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09/08/99
 SYSTEM TIME: 09/08/99 10:16:22 AM EDT
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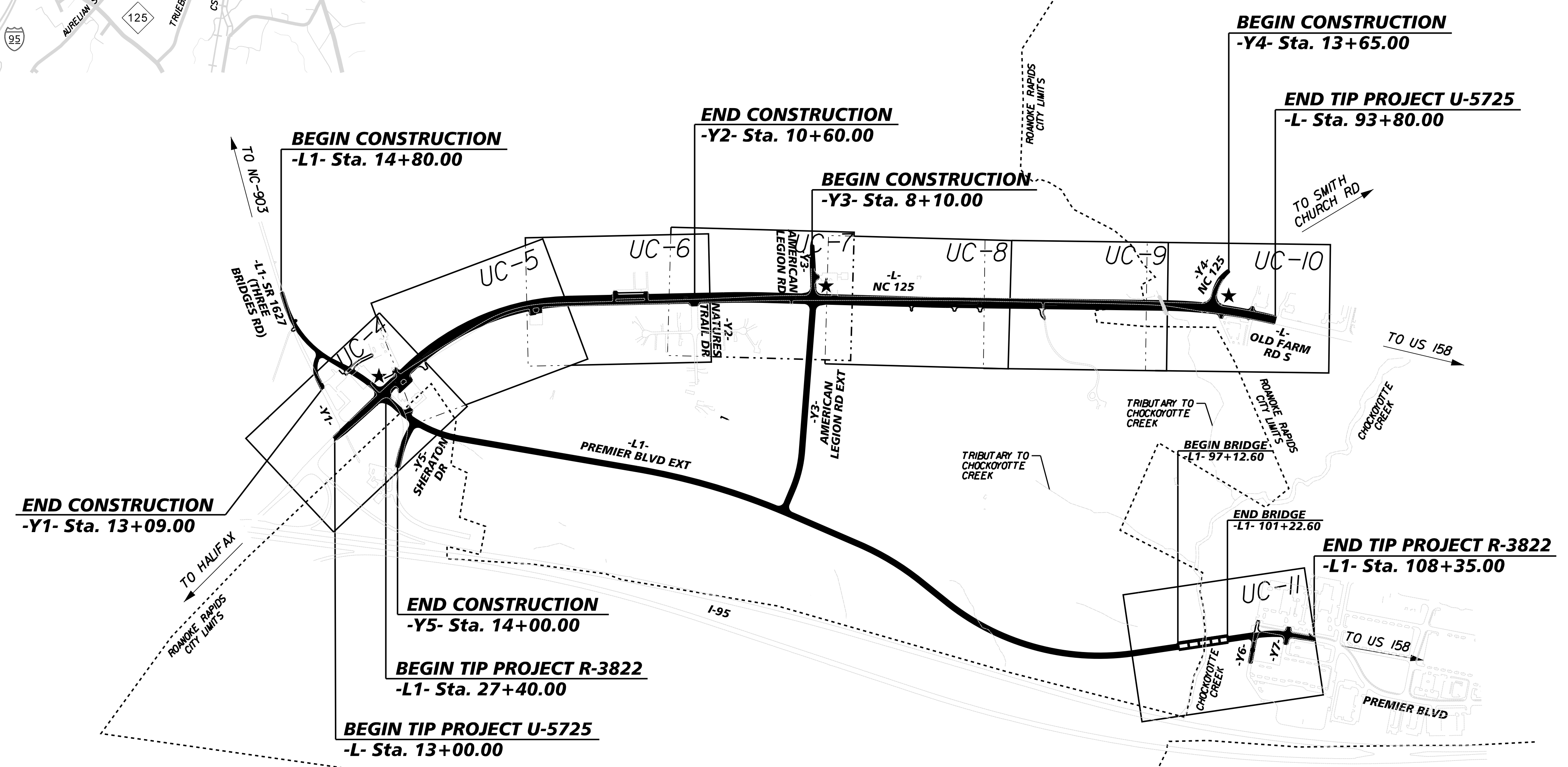
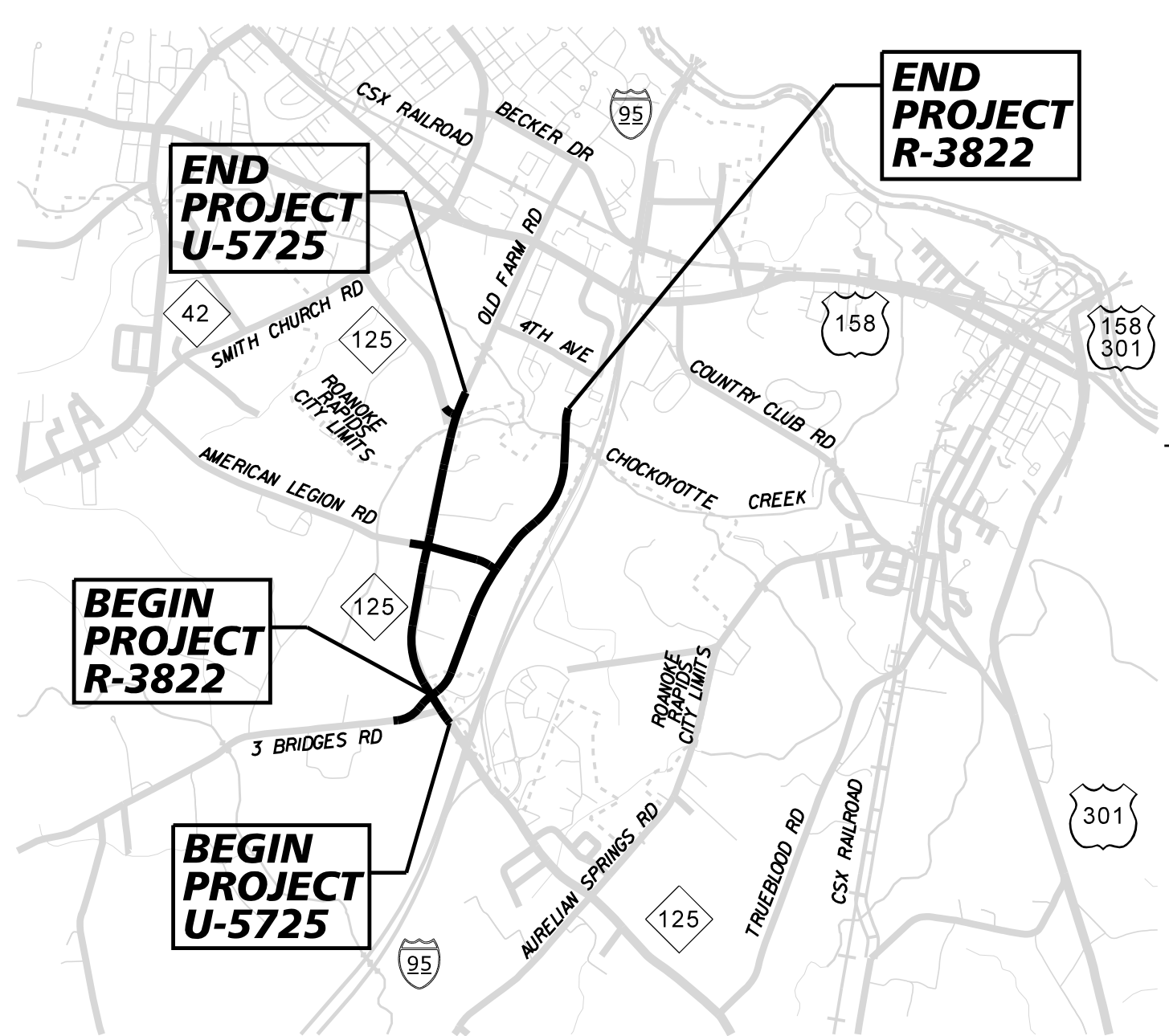
TIP PROJECT: U-5725R-3822

T.I.P. NO.	SHEET NO.
U-5725R-3822	UC-1

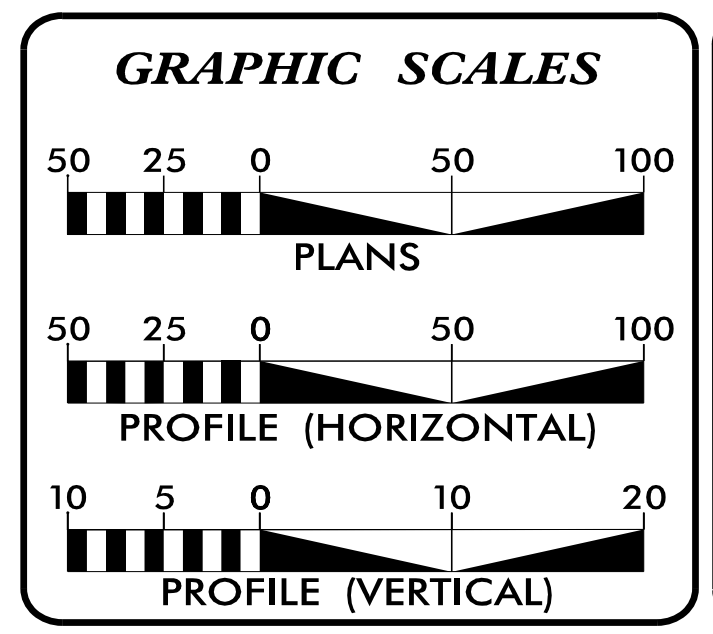
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HALIFAX COUNTY

LOCATION: NC 125 FROM I-95 TO OLD FARM ROAD SOUTH, SR 1627 (THREE BRIDGES ROAD) FROM NC 125 TO PREMIER BOULEVARD
TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNING, SIGNALS, AND STRUCTURES



DOCUMENT NOT CONSIDERED FINAL UNTIL ALL SIGNATURES ARE COMPLETED



INDEX OF SHEETS

SHEET NO.:	DESCRIPTION:
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3	NOTES
UC-3A THRU UC-3D	DETAILS
UC-4 THRU UC-11	UTILITY CONSTRUCTION SHEETS
UC-12 THRU UC-16	PROFILE SHEETS

WATER AND SEWER OWNERS ON PROJECT

(A) WATER/SEWER - HALIFAX COUNTY PUBLIC UTILITIES: GREG GRIFFIN 252-583-1451
 (B) WATER/SEWER - ROANOKE RAPIDS SANITARY DISTRICT: DAN BROWN 252-537-9137

PREPARED IN THE OFFICE OF

Kimley»Horn

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NOLAN D. RANEY, PE CONSULTANT CONTACT #1
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SEAL

8/10/2018 10:16:22 AM EDT

DIVISION OF HIGHWAYS UTILITIES UNIT
 1555 MAIL SERVICES CENTER
 RALEIGH, NC 27699-1555
 PHONE: (919) 707-6690
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Corey McLamb, PE DIVISION CONSTRUCTION ENGINEER
 Matt Clarke, PE DIVISION PROJECT DEVELOPMENT ENGINEER
 Kim Moore DIVISION UTILITY ENGINEER

5/14/99

REVISIONS

8/9/2018

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

Kimley»Horn
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 RALEIGH, N.C. 27601

PROJECT REFERENCE NO. U-5725/R-3822	SHEET NO. UC-2
R/W SHEET NO. UTILITY DESIGN ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	
11¼ Degree Bend	
22½ Degree Bend	
45 Degree Bend	
90 Degree Bend	
Plug	
Tee	
Cross	
Reducer	
Gate Valve	
Butterfly Valve	
Tapping Valve	
Line Stop	
Line Stop with Bypass	
Blow Off	
Fire Hydrant	
Relocate Fire Hydrant	
Remove Fire Hydrant	
Water Meter	
Relocate Water Meter	
Remove Water Meter	
Water Pump Station	
RPZ Backflow Preventer	
DCV Backflow Preventer	
Relocate RPZ Backflow Preventer	
Relocate DCV Backflow Preventer	

PROPOSED SEWER SYMBOLS

Gravity Sewer Line (Sized as Shown)	
Force Main Sewer Line (Sized as Shown)	
Manhole (Sized per Note)	
Sewer Pump Station	

PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

Power Pole	
Telephone Pole	
Joint Use Pole	
Telephone Pedestal	
Utility Line by Others (Type as Shown)	
Trenchless Installation	
Encasement by Open Cut	
Encasement	

Thrust Block	
Air Release Valve	
Utility Vault	
Concrete Pier	
Steel Pier	
Plan Note	
Pay Item Note	

EXISTING UTILITIES SYMBOLS

Power Pole		*Underground Power Line	
Telephone Pole		*Underground Telephone Cable	
Joint Use Pole		*Underground Telephone Conduit	
Utility Pole		*Underground Fiber Optics Telephone Cable	
Utility Pole with Base		*Underground TV Cable	
H-Frame Pole		*Underground Fiber Optics TV Cable	
Power Transmission Line Tower		*Underground Gas Pipeline	
Water Manhole		Aboveground Gas Pipeline	
Power Manhole		*Underground Water Line	
Telephone Manhole		Aboveground Water Line	
Sanitary Sewer Manhole		*Underground Gravity Sanitary Sewer Line	
Hand Hole for Cable		Aboveground Gravity Sanitary Sewer Line	
Power Transformer		*Underground SS Forced Main Line	
Telephone Pedestal		Underground Unknown Utility Line	
CATV Pedestal		SUE Test Hole	
Gas Valve		Water Meter	
Gas Meter		Water Valve	
Located Miscellaneous Utility Object		Fire Hydrant	
Abandoned According to Utility Records		Sanitary Sewer Cleanout	
End of Information			

*For Existing Utilities
 Utility Line Drawn from Record (Type as Shown)
 Designated Utility Line (Type as Shown)

5/14/09

REVISIONS

8/9/2018

GENERAL NOTES:

1. ALL WORK SHALL COMPLY WITH APPLICABLE STATE, FEDERAL, AND LOCAL CODES, AND ALL NECESSARY LICENSES AND PERMITS SHALL BE OBTAINED BY THE CONTRACTOR AT ITS EXPENSE, UNLESS PREVIOUSLY OBTAINED BY THE OWNER AND PROVIDED AT THE PRECONSTRUCTION CONFERENCE.
2. DEVIATION FROM THESE PLANS AND NOTES WITHOUT THE PRIOR WRITTEN CONSENT OF THE OWNER OR THEIR REPRESENTATIVE OR THE ENGINEER MAY BE CAUSE FOR THE WORK TO BE UNACCEPTABLE.
3. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SHOULD ANY FIELD CONDITIONS BE ENCOUNTERED THAT VARY FROM THE INFORMATION PROVIDED IN THE CONTRACT DOCUMENTS.
4. CONTRACTOR SHALL PLAN AND CONSTRUCT WORK SO AS TO CAUSE MINIMUM INCONVENIENCE TO THE OWNER AND PUBLIC. THE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AND ERECT AND MAINTAIN AT ALL TIMES DURING THE PROGRESS OR TEMPORARY SUSPENSION OF WORK, SUITABLE BARRIERS, FENCES, SIGNS OR OTHER ADEQUATE PROTECTION, INCLUDING FLAG MEN AND WATCHMEN AS NECESSARY TO ENSURE THE SAFETY OF THE PUBLIC AS WELL AS THOSE ENGAGED IN THE CONSTRUCTION WORK. CONSTRUCTION SIGNAGE SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "CONSTRUCTION AND MAINTENANCE OPERATIONS SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" BY THE NCDOT.
5. ALL SANITARY SEWER CONSTRUCTION SHALL CONFORM TO NCDOT REGULATIONS, AND TO CURRENT HALIFAX COUNTY PUBLIC UTILITIES/RRSD REGULATIONS, STANDARDS, AND SPECIFICATIONS.
6. CONTRACTOR SHALL COORDINATE ALL WORK WITH THE HALIFAX COUNTY PUBLIC UTILITIES/RRSD.
7. ALL PIPE LENGTHS AND DISTANCES BETWEEN STRUCTURES ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE ALONG A HORIZONTAL PLANE.
8. THE CONTRACTOR SHALL PROVIDE ALL STAKEOUT SURVEY. ANY EXISTING STAKEOUT OR BENCHMARKS SHALL NOT BE RELIED UPON BY THE CONTRACTOR.
9. COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON THE NORTH CAROLINA STATE PLANE COORDINATE SYSTEM (NAD 83).
10. ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY HALIFAX COUNTY PUBLIC UTILITIES AND RRSD PRIOR TO CONSTRUCTION.
11. LOCATIONS OF EXISTING SHOWN UTILITIES ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE SIZE, DEPTH, MATERIAL AND LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION AND TO TAKE WHATEVER STEPS ARE NECESSARY TO PROVIDE FOR THEIR PROTECTION. THE ENGINEER HAS ATTEMPTED TO LOCATE AND INDICATE ALL EXISTING FACILITIES ON THE PLANS; HOWEVER, THIS INFORMATION IS SHOWN FOR THE CONTRACTOR'S CONVENIENCE ONLY. THE ENGINEER AND THE OWNER ASSUME NO RESPONSIBILITY FOR THE LOCATIONS OF UTILITIES SHOWN OR NOT SHOWN. PRIOR TO DIGGING ON AND OFF SITE, THE CONTRACTOR SHALL HAVE ALL UTILITIES LOCATED BY "NC 811" 1-800-632-4949. THE CONTRACTOR SHALL CONTACT ANY UTILITY COMPANY WHOSE UTILITIES ARE NOT LOCATED BY "NC 811" FOR EXACT LOCATION OF THEIR UTILITIES PRIOR TO STARTING CONSTRUCTION. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND/OR REPLACE ANY AND ALL DAMAGE MADE TO UTILITIES BY THE CONTRACTOR TO EXISTING CONDITIONS AT THE CONTRACTOR'S EXPENSE.
12. BURIED DATA, TELEPHONE AND CATV CABLES (FIBER OPTICS AND CONVENTIONAL) ARE KNOWN TO VARY DUE TO INSTALLATION TECHNIQUES. CONTRACTOR SHALL COORDINATE WORK WITH CONFLICTING DATA, TELEPHONE AND CATV CABLES AS NECESSARY FOR INSTALLATION OF THE PROPOSED WATER AND SEWER. UTILITY COORDINATION SHALL BE INCLUDED IN THE PROJECT SCHEDULE AND IT IS THE EXPLICIT RESPONSIBILITY OF THE CONTRACTOR TO ASSURE THAT THE PROJECT SCHEDULE INCLUDES THE NECESSARY RELOCATION. THE CONTRACTOR SHALL NOT BE PAID ADDITIONALLY FOR THIS COORDINATION.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH UTILITY PROVIDERS ANY ADDITIONAL SUPPORT OF EXISTING UTILITY POLES OR OTHER ITEMS AS REQUIRED FOR TRENCH EXCAVATION. ALL COSTS OF SUCH WORK SHALL BE PAID BY THE CONTRACTOR.
14. THE CONTRACTOR SHALL VERIFY THE VOLTAGES OF ALL ELECTRICAL UTILITIES AND FOLLOW THE APPROPRIATE OSHA STANDARDS WHEN WORKING IN THEIR VICINITY.
15. UNLESS OTHERWISE INDICATED, ALL EXISTING GRADE ELEVATIONS SHOWN ARE ALONG THE PIPE CENTERLINE.
16. OWNERS WILL FURNISH DESCRIPTIONS OF EASEMENTS UPON REQUEST.
17. ALL PAVEMENT CUTS SHALL BE SAWCUT ALONG A CONTINUOUS STRAIGHT LINE AND REPAVED PER THE DETAILS. DECORATIVE CONCRETE SHALL BE CUT TO THE NEAREST JOINT.
18. TRAFFIC ISLANDS, CURBS AND CONCRETE DRIVEWAYS SHALL BE REPLACED TO THE FIRST EXPANSION JOINT BEYOND THE TRENCH EXCAVATION LIMITS AND TO THE FULL WIDTH. TRAFFIC ISLANDS, CURBS AND CONCRETE DRIVEWAYS SHALL MATCH EXISTING.
19. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SHEETING REQUIRED FOR THE INSTALLATION OF THE UTILITY. ALL EXCAVATIONS SHALL BE KEPT WITHIN THE DESIGNATED EASEMENT WIDTHS. EXCAVATION WITHIN PAVED AREAS SHALL BE KEPT TO A MINIMUM. SHEETING SHALL BE INSTALLED AS REQUIRED TO PROTECT EXISTING UTILITIES.
20. PLACED RIP-RAP SHALL HAVE A MINIMUM DEPTH OF 1.5 TIMES THE MAXIMUM STONE DIAMETER AND SHALL HAVE A LAYER OF TYPE II GEOTEXTILE SEPARATOR PLACED BETWEEN THE SOIL AND STONE.
21. ALL MATERIAL CLEARED AND GRUBBED BY THE CONTRACTOR IN ORDER TO CONSTRUCT THE WORK, SUCH AS TREES, VEGETATION, ETC., SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF-SITE AT A STATE APPROVED DISPOSAL SITE.
22. IMMEDIATELY PRIOR TO DISTURBANCE, CONTRACTOR SHALL OBTAIN DIGITALLY RECORDED VIDEO OF THE UTILITY ALIGNMENTS INCLUDING EACH DRIVEWAY, SIDEWALK, ETC., TO BE DISTURBED. EACH SHALL BE RESTORED TO ITS ORIGINAL CONDITION OR BETTER. VIDEO SHALL BE SUBMITTED TO THE CITY OF GOLDSBORO AND THE ENGINEER PRIOR TO WORK.
23. CONTRACTOR SHALL MAINTAIN A MEANS FOR ACCESS TO EACH PROPERTY AT ALL TIMES.
24. DURING CONSTRUCTION, EMERGENCY VEHICLE APPARATUS ACCESS AND ACCESS TO FIRE HYDRANTS SHALL BE MAINTAINED AT ALL TIMES.
25. ALL CONSTRUCTION SHALL BE LIMITED TO STREET RIGHTS-OF-WAY AND OBTAINED EASEMENTS. REFER TO DETAIL 0222110 FOR TRENCH WIDTH REQUIREMENTS. WHERE THE CONTRACTOR DETERMINES THAT ENCROACHMENT ONTO PRIVATE PROPERTY IS NECESSARY AND AN EASEMENT HAS NOT BEEN PROVIDED, THE CONTRACTOR SHALL CONTACT INDIVIDUAL PROPERTY OWNERS AND OBTAIN WRITTEN APPROVAL FOR THAT ENCROACHMENT. SUCH APPROVALS SHALL BE PROVIDED TO THE OWNER AND ENGINEER.
26. CONTRACTOR SHALL NOTIFY HOME OWNERS AT LEAST 7 DAYS PRIOR TO CONSTRUCTION THAT CONSTRUCTION ACTIVITY WILL TAKE PLACE IN THEIR AREA.

27. CONTRACTOR SHALL REMOVE AND REPLACE ALL CONFLICTING MAIL BOXES, CULVERTS, HEADWALLS, ORNAMENTAL STRUCTURES, ETC. WITHIN THE RIGHT OF WAY OR PERMANENT EASEMENT UNLESS OTHERWISE SHOWN ON THE PLANS OR IN THE CONTRACT DOCUMENTS. CONFLICTING TREES WITHIN THE RIGHT OF WAY SHALL BE REMOVED AND NOT REPLANTED.

28. THE CONTRACTOR SHALL INSTALL ALL SIGNS AS REQUIRED BY NCDOT ALONG STATE ROADWAYS.

29. TRENCHES AND EXCAVATIONS SHALL BE BACKFILLED OR COVERED WITH ROAD PLATES AT THE END OF THE WORK DAY.

30. CONTRACTOR SHALL PATCH ALL ROADWAY PAVEMENT DISTURBANCES BY THE END OF EACH WEEK. TEMPORARY GRAVEL PATCHES SHALL BE PROVIDED DAILY AND MAINTAINED UNTIL PAVEMENT PATCH IS PROVIDED. EROSION CONTROL SHALL BE PROVIDED AS NECESSARY FOR GRAVEL AREAS.

31. AT THE COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE FROM THE SITE ALL TOOLS, APPLIANCES, CONSTRUCTION EQUIPMENT AND MACHINERY, AND SURPLUS MATERIALS AND SHALL RESTORE TO ORIGINAL CONDITION ALL PROPERTY NOT DESIGNATED FOR ALTERATION BY THE CONTRACT DOCUMENTS.

32. ALL DI WATER/SEWER SHALL USE THE TYPE B TRENCH DETAIL.
ALL PVC WATER/SEWER SHALL USE THE TYPE E TRENCH DETAIL.

UTILITY NOTES:

1. UTILITY SEPARATION REQUIREMENTS:
 - A. DISTANCE OF 100' SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25' FROM A PRIVATE WELL OR 50' FROM A PUBLIC WELL.
 - B. WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
 - C. WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASEMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS.
 - D. 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER.
 - E. MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 24" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 6" MIN. CLEARANCE).
 - F. ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED.
2. MINIMUM PIPE COVER FOR SANITARY SEWER SHALL BE 4 FEET UNLESS DUCTILE IRON PIPE IS USED AND LESS COVER IS SPECIFICALLY APPROVED BY THE ENGINEER OR SHOWN OTHERWISE ON PLANS.
3. THE MINIMUM TRENCH WIDTHS SHALL BE IN STRICT ACCORDANCE WITH THE "TRENCH EXCAVATION LIMITS" AS SHOWN ON THE DRAWINGS.
4. CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 72 HOUR ADVANCE NOTICE TO HALIFAX COUNTY PUBLIC UTILITIES AND/OR RRSD.
5. RESTRAINED JOINT PIPE JOINTS SHALL BE INSTALLED BETWEEN THE STATIONS INDICATED ON THE DRAWINGS. IF A BEND OR FITTING IS RELOCATED BY THE CONTRACTOR FOR HIS CONVENIENCE THEN THE REQUIRED LENGTH OF RESTRAINED JOINTS SHALL BE MAINTAINED, AT NO ADDITIONAL COST TO THE OWNER. IF ADDITIONAL BENDS OR FITTINGS INSTALLED BY THE CONTRACTOR FOR HIS CONVENIENCE, THEN THE CONTRACTOR SHALL INSTALL THE REQUIRED LENGTH OF RESTRAINING JOINTS AS DETERMINED BY THE ENGINEER, AT NO ADDITIONAL COST TO THE OWNER.
6. ALL PRESSURIZED FITTINGS SHALL BE RESTRAINED JOINT, UNLESS OTHERWISE SHOWN. A THRUST RESTRAINT PRESSURE OF 350 PSI SHALL BE USED FOR THIS PROJECT.
7. ALL MECHANICAL JOINTS SHALL BE FITTED WITH RESTRAINING TYPE ACCESSORY KITS MEGA-LUG SERIES 1100 OR EQUAL. ALL BURIED EXTERIOR PRESSURIZED PIPING SHALL HAVE RESTRAINED JOINTS FOR THRUST PROTECTION UNLESS OTHERWISE SPECIFIED.
8. PIPE ALIGNMENT SHOWN IS BASED ON STANDARD FITTINGS AVAILABLE FOR PC 350 DUCTILE IRON PIPE. JOINT DEFLECTIONS SHALL NOT EXCEED 75 PERCENT OF MANUFACTURER'S RECOMMENDED DEFLECTION. CONTRACTOR SHALL ADJUST PIPELINE ALIGNMENT AND DEFLECT JOINTS AS NECESSARY TO ACCOMMODATE THE STANDARD BENDS SHOWN.
9. DETECTOR TAPE IS REQUIRED FOR ALL BURIED PIPE.
10. ALL MANHOLE COVERS AND VALVE BOX LIDS FOR WATER SHALL READ "WATER", ALL MANHOLE COVERS AND VALVE BOX LIDS FOR SEWER SHALL READ "SEWER".
11. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE OWNER.
12. EXISTING WATER SERVICES SHALL REMAIN IN SERVICE AT ALL TIMES UNTIL THE PROPOSED MAIN IS TESTED AND PHASED INTO SERVICE.
13. ALL WATER SERVICES SHALL BE INSTALLED ACCORDING TO SPECIFICATIONS UNLESS OTHERWISE SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL LOCATE AND MAINTAIN EXISTING WATER SERVICES PRIOR TO ANY EXCAVATION IN THE AREA. ALL WATER METERS SHALL BE INSTALLED WITHIN 2 FEET OF THE RIGHT OF WAY LINE.
14. ALL DI FITTINGS AND PIPING FOR GRAVITY SEWER SHALL BE LINED WITH PROTECTO 401, OR APPROVED EQUAL. FIELD CUTS SHALL BE REPAIRED WITH PROTECTO 401 JOINT COMPOUND, OR APPROVED EQUAL.

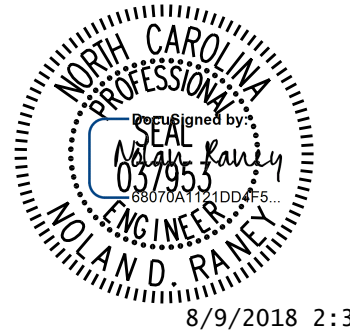
Kimley»Horn421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, N.C. 27601

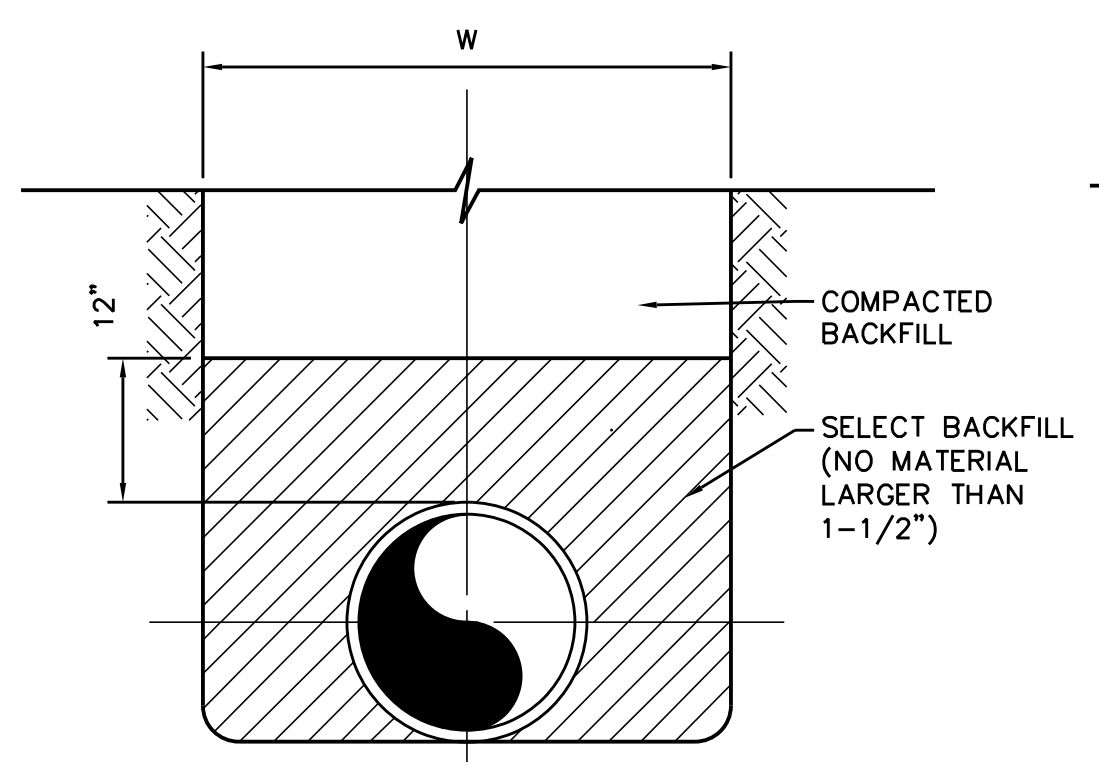
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U-5725/R-3822 UC-3

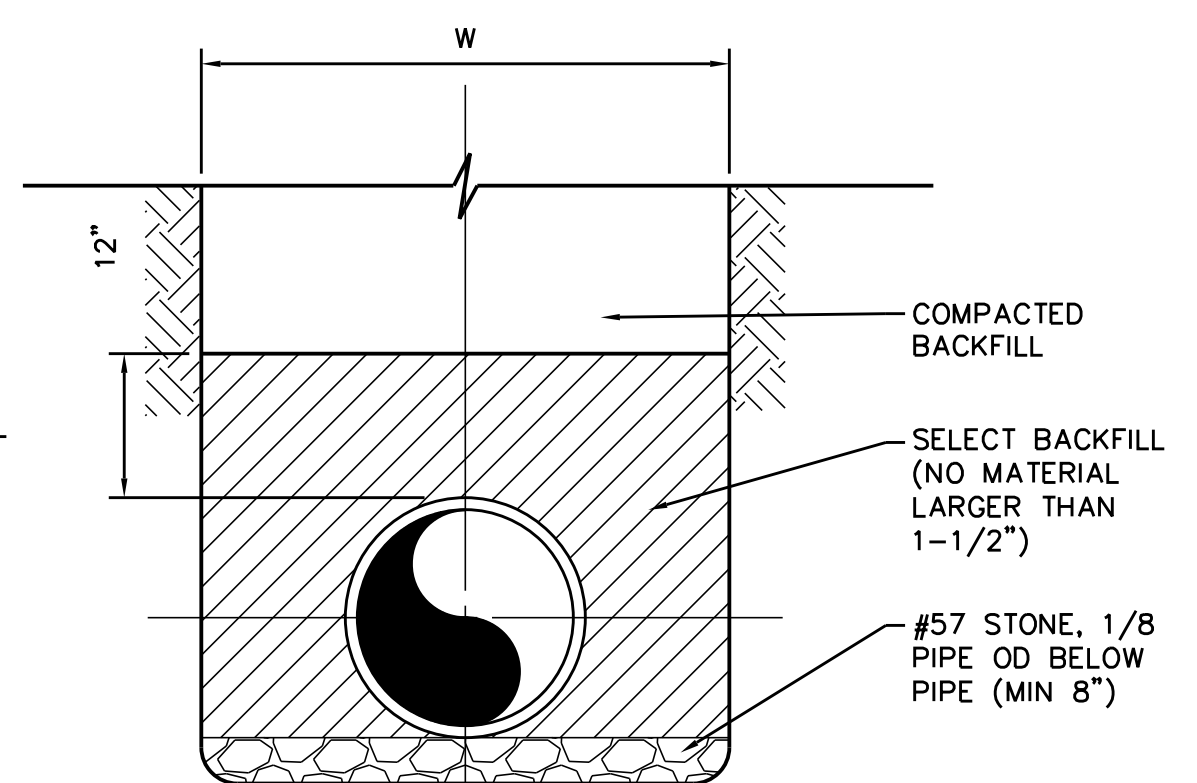
R/W SHEET NO.

UTILITY DESIGN ENGINEER

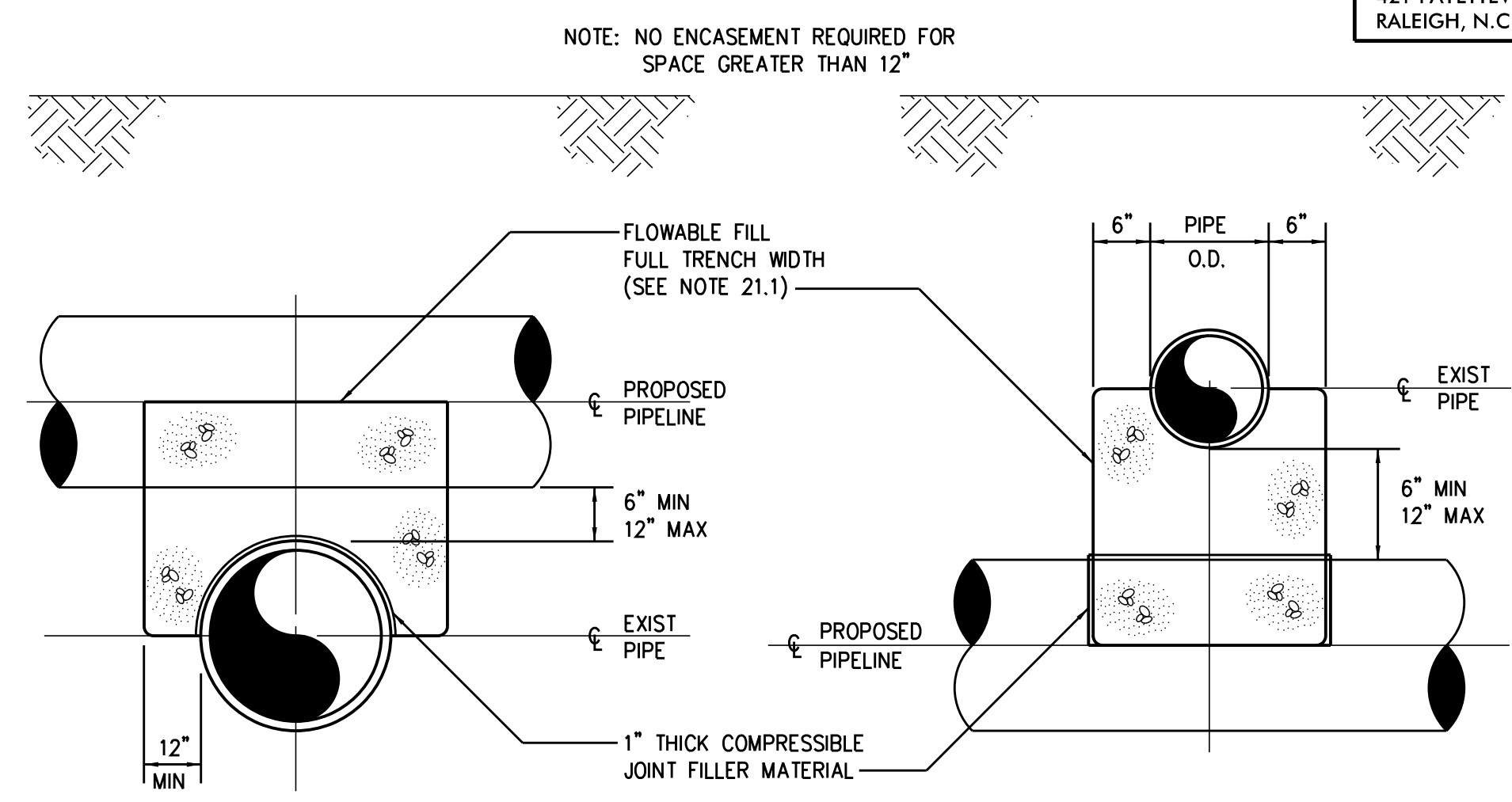
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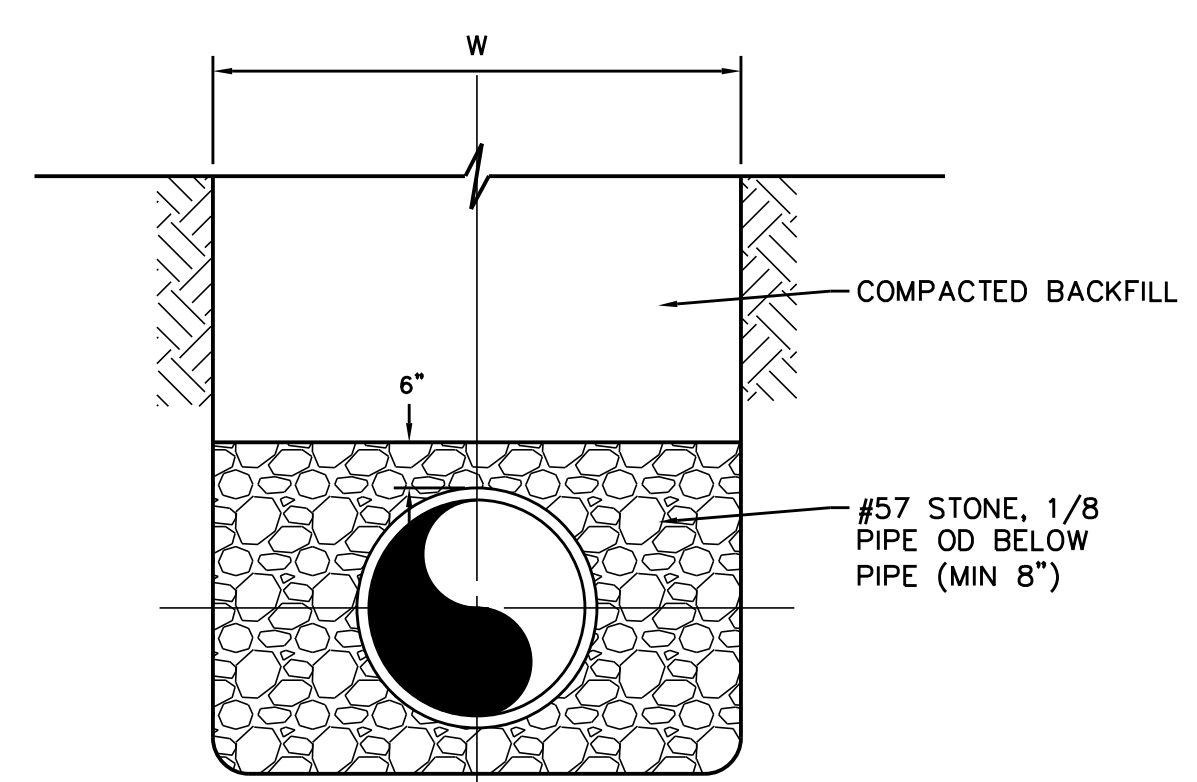
TYPE A - IN EARTH
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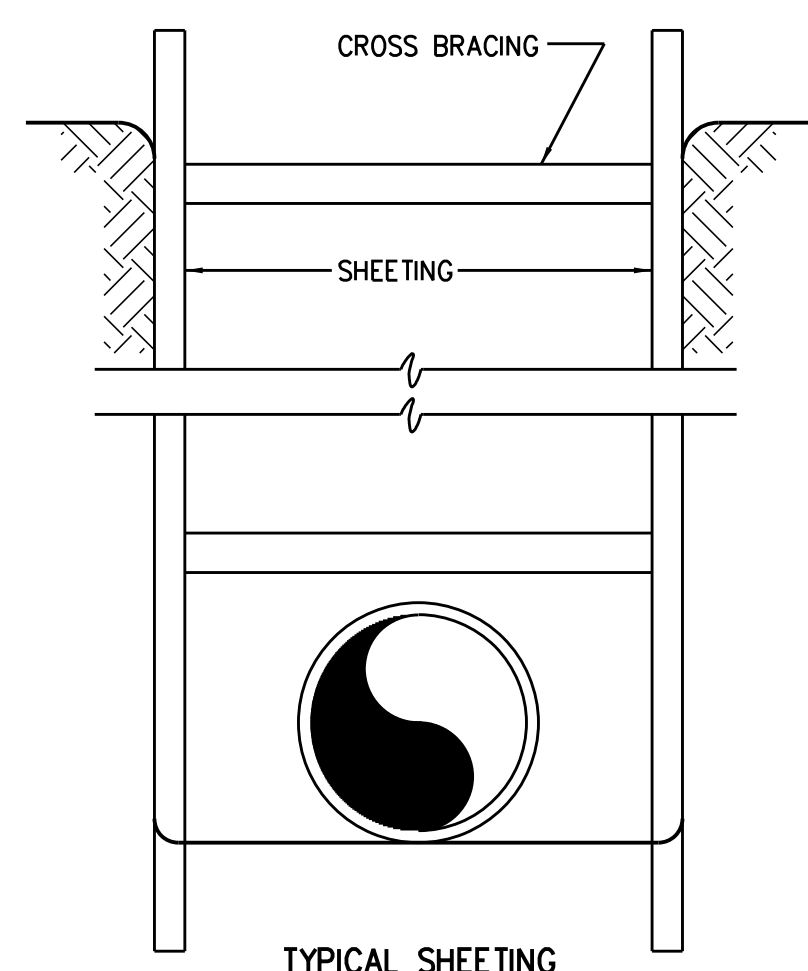
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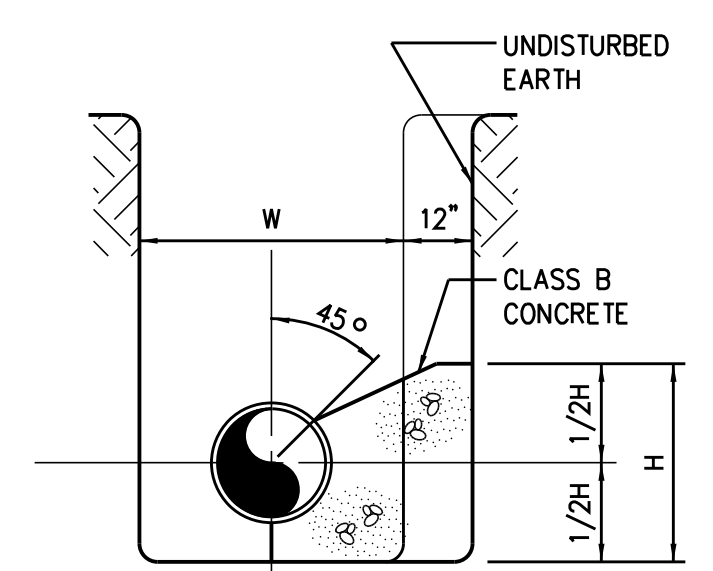
PROPOSED PIPELINE OVER EXIST PIPE
 PROPOSED PIPELINE UNDER EXIST PIPE
 0222118



TYPE E
0222101



TYPICAL SHEETING
0222121

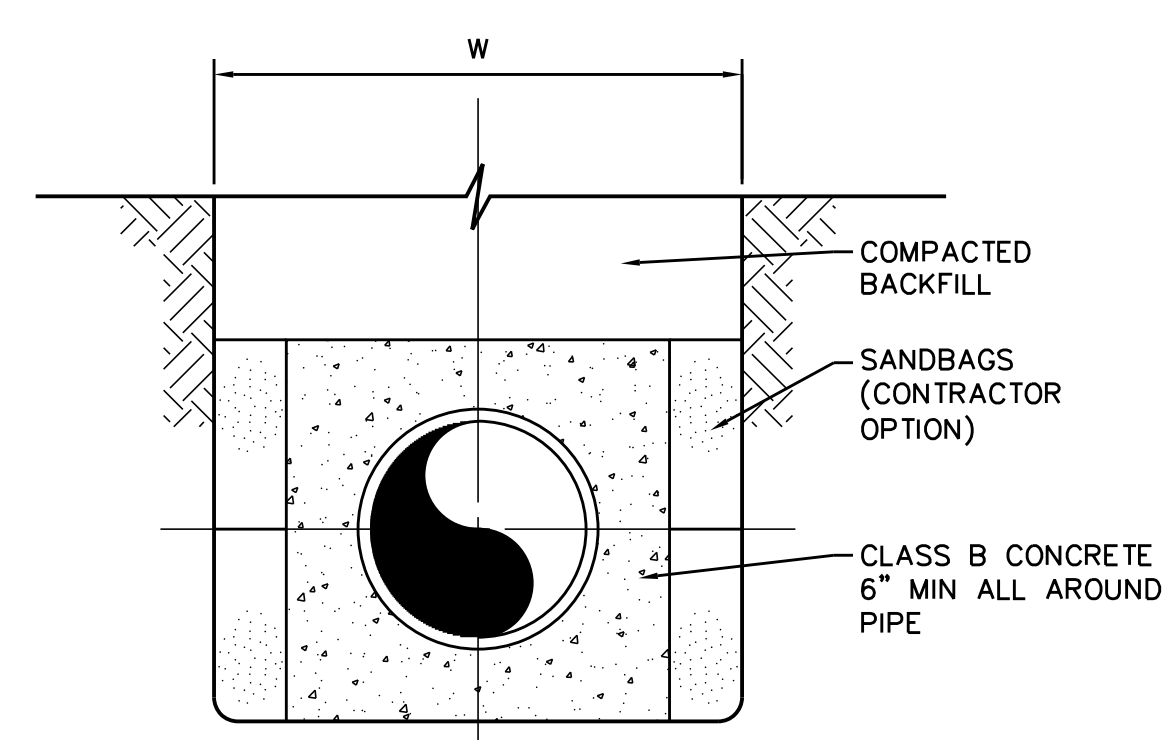


TYPICAL SECTION
TEE OR BEND

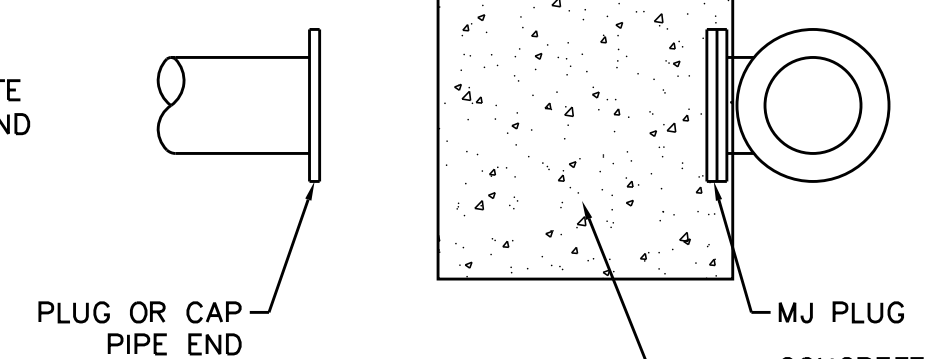
PIPE SIZE (IN)	CONCRETE THRUST BLOCK SCHEDULE*								DESIGN PRESSURE (PSI)
	90° TEE				BEND				
	H	L	H	L	H	L	H	L	
6.0	2.6	5.3	1.9	3.9	1.4	2.8	1.0	2.0	350
8.0	3.5	7.0	2.5	5.1	1.8	3.7	1.3	2.6	350
10.0	4.2	8.5	3.1	6.3	2.2	4.5	1.6	3.2	350
12.0	5.0	10.1	3.7	7.5	2.6	5.3	1.9	3.8	350
14.0	5.8	11.7	4.3	8.6	3.1	6.2	2.2	4.4	350
16.0	6.6	13.3	4.9	9.8	3.5	7.0	2.5	5.0	350
18.0	7.4	14.9	5.5	11.0	3.9	7.9	2.8	5.6	350
20.0	8.2	16.5	6.1	12.2	4.3	8.7	3.1	6.2	350
24.0	9.9	19.8	7.2	14.5	5.2	10.4	3.7	7.4	350
30.0	12.2	24.5	9.0	18.0	6.4	12.9	4.5	9.1	350
36.0	14.6	29.3	10.8	21.6	7.7	15.4	5.4	10.9	350
42.0	17.0	34.0	12.5	25.0	8.9	17.9	6.3	12.7	350
48.0	19.4	38.8	14.3	28.6	10.2	20.4	7.2	14.5	350
54.0	22.0	44.0	16.2	32.4	11.5	23.1	8.2	16.4	350
60.0	23.5	47.1	17.3	34.7	12.4	24.8	8.8	17.6	350
64.0	25.1	50.2	18.4	36.9	13.2	26.4	9.3	18.7	350

* BASED ON AVERAGE SOIL PASSIVE BEARING STRENGTH OF 2000 PSF USING SF OF 1.5

0222114R

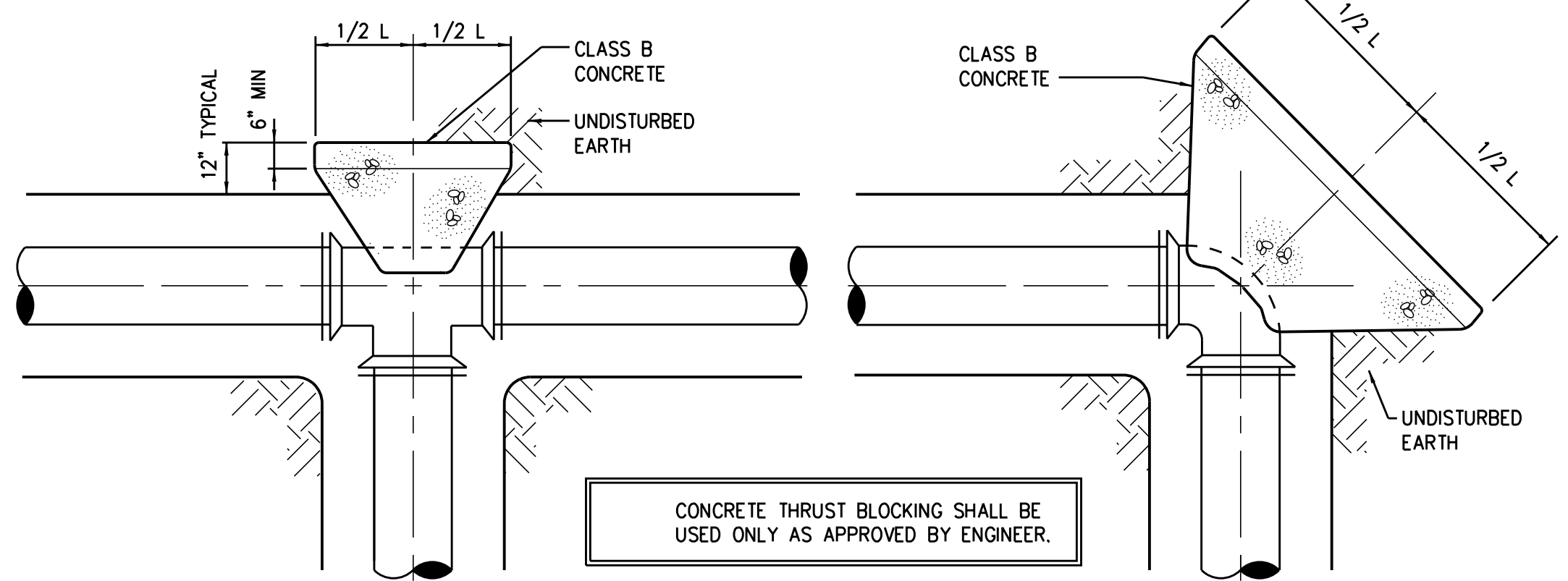


CONCRETE ENCASEMENT
0222104



- NOTES:
 1. CLOSE VALVES TO KILL LINE
 2. SEVER AND REMOVE PIPE SECTION
 3. BLIND FLANGE TO TEE OR EXISTING PIPING
 4. PLUG OR CAP ABANDONED PIPE END
 5. INSTALL THRUST BLOCK

CUT AND CAP EXISTING WATERLINE
0280003



PLAN - TEE
THRUST BLOCKS
PLAN - BEND

CONCRETE THRUST BLOCKING SHALL BE USED ONLY AS APPROVED BY ENGINEER.

0222108

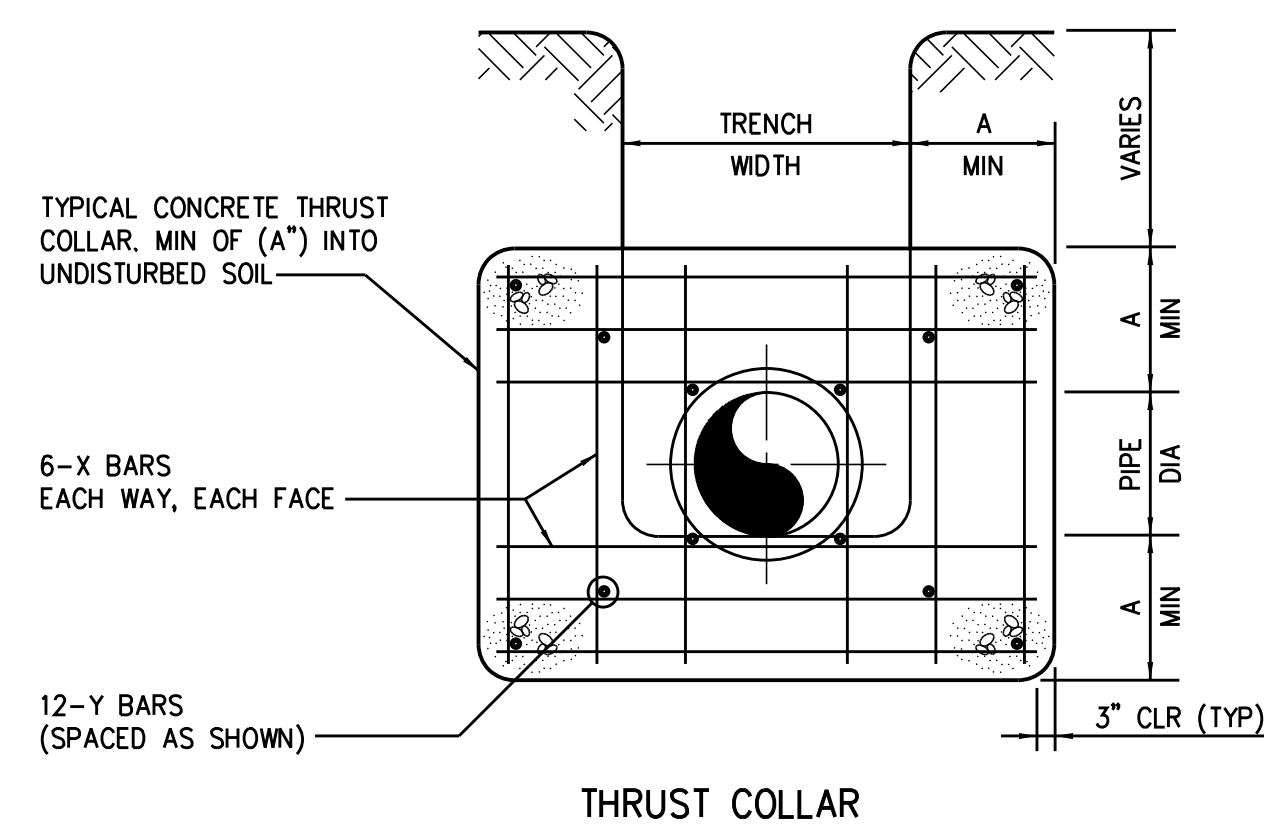
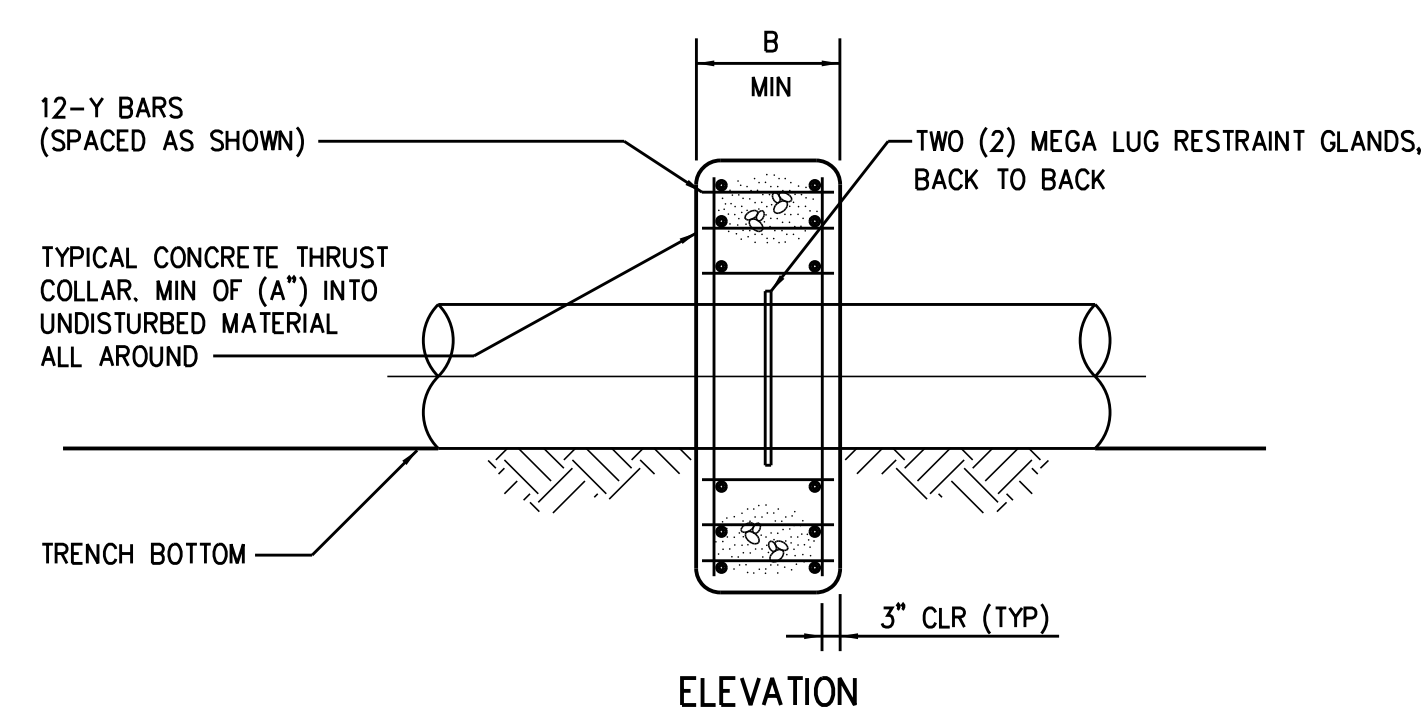
TRENCH EXCAVATION LIMITS		
INTERNAL DIAMETER OF PIPE	WIDTH OF TRENCH	
	MAX	W=MIN
4'-6"	3'-9"	2'-0"
8'-10"	3'-9"	2'-2"
12"	3'-9"	O.D.+2'
14"-16"	4'-2"	O.D.+2'
18"	4'-4"	O.D.+2'
20", 21"	4'-8"	O.D.+2'
24"	4'-11"	O.D.+2'
27"	5'-9"	O.D.+2'
30"	6'-7"	O.D.+2'
36"	7'-4"	O.D.+2'
42"	8'-2"	O.D.+2'
48"	8'-9"	O.D.+2'
54"	9'-4"	O.D.+2'
60"	9'-10"	O.D.+2'
72"	11'-0"	O.D.+2'
78"	11'-8"	O.D.+2'
84"	12'-0"	O.D.+2'
90"	12'-6"	O.D.+2'
96"	13'-0"	O.D.+2'
108"	14'-0"	O.D.+2'
DEPTH OF CUT	S MAXIMUM PAVEMENT REPLACEMENT WIDTH	
0-6'	S=W+4'	
>6-8'	S=W+8'	
>8-10'	S=W+12'	
>10-12'	S=W+16'	
>12-14'	S=W+20'	
>14-16'	S=W+24'	
>16-18'	S=W+28'	
>18'	S=W+32'	

W = TRENCH WIDTH AT BOTTOM OF PIPE. TRENCH SIDE SLOPES SHALL BE IN ACCORDANCE WITH OSHA REQUIREMENTS.

0222110

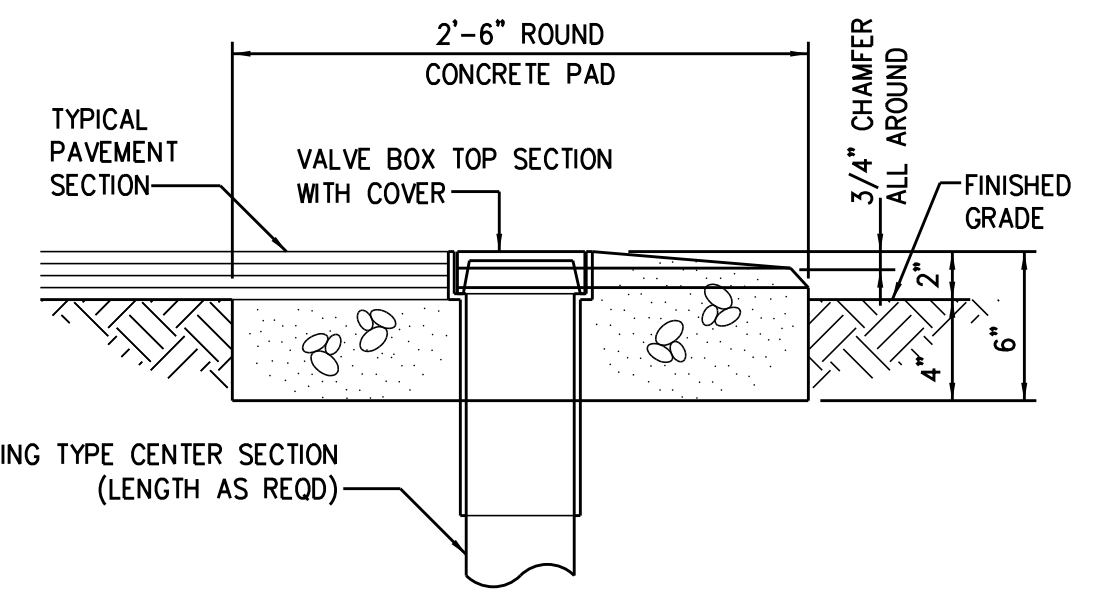
REVISIONS

5/14/99

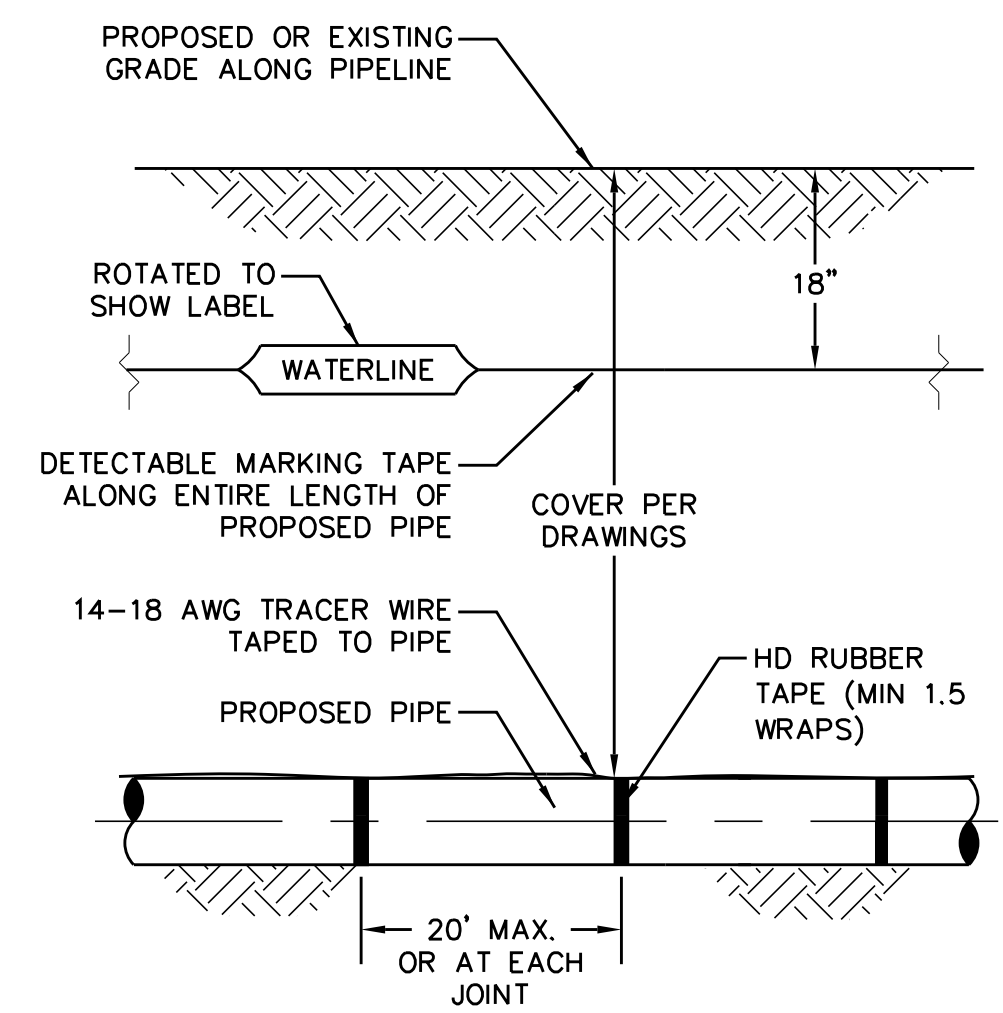


PIPE SIZE	X BARS	Y BARS	A	B
6"-36"	#5	#5	1'-4"	1'-7"
42" & >	#6	#6	1'-8"	1'-9"

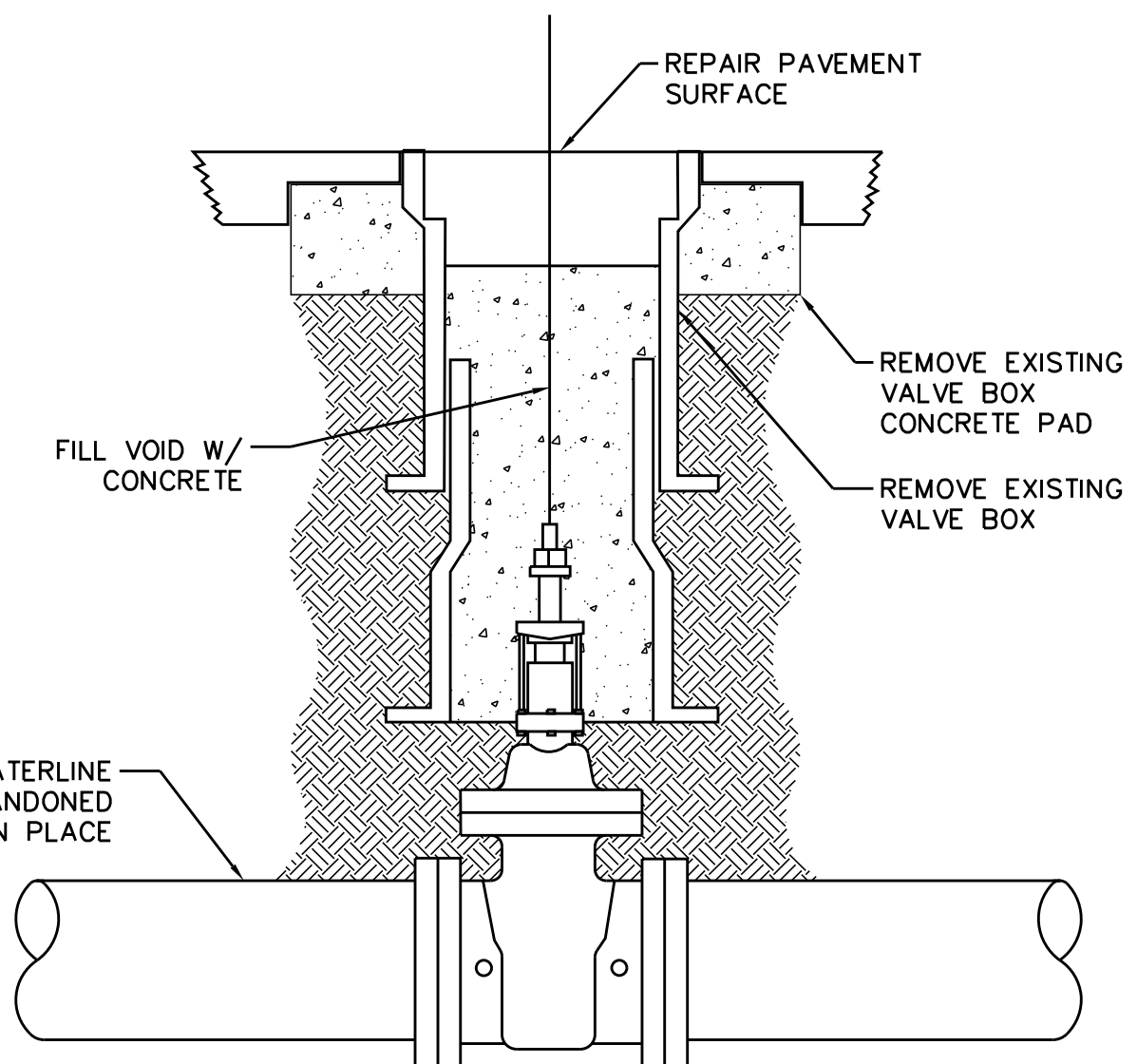
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0264005

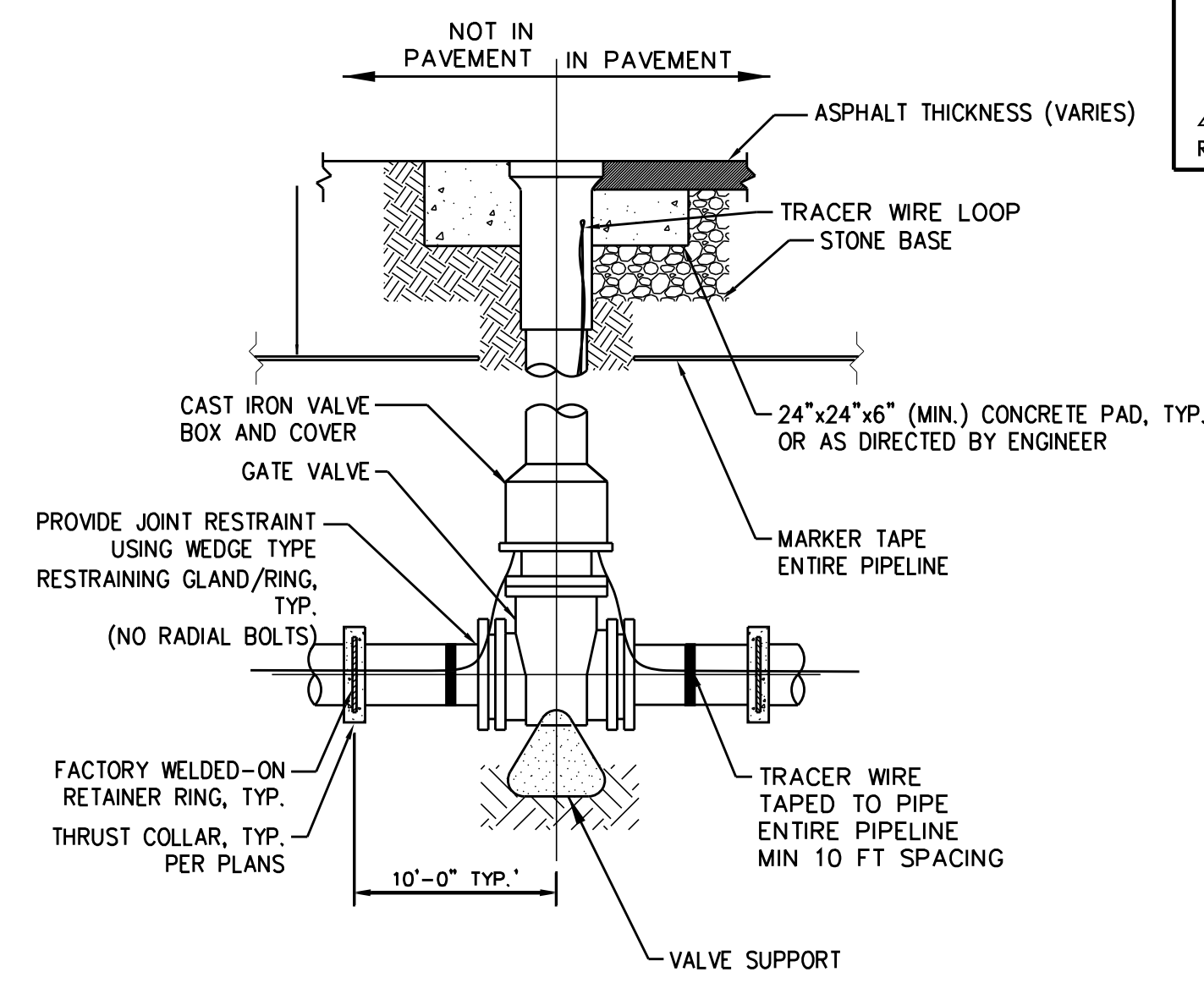


0222128



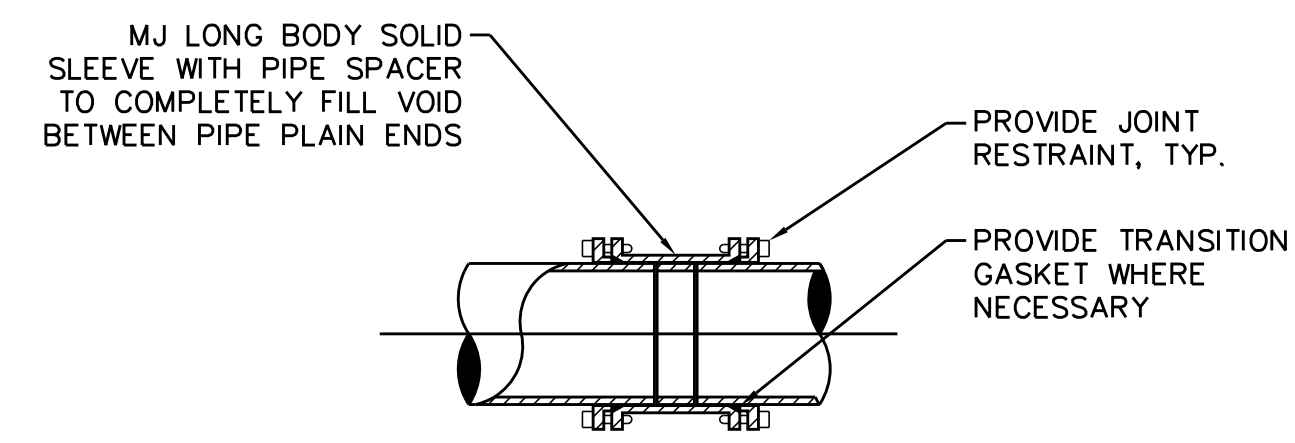
0264014

- NOTES:
1. CLOSE VALVE.
 2. REMOVE UPPER VALVE BOX AND VALVE BOX COVER.
 3. REMOVE EXISTING VALVE NUT.
 4. FILL VOID AROUND VALVE WITH CONCRETE TO WITHIN 6" OF EXISTING GRADE OR PAVEMENT.
 5. AT GRADE REPAIR TO MATCH EXISTING SURFACE.



0264016

- NOTES:
1. PROVIDE HDPE INSERTS IN ALL VALVE BOXES.

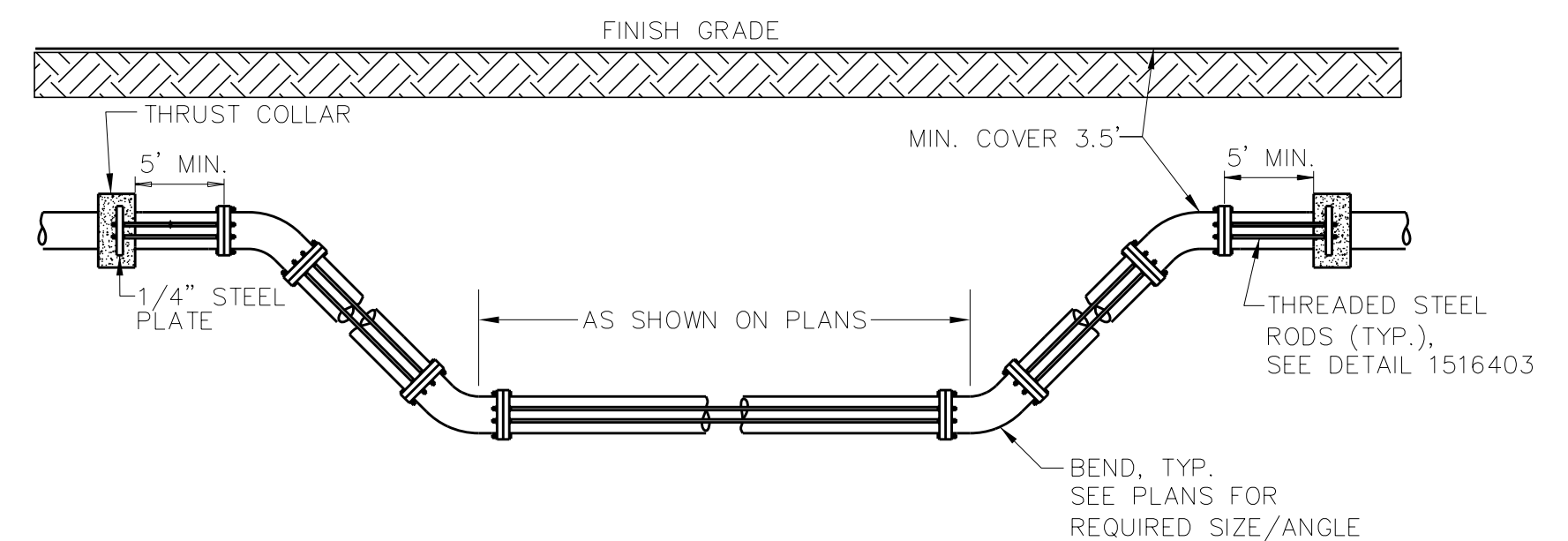


1509221

PIPE SIZE	50 PSI		100 PSI		150 PSI		200 PSI		250 PSI		300 PSI		350 PSI	
	BOLTS NO-DIA	TAB THK	BOLTS NO-DIA	TAB THK	BOLTS NO-DIA	TAB THK	BOLTS NO-DIA	TAB THK	BOLTS NO-DIA	TAB THK	BOLTS NO-DIA	TAB THK	BOLTS NO-DIA	TAB THK
4.6	2-3/4	1	2-3/4	1	2-3/4	1	2-3/4	1	2-3/4	1	2-3/4	1	2-3/4	1
8	2-3/4	1 1/4	2-3/4	1 1/4	2-3/4	1 1/4	2-3/4	1 1/4	2-3/4	1 1/4	4-3/4	1 1/4	4-3/4	1 1/4
10	2-3/4	1 1/4	2-3/4	1 1/4	2-3/4	1 1/4	4-3/4	1 1/4	4-3/4	1 1/4	4-3/4	1 1/4	4-3/4	1 1/4
12	2-3/4	1 1/4	2-3/4	1 1/4	4-3/4	1 1/4	4-3/4	1 1/4	6-3/4	1 1/4	6-3/4	1 1/4	6-3/4	1 1/4
14	2-3/4	1 1/2	4-3/4	1 1/2	4-3/4	1 1/2	4-3/4	1 1/2	4-3/4	1 1/2	4-3/4	1 1/2	4-3/4	1 1/2
16	2-3/4	1 1/2	4-3/4	1 1/2	6-3/4	1 1/2	4-3/4	1 1/2	4-3/4	1 1/2	4-3/4	1 1/2	6-3/4	1 1/2
18	2-3/4	1 3/4	4-3/4	1 3/4	6-3/4	1 3/4	4-3/4	1 3/4	6-3/4	1 3/4	6-3/4	1 3/4	6-3/4	1 3/4
20	4-3/4	1 3/4	4-3/4	1 3/4	4-3/4	1 3/4	4-3/4	1 3/4	6-3/4	1 3/4	6-3/4	1 3/4	8-3/4	1 3/4
24	4-3/4	2	4-3/4	2	6-3/4	2	6-3/4	2	8-3/4	2	10-3/4	2	10-3/4	2
30	4-1	2 1/4	4-1	2 1/4	4-1	2 1/4	6-1	2 1/4	8-1	2 1/4	10-1	2 1/4	10-1	2 1/4
36	4-1	2 1/2	4-1	2 1/2	6-1	2 1/2	8-1	2 1/2	10-1	2 1/2	12-1	2 1/2	14-1	2 1/2
42	4-1 1/4	2 3/4	4-1 1/4	2 3/4	6-1 1/4	2 3/4	8-1 1/4	2 3/4	10-1 1/4	2 3/4	12-1 1/4	2 3/4	12-1 1/4	2 3/4
48	6-1 1/4	2 3/4	4-1 1/4	2 3/4	8-1 1/4	2 3/4	8-1 1/4	2 3/4	12-1 1/4	2 3/4	12-1 1/4	2 3/4	14-1 1/4	2 3/4
54	6-1 1/4	3	6-1 1/4	3	8-1 1/4	3	12-1 1/4	3	14-1 1/4	3	16-1 1/4	3	18-1 1/4	3

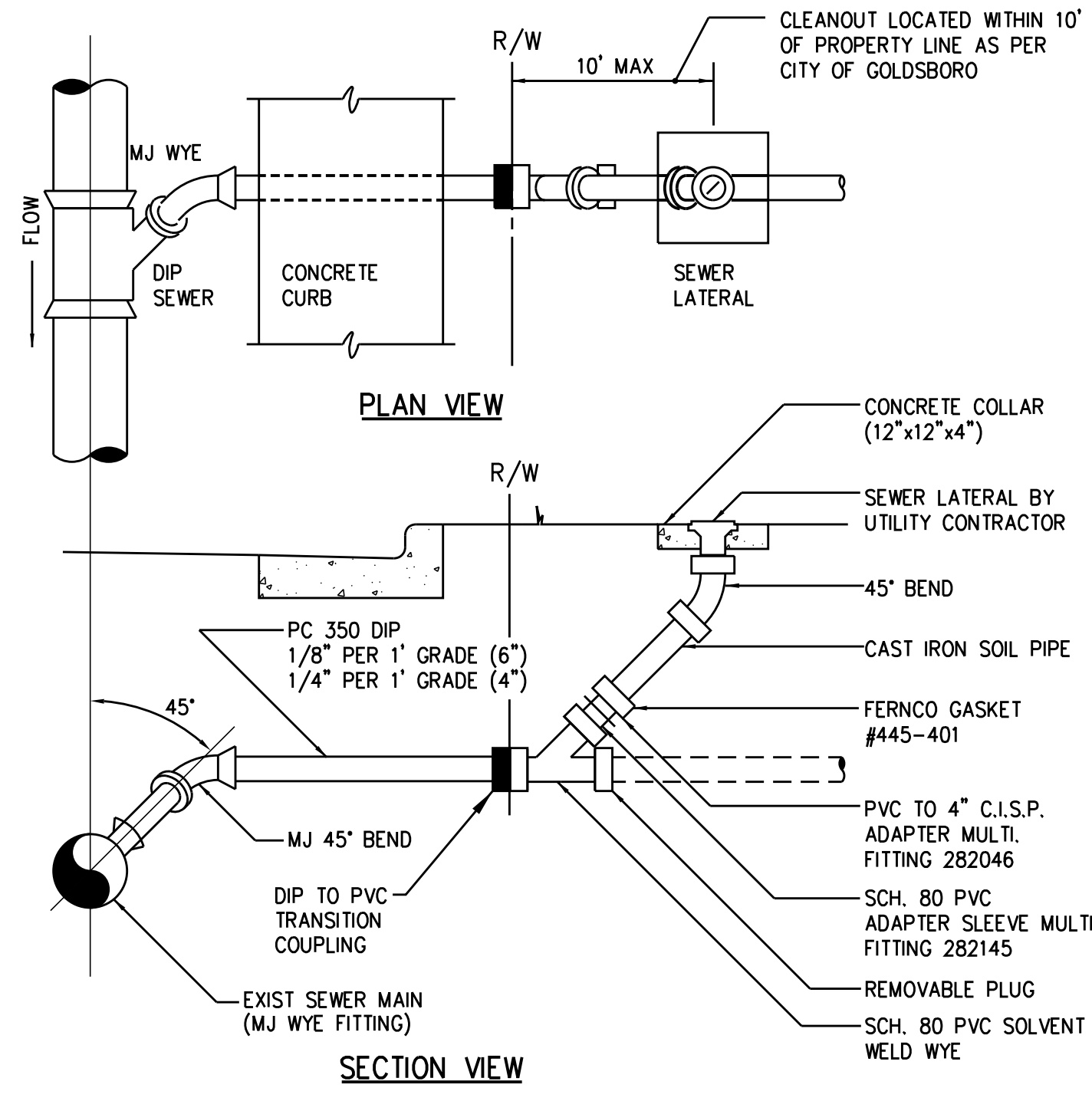
1. THREADED RODS FOR ALL PIPE DIAMETERS IN THE SHADED AREA SHALL BE ASTM A193 (GRADE B7).
 2. ALL OTHER THREADED RODS SHALL BE ASTM A36. ALL TABS SHALL BE ASTM A572 GR50.
 3. ASTM A193 (GRADE B7) RODS SHALL BE LABELED AND BUNDLED SEPARATELY.
 4. THIS SCHEDULE SHALL APPLY FOR HARNESSSED FLANGED ADAPTERS, HARNESSSED FLEXIBLE COUPLINGS AND ALL MECHANICAL JOINT COUPLINGS, SLEEVES ETC. THAT ARE REQUIRED TO BE HARNESSSED.
 5. RODS THREADED AT ENDS (INCLUDING NUTS) SHALL BE EQUALLY SPACED AROUND PIPE BETWEEN ALL MECHANICAL JOINT FITTINGS (TEE, VALVES, BEND, PLUG, ETC.) OR AS OTHERWISE SHOWN ON THE CONTRACT DRAWINGS. THREADED RODS SHALL BE AS SHOWN IN THE THREADED ROD SCHEDULE. SEE NOTE 6.
 6. RODS, NUTS, ETC., IN CONTACT WITH SOIL SHALL BE PAINTED WITH TWO COATS COAL TAR (MIN 26 DRY MIL THICKNESS) TNEMEC 46-465 HI-BUILD OR EQUAL.

1516403



- NOTES:
1. ONCE INSTALLED AND TIGHT, THE STEEL RODS AND BOLTS SHALL BE COATED WITH 2 COATS OF BITUMINOUS BASE PAINT.
 2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT BENDS.
 3. MEGALUGS OR RESTRAINED JOINT PIPE AND FITTINGS ARE ALLOWED IN LIEU OF RODDING.
 4. CONCRETE ENCASED MEGALUGS MAY BE USED IN LIEU OF THRUST COLLARS.
 5. ALL PIPE AND FITTINGS BETWEEN THRUST COLLARS SHALL BE RODDED.

0222128




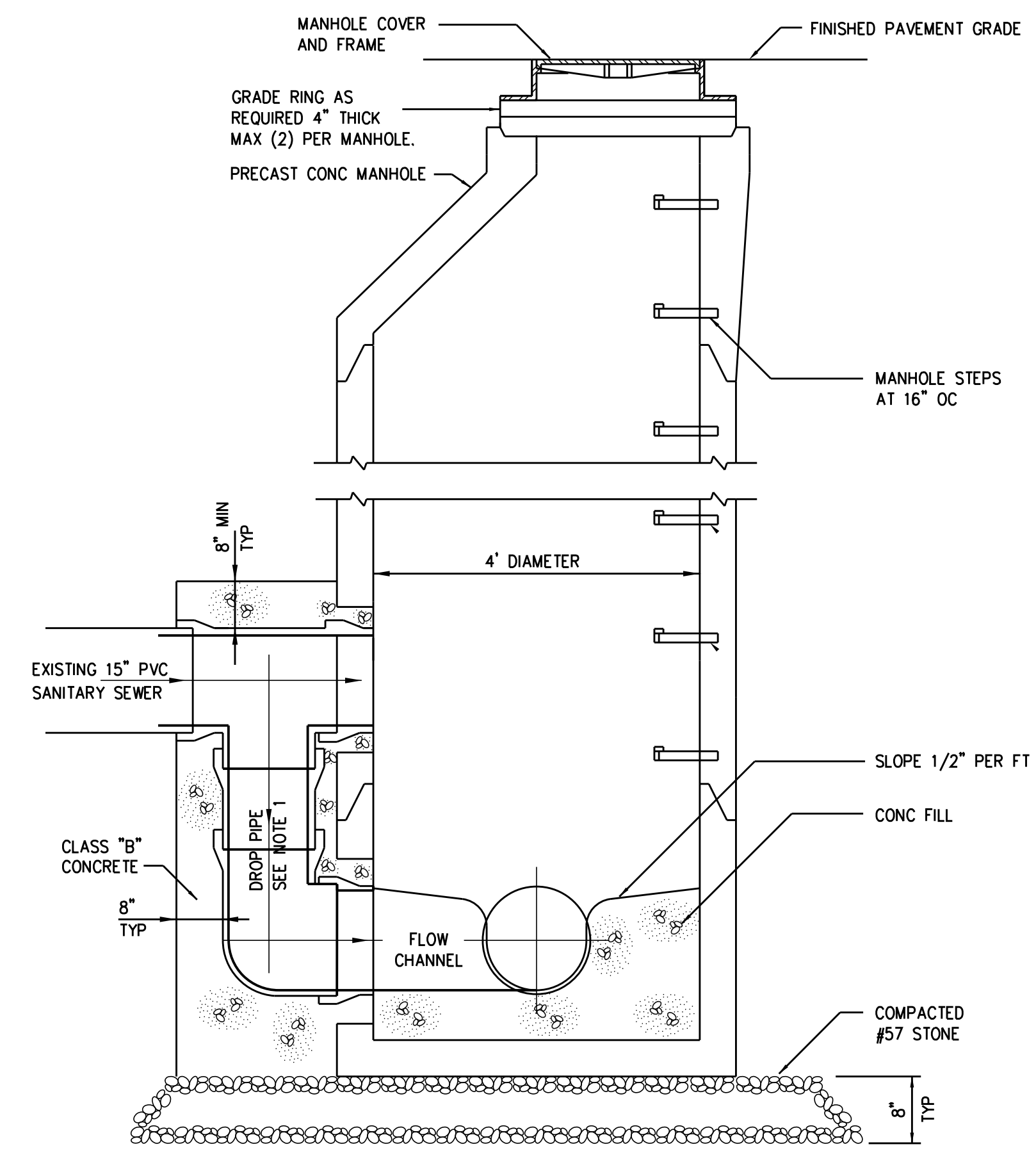
0260106R

REVISIONS

8/9/2018

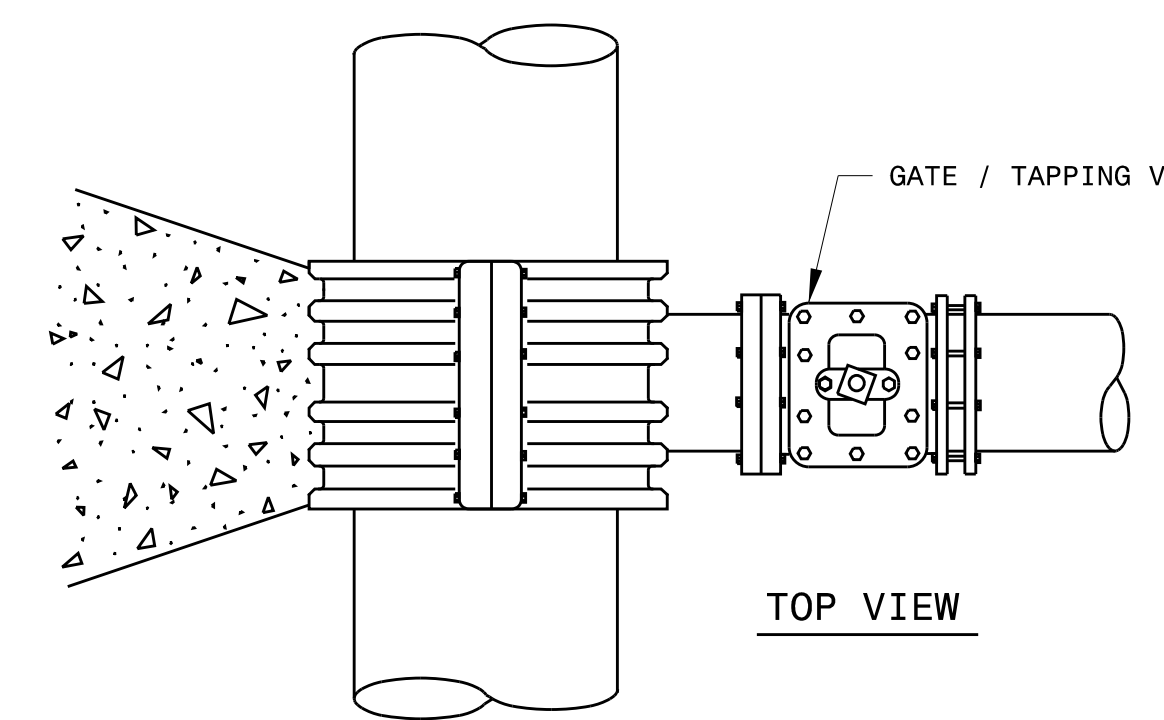
5/14/99

PROJECT REFERENCE NO. U-5725/R-3822	SHEET NO. UC-3C
R/W SHEET NO. N/A	
UTILITY DESIGN ENGINEER	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

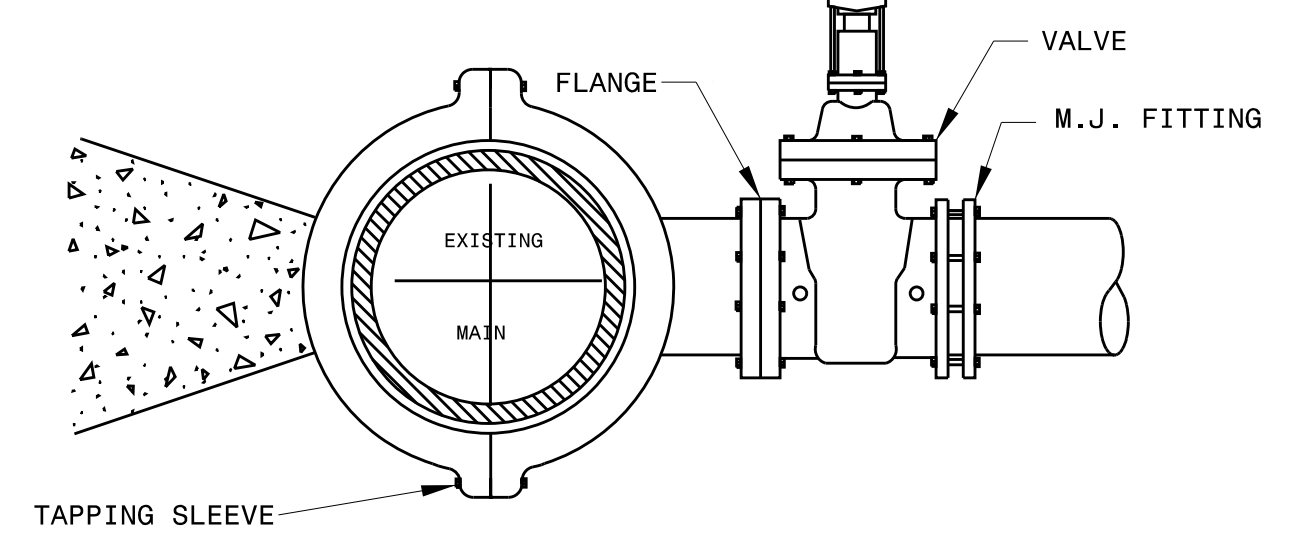


NOTES:
 1. ALL OUTSIDE DROP PIPING AND FITTINGS SHALL BE RESTRAINED, PROTECTO 401 LINED DUCTILE IRON.

**DROP MANHOLE
 0260109**

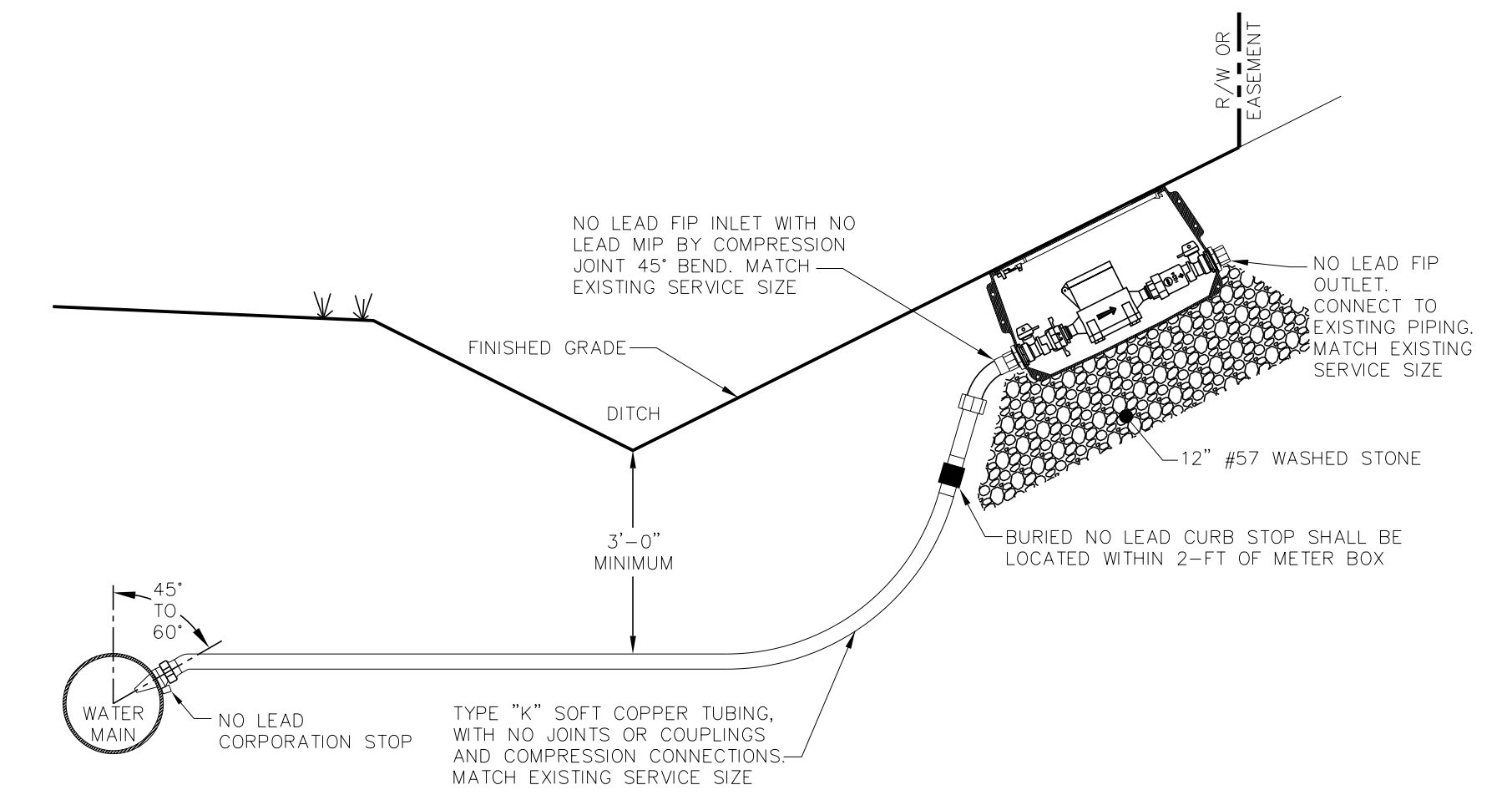


3000 PSI SOLID CONCRETE SHALL BE USED AS FOOTING FOR DUCTILE IRON PIPE.

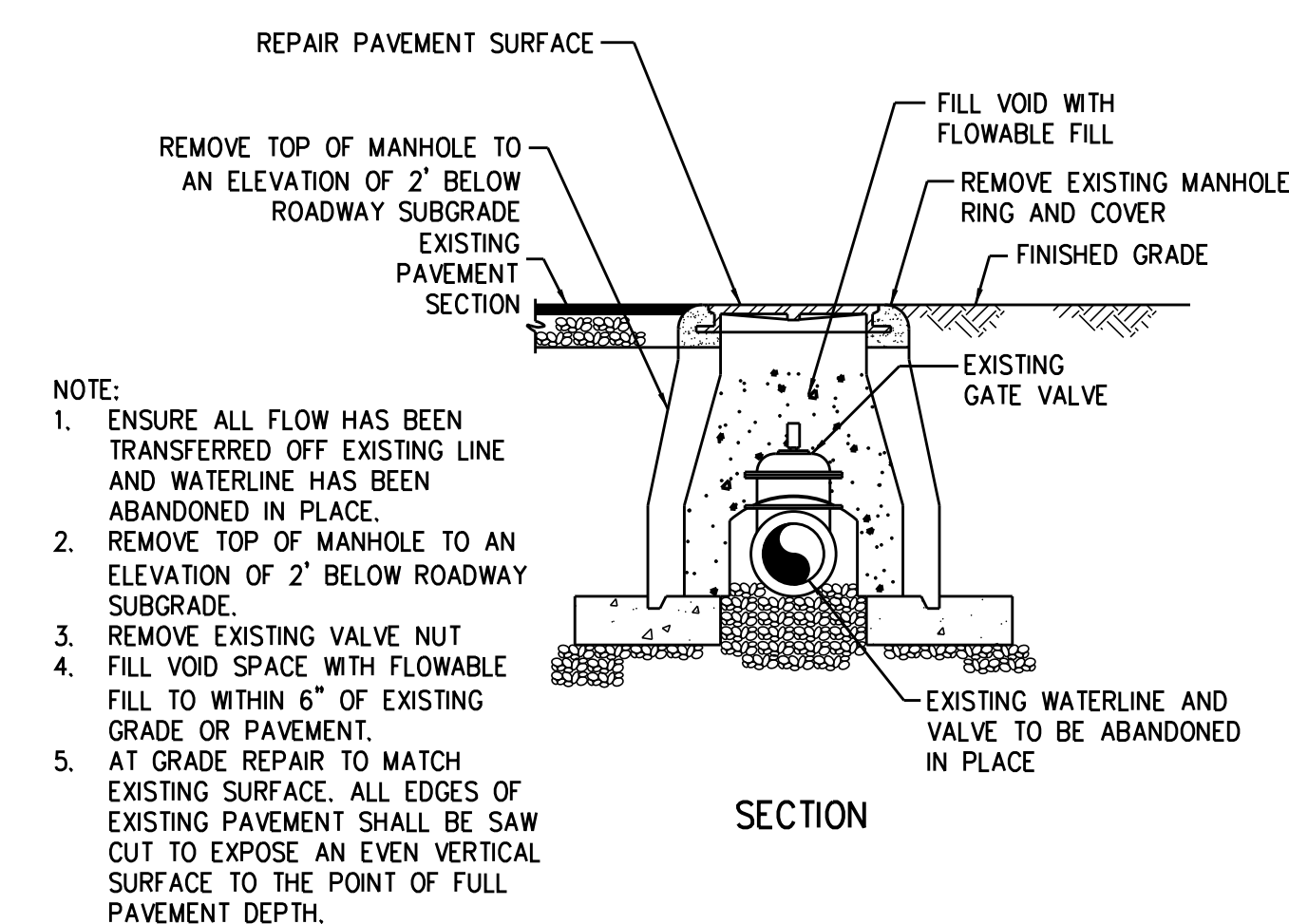


NOTES:
 1. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
 2. SEE STANDARD REACTION BLOCK TABLE, DETAIL 0222114R, FOR AREA OF CONCRETE REQUIRED.

**TAPPING SLEEVE AND VALVE
 DETAIL D1**

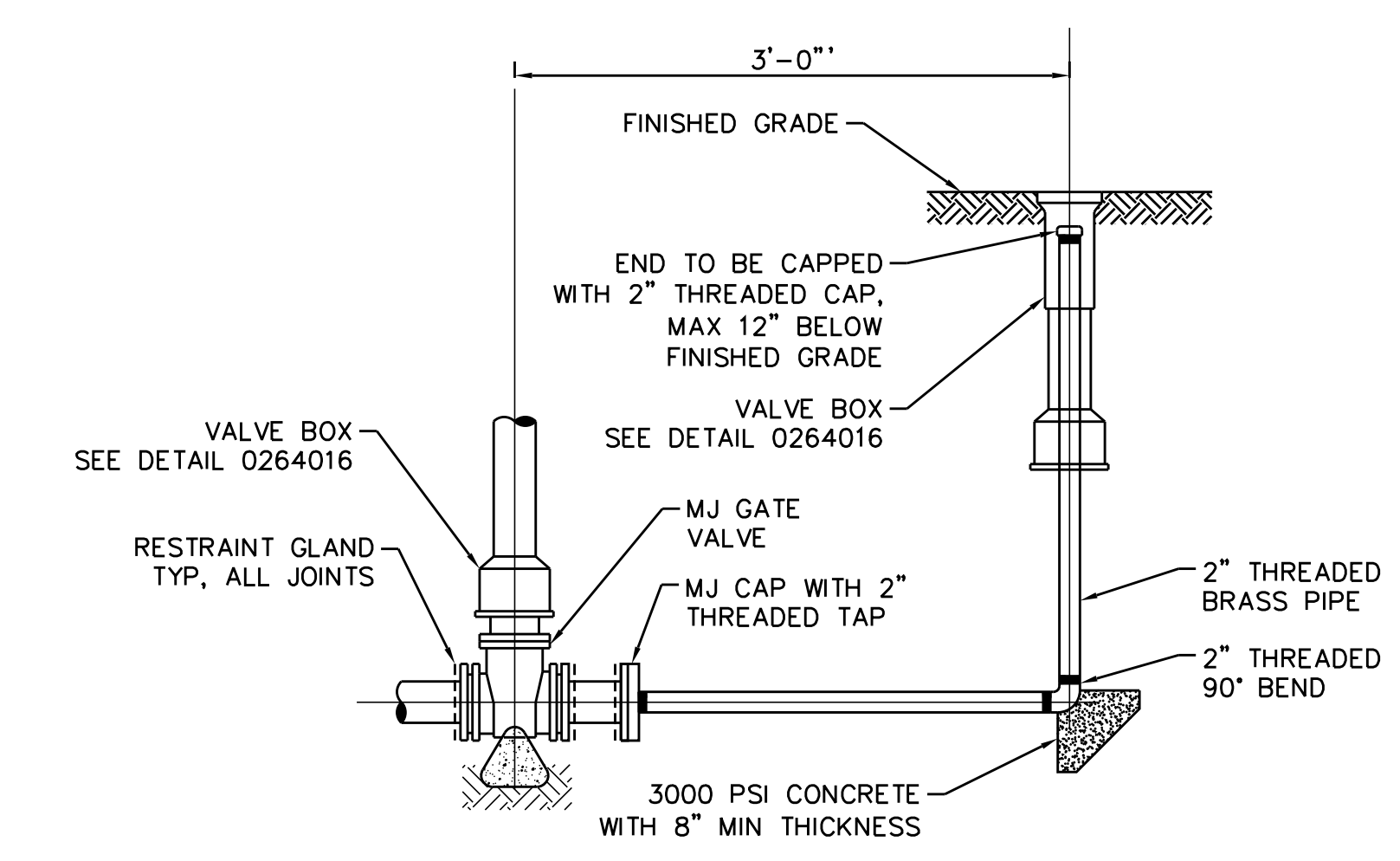


**WATER SERVICE CONNECTION
 DETAIL D2**



NOTE:
 1. ENSURE ALL FLOW HAS BEEN TRANSFERRED OFF EXISTING LINE AND WATERLINE HAS BEEN ABANDONED IN PLACE.
 2. REMOVE TOP OF MANHOLE TO AN ELEVATION OF 2' BELOW ROADWAY SUBGRADE.
 3. REMOVE EXISTING VALVE NUT
 4. FILL VOID SPACE WITH FLOWABLE FILL TO WITHIN 6" OF EXISTING GRADE OR PAVEMENT.
 5. AT GRADE REPAIR TO MATCH EXISTING SURFACE. ALL EDGES OF EXISTING PAVEMENT SHALL BE SAW CUT TO EXPOSE AN EVEN VERTICAL SURFACE TO THE POINT OF FULL PAVEMENT DEPTH.

**WATER MANHOLE ABANDONMENT
 DETAIL D3**



**2" BLOW OFF ASSEMBLY
 DETAIL D4**

REVISIONS

8/9/2018

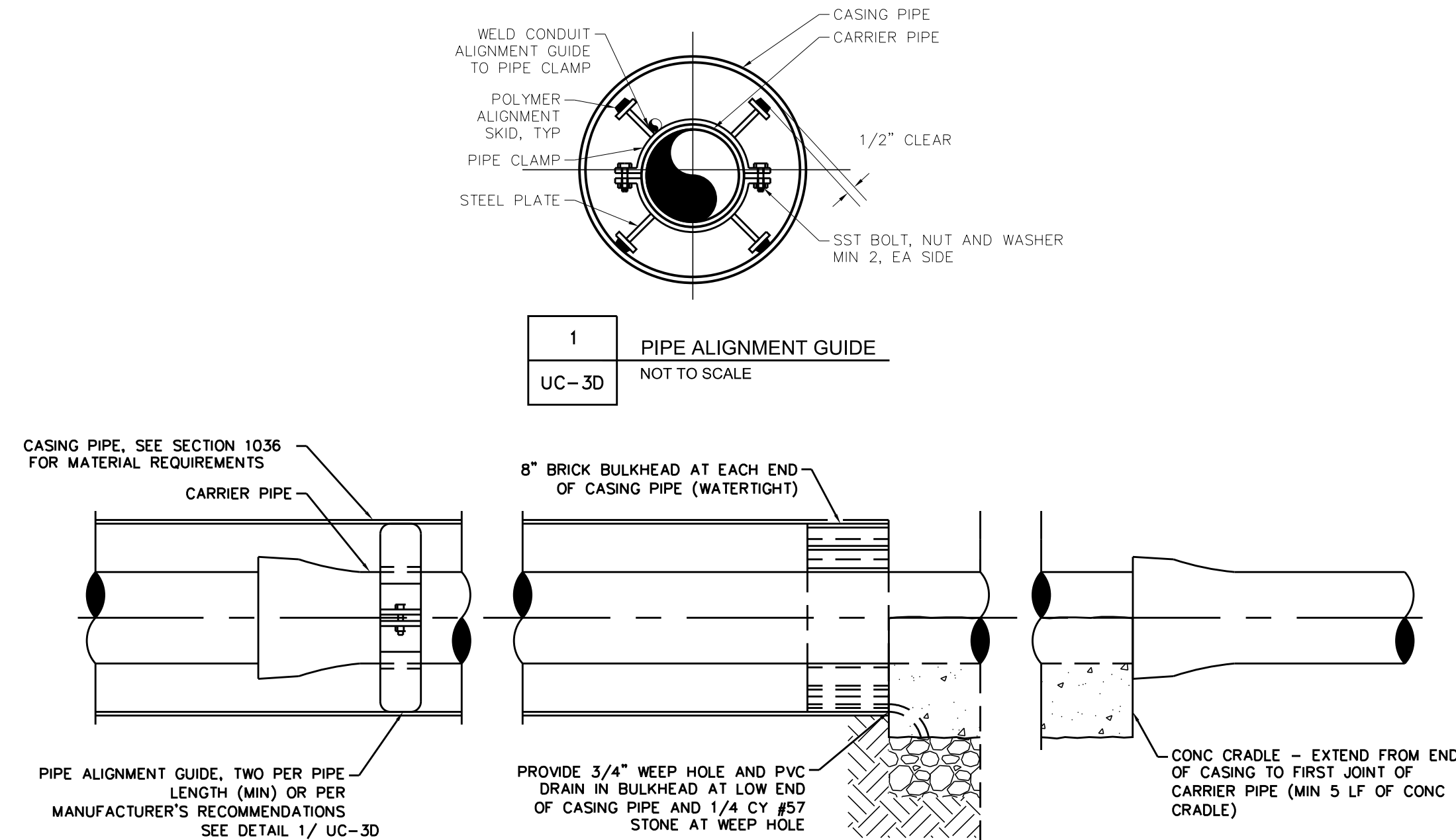
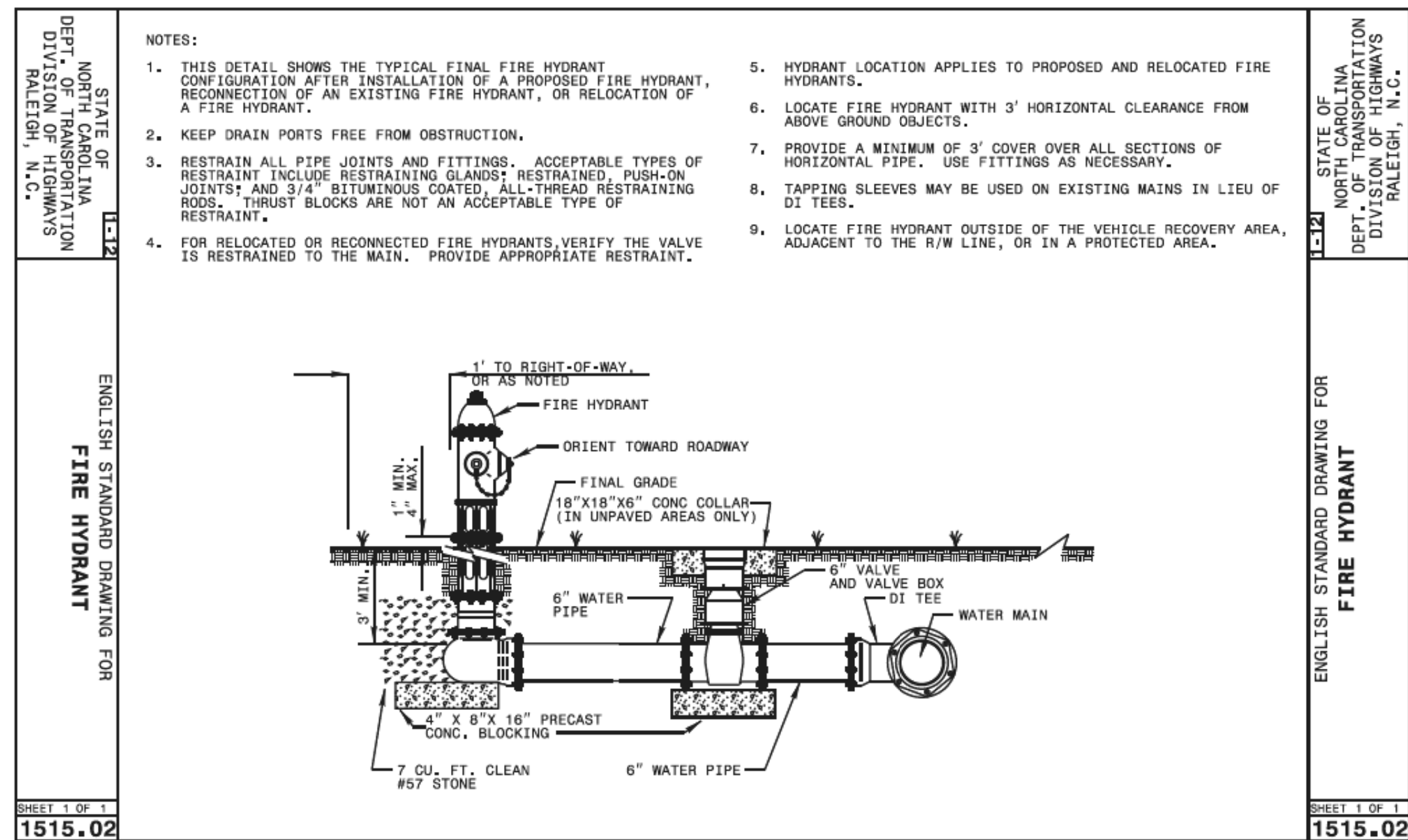
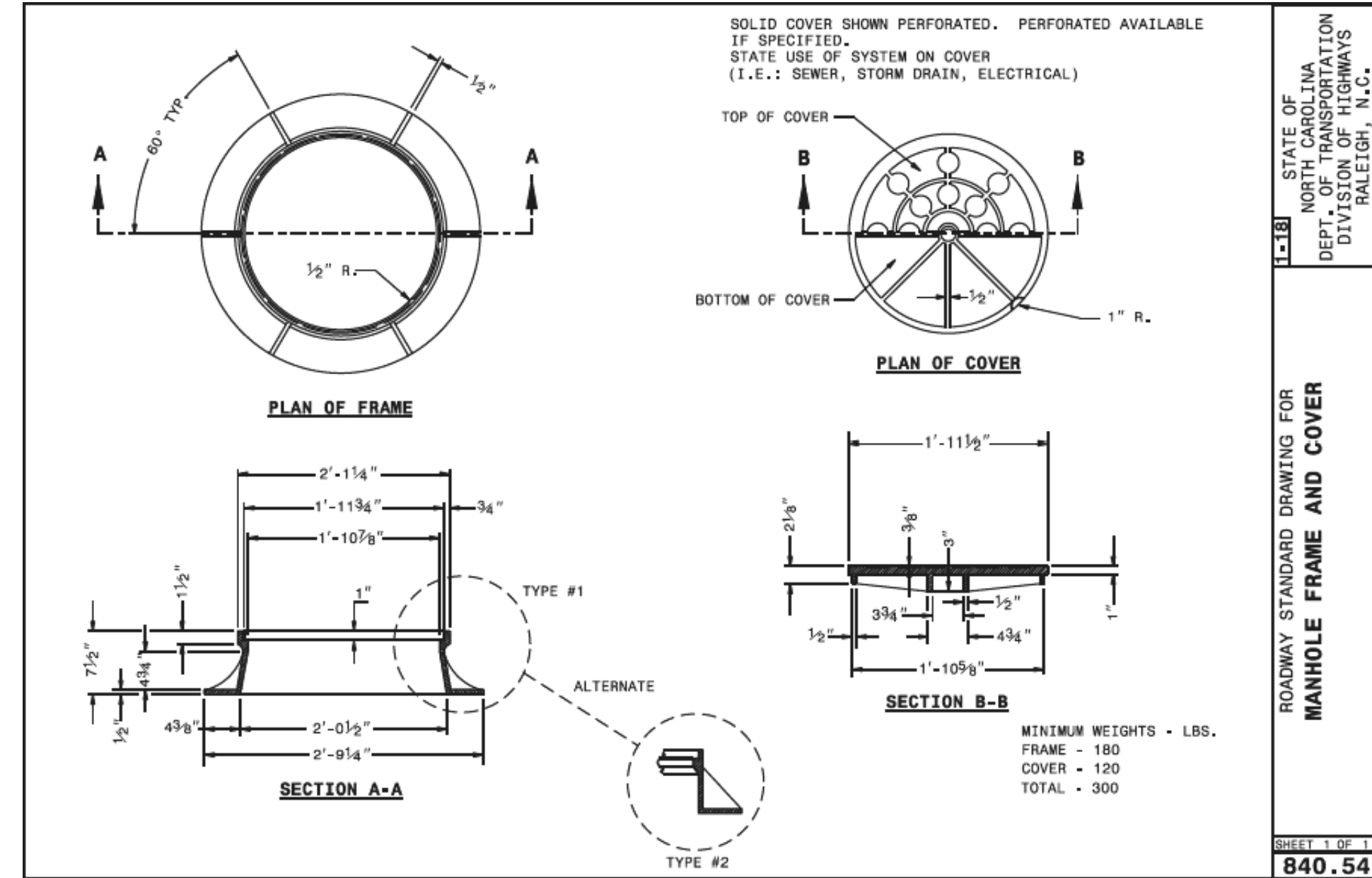
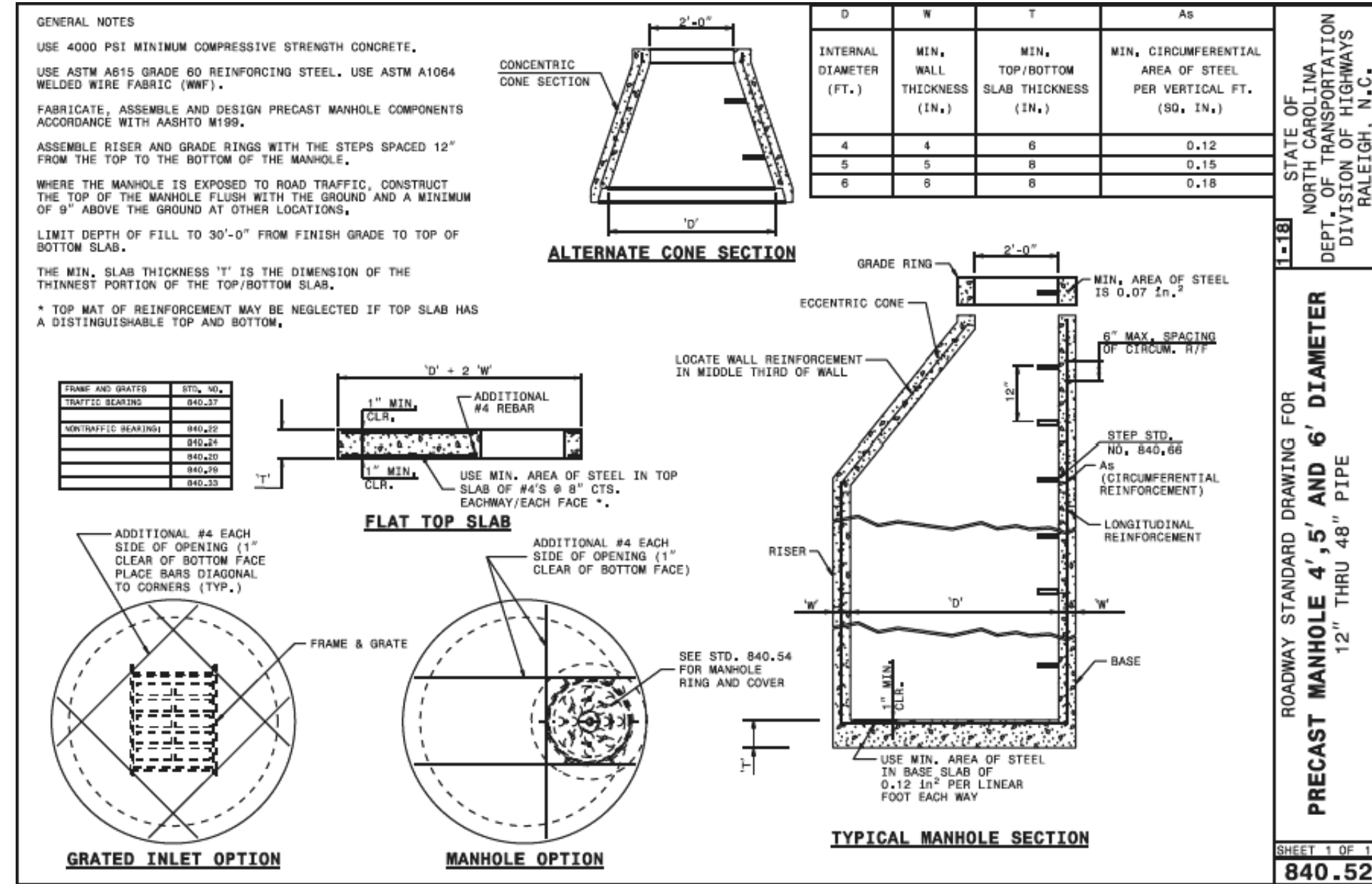
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REVISIONS

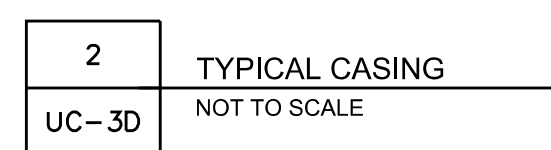


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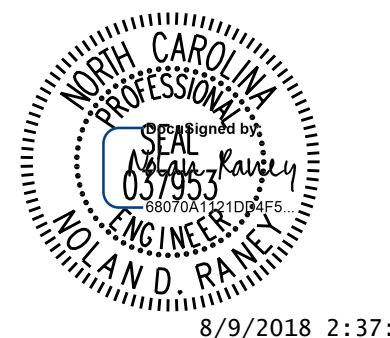


- NOTES:
1. CASING PIPE FOR 8" CARRIER PIPE SHALL BE 16" (MIN) OUTSIDE DIAMETER WITH A MINIMUM WALL THICKNESS OF 0.250"
2. CASING PIPE FOR 12" CARRIER PIPE SHALL BE 24" (MIN) OUTSIDE DIAMETER WITH A MINIMUM WALL THICKNESS OF 0.250"
3. CASING PIPE FOR 16" CARRIER PIPE SHALL BE 30" (MIN) OUTSIDE DIAMETER WITH A MINIMUM WALL THICKNESS OF 0.312"



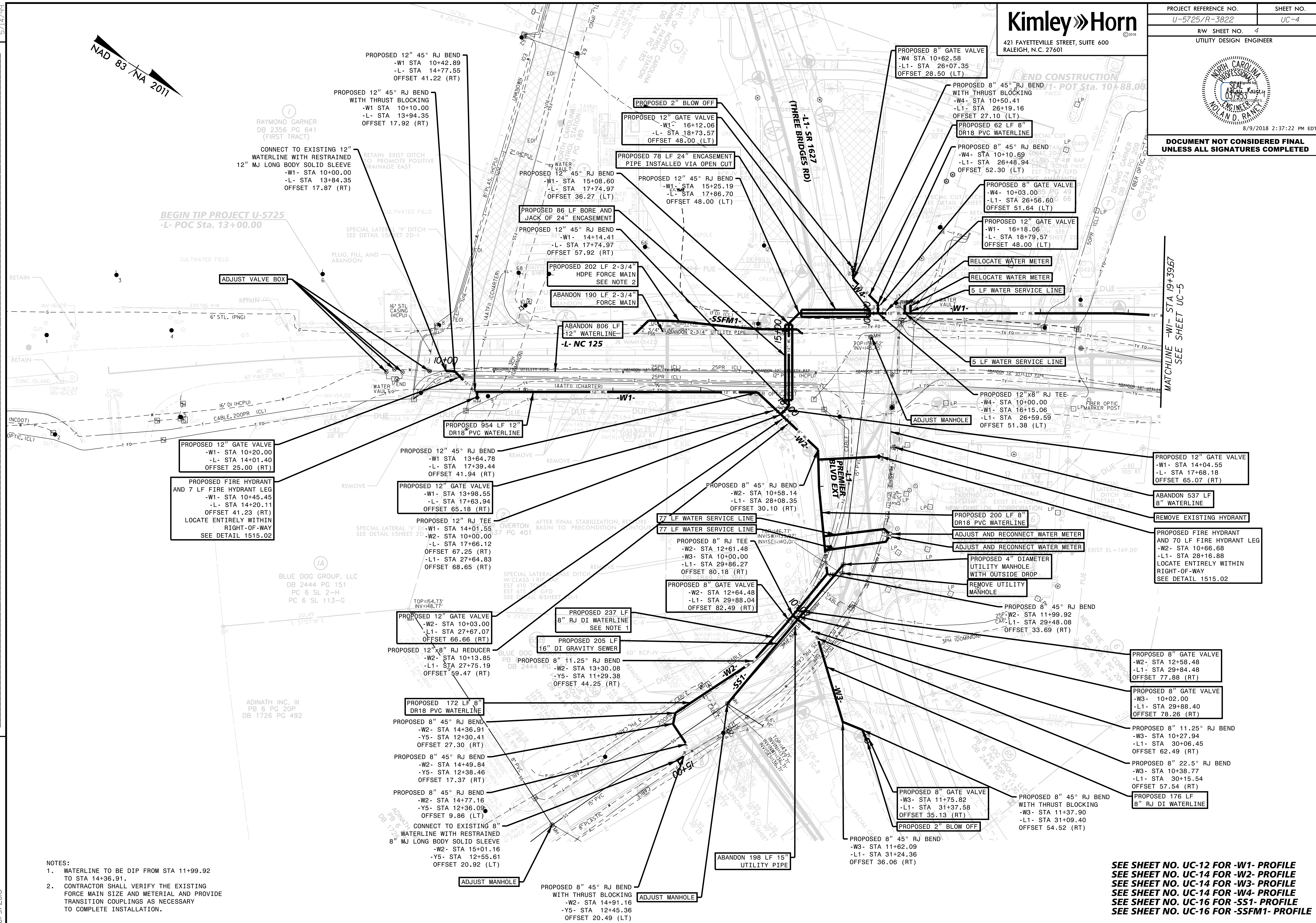
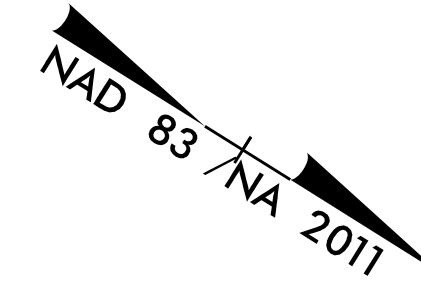
8/9/2018

PROJECT REFERENCE NO.	SHEET NO.
U-5725/R-3822	UC-4
RW SHEET NO. 4	
UTILITY DESIGN ENGINEER	



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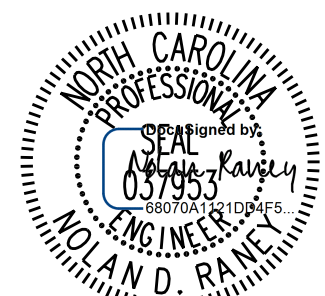
- NOTES:
1. WATERLINE TO BE DIP FROM STA 11+99.92 TO STA 14+36.91.
 2. CONTRACTOR SHALL VERIFY THE EXISTING FORCE MAIN SIZE AND MATERIAL AND PROVIDE TRANSITION COUPLINGS AS NECESSARY TO COMPLETE INSTALLATION.

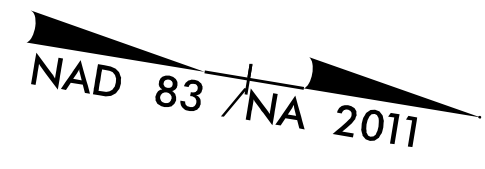
**SEE SHEET NO. UC-12 FOR -W1- PROFILE
SEE SHEET NO. UC-14 FOR -W2- PROFILE
SEE SHEET NO. UC-14 FOR -W3- PROFILE
SEE SHEET NO. UC-14 FOR -W4- PROFILE
SEE SHEET NO. UC-16 FOR -SS1- PROFILE
SEE SHEET NO. UC-16 FOR -SSFM1- PROFILE**

REVISIONS

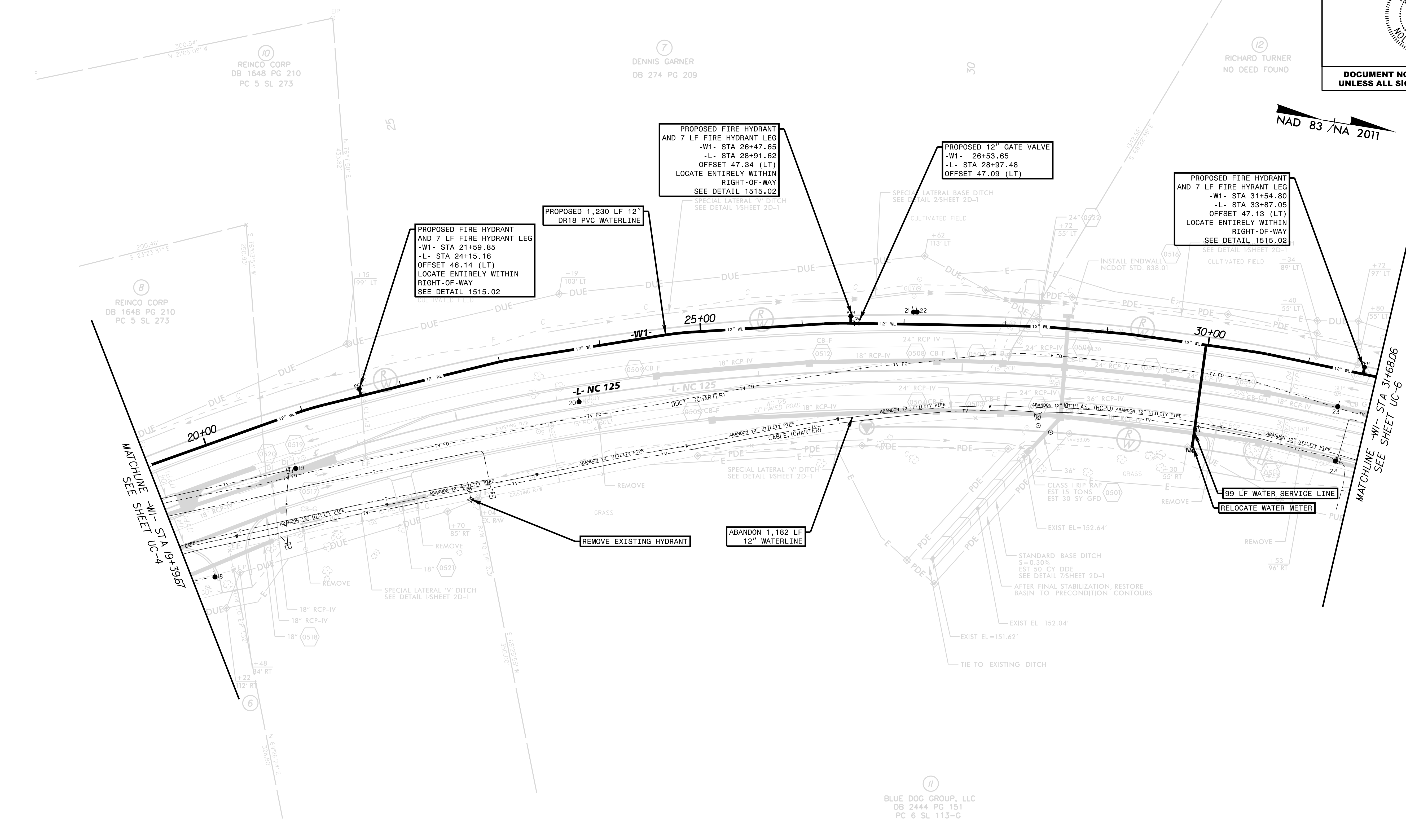
8/9/2018

5/14/19

PROJECT REFERENCE NO. U-5725/R-3822	SHEET NO. UC-5
RW SHEET NO. 5 UTILITY DESIGN ENGINEER	
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REVISIONS



MATCHLINE -WI- STA 19+396.7
 SEE SHEET UC-4

MATCHLINE -WI- STA 31+68.06
 SEE SHEET UC-6

BLUE DOG GROUP, LLC
 DB 2444 PG 151
 PC 6 SL 113-G

SEE SHEET NO. UC-12 FOR -W1- PROFILE

8/9/2018

5/14/19

Kimley»Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, N.C. 27601

NAD 83 / NA 2011

ANTHONY DICKENS
DB 644 PG 561

PROJECT REFERENCE NO. SHEET NO.

U-5725/R-3822 UC-6

R/W SHEET NO. 6
UTILITY DESIGN ENGINEER



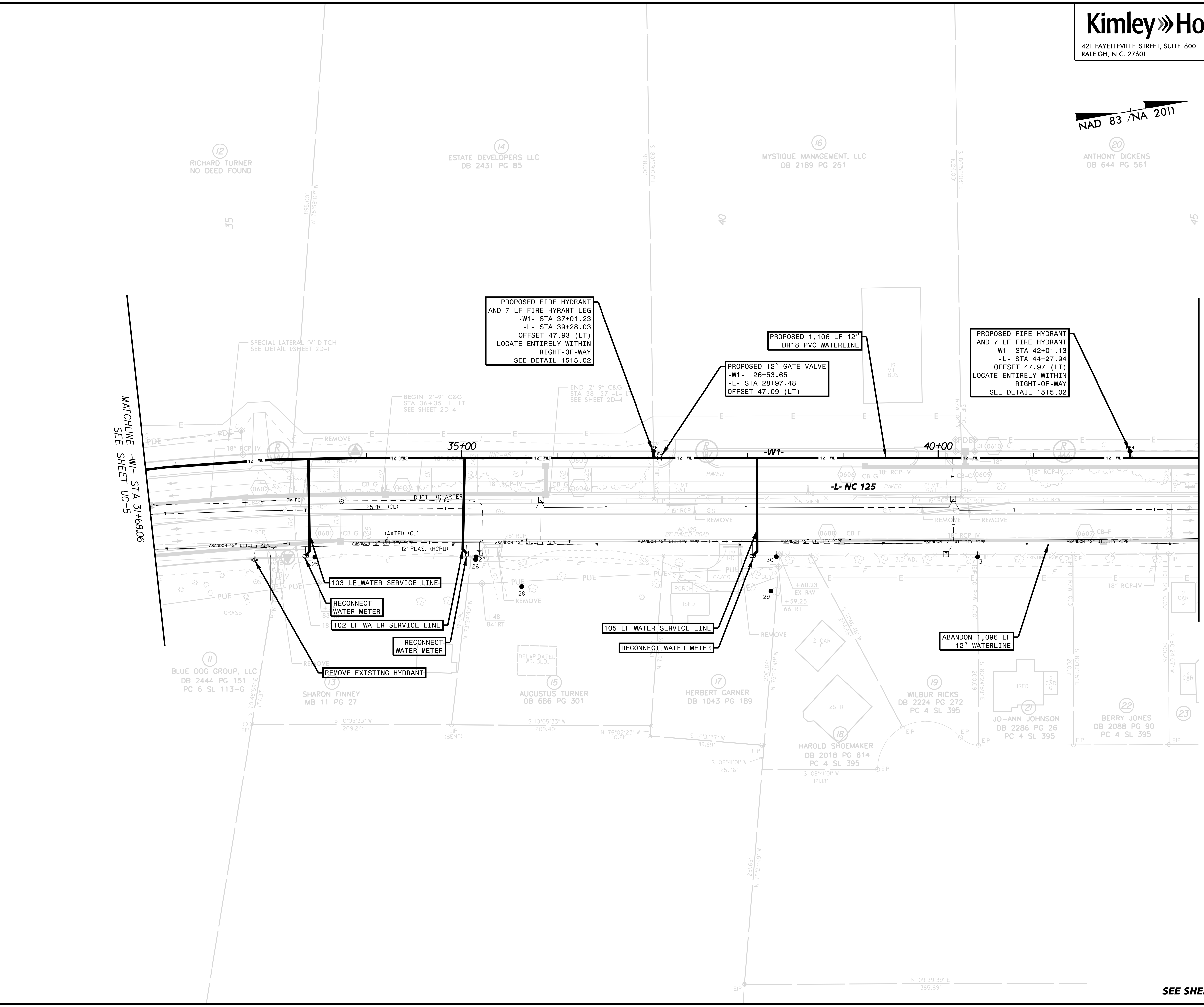
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REVISIONS

MATCHLINE -W1- STA 31+68.06
SEE SHEET UC-5

MATCHLINE -W1- STA 42+73.19
SEE SHEET UC-7



8/9/2018

SEE SHEET NO. UC-12 AND UC-13 FOR -W1- PROFILE

5/14/99

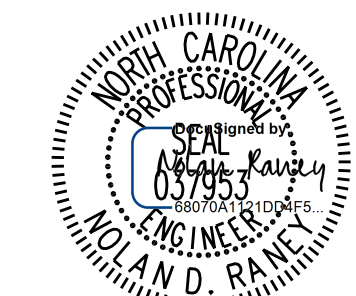
Kimley»Horn

421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, N.C. 27601

PROJECT REFERENCE NO. U-5725/R-3822 SHEET NO. UC-7

R/W SHEET NO. 7

UTILITY DESIGN ENGINEER

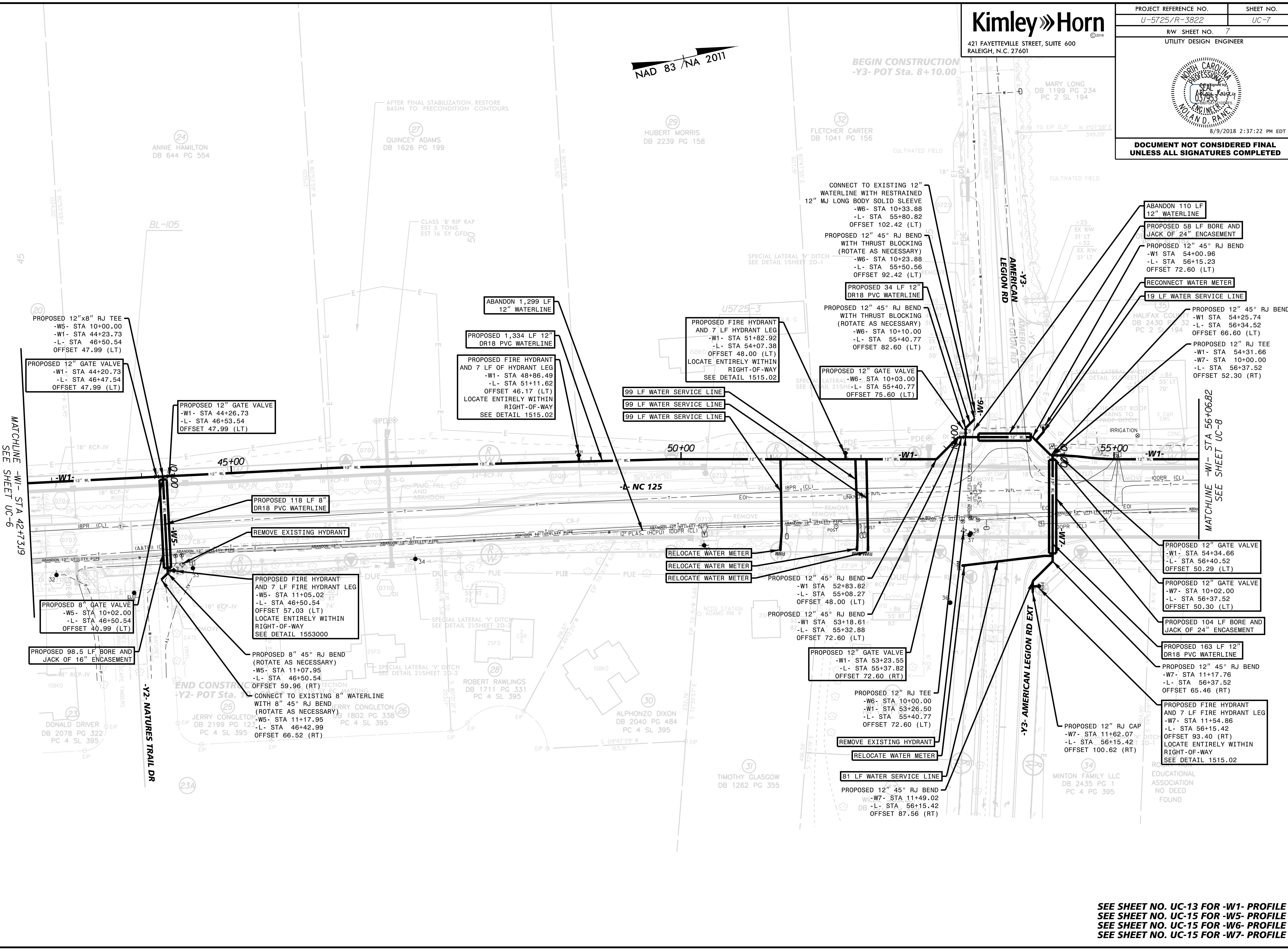


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NAD 83 / NA 2011

BEGIN CONSTRUCTION
-Y3- POT Sta. 8+10.00



REVISIONS

MATCHLINE -W1- STA 42+73.19
SEE SHEET UC-6

MATCHLINE -W1- STA 56+06.82
SEE SHEET UC-8


SEE SHEET NO. UC-13 FOR -W1- PROFILE
SEE SHEET NO. UC-15 FOR -W5- PROFILE
SEE SHEET NO. UC-15 FOR -W6- PROFILE
SEE SHEET NO. UC-15 FOR -W7- PROFILE

8/9/2018

5/14/19

Kimley»Horn

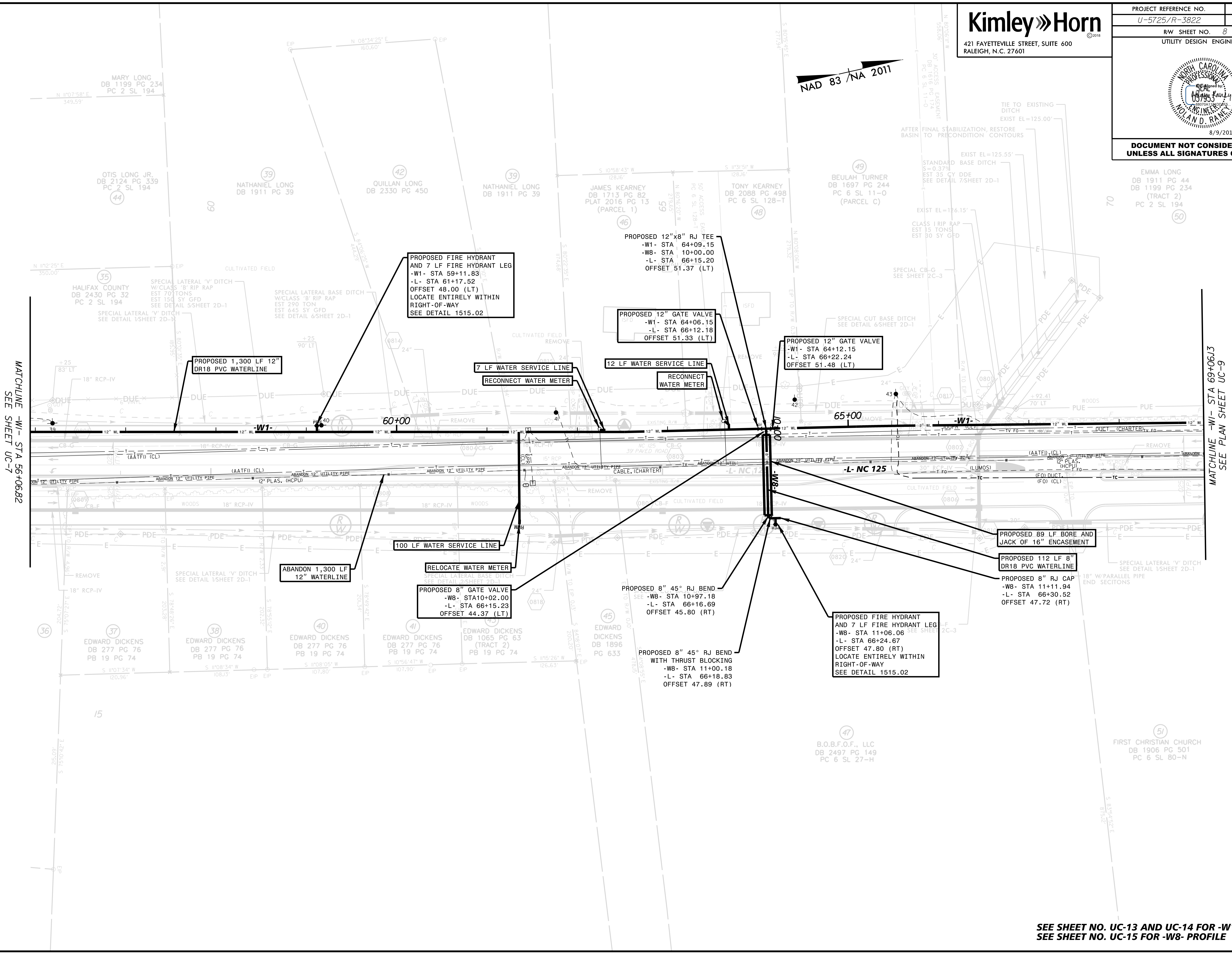
421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, N.C. 27601

PROJECT REFERENCE NO.	SHEET NO.
U-5725/R-3822	UC-8
RW SHEET NO. 8	
UTILITY DESIGN ENGINEER	
	
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EMMA LONG
DB 1911 PG 44
DB 1199 PG 234
(TRACT 2)
PC 2 SL 194

NAD 83 / NA 2011



REVISIONS


MATCHLINE -W1- STA 56+06.82
SEE SHEET UC-7

MATCHLINE -W1- STA 69+06.13
SEE PLAN SHEET UC-9

8/9/2018

SEE SHEET NO. UC-13 AND UC-14 FOR -W1- PROFILE
SEE SHEET NO. UC-15 FOR -W8- PROFILE

5/14/19

PROJECT REFERENCE NO. U-5725/R-3822	SHEET NO. UC-9
R/W SHEET NO. 9	
UTILITY DESIGN ENGINEER	
	
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NAD 83 / N.A. 2011

REVISIONS

MATCHLINE -W1- STA 69+06.13
SEE SHEET UC-8

MATCHLINE -L- STA 84+00.00
SEE PLAN SHEET UC-10

50
EMMA LONG
DB 1911 PG 44
DB 1199 PG 234
(TRACT 2)
PC 2 SL 194

52
WILLIE LONG
DB 1199 PG 234
(TRACT 1)
PC 2 SL 194

55
MASUKI INC.
DB 2430 PG 17
DB 1991 PG 325

PROPOSED FIRE HYDRANT
AND 7 LF FIRE HYDRANT LEG
-W1- STA 69+07.01
-L- STA 71+13.38
OFFSET 51.16 (LT)
LOCATE ENTIRELY WITHIN
RIGHT-OF-WAY
SEE DETAIL 1515.02

PROPOSED FIRE HYDRANT
AND 7 LF FIRE HYDRANT LEG
-W1- STA 72+22.23
-L- STA 74+28.60
OFFSET 48.35 (LT)
LOCATE ENTIRELY WITHIN
RIGHT-OF-WAY
SEE DETAIL 1515.02

PROPOSED 340 LF 12"
DR18 PVC WATERLINE

PROPOSED 12" GATE VALVE
-W1- STA 72+33.09
-L- STA 74+39.48
OFFSET 46.25 (LT)

PROPOSED 2" BLOW OFF

ABANDON 388 LF
12" WATERLINE

REMOVE EXISTING HYDRANT

RELOCATE WATER METER

ABANDON 986 LF
2" WATERLINE

100 LF WATER SERVICE LINE

TOE PROTECTION
CLASS 'B' RIP RAP
EST 125 TONS
EST 275 SY GFD
SEE DETAIL 9/SHEET 2D-1

AFTER FINAL STABILIZATION RESTORE
BASIN TO 'PRECONDITION' CONTOURS

BEGIN 2'-9" C&G
STA 83+25 -L- LT
SEE SHEET 2D-3

SPECIAL LATERAL BASE DITCH
SEE DETAIL 2/SHEET 2D-1

SPECIAL CUT BASE DITCH
W/CLASS 'B' RIP RAP
EST 85 TONS
EST 200 SY GFD
SEE DETAIL 11/SHEET 2D-1

SPECIAL CUT BASE DITCH
SEE DETAIL 3/SHEET 2D-1

TOE PROTECTION
CLASS 'B' RIP RAP
EST 55 TONS
EST 125 SY GFD
SEE DETAIL 9/SHEET 2D-1

51
FIRST CHRISTIAN CHURCH
DB 1906 PG 501
PC 6 SL 80-N

53
RIDER FARMS LLC
DB 2262 PG 642
PC 6 SL 100-A

54
RIDER FARMS LLC
DB 2262 PG 642
PC 6 SL 105-E

56
RIDER FARMS LLC
DB 2262 PG 642
PC 6 SL 105-E


8/9/2018

5/14/19

NOTES:
1. DCV BACKFLOW PREVENTION ASSEMBLIES ARE PRIVATELY OWNED. CONTRACTOR SHALL COORDINATE RELOCATION WITH OWNERS.

GOOD NEWS BAPTIST CHURCH OF ROANOKE RAPIDS INC
DB 2319 PG 507
MB 17 PG 89

Kimley»Horn
421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, N.C. 27601

PROJECT REFERENCE NO. U-5725/R-3822	SHEET NO. UC-10
RW SHEET NO. 10	
UTILITY DESIGN ENGINEER	
	
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NAD 83 / NA 2011

REVISIONS

MATCHLINE -L- STA 84+00.00
SEE SHEET UC-9

BEGIN CONSTRUCTION
-Y4- POC Sta. 13+65.00

END CONSTRUCTION
-DRW2- POT Sta. 12+10.00

END TIP PROJECT U-5725
-L- POT Sta. 93+80/00

55
MASUKI INC.
DB 2430 PG 17
DB 1991 PG 325

59
CROSS CREEK CORNER, LLC
DB 2117 PG 130
PC 6 SL 117-M

60
NANCY ELIAS
DB 2043 PG 609
PC 6 SL 108-K

61
NANCY ELIAS
DB 2262 PG 515
PC 6 SL 108-K

GILBERT CHICHESTER
DB 2024 PG 326
PC 6 SL 108-K

LANA HORN
DB 2405 PG 519
PC 6 SL 108-K

WILLIAM BOSEMAN
DB 2017 PG 187
PC 6 SL 108-K

CHANNEL IMPROVEMENTS
CLASS II RIP RAP
EST 45 TONS
EST 40 SY GFD
SEE DETAIL 12/SHEET 2D-1

ABANDON APPROX 65 LF
2" WATERLINE

SPECIAL LATERAL 'V' DITCH
W/CLASS 'B' RIP RAP
EST 10 TONS
EST 21 SY GFD
SEE DETAIL 5/SHEET 2D-1

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 1/SHEET 2D-1
TEMPORARY CONSTRUCTION
EASEMENT

PUE
RIDER FARMS LLC
DB 2262 PG 642
PC 6 SL 105-E

JB W/MH COVER
INV=-07.53
18" W/ ELBOWS

WOODS
1012

WOODS
1003

WOODS
1004

WOODS
1005

WOODS
1006

WOODS
1007

WOODS
1008

WOODS
1009

WOODS
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RIDER FARMS LLC
DB 2262 PG 642
PC 6 SL 105-E

58
CITIZENS COMMUNITY BANK
DB 2178 PG 531
PC 6 SL 141-I

JOEY P. THOMAS FAMILY LIMITED LIABILITY
DB 2132 PG 455
PC 6 SL 143-A

RURAL HEALTH GROUP INC
DB 2463 PG 113

P&I ENTERPRISE INC
DB 2194 PG 337
PC 6 SL 158-G

56
RIDER FARMS LLC
DB 2262 PG 642
PC 6 SL 105-E

CHANNEL IMPROVEMENTS
CLASS II RIP RAP
EST 30 TONS
EST 25 SY GFD
SEE DETAIL 13/SHEET 2D-1

TIE TO PROP RCBC

REMOVE EXIST 66" RCP
±46.41
55' RT

FOR PROJECTION
CLASS 'B' RIP RAP
EST 55 TONS
EST 125 SY GFD
SEE DETAIL 9/SHEET 2D-1

TIE TO PROP RCBC

TIE 18" RCP-IV TO PROP RCBC

CLASS 'B' RIP RAP
EST 2 TONS
EST 7 SY GFD

SPECIAL LATERAL 'V' DITCH
SEE DETAIL 1/SHEET 2D-1

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5/14/99

Kimley»Horn
421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, N.C. 27601

PROJECT REFERENCE NO.	SHEET NO.
U-5725/R-3822	UC-11
RW SHEET NO. 17	
UTILITY DESIGN ENGINEER	
 NORTH CAROLINA PROFESSIONAL ENGINEER No. 07453 W. AND D. RALEY 8/9/2018 2:37:22 PM EDT	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

NAD 83 / NA 2011

MATCHLINE -L1- STA 94+00.00
SEE PLAN SHEET 16

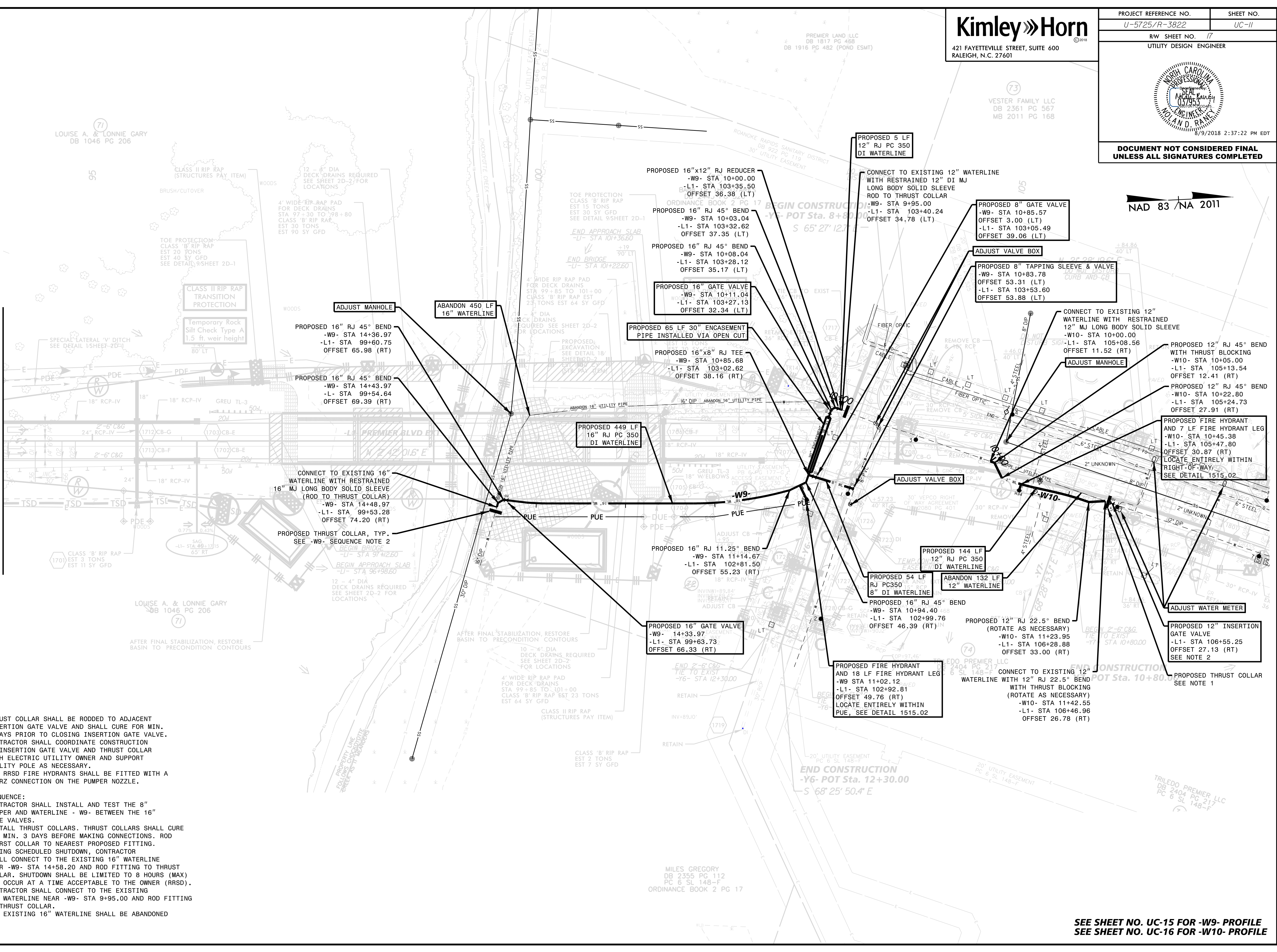
REVISIONS

NOTES:

- THRUST COLLAR SHALL BE RODDED TO ADJACENT INSERTION GATE VALVE AND SHALL CURE FOR MIN. 3 DAYS PRIOR TO CLOSING INSERTION GATE VALVE. CONTRACTOR SHALL COORDINATE CONSTRUCTION OF INSERTION GATE VALVE AND THRUST COLLAR WITH ELECTRIC UTILITY OWNER AND SUPPORT UTILITY POLE AS NECESSARY.
- ALL RRSD FIRE HYDRANTS SHALL BE FITTED WITH A STORZ CONNECTION ON THE PUMPER NOZZLE.

-W9- SEQUENCE:

- CONTRACTOR SHALL INSTALL AND TEST THE 8" JUMPER AND WATERLINE - W9- BETWEEN THE 16" GATE VALVES.
- INSTALL THRUST COLLARS. THRUST COLLARS SHALL CURE FOR MIN. 3 DAYS BEFORE MAKING CONNECTIONS. ROD THRUST COLLAR TO NEAREST PROPOSED FITTING.
- DURING SCHEDULED SHUTDOWN, CONTRACTOR SHALL CONNECT TO THE EXISTING 16" WATERLINE NEAR -W9- STA 14+58.20 AND ROD FITTING TO THRUST COLLAR. SHUTDOWN SHALL BE LIMITED TO 8 HOURS (MAX) AND OCCUR AT A TIME ACCEPTABLE TO THE OWNER (RRSD).
- CONTRACTOR SHALL CONNECT TO THE EXISTING 12" WATERLINE NEAR -W9- STA 9+95.00 AND ROD FITTING TO THRUST COLLAR.
- THE EXISTING 16" WATERLINE SHALL BE ABANDONED



SEE SHEET NO. UC-15 FOR -W9- PROFILE
SEE SHEET NO. UC-16 FOR -W10- PROFILE

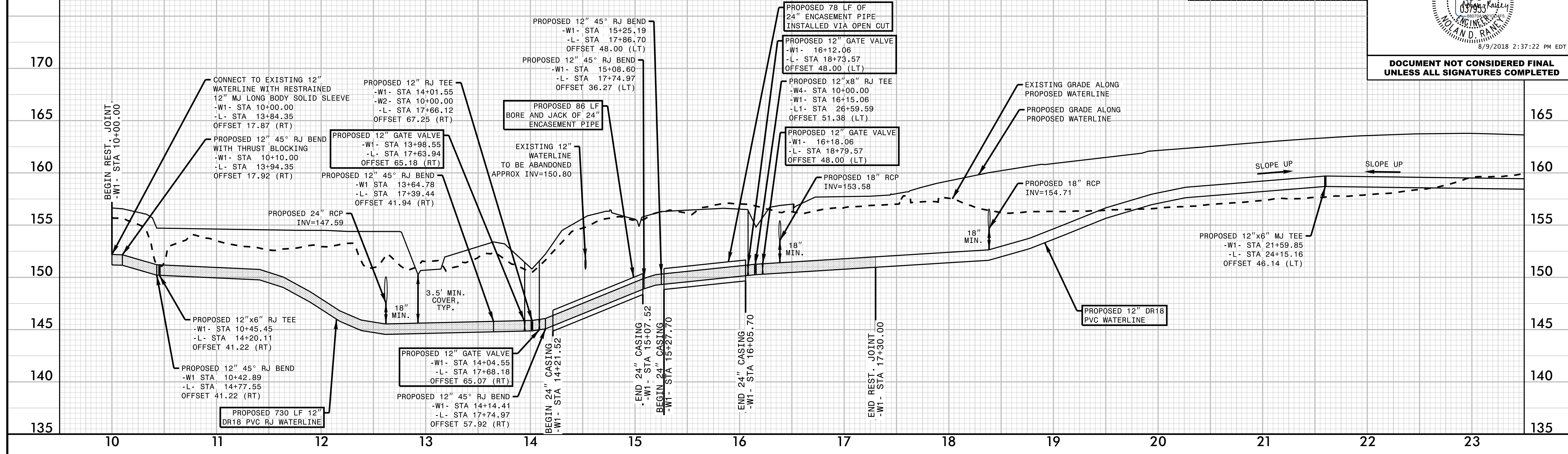
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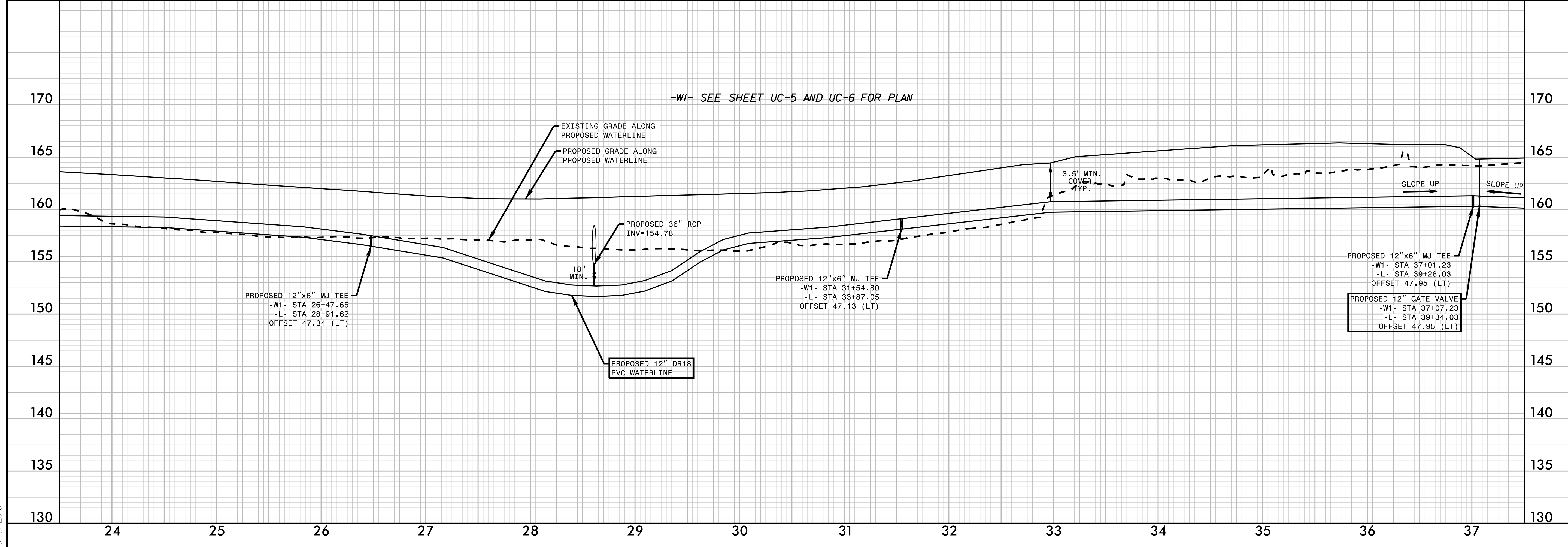


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-WI- SEE SHEET UC-4 AND UC-5 FOR PLAN



-WI- SEE SHEET UC-5 AND UC-6 FOR PLAN



8/9/2008

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RIGHT-OF-WAY REV.

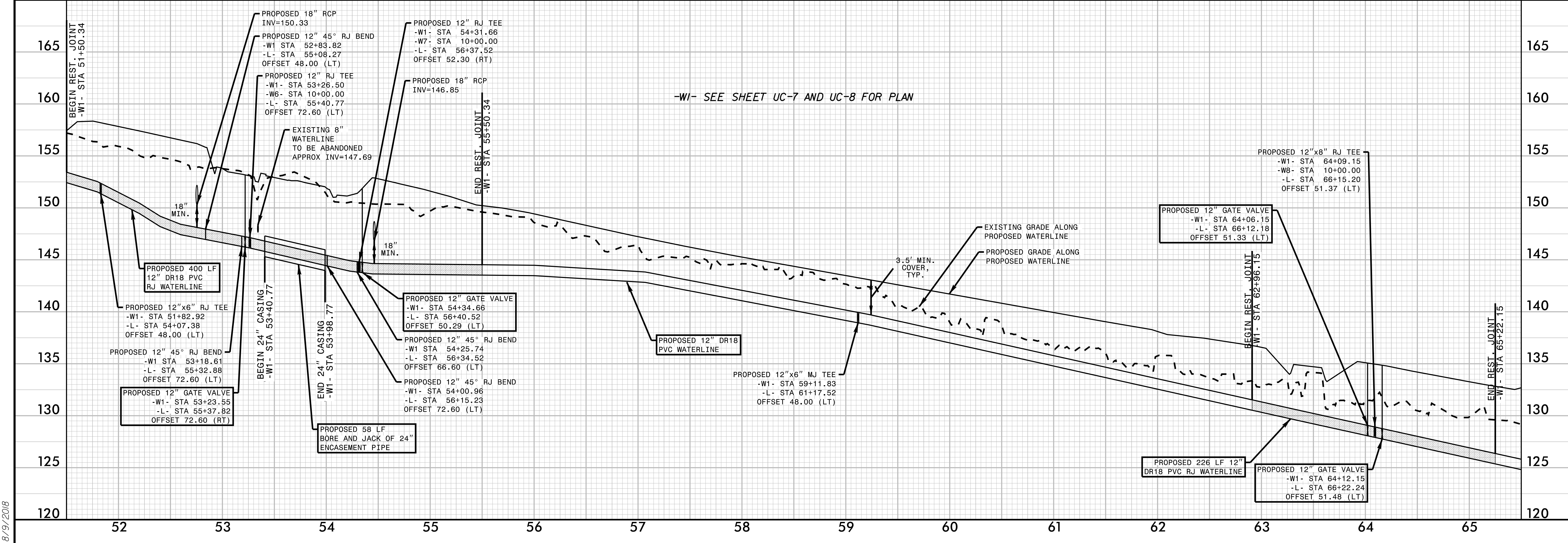
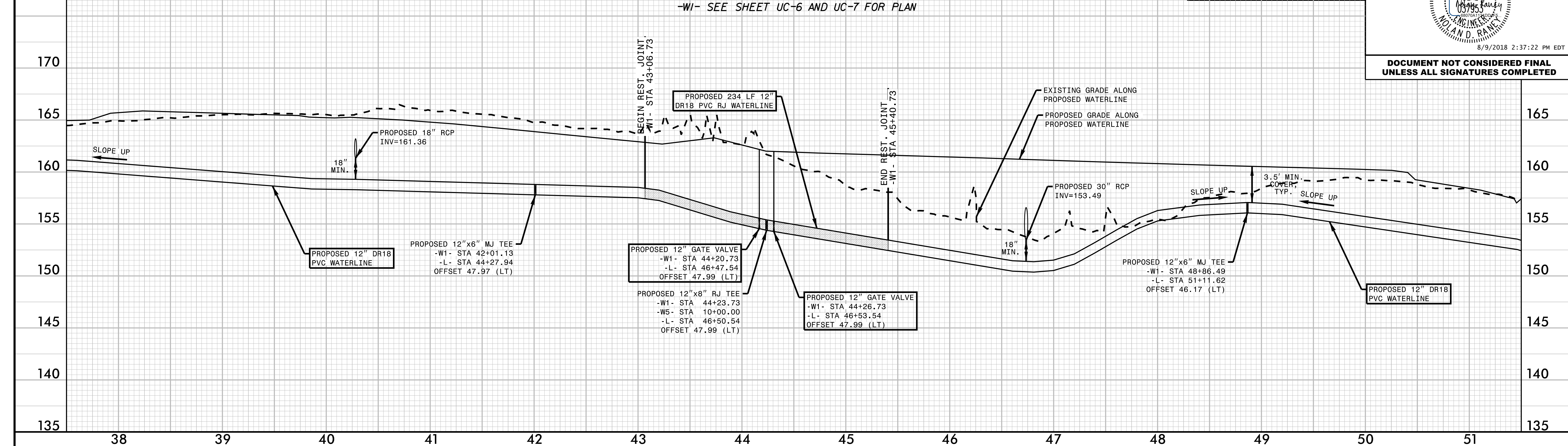
CONST. REV.

PROJECT REFERENCE NO. U-5725/R-3822 SHEET NO. UC-13

UTILITY DESIGN ENGINEER

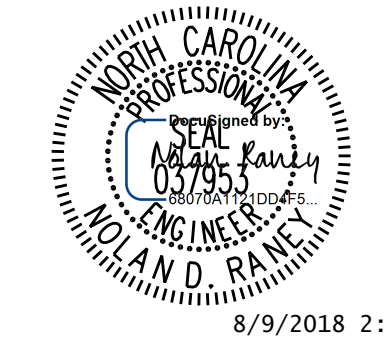


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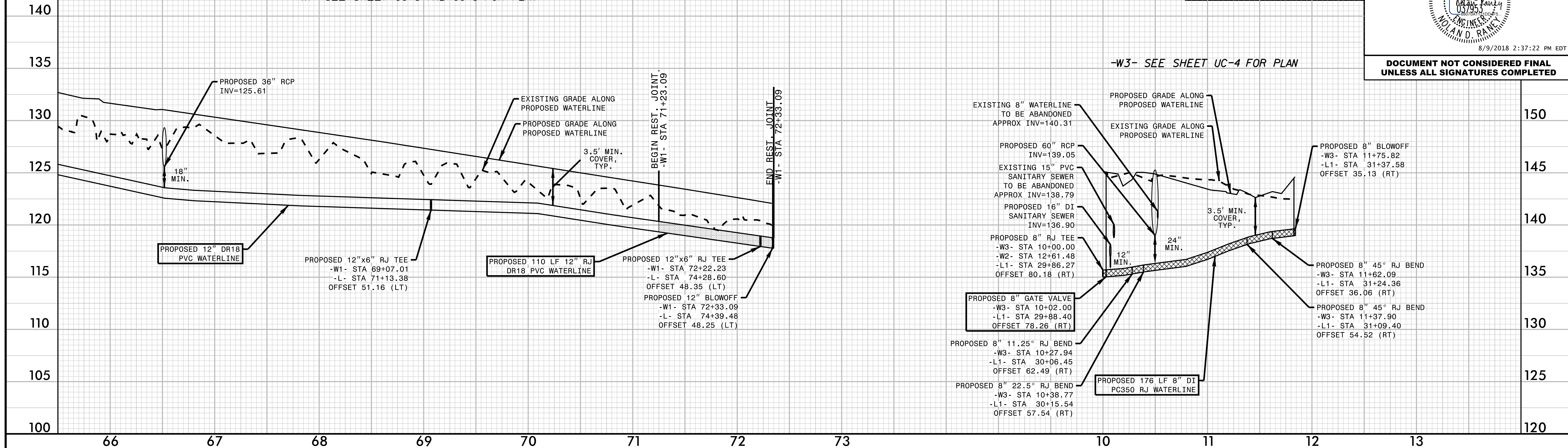
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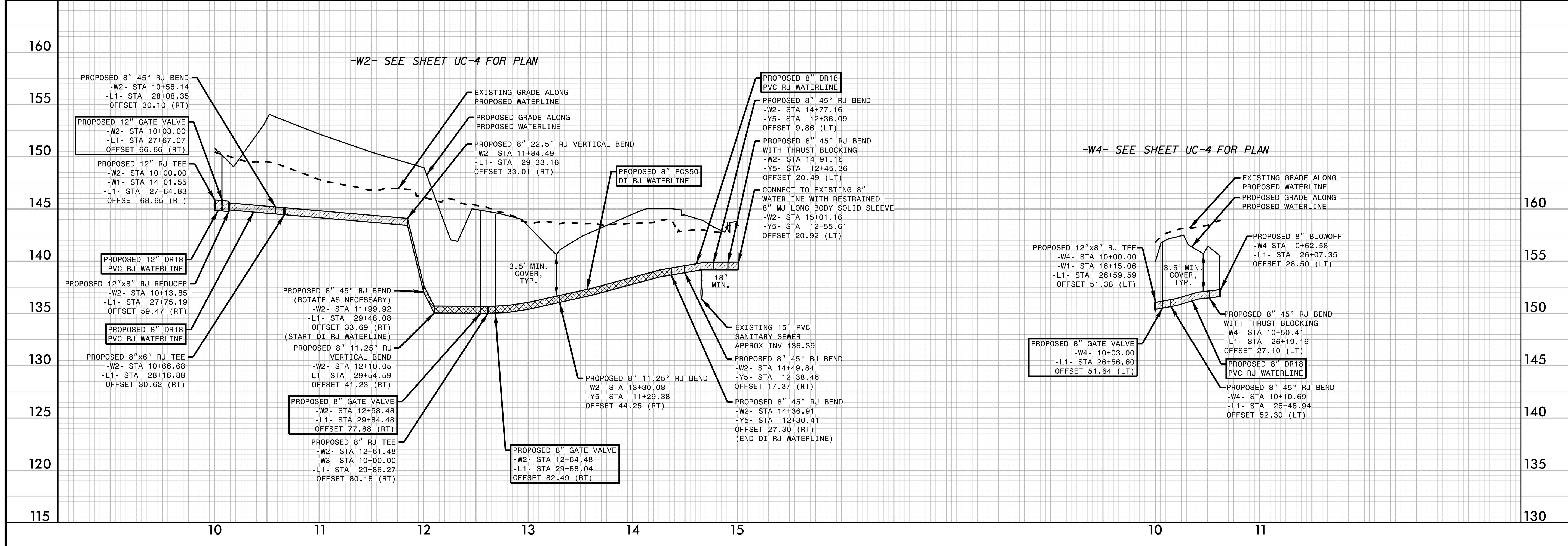
-W1- SEE SHEET UC-8 AND UC-9 FOR PLAN

-W3- SEE SHEET UC-4 FOR PLAN



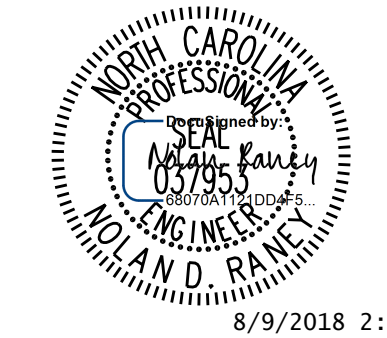
-W2- SEE SHEET UC-4 FOR PLAN

-W4- SEE SHEET UC-4 FOR PLAN



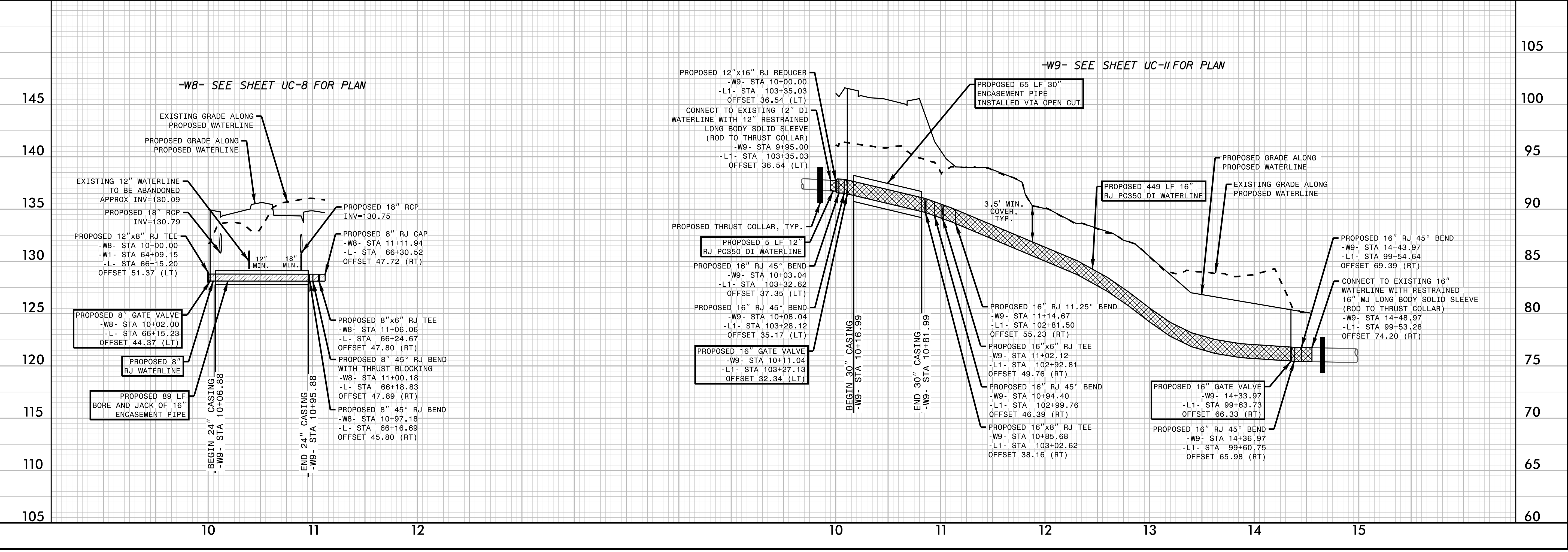
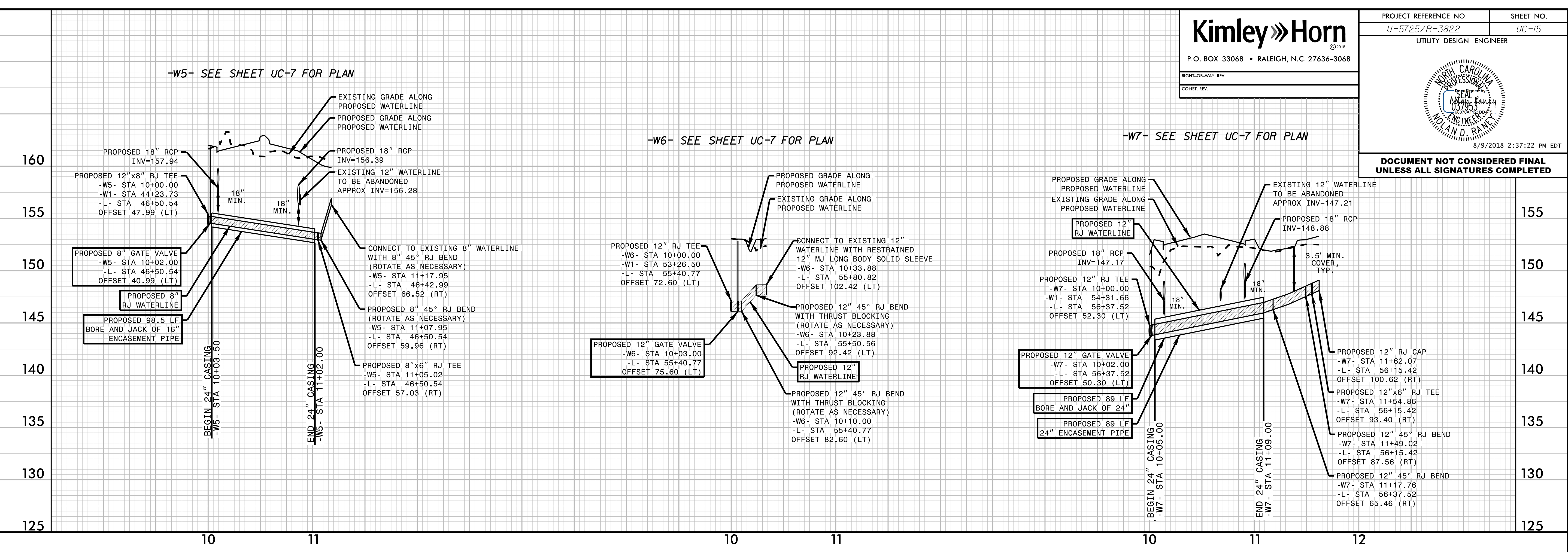
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RIGHT-OF-WAY REV.

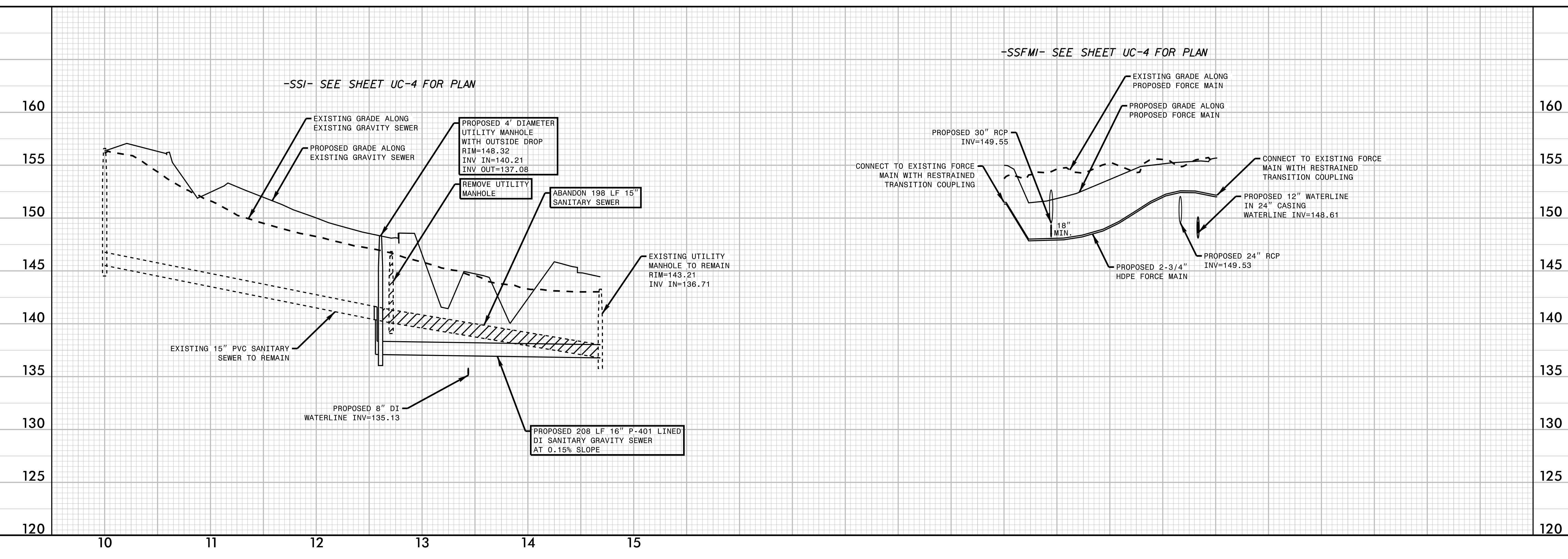
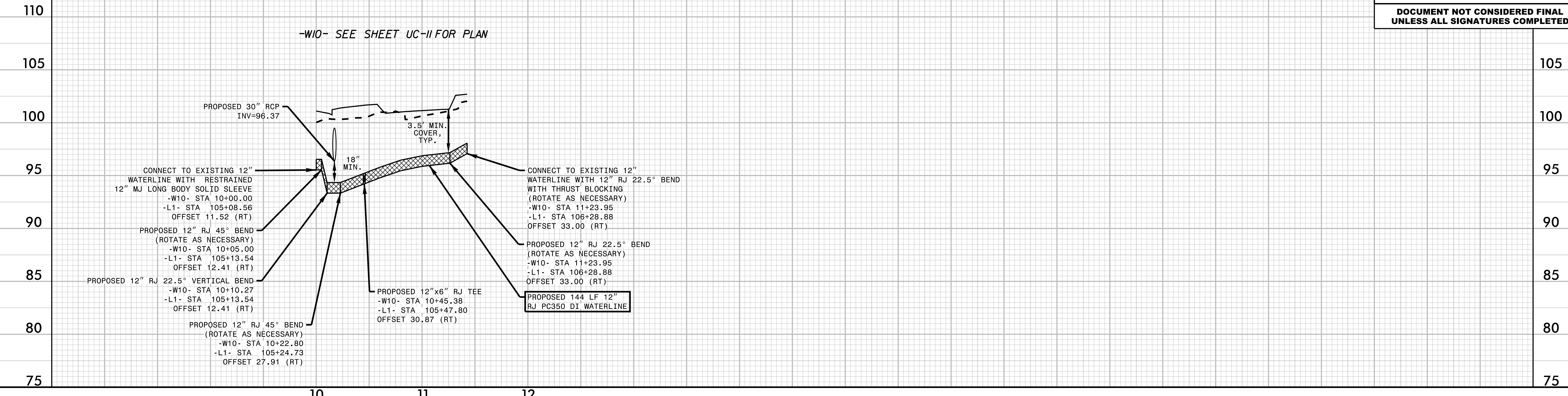
CONST. REV.

PROJECT REFERENCE NO. U-5725/R-3822	SHEET NO. UC-16
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