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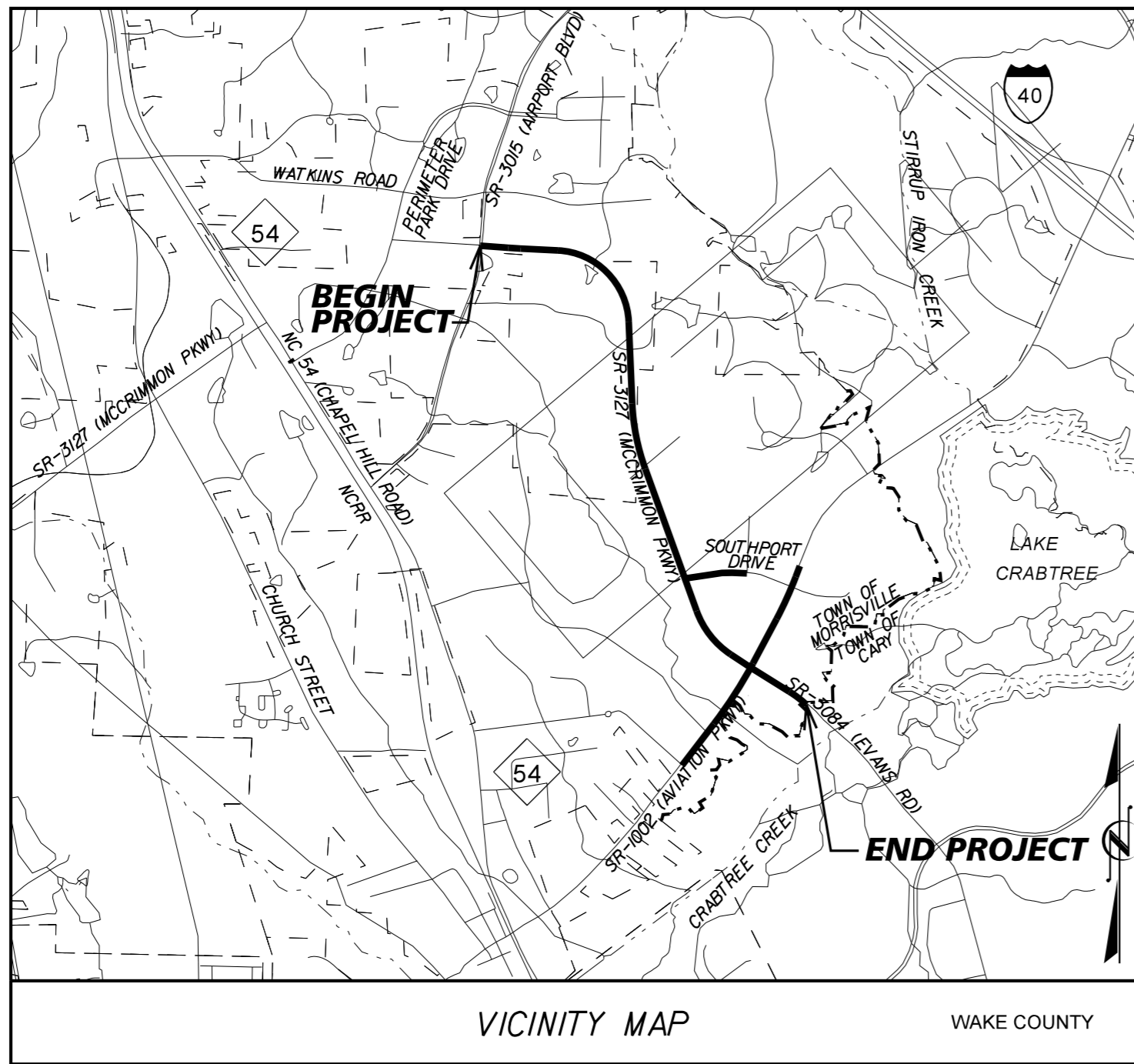
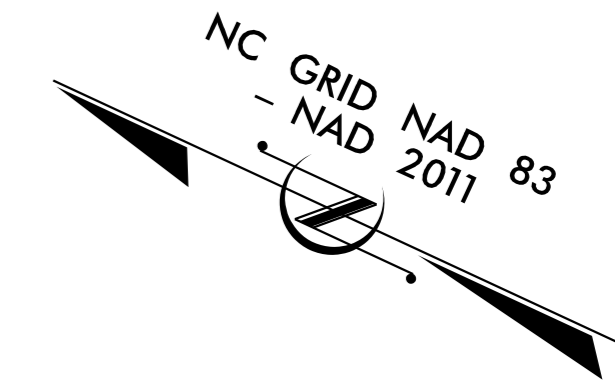
T.I.P. NO.	SHEET NO.
U-5828	UC-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

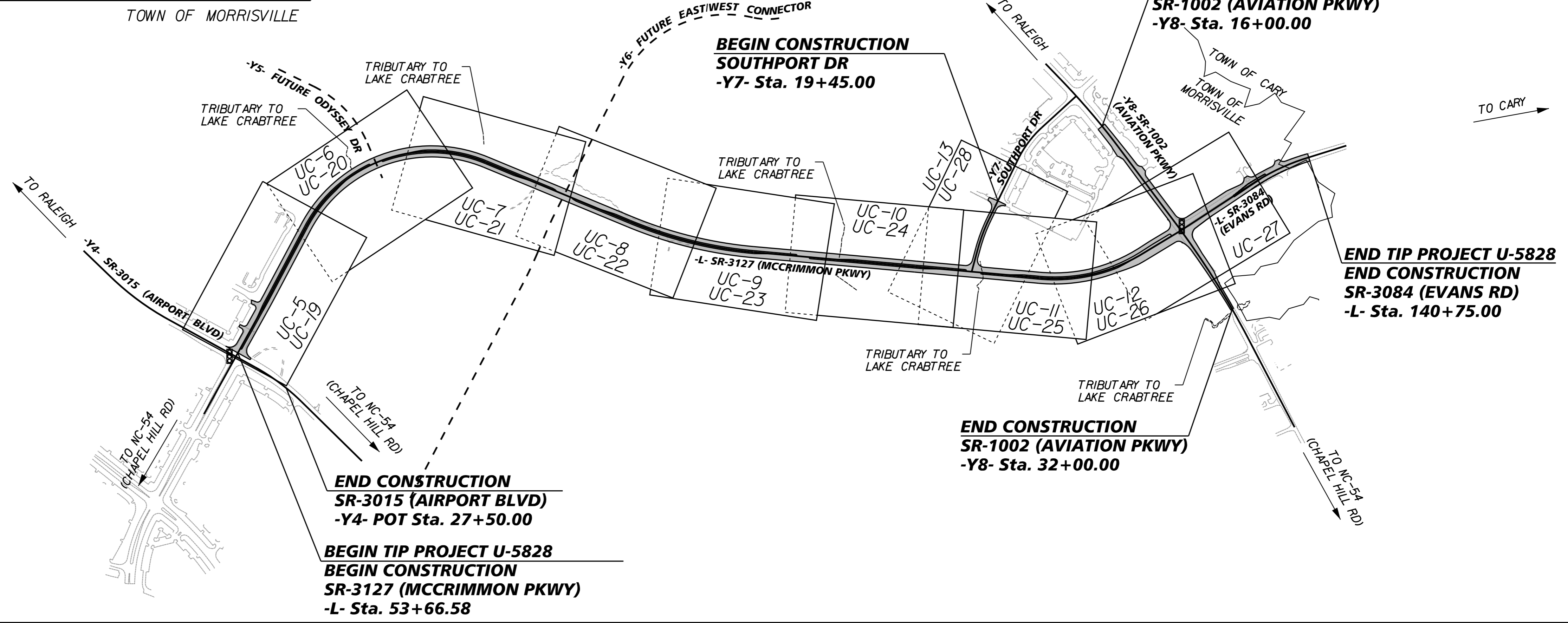
UTILITY CONSTRUCTION PLANS
WAKE COUNTY

LOCATION: SR 3127 (MCCRIMMON PARKWAY) FROM SR 3015 (AIRPORT BOULEVARD) TO SR 1002 (AVIATION PARKWAY), SR 3084 (EVANS ROAD)

TYPE OF WORK: REUSE WATER MAIN & WATER MAIN CONSTRUCTION

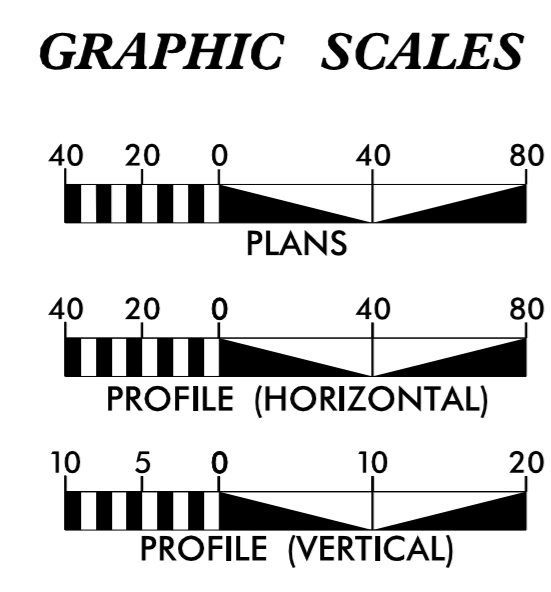


VICINITY MAP
WAKE COUNTY
TOWN OF MORRISVILLE



CONTRACT: C203981 **TIP PROJECT: U-5828**

K:\RAL_Roadway\01208004 - McCrinmon Parkway\Phase I\Plan\Utility Construction\Phase2_01208004_of_1.sh_uc01_psh.dgn



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UTILITY OWNERS ON PROJECT

(1) WATER - TOWN OF CARY
(2) SEWER - TOWN OF CARY

PLANS PREPARED FOR THE NCDOT BY:

Kimley » Horn

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STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

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	

NOTE
PAY ITEM

EXISTING UTILITIES SYMBOLS

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

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

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GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PUBLIC OR PRIVATE, PRIOR TO EXCAVATION OR PRIOR TO MANUFACTURE OF PIPE. THE INFORMATION AND DATA SHOWN WITH RESPECT TO EXISTING UNDERGROUND FACILITIES AT OR CONTIGUOUS TO THE SITE IS APPROXIMATE AND BASED ON PHYSICAL APPURTENANCES OBSERVED IN THE FIELD. THE OWNER AND ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR THE COMPLETENESS OF ANY SUCH INFORMATION AND DATA; AND, THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA, FOR LOCATING ALL UNDERGROUND FACILITIES, FOR COORDINATION OF THE WORK WITH THE OWNERS OF SUCH UNDERGROUND FACILITIES DURING CONSTRUCTION, FOR THE SAFETY AND PROTECTION THEREOF, AND FOR REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK. THE COST OF ALL OF WHICH WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. THE CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES IN WRITING AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION. THE NC ONE CALL TELEPHONE NUMBER IS 1-800-632-4949.
2. THE CONTRACTOR SHALL COORDINATE WITH THE TOWN OF MORRISVILLE PUBLIC WORKS DEPARTMENT A MINIMUM OF 48 HOURS PRIOR TO CUTTING OR CONNECTING TO EXISTING UTILITY LINES. PUBLIC WORKS DEPARTMENT PERSONNEL SHALL DETERMINE THE MOST APPROPRIATE TIME FOR THESE ACTIVITIES TO TAKE PLACE. THE CONTRACTOR SHALL CONTACT THE PUBLIC WORKS DIRECTOR AT 919-463-7071 AT LEAST 48 HOURS PRIOR TO STARTING CONSTRUCTION.
3. THE CONTRACTOR SHALL RE-ESTABLISH ANY PROPERTY MARKER, BENCHMARK, ETC. DISTURBED DURING CONSTRUCTION TO ITS ORIGINAL LOCATION AND ELEVATION. THIS ITEM SHALL BE CONSIDERED AS A SUBSIDIARY COST TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
4. CONTRACTOR SHALL FIELD LOCATE EXISTING UTILITY LINES TO BE CONNECTED TO PRIOR TO COMMENCING WORK. IF A DISCREPANCY EXISTS BETWEEN THE PLANS AND ACTUAL FIELD CONDITIONS THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND TOWN IMMEDIATELY.
5. CONTRACTOR SHALL VERIFY THE ELEVATION, CONFIGURATION AND ANGULATIONS OF EXISTING LINES PRIOR TO CONSTRUCTION. THIS ITEM SHALL BE CONSIDERED AS A SUBSIDIARY COST TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE VERTICAL AND HORIZONTAL CONTROL SHOWN ON THE PLANS THROUGHOUT THE PROJECT.
7. THE CONTRACTOR SHALL MAINTAIN A NEAT AND ACCURATE RECORD OF CONSTRUCTION FOR THE TOWN'S RECORDS. THE CONTRACTOR SHALL PROVIDE THE TOWN FULL SIZE REPRODUCIBLE MARKUPS THAT RECORD ALL CONSTRUCTION DEVIATING FROM THE PLANS AT SUBSTANTIAL COMPLETION.
8. THE CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST. CONTRACTOR SHALL CONTROL DUST BY SPRINKLING WATER, OR AS APPROVED BY THE ENGINEER. THIS SHALL BE CONSIDERED SUBSIDIARY TO THE COST OF THE PROJECT.
9. WHERE THE CONTRACTOR DESIRES TO MOVE EQUIPMENT NOT LICENSED FOR OPERATION ON PUBLIC HIGHWAYS ON OR ACROSS ANY PAVEMENT, HE SHALL PROTECT THE PAVEMENT FROM ALL DAMAGE.
10. THE CONTRACTOR SHALL NOT PLACE FILL OR WASTE MATERIAL ON ANY PRIVATE PROPERTY WITHOUT PRIOR WRITTEN AGREEMENT WITH PROPERTY OWNER.
11. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CURRENT NCDOT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION EXCEPT WHERE MODIFIED IN THESE PLANS OR THE SPECIFICATIONS.
12. THE CONTRACTOR SHALL REVEGETATE UNPAVED AREAS DISTURBED BY CONSTRUCTION PRIOR TO ACCEPTANCE OF THE PROJECT. REVEGETATION SHALL CONSIST OF SEED SOWING, STRAW MULCHING, FERTILIZING AND WATERING. REVEGETATION SHALL BE ACCEPTABLE WHEN VEGETATION ACHIEVES ONE (1) INCH IN HEIGHT, WITH 85% COVERAGE AND NO GREATER THAN 10 SQUARE FEET BARE.
13. THE CONTRACTOR SHALL ABIDE BY ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS GOVERNING EXCAVATION. TRENCH SIDE SLOPES SHALL MEET OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS THAT ARE IN EFFECT AT THE TIME OF CONSTRUCTION. SHEETING, SHORING AND BRACING SHALL BE REQUIRED WHEN SIDE SLOPE STANDARDS ARE NOT MET. A PULL BOX, MEETING OSHA STANDARDS, MAY BE ACCEPTABLE, UNLESS NEGATED BY GROUNDWATER CONTROL MEASURES. CONTRACTOR SHALL HAVE A TRENCH SAFETY PLAN AT THE TIME OF PRE-CONSTRUCTION MEETING. NO OPEN TRENCHES WILL BE ALLOWED OVERNIGHT WITHOUT THE PRIOR WRITTEN APPROVAL OF THE TOWN OF MORRISVILLE PUBLIC WORKS DEPARTMENT. ONSITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
14. THE CONTRACTOR SHALL SUBMIT IN WRITING A SEQUENCE OF CONSTRUCTION AND WORK SCHEDULE TO THE ENGINEER AT THE TIME OF THE PRE-CONSTRUCTION MEETING.
15. ALL PHASES OF CONSTRUCTION MUST BE COORDINATED WITH THE TOWN OF MORRISVILLE. FIELD ADJUSTMENTS MAY BE NECESSARY AND WILL BE CARRIED OUT AS DIRECTED BY THE TOWN OF MORRISVILLE AT NO EXTRA PAY.
16. CONSTRUCTION DEWATERING, IF ANY, IS INCIDENTAL TO THE PROJECT BID ITEMS. ALL DEWATERING DISCHARGE SHALL BE FILTERED THROUGH SILT BAGS AND/OR OTHER APPROVED EROSION CONTROL MEASURES.
17. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PERFORMING ALL CONSTRUCTION LAYOUTS FROM THE SITE LAYOUT CONTROL POINTS, AND FROM THE DIMENSIONS AND CENTERLINES SHOWN. THE CONTRACTOR MUST NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRANSITION FROM ONE PIPE MATERIAL TO ANOTHER, WHERE INDICATED ON THE PLANS. MATERIALS, LABOR, AND EQUIPMENT NECESSARY FOR PROPER TRANSITION BETWEEN MATERIALS SHALL BE SUBSIDIARY TO THE COST OF THE PROJECT.
19. UNTIL THE WORK IS ACCEPTED BY THE TOWN OF MORRISVILLE, THE PROJECT SHALL BE UNDER THE CHARGE AND CUSTODY OF THE CONTRACTOR AND THE CONTRACTOR SHALL TAKE EVERY NECESSARY PRECAUTION AGAINST INJURY AND/OR DAMAGE TO THE WORK.
20. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE TOWN INSPECTOR OF ANY DAMAGE OR CHANGED CONDITION CAUSED BY CONSTRUCTION ACTIVITIES THAT MAY RESULT IN COMPROMISED WATER QUALITY ENTERING THE DISTRIBUTION SYSTEM.
21. THE CONTRACTOR SHALL DISTRIBUTE LETTERS TO ALL AFFECTED PROPERTY OWNERS PRIOR TO BEGINNING WORK ON EACH PROPERTY. THIS LETTER SHALL INCLUDE NAMES AND TELEPHONE NUMBERS OF CONTRACTOR CONTACTS, A DESCRIPTION OF WORK TO BE DONE, AND THE TIME FRAME FOR DOING THE WORK. COPIES OF THE LETTER SHALL BE FORWARDED TO THE TOWN INSPECTOR. THE CONTRACTOR SHALL NOTIFY RESIDENTS 48 HOURS IN ADVANCE OF PERFORMING ANY WORK ON PRIVATE PROPERTY. DISTRIBUTION OF LETTERS SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT COST AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
22. THE CONTRACTOR SHALL NOT COMMENCE WORK BEFORE 7:00AM AND SHALL ARRANGE HIS WORK SO THAT NO MACHINERY OR EQUIPMENT SHALL BE CLOSER THAN 30 FEET TO ANY TRAVEL LANES AFTER SUNSET EXCEPT AS AUTHORIZED BY THE OWNER. NO WORK IS ALLOWED ON SUNDAY.
23. THE CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY DAMAGE TO PRIVATE PROPERTY, INCLUDING, BUT NOT LIMITED TO, FENCES, BRICKS, WALLS, PAVEMENT, GRASS, AND TREES, AT NO ADDITIONAL COST TO THE OWNER. THIS WORK SHALL BE SUBSIDIARY TO THE COST OF THE CONTRACT UNLESS OTHERWISE NOTED.

24. CONTRACTOR SHALL TAKE SPECIAL PRECAUTIONS IN VICINITY OF ANY OVERHEAD ELECTRIC LINES. CONTRACTOR SHALL ABIDE BY NATIONAL ELECTRIC CODE AND ANY REQUIREMENT BY OWNER OF ELECTRIC LINE.
25. CONTRACTOR SHALL INSTALL TEMPORARY BACKFILL AS REQUIRED FOR OPEN TRENCH IN ESTABLISHED ROADWAYS. NO OPEN TRENCH WILL BE ALLOWED IN EXISTING PAVEMENT EXCEPT DURING DAYLIGHT HOURS AND DURING CONSTRUCTION OPERATIONS. TEMPORARY BACKFILL SHALL BE INSTALLED TO THE FINISHED GRADE OF THE EXISTING PAVEMENT AND SHALL BE MAINTAINED BY THE CONTRACTOR TO ENSURE A SMOOTH DRIVING SURFACE FREE OF RUTTING AND POTHOLES. REPAIR DAMAGED PAVEMENT IN ACCORDANCE WITH SPECIFICATIONS. A LIMIT OF 40 LF OF TRENCH MAY BE CLOSED BY PLATES OUTSIDE OF CONSTRUCTION HOURS.
26. TOPSOIL REPLACEMENT IS REQUIRED IN ALL AREAS WHERE TOPSOIL EXISTS. TOPSOIL SHALL INCLUDE THE TOP SIX (6) INCHES OF TRENCH, UNLESS ROCK DEPTH IS LESS THAN SIX (6) INCHES. TOPSOIL SHALL BE KEPT SEPARATE FROM GENERAL TRENCH EXCAVATED MATERIAL AND SHALL BE PLACED ON TOP OF TRENCH BACK FILL. CONTRACTOR SHALL REMOVE ALL ROCK FROM TOPSOIL IN CULTIVATED AREAS.
27. ALL TESTING SHALL BE IN ACCORDANCE WITH NCDOT STANDARD SPECIFICATIONS.
28. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING STREETS AND PROPERTIES ADJACENT TO THE PROJECT FREE OF MUD AND DEBRIS FROM THE CONSTRUCTION AT ALL TIMES.
29. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS BEFORE CONSTRUCTION BEGINS.
30. CONTRACTOR SHALL NOT STORE MATERIALS, EQUIPMENT OR OTHER CONSTRUCTION ITEMS ON ADJACENT PROPERTIES OR RIGHT-OF-WAY WITHOUT THE PRIOR WRITTEN CONSENT OF THE PROPERTY OWNER OR THE TOWN OF MORRISVILLE (FOR R.O.W.) ALL CONSTRUCTION MATERIALS TO BE REMOVED SHALL BE DISPOSED OF AT A LEGAL DISPOSAL LOCATION OFF SITE, UNLESS WRITTEN APPROVAL IS OBTAINED FROM THE PROPERTY OWNER.
31. ALL EXCAVATION IS UNCLASSIFIED AND SHALL INCLUDE ALL MATERIALS ENCOUNTERED. UNUSABLE EXCAVATED MATERIAL AND ALL WASTE RESULTING FROM SITE CLEARING AND GRUBBING SHALL BE DISPOSED OF AT A LEGAL DISPOSAL FACILITY OFF SITE BY THE CONTRACTOR AT HIS EXPENSE UNLESS OTHERWISE SPECIFIED OR AGREED TO BY OWNER.
32. ALL PAVING DIMENSIONS ARE TO EDGE OF PAVEMENT AND/OR FACE OF CURB UNLESS OTHERWISE NOTED.
33. THE CONTRACTOR SHALL GIVE THE OWNER A MINIMUM OF 5 DAYS NOTICE PRIOR TO THE TIME A STREET SIGN IS TO BE REMOVED DUE TO CONSTRUCTION OPERATIONS. AT NO TIME SHALL THE CONTRACTOR REMOVE OR RELOCATE A STOP OR YIELD SIGN WITHOUT THE APPROVAL OF THE TOWN.
34. THE CONTRACTOR SHALL PROTECT ALL FRANCHISE UTILITIES DURING ALL CONSTRUCTION PHASES (INCLUDING POWER POLES, TELEPHONE RISERS, ETC.). THE CONTRACTOR SHALL PROTECT AND SALVAGE ALL EXISTING UTILITIES IN ACCORDANCE WITH TOWN OF MORRISVILLE REQUIREMENTS AND RETURN SALVAGED UTILITIES TO THE TOWN.
35. CONTRACTOR SHALL FURNISH AND INSTALL ALL THERMOPLASTIC PAVEMENT MARKINGS AS SHOWN ON THE PLANS. STOP BARS SHALL BE INSTALLED AT ALL STREET INTERSECTIONS.
36. CONTRACTOR SHALL SAW-CUT TO PROVIDE SMOOTH TRANSITION AT TIE-IN TO EXISTING EDGE OF PAVEMENT AND MEET EXISTING PAVEMENT AS NECESSARY TO ENSURE POSITIVE DRAINAGE.
37. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING FENCING ALONG THE PROJECT.
38. CONTRACTOR SHALL MAKE ALL ATTEMPTS TO PROTECT ALL TREES WITHIN THE LIMITS OF CONSTRUCTION. IF CONSTRUCTION REQUIRES ANY TREE TO BE REMOVED, THE CONTRACTOR SHALL NOTIFY TOWN STAFF OF THE NECESSARY REMOVAL PRIOR TO CONSTRUCTION. THIS ITEM SHALL BE CONSIDERED A SUBSIDIARY COST TO THE PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
39. CONTRACTOR SHALL MAKE ALL ATTEMPTS TO PROTECT ALL SIGNS WITHIN THE LIMITS OF CONSTRUCTION. ANY SIGN REQUIRING REMOVAL AND REPLACEMENT AS A RESULT OF CONSTRUCTION SHALL BE REPLACED AT EQUAL OR BETTER CONDITION AND IN ACCORDANCE WITH NCDOT GUIDELINES. ANY SIGNS DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AS A NON-PAY ITEM.
40. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO PRIVATE PROPERTY. THE CONTRACTOR SHALL VIDEO THE ENTIRE PROJECT CORRIDOR AND PROVIDE A COPY OF THE CD TO THE TOWN PRIOR TO CONSTRUCTION.
41. TEMPORARY MAILBOXES SHALL BE PROVIDED AS REQUIRED. THIS ITEM SHALL BE CONSIDERED A SUBSIDIARY COST TO THE PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. THE LOCATION OF MAILBOXES IS TO BE DETERMINED BY PROPERTY OWNERS. MAILBOXES MUST MEET POST OFFICE STANDARDS
42. CONSTRUCTION WATER IS AVAILABLE THROUGH A TOWN OF MORRISVILLE HYDRANT METER. CONTACT BLAKE MILLS, DIRECTOR OF PUBLIC WORKS, AT 919-463-7071.

TRAFFIC CONTROL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING TRAFFIC CONTROL MEASURES FOR THE UTILITIES WORK WITH THE OVERALL TRAFFIC CONTROL PLANS.

EROSION CONTROL NOTES

1. VEGETATIVE COVER SHALL BE ESTABLISHED ON ALL DISTURBED AREAS IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE DIVISION ROADSIDE ENVIRONMENTAL ENGINEER
2. PROPER TEMPORARY AND PERMANENT MEASURES SHALL BE USED TO CONTROL EROSION AND SEDIMENTATION IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS. ALL EROSION AND POLLUTION CONTROL DEVICES AND MEASURES SHALL BE CONSTRUCTED, INSTALLED, MAINTAINED, AND REMOVED BY THE ENCROACHING PARTY IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, REGULATIONS, ORDINANCES, AND POLICIES.
3. THE ENCROACHING PARTY SHALL BE RESPONSIBLE TO KEEP FULLY INFORMED TO COMPLY WITH THE APPLICABLE AND MOST CURRENT REGULATIONS OF ALL LEGALLY CONSTITUTED AUTHORITIES RELATING TO POLLUTION PREVENTION AND CONTROL INCLUDING EROSION CONTROL. IN THE EVENT OF CONFLICT BETWEEN LAWS, REGULATIONS, ORDINANCES, POLICIES, SPECIFICATIONS, OR OTHER REQUIREMENTS, THE MORE RESTRICTIVE REQUIREMENT SHALL APPLY.
4. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED EVERY SEVEN DAYS OR AFTER EACH RAINFALL OCCURRENCE THAT EXCEEDS ONE-HALF INCH. DAMAGED OR INEFFECTIVE DEVICES SHALL BE REPAIRED OR REPLACED AS NECESSARY AND IN A TIMELY MANNER.

WATER LINE NOTES

1. THE CONTRACTOR SHALL VERIFY THE ELEVATION OF ALL UTILITY CROSSINGS PRIOR TO THE INSTALLATION OF ANY PIPE.
2. THE CONTRACTOR SHALL MAINTAIN WATER SERVICE TO ALL CUSTOMERS THROUGHOUT CONSTRUCTION BY USE OF TEMPORARY METHODS APPROVED BY THE OWNER. THIS WORK SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
3. CONTRACTOR SHALL INSTALL STANDARD BENDS AT LOCATIONS SHOWN. ALL NON-STANDARD VERTICAL AND HORIZONTAL BENDS SHALL BE INSTALLED USING STANDARD BENDS AND 50% OF THE MAXIMUM ALLOWABLE JOINT DEFLECTIONS AND MINIMUM RADIUS AS RECOMMENDED BY THE PIPE MANUFACTURER.
4. THE ENDS OF ALL EXISTING WATER MAINS THAT ARE CUT, BUT NOT REMOVED, SHALL BE PLUGGED AND ABANDONED IN PLACE. THIS WORK SHALL BE CONSIDERED AS A SUBSIDIARY COST TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
5. THE 12-INCH WATER LINE SHALL BE DUCTILE IRON, PRESSURE CLASS 350.
6. ALL TEES, BENDS, REDUCERS, AND PLUGS SHALL BE MECHANICALLY RESTRAINED AND BLOCKED. MECHANICAL RESTRAINT SHALL BE BY EBAA MEGALUG FOR DUCTILE IRON OR APPROVED EQUAL.
7. ALL VALVES, FIRE HYDRANTS, FITTINGS, AND OTHER METAL APPURTENANCES LOCATED BELOW GROUND SHALL BE POLYETHYLENE-ENCASED IN ACCORDANCE WITH AWWA C-509.
8. WATER PIPE SHALL HAVE A MINIMUM OF 60 INCHES OF COVER (UNLESS NOTED OTHERWISE).
9. CONCRETE THRUST BLOCKING SHALL BE USED AT ALL HORIZONTAL AND VERTICAL BENDS, TEES, AND WYES.
10. THE CONTRACTOR SHALL INSTALL A FULL JOINT OF PIPE ON BOTH SIDES OF ALL FITTINGS WHERE POSSIBLE.
11. CONTRACTOR SHALL INSTALL DETECTABLE WARNING TAPE A MINIMUM OF 120" ABOVE WATER LINES. DETECTABLE WARNING TAPE SHALL BE INCLUDED IN THE PRICE OF THE WATER PIPE. NO SEPARATE PAYMENT WILL BE MADE FOR THIS ITEM.
12. WHERE THE CONTRACTOR CROSSES AN EXISTING, NON-PRESSURE RATED WASTEWATER MAIN OR LATERAL WITH THE NEW POTABLE WATER LINE PIPE, ONE SEGMENT OF THE WATER LINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATER LINE PIPE ARE EQUIDISTANT AND AT LEAST TEN FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL.
13. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE AWWA, NCDEQ, AND ASTM STANDARDS FOR CONNECTIONS TO EXISTING ASBESTOS CEMENT PIPES.
14. ALL EXISTING FIRE HYDRANTS SHALL BE SALVAGED AND RETURNED TO THE TOWN OF MORRISVILLE.

REUSE LINE NOTES

1. ALL RECLAIMED WATER MAIN DISTRIBUTION PIPE SHALL BE C900 OR C905 PVC PIPE.
2. ALL PVC PIPE SUPPLIED FOR RECLAIMED WATER APPLICATIONS SHALL BE COLOR CODED PURPLE, PANTONE 522 AS REQUIRED BY THE NORTH CAROLINA ADMINISTRATIVE CODE, 15A, NCAC, 02T 0909. PIPE IDENTIFICATION FOR RECLAIMED WATER BY THE MANUFACTURER WITH THE WORDS "CAUTION RECLAIMED WATER DO NOT DRINK" REPEATED ON OPPOSITE SIDES OF THE PIPE EVERY 3- FEET OR LESS
3. ALL RECLAIMED WATER DISTRIBUTION MAINS IN THE TOWN OF CARY WATER SYSTEM SHALL BE RESTRAINED. THE STANDARD JOINT RESTRAINT SHALL CONSIST OF WEDGE ACTION RETAINER GLANDS, BELL JOINT HARNESSSES AND OTHER MECHANICAL RESTRAINING METHODS AS APPROVED BY THE TOWN.
4. A THRUST RESTRAINT PRESSURE OF 250 SHALL BE USED FOR THIS PROJECT.
5. TYPICAL DEPTH OF COVER FOR BURIED REUSE LINE SHALL BE 5 FEET UNLESS OTHERWISE SHOWN OR SPECIFIED.
6. REUSE DESIGNATED DETECTOR TAPE IS REQUIRED FOR ALL BURIED PIPE. ALL PIPING SHALL BE POLY-WRAPPED AND PAINTED. SEE SPECIFICATIONS.

SANITARY SEWER NOTES


1. SANITARY SEWER SERVICE SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION AT ALL TIMES. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER AND OWNER A PLAN PRIOR TO CONSTRUCTION FOR APPROVAL FOR MAINTAINING SANITARY SEWER SERVICE. THE COST FOR MAINTAINING SEWER SERVICE AND ANY ASSOCIATED BYPASS PUMPING SHALL BE CONSIDERED SUBSIDIARY TO THE COST OF THE SANITARY SEWER PIPE INSTALLATION.
2. ABANDONMENT OF EXISTING SANITARY SEWER LINES AND MANHOLES SHALL CONSIST OF THE WORK, LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO LOCATE, CUT, AND PLUG THE EXISTING SANITARY SEWER LINE AND COLLAPSE THE CONE SECTION OF THE MANHOLE AT THE LOCATIONS IDENTIFIED ON THE PLANS AND IN ACCORDANCE WITH THE REFERENCED DETAIL.

Kimley»Horn

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RIGHT-OF-WAY REV.

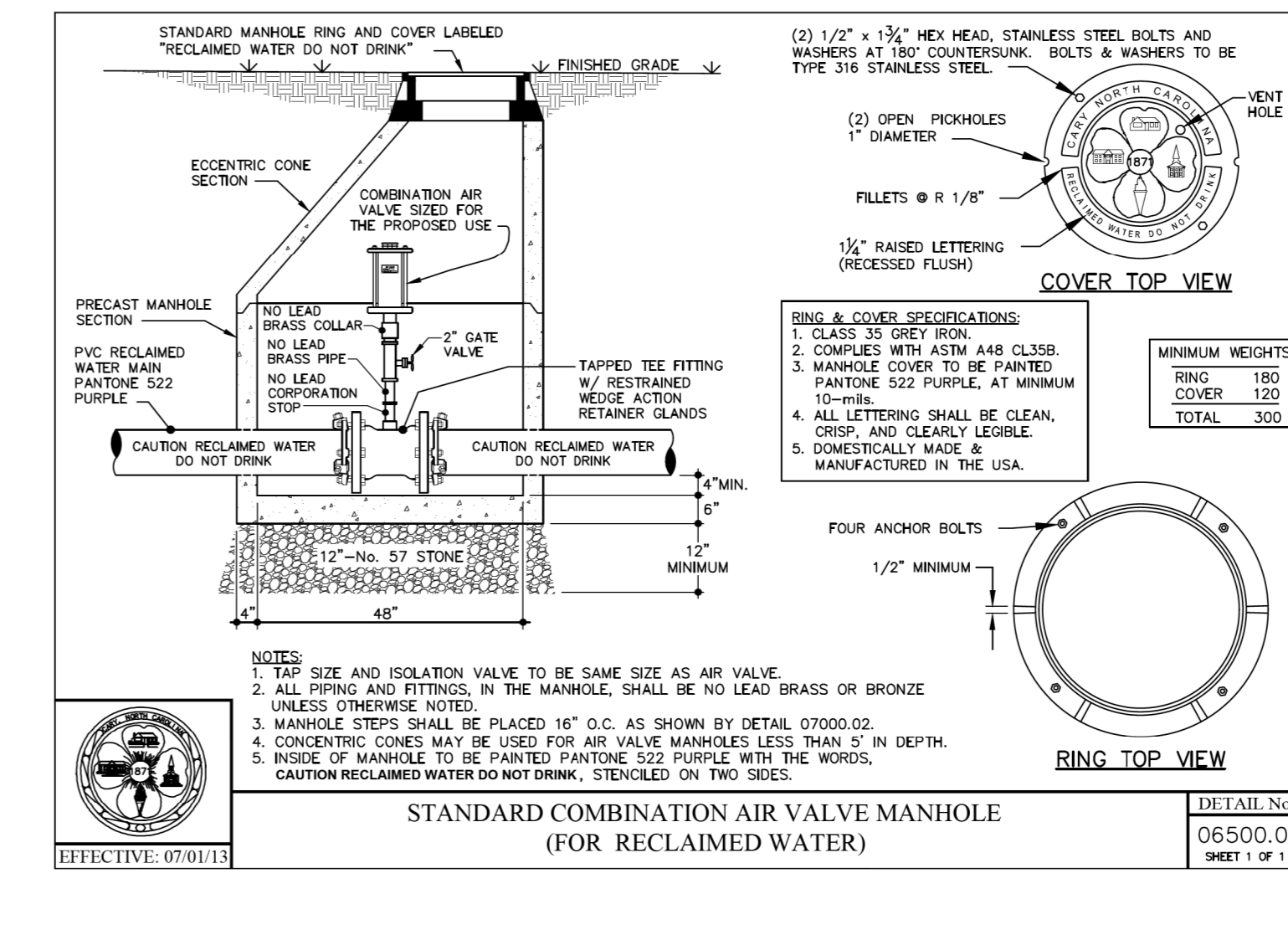
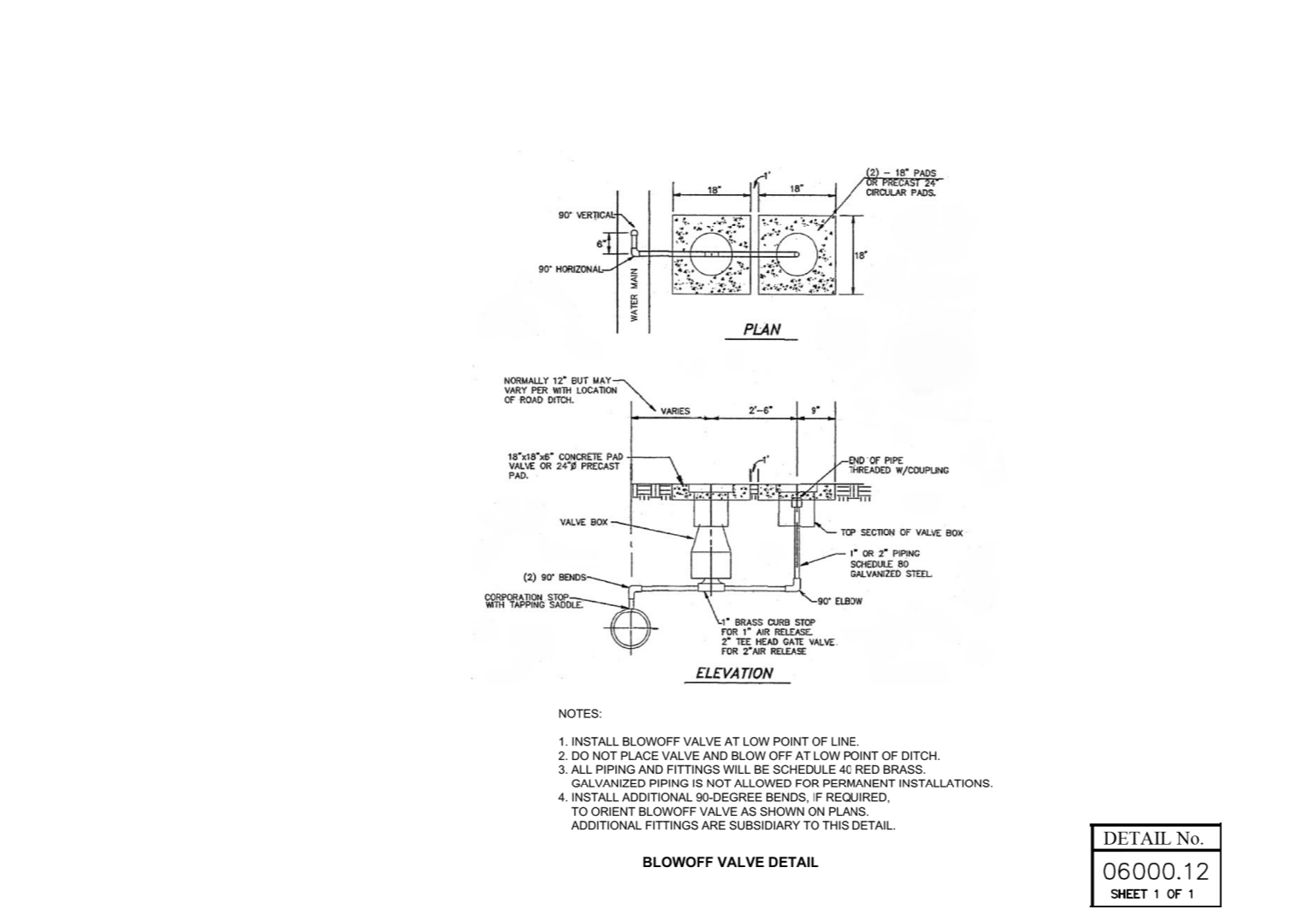
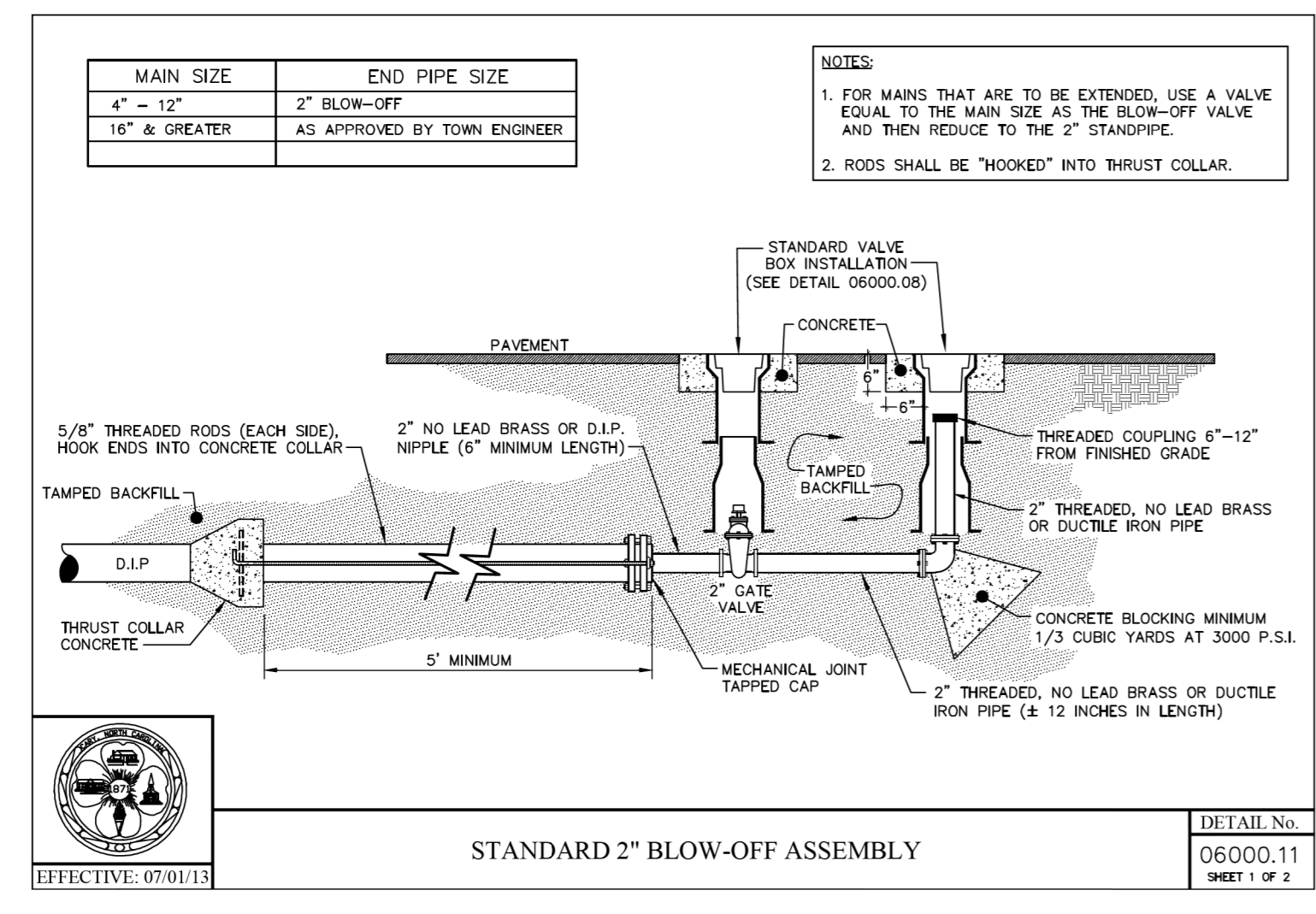
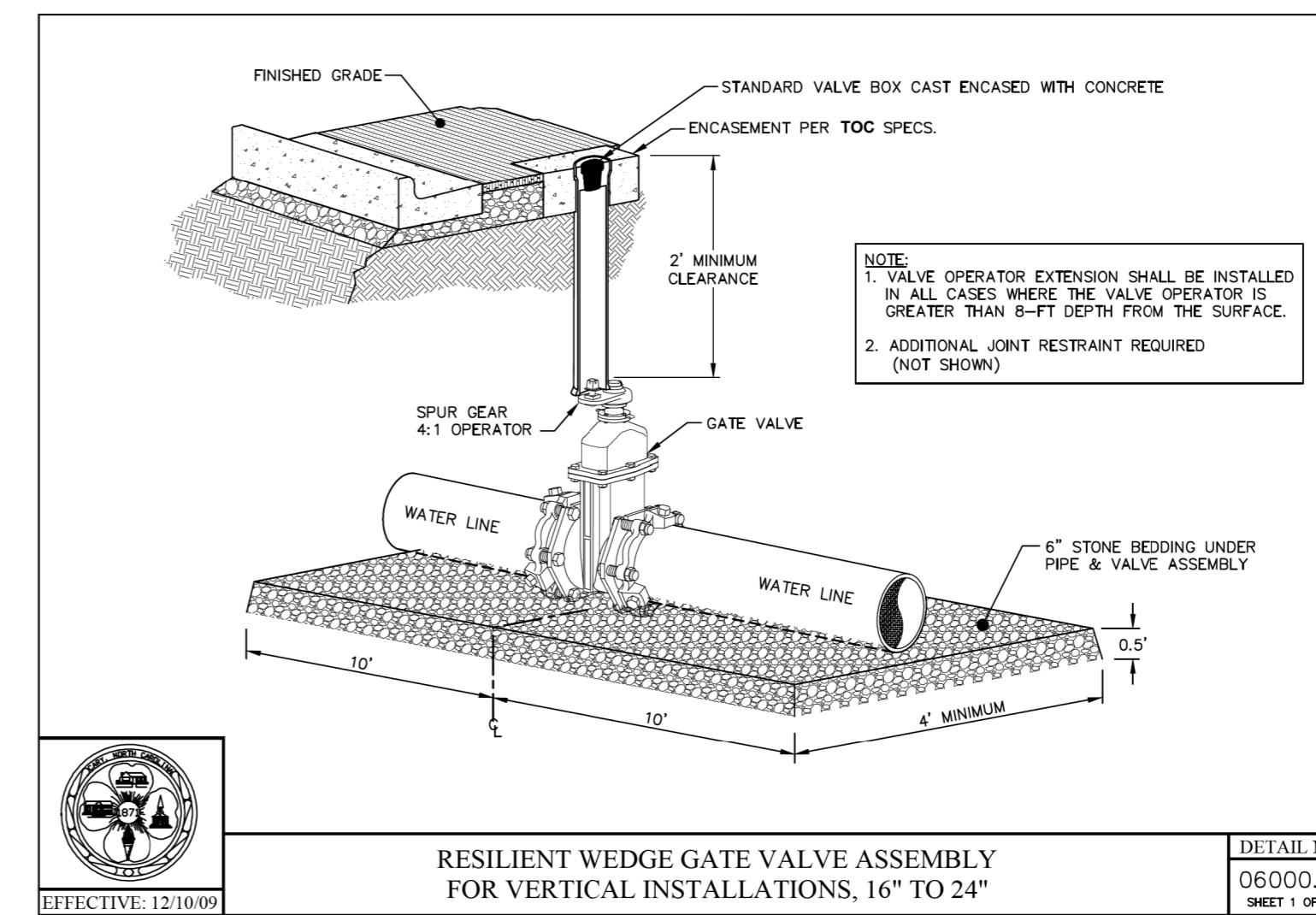
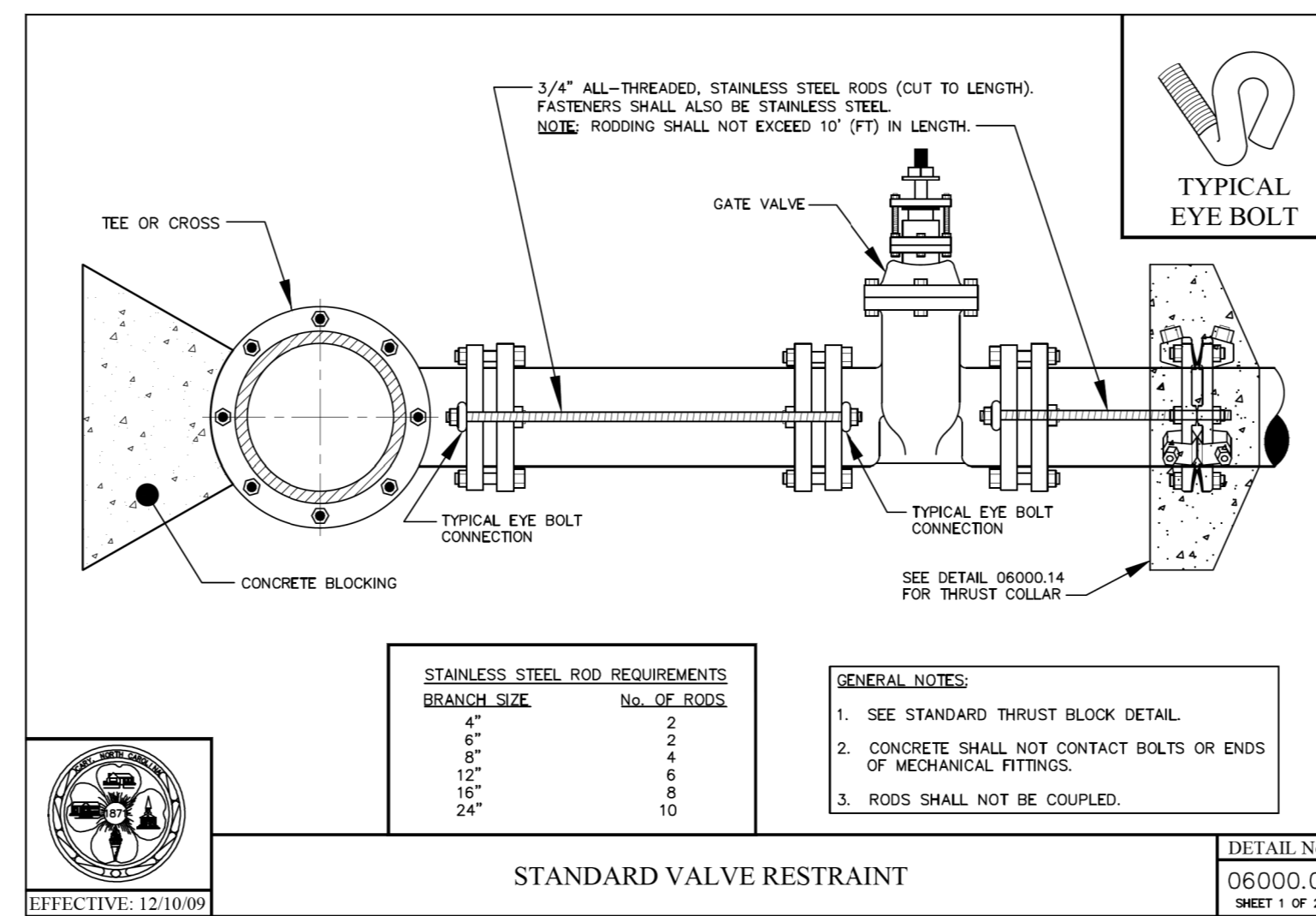
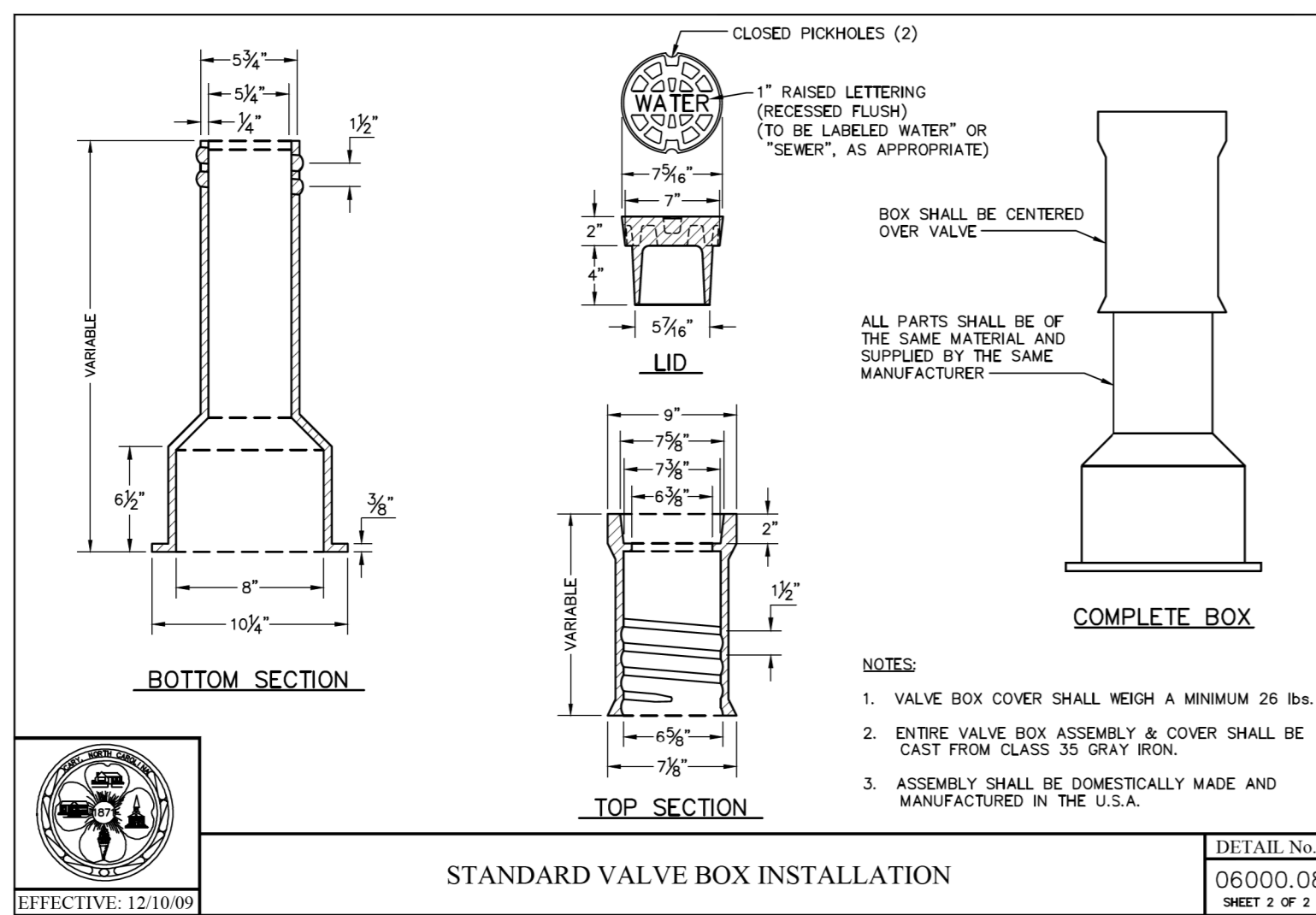
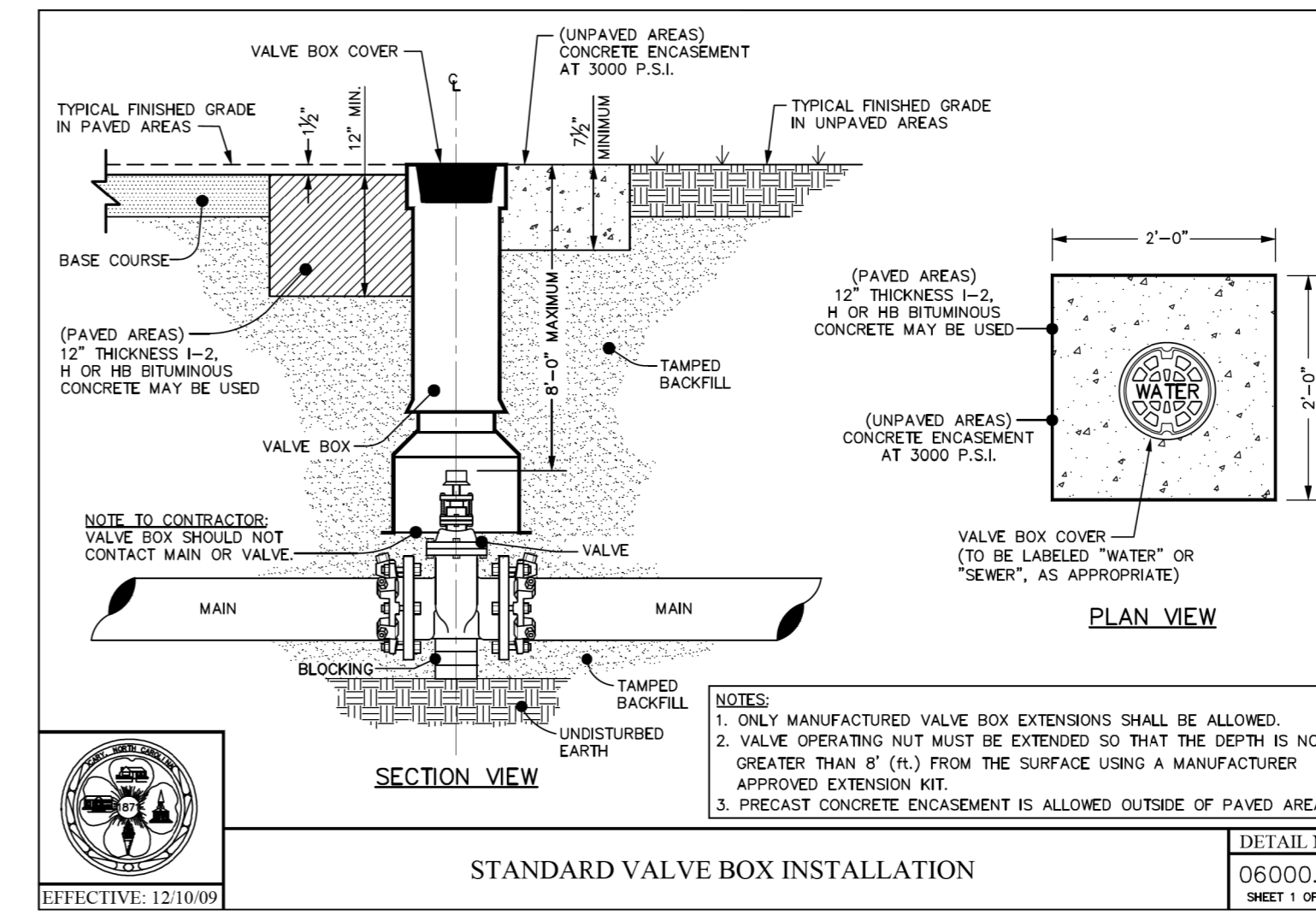
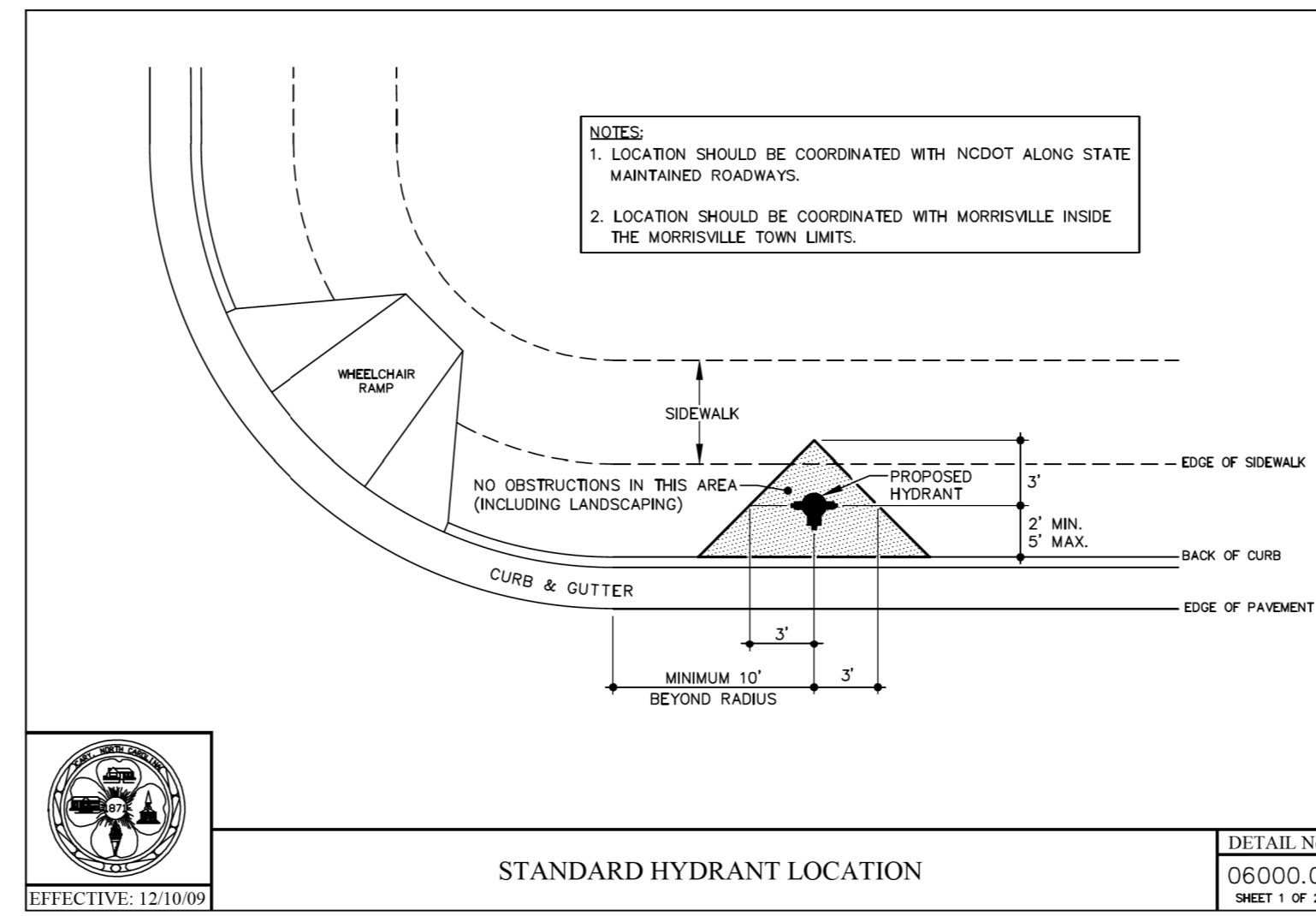
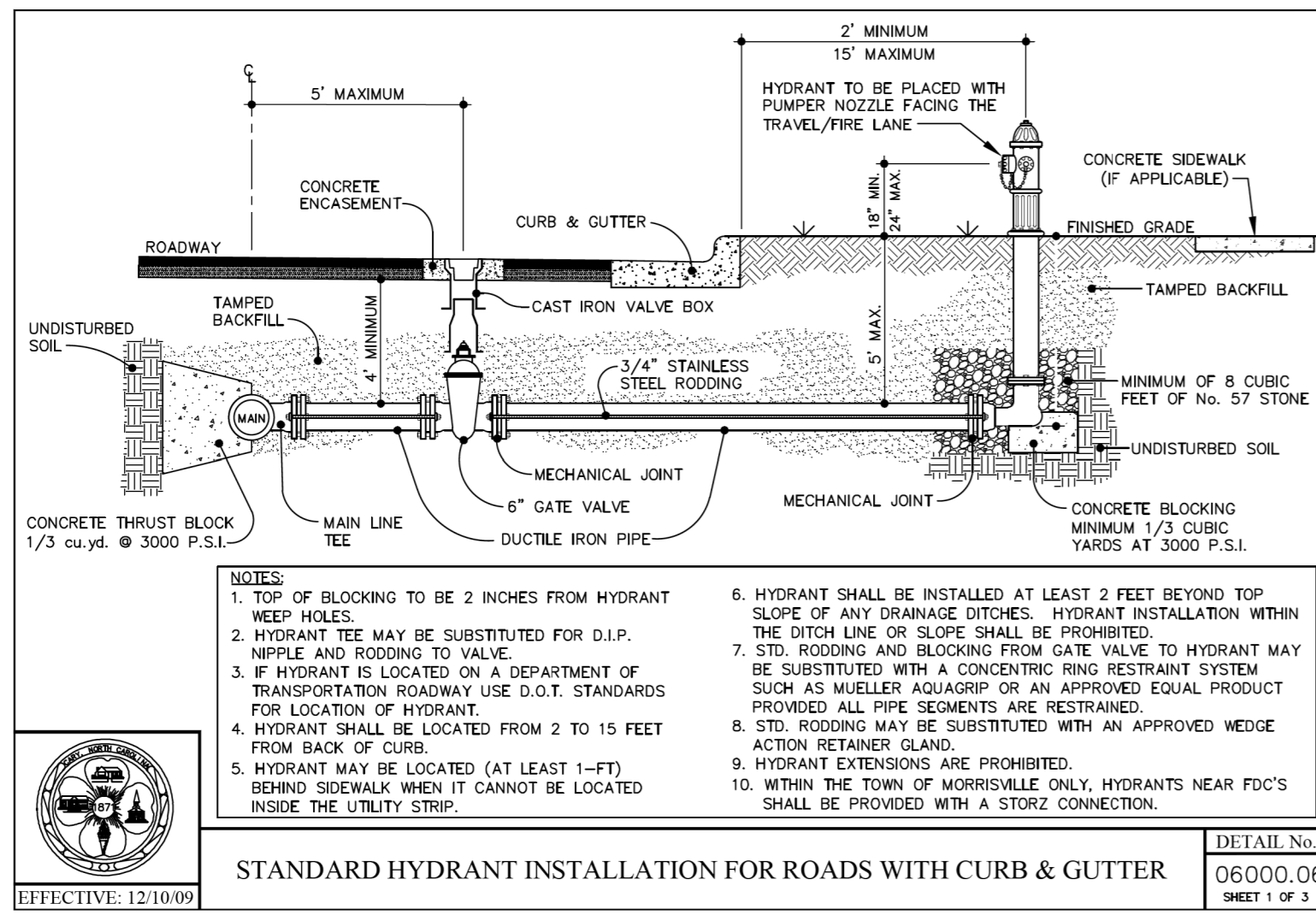
CONST. REV.

PROJECT REFERENCE NO.	SHEET NO.
U-5828	UC-3
R/W SHEET NO.	
UTILITY CONSTRUCTION ENGINEER	
	
DocuSigned by: <i>Matthew A. Shoemith</i>	8/28/2017
14897D078F4408	

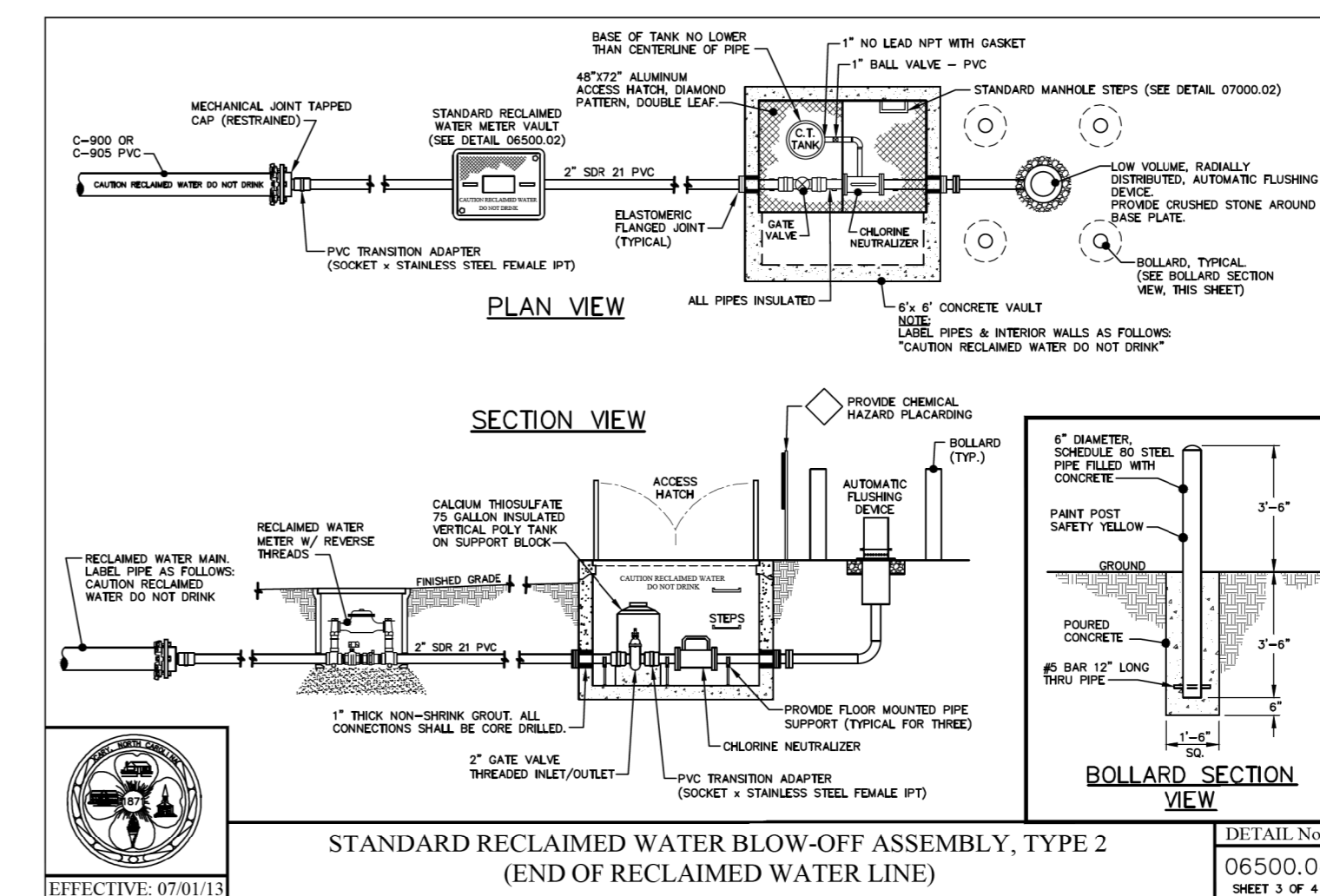
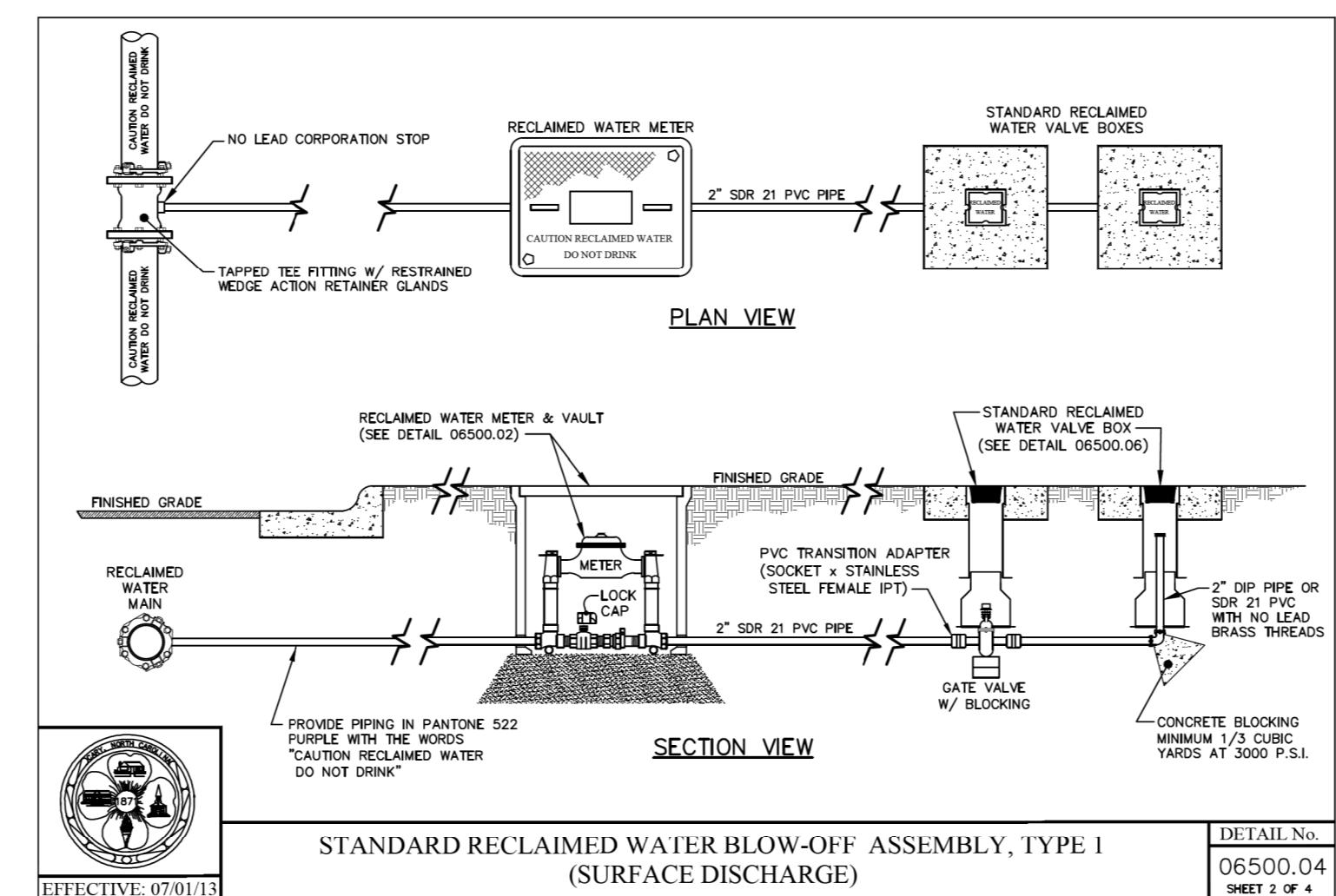
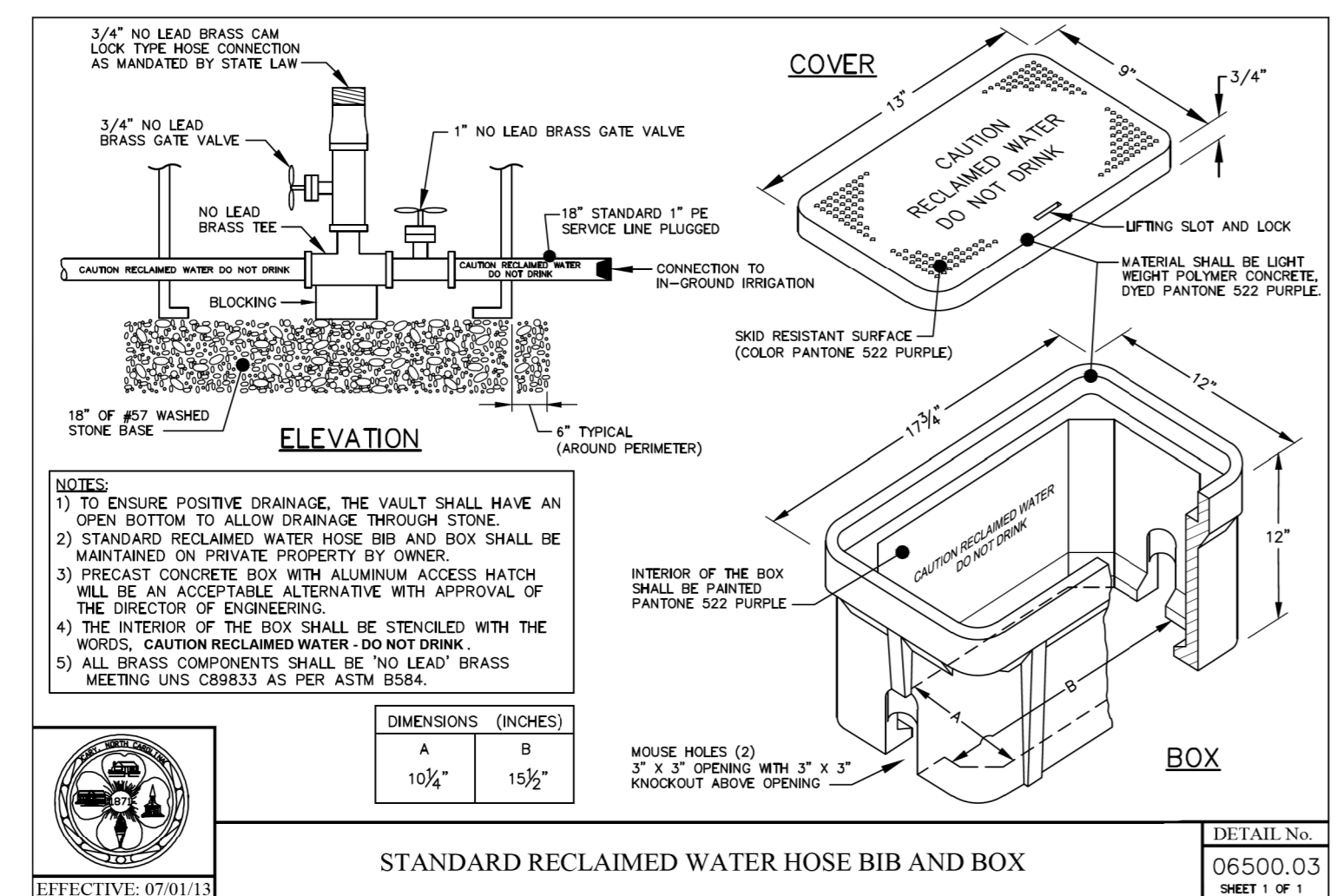
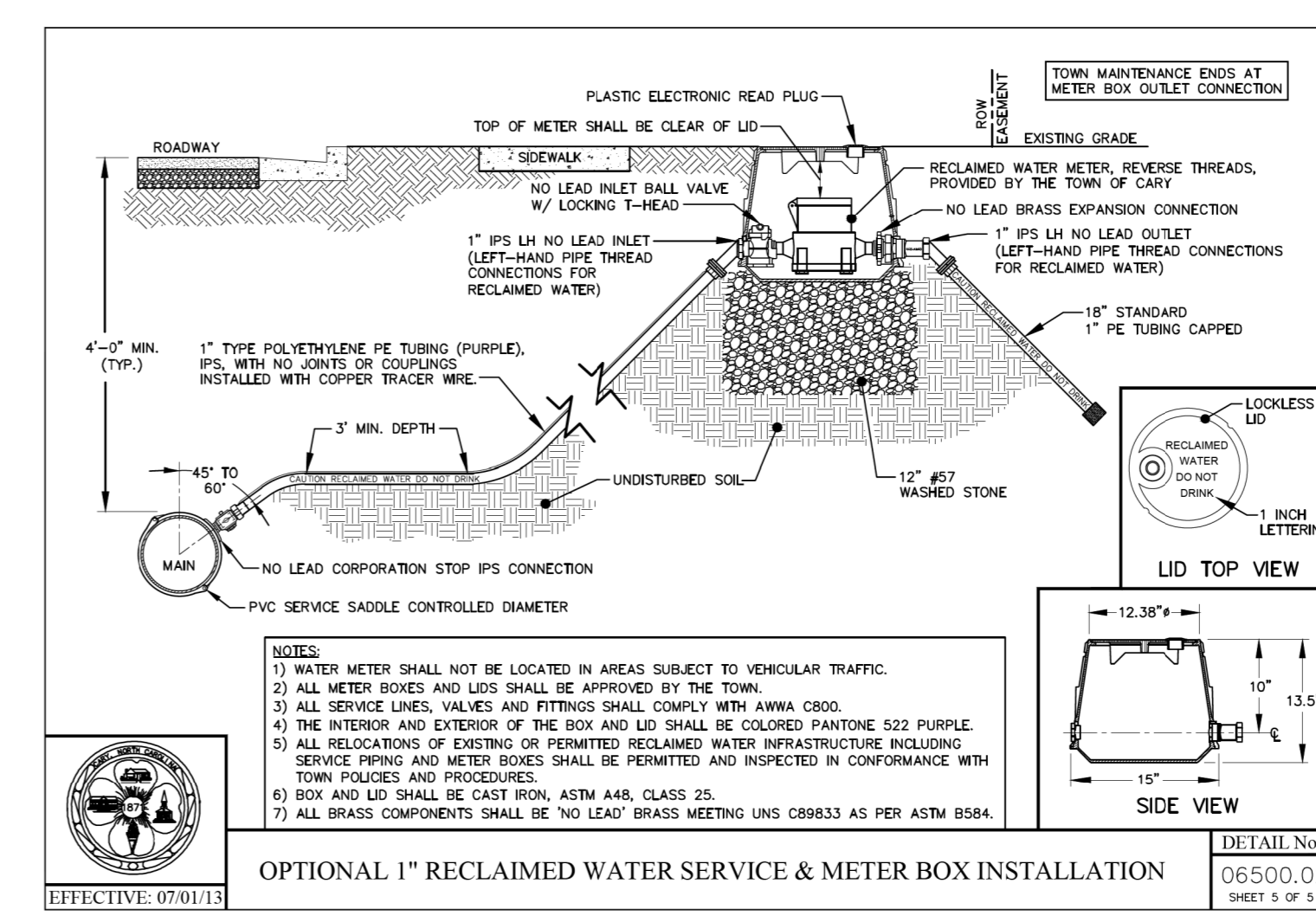
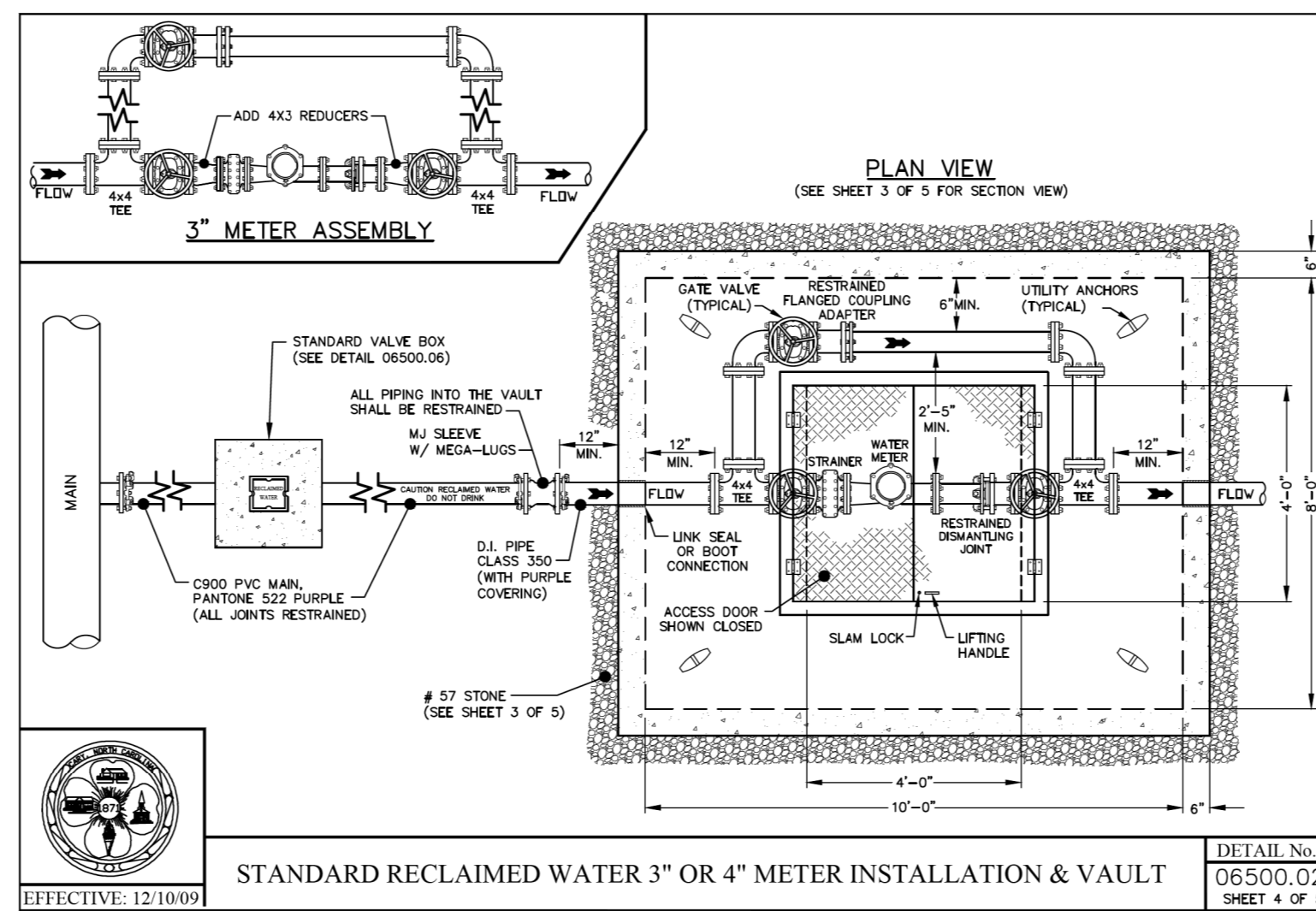
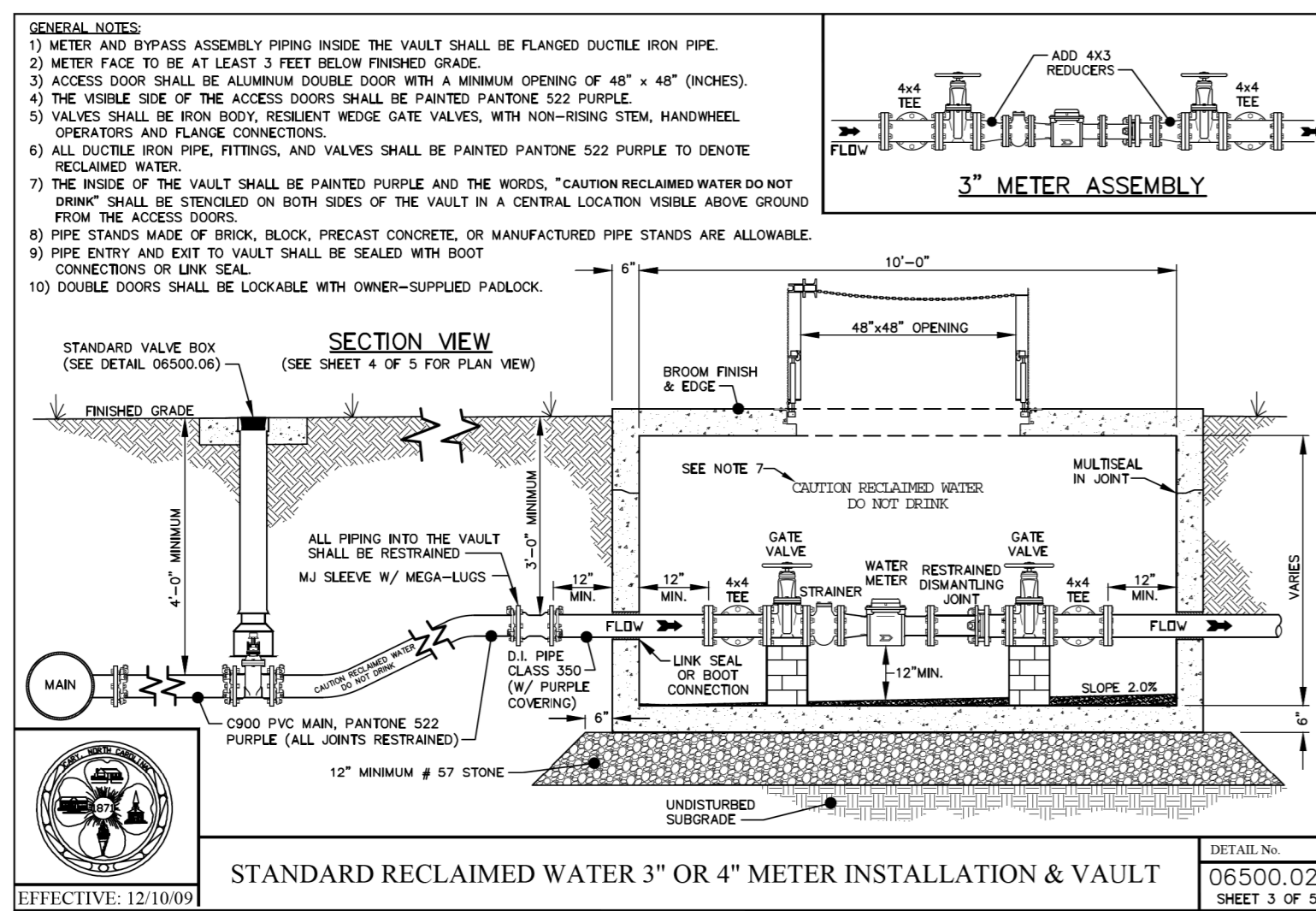
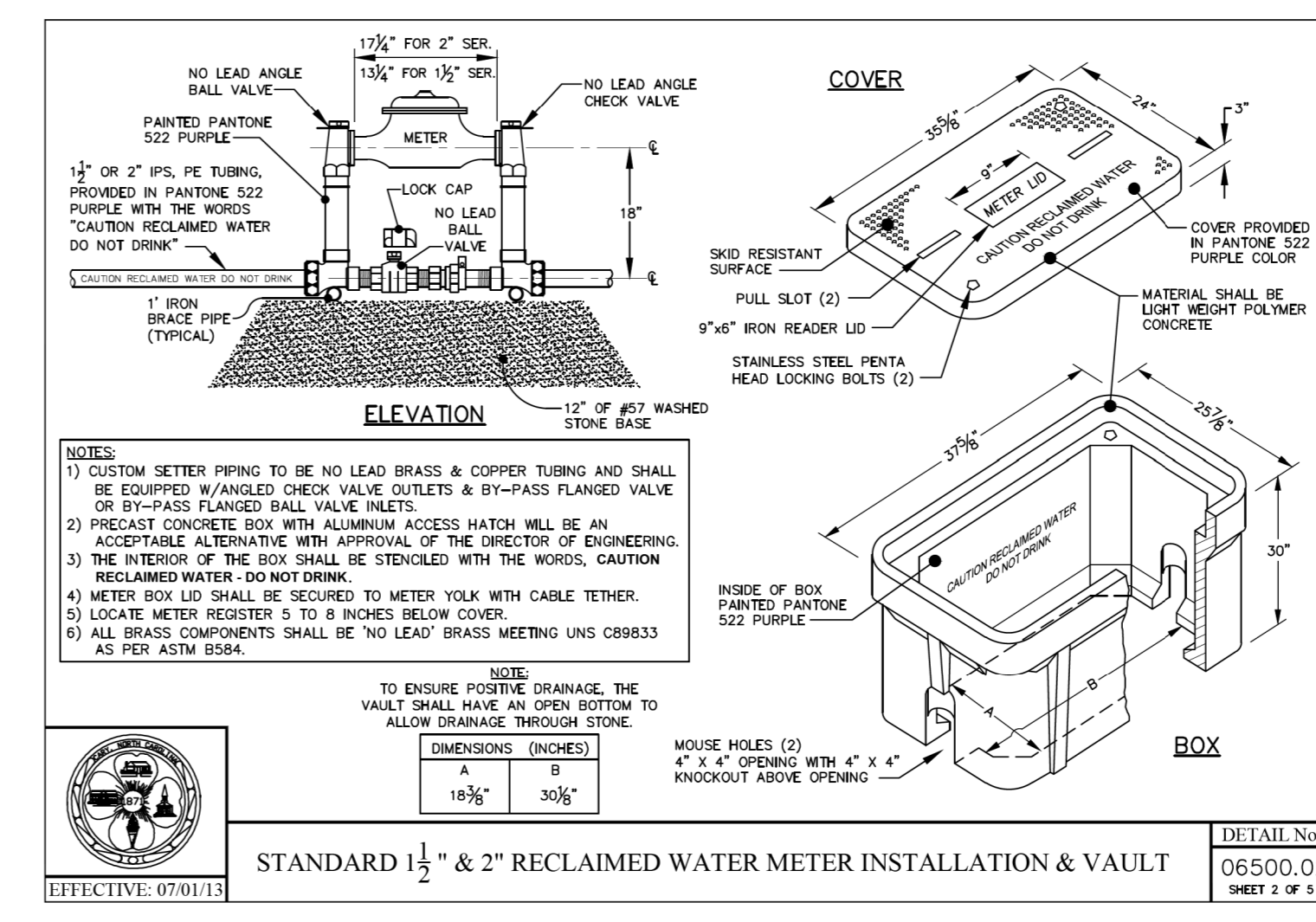
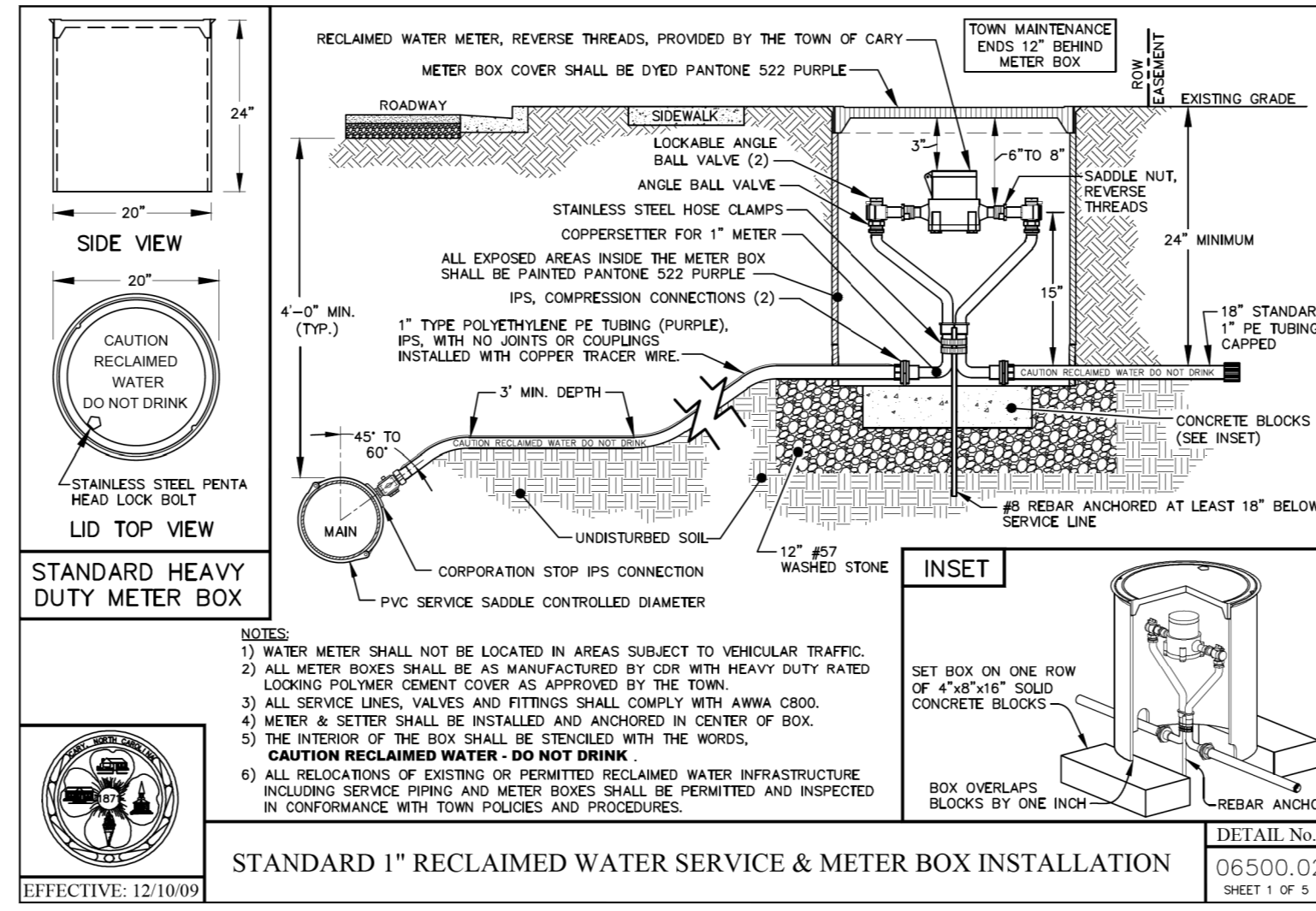
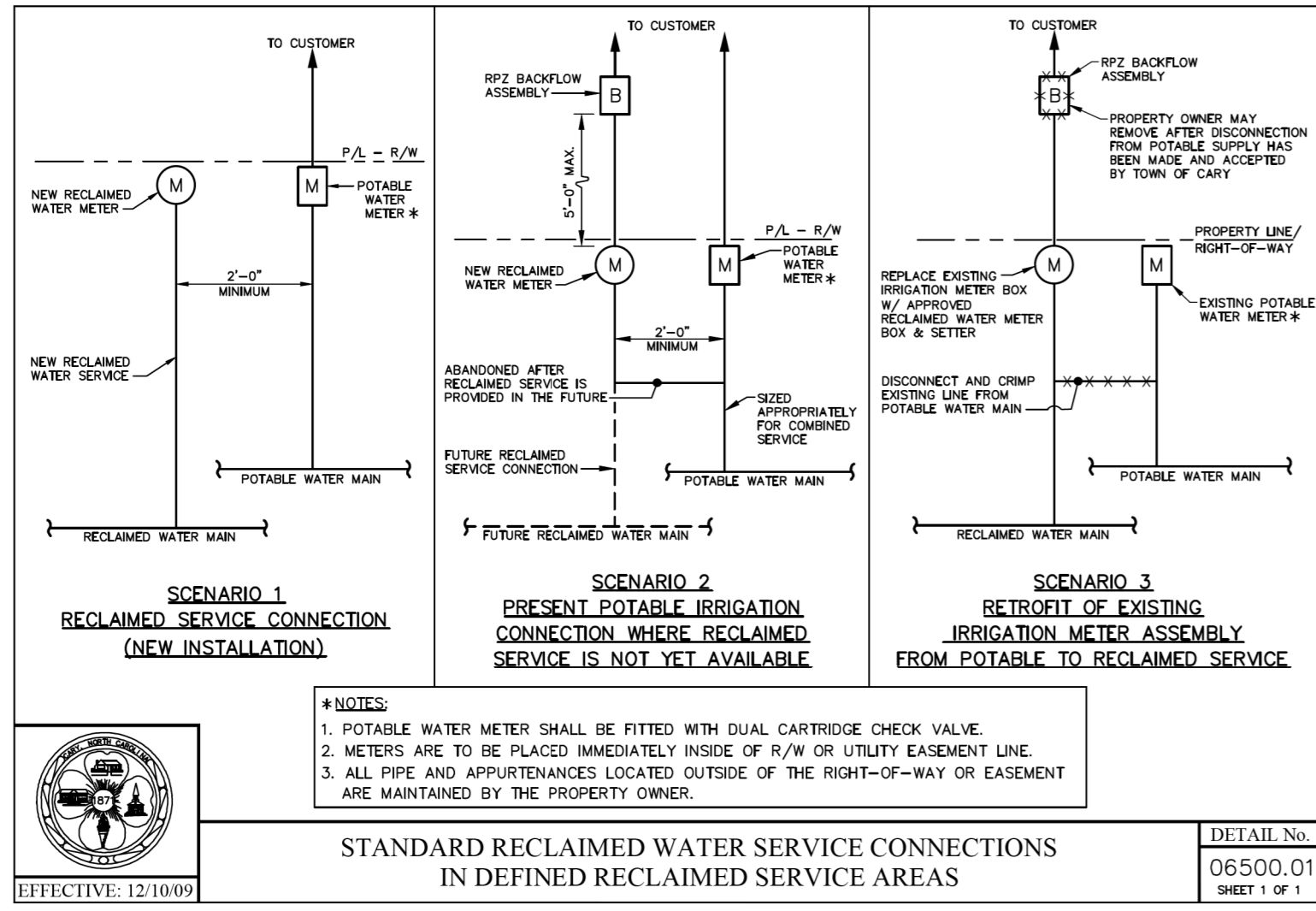
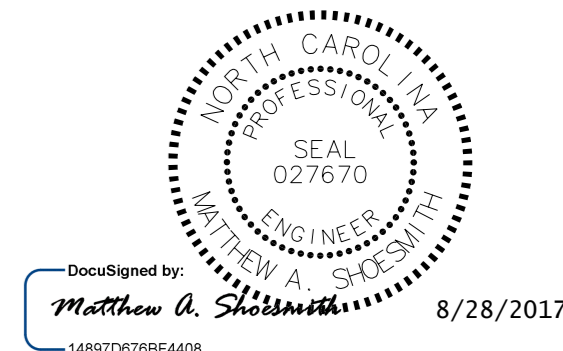
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8/28/2017

PROJECT REFERENCE NO. U-5828	SHEET NO. UC-4A
RW SHEET NO.	
UTILITY CONSTRUCTION ENGINEER	
	
DocuSigned by: Matthew A. Shoemaker	
8/28/2017	



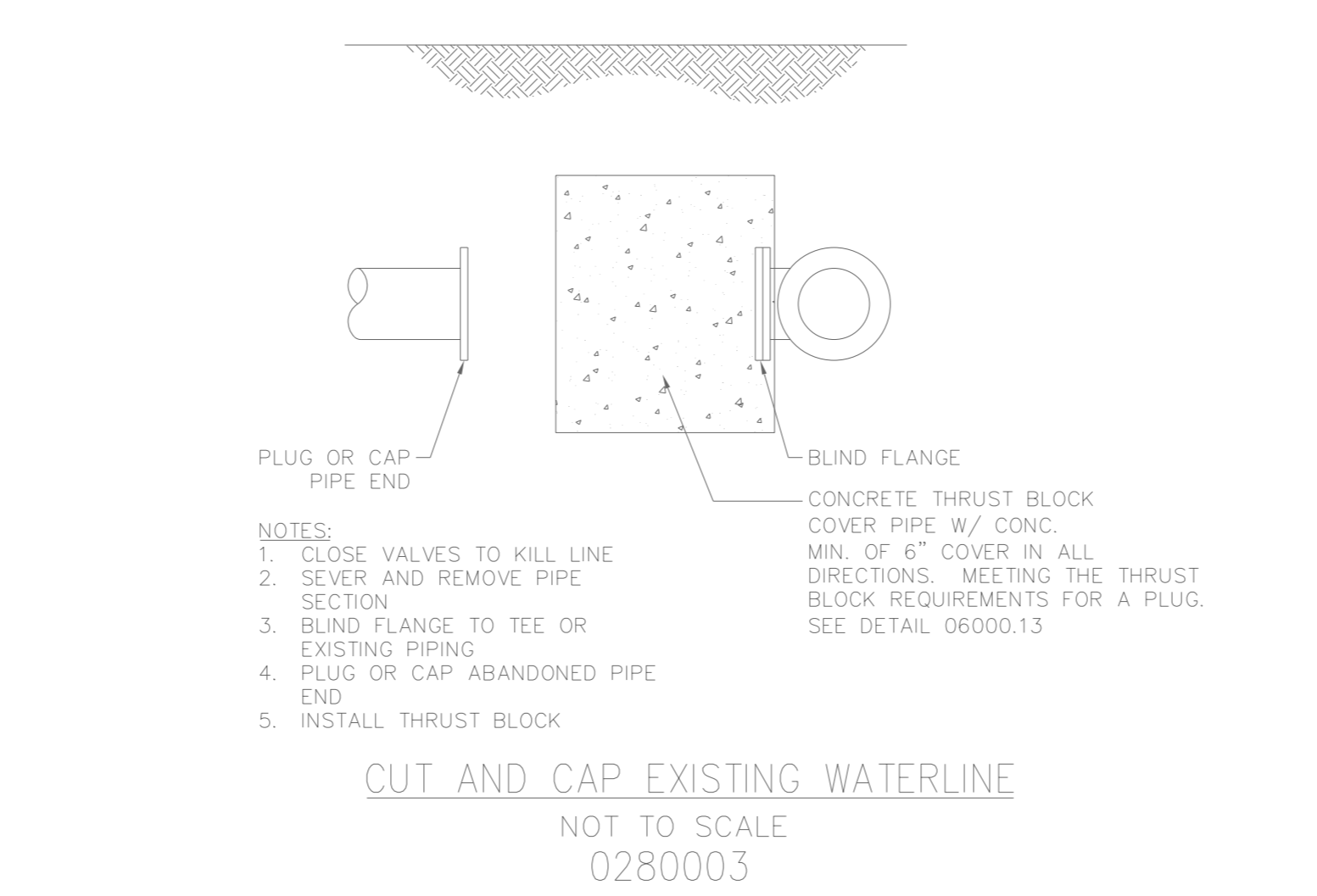
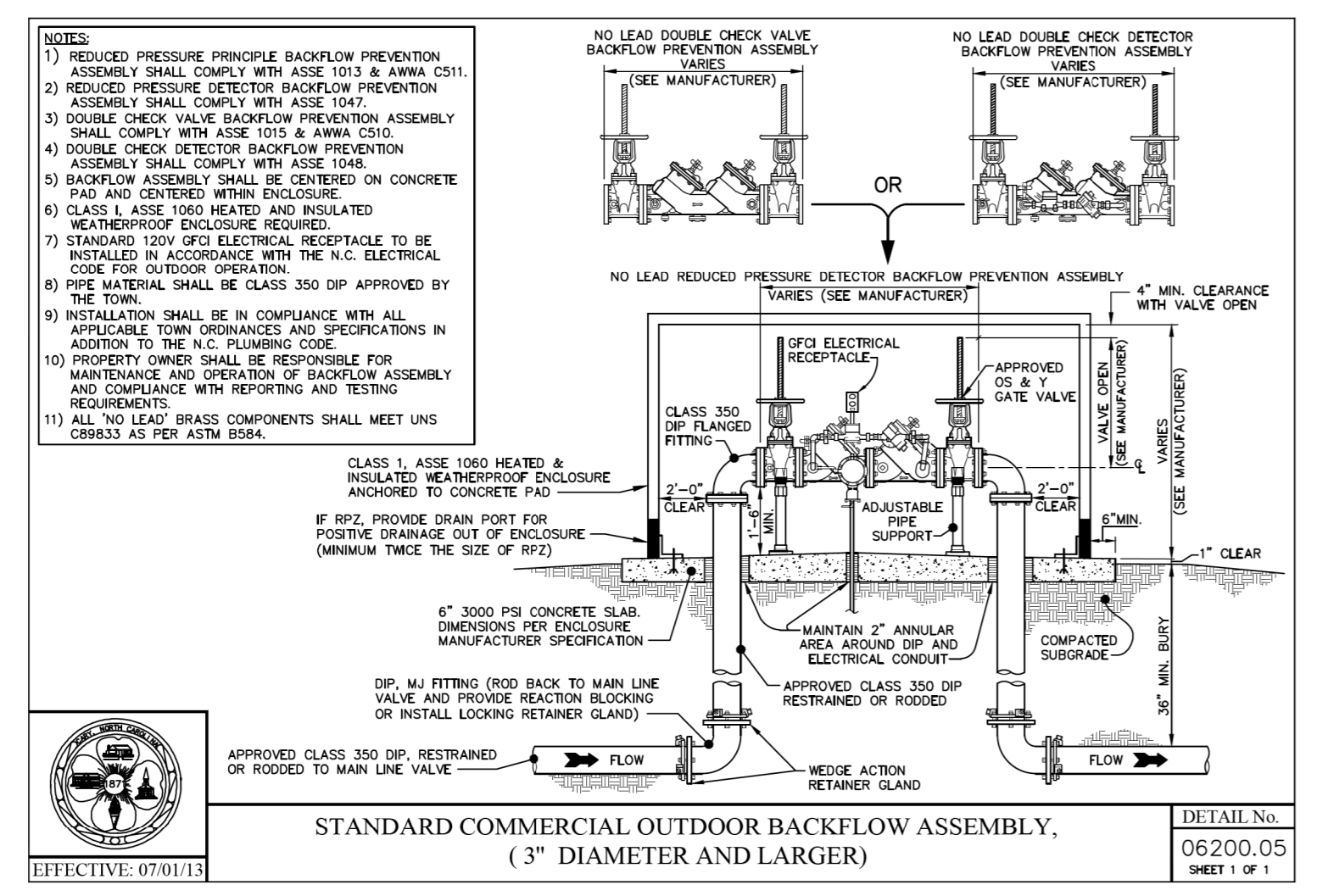
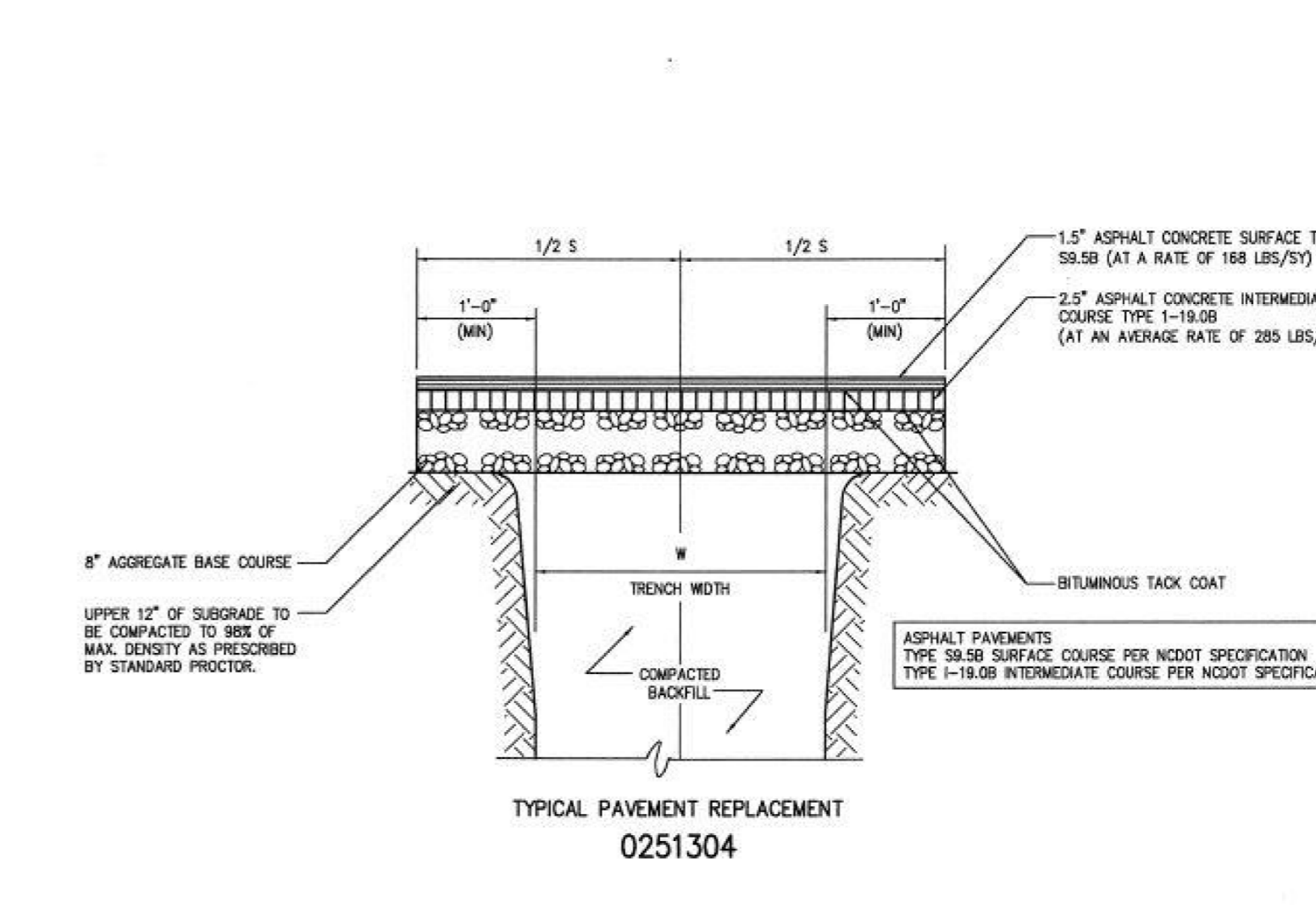
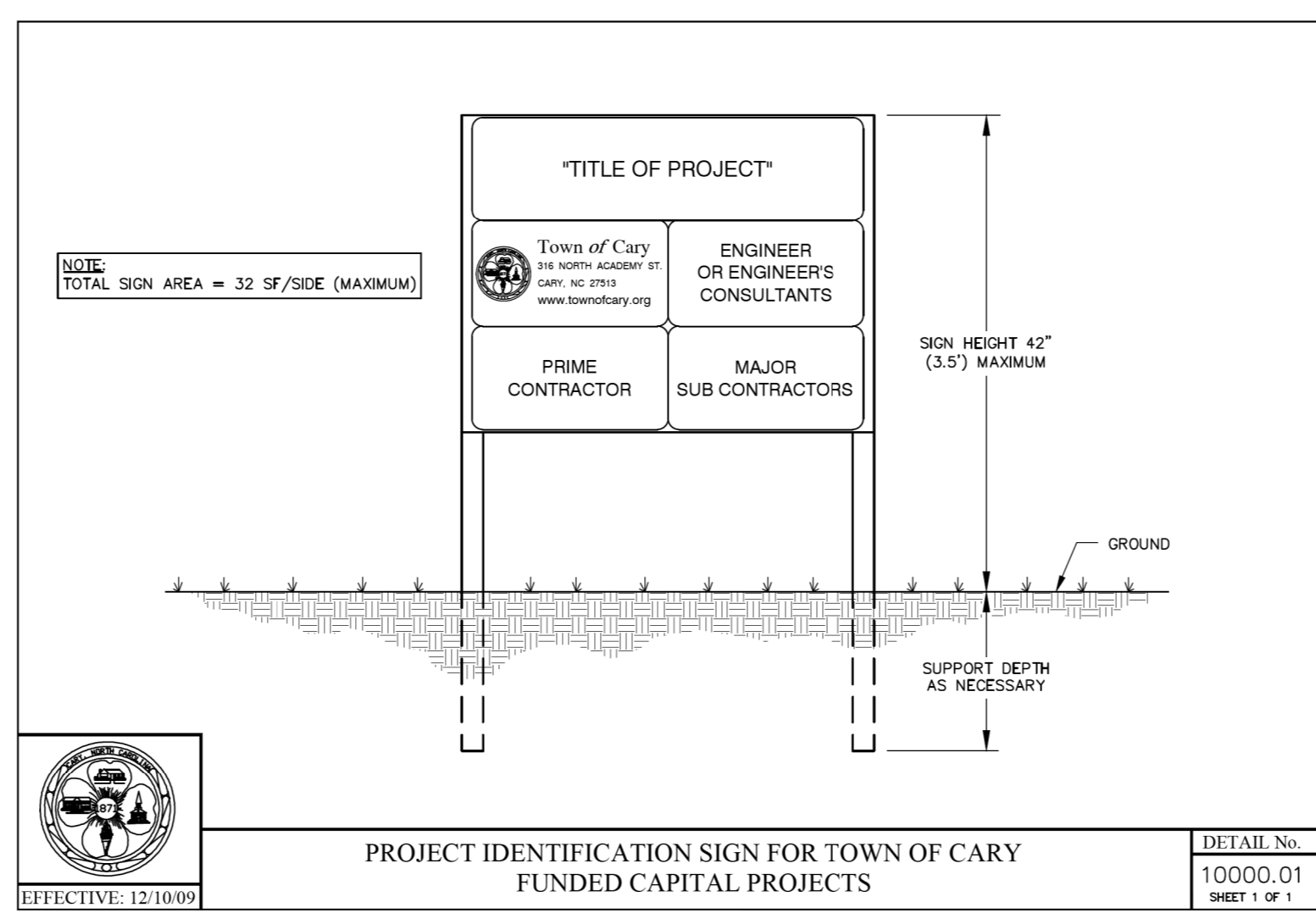
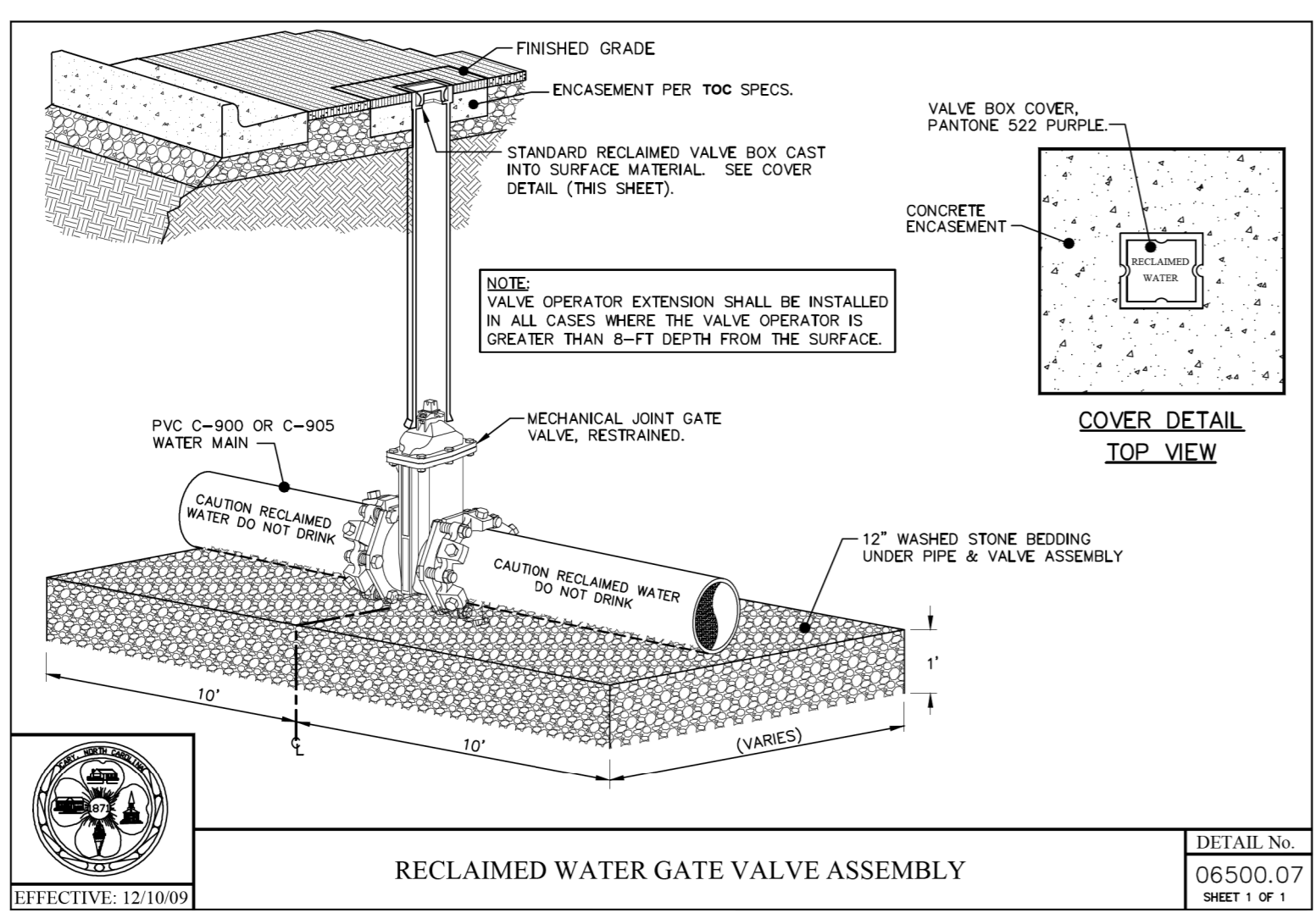
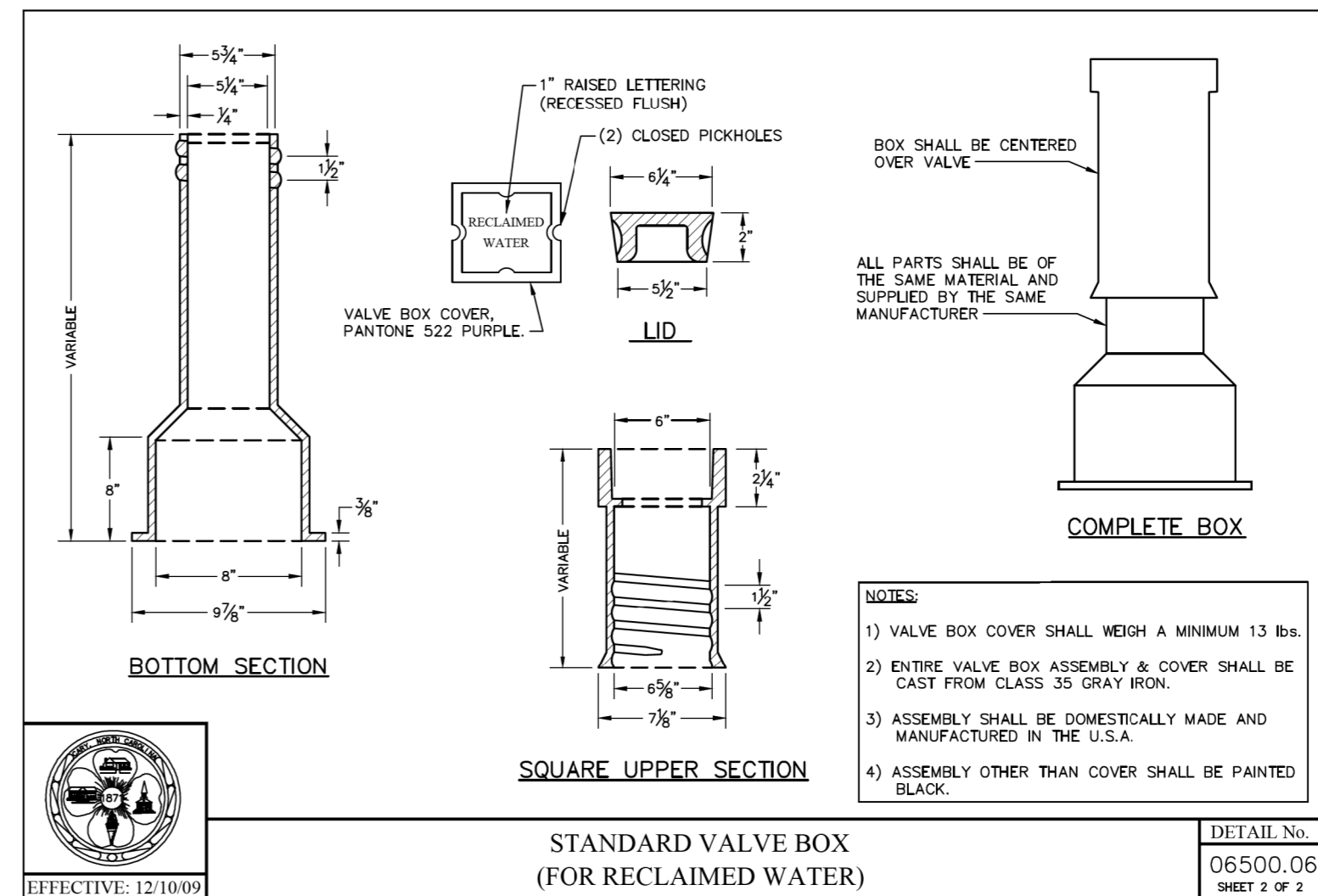
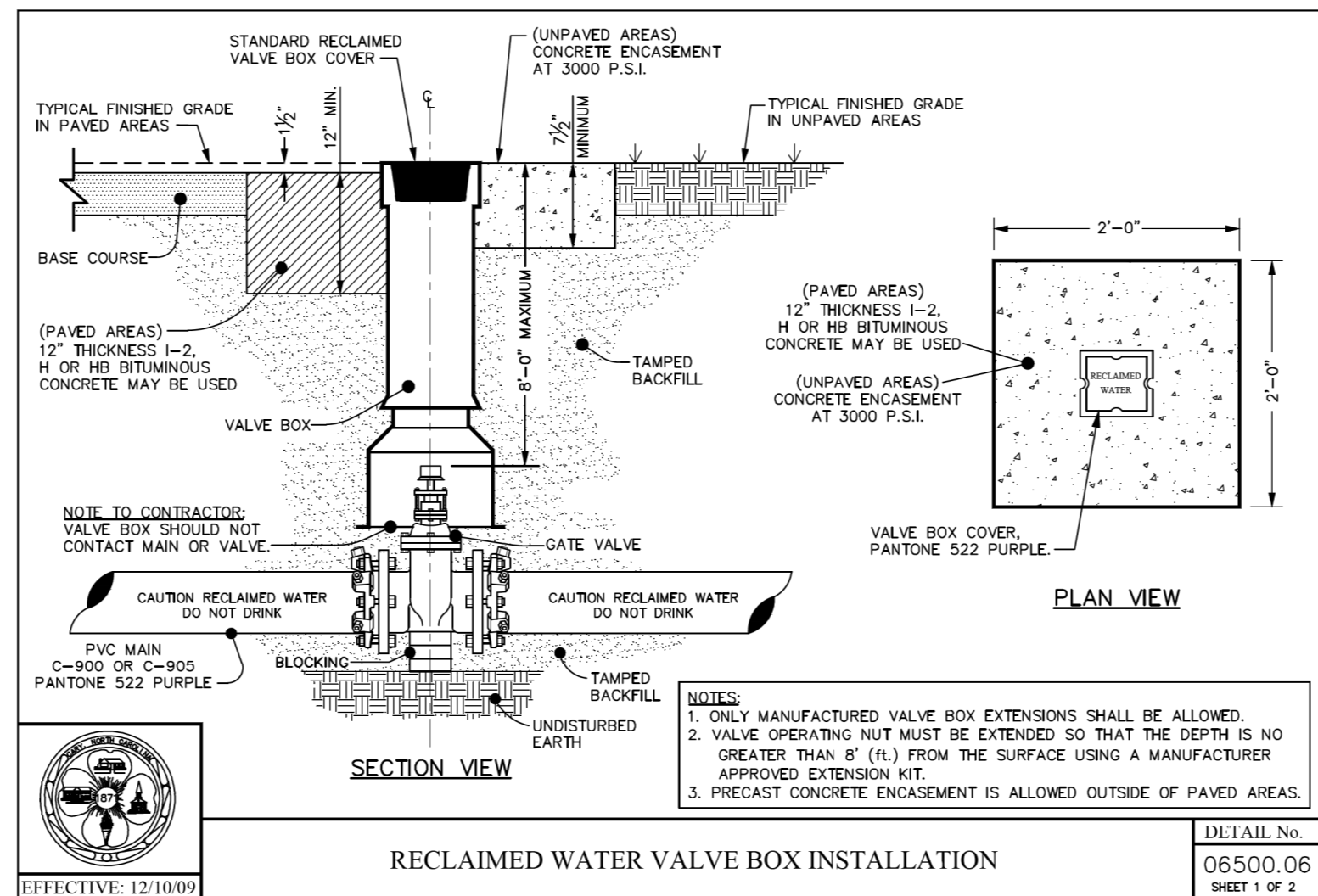
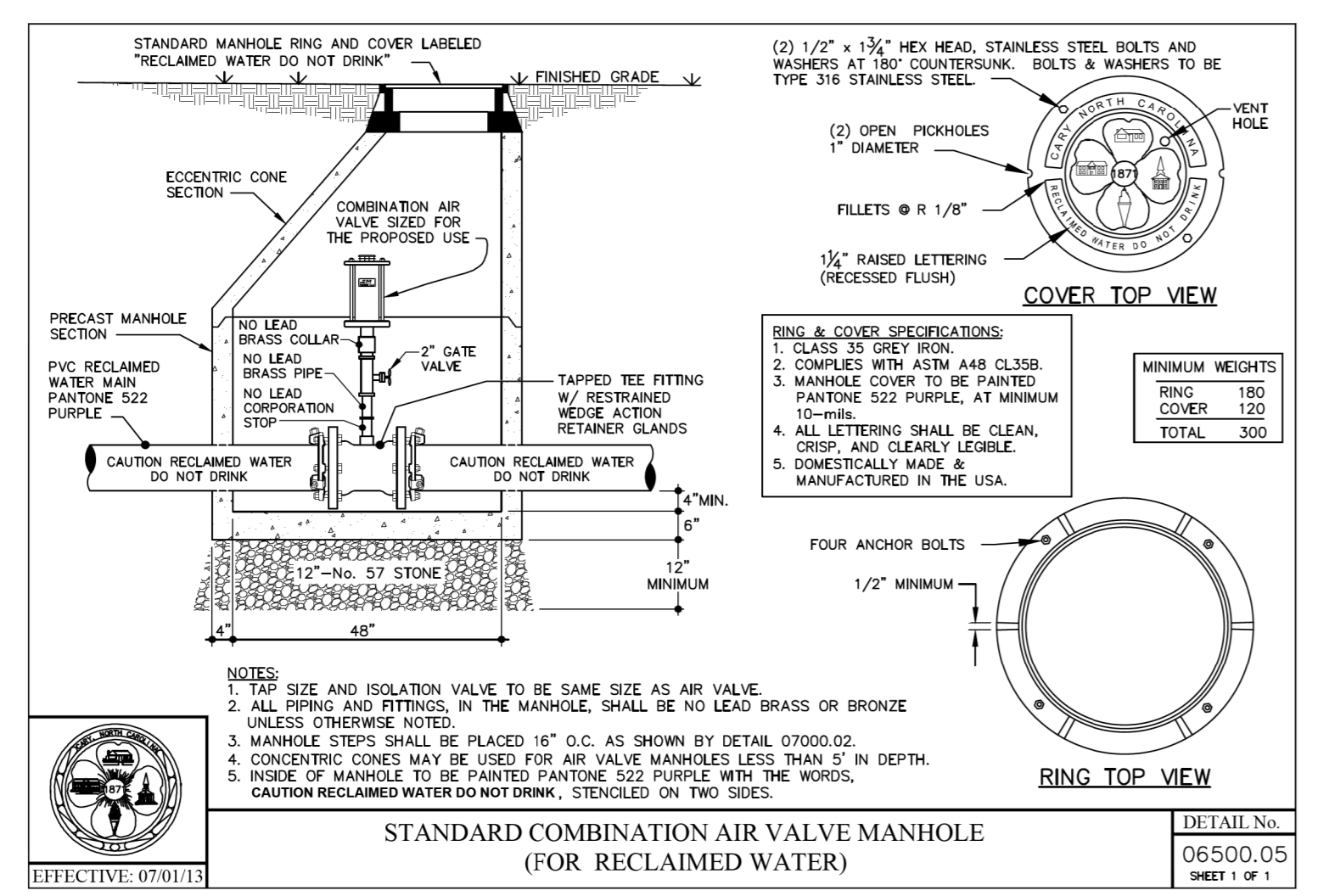
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K:\VAL_Roadway\01208004 - McCrinmon Parkway\Phase 1\Plan\Utility Construction\Phase2_01208004_of_01_Loc04_pst.dgn 8/28/2017

Kimley»Horn
 P.O. BOX 33068
 RALEIGH, N.C. 27636-3068
 RIGHT-OF-WAY REV.
 CONST. REV.

PROJECT REFERENCE NO. <i>U-5828</i>	SHEET NO. <i>UC-4C</i>
RW SHEET NO. UTILITY CONSTRUCTION ENGINEER	
DATE: 12/28/2018	



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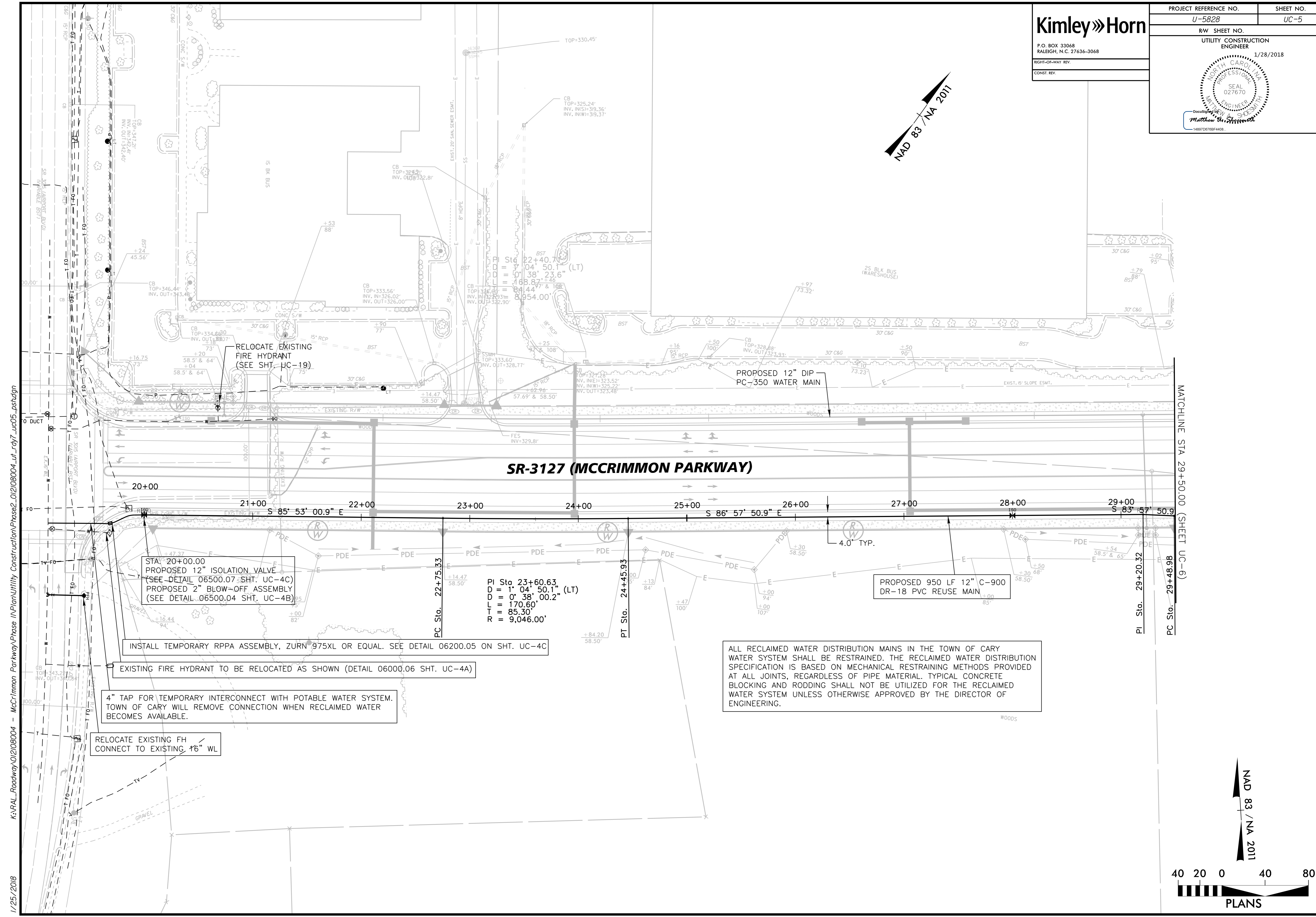
Kimley»Horn

P.O. BOX 33068
RALEIGH, N.C. 27636-3068

RIGHT-OF-WAY REV.
CONST. REV.

PROJECT REFERENCE NO. <i>U-5828</i>	SHEET NO. <i>UC-5</i>
RW SHEET NO.	
UTILITY CONSTRUCTION ENGINEER	
1/28/2018	

DocuSign
Matthew W. Apperly
148970768F4408



RELOCATE EXISTING
FIRE HYDRANT
(SEE SHT. UC-19)

PROPOSED 12" DIP
PC-350 WATER MAIN

SR-3127 (MCCRIMMON PARKWAY)

STA. 20+00.00
PROPOSED 12" ISOLATION VALVE
(SEE DETAIL 06500.07, SHT. UC-4C)
PROPOSED 2" BLOW-OFF ASSEMBLY
(SEE DETAIL 06500.04, SHT. UC-4B)

PI Sta. 23+60.63
D = 1' 04" 50.1" (LT)
L = 170.60'
T = 85.30'
R = 9,046.00'

PROPOSED 950 LF 12" C-900
DR-18 PVC REUSE MAIN

INSTALL TEMPORARY RPPA ASSEMBLY, ZURN 975XL OR EQUAL. SEE DETAIL 06200.05 ON SHT. UC-4C

EXISTING FIRE HYDRANT TO BE RELOCATED AS SHOWN (DETAIL 06000.06 SHT. UC-4A)

4" TAP FOR TEMPORARY INTERCONNECT WITH POTABLE WATER SYSTEM.
TOWN OF CARY WILL REMOVE CONNECTION WHEN RECLAIMED WATER
BECOMES AVAILABLE.

RELOCATE EXISTING FH
CONNECT TO EXISTING 16" WL

ALL RECLAIMED WATER DISTRIBUTION MAINS IN THE TOWN OF CARY
WATER SYSTEM SHALL BE RESTRAINED. THE RECLAIMED WATER DISTRIBUTION
SPECIFICATION IS BASED ON MECHANICAL RESTRAINING METHODS PROVIDED
AT ALL JOINTS, REGARDLESS OF PIPE MATERIAL. TYPICAL CONCRETE
BLOCKING AND RODDING SHALL NOT BE UTILIZED FOR THE RECLAIMED
WATER SYSTEM UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF
ENGINEERING.

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1/25/2018

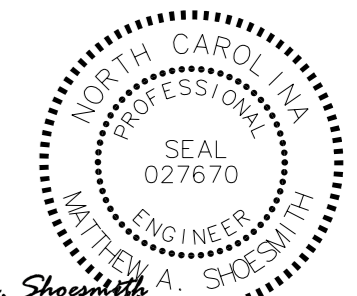
MATCHLINE STA 29+50.00 (SHEET UC-6)

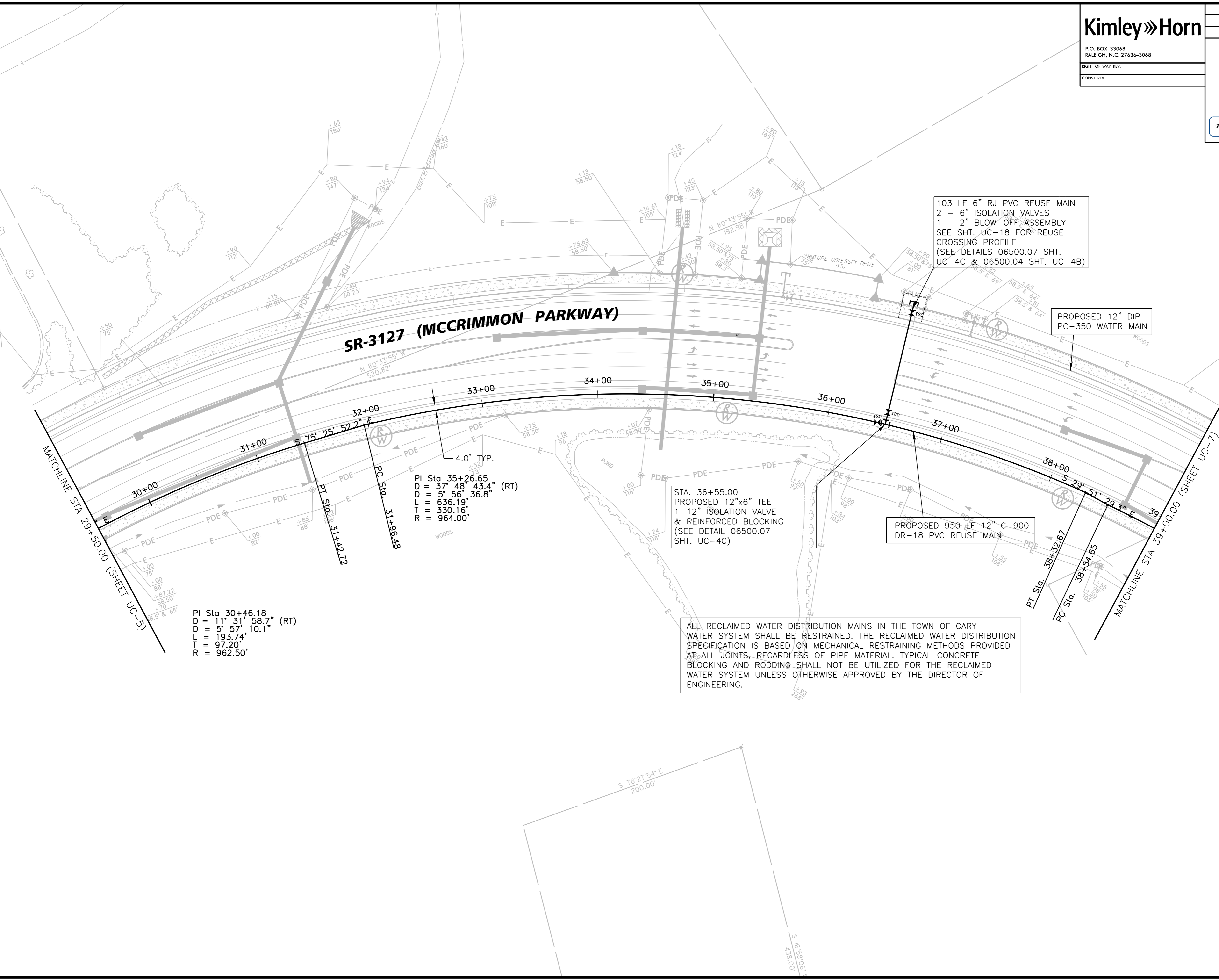
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PLANS

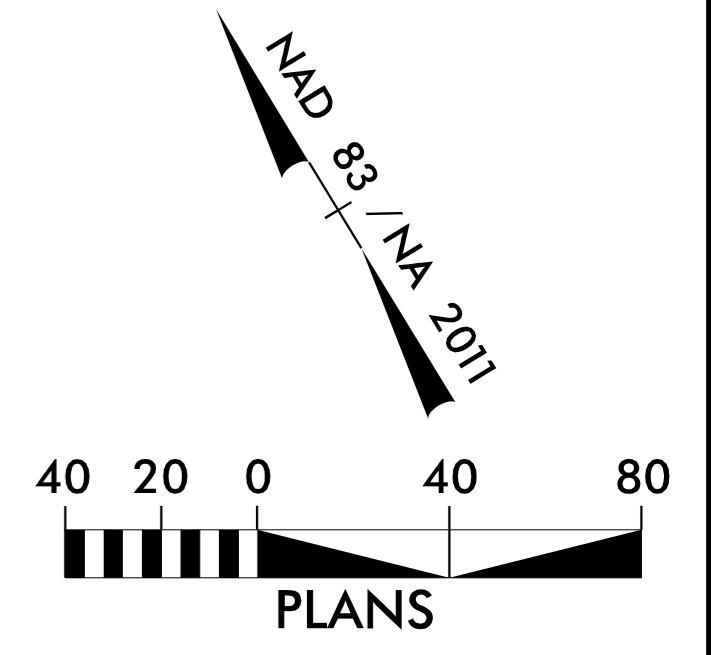
Kimley»Horn
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 RALEIGH, N.C. 27636-3068
 RIGHT-OF-WAY REV.
 CONST. REV.

PROJECT REFERENCE NO. U-5828	SHEET NO. UC-6
R/W SHEET NO. UTILITY CONSTRUCTION ENGINEER	
	
Designed by: Matthew A. Shoemith <small>14897D6768F4408</small>	
8/28/2017	

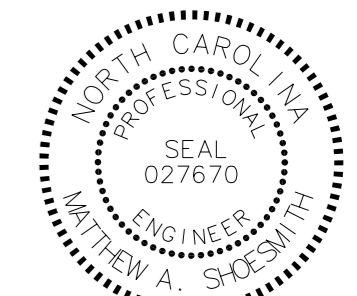


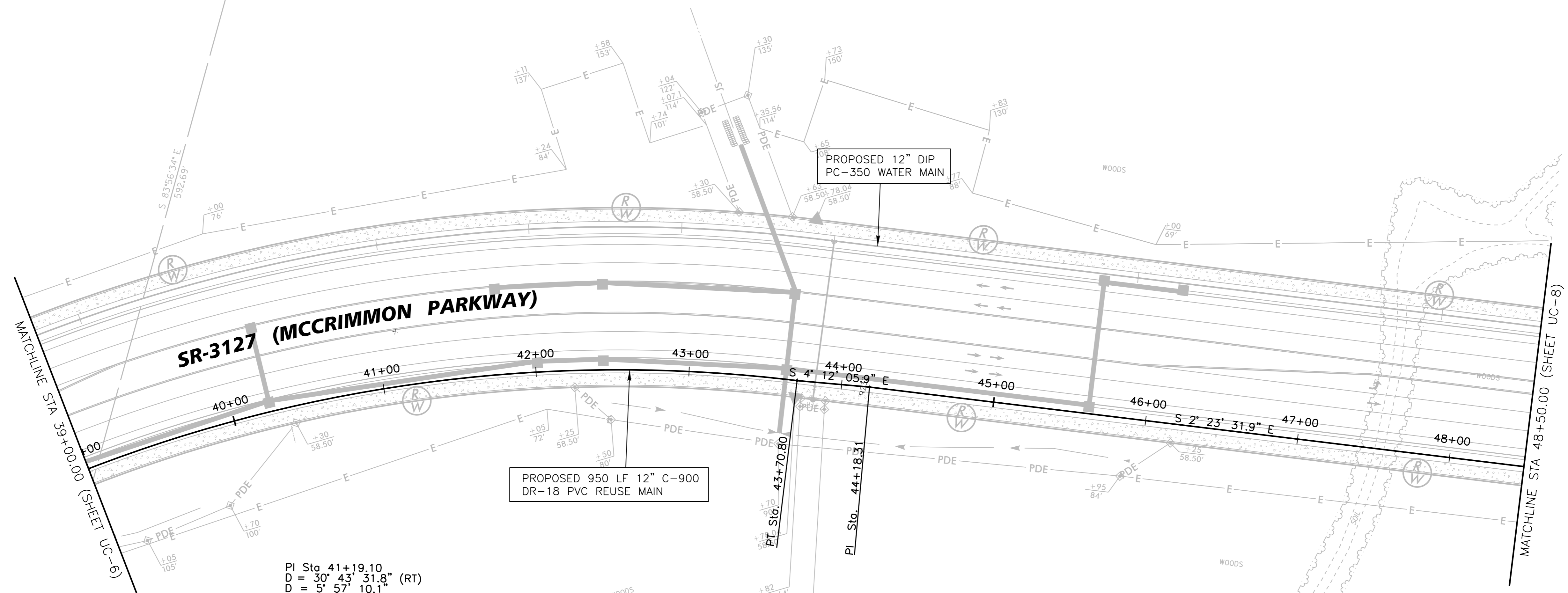
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8/28/2017



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 RIGHT-OF-WAY REV.
 CONST. REV.

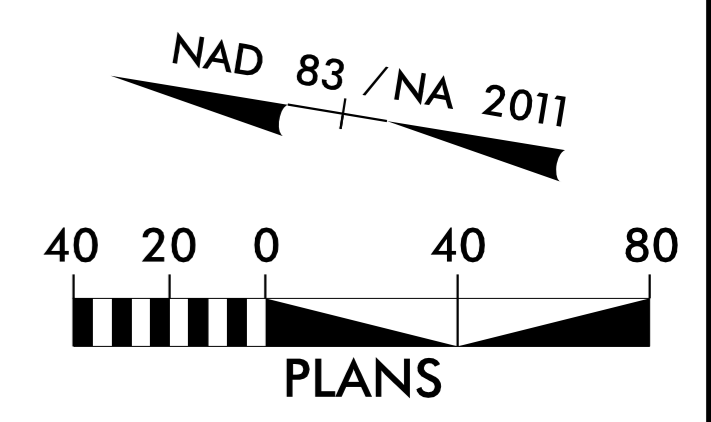
PROJECT REFERENCE NO. U-5828	SHEET NO. UC-7
R/W SHEET NO. UTILITY CONSTRUCTION ENGINEER	
	
DocuSigned by: Matthew A. Shoemith 8/28/2017	

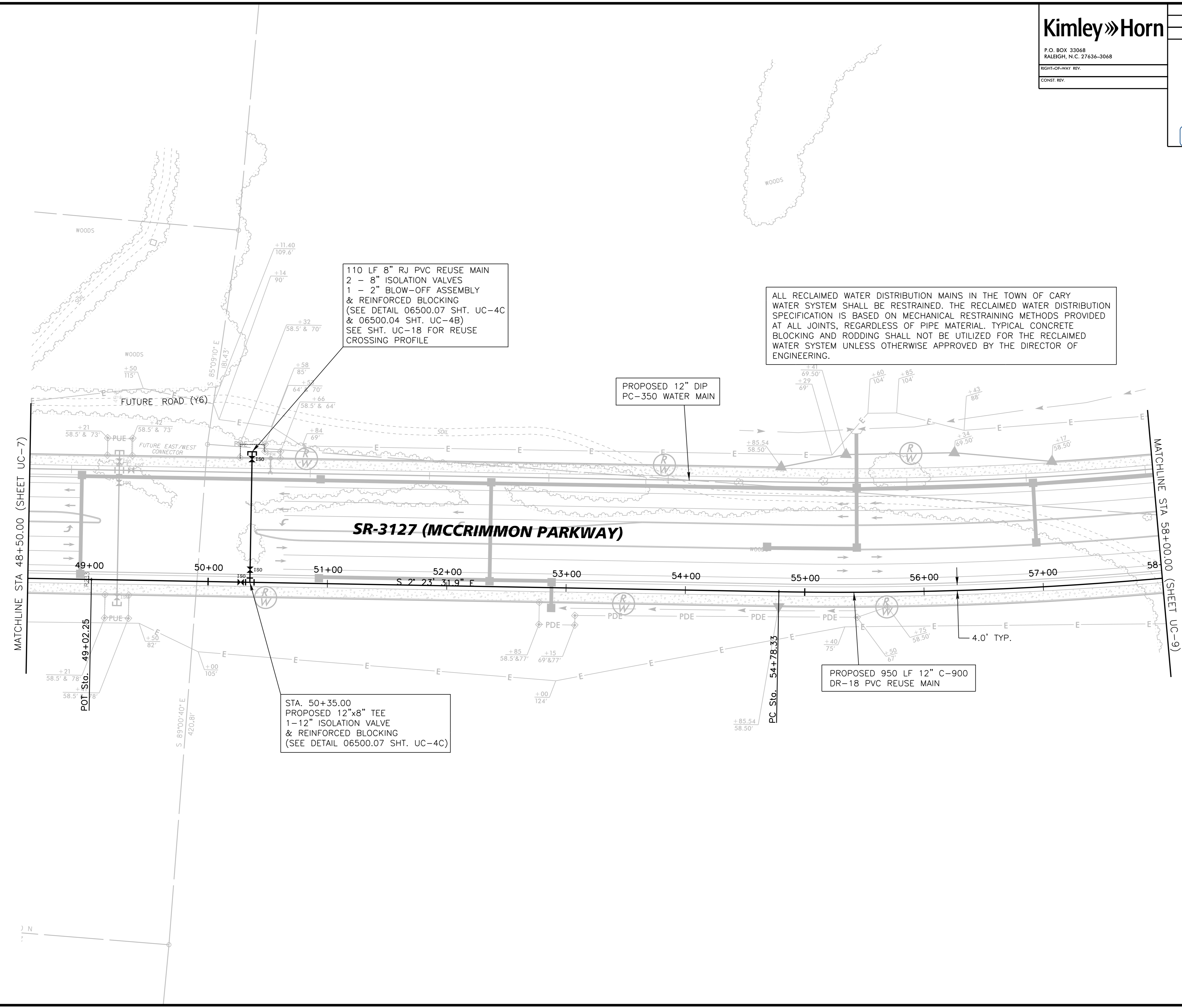


PI Sta 41+19.10
 D = 30° 43' 31.8" (RT)
 D = 5' 57' 10.1"
 L = 516.15'
 T = 264.44'
 R = 962.50'

ALL RECLAIMED WATER DISTRIBUTION MAINS IN THE TOWN OF CARY WATER SYSTEM SHALL BE RESTRAINED. THE RECLAIMED WATER DISTRIBUTION SPECIFICATION IS BASED ON MECHANICAL RESTRAINING METHODS PROVIDED AT ALL JOINTS, REGARDLESS OF PIPE MATERIAL. TYPICAL CONCRETE BLOCKING AND RODDING SHALL NOT BE UTILIZED FOR THE RECLAIMED WATER SYSTEM UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF ENGINEERING.

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110 LF 8" RJ PVC REUSE MAIN
 2 - 8" ISOLATION VALVES
 1 - 2" BLOW-OFF ASSEMBLY
 & REINFORCED BLOCKING
 (SEE DETAIL 06500.07 SHT. UC-4C
 & 06500.04 SHT. UC-4B)
 SEE SHT. UC-18 FOR REUSE
 CROSSING PROFILE

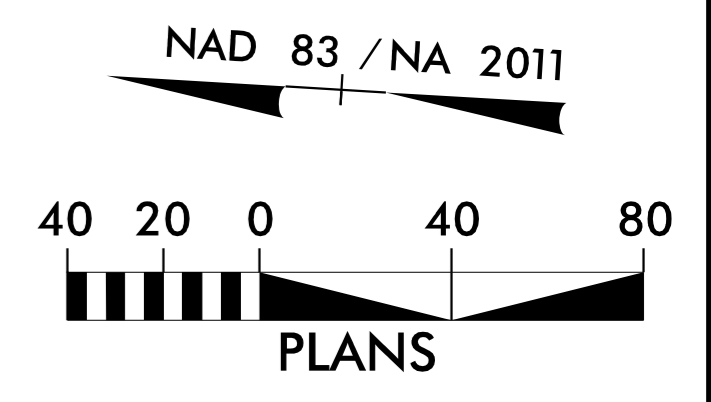
ALL RECLAIMED WATER DISTRIBUTION MAINS IN THE TOWN OF CARY WATER SYSTEM SHALL BE RESTRAINED. THE RECLAIMED WATER DISTRIBUTION SPECIFICATION IS BASED ON MECHANICAL RESTRAINING METHODS PROVIDED AT ALL JOINTS, REGARDLESS OF PIPE MATERIAL. TYPICAL CONCRETE BLOCKING AND RODDING SHALL NOT BE UTILIZED FOR THE RECLAIMED WATER SYSTEM UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF ENGINEERING.


PROPOSED 12" DIP
 PC-350 WATER MAIN

STA. 50+35.00
 PROPOSED 12"x8" TEE
 1-12" ISOLATION VALVE
 & REINFORCED BLOCKING
 (SEE DETAIL 06500.07 SHT. UC-4C)

PROPOSED 950 LF 12" C-900
 DR-18 PVC REUSE MAIN

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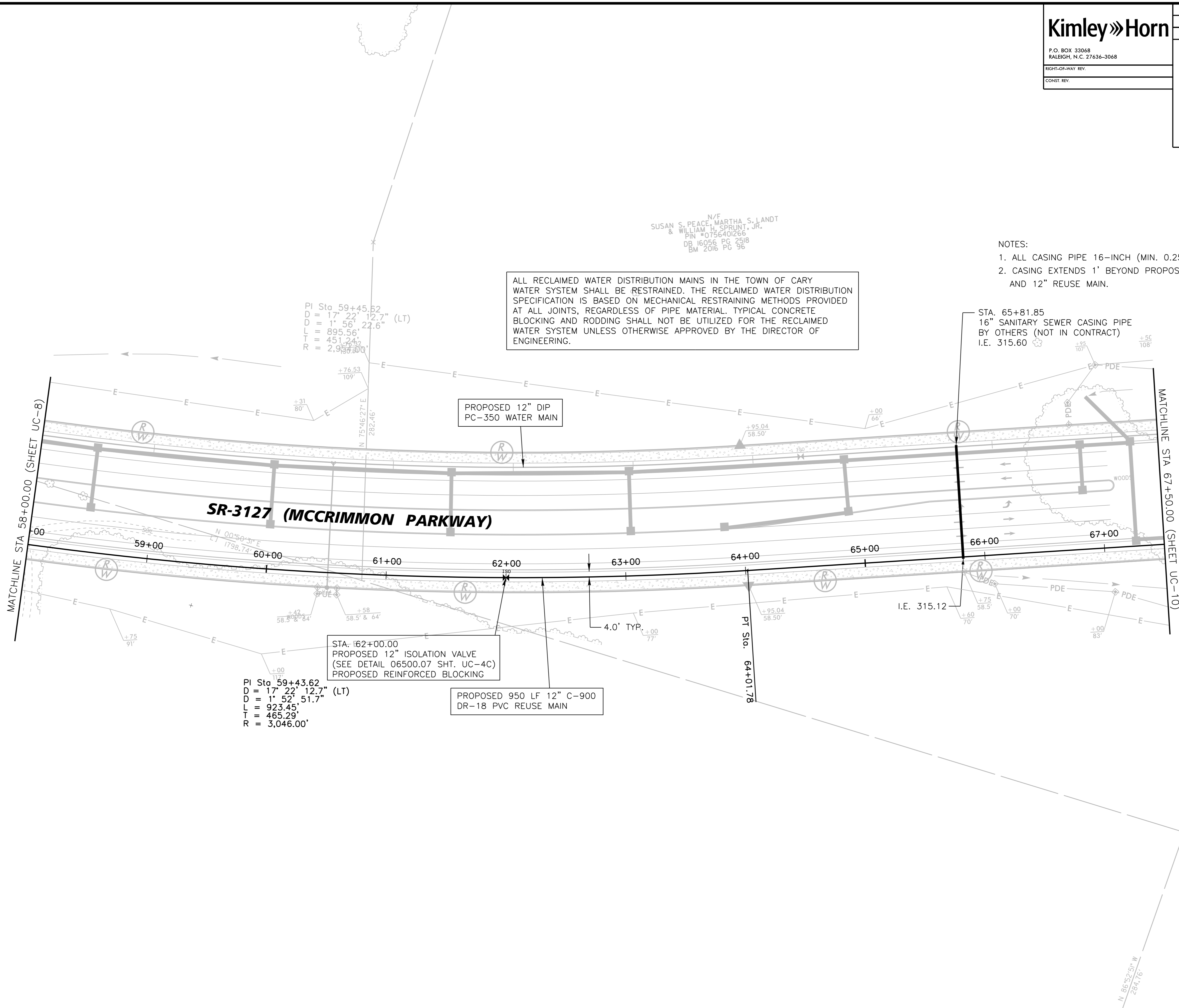


Kimley»Horn P.O. BOX 33068 RALEIGH, N.C. 27636-3068 RIGHT-OF-WAY REV. CONST. REV.	PROJECT REFERENCE NO. <i>U-5828</i>	SHEET NO. <i>UC-9</i>
	R/W SHEET NO. UTILITY CONSTRUCTION ENGINEER	
		DocuSigned by: <i>Matthew A. Shoemith</i>
		8/28/2017

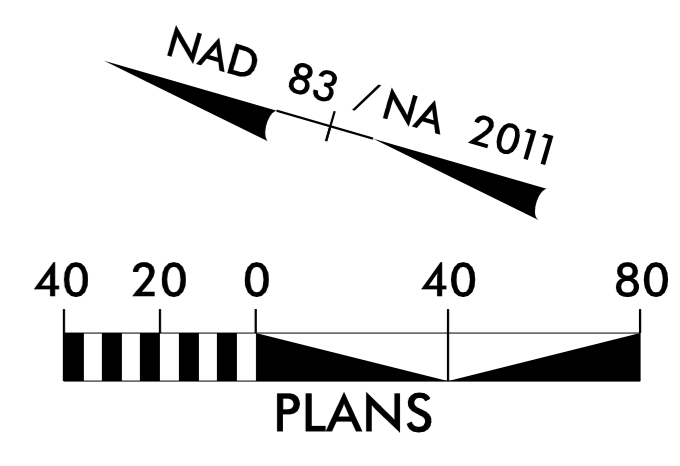
N/F
SUSAN S. PEACE, MARTHA S. LANDT
& WILLIAM H. SPRUNT, JR.
PIN #075640266
DB 16056 PG 25/18
BM 2016 PG 96

ALL RECLAIMED WATER DISTRIBUTION MAINS IN THE TOWN OF CARY WATER SYSTEM SHALL BE RESTRAINED. THE RECLAIMED WATER DISTRIBUTION SPECIFICATION IS BASED ON MECHANICAL RESTRAINING METHODS PROVIDED AT ALL JOINTS, REGARDLESS OF PIPE MATERIAL. TYPICAL CONCRETE BLOCKING AND RODDING SHALL NOT BE UTILIZED FOR THE RECLAIMED WATER SYSTEM UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF ENGINEERING.

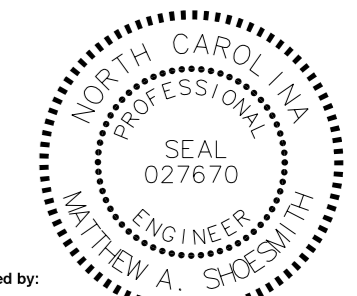
- NOTES:
1. ALL CASING PIPE 16-INCH (MIN. 0.250 INCHES THICK).
 2. CASING EXTENDS 1' BEYOND PROPOSED 12" WATER MAIN AND 12" REUSE MAIN.

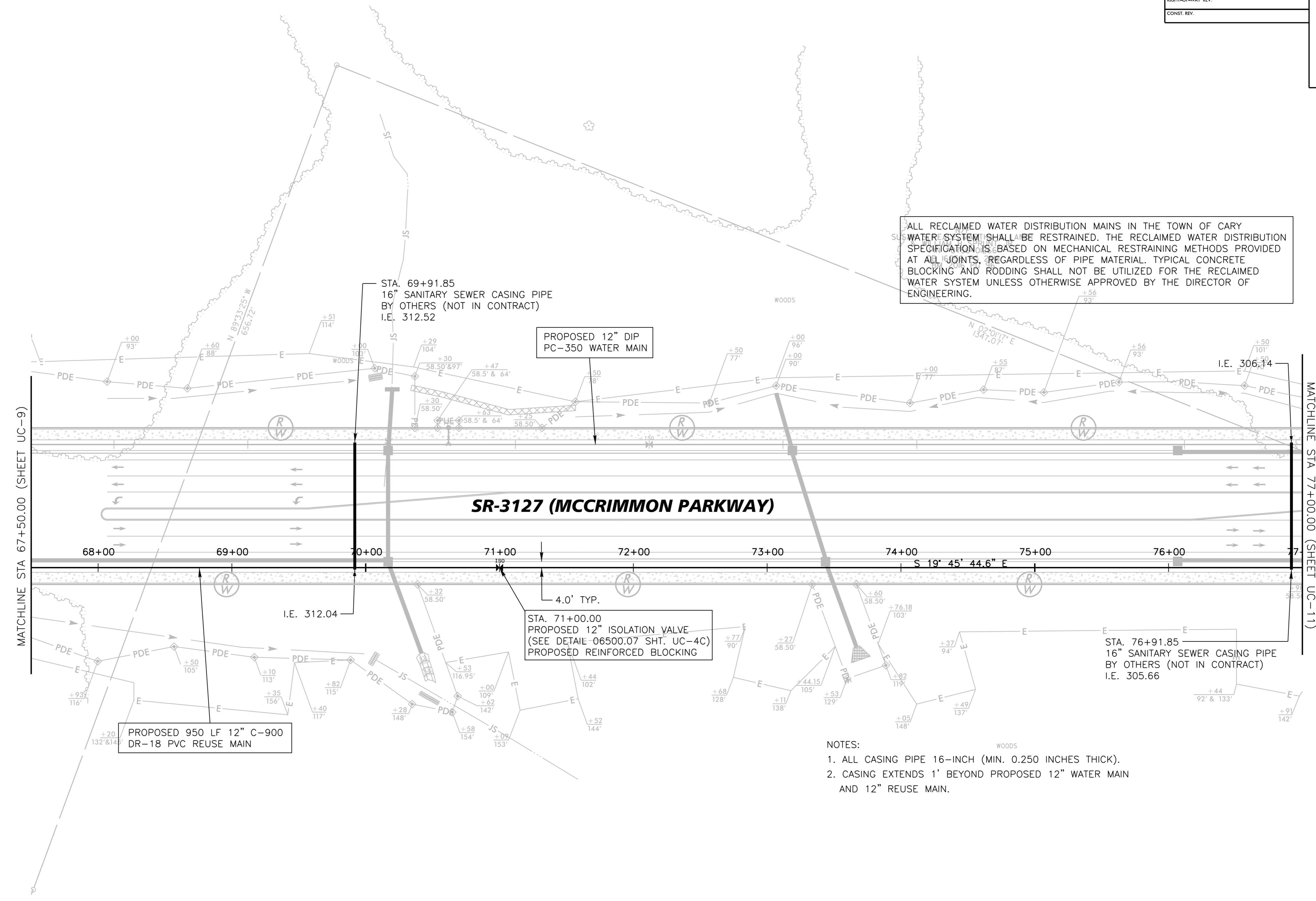


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 RALEIGH, N.C. 27636-3068
 RIGHT-OF-WAY REV.
 CONST. REV.

PROJECT REFERENCE NO. <i>U-5828</i>	SHEET NO. <i>UC-10</i>
R/W SHEET NO. UTILITY CONSTRUCTION ENGINEER	
	
DocuSigned by: <i>Matthew A. Shoemith</i> 8/28/2017	



ALL RECLAIMED WATER DISTRIBUTION MAINS IN THE TOWN OF CARY WATER SYSTEM SHALL BE RESTRAINED. THE RECLAIMED WATER DISTRIBUTION SPECIFICATION IS BASED ON MECHANICAL RESTRAINING METHODS PROVIDED AT ALL JOINTS, REGARDLESS OF PIPE MATERIAL. TYPICAL CONCRETE BLOCKING AND RODDING SHALL NOT BE UTILIZED FOR THE RECLAIMED WATER SYSTEM UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF ENGINEERING.

PROPOSED 12" DIP
PC-350 WATER MAIN

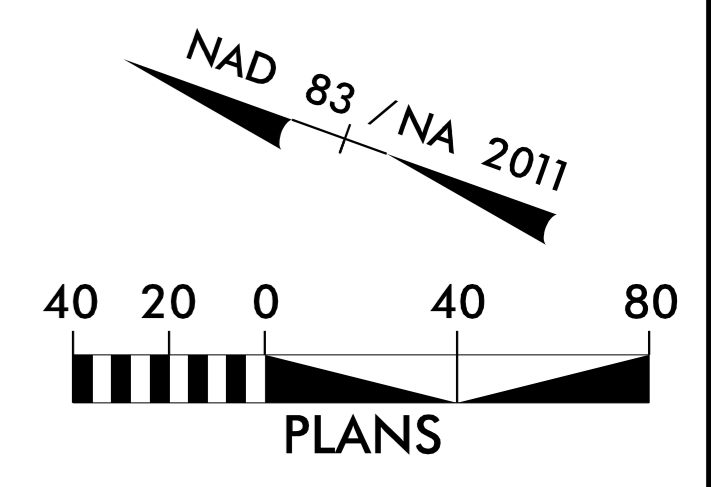
STA. 71+00.00
PROPOSED 12" ISOLATION VALVE
(SEE DETAIL 06500.07 SHT. UC-4C)
PROPOSED REINFORCED BLOCKING

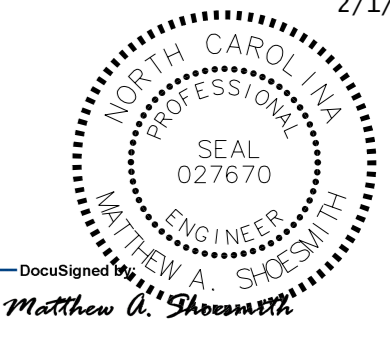
PROPOSED 950 LF 12" C-900
DR-18 PVC REUSE MAIN

STA. 76+91.85
16" SANITARY SEWER CASING PIPE
BY OTHERS (NOT IN CONTRACT)
I.E. 305.66

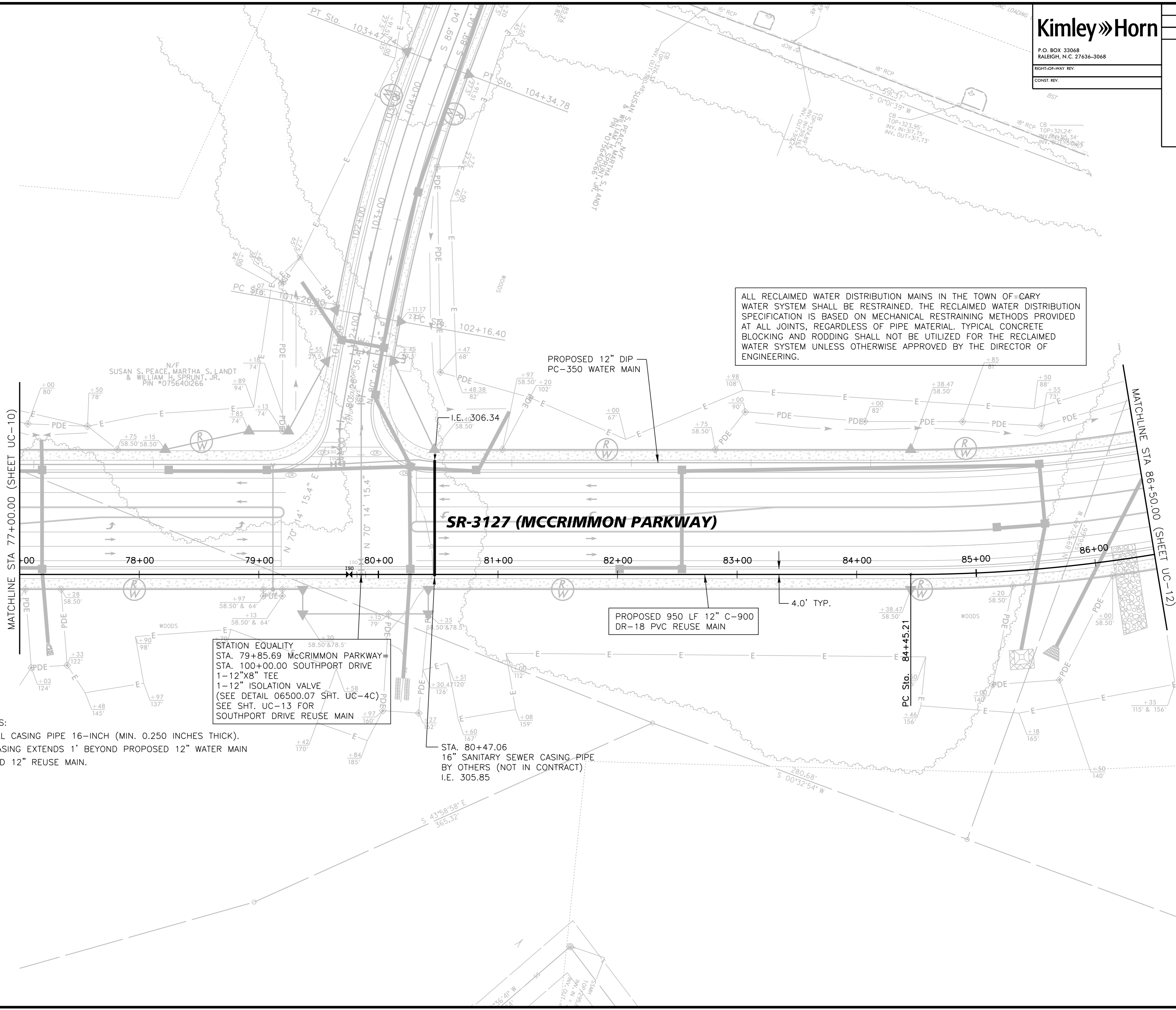
- NOTES:
1. ALL CASING PIPE 16-INCH (MIN. 0.250 INCHES THICK).
 2. CASING EXTENDS 1' BEYOND PROPOSED 12" WATER MAIN AND 12" REUSE MAIN.

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PROJECT REFERENCE NO. <i>U-5828</i>	SHEET NO. <i>UC-11</i>
R/W SHEET NO. UTILITY CONSTRUCTION ENGINEER 2/1/2018	
	

ALL RECLAIMED WATER DISTRIBUTION MAINS IN THE TOWN OF CARY WATER SYSTEM SHALL BE RESTRAINED. THE RECLAIMED WATER DISTRIBUTION SPECIFICATION IS BASED ON MECHANICAL RESTRAINING METHODS PROVIDED AT ALL JOINTS, REGARDLESS OF PIPE MATERIAL. TYPICAL CONCRETE BLOCKING AND RODDING SHALL NOT BE UTILIZED FOR THE RECLAIMED WATER SYSTEM UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF ENGINEERING.



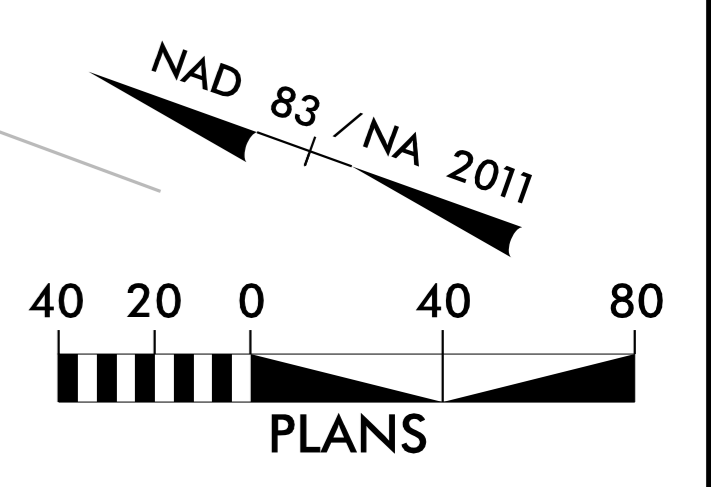
STATION EQUALITY
STA. 79+85.69 McCRIMMON PARKWAY=
STA. 100+00.00 SOUTHPORT DRIVE
1-12"X8" TEE
1-12" ISOLATION VALVE
(SEE DETAIL 06500.07 SHT. UC-4C)
SEE SHT. UC-13 FOR
SOUTHPORT DRIVE REUSE MAIN

PROPOSED 950 LF 12" C-900
DR-18 PVC REUSE MAIN

PROPOSED 12" DIP
PC-350 WATER MAIN

- NOTES:
1. ALL CASING PIPE 16-INCH (MIN. 0.250 INCHES THICK).
 2. CASING EXTENDS 1' BEYOND PROPOSED 12" WATER MAIN AND 12" REUSE MAIN.

STA. 80+47.06
16" SANITARY SEWER CASING PIPE
BY OTHERS (NOT IN CONTRACT)
I.E. 305.85



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1/31/2018

STA. 86+89.82
135 LF 16" SANITARY SEWER
CASING PIPE
STEEL CASING MIN. 0.250 INCHES THICK.
CONTRACTOR TO COORDINATE WITH DEVELOPER
TO ENSURE INVERT DEPTHS ARE SUFFICIENT TO
ACCOMMODATE FLOW FROM PROPOSED SITE.
I.E. 304.17

ALL RECLAIMED WATER DISTRIBUTION MAINS IN THE TOWN OF CARY
WATER SYSTEM SHALL BE RESTRAINED. THE RECLAIMED WATER DISTRIBUTION
SPECIFICATION IS BASED ON MECHANICAL RESTRAINING METHODS PROVIDED
AT ALL JOINTS, REGARDLESS OF PIPE MATERIAL. TYPICAL CONCRETE
BLOCKING AND RODDING SHALL NOT BE UTILIZED FOR THE RECLAIMED
WATER SYSTEM UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF
ENGINEERING.

RELOCATE EXISTING
FIRE HYDRANT
(SEE SHT. UC-27)

STA. 88+00.00
PROPOSED 12" ISOLATION VALVE
(SEE DETAIL 06500.07 SHT. UC-4C)
PROPOSED REINFORCED BLOCKING

8" RJ DIP
WATER LINE

PI Sta. 87+39.30
D = 26' 33" 38.6" (LT)
L = 4' 35" 54.2"
T = 577.61'
R = 1,246.00'

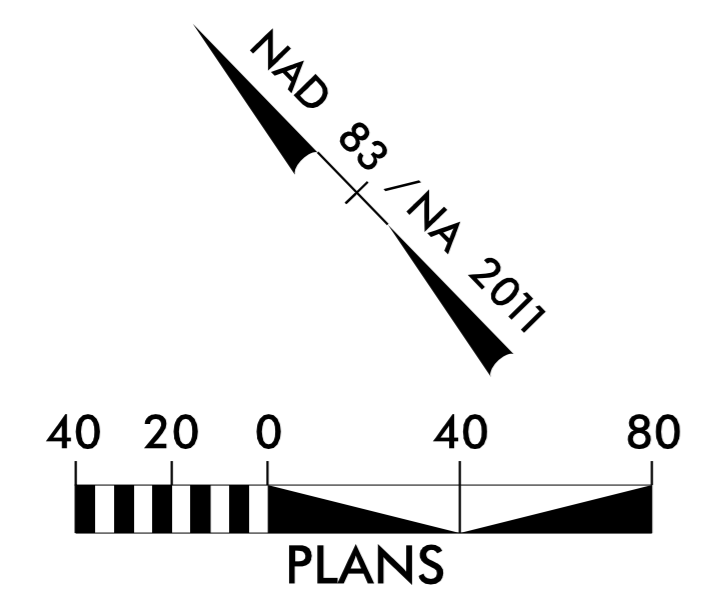
PROPOSED 838 LF 12" C-900
DR-18 PVC REUSE MAIN

PI Sta. 91+01.41
D = 7' 12" 14.9" (LT)
L = 156.96'
T = 78.59'
R = 1,248.36'

STA. 94+75.00
PROPOSED 12" ISOLATION VALVE
(SEE DETAIL 06500.07 SHT. UC-4C)
PROPOSED REINFORCED BLOCKING

STA. 94+87.24
PROPOSED 2" BLOW-OFF ASSEMBLY
END OF RECLAIMED WATER LINE
(SEE DETAIL 06500.04 SHT UC-4B)

- NOTES:
1. ALL CASING PIPE 16-INCH (MIN. 0.250 INCHES THICK).
 2. CASING EXTENDS 1' BEYOND PROPOSED 12" WATER MAIN AND 12" REUSE MAIN.



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1/25/2018

ALL RECLAIMED WATER DISTRIBUTION MAINS IN THE TOWN OF CARY WATER SYSTEM SHALL BE RESTRAINED. THE RECLAIMED WATER DISTRIBUTION SPECIFICATION IS BASED ON MECHANICAL RESTRAINING METHODS PROVIDED AT ALL JOINTS, REGARDLESS OF PIPE MATERIAL. TYPICAL CONCRETE BLOCKING AND RODDING SHALL NOT BE UTILIZED FOR THE RECLAIMED WATER SYSTEM UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF ENGINEERING.

STA. 101+45.95
1 - 8" 11.25' BEND

PROPOSED .527 LF 8" C-905
DR-18-PVC REUSE MAIN

PROPOSED 12" DIP
PC-350 WATER MAIN

STATION EQUALITY
 STA. 79+85.69 McCRIMMON PARKWAY
 STA. 100+00.00 SOUTHPORT DRIVE
 1 - 12" X 8" TEE
 1 - 8" ISOLATION VALVE
 (SEE DETAIL 06500.07 SHT. UC-4C)
 PROPOSED REINFORCED BLOCKING

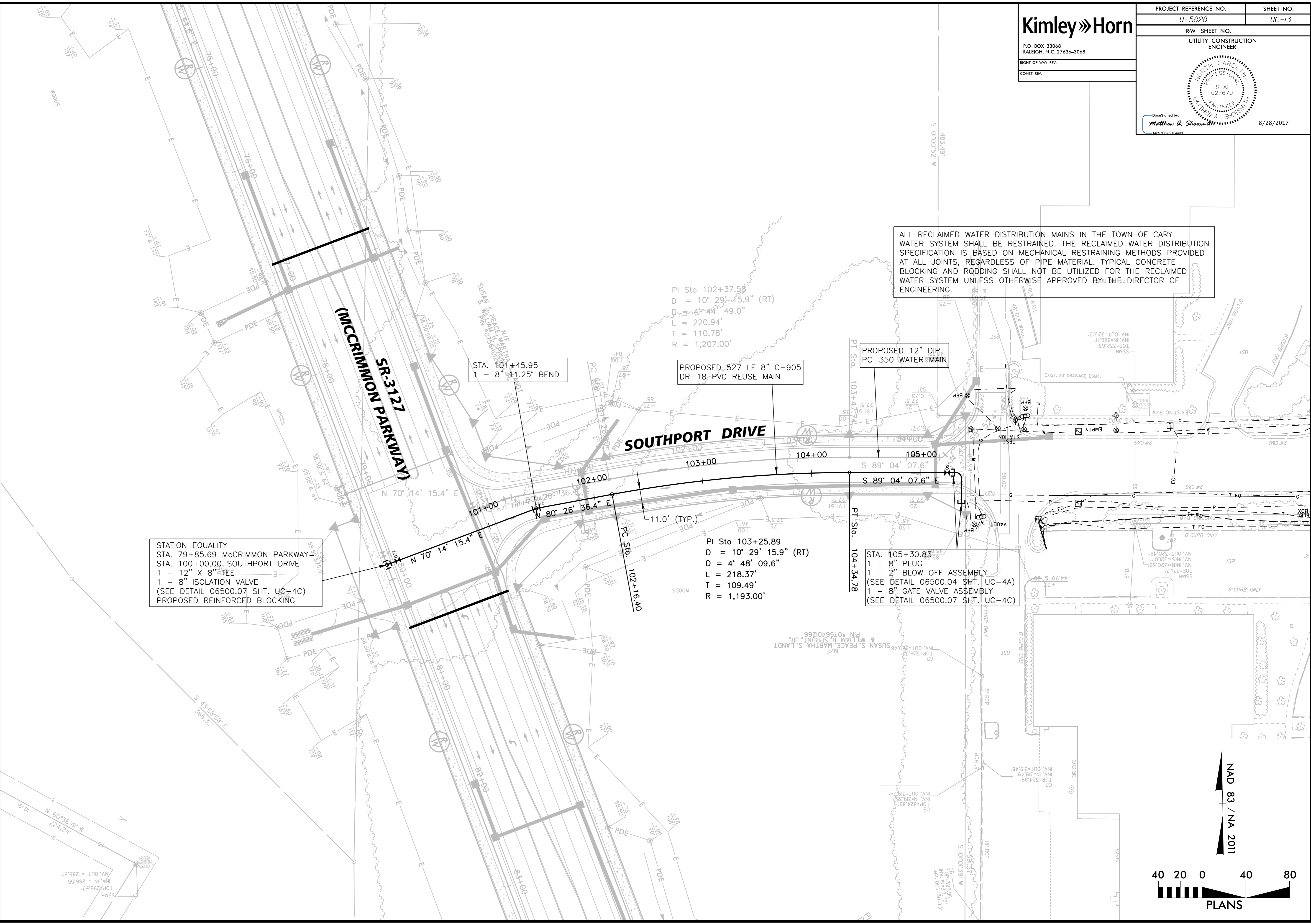
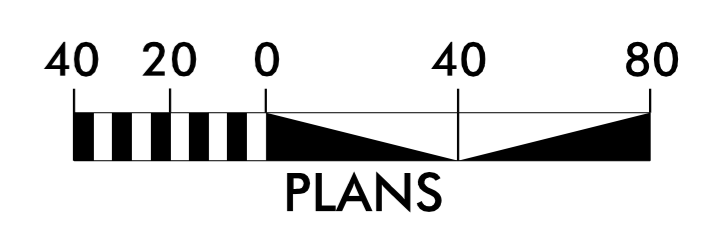
PI Sta 103+25.89
 D = 10' 29' 15.9" (RT)
 D = 4' 48' 09.6"
 L = 218.37'
 T = 109.49'
 R = 1,193.00'

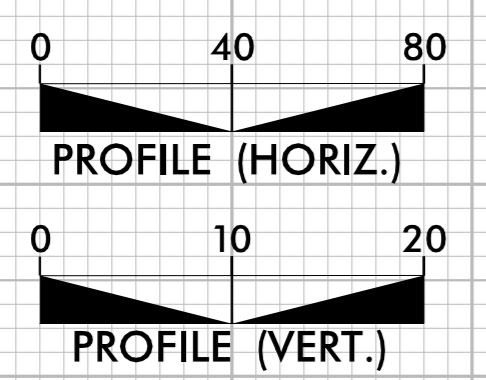
STA. 105+30.83
 1 - 8" PLUG
 1 - 2" BLOW OFF ASSEMBLY
 (SEE DETAIL 06500.04 SHT. UC-4A)
 1 - 8" GATE VALVE ASSEMBLY
 (SEE DETAIL 06500.07 SHT. UC-4C)

K:\RAL_Roadway\01208004 - McCrimmon Parkway Phase I\Plan\Utility Construction\Phase2_01208004_ut_rdy15_uc13_pshdgn

8/28/2017

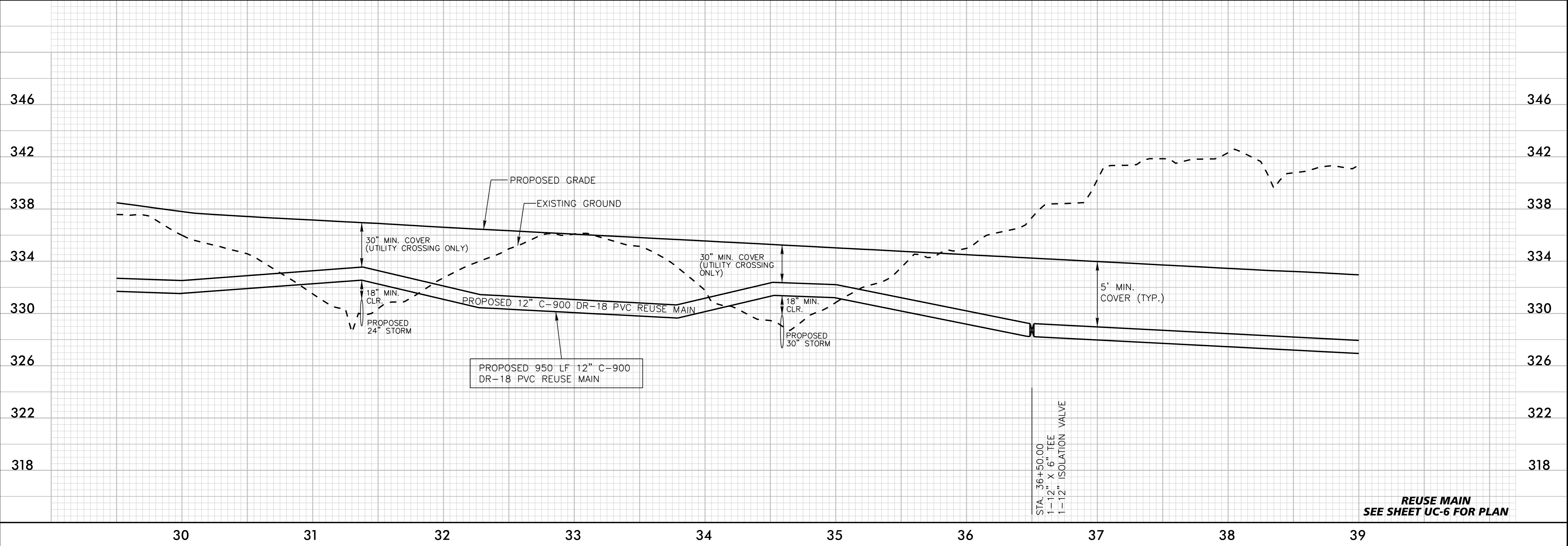
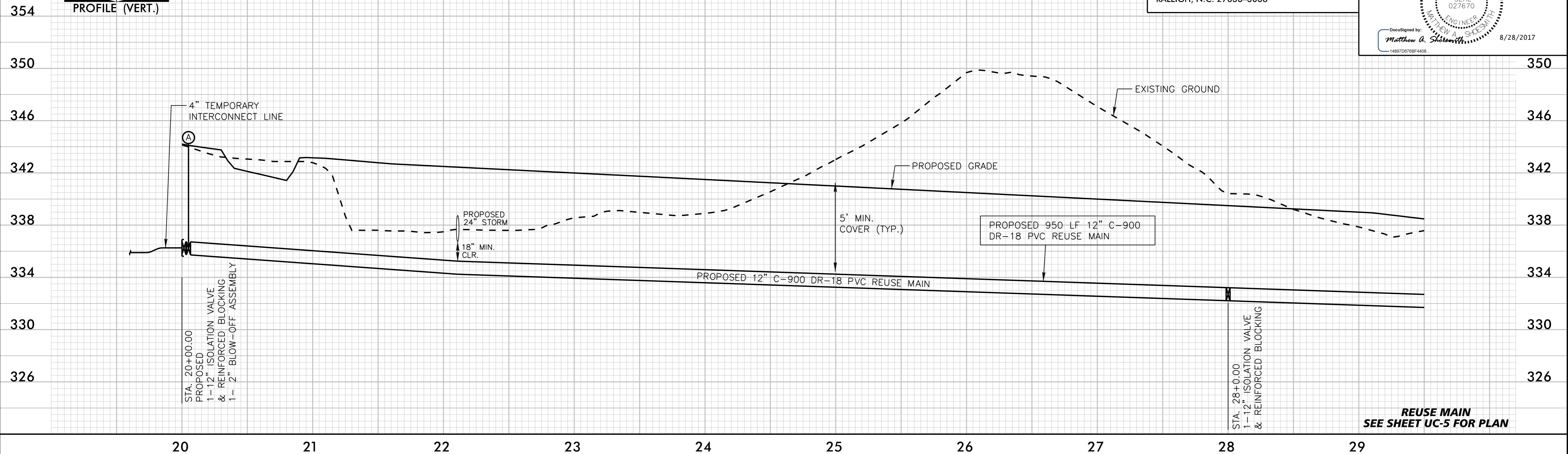
NAD 83 / NA 2011



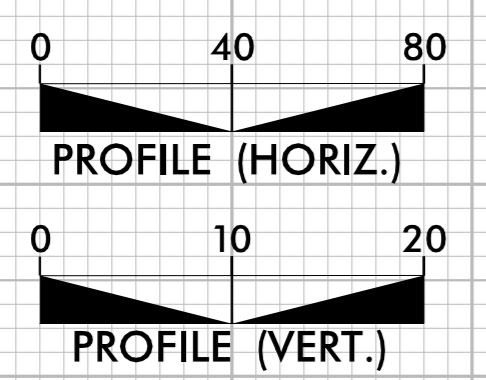


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PROJECT REFERENCE NO. U-5828	SHEET NO. UC-14
UTILITY CONSTRUCTION ENGINEER	
DocuSigned by: Matthew A. Shores 8/28/2017	

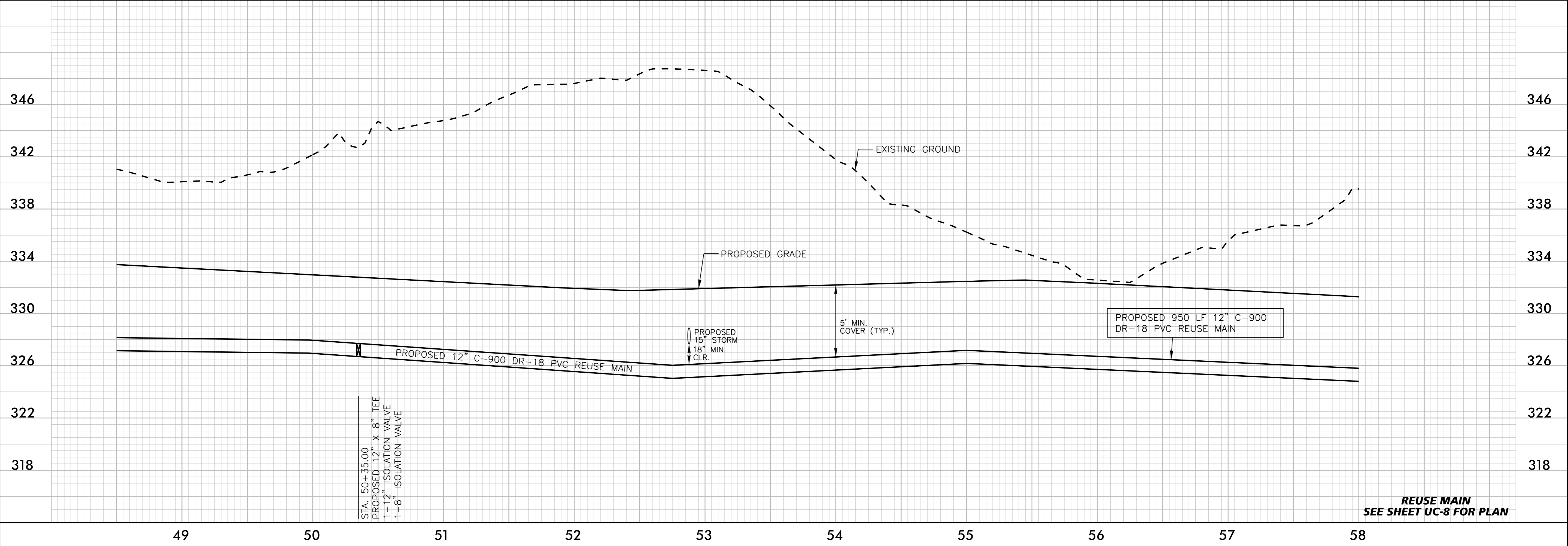
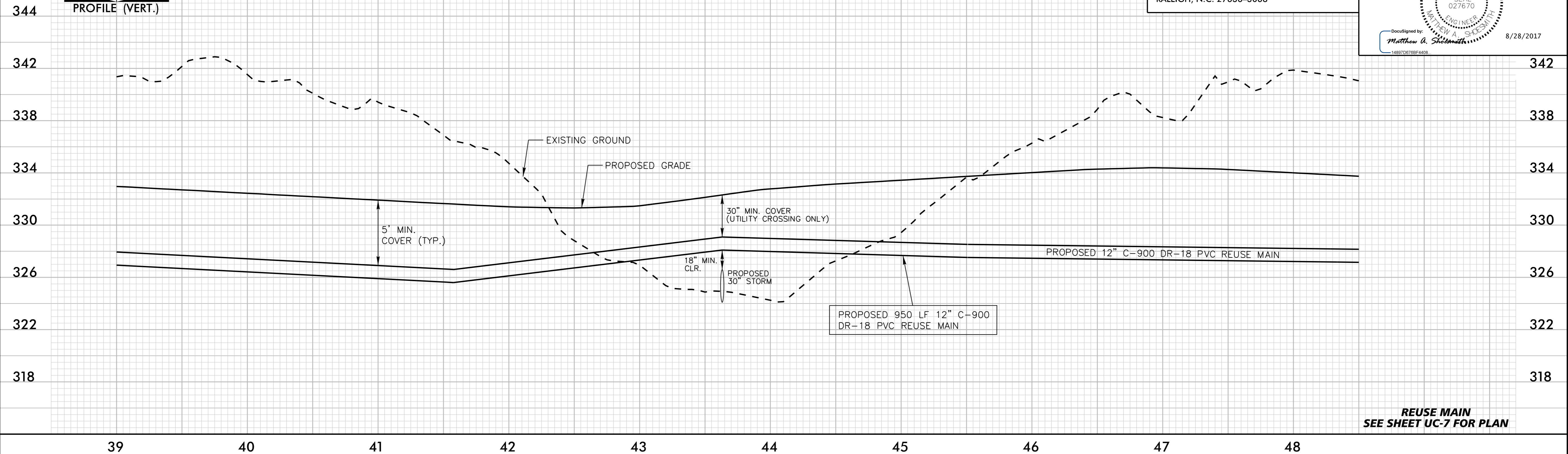


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 8/28/2017

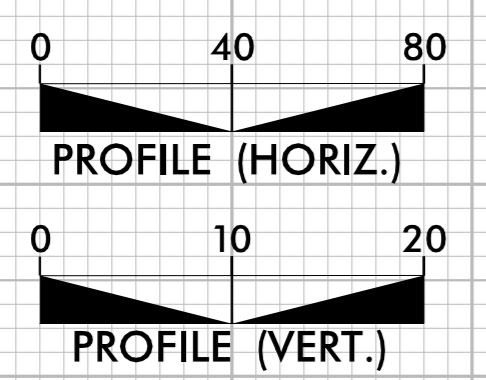


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PROJECT REFERENCE NO. U-5828	SHEET NO. UC-15
UTILITY CONSTRUCTION ENGINEER	
Designed by Matthew A. Spenseth	8/28/2017

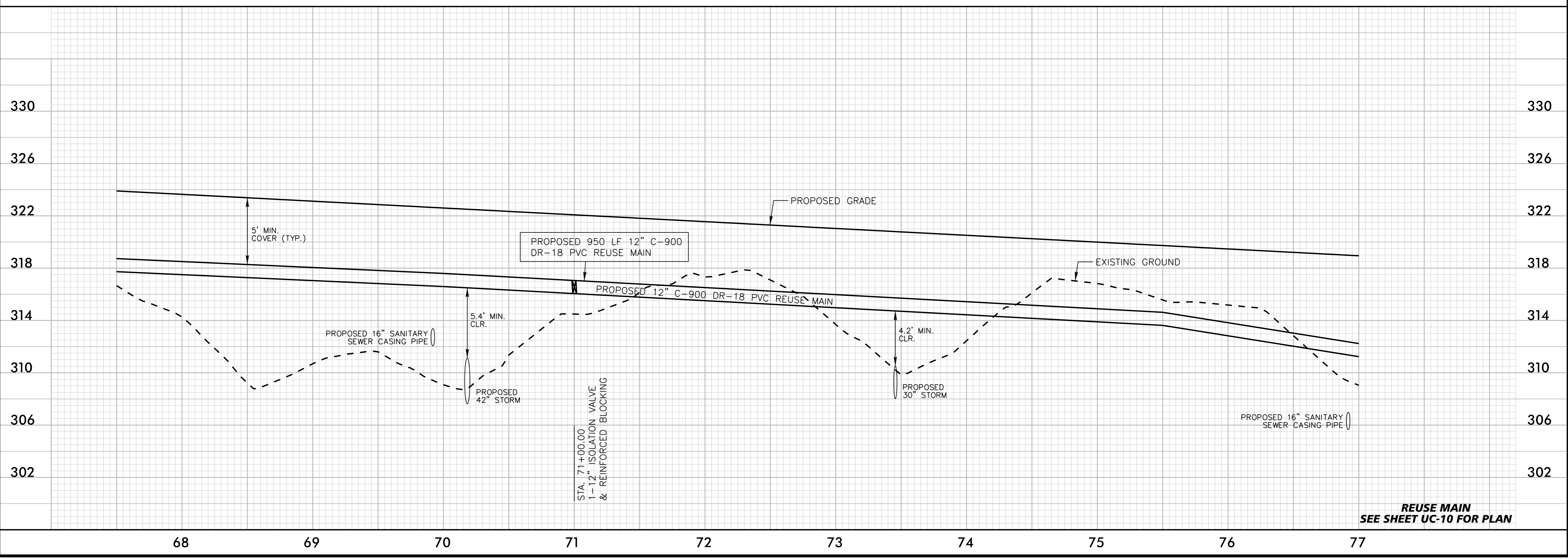
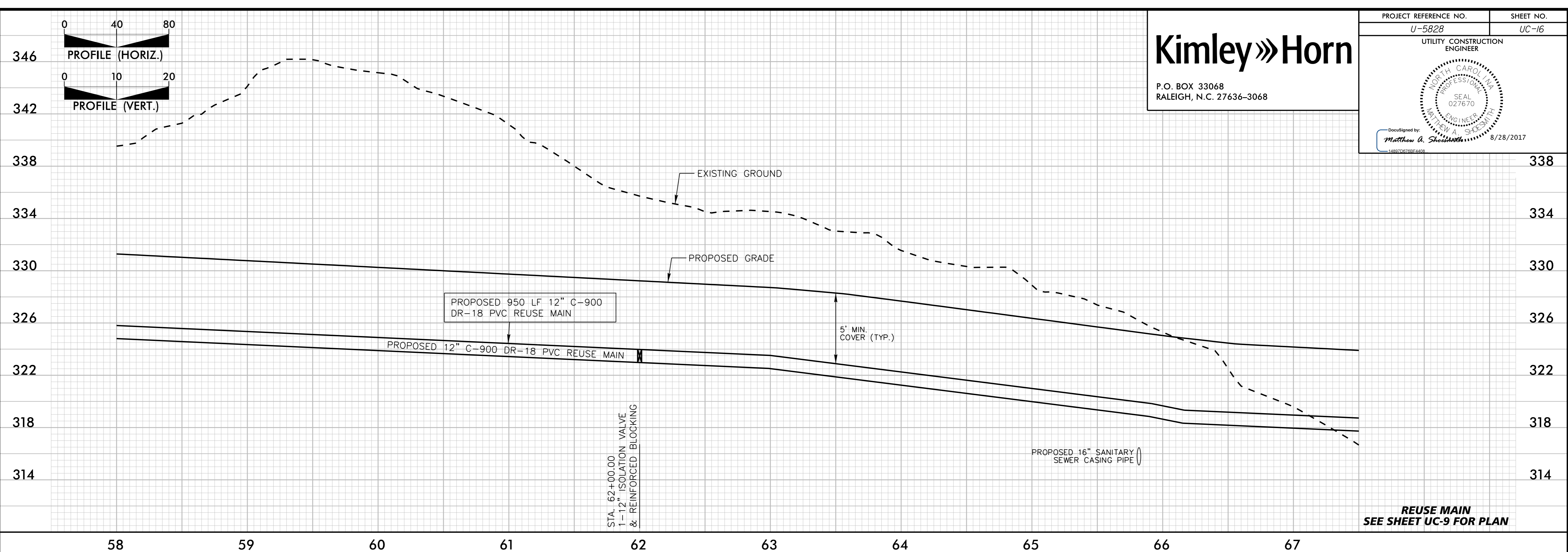


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8/28/2017

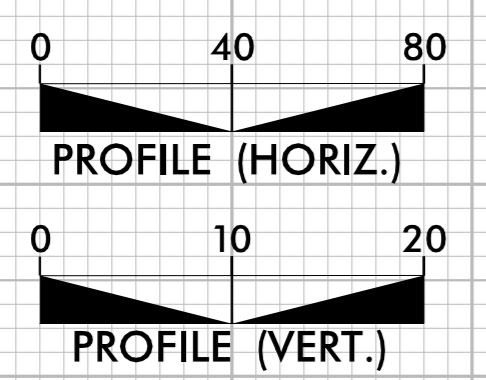


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PROJECT REFERENCE NO. U-5828	SHEET NO. UC-16
UTILITY CONSTRUCTION ENGINEER	
DocuSigned by: Matthew A. Spenshott	8/28/2017



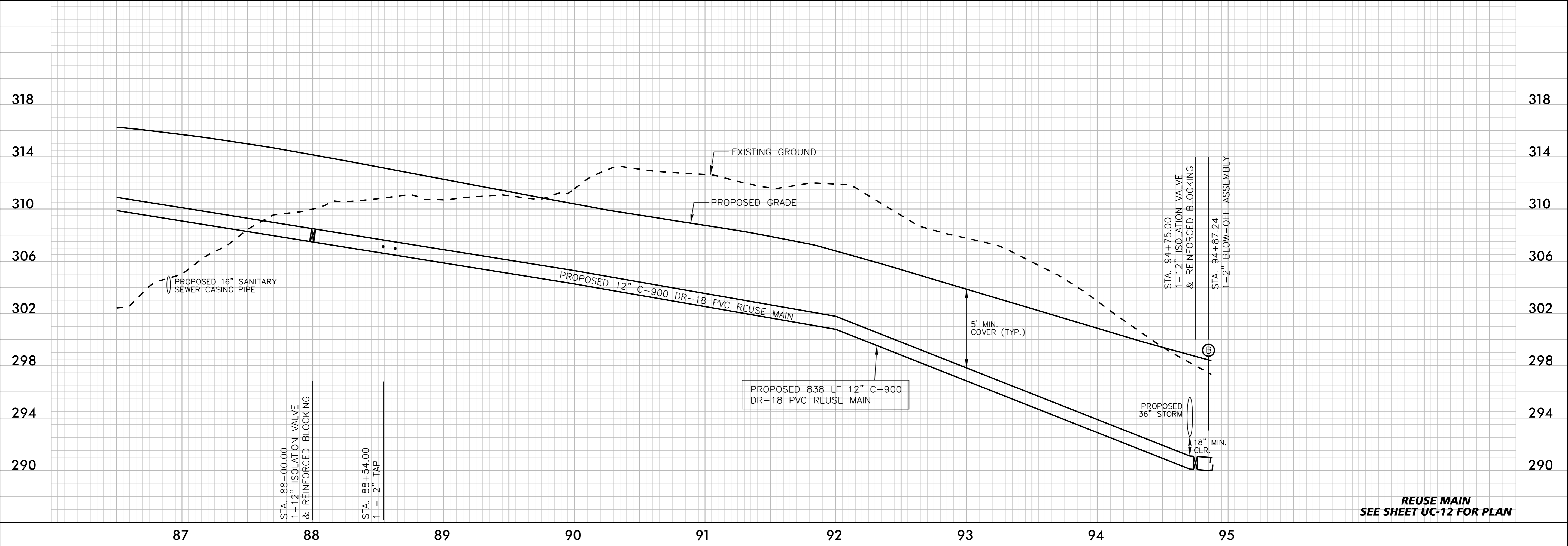
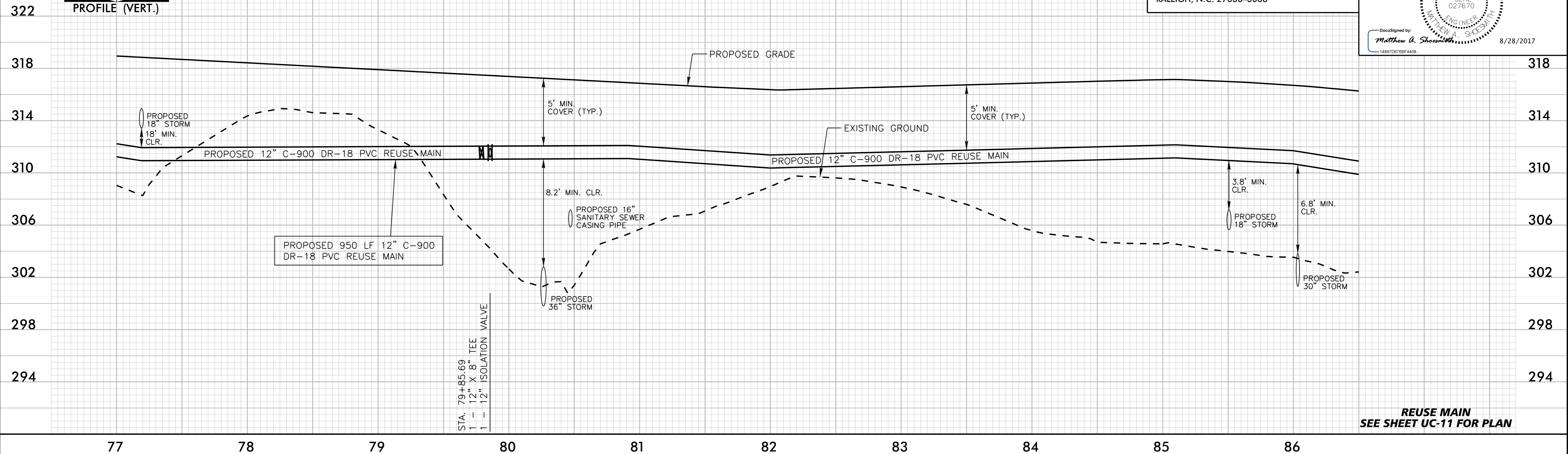
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8/28/2017



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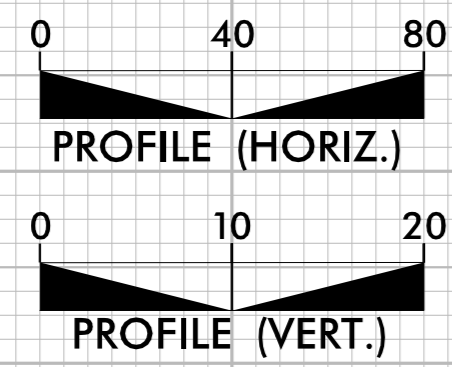
P.O. BOX 33068
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PROJECT REFERENCE NO. U-5828	SHEET NO. UC-17
UTILITY CONSTRUCTION ENGINEER	
DocuSigned by: Matthew A. Spensith	8/28/2017



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8/28/2017



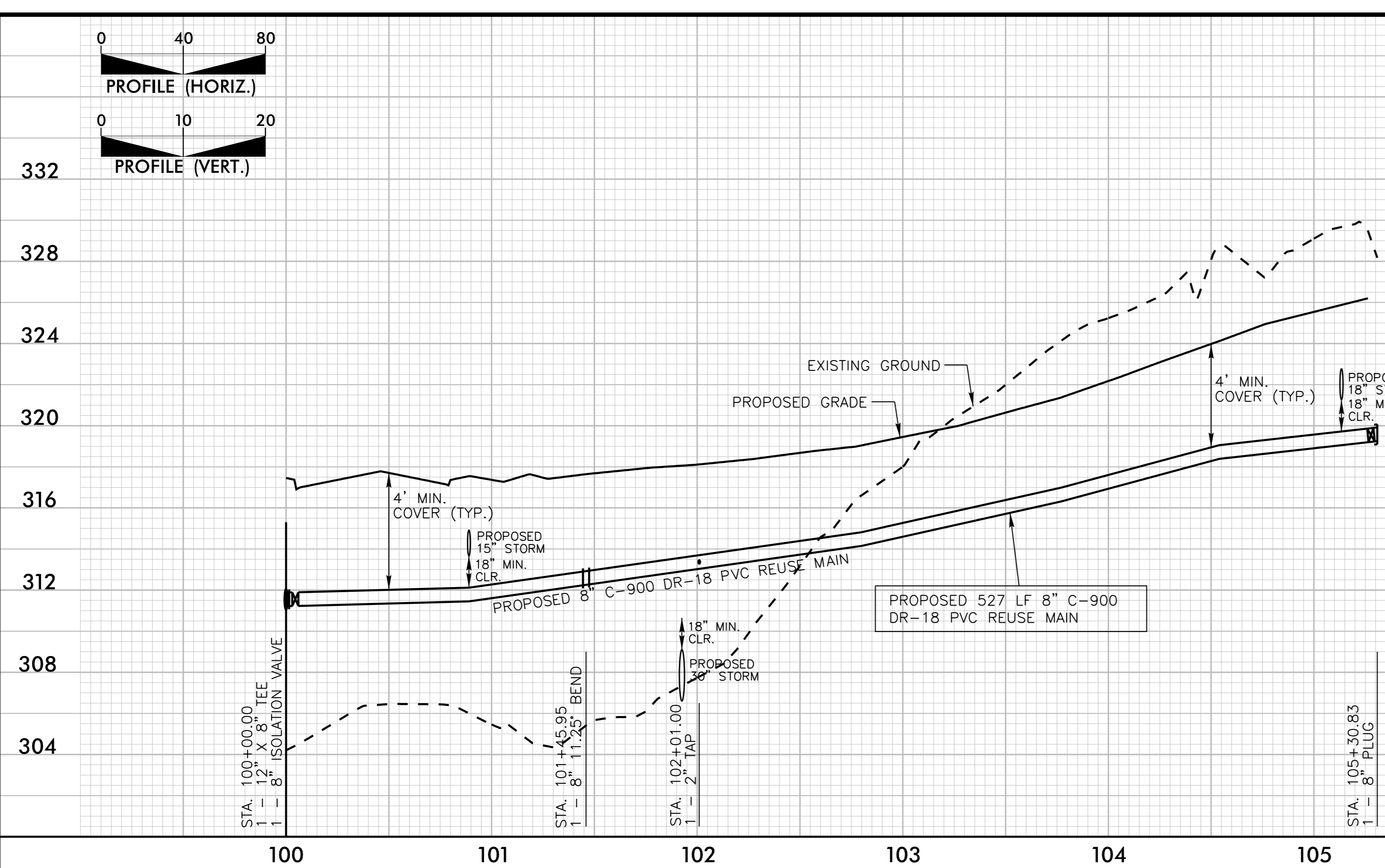
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RALEIGH, N.C. 27636-3068

PROJECT REFERENCE NO. U-5828	SHEET NO. UC-18
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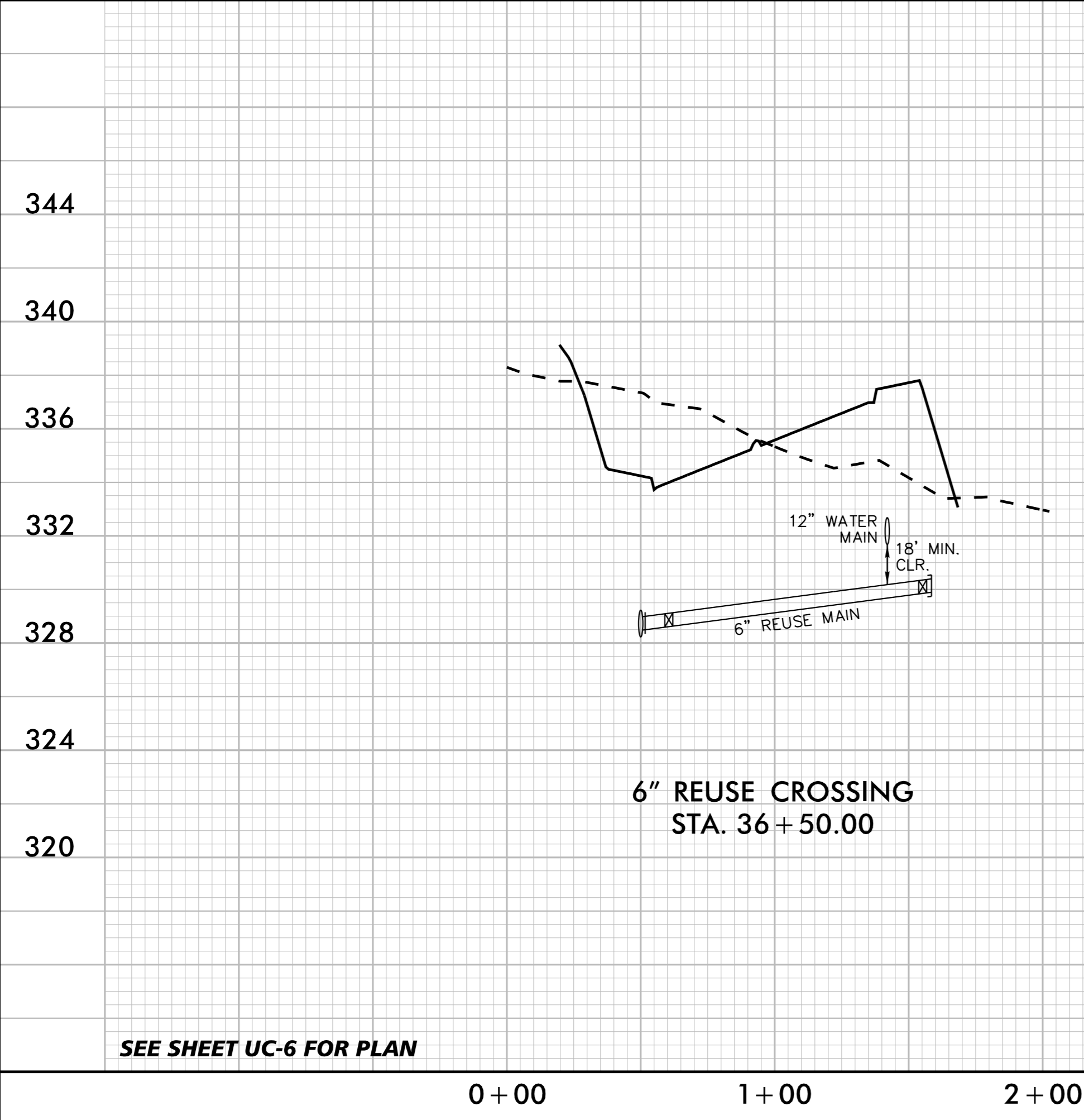
UTILITY CONSTRUCTION ENGINEER

Matthew A. Shoemith
NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 027670

DocuSigned by:
Matthew A. Shoemith
8/28/2017



REUSE MAIN
SEE SHEET UC-13 FOR PLAN



SEE SHEET UC-6 FOR PLAN



SEE SHEET UC-8 FOR PLAN

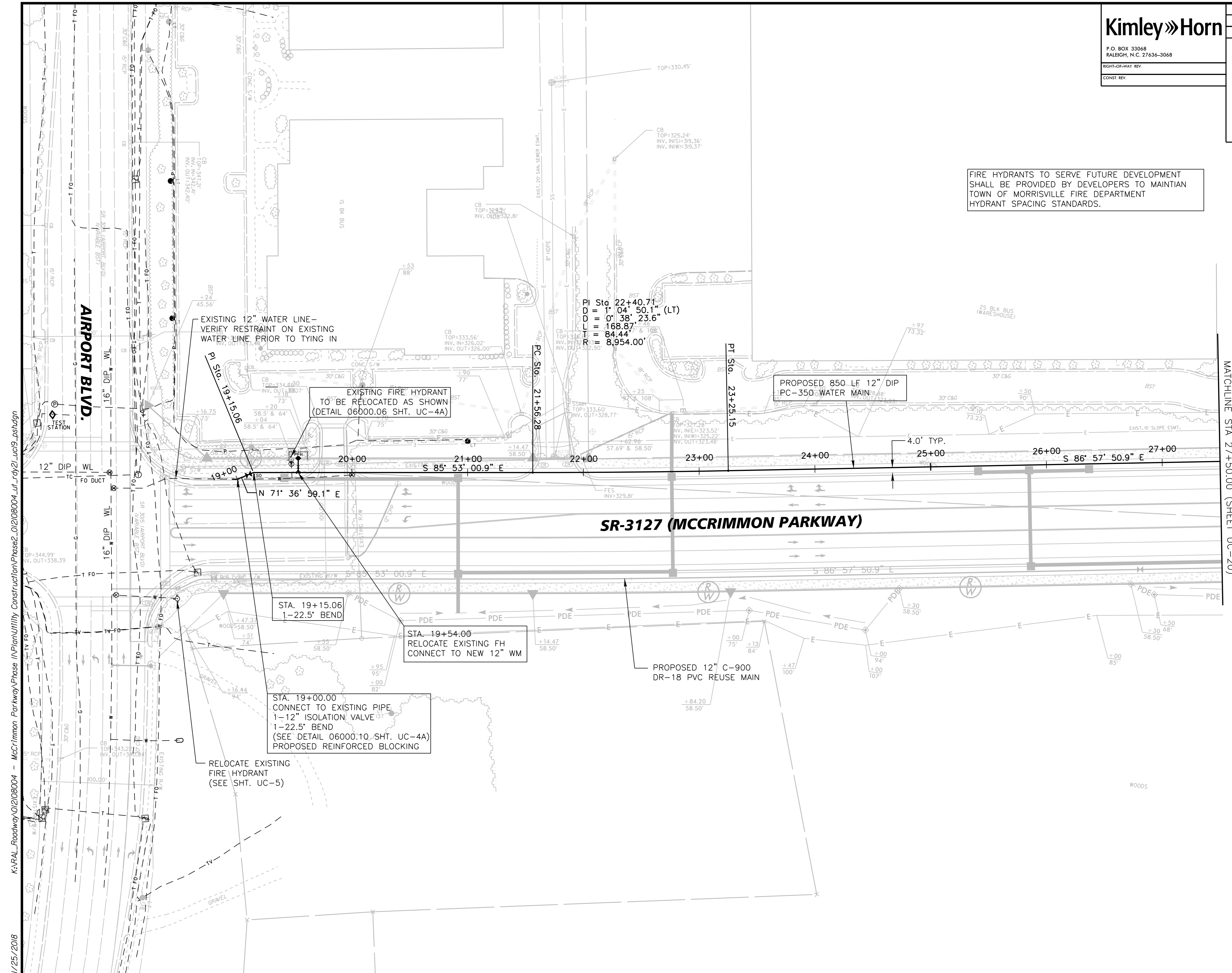
ALL RECLAIMED WATER DISTRIBUTION MAINS IN THE TOWN OF CARY WATER SYSTEM SHALL BE RESTRAINED. THE RECLAIMED WATER DISTRIBUTION SPECIFICATION IS BASED ON MECHANICAL RESTRAINING METHODS PROVIDED AT ALL JOINTS, REGARDLESS OF PIPE MATERIAL. TYPICAL CONCRETE BLOCKING AND RODDING SHALL NOT BE UTILIZED FOR THE RECLAIMED WATER SYSTEM UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF ENGINEERING.

K:\RAL_Roadway\012108004 - McCrimmon Parkway\Phase I\Plan\Utility Construction\Phase2_012108004_ut_pf1_wa8_pst.dgn
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 RIGHT-OF-WAY REV.
 CONST. REV.

PROJECT REFERENCE NO. <i>U-5828</i>	SHEET NO. <i>UC-19</i>
RW SHEET NO. UTILITY CONSTRUCTION ENGINEER	
1/28/2018	

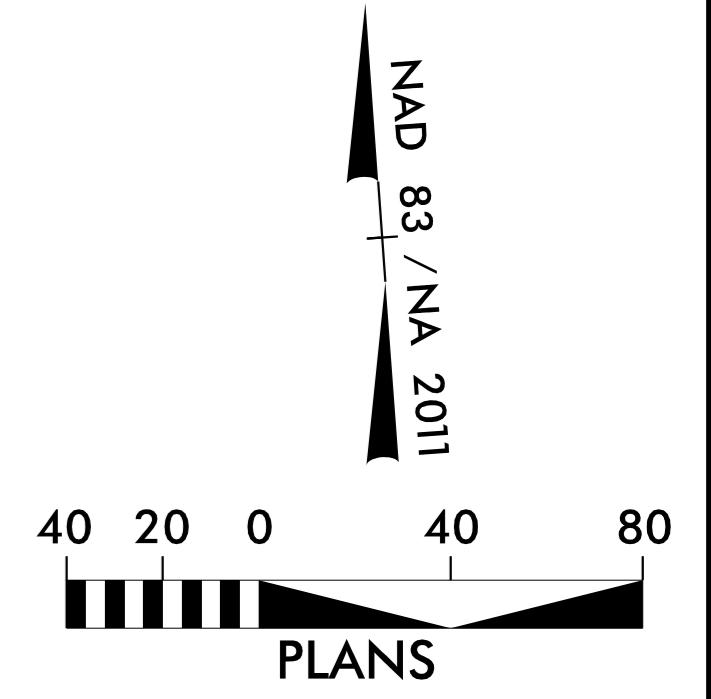
FIRE HYDRANTS TO SERVE FUTURE DEVELOPMENT SHALL BE PROVIDED BY DEVELOPERS TO MAINTAIN TOWN OF MORRISVILLE FIRE DEPARTMENT HYDRANT SPACING STANDARDS.



K:\RAL_Roadway\012108004 - McCrimmon Parkway\Phase 1\Plan\Utility Construction\Phase2_012108004_of_raj21_uc19_pshdgn

1/25/2018

MATCHLINE STA 27+50.00 (SHEET UC-20)



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PROJECT REFERENCE NO. U-5828	SHEET NO. UC-20
R/W SHEET NO. UTILITY CONSTRUCTION ENGINEER	
DocuSigned by: <i>Matthew A. Shoemaker</i> , PE 148970678F4408	
8/28/2017	

STA. 28+00.00
 PROPOSED FIRE HYDRANT ASSEMBLY
 (SEE DETAIL 06000.06 SHT UC-4A)

PROPOSED 950 LF 12" DIP
 PC-350 WATER MAIN

21 LF 12" RJ DIP WM
 1 - 12" ISOLATION VALVE
 1 - 2" BLOW OFF ASSEMBLY
 (SEE DETAIL 06000.10 SHT UC-4A
 & DETAIL 06000.11 SHT UC-4A)

PI Sta 37+88.57
 D = 84' 34" 19.1" (RT)
 D = 5' 25" 32.7"
 L = 1,558.72'
 T = 960.41'
 R = 1,056.00'

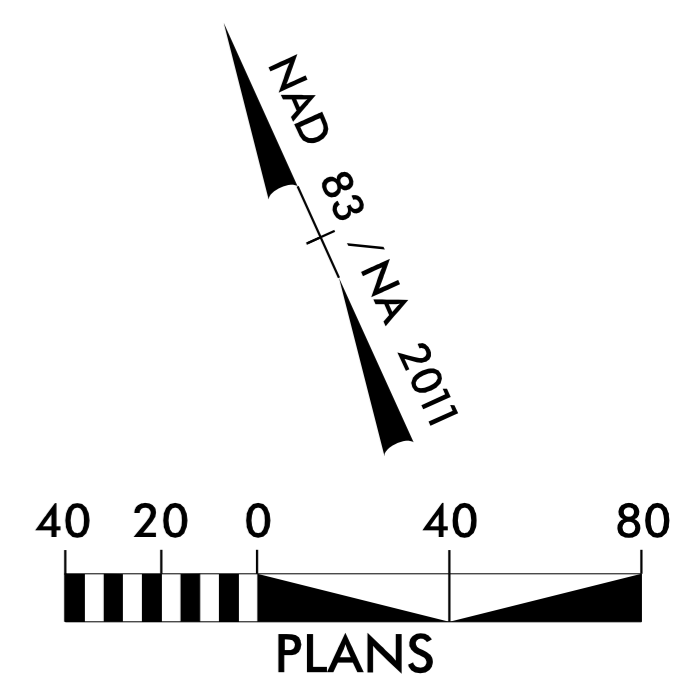
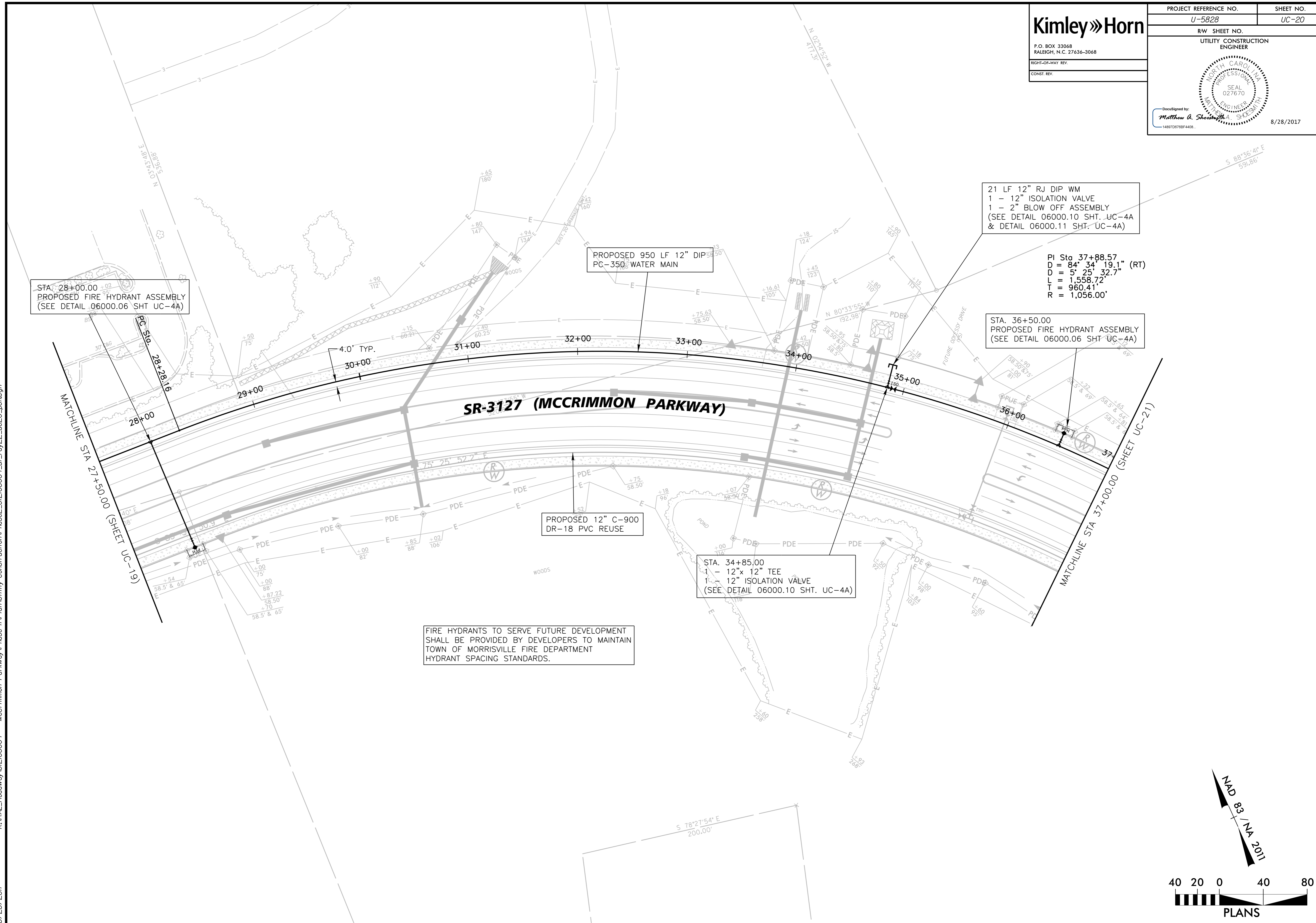
STA. 36+50.00
 PROPOSED FIRE HYDRANT ASSEMBLY
 (SEE DETAIL 06000.06 SHT UC-4A)

STA. 34+85.00
 1 - 12"x 12" TEE
 1 - 12" ISOLATION VALVE
 (SEE DETAIL 06000.10 SHT UC-4A)

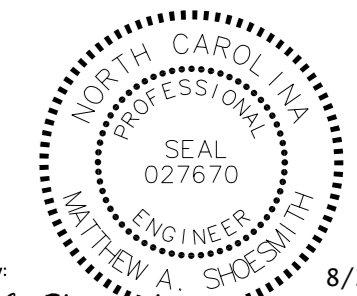
PROPOSED 12" C-900
 DR-18 PVC REUSE

FIRE HYDRANTS TO SERVE FUTURE DEVELOPMENT
 SHALL BE PROVIDED BY DEVELOPERS TO MAINTAIN
 TOWN OF MORRISVILLE FIRE DEPARTMENT
 HYDRANT SPACING STANDARDS.

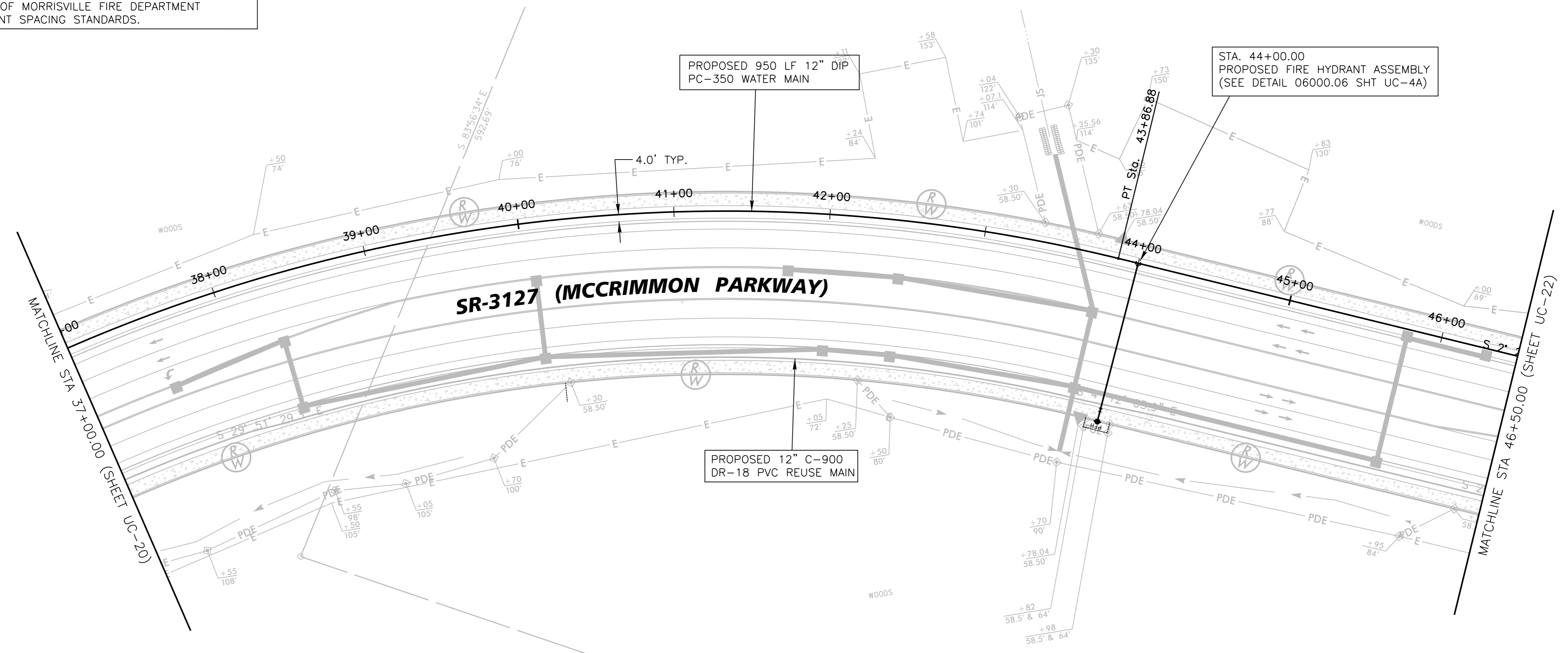
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PROJECT REFERENCE NO. U-5828	SHEET NO. UC-21
R/W SHEET NO. UTILITY CONSTRUCTION ENGINEER	
	
DocuSigned by: Matthew A. Shoemith 8/28/2017	

FIRE HYDRANTS TO SERVE FUTURE DEVELOPMENT SHALL BE PROVIDED BY DEVELOPERS TO MAINTAIN TOWN OF MORRISVILLE FIRE DEPARTMENT HYDRANT SPACING STANDARDS.

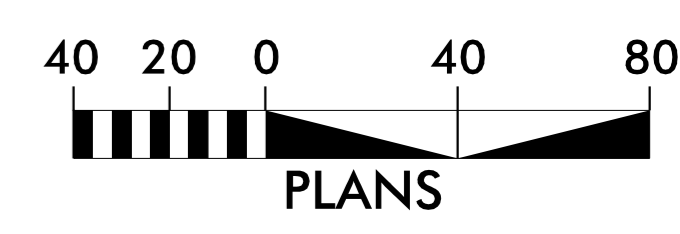
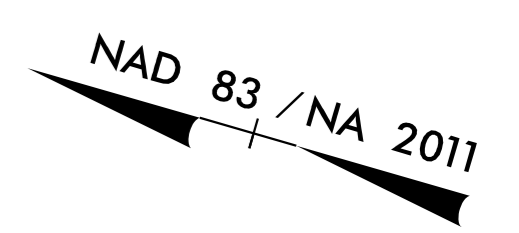


PROPOSED 950 LF 12" DIP
PC-350 WATER MAIN

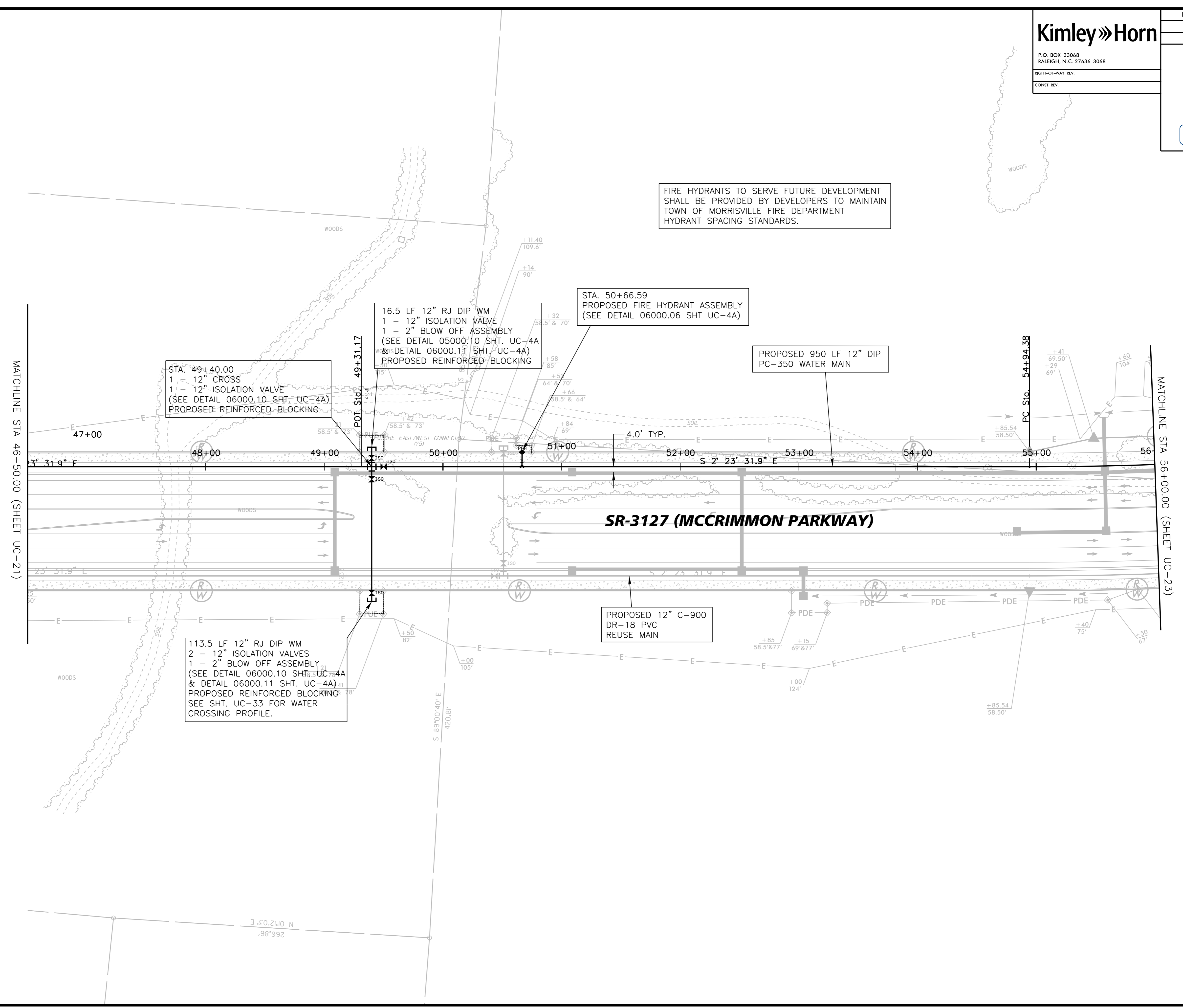
STA. 44+00.00
PROPOSED FIRE HYDRANT ASSEMBLY
(SEE DETAIL 06000.06 SHT UC-4A)

PROPOSED 12" C-900
DR-18 PVC REUSE MAIN

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FIRE HYDRANTS TO SERVE FUTURE DEVELOPMENT SHALL BE PROVIDED BY DEVELOPERS TO MAINTAIN TOWN OF MORRISVILLE FIRE DEPARTMENT HYDRANT SPACING STANDARDS.



STA. 49+40.00
1 - 12" CROSS
1 - 12" ISOLATION VALVE
(SEE DETAIL 06000.10 SHT. UC-4A)
PROPOSED REINFORCED BLOCKING

16.5 LF 12" RJ DIP WM
1 - 12" ISOLATION VALVE
1 - 2" BLOW OFF ASSEMBLY
(SEE DETAIL 05000.10 SHT. UC-4A
& DETAIL 06000.11 SHT. UC-4A)
PROPOSED REINFORCED BLOCKING

STA. 50+66.59
PROPOSED FIRE HYDRANT ASSEMBLY
(SEE DETAIL 06000.06 SHT UC-4A)

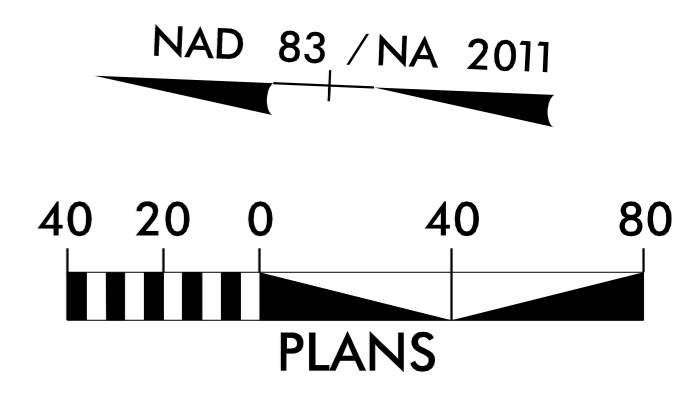
PROPOSED 950 LF 12" DIP
PC-350 WATER MAIN

113.5 LF 12" RJ DIP WM
2 - 12" ISOLATION VALVES
1 - 2" BLOW OFF ASSEMBLY
(SEE DETAIL 06000.10 SHT. UC-4A
& DETAIL 06000.11 SHT. UC-4A)
PROPOSED REINFORCED BLOCKING
SEE SHT. UC-33 FOR WATER
CROSSING PROFILE.


PROPOSED 12" C-900
DR-18 PVC
REUSE MAIN

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8/28/2017

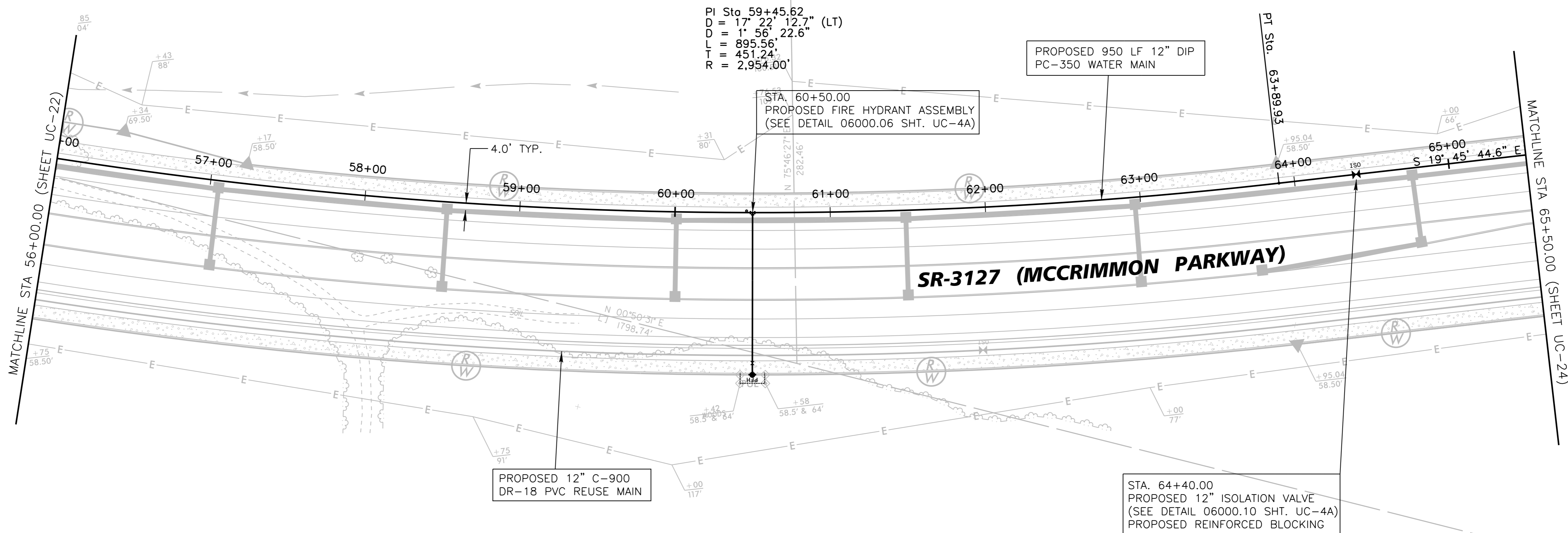


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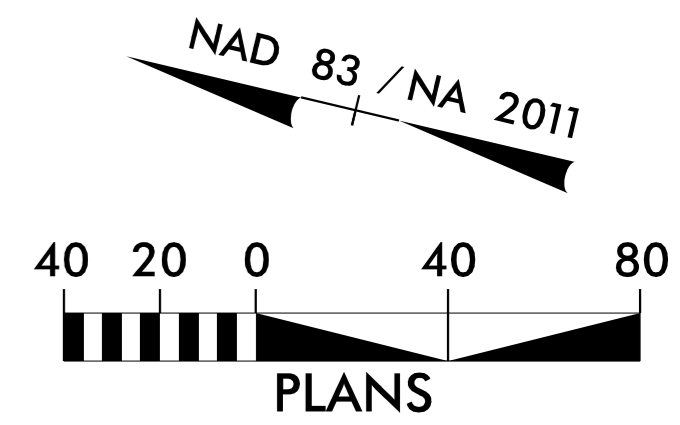
PROJECT REFERENCE NO. U-5828	SHEET NO. UC-23
RW SHEET NO. UTILITY CONSTRUCTION ENGINEER	
	
8/28/2017	

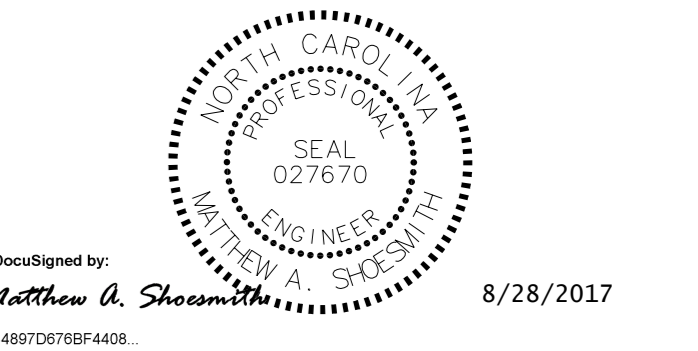
FIRE HYDRANTS TO SERVE FUTURE DEVELOPMENT SHALL BE PROVIDED BY DEVELOPERS TO MAINTAIN TOWN OF MORRISVILLE FIRE DEPARTMENT HYDRANT SPACING STANDARDS.

N/F
 SUSAN S. PEACE, MARTHA S. LANDT
 & WILLIAM H. SPRUNT, JR.
 PIN #075640266
 DB 16056 PG 2518
 BM 2016 PG 96



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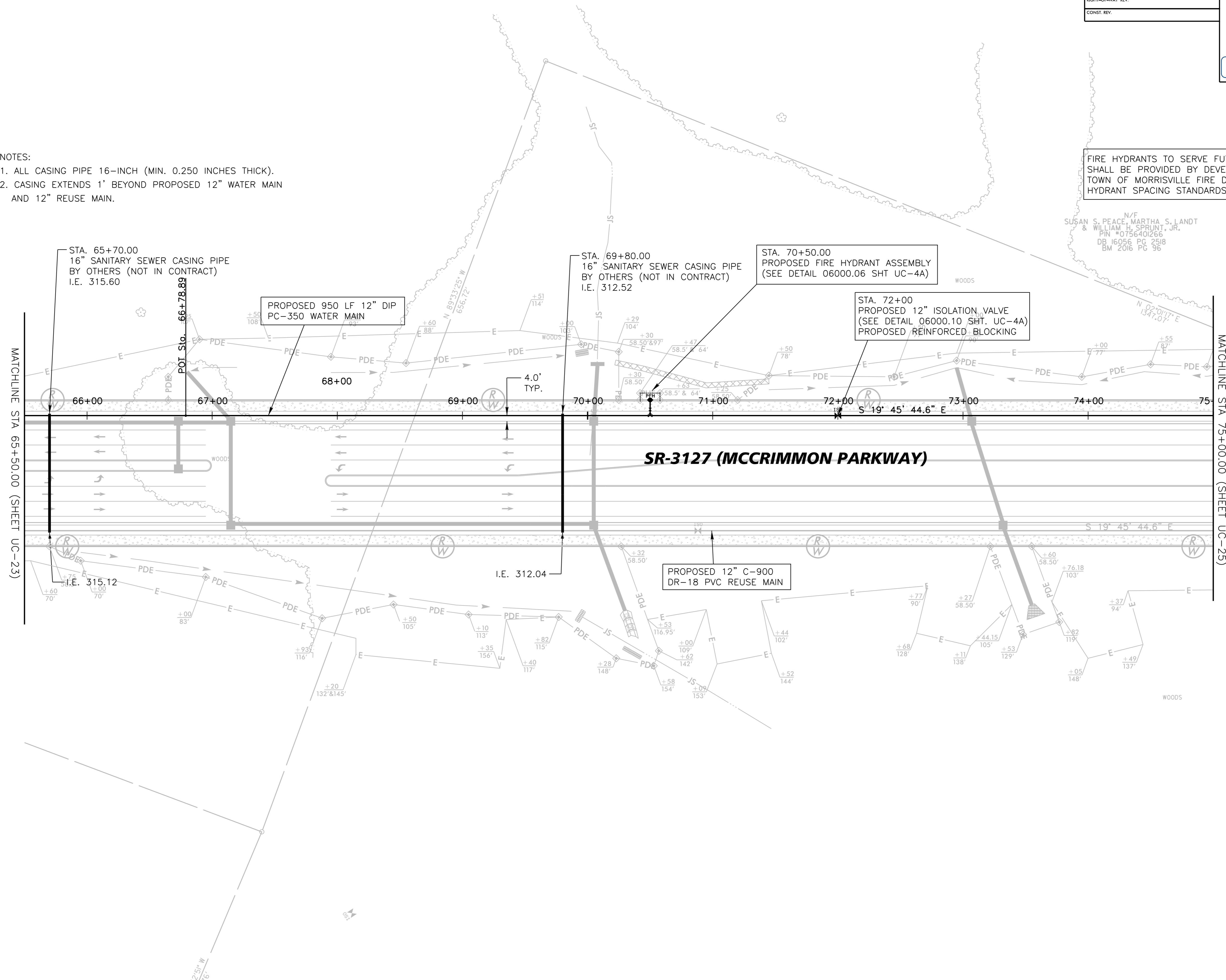


NOTES:

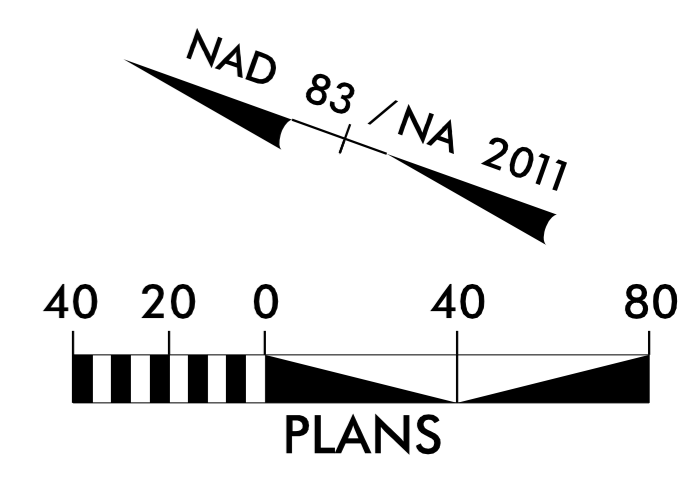
1. ALL CASING PIPE 16-INCH (MIN. 0.250 INCHES THICK).
2. CASING EXTENDS 1' BEYOND PROPOSED 12" WATER MAIN AND 12" REUSE MAIN.

FIRE HYDRANTS TO SERVE FUTURE DEVELOPMENT SHALL BE PROVIDED BY DEVELOPERS TO MAINTAIN TOWN OF MORRISVILLE FIRE DEPARTMENT HYDRANT SPACING STANDARDS.

N/F
SUSAN S. PEACE, MARTHA S. LANDT
& WILLIAM H. SPRUNT, JR.
PIN #0756401266
DB 16056 PG 2518
BM 2016 PG 96



K:\RAL_Roadway\012108004 - McCrimmon Parkway Phase II\Plan\Utility Construction\Phase2_012108004_ut_rwy26_uc24_pshdgn
8/28/2017

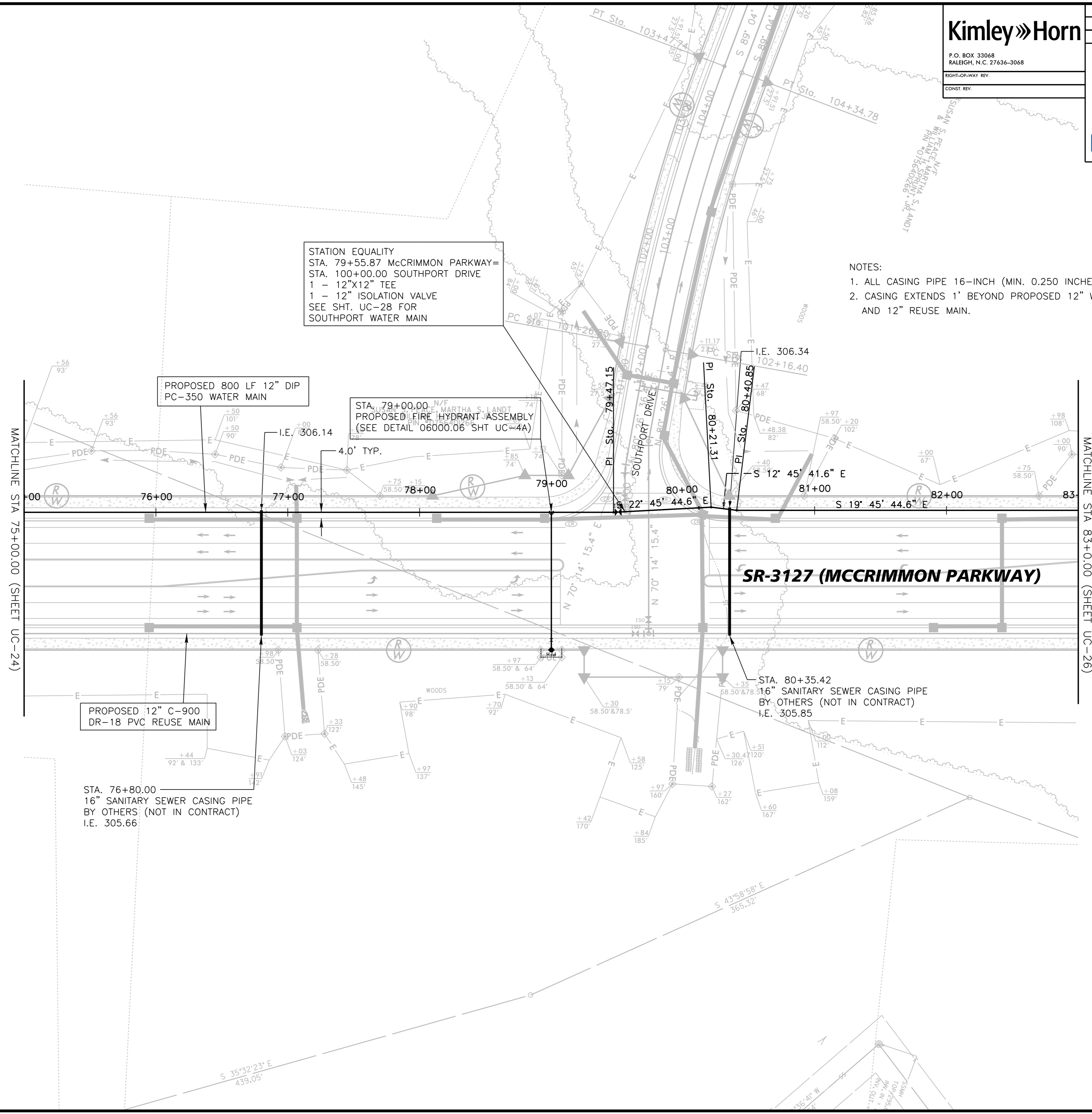


PROJECT REFERENCE NO. <i>U-5828</i>	SHEET NO. <i>UC-25</i>
R/W SHEET NO. UTILITY CONSTRUCTION ENGINEER	
DocuSigned by: <i>Matthew A. Shoemaker</i> 148970576F4408	
8/28/2017	

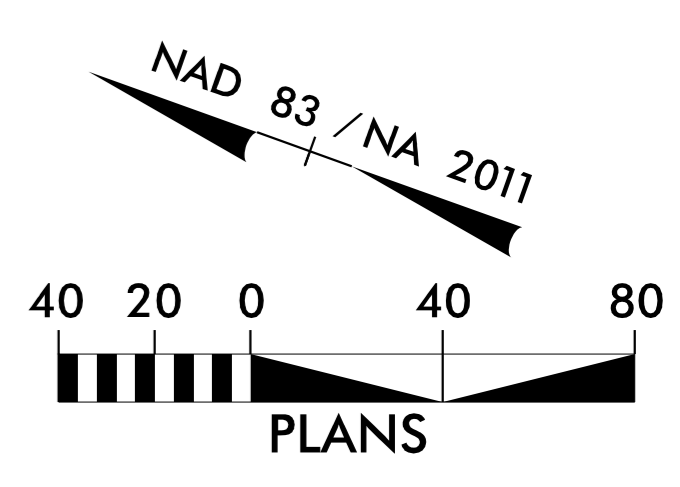
FIRE HYDRANTS TO SERVE FUTURE DEVELOPMENT SHALL BE PROVIDED BY DEVELOPERS TO MAINTAIN TOWN OF MORRISVILLE FIRE DEPARTMENT HYDRANT SPACING STANDARDS.

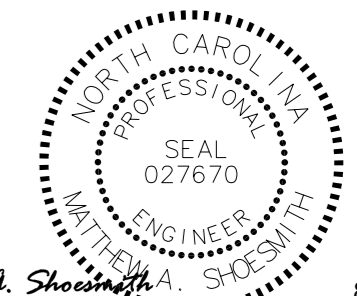
STATION EQUALITY
STA. 79+55.87 McCRIMMON PARKWAY=
STA. 100+00.00 SOUTHPORT DRIVE
1 - 12"x12" TEE
1 - 12" ISOLATION VALVE
SEE SHT. UC-28 FOR
SOUTHPORT WATER MAIN

- NOTES:
1. ALL CASING PIPE 16-INCH (MIN. 0.250 INCHES THICK).
 2. CASING EXTENDS 1' BEYOND PROPOSED 12" WATER MAIN AND 12" REUSE MAIN.



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PROJECT REFERENCE NO. <i>U-5828</i>	SHEET NO. <i>UC-26</i>
R/W SHEET NO.	
UTILITY CONSTRUCTION ENGINEER	
	
DocuSigned by: <i>Matthew A. Shoemaker</i>	8/28/2017

NOTES:

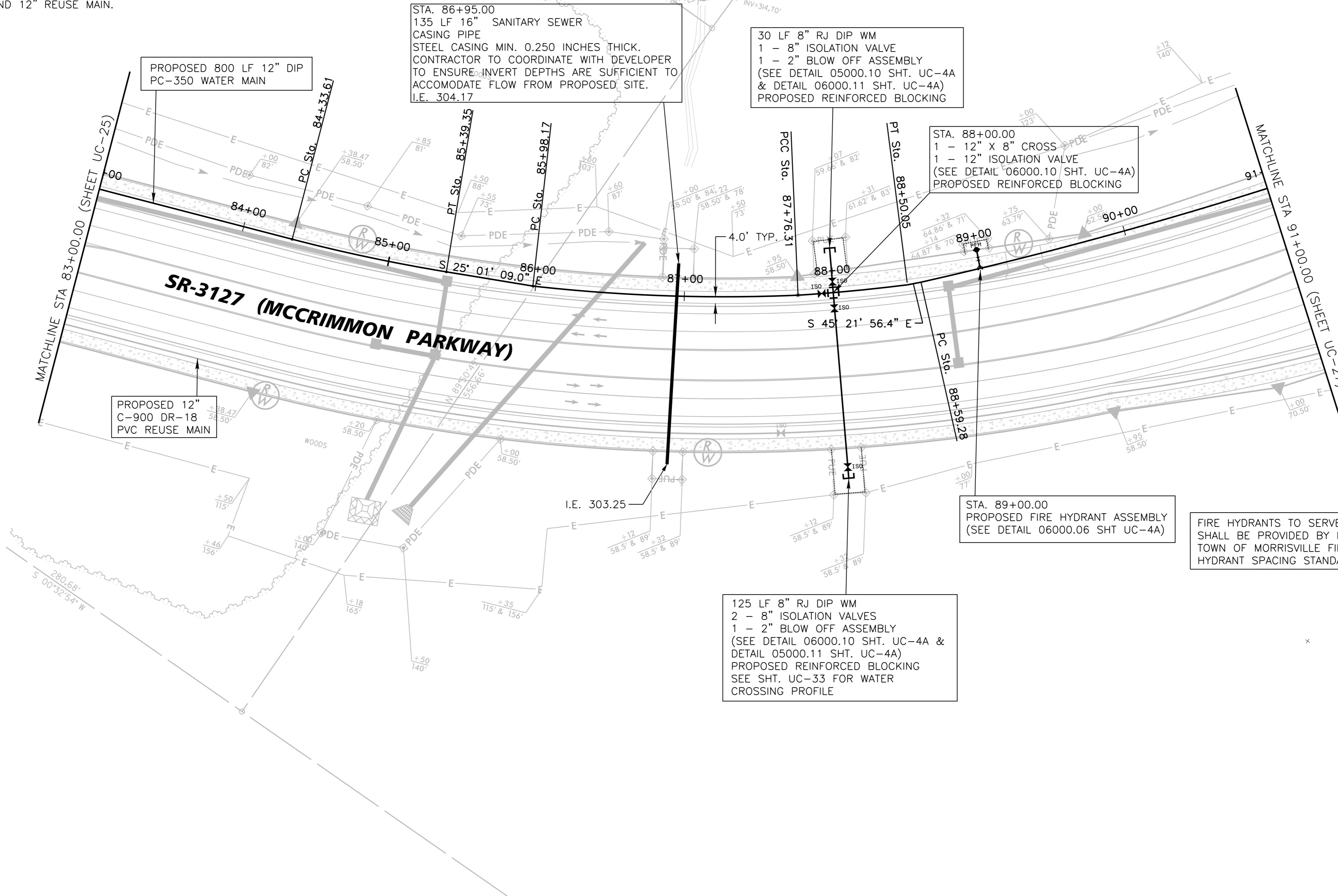
1. ALL CASING PIPE 16-INCH (MIN. 0.250 INCHES THICK).
2. CASING EXTENDS 1' BEYOND PROPOSED 12" WATER MAIN AND 12" REUSE MAIN.

PI Sta 84+86.52
 D = 5' 15" 24.4" (LT)
 D = 4' 58" 17.2"
 L = 105.74'
 T = 52.91'
 R = 1,152.50'

PI Sta 86+87.42
 D = 8' 50" 40.4" (LT)
 D = 4' 57" 53.9"
 L = 178.14'
 T = 89.25'
 R = 1,154.00'

PI Sta 88+13.19
 D = 3' 38" 57.3" (LT)
 D = 4' 56" 55.7"
 L = 73.74'
 T = 36.88'
 R = 1,157.77'

PI Sta 90+17.87
 D = 6' 19" 20.2" (LT)
 D = 1' 59" 43.4"
 L = 316.85'
 T = 158.58'
 R = 2,871.42'



PROPOSED 800 LF 12" DIP
PC-350 WATER MAIN

STA. 86+95.00
135 LF 16" SANITARY SEWER
CASING PIPE
STEEL CASING MIN. 0.250 INCHES THICK.
CONTRACTOR TO COORDINATE WITH DEVELOPER
TO ENSURE INVERT DEPTHS ARE SUFFICIENT TO
ACCOMMODATE FLOW FROM PROPOSED SITE.
I.E. 304.17

30 LF 8" RJ DIP WM
1 - 8" ISOLATION VALVE
1 - 2" BLOW OFF ASSEMBLY
(SEE DETAIL 05000.10 SHT. UC-4A
& DETAIL 06000.11 SHT. UC-4A)
PROPOSED REINFORCED BLOCKING

STA. 88+00.00
1 - 12" X 8" CROSS
1 - 12" ISOLATION VALVE
(SEE DETAIL 06000.10 SHT. UC-4A)
PROPOSED REINFORCED BLOCKING

PROPOSED 12"
C-900 DR-18
PVC REUSE MAIN

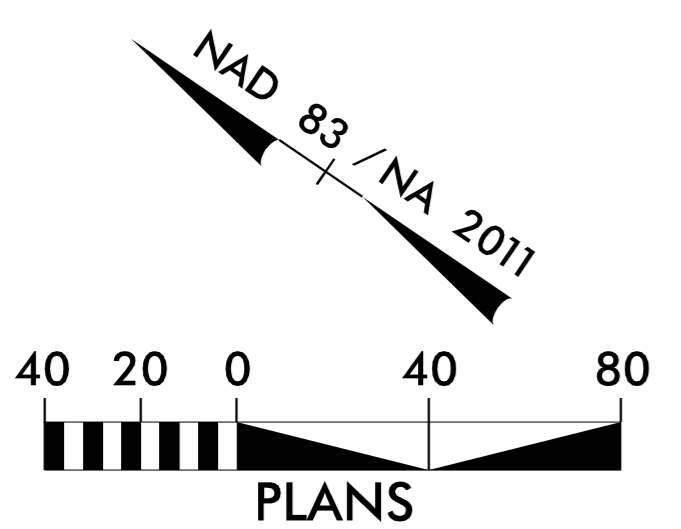
STA. 89+00.00
PROPOSED FIRE HYDRANT ASSEMBLY
(SEE DETAIL 06000.06 SHT UC-4A)

FIRE HYDRANTS TO SERVE FUTURE DEVELOPMENT
SHALL BE PROVIDED BY DEVELOPERS TO MAINTAIN
TOWN OF MORRISVILLE FIRE DEPARTMENT
HYDRANT SPACING STANDARDS.

125 LF 8" RJ DIP WM
2 - 8" ISOLATION VALVES
1 - 2" BLOW OFF ASSEMBLY
(SEE DETAIL 06000.10 SHT. UC-4A &
DETAIL 05000.11 SHT. UC-4A)
PROPOSED REINFORCED BLOCKING
SEE SHT. UC-33 FOR WATER
CROSSING PROFILE

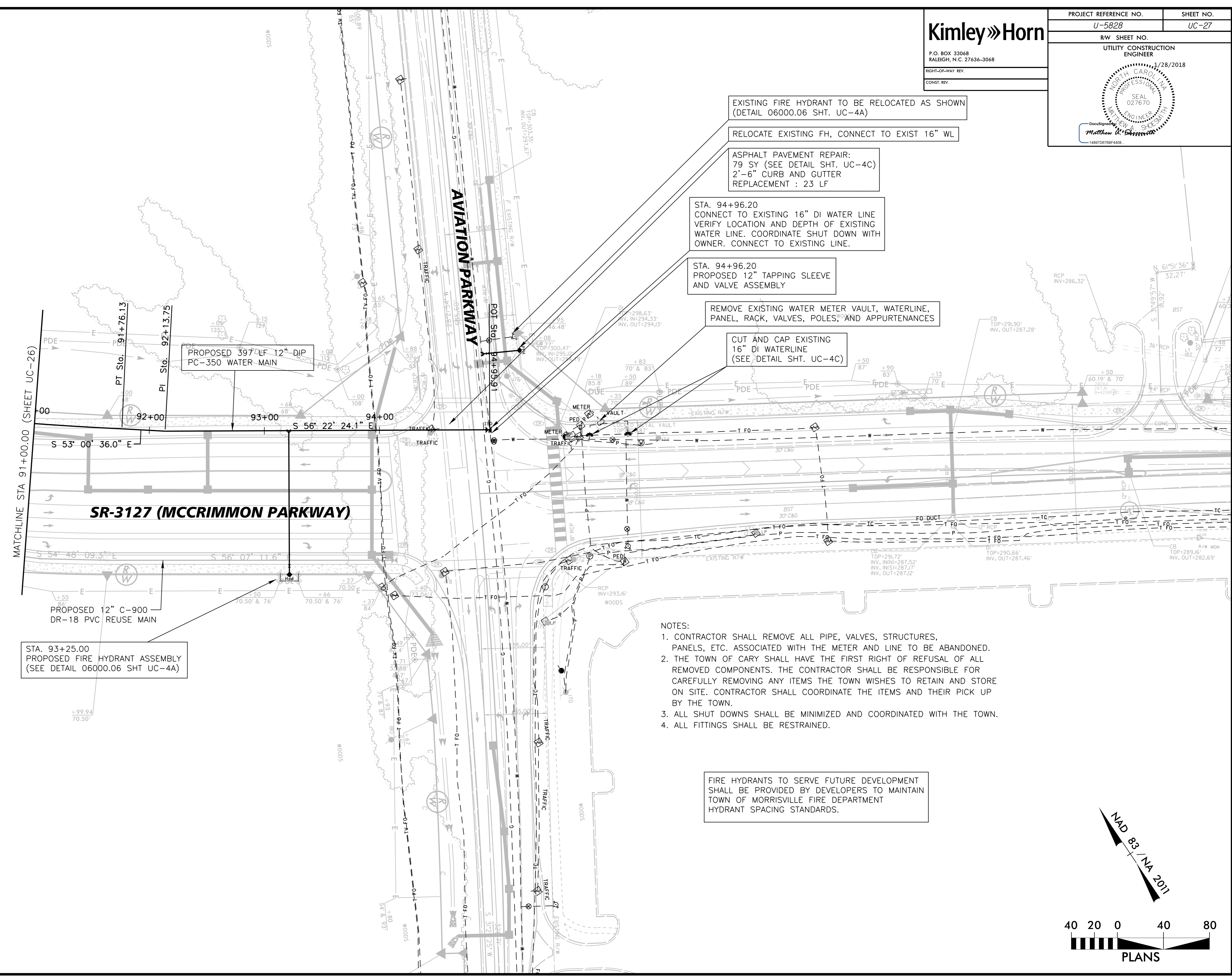
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 CONST. REV.

PROJECT REFERENCE NO. <i>U-5828</i>	SHEET NO. <i>UC-27</i>
R/W SHEET NO. UTILITY CONSTRUCTION ENGINEER	
1/28/2018	



EXISTING FIRE HYDRANT TO BE RELOCATED AS SHOWN (DETAIL 06000.06 SHT. UC-4A)

RELOCATE EXISTING FH, CONNECT TO EXIST 16" WL

ASPHALT PAVEMENT REPAIR:
 79 SY (SEE DETAIL SHT. UC-4C)
 2'-6" CURB AND GUTTER
 REPLACEMENT : 23 LF

STA. 94+96.20
 CONNECT TO EXISTING 16" DI WATER LINE
 VERIFY LOCATION AND DEPTH OF EXISTING
 WATER LINE. COORDINATE SHUT DOWN WITH
 OWNER. CONNECT TO EXISTING LINE.

STA. 94+96.20
 PROPOSED 12" TAPPING SLEEVE
 AND VALVE ASSEMBLY

REMOVE EXISTING WATER METER VAULT, WATERLINE,
 PANEL, RACK, VALVES, POLES, AND APPURTENANCES

CUT AND CAP EXISTING
 16" DI WATERLINE
 (SEE DETAIL SHT. UC-4C)

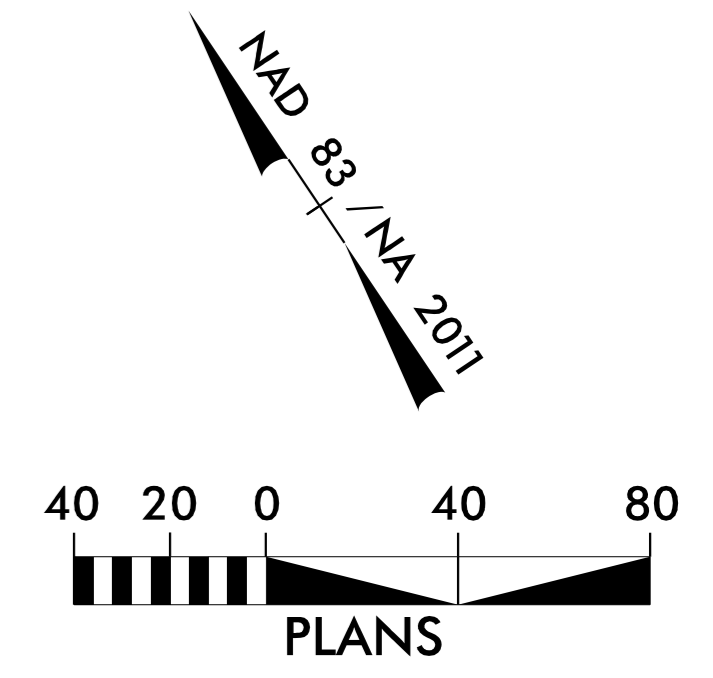
PROPOSED 397 LF 12" DIP
 PC-350 WATER MAIN

PROPOSED 12" C-900
 DR-18 PVC REUSE MAIN

STA. 93+25.00
 PROPOSED FIRE HYDRANT ASSEMBLY
 (SEE DETAIL 06000.06 SHT UC-4A)

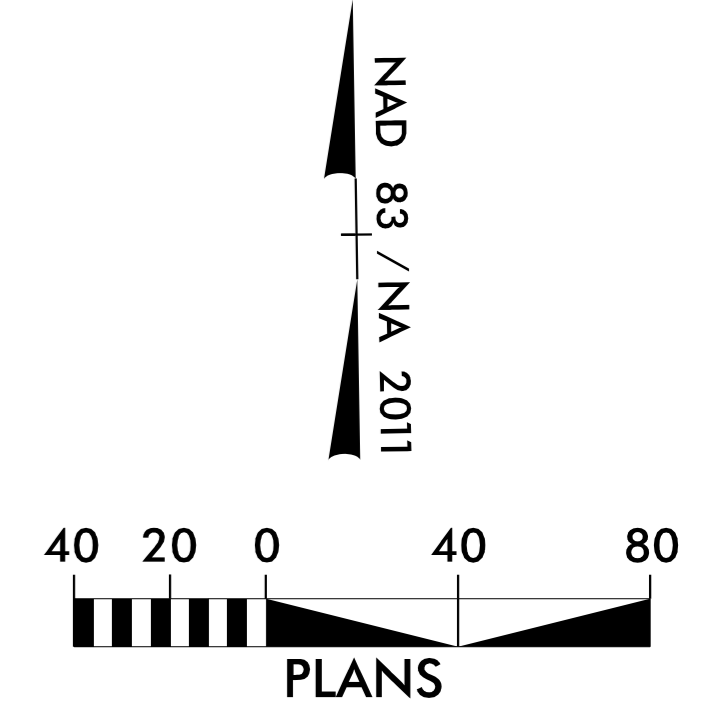
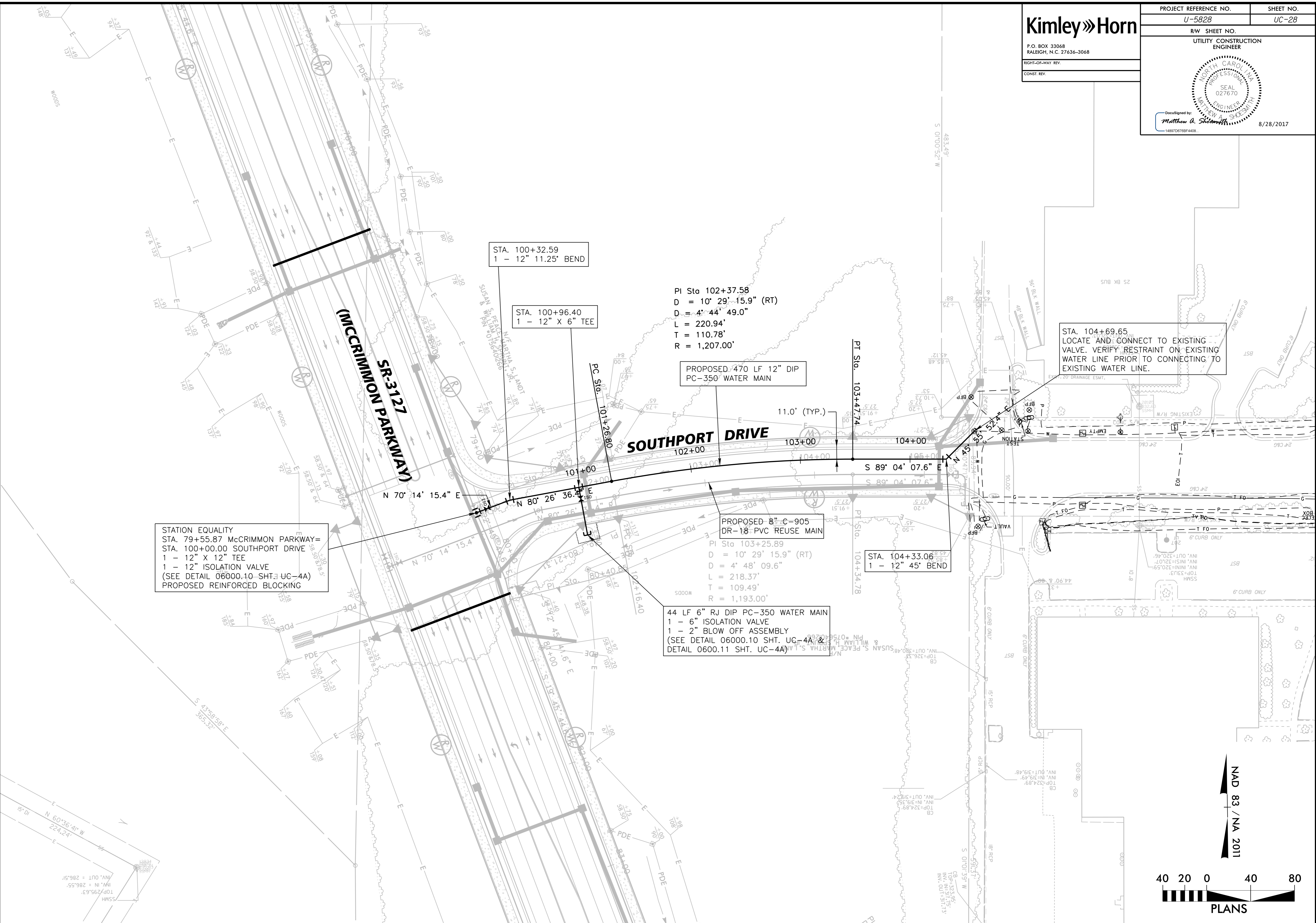
- NOTES:
1. CONTRACTOR SHALL REMOVE ALL PIPE, VALVES, STRUCTURES, PANELS, ETC. ASSOCIATED WITH THE METER AND LINE TO BE ABANDONED.
 2. THE TOWN OF CARY SHALL HAVE THE FIRST RIGHT OF REFUSAL OF ALL REMOVED COMPONENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CAREFULLY REMOVING ANY ITEMS THE TOWN WISHES TO RETAIN AND STORE ON SITE. CONTRACTOR SHALL COORDINATE THE ITEMS AND THEIR PICK UP BY THE TOWN.
 3. ALL SHUT DOWNS SHALL BE MINIMIZED AND COORDINATED WITH THE TOWN.
 4. ALL FITTINGS SHALL BE RESTRAINED.

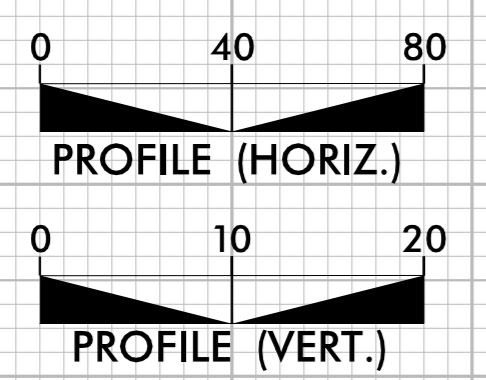
FIRE HYDRANTS TO SERVE FUTURE DEVELOPMENT
 SHALL BE PROVIDED BY DEVELOPERS TO MAINTAIN
 TOWN OF MORRISVILLE FIRE DEPARTMENT
 HYDRANT SPACING STANDARDS.



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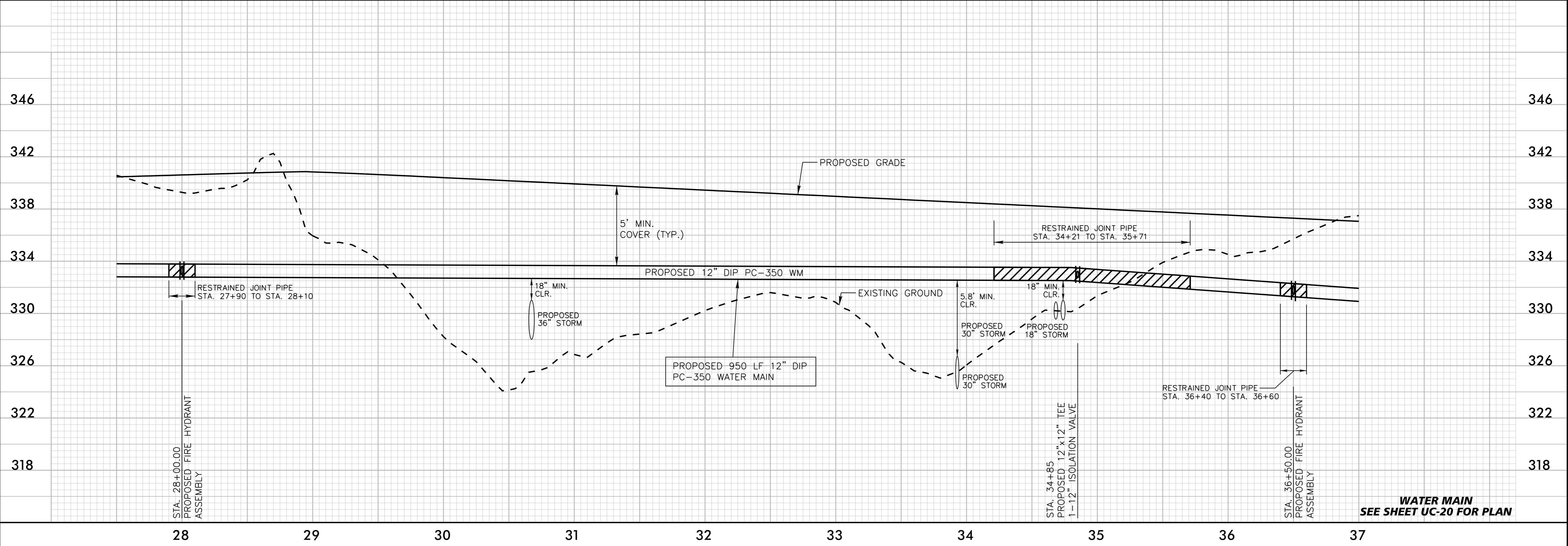
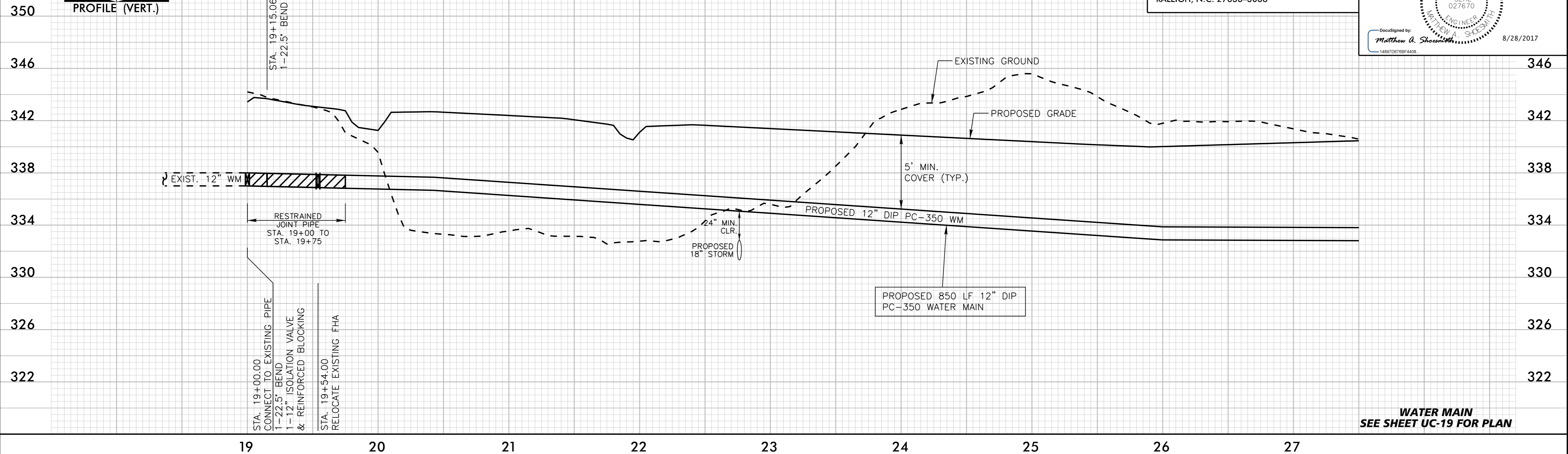
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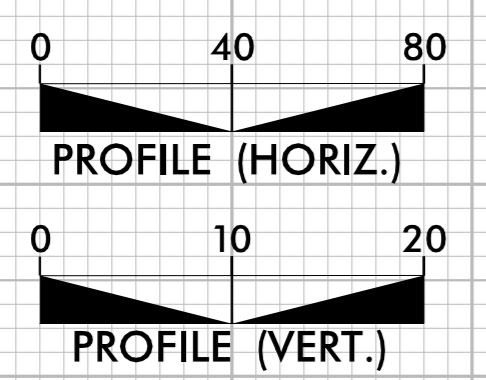


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UTILITY CONSTRUCTION ENGINEER	
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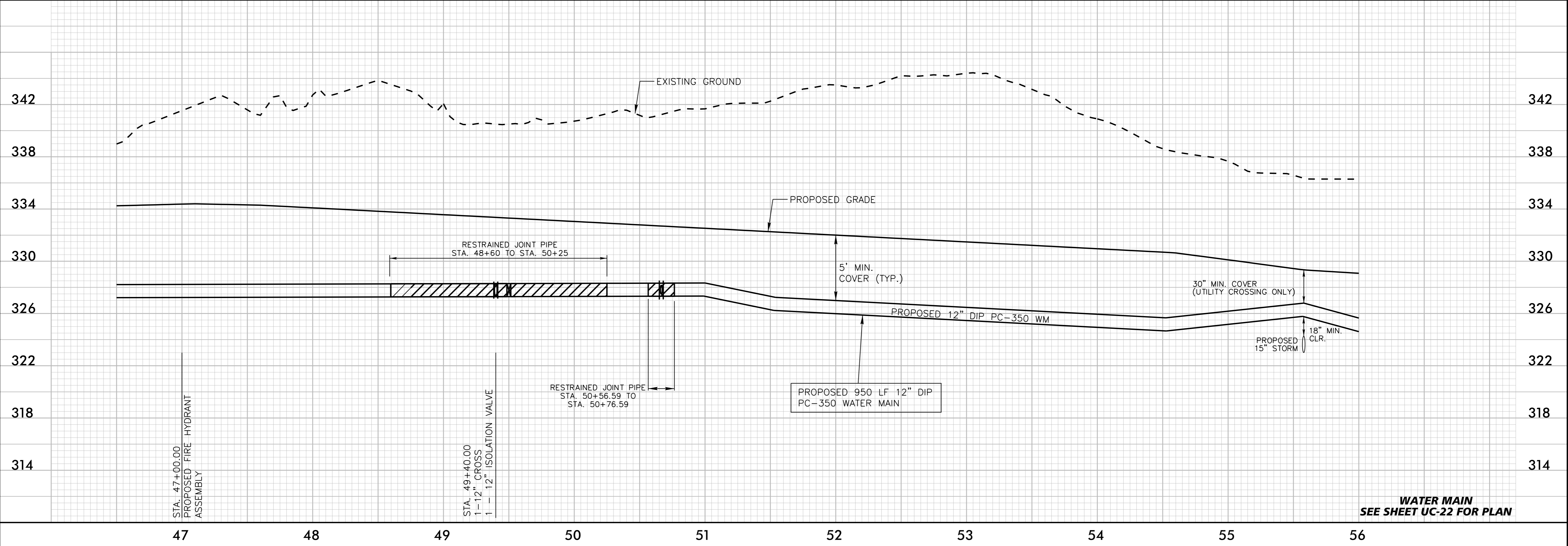
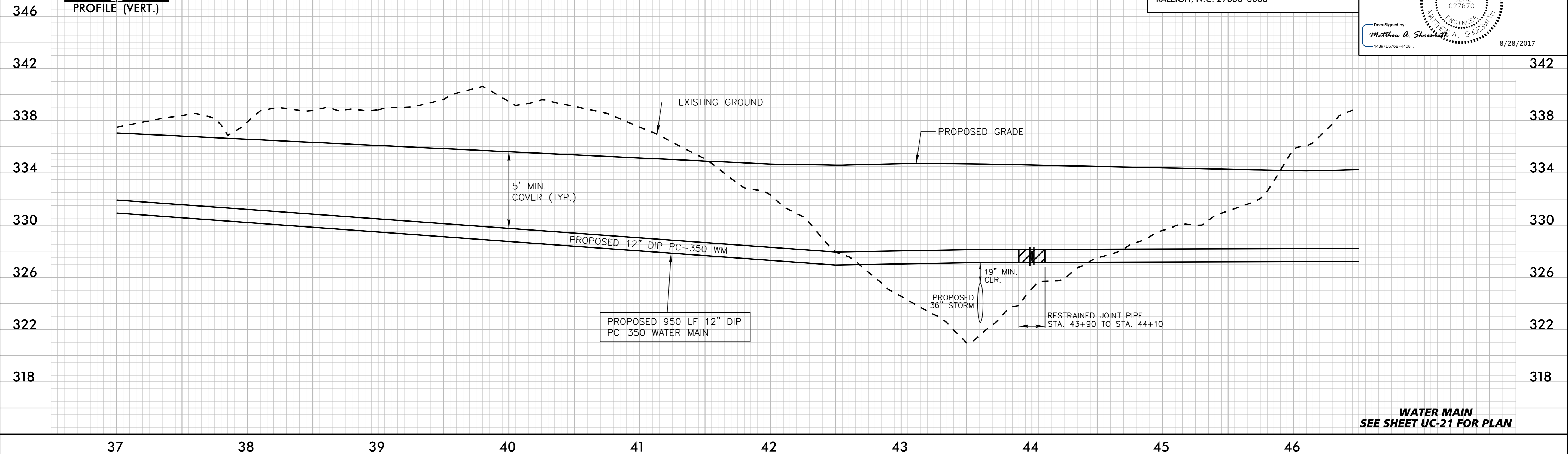


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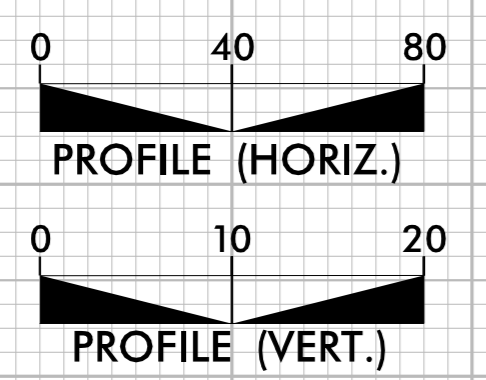


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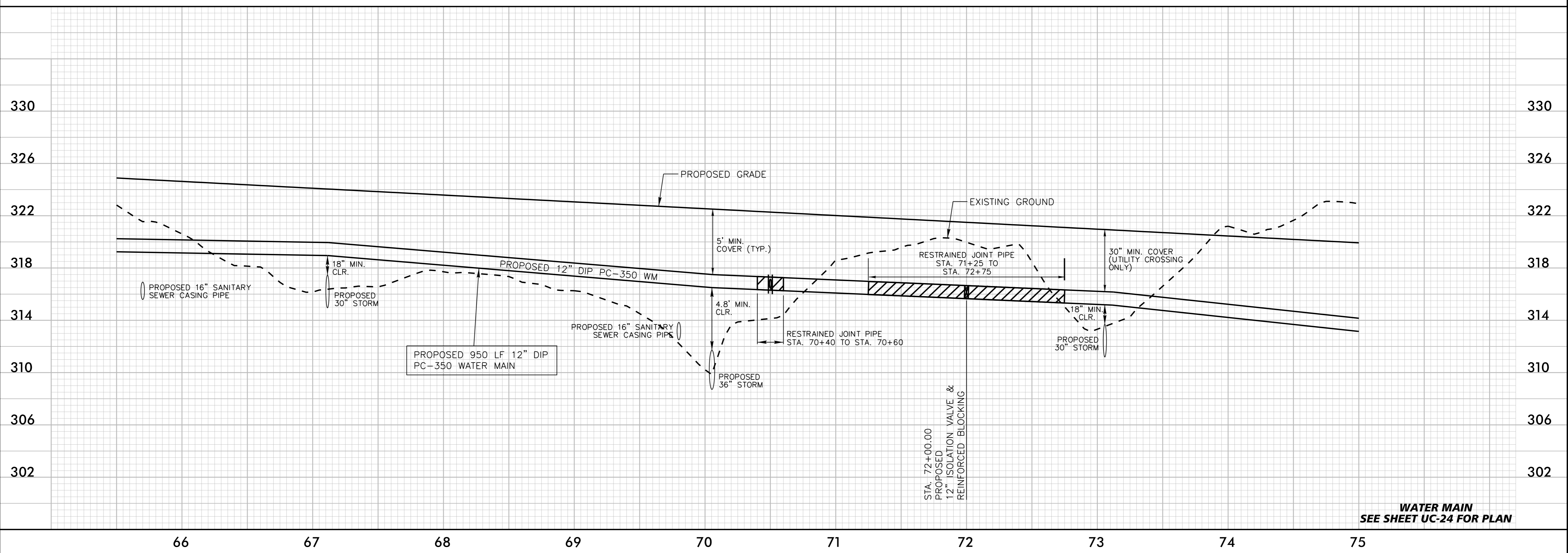
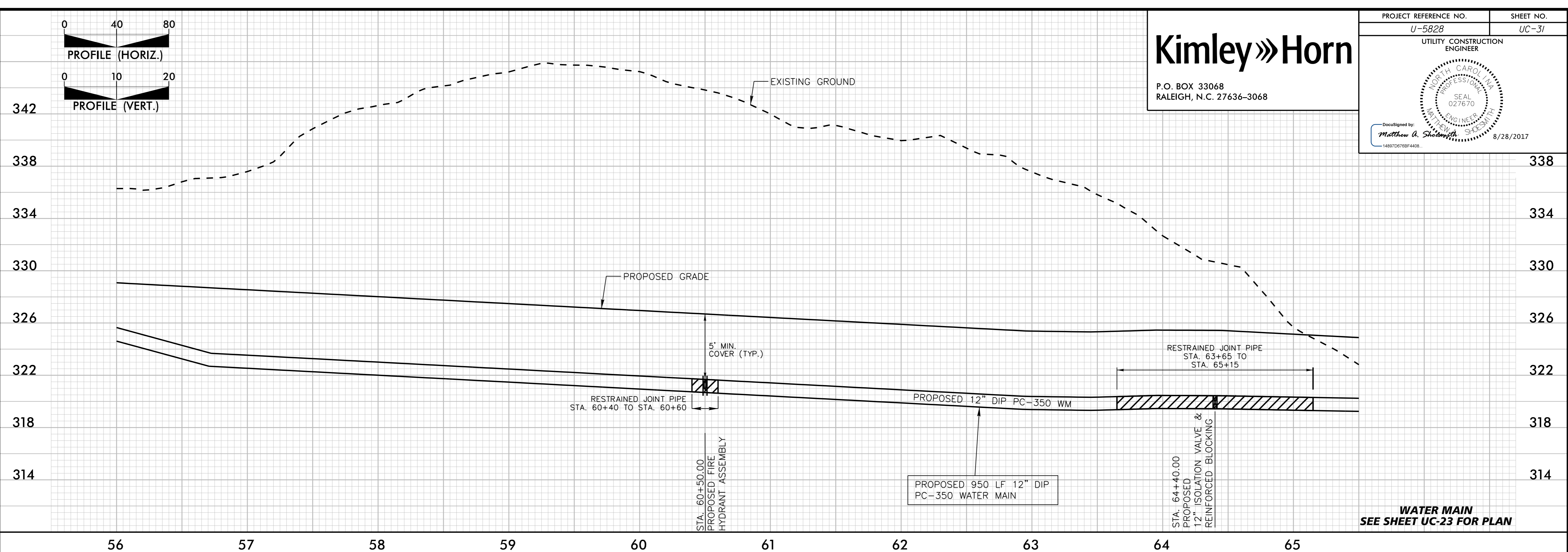


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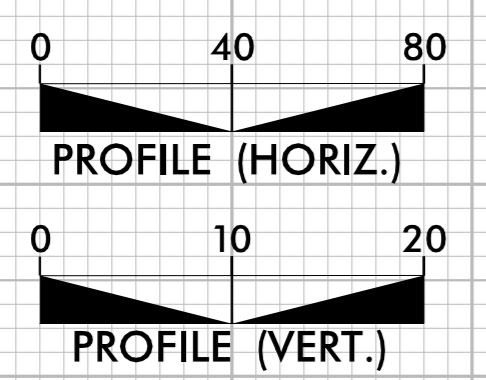


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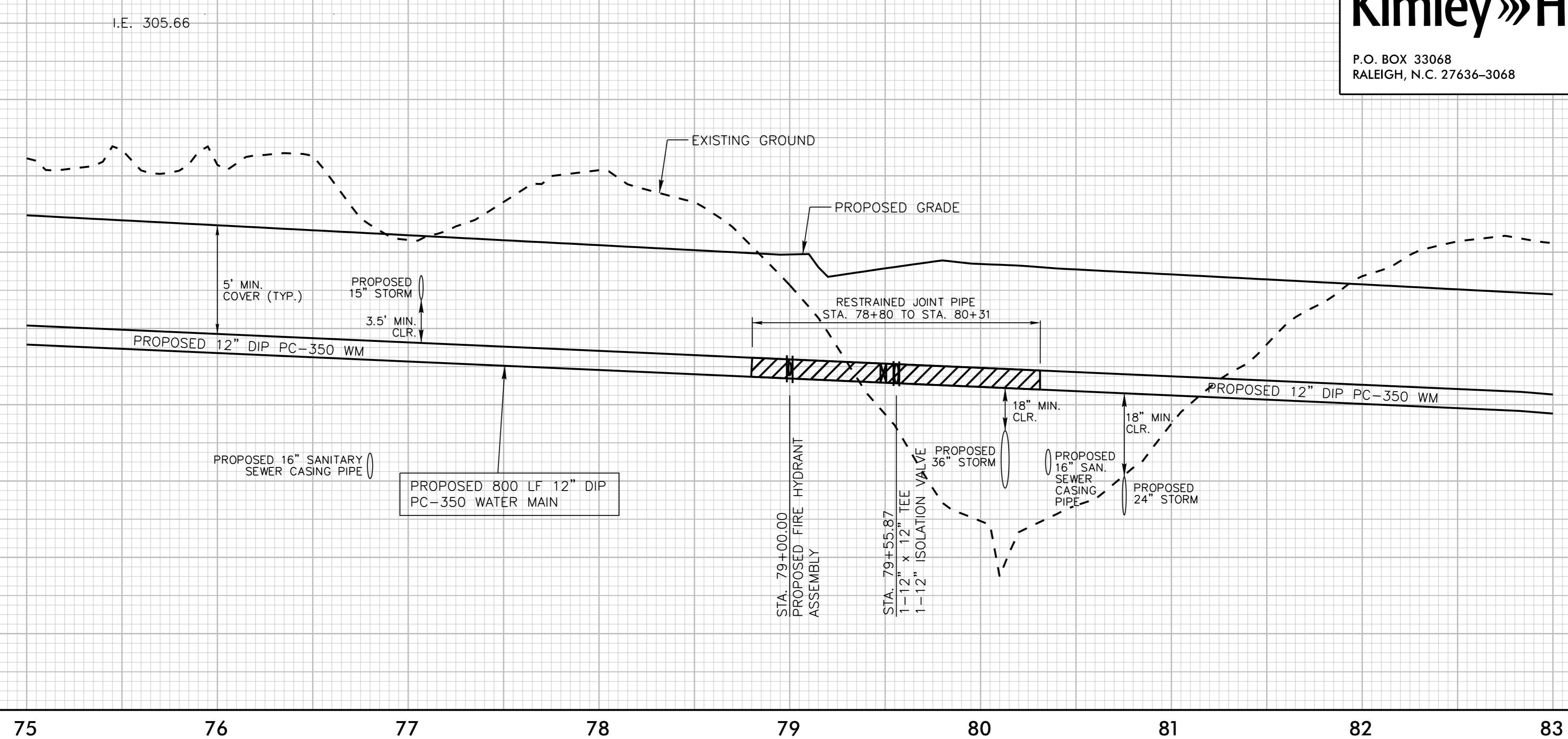


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PROJECT REFERENCE NO. U-5828	SHEET NO. UC-32
UTILITY CONSTRUCTION ENGINEER	
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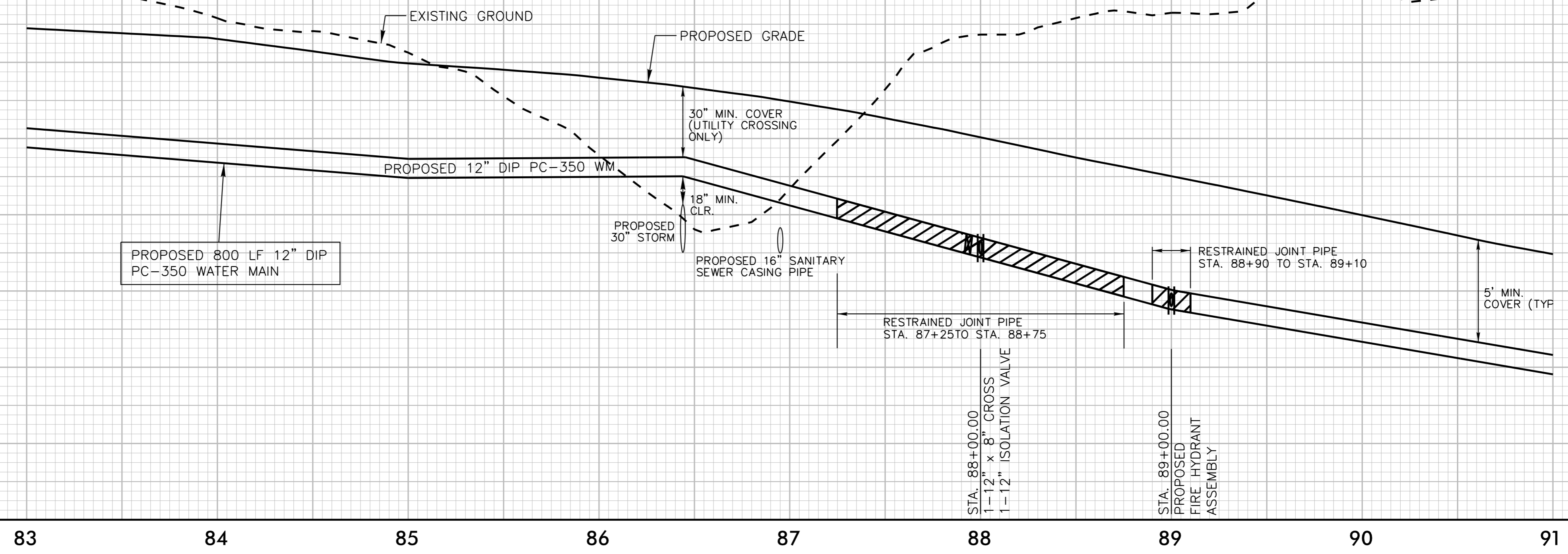


WATER MAIN
SEE SHEET UC-25 FOR PLAN

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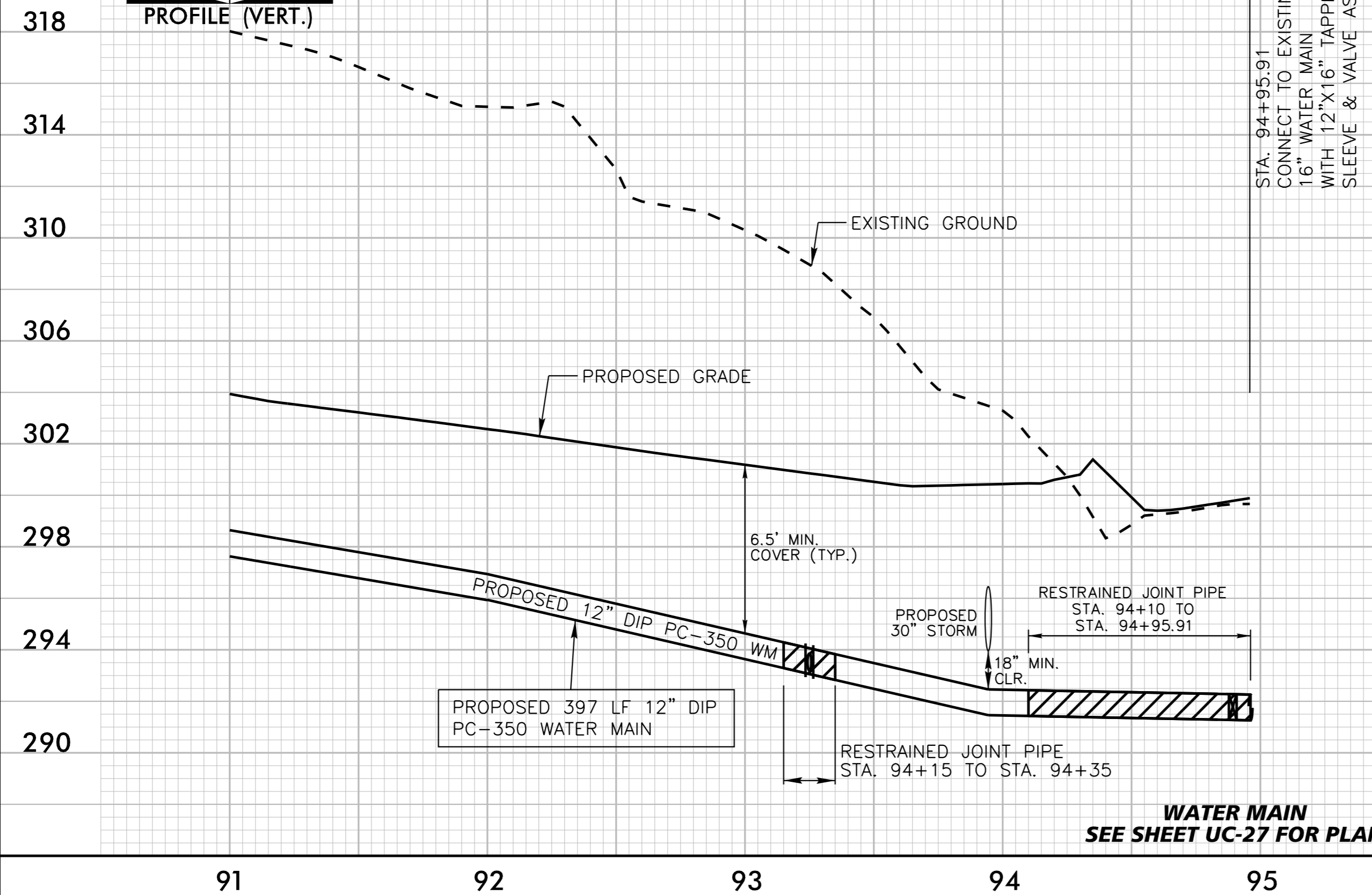
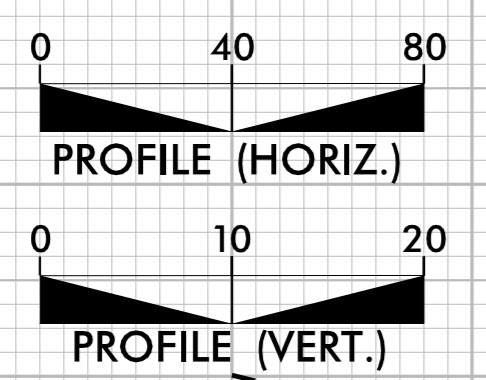
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WATER MAIN
SEE SHEET UC-26 FOR PLAN

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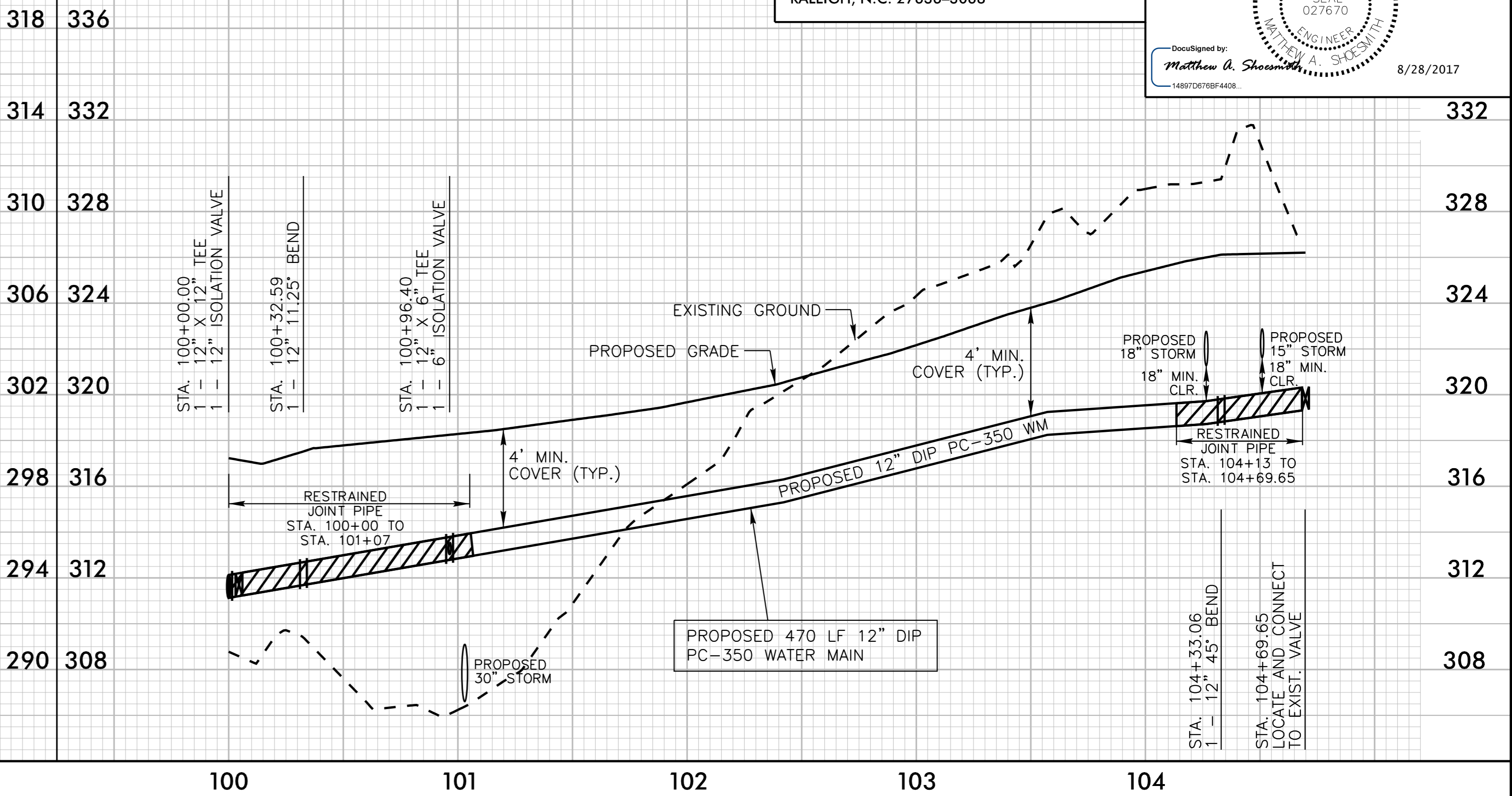
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**WATER MAIN
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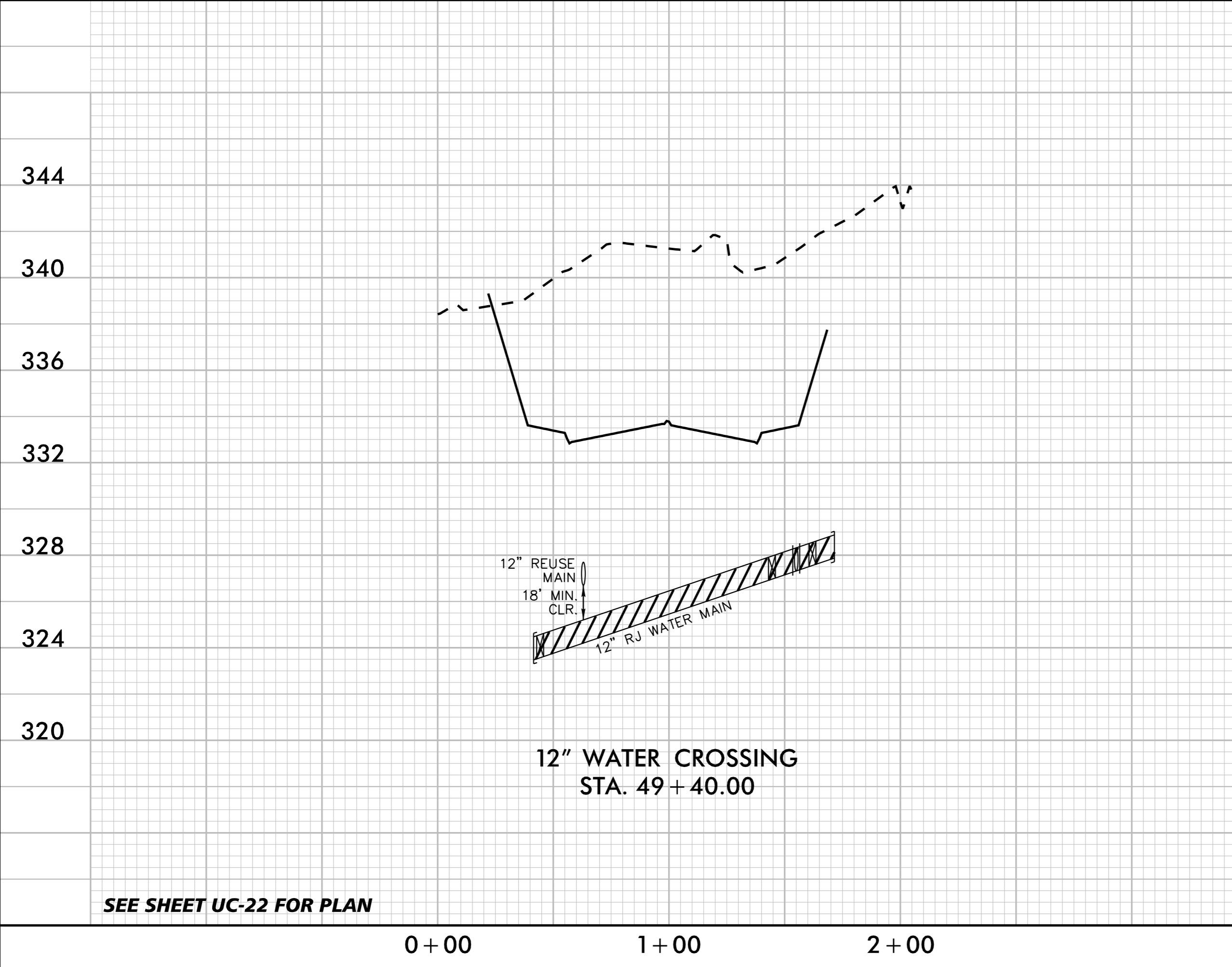
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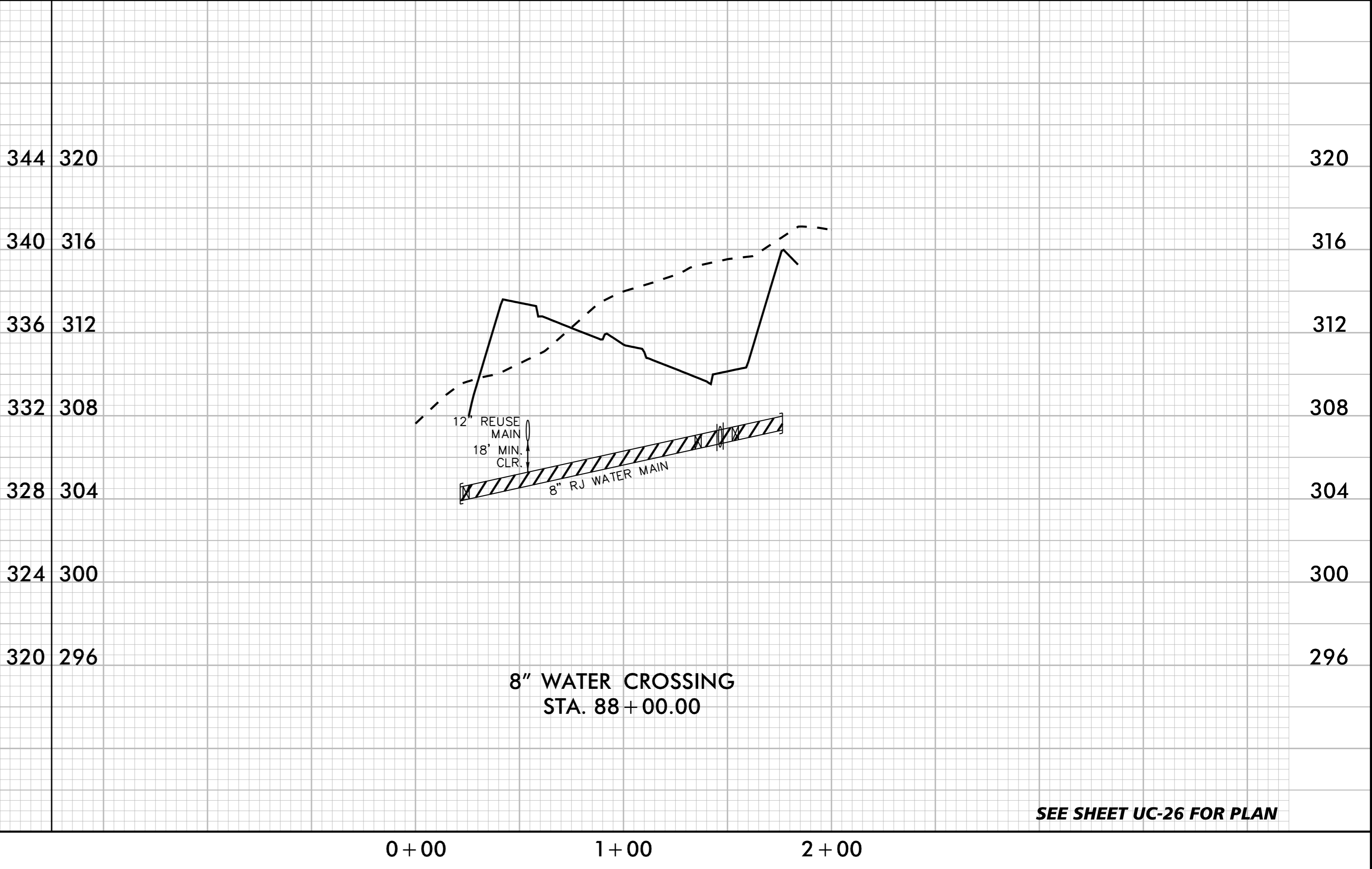
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UTILITY CONSTRUCTION ENGINEER	
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SEE SHEET UC-26 FOR PLAN