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This file or an individual page shall not be considered a certified document.

STATE OF NORTH CAROLINA T.I.P. NO. SHEET NO BUS 70 DIVISION OF HIGHWAYS U-6223 UC-1 CLAYTON JOHNSTON COUNTY BEGIN PROJECT LOCATION: NEW LOCATION FROM SR-1560 (RANCH ROAD) TO THE US-70 BUS & NC-42 INTERSECTION. 70 -END PROJECT TYPE OF WORK: WATER MAIN RELOCATION AND IMPROVEMENTS 42 ROJE -Y2-POT 10+00.00O CLAYTON CITY BEGIN CONST -L-POC 40+10.00BEGIN CONST UC-6-L-POT 63+65.41LINE -Y2-SR-1563 LITTLE CREEK CHURCH RD -L-POT 12+00.00END PROJECT U-6223 BEGIN PROJECT U-6223 6" WATER MAIN— / 12" WATER MAIN T 2" WATER 4 UC-5 /UC> LINE -L-SR-1563 — 4" FÒRCE MAIN LINE -L-TO US 70 BYPASS LITTLE CREEK CHURCH RD LINE -L-SR-1560 RANCH RD ROSE ST 12" GRAVITY SEWER 8" WATER MAIN ──► LINE -Y1-SR-1563 TO SR-1003 LITTLE CREEK -L-POC 25+00.006" WATER MAIN-CHURCH RD END CONST -Y4-POT 12+20.00END CONST -Y1-POT 16+50.00REVISED SIGNAL END CONST PROPOSED SIGNAL DOCUMENT NOT CONSIDERED FINAL UNTIL ALL SIGNATURES ARE COMPLETED INDEX OF SHEETS GRAPHIC SCALES PREPARED IN THE OFFICE OF SEAL WATER AND SEWER **DIVISION OF HIGHWAYS** SHEET NO.: **DESCRIPTION:** UTILITIES UNIT OWNERS ON PROJECT 50 25 0 Nooten UC-1 TITLE SHEET 1555 MAIL SERVICES CENTER RALEIGH NC 27699–1555 UTILITY SYMBOLOGY PHONE (919) 707–6690 FAX (919) 250–4151 **PLANS** 120 North Boylan Avenue Raleigh NC 27603-1423 919.828.0531 Fax 919.834.3559 *UC–3* **NOTES** (A) WATER – JOHNSTON COUNTY

(B) WATER & SEWER - TOWN OF CLAYTON

License Number: F-0115

CONSULTANT CONTACT #2

CONSULTANT CONTACT #3

DAVE MALINAUSKAS, P.E. PROJECT ENGINEER

29997

David G. Malinauskas

UTILITIES REGIONAL ENGINEER

UTILITIES PROJECT ENGINEER

UTILITIES AREA COORDINATOR

UTILITIES COORDINATOR

UC-3A

PROFILE (HORIZONTAL)

PROFILE (VERTICAL)

UC-3B & *UC-3C*

UC-8 THRU UC-10

NCDOT DETAILS

UC-3D THRU UC-3G TOWN OF CLAYTON DETAILS

UC-4 THRU UC-7 UTILITY CONSTRUCTION SHEETS

JOHNSTON COUNTY DETAILS

UTILITY PROFILE SHEETS

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

Water Line (Sized as Shown) 111⁄4 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	10" 60
(Sized as Shown)	12 33
Force Main Sewer Line(Sized as Shown)	112" FSS
Manhole (Sized per Note)	
Sewer Pump StationPS(SS)	

PROPOSED MISCELLANOUS UTILITIES SYMBOLS

Power Pole	6	Thrust Block	1
Telephone Pole	-0-	Air Release Valve	AR ●
Joint Use Pole	---	Utility Vault	UV
Telephone Pedestal	TEL PED O	Concrete Pier	CP.
Utility Line by Others (Type as Shown)	PROP O/H POW LINES	Steel Pier	SP
Trenchless Installation	12" TL INSTALL	Plan Note	NOTE
Encasement by Open Cut	24" ENCAS BY OC	Pay Item Note	NOTE
Encasement	24" ENCASEMENT		PAY ITEM

EXISTING UTILITIES SYMBOLS

	LYIOIING OIILI	TILO OTNIDOLO	
wer Pole	•	*Underground Power Line	P ———
elephone Pole	-	*Underground Telephone Cable	т
int Use Pole	- ♦-	*Underground Telephone Conduit	тс
ility Pole	•	*Underground Fiber Optics Telephone Cable —	Т F0
ility Pole with Base		*Underground TV Cable	ТУ
Frame Pole	•—•	*Underground Fiber Optics TV Cable	TV F0
wer Transmission Line Tower		*Underground Gas Pipeline	G
ter Manhole	igotimes	Aboveground Gas Pipeline	A/G Gas
wer Manhole	$lack{\mathbb{P}}$	*Underground Water Line	- W
lephone Manhole	\odot	Aboveground Water Line	A/G Water
nitary Sewer Manhole	\oplus	*Underground Gravity Sanitary Sewer Line —	
nd Hole for Cable	H _H	Aboveground Gravity Sanitary Sewer Line —	A/G Sanitary Sewer
wer Transformer		*Underground SS Forced Main Line	FSS———
lephone Pedestal	T	Underground Unknown Utility Line	?UTL
TV Pedestal		SUE Test Hole	
s Valve	\Diamond	Water Meter c)
s Meter	♦	Water Valve	
cated Miscellaneous Utility Object	\odot	Fire Hydrant	
andoned According to Utility Records	AATUR	Sanitary Sewer Cleanout @	
d of Information	E.O.I.		

*For Existing Utilities
Utility Line Drawn from Record
Designated Utility Line

UTILITY CONSTRUCTION

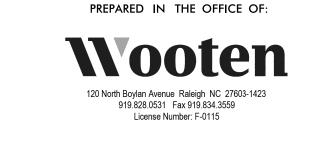
GENERAL NOTES:

- 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 2018 AND JOHNSTON COUNTY AND TOWN OF CLAYTON STANDARD SPECIFICATIONS AND DETAILS.
- 2. THE EXISTING UTILITIES ARE OWNED BY AND OPERATED BY JOHNSTON COUNTY AND TOWN OF CLAYTON.
- 3. ALL WATER LINES ARE 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 ARE TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT QUALITY, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.
- 4. THE UTILITY OWNERS OWN 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. UTILITY SERVICE SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. SERVICE INTERRUPTIONS SHALL ONLY BE ALLOWED WITH ADVANCES (72 HOUR) WRITTEN NOTICE FOR BOTH JOHNSTON COUNTY AND TOWN OF CLAYTON, FOR PURPOSES OF TIE-INS OR SERVICE SWITCH-OVERS. 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. PROPOSED WATER LINES 4" AND GREATER DIAMETER SHALL BE PRESSURE CLASS 350 DUCTILE IRON (RESTRAINED JOINT WHERE SHOWN). PROPOSED WATER LINES LESS THAN 4" DIAMETER SHALL BE SDR-21PVC. PROPOSED FORCE MAINS SHALL BE PRESSURE CLASS 350 DUCTILE IRON WITH CERAMIC EPOXY LINER (RESTRAINED JOINT WHERE SHOWN). PROPOSED SANITARY GRAVITY SEWER SHALL BE THICKNESS CLASS 50 DUCTILE IRON WITH CERAMIC EPOXY LINER.
- 2. TRACER WIRE, WARNING TAPES, AND UTILITY MARKERS SHALL BE INSTALLED WITH ALL PLASTIC PIPE UTILITIES. WIRE, TAPE AND PIPE SHALL BE COLOR CODED ACCORDING TO UTILITY (BLUE FOR WATER, GREEN FOR SEWER).
- 3. EXISTING CONDITIONS SURVEY AND PROPOSED HIGHWAY PLANS PROVIDED TO THE WOOTEN COMPANY BY NCDOT.
- 4. THRUST COLLARS ON EXISTING UTILITIES ARE TO BE INSTALLED AND CURED PRIOR TO CONNECTION OF NEW UTILITIES TO EXISTING UTILITIES.
- 5. CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE TEMPORARY SHUTDOWNS WITH JOHNSTON COUNTY AND TOWN OF CLAYTON. CONTRACTOR IS RESPOSIBLE FOR HAVING ADEQUATE STAFF AND MATERIALS TO COMPLETE THE CUT-IN CONNECTION DURING THE SPECIFIED SHUTDOWN.



WATER LINE CONSTRUCTION

SHOWN ON THIS SHEET

VERTICAL SCALE

5' 0 5' 10'

HORIZONTAL SCALE
25′ 0 25′ 50′
DEPARTMENT OF TRANSPORTATION

TRANSPORTATION

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

DESIGNED BY: CMG

CHECKED BY: DGM

DRAWN BY: TK

PROJECT REFERENCE NO.

U-6223

Document Not Considered Final Unless All Signatures Completed UTILITY CONSTRUCTION PLANS ONLY

SHEET NO.

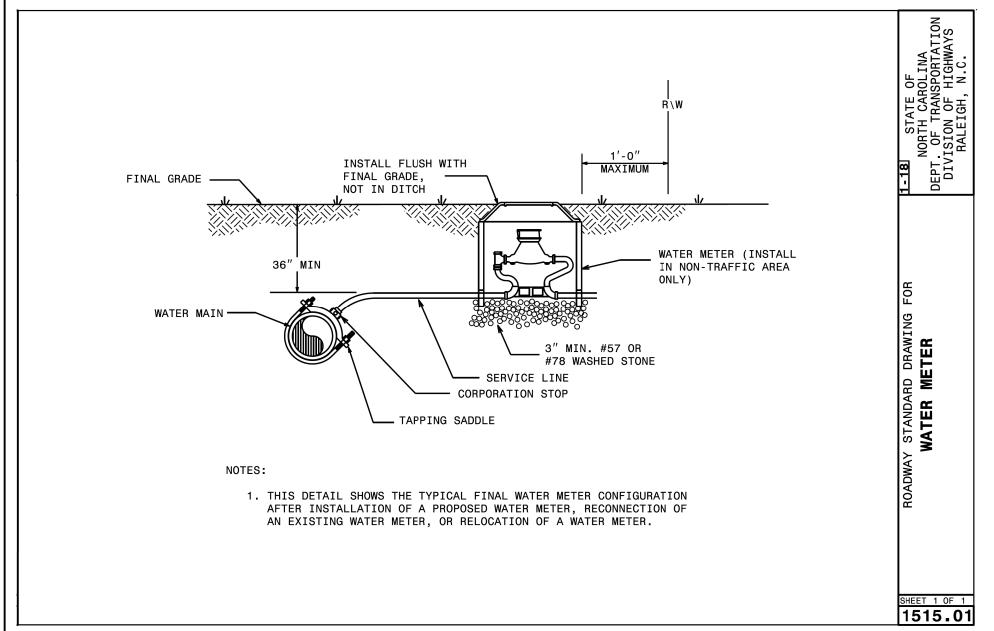
UC-3

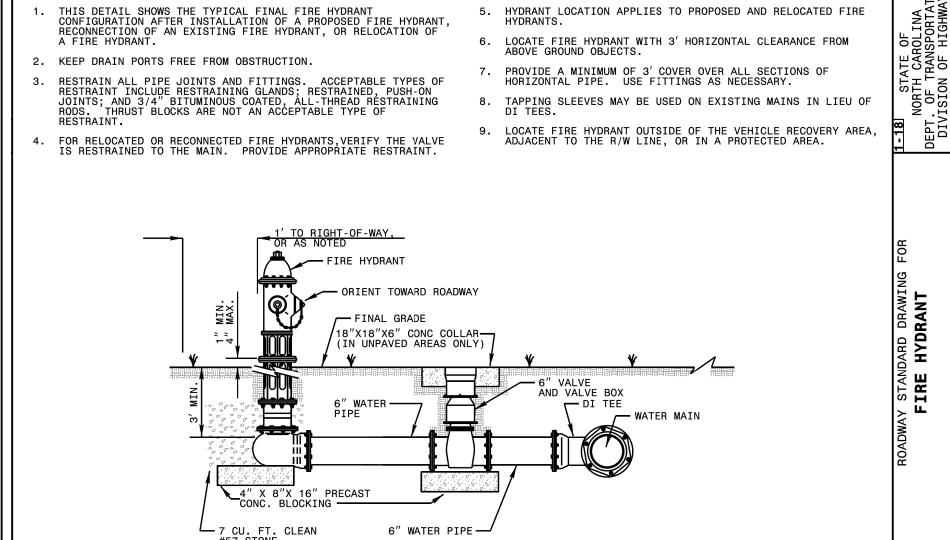
UTILITY CONSTRUCTION

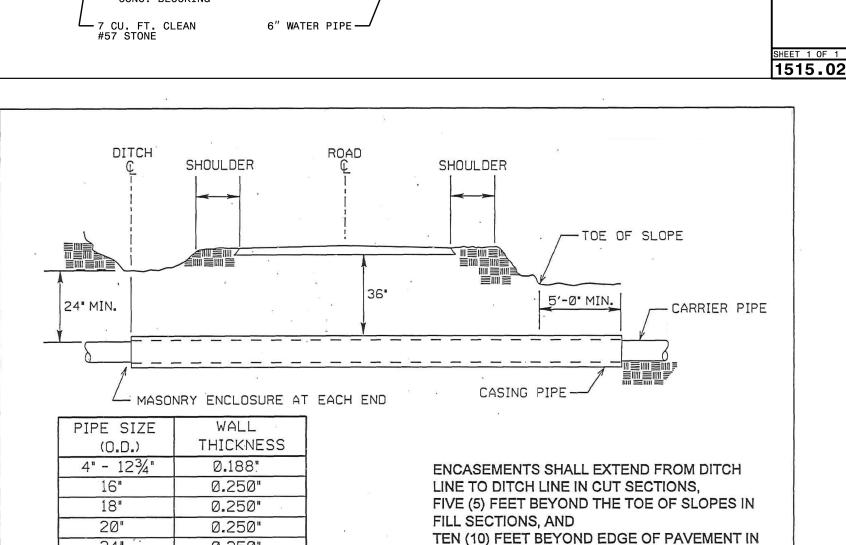
JOHNSTON COUNTY SEQUENCING NOTES:

- 1. LAY NEW LINE TO TIE-IN POINTS AND POUR THRUST COLLARS ON EXISTING LINES.
- 2. INSTALL JUMPER AT ONE END OF TIE-IN POINT TO FILL/TEST/FLUSH LINE.
- 3. PRESSURE TEST AND CHLORINE NEW LINE.
- 4. SUBMIT PASSING BAC-T SAMPLE AND ENGINEER'S CERTIFICATION.
- 5. MAKE TIE-IN AT GRANT STREET.
- 6. SWITCH WATER SERVICES OVER TO THE NEW LINE.
- 7. MAKE 8" TIE-INS.
- 8. ABANDON OLD LINE.

NCDOT PROJECT DETAILS







WELDING 1072-18 Qualifications of Personnel:

DETAIL FOR BORE UNDER STATE ROAD

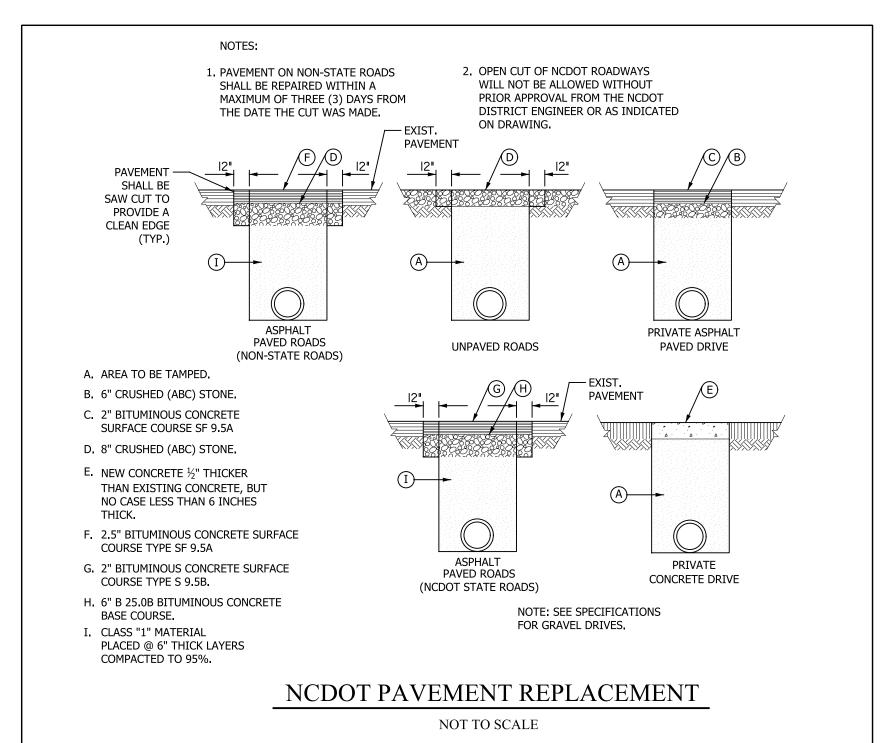
urnished to the NCDOT Department Engineer or his representative.

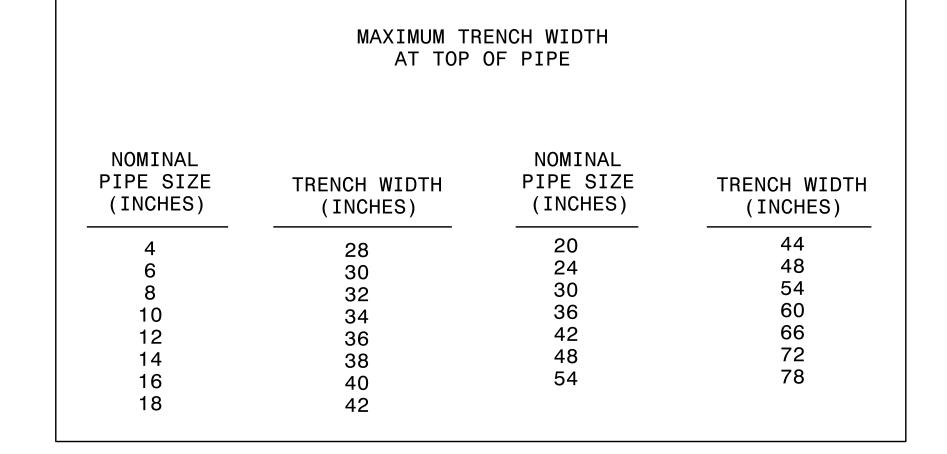
SECTIONS WITH NO DITCH OR FILL AREA.

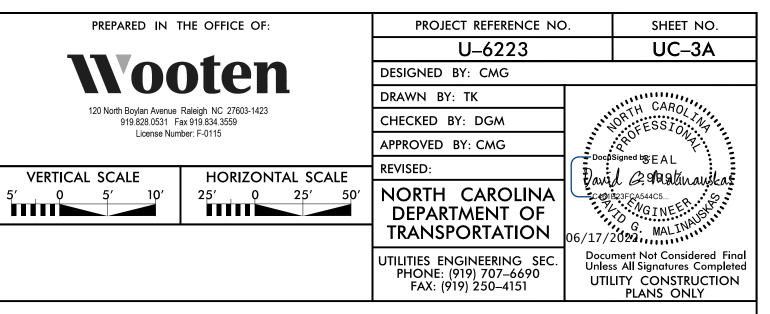
Not To Scale

Welders must be certified to meet state requirements as noted within the NCDOT Standards

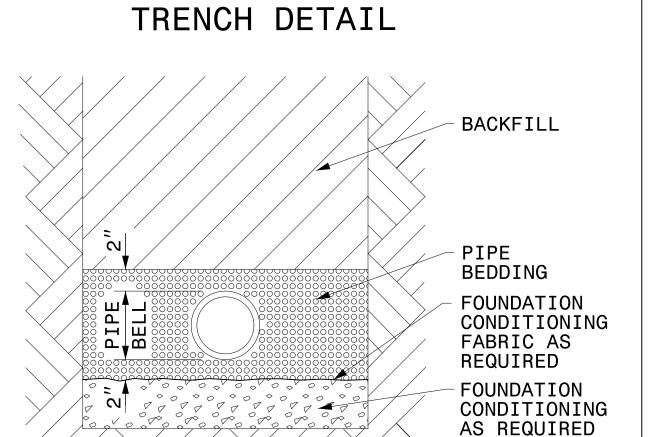
Specifications for Roads and Structures 2012. Upon request, evidence of such qualifications shall be





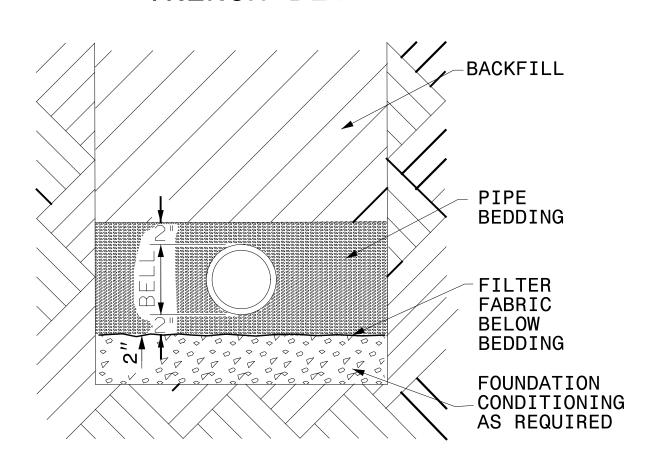


UTILITY CONSTRUCTION



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.

TRENCH DETAIL



PLACE FOUNDATION CONDITIONING MATERIAL BELOW BEDDING IF REQUIRED, AS DIRECTED BY ENGINEER. PIPE BEDDED IN SELECT MATERIAL, CLASS IV. 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 APPROX. 95% DENSITY IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY THE DEPARTMENT OF TRANSPORTATION.

\$\$\$\$\$\$\$YSTIME\$\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$DGN\$\$\$\$\$\$\$\$\$\$\$ \$\$\$\$USERNAME\$\$\$\$

24"

30"

36"

48"

0.250"

0.312"

0.375"

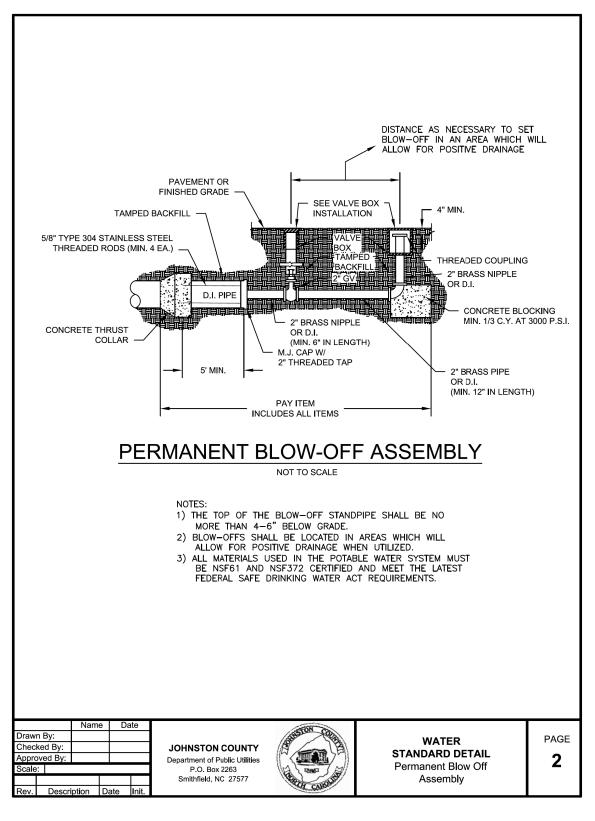
NCDOT APPROVED NOV. 2000

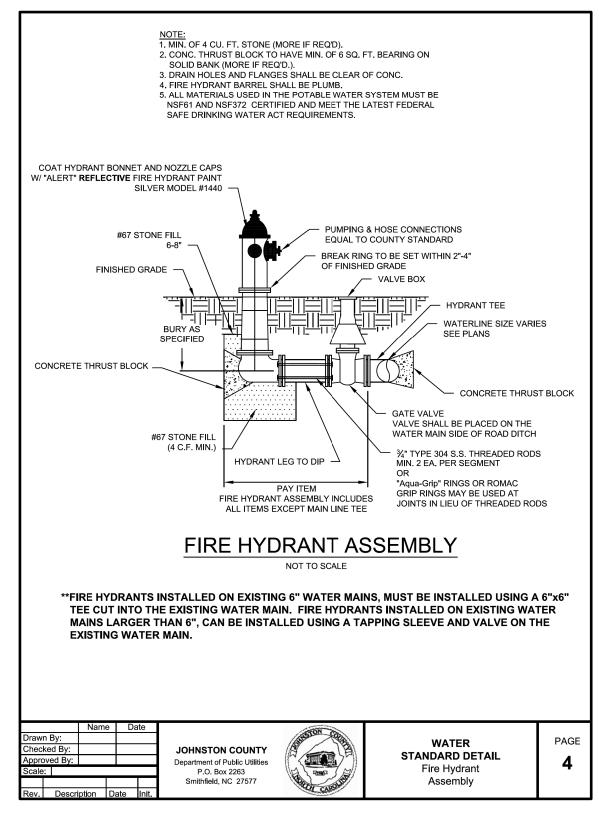
0.500"

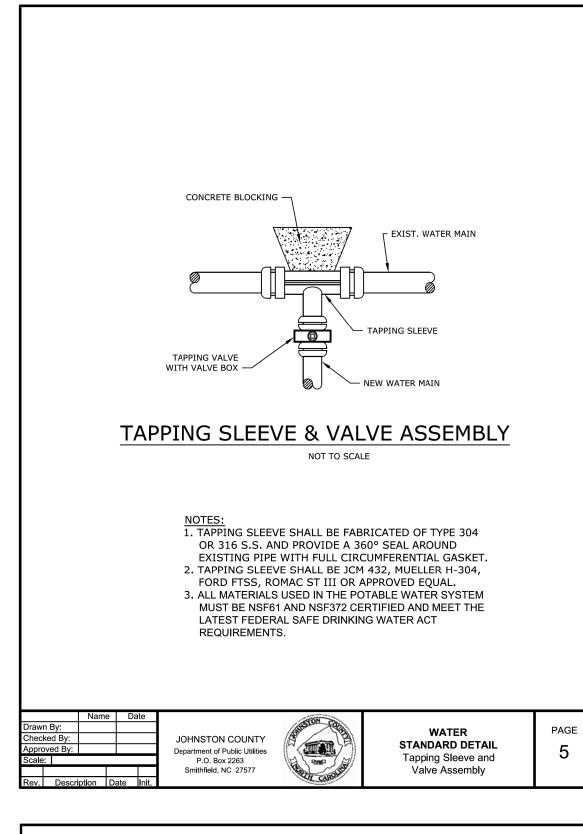
JOHNSTON COUNTY DETAILS

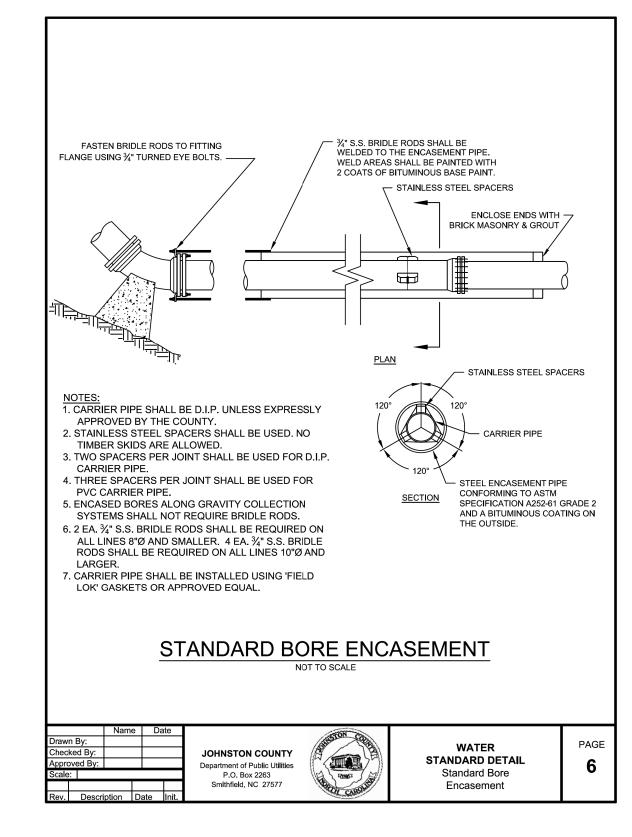
PREPARED IN THE OFFICE OF:	PROJECT REFERENCE NO) .	SHEET NO.				
	U-6223		UC-3B				
Wooten	DESIGNED BY: CMG	DESIGNED BY: CMG					
	DRAWN BY: TK	CARO					
120 North Boylan Avenue Raleigh NC 27603-1423 919.828.0531 Fax 919.834.3559	CHECKED BY: DGM	NO SEESSION NA					
License Number: F-0115	APPROVED BY: CMG	NA.					
VERTICAL SCALE HORIZONTAL SCALE	REVISED:	Devisign	ned by: SEAL G. 2020 Dividualists				
	O' NORTH CAROLINA DEPARTMENT OF	74476 — C3615231	FCA544C5				
	TRANSPORTATION	06/17/2	2022, MAL				
	UTILITIES ENGINEERING SEC. PHONE: (919) 707–6690 FAX: (919) 250–4151	Unless	nent Not Considered Final All Signatures Completed ITY CONSTRUCTION PLANS ONLY				

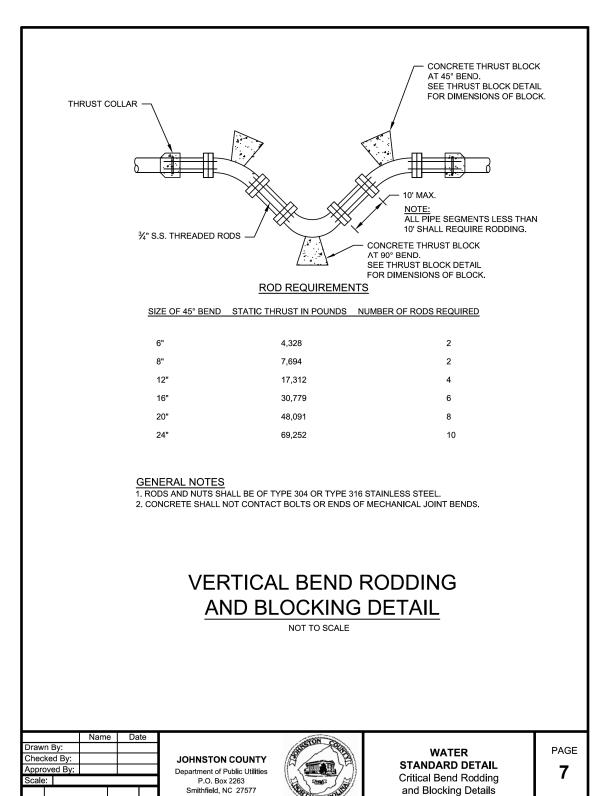
UTILITY CONSTRUCTION

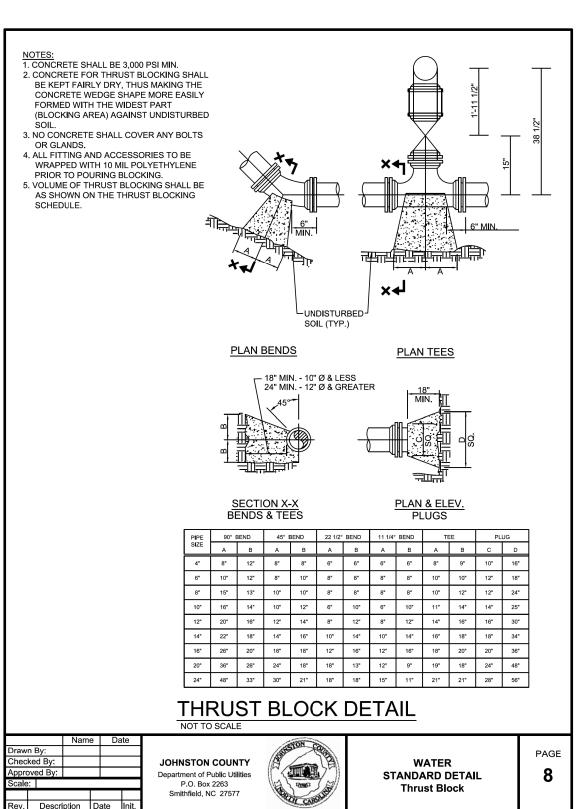


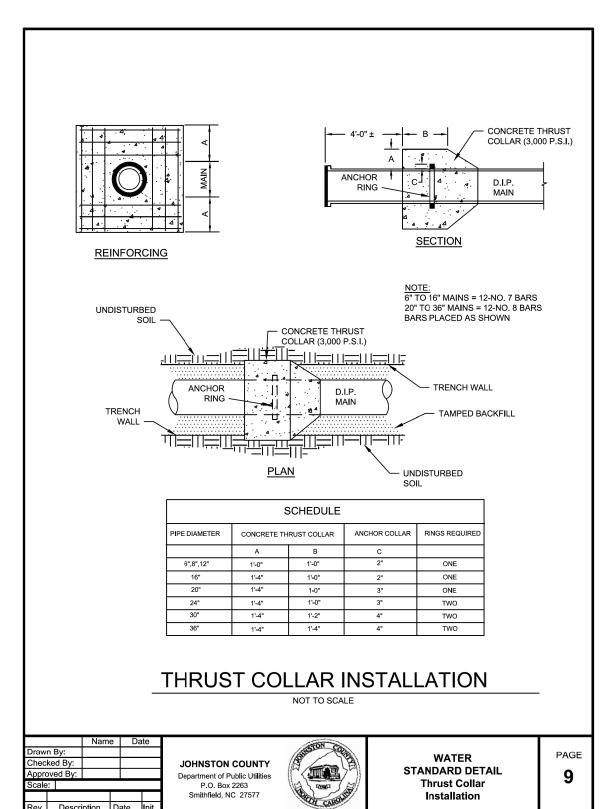


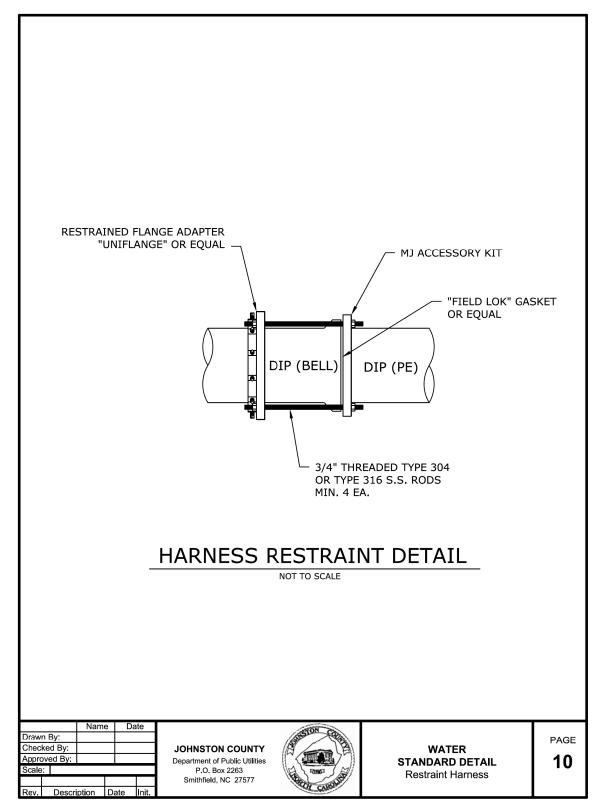




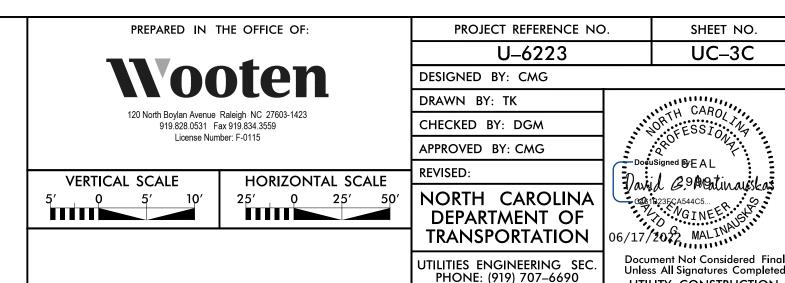








\$\$\$\$\$YSTIME\$\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$ \$\$USERNAME\$\$\$



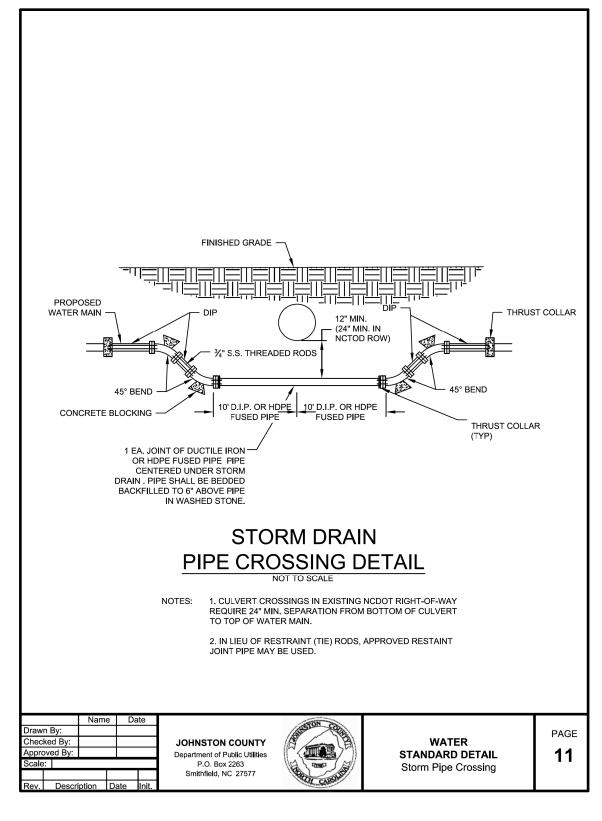
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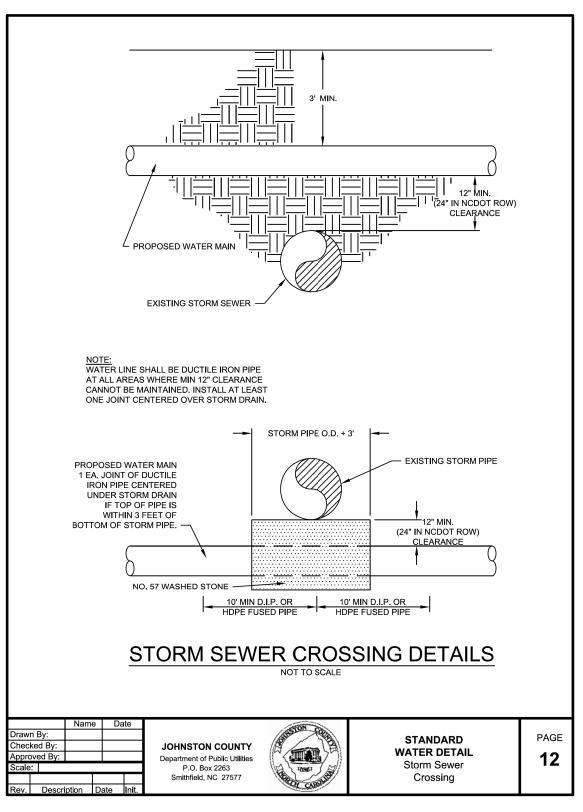
FAX: (919) 250-4151

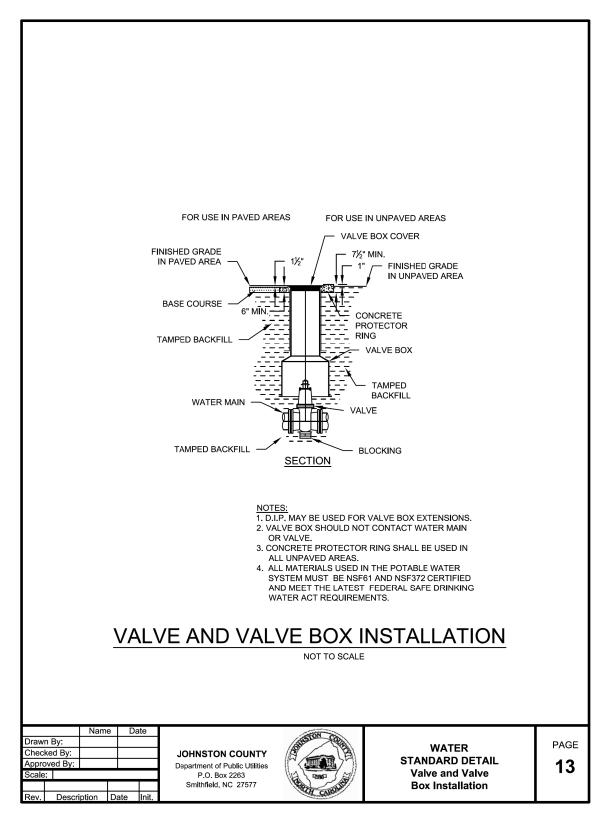
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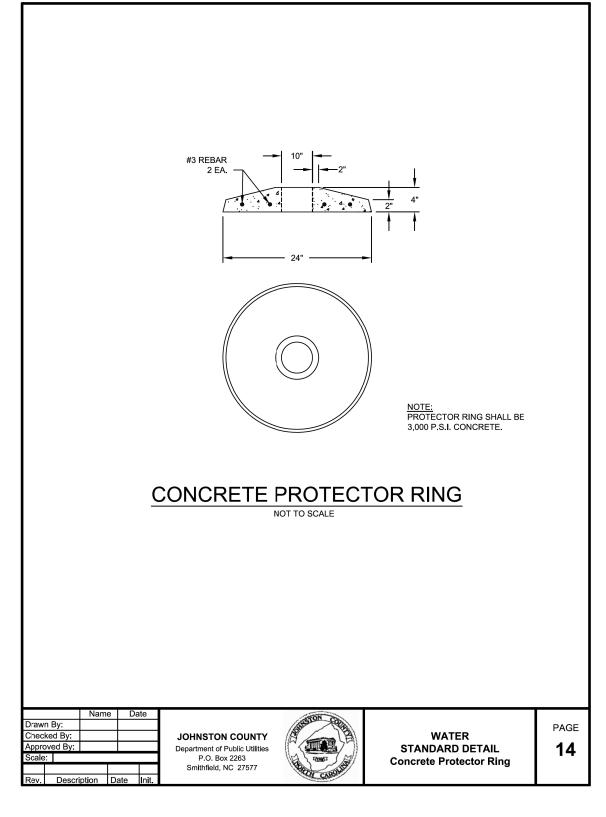
UC-3C

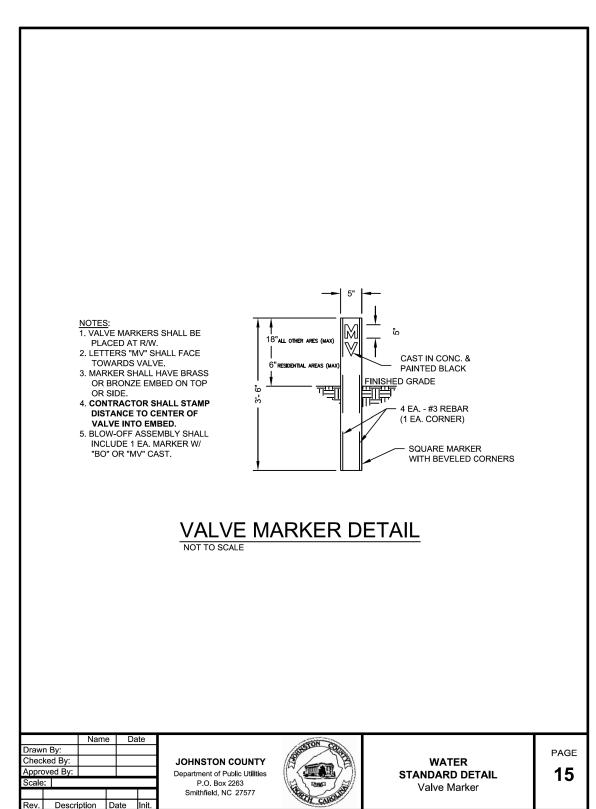
UTILITY CONSTRUCTION

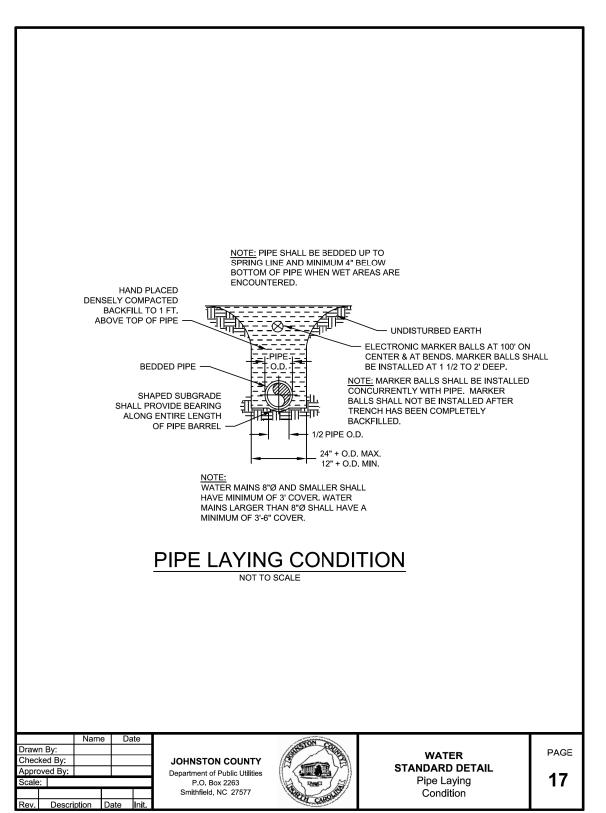


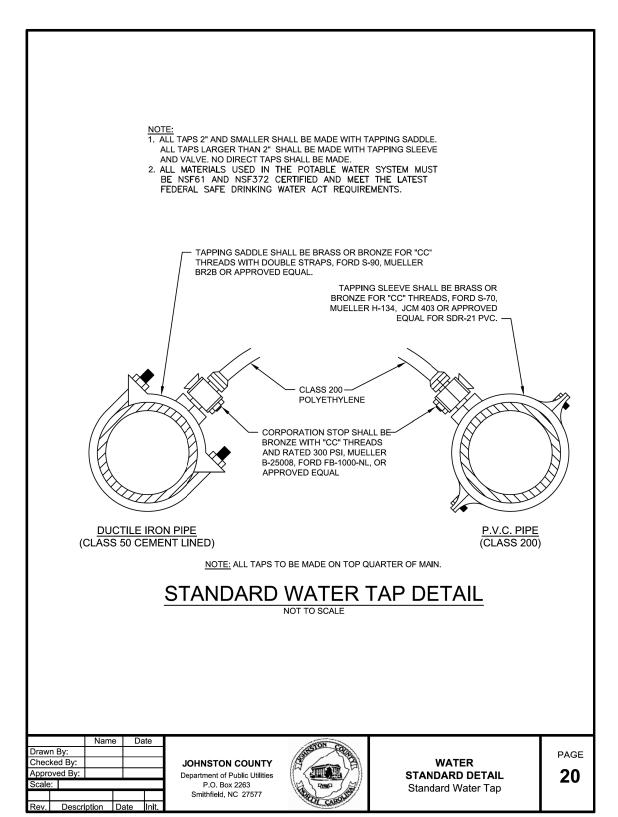


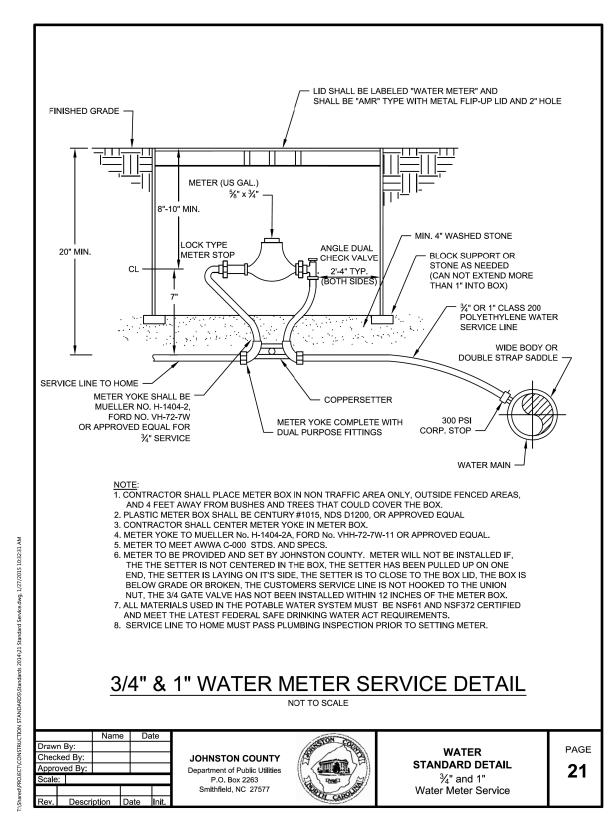












PREPARED IN THE OFFICE OF: 919.828.0531 Fax 919.834.3559 License Number: F-0115

HORIZONTAL SCALE

25' 0 25' 50

VERTICAL SCALE

0 5' CHECKED BY: DGM APPROVED BY: CMG gned bySEAL **REVISED:** NORTH CAROLINA DEPARTMENT OF **TRANSPORTATION**

PROJECT REFERENCE NO.

U-6223

JTILITIES ENGINEERING SEC. PHONE: (919) 707-6690

FAX: (919) 250-4151

DESIGNED BY: CMG

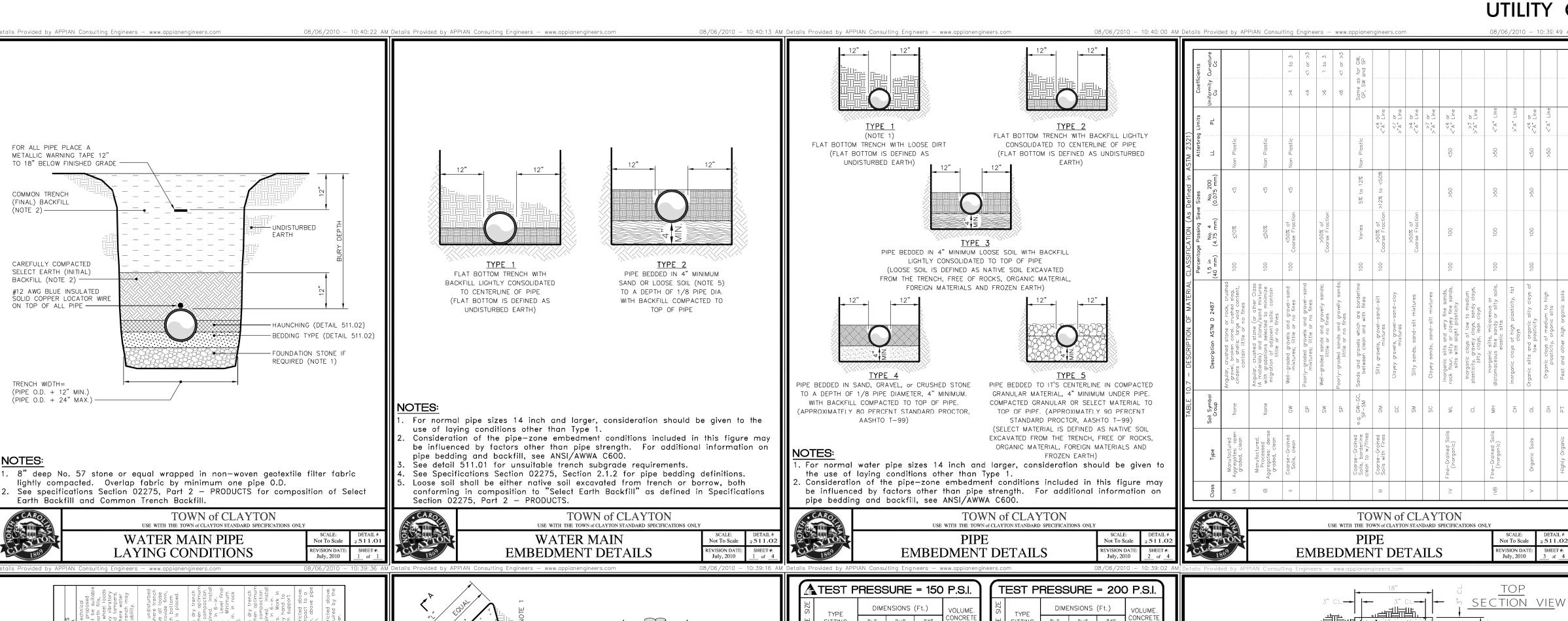
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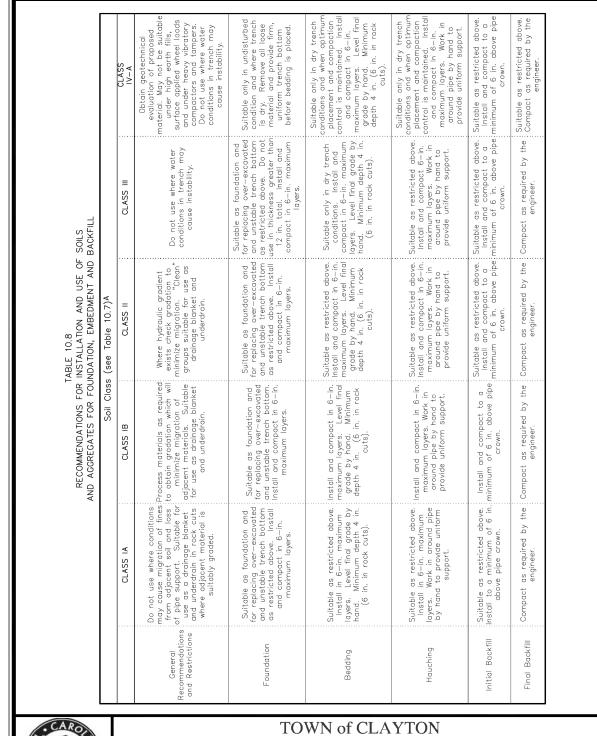
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SHEET NO.

UC-3D

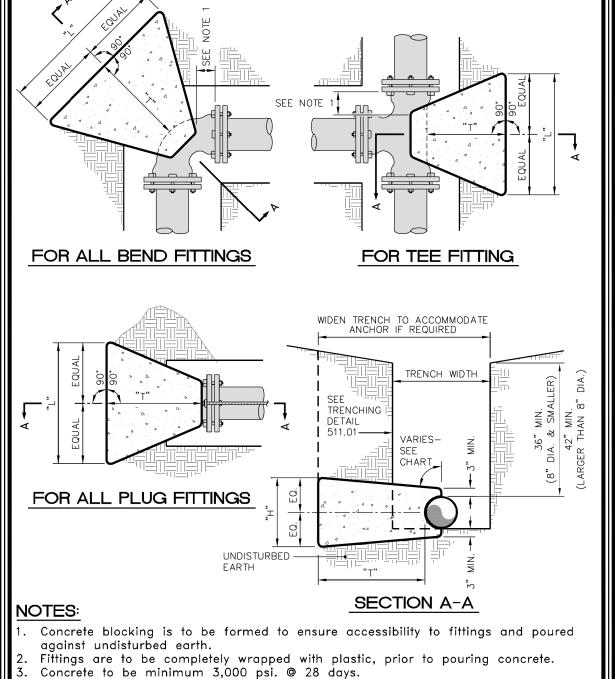
UTILITY CONSTRUCTION





PIPE

EMBEDMENT DETAILS

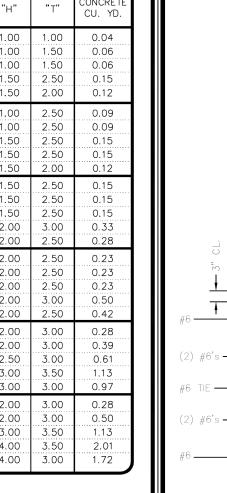


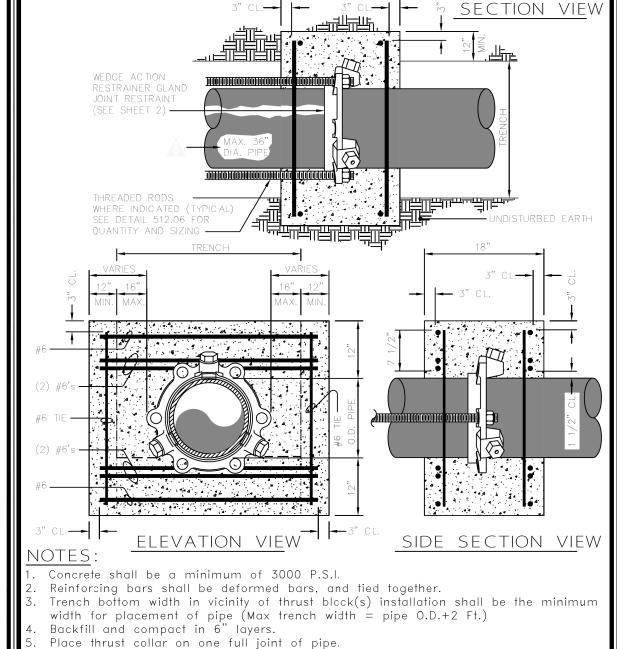
TOWN of CLAYTON

HORIZONTAL BLOCKING DETAIL

for BENDS, TEE, & PLUG

TEST PRESSURE = 150 P.S.I. TEST PRESSURE							URE	= 200	P.S.I.			
PIPE SIZE	TYPE FITTING	DIME	"H"	(Ft.) "T"	VOLUME. CONCRETE CU. YD.		PIPE SIZE	TYPE FITTING	DIME	"H"	(Ft.)	VOLUME. CONCRETE CU. YD.
<4 INCHES	11 1/4° 22 1/2° 45° 90° TEE / PLUG	1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00	1.50 1.50 2.50 2.00	 0.06 0.06 0.09 0.07	L C	<4 INCHES	11 1/4° 22 1/2° 45° 90° TEE	1.00 1.00 1.00 1.50 1.50	1.00 1.00 1.00 1.50 1.50	1.00 1.50 1.50 2.50 2.00	0.04 0.06 0.06 0.15 0.12
4 INCHES	11 1/4° 22 1/2° 45° 90° TEE / PLUG	1.00 1.00 1.00 1.50 1.50	1.00 1.00 1.00 1.50 1.50	2.50 2.50 2.50 2.50 2.00	0.09 0.09 0.09 0.15 0.12		4 INCHES	11 1/4° 22 1/2° 45° 90° TEE	1.00 1.00 1.50 1.50 1.50	1.00 1.00 1.50 1.50 1.50	2.50 2.50 2.50 2.50 2.00	0.09 0.09 0.15 0.15 0.12
6 INCHES	11 1/4° 22 1/2° 45° 90° TEE / PLUG	1.50 1.50 1.50 2.00 2.00	1.50 1.50 1.50 2.00 2.00	2.50 2.50 2.50 3.00 2.50	0.15 0.15 0.15 0.28 0.23	C -	6 INCHES	11 1/4° 22 1/2° 45° 90° TEE	1.50 1.50 1.50 2.50 2.50	1.50 1.50 1.50 2.00 2.00	2.50 2.50 2.50 3.00 2.50	0.15 0.15 0.15 0.33 0.28
8 INCHES	11 1/4° 22 1/2° 45° 90° TEE / PLUG	2.00 2.00 2.00 3.00 3.00	2.00 2.00 2.00 2.00 2.00	2.50 2.50 2.75 3.00 2.50	0.23 0.23 0.25 0.39 0.32		8 INCHES	11 1/4° 22 1/2° 45° 90° TEE	2.00 2.00 2.00 4.00 4.00	2.00 2.00 2.00 2.00 2.00	2.50 2.50 2.50 3.00 2.50	0.23 0.23 0.23 0.50 0.42
12 INCHES	11 1/4° 22 1/2° 45° 90° TEE / PLUG	2.00 2.00 3.00 4.50 4.50	2.00 2.00 2.50 3.00 3.00	3.00 3.00 3.00 3.50 3.00	0.28 0.28 0.47 0.94 0.81	L C	12 INCHES	11 1/4° 22 1/2° 45° 90° TEE	2.00 3.00 4.00 5.50 5.50	2.00 2.00 2.50 3.00 3.00	3.00 3.00 3.00 3.50 3.00	0.28 0.39 0.61 1.13 0.97
16 INCHES	11 1/4° 22 1/2° 45° 90° TEE / PLUG	2.00 3.00 4.00 6.50 6.50	2.00 2.00 3.00 3.50 3.50	3.00 3.00 3.50 3.50 3.00	0.28 0.39 0.84 1.54 1.32		16 INCHES	11 1/4° 22 1/2° 45° 90° TEE	2.00 4.00 5.50 7.50 7.50	2.00 2.00 3.00 4.00 4.00	3.00 3.00 3.50 3.50 3.00	0.28 0.50 1.13 2.01 1.72
CHART NOTES: 1. 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: A. 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.

HORIZONTAL BLOCKING DETAIL for BENDS, TEE, & PLUG SCALE: Not To Scale REVISION DATE: July, 2010		$\overline{\text{TOWN}}$ of CLAYTON use with the town of Clayton standard specifications only	
for BENDS, TEE, & PLUG REVISION DATE: July, 2010	1	HORIZONTAL BLOCKING DETAIL	
		for BENDS, TEE, & PLUG	

TOWN of CLAYTON THRUST COLLAR & BLOCKING with

Place wedge action restrainer gland joint restraint 4 feet from plug end of pipe.

Last joint of pipe with thrust collar to be mechanical joint pipe.

TOWN OF CLAYTON DETAILS

PREPARED IN THE OFFICE OF: Wooten 120 North Boylan Avenue Raleigh NC 27603-1423 919.828.0531 Fax 919.834.3559 License Number: F-0115

HORIZONTAL SCALE

25' 0 25' 50

VERTICAL SCALE

5′

APPROVED BY: CMG NORTH CAROLINA DEPARTMENT OF TRANSPORTATION JTILITIES ENGINEERING SEC.

PHONE: (919) 707-6690

FAX: (919) 250-4151

PROJECT REFERENCE NO.

U-6223

DESIGNED BY: CMG

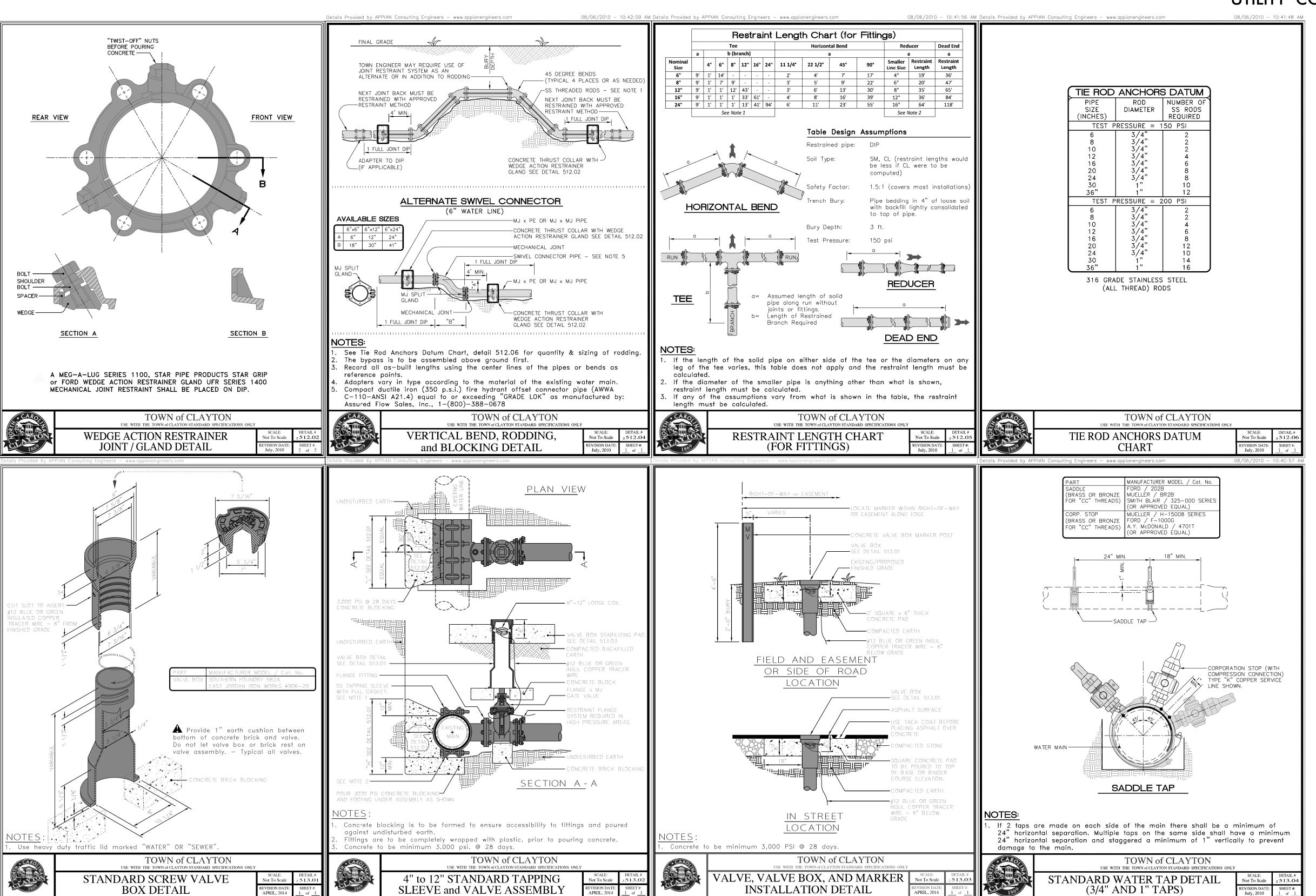
CHECKED BY: DGM

DRAWN BY: TK

ned bySEAL Document Not Considered Final Unless All Signatures Completed UTILITY CONSTRUCTION PLANS ONLY

SHEET NO. UC-3E

UTILITY CONSTRUCTION



(3/4" AND 1" TAPS)

PREPARED IN THE OFFICE OF: Wooten 120 North Boylan Avenue Raleigh NC 27603-1423 919.828.0531 Fax 919.834.3559 License Number: F-0115

HORIZONTAL SCALE

25' 0 25' 50

VERTICAL SCALE

0 5'

DRAWN BY: TK CHECKED BY: DGM APPROVED BY: CMG uSigned by SEAL Pavid G? Medinauskas NORTH CAROLINA DEPARTMENT OF **TRANSPORTATION** UTILITIES ENGINEERING SEC.

PROJECT REFERENCE NO.

U-6223

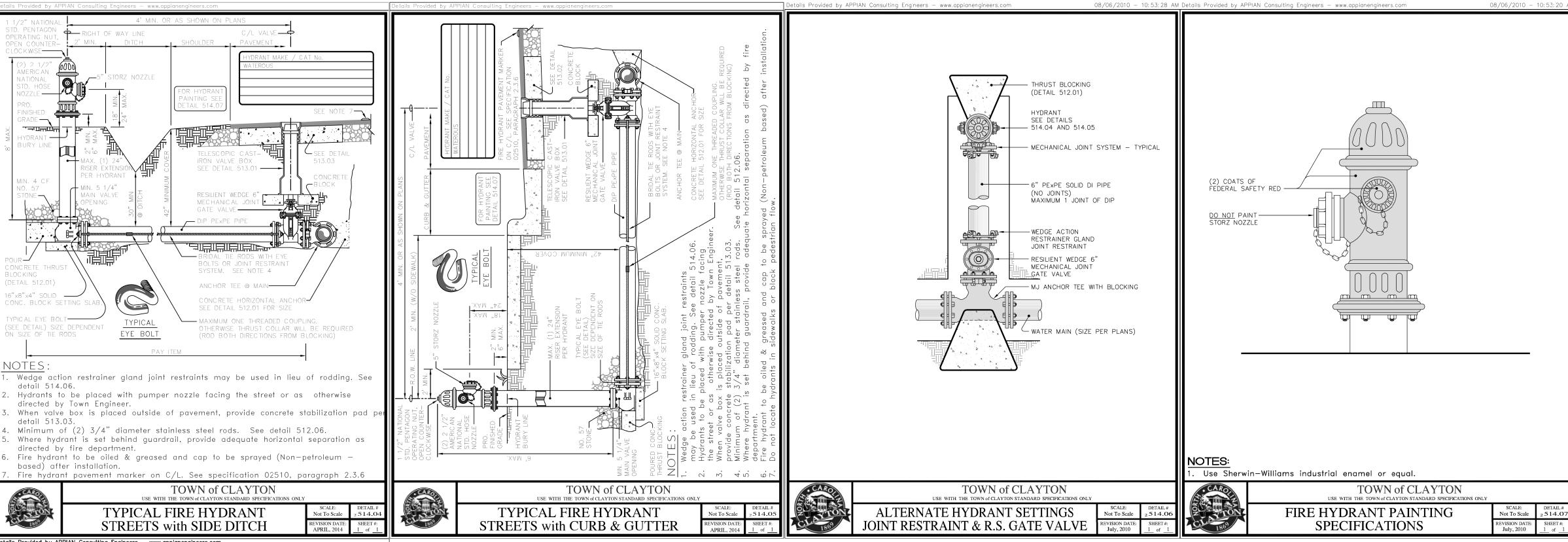
DESIGNED BY: CMG

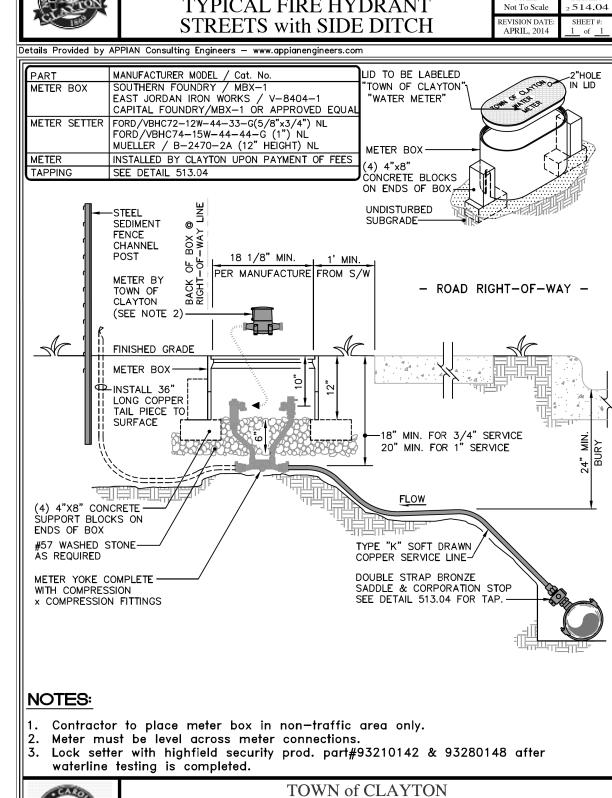
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PLANS ONLY

SHEET NO.

UC-3F

UTILITY CONSTRUCTION





3/4" & 1" WATER METER SERVICE DETAIL

PREPARED IN THE OFFICE OF: Wooten 120 North Boylan Avenue Raleigh NC 27603-1423 919.828.0531 Fax 919.834.3559 License Number: F-0115 VERTICAL SCALE HORIZONTAL SCALE 0 5' 25' 0 25' 50

PROJECT REFERENCE NO. SHEET NO. UC-3G U-6223 DESIGNED BY: CMG DRAWN BY: TK CHECKED BY: DGM APPROVED BY: CMG Signed by SEAL Bavid G? Medinauskas NORTH CAROLINA DEPARTMENT OF TRANSPORTATION Document Not Considered Final Unless All Signatures Completed JTILITIES ENGINEERING SEC.

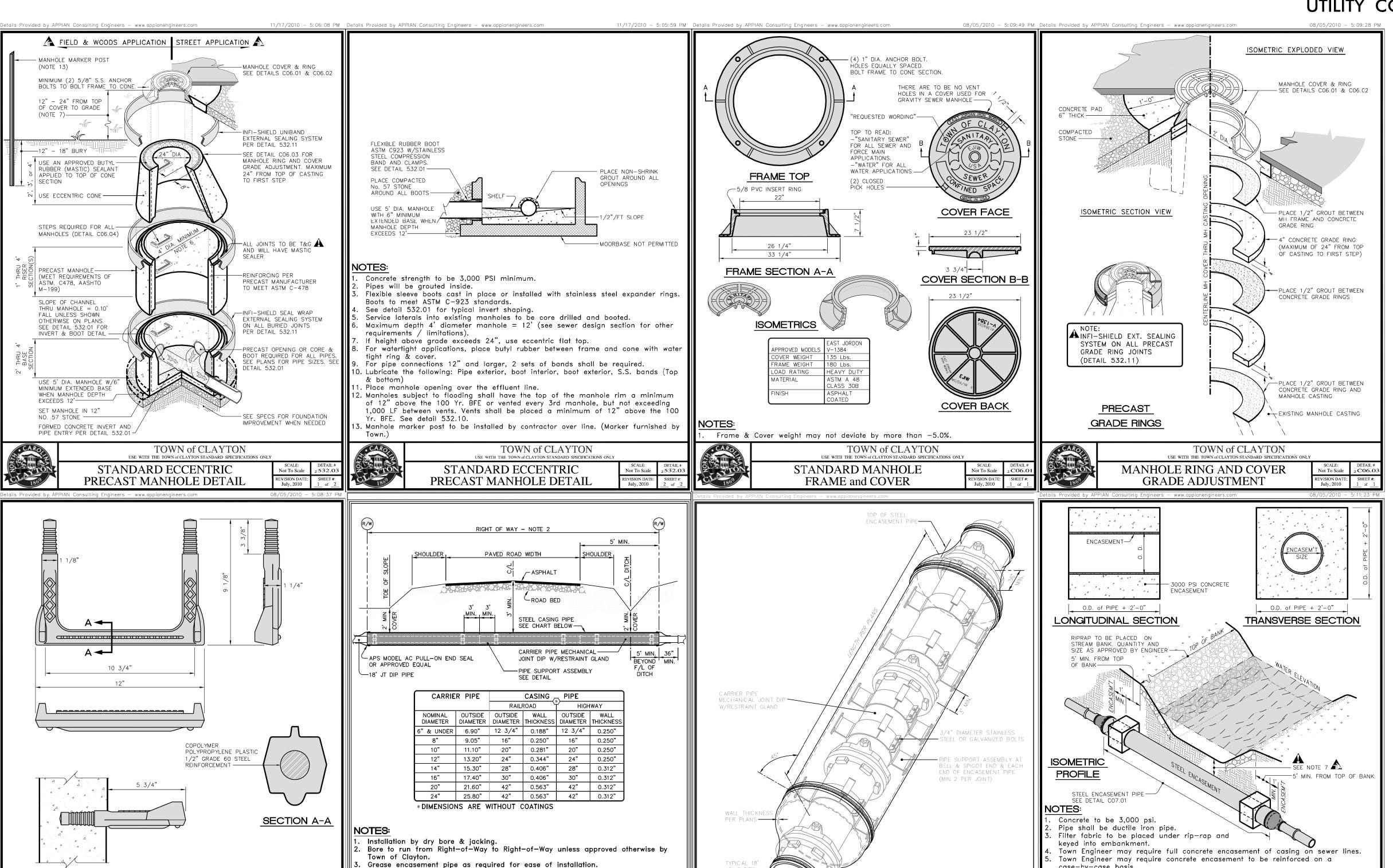
UTILITY CONSTRUCTION

UTILITY CONSTRUCTION

PLANS ONLY

PHONE: (919) 707-6690

FAX: (919) 250-4151



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TOWN of CLAYTON SCALE: Not To Scale **POLYPROPYLENE** PLASTIC STEP

Step shown is PS1-PF by M.A. Industries Inc. Peachtree City, GA. alternate may

be used provided they are approved by Town of Clayton.

TYPICAL DETAIL for BORE INDER PAVED ROADS / HIGHWAYS

Inc, Lafayette, LA. / or approved equal.

. Steel pipe to be 35,000 psi min. yield strength, grade B.

. All exposed metal to be coated with epoxy or asphaltic material.

. Skids to be installed, manufactured by ITT Grinnell, Charlotte, N.C. / Spider

Manufacturing, Durham, N.C. / APS casing spacers by Advanced Products Systems

TOWN of CLAYTON

TOWN of CLAYTON TYPICAL DETAIL for BORE UNDER PAVED ROADS / HIGHWAY

- APS MODEL AC PULL-ON END SEAL

OR APPROVED EQUAL

if water course is wider than 15'.

TOWN of CLAYTON STANDARD STREAM/CREEK CROSSING

All stream xings shall require steel casing. See detail C07.01. Valves shall be a

Clearance from stream bed to top of encasement shall be a minimum of 2'-0".

If this line is a waterline, provide a minimum of 30" of cover & 5'-0" of cover

minimum of 20 ft from end of casing if valves are in line with casing.

