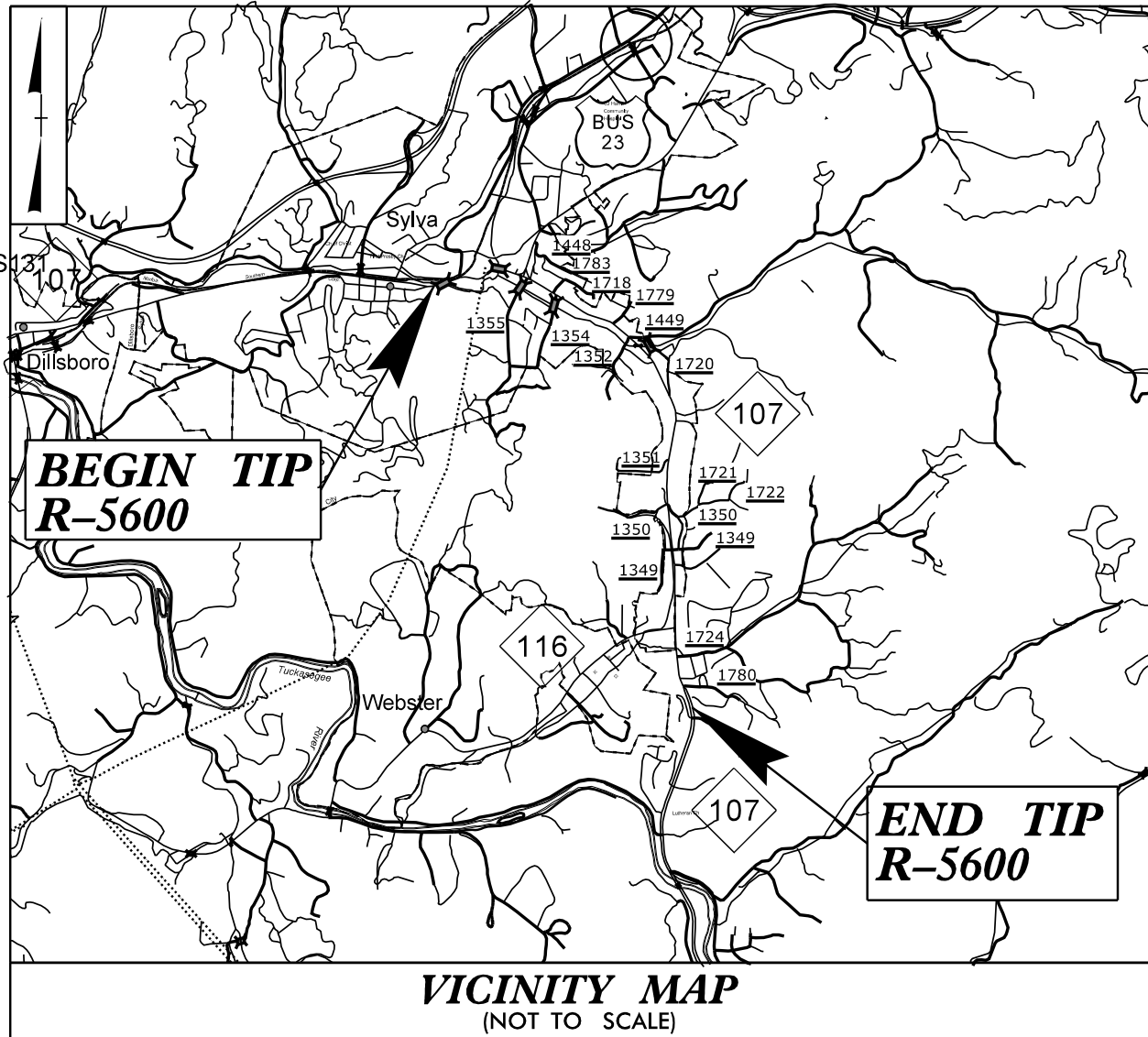


6-5-19

TIP PROJECT: R-5600

CONTRACT:



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITY CONSTRUCTION PLANS
JACKSON COUNTY

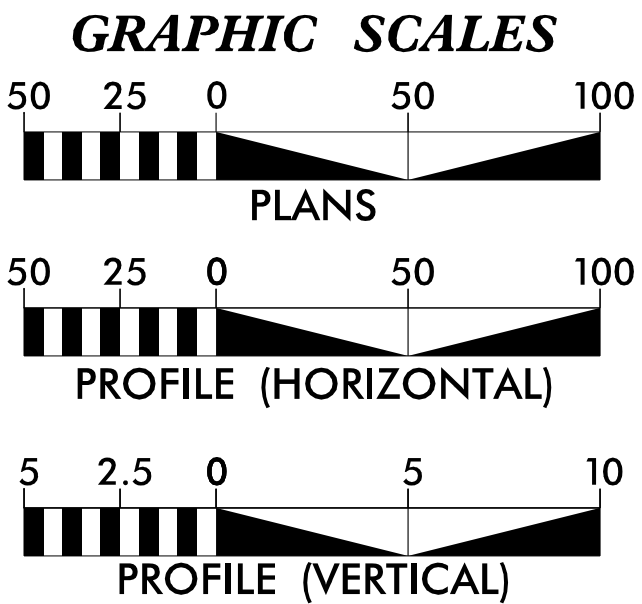
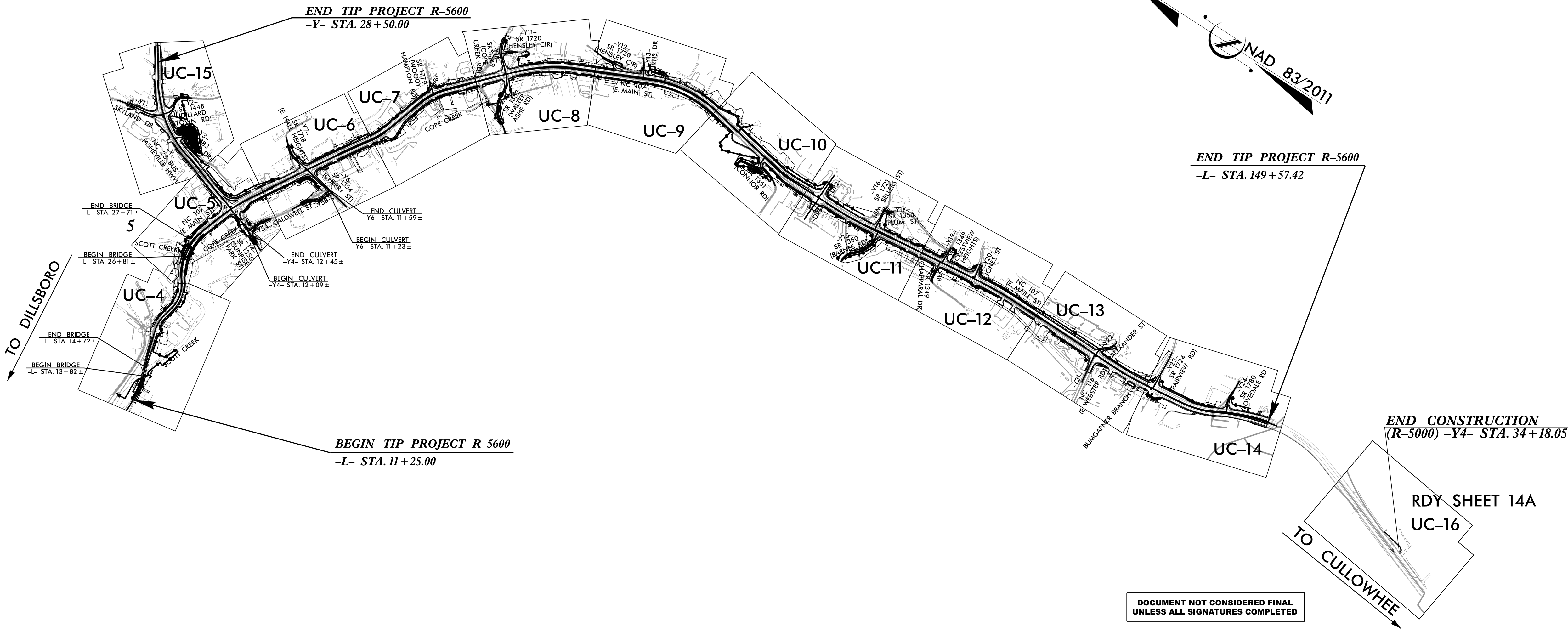
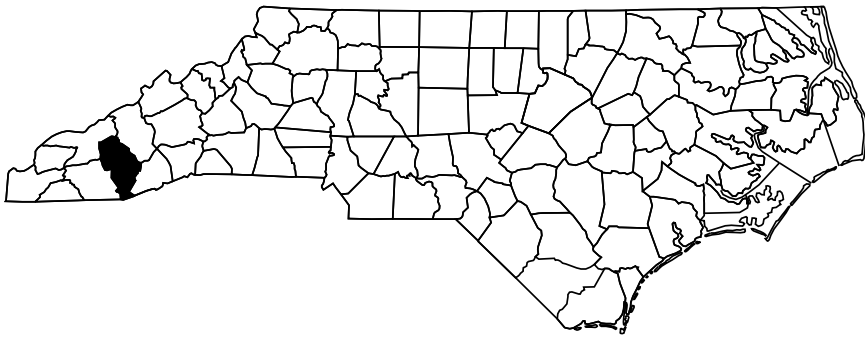
LOCATION: SYLVA - N.C.107 FROM WEST OF U.S. 23 BUSINESS (ASHEVILLE HIGHWAY) TO SOUTH OF N.C. 116 (WEBSTER ROAD) AND U.S. 23 BUSINESS FROM SKYLAND DRIVE TO WEST OF MUNICIPAL DRIVE

TYPE OF WORK: WATER AND SEWER CONSTRUCTION

T.I.P. NO.	SHEET NO.
R-5600	UC-1

100% UTILITY CONST. PLANS

UTILITY CONST. PLANS
DATE: JULY 3, 2025



SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3	NOTES
UC-3A - UC-3E	DETAILS
UC-3F - UC-3H	SERVICES TABLE
UC-4 - UC-16	UTILITY PLANS & PROFILES

PUBLIC UTILITY OWNERS
ON PROJECT

(1) WATER & SEWER - TUCKASEIGEE WATER AND SEWER AUTHORITY (TWSA)

PREPARED IN THE OFFICE OF:



JOHNSON, MIRIRAN & THOMPSON INC.
1318-F Patton Avenue
Asheville, NC, 28806
(828) 253-2786

SEAL:



Marie Peedin, P.E.	UTILITY PROJECT MANAGER
James Montgomery	PROJECT UTILITY COORDINATOR
Emily Morris, E.I.	PROJECT UTILITY DESIGNER



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

Alireza Kouchehi, P.E. UTILITIES REGIONAL ENGINEER
Bob Golding DIVISION UTILITIES ENGINEER

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

JACKSON COUNTY

PROJECT REFERENCE NO.	SHEET NO.
R-5600	UC-2

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	
11¼ Degree Bend	
22½ Degree Bend	
45 Degree Bend	
90 Degree Bend	
Plug	
Tee	
Cross	
Reducer	
Gate Valve	
Butterfly Valve	
Tapping Valve	
Line Stop	
Line Stop with Bypass	
Blow Off	
Fire Hydrant	
Relocate Fire Hydrant	
Remove Fire Hydrant	
Water Meter	
Relocate Water Meter	
Remove Water Meter	
Water Pump Station	
RPZ Backflow Preventer	
DCV Backflow Preventer	
Relocate RPZ Backflow Preventer	
Relocate DCV Backflow Preventer	

PROPOSED SEWER SYMBOLS

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

PROPOSED MISCELLANOUS UTILITIES SYMBOLS

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

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

EXISTING UTILITIES SYMBOLS

Power Pole	
Telephone Pole	
Joint Use Pole	
Utility Pole	
Utility Pole with Base	
H-Frame Pole	
Power Transmission Line Tower	
Water Manhole	
Power Manhole	
Telephone Manhole	
Sanitary Sewer Manhole	
Hand Hole for Cable	
Power Transformer	
Telephone Pedestal	
CATV Pedestal	
Gas Valve	
Gas Meter	
Located Miscellaneous Utility Object	
Abandoned According to Utility Records	
End of Information	

*Underground Power Line	
*Underground Telephone Cable	
*Underground Telephone Conduit	
*Underground Fiber Optics Telephone Cable	
*Underground TV Cable	
*Underground Fiber Optics TV Cable	
*Underground Gas Pipeline	
Aboveground Gas Pipeline	
*Underground Water Line	
Aboveground Water Line	
*Underground Gravity Sanitary Sewer Line	
Aboveground Gravity Sanitary Sewer Line	
*Underground SS Forced Main Line	
Underground Unknown Utility Line	
SUE Test Hole	
Water Meter	
Water Valve	
Fire Hydrant	
Sanitary Sewer Cleanout	

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

JACKSON COUNTY

PROJECT REFERENCE NO.		SHEET NO.	
R-5600		UC-3	
DESIGNED BY: ELM			
DRAWN BY: HSN			
CHECKED BY: MUP			
APPROVED BY: MUP			
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
		UTILITY CONSTRUCTION PLANS ONLY	
DOCUMENT NOT CONSIDERED FINAL UNTIL ALL SIGNATURES ARE COMPLETED			

9. HDPE PRESSURE PIPE FOR POTABLE WATER SHALL MEET THE REQUIREMENTS OF NSF 61.

10. ANY NECESSARY CONNECTIONS FOR TESTING AND FILLING THE INSTALLED WATER MAIN WILL BE REQUIRED AND CONSIDERED INCIDENTAL TO THE WATER MAIN CONSTRUCTION. SEE DETAIL SHEET UC-3C.

11. CONTRACTOR IS REQUIRED TO PROVIDE
TWSA AND NCDOT A SEWER BY-PASS PLAN
PRIOR TO BEGINNING ANY SEWER WORK.

12. CONTRACTOR WILL BE REQUIRED TO TELEWISE SANITARY SEWER LINE PRE & POST CONSTRUCTION OF EXISTING 8" OR LARGER TERRACOTTA LINE TO REMAIN WITHIN PROJECT LIMITS.

13. CONTRACTOR SHALL CONFORM TO SPECIAL PROVISIONS.

14. TRACER WIRE MUST BE PLACED ON ALL BURIED TWSA LINES EXCEPT GRAVITY SEWER.

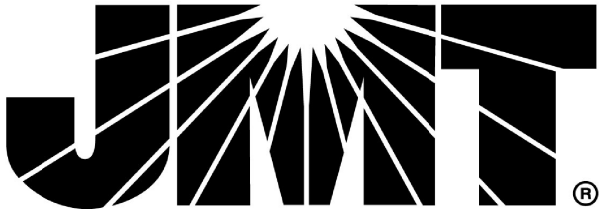
15. METALLIC BURY TAPE MUST BE PLACED ON ALL TWSA LINES INCLUDING GRAVITY SEWER. THE BURY TAPE MUST ALWAYS BE USED ABOVE A UTILITY, REGARDLESS OF WHAT IT IS.

6. PRIOR TO CONSTRUCTION OF THE MILL CREEK CULVERT, A 2" TEMPORARY SERVICE MAIN SHALL BE INSTALLED AS SHOWN ON THE PLANS. THIS LINE WILL BE CONNECTED TO THE EXISTING WATER MAIN AND ALL EXISTING SERVICES WILL BE TIED INTO THIS LINE UNTIL THE NEW WATER LINE HAS BEEN INSTALLED AND TESTED.

17. SERVICES WILL NOT BE REPLACED ON PLOTS WHICH HAVE NO BUILDINGS. WHEN OWNER CHOOSES TO REDEVELOP, TWSA WILL INSTALL NEW WATER SERVICES.

18. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF PIPE RESTRAINTS FOR ALL NECESSARY LOCATIONS AS SHOWN ON DETAIL SHEET UC-3B. NO NOTATION HAS BEEN MADE ON THE PLANS.

9. CONTRACTOR SHALL BE RESPONSIBLE FOR PLACEMENT OF RPZ OUTSIDE OF PROPOSED SIDEWALK AND EXISTING PARKING LOTS. FIELD ADJUST AS NEEDED



1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2024.

2. THE EXISTING UTILITIES BELONG TO TUCKASEEGEE WATER AND SEWER AUTHORITY (TWSA). PLEASE CONTACT MR. BOBBY MORRIS, DISTRIBUTION AND COLLECTION SUPERINTENDENT, 1246 WEST MAIN STREET, SYLVA, NC 28779, (828) 507-4866, bmorris@twasn.us

3. ALL WATER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER RESOURCES, PUBLIC WATER SUPPLY SECTION. ALL SEWER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.

4. THE UTILITY OWNER OWNS THE EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY THE DEPARTMENT. THE DEPARTMENT OWNS THE CONSTRUCTION CONTRACT AND HAS ADMINISTRATIVE AUTHORITY. COMMUNICATIONS AND DECISIONS BETWEEN THE CONTRACTOR AND UTILITY OWNER ARE NOT BINDING UPON THE DEPARTMENT OR THIS CONTRACT UNLESS AUTHORIZED BY THE ENGINEER. AGREEMENTS BETWEEN THE UTILITY OWNER AND CONTRACTOR FOR 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 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.

UTILITY CONSTRUCTION NOTES:

1. ALL FITTINGS SHALL BE DUCTILE IRON MECHANICAL JOINT USING GRIP RINGS. NO GLUE OR PUSH-ON FITTINGS ARE ALLOWED THRUST BLOCKING IS REQUIRED.

2. CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107 AND 1550 OF THE STANDARD SPECIFICATIONS CONCERNING TRENCHLESS INSTALLATION. IT IS CONTRACTOR'S RESPONSIBILITY TO HAVE BORE DESIGNED AND SEALED BY A LICENSED NORTH CAROLINA PROFESSIONAL ENGINEER. NO DAMAGE SHALL BE ALLOWED TO RIVER, WETLANDS OR BUFFER ZONES.

3. IF HDPE PIPE IS INSTALLED BY DIRECTIONAL DRILL, IT SHALL BE FILLED WITH WATER AND NOT BE CONNECTED TO ANY OTHER PIPE OR FITTING FOR ONE WEEK FROM THE TIME OF INSTALLATION.

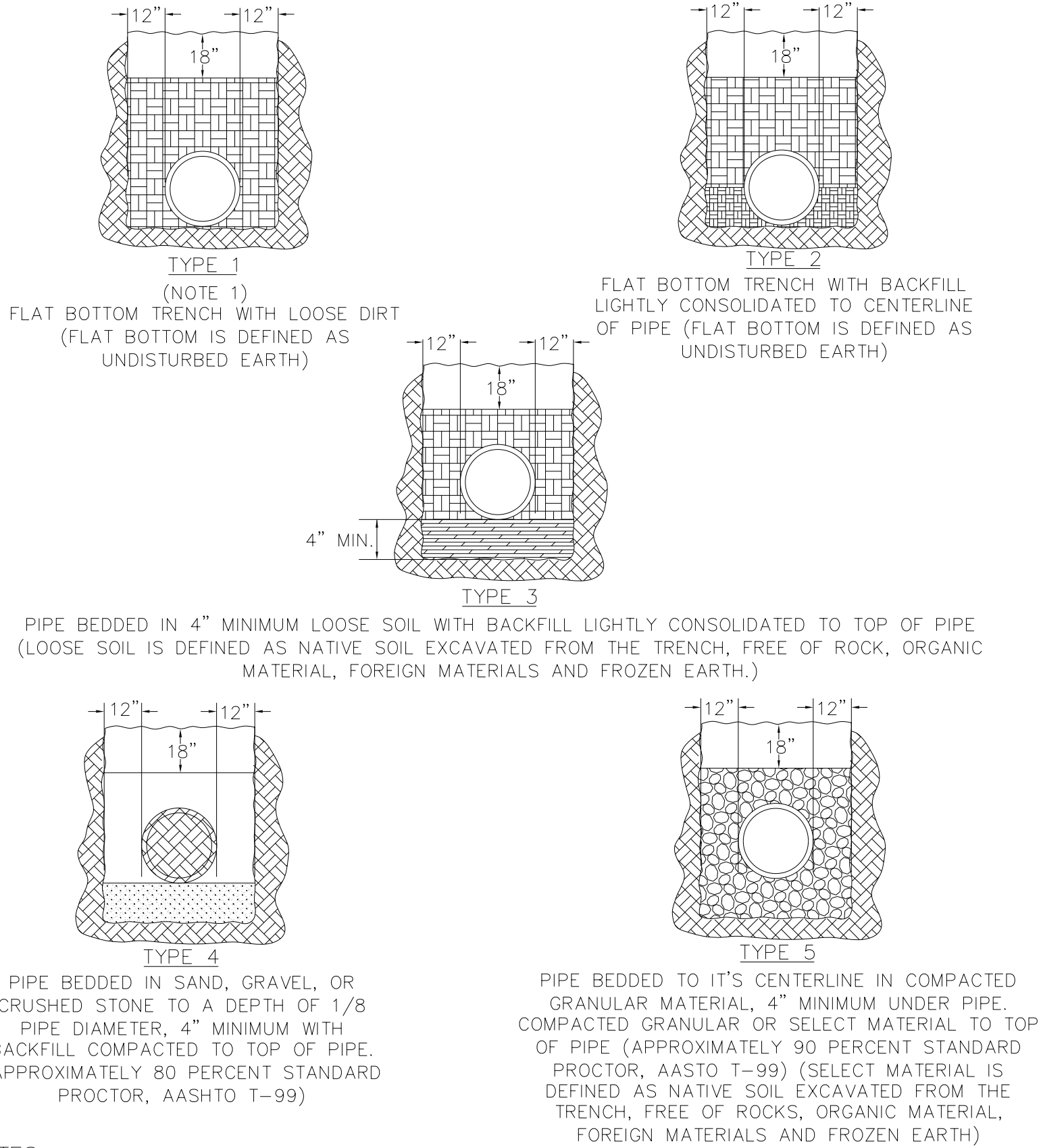
4. NEW WATER LINES MUST BE PRESSURE TESTED AT 200 PSI OR 1.5 TIMES AVERAGE STATIC PRESSURE IN PROJECT AREA, WHICHEVER IS MORE FOR 2 HOURS. TEST TO BE OBSERVED BY TUCKASEIGEE WATER AND SEWER AUTHORITY REPRESENTATIVE AND THE NCDOT RESIDENT ENGINEER OR EQUIVALENT.

5. SERVICE INTERRUPTIONS SHALL BE SCHEDULED WITH TUCKASEIGEE WATER AND SEWER AUTHORITY AND SHALL BE COMPLETED DURING OFF-PEAK HOURS- BEGINNING AFTER 9 PM AND BE COMPLETED BY 4 AM, UNLESS AUTHORIZED BY TUCKASEIGEE WATER AND SEWER AUTHORITY. INTERRUPTION SHALL NOT EXCEED 8 HOURS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY POTABLE WATER SUPPLIES TO ANY CUSTOMER UPON REQUEST BY TWSA AND/OR WHEN DURATION OF THE WATER SERVICE LOSS OR DISRUPTION EXCEEDS 4 HOURS.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING AFFECTED CUSTOMERS OF ANY SERVICE OUTAGES. CONTRACTOR SHALL COORDINATE WITH TWSA ON ALL CUSTOMERS THAT MAY BE IMPACTED. THIS SHALL APPLY TO ANY EXISTING LINES WHERE PRESSURE IS LOST AND A BOIL WATER ADVISORY IS ISSUED.

7. ALL TESTING TO BE PERFORMED USING APPROVED BACKFLOW PREVENTION. ALL NC DEQ-DWR-PWS AND LOCAL TESTING MUST BE COMPLETED AND APPROVED PRIOR TO CONNECTING THE NEW CONSTRUCTION TO THE EXISTING WATER LINES. SEE DETAIL SHEET UC-3C.

8. THE PROFESSIONAL ENGINEER (PE) SHALL OBTAIN AND PROVIDE THE NC DEQ "AUTHORIZATION TO CONSTRUCT" PERMIT TO THE UTILITY CONTRACTOR BEFORE THE CONSTRUCTION OF THE WATER LINE SHALL BEGIN. THE UTILITY CONTRACTOR MUST POST A COPY OF THE NC DEQ "AUTHORIZATION TO CONSTRUCT" PERMIT ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY ON SITE PRIOR TO THE START OF CONSTRUCTION. THE PERMIT MUST BE MAINTAINED ON SITE THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS OF THE PROPOSED WATER LINES THAT WILL SERVE THIS PROJECT. ANY SIGNIFICANT CHANGE FROM THE SEALED PLANS SHALL REQUIRE NOTIFICATION AND APPROVAL FROM PWS AND NCDOT PRIOR TO MAKING THE MODIFICATION.

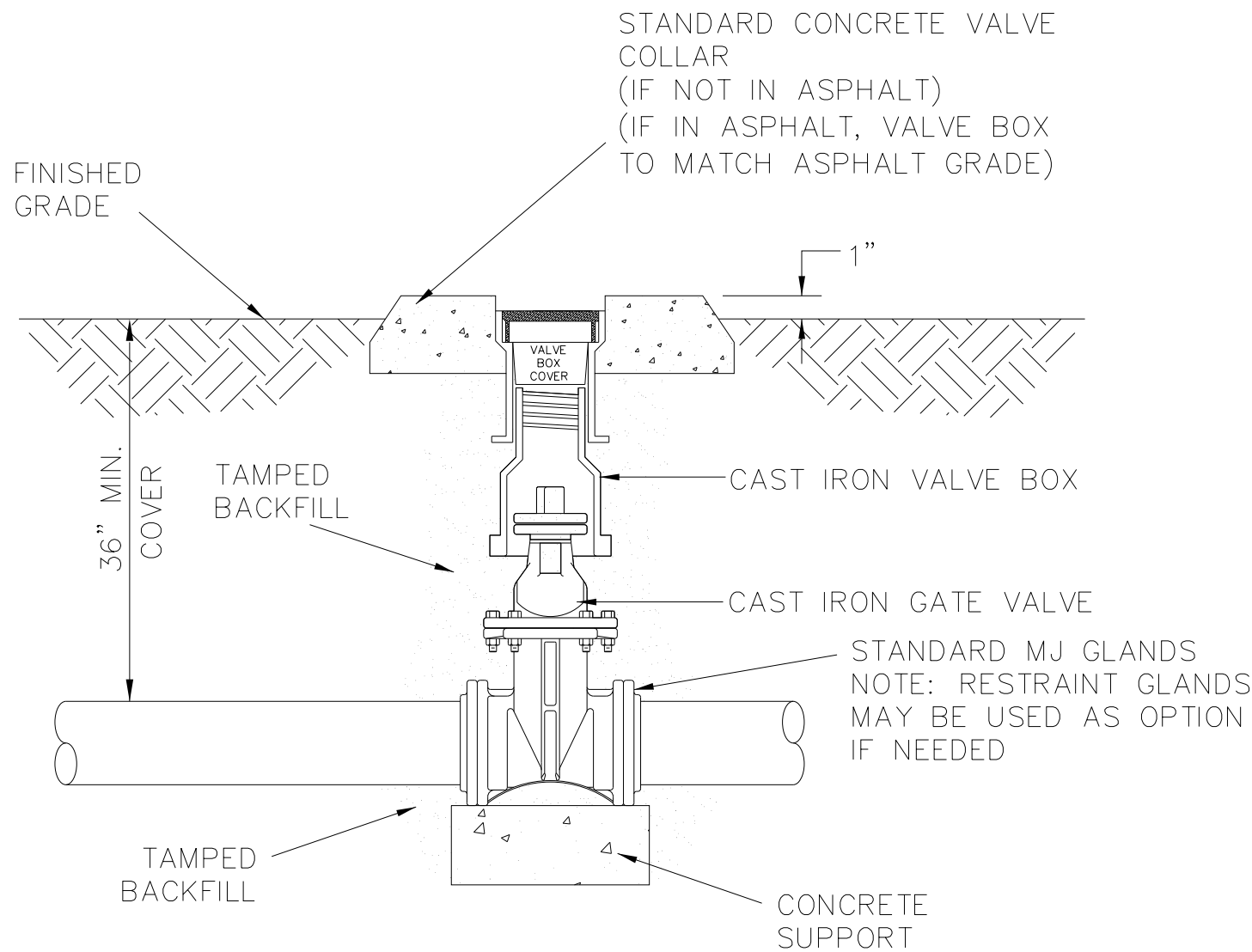


NOTES:

- FOR NORMAL PIPE SIZES 14 INCH AND LARGER, CONSIDERATION SHOULD BE GIVEN TO THE USE OF LAYING CONDITIONS OTHER THAN TYPE 1.
- CONSIDERATION OF THE PIPE-ZONE EMBEDMENT CONDITIONS INCLUDED IN THIS FIGURE MAY BE INFLUENCED BY FACTORS OTHER THAN PIPE STRENGTH. FOR ADDITIONAL INFORMATION ON PIPE BEDDING AND BACKFILL, SEE ANSI/AWWA C600.

WATER MAIN EMBEDMENT DETAILS

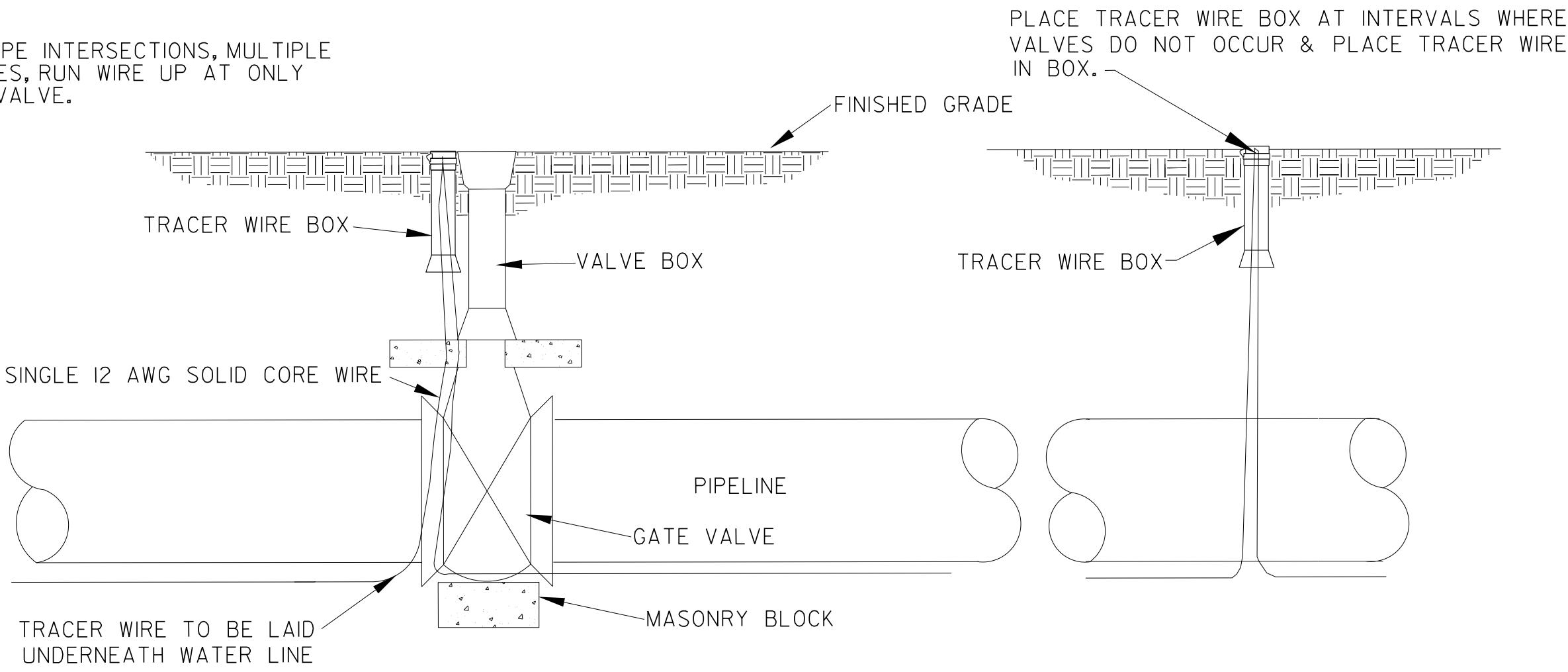
NOT TO SCALE



INLINE VALVE DETAIL

NOT TO SCALE

NOTE:
AT PIPE INTERSECTIONS, MULTIPLE
VALVES, RUN WIRE UP AT ONLY
ONE VALVE.



NOTES:

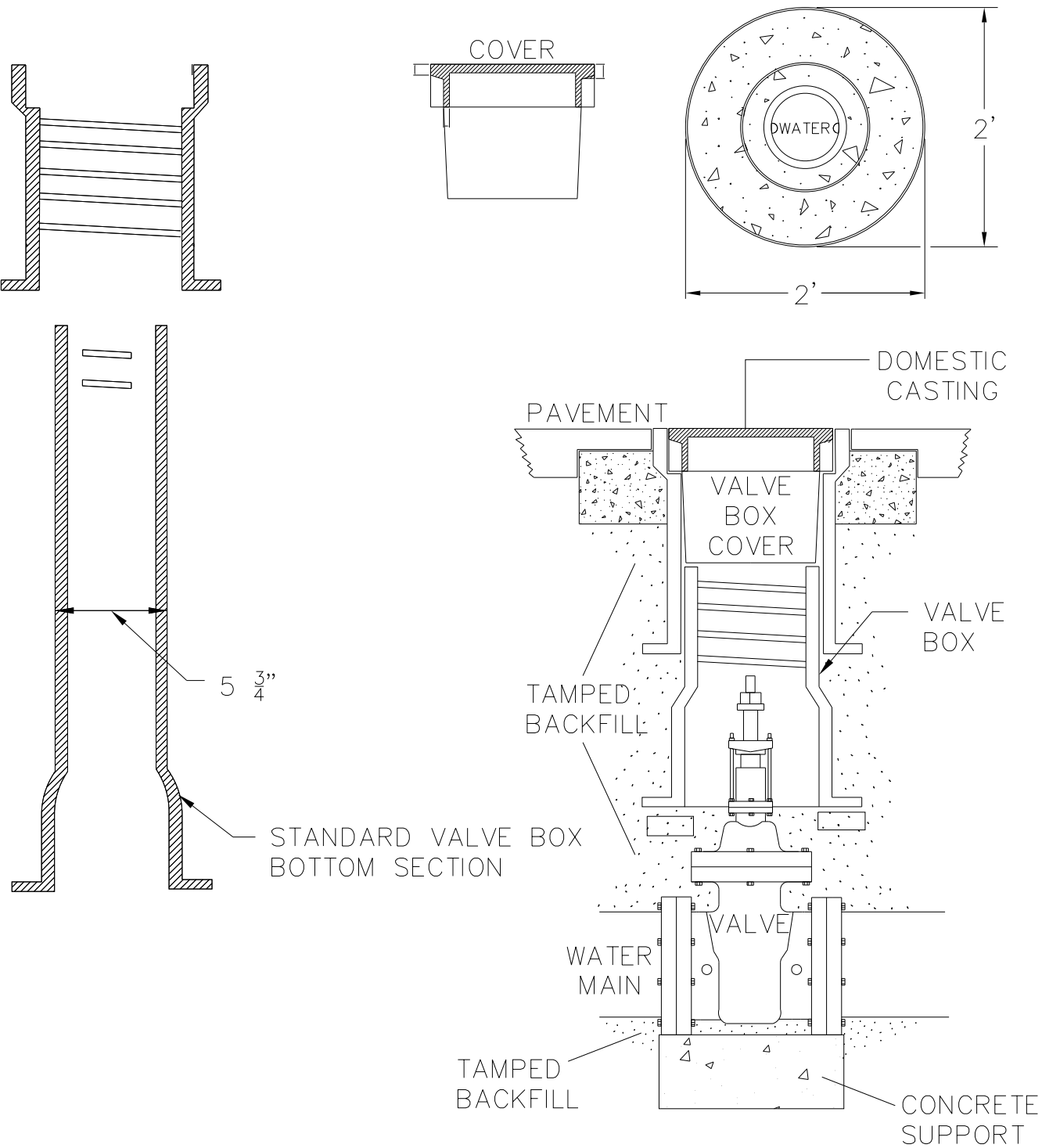
- PLACE TRACER WIRE IN TRACER WIRE BOX AS SHOWN.
- NO UNDERGROUND SPLICING WILL BE ALLOWED. DO NOT SPLICE WIRE WHEN BEGINNING A NEW SPOOL. INSTEAD INSTALL A TRACER WIRE BOX AND ATTACH EACH WIRE TO THE BOX.
- TRACER WIRE BOXES SHALL BE PLACED NO FARTHER THAN 400' APART

TYPICAL TRACER WIRE INSTALLATION DETAIL

NOT TO SCALE

NOTE: CONCRETE VALVE COLLAR
REQUIRED ON ALL VALVES.

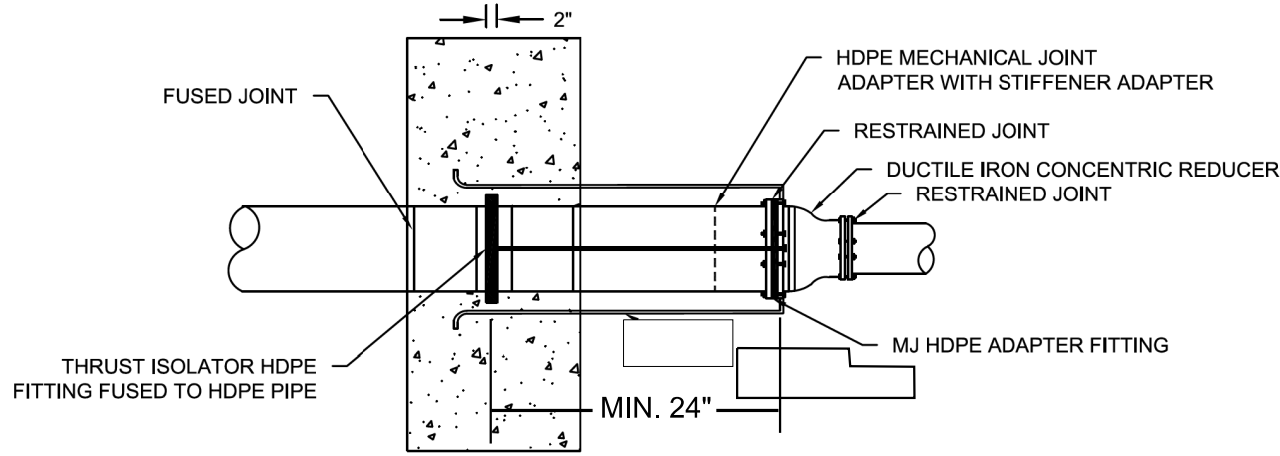
APPROVED METHOD FOR
EXTENSION OF VALVE BOX



NOTE:
VALVE BOX SHALL BE PER OWNER'S SPECIFICATIONS.

VALVE BOX INSTALLATION

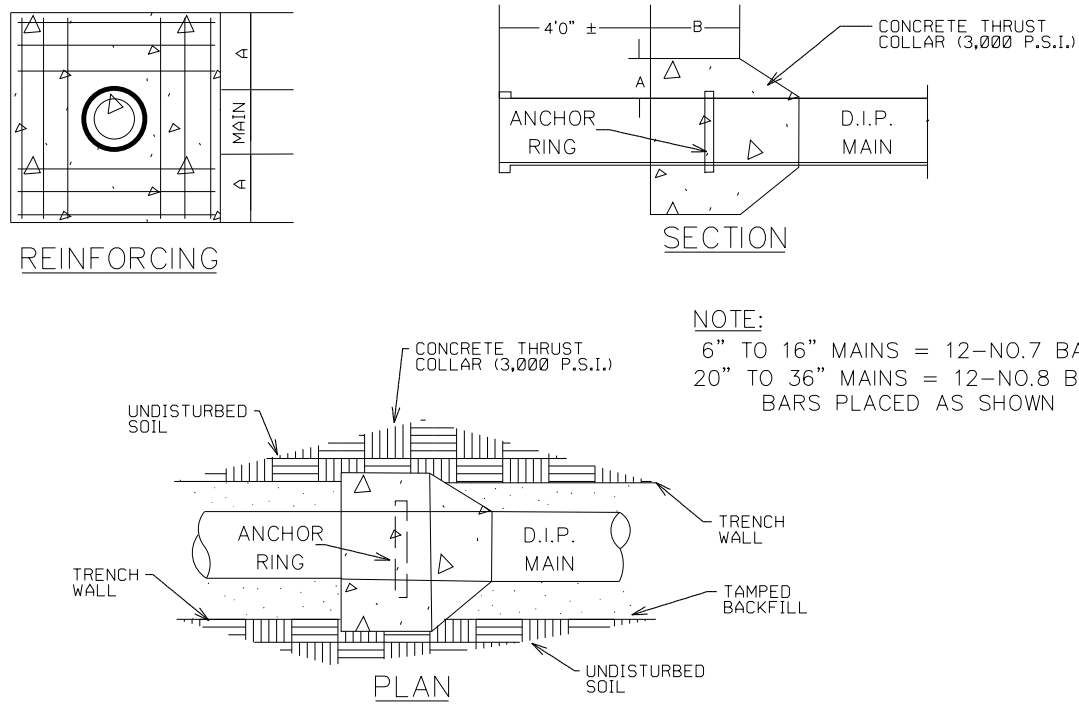
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NOTE:
SEE SEPARATE DETAIL FOR CONCRETE ANCHOR BLOCK

HDPE PIPE CONNECTION

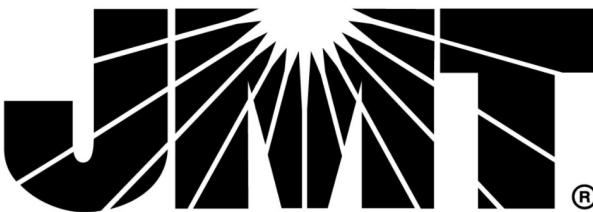
NOT TO SCALE



SCHEDULE				
PIPE DIAMETER	CONCRETE THRUST COLLAR	ANCHOR COLLAR	RINGS REQUIRED	
	A	B	C	
6", 8", 12"	1'-0"	1'-0"	2"	ONE
16"	1'-4"	1'-0"	2"	ONE
20"	1'-4"	1'-0"	3"	ONE
24"	1'-4"	1'-0"	3"	TWO
30"	1'-4"	1'-2"	4"	TWO
46"	1'-4"	1'-4"	4"	TWO

THRUST COLLAR INSTALLATION

NOT TO SCALE



3/21/17

V:\Asheville\water-sewer\31751-01_TWSA-B-5905-W and S Relocation\Utilities\B-5905-UTL_UC-3B.dgn

TEST PRESSURE = 150 PSI					
PIPE SIZE	TYPE FITTING	DIMENSIONS (FT)			VOLUME CONCRETE CU. YD.
		L"	H"	T"	
<4 INCHES	11 1/4"	-----	-----	-----	-----
	22 1/2"	1.00	1.00	1.50	0.06
	45"	1.00	1.00	1.50	0.06
	90"	1.00	1.00	2.50	0.09
	TEE	1.00	1.00	2.00	0.07
4 INCHES	11 1/4"	1.00	1.00	2.50	0.09
	22 1/2"	1.00	1.00	2.50	0.09
	45"	1.00	1.00	2.50	0.09
	90"	1.50	1.50	2.50	0.15
	TEE	1.50	1.50	2.00	0.12
6 INCHES	11 1/4"	1.50	1.50	2.50	0.15
	22 1/2"	1.50	1.50	2.50	0.15
	45"	1.50	1.50	2.50	0.15
	90"	2.00	2.00	3.00	0.28
	TEE	2.00	2.00	2.50	0.23
8 INCHES	11 1/4"	2.00	2.00	2.50	0.23
	22 1/2"	2.00	2.00	2.50	0.23
	45"	2.00	2.00	2.75	0.25
	90"	3.00	2.00	3.00	0.39
	TEE	3.00	2.00	2.50	0.32
12 INCHES	11 1/4"	2.00	2.00	3.00	0.28
	22 1/2"	2.00	2.00	3.00	0.28
	45"	3.00	2.50	3.00	0.47
	90"	4.50	3.00	3.50	0.94
	TEE	4.50	3.00	3.00	0.81
16 INCHES	11 1/4"	2.00	2.00	3.00	0.28
	22 1/2"	3.00	2.00	3.00	0.39
	45"	4.00	3.00	3.50	0.84
	90"	6.50	3.50	3.50	1.54
	TEE	6.50	3.50	3.00	1.32

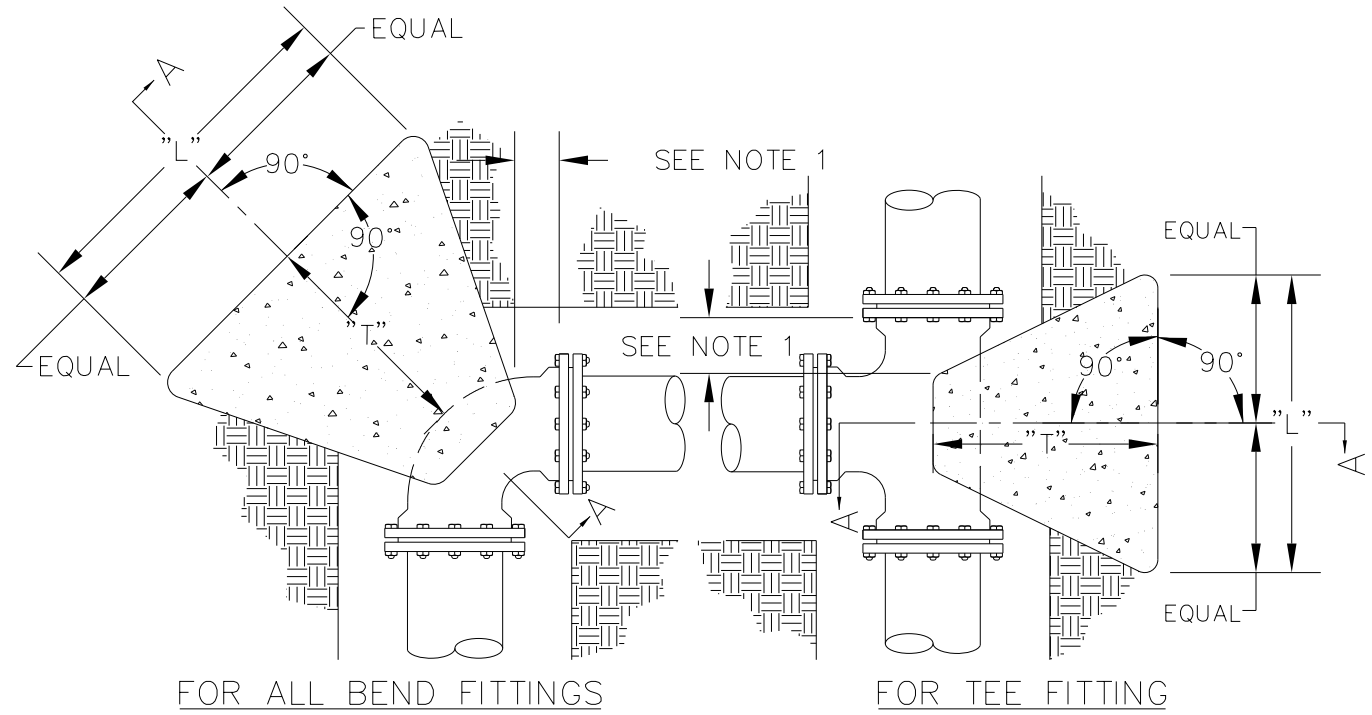
TEST PRESSURE = 200 PSI					
PIPE SIZE	TYPE FITTING	DIMENSIONS (FT)			VOLUME CONCRETE CU. YD.
		L"	H"	T"	
<4 INCHES	11 1/4"	1.00	1.00	1.00	0.04
	22 1/2"	1.00	1.00	1.50	0.06
	45"	1.00	1.00	1.50	0.06
	90"	1.50	1.50	2.50	0.15
	TEE	1.50	1.50	2.00	0.12
4 INCHES	11 1/4"	1.00	1.00	2.50	0.09
	22 1/2"	1.00	1.00	2.50	0.09
	45"	1.50	1.50	2.50	0.15
	90"	1.50	1.50	2.50	0.15
	TEE	1.50	1.50	2.00	0.12
6 INCHES	11 1/4"	1.50	1.50	2.50	0.15
	22 1/2"	1.50	1.50	2.50	0.15
	45"	1.50	1.50	2.50	0.15
	90"	2.50	2.00	3.00	0.33
	TEE	2.50	2.00	2.50	0.28
8 INCHES	11 1/4"	2.00	2.00	2.50	0.23
	22 1/2"	2.00	2.00	2.50	0.23
	45"	2.00	2.00	2.75	0.23
	90"	4.00	2.00	3.00	0.50
	TEE	4.00	2.00	2.50	0.42
12 INCHES	11 1/4"	2.00	2.00	3.00	0.28
	22 1/2"	3.00	2.00	3.00	0.39
	45"	4.00	2.50	3.00	0.61
	90"	5.50	3.00	3.50	1.13
	TEE	5.50	3.00	3.00	0.97
16 INCHES	11 1/4"	2.00	2.00	3.00	0.28
	22 1/2"	4.00	2.00	3.00	0.50
	45"	5.50	3.00	3.50	1.13
	90"	7.50	4.00	3.50	2.01
	TEE	7.50	4.00	3.00	1.72

CHART NOTES:

- IF BLOCKING EXCAVATION IS IN LIGHTLY COMPACTED FILL AREAS, OR IN AREAS WHERE BOULDERS OR STUMPS HAVE BEEN REMOVED, BLOCKING SIZE MUST BE RE-SIZED FOR THE SPECIFIC LOCATION/CIRCUMSTANCE BY A NC LICENSED PROFESSIONAL ENGINEER.
- BLOCKING SIZES SHOWN IN THESE TABLES ASSUME THE FOLLOWING:
 - BLOCKING IS CONSTRUCTED IN RESIDUAL SOILS AS SHOWN IN DETAIL
 - SOIL BEARING PRESSURE = 2000 PSF
 - VELOCITY OF FLOW = 15 FPS
- THIS DETAIL NOT APPLICABLE TO REDUCING BENDS.
- NEITHER THE WEIGHT OF THE CONCRETE BLOCKING NOR FRICTION BETWEEN CONCRETE BLOCKING AND SOIL WAS ADDED INTO BLOCKING SIZES COMPUTATION. THEREFORE, BLOCKING SIZE IS CONSERVATIVE.

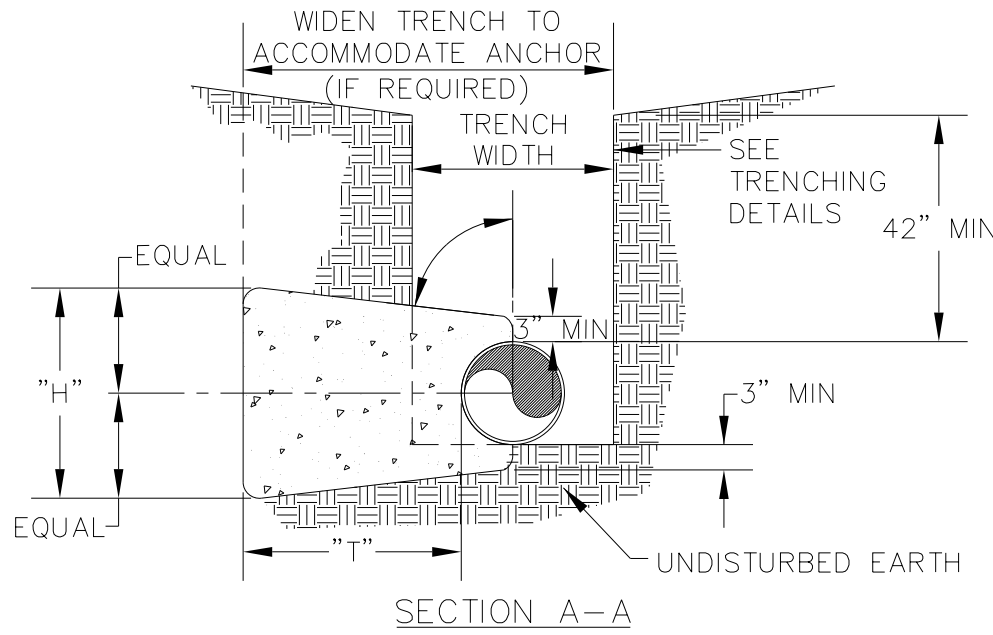
THRUST BLOCKING TABLE

NOT TO SCALE



FOR ALL BEND FITTINGS

FOR TEE FITTING



SECTION A-A

NOTES:

- CONCRETE BLOCKING IS TO BE FORMED TO ENSURE ACCESSIBILITY TO FITTINGS AND POURED AGAINST UNDISTURBED EARTH.
- ALL FITTINGS SHALL BE WRAPPED IN POLYETHYLENE TO PREVENT CONCRETE FROM CONTACTING FITTINGS, BOLTS OR ENDS OF MECHANICAL JOINT BENDS.
- CONCRETE TO BE MINIMUM 3,000 PSI @ 28 DAYS.
- WHEN SACKCRETE IS TO BE USED, IT SHALL BE PROPERLY MIXED PER MANUFACTURER SPECIFICATIONS.
- FOR REQUIRED DIMENSIONS, SEE THRUST BLOCKING TABLE.

THRUST BLOCKING

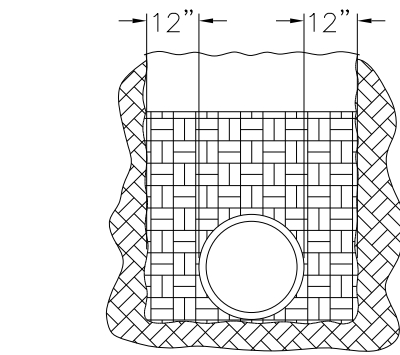
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Pipe Restraint Charts

Horizontal & Vertical Up Bends			
Pipe Size (inch)	Bend	Angle	Pipeline Restraint Req. (feet)
4"	11.25	2	
	22.5	5	
	30	6	
	45	10	
	60	14	
6"	11.25	3	
	22.5	7	
	30	9	
	45	14	
	60	19	
8"	11.25	4	
	22.5	9	
	30	11	
	45	18	
	60	25	
10"	11.25	5	
	22.5	10	
	30	14	
	45	21	
	60	30	
12"	11.25	6	
	22.5	12	
	30	16	
	45	25	
	60	35	
16"	11.25	7	
	22.5	13	
	45	27	
	90	65	
	11.25	9	
24"	22.5	18	
	45	37	
	90	90	

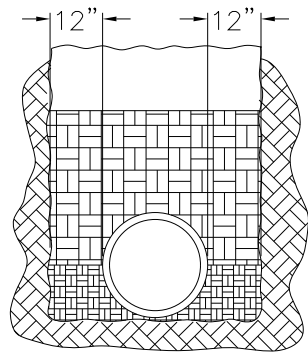
Vertical Down Bends			
Pipe Size (inch)	Bend	Angle	Pipeline Restraint Req. (feet)
4"	11.25	4	
	22.5	8	
	30	11	
	45	17	
	60	24	
6"	11.25	8	
	22.5	12	
	30	16	
	45	24	
	60	34	
8"	11.25	7	
	22.5	15	
	30	20	
	45	31	
	60	44	
10"	11.25	9	
	22.5	18	
	30	25	
	45	38	
	60	53	
12"	11.25	11	
	22.5	21	
	30	29	
	45	44	
	60	62	
16"	11.25	14	
	22.5	28	
	45	58	
	90	139	
	11.25	20	
24"	22.5	39	
	45	81	
	90	194	

Tees, Reducer, Caps			
Fitting Type	Size (inch)	Pipeline Restraint Req. (feet)	
Tee	4	35	
	6	52	
	8	70	
	10	85	
	12	101	
	16	131	
	24	186	
Reducer	6x4	30	
	8x6	32	
	10x4	74	
	10x6	58	
	10x8	21	
	12x4	83	
	12x6	78	
	12x10	31	
	16x4	128	
	16x6	117	
Cap	16x8	101	
	16x10	82	
	16x12	59	
	24x4	187	
	24x6	180	
	24x8	170	
	24x10	160	
	24x12	143	
	24x16	106	
	4	41	
Cap	6	59	
	8	76	
	10	92	
	12	107	
	16	139	
Cap	24	194	

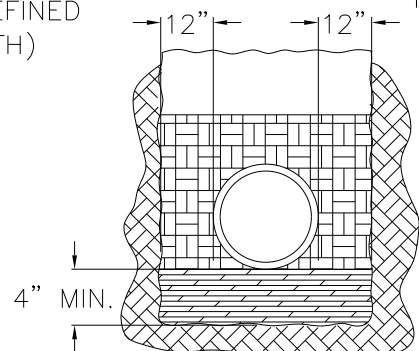


TYPE 1

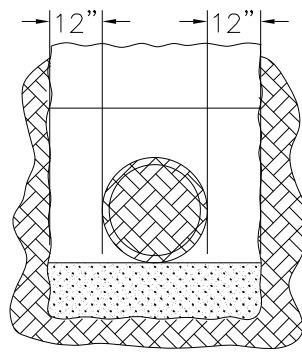
(NOTE 1)
FLAT BOTTOM TRENCH WITH LOOSE DIRT (FLAT BOTTOM IS DEFINED AS UNDISTURBED EARTH)



TYPE 2

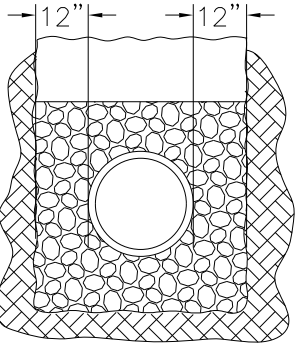


TYPE 3



TYPE 4

PIPE BEDDED IN SAND, GRAVEL OR CRUSHED STONE TO A DEPTH OF 1/8 PIPE DIAMETER, 4" MINIMUM WITH BACKFILL COMPACTED TO TOP OF PIPE (APPROXIMATELY 80 PERCENT STANDARD PROCTOR, AASHTO T-99)



TYPE 5

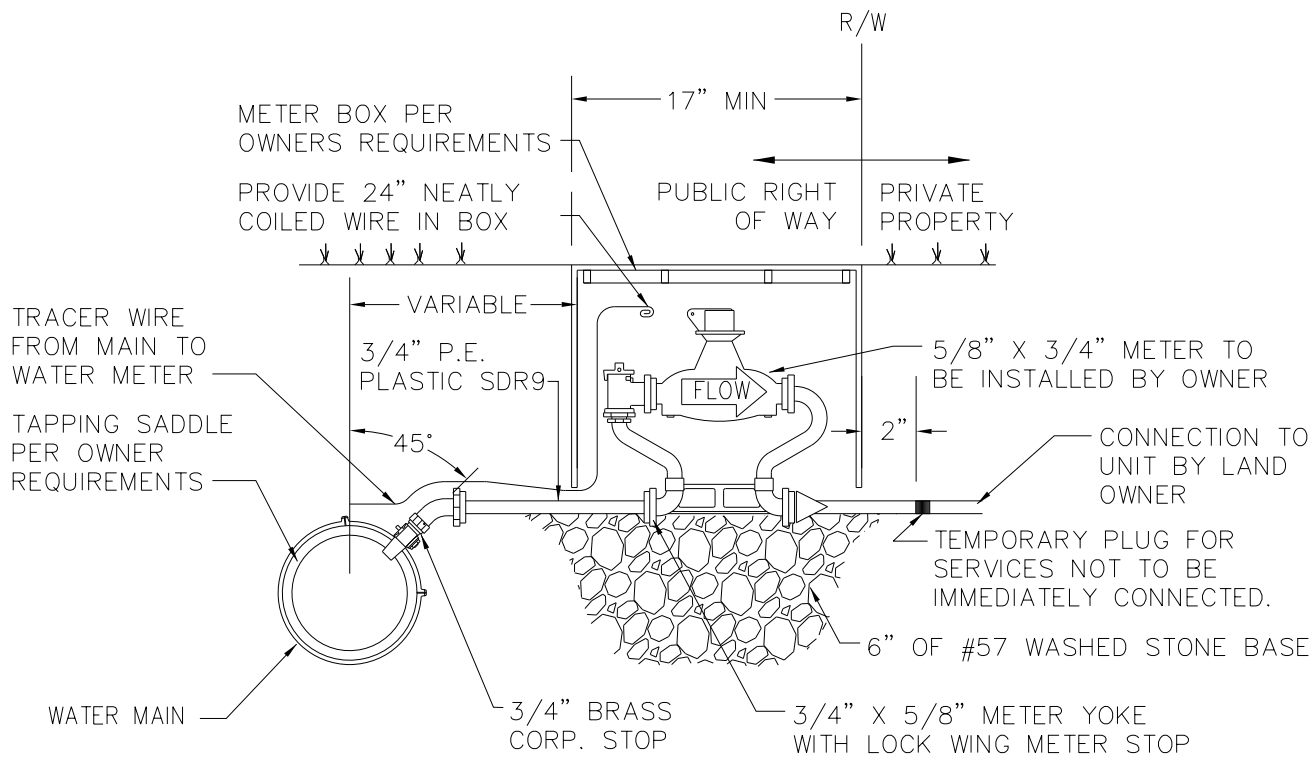
PIPE BEDDED TO ITS' CENTERLINE IN COMPACTED GRANULAR MATERIAL, 4" MINIMUM UNDER PIPE. COMPACTED GRANULAR OR SELECT MATERIAL TO TOP OF PIPE (APPROXIMATELY 90 PERCENT STANDARD PROCTOR, AASHTO T-99) (SELECT MATERIAL IS DEFINED AS NATIVE SOIL EXCAVATED FROM THE TRENCH, FREE OF ROCKS, ORGANIC MATERIAL, FOREIGN MATERIALS AND FROZEN EARTH)

NOTES:

- FOR NORMAL PIPE SIZES 14 INCH AND LARGER, CONSIDERATION SHOULD BE GIVEN TO THE USE OF LAYING CONDITIONS OTHER THAN TYPE 1.
- CONSIDERATION OF THE PIPE-ZONE EMBEDMENT CONDITIONS INCLUDED IN THIS FIGURE MAY BE INFLUENCE BY FACTORS OTHER THAN PIPE STRENGTH. FOR ADDITIONAL INFORMATION ON PIPE BEDDING AND BACKFILL, SEE ANSI/AWWA C600.

SEWER FORCE MAIN EMBEDMENT DETAIL

NOT TO SCALE



NOTE: METER BOX TO BE SUPPORTED ON BRICK OR BLOCK

3/4" TO 1" SERVICE CONNECTION AND METER

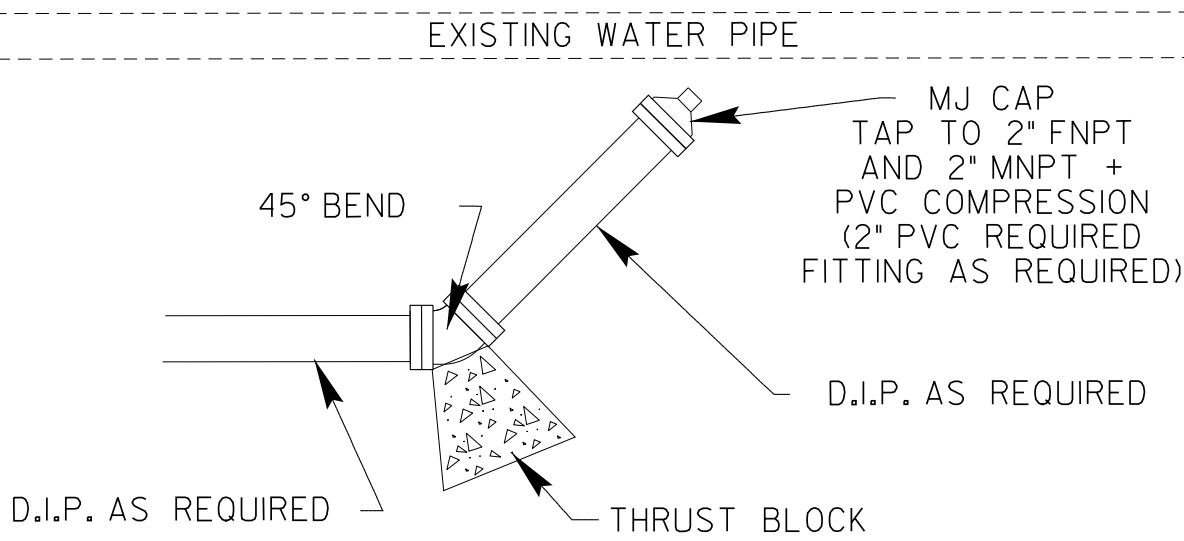
NOT TO SCALE



8/26/2020 4:38:54 PM EDT

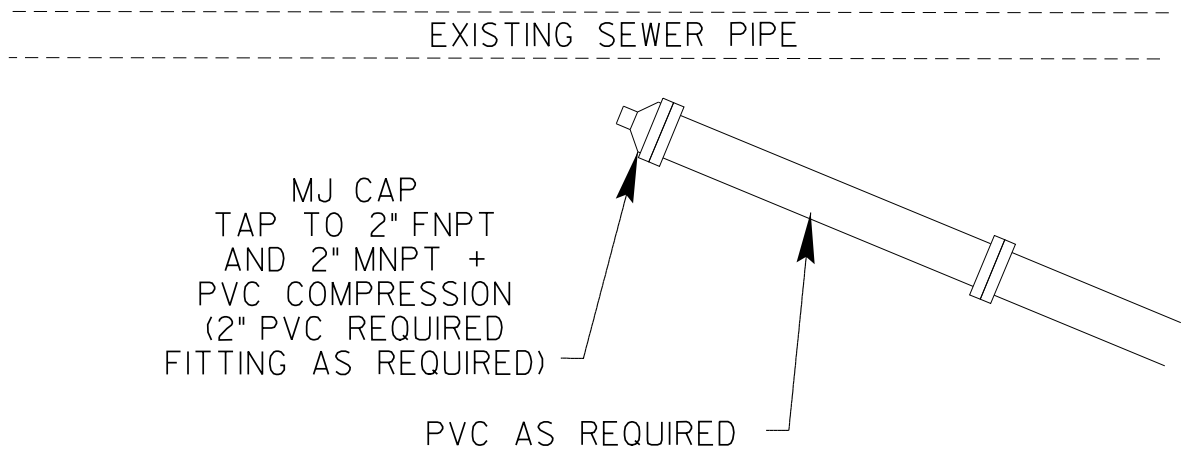
SANITARY SEWER FORCEMAIN PRE-TESTING DETAILS

NOTE: ALL FITTINGS SHALL BE DUCTILE IRON MECHANICAL RESTRAINED JOINT. NO GLUED OR PUSH-ON FITTINGS ARE ALLOWED AND THRUST BLOCKING IS REQUIRED. THRUST COLLARS ARE REQUIRED ON EACH END OF EXISTING WATER LINE TO REMAIN.



INSET 'B
NTS

NOTE: ALL FITTINGS SHALL BE DUCTILE IRON MECHANICAL RESTRAINED JOINT USING GRIP RINGS. NO GLUED OR PUSH-ON FITTINGS ARE ALLOWED.



EXISTING SEWER PIPE

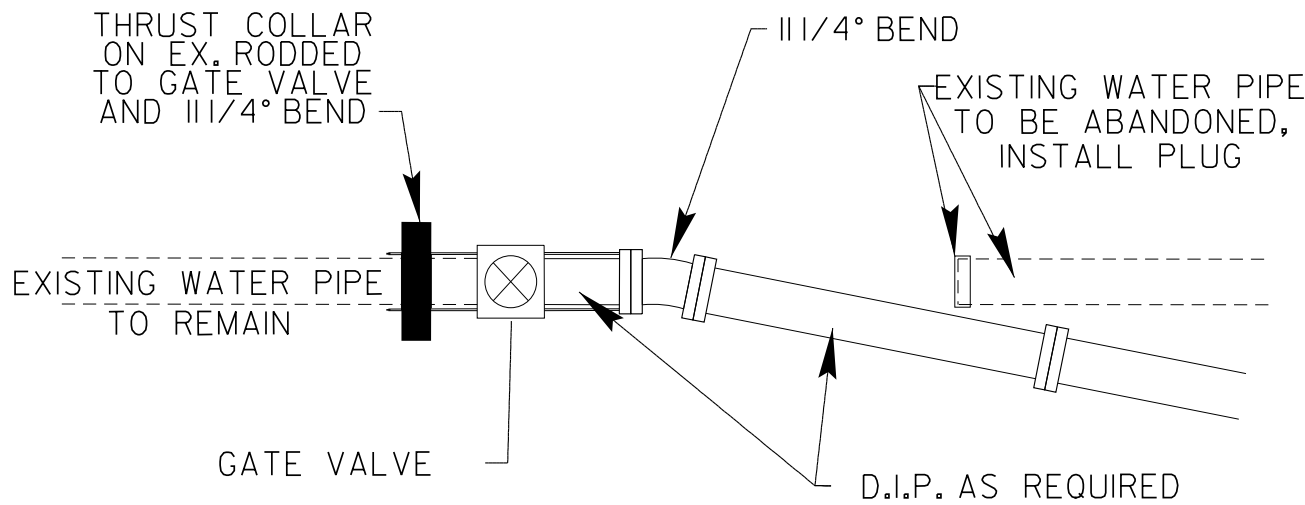
MJ CAP

PVC AS REQUIRED

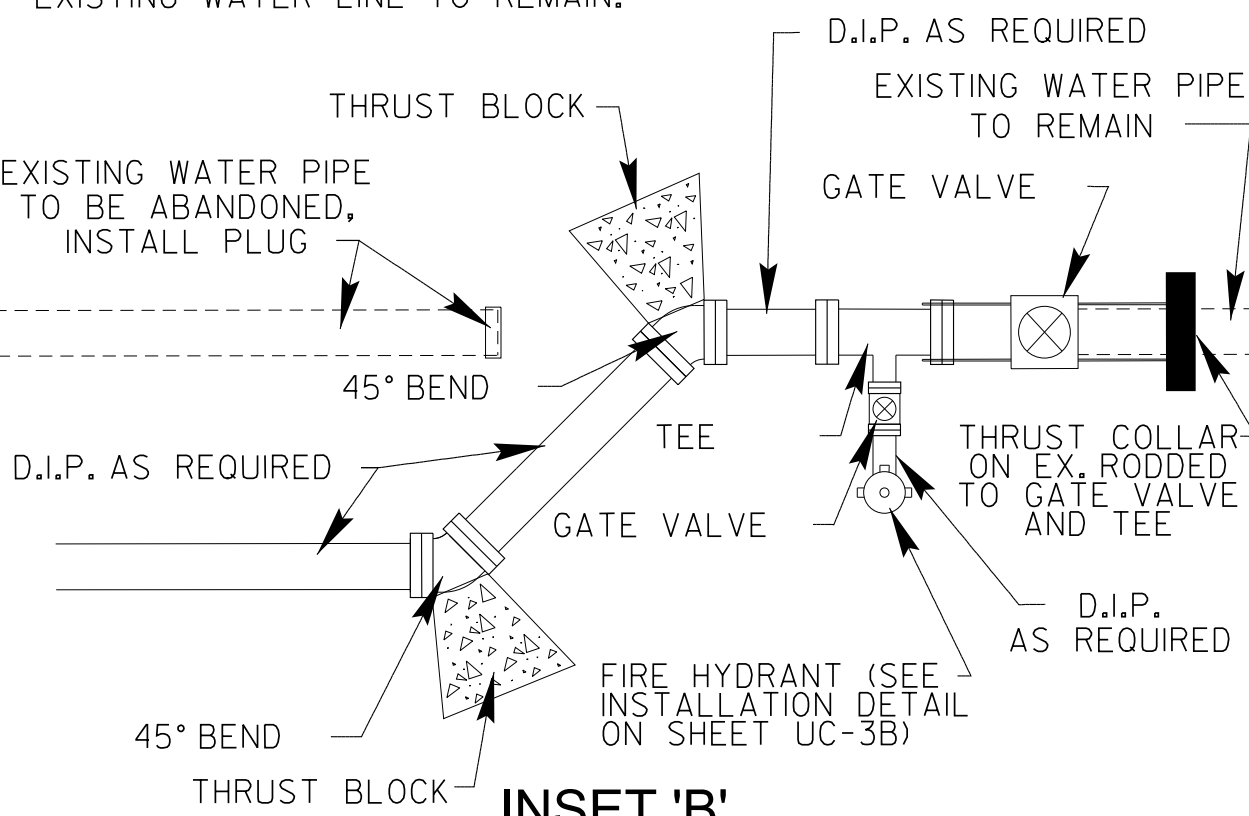
INSET 'D'
NTS

SANITARY SEWER FORCEMAIN POST-TESTING DETAILS

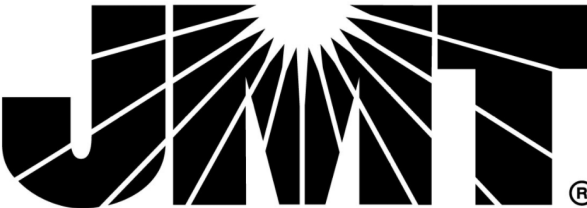
NOTE: ALL FITTINGS SHALL BE DUCTILE IRON MECHANICAL RESTRAINED JOINT. NO GLUED OR PUSH-ON FITTINGS ARE ALLOWED AND THRUST BLOCKING IS REQUIRED. THRUST COLLARS ARE REQUIRED ON EACH END OF EXISTING WATER LINE TO REMAIN.



INSET 'B
NTS



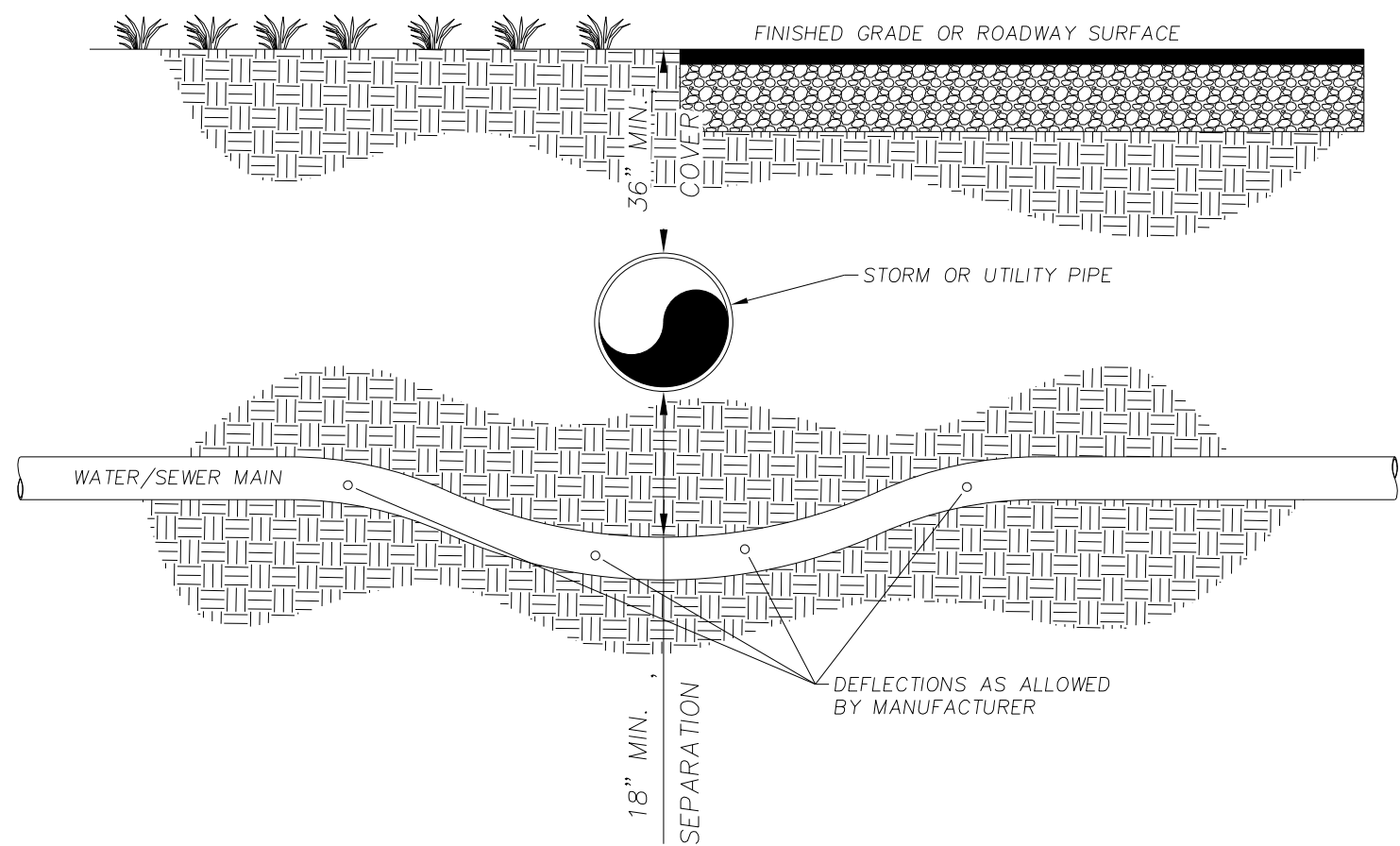
INSET 'D'
NTS



PROJECT REFERENCE NO.		SHEET NO.	
R-5600		UC-3D	
DESIGNED BY:	ELM		
DRAWN BY:	HSN		
CHECKED BY:	MUP		
APPROVED BY:	MUP		
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		UTILITY CONSTRUCTION PLANS ONLY	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151			

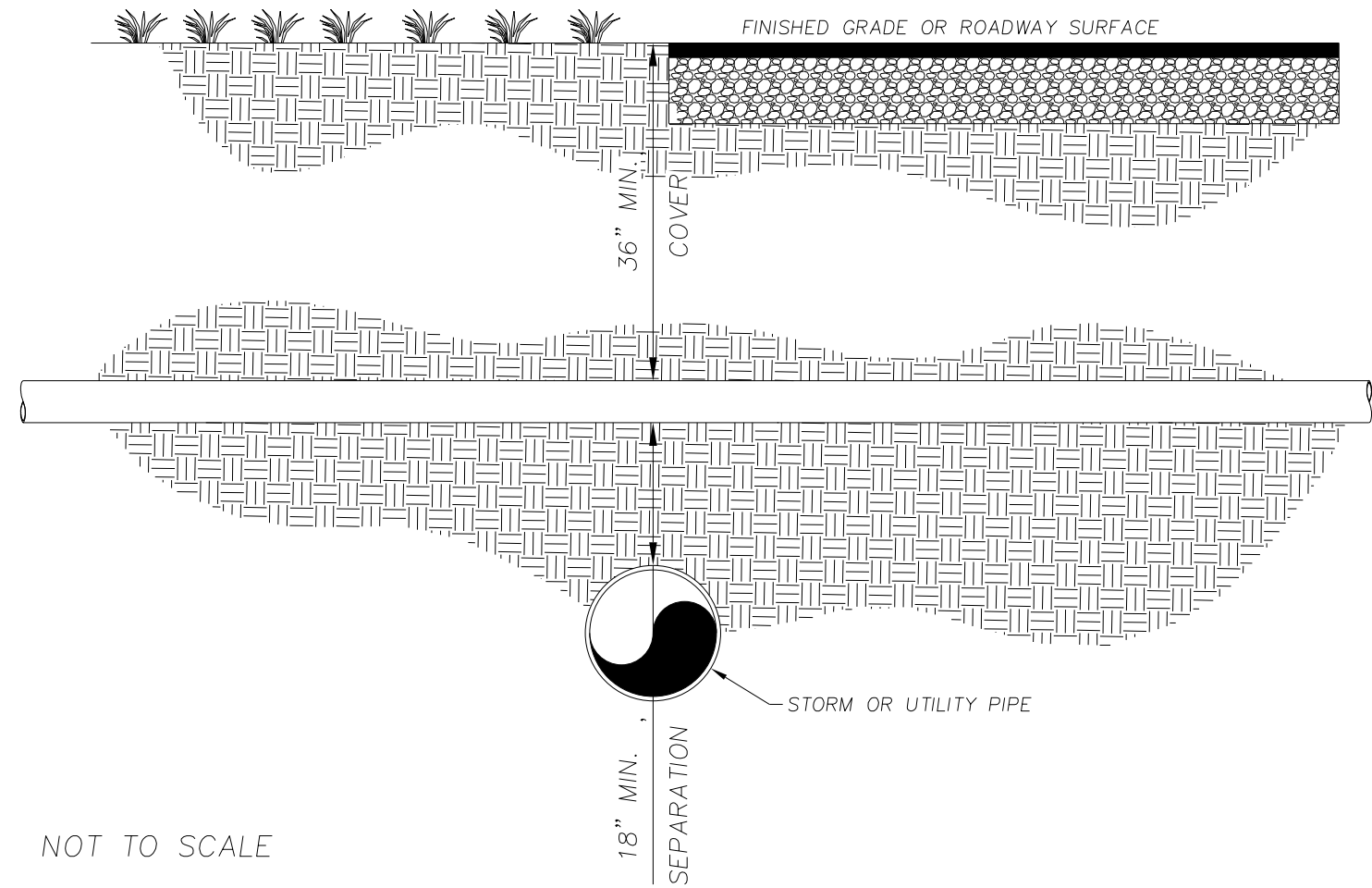
UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



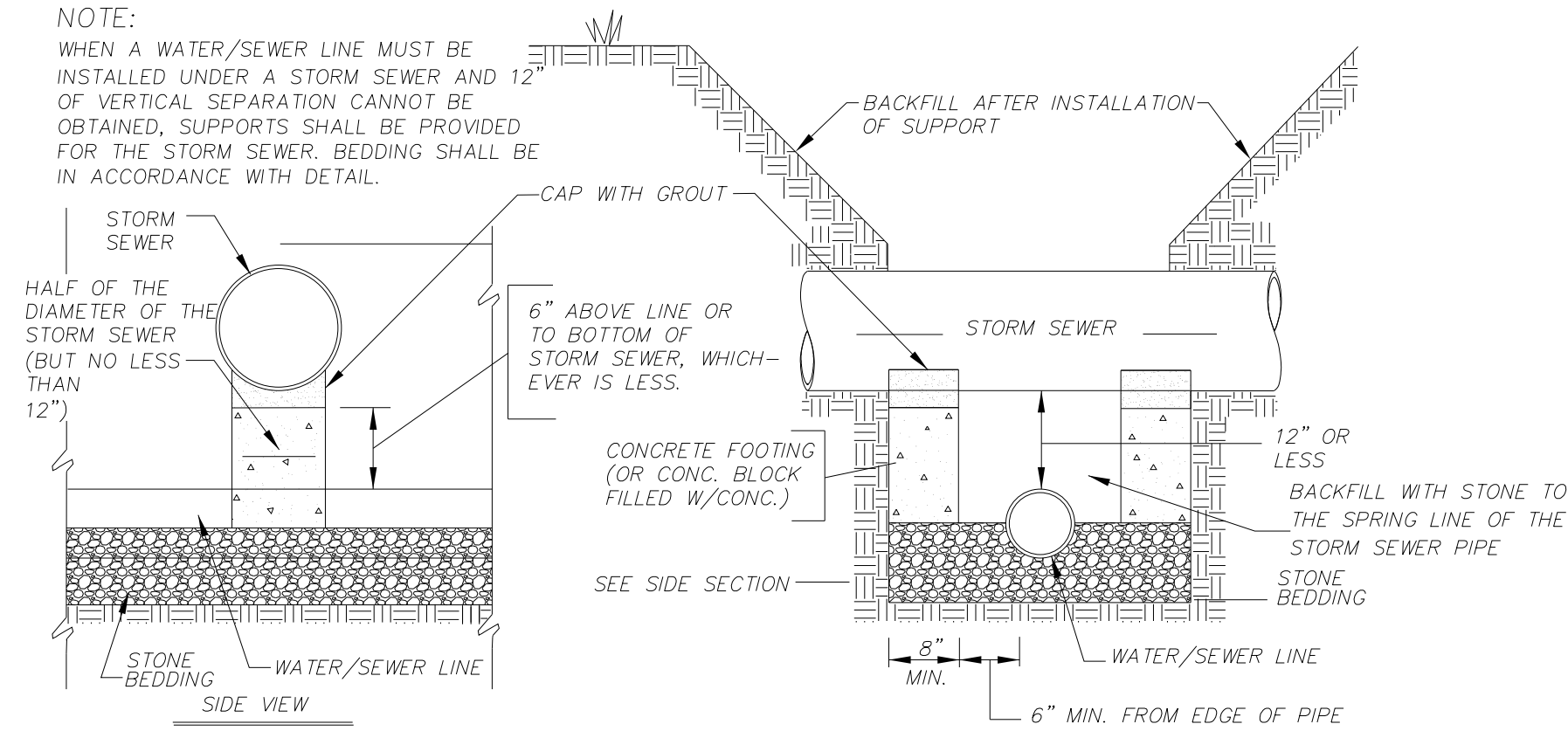
NOT TO SCALE

WATER/SEWER MAIN CROSSING
UNDER STORM/UTILITY PIPE



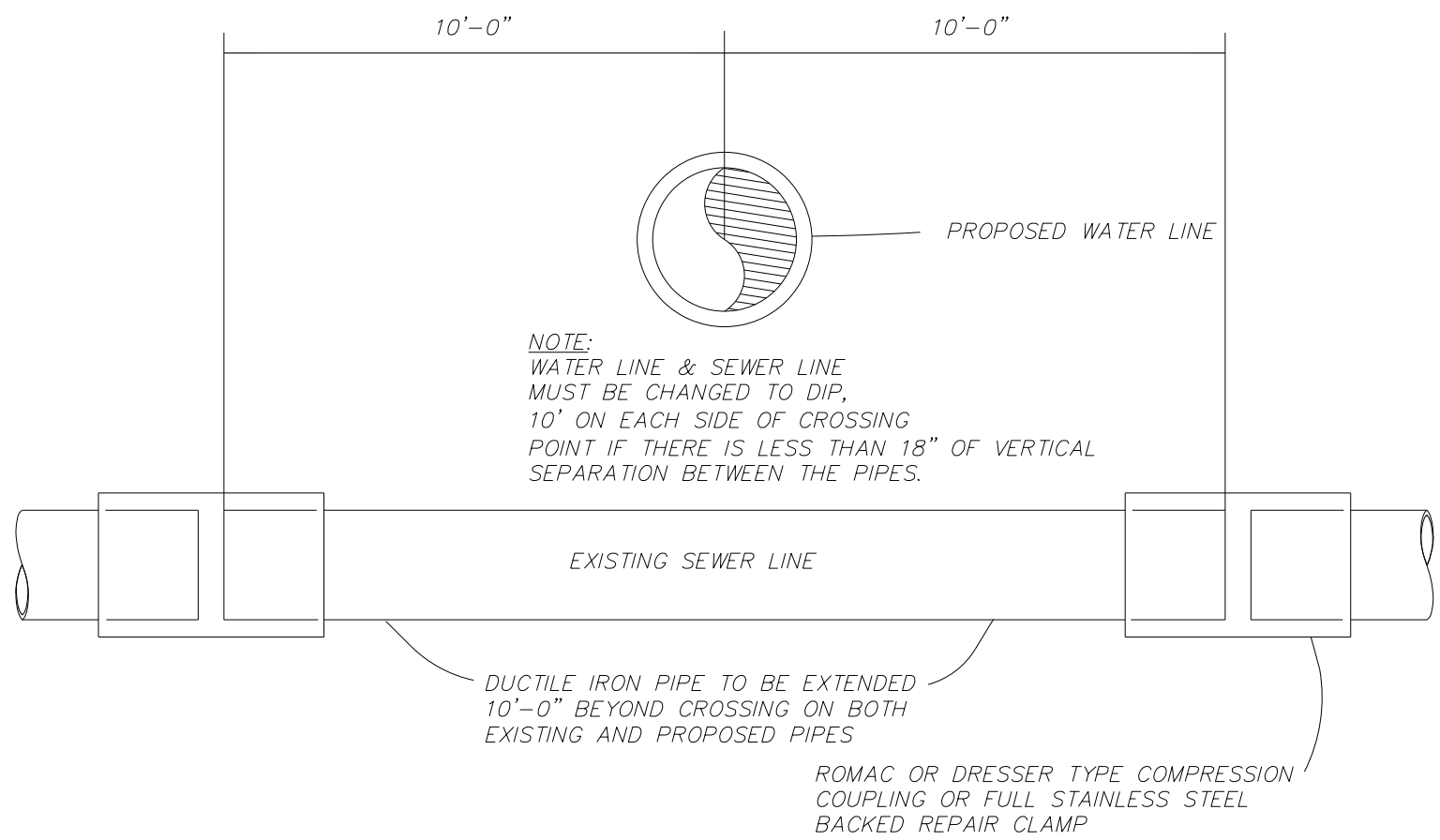
NOT TO SCALE

WATER/SEWER MAIN OVER STORM/UTILITY PIPE



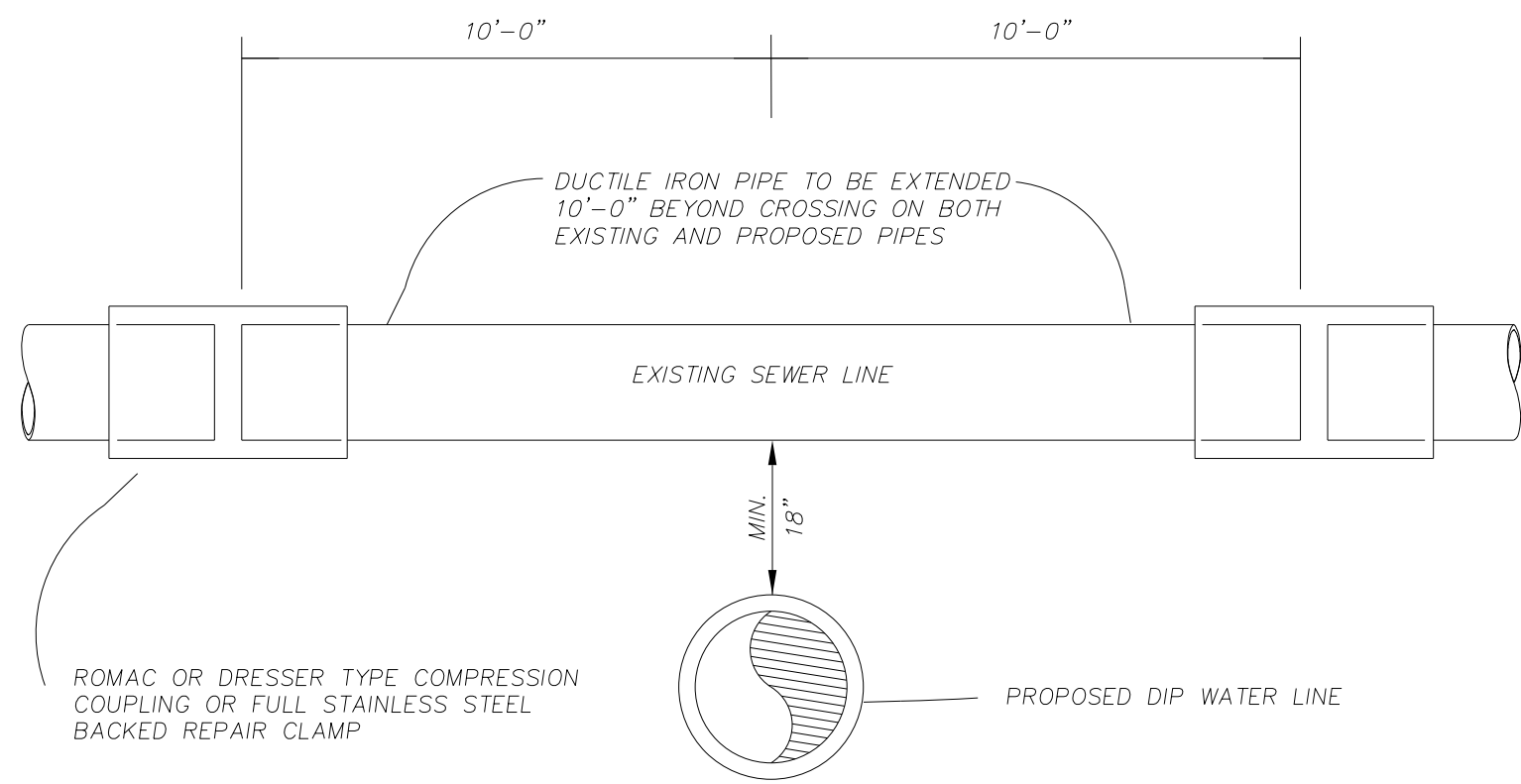
NOT TO SCALE

SHALLOW WATER/ SEWER CROSSING
BELOW STORM SEWER (WITHIN 12")



NOT TO SCALE

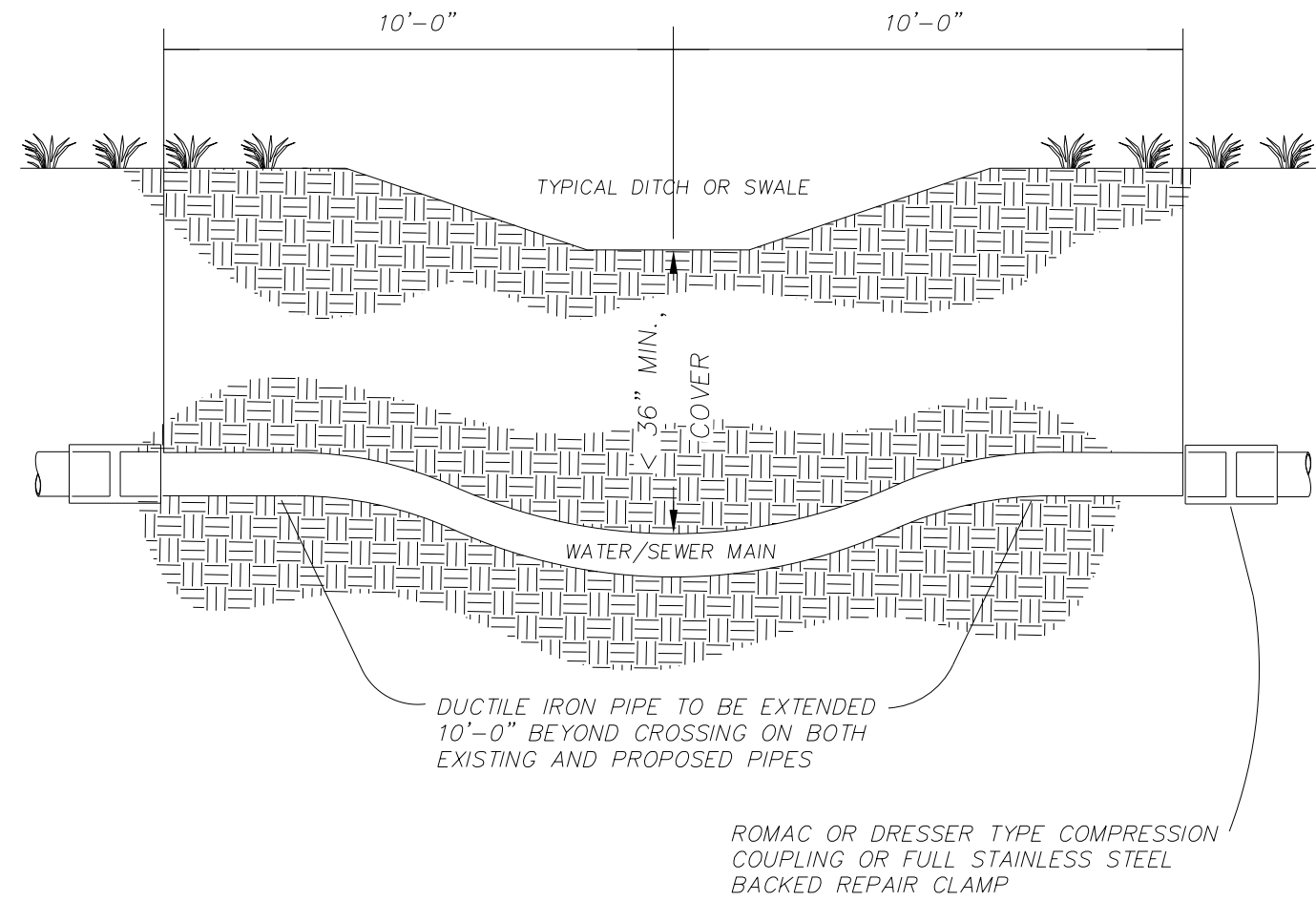
WATER CROSSING OVER SEWER LINE (WITHIN 18")



NOT TO SCALE

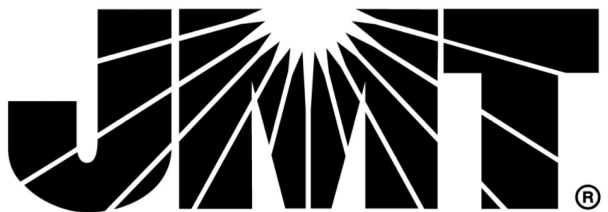
WATER CROSSING UNDER SEWER LINE

NOTE:
WATER LINE & SEWER LINE
MUST BE CHANGED TO DIP,
10' ON EACH SIDE OF CROSSING.
POINT IF THERE IS LESS THAN 36" OF COVER.



NOT TO SCALE

SHALLOW WATER/SEWER MAIN CROSSING
UNDER DITCH (WITHIN 36")





2/8/2012

PARCEL TABLE FOR
WATER & SEWER INFORMATION

JACKSON COUNTY

JMT Parcel or Sheet Number	Parcel NO.	Property Owner	Site Address	Total Take?	Survey Shows Existing Water Meter?	Meter Size				Water Service Requirement	Survey Shows Existing Sewer Service?	Sewer Service Requirement	Notes
						3/4"	1"	2"	>2"				
1A	7641-37-0712	JEAN MONTEITH HENSLEY REVOCABLE TRUST	249 WMAIN ST	NO	YES	X				YES	YES	NO	No, sewer not impacted
2	7641-27-2517	SAMUEL CLEMMONS	413 WMAIN ST	NO	YES	X				YES	YES	YES	Yes, sewer impacted
2A	7641-27-3682	SAMUEL CLEMMONS	WMAIN ST	NO	NO					-----	NO	NO	No, parking lot
3	7641-27-4653	GARY W. GIBSON	399 WMAIN ST	NO	NO					-----	NO	NO	No, existing sewer
4	7641-27-4651	CENTRAL SILVA MAIN, LLC	385 WMAIN ST	NO	YES	X				YES	YES	YES	Yes, sewer impacted
5	7641-27-7534	DAVID J. HART, ET AL	365 WMAIN ST	NO	YES	X				-----	YES	YES	Yes, sewer impacted
6	7641-27-6761	WHOLESALERE INVESTMENTS, LLC	345 WMAIN ST	YES	YES	X				YES	YES	NO	No, total take
7	7641-27-7767	JOSEPH SHELLEY, ET AL	323 WMAIN ST	NO	YES	X				YES	YES	NO	No, sewer not impacted
8	7641-27-8752	CHRIS WHITMIRE	317 WMAIN ST	YES	YES	X				YES	YES	NO	No, total take
9	7641-27-3766	FARM DOGS, LLC	414 WMAIN ST	NO	YES		X			NO	YES	NO	No, sewer not impacted
10	7641-27-4767	SHIRLEY C. DEAN SUTTON	360 WMAIN ST	NO	NO					-----	NO	NO	No, sewer not impacted
11	7641-39-4283	JACKSON PAPERMANUFACTURING COMPANY	152 WMAIN ST	NO	YES	X				YES	YES	NO	No, sewer not impacted
					YES				X (4")				
12	7641-37-6914	TUCKASB GEE WATER & SEWER AUTHORITY	WMAIN ST	NO	YES					YES	NO	NO	No, sewer not impacted
12	7641-37-6912	TUCKASB GEE WATER & SEWER AUTHORITY	141 WMAIN ST	NO	NO					-----	NO	NO	No, sewer not impacted
14	7641-37-8903	KENNETH L. OMEN (now NCDOT)	91 WMAIN ST	YES	NO					NO	NO	NO	No, total take
15	7641-37-9818	EKEK, LLC	73 WMAIN ST	NO	YES	X				NO	YES	NO	No, sewer not impacted
15A	7641-37-8764	EKEK, LLC	44 RACE LN	NO	YES	X				-----	YES	NO	No, sewer not impacted
16	7641-47-1856	ECKERD CORPORATION	36 SUNRISE PARK	NO	YES		X			YES	YES	YES	Yes, sewer impacted
17	7641-47-2755	GENEVA G. LINEBERRY	EMAIN ST	NO	NO					-----	NO	NO	No, sewer not impacted (parking lot)
18	7641-47-1601	OMEN & GATES, LLC	58 SUNRISE PARK	NO	YES		X			NO	YES	NO	No, sewer impacted
19	7641-47-4476	C. T. AUTO SERVICE, INC. (THROGMORTON, LINDA L)	12 CALDWELL ST	NO	YES	X				YES	YES	YES	Yes, sewer impacted
20	7641-47-4656	KEL-SAVE, INC., ROBERT D. KELLEY	38 EMAIN ST	NO	YES	X				NO	YES	NO	No, sewer not impacted
20A	7641-47-6652	38 EAST MAIN LLC	76 EMAIN ST	NO	NO					-----	NO	NO	No, sewer not impacted.
21	7641-38-8177	NCRENTALS, LLC	104 WMAIN ST	NO	YES	X				NO	NO	NO	No, sewer not impacted
22	7641-48-0256	EL PATRON MEXICAN RESTAURANT INC	86 WMAIN ST	NO	YES	X				YES	YES	YES	Yes, sewer impacted
23	7641-48-1271	FF SILVA LLC	60 WMAIN ST	NO	YES	X				NO	YES	YES	Yes, sewer impacted
24	7641-48-3110	ALPINE SILVA, LLC	28 WMAIN ST	NO	NO					NO	NO	NO	No, sewer impacted (vacant lot)
25	7641-48-3202	SAINTS EUROPEAN HOLDINGS, INC.	55 ASHEVILLE HWY	NO	YES	X				NO	YES	YES	Yes, sewer impacted
28	7641-48-5238	THE RISH CAMP, LLC (now NCDOT)	88 ASHEVILLE HWY	YES	NO					NO	NO	NO	No, total take
29	7641-48-5118	NHN HOLDINGS, LLC	68 ASHEVILLE HWY	NO	NO					YES	NO	YES	Yes, sewer impacted
29	7641-48-4086	NHN HOLDINGS, LLC	42 ASHEVILLE HWY	NO	NO					YES	NO	YES	Yes, sewer impacted
30	7641-47-4966	K&H ENTERPRISES, LLC	32 ASHEVILLE HWY	NO	NO					YES	NO	NO	No, sewer not impacted (vacant lot)
31	7641-47-5889	TIMOTHY L. HALL (now NHN HOLDINGS LLC)	35 EMAIN ST	YES	NO					YES	NO	NO	No, total take
31	7641-47-6855	TIMOTHY L. HALL (now NHN HOLDINGS LLC)	35 EMAIN ST	YES	NO					-----	NO	NO	No, total take
32	7641-47-8744	WEST SYLVAMAIN, LLC	89 EMAIN ST	YES	YES	X				YES	YES	NO	No, total take
35	7641-47-6563	PT PROPERTIES OF WNC, LLC	90 EMAIN ST	NO	YES	X				YES	YES	YES	Yes, sewer impacted
36	7641-47-7476	T & D'S ENTERPRISES, LLC	106 EMAIN ST	NO	NO					-----	NO	NO	No, sewer not impacted
37	7641-47-8441	SKYLAND PROPERTIES OF WNC INC	124 EMAIN ST	NO	YES	X				YES	NO	NO	No, sewer not impacted
38	7641-47-6175	RODNEY A. RIDDLE	94 CALDWELL ST	NO	YES	X				YES	YES	YES	Yes, sewer impacted
38A	7641-47-5381	R. LARRY CRAWFORD	80 CALDWELL ST	NO	YES	X				YES	YES	NO	No, sewer not impacted
	7641-47-9137	HENSLEY, B DONALD TRUSTEE	CHERRY ST	NO	NO					-----	NO	NO	No, sewer not impacted (vacant lot)
39	7641-46-9908	PEGGY REVIS	94 CHERRY ST	NO	YES	X				NO	YES	NO	No, sewer not impacted
40	7641-47-9344	TINY PROPERTIES, LLC	32 CHERRY ST	NO	YES	X				YES	YES	YES	Yes, sewer impacted
41	7641-57-2025	CHURCH OF GOD OF SILVA, NC TIES	59 CHERRY ST	NO	YES	X				NO	YES	YES	Yes, sewer impacted
41A	7641-57-4173	PAINTER, BETTY J TRUSTEE (WOODS, DEBRA P. ET AL)	TRA EMAIN ST	NO	NO					-----	NO	NO	No, sewer not impacted (vacant lot)
41B	7641-56-4919	PAINTER, BETTY J TRUSTEE (WOODS, DEBRA P. ET AL)	TRB CHERRY ST	NO	NO					-----	NO	NO	No, sewer not impacted
42	7641-57-2240	PEGGY REVIS	200 EMAIN ST	NO	NO					YES	NO	NO	No, sewer not impacted
43	7641-57-5003	BILLY C. AIKENS (now NCDOT)	276 EMAIN ST	YES	NO					YES	NO	NO	No, total take
44	7641-56-6948	CPM HOLDINGS, LLC	284 EMAIN ST	NO	YES		X			YES	YES	YES	Yes, sewer impacted
45	7641-57-0747	THREE LEES, LLC	21 EHALL HTS	NO	YES	X				YES	YES	YES	Yes, sewer impacted
46	7641-57-1548	THREE LEES, LLC (now NCDOT)	36 EHALL HTS	YES	NO					YES	NO	NO	No, total take
47	7641-57-3638	DEBRA P. WOODS, TRUSTEE OF THE BETTY J. PAINTER 2020 IRREVOCABLE TRUST (now VAZQUEZ, JORGE L ROSARIO)	94 EHALL HTS	NO	YES	X				YES	YES	NO	No, sewer not impacted
48	7641-57-3517	ROBERT L. MIDDLETON	209 EMAIN ST	NO	YES	X				YES	YES	YES	Yes, sewer impacted
49	7641-57-4406	CLEARANCE G. MIDDLETON	209 EMAIN ST	NO	NO					-----	NO	YES	Yes, sewer impacted
50	7641-57-4441	HAROLD E. MIDDLETON	219 EMAIN ST	NO	YES	X				-----	YES	YES	Yes, sewer impacted
51	7641-57-5309	DOROTHY FRANKLIN, ET AL	221 EMAIN ST	NO	YES	X				-----	NO	YES	Yes, sewer impacted
52	7641-57-5333	BRENDA J. PATTERSON, TRUSTEE	235 EMAIN ST	NO	YES	X				YES	YES	YES	Yes, sewer impacted
53	7641-57-6207	SARA B. ALLISON, ET AL	35 OUTDOOR DR	NO	YES	X				NO	YES	YES	Yes, sewer impacted
53	7641-57-6270	SARA B. ALLISON, ET AL	LT 49 OUTDOOR DR	NO	NO					YES	NO	NO	No, sewer not impacted
53	7641-57-8311	SARA B. ALLISON, ET AL	LOT OUTDOOR DR	NO	NO					-----	NO	NO	No, sewer not impacted
54	7641-57-8107	AUTOSTAR PROPERTY GROUP, LLC	307 EMAIN ST	NO	YES		X			YES	YES	YES	Yes, sewer impacted
55	7641-66-0851	MELUJEE ALLEN, ET AL	382 EMAIN ST	NO	YES	X				YES	YES	NO	No, sewer not impacted
55	7641-56-9557	MELUJEE ALLEN, ET AL	EMAIN ST		NO					-----	-----	-----	
56	7641-66-1737	HIZEV LLC	400 EMAIN ST	NO	YES	X				YES	YES	YES	Yes, sewer impacted
57	7641-66-3698	BO WOODS PROPERTIES LLC	454 EMAIN ST	NO	YES	X				YES	YES	YES	Yes, sewer impacted
58	7641-66-2753	PACIFIC CO OF SILVA, INC.	410 EMAIN ST	NO	NO					YES	NO	NO	No, sewer not impacted
59	7641-66-4567	STILL BROOK PROPERTIES, LLC	472 EMAIN ST	NO	YES	X				YES	YES	YES	Yes, sewer impacted
60	7641-66-5478	SELECT BANK & TRUST CO (FIRST BANK)	498 EMAIN ST	NO	YES		X			NO	YES	YES	Yes, sewer impacted
61	7641-57-8183	FFCLIMITED PARTNERSHIP	NC 107	NO	NO					-----	NO	NO	No, sewer not impacted
61	7641-67-0514	FFCLIMITED PARTNERSHIP	353 EMAIN ST	NO	YES		X			-----	YES	YES	Yes, sewer impacted
62	7641-67-1085	NATIONAL RETAIL PROPERTIES, LP	375 EMAIN ST	NO	YES		X			YES	YES	YES	Yes, sewer impacted
63	7641-66-3944	GT AUTO SERVICE LLC	415 EMAIN ST	NO	YES	X				YES	YES	NO	No, sewer not impacted
64	7641-66-5878	M. HODGIN PROPERTIES, LLC (now NHN HOLDINGS LLC)	437 EMAIN ST	NO	YES	X				NO	YES	YES	Yes, sewer impacted
65	7641-66-6725	NATHAN EARWOOD, P.C.	461 EMAIN ST	NO	YES	X				YES	YES	YES	Yes, sewer impacted
66	7641-66-7792	475 EMAIN STREET LLC	475 EMAIN ST	NO	YES		X			YES	YES	YES	Yes, sewer impacted
66A	7641-77-5223	KRISTIN COFFEY, ET AL	COPE CREEK RD	NO	NO					-----	NO	NO	No, sewer not impacted
67	7641-66-3387	RODNEY A. RIDDLE	42 WALTER ASHERD	NO	YES	X				NO	YES	NO	No, sewer not impacted
67Z	7641-66-5478	SELECT BANK & TRUST CO (FIRST BANK)	498 EMAIN ST	NO	NO					-----	NO	YES	Yes, sewer impacted
67A	7641-66-7355	LANA C. PHILLIPS (now NCDOT)	532 EMAIN ST	YES	NO					NO	NO	NO	No, total take
68	7641-66-3119	RONNIE A. RIDDLE	76 WALTER ASHERD	NO	YES		X			YES	YES	NO	No, sewer not impacted
68A	7641-66-7274	THOMAS HART GOODSON, JR., ET UX (now NCDOT)	27 PATHFINDER LN	YES	NO					NO	NO	NO	No, total take

PROJECT REFERENCE NO.
R-5600

SHEET NO.
UC-3F

DESIGNED BY: ELM
DRAWN BY: HSN
CHECKED BY: MUP
APPROVED BY: MUP

REVISED:

NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION

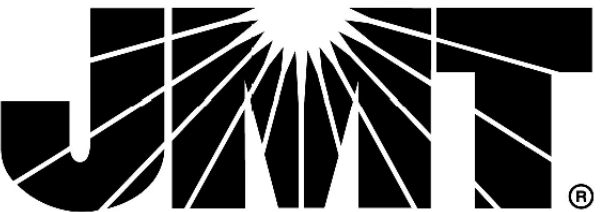
UTILITIES ENGINEERING SEC.
PHONE: (919) 707-6690
FAX: (919) 250-4151

SEAL
2012

8/26/2012

UTILITY CONSTRUCTION
PLANS ONLY

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



6/18/2025

PARCEL TABLE FOR
WATER & SEWER INFORMATION

JACKSON COUNTY

JMT Parcel or Sheet Number	Parcel NO.	Property Owner	Site Address	Total Take?	Survey Shows Existing Water Meter?	Meter Size				Water Service Requirement	Survey Shows Existing Sewer Service?	Sewer Service Requirement	Notes
						3/4"	1"	2"	>2"				
69	7641-66-6919	ERROL ENGLISH	WALTER ASHERD	NO	NO					-----	NO	NO	No, sewer not impacted
70	7641-66-6143	MISTY TAYLOR	28 PATHFINDER LN	NO	YES	X				-----	YES	YES	Yes, sewer impacted
71	7641-66-7045	MISTY SHULER TAYLOR (TAYLOR, LARMAN M)	42 PATHFINDER LN	NO	NO					NO	NO	NO	No, sewer not impacted
72	7641-76-0117	RLCC HOLDINGS CO LLC	582 EMAN ST	NO	NO					NO	NO	NO	No, sewer not impacted
73	7641-76-0117	RLCC HOLDINGS CO LLC	608 EMAN ST	NO	NO					NO	NO	NO	No, sewer not impacted (vacant lot)
74	7641-75-0979	VIRGINIA KINKAID, TRUSTEE (ALVIN N KINKAID TRUST)	LT 13 EMAN ST	NO	NO					NO	NO	NO	No, sewer not impacted (vacant lot)
74	7641-76-0043	VIRGINIA KINKAID, TRUSTEE (ALVIN N KINKAID TRUST)	LT 14 EMAN ST	NO	NO					NO	NO	NO	No, sewer not impacted
75	7641-75-1740	SOOCL COMPANY, INC	688 EMAN ST	NO	YES		X			YES	YES	YES	Yes, sewer impacted
77	7641-75-2661	ENMARK STATIONS, INC	716 EMAN ST	NO	YES			X		NO	YES	YES	Yes, sewer impacted
		ENMARK STATIONS, INC			YES	X					YES		
77A	7641-66-9547	TINY PROPERTIES, LLC	35 COPE CREEK RD	NO	YES	X				YES	YES	YES	Yes, sewer impacted
78	7641-66-9433	POLE YARD PROPERTIES, LLC	551 EMAN ST	NO	YES	X				YES	YES	NO	No, sewer not impacted
79	7641-76-2487	DAVID GATES	23 HENSLEY CIR	NO	YES	X				-----	YES	NO	No, sewer not impacted
80	7641-76-1236	GOODWILL INDUSTRIES OF NORTHWEST NORTH CAROLINA, INC. (now OPM HOLDINGS LLC)	601 EMAN ST	NO	YES	X				YES	YES	NO	No, sewer not impacted
81	7641-76-2124	STONEHOUSE ASSOCIATES (now GOODSON, THART)	619 EMAN ST	NO	YES	X				YES	YES	NO	No, sewer not impacted
82	7641-76-4085	DT RETAIL PROPERTIES, LLC	675 EMAN ST	NO	YES		X			YES	YES	NO	No, sewer not impacted
83	7641-75-5962	AGREE STORES, LLC	705 EMAN ST	NO	YES	X				YES	YES	NO	No, sewer not impacted
84	7641-75-5702	KEVIN E. STANBERRY, ETAL	200 HENSLEY CIR	NO	YES		X			-----	NO	NO	No, sewer not impacted
85	7641-75-5631	VISION QUEST PROPERTIES, LLC	741 EMAN ST	NO	NO					YES	NO	NO	No, sewer not impacted
86	7641-75-4411	PORT OF CALL, INC	744 EMAN ST	NO	YES	X				YES	YES	YES	Yes, sewer impacted
86A	7641-75-1448	TINSEL TOWN, INC	EMAN ST	NO	NO					-----	NO	NO	No, sewer not impacted
87	7641-75-2271	TRIPLE "C" INVESTMENT, INC	760 EMAN ST	NO	NO					-----	NO	NO	No, sewer not impacted (vacant lot)
87	7641-74-5901	TRIPLE "C" INVESTMENT, INC	862 EMAN ST	NO	NO					-----	NO	NO	No, sewer not impacted (vacant lot)
88	7641-74-6856	SG OF VNC LLC	876 EMAN ST	YES	NO					YES	NO	NO	No, total take
89	7641-74-7832	MARK STEIN, ETAL	894 EMAN ST	YES	NO					YES	NO	NO	No, total take
90	7641-74-7780	ROBERT M. PRICE (now NCDOT)	924 EMAN ST	YES	NO					-----	NO	NO	No, total take
91	7641-74-6446	RALEIGH DOUBLE COUSINS PROPERTIES, LLC	972 EMAN ST	NO	YES	X				YES	YES	YES	Yes, sewer impacted
92	7641-75-7527	THE NORTH CAROLINA DISTRICT COUNCIL OF THE ASSEMBLIES OF GOD, INC. (GENERATION CHURCH SYLVANIA)	255 HENSLEY CIR	NO	NO					YES	NO	NO	No, sewer not impacted
93	7641-75-8311	GLEN H. HENSLEY, TRUSTEE	11 G TRUS DR	NO	YES	X				YES	NO	NO	No, sewer not impacted
94	7641-75-9157	LARRY BARNES	54 LIBERTY DR	NO	NO					-----	NO	NO	No, sewer not impacted
95	7641-74-9977	PATRICIA COMEN	15 STORMY CV	NO	NO					YES	YES	NO	No, sewer not impacted
96	7641-74-9791	NORJIAZ, LLC	921 EMAN ST	NO	YES	X				YES	YES	NO	No, sewer not impacted
97	7641-74-9498	DALLASA STEPHENS	945 EMAN ST	NO	NO					-----	NO	NO	No, sewer not impacted
98	7641-74-9405	MATTHEW JAMES HUNTER (now NCDOT)	947 EMAN ST	NO	NO					-----	NO	NO	No, sewer not impacted
99	7641-84-0216	THOMAS J. CALDWELL	1009 EMAN ST	NO	NO					YES	NO	NO	No, sewer not impacted
99	7641-84-1071	THOMAS J. CALDWELL	1025 EMAN ST	NO	NO					YES	NO	NO	No, sewer not impacted
100	7641-74-5241	MARK A. QUEEN, ETAL	EMAN ST	NO	NO					-----	NO	NO	No, sewer not impacted (vacant lot)
101	7641-74-4093	MARGA P. QUEEN & DENISE P. WHITE (now NCDOT)	EMAN ST	NO	NO					-----	NO	NO	No, sewer not impacted (vacant lot)
102	7641-73-4878	EMILY PRYOR LAND HOLDING, LLC	8 CONNOR RD	NO	YES	X				YES	YES	YES	Yes, sewer impacted
103	7641-73-4566	BARBARA C. DAVIS	72 CONNOR RD	NO	NO					-----	YES	NO	No, sewer not impacted
104	7641-73-5412	SARA BALLISON, ETAL	SIGN LOT EMAN ST	NO	NO					-----	NO	NO	No, sewer not impacted (sign lot)
105	7641-73-4354	SYLVASHOPS LIMITED PARTNERSHIP	86 WALMART PLZ	NO	YES	X				YES	YES	NO	No, sewer not impacted
106	7641-73-4146	COLDWATER INVESTORS, LLC	64 WALMART PLZ	NO	YES		X			YES	YES	NO	No, sewer not impacted
107	7641-73-7652	CLEATUS C. BARRON (now NCDOT)	1093 EMAN ST	NO	NO					YES	NO	NO	No, sewer not impacted
108	7641-73-7464	DAVID L. KELLEY (now NCDOT)	1095 EMAN ST	NO	NO					-----	NO	NO	No, sewer not impacted
109	7641-73-8397	HINTON SHAW PROPERTIES, LLC	1231 EMAN ST	NO	YES		X			YES	YES	YES	Yes, sewer impacted
110	7641-72-0930	AGREE LP	210 WALMART PLZ	NO	YES	X				NO	YES	NO	No, sewer not impacted
		AGREE LP			YES				X (4')				
111	7641-72-4840	SYLVA COMMONS LLP (GANDHI AT SYLVA COMMONS NC LLC)	366 WALMART PLZ	NO	YES		X			YES	YES	YES	Yes, sewer impacted
112	7641-72-5522	OX INVESTMENTS LLC	1336 EMAN ST	NO	YES	X				YES	YES	NO	No, sewer not impacted
113	7641-72-0461	JAMES C. & SHERRY R. BURRELL	87 BARNES RD	NO	NO					-----	NO	NO	No, sewer not impacted
114	7641-72-4392	D & H PROPERTIES OF SYLVA, LLC (now NCDOT)	1362 EMAN ST	NO	YES	X				NO	YES	NO	No, sewer not impacted
115	7641-72-5136	KENNETH D. BUCHANAN, ETAL	1414 EMAN ST	NO	YES	X				YES	YES	YES	Yes, sewer impacted
116	7641-72-3251	SAMUEL H. COGDILL	251 CHAPARRAL DR	NO	NO					-----	NO	NO	No, sewer not impacted
117	7641-71-5963	ARGPHI7SLBOOI LLC (ARN ABS PROPR002 LLC)	1454 EMAN ST	YES	YES	X				YES	YES	NO	No, total take
118	7641-72-8949	GTL&A CO LLC	1233 EMAN ST	NO	YES	X				YES	YES	YES	Yes, sewer impacted
119	7641-72-9704	SYLVA HOTEL GROUP, LLC	1235 EMAN ST	NO	YES			X		YES	YES	NO	No, sewer not impacted
					YES	X							
120	7641-72-7433	GLORIA THIEN KIM BUI, ETAL (now NCDOT)	20 PLUM ST	YES	NO					YES	NO	NO	No, total take
121	7641-72-7309	KELLY A. SMITH (now NCDOT)	1363 EMAN ST	YES	NO					YES	NO	NO	No, total take
122	7641-72-8352	COOK OUT SYLVA, INC	1391 EMAN ST	NO	YES	X				YES	YES	YES	Yes, sewer impacted
123	7641-72-8136	BL PROPERTIES OF NC, LLC	1407 EMAN ST	NO	NO					YES	YES	YES	Yes, sewer impacted
124	7641-72-8010	DEWEY BUCHANAN, ETAL	110 PLUM ST	NO	YES	X				YES	YES	NO	No, sewer not impacted
125	7641-71-5784	ANGELA F. GEORGE	32 CHAPARRAL DR	NO	NO					-----	NO	NO	No, sewer not impacted
126	7641-71-6506	ANGELA F. GEORGE	9 CHAPARRAL DR	YES	NO					-----	NO	NO	No, total take
127	7641-71-6404	DEBBIE HOOVER	1526 EMAN ST	NO	YES	X				YES	YES	NO	No, sewer not impacted
128	7641-71-6315	NEIL R. BRYSON	1552 EMAN ST	YES	NO					-----	YES	NO	No, total take
129	7641-71-6214	DEBBIE HOOVER	EMAN ST	NO	NO					-----	NO	NO	No, sewer not impacted
130	7641-71-6009	GREEN INVESTMENT, LLC	1594 EMAN ST	YES	NO					-----	YES	NO	No, total take

PROJECT REFERENCE NO.
R-5600

SHEET NO.
UC-3G

DESIGNED BY: ELM
DRAWN BY: HSN
CHECKED BY: MUP
APPROVED BY: MUP

SEAL
20212

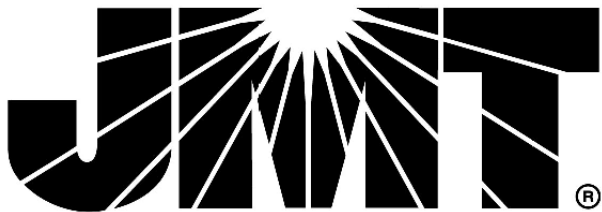
8/26/2025

REVISED:
NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION

UTILITIES ENGINEERING SEC.
PHONE: (919) 707-6690
FAX: (919) 250-4151

UTILITY CONSTRUCTION
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UNLESS ALL SIGNATURES COMPLETED



2/8/13

PARCEL TABLE FOR
WATER & SEWER INFORMATION

JACKSON COUNTY

JMT Parcel or Sheet Number	Parcel NO.	Property Owner	Site Address	Total Take?	Survey Shows Existing Water Meter?	Meter Size				Water Service Requirement	Survey Shows Existing Sewer Service?	Sewer Service Requirement	Notes
						3/4"	1"	2"	>2"				
131	7641-70-5889	UNITED COMMUNITY BANK	1640 E MAIN ST	NO	YES	X				YES	YES	NO	No, sewer not impacted
132	7641-70-5711	KATHY WATKINS, ET AL	1668 E MAIN ST	YES	NO					-----	NO	NO	No, total take
133	7641-70-3303	LOVESHOME CENTERS, INC	1716 E MAIN ST	NO	YES			X		NO	YES	NO	No, sewer not impacted
					YES	X							
134	7641-71-7881	ALMA INVESTORS LLC	1461 E MAIN ST	NO	YES	X				YES	YES	YES	Yes, sewer impacted
135	7641-71-7782	DONALD W. HOLLAND	15 CRESTVIEW HTS	NO	YES	X				NO	YES	NO	No, sewer not impacted
					YES			X					
136	7641-71-8612	ROBERT J. HUMES, MARTHA W. HUMES (now NCDOT)	16 CRESTVIEW HTS	NO	NO					-----	NO	NO	No, sewer not impacted (vacant lot)
137	7641-71-9522	EARL K. MORGAN, TRUSTEE (now QUALITY OIL COMPANY LLC)	1535 EAST MAIN STREET	NO	YES	X				YES	YES	YES	Yes, sewer impacted
					YES			X					
138	7641-71-8186	1585 EAST MAIN ST, LLC	1585 E MAIN ST	NO	YES	X				YES	YES	YES	Yes, sewer impacted
139	7641-71-9113	1601 EAST MAIN STREET, LLC (1609 EAST MAIN STREET LLC ESTATE)	1601 E MAIN ST	NO	NO					-----	YES	NO	No reconnection required
140	7641-71-9048	1609 EAST MAIN STREET, LLC ESTATE	1609 E MAIN ST	NO	NO					-----	YES	NO	No reconnection required
141	7641-70-8960	JACKSON COUNTY FARM BUREAU, INC	1627 E MAIN ST	NO	YES	X				YES	YES	YES	Yes, sewer impacted
142	7641-70-8860	SH. ONE, LLC	1643 E MAIN ST	NO	NO					-----	YES	YES	Yes, sewer impacted
143	7641-70-8751	MCDONALD FAMILY REALTY, LLC	1669 E MAIN ST	NO	YES	X				YES	YES	YES	Yes, sewer impacted
144	7640-89-3919	JACKSON COUNTY	11 FAIRMVIEW RD	NO	YES					NO	YES	NO	No, sewer not impacted
145	7641-70-6154	STATE EMPLOYEES CREDIT UNION, INC	1746 E MAIN ST	NO	YES	X				YES	YES	YES	Yes, sewer impacted
146	7640-79-6753	MOUNTAIN CREDIT UNION	30 HWY 107	NO	YES	X				NO	YES	YES	Yes, sewer impacted
147	7640-79-6544	MURPHY AND WALDRUP, LLC	66 HWY 107	NO	YES		X			YES	YES	NO	No, sewer not impacted.
148	7640-79-6364	CVS 7546 NC, LLC	88 HWY 107	NO	YES		X			YES	YES	NO	No, sewer not impacted
149	7640-79-5182	DORIS M. HIGDON (HIGDON, DEBRA ET AL)	120 HWY 107	NO	YES					-----	YES	NO	No, sewer not impacted
150	7640-89-2035	SMOKY MOUNTAIN MEMORIAL PARKS, INC	FAIRMVIEW RD	NO	NO					-----	NO	NO	No, sewer not impacted
151	7640-88-1659	LOVESHOMELUMCHURCH, INC	41 LOVEDALE RD	NO	NO					-----	NO	NO	No, sewer not impacted
152	7640-88-2416	SHIRLEY P. SIMPSON, TRUSTEE	80 LOVEDALE RD	NO	NO					-----	NO	NO	No, sewer not impacted
153	7641-48-9630	FRANK WATSON, JR	21 CACTUS LOOP	NO	NO					-----	NO	YES	Yes, sewer impacted
154	7641-48-7767	JOHN N. CARLINGER	218 ASH-VILLE HWY	NO	YES	X				YES	YES	YES	Yes, sewer impacted
155	7641-48-8842	LANESBORCH, TRUSTEE (now NCDOT)	222 ASH-VILLE HWY	YES	NO					YES	YES	NO	No, total take
156	7641-58-1859	GRACEL ENSLEY	5 POPLAR DR	NO	NO					YES	NO	NO	No, sewer not impacted
157	7641-48-5358	SARA B. ALLISON, ET AL (now NCDOT)	SIGN LOT ASH-VILLE HWY		NO					-----	NO	NO	No, total take
158	7641-82-0310	MOUNTAIN PROJECTS, INC	15 LASER DR	NO	NO					NO	NO	NO	No, sewer not impacted
158Z	7641-82-0310	MOUNTAIN PROJECTS, INC	15 LASER DR	NO	NO					NO	NO	NO	No, sewer not impacted
158Y	7641-82-0310	MOUNTAIN PROJECTS, INC	15 LASER DR	NO	NO					NO	NO	NO	No, sewer not impacted
159	7641-37-9780	JOHN L. SHEPHERD	47 RACE LN	NO	YES	X				-----	YES	NO	No, sewer not impacted
160	7641-76-3133	PHILIP O. ELLIOTT & JONATHAN D. ELLIOTT (now MALDONADO, YENS Y RODRIGUEZ)	647 E MAIN ST	NO	NO					-----	YES	NO	No, sewer not impacted
161	7641-72-9050	LARRY P. AKINS	115 PLUM ST	NO	NO					-----	NO	NO	No, sewer not impacted
162	7641-71-9842	CANDY TOOTH LAND OF SYLVIA, LLC	37 CRESTVIEW HTS	NO	YES	X				NO	YES	NO	No, sewer not impacted
900	7641-47-3758	VICTOR HAMILTON (now NCDOT)	10 E MAIN ST	YES	NO					YES	NO	NO	No, total take
901	7641-76-1411	CAROL S. GARRISON, TRUSTEE (now NCDOT)	569 E MAIN ST	YES	NO					YES	YES	NO	No, total take

SERVICES POTENTIALLY AFFECTED: CONFIRM WITH TWSA (NO ROW PARCEL #)

	7641-47-4376	WOODARD, ANTHONY ET AL (MARIETREADWAY)	60 CALDWELL ST	NO	YES					YES	YES	NO	No, sewer not impacted
	7641-47-5137	BROWN, JEAN C	82 CALDWELL ST	NO	YES	X				-----	YES	NO	No, sewer not impacted
	7641-47-4223	MARR, BENJAMIN C	93 WILKESDALE ST	NO	YES	X				-----	YES	NO	No, sewer not impacted
	7641-76-8686	BLANTON, RAYM	229 COPE CREEK RD	NO	NO					-----	YES	NO	No, sewer not impacted
	7641-76-4426	OWEN & GATES LLC	98 COPE CREEK RD	NO	NO					-----	YES	NO	No, sewer not impacted
	7641-76-5444	CODY, DOUGLAS L	150 COPE CREEK RD	NO	NO					-----	NO	NO	No, sewer not impacted
	7641-76-6238	BLUE MOON RENTALS LLC	75 HENSLEY CIR	NO	NO					-----	NO	NO	No, sewer not impacted
	7641-48-3463	STANBERRY PROPERTIES, INC	83 ASH-VILLE HWY	NO	YES		X			YES	YES	YES	Yes, sewer impacted
	7641-48-4655	SHIRLEY M. GREEN	125 ASH-VILLE HWY	NO	YES	X				-----	YES	YES	Yes, sewer impacted
	7641-48-5800	WAYNE SMITH	157 ASH-VILLE HWY	NO	YES		X			NO	YES	YES	Yes, sewer impacted
	7641-59-0055	NHN HOLDINGS, LLC	280 ASH-VILLE HWY	NO	YES		X			YES	YES	YES	Yes, sewer impacted
	7641-59-1089	KIRBY G. ENSLEY	239 POPLAR DR	NO	YES					-----	YES	NO	No, sewer not impacted
	7641-59-4181	SHELBY J. BRYANT	200 POPLAR DR	NO	NO					-----	NO	NO	No, sewer not impacted
	7641-59-0333	JACKSON COUNTY ABC BOARD	30 ES SYLVA SHOPPING CTR	NO	YES	X				YES	YES	NO	No, sewer not impacted

PROJECT REFERENCE NO.
R-5600

SHEET NO.
UC-3H

DESIGNED BY: ELM
DRAWN BY: HSN
CHECKED BY: MUP
APPROVED BY: MUP

REVISID:
NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION

UTILITIES ENGINEERING SEC.
PHONE: (919) 707-6690
FAX: (919) 250-4151

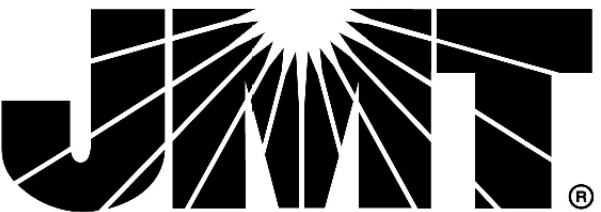
SEAL
2012

8/26/2025

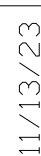
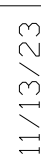
EDT

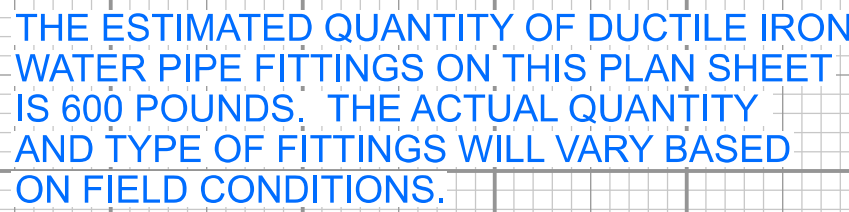
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11/13/23

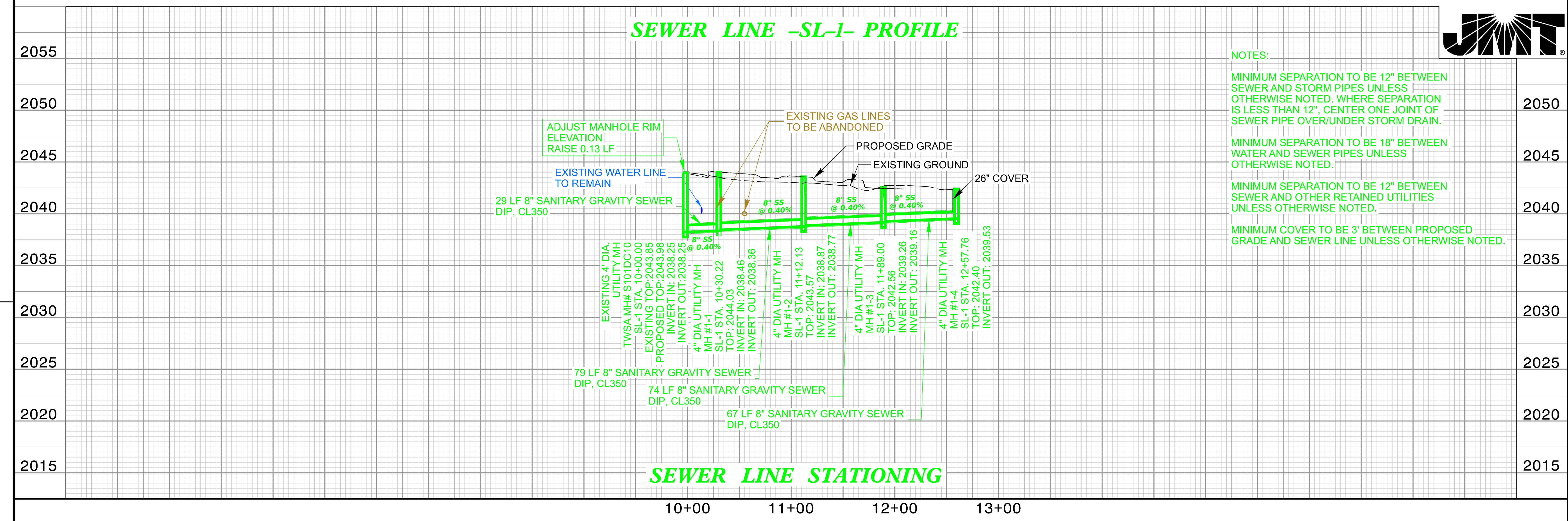
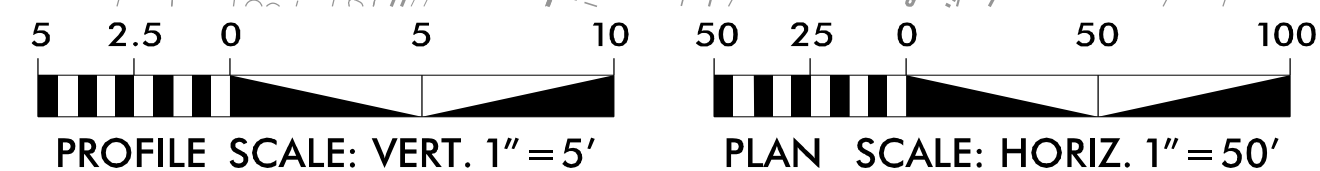




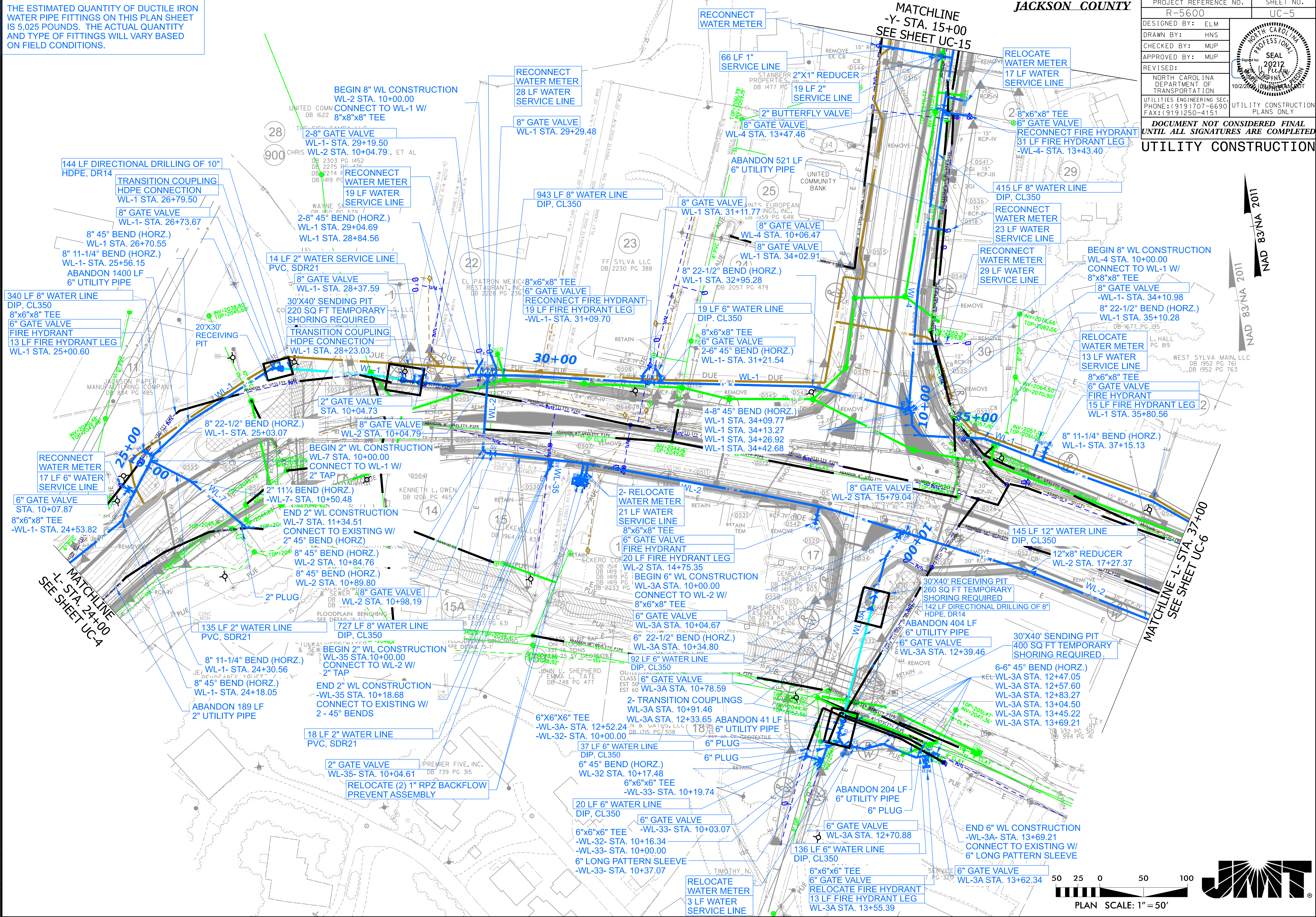
REVISIONS

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UNTIL ALL SIGNATURES ARE COMPLETED

UTILITY CONSTRUCTION



THE ESTIMATED QUANTITY OF DUCTILE IRON
WATER PIPE FITTINGS ON THIS PLAN SHEET
IS 5,025 POUNDS. THE ACTUAL QUANTITY
AND TYPE OF FITTINGS WILL VARY BASED
ON FIELD CONDITIONS.











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NAD 83/NA 2011

Signed by: Marie U. Padon
 State of North Carolina
 Professional Engineer
 Seal No. 20212
 Exp. 12/31/2025
 8/26/2025 12:02:40 PM

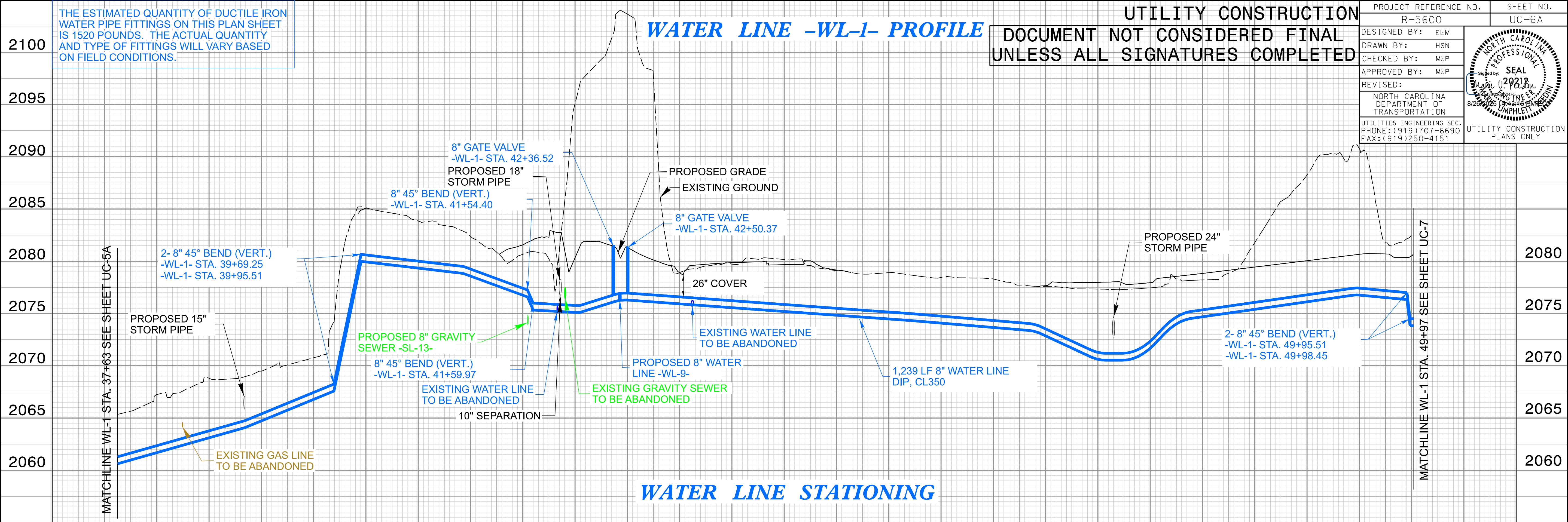
UTILITY CONSTRUCTION
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PLAN SCALE: 1" = 50'

5/28/99

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WATER LINE -WL-3B- PROFILE



UTILITY CONSTRUCTION

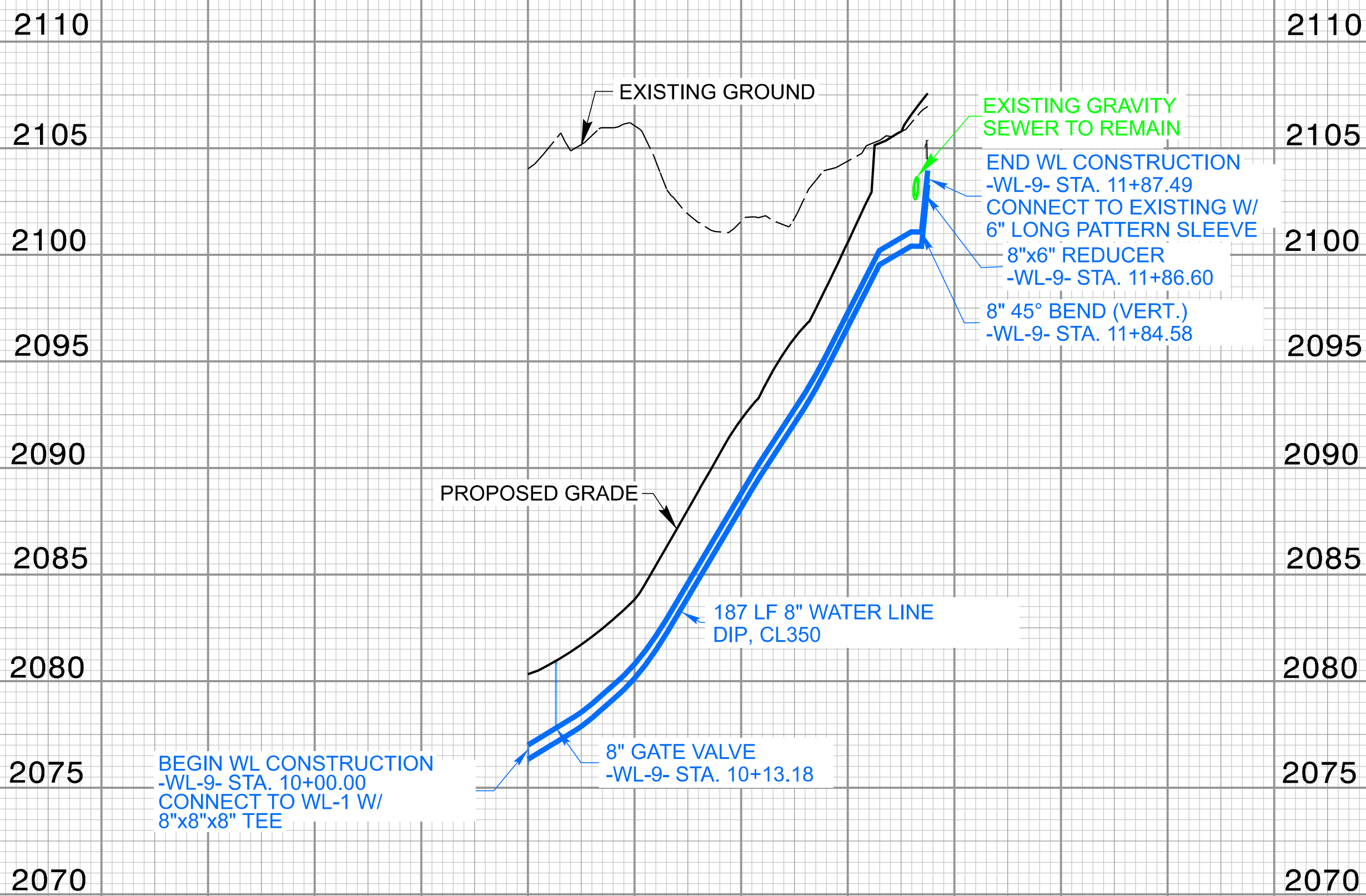
NOTES:
MINIMUM SEPARATION TO BE 12" BETWEEN
WATER AND STORM PIPES UNLESS
OTHERWISE NOTED. WHERE SEPARATION
IS LESS THAN 12", CENTER ONE JOINT OF
WATER PIPE OVER/UNDER STORM DRAIN.

MINIMUM SEPARATION TO BE 18" BETWEEN
WATER AND SEWER PIPES UNLESS
OTHERWISE NOTED.

MINIMUM SEPARATION TO BE 12" BETWEEN
WATER AND OTHER RETAINED UTILITIES
UNLESS OTHERWISE NOTED.

MINIMUM COVER TO BE 3' BETWEEN PROPOSED GRADE AND WATER LINE UNLESS OTHERWISE NOTED.

WATER LINE -WL-9- PROFILE



WATER LINE STATIONING

NAD 83/NA 2011

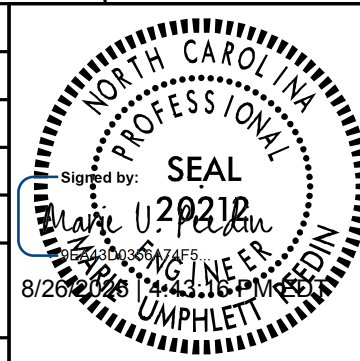
Seal of the State of North Carolina Professional Engineer. The seal is circular with "NORTH CAROLINA" at the top and "PROFESSIONAL ENGINEER" at the bottom. In the center, it says "SEAL" and "20212". Below the seal, it says "State of North Carolina, Professional Engineer, Seal, 20212".

UTILITY CONSTRUCTION
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PLAN SCALE: 1" = 50'

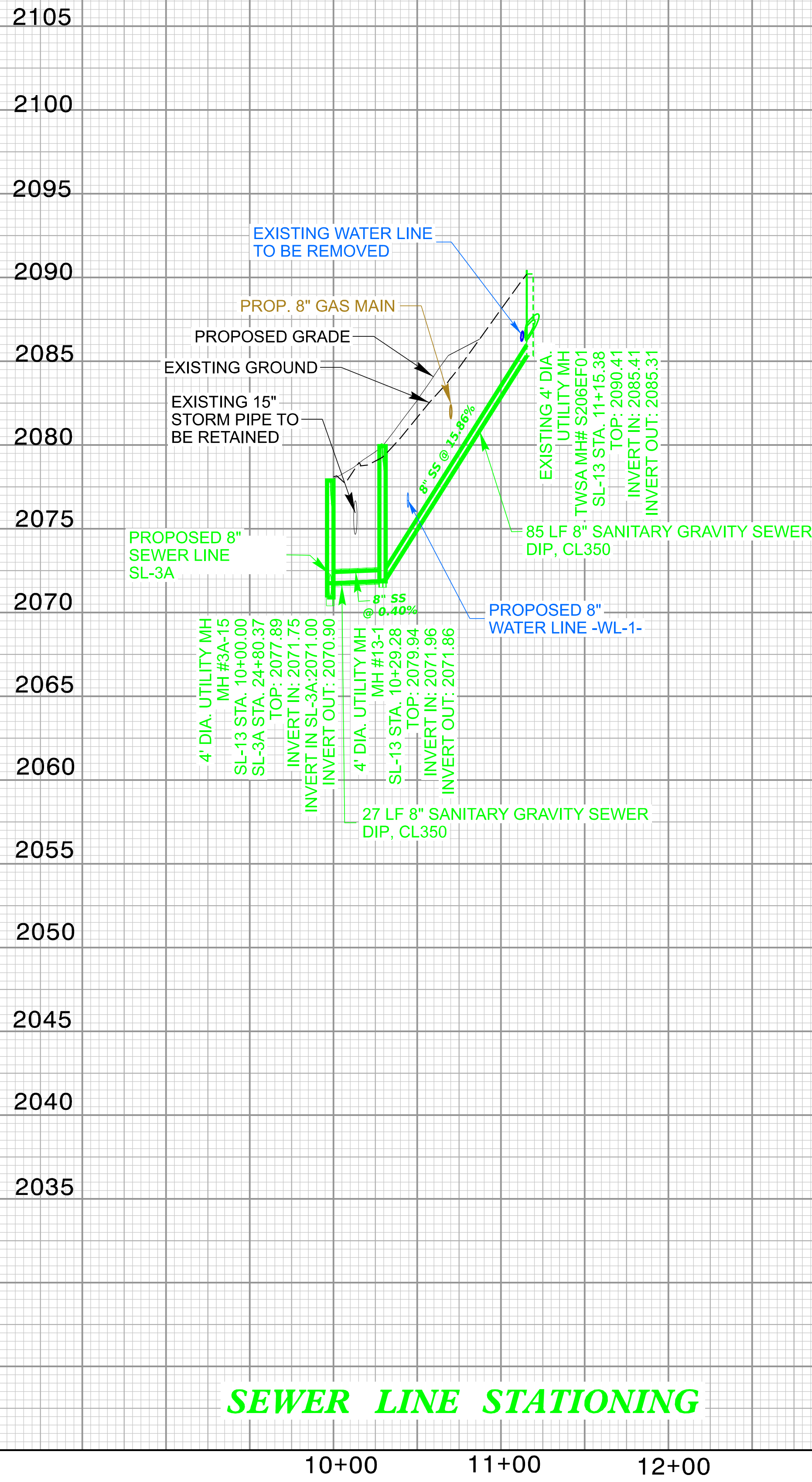




5/14/99

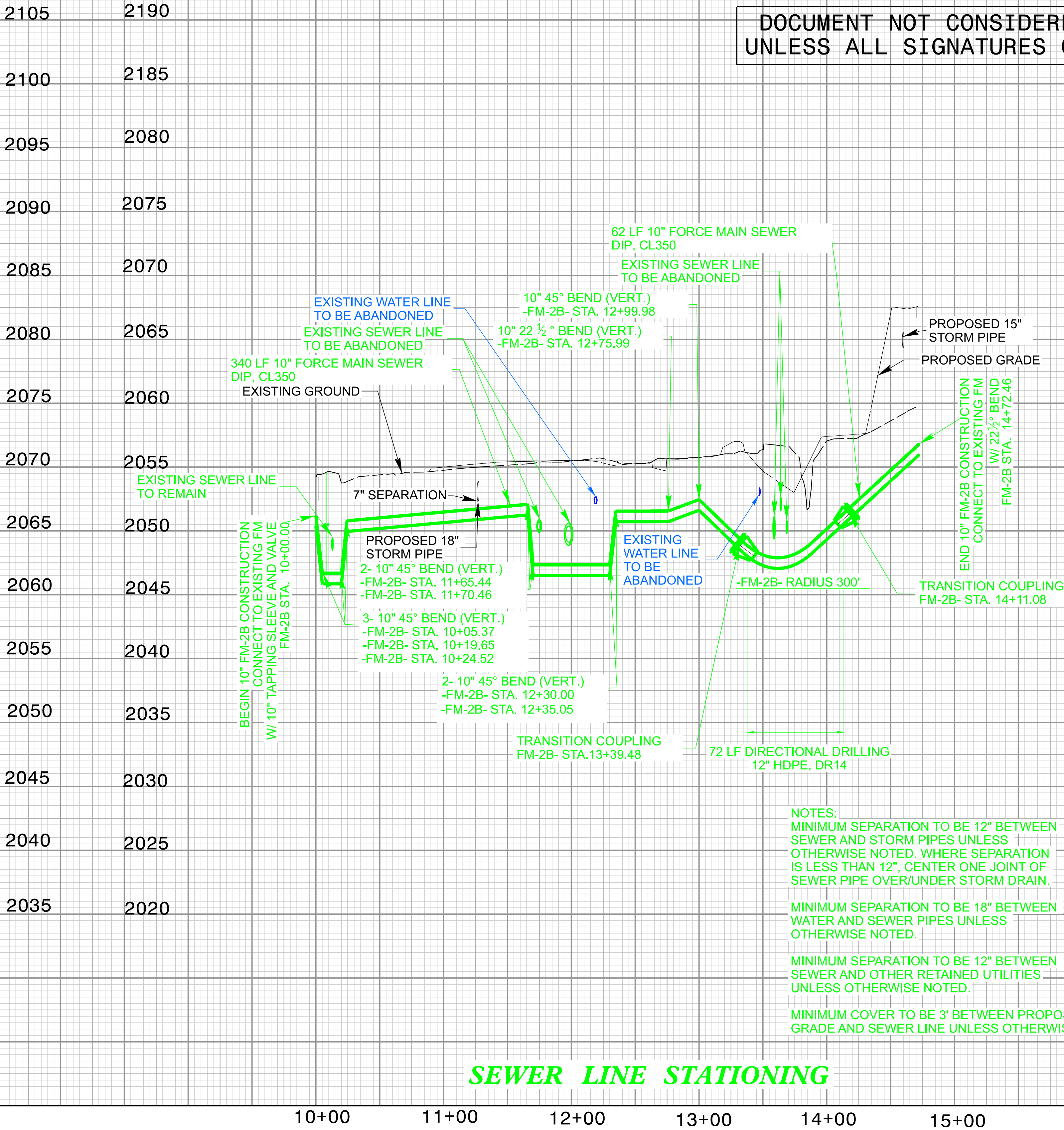
THE ESTIMATED QUANTITY OF DUCTILE IRON SEWER PIPE FITTINGS ON THIS PLAN SHEET IS 1400 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

SEWER LINE -SL-13- PROFILE



SEWER LINE STATIONING

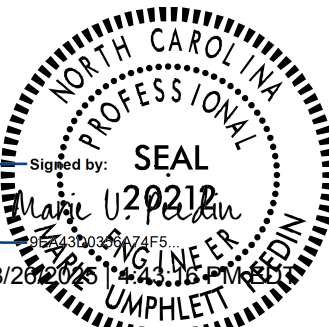
SEWER LINE -FM-2B- PROFILE



SEWER LINE STATIONING

UTILITY CONSTRUCTION

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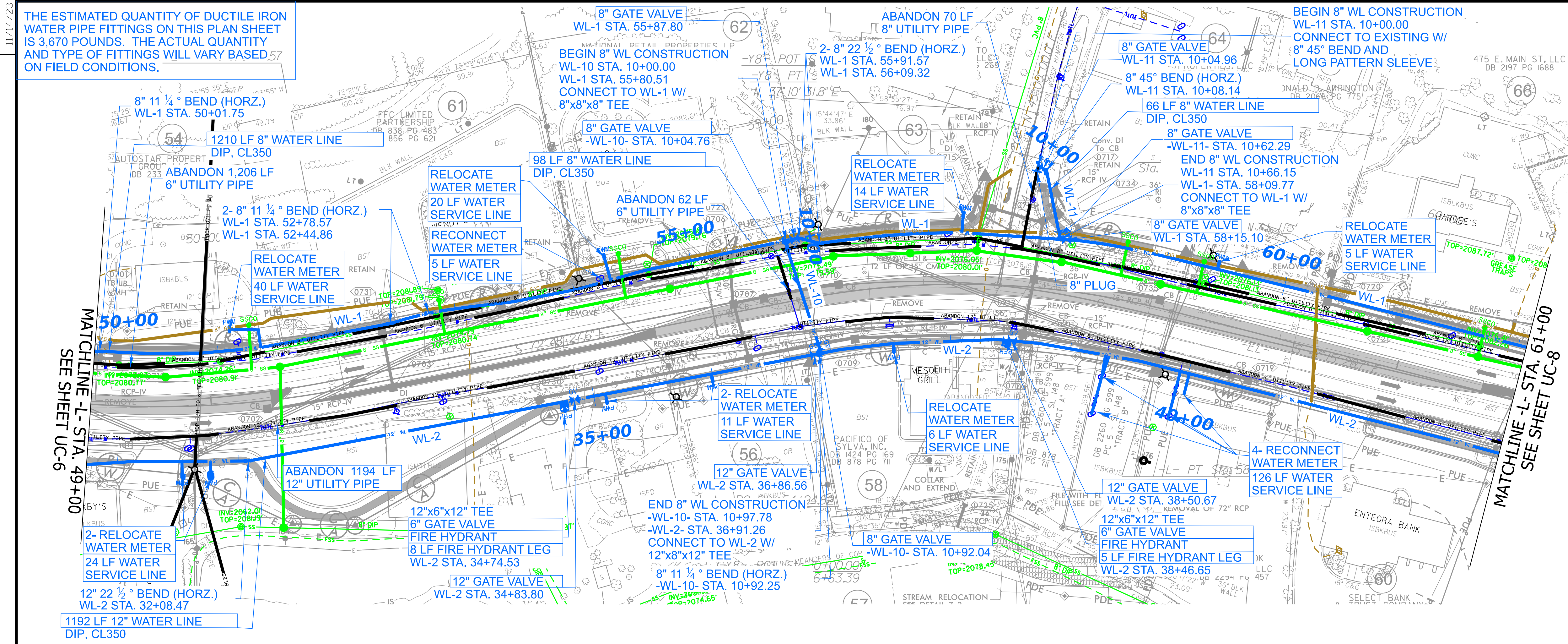
PROJECT REFERENCE NO.		SHEET NO.
R-5600		UC-6E
DESIGNED BY:	ELM	
DRAWN BY:	HSN	
CHECKED BY:	MUP	
APPROVED BY:	MUP	
REVISED:		
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151		
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NOTES:
MINIMUM SEPARATION TO BE 12" BETWEEN SEWER AND STORM PIPES UNLESS OTHERWISE NOTED. WHERE SEPARATION IS LESS THAN 12", CENTER ONE JOINT OF SEWER PIPE OVER/UNDER STORM DRAIN.
MINIMUM SEPARATION TO BE 18" BETWEEN WATER AND SEWER PIPES UNLESS OTHERWISE NOTED.
MINIMUM SEPARATION TO BE 12" BETWEEN SEWER AND OTHER RETAINED UTILITIES UNLESS OTHERWISE NOTED.
MINIMUM COVER TO BE 3' BETWEEN PROPOSED GRADE AND SEWER LINE UNLESS OTHERWISE NOTED.

11/14/23

REVISIONS

THE ESTIMATED QUANTITY OF DUCTILE IRON WATER PIPE FITTINGS ON THIS PLAN SHEET IS 3,670 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.



PROJECT REFERENCE NO. R-5600		SHEET NO. UC-7	
DESIGNED BY: ELM			
DRAWN BY: HSN			
CHECKED BY: MUP			
APPROVED BY: MUP			
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UTILITY CONSTRUCTION
JACKSON COUNTY

