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PROJECT: P-5705A

BEGIN PROJECT

VICINITY MAP

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS T.I.P. NO.

P-5705A UC-1

SHEET NO.

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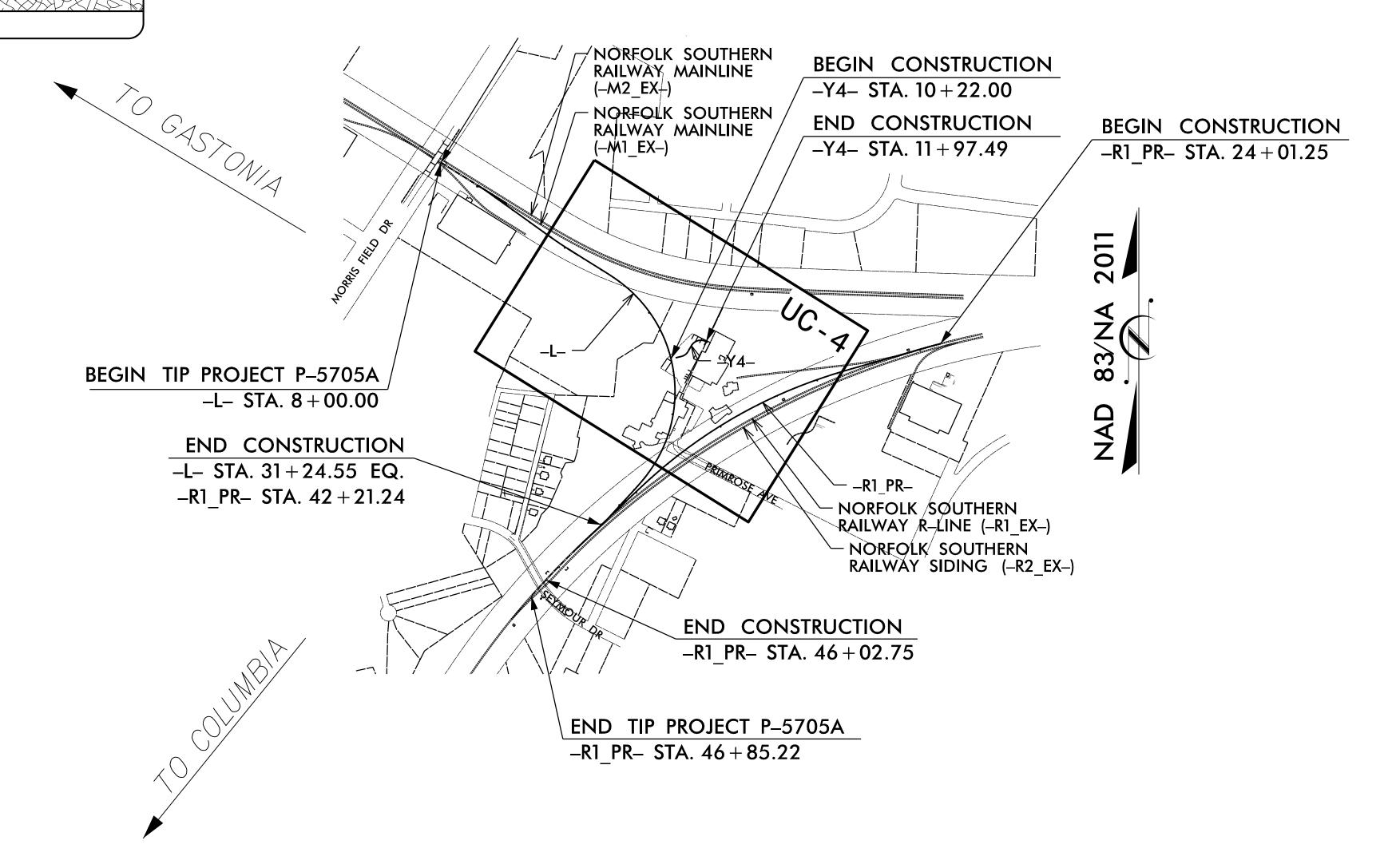
TO CHARLOTTE

UTILITY CONSTRUCTION PLANS MECKLENBURG COUNTY

LOCATION: CHARLOTTE JUNCTION NS MP 381.4

NS R-LINE MP R-0.3 TO MP R-0.5

TYPE OF WORK: WATER & SEWER RELOCATIONS



GRAPHIC SCALES

50 25 0 50 100

PLANS

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PROFILE (HORIZONTAL)

10 5 0 10 20

PROFILE (VERTICAL)

INDEX OF SHEETS

SHEET NO.

UC-1

UC-2

PERMITS

UC-2A

UTILITY SYMBOLOGY

UC-3

NOTES

UC-3A TO 3D

DETAILS

UC-4

UTILITY CONSTRUCTION SHEET

UC-4A

UTILITY CONSTRUCTION PHASING

PROFILE SHEET

WATER AND SEWER OWNERS ON PROJECT

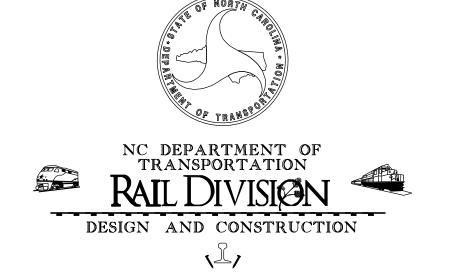
(A) WATER – CHARLOTTE WATER (B) SEWER – CHARLOTTE WATER



Jordan K. Chapman UTILITIES PROJECT DESIGNER

Clint L. Stevens, P.E. UTILITIES PROJECT MANAGER
Corey D. Bousquet, P.E. UTILITIES PROJECT ENGINEER





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COMPLETED	REVISED:			F32D777EB42D
	NORTH CAROL DEPARTMENT TRANSPORTA	OF	13,7,7,7	NOGINEE LANGE

	DESIGNED BY: C	DB	Manning.
	DRAWN BY: J	KC	ATH CAROL
	CHECKED BY: C	יומטי	a Signed Spy
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	NORTH CAROLIN DEPARTMENT O TRANSPORTATIO	NA F	10/20/2022
	UTILITIES ENGINEERII PHONE: (919)707- FAX: (919)250-41	-6690 UTILI	TY CONSTRUCTION PLANS ONLY
UT]	LITY CO	ONSTR	UCTION

	APPLICATION FOR PERMIT FOR WATER MAIN EXTENSION
PROJECT NAME:	PROPOSED 64" WATER LINE RELOCATION TO SERVE P-5705A CHARLOTTE JUNCTION PROJECT
	P-5705A CHARLOTTE JUNCTION PROJECT
CLTWater PROJECT NO.:	CPM-20-21-130
PROJECT DESCRIPTION:	PPROPOSED 268 L.F. OF 64" WATER MAIN WITH IT'S ASSOCIATED FITTINGS IN THE CITY OF CHARLOTTE
DESIGNED BY: FIRM:	HINDE ENGINEERING, INC.
ENGINEER:	CLINT L. STEVENS, PE
ADDRESS:	401 HARRISON OAKS BLVD. , SUITE 220 CARY, N. C. 27513
PHONE:	(919) 653-0001
NORTH CAROLINA GENEI CLTWater HAS BEEN GRA 15A NCAC 18C.1801. TH AND SPECIFICATIONS AP OF CLTWater OR ITS AUT STATE OF NORTH CAROL	DE UNDER AND IN FULL ACCORD WITH THE PROVISIONS OF CHAPTER 130A-317 OF THE RAL STATUTES, AND SUCH OTHER STATUTES AS RELATED TO PUBLIC WATER SYSTEMS. ANTED AUTHORITY TO ISSUE PERMITS FOR EXTENSION OF WATER MAINS PURSUANT TO E APPLICANT AGREES THAT NO SIGNIFICANT CHANGE OR DEVIATION FROM THE PLANS PROVED BY CLTWater WILL BE MADE WITHOUT THE WRITTEN CONSENT AND APPROVAL HORIZED REPRESENTATIVE. A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE INA SHALL SUBMIT A STATEMENT REFLECTING THAT ADEQUATE OBSERVATIONS DURING IN OF CONSTRUCTION INDICATES THAT CONSTRUCTION WAS COMPLETED IN ACCORDANCE AND SPECIFICATIONS.
PERMIT NO.	
APPROVED:	DATE

APPLICATION FOR NON-DISCHARGE PERMIT **GRAVITY SEWER MAIN EXTENSION** CHARLOTTE WATER PROPOSED 12" SANITARY SEWER RELOCATION TO SERVE CREEK BASIN COFFEY CREEK PROJECT NAME P-5705A CHARLOTTE JUNCTION PROJECT CLTWater PROJECT NO.: CPM-40-21-131 PROJECT TYPE: NEW CONSTRUCTION RELOCATION MODIFICATION OF PERMIT NO. **VOLUME OF WASTEWATER GENERATED BY THIS PROJECT:** GALLONS PER DAY BASED ON 190 GAL/DAY/SINGLE FAMILY HOUSEHOLD X ______N/A HOUSEHOLDS OR 135 GAL/DAY/MULTI-FAMILY UNIT X ______N/A ____ UNITS OR IS BASED ON : WASTEWATER TREATMENT PLANT RECEIVING WASTEWATER: \bowtie McALPINE CR. (NC0024970) | IRWIN CR. (NC0024945) McDOWELL CR. (NC0036277) MALLARD CR. (NC0030210) SUGAR CR. (NC0024937) NATURE OF WASTEWATER ______ % DOMESTIC ______ % INDUSTRIAL X SUBDIVISION X COMMERCIAL ORIGIN OF WASTEWATER X SCHOOL INDUSTRIAL APARTMENTS/CONDO'S OTHER ___ LIST ANY PARAMETER AND ITS CONCENTRATION THAT WILL BE GREATER THAN NORMAL DOMESTIC LEVELS: IF WASTEWATER IS NON-DOMESTIC, DESCRIBE LEVEL OF PRETREATMENT: IF A PRETREATMENT PERMIT IS REQUIRED, HAS ONE BEEN ISSUED? YES NO HAS ENGINEER DETERMINED THAT DOWNSTREAM SEWERS ARE CAPABLE TO HANDLE THIS FLOW? X YES NO PERMIT NO. FOR SEWERS IMMEDIATELY DOWNSTREAM _ PIPE DIAMETER OF SEWERS IMMEDIATELY DOWNSTREAM _ 10-INCH HAS ENGINEER DETERMINED THAT NC DEM AND CLTWater MINIMUM DESIGN STANDARDS ARE MET BY THIS PROJECT? XES __ NO COMPLETE NAME AND ADDRESS OF ENGINEERING DESIGN FIRM: HINDE ENGINEERING, INC. 401 HARRISON OAKS BLVD., SUITE 220 CARY, N. C. 27513 TELEPHONE _____ 919 __ - ____ 653 __ - ____ 0001 PROFESSIONAL ENGINEER'S CERTIFICATION: CLINT L. STEVENS, PE , ATTEST THAT THIS APPLICATION FOR 12" SAN. SEWER RELOCATION TO SERVE P-5705A CHARLOTTE JUNCTION PROJECT HAS BEEN REVIEWED BY ME AND IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE. I FURTHER ATTEST THAT TO THE BEST OF MY KNOWLEDGE THE PROPOSED DESIGN HAS BEEN PREPARED IN ACCORDANCE WITH THE APPLICABLE REGULATIONS. ALTHOUGH CERTAIN PORTIONS OF THIS SUBMITTAL PACKAGE MAY HAVE BEEN DEVELOPED BY OTHER PROFESSIONALS, INCLUSION OF THESE MATERIALS UNDER MY SIGNATURE AND SEAL SIGNIFIES THAT I HAVE REVIEWED THIS MATERIAL AND HAVE JUDGED IT TO BE CONSISTENT WITH THE PROPOSED DESIGN. NORTH CAROLINA PROFESSIONAL ENGINEER'S SEAL, SIGNATURE, AND DATE: CLTWater PERMIT NO. ______ ISSUED _____ PLANT FLOW ALLOCATION RECORDED BY: PERMIT APPROVED BY: _____ JOSEPH C WILSON, P.E., CHIEF ENGINEER



PROJECT REFERENCE NO. SHEET NO. UC-2A

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

Water Line (Sized as Shown) 11½ 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 REM FH 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)

REV: 2/1/2012

Sewer Pump Station

PROPOSED MISCELLANOUS UTILITIES SYMBOLS

ower Pole ····································	Thrust Block ·····
elephone Pole	Air Release Valve
oint Use Pole ····································	Utility Vault
elephone Pedestal ····································	Concrete Pier
tility Line by Others Type as Shown)	Steel Pier
renchless Installation	Plan Note
ncasement by Open Cut	Pay Item Note
ncasement	PAY ITEM

EXISTING UTILITIES SYMBOLS

Power Pole	_	*Underground Power Line	
Fower Pole			
Telephone Pole	-•-	*Underground Telephone Cable	
Joint Use Pole		*Underground Telephone Conduit	
Utility Pole	•	*Underground Fiber Optics Telephone Cable ———— T FO	
Utility Pole with Base		*Underground TV Cable	
H-Frame Pole	•—•	*Underground Fiber Optics TV Cable	
Power Transmission Line Tower		*Underground Gas Pipeline	
Water Manhole	③	Aboveground Gas Pipeline	
Power Manhole		*Underground Water Line	
Telephone Manhole	Θ	Aboveground Water Line	
Sanitary Sewer Manhole	⊕	*Underground Gravity Sanitary Sewer Liness	
Hand Hole for Cable	H _H	Aboveground Gravity Sanitary Sewer Line A/G Sanitary Sewer	
Power Transformer		*Underground SS Forced Main Line	
Telephone Pedestal	T	Underground Unknown Utility Line	
CATV Pedestal		SUE Test Hole	
Gas Valve	\Diamond	Water Meter	
Gas Meter	♦	Water Valve ····································	
Located Miscellaneous Utility Object	\odot	Fire Hydrant	
Abandoned According to Utility Records	AATUR	Sanitary Sewer Cleanout ⊕	
End of Information	E.O.I.		

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

GENERAL NOTES:

SENSITIVE MATERIALS DO NOT DUPLICATE

ENGINEERING License No. C-2639 401 Harrison Oaks Blvd., Suite 220 Cary, NC 27513

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PROJECT REFERENCE NO. SHEET NO.

P-5705A

DESIGNED BY: CDB

DRAWN BY: JKC

CHECKED BY: CDB

APPROVED BY: CLS

REVISED:

NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION

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

PLANS ONLY

UTILITY CONSTRUCTION

- 12. THE CONTRACTOR SHALL PROVIDE THE ANODE TEST STATION AND CATHODIC PROTECTION DESIGN PLANS AND SPECIFICATIONS SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA. THE PLANS SHALL BE REVIEWED AND APPROVED BY NCDOT AND CHARLOTTE WATER PRIOR TO THE ANODE STATION AND CATHODIC PROTECTION BEING INSTALLED.
- 13. THE STEEL WATER PIPE FITTINGS SHALL BE IN ACCORDANCE WITH AWWA C200. THE INTERIOR CEMENT MORTAR LINING AND SEAL COAT SHALL BE IN ACCORDANCE WITH AWWA C205. THE EXTERIOR COAL TAR PROTECTIVE COATING SHALL BE IN ACCORDANCE WITH AWWA C203.

MANUFACTURES AND CONTRACTOR'S QUALIFICATIONS:

- 1. ALL STEEL WATER PIPE, MANWAYS, AND FITTINGS SHALL BE FURNISHED BY MANUFACTURERS WHO ARE EXPERIENCED, REPUTABLE, AND QUALIFIED IN MANUFACTURE OF THE MATERIALS TO BE FURNISHED. THE STEEL WATER PIPE, MANWAYS AND FITTINGS SHALL BE DESIGNED, CONSTRUCTED, AND INSTALLED IN ACCORDANCE WITH THE BEST PRACTICES AND METHODS AND SHALL COMPLY WITH THE SPECIFICATIONS AS APPLICABLE.
- 2. TO DEMONSTRATE QUALIFICATIONS TO PERFORM THE WORK, THE BIDDERS SHALL SUBMIT RESUMES, PROJECT LISTS, AND OTHER SUPPORTING DOCUMENTS DEMONSTRATING THEIR EXPERIENCE WITH LARGE STEEL WATER LINE INSTALLATIONS.
- 3. CHARLOTTE WATER RESERVES THE RIGHT TO REQUEST AND OBTAIN ADDITIONAL INFORMATION FROM THE BIDDER OR THEIR UTILITY SUBCONTRACTOR TO SEEK REFERENCES OF BIDDER'S PROJECT EXPERIENCE.
- 4. THE CONTRACTOR THAT WILL PERFORM THE INSTALLATION OF THE PROPOSED 64"STEEL WATER MAIN SHALL PROVIDE EVIDENCE DEMONSTRATING SUCCESSFUL COMPLETION IN THE LAST (10) YEARS OF CONSTRUCTION PROJECTS OF STEEL WATER LINES 48" AND LARGER. THE CONTRACTOR WHO PERFORMS THE WORK MUST BE LICENSED IN NORTH CAROLINA.

UTILITY CONSTRUCTION

- 1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2018.
- 2. THE EXISTING WATER AND SEWER FACILITIES BELONG TO CHARLOTTE WATER.
- 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
 ENVIRONMENT 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 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 SHALL CONNECT ALL WATER LINES AND SERVICE CONNECTIONS USING NECESSARY FITTINGS.
- 2. CONTRACTOR IS REQUIRED TO CONTACT BILL DEAL, PE, OF CLTWATER, AT (980)722-0786 AT LEAST 4 WEEKS PRIOR TO ANY WATER AND SEWER CONSTRUCTION.
- 3. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING THE THICKNESS OF THE EXISTING 64" STEEL WATER LINE BEFORE ORDERING THE NEW 64" WATER LINE. THE METHOD USED TO DETERMINE THE THICKNESS OF THE EXISTING 64" STEEL WATER LINE WILL NEED TO BE REVIEWED AND APPROVED BY CHARLOTTE WATER.
- 4. THE SPIRAL WELDED STEEL WATER PIPE SHALL BE IN ACCORDANCE WITH AWWA C200, CLASS 150. THE INTERIOR CEMENT MORTAR LINING AND SEAL COAT SHALL BE IN ACCORDANCE WITH AWWA C205. THE EXTERIOR COAL TAR PROTECTIVE COATING SHALL BE IN ACCORDANCE WITH AWWA C203.

- 5. THE STEEL WATER PIPE AND FITTING
 JOINTS SHALL BE LAP WELDED IN
 ACCORDANCE WITH AWWA C200 AND AS SHOWN
 IN CHAPTER 8 OF AWWA M11. WELDERS SHALL
 MAINTAIN CURRENT QUALIFICATIONS UNDER
 THE PROVISIONS OF AWS B2.1 OR ASME
 SECTION IX.
- 6. CHARLOTTE WATER WILL HAVE AN INSPECTOR ON SITE DAILY.
- 7. PRIOR TO WATER AND/OR SEWER
 CONSTRUCTION, THE CONTRACTOR MUST
 SUBMIT TO THE ENGINEER AND BILL DEAL,
 PE THE PROPOSED UTILITY MATERIAL
 SUBMITTALS AND SHOP DRAWINGS, AS
 APPLICABLE FOR CHARLOTTE WATER REVIEW
 AND OBTAIN CHARLOTTE WATER APPROVAL OF
 UTILITY MATERIAL SUBMITTALS AND SHOP
 DRAWINGS.
- 8. THE CONTRACTOR SHALL KEEP THE APPOINTED REPRESENTATIVE FROM CHARLOTTE WATER INFORMED OF THE WORK PROGRESS AND PROVIDE OPPORTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.
- 9. THE EXISTING 64"WATER LINE CAN ONLY BE SHUT DOWN BETWEEN NOVEMBER 30 TO FEBRUARY 28. THE CONTRACTOR WILL BE ALLOWED 2 WEEKS TO SHUT DOWN THE EXISTING 64" WATER LINE TO MAKE THE TIE-INS FOR THE NEW WATER LINE.
- 10. THE CONTRACTOR SHALL MAINTAIN WATER AND SEWER SERVICE TO EXISTING CUSTOMERS DURING CONSTRUCTION, MINIMIZE THE DURATION OF ANY SERVICE DISRUPTION, AND NOTIFY THE CHARLOTTE WATER REPRESENTATIVE AT LEAST 48 HOURS IN ADVANCE OF ANY SCHEDULED SERVICE DISRUPTION.
- 11. PROVIDE MATERIALS FOR THE PROPOSED WATER AND SEWER UTILITIES CONSTRUCTION MEETING THE APPLICABLE REQUIREMENTS (I.E. MATERIAL SPECIFICATIONS, STANDARD DETAILS, TESTING, POLICIES, ETC.) OF CHARLOTTE WATER'S STANDARD SPECIFICATIONS AND APPLICABLE CURRENT CHARLOTTE WATER STANDARD DETAILS AS OF DATE OF ADVERTISEMENT. CHARLOTTE WATER SPECIFICATIONS AND DETAILS CAN BE OBTAINED FROM CHARLOTTE WATER AT HTTP://CHARLOTTENC.GOV/WATER/PAGES/DESIGNMANUAL.ASPX.

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WATER LINE DETAILS

ENGINEERING
License No. C-2639
401 Harrison Oaks Blvd., Suite 220 Cary, NC 27513

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CHECKED BY: CDB

APPROVED BY: CLS

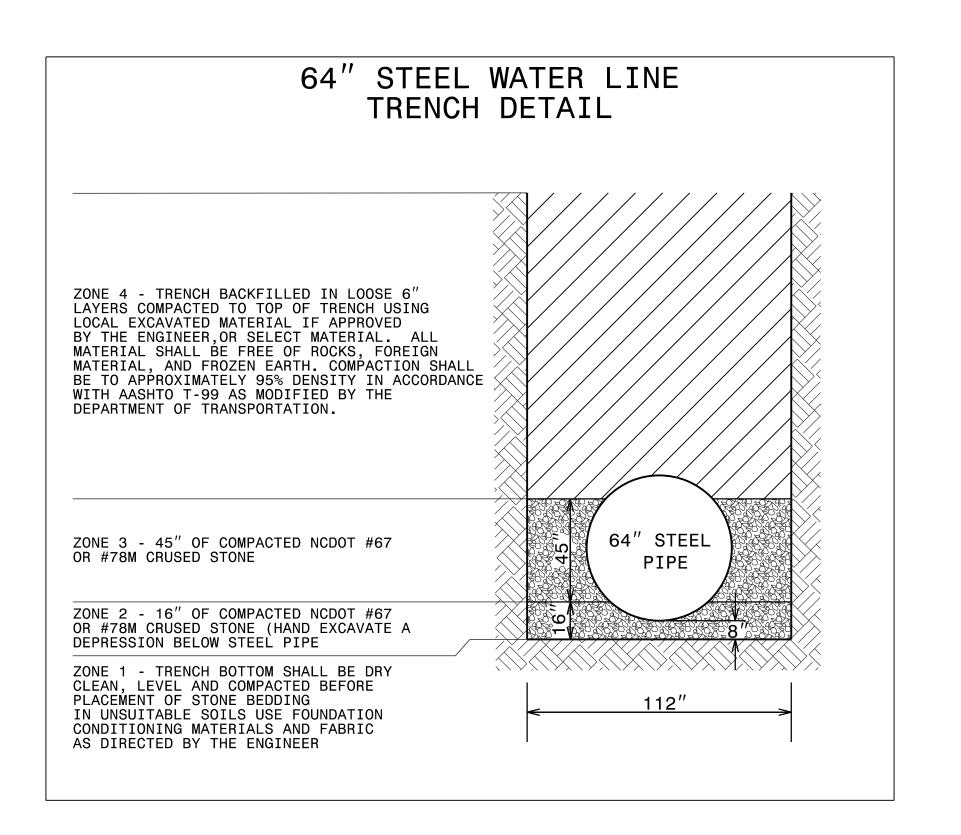
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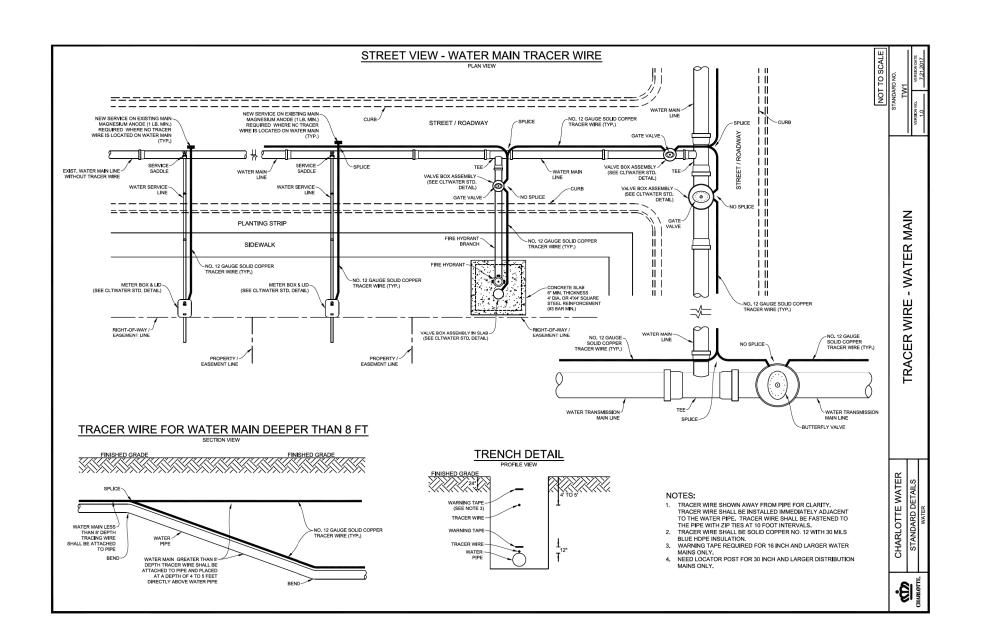
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DEPARTMENT OF
TRANSPORTATION

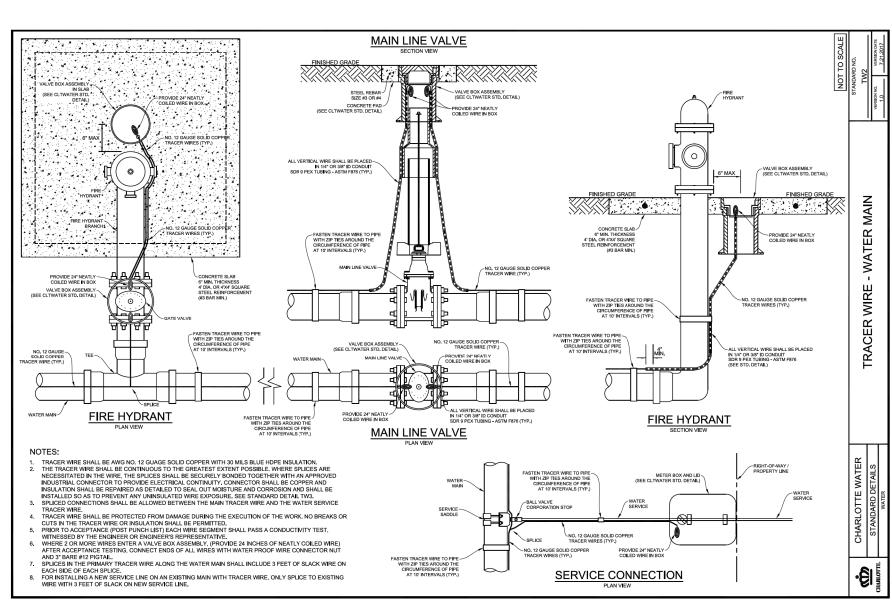
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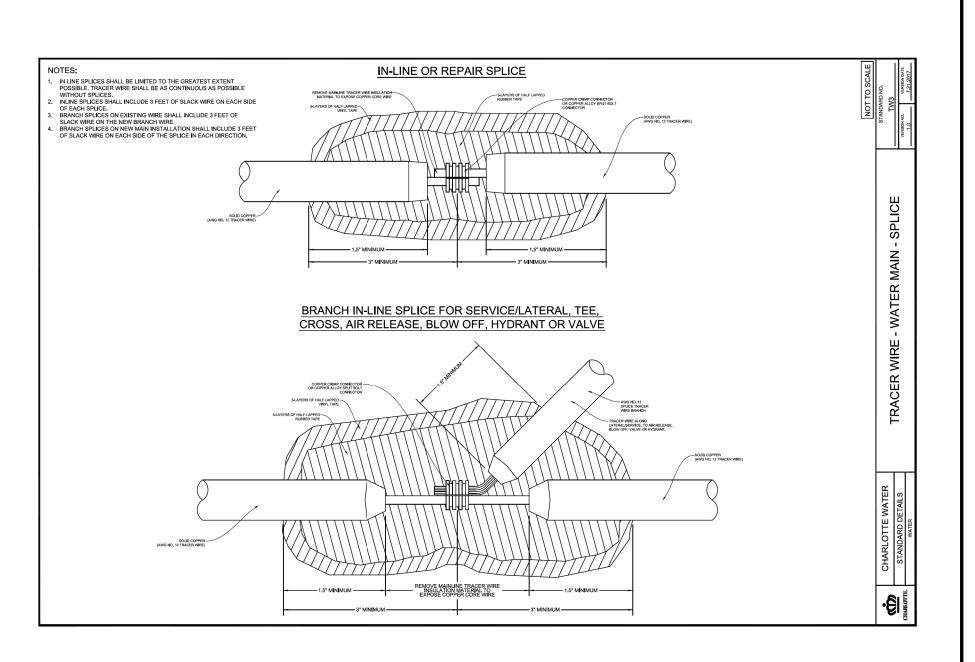
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UTILITY CONSTRUCTION







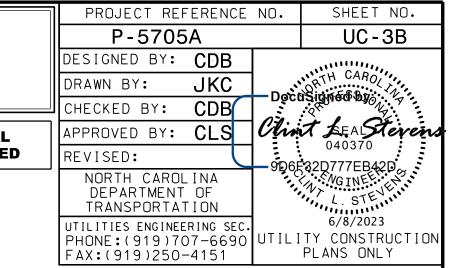


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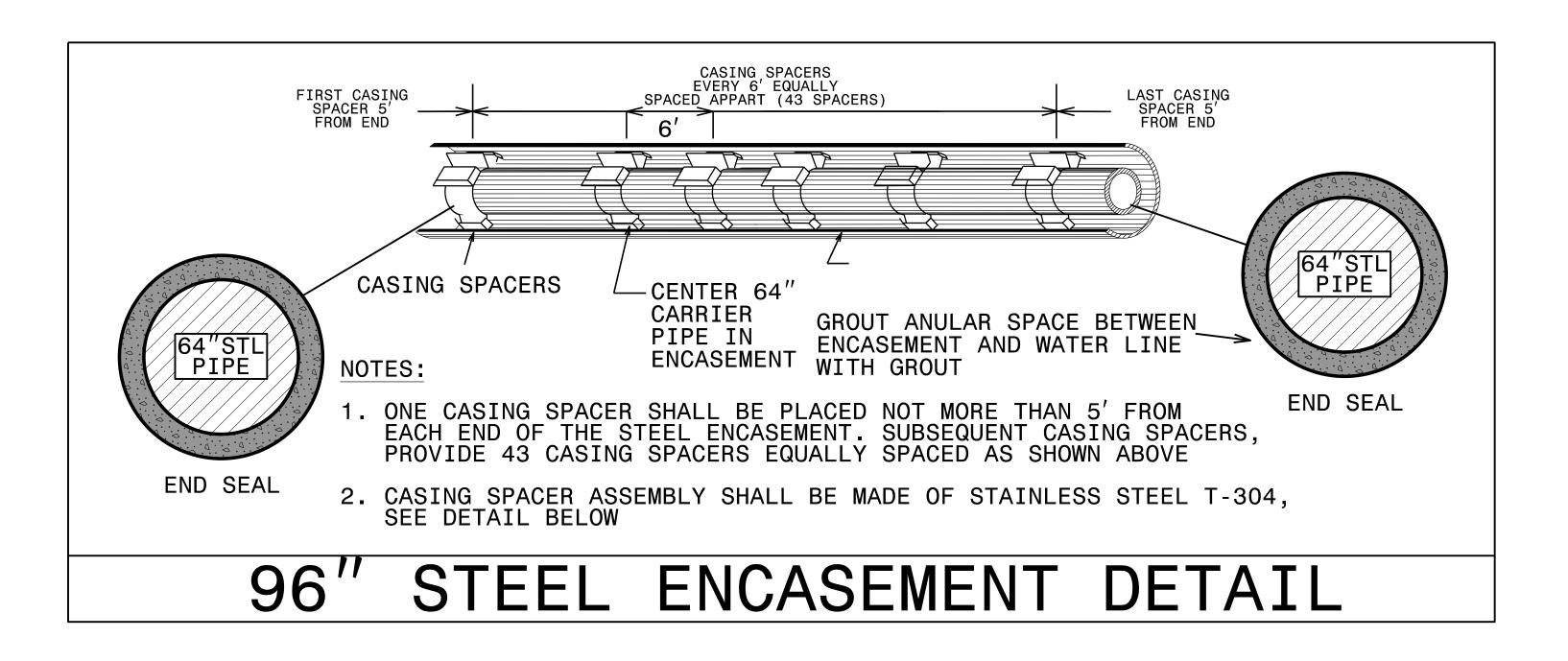
WATER LINE DETAILS

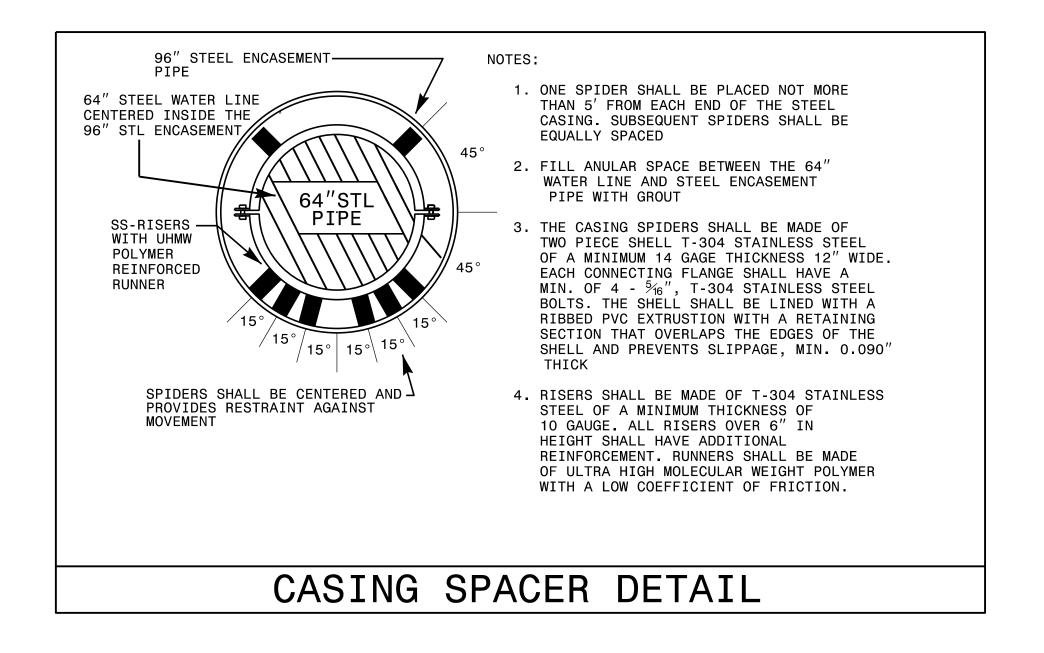


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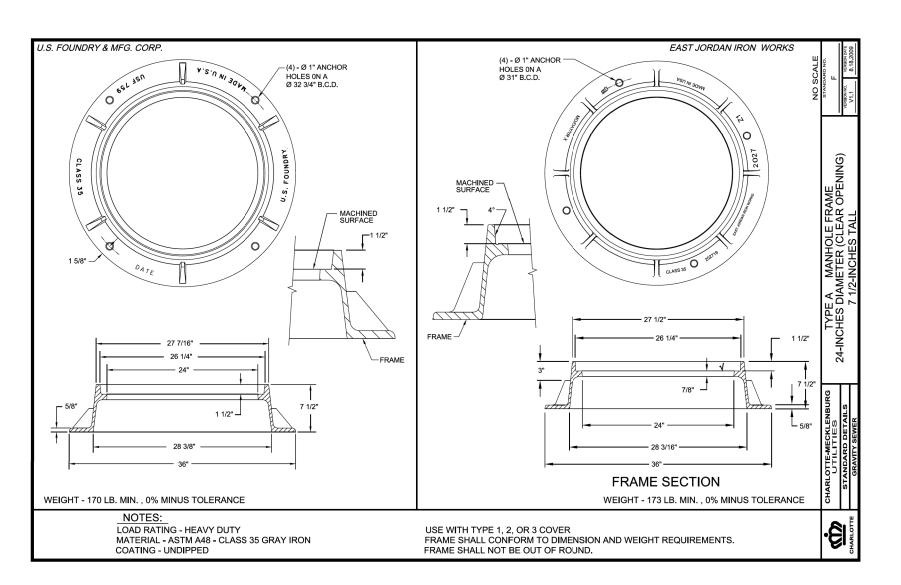


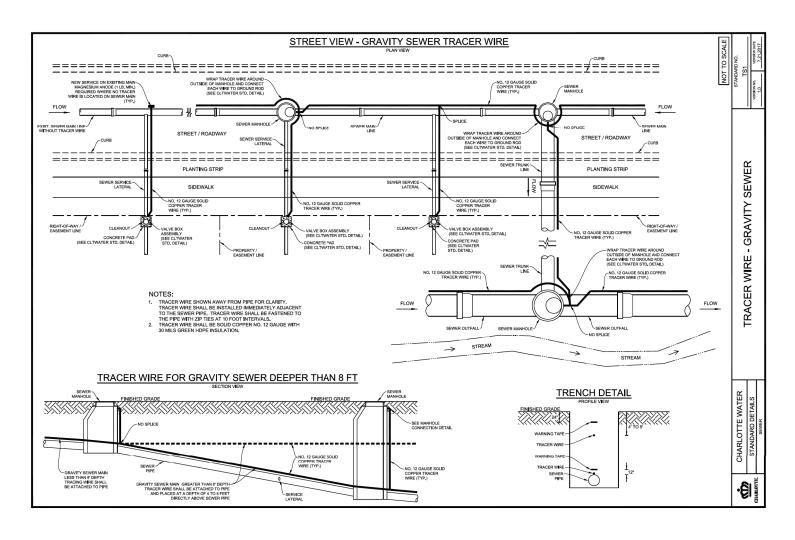
UTILITY CONSTRUCTION

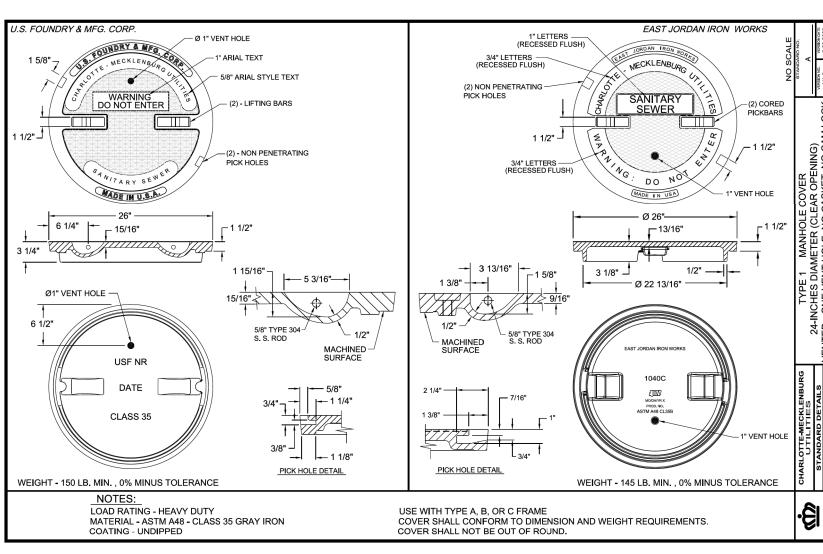


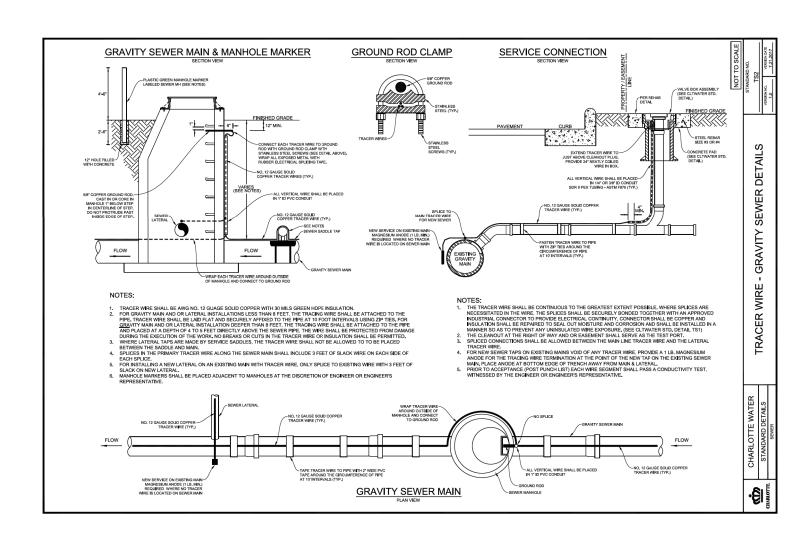


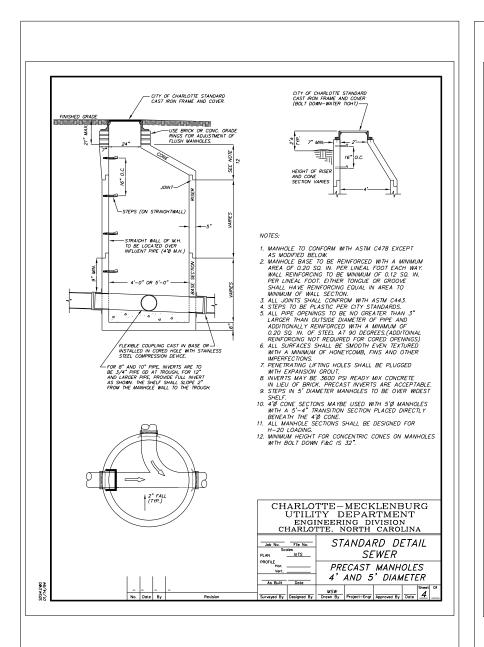
SEWER LINE DETAILS

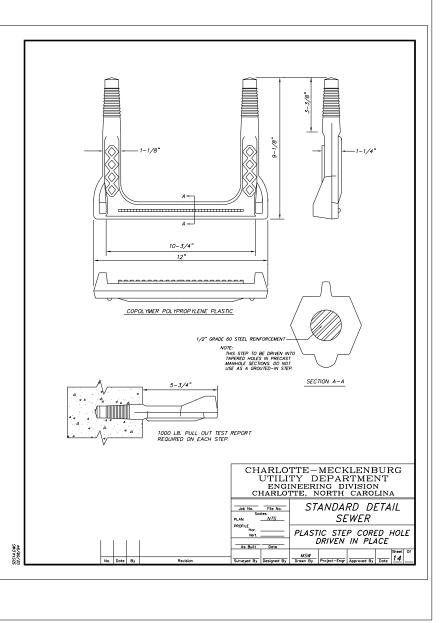


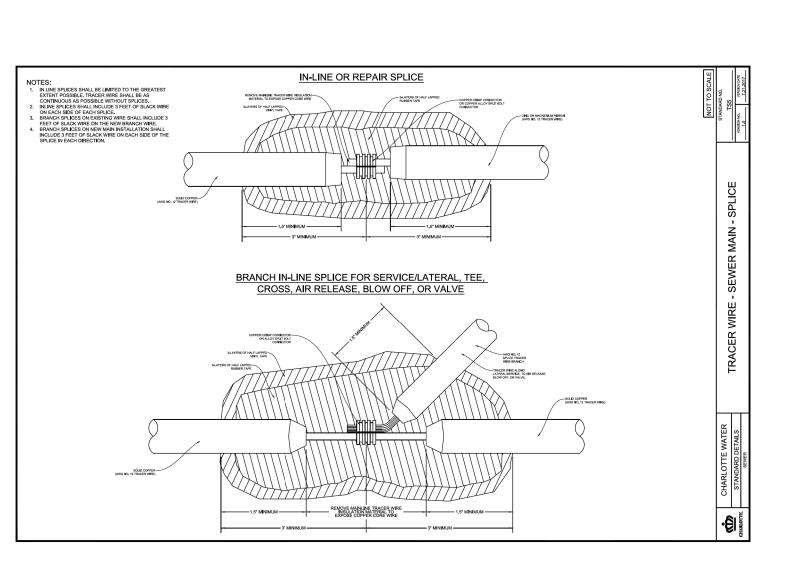














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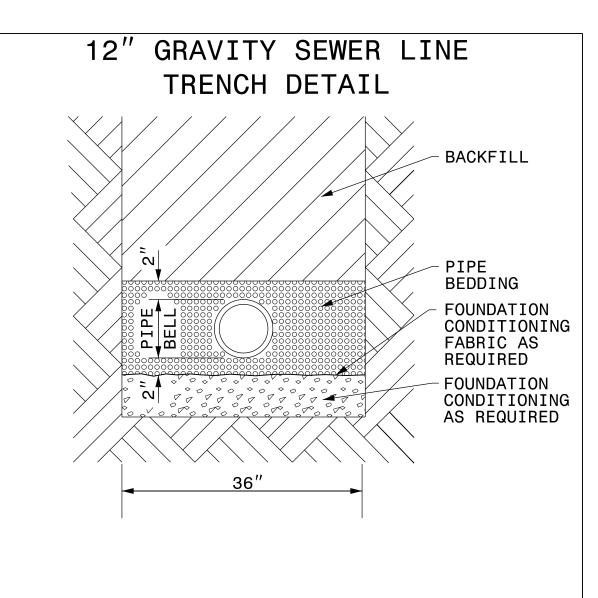
NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION

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

PLANS ONLY

UTILITY CONSTRUCTION

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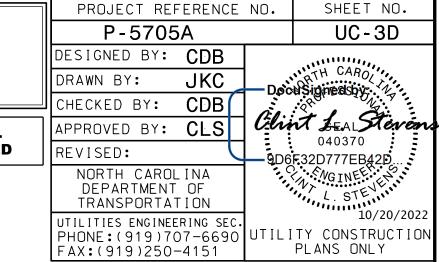
PLACE FOUNDATION CONDITIONING MATERIAL BELOW BEDDING IF REQUIRED, AS DIRECTED BY ENGINEER. PIPE BEDDED IN SELECT MATERIAL, CLASS II (TYPE 1) OR CLASS III. TRENCH BACKFILLED IN LOOSE 6" LAYERS COMPACTED TO TOP OF TRENCH USING LOCAL EXCAVATED MATERIAL IF APPROVED BY THE ENGINEER, OR SELECT MATERIAL. ALL 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.

MANWAY AND VAULT DETAIL

BILCO TYPE J-4AL CHANNEL FRAME 36" X 36" ALUMINUM DOUBLE LEAF ACCESS DOOR REINFORCED FOR AASHTO HS-20 WHEEL LOAD WITH RECESSED DOOR HANDLE AND -LOCKING DEVICE-OPENS TO 90 DEGREES AND LOCKS AUTOMATICALLY WITH LIFT ASSISTANCE

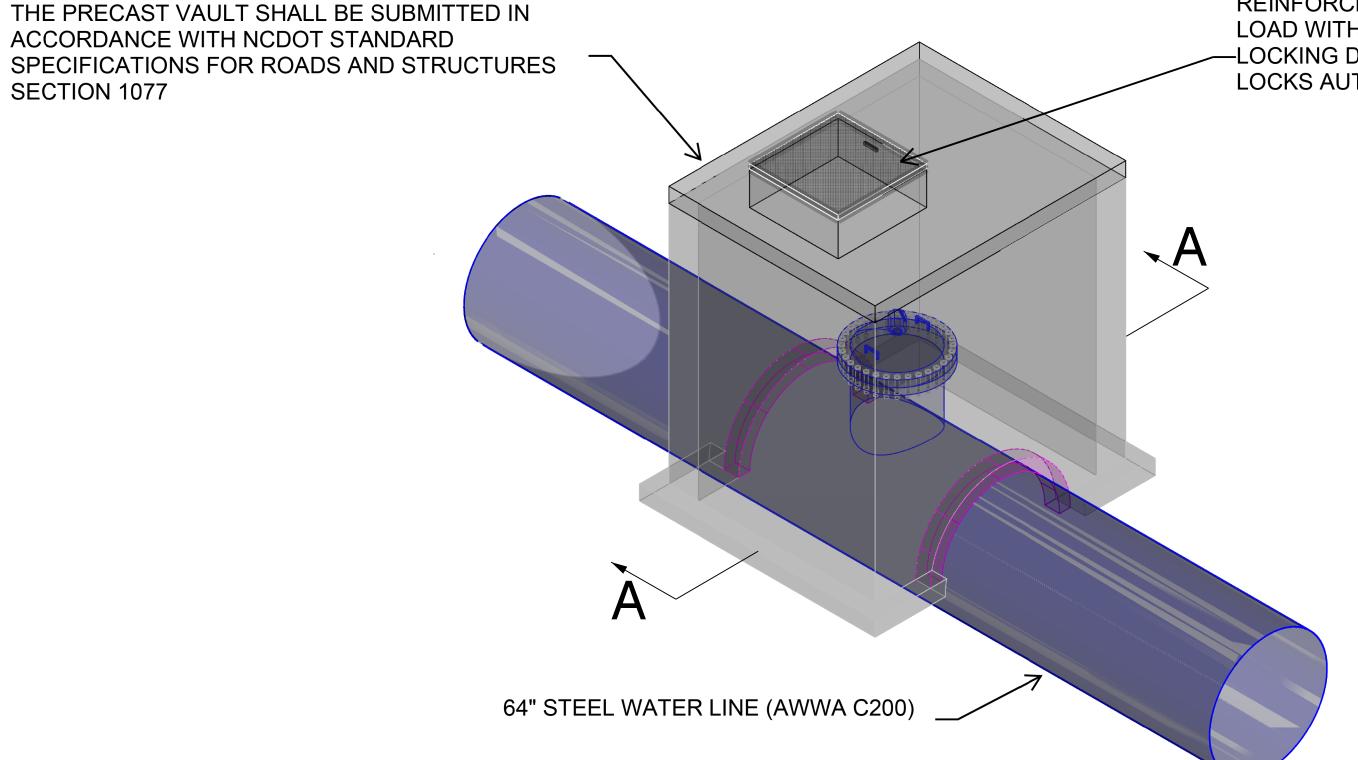


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SENSITIVE MATERIALS DO NOT DUPLICATE



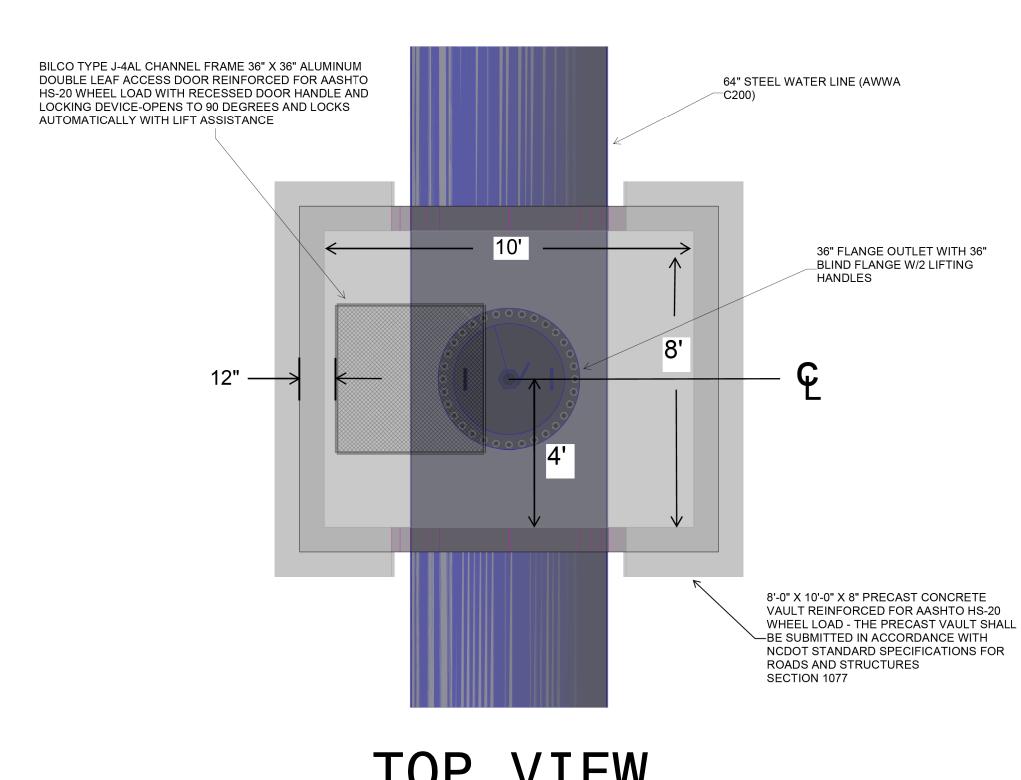
BILCO TYPE J-4AL CHANNEL FRAME 36" X 36" ALUMINUM DOUBLE LEAF ACCESS DOOR REINFORCED FOR AASHTO HS-20 WHEEL LOAD WITH RECESSED DOOR HANDLE AND 36" X 36" PRECAST CONCRETE LOCKING DEVICE-OPENS TO 90 DEGREES AND LOCKS RISER REINFORCED FOR AASHTO AUTOMATICALLY WITH LIFT ASSISTANCE HS-20 WHEEL LOAD – FINAL GRADE 8'-0" X 10'-0" X 8" PRECAST CONCRETE TOP REINFORCED FOR -AASHTO HS-20 WHEEL LOAD 2" TAPPED OPENING W/2" NIPPLE, PLUG & BALL VALVE 8'-0" X 10'-0" X 8" PRECAST CONCRETE 36" FLANGE OUTLET WITH 36" VAULT REINFORCED FOR AASHTO HS-20 BLIND FLANGE W/2 LIFTING WHEEL LOAD - THE PRECAST VAULT HANDLES SHALL BE SUBMITTED IN ACCORDANCE WITH NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES 64" STEEL WATER LINE (AWWA C200) #67 OR 78M CRUSHED STONE ONLY USE 12" OF STONE TO SPRINGLINE FILL ABOVE BELOW THE WATER PIPE AT SPRINGLINE AFTER VAULT THE VAULT LOCATIONS-USE 8" — PLACEMENT ALONG THE WATER PIPE

8'-0" X 10'-0" X 8" PRECAST CONCRETE VAULT

SECTION 1077

REINFORCED FOR AASHTO HS-20 WHEEL LOAD -

SECTION A-A VIEW



TOP VIEW

NOT TO SCALE

HINDE ENGINEERING License No. C-2639 401 Harrison Oaks Blvd., Suite 220 Cary, NC 27513

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT REFERENCE NO. SHEET NO.

P-5705A

DESIGNED BY: CDB

DRAWN BY: JKC

CHECKED BY: CDB

APPROVED BY: CLS

REVISED:

NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION

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

UTILITY CONSTRUCTION

ANODE HEADER CABLE SPLICE ANODE HEADER CABLE ANODE HEADER CABLE ANODE HEADER CABLE ANODE HEADER CABLE THERMITE WELD (TYPICAL). INSTALL PREPACKAGED MAGNESIUM ANODES FOR STEEL PIPE CABLE CABLE

PROJECT TYPICAL DETAILS

TEST STATION (ANODE)

NOT TO SCALE

THE ANODE TEST STATION DETAIL IS A GENERAL REPRESENTATION OF THE EXISTING CATHODIC PROTECTION BEING IMPACTED BY THE PROPOSED 64" WATER LINE, THE CONTRACTOR WILL BE RESPONSIBLE TO PREPARE DESIGN PLANS AND SPECIFICATIONS FOR THE PROPOSED CATHODIC PROTECTION SIGNED AND SEALED BY A NORTH CAROLINA PROFESSIONAL ENGINEEER. THE CONTRACTOR SHALL HAVE A CERTIFIED CATHODIC PROTECTION SPECIALIST TO INSTALL THE TEST STATION AND CATHODIC PROTECTION.

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