

5/14/99

GENERAL NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE SALISBURY-ROWAN UTILITIES(SRU) AND NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" AND STANDARD DRAWINGS DATED JANUARY 2018.

2. THE EXISTING WATER MAIN AND SANITARY SEWER MAIN BELONG TO SALISBURY-ROWAN UTILITIES (SRU) (I.E. UTILITY OWNER).

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, AND SALISBURY-ROWAN UTILITIES. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.

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 AND SALISBURY-ROWAN UTILITIES. 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 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 UTILITY 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. PROPOSED WATER LINE SHALL BE PC (PRESSURE CLASS) 350 D.I.R.J. (DUCTILE IRON RESTRAINED JOINT) PIPE, FITTINGS, VALVES AND UTILITY CONTROLS

2. PROPOSED SANITARY SEWER LINE SHALL BE PC (PRESSURE CLASS) 350 D.I. (DUCTILE IRON) PIPE, FITTINGS WITH PIPE INTERIOR PROTECTIVE COATINGS.

2. ALL FITTINGS SHALL BE DUCTILE IRON, RESTRAINED JOINT, SHALL HAVE A MINIMUM WORKING PRESSURE RATING OF 350 PSI, A MINIMUM IRON STRENGTH OF 25,000 PSI AND BE DOMESTIC MANUFACTURED

3. 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 IS ALLOWED TO STREAM, WETLANDS, OR BUFFER ZONES.

4. THE CONTRACTOR SHALL COORDINATE ISOLATION OF THE EXISTING WATER MAIN FOR TIE-INS WITH SALISBURY-ROWAN UTILITIES. IF TEMPORARY SHUT DOWN IS REQUIRED THE CONTRACTOR WILL COORDINATE THIS SHUT DOWN WITH SALIBURY-ROWAN UTILITIES IN A MANNER THAT IS MOST CONVENIENT FOR CUSTOMERS AND SALISBURY-ROWAN UTILITIES.

5. EXISTING WATER VALVES SHALL ONLY BE OPERATED BY SALISBURY-ROWAN UTILITIES PERSONNEL.

6. CONTRACTOR TO PLACE CONCRETE THRUST COLLAR AROUND THE EXISTING DUCTILE IRON (DI) PIPE AS SHOWN IN THE PLANS.

7. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED TESTS, REVIEWING THE RESULTS AND ENSURING THAT ALL WORK NOT IN CONFORMANCE IS CORRECTED OR REPLACED. THE SRU INSPECTOR SHALL BE COPIED ON ALL TEST RESULTS WHICH DO NOT MEET THE STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL KEEP RECORDS AND RESULTS OF ALL TESTS, INCLUDING TESTS ON FAILED WORK WHICH HAS BEEN CORRECTED THROUGH THE WARRANTY PERIOD.

AT THE END OF THE JOB, PRIOR TO ACCEPTANCE BY SRU, THE CONTRACTOR SHALL SUBMIT A NOTARIZED STATEMENT CERTIFYING THAT HE HAS REVIEWED THE TEST RESULTS AND THAT ALL TEST RESULTS WERE ACCEPTABLE AND/OR HE HAS CORRECTED ANY DEFICIENCIES.

UTILITY CONSTRUCTION

THIS CERTIFICATION SHALL BE MADE BY AN OFFICER OR PRINCIPAL OF THE COMPANY, AND SHALL BE IN THE FOLLOWING FORM:

I, (NAME) (TITLE) OF (COMPANY) CERTIFY THAT ON (NAME OF JOB) TESTING HAS BEEN DONE IN ACCORDANCE WITH THE SPECIFICATIONS AND STANDARDS OF THE CITY OF SALISBURY'S MANUAL OF STANDARDS AND THAT I HAVE REVIEWED THOSE TEST RESULTS AND REPAIRED, CORRECTED, OR REPLACED ANY WORK NOT PASSING THE REQUIRED TEST.

8. WATER USED FOR TESTING, FLUSHING, DISINFECTION, ETC., MAY BE PURCHASED FROM THE CITY OF SALISBURY AT PREVAILING RATES (BULK WATER PERMIT REQUIRED). THE USE OF WATER (TIME AND QUANTITY) SHALL BE COORDINATED WITH THE SRU INSPECTOR. SOURCES OTHER THAN CITY OF SALISBURY MAY BE USED IF APPROVED BY THE SRU INSPECTOR. A CITY OF SALISBURY APPROVED (JUMPER) BACKFLOW DEVICE (RP) MUST BE USED WHEN WATER IS OBTAINED FROM EXISTING WATER MAIN (EXISTING WATER LINE TO NEW WATER LINE). WHEN A FIRE HYDRANT IS USED TO SUPPLY WATER FOR FLUSHING, TESTING, ETC. A CITY OF SALISBURY APPROVED BACKFLOW DEVICE (RP) MUST BE USED ON THE FIRE HYDRANT TO PREVENT ANY POSSIBLE BACKFLOW TO THE CITY'S WATER SYSTEM.

A 4" TEMPORARY BACKFLOW DEVICE (RP) WILL BE REQUIRED TO FILL, PRESSURE TEST, CHLORINATE, FLUSH, AND FOR BACTERIOLOGICAL TESTING OF THE NEW WATER LINE (ALL ITEMS MUST BE COMPLETED BEFORE THE NEW WATER LINE CAN BE TIED-IN).

A SRU INSPECTOR MUST BE PRESENT FOR ALL TESTING AND TIE-INS. SRU INSPECTOR WILL ALSO SPOT CHECK ALL CONSTRUCTION (MINIMUM 2-DAY ADVANCE NOTICE IS REQUIRED FOR TESTING AND PRIOR TO THE START OF CONSTRUCTION ADDITIONAL ADVANCE NOTICE WILL BE REQUIRED FOR SHUTTING OFF WATER).

A TEMPORARY 2" BLOW-OFF STUBBED ABOVE GROUND WILL BE REQUIRED FOR FLUSHING AND TESTING PURPOSES.

9. SCHEDULE OF TESTS AND NOTIFICATIONS

10. THE WATER LINE SHALL BE TESTED FOR LEAKAGE. THE WATER LEAKAGE TEST IS A TWO PART TEST; PART A (PRESSURE LOSS) AND PART B ALLOWABLE LEAKAGE. PART A & PART B MUST PASS FOR THE TEST TO BE CONSIDERED SUCCESSFUL.

LEAKAGE TESTS SHALL BE CONDUCTED ON A SCHEDULE AGREED UPON BY THE SRU INSPECTOR, ENGINEER OR ENGINEER'S REPRESENTATIVE AND THE CONTRACTOR. CITY/SRU INSPECTION IS REQUIRED DURING THE TESTS WITH A MINIMUM 48-HOUR NOTICE (2 BUSINESS DAYS).

WATER SERVICES (TAP, SERVICE LINE AND METER SETTER) SHALL BE INSTALLED PRIOR TO WATER LINE LEAKAGE TEST.

THE PIPE SHALL BE FILLED WITH POTABLE WATER FOR A PERIOD OF 24 HOURS BEFORE TESTING BEGINS. IT SHALL BE ENSURED THAT THE PIPE IS FULL OF WATER AND ALL AIR HAS BEEN REMOVED BEFORE TESTING. CONTRACTOR SHALL PRETEST THE WATER LINE PRIOR TO SCHEDULING A TEST WITH ENGINEER AND SRU INSPECTOR.

THE WATER LINE SHALL BE TESTED AT 1.25 TIMES THE HIGHEST WORKING PRESSURE ALONG THE SECTION, OR 200 PSIG, WHICHEVER IS GREATER. THE TEST SHALL BE OF AT LEAST 2 HOURS DURATION AND THE PRESSURE MAY NOT DROP MORE THAN 5 PSIG DURING THE TEST.

ALL EXPOSED PIPE, FITTINGS, VALVES AND HYDRANTS SHALL BE VISUALLY EXAMINED DURING THE TEST.

PIPE HAVING MORE THAN ALLOWED LEAKAGE SHALL BE REPAIRED. ALL VISIBLE LEAKS SHALL BE REPAIRED REGARDLESS OF THE AMOUNT OF LEAKAGE.

ITEM	MINIMUM ADVANCE FREQUENCY	NCDOT/CITY/SRU PRESENCE REQUIRED	MIN. NOTICE (*4)
WATER			
FLUSHING (*1)	AT END OF CONSTRUCTION (*2)	YES	1 HOUR
PRESSURE TESTING (*1)	AT END OF CONSTRUCTION	YES	48 HOURS
STERILIZATION (*1) LAB CONFIRMATION OF FREE CHLORINE LEVEL	AT END OF CONSTRUCTION	YES	24 HOURS
BACTERIOLOGICAL TESTING (LAB)	AT END OF CONSTRUCTION 8:00 AM TO 12:00 PM MONDAY - THURSDAY	YES	1 HOUR
SANITARY SEWER GRAVITY			
CCTV (*3)	AT END OF CONSTRUCTION (*2)	YES	48 HOURS
AIRTEST (*1)	AT END OF CONSTRUCTION	YES	48 HOURS
DEFLECTION	NO SOONER THAN 30 DAYS AFTER FINAL BACKFILL	YES	48 HOURS
MANHOLE VACUUM TESTING	DURING OR AT THE END OF CONSTRUCTION	YES	48 HOURS



1 Glenwood Avenue
Raleigh, NC 27603
Tel:919.789.9977
Fax:919.789.9591
License: C-2197

PROJECT REFERENCE NO. U-5738	SHEET NO. UC-3
DESIGNED BY: WAP	
DRAWN BY: WAP	
CHECKED BY: MET	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

11. VALVES
VALVES SHALL BE FIELD TESTED AS DIRECTED BY AWWA SPECIFICATION C500 AND C504 AS APPLICABLE.

(A) DURING THE LAST STAGES OF THE TEST AND WITHOUT ANY REDUCTION IN PRESSURE, FIRST THE HYDRANT VALVES WILL BE CLOSED, THEN PROGRESSING IN AN ORDERLY MANNER FROM THE END OPPOSITE FROM THE TEST PUMP, EACH MAIN LINE VALVE WILL BE CLOSED AND PRESSURE RELEASED TO DETERMINE IF IT IS HOLDING PRESSURE (MINIMUM 30 MINUTES).

VALVES SHALL BE TESTED ON A SCHEDULE AGREED UPON BY THE SRU INSPECTOR AND THE CONTRACTOR. CITY/SRU INSPECTION IS REQUIRED DURING THE TESTS.

12. STERILIZATION
SAMPLING TAPS SHALL BE PROVIDED EVERY 1,000 FEET AND AT THE END OF EACH BRANCH. TAPS SHALL BE LOCATED AND CONSTRUCTED SO SAMPLES MAY BE EASILY COLLECTED WITHOUT DANGER TO PERSONNEL OR LIKELIHOOD OF SAMPLE CONTAMINATION.

SAMPLING TAPS MAY BE USED AS BLOW-OFFS. THE NUMBER AND LOCATION OF THE TAPS/BLOW-OFFS MUST BE APPROVED BY THE SRU INSPECTOR. HYDRANTS MAY NOT BE USED FOR BACTERIOLOGICAL SAMPLING.

ALL PARTS OF A POTABLE WATER SYSTEM (INCLUDING SERVICE LINES) SHALL BE STERILIZED IN ACCORDANCE WITH AWWA C601 AND THESE SPECIFICATIONS. PREVENTIVE AND CORRECTIVE MEASURES DURING CONSTRUCTION (AWWA C601) SHOULD BE ADHERED TO DURING CONSTRUCTION TO ENSURE SUCCESS OF THE STERILIZATION PROCESS.

LINES SHALL BE INITIALLY CHLORINATED TO 100 MG/L.

LINES MUST HAVE A MINIMUM FREE CHLORINE RESIDUAL OF 24 MG/L AFTER 24 HOURS.

- *1 - SCHEDULE OF WATER USE, INCLUDING ESTIMATE OF AMOUNT, RATE, DAY, TIME AND DURATION MUST BE FILED TEN (10) DAYS PRIOR TO NEED. WATER USE IS SUBJECT TO CITY OF SALISBURY APPROVAL AND AT PREVAILING RATES.
- *2 - OR AS SCHEDULED WITH THE SRU INSPECTOR.
- *3 - AS DIRECTED BY SRU INSPECTOR.
- *4 - MINIMUM NOTICE - SUBJECT TO THE AVAILABILITY OF A SRU INSPECTOR.

UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL UNTIL ALL SIGNATURES ARE COMPLETED

12. (CONTINUED) WHEN THE CONTRACTOR HAS DETERMINED THAT THE LINE HAS BEEN CHLORINATED TO THE PROPER LEVEL, HE SHALL REQUEST A LABORATORY CONFIRMATION OF THE FREE CHLORINE LEVEL. ADVANCE NOTICE SHALL BE GIVEN TO THE SRU INSPECTOR PRIOR TO REQUESTING SAMPLING FOR CHLORINE LEVEL CONCENTRATION (ON SITE TEST) AS REQUIRED IN THE SCHEDULE OF TESTS AND NOTIFICATIONS. IN LIEU OF USING CITY RESOURCES, THE CONTRACTOR MAY USE AN APPROVED CERTIFIED TESTING LAB; HOWEVER, CITY/SRU INSPECTION OF THE TEST IS REQUIRED.

AFTER THE REQUIRED CONTACT TIME (24 HOURS), THE CONTRACTOR SHALL HAVE THE CHLORINE RESIDUAL TESTED AND IF THE CHLORINE LEVELS ARE AT LEAST 24 MG/L THEN THE CONTRACTOR CAN FLUSH THE LINE AND ALL APPURTENANCES WITH SALISBURY DISTRIBUTION WATER UNTIL COMPLETELY PURGED.

NO BACTERIOLOGICAL SAMPLES WILL BE COLLECTED AT POINTS WHERE THE FREE CHLORINE RESIDUAL EXCEEDS THE AMBIENT DISTRIBUTION SYSTEM FREE RESIDUAL BY MORE THAN 0.5 MG/L.

CARE MUST BE TAKEN TO DISCHARGE THE CHLORINATED WATER IN A MANNER WHICH WILL NOT ENDANGER PLANT OR ANIMAL LIFE OR BE UNSAFE. CHLORINATED WATER MUST BE DISCHARGED IN AN ENVIRONMENTALLY SAFE MANNER AND IN ACCORDANCE WITH ALL FEDERAL, STATE, AND/OR LOCAL LAWS AND REGULATIONS. CHLORINATED STERILIZATION WATER SHALL NOT BE DISCHARGED INTO THE CITY'S SEWER OR STORM DRAIN SYSTEMS. CONTRACTOR MUST TREAT THE CHLORINATED WATER TO MEET NORTH CAROLINA QUALITY DISCHARGE STANDARDS.

BACTERIOLOGICAL TESTING/SAMPLING SHALL BE REQUESTED ON THE SAME DAY THE LINE IS FLUSHED. BACTERIOLOGICAL TESTING WILL BE PERFORMED BY THE CITY/SRU LABORATORY MONDAY THROUGH THURSDAY PRIOR TO 12:00 P.M. AT LEAST 24-HOUR NOTICE SHALL BE GIVEN THE SRU INSPECTOR/LAB PRIOR TO SAMPLING. THE SRU INSPECTOR WILL COLLECT AND DELIVER THE SAMPLES TO THE LAB (TESTING FEE APPLIES).

EACH SAMPLE SHALL BE MARKED LEGIBLY, IDENTIFYING WITH LETTERS OR NUMBERS EACH SAMPLING POINT.

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