| T.I.P. NO. | SHEET NO. |
|---|---|
| U-2809B | UC-1 |

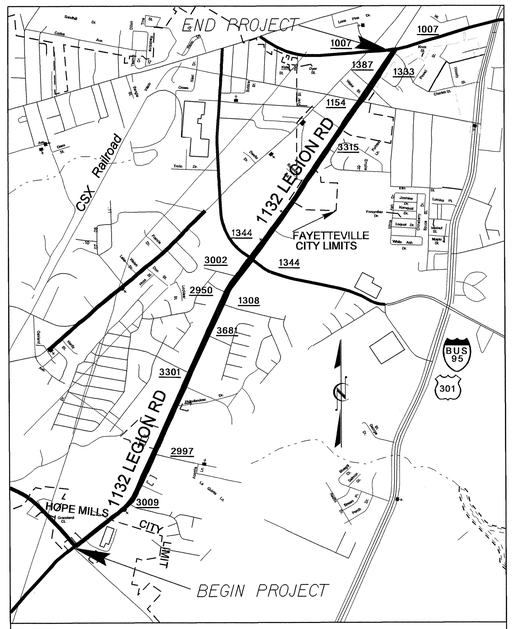
# TIP PROJECT: U-2809B

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

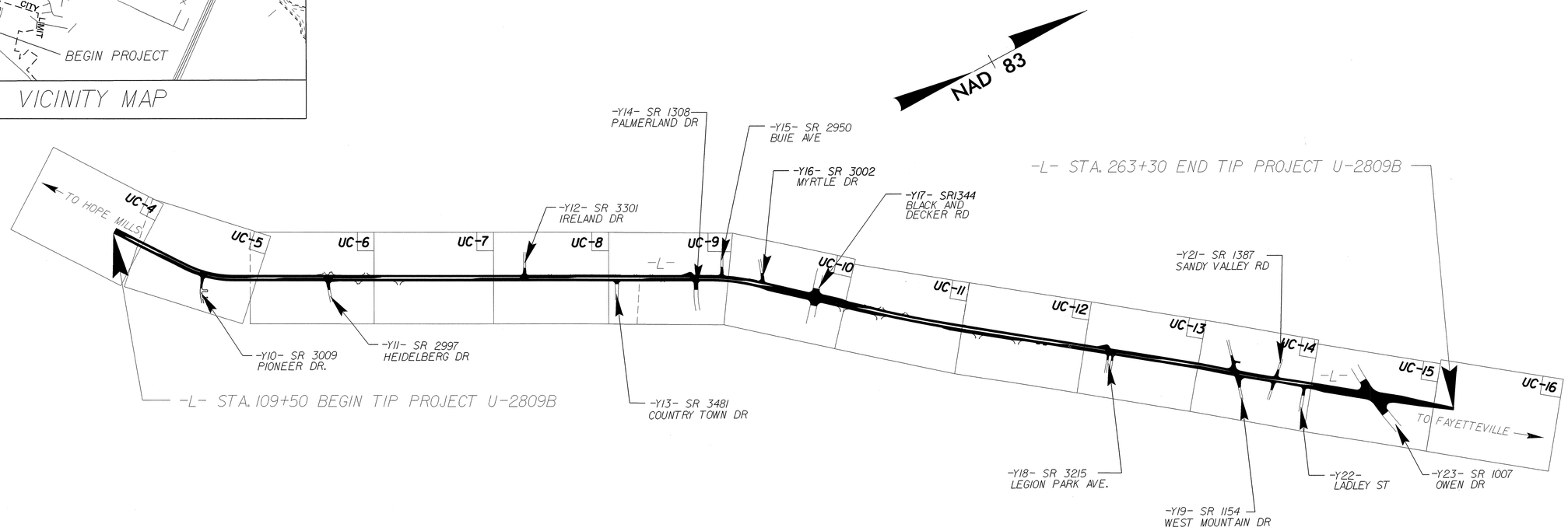
# UTILITY CONSTRUCTION PLANS
# CUMBERLAND COUNTY

**LOCATION: SR 1132 (LEGION RD) FROM SR 1363 (ELK RD) TO SR 1007 (OWEN DR)**

**TYPE OF WORK: UTILITY CONSTRUCTION**




VICINITY MAP




**GRAPHIC SCALES**

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

## INDEX OF SHEETS

| SHEET NO. | DESCRIPTION |
|---|---|
| UC-1 | TITLE SHEET |
| UC-2 | UTILITY SYMBOLOGY |
| UC-3 | NOTES |
| UC-3A | DETAILS |
| UC-4 THRU UC-16 | UTILITY CONSTRUCTION PLAN SHEETS |
| UC-17 THRU UC-23 | PROFILE SHEETS |

## WATER AND SEWER OWNERS ON PROJECT

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

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 10157 ENGINEER RONALD R. WILKINS

6/9/99


PREPARED IN THE OFFICE OF:
DIVISION OF HIGHWAYS
UTILITIES UNIT
UTILITIES ENGINEERING
1591 MAIL SERVICES CENTER
RALEIGH NC 27699-1591
PHONE (919) 707-6690
FAX (919) 250-4151

Roger Worthington, P.E. UTILITIES SECTION ENGINEER
R. B. WILKINS, P. E. UTILITIES SQUAD LEADER PROJECT ENGINEER
MICHAEL R. BRIGHT UTILITIES PROJECT DESIGNER



09/08/99
04-JUN-2012 08:02
R:\Utilities\Rdy_Ut\Proj\u-2809b_ut_title_ucl_psh.dgn
$$$$USERNAME$$$$

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | UC-2 |

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

# UTILITIES PLAN SHEET SYMBOLS

## PROPOSED WATER SYMBOLS

- Water Line (Sized as Shown) — 12" WL
- 11¼ Degree Bend
- 22½ Degree Bend
- 45 Degree Bend
- 90 Degree Bend
- Plug
- Tee
- Cross
- Reducer
- Gate Valve — GV
- Butterfly Valve — BV
- Tapping Valve — TGV
- Line Stop — LS
- Line Stop with Bypass — LS/BP
- Blow Off — BO
- Fire Hydrant — PFH
- Relocate Fire Hydrant — REH
- Remove Fire Hydrant — REM FH
- Water Meter — PWM
- Relocate Water Meter — RWM
- Remove Water Meter — REM WM
- Water Pump Station — PS(W)
- RPZ Backflow Preventer — PBPZ
- DCV Backflow Preventer — PBFP
- Relocate RPZ Backflow Preventer — RBPZ
- Relocate DCV Backflow Preventer — RBFP

## PROPOSED SEWER SYMBOLS

- Gravity Sewer Line (Sized as Shown) — 12" SS
- Force Main Sewer Line (Sized as Shown) — 12" FSS
- Manhole (Sized per Note)
- Sewer Pump Station — PS(SS)

## PROPOSED MISCELLANOUS UTILITIES SYMBOLS

- Power Pole
- Telephone Pole
- Joint Use Pole
- Telephone Pedestal — TEL PED
- Utility Line by Others (Type as Shown) — PROP O/H POW LINES
- Trenchless Installation — 12" TL INSTALL
- Encasement by Open Cut — 24" ENCAS BY OC
- Encasement — 24" ENCASEMENT
- Thrust Block
- Air Release Valve — AR
- Utility Vault — UV
- Concrete Pier — CP
- Steel Pier — SP
- Plan Note — NOTE
- Pay Item Note — PAY ITEM

## EXISTING UTILITIES SYMBOLS

- Power Pole
- Telephone Pole
- Joint Use Pole
- Utility Pole
- Utility Pole with Base
- H-Frame Pole
- Power Transmission Line Tower
- Water Manhole
- Power Manhole
- Telephone Manhole
- Sanitary Sewer Manhole
- Hand Hole for Cable
- Power Transformer
- Telephone Pedestal
- CATV Pedestal
- Gas Valve
- Gas Meter
- Located Miscellaneous Utility Object
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.
- *Underground Power Line — P
- *Underground Telephone Cable — T
- *Underground Telephone Conduit — TC
- *Underground Fiber Optics Telephone Cable — T FO
- *Underground TV Cable — TV
- *Underground Fiber Optics TV Cable — TV FO
- *Underground Gas Pipeline — G
- Aboveground Gas Pipeline — A/G Gas
- *Underground Water Line — W
- Aboveground Water Line — A/G Water
- *Underground Gravity Sanitary Sewer Line — SS
- Aboveground Gravity Sanitary Sewer Line — A/G Sanitary Sewer
- *Underground SS Forced Main Line — FSS
- Underground Unknown Utility Line — ?UTL
- SUE Test Hole
- Water Meter
- Water Valve
- Fire Hydrant
- Sanitary Sewer Cleanout

*For Existing Utilities

- Utility Line Drawn from Record (Type as Shown) — W
- Designated Utility Line (Type as Shown)

REV: 2/1/2012

5/14/99

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| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | UC-3 |
| DESIGNED BY: MRB | |
| DRAWN BY: MRB | |
| CHECKED BY: RBW | |
| APPROVED BY: RBW | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | |
| UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151 | UTILITY CONSTRUCTION PLANS ONLY |

NORTH CAROLINA PROFESSIONAL SEAL 10157 ENGINEER ROBERT B. WHITING

UTILITY CONSTRUCTION

# UTILITY CONSTRUCTION

## GENERAL NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2012.

2. THE EXISTING UTILITIES BELONG TO FAYETTEVILLE PWC.

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 ENVIRONMENTAL HEALTH. 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 QUALITY. 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 ADDITONAL 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. THE PROPOSED D.I.R.J. (DUCTILE IRON RESTRAINED JOINT) WATER LINE QUANTITIES WERE DERIVED FROM THE MINIMUM LENGTH OF RESTRAINT TABLE SHOWN IN THE PROJECT SPECIAL PROVISONS.
THIS TABLE WAS PROVIDED TO NCDOT BY FAYETTEVILLE PWC AND IS BASED UPON STANDARD DETAILS AND CALCULATIONS FROM THE AWWA MANUAL.

2. ALL WATER PIPE 6" DIAMETER AND LARGER SHALL BE DUCTILE IRON PIPE.

3. ALL FORCE MAIN SEWER PIPE SHALL BE DUCTILE IRON RESTRAINED JOINT PIPE.

## LIST OF STANDARD DRAWINGS

1515.01 WATER METER

1515.02 FIRE HYDRANT

1520.01 SEWER CLEAN OUT

1525.06 PRECAST CONCRETE SANITARY SEWER MANHOLE WITH CAST-IN-PLACE BOTTOM

5/14/99
04-JUN-2012 08:00
$$$$USERNAME$$$$ u-2809B_Ut_ugn_UC3_psh.dgn

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | UC-3A |

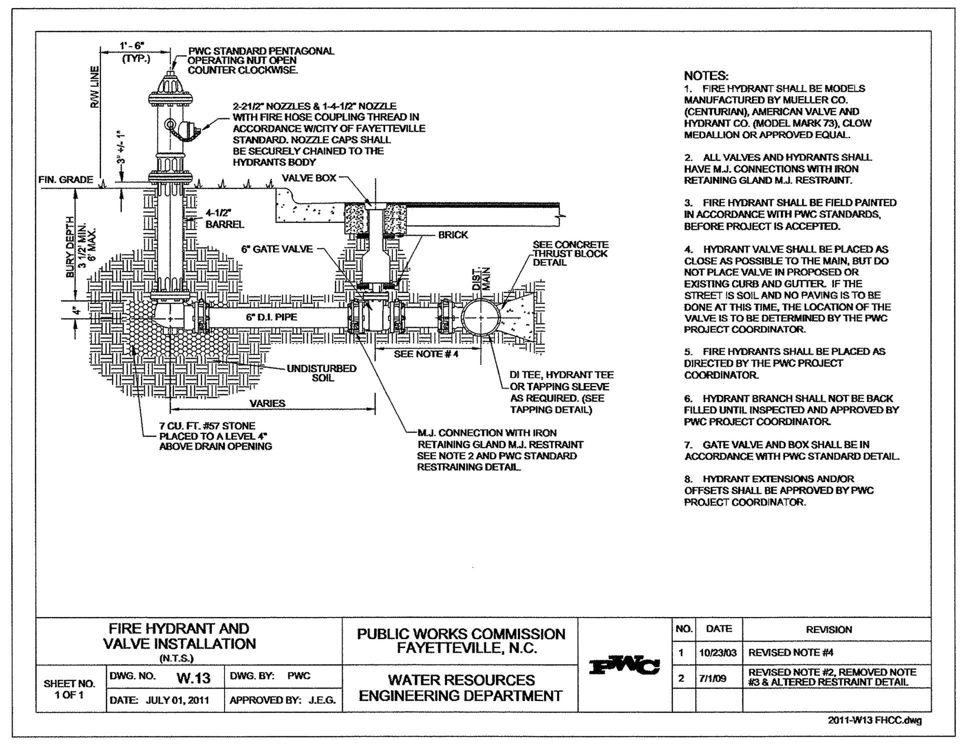
DESIGNED BY: MRB
DRAWN BY: MRB
CHECKED BY: RBW
APPROVED BY: RBW
REVISED:

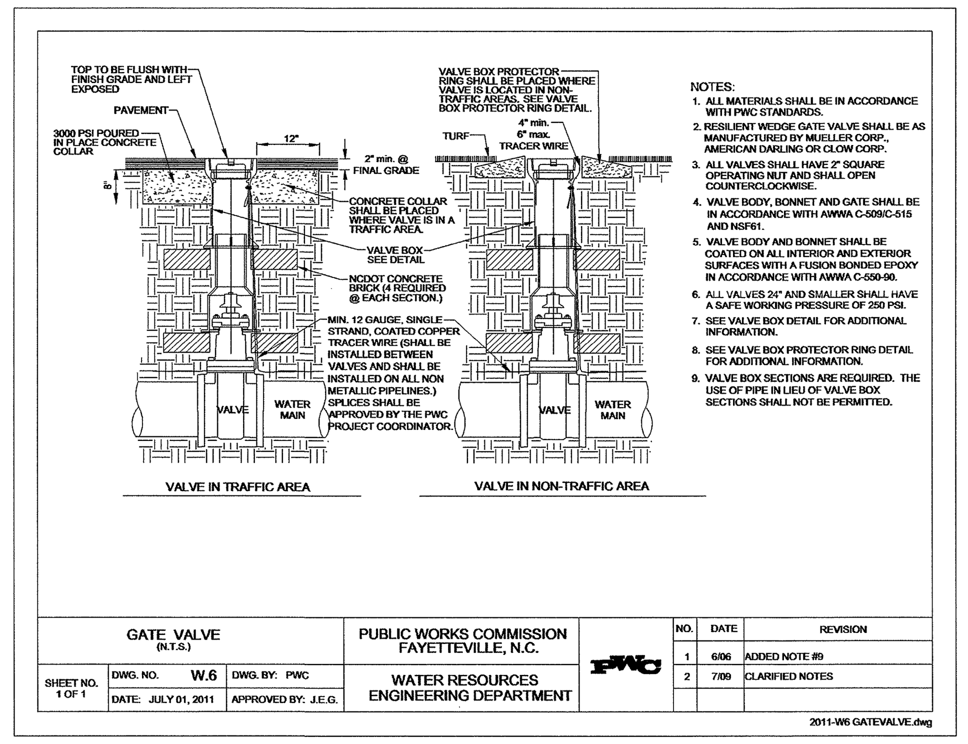
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
UTILITIES ENGINEERING SEC.
PHONE:(919)250-4128
FAX:(919)250-4119

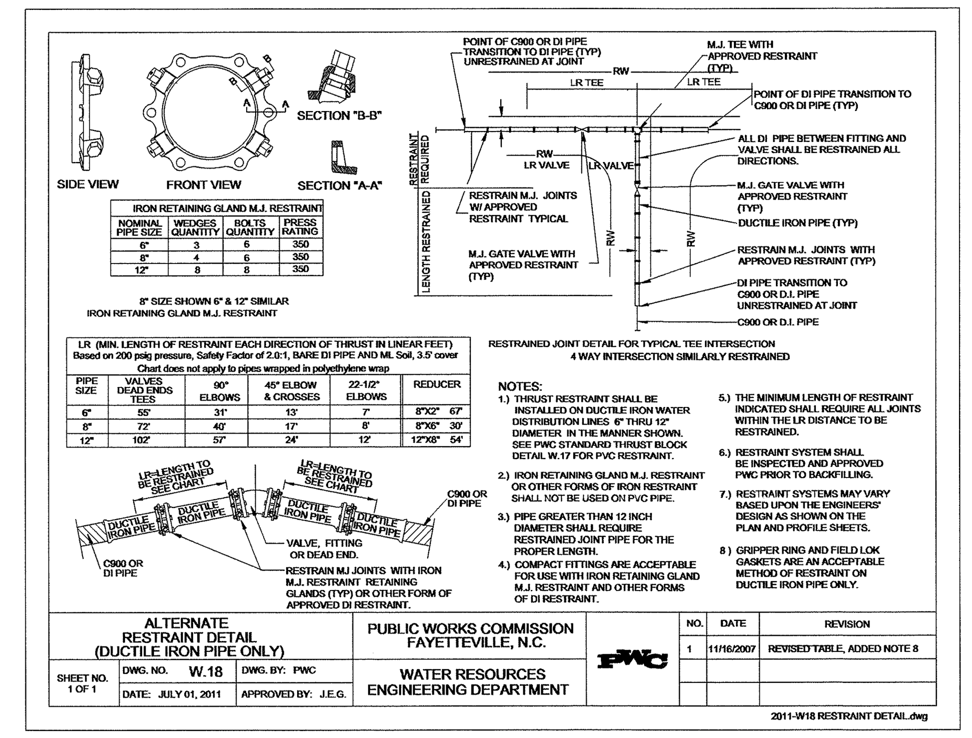
NORTH CAROLINA PROFESSIONAL SEAL 10157 ENGINEER

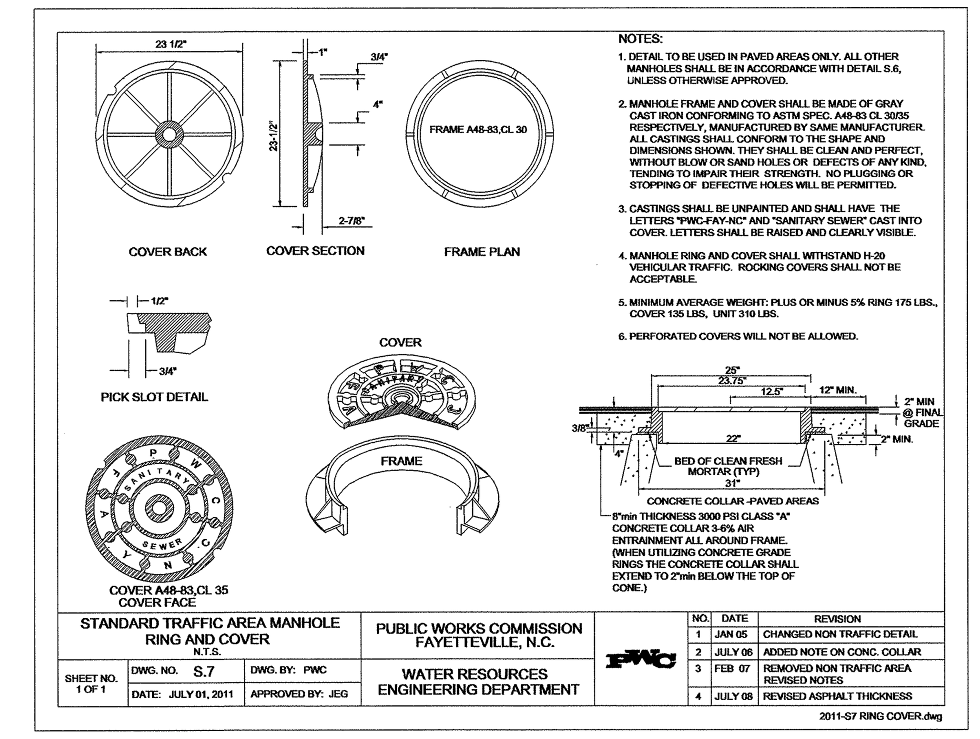
UTILITY CONSTRUCTION PLANS ONLY

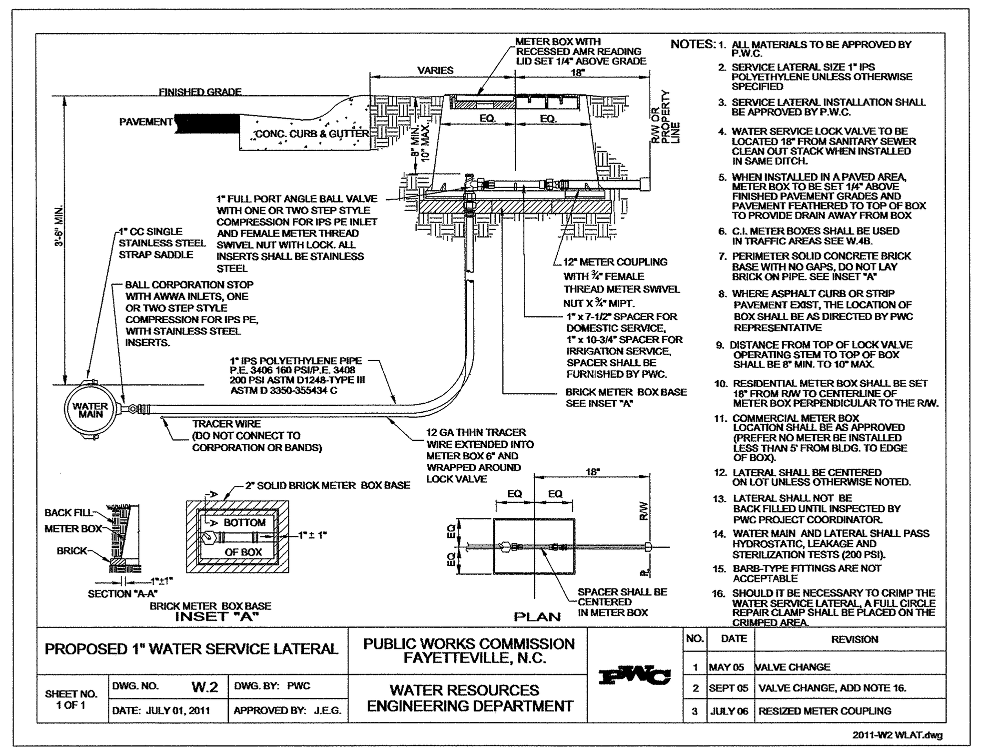
# UTILITY CONSTRUCTION

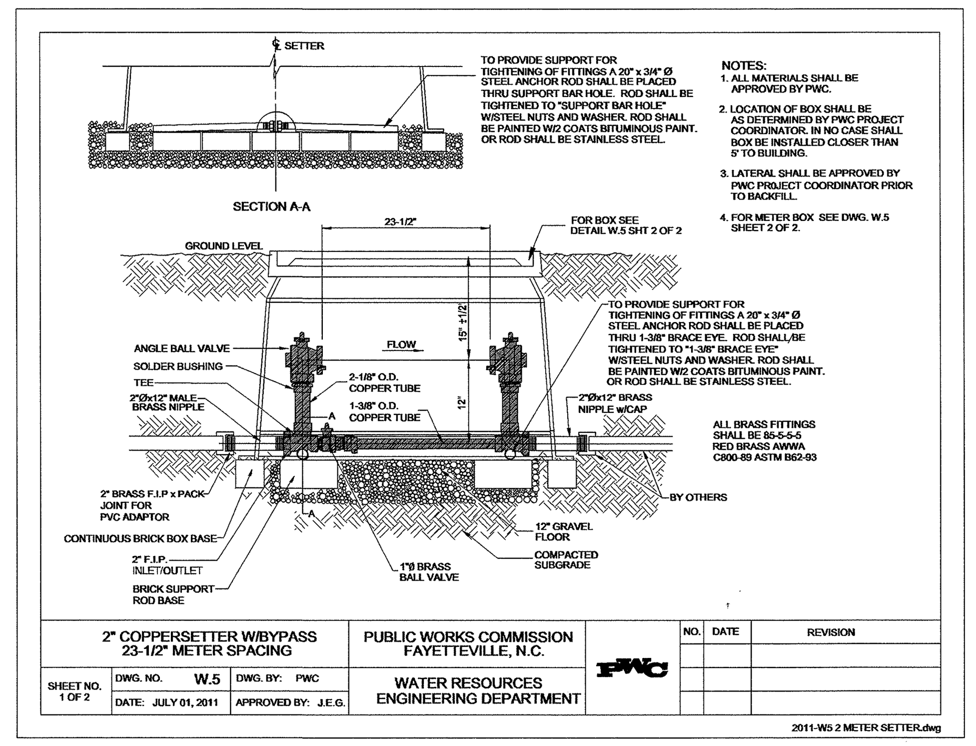


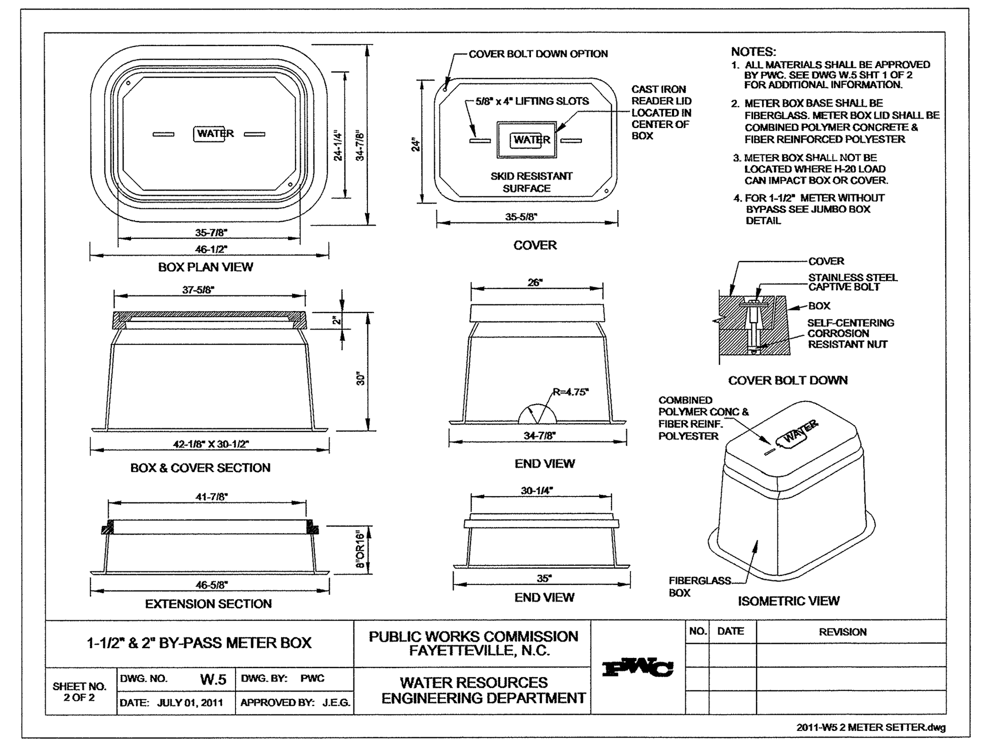



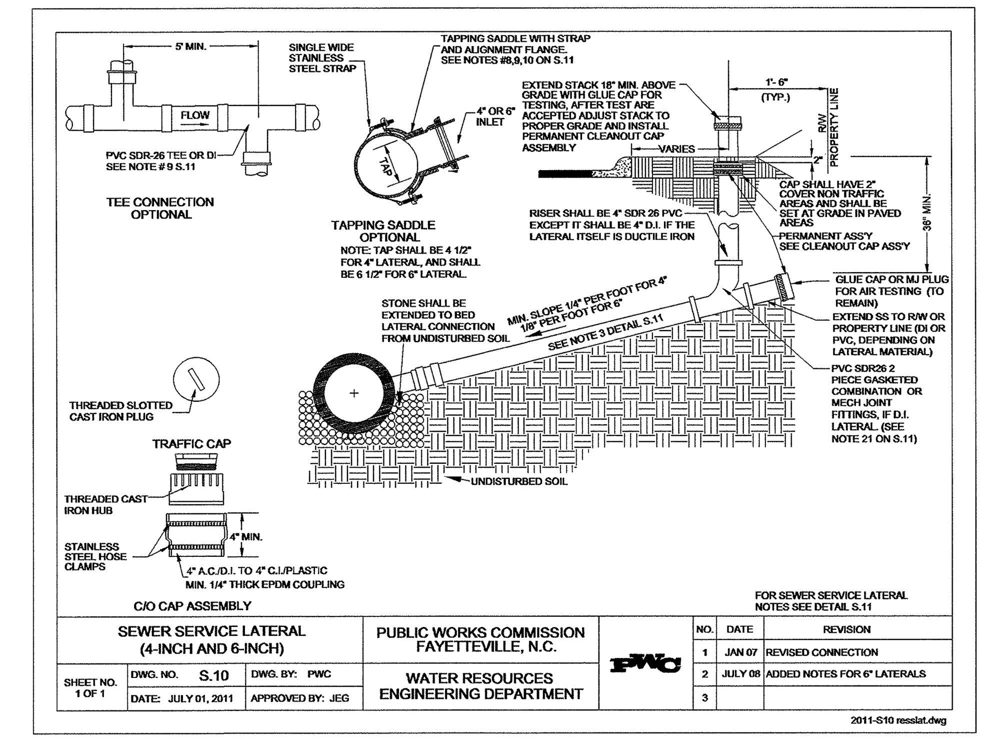



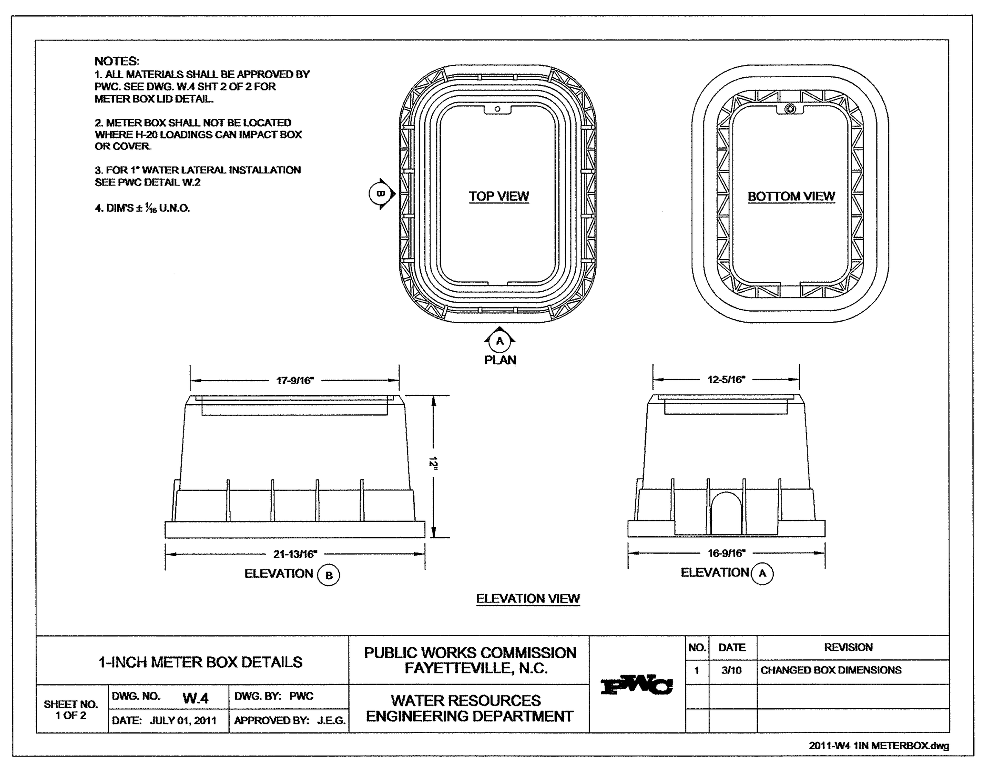



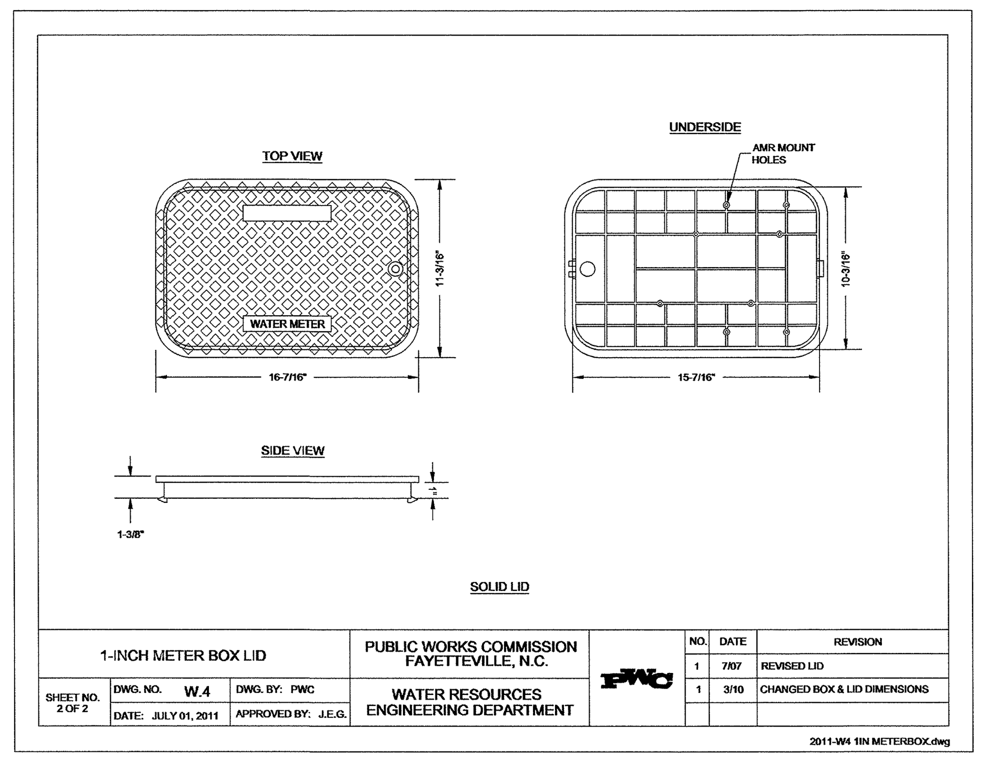



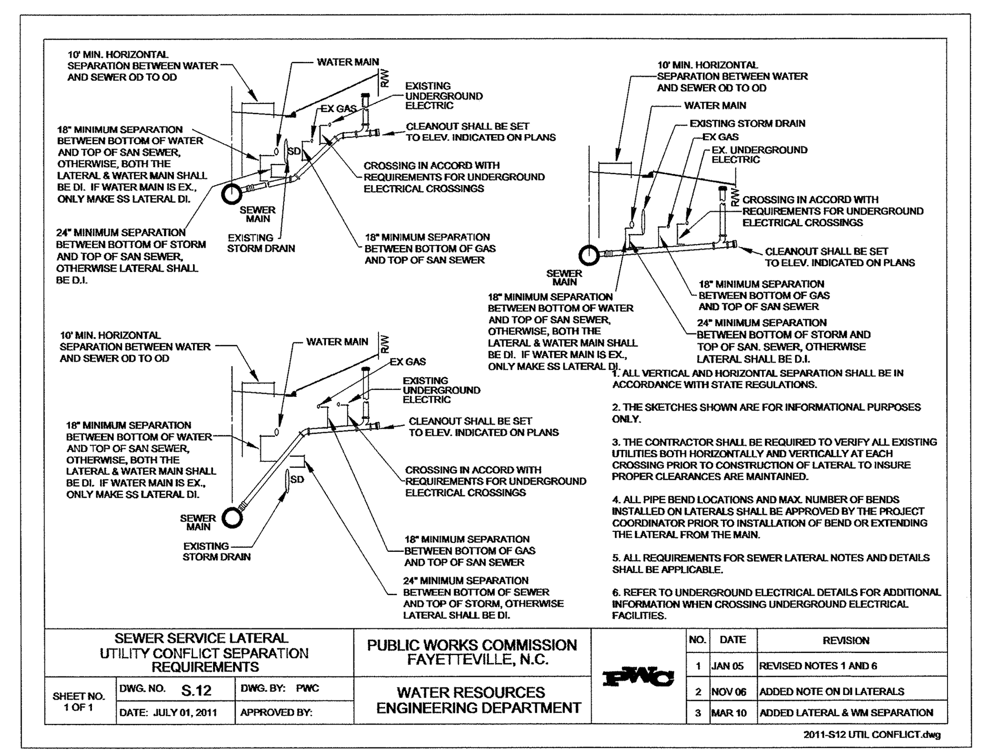



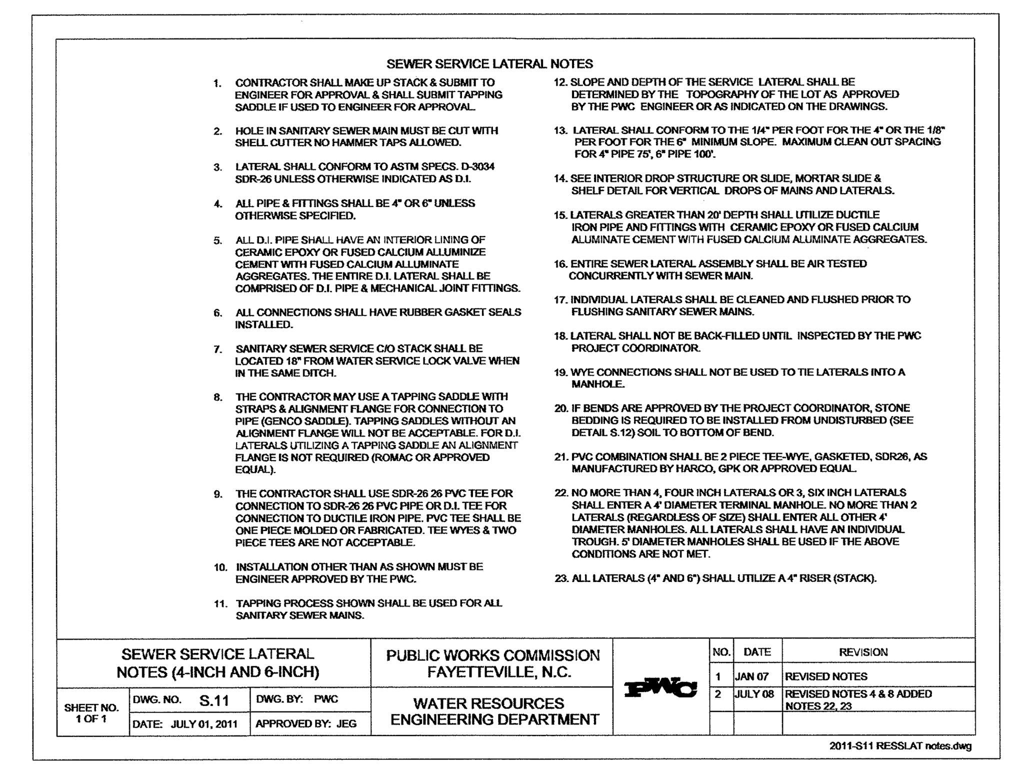



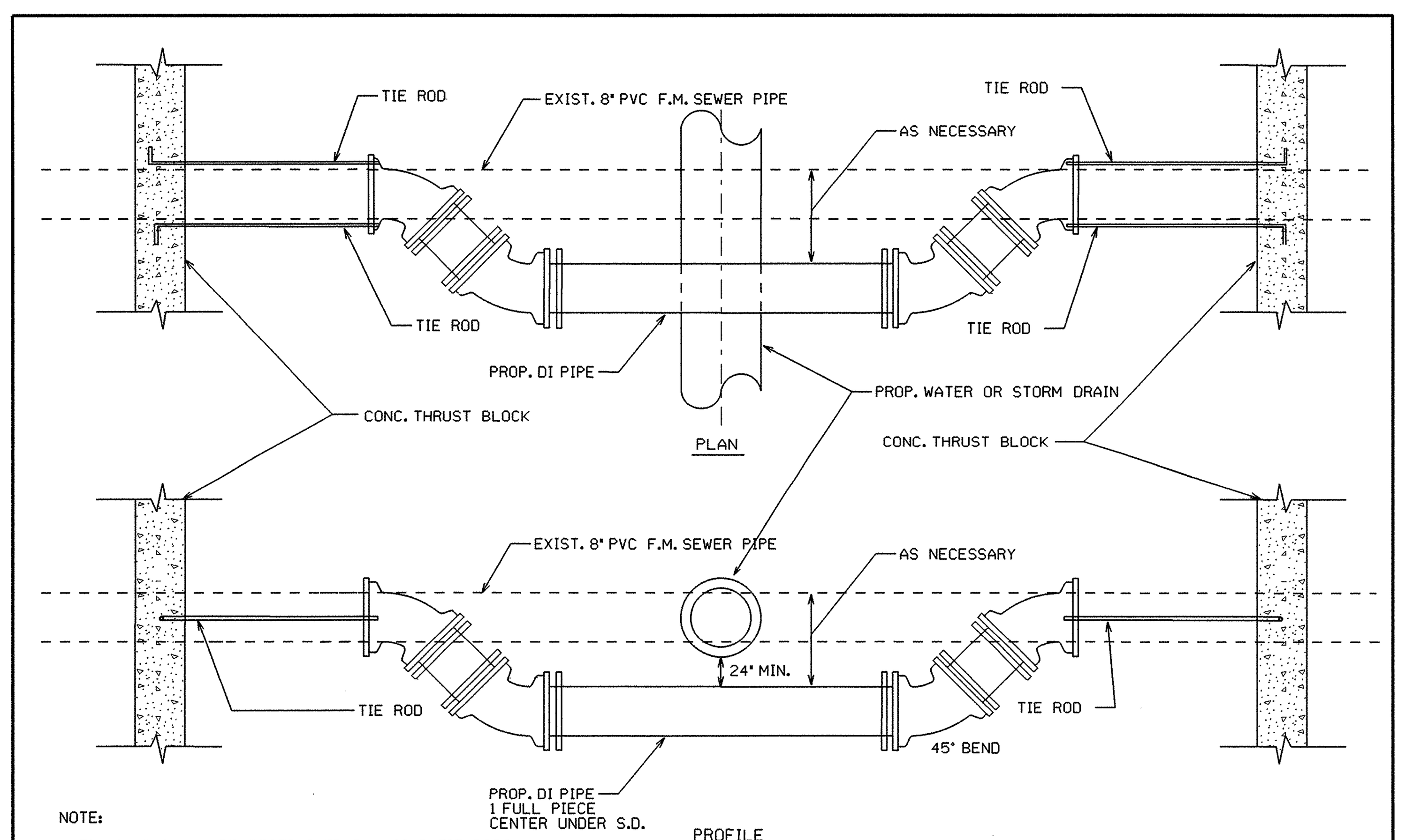



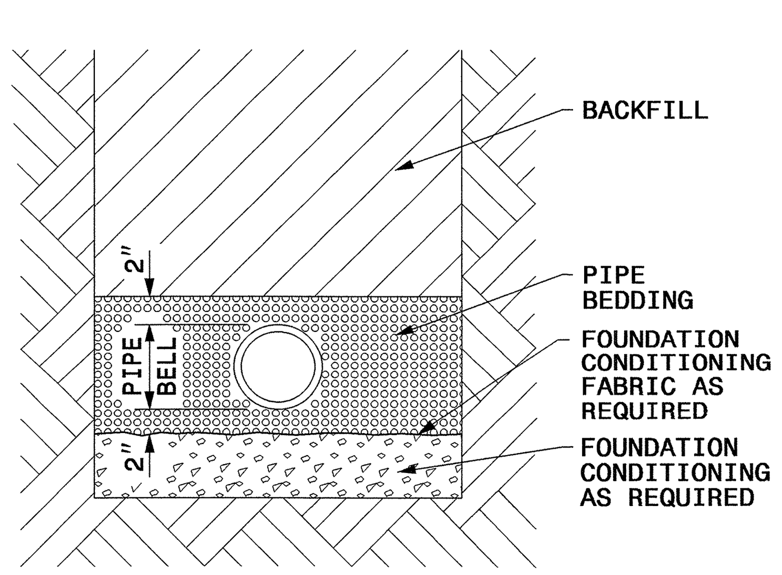

NOTE:

1. FITTINGS SHALL BE RESTRAINED BY USING TIE RODS OR OTHER METHOD AS APPROVED BY ENGINEER.

RELOCATION OF EXIST. 8" PVC SEWER PIPE AT PROP. WATER AND PROP. STORM DRAINAGE AS SHOWN ON PLANS

*NTS

## 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.

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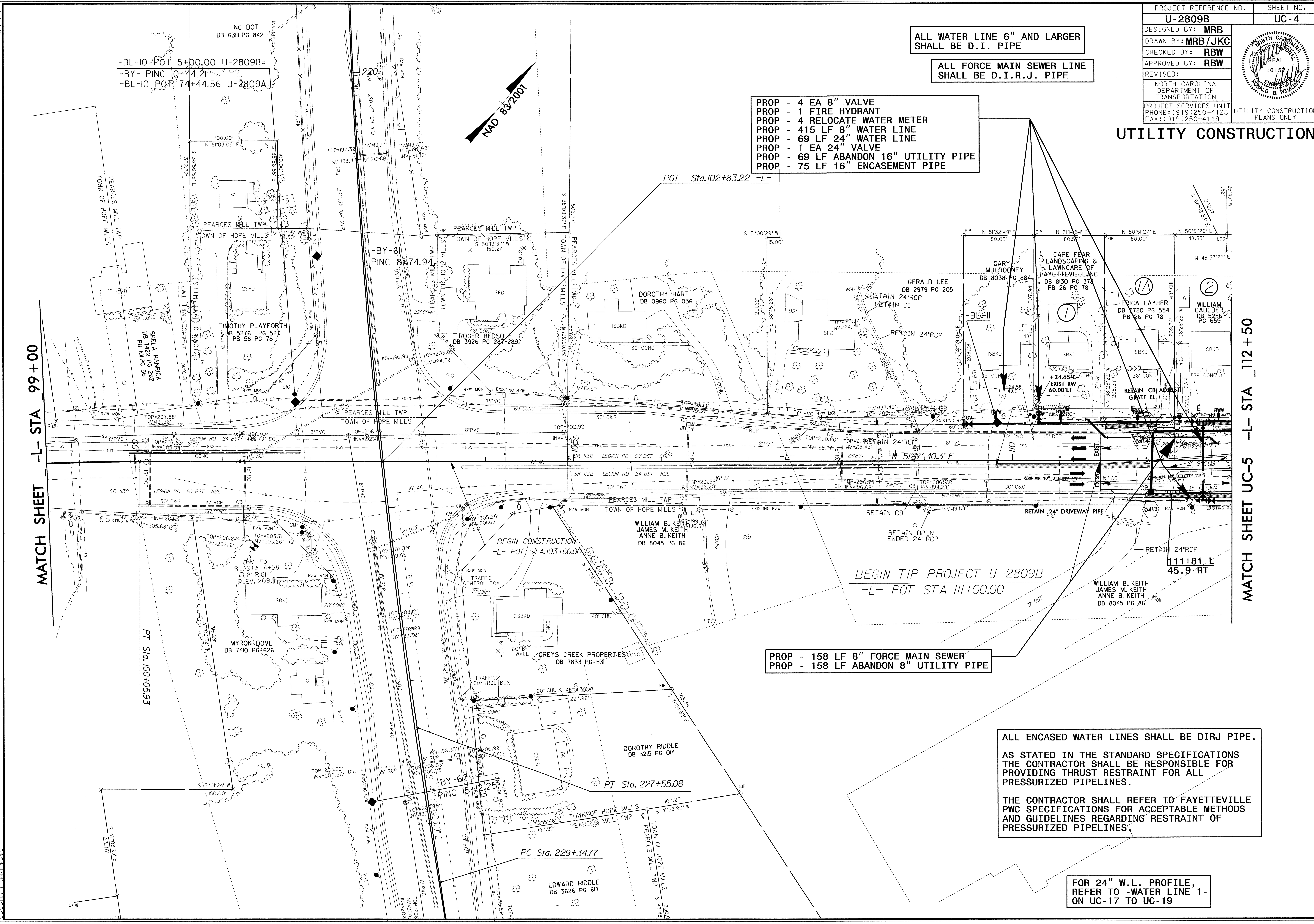


PROJECT REFERENCE NO. U-2809B
SHEET NO. UC-4
DESIGNED BY: MRB
DRAWN BY: MRB/JKC
CHECKED BY: RBW
APPROVED BY: RBW
REVISED:
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PROJECT SERVICES UNIT
PHONE:(919)250-4128
FAX:(919)250-4119
UTILITY CONSTRUCTION PLANS ONLY
UTILITY CONSTRUCTION
ALL WATER LINE 6" AND LARGER SHALL BE D.I. PIPE
ALL FORCE MAIN SEWER LINE SHALL BE D.I.R.J. PIPE
PROP - 4 EA 8" VALVE
PROP - 1 FIRE HYDRANT
PROP - 4 RELOCATE WATER METER
PROP - 415 LF 8" WATER LINE
PROP - 69 LF 24" WATER LINE
PROP - 1 EA 24" VALVE
PROP - 69 LF ABANDON 16" UTILITY PIPE
PROP - 75 LF 16" ENCASEMENT PIPE
PROP - 158 LF 8" FORCE MAIN SEWER
PROP - 158 LF ABANDON 8" UTILITY PIPE
ALL ENCASED WATER LINES SHALL BE DIRJ PIPE.
AS STATED IN THE STANDARD SPECIFICATIONS THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THRUST RESTRAINT FOR ALL PRESSURIZED PIPELINES.
THE CONTRACTOR SHALL REFER TO FAYETTEVILLE PWC SPECIFICATIONS FOR ACCEPTABLE METHODS AND GUIDELINES REGARDING RESTRAINT OF PRESSURIZED PIPELINES.
FOR 24" W.L. PROFILE, REFER TO -WATER LINE 1- ON UC-17 TO UC-19
MATCH SHEET -L- STA 99+00
MATCH SHEET UC-5 -L- STA 112+50
-BL-10 POT 5+00.00 U-2809B=
-BY- PINC 10+44.21
-BL-10 POT 74+44.56 U-2809A
NAD 83/2001
POT Sta.102+83.22 -L-
-BY-61 PINC 8+74.94
-BY-62 PINC 5+12.25
BEGIN CONSTRUCTION -L- POT STA.103+60.00
BEGIN TIP PROJECT U-2809B -L- POT STA 111+00.00
PT Sta. 100+05.93
PT Sta. 227+55.08
PC Sta. 229+34.77
111+81 L 45.9 RT
NC DOT DB 6311 PG 842
TIMOTHY PLAYFORTH DB 5276 PG 527 PB 58 PG 78
SHELA HANRICK DB 7422 PG 262 PB 101 PG 56
ROGER BEDSOLE DB 3926 PG 287-289
DOROTHY HART DB 0960 PG 036
GERALD LEE DB 2979 PG 205
GARY MULROONEY DB 8038 PG 884
CAPE FEAR LANDSCAPING & LAWNCARE OF FAYETTEVILLE,INC DB 8130 PG 378 PB 26 PG 78
ERICA LAYHER DB 5720 PG 554 PB 26 PG 78
WILLIAM CAULDER DB 5256 PG 659
WILLIAM B. KEITH JAMES M. KEITH ANNE B. KEITH DB 8045 PG 86
MYRON DOVE DB 7410 PG 626
GREYS CREEK PROPERTIES DB 7833 PG 531
DOROTHY RIDDLE DB 3215 PG 014
EDWARD RIDDLE DB 3626 PG 617
PEARCES MILL TWP
TOWN OF HOPE MILLS
SR 1132 LEGION RD

| PROJECT REFERENCE NO. | SHEET NO. |
| --- | --- |
| U-2809B | UC-5 |

DESIGNED BY: MRB
DRAWN BY: MRB/JKC
CHECKED BY: RBW
APPROVED BY: RBW
REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
UTILITIES ENGINEERING SEC.
PHONE:(919)250-4128
FAX:(919)250-4119

UTILITY CONSTRUCTION PLANS ONLY

# UTILITY CONSTRUCTION

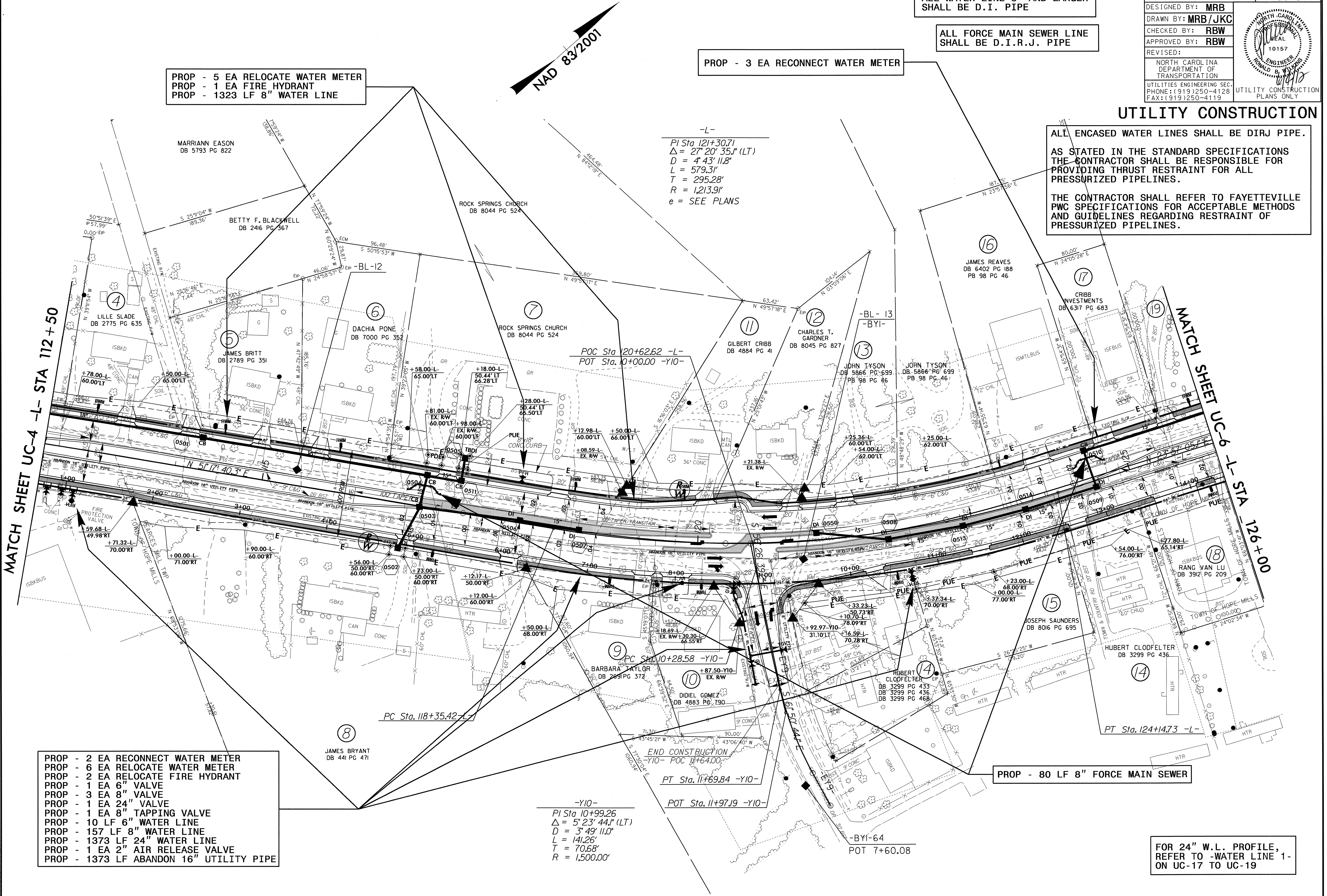
ALL WATER LINE 6" AND LARGER SHALL BE D.I. PIPE

ALL FORCE MAIN SEWER LINE SHALL BE D.I.R.J. PIPE

ALL ENCASED WATER LINES SHALL BE DIRJ PIPE.

AS STATED IN THE STANDARD SPECIFICATIONS THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THRUST RESTRAINT FOR ALL PRESSURIZED PIPELINES.

THE CONTRACTOR SHALL REFER TO FAYETTEVILLE PWC SPECIFICATIONS FOR ACCEPTABLE METHODS AND GUIDELINES REGARDING RESTRAINT OF PRESSURIZED PIPELINES.

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| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | UC-6 |
| DESIGNED BY: MRB | |
| DRAWN BY: MRB/JKC | |
| CHECKED BY: RBW | |
| APPROVED BY: RBW | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | |
| PROJECT SERVICES UNIT PHONE:(919)250-4128 FAX:(919)250-4119 | UTILITY CONSTRUCTION PLANS ONLY |

NORTH CAROLINA PROFESSIONAL SEAL 10157 ENGINEER R. BRYAN WHITE 04/04/12

# UTILITY CONSTRUCTION

ALL ENCASED WATER LINES SHALL BE DIRJ PIPE.

AS STATED IN THE STANDARD SPECIFICATIONS THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THRUST RESTRAINT FOR ALL PRESSURIZED PIPELINES.

THE CONTRACTOR SHALL REFER TO FAYETTEVILLE PWC SPECIFICATIONS FOR ACCEPTABLE METHODS AND GUIDELINES REGARDING RESTRAINT OF PRESSURIZED PIPELINES.

ALL WATER LINE 6" AND LARGER SHALL BE D.I. PIPE

ALL FORCE MAIN SEWER LINE SHALL BE D.I.R.J. PIPE

STANDARD BASE TAIL DITCH (Not to Scale)

Natural Ground, 3:1, D, d, B, 3:1, Natural Ground

Min. D= 1.0 Ft.
Max. d= 1.0 Ft.
B= 3.0 Ft.

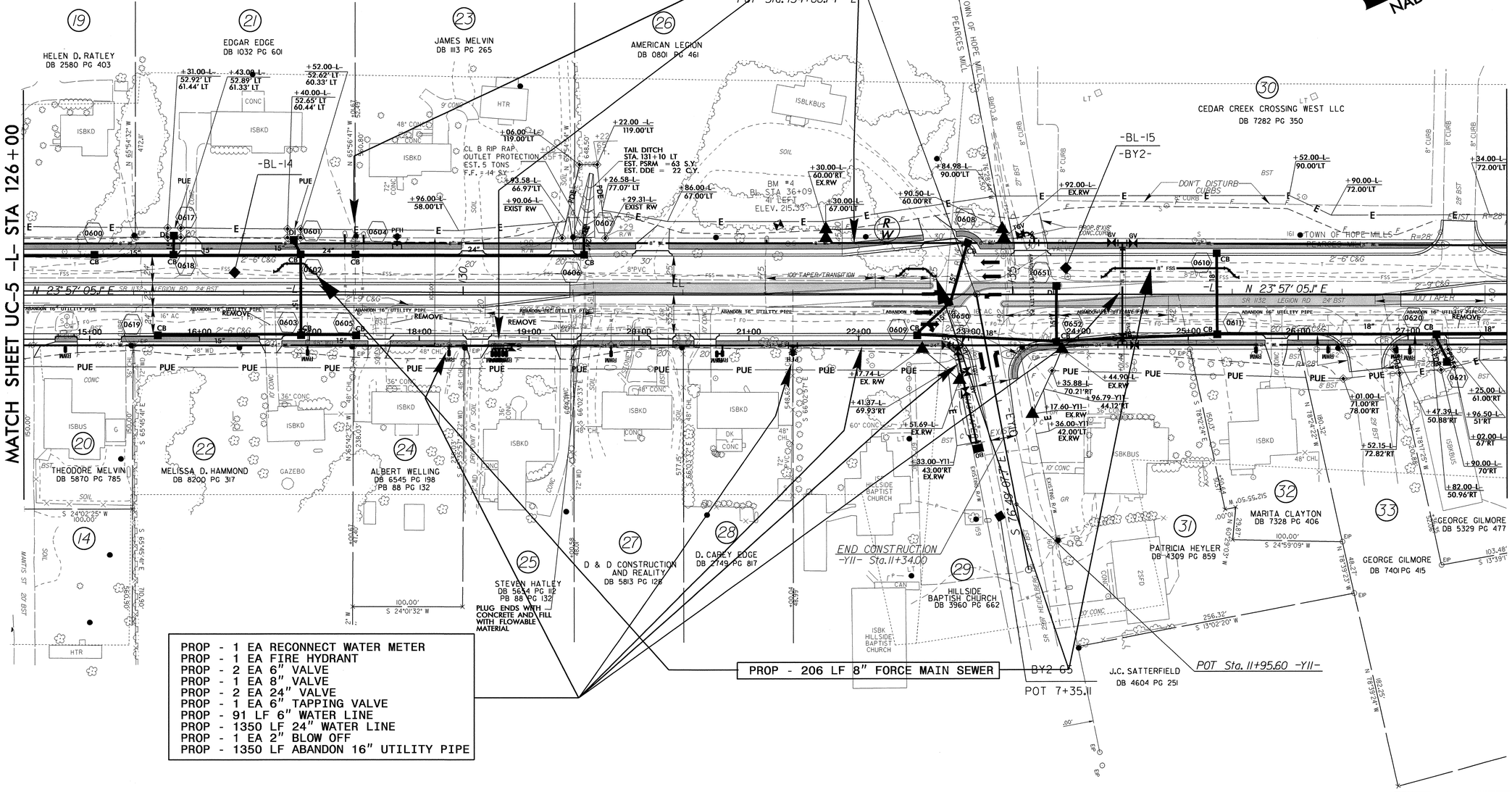
*When B is < 6.0'

Type of Liner= PSRM

STA. 131+10 LT.

PROP - 3 EA RECONNECT WATER METER
PROP - 11 EA RELOCATE WATER METER
PROP - 1 EA FIRE HYDRANT
PROP - 1 EA 2" VALVE
PROP - 2 EA 8" VALVE
PROP - 1 EA 8" TAPPING VALVE
PROP - 20 LF 2" WATER LINE
PROP - 1483 LF 8" WATER LINE
PROP - 80 LF 16" ENCASEMENT PIPE

NAD 83/2001




PROP - 1 EA RECONNECT WATER METER
PROP - 1 EA FIRE HYDRANT
PROP - 2 EA 6" VALVE
PROP - 1 EA 8" VALVE
PROP - 2 EA 24" VALVE
PROP - 1 EA 6" TAPPING VALVE
PROP - 91 LF 6" WATER LINE
PROP - 1350 LF 24" WATER LINE
PROP - 1 EA 2" BLOW OFF
PROP - 1350 LF ABANDON 16" UTILITY PIPE

FOR 24" W.L. PROFILE, REFER TO -WATER LINE 1- ON UC-17 TO UC-19

5/14/99

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| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | UC-7 |

DESIGNED BY: MRB
DRAWN BY: MRB/JKC
CHECKED BY: RBW
APPROVED BY: RBW
REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PROJECT SERVICES UNIT
PHONE:(919)250-4128
FAX:(919)250-4119

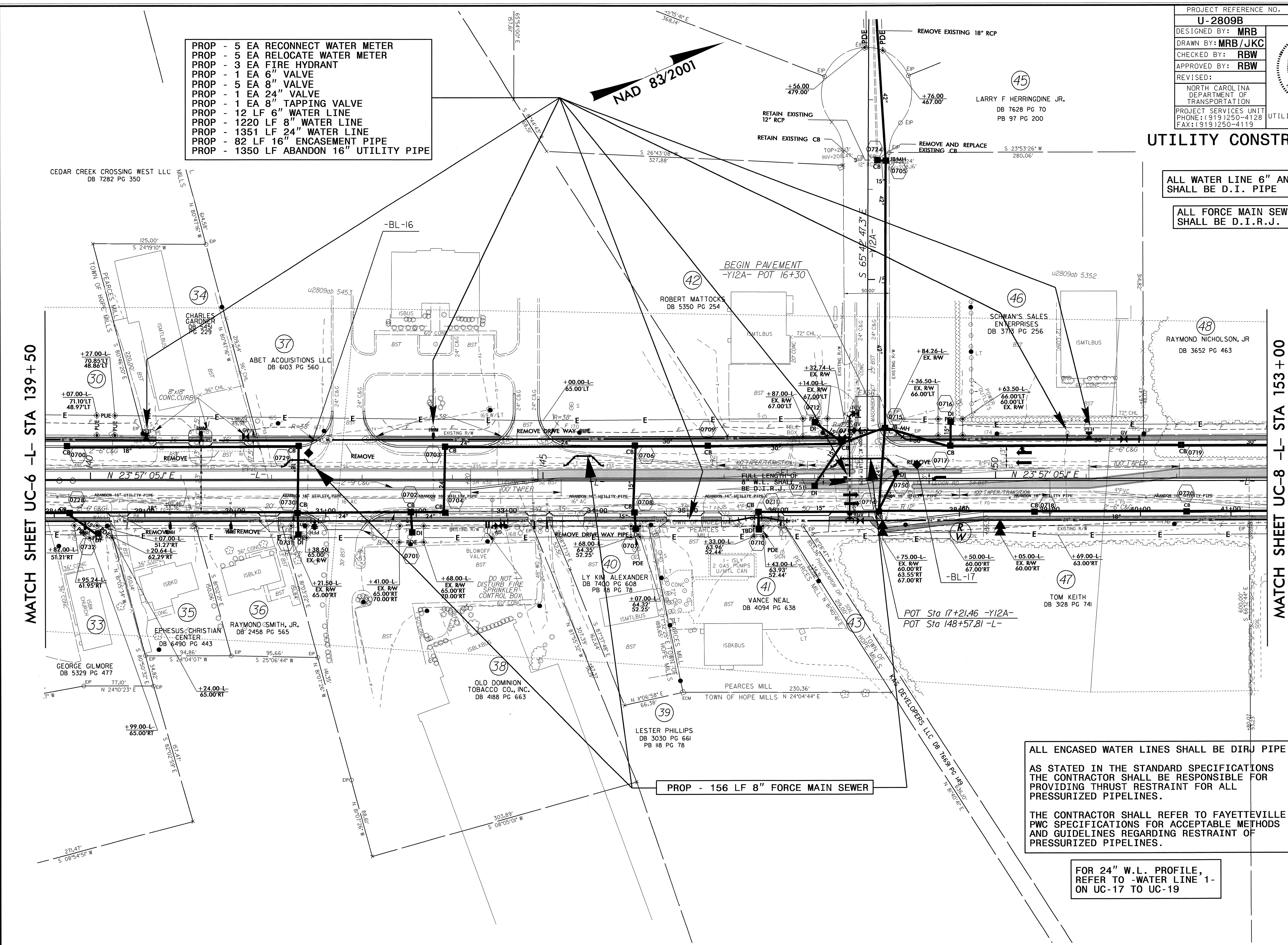
UTILITY CONSTRUCTION PLANS ONLY

# UTILITY CONSTRUCTION

PROP - 5 EA RECONNECT WATER METER
PROP - 5 EA RELOCATE WATER METER
PROP - 3 EA FIRE HYDRANT
PROP - 1 EA 6" VALVE
PROP - 5 EA 8" VALVE
PROP - 1 EA 24" VALVE
PROP - 1 EA 8" TAPPING VALVE
PROP - 12 LF 6" WATER LINE
PROP - 1220 LF 8" WATER LINE
PROP - 1351 LF 24" WATER LINE
PROP - 82 LF 16" ENCASEMENT PIPE
PROP - 1350 LF ABANDON 16" UTILITY PIPE

ALL WATER LINE 6" AND LARGER SHALL BE D.I. PIPE

ALL FORCE MAIN SEWER LINE SHALL BE D.I.R.J. PIPE




PROP - 156 LF 8" FORCE MAIN SEWER

ALL ENCASED WATER LINES SHALL BE DIRJ PIPE.

AS STATED IN THE STANDARD SPECIFICATIONS THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THRUST RESTRAINT FOR ALL PRESSURIZED PIPELINES.

THE CONTRACTOR SHALL REFER TO FAYETTEVILLE PWC SPECIFICATIONS FOR ACCEPTABLE METHODS AND GUIDELINES REGARDING RESTRAINT OF PRESSURIZED PIPELINES.

FOR 24" W.L. PROFILE, REFER TO -WATER LINE 1- ON UC-17 TO UC-19

5/14/99

04-JUN-2012 07:57
R:\Utilities\Rdwy\Utility\u-2809b_ut_7_uc7_psh.dgn

ALL ENCASED WATER LINES SHALL BE DIRJ PIPE.

AS STATED IN THE STANDARD SPECIFICATIONS THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THRUST RESTRAINT FOR ALL PRESSURIZED PIPELINES.

THE CONTRACTOR SHALL REFER TO FAYETTEVILLE PWC SPECIFICATIONS FOR ACCEPTABLE METHODS AND GUIDELINES REGARDING RESTRAINT OF PRESSURIZED PIPELINES.

NAD 83/2001

ALL WATER LINE 6" AND LARGER SHALL BE D.I. PIPE

ALL FORCE MAIN SEWER LINE SHALL BE D.I.R.J. PIPE

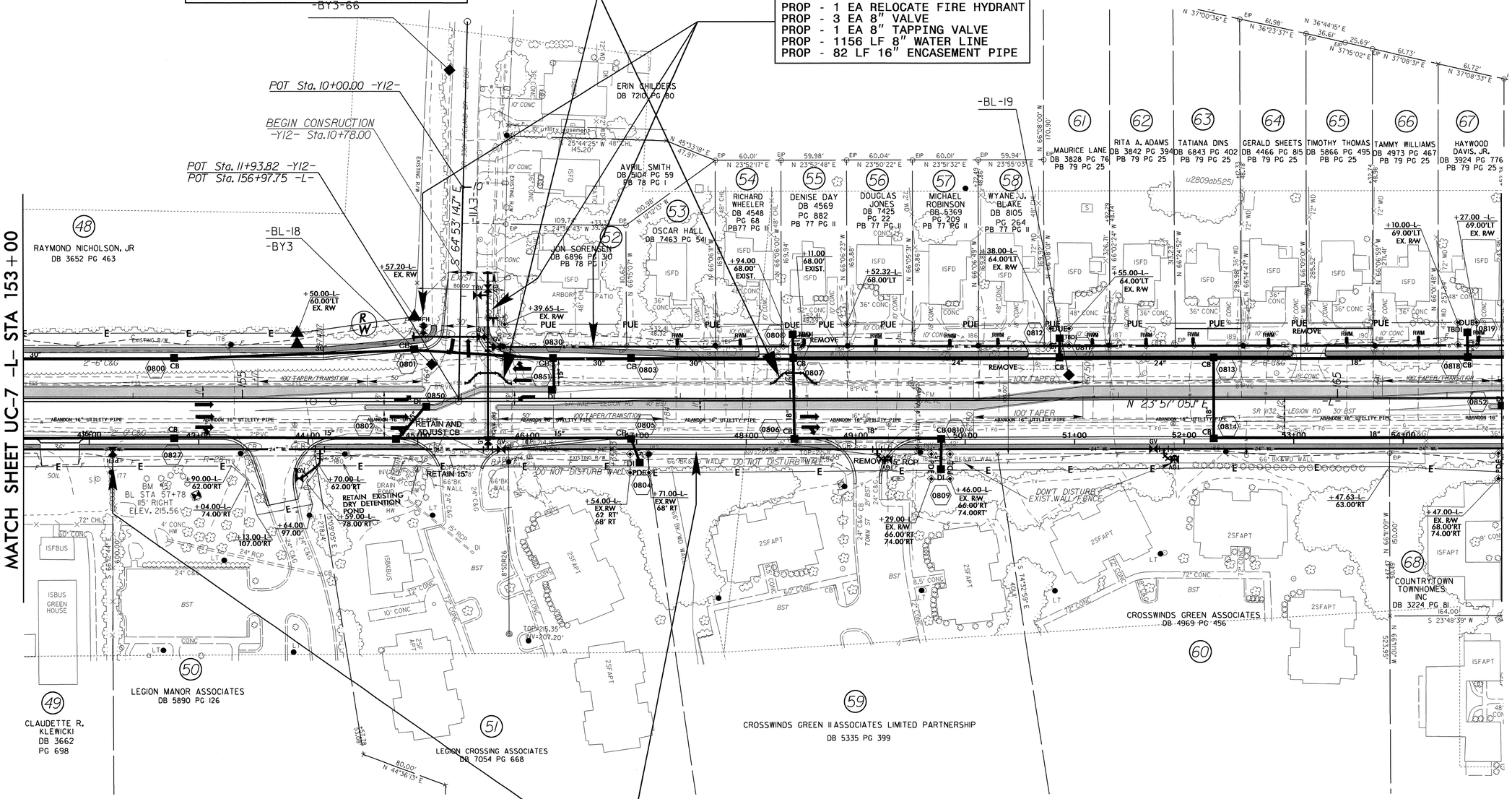
| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | UC-8 |
| DESIGNED BY: MRB | |
| DRAWN BY: MRB/JKC | |
| CHECKED BY: RBW | |
| APPROVED BY: RBW | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | |
| PROJECT SERVICES UNIT PHONE:(919)250-4128 FAX:(919)250-4119 | UTILITY CONSTRUCTION PLANS ONLY |

NORTH CAROLINA PROFESSIONAL SEAL 10157 ENGINEER RONALD B. WILLIAMS

# UTILITY CONSTRUCTION

PROP - 80 LF 8" FORCE MAIN SEWER
-BY3-66

PROP - 13 EA RELOCATE WATER METER
PROP - 1 EA FIRE HYDRANT
PROP - 1 EA RELOCATE FIRE HYDRANT
PROP - 3 EA 8" VALVE
PROP - 1 EA 8" TAPPING VALVE
PROP - 1156 LF 8" WATER LINE
PROP - 82 LF 16" ENCASEMENT PIPE




PROP - 1 EA RECONNECT WATER METER
PROP - 1 EA FIRE HYDRANT
PROP - 1 EA 8" VALVE
PROP - 2 EA 24" VALVE
PROP - 3 EA 8" TAPPING VALVE
PROP - 74 LF 8" WATER LINE
PROP - 1350 LF 24" WATER LINE
PROP - 1350 LF ABANDON 16" UTILITY PIPE

FOR 24" W.L. PROFILE, REFER TO -WATER LINE 1- ON UC-17 TO UC-19

5/14/99

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04-JUN-2012 07:57
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| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | UC-9 |
| DESIGNED BY: MRB | |
| DRAWN BY: MRB/JKC | |
| CHECKED BY: RBW | |
| APPROVED BY: RBW | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | |
| UTILITIES ENGINEERING SEC. PHONE:(919)250-4128 FAX:(919)250-4119 | UTILITY CONSTRUCTION PLANS ONLY |

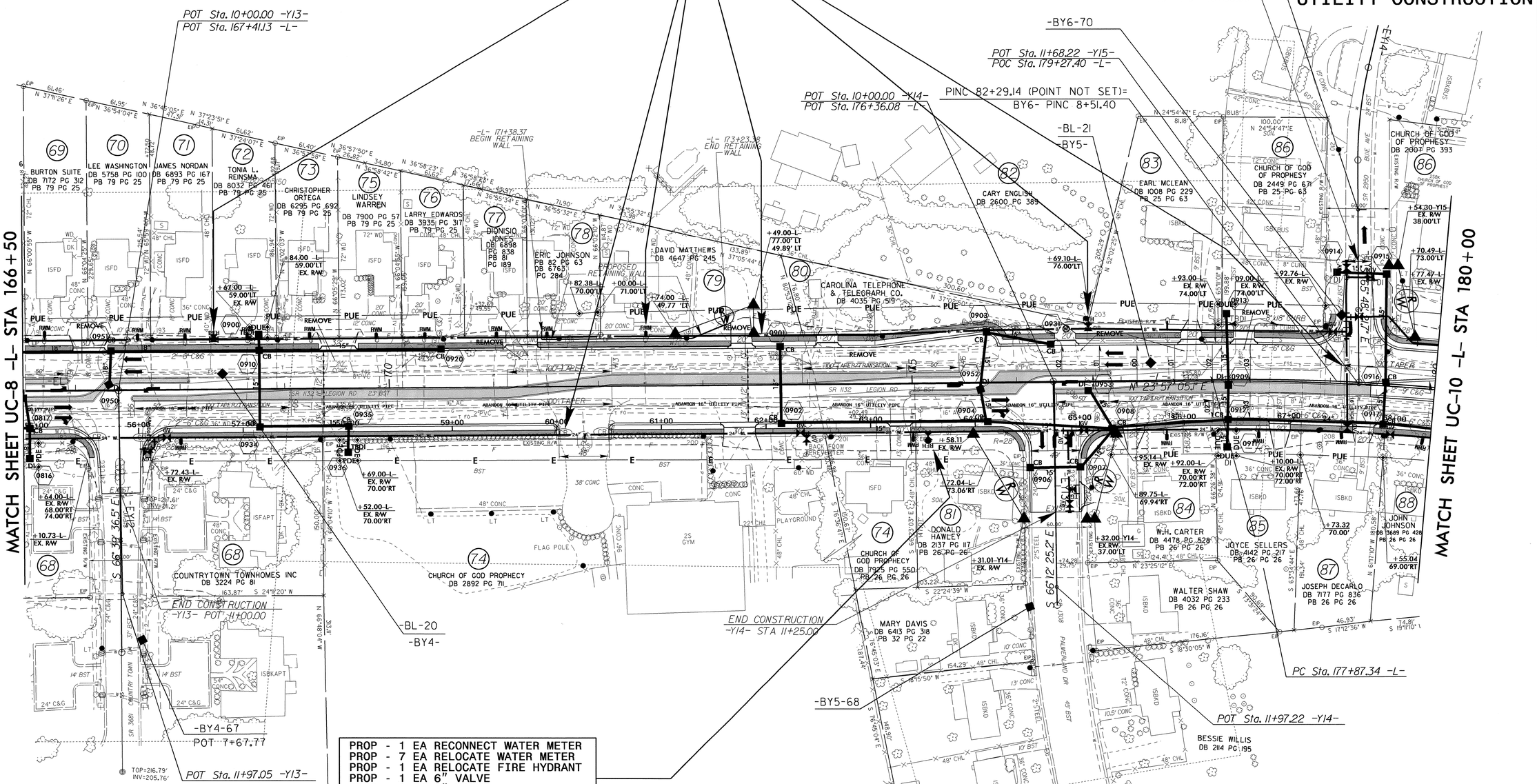
NORTH CAROLINA PROFESSIONAL SEAL 10157 ENGINEER RONALD B. WALKER 6/24/17

# UTILITY CONSTRUCTION

PROP - 1 EA RECONNECT WATER METER
PROP - 10 EA RELOCATE WATER METER
PROP - 2 EA FIRE HYDRANT
PROP - 4 EA 8" VALVE
PROP - 1 EA 8" TAPPING VALVE
PROP - 1649 LF 8" WATER LINE
PROP - 1351 LF 24" WATER LINE
PROP - 82 LF 16" ENCASEMENT PIPE
PROP - 1350 LF ABANDON 16" UTILITY PIPE

ALL WATER LINE 6" AND LARGER SHALL BE D.I. PIPE

NAD 83/2001




ALL ENCASED WATER LINES SHALL BE DIRJ PIPE.

AS STATED IN THE STANDARD SPECIFICATIONS THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THRUST RESTRAINT FOR ALL PRESSURIZED PIPELINES.

THE CONTRACTOR SHALL REFER TO FAYETTEVILLE PWC SPECIFICATIONS FOR ACCEPTABLE METHODS AND GUIDELINES REGARDING RESTRAINT OF PRESSURIZED PIPELINES.

PROP - 1 EA RECONNECT WATER METER
PROP - 7 EA RELOCATE WATER METER
PROP - 1 EA RELOCATE FIRE HYDRANT
PROP - 1 EA 6" VALVE
PROP - 3 EA 8" VALVE
PROP - 4 EA 24" VALVE
PROP - 2 EA 8" TAPPING VALVE

FOR 24" W.L. PROFILE, REFER TO -WATER LINE 1- ON UC-17 TO UC-19

5/14/99

04-JUN-2012 07:56
R:\Utilities\Projects\U-2809B_FayetteVille\Roadway\u-2809b_ut_9_uc9_psh.dgn

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | UC-10 |
| DESIGNED BY: MRB | |
| DRAWN BY: MRB/JKC | |
| CHECKED BY: RBW | |
| APPROVED BY: RBW | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | |
| PROJECT SERVICES UNIT PHONE:(919)250-4128 FAX:(919)250-4119 | UTILITY CONSTRUCTION PLANS ONLY |

NORTH CAROLINA PROFESSIONAL SEAL 10157 ENGINEER RONALD B. WILKINS 8/14/12

# UTILITY CONSTRUCTION

PROP - 1 EA RECONNECT WATER METER
PROP - 2 EA RELOCATE WATER METER
PROP - 1 EA 2" VALVE
PROP - 245 LF 2" WATER LINE
PROP - 672 LF 8" WATER LINE
PROP - 820 LF 24" WATER LINE
PROP - 90 LF 16" ENCASEMENT PIPE
PROP - 820 LF ABANDON 16" UTILITY PIPE

ALL WATER LINE 6" AND LARGER SHALL BE D.I. PIPE

PROP - 4 EA RELOCATE WATER METER
PROP - 1 RELOCATE FIRE HYDRANT
PROP - 163 LF 24" WATER LINE
PROP - 163 LF ABANDON 16" UTILITY PIPE

PROP - 10 EA RELOCATE WATER METER
PROP - 1 EA FIRE HYDRANT
PROP - 3 EA 8" VALVE
PROP - 1 EA 24" VALVE
PROP - 1 EA 8" TAPPING VALVE

ALL ENCASED WATER LINES SHALL BE DIRJ PIPE.

AS STATED IN THE STANDARD SPECIFICATIONS THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THRUST RESTRAINT FOR ALL PRESSURIZED PIPELINES.

THE CONTRACTOR SHALL REFER TO FAYETTEVILLE PWC SPECIFICATIONS FOR ACCEPTABLE METHODS AND GUIDELINES REGARDING RESTRAINT OF PRESSURIZED PIPELINES.

-L-
PI Sta 180+45.16
Δ = 13° 05' 18.8" (RT)
D = 2° 32' 58.0"
L = 513.39'
T = 257.81'
R = 2,247.37'
e = SEE PLANS

-Y17-
PI Sta 81+32.11
Δ = 12° 19' 19.3" (LT)
D = 4° 59' 22.8"
L = 246.95'
T = 123.95'
R = 1,148.29'

PI Sta 90+76.80
Δ = 20° 35' 38.4" (LT)
D = 5° 43' 33.0"
L = 359.67'
T = 181.80'
R = 1,000.65'

FOR 24" W.L. PROFILE, REFER TO -WATER LINE 1- ON UC-17 TO UC-19

MATCH SHEET UC-9 -L- STA 180+00

MATCH SHEET UC-11 -L- STA 193+50

NAD 83/2001

POT Sta. 10+00.00 -Y16-
POT Sta. 11+95.42 -Y16-
POT Sta. 184+08.22 -L-
BEGIN CONSTRUCTION -Y16- POT 10+53.00
POT STA. 84+92.54 -Y17-
POT STA. 190+02.18 -L-
PT Sta. 82+55.11 -Y17-
PC Sta. 80+08.15
PT Sta. 183+00.73 -L-
PC 88+95.00-Y17-
-BL-23
-BY8-
-BY8-73
-BY8-74

CHURCH OF GOD OF PROPHESY DB 2007 PG 393
BREEZEWOOD CHURCH OF GOD DB 7923 PG 227 PB 25 PG 63
CHURCH OF GOD OF PROPHESY DB 5345 PG 245 PB 25 PG 63
OF PROPHESY DB 6533 PG 555 PB 25 PG 63
STANLEY JOHNSON DB 0744 PG 266
ALFONZIE WILLIAMSON DB 3660 PG 154
JPR DEVELOPMENT LLC DB 6687 PG 492 PB 103 PG 118
JAMES EMANUEL DB 2105 PG 209 PB 29 PG 8
FIVE RIDDLES IIINC DB 5370 PG 519 PB 29 PG 8
CLADYS R. BEASLEY DB 1146 PG 93 PB 29 PG 8
WILLIAM CARROLL DB 2336 PG 412 PB 29 PG 6
SHELLEY A. CANAS DB 7512 PG 276 PB 26 PG 26
MARSHALL TEW DB 7710 PG 348 PB 26 PG 26
HAROLD JANSON DB 3402 PG 869 PB 26 PG 26
RAYMOND EATON DB 0994 PG 493 PB 26 PG 26
LUTHER N. PACKER DB 6409 PG 235 PB 26 PG 26
ALFONZIE WILLIAMSON DB 7976 PG 834 PB 26 PG 26
KENNETH A. BYRD DB 5147 PG 222 PB 26 PG 26
DAVIS MCCOY, JR DB 3301 PG 8 PB 27 PG 69
BETTY B. SMITH DB 5047 PG 608 PB 27 PG 69
ELLEN J. WILLIS DB 1078 PG 142 PB 27 PG 83
SHIRLEY WILLIAMS DB 2756 PG 125 PB 27 PG 83
JOSEPH RIDDLE III DB 6349 PG 764
MAHER HATTO DB 7229 PG 559
WILLIS MCNEIL DB 2582 PG 324 PB 34 PG 53
LEGION CROSSING, INC DB 4201 PG 115 DB 4267 PG 587 DB 4201 PG 115

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | UC-11 |
| DESIGNED BY: MRB | |
| DRAWN BY: MRB/JKC | |
| CHECKED BY: RBW | |
| APPROVED BY: RBW | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | |
| UTILITIES ENGINEERING SEC. PHONE:(919)250-4128 FAX:(919)250-4119 | UTILITY CONSTRUCTION PLANS ONLY |

NORTH CAROLINA PROFESSIONAL SEAL 10157 ENGINEER RONALD B. WORKMAN 04/19/10

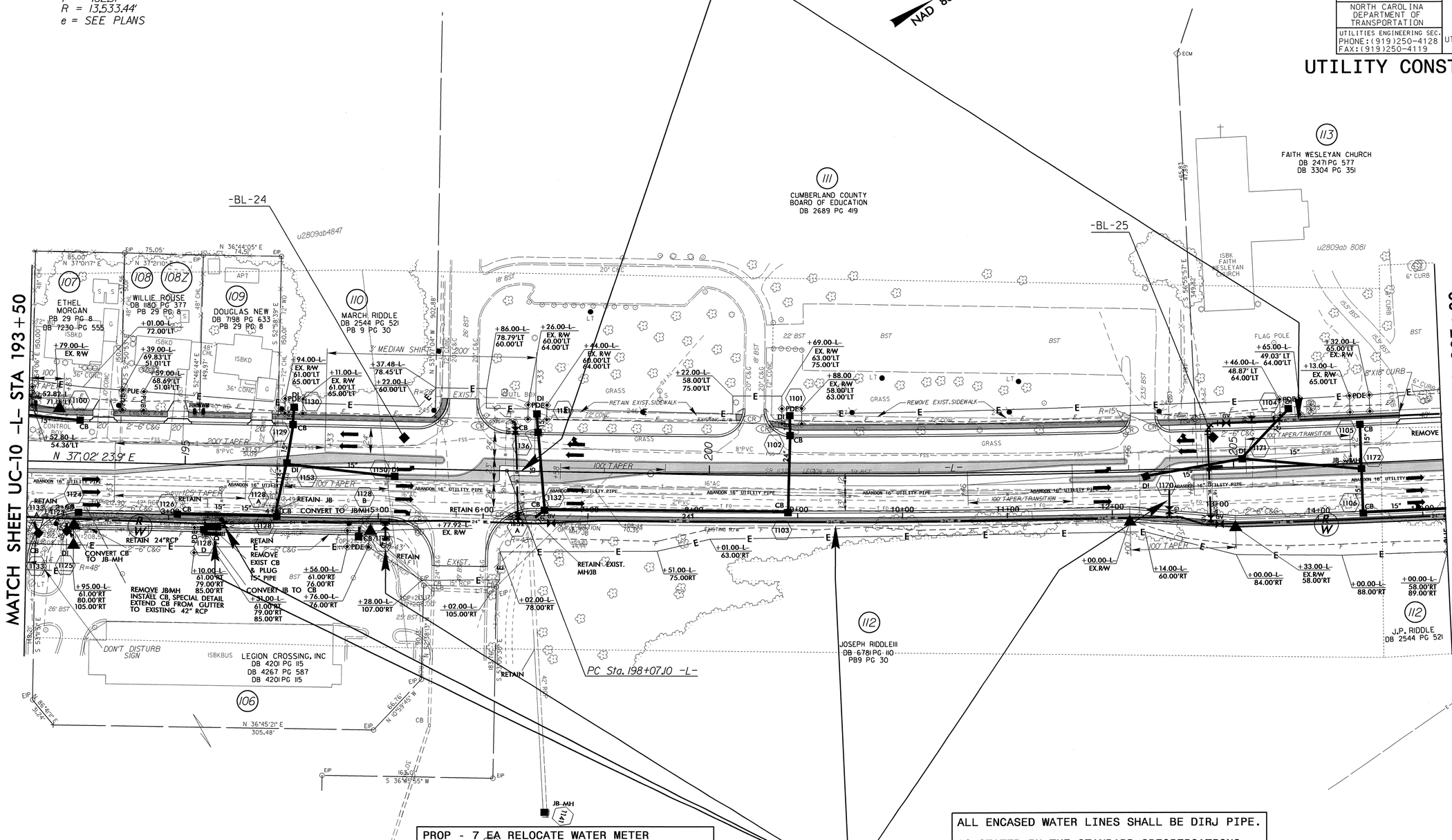
# UTILITY CONSTRUCTION

-L-
PI Sta 202+70.00
Δ = 3° 55' 04.9" (LT)
D = 0° 25' 24.1"
L = 925.45'
T = 462.91'
R = 13,533.44'
e = SEE PLANS

PROP - 3 EA RELOCATE WATER METER
PROP - 2 EA RECONNECT WATER METER
PROP - 2 EA 8" VALVE
PROP - 408 LF 8" WATER LINE
PROP - 160 LF 16" ENCASEMENT PIPE

ALL WATER LINE 6" AND LARGER SHALL BE D.I. PIPE

NAD 83/2001




PROP - 7 EA RELOCATE WATER METER
PROP - 1 EA FIRE HYDRANT
PROP - 2 EA 2" VALVE
PROP - 1 EA 6" VALVE
PROP - 2 EA 8" VALVE
PROP - 2 EA 24" VALVE
PROP - 21 LF 2" WATER LINE
PROP - 26 LF 6" WATER LINE
PROP - 1355 LF 24" WATER LINE
PROP - 1350 LF ABANDON 16" UTILITY PIPE

ALL ENCASED WATER LINES SHALL BE DIRJ PIPE.

AS STATED IN THE STANDARD SPECIFICATIONS THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THRUST RESTRAINT FOR ALL PRESSURIZED PIPELINES.

THE CONTRACTOR SHALL REFER TO FAYETTEVILLE PWC SPECIFICATIONS FOR ACCEPTABLE METHODS AND GUIDELINES REGARDING RESTRAINT OF PRESSURIZED PIPELINES.

FOR 24" W.L. PROFILE, REFER TO -WATER LINE 2- ON UC-20 TO UC-21

5/14/99

04-JUN-2012 07:55
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| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | UC-12 |
| DESIGNED BY: MRB | |
| DRAWN BY: MRB/JKC | |
| CHECKED BY: RBW | |
| APPROVED BY: RBW | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | |
| PROJECT SERVICES UNIT PHONE:(919)250-4128 FAX:(919)250-4119 | UTILITY CONSTRUCTION PLANS ONLY |

NORTH CAROLINA PROFESSIONAL SEAL 10157 ENGINEER RONALD B. WALKER

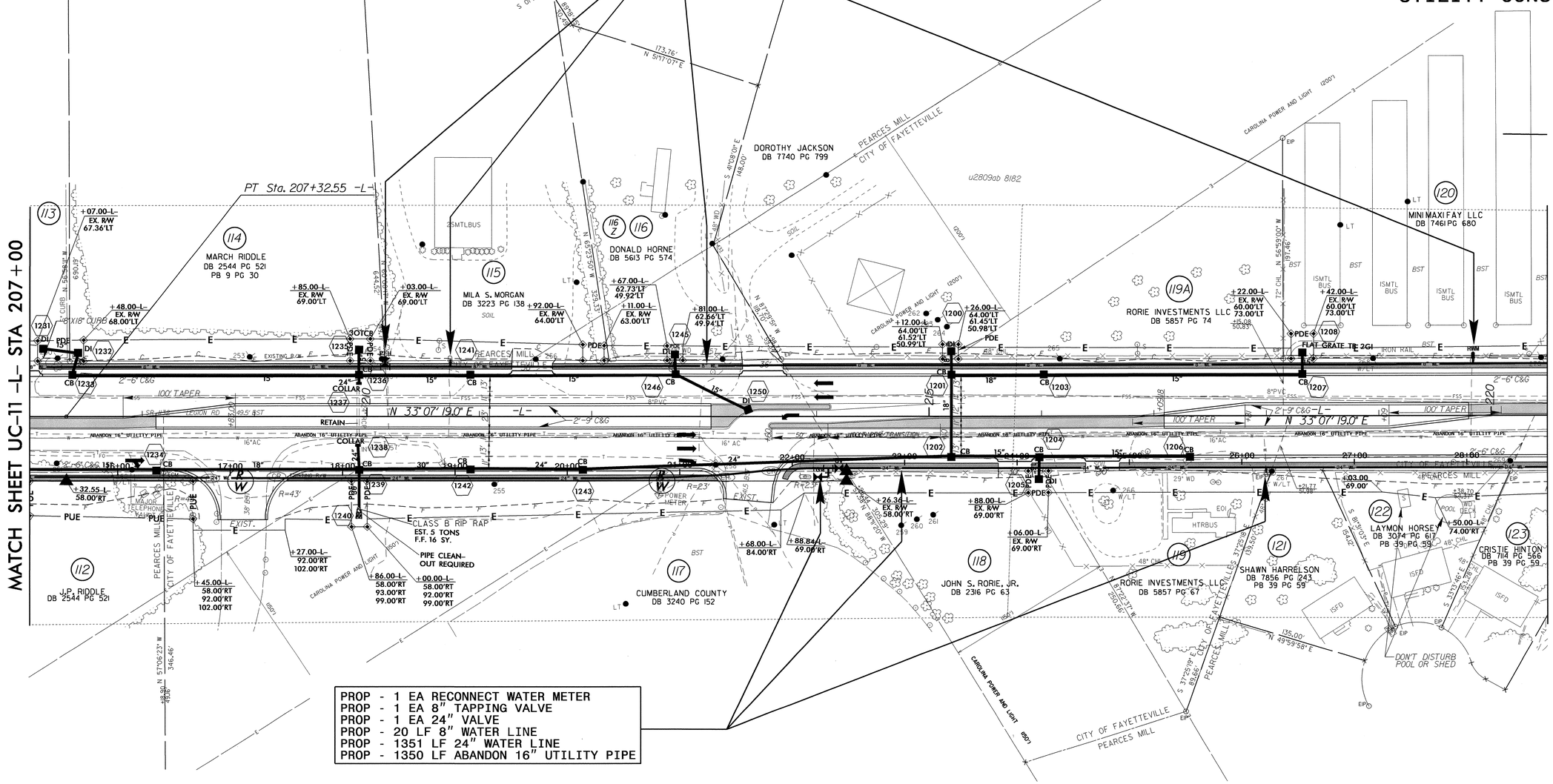
# UTILITY CONSTRUCTION

-L-
PI Sta 202+70.00
Δ = 3° 55' 04.9" (LT)
D = 0° 25' 24.1"
L = 925.45'
T = 462.91'
R = 13,533.44'
e = SEE PLANS

PROP - 1 EA RECONNECT WATER METER
PROP - 1 EA RELOCATE WATER METER
PROP - 1 EA FIRE HYDRANT
PROP - 1351 LF 8" WATER LINE

NAD 83/2001

ALL WATER LINE 6" AND LARGER SHALL BE D.I. PIPE




PROP - 1 EA RECONNECT WATER METER
PROP - 1 EA 8" TAPPING VALVE
PROP - 1 EA 24" VALVE
PROP - 20 LF 8" WATER LINE
PROP - 1351 LF 24" WATER LINE
PROP - 1350 LF ABANDON 16" UTILITY PIPE

ALL ENCASED WATER LINES SHALL BE DIRJ PIPE.

AS STATED IN THE STANDARD SPECIFICATIONS THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THRUST RESTRAINT FOR ALL PRESSURIZED PIPELINES.

THE CONTRACTOR SHALL REFER TO FAYETTEVILLE PWC SPECIFICATIONS FOR ACCEPTABLE METHODS AND GUIDELINES REGARDING RESTRAINT OF PRESSURIZED PIPELINES.

FOR 24" W.L. PROFILE, REFER TO -WATER LINE 2- ON UC-20 TO UC-21

5/14/99

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| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | UC-13 |
| DESIGNED BY: MRB | |
| DRAWN BY: MRB/JKC | |
| CHECKED BY: RBW | |
| APPROVED BY: RBW | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | |
| PROJECT SERVICES UNIT PHONE:(919)250-4128 FAX:(919)250-4119 | UTILITY CONSTRUCTION PLANS ONLY |

NORTH CAROLINA PROFESSIONAL SEAL 10157 ENGINEER RONALD B. WHITLOCK

# UTILITY CONSTRUCTION

ALL ENCASED WATER LINES SHALL BE DIRJ PIPE.

AS STATED IN THE STANDARD SPECIFICATIONS THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THRUST RESTRAINT FOR ALL PRESSURIZED PIPELINES.

THE CONTRACTOR SHALL REFER TO FAYETTEVILLE PWC SPECIFICATIONS FOR ACCEPTABLE METHODS AND GUIDELINES REGARDING RESTRAINT OF PRESSURIZED PIPELINES.

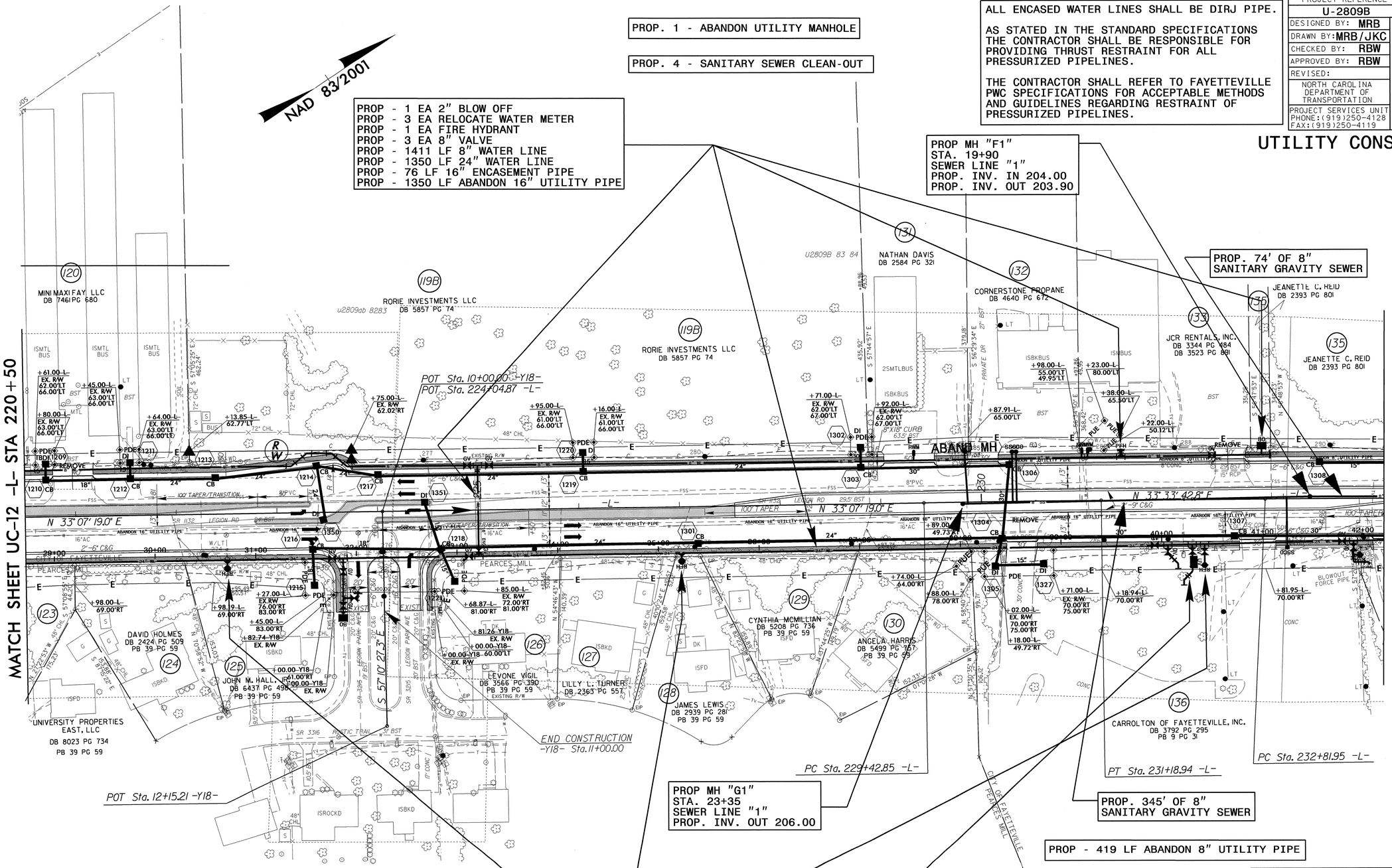
PROP. 1 - ABANDON UTILITY MANHOLE

PROP. 4 - SANITARY SEWER CLEAN-OUT

PROP - 1 EA 2" BLOW OFF
PROP - 3 EA RELOCATE WATER METER
PROP - 1 EA FIRE HYDRANT
PROP - 3 EA 8" VALVE
PROP - 1411 LF 8" WATER LINE
PROP - 1350 LF 24" WATER LINE
PROP - 76 LF 16" ENCASEMENT PIPE
PROP - 1350 LF ABANDON 16" UTILITY PIPE

PROP MH "F1"
STA. 19+90
SEWER LINE "1"
PROP. INV. IN 204.00
PROP. INV. OUT 203.90

PROP. 74' OF 8"
SANITARY GRAVITY SEWER




PROP MH "G1"
STA. 23+35
SEWER LINE "1"
PROP. INV. OUT 206.00

PROP. 345' OF 8"
SANITARY GRAVITY SEWER

PROP - 419 LF ABANDON 8" UTILITY PIPE

ALL WATER LINE 6" AND LARGER SHALL BE D.I. PIPE

ALL GRAVITY SEWER LINE SHALL BE PVC PIPE, U.N.O.

FOR 24" W.L. PROFILE, REFER TO -WATER LINE 2- ON UC-20 TO UC-21

PROP - 1 EA RECONNECT WATER METER
PROP - 3 EA RELOCATE FIRE HYDRANT
PROP - 1 EA 4" VALVE
PROP - 2 EA 6" VALVE
PROP - 3 EA 8" VALVE
PROP - 4 EA 24" VALVE
PROP - 1 EA 8" TAPPING VALVE
PROP - 1 EA 2" BLOW OFF

PROP - 1 EA RELOCATE 4" WATER METER AND VAULT

5/14/99

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$$$$USERNAME$$$$

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | UC-14 |
| DESIGNED BY: MRB | |
| DRAWN BY: MRB/JKC | |
| CHECKED BY: RBW | |
| APPROVED BY: RBW | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | |
| PROJECT SERVICES UNIT PHONE:(919)250-4128 FAX:(919)250-4119 | UTILITY CONSTRUCTION PLANS ONLY |

NORTH CAROLINA PROFESSIONAL SEAL 10157 ENGINEER RONALD B. WILKERSON

# UTILITY CONSTRUCTION

ALL ENCASED WATER LINES SHALL BE DIRJ PIPE.

AS STATED IN THE STANDARD SPECIFICATIONS THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THRUST RESTRAINT FOR ALL PRESSURIZED PIPELINES.

THE CONTRACTOR SHALL REFER TO FAYETTEVILLE PWC SPECIFICATIONS FOR ACCEPTABLE METHODS AND GUIDELINES REGARDING RESTRAINT OF PRESSURIZED PIPELINES.

FOR 24" W.L. PROFILE, REFER TO -WATER LINE 2- ON UC-20 TO UC-21

FOR 24" W.L. PROFILE FOR -Y21- REFER TO -WATER LINE 3- ON UC-22

PROP MH "E1"
STA. 15+90
SEWER LINE "1"
PROP. INV. IN 200.10
PROP. INV. OUT 200.00

PROP MH "D1"
STA. 11+90
SEWER LINE "1"
PROP. INV. IN 196.20
PROP. INV. OUT 196.10

PROP - 1 EA 2" BLOW OFF
PROP - 7 EA RELOCATE WATER METER
PROP - 2 EA FIRE HYDRANT
PROP - 4 EA 8" VALVE
PROP - 2 EA 24" VALVE
PROP - 1 EA 16" TAPPING VALVE
PROP - 1549 LF 8" WATER LINE
PROP - 268 LF 24" WATER LINE
PROP - 56 LF 16" ENCASEMENT PIPE
PROP - 76 LF 42" ENCASEMENT PIPE

PROP. 5 - ABANDON UTILITY MANHOLE

ALL WATER LINE 6" AND LARGER SHALL BE D.I. PIPE

ALL GRAVITY SEWER LINE SHALL BE PVC PIPE, U.N.O.

PROP. 21 - SANITARY SEWER CLEAN-OUT

PROP. 326' OF 8" SANITARY GRAVITY SEWER

PROP. 400' OF 8" SANITARY GRAVITY SEWER

NAD 83/2001

POT Sta. 10+00.00 -Y1

POT Sta. 238+34.35 -L-

PC Sta. 239+62.52 -L-

PT Sta. 240+83.59 -L-

POT Sta. 10+00.00 -Y21-

POT Sta. 10+00.00 -Y22-
POT Sta. 246+26.13 -L-

BEG. CONSTRUCTION -Y19- POT 12+25.00

BEG. CONSTRUCTION -Y21- Sta. 10+75

MATCH SHEET UC-13 -L- STA 234+00

MATCH SHEET UC-15 -L- STA 247+50

PROP - 1 EA 2" BLOW OFF
PROP - 4 EA RELOCATE WATER METER
PROP - 1 EA RECONNECT WATER METER
PROP - 1 EA 8" VALVE
PROP - 3 EA 24" VALVE
PROP - 64 LF 8" WATER LINE
PROP - 836 LF 24" WATER LINE
PROP - 106 LF 42" ENCASEMENT PIPE

-L-
Sta 240+23.06
= 1° 45' 43.1" (LT)
= 1° 27' 19.1"
= 121.07'
= 60.54'
= 3,937.00'
: SEE PLANS

-Y19-
PI Sta 17+55.59
Δ = 1° 48' 09.3" (RT)
D = 3° 49' 11.0"
L = 47.19'
T = 23.60'
R = 1,500.00'

PT Sta. 235+76.35 -L-

PC Sta. 17+31.98 -Y19-

PT Sta. 17+79.18 -Y19-

POT Sta. 19+85.93 -Y19-

END CONSTRUCTION -Y19- POT 18+22

PROP - 1350 LF ABANDON 8" UTILITY PIPE

PROP. 400' OF 8" SANITARY GRAVITY SEWER

PROP MH "C1"
STA. 7+90
SEWER LINE "1"
PROP. INV. IN 192.10
PROP. INV. OUT 192.00

PROP - 2 EA RELOCATE FIRE HYDRANT
PROP - 7 EA RELOCATE WATER METER
PROP - 3 EA 8" VALVE
PROP - 1 EA 8" TAPPING VALVE
PROP - 1 EA 16" TAPPING VALVE
PROP - 28 LF 8" WATER LINE

PROP. 224' OF 8" SANITARY GRAVITY SEWER

POT Sta. 11+99.69 -Y21-
POT Sta. 242+82.66 -L-

END CONSTRUCTION -Y21- Sta. 13+20

POT Sta. 13+99.82 -Y21-

END CONSTRUCTION -Y22- POT 11+00

POT Sta. 11+01.88 -Y22-

ABANDON 8" UTILITY PIPE

CAP 15" RCP AND FILL WITH FLOWABLE GROUT

CONVERT EXISTING DI TO CB

RETAIN DI

RETAIN & ADJUST GRATE ELEVATIONS

RETAIN EXISTING SYSTEM TIE TO PROPOSED JB-MH

DO NOT DISTURB EXISTING CURB

DON'T DISTURB TREE

CAMDEN ROAD LASERWASH INC. DB 6461 PG 881

JEANETTE C. REID DB 2393 PG 801

CHERYL H. PERRY DB 8031 PG 804 PB 11 PG 27

TERRI C. BYROM DB 4256 PG 590 PB 11 PG 27

OSCAR PHILLIPS, JR. DB 3829 PG 846 PB 11 PG 27

CHARLES D. JONES DB 1115 PG 421 PB 11 PG 27

BOBBY HAIRR DB 3038 PG 773 PB 11 PG 27

JOHN H. WILLIAMS DB 2941 PG 717 DB 3924 PG 744 PB 11 PG 27

PAUL HAMMAKER DB 6378 PG 8 PB 11 PG 27

DB 2424 PG 856 PB 11 PG 27

ELBERT CALHOUN JR.

JOHN H. WILLIAMS DB 5495 PG 211 PB 9 PG 51

DONALD STRICKLAND DB 7387 PG 707 PB 9 PG 31

COMMUNITY REAL ESTATE HOLDING DB 7344 PG 672 PB 113 PG 93

F & B INVESTMENTS, INC DB 4582 PG 306

CHARLES T. HUGGINS DB 3482 PG 323 DB 3984 PG 701

PATRICIA RODITZ DB 3321 PG 699

DEBBIE BARR DB 6496 PG 536 PB 11 PG 27

WESTMINSTER PRESBYTERIAN DB 7825 PB 184 PB 11 PG 27

LARRY BUIE DB 5400 PG 30

JOHN WILLIAMS DB 5704 PG 759

JOHN WILLIAMS DB 7789 PG 136

JOHN H. WILLIAMS DB 3924 PG 744

DALE ANN TRIPP DB 4257 PG 856

ALFRED YOUNG DB 7720 PG 392 PB 11 PG 27

RICHARD BRAUN DB 6644 PG 466 PB 11 PG 27

JOHN H. WILLIAMS DB 2800 PG 311 DB 3924 PG 744 DB 3602 PG 276

D.S. CARTER DB 0819 PG 353

CITY OF FAYETTEVILLE

PEARCES MILL

200' MEDIAN SHIFT RT 1/2

SOUTHERN BLVD SR 1132

SANDY VALLEY RD

JEST MOUNTAIN RD

ABAND MH

M 35° 01' 51.1" E

N 33° 16' 08.0" E

S 47° 17' 23.5" E

S 77° 38' 24.1" E

S 55° 40' 49.8" E

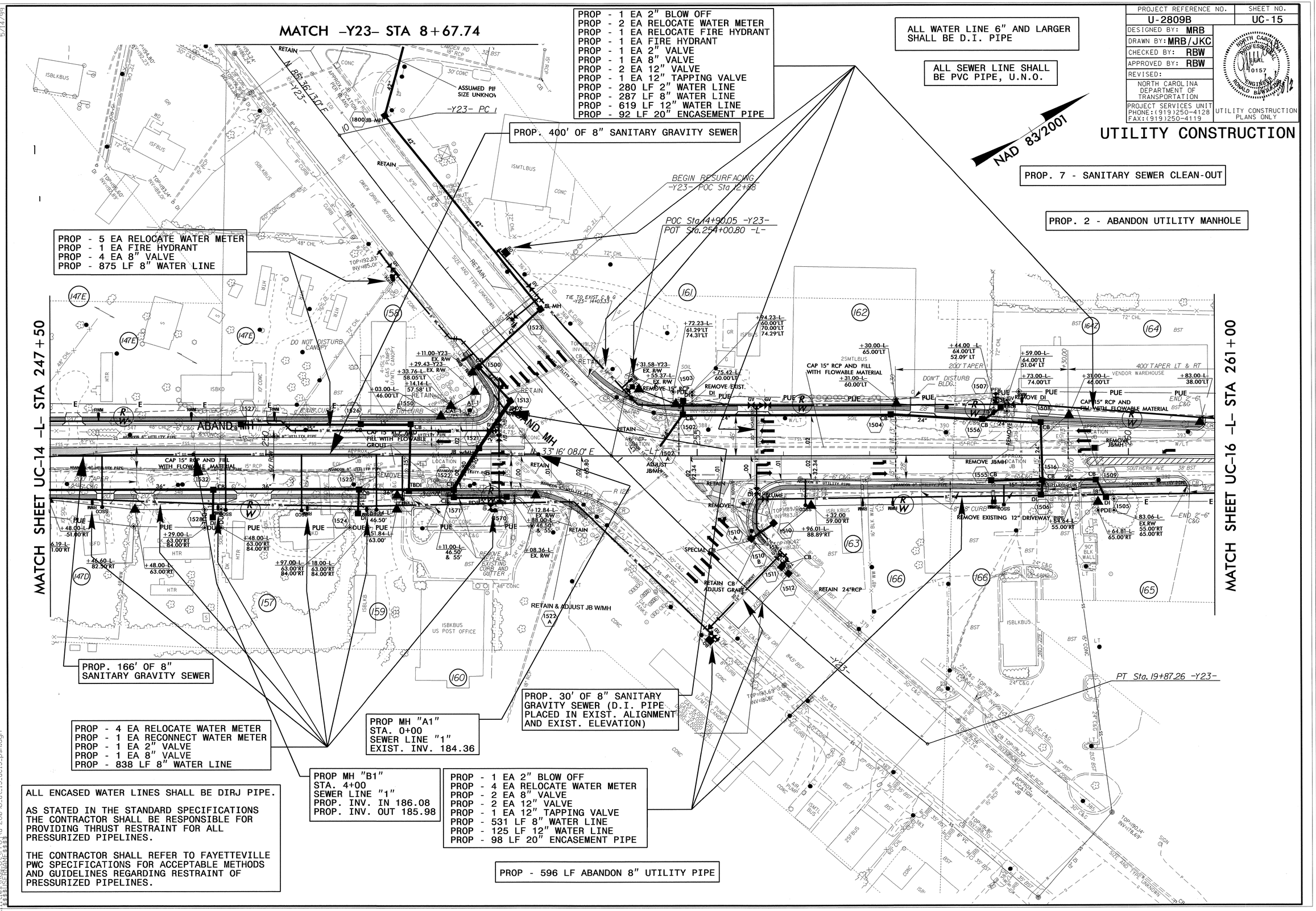
06-JUN-2012 08:52
Utilities\Utility Proj\u-2809b_ut_14_uc14_psh.dgn
$$$$USERNAME$$$$

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | UC-15 |
| DESIGNED BY: MRB | |
| DRAWN BY: MRB/JKC | |
| CHECKED BY: RBW | |
| APPROVED BY: RBW | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | |
| PROJECT SERVICES UNIT PHONE:(919)250-4128 FAX:(919)250-4119 | UTILITY CONSTRUCTION PLANS ONLY |

NORTH CAROLINA PROFESSIONAL SEAL 0157 ENGINEER RONALD BLACKBURN

# UTILITY CONSTRUCTION

NAD 83/2001




5/14/99

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$$$$USERNAME$$$$

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | UC-16 |
| DESIGNED BY: MRB | |
| DRAWN BY: MRB/JKC | |
| CHECKED BY: RBW | |
| APPROVED BY: RBW | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | |
| PROJECT SERVICES UNIT PHONE:(919)250-4128 FAX:(919)250-4119 | UTILITY CONSTRUCTION PLANS ONLY |

NORTH CAROLINA PROFESSIONAL SEAL 10157 ENGINEER RONALD B. WEAVER

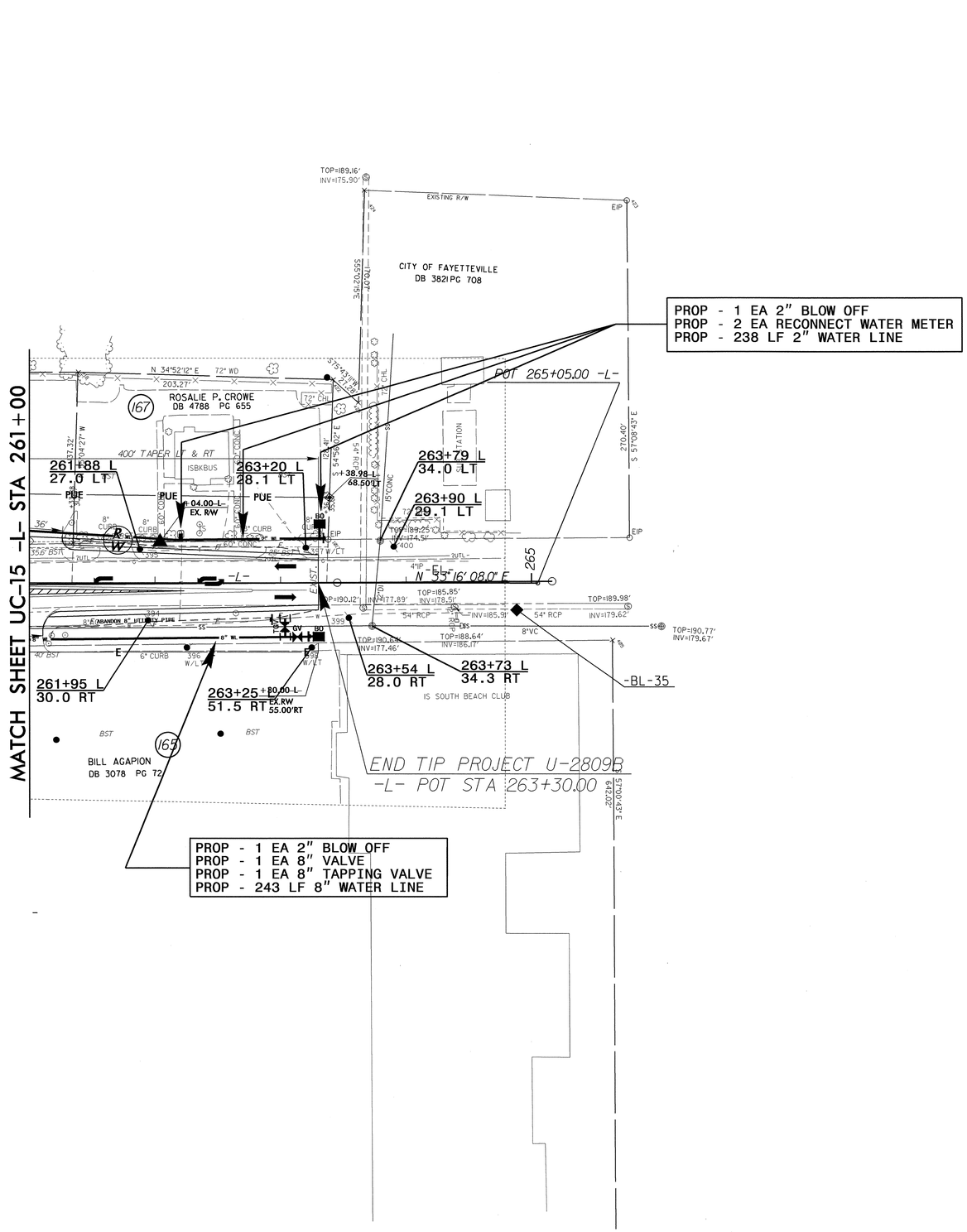
# UTILITY CONSTRUCTION

ALL WATER LINE 6" AND LARGER SHALL BE D.I. PIPE

ALL ENCASED WATER LINES SHALL BE DIRJ PIPE.

AS STATED IN THE STANDARD SPECIFICATIONS THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THRUST RESTRAINT FOR ALL PRESSURIZED PIPELINES.

THE CONTRACTOR SHALL REFER TO FAYETTEVILLE PWC SPECIFICATIONS FOR ACCEPTABLE METHODS AND GUIDELINES REGARDING RESTRAINT OF PRESSURIZED PIPELINES.




5/14/99
04-JUN-2012 07:52
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$$$$USERNAME$$$$

| PROJECT REFERENCE NO. | SHEET NO. |
| --- | --- |
| U-2809B | UC-17 |

| | |
| --- | --- |
| DESIGNED BY: | JKC |
| DRAWN BY: | JKC |
| CHECKED BY: | RBW |
| APPROVED BY: | RBW |
| REVISED: | |

NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION

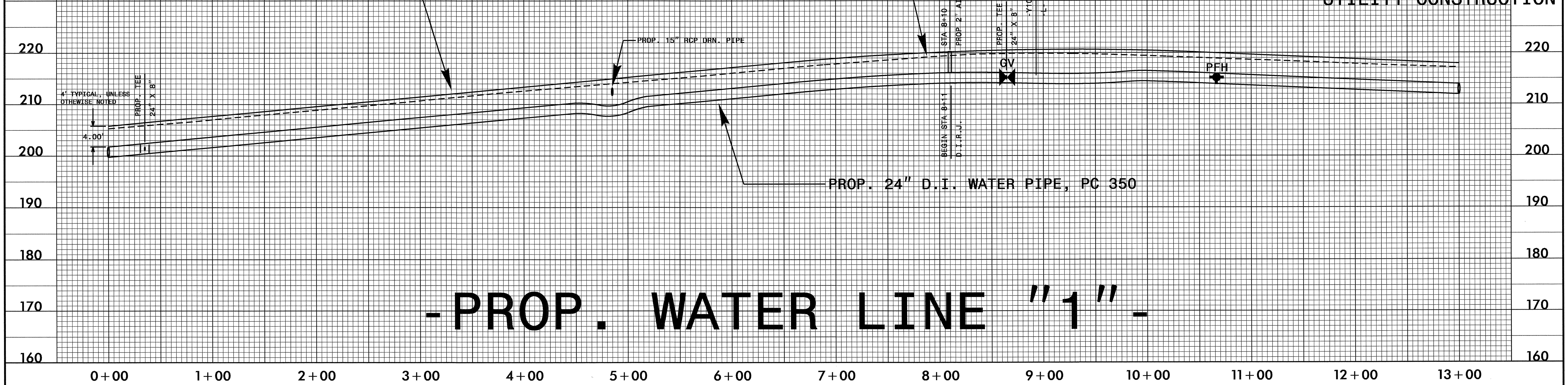
UTILITIES ENGINEERING SEC.
PHONE:(919)250-4128
FAX:(919)250-4119

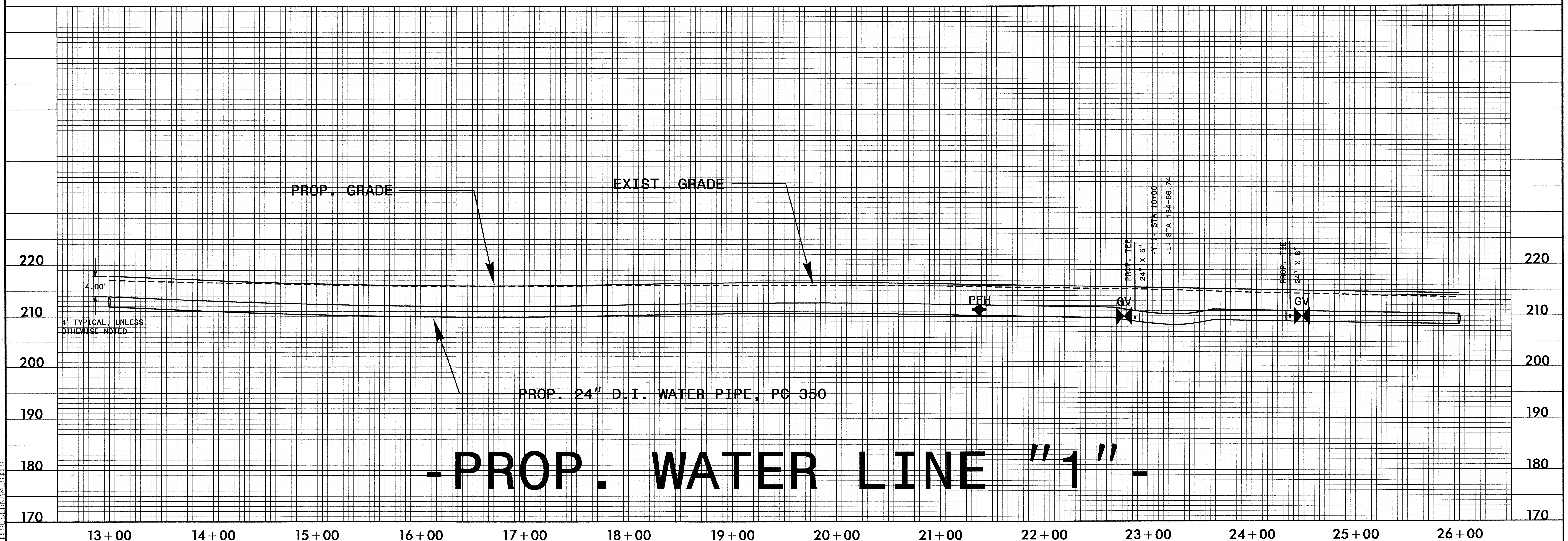
NORTH CAROLINA PROFESSIONAL SEAL 0157 ENGINEER RONALD B. WILKINS

UTILITY CONSTRUCTION PLANS ONLY

# UTILITY CONSTRUCTION

5/28/99

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$$$$USERNAME$$$$

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | UC-18 |

DESIGNED BY: JKC
DRAWN BY: JKC
CHECKED BY: RBW
APPROVED BY: RBW
REVISED:

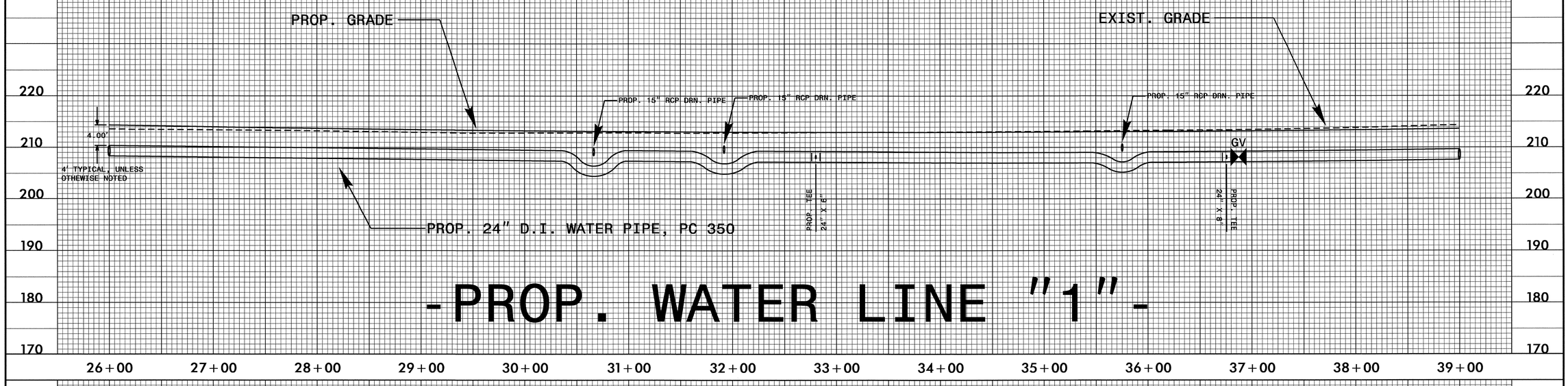
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

UTILITIES ENGINEERING SEC.
PHONE:(919)250-4128
FAX:(919)250-4119

NORTH CAROLINA PROFESSIONAL SEAL 10157 ENGINEER RONALD B. WEBSTER 6/8/16

UTILITY CONSTRUCTION PLANS ONLY

# UTILITY CONSTRUCTION

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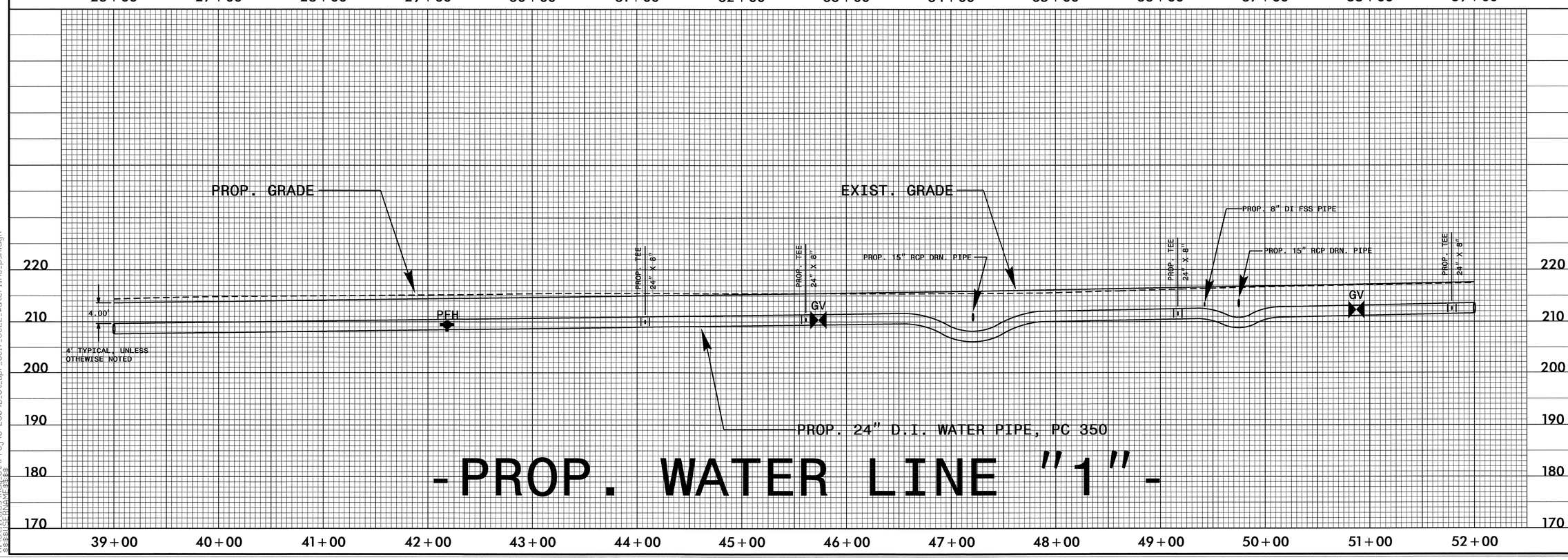


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5/28/99

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$$$$USERNAME$$$$

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | UC-19 |

DESIGNED BY: JKC
DRAWN BY: JKC
CHECKED BY: RBW
APPROVED BY: RBW
REVISED:

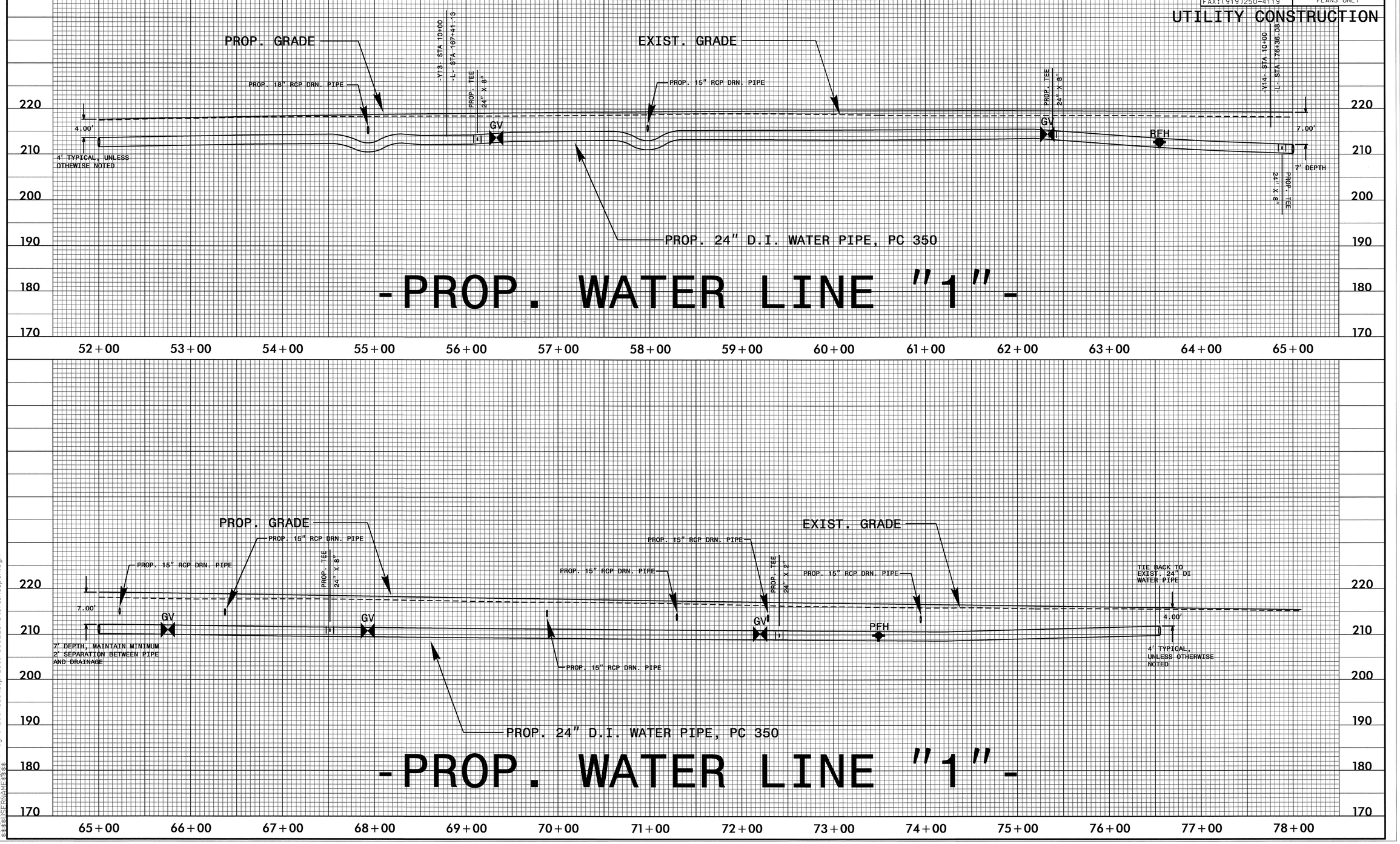
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

UTILITIES ENGINEERING SEC.
PHONE:(919)250-4128
FAX:(919)250-4119

NORTH CAROLINA PROFESSIONAL SEAL 10157 ENGINEER RONALD B. WILKINS

UTILITY CONSTRUCTION PLANS ONLY

# UTILITY CONSTRUCTION




5/28/99

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$$$$USERNAME$$$$

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | UC-20 |

DESIGNED BY: JKC
DRAWN BY: JKC
CHECKED BY: RBW
APPROVED BY: RBW
REVISED:

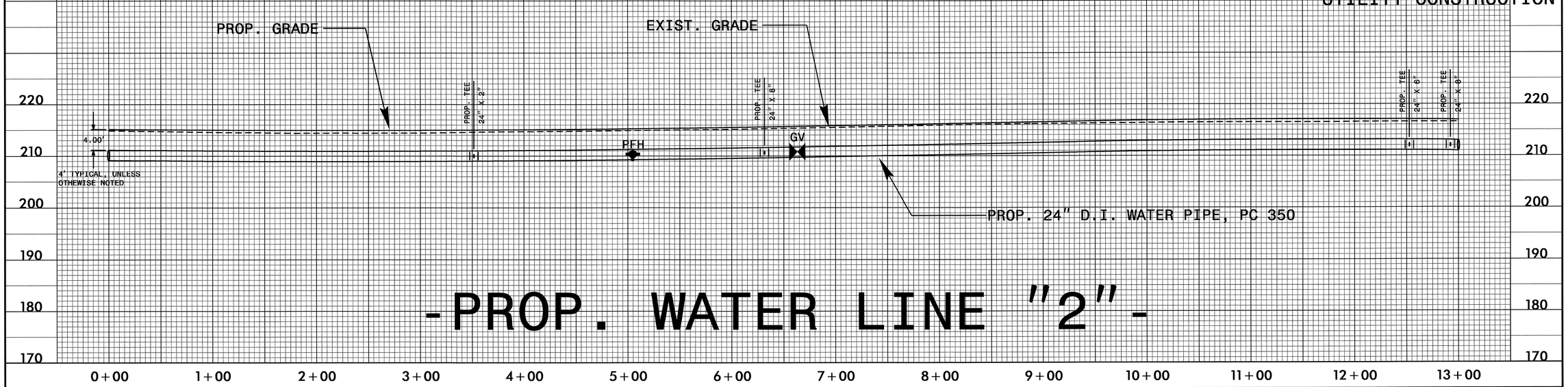
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

UTILITIES ENGINEERING SEC.
PHONE:(919)250-4128
FAX:(919)250-4119

NORTH CAROLINA PROFESSIONAL SEAL 10157 ENGINEER RONALD B. WILLIAMS

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

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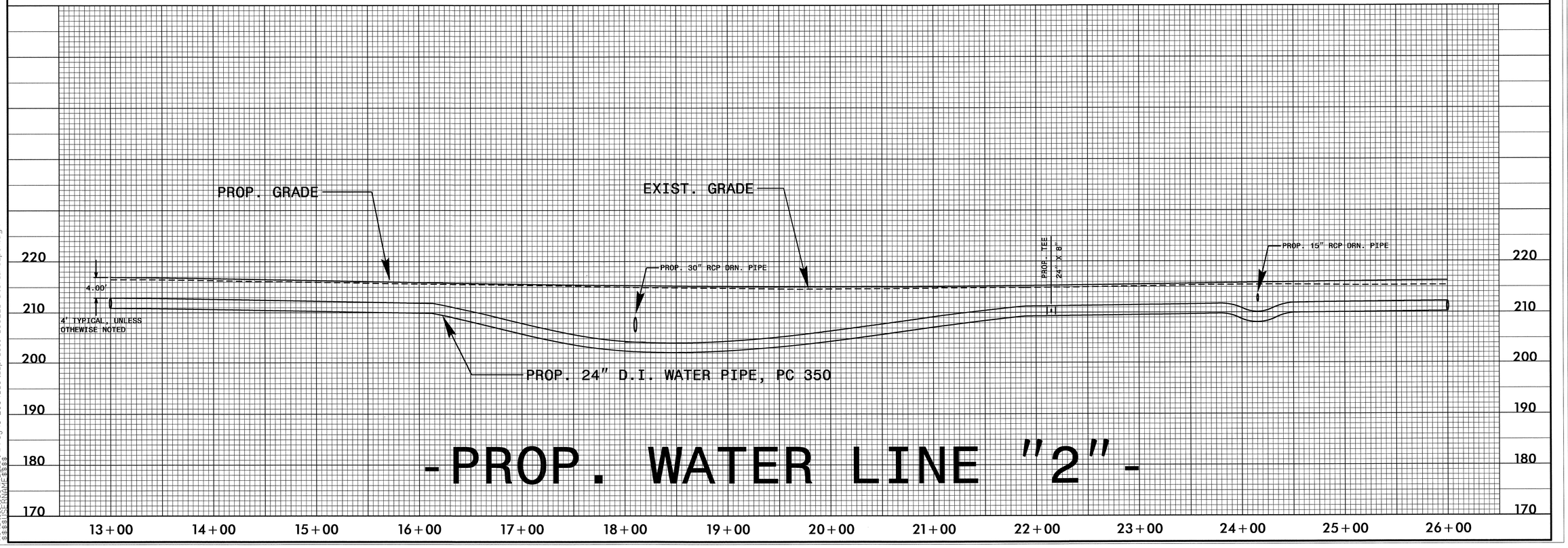


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5/28/99

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$$$$USERNAME$$$$

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | UC-21 |

DESIGNED BY: JKC
DRAWN BY: JKC
CHECKED BY: RBW
APPROVED BY: RBW
REVISED:

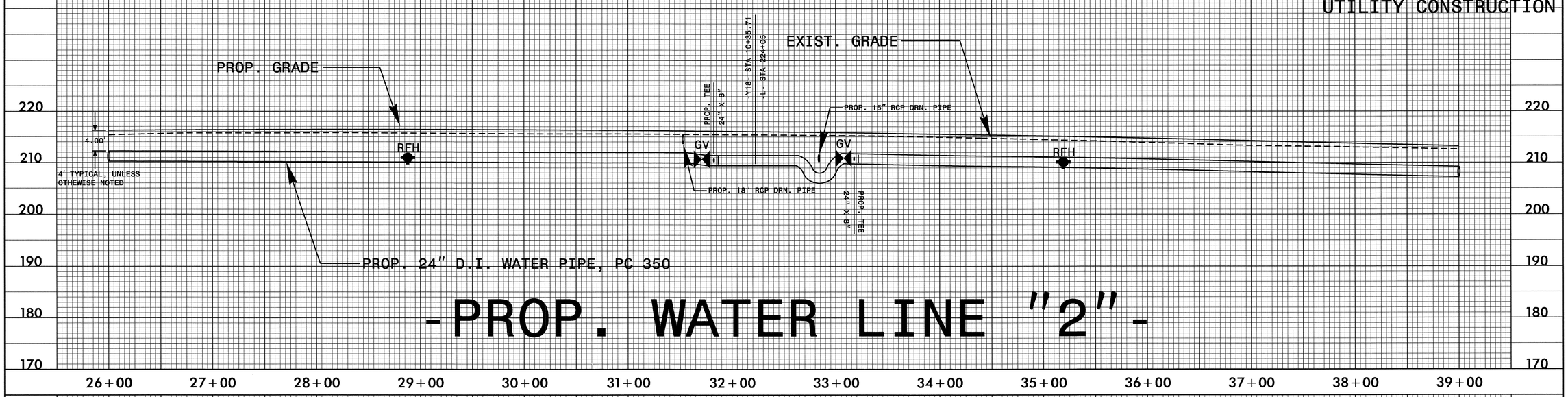
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

UTILITIES ENGINEERING SEC.
PHONE:(919)250-4128
FAX:(919)250-4119

NORTH CAROLINA PROFESSIONAL SEAL 10157 ENGINEER RONALD B. WIZEROVICH

UTILITY CONSTRUCTION PLANS ONLY

# UTILITY CONSTRUCTION

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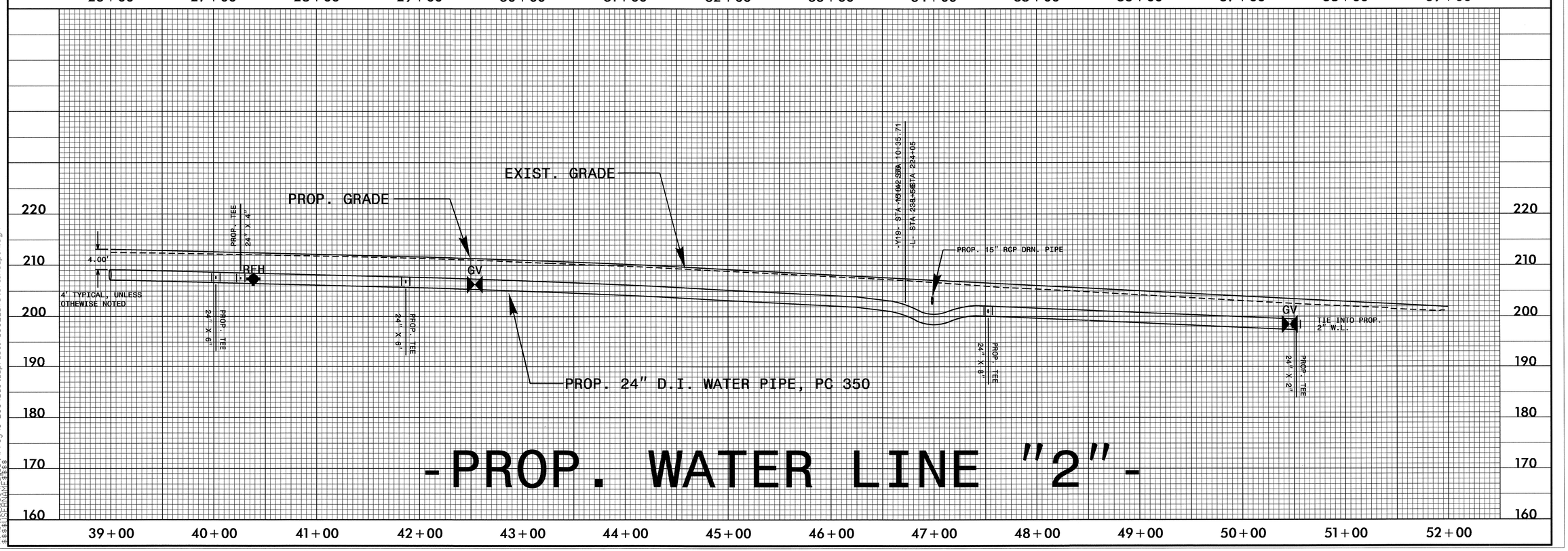


# -PROP. WATER LINE "2"-

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$$$$USERNAME$$$$

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | UC-22 |

DESIGNED BY: JKC
DRAWN BY: JKC
CHECKED BY: RBW
APPROVED BY: RBW
REVISED:

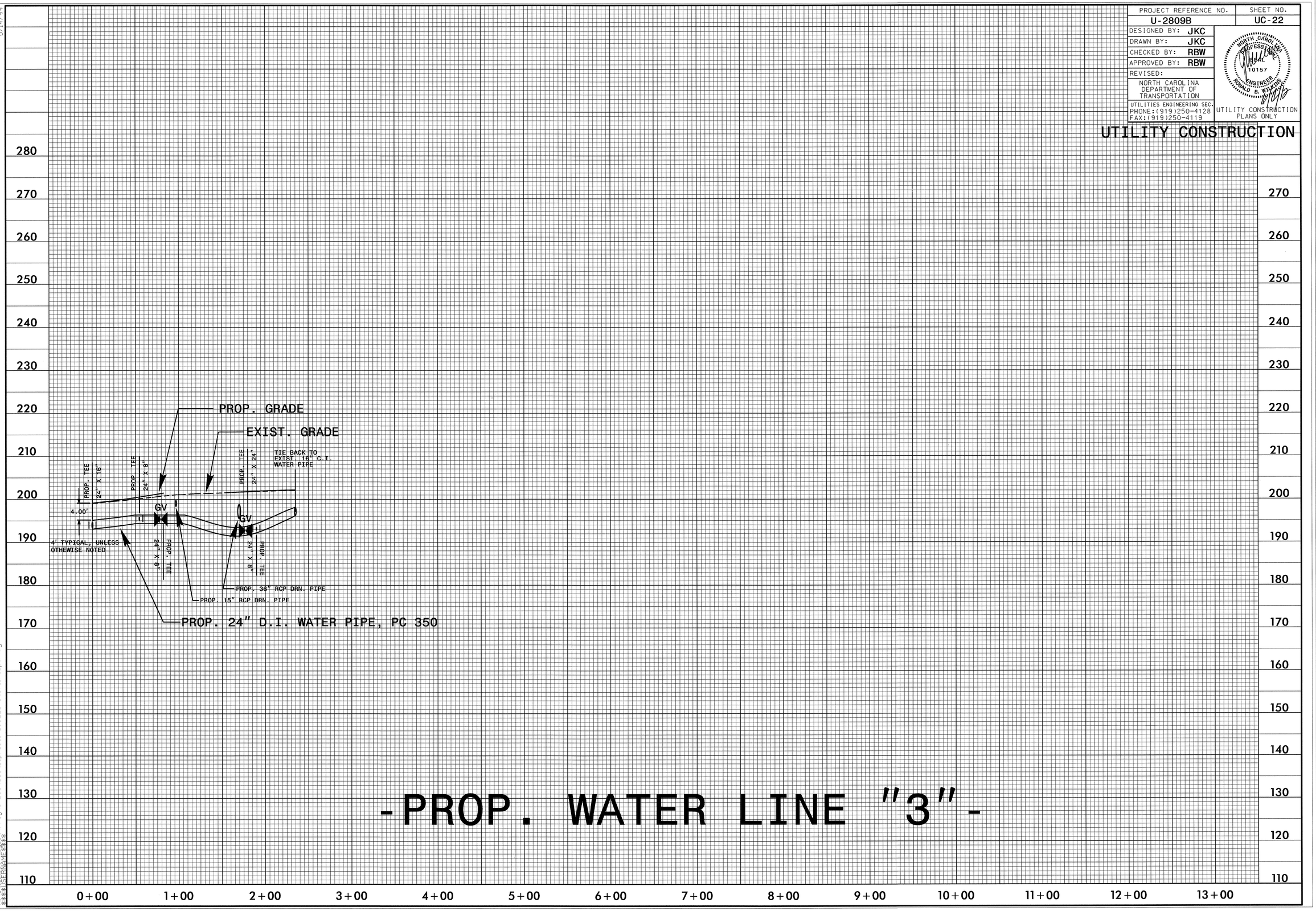
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

UTILITIES ENGINEERING SEC.
PHONE:(919)250-4128
FAX:(919)250-4119

NORTH CAROLINA PROFESSIONAL SEAL 10157 ENGINEER RONALD B. WILKERSON

UTILITY CONSTRUCTION PLANS ONLY

# UTILITY CONSTRUCTION

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5/14/99

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$$$$USERNAME$$$$

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | UC-23 |

DESIGNED BY: MRB
DRAWN BY: JKC
CHECKED BY: RBW
APPROVED BY: RBW
REVISED:

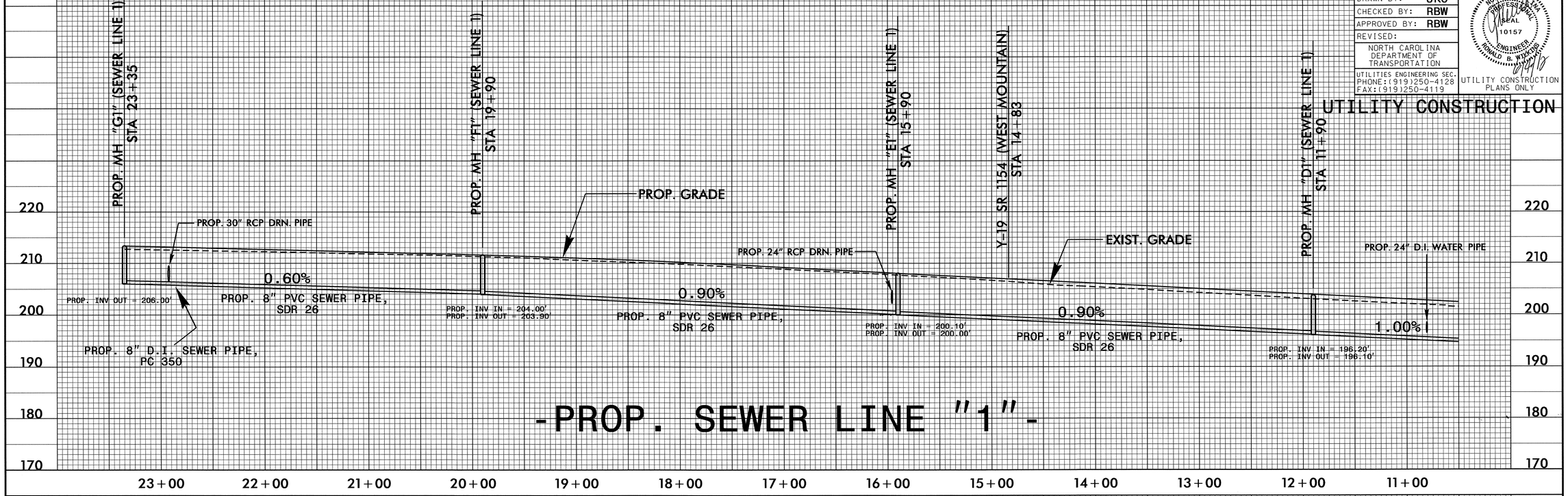
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

UTILITIES ENGINEERING SEC.
PHONE:(919)250-4128
FAX:(919)250-4119

NORTH CAROLINA PROFESSIONAL SEAL 10157 ENGINEER RONALD B. WORKMAN

UTILITY CONSTRUCTION PLANS ONLY

# UTILITY CONSTRUCTION

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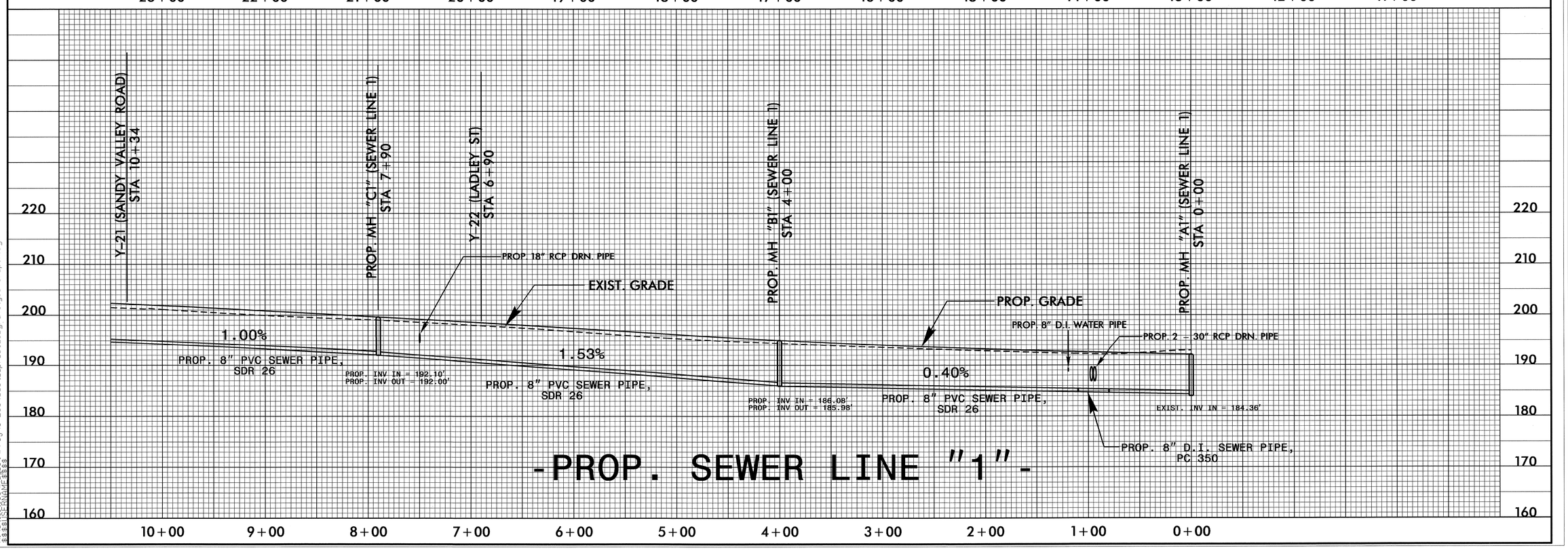


## -PROP. SEWER LINE "1"-

5/28/99

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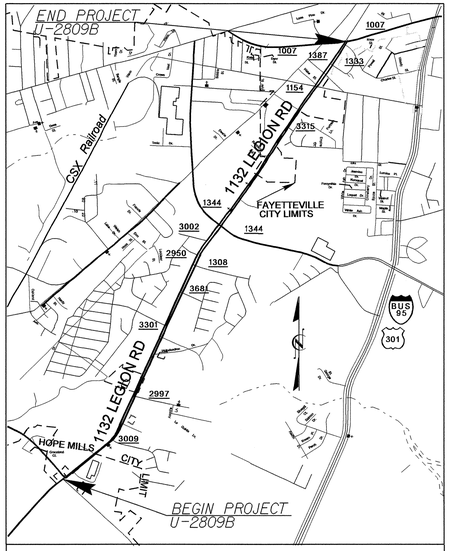
$$$$USERNAME$$$$

09/08/99

# TIP PROJECT: U-2809B

| T.I.P. NO. | SHEET NO. |
|---|---|
| U-2809B | UO-1 |



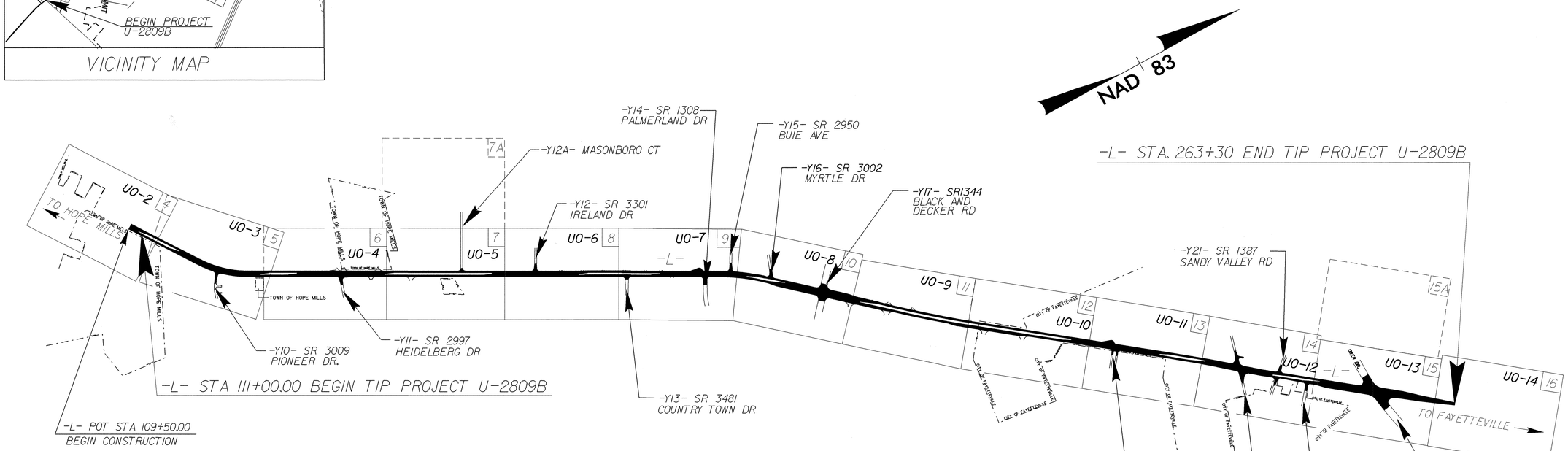

VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

# UTILITIES BY OTHERS PLANS
# CUMBERLAND COUNTY

**LOCATION: SR 1132 (LEGION RD.) FROM SR 1363 (ELK RD.) TO SR 1007 (OWEN DR.) IN FAYETTEVILLE**

**TYPE OF WORK: UTILITIES BY OTHERS**




## GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

## INDEX OF SHEETS

| SHEET NO. | DESCRIPTION |
|---|---|
| UO-1 | TITLE SHEET |
| UO-2 THRU UO-14 | UTILITY CONSTRUCTION PLAN SHEETS |

## UTILITY OWNERS ON PROJECT

(1) FAYETTEVILLE PWC – POWER (DISTRIBUTION)
(2) PROGRESS ENERGY CAROLINAS – POWER (DISTRIBUTION)
(3) CENTURYLINK – TELEPHONE
(4) AT&T – TELEPHONE (FO)
(5) TIME WARNER CABLE – CATV
(6) PIEDMONT NATURAL GAS


PREPARED IN THE OFFICE OF:
DIVISION OF HIGHWAYS
UTILITIES ENGINEERING SECTION
1591 MAIL SERVICES CENTER
RALEIGH NC 27699-1591
PHONE (919) 707-6690
FAX (919) 250-4151

Roger Worthington, P.E. UTILITIES SECTION ENGINEER
R. B. WILKINS, P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER
MICHAEL R. BRIGHT UTILITIES PROJECT DESIGNER



04-JUN-2012 14:29
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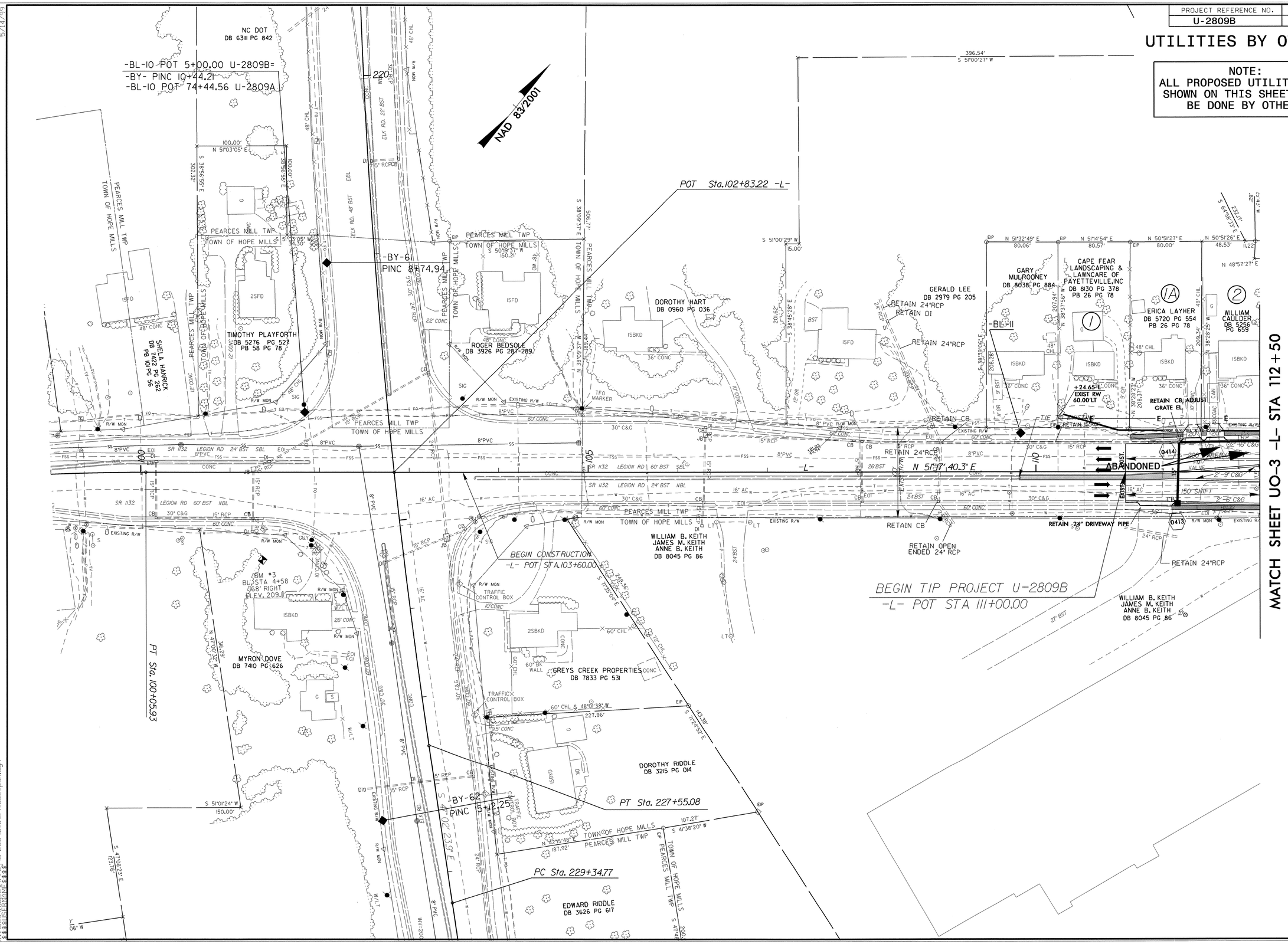
$$$$USERNAME$$$$

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | UO-2 |

# UTILITIES BY OTHERS

**NOTE:**
**ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS**



| PROJECT REFERENCE NO. | SHEET NO. |
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| U-2809B | U0-3 |

# UTILITIES BY OTHERS

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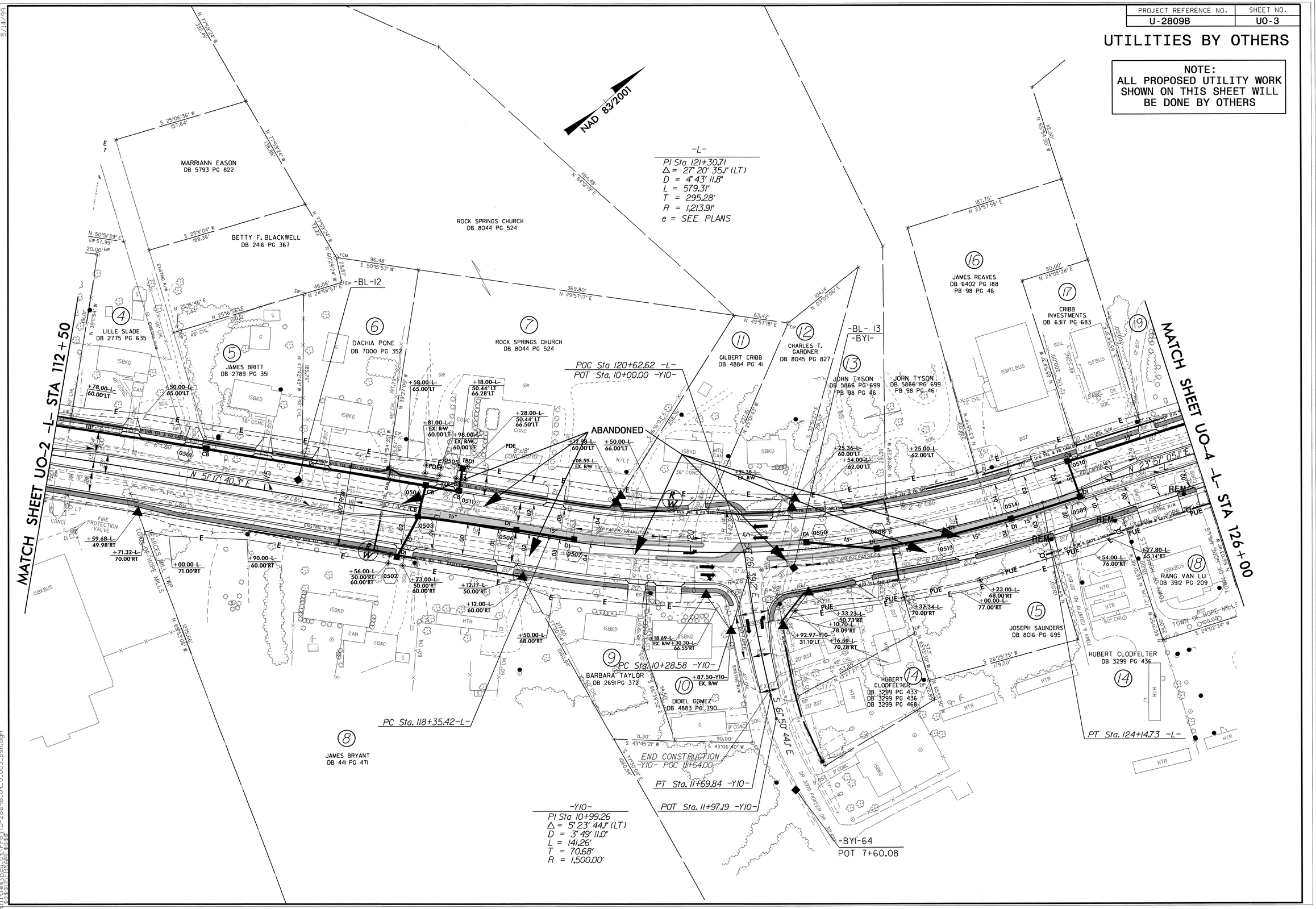
**ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS**




5/14/99

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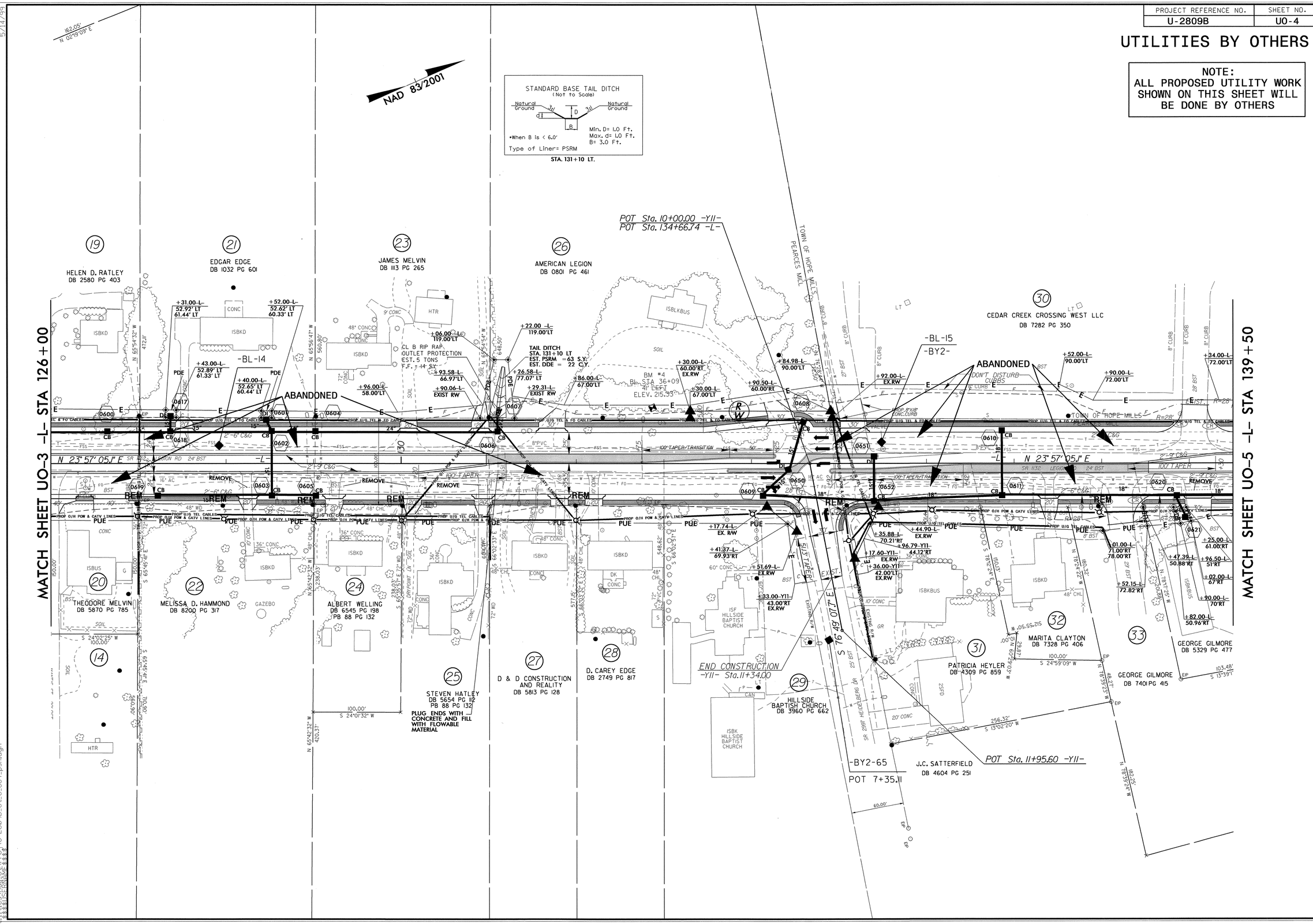
| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | U0-4 |

# UTILITIES BY OTHERS

**NOTE:**
**ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS**




5/14/99

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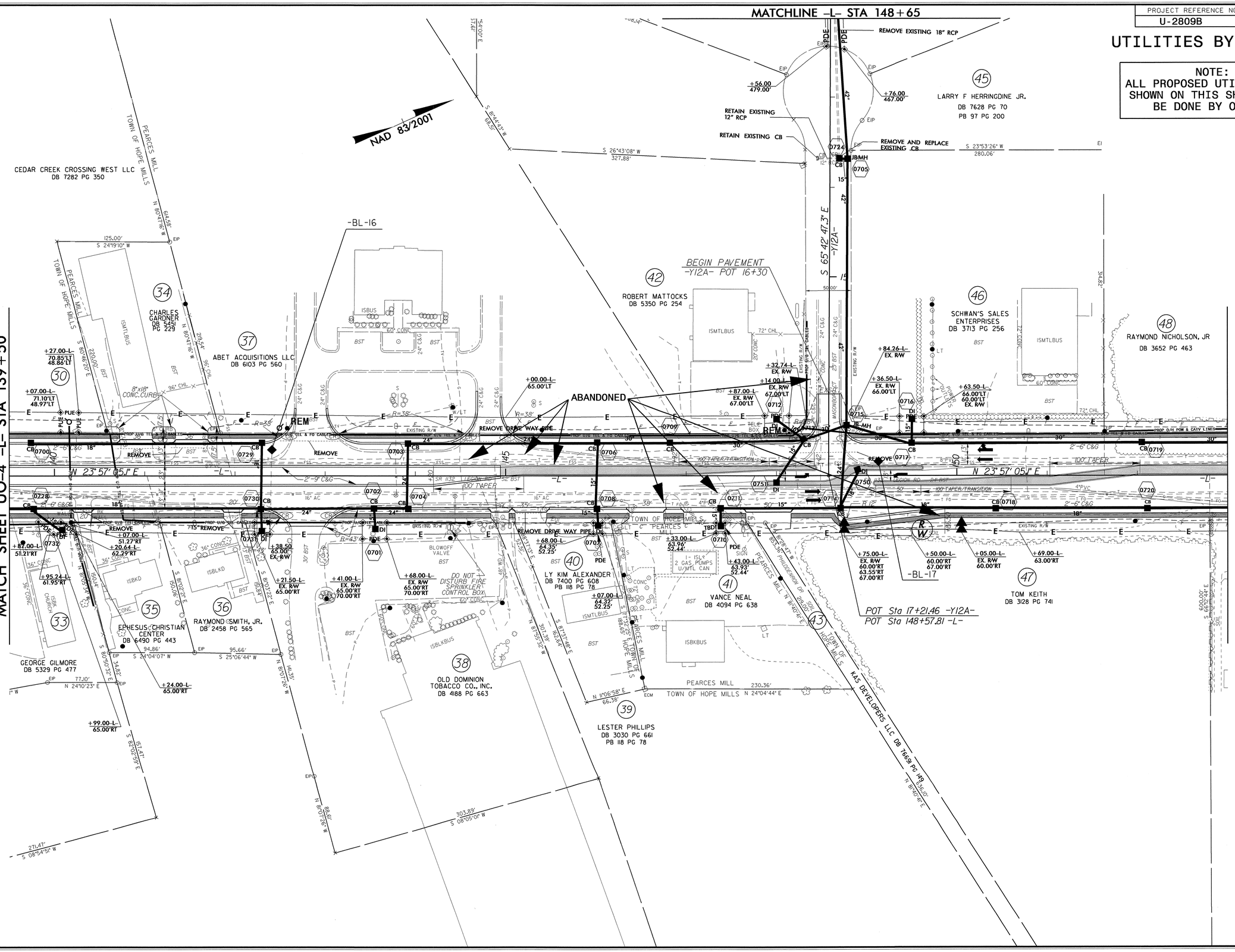
| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | U0-5 |

# UTILITIES BY OTHERS

**NOTE:**
**ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS**




5/14/99

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| PROJECT REFERENCE NO. | SHEET NO. |
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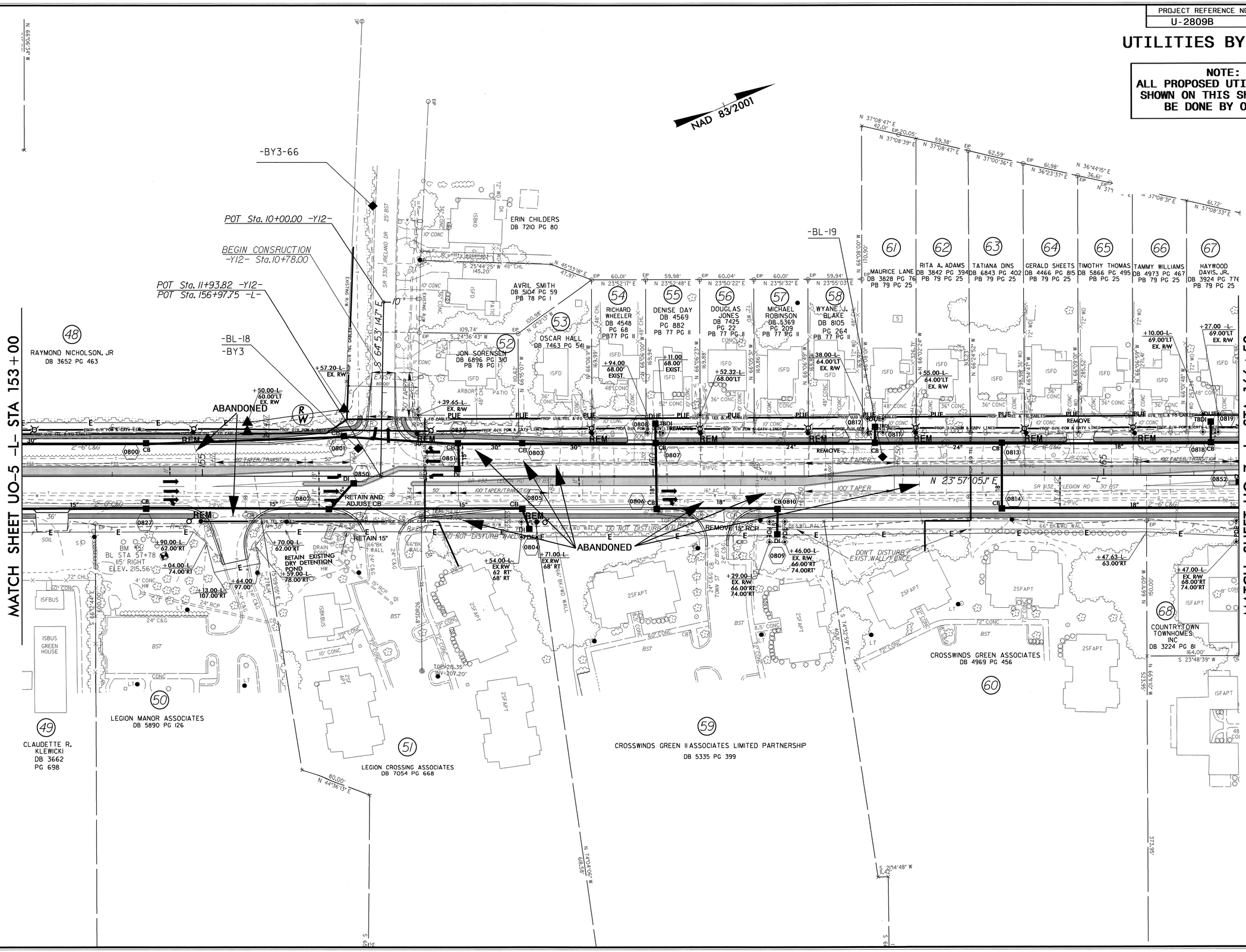
| U-2809B | U0-6 |

# UTILITIES BY OTHERS

**NOTE:**
**ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS**




5/14/99

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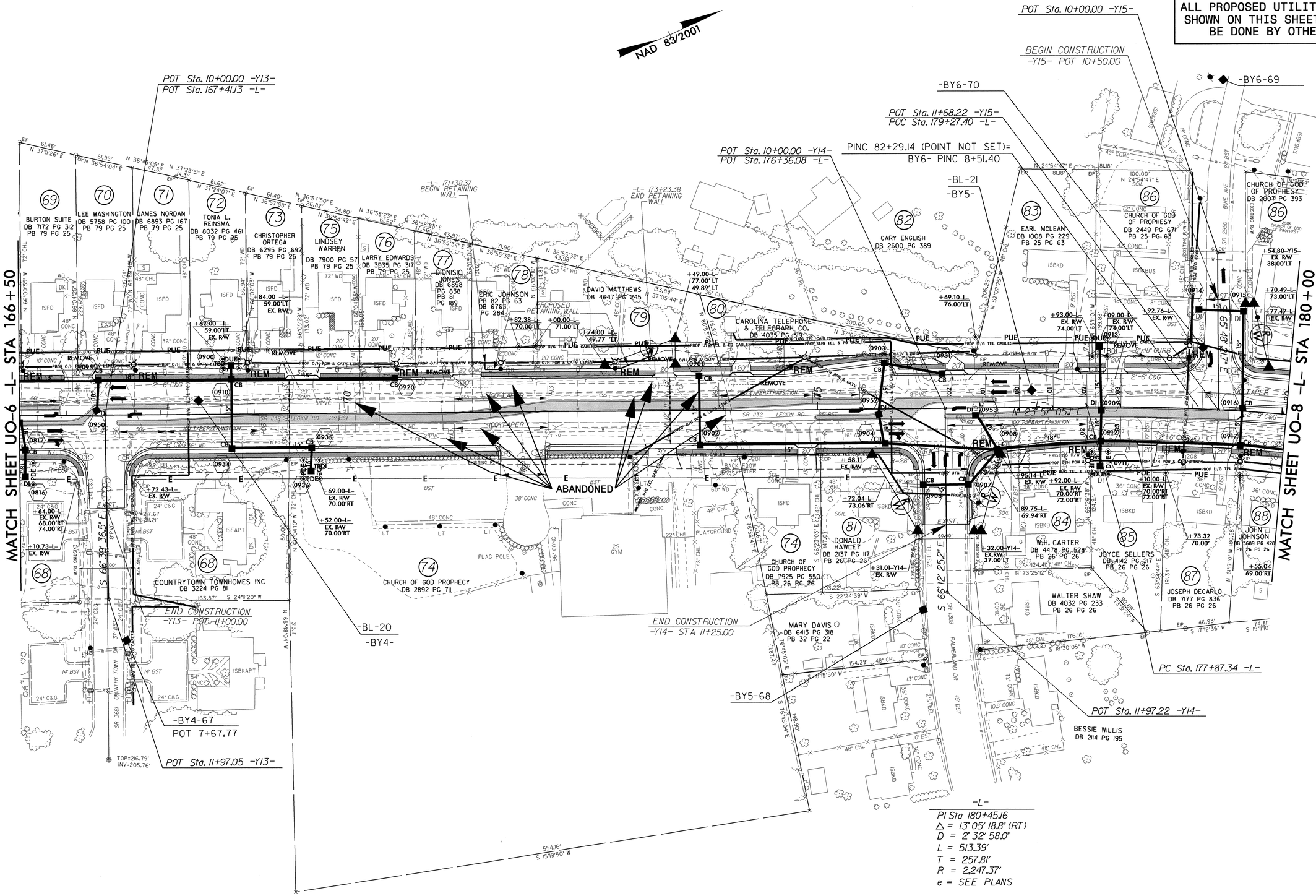
| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | U0-7 |

# UTILITIES BY OTHERS

**NOTE:**
**ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS**




5/14/99

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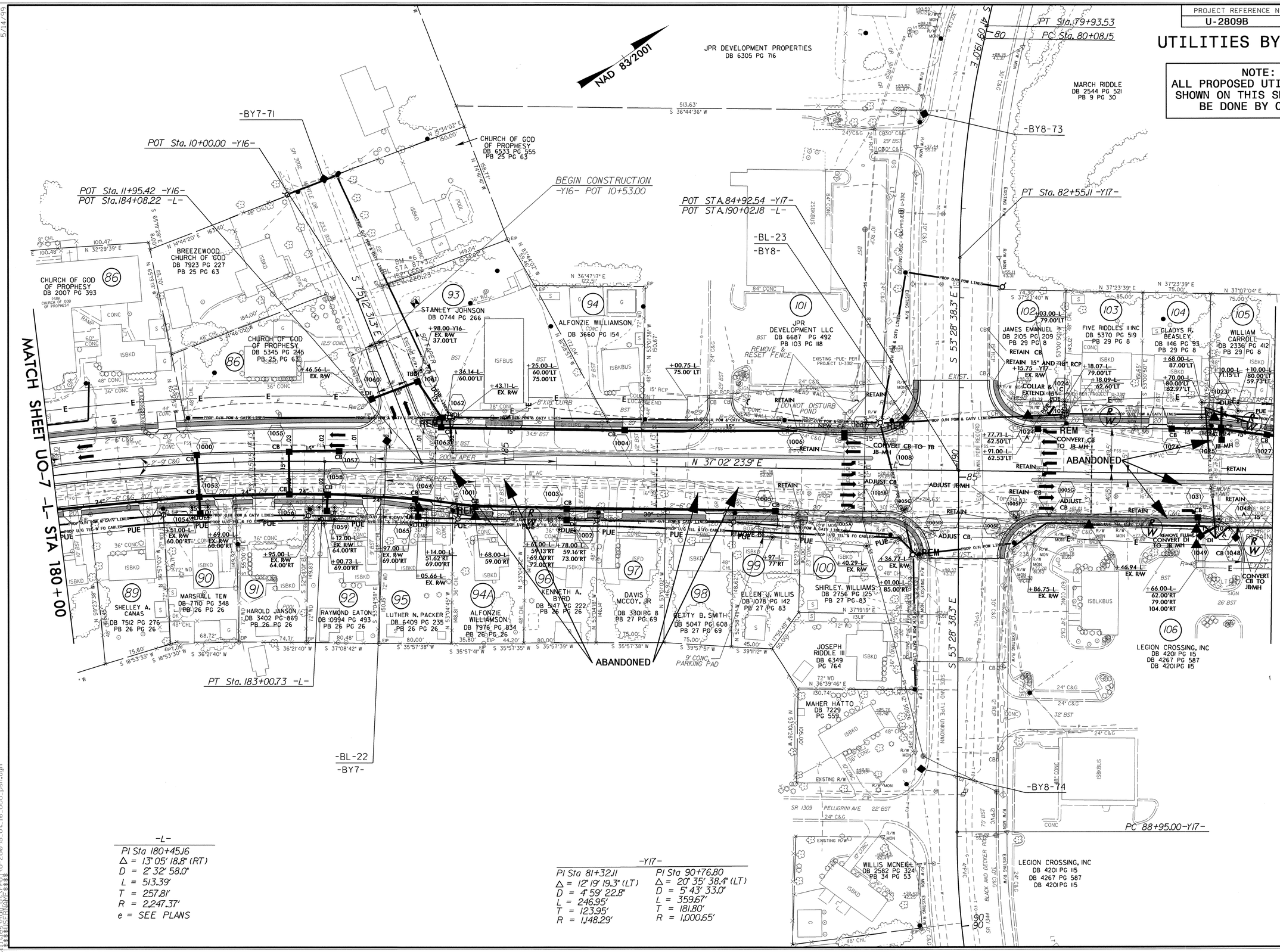
| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | U0-8 |

# UTILITIES BY OTHERS

**NOTE:**
**ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS**




-L-

PI Sta 180+45.16
Δ = 13° 05' 18.8" (RT)
D = 2° 32' 58.0"
L = 513.39'
T = 257.81'
R = 2,247.37'
e = SEE PLANS

-Y17-

PI Sta 81+32.11
Δ = 12° 19' 19.3" (LT)
D = 4° 59' 22.8"
L = 246.95'
T = 123.95'
R = 1,148.29'

PI Sta 90+76.80
Δ = 20° 35' 38.4" (LT)
D = 5° 43' 33.0"
L = 359.67'
T = 181.80'
R = 1,000.65'

5/14/99

04-JUN-2012 14:21
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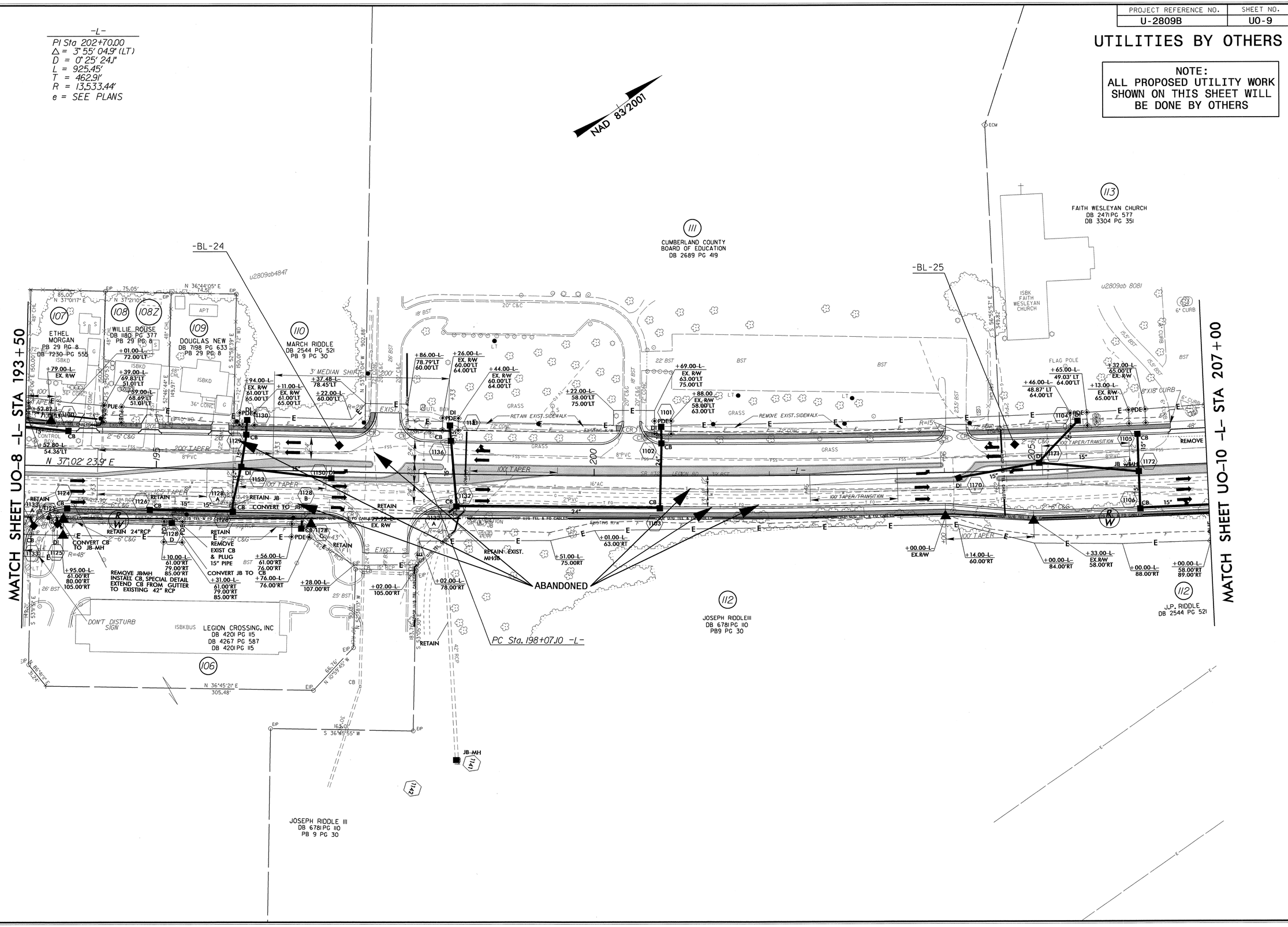
$$$$USERNAME$$$$

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | U0-9 |

# UTILITIES BY OTHERS

**NOTE:**
**ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS**




5/14/99

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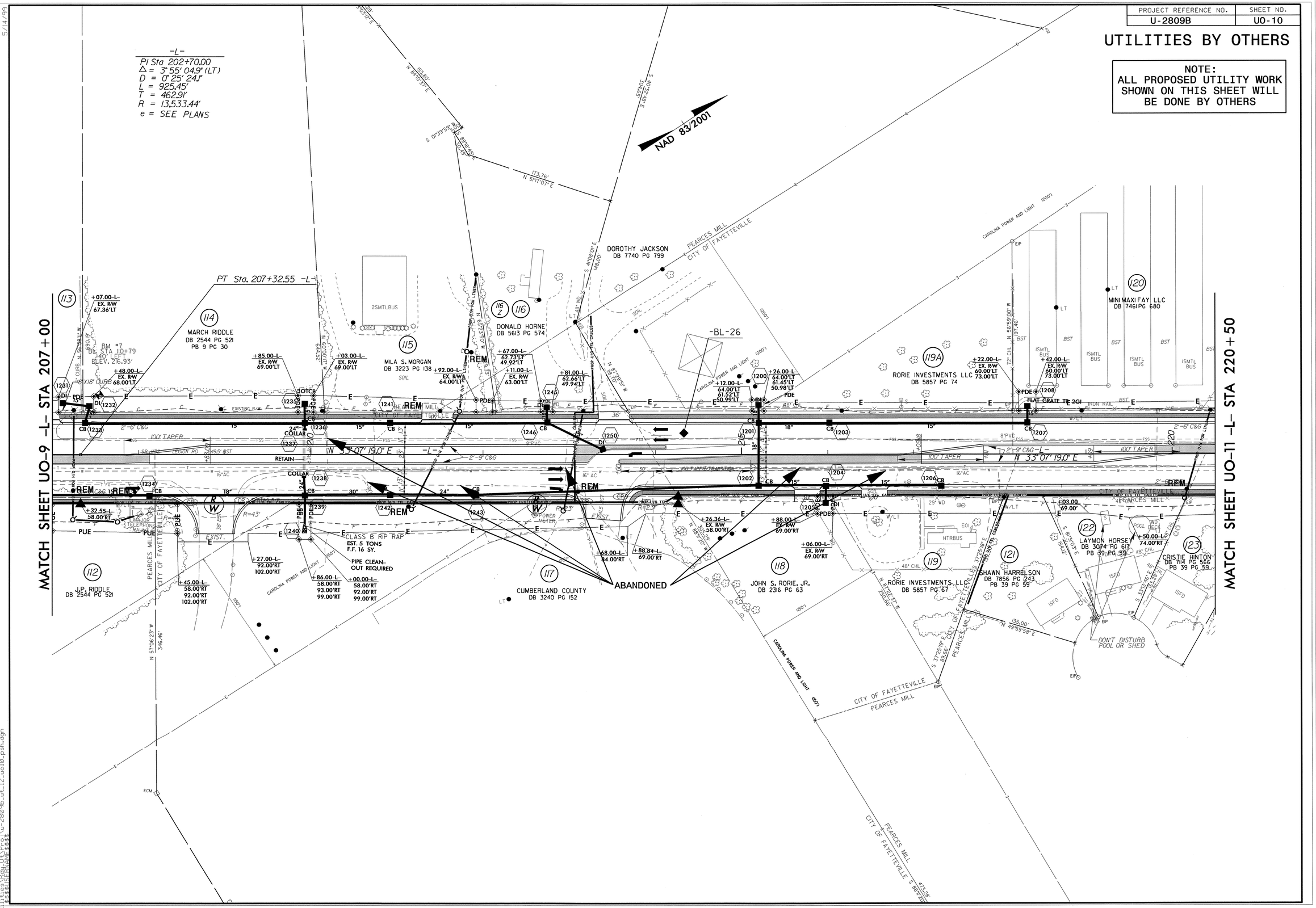
| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | UO-10 |

# UTILITIES BY OTHERS

**NOTE:**
**ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS**



| PROJECT REFERENCE NO. | SHEET NO. |
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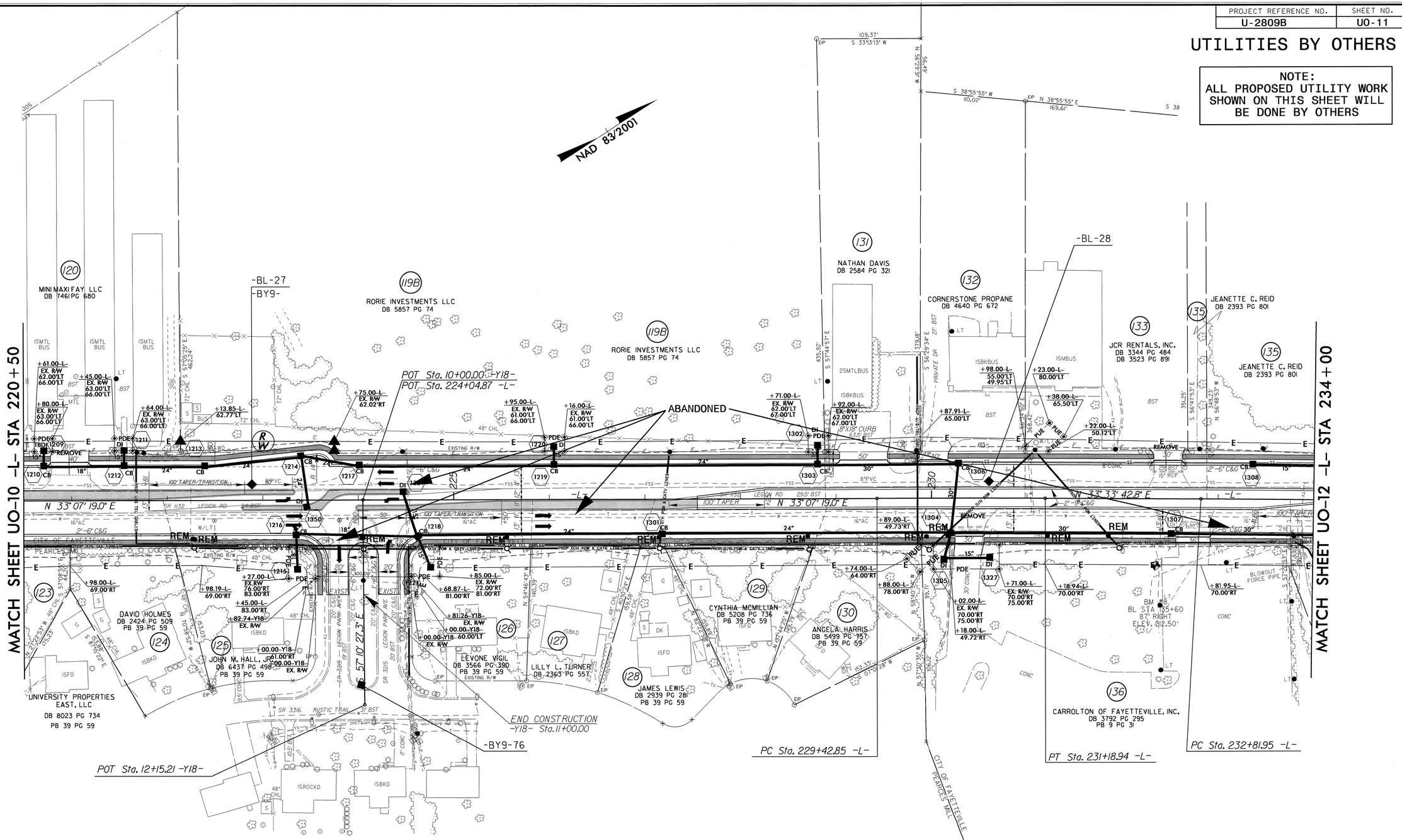
| U-2809B | U0-11 |

# UTILITIES BY OTHERS

**NOTE:**
**ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS**



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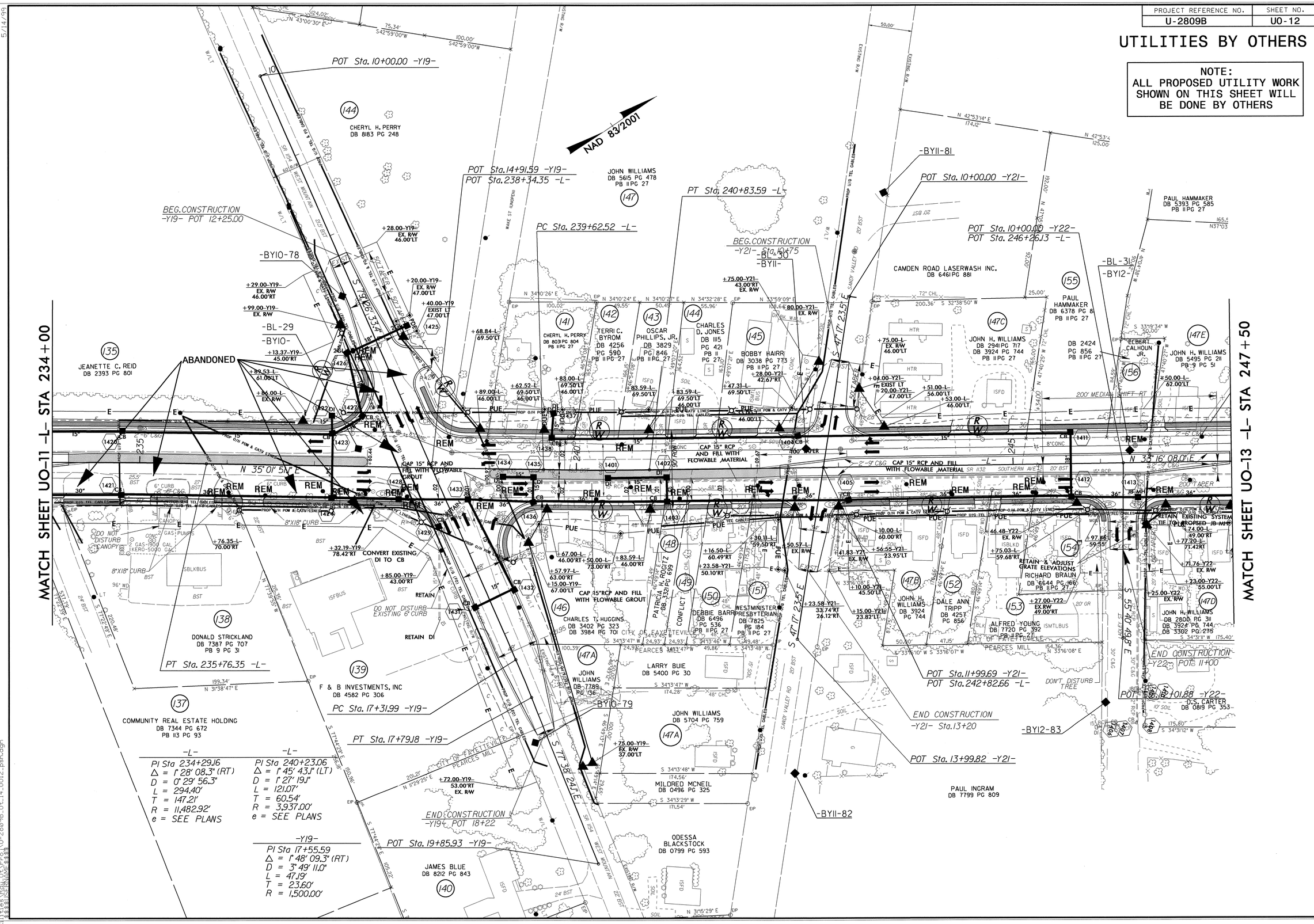
|---|---|
| U-2809B | U0-12 |

# UTILITIES BY OTHERS

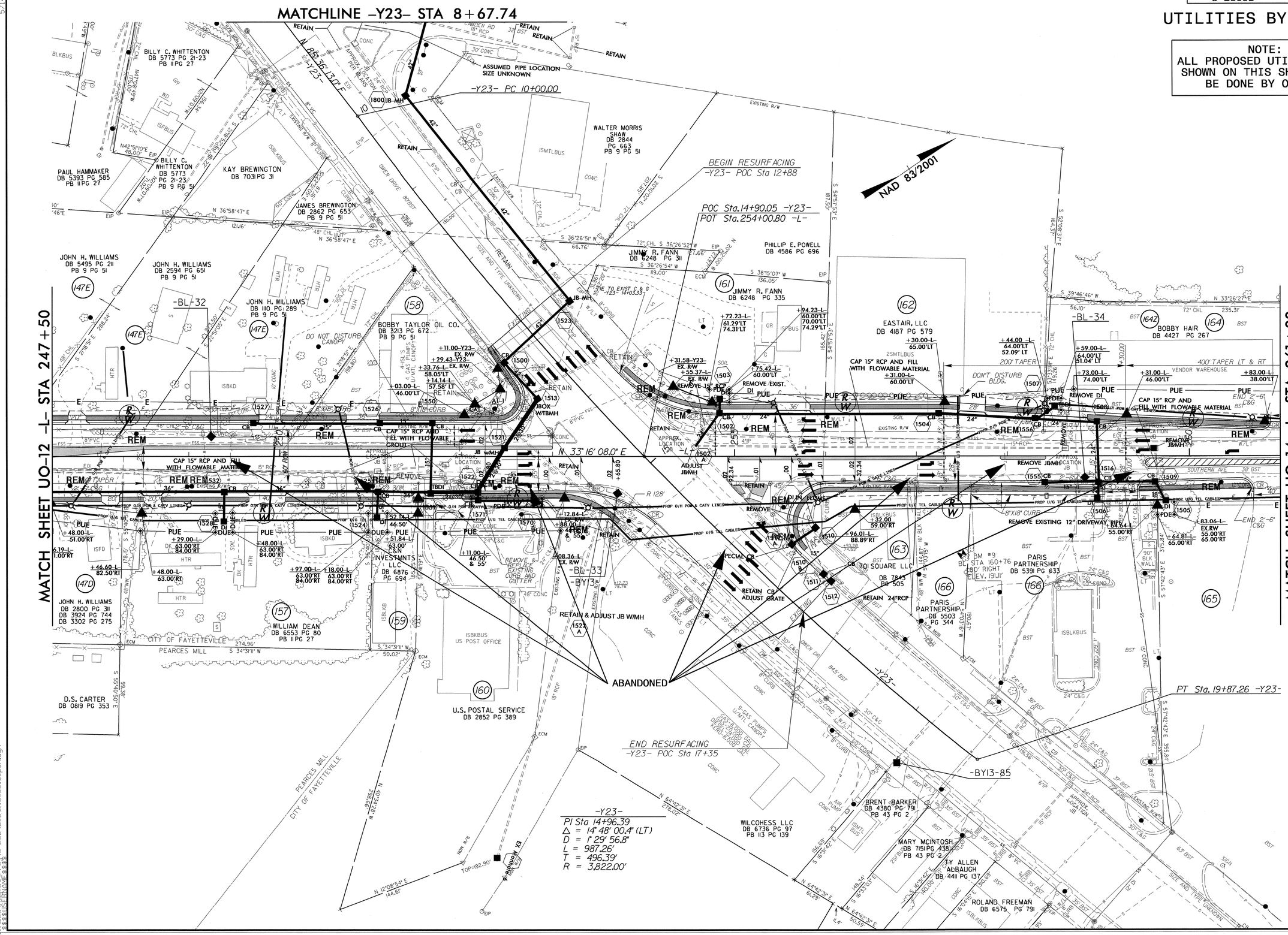
**NOTE:**
**ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS**



| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | U0-13 |

# UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS




5/14/99

04-JUN-2012 14:16
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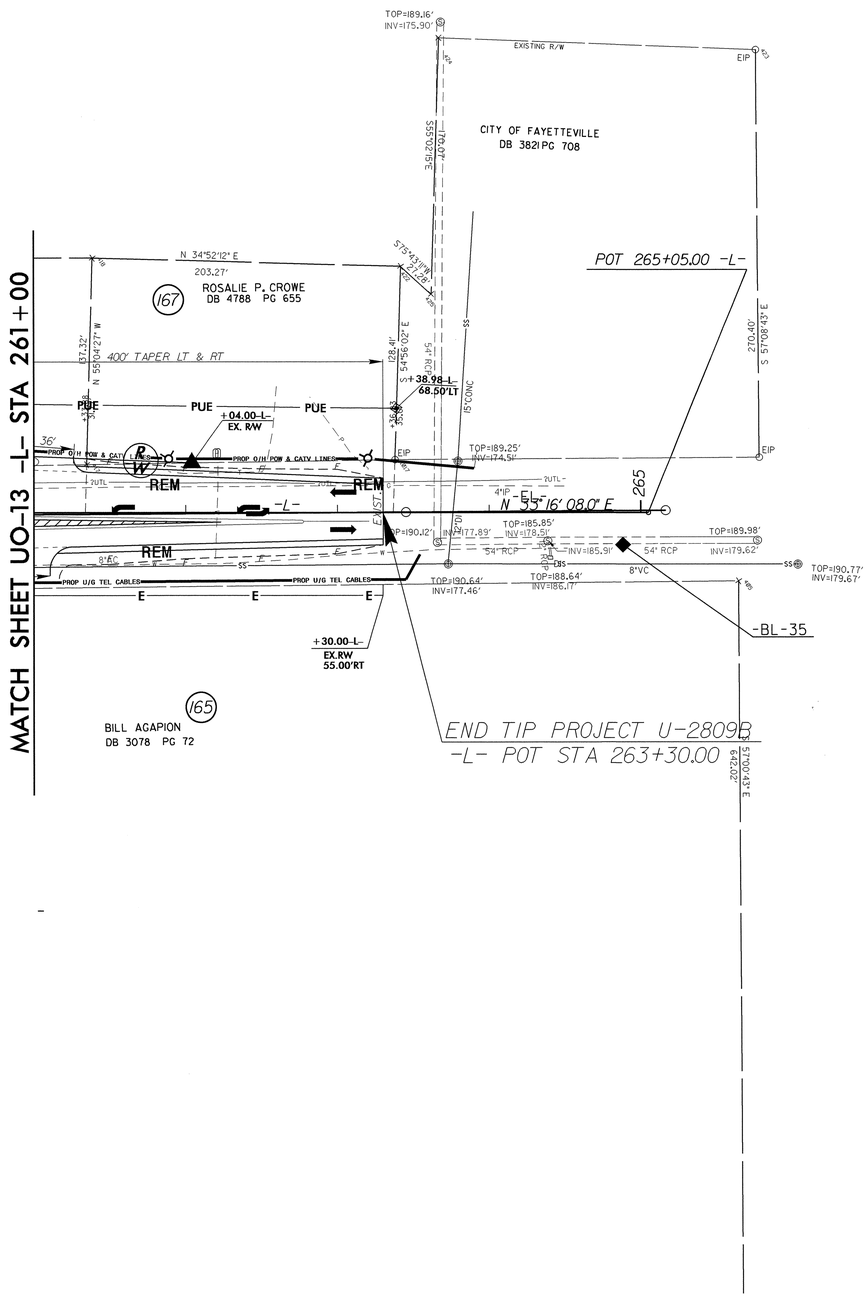
| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2809B | U0-14 |

# UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS

NAD 83/2001




5/14/99
04-JUN-2012 14:16
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