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UTILITY CONSTRUCTION NOTES

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 2024.

2. THE EXISTING WATER AND SEWER UTILITIES BELONG TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT.

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.

WATER AND/OR SANITARY SEWER

1. THE MOST CURRENT EDITION OF THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT STANDARD SPECIFICATIONS AND DETAIL DRAWINGS FOR WATER LINE AND SANITARY SEWER LINE CONSTRUCTION WILL GOVERN ALL WATER AND SANITARY SEWER CONSTRUCTION.

2. WATER AND SEWER CONNECTIONS SHALL BE BESIDE EACH OTHER AT THE CENTER OF EACH LOT. CONNECTIONS ARE TO BE SPACED NOT MORE THAN 30" CENTER TO CENTER AND HAVE WOODEN STAKES PLACED ON EACH SIDE. STAKES SHOULD BE FLAGGED OR PAINTED FOR VISIBILITY.

3. DENSITY TESTS BY AN INDEPENDENT TESTING LAB ARE TO BE MADE AS DIRECTED BY THE NCDOT AT THE CONTRACTOR'S EXPENSE.

4. TIES TO EXISTING WATER LINE WITH BENDS AND SOLID SLEEVES AS SHOWN IN PLANS SHALL INCLUDE APPROXIMATELY 3 LF DUCTILE IRON PIPE FOR EACH TIE-IN, OR AS NECESSARY.

PROJECT SPECIFIC NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION.

2. ALL EROSION CONTROL DEVICES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MOST CURRENT STANDARDS OF THE LAND QUALITY SECTION OF NCDEQ.

3. STABILIZATION STONE UNDER PIPING TO BE PLACED AS REQUIRED BY CITY INSPECTOR WHEN CONDITIONS WARRANT.

4. PRIOR TO REQUESTING A FINAL INSPECTION, THE CONTRACTOR MUST SUBMIT RECORD DRAWINGS AND ENGINEER'S CERTIFICATION TO THE CITY ENGINEERING DEVISION'S RECORD CENTER. THE CONTRACTOR MUST ALSO SUBMIT THE CONSTRUCTION CHECKLIST TO THE CITY INSPECTOR.

5. ALL WORK MUST CARRY A ONE-YEAR WARRANTY TO COVER ALL DEFECTS IN MATERIALS AND WORKMANSHIP.

6. PRIOR TO BEGINNING ANY WORK, THE CONTRACTOR MUST NOTIFY THE CITY ENGINEERING FIELD OFFICE (919-996-6822) TO ARRANGE FOR CONSTRUCTION INSPECTION.

7. ALL 6", 8", AND 12" WATER LINES SHALL BE PC350 DUCTILE IRON, TYPICAL ALL SHEETS.

8. ALL FITTINGS OR COMPONENTS SUBJECT TO HYDROSTATIC THRUST SHALL BE SECURELY ANCHORED BY THE USE OF CONCRETE THRUST BLOCKS POURED IN PLACE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. WHERE CONCRETE MUST BE REINFORCED, THE CONTRACTOR SHALL FURNISH SUCH REINFORCING AS IS REQUIRED.

9. REQUIRED THRUST BLOCK SIZING SHALL BE PER THE SCHEDULE PROVIDED ON THE PLANS AND INSTALLATION SHALL BE PER THE DETAIL NOTES; SEE DETAILS S-7 AND W-9. THE CONCRETE SHALL BE TRANSIT-MIXED, BE CLASS A IN ACCORDANCE WITH ARTICLE 1000-4, AND HAVE A TWENTY-EIGHT DAY COMPRESSIVE STRENGTH OF 3000 PSI. ANY METAL USED TO RESIST THRUST WHICH IS NOT ENCASED IN CONCRETE SHALL BE "HOT DIPPED" GALVANIZED.

10. TEMPORARY WATER SERVICE MAY BE REQUIRED FOR BUSINESSES LOCATED ON US-401/FAYETTEVILLE ROAD. CONTRACTOR SHALL COORDINATE BY-PASS/TEMPORARY SERVICE WITH CORPUD PROJECT MANAGER.

11. A COMPLETE CLOSURE OF US-401 WILL NOT BE PERMITTED. CONTRACTOR WILL NEED TO WORK WITH THE NCDOT AND CITY OF RALEIGH PUBLIC UTILITIES PROJECT MANAGER TO DETERMINE IF NIGHT WORK WILL BE ALLOWED OR REQUIRED.

12. THE WATER METER SERVING THE TRAILER PARK LOCATED AT 4833 FAYETTEVILLE RD WILL REQUIRE AN APPROVED BFP AND CERTIFICATE OF COMPLIANCE FROM THE RALEIGH WATER CROSS-CONNECTION PROGRAM.

Signed by: 71B7868F05EE453...

WATER METER RELOCATION NOTES

1. THE NEW WATER SERVICE TAP, PIPE AND YOKE BOXES SHALL BE INSTALLED, TESTED, AND DISINFECTED ALONG WITH THE MAIN PRIOR TO SHUTTING OFF THE WATER TO THE EXISTING USER. WHEN THE NEW SERVICE IS READY FOR USE, THE CONTRACTOR SHALL THEN RELOCATE THE EXISTING METER.

2. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THE CONNECTION FROM THE RELOCATED METER TO THE EXISTING SERVICE MAIN ON THE CUSTOMER'S SIDE OF THE METER, INCLUDING THE COST OF A LICENSED PLUMBER, IF REQUIRED.

3. THE NEW OR RELOCATED METER BOXES SHALL BE LOCATED INSIDE BUT AT THE RIGHT-OF-WAY LINE IN ACCORDANCE WITH THE METER INSTALLATION DETAILS.

4. CONTRACTOR SHALL FIELD LOCATE WATER METERS PRIOR TO COMMENCING INSTALLATION OF NEW METERS IN LOCATIONS WHERE SURVEY DOES NOT SHOW AN EXISTING METER.

GENERAL CONSTRUCTION PHASING NOTES

1. CLEAR THE PROPOSED WATER MAIN ROUTE OF ANY OBSTRUCTIONS.

2. INSTALL THE WATER MAIN FOR THE FULL LENGTH, BUT DO NOT MAKE CONNECTIONS.

3. INSTALL FIRE HYDRANT LEGS THAT CROSS US-401 IN PHASES SO AS NOT TO SHUT DOWN US-401.

4. CONTRACTOR SHALL INSTALL FULL FIRE HYDRANT LEG UP TO BUT NOT INCLUDING THE 90 DEGREE VERTICAL BEND. LEG SHALL BE RESTRAINED JOINT PIPE FOR THE LAST 35' OF THE LEG FOR THOSE LEGS THAT CROSS US-401

5. INSTALL ALL INSERTION VALVES AS SHOWN ON PLANS.

6. INSTALL ALL WATER SERVICES LINES IN ACCORDANCE WITH THE WATER METER RELOCATION NOTES AS SHOWN ON THIS SHEET.

7. POTABLE WATER FROM THE EXISTING 12-INCH MAIN SHALL BE USED TO FLUSH, FILL, TEST AND CHLORINATE THE NEW SECTIONS OF POTABLE WATER MAIN. TEMPORARY TAPS OR FIRE HYDRANT CONNECTIONS EQUIPPED WITH DOUBLE CHECK VALVE ASSEMBLIES SHALL BE USED TO SUPPLY AND FILL THE NEW MAIN.

8. ONCE THE WATER MAIN HAS BEEN TESTED AND THE BACTERIOLOGICAL TEST RESULTS ARE APPROVED BY THE ENGINEER AND OWNER, THE CONTRACTOR SHALL FLUSH THE NEW MAIN UNTIL THE CHLORINE CONCENTRATIONS ARE BELOW 4 PPM. IMMEDIATELY AFTER FLUSHING THE CONTRACTOR SHALL MAKE THE CONNECTION BETWEEN THE NEW AND EXISTING MAINS AS DETAILED IN THE FOLLOWING CONSTRUCTION SEQUENCES.

9. ONCE THE CONNECTIONS TO THE NEW MAIN ARE MADE, THE CONTRACTOR SHALL IMMEDIATELY BEGIN MAKING CONNECTIONS BETWEEN THE EXISTING WATER SERVICE LINES AND THE RELOCATED METER BOXES.

CONSTRUCTION SEQUENCE

WL-1A (STATION 0+00 - 15+70)

1. INSTALL 12-IN TAPPING SLEEVE AND VALVE ASSEMBLIES AT STATION 0+00 AND 15+70. INSTALL NEW WATER MAIN TO 15+70, WHILE KEEPING EXISTING WATER MAIN IN OPERATION.

2. AFTER INSTALLATION, FLUSH, TEST, CHLORINATE, AND SAMPLE WATER MAIN AS REQUIRED.

3. AFTER THE WATER MAIN HAS BEEN APPROVED TO PLACE INTO OPERATION, TRANSFER SERVICES BY INSTALLING NEW SERVICE SADDLES, SERVICE LINES, ETC. AND CONNECT TO EXISTING METERS, INSTALL NEW METERS, OR RELOCATE METERS AS REQUIRED.

4. AFTER ALL SERVICES HAVE BEEN TRANSFERRED, CONNECT NEW MAIN TO EXISTING MAIN AS SHOWN ON SHEET UC-6 AT APPROXIMATE STATION 15+70. USE EXISTING SYSTEM VALVES, PROPOSED INSERTION VALVES, PROPOSED TAPPING SLEEVE AND VALVE ASSEMBLIES, PROPOSED MAIN VALVES, AND / OR LINE STOPS TO ISOLATE WATER LINE OUTAGE. ALL NECESSARY PREPARATIONS SHOULD BE MADE TO MINIMIZE THE DURATION OF ANY WATERLINE OUTAGES, AND COORDINATION WITH THE UTILITY PROVIDER IS REQUIRED FOR ALL PLANNED DISRUPTIONS.

5. ABANDONED WATER MAINS SHALL BE DRAINED OF RESIDUAL WATER, FILLED WITH FLOWABLE FILL, AND PLUGGED AT EACH END OF THE ABANDONMENT.

WL-1B (STATION 19+32 - 26+12) AND WL-3

1. INSTALL 12-IN TAPPING SLEEVE AND VALVE ASSEMBLIES AT STATION 19+32 AND 26+12. INSTALL NEW WATER MAIN TO 26+12 AND NEW 8-IN WATER MAIN, WHILE KEEPING EXISTING WATER MAIN IN OPERATION.

2. AFTER INSTALLATIONS, FLUSH, TEST, CHLORINATE, AND SAMPLE WATER MAINS AS REQUIRED.

3. AFTER THE WATER MAINS HAVE BEEN APPROVED TO PLACE INTO OPERATION, TRANSFER SERVICES BY INSTALLING NEW SERVICE SADDLES, SERVICE LINES, ETC. AND CONNECT TO EXISTING METERS, INSTALL NEW METERS, OR RELOCATE METERS AS REQUIRED.

4. AFTER ALL SERVICES HAVE BEEN TRANSFERRED, CONNECT NEW MAINS TO EXISTING MAINS AS SHOWN ON SHEET UC-6 AT APPROXIMATE STATION 26+12 FOR WL-1B AND APPROXIMATE STATION 00+23 FOR WL-3. USE EXISTING SYSTEM VALVES, PROPOSED INSERTION VALVES, PROPOSED TAPPING SLEEVE AND VALVE ASSEMBLIES, PROPOSED MAIN VALVES, AND / OR LINE STOPS TO ISOLATE WATER LINE OUTAGES. ALL NECESSARY PREPARATIONS SHOULD BE MADE TO MINIMIZE THE DURATION OF ANY WATERLINE OUTAGES, AND COORDINATION WITH THE UTILITY PROVIDER IS REQUIRED FOR ALL PLANNED DISRUPTIONS.

5. ABANDONED WATER MAINS SHALL BE DRAINED OF RESIDUAL WATER, FILLED WITH FLOWABLE FILL, AND PLUGGED AT EACH END OF THE ABANDONMENT.

WL-1C (STATION 28+68 - 33+16)

1. INSTALL 12-IN TAPPING SLEEVE AND VALVE ASSEMBLIES AT STATIONS 28+68 AND 33+16. INSTALL NEW WATER MAIN TO 33+16, WHILE KEEPING EXISTING WATER MAIN IN OPERATION.

2. AFTER INSTALLATION, FLUSH, TEST, CHLORINATE, AND SAMPLE WATER MAIN AS REQUIRED.

3. AFTER THE WATER MAIN HAS BEEN APPROVED TO PLACE INTO OPERATION, TRANSFER SERVICES BY INSTALLING NEW SERVICE SADDLES, SERVICE LINES, ETC. AND CONNECT TO EXISTING METERS, INSTALL NEW METERS, OR RELOCATE METERS AS REQUIRED.

4. AFTER ALL SERVICES HAVE BEEN TRANSFERRED, CONNECT NEW MAIN TO EXISTING MAIN AS SHOWN ON SHEET UC-7 AT APPROXIMATE STATION 33+16. USE EXISTING SYSTEM VALVES, PROPOSED INSERTION VALVES, PROPOSED TAPPING SLEEVE AND VALVE ASSEMBLIES, PROPOSED MAIN VALVES, AND / OR LINE STOPS TO ISOLATE WATER LINE OUTAGE. ALL NECESSARY PREPARATIONS SHOULD BE MADE TO MINIMIZE THE DURATION OF ANY WATERLINE OUTAGES, AND COORDINATION WITH THE UTILITY PROVIDER IS REQUIRED FOR ALL PLANNED DISRUPTIONS.

5. ABANDONED WATER MAINS SHALL BE DRAINED OF RESIDUAL WATER, FILLED WITH FLOWABLE FILL, AND PLUGGED AT EACH END OF THE ABANDONMENT.

WL-1D (STATION 44+47 - 44+82), WL-1E (STATION 48+92 - 49+28), WL-1F (STATION 51+70 - 52+05), AND WL-1G (STATION 54+83 - 55+20)

1. INSTALL NEW WATER MAIN PRIOR TO MAKING TIE-INS, WHILE KEEPING EXISTING WATER MAIN IN OPERATION.

2. AFTER INSTALLATION, FLUSH, TEST, CHLORINATE, AND SAMPLE WATER MAIN AS REQUIRED.

3. AFTER THE WATER MAIN HAS BEEN APPROVED TO PLACE INTO OPERATION, PREPARE BOTH TIE-IN LOCATIONS. USE EXISTING SYSTEM VALVES, PROPOSED INSERTION VALVES, PROPOSED MAIN VALVES, AND / OR LINE STOPS TO ISOLATE WATER LINE OUTAGE. ALL NECESSARY PREPARATIONS SHOULD BE MADE TO MINIMIZE THE DURATION OF ANY WATERLINE OUTAGES BY USING TWO CREWS IF NECESSARY TO CONNECT THE NEW WATER LINE IN BOTH LOCATIONS. COORDINATION WITH THE UTILITY PROVIDER IS REQUIRED FOR ALL PLANNED DISRUPTIONS.

4. ABANDONED WATER MAINS SHALL BE DRAINED OF RESIDUAL WATER, FILLED WITH FLOWABLE FILL, AND PLUGGED AT EACH END OF THE ABANDONMENT.

WL-2

1. INSTALL PROPOSED 8-IN TAPPING SLEEVE AND VALVE AND 8-IN LINESTOP FOR ABANDONMENT IN THE EXISTING 8-IN MAIN TYING IN AT APPROXIMATE STATION 3+63 WL-1A / 1+51 WL-2.

2. INSTALL WL-2 PIPING FROM WL-1A.

3. AFTER INSTALLATION OF WL-1A & 2, FLUSH, TEST CHLORINATE, AND SAMPLE WATER MAIN AS REQUIRED.

4. AFTER THE WATER MAIN HAS BEEN APPROVED TO PLACE INTO OPERATION, TRANSFER SERVICES BY INSTALLING NEW SERVICE SADDLES, SERVICE LINES, ETC. AND CONNECT TO EXISTING METERS, INSTALL NEW METERS, OR RELOCATE METERS AS REQUIRED.

5. AFTER ALL SERVICES HAVE BEEN TRANSFERRED,CONNECT NEW MAIN TO EXISTING MAIN AS SHOWN ON SHEET UC-5. USE EXISTING SYSTEM VALVES, PROPOSED INSERTION VALVES, PROPOSED MAIN VALVES, AND / OR LINE STOPS TO ISOLATE WATER LINE OUTAGE. ALL NECESSARY PREPARATIONS SHOULD BE MADE TO MINIMIZE THE DURATION OF ANY WATERLINE OUTAGES, AND COORDINATION WITH THE UTILITY PROVIDER IS REQUIRED FOR ALL PLANNED DISRUPTIONS.

6. ABANDONED WATER MAINS SHALL BE DRAINED OF RESIDUAL WATER, FILLED WITH FLOWABLE FILL, AND PLUGGED AT EACH END OF THE ABANDONMENT

WL-4

1. INSTALL NEW WATER MAIN FROM APPROXIMATE STATION 0+00 TO 00+92, WHILE KEEPING EXISTING WATER MAIN IN OPERATION.

2. AFTER INSTALLATION, FLUSH, TEST, CHLORINATE, AND SAMPLE WATER MAIN AS REQUIRED.

3. AFTER THE WATER MAIN HAS BEEN APPROVED TO PLACE INTO OPERATION, TRANSFER SERVICES BY INSTALLING NEW SERVICE SADDLES, SERVICE LINES, ETC. AND CONNECT TO EXISTING METERS, INSTALL NEW METERS, OR RELOCATE METERS AS REQUIRED.

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UTILITY CONSTRUCTION

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