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See Sheet 1-A For Index of Sheets

T.I.P. NO.  
R-4060

SHEET NO.  
UC-1

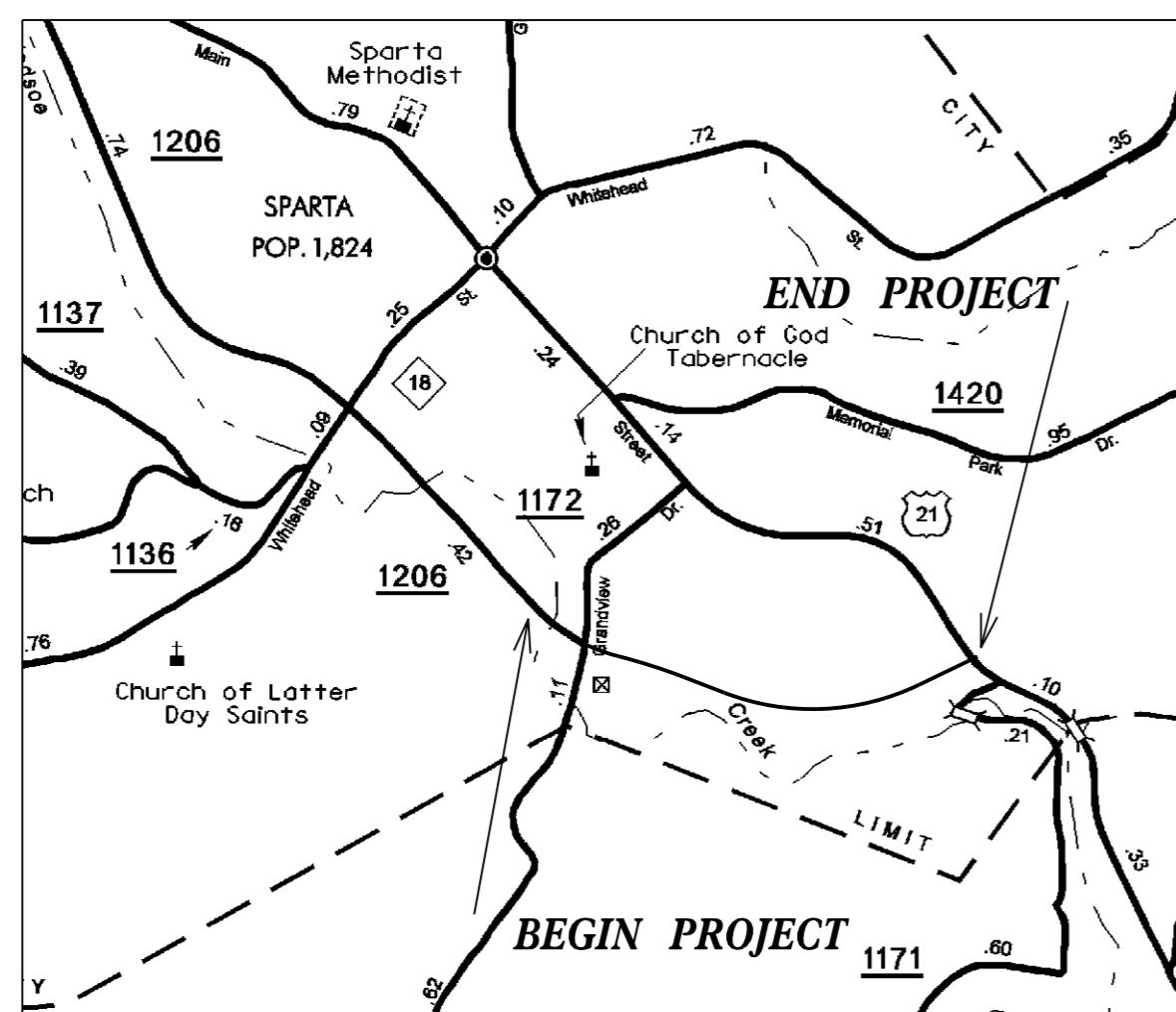
TIP PROJECT: R-4060

# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

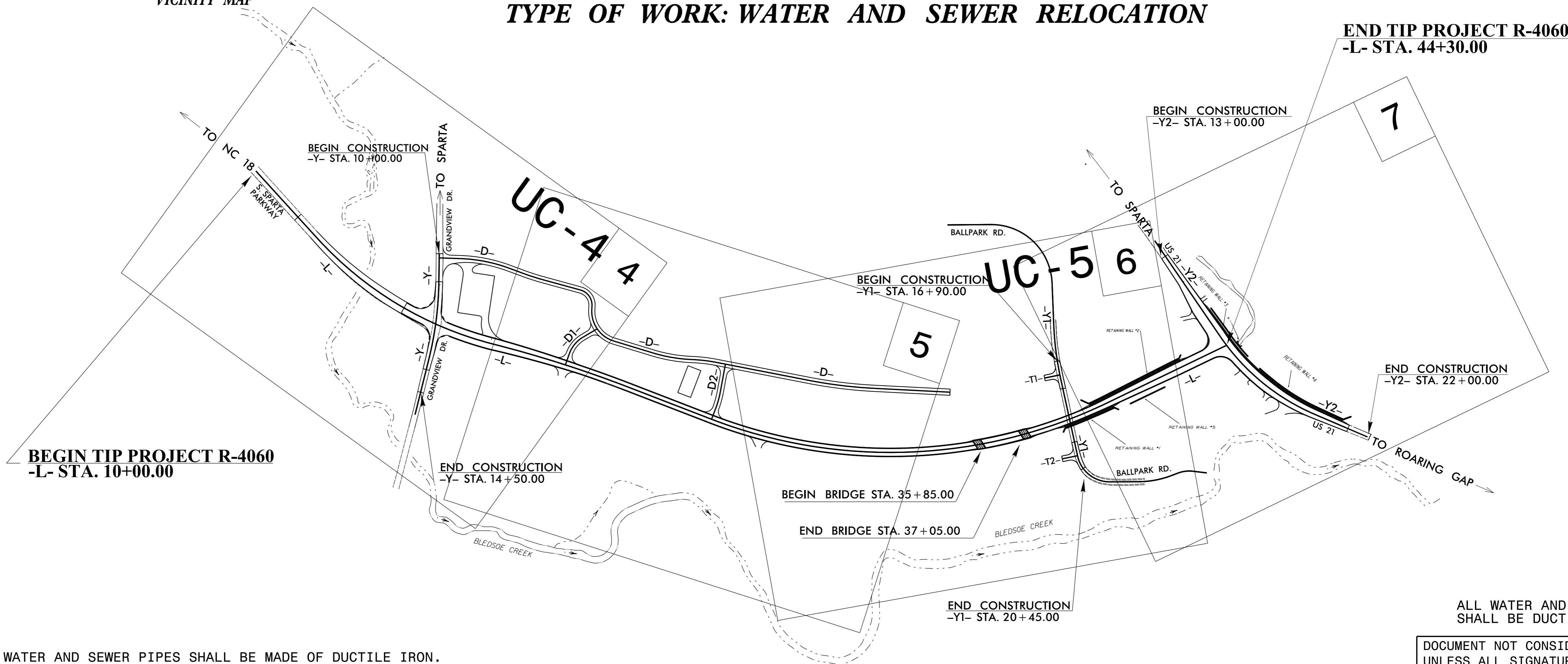
## UTILITY CONSTRUCTION PLANS ALLEGHANY COUNTY

LOCATION: US 21 (SPARTA WESTERN LOOP) FROM  
SR 1172 (GRANDVIEW DR.) TO US 21

TYPE OF WORK: WATER AND SEWER RELOCATION



VICINITY MAP

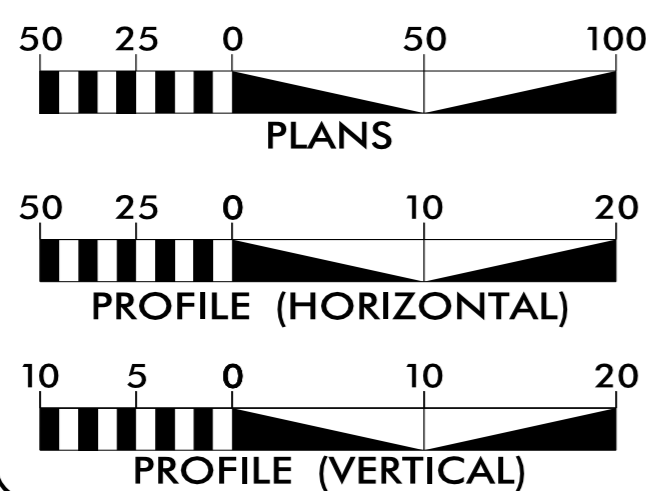


ALL WATER AND SEWER PIPES SHALL BE MADE OF DUCTILE IRON.

ALL WATER AND SEWER PIPES SHALL BE DUCTILE IRON.

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### GRAPHIC SCALES



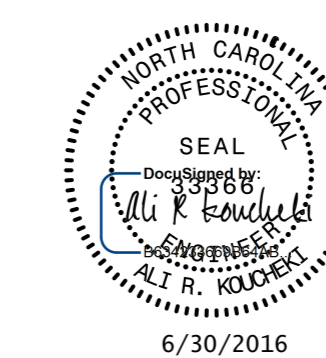
### INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3	NOTES
UC-4 THRU UC-5	UTILITY CONSTRUCTION SHEETS
UC-6 THRU UC-10	PROFILE SHEETS

### WATER AND SEWER OWNERS ON PROJECT

- (1) WATER TOWN OF SPARTA
- (2) SANITARY SEWER TOWN OF SPARTA

SEAL

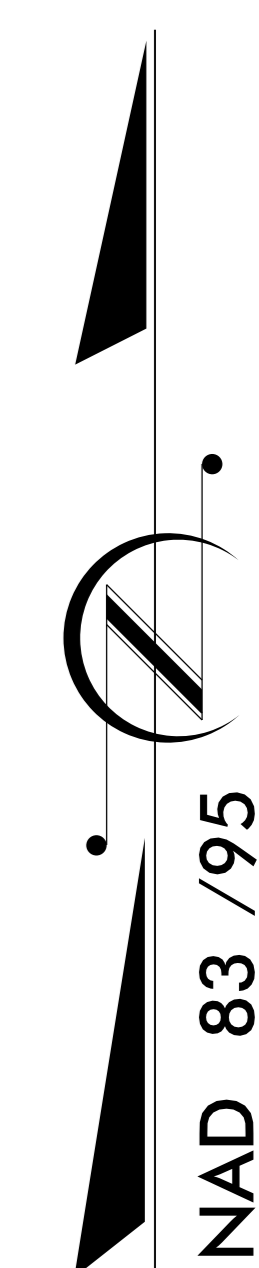


PREPARED IN THE OFFICE OF:  
DIVISION OF HIGHWAYS  
UTILITIES UNIT  
UTILITIES ENGINEERING

1555 MAIL SERVICES CENTER  
RALEIGH NC 27699-1555  
PHONE (919) 707-6690  
FAX (919) 250-4151

**Roger Worthington, P.E.** UTILITIES SECTION ENGINEER  
**Carl Barclay, P.E.** UTILITIES SQUAD LEADER PROJECT ENGINEER  
**Ali Kouchehi, P.E.** UTILITIES PROJECT DESIGNER

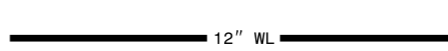























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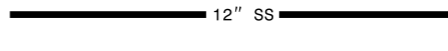
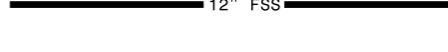


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# UTILITIES PLAN SHEET SYMBOLS





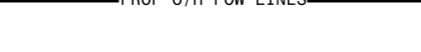



## PROPOSED WATER SYMBOLS








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	REM FH
Water Meter	
Relocate Water Meter	
Remove Water Meter	REM WM
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	AATUR	Sanitary Sewer Cleanout	
End of Information	E.O.I.		

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

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# UTILITY CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
R-4060	UC-3
DESIGNED BY: ARK	
DRAWN BY: ARK	
CHECKED BY: CAB	
APPROVED BY: CAB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

## 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 UTILITIES BELONG TO TOWN OF SPARTA.
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 OPPROTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.

6. THE PLANS DEPICT THE BEST AVAILABLE INFORMATION FOR THE LOCATION, SIZE, AND TYPE OF MATERIAL FOR ALL EXISTING UTILITIES. MAKE INVESTIGATIONS FOR DETERMINING THE EXACT LOCATION, SIZE, AND TYPE MATERIAL OF THE EXISTING FACILITIES AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED UTILITIES AND FOR AVOIDING DAMAGE TO EXISTING FACILITIES. REPAIR ANY DAMAGE INCURRED TO EXISTING FACILITIES TO THE ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE DEPARTMENT.
7. MAKE FINAL CONNECTIONS OF THE NEW WORK TO THE EXISTING SYSTEM WHERE INDICATED ON THE PLANS, AS REQUIRED TO FIT THE ACTUAL CONDITIONS, OR AS DIRECTED.
8. MAKE CONNECTIONS BETWEEN EXISTING AND PROPOSED UTILITIES AT TIMES MOST CONVENIENT TO THE PUBLIC, WITHOUT ENDANGERING THE UTILITY SERVICE, AND IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. MAKE CONNECTIONS ON WEEKENDS, AT NIGHT, AND ON HOLIDAYS IF NECESSARY.
9. ALL UTILITY MATERIALS SHALL BE APPROVED PRIOR TO DELIVERY TO THE PROJECT. SEE 1500-7, " SUBMITTALS AND RECORDS" IN SECTION 1500 OF THE STANDARD SPECIFICATIONS.

## PROJECT SPECIFIC NOTES:

1. PROPOSED WATER LINE FROM -Y1- LINE STATION 17+60 TO -Y1- LINE STATION 20+13 AND SEWER LINE FROM -Y1- LINE STA. 17+14 TO -Y1- LINE STA. 20+72 SHALL BE D.I.R.J. (DUCTILE IRON RESTRAINED JOINT) PIPE.

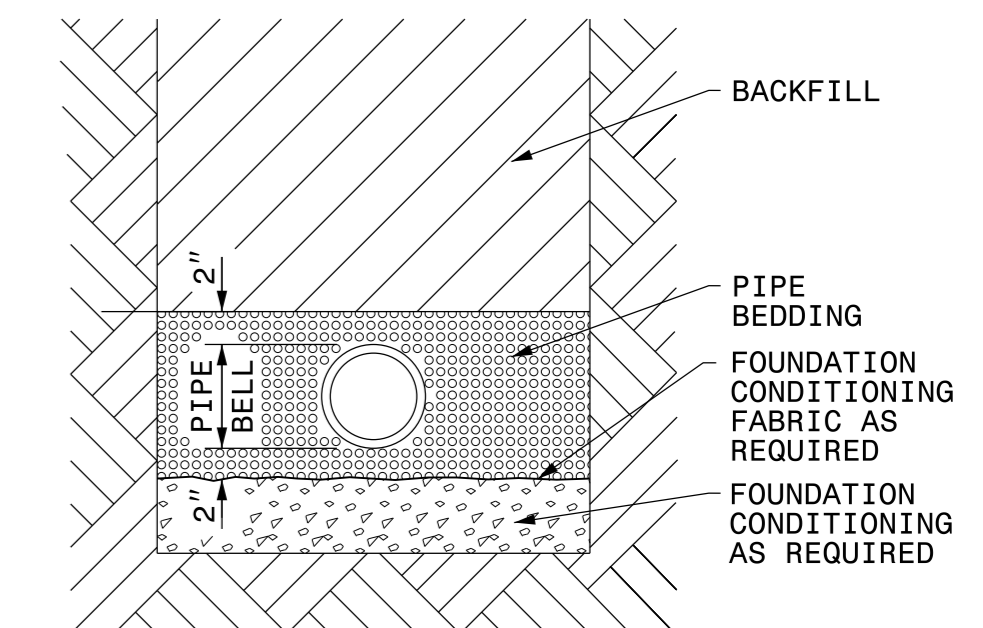
## LIST OF STANDARD DRAWINGS

- 1515.01 WATER METER
- 1520.01 SEWER CLEAN OUT
- 1525.06 PRECAST CONCRETE SANITARY SEWER MANHOLE WITH CAST-IN-PLACE BOTTOM

## UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL  
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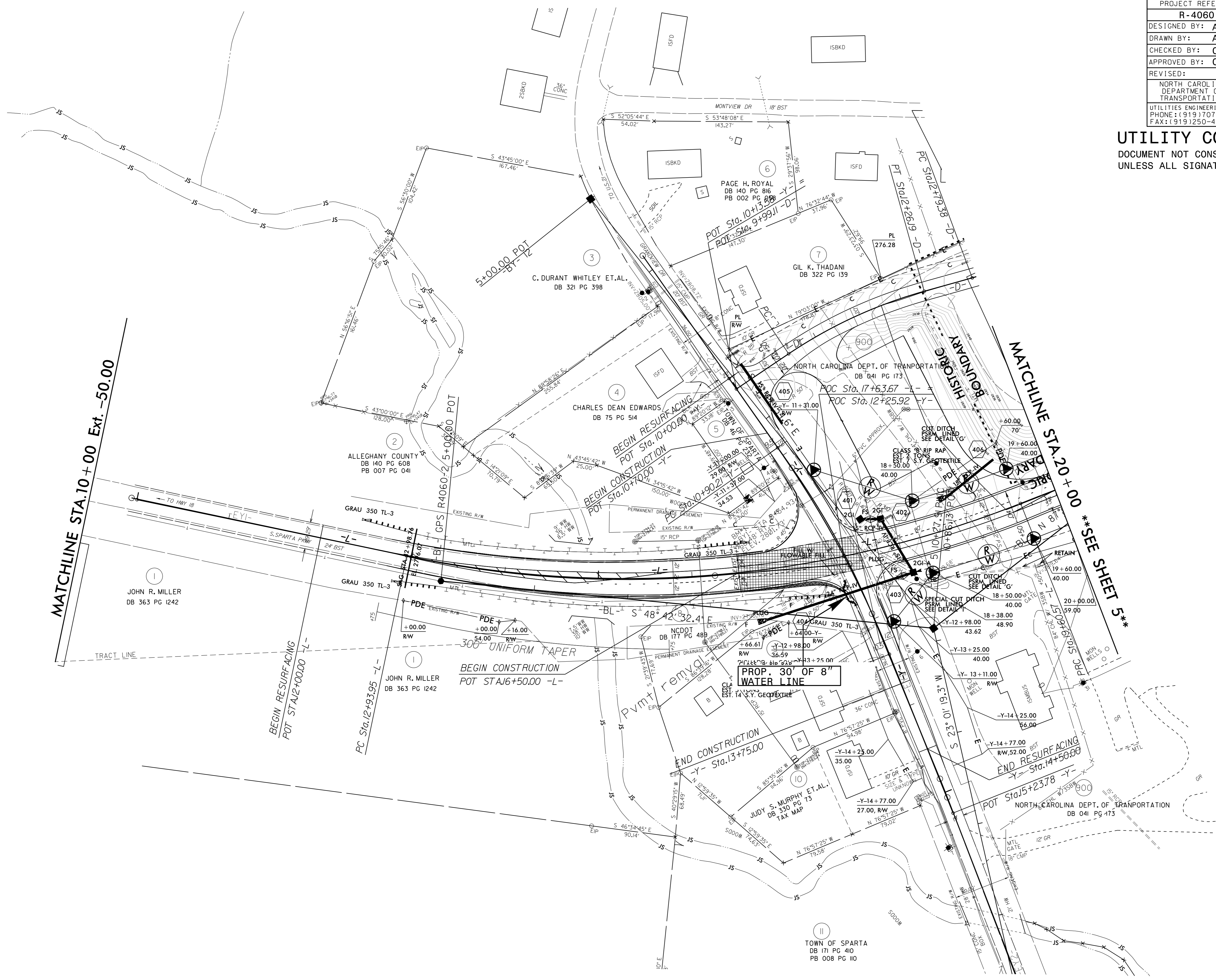
### TRENCH DETAIL



PLACE FOUNDATION CONDITIONING MATERIAL BELOW BEDDING IF REQUIRED, AS DIRECTED BY ENGINEER. PIPE BEDDED IN SELECT MATERIAL, CLASS II (TYPE 1) OR CLASS III. TRENCH BACKFILLED IN LOOSE 6" LAYERS COMPACTED TO TOP OF TRENCH USING LOCAL EXCAVATED MATERIAL IF APPROVED BY THE ENGINEER, OR SELECT MATERIAL. ALL MATERIAL SHALL BE FREE OF ROCKS, FOREIGN MATERIAL, AND FROZEN EARTH. COMPACTION SHALL BE TO APPROXIMATELY 95% DENSITY IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY THE DEPARTMENT OF TRANSPORTATION.

PROJECT REFERENCE NO.	SHEET NO.
R-4060	UC-4
DESIGNED BY: ARK	
DRAWN BY: ARK	
CHECKED BY: CAB	
APPROVED BY: CAB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SECTION PHONE: (919) 707-6690 FAX: (919) 250-4151	

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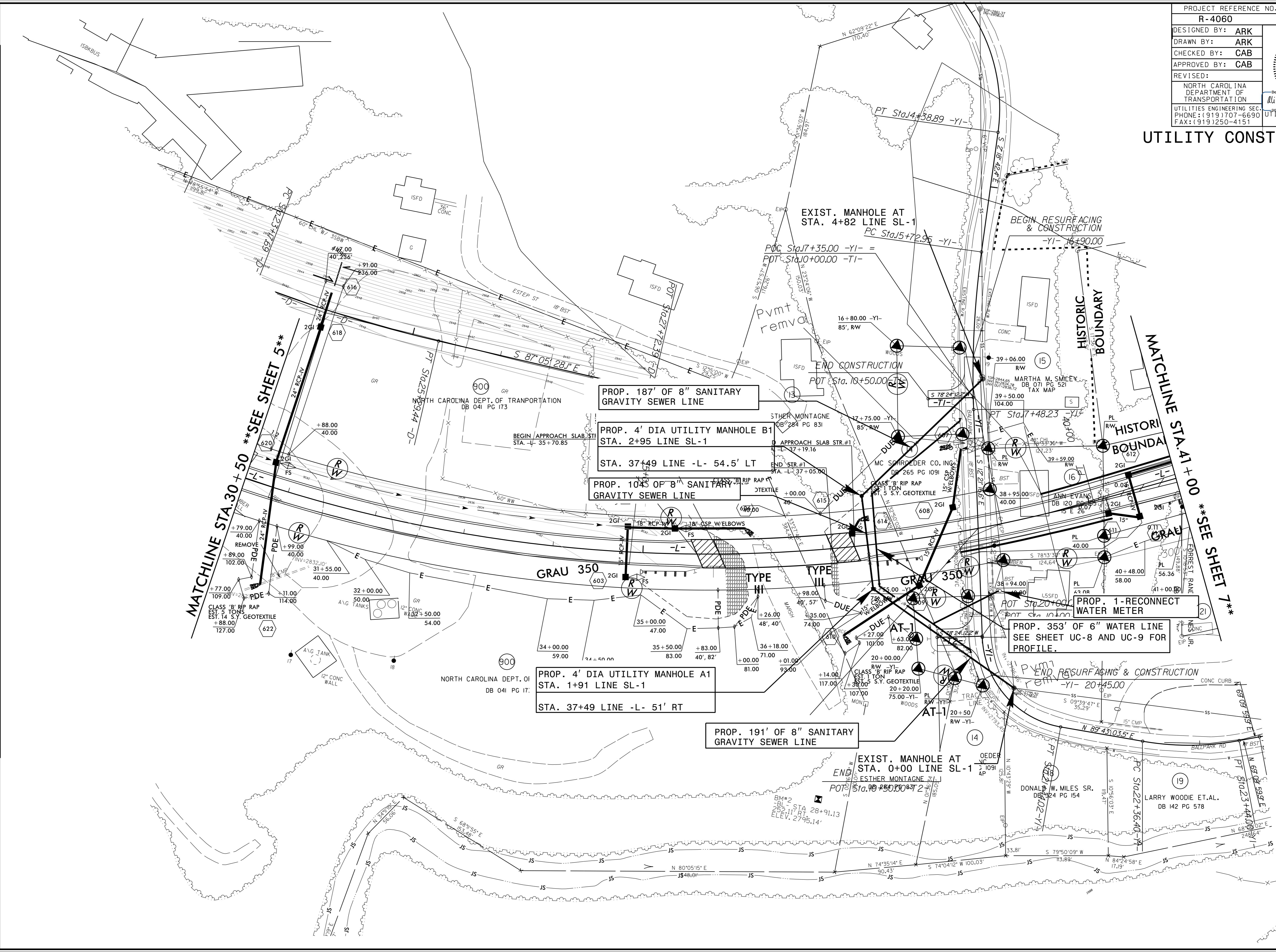
MATCHLINE STA.10+00 Ext. -50.00

MATCHLINE STA.20+00 \*\*SEE SHEET 5\*\*

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PROJECT REFERENCE NO.	SHEET NO.
R-4060	UC-5
DESIGNED BY: ARK	
DRAWN BY: ARK	
CHECKED BY: CAB	
APPROVED BY: CAB	
REVISOR:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151
	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION



MATCHLINE STA. 30+50 \*\*SEE SHEET 5\*\*

MATCHLINE STA. 41+00 \*\*SEE SHEET 7\*\*

PROP. 187' OF 8" SANITARY GRAVITY SEWER LINE

PROP. 4' DIA UTILITY MANHOLE B1 STA. 2+95 LINE SL-1

STA. 37+49 LINE -L- 54.5' LT

PROP. 104' OF 8" SANITARY GRAVITY SEWER LINE

PROP. 4' DIA UTILITY MANHOLE A1 STA. 1+91 LINE SL-1

STA. 37+49 LINE -L- 51' RT

PROP. 191' OF 8" SANITARY GRAVITY SEWER LINE

PROP. 1-RECONNECT WATER METER

PROP. 353' OF 6" WATER LINE SEE SHEET UC-8 AND UC-9 FOR PROFILE.

REVISIONS

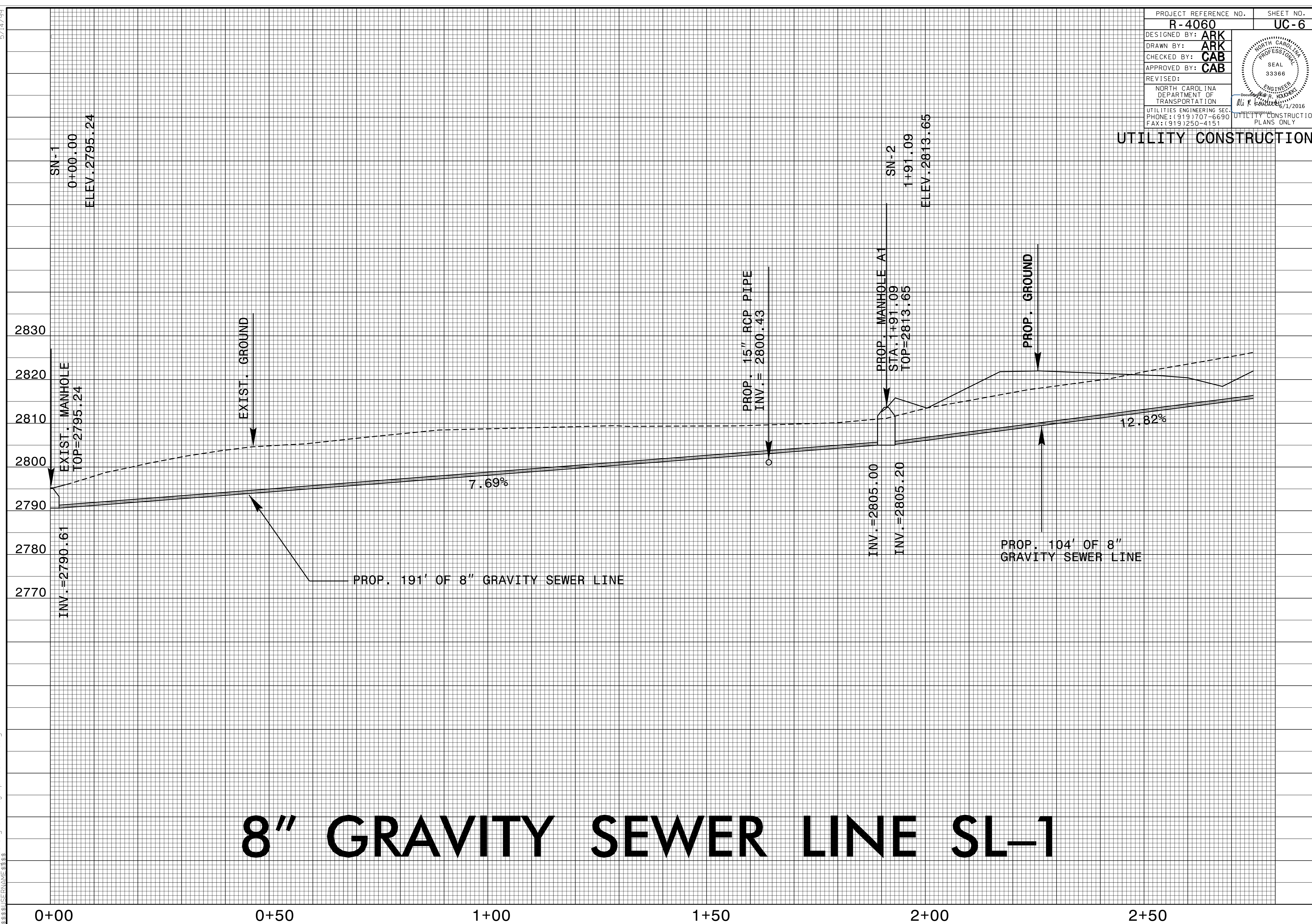
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DRAWN BY: <b>ARK</b>	
CHECKED BY: <b>CAB</b>	
APPROVED BY: <b>CAB</b>	
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

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# 8" GRAVITY SEWER LINE SL-1

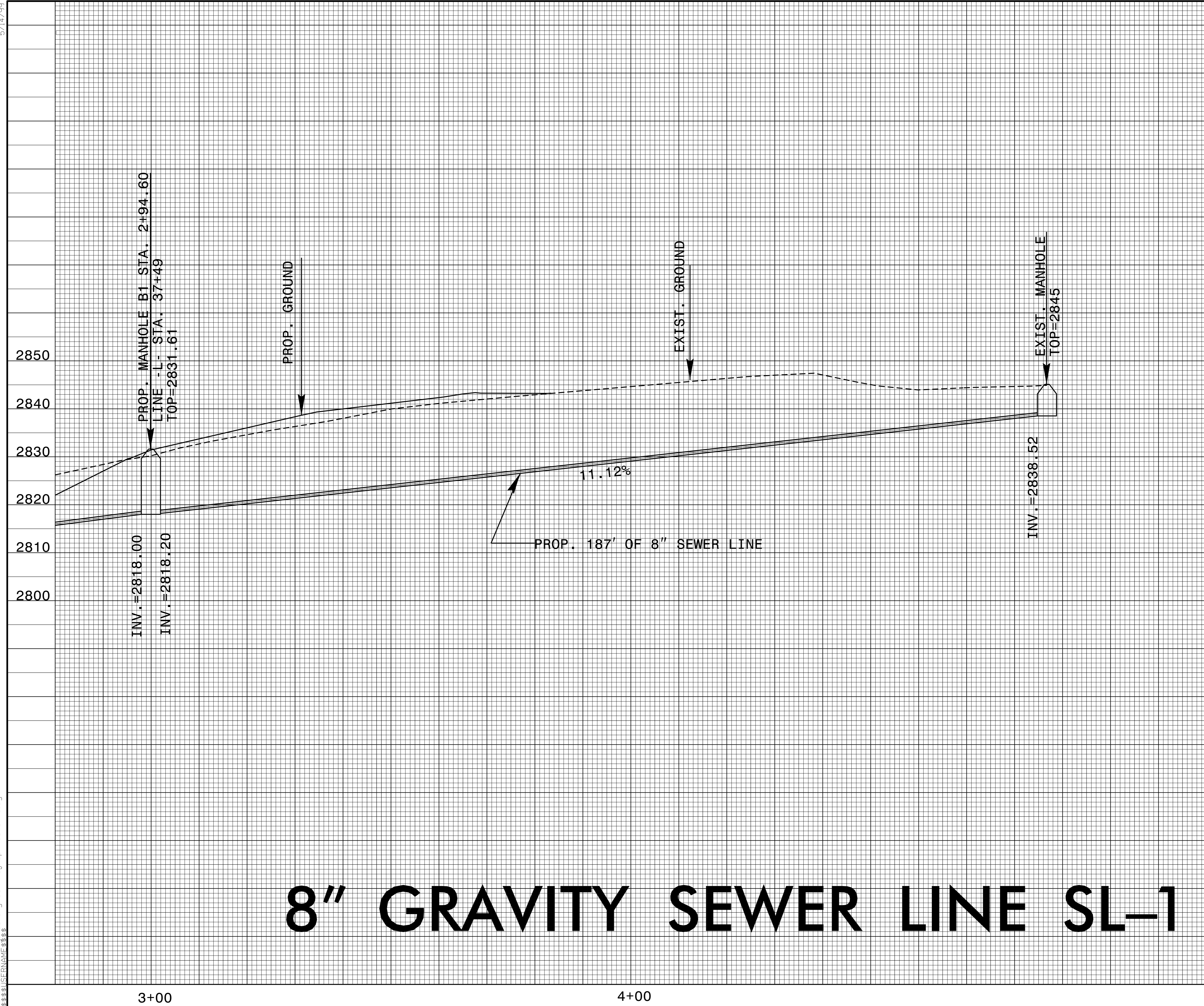
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UTILITY CONSTRUCTION PLANS ONLY	

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# 8" GRAVITY SEWER LINE SL-1

3+00

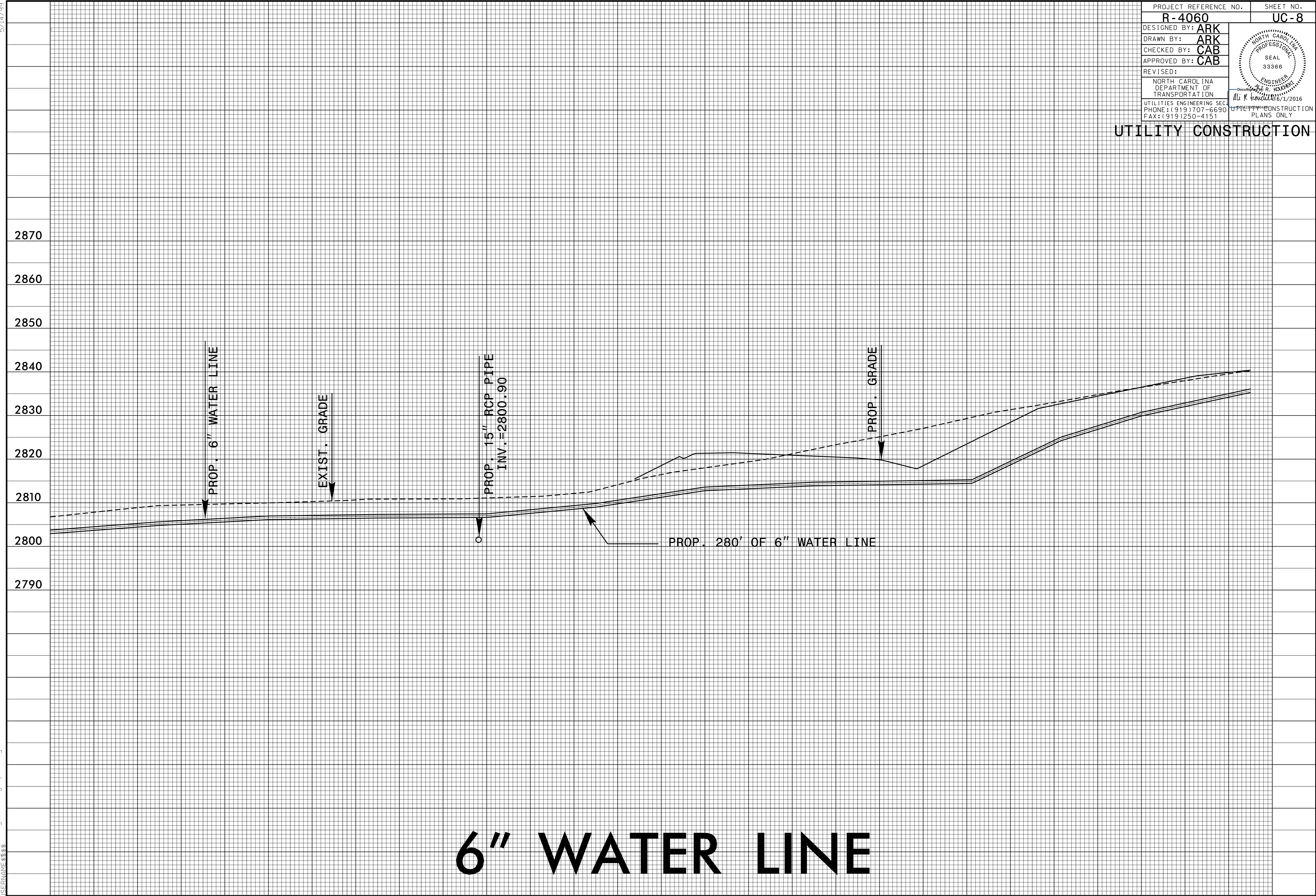
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CHECKED BY: <b>CAB</b>	
APPROVED BY: <b>CAB</b>	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SECTION PHONE: (919) 707-6690 FAX: (919) 250-4151	

UTILITY CONSTRUCTION

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# 6" WATER LINE

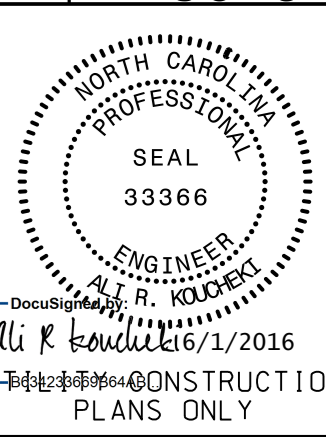
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0+50

1+50

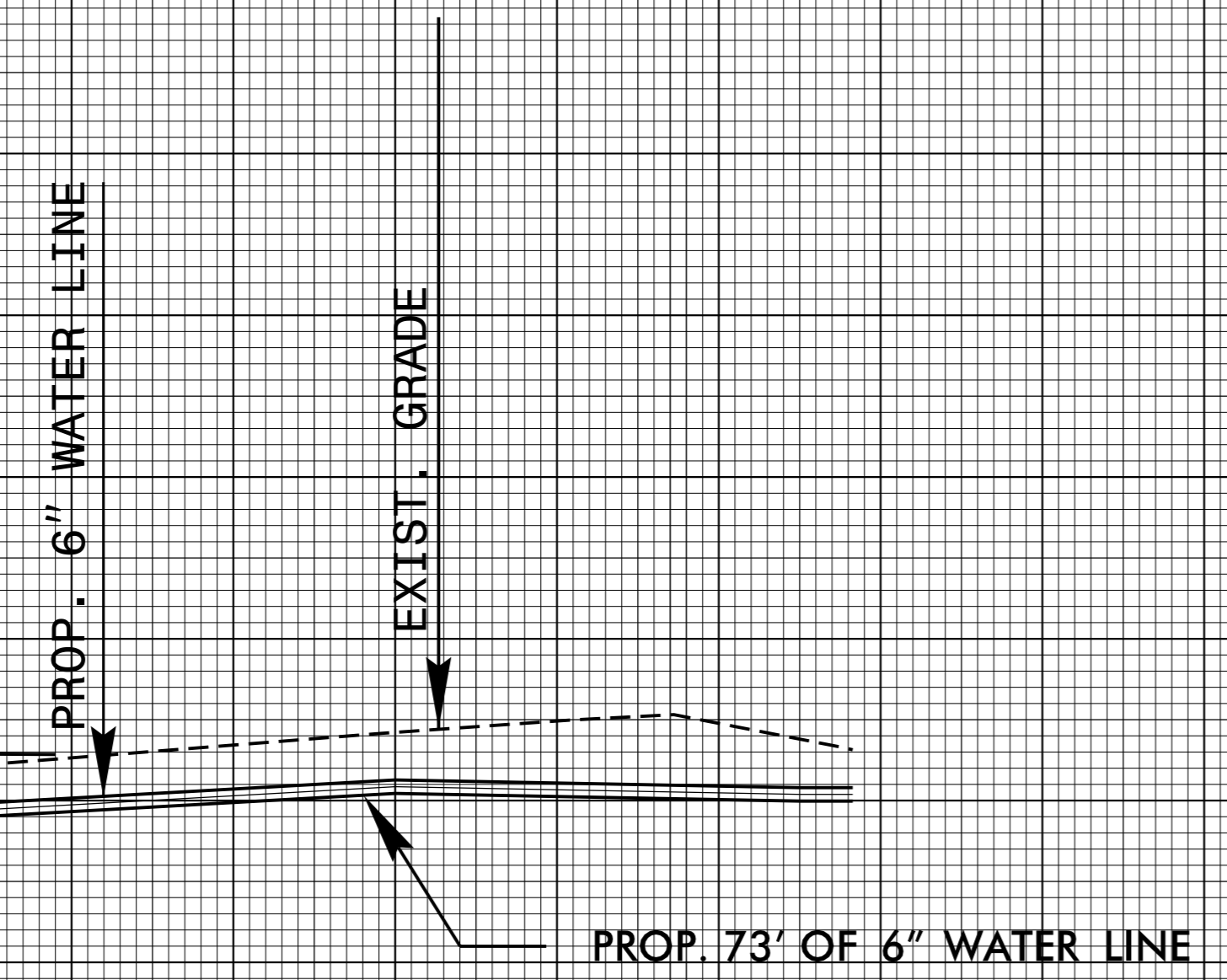
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PHONE: (919) 707-6690  
FAX: (919) 250-4151



UTILITY CONSTRUCTION

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2820



# 6" WATER LINE

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