

09.05/24

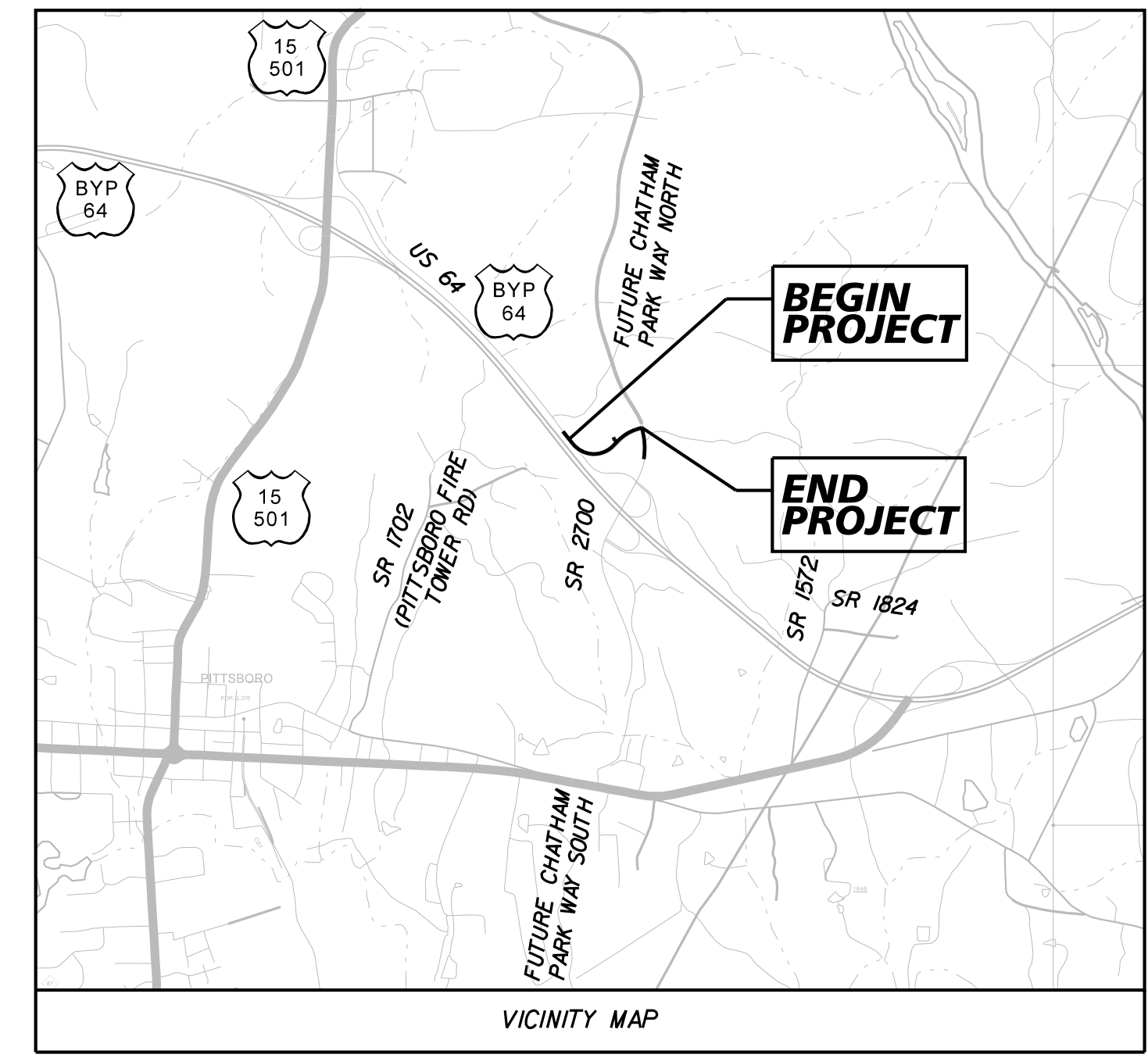
TIP PROJECT: R-5963D

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
R-5963D	UC-1

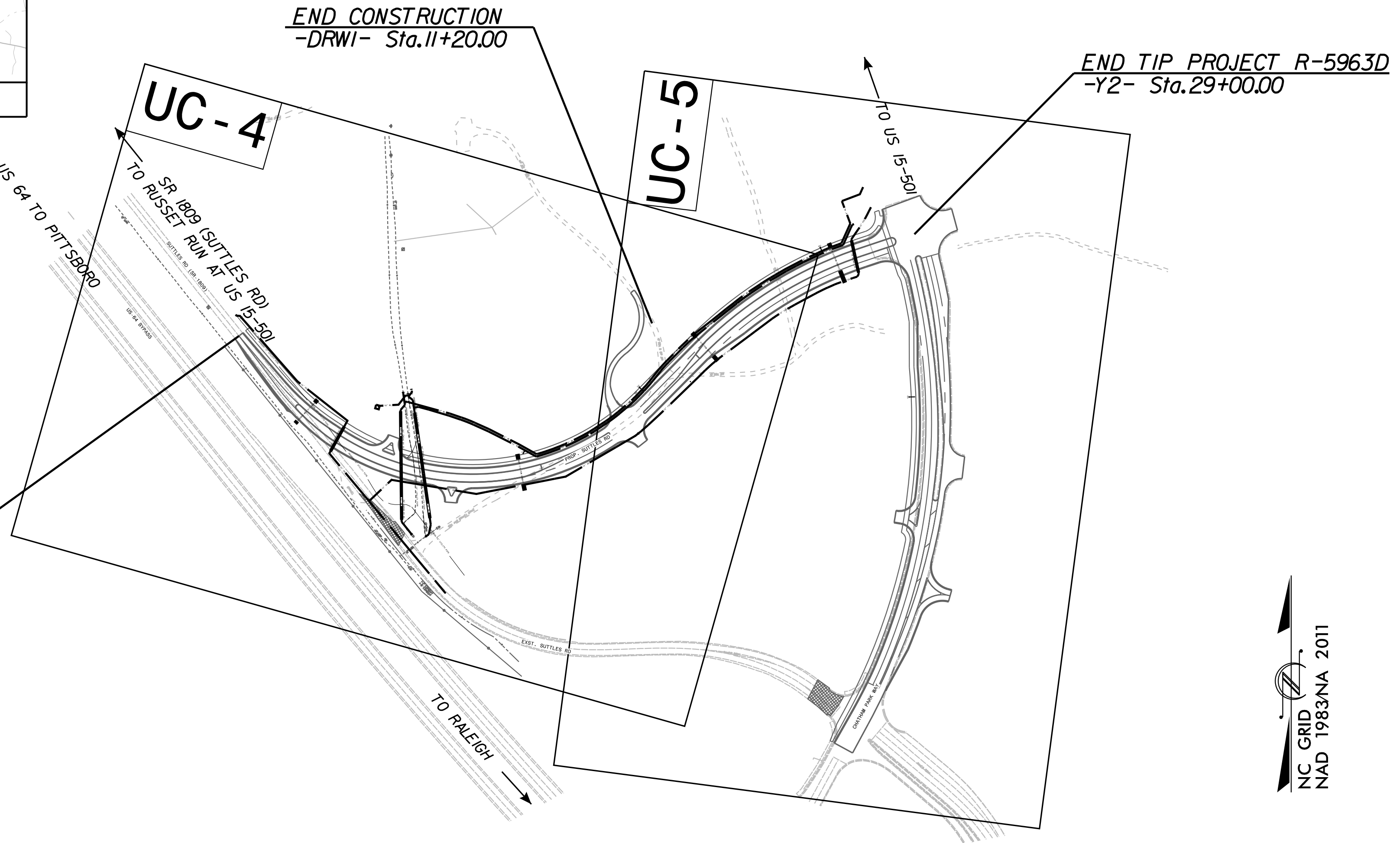
UTILITY CONSTRUCTION PLANS CHATHAM COUNTY

LOCATION: SR 1809 (SUTTLES ROAD) TO CHATHAM PARK WAY
**TYPE OF WORK: POTABLE WATERLINE, RECLAIMED WATERLINE,
AND SANITARY SEWER FORCE MAIN CONSTRUCTION**



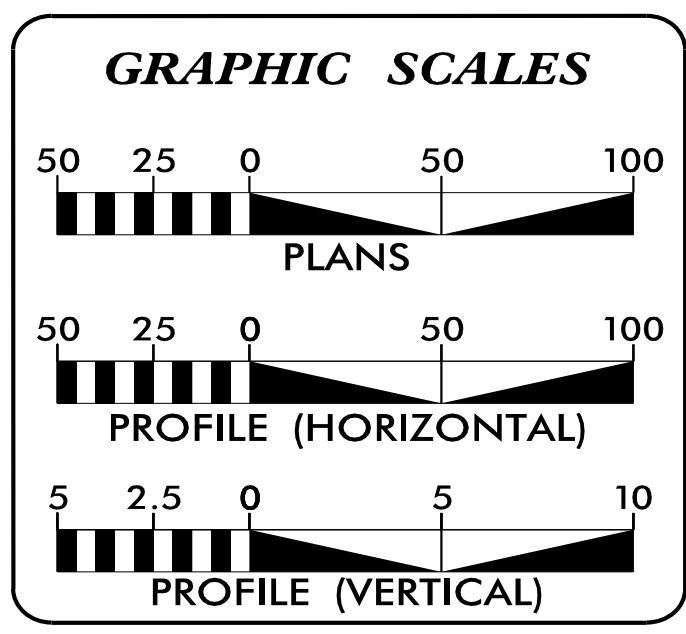
FINAL PLANS

BEGIN TIP PROJECT R-5963D
-Y2- Sta.11+80.00



NC GRID
NAD 1983/NA 2011

DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED



INDEX OF SHEETS	
SHEET NO.:	DESCRIPTION:
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3	UTILITY NOTES
UC-3A THRU UC-3C	UTILITY DETAIL SHEETS
UC-4, UC-4A, UC-5	UTILITY CONSTRUCTION SHEETS
UC-6 THRU UC-8	UTILITY PROFILE SHEETS

WATER AND SEWER OWNERS ON PROJECT

(A) POTABLE WATER, RECLAIMED WATER, & SANITARY SEWER
- TOWN OF PITTSBORO

PREPARED IN THE OFFICE OF

Kimley»Horn

MEMBER OF THE KIMLEY-HORN GROUP

NATE HARVEY, P.E. UTILITY ENGINEER

JACK BAJERSKI, E.I. UTILITY DESIGNER

SEAL

3/4/2024

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

TRAVIS MORGAN, P.E. DIVISION 8 UTILITY ENGINEER

JAMIE YOW DIVISION 8 UTILITY COORDINATOR

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS



300 MORRIS STREET, SUITE 200
DURHAM, NC 27701

PROJECT REFERENCE NO. R-5963D	SHEET NO. UC-2
DESIGNED BY: NLH	
DRAWN BY: JNB	
CHECKED BY: NDR	
APPROVED BY: NLH	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

UTILITIES PLAN SHEET SYMBOLS

UTILITY CONSTRUCTION

PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	12" WL
11¼ Degree Bend	++
22½ Degree Bend	+*
45 Degree Bend	+x
90 Degree Bend	+†
Plug	⊥
Tee	⊕
Cross	⊕⊕
Reducer	▶
Gate Valve	GV
Butterfly Valve	BV
Tapping Valve	TGV
Line Stop	LS
Line Stop with Bypass	LS/BP
Blow Off	BO
Fire Hydrant	PFH
Relocate Fire Hydrant	RFH
Remove Fire Hydrant	REM FH
Water Meter	PWM
Relocate Water Meter	RWM
Remove Water Meter	REM WM
Water Pump Station	PSTW
RPZ Backflow Preventer	PRPZ
DCV Backflow Preventer	PBFP
Relocate RPZ Backflow Preventer	RRPZ
Relocate DCV Backflow Preventer	RBFP

PROPOSED SEWER SYMBOLS

Gravity Sewer Line (Sized as Shown)	12" SS
Force Main Sewer Line (Sized as Shown)	12" FSS
Manhole (Sized per Note)	•
Sewer Pump Station	PSTSS

PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

Power Pole	⊖
Telephone Pole	⊖
Joint Use Pole	⊖
Telephone Pedestal	TEL PED
Utility Line by Others (Type as Shown)	PROP. O/H POW. LINES
Trenchless Installation	12" TL INSTALL
Encasement by Open Cut	24" ENCAS. BY OC
Encasement	24" ENCASEMENT

Thrust Block	⊥
Air Release Valve	AR
Utility Vault	UV
Concrete Pier	CP
Steel Pier	SP
Plan Note	NOTE
Pay Item Note	PAY ITEM

EXISTING UTILITIES SYMBOLS

Power Pole	⊖
Telephone Pole	⊖
Joint Use Pole	⊖
Utility Pole	•
Utility Pole with Base	□
H-Frame Pole	•—•
Power Transmission Line Tower	⊠
Water Manhole	⊗
Power Manhole	⊗
Telephone Manhole	⊗
Sanitary Sewer Manhole	⊗
Hand Hole for Cable	⊠
Power Transformer	⊠
Telephone Pedestal	⊠
CATV Pedestal	⊠
Gas Valve	◇
Gas Meter	⊕
Located Miscellaneous Utility Object	⊖
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

*Underground Power Line	P
*Underground Telephone Cable	T
*Underground Telephone Conduit	TC
*Underground Fiber Optics Telephone Cable	T FO
*Underground TV Cable	TV
*Underground Fiber Optics TV Cable	TV FO
*Underground Gas Pipeline	G
Aboveground Gas Pipeline	A/G Gas
*Underground Water Line	W
Aboveground Water Line	A/G Water
*Underground Gravity Sanitary Sewer Line	SS
Aboveground Gravity Sanitary Sewer Line	A/G Sanitary Sewer
*Underground SS Forced Main Line	FSS
Underground Unknown Utility Line	UUL
SUE Test Hole	•
Water Meter	⊖
Water Valve	⊗
Fire Hydrant	⊕
Sanitary Sewer Cleanout	⊗

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

5/14/2024

NCDOT GENERAL UTILITY NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2024.
2. THE EXISTING UTILITIES BELONG TO THE TOWN OF PITTSBORO.
3. ALL WATER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL AND NATURAL RESOURCES, 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 AND NATURAL 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 AND THE UTILITY OWNER. 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 A MINIMUM OF ONE WEEK PRIOR TO SERVICE INTERRUPTIONS AND TESTING. KEEP UTILITY OWNERS' REPRESENTATIVES INFORMED OF WORK PROGRESS AND PROVIDE OPPROTUNITY 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 ADDITONAL 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 UTILITY NOTES:

1. DEVIATION FROM THESE PLANS AND NOTES WITHOUT THE PRIOR WRITTEN CONSENT OF THE UTILITY OWNER OR THEIR REPRESENTATIVE OR THE ENGINEER MAY BE CAUSE FOR THE WORK TO BE UNACCEPTABLE.
2. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SHOULD ANY FIELD CONDITIONS BE ENCOUNTERED THAT VARY FROM THE INFORMATION PROVIDED IN THE CONTRACT DOCUMENTS. ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE UTILITY OWNER PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL COORDINATE ALL WORK WITH UTILITY OWNER AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION, OR AS OTHERWISE SPECIFIED HEREIN.
4. CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS FOR ALL UTILITY CONSTRUCTION PRIOR TO PLACING THE PIPELINE(S) IN SERVICE
5. PIPE ALIGNMENT SHOWN IS BASED ON STANDARD DUCTILE IRON MECHANICAL JOINT FITTINGS. JOINT DEFLECTIONS SHALL NOT EXCEED 75 PERCENT OF MANUFACTURER'S RECOMMENDED DEFLECTION. CONTRACTOR SHALL ADJUST PIPELINE ALIGNMENT AND DEFLECT JOINTS AS NECESSARY TO ACCOMMODATE THE STANDARD BENDS SHOWN.
6. ALL PIPE FITTINGS SHALL BE DUCTILE IRON RESTRAINED MECHANICAL JOINT WITH PRESSURE RATING EQUAL TO OR HIGHER THAN HOST PIPE, UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
7. ALL MECHANICAL JOINT CONNECTIONS SHALL BE RESTRAINED WITH WEDGE-TYPE MECHANICAL RESTRAINT ACCESSORY KITS DESIGNED FOR THE INTENDED USE AND MATERIAL, AS APPROVED BY UTILITY OWNER.
8. ALL DUCTILE IRON FITTINGS AND CAPS/PLUGS USED IN WASTEWATER SERVICE SHALL BE LINED INTERNALLY WITH CERAMIC EPOXY LINING (SEE UC SPECIAL PROVISIONS).
9. ALL EXPOSED DUCTILE IRON PIPE AND FITTINGS WITHIN WASTEWATER AIR RELEASE MANHOLES SHALL BE COATED EXTERNALLY WITH MIN 2-COATS COAL TAR EPOXY.
10. ALL EXPOSED HARDWARE, PIPING, AND VALVING WITHIN WASTEWATER AIR RELEASE MANHOLES SHALL BE STAINLESS STEEL.
11. ALL UTILITY PIPING SHALL BE IDENTIFIED WITH DETECTABLE WARNING TAPE AND MARKER BALLS IN ACCORDANCE WITH OWNER SPECIFICATIONS. ALL RECLAIMED WATER LINES SHALL BE PANTONE 522 PURPLE IN COLOR OR WRAPPED IN PANTONE 522 PURPLE POLYETHYLENE SHEETING AND SHALL BEAR THE TEXT: "CAUTION: RECLAIMED WATER - DO NOT DRINK" ON THE EXTERIOR. SEE TOWN OF PITTSBORO SPECIFICATIONS SECTION 6 FOR ADDITIONAL LABELING REQUIREMENTS.
12. ENCASEMENTS PIPES SHALL INCLUDE 100-YEAR CERTIFICATION IN LIEU OF GROUT-FILLING ANNULAR SPACE BETWEEN CASING AND CARRIER.

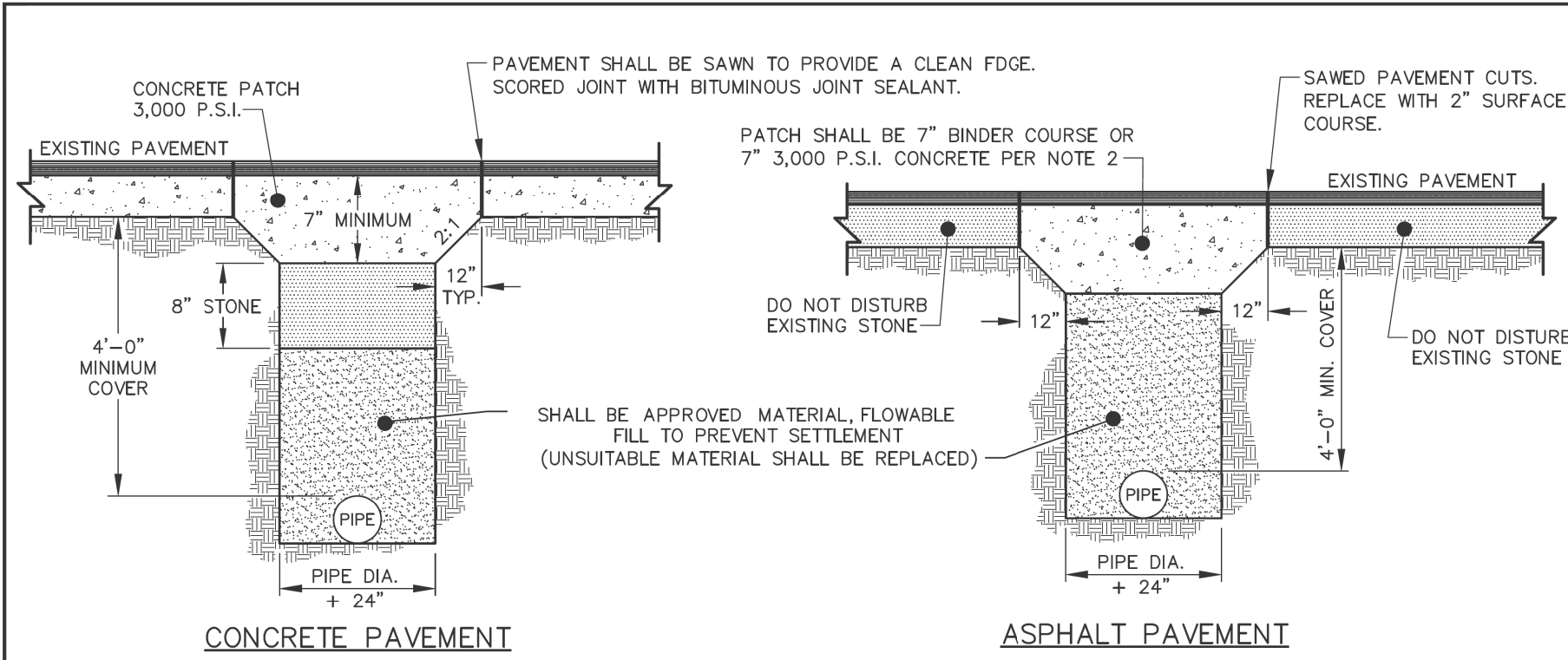
 300 MORRIS STREET, SUITE 200 DURHAM, NC 27701	PROJECT REFERENCE NO.	SHEET NO.
	R-5963D	UC-3
DESIGNED BY: NLH		
DRAWN BY: JNB		
CHECKED BY: NDR		
APPROVED BY: NLH		
REVISED:		
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151
UTILITY CONSTRUCTION PLANS ONLY		

UTILITY CONSTRUCTION

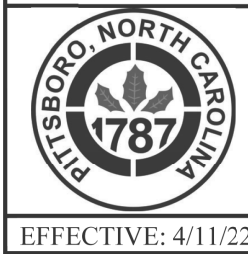
2/16/2024

PROJECT REFERENCE NO.	SHEET NO.
R-5963D	UC-3A
DESIGNED BY: NLH	
DRAWN BY: JNB	
CHECKED BY: NDR	
APPROVED BY: NLH	
REVISED:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



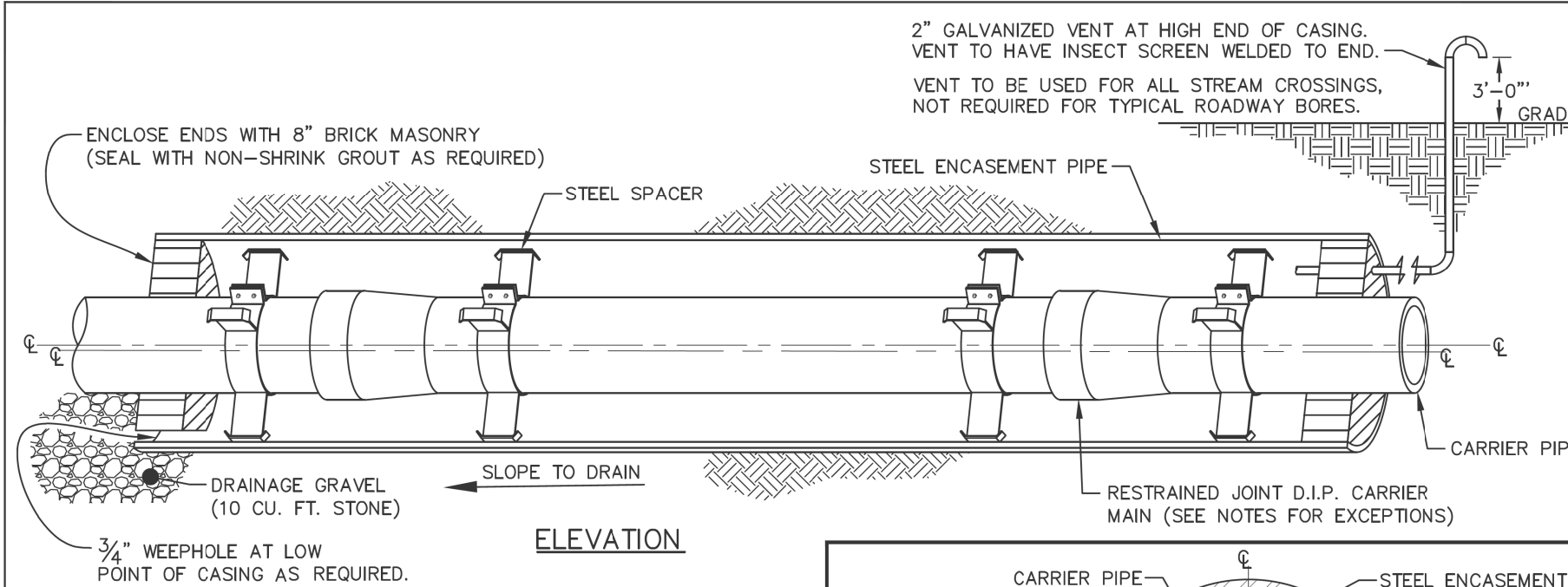
- NOTES:**
- ALL PAVEMENT CUTS SHALL BE REPAIRED WITHIN A MAXIMUM OF THREE (3) DAYS FROM THE DATE THE CUT IS MADE.
 - CONCRETE TRENCH CAP ON ASPHALT STREETS SHALL BE USED ONLY DURING INCLEMENT WEATHER WHEN ASPHALT PLANTS ARE NOT OPERATING.
 - IN ALL OPEN TRENCHES, BACKFILL SHALL BE COMPACTED TO 95% MAXIMUM DRY DENSITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING COMPACTION REQUIREMENTS BY SOILS TESTING CERTIFIED BY A LICENSED PROFESSIONAL GEOTECHNICAL ENGINEER.
 - BACKFILL WITH A HIGH CLAY CONTENT, HIGH SHRINK-SWELL POTENTIAL, OR HIGH MOISTURE CONTENT THAT CANNOT MEET COMPACTION REQUIREMENTS SHALL BE DEEMED UNSUITABLE AND SHALL BE REPLACED WITH SUITABLE BACKFILL MATERIAL.
 - ALL PAVEMENT PATCHES SHALL PROVIDE A UNIFORM AND SMOOTH DRIVING SURFACE.



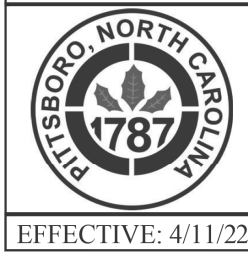
STANDARD TRENCH AND PAVEMENT REPAIR SECTIONS

TOWN OF PITTSBORO
STANDARD CONSTRUCTION
DETAIL
STANDARD NO: UT-02-002

EFFECTIVE: 4/11/22



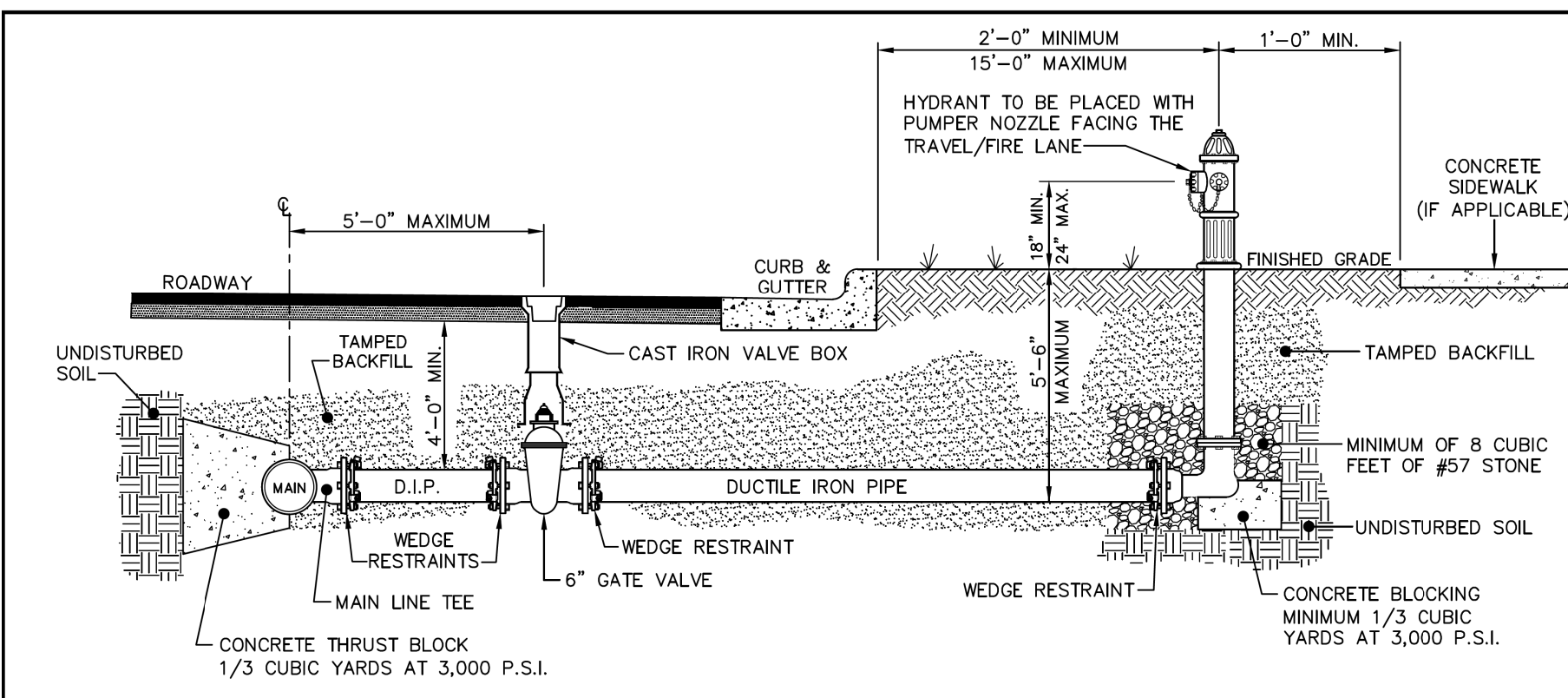
- NOTES:**
- STEEL SPACERS SHALL BE USED FOR SUPPORT OF THE CARRIER PIPE WITHIN THE CASING PIPE.
 - A MINIMUM SPACING OF 2 SPACERS PER JOINT OF CARRIER PIPE SHALL BE REQUIRED. 3 SPACERS ARE REQUIRED FOR CARRIER PIPE ≥ 36 INCHES.
 - THE SPACERS SHALL BE LOCATED EVENLY ALONG THE CARRIER PIPE SUCH THAT EACH SPACER SUPPORTS THE SAME UNIT WEIGHT OF THE CARRIER MAIN.
 - VENT OPENING SHALL BE INSTALLED 12" ABOVE 100-YEAR FLOOD ELEVATION OR 36" ABOVE EXISTING GRADE, WHICHEVER IS HIGHER.



STEEL ENCASEMENT & CARRIER PIPE

TOWN OF PITTSBORO
STANDARD CONSTRUCTION
DETAIL
STANDARD NO: UT-02-002

EFFECTIVE: 4/11/22



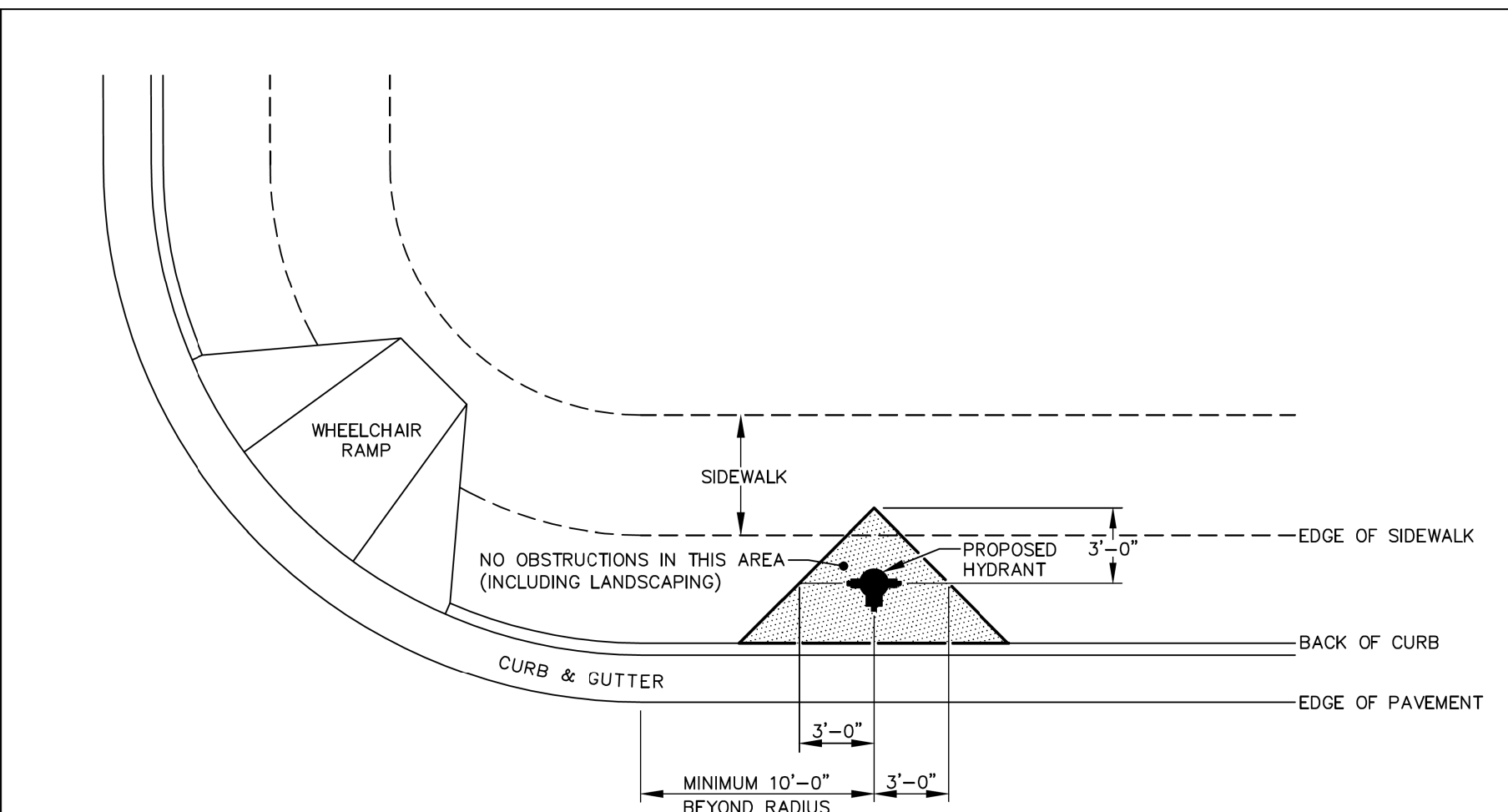
- NOTES:**
- TOP OF BLOCKING TO BE 2 INCHES FROM HYDRANT WEEP HOLES.
 - IF HYDRANT IS LOCATED ON A DEPARTMENT OF TRANSPORTATION ROADWAY USE D.O.T. STANDARDS FOR LOCATION OF HYDRANT.
 - HYDRANT SHALL BE LOCATED FROM 2 TO 15 FEET FROM BACK OF CURB.
 - HYDRANT MAY BE LOCATED (AT LEAST 1 FOOT) BEHIND SIDEWALK WHEN IT CANNOT BE LOCATED INSIDE THE UTILITY STRIP.
 - HYDRANT SHALL BE INSTALLED AT LEAST 2 FEET BEYOND TOP SLOPE OF ANY DRAINAGE DITCHES. HYDRANT INSTALLATION WITHIN THE DITCH LINE OR SLOPE SHALL BE PROHIBITED.
 - STANDARD WEDGE ACTION RETAINER GLANDS, THRUST BLOCK, AND 3/4 INCH STAINLESS STEEL RODDING ARE REQUIRED IN ORDER TO ACHIEVE CONTINUOUS RESTRAINT BETWEEN THE HYDRANT AND THE MAIN.
 - HYDRANT EXTENSIONS ARE PROHIBITED.
 - HYDRANTS NEAR FDC'S SHALL BE PROVIDED WITH A STORZ CONNECTION.



STANDARD HYDRANT INSTALLATION FOR ROADS WITH CURB & GUTTER

TOWN OF PITTSBORO
STANDARD CONSTRUCTION
DETAIL
STANDARD NO: PW-03-010

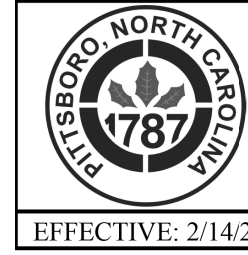
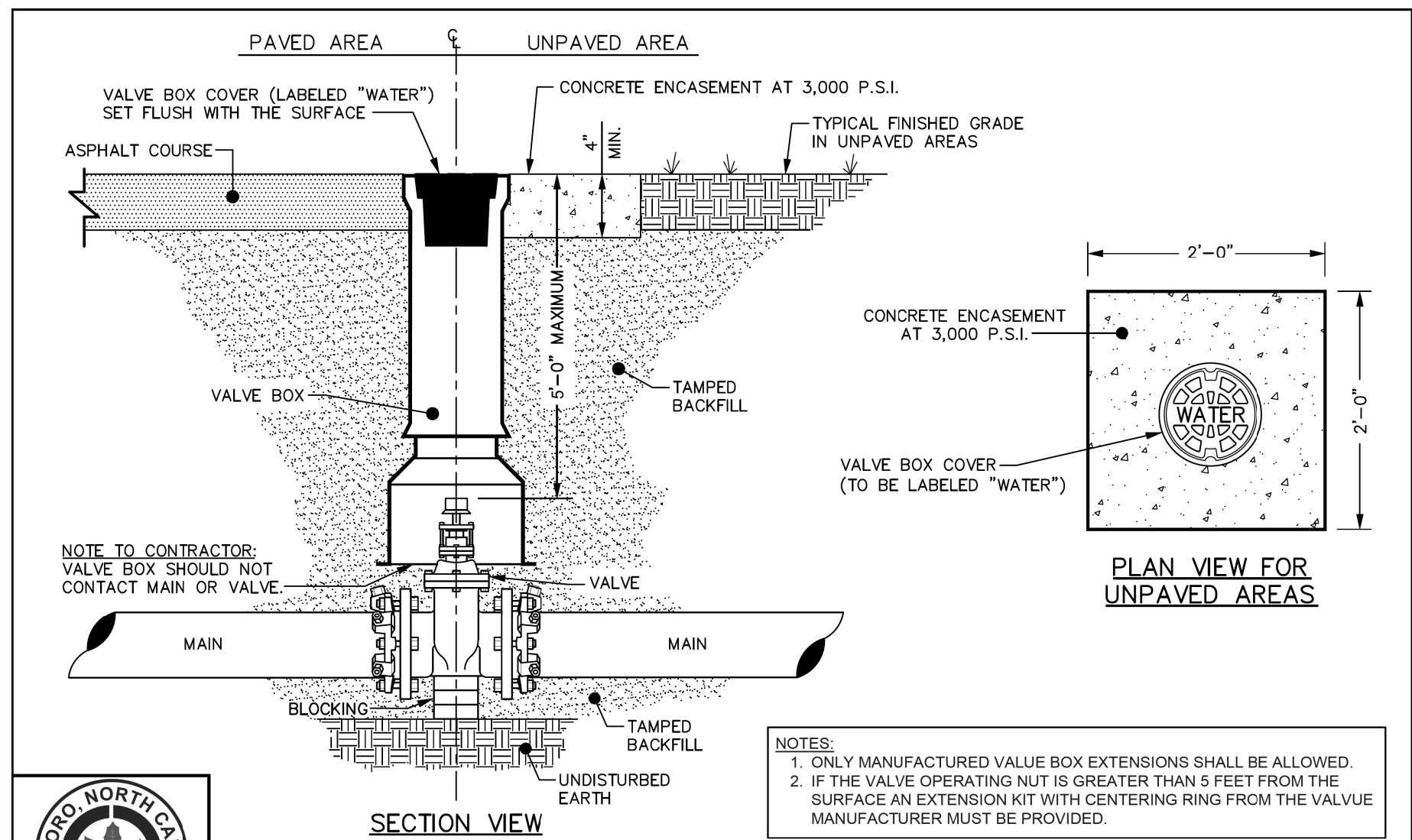
EFFECTIVE: 2/14/22



STANDARD HYDRANT LOCATION

TOWN OF PITTSBORO
STANDARD CONSTRUCTION
DETAIL
STANDARD NO: PW-03-013

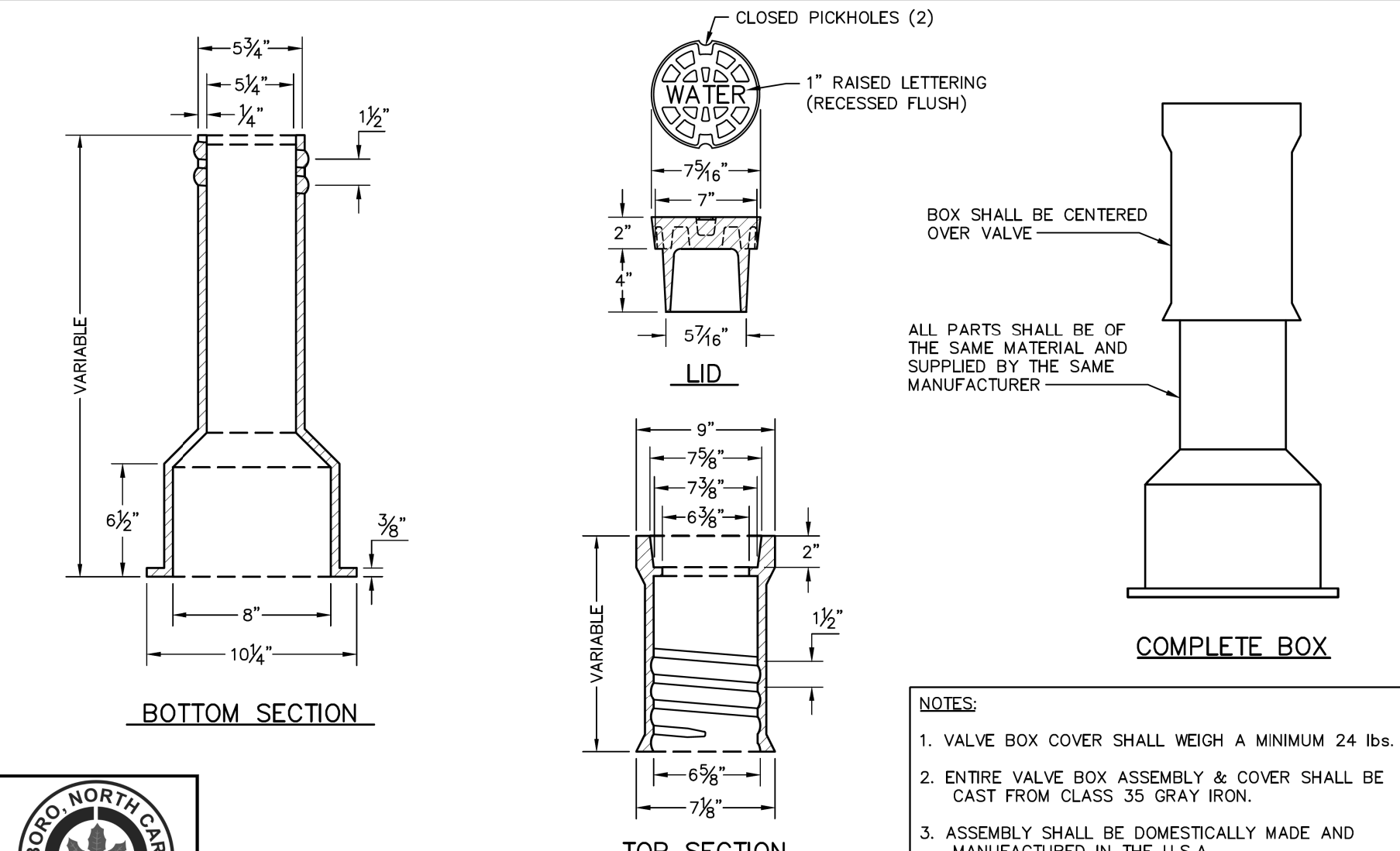
EFFECTIVE: 2/14/22



STANDARD WATER VALVE BOX INSTALLATION (1 of 2)

TOWN OF PITTSBORO
STANDARD CONSTRUCTION
DETAIL
STANDARD NO: PW-03-015

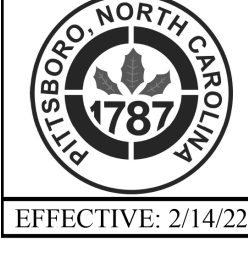
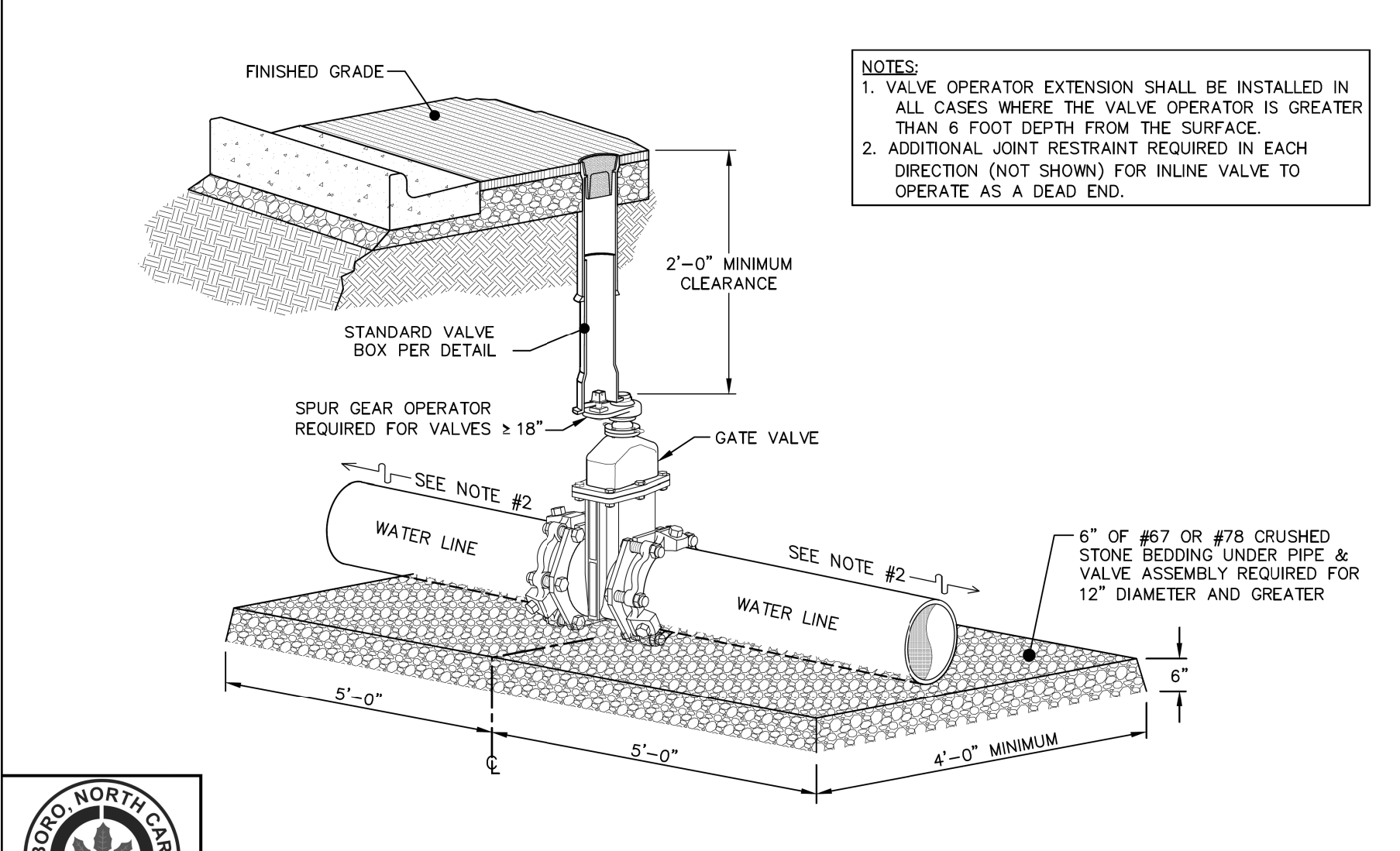
EFFECTIVE: 2/14/22



STANDARD WATER VALVE BOX INSTALLATION (2 OF 2)

TOWN OF PITTSBORO
STANDARD CONSTRUCTION
DETAIL
STANDARD NO: PW-03-016

EFFECTIVE: 2/14/22

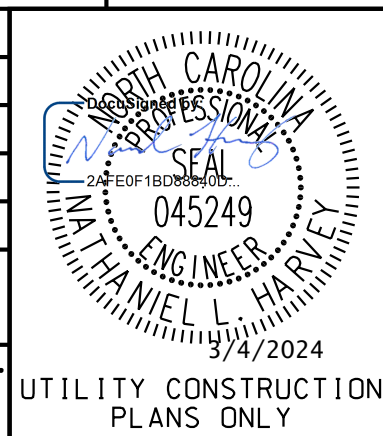


RESILIENT WEDGE GATE VALVE ASSEMBLY FOR VERTICAL INSTALLATIONS

TOWN OF PITTSBORO
STANDARD CONSTRUCTION
DETAIL
STANDARD NO: PW-03-020

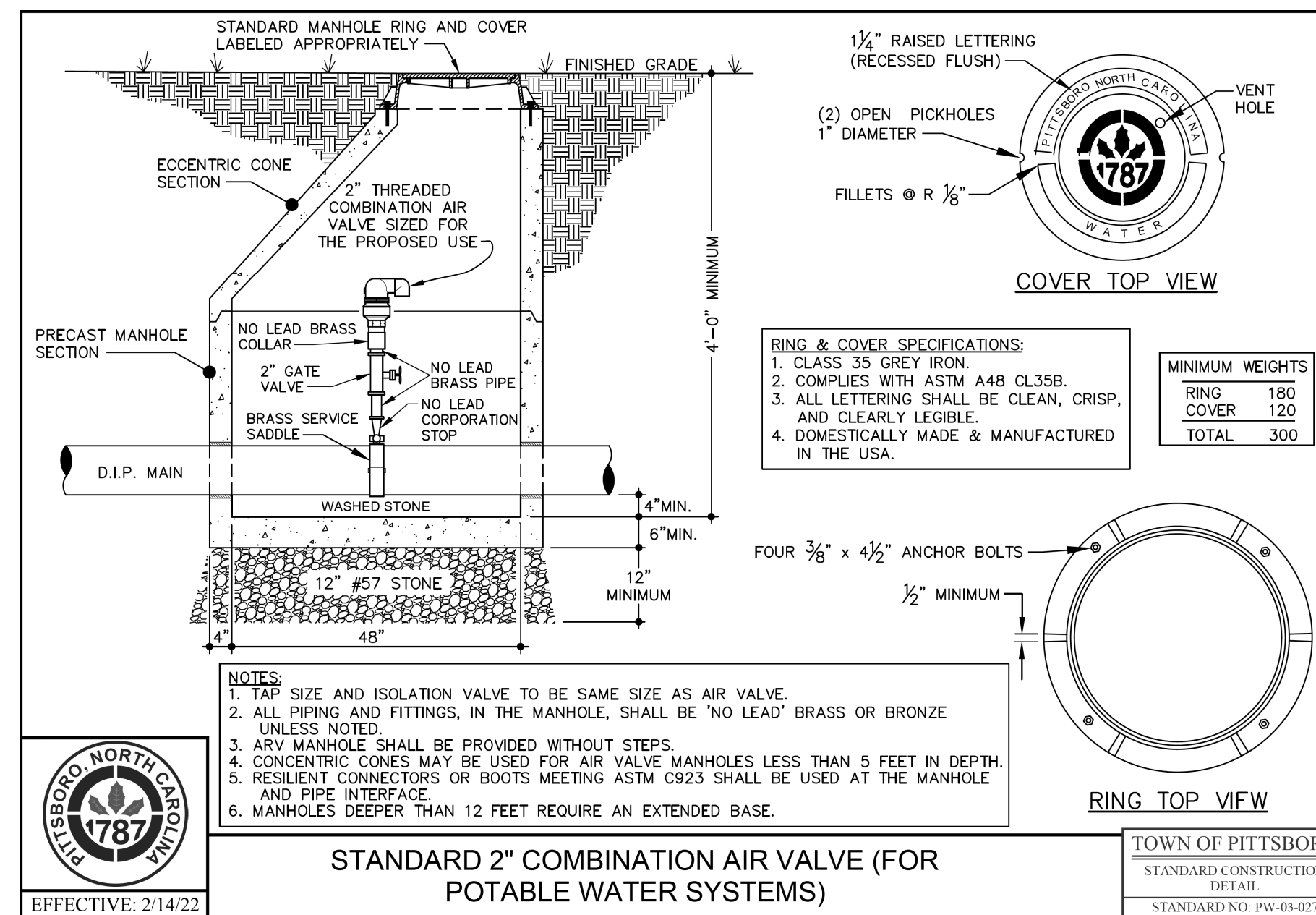
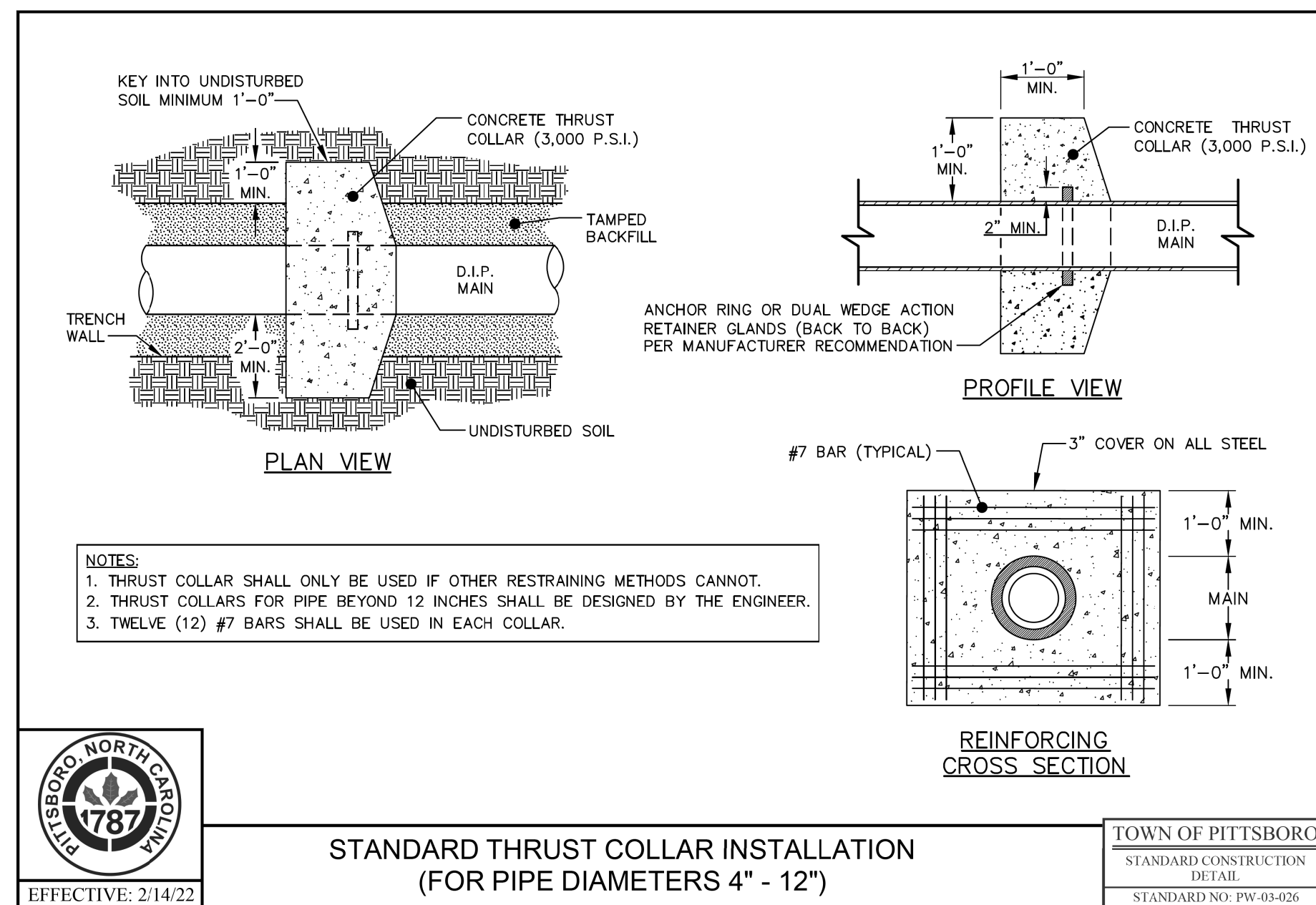
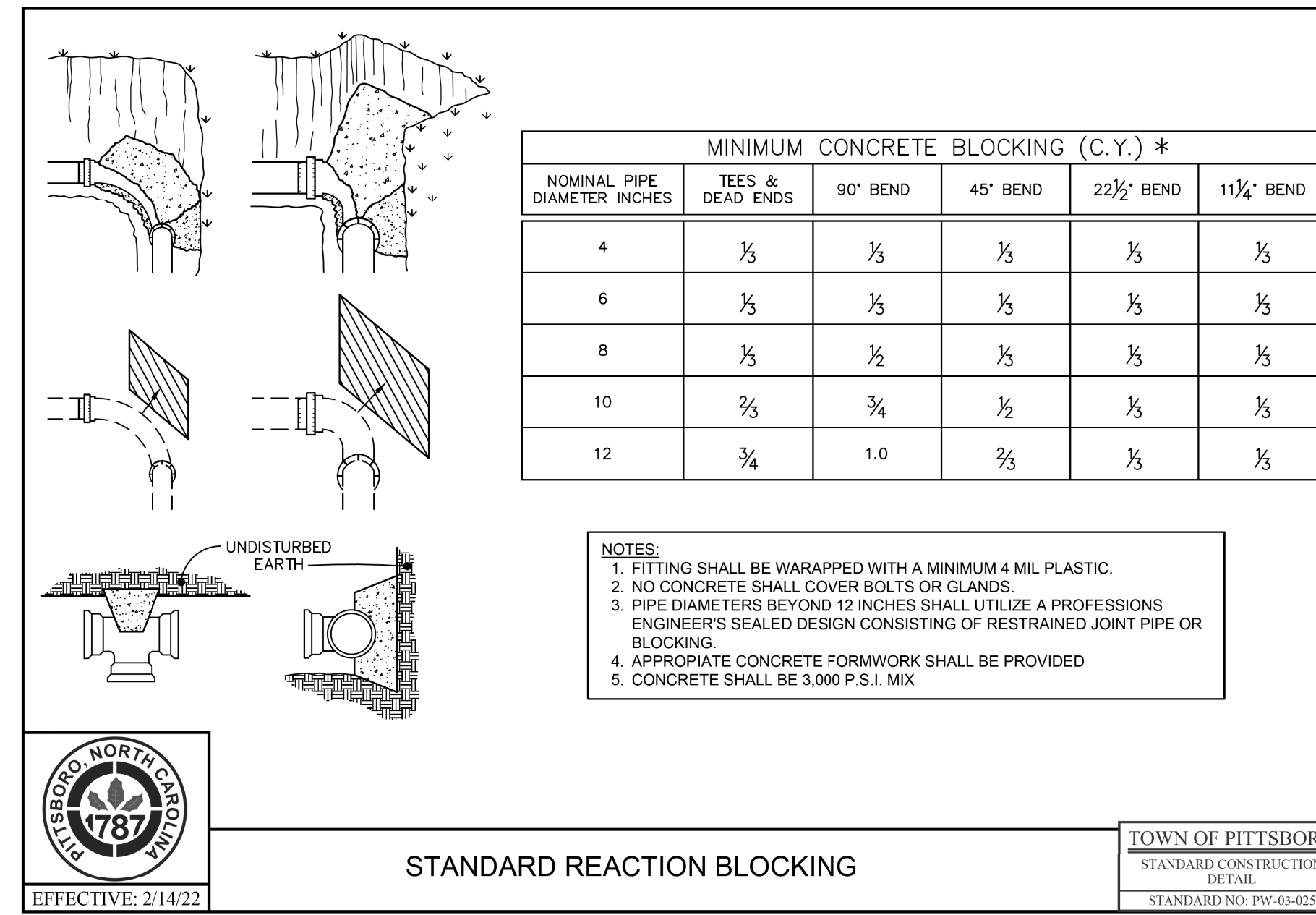
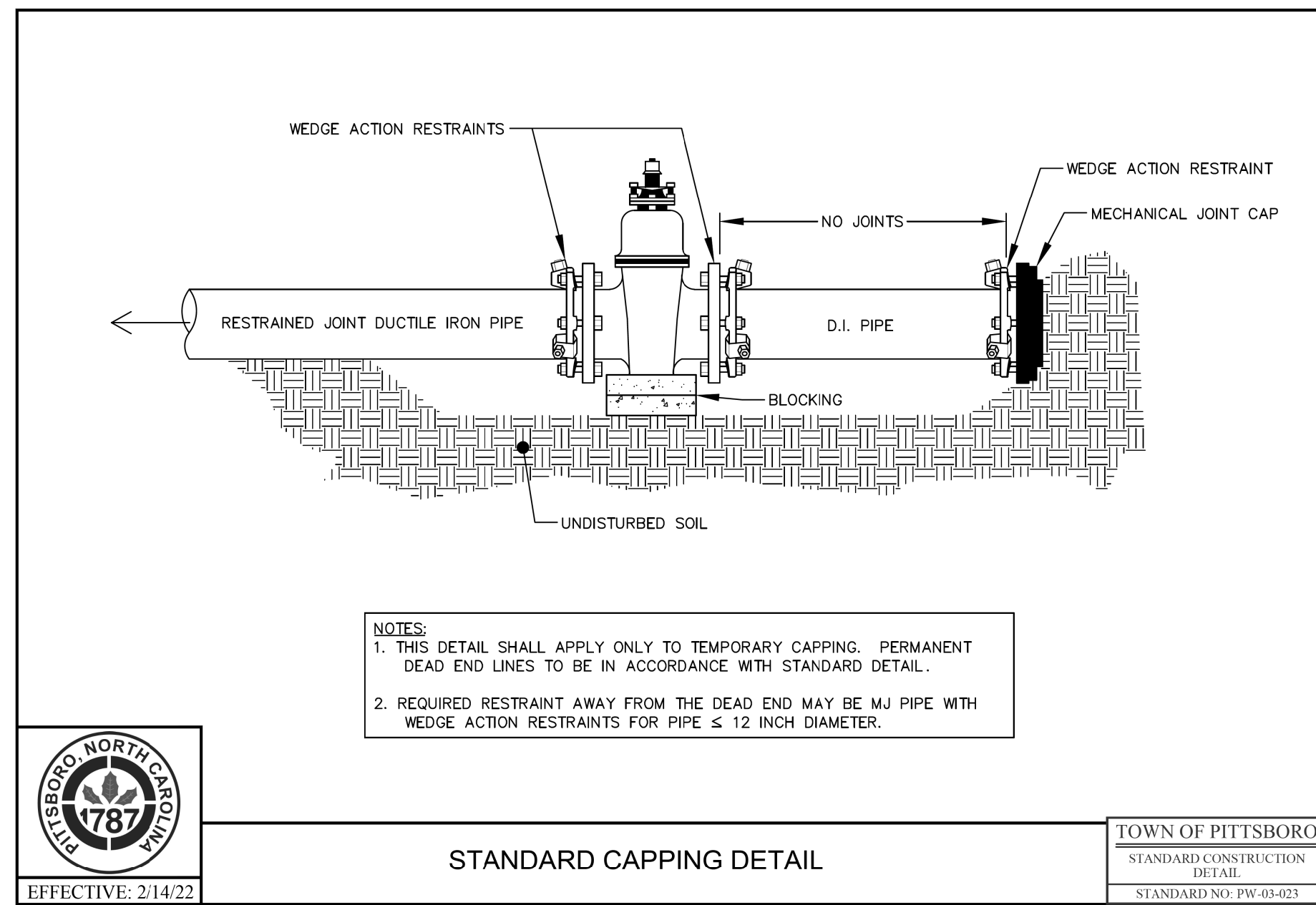
EFFECTIVE: 2/14/22

DESIGNED BY: **NLH**
DRAWN BY: **JNB**
CHECKED BY: **NDR**
APPROVED BY: **NLH**
REVISED:
NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION
UTILITIES ENGINEERING SEC.
PHONE: (919) 707-6690
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UTILITY CONSTRUCTION
PLANS ONLY

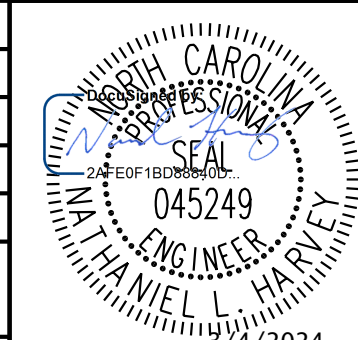
UTILITY CONSTRUCTION



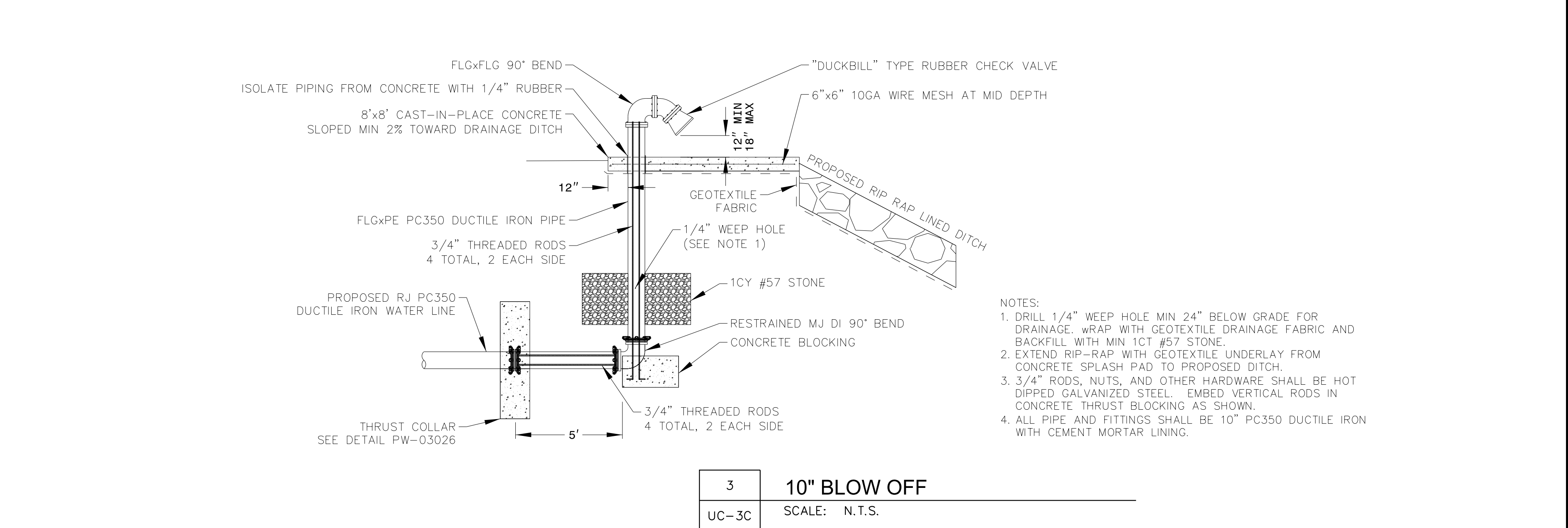
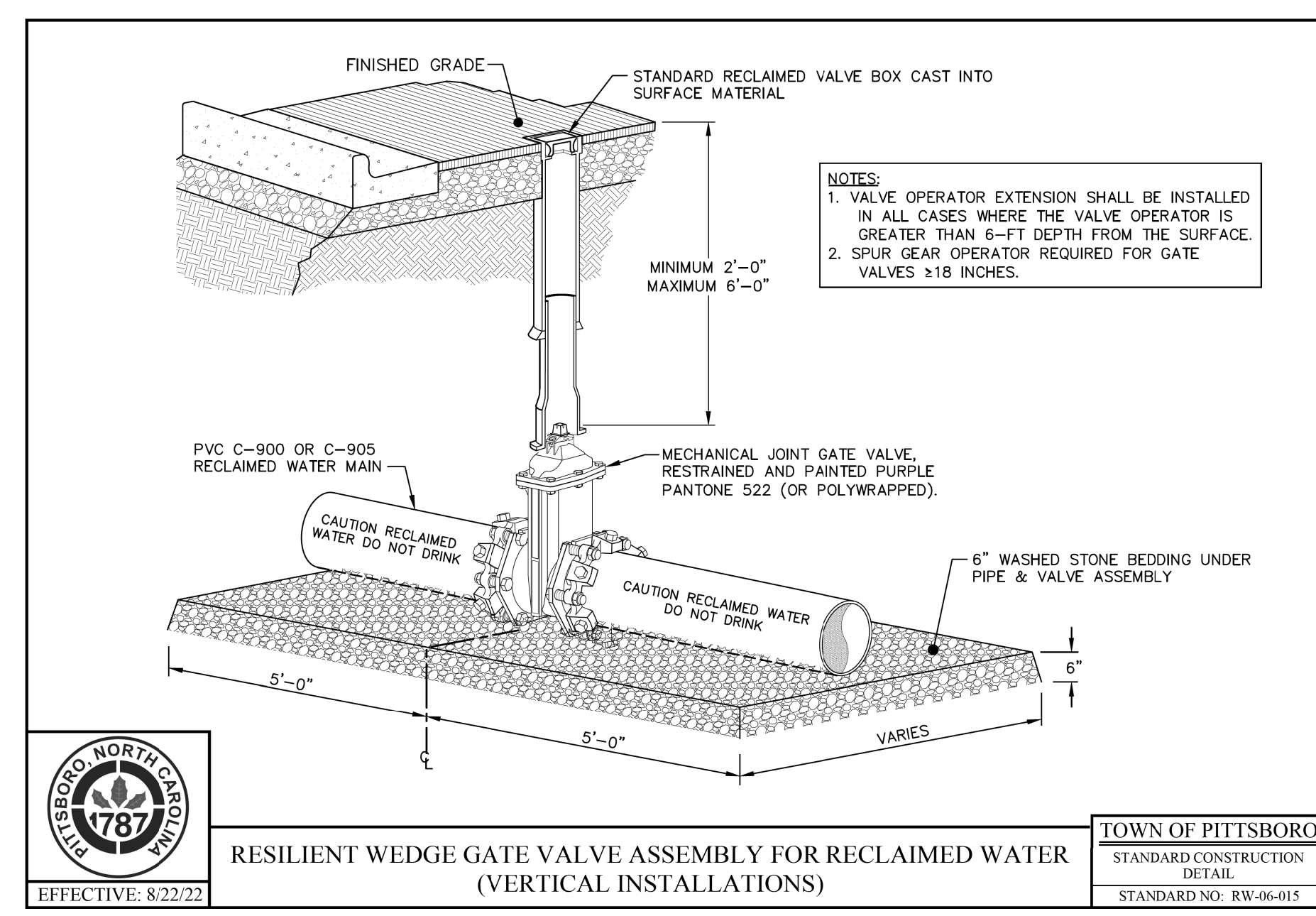
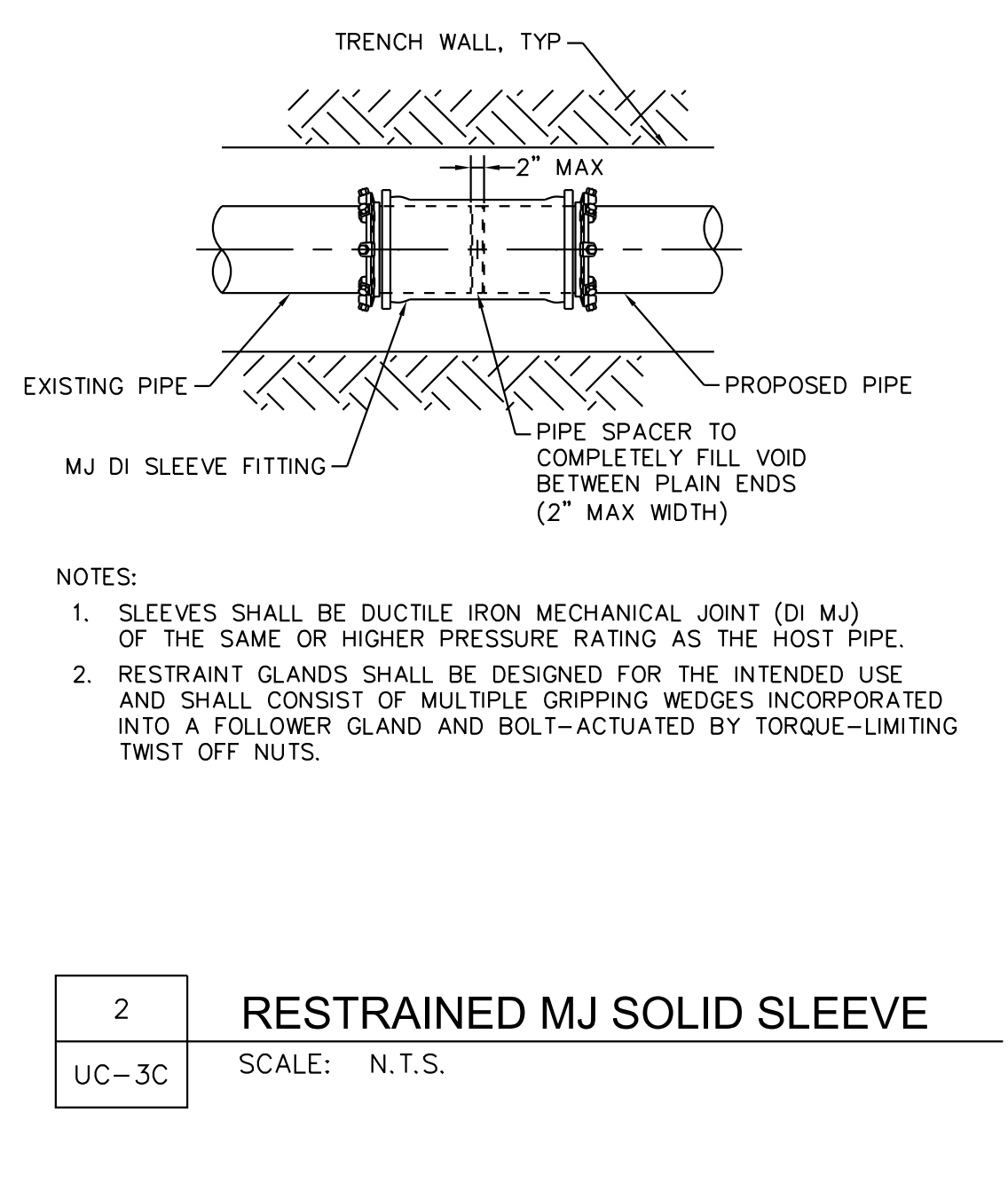
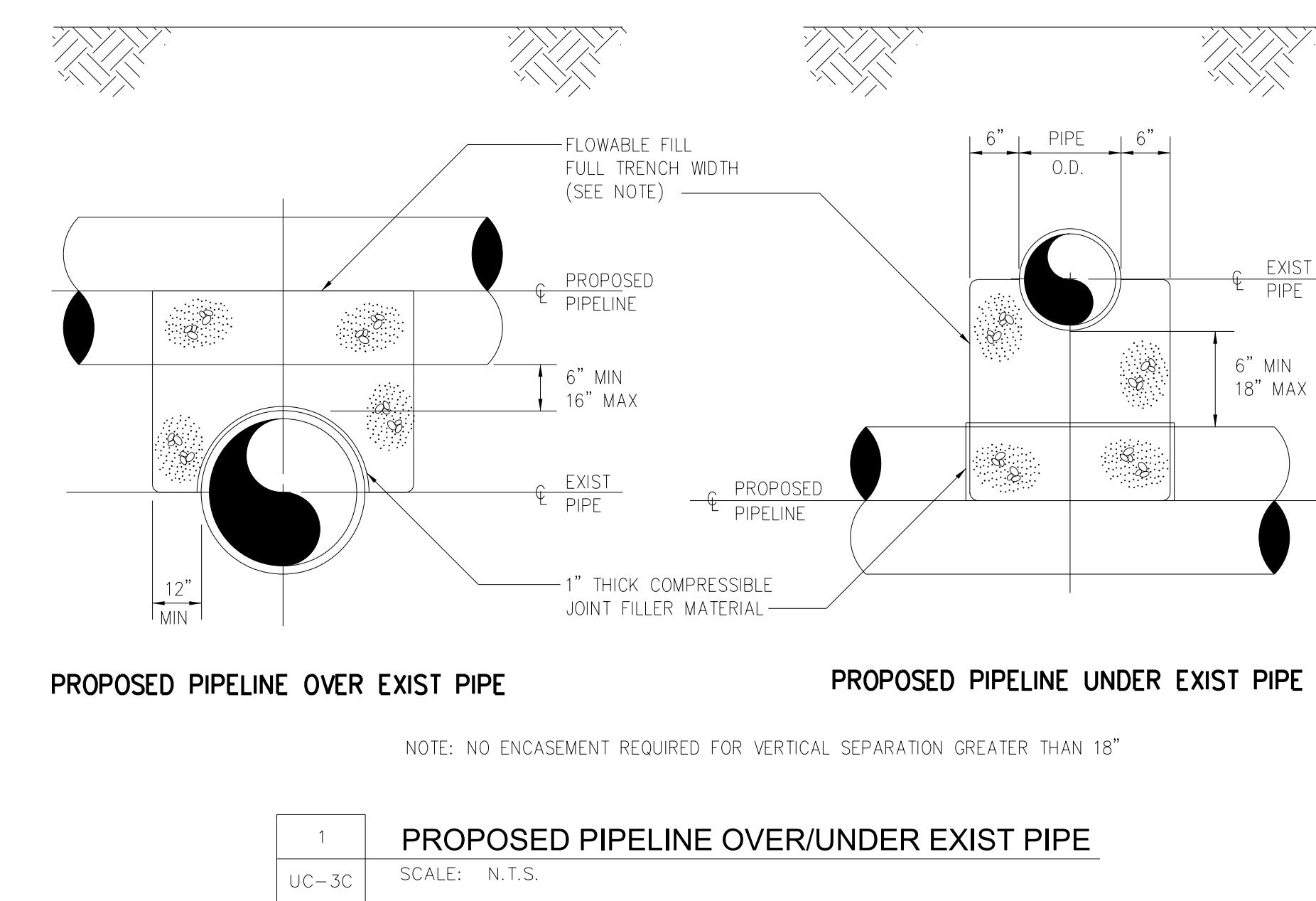
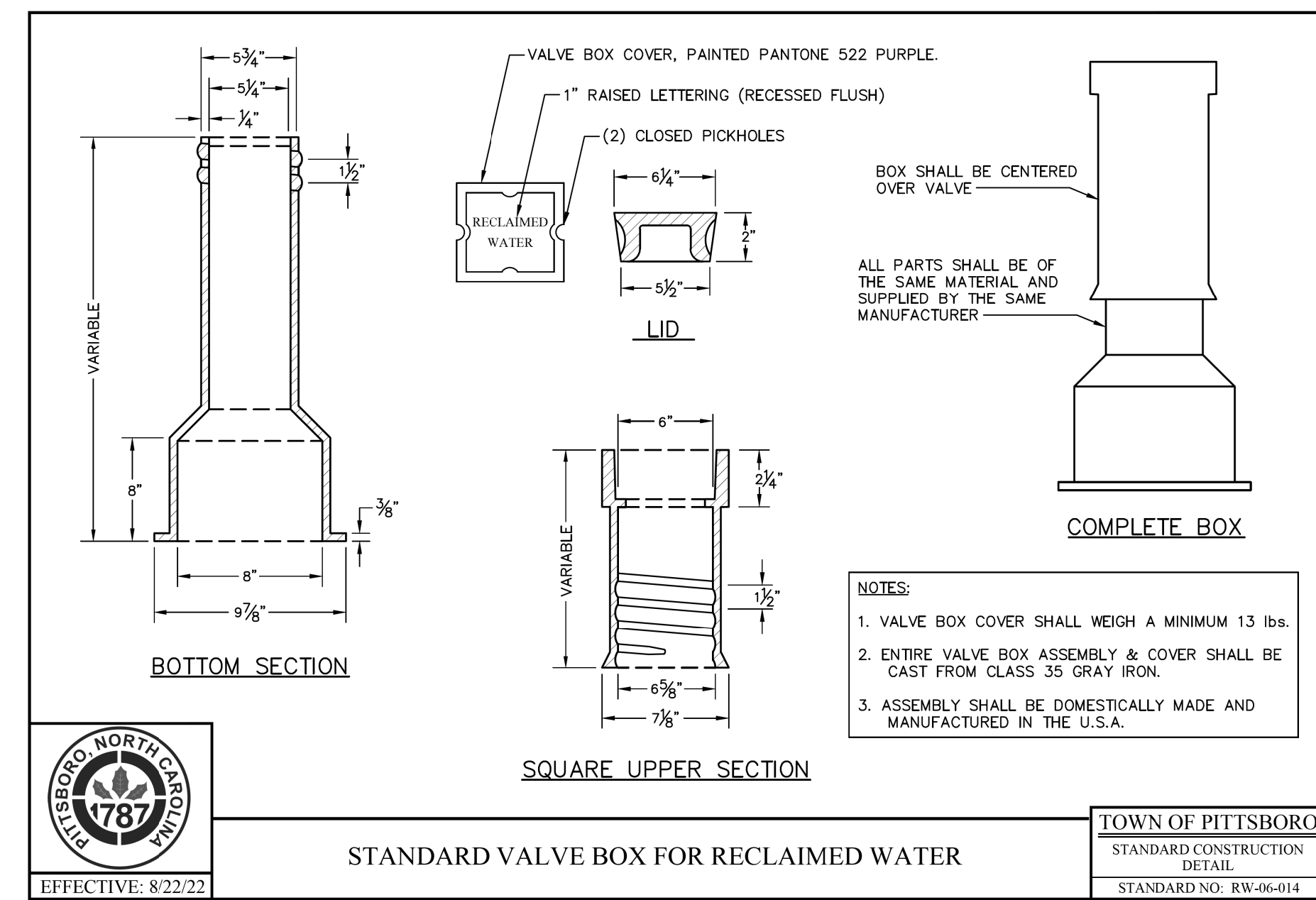
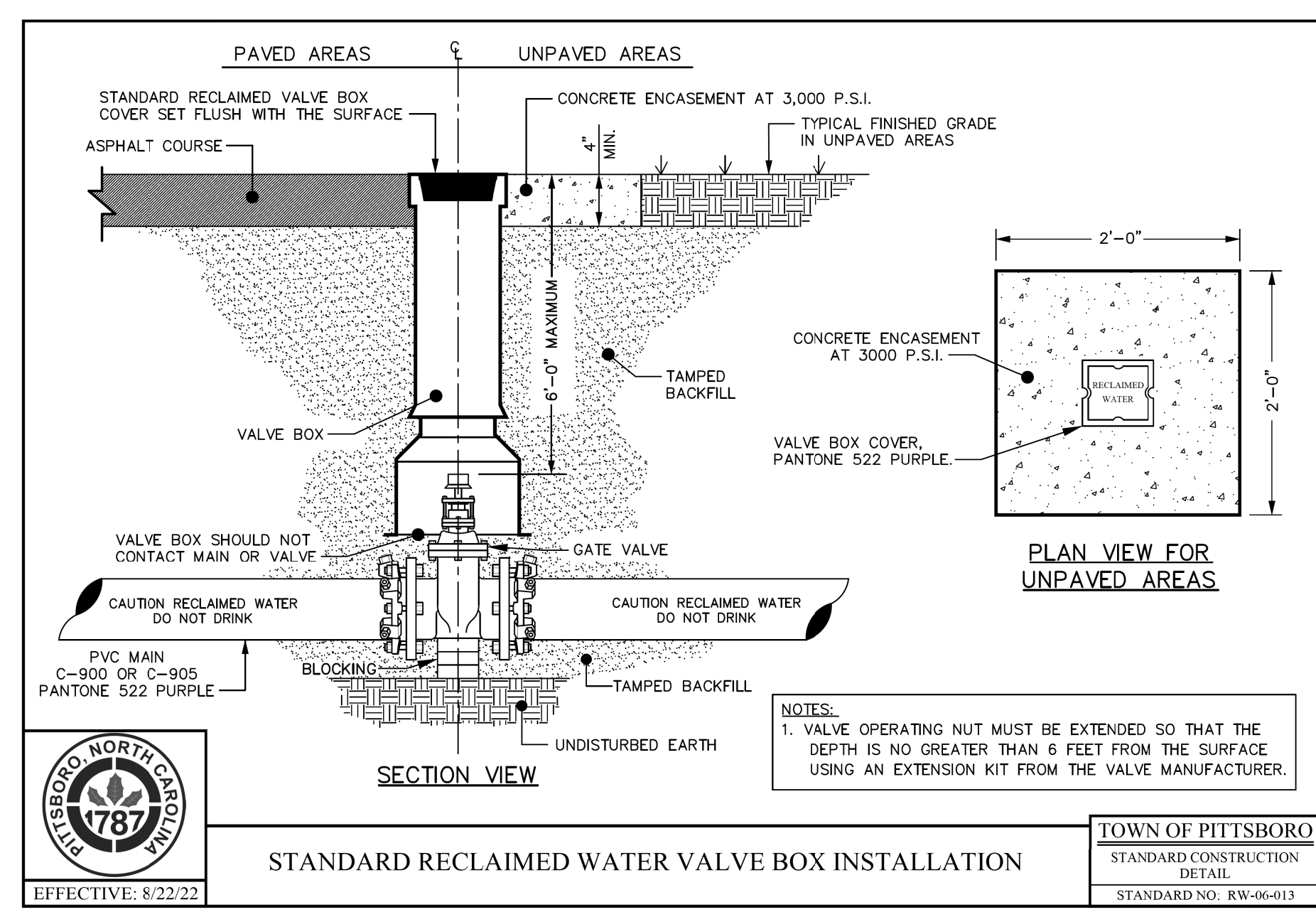
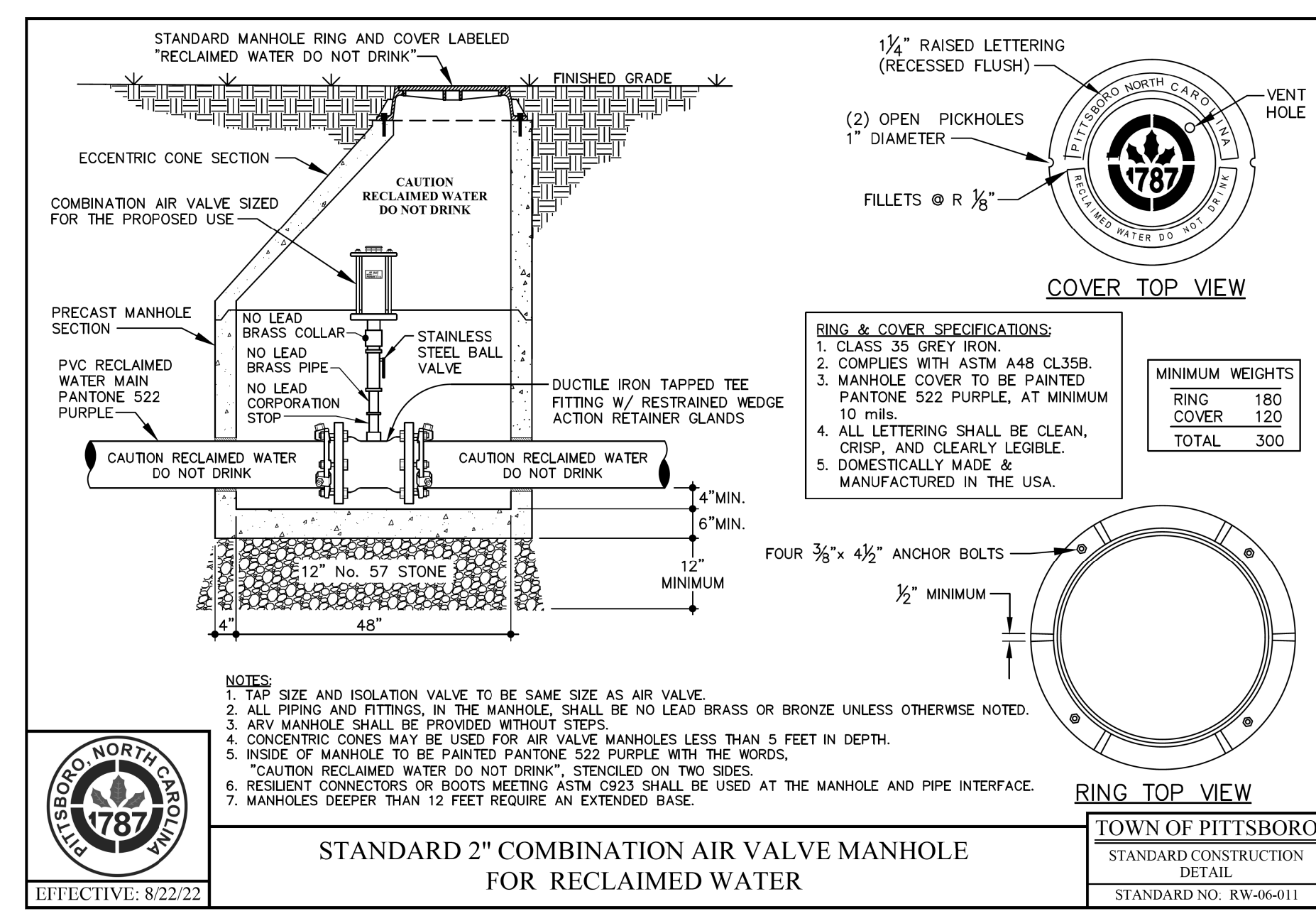
5/14/2024



300 MORRIS STREET, SUITE 200
DURHAM, NC 27701

PROJECT REFERENCE NO. R-5963D	SHEET NO. UC-3C
DESIGNED BY: NLH	
DRAWN BY: JNB	
CHECKED BY: NDR	
APPROVED BY: NLH	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



2/16/2024

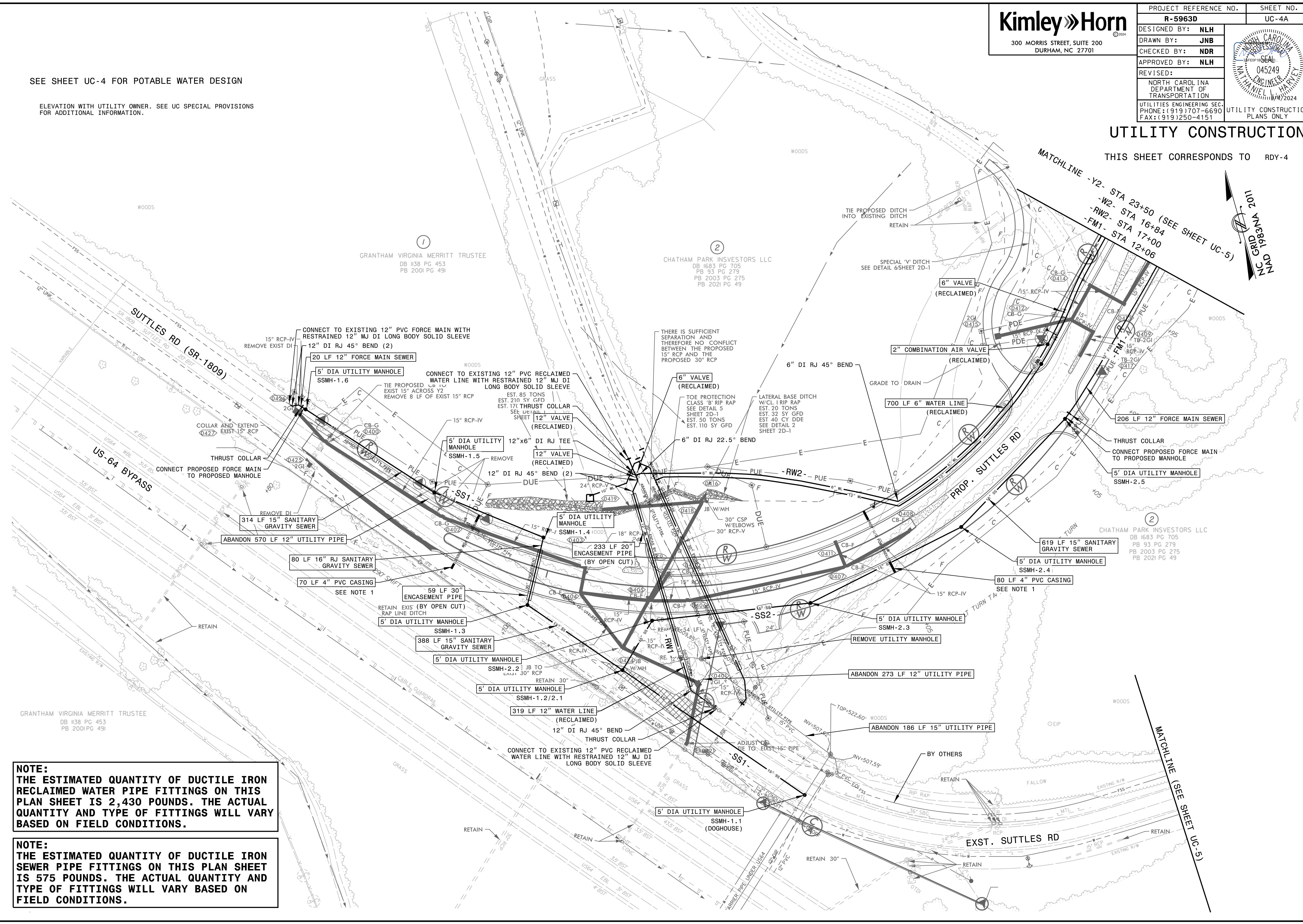
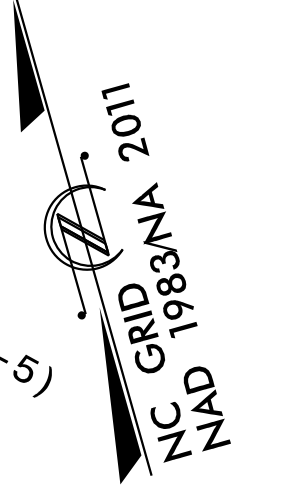
PROJECT REFERENCE NO.	R-5963D	SHEET NO.	UC-4A
DESIGNED BY:	NLH		
DRAWN BY:	JNB		
CHECKED BY:	NDR		
APPROVED BY:	NLH		
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		UTILITY CONSTRUCTION PLANS ONLY	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151			

SEE SHEET UC-4 FOR POTABLE WATER DESIGN

ELEVATION WITH UTILITY OWNER. SEE UC SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

UTILITY CONSTRUCTION

THIS SHEET CORRESPONDS TO RDY-4



NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON RECLAIMED WATER PIPE FITTINGS ON THIS PLAN SHEET IS 2,430 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

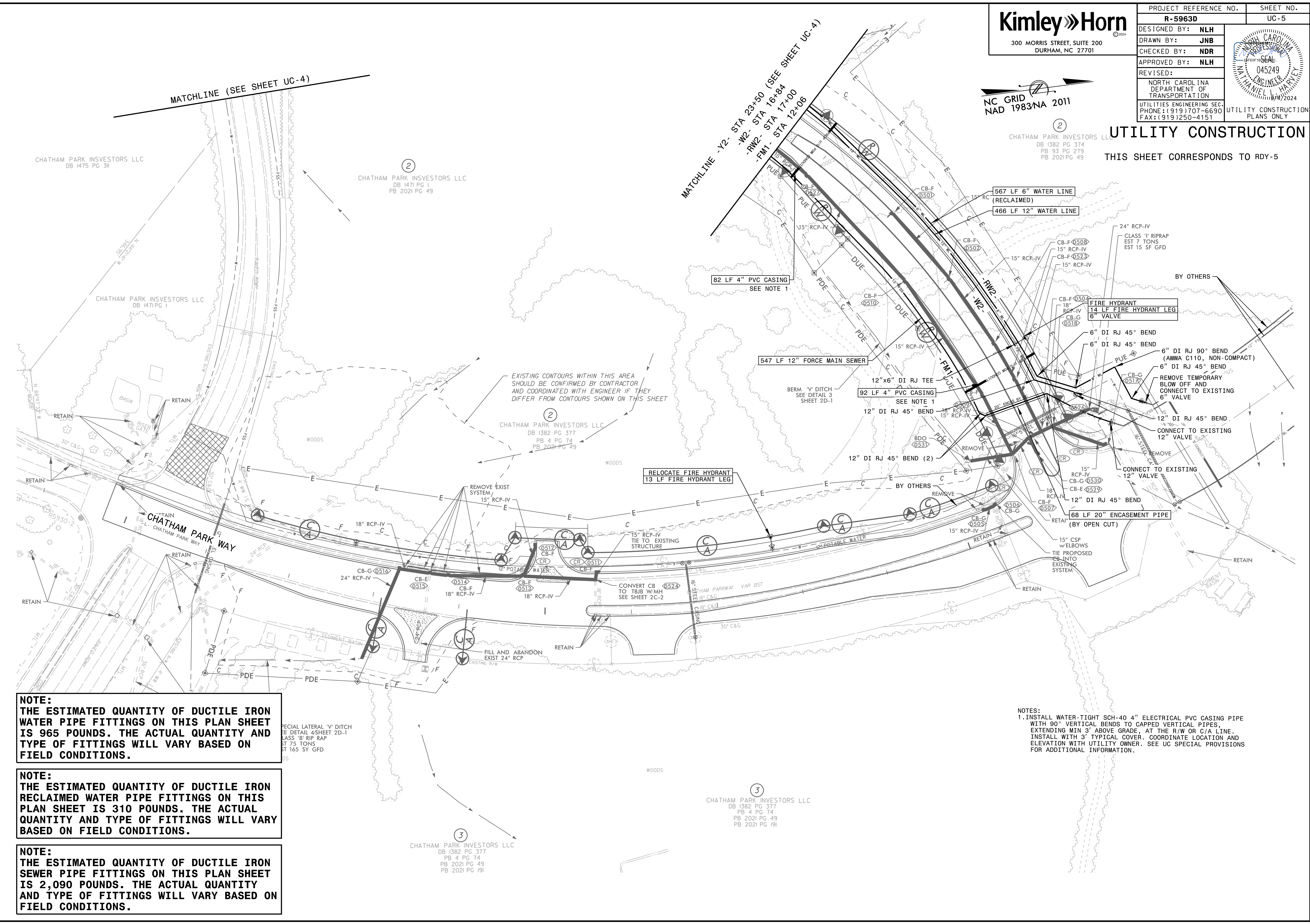
NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON SEWER PIPE FITTINGS ON THIS PLAN SHEET IS 575 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

PROJECT REFERENCE NO.	R-5963D	SHEET NO.	UC-5
DESIGNED BY:	NLH		
DRAWN BY:	JNB		
CHECKED BY:	NDR		
APPROVED BY:	NLH		
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		UTILITY CONSTRUCTION PLANS ONLY	



UTILITY CONSTRUCTION

THIS SHEET CORRESPONDS TO RDY-5



NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 965 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON RECLAIMED WATER PIPE FITTINGS ON THIS PLAN SHEET IS 310 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

NOTE:
THE ESTIMATED QUANTITY OF DUCTILE IRON SEWER PIPE FITTINGS ON THIS PLAN SHEET IS 2,090 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

NOTES:
1. INSTALL WATER-TIGHT SCH-40 4" ELECTRICAL PVC CASING PIPE WITH 90° VERTICAL BENDS TO CAPPED VERTICAL PIPES, EXTENDING MIN 3' ABOVE GRADE, AT THE R/W OR C/A LINE. INSTALL WITH 3" TYPICAL COVER. COORDINATE LOCATION AND ELEVATION WITH UTILITY OWNER. SEE UC SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 4 SHEET 2D-1
CLASS 'B' RIP RAP
EST 75 TONS
EST 165 SY' GFD

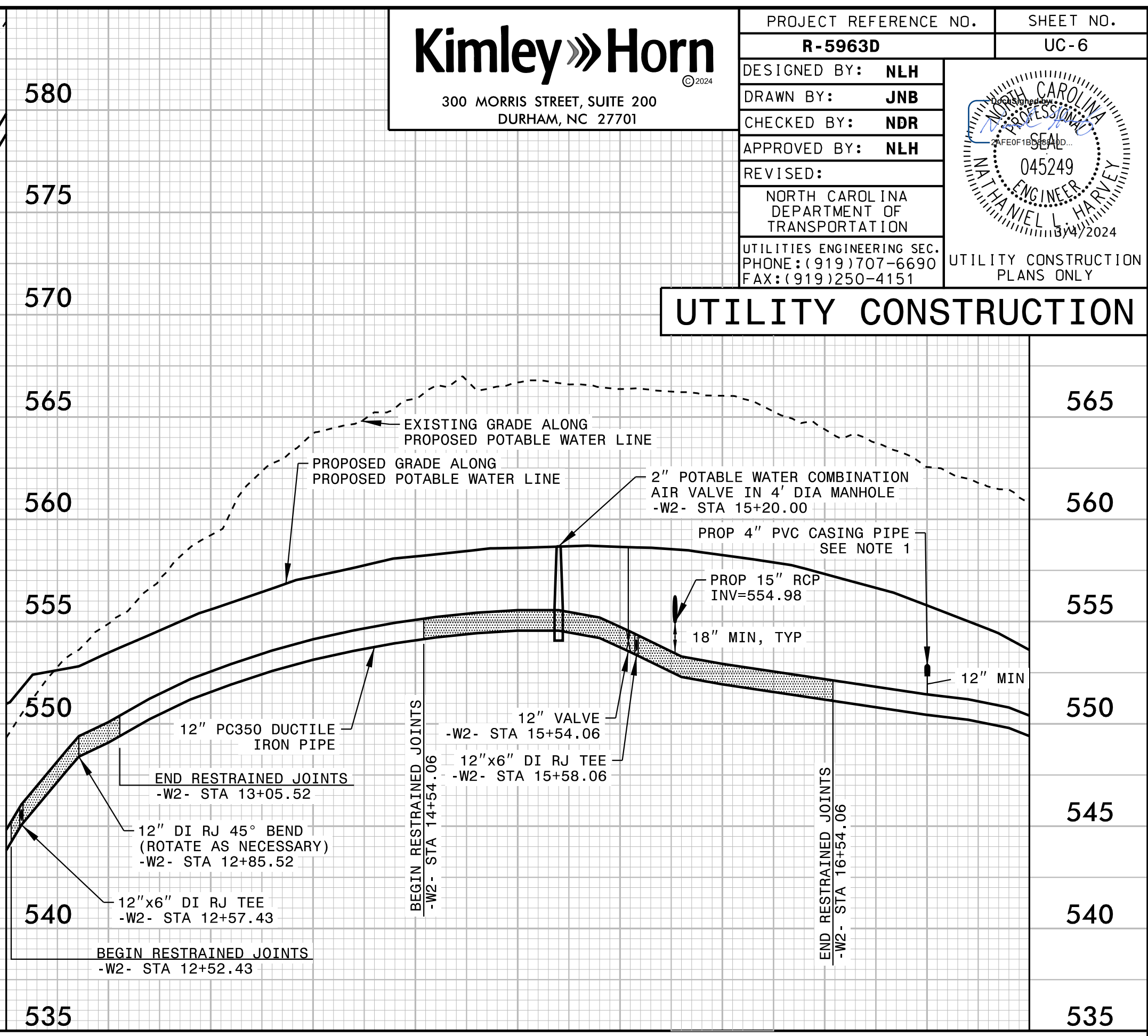
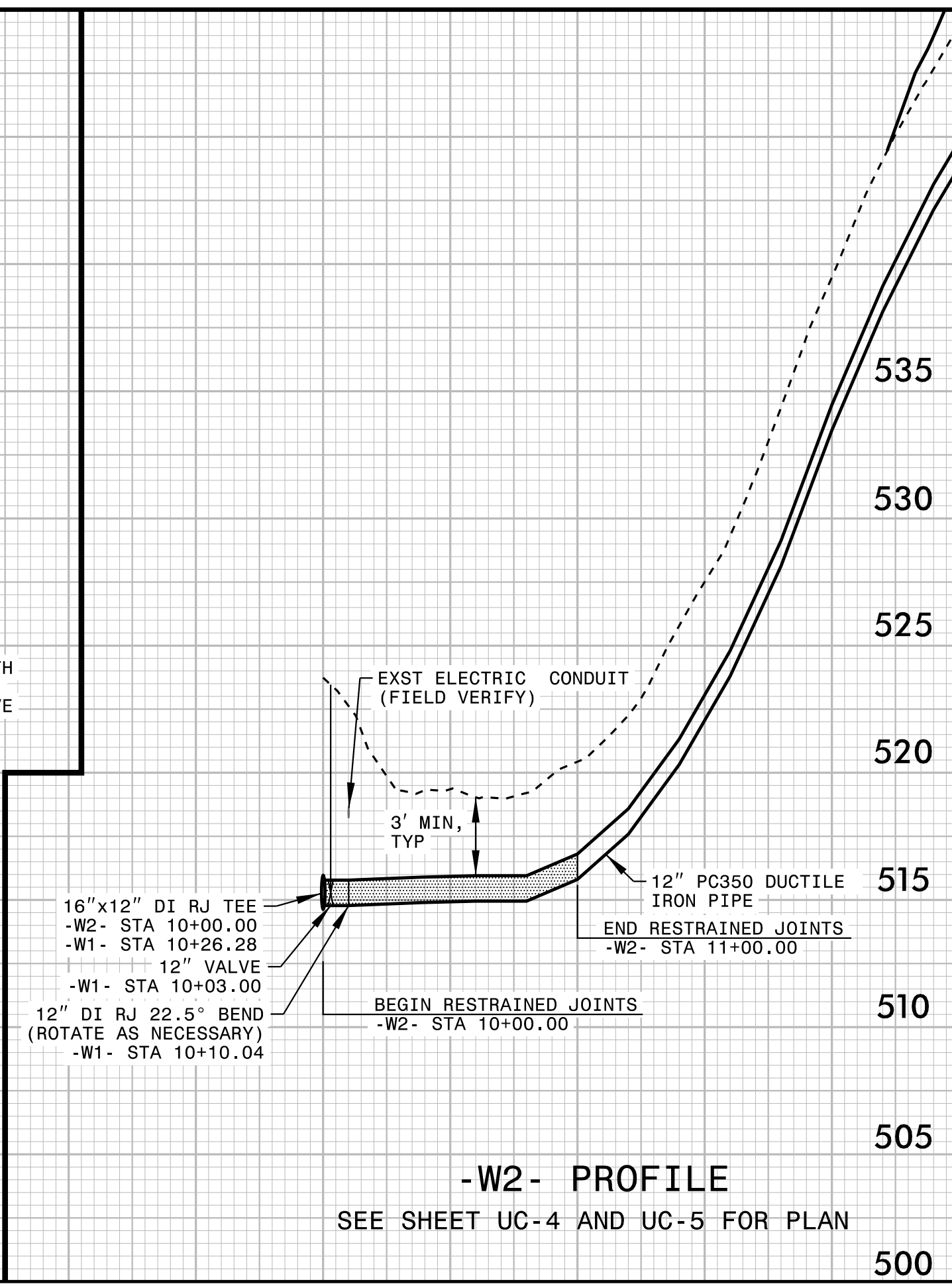
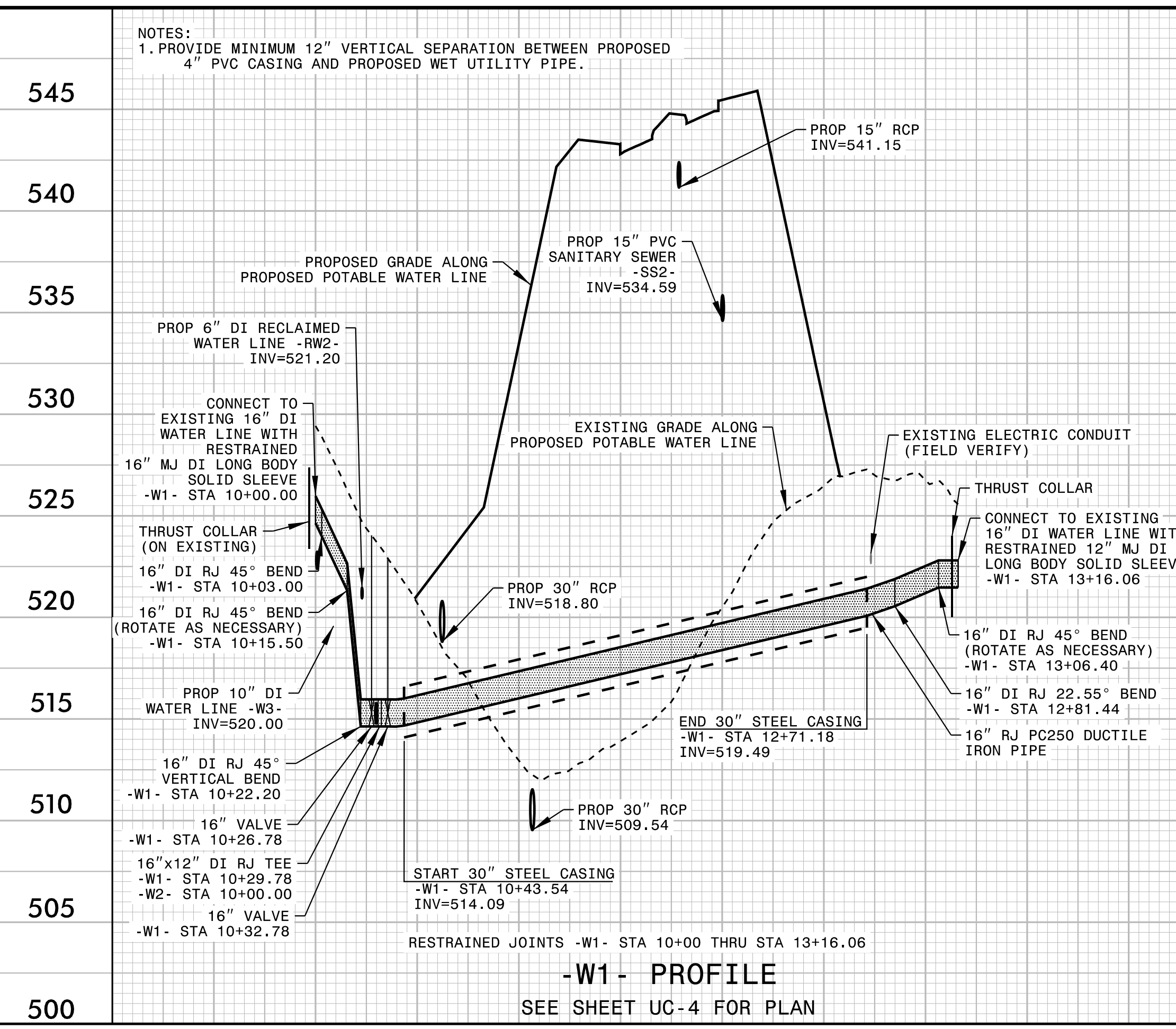
5/14/2024

NOTES:
1. PROVIDE MINIMUM 12" VERTICAL SEPARATION BETWEEN PROPOSED 4" PVC CASING AND PROPOSED WET UTILITY PIPE.



PROJECT REFERENCE NO.	R-5963D	SHEET NO.	UC-6
DESIGNED BY:	NLH		
DRAWN BY:	JNB		
CHECKED BY:	NDR		
APPROVED BY:	NLH		
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		UTILITY CONSTRUCTION PLANS ONLY	

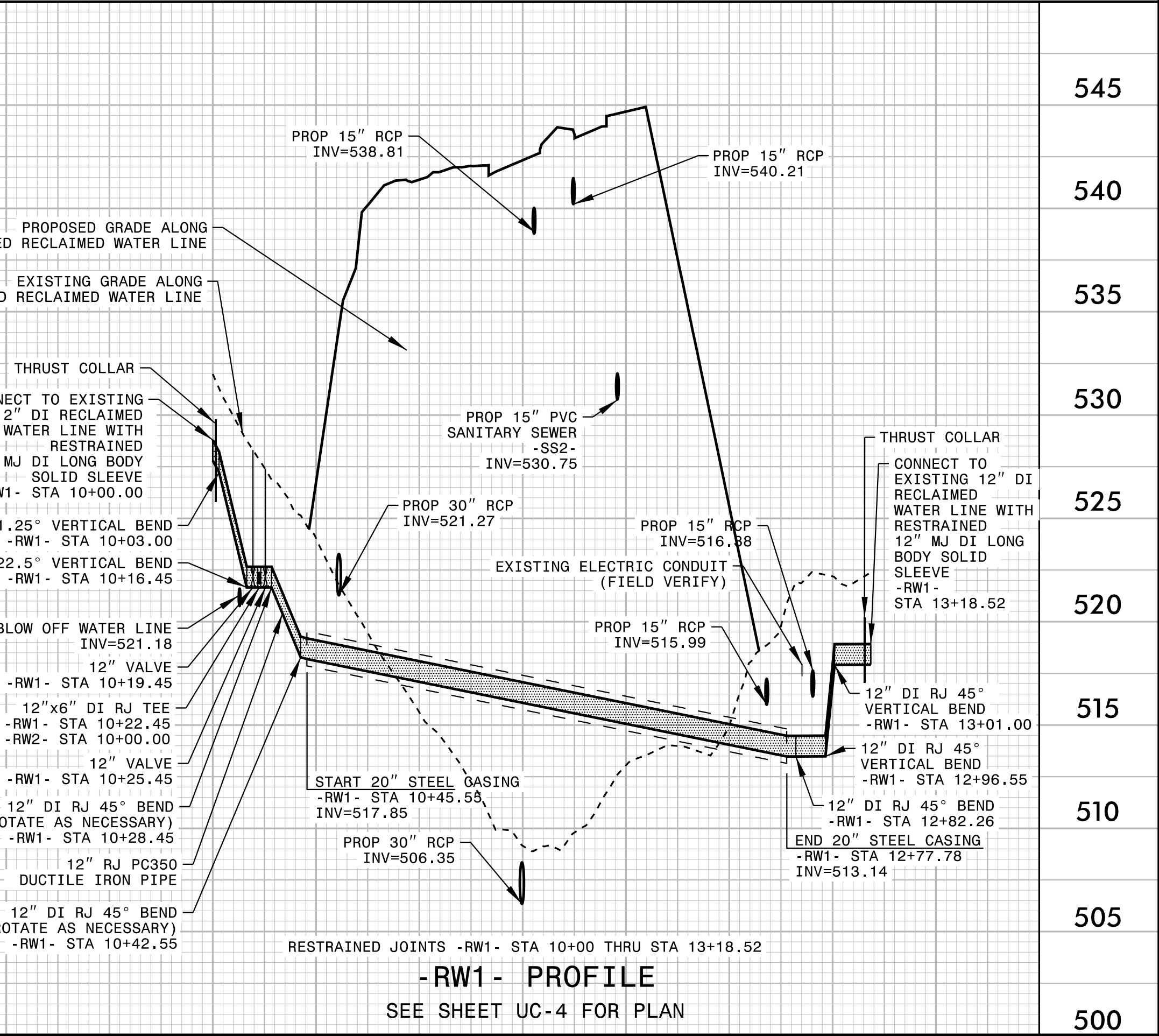
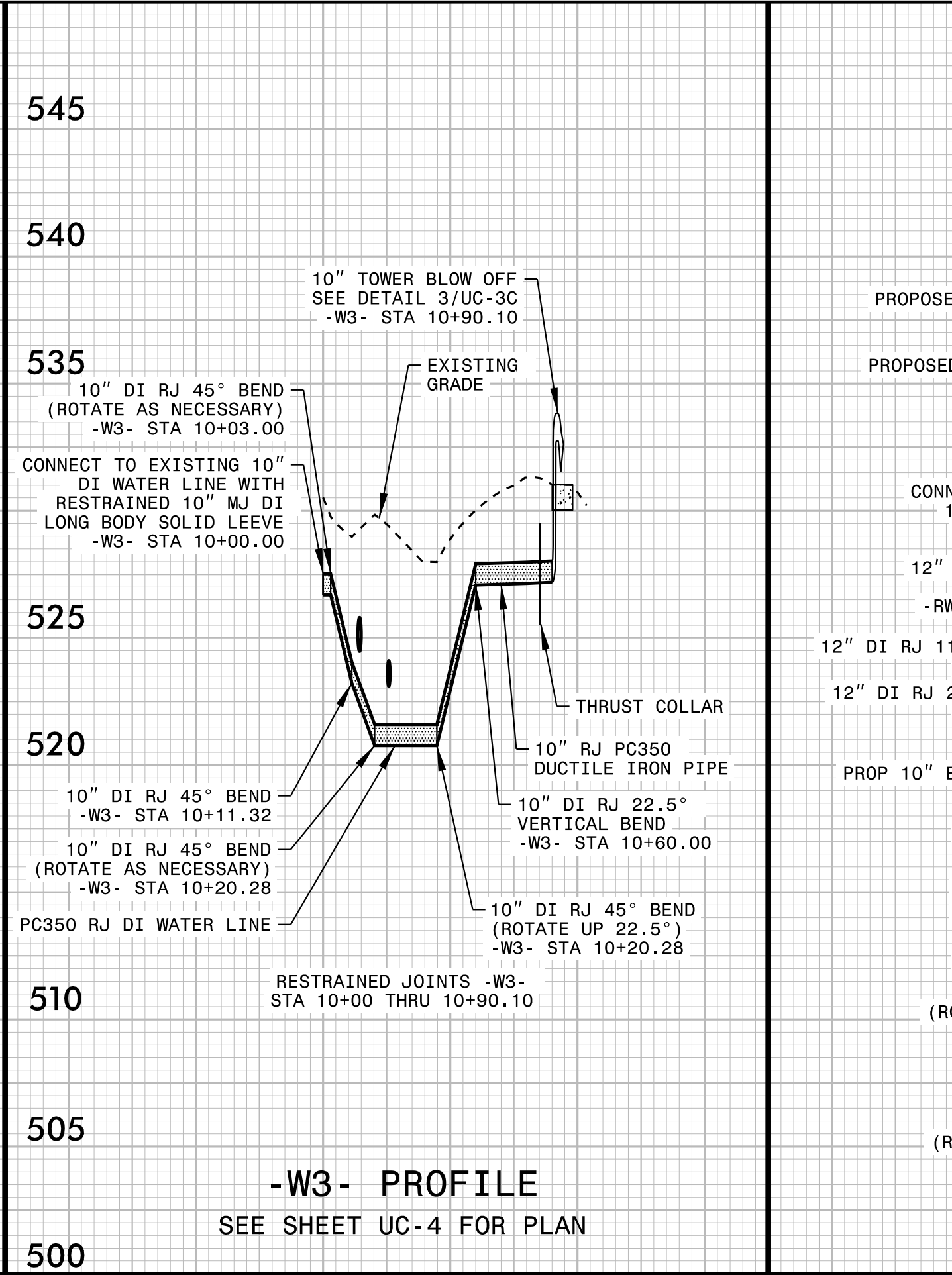
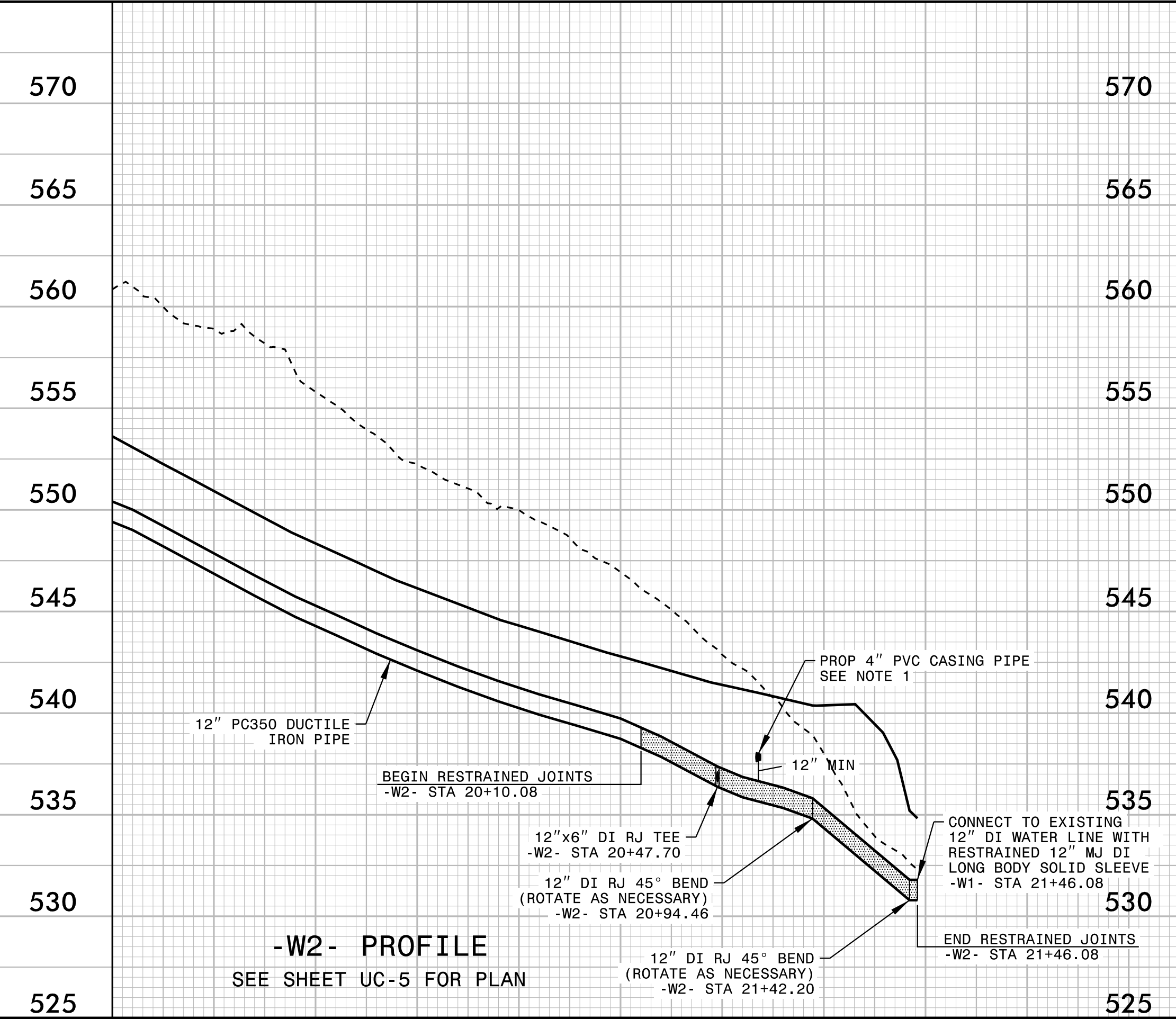
UTILITY CONSTRUCTION



STATION: 10 11 12 13

STATION: 10 11 12 13 14 15 16 17

STATION: 13 14 15 16 17



STATION: 18 19 20 21 22

STATION: 10 11

STATION: 10 11 12 13

3/14/2024

5/14/2024

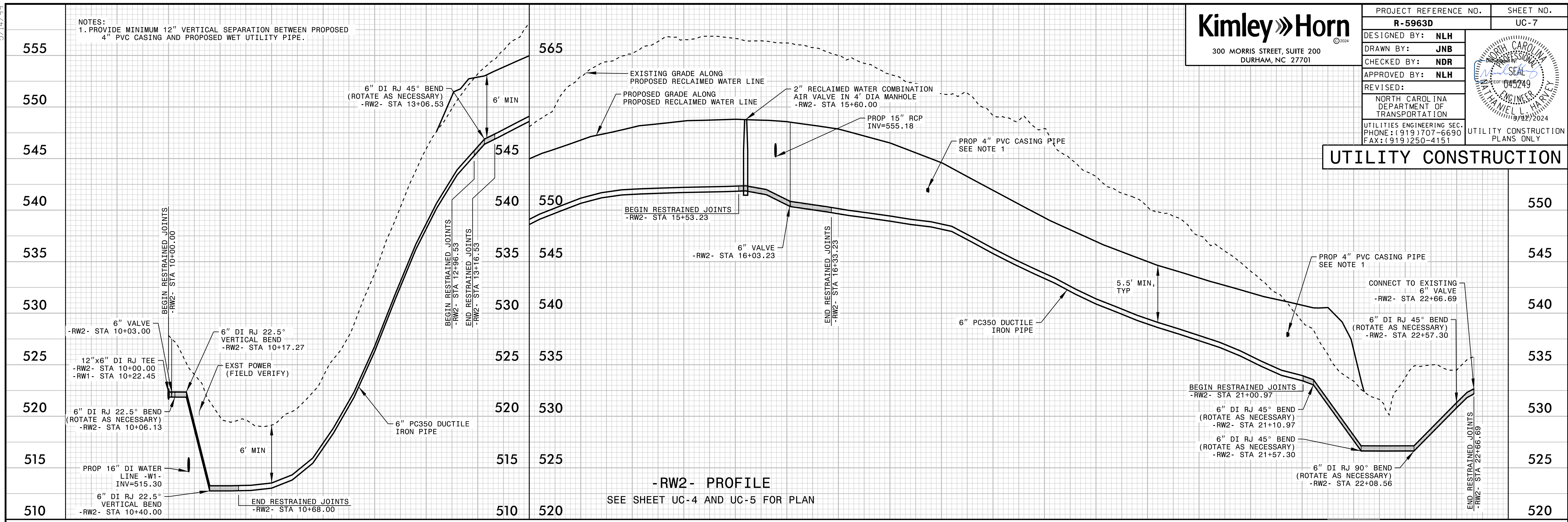
NOTES:
1. PROVIDE MINIMUM 12" VERTICAL SEPARATION BETWEEN PROPOSED 4" PVC CASING AND PROPOSED WET UTILITY PIPE.



300 MORRIS STREET, SUITE 200
DURHAM, NC 27701

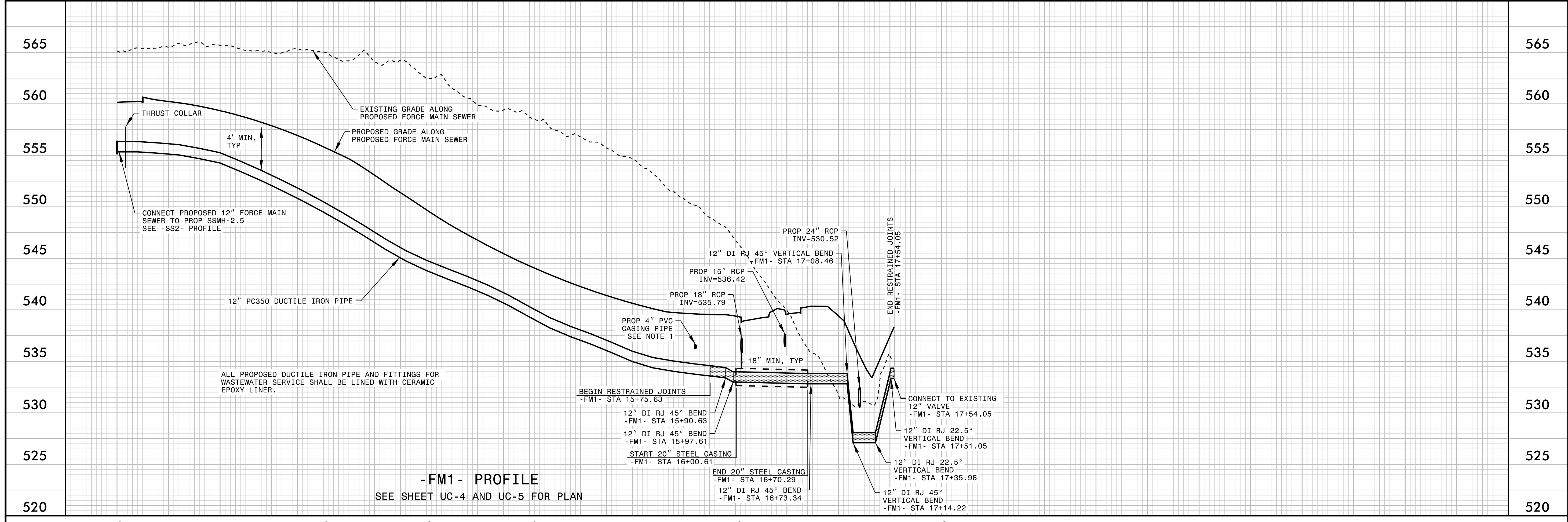
PROJECT REFERENCE NO. R-5963D	SHEET NO. UC-7
DESIGNED BY: NLH	
DRAWN BY: JNB	
CHECKED BY: NDR	
APPROVED BY: NLH	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



-RW2- PROFILE
SEE SHEET UC-4 AND UC-5 FOR PLAN

STATION: 10 11 12 13 14 15 16 17 18 19 20 21 22 23



-FM1- PROFILE
SEE SHEET UC-4 AND UC-5 FOR PLAN

STATION: 10 11 12 13 14 15 16 17 18

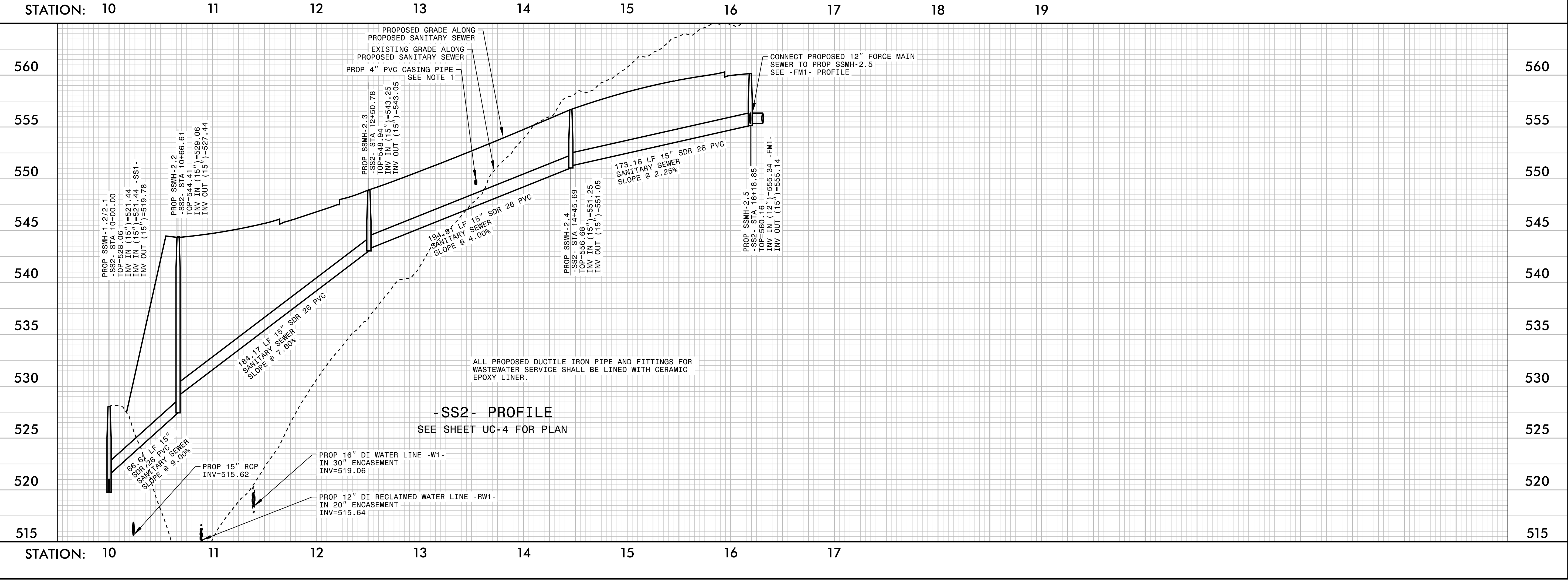
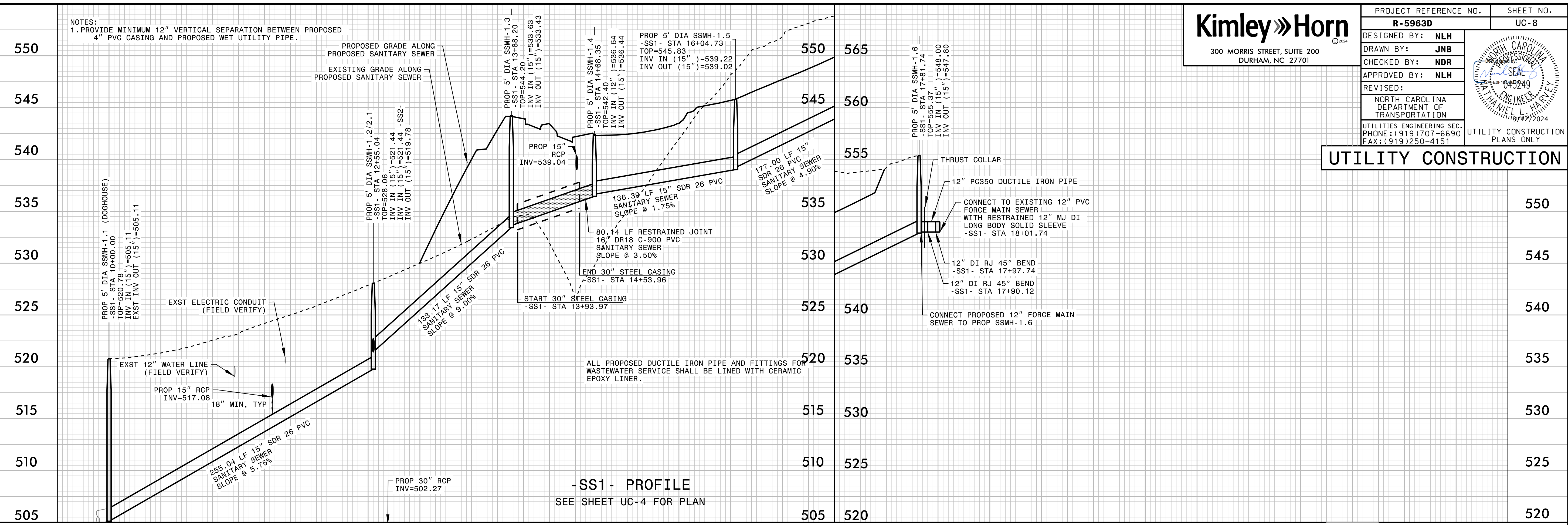
3/12/2024

5/14/2024

Kimley Horn
 300 MORRIS STREET, SUITE 200
 DURHAM, NC 27701

PROJECT REFERENCE NO.	R-5963D	SHEET NO.	UC-8
DESIGNED BY:	NLH		
DRAWN BY:	JNB		
CHECKED BY:	NDR		
APPROVED BY:	NLH		
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		UTILITY CONSTRUCTION PLANS ONLY	
UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151			

UTILITY CONSTRUCTION



3/12/2024