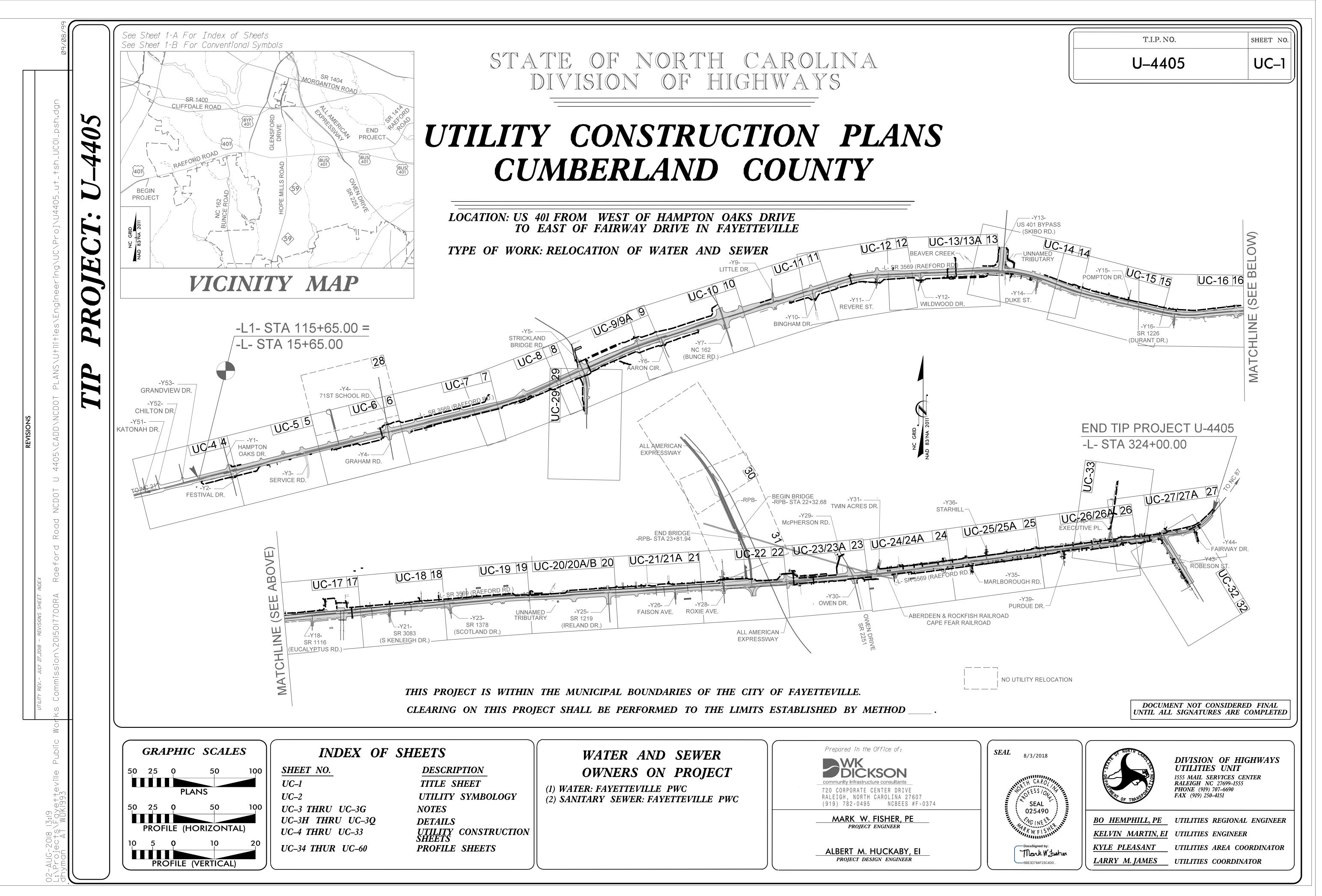
This electronic collection of documents is provided for the convenience of the user and is Not a Certified Document –

The documents contained herein were originally issued and sealed by the individuals whose names and license numbers appear on each page, on the dates appearing with their signature on that page.

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



A/G Gas

A/G Sanitary Sewer

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

Water Line (Sized as Shown) 11⅓ Degree Bend 22½ Degree Bend 45 Degree Bend 90 Degree Bend Plug 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)	12" SS
Force Main Sewer Line (Sized as Shown)	12" FSS
Manhole (Sized per Note)	
Sewer Pump Station ·····PS(SS)	

PROPOSED MISCELLANOUS UTILITIES SYMBOLS

Power Pole ····································	Thrust Block
Telephone Pole	Air Release Valve ····································
Joint Use Pole ·······	Utility Vault
Telephone Pedestal ····································	Concrete Pier
Utility Line by Others(Type as Shown)	Steel Pier
Trenchless Installation	Plan Note
Encasement by Open Cut	Pay Item Note
Encasement	PAY ITEM

EXISTING UTILITIES SYMBOLS

Power Pole ····································	*Underground Power Line
Telephone Pole	*Underground Telephone Cable
Joint Use Pole	*Underground Telephone Conduit
Utility Pole	*Underground Fiber Optics Telephone Cab
Utility Pole with Base	*Underground TV Cable
H-Frame Pole	*Underground Fiber Optics TV Cable
Power Transmission Line Tower	*Underground Gas Pipeline
Water Manhole	Aboveground Gas Pipeline
Power Manhole ····	*Underground Water Line
Telephone Manhole	Aboveground Water Line
Sanitary Sewer Manhole	*Underground Gravity Sanitary Sewer Line
Hand Hole for Cable	Aboveground Gravity Sanitary Sewer Line
Power Transformer	*Underground SS Forced Main Line
Telephone Pedestal	Underground Unknown Utility Line
CATV Pedestal	SUE Test Hole
Gas Valve ····································	Water Meter
Gas Meter ·····	Water Valve
Located Miscellaneous Utility Object o	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	
(Type as Shown)	
Designated Utility Line	

(Type as Shown)

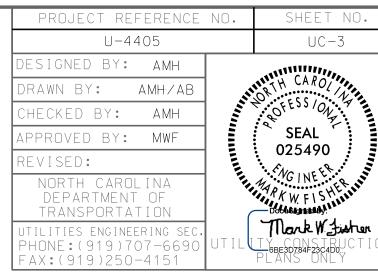
GENERAL NOTES:

- 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 THE SPECIAL PROVISIONS TO NCDOT SPECIFICATION DIVISION 15.
- 2. FAYETTEVILLE PWC OWNS AND OPERATES THE EXISTING WATER AND SEWER UTILITIES EXCEPT FOR THE WATER UTILITIES IDENTIFIED AS AQUA AMERICA.
- 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. FAYETTEVILLE PWC 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. THE CONTRACTOR SHALL 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. 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.

- 7. 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.
- 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.
- 10. PRIOR TO PLACEMENT OF PROPOSED SANITARY GRAVITY SEWER THE CONTRACTOR SHALL LOCATE ALL EXISTING SEWER SERVICE LATERALS (DEPTH AND PIPE DIAMETER) AND NOTIFY THE RESIDENT ENGINEER IF THERE ARE COMPLICATIONS WITH CONNECTING TO THE PROPOSED SANITARY GRAVITY SEWER. THE CONTRACTOR'S COST FOR ALL WORK ASSOCIATED WITH SEWER SERVICES, IS INCIDENTAL TO SEWER SERVICE PAYMENT ITEM.
- 11. PRIOR TO PLACEMENT OF PROPOSED WATERLINE THE CONTRACTOR SHALL LOCATE ALL EXISTING WATER SERVICE LATERALS (DEPTH AND PIPE DIAMETER) AND NOTIFY THE RESIDENT ENGINEER IF THERE ARE COMPLICATIONS WITH CONNECTING TO THE PROPOSED WATERLINE. THE CONTRACTOR'S COST FOR ALL WORK ASSOCIATED WITH WATER SERVICES, IS INCIDENTAL TO WATER SERVICE PAYMENT ITEM.
- 12. THE CONTRACTOR SHALL REFER TO THE "UTILITIES BY OTHERS" PLANS FOR PROPOSED GAS, TELECOMMUNICATIONS, AQUA AMERICA WATER, AND POWER UTILITY RELOCATIONS.

PROJECT SPECIFIC NOTES:

- 1. ALL PROPOSED WATER LINE 2" IN DIAMETER SHALL BE SDR21, PRESSURE CLASS 200 IN ACCORDANCE WITH ASTM D 2241 OR SDR-17 WITH A PRESSURE RATING OF 250 PSI, IN ACCORDANCE WITH ASTM D-224. ALL PROPOSED WATER LINE 4"-12" IN DIAMETER SHALL BE DI (DUCTILE IRON PUSH-ON) PC 350 PIPE, UNLESS SPECIFIED TO BE RESTRAINED JOINT PIPE AND/OR SPECIAL THICKNESS CLASS AS SHOWN ON THE PLAN/PROFILE. ALL PROPOSED WATERLINE LINE 16" IN DIAMETER AND LARGER SHALL BE DI (DUCTILE IRON PUSH-ON) PC 250 PIPE, UNLESS SPECIFIED TO BE RESTRAINED JOINT PIPE AND/OR SPECIAL THICKNESS CLASS AS SHOWN ON THE PLAN/PROFILE.
- 2. ALL PROPOSED GRAVITY SEWER LINES 12" IN DIAMETER AND SMALLER SHALL BE PROTECTO 401 LINED DI (DUCTILE IRON PUSH ON) PC 350 PIPE UNLESS OTHERWISE SPECIFIED. ALL PROPOSED GRAVITY SEWER LINES 16" IN DIAMETER AND GREATER SHALL BE PROTECTO 401 LINED DI (DUCTILE IRON PUSH ON) PC 250, UNLESS OTHERWISE SPECIFIED.
- 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 RIVER, WETLANDS, OR BUFFER ZONES.
- 4. IF HDPE PIPE IS INSTALLED BY DIRECTIONAL DRILL. IT SHALL BE FILLED WITH WATER AND NOT BE CONNECTED TO ANY OTHER PIPE OR FITTINGS FOR ONE WEEK FROM THE TIME OF INSTALLATION.
- 5. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL FAYETTEVILLE PWC AND/OR NCDOT STANDARDS AND SPECIFICATIONS.
- 6. TEMPORARY SHORING IF REQUIRED FOR BUILDING FOUNDATION PROTECTION OR MAINTENANCE OF TRAFFIC WILL BE PAID AS TEMPORARY SHORING IN SQUARE FEET BELOW GROUND SURFACE. THIS REQUIREMENT IS APPLICABLE TO ALL UTILITY CONSTRUCTION SHEETS.



UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL UNTIL ALL SIGNATURES ARE COMPLETED

- 7. UTILITY CONSTRUCTION NOTE SHEETS PROVIDE SEQUENCE OPTIONS FOR THE CRITICAL INSTALLATIONS AND KILL OUTS OF THE PROPOSED WATER AND SEWER LINES. CONTRACTOR SHALL PROVIDE A CONSTRUCTION SEQUENCE FOR ALL WATER LINE AND SEWER LINE SEGMENTS AND KILLOUTS PRIOR TO INSTALLATION FOR REVIEW AND APPROVAL BY ENGINEER. CONTRACTOR SHALL UPDATE CONSTRUCTION SEQUENCES WHERE ACTUAL CONDITIONS REQUIRE AJDUSTMENTS OR ALTERATIONS TO THE PLANNED WORK. CONSTRUCTION SEQUENCE OPTIONS THAT ARE PROVIDED ARE INTENDED TO MINIMIZE IMPACTS TO WATER AND SEWER OPERATIONS. INSTALLATION SHALL NOT BEGIN UNTIL AN APPROVED SEQUENCE PLAN IS IN PLACE.
- 8. ANY REFERENCE TO THE FAYPWC COORDINATOR OR PWC COORDINATOR SHALL BE INTERPRETED AS A REFERENCE TO THE ENGINEER.

UC-4 UTILITY NOTES:

1.FULLY GROUT MIN. 60LF OF 24" EXIST MAIN. PLUG EACH END OF ABANDONED MAIN PER UTILITY OWNER KILLOUT DETAIL W-22.

2.KILL OUT OF BRANCH LINE SIDE OF TAPPING SLEEVE SHALL BE COORDINATED WITH 24" MAIN SHUTDOWN FOR LAYING BACK NEW 24" MAIN INTO EXIST ALIGNMENT (SEE SHEET UC-5).

3.WL-2, WL-3 AND WL-1 BETWEEN TAP AT -WL-1- STA 0+00 AND VALVE AT APPROX -WL-1- STA. 8+95 SHALL BE INSTALLED AND OPERATIONAL BEFORE INSTALLING ANY OTHER PORTION OF WL-1

4. PURSUANT TO TRAFFIC CONTROL REQUIREMENTS, CONTRACTOR MUST BE COMPLETE WITH THE PORTION OF WL-1 AND WL-2 AS DEFINED IN NOTE 3 BEFORE BEGINNING INSTALLATION OF WL-3. CONTRACTOR SHALL NOT BE PERFORMING WATER MAIN INSTALLATION LONGITUDINALLY TO THE ROAD ON BOTH SIDES.

5.WL-3 TO BE CONNECTED TO EXISTING MAIN UNDER SERVICE INTERRUPTION. ADHERE TO UTILITY OWNER'S PROCEDURES FOR SHUTDOWN. EXISTING VALVES EV-2A AND EV-2B SHALL BE CRITICAL IN ISOLATING CONNECTING POINTS.

6.KILL-OUT OF 24" SIDES OF 24"x24"x8"x8" CROSS TO BE FACILITATED BY SHUTDOWN WHEN KILLING OUT 24" MAIN AT TAPPING SLEEVE FOR WL-1. VALVES TO ISOLATE KILL OUT INCLUDE EV-1, EV-2A, EV-2B, EV-4 AND TAPPING VALVE FOR WL-1.

UC-5 UTILITY NOTES:

1.CONTRACTOR SHALL LAY BACK INTO EXISTING 24" WATER MAIN WITH A MINIMUM OF 20 LF OF RESTRAINED JOINT UNDER PLANNED SERVICE INTERRUPTION.

2.CONTRACTOR SHALL PROVIDE A TEMPORARY RESTRAINED PLUG AND TEMPORARY BLOW OFF ASSEMBLY FOR TESTING AND FLUSHING BEFORE RECONNECTING TO EXISTING 24" MAIN. NO SEPARATE PAYMENT SHALL BE MADE FOR TEMPORARY BLOW-OFF ASSEMBLIES.

3.CONTRACTOR SHALL REMOVE TEMPORARY 24" PLUG AND SLEEVE TO EXISTING 24" WATER MAIN USING MJ x MJ FULL BODY SLEEVE AND RESTRAIN WITH RESTRAINING GLANDS.

4.AFTER SLEEVING OF PROPOSED 24" MAIN TO EXISTING 24" MAIN, CONTRACTOR SHALL ADHERE TO CUT IN CONSTRUCTION REQUIREMENTS WHEN REINSTATING THE 24" MAIN.

5.WL-2, WL-3 AND WL-1 BETWEEN TAPPPING SLEEVE AND VALVE AT -WL-1-STA 0+00 AND VALVE AT -WL-1-STA 8+95 SHALL BE INSTALLED AND OPERATIONAL BEFORE INSTALLING ANY OTHER PORTION OF WL-1.

6.PURSUANT TO TRAFFIC CONTROL REQUIREMENTS, CONTRACTOR MUST BE COMPLETE WITH THE PORTION OF WL-1 AND WL-2 BEFORE BEGINNING INSTALLATION OF WL-3. CONTRACTOR SHALL NOT BE PERFORMING WATER MAIN INSTALLATION LONGITUDINALLY TO THE ROAD ON BOTH SIDES.

7.SHUTDOWN TO CONNECT WL-1 TO EXISTING 24" MAIN AND PERFORM KILL-OUT OF EXISTING 24" MAIN AT TAPPING LOCATION SHALL BE FACILITATED THROUGH EV-1, EV-2A, EV-2C, EV-4 AND 24" TAPPING VALVE AND NEW IN-LINE VALVE AT STA. 8+95. WL-2 AND WL-3 SHALL BE INSTALLED AND OPERATIONAL PRIOR TO SHUTDOWN FOR WL-1 TO BACKFEED EXISTING SERVICES ON SKATEWAY DRIVE.

8.UTILITY OWNER'S SAMPLING STATION SHALL NOT BE DISTURBED. PROVIDE NEW TAP AND LATERAL TO SAMPLING STATION IF SAMPLING STATION'S 1" SERVICE LATERAL IS IN CONFLICT WITH PROPOSED DRAINAGE. SAMPLING STATION SHALL NOT BE INTERRUPTED DURING ANNUAL BURN OUT, WHICH OCCURS EVERY MARCH. OTHERWISE, SERVICE TO SAMPLING STATION MAY BE INTERUPTED SHOULD PLANNED SHUTDOWNS IMPACT THIS SERVICE

9.CITY OF FAYETTEVILLE HAS A 1" SERVICE FOR MEDIAN IRRIGATION. PROVIDE NEW TAP AND LATERAL TO RECONNECT 1" IRRIGATION SERVICE IF IT IS IN CONFLICT WITH PROPOSED DRAINAGE. CONTRACTOR SHALL REPLACE ALL DAMAGED IRRIGATION PIPING (INCIDENTAL AND THAT IS IN CONFLICT WITH WORK) AT NO ADDITIONAL COST. EXISTING IRRIGATION PIPING HAS NOT BEEN LOCATED AND IS NOT SHOWN ON SHEET.

10.ALL DUCK AND UNDERS BETWEEN WL-1 AND WL-5 SHALL BE PERFORMED DURING PLANNED OUTAGES. CONTRACTOR SHALL CONFORM TO CUT IN CONSTRUCTION REQUIREMENTS WHEN PERFORMING THIS WORK.

UC-6 UTILITY NOTES:

1.EXISTING METER AND SERVICE WAS NOT LOCATED FOR MULTIPLE PARCELS. CONTRACTOR TO PROVIDE 1" METER SERVICE FOR THOSE PARCELS THAT CURRENTLY ARE SERVED BY UTILITY OWNER. COORDINATE LOCATION WITH UTILITY OWNER'S PROJECT COORDINATOR.

2.INSTALL AND HAVE OPERATIONAL WL-5 BETWEEN TAPPING VALVE AND 24"x24"x24" TEE AT WL-5- STA 8+37.33. STUB-OUT WL-5 FOR CONNECTION TO EXISTING 24" MAIN. INSTALL AND HAVE OPERATIONAL WL-6 BETWEEN WL-5 AND 24" TAPPING VALVE FOR WL-6. STUB-OUT WL-7.

3.PURSUANT TO TRAFFIC CONTROL REQUIREMENTS, CONTRACTOR MUST BE COMPLETED WITH WORK ON WL-5 AS DEFINED NOTE 2 (ABOVE) BEFORE BEGINNING INSTALLATION ON WL-6. CONTRACTOR SHALL NOT BE PERFORMING WATER MAIN INSTALLATION LONGITUDINALLY TO THE ROAD ON BOTH SIDES.

4.TRANSFER EXISTING METERS FROM EXISTING 24" MAIN TO WL-5 BEFORE PERFORMING DUCK AND UNDERS ON EXISTING MAIN AND HYDRANT LEG ADJUSTMENTS BETWEEN EV-4 AND EV-8.

UC-6 UTILITY NOTES:

5.COORDINATE SHUTDOWN TO PERFORM EXISTING MAIN AND HYDRANT LEG ADJUSTMENTS BETWEEN EV-4 AND EV-8 WITH UTILITY OWNER'S PROJECT COORDINATOR AND KILLING OUT EXISTING MAIN AT TAPPING SLEEVE FOR WL-5, STA 0+00. EXISTING VALVES EV-4, EV-5, EV-8, AND TAPPING SLEEVE FOR WL-5 AT STA 0+00 SHALL FACILITATE SHUTDOWN AND MAINTAIN UNINTERRUPTED SERVICE TO CUSTOMERS.

6. AFTER COMPLETING ALTERATIONS IN NOTE 5 (ABOVE), COMPLETE CONNECTION OF WL-5 TO EXISTING 24" MAIN BY CUTTING IN AND KILLING OUT EXISTING MAIN AT TAPPING SLEEVE FOR WL-6 UNDER PLANNED SHUTDOWN. CONSTRUCTION TIME FOR THIS WORK SHALL BE LIMITED TO WEEKEND AND SHALL NOT BEGIN UNTIL 6:00 P.M. ON FRIDAY. ALL WORK MUST BE COMPLETED AND WATER MAIN BACK IN OPERATION BEFORE 6:00 A.M. MONDAY. EXISTING VALVES EV-4, EV-5, EV-8A AND EV-9 SHALL FACLITATE SHUTDOWN TO MINIMIZE SERVICE INTERRUPTIONS.

7. SLEEVING OF WL-5 INTO EXISTING MAIN SHALL ENTAIL THE REMOVAL OF ONE 24" RJ BUTTERFLY VALVE AND ONE 24"x24"x24" RJ TEE. EV-8A IS RESTRAINED AND SHALL NOT BE DAMAGED SO WL-5 CAN BE RECONNECTED TO IT USING SPOOL PIECE AND FULL BODY MJ SLEEVE AND RESTRAINING GLANDS.

8. DURING INSTALLATION OF WL-5, CONTRACTOR SHALL REMOVE AND REPLACE 48 LF OF RCP AS SHOWN ON PLANS UNLESS ACTUAL CONDITIONS DIFFER, OR WORK CAN BE PERFORMED SO AS NOT TO INTERFERE WITH EXISTING DRAINAGE.

UC-7 UTILITY NOTES

1.WL-8 SHALL BE BUILT OUT FROM TAPPING SLEEVE AND VALVE (SEE SHEET UC-8) TO TIE INTO EXISTING 24" MAIN ON THIS SHEET.

2.SEE UTILITY NOTES ON SHEET UC-8 FOR SPECIAL SEQUENCING OF INSTALLATION AND CUT IN REQUREMENTS FOR WL-8, WL-10, AND 24" MAIN ABANDONMENT.

3.LAY BACK MINIMUM OF ONE FULL RESTRAINED JOINT WHEN SLEEVING INTO EXISTING MAIN.

UC-8 UTILITY NOTES:

1.THE PORTION OF WL-8 WITHIN RAEFORD ROAD (BETWEEN APPROX. WL-8-STA 12+00 AND APPROX. WL-8-STA 17+00) SHALL BE INSTALLED DURING WEEKNIGHT TIMES TO FACILITATE MAXIMUM OF TWO LANES OF CLOSURE. WORK EACH NIGHT SHALL NOT BEGIN BEFORE 7:00 P.M. ALL WORK UTILITIZING THE SECOND LANE OF CLOSURE SHALL BE COMPLETED BEFORE 6:00 A.M.

2.FULLY GROUT MIN. 60 LF OF 24" EXIST. MAIN. PLUG EACH END OF ABANDONED MAIN PER KILLOUT DETAIL W-22.

3.KILL OUT OF LINE SIDE OF TAPPING SLEEVE SHALL BE COORDINATED WITH 24" MAIN SHUTDOWN FOR LAYING BACK NEW 24" MAIN INTO EXISTING ALIGNMENT (SEE SHEET UC-7 FOR WL-8 AND UC-8 FOR WL-10).

4.INSTALL WL-8 AND WL-10 AND HAVE EACH SEGMENT OPERATIONAL TO LAST IN LINE VALVE ON EACH SEGMENT (BETWEEN WL-8- STA 1+10 AND APPROX. WL-8- STA 17+10 AND BETWEEN APPROX. WL-10- STA 1+00 AND WL-10- STA 25+50). ALL EXISTING METERS THAT OVERLAP THESE RELOCATION SEGMENTS SHALL BE TRANSFERED TO THESE NEW SEGMENTS. ALL CROSS-LINES FOR WL-10 SHALL BE FULLY RESTRAINED THROUGH BRANCH VALVES. ARRAN CIRCLE AND STRICKLAND BRIDGE ROAD (WL-11 AND WL-12) RECONNECTION SHALL BE COMPLETED AND OPERATIONAL CONCURRENT WITH WL-10 INSTALLATION. EXISTING BRANCH VALVES FOR ARRAN CIRCLE AND STRICKLAND BRIDGE ROAD SHALL BE PERMANENTLY CLOSED AND PROPERLY ABANDONED. SEE UC-9 UTILITY NOTES FOR ADDITIONAL SEQUENCING PROVISIONS FOR UC-12 THAT SHALL BE PERFORMED BEFORE SHUTDOWN FOR WL-8 AND WL-10.

5.PRIOR TO TAPPING THE EXISTING 24" WATER MAIN, CONTRACTOR SHALL INSTALL SPLIT RING BELL HARNESSES ON EXISTING PIPE EQUIVALENT TO 3 FULL JOINT LENGTHS. MJ x MJ FULL BODY SOLID TAPPING SLEEVE WITH RESTRAINING GLANDS SHALL BE PLUGGED AND RESTRAINED ON LINE SIDE. NO SEPARATE PAYMENT SHALL BE MADE FOR PIPE HARNESSES.

6.TEMPORARILY BURY TEMPORARY 6" MAIN AT ALL DRIVEWAY CROSSINGS TO MAINTAIN INGRESS/EGRESS FOR THESE PARCELS.

7.RECONNECT WL-8 AND WL-10 TO EXISTING MAIN UNDER SERVICE INTERRUPTION. ADHERE TO UTILITY OWNER'S PROCEDURES FOR SHUTDOWN. EXISTING VALVES EV-8A, EV-12, EV-12A, EV-13, EV-20, EV-20A AND EV-22 IN ISOLATING EXISTING 24" MAIN. KILL-OUT OF 24" TAPPNG SLEEVE (LINE SIDE OF 24"x24"x24") FOR WL-8 AND WL-10 TO BE FACILITATED UNDER SAME SHUTDOWN. AFTER COMPLETION OF KILLOUTS AND CUT IN CONSTRUCTION, RESUME OPERATION OF EXISTING 24" WATER MAIN BY OPENING EV-8A, EV-20, EV-20A AND EV-22 AND COMPLETE ABANDONMENT OF 24" ADJACENT TO WL-8 AND WL-10

8.EXISTING 24" WATER MAIN IS RESTRAINED AT DESIGNATED LOCATION OF CUT IN FOR WL-10. WL-10 CAN BE SLEEVED IN WITH FULL BODY SLEEVE AND RESTRAINING GLANDS WITHOUT LAYING BACK ONE FULLY JOINT INTO EXISTING SYSTEM UNLESS ACTUAL CONDITIONS.

DOCUMENT NOT CONSIDERED FINAL UNTIL ALL SIGNATURES ARE COMPLETED

PROJECT REFERENCE	NO.	SHEET NO.
U-4405		UC-3A
DESIGNED BY: AMH		8/3/2018
DRAWN BY: AMH/AB	, sur	CAROLINA CAROLINA
CHECKED BY: AMH		OFESS 101 14
APPROVED BY: MWF		SEAL 025490
REVISED:		
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		MG INE ELLENGER OF THE PROPERTY OF THE PROPERT
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILL	Mork W. Jisher TY CONSTRUCTION FOBERRISHF23GAPOY
<u> </u>		

UC-9 UTILITY NOTES:

UTILITY CONSTRUCTION

1.ADHERE TO SPECIAL PROVISIONS OF OPEN CUTTING EXISTING PAVEMENT.

2.EXISTING IN LINE VALVE TO FACILITATE SHUTDOWN FOR RECONENCTION OF THE EXISTING WATER MAIN IN OAK FOREST DR IS APPROXIMATELY 325 LF FROM PROPOSED RECONNECTION POINT.

3.FULLY GROUT MIN. 60 LF OF 12" EXIST. MAIN. PLUG EACH END OF ABANDONED MAIN PER KILLOUT DETAIL W-22.

4.KILL OUT OF LINE SIDE OF TAPPING SLEEVE FOR WL-13 SHALL BE COORDINATED WITH 12" MAIN SHUTDOWN.

5.INSTALL WL-12 AND HAVE OPERATIONAL PRIOR TO PLANNED SHUTDOWN FOR CONNECTION OF WL-10 BACK TO EXISTING 24" MAIN. WL -12 SHALL BE CONNECTED AS SHOWN TO EXISTING 12" MAIN TO MAINTAIN OPERATION AND TO FACILITATE KILL OUT OF EXISTING 12" MAIN CROSSING OF RAEFORD ROAD

6.12"x12"x12" TAPPING SLEEVE AND VALVE AND SHORT LOOP BETWEEN EXISTING 12"MAIN AND WL-13 SHALL BE INSTALLED TO MAINTAIN OPERATION UNTIL WL-13 IS INSTALLED AND OPERATIONAL. THIS SHORT LOOP SHALL BE ABANDONED AFTER WL-13 IS IN OPERATION.

7.KILL OUT OF PORTION OF EXISTING 12" MAIN THAT FEEDS STRICKLAND BRIDGE ROAD (NORTH) AND NORTH SIDE OF RAEFORD ROAD SHALL BE FACILITATED BY EV-13, EV-14 AND EV-15.

8.PURSUANT TO TRAFFIC CONTROL REQUIREMENTS, NO WORK ON THE SOUTH SIDE SHALL BE IN PROGRESS WHILE INSTALLING WL-12 AND CONNECTING IT TO THE EXISTING 12" MAIN ON STRICKLAND BRIDGE ROAD. CONTRACTOR SHALL NOT BE PERFORMING WATER MAIN INSTALLATION LONGITUDINALLY TO THE ROAD ON BOTH SIDES.

UC-9A UTILITY NOTES

1.CONTRACTOR SHALL SUBMIT A DETAILED SEWAGE BYPASS PLAN FOR MAINTAINING ALL SEWAGE FLOWS THAT WILL BE IMPACTED BY THE SEWER RELOCATION AND ADHERE TO ALL REQUIREMENTS IN OWNER'S WASTE WATER CONTROL SPECIFICATIONS

2.CONTRACTOR SHALL VERIFY EXISTING SEWER SERVICE LOCATION AND DEPTH PRIOR TO ORDERING MATERIALS.

3.CONTRACTOR SHALL COORDINATE WITH UTILITY OWNER'S PROJECT COORDINATOR TO DETERMINE IF PARCEL 87 IS CONNECTED TO EXISTING SEWER. IF CONNECTED, CONTRACTOR SHALL DETERMINE LOCATION AND DEPTH PRIOR TO ORDERING MATERIALS.

UC-9A UTILITY NOTES

1.CONTRACTOR SHALL SUBMIT A DETAILED SEWAGE BYPASS PLAN FOR MAINTAINING ALL SEWAGE FLOWS THAT WILL BE IMPACTED BY THE SEWER RELOCATION AND ADHERE TO ALL REQUIREMENTS IN OWNER'S WASTE WATER CONTROL SPECIFICATIONS

2.CONTRACTOR SHALL VERIFY EXISTING SEWER SERVICE LOCATION AND DEPTH PRIOR TO ORDERING MATERIALS.

3.CONTRACTOR SHALL COORDINATE WITH UTILITY OWNER'S PROJECT COORDINATOR TO DETERMINE IF PARCEL 87 IS CONNECTED TO EXISTING SEWER. IF CONNECTED, CONTRACTOR SHALL DETERMINE LOCATION AND DEPTH PRIOR TO ORDERING MATERIALS.

UC-10 UTILITY NOTES:

1.EXISTING IN LINE VALVE TO FACILITATE SHUTDOWN FOR RECONNECTION OF THE EXISTING WATER MAIN IN ARRAN CIRCLE IS APPROXIMATELY 760 LF FROM PROPOSED RECONNECTION POINT.

2.CONTRACTOR SHALL LAY BACK A MINIMUM OF 1 FULL JOINT OF RESTRAINED DUCTILE IRON PIPE.

3.FULLY GROUT MIN. 60LF OF 24" EXIST MAIN. PLUG EACH END OF ABANDONED MAIN PER KILLOUT DETAIL W-22.

4.KILL OUT OF LINE SIDE OF TAPPING SLEEVE FOR WL-10 SHALL BE COORDINATED WITH 24" MAIN SHUTDOWN FOR LAYING BACK NEW 24" MAIN INTO EXIST ALIGNMENT (SEE SHEET UC-5).

5.REFERENCE UC-8 UTILITY NOTES FOR SEQUENCE OF WL-10 AND ABANDONMENT OF EXISTING 24" MAIN.

6.WL-13 UP TO PROPOSED IN LINE VALVE NEAR STATION WL-13- STA 24+00 AND THE EXISTING CROSS-LINE THAT SERVES OAK FOREST DRIVE SHALL BE INSTALLED AND IN OPERATION PRIOR TO RECONNECTING TO THE EXISTING 12" MAIN IN BUNCE ROAD. ADHERE TO PROVISIONS FOR OPEN CUTTING PAVEMENT AND WORKING WITHIN TRAFFIC TO RECONNECT PROPOSED 12" MAIN TO EXISTING MAIN. EXISTING MAIN AT POINT OF CONNECTION IS RESTRAINED. CONNECT TO EXISTING RESTRAINED JOINT PIPE WITH FULL BODY MJ x MJ SLEEVE AND RESTRAINING GLANDS UNLESS ACTUAL CONDITIONS DIFFER.

7.CONNECT WL-13 TO EXISTING MAIN UNDER SERVICE INTERRUPTION. ADHERE TO UTILITY OWNER'S PROCEDURES FOR SHUTDOWN. EXISTING VALVES EV-20, BRANCH VALVE EV-21, EXISTING IN LINE VALVE EV-21A, NEW TAPPING VALVE ON WL-12 THAT LOOPED TO EXISTING MAIN (SEE SHEET UC-9) TO FACILITATE SHUTDOWN. SHUTDOWN SHALL BE PERFORMED BETWEEN 11:00 P.M. AND 6:00 A.M. SERVICE SHALL BE RESTORED TO EXISTING 12" MAIN TO MINIMIZE SERVICE DISRUPTION TO EXISTING CUSTOMERS BETWEEN 1103 BUNCE RD AND 1165 BUNCE RD. IF SERVICE OUTAGE EXTENDS LONGER THAN 8 HOURS, CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY WATER SERVICES TO IMPACTED METERS.

8.AFTER RECONNECTION OF WL-13, ABANDON CROSS-OVER LINE FROM WL-12 TO EXISTING WATER MAIN. SEE SHEET UC-9 AND KILL OUT EXISTING 12" MAIN AT VALVE EV-20.

UC-11 UTILITY NOTES:

1.FULLY GROUT MIN. 60 LF OF 24" EXIST. MAIN. PLUG EACH END OF ABANDONED MAIN PER KILLOUT DETAIL W-22.

2.KILL OUT OF LINE SIDE OF TAPPING SLEEVE FOR WL-14 SHALL BE COORDINATED WITH 24" MAIN SHUTDOWN FOR LAYING BACK NEW 24" MAIN INTO EXISTING ALIGNMENT (SEE SHEET UC-13).

3.INSTALL AND HAVE OPERATIONAL THE FOLLOWING SEGMENTS: WL-14 TO ITS LAST IN LINE VALVE, WL-15, WL-17 AND CROSS LINES AT BINGHAM DRIVE, REVERE STREET AND WILDWOOD DRIVE. TRANSFER ALL EXISTING SERVICES TO WL-14 AND WL-17. SEE ADDITIONAL SEQUENCING FOR WL-15 ON UC-12 UTILITY NOTES AND WL-17 ON UC-13 AND UC-14 UTILITY NOTES.

4.KILL OUT OF LINE SIDE OF TAPPING SLEEVE FOR WL-14 SHALL BE COORDINATED WITH CUT IN CONSTRUCTION (SLEEVE IN) OF WL-14 TO EXISTING 24" MAIN (SEE SHEET UC-13). KILL OUT SHALL BE PERFORMED UNDER PLANNED SHUTDOWN OF EXISTING 24" MAIN AND SHALL BE PERFORMED BETWEEN 600 P.M. AND 6:00 A.M. ON SUNDAY. EXISTING 24" MAIN SHALL BE BACK IN OPERATION SO WATER SERVICE TO PARCELS 107, 112, 113 AND 115 ARE NOT IMPACTED DURING NORMAL BUSINESS HOURS. ADHERE TO PWC'S PROCEDURES FOR SHUTDOWN. EXISTING VALVES EV-22, EV-28, EV-31 AND EV-28A SHALL FACILITATE SHUTDOWN. AFTER COMPLETION OF KILLOUTS AND CUT IN CONSTRUCTION, RESUME OPERATION OF EXISTING 24" WATER MAIN BY RE-OPENING EV-22 AND EV-31.

5.RECONNECTION OF EXISTING 24" MAIN ON BINGHAM DRIVE SHALL BE BY PLANNED SHUTDOWN. EXISTING VALVES TO FACILITATE SHUTDOWN INCLUDE EV-23A AND EV-23B. LAY BACK 20 LF OF RESTRAINED JOINT DUCTILE IRON PIPE AND RECONNECT TO EXISTING MAIN USING FULL BODY MJ SLEEVE WITH RESTRAINING GLANDS. RECONNECTION SHALL BE PERFORMED BETWEEN 9:00 P.M. AND 6:00 A.M. ONLY ON A WEEKNIGHT.

UC-12 UTILITY NOTES:

1.CONNECTION OF WL-15 TO EXISTING WATER MAIN SHALL BE UNDER PLANNED SHUTDOWN. EXISTING VALVE EV-28 AND EV-28A SHALL FACILITATE SERVICE INTERRUPTION. REMOVE PLUG AND CONNECT TO EXISTING MAIN USING FULL BODY MJ SLEEVE AND RESTRAINING GLANDS. WL-15 SHALL BE INSTALLED AND OPERATIONAL TO MAINTAIN SERVICE TO THE NORTH SIDE AND FACILITATE KILL OUT OF THE 24" MAIN ON THE SOUTH SIDE.

2.PURSUANT TO TRAFFIC CONTROL REQUIREMENTS, NO WORK ON THE SOUTH SIDE SHALL BE IN PROGRESS WHILE INSTALLING WL-15 AND CONNECTING IT TO THE EXISTING MAIN ON THE NORTH SIDE. CONTRACTOR SHALL NOT BE PERFORMING WATER MAIN INSTALLATION LONGITUDINALLY TO THE ROAD ON BOTH SIDES.

UC-13 UTILITY NOTES:

1.INSTALL WL-14 AND HAVE IT OPERATIONAL TO ITS LAST IN LINE VALVE (APPROX. STAT 31+75). ALL EXISTING METERS THAT OVERLAP THESE RELOCATION SEGMENTS SHALL BE SWITCHED OVER TO THESE NEW SEGMENTS. ALL CROSS-LINES FOR WL-14 SHALL BE FULLY RESTRAINED THROUGH BRANCH VALVES. BINGHAM DRIVE, WL-15, WL-15A AND WILDWOOD DRIVE RECONNECTIONS SHALL BE COMPLETED AND OPERATIONAL CONCURRENT WITH WL-14 INSTALLATION. EXISTING BRANCH VALVES FOR THESE CROSS LINES SHALL BE PERMANENTLY CLOSED AND PROPERLY ABANDONED. SEE UC-12 UTILITY NOTES FOR ADDITIONAL SEQUENCING PROVISIONS FOR WL-15 THAT SHALL BE PERFORMED BEFORE SHUTDOWN TO CONNECT WL-14 BACK TO EXISTING MAIN.

2.PRIOR TO SHUTTING DOWN 24" MAIN TO FACILITATE KILL OUT OF EXISTING 24" MAIN AT WL-14 TAPPING SLEEVE AND CUT IN CONSTRUCTION FOR WL-14 TIE BACK TO EXISTING 24" MAIN, INSTALL WL-16 AND HAVE IT OPERATIONAL. RECONNECT ALL SERVICES TO WL-16. SEE UC-13 UTILITY NOTES FOR ADDITIONAL SEQUECING PROVISIONS FOR WL-16 THAT SHALL BE PERFORMED BEFORE SHUTDOWN FOR WL-14.

3.BORE AND JACK FOR WL-15A SHALL BE INSTALLED AHEAD OF WL-14 SO BORE PIT WILL NOT BE IN CONFLICT WITH WL-14. BORE INSTALLATION IS ANTICIPATED TO BE IN CONFLICT WITH EXISTING SEWER. INSTALL TEMPORARY DOGHOUSE SSMH FOR RECEIVING SEWAGE BYPASS. READY SEWER BYPASS TO MAINTAIN SEWER SERVICE. UPON COMPLETION OF ENCASEMENT INSTALLATION AND THREADING OF 2-INCH MAIN, COMPLETE SEWER REPLACEMENT AS SHOWN ON UC-13A WHILE SEWER FLOW IS UNDER BYPASS. SEE ADDITIONAL PROVISIONS ON UC-13A UTILITY NOTES.

4.PROTECT WORK AREA TO MAINTAIN INGRESS/EGRESS TO BUSINESS AND STORE FRONT PARKING.

5.REMOVE INSITU MATERIAL COMPLETELY FOR 2" WATER MAIN ACROSS PARCEL 140 DUE TO POTENTIAL OF PRIOR CONTAMINATION. MINIMUM TRENCH WIDTH FOR INSITU MATERIAL AND SELECT BACKFILL SHALL BE 2 FEET WIDE BY 4 FEET DEEP.

6.TEMPORARY SHORING IF REQUIRED FOR BUILDING FOUNDATION PROTECTION OR MAINTENANCE OF TRAFFIC WILL BE PAID AS TEMPORARY SHORING IN SQUARE FEET

7.METER RECONNECTION NOTES FOR PARCEL NO. 136:

A.PROVIDE 2" TAP WITH 2" CURB STOP AND 2" BLOW OFF ASSEMBLY. 4-1" STD. PWC METER ASSEMBLIES SHALL BE PROVIDED UNLESS ACTUAL CONDITIONS DIFFER.

B.RECONNECT TO CUSTOMER'S EXIST. 3-1" PVC WATER LATERALS. FIELD COORDIANTE WATER SERVICE PIPING ROUTE.

C.RECONNECT PROPOSED IRRIGATION METER TO CUSTOMERS EXIST. RPZ. FIELD COORDINATE IRRIGATION PIPING TO ENCLOSURE.

UC-13A UTILITY NOTES:

1.PLUG EXISTING 8" OPENING IN EXIST. SSMH ON 42"DIA. OUTFALL AFTER PROPOSED SEWER IS OPERATIONAL.

2.PROP. SSMH SHALL BE CUT IN (DOG-HOUSE STYLE) ON THE 8"EXISTING SEWER LINE FOR TEMPORARY SEWAGE BYPASS. IT SHALL BE OPERATIONAL PRIOR TO INITIATING BORE AND JACK AND SETTING PROPOSED UPSTREAM SSMH. PROP. SSMH FOR TEMPORARY BYPASS PUMPING SHALL BE ABANDONED AFTER NEW SEWER IS OPERATIONAL AND BYPASS PUMPING CAN BE DISCONTINUED.

3.PROP. SSMH SHALL BE 4' DIA. RECONNECT EXISTING DI AT SAME SLOPE USING DI COUPLING RATED FOR SEWER SERVICE.

4.CONNECTION TO EXISTING SSMH ON EXIST. 8"OUTFALL BEHIND GAS STATION SHALL BE BY FIELD CORE. CORE SHALL BE NEAT AND EQUIPPED WITH BOOTED CONNECTION.

5.LOCATE ELECTRICAL CIRCUITRY TO LIGHTS ON PARCEL 138 PRIOR TO SEWER INSTALLATION. ALL CIRCUITRY SHALL BE PROTECTED. ANY DAMAGE SHALL BE REPAIRED AND SHALL MEET LOCAL ELECTRICAL REQUIREMENTS.

6.TEMPORARY SHORING IF REQUIRED FOR BUILDING FOUNDATION PROTECTION OR MAINTENANCE OF TRAFFIC WILL BE PAID AS TEMPORARY SHORING IN SQUARE FEET BELOW GROUND SURFACE

7.CONTRACTOR SHALL VERIFY SEWER SERVICE DEPTH AND LOCATION PRIOR TO ORDERING MATERIALS.

8.CONTRACTOR SHALL REPLACE EXISTING CLEAN OUT AND SEWER SEVICE LINE AT SAME DEPTH AND SLOPE.

9.CONTRACTOR SHALL REMOVE EXISTING CLEAN OUT AND EXISTING SEWER SERVICE TO PROPOSED CLEAN OUT LOCATION. CONTRACTOR SHALL GROUT FILL EXISTING SERVICE CORE IN MANHOLE WITH NON-SHRINK GROUT.

DOCUMENT NOT CONSIDERED FINAL UNTIL ALL SIGNATURES ARE COMPLETED

PROJECT REFERENCE	NO.	SHEET NO.
⊍-4405		UC-3B
DESIGNED BY: AMH		8/3/2018
DRAWN BY: AMH/AB		CAROLLA CAROLLA
CHECKED BY: AMH		OFESS 101 14
APPROVED BY: MWF		SEAL 025490
REVISED:		
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		MG INE EN LINE AND THE MENTINE TO TH
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTIL	Mork W. Lister I Y BBE 30784 F 33 L BOUCT I PLANS ONLY

UC-14 UTILITY NOTES:

UTILITY CONSTRUCTION

1. CONNECTION OF WL-16 TO EXISTING 8" SHALL BE PERFORMED UNDER PLANNED SERVICE INTERRUPTION. LENGTH OF BURIED PIPE BETWEEN DEAD END PLUG AND EV-33A IS LESS THAN 95 LF FOR ESTIMATED BURIAL DEPTH OF 3 FEET. EXISTING VALVE EV-33A, EV-33B AND EXISTING HYDRANT BETWEEN THESE TWO VALVES SHALL FACILITATE SHUTDOWN TO REMOVE EXISTING DEAD-END PLUG AND TO INSTALL PROPOSED 8" RJ GATE VALVE AND MINIMUM OF THREE JOINTS OF PROPOSED PIPE. PROPOSED VALVE AND MINIMUM OF THREE JOINTS OF PIPE INSTALLATION SHALL BE PERFORMED DURING NON-BUSINESS HOURS (BETWEEN 10:00 P.M. AND 6:00 A.M.). COORDINATE WITH UTILITY OWNER'S PROJECT COORDINATOR. EV-33A AND EV-33B SHALL BE TEMPORARILY CLOSED AND EXISTING HYDRANT SHALL BE UTILIZED TO REDUCE PRESSURE SO EXISTING 8" PLUG CAN BE SAFELY REMOVED AND CONNECTION CAN BE MADE. REFERENCE UTILITY OWNER'S DETAIL M.15.

2.AFTER INSTALLATION OF 8" RJ GATE VALVE AND MINIMUM OF 60 LF OF PIPE, COORDINATE WITH UTILITY OWNER'S PROJECT COORDINATOR TO RESTORE OPERATION OF EV-33B. MAINTAIN CLOSURE OF EV-33A UNTIL WATER MAIN LENGTH EXCEEDS 125 LF FROM NEW 8" RJ VALVE. AT THAT POINT, DISINFECT EXISTING MAIN BETWEEN EV-33A AND NEW VALVE AND PERFORM BACTERIOLOGICAL TESTING BEFORE PLACING IT BACK IN OPERATION. UTILIZE EXISTING 2" BLOW ASSEMBLY TO FLUSH EXISTING MAIN. MAINTAIN CLOSURE OF NEW 8" RJ GATE VALVE AND RESUME OPERATION OF EV-33A AND CONTINUE INSTALLATION OF WL-16.

3.AFTER EXISTING SEGMENT BETWEEN EV-33A AND NEW VALVE HAS BEEN PLACED BACK IN SERVICE, ABANDON EXISTING 2" TAP AND REMOVE BLOW ASSEMBLY.

4.WL-16 SHALL BE IN OPERATION BEFORE CUT IN CONSTRUCTION TO CONNECT WL-14 TO EXISTING 24"MAIN. SEE UC-13 UTILITY NOTES FOR ADDITIONAL SEQUENCE PROVISIONS.

5.ADHERE TO NCDOT TRAFFIC CONTROL PROVISIONS. WL-16 INSTALLATION SHALL BE COORDINATED SO THAT IT IS PERFORMED WHEN LONGITUDINAL WORK ON THE SOUTH SIDE OF RAEFORD ROAD IS NOT OCCURRING.

6.COORDINATE WITH UTILITY OWNER'S PROJECT COORDINATOR FOR EXISTING VALVES TO FACILITATE TEMPORARY SHUT DOWN.

7.PROP. 8" GATE VALVE SHALL BE CUT IN AND MIN. 40 LF OF 8" PVC PIPE SHALL BE REMOVED AND REPLACED WITH RESTRAINED JOINT DIP AND SLEEVED BACK TO EXISTING PVC ON THE SOUTH SIDE OF RAEFORD ROAD. LAYING BACK OF THE MIN. 40 LF OF RESTRAINED JOINT DIP IS ANTICIPATED TO OVERLAP WITH EXISTING SERVICE OF WAFFLE HOUSE. WORK SHALL BE PERFORMED UNDER SERVICE INTERRUPTION USING EV-31 AND EV-35, AND IT SHALL BE PERFORMED BETWEEN 9:00 P.M. AND 6:00 A.M. TO HAVE MINIMUM IMPACT ON ADJACENT BUSINESSES. SERVICE INTERRUPTION SHALL BE CONSISTENT WITH UTILITY OWNER'S REQUIREMENTS. THIS WORK SHALL BE PERFORMED AND COMPLETED PRIOR TO BEGINNING WORK ON EXTENSION OF EXISTING 84" CMP AND TRENCHLESS 72" STORM CROSSINGS. COORDINATE PLANNED OUTAGE WITH UTILITY OWNER'S PROJECT COORDINATOR. IF CONTRACTOR ANTICIPATES OUTAGE WILL BE LONGER THAN 8 HOURS TO COMPLETE WORK, CONTRACTOR SHALL PROVIDE TEMPORARY WATER SERVICE TO ALL IMPACTED BUSINESSES WITHIN ESTIMATED OUTAGE SEGMENT INCLUDING PARCELS 156, 157 AND 158. LAYOUT OF TEMPORARY WATER MAIN HAS NOT BEEN SHOWN, BUT ALL BUSINESS DRIVEWAYS SHALL NOT BE IMPACTED BY A TEMPORARY WATER MAIN. BUSINESS DRIVES SHALL BE MAINTAINED AND REMAIN OPEN.

8.NEW RESTRAINED CUT IN VALVE AND EXISTING 8" TAPPING VALVE AT 8" CONNECTION TO EXISTING 24" MAIN SHALL BE UTILIZED TO ISOLATE EXISTING 8" FOR DRAINAGE WORK.

9.WL-18 SHALL BE INSTALLED AND OPERATIONAL PRIOR TO EXTENDING 84" CULVERTS AND INSTALLING 72". WL-18 WILL BE REQUIRED TO BACK FEED CUSTOMERS WHEN ISOLATING EXISTING 8" MAIN AS DEFINED IN NOTE 8 (ABOVE).

10.FULLY GROUT MIN. 60 LF OF 24" EXIST. MAIN AT DESIGNATED LOCATIONS. PLUG EACH END OF ABANDONED MAIN PER PWC DETAIL W-22.

11.KILL OUT OF LINE SIDE OF TAPPING SLEEVE SHALL BE COORDINATED WITH 24" MAIN SHUTDOWN FOR LAYING BACK NEW 24" MAIN INTO EXISTING ALIGNMENT (SEE SHEET UC-14).

UC-14 UTILITY NOTES:

12.INSTALLATION OF WL-17 AND INTERRUPTION OF EXISTING 24"ON NORTH SIDE THAT CROSSES OVER EXISTING TWIN 84"CMPS AND PROPOSED 72"TRENCHLESS CROSSING SHALL BE CLOSELY COORDINATED WITH INSTALLATION OF CULVERT IMPROVEMENTS. WL-17 SHALL BE INSTALLED FOLLOWING THE COMPLETION OF THE 84"CMP EXTENSIONS AND THE TRENCHLESS CROSSING OF THE 72"DRAINAGE PIPE SO AS TO NOT CONFLICT WITH THE DRAINAGE WORK. WL-20R1 AND THE 8"AND 2"TEMPORARY WATER LINES SHALL BE OPERATIONAL PRIOR TO INTIATING ANY WORK ON THE EXISTING 84"CMPS AND THE 72"TRENCHLESS CROSSING. THE DRAINAGE WORK MAY REQUIRE THE EXISTING 24"MAIN BETWEEN SKIBO ROAD AND HOPE MILLS ROAD TO BE SHUTDOWN AS A PORTION OF THIS SEGMENT OF THE EXISTING 24"MAIN IS VERY CLOSE TO EXCAVATION LIMITS. EXISTING VALVE SPACING DOES NOT ALLOW ANY SHORTER RUN TO BE ISOLATED THAN THAT BETWEEN SKIBO AND HOPE MILLS ROAD. SEE SEQUENCE ON UC-15 AND UC-17 UTILITY NOTES FOR ADDITIONAL DETAILS. IF ANY PORTION OF THE EXISTING 24"MAIN THAT IS LOCATED ABOVE THE EXISTING CMPS AND POTENTIALLY WITHIN EXCAVATION LIMITS OF THE CONCRETE COLLARS FOR THE EXTENSIONS OF THE 84"CMPS, THEN REMOVE AND REPLACE WITH RESTRAINED JOINT 24"DUCTILE MAIN BETWEEN THE PROPOSED TAPPING SLEEVE FOR WL-17 AND THE EXISTING 24"X24"X24"TEE JUST INSIDE THE RADIUS OF THE INTERSECTION OF SKIBO ROAD AND RAEFORD ROAD; AND INSTALL 24"X24"X24"X24"TEE AND RJ 24"BRANCH VALVE TO FACILITATE WL-17 AS OPPOSED TO THE TAPPING SLEEVE AND VALVE. EXISTING VALVES TO ISOLATE THIS SEGMENT OF THE 24"MAIN ARE EV-31, EV-32, EV-33 AND EV-45 (SEE UC-17).

13.ABANDONMENT OR KILL-OUT OF EXISTING 24" MAIN THAT CROSSES RAEFORD ROAD AND THAT IS LOCATED BETWEEN EV-33 AND CUT IN FOR WL-17 SHALL BE PERFORMED UNDER SERVICE INTERRUPTION AND SEQUENCED ONCE WL-17 IS OPERATIONAL. EV-33, EV-31, PROPOSED VALVE ON WL-14 AT STA. 32+75, PROPOSED VALVE ON WL-20R1 AT STA. 154+51.95 AND PROPOSED VALVE ON WL-17 AT STA. 0+00 SHALL FACILIATE SHUTDOWN. EXISTING 24" WATER MAIN IS FULLY RESTRAINED AT DESIGNATED KILL-OUT LOCATION, BOTH ON THE ACTIVE AND KILL-OUT SIDES OF THIS LOCATION. INSTALL RJ PLUG AND KICKER PER KILLOUT DETAIL. COORDINATE THIS KILL-OUT WITH KILL-OUT OF EXISTING 24"BETWEEN TAPPING SLEEVE AND VALVE ON WL-20R1 AND WL-19 CONNECTION TO EXISTING 24"MAIN ON HOPE MILLS ROAD, UNLESS INSTALLATION OF WL-17 AND DRAINAGE IMPROVEMENTS FOR CULVERT UPGRADES HAS LONGER TIME FRAME OR INSTALLATION SCHEDULES DO NOT OVERLAP.

14.CONNECTION OF WL-17 INTO EXISTING 24"MAIN ALONG SKIBO ROAD SHALL BE PERFORMED BY A COMBINATION OF A 24"TEMPORARY LINE STOP AND CLOSURE OF EV-33. INSTALL AND HAVE WL-17 OPERATIONAL TO LAST IN LINE VALVE AT APPROX. STA. 3+65. TEMPORARY LINE STOP IS NECESSITATED BECAUSE OF LONG VALVE SPACING TO NEXT NEAREST IN LINE VALVE ON 24" MAIN UP SKIBO ROAD. ADHERE TO CUT IN CONSTRUCTION REQUIREMENTS AND HAVE LINE STOP OPERATIONAL PRIOR TO INTIATING CUT IN. COORDINATE LINE STOP PLACEMENT WITH UTILITY OWNER'S PROJECT COORDINATOR. LAY BACK INTO EXISTING MAIN A MINIMUM OF 20 LF WITH 24"RESTRAINED JOINT PIPE. WORK INCLUSIVE OF LINE STOP INSTALLATION SHALL BE PERFORMED BETWEEN 9:00 P.M. AND 6:00 A.M. TO AVOID TRAFFIC CONGESTION. PROVIDE TRAFFIC RATED PLATING FOR LINE STOP EXCAVATION AND TIE IN EXCAVATION UNLESS EXCAVATIONS ARE DRIVABLE AT THE END OF EACH WORKING NIGHT.

15.WL-18 INSTALLATION SHALL BEGIN AT STA. 0+00 AND CONTINUE TOWARDS HOPE MILLS ROAD. ADHERE TO CUT IN CONSTRUCTION FOR CONNECTION TO EXISTING MAINS AT STA. 0+00 AND ITS TERMINUS, APPROX. STA. 38+50. CONNECTION TO EXISTING MAIN AT STA. 0+00 SHALL BE UNDER SERVICE INTERRUPTION SCHEDULED BETWEEN 9:00 P.M. AND 6:00 A.M. TO MINIMIZE SERVICE INTERRUPTION TO IMPACTED BUSINESSES. PERFORM EXISTING MAIN ALTERATION ON DUKE STREET DURING THE PLANNED OUTAGE FOR THE CONNECTION OF WL-18 TO EXISTING TERMINUS OF 8"MAIN. ISOLATE EXISTING MAINS BY TEMPORARY CLOSURE OF EV-35, EV-35A AND EV-35B. PARCELS 164, 165 AND 166 ARE SERVED FROM THE REAR AND FROM DAIRY STREET. AFTER COMPLETION OF ALTERATION OF EXISTING MAIN ON DUKE STREET, RE-OPEN EV-35B. MAINTAIN CLOSURE OF EV-35 AND EV-35A UNTIL NEW WATER MAIN LENGTH FOR WL-18 EXCEEDS 125 LF FROM NEW 8" RJ VALVE. AT THAT POINT, RE-OPEN EV-35 AND EV-35A AND KEEP NEW VALVE AT WL-18 STA. 0+00 CLOSED UNTIL PHASING IN OPERATION OF WL-18 AS IT CONTINUES TOWARD HOPE MILLS ROAD.

UC-15 UTILITY NOTES:

1.FULLY GROUT MIN. 60 LF OF 24" EXIST MAIN. PLUG EACH END OF ABANDONED MAIN PER KILLOUT DETAIL W-22.

2.KILL OUT OF LINE SIDE OF TAPPING SLEEVE FOR WL-20R1 SHALL BE COORDINATED WITH 24" MAIN SHUTDOWN FOR DRAINAGE IMPROVEMENTS AS DEFINED IN NOTE 8 ON UC-17 UTILITY NOTES.

3.SEE SEQUENCE NOTES (NOTE 1.C) ON UC-17 UTILITY NOTES FOR WL-20R1.

4.PROVIDE TEMPORARY WATER LINE TO MAINTAIN WATER SERVICES BETWEEN RAEFORD ROAD AND GREENLEAF DRIVE DURING 24" SHUTDOWNS. TEMPORARY 8"MAIN SHALL BE CONNECTED TO EXISTING HYDRANT TO MAINTAIN ADEQUATE FIRE FLOW. PROVIDE 2"TEMPORARY WATER MAIN OFF 8"TEMPORARY WATER MAIN TO SERVE ACTIVE METERS (PARCELS 160 AND 162). COORDINATE UTILITY OWNER PROJECT COORDINATOR TO OPEN AND CLOSE EXISTING BRANCH VALVE ON GREENLEAF AS NEEDED DURING 24"MAIN SHUTDOWNS. TEMPORARY WATER SYSTEM SHALL REMAIN IN PLACE UNTIL RELOCATION WATER MAIN BETWEEN SKIBO AND HOPE MILLS ROAD AND KILL OUTS ARE COMPLETED.

5.COMPLETE CROSS-LINE RECONNECTION AT DURANT DRIVE FOR WL-18 AND WL-20R1 CONCURRENT WITH KILLOUT OF EXISTING 24" MAIN BETWEEN TAPPING SLEEVE AND VALVE FOR WL-20R1 AND CONNECTION OF WL-19 TO EXISTING 24"MAIN IN HOPE MILLS ROAD. RECONNECTIONS SHALL ADHERE TO CUT IN CONSTRUCTION REQUIREMENTS TO RETAIN EXISTING AND ENCASED 8"PVC UNDER RAEFORD ROAD.

UC-16 UTILITY NOTES:

1.INSTALL WL-18 AND HAVE IT OPERATIONAL UP TO STA. 19+00 INCLUSIVE OF THE BRANCH FOR THE RECONNECTION OF THE EXISTING MAIN ON DURANT DRIVE. RESTRAIN TEE AND BRANCH VALVE FOR THE RECONNECTION. RECONNECT EXISTING BRANCH MAIN ON DURANT DRIVE UNDER PLANNED SERVICE INTERRUPTION AND ADHERE TO CUT IN CONSTRUCTION REQUIREMENTS. PERFORM RECONNECTION OF DURANT DRIVE CROSS-LINE CONCURRENT WITH RECONNECTION OF THE EXISTING 8" MAIN TO WL-20R1. THIS SEQUENCE WILL MINIMIZE INTERRUPTION OF SERVICE ON DURANT DRIVE AND ALLOW THE EXISTING 8"PVC CROSS-LINE UNDER RAEFORD ROAD TO BE RETAINED.

UC-17 UTILITY NOTES:

1.PRIOR TO BEGINNING WORK ON PORTION OF WL-18 BETWEEN EUCALYPTUS AND HOPE MILLS ROAD, CONTRACTOR SHALL COMPLETE FOLLOWING:

A.WL-18 SHALL BE OPERATIONAL UPTO PROPOSED IN LINE VALVE AT APPROX. STA. 33+75 (EUCALYPTUS ROAD). ALL EXISTING SERVICES SHALL BE TRANSFERRED TO WL-18.

B.WL-19 SHALL BE INSTALLED AND OPERATIONAL BETWEEN THE CONNECTION TO EXISTING 8" MAIN AT FRED ANDERSON AND THE IN-LINE VALVE AT APPROX. STA. 1+60 SHALL BE OPERATIONAL. ALL EXISTING SERVICES AND EXSITING BRANCH MAINS ALONG THIS SEGMENT SHALL BE TRANSFERRED TO THIS PORTION OF WL-19.

C.WL-20R1 SHALL BE INSTALLED AND OPERATIONAL UP TO STA. 38+81. ALL EXISTING BRANCH MAINS AND EXISTING SERVICES THAT ARE ON THE SAME SIDE OF RAEFORD ROAD AS THE EXISTING 24"MAIN AND THAT ARE CONNECTED TO EXISTING 6"/8" ON SOUTH SIDE OF RAEFORD ROAD SHALL BE TRANSFERRED AND CONNECTED TO WL-20R1. ALTERNATIVELY, CONTRACTOR CAN TEMPORARILY TRANSFER THESE EXISTING SERVICES TO THE EXISTING 24" MAIN TO PROVIDE FLEXIBILITY IN SEQUENCING THE INSTALLATION OF WL-20R1 WITH RELOCATION AND STORM DRAINAGE WORK ON THE NORTH SIDE. NO SEPARATE PAYMENT FOR THE "TEMPORARY"TRANSFER OF THESE SERVICES SHALL BE PROVIDED.

D.TEMPORARY 2" MAIN TO MAINTAIN WATER SERVICES FOR PARCEL 21 SHALL BE OPERATIONAL. DURING INSTALLATION OF TEMPORARY 2"MAIN, INSTALL NEW METERS FOR BUSINESSES AT DESIGNATED LOCATION.

2.COORDINATE WITH UTILITY OWNER'S PROJECT COORDINATOR TO INTERRUPT SERVICE OF EXISTING 6"AC/EXISTING 8"CONNECTION POINT FOR WL-18 SINCE WL-18 WILL BE PLACED IN SAME TRENCH AS EXISTING 8"MAIN. ADHERE TO PWC'S POLICIES FOR WATER MAIN OUTAGE. WORK SHALL BE PERFORMED BETWEEN 9:00 P.M. AND 6:00 A.M. TO COMPLY WITH TRAFFIC CONTROL REQUIREMENTS. EXISTING VALVES TO FACILITATE OUTAGE INCLUDE EV-47A AND EV-48A (SEE SHEET UC-18). REMOVE AND REPLACE EV-47 WITH NEW RESTRAINED VALVE AS SHOWN TO FACILITATE PRESSURE TEST. AFTER PROPOSED SEGMENT BETWEEN NEW EV-47 AND EUCALYPTUS ROAD IS OPERATIONAL AND IS READY FOR WATER SERVICES, REMOVE TEMPORARY LATERALS AND TEMPORARY MAIN FOR PARCEL 21 AND PROVIDE NEW LATERALS FROM METER TO MAIN. NO PORTION OF THE TEMPORARY LATERAL SHALL BE UTILIZED. CLOSE LOOP BETWEEN THE GANG METERS USING 2"MAIN. NO PORTION OF THE TEMPORARY 2"MAIN SHALL BE UTILIZED TO PROVIDE A LOOPED 2"SERVICE LINE. MAINTAIN VALVE CLOSURE OF EV-47A, NEW VALVE-47 AND EV-48 TO FACILITATE WATER MAIN INSTALLATION BETWEEN THE HOPE MILLS ROAD (EAST SIDE) AND THE INSTALLED PORTION OF WL-19 AS DEFINED IN ITEM 1.A.

3.ADHERE TO NCDOT TRAFFIC CONTROL PROVISIONS. WL-20R1 INSTALLATION SHALL BE COORDINATED SO THAT IT IS PERFORMED WHEN LONGITUDINAL WORK ON THE SOUTH SIDE OF RAEFORD ROAD IS NOT OCCURRING. IF CONTRACTOR ELECTS TO INSTALL WI-20R1 INSTALLATION AS DEFIND IN NOTE 1.C ABOVE, NO RELOCATION WORK ON THE SOUTH SIDE CAN PERFORMED UNTIL ALL WORK ON WL-20R1 IS COMPLETED. COORDINATE WITH THE DEPARTMENT TO IMPLEMENT ANY ADDITIONAL TRAFFIC CONTROL MEASURES THAT MAY BE REQUIRED FOR INSTALLATION OF WL-20R1 DURING THE SOUTHSIDE PHASING.

4.RECONNECTION OF THE GLENSFORD DRIVE CROSS-LINE SHALL BE BY SERVICE INTERRUPTION AND COMPLY WITH CUT IN CONSTRUCTION REQUIREMENTS. WL-20R1 SHALL BE OPERATIONAL PRIOR TO RECONNECTING THE CROSS-LINE. ITS BRANCH FOR THE RECONNECTION OF THIS EXISTING CROSS-LINE SHALL BE RESTRAINED. RECONNECT THE EXISTING CROSS-LINE BY ISOLATING THE SEGMENT BETWEEN RAEFORD ROAD AND BELFORD ROAD TRAFFIC CIRCLE USING EV-46 AND OR EV-46A AND THE EXISTING IN LINE VALVE AT THE TRAFFIC CIRCLE. OUTAGE SHALL BE PLANNED BETWEEN 9:00 P.M. AND 6:00 A.M. TO MINIMIMZE IMPACT TO EXISTING SERVICES ALONG THIS SEGMENT IN NOTE 1.B AS NOTED ABOVE. RECONNECTION OF GLENSFORD DRIVE TO WL-20R1 SHALL BE PERFORMED JUST PRIOR TO 30"CUT IN CONNNECTION OF WL-19 TO EXISTING 24"IN HOPE MILLS ROAD. CLOSE AND KILLOUT OF EV-46.

PROJECT REFERENCE	NO	SHEET NO.
TRUJECI REFERENCE	NU.	SIILLI NU.
U-4405		UC-3C
SIGNED BY: AMH		8/3/2018
RAWN BY: AMH/AB		OFESSION A
HECKED BY: AMH	Z. Z.	4. Ok F 22 / ON 14
PROVED BY: MWF		SEAL SEAL
:VISED:		025490 E
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	TITA	SEAL 025490 NGINERALINA POLISABARALINA Mark W. Fisher
ILITIES ENGINEERING SEC. HONE:(919)707-6690 AX:(919)250-4151	UTIL	Thock W. Fisher TY CONSTRUCTION PLANS UNLY

UC-17 UTILITY NOTES:

UTILITY CONSTRUCTION

5.ADHERE TO FOLLOWING CONSTRUCTION SEQUENCE FOR CUT IN CONNECTION TO EXISTING 24"WITHIN HOPE MILLS ROAD:

A.INSTALL WL-18A, WL-19 BETWEEN INSTALLED PORTION AS DEFINED IN NOTE 1.A (STA. 1+60) AND 24" VALVE (APPROX. STA. 0+50) AND PROPOSED 24"CROSSING UNDER RAEFORD ROAD (WL BETWEEN WL-20R1 AND WL-19) AND HAVE THESE MAINS OPERATIONAL.

B.INSTALL WL-20R2 BETWEEN STA. 0+00 AND IN LINE VALVE NEAR STA. 8+75, HAVE IT OPERATIONAL AND ALL CROSS-LINE CONNECTIONS AND METERS TRANSFERRED. WORK ON THIS SEGMENT SHALL ADHERE TO TRAFFIC CONTROL PROVISIONS AND BE PERFORMED WHEN NO OTHER WORK LONGITUDINAL TO THE SOUTH SIDE IS OCCURRING. ALTERNATIVELY, A 12"TEMPORARY LINE STOP CAN BE INSTALLED ON EXISTING 12"MAIN TO PROVIDE FLEXIBILITY IN SEQUENCING THE INSTALLATION OF WL-20R2 WITH RELOCATION AND STORM DRAINAGE WORK ON THE NORTH SIDE. NO SEPARATE PAYMENT FOR THIS TEMPORARY LINE STOP SHALL BE PROVIDED. INSTALLATION OF WL-20R2 AS NOTED OR 12"TEMPORARY LINE STOP SHALL BE NECESSARY TO MAINTAIN EXISTING SERVICES FOR ALDI AND OTHER BUSINESSES SINCE EXISTING 12" BETWEEN EV-50A (SHEET UC-18) AND INTERSECTION OF GLENSFORD DRIVE AND RAEFORD ROAD WILL HAVE TO BE ISOLATED.

C.EV-47A AND NEW VALVE-27 SHALL BE RE-OPENED TO ALLOW BACKFEEDING OF THE EXISTING 24" MAIN THAT SERVES PORTIONS OUT TO HOPE MILLS WHILE ITS CONNECTION TO THE 24" MAIN ON THE NORTH SIDE IS ISOLATED TO FACILITATE RECONNECTION.

6.EXISTING MAIN BETWEEN NEW VALVE-47 AND APPROX. STA. 0+22 ON WL-18 SHALL BE INSTALLED UNDER SERVICE INTERRUPTION THROUGH VALVE CLOSURE CONSISTING OF EV-47A, NEW VALVE-47 AND EV-48.

7.WL-19 CONNECTION TO EXISTING 24"MAIN WITHIN HOPE MILLS ROAD SHALL BE PERFORMED BY A COMBINATION OF A 24"TEMPORARY LINE STOP AND CLOSURE OF EV-45 AND EV-50A (SHEET UC-18). TEMPORARY 24"LINE STOP IS NECESSITATED BECAUSE OF LONG VALVE SPACING TO NEAREST IN LINE VALVE ON 24"MAIN DOWN HOPE MILLS ROAD. ADHERE TO CUT IN CONSTRUCTION REQUIREMENTS AND HAVE LINE STOP OPERATIONAL PRIOR TO INTIATING CUT IN. COORDINATE LINE STOP PLACEMENT WITH UTILITY OWNER'S PROJECT COORDINATOR. REMOVE EXISTING 24"VALVE AND SLEEVE INTO EXISTING MAIN. LAYING BACK A MINIMUM OF 20 LF WITH 24"RESTRAINED JOINT PIPE IS NOT REQUIRED AS RECORDS INDICATE EXISTING MAIN IS RESTRAINED, UNLESS ACTUAL CONDITIONS DIFFER. WORK INCLUSIVE OF LINE STOP INSTALLATION SHALL BE PERFORMED BETWEEN 9:00 P.M. AND 6:00 A.M. TO AVOID TRAFFIC CONGESTION. PROVIDE TRAFFIC RATED PLATING FOR LINE STOP EXCAVATION AND TIE IN EXCAVATION UNLESS ROAD IS RETURNED TO DRIVABLE CONDITIONS AT END OF EACH WORK PERIOD.

8.COORDINATE KILLOUT OF EXISTING 24"WATER MAIN BETWEEN WL-20R1 TAPPING SLEEVE AND VALVE AND WL-19 CONNECTION TO EXISTING 24"MAIN CONCURRENTLY.

9.PARCEL 25A (CVS PHARMACY) HAS 2-1" METERS AND 6" FIRELINE THAT WILL NEED TO BE REPLACED AND RECONNECTED TO WL-19.

10.REMOVE AND REPLACE EXISTING SEWER IN KARR DRIVE AS SHOWN WITH DUCTILE IRON PRIOR TO INSTALLATION OF WL-20R1.

UC-18 UTILITY NOTES:

1.SEE UC-17 UTILITY NOTE 1 FOR SEQUENCE OF WL-19 AND WL-20R2 BETWEEN STA. 0+00 AND STA. 8+75.

2.BUILDOUT WL-20R2 FROM STA. 8+75 TO PROP. IN LINE VALVE NEAR STA. 24+35 (SEE SHEET UC-19). INSTALL, HAVE OPERATIONAL AND CONNECT ALL CROSS-LINES WITHIN THIS SEGMENT. TRANSFER ALL IMPACTED METERS TO THIS SEGMENT OF WL-20R2.

3.BUILD OUT WL-19 FROM TAPPING SLEEVE TO IN LINE VALVE NEAR STA. 9+60 (SEE SHEET UC-17). PERFORM KILL-OUT ON THE LINE SIDE OF TAPPING SLEEVE FOR WL-19 AT STA. 9+60 ONCE EXISTING 12"ON THE NORTH SIDE BETWEEN EV-50 AND EV-50A (NEAR INTERSECTION OF MONTCLAIR AND RAEFORD, SEE SHEET UC-19) IS READY TO BE ABANDONDED. KILL OUT OF THIS EXISTING 6" WATER MAIN BETWEEN WL-19 TAPPING SLEEVE AND EXISTING 12"MAIN ON NORTH SIDE WILL INVOLVE PERMANENTLY CLOSING EV-50, EV-50A AND EV-50C AND TEMPORARILY CLOSING EV-50D TO AVOID BACKFEEDING FROM FRED ANDERSON DURING KILL-OUT PROCEDURE.

4.BUILD OUT WL-19B FROM STA. 2+06.32 (SEE SHEET UC-19) TO END OF LINE. SEE ADDITIONAL SEQUENCE NOTES ON UC-19 UTILITY NOTES.

UC-19 UTILITY NOTES:

1.8"RJ GATE VALVE ON SCOTLAND DRIVE AND 8"WATER MAIN THAT WILL CONTINUE SOUTH ON SCOTLAND DRIVE CONNECTING TO EXISTING 8"MAIN THAT ROUTES ACROSS FRED ANDERSON NISSAN COMPLETING A LOOP AND CONNECTING TO EXISTING MAIN ON ALAMANCE (OUTSIDE OF PROJECT LIMITS) WILL BE INSTALLED AND WILL BE OPERATIONAL PRIOR TO THE INSTALLATION OF WL-19A, WL-19B AND WL-19C. DESIGN PLANS FOR THE PROPOSED 8" MAIN THAT CONTINUES SOUTH ON SCOTLAND DRIVE WILL BE AVAILABLE TO CONTRACTOR AFTER CONTRACT AWARD.

2.PROPOSED 8"MAIN AS NOTED IN NOTE 1 ABOVE SHALL BE CONNNECTED TO PROVIDE SOURCE WATER AND FACILITATE THE INSTALLATION AND TESTING OF WL-19A, WL-19B AND WL-19C.

3.INSTALL AND HAVE OPERATIONAL WL-19A FROM CONNECTION TO 8"RJ GATE VALVE AS NOTED IN NOTE 1 TO IN-LINE VALVE (APPROX. STA. 0+02) ON THE OPPOSING SIDE OF RAEFORD. CROSSING SHALL BE PERFORMED IN ACCORDANCE WITH TRAFFIC CONTROL REQUIREMENTS. NO LONGITUDINAL WORK SHALL BE OCCURRING ON THE SOUTH OR NORTH SIDES. FULLY RESTRAIN IN LINE VALVE AND BRANCH VALVES FOR WL-19B AND WL-19C.

4.PRIOR TO PERFORMING THE CROSSING VIA BORE AND JACK FOR WL-19A, CONTRACTOR SHALL RELOCATE METER FOR PARCEL 209 TO DESIGNATED LOCATION (OUTSIDE THE BORE FOOTPRINT) AND PROVIDE TEMPORARY 1" SERVICE TO RELOCATED METER. TEMPORARY 1" SERVICE SHALL BE TAPPED OFF OF THE EXISTING 12". ONCE WL-2R2 IS OPERATIONAL, RECONNECT METER TO 30" USING NEW LATERAL. REMOVE ALL PART OF THE TEMPORARY

5.BUILD OUT WL-19B AND WL-19C FROM WL-19A TO EACH END OF RESPECTIVE LINE.

6.EXIST. 2"MAIN CONFLICTS WITH PROP. TRENCH FOR WL-19C BETWEEN STA. 7+50 AND STA. 12+00. COORDINATE WITH UTILITY OWNER'S PROJECT COORDINATOR TO SHUT DOWN EXIST. 2"MAIN USING EXIST. 2"BALL VALVE BETWEEN WL-STA. 12+00 AND EXIST. SERVICE FOR PARCEL 220. WATER SERVICE SHALL BE MAINTAINED TO PARCEL 220 DURING INSTALLATION OF WL-19C. OUTAGE FOR OTHER EXISTING METER ON EXISTING 2"MAIN SHALL BE COORDINATED AS NOTED IN NOTE 7.

7.COORDINATE SERVICE INTERRUPTION FOR EXIST. 2"METER NEAR STA. 8+10 WITH THE ENGINEER. EXISTING 2"METER SERVICE PROVIDES IRRIGATION TO THE MEMORIAL GARDENS, WHICH ARE MAINTAINED BY THE CITY OF FAYETTEVILLE. OUTAGE SHALL BE MINIMIZED BY HAVING WL-19C INSTALLED AND OPERATIONAL UP TO IN LINE VALVE AT STA. 8+30. TRANSFER EXISTING 2"METER TO WL-19C BEFORE CONTINUING INSTALLATION TO WL-19C TERMINUS.

8.INSTALL AND HAVE WL-19C OPERATIONAL BETWEEN STA. 8+30 AND PLUGGED END WHILE MAINTAINING WATER TO PARCEL 220. RELOCATE WATER METER FOR PARCEL 220 AND CONNECT IT TO WL-19C.

9.KILLOUT EXIST. 2"MAIN AT EXIST. 12"MAIN. SHUT EXIST. VALVE AND PLUG 2" MAIN IN ACCORDANCE WITH KILLOUT DETAIL.

10.SEE SEQUENCE NOTE 2 ON UC-18 UTILITY NOTES AND NOTE 1 ON UC-20 UTILITY NOTES FOR INSTALLATION OF WL-20R2.

11.CONTRACTOR SHALL SAFEGUARD EXIST. 12" AC DURING INSTALLATION OF 30" BY BUILDING OUT 30" WATER MAIN AS NOTED IN NOTE 12.

12.INSTALLATION OF WL-20R2 BETWEEN IN-LINE VALVE NEAR STA. 24+25 AND IN-LINE VALVE NEAR STA. 33+10 SHALL REQUIRE INTERRUPTION OF SERVICE OF EXISTING 12" MAIN ON NORTH SIDE BECAUSE OF THE FOLLOWING:

A.POTENTIAL FOR EXCAVATION OF THE 30"WATER MAIN TO CONFLICT WITH EXISTING 12"MAIN

B.POTENTIAL FOR EXCAVATION TO CAUSE DAMAGE TO AC MATERIAL RESULTING IN RUPTURE OR BREAK

13.PRIOR TO INTERRUPTION OF SERVICE OF THE EXISTING 12"MAIN, RELOCATE METER FOR PARCEL 227 AND PROVIDE 1"TEMPORARY SERVICE FROM EXIST. 12"PVC MAIN IN MONTCLAIR DRIVE TO PARCEL 227.

14.INTERRUPTION OF EXIST. 12"MAIN AS NOTED IN NOTE 11 SHALL BE FACILIATED BY EV-50A, EV-50B, EV-50C AND EV-51.

15.INSTALLATION OF WL-20R2 BETWEEN STA. 24+25 AND STA. 33+10 SHALL ADHERE TO TRAFFIC CONTROL PROVISIONS. WORK SHALL BE PERFORMED BETWEEN 9:00 P.M. AND 6:00 A.M. OPEN EXCAVATIONS SHALL BE EQUIPPED WITH TRAFFIC RATED PLATED OR RETURNED TO DRIVABLE CONDITIONS BY 6:00 A.M. EACH DAY.

16.INSTALL WL-20R2 AND HAVE IT OPERATIONAL BETWEEN STA. 24+25 AND STA. 33+10. RESTRAIN BRANCH VALVE TO FACILITATE RECONNECTION OF 12"MAIN WITHIN MONTCLAIR DRIVE. PROVIDE NEW LATERAL FROM 30"MAIN TO RELOCATED METER FOR PARCEL 227 TO COMPLETE TRANSFER OF SERVICE AND REMOVE 1"TEMPORARY LATERAL AND PLUG TAP ON EXISTING 12"MAIN FOR TEMPORARY 1"LATERAL. KILL OUT EXIST. MAIN BETWEEN EV-50A AND EV-51.

17.RECONNECT EXIST. 12" MAIN IN MONTCLAIR DRIVE UNDER SERVICE INTERRUPTION ONCE SEGMENT OF WL-20R2 AS NOTED IN NOTE 14 IS OPERATIONAL. UPON RECONNECTION OF 12"MAIN IN MONTCLAIR DRIVE, KILL-OUT BRANCH AT EV- 50C.

UC-20 UTILITY NOTES

1.BUILDOUT WL-20R2 FROM PROP. 12"CROSSING UNDER RAEFORD (WL-22) THAT WILL BE STUBBED WHEN INSTALLING WL-21 AND WL-22. REFERENCE UC-21 UTILITY NOTES FOR SEQUENCE OF WL-21 AND WL-22.

2.INSTALL WL-20R2 AND HAVE IT OPERATIONAL TO ITS IN-LINE VALVE (APPROX. STAT 33+10). ALL EXISTING METERS THAT OVERLAP THIS RELOCATION SEGMENT SHALL BE SWITCHED OVER TO THIS NEW SEGMENT. ALL CROSS-LINES FOR WL-20R2 SHALL BE FULLY RESTRAINED THROUGH BRANCH VALVES. RECONNECTIONS OF THESE CROSS-LINES INCLUDING FIRE LINES SHALL BE COMPLETED AND OPERATIONAL CONCURRENT WITH WL-20R2 INSTALLATION. KILL OUT EXISTING CROSS-LLINES AT EXISTING BRANCH VALVES CONFORMING TO KILL OUT DETAIL.

3.SEE SEQUENCE NOTES UNDER UC-19 UTILITY NOTES FOR PORTION OF WL-20R2 BETWEEN STA. STA. 24+25 AND STA. 33+10.

4.SEE SEQUENCE NOTES FOR SEWER ON UC-20A AND UC-20B UTILITY NOTES.

5.BUILDOUT WL-21 FROM TAPPING SLEEVE AND VALVE IN ROXIE AVENUE (SEE SHEET UC-22) TO STA 0+00 (THIS SHEET).

6.2" SERVICE ON WL-20R2 NEAR STA. 40+25 IS ASSUMED TO BE IRRIGATION TAP FOR BYRAN HONDA. CONTRACTOR TO COORDINATE WITH UTILITY OWNER'S PROJECT COORDINATOR PRIOR TO PROVIDING NEW SERVICE AND ORDERING MATERIAL AND SHALL CONFIRM CONNECTIVITY AND SIZE.

RIGHT OF ENTRY NOTE:

7.CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING RIGHT OF ENTRY TO RECONNECT NEW MAIN TO EXISTING FIRE LINE IF RECONNECTION CANNOT BE MADE WITHIN PUE.

UC-20A/20-B UTILITY NOTES

1.INSTALLATION OF SL-3 AND SL-4 SHALL ADHERE TO THE INTERMEDIATE COMPLETION DATE. TEMPORARILY RE-CONNECT EXIST. SEWER ON SOUTHSIDE OF RAEFORD ROAD THAT RUNS TOWARDS IRELAND DRIVE TO SL-3 AT STA. 0+39.34 IN THE EVENT BUILDOUT OF SL-5 FLOATS ON A DIFFERENT INSTALLATION SCHEDULE.

2.CONTRACTOR SHALL SUBMIT A DETAILED SEWAGE BYPASS PLAN FOR MAINTAINING ALL SEWAGE FLOWS THAT WILL BE IMPACTED BY THE SEWER RELOCATION AND ADHERE TO ALL REQUIREMENTS IN UTILITY SPECIAL PROVISIONS.

3.CONTRACTOR SHALL PROPERLY BARRICADE BYPASS PUMP MANHOLE AND ADHERE TO MUTCD FOR BARRICADE PLACEMENT AND SIGNAGE. TRAFFIC FLOW IN RAEFORD ROAD SHALL NOT BE OBSTRUCTED BY BYPASS PUMP AND PIPE OPERATION.

4.CONTRACTOR SHALL SECURE BYPASS PIPING ACROSS IRELAND DRIVE AND MAINTAIN TRAFFIC FLOW. TRAFFIC RATED RAMP OR OTHER ACCEPTABLE TEMPORARY MEANS SHALL BE PROVIDED TO MAINTAIN TRAFFIC FLOW FOR IRELAND DRIVE.

5.SEWER MAIN THROUGH ENCASEMENT AND FOR SUBMERGED STREAM CROSSINGS OR UNDERNEATH THE STREAMS SHALL BE FACTORY RESTRAINED JOINT.

6.SEWER MAINS CROSSING UNDER STREAMS SHALL BE HYDROSTATICALLY TESTED TO 150 PSI.

7.STREAM CROSSINGS SHALL NOT HAVE JOINTS BELOW STREAM CHANNEL (NORMAL WATER SURFACE ELEVATION) OR WITHIN TWO FEET OF BANKS UNLESS OTHERWISE NOTED.

8.PROP. RIM ELEVATION IS DESIGNED BASED ON UTILITY OWNER'S REQUIREMENT OF 18" ABOVE EXIST. GRADE.

9.SINCE SUBMERGED CREEK CROSSING FOR SL-4 BETWEEN APPROX. STA. 0+25 AND STA. 0+75 EXCEEDS 20 LF, NOTE 7 IS EXEMPTED FOR THIS CROSSING. ATTEMPT TO KEEP JOINTS OUTSIDE OF NORMAL WATER SURFACE TO THE EXTENT PRACTICAL.

10.WIDTH SPAN OF CREEK IS GREATER THAN 40 FEET, WHICH IS TYPICALLY THE LONGEST SPAN OF A TEMPORARY BRIDGE MAT. BENCH AND SLOPE APPROACHES TO ACCOMMODATE MAX. SPAN OF A TEMPORARY BRIDGE MAT. RESTORE BENCHED BANKS TO ORIGINAL CONDITIONS.

11.SL-5 SHALL BE INSTALLED AND OPERATIONAL BETWEEN SL-3 STA. 0+39.34 AND STA. 21+56.21. TRANSFER ALL IMPACTED SEWER SERVICES FROM EXIST. SEWER TO SL-5. THIS SEGMENT OF SL-5 SHALL BE INSTALLED PRIOR TO ANY INSTALLATION OF WL-21 AND WL-22. SEE ADDITIONAL SEQUENCE NOTES ON UC-21 UTILITY NOTES.

12.INSTALLATION OF SL-6 SHALL BE COORDINATED WITH INSTALLATION OF SL-5. MAINTAIN FLOW CONTROL PROVISIONS WHEN CONSTRUCTING SL-6 AND CUT IN INTO EXISTING SEWER ALONG IRELAND DRIVE. BYPASS PUMP AND PIPIING TO MAINTAIN SEWER FLOW DURING CUT IN CONSTRUCTION SHALL BE SITUATED TO MAINTAIN TRAFFIC FLOW.

13.INSTALLATION OF SL-5 AND SL-6 THAT ARE CONTAINED IN IRELAND DRIVE SHALL BE PERFORMED BETWEEN 9:00 P.M. AND 6:00 A.M. TO MINIMIZE TRAFFIC IMPACTS. ALL OPEN EXCAVATIONS SHALL BE PLATED AND READY FOR TRAFFIC BY 6:00 A.M. UNLESS EXCAVATIONS ARE BACKFILLED/COMPACTED AND PATCHED BY 6:00 A.M

PROJECT REFERENCE	NO.	SHEET NO.
U-4405		UC-3D
DESIGNED BY: AMH		8/3/2018
DRAWN BY: AMH/AB		CAROLINA FESSION:
CHECKED BY: AMH		OFESSION NA
APPROVED BY: MWF		SEAL 025490
REVISED:		
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		MGINEE SHELLING TO SOUTH THE SHELLING TO SOUTH THE SHELLING THE SHELLI
UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151	UTILLI	Mork W. Jishur TY CONSTRUCTION P6BE3D784F23C4D0Y

UC-21 UTILITY NOTES

UTILITY CONSTRUCTION

1.BUILD-OUT WL-21 FROM TAPPING SLEEVE AND VALVE (SEE SHEET UC-22) TO TERMINUS (SEE SHEET UC-20). ADHERE TO FOLLOWING PROVISIONS FOR WL-21, WL-22 AND SL-5 INSTÁLLATIONS:

A.BUILDOUT SL-5 FROM SL-3 TO SL-5, STA. 21+56.21. HAVE THIS SEGMENT OPERATIONAL AND ALL IMPACTED SEWER SERVICES TRANSFERRED TO SL-5.

B.RETAIN EXIST. SSMH BETWEEN PARCELS 246 AND 247 AND EXIST. 4" LATERAL THAT CONNECTS TO THIS EXIST. SSMH AND THAT SERVES PARCEL 247. THIS EXIST SSMH SHALL SERVE AS SEWER BYPASS SSMH TO MAINTAIN SEWER SERVICE FOR PARCEL 247 DURING BORE AND JACK OPERATION OF

C.BORE AND JACK PIT FOR WL-22 WILL CONFLICT WITH SL-5 AND CONTINUATION OF WL-21 INSTALLATION TOWARDS IRELAND DRIVE. INSTALL BORE AND JACK FOR WL-22 AND THREAD CARRIER PIPE TROUGH ENCASEMENT. PROTECT/SEAL/TEMPORARILY CAP CARRIER ENDS.

D.COMPLETE SL-5 INSTALLATION BETWEEN STA. 21+56.21 AND STA. 22+18.74, HAVE OPERATIONAL AND TRANSFER SEWER LATERAL FOR PARCEL 247 FROM EXIST. TERMINAL SSMH TO NEW TERMINAL SSMH.

E.INSTALL WL-21 BETWEEN TAPPING SLEEVE AND IN LINE VALVE NEAR STA. 19+25. INSTALL BRANCH VALVE (SOUTH AND NORTH SIDES OF RAEFORD) FOR WL-22 AND CONNECT TO CARRIER PIPE. PRESSURE TEST AND DISINFECT AND PLACE INTO SERVICE THIS PORTION OF WL-21 AND WL-22 AND TRANSFER SERVICES TO THIS PORTION OF WL-21.

F.COMPLETE INSTALLATION OF WL-21 TO ITS TERMINUS AND RECONNECT ALL EXISTING CROSS-LINES AND TRANSFER ALL SERVICES TO THIS PORTION OF WL-21.

2.EXISTING CROSS-LINES ON WL-21 SHALL BE RECONNECTED UNDER SERVICE 2.EXISTING CROSS-LINES ON WL-21 SHALL BE RECONNECTED UNDER SERVICE INTERRUPTION ADHERING TO CUT IN CONSTRUCTION REQUIREMENTS. EXISTING 2"CROSS-LINE NEAR WL-21 STA. 11+25 SHALL BE INTERRUPTED USING EXISTING BRANCH VALVE. EXISTING 2"IS A DEAD-END LINE AND IS NOT LOOPED. RECONNECTION OF EXIST. 12" CROSS-LINE FOR IRELAND AVENUE (SEE SHEET UC-20) SHALL BE PERFORMED BETWEEN 9:00 P.M. AND 6:00 A.M. TO MINIMIZE TRAFFIC IMPACTS. KILLOUT EXIST. CROSS-LINES AT EXIST. BRANCH VALVES. AFTER COMPLETION OF WL-21 INCLUSIVE OF RECONNECTION OF CROSS-LINES AND SERVICES, CLOSE EV-62, EV- (SEE SHEET UC-22). KILL-OUT OF EXIST. 12" AC MAIN ON SOUTH SIDE OF RAEFORD ROAD BETWEEN ROXIE AVENUE AND PARCEL 223 (IRELAND CROSSING. SEE SHEET BETWEEN ROXIE AVENUE AND PARCEL 223 (IRELAND CROSSING, SEE SHEET UC-20) SHALL BE COORDINATED AND PERFORMED AS DEFINED ON UC-22.

3.WL-20R2 SHALL BE INSTALLED FROM ITS CONNECTION TO WL-22 TO THE PROP. 30" IN-LINE VALVE NEAR STA. 33+10 TO FACILITATE SEQUENCE REQUIREMENTS AS DEFINED ON UC-19 UTILITY NOTES. CONNECT TO WL-22 RESTRAINED VALVE AND INSTALL AND RESTRAIN 30"VALVE TO FACILITATE CONTINUATION OF 30"TOWARDS FERNCREEK (SEE SHEET UC-22) ONCE WL-20R2 IS INSTALLED AND OPERATIONAL BETWEEN WL-22 AND STA. 24+25 (SEE SHEET UC-19).

4.WL-22 IS TO PROVIDE SOURCE WATER TO FACILITATE INSTALLATION SEQUENCE OF WL-20R2 AS NOTED IN NOTE 3.

5.EXISTING CROSS-LINES ON SEGMENT OF WL-20R2 BETWEEN WL-22 AND STA. 33+10 SHALL BE RECONNECTED UNDER SERVICE INTERRUPTION ADHERING TO CUT IN CONSTRUCTION REQUIREMENTS. KILLOUT EXIST. CROSS-LINES AT EXIST. BRANCH VALVES. AFTER COMPLETION OF WL-21 INCLUSIVE OF RECONNECTION OF CROSS-LINES AND SERVICES, CLOSE EV-67A. KILL-OUT OF EXIST. 12" A C. MALIN CONNECTION OF CROSS-LINES AND SERVICES. EXIST. 12"AC MAIN ON NORTH SIDE OF RAEFORD ROAD BETWEEN FERNCREEK ROAD AND EV-67A SHALL BE COORDINATED AND PERFORMED WHEN WL-20R2 IS OPERATIONAL UP TO 30"IN LINE VALVE NEAR STA. 58+10 (SEE SHEET UC-22).

6.BUILD OUT WL-20R2 FROM 30"IN LINE VALVE NEAR STA. 53+55 TO 30"IN LINE VALVE NEAR STA. 58+10 (SEE SHEET UC-22). SEE ADDITIONAL SEQUENCE NOTES FOR CONTINUATION OF WL-20R2 ON UC-22 UTILITY NOTES.

RIGHT OF ENTRY NOTE:

7. CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING RIGHT OF ENTRY TO RECONNECT NEW MAIN TO EXISTING DOMESTIC AND FIRE LINE FOR PARCEL 229 IF RECONNECTIONS CANNOT BE MADE WITHIN PUE.

PARCEL 229 (BRYAN HONDA) NOTES:

8.CONFIRM DOMESTIC WATER SERVICE AND FIRE LINE SIZES FOR PARCEL 229. SIZES AS INDICATED ON SHEET UC-21 ARE BASED ON RECORD DRAWINGS. ACTUAL SIZES MAY DIFFER. COORDINATE SHUTDOWN WITH PROPERTY OWNER. VERIFY MATERIAL AND SIZES PRIOR TO ORDERING MATERIAL FOR RECONNECTION.

9.CONTRACTOR SHALL COORDINATE WITH BRYAN HONDA PRIOR TO CONSTRUCTION TO COORDINATE TRENCHING THROUGH PARKING LOT. CONTRACTOR SHALL POTHOLE IN ADVANCE OF CONSTRUCTION TO IDENTIFY ALL LIGHTING CIRCUITRY AND CONTROL CONDUIT. LOCATIONS ON DRAWINGS ARE APPROXIMATE AND SHALL BE VERIFIED.

10.CONTRACTOR SHALL NOT DISTURB ANY CONDUIT FOR POWER AND CONTROL WIRING FOR LIGHT POLE AND DRIVEWAY SENSORS. CONTRACTOR SHALL TAKE PRECAUTIONS AND MEASURES TO PROTECT EXISTING CONDUITS.

UC-21 UTILITY NOTES:

11.CONTRACTOR SHALL PROTECT LIGHT POLES FROM TRENCHING OF WATER MAIN. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION AND ALL COSTS ASSOCIATED WITH DISMANTLING AND REINSTALLING LIGHT POLES DURING INSTALLATION OF WATER MAIN. ACCORDING TO DRAWINGS PROVIDED BY DEALERSHIP, POLE BASES ARE 2'-6" SQUARE AND INSTALLED 7' DEEP

12.COORDINATE METER PLACEMENTS WITH 6" CONDUIT THAT POWERS AND CONTROLS DRIVEWAY SENSORS.
BACKFLOW FOR 8" FIRE LINE IS PRESUMABLY IN BUILDING.

UC-22 UTILITY NOTES

1.SEE SEQUENCE NOTES FOR WL-21 AND WL-20R2 ON UC-21 UTILITY NOTES.

2.INSTALLATION OF 12"X12"X12"TAPPING SLEEVE FOR WL-21 AND OPEN CUT CROSSING OF ROXIE AVENUE SHALL BE PERFORMED BETWEEN 9:00 P.M. AND 6:00 A.M. TO MINIMIZE TRAFFIC IMPACTS. ALL OPEN EXCAVATIONS SHALL BE PLATED AND READY FOR TRAFFIC BY 6:00 A.M. UNLESS EXCAVATIONS ARE BACKFILLED/COMPACTED AND PATCHED BY 6:00 A.M.

3.SEE SEQUENCE NOTES FOR WL-20R2 ON UC-23 UTILITY NOTES. SEGMENT OF WL-20R2 BETWEEN 30"IN LINE VALVE AT STA. 53+55 AND 30"IN LINE VALVE NEAR STA. 73+05 SHALL BE INSTALLED AFTER WL-20R2 IS BUILT OUT AND OPERATIONAL ON EACH SIDE OF THIS SEGMENT.

4.RECONNECTION OF EXIST. 8"WATER MAIN IN FERNCREEK DRIVE SHALL BE UNDER SERVICE INTERRUPTION ADHERING TO CUT IN CONSTRUCTION REQUIREMENTS. RECONNECTION SHALL OCCUR AFTER 30" IS OPERATIONAL UP TO PROP. IN-LINE 30"VALVE NEAR STA. 58+10. EXISTING 8"CROSS-LINE SHALL BE INTERRUPTED USING EXISTING BRANCH VALVE (EV-67), THE EXIST. 8"IN-LINE NORTH ON FERNCREEK DRIVE AND EV-67A (SEE SHEET UC-21). RECONNECTION OF EXIST. 12"CROSS-LINE FOR FERNCREEK DRIVE SHALL BE PERFORMED BETWEEN 9:00 P.M. AND 6:00 A.M. TO MINIMIZE TRAFFIC IMPACTS.

5.KILL OUT OF SOUTHSIDE WATER MAIN BETWEEN ROXIE AVENUE AND PARCEL 223 AND LINE SIDE OF TAPPING SLEEVE FOR WL-21 SHALL BE KILLED OUT. SEQUENCE ENTAILS PERMANENTLY CLOSING EV-63, EV-69 AND EV-62 AND TEMPORARILY CLOSING EV-67 AND EV-67A TO TAKE PRESSURE OFF OF EV-63. KILLOUT LINE SIDE OF TAPPING SLEEVE FOR WL-21 AND SOUTHSIDE OF EV-63. RE-OPEN EV-67 AND EV-67A TO CONTINUE TO FEED NORTHSIDE 12"MAIN ALONG RAEFORD ROAD UNTIL WL-20R2 IS OPERATIONAL UPTO 30" IN-LINE VALVE NEAR STA. 58+10 AND CROSS-LINE ON FERNCREEK DRIVE IS PLANNED FOR RECONNECTION. KILL-OUT OF 12"MAIN ON NORTHSIDE OF RAEFORD ROAD SHALL THEN BE BY CLOSING EV-67B AND CUTTING AND PLUGGING EV-67A. THOSE KILLOUTS OUTSIDE OF ONE LANE CLOSURE SHALL BE PERFORMED BETWEEN 9:00 P.M. AND 6:00 A.M. TO COMPLY WITH TRAFFIC CONTROL REQUIREMENTS.

UC-23 UTILITY NOTES

1.BUILD-OUT PROP. 12"WATER MAIN FROM TAPPING SLEEVE AND VALVE ON EXIST. 12"IN OWEN DRIVE TO WL-23 APPROX. STA. 11+40 AND CONTINUE BUILD-OUT OF WL-23 TO PROP. 12"IN-LINE VALVE NEAR STA. 0+05.

2.BUILD-OUT PROP. 8"WATER MAIN FROM TAPPING SLEEVE AND VALVE ON EXIST. 8" IN MCPHERSON CHURCH ROAD TO WL-2OR2 APPROX. STA. 77+90 AND CONTINUE BUILD-OUT OF WL-20R2 TO PROP. 30"IN-LINE VALVE NEAR STA. 73+15.

3.INSTALL TAPPING SLEEVE AND VALVE, STUB-OUT RESTRAINED VALVE FOR FUTURE EXTENSION SOUTH DOWN OWEN DRIVE, STUB-OUT RESTRAINED VALVE FOR WL-23 FOR CONTINUATION OF 8" TO SERVE SHOPPING CENTER AND STUB-OUT RESTRAINED VALVE FOR CONTINUATION OF WL-23 TOWARDS OLD MCPHERSON CHURCH ROAD. THESE MAINS SHALL BE OPERATIONAL, AND ALL SERVICES AND IMPACTED CROSS-LINES SHALL BE TRANSFERRED OVER TO WL-23.

4.INSTALLATION OF THE FOLLOWING COMPONENTS OF WL-23 SHALL CONFORM TO TRAFFIC CONTROL REQUIREMENTS AND BE PERFORMED BETWEEN 9:00 P.M. AND 6:00 A.M UNLESS WORK CAN BE PERFORMED UNDER ONE LANE CLOSURE.:

A.TAPPING SLEEVE AND VALVE AND WATER MAIN ALONG OWEN DRIVE UPTO WL-23 STA. 11+50

B. WL-23 BETWEEN STA. 11+50 AND END OF LINE

C.WL-23 BETWEEN STA. 10+00 AND STA. 11+50

D.WL-23 BETWEEN STA. 4+00 AND STA. 5+50

E.RECEIVING PIT FOR WL-23 AND CONNECTION TO CARRIER PIPE

5.KILLOUT LINE SIDE OF TAPPING SLEEVE VALVE WITHIN OWEN DRIVE AND EXIST. 12"EXISTING WATER MAIN BETWEEN EV-71 AND EV-69 SHALL BE ONCE WL-20R2 IS INSTALLED COMPLETELY BETWEEN FERNCREEK DRIVE AND MCPHERSON CHURCH ROAD.

6.INSTALLATION OF WL-20R2 SHALL BE COMPLETED AND IN OPERATION UP TO PROP. 30"IN LINE VALVE 73+05. TEMPORARY 2" MAIN SHALL BE INSTALLED AND EXTENDED TO SERVE PARCEL 249, 388 AND 378 PRIOR TO TAKING THE EXISTING 6"WATER MAIN ON THE NORTH SIDE OF RAEFORD BETWEEN MCPHERSON CHURCH ROAD AND OLD MCPHERSON CHURCH ROAD OUT OF SERVICE.

UC-23 UTILITY NOTES

7.ONCE TEMPORARY 2"MAIN IS IN SERVICE PRIOR TO INTERRUPTION OF SERVICE OF THE EXISTING 12"MAIN, RELOCATE METERS FOR PARCEL 249, 388 AND 378 AND CONNECT TO TEMPORARY MAIN.

8. INTERRUPT SERVICE TO EXIST. 6"USING EV-71A AND EV-69B (SEE SHEET UC-22) AND COMPLETE GAP ON WL-20R2 BETWEEN PROP. 30"IN LINE VALVE NEAR WL-20R2 STA. 58+10 (SEE SHEET UC-22) AND PROP. 30"IN-LINE VALVE NEAR WL-20R2 STA. 73+05. CONNECT WL-20R2 TO WL-23. PROVIDE NEW SERVICES FROM WL-20R2 TO RELOCATED METERS FOR PARCELS 249, 288 AND 378 AND REMOVE TEMPORARY 2"MAINS.

9.INSTALLATION OF WL-20R2 BETWEEN APPROX. STA. 62+25 AND APPROX. STA. 65+50 SHALL CONFORM TO TRAFFIC CONTROL REQUIREMENTS AND BE PERFORMED BETWEEN 9:00 P.M. AND 6:00 A.M. PLATE ALL OPEN EXCAVATIONS OR HAVE IT READY FOR TRAFFIC BY 6:00 A.M.

10.RECONNECT EXIST. MAIN IN OLD MCPHERSON CHURCH ROAD UNDER SERVICE INTERRUPTION. LOCATION OF EXIST. WATER MAIN IN MCPHERSON CHURCH ROAD SHALL BE CONFIRMED PRIOR TO RECONNECTION. VERIFY VALVE NEST IN RAEFORD ROAD FOR APPRPORIATE VALVE TO SHUT FLOW OFF FROM EXISTING MAINS IN RAEFORD ROAD. SHUTDOWN SHOULD BE FACILITATED BY EV-69B AS IT APPEARS TO BE THE CORRECT VALVE IN RAEFORD AND THE EXISTING IN LINE FURTHER NORTH ON MCPHERSON CHURCH ROAD.

11. ONCE WL-20R2 IS IN SERVICE AND THE GAP AS NOTED IN NOTE 8 AND RECONNECETION ON OLD MCPHERSON CHURCH ROAD IS COMPLETED, KILL OUT EXISTING MAINS BETWEEN RAILROAD CROSSING AND ALL-AMERICAN ROAD.12" MAIN FROM EV-71 TOWARDS ROBESON STREET SHALL REMAIN ACTIVE. CLOSE EV-71 TO FACILITATE KILLOUT TOWARDS ALL AMERICAN.

UC23A/UC24A UTILITY NOTES

1.EXIST. 4"SEWER SERVICE FOR PARCEL 254 SHALL BE RE-ROUTED TO EXIST. SEWER MAIN ON NORTH SIDE. COORDINATE SEWER SERVICE RE-ROUTE WITH WL-23 AND STORM DRAINAGE INSTALLATION. EXIST. 4" SEWER SERVICE CONFLICTS WITH PROP. DRAINAGE SO IT SHALL BE RE-ROUTED PRIOR TO DRAINAGE WORK. PROP.

2.PROP. SL-7 SHALL BE INSTALLED PRIOR TO INSTALLATION OF WL-23 AND DRAINAGE. BUILD OUT FROM CONNECTION TO EXIST. SSMH NO. 1 AND HAVE PROP. SEWER AND SSMH NO. 2 IN SERVICE AND READY FOR SEWER BEFORE LAYING BACK TO EXIST. SSMH NO. 3. CONNECT TO EXIST. SSMH NO. 3 AND PLUG EXIST. INVERT OUT.

UC-24 UTILITY NOTES:

1.PURSUANT TO TRAFFIC CONTROL REQUIRMENTS, CONTRACTOR MUST BE COMPLETE WITH WORK ON THE SOUTH SIDE OF RAEFORD ROAD BEFORE BEGINNING WORK ON THE NORTH SIDE. CONTRACTOR SHALL NOT BE PERFORMING WATER MAIN INSTALLATION LONGITUDINALLY TO THE ROAD ON BOTH SIDES.

2.WL-26 BETWEEN THE PLUG AT STA. 0+00 TO THE FIRST IN-LINE VALVE AT MARLBOROUGH ROAD (APPROX STA. 12+50) (SEE UTILITY NOTES FOR SHEET UC-25), INCLUDING CROSS LINE CONNECTION FOR ANCESTRY DRIVE, SHALL BE INSTALLED AND OPERATIONAL BEFORE INSTALLING ANY OTHER PORTION OF WL-26. WL-26 FROM RESTRAINED PLUG (STA 0+00) TO HORIZONTAL 45 DEGREE BEND (APPROX. STA 3+29) SHALL BE INSTALLED BETWEEN 9:00 P.M. TO 6:00 A.M. TO COMPLY WITH TRAFFIC CONTROL REQUIREMENTS.

3.CONTRACTOR SHALL COORDINATE INSTALLATION OF WATER MAIN WITH ABANDONMENT/REMOVAL OF EXISTING STORM DRAINAGE AND INSTALLATION OF PROPOSED STORM DRAINAGE FROM STATION 0+00 TO STATION 3+29.

4.ANCESTRY DRIVE CROSS-LINE CONNECTION SHALL BE INSTALLED UNDER SERVICE INTERUPTION AND SHALL BE COORDINATED WITH PWC'S PROJECT COORDINATOR. EXISTING VALVES EV-77 AND EV-78 SHALL BE USED TO FACILITATE RECONNECTION OF THE 8"WATER MAIN. CONTRACTOR SHALL CONNECT TO EXISTING 8"WATER MAIN USING FULLBODY SLEEVE AND RESTRAINING GLANDS. THIS PART OF THE CONNECTION SHALL BE SWABBED PRIOR TO RECONNECTION OF THE EXISTING 8"WATER MAIN. THE CROSS-LINE SHALL BE KILLED OUT BY PERMANENTLY CLOSING AND ABANDONING EXISTING VALVE EV-77. KILL OUT SHALL BE DONE BETWEEN 9:00 P.M. TO 6:00 A.M. TO COMPLY WITH TRAFFIC CONTROL REQUIREMENTS.

5.ANCESTRY DRIVE WILL BE THE SOURCE WATER FOR WL-26 TO IN-LINE VALVE AT STA. 25+43. SEE UTILITY NOTES FOR UC-26.

6.WL-28 BETWEEN IN-LINE VAVLE AT APPROX. STATION 13+71 (SHEET UC-25) TO IN-LINE VALVE AT APPROX. STATION 9+81, INCLUDING FAIRFIELD ROAD CROSS-LINE CONNECTION, SHALL BE INSTALLED AND FULLY OPERATIONAL AFTER INSTALLATION OF SECTION WL-28 (SEE NOTE 18 ON UTILITY NOTES UC-25).

7.NEXT IN-LINE VALVE TO FACILITATE RECONNECTION OF THE 12"WATER MAIN IN FAIRFILED ROAD IS APPROXIMATELY 760 FEET (NEAR INTERSECTION OF MICHAEL ST) FROM PROPOSED RECONNECTION POINT. THIS PLANNED SERVICE INTERUPTION SHALL BE COORDINATED WITH THE ENGINEER.

8.ALL EXISTING METERS THAT OVERLAP THIS RELOCATION SEGMENT SHALL BE SWITCHED OVER TO THIS NEW SEGMENT. CROSS-LINE FOR FAIRFIELD ROAD SHALL BE FULLY RESTRAINED THROUGH BRANCH VALVES.

PROJECT REFERENCE	NO.	SHEET NO.
U-4405		UC-3E
DESIGNED BY: AMH		
DRAWN BY: AMH/AB		TH CAROLINATION OF ESSION
CHECKED BY: AMH		4. OLE 22/01. A.
APPROVED BY: MWF		SEAL 025490
REVISED:		025490 E
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		MG INE ER PRODUCTION OF THE PR
UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151	UTILL	Mark W. Jishur ITY CONSTRUCTION PGBE3P184F23C4D0Y

UC-24 UTILITY NOTES

UTILITY CONSTRUCTION

9.CONTRACTOR SHALL CONNECT TO EXISTING 12" WATER MAIN USING FULL BODY SLEEVE AND RESTRAINING GLANDS. THIS PART OF THE CONNECTION SHALL BE SWABBED PRIOR TO RECONNECTION OF THE EXISTING 12"WATER MAIN. THE EXISTING CROSS LINE AT FAIRFIELD ROAD SHALL BE KILLED OUT BY PERMANENTLY CLOSING AND ABANDONING EXISTING VALVE EV-82. KILL OUT SHALL BE DONE BETWEEN 9:00 P.M. TO 6:00 A.M. TO COMPLY WITH TRAFFIC CONTROL REQUIREMENTS AND MINIMZE SERVICE INTERUPTION.

10.WL-28 BETWEEN IN-LINE VALVE AT APPROX. STATION 9+81 TO IN-LINE VALVE AT APPROX. STATION 3+00, INCLUDING CAMBRIDGE ST CROSS-LINE CONNECTION, SHALL BE INSTALLED AND FULLY OPERATIONAL AFTER INSTALLATION OF SECTION WL-28 (SEE NOTE 6).

11.NEXT IN-LINE VALVE TO FACILITATE RECONNECTION OF THE 6"WATER MAIN IN CAMBRIDGE ST IS APPROXIMATELY 372 FEET FROM PROPOSED RECONNECTION POINT. THIS PLANNED SERVICE INTERUPTION SHALL BE COORDINATED WITH THE ENGINEER.

12.ALL EXISTING METERS THAT OVERLAP THIS RELOCATION SEGMENT SHALL BE SWITCHED OVER TO THIS NEW SEGMENT. CROSS-LINE FOR CAMBRIDGE ST SHALL BE FULLY RESTRAINED THROUGH BRANCH VALVES.

13.CONTRACTOR SHALL CONNECT TO EXISTING 6" WATER MAIN USING FULL BODY SLEEVE AND RESTRAINING GLANDS. THIS PART OF THE CONNECTION SHALL BE SWABBED PRIOR TO RECONNECTION OF THE EXISTING 6"WATER MAIN. THE EXISTING CROSS LINE AT CAMBRIDGE ST SHALL BE KILLED OUT BY PERMANENTLY CLOSING AND ABANDONING EXISTING VALVE EV-80. KILL OUT SHALL BE DONE BETWEEN 9:00 P.M. TO 6:00 A.M. TO COMPLY WITH TRAFFIC CONTROL REQUIREMENTS AND MINIMZE SERVICE INTERUPTION.

14.WL-28 BETWEEN IN-LINE VAVLE AT APPROX. STATION 3+00 TO IN-LINE VALVE AT APPROX. STATION 0+35 SHALL BE INSTALLED AND FULLY OPERATIONAL AFTER INSTALLATION OF SECTION WL-28 (SEE NOTE 10).

15.NEXT IN-LINE VALVE TO FACILITATE RECONNECTION OF THE 8" WATER MAIN IN TWIN ACRES DR IS APPROXIMATELY 275 FEET FROM PROPOSED RECONNECTION POINT. THIS PLANNED SERVICE INTERUPTION SHALL BE COORDINATED WITH THE ENGINEER.

16.ALL EXISTING METERS THAT OVERLAP THIS RELOCATION SEGMENT SHALL BE SWITCHED OVER TO THIS NEW SEGMENT.

17.CONTRACTOR SHALL CONNECT TO EXIST. 8" GATE VALVE USING NIPPLE AND FULLBODY SLEEVE AND RESTRAINING GLANDS AND LAY BACK INTO EXISTING 8" WATER MAIN IN TWIN ACRES DR. WITH A MINIMUM OF 20 LF OF RESTRAINED JOINT UNDER PLANNED SERVICE INTERRUPTION AND SHALL BE COORIDNATED WITH THE ENGINEER. THIS PART OF WL-28 SHALL BE SWABBED PRIOR TO RECONNECTION OF THE EXISTING 8"WATER MAIN.

18.THE EXISTING 8"WATER MAIN AT TWIN ACRES DRIVE SHALL BE KILLED OUT BY PERMANENTLY CLOSING AND ABANDONING EXISTING VALVE EV-75. KILL OUT SHALL BE DONE BETWEEN 9:00 P.M. TO 6:00 A.M. TO COMPLY WITH TRAFFIC CONTROL REQUIREMENTS AND MINIMZE SERVICE INTERUPTION.

UC-24A UTILITY NOTES:

1.TEMPORARY SHORING IF REQUIRED FOR BUILDING FOUNDATION PROTECTION OR MAINTENANCE OF TRAFFIC WILL BE PAID AS TEMPORARY SHORING IN SQUARE FEET BELOW GROUND SURFACE.

2.CONTRACTOR SHALL SUBMIT A DETAILED SEWAGE BYPASS PLAN FOR MAINTAINING ALL SEWAGE FLOWS THAT WILL BE IMPACTED BY THE SEWER RELOCATION AND ADHERE TO ALL REQUIREMENTS IN OWNER'S WASTE WATER CONTROL SPECIFICATIONS.

3.CONTRACTOR SHALL VERIFY SEWER SERVICE DEPTH AND LOCATION PRIOR TO ORDERING MATERIALS.

4.CONTRACTOR SHALL REPLACE EXISTING CLEAN OUT AND SEWER SEVICE LINE AT SAME DEPTH AND SLOPE.

5.CONTRACTOR SHALL REMOVE EXISTING CLEAN OUT AND EXISTING SEWER SERVICE TO PROPOSED CLEAN OUT LOCATION. CONTRACTOR SHALL GROUT FILL EXISTING SERVICE CORE IN MANHOLE WITH NON-SHRINK GROUT.

6.SEE SEWER FROM 23A NOTES FOR SEWER CONNECTION TO OUTFALL.

<u>UTILITY CONSTRUCTION</u>

UC-25 UTILITY NOTES:

1.PURSUANT TO TRAFFIC CONTROL REQUIRMENTS, CONTRACTOR MUST BE COMPLETE WITH WORK ON THE SOUTH SIDE OF RAEFORD ROAD BEFORE BEGINNING WORK ON THE NORTH SIDE. CONTRACTOR SHALL NOT BE PERFORMING WATER MAIN INSTALLATION LONGITUDINALLY TO THE ROAD ON BOTH SIDES.

2.CONT. FROM SHEET UC-24 NOTES FOR WL-26: EXISTING IN-LINE VALVE TO FACILITATE SHUTDOWN FOR RECONNECTION OF THE EXISTING 6"WATER MAIN ALONG MARLBOROUGH RD IS APPROXIMATELY 285 LF FROM PROPOSED RECONNECTION POINT. THIS VALVE FALLS IN-LINE AFTER A TEE AND BRANCH VALVE. PLANNED SHUT DOWN SHALL BE COORDINATED WITH THE ENGINEER.

3.ALL EXISTING METERS THAT OVERLAP THIS RELOCATION SEGMENT SHALL BE SWITCHED OVER TO THIS NEW SEGMENT (WL-26 STA 0+00 TO STA 12+50). CROSS-LINE CONNECTION (CWL-EY38) FOR MARLBOROUGH ROAD SHALL BE FULLY RESTRAINED THROUGH BRANCH VALVES.

4.CONTRACTOR SHALL CONNECT TO EXISTING 6"WATER MAIN USING FULL BODY SLEEVE AND RESTRAINING GLANDS. THIS PART OF THE CONNECTION SHALL BE SWABBED PRIOR TO RECONNECTION OF THE EXISTING 6"WATER MAIN. THE EXISTING CROSS LINE AT MARLBOROUGH ROAD SHALL BE KILLED OUT BY PERMANENTLY CLOSING AND ABANDONING EXISTING VALVE EV-85. KILL OUT SHALL BE DONE BETWEEN 9:00 P.M. TO 6:00 A.M. TO COMPLY WITH TRAFFIC CONTROL REQUIREMENTS.

5.SEE UC-26 UTILITY NOTES FOR WL-26 IN-LINE VAVLE AT STATION 12+50 TO IN-LINE VALVE AT STATION 25+43.

6.WL-28 BETWEEN IN-LINE VAVLE AT APPROX. STATION 27+22 TO IN-LINE VALVE AT APPROX. STATION 24+25, INCLUDING RAVEN HILL DRIVE CROSS-LINE CONNECTION, SHALL BE INSTALLED AND FULLY OPERATIONAL AFTER INSTALLATION OF SECTION WL-28 ON SHEET UC-26. SEE UC-6 UTILITY NOTES

7.NEXT IN-LINE VALVE TO FACILITATE RECONNECTION OF THE 8"WATER IN RAVENHILL DR IS APPROXIMATELY 1,300 FEET (NEAR EXEXUTIVE PLACE INTERSECTION) FROM PROPOSED RECONNECTION POINT. PRIOR TO THIS IN-LINE VALVE THERE ARE FOUR SEPARATE FIRE LINE BRANCHES, THIS PLANNED SERVICE INTERUPTION SHALL BE COORDINATED WITH THE ENGINEER.

8.ALL EXISTING METERS THAT OVERLAP THIS RELOCATION SEGMENT SHALL BE SWITCHED OVER TO THIS NEW SEGMENT. CROSS-LINE FOR RAVEN HILL DRIVE SHALL BE FULLY RESTRAINED THROUGH BRANCH VALVES.

9.CONTRACTOR SHALL CONNECT TO EXISTING 8"WATER MAIN USING FULL BODY SLEEVE AND RESTRAINING GLANDS. THIS PART OF THE CONNECTION SHALL BE SWABBED PRIOR TO RECONNECTION OF THE EXISTING 8"WATER MAIN. THE EXISTING CROSS LINE AT RAVEN HILL DRIVE SHALL BE KILLED OUT BY PERMANENTLY CLOSING AND ABANDONING EXISTING VALVE EV-92. KILL OUT SHALL BE DONE BETWEEN 9:00 P.M. TO 6:00 A.M. TO COMPLY WITH TRAFFIC CONTROL REQUIREMENTS AND MINIMZE SERVICE INTERUPTION.

10.WL-28 BETWEEN IN-LINE VAVLE AT APPROX. STATION 24+25 TO IN-LINE VALVE AT APPROX. STATION 19+62, INCLUDING WILLBOROUGH AVE CROSS-LINE CONNECTION, SHALL BE INSTALLED AND FULLY OPERATIONAL AFTER INSTALLATION OF SECTION WL-28 (SEE NOTE 6).

11.NEXT IN-LINE VALVE TO FACILITATE RECONNECTION OF THE 6"WATER MAIN IN WILLBOROUGH AVE IS APPROXIMATELY 700 FEET FROM PROPOSED RECONNECTION POINT. PRIOR TO THIS IN-LINE VALVE THERE ARE SEVERAL SEPARATE FIRE LINE AND BRANCH VALVES. THIS PLANNED SERVICE INTERUPTION SHALL BE COORDINATED WITH THE ENGINEER.

12.ALL EXISTING METERS THAT OVERLAP THIS RELOCATION SEGMENT SHALL BE SWITCHED OVER TO THIS NEW SEGMENT. CROSS-LINE FOR WILLBOROUGH AVE SHALL BE FULLY RESTRAINED THROUGH BRANCH VALVES.

13.CONTRACTOR SHALL CONNECT TO EXISTING 6"WATER MAIN USING FULL BODY SLEEVE AND RESTRAINING GLANDS. THIS PART OF THE CONNECTION SHALL BE SWABBED PRIOR TO RECONNECTION OF THE EXISTING 6"WATER MAIN. THE EXISTING CROSS LINE AT WILLBOROUGH AVE SHALL BE KILLED OUT BY PERMANENTLY CLOSING AND ABANDONING EXISTING VALVE EV-88. KILL OUT SHALL BE DONE BETWEEN 9:00 P.M. TO 6:00 A.M. TO COMPLY WITH TRAFFIC CONTROL REQUIREMENTS AND MINIMZE SERVICE INTERUPTION.

14.WL-28 BETWEEN IN-LINE VAVLE AT APPROX. STATION 19+62 TO IN-LINE VALVE AT APPROX. STATION 16+64, INCLUDING STARHILL AVE CROSS-LINE CONNECTION, SHALL BE INSTALLED AND FULLY OPERATIONAL AFTER INSTALLATION OF SECTION WL-28 (SEE NOTE 10).

15.NEXT IN-LINE VALVE TO FACILITATE RECONNECTION OF THE 6" WATER MAIN IN STARHILL AVE IS APPROXIMATELY 620 FEET (NEAR INTERSECTION OF MICHAEL ST) FROM PROPOSED RECONNECTION POINT. THIS PLANNED SERVICE INTERUPTION SHALL BE COORDINATED WITH THE ENGINEER.

16.ALL EXISTING METERS THAT OVERLAP THIS RELOCATION SEGMENT SHALL BE SWITCHED OVER TO THIS NEW SEGMENT. CROSS-LINE FOR STARHILL AVE SHALL BE FULLY RESTRAINED THROUGH BRANCH VALVES.

17.CONTRACTOR SHALL CONNECT TO EXISTING 6" WATER MAIN USING FULL BODY SLEEVE AND RESTRAINING GLANDS. THIS PART OF THE CONNECTION SHALL BE SWABBED PRIOR TO RECONNECTION OF THE EXISTING 6"WATER MAIN. THE EXISTING CROSS LINE AT STARHILL AVE SHALL BE KILLED OUT BY PERMANENTLY CLOSING AND ABANDONING EXISTING VALVE EV-86. KILL OUT SHALL BE DONE BETWEEN 9:00 P.M. TO 6:00 A.M. TO COMPLY WITH TRAFFIC CONTROL REQUIREMENTS AND MINIMZE SERVICE INTERUPTION.

UC-25 UTILITY NOTES

18.WL-28 BETWEEN IN-LINE VAVLE AT APPROX. STATION 16+64 TO IN-LINE VALVE AT APPROX. STATION 13+71, INCLUDING EMELINE ST CROSS-LINE CONNECTION, SHALL BE INSTALLED AND FULLY OPERATIONAL AFTER INSTALLATION OF SECTION WL-28 (SEE NOTE 14).

19.NEXT IN-LINE VALVE TO FACILITATE RECONNECTION OF THE 6" WATER MAIN IN EMELINE ST IS APPROXIMATELY 608 FEET (NEAR INTERSECTION OF MICHAEL ST) FROM PROPOSED RECONNECTION POINT. THIS PLANNED SERVICE INTERUPTION SHALL BE COORDINATED WITH THE ENGINEER.

20.ALL EXISTING METERS THAT OVERLAP THIS RELOCATION SEGMENT SHALL BE SWITCHED OVER TO THIS NEW SEGMENT. CROSS-LINE FOR EMELINE ST SHALL BE FULLY RESTRAINED THROUGH BRANCH VALVES.

21.CONTRACTOR SHALL CONNECT TO EXISTING 6"WATER MAIN USING FULL BODY SLEEVE AND RESTRAINING GLANDS. THIS PART OF THE CONNECTION SHALL BE SWABBED PRIOR TO RECONNECTION OF THE EXISTING 6" WATER MAIN. THE EXISTING CROSS LINE AT EMELINE ST SHALL BE KILLED OUT BY PERMANENTLY CLOSING AND ABANDONING EXISTING VALVE EV-84. KILL OUT SHALL BE DONE BETWEEN 9:00 P.M. TO 6:00 A.M. TO COMPLY WITH TRAFFIC CONTROL REQUIREMENTS AND MINIMZE SERVICE INTERUPTION.

22.SEE UC-24 UTILITY NOTES FOR WL-28 IN-LINE VAVLE AT APPROX. STATION 13+71 TO IN-LINE VALVE AT APPROX. STATION 9+81.

UC-25A UTILITY NOTES

1.TEMPORARY SHORING IF REQUIRED FOR BUILDING FOUNDATION PROTECTION OR MAINTENANCE OF TRAFFIC WILL BE PAID AS TEMPORARY SHORING IN SQUARE FEET BELOW GROUND SURFACE.

2.CONTRACTOR SHALL SUBMIT A DETAILED SEWAGE BYPASS PLAN FOR MAINTAINING ALL SEWAGE FLOWS THAT WILL BE IMPACTED BY THE SEWER RELOCATION AND ADHERE TO ALL REQUIREMENTS IN OWNER'S WASTE WATER CONTROL SPECIFICATIONS.

3.CONTRACTOR SHALL VERIFY SEWER SERVICE DEPTH AND LOCATION PRIOR TO ORDERING MATERIALS.

4.CONTRACTOR SHALL REPLACE EXISTING CLEAN OUT AND SEWER SEVICE LINE AT SAME DEPTH AND SLOPE.

5.CONTRACTOR SHALL REMOVE EXISTING CLEAN OUT AND EXISTING SEWER SERVICE TO PROPOSED CLEAN OUT LOCATION. CONTRACTOR SHALL GROUT FILL EXISTING SERVICE CORE IN MANHOLE WITH NON-SHRINK GROUT.

UC-26 UTILITY NOTES:

1.PURSUANT TO TRAFFIC CONTROL REQUIRMENTS, CONTRACTOR MUST BE COMPLETE WITH WORK ON THE SOUTH SIDE OF RAEFORD ROAD BEFORE BEGINNING WORK ON THE NORTH SIDE. CONTRACTOR SHALL NOT BE PERFORMING WATER MAIN INSTALLATION LONGITUDINALLY TO THE ROAD ON BOTH SIDES.

2.WL-26 BETWEEN THE IN-LINE VALVE AT MARLBOROUGH ROAD (APPROX. STA. 12+50 SHEET UC-25) AND IN-LINE VALVE AT APPROX. STA. 25+43 SHALL BE INSTALLED AND FULLY OPERATIONAL PRIOR TO CONNECTION TO PREVIOUSLY INSTALLED WL-26 SEGMENT. ANCESTRY DRIVE WILL BE THE SOURCE WATER FOR WL-26 TO THIS SEGMENT SEE UTILITY NOTES UC-24.

3.ALL EXISTING METERS THAT OVERLAP THIS RELOCATION SEGMENT SHALL BE SWITCHED OVER TO THIS NEW SEGMENT.

RIGHT OF ENTRY NOTE:

4.CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING RIGHT OF ENTRY TO RECONNECT NEW MAIN TO THE EXISTING 8"FIRE LINE FOR PARCEL 308 AT WL-26 APPROX. STA. 23+75.

5.SEE UTILITY NOTES FOR WL-26 AND WL-25 ON UC-27 AND UC-32. SEGMENT OF WL-26 BETWEEN 12" IN-LINE VALVE AT STA. 25+43 AND 12"IN-LINE VALVE AT STA. 30+64 SHALL BE INSTALLED AFTER WL-26 (BETWEEN 12"IN-LINE VALVE AT STA. 30+64 TO 12" IN-LINE VALVE AT STA. 40+15) AND ALL OF WL-25 (SEE SHEET UC-27 AND UC-32) IS BUILT OUT AND OPERATIONAL.

6.INSTALLATION FOR SEGMENT OF WL-26 BETWEEN 12"IN-LINE VALVE AT STA. 25+43 AND 12" IN-LINE VALVE AT STA. 30+64 AND CROSS-LINE CONNECTION FOR PURDUE DRIVE SHALL BE PERFORMED BETWEEN 9:00 P.M. AND 6:00 A.M. ALL OPEN EXCAVATIONS SHALL BE PLATED AND READY FOR TRAFFIC BY 6:00 A.M. UNLESS EXCAVATIONS ARE BACKFILLED/COMPACTED AND PATCHED BY 6:00 A.M.

7.ALL EXISTING METERS THAT OVERLAP THIS RELOCATION SEGMENT SHALL BE SWITCHED OVER TO THIS NEW SEGMENT. CROSS-LINE FOR PURDUE RD SHALL BE FULLY RESTRAINED THROUGH BRANCH VALVES.

8.THE EXISTING 6"WATER LINE LOCATED IN PURDUE DRIVE HAS A LOOPED SYSTEM AND THREE EXISTING VALVES AT THE INTERSECTION OF BREEZEWOOD AVE. CONTRACTOR TO COORDINATE WITH THE ENGINEER TO FACILITATE TEMPORARY SHUTDOWN.

PROJECT REFERENCE	NO.	SHEET NO.
U-4405		UC-3F
DESIGNED BY: AMH		8/4/4018
DRAWN BY: AMH/AB	, si	CAROLINA ESSIONA
CHECKED BY: AMH		OFESSION A
APPROVED BY: MWF		SEAL :
REVISED:		025490
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	E _{II} ,	MARKW FISHERING
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTIL	Mark W. Fisher TY CONSTRUCTION PEBESO784F23C4DUY

UC-26 UTILITY NOTES

UTILITY CONSTRUCTION

9.CONTRACTOR SHALL CONNECT TO EXISTING 6"WATER MAIN USING FULLBODY SLEEVE AND RESTRAINING GLANDS. THIS PART OF THE CONNECTION SHALL BE SWABBED PRIOR TO RECONNECTION OF THE EXISTING 6"WATER MAIN. THE EXISTING CROSS LINE AT PURDUE DRIVE SHALL BE KILLED OUT BY PERMANENTLY CLOSING AND ABANDONING EXISTING VALVE EV-97. KILL OUT SHALL BE DONE BETWEEN 9:00 P.M. TO 6:00 A.M. TO COMPLY WITH TRAFFIC CONTROL REQUIREMENTS.

10.SEE UC-27 UTILITY NOTES FOR WL-26 IN-LINE VAVLE AT STATION 30+64 TO IN-LINE VALVE AT STATION 40+15.

11.WL-28 BETWEEN THE IN-LINE VALVE (APPROX. STA. 27+22) TO THE IN-LINE VALVE (APPROX. STA. 37+58) SHALL BE INSTALLED AND FULLY OPERATIONAL PRIOR AFTER INTALLATION OF WL-28 ON SHEET UC-27. SEE UC-27 UTLITY NOTES.

RIGHT OF ENTRY NOTE:

12.CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING RIGHT OF ENTRY TO RECONNECT NEW MAIN TO THE EXISTING 8"FIRE LINE FOR PARCEL 313 AT WL-28 APPROX. STA. 31+50.

13.ALL EXISTING METERS THAT OVERLAP THIS RELOCATION SEGMENT SHALL BE SWITCHED OVER TO THIS NEW SEGMENT.

14.SEE UC-25 UTILITY NOTES FOR WL-28 IN-LINE VAVLE AT APPROX. STATION 27+22 TO IN-LINE VALVE AT APPROX. STATION 24+25.

UC-26A UTILITY NOTES:

1.TEMPORARY SHORING IF REQUIRED FOR BUILDING FOUNDATION PROTECTION OR MAINTENANCE OF TRAFFIC WILL BE PAID AS TEMPORARY SHORING IN SQUARE FEET BELOW GROUND SURFACE.

2.CONTRACTOR SHALL SUBMIT A DETAILED SEWAGE BYPASS PLAN FOR MAINTAINING ALL SEWAGE FLOWS THAT WILL BE IMPACTED BY THE SEWER RELOCATION AND ADHERE TO ALL REQUIREMENTS IN OWNER'S WASTE WATER CONTROL SPECIFICATIONS.

3.CONTRACTOR SHALL VERIFY SEWER SERVICE DEPTH AND LOCATION PRIOR TO ORDERING MATERIALS.

4.CONTRACTOR SHALL REPLACE EXISTING CLEAN OUT AND SEWER SEVICE LINE AT SAME DEPTH AND SLOPE.

5.CONTRACTOR SHALL REMOVE EXISTING CLEAN OUT AND EXISTING SEWER SERVICE TO PROPOSED CLEAN OUT LOCATION. CONTRACTOR SHALL GROUT FILL EXISTING SERVICE CORE IN MANHOLE WITH NON-SHRINK GROUT.

6.CONTRACTOR SHALL COORDINATE WITH DRAINAGE INSTALLATION OF 30" SMOOTH STEEL STORM PIPE BETWEEN DRAINAGE STRUCTURE 2624 AND 2625 TO REPLACE 20 FEET OF EXISTING 12"VCP PIPE WITH DIP CENTERED UNDER STORM PIPE BETWEEN EXIST MH-3 AND EXIST. MH-2.

7.CONTRACTOR SHALL COORDINATE WITH DRAINAGE INSTALLATION OF 36" SMOOTH STEEL STORM PIPE BETWEEN DRAINAGE STRUCTURE 2635 AND 2636 TO REPLACE 120 FEET OF EXISTING 12"VCP PIPE WITH DIP UNDER STORM PIPE BETWEEN EXIST MH-2 AND EXIST. MH-1 (SHEET UC-27A).

RIGHT OF ENTRY NOTE:

8.CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING PROPERTY OWNER (NCDOT PARCEL 314) AND OBTAINING RIGHT OF ENTRY OR TEMPORARY CONSTRUCTION EASEMENT TO RECONNECT LATERAL TO EXISTING PLUMBING.