



# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

## Kimley»Horn

300 MORRIS STREET, SUITE 200  
DURHAM, NC 27701

PROJECT REFERENCE NO. <b>R-5930A</b>	SHEET NO. UC-2
DESIGNED BY: <b>NLH</b>	
DRAWN BY: <b>JNB</b>	
CHECKED BY: <b>NDR</b>	
APPROVED BY: <b>NLH</b>	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

UTILITY CONSTRUCTION  
PLANS ONLY

# UTILITIES PLAN SHEET SYMBOLS

## UTILITY CONSTRUCTION

### 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	
Water Meter	
Relocate Water Meter	
Remove Water Meter	
Water Pump Station	
RPZ Backflow Preventer	
DCV Backflow Preventer	
Relocate RPZ Backflow Preventer	
Relocate DCV Backflow Preventer	

### PROPOSED SEWER SYMBOLS

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

### PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

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

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

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		Sanitary Sewer Cleanout	
End of Information			

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

Designated Utility Line (Type as Shown)

5/14/2023

## 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 2018.
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.

PROJECT REFERENCE NO.		SHEET NO.	
R-5930A		UC-3	
DESIGNED BY:	NLH		UTILITY CONSTRUCTION PLANS ONLY
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

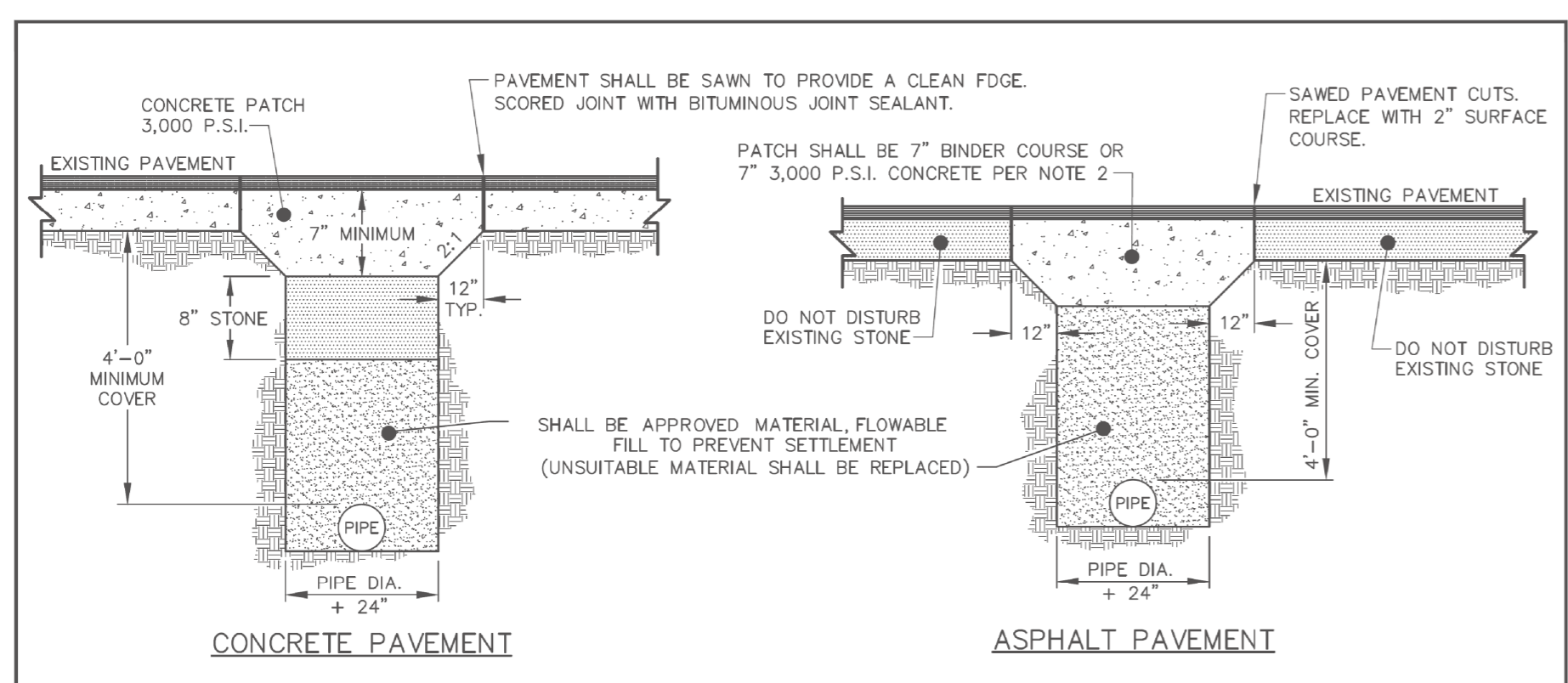
5/16/2023

# Kimley»Horn

300 MORRIS STREET, SUITE 200  
DURHAM, NC 27701

PROJECT REFERENCE NO.	SHEET NO.
R-5930A	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

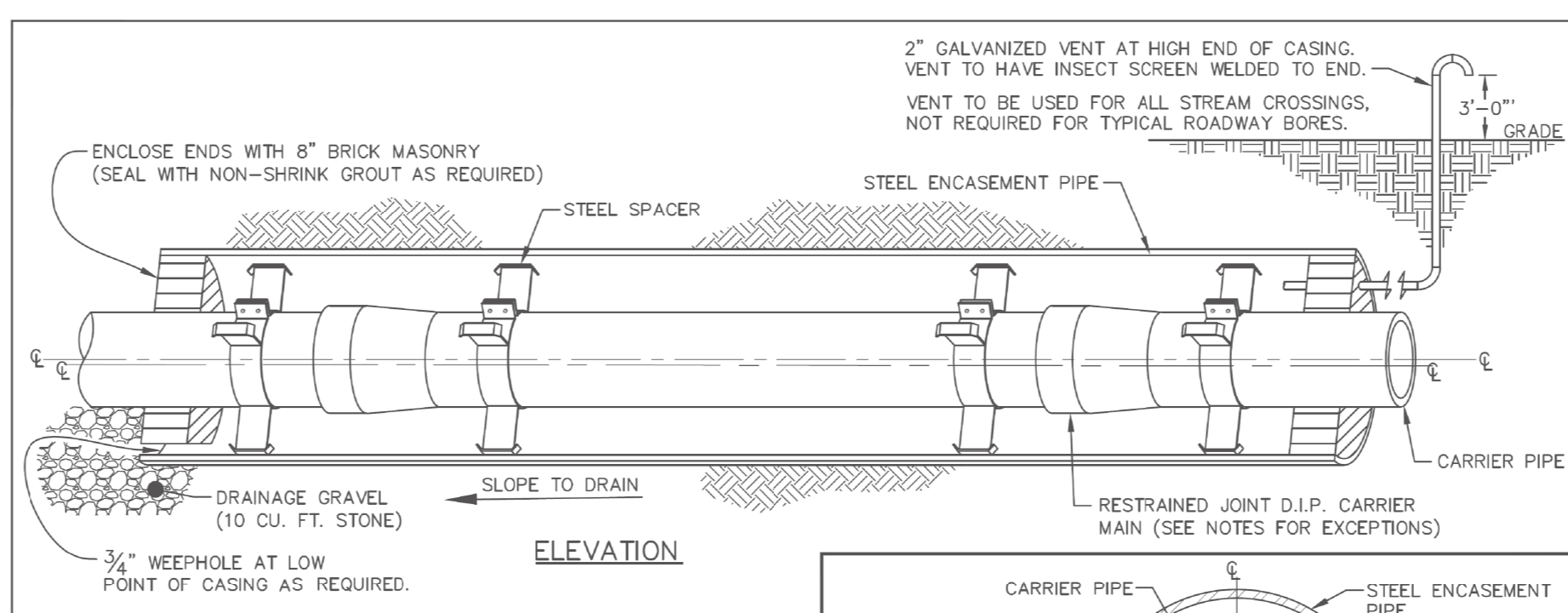


- NOTES:**
1. ALL PAVEMENT CUTS SHALL BE REPAIRED WITHIN A MAXIMUM OF THREE (3) DAYS FROM THE DATE THE CUT IS MADE.
  2. CONCRETE TRENCH CAP ON ASPHALT STREETS SHALL BE USED ONLY DURING INCLEMENT WEATHER WHEN ASPHALT PLANTS ARE NOT OPERATING.
  3. IN ALL OPEN TRENCHES, BACKFILL SHALL BE COMPACTED TO 95% MAXIMUM DRY DENSITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING COMPACTION REQUIREMENTS BY SOILS TESTING CERTIFIED BY A LICENSED PROFESSIONAL GEOTECHNICAL ENGINEER.
  4. 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.
  5. 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-02-001  
EFFECTIVE: 4/11/22

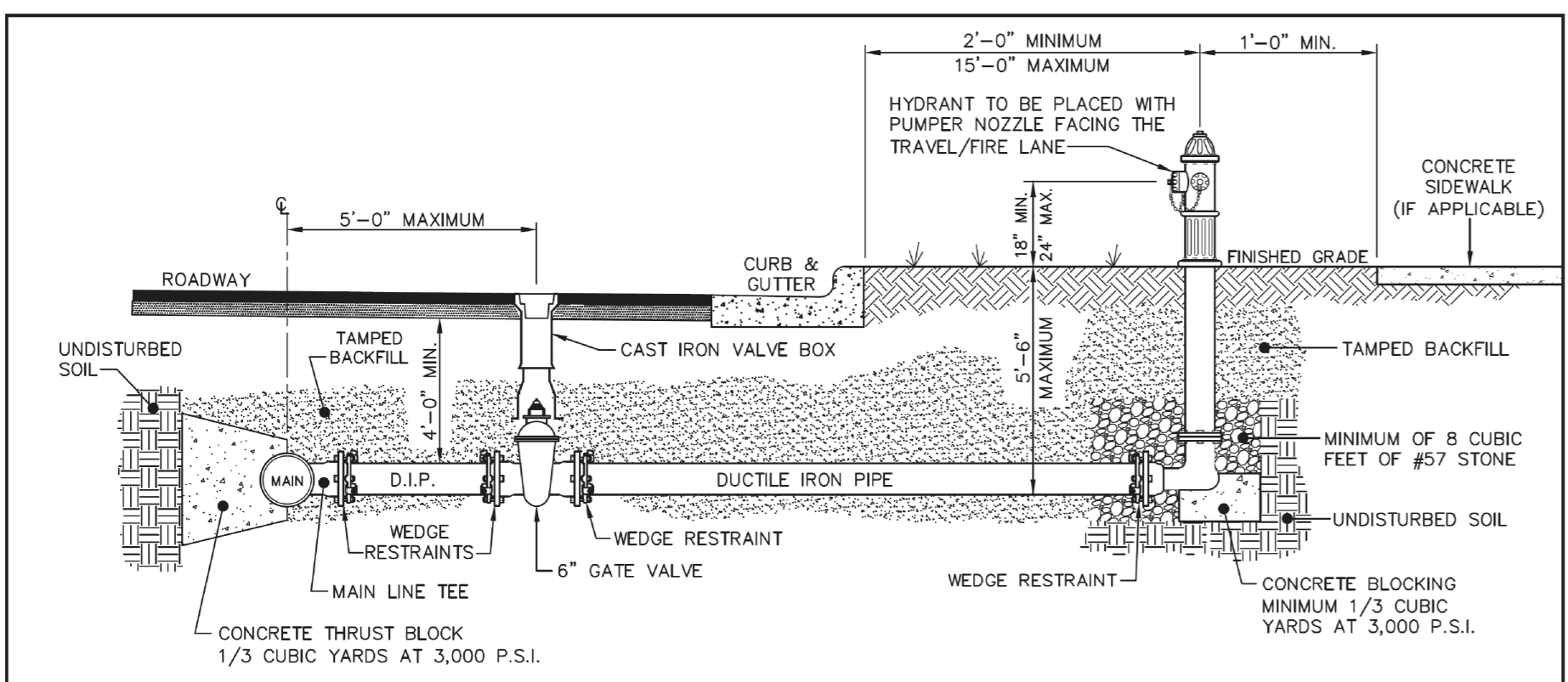


- NOTES:**
1. STEEL SPACERS SHALL BE USED FOR SUPPORT OF THE CARRIER PIPE WITHIN THE CASING PIPE.
  2. A MINIMUM SPACING OF 2 SPACERS PER JOINT OF CARRIER PIPE SHALL BE REQUIRED. 3 SPACERS ARE REQUIRED FOR CARRIER PIPE  $\geq$  36 INCHES.
  3. THE SPACERS SHALL BE LOCATED EVENLY ALONG THE CARRIER PIPE SUCH THAT EACH SPACER SUPPORTS THE SAME UNIT WEIGHT OF THE CARRIER MAIN.
  4. 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

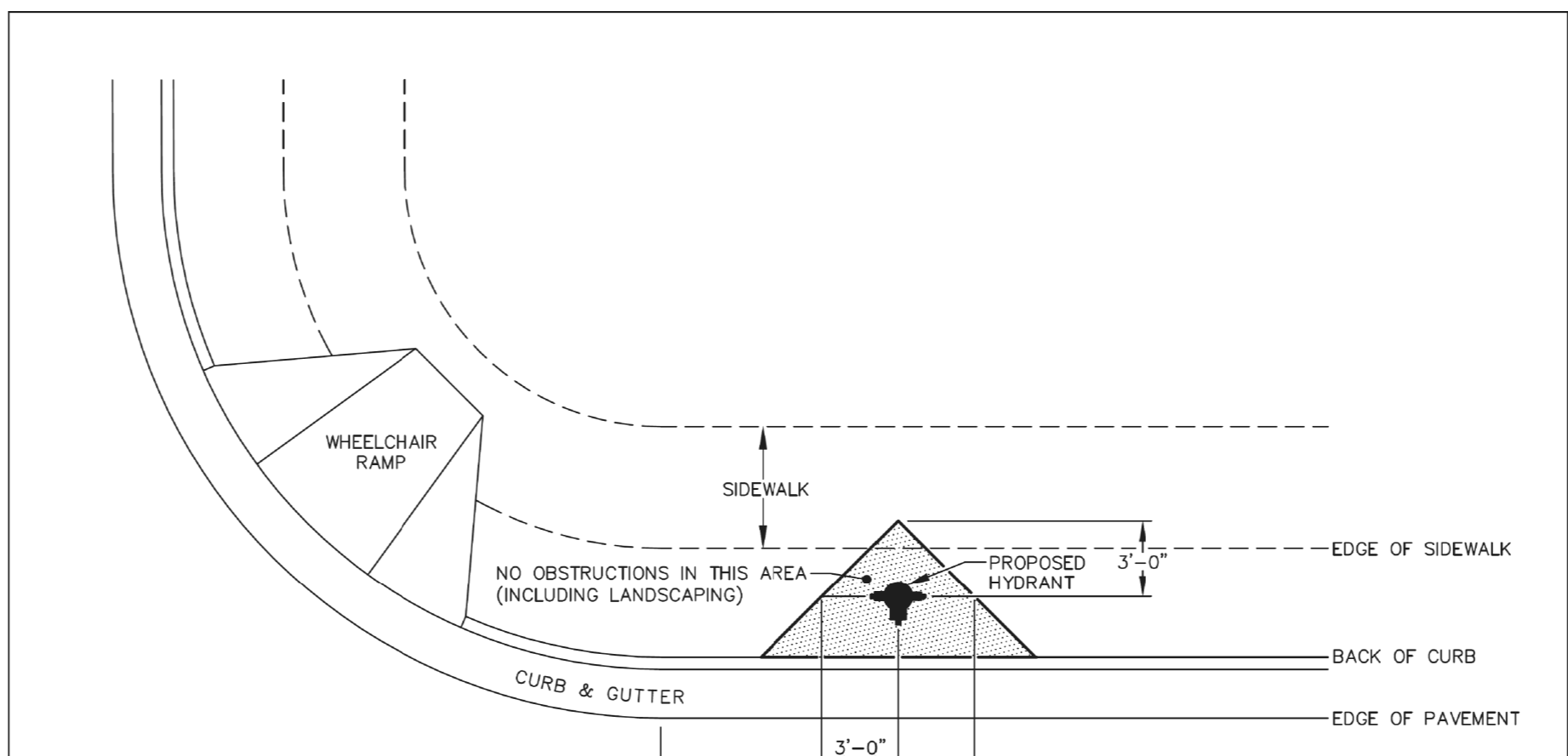


- NOTES:**
1. TOP OF BLOCKING TO BE 2 INCHES FROM HYDRANT WEEP HOLES.
  2. IF HYDRANT IS LOCATED ON A DEPARTMENT OF TRANSPORTATION ROADWAY USE D.O.T. STANDARDS FOR LOCATION OF HYDRANT.
  3. HYDRANT SHALL BE LOCATED FROM 2 TO 15 FEET FROM BACK OF CURB.
  4. HYDRANT MAY BE LOCATED (AT LEAST 1 FOOT) BEHIND SIDEWALK WHEN IT CANNOT BE LOCATED INSIDE THE UTILITY STRIP.
  5. 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.
  6. 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.
  7. HYDRANT EXTENSIONS ARE PROHIBITED.
  8. HYDRANTS NEAR FDC'S SHALL BE PROVIDED WITH A STORZ CONNECTION.



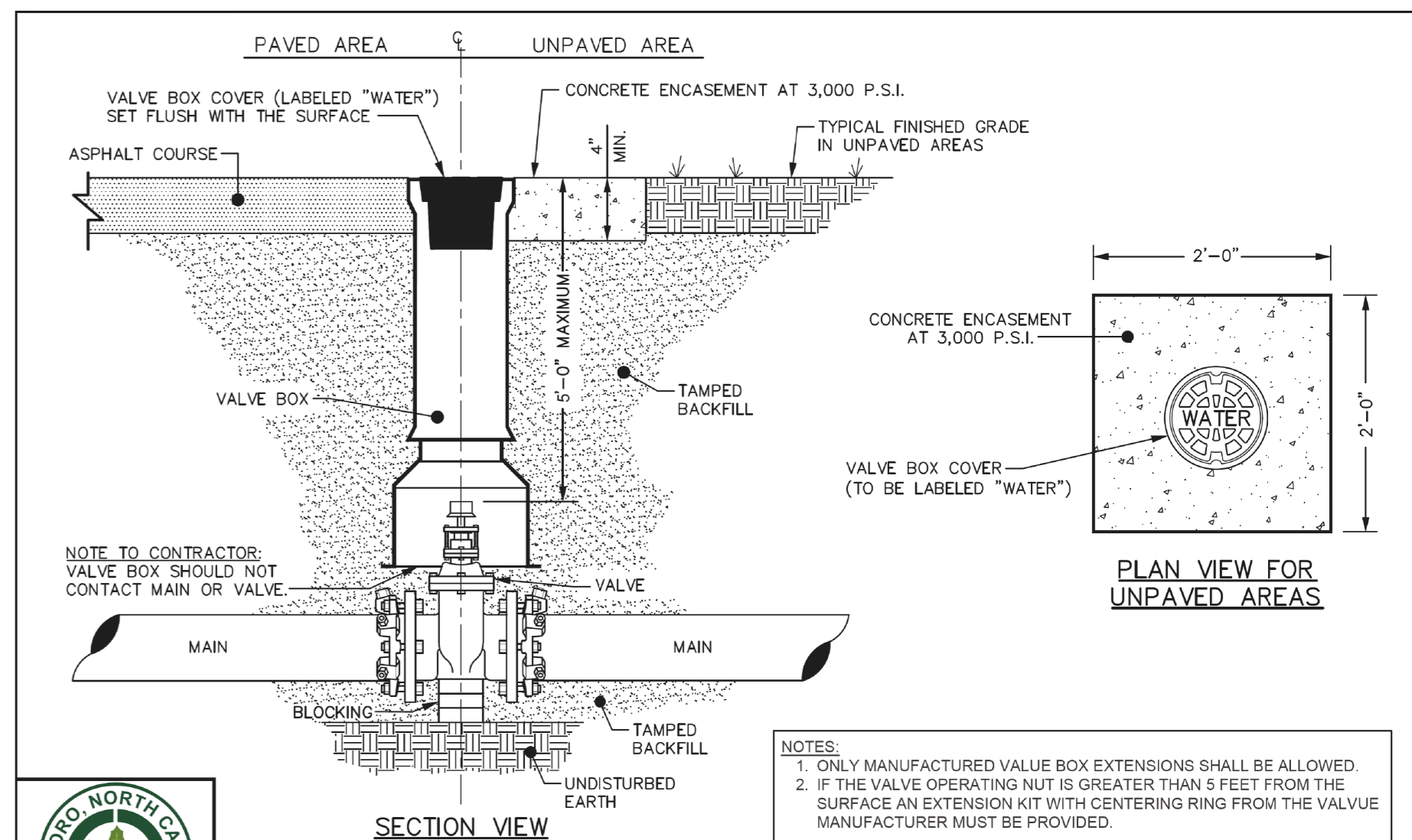
**STANDARD HYDRANT INSTALLATION FOR ROADS WITH CURB & GUTTER**

TOWN OF PITTSBORO  
STANDARD CONSTRUCTION  
DETAIL  
STANDARD NO: PW-03-010  
EFFECTIVE: 2/14/22



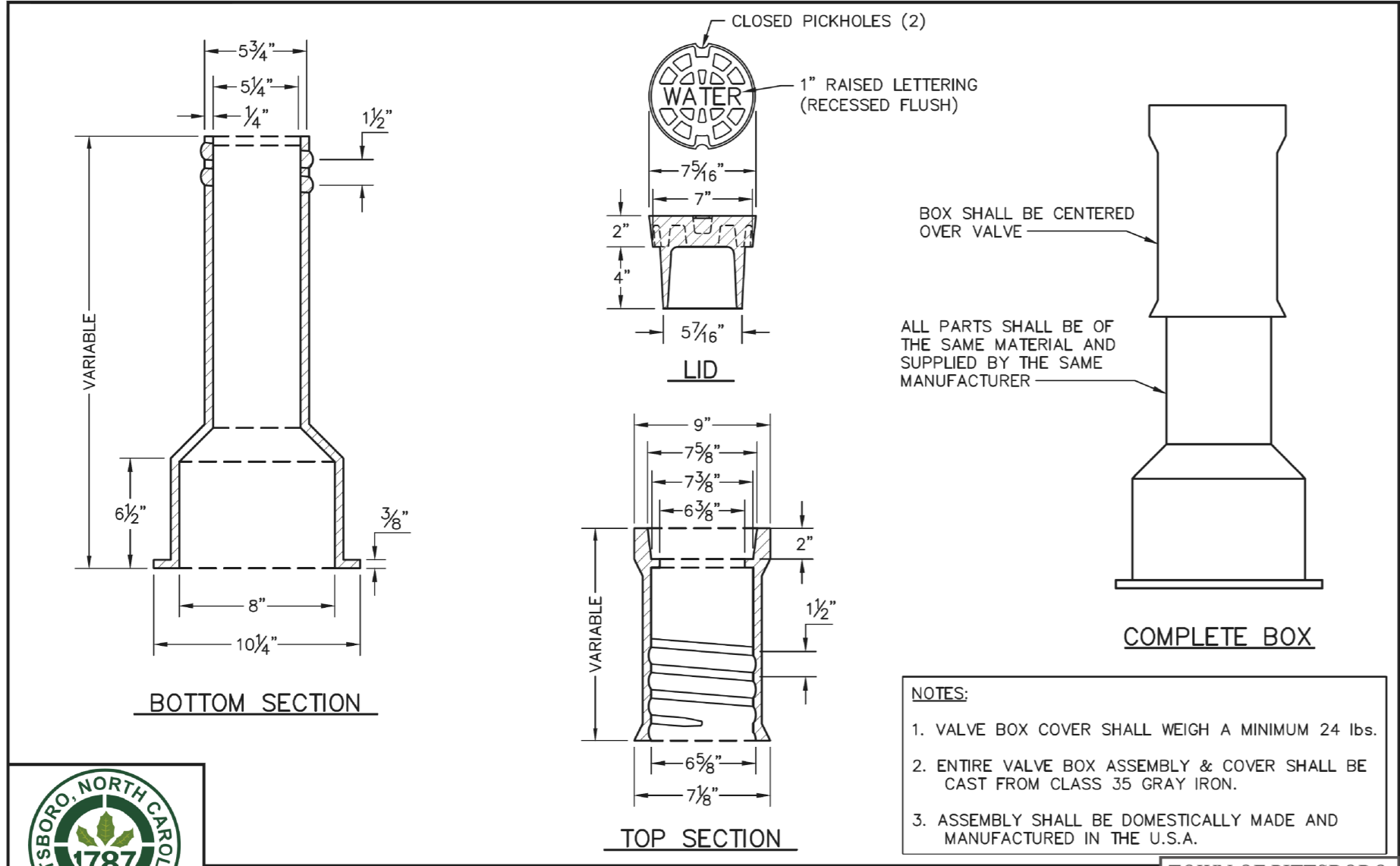
**STANDARD HYDRANT LOCATION**

TOWN OF PITTSBORO  
STANDARD CONSTRUCTION  
DETAIL  
STANDARD NO: PW-03-013  
EFFECTIVE: 2/14/22



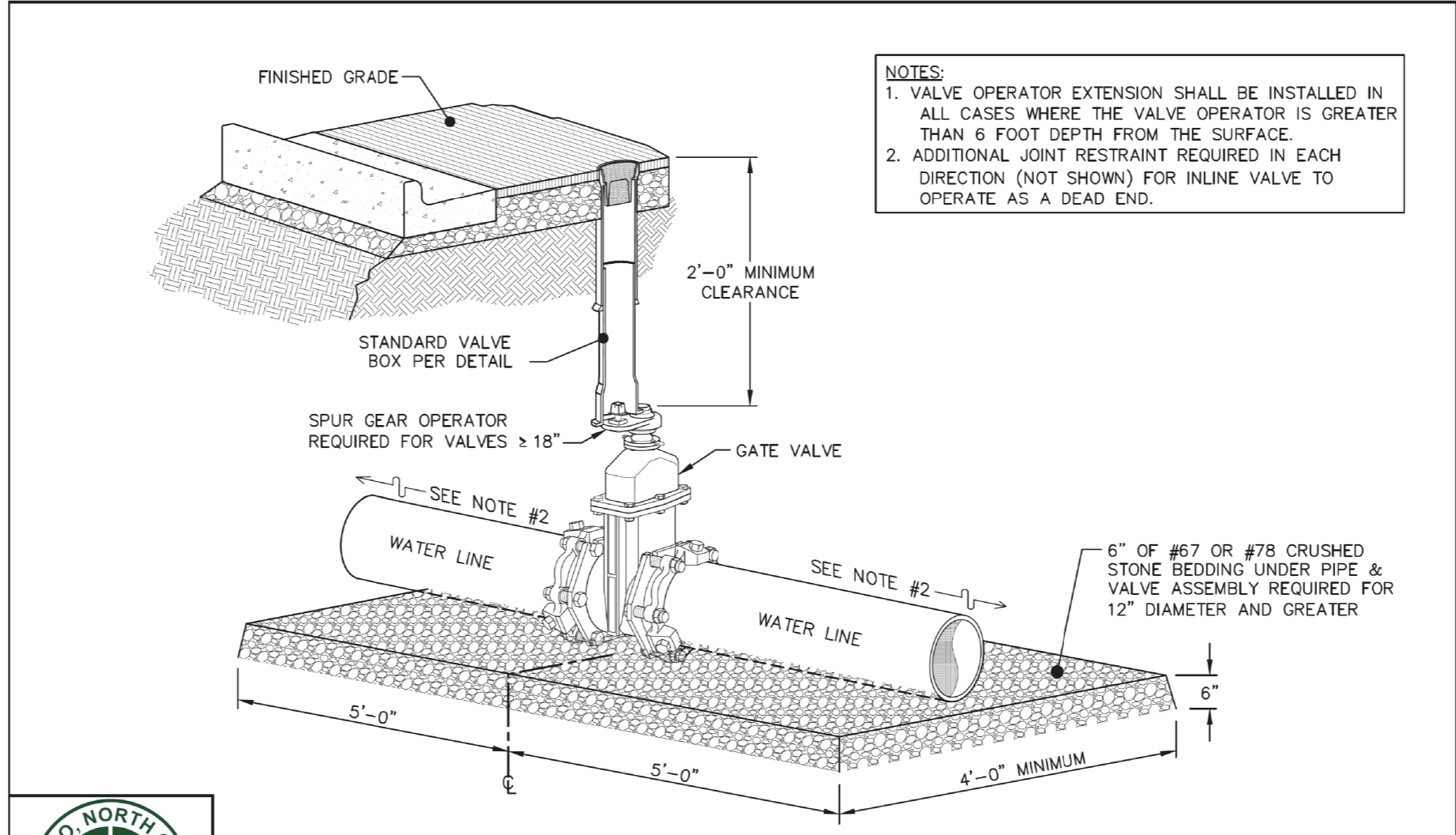
**STANDARD WATER VALVE BOX INSTALLATION (1 OF 2)**

TOWN OF PITTSBORO  
STANDARD CONSTRUCTION  
DETAIL  
STANDARD NO: PW-03-015  
EFFECTIVE: 2/14/22



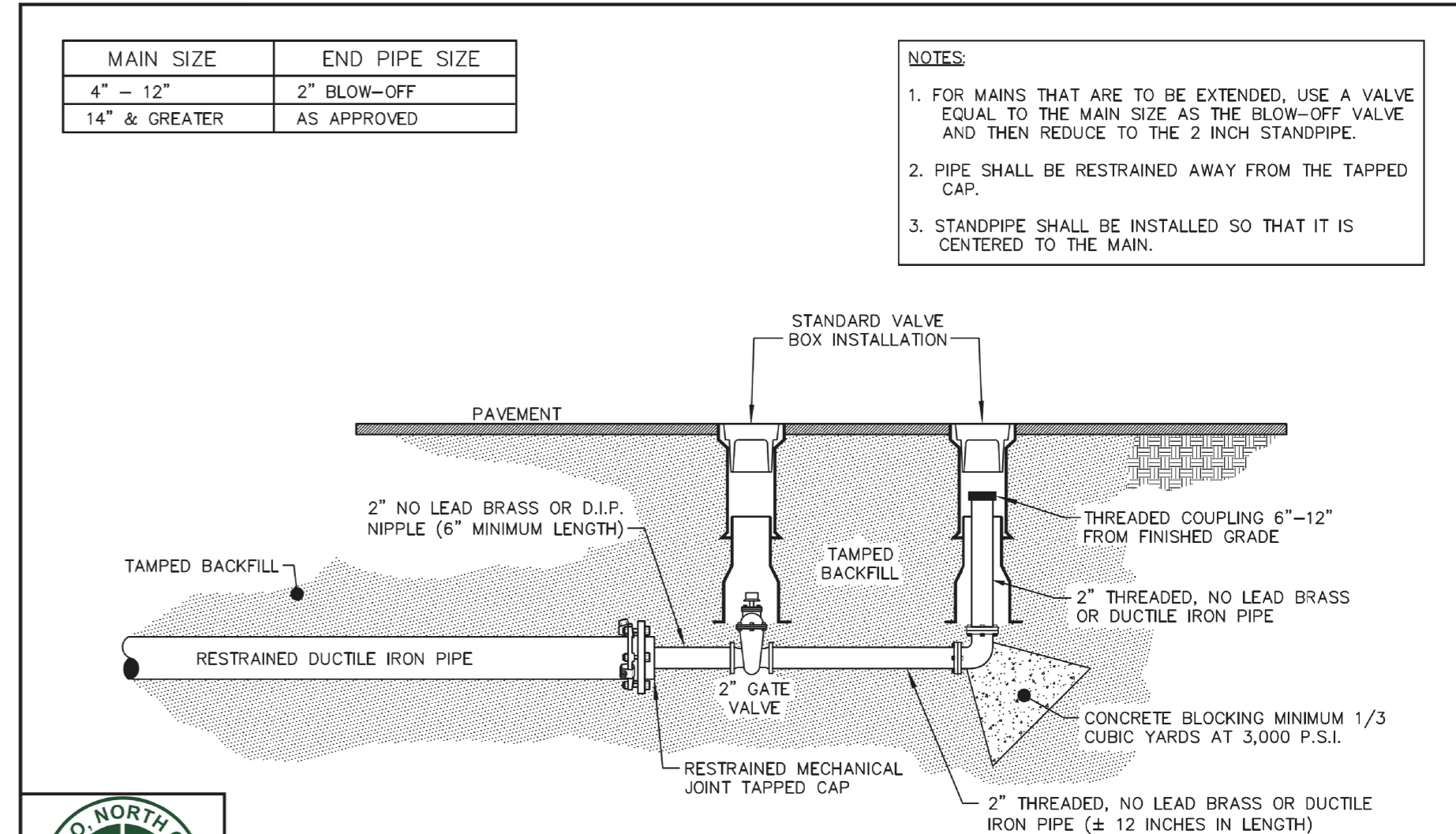
**STANDARD WATER VALVE BOX INSTALLATION (2 OF 2)**

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



**STANDARD 2" BLOW-OFF ASSEMBLY**

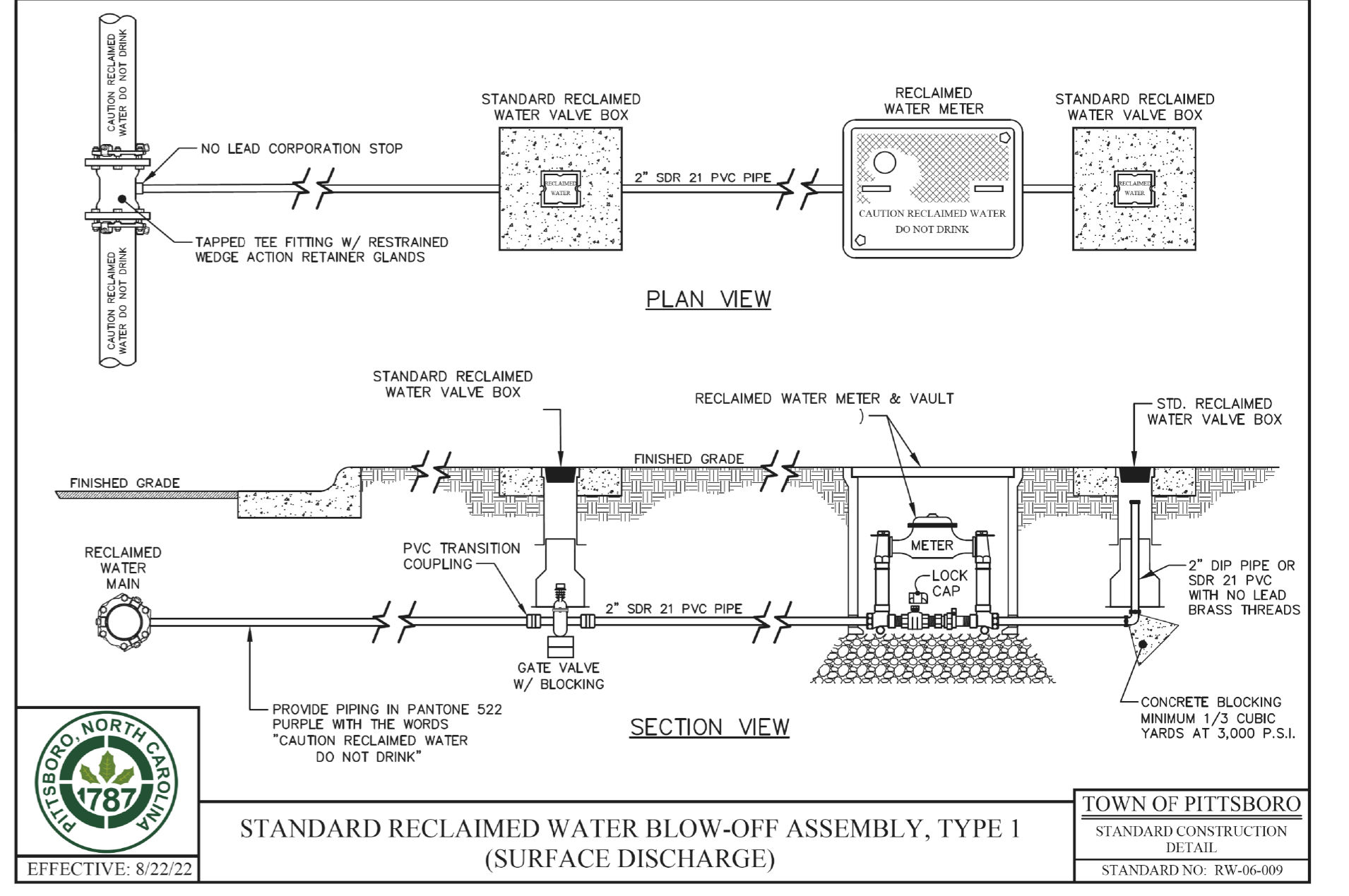
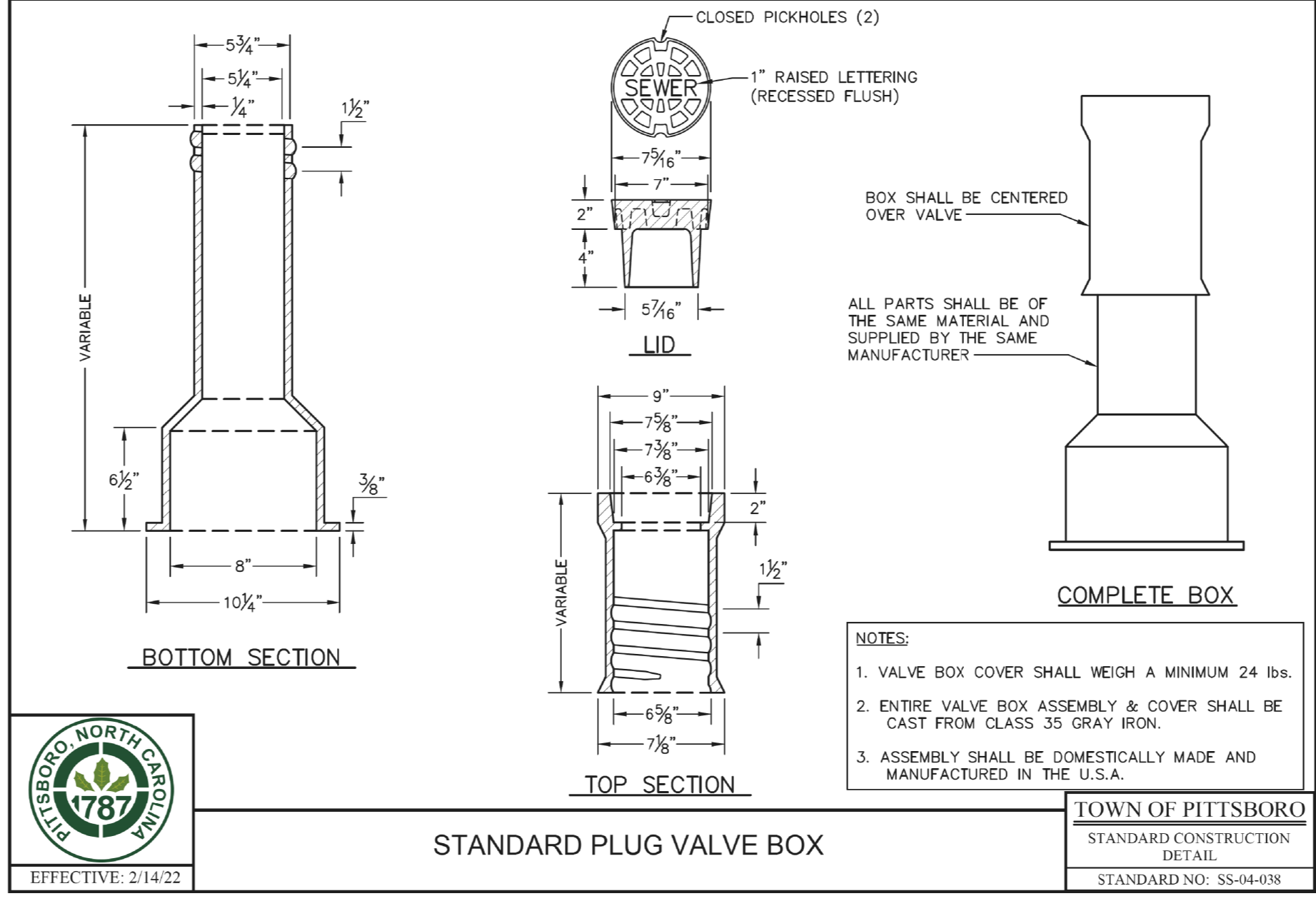
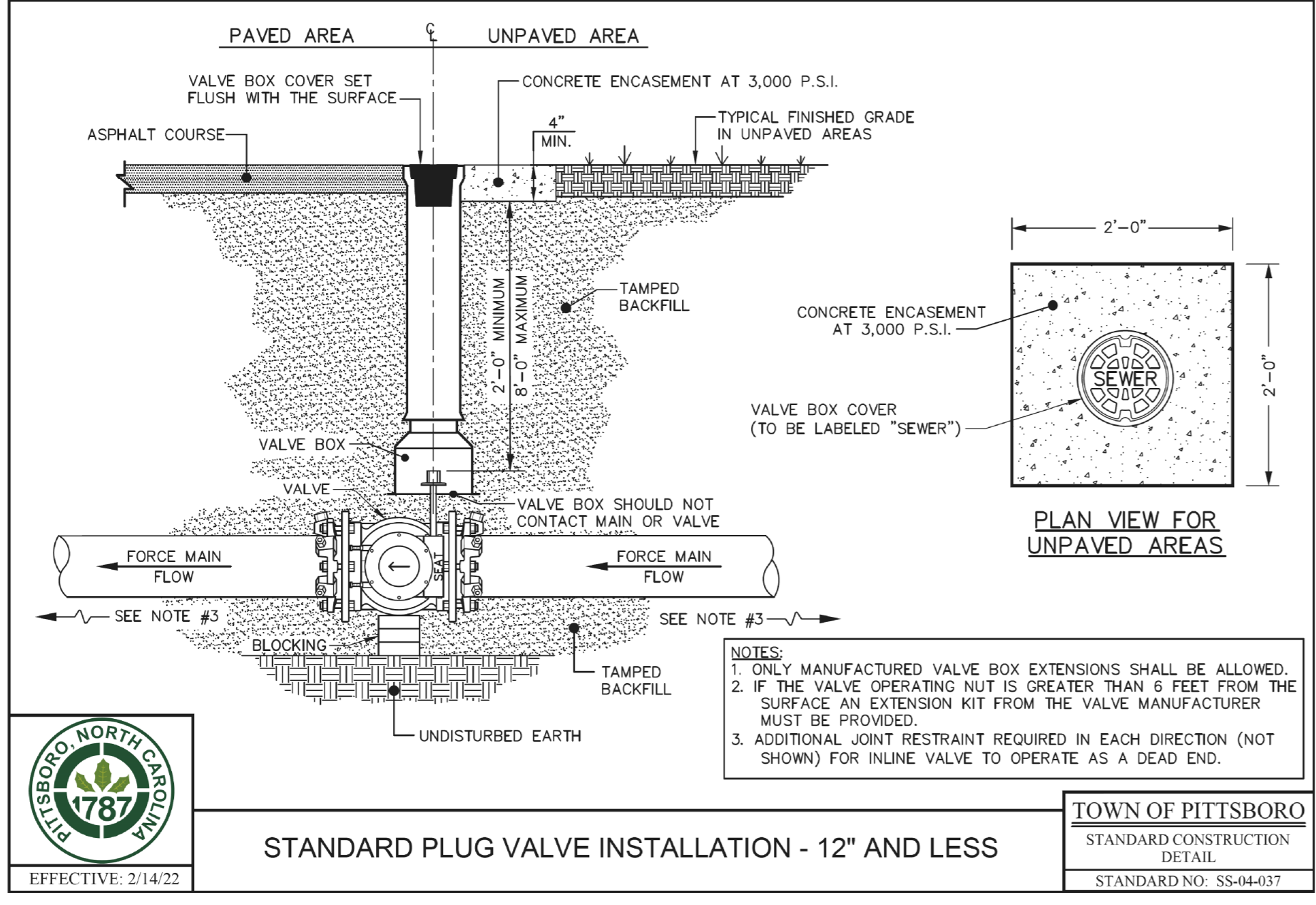
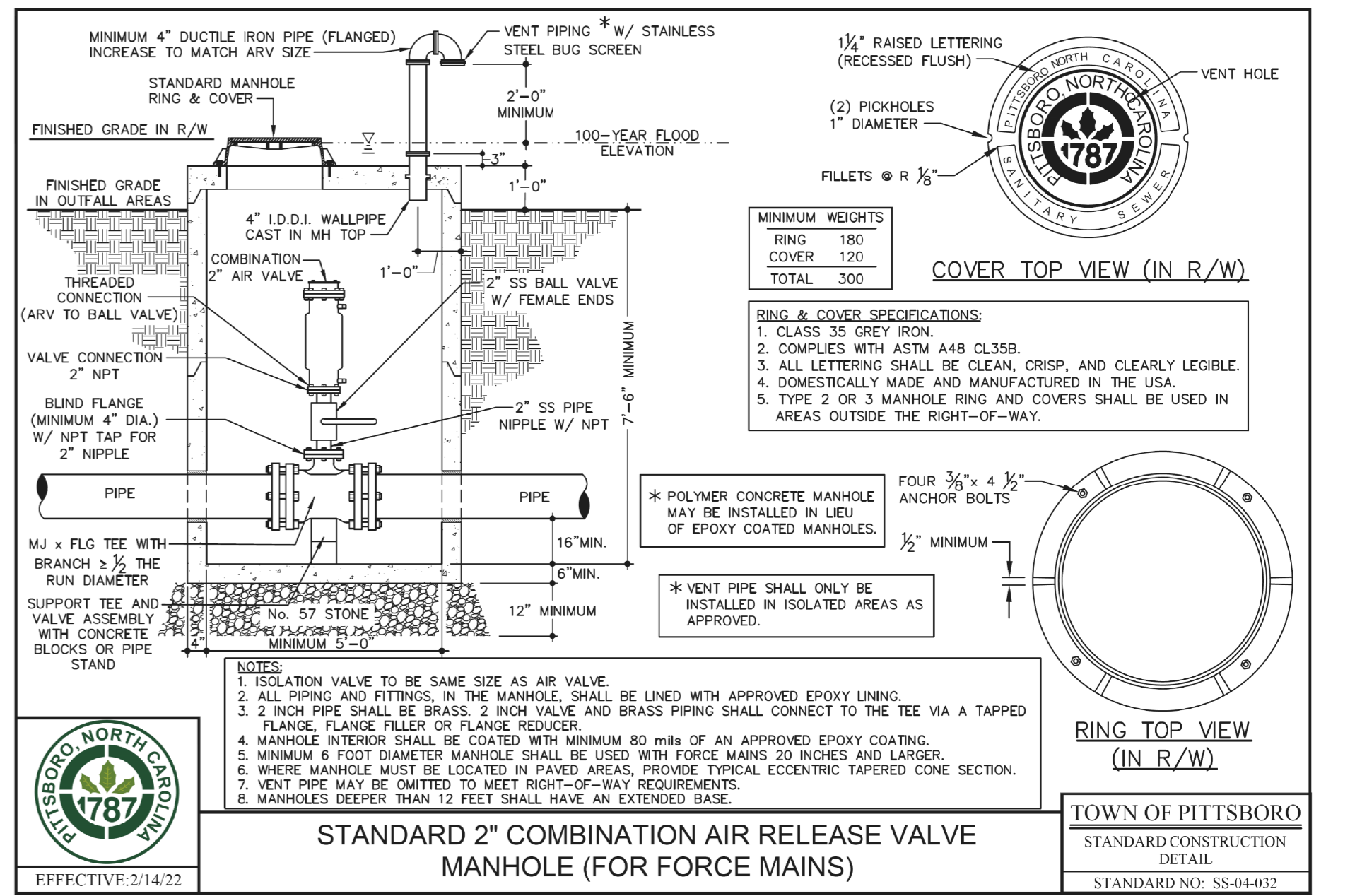
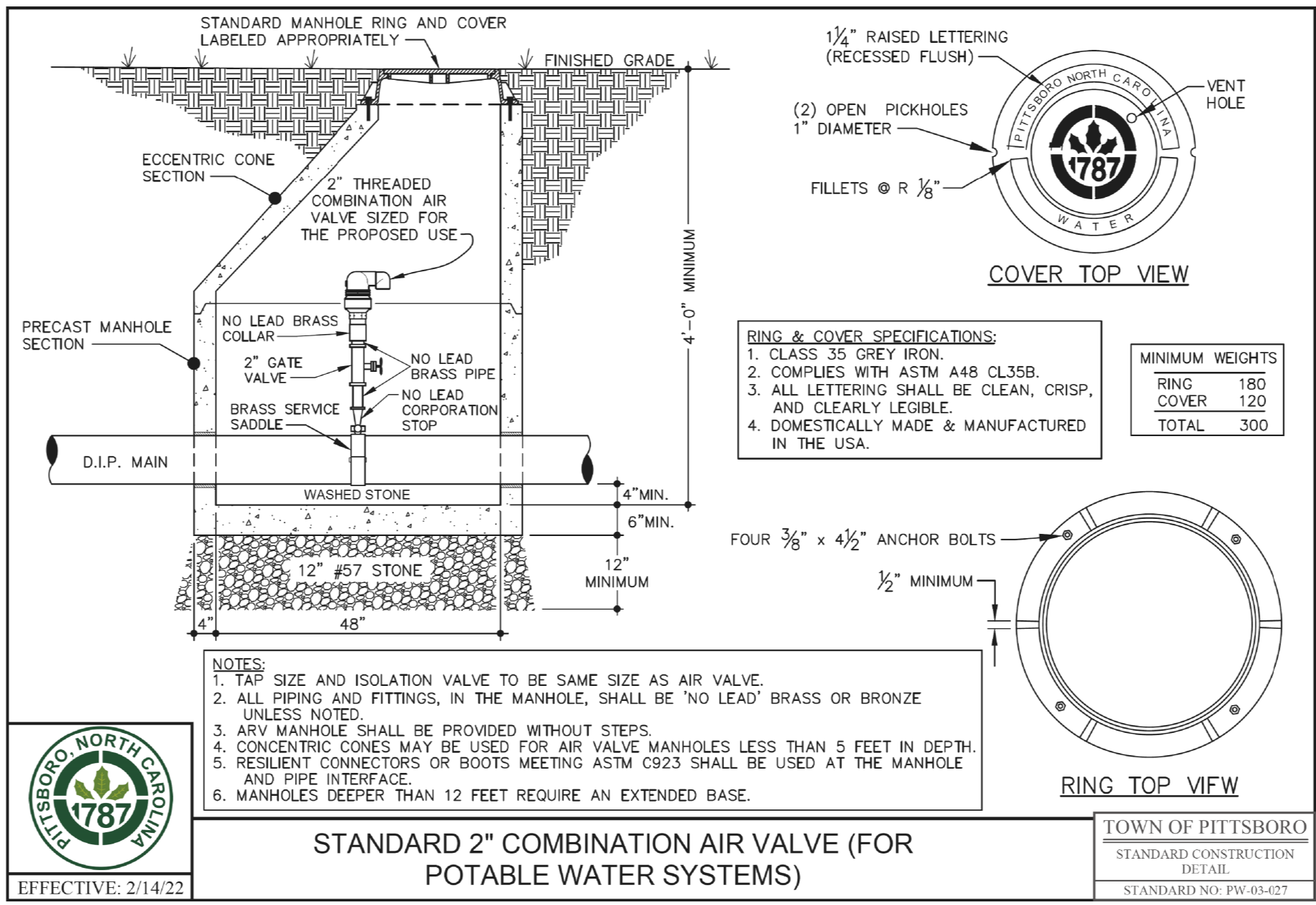
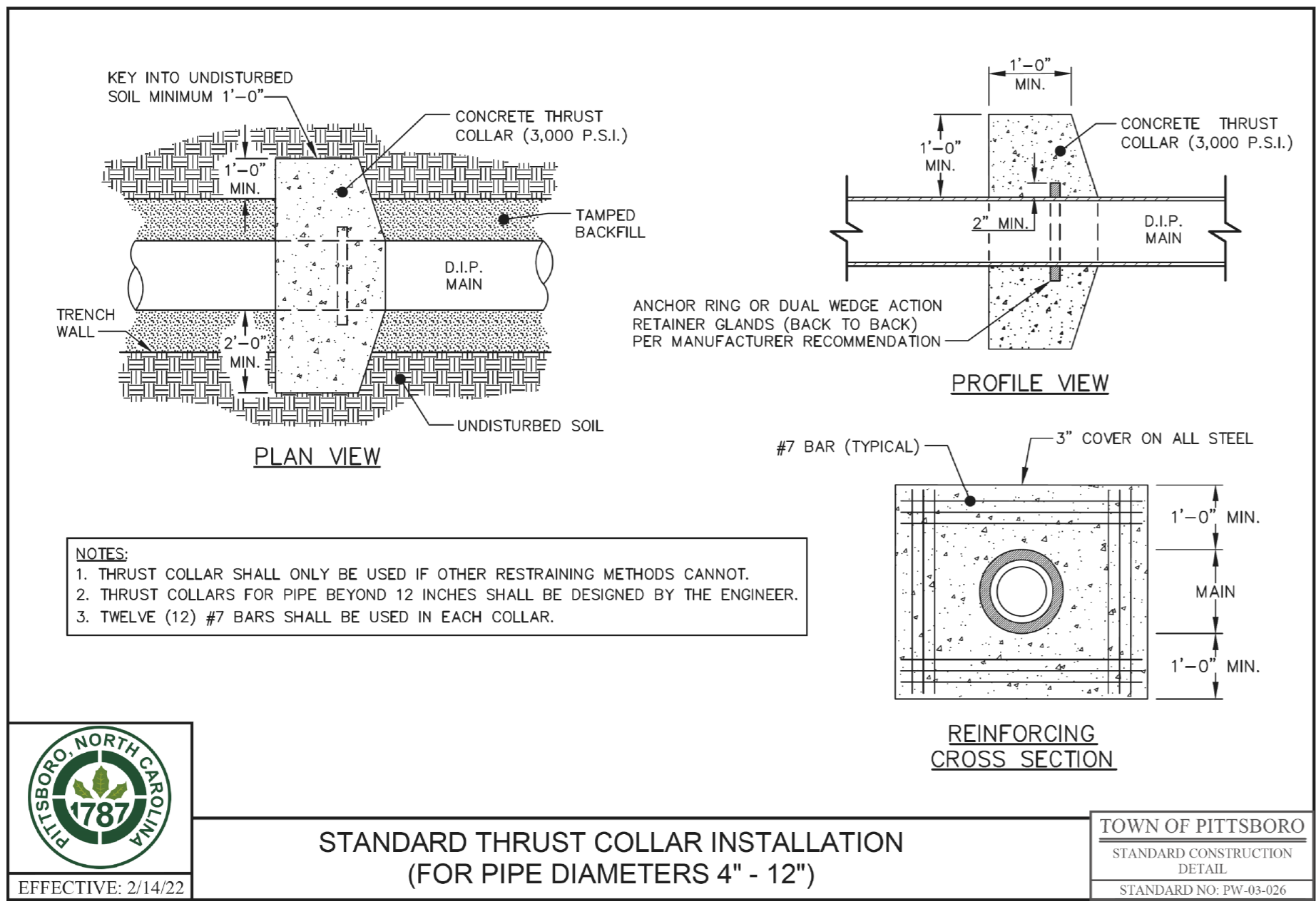
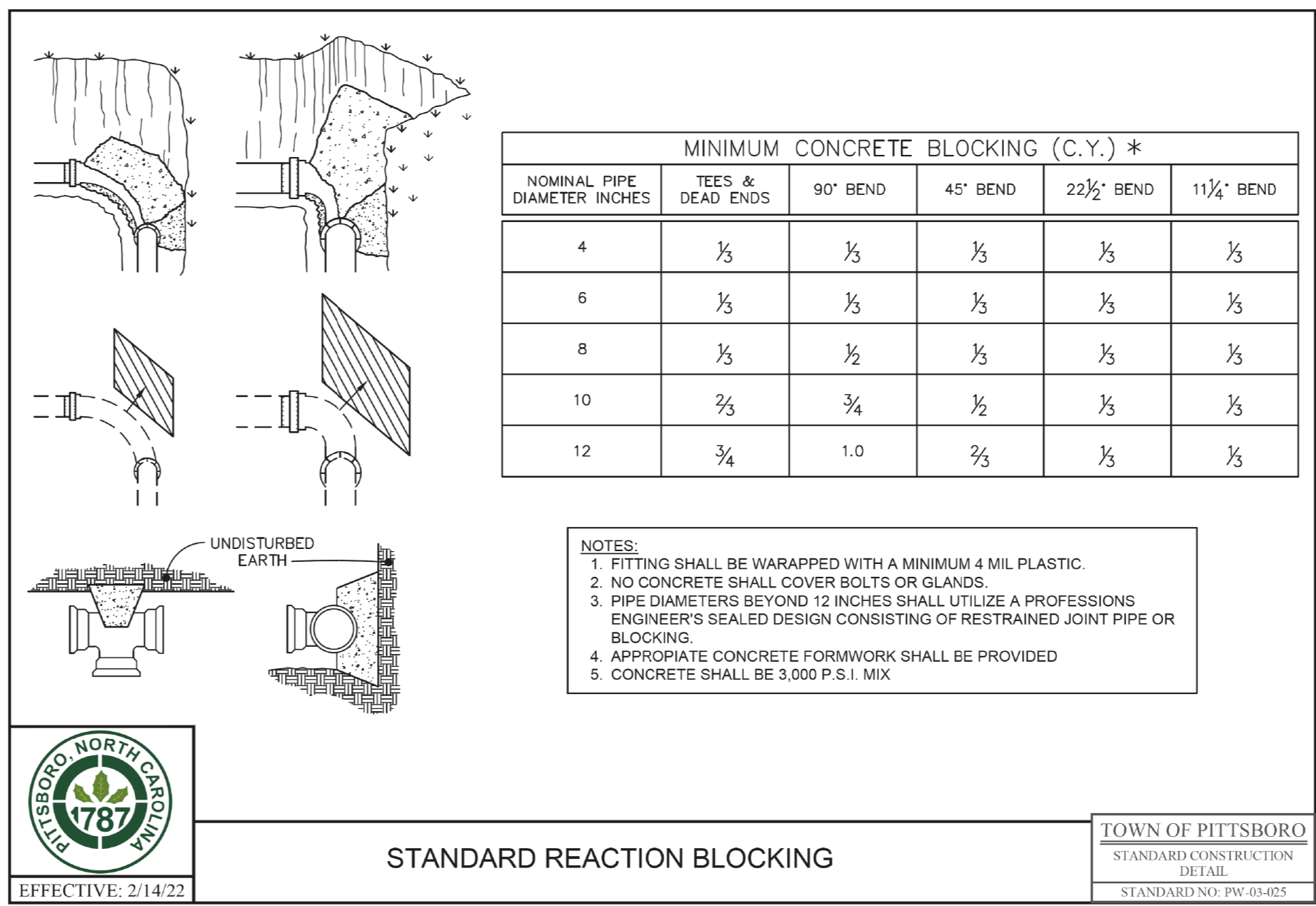
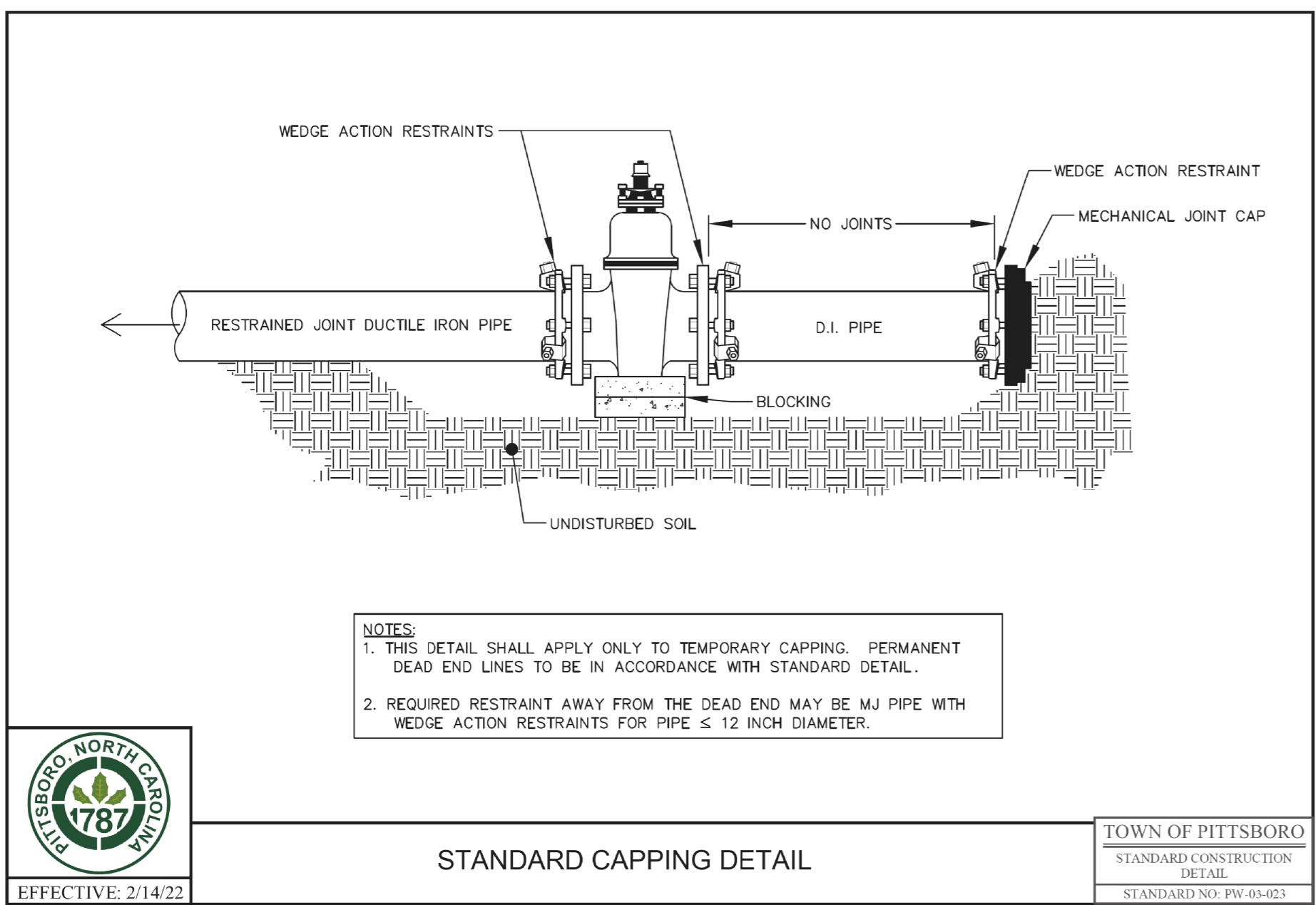
TOWN OF PITTSBORO  
STANDARD CONSTRUCTION  
DETAIL  
STANDARD NO: PW-03-022  
EFFECTIVE: 2/14/22

# Kimley»Horn

300 MORRIS STREET, SUITE 200  
DURHAM, NC 27701

PROJECT REFERENCE NO.	SHEET NO.
<b>R-5930A</b>	<b>UC-3B</b>
DESIGNED BY: <b>NLH</b>	
DRAWN BY: <b>JNB</b>	
CHECKED BY: <b>NDR</b>	
APPROVED BY: <b>NLH</b>	
REVISED:	UTILITY CONSTRUCTION PLANS ONLY
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

## UTILITY CONSTRUCTION

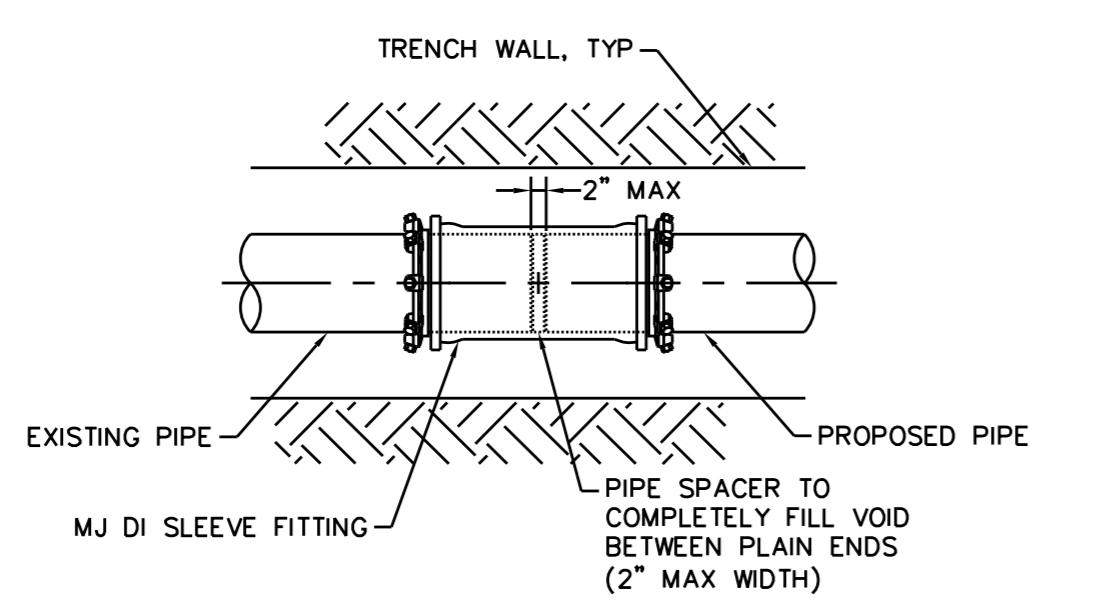
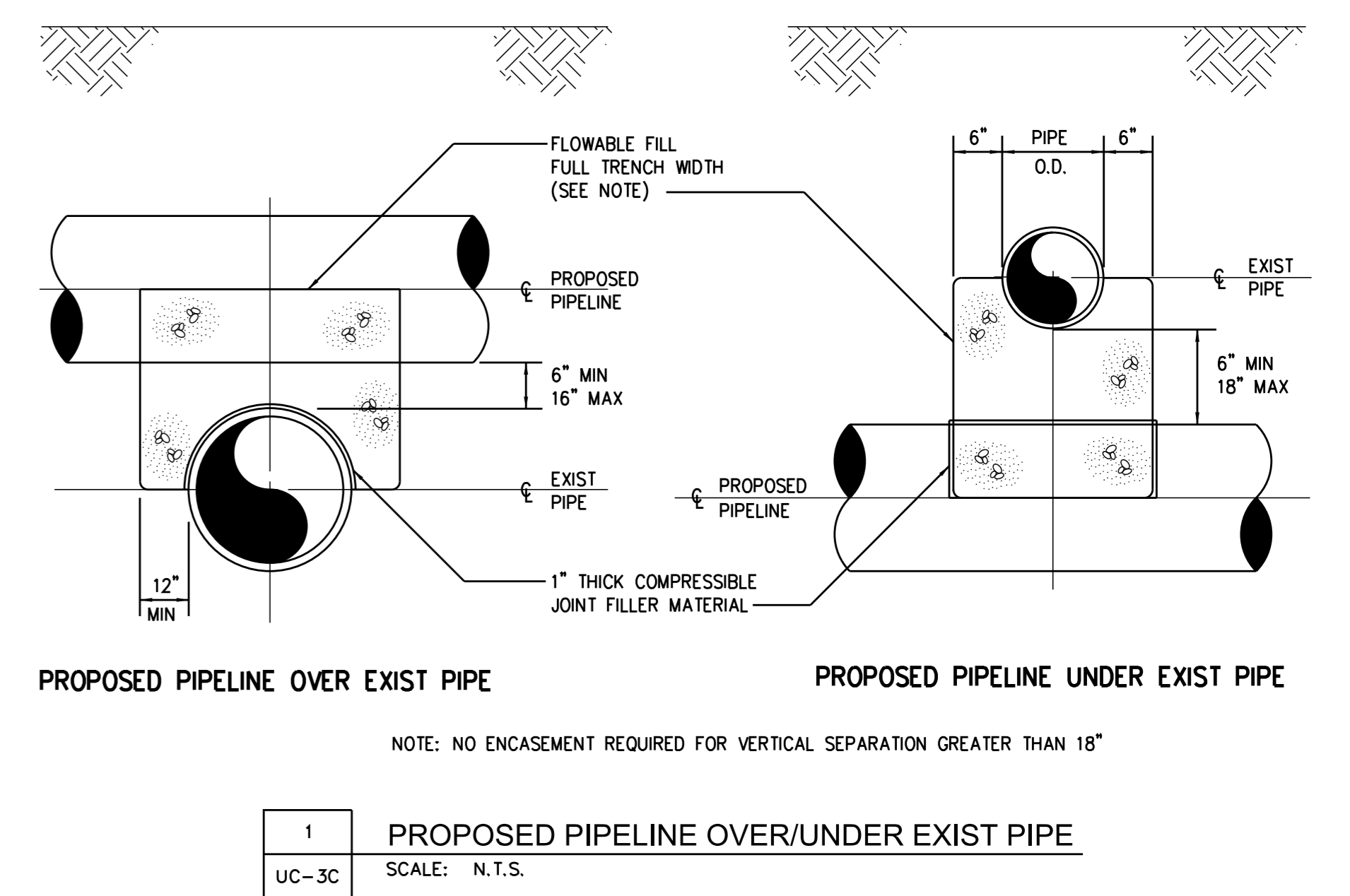
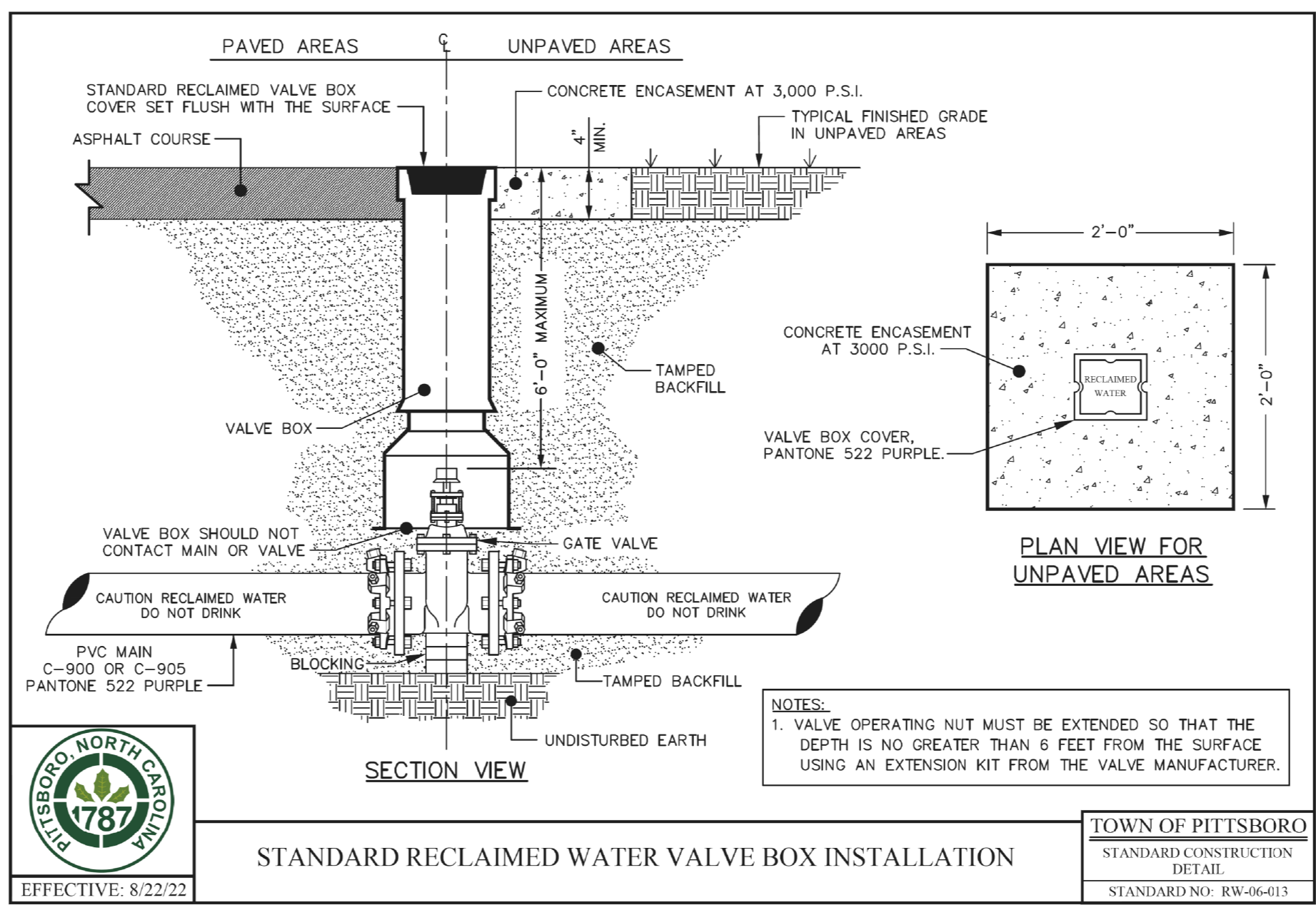
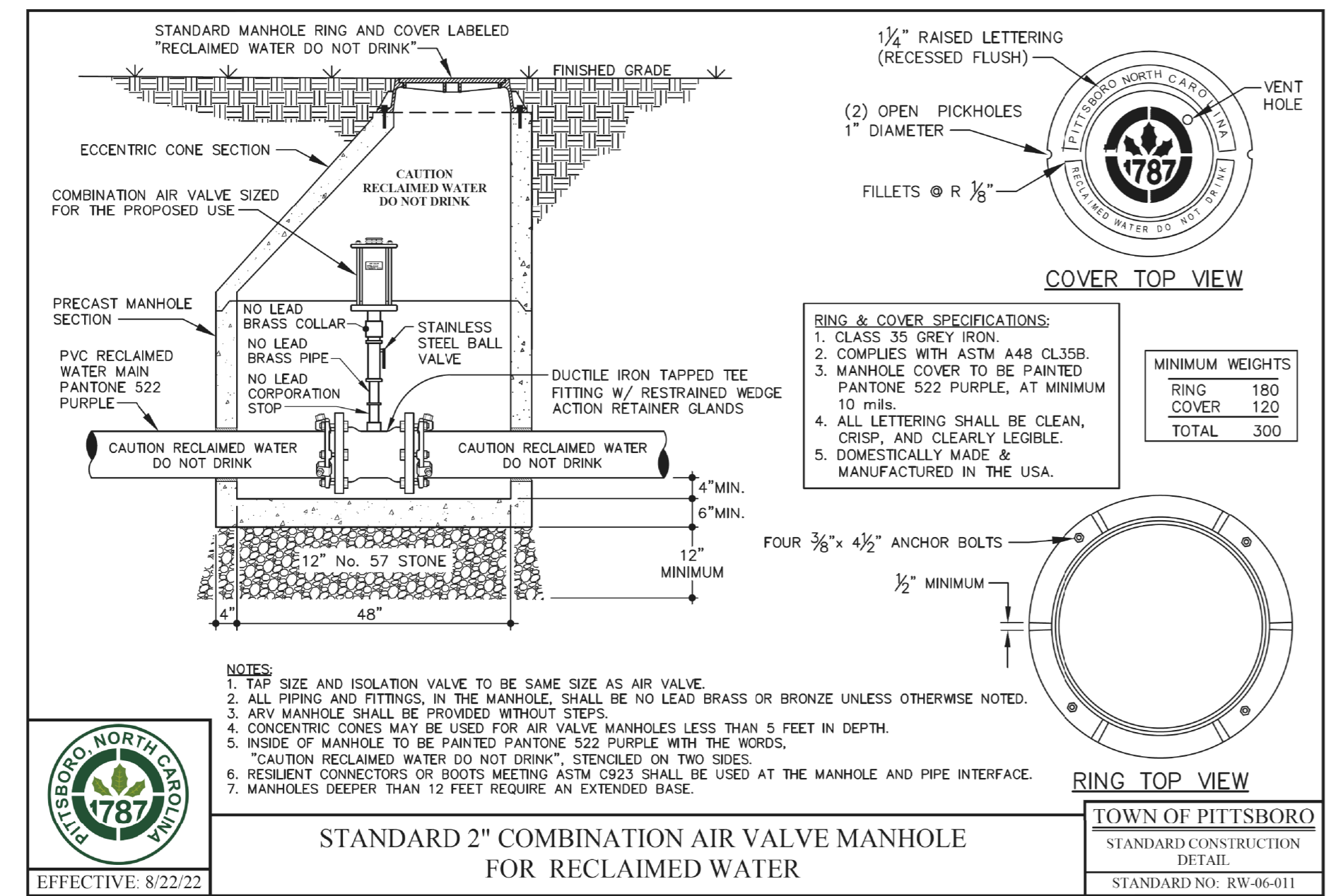
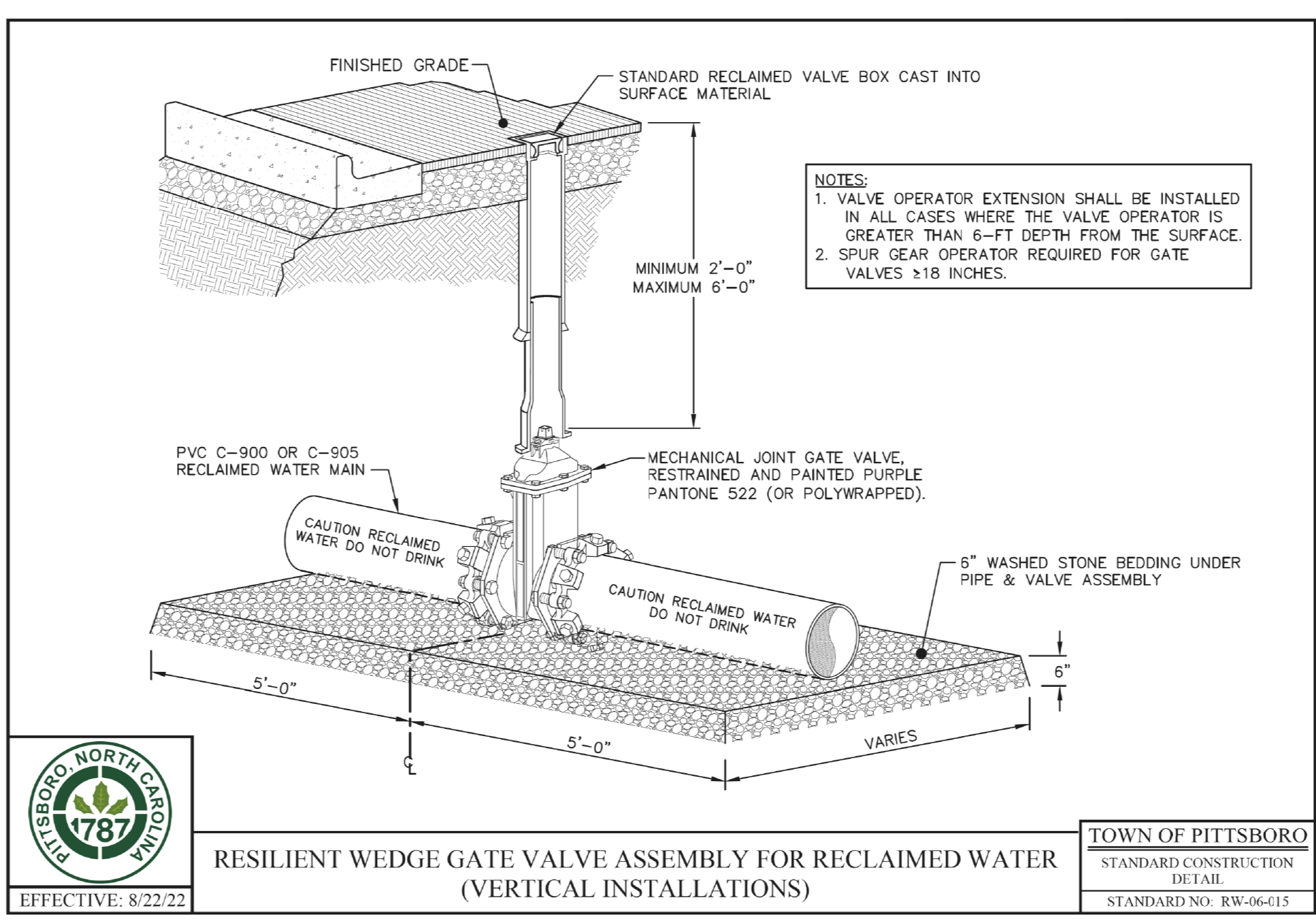
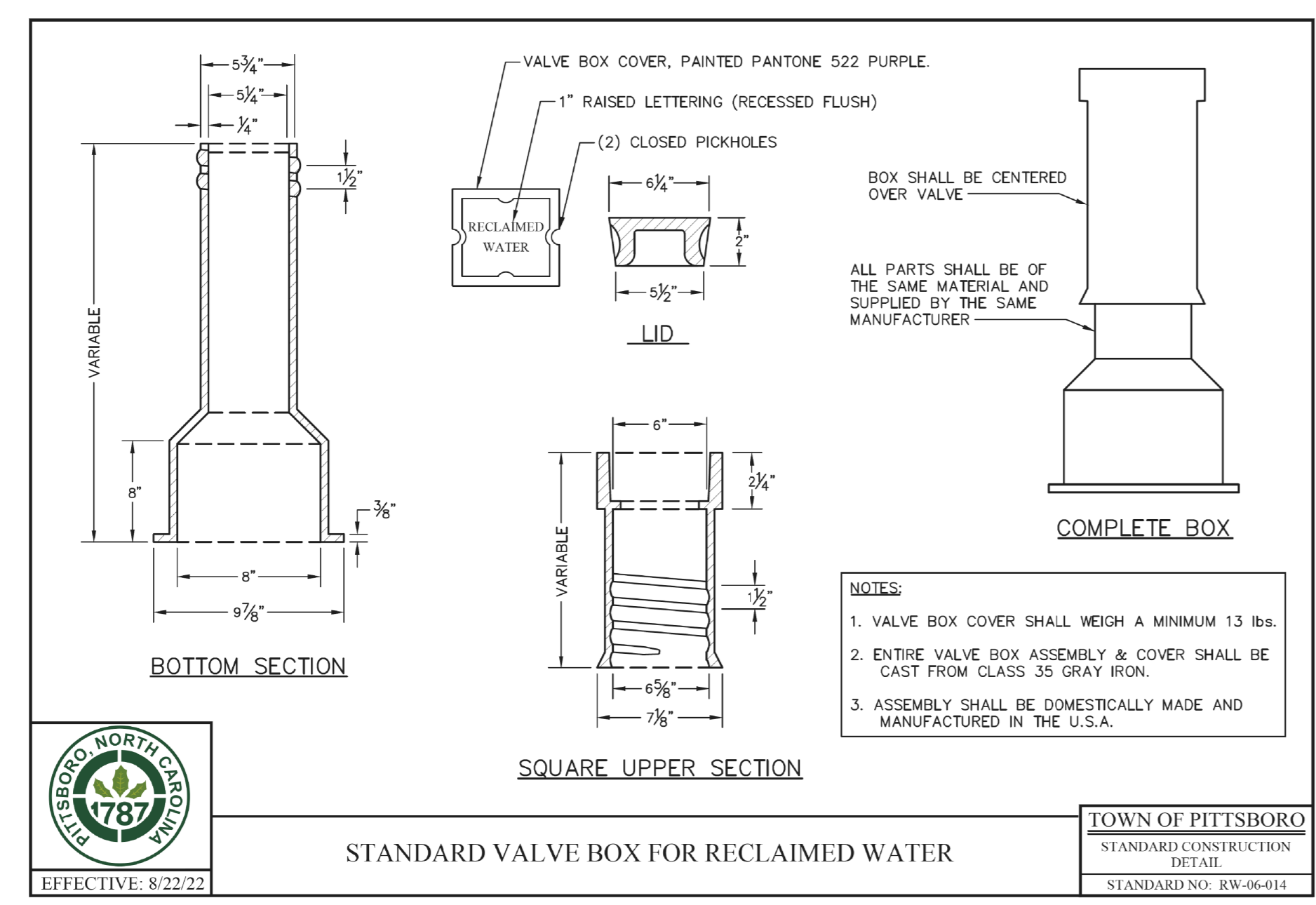


# Kimley»Horn

300 MORRIS STREET, SUITE 200  
DURHAM, NC 27701

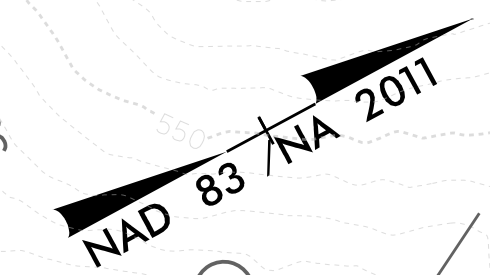
PROJECT REFERENCE NO.	SHEET NO.
R-5930A	UC-3C
DESIGNED BY: NLH	
DRAWN BY: JNB	
CHECKED BY: NDR	
APPROVED BY: NLH	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

## UTILITY CONSTRUCTION



**2** RESTRAINED MJ SOLID SLEEVE  
**UC-3C** SCALE: N.T.S.

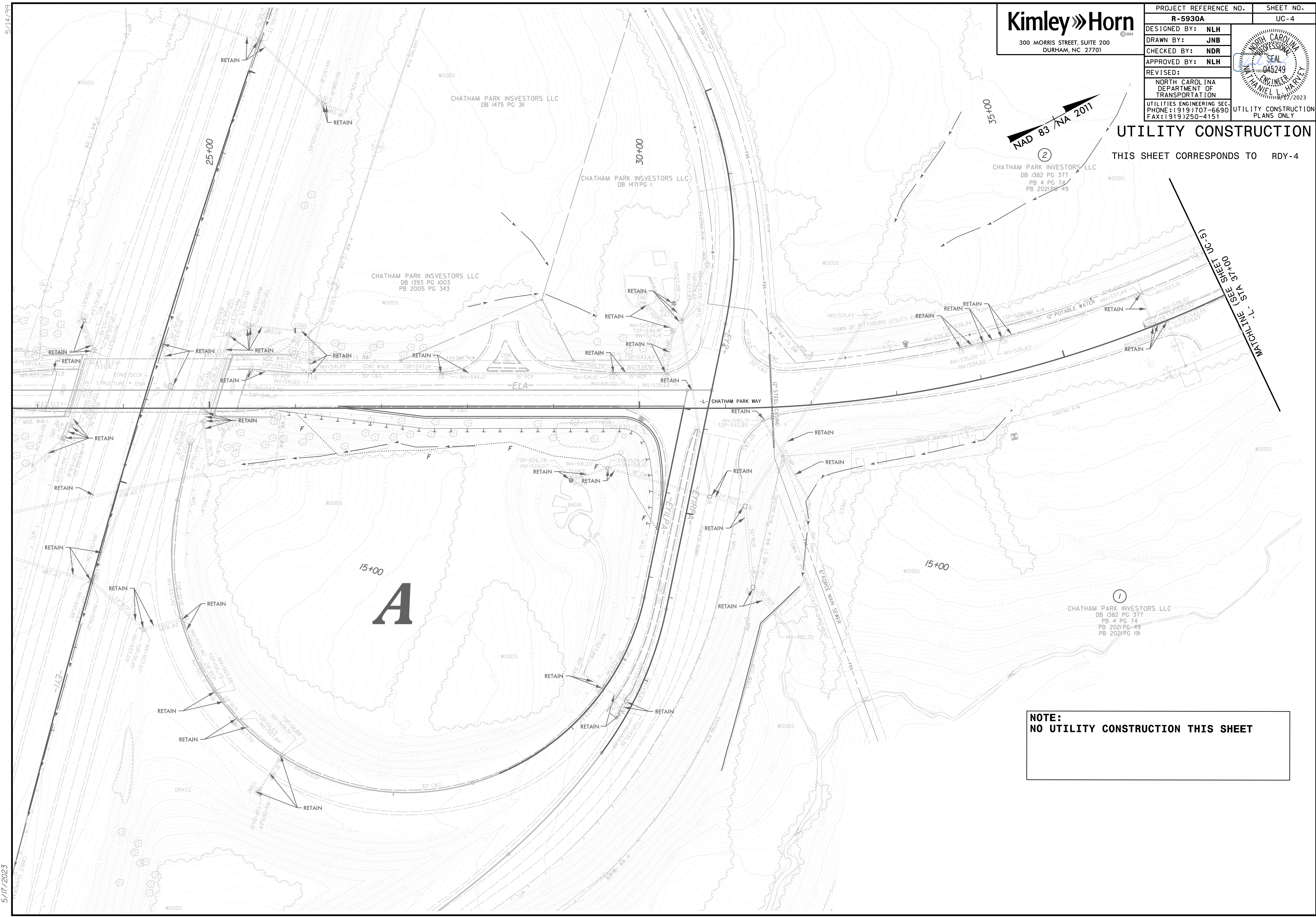
PROJECT REFERENCE NO. <b>R-5930A</b>	SHEET NO. <b>UC-4</b>
DESIGNED BY: <b>NLH</b>	
DRAWN BY: <b>JNB</b>	
CHECKED BY: <b>NDR</b>	
APPROVED BY: <b>NLH</b>	
REVISED:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151
UTILITY CONSTRUCTION PLANS ONLY	



**UTILITY CONSTRUCTION**

THIS SHEET CORRESPONDS TO RDY-4

MATCHLINE - L. STA 37+00 (SEE SHEET UC-3)



**A**

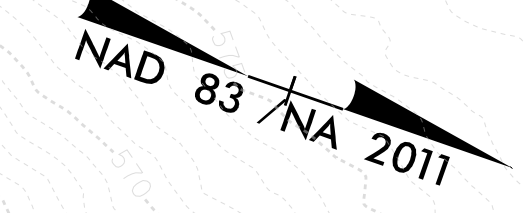
**NOTE:**  
 NO UTILITY CONSTRUCTION THIS SHEET

5/14/2023

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.

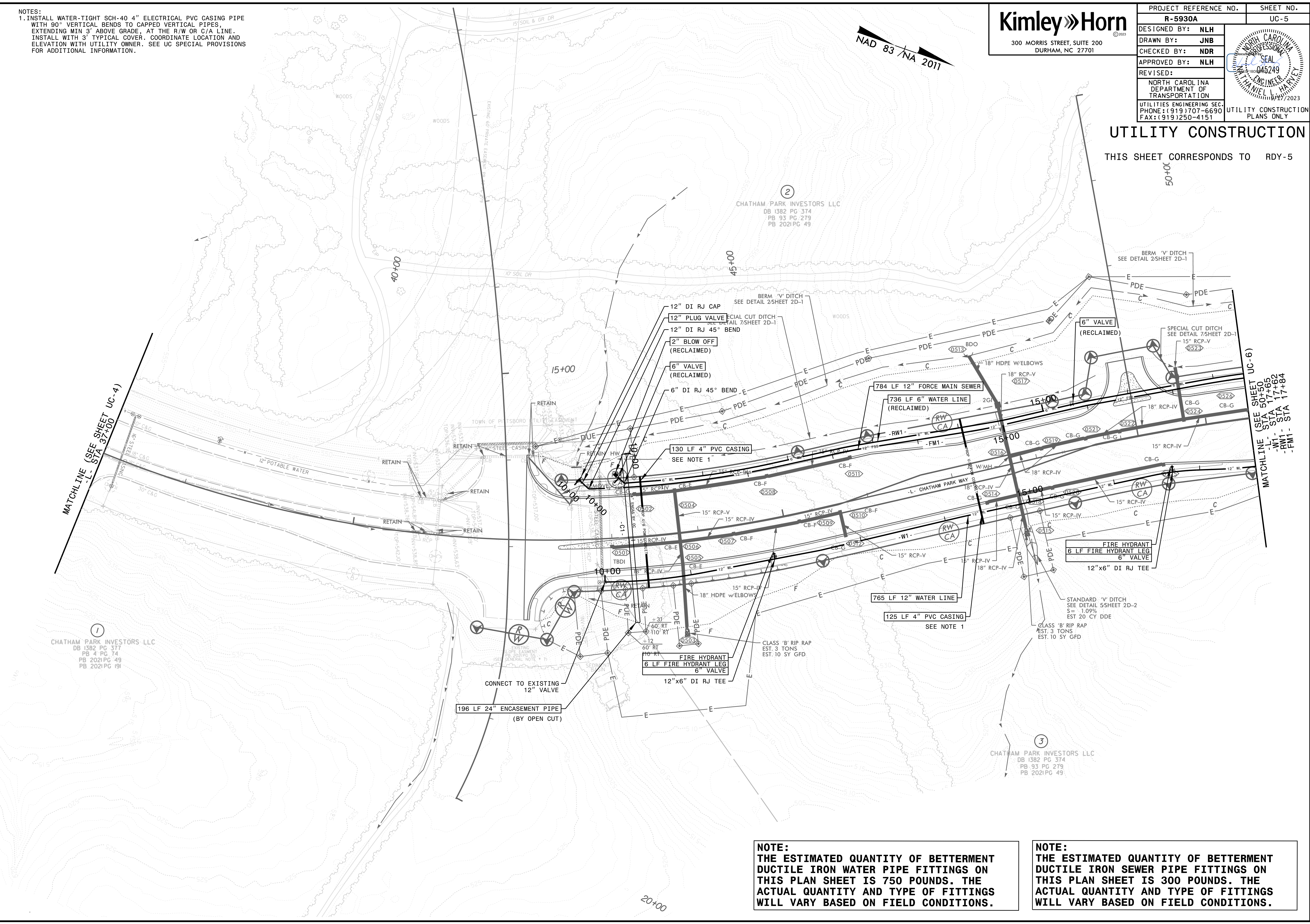
**Kimley»Horn**  
 300 MORRIS STREET, SUITE 200  
 DURHAM, NC 27701

PROJECT REFERENCE NO.	SHEET NO.
R-5930A	UC-5
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**

THIS SHEET CORRESPONDS TO RDY-5



MATCHLINE (SEE SHEET UC-4)  
 -L- STA 37+00

MATCHLINE (SEE SHEET UC-6)  
 -L- STA 17+65  
 -W1- STA 17+84  
 -FM1- STA 17+84

CHATHAM PARK INVESTORS LLC  
 DB 1382 PG 377  
 PB 4 PG 74  
 PB 2021 PG 49  
 PB 2021 PG 191

CHATHAM PARK INVESTORS LLC  
 DB 1382 PG 374  
 PB 93 PG 279  
 PB 2021 PG 49

**NOTE:**  
 THE ESTIMATED QUANTITY OF BETTERMENT DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 750 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

**NOTE:**  
 THE ESTIMATED QUANTITY OF BETTERMENT DUCTILE IRON SEWER PIPE FITTINGS ON THIS PLAN SHEET IS 300 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

5/17/2023

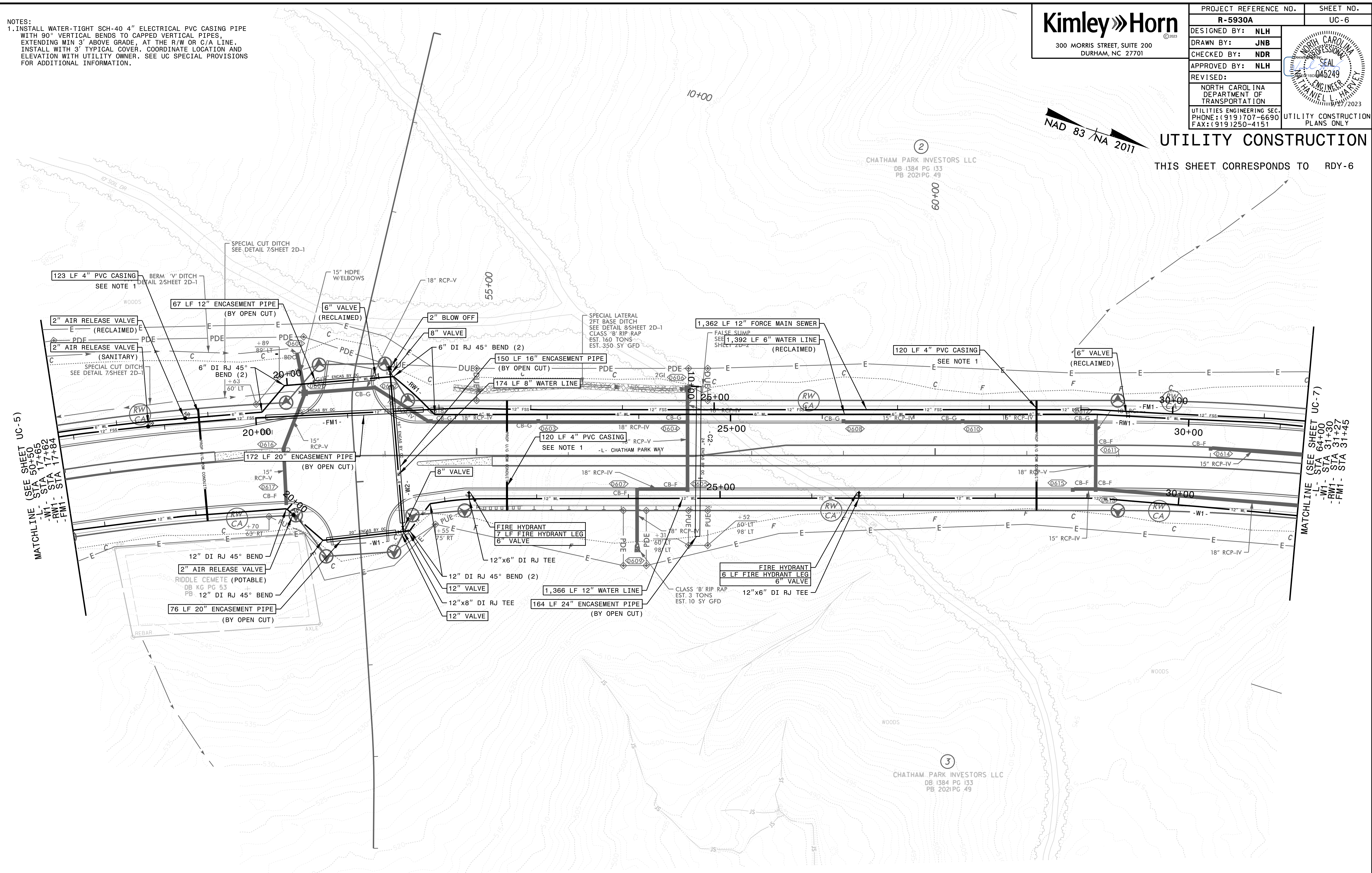
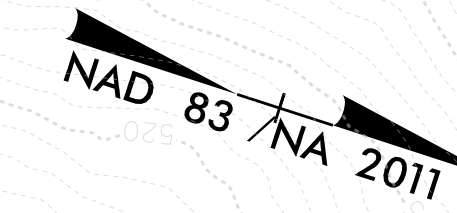


NOTES:  
 1. INSTALL WATER-TIGHT SCH-40 4" ELECTRICAL PVC CASING PIPE WITH 90° VERTICAL BENDS TO CAPPED VERTICAL PIPES, EXTENDING MIN 3' ABOVE GRADE, AT THE R/W OR C/A LINE. INSTALL WITH 3' TYPICAL COVER, COORDINATE LOCATION AND ELEVATION WITH UTILITY OWNER. SEE UC SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

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

PROJECT REFERENCE NO.	R-5930A	SHEET NO.	UC-6
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  
 THIS SHEET CORRESPONDS TO RDY-6



MATCHLINE (SEE SHEET UC-5)  
 -L- STA 50+00  
 -W1- STA 17+62  
 -FM1- STA 17+84

MATCHLINE (SEE SHEET UC-7)  
 -L- STA 64+00  
 -W1- STA 31+30  
 -FM1- STA 31+27  
 -FM1- STA 31+45


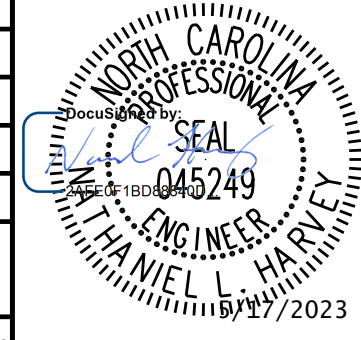
**NOTE:**  
 THE ESTIMATED QUANTITY OF BETTERMENT DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 2,195 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

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



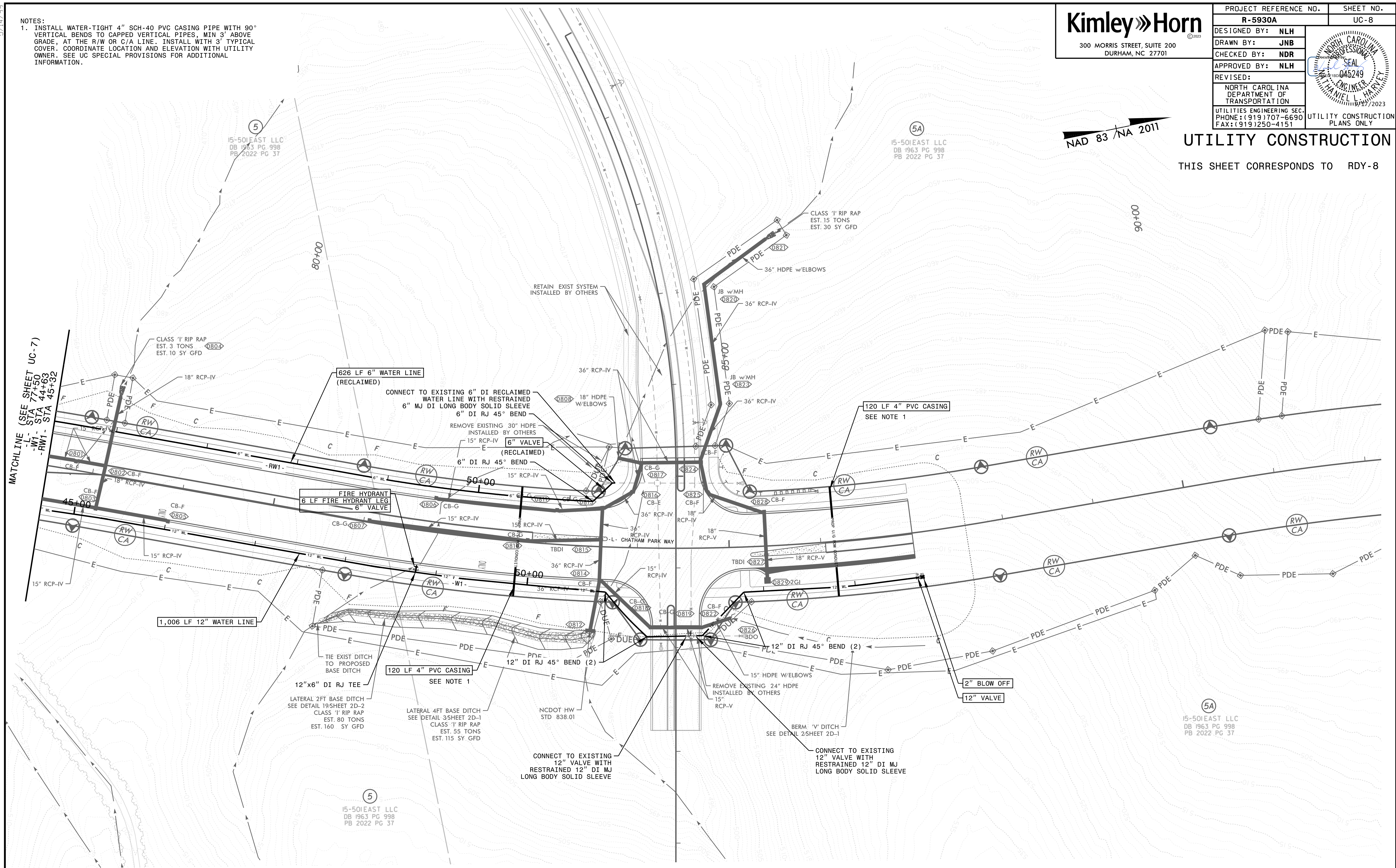
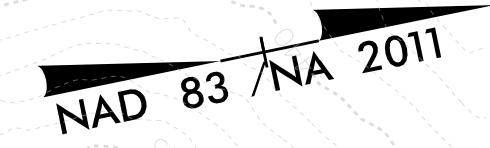
5/14/2023

NOTES:  
 1. INSTALL WATER-TIGHT 4" SCH-40 PVC CASING PIPE WITH 90° VERTICAL BENDS TO CAPPED VERTICAL PIPES, 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.

PROJECT REFERENCE NO. <b>R-5930A</b>		SHEET NO. <b>UC-8</b>
		
300 MORRIS STREET, SUITE 200 DURHAM, NC 27701		
DESIGNED BY: <b>NLH</b>		
DRAWN BY: <b>JNB</b>		
CHECKED BY: <b>NDR</b>		
APPROVED BY: <b>NLH</b>		
REVISED:		
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151		
UTILITY CONSTRUCTION PLANS ONLY		

# UTILITY CONSTRUCTION

THIS SHEET CORRESPONDS TO RDY-8



**NOTE:**  
 THE ESTIMATED QUANTITY OF BETTERMENT DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 1,630 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

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

5/17/2023

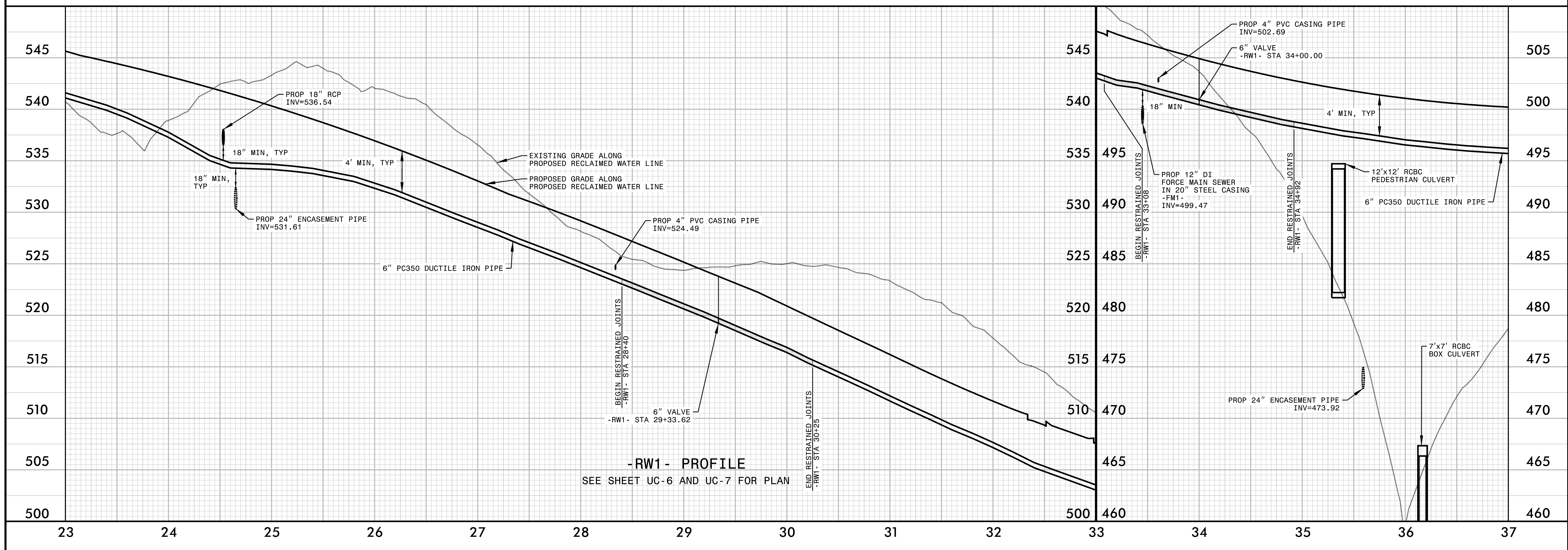
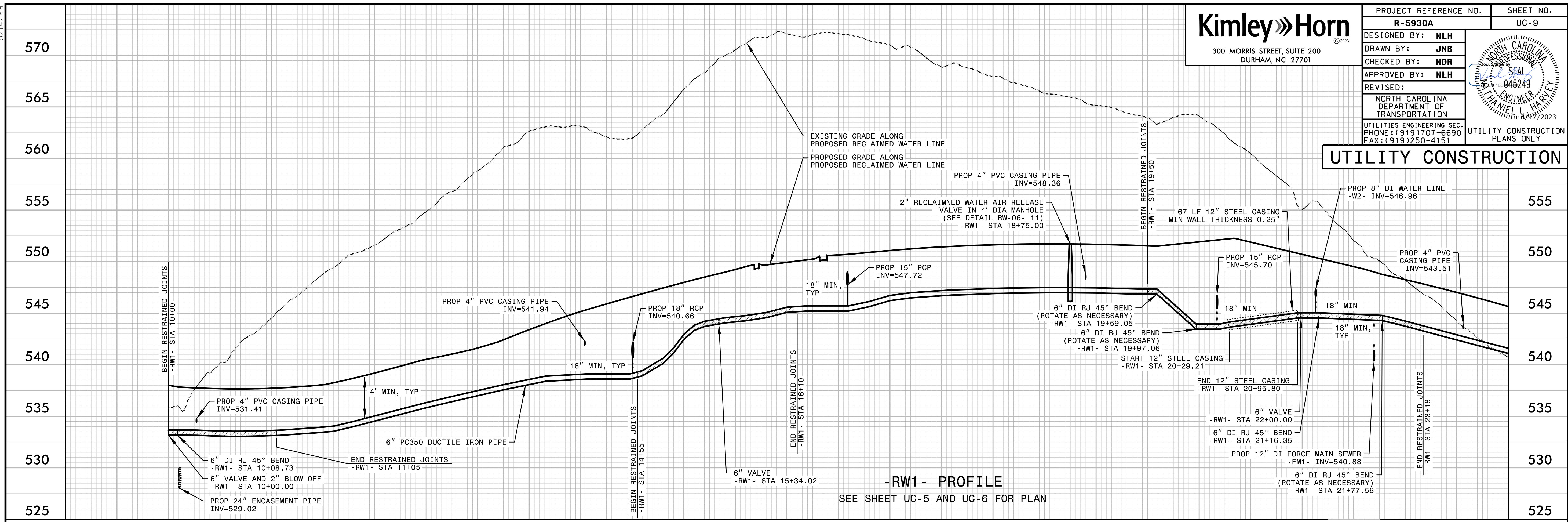
5/14/2023



300 MORRIS STREET, SUITE 200  
DURHAM, NC 27701

PROJECT REFERENCE NO. <b>R-5930A</b>	SHEET NO. UC-9
DESIGNED BY: <b>NLH</b>	
DRAWN BY: <b>JNB</b>	
CHECKED BY: <b>NDR</b>	
APPROVED BY: <b>NLH</b>	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

### UTILITY CONSTRUCTION



5/17/2023

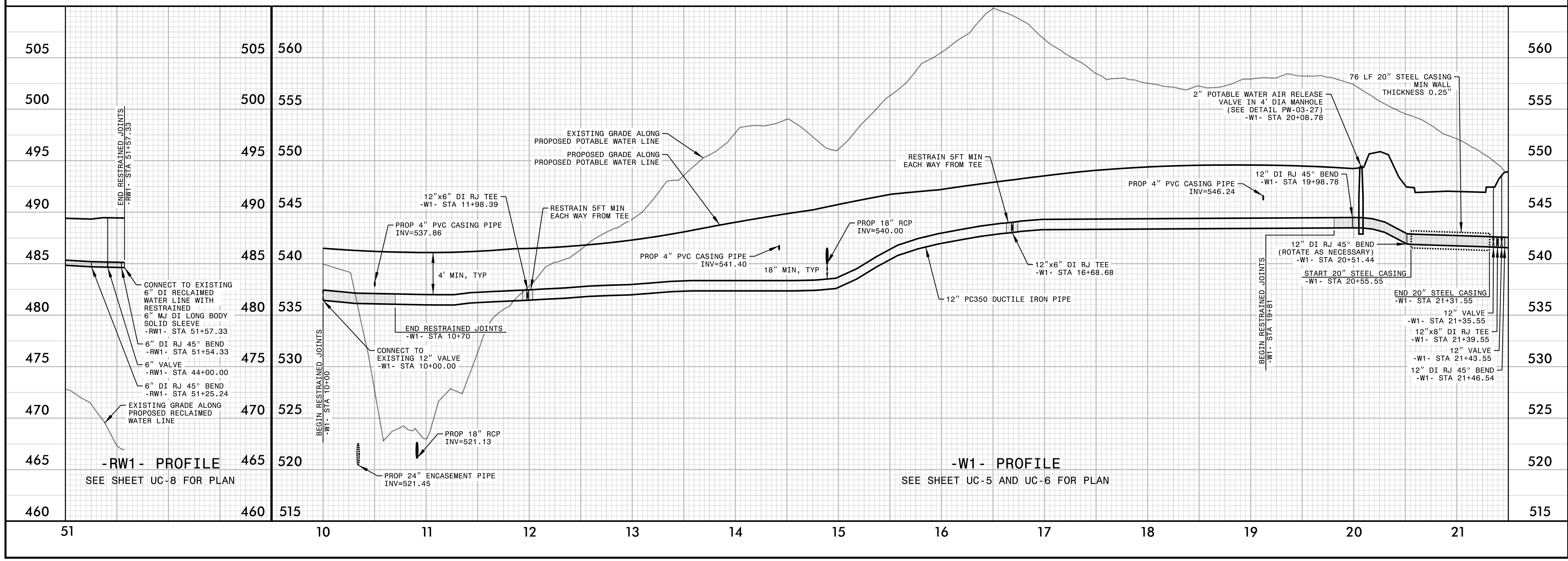
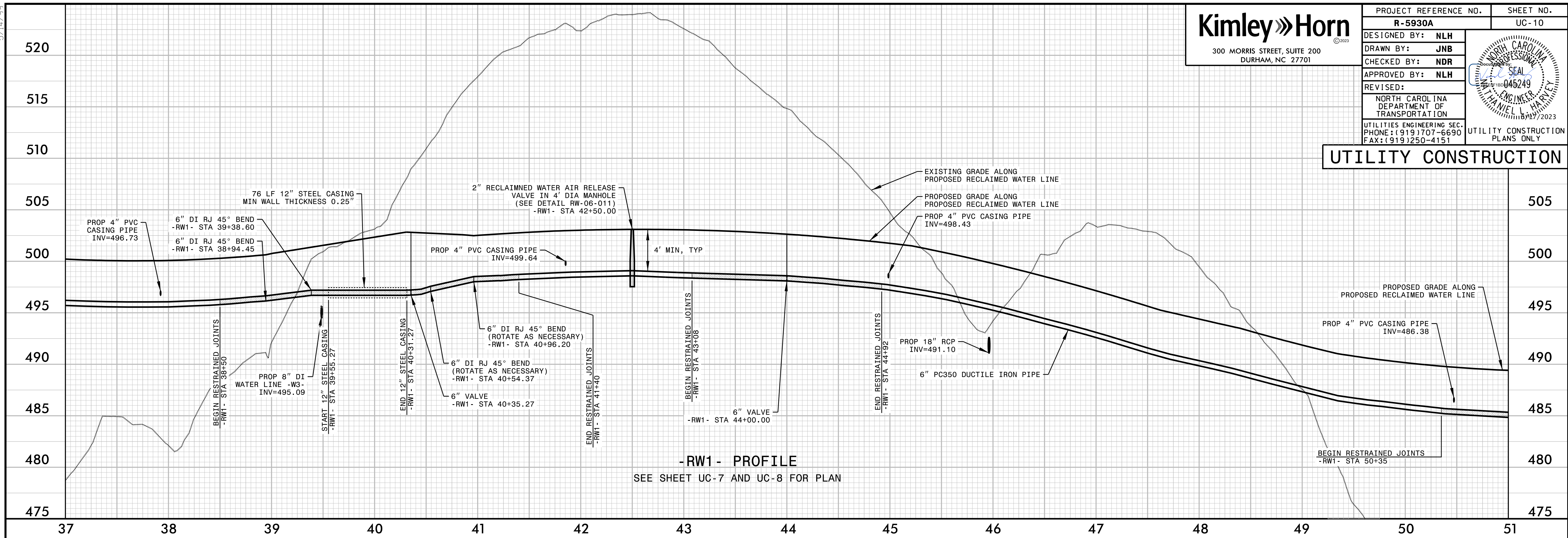
5/14/2023



300 MORRIS STREET, SUITE 200  
DURHAM, NC 27701

PROJECT REFERENCE NO. <b>R-5930A</b>	SHEET NO. UC-10
DESIGNED BY: <b>NLH</b>	
DRAWN BY: <b>JNB</b>	
CHECKED BY: <b>NDR</b>	
APPROVED BY: <b>NLH</b>	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

### UTILITY CONSTRUCTION



5/17/2023

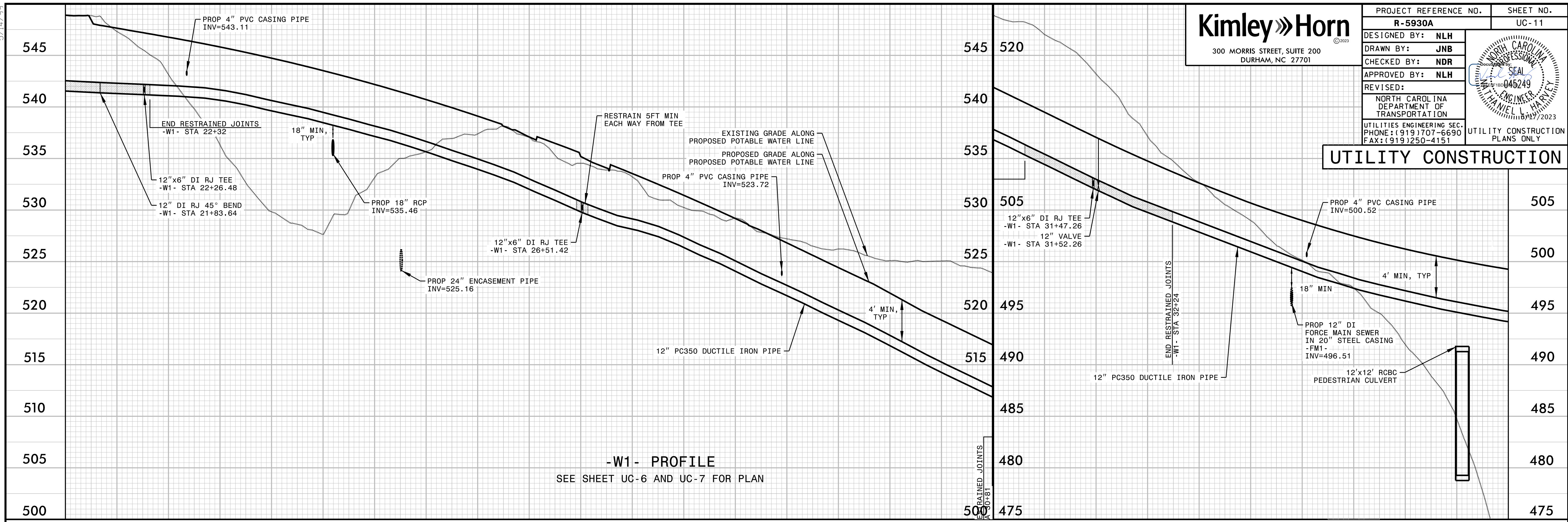
5/14/2023



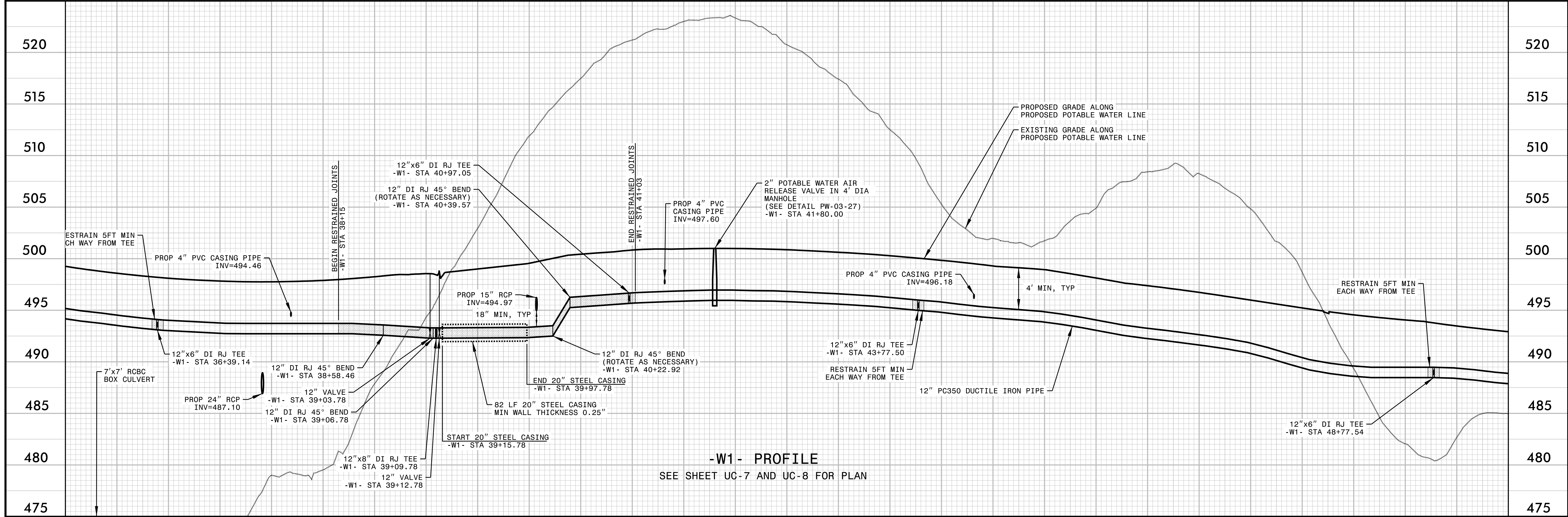
300 MORRIS STREET, SUITE 200  
DURHAM, NC 27701

PROJECT REFERENCE NO. <b>R-5930A</b>	SHEET NO. UC-11
DESIGNED BY: <b>NLH</b>	
DRAWN BY: <b>JNB</b>	
CHECKED BY: <b>NDR</b>	
APPROVED BY: <b>NLH</b>	
REVISED:	UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITY CONSTRUCTION PLANS ONLY	

### UTILITY CONSTRUCTION



22 23 24 25 26 27 28 29 30 31 32 33 34 35



36 37 38 39 40 41 42 43 44 45 46 47 48 49

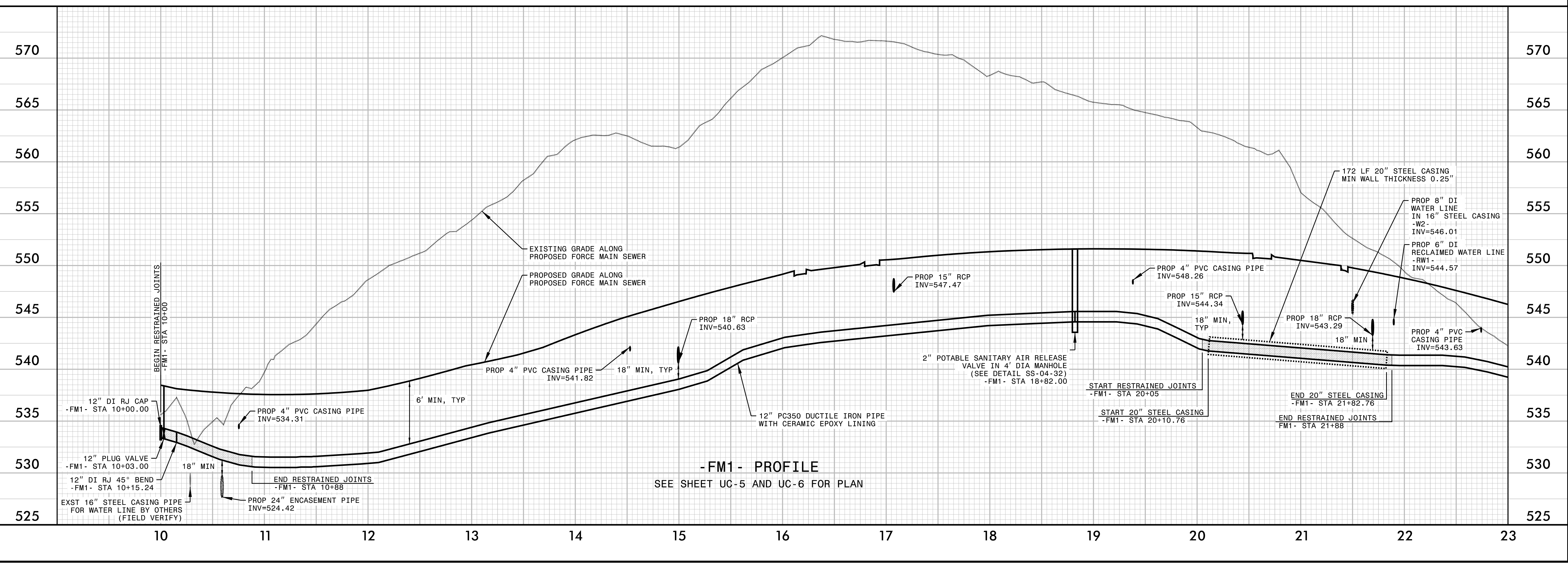
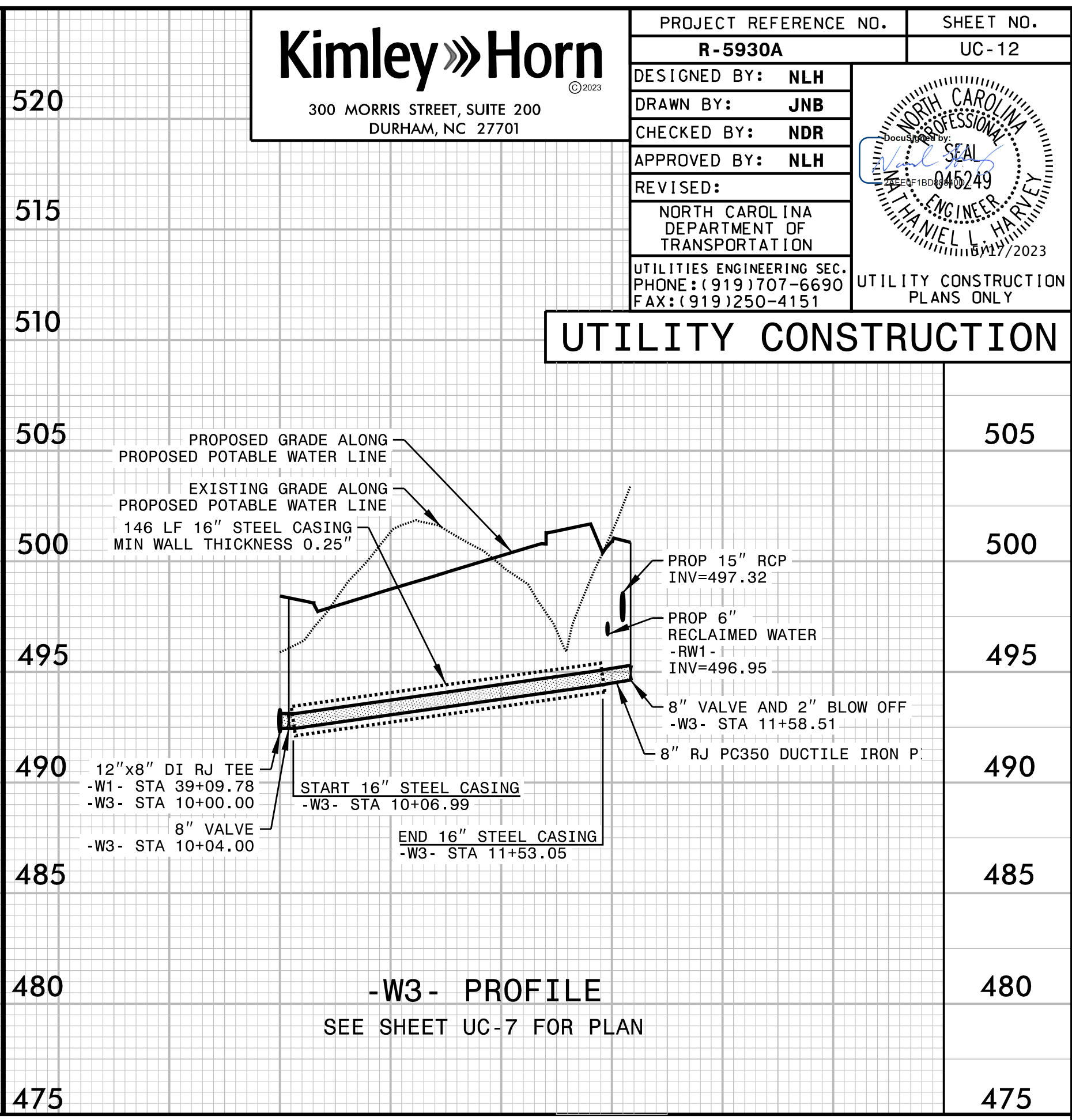
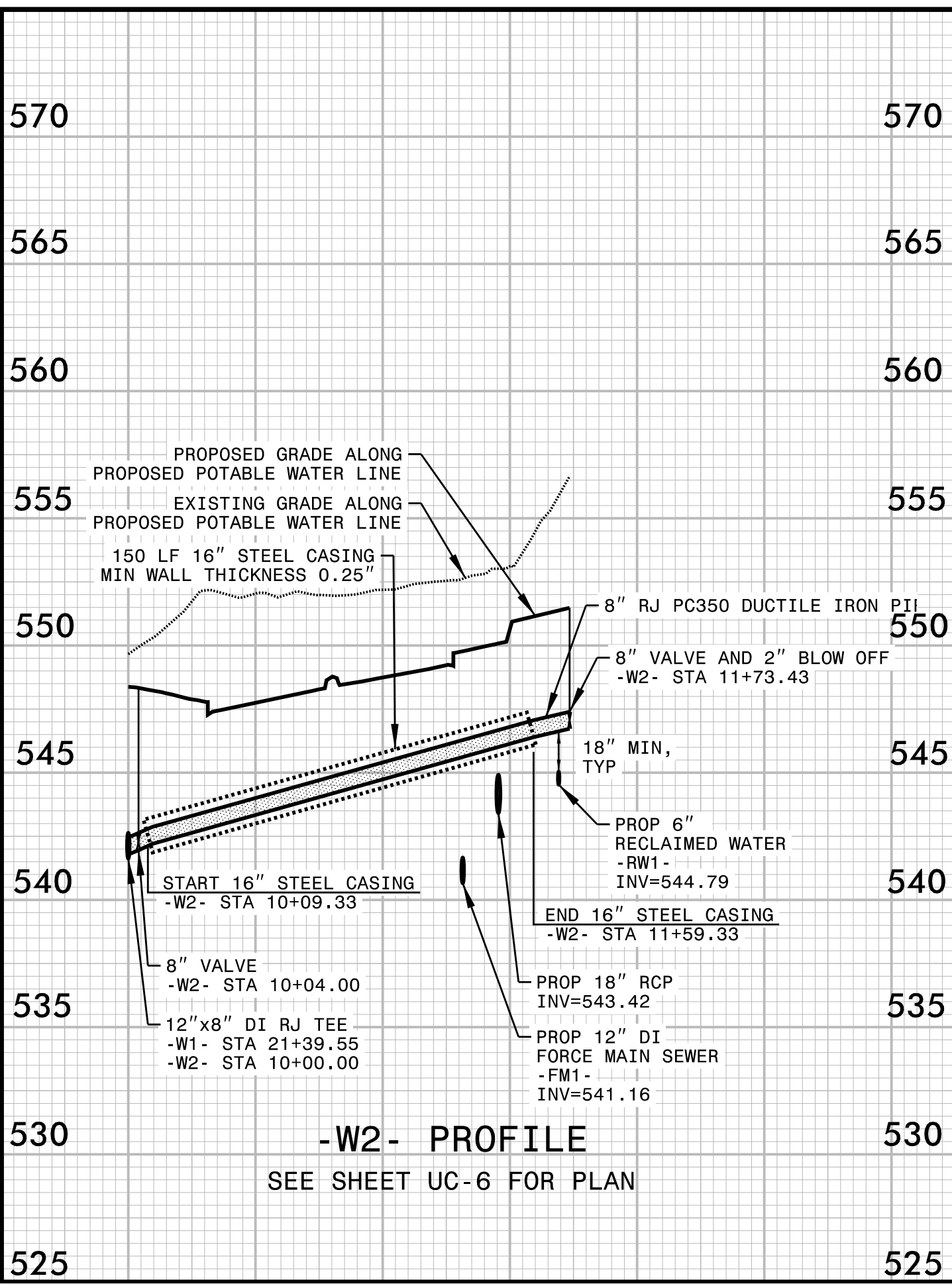
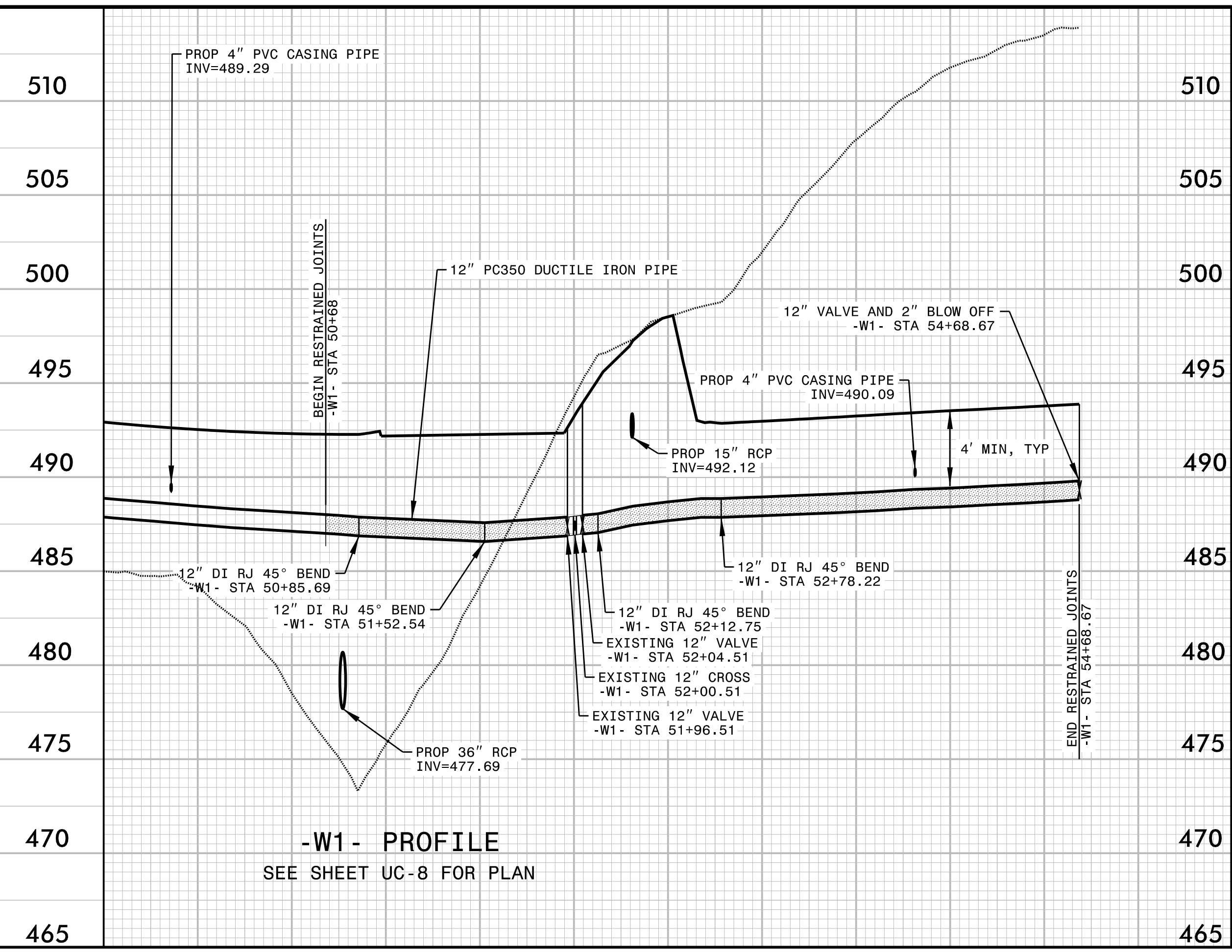
5/17/2023

5/14/2023

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

PROJECT REFERENCE NO. <b>R-5930A</b>	SHEET NO. UC-12
DESIGNED BY: <b>NLH</b>	
DRAWN BY: <b>JNB</b>	
CHECKED BY: <b>NDR</b>	
APPROVED BY: <b>NLH</b>	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

### UTILITY CONSTRUCTION



5/17/2023

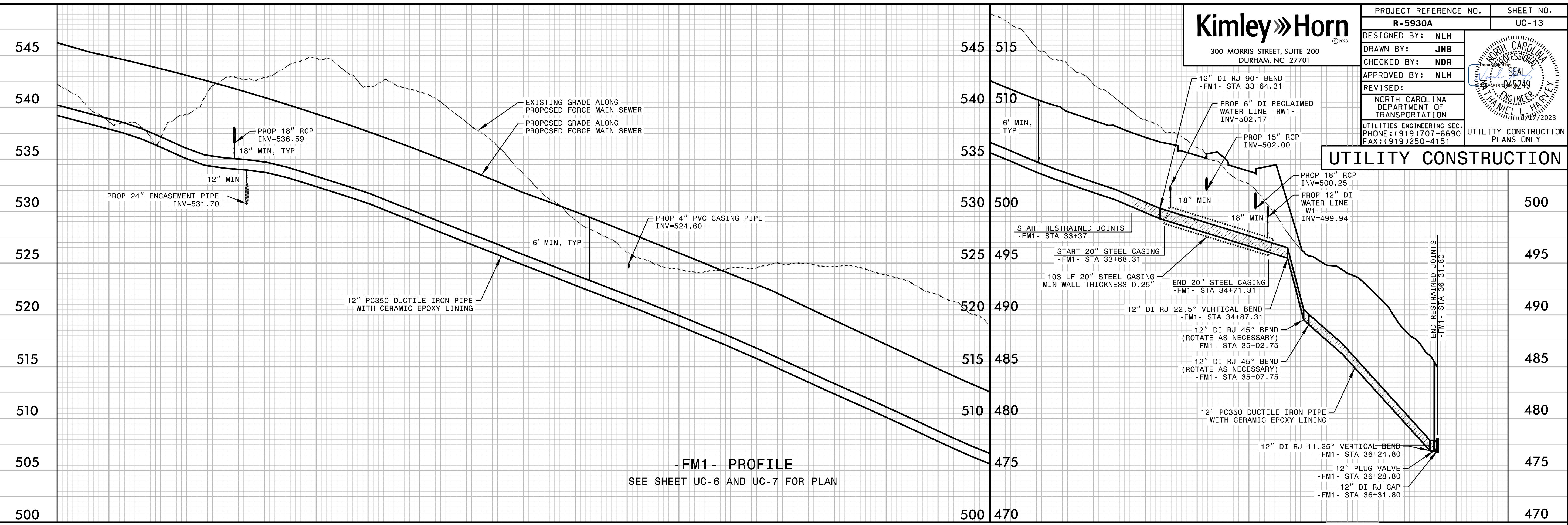
5/14/2023



300 MORRIS STREET, SUITE 200  
DURHAM, NC 27701

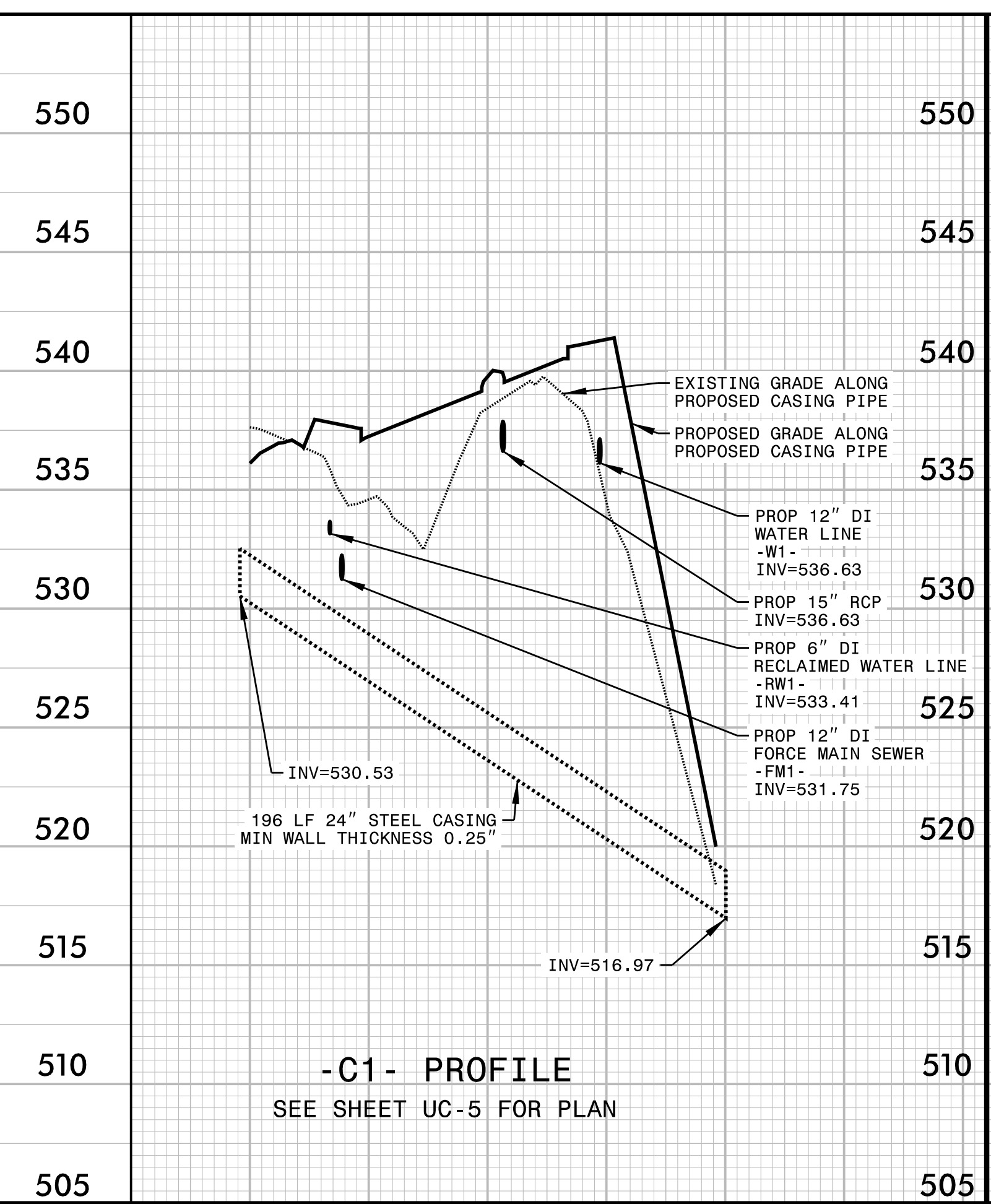
PROJECT REFERENCE NO. <b>R-5930A</b>	SHEET NO. UC-13
DESIGNED BY: <b>NLH</b>	
DRAWN BY: <b>JNB</b>	
CHECKED BY: <b>NDR</b>	
APPROVED BY: <b>NLH</b>	
REVISED:	UTILITY CONSTRUCTION PLANS ONLY
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SECTION PHONE: (919)707-6690 FAX: (919)250-4151	

### UTILITY CONSTRUCTION

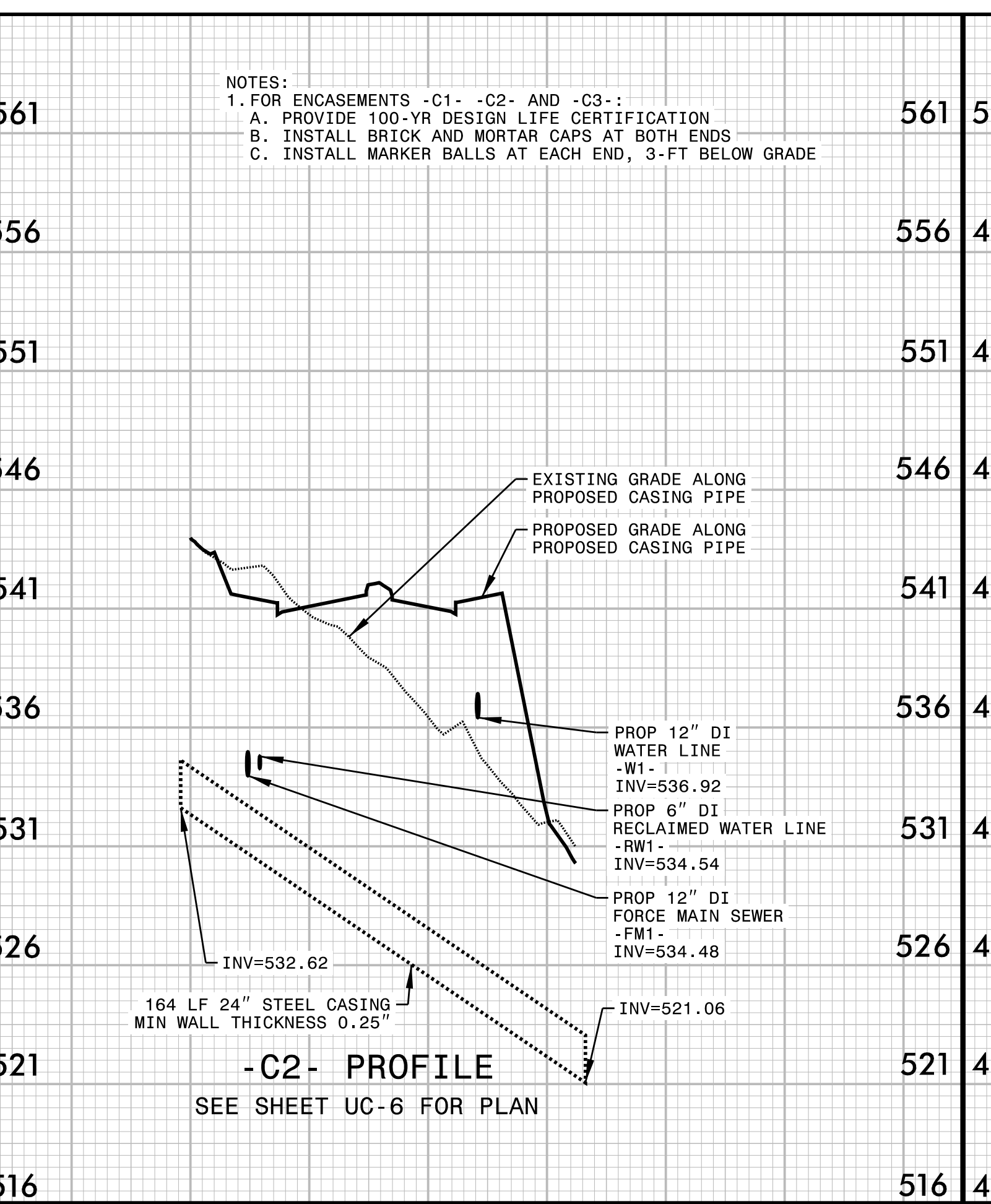


**-FM1- PROFILE**  
SEE SHEET UC-6 AND UC-7 FOR PLAN

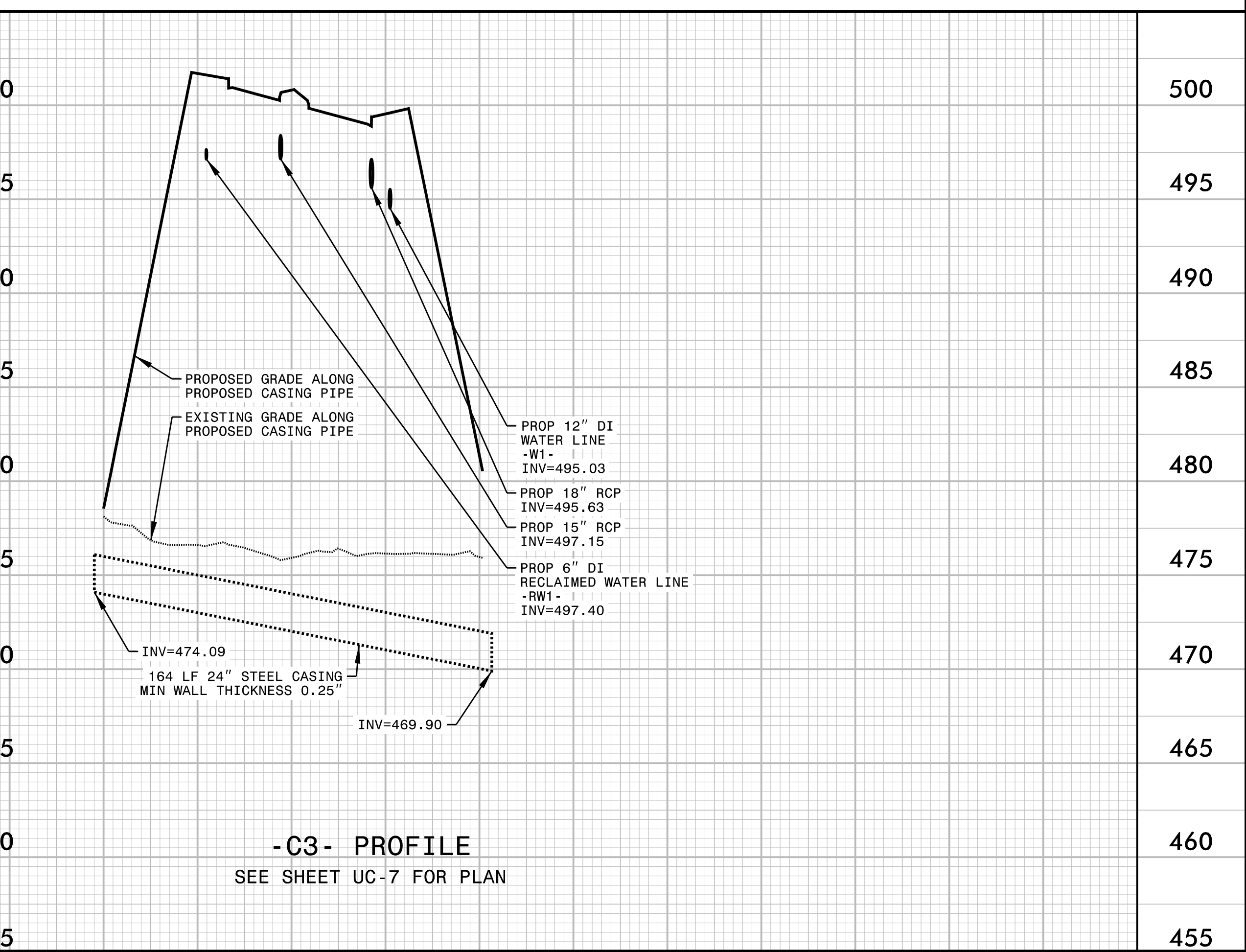
- NOTES:  
 1. FOR ENCASEMENTS -C1-, -C2- AND -C3-:  
 A. PROVIDE 100-YR DESIGN LIFE CERTIFICATION  
 B. INSTALL BRICK AND MORTAR CAPS AT BOTH ENDS  
 C. INSTALL MARKER BALLS AT EACH END, 3-FT BELOW GRADE



**-C1- PROFILE**  
SEE SHEET UC-5 FOR PLAN



**-C2- PROFILE**  
SEE SHEET UC-6 FOR PLAN



**-C3- PROFILE**  
SEE SHEET UC-7 FOR PLAN

5/17/2023