PATTERN.
 - CONTRACTOR SHALL SEAL MANHOLES APPROPRIATELY WHERE EXISTING PIPES ARE REMOVED OR ABANDONED WHEN CONDUCTING TIE-INS AT EXISTING MANHOLES.
 - CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY PUMP AND HAUL PERMITS NEEDED BEFORE CONDUCTING TIE-INS AT EXISTING MANHOLES. COORDINATE WITH UTILITY OWNER.
 - ELEVATIONS OF PROPOSED ENCASMENT PIPES ARE AT CENTER OF PIPE.

GRAVITY SEWER PROFILES

PROJECT REFERENCE NO. U-5813	SHEET NO. UC-12
DESIGNED BY: KCZ	
DRAWN BY: KCZ	
CHECKED BY: KSH	
APPROVED BY: KCZ	
REVISED:	11/20/2023
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	
<p>UTILITY CONSTRUCTION</p> <p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>	
<p>PROFILE (HORIZONTAL)</p> <p>PROFILE (VERTICAL)</p>	

5/28/2013

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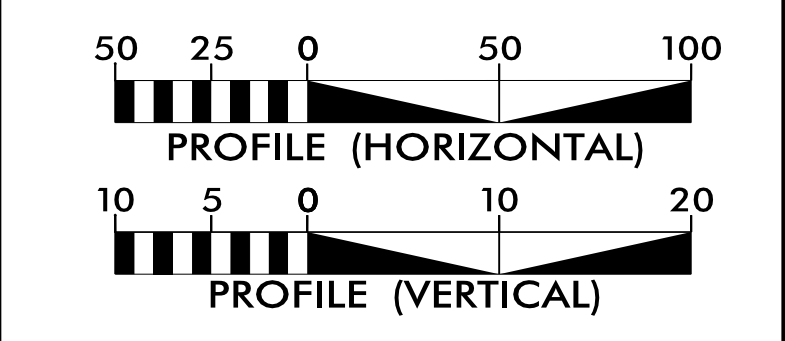
PROJECT REFERENCE NO. U-5813	SHEET NO. UC-13
DESIGNED BY: KCZ	
DRAWN BY: KK	
CHECKED BY: KSH	
APPROVED BY: KCZ	
REVISER:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 11/20/2013 UTILITY CONSTRUCTION PLANS ONLY
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

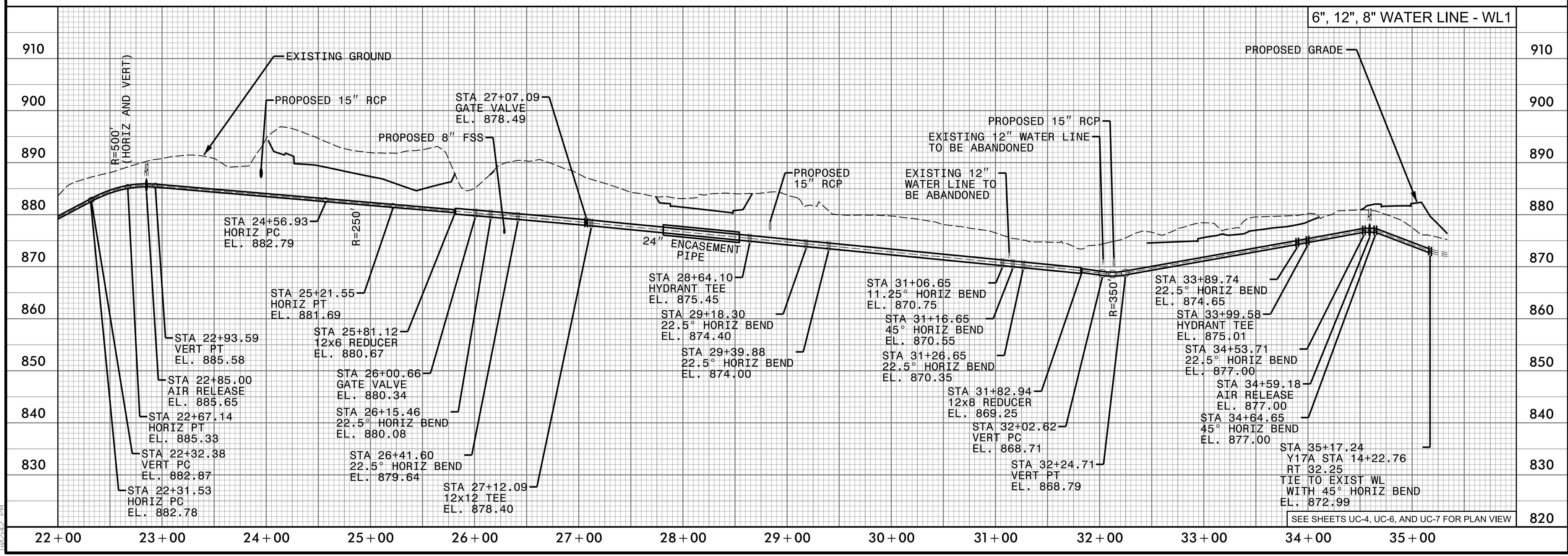
Weston & Sampson
 WSE of North Carolina, PC
 2052 Energy Drive
 Phone: 819.297.0220

NC License: C-4847
 Apex, NC 27602
 westonandsampson.com



- NOTES:
- EXISTING PIPE AT TIE-IN LOCATIONS ARE ESTIMATED BASED ON TEST HOLE INFORMATION PROVIDED BY OTHERS OR ASSUMED TO HAVE 3 FEET OF COVER. CONTRACTOR SHALL FIELD VERIFY PIPE LOCATION BEFORE STARTING WORK.
 - ALL PROPOSED PIPE ELEVATIONS IN PROFILE REFER TO CENTER OF PIPE UNLESS INDICATED AS AN INVERT.
 - OPEN TRENCH CONSTRUCTION SHALL PROVIDE 3 FEET MINIMUM COVER FROM FINAL GRADE TO TOP OF PIPE.

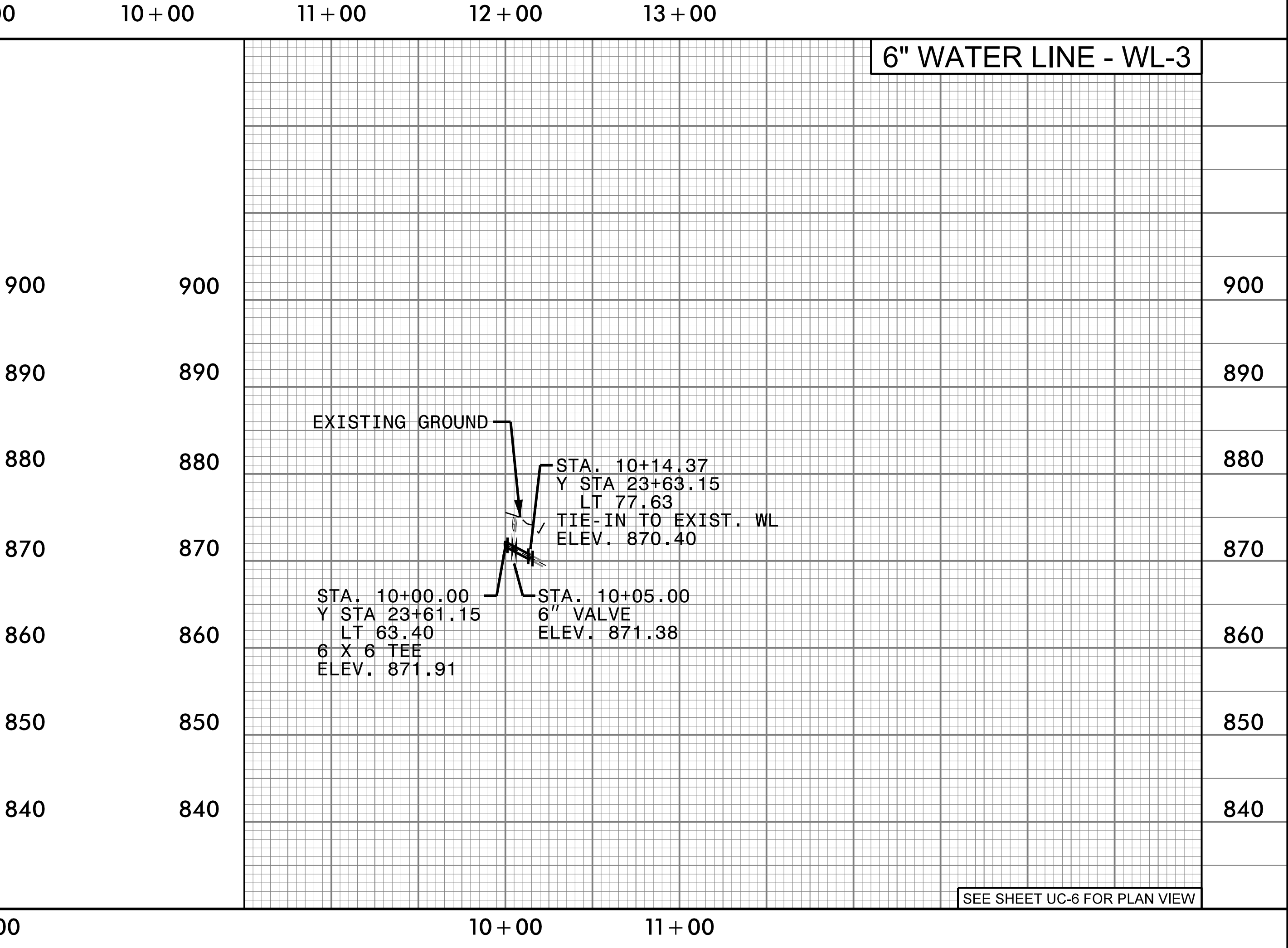
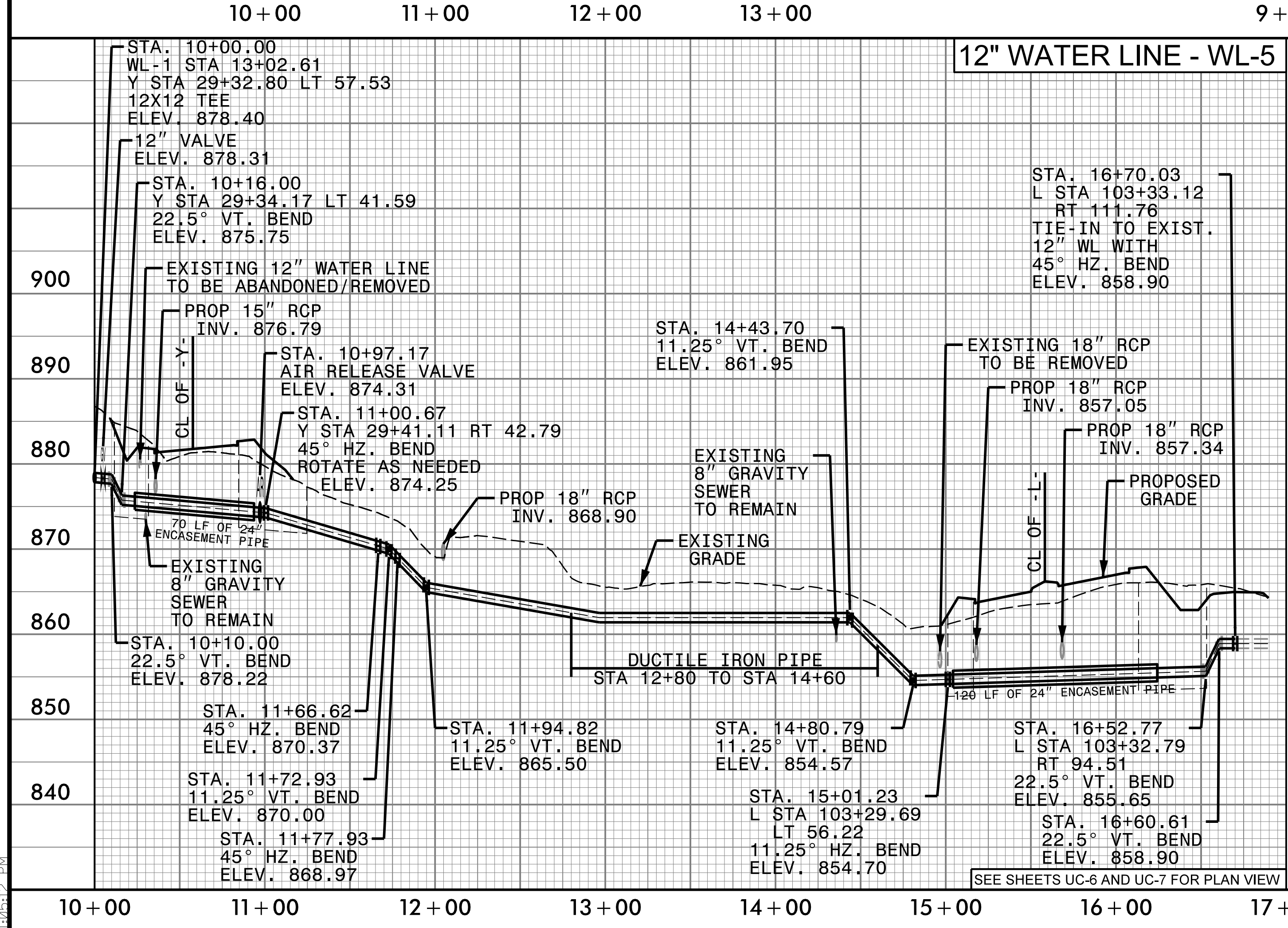
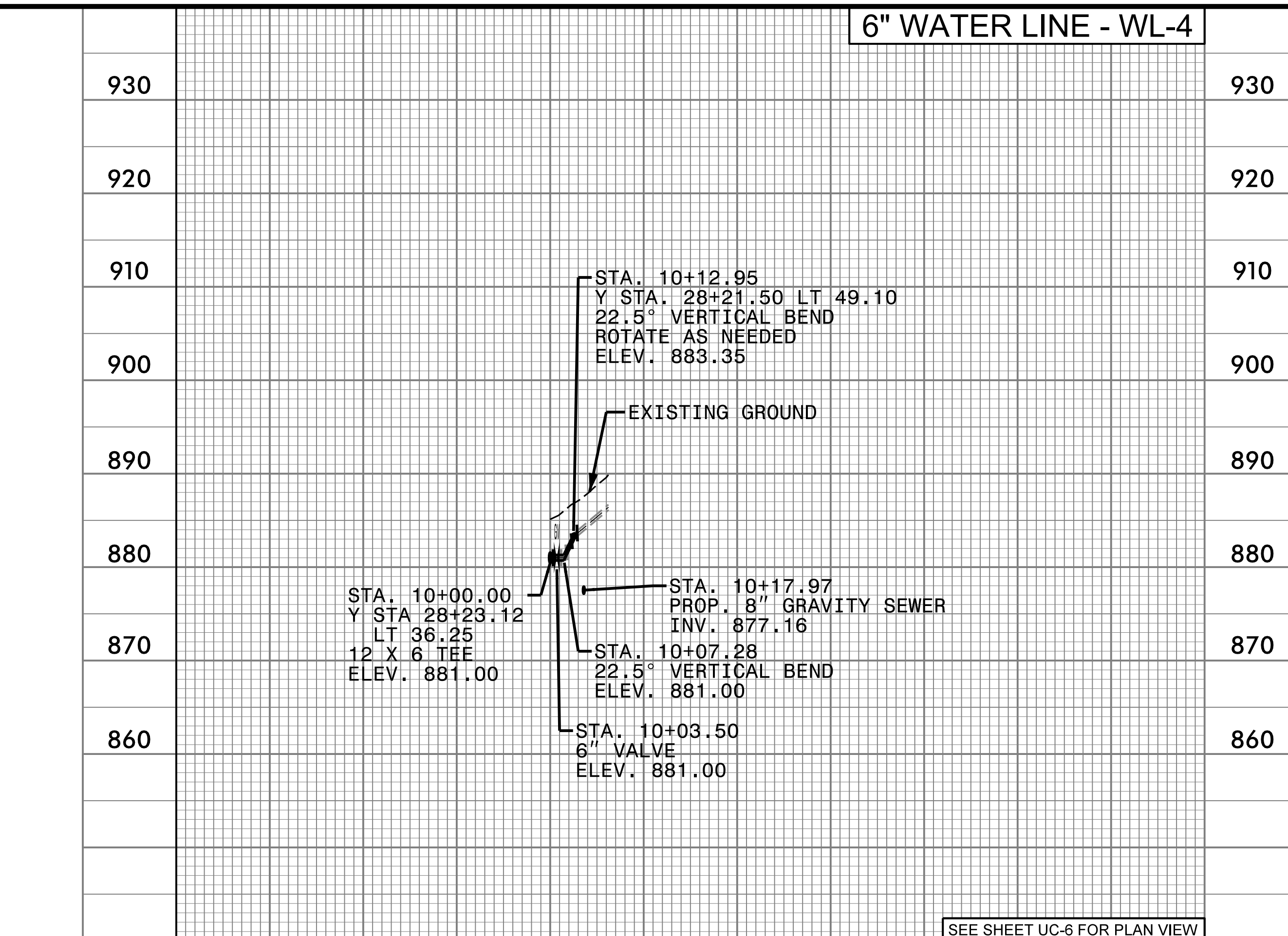
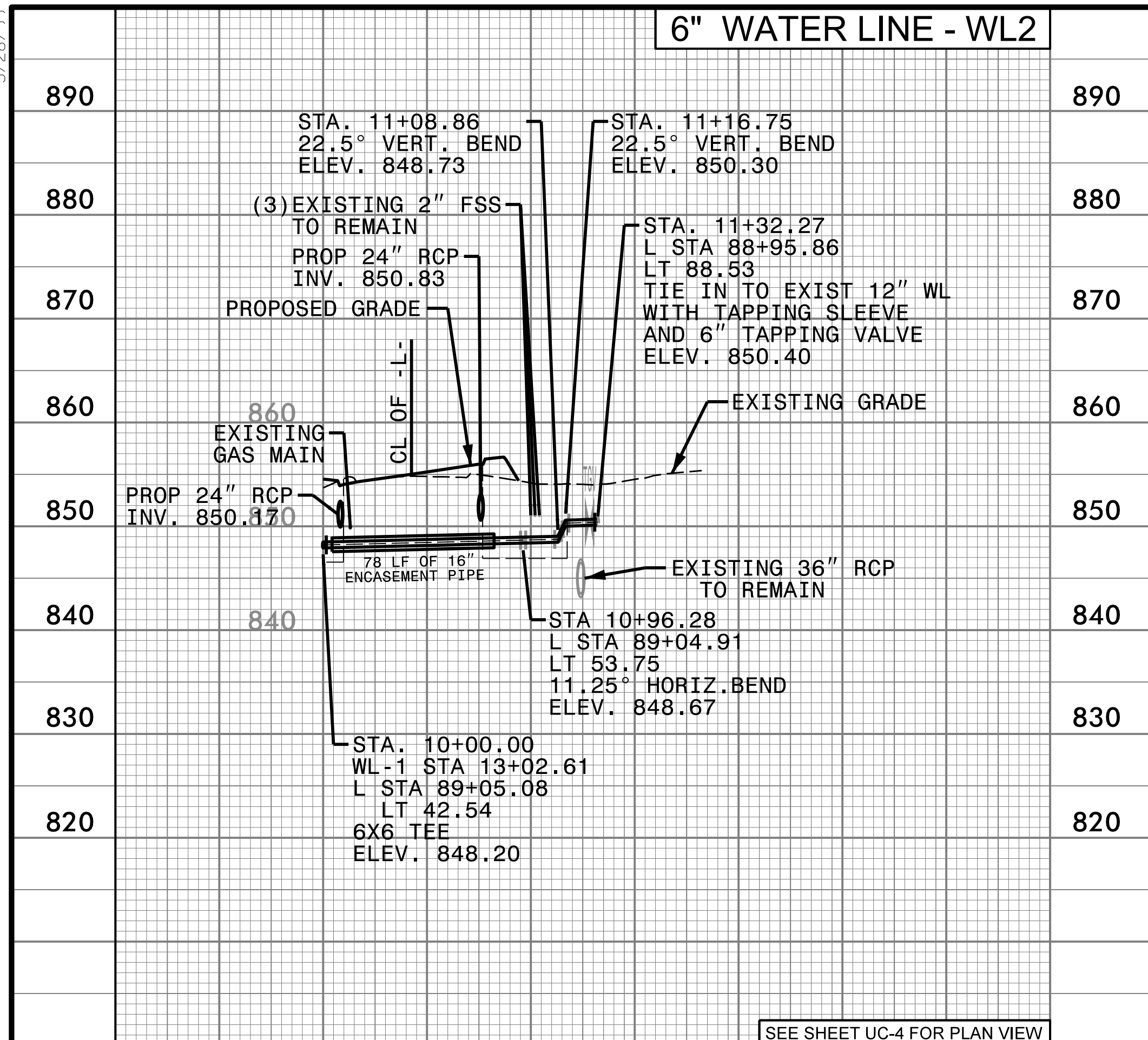
SEE SHEETS UC-4, UC-6, AND UC-7 FOR PLAN VIEW

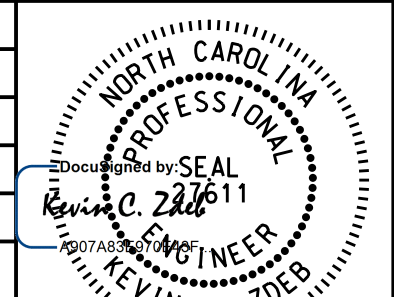


SEE SHEETS UC-4, UC-6, AND UC-7 FOR PLAN VIEW

5/28/99

9/12/2007 local\WSE-Projects\NC\HNTB\Division 8\ENG20-0567_U-5813_Randolph\Engineering\UC\Proj\U5813.ut_UC-14_WTR_pfl.dgn

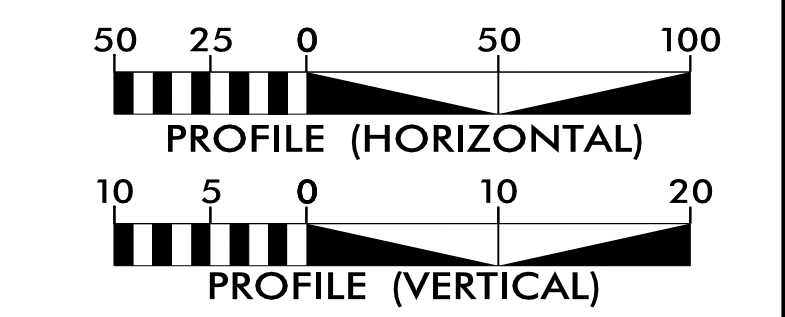


PROJECT REFERENCE NO. U-5813	SHEET NO. UC-14
DESIGNED BY: KCZ	
DRAWN BY: KK	
CHECKED BY: KSH	
APPROVED BY: KCZ	
REVISED:	11/20/2009
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	UTILITY CONSTRUCTION PLANS ONLY
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

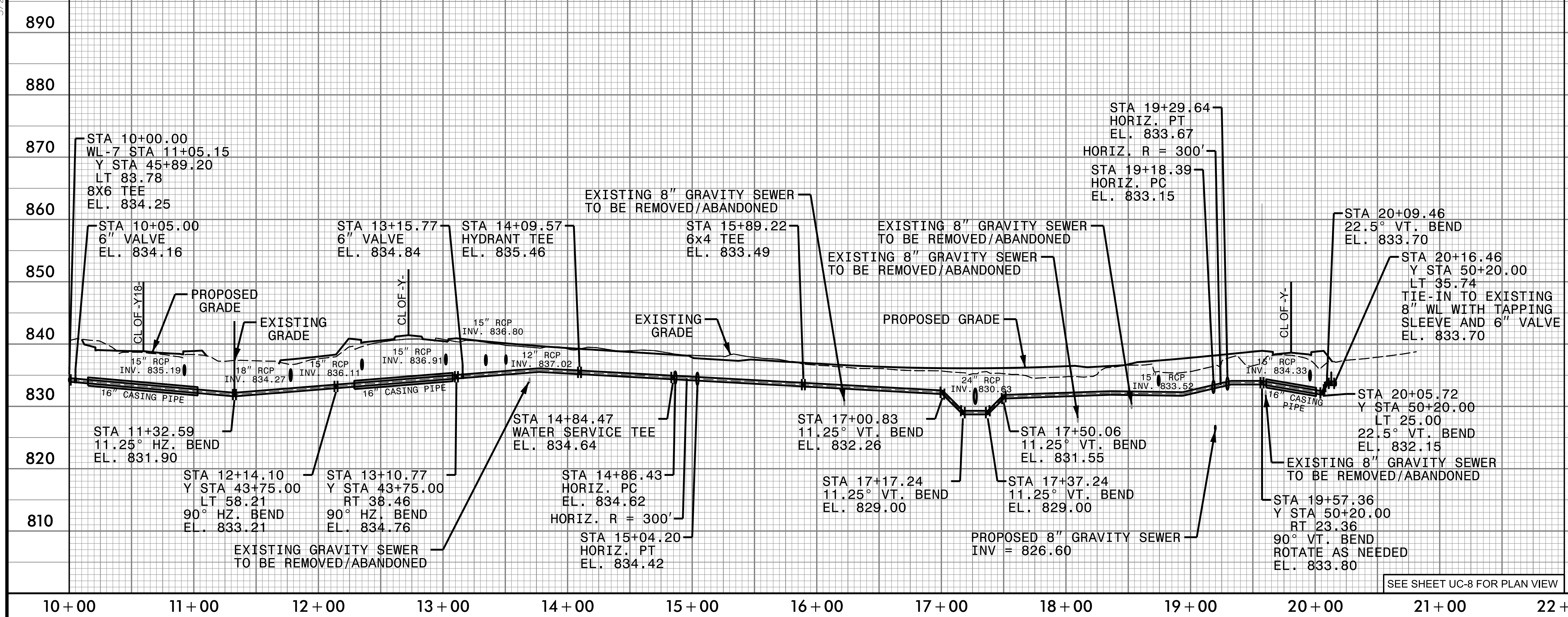
Weston Sampson NC License: C-4847
 WSE of North Carolina, PC Apex, NC 27602
 2062 Energy Drive Phone: 819.297.0220 westonsampson.com



- NOTES:
- EXISTING PIPE AT TIE-IN LOCATIONS ARE ESTIMATED BASED ON TEST HOLE INFORMATION PROVIDED BY OTHERS OR ASSUMED TO HAVE 3 FEET OF COVER. CONTRACTOR SHALL FIELD VERIFY PIPE LOCATION BEFORE STARTING WORK.
 - ALL PROPOSED PIPE ELEVATIONS IN PROFILE REFER TO CENTER OF PIPE UNLESS INDICATED AS AN INVERT.
 - OPEN TRENCH CONSTRUCTION SHALL PROVIDE 3 FEET MINIMUM COVER FROM FINAL GRADE TO TOP OF PIPE.

5/28/2011

6" WATER LINE - WL-8



PROJECT REFERENCE NO. U-5813 SHEET NO. UC-15

DESIGNED BY: KCZ
 DRAWN BY: KCZ
 CHECKED BY: KSH
 APPROVED BY: KCZ

REVISIONS:
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Weston & Sampson
 WSE of North Carolina, PC
 2052 Energy Drive
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 Apex, NC 27602
 westonandsampson.com

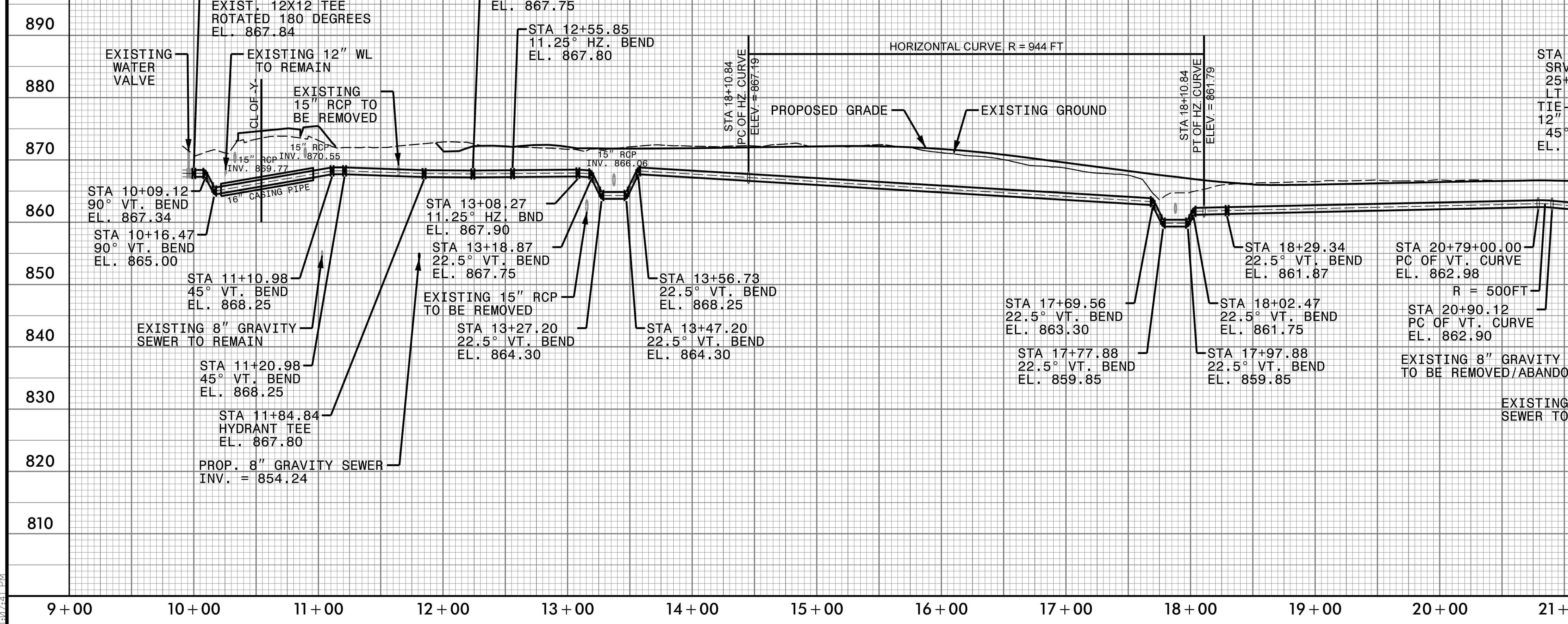
50 25 0 50 100
 PROFILE (HORIZONTAL)

10 5 0 10 20
 PROFILE (VERTICAL)

NOTES:
 1. EXISTING PIPE AT TIE-IN LOCATIONS ARE ESTIMATED BASED ON TEST HOLE INFORMATION PROVIDED BY OTHERS OR ASSUMED TO HAVE 3 FEET OF COVER. CONTRACTOR SHALL FIELD VERIFY PIPE LOCATION BEFORE STARTING WORK.
 2. ALL PROPOSED PIPE ELEVATIONS IN PROFILE REFER TO CENTER OF PIPE UNLESS INDICATED AS INVERT.
 3. OPEN TRENCH CONSTRUCTION SHALL PROVIDE 3 FEET MINIMUM COVER FROM FINAL GRADE TO TOP OF PIPE.
 4. MINIMUM CLEARANCE OF 1 FOOT IS PROVIDED FROM DRAINAGE PIPES.

SEE SHEET UC-8 FOR PLAN VIEW

12" WATER LINE - WL-9

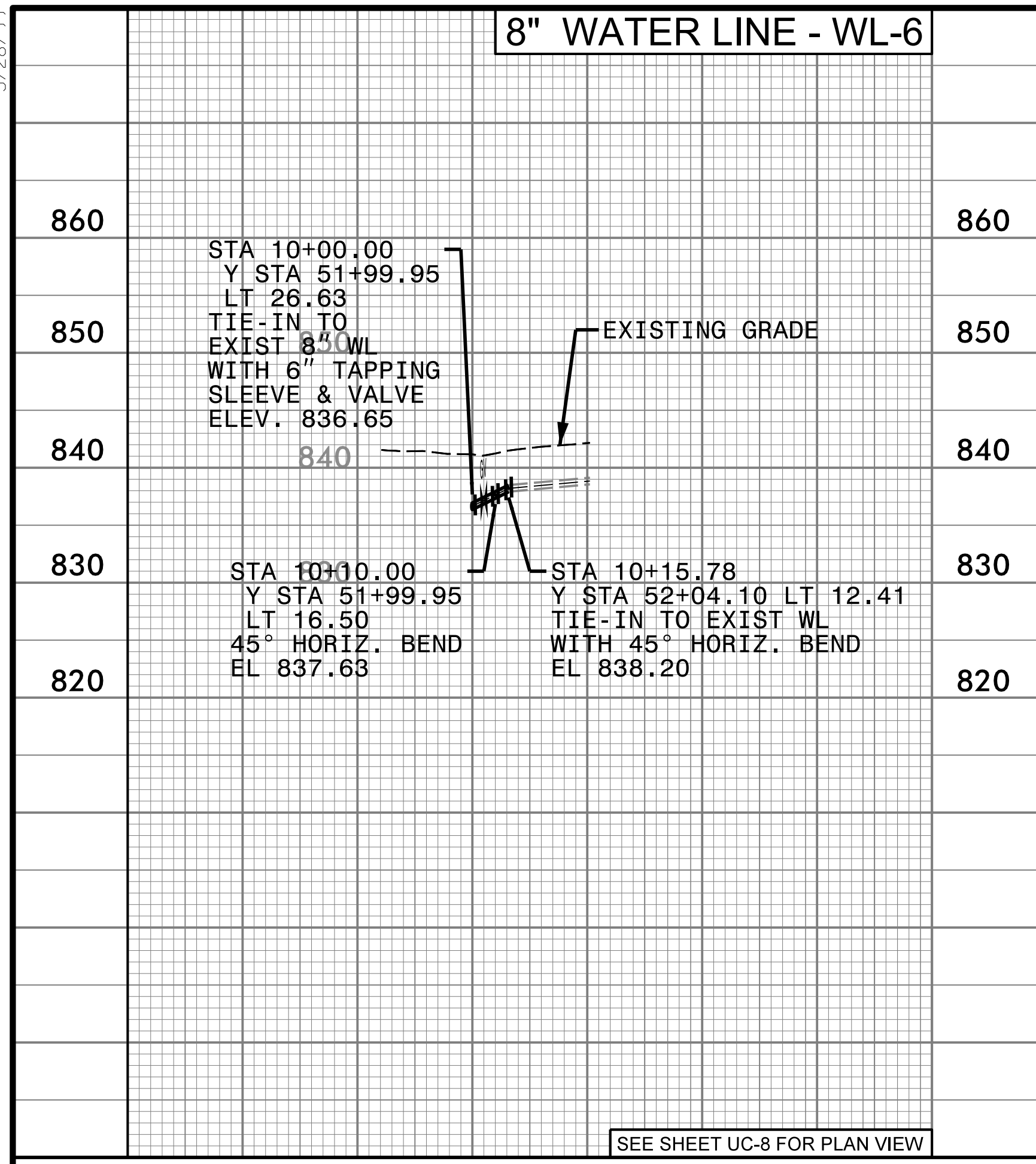


SEE SHEET UC-5 AND UC-6 FOR PLAN VIEW

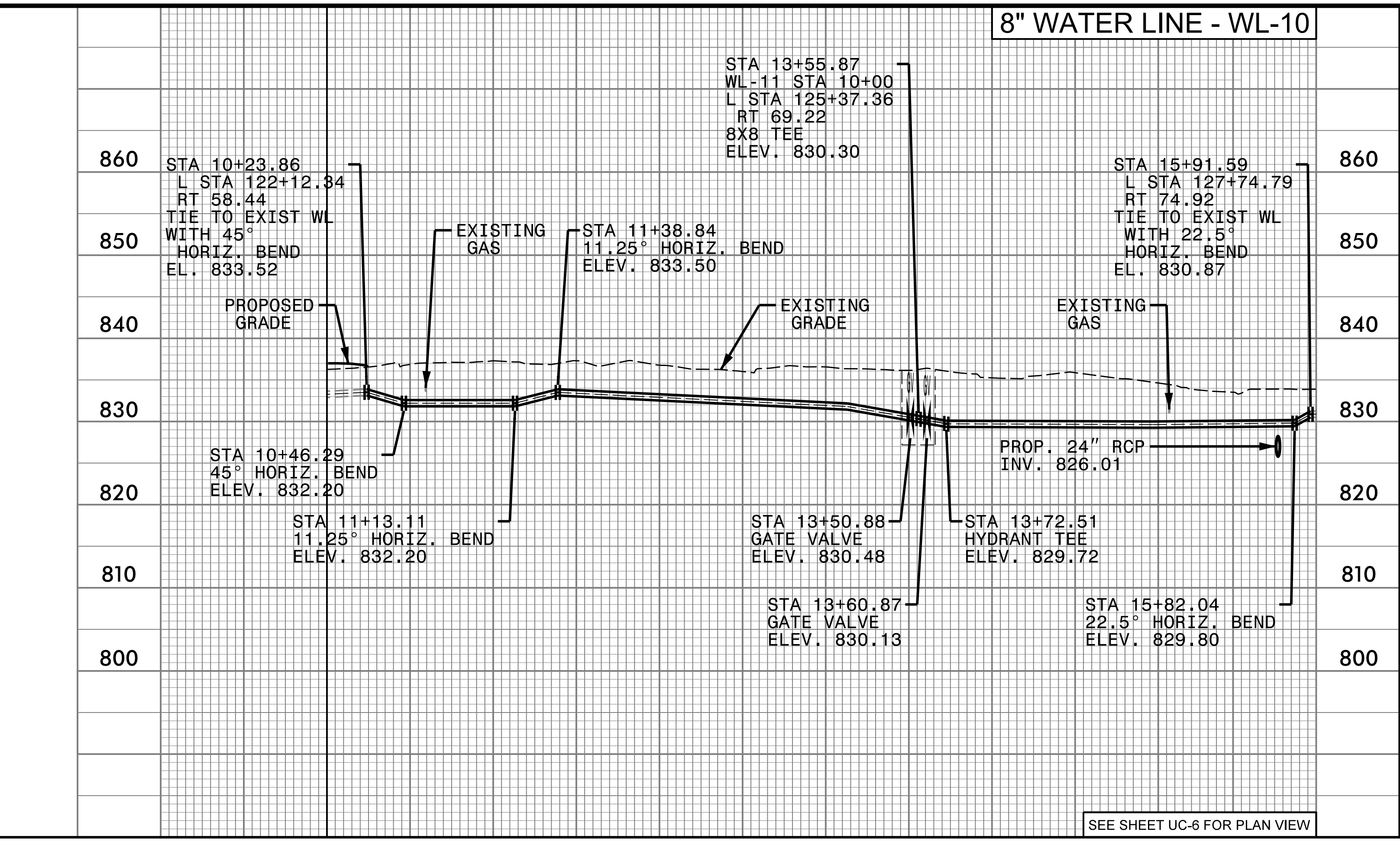
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5/28/2013

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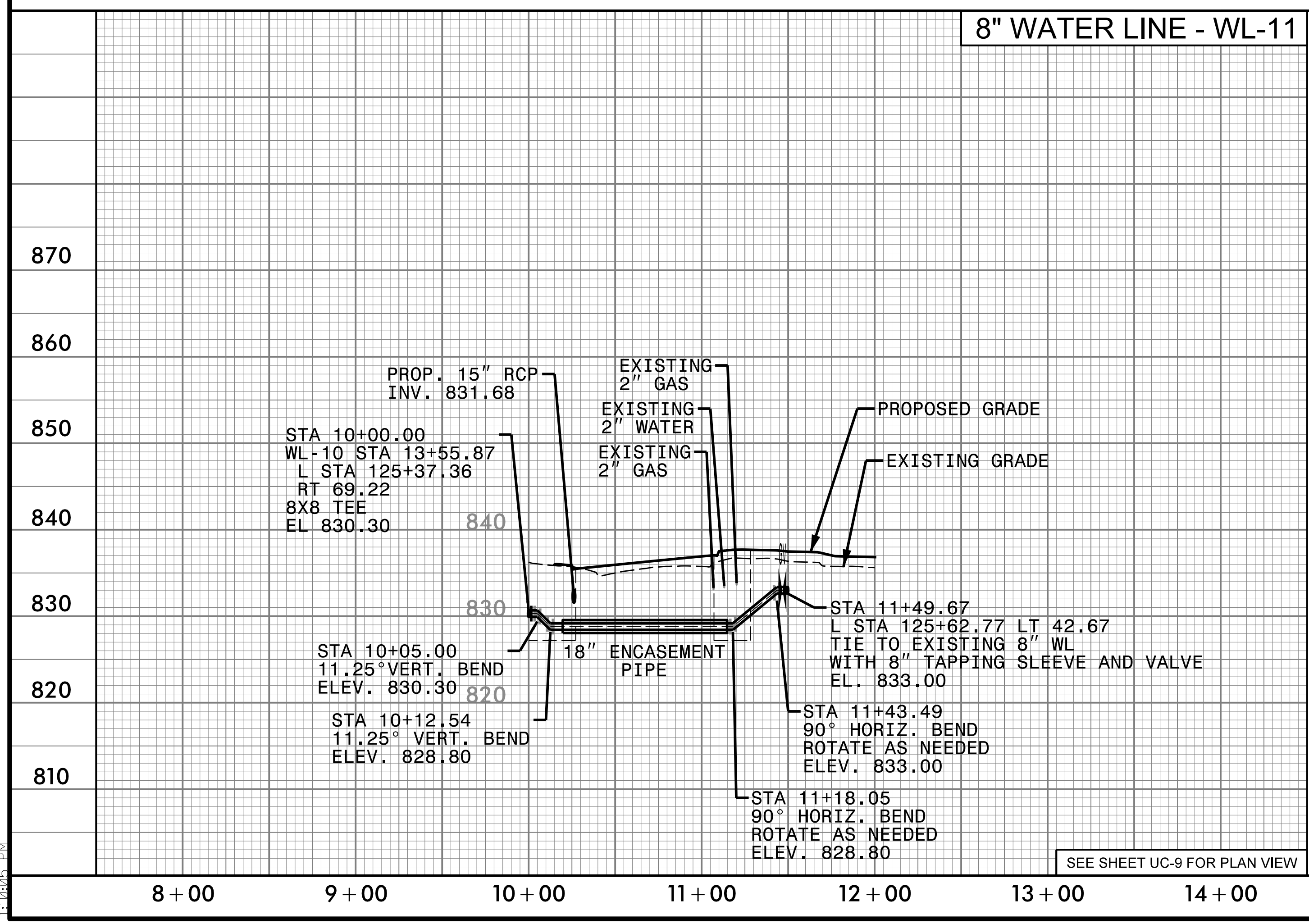


SEE SHEET UC-8 FOR PLAN VIEW

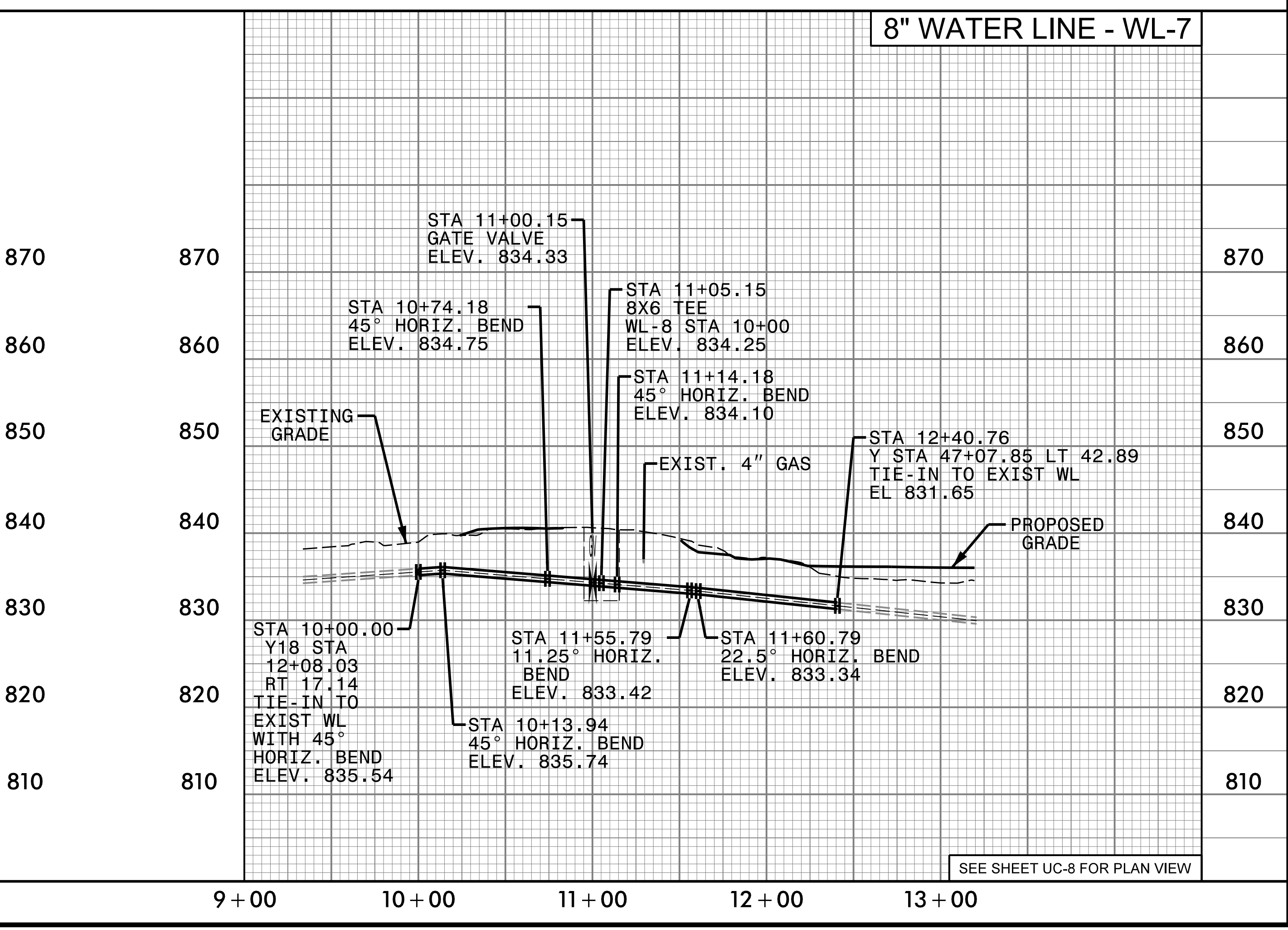


SEE SHEET UC-6 FOR PLAN VIEW

PROJECT REFERENCE NO. U-5813	SHEET NO. UC-16
DESIGNED BY: KCZ	
DRAWN BY: KCZ	
CHECKED BY: KSH	
APPROVED BY: KCZ	
REVISER:	11/20/2013
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
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SEE SHEET UC-9 FOR PLAN VIEW



SEE SHEET UC-8 FOR PLAN VIEW