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UTILITY CONSTRUCTION

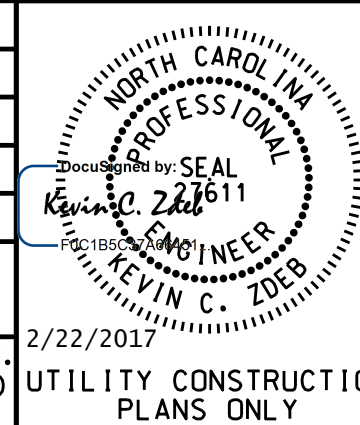

GENERAL NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2012.
2. THE EXISTING UTILITIES BELONG TO THE CITY OF ROCKY MOUNT. CONTACT: DONALD M. PERRY, PE ASSISTANT CITY ENGINEER PHONE: (252) 972-1122
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 ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.
4. THE UTILITY OWNER OWNS THE EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY THE DEPARTMENT. THE DEPARTMENT OWNS THE CONSTRUCTION CONTRACT AND HAS ADMINISTRATIVE AUTHORITY. COMMUNICATIONS AND DECISIONS BETWEEN THE CONTRACTOR AND UTILITY OWNER ARE NOT BINDING UPON THE DEPARTMENT OR THIS CONTRACT UNLESS AUTHORIZED BY THE ENGINEER. AGREEMENTS BETWEEN THE UTILITY OWNER AND CONTRACTOR FOR THE WORK THAT IS NOT PART OF THIS CONTRACT OR IS SECONDARY TO THIS CONTRACT ARE ALLOWED, BUT ARE NOT BINDING UPON THE DEPARTMENT.
5. PROVIDE ACCESS FOR THE DEPARTMENT PERSONNEL AND THE OWNER'S REPRESENTATIVES TO ALL PHASES OF CONSTRUCTION. NOTIFY DEPARTMENT PERSONNEL AND THE UTILITY OWNER TWO WEEKS PRIOR TO COMMENCEMENT OF ANY WORK AND ONE WEEK PRIOR TO SERVICE INTERRUPTION. KEEP UTILITY OWNERS' REPRESENTATIVES INFORMED OF WORK PROGRESS AND PROVIDE OPPORTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.

6. THE PLANS DEPICT THE BEST AVAILABLE INFORMATION FOR THE LOCATION, SIZE, AND TYPE OF MATERIAL FOR ALL EXISTING UTILITIES. MAKE INVESTIGATIONS FOR DETERMINING THE EXACT LOCATION, SIZE, AND TYPE MATERIAL OF THE EXISTING FACILITIES AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED UTILITIES AND FOR AVOIDING DAMAGE TO EXISTING FACILITIES. REPAIR ANY DAMAGE INCURRED TO EXISTING FACILITIES TO THE ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE DEPARTMENT.
7. MAKE FINAL CONNECTIONS OF THE NEW WORK TO THE EXISTING SYSTEM WHERE INDICATED ON THE PLANS, AS REQUIRED TO FIT THE ACTUAL CONDITIONS, OR AS DIRECTED.
8. MAKE CONNECTIONS BETWEEN EXISTING AND PROPOSED UTILITIES AT TIMES MOST CONVENIENT TO THE PUBLIC, WITHOUT ENDANGERING THE UTILITY SERVICE, AND IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. MAKE CONNECTIONS ON WEEKENDS, AT NIGHT, AND ON HOLIDAYS IF NECESSARY.
9. ALL UTILITY MATERIALS SHALL BE APPROVED PRIOR TO DELIVERY TO THE PROJECT. SEE 1500-7, " SUBMITTALS AND RECORDS" IN SECTION 1500 OF THE STANDARD SPECIFICATIONS.

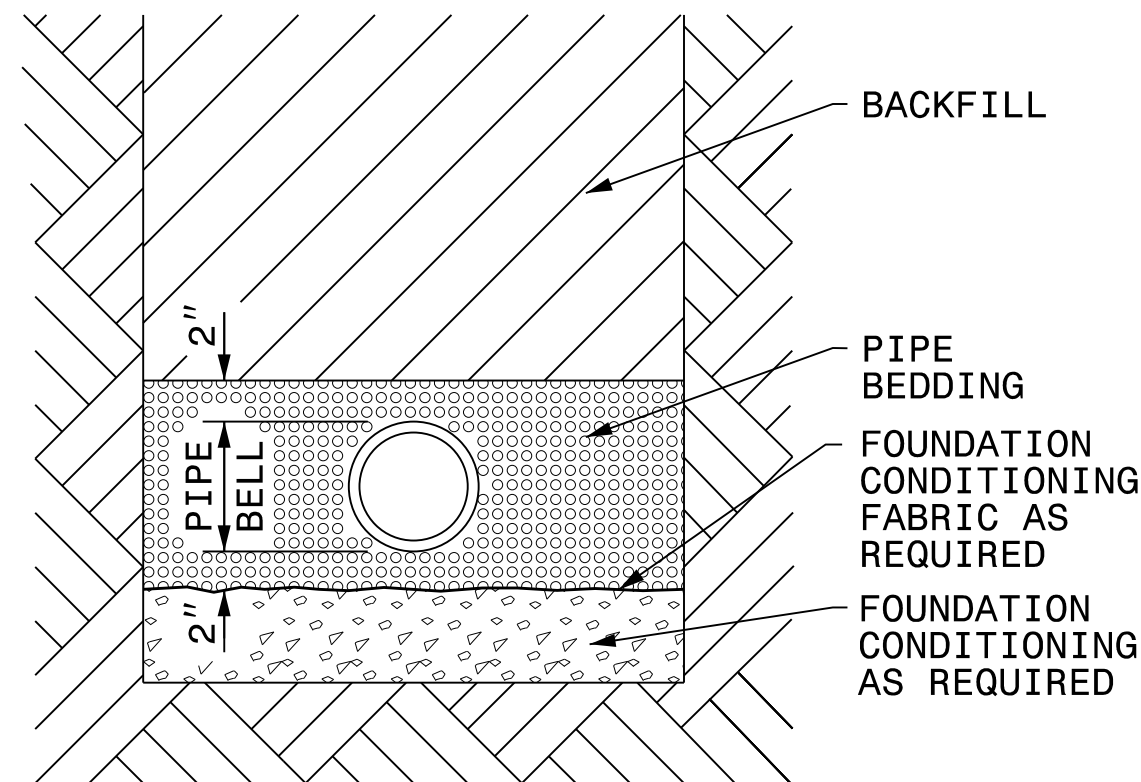
PROJECT SPECIFIC NOTES:

1. CONTRACTOR'S ATTENTION IS DIRECTED TO THE UTILITY CONSTRUCTION PROJECT SPECIAL PROVISIONS PROVIDED ALONG WITH THIS PLAN SET.
2. PVC PIPE MANUFACTURED MORE THAN 12 MONTHS BEFORE INSTALLATION DATE WILL NOT BE ACCEPTED.
3. ALL WATER LINE, WATER SERVICES, SANITARY SEWER MAIN, AND SANITARY SEWER SERVICES SHALL BE INSTALLED WITH A CONTINUOUS TRACER WIRE FOR LOCATION PURPOSES BY MEANS OF AN ELECTRONIC TRACER.
4. WATER LINE PIPE SHALL BE EITHER PVC OR DUCTILE IRON. PVC PIPE SHALL BE DR-18 AWWA C900 OR AWWA C905 WITH D.I.P. EQUIVALENT OUTSIDE DIAMETERS AND CERTIFIED NSF61 FOR POTABLE WATER USE. DUCTILE IRON PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH AWWA C150 AND C151 AND SHALL BE A MINIMUM PRESSURE CLASS OF 350 AND THICKNESS CLASS 50.
5. DUCTILE IRON PIPE SHALL BE EITHER PUSH-ON, MECHANICAL JOINT, OR RESTRAINED JOINT CONSTRUCTION.
6. ALL WATER LINE FITTINGS SHALL BE DUCTILE IRON, MECHANICAL JOINT OR RESTRAINED JOINT COMPACT FITTINGS AND SHALL CONFORM WITH ANSI/AWWA C153/A21.53 UNLESS OTHERWISE DIRECTED. FITTINGS 4-INCH THROUGH 24-INCH DIAMETER SHALL HAVE A MINIMUM PRESSURE RATING OF 350 PSI.
7. DUCTILE IRON PIPE AND FITTINGS SHALL BE BITUMINOUS COATED OUTSIDE AND CEMENT MORTAR LINED IN ACCORDANCE WITH ANSI/AWWA STANDARD C104/A21.4.
8. ALL WATER LINE FITTINGS SHALL BE ADEQUATELY RESTRAINED BY THE USE OF RESTRAINED JOINT CONSTRUCTION AND/OR CAST IN PLACE CONCRETE THRUST RESTRAINTS AS DETAILED ON THESE DRAWINGS, OR AS DIRECTED BY THE RESIDENT ENGINEER.
9. TRENCHLESS INSTALLATION OF WATER LINE, 4" THROUGH 24", SHALL UTILIZE PVC C900 OR C905 DR-18 PIPE WITH FUSIBLE JOINTS AND D.I.P. EQUIVALENT OUTSIDE DIAMETERS.
10. CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107, AND 1550 OF THE STANDARD SPECIFICATIONS CONCERNING TRENCHLESS INSTALLATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE BORE DESIGNED AND SEALED BY A LICENSED NORTH CAROLINA PROFESSIONAL ENGINEER. NO DAMAGE IS ALLOWED TO RIVER, WETLANDS, OR BUFFER ZONES.
11. EXISTING WATER METERS TO REMAIN SHALL BE RECONNECTED TO THE EXISTING / PROPOSED WATER MAIN WITH NEW WATER SERVICE LINES.
12. ALL NEW OR RELOCATED WATER METERS SHALL BE INSTALLED AT THE RIGHT-OF-WAY LINE, UNLESS OTHERWISE DIRECTED BY THE RESIDENT ENGINEER.
13. EXISTING HYDRANTS AND WATER METERS TO BE REMOVED AND/OR RELOCATED SHALL BE RETURNED TO THE UTILITY OWNER FOR INSPECTION. CONTRACTOR SHALL DELIVER THESE UTILITY ITEMS TO A MUTUALLY AGREED UPON LOCATION. ALL OTHER PARTS, PIPING, AND METER BOXES REMOVED FROM THE SYSTEM SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AND BE PROPERLY DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.
14. HYDRANTS AND WATER METERS LABELLED TO BE REMOVED SHALL NOT BE USED AS NEW MATERIALS IN THE PROPOSED CONSTRUCTION UNLESS OTHERWISE DIRECTED BY THE UTILITY OWNER'S REPRESENTATIVE.
15. EXISTING WATER METERS TO BE RELOCATED SHALL BE CONNECTED TO THE EXISTING OR PROPOSED WATER LINE WITH NEW WATER SERVICE LINES. ANY EXTENSIONS OR MODIFICATIONS TO EXISTING SERVICE LINES ON THE CUSTOMER SIDE OF THE WATER METER SHALL BE MADE WITH LIKE MATERIAL AND WORK SHALL BE INCIDENTAL TO RELOCATION OF THE WATER METER.

PROJECT REFERENCE NO. U-3621A	SHEET NO. UC-3
DESIGNED BY: GJB	
DRAWN BY: GJB	
CHECKED BY: KCZ	
APPROVED BY: KCZ	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 M A Engineering Consultants, Inc. 598 East Chatham Street Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221	

5/14/99

BEDDING DETAIL FOR DUCTILE IRON PIPE

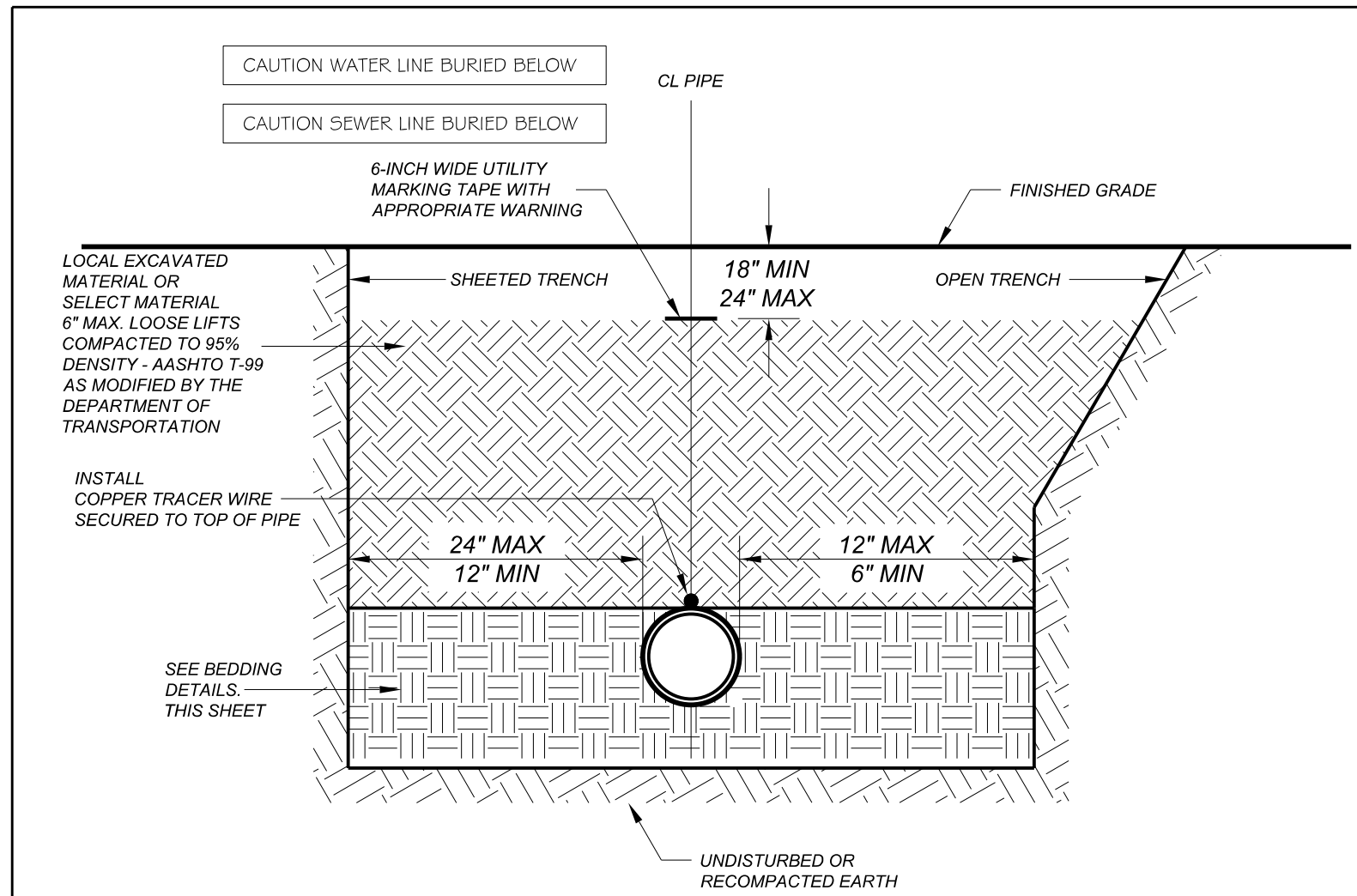


PLACE FOUNDATION CONDITIONING MATERIAL BELOW BEDDING IF REQUIRED, AS DIRECTED BY ENGINEER.

PIPE BEDDED IN SELECT MATERIAL, CLASS II (TYPE 1) OR CLASS III.

TRENCH BACKFILLED IN LOOSE 6" LAYERS COMPACTED TO TOP OF TRENCH USING LOCAL EXCAVATED MATERIAL IF APPROVED BY THE ENGINEER, OR SELECT MATERIAL. ALL MATERIAL SHALL BE FREE OF ROCKS, FOREIGN MATERIAL, AND FROZEN EARTH.

COMPACTION SHALL BE TO APPROXIMATELY 95% DENSITY IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY THE DEPARTMENT OF TRANSPORTATION.



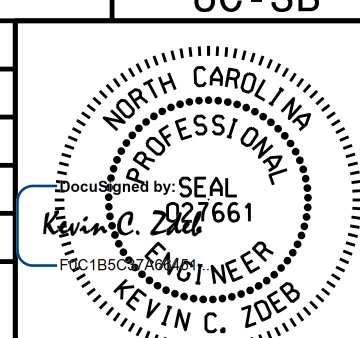
NOTES:

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

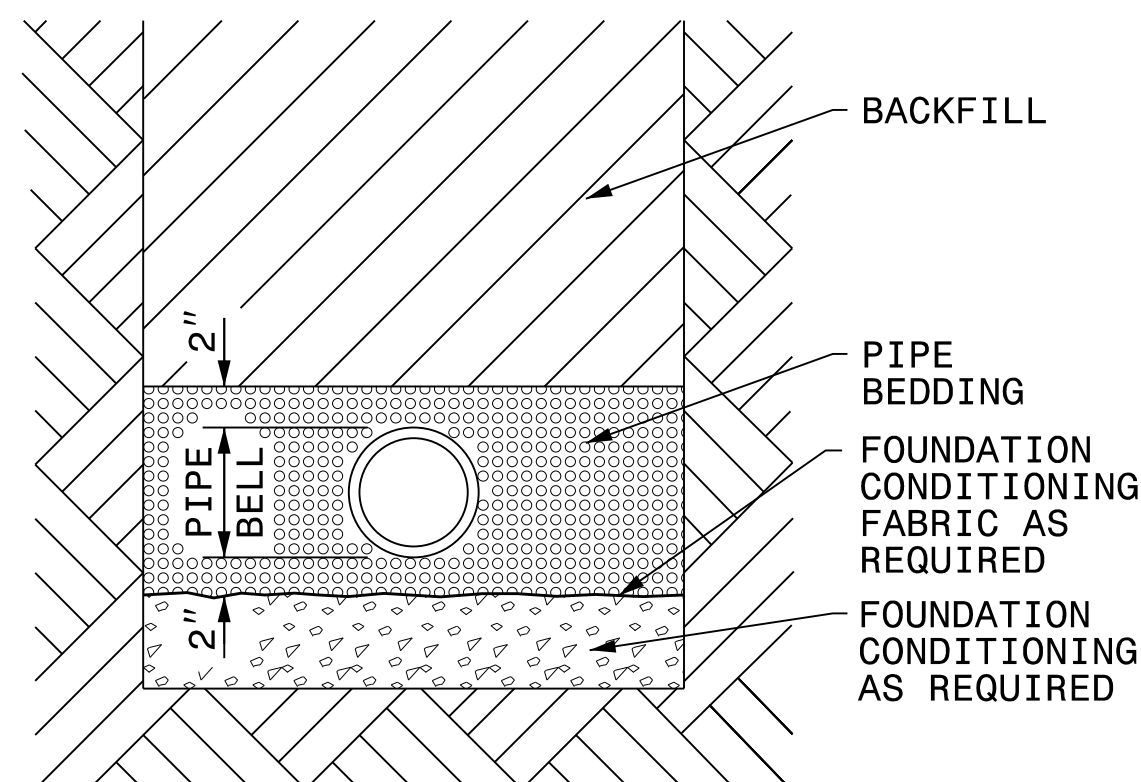
GENERAL TRENCH DETAIL

MAXIMUM TRENCH WIDTH AT TOP OF PIPE

NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)	NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)
2	26	18	42
4	28	20	44
6	30	24	48
8	32	30	54
10	34	36	60
12	36	42	66
14	38	48	72
16	40	54	78

PROJECT REFERENCE NO. U-3621A	SHEET NO. UC-3B
DESIGNED BY: GJB	
DRAWN BY: GJB	
CHECKED BY: KCZ	
APPROVED BY: KCZ	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	2/22/2017
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY
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BEDDING DETAIL FOR POLYVINYL CHLORIDE (PVC) PIPE

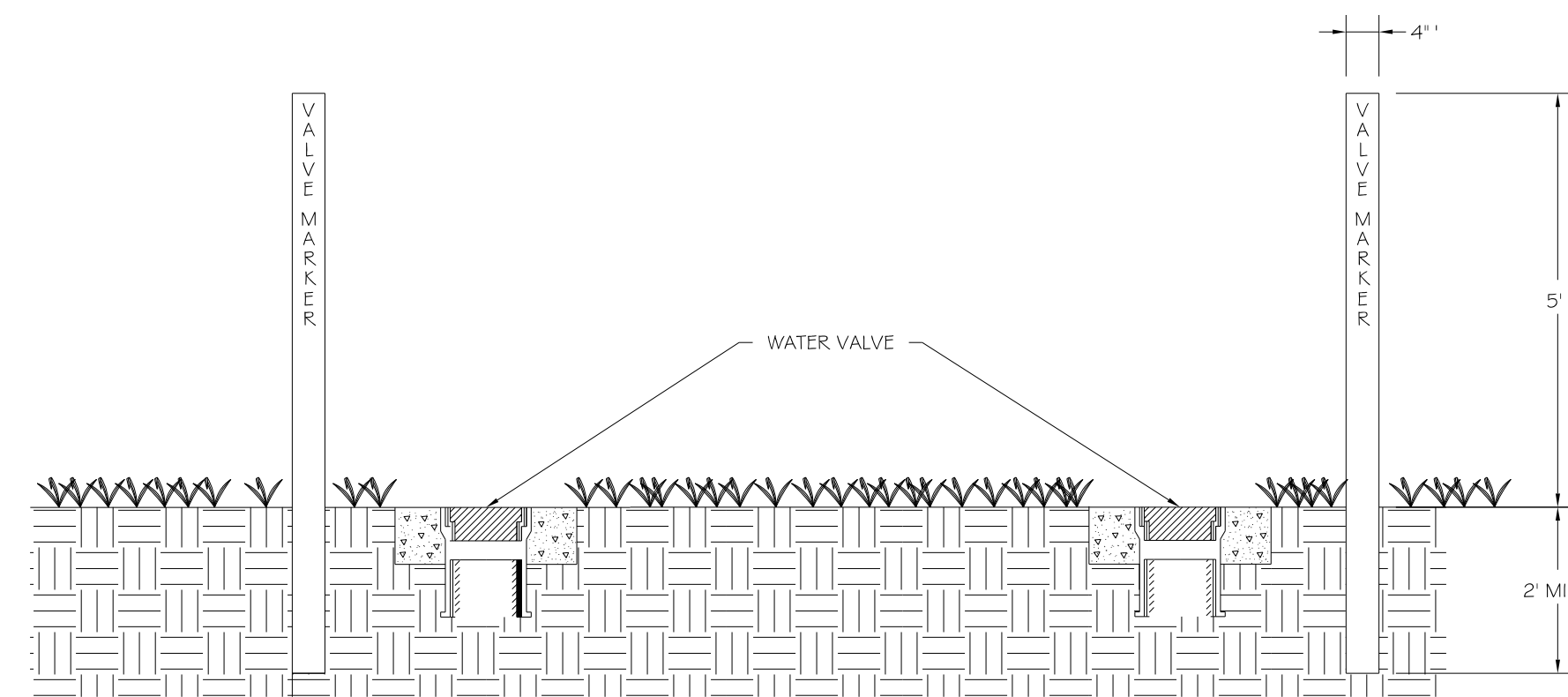


PLACE FOUNDATION CONDITIONING MATERIAL BELOW BEDDING IF REQUIRED, AS DIRECTED BY ENGINEER.

PIPE BEDDED IN NCDOT #57 STONE.

TRENCH BACKFILLED IN LOOSE 6" LAYERS COMPACTED TO TOP OF TRENCH USING LOCAL EXCAVATED MATERIAL IF APPROVED BY THE ENGINEER, OR SELECT MATERIAL. ALL MATERIAL SHALL BE FREE OF ROCKS, FOREIGN MATERIAL, AND FROZEN EARTH.

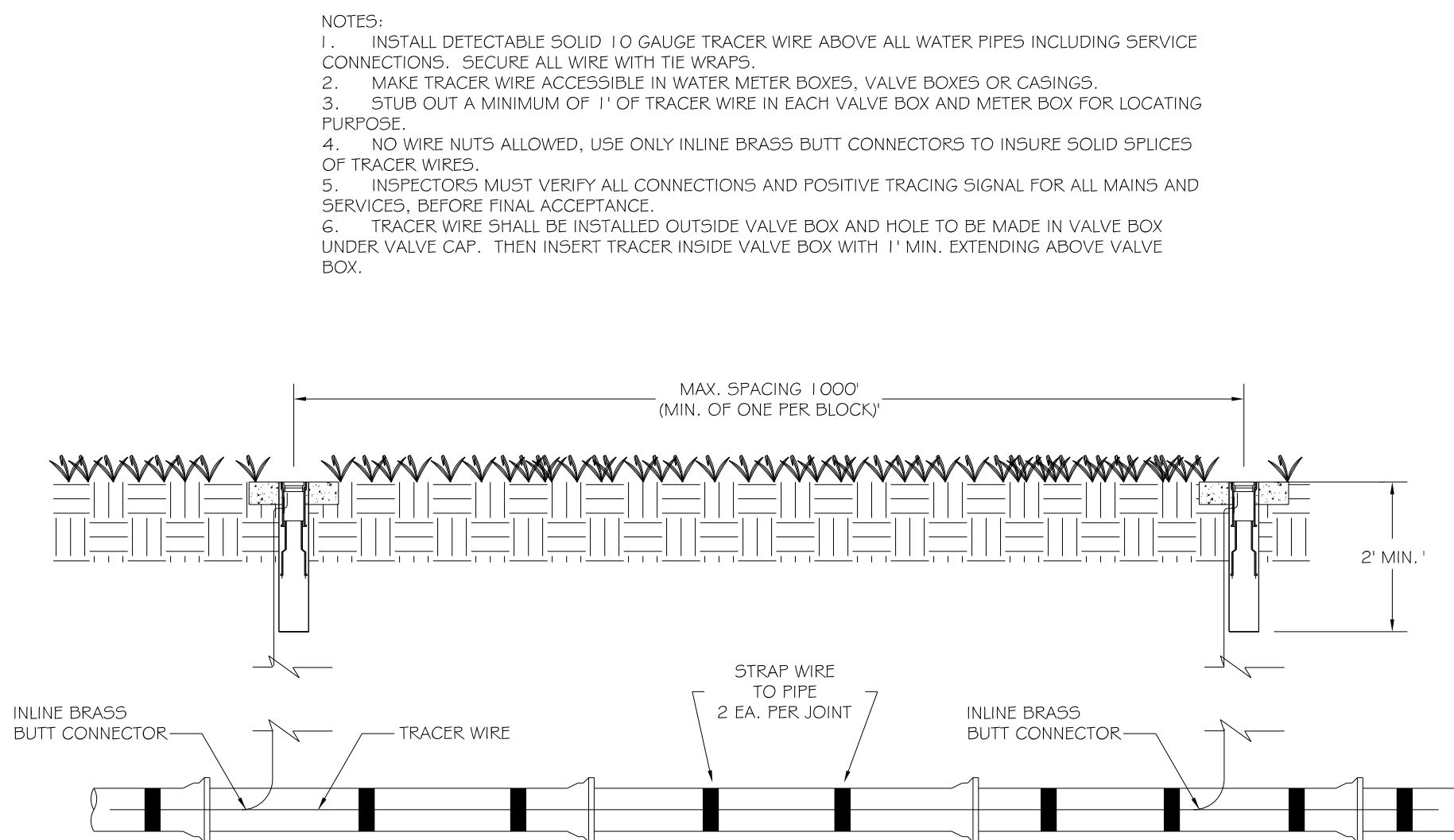
COMPACTION SHALL BE TO APPROXIMATELY 95% DENSITY IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY THE DEPARTMENT OF TRANSPORTATION.



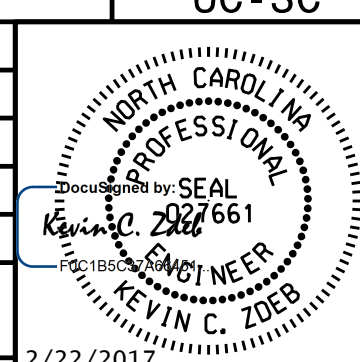

NOTES:

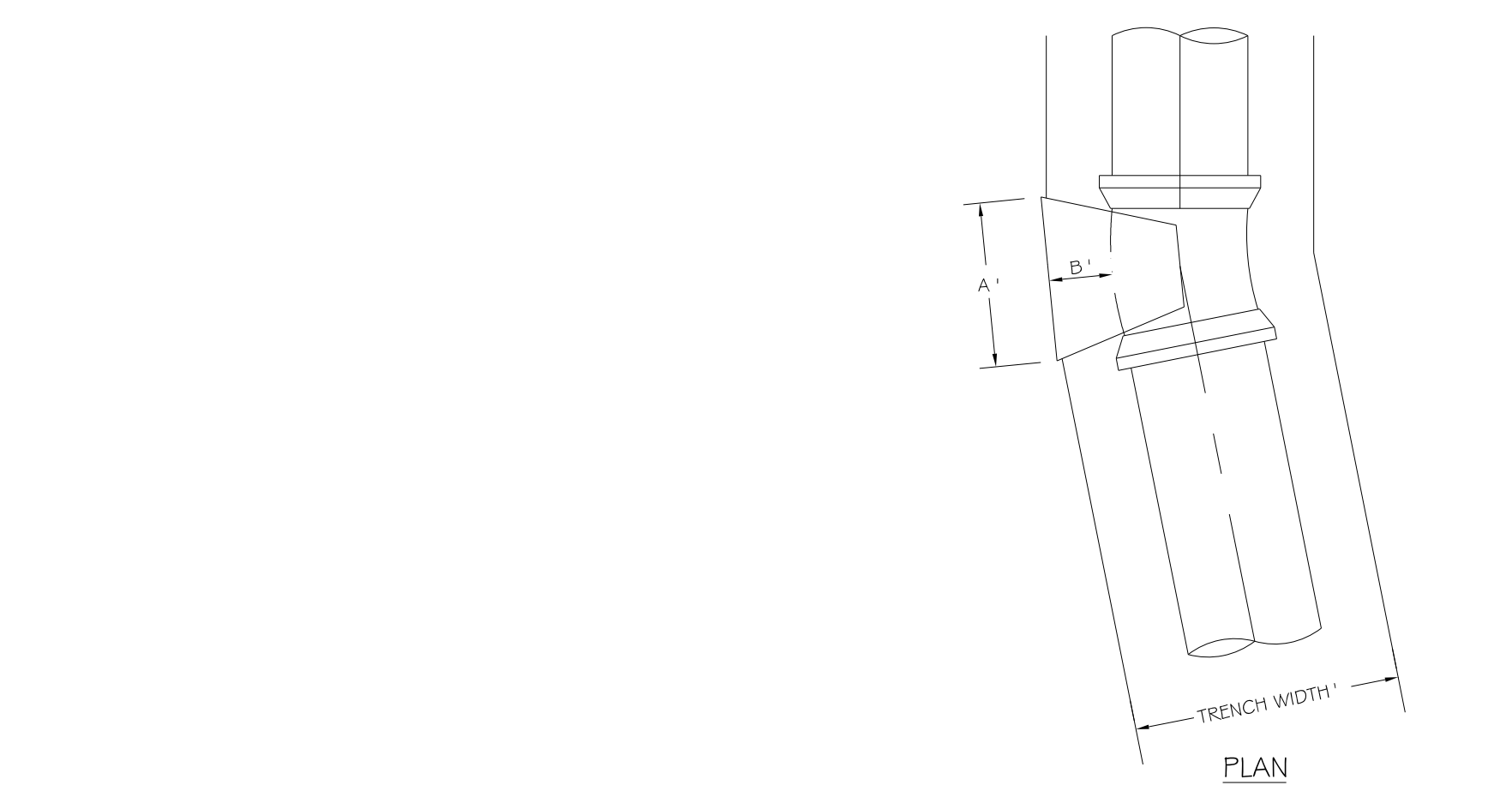
1. MARKER HAS HIGH IMPACT RESISTANCE DUE TO HIGH FLEXIBILITY.
2. TWO (2) FLAT SURFACES ARE PROVIDED FOR ANY DECAL APPLICATION NEEDED.
3. MAY REQUIRE A SMALL PILOT HOLE IN CERTAIN SOIL CONDITIONS BEFORE INSTALLATION.

VALVE MARKER DETAIL



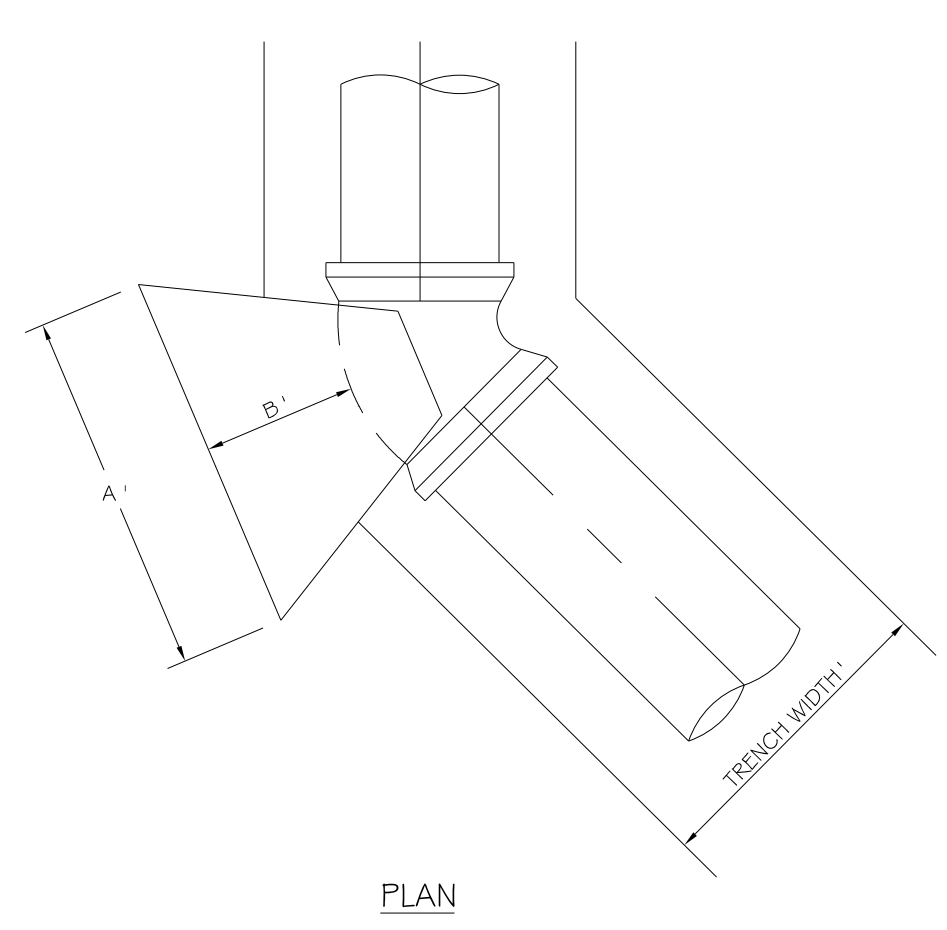
TEST STATION MARKERS WITH TRACER WIRE FOR UTILITY INSTALLATIONS

PROJECT REFERENCE NO. U-3621A	SHEET NO. UC-3C
DESIGNED BY: GJB	
DRAWN BY: GJB	
CHECKED BY: KCZ	
APPROVED BY: KCZ	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 2/22/2017 UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION	
<i>DOCUMENT NOT CONSIDERED FINAL UNTIL ALL SIGNATURES ARE COMPLETED</i>	
 M A Engineering Consultants, Inc.	



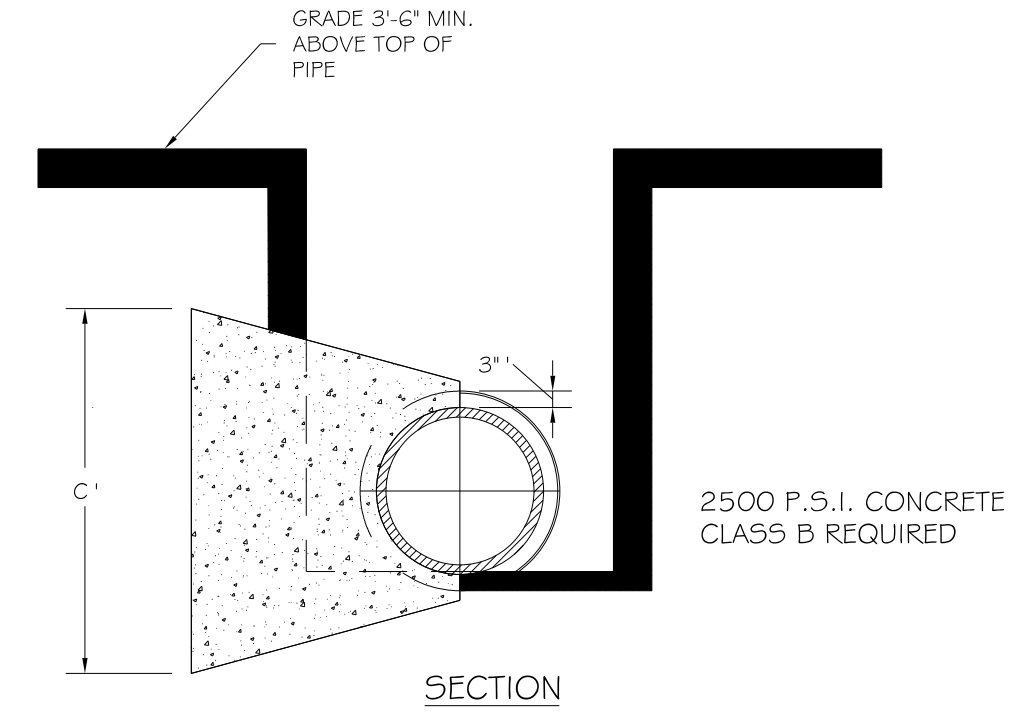
1 1/4° BENDS

NOMINAL DIAMETER	A	B	C	TRENCH WIDTH
6"	6"	1'0"	1'0"	2'6"
8"	1'0"	1'0"	1'0"	2'8"
12"	1'3"	1'0"	1'0"	3'0"
16"	1'8"	1'2"	1'2"	3'4"
20"	2'1"	1'2"	1'6"	3'8"
24"	2'6"	1'2"	1'10"	4'0"
30"	3'0"	1'4"	2'4"	4'6"

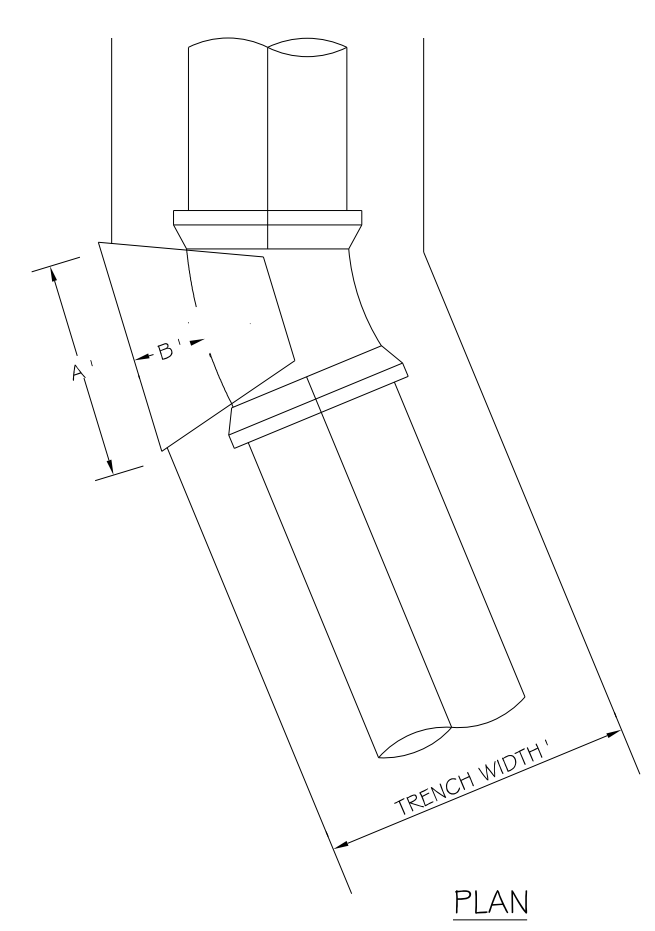


45° BENDS

NOMINAL DIAMETER	A	B	C	TRENCH WIDTH
6"	1'4"	1'0"	1'2"	2'6"
8"	1'6"	1'0"	1'4"	2'8"
12"	2'2"	1'0"	2'2"	3'0"
16"	3'0"	1'0"	2'8"	3'4"
20"	4'0"	1'6"	3'0"	3'8"
24"	5'0"	2'0"	3'6"	4'0"
30"	6'6"	2'6"	4'2"	4'6"

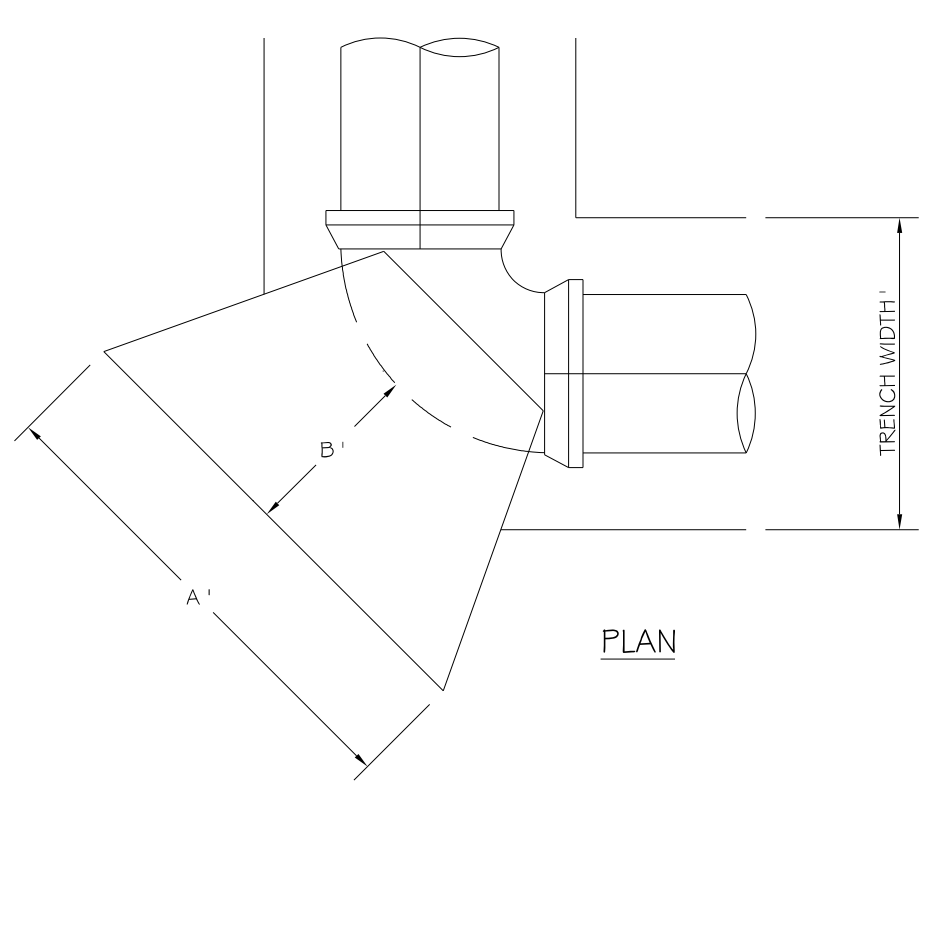


THRUST BLOCK DETAIL FOR BEND FITTINGS



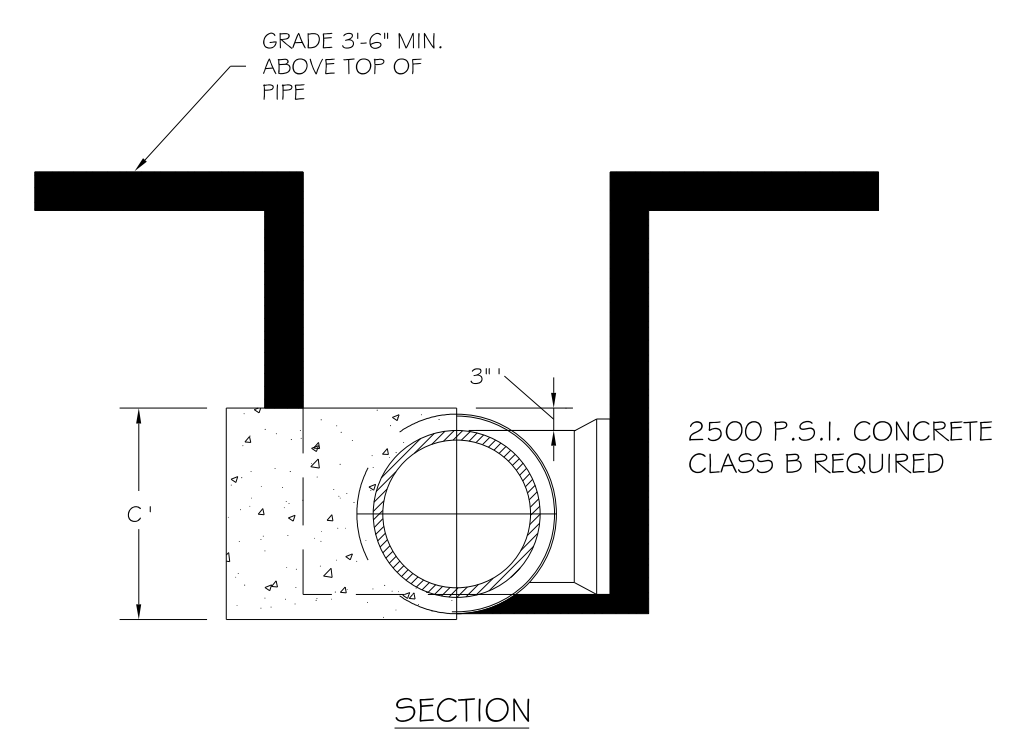
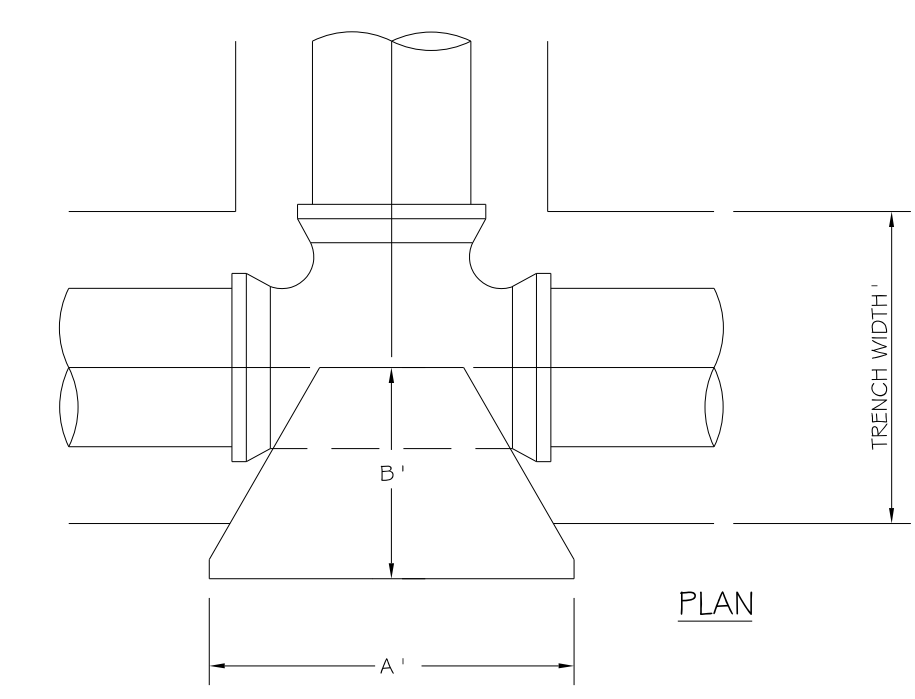
2 1/2° BENDS

NOMINAL DIAMETER	A	B	C	TRENCH WIDTH
6"	1'0"	1'0"	1'0"	2'6"
8"	1'4"	1'0"	1'2"	2'8"
12"	2'0"	1'0"	1'6"	3'0"
16"	2'8"	1'0"	1'10"	3'4"
20"	3'0"	1'0"	2'2"	3'8"
24"	3'0"	1'0"	3'0"	4'0"
30"	4'0"	1'6"	3'6"	4'6"



90° BENDS

NOMINAL DIAMETER	A	B	C	TRENCH WIDTH
6"	2'6"	1'0"	1'4"	2'6"
8"	3'0"	1'6"	1'10"	2'8"
12"	4'0"	1'6"	3'0"	3'0"
16"	6'0"	2'0"	3'8"	3'4"
20"	7'0"	2'6"	4'4"	3'8"
24"	8'0"	3'2"	5'6"	4'0"
30"	9'6"	4'0"	6'2"	4'6"

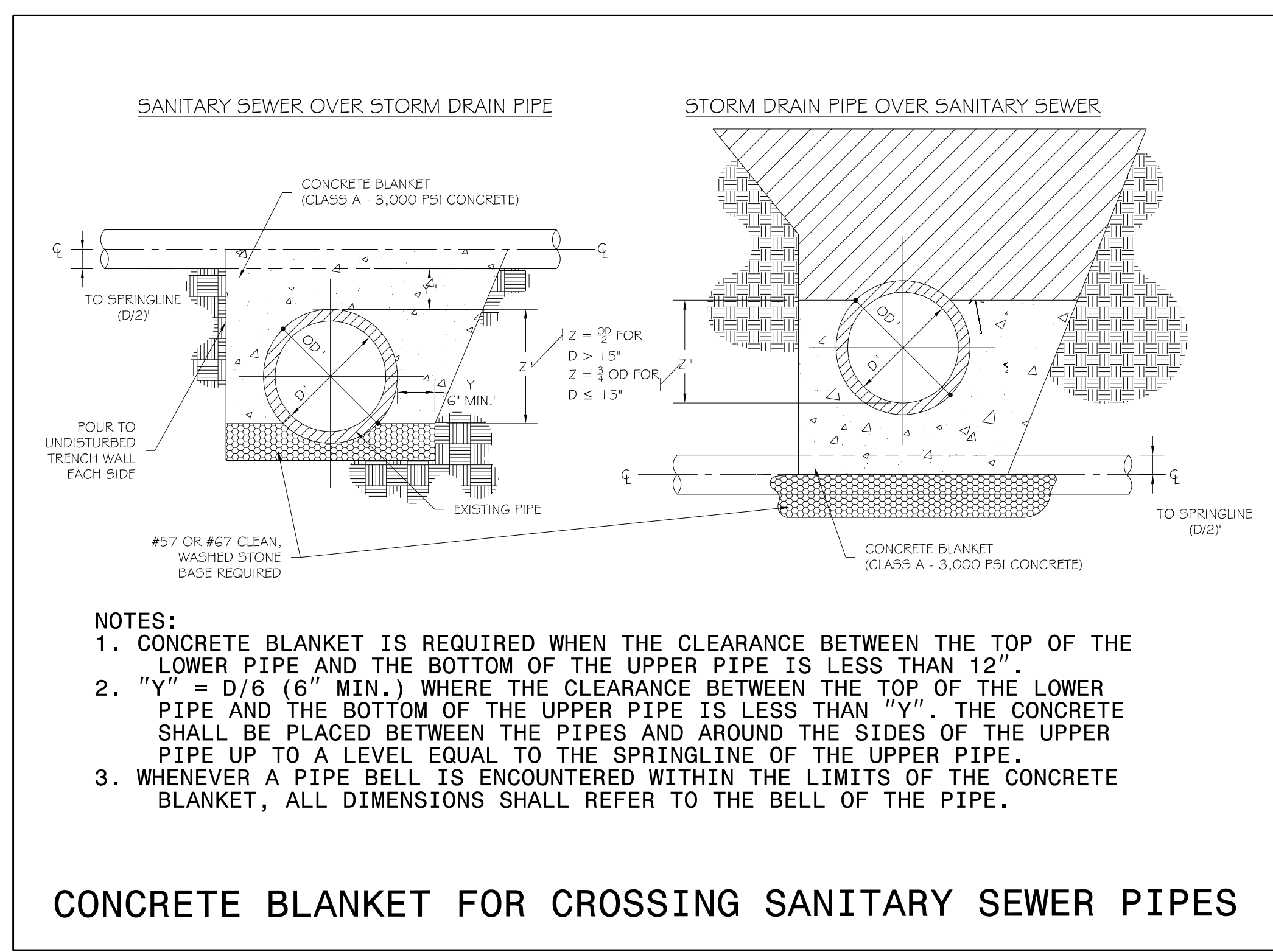


THRUST BLOCK DETAIL FOR TEE FITTINGS

TEE	A	B	C
6x6x6"	2'0"	1'0"	1'0"
8x8x8"	2'0"	1'0"	1'0"
8x8x8"	2'4"	1'0"	1'6"
12x12x6"	2'4"	1'0"	1'6"
12x12x8"	2'6"	1'0"	1'6"
12x12x12"	2'8"	1'6"	1'10"
16x16x6"	2'6"	1'6"	1'10"
16x16x8"	2'6"	1'6"	1'10"
16x16x12"	2'10"	1'6"	2'0"
16x16x16"	2'10"	1'6"	2'0"
20x20x6"	2'6"	1'8"	2'2"
20x20x8"	2'6"	1'8"	2'2"
20x20x12"	2'10"	1'8"	2'2"
20x20x16"	2'10"	1'10"	2'2"

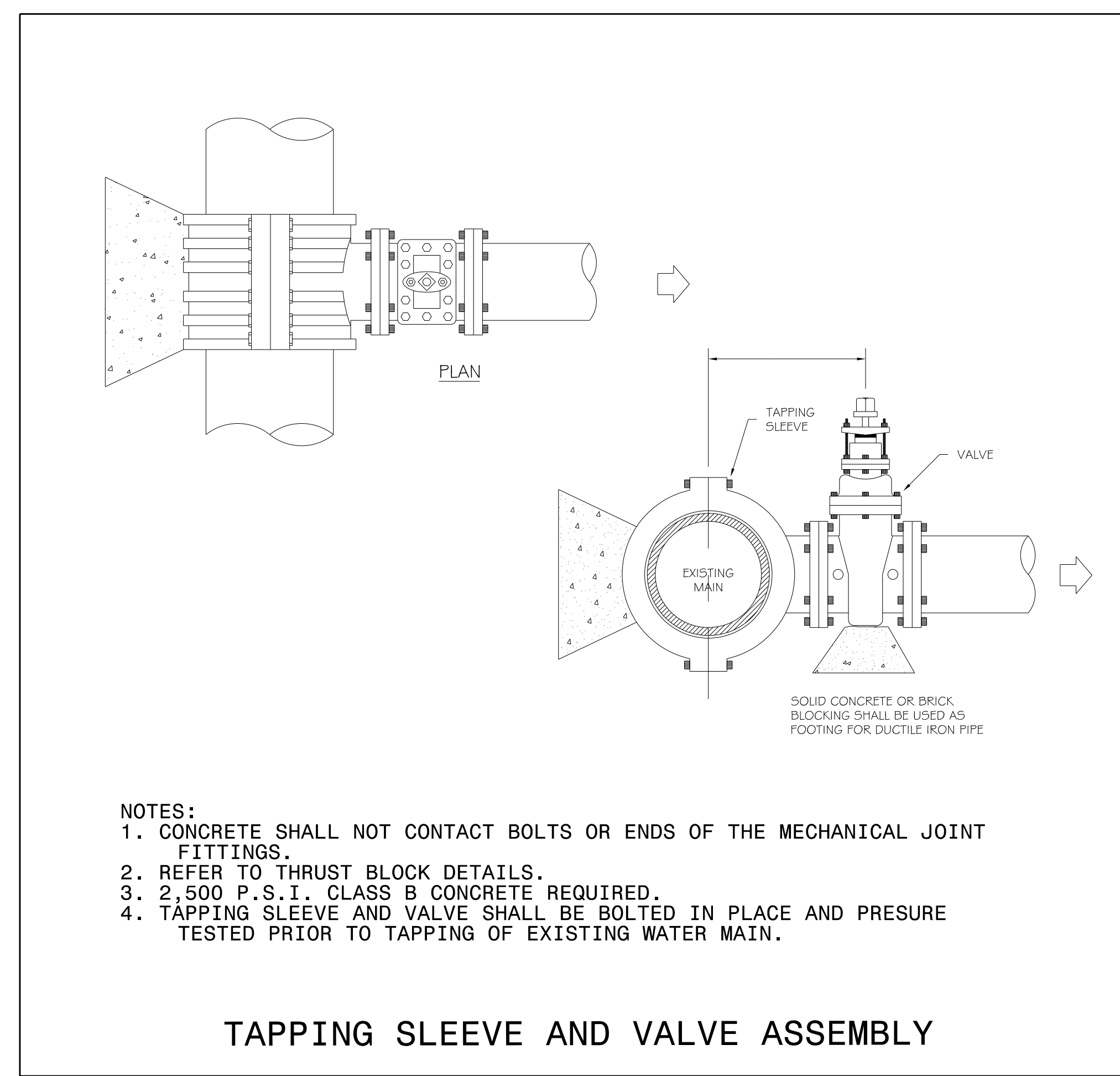
TEE	A	B	C
20x20x20"	3'2"	2'0"	3'0"
24x24x6"	2'6"	1'8"	2'6"
24x24x8"	2'6"	1'8"	2'6"
24x24x12"	2'10"	1'8"	2'6"
24x24x16"	2'10"	2'0"	3'0"
24x24x20"	3'2"	2'0"	3'0"
24x24x24"	3'6"	2'0"	3'6"
30x30x6"	2'6"	1'8"	3'4"
30x30x8"	2'6"	1'8"	3'4"
30x30x12"	2'10"	1'8"	3'4"
30x30x16"	3'6"	1'10"	3'8"
30x30x20"	3'6"	2'0"	3'8"
30x30x24"	3'10"	2'6"	4'0"
30x30x30"	4'2"	3'0"	4'4"

5/14/99



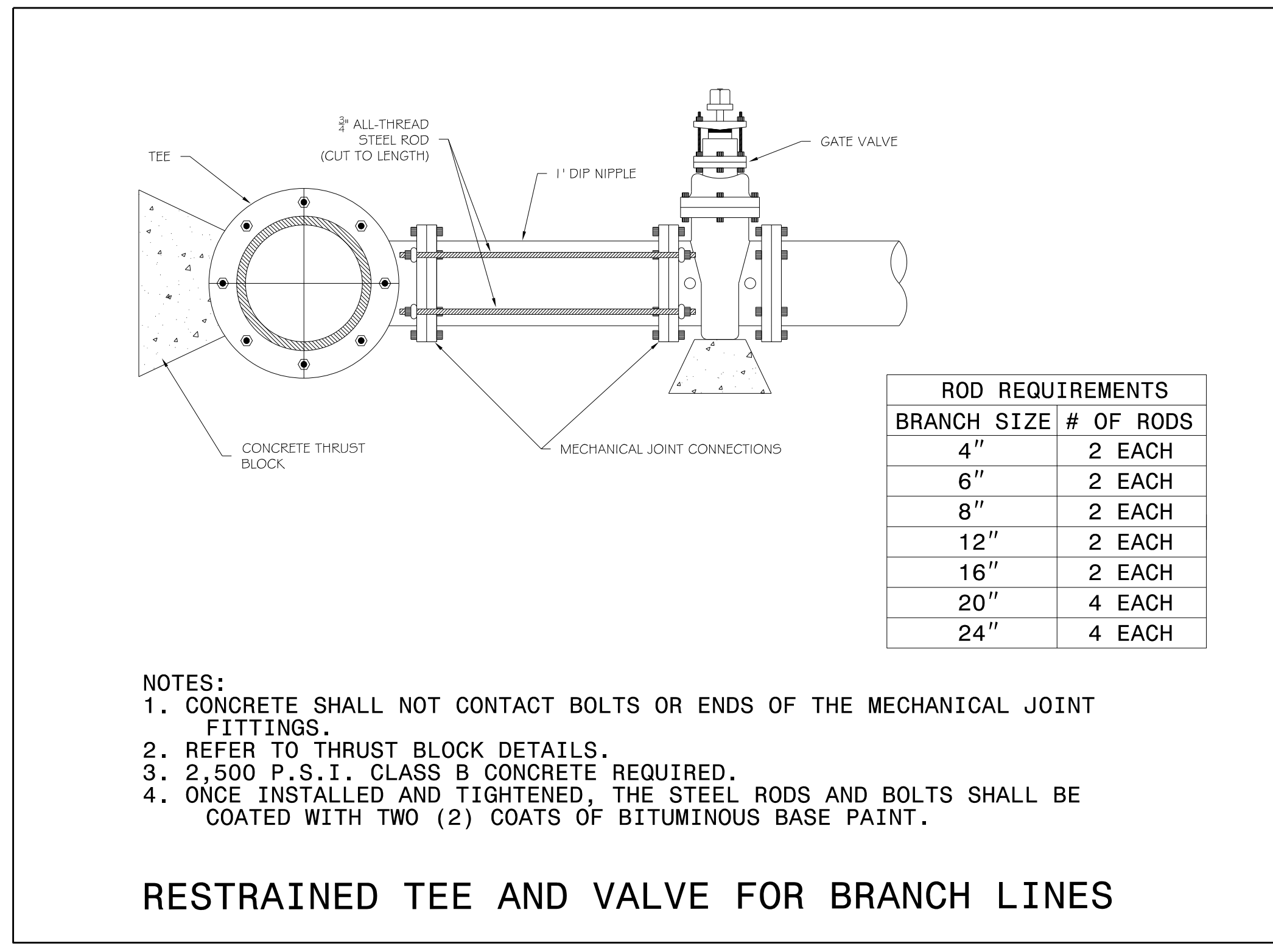
- NOTES:**
1. CONCRETE BLANKET IS REQUIRED WHEN THE CLEARANCE BETWEEN THE TOP OF THE LOWER PIPE AND THE BOTTOM OF THE UPPER PIPE IS LESS THAN 12".
 2. "Y" = D/6 (6" MIN.) WHERE THE CLEARANCE BETWEEN THE TOP OF THE LOWER PIPE AND THE BOTTOM OF THE UPPER PIPE IS LESS THAN "Y". THE CONCRETE SHALL BE PLACED BETWEEN THE PIPES AND AROUND THE SIDES OF THE UPPER PIPE UP TO A LEVEL EQUAL TO THE SPRINGLINE OF THE UPPER PIPE.
 3. WHENEVER A PIPE BELL IS ENCOUNTERED WITHIN THE LIMITS OF THE CONCRETE BLANKET, ALL DIMENSIONS SHALL REFER TO THE BELL OF THE PIPE.

CONCRETE BLANKET FOR CROSSING SANITARY SEWER PIPES



- NOTES:**
1. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF THE MECHANICAL JOINT FITTINGS.
 2. REFER TO THRUST BLOCK DETAILS.
 3. 2,500 P.S.I. CLASS B CONCRETE REQUIRED.
 4. TAPPING SLEEVE AND VALVE SHALL BE BOLTED IN PLACE AND PRESURE TESTED PRIOR TO TAPPING OF EXISTING WATER MAIN.

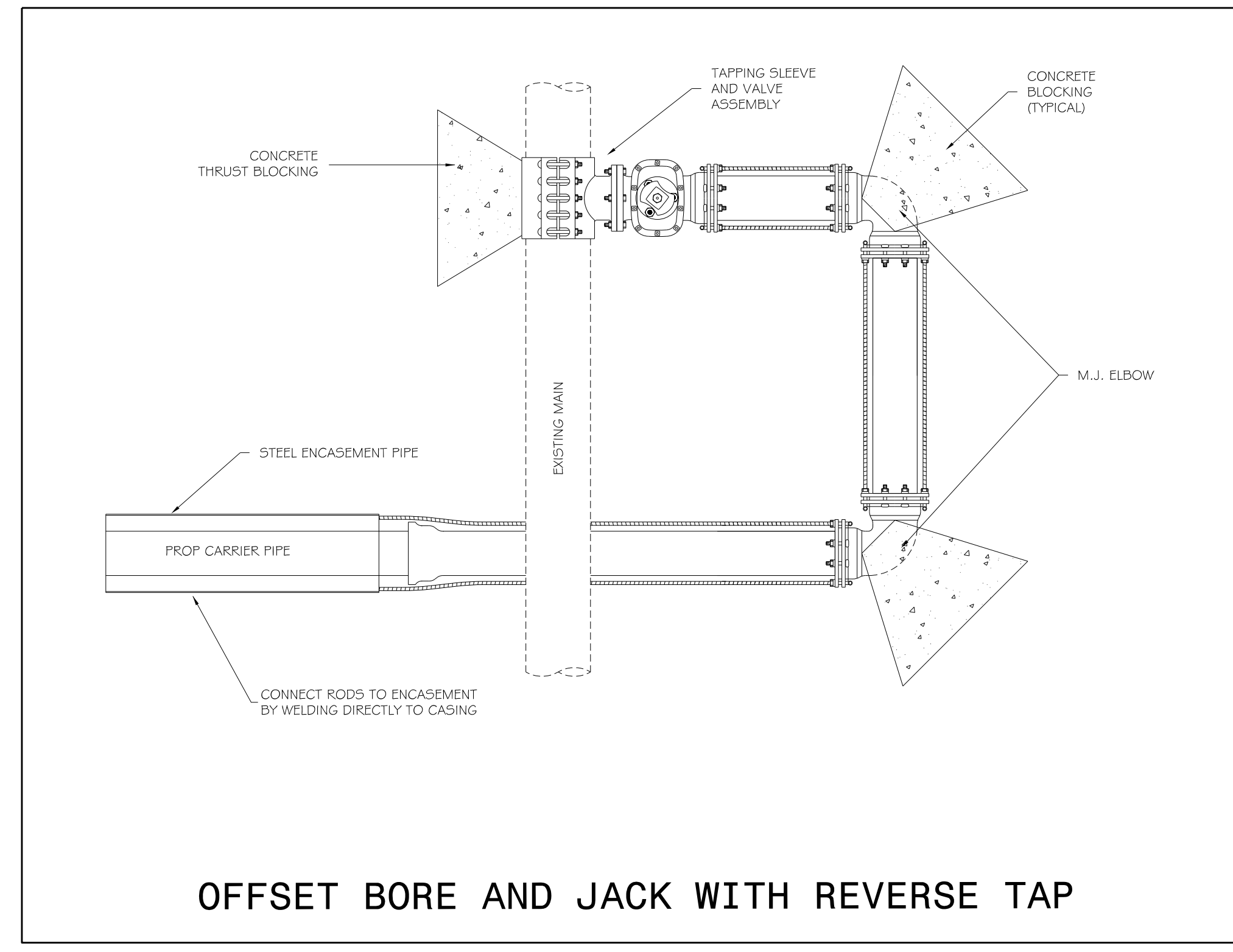
TAPPING SLEEVE AND VALVE ASSEMBLY



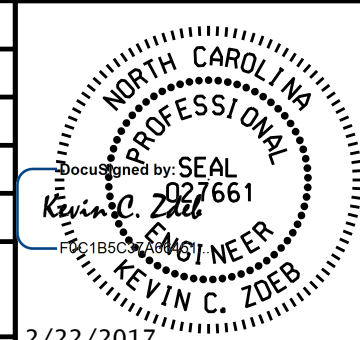

ROD REQUIREMENTS		
BRANCH SIZE	#	OF RODS
4"	2	EACH
6"	2	EACH
8"	2	EACH
12"	2	EACH
16"	2	EACH
20"	4	EACH
24"	4	EACH

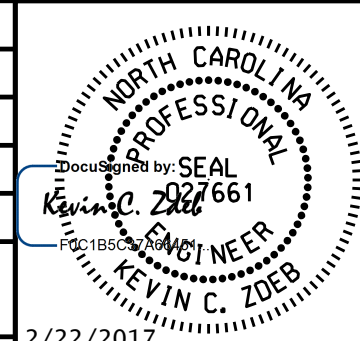
- NOTES:**
1. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF THE MECHANICAL JOINT FITTINGS.
 2. REFER TO THRUST BLOCK DETAILS.
 3. 2,500 P.S.I. CLASS B CONCRETE REQUIRED.
 4. ONCE INSTALLED AND TIGHTENED, THE STEEL RODS AND BOLTS SHALL BE COATED WITH TWO (2) COATS OF BITUMINOUS BASE PAINT.

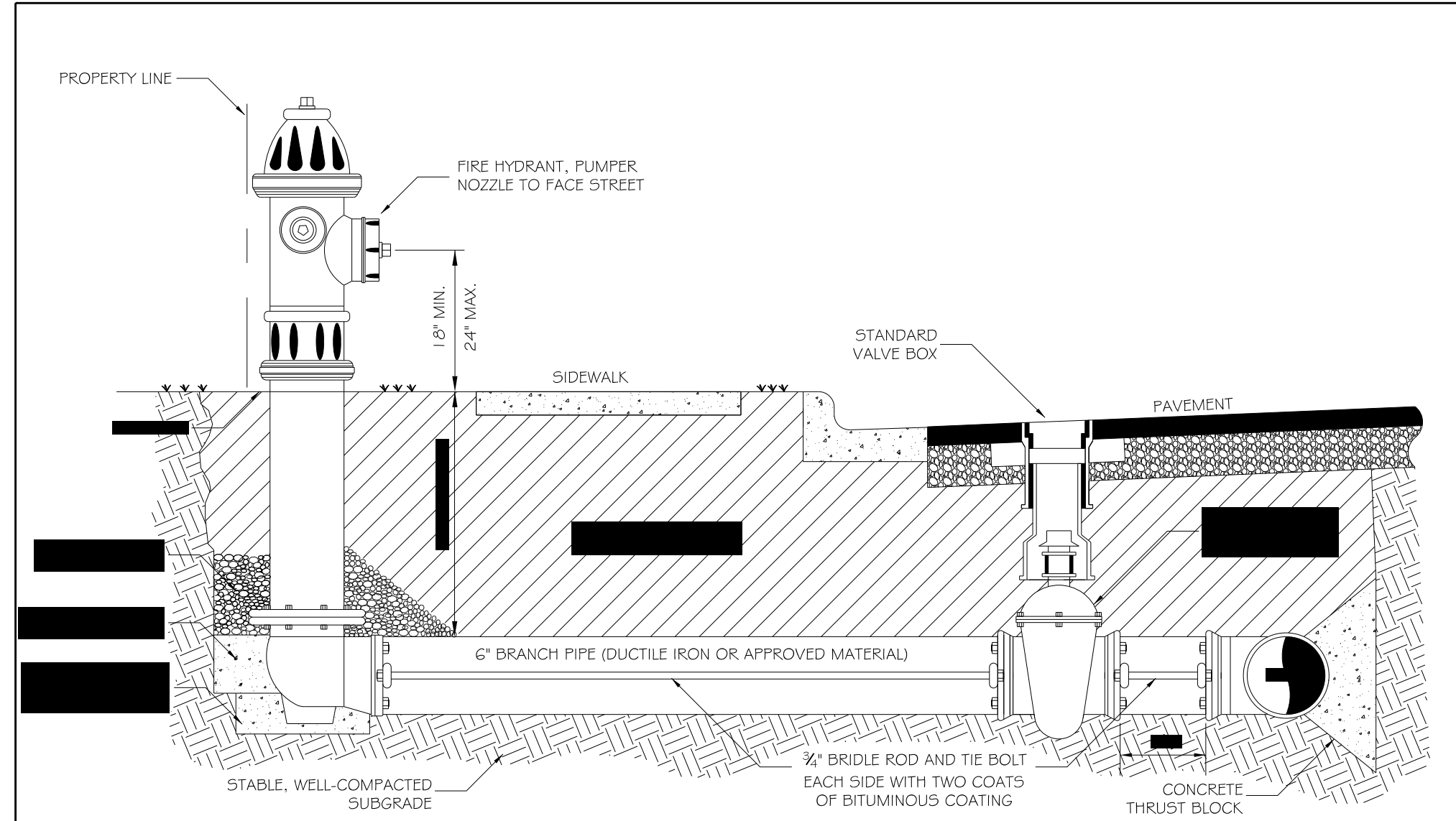
RESTRAINED TEE AND VALVE FOR BRANCH LINES



OFFSET BORE AND JACK WITH REVERSE TAP

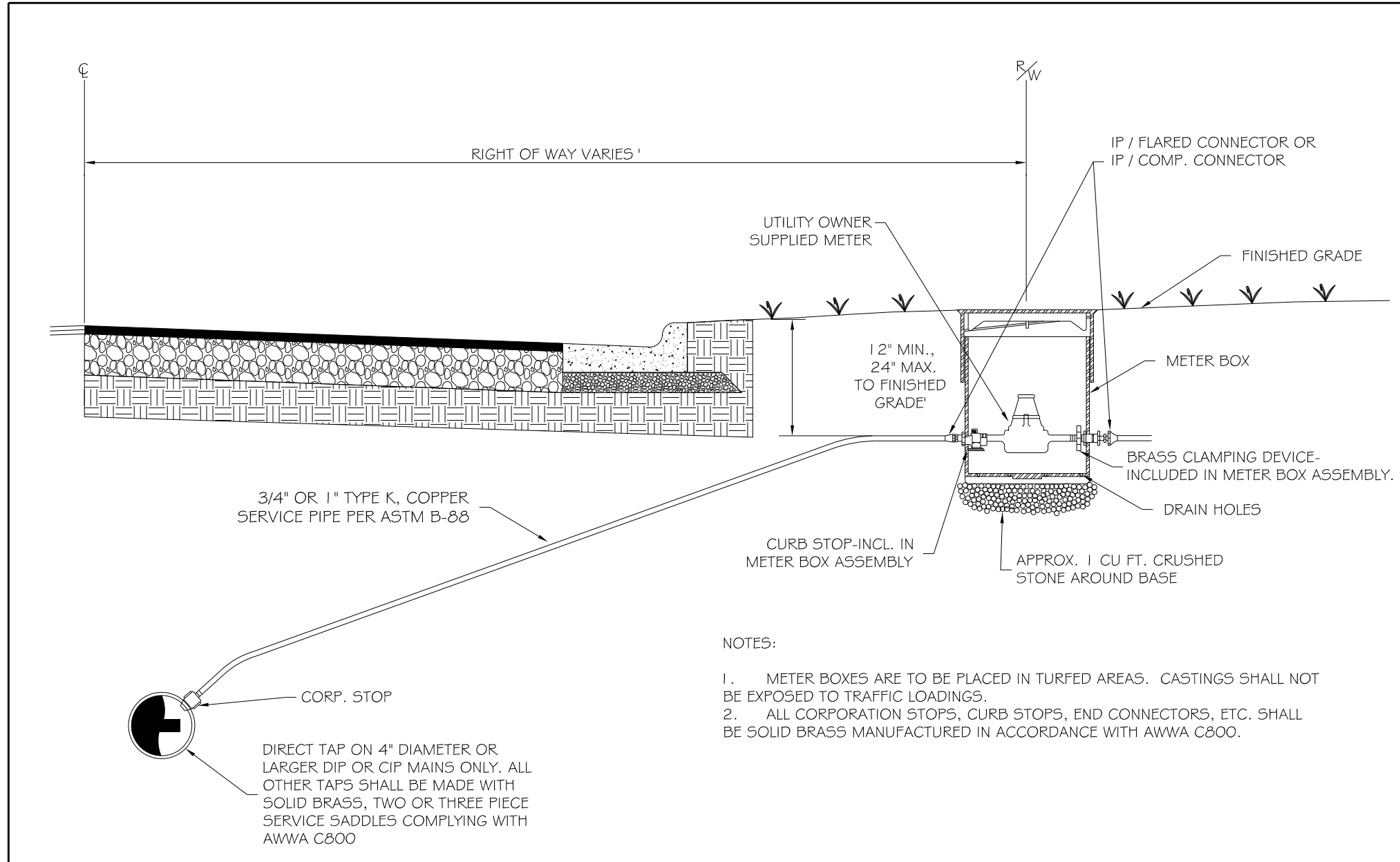
PROJECT REFERENCE NO. U-3621A	SHEET NO. UC-3E
DESIGNED BY: GJB	
DRAWN BY: GJB	
CHECKED BY: KCZ	
APPROVED BY: KCZ	
REVISED:	2/22/2017
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	
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<small>598 East Chatham Street - Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221 NC License: F-0160</small>	

PROJECT REFERENCE NO.	SHEET NO.
U-3621A	UC-3G
DESIGNED BY: GJB	
DRAWN BY: GJB	
CHECKED BY: KCZ	
APPROVED BY: KCZ	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SECTION PHONE: (919) 707-6690 FAX: (919) 250-4151	
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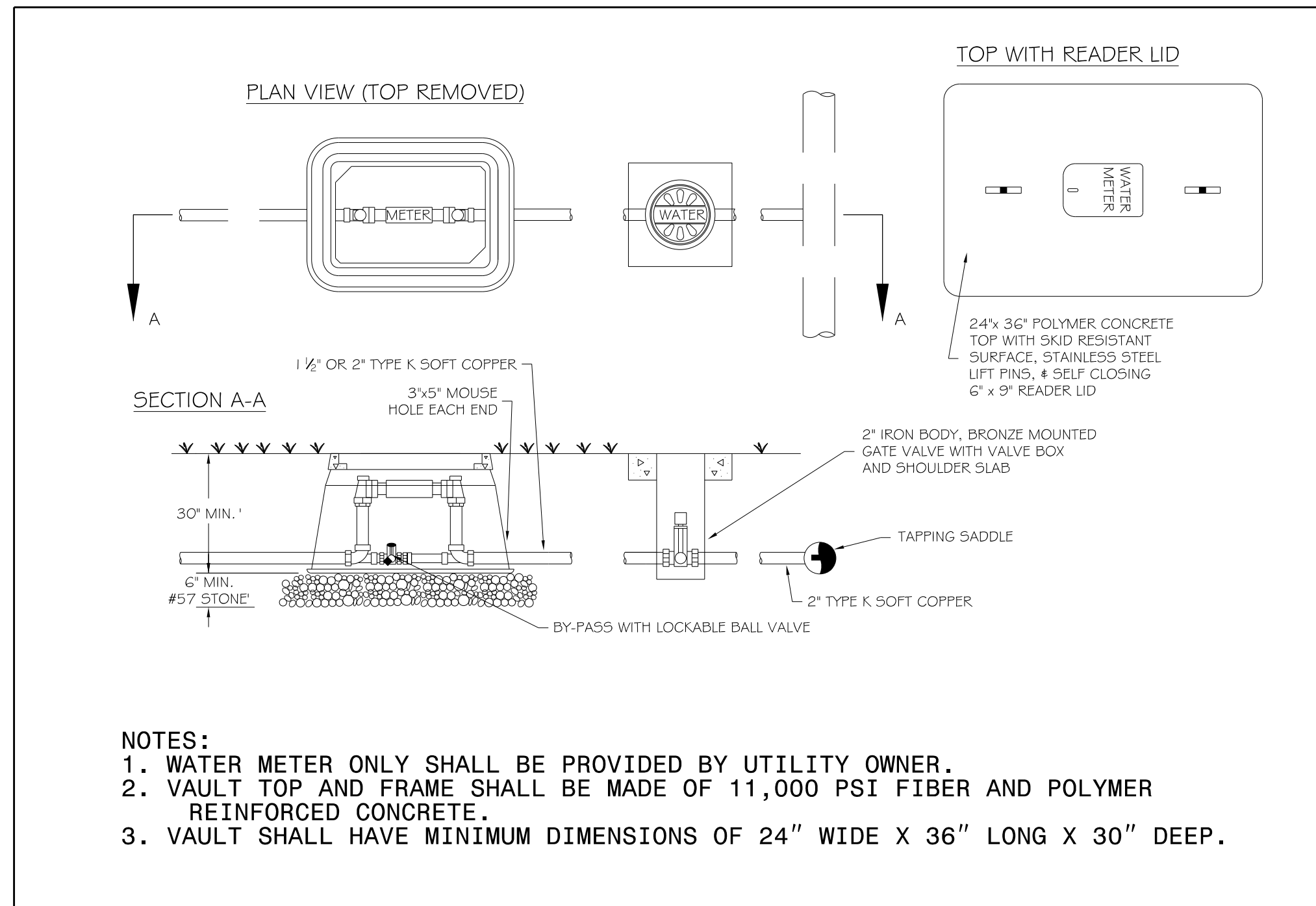


- NOTES:**
- FOR HYDRANT INSTALLATION ON EXISTING MAIN, USE TAPPING SLEEVE AND VALVE ASSEMBLY.
 - HYDRANT SHALL HAVE REPLACEABLE BRONZE NOZZLES WITH NATIONAL STANDARD THREADS, BREAK-AWAY TRAFFIC FEATURE, AND BRONZE ON BRONZE SEAT RINGS.
 - HYDRANT SHALL HAVE PENTAGON SHAPED (5 SIDED) OPERATING NUT.
 - HYDRANT SHALL BE PAINTED WITH RUSTOLEUM #964 FEDERAL SAFETY RED.
 - NOZZLE CAPS AND BONNET SHALL BE PAINTED ALERT SERIES 1440 SILVER WHITE.
 - HYDRANT SHALL BE OILED OR GREASED AS RECOMMENDED BY MANUFACTURER AFTER INSTALLATION.
 - CLASS A CONCRETE BLOCKING SHALL BE PLACED BEHIND BOTH THE TEE AND HYDRANT.
 - IN LIEU OF THREADED BRIDLE RODS, APPROVED GRIP RING OR LOCKING FLANGE CONNECTIONS MAY BE USED. BOTH GRIP RINGS AND LOCKING FLANGES SHALL BE UL LISTED AND F.M. APPROVED WITH A WORKING PRESSURE OF NOT LESS THAN 350 PSI WITH A MINIMUM SAFETY FACTOR OF 2:1. LOCKING FLANGE CONNECTIONS SHALL ONLY BE PERMITTED WHERE PROPER PLACEMENT AND GRADE ADJUSTMENT CAN BE PROVIDED, AS APPROVED BY UTILITY OWNER.

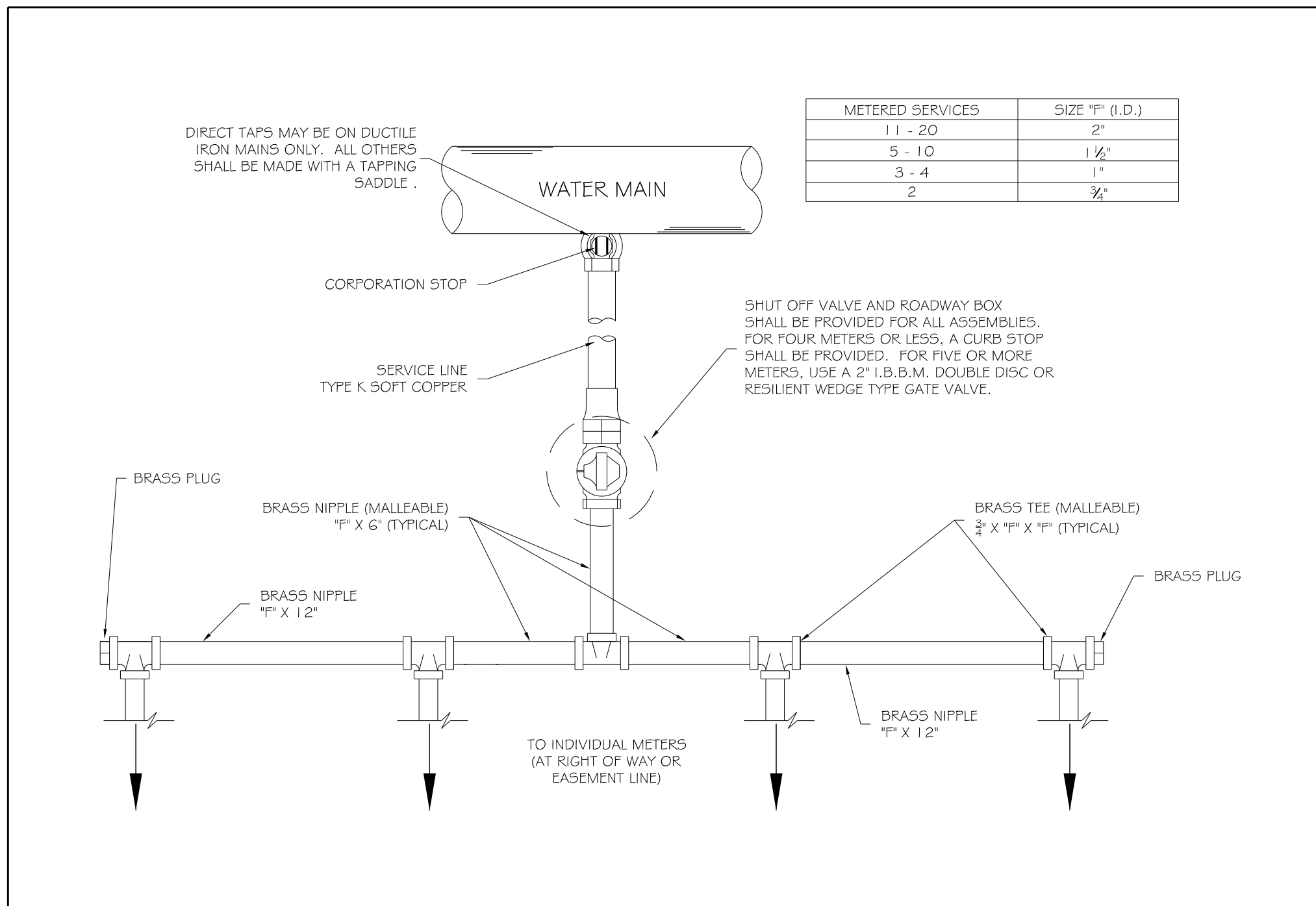
FIRE HYDRANT DETAIL



5/8" X 3/4" AND 1" WATER SERVICE DETAIL

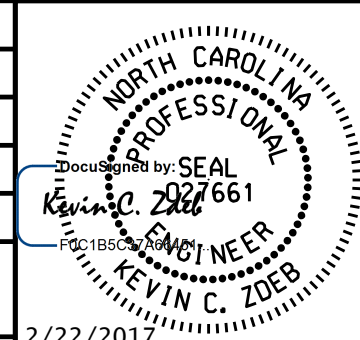



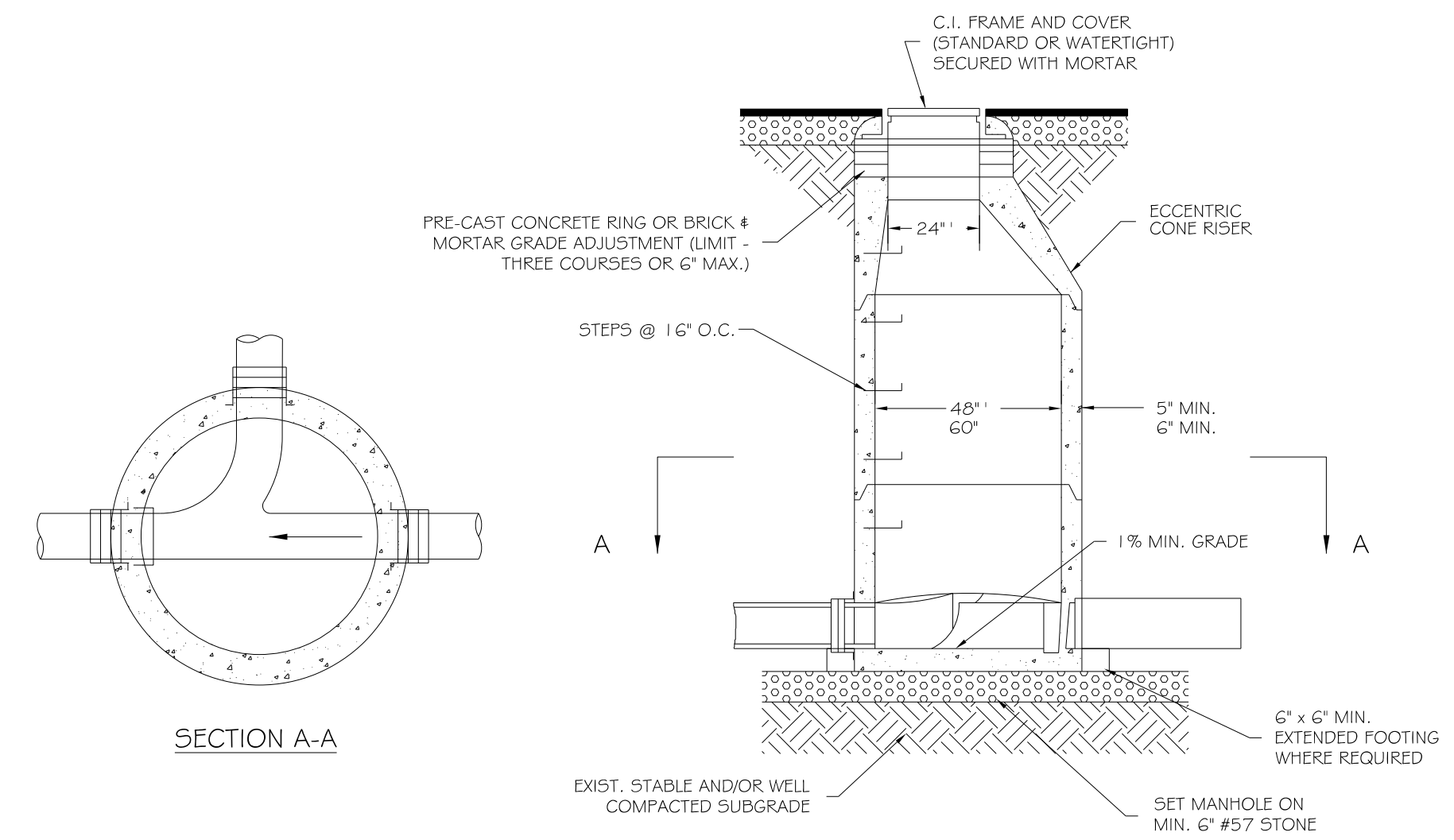
1-1/2" AND 2" STANDARD WATER METER VAULT DETAIL



STANDARD GANG METER ASSEMBLY DETAIL

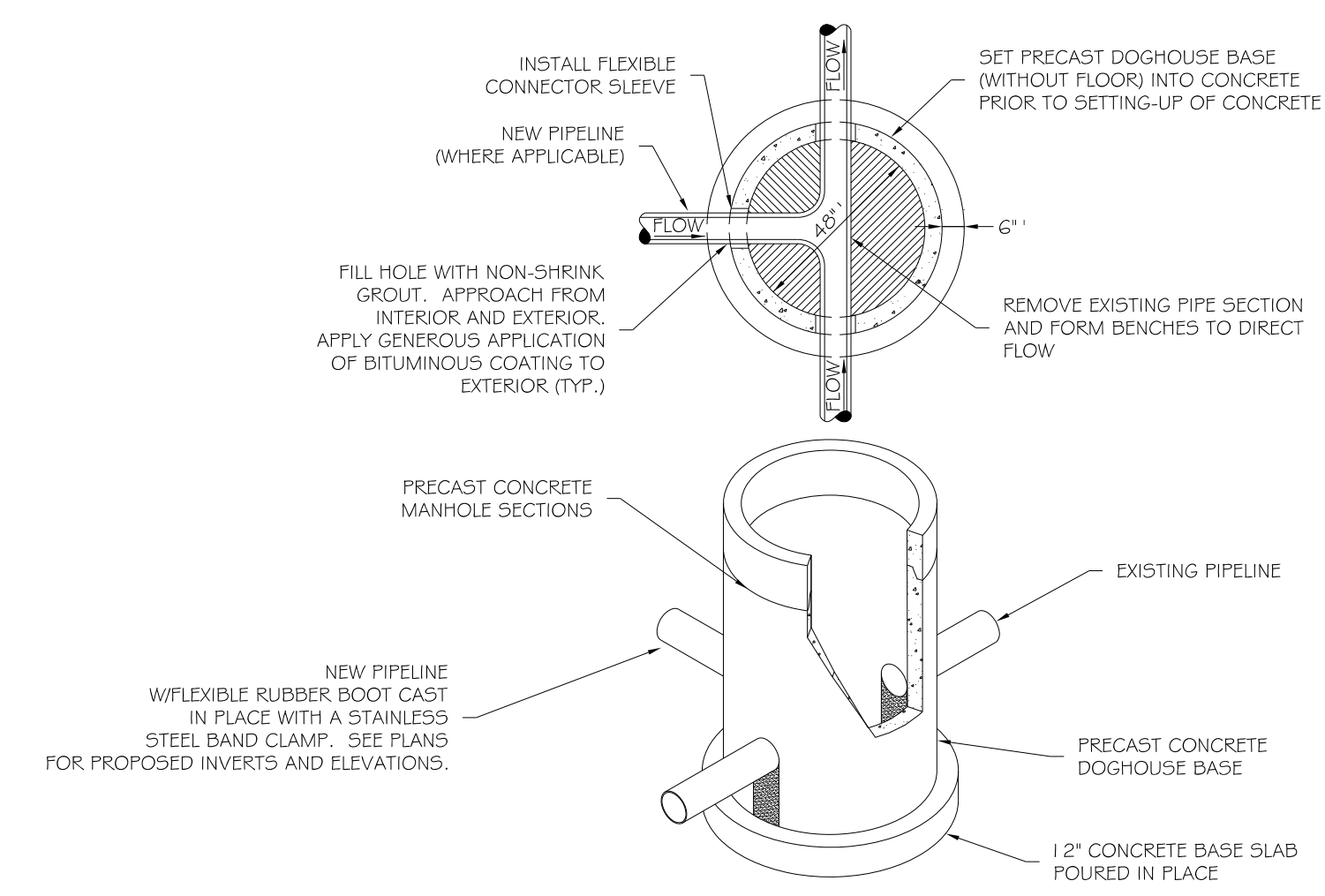
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PROJECT REFERENCE NO. U-3621A	SHEET NO. UC-3H
DESIGNED BY: GJB	 KEVIN C. ZICK PROFESSIONAL ENGINEER No. 2827661 State of North Carolina 2/22/2017
DRAWN BY: GJB	
CHECKED BY: KCZ	
APPROVED BY: KCZ	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SECTION PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	
UTILITY CONSTRUCTION DOCUMENT NOT CONSIDERED FINAL UNTIL ALL SIGNATURES ARE COMPLETED	
 M A Engineering Consultants, Inc. <small>998 East Chatham Street - Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221 NCLicense: F-0160</small>	



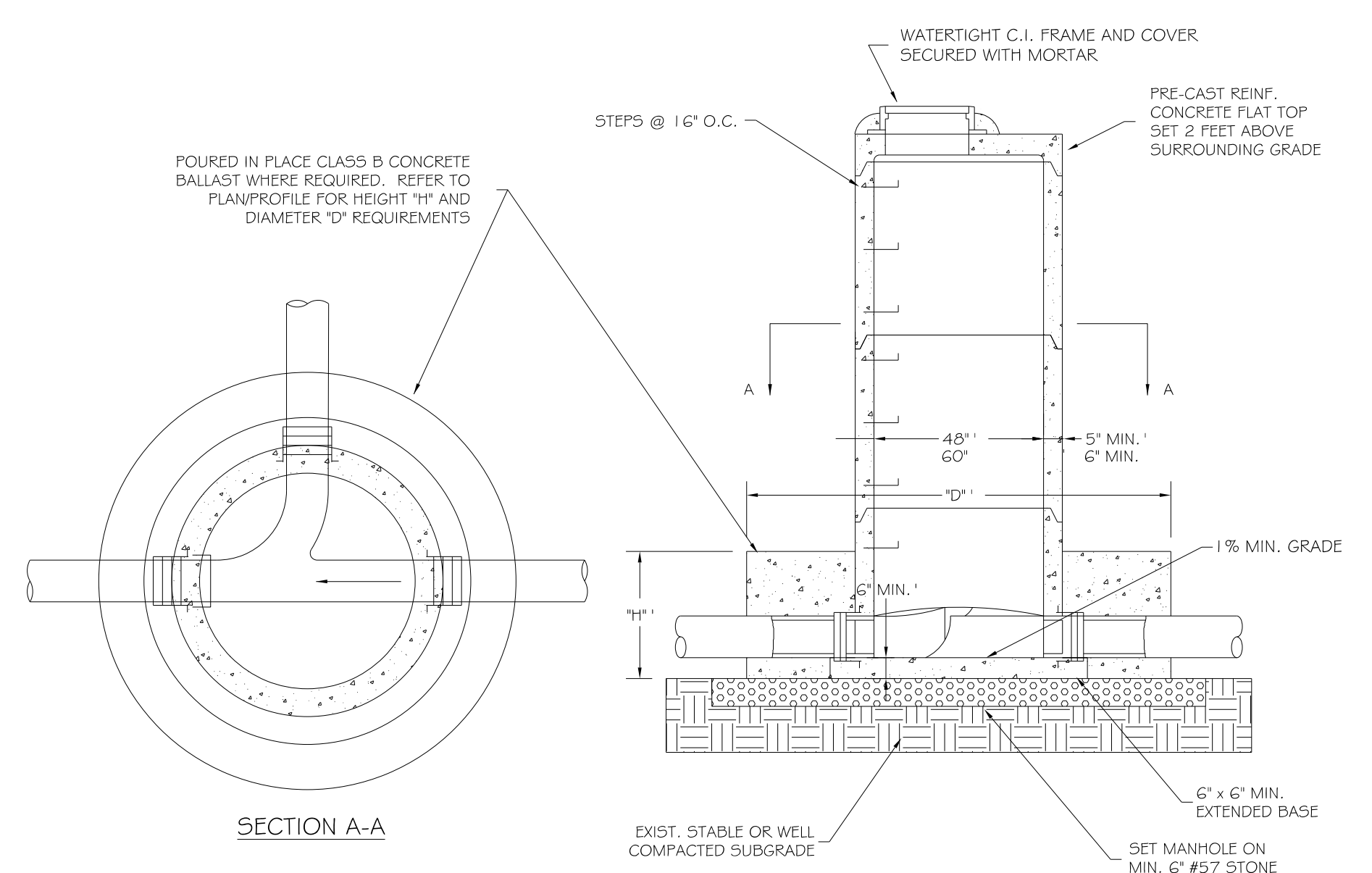
- NOTES:**
1. PRECAST CONCRETE MANHOLES SHALL MEET OR EXCEED THE REQUIREMENTS OF ASTM C748. ALL SURFACES SHALL BE SMOOTH AND EVEN TEXTURED WITH A MINIMUM OF HONEYCOMB, FIN, AND OTHER IMPERFECTIONS.
 2. JOINTS BETWEEN MANHOLE SECTIONS SHALL BE SEALED WATERTIGHT USING EITHER: O-RING GASKETS CONFORMING TO ASTM C-443; OR BUTYL RESIN CONFORMING TO AASHTO M-198.
 3. HOLES FOR CONNECTION OF PIPE TO MANHOLE SHALL BE PRECAST OR CORED. DIAMETER OF HOLE SHALL NOT EXCEED OUTSIDE DIAMETER OF PIPE BY MORE THAN 3 INCHES.
 4. CONNECTIONS OF PIPE TO MANHOLE SHALL BE MADE WATERTIGHT USING RESILIENT CONNECTORS CONFORMING TO ASTM C-923 OR NEOPRENE BOOTS EMBEDDED IN PRECAST BASE WITH STAINLESS STEEL COMPRESSION BANDS.
 5. MANHOLE INVERTS SHALL BE INSTALLED USING BRICK MORTAR, OR MANHOLES MAY BE PRECAST, MONOLITHIC SECTIONS WITH FORMED INVERTS.
 6. LIFT HOLES SHALL BE PLUGGED AND FILLED FLUSH WITH MORTAR.
 7. ALL BRICK AND MORTAR SHALL RECEIVE A ONE-HALF (1/2) INCH MORTAR PARGE COAT ON THE INSIDE AND OUTSIDE.

PRECAST CONCRETE SANITARY MANHOLE



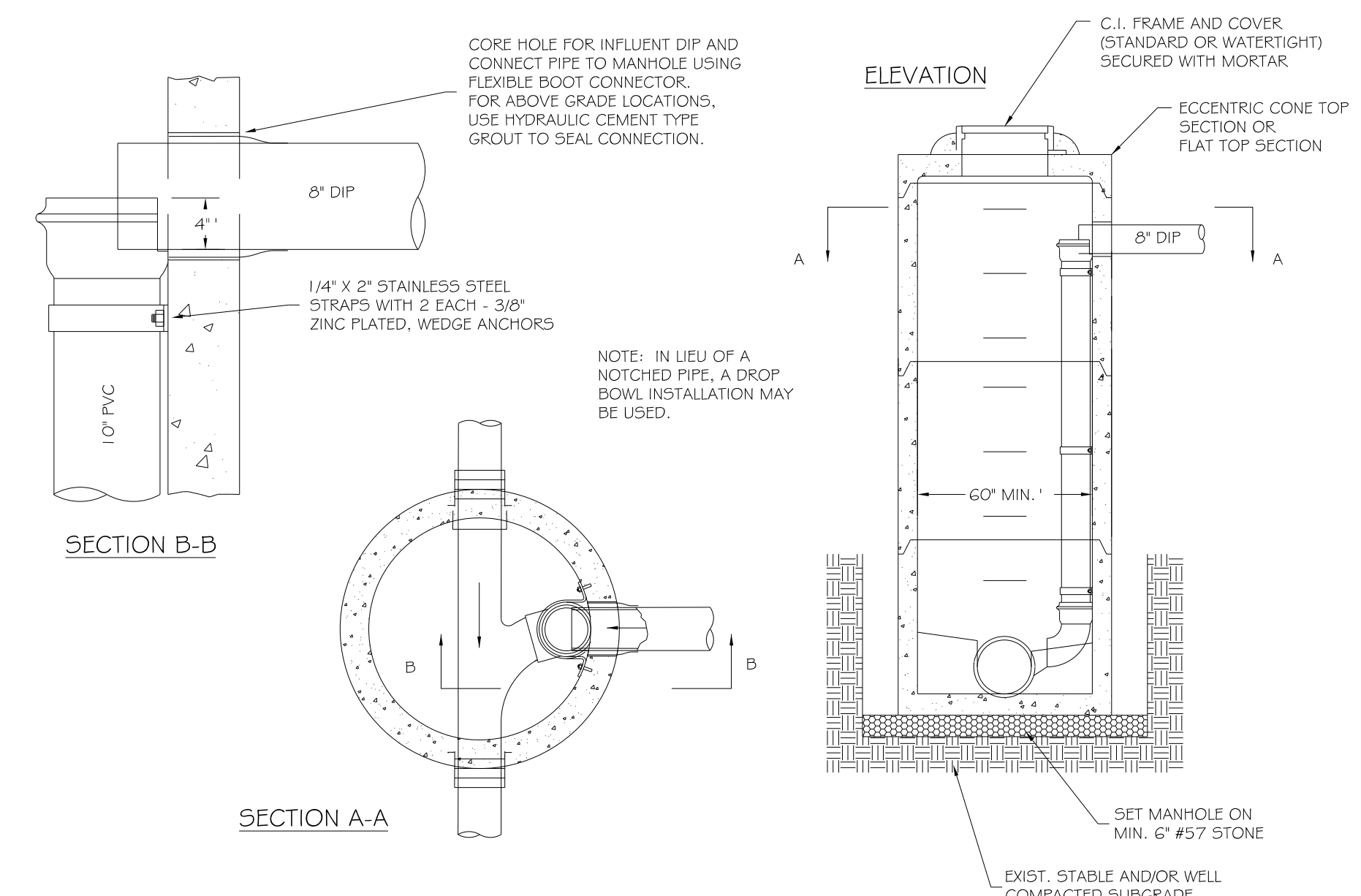
- NOTES:**
1. REFER TO NOTES ON PRECAST CONCRETE SANITARY MANHOLE DETAIL.

DOGHOUSE SANITARY MANHOLE DETAIL



- NOTES:**
1. REFER TO NOTES ON PRECAST CONCRETE SANITARY MANHOLE DETAIL.

SANITARY MANHOLE IN FLOOD PRONE AREA

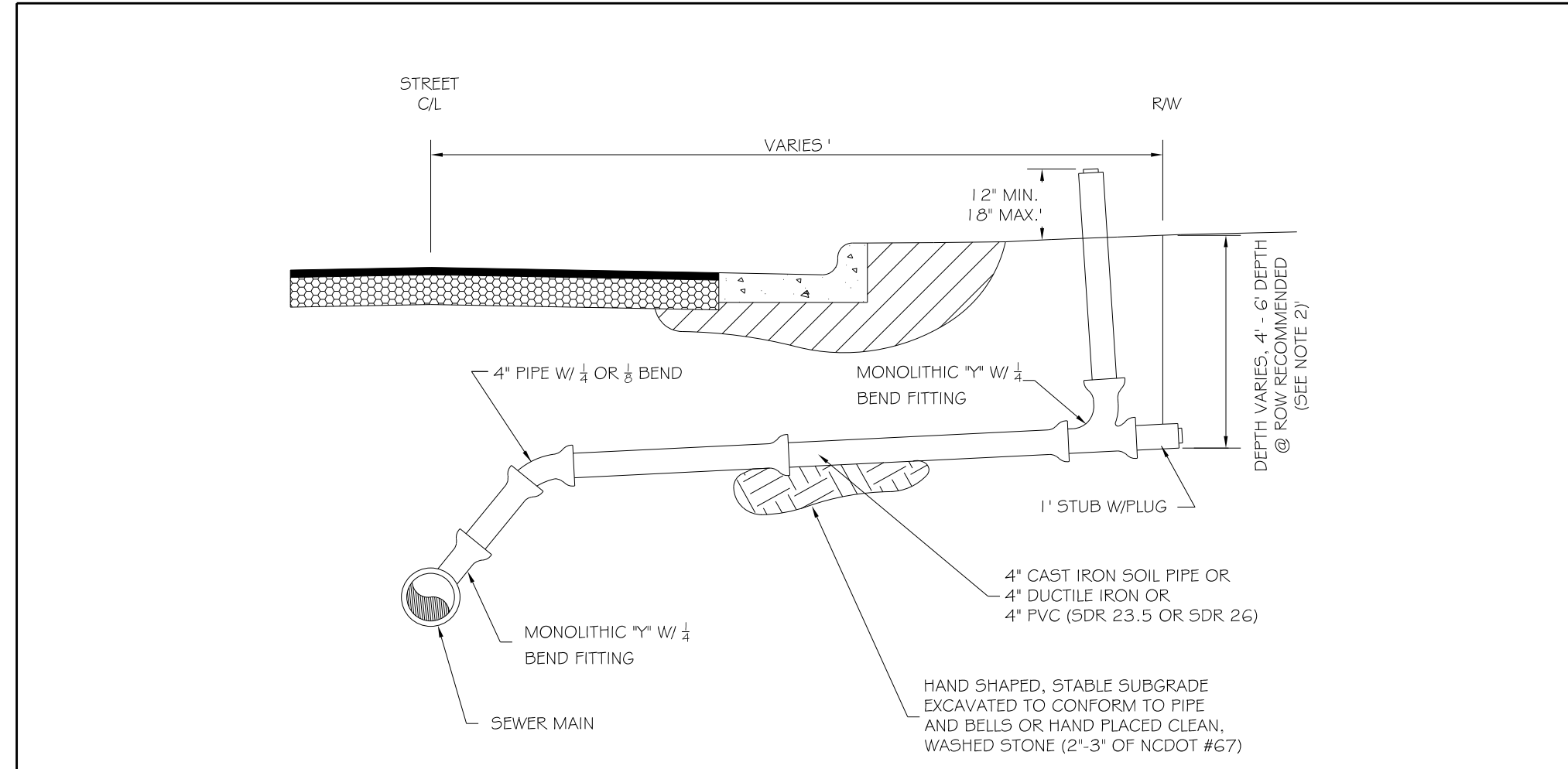


- NOTES:**
1. REFER TO NOTES ON PRECAST CONCRETE SANITARY MANHOLE DETAIL.

PRECAST CONCRETE SANITARY MANHOLE WITH INSIDE DROP

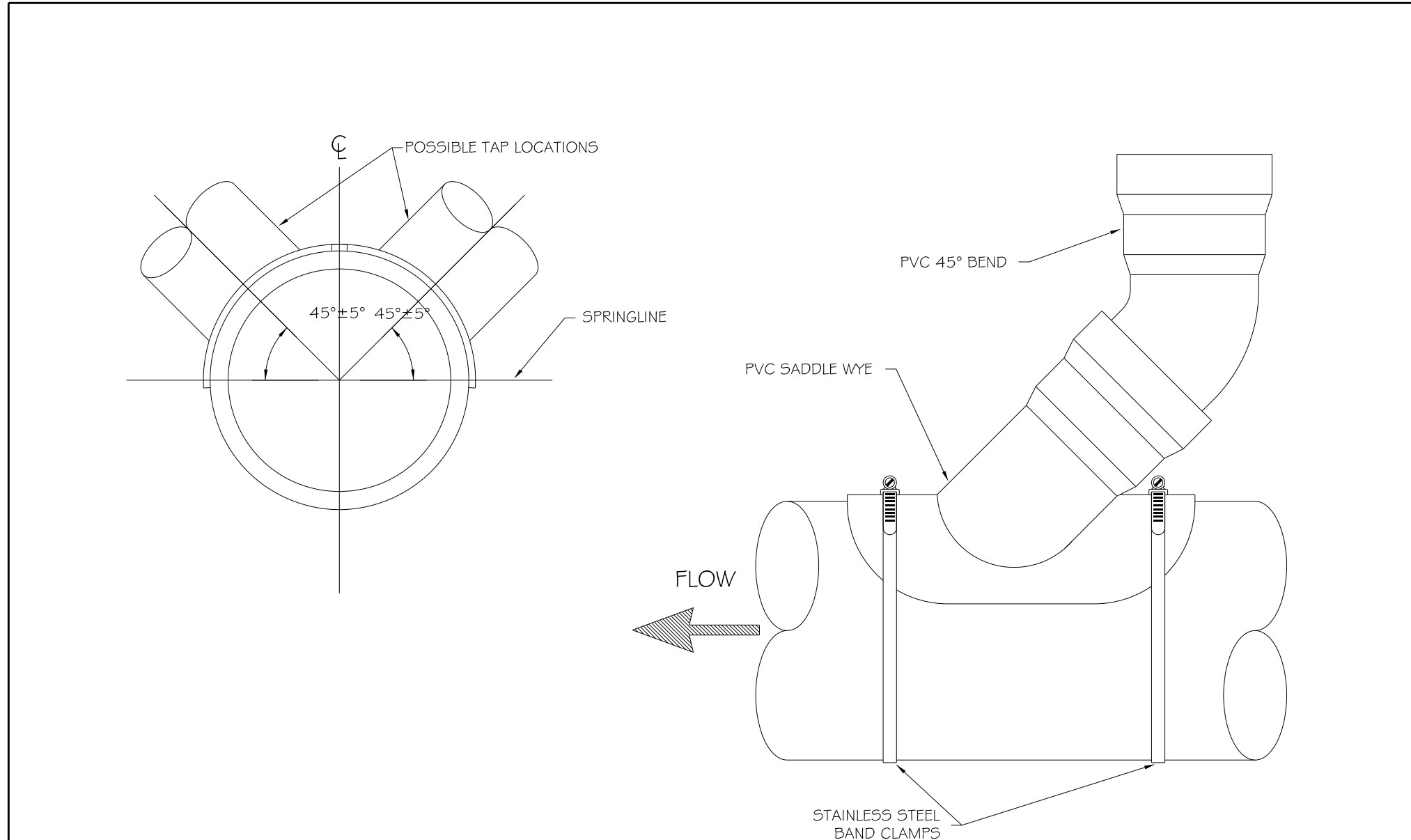
5/14/99

PROJECT REFERENCE NO. U-3621A	SHEET NO. UC-3J
DESIGNED BY: GJB	
DRAWN BY: GJB	
CHECKED BY: KCZ	
APPROVED BY: KCZ	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY 2/22/2017	
UTILITY CONSTRUCTION DOCUMENT NOT CONSIDERED FINAL UNTIL ALL SIGNATURES ARE COMPLETED	
M A Engineering Consultants, Inc.	



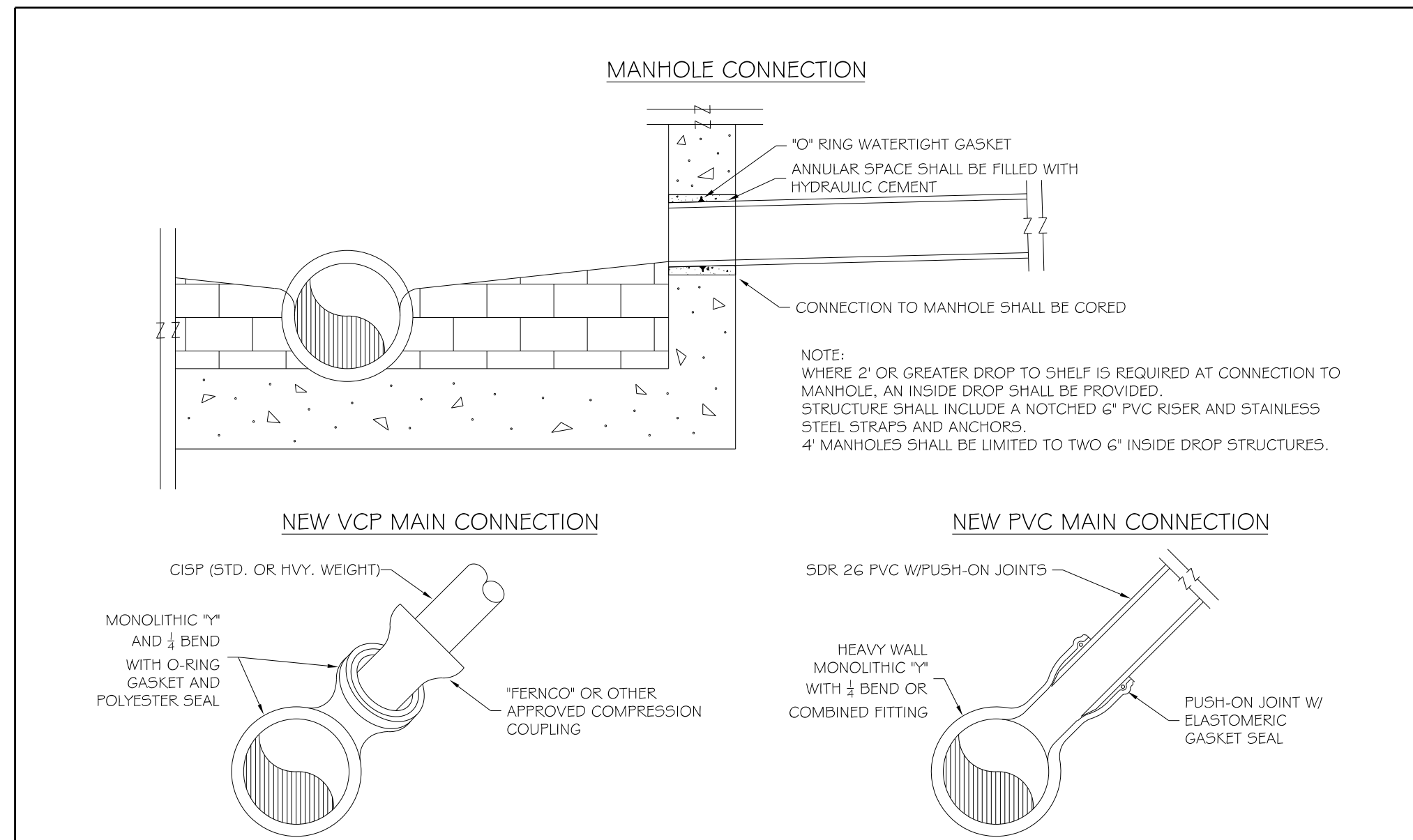
- NOTES:**
1. MINIMUM GRADE FOR 4" SANITARY SEWER SERVICE SHALL BE 1% (1/8" PER FT).
 2. DEPTH OF SERVICE AT PROPERTY LINE MUST BE SUFFICIENT TO PROVIDE AT LEAST MINIMUM GRADE TO BUSINESS OR DWELLING AND 12" MINIMUM COVER OVER SERVICE.
 3. ALL SANITARY SEWER SERVICES SHALL HAVE A CLEANOUT PLACED AT THE EASEMENT OR RIGHT-OF-WAY LINE. ALL CLEANOUTS.
 4. ALL CLEANOUTS SHALL BE CAST IRON WITH BRASS PLUGS. CAST IRON DOUBLE HUB CONNECTORS (30" MINIMUM) MAY BE USED TO TRANSITION FROM PVC SERVICE PIPE.
 5. ALL PVC FITTINGS SHALL BE OF HEAVY WALL CONSTRUCTION (115 PSI MINIMUM PIPE STIFFNESS).
 6. ALL PIPE WITHIN RIGHT-OF-WAY SHALL HAVE PUSH-ON JOINTS WITH ELASTOMERIC GASKET SEALS.
 7. SIX INCH (6") AND LARGER SANITARY SEWER SERVICES SHALL CONNECT AT MANHOLES.

STANDARD 4" SANITARY SEWER SERVICE LATERAL

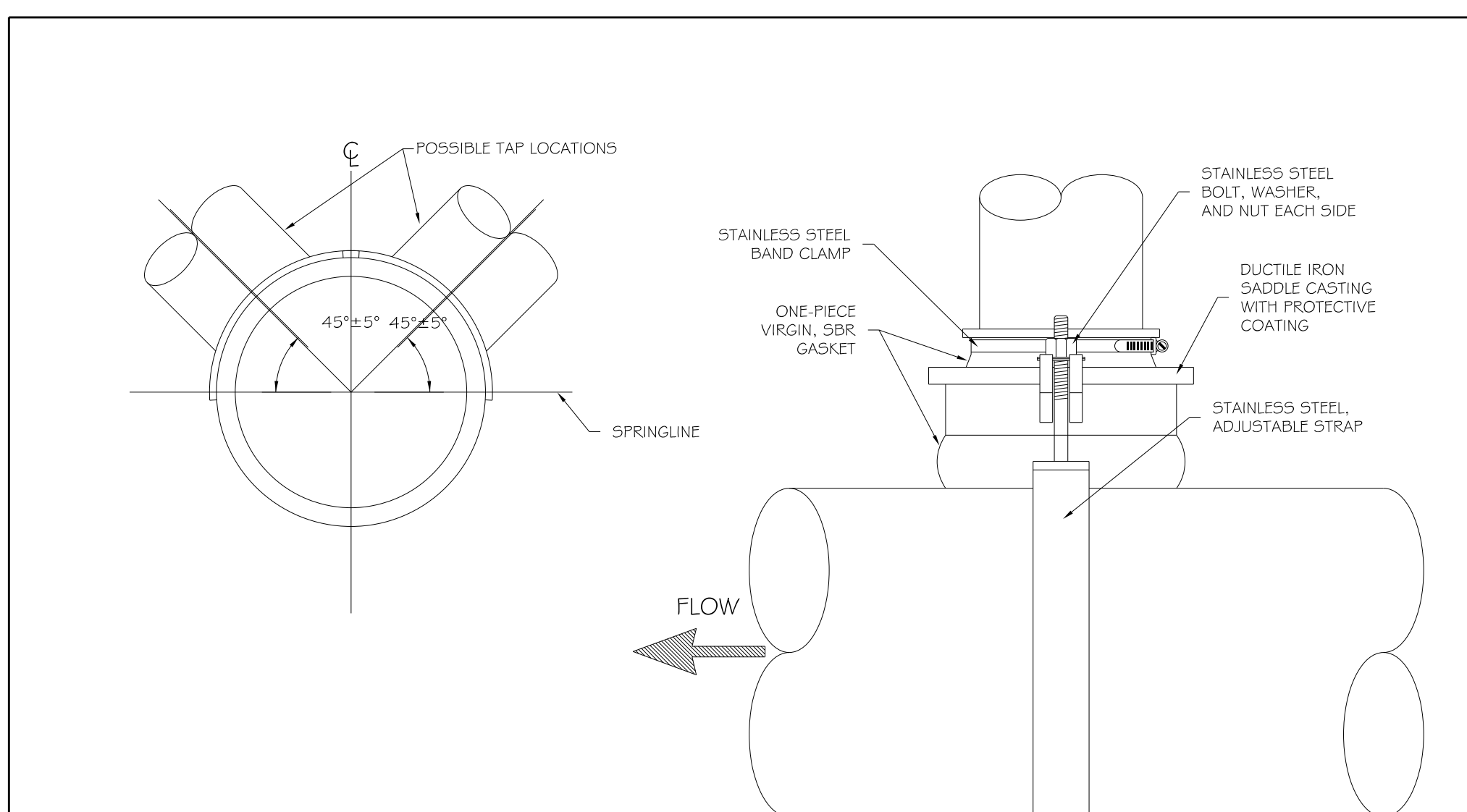


- NOTES:**
1. TAPS FOR SADDLES SHALL BE SAWCUT USING A KEYHOLE OR SABRE SAW AND MANUFACTURER'S TEMPLATE.
 2. TAPS SHALL BE SMOOTH AND CLEANED OF ALL FILINGS, BURRS, DIRT, DEBRIS, ETC.
 3. TAP AND SADDLE SHALL BE SOLVENT WELDED USING MANUFACTURER'S RECOMMENDED PRIMER AND SOLVENT CEMENT.
 4. SADDLE CONNECTION SHALL BE REINFORCED WITH TWO (2) STAINLESS STEEL BAND CLAMPS.

4" SANITARY SEWER SERVICE CONNECTION ON EXISTING PVC SEWER MAIN



4" SANITARY SEWER SERVICE CONNECTION



- NOTES:**
1. TAPS ON EXISTING SANITARY SEWER MAIN SHALL BE CUT USING AN APPROPRIATELY SIZED TAPPING MACHINE.
 2. TAPS SHALL BE SMOOTH AND CLEANED OF ALL FILINGS, BURRS, DIRT, DEBRIS, ETC.

4" SANITARY SEWER SERVICE CONNECTION ON EXISTING VCP, CIP, OR DIP SEWER MAIN

5/14/2019

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

SEE SHEET UC-10 FOR SL-1 PROFILE.

UTILITY OWNERS ON THIS PROJECT:

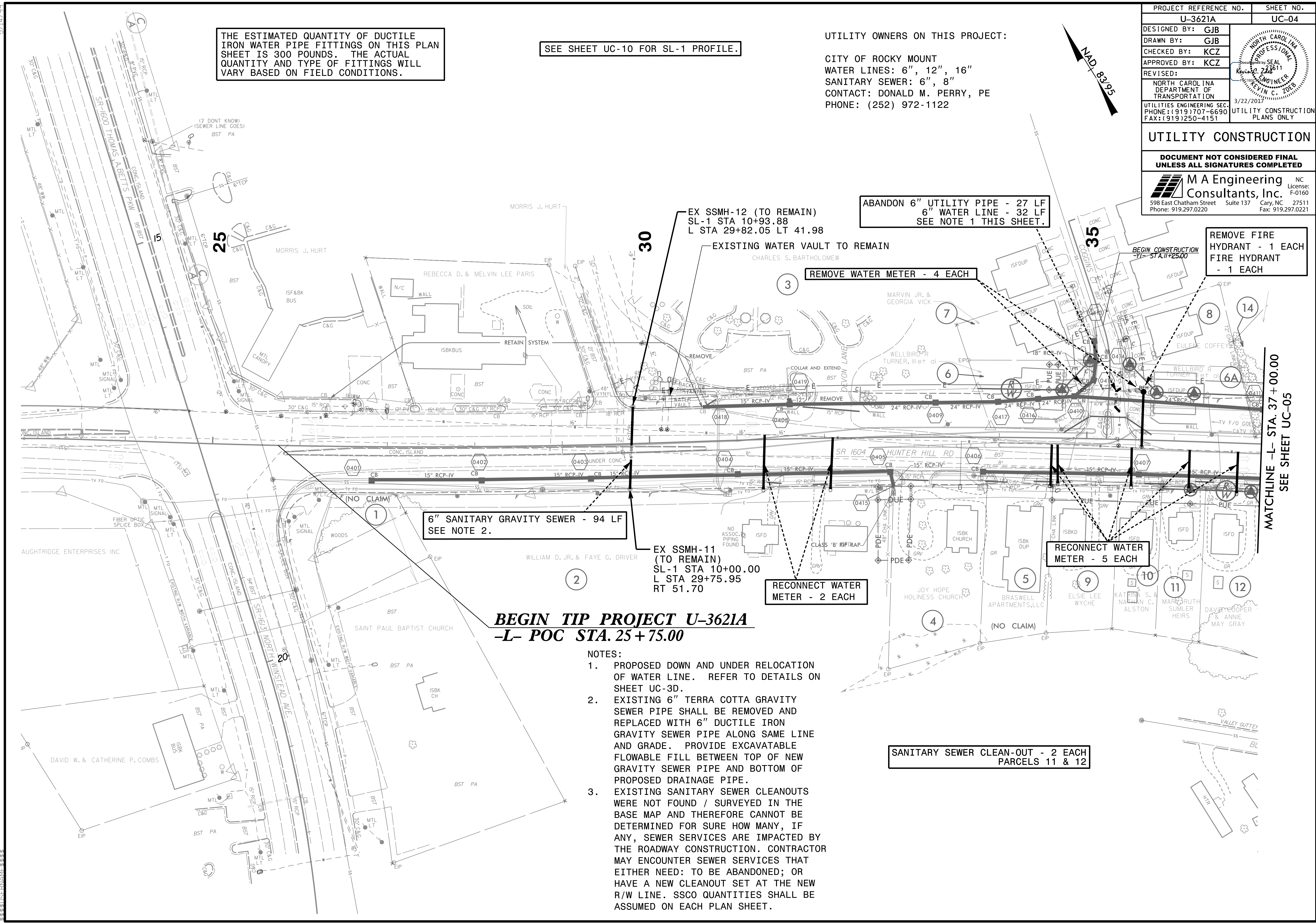
CITY OF ROCKY MOUNT
WATER LINES: 6", 12", 16"
SANITARY SEWER: 6", 8"
CONTACT: DONALD M. PERRY, PE
PHONE: (252) 972-1122

PROJECT REFERENCE NO.	SHEET NO.
U-3621A	UC-04
DESIGNED BY: GJB	
DRAWN BY: GJB	
CHECKED BY: KCZ	
APPROVED BY: KCZ	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	3/22/2019
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

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Phone: 919.297.0220 Fax: 919.297.0221



ABANDON 6" UTILITY PIPE - 27 LF
6" WATER LINE - 32 LF
SEE NOTE 1 THIS SHEET.

REMOVE FIRE HYDRANT - 1 EACH
FIRE HYDRANT - 1 EACH

REMOVE WATER METER - 4 EACH

6" SANITARY GRAVITY SEWER - 94 LF
SEE NOTE 2.

EX SSMH-11 (TO REMAIN)
SL-1 STA 10+00.00
L STA 29+75.95
RT 51.70

RECONNECT WATER METER - 2 EACH

RECONNECT WATER METER - 5 EACH

SANITARY SEWER CLEAN-OUT - 2 EACH
PARCELS 11 & 12

BEGIN TIP PROJECT U-3621A
-L- POC STA. 25+75.00

- NOTES:
1. PROPOSED DOWN AND UNDER RELOCATION OF WATER LINE. REFER TO DETAILS ON SHEET UC-3D.
 2. EXISTING 6" TERRA COTTA GRAVITY SEWER PIPE SHALL BE REMOVED AND REPLACED WITH 6" DUCTILE IRON GRAVITY SEWER PIPE ALONG SAME LINE AND GRADE. PROVIDE EXCAVATABLE FLOWABLE FILL BETWEEN TOP OF NEW GRAVITY SEWER PIPE AND BOTTOM OF PROPOSED DRAINAGE PIPE.
 3. EXISTING SANITARY SEWER CLEANOUTS WERE NOT FOUND / SURVEYED IN THE BASE MAP AND THEREFORE CANNOT BE DETERMINED FOR SURE HOW MANY, IF ANY, SEWER SERVICES ARE IMPACTED BY THE ROADWAY CONSTRUCTION. CONTRACTOR MAY ENCOUNTER SEWER SERVICES THAT EITHER NEED: TO BE ABANDONED; OR HAVE A NEW CLEANOUT SET AT THE NEW R/W LINE. SSCO QUANTITIES SHALL BE ASSUMED ON EACH PLAN SHEET.

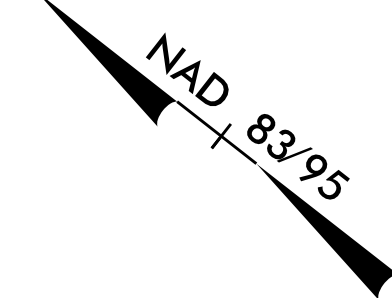
MATCHLINE -L- STA. 37+00.00
SEE SHEET UC-05

5/14/2019

THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 7400 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

SEE SHEET UC-09 FOR WL-1 PROFILE
SEE SHEET UC-10 FOR SL-2 PROFILE

UTILITY OWNERS ON THIS PROJECT:
CITY OF ROCKY MOUNT
WATER LINES: 8", 12", 16"
SANITARY SEWER: 24"
CONTACT: DONALD M. PERRY, PE
PHONE: (252) 972-1122



PROJECT REFERENCE NO.	SHEET NO.
U-3621A	UC-05
DESIGNED BY: GJB	
DRAWN BY: GJB	
CHECKED BY: KCZ	
APPROVED BY: KCZ	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	3/22/2019
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
M A Engineering Consultants, Inc.
598 East Chatham Street Suite 137 Cary, NC 27511
Phone: 919.297.0220 License: F-0160 Fax: 919.297.0221

ABANDON 16" UTILITY PIPE - 30 LF
16" WATER LINE - 35 LF
SEE NOTE 1 THIS SHEET.

ABANDON 42 LF OF 8" UTILITY PIPE
ABANDON UTILITY MANHOLE - 1 EACH
4' DIA UTILITY MANHOLE - 1 EACH

ABANDON 30 LF OF 8" UTILITY PIPE
34 LF OF 8" WATER LINE, SEE NOTE 1.

RELOCATE WATER METER - 2 EACH

REMOVE WATER METER - 4 EACH

8" VALVE - 1 EACH.
16" VALVE - 1 EACH.

PROP 45° BEND
WL-1 STA 20+49.98
L STA 40+69.33
LT 24.64

PROP 45° BEND
WL-1 STA 20+00.00
L STA 40+34.91
RT 11.08

RELOCATE WATER METER - 2 EACH

PROP 16x8 TEE
WL-1 STA 22.11.72
L STA 42+28.92 LT 27.38

ABANDON 33 LF OF 8" UTILITY PIPE

PROP 45° BEND
WL-1 STA 23+03.33
L STA 43+18.55
LT 35.12

PROP 45° BEND
WL-1 STA 23+51.44
L STA 43+51.57
LT 0.00

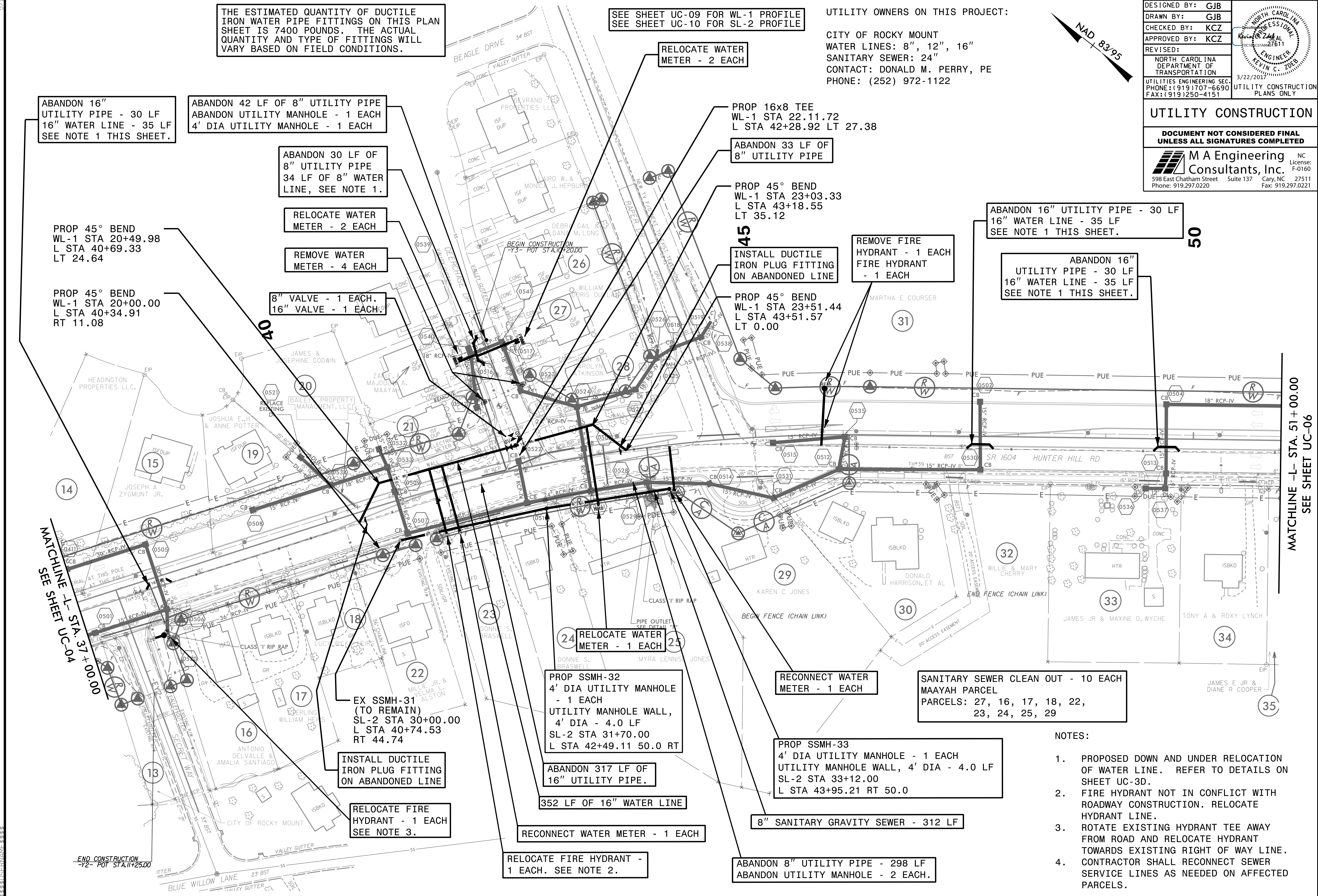
REMOVE FIRE HYDRANT - 1 EACH
FIRE HYDRANT - 1 EACH

ABANDON 16" UTILITY PIPE - 30 LF
16" WATER LINE - 35 LF
SEE NOTE 1 THIS SHEET.

ABANDON 16" UTILITY PIPE - 30 LF
16" WATER LINE - 35 LF
SEE NOTE 1 THIS SHEET.

SEE SHEET UC-04
MATCHLINE - L - STA. 37 + 00.00

MATCHLINE - L - STA. 51 + 00.00
SEE SHEET UC-06



RELOCATE WATER METER - 1 EACH

PROP SSMH-32
4' DIA UTILITY MANHOLE - 1 EACH
UTILITY MANHOLE WALL,
4' DIA - 4.0 LF
SL-2 STA 31+70.00
L STA 42+49.11 50.0 RT

ABANDON 317 LF OF 16" UTILITY PIPE.

352 LF OF 16" WATER LINE

RECONNECT WATER METER - 1 EACH

RELOCATE FIRE HYDRANT - 1 EACH. SEE NOTE 2.

RECONNECT WATER METER - 1 EACH

PROP SSMH-33
4' DIA UTILITY MANHOLE - 1 EACH
UTILITY MANHOLE WALL, 4' DIA - 4.0 LF
SL-2 STA 33+12.00
L STA 43+95.21 RT 50.0

8" SANITARY GRAVITY SEWER - 312 LF

ABANDON 8" UTILITY PIPE - 298 LF
ABANDON UTILITY MANHOLE - 2 EACH.

SANITARY SEWER CLEAN OUT - 10 EACH
MAAYAH PARCEL
PARCELS: 27, 16, 17, 18, 22,
23, 24, 25, 29

NOTES:

1. PROPOSED DOWN AND UNDER RELOCATION OF WATER LINE. REFER TO DETAILS ON SHEET UC-3D.
2. FIRE HYDRANT NOT IN CONFLICT WITH ROADWAY CONSTRUCTION. RELOCATE HYDRANT LINE.
3. ROTATE EXISTING HYDRANT TEE AWAY FROM ROAD AND RELOCATE HYDRANT TOWARDS EXISTING RIGHT OF WAY LINE.
4. CONTRACTOR SHALL RECONNECT SEWER SERVICE LINES AS NEEDED ON AFFECTED PARCELS.

END CONSTRUCTION
-72- POT STA. 11+25.00

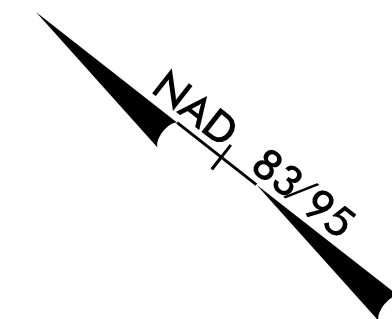
5/14/09

THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 3010 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

SEE SHEET UC-09 FOR WL-2 PROFILE.

UTILITY OWNERS ON THIS PROJECT:

CITY OF ROCKY MOUNT
WATER LINES: 16"
SANITARY SEWER:
CONTACT: DONALD M. PERRY, PE
PHONE: (252) 972-1122



PROJECT REFERENCE NO. U-3621A	SHEET NO. UC-06
DESIGNED BY: GJB	
DRAWN BY: GJB	
CHECKED BY: KCZ	
APPROVED BY: KCZ	
REVISED:	3/22/2011
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

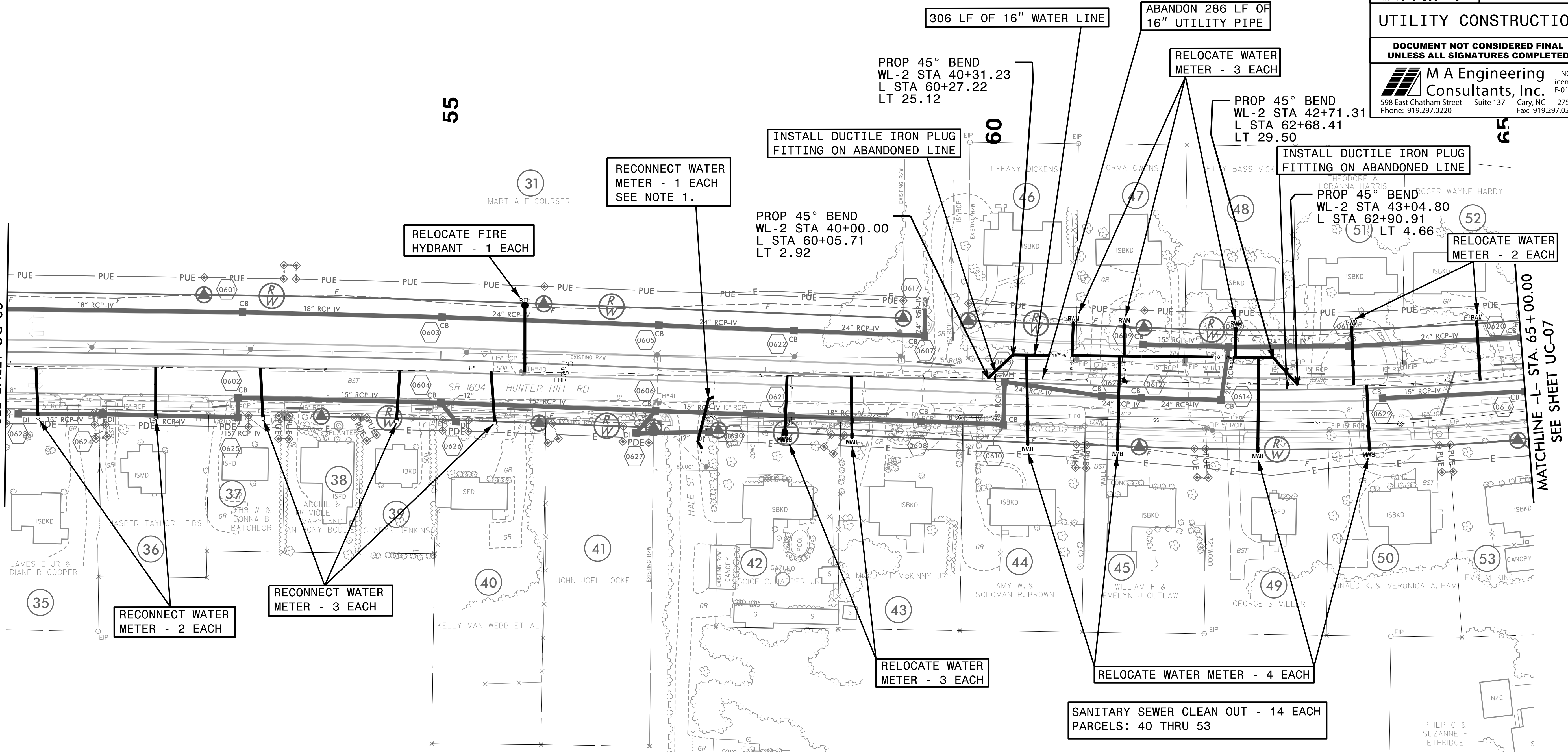
UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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 598 East Chatham Street Suite 137 Cary, NC 27511
 Phone: 919.297.0220 Fax: 919.297.0221

MATCHLINE -L- STA. 51+00.00
SEE SHEET UC-05

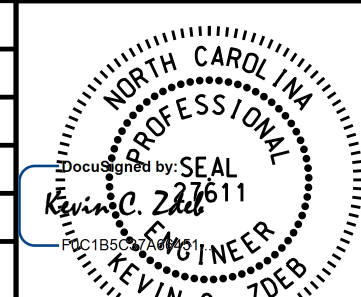
MATCHLINE -L- STA. 65+00.00
SEE SHEET UC-07



- NOTES:
- ROCKY MOUNT RECORDS DO NOT SHOW A WATER MAIN HERE. THEREFORE, THIS MUST BE A WATER SERVICE LINE THAT CONNECTS TO A WATER METER THAT WAS NOT FIELD LOCATED. CONTRACTOR SHALL VERIFY AND RELOCATE/RECONNECT SERVICE LINE AS NEEDED TO CLEAR CONFLICT WITH PROPOSED DRAINAGE PIPES.
 - CONTRACTOR SHALL RECONNECT SEWER SERVICE LINES AS NEEDED ON AFFECTED PARCELS.

NICHOL

5/14/2017

PROJECT REFERENCE NO.	SHEET NO.
U-3621A	UC-07
DESIGNED BY: GJB	
DRAWN BY: GJB	
CHECKED BY: KCZ	
APPROVED BY: KCZ	
REVISED:	3/22/2017
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	UTILITY CONSTRUCTION PLANS ONLY
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

UTILITY CONSTRUCTION

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 598 East Chatham Street Suite 137 Cary, NC 27511
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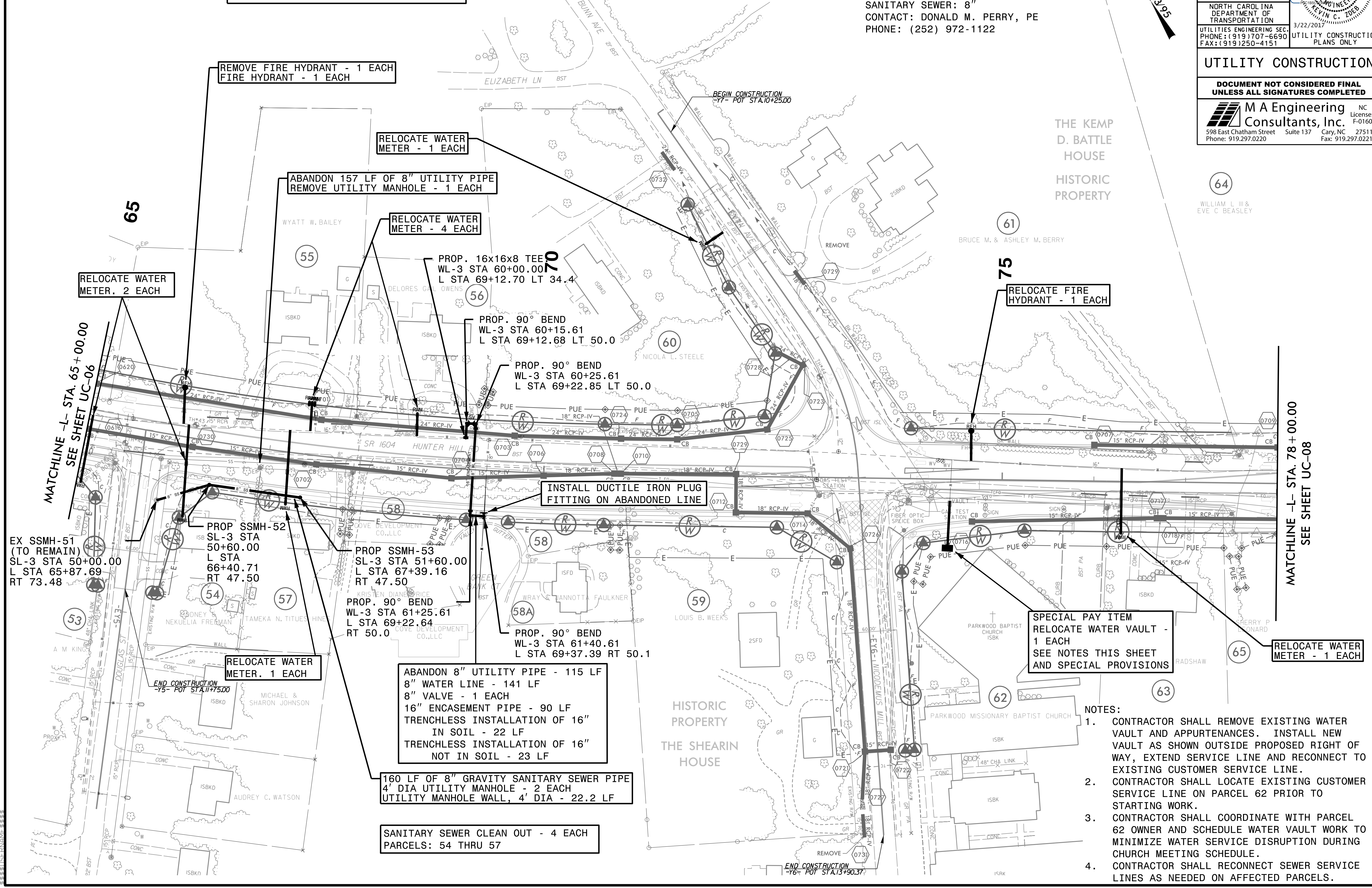
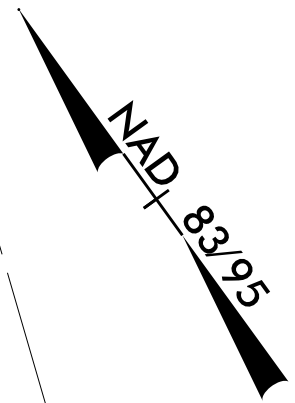
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WILLIAM L III & EVE C BEASLEY

THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 840 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

SEE SHEET UC-09 FOR WL-3 PROFILE.
SEE SHEET UC-10 FOR SL-3 PROFILE.

UTILITY OWNERS ON THIS PROJECT:

CITY OF ROCKY MOUNT
WATER LINES: 8", 12", 16"
SANITARY SEWER: 8"
CONTACT: DONALD M. PERRY, PE
PHONE: (252) 972-1122



MATCHLINE -L- STA. 65+00.00
SEE SHEET UC-06

MATCHLINE -L- STA. 78+00.00
SEE SHEET UC-08

EX SSMH-51
(TO REMAIN)
SL-3 STA 50+00.00
L STA 65+87.69
RT 73.48

PROP SSMH-52
SL-3 STA 50+60.00
L STA 66+40.71
RT 47.50

PROP SSMH-53
SL-3 STA 51+60.00
L STA 67+39.16
RT 47.50

PROP. 90° BEND
WL-3 STA 61+25.61
L STA 69+22.64
RT 50.0

PROP. 90° BEND
WL-3 STA 61+40.61
L STA 69+37.39 RT 50.1

ABANDON 8" UTILITY PIPE - 115 LF
8" WATER LINE - 141 LF
8" VALVE - 1 EACH
16" ENCASEMENT PIPE - 90 LF
TRENCHLESS INSTALLATION OF 16"
IN SOIL - 22 LF
TRENCHLESS INSTALLATION OF 16"
NOT IN SOIL - 23 LF

160 LF OF 8" GRAVITY SANITARY SEWER PIPE
4" DIA UTILITY MANHOLE - 2 EACH
UTILITY MANHOLE WALL, 4" DIA - 22.2 LF

SANITARY SEWER CLEAN OUT - 4 EACH
PARCELS: 54 THRU 57

SPECIAL PAY ITEM
RELOCATE WATER VAULT -
1 EACH
SEE NOTES THIS SHEET
AND SPECIAL PROVISIONS

- NOTES:
- CONTRACTOR SHALL REMOVE EXISTING WATER VAULT AND APPURTENANCES. INSTALL NEW VAULT AS SHOWN OUTSIDE PROPOSED RIGHT OF WAY, EXTEND SERVICE LINE AND RECONNECT TO EXISTING CUSTOMER SERVICE LINE.
 - CONTRACTOR SHALL LOCATE EXISTING CUSTOMER SERVICE LINE ON PARCEL 62 PRIOR TO STARTING WORK.
 - CONTRACTOR SHALL COORDINATE WITH PARCEL 62 OWNER AND SCHEDULE WATER VAULT WORK TO MINIMIZE WATER SERVICE DISRUPTION DURING CHURCH MEETING SCHEDULE.
 - CONTRACTOR SHALL RECONNECT SEWER SERVICE LINES AS NEEDED ON AFFECTED PARCELS.

THE KEMP
D. BATTLE
HOUSE

HISTORIC
PROPERTY

HISTORIC
PROPERTY
THE SHEARIN
HOUSE

PROJECT REFERENCE NO.	SHEET NO.
U-3621A	UC-08
DESIGNED BY: GJB	
DRAWN BY: GJB	
CHECKED BY: KCZ	
APPROVED BY: KCZ	
REVISED:	2/22/2017
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SECTION PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

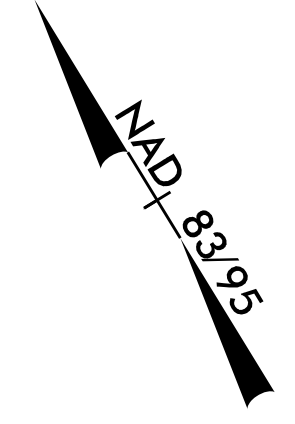
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

M A Engineering Consultants, Inc.
 NC License: F-0160
 598 East Chatham Street, Suite 137, Cary, NC 27511
 Phone: 919.297.0220 Fax: 919.297.0221

THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 230 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

NOTE:
 1. REMOVE EXISTING HYDRANT VALVE AND INSTALL PLUG AT EXISTING TEE.

UTILITY OWNERS ON THIS PROJECT:
 CITY OF ROCKY MOUNT
 WATER LINES: 6", 8", 16"
 SANITARY SEWER: 8"
 CONTACT: DONALD M. PERRY, PE
 PHONE: (252) 972-1122



END TIP PROJECT U-3621A
 -L- POT STA. 83+63.00 = TIP PROJECT U-3621B
 -L- POT STA. 16+41.52

REMOVE FIRE HYDRANT - 1 EACH
 FIRE HYDRANT - 1 EACH
 SEE NOTE 1.
 6" TAPPING VALVE - 1 EACH

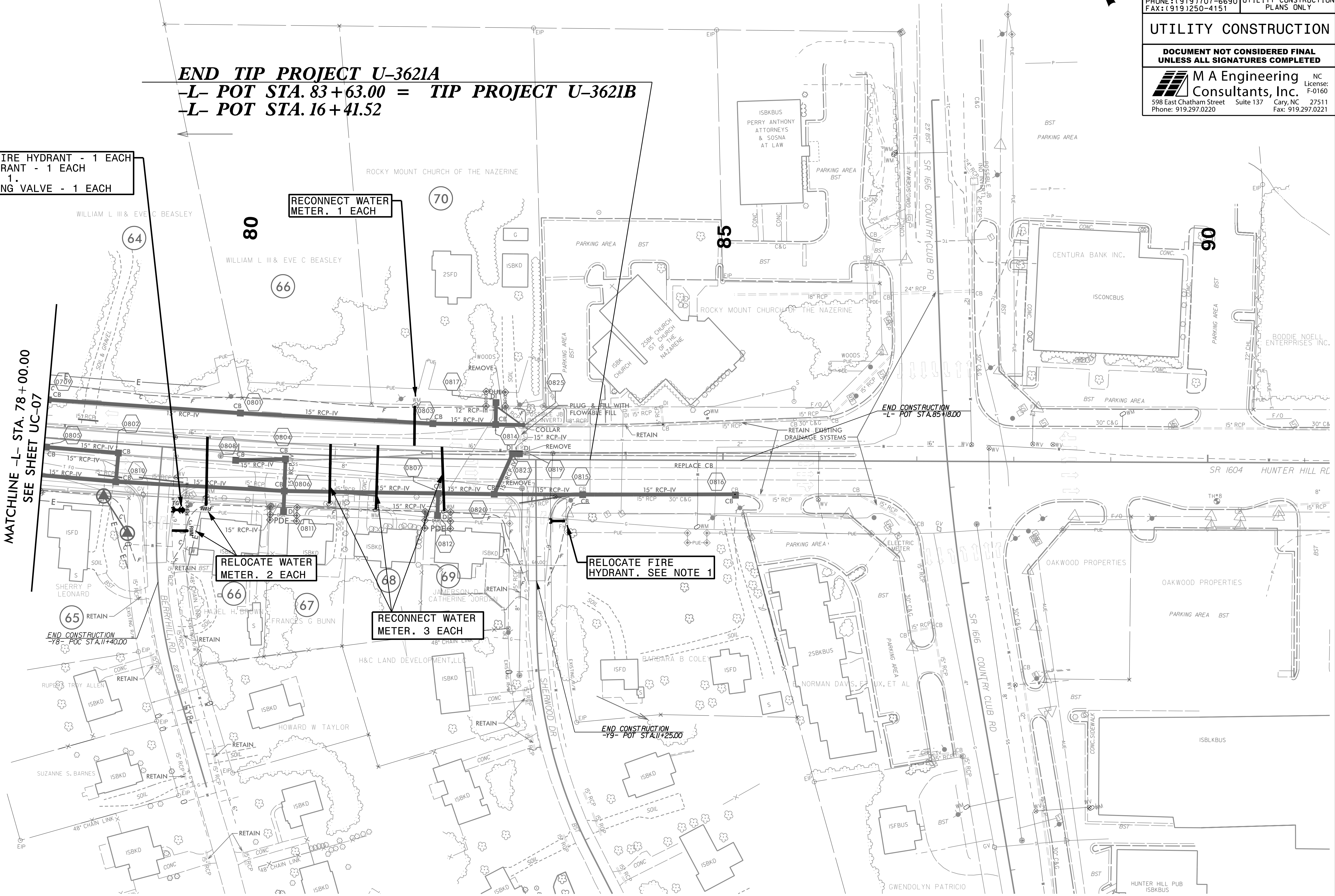
RECONNECT WATER METER. 1 EACH

RELOCATE WATER METER. 2 EACH

RECONNECT WATER METER. 3 EACH

RELOCATE FIRE HYDRANT. SEE NOTE 1

MATCHLINE -L- STA. 78+00.00
 SEE SHEET UC-07



5/14/99

5/28/09

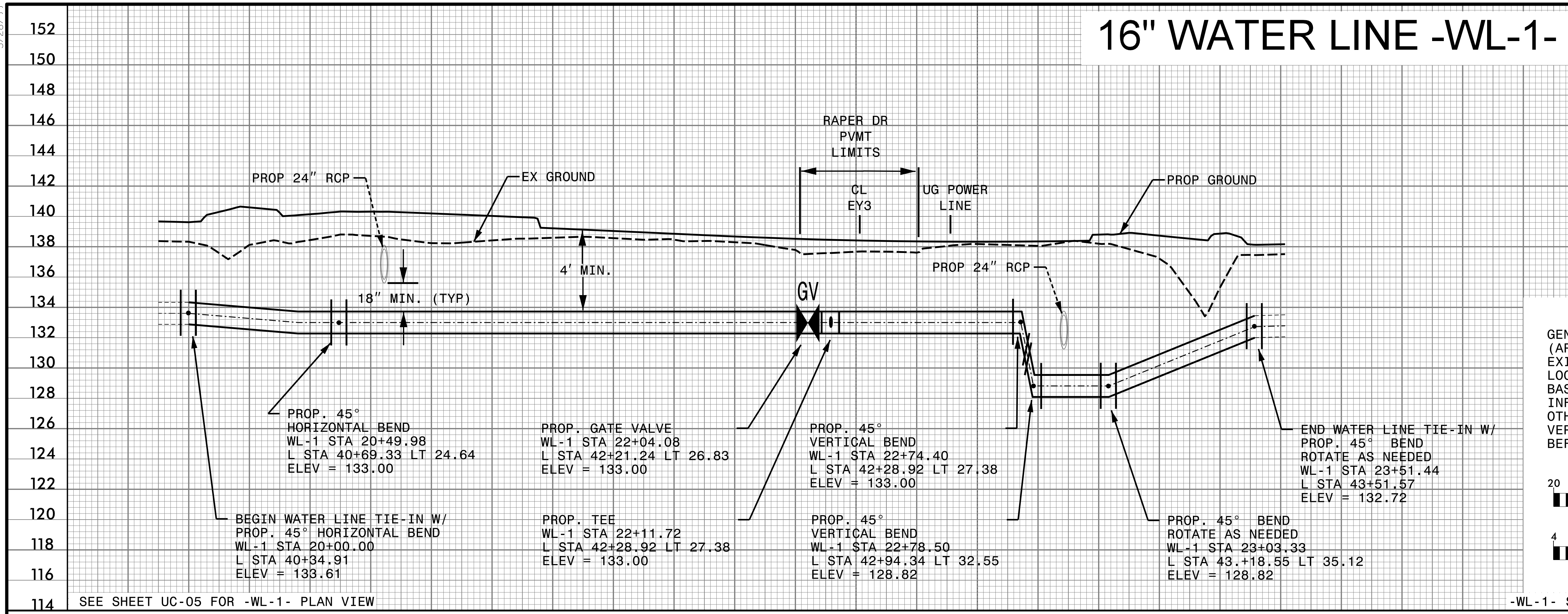
16" WATER LINE -WL-1-

PROJECT REFERENCE NO. U-3621A	SHEET NO. UC-09
DESIGNED BY: GJB	
DRAWN BY: GJB	
CHECKED BY: KCZ	
APPROVED BY: KCZ	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SECTION PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY DATE: 5/17/2011 ENGINEER: KEVIN C. ZOBEL	

UTILITY CONSTRUCTION

M A Engineering Consultants, Inc.
 598 East Chatham Street Suite 137 Cary, NC 27511
 Phone: 919.297.0220 Fax: 919.297.0221
 NC License: F-0160

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

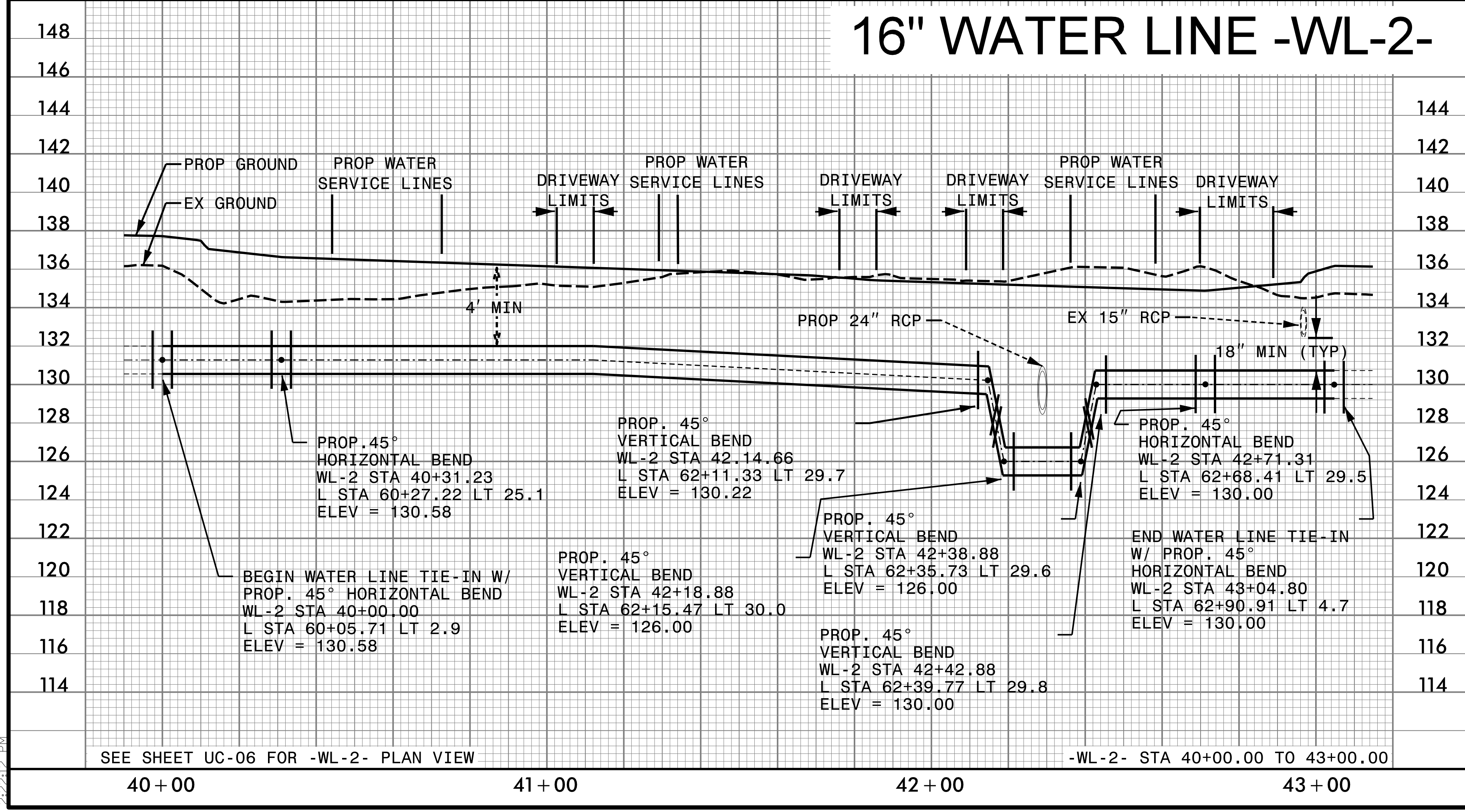


SEE SHEET UC-05 FOR -WL-1- PLAN VIEW

-WL-1- STA 20+00.00 TO 24+00.00

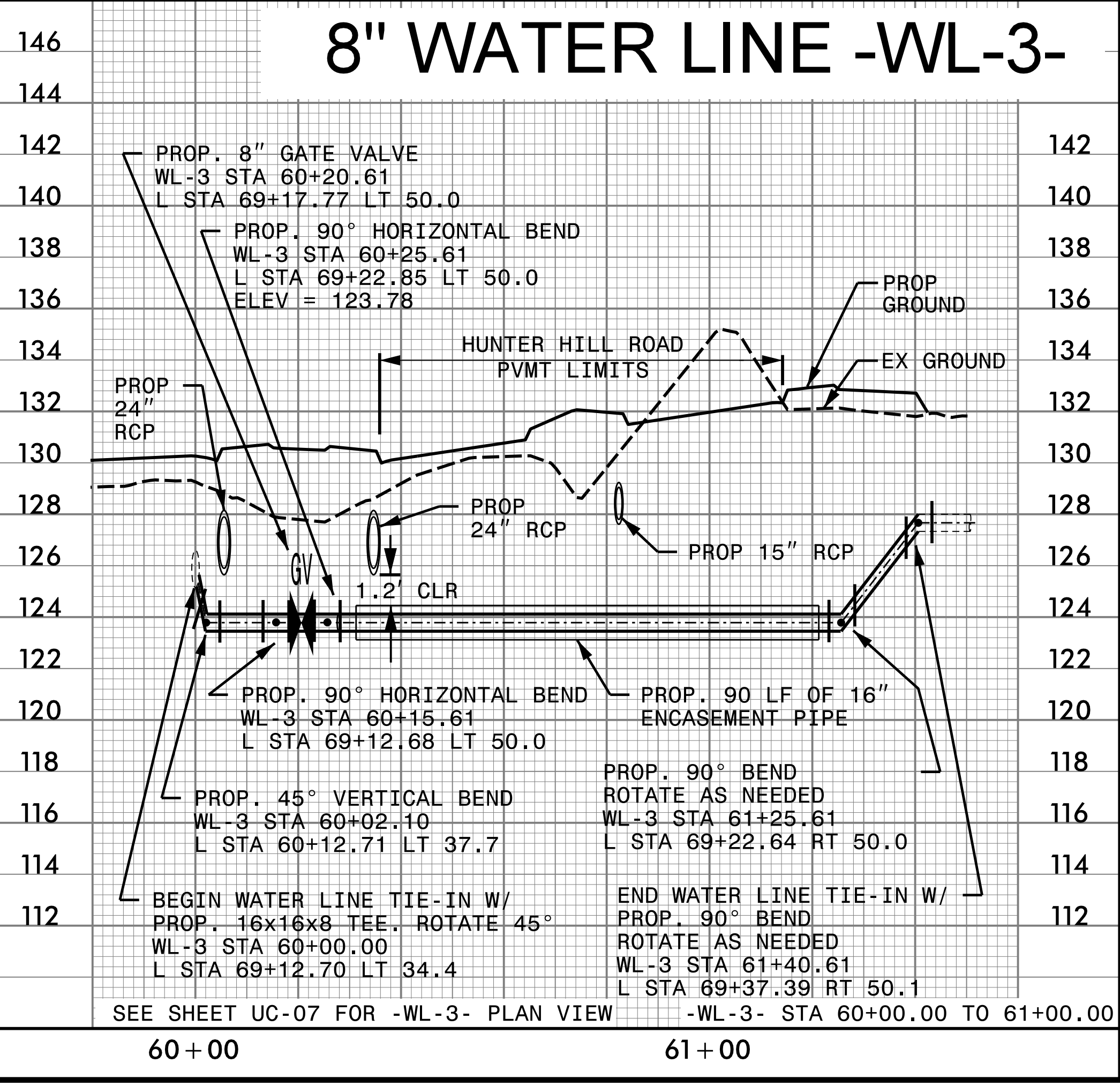
16" WATER LINE -WL-2-

8" WATER LINE -WL-3-



SEE SHEET UC-06 FOR -WL-2- PLAN VIEW

-WL-2- STA 40+00.00 TO 43+00.00

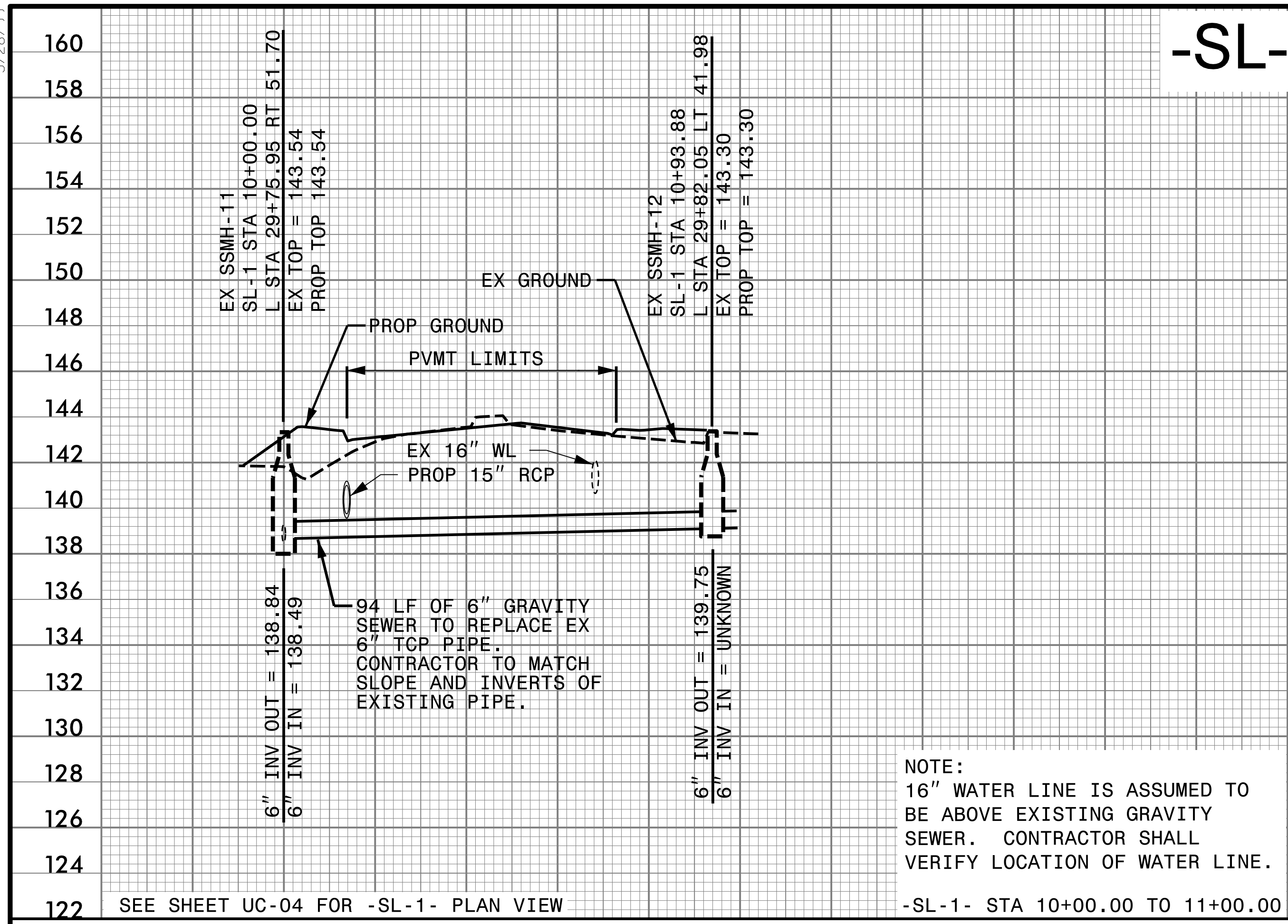


SEE SHEET UC-07 FOR -WL-3- PLAN VIEW

-WL-3- STA 60+00.00 TO 61+00.00

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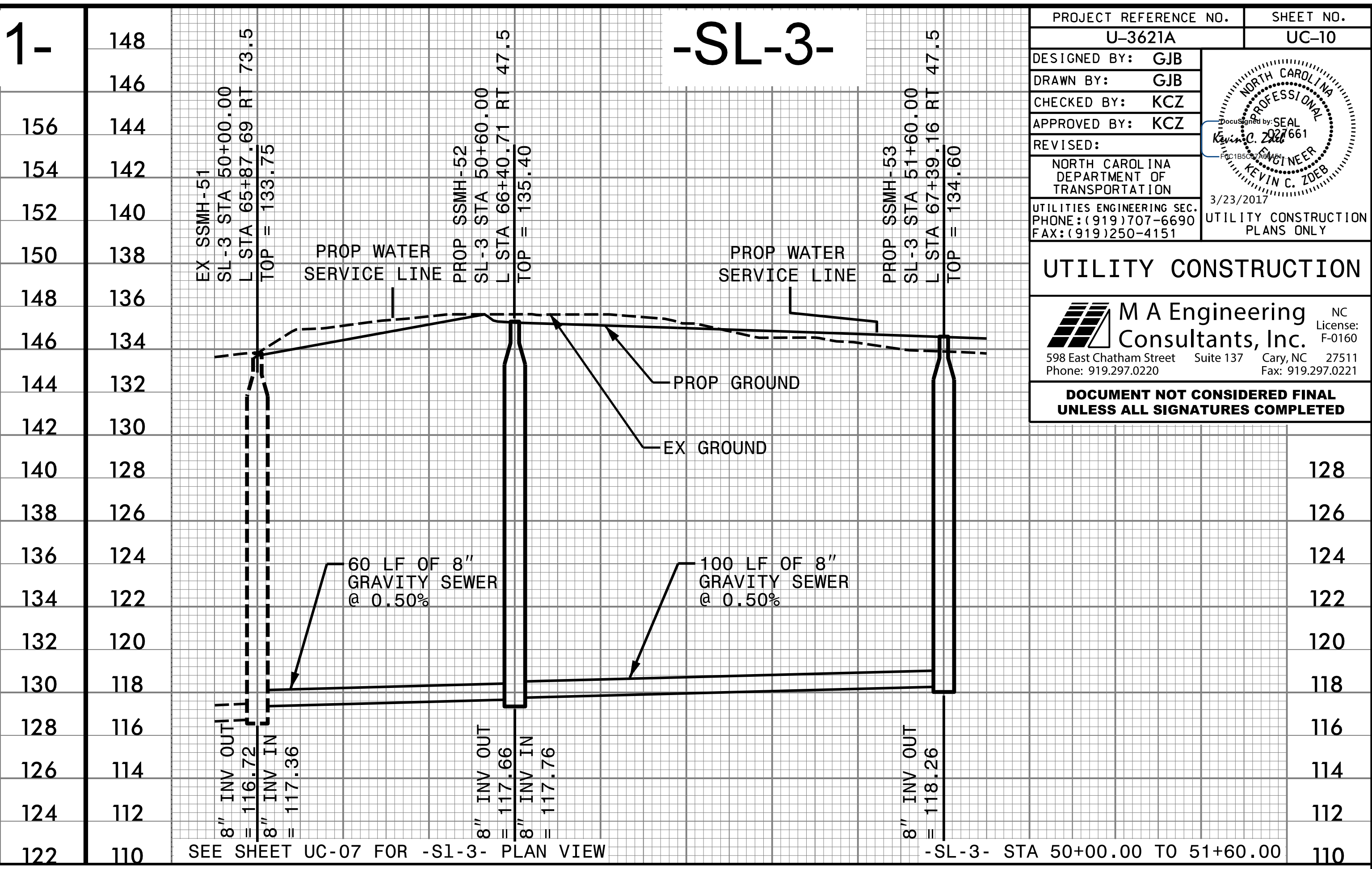
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SEE SHEET UC-04 FOR -SL-1- PLAN VIEW

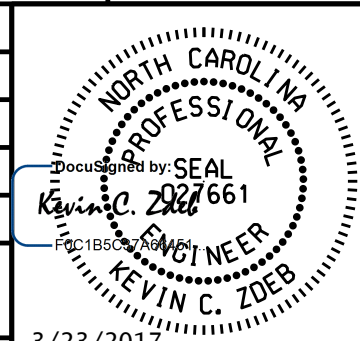

NOTE:
16" WATER LINE IS ASSUMED TO BE ABOVE EXISTING GRAVITY SEWER. CONTRACTOR SHALL VERIFY LOCATION OF WATER LINE.

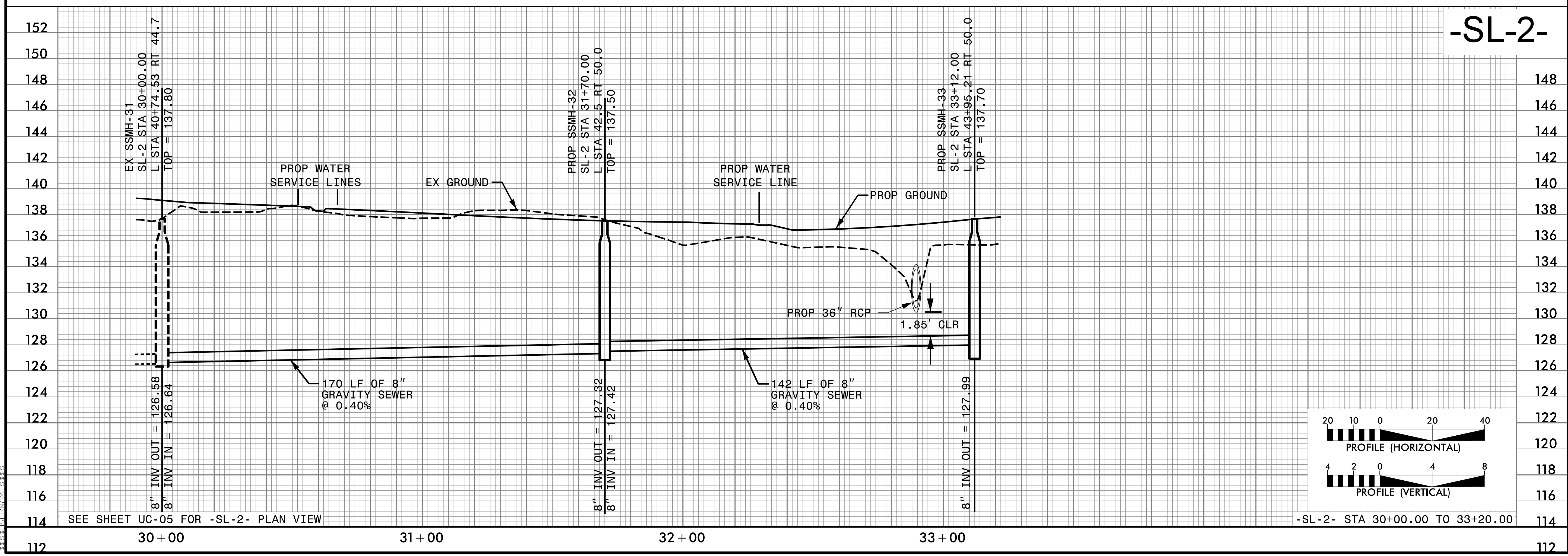
-SL-1-



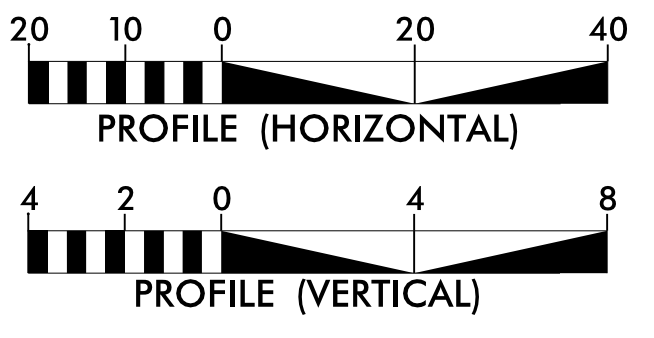
SEE SHEET UC-07 FOR -SL-3- PLAN VIEW

-SL-3-

PROJECT REFERENCE NO. U-3621A	SHEET NO. UC-10
DESIGNED BY: GJB	
DRAWN BY: GJB	
CHECKED BY: KCZ	
APPROVED BY: KCZ	
REVISED:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151
UTILITY CONSTRUCTION PLANS ONLY 3/23/2017	
UTILITY CONSTRUCTION  M A Engineering Consultants, Inc. 598 East Chatham Street Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221 License: F-0160	
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SEE SHEET UC-05 FOR -SL-2- PLAN VIEW



-SL-2-