

TIP PROJECT: B-4071

WBS NUMBER: 33434.1.1

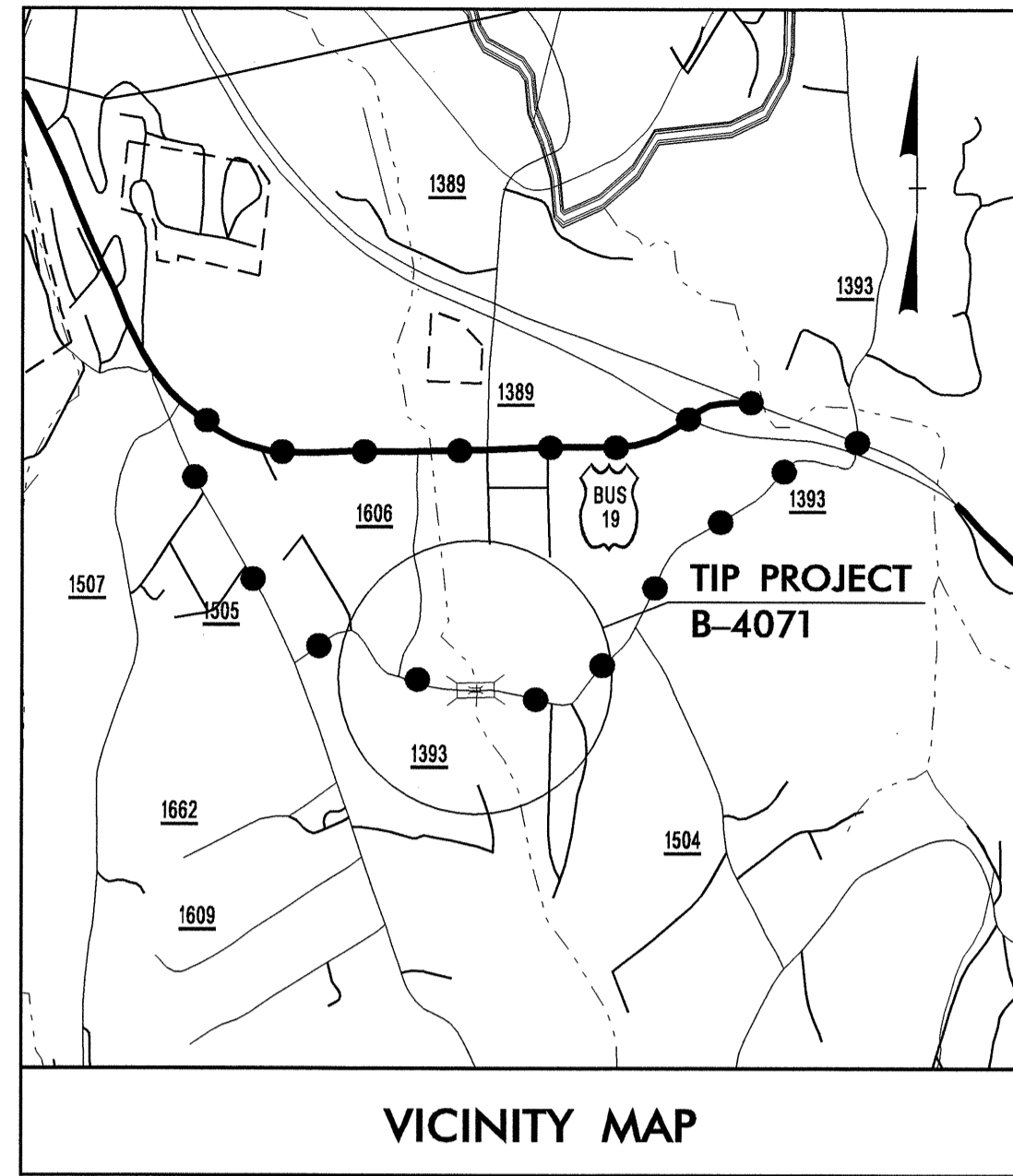
T.I.P. NO.	SHEET NO.
B-4071	UC-1

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**UTILITY CONSTRUCTION PLANS**  
**CHEROKEE COUNTY**

LOCATION: Bridge No.32 over Junaluska Creek on SR 1393 (Wakefield Road)

TYPE OF WORK: Utilities Relocation

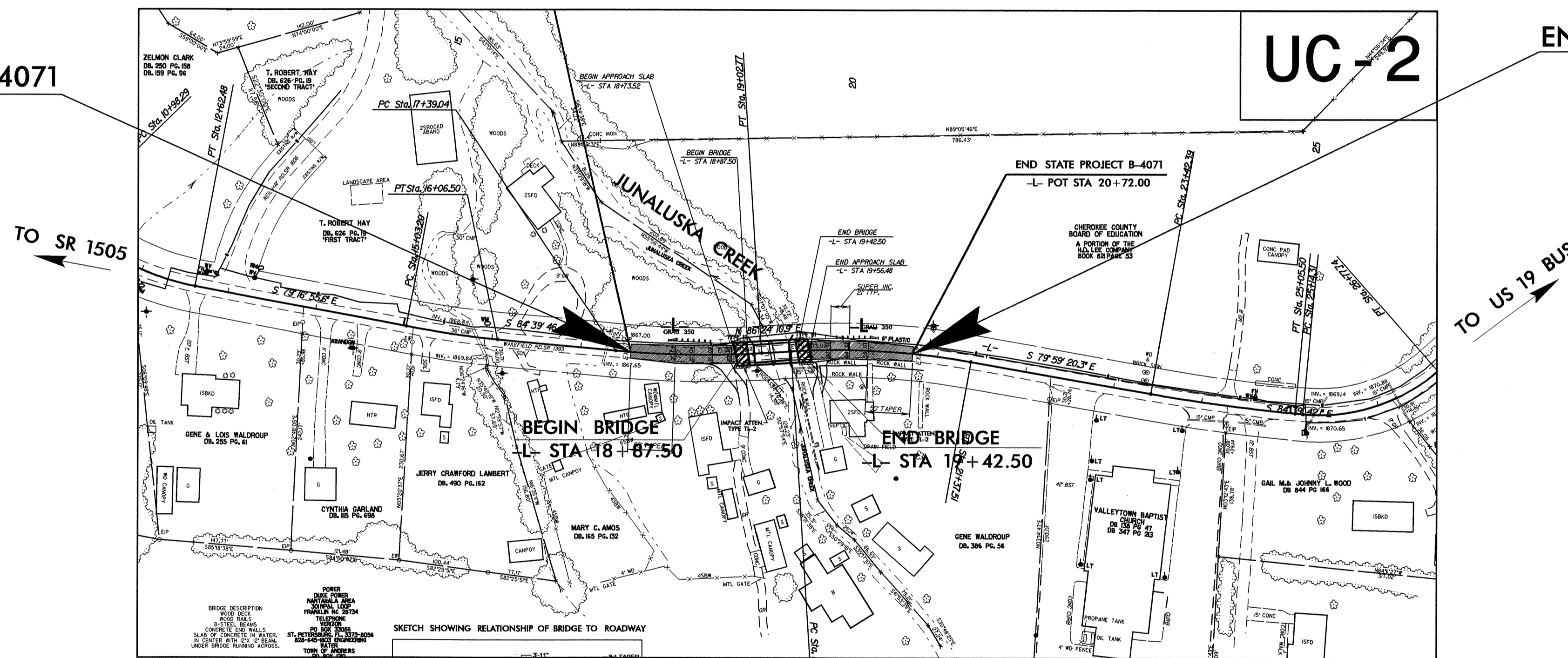


VICINITY MAP

DETOUR —●—●—●—

BEGIN TIP PROJECT B-4071  
-L- STA 17+56.00

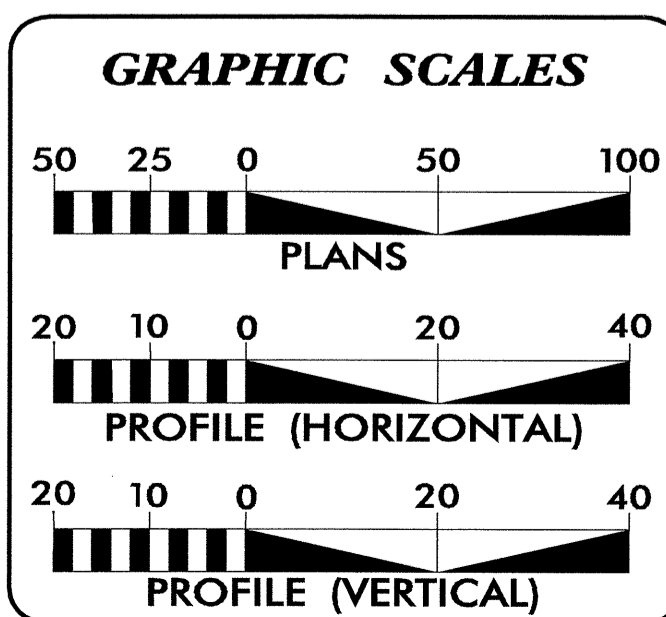
END TIP PROJECT B-4071  
-L- STA 20+72.00



NCDOT CONTACTS: CATHY S. HOUSER, PE, PROJECT ENGINEER – ROADWAY DESIGN  
ROBERT J. STROUP, PE, PROJECT DESIGN ENGINEER – ROADWAY DESIGN

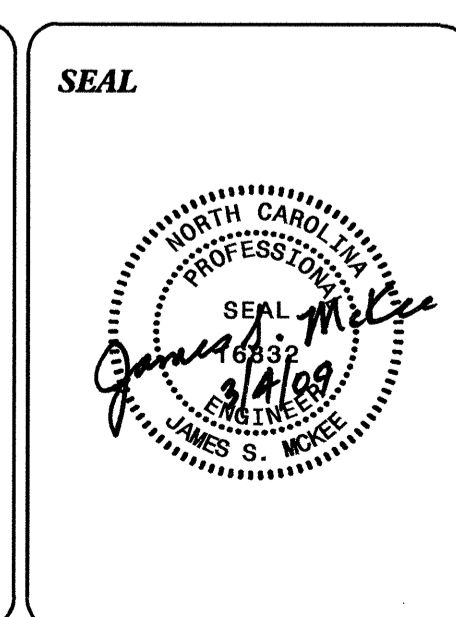
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

THIS PROJECT IS NOT WITHIN THE TOWN OF ANDREWS MUNICIPAL BOUNDARY.



SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	UTILITY CONSTRUCTION PLAN SHEET
UC-3	DETAIL SHEET

WATER AND SEWER OWNERS ON PROJECT
(1) TOWN OF ANDREWS - WATER



PREPARED IN THE OFFICE OF:  
**DIVISION OF HIGHWAYS**  
**UTILITIES ENGINEERING SECTION**

1591 MAIL SERVICES CENTER  
RALEIGH, NC 27699-1591  
PHONE (919) 250-4128  
FAX (919) 250-4119

**Roger Worthington, P.E.** UTILITIES SECTION ENGINEER  
**Steve McKee, P.E.** UTILITIES SQUAD LEADER PROJECT ENGINEER  
**Donald Proper** UTILITIES PROJECT DESIGNER

# UTILITY CONSTRUCTION

-L-	-L-
PI Sta 18+21.07	PI Sta 20+37.05
$\Delta = 8^{\circ} 56' 02.7''$ (LT)	$\Delta = 13^{\circ} 36' 28.7''$ (RT)
$D = 5^{\circ} 27' 24.3''$	$D = 6^{\circ} 44' 26.4''$
$L = 163.73'$	$L = 201.88'$
$T = 82.03'$	$T = 101.42'$
$R = 1,050.00'$	$R = 850.00'$
SE = SEE PLAN	SE = SEE PLAN

NOTE: MINIMIZE DISTURBANCE TO ROCK WALLS ON PARCELS 3 AND 4. DO NOT DISTURB ROCK WALL ALONG STREAM BANK AT PARCEL 4.

PROP. 25' - TRENCHLESS INSTALLATION OF 6" WATER LINE IN SOIL  
 PROP. 25' - TRENCHLESS INSTALLATION OF 6" WATER LINE NOT IN SOIL  
 PROP. 50' - 6" WATER LINE  
 THE MATERIAL USED FOR TRENCHLESS INSTALLATION PIPE INSIDE DIMENSION SHALL BE EQUIVALENT TO 6" INSIDE DIAMETER  
 MAINTAIN 7' MINIMUM CLEARANCE FROM BOTTOM OF CREEK CHANNEL TO TOP OF PIPE

PROP. 130' - 6" WATER LINE BY OPEN TRENCH INSTALLATION

END STATE PROJECT B-4071  
 -L- POT STA 20+72.00  
 PROP. 22-1/2 DEGREE BEND

PROP. 150' - 6" WATER LINE BY OPEN TRENCH INSTALLATION

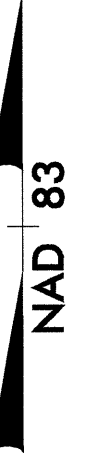
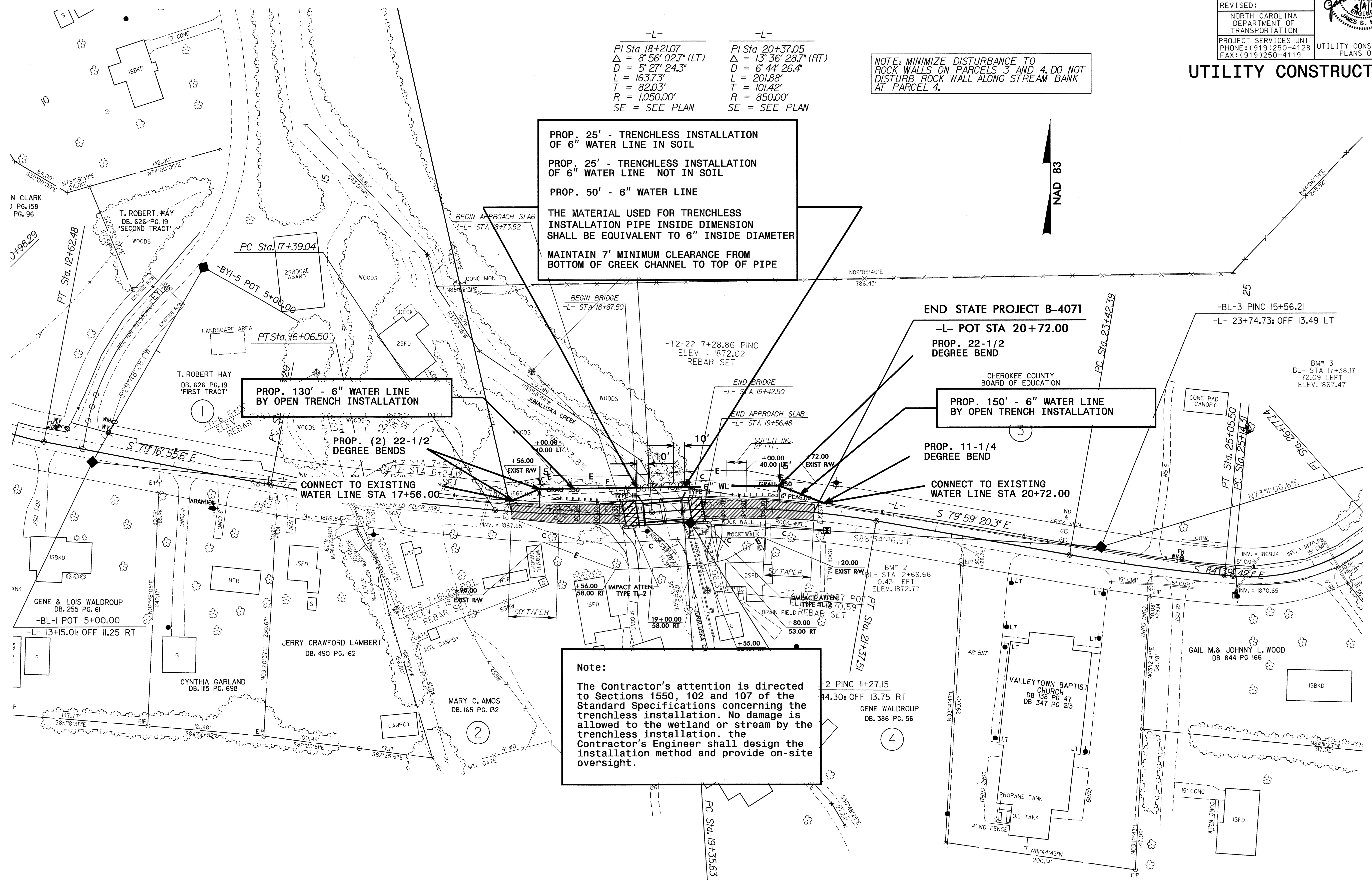
PROP. 11-1/4 DEGREE BEND

CONNECT TO EXISTING WATER LINE STA 20+72.00

PROP. (2) 22-1/2 DEGREE BENDS

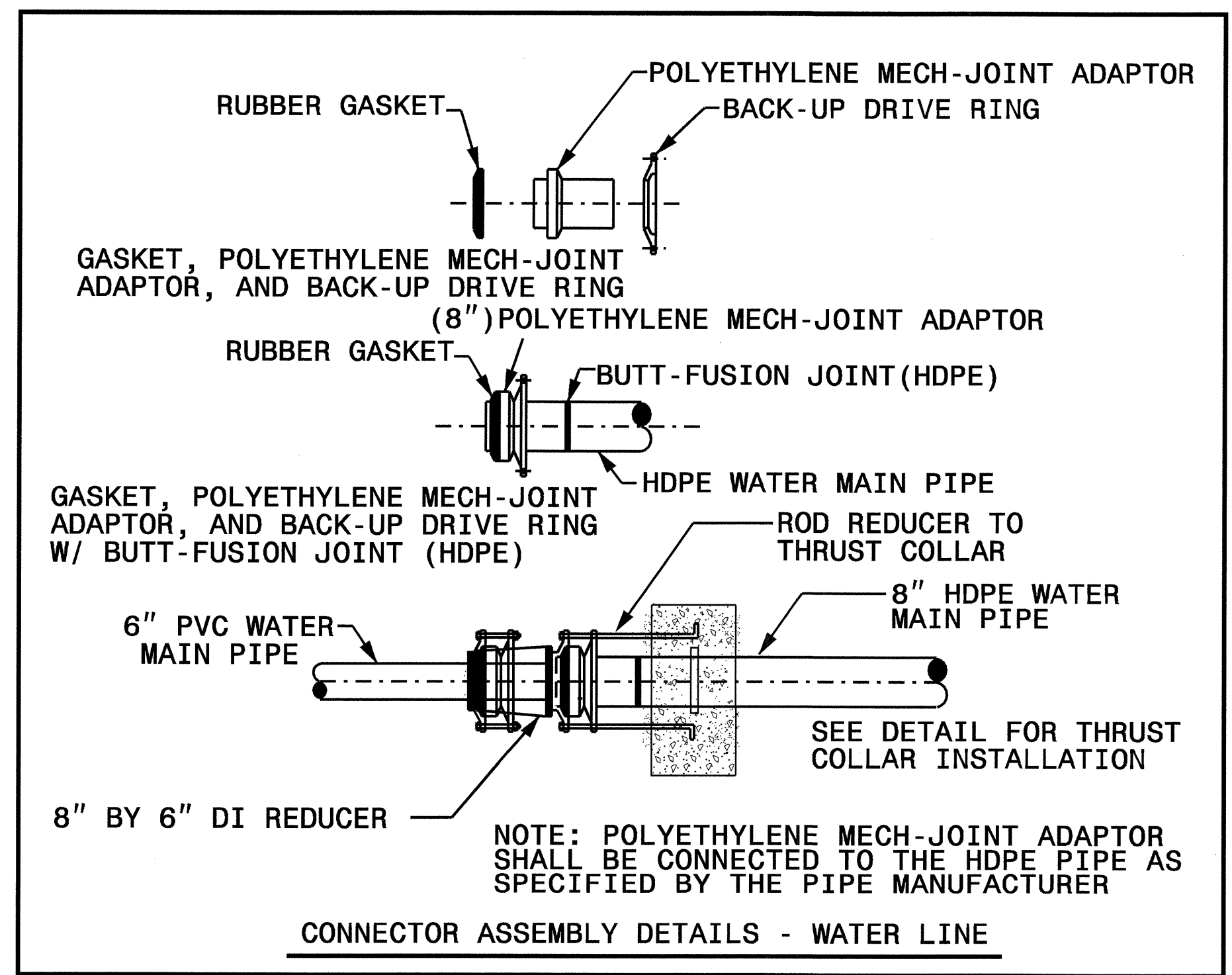
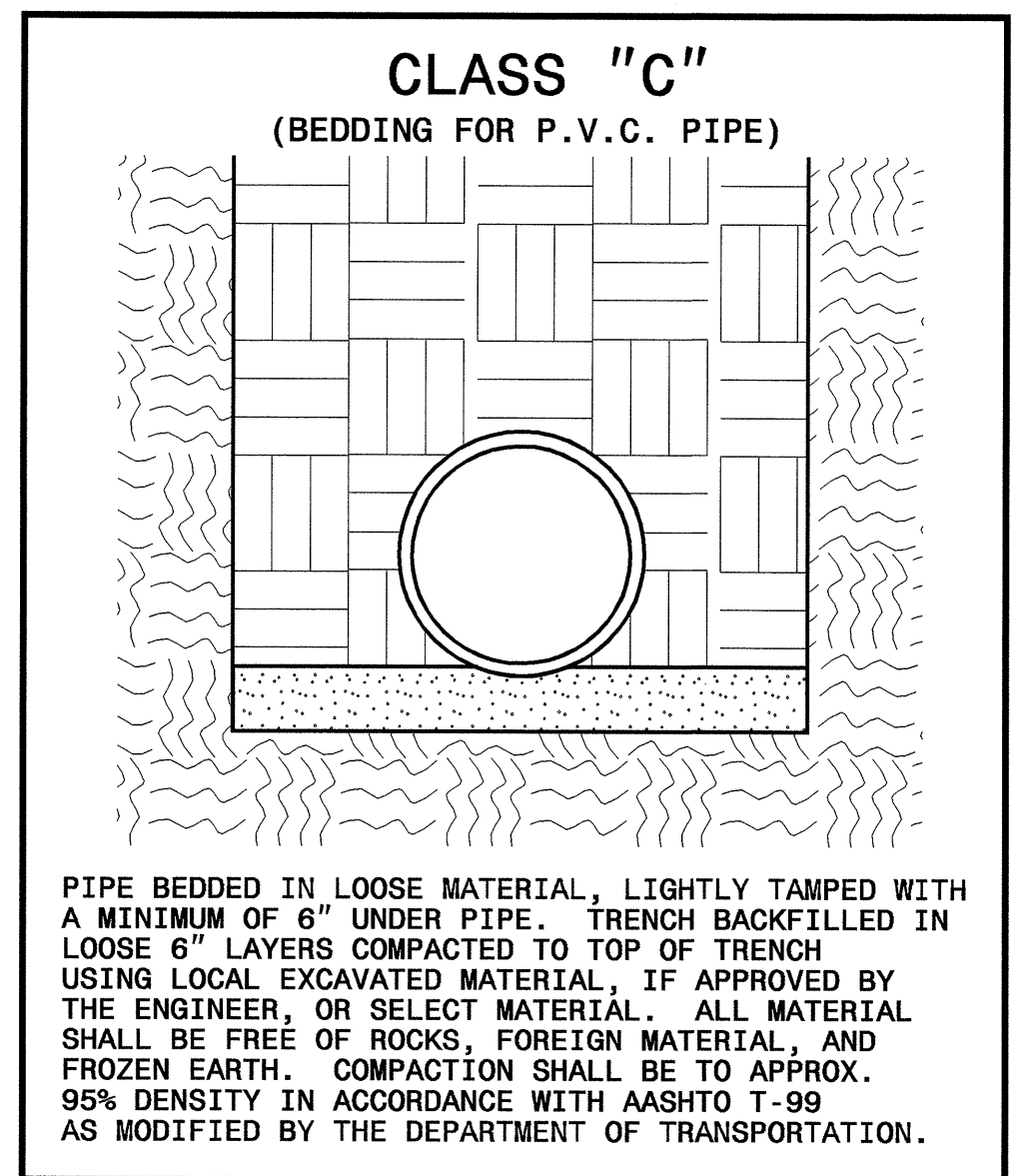
CONNECT TO EXISTING WATER LINE STA 17+56.00

Note:  
 The Contractor's attention is directed to Sections 1550, 102 and 107 of the Standard Specifications concerning the trenchless installation. No damage is allowed to the wetland or stream by the trenchless installation. The Contractor's Engineer shall design the installation method and provide on-site oversight.

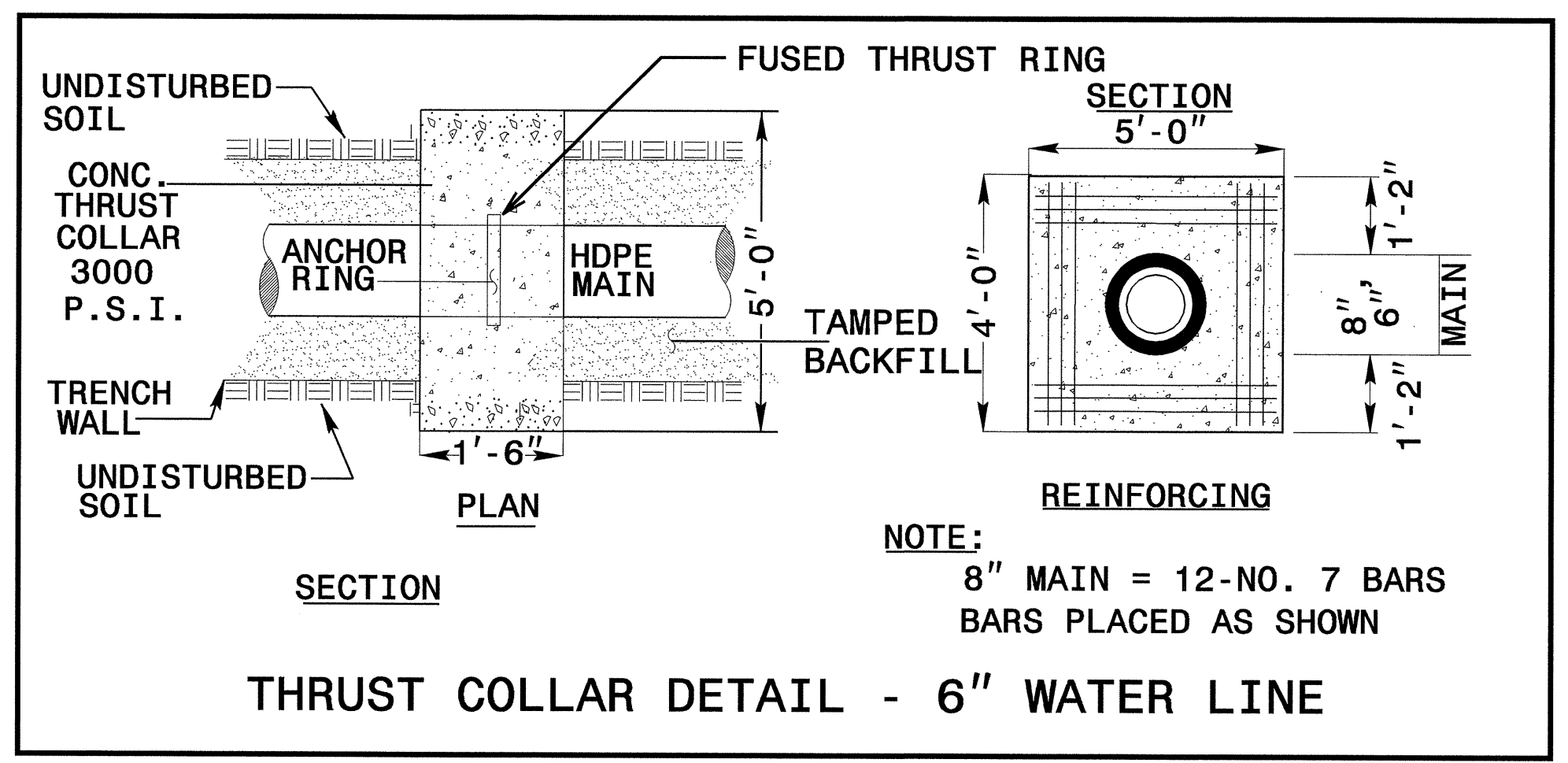


UTILITY CONSTRUCTION

MAXIMUM TRENCH WIDTH AT TOP OF PIPE			
NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)	NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)
4	28	20	44
6	30	24	48
8	32	30	54
10	34	36	60
12	36	42	66
14	38	48	72
16	40	54	78
18	42		



(IF HDPE PIPE IS USED)

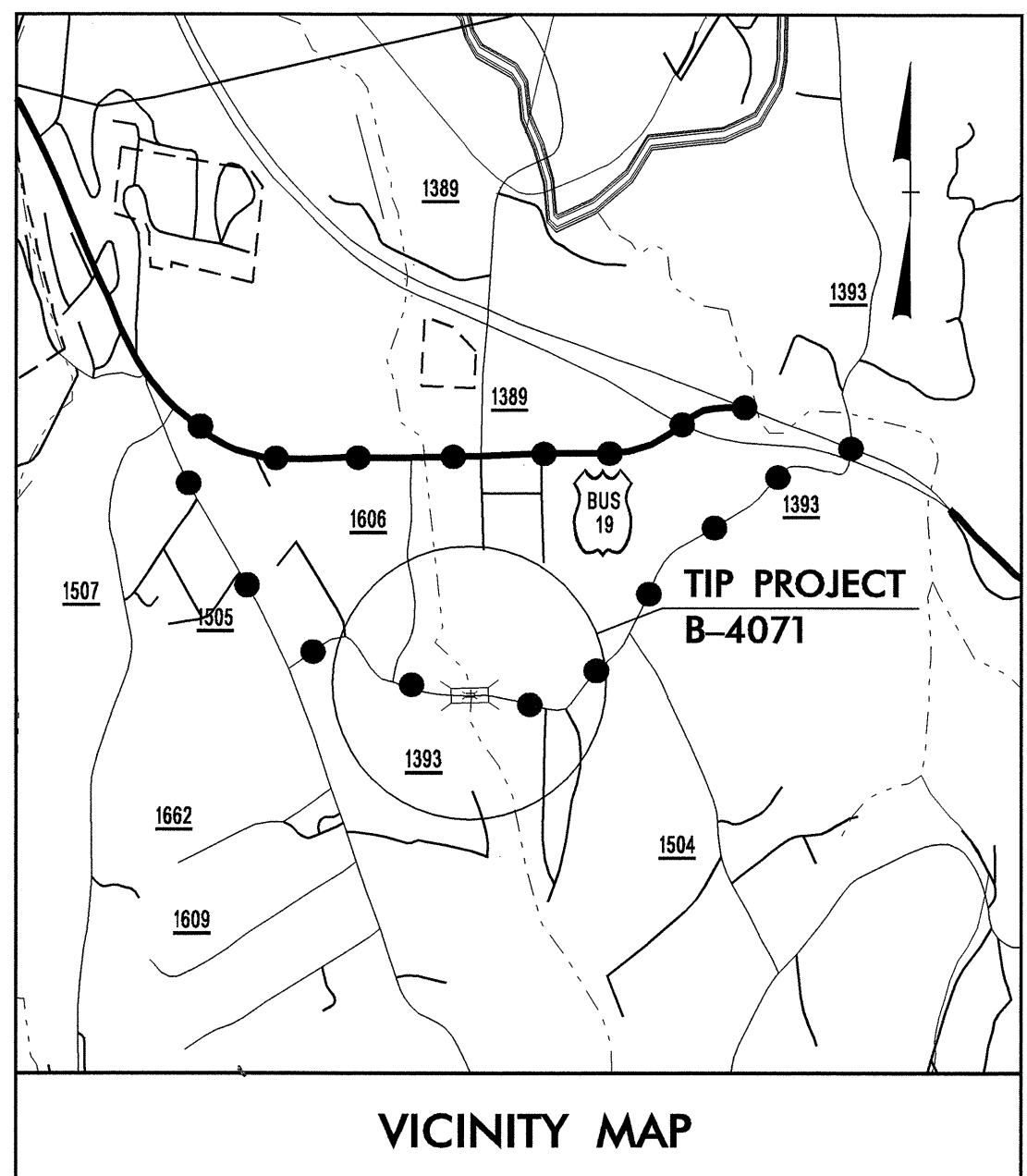


(IF HDPE PIPE IS USED)

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**UTILITIES BY OTHERS PLANS  
CHEROKEE COUNTY**

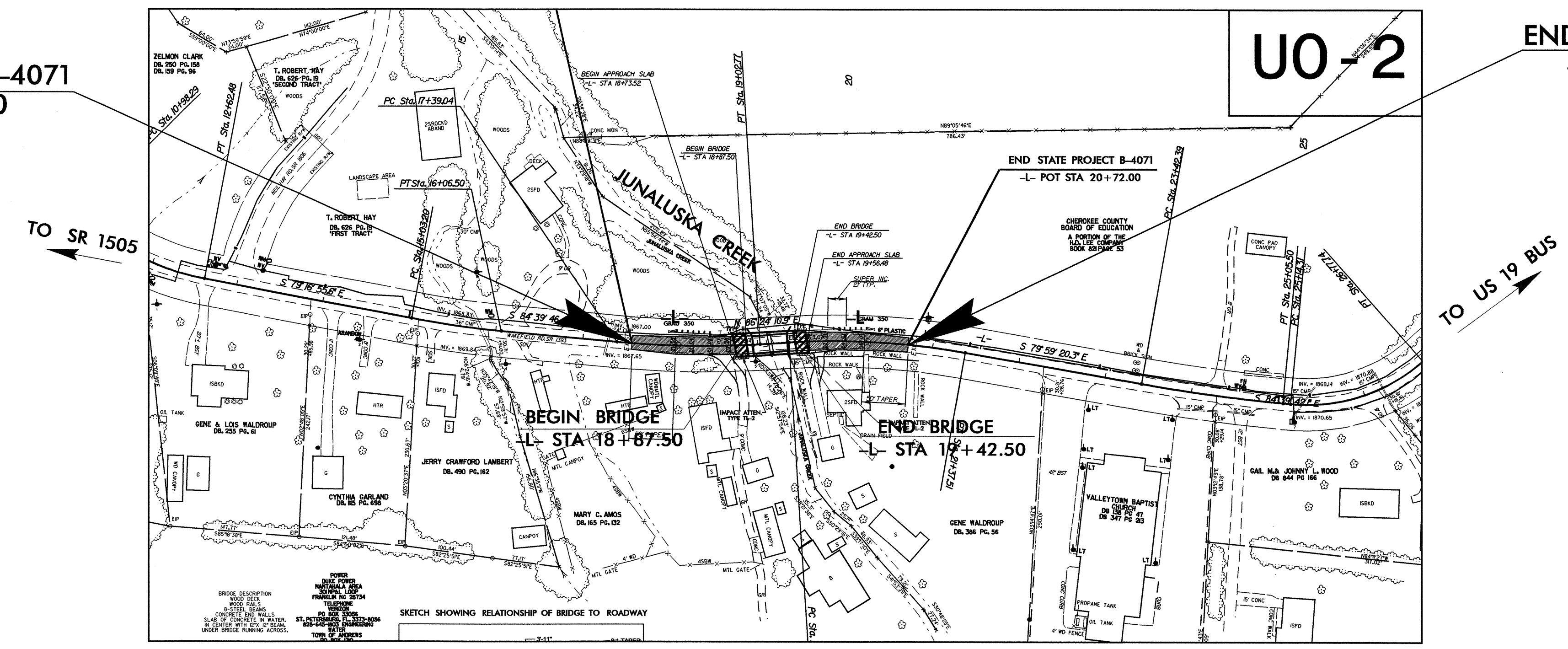
**LOCATION:** Bridge No. 32 over Junaluska Creek on S.R. 1393 (Wakefield Road)  
**TYPE OF WORK:** Utility Construction



DETOUR —●—●—●—

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-L- STA 17+56.00

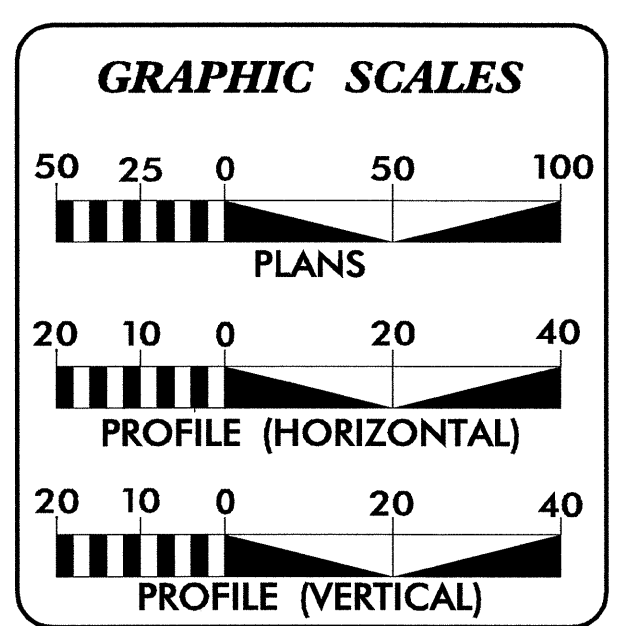
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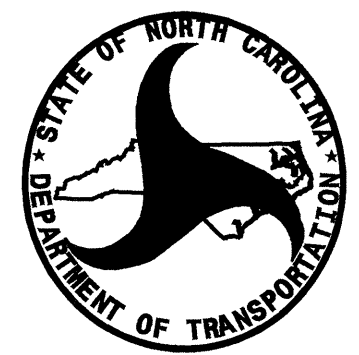
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INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2	UTILITIES BY OTHERS PLAN SHEET

UTILITY OWNERS ON PROJECT
(1) DUKE ENERGY – POWER
(2) VERIZON – TELEPHONE



PREPARED IN THE OFFICE OF:  
**DIVISION OF HIGHWAYS  
PROJECT SERVICES  
UTILITY SECTION**  
1591 MAIL SERVICES CENTER  
RALEIGH NC 27699-1591  
PHONE (919) 250-4128  
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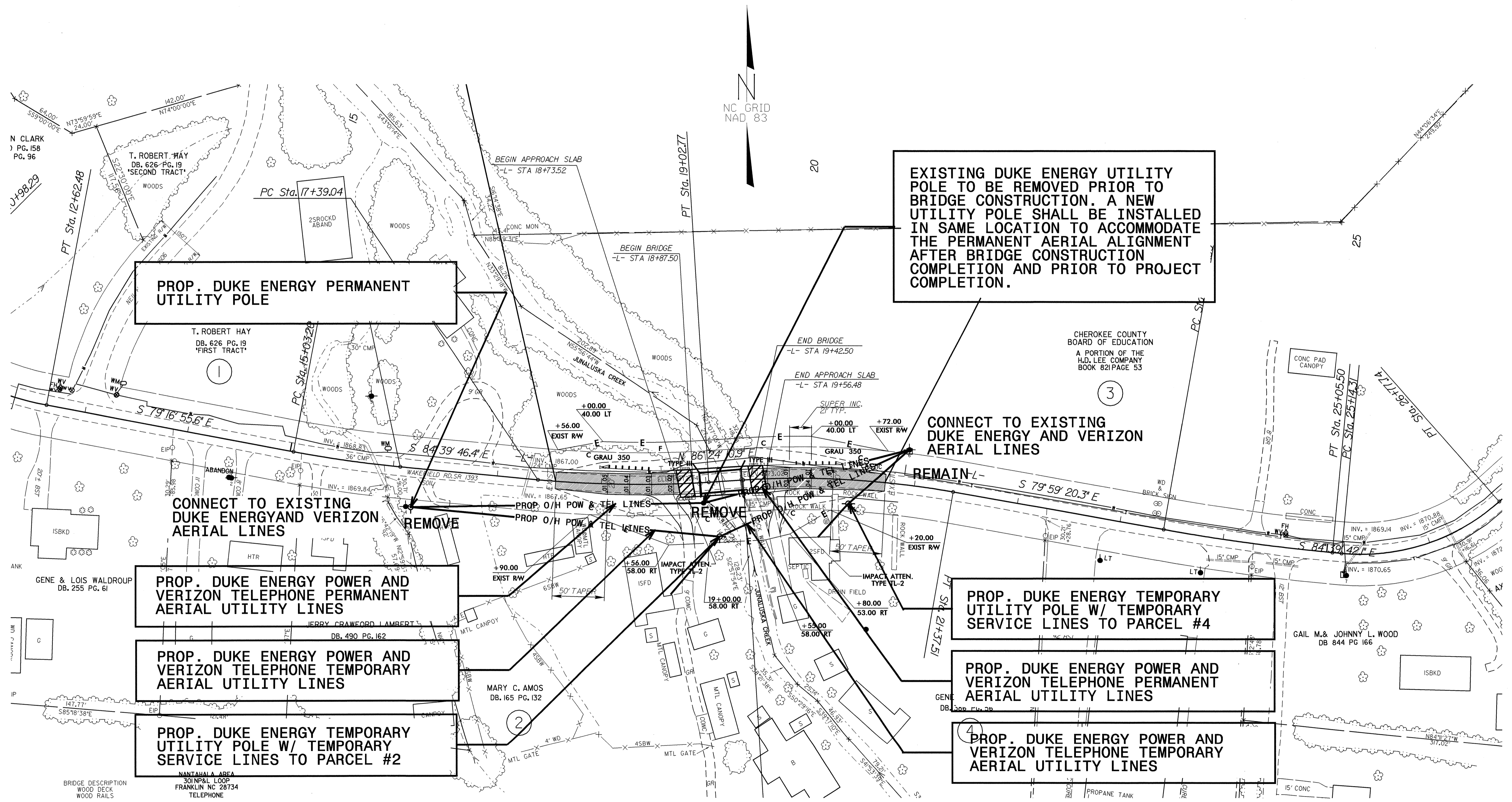
TIP PROJECT: B-4071

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\$\$\$\$\$USERNAME\$\$\$\$\$

### UTILITIES BY OTHERS

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



**PROP. DUKE ENERGY PERMANENT UTILITY POLE**

**EXISTING DUKE ENERGY UTILITY POLE TO BE REMOVED PRIOR TO BRIDGE CONSTRUCTION. A NEW UTILITY POLE SHALL BE INSTALLED IN SAME LOCATION TO ACCOMMODATE THE PERMANENT AERIAL ALIGNMENT AFTER BRIDGE CONSTRUCTION COMPLETION AND PRIOR TO PROJECT COMPLETION.**

**CONNECT TO EXISTING DUKE ENERGY AND VERIZON AERIAL LINES**

**CONNECT TO EXISTING DUKE ENERGY AND VERIZON AERIAL LINES**

**PROP. DUKE ENERGY POWER AND VERIZON TELEPHONE PERMANENT AERIAL UTILITY LINES**

**PROP. DUKE ENERGY TEMPORARY UTILITY POLE W/ TEMPORARY SERVICE LINES TO PARCEL #4**

**PROP. DUKE ENERGY POWER AND VERIZON TELEPHONE TEMPORARY AERIAL UTILITY LINES**

**PROP. DUKE ENERGY POWER AND VERIZON TELEPHONE PERMANENT AERIAL UTILITY LINES**

**PROP. DUKE ENERGY TEMPORARY UTILITY POLE W/ TEMPORARY SERVICE LINES TO PARCEL #2**

**PROP. DUKE ENERGY POWER AND VERIZON TELEPHONE TEMPORARY AERIAL UTILITY LINES**

5/14/09  
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