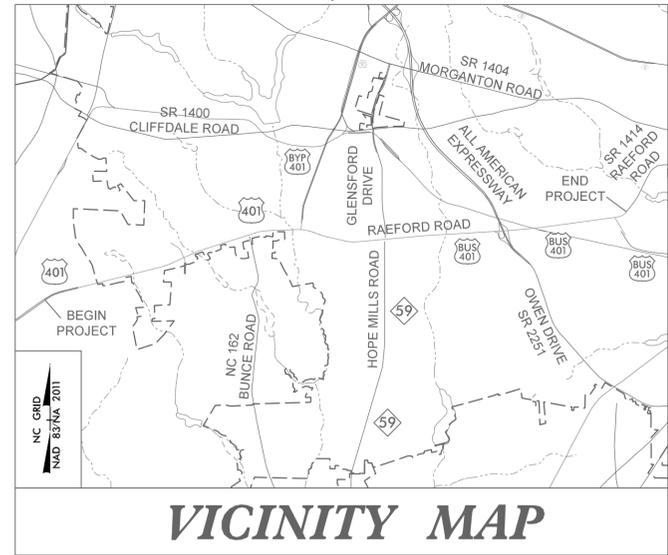


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
U-4405A	UC-1

See Sheet 1A For Index of Sheets
See Sheet 1B-1 For Conventional Symbols

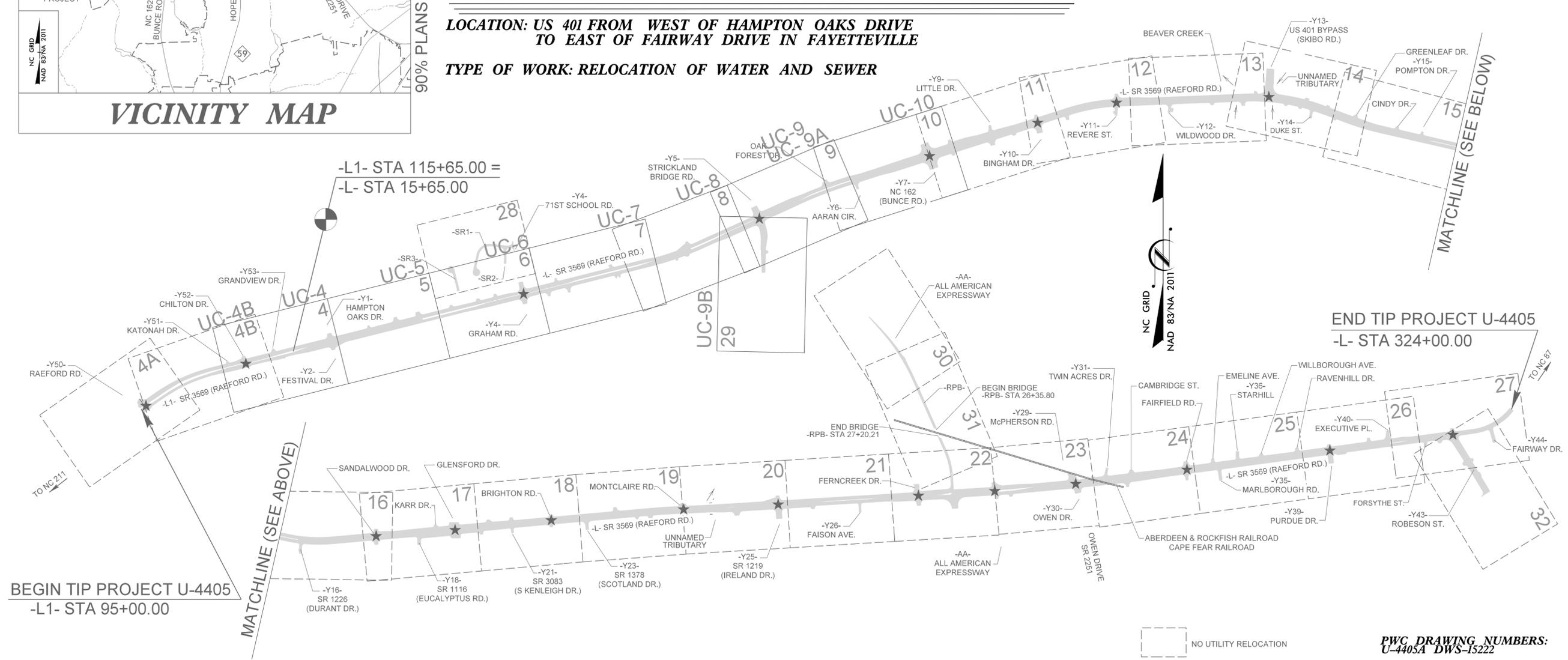


UTILITY CONSTRUCTION PLANS CUMBERLAND COUNTY

**LOCATION: US 401 FROM WEST OF HAMPTON OAKS DRIVE
TO EAST OF FAIRWAY DRIVE IN FAYETTEVILLE**

TYPE OF WORK: RELOCATION OF WATER AND SEWER

TIP PROJECT: U-4405



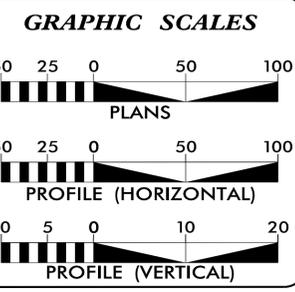
BEGIN TIP PROJECT U-4405
-L1- STA 95+00.00

END TIP PROJECT U-4405
-L- STA 324+00.00

NO UTILITY RELOCATION

**PWC DRAWING NUMBERS:
U-4405A DWS-15222**

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3 THRU UC-3B	NOTES
UC-3C THRU UC-3K	DETAILS
UC-4 THRU UC-10	UTILITY CONSTRUCTION SHEETS
UC-11 THRU UC-17	PROFILE SHEETS

WATER AND SEWER OWNERS ON PROJECT

(1) WATER: FAYETTEVILLE PWC
(2) SANITARY SEWER: FAYETTEVILLE PWC

Prepared in the Office of:

community infrastructure consultants
720 CORPORATE CENTER DRIVE
RALEIGH, NORTH CAROLINA 27607
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VACANT UTILITIES AREA COORDINATOR
LARRY M. JAMES UTILITIES COORDINATOR

01-OCT-2021 10:19
Z:\Projects\Environmental\Fayetteville Public Works Commission\2015017700RA Raeford Road NCDOT U 4405\CADD\NCDOT PLANS\Utilities\Engineering\U-4405A-ut_tsh_uc01.psh.dgn
09/08/19
UTILITY REV: - JULY 27, 2016 - REVISIONS SHEET INDEX

CONTRACT:

PROJECT REFERENCE NO.	SHEET NO.
U-4405	UC-3
DESIGNED BY: AMH	UTILITY CONSTRUCTION PLANS ONLY
DRAWN BY: AMH/AB	
CHECKED BY: AMH	
APPROVED BY: BRO	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

UTILITY CONSTRUCTION

GENERAL NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2018 AND 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 ENVIRONMENTAL 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 CERAMIC EPOXY LINED DI (DUCTILE IRON PUSH ON) PC 350 PIPE UNLESS OTHERWISE SPECIFIED. ALL PROPOSED GRAVITY SEWER LINES 16" IN DIAMETER AND GREATER SHALL BE CERAMIC EPOXY 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.

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. ALL EXISTING VALVES, AIR RELEASE VALVES, FIRE HYDRANTS AND MANHOLE RING AND COVERS TO BE REMOVED SHALL BE RETURNED TO PWC
9. SEE PROFILE SHEETS FOR REFERENCE TO PIPE MATERIALS AND VALVE TYPES.

**DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED**

REVISIONS

UTILITY REV.- JULY 23,2008 - REVISED GENERAL NOTES

9:\c:\2021\019 Environmental\Fayetteville Public Works Commission\20150117\008A Reeford Road NCDOT U 4405\CADD\NCDOT PLANS\Utilities\Engineering\UC\ProJ\U4405A_ut_notes_UC03_psh.dgn

UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED

PROJECT REFERENCE NO.		SHEET NO.
U-4405		UC-3A
DESIGNED BY:	AMH	
DRAWN BY:	AMH/AB	
CHECKED BY:	AMH	
APPROVED BY:	BRO	
REVISED:		
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4751		UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

CONSTRUCTION SEQUENCING ON INDIVIDUAL SHEETS IS IMPACTED BY SEQUENCING REQUIREMENTS ON OTHER SHEETS. REVIEW THEM ACCORDINGLY.

UC-4 UTILITY NOTES:

1. INSTALL AND MAKE OPERATIONAL:
 - WL-1 BETWEEN TAP AT -WL-1- STA 0+00 AND VALVE AT APPROX -WL-1- STA. 8+95
 - WL-2
 - WL-3BEFORE INSTALLING ANY OTHER PORTION OF WL-1.
2. 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.

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

3. KILL OUT OF PORTION OF 24" EXIST MAIN EAST OF TAPPING SLEEVE SHALL BE COORDINATED WITH 24" MAIN SHUTDOWN FOR LAYING BACK NEW 24" MAIN INTO EXIST ALIGNMENT ON SHEET UC-5.
4. 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
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-2C, EV-4 AND TAPPING VALVE FOR WL-1.

UC-5 UTILITY NOTES:

1. INSTALL AND MAKE OPERATIONAL:
 - WL-1 BETWEEN TAP AT -WL-1- STA 0+00 AND VALVE AT APPROX -WL-1- STA. 8+95
 - WL-2
 - WL-3BEFORE INSTALLING ANY OTHER PORTION OF WL-1.
2. CONTRACTOR SHALL LAY BACK INTO EXISTING 24" WATER MAIN WITH A MINIMUM OF 20 LF OF RESTRAINED JOINT UNDER PLANNED SERVICE INTERRUPTION.
3. 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.
4. 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.
5. AFTER SLEEVING OF PROPOSED 24" MAIN TO EXISTING 24" MAIN, CONTRACTOR SHALL ADHERE TO CUT IN CONSTRUCTION REQUIREMENTS WHEN REINSTATING THE 24" MAIN.
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. WHEN MAKING CONNECTION OF WL-1 TO EXISTING 24" MAIN AND PERFORMING KILL-OUT OF EXISTING 24" MAIN AT TAPPING LOCATION, MAIN SHUTDOWN 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. TRANSFER EXISTING METERS FROM EXISTING 24" MAIN TO WL-5 BEFORE PERFORMING DOWN AND UNDERS ON EXISTING MAIN AND HYDRANT LEG ADJUSTMENTS BETWEEN EV-4 AND EV-8.
9. 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 INTERRUPTED SHOULD PLANNED SHUTDOWNS IMPACT THIS SERVICE LATERAL.
10. 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.
11. ALL DOWN 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.
12. TRANSFER EXISTING METERS FROM EXISTING 24" MAIN TO WL-5 BEFORE PERFORMING DOWN AND UNDERS ON EXISTING MAIN AND HYDRANT LEG ADJUSTMENTS BETWEEN EV-4 AND EV-8.

UC-6 UTILITY NOTES:

1. INSTALL AND HAVE OPERATIONAL:
 - WL-5 BETWEEN TAPPING VALVE AT WL-5 STA 0+00 AND 24"x24"x24" TEE AT WL-5 STA 8+37.33
 - WL-6 BETWEEN WL-5 AND 24" TAPPING VALVE FOR WL-6
 - STUB OUT WL-5 FOR CONNECTION TO EXISTING 24" MAIN
 - STUB OUT WL-7
2. EXISTING METER AND SERVICE WAS NOT LOCATED FOR PARCELS 46, 47, AND 48. CONTRACTOR TO PROVIDE 1" METER SERVICE FOR THOSE PARCELS THAT CURRENTLY ARE SERVED BY UTILITY OWNER. COORDINATE LOCATION WITH UTILITY OWNER'S PROJECT COORDINATOR.
3. PURSUANT TO TRAFFIC CONTROL REQUIREMENTS, CONTRACTOR MUST BE COMPLETED WITH WORK ON WL-5 AS DEFINED IN NOTE 1 (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 DOWN AND UNDERS ON EXISTING MAIN AND HYDRANT LEG ADJUSTMENTS BETWEEN EV-4 AND EV-8.
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 FACILITATE SHUTDOWN TO MINIMIZE SERVICE INTERRUPTIONS.
7. INSTALL NEW FIRE HYDRANT WITH TAPPING SLEEVE AND VALVE CONNECTION TO THE EXISTING 24" MAIN IN FRONT OF THE PIZZA HUT AND WEST OF THE NEW IN-LINE VALVE PV-1 TO BE INSTALLED.
8. INSTALL NEW IN-LINE VALVE PV-1. UTILIZE VALVES EV-8A AND EV-10 TO FACILITATE SHUTDOWN OF EXISTING 24" MAIN.
9. 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.
10. COMPLETE CONNECTION OF WL-5 TO EXISTING 24" MAIN FROM STUB OUT TO MAIN UTILIZING VALVE PV-1.

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 REQUIREMENTS 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. INSTALL AND HAVE OPERATIONAL:
 - WL-8 BETWEEN TAPPING SLEEVE AND VALVE AT APPROX. WL-8 STA 17+00 AND NEW 24" VALVE AT APPROX WL-8 STA 1+10
 - WL-10 BETWEEN TAPPING SLEEVE AND VALVE AT APPROX STA 25+50 ND VALVE AT APPROX WL-10 STA 1+00
 - WL-12
 - TEMPORARY LOOP FROM WL-12 TO EXISTING 12" MAIN
 - WL-11 TO VALVE AT APPROX STA 0+30
 - BURY TEMPORARY MAIN PARALLEL TO WL-8
2. 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 UTILIZING THE SECOND LANE OF CLOSURE SHALL BE COMPLETED BEFORE 6:00 A.M.
3. INSTALL TEMPORARY WATER LINE FROM FIRE HYDRANT AT PIZZA HUT TO LAFAYETTE PARK APTS.
4. FULLY GROUT MIN. 60 LF OF 24" EXIST. MAIN. PLUG EACH END OF ABANDONED MAIN PER KILLOUT DETAIL W-22.
5. 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).
6. 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 TRANSFERRED 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-

UC-8 UTILITY NOTES:

7. 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.

Shoring Location No.	Begin Station & Offset	End Station & Offset	Estimated Average Height (ft)	Estimated Maximum Height (ft)	Shoring Location Type	Square Footage (ft)	Trench Length (ft)
No. 1	67+17.82 -L, 43.94' Right	67+66.02 -L, 37.17' Right	6.5	10.81	Roadway (Longitudinal Trench)	715	50
No. 2	76+01.08 -L, 182.28' Left	76+10.56 -L, 181.02' Left	9.55	9.71	Roadway Shoulder (Perpendicular Base (Receiving) Within Roadway)	286.5	10
No. 3	98.92.49 -L, 221.06' Left	99+11.68 -L, 226.64' Left	6.75	6.75		270	10

8. BURY TEMPORARY MAINS AT ALL DRIVEWAY CROSSINGS TO MAINTAIN INGRESS/EGRESS FOR THESE PARCELS.

9. RECONNECT WL-8 AND WL-10 TO EXISTING MAIN UNDER SERVICE INTERRUPTION. ADHERE TO UTILITY OWNER'S PROCEDURES FOR SHUTDOWN. UTILIZE VALVES PV-1 AND EV-10 FOR RECONNECTION OF WL-8. UTILIZE VALVES EV-12A, EV-13, EV-12, EV-10 AND THE WL-8 TSV TO COMPLETE THE RECONNECT OF WL-10. INSTALL PERMANENT SERVICE CONNECTION TO LAFAYETTE PARK APTS WATER LINE WHEN WL-8 IS RECONNECTED.

10. KILL-OUT OF 24" TAPPING 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 PV-1, EV-20, EV-20A AND EV-22 AND COMPLETE ABANDONMENT OF 24" ADJACENT TO WL-8 AND WL-10

11. 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 FULL JOINT INTO EXISTING SYSTEM UNLESS ACTUAL CONDITIONS DIFFER.

12. ABNDON/REMOVE TEMPORARY WATER LINE TO LAFAYETTE PARK APTS.

UC-9 UTILITY NOTES:

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. UTILIZE EV-12 AND NEXT EXSITING IN-LINE VALVE TO THE SOUTH TO CONNECT WL-11 TO EXISTING 16" MAIN.
7. 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.
8. 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.
9. 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 VERIFY EXISTING SEWER SERVICE LOCATION AND DEPTH PRIOR TO ORDERING MATERIALS.
2. 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.

REVISIONS

UTILITY REV.- JULY 23,2008 - REVISED ALL CONSTRUCTION NOTES

9:\c\c-2021\049 - Environmental\Fayetteville Public Works Commission\20150117\00RA - Raeford Road NCDOT U 4405\CADD\NCDOT PLANS\Utilities\Engineering\UC\Proc\U4405A_ut_notes_UC03a_psh.dgn 7/14/09

DESIGNED BY: AMH	UTILITY CONSTRUCTION PLANS ONLY
DRAWN BY: AMH/AB	
CHECKED BY: AMH	
APPROVED BY: BRO	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

UTILITY CONSTRUCTION
DOCUMENT NOT CONSIDERED FINAL UNTIL ALL SIGNATURES ARE COMPLETED

- CONTRACTOR SHALL REPAIR ALL WATER LATERALS AND MAINS DAMAGED DURING CONSTRUCTION. THE CONTRACTOR SHALL REPORT IMMEDIATELY ALL WATER MAIN AND LATERAL BREAKS TO THE FAYETTEVILLE PROJECT COORDINATOR. THE CONTRACTOR SHALL INITIATE IMMEDIATE REPAIRS IN ACCORDANCE WITH FAYPWC STANDARDS. CONTRACTOR SHALL NOT OPERATE FAYPWC WATER MAIN VALVES WITHOUT FAYPWC APPROVAL AND SHALL COORDINATE ALL VALVE CLOSINGS WITH FAYPWC.
- THE CONTRACTOR SHALL NOT USE HOUSE HOSE BIBBS OR ANY OTHER METHOD OF BLOW OFF WHICH ALLOWS DOMESTIC WATER CONTAINING SEDIMENTS OR HIGH LEVELS OF CHLORINE TO PASS THRU RESIDENT'S METERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES RESULTING FROM ALLOWING "DIRTY" WATER TO ENTER RESIDENT'S PLUMBING SYSTEM, SUCH AS WATER HEATERS, STAINED CLOTHING, CLOGGED SCREENS, ETC.
- WATER MAINS AND LATERALS SHALL BE INSTALLED UTILIZING A FAYPWC APPROVED CUT-SHEET INDICATING INSTALLATION DEPTH.
- TRANSFER OF WATER SERVICES SHALL BE ACCOMPLISHED AS FOLLOWS:
 - INSTALL, TEST AND STERILIZE NEW MAIN AND LATERALS. LATERALS SHALL BE INSTALLED 18" INSIDE RIGHT-OF-WAY UNLESS OTHERWISE DIRECTED BY FAYPWC.
 - TRANSFER EXISTING METER TO NEW WATER LATERAL. THE EXISTING METER SHALL BE INSTALLED ON SAME ADDRESS AND/OR CUSTOMER. BLOW OFF SERVICE AT HOSE BIBB ON HOUSE ONLY AFTER METER HAS BEEN TRANSFERRED.
 - AFTER ALL SERVICES ARE TRANSFERRED TO THE NEW SYSTEM, SHUT OFF VALVE ON EXISTING SYSTEM AND ABANDON EXISTING MAINS IN ACCORDANCE WITH FAYPWC DETAILS.
 - CONTRACTOR SHALL SUPPLY NEW METER BOXES AND DISPOSE OF EXISTING METER BOXES.
- WHEN MAIN IS NOT TO BE ABANDONED, CONTRACTOR SHALL UNCOVER OLD CORPORATION AT MAIN, CLOSE AND PLUG CORPORATION TO ABANDON OLD SERVICE.
- CONTRACTOR SHALL ABANDON ("KILL-OUT") ANY EXISTING WATER SERVICES THAT WILL NOT BE UTILIZED BY CUTTING THE SERVICE AT THE MAIN, PLUGGING THE CORPORATION, AND TURNING OFF THE CORPORATION. AT THE METER BOX, THE ABANDONED SERVICE IS TO BE CUT OR CRIMPED, AND BURIED A MINIMUM OF 3 FEET BELOW GRADE.
- ALL EXISTING UTILITIES IMPACTED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISHED GRADE, IN ACCORDANCE WITH FAYPWC REQUIREMENTS.
- ALL WORK ON FAYPWC WATER UTILITIES (MAINS, LATERALS, ETC.) SHALL BE PERFORMED BY A LICENSED UTILITY CONTRACTOR. THE FAYETTEVILLE PUBLIC WORKS COMMISSION SHALL OBSERVE AND APPROVE ALL WORK ON FAYPWC WATER UTILITIES. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH FAYPWC REQUIREMENTS.
- SEPARATION REQUIREMENTS:
 - LATERAL SEPARATION OF SEWERS AND WATER MAINS:** WATER MAINS SHALL BE LAID AT LEAST 10 FEET LATERALLY FROM EXISTING OR PROPOSED SEWER MAINLATERAL, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10-FOOT LATERAL SEPARATION - IN WHICH CASE:
 - THE WATER MAIN IS LAID IN A SEPARATE TRENCH, WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER MAINLATERAL; OR
 - THE WATER MAIN IS LAID IN THE SAME TRENCH AS THE SEWER MAINLATERAL WITH THE WATER MAIN LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH AND WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER MAINLATERAL.
 - CROSSING A WATER MAIN OVER A SEWER:** WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER MAINLATERAL, BOTH THE WATER MAIN AND THE SEWER MAINLATERAL SHALL BE DUCTILE IRON IN ACCORDANCE WITH FAYPWC REQUIREMENTS. A FULL JOINT OF DUCTILE IRON PIPE SHALL BE INSTALLED ON THE WATER MAIN CENTERED AT THE POINT OF CROSSING.
 - CROSSING WATER MAIN UNDER A SEWER:** WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER MAINLATERAL, BOTH THE WATER MAIN AND THE SEWER MAINLATERAL SHALL BE DUCTILE IRON IN ACCORDANCE WITH FAYPWC REQUIREMENTS.
 - CROSSING STORM DRAINAGE LINES:** A MINIMUM OF 12 INCHES OF VERTICAL CLEARANCE SHALL BE MAINTAINED BETWEEN A WATER LINE CROSSING OVER A STORM DRAINAGE LINE UNLESS DUCTILE IRON PIPE IS USED. IN ADDITION, THREE AND A HALF (3.5) FEET OF COVER MUST BE MAINTAINED OVER THE WATER MAIN OR IT SHALL BE DUCTILE IRON. IF DUCTILE IRON PIPE IS USED THEN TWO AND A HALF (2.5) FEET OF COVER MUST BE MAINTAINED OVER THE WATER MAIN AND A MINIMUM OF 4 INCHES OF VERTICAL CLEARANCE SHALL BE MAINTAINED BETWEEN THE WATER MAIN AND THE STORM DRAINAGE LINE. WHERE A WATER MAIN CROSSES UNDER A STORM DRAINAGE LINE THE MINIMUM OF TWELVE (12) INCHES OF VERTICAL SEPARATION SHALL BE MAINTAINED AND THE WATER MAIN SHALL BE DUCTILE IRON FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING.

10. **WATER OUTAGES:** THE CONTRACTOR SHALL SCHEDULE A COORDINATION MEETING WITH THE FAYPWC PROJECT COORDINATOR AND PROJECT ENGINEER A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO ANY PLANNED WATER OUTAGE. THE COORDINATION MEETING SHALL BE CONDUCTED PRIOR TO ANY NOTICES BEING ISSUED. ADDITIONALLY, THE CONTRACTOR SHALL LOCATE (VERTICALLY AND HORIZONTALLY) ANY UTILITIES WITHIN THE WORK AREA, IN ACCORDANCE WITH THESE CONTRACT DOCUMENTS. THE LOCATIONS OF ALL UTILITIES WITHIN THE WORK AREA SHALL BE DETERMINED PRIOR TO THE COORDINATION MEETING. ANY CONFLICTS WITH THE PENDING WORK AND THE EXISTING UTILITIES SHALL BE IDENTIFIED AND A PLAN FOR RESOLVING ANY CONFLICTS SHALL BE PRESENTED. THE PURPOSE OF THIS COORDINATION MEETING IS TO ENSURE THAT THE CONTRACTOR HAS A GOOD UNDERSTANDING OF THE REQUIREMENTS RELATED TO THE PENDING OUTAGE, VERIFY THAT THERE ARE NO UTILITY CONFLICTS THAT WILL PREVENT THE WORK FROM BEING COMPLETED, ALL EQUIPMENT IS IN GOOD WORKING ORDER, ALL EQUIPMENT IS FUNCTIONAL, ALL MATERIALS ARE ON SITE, ALL NECESSARY TOOLS ARE ON SITE, DISCUSS ANY NECESSARY CONTINGENCY PLANS, AND ANY OTHER ITEMS NECESSARY TO ENSURE THAT THE FAYETTEVILLE PUBLIC WORKS COMMISSION HAS CONFIDENCE THAT THE WORK CAN BE ACCOMPLISHED WITHIN THE GIVEN TIME PERIOD. SHOULD, FOR ANY REASON, THE FAYETTEVILLE PUBLIC WORKS COMMISSION DEEM THAT THE CONTRACTOR IS NOT PREPARED FOR THE PROPOSED OUTAGE, THE OUTAGE NOTIFICATIONS WILL NOT BE DISTRIBUTED AND THE OUTAGE SHALL BE POSTPONED A MINIMUM OF TWO (2) WEEKS. THE FAYETTEVILLE PUBLIC WORKS COMMISSION WILL PROVIDE WRITTEN NOTIFICATION TO THE CONTRACTOR OF THIS DECISION. NO ADDITIONAL CONTRACT TIME WILL BE GRANTED FOR THIS DELAY.

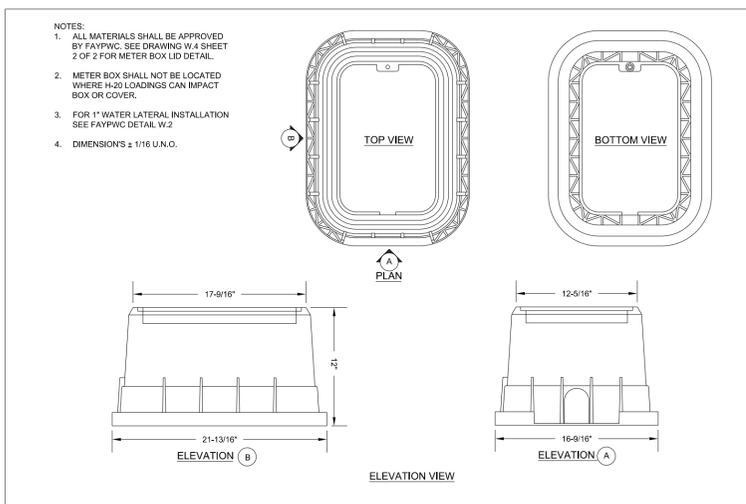
ONCE THE WATER OUTAGE NOTIFICATIONS HAVE BEEN ISSUED, A FOLLOW-UP COORDINATION MEETING WITH THE FAYPWC PROJECT COORDINATOR AND PROJECT ENGINEER SHALL BE HELD A MINIMUM OF 24 HOURS PRIOR TO THE SCHEDULED OUTAGE. THE PURPOSE OF THIS MEETING IS TO VERIFY THAT THE CONTRACTOR IS PREPARED TO PROCEED WITH THE OUTAGE, AND THAT ALL EQUIPMENT, MATERIALS, TOOLS, AND ALL OTHER INCIDENTALS ARE ON THE PROJECT SITE AND FUNCTIONING. IF FOR ANY REASON THE FAYETTEVILLE PUBLIC WORKS COMMISSION DEEMS THAT THE CONTRACTOR IS NOT PREPARED TO PROCEED WITH THE OUTAGE AND ALL CUSTOMERS IMMEDIATELY NOTIFIED OF THE CANCELLATION, THE OUTAGE SHALL BE POSTPONED A MINIMUM OF TWO (2) WEEKS. NO ADDITIONAL CONTRACT TIME WILL BE GRANTED FOR THIS DELAY.

THE CONTRACTOR SHALL COMPLETE THE REQUIRED WORK AND RESTORE WATER SERVICE WITHIN THE GIVEN TIME PERIOD FOR THE OUTAGE. IF THE FAYPWC PROJECT COORDINATOR DETERMINES THAT THE CONTRACTOR WILL NOT RESTORE WATER SERVICE WITHIN THE APPROVED TIMEFRAME, THE FAYPWC PROJECT COORDINATOR WILL DIRECT THE CONTRACTOR ON HOW TO RESTORE WATER SERVICE. THE CONTRACTOR SHALL ADHERE TO ALL INSTRUCTIONS GIVEN BY THE FAYPWC PROJECT COORDINATOR.

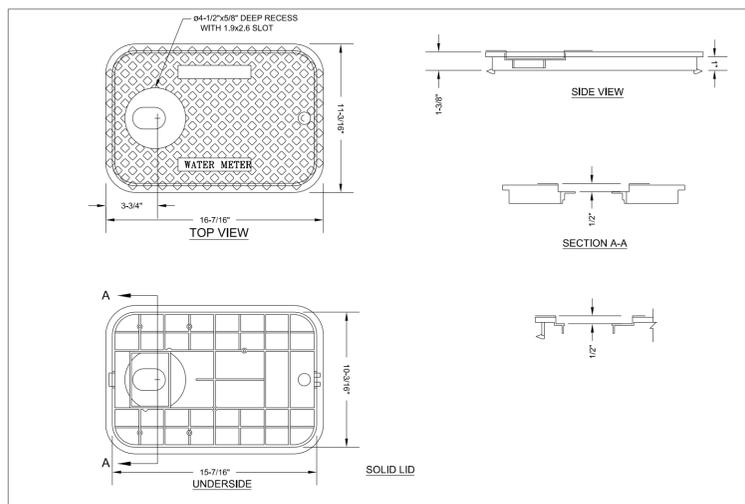
SHOULD THE CONTRACTOR FAIL TO COMPLETE THE WORK WITHIN THE ALLOTTED TIME, THE FAYETTEVILLE PUBLIC WORKS COMMISSION SHALL ASSESS A PENALTY OF \$500 PER 15-MINUTE INTERVAL OR ANY PORTION THEREOF UNTIL WATER SERVICE IS RESTORED. THIS PENALTY WILL BE DEDUCTED FROM THE CONTRACTOR'S PAY APPLICATION OR BILLED DIRECTLY TO THE CONTRACTOR. THE PENALTY MAY BE WAIVED FOR CIRCUMSTANCES BEYOND THE CONTRACTOR'S CONTROL, AS DEEMED BY THE FAYETTEVILLE PUBLIC WORKS COMMISSION. THE FAYPWC PROJECT COORDINATOR AND/OR PROJECT ENGINEER RESERVE THE RIGHT TO CANCEL OR POSTPONE THE OUTAGE AT ANY GIVEN TIME, IF DEEMED NECESSARY.

WATER UTILITY NOTES		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
SHEET NO. 1 OF 2	DWG. NO. W.1	DWG. BY: FAYPWC	WATER RESOURCES ENGINEERING DEPARTMENT	1	07/11	REVISED NOTES AND ADDED NOTE 6
DATE: JAN. 01, 2021	APPROVED BY: J.E.G.			2	07/01/16	ADDED NOTE 6
				3	01/01/18	ADDED NOTES 6, 8

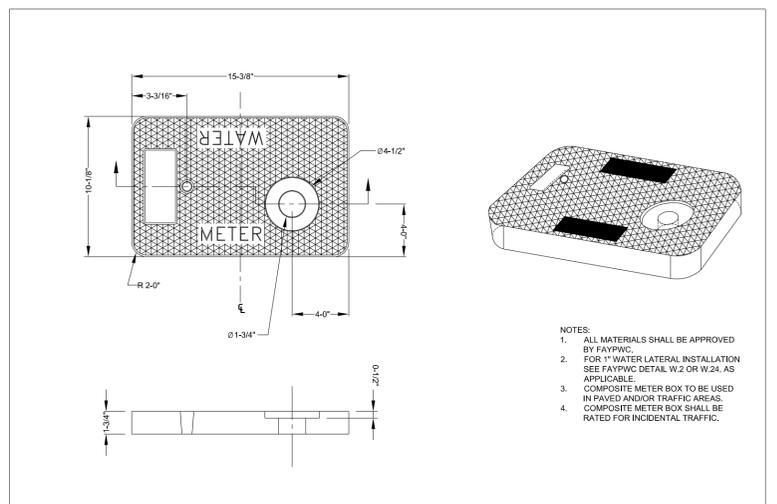
WATER UTILITY NOTES		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
SHEET NO. 2 OF 2	DWG. NO. W.1	DWG. BY: FAYPWC	WATER RESOURCES ENGINEERING DEPARTMENT	1	07/11	REVISED NOTES AND ADDED NOTE 6
DATE: JAN. 01, 2021	APPROVED BY: J.E.G.			2	07/01/16	ADDED NOTE 6
				3	01/01/18	ADDED NOTES 6, 8



1-INCH METER BOX DETAILS		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
SHEET NO. 1 OF 2	DWG. NO. W.4	DWG. BY: FAYPWC	WATER RESOURCES ENGINEERING DEPARTMENT	1	03/10	CHANGED BOX DIMENSIONS
DATE: JAN. 01, 2021	APPROVED BY: J.E.G.					



1-INCH METER BOX LID		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
SHEET NO. 2 OF 2	DWG. NO. W.4	DWG. BY: FAYPWC	WATER RESOURCES ENGINEERING DEPARTMENT	1	07/07	REVISED LID
DATE: JAN. 01, 2021	APPROVED BY: J.E.G.			2	03/10	CHANGED BOX AND LID DIMENSIONS
				2	01/15	REVISED LID

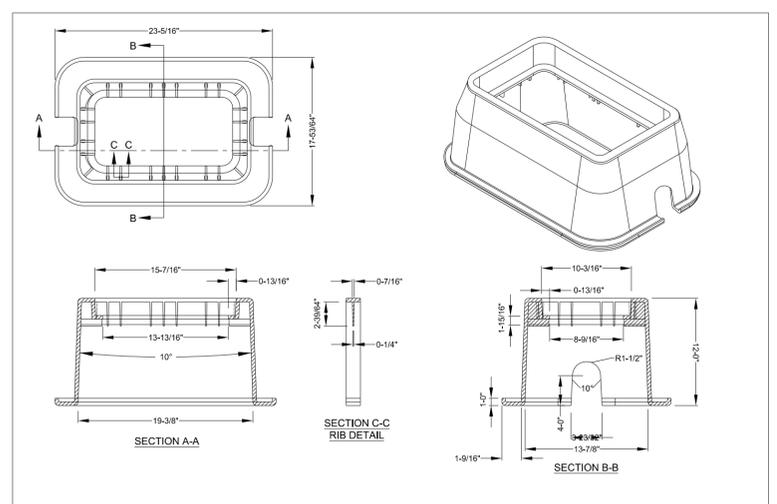


1-INCH COMPOSITE METER BOX & COVER		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
SHEET NO. 1 OF 2	DWG. NO. W.4B	DWG. BY: FAYPWC	WATER RESOURCES DEPARTMENT	1	03/10	CHANGED BOX & LID DIMENSIONS
DATE: JAN. 01, 2021	APPROVED BY: J.E.G.			2	12/15	REPLACED CI BOX w/COMPOSITE BOX

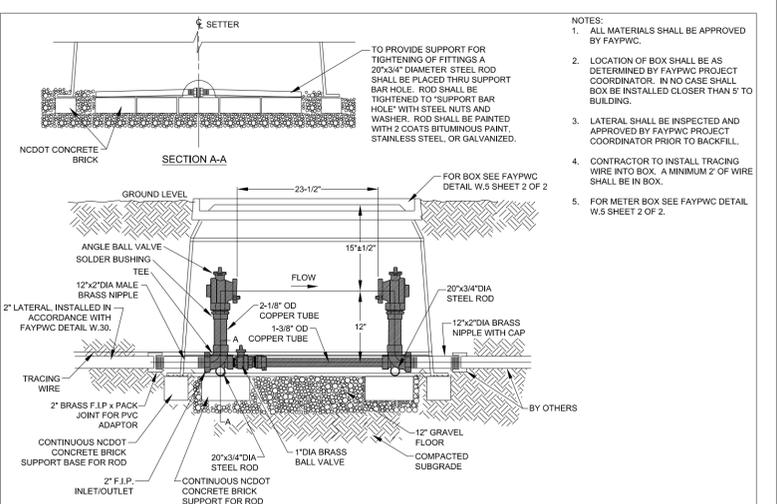
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 5/14/99
 UTILITY REV. - JULY 24, 2018 - REVISIONS TO DETAIL SHEETS

PROJECT REFERENCE NO.	U-4405	SHEET NO.	UC-03D
DESIGNED BY:	AMH	DRAWN BY:	AMH/AB
CHECKED BY:	AMH	APPROVED BY:	BRO
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		UTILITY CONSTRUCTION PLANS ONLY	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151			

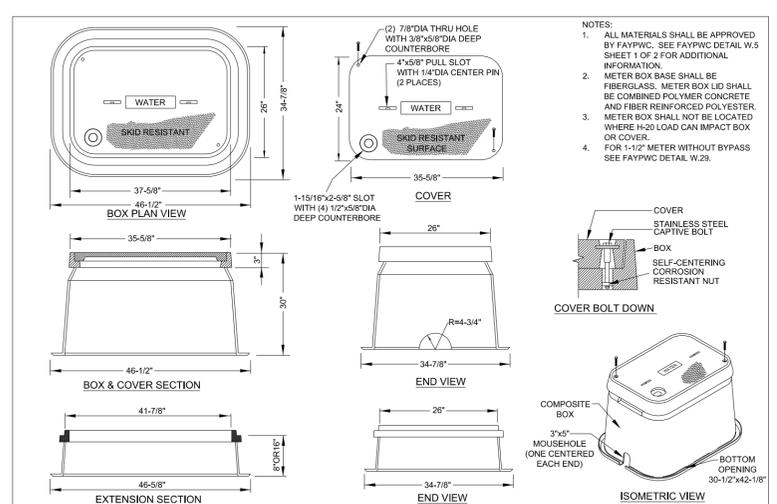
UTILITY CONSTRUCTION
DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED



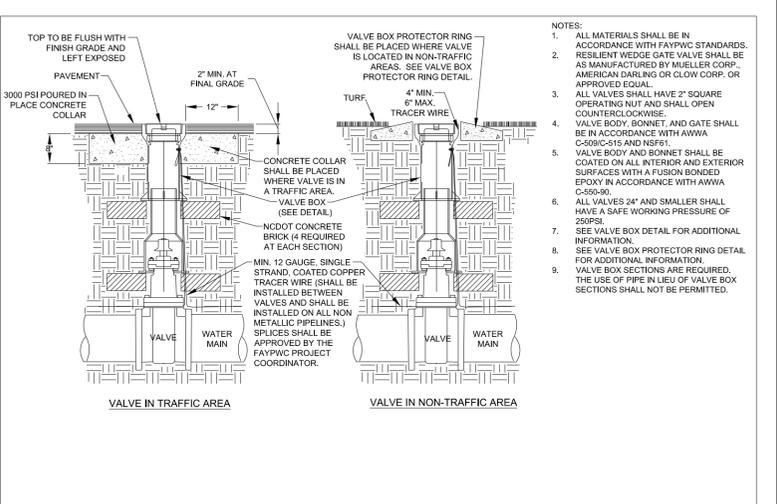
1-INCH COMPOSITE METER BOX & COVER N.T.S.		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		WATER RESOURCES ENGINEERING DEPARTMENT	
SHEET NO. 2 OF 2	DWG. NO. W.4B DATE: JAN. 01, 2021	DWG. BY: FAYPWC APPROVED BY: J.E.G.	NO. 1	DATE 12/15	REVISION REPLACED CI BOX WITH COMPOSITE BOX



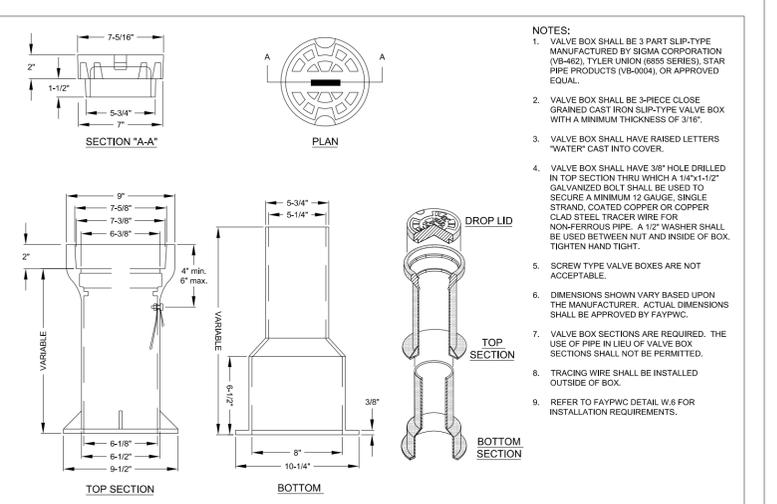
2" COPPER SETTER WITH BY-PASS 23-1/2" METER SPACING		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		WATER RESOURCES ENGINEERING DEPARTMENT	
SHEET NO. 1 OF 2	DWG. NO. W.5 DATE: JAN. 01, 2021	DWG. BY: FAYPWC APPROVED BY: J.E.G.	NO. 1	DATE 07/13	REVISION REVISED, UPDATED NOTES



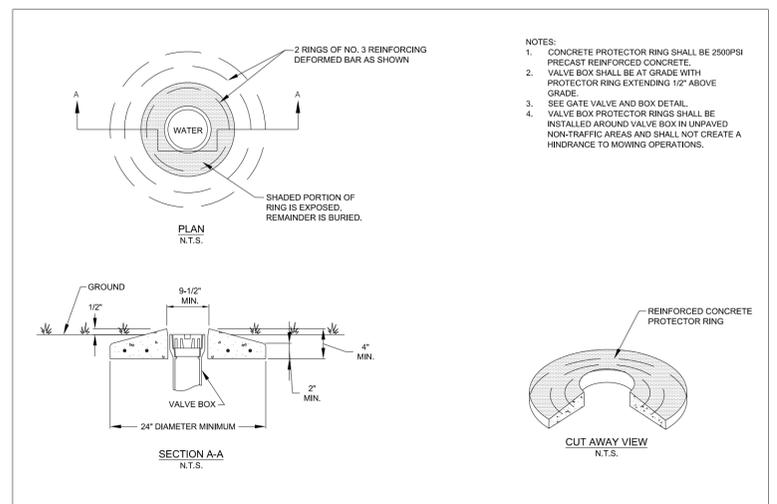
1-1/2" AND 2" BY-PASS METER BOX N.T.S.		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		WATER RESOURCES ENGINEERING DEPARTMENT	
SHEET NO. 2 OF 2	DWG. NO. W.5 DATE: JAN. 01, 2021	DWG. BY: FAYPWC APPROVED BY: J.E.G.	NO. 1	DATE 12/15	REVISION REVISED LID



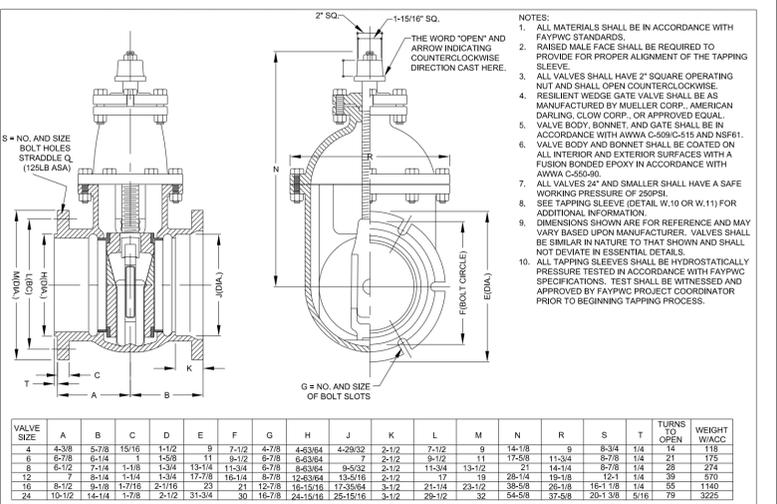
GATE VALVE N.T.S.		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		WATER RESOURCES ENGINEERING DEPARTMENT	
SHEET NO. 1 OF 1	DWG. NO. W.6 DATE: JAN. 01, 2021	DWG. BY: FAYPWC APPROVED BY: J.E.G.	NO. 1	DATE 8/06	REVISION ADDED NOTE NO. 9



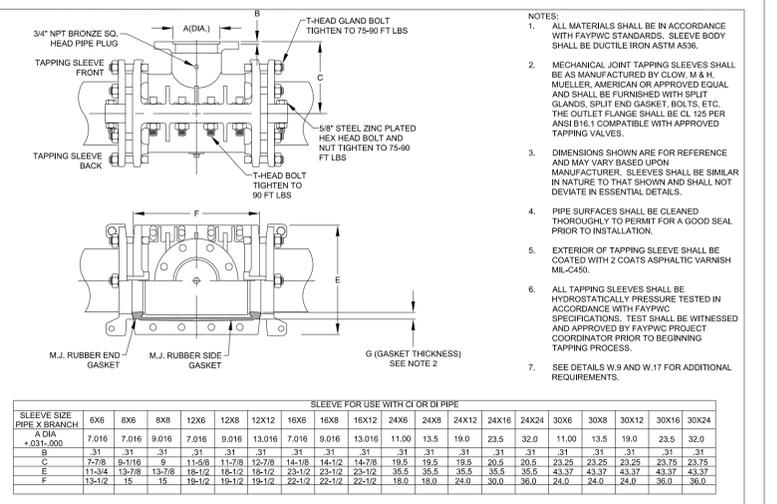
VALVE BOX N.T.S.		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		WATER RESOURCES ENGINEERING DEPARTMENT	
SHEET NO. 1 OF 1	DWG. NO. W.7 DATE: JAN. 01, 2021	DWG. BY: FAYPWC APPROVED BY: J.E.G.	NO. 1	DATE 07/09	REVISION ADDED NOTES 7, 8, AND CLARIFIED NOTES



VALVE BOX PROTECTOR RING N.T.S.		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		WATER RESOURCES ENGINEERING DEPARTMENT	
SHEET NO. 1 OF 1	DWG. NO. W.8 DATE: JAN. 01, 2021	DWG. BY: FAYPWC APPROVED BY: J.E.G.	NO. 1	DATE 07/09	REVISION REVISION NOTE 10, REVISED 4 AND 5



TAPPING VALVE N.T.S.		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		WATER RESOURCES ENGINEERING DEPARTMENT	
SHEET NO. 1 OF 1	DWG. NO. W.9 DATE: JAN. 01, 2021	DWG. BY: FAYPWC APPROVED BY: J.E.G.	NO. 1	DATE 07/13	REVISION REVISED NOTES 4, 8, 10



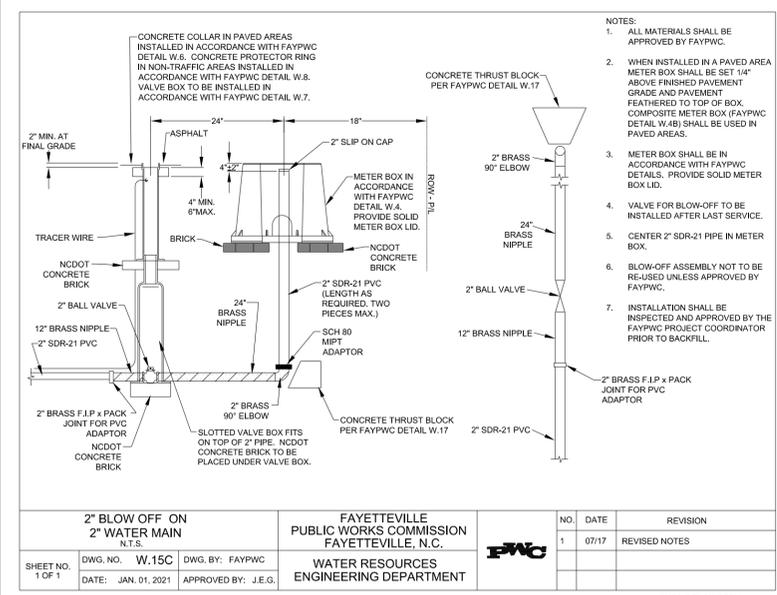
DUCTILE IRON TAPPING SLEEVE N.T.S.		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		WATER RESOURCES ENGINEERING DEPARTMENT	
SHEET NO. 1 OF 1	DWG. NO. W.10 DATE: JAN. 01, 2021	DWG. BY: FAYPWC APPROVED BY: J.E.G.	NO. 1	DATE 07/13	REVISION REVISED NOTES 6, 7

SLEEVE SIZE PIPE X BRANCH	6X6	8X8	8X8	12X8	12X8	12X12	16X8	16X8	16X12	24X8	24X8	24X12	24X16	24X24	30X6	30X8	30X12	30X16	30X24
A DIA. +0.011-0.000	7.016	7.016	9.016	7.016	9.016	13.016	7.016	9.016	13.016	11.000	13.5	19.0	23.5	32.0	11.000	13.5	19.0	23.5	32.0
B DIA.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
C	7.78	9.116	9	11.508	11.778	12.778	14.178	14.178	14.778	19.5	19.5	19.5	20.5	20.5	23.25	23.25	23.25	23.75	23.75
E	11.24	13.778	13.778	18.12	18.12	18.12	23.12	23.12	23.12	35.5	35.5	35.5	35.5	35.5	43.37	43.37	43.37	43.37	43.37
F	13.12	15	15	19.12	19.12	19.12	26.12	26.12	26.12	39.0	39.0	39.0	39.0	39.0	47.0	47.0	47.0	47.0	47.0

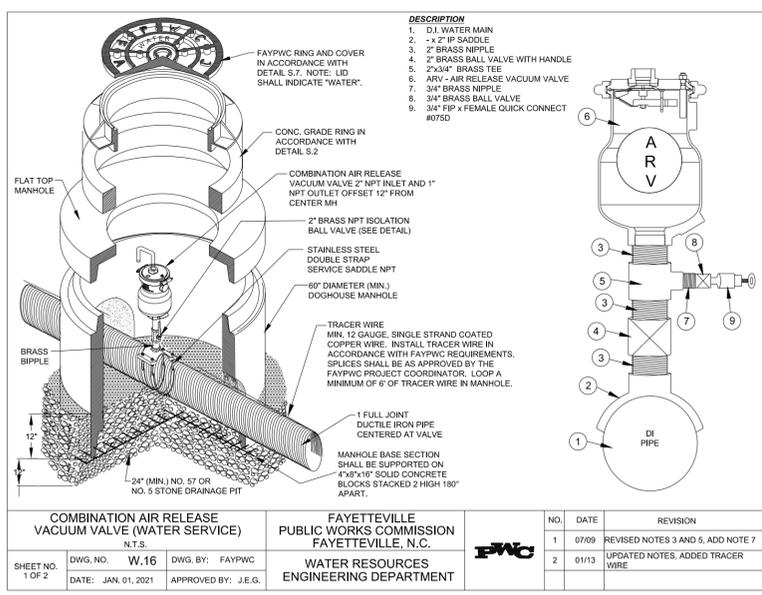
5/14/99
 01 OCT 2021 09:38:38 Environmental\Fayetteville Public Works Commission\2015017700RA Reeford Road NCDOT U 4405\CADD\NCDOT PLANS\Utilities\Engineering\UC\Proc\U4405A_ut_dt_UC03D_psh.dgn
 UTILITY REV. - JULY 24, 2008 - REVISIONS TO DETAIL SHEETS

UTILITY CONSTRUCTION

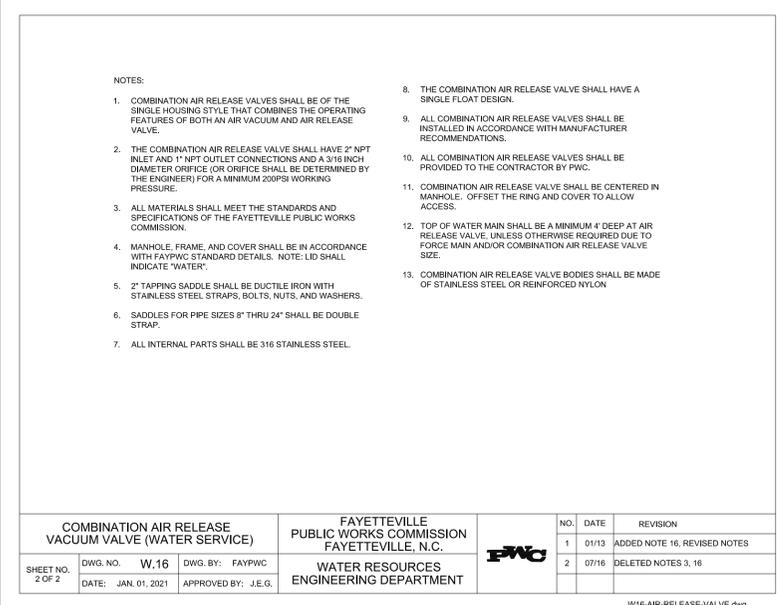
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UNTIL ALL SIGNATURES ARE COMPLETED**



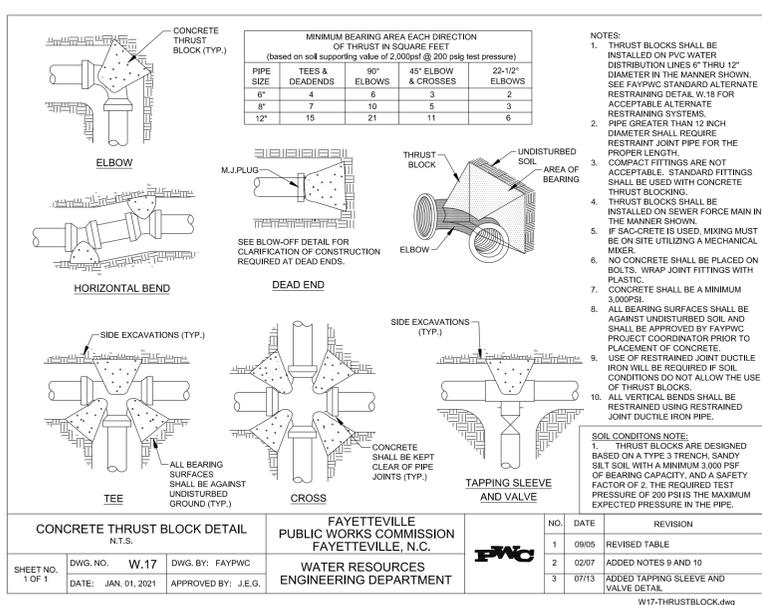
2" BLOW OFF ON 2" WATER MAIN		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
N.T.S.		WATER RESOURCES ENGINEERING DEPARTMENT		1	07/17	REVISED NOTES
SHEET NO. 1 OF 1	DWG. NO. W.15C	DWG. BY: FAYPWC	APPROVED BY: J.E.G.	W15C-2-BLOWOFF.dwg		



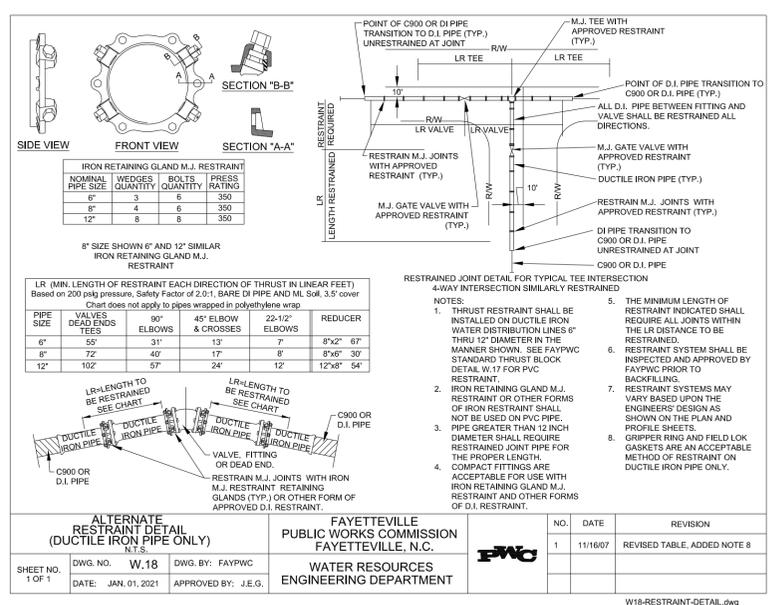
COMBINATION AIR RELEASE VACUUM VALVE (WATER SERVICE)		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
N.T.S.		WATER RESOURCES ENGINEERING DEPARTMENT		1	07/09	REVISED NOTES 3 AND 5, ADD NOTE 7
SHEET NO. 1 OF 2	DWG. NO. W.16	DWG. BY: FAYPWC	APPROVED BY: J.E.G.	2	01/13	UPDATED NOTES, ADDED TRACER WIRE



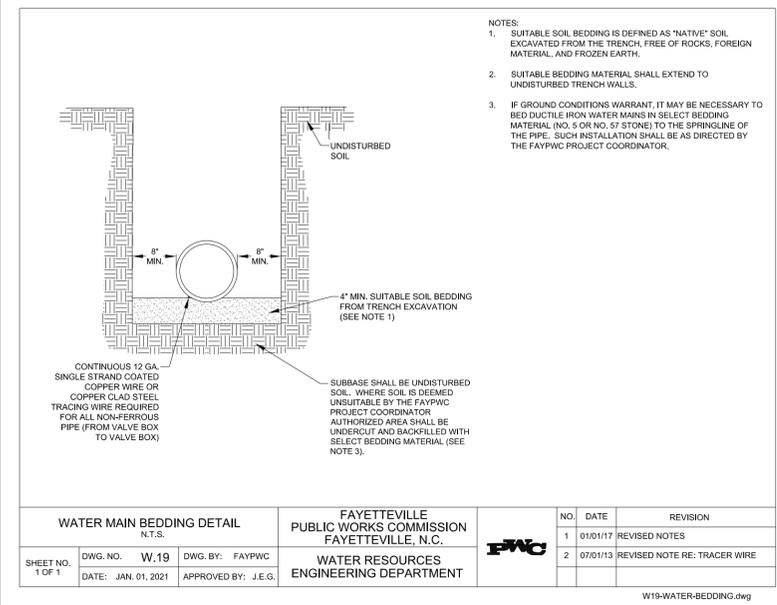
COMBINATION AIR RELEASE VACUUM VALVE (WATER SERVICE)		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
N.T.S.		WATER RESOURCES ENGINEERING DEPARTMENT		1	01/13	ADDED NOTE 16, REVISED NOTES
SHEET NO. 2 OF 2	DWG. NO. W.16	DWG. BY: FAYPWC	APPROVED BY: J.E.G.	2	07/16	DELETED NOTES 3, 16



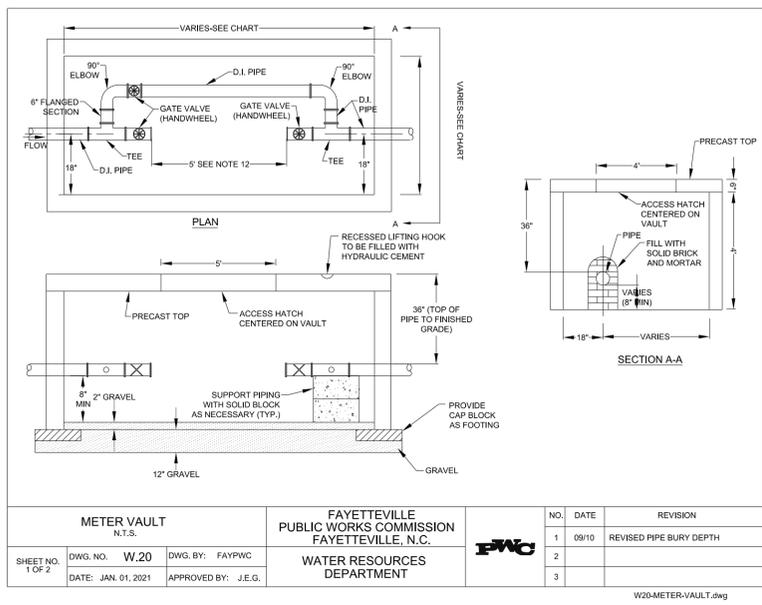
CONCRETE THRUST BLOCK DETAIL		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
N.T.S.		WATER RESOURCES ENGINEERING DEPARTMENT		1	09/05	REVISED TABLE
SHEET NO. 1 OF 1	DWG. NO. W.17	DWG. BY: FAYPWC	APPROVED BY: J.E.G.	2	02/07	ADDED NOTES 9 AND 10
				3	07/13	ADDED TAPPING SLEEVE AND VALVE DETAIL



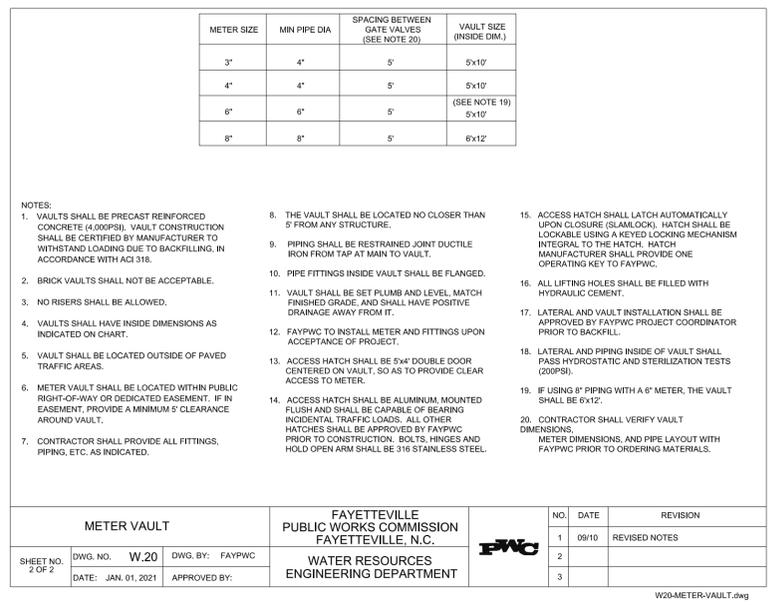
ALTERNATE RESTRAINT DETAIL (DUCTILE IRON PIPE ONLY)		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
N.T.S.		WATER RESOURCES ENGINEERING DEPARTMENT		1	11/16/07	REVISED TABLE, ADDED NOTE 8
SHEET NO. 1 OF 1	DWG. NO. W.18	DWG. BY: FAYPWC	APPROVED BY: J.E.G.	W18-RESTRAINT-DETAIL.dwg		



WATER MAIN BEDDING DETAIL		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
N.T.S.		WATER RESOURCES ENGINEERING DEPARTMENT		1	01/01/17	REVISED NOTES
SHEET NO. 1 OF 1	DWG. NO. W.19	DWG. BY: FAYPWC	APPROVED BY: J.E.G.	2	07/01/13	REVISED NOTE RE: TRACER WIRE



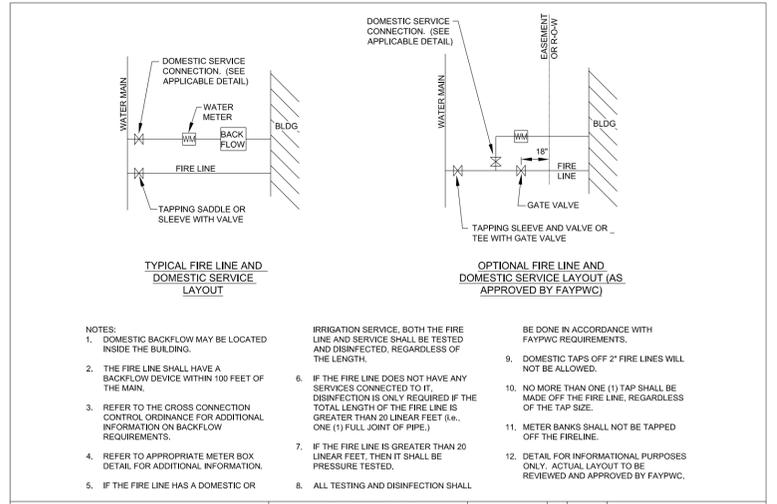
METER VAULT		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
N.T.S.		WATER RESOURCES ENGINEERING DEPARTMENT		1	09/10	REVISED PIPE BURY DEPTH
SHEET NO. 1 OF 2	DWG. NO. W.20	DWG. BY: FAYPWC	APPROVED BY: J.E.G.	2		
				3		



METER VAULT		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
N.T.S.		WATER RESOURCES ENGINEERING DEPARTMENT		1	09/10	REVISED NOTES
SHEET NO. 2 OF 2	DWG. NO. W.20	DWG. BY: FAYPWC	APPROVED BY: J.E.G.	2		
				3		

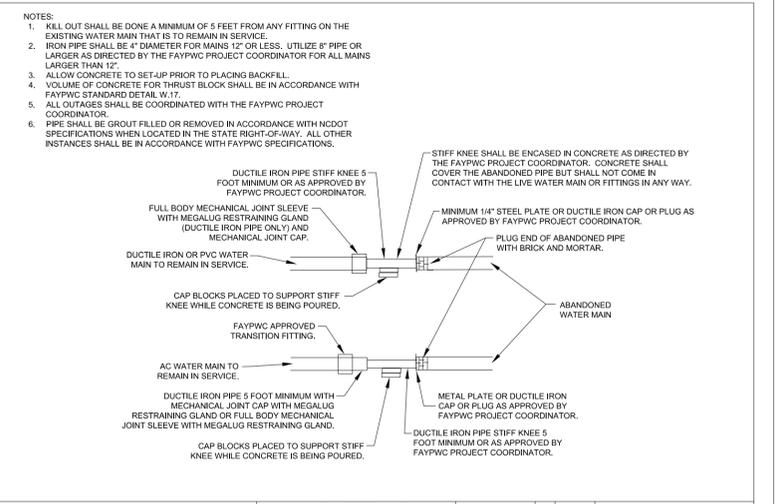
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 UTILITY REV. - JULY 24, 2018 - REVISIONS TO DETAIL SHEETS

UTILITY CONSTRUCTION
DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED



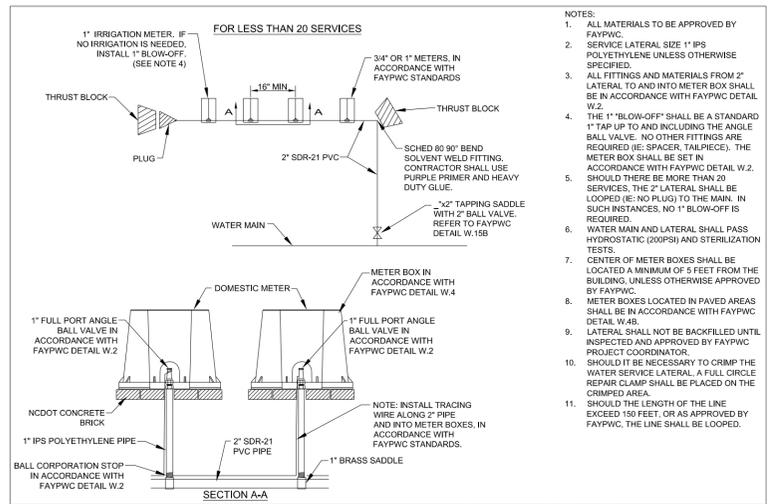
FIRE LINE SERVICES		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
DWG. NO.	W.21	DWG. BY:	FAYPWC	1	10/17	ADDED NOTES 4, 5, 6, 7, 8.
DATE:	JAN. 01, 2021	APPROVED BY:	J.E.G.	2	10/19	ADDED NOTES 9, 10 AND 11.

W21-STANDARD-TAPS.dwg



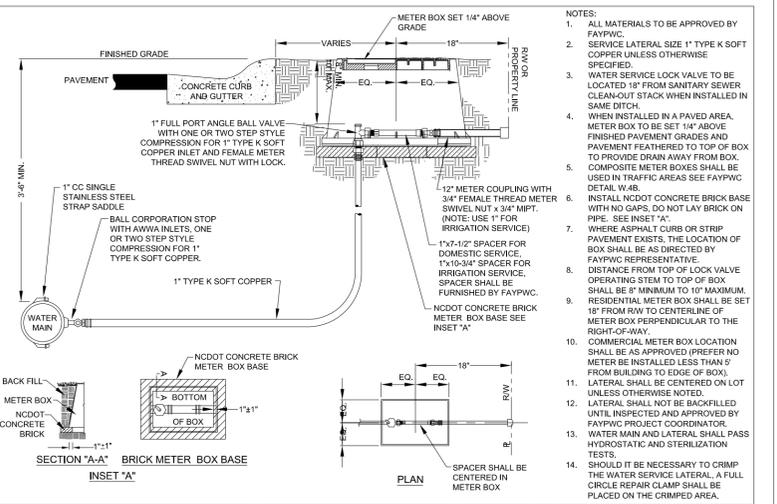
WATER MAIN KILL-OUT		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
DWG. NO.	W.22	DWG. BY:	FAYPWC			
DATE:	JAN. 01, 2021	APPROVED BY:	J.E.G.			

W22-WATERMAIN-KILLOUT.dwg



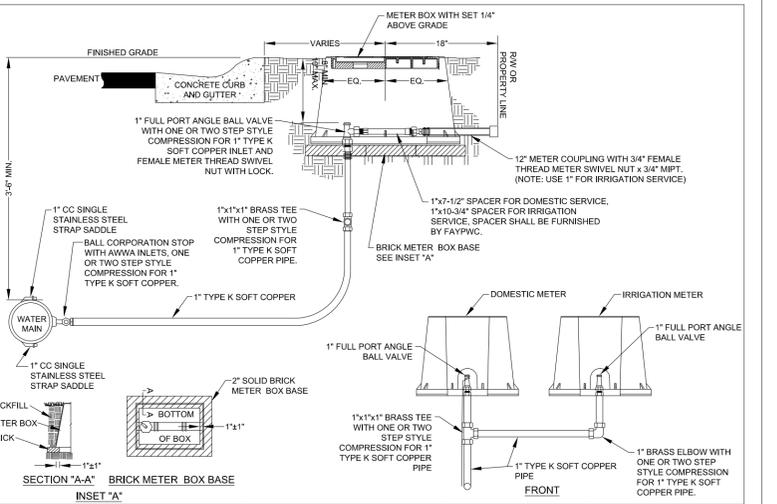
WATER SERVICE DETAILS FOR MULTI-UNIT BUILDINGS		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
DWG. NO.	W.23	DWG. BY:	FAYPWC	1	07/16	REVISED TITLE, NOTES
DATE:	JAN. 01, 2021	APPROVED BY:	J.E.G.	2	07/17	REVISED NOTES

W23-SERVICE-FOR-MULTI-UNIT-BUILDINGS.dwg



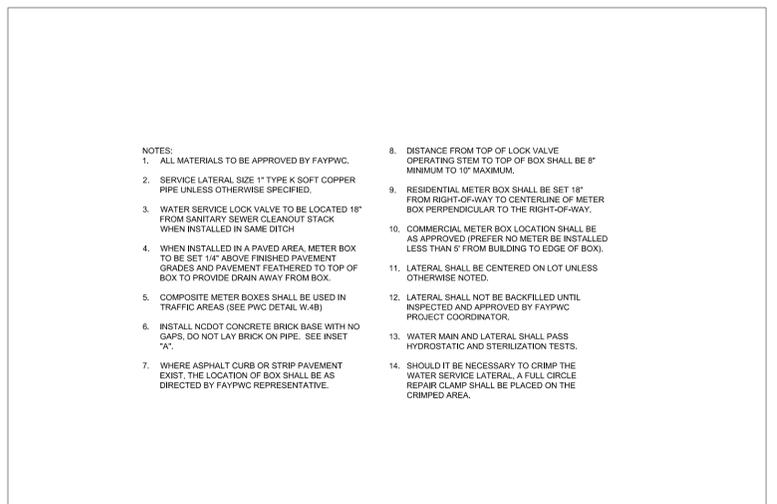
1" COPPER WATER SERVICE LATERAL		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
DWG. NO.	W.24	DWG. BY:	FAYPWC	2	09/05	VALVE CHANGE, ADD NOTE 16
DATE:	JAN. 01, 2021	APPROVED BY:	J.E.G.	3	07/06	RESIZED METER COUPLING
				4	07/17	RESIZED NOTES

W24-COPPER-SERVICE-LATERAL.dwg



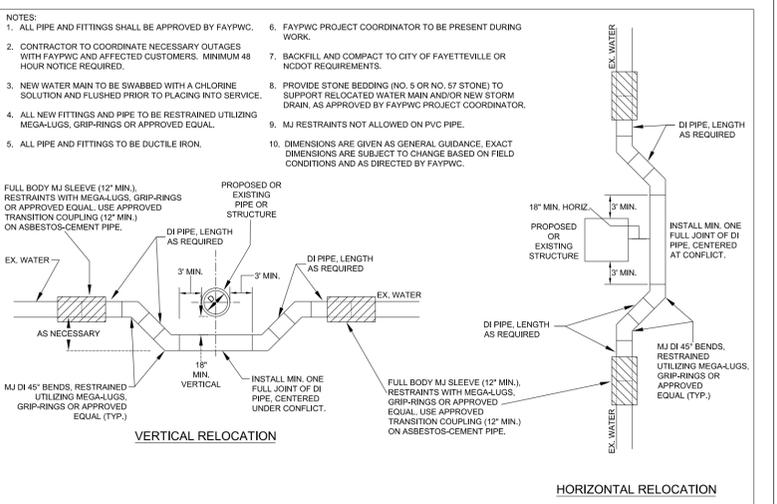
1" SPLIT WATER SERVICE LATERAL FOR TYPE K SOFT COPPER PIPE		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
DWG. NO.	W.25	DWG. BY:	FAYPWC	1	05/05	VALVE CHANGE
DATE:	JAN. 01, 2021	APPROVED BY:	J.E.G.	2	09/05	VALVE CHANGE, ADD NOTE 17
				3	07/06	ADDED FRONT VIEW AND MOVED NOTES TO SHEET 2

W25-COPPER-SPLIT-WLAT.dwg



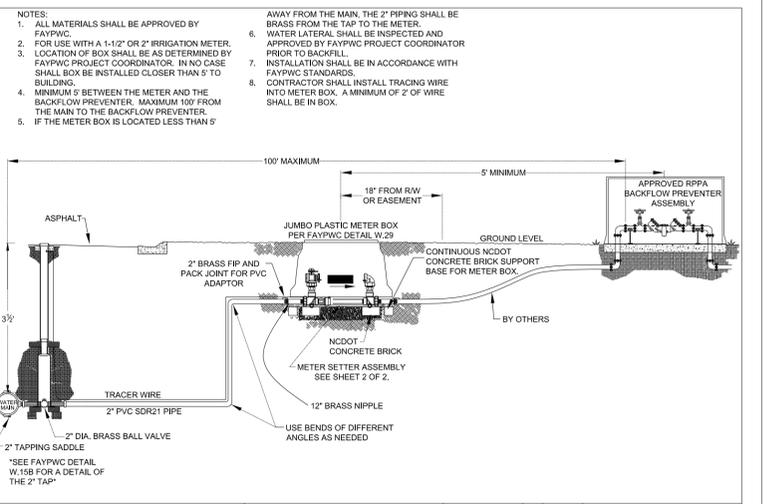
NOTES FOR 1" SPLIT WATER SERVICE LATERAL FOR TYPE K SOFT COPPER PIPE		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
DWG. NO.	W.25	DWG. BY:	FAYPWC	1	07/06	ADDED FRONT VIEW AND MOVED NOTES TO SHEET 2
DATE:	JAN. 01, 2021	APPROVED BY:	J.E.G.	2	07/17	REVISED NOTES

W25-COPPER-SPLIT-WLAT.dwg



PIPE RELOCATION DETAIL		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
DWG. NO.	W.26	DWG. BY:	FAYPWC	1	01/12	REVISED NOTES, ADDED HORIZONTAL RELOCATION
DATE:	JAN. 01, 2021	APPROVED BY:	J.E.G.			

W26-PIPE-RELOCATION-DETAIL.dwg



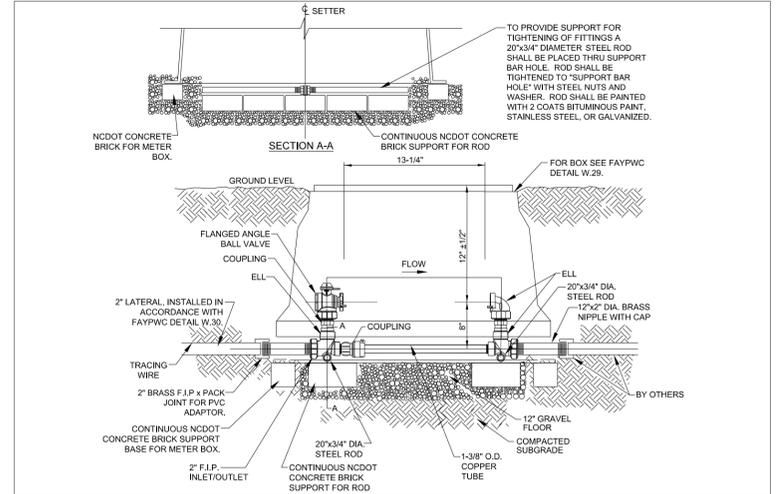
2" IRRIGATION LATERAL		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
DWG. NO.	W.28	DWG. BY:	FAYPWC	1	07/17	REVISED NOTES, ADDED SHEET 2
DATE:	JAN. 01, 2021	APPROVED BY:	J.E.G.			

W28-2IN-IRRIG-LAT.DWG

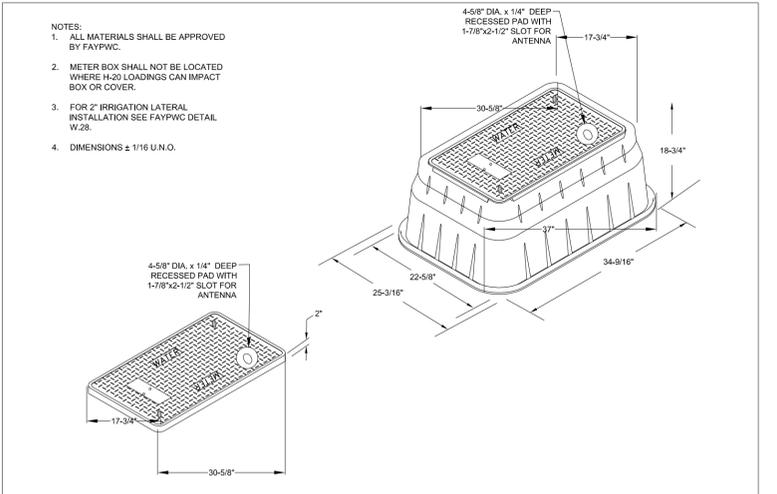
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 UTILITY REV. - JULY 24, 2018 - REVISIONS TO DETAIL SHEETS

DESIGNED BY: AMH
 DRAWN BY: AMH/AB
 CHECKED BY: AMH
 APPROVED BY: BRO
 REVISED:
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151

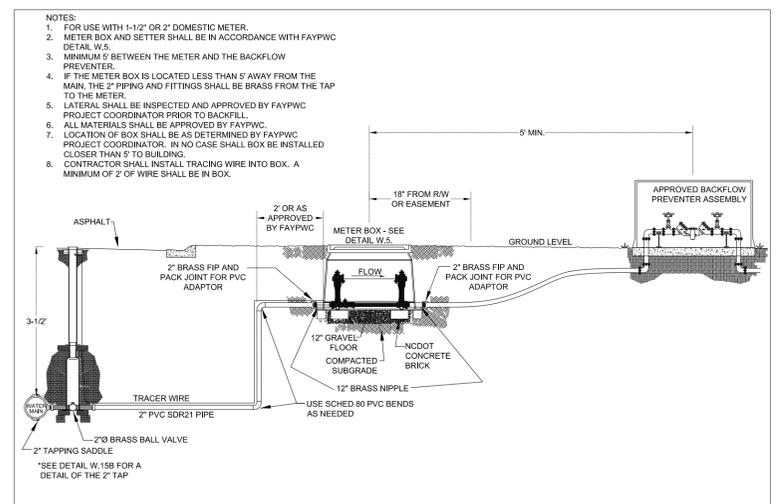
UTILITY CONSTRUCTION
DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED



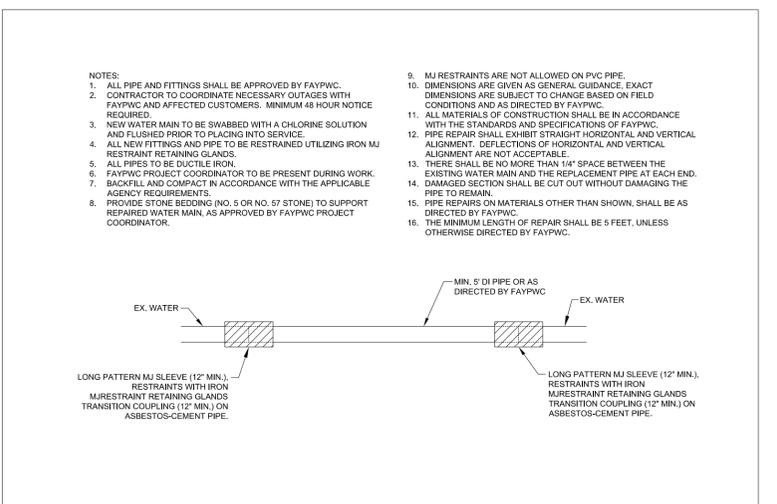
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FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		
WATER RESOURCES ENGINEERING DEPARTMENT		
NO. 1	DATE 07/17	REVISION ADDED SHEET 2 OF 2



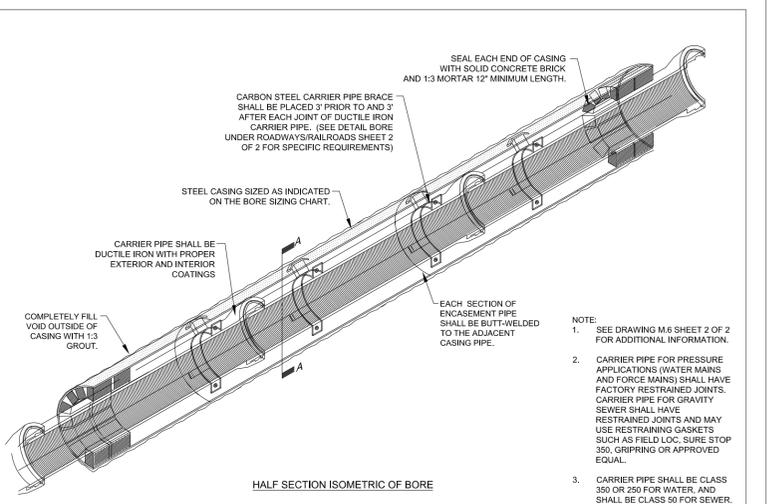
JUMBO METER BOX FOR IRRIGATION N.T.S.		
FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		
WATER RESOURCES ENGINEERING DEPARTMENT		
NO. 1	DATE 07/17	REVISION REVISED LID, BOX AND DIMENSIONS



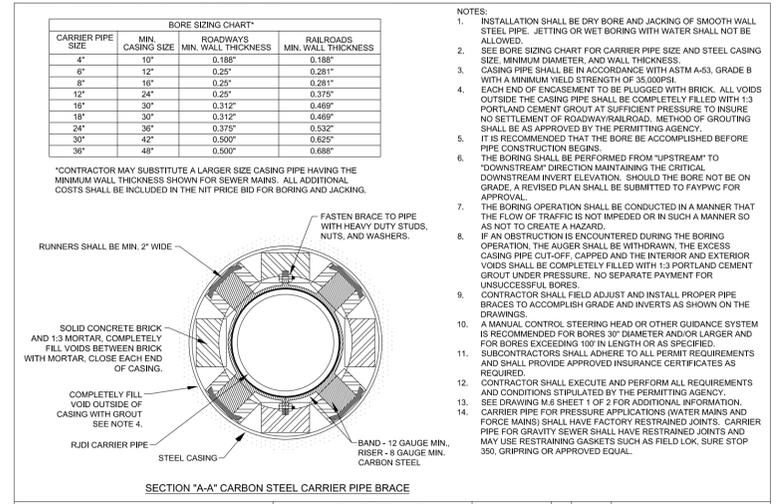
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FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		
WATER RESOURCES ENGINEERING DEPARTMENT		
NO. 1	DATE 07/21/17	REVISION REVISED NOTES



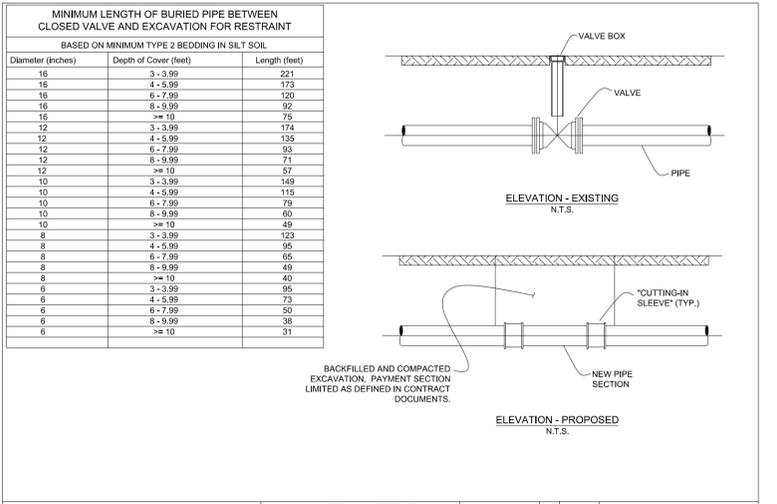
PIPE REPAIR DETAIL N.T.S.		
FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		
WATER RESOURCES ENGINEERING DEPARTMENT		
NO. 1	DATE JAN. 01, 2021	REVISION APPROVED BY: J.E.G.



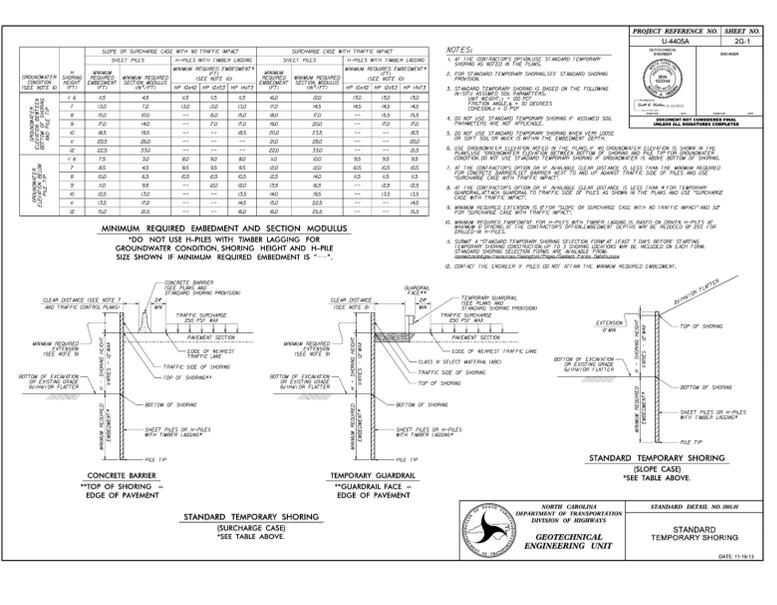
BORE UNDER ROADWAYS/RAILROADS N.T.S.		
FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		
WATER RESOURCES ENGINEERING DEPARTMENT		
NO. 1	DATE 10/05	REVISION ADDED NOTES 2 AND 3
NO. 2	DATE 10/09	REVISION CLARIFIED RESTRAINT REQUIREMENTS



BORE UNDER ROADWAYS/RAILROADS N.T.S.		
FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		
WATER RESOURCES ENGINEERING DEPARTMENT		
NO. 1	DATE 02/11/04	REVISION ADDED 6\"/>
NO. 2	DATE 07/10	REVISION REVISED NOTES, SIZING CHART



VALVE REMOVAL WITH EXCAVATION N.T.S.		
FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		
WATER RESOURCES ENGINEERING DEPARTMENT		
NO. 1	DATE M. 15	REVISION DWG. BY: FAYPWC



BORE UNDER ROADWAYS/RAILROADS N.T.S.		
FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		
WATER RESOURCES ENGINEERING DEPARTMENT		
NO. 1	DATE 02/11/04	REVISION ADDED 6\"/>
NO. 2	DATE 07/10	REVISION REVISED NOTES, SIZING CHART

VALVE REMOVAL WITH EXCAVATION N.T.S.		
FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		
WATER RESOURCES ENGINEERING DEPARTMENT		
NO. 1	DATE M. 15	REVISION DWG. BY: FAYPWC

01 OCT 2021 09:49 AM - REVISIONS TO DETAIL SHEETS - ADDED CONCRETE BRIDGE DETAIL
 UTILITY REV. - JULY 24, 2018
 korks-Commission\2015017700RA -RaeFord-Road NCDOT U-4405\CADD\NCDOT-PLANS\Utilities\Engineering\NUC\Proc\U4405A_ut_dt\UC03H_psh.dgn
 5/14/09

DESIGNED BY: AMH	UTILITY CONSTRUCTION PLANS ONLY
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APPROVED BY: BRO	
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

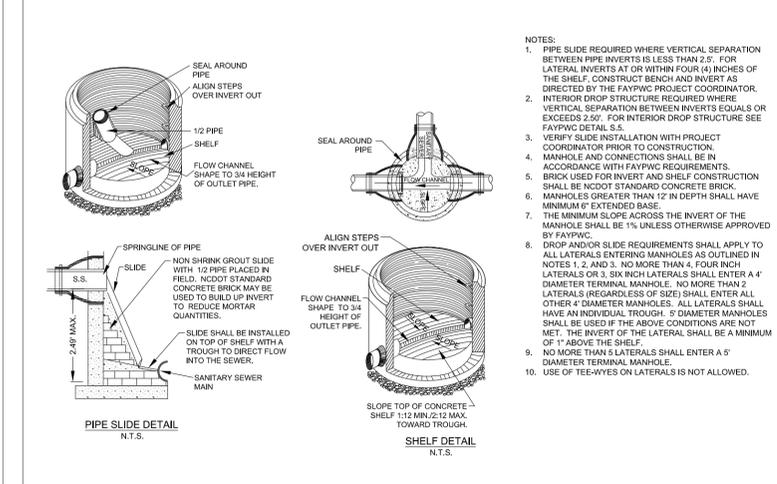
UTILITY CONSTRUCTION
DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED

- CONTRACTOR SHALL REPAIR ALL SEWER LATERALS AND MAINS DAMAGED DURING CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY REPORT ALL SEWER MAIN AND LATERAL BREAKS TO THE FAYFWPC PROJECT COORDINATOR. THE CONTRACTOR SHALL INITIATE IMMEDIATE REPAIRS IN ACCORDANCE WITH FAYFWPC STANDARDS.
- SEWER MAINS, LATERALS, AND MANHOLES SHALL BE INSTALLED UTILIZING A FAYFWPC APPROVED OUT-SHEET, INDICATING INSTALLATION DEPTH.
- TRANSFER OF SEWER SERVICES SHALL BE ACCOMPLISHED AS FOLLOWS:
 - INSTALL AND TEST NEW MAINS, MANHOLES, AND LATERALS. CLEANOUTS SHALL BE INSTALLED 18" INSIDE R/W UNLESS OTHERWISE DIRECTED BY FAYFWPC.
 - CONNECT EXISTING PLUMBING TO NEW LATERAL UTILIZING THE NECESSARY FITTINGS AS DIRECTED BY FAYFWPC.
 - AFTER ALL SERVICES HAVE BEEN TRANSFERRED TO THE NEW MAIN, THE EXISTING SEWER SYSTEM SHALL BE ABANDONED IN ACCORDANCE WITH FAYFWPC REQUIREMENTS.
- WHEN THE EXISTING MAIN IS NOT TO BE ABANDONED, THE CONTRACTOR SHALL UNCOVER THE EXISTING LATERAL AT THE MAIN, CUT AND PLUG BOTH ENDS, REMOVE THE EXISTING CLEANOUT AND COMBINATION, AND PLUG THE LATERAL TO ABANDON THE OLD SERVICE.
- CONTRACTOR SHALL ABANDON ("KILL-OUT") ANY EXISTING SEWER SERVICES THAT WILL NOT BE UTILIZED BY UNCOVERING THE EXISTING LATERAL AT THE MAIN, CUT AND PLUG AT BOTH ENDS, REMOVE THE EXISTING CLEANOUT AND COMBINATION, AND PLUG THE TAP OR TEE AT THE MAIN. FOR LATERALS THAT CONNECT TO A MANHOLE AND ARE TO BE ABANDONED ("KILL-OUT"), THE LATERAL SHALL BE REMOVED FROM THE MANHOLE AND THE REMAINING VOID IN THE MANHOLE SHALL BE FILLED WITH BLOCK AND MORTAR.
- SEWER PLUGS SHALL BE INSTALLED TO ELIMINATE ANY DEBRIS OR OTHER MATERIAL FROM ENTERING THE ACTIVE SEWER SYSTEM. UPON ACCEPTANCE OF THE NEW SEWER SYSTEM, THE CONTRACTOR SHALL CLEAN THE NEW MAINS, REMOVE ALL DEBRIS, AND THEN REMOVE THE PLUG.
- ALL EXISTING UTILITIES IMPACTED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISHED GRADE, IN ACCORDANCE WITH FAYFWPC REQUIREMENTS.
- ALL WORK ON FAYFWPC SEWER UTILITIES (MAINS, LATERALS, ETC) SHALL BE PERFORMED BY A LICENSED SEWER CONTRACTOR. THE FAYFWPC PUBLIC WORKS COMMISSION SHALL OBSERVE AND APPROVE ALL WORK ON FAYFWPC SEWER UTILITIES. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH FAYFWPC REQUIREMENTS.

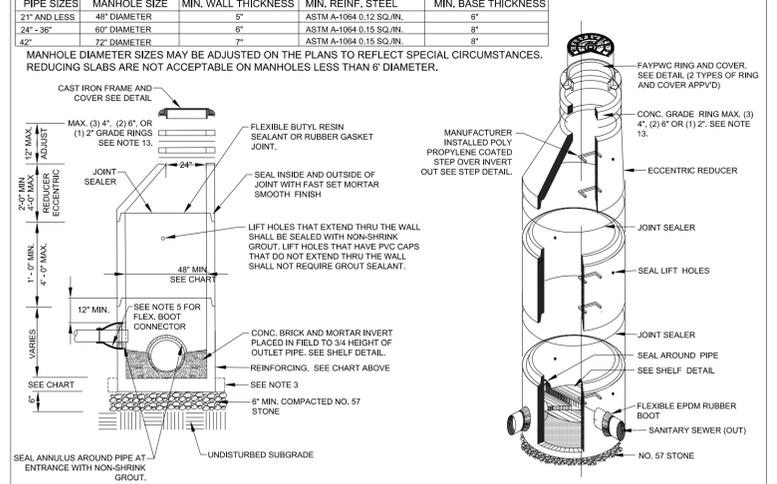
GENERAL NOTES SANITARY SEWER UTILITY		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
SHEET NO. 1 OF 1	DWG. NO. S.1	DWG. BY: FAYFWPC	FAYFWPC	1	07/16	ADDED NOTE 6
	DATE: JAN. 01, 2021	APPROVED BY: J.E.G.		2	01/18	ADDED NOTES 5, 8

- NOTES:
- PRECAST REINFORCED CONCRETE MANHOLES SHALL BE IN ACCORDANCE WITH ASTM C478.
 - MINIMUM CONCRETE COMPRESSIVE STRENGTH SHALL BE 4,000PSI.
 - MANHOLES GREATER THAN 12" DEPTH SHALL HAVE MINIMUM 6" EXTENDED BASE.
 - FLEXIBLE BUTYL RESIN JOINT SEALANT SHALL BE IN ACCORDANCE WITH ASTM C990. RUBBER GASKET JOINTS SHALL BE IN ACCORDANCE WITH ASTM C-443.
 - FLEXIBLE EPDM RUBBER BOOT CONNECTORS SHALL BE IN ACCORDANCE WITH ASTM C923. INSTALLED BY MANUFACTURER WITH STAINLESS STEEL COMPRESSION RING AND TAKE-UP CLAMP. CONNECTION TO MAIN SHALL BE BY CONTRACTOR WITH STAINLESS STEEL PIPE CLAMP.
 - CONNECTIONS TO EXISTING MANHOLES SHALL BE BY CORING MANHOLE AND FIELD INSTALLING A FLEXIBLE EPDM RUBBER BOOT CONNECTOR. DO NOT ALLOW DEBRIS TO ENTER SYSTEM.
 - MORTAR SHALL BE QUICK SETTING, NON-SHRINK GROUT MIXED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
 - MANHOLE STEPS SHALL BE IN ACCORDANCE WITH ASTM C478 AND OSHA REGULATIONS. ALIGN STEPS WITH INVERT OUT.
 - PRECAST INVERTS ARE NOT ALLOWED.
 - VERTICAL DROPS BETWEEN THE INFLOW PIPES AND OUTFLOW PIPES SHALL REQUIRE THE FOLLOWING:
 - GREATER THAN 2' SEE DROP STRUCTURE DETAIL (MIN. 5" DIAMETER MH REQUIRED).
 - LESS THAN 2' SEE PIPE SLIDE DETAIL.
 - AN ECCENTRIC CONE SHALL BE UTILIZED ON ALL MANHOLES, UNLESS OTHERWISE APPROVED BY FAYFWPC.
 - NO MORE THAN 5" DIAMETER MANHOLES SHALL BE USED IF THE ABOVE CONDITIONS ARE NOT MET.
 - NO MORE THAN 5" DIAMETER LATERALS SHALL ENTER A 5" DIAMETER MANHOLE.
 - USE OF TEE-WYES ON LATERALS IS NOT ALLOWED.
 - ALL MANHOLES SHALL BE VACUUM TESTED IN ACCORDANCE WITH FAYFWPC STANDARDS.
 - THE MINIMUM SLOPE ACROSS THE INVERT OF THE MANHOLE SHALL BE 1%, UNLESS OTHERWISE APPROVED BY FAYFWPC. STANDING WATER IN INVERT OF MANHOLE IS NOT ACCEPTABLE.
 - THE EXTERIOR MANHOLE RISER JOINTS, INCLUDING THE JOINT AT THE CONE, SHALL BE SEALED ON THE OUTSIDE BY AN APPROVED JOINT WRAP. THE WRAP SHALL BE IN ACCORDANCE WITH FAYFWPC SPECIFICATIONS.
 - MANHOLE BOOT FOR 4-INCH LATERALS, SHOULD IT BE NECESSARY TO INSTALL A 4-INCH LATERAL INTO A MANHOLE, THE RUBBER BOOT THAT THE LATERAL IS INSERTED INTO SHALL BE SECURELY FASTENED TO THE CORE HOLE BY UTILIZING A STAINLESS STEEL BAND THAT IS TIGHTENED USING A JACK OR A TORQUE WRENCH (DIRECT DRIVE). BOTH STANDARD SIZE AND STEP DOWN BOOTS ARE ALLOWED. THE TORQUE WRENCH SHALL BE SUPPORTED BY THE MANUFACTURER. NO OTHER TIE BANDS OR METHOD OF SECURING THE BOOT TO THE MANHOLE SHALL BE ACCEPTED.
 - FOR FOUR (4) INCH SDR 26 LATERALS, THE PIPE OUTSIDE DIAMETER RANGE OF THE BOOT SHALL BE 3.5 INCHES TO 4.25 INCHES.
 - FOR FOUR (4) INCH DUCTILE IRON LATERALS, THE PIPE OUTSIDE DIAMETER RANGE OF THE BOOT SHALL EITHER BE AS FOR VC OR 4.25 INCHES TO 4.81 INCHES.
 - IN ALL CASES, THE BOOT SHALL BE TIGHTENED ON THE LATERAL BY MEANS OF A SINGLE STAINLESS STEEL STRAP.
 - THE LATERAL INVERT SHALL BE AT THE TOP OF THE SHELF.
 - NO MORE THAN 4, FOUR INCH LATERALS OR 3, SIX INCH LATERALS SHALL ENTER A 4" DIAMETER TERMINAL MANHOLE. NO MORE THAN 2 LATERALS (REGARDLESS OF SIZE) SHALL ENTER ALL OTHER 4" DIAMETER MANHOLES. ALL LATERALS SHALL HAVE AN INDIVIDUAL TROUGH. 5" DIAMETER MANHOLES SHALL BE USED IF THE ABOVE CONDITIONS ARE NOT MET.
 - NO MORE THAN 5 LATERALS SHALL ENTER A 5" DIAMETER MANHOLE.
 - USE OF TEE-WYES ON LATERALS IS NOT ALLOWED.
 - ALL MANHOLES SHALL BE VACUUM TESTED IN ACCORDANCE WITH FAYFWPC STANDARDS.

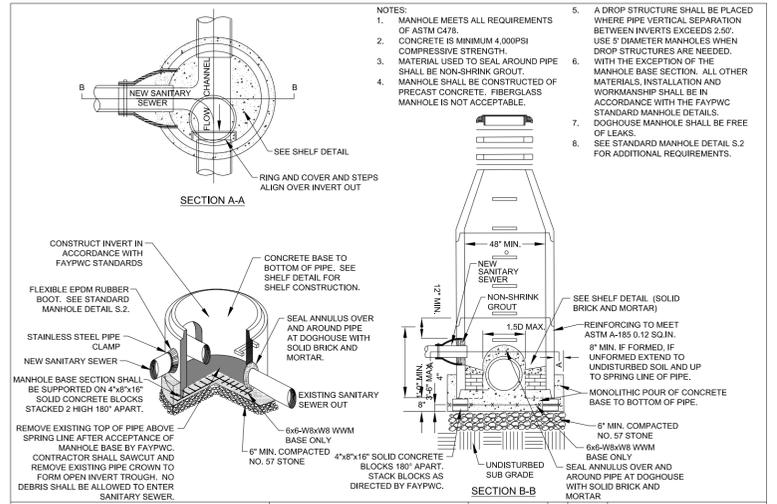
STANDARD MANHOLE		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
SHEET NO. 2 OF 2	DWG. NO. S.2	DWG. BY: FAYFWPC	FAYFWPC	1	01/08	CREATED DETAIL, ADDED NOTES 14-20
	DATE: JAN. 01, 2021	APPROVED BY: J.E.G.		2	07/13	REVISED NOTES 9, 11, 15 CONVERTED TO S.2 SHEET 2 OF 2



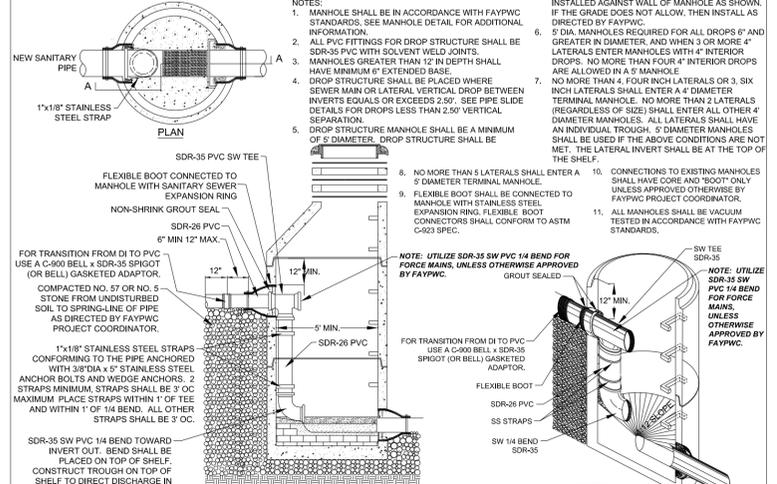
PIPE SLIDE AND SHELF DETAILS N.T.S.		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
SHEET NO. 1 OF 1	DWG. NO. S.4	DWG. BY: FAYFWPC	FAYFWPC	1	01/05	ADDED NOTE 8
	DATE: JAN. 01, 2021	APPROVED BY: J.E.G.		2	02/07	REVISED NOTE 8, SLIDE DETAIL, ADDED NOTES 10, 11, 12



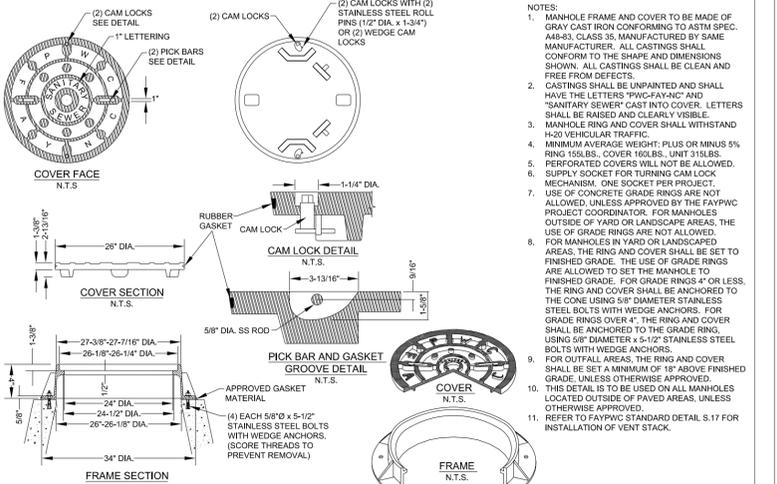
STANDARD MANHOLE N.T.S.		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
SHEET NO. 1 OF 2	DWG. NO. S.2	DWG. BY: FAYFWPC	FAYFWPC	1	02/07	CREATED S.2A ADDED NOTES 13-17
	DATE: JAN. 01, 2021	APPROVED BY: J.E.G.		2	07/13	ADDED SHEET 2 OF 2



DOGHOUSE MANHOLE (MAINS 15" OR LESS) N.T.S.		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
SHEET NO. 1 OF 2	DWG. NO. S.3	DWG. BY: FAYFWPC	FAYFWPC	1	07/16	ADDED SHEET 2
	DATE: JAN. 01, 2021	APPROVED BY: J.E.G.		2	11/25/08	MADE CHANGES TO NOTES



INTERIOR DROP STRUCTURE SEWER MAINS AND LATERALS		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
SHEET NO. 1 OF 1	DWG. NO. S.5	DWG. BY: FAYFWPC	FAYFWPC	4	11/08	REVISED FITTING MATERIAL
	DATE: JAN. 01, 2021	APPROVED BY: J.E.G.		5	07/12	REVISED NOTES 5, 6, AND HUB ON INVERT

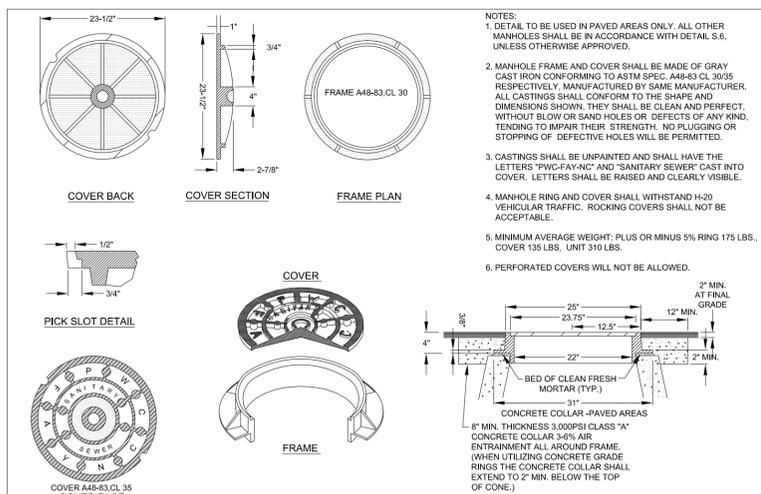


STANDARD NON-TRAFFIC AREA MANHOLE RING AND COVER WITH WIPER GASKET AND CAM LOCK N.T.S.		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
SHEET NO. 1 OF 1	DWG. NO. S.6	DWG. BY: FAYFWPC	FAYFWPC	1	07/09	REVISED NOTES ON FRAME SECTION, REVISED NOTE 3
	DATE: JAN. 01, 2021	APPROVED BY: J.E.G.		2	07/17	ADDED NOTE ON WEDGE CAM LOCKS

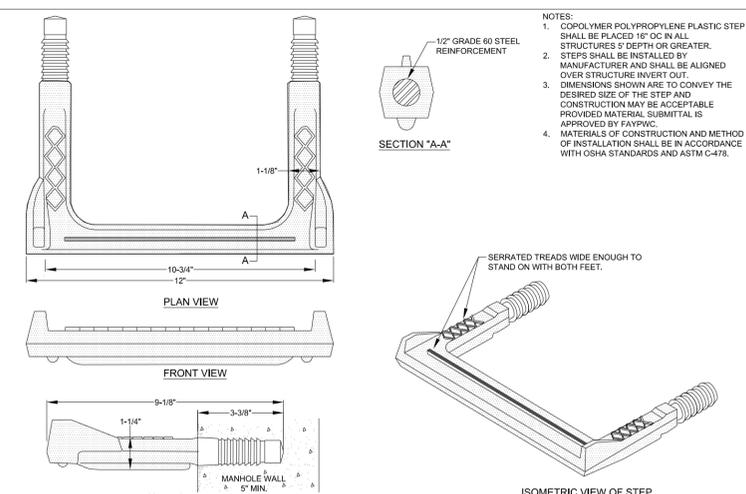
5/14/2019
 UTILITY REV. - JULY 24, 2018 - REVISIONS TO DETAIL SHEETS
 01_OCT_2021(0120) Environmental\Fayetteville Public Works Commission\2015017700RA_RaeFord_Road_NCDOT_U_4405\CADD\NCDOT_PLANS\Utilities\Engineering\UC_Proj\U4405A_ut_dtl_UC031_psh.dgn

PROJECT REFERENCE NO.	U-4405	SHEET NO.	UC-03J
DESIGNED BY:	AMH	UTILITY CONSTRUCTION PLANS ONLY	
DRAWN BY:	AMH/AB		
CHECKED BY:	AMH		
APPROVED BY:	BRO		
REVISED:		NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151			

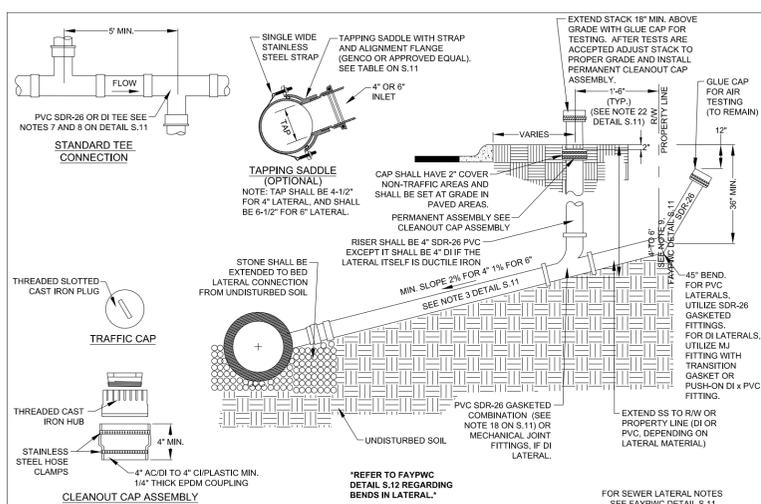
UTILITY CONSTRUCTION
DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED



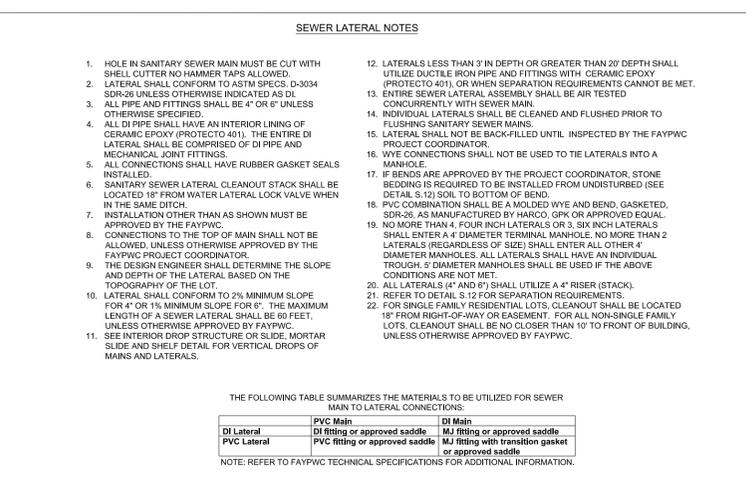
STANDARD TRAFFIC AREA MANHOLE RING AND COVER		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
DWG. NO.	S.7	DWG. BY:	FAYPWC	1	01/05	CHANGED NON TRAFFIC DETAIL
DATE:	JAN. 01, 2021	APPROVED BY:	J.E.G.	2	07/06	ADDED NOTE ON CONCRETE COLLAR
				3	02/07	REMOVED NON TRAFFIC AREA AND REVISED NOTES
				4	07/08	REVISED ASPHALT THICKNESS



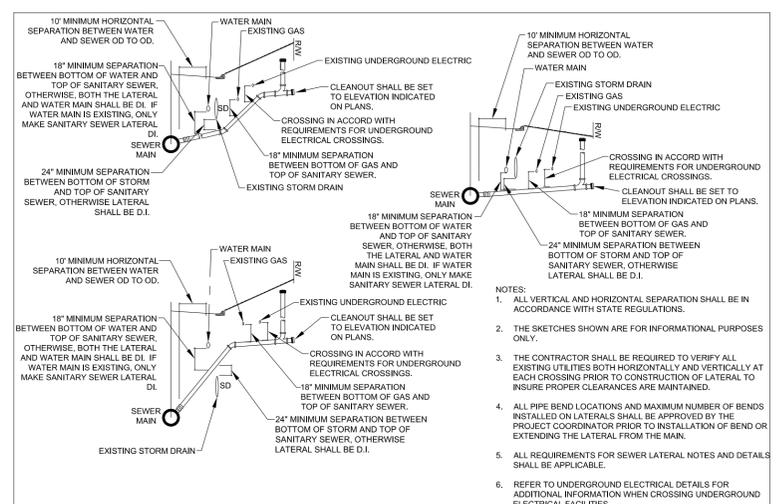
STRUCTURE STEP		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
DWG. NO.	S.8	DWG. BY:	FAYPWC			
DATE:	JAN. 01, 2021	APPROVED BY:	J.E.G.			



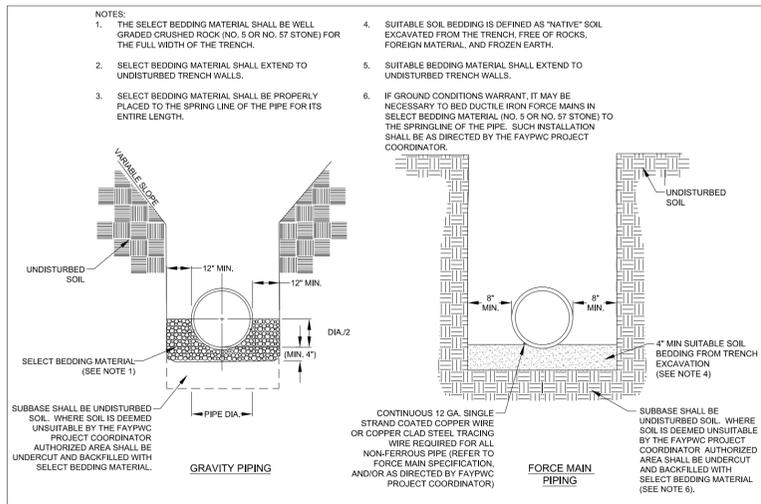
SEWER LATERAL (4-INCH AND 6-INCH)		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
DWG. NO.	S.10	DWG. BY:	FAYPWC	2	01/14	ADDED TAILPIECE, NOTES
DATE:	JAN. 01, 2021	APPROVED BY:	J.E.G.	3	01/15	REVISED NOTES RE: TAILPIECE
				4	07/18	REVISED NOTE RE: LATERAL DEPTH



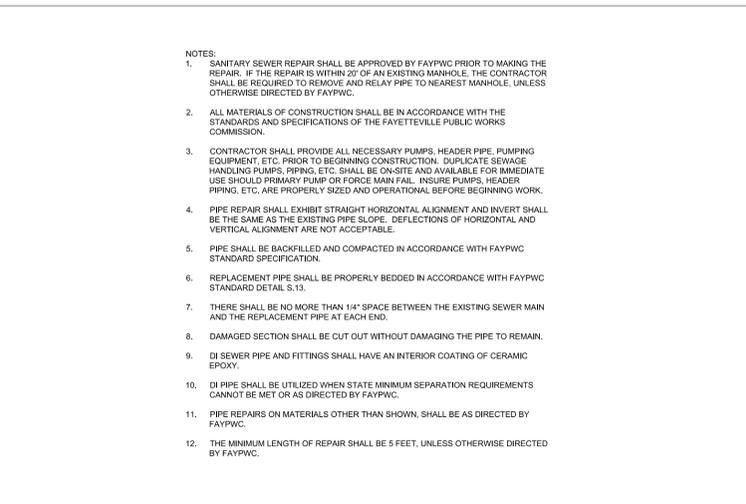
SEWER LATERAL NOTES (4-INCH AND 6-INCH)		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
DWG. NO.	S.11	DWG. BY:	FAYPWC	3	01/13	REVISED NOTES AND ADDED TABLE
DATE:	JAN. 01, 2021	APPROVED BY:	J.E.G.	4	01/15	REVISED NOTE 22, TABLE
				5	07/18	REVISED NOTES 6, 9



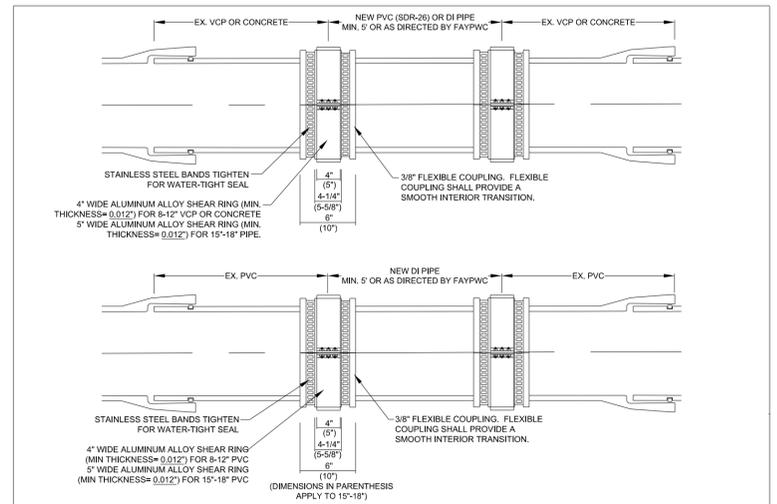
SEWER LATERAL SEPARATION REQUIREMENTS		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
DWG. NO.	S.12	DWG. BY:	FAYPWC	1	01/05	REVISED NOTES 1 AND 6
DATE:	JAN. 01, 2021	APPROVED BY:	J.E.G.	2	11/06	ADDED NOTE ON DI LATERALS
				3	03/10	ADDED LATERAL AND SEWER SEPARATION



GRAVITY SANITARY SEWER PIPE REPAIR		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
DWG. NO.	S.13	DWG. BY:	FAYPWC	1	01/05	REVISED NOTES
DATE:	JAN. 01, 2021	APPROVED BY:	J.E.G.	2	01/01/16	REVISED NOTES



GRAVITY SANITARY SEWER PIPE REPAIR		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
DWG. NO.	S.15	DWG. BY:	FAYPWC	1	01/05	REVISED REPLACEMENT PIPE
DATE:	JAN. 01, 2021	APPROVED BY:	J.E.G.	2	07/11	REVISED NOTES



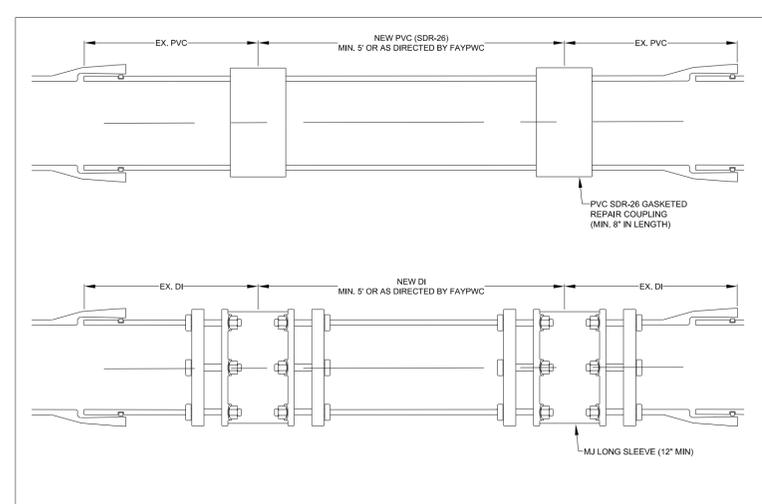
GRAVITY SANITARY SEWER PIPE REPAIR		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
DWG. NO.	S.15	DWG. BY:	FAYPWC	1	01/05	REVISED REPLACEMENT PIPE
DATE:	JAN. 01, 2021	APPROVED BY:	J.E.G.	2	07/11	REVISED NOTES

REVISIONS

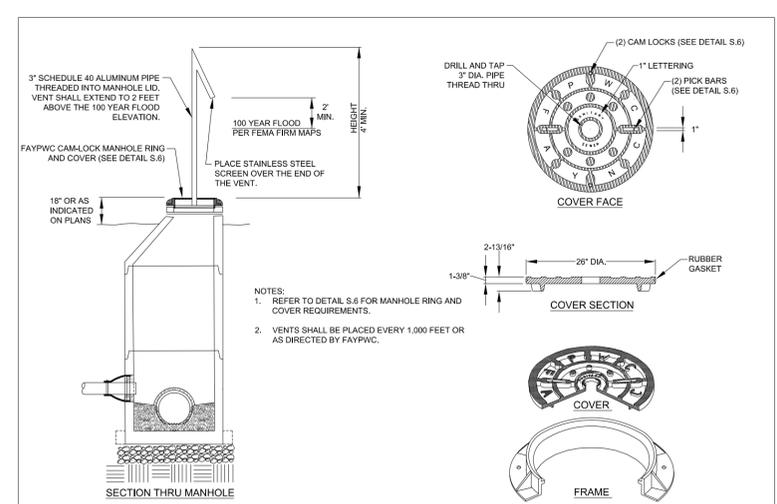
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PROJECT REFERENCE NO.	SHEET NO.
U-4405	UC-03K
DESIGNED BY: AMH	UTILITY CONSTRUCTION PLANS ONLY
DRAWN BY: AMH/AB	
CHECKED BY: AMH	
APPROVED BY: BRO	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

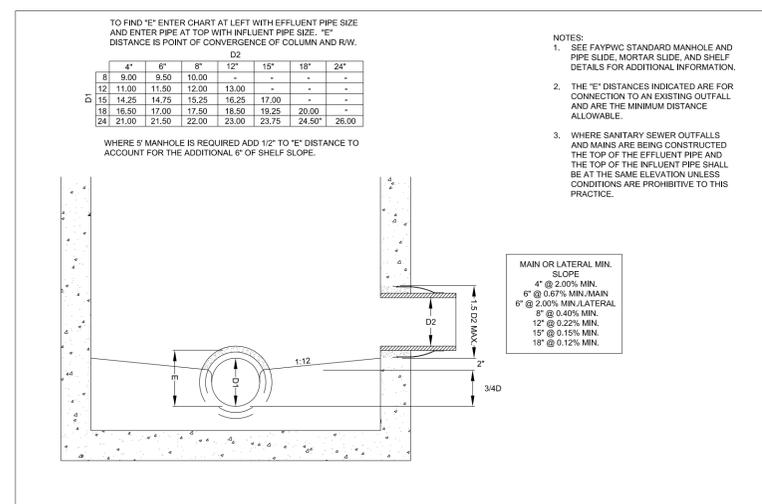
UTILITY CONSTRUCTION
DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED



GRAVITY SANITARY SEWER PIPE REPAIR N.T.S.		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
SHEET NO. 3 OF 3		WATER RESOURCES ENGINEERING DEPARTMENT		1	01/05	REVISED REPLACEMENT PIPE
DWG. NO. S.15	DWG. BY: FAYPWC	FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		2	07/11	REVISED NOTES, REPAIRS
DATE: JAN. 01, 2021	APPROVED BY: J.E.G.	FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.				



MANHOLE VENT N.T.S.		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
SHEET NO. 1 OF 1		WATER RESOURCES ENGINEERING DEPARTMENT				
DWG. NO. S.17	DWG. BY: FAYPWC	FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.				
DATE: JAN. 01, 2021	APPROVED BY: J.E.G.	FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.				

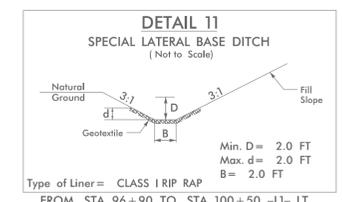
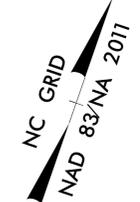


MH CONNECTION DESIGN GUIDE N.T.S.		FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.		NO.	DATE	REVISION
SHEET NO. 1 OF 1		WATER RESOURCES ENGINEERING DEPARTMENT				
DWG. NO. S.18	DWG. BY: FAYPWC	FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.				
DATE: JAN. 01, 2021	APPROVED BY: J.E.G.	FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, N.C.				

5/14/99
 UTILITY REV. - JULY 24, 2008 - REVISIONS TO DETAIL SHEETS
 01 OCT - 2021 09:20
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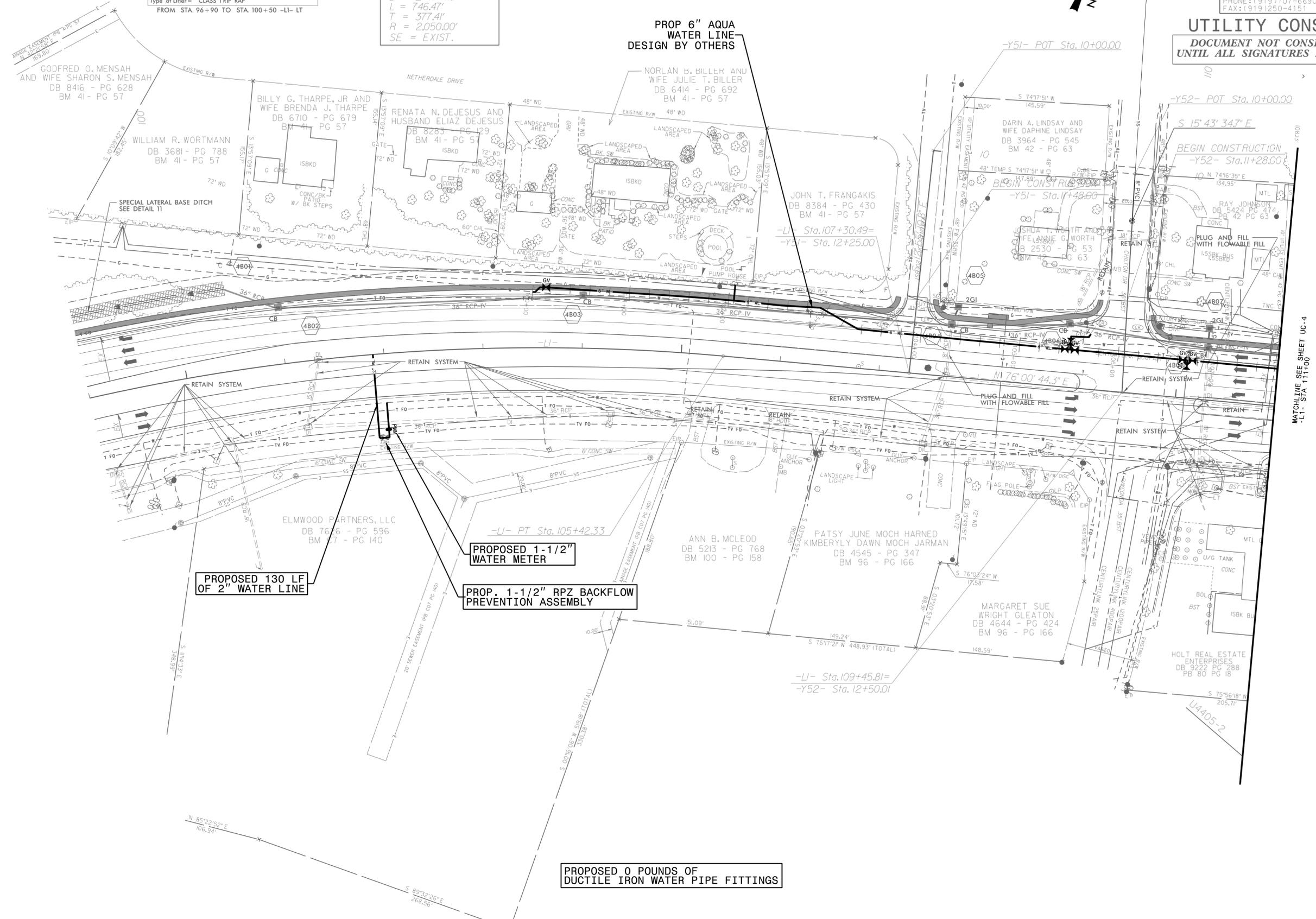
PROJECT REFERENCE NO.	SHEET NO.
U-4405	UC-48
DESIGNED BY: AMH	UTILITY CONSTRUCTION PLANS ONLY
DRAWN BY: AMH/AB	
CHECKED BY: AMH	
APPROVED BY: BRO	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

UTILITY CONSTRUCTION
DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED



-LI-
PI Sta 101+73.28
 $\Delta = 20^{\circ} 51' 47.4''$ (RT)
D = 2' 47' 41.7"
L = 746.47'
T = 377.41'
R = 2,050.00'
SE = EXIST.

PROP 6" AQUA
WATER LINE
DESIGN BY OTHERS



PROPOSED 130 LF
OF 2" WATER LINE

PROPOSED 1-1/2"
WATER METER

PROP. 1-1/2" RPZ BACKFLOW
PREVENTION ASSEMBLY

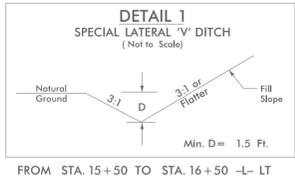
PROPOSED 0 POUNDS OF
DUCTILE IRON WATER PIPE FITTINGS

MATCHLINE SEE SHEET UC-4
-LI- STA 111+00

3:\AUC-2021\2-02
2:\Projects\Environmental\Fayetteville Public Works Commission\2015017700RA Røeford Road NCDOT U 4405\CADD\NCDOT PLANS\Utilities\Engineering\UC-Proj\U4405A_ut_r.dwg uc048_psh.dgn
5/14/99

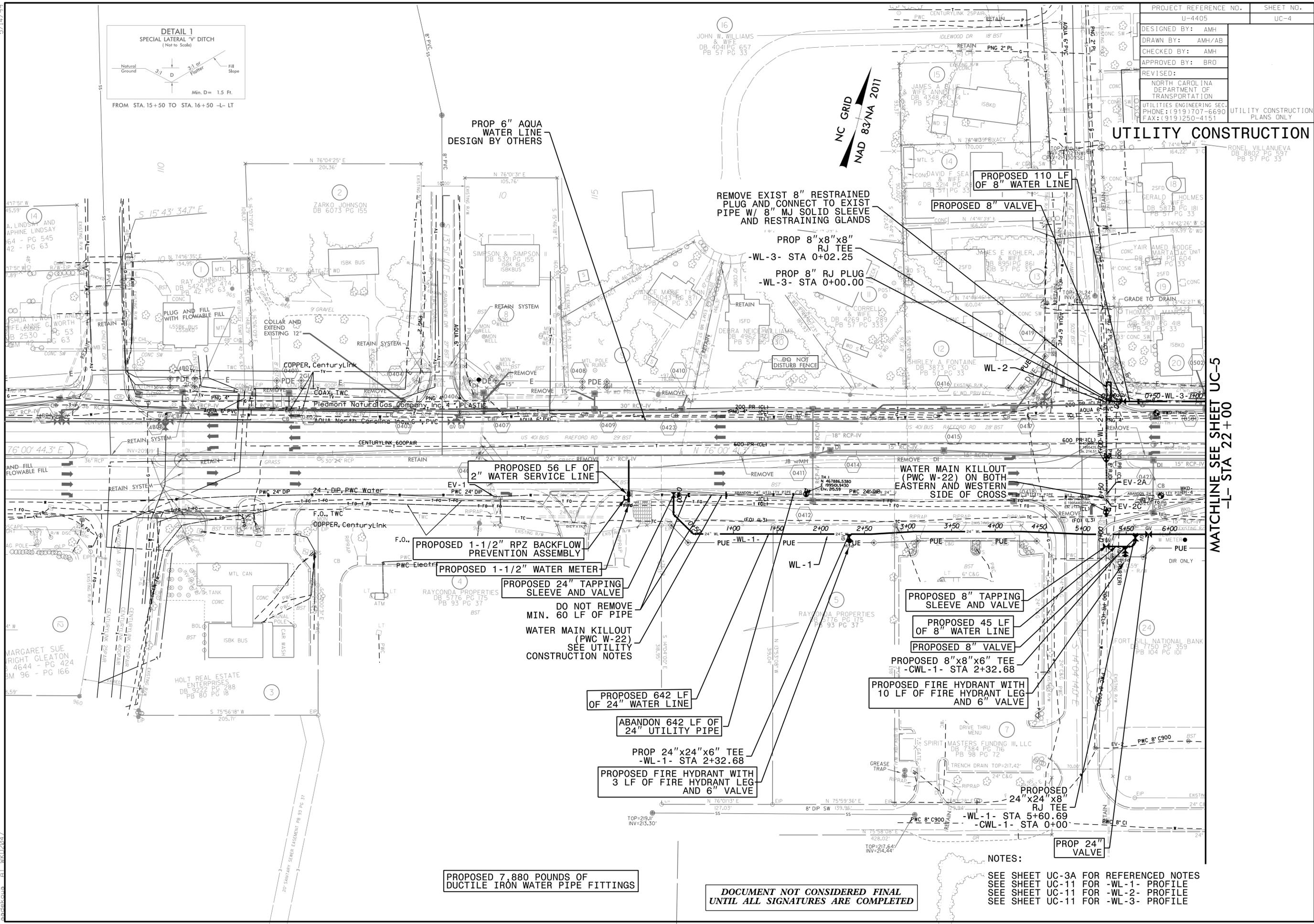
PROJECT REFERENCE NO.	U-4405
SHEET NO.	UC-4
DESIGNED BY:	AMH
DRAWN BY:	AMH/AB
CHECKED BY:	AMH
APPROVED BY:	BRO
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



NC GRID
NAD 83/NA 2011

MATCHLINE SEE SHEET UC-5
-L- STA 22+00



PROP 6" AQUA WATER LINE DESIGN BY OTHERS

REMOVE EXIST 8" RESTRAINED PLUG AND CONNECT TO EXIST PIPE W/ 8" MJ SOLID SLEEVE AND RESTRAINING GLANDS

PROP 8"x8"x8" RJ TEE -WL-3- STA 0+02.25
PROP 8" RJ PLUG -WL-3- STA 0+00.00

PROPOSED 110 LF OF 8" WATER LINE

PROPOSED 8" VALVE

PROPOSED 56 LF OF 2" WATER SERVICE LINE

WATER MAIN KILLOUT (PWC W-22) ON BOTH EASTERN AND WESTERN SIDE OF CROSS

PROPOSED 1-1/2" RPZ BACKFLOW PREVENTION ASSEMBLY

PROPOSED 1-1/2" WATER METER

PROPOSED 24" TAPPING SLEEVE AND VALVE

DO NOT REMOVE MIN. 60 LF OF PIPE WATER MAIN KILLOUT (PWC W-22) SEE UTILITY CONSTRUCTION NOTES

PROPOSED 8" TAPPING SLEEVE AND VALVE

PROPOSED 45 LF OF 8" WATER LINE

PROPOSED 8" VALVE

PROPOSED 8"x8"x6" TEE -CWL-1- STA 2+32.68

PROPOSED FIRE HYDRANT WITH 10 LF OF FIRE HYDRANT LEG AND 6" VALVE

PROPOSED 642 LF OF 24" WATER LINE

ABANDON 642 LF OF 24" UTILITY PIPE

PROP 24"x24"x6" TEE -WL-1- STA 2+32.68

PROPOSED FIRE HYDRANT WITH 3 LF OF FIRE HYDRANT LEG AND 6" VALVE

PROPOSED 24"x24"x8" RJ TEE -WL-1- STA 5+60.69 -CWL-1- STA 0+00

PROP 24" VALVE

PROPOSED 7,880 POUNDS OF DUCTILE IRON WATER PIPE FITTINGS

DOCUMENT NOT CONSIDERED FINAL UNTIL ALL SIGNATURES ARE COMPLETED

NOTES:
SEE SHEET UC-3A FOR REFERENCED NOTES
SEE SHEET UC-11 FOR -WL-1- PROFILE
SEE SHEET UC-11 FOR -WL-2- PROFILE
SEE SHEET UC-11 FOR -WL-3- PROFILE

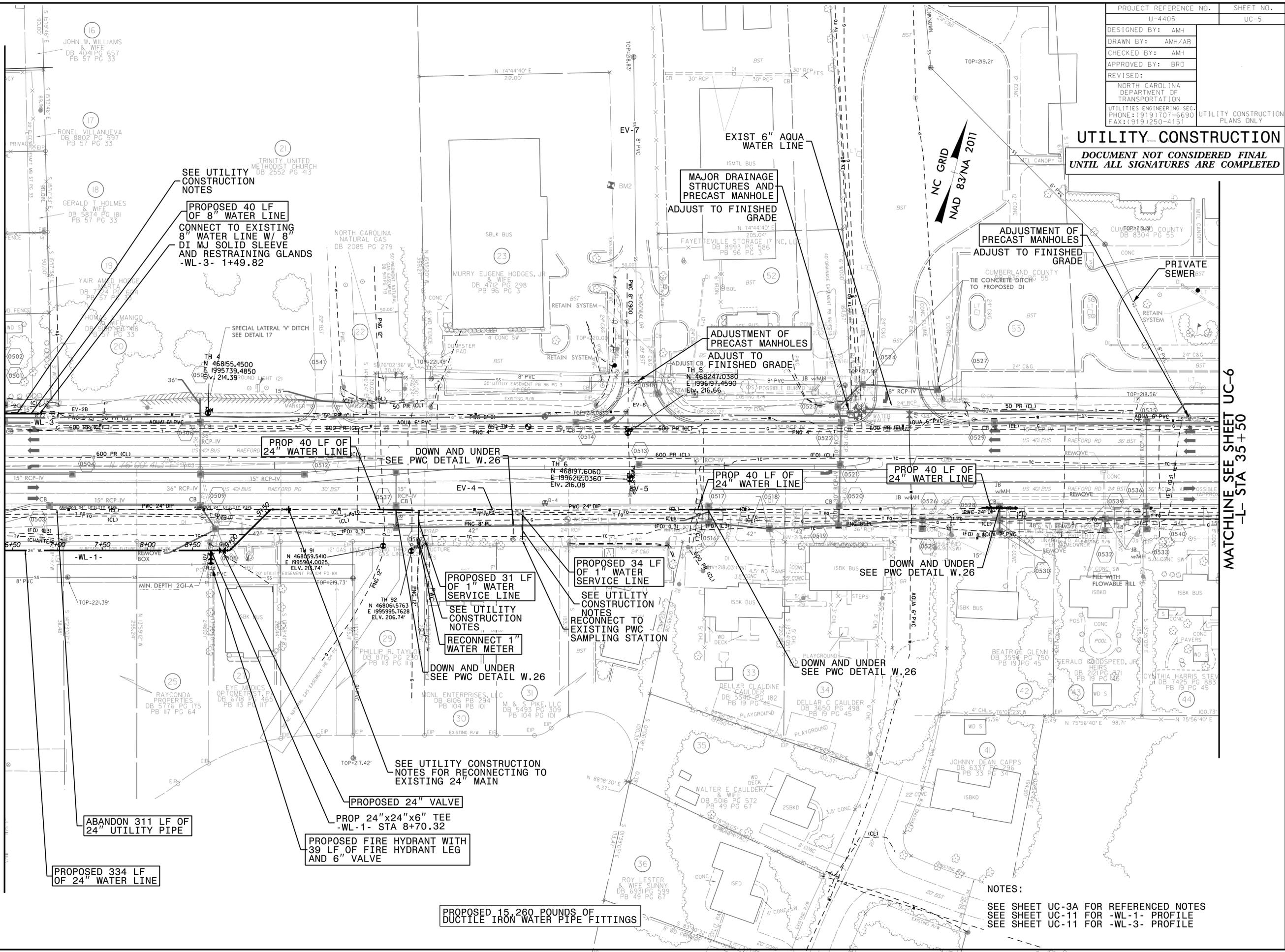
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5/14/2019

PROJECT REFERENCE NO.	U-4405
SHEET NO.	UC-5
DESIGNED BY:	AMH
DRAWN BY:	AMH/AB
CHECKED BY:	AMH
APPROVED BY:	BRO
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION
DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED

MATCHLINE SEE SHEET UC-4
 -L- STA 22+00

MATCHLINE SEE SHEET UC-6
 -L- STA 35+50



SEE UTILITY CONSTRUCTION NOTES
PROPOSED 40 LF OF 8" WATER LINE
 CONNECT TO EXISTING 8" WATER LINE W/ 8" DI MJ SOLID SLEEVE AND RESTRAINING GLANDS
 -WL-3- 1+49.82

EXIST 6" AQUA LINE
MAJOR DRAINAGE STRUCTURES AND PRECAST MANHOLE
 ADJUST TO FINISHED GRADE

ADJUSTMENT OF PRECAST MANHOLES
 ADJUST TO FINISHED GRADE

ADJUSTMENT OF PRECAST MANHOLES
 ADJUST TO FINISHED GRADE

PROP 40 LF OF 24" WATER LINE
 DOWN AND UNDER SEE PWC DETAIL W.26

PROP 40 LF OF 24" WATER LINE
 DOWN AND UNDER SEE PWC DETAIL W.26

PROP 40 LF OF 24" WATER LINE
 DOWN AND UNDER SEE PWC DETAIL W.26

PROPOSED 31 LF OF 1" WATER SERVICE LINE
 SEE UTILITY CONSTRUCTION NOTES
 RECONNECT TO EXISTING PWC SAMPLING STATION
RECONNECT 1" WATER METER

PROPOSED 34 LF OF 1" WATER SERVICE LINE
 SEE UTILITY CONSTRUCTION NOTES
 RECONNECT TO EXISTING PWC SAMPLING STATION

DOWN AND UNDER SEE PWC DETAIL W.26

DOWN AND UNDER SEE PWC DETAIL W.26

ABANDON 311 LF OF 24" UTILITY PIPE

PROP 24"x24"x6" TEE
 -WL-1- STA 8+70.32

PROPOSED FIRE HYDRANT WITH 39 LF OF FIRE HYDRANT LEG AND 6" VALVE

PROPOSED 334 LF OF 24" WATER LINE

PROPOSED 15,260 POUNDS OF DUCTILE IRON WATER PIPE FITTINGS

NOTES:
 SEE SHEET UC-3A FOR REFERENCED NOTES
 SEE SHEET UC-11 FOR -WL-1- PROFILE
 SEE SHEET UC-11 FOR -WL-3- PROFILE

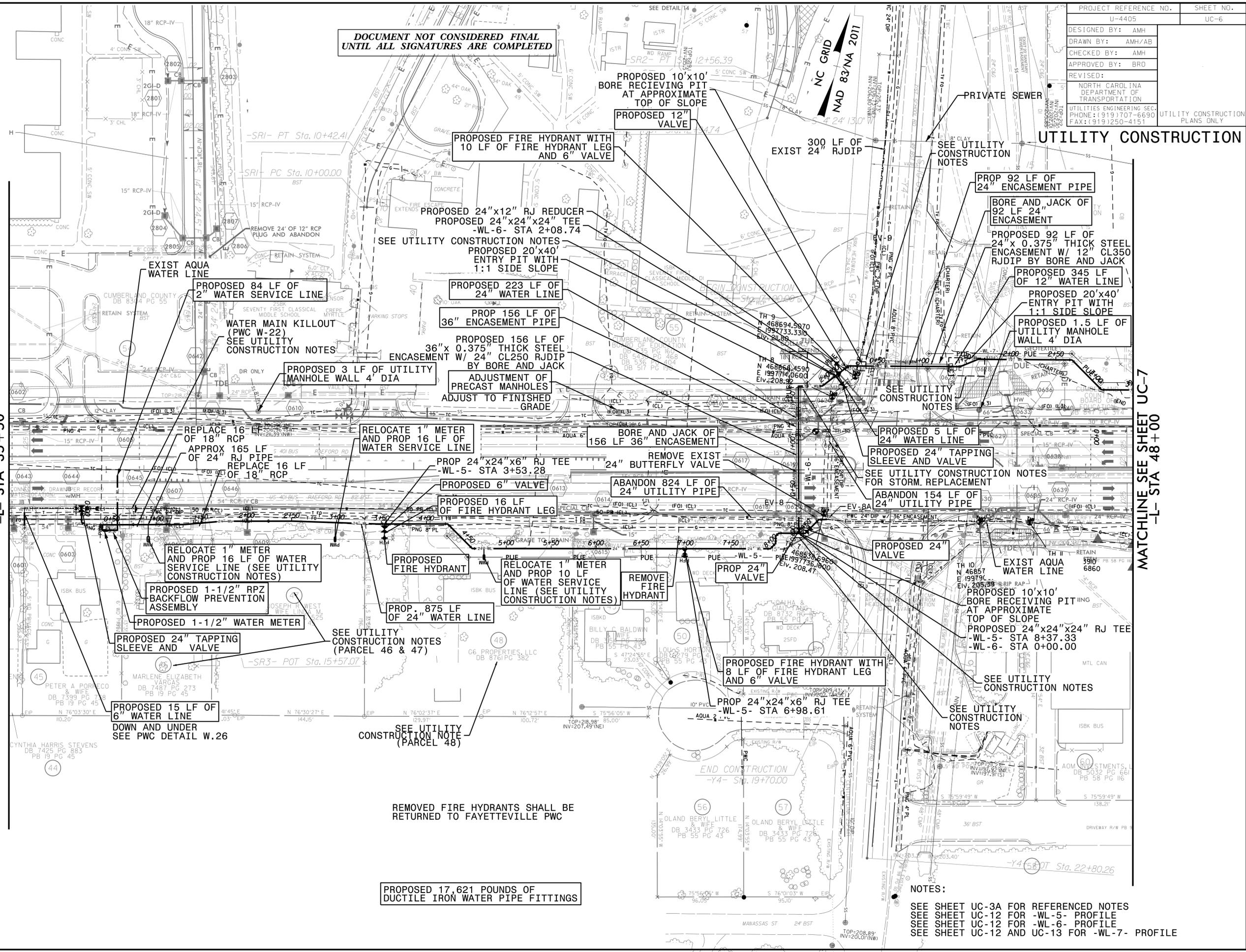
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 5/14/20

PROJECT REFERENCE NO.	U-4405
SHEET NO.	UC-6
DESIGNED BY:	AMH
DRAWN BY:	AMH/AB
CHECKED BY:	AMH
APPROVED BY:	BRO
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

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UNTIL ALL SIGNATURES ARE COMPLETED**

MATCHLINE SEE SHEET UC-5
-L- STA 35+50

MATCHLINE SEE SHEET UC-7
-L- STA 48+00



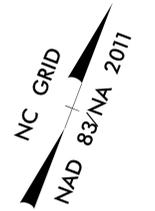
PROPOSED 17,621 POUNDS OF
DUCTILE IRON WATER PIPE FITTINGS

NOTES:
 SEE SHEET UC-3A FOR REFERENCED NOTES
 SEE SHEET UC-12 FOR -WL-5- PROFILE
 SEE SHEET UC-12 FOR -WL-6- PROFILE
 SEE SHEET UC-12 AND UC-13 FOR -WL-7- PROFILE

05-OCT-2021 17:50
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 5/14/99

PROJECT REFERENCE NO.	U-4405
SHEET NO.	UC-8
DESIGNED BY:	AMH
DRAWN BY:	AMH/AB
CHECKED BY:	AMH
APPROVED BY:	BRO
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY

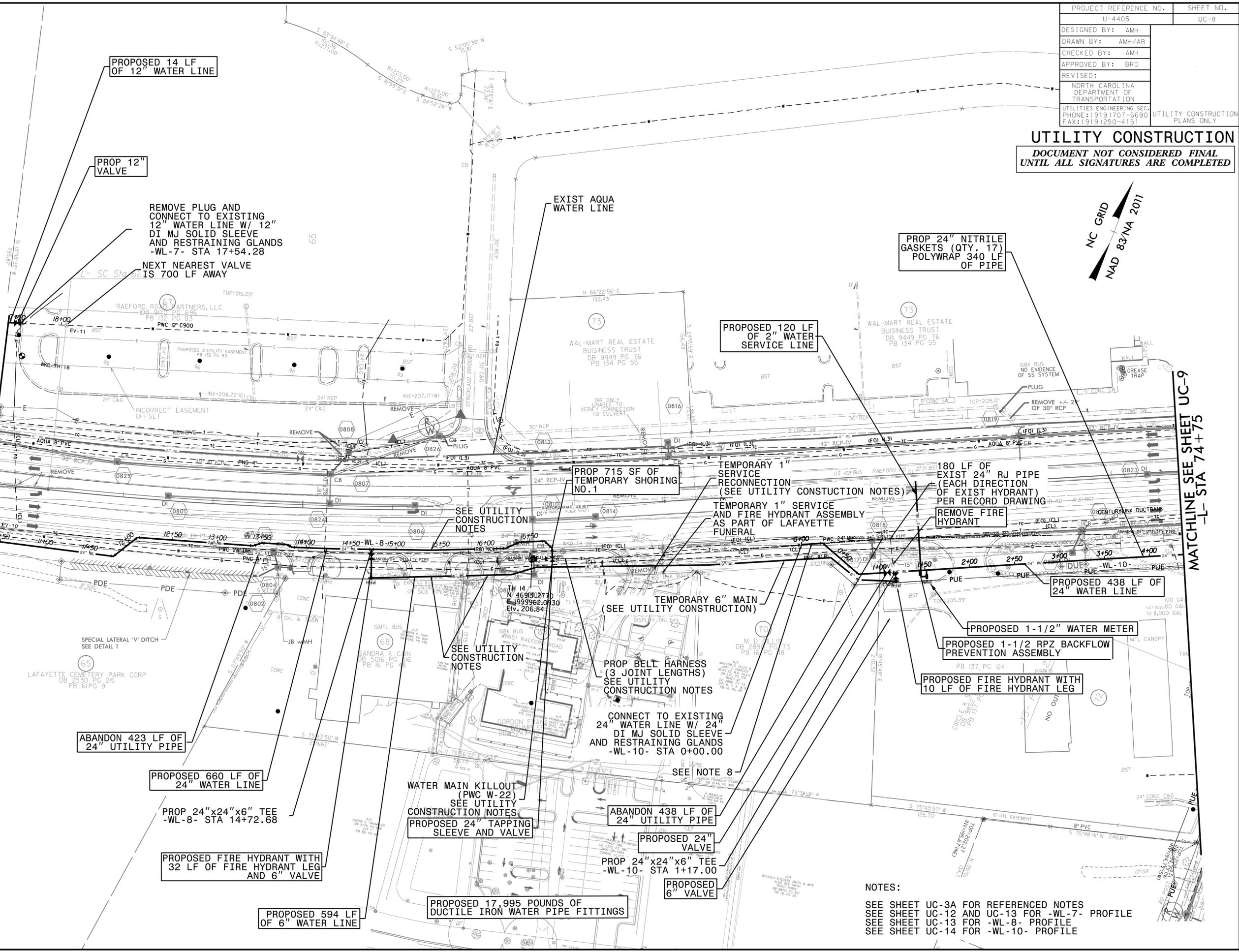
UTILITY CONSTRUCTION
DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED



MATCHLINE SEE SHEET UC-7
-L- STA 61+50

MATCHLINE SEE SHEET UC-9
-L- STA 74+75

5/14/09
06-OCT-2021(6:01)
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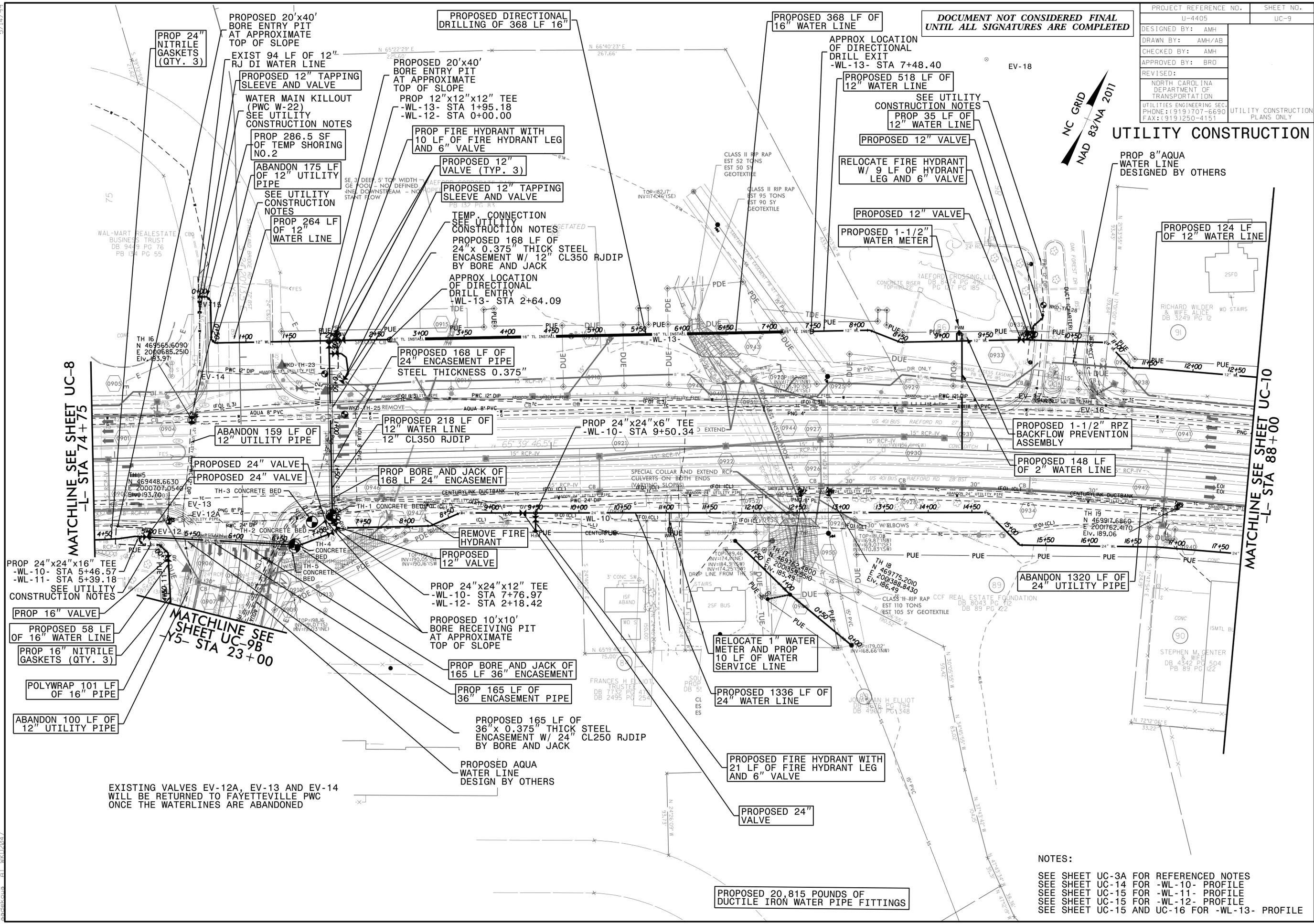


NOTES:
SEE SHEET UC-3A FOR REFERENCED NOTES
SEE SHEET UC-12 AND UC-13 FOR -WL-7- PROFILE
SEE SHEET UC-13 FOR -WL-8- PROFILE
SEE SHEET UC-14 FOR -WL-10- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-4405	UC-9
DESIGNED BY: AMH	
DRAWN BY: AMH/AB	
CHECKED BY: AMH	
APPROVED BY: BRO	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

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UTILITY CONSTRUCTION



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 05-OCT-2021(7:51)
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 adokoua

MATCHLINE SEE SHEET UC-8
-L- STA 74+75

MATCHLINE SEE SHEET UC-9B
-Y5- STA 23+00

MATCHLINE SEE SHEET UC-10
-L- STA 88+00

EXISTING VALVES EV-12A, EV-13 AND EV-14 WILL BE RETURNED TO FAYETTEVILLE PWC ONCE THE WATERLINES ARE ABANDONED

- NOTES:**
- SEE SHEET UC-3A FOR REFERENCED NOTES
 - SEE SHEET UC-14 FOR -WL-10- PROFILE
 - SEE SHEET UC-15 FOR -WL-11- PROFILE
 - SEE SHEET UC-15 FOR -WL-12- PROFILE
 - SEE SHEET UC-15 AND UC-16 FOR -WL-13- PROFILE

PROPOSED 20,815 POUNDS OF DUCTILE IRON WATER PIPE FITTINGS

PROJECT REFERENCE NO.	U-4405	SHEET NO.	UC-9A
DESIGNED BY:	AMH		
DRAWN BY:	AMH/AB		
CHECKED BY:	AMH		
APPROVED BY:	BRO		
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		UTILITY CONSTRUCTION PLANS ONLY	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151			

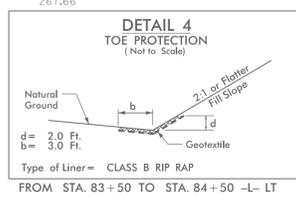
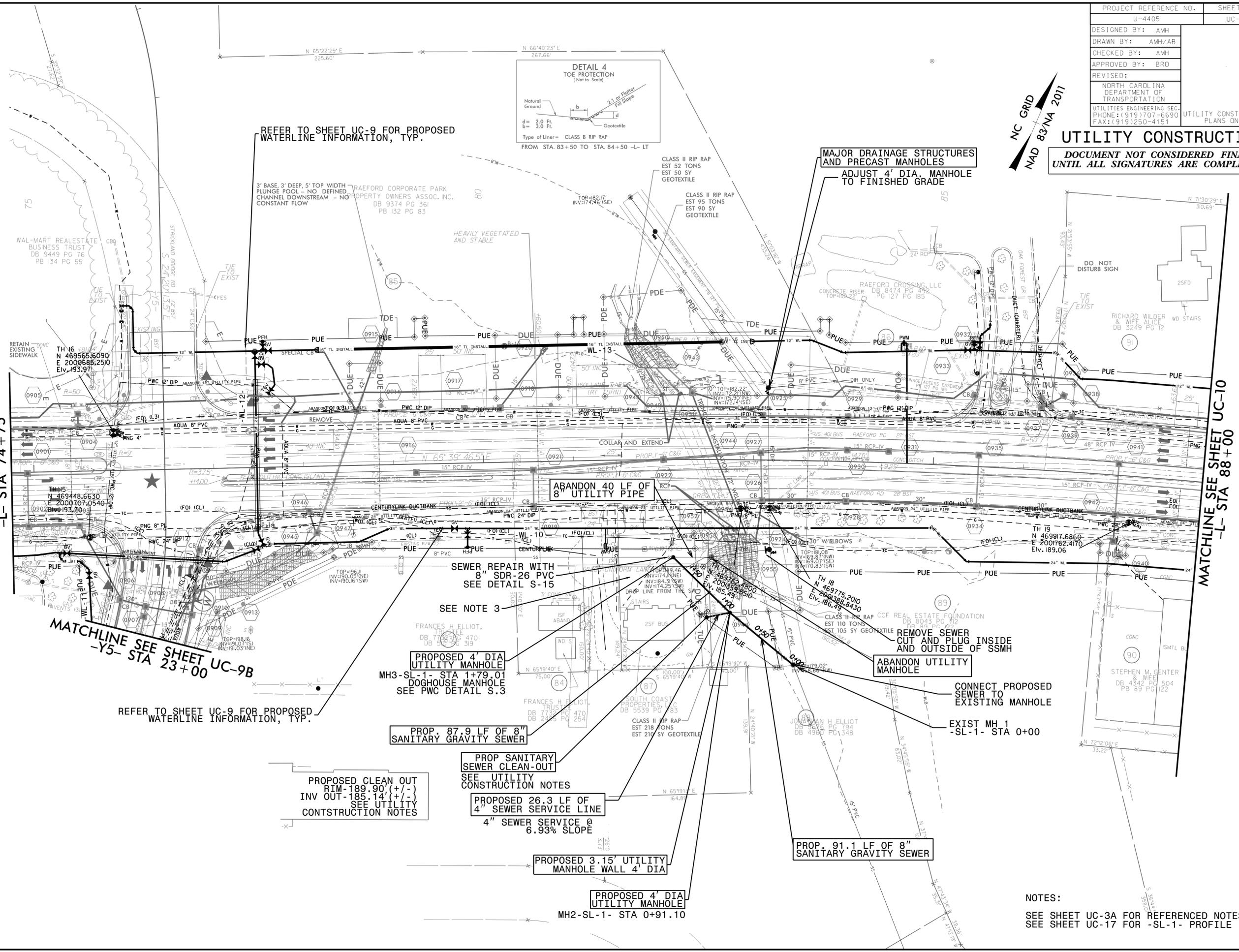


UTILITY CONSTRUCTION
DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED

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MATCHLINE SEE SHEET UC-8
-L- STA 74+75

MATCHLINE SEE SHEET UC-10
-L- STA 88+00



REFER TO SHEET UC-9 FOR PROPOSED WATERLINE INFORMATION, TYP.

MAJOR DRAINAGE STRUCTURES AND PRECAST MANHOLES
 ADJUST 4' DIA. MANHOLE TO FINISHED GRADE

MATCHLINE SEE SHEET UC-9B
 -Y5- STA 23+00

REFER TO SHEET UC-9 FOR PROPOSED WATERLINE INFORMATION, TYP.

ABANDON 40 LF OF 8" UTILITY PIPE

SEWER REPAIR WITH 8" SDR-26 PVC SEE DETAIL S-15

SEE NOTE 3

PROPOSED 4' DIA UTILITY MANHOLE
 MH3-SL-1- STA 1+79.01
 DOGHOUSE MANHOLE
 SEE PWC DETAIL S.3

PROP. 87.9 LF OF 8" SANITARY GRAVITY SEWER

PROP SANITARY SEWER CLEAN-OUT
 SEE UTILITY CONSTRUCTION NOTES

PROPOSED 26.3 LF OF 4" SEWER SERVICE LINE
 4" SEWER SERVICE @ 6.93% SLOPE

PROPOSED 3.15' UTILITY MANHOLE WALL 4' DIA

PROPOSED 4' DIA UTILITY MANHOLE
 MH2-SL-1- STA 0+91.10

REMOVE SEWER CUT AND PLUG INSIDE AND OUTSIDE OF SSMH
 ABANDON UTILITY MANHOLE

CONNECT PROPOSED SEWER TO EXISTING MANHOLE

EXIST MH 1 -SL-1- STA 0+00

PROP. 91.1 LF OF 8" SANITARY GRAVITY SEWER

NOTES:
 SEE SHEET UC-3A FOR REFERENCED NOTES
 SEE SHEET UC-17 FOR -SL-1- PROFILE

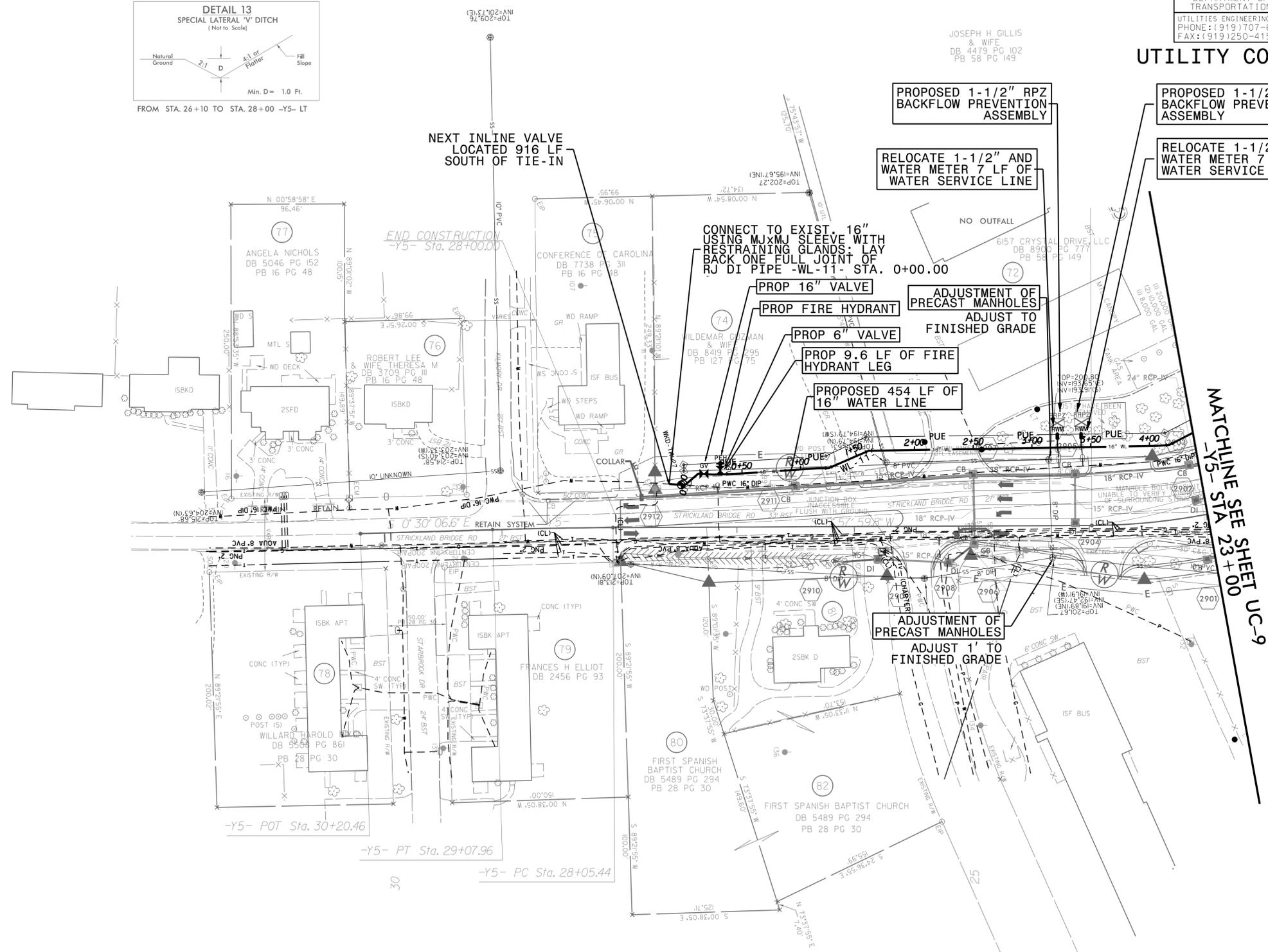
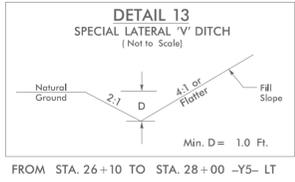
PROJECT REFERENCE NO.	SHEET NO.
U-4405	UC-98
DESIGNED BY: AMH	UTILITY CONSTRUCTION PLANS ONLY
DRAWN BY: AMH/AB	
CHECKED BY: AMH	
APPROVED BY: BRO	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED

NC GRID
NAD 83/NA 2011

JOSEPH H. GILLIS
& WIFE
DB 4479 PG 102
PB 58 PG 149

UTILITY CONSTRUCTION



PROPOSED 2,490 POUNDS OF
DUCTILE IRON WATER PIPE FITTINGS

-Y5-	
PI Sta 28+56.71	PI Sta 22+82.12
$\Delta = 1^{\circ} 28' 06.4\"$ (LT)	$\Delta = 25^{\circ} 18' 13.3\"$ (RT)
$D = 1^{\circ} 25' 56.6\"$	$D = 10^{\circ} 44' 58.8\"$
$L = 102.52'$	$L = 235.39'$
$T = 51.26'$	$T = 119.65'$
$R = 4,000.00'$	$R = 533.00'$
	$SE = 0.02$

MATCHLINE SEE SHEET UC-9
-Y5- STA 23+00

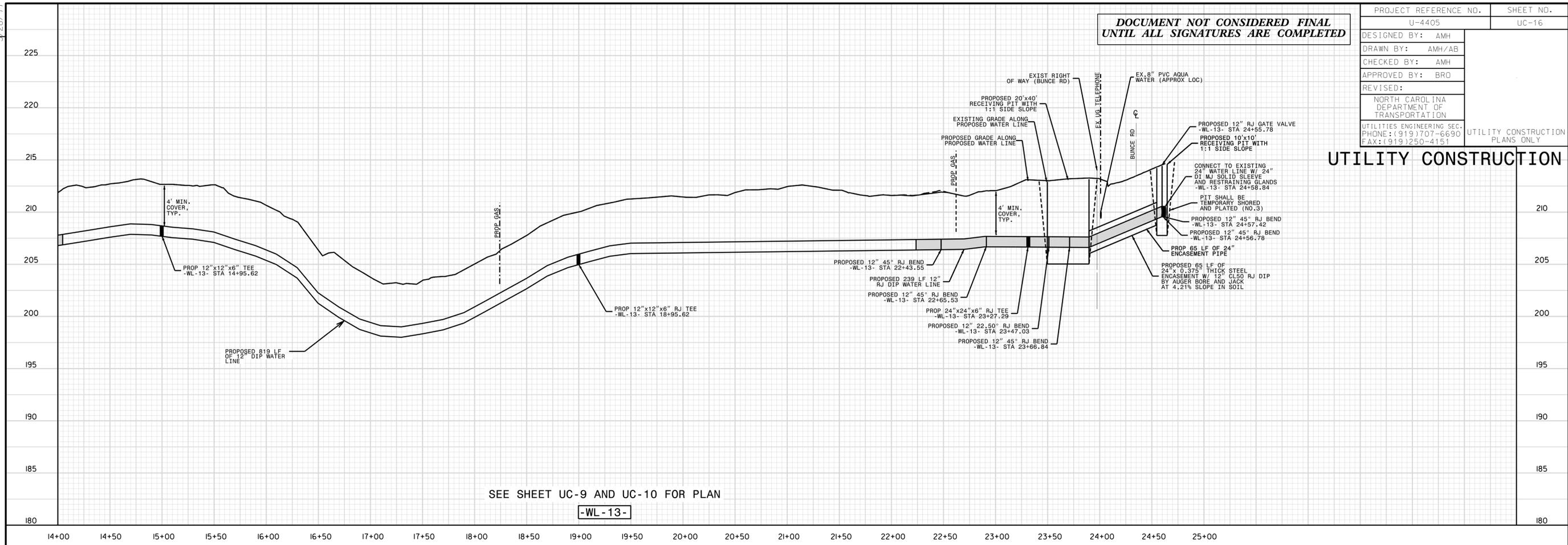
NOTE:
SEE SHEET UC-3A FOR CONSTRUCTION NOTES
SEE SHEET UC-3B FOR -WL-11 PROFILE

05-OCT-2021(7:51)
Z:\Projects\Environmental\Fayetteville Public Works Commission\2015017700RA Røeford Road NCDOT U 4405\CADD\NCDOT PLANS\Utilities\Engineering\UC\Proc\U4405A_ut_r.dwg(29_uc9B_psh.dgn
5/14/99

**DOCUMENT NOT CONSIDERED FINAL
UNTIL ALL SIGNATURES ARE COMPLETED**

PROJECT REFERENCE NO.	U-4405	SHEET NO.	UC-16
DESIGNED BY:	AMH	UTILITY CONSTRUCTION PLANS ONLY	
DRAWN BY:	AMH/AB		
CHECKED BY:	AMH		
APPROVED BY:	BRO		
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION			
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151			

UTILITY CONSTRUCTION



SEE SHEET UC-9 AND UC-10 FOR PLAN

-WL-13-

REVISIONS

UTILITY REV. - JULY 23, 2008 - ADDED 50 LF OF RJ DIP TO -WL-14- STA 10+50

3: AUG 2009 (R.05) Environmental\Fayetteville Public Works Commission\2015017700RA Reeford Road NCDOT U-4405\CADD\NCDOT PLANS\Utilities\Engineering\UC\Proj\U4405A_ut_pf1_uc16_psh.dgn
 2: 11/15/2005
 1: 11/15/2005
 0: 11/15/2005

