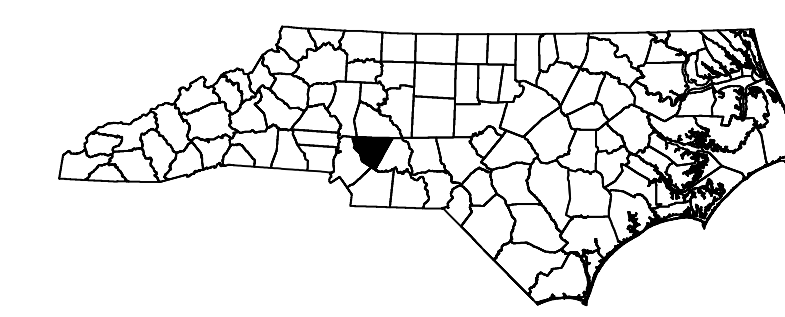


TIP PROJECT: U-3440

T.I.P. NO.	SHEET NO.
U-3440	UC-1

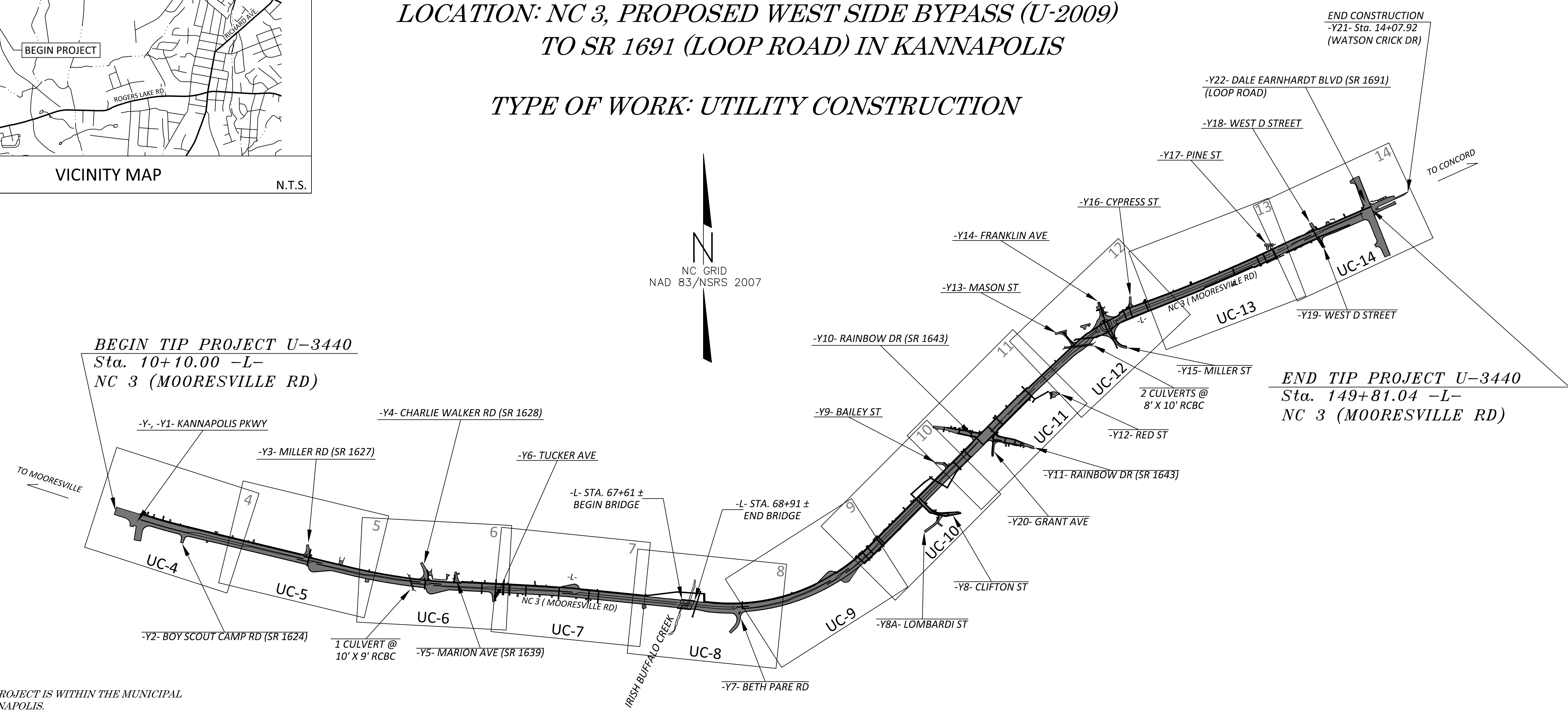
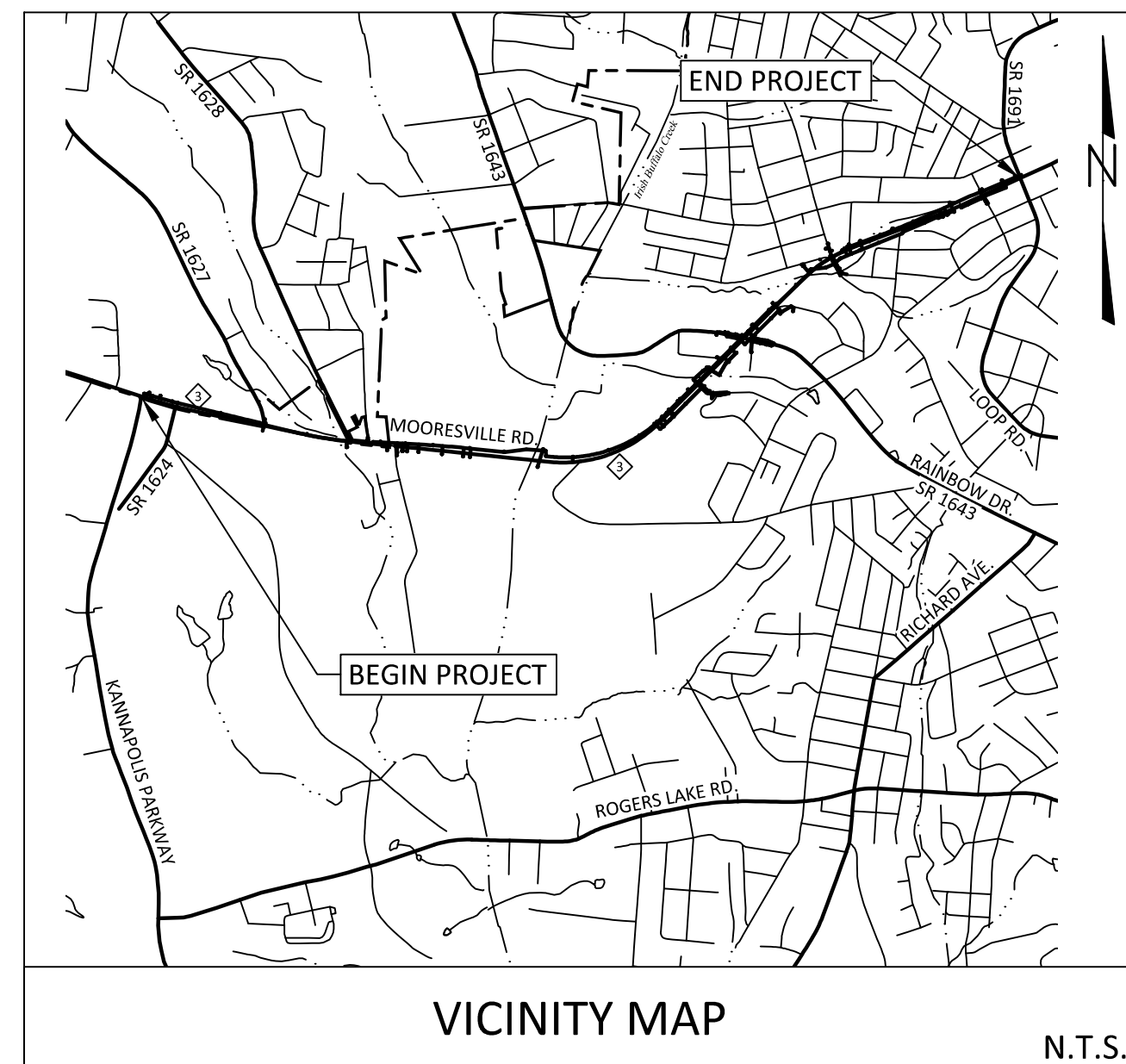


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CABARRUS COUNTY

LOCATION: NC 3, PROPOSED WEST SIDE BYPASS (U-2009)
TO SR 1691 (LOOP ROAD) IN KANNAPOLIS

TYPE OF WORK: UTILITY CONSTRUCTION

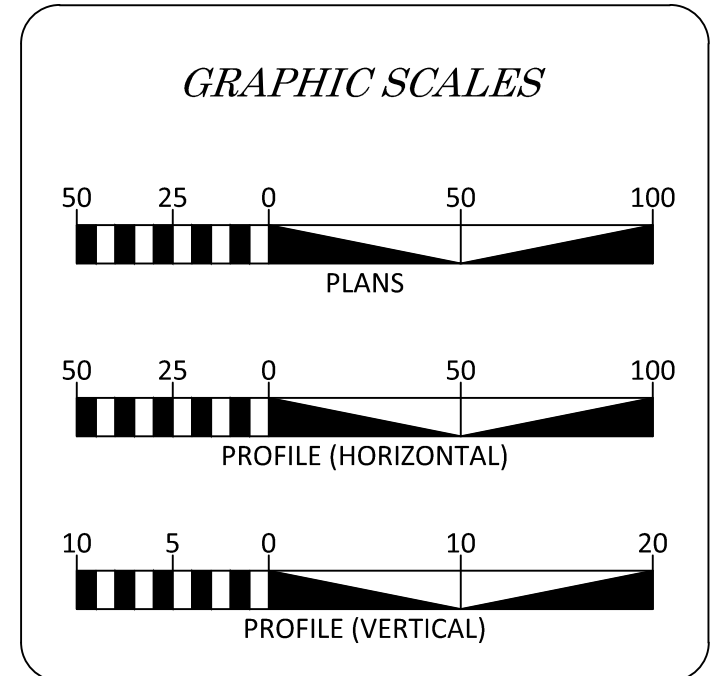


A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF KANNAPOLIS.

THIS IS A PARTIAL CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS AS SHOWN ON THE PLANS.

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD _____.

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOLOGY SHEET
UC-3	NOTES SHEET
UC-3A THRU UC-3E	DETAIL SHEETS
UC-4 THRU UC-14	UTILITY PLAN SHEETS
UC-15 THRU UC-28	UTILITY PROFILE SHEETS

WATER AND SEWER OWNERS ON PROJECT

(1) WATER & SEWER - CITY OF KANNAPOLIS
(2) SEWER - WATER AND SEWER AUTHORITY OF CABARRUS COUNTY (WSACC)

SEAL:

6/29/2016

aww
alley, williams, carmen, & king, inc.
CONSULTING ENGINEERS
130 SOUTH MAIN STREET
KANNAPOLIS, NC 28082
P.O. BOX 1248
704/938-1515

DIVISION OF HIGHWAYS
UTILITIES UNIT
UTILITIES ENGINEERING

1555 MAIL SERVICES CENTER
RALEIGH, NC 27689-1555
PHONE: (919) 707-6690
FAX: (919) 250-4151

Roger Worthington, P.E. UTILITIES SECTION ENGINEER
Carl A. Barclay, P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER
Michael Bright UTILITIES PROJECT DESIGNER
Jeffery D. Moody, P.E. AWKC ENGINEERING PROJECT ENGINEER

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER AND SEWER SYMBOLS

WATER LINE	
11 1/4 DEGREE BEND	
22 1/2 DEGREE BEND	
45 DEGREE BEND	
90 DEGREE BEND	
PLUG	
TEE	
CROSS	
REDUCER	
GATE VALVE	
BUTTERFLY VALVE	
TAPPING VALVE	
BLOW OFF	
FIRE HYDRANT	
RELOCATE FIRE HYDRANT	
WATER METER	
RELOCATE WATER METER	
REMOVE WATER METER	
ABANDON UTILITY MANHOLE	
ABANDON WATER VALVE	
GRAVITY SEWER LINE	
MANHOLE	
SANITARY SEWER CLEANOUT	

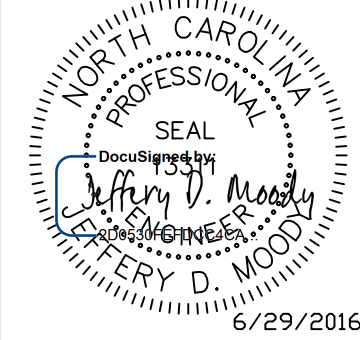
PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

THRUST BLOCK	
PLAN NOTE	
ENCASEMENT	
TO BE ABANDONED	

EXISTING UTILITIES SYMBOLS

POWER POLE		ABANDONED ACCORDING TO UTILITY RECORDS	AATUR
POWER POLE TO BE REMOVED		END OF INFORMATION	E.O.I.
TELEPHONE POLE		UNDERGROUND POWER LINE	
TELEPHONE POLE TO BE REMOVED		UNDERGROUND POWER SUE	
JOINT USE POLE		ABOVEGROUND POWER LINE	
JOINT USE POLE TO BE REMOVED		UNDERGROUND TELEPHONE CABLE	
UTILITY POLE		UNDERGROUND TELEPHONE CONDUIT	
UTILITY POLE TO BE REMOVED		UNDERGROUND TELEPHONE SUE	
UTILITY POLE WITH BASE		UNDERGROUND FIBER OPTICS TELEPHONE CABLE	
WATER MANHOLE		UNDERGROUND TV CABLE	
POWER MANHOLE		UNDERGROUND GAS PIPELINE	
TELEPHONE MANHOLE		UNDERGROUND GAS PIPELINE SUE	
SANITARY SEWER MANHOLE		UNDERGROUND WATER LINE	
HAND HOLE		UNDERGROUND WATER LINE SUE	
POWER TRANSFORMER		UNDERGROUND GRAVITY SANITARY SEWER LINE	
TELEPHONE PEDESTAL		UNDERGROUND SS FORCED MAIN LINE	
TELEPHONE BOOTH		UNDERGROUND UNKNOWN UTILITY LINE	
TRAFFIC SIGNAL BOX		WATER METER	
CATV PEDESTAL		WATER VALVE	
TV SATELLITE DISH		FIRE HYDRANT	
GAS VALVE		SANITARY SEWER CLEANOUT	
LOCATED MISCELLANEOUS UTILITY OBJECT			

UTILITY CONSTRUCTION

PROJECT REFERENCE NO. <i>U-3440</i>	SHEET NO. <i>UC-3</i>
DESIGNED BY: JDM	
DRAWN BY: RCC	
CHECKED BY:	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151	
6/29/2016	
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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 2012.
2. THE EXISTING WATER AND SEWER LINES BELONG TO THE CITY OF KANNAPOLIS OR THE WATER AND SEWER AUTHORITY OF CABARRUS COUNTY (WSACC).
3. ALL WATER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL AND NATURAL RESOURCES, 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 AND NATURAL RESOURCES, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.
4. THE UTILITY OWNER OWNS THE EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY THE DEPARTMENT. THE DEPARTMENT OWNS THE CONSTRUCTION CONTRACT AND HAS ADMINISTRATIVE AUTHORITY. COMMUNICATIONS AND DECISIONS BETWEEN THE CONTRACTOR AND UTILITY OWNER ARE NOT BINDING UPON THE DEPARTMENT OR THIS CONTRACT UNLESS AUTHORIZED BY THE ENGINEER. AGREEMENTS BETWEEN THE UTILITY OWNER AND CONTRACTOR FOR THE WORK THAT IS NOT PART OF THIS CONTRACT OR IS SECONDARY TO THIS CONTRACT ARE ALLOWED, BUT ARE NOT BINDING UPON THE DEPARTMENT.
5. PROVIDE ACCESS FOR THE DEPARTMENT PERSONNEL AND THE OWNER'S REPRESENTATIVES TO ALL PHASES OF CONSTRUCTION. NOTIFY DEPARTMENT PERSONNEL AND THE UTILITY OWNER TWO WEEKS PRIOR TO COMMENCEMENT OF ANY WORK AND ONE WEEK PRIOR TO SERVICE INTERRUPTION. KEEP UTILITY OWNERS' REPRESENTATIVES INFORMED OF WORK PROGRESS AND PROVIDE OPPORTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.
6. THE PLANS DEPICT THE BEST AVAILABLE INFORMATION FOR THE LOCATION, SIZE, AND TYPE OF MATERIAL FOR ALL EXISTING UTILITIES. MAKE INVESTIGATIONS FOR DETERMINING THE EXACT LOCATION, SIZE, AND TYPE MATERIAL OF THE EXISTING FACILITIES AS NECESSARY FOR THE FACILITIES AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED UTILITIES AND FOR AVOIDING DAMAGE TO EXISTING FACILITIES. REPAIR ANY DAMAGE INCURRED TO EXISTING FACILITIES TO THE ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE DEPARTMENT.
7. MAKE FINAL CONNECTIONS OF THE NEW WORK TO THE EXISTING SYSTEM WHERE INDICATED ON THE PLANS, AS REQUIRED TO FIT THE ACTUAL CONDITIONS, OR AS DIRECTED.
8. MAKE CONNECTIONS BETWEEN EXISTING AND PROPOSED UTILITIES AT TIMES MOST CONVENIENT TO THE PUBLIC, WITHOUT ENDANGERING THE UTILITY SERVICE, AND IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. MAKE CONNECTIONS ON WEEKENDS, AT NIGHT, AND ON HOLIDAYS IF NECESSARY.
9. ALL UTILITY MATERIALS SHALL BE APPROVED PRIOR TO DELIVERY TO THE PROJECT. SEE 1500-7, "SUBMITTALS AND RECORDS" IN SECTION 1500 OF THE STANDARD SPECIFICATIONS.

PROJECT SPECIFIC NOTES:

CITY OF KANNAPOLIS REQUIREMENTS

1. ALL WATER MAIN AND SANITARY SEWER WORK SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR WASTEWATER COLLECTION AND WATER DISTRIBUTION FOR THE WATER AND SEWER AUTHORITY OF CABARRUS COUNTY (WSACC). CONTRACTOR SHALL HAVE A COPY OF THESE SPECIFICATIONS ON SITE AT ALL TIMES.
2. ALL EXISTING WATER AND SEWER MAINS ARE OWNED AND OPERATED BY THE CITY OF KANNAPOLIS. THE SITE INSPECTOR MUST BE CONTACTED AT LEAST 48 HOURS PRIOR TO MAKING ANY CONNECTION TO THE EXISTING SYSTEM.
3. SANITARY SEWER LATERALS AND WATER METER LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO RELOCATION DUE TO FIELD LOCATIONS. UNDER NO CIRCUMSTANCE WILL CLEANOUTS AND METERS BE LOCATED IN DRIVEWAYS.
4. WATER METERS SHALL MEET CITY OF KANNAPOLIS STANDARDS. CONTRACTOR IS RESPONSIBLE FOR INSTALLING METER BOXES AND PURCHASING METERS. CONTRACTOR SHALL COORDINATE WITH SITE INSPECTOR TO HAVE WATER METERS DELIVERED TO THE CITY OF KANNAPOLIS.
5. ALL 12-INCH AND SMALLER WATER VALVES ON PROJECT SHALL BE RESILIENT-SEATED GATE VALVES UNLESS NOTED OTHERWISE. ALL 24-INCH WATER VALVES ON PROJECT SHALL BE HORIZONTAL BEVEL GEAR RESILIENT-SEATED GATE VALVES UNLESS NOTED OTHERWISE.
6. THE DEVELOPER WILL BE RESPONSIBLE FOR PAYING APPLICABLE WATER AND SEWER CONNECTION FEES BEFORE THE FINAL PLAT CAN BE RECORDED.
7. CONTRACTOR IS FULLY RESPONSIBLE FOR CONTACTING ALL APPROPRIATE PARTIES ASSURING THAT UTILITIES ARE LOCATED PRIOR TO COMMENCEMENT OF CONSTRUCTION. CALL NORTH CAROLINA 811 (1-800-632-4949) FOR UTILITY LOCATING SERVICES AS REQUIRED BY LAW PRIOR TO COMMENCEMENT OF ANY WORK. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR SEWER OVERFLOWS THAT OCCUR DUE TO ACTIVITIES INITIATED BY THEM AND SHALL BE RESPONSIBLE FOR, BUT NOT LIMITED TO, THE COSTS ASSOCIATED WITH PERFORMING REMEDIAL WORK OF/FOR ENVIRONMENTAL IMPACTS AND/OR THE PAYING OF FINES ASSESSED BY REGULATORY AGENCIES AND/OR THIRD PARTY CLAIMS.
9. UNLESS OTHERWISE NOTED, WATER MAINS SHALL HAVE A MINIMUM COVER OF 36-INCHES.
10. BEDDING FOR THE SEWER MAINS SHOULD BE WSACC CLASS B BEDDING.
11. UNLESS OTHERWISE NOTED, WATERLINES SHALL BE PVC C900 FOR 6"-12" DIAMETER AND PVC SDR 13.5 FOR 2'-4" DIAMETER PER WSACC STANDARDS.
12. UNLESS OTHERWISE NOTED, SEWER MAINS SHALL BE PVC SDR 35 PER WSACC STANDARDS.
13. LATERALS SHALL HAVE A NO-HUB CAP AND STAINLESS STEEL NO-HUB BAND AT THE CLEAN OUT.
 - WATERLINE CROSSING UNDER SANITARY SEWER (FOR ANY CLEARANCE).
 - 18-INCH VERTICAL FOR WATERLINE INSTALLED ABOVE SEWER LINE.
 - 10-FOOT HORIZONTAL SEPARATION FOR WATERLINE PARALLEL TO SEWER LINE (OR 18-INCH VERTICAL SEPARATION IN SEPARATE DITCHES).
 - FOR WATERLINE, 18-INCH CLEARANCE WITH STORM DRAINS.
 - FOR WATERLINE, 12-INCH CLEARANCE WITH GAS MAINS, TELEPHONE DUCTS, AND UNDERGROUND CABLES.
 - FOR SANITARY SEWER, 24-INCH CLEARANCE WITH STORM DRAINS.
14. INITIAL CONNECTION TO THE EXISTING WATER MAIN SHALL BE IN ACCORDANCE WITH THE CITY OF KANNAPOLIS DETAIL FOR A TEMPORARY BY-PASS CONNECTION FOR FILLING NEW WATER MAINS. THE TEMPORARY JUMPER CONNECTION SHALL BE REMOVED AND THE WATERLINE CONNECTED TO THE EXISTING SYSTEM ONLY AFTER THE PROPOSED SYSTEM HAS BEEN PRESSURE TESTED, CHLORINATED AND ACCEPTED BY THE CITY OF KANNAPOLIS. NO OTHER CONNECTIONS WILL BE ALLOWED TO THE EXISTING SYSTEM UNTIL THE PROPOSED SYSTEM HAS BEEN ACCEPTED.
15. NOTIFY THE CITY OF ANY WORK BEING PERFORMED ON THE WEEKENDS. NO WORK REQUIRING TESTING OR OBSERVATION BY THE CITY WILL BE PERMITTED WITHOUT WRITTEN PERMISSION.
16. NOISE ORDINANCE: 7:00AM TO 9:00PM - WEEKDAYS, 8:00AM TO 9:00PM WEEKENDS.

CITY OF KANNAPOLIS GENERAL NOTES

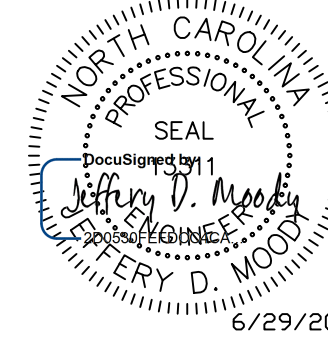
1. THE LOCATION OF EXISTING UNDERGROUND UTILITIES SHOWN IN PROFILES ARE APPROXIMATE.
2. EXISTING UTILITIES ARE ILLUSTRATED FOR INFORMATION PURPOSES ONLY. NCDOT WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF UTILITY LOCATIONS, SIZES, DEPTHS OR THE COMPLETENESS OF UTILITY INFORMATION. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL UTILITY INFORMATION.
3. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL INTERRUPTION OF WATER SERVICE WITH AFFECTED BUSINESSES AND RESIDENTS AT LEAST 48 HOURS PRIOR TO THE PLANNED INTERRUPTION OF SERVICE.
4. CONTRACTOR SHALL PHASE WATER UTILITY CONSTRUCTION TO MINIMIZE THE FREQUENCY AND DURATION OF WATER SERVICE INTERRUPTIONS.
5. CONTRACTOR SHALL PERFORM WATER LINE ACCEPTANCE TESTING IN ACCORDANCE WITH WSACC AND NCDENR (DIVISION OF ENVIRONMENTAL HEALTH, PUBLIC WATER SUPPLY SECTION) REQUIREMENTS.
6. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL NOTIFY ALL UTILITY OWNERS WHOSE FACILITIES WILL BE AFFECTED TO DETERMINE UTILITY LOCATIONS. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING WATER AND SANITARY SEWER SERVICES AND ENSURING THAT ALL EXISTING SERVICES WITHIN THE LIMITS OF THE PROPOSED WATER AND SANITARY SEWER RELOCATION ARE RECONNECTED TO THE NEW MAINS.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION.
8. CONTRACTOR SHALL PROTECT ALL UTILITIES FROM DAMAGE CAUSED BY HIS OPERATIONS OR THOSE OF HIS AGENTS. CONTRACTOR SHALL HOLD THE NCDOT HARMLESS FOR ANY THIRD PARTY INCONVENIENCE CREATED BY WORK OF HIS OWN FORCES OR THAT OF HIS AGENTS.
9. CONTRACTOR SHALL ADJUST VALVE BOXES, MANHOLES AND OTHER UTILITIES TO THE FINISHED GRADE AS NECESSARY.
10. THE CONTRACTOR SHALL NOTE THAT GRAPHICAL REPRESENTATIONS OF VALVE, TEE, HYDRANT, METER, ETC. LOCATIONS SHOWN IN PLANS ARE APPROXIMATE ONLY.
11. EXISTING WATER METERS SHALL BE RELOCATED AS SHOWN IN THE PLANS WHERE FEASIBLE - OTHERWISE, NEW METERS SHALL BE INSTALLED.
12. INDIVIDUAL WATER AND SEWER SERVICE CONNECTIONS ARE SHOWN APPROXIMATELY. FINAL SERVICE CONNECTION LOCATIONS SHALL BE DETERMINED IN THE FIELD AND PROVIDED ON AS-BUILT PLANS FOR RECORD. ALL WATER AND SEWER SERVICES SHALL BE INSTALLED PER THE CITY OF KANNAPOLIS STANDARDS AND NCDENR REQUIREMENTS.

SPECIAL REQUIREMENTS FOR ASBESTOS CEMENT PIPE

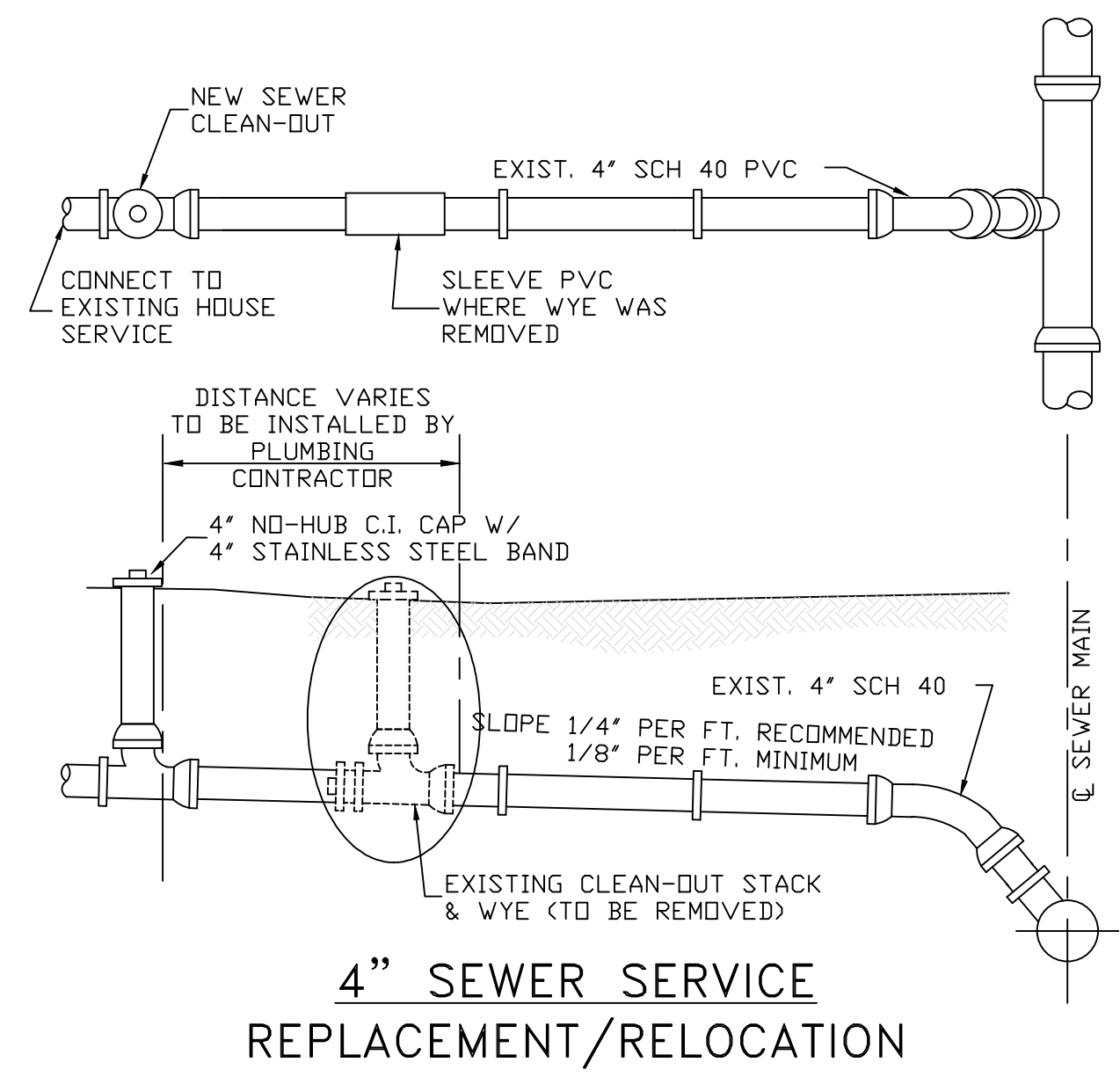
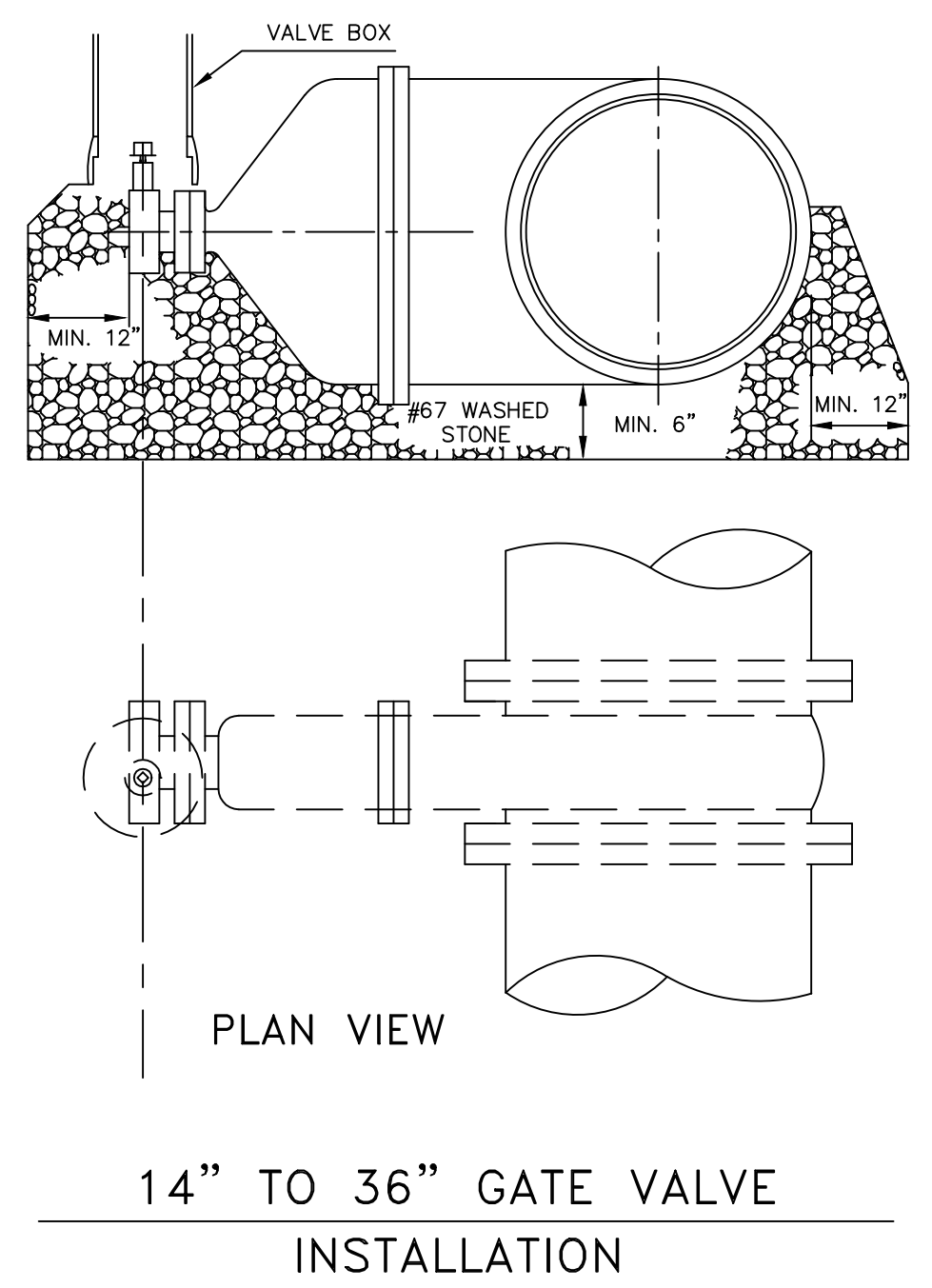
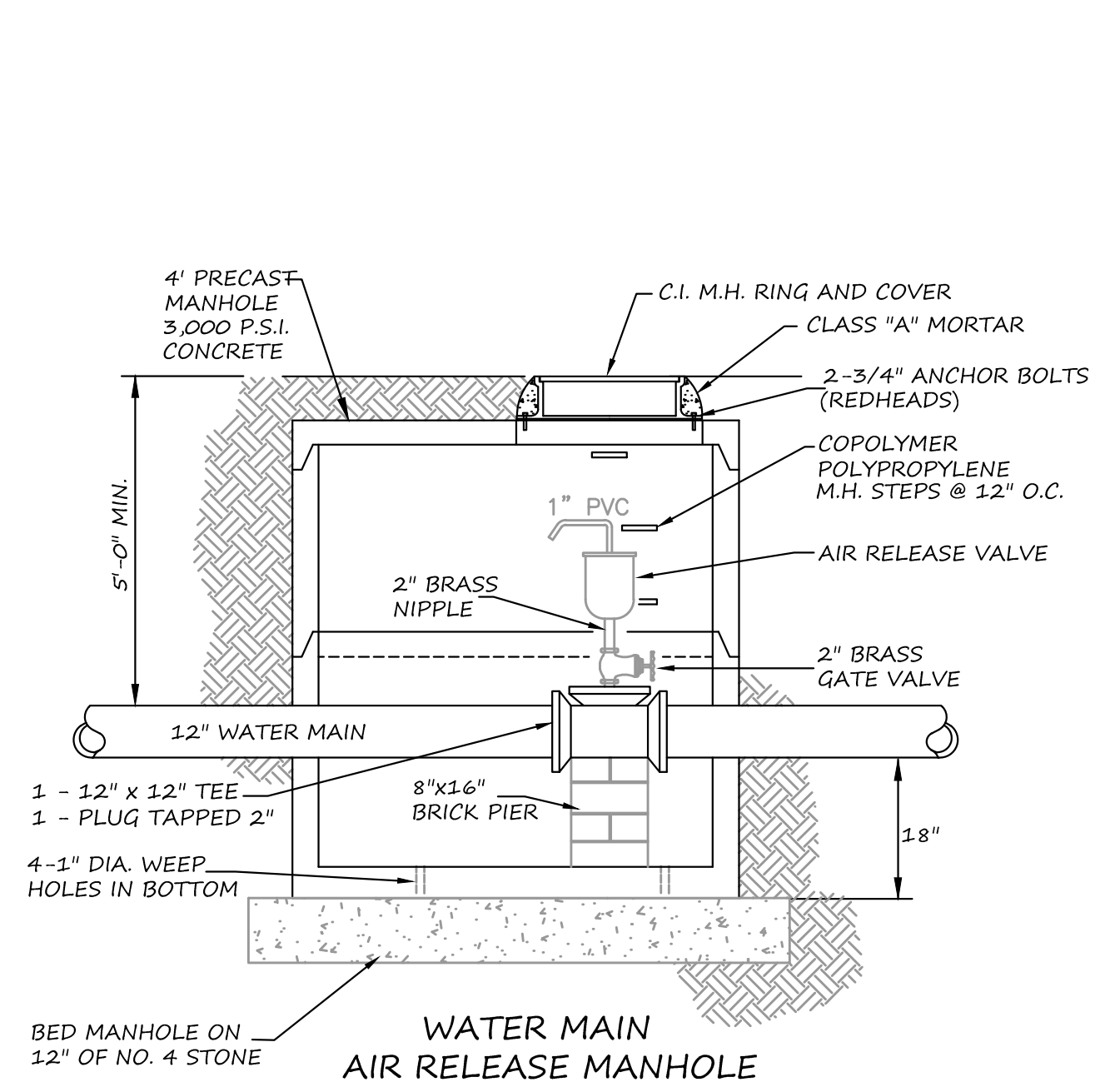
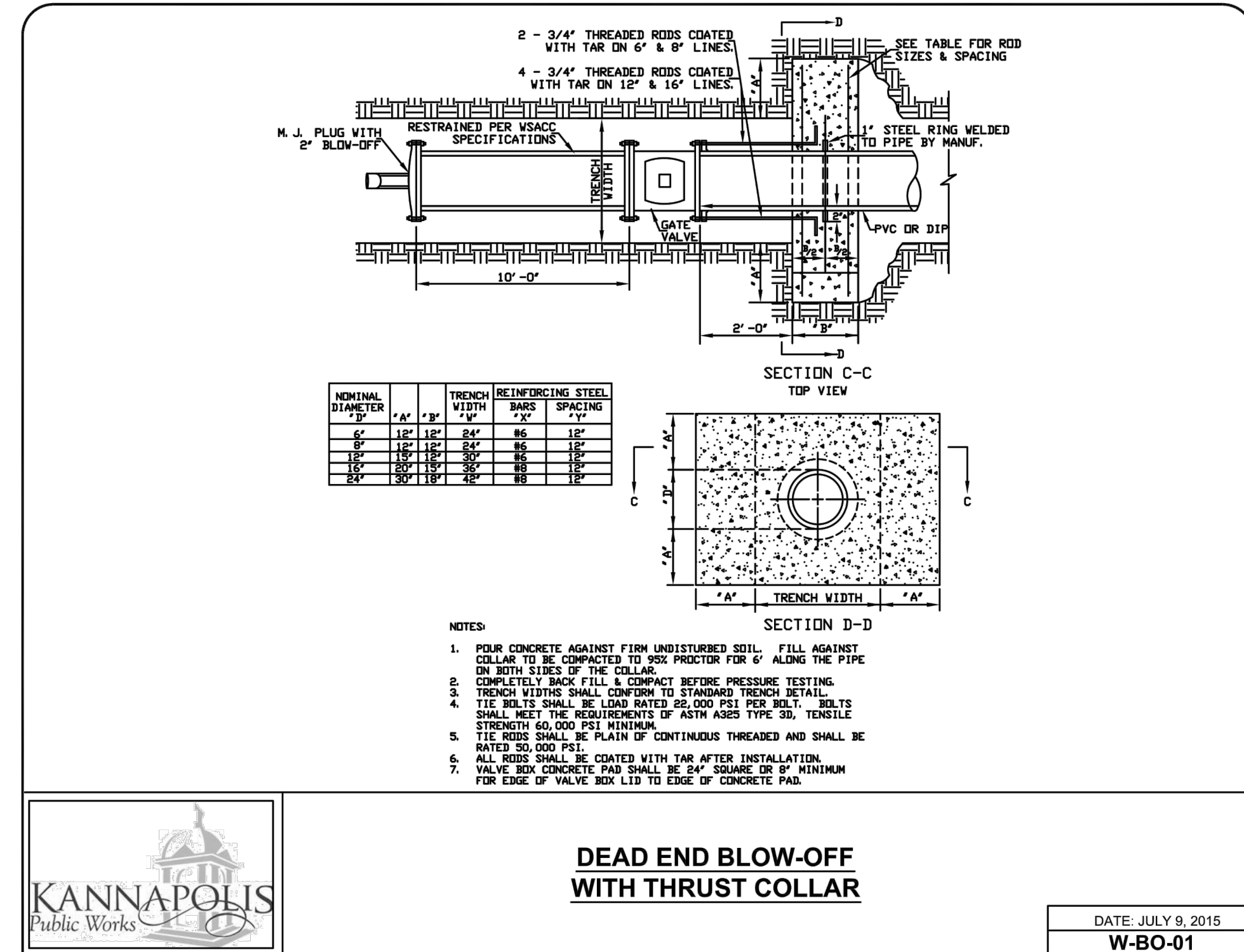
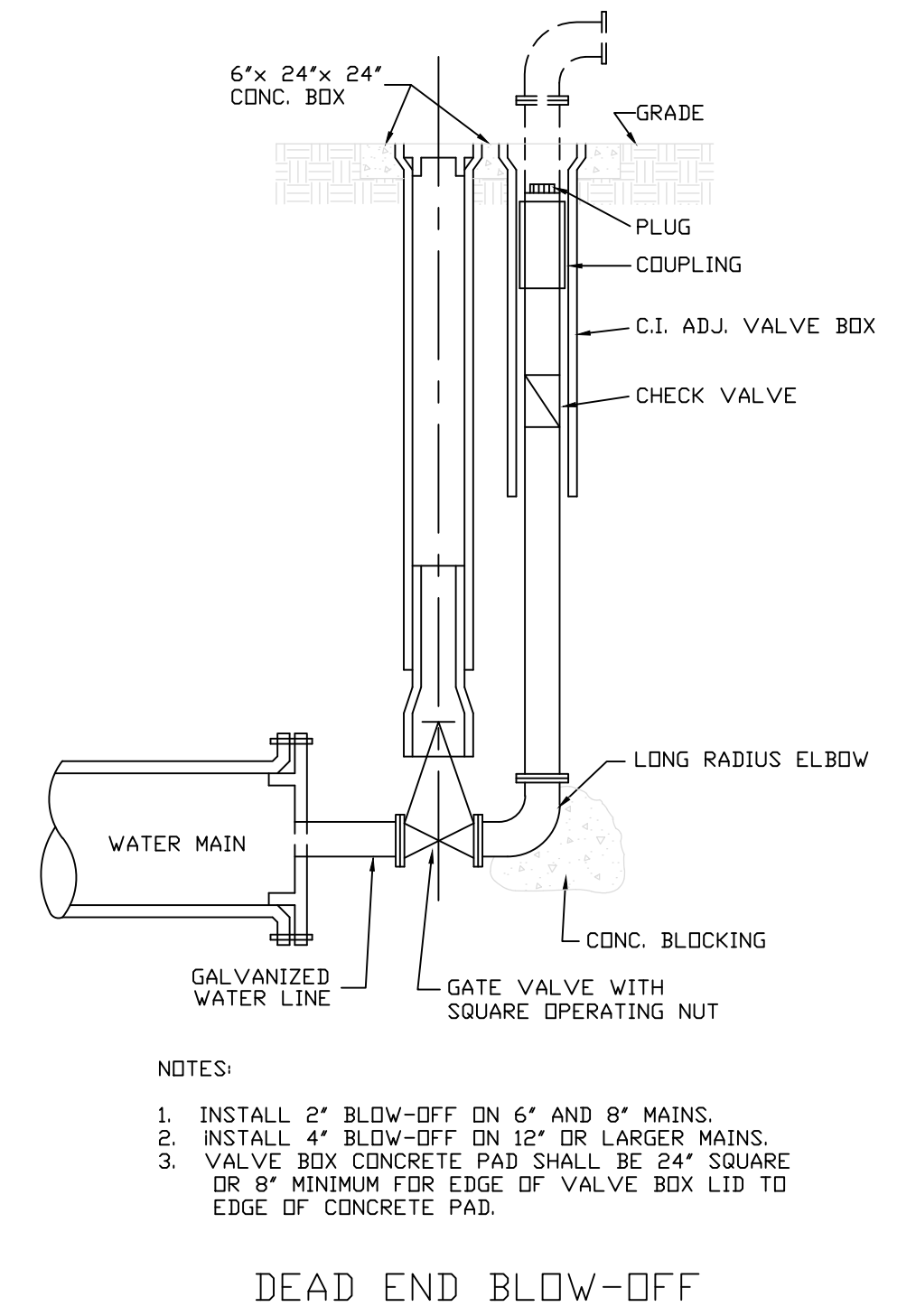
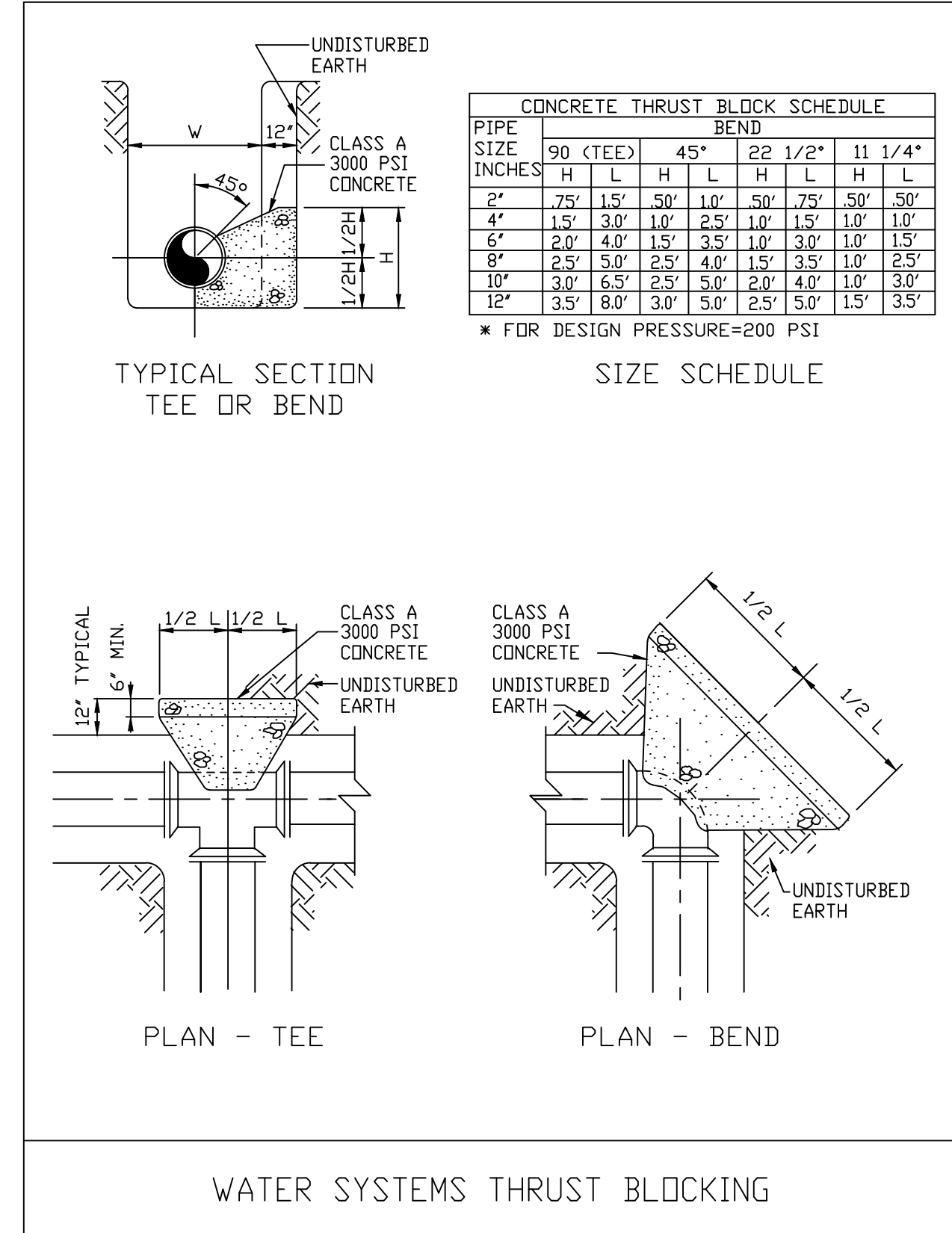
1. CONSTRUCTION ACTIVITIES WILL REQUIRE CUTTING, MODIFYING, REMOVAL AND DISPOSAL OF EXISTING ASBESTOS CEMENT (AC) PIPE.
2. WHERE RECORDS ARE AVAILABLE, EXISTING AC PIPE MATERIALS ARE LABELED ON THE PLANS. THE CONTRACTOR SHALL ANTICIPATE ENCOUNTERING AC PIPE THAT MAY NOT BE LABELED.
3. ALL EXISTING AC PIPE SHOWN "TO BE ABANDONED" SHALL BE ABANDONED IN PLACE UNLESS SPECIFICALLY LABELED TO BE REMOVED.
4. AC PIPE TO BE ABANDONED IN PLACE SHALL NOT BE CRUSHED BY MACHINERY. IF AC PIPE IS CRUSHED, THE SITE SHALL BE CONSIDERED A REGULATED ASBESTOS CONTAINING MATERIALS (RCM) SITE AND CONSIDERED AN ACTIVE WASTE DISPOSAL SITE. THE CRUSHED PIPE AND CONTAMINATED SOIL SHALL BE REMOVED, HANDLED, AND DISPOSED OF BY A LICENSED ASBESTOS REMOVAL CONTRACTOR FOLLOWING REQUIRED PROTOCOLS FOR HANDLING AND DISPOSAL OF ASBESTOS.
5. WHERE EXCAVATIONS OR GRADING REQUIRED FOR CONSTRUCTION EXPOSES EXISTING AC PIPES, THE WORK SITE SHALL BE MARKED WITH SIGNAGE WARNING OF ASBESTOS. EXPOSED PIPE, WHETHER INTACT OR NOT, SHALL BE HANDLED AND DISPOSED OF BY A LICENSED ASBESTOS REMOVAL CONTRACTOR.
6. ALL WORK REQUIRING HANDLING, REMOVAL OR DISPOSAL OF AC PIPE SHALL BE DONE IN STRICT ACCORDANCE WITH NCGS CHAPTER 130A PUBLIC HEALTH ARTICLE 19: ASBESTOS HAZARD MANAGEMENT PROGRAM.
7. WORKER TRAINING AND WORKPLACE RULES AND PROCEDURES SHALL MEET THE MINIMUM REQUIREMENTS OF NC AND FEDERAL OSHA RULES.
8. WHERE THE WORK REQUIRES CONNECTING INTO EXISTING AC PIPING, THE FOLLOWING REQUIREMENTS SHALL APPLY:
 - a. ALL PERSONNEL INVOLVED IN THE WORK SHALL RECEIVE TRAINING IN PROPER PROCEDURES FOR HANDLING AND WORKING WITH AC PIPE.
 - b. ALL PERSONNEL SHALL BE EQUIPPED WITH APPROVED PERSONAL PROTECTIVE EQUIPMENT (PPE) INCLUDING SHOES, CLOTHING AND BREATHING EQUIPMENT.
 - c. THE CONTRACTOR SHALL DESIGNATE A "PERSON IN CHARGE" WHO SHALL BE PRESENT AT ALL TIMES WHEN A PIPE IS BEING MODIFIED.
 - d. ALL PIPE CUTTING SHALL BE BY APPROVED "SNAP CUTTERS". THE USE OF SAWS OR GRINDERS EMPLOYING CARBIDE BLADES IS STRICTLY PROHIBITED.
 - e. COMPRESSED AIR SHALL NEVER BE USED TO BLOW OR CLEAN PIPE CUTS WHERE NEW PIPES ARE TO BE CONNECTED TO EXISTING AC PIPE.
 - f. MODIFIED WATER CONTAINING SURFACTANTS SHALL BE USED TO LUBRICATE AND WET ALL PIPE CUTS TO MINIMIZE PRODUCTION OF DUST.
 - g. WORK SITES SHALL BE ROPED OFF AND SIGNS WARNING OF ASBESTOS SHALL BE POSTED.
 - h. ALL SECTIONS OF AC PIPE CUT OUT FOR CONNECTIONS OF NEW PIPING SHALL BE REMOVED FROM THE EXCAVATION, DOUBLE BAGGED IN HEAVY PLASTIC WRAP, LABELED AS "ASBESTOS" AND PLACED IN A SECURE STORAGE AREA PENDING TRANSPORT AND DISPOSAL TO A LICENSED ASBESTOS DISPOSAL LANDFILL.
 - i. WHERE THE WORK REQUIRES PREPARING THE CUT END OF AN EXISTING AC PIPE FOR CONNECTION OF A NEW PIPE, ONLY TOOLS APPROVED FOR THIS WORK SHALL BE USED. PIPE SHALL BE CONTINUOUSLY LUBRICATED WITH "MODIFIED WATER" TO LIMIT DUST.
 - j. CLEAN UP AT WORK SITES SHALL NEVER EMPLOY COMPRESSED AIR, BLOWERS, MECHANICAL BROOMS OR OTHER DEVICES THAT WILL PRODUCE DUST.
 - k. AT THE END OF EACH WORK DAY WHERE PIPE IS CUT, HANDLED, MODIFIED OR REMOVED, ALL WORKERS' PERSONAL PROTECTION EQUIPMENT (PPE) SHALL BE STORED AT A SUITABLE LOCATION FOR CLEANING, DECONTAMINATION, DISPOSAL, OR FUTURE USE. WORKERS INVOLVED IN CUTTING, REMOVAL AND DISPOSAL OF AC PIPE SHALL NOT BE ALLOWED TO REMOVE PPE FROM THE WORK SITE.

	alley, williams, carmen, & king, inc. CONSULTING ENGINEERS	
	<small>FIRM LICENSE No. F-0203</small> <small>120 SOUTH MAIN STREET</small> <small>KANNAPOLIS, NC 28082</small>	<small>P.O. BOX 1248</small> <small>704/958-1515</small>

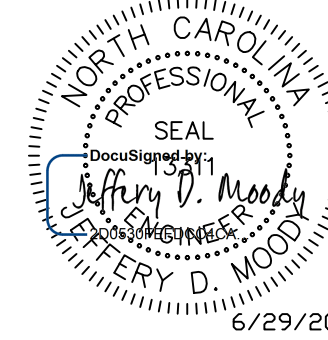
GENERAL AND CITY OF KANNAPOLIS STANDARD DETAILS

PROJECT REFERENCE NO. U-3440	SHEET NO. UC-3A
DESIGNED BY: JDM	
DRAWN BY: RCC	
CHECKED BY:	
APPROVED BY:	
REVISED:	6/29/2016
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	UTILITY CONSTRUCTION PLANS ONLY
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120 SOUTH MAIN STREET KANNAPOLIS, NC 28082 P.O. BOX 1248 704/958-1515



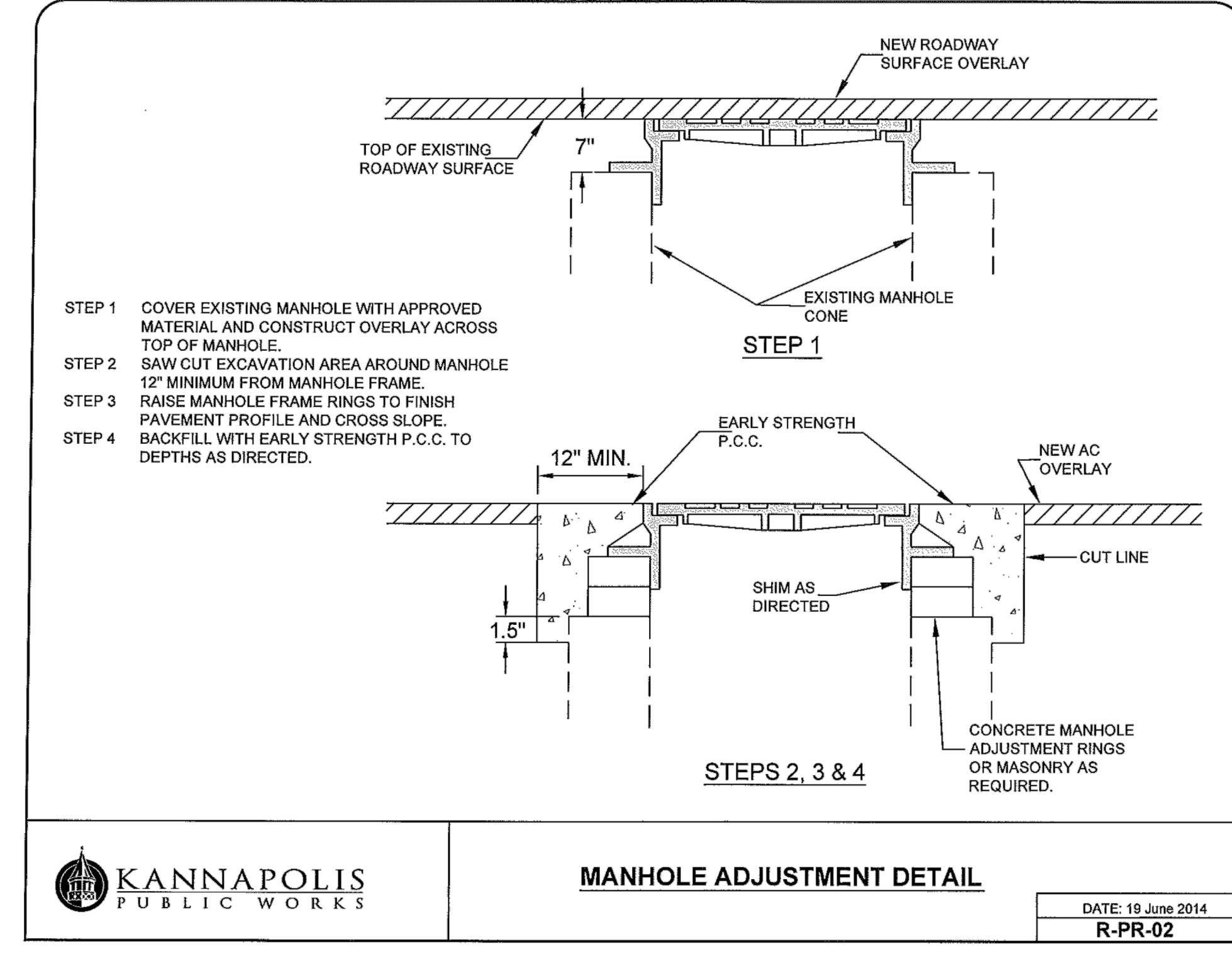
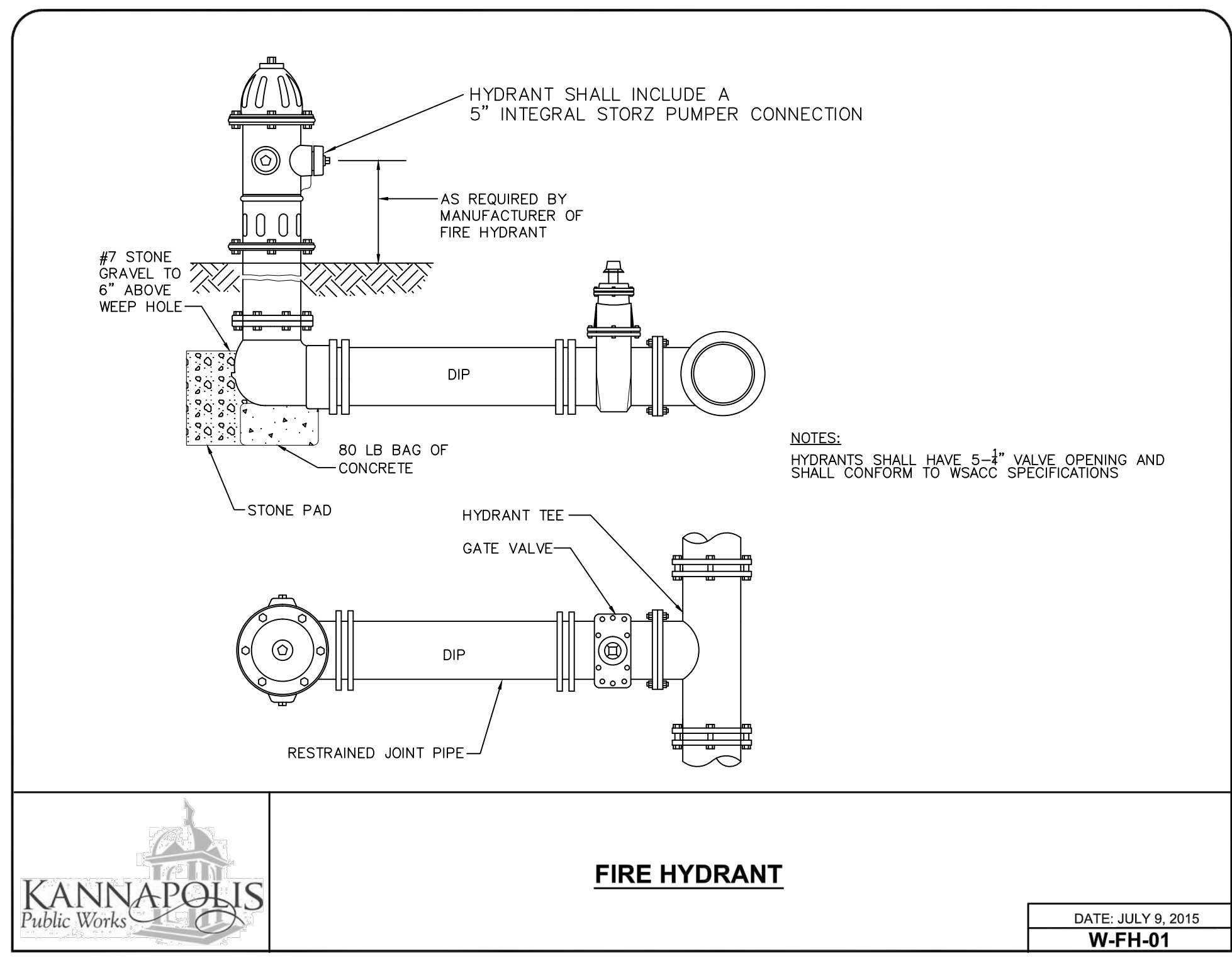
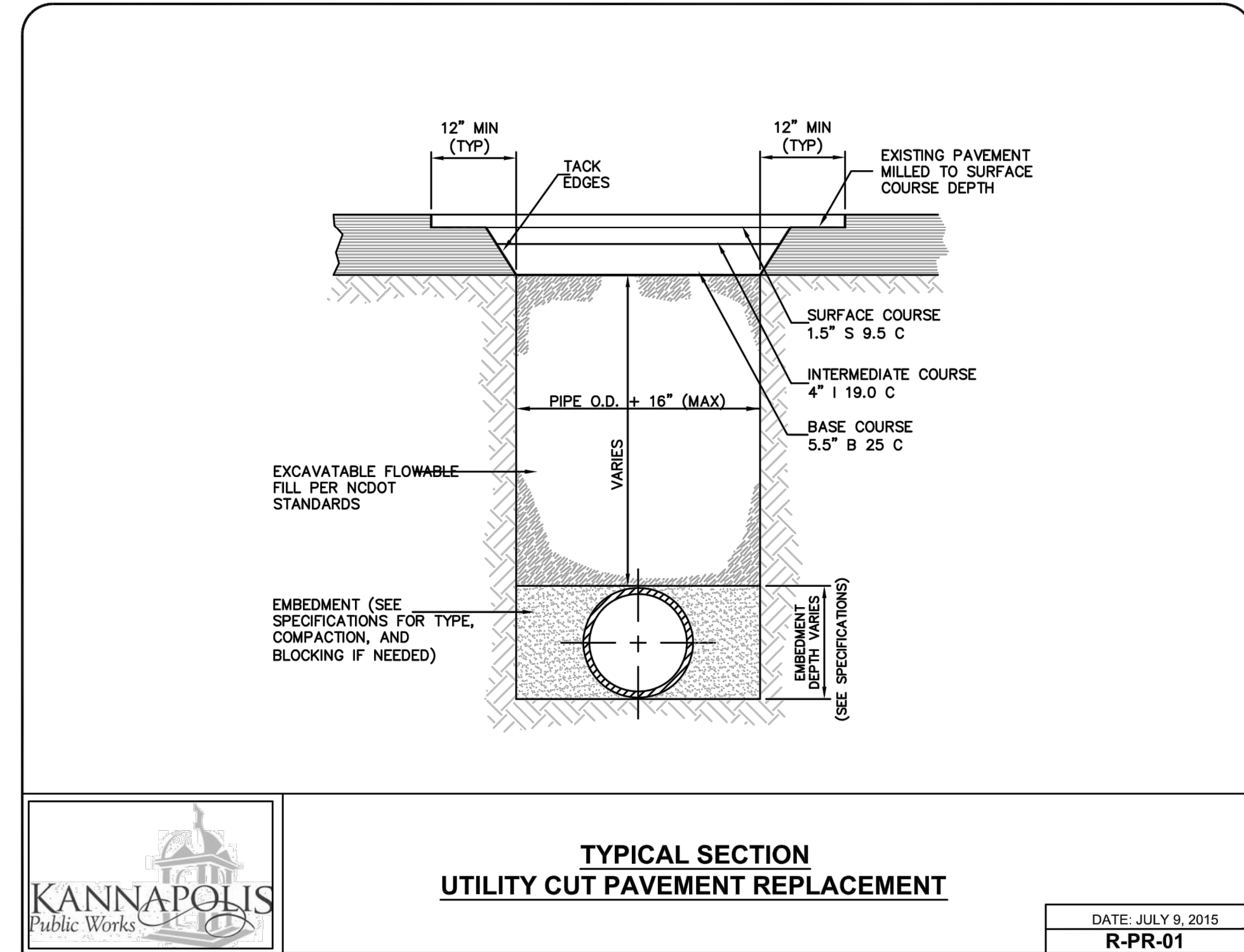
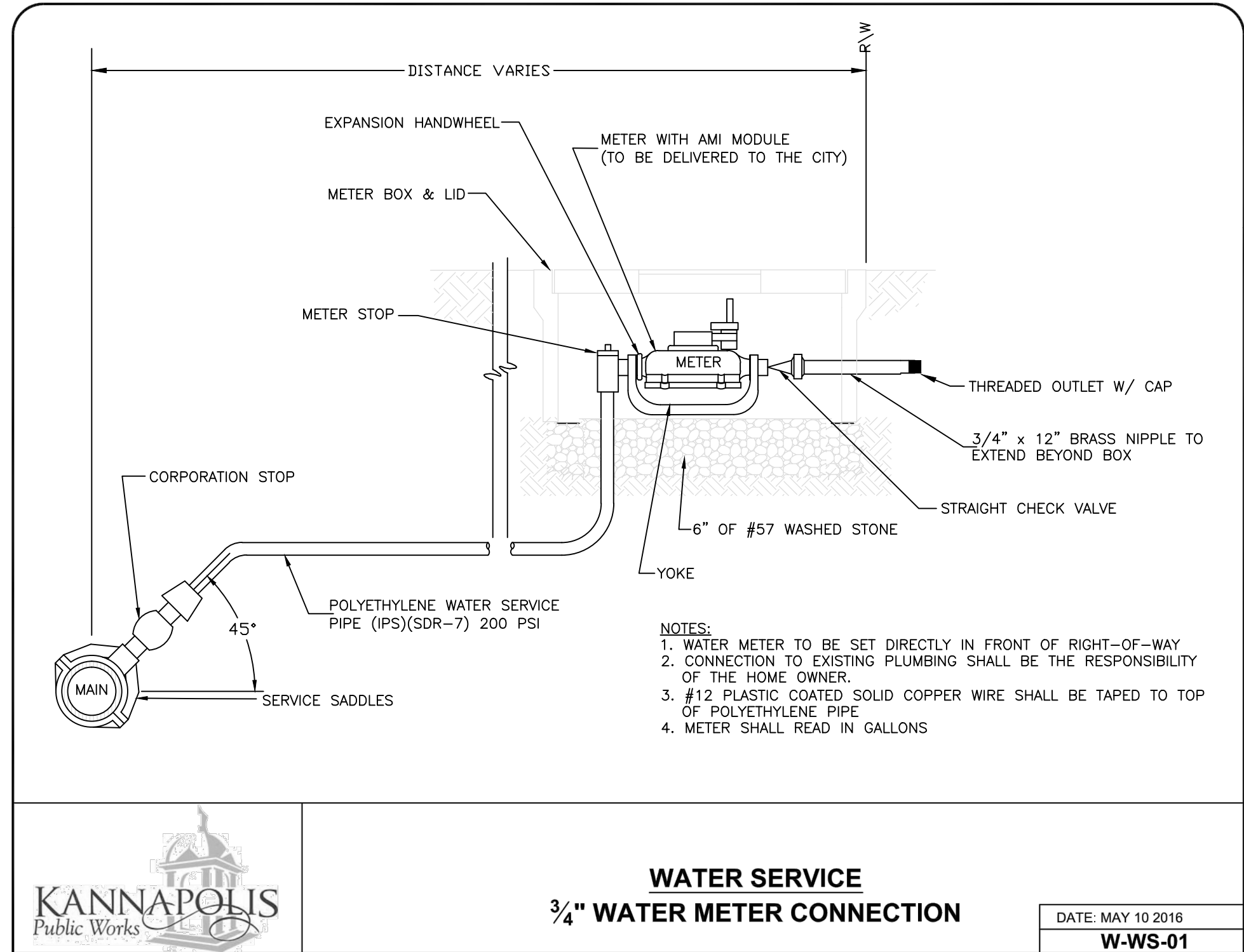
CITY OF KANNAPOLIS STANDARD DETAILS

PROJECT REFERENCE NO. U-3440	SHEET NO. UC-3B
DESIGNED BY: JDM	
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	UTILITY CONSTRUCTION PLANS ONLY
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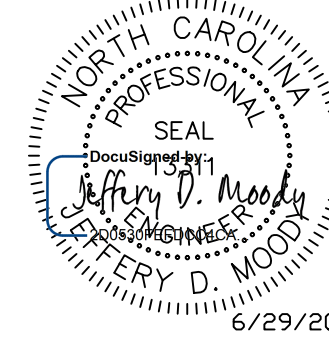
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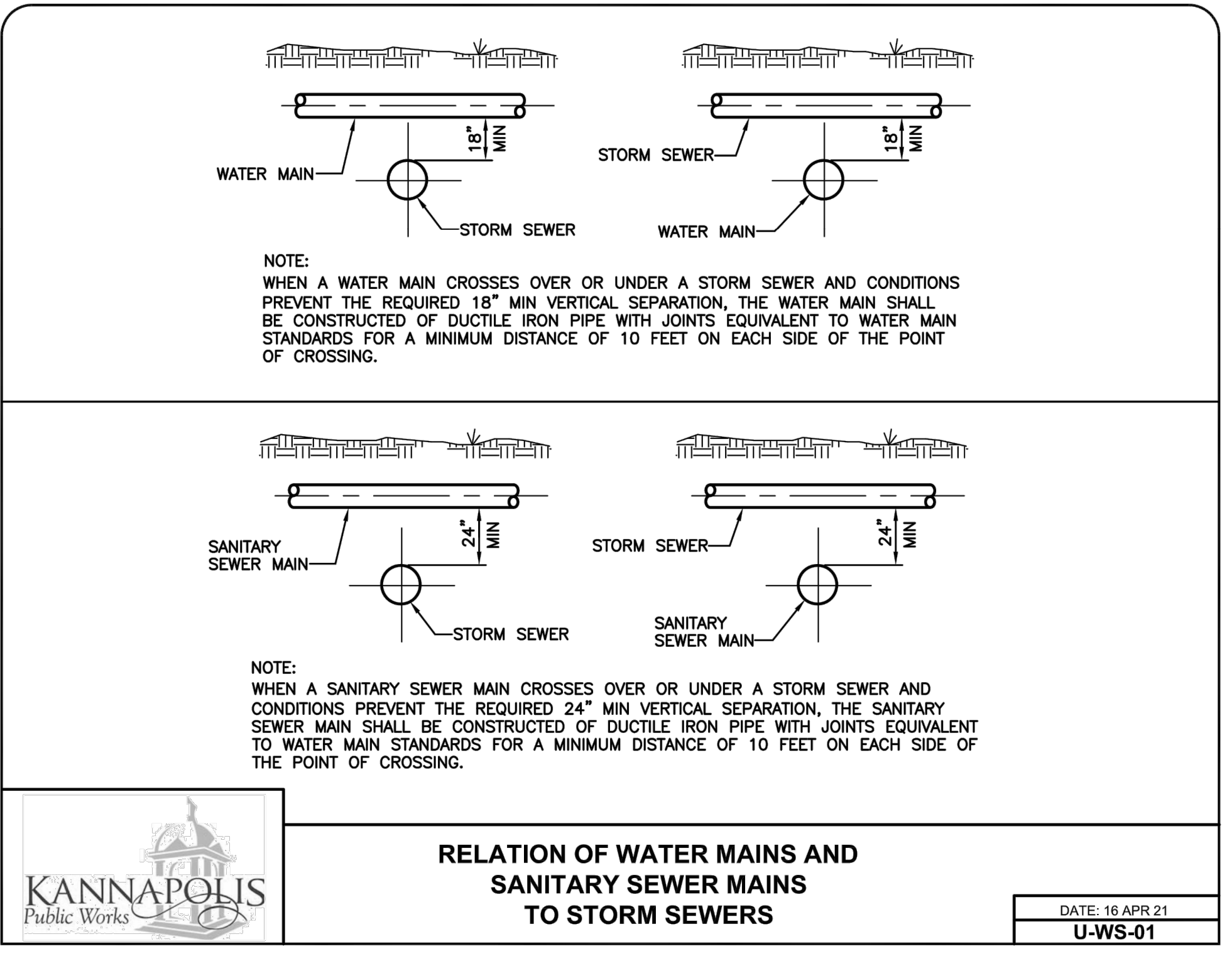
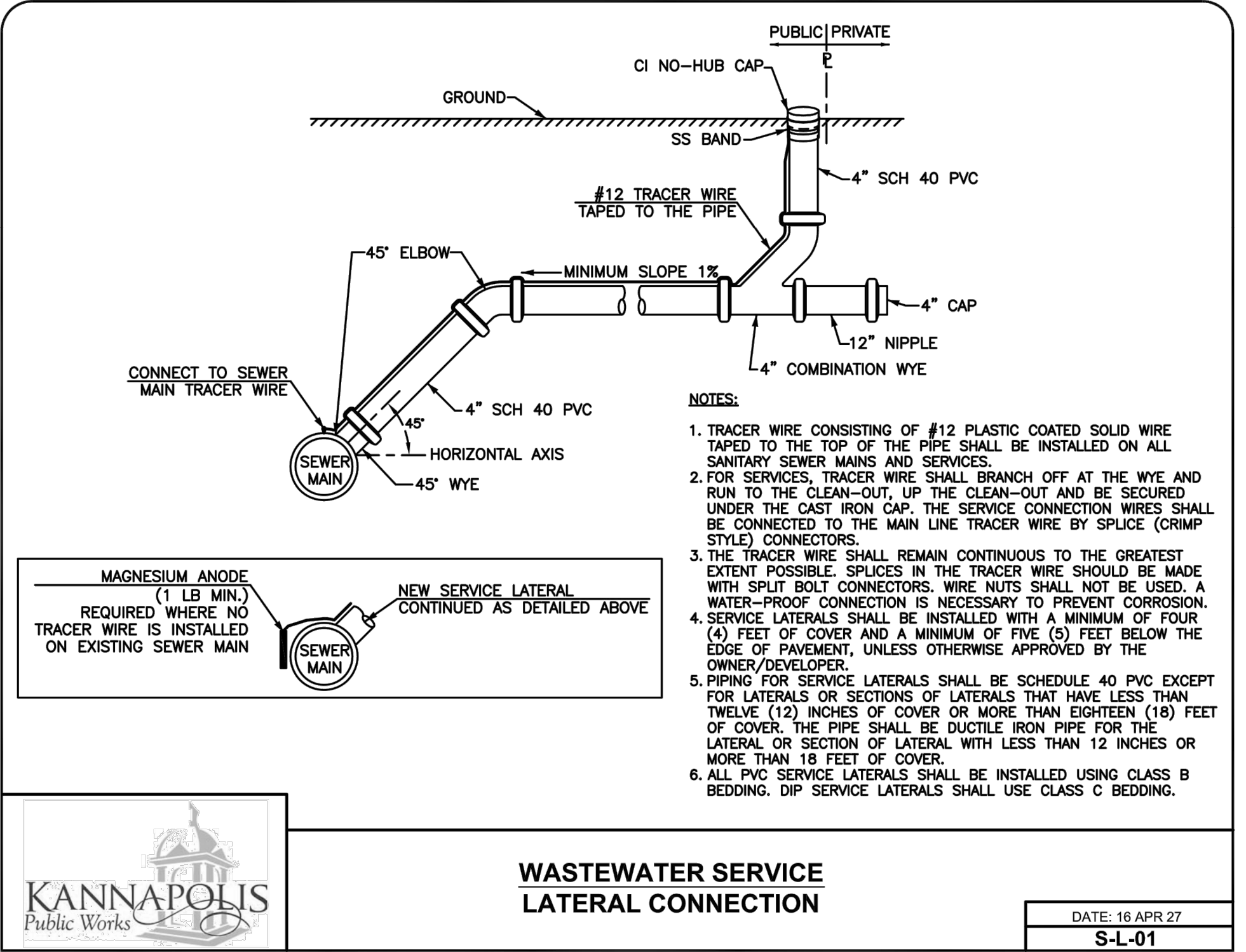
CITY OF KANNAPOLIS STANDARD DETAILS

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DESIGNED BY: JDM	
DRAWN BY: RCC	
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APPROVED BY:	
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	6/29/2016
UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

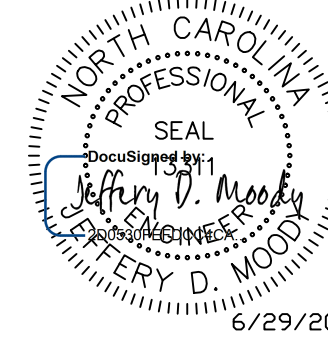
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CONSULTING ENGINEERS
FIRM LICENSE No. F-0203
120 SOUTH MAIN STREET KANNAPOLIS, NC 28082 P.O. BOX 1248 704/958-1515

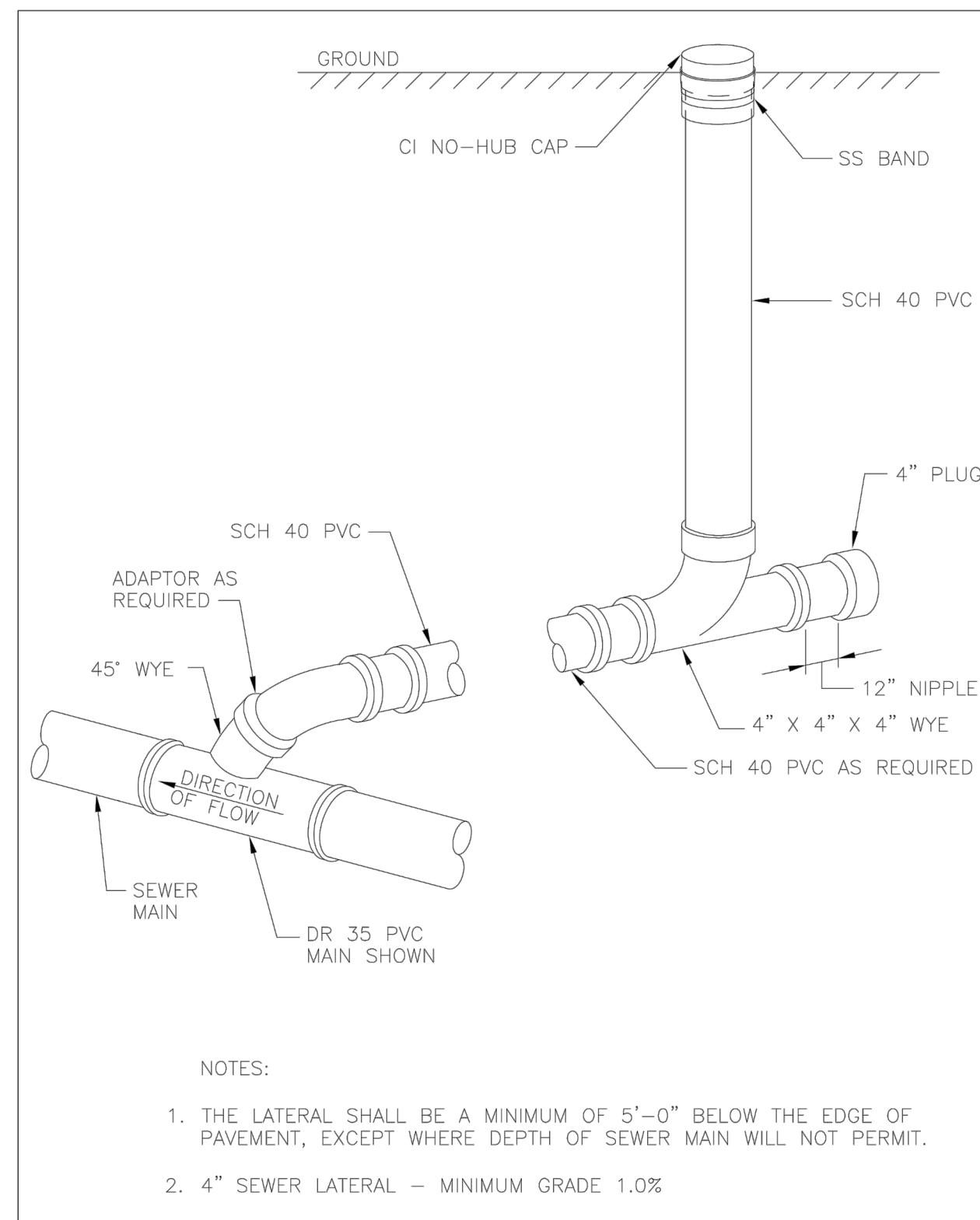


WSACC STANDARD DETAILS

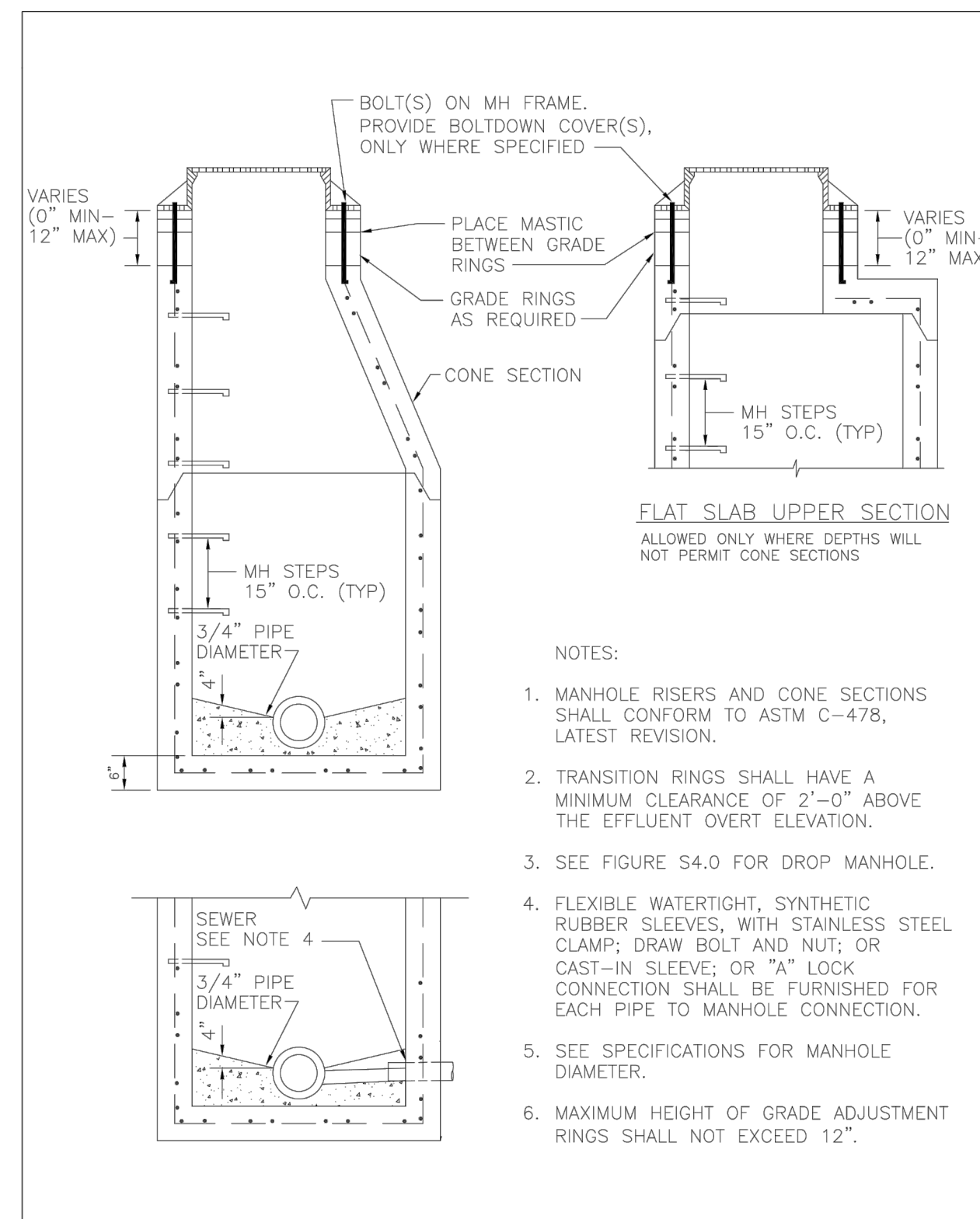
PROJECT REFERENCE NO. U-3440	SHEET NO. UC-3D
DESIGNED BY: JDM	
DRAWN BY: RCC	
CHECKED BY:	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	6/29/2016
UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151	UTILITY CONSTRUCTION PLANS ONLY
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



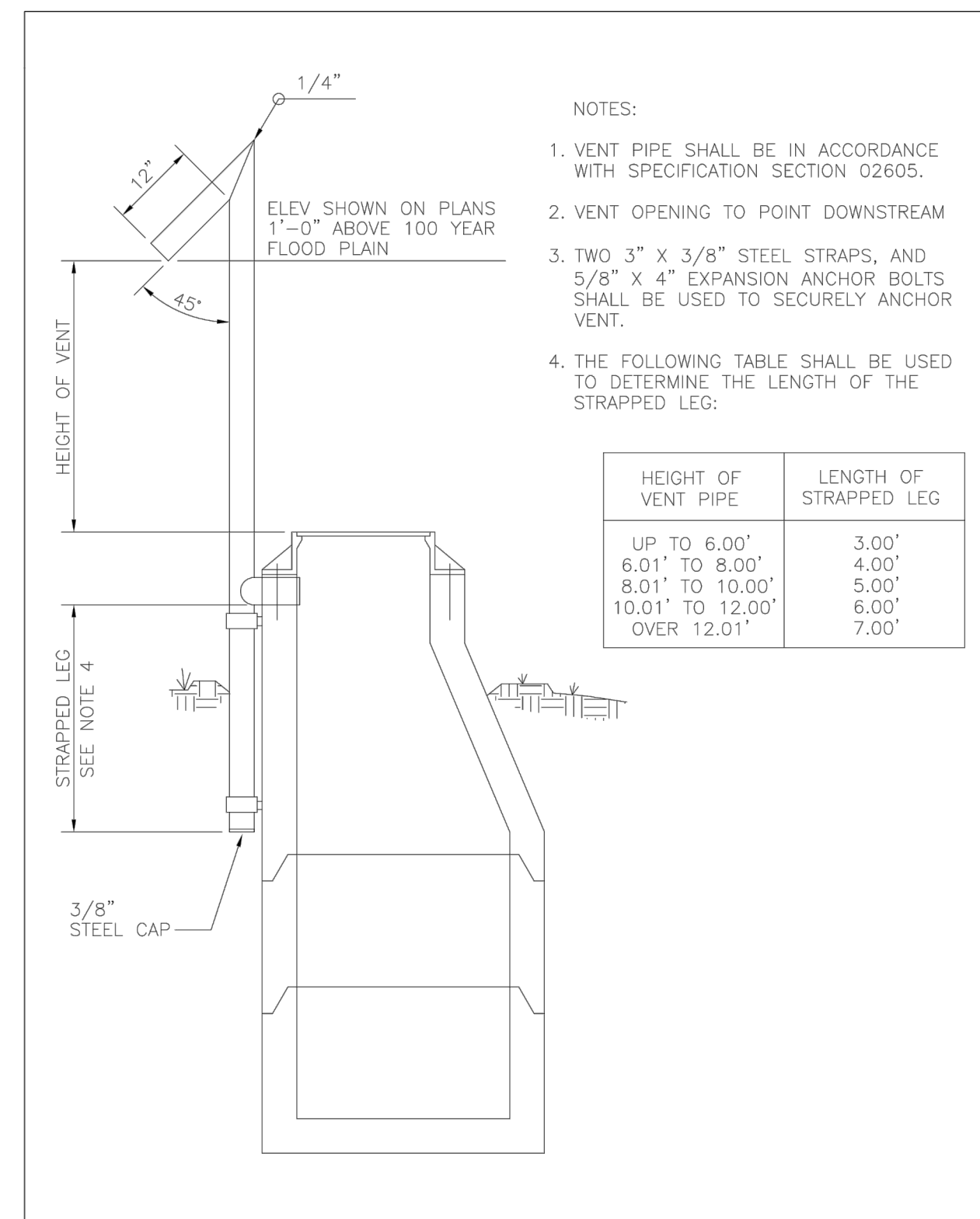
alley, williams, carmen, & king, inc.
CONSULTING ENGINEERS
FIRM LICENSE No. F-0203
120 SOUTH MAIN STREET P.O. BOX 1248
KANNAPOLIS, NC 28082 704/958-1515



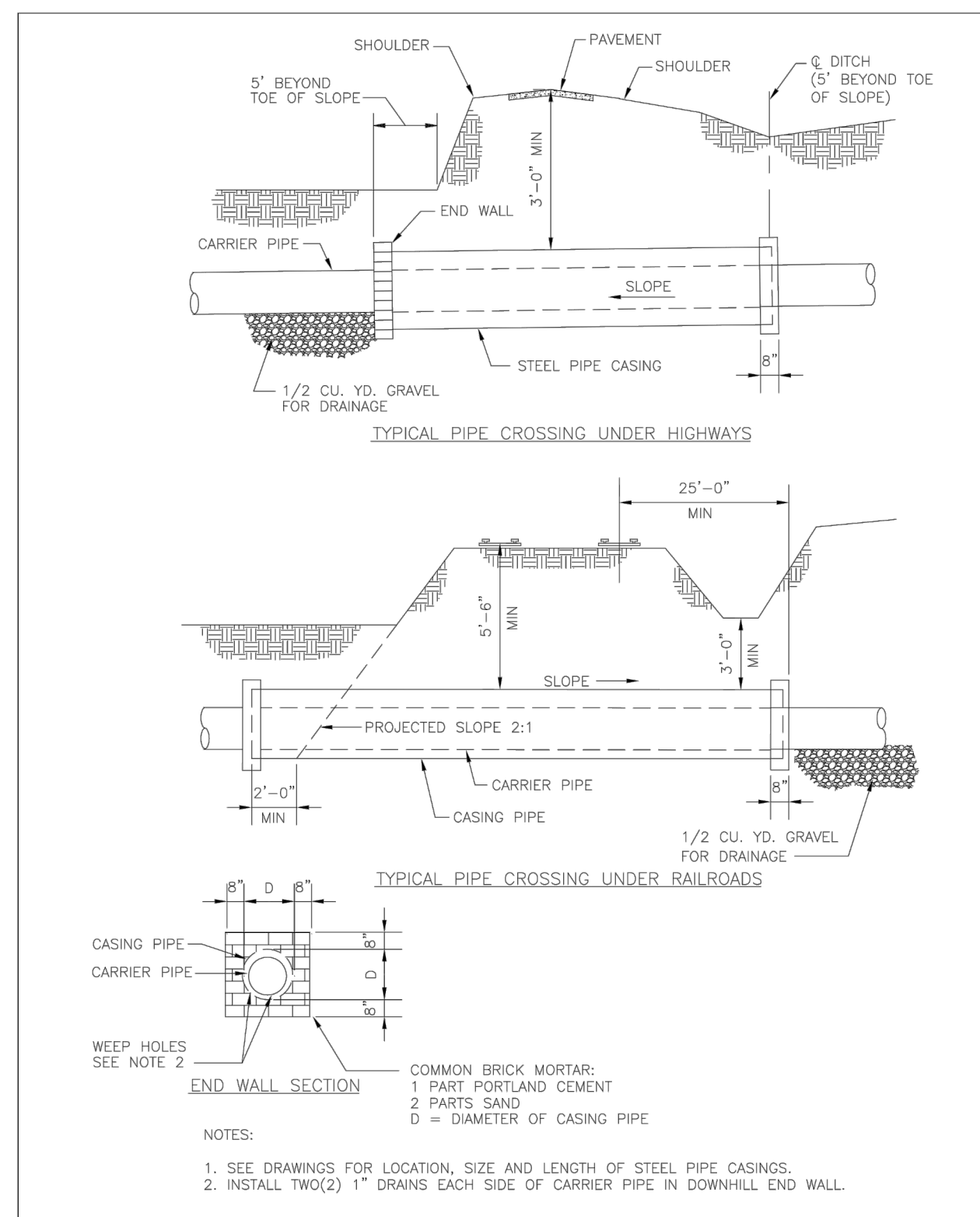
REVISION NO.	DATE	BY	CHKD	WSACC WATER AND SEWER AUTHORITY OF CABARRUS COUNTY	TYPICAL SEWER LATERAL	FILE NAME: S1.0	DATE: 8/08
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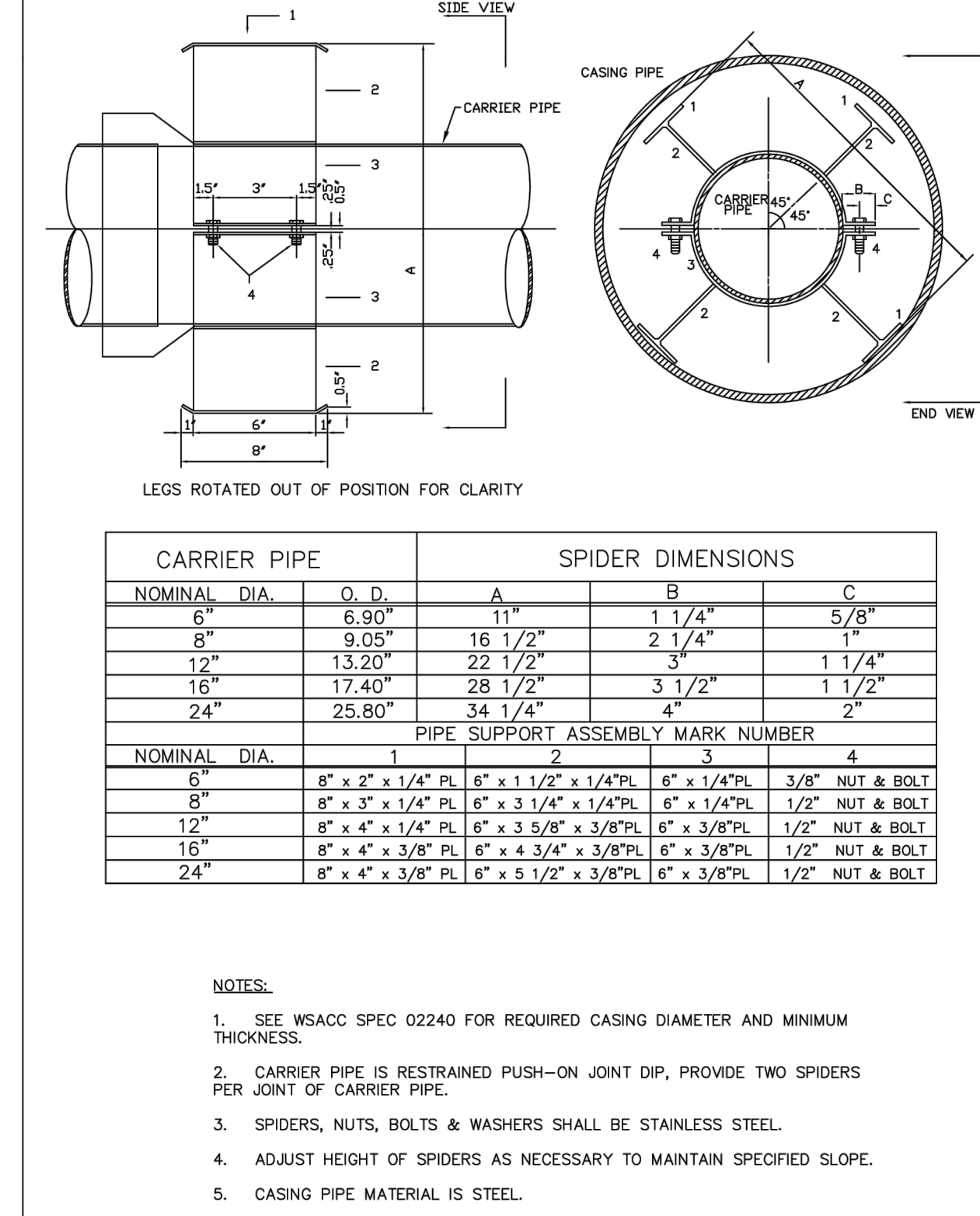
REVISION NO.	DATE	BY	CHKD	WSACC WATER AND SEWER AUTHORITY OF CABARRUS COUNTY	STANDARD PRECAST CONCRETE MANHOLE	FILE NAME: S2.0	DATE: 8/08
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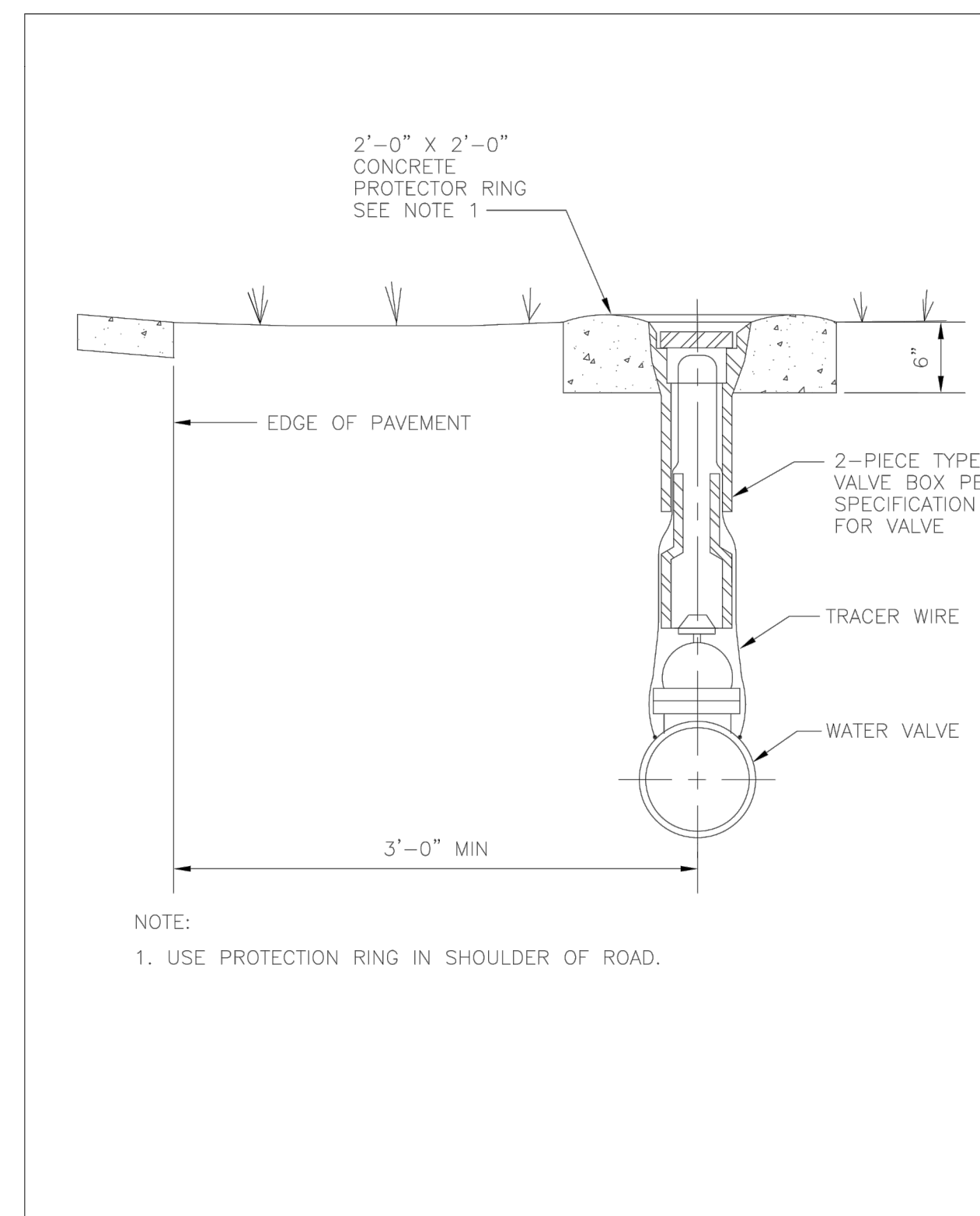
REVISION NO.	DATE	BY	CHKD	WSACC WATER AND SEWER AUTHORITY OF CABARRUS COUNTY	STANDARD VENT FOR PRECAST CONCRETE MANHOLE	FILE NAME: S3.0	DATE: 8/08
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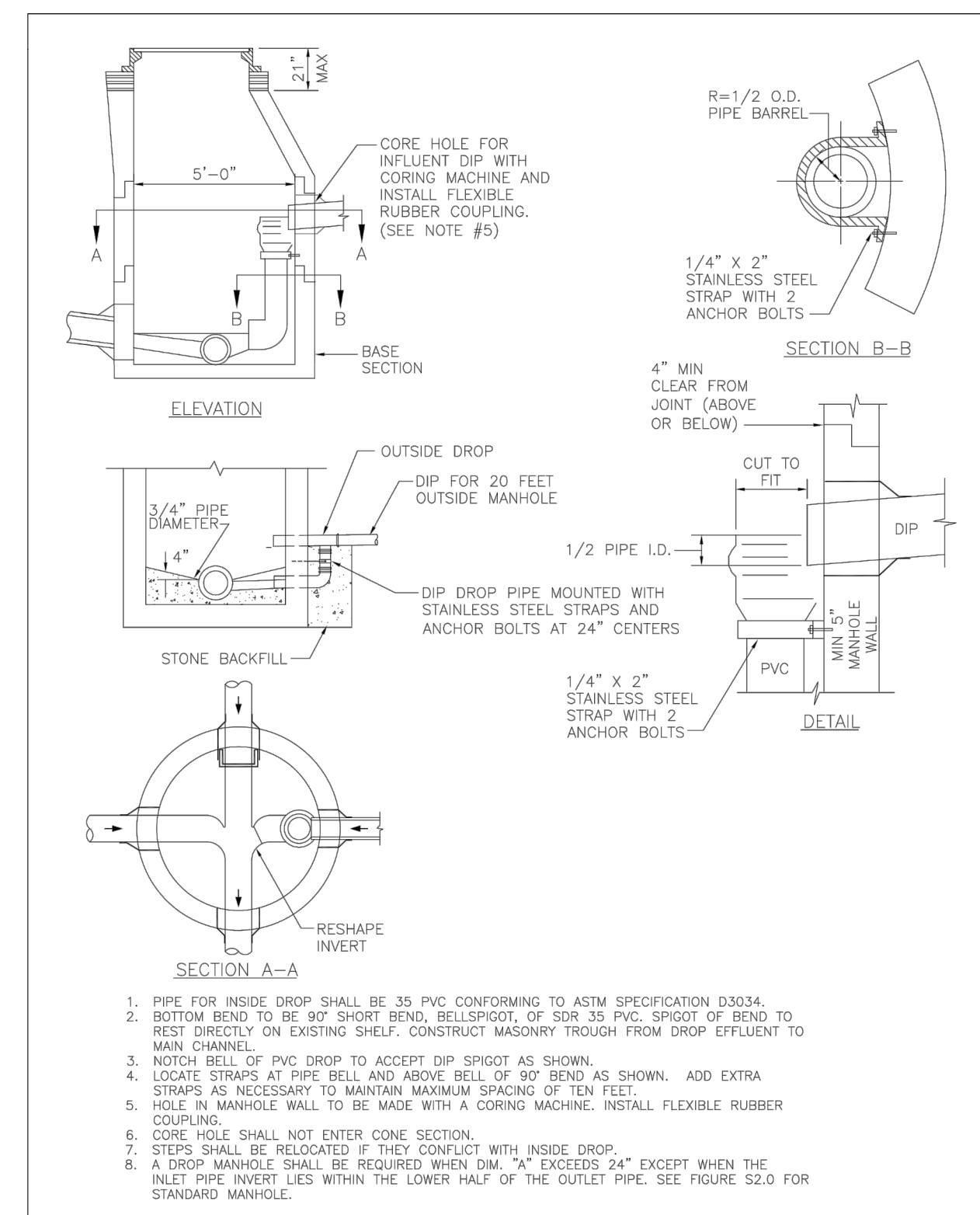
REVISION NO.	DATE	BY	CHKD	WSACC WATER AND SEWER AUTHORITY OF CABARRUS COUNTY	ENCASEMENT PIPE UNDER HIGHWAYS AND RAILROADS	FILE NAME: M1.0	DATE: 8/08
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1	0808	BY	MAL	WSACC WATER AND SEWER AUTHORITY OF CABARRUS COUNTY	CASING SPIDER	FILE NAME: M2.0	DATE: 09/08
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REVISION NO.	DATE	BY	CHKD	WSACC WATER AND SEWER AUTHORITY OF CABARRUS COUNTY	VALVE BOX INSTALLATION	FILE NAME: W1.0	DATE: 8/08
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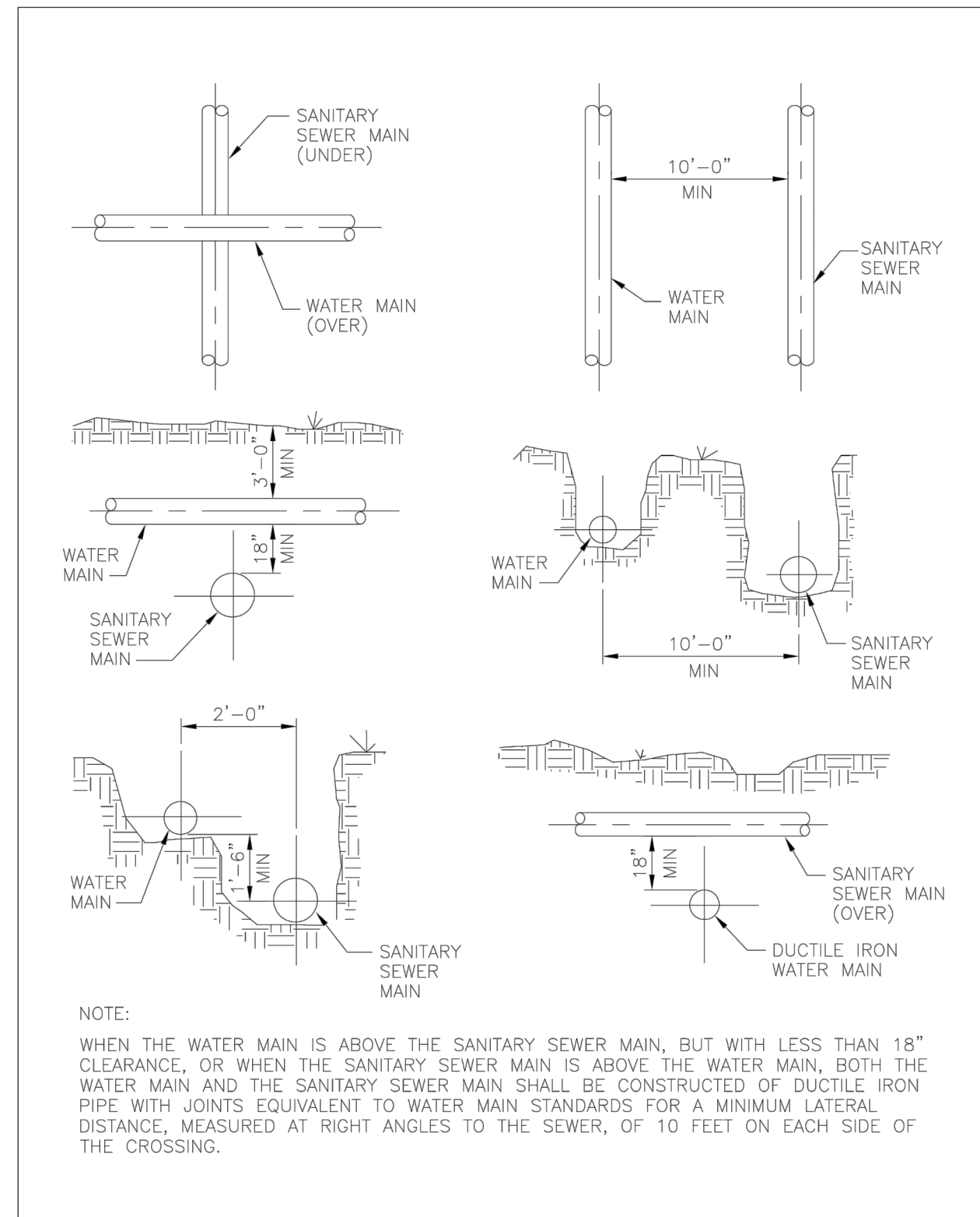


REVISION NO.	DATE	BY	CHKD	WSACC WATER AND SEWER AUTHORITY OF CABARRUS COUNTY	STANDARD DROP MANHOLE DETAIL	FILE NAME: S4.0	DATE: 8/08
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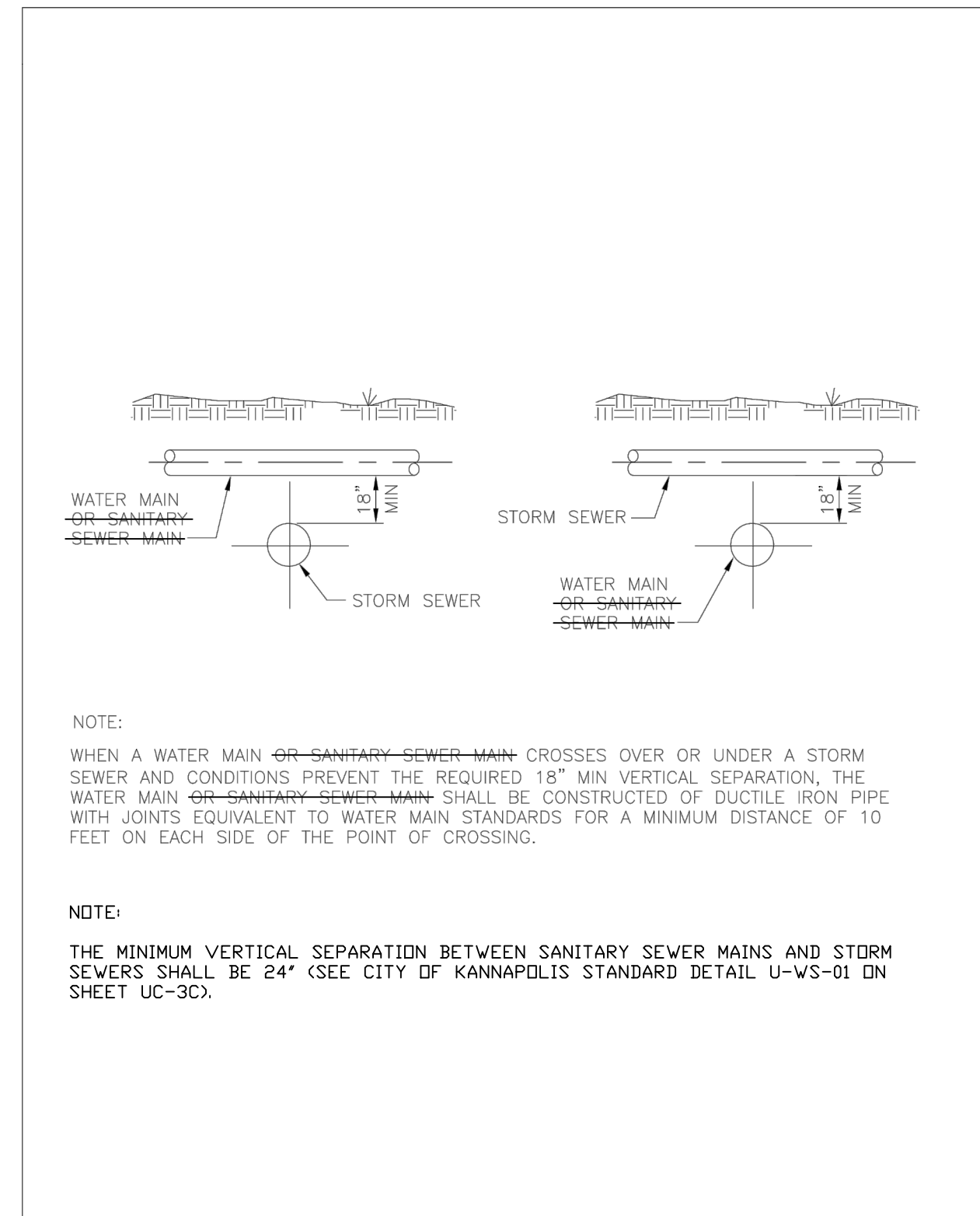
WSACC STANDARD DETAILS

PROJECT REFERENCE NO. U-3440	SHEET NO. UC-3E
DESIGNED BY: JDM	
DRAWN BY: RCC	
CHECKED BY:	
APPROVED BY:	
REVISED:	6/29/2016
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151 UTILITY CONSTRUCTION PLANS ONLY	
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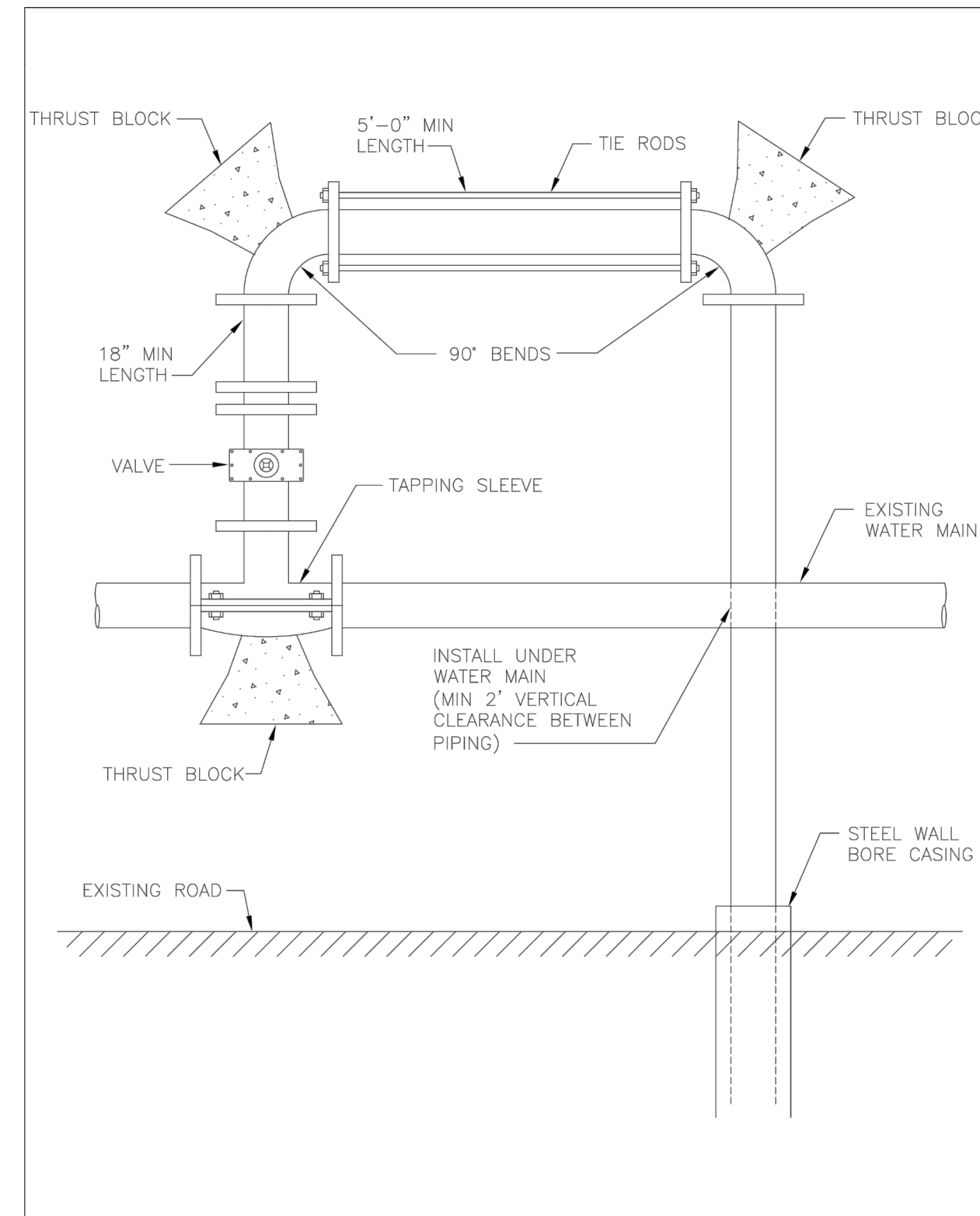
awc alley, williams, carmen, & king, inc.
CONSULTING ENGINEERS
 FIRM LICENSE No. F-0203
 120 SOUTH MAIN STREET P.O. BOX 1248
 KANNAPOLIS, NC 28082 704/958-1515



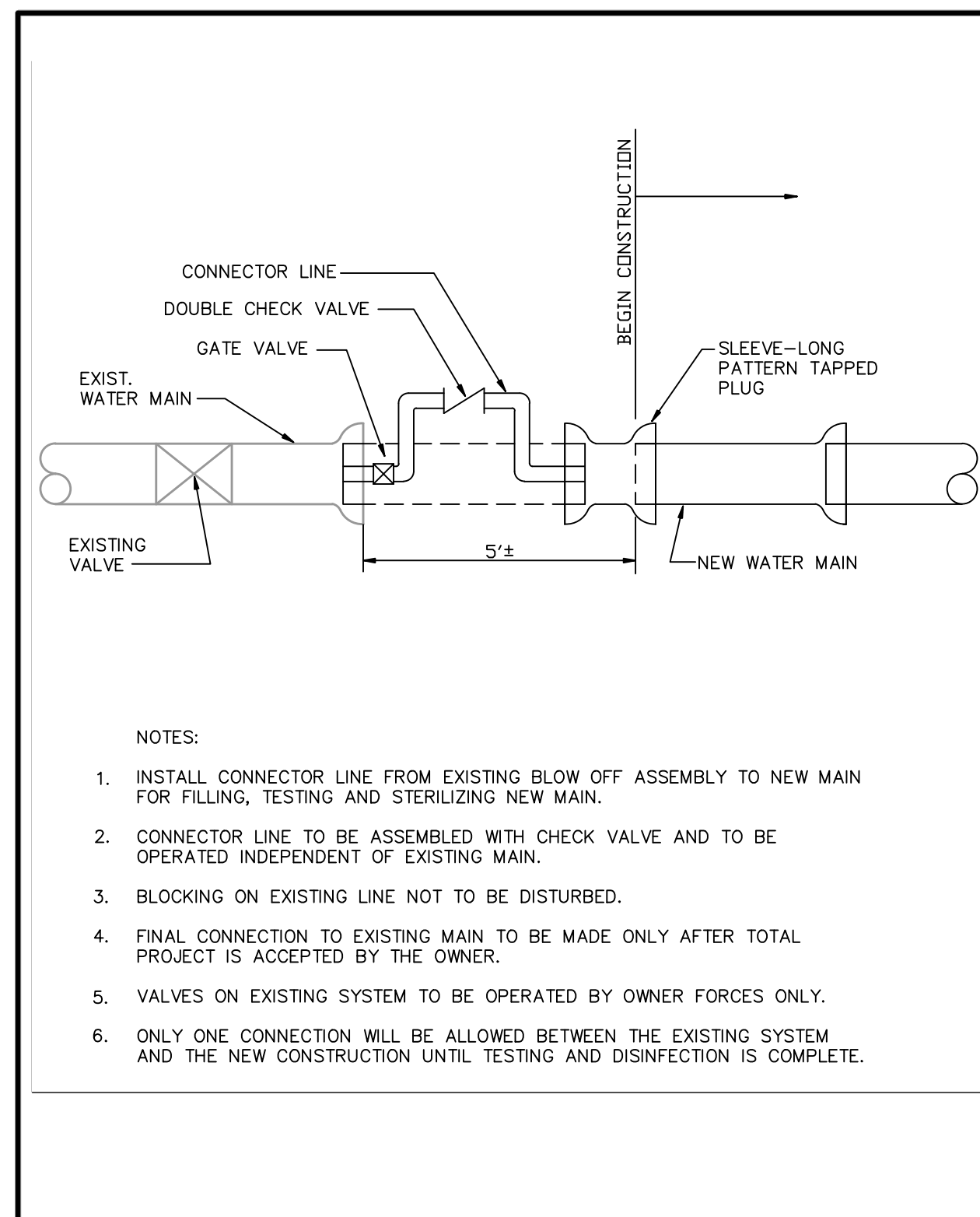
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WATER AND SEWER AUTHORITY OF CABARRUS COUNTY				FILE NAME: W3.0 DATE: 8/08			
REVISION NO.	DATE	BY	CHKD	REVISION NO.	DATE	BY	CHKD



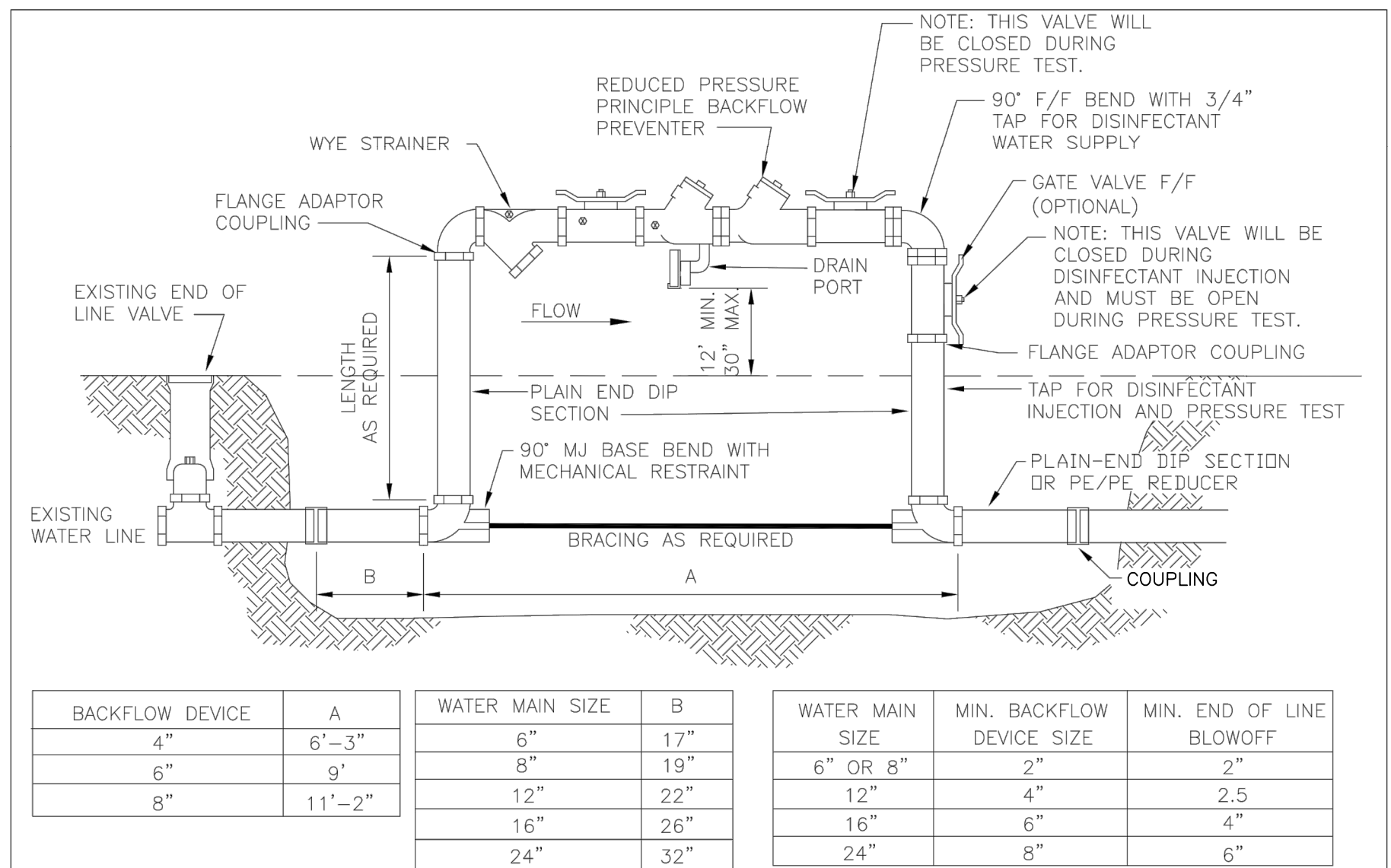
WSACC				RELATION OF WATER MAINS AND SANITARY SEWER MAINS TO STORM SEWERS			
WATER AND SEWER AUTHORITY OF CABARRUS COUNTY				FILE NAME: W4.0 DATE: 8/08			
REVISION NO.	DATE	BY	CHKD	REVISION NO.	DATE	BY	CHKD



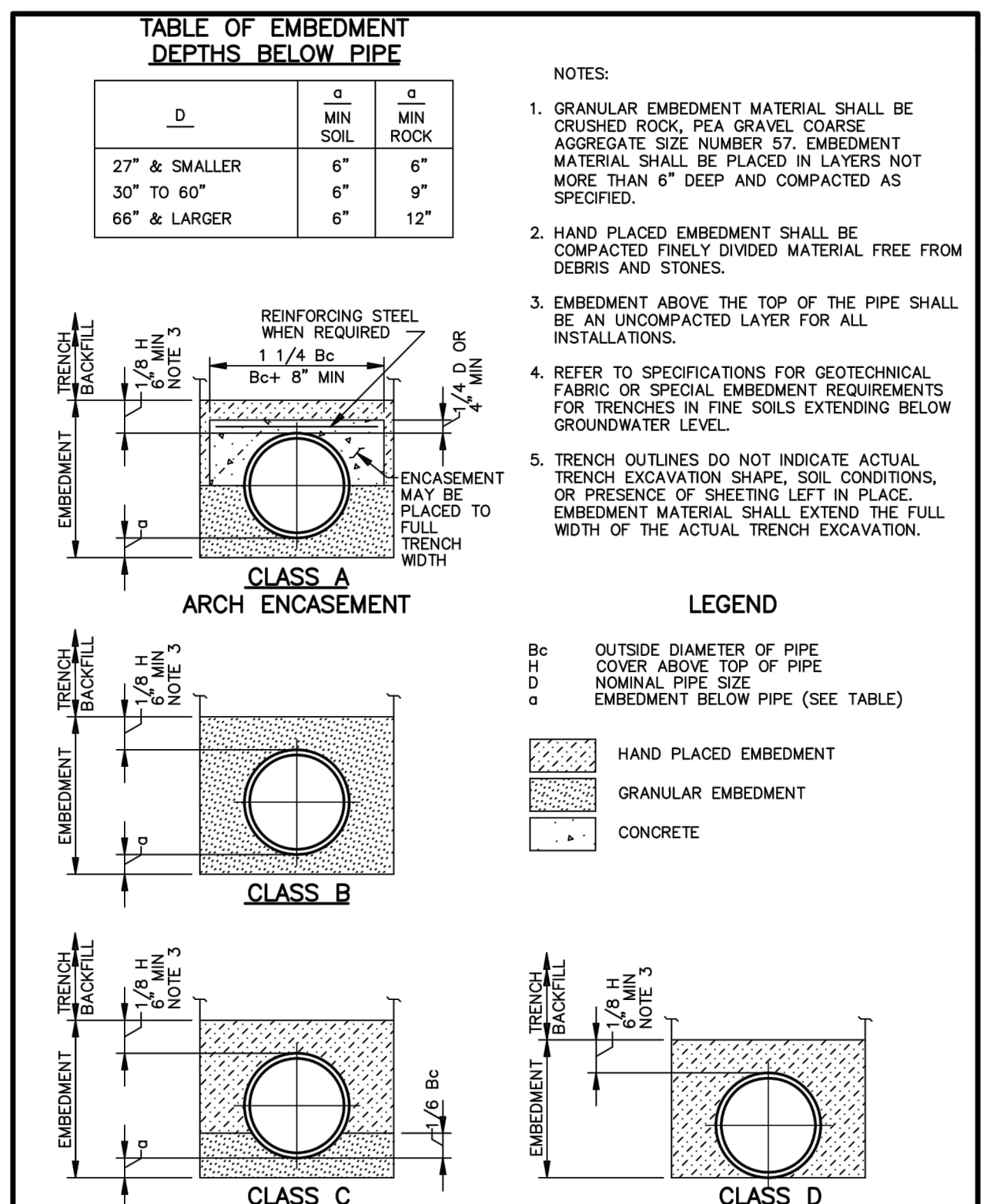
WSACC				BACKSIDE TAP			
WATER AND SEWER AUTHORITY OF CABARRUS COUNTY				FILE NAME: W12.0 DATE: 8/08			
REVISION NO.	DATE	BY	CHKD	REVISION NO.	DATE	BY	CHKD



WSACC				JUMPER CONNECTION			
WATER AND SEWER AUTHORITY OF CABARRUS COUNTY				FILE NAME: W 13.0 DATE: 2/08			
REVISION NO.	DATE	BY	CHKD	REVISION NO.	DATE	BY	CHKD



WSACC				BACKFLOW PREVENTOR BY-PASS CONNECTION FOR FILLING NEW WATER MAINS			
WATER AND SEWER AUTHORITY OF CABARRUS COUNTY				FILE NAME: W2.0 DATE: 8/08			
REVISION NO.	DATE	BY	CHKD	REVISION NO.	DATE	BY	CHKD

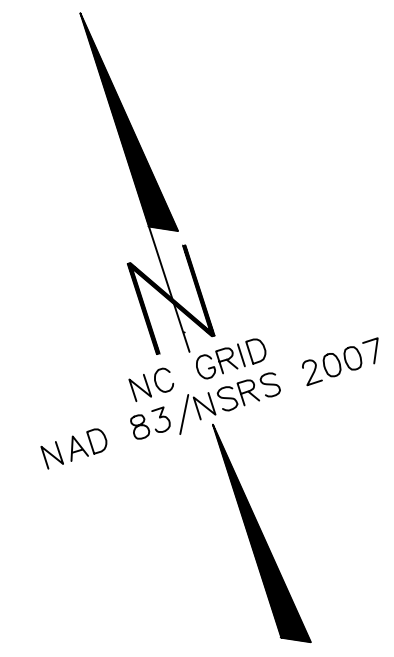
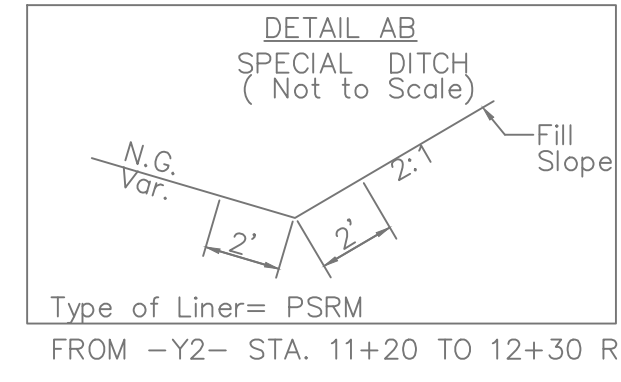
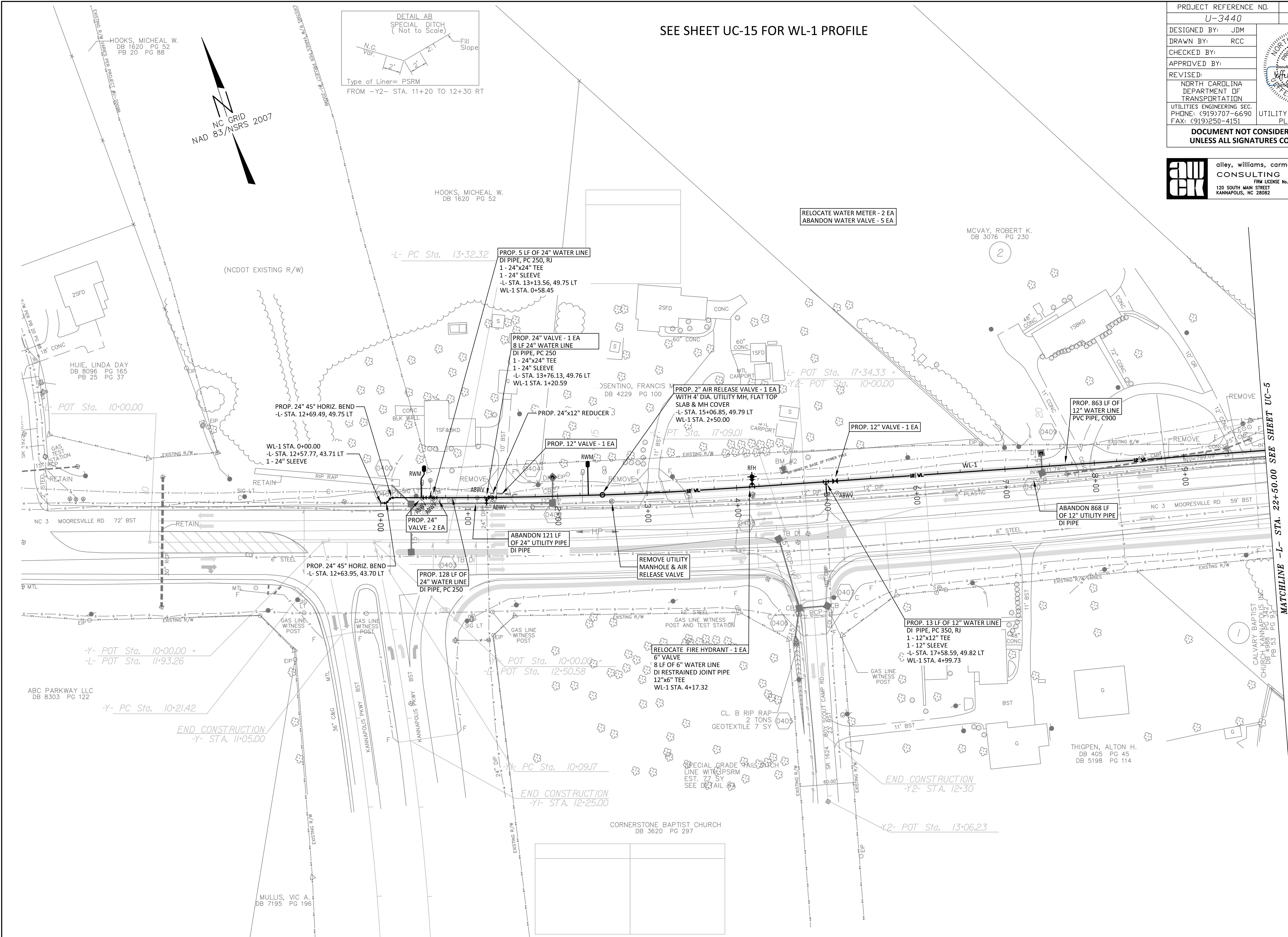


WSACC				EMBEDMENTS FOR MAINS			
WATER AND SEWER AUTHORITY OF CABARRUS COUNTY				FILE NAME: WS 1.0 DATE: 8/08			
REVISION NO.	DATE	BY	CHKD	REVISION NO.	DATE	BY	CHKD

SEE SHEET UC-15 FOR WL-1 PROFILE

PROJECT REFERENCE NO. U-3440	SHEET NO. UC-4
DESIGNED BY: JDM	
DRAWN BY: RCC	
CHECKED BY:	
APPROVED BY:	
REVISED:	6/29/2016
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	UTILITY CONSTRUCTION PLANS ONLY
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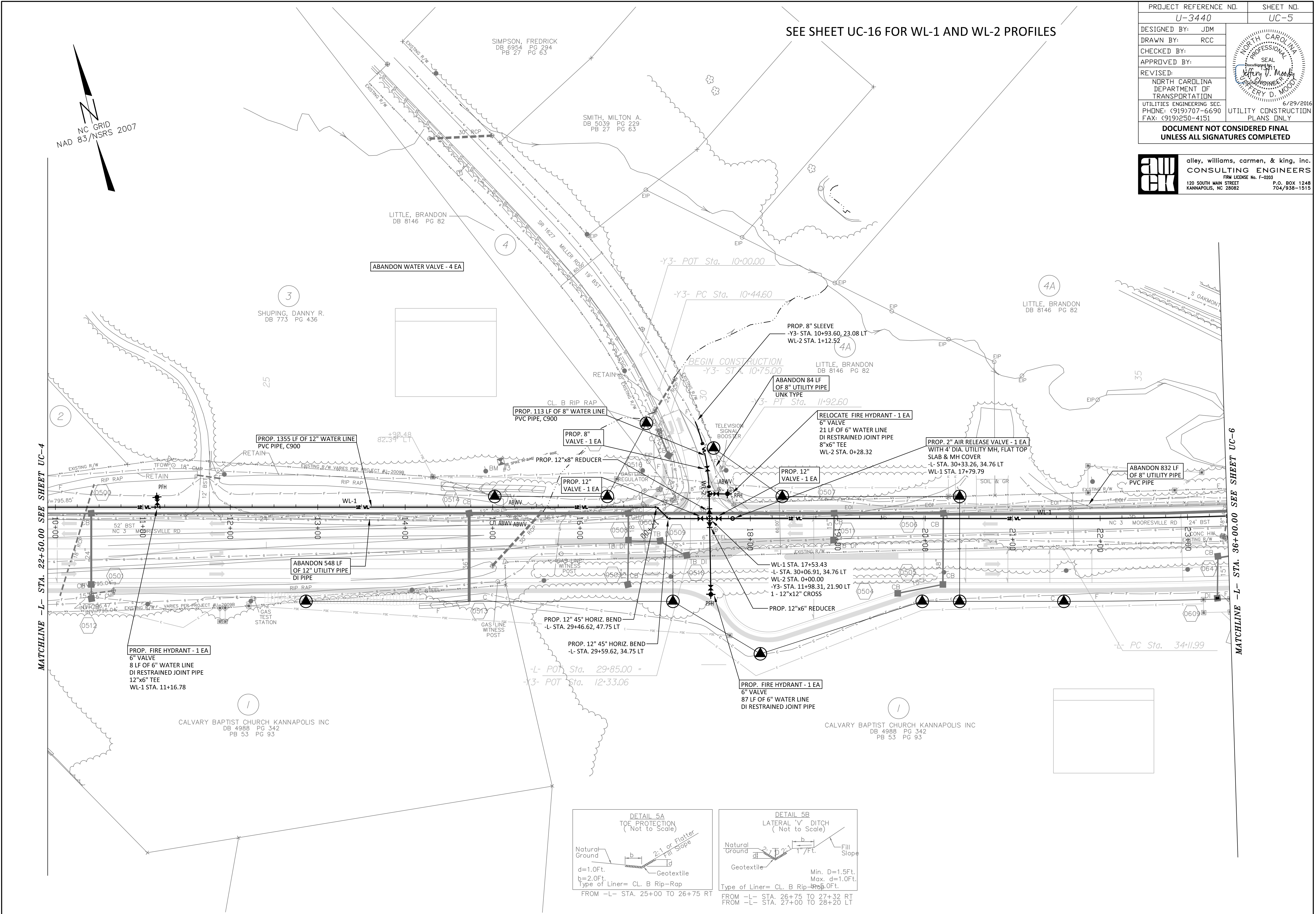
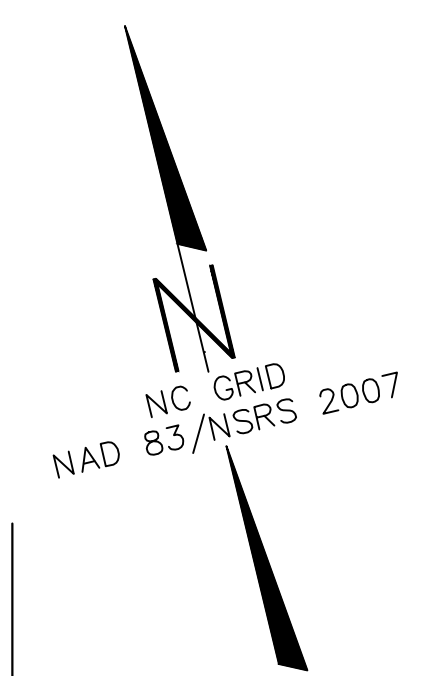


MATCHLINE -L- STA. 22+50.00 SEE SHEET UC-5

PROJECT REFERENCE NO. U-3440	SHEET NO. UC-5
DESIGNED BY: JDM	
DRAWN BY: RCC	
CHECKED BY:	
APPROVED BY:	
REVISED:	6/29/2016
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	UTILITY CONSTRUCTION PLANS ONLY
UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151	
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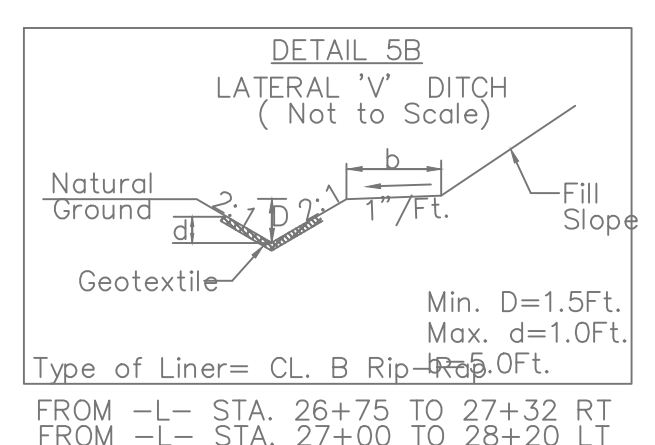
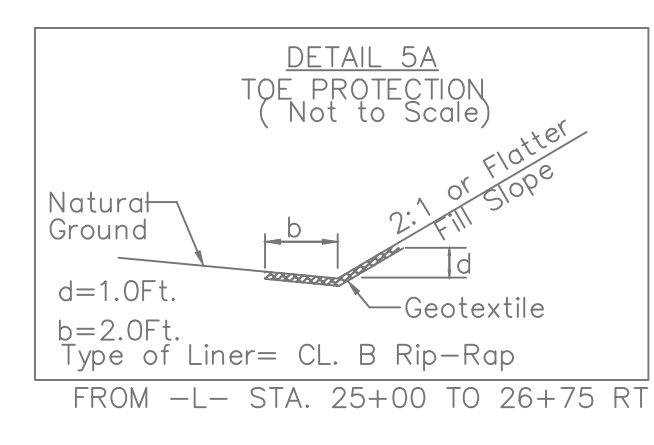
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SEE SHEET UC-16 FOR WL-1 AND WL-2 PROFILES



MATCHLINE -L- STA. 22+50.00 SEE SHEET UC-4

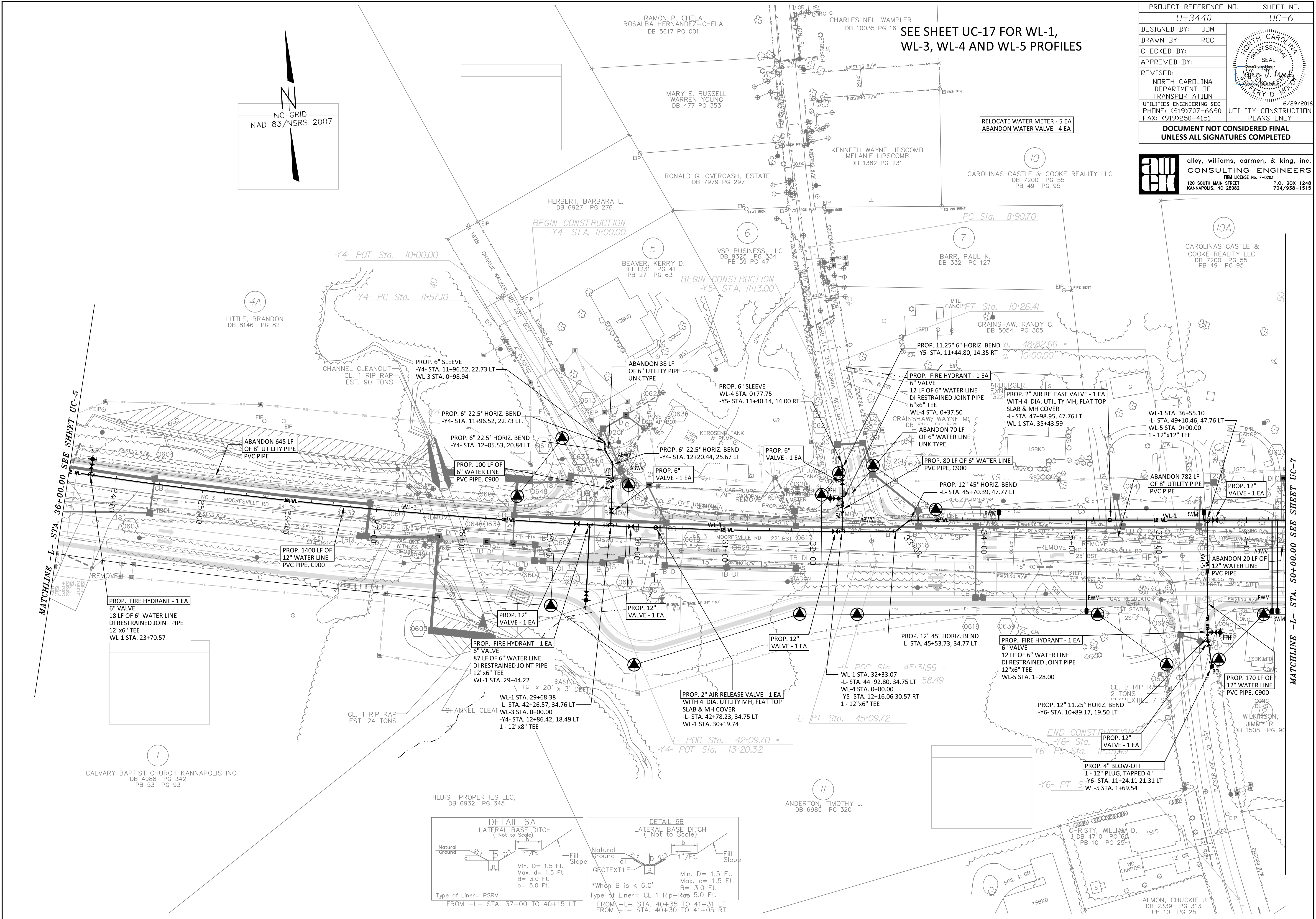
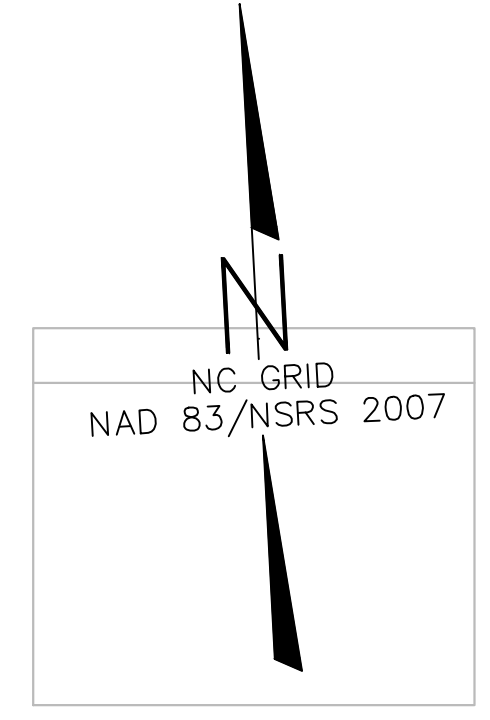
MATCHLINE -L- STA. 36+00.00 SEE SHEET UC-6



PROJECT REFERENCE NO. U-3440	SHEET NO. UC-6
DESIGNED BY: JDM	
DRAWN BY: RCC	
CHECKED BY:	
APPROVED BY:	
REVISED:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151
UTILITY CONSTRUCTION PLANS ONLY 6/29/2016	
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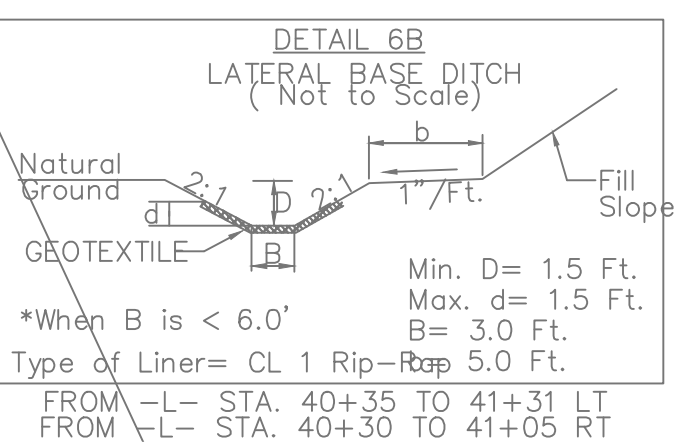
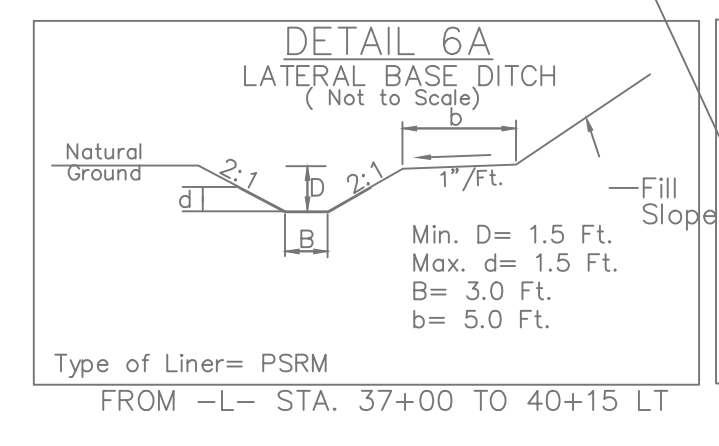
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 KANNAPOLIS, NC 28082 704/958-1515

SEE SHEET UC-17 FOR WL-1,
 WL-3, WL-4 AND WL-5 PROFILES



MATCHLINE -L- STA. 36+00.00 SEE SHEET UC-5

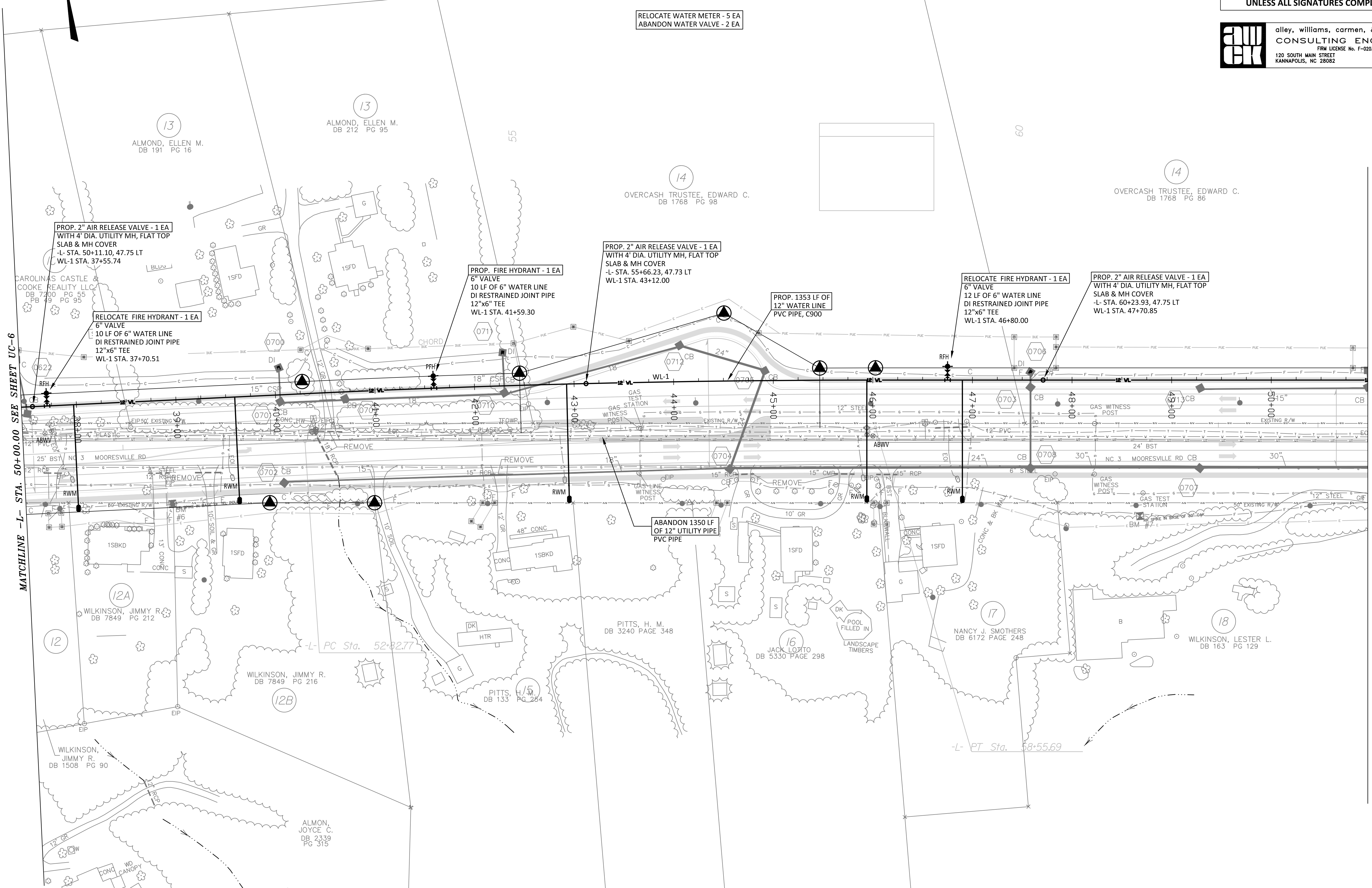
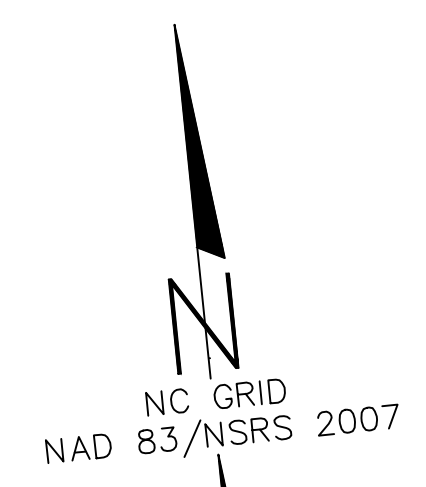
MATCHLINE -L- STA. 50+00.00 SEE SHEET UC-7



PROJECT REFERENCE NO. U-3440	SHEET NO. UC-7
DESIGNED BY: JDM	
DRAWN BY: RCC	
CHECKED BY:	
APPROVED BY:	
REVISED:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151
UTILITY CONSTRUCTION PLANS ONLY 6/29/2016	
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CONSULTING ENGINEERS
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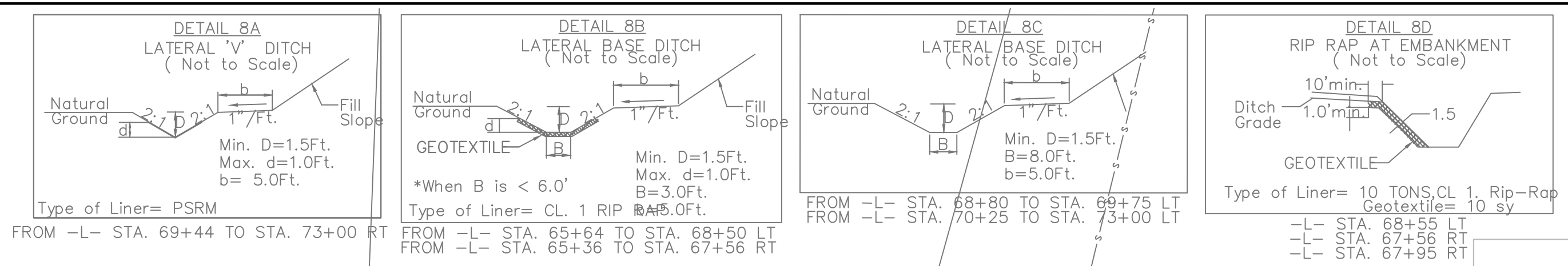
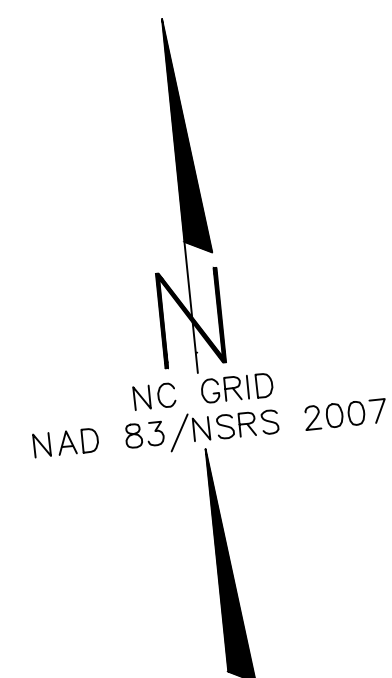
SEE SHEET UC-18 FOR WL-1 PROFILE



MATCHLINE -L- STA. 50+00.00 SEE SHEET UC-6

MATCHLINE -L- STA. 63+50.00 SEE SHEET UC-8

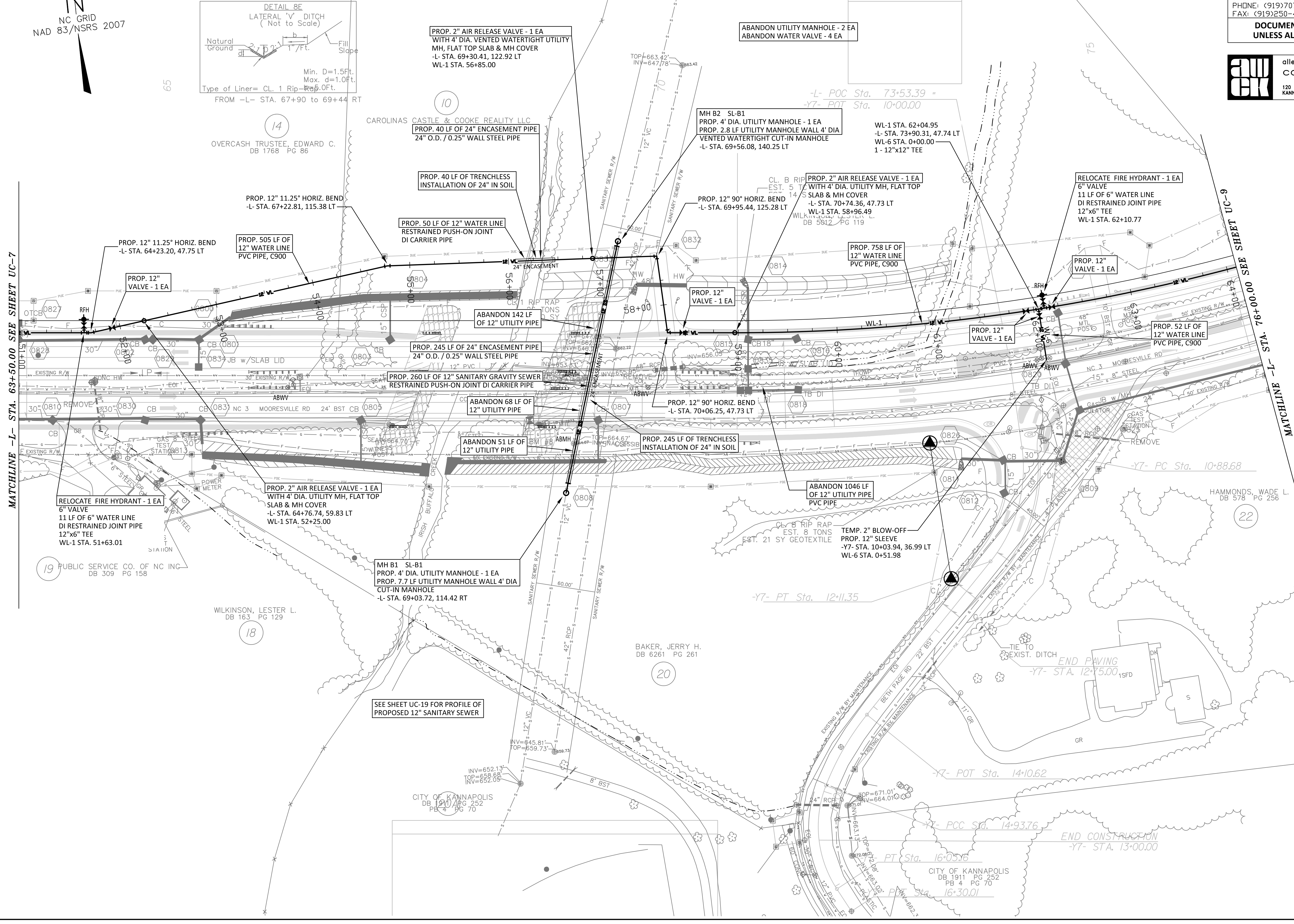
13 ALMOND, ELLEN M. DB 191 PG 16
 13 ALMOND, ELLEN M. DB 212 PG 95
 14 OVERCASH TRUSTEE, EDWARD C. DB 1768 PG 98
 14 OVERCASH TRUSTEE, EDWARD C. DB 1768 PG 86
 12A WILKINSON, JIMMY R. DB 7849 PG 212
 12B WILKINSON, JIMMY R. DB 7849 PG 216
 12 WILKINSON, JIMMY R. DB 1508 PG 90
 15 PITTS, H. M. DB 3240 PAGE 348
 15 PITTS, H. M. DB 133 PG 264
 16 JACK LOTTO DB 5330 PAGE 298
 17 NANCY J. SMOTHERS DB 6172 PAGE 248
 18 WILKINSON, LESTER L. DB 163 PG 129
 ALMON, JOYCE C. DB 2339 PG 315



SEE SHEET UC-19 FOR WL-1, WL-6 AND SL-B1 PROFILES

PROJECT REFERENCE NO.	U-3440	SHEET NO.	UC-8
DESIGNED BY:	JDM		
DRAWN BY:	RCC		
CHECKED BY:			
APPROVED BY:			
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		6/29/2016	
UTILITIES ENGINEERING SEC. PHONE: (919)707-6690		UTILITY CONSTRUCTION PLANS ONLY	
FAX: (919)250-4151			
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KANNAPOLIS, NC 28082 704/938-1515



MATCHLINE -L- STA. 63+50.00 SEE SHEET UC-7

MATCHLINE -L- STA. 76+00.00 SEE SHEET UC-9

SEE SHEET UC-19 FOR PROFILE OF PROPOSED 12" SANITARY SEWER

END PAVING -Y7- STA. 12+55.00

END CONSTRUCTION -Y7- STA. 13+00.00

NC GRID NAD 83/NSRS 2007

MATCHLINE -L- STA. 63+50.00 SEE SHEET UC-7

MATCHLINE -L- STA. 76+00.00 SEE SHEET UC-9

SEE SHEET UC-19 FOR PROFILE OF PROPOSED 12" SANITARY SEWER

END PAVING -Y7- STA. 12+55.00

END CONSTRUCTION -Y7- STA. 13+00.00

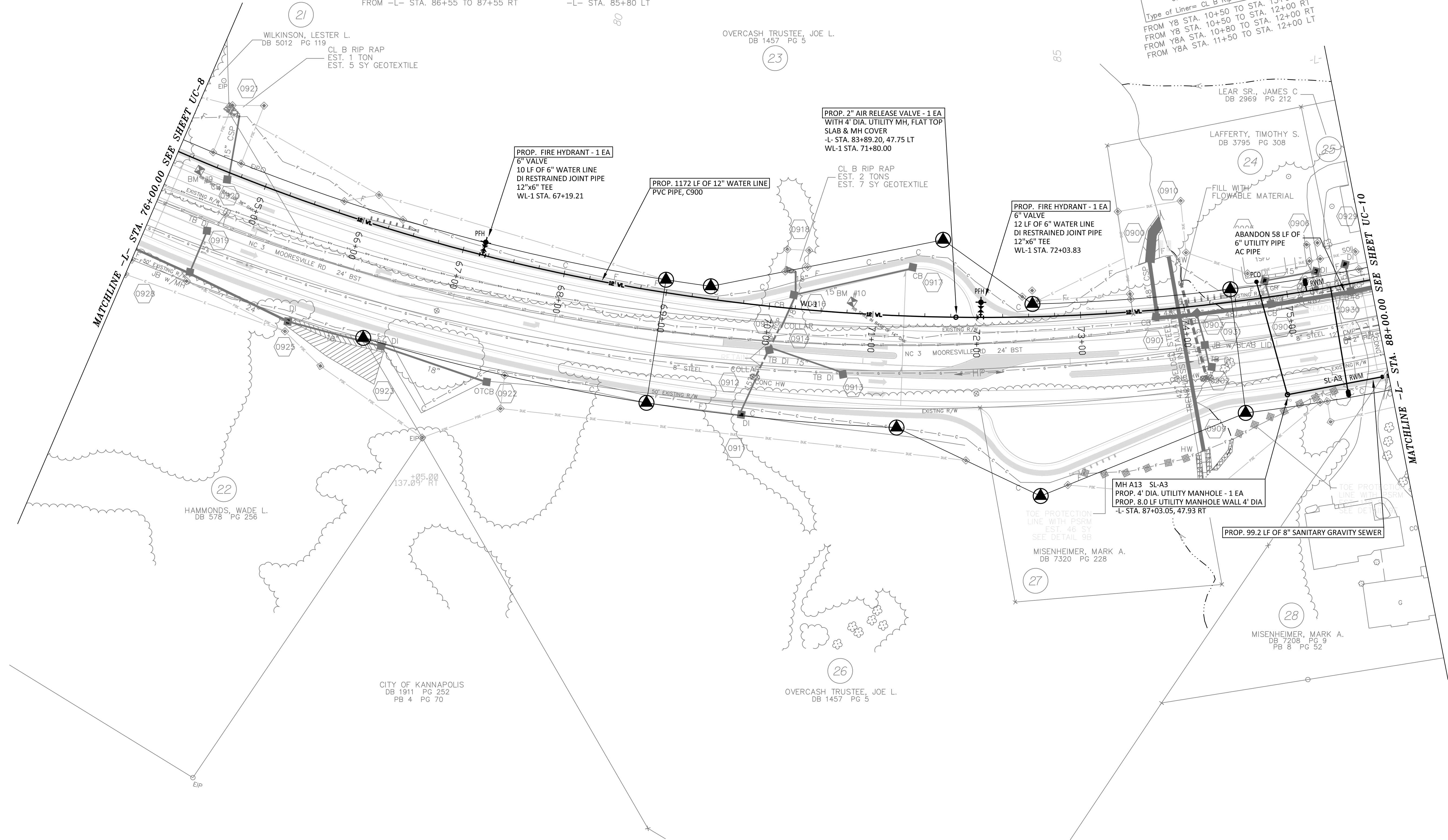
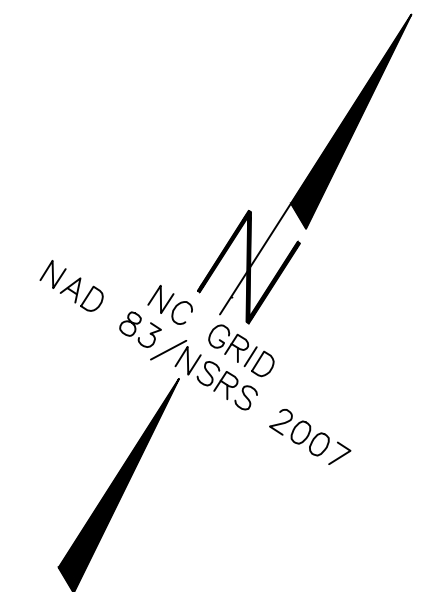
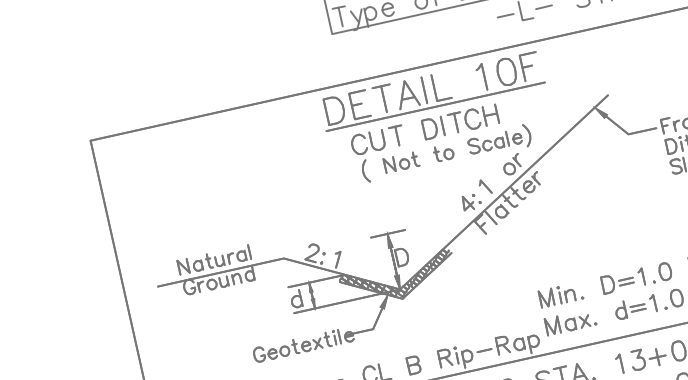
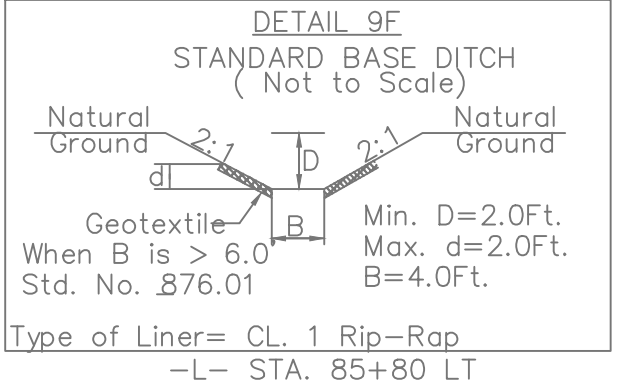
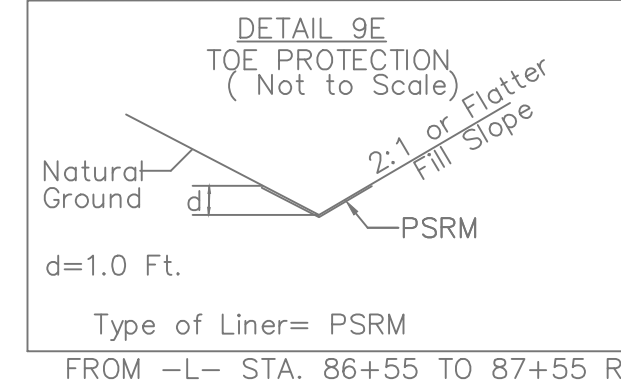
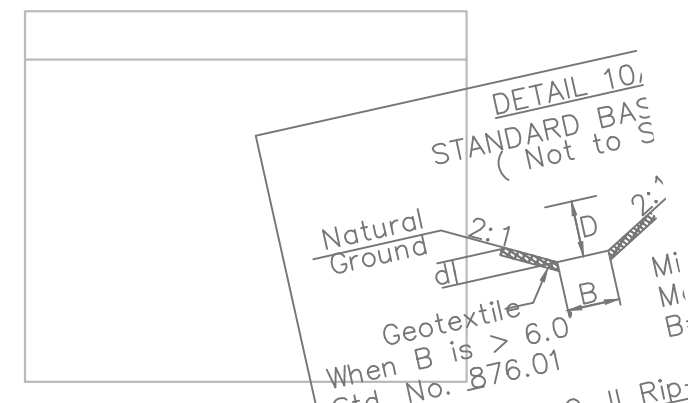
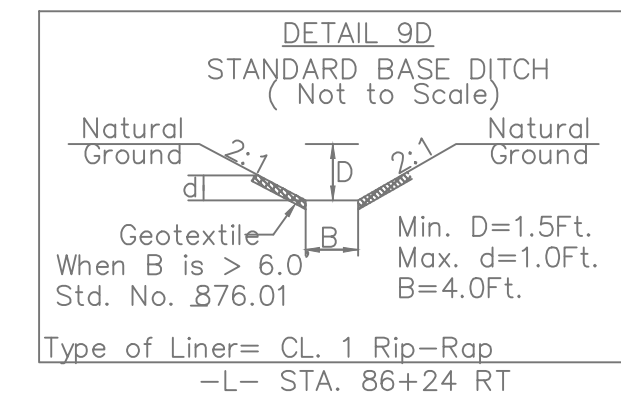
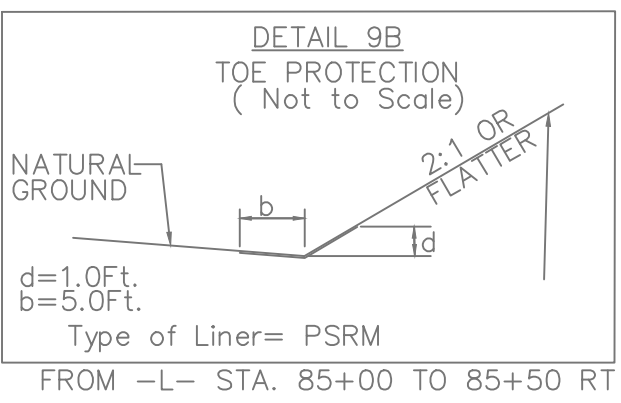
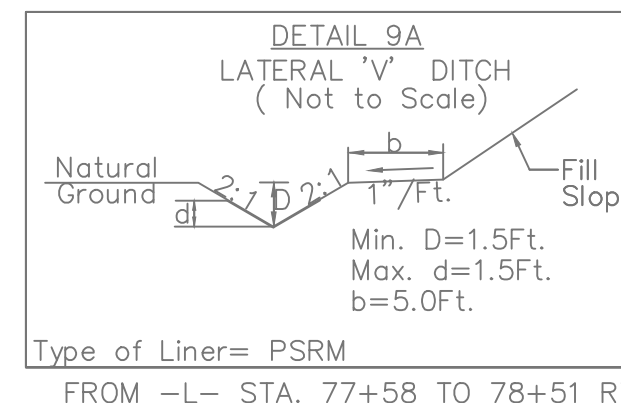
NC GRID NAD 83/NSRS 2007

SEE SHEET UC-20 FOR WL-1 AND SL-A3 PROFILES

PROJECT REFERENCE NO. U-3440	SHEET NO. UC-9
DESIGNED BY: JDM	
DRAWN BY: RCC	
CHECKED BY:	
APPROVED BY:	
REVISED:	6/29/2016
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151	
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KANNAPOLIS, NC 28082 704/938-1515



RELOCATE WATER METER - 2 EA
SANITARY SEWER CLEANOUT - 1 EA

MATCHLINE -L- STA. 76+00.00 SEE SHEET UC-8

MATCHLINE -L- STA. 88+00.00 SEE SHEET UC-10

HAMMONDS, WADE L.
DB 578 PG 256

CITY OF KANNAPOLIS
DB 1911 PG 252
PB 4 PG 70

OVERCASH TRUSTEE, JOE L.
DB 1457 PG 5

MISENHEIMER, MARK A.
DB 7208 PG 9
PB 8 PG 52

MISENHEIMER, MARK A.
DB 7320 PG 228

MH A13 SL-A3
PROP. 4' DIA. UTILITY MANHOLE - 1 EA
PROP. 8.0 LF UTILITY MANHOLE WALL 4' DIA
-L- STA. 87+03.05, 47.93 RT

PROP. 99.2 LF OF 8" SANITARY GRAVITY SEWER

PROP. FIRE HYDRANT - 1 EA
6" VALVE
12 LF OF 6" WATER LINE
DI RESTRAINED JOINT PIPE
12"x6" TEE
WL-1 STA. 72+03.83

PROP. 2" AIR RELEASE VALVE - 1 EA
WITH 4' DIA. UTILITY MH, FLAT TOP
SLAB & MH COVER
-L- STA. 83+89.20, 47.75 LT
WL-1 STA. 71+80.00

PROP. FIRE HYDRANT - 1 EA
6" VALVE
10 LF OF 6" WATER LINE
DI RESTRAINED JOINT PIPE
12"x6" TEE
WL-1 STA. 67+19.21

PROP. 1172 LF OF 12" WATER LINE
PVC PIPE, C900

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GEOTEXTILE

WILKINSON, LESTER L.
DB 5012 PG 119
CL B RIP RAP
EST. 1 TON
EST. 5 SY GEOTEXTILE

OVERCASH TRUSTEE, JOE L.
DB 1457 PG 5

LEAR SR, JAMES C
DB 2969 PG 212

LAFFERTY, TIMOTHY S.
DB 3795 PG 308

22

21

23

26

27

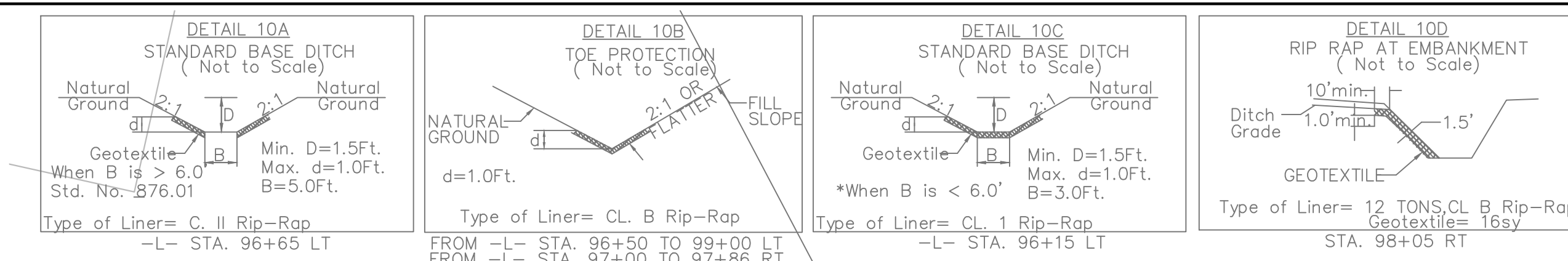
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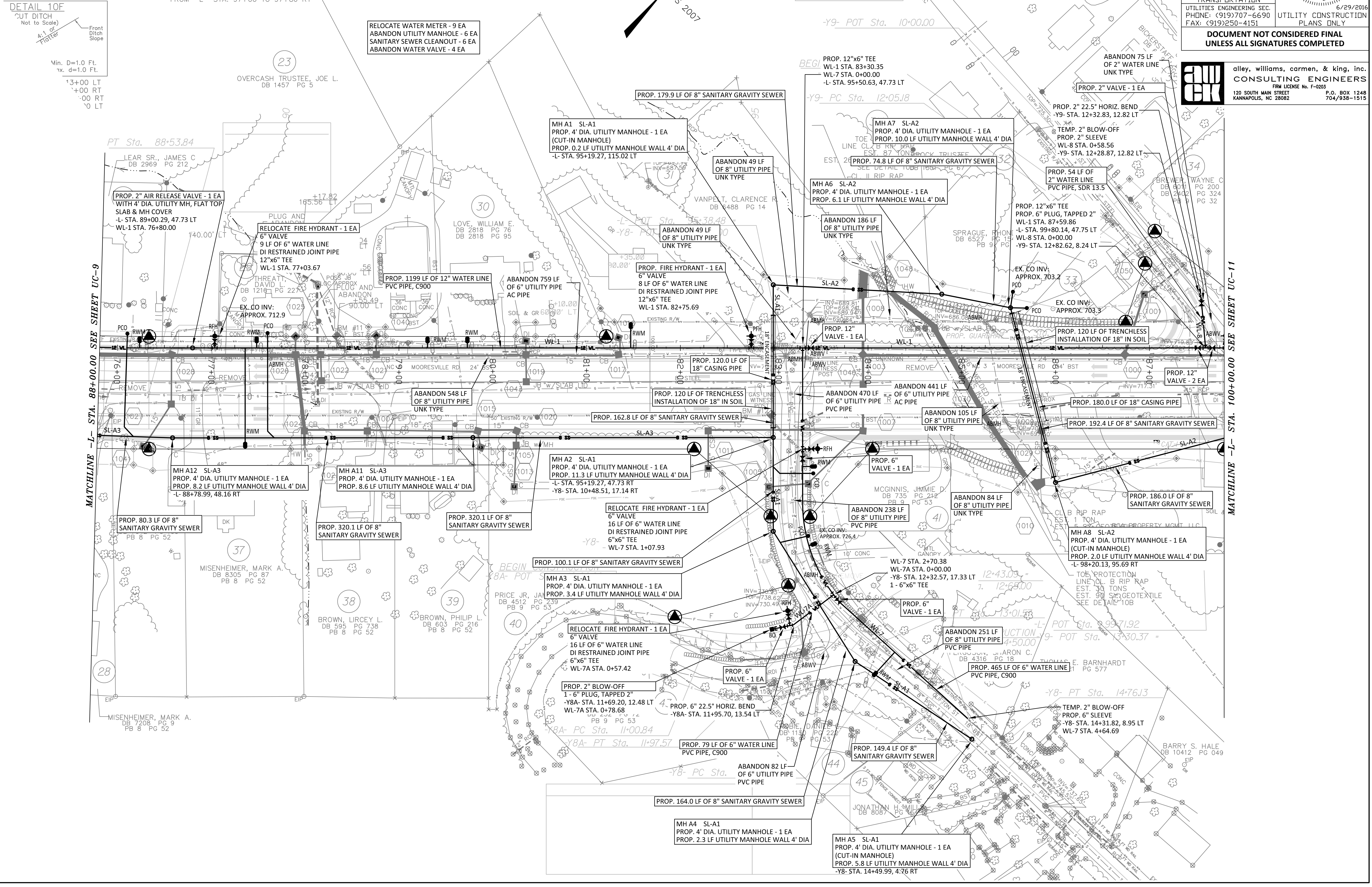
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SEE SHEET UC-21 FOR WL-1, WL-7, WL-7A, AND WL-8 PROFILES
 SEE SHEET UC-22 FOR SL-A1, SL-A2 AND SL-A3 PROFILES

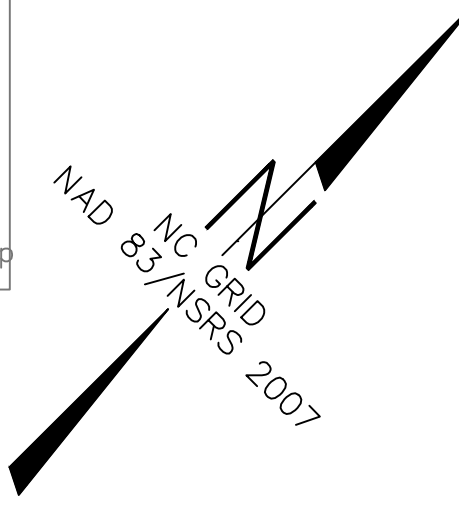
PROJECT REFERENCE NO.	U-3440	SHEET NO.	UC-10
DESIGNED BY:	JDM		
DRAWN BY:	RCC		
CHECKED BY:			
APPROVED BY:			
REVISED:		NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151	
6/29/2016			
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 CONSULTING ENGINEERS
 FIRM LICENSE No. F-0203
 120 SOUTH MAIN STREET, P.O. BOX 1248
 KANNAPOLIS, NC 28082 704/958-1515



MATCHLINE -L- STA. 88+00.00 SEE SHEET UC-9

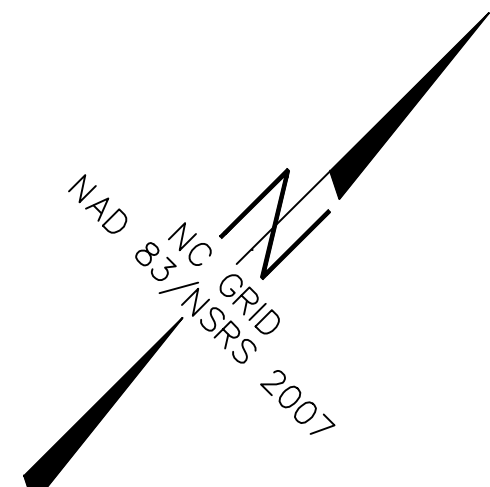
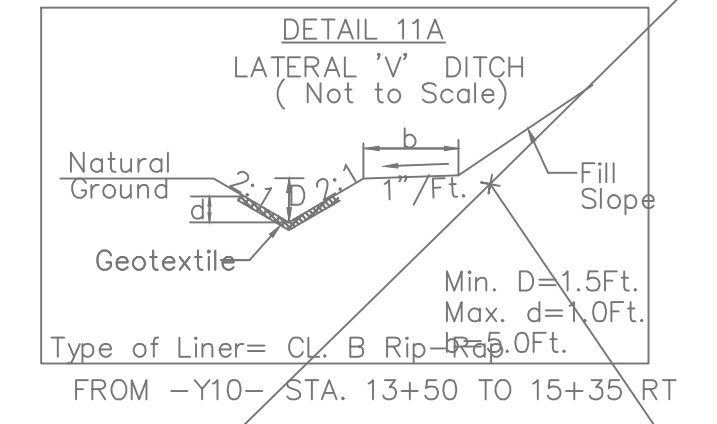
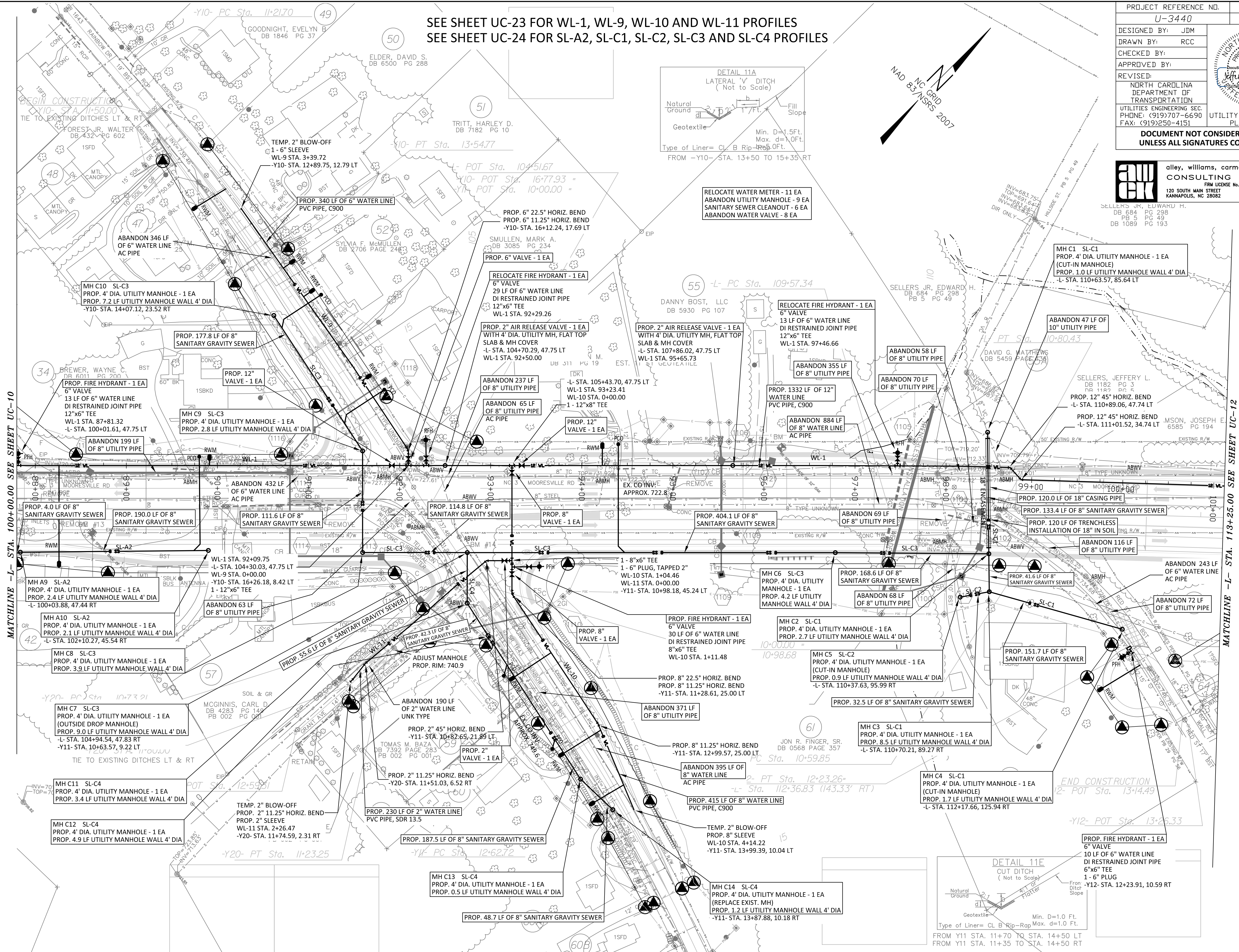
MATCHLINE -L- STA. 100+00.00 SEE SHEET UC-11



SEE SHEET UC-23 FOR WL-1, WL-9, WL-10 AND WL-11 PROFILES
 SEE SHEET UC-24 FOR SL-A2, SL-C1, SL-C2, SL-C3 AND SL-C4 PROFILES

PROJECT REFERENCE NO. U-3440	SHEET NO. UC-11
DESIGNED BY: JDM	
DRAWN BY: RCC	
CHECKED BY:	
APPROVED BY:	
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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RELOCATE WATER METER - 11 EA
 ABANDON UTILITY MANHOLE - 9 EA
 SANITARY SEWER CLEANOUT - 6 EA
 ABANDON WATER VALVE - 8 EA

MH C1 SL-C1
 PROP. 4' DIA. UTILITY MANHOLE - 1 EA
 (CUT-IN MANHOLE)
 PROP. 1.0 LF UTILITY MANHOLE WALL 4' DIA
 -L STA. 110+63.57, 85.64 LT

ABANDON 47 LF OF
 10" UTILITY PIPE

PROP. 12" 45° HORIZ. BEND
 -L STA. 110+89.06, 47.74 LT

PROP. 12" 45° HORIZ. BEND
 -L STA. 111+01.52, 34.74 LT

PROP. 120.0 LF OF 18" CASING PIPE

PROP. 133.4 LF OF 8" SANITARY GRAVITY SEWER

PROP. 120 LF OF TRENCHLESS
 INSTALLATION OF 18" IN SOIL

ABANDON 116 LF OF
 8" UTILITY PIPE

ABANDON 243 LF OF
 6" WATER LINE
 AC PIPE

ABANDON 72 LF OF
 8" UTILITY PIPE

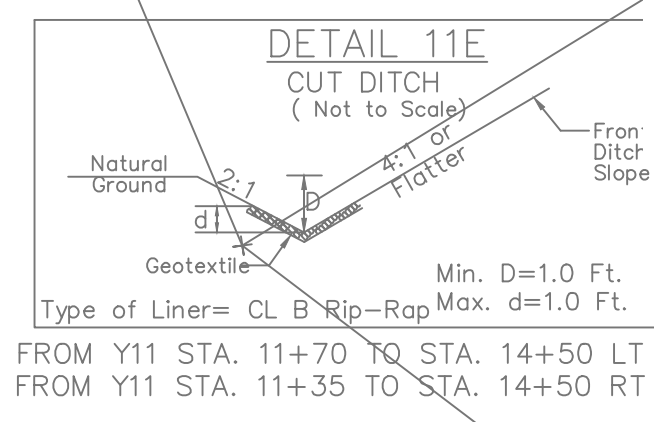
PROP. 41.6 LF OF 8"
 SANITARY GRAVITY SEWER

PROP. 151.7 LF OF 8"
 SANITARY GRAVITY SEWER

PROP. 151.7 LF OF 8"
 SANITARY GRAVITY SEWER

MH C4 SL-C1
 PROP. 4' DIA. UTILITY MANHOLE - 1 EA
 (CUT-IN MANHOLE)
 PROP. 1.7 LF UTILITY MANHOLE WALL 4' DIA
 -L STA. 112+17.66, 125.94 RT

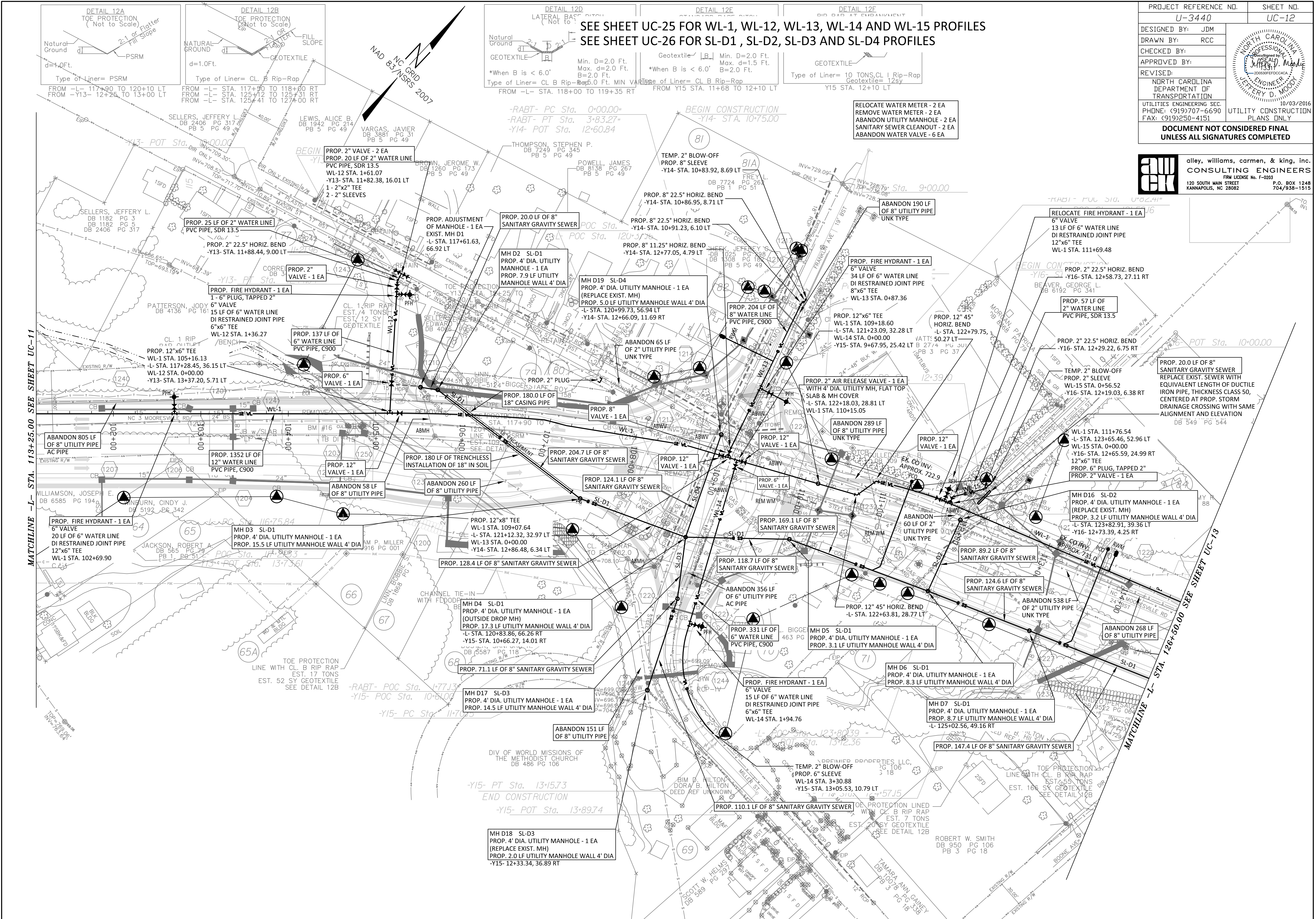
PROP. FIRE HYDRANT - 1 EA
 6" VALVE
 10 LF OF 6" WATER LINE
 DI RESTRAINED JOINT PIPE
 6"x6" TEE
 1-6" PLUG
 -Y12 STA. 12+23.91, 10.59 RT



PROJECT REFERENCE NO.	U-3440	SHEET NO.	UC-12
DESIGNED BY:	JDM		
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SEE SHEET UC-25 FOR WL-1, WL-12, WL-13, WL-14 AND WL-15 PROFILES
 SEE SHEET UC-26 FOR SL-D1, SL-D2, SL-D3 AND SL-D4 PROFILES



MATCHLINE - L- STA. 113+25.00 SEE SHEET UC-11

MATCHLINE - L- STA. 126+50.00 SEE SHEET UC-13

MH D18 SL-D3
 PROP. 4' DIA. UTILITY MANHOLE - 1 EA
 (REPLACE EXIST. MH)
 PROP. 2.0 LF UTILITY MANHOLE WALL 4' DIA
 -Y15- 12+33.34, 36.89 RT

-Y15- PT Sta. 13+57.3
 END CONSTRUCTION
 -Y15- POT Sta. 13+89.74

MH D17 SL-D3
 PROP. 4' DIA. UTILITY MANHOLE - 1 EA
 PROP. 14.5 LF UTILITY MANHOLE WALL 4' DIA
 -Y15- 12+02.56, 49.16 RT

MH D6 SL-D1
 PROP. 4' DIA. UTILITY MANHOLE - 1 EA
 PROP. 8.3 LF UTILITY MANHOLE WALL 4' DIA
 -L- 125+02.56, 49.16 RT

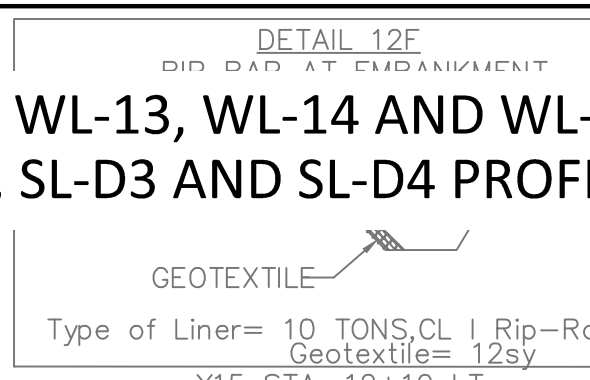
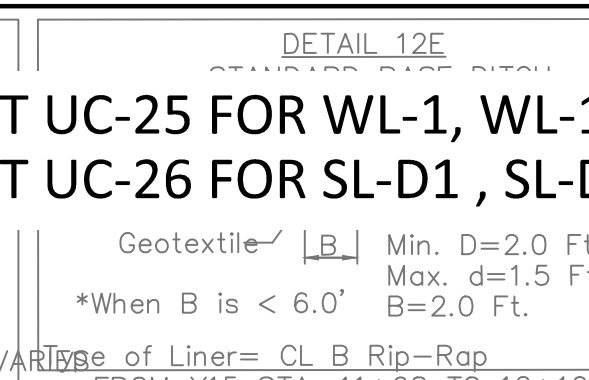
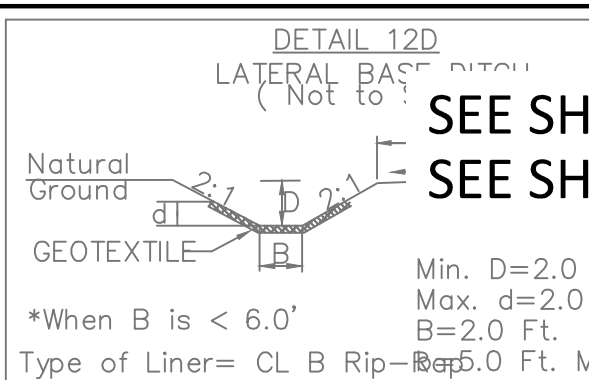
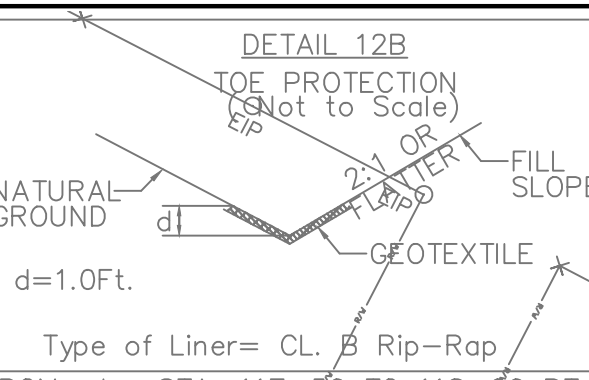
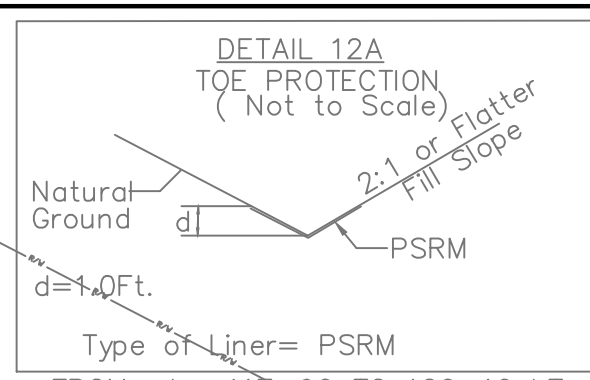
MH D5 SL-D1
 PROP. 4' DIA. UTILITY MANHOLE - 1 EA
 PROP. 3.1 LF UTILITY MANHOLE WALL 4' DIA

MH D4 SL-D1
 PROP. 4' DIA. UTILITY MANHOLE - 1 EA
 (OUTSIDE DROP MH)
 PROP. 17.3 LF UTILITY MANHOLE WALL 4' DIA
 -L- STA. 120+83.86, 66.26 RT
 -Y15- STA. 10+66.27, 14.01 RT

MH D3 SL-D1
 PROP. 4' DIA. UTILITY MANHOLE - 1 EA
 PROP. 15.5 LF UTILITY MANHOLE WALL 4' DIA
 -L- STA. 117+28.45, 36.15 LT
 -Y13- STA. 13+37.20, 5.71 LT

MH D2 SL-D1
 PROP. 4' DIA. UTILITY MANHOLE - 1 EA
 PROP. 7.9 LF UTILITY MANHOLE WALL 4' DIA

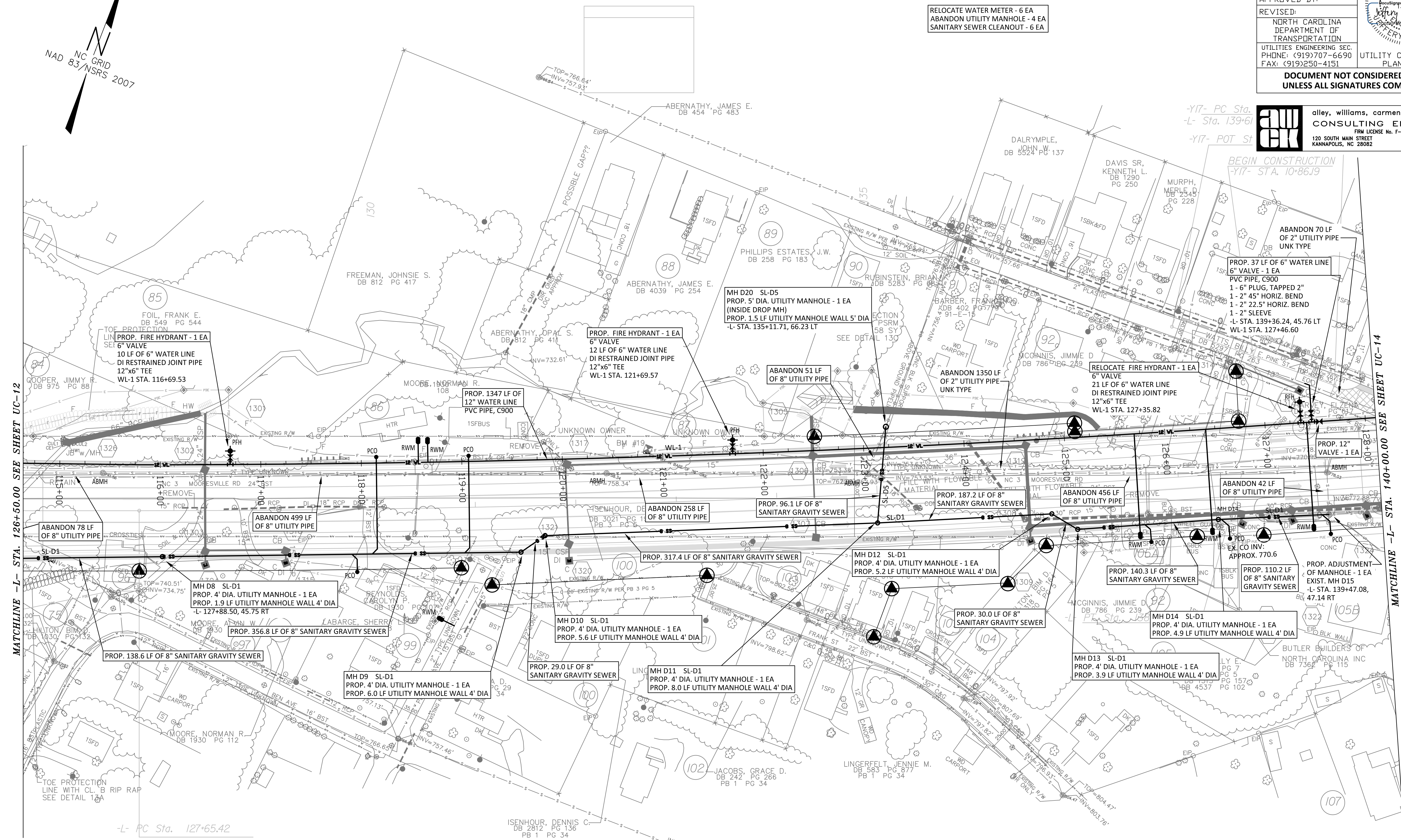
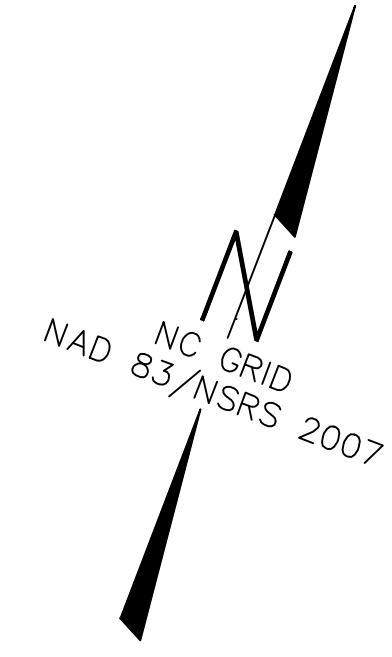
PROP. 2" VALVE - 2 EA
 PROP. 20 LF OF 2" WATER LINE
 PVC PIPE, SDR 13.5
 WL-12 STA. 1+61.07
 -Y13- STA. 11+82.38, 16.01 LT
 1- 2"x2" TEE
 2- 2" SLEEVES



SEE SHEET UC-27 FOR WL-1, SL-D1 AND SL-D5 PROFILES

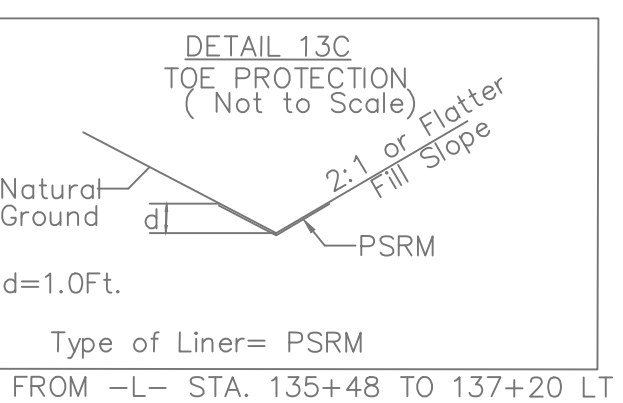
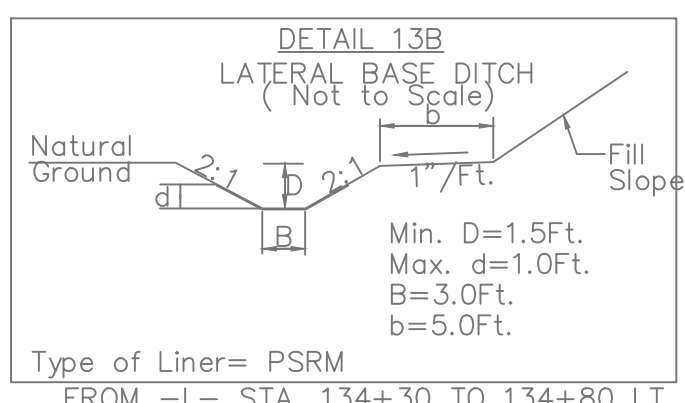
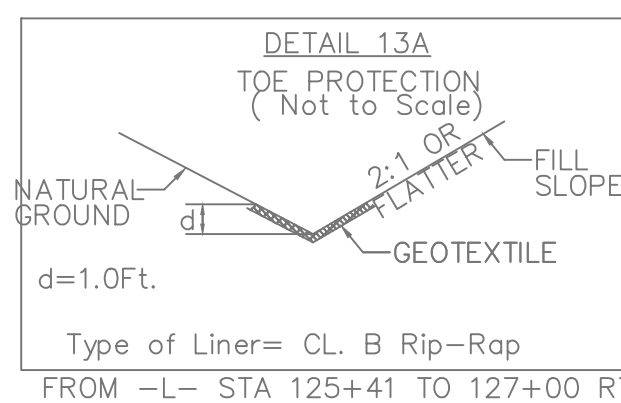
PROJECT REFERENCE NO. U-3440	SHEET NO. UC-13
DESIGNED BY: JDM	
DRAWN BY: RCC	
CHECKED BY:	
APPROVED BY:	
REVISED:	
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MATCHLINE -L- STA. 126+50.00 SEE SHEET UC-12

MATCHLINE -L- STA. 140+00.00 SEE SHEET UC-14



RELOCATE WATER METER - 6 EA
 ABANDON UTILITY MANHOLE - 4 EA
 SANITARY SEWER CLEANOUT - 6 EA

-Y17- PC Sta.
-L- Sta. 139+61
-Y17- POT ST

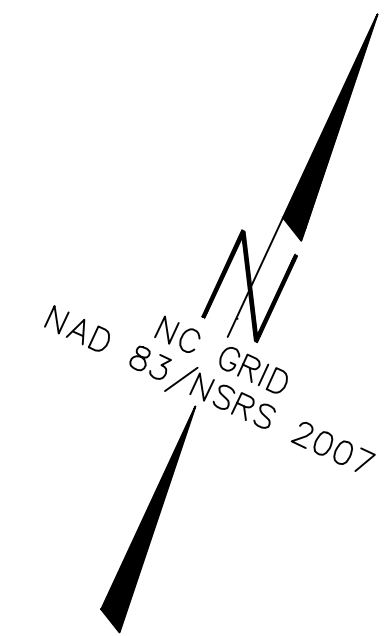
BEGIN CONSTRUCTION
-Y17- STA. 10+86.19

-L- PC Sta. 127+65.42

ISENHOUR, DENNIS C.
DB 2812 PG 136
PB 1 PG 34

INV=769.31
TOP=774.13
INV=769.52

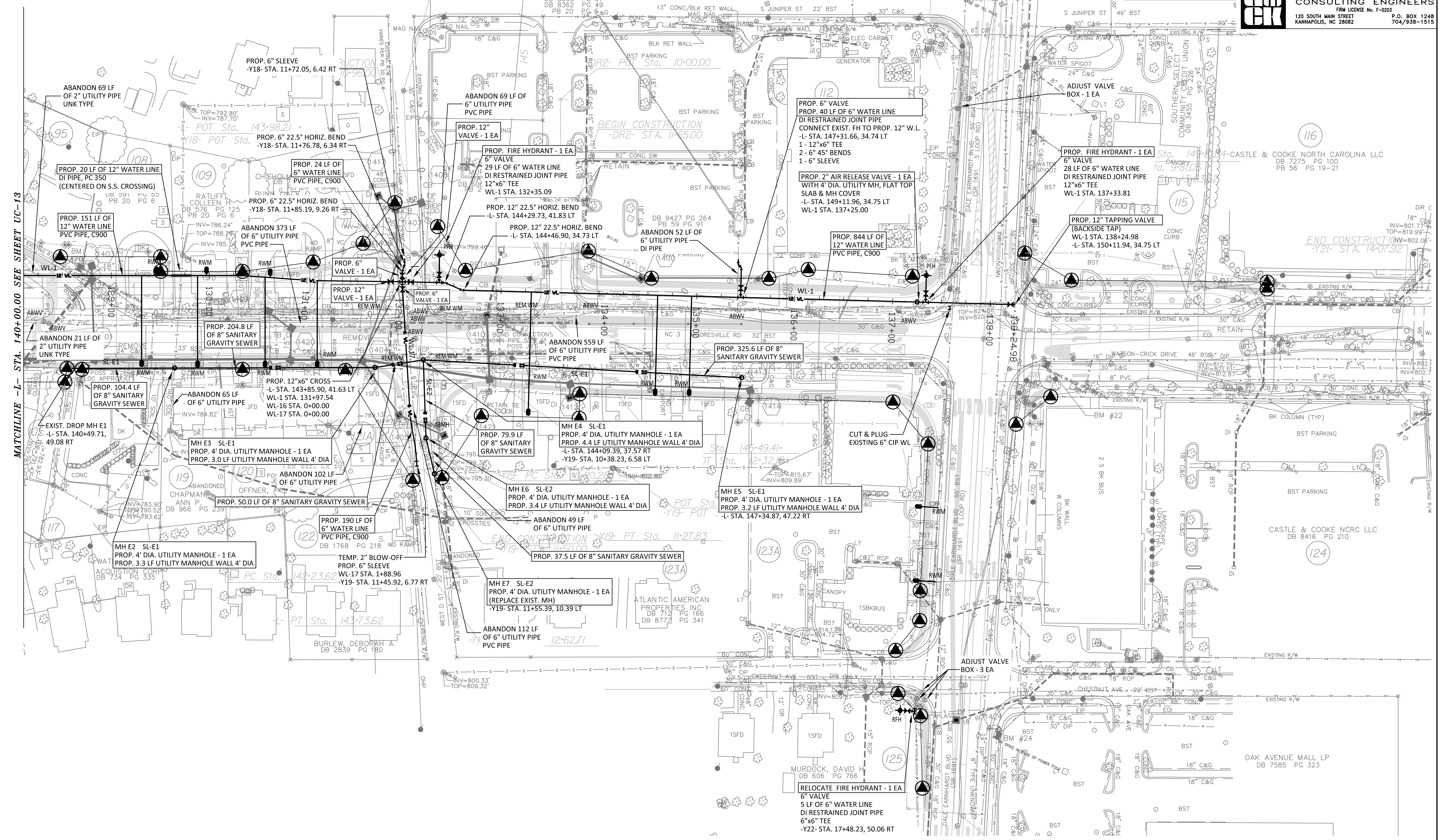
SEE SHEET UC-28 FOR WL-1, WL-16, WL-17, SL-E1 AND SL-E2 PROFILES



RELOCATE WATER METER - 10 EA
REMOVE WATER METER - 5 EA
ABANDON UTILITY MANHOLE - 1 EA
ABANDON WATER VALVE - 8 EA

PROJECT REFERENCE NO.	U-3440	SHEET NO.	UC-14
DESIGNED BY:	JDM		
DRAWN BY:	RCC		
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REVISION:			
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MATCHLINE - L - STA. 140+00.00 SEE SHEET UC-13

MURDOCK, DAVID H. DB 606 PG 766

OAK AVENUE MALL LP DB 7585 PG 323

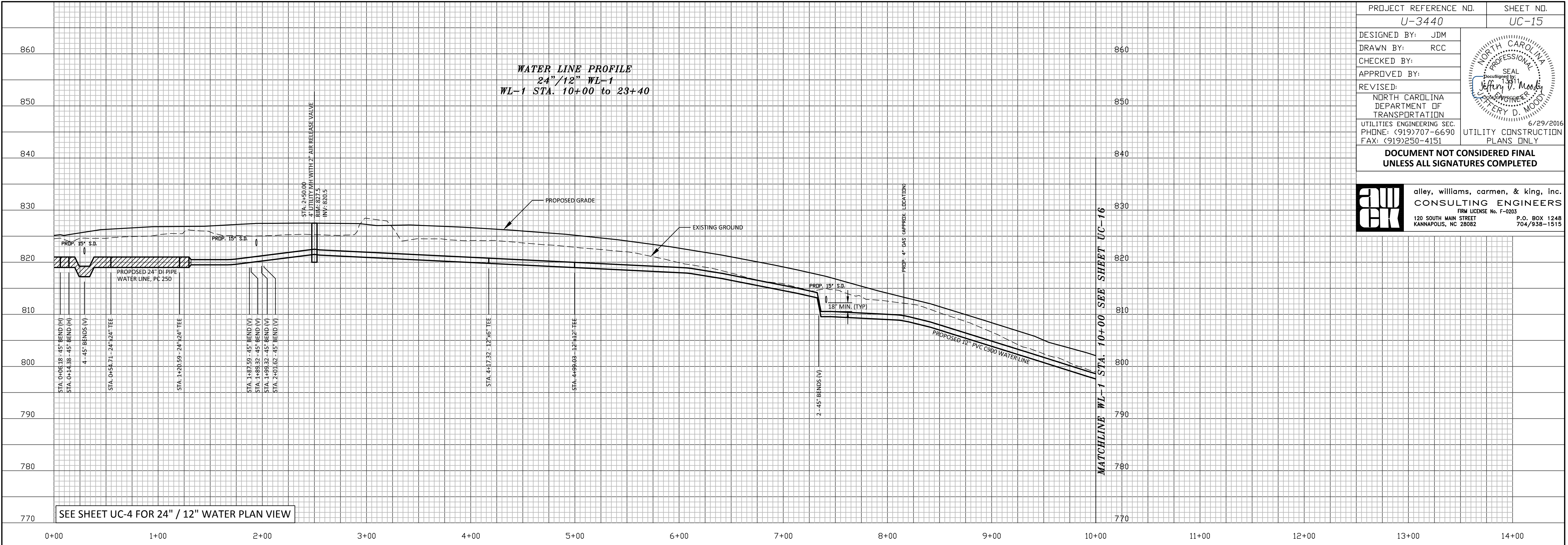
PROJECT REFERENCE NO. U-3440	SHEET NO. UC-15
DESIGNED BY: JDM	
DRAWN BY: RCC	
CHECKED BY:	
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WATER LINE PROFILE
 24" / 12" WL-1
 WL-1 STA. 10+00 to 23+40

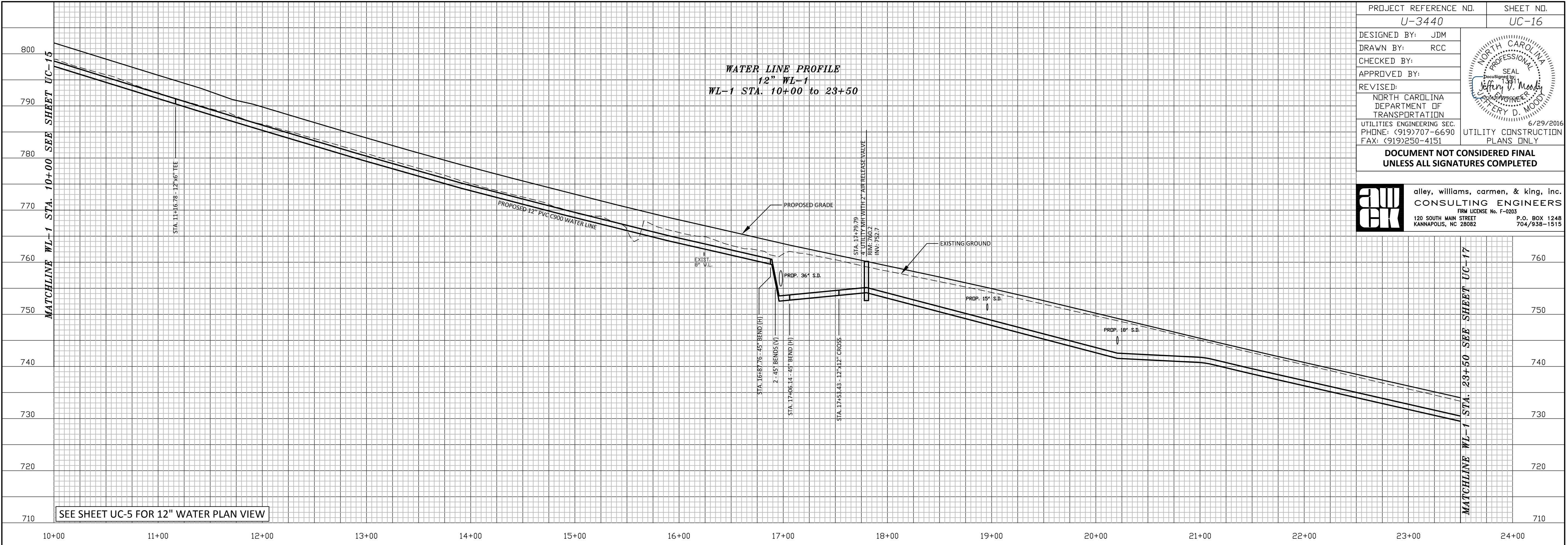


SEE SHEET UC-4 FOR 24" / 12" WATER PLAN VIEW

PROJECT REFERENCE NO. U-3440	SHEET NO. UC-16
DESIGNED BY: JDM	
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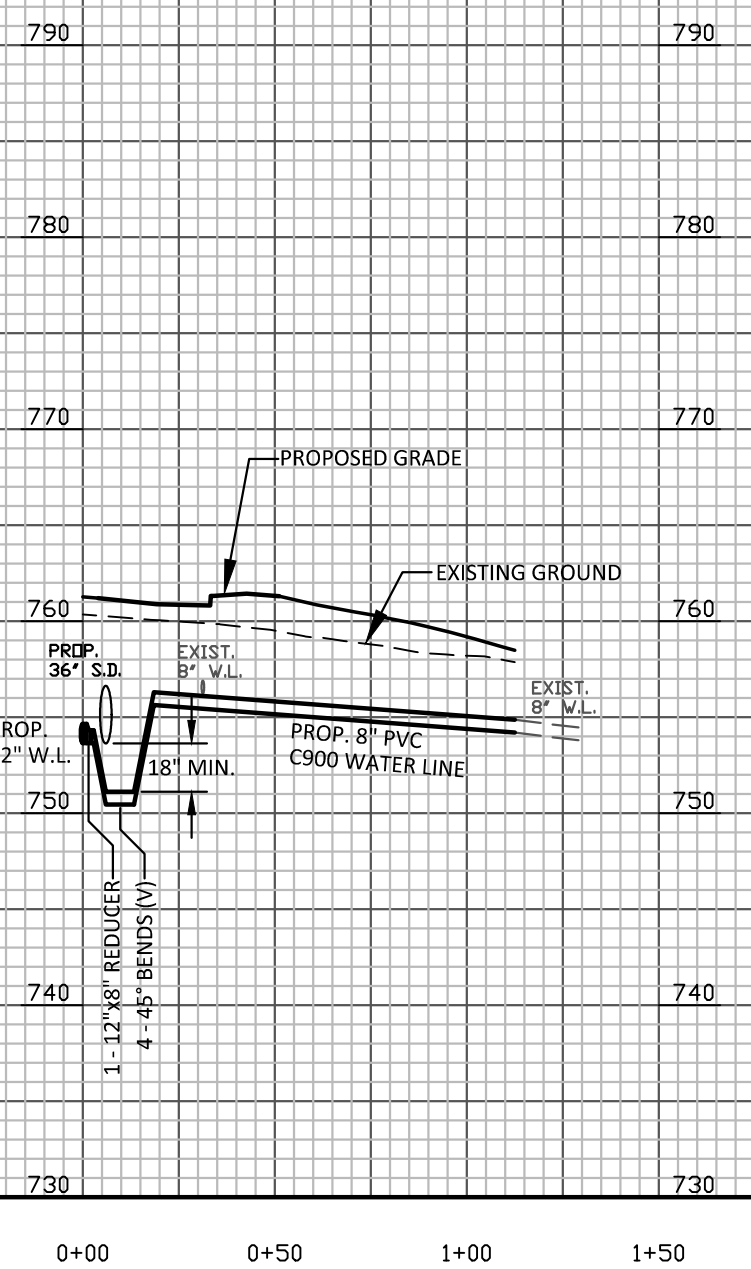
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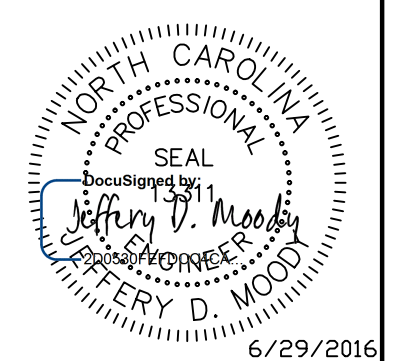


SEE SHEET UC-5 FOR 12" WATER PLAN VIEW

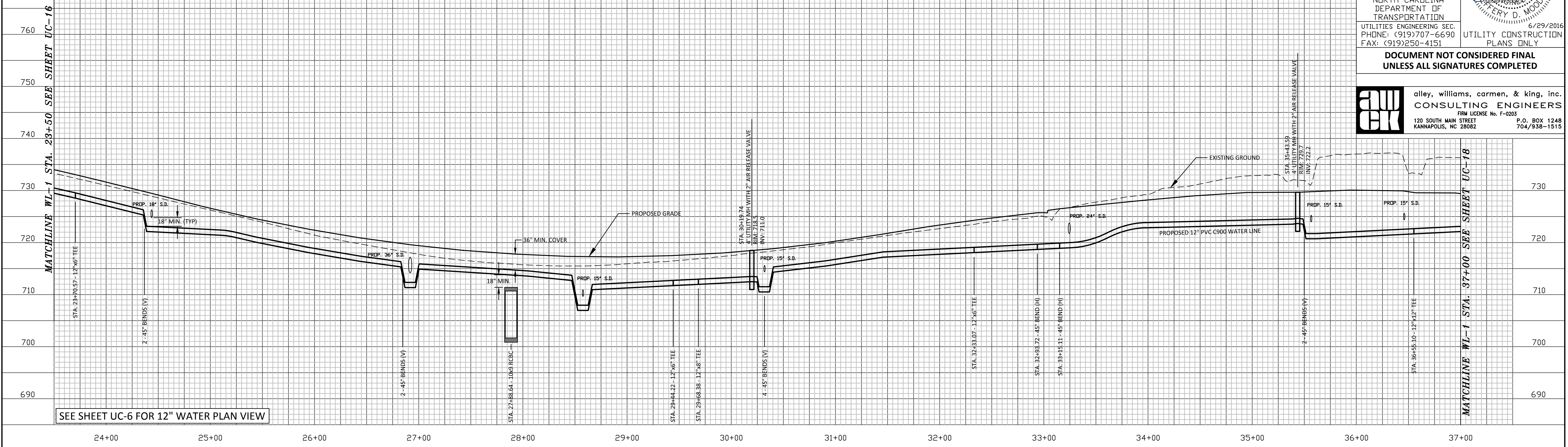
WATER LINE PROFILE
 8" WL-2
 WL-2 STA. 0+00 to 0+83



SEE SHEET UC-5 FOR 8" WATER PLAN VIEW



WATER LINE PROFILE
 12" WL-1
 WL-1 STA. 23+50 to 37+00



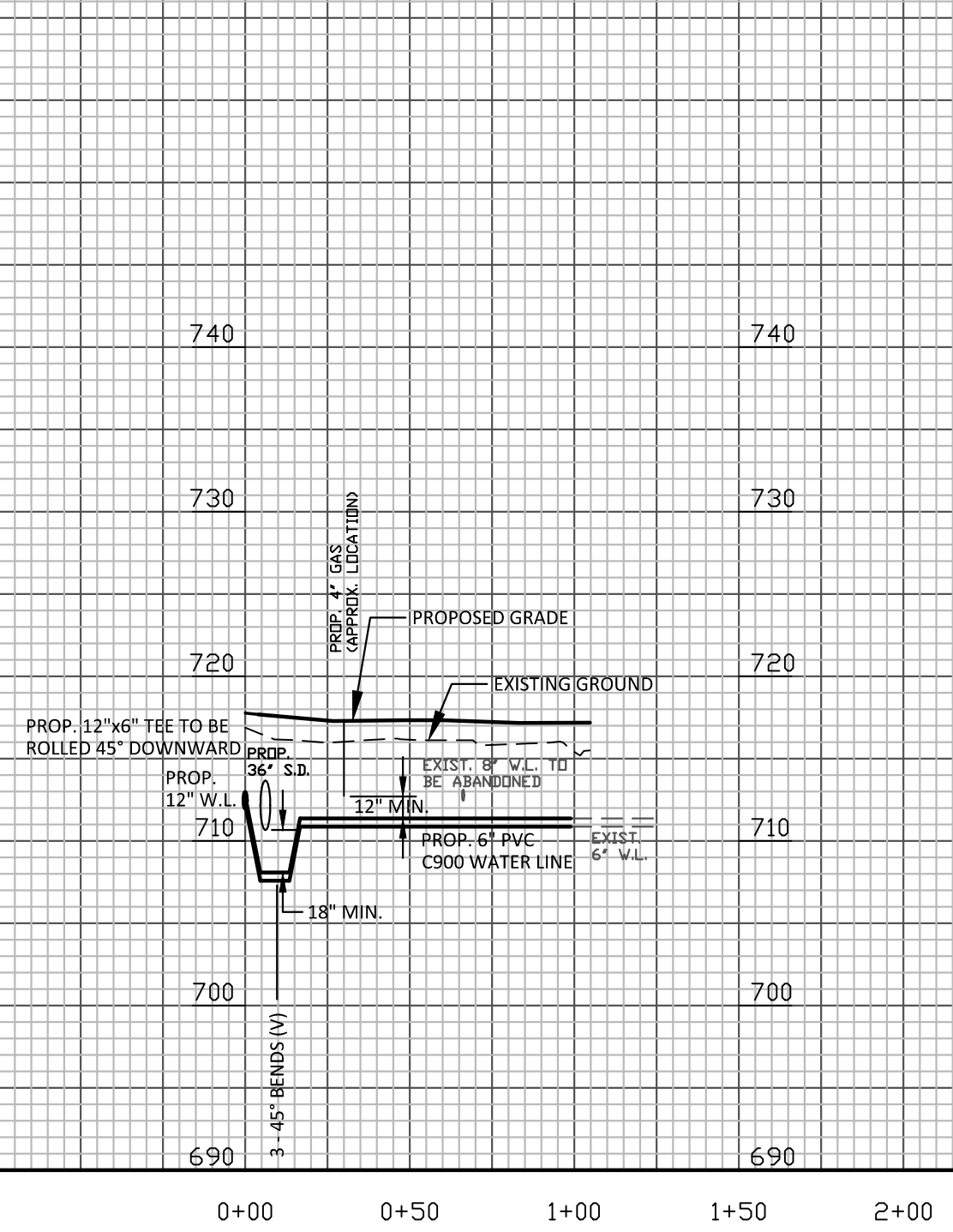
SEE SHEET UC-6 FOR 12" WATER PLAN VIEW

SEE SHEET UC-6 FOR 12" WATER PLAN VIEW

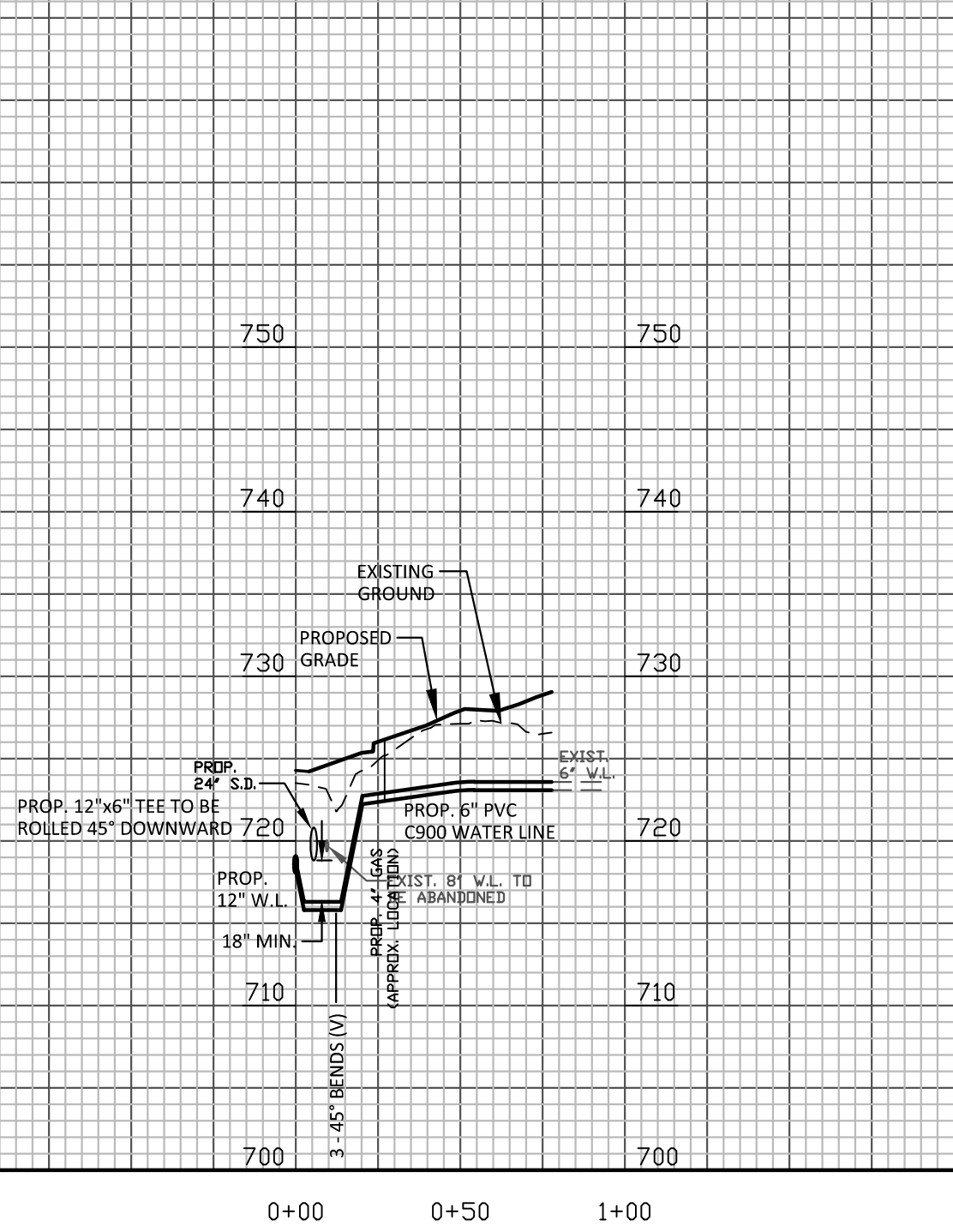
SEE SHEET UC-6 FOR 6" WATER PLAN VIEW

SEE SHEET UC-6 FOR 6" WATER PLAN VIEW

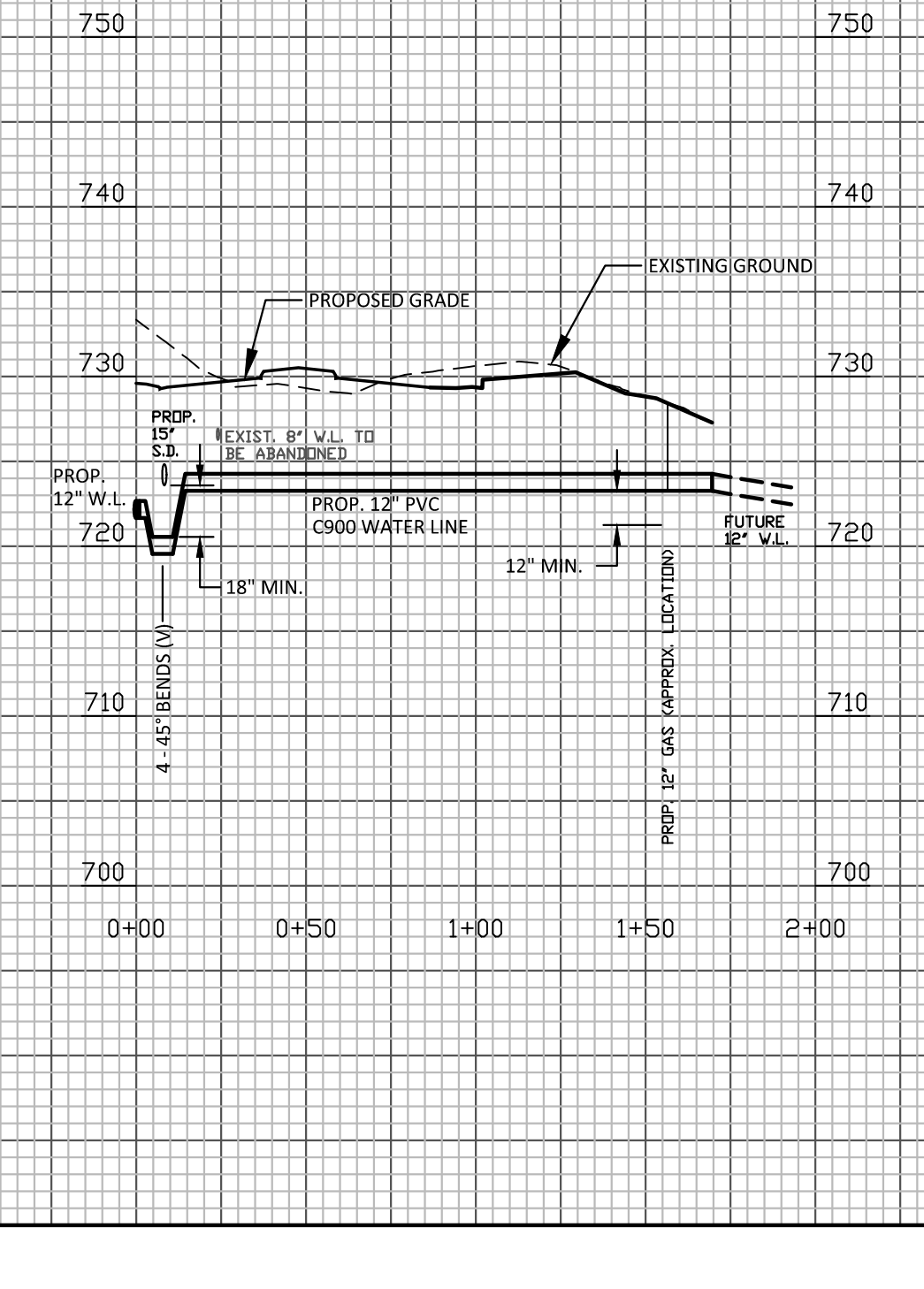
WATER LINE PROFILE
 6" WL-3
 WL-3 STA. 0+00 to 1+05



WATER LINE PROFILE
 6" WL-4
 WL-4 STA. 0+00 to 0+78



WATER LINE PROFILE
 12" WL-5
 WL-5 STA. 0+00 to 1+70



PROJECT REFERENCE NO.
U-3440

SHEET NO.
UC-18

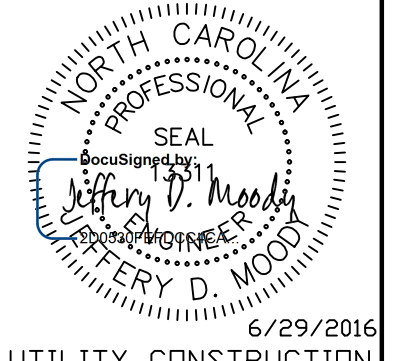
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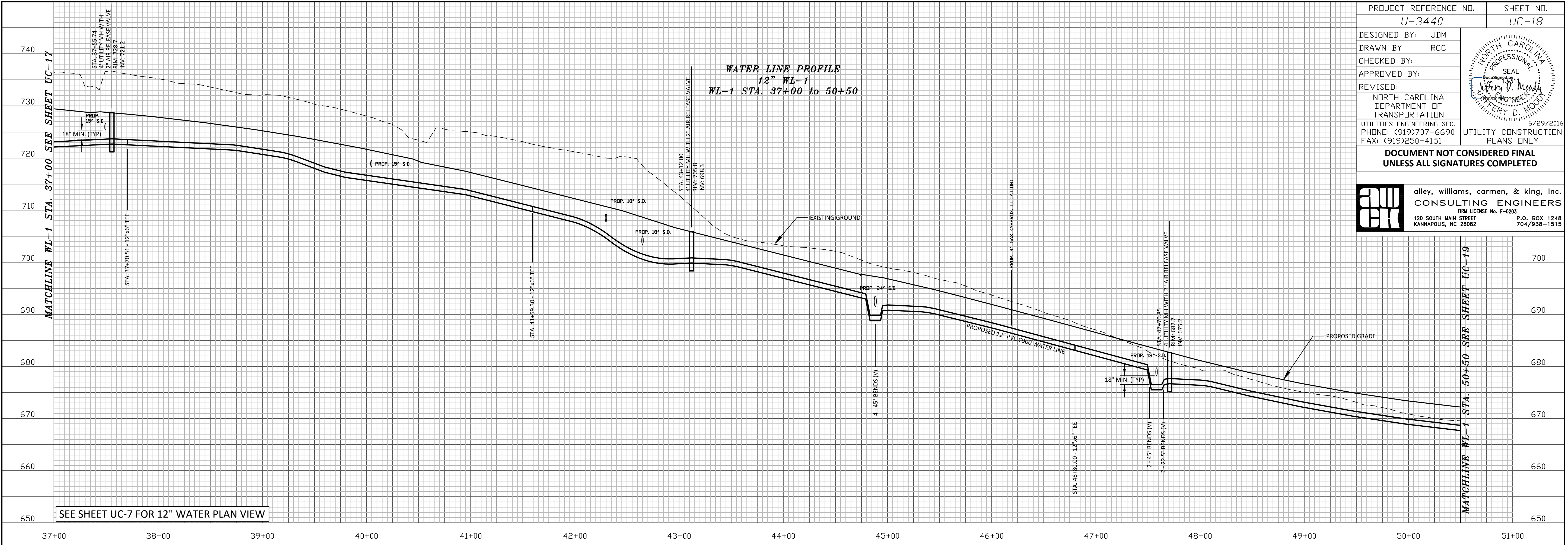
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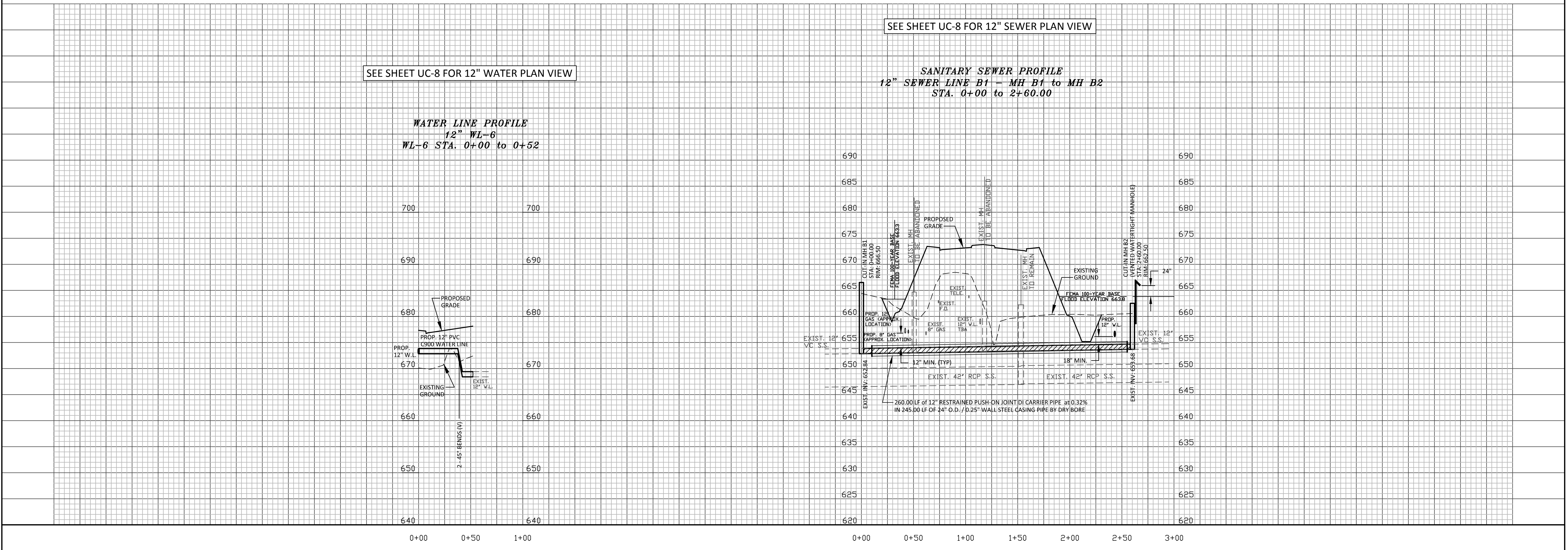
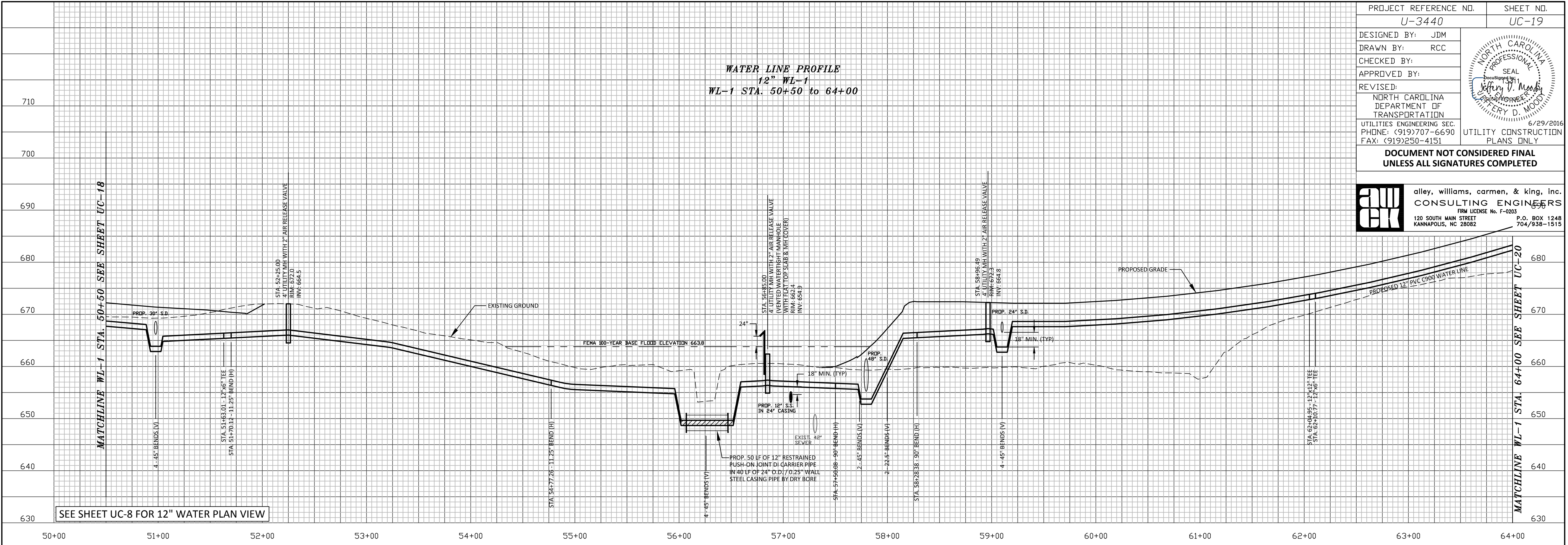


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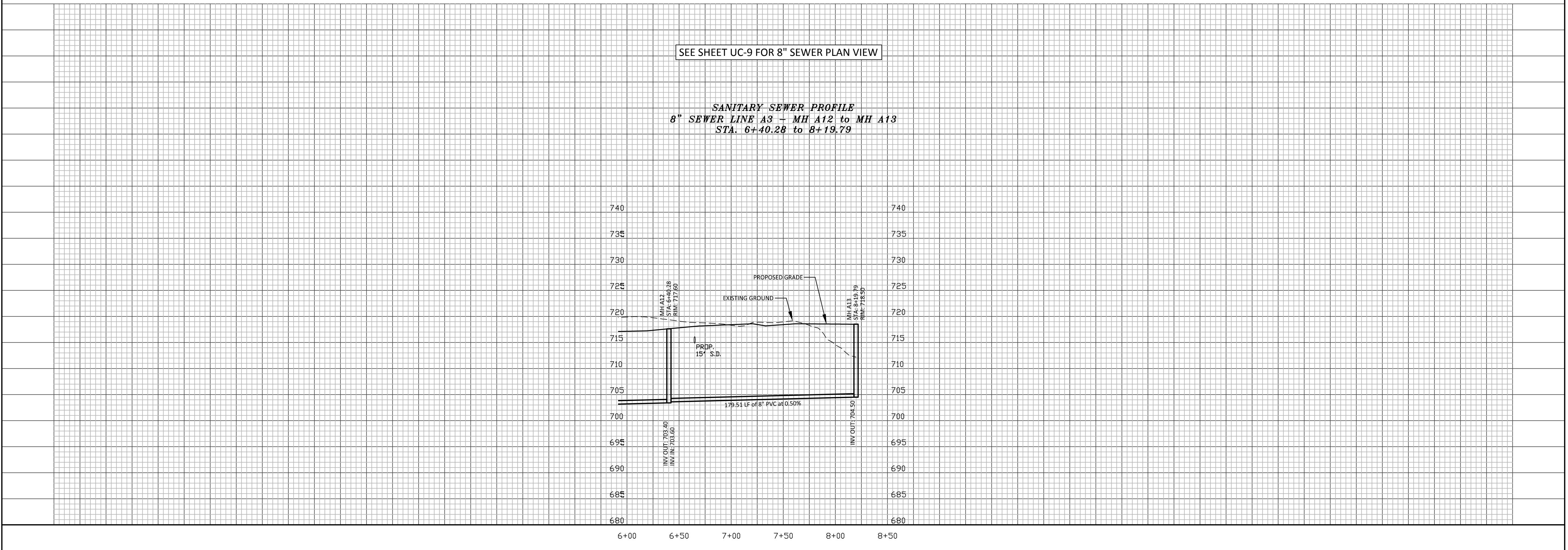
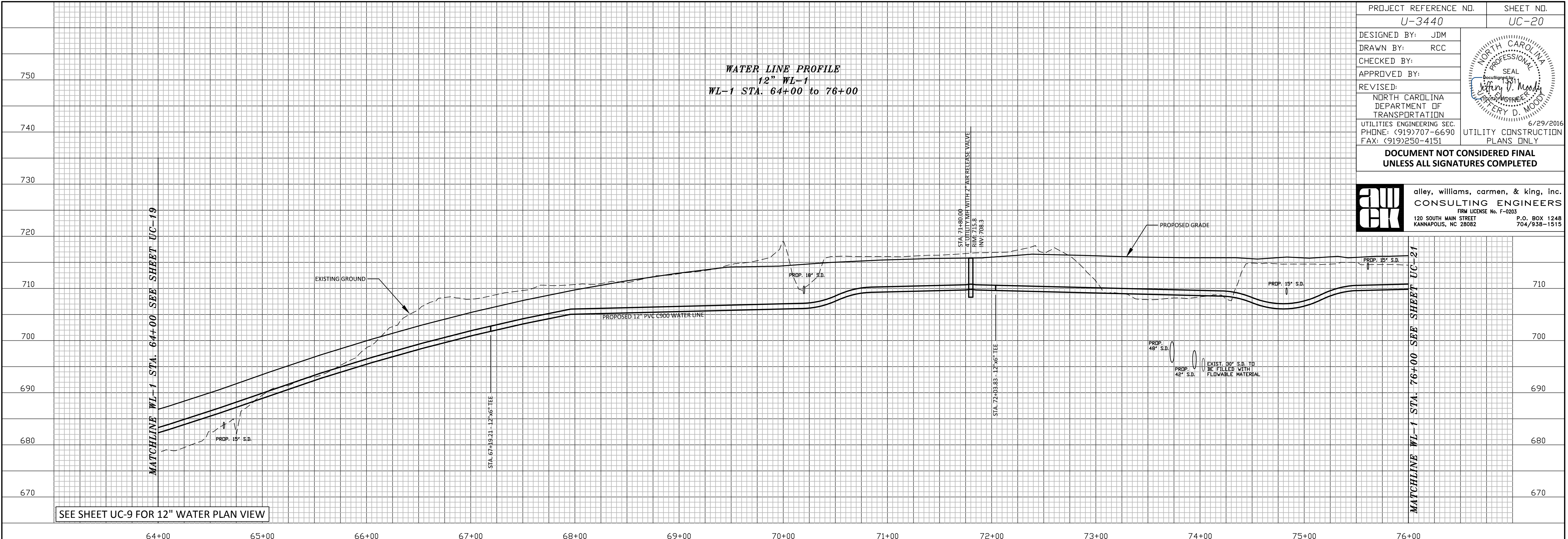
SEE SHEET UC-7 FOR 12" WATER PLAN VIEW

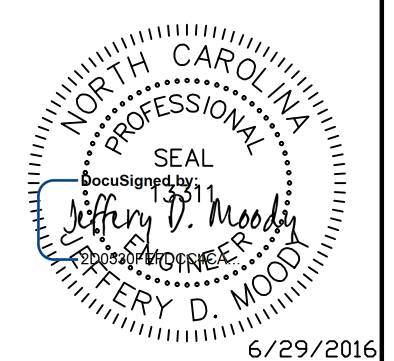


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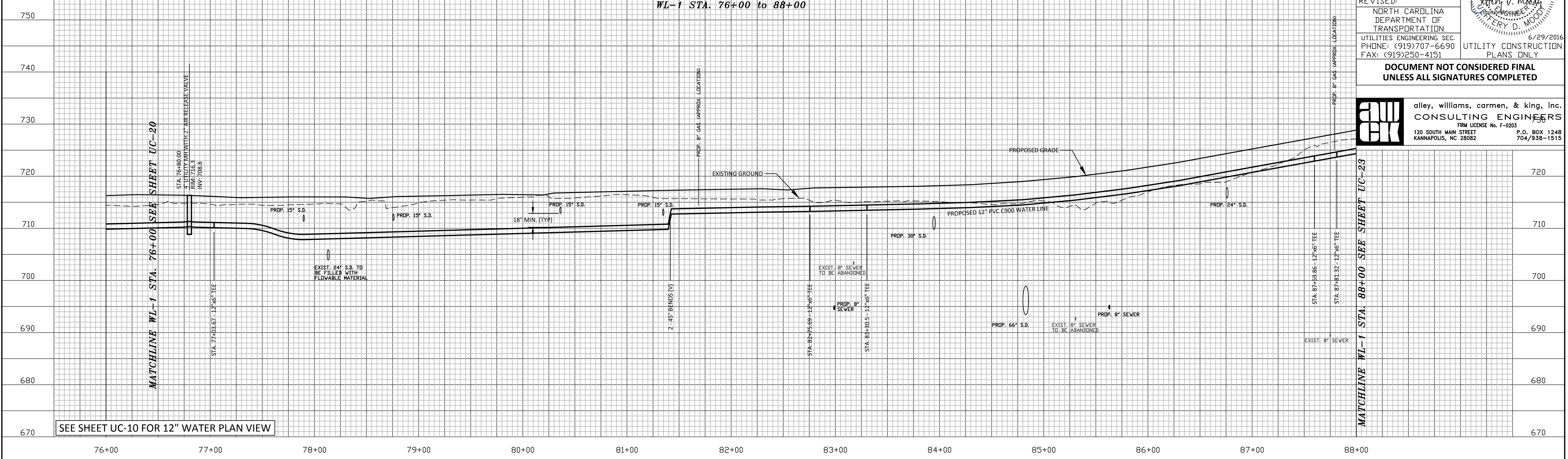
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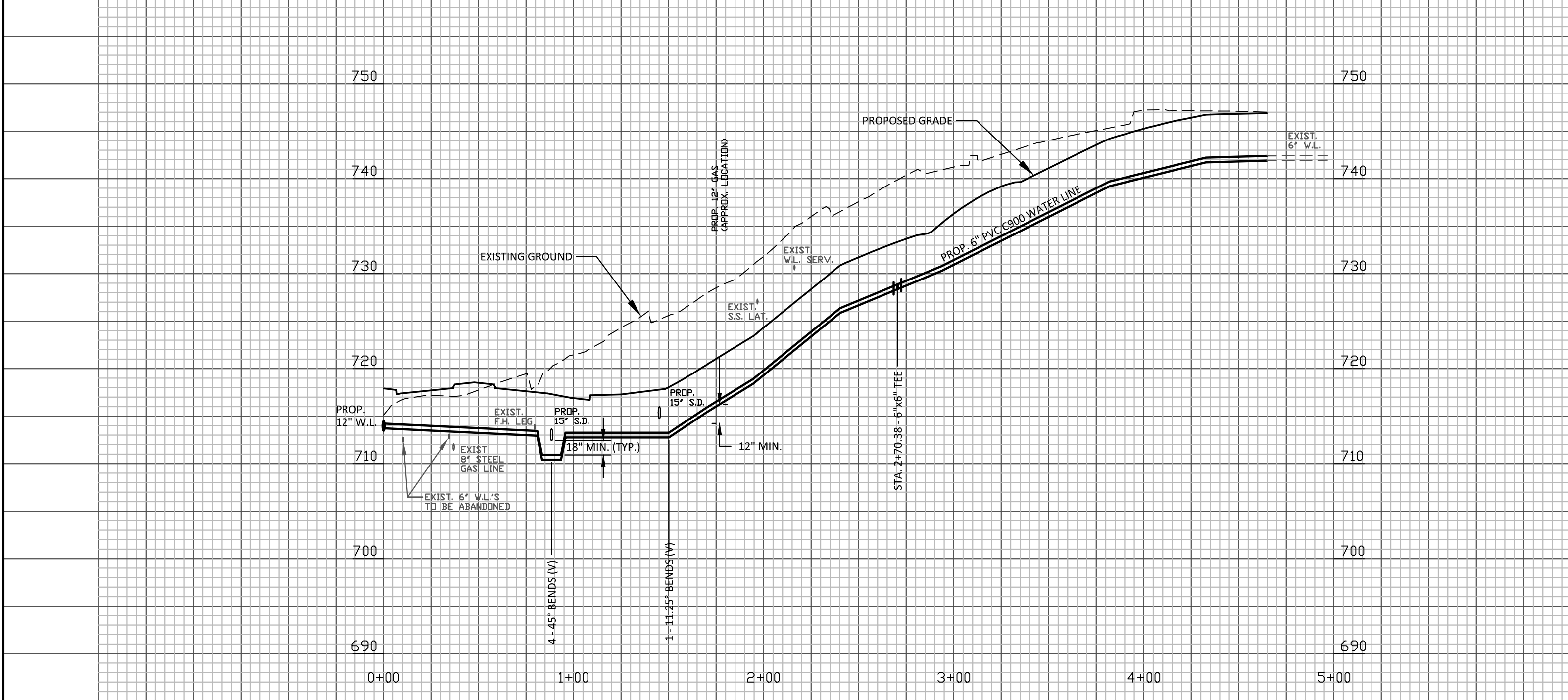
WATER LINE PROFILE
12" WL-1
WL-1 STA. 76+00 to 88+00



SEE SHEET UC-10 FOR 12" WATER PLAN VIEW

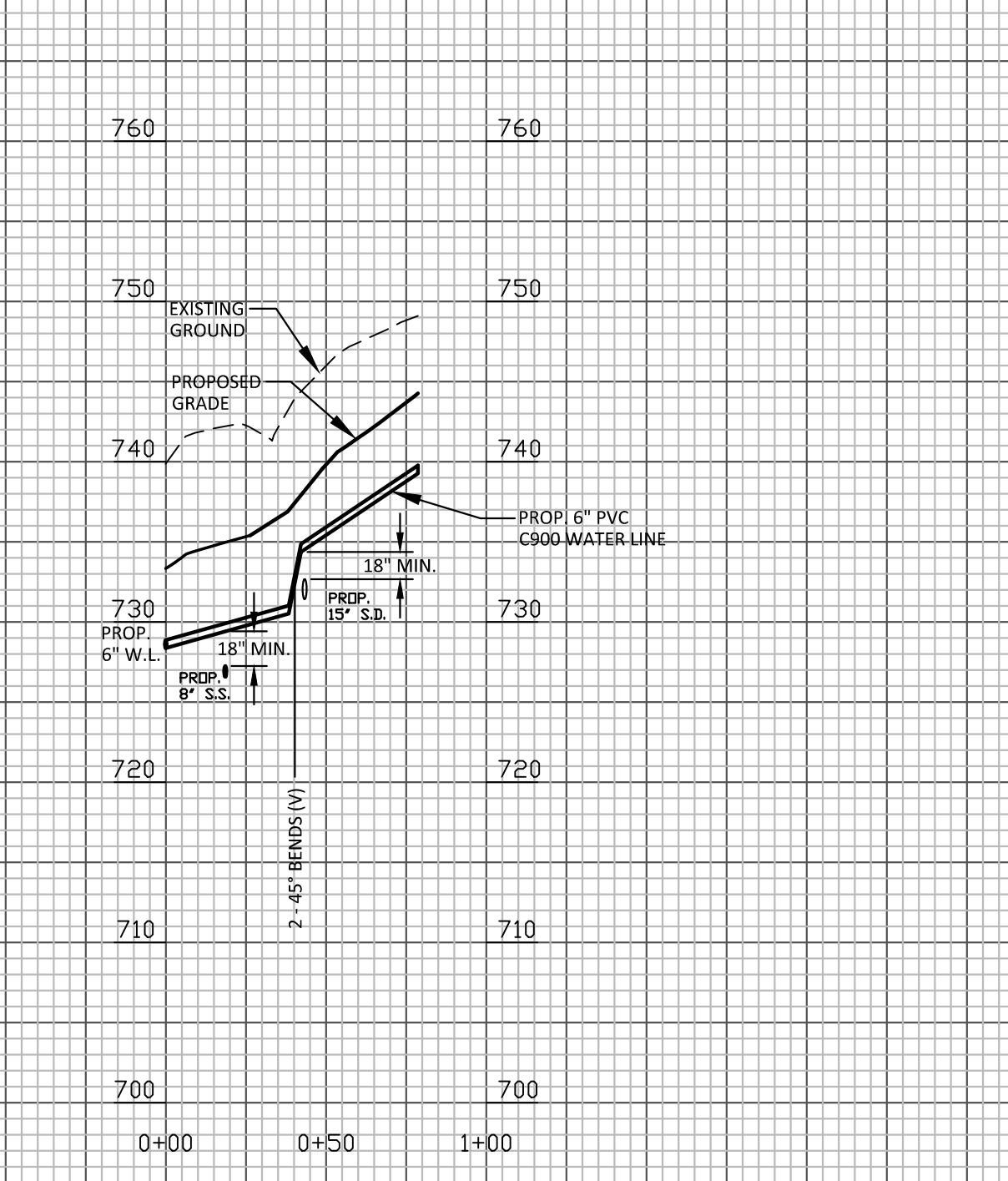
SEE SHEET UC-10 FOR 6" WATER PLAN VIEW

WATER LINE PROFILE
6" WL-7
WL-7 STA. 0+00 to 4+65



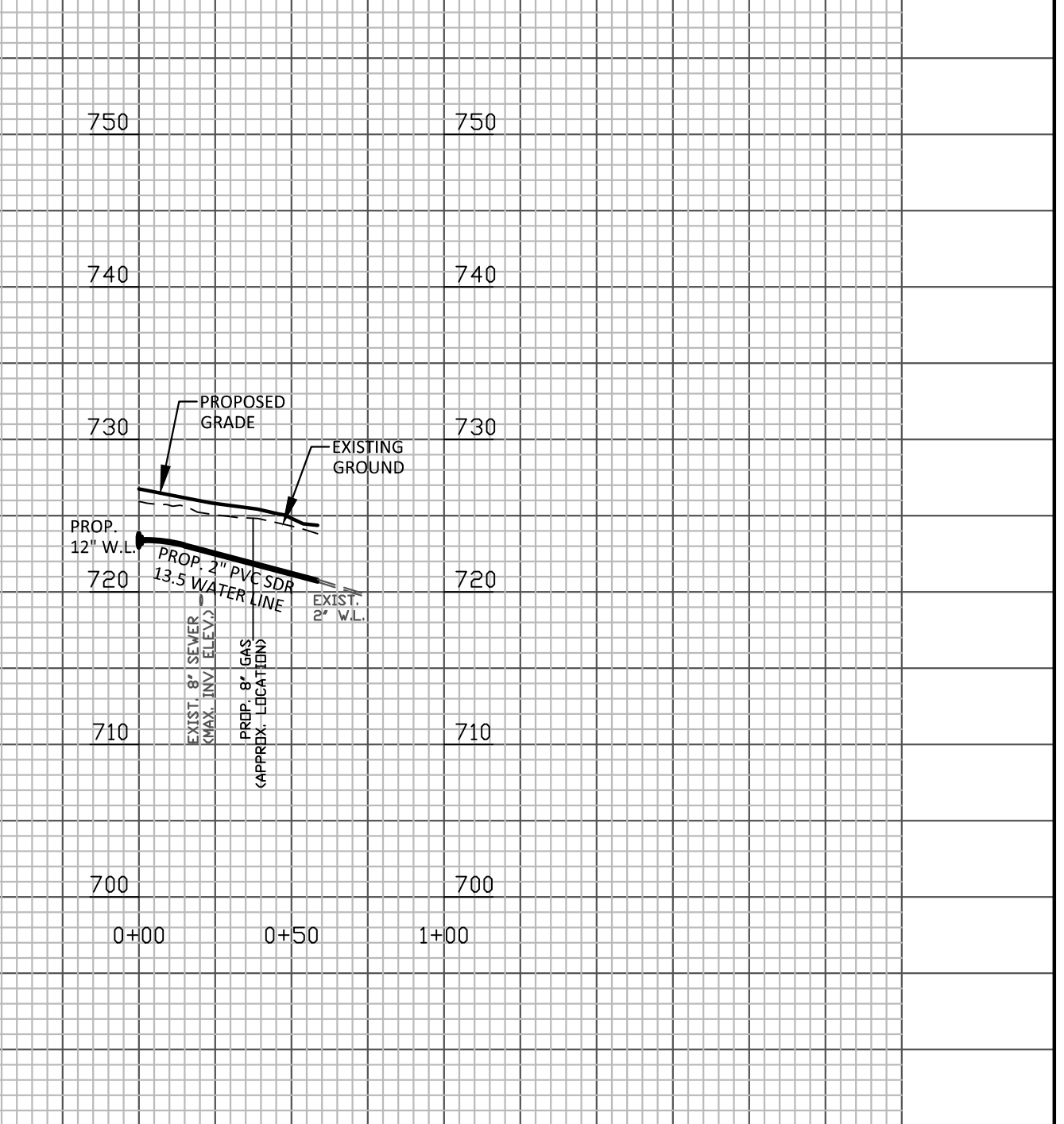
SEE SHEET UC-10 FOR 6" WATER PLAN VIEW

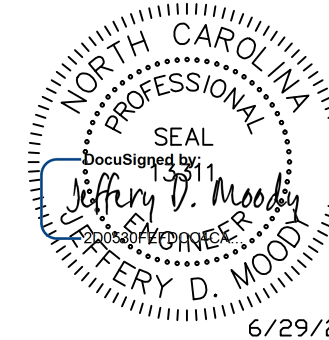
WATER LINE PROFILE
6" WL-7A
WL-7A STA. 0+00 to 0+79



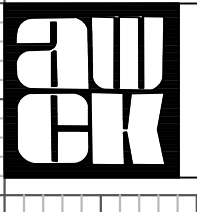
SEE SHEET UC-10 FOR 2" WATER PLAN VIEW

WATER LINE PROFILE
2" WL-8
WL-8 STA. 0+00 to 0+59



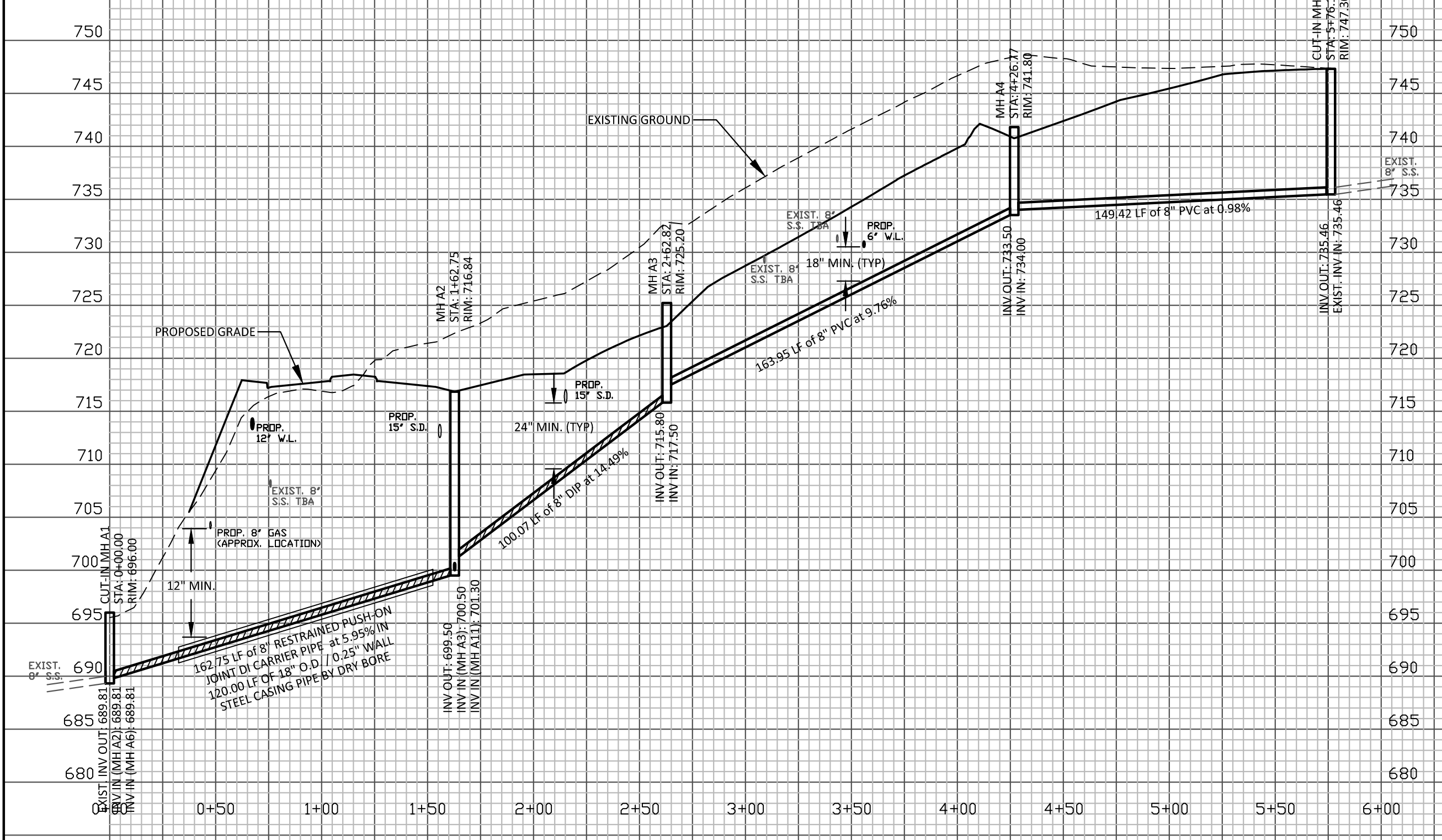
PROJECT REFERENCE NO. U-3440	SHEET NO. UC-22
DESIGNED BY: JDM	
DRAWN BY: RCC	
CHECKED BY:	
APPROVED BY:	
REVISED:	6/29/2016
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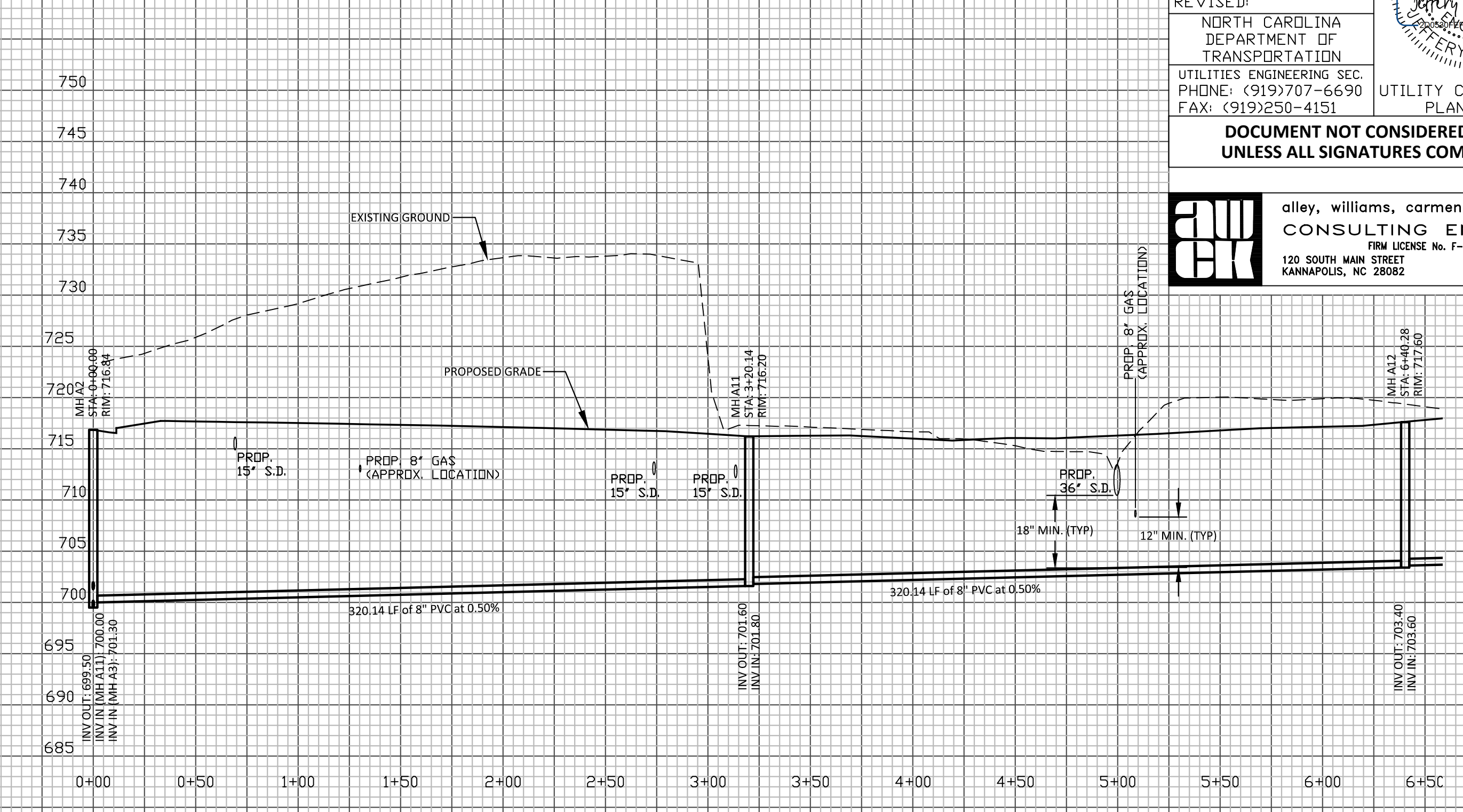
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SANITARY SEWER PROFILE
8" SEWER LINE A1 - MH A1 to MH A5
 STA. 0+00 to 5+76.19



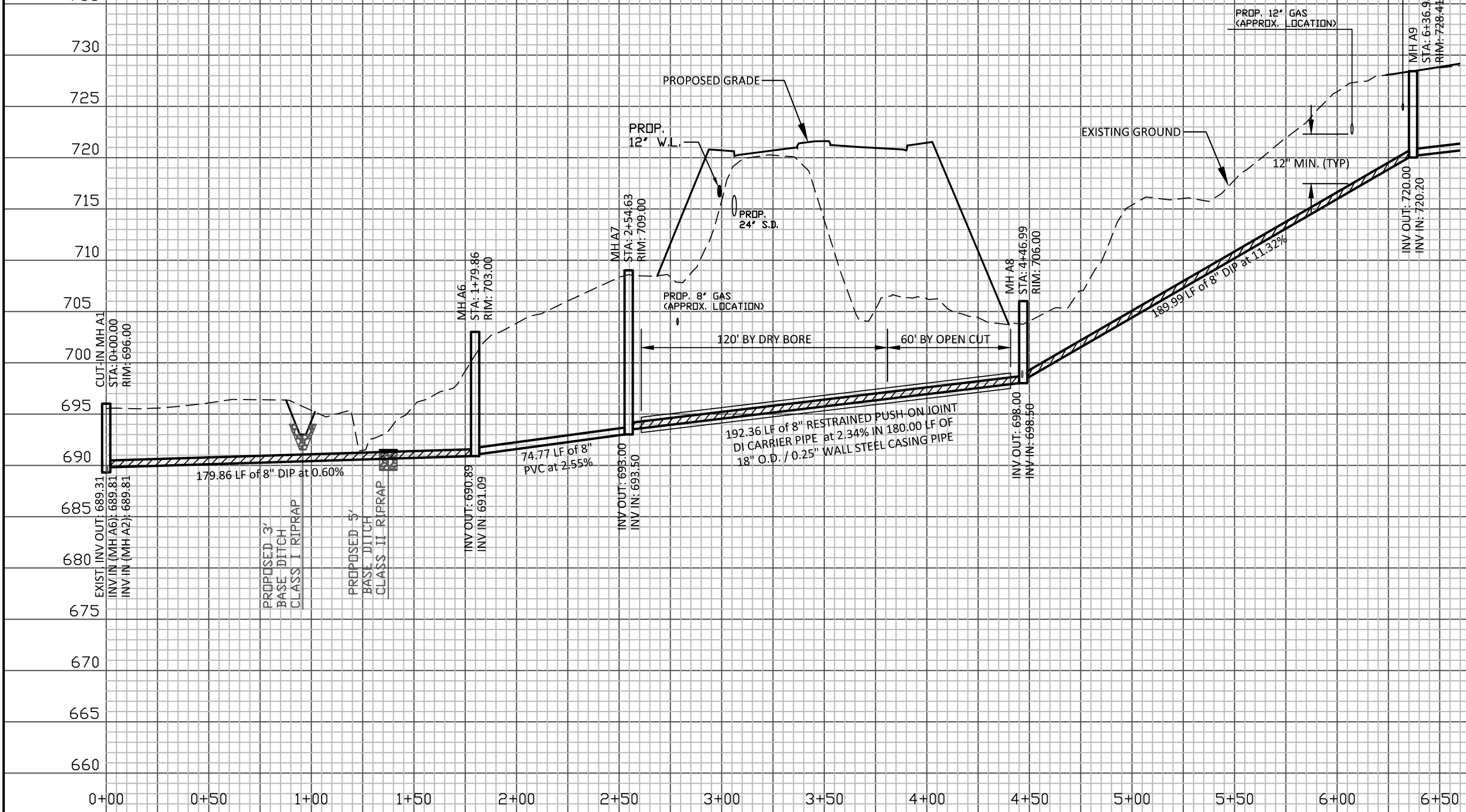
SEE SHEET UC-10 FOR 8" SEWER PLAN VIEW

SANITARY SEWER PROFILE
8" SEWER LINE A3 - MH A2 to MH A12
 STA. 0+00 to 6+40.28

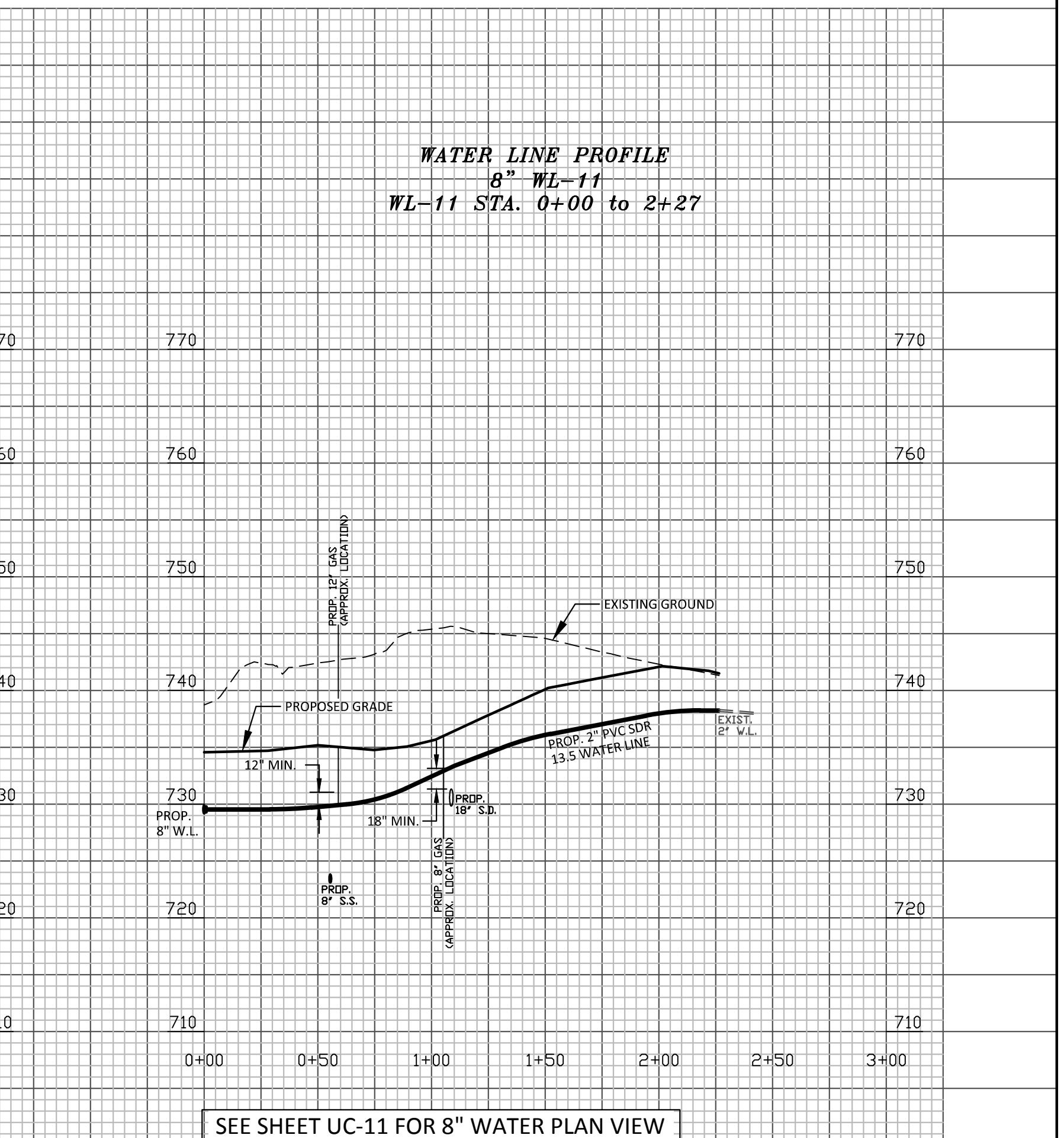
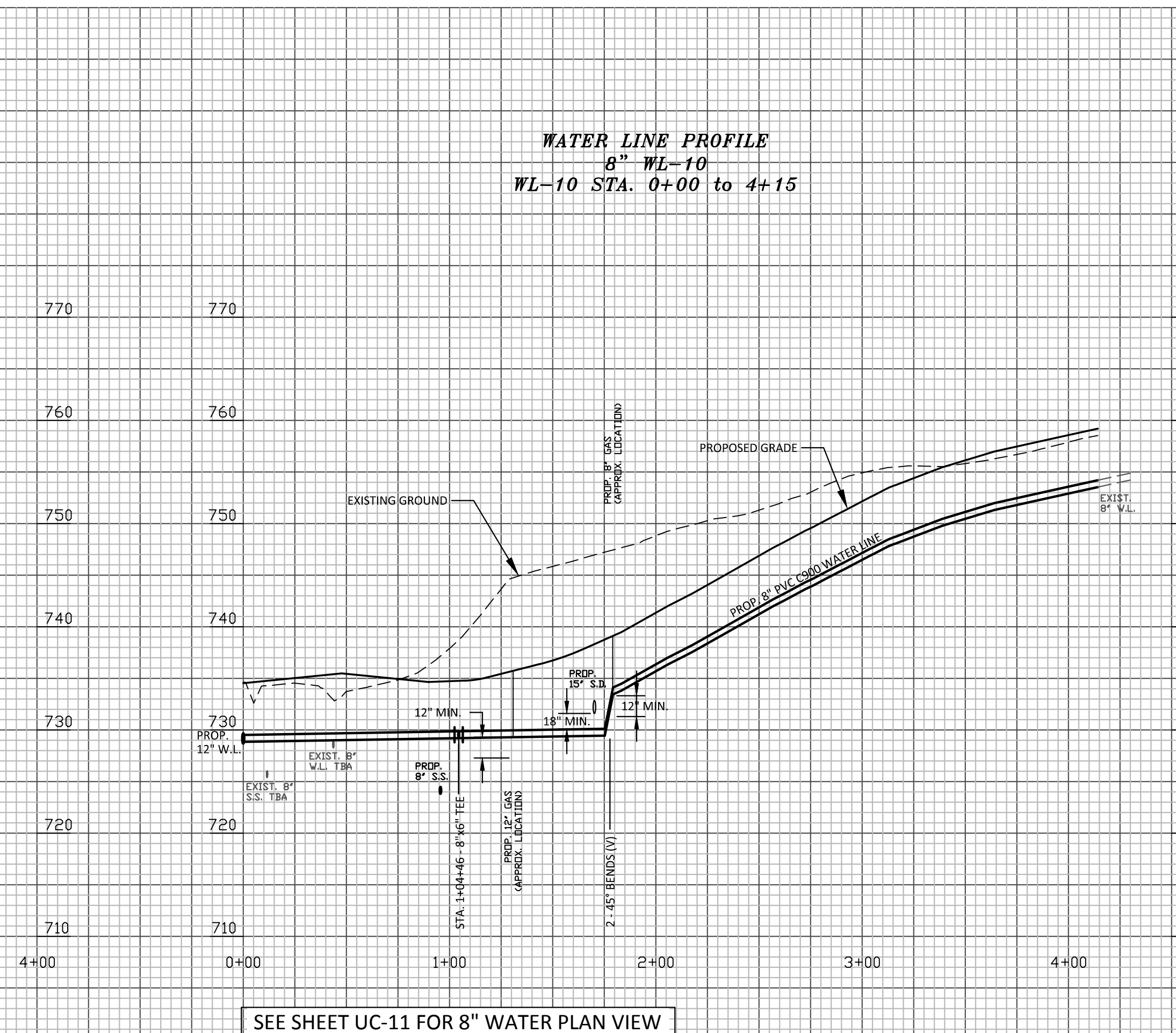
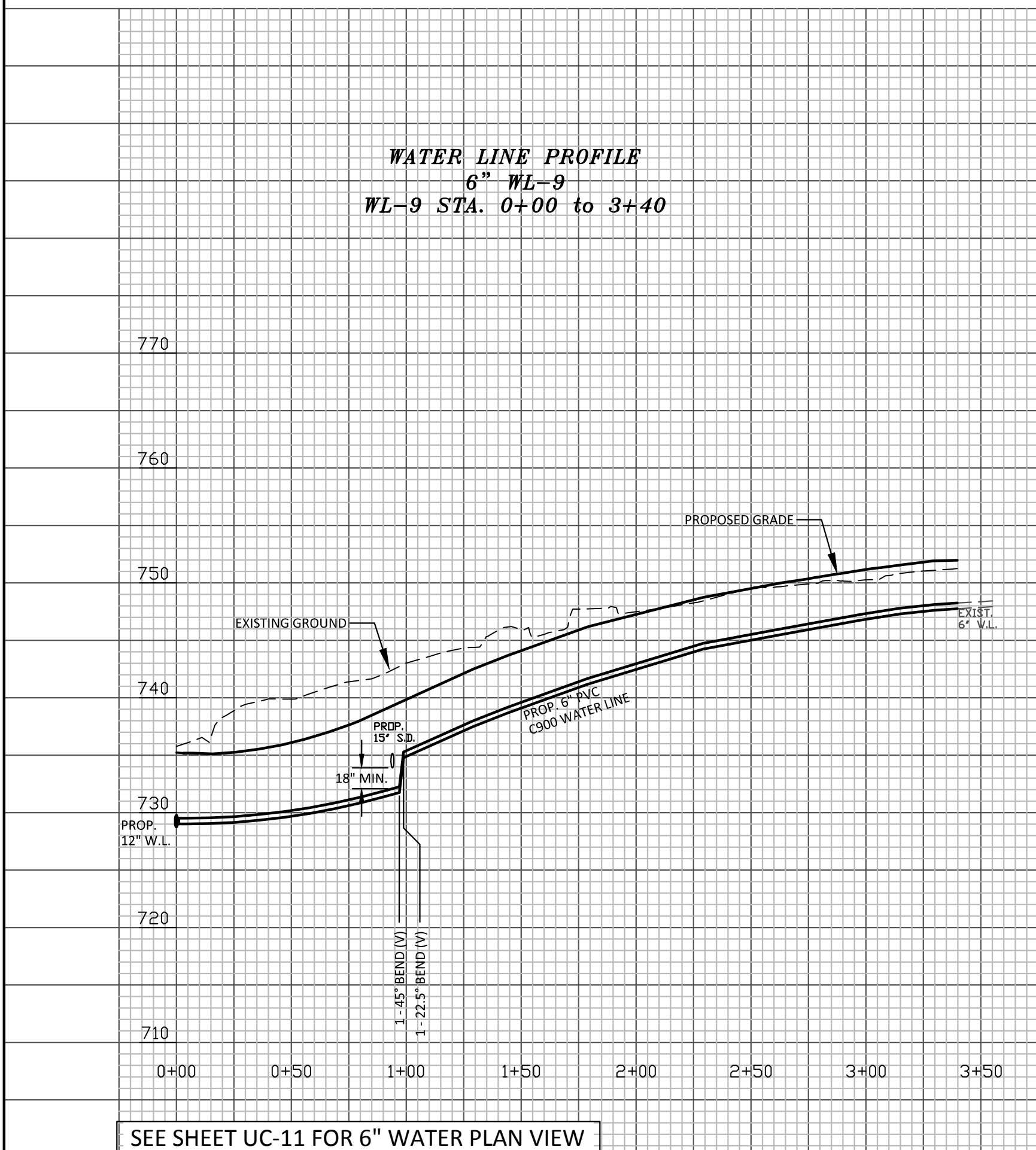
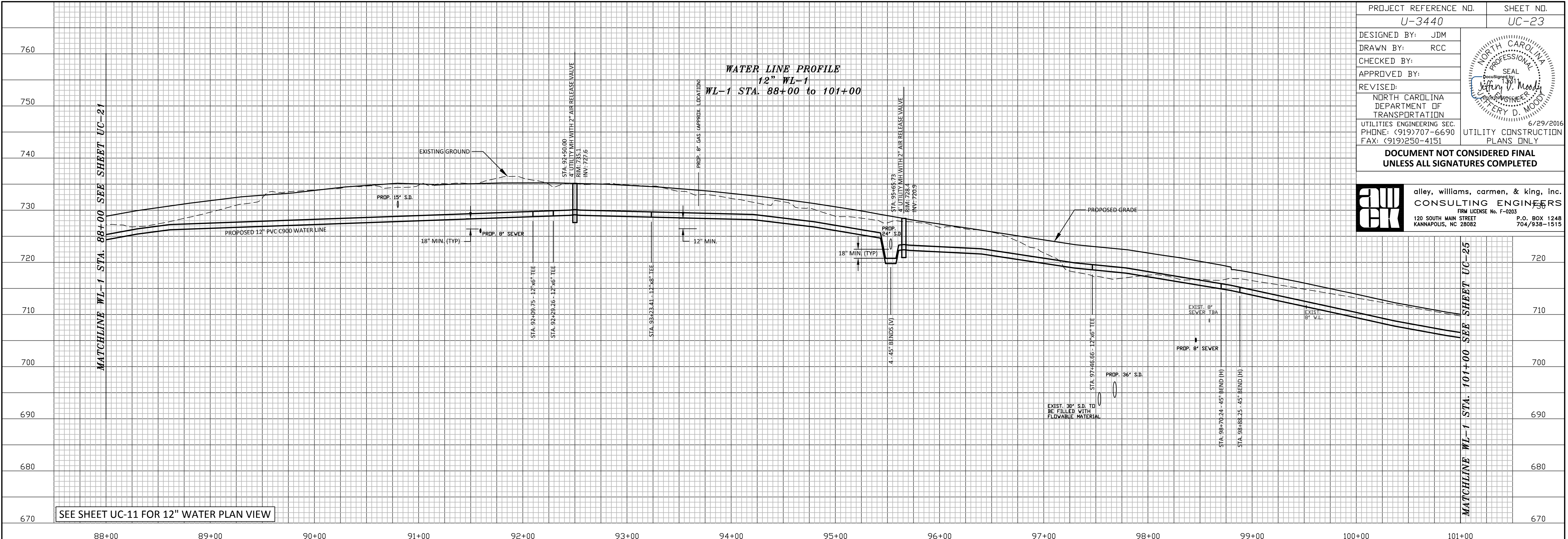
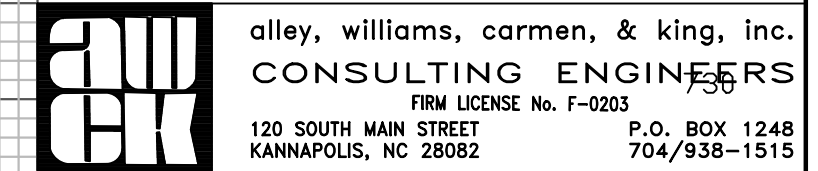
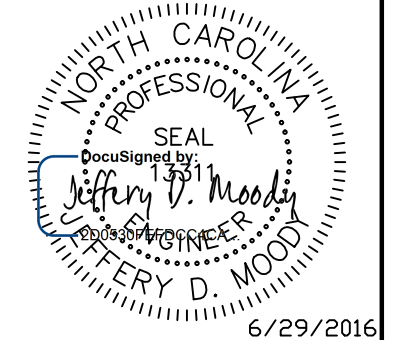


SEE SHEET UC-10 FOR 8" SEWER PLAN VIEW

SANITARY SEWER PROFILE
8" SEWER LINE A2 - MH A1 to MH A9
 STA. 0+00 to 6+36.98



SEE SHEET UC-10 FOR 8" SEWER PLAN VIEW



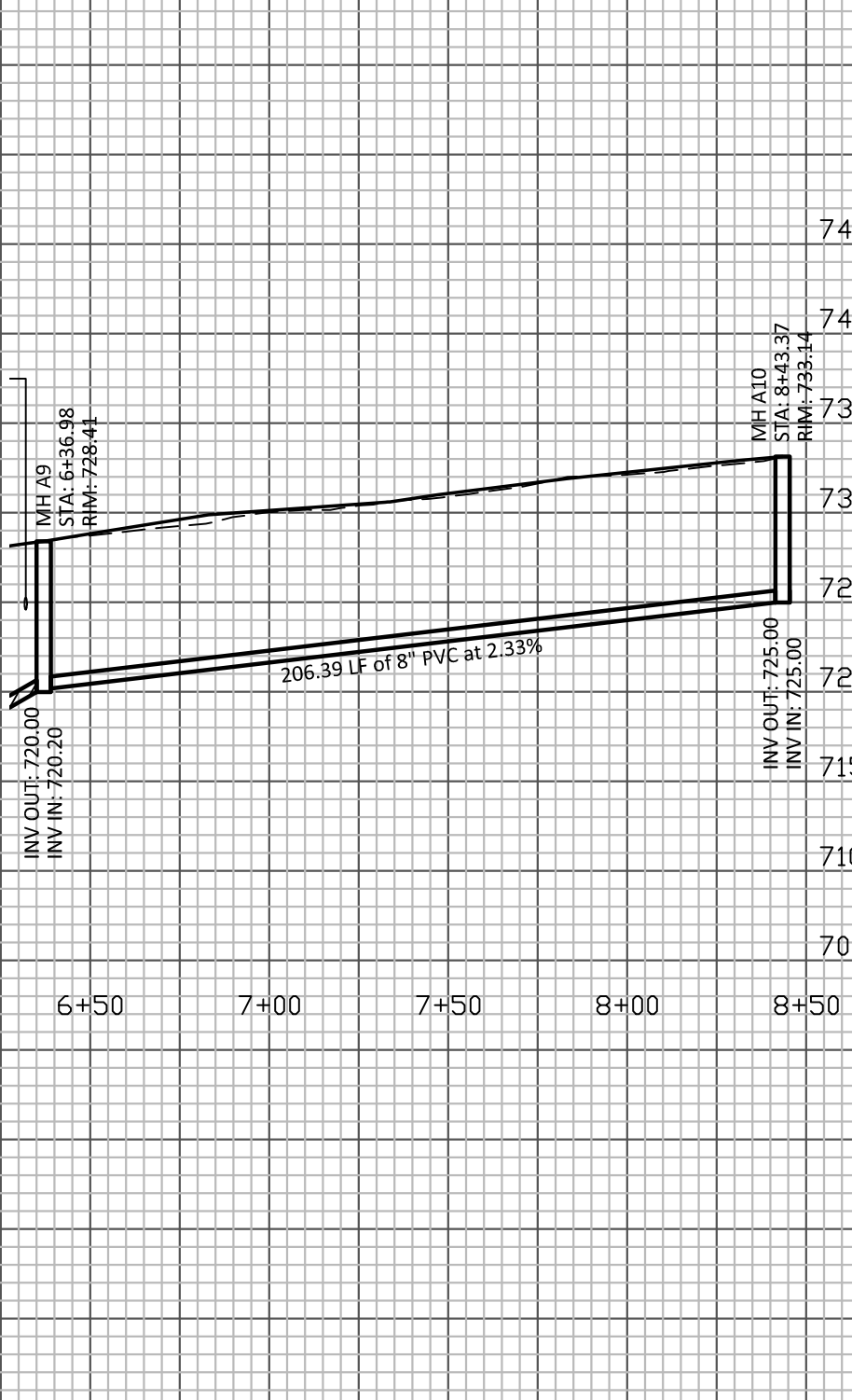
DESIGNED BY: JDM
 DRAWN BY: RCC
 CHECKED BY:
 APPROVED BY:
 REVISED:
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 UTILITIES ENGINEERING SEC. PHONE: (919)707-6690 FAX: (919)250-4151
 UTILITY CONSTRUCTION PLANS ONLY
 6/29/2016



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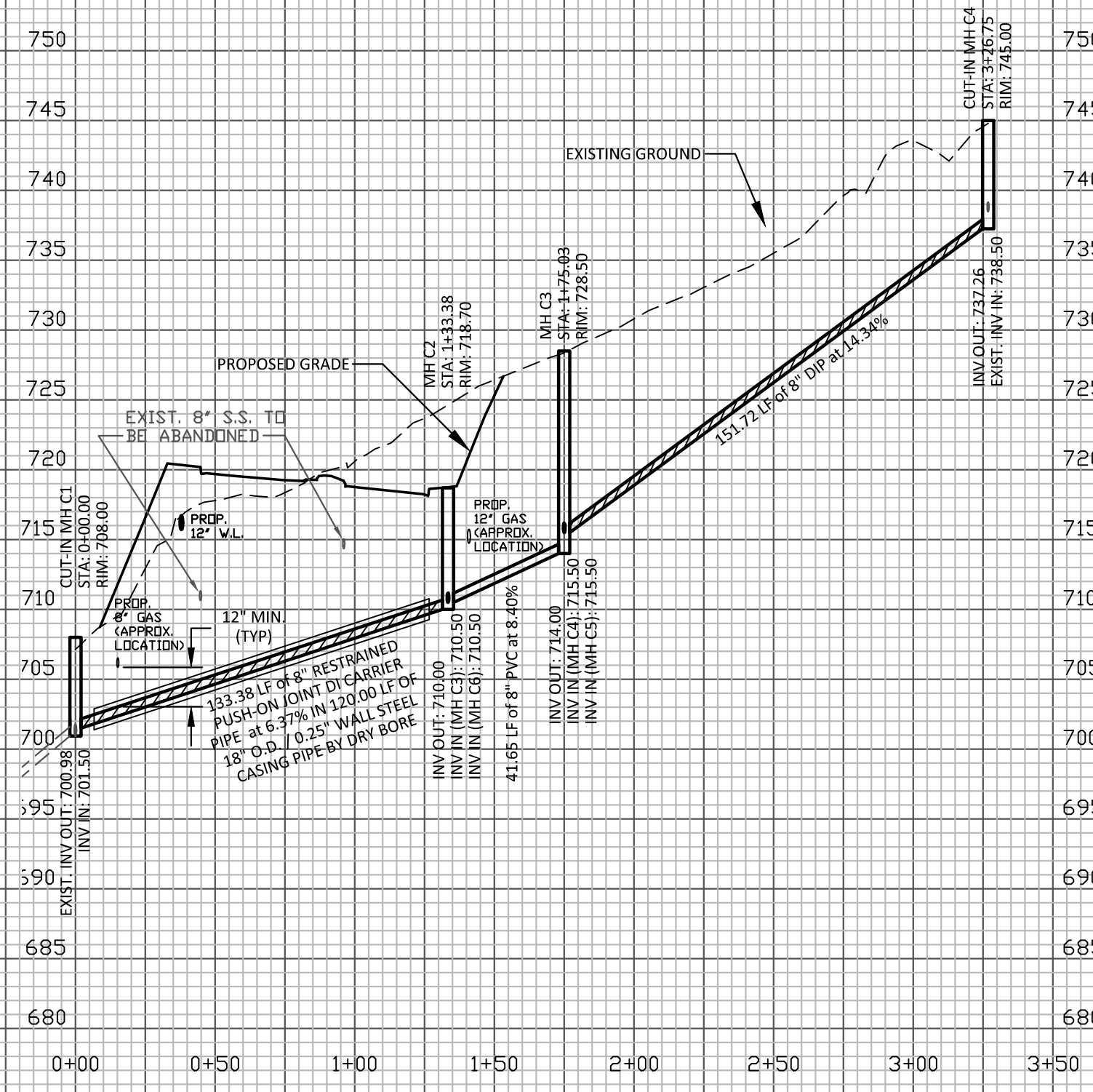
awck alley, williams, carmen, & king, inc.
 CONSULTING ENGINEERS
 FIRM LICENSE No. F-2003
 120 SOUTH MAIN STREET KANNAPOUS, NC 28082 P.O. BOX 1248 704/938-1515

SANITARY SEWER PROFILE
8" SEWER LINE A2 - MH A9 to MH A10
 STA. 6+36.98 to 8+43.97



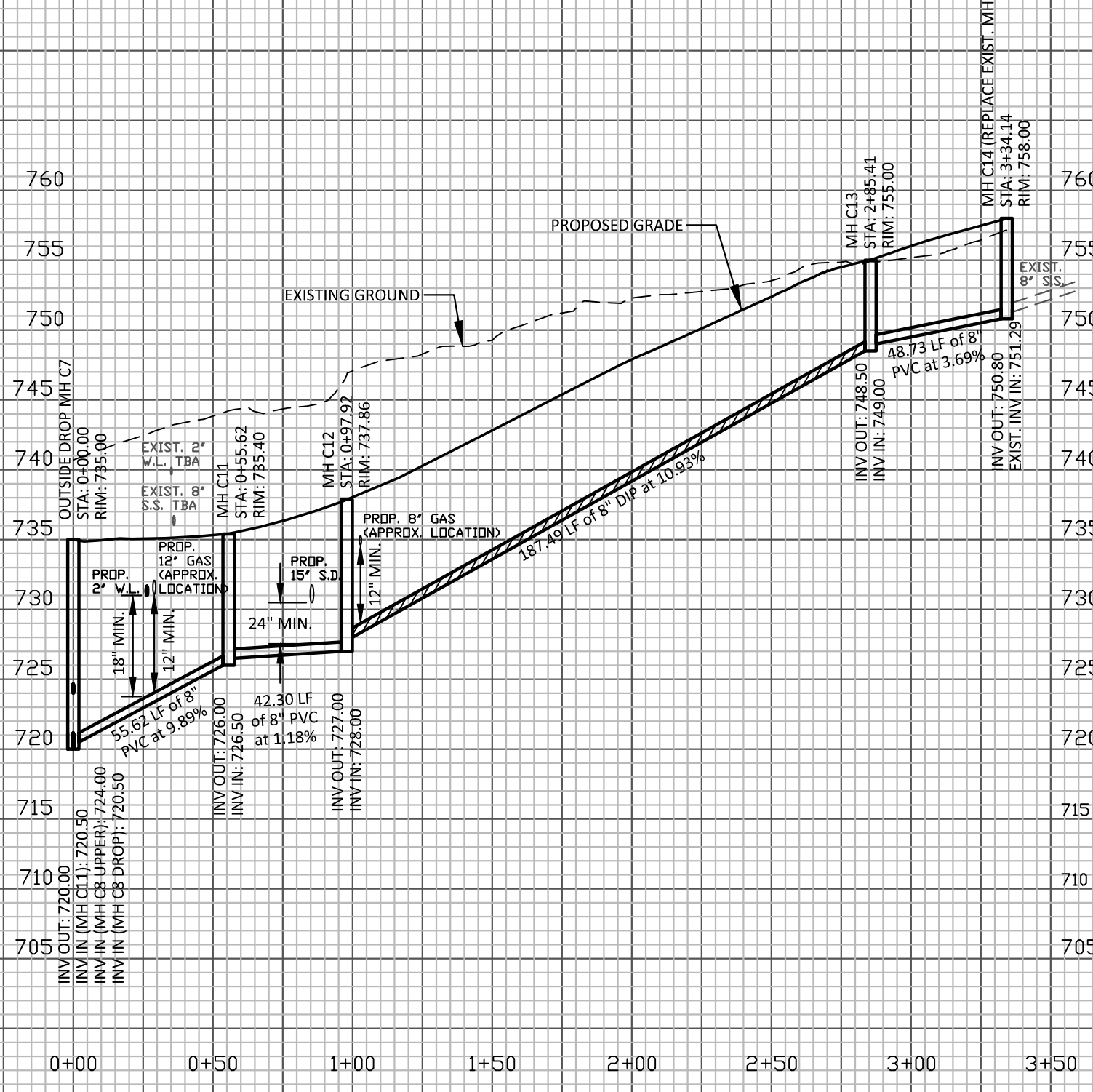
SEE SHEET UC-11 FOR 8" SEWER PLAN VIEW

SANITARY SEWER PROFILE
8" SEWER LINE C1 - MH C1 to MH C4
 STA. 0+00 to 3+26.75



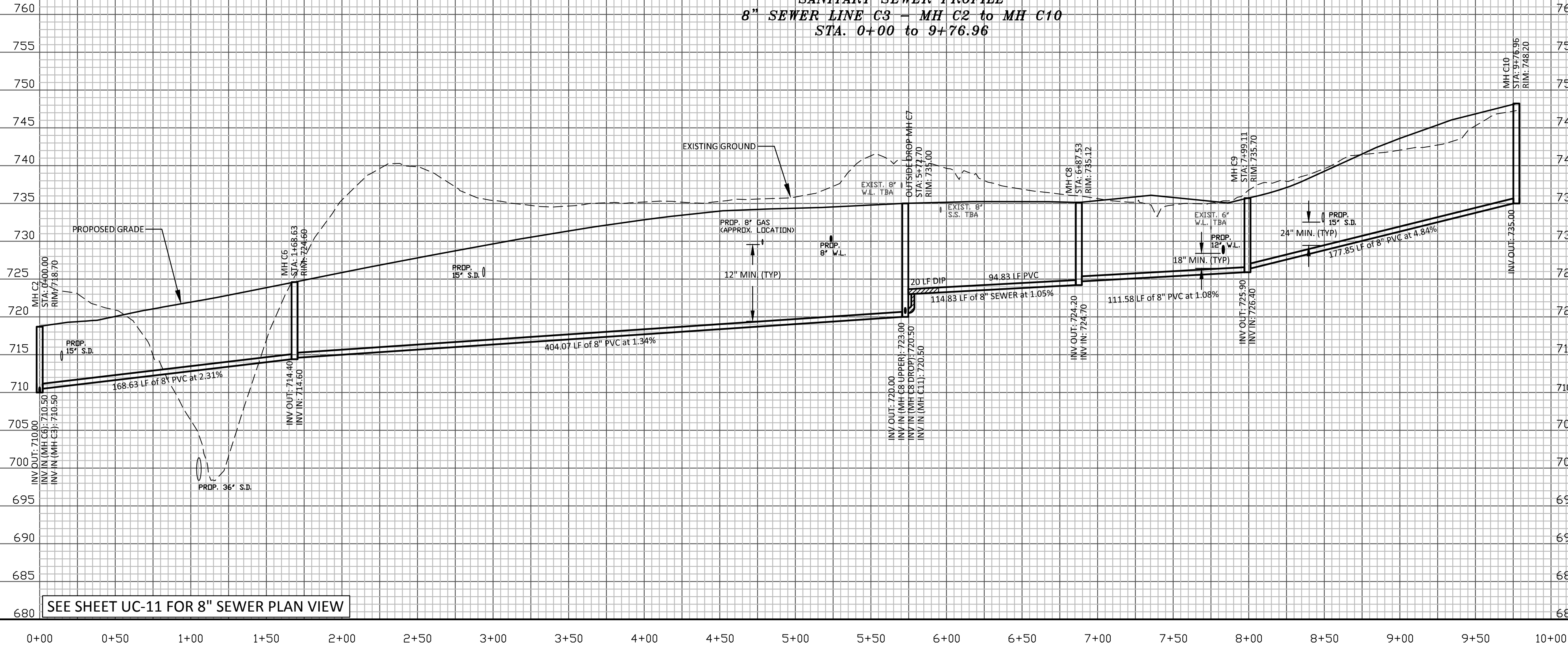
SEE SHEET UC-11 FOR 8" SEWER PLAN VIEW

SANITARY SEWER PROFILE
8" SEWER LINE C4 - MH C7 to MH C14
 STA. 0+00 to 3+34.14



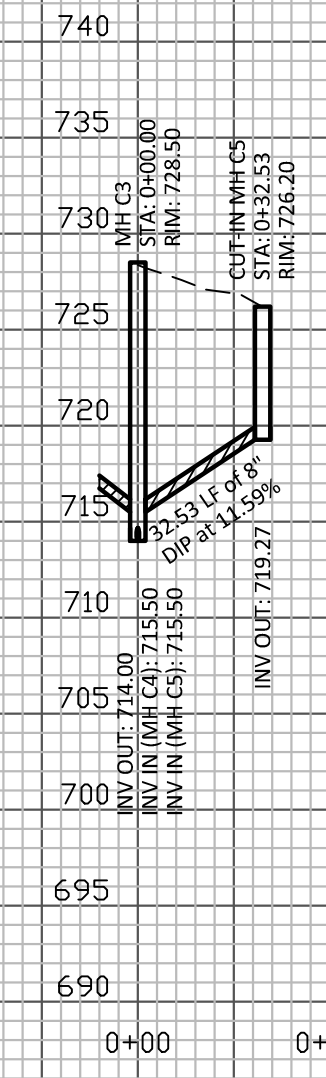
SEE SHEET UC-11 FOR 8" SEWER PLAN VIEW

SANITARY SEWER PROFILE
8" SEWER LINE C3 - MH C2 to MH C10
 STA. 0+00 to 9+76.96



SEE SHEET UC-11 FOR 8" SEWER PLAN VIEW

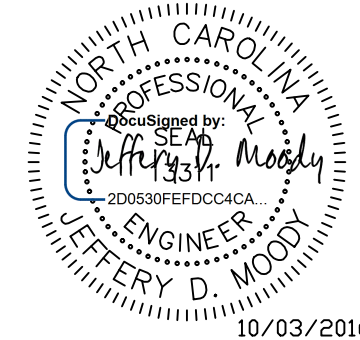
SANITARY SEWER PROFILE
8" SEWER LINE C2 - MH C3 to MH C5
 STA. 0+00 to 0+32.53



SEE SHEET UC-11 FOR 8" SEWER PLAN VIEW

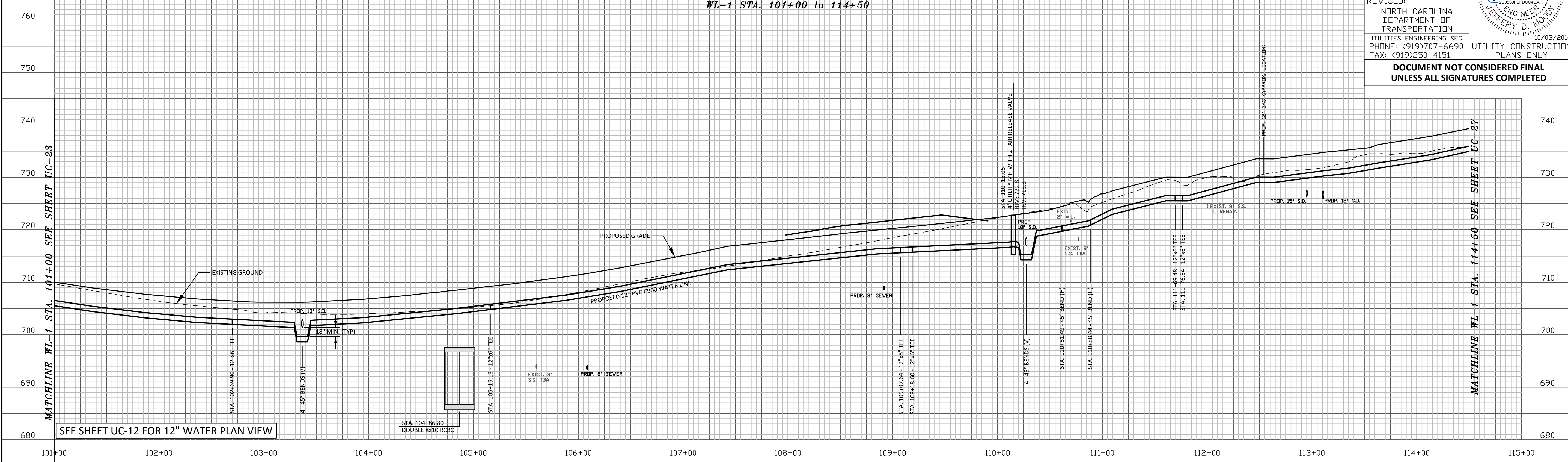
DESIGNED BY: JDM
DRAWN BY: RCC
CHECKED BY:
APPROVED BY:
REVISIONS:
NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION
UTILITY ENGINEERING SEC.
PHONE: (919)707-6690
FAX: (919)250-4151

10/03/2016
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WATER LINE PROFILE 12" WL-1 WL-1 STA. 101+00 to 114+50



SEE SHEET UC-12 FOR 12" WATER PLAN VIEW

SEE SHEET UC-12 FOR 6" WATER PLAN VIEW

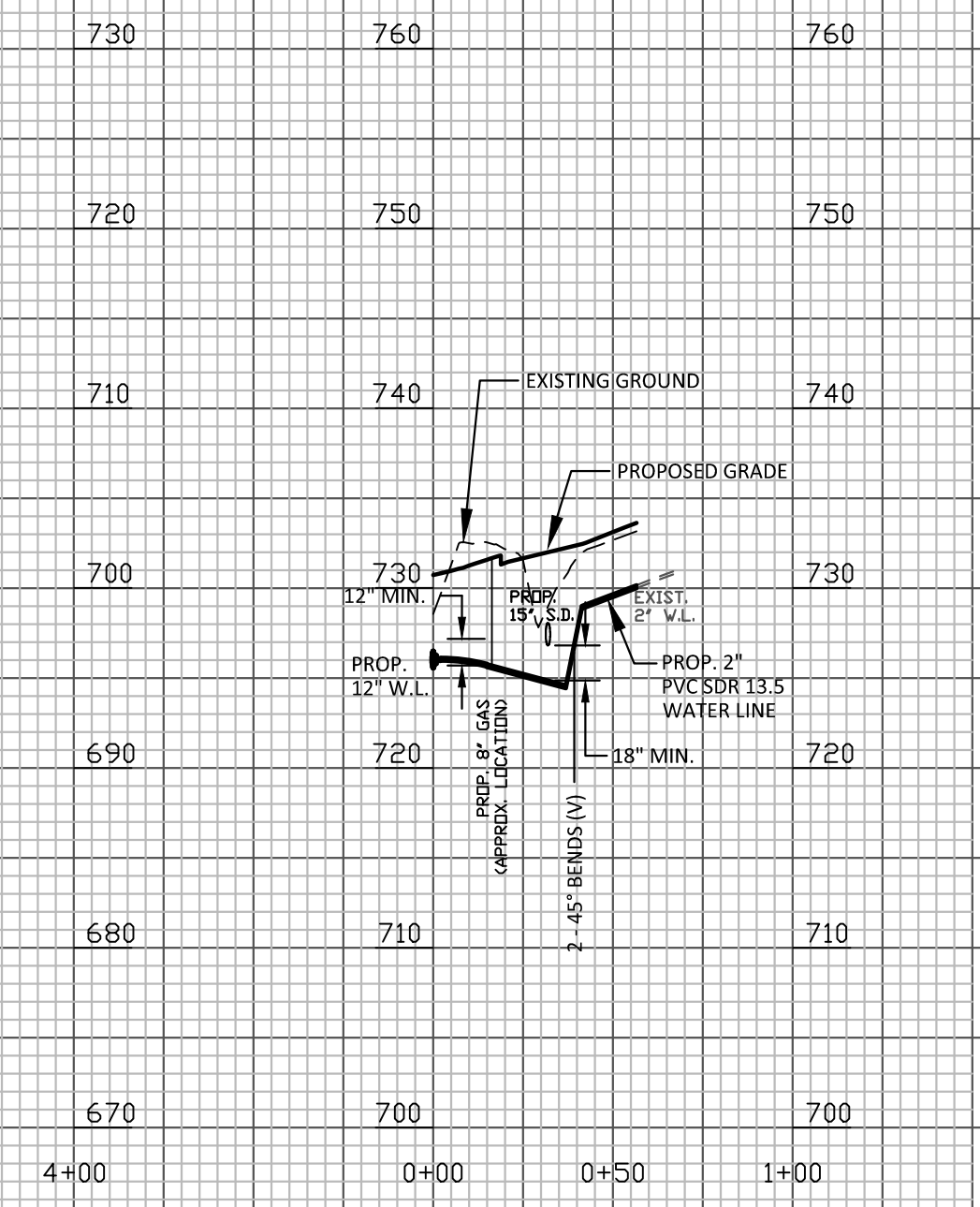
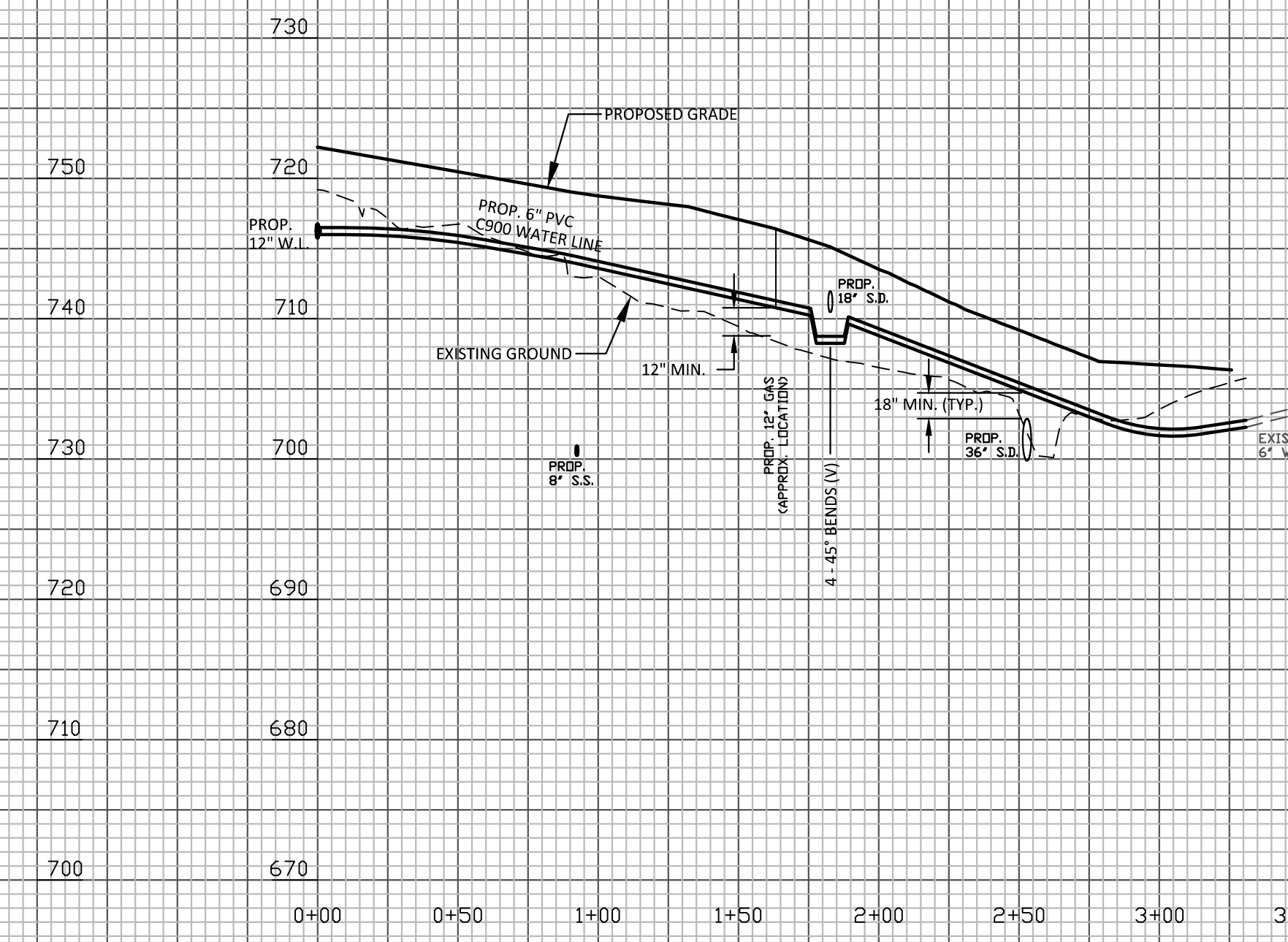
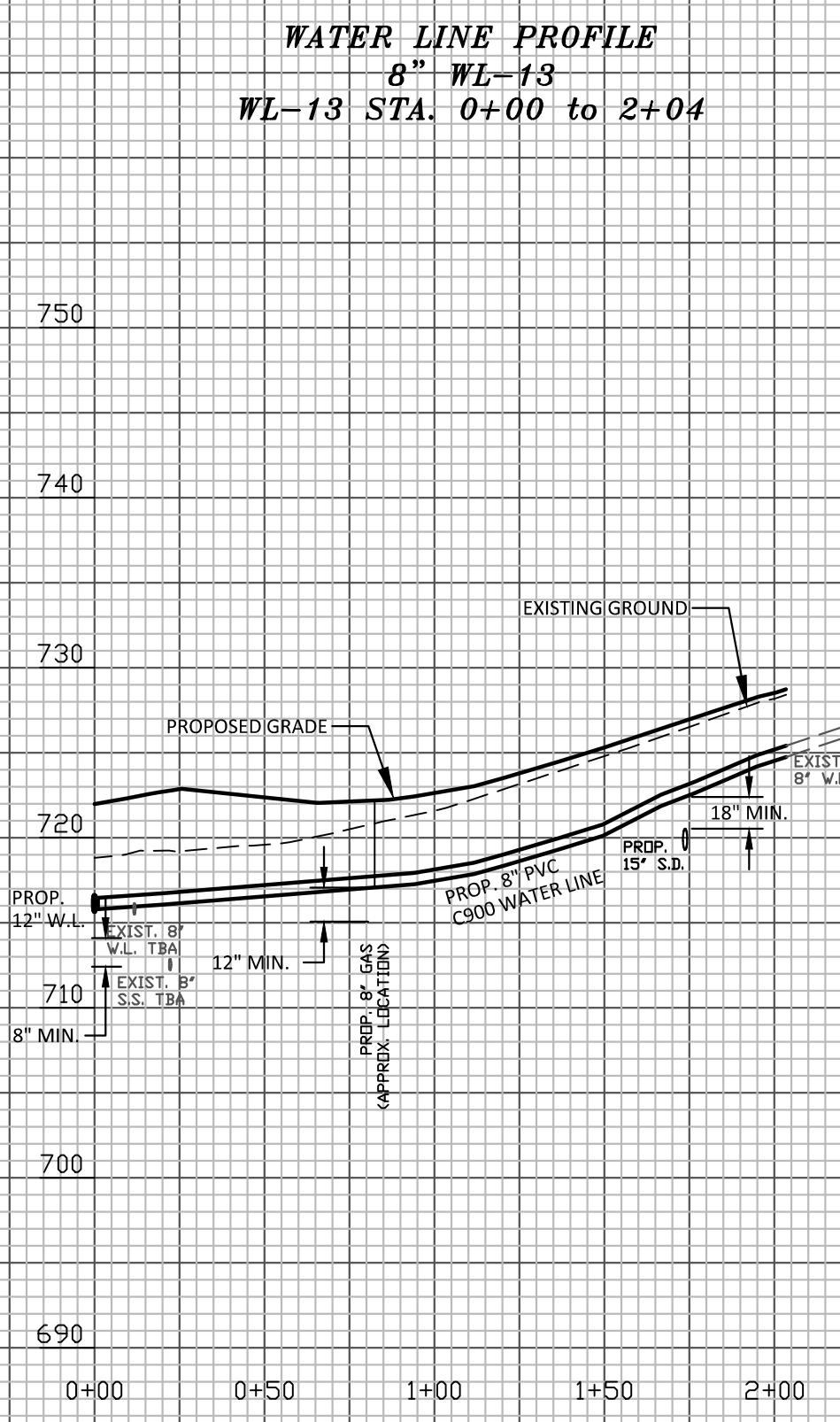
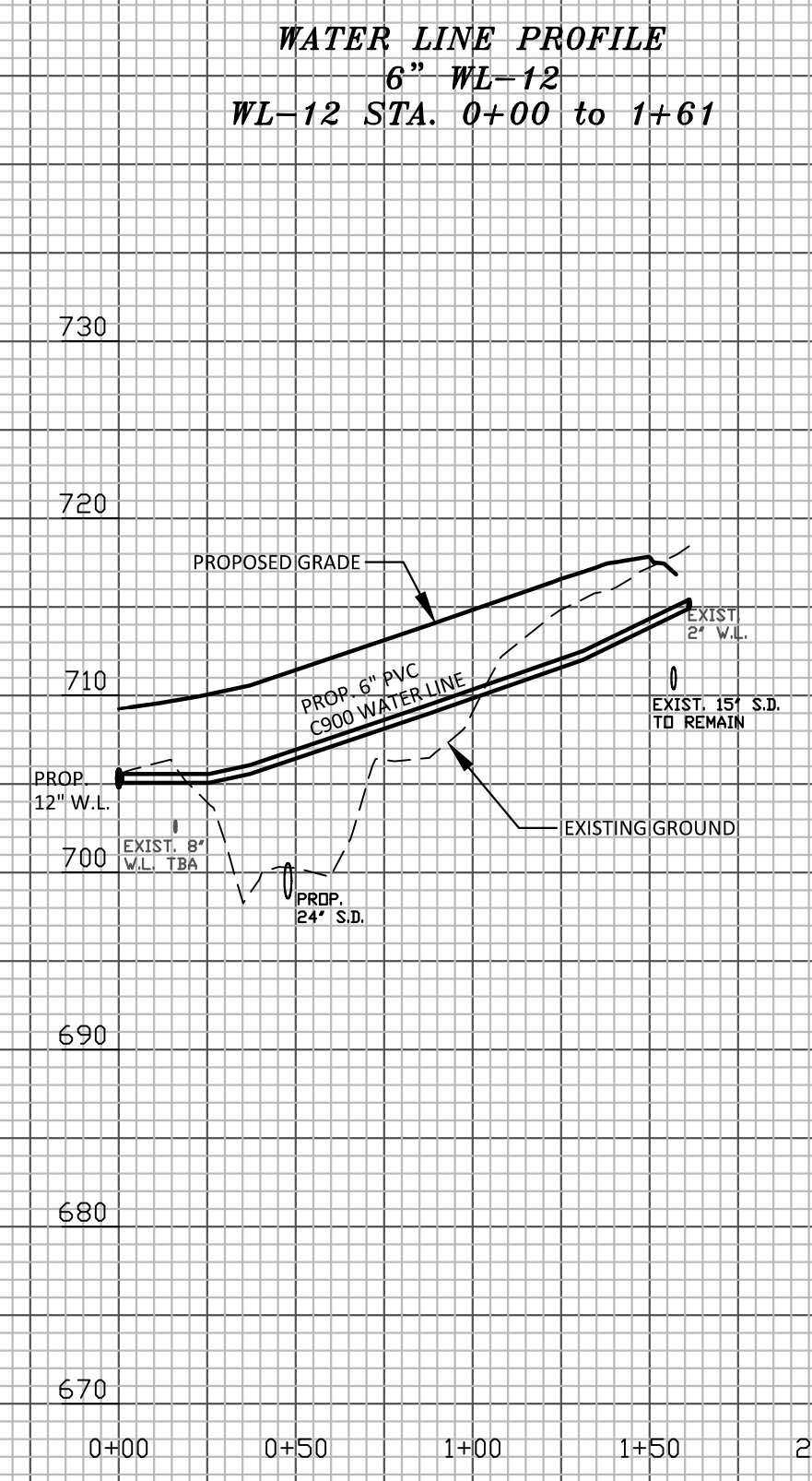
SEE SHEET UC-12 FOR 2" WATER PLAN VIEW

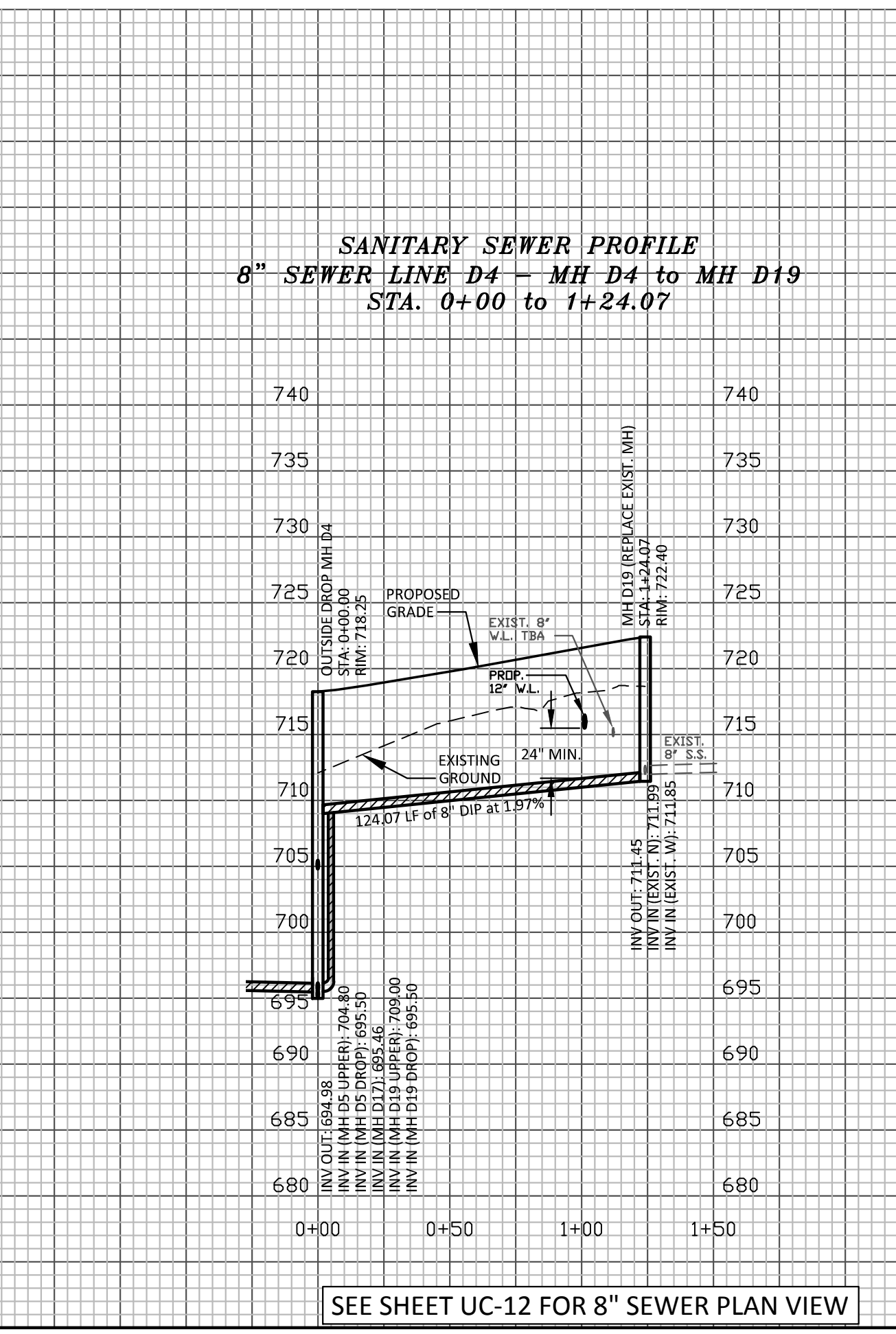
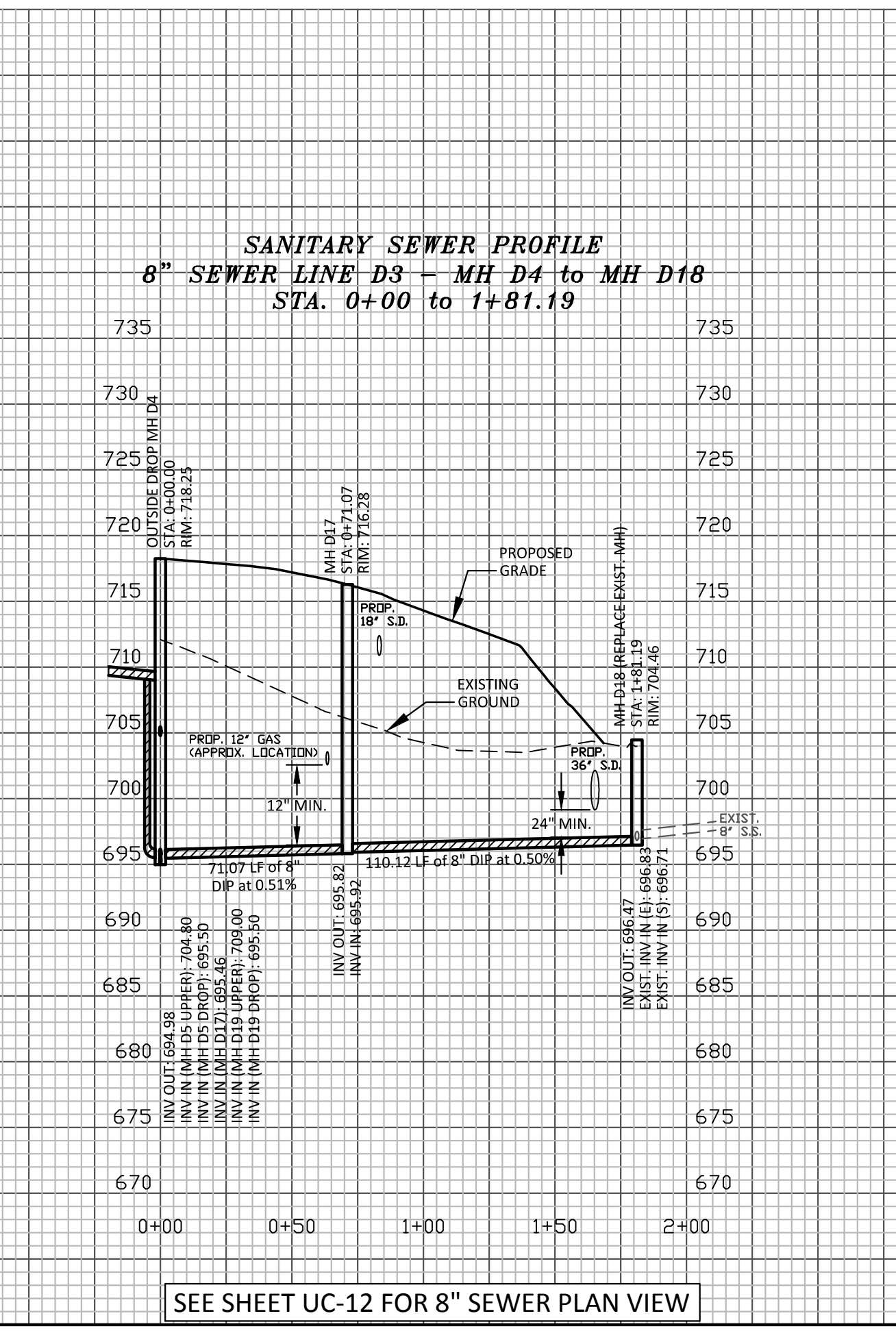
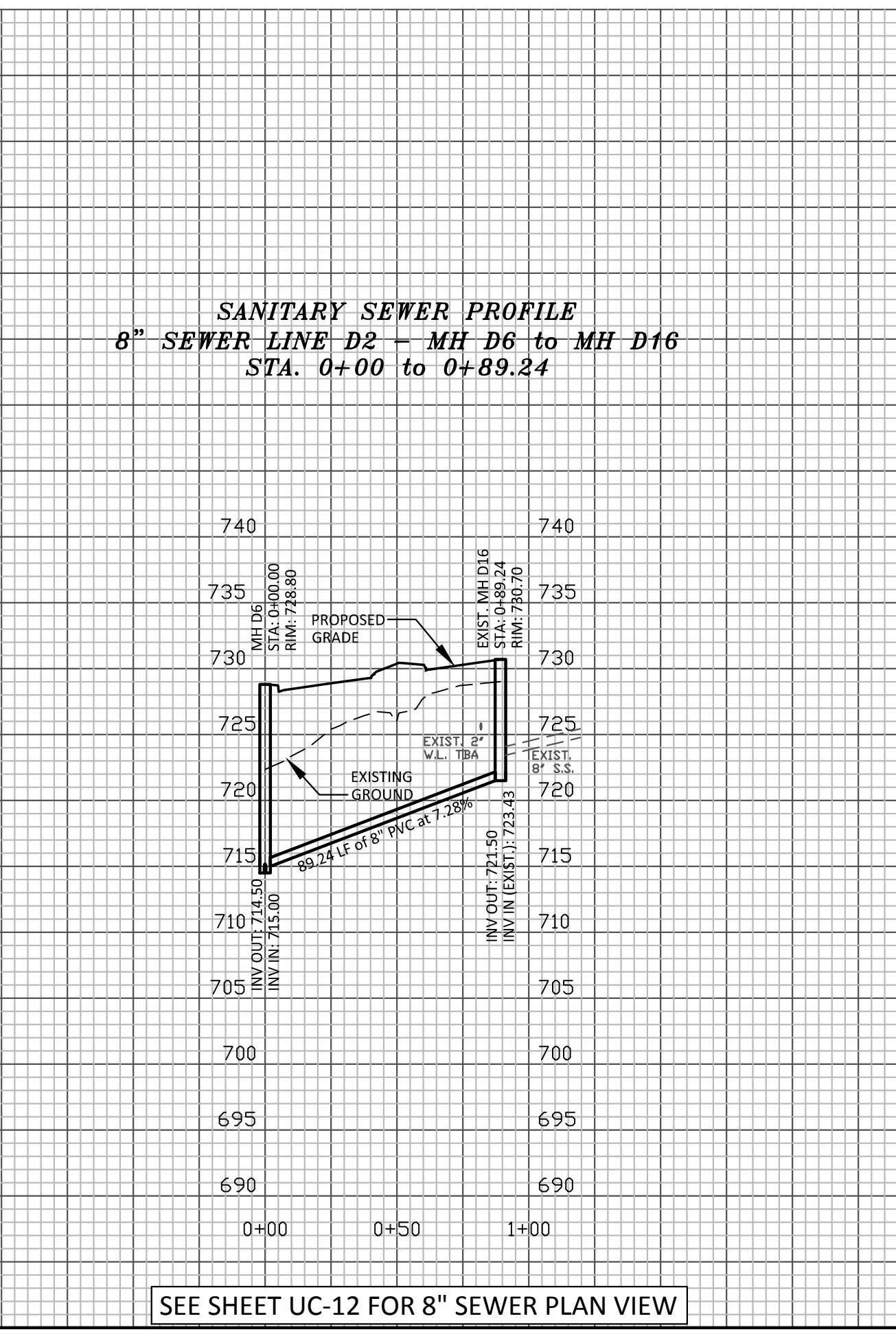
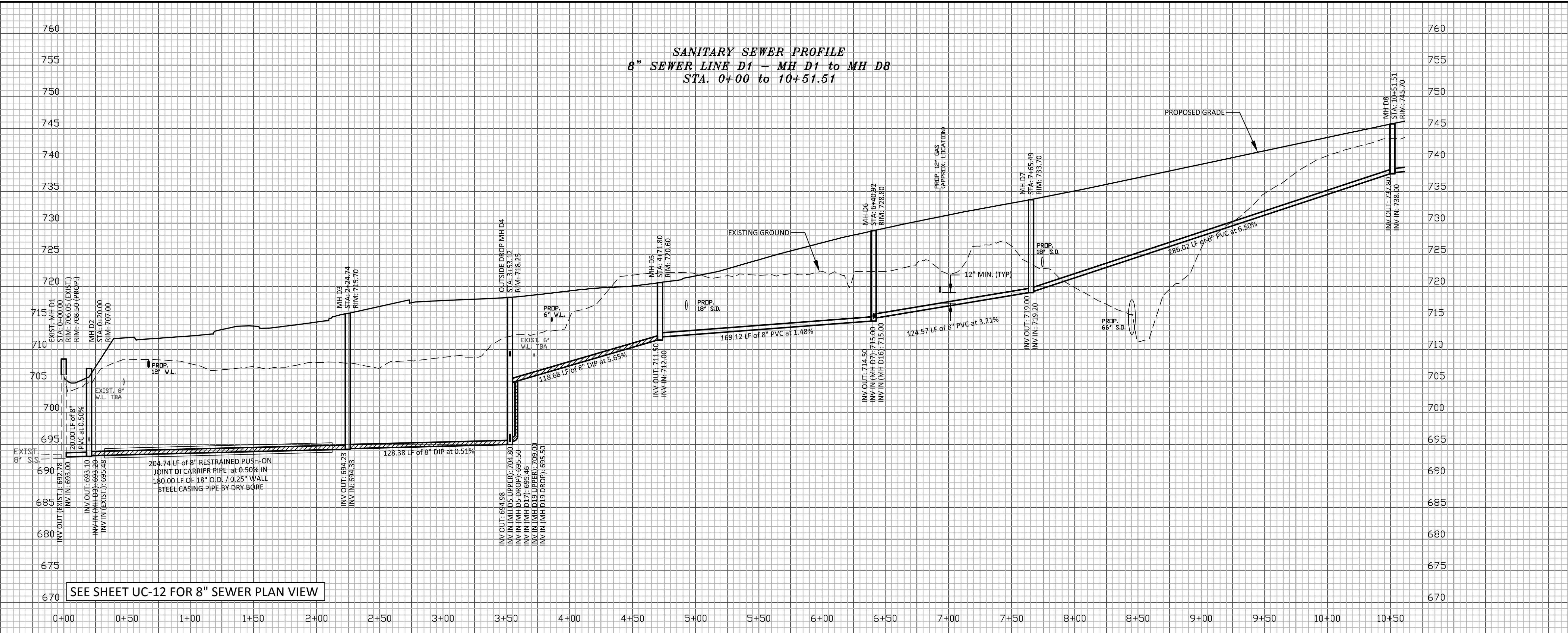
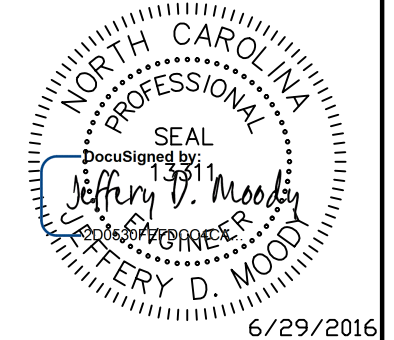
WATER LINE PROFILE 6" WL-12 WL-12 STA. 0+00 to 1+61

WATER LINE PROFILE 8" WL-13 WL-13 STA. 0+00 to 2+04

WATER LINE PROFILE 6" WL-14 WL-14 STA. 0+00 to 3+31

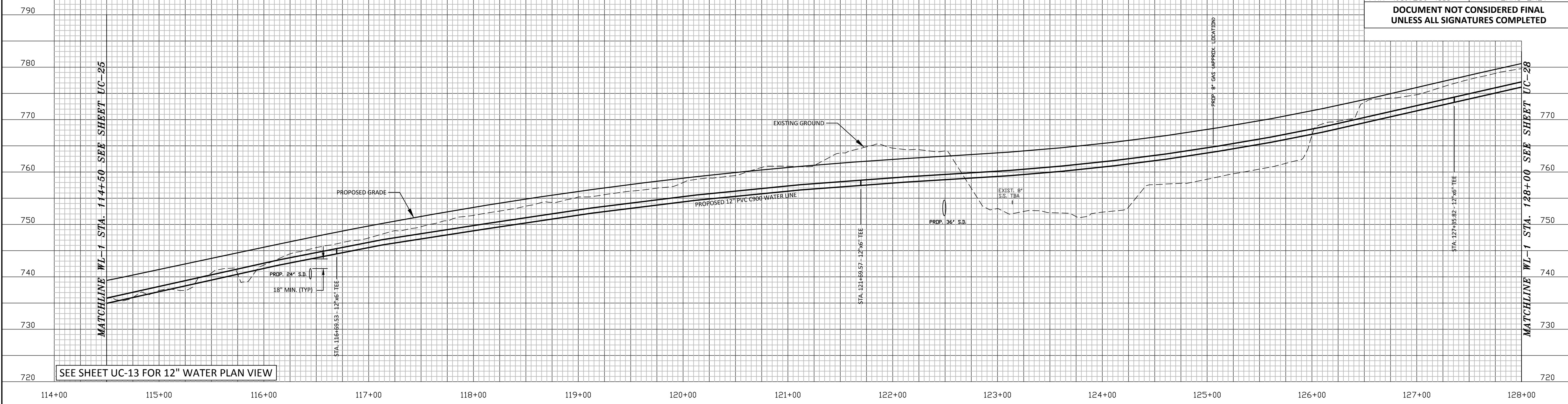
WATER LINE PROFILE 2" WL-15 WL-15 STA. 0+00 to 0+57





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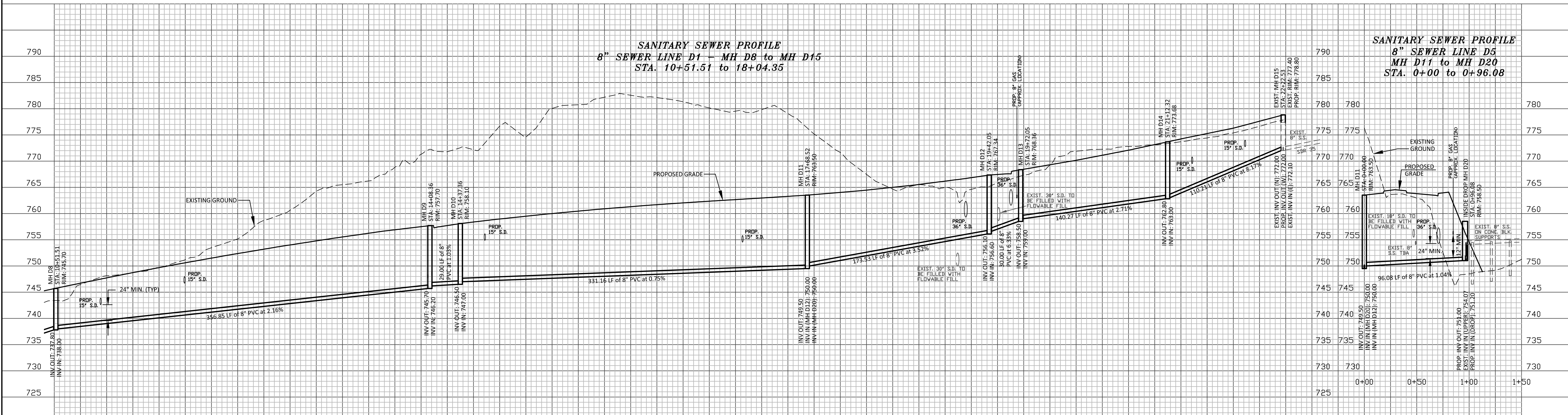
WATER LINE PROFILE
12" WL-1
WL-1 STA. 114+50 to 128+00



SEE SHEET UC-13 FOR 12" WATER PLAN VIEW

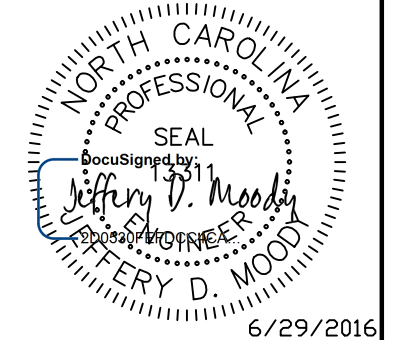
SANITARY SEWER PROFILE
8" SEWER LINE D1
STA. 10+51.51 to 18+04.35

SANITARY SEWER PROFILE
8" SEWER LINE D5
MH D11 to MH D20
STA. 0+00 to 0+96.08



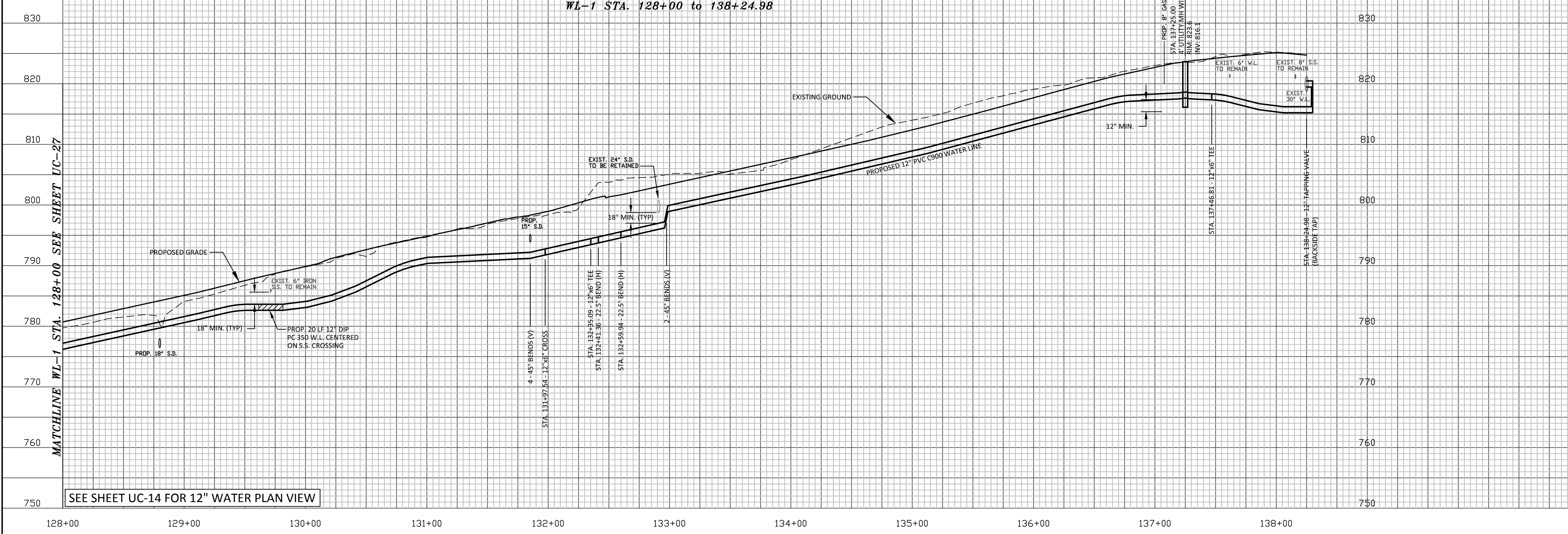
SEE SHEET UC-13 FOR 8" SEWER PLAN VIEW

SEE SHEET UC-13 FOR 8" SEWER PLAN VIEW

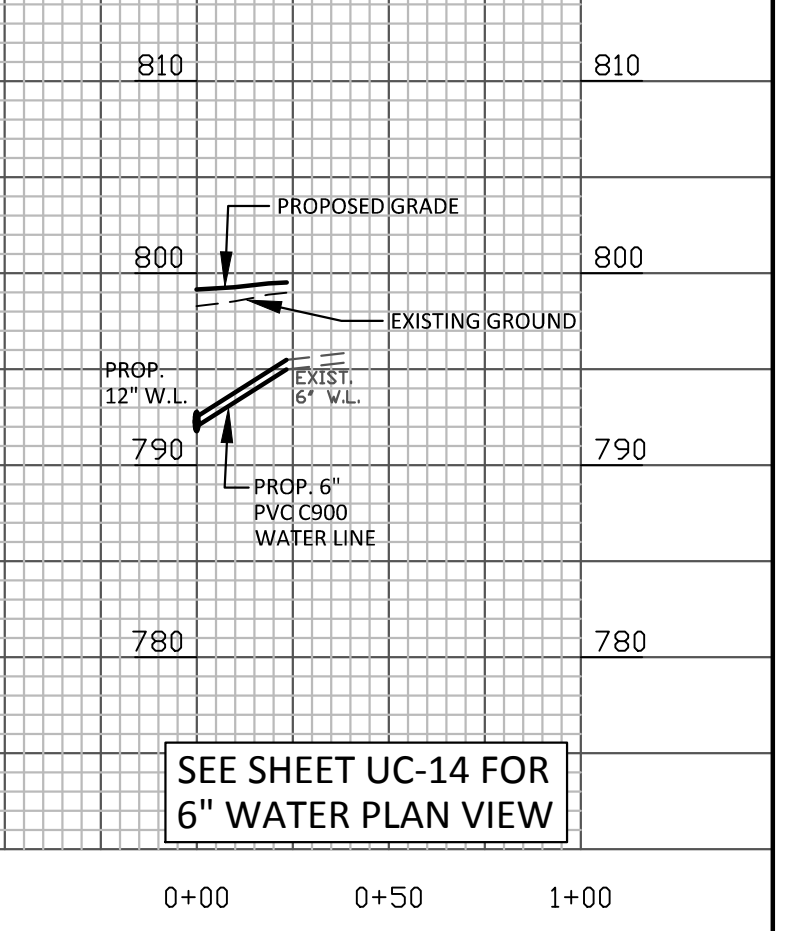


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 FIRM LICENSE No. F-0203
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 KANNAPOLIS, NC 28082 704/938-1515

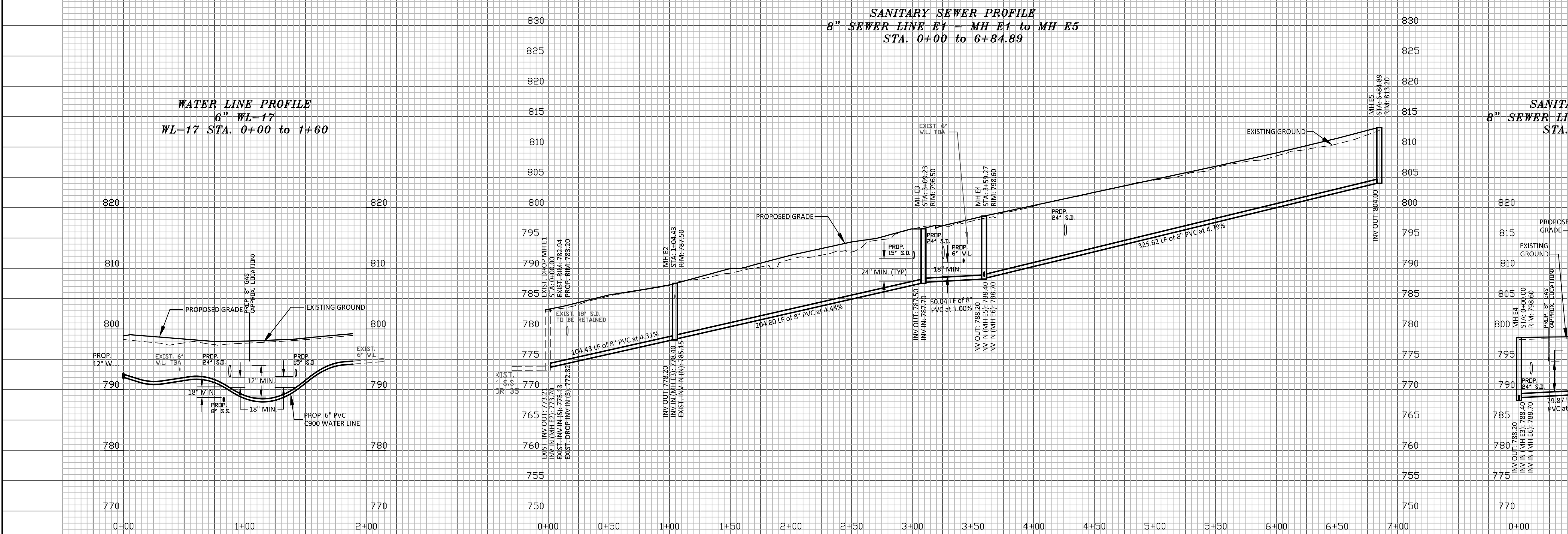
WATER LINE PROFILE
12" WL-1
WL-1 STA. 128+00 to 138+24.98



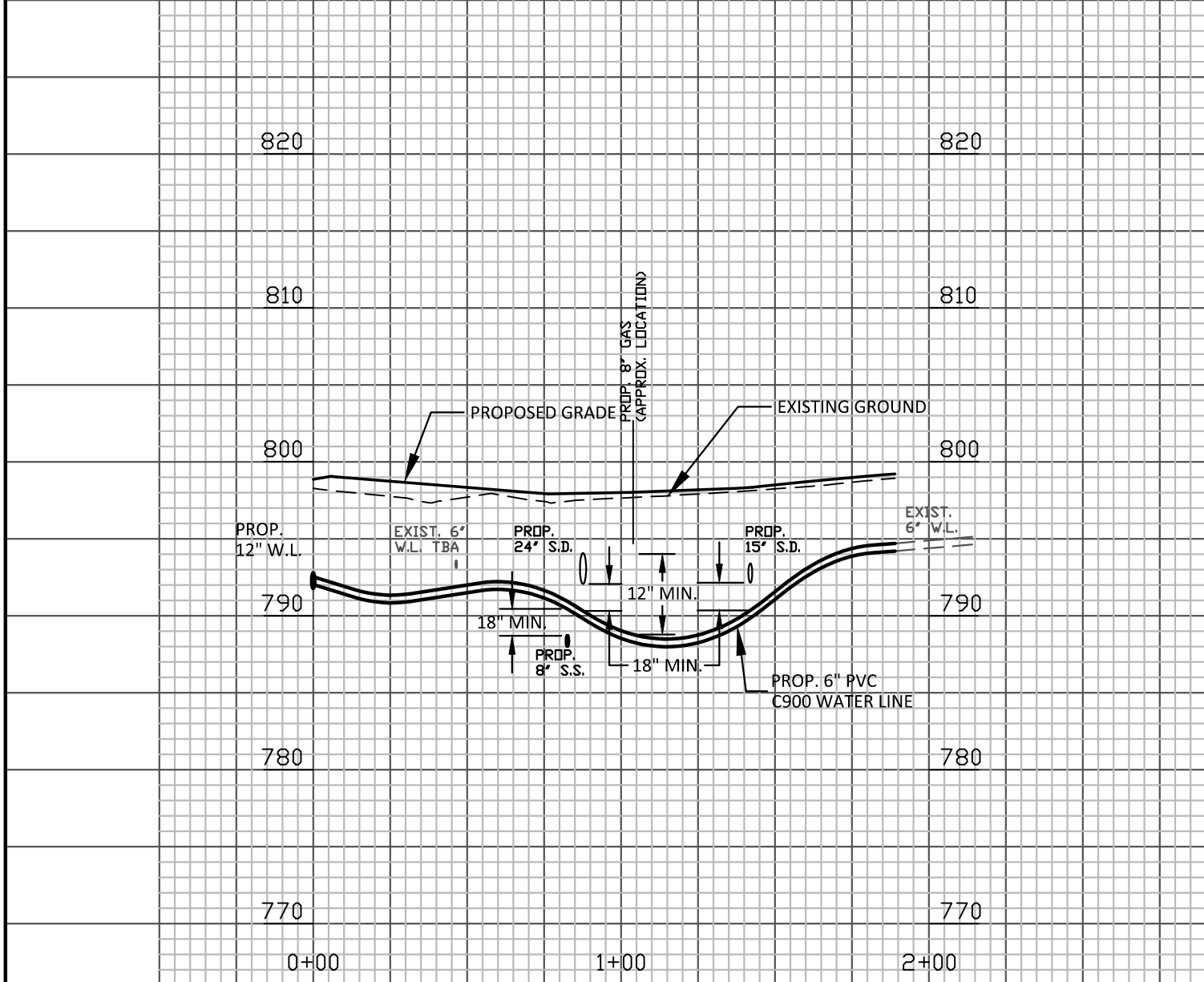
WATER LINE PROFILE
6" WL-16
WL-16 STA. 0+00 to 0+24



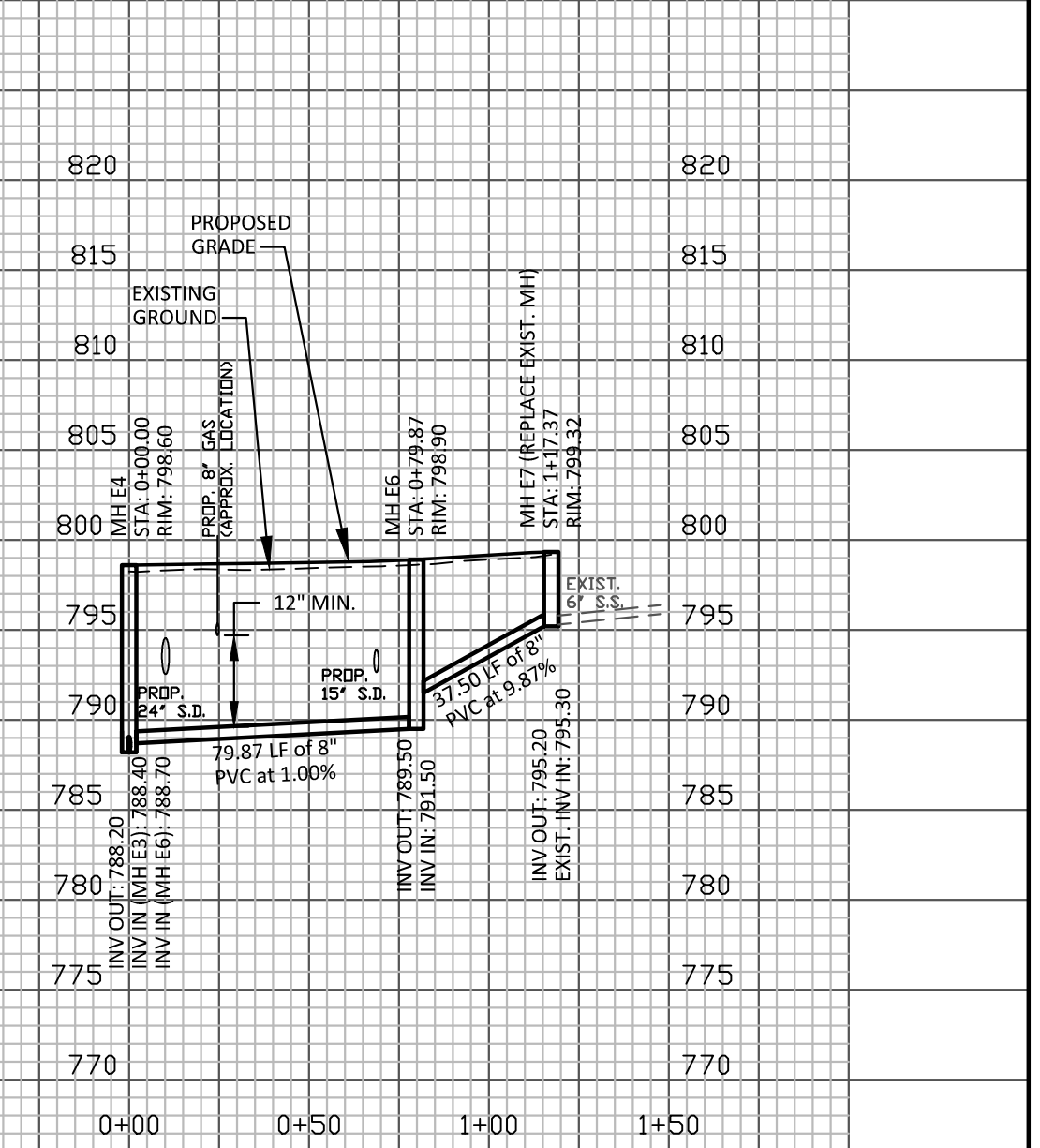
SANITARY SEWER PROFILE
8" SEWER LINE E1 - MH E1 to MH E5
STA. 0+00 to 6+84.89



WATER LINE PROFILE
6" WL-17
WL-17 STA. 0+00 to 1+60

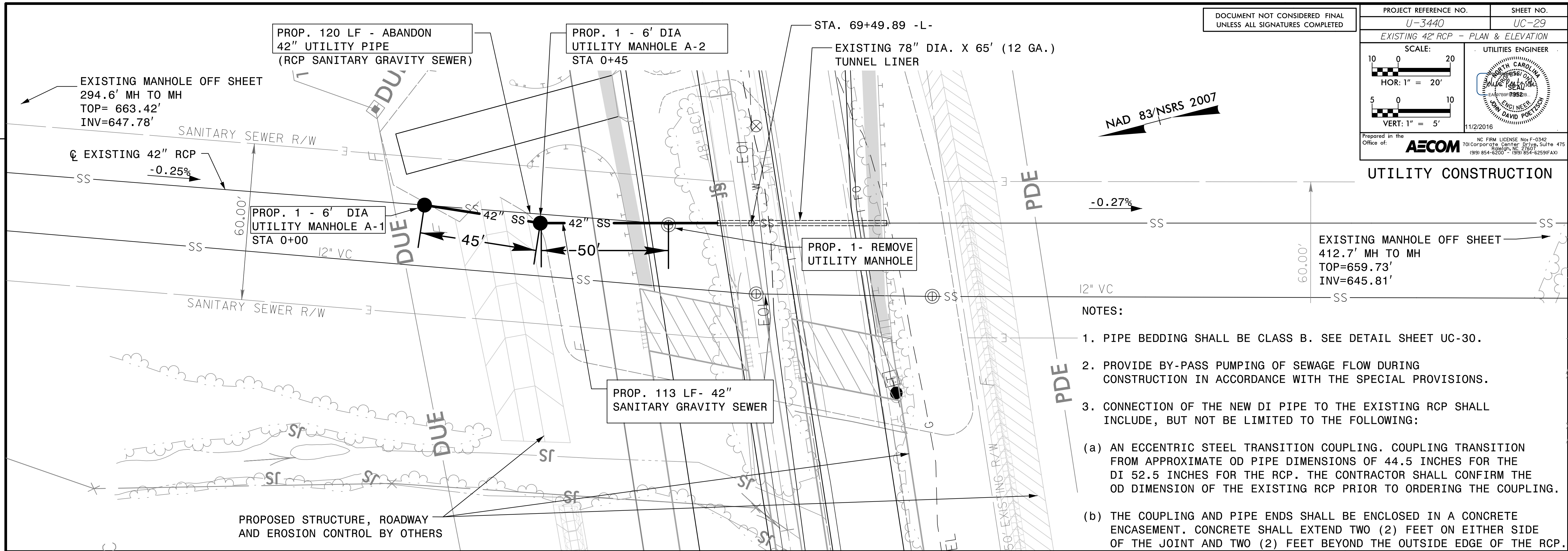


SANITARY SEWER PROFILE
8" SEWER LINE E2 - MH E4 to MH E7
STA. 0+00 to 1+17.37

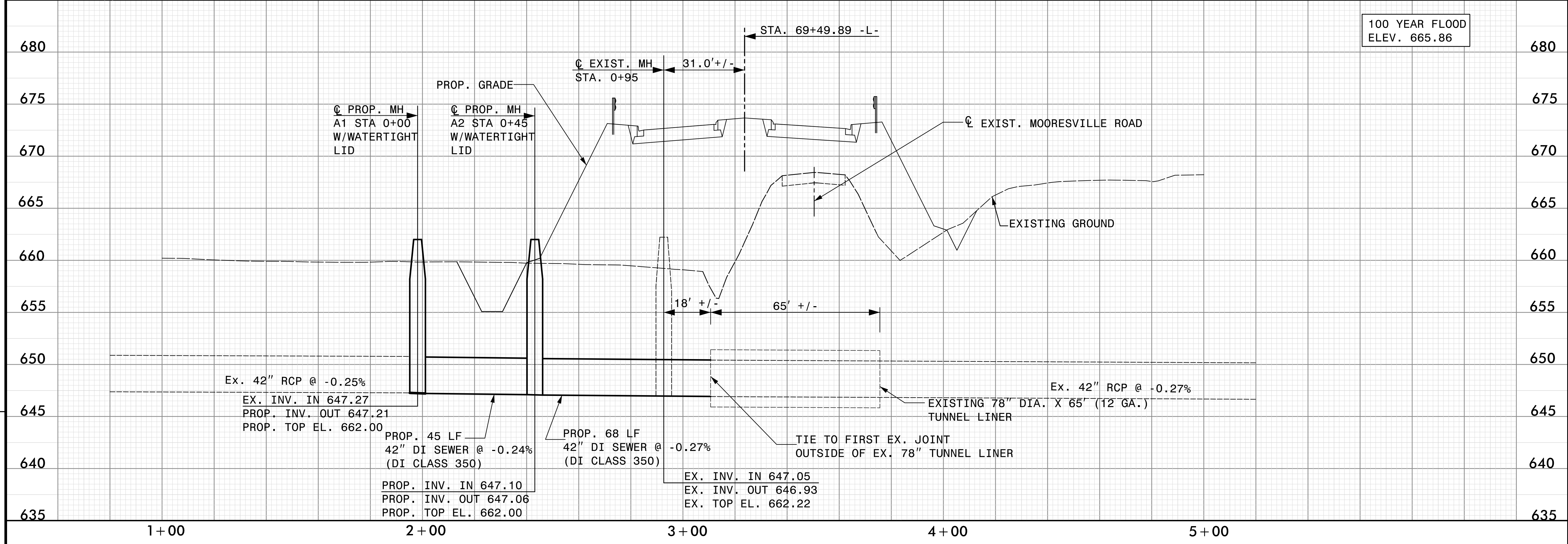


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PROJECT REFERENCE NO. U-3440	SHEET NO. UC-29
EXISTING 42" RCP - PLAN & ELEVATION	
SCALE: HOR: 1" = 20' VERT: 1" = 5'	
UTILITIES ENGINEER 	
Prepared in the Office of: AECOM 701 Corporate Center Drive, Suite 415 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259(FAX)	

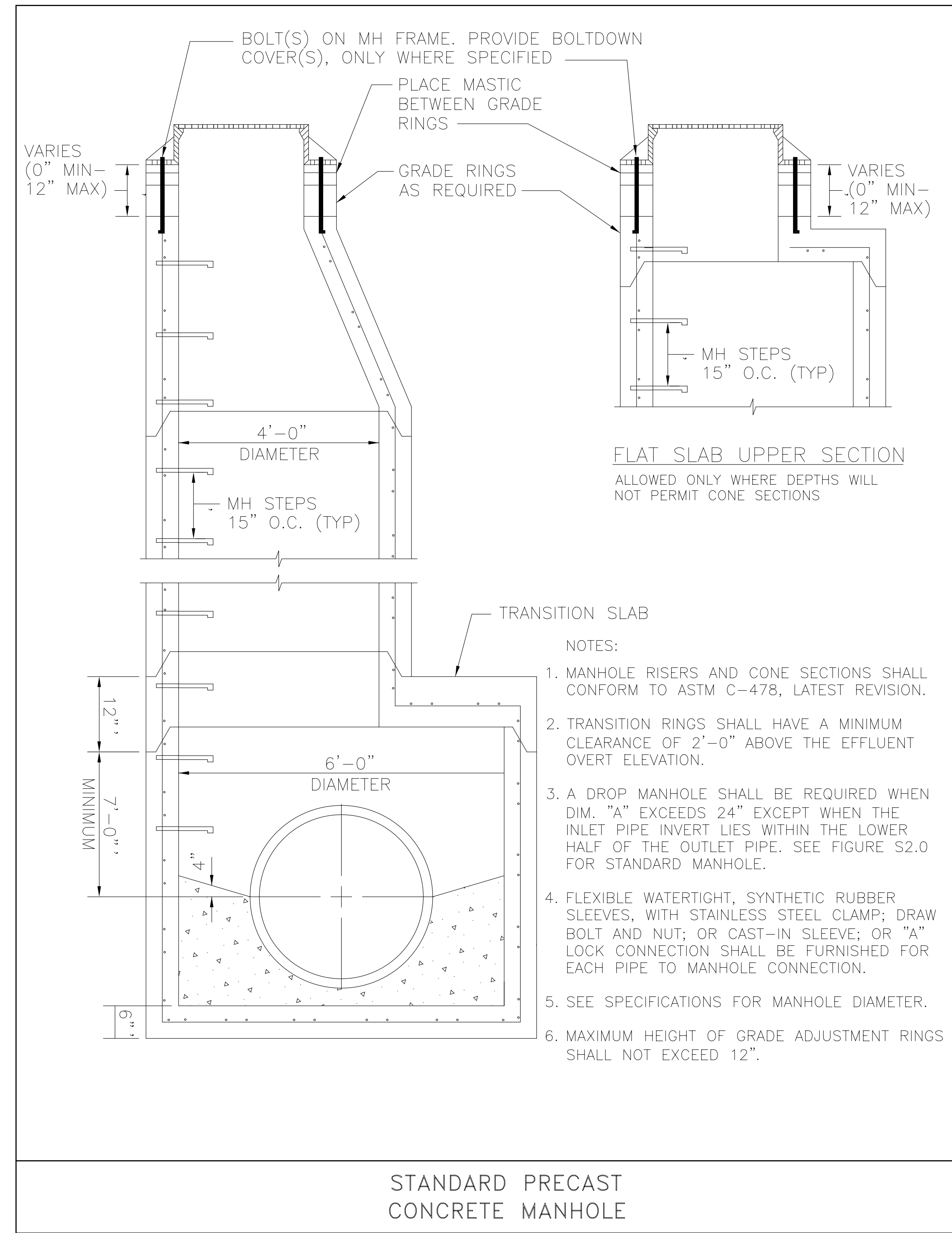


REVISIONS

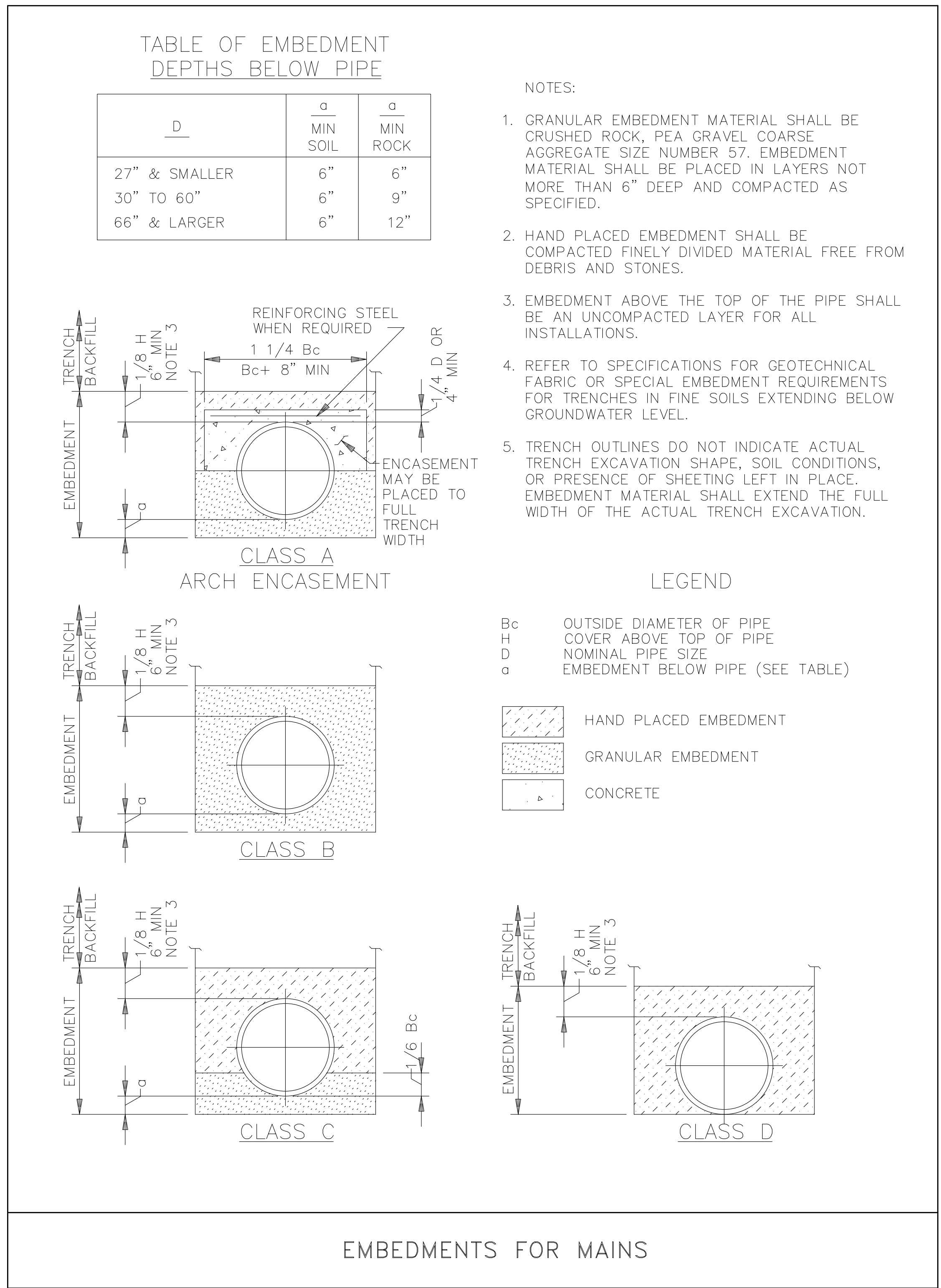


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Date: 11/2/2016
Time: 11:50 AM

UTILITY CONSTRUCTION



- NOTES:
1. MANHOLE RISERS AND CONE SECTIONS SHALL CONFORM TO ASTM C-478, LATEST REVISION.
 2. TRANSITION RINGS SHALL HAVE A MINIMUM CLEARANCE OF 2'-0" ABOVE THE EFFLUENT OVERT ELEVATION.
 3. A DROP MANHOLE SHALL BE REQUIRED WHEN DIM. "A" EXCEEDS 24" EXCEPT WHEN THE INLET PIPE INVERT LIES WITHIN THE LOWER HALF OF THE OUTLET PIPE. SEE FIGURE S2.0 FOR STANDARD MANHOLE.
 4. FLEXIBLE WATERTIGHT, SYNTHETIC RUBBER SLEEVES, WITH STAINLESS STEEL CLAMP; DRAW BOLT AND NUT; OR CAST-IN SLEEVE; OR "A" LOCK CONNECTION SHALL BE FURNISHED FOR EACH PIPE TO MANHOLE CONNECTION.
 5. SEE SPECIFICATIONS FOR MANHOLE DIAMETER.
 6. MAXIMUM HEIGHT OF GRADE ADJUSTMENT RINGS SHALL NOT EXCEED 12".



REVISIONS

Revisions: