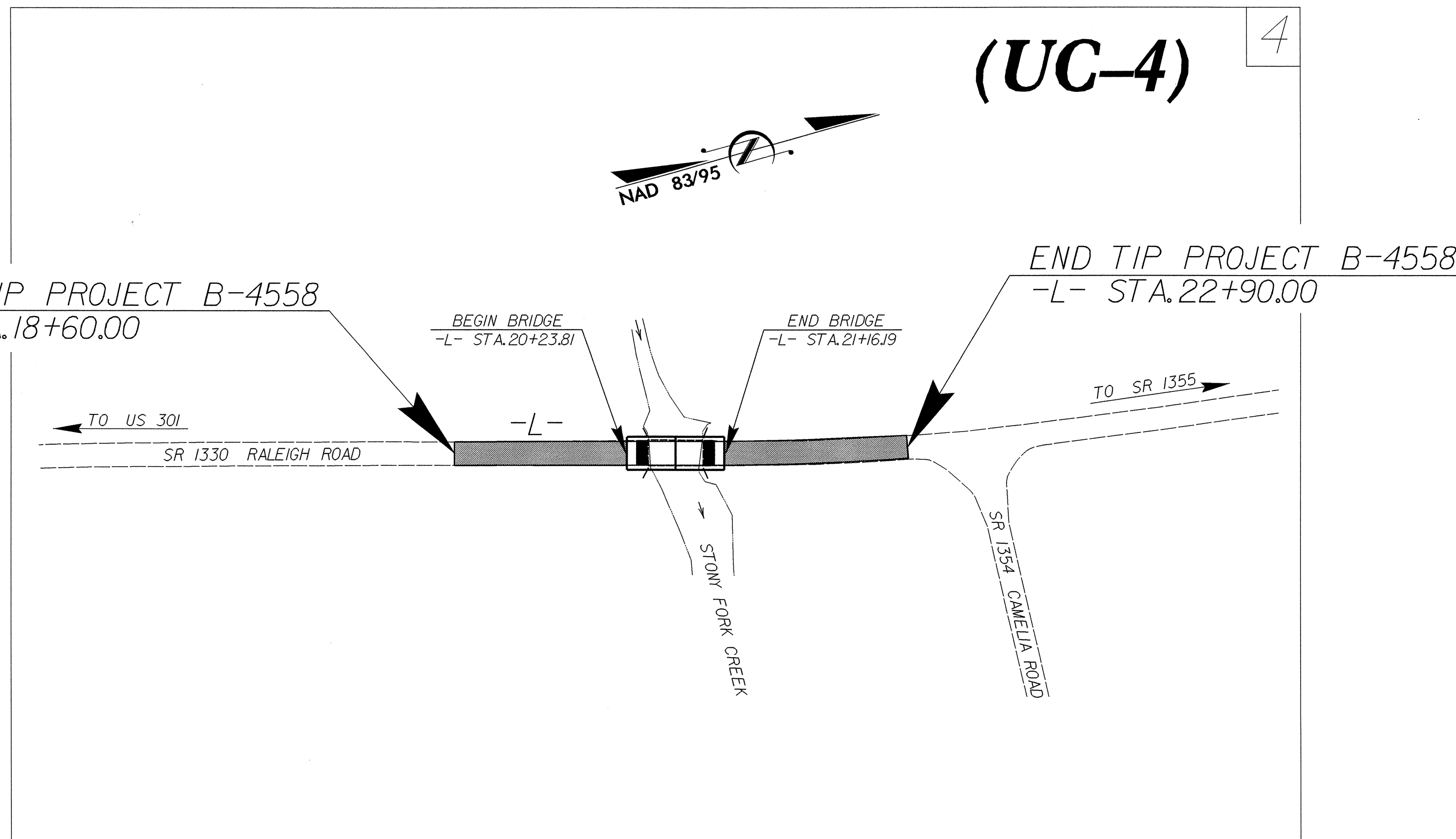
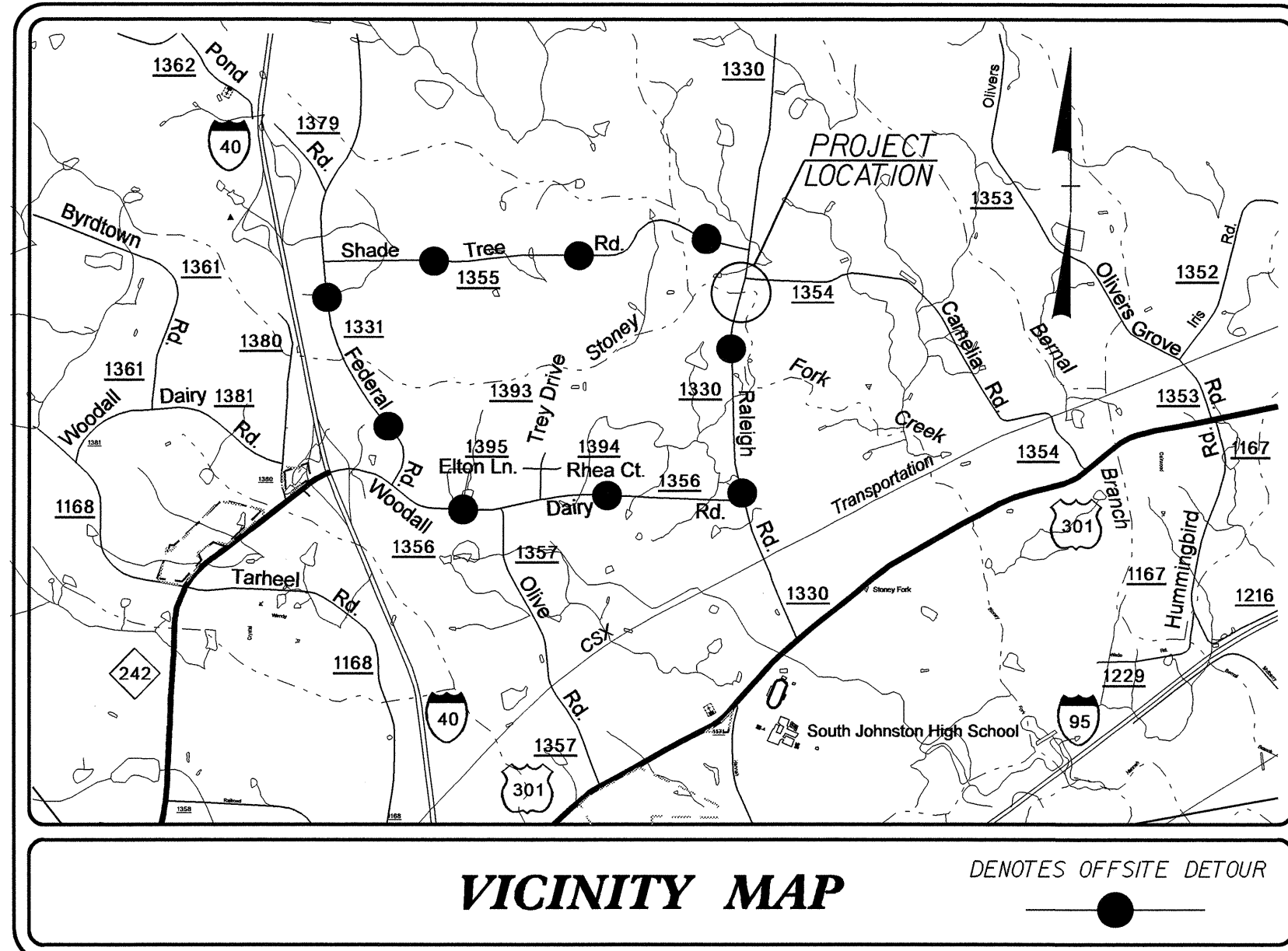


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

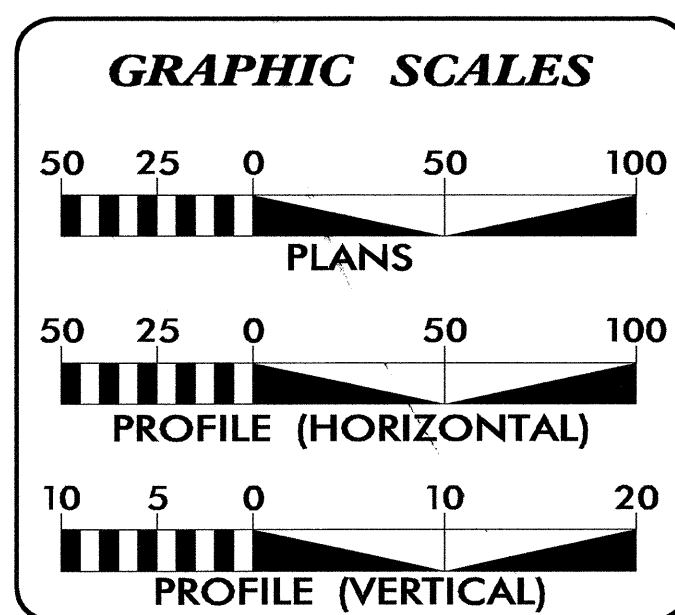
**UTILITY CONSTRUCTION PLANS
JOHNSTON COUNTY**

**LOCATION: BRIDGE NO. 86 OVER STONY FORK CREEK AND
APPROACHES ON SR 1330 (RALEIGH ROAD)**

TYPE OF WORK: UTILITIES RELOCATION



TIP PROJECT: B-4558

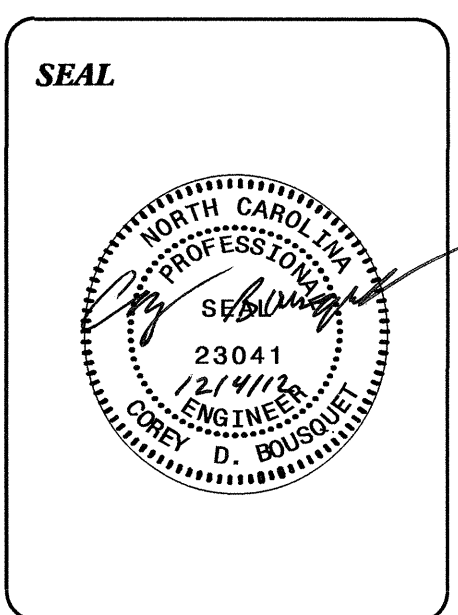


INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3	NOTES
UC-3A and UC-3B	DETAILS
UC-4	UTILITY CONSTRUCTION SHEET
UC-5 and UC-6	PROFILE SHEETS

WATER AND SEWER OWNERS ON PROJECT

(1) JOHNSTON COUNTY PUBLIC UTILITIES (WATER)



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
Corey Bousquet, P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER
Nabil Hamdan UTILITIES PROJECT DESIGNER

04-DEC-2012 15:44 R:\UTIL\1300\Proj\UT\B4558_rdy_UC_1.tsh.dgn \$\$\$USERNAME\$\$\$

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	
11 1/4 Degree Bend	
22 1/2 Degree Bend	
45 Degree Bend	
90 Degree Bend	
Plug	
Tee	
Cross	
Reducer	
Gate Valve	
Butterfly Valve	
Tapping Valve	
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	

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	
*Underground Telephone Cable	
*Underground Telephone Conduit	
*Underground Fiber Optics Telephone Cable	
*Underground TV Cable	
*Underground Fiber Optics TV Cable	
*Underground Gas Pipeline	
Aboveground Gas Pipeline	
*Underground Water Line	
Aboveground Water Line	
*Underground Gravity Sanitary Sewer Line	
Aboveground Gravity Sanitary Sewer Line	
*Underground SS Forced Main Line	
Underground Unknown Utility Line	
SUE Test Hole	
Water Meter	
Water Valve	
Fire Hydrant	
Sanitary Sewer Cleanout	

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

5/14/09
04-DEC-2012 15:45
R:\Utilities\Records\UC\Project\B4558\rdg\UC_1.shxdgn
REV: 2/11/2012

UTILITY CONSTRUCTION

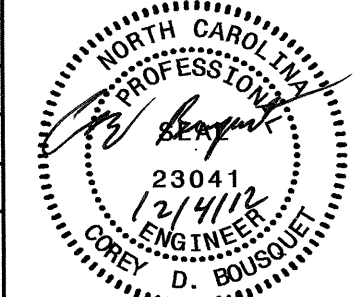
GENERAL NOTES:

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 **Johnston County Public Utilities**.
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 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. CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107, AND 1550 OF THE STANDARD SPECIFICATIONS CONCERNING TRENCHLESS INSTALLATION. IT IS CONTRACTOR'S RESPONSIBILITY TO HAVE BORE PATH DESIGNED AND SEALED BY A LICENSED NORTH CAROLINA PROFESSIONAL ENGINEER. NO DAMAGE IS ALLOWED TO RIVER, WETLANDS, OR BUFFER ZONES.
2. IF HDPE PIPE IS INSTALLED BY DIRECTIONAL DRILL. IT SHALL BE FILLED WITH WATER AND NOT BE CONNECTED TO ANY OTHER PIPE OR FITTINGS FOR ONE WEEK FROM THE TIME OF INSTALLATION.

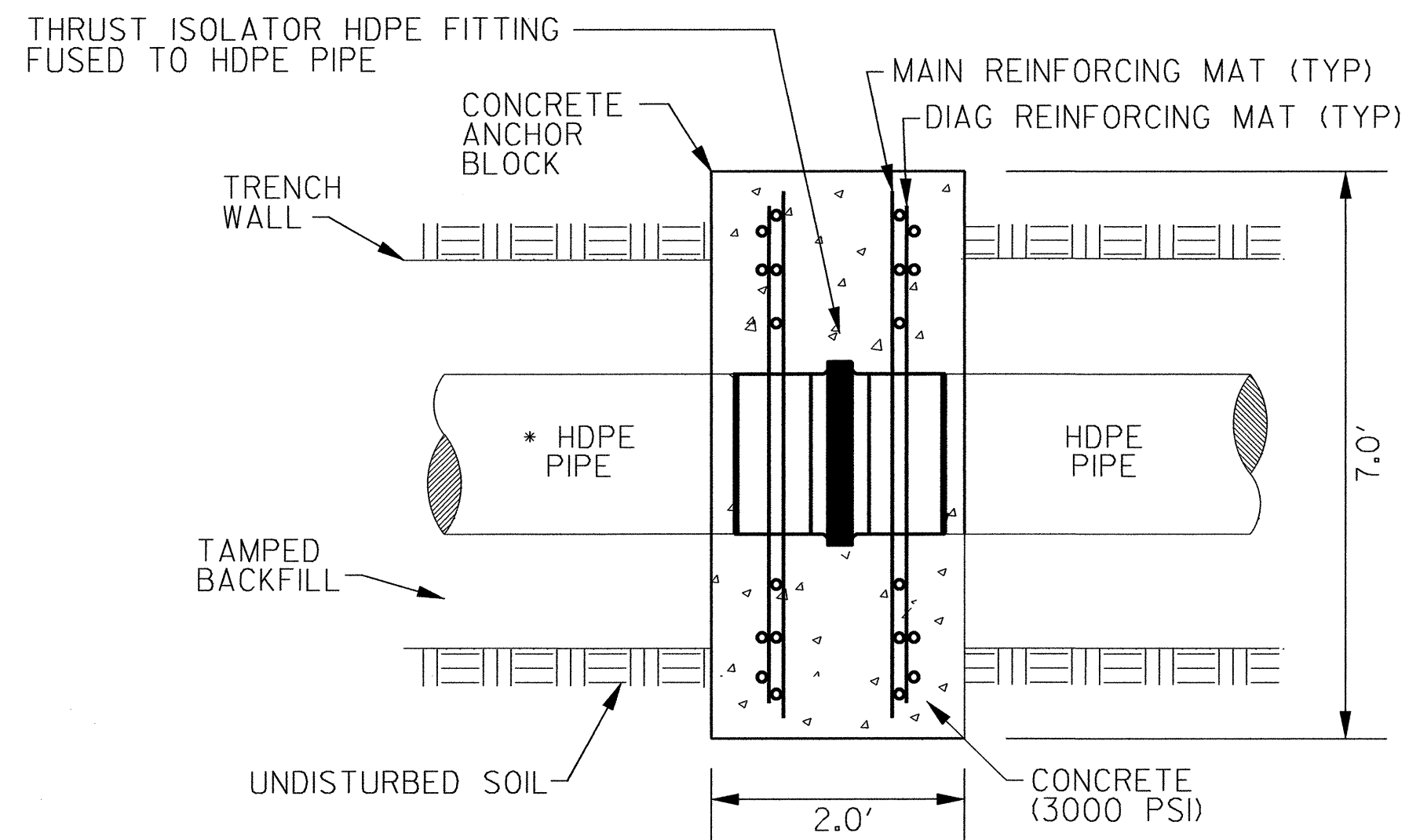
PROJECT REFERENCE NO. B-4558	SHEET NO. UC-3
DESIGNED BY: NSH	 NORTH CAROLINA PROFESSIONAL ENGINEER COREY D. BOUSH 23041 12/11/12
DRAWN BY: NSH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

PROJECT TYPICAL DETAILS

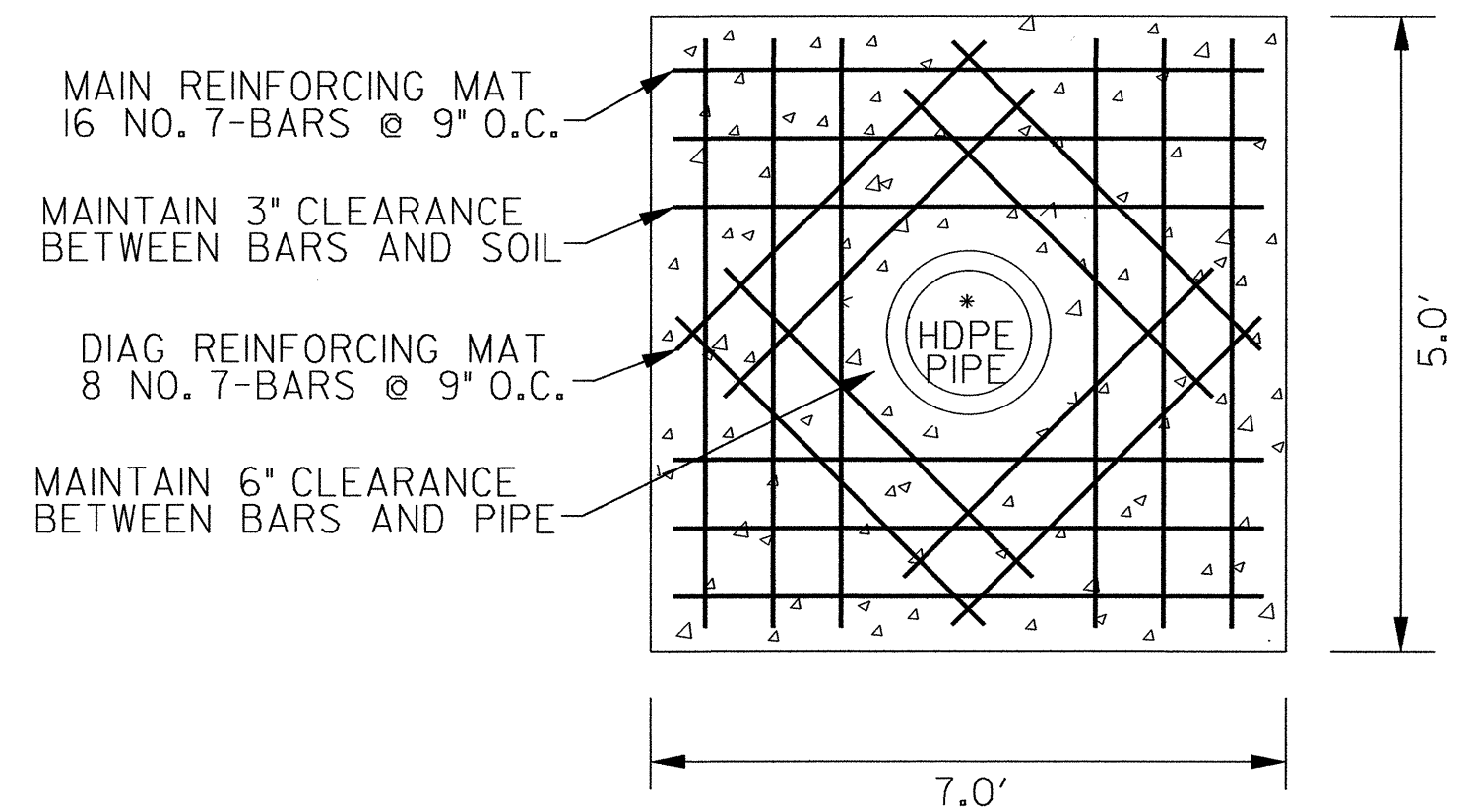
PROJECT REFERENCE NO.	SHEET NO.
B-4558	UC-3A
DESIGNED BY: NSH	
DRAWN BY: NSH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

CONCRETE ANCHOR BLOCK - PLAN VIEW
FOR HDPE AND DI PIPE



NOTE: BOTTOM OF TRENCH NEEDS TO BE STABILIZED TO SUPPORT THE WEIGHT OF THE CONCRETE ANCHOR BLOCK

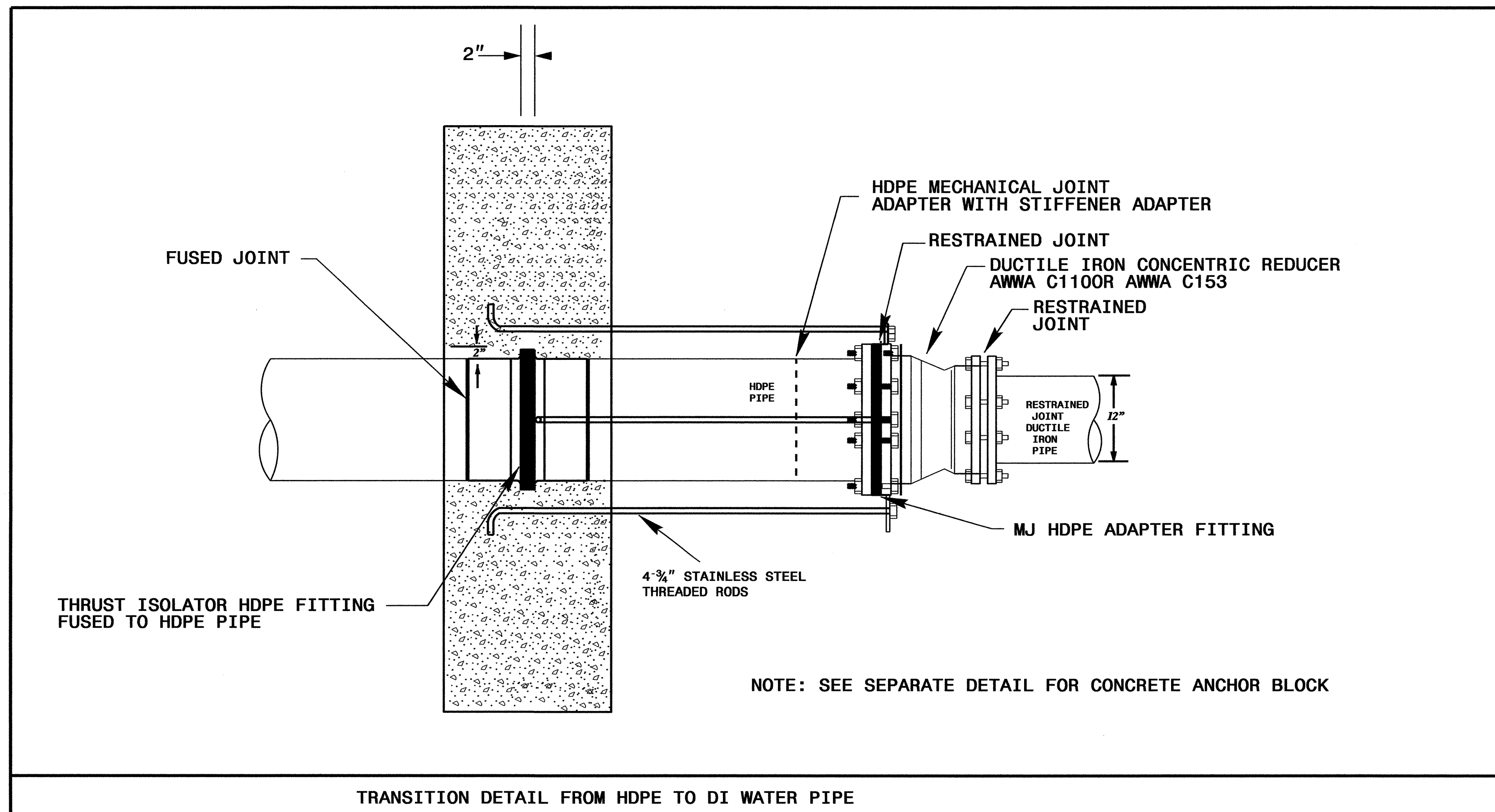
CONCRETE ANCHOR BLOCK - SECTION VIEW
FOR HDPE PIPE



REINFORCING BARS (PER ANCHOR BLOCK):
 MAIN MATS = 24 (#7 BARS) @ 78\"/>

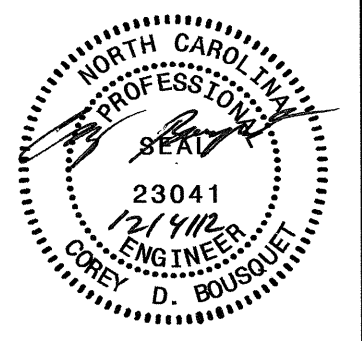
FORCE MAIN AND WATER MAIN PROFILE NOTES:

- (1) ELEVATIONS OF EXISTING UTILITIES SHOWN ON PROFILE NEED TO BE VERIFIED IN THE FIELD.
- (2) CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107, AND 1550 OF THE STANDARD SPECIFICATIONS CONCERNING TRENCHLESS INSTALLATION. IT IS CONTRACTOR'S RESPONSIBILITY TO HAVE BORE PATH DESIGNED AND SEALED BY A NORTH CAROLINA PROFESSIONAL ENGINEER. NO DAMAGE IS ALLOWED TO RIVER OR BUFFER ZONES.
- (3) CONTRACTOR'S ENGINEER SHALL PROVIDE ON-SITE OVERSIGHT FOR HDD OPERATION.
- (4) THE HDPE WATER LINE INSIDE DIAMETERS SHALL BE EQUIVALENT TO THE DI WATER LINE INSIDE DIAMETER. *

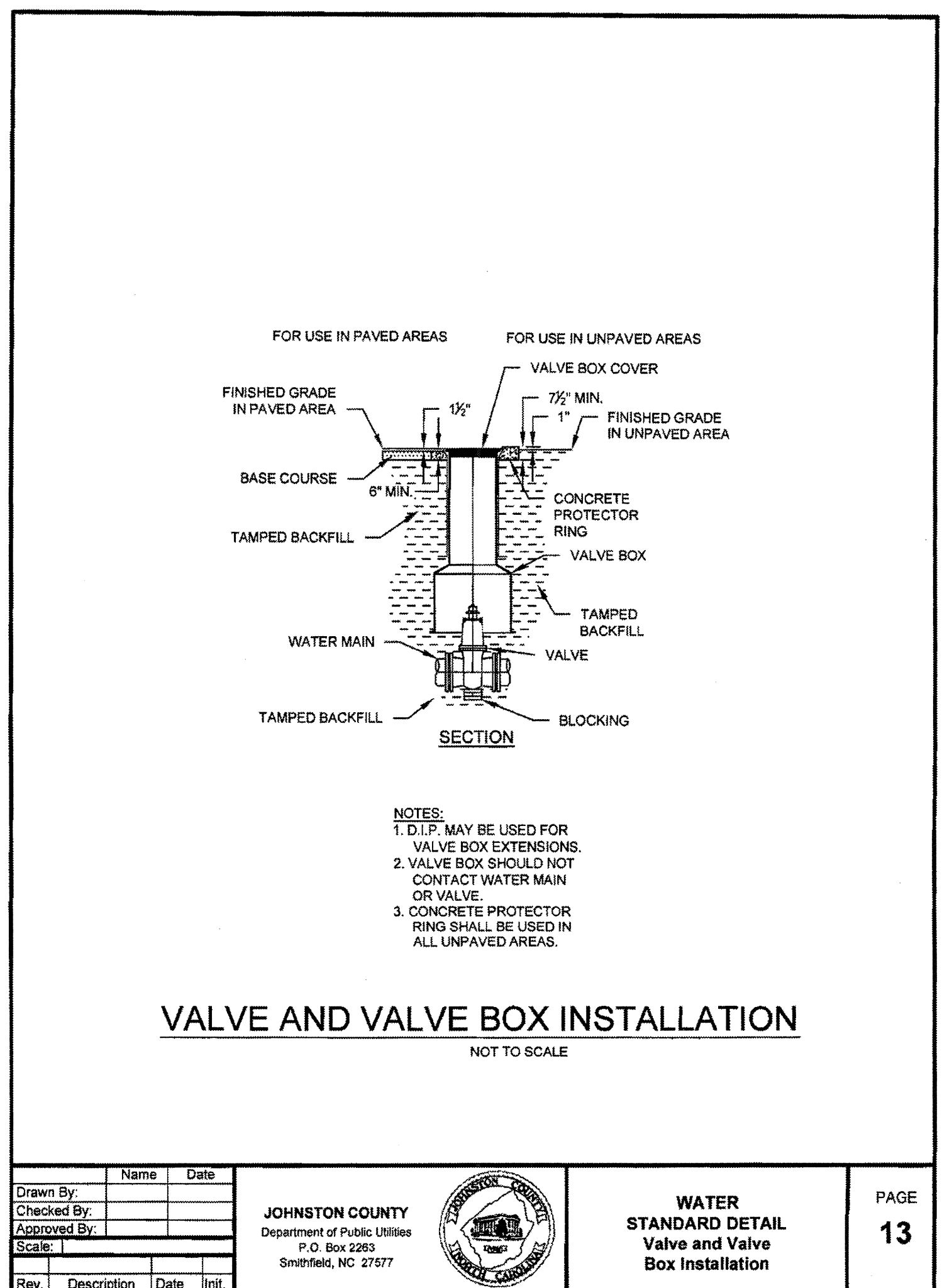
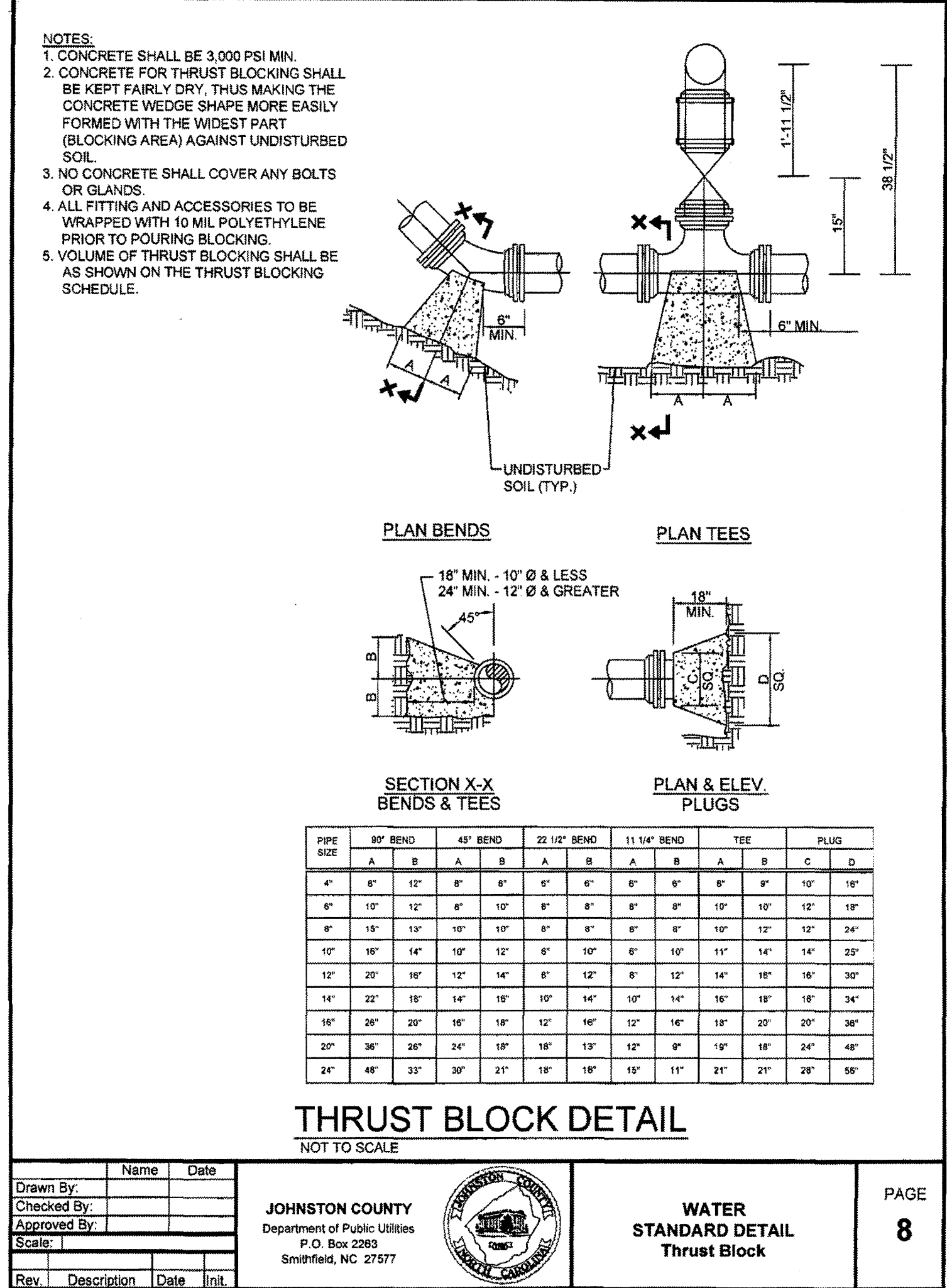
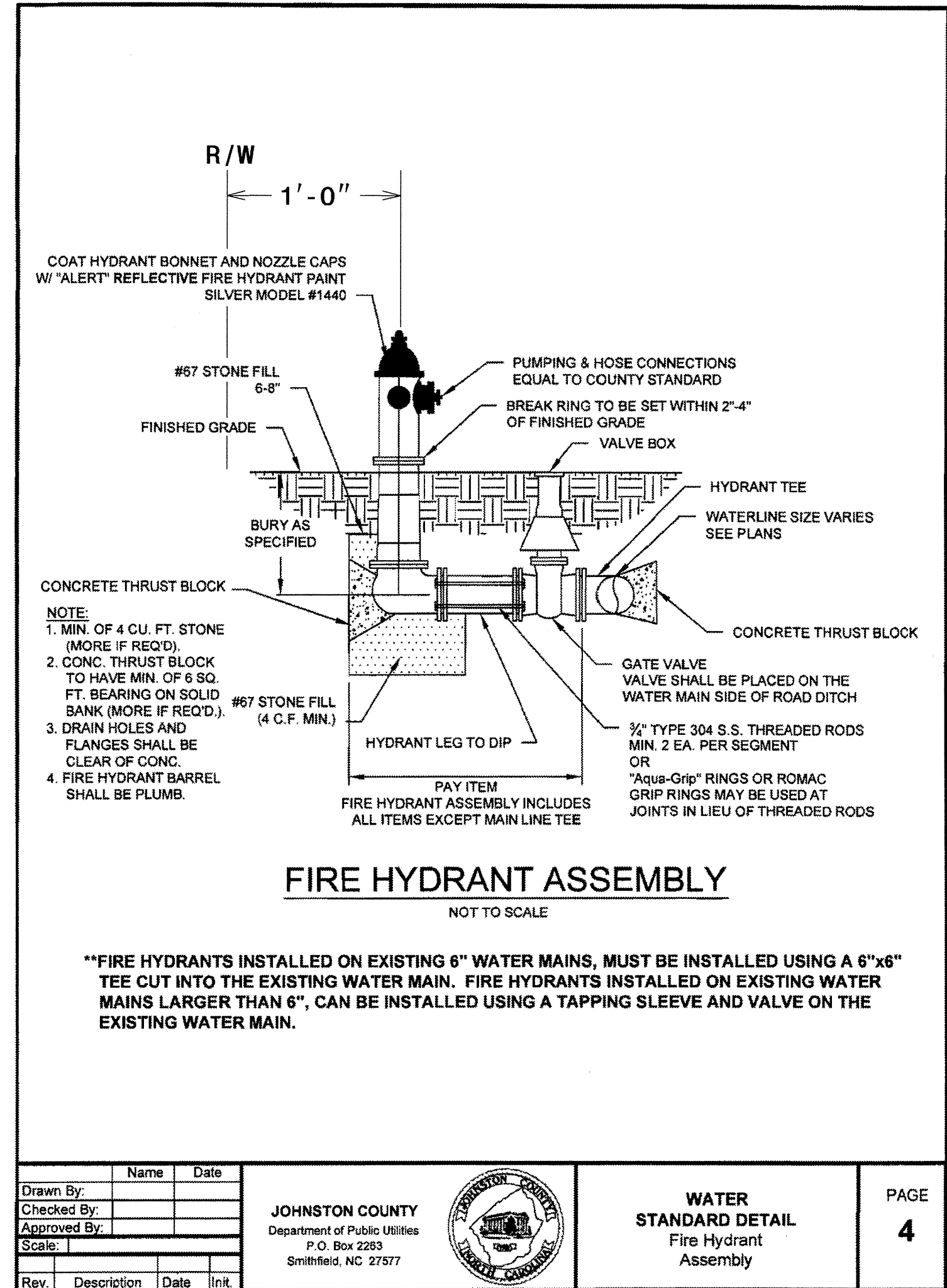
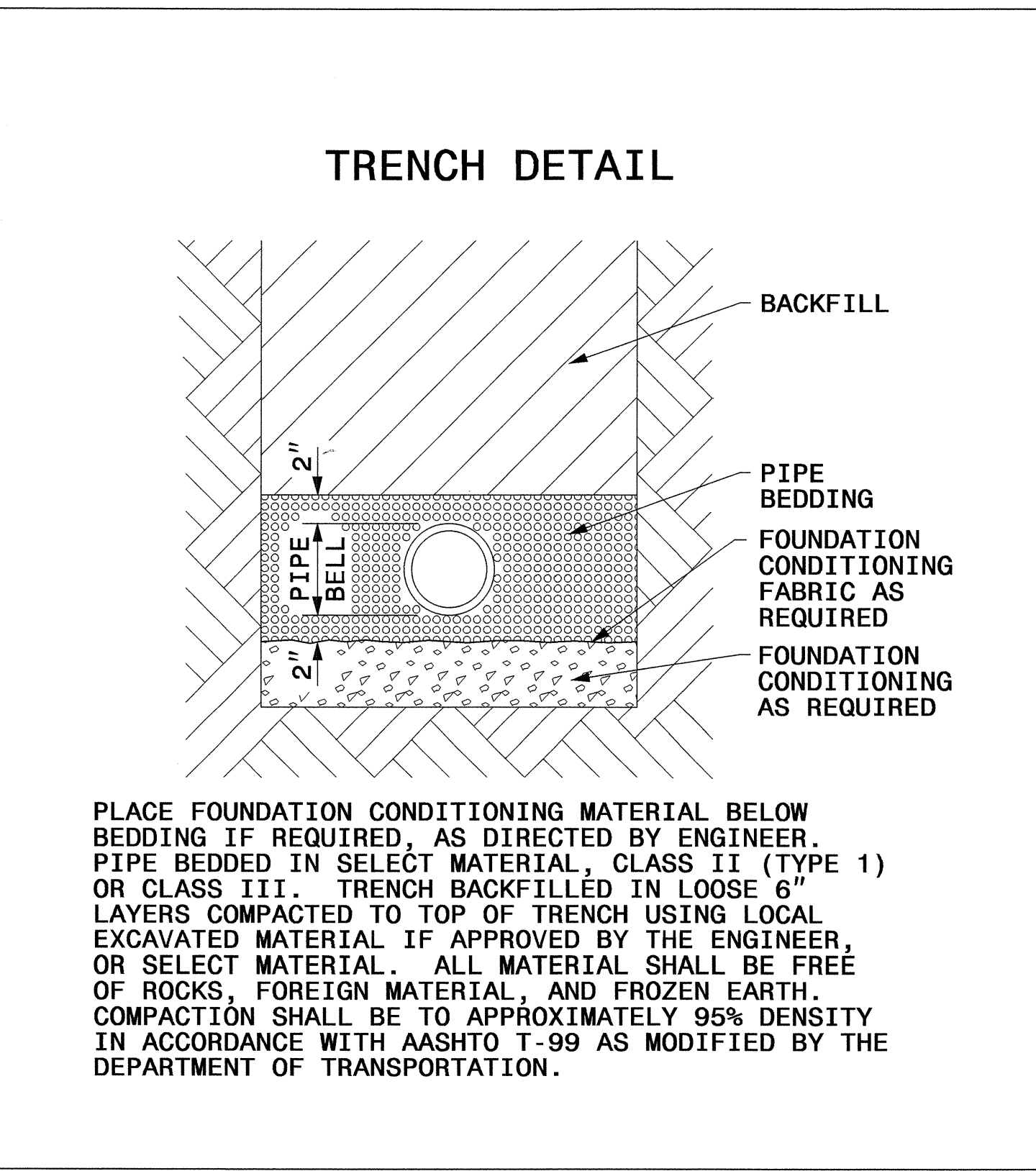


NOTE: SEE SEPARATE DETAIL FOR CONCRETE ANCHOR BLOCK

TRANSITION DETAIL FROM HDPE TO DI WATER PIPE



UTILITY CONSTRUCTION

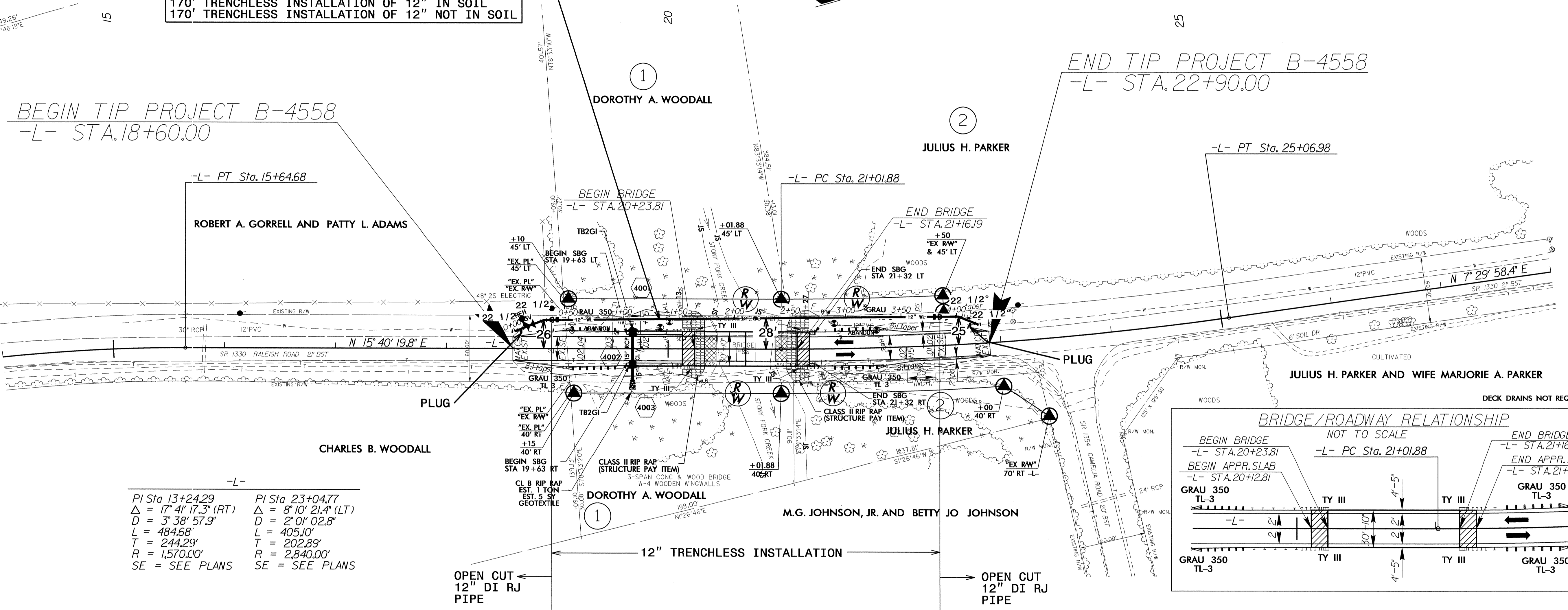


5/14/99
 R:\UTILITIES\POL\UC\Proje\B4558_rdy\UC_tsh.dgn
 04-DEC-2002 15:47
 R:\UTILITIES\POL\UC\Proje\B4558_rdy\UC_tsh.dgn

PROJECT REFERENCE NO.	SHEET NO.
B-4558	UC-4
DESIGNED BY: NSH	
DRAWN BY: NSH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

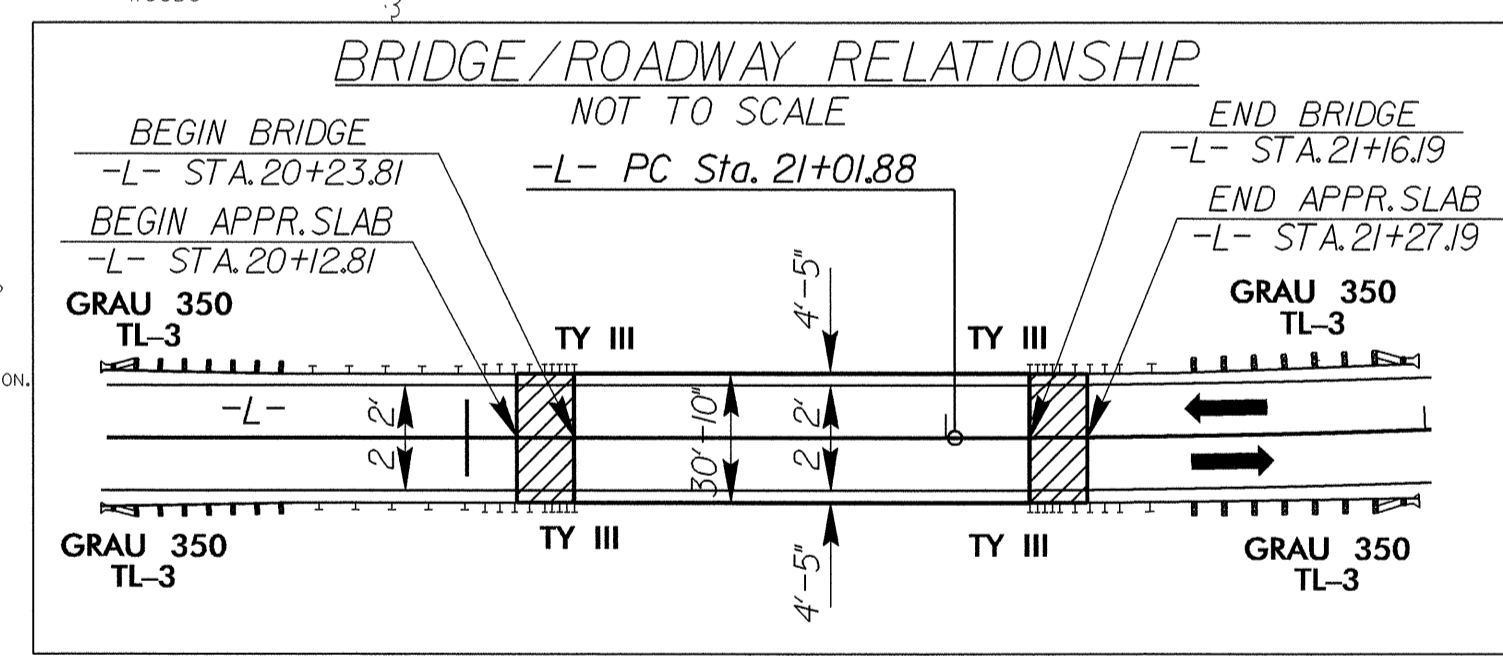
POP. 420' OF 12" WATER LINE
 1- PROP. 12" VALVE
 1- RELOCATE FIRE HYDRANT
 420' - ABANDON 12" UTILITY PIPE
 170' TRENCHLESS INSTALLATION OF 12" IN SOIL
 170' TRENCHLESS INSTALLATION OF 12" NOT IN SOIL



BEGIN TIP PROJECT B-4558
 -L- STA. 18+60.00

END TIP PROJECT B-4558
 -L- STA. 22+90.00

-L-
 PI Sta 13+24.29 PI Sta 23+04.77
 $\Delta = 17^\circ 41' 17.3" (RT)$ $\Delta = 8^\circ 10' 21.4" (LT)$
 $D = 3^\circ 38' 57.9"$ $D = 2^\circ 01' 02.8"$
 $L = 484.68'$ $L = 405.10'$
 $T = 244.29'$ $T = 202.89'$
 $R = 1,570.00'$ $R = 2,840.00'$
 SE = SEE PLANS SE = SEE PLANS

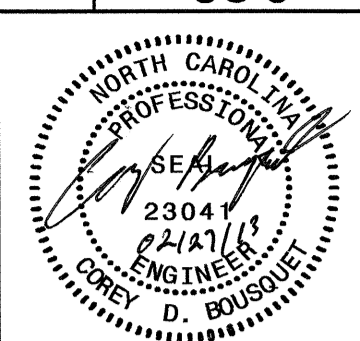


OPEN CUT
 12" DI RJ
 PIPE

OPEN CUT
 12" DI RJ
 PIPE

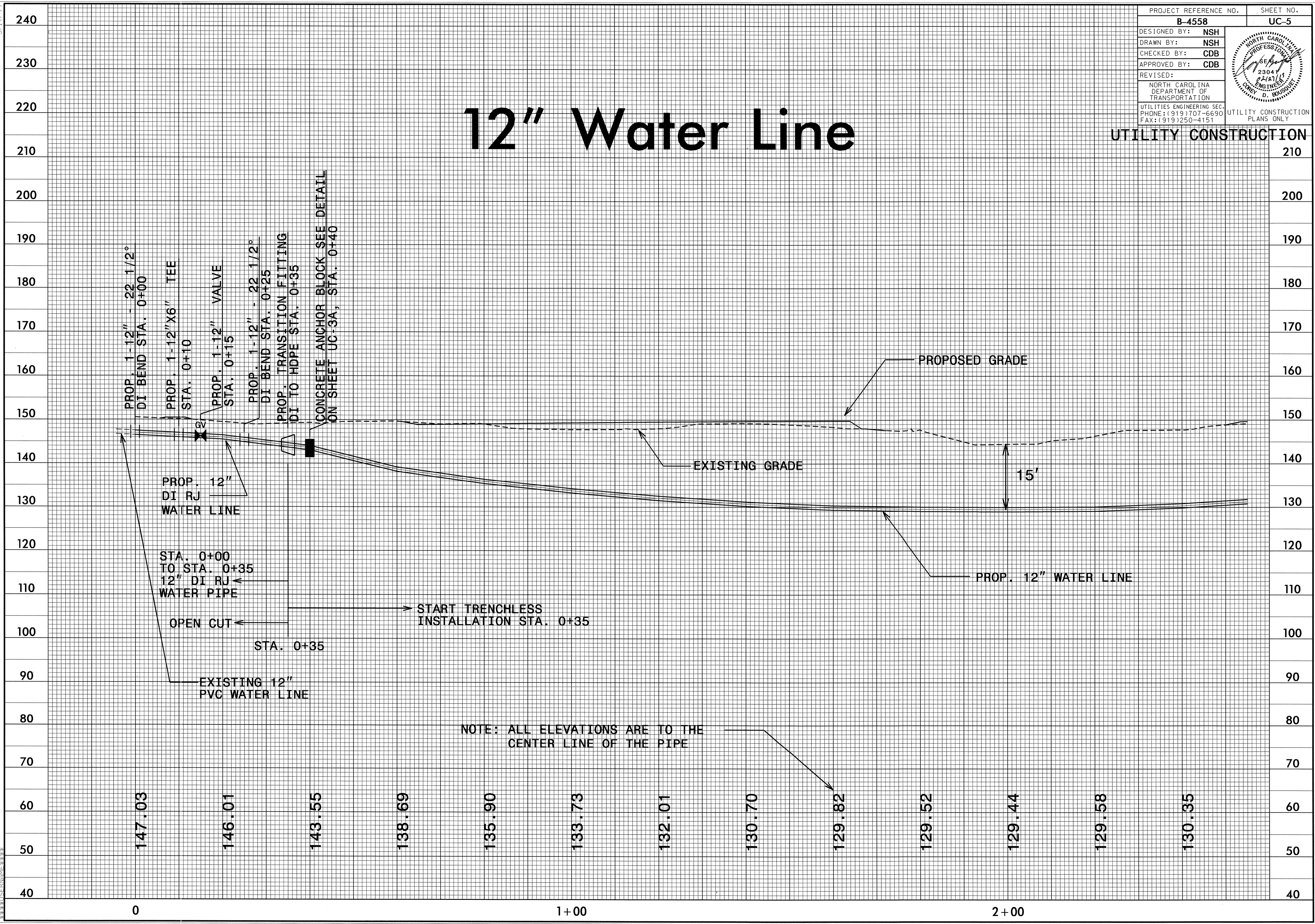
5/14/99
 27 FEB 2017 09:08
 3:\Users\j... \Projects\B4558_Rd\psh_Ut_UC04.dgn

5/14/99

PROJECT REFERENCE NO. B-4558	SHEET NO. UC-5
DESIGNED BY: NSH	
DRAWN BY: NSH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

12" Water Line

UTILITY CONSTRUCTION



27-FEB-2013 09:09
R:\Utility\Drawings\Projects\B4558\wat_prof1.e4.dgn
D:\Users\NSH\My Documents\Projects\B4558\wat_prof1.e4.dgn

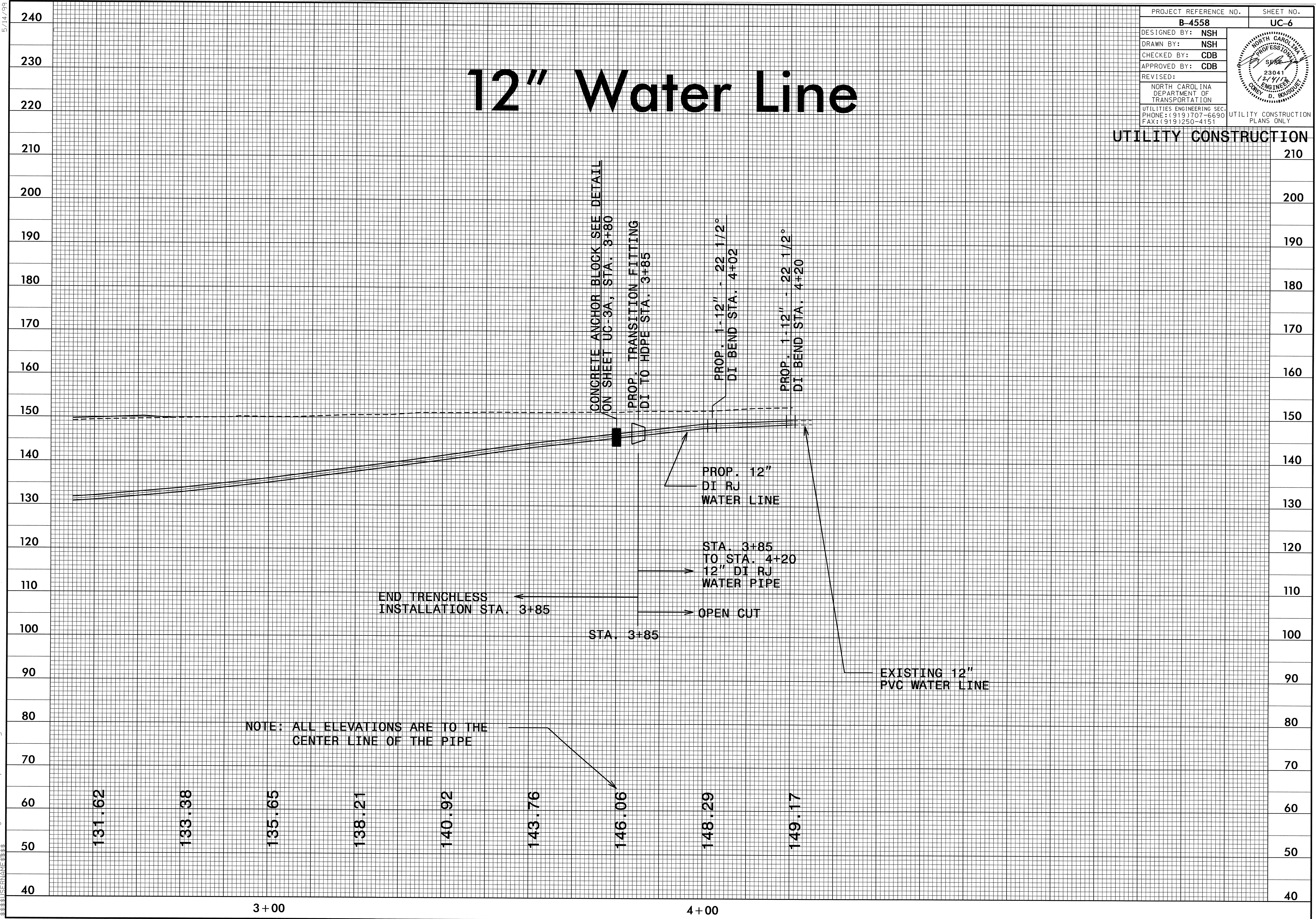
5/14/99

04-DEC-2002 15:50 U:\Pro\14458.wat.pro\file4.dgn
3333333333333333

PROJECT REFERENCE NO. B-4558	SHEET NO. UC-6
DESIGNED BY: NSH	
DRAWN BY: NSH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

12" Water Line

UTILITY CONSTRUCTION



131.62

133.38

135.65

138.21

140.92

143.76

146.06

148.29

149.17

3+00

4+00

09/208/199

TIP PROJECT: B-4558

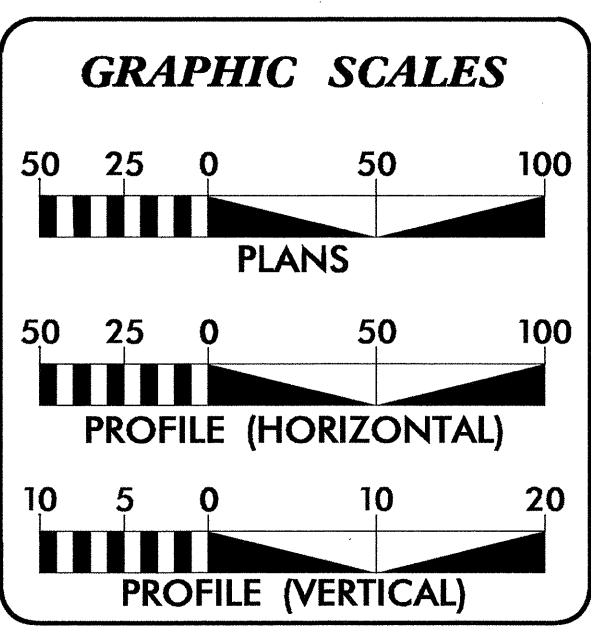
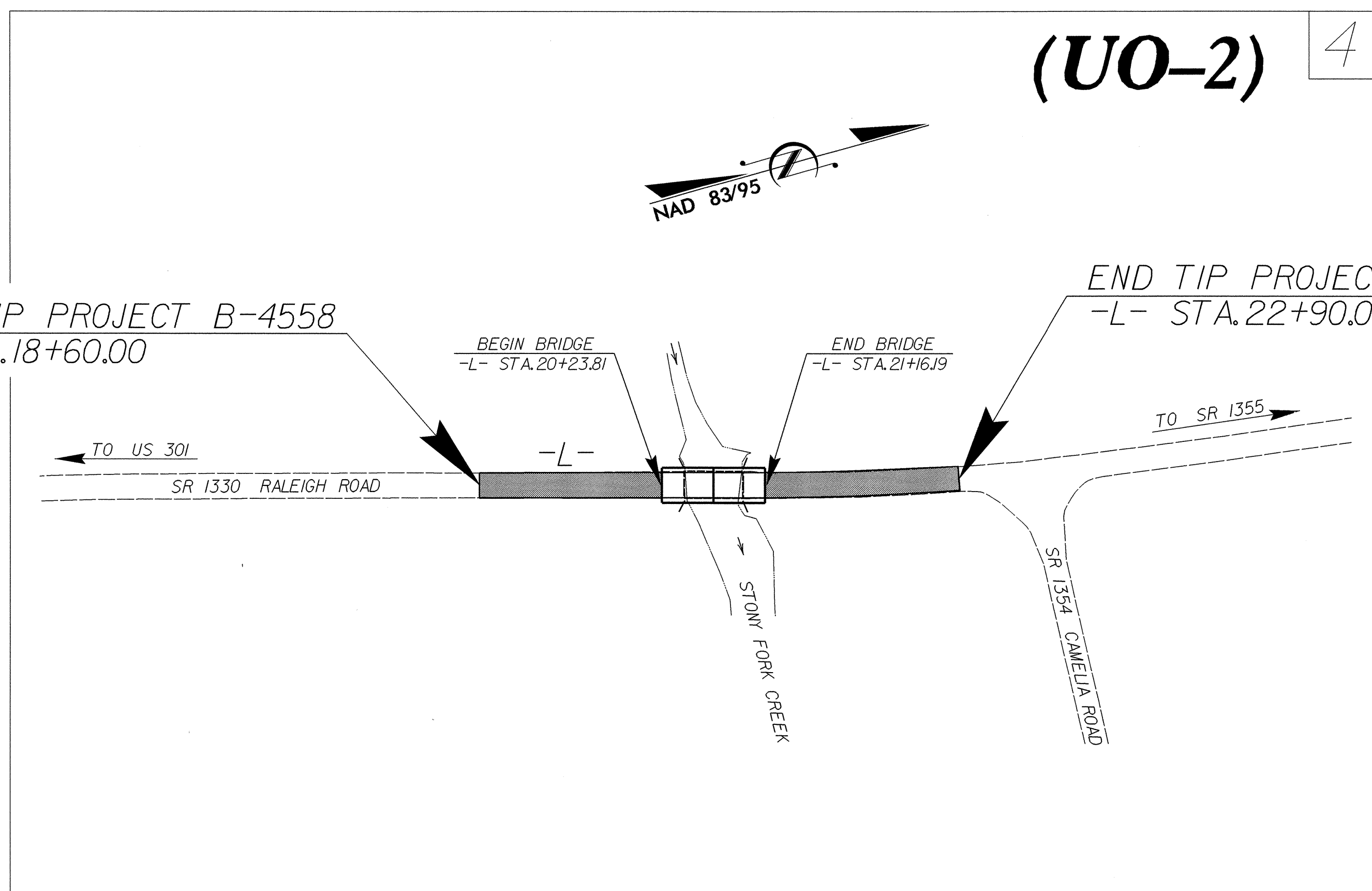
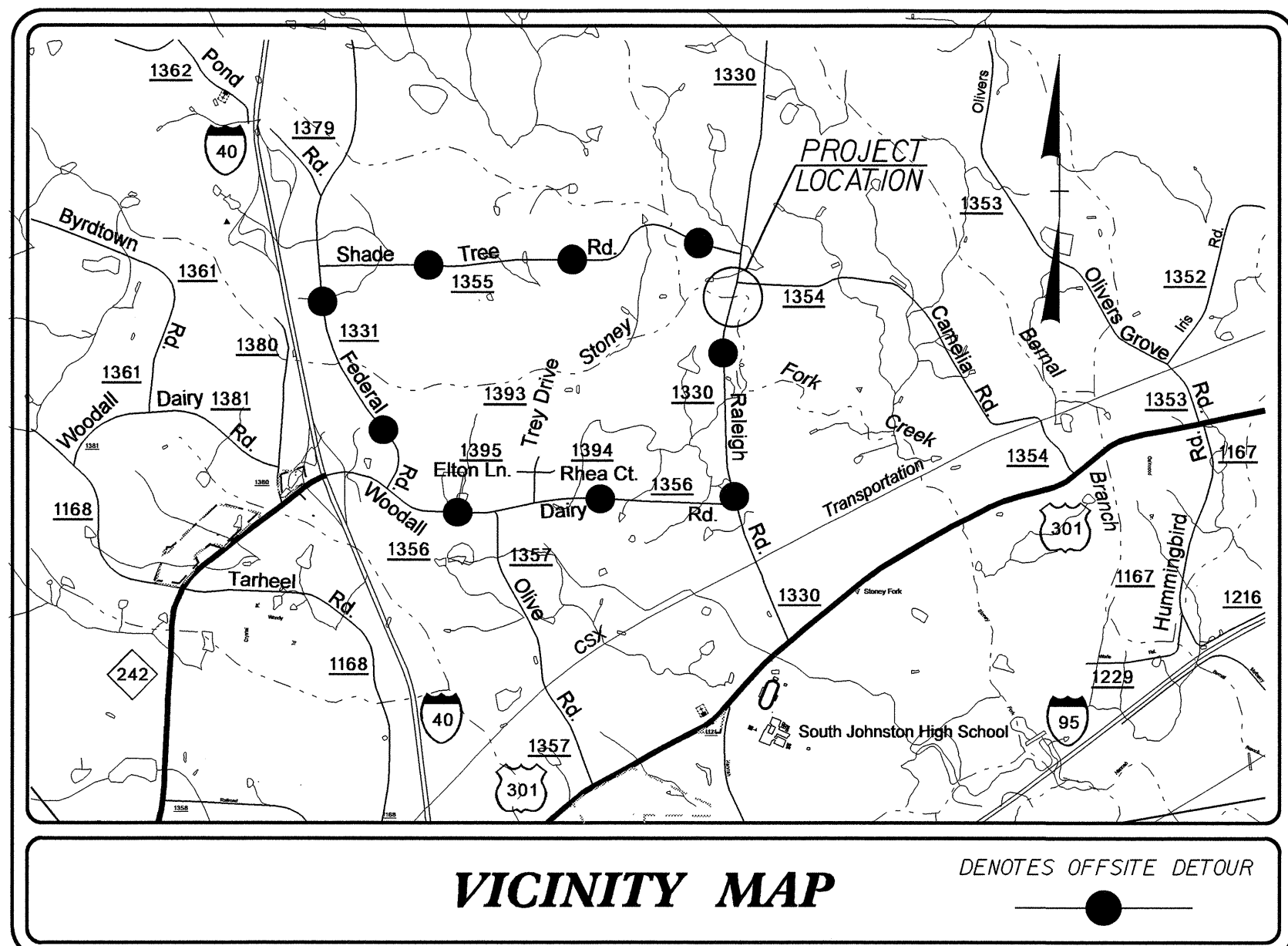
T.I.P. NO.	SHEET NO.
B-4558	UO-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

**UTILITIES BY OTHERS PLANS
JOHNSTON COUNTY**

**LOCATION: BRIDGE NO. 86 OVER STONY FORK CREEK AND
APPROACHES ON SR 1330 (RALEIGH ROAD)**

TYPE OF WORK: UTILITIES RELOCATION



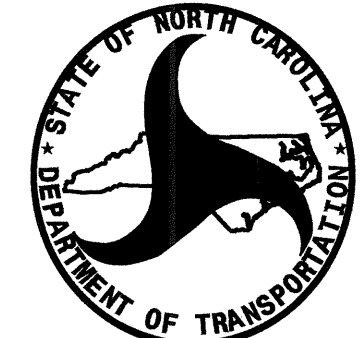
INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2	UTILITY BY OTHERS PLAN SHEET

UTILITY OWNERS ON PROJECT

(1) **Progress Energy Carolinas, Inc. (Power)**
Contact: Sheila Talton sheila.talton@pgnmail.com
(919) 481-6126 (Office)
(919) 219-5853 (Mobile)

(2) **Century Link (Telephone)**
Contact: Kevin Godwin kevin.godwin@embarq.com
(910) 366-2142



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

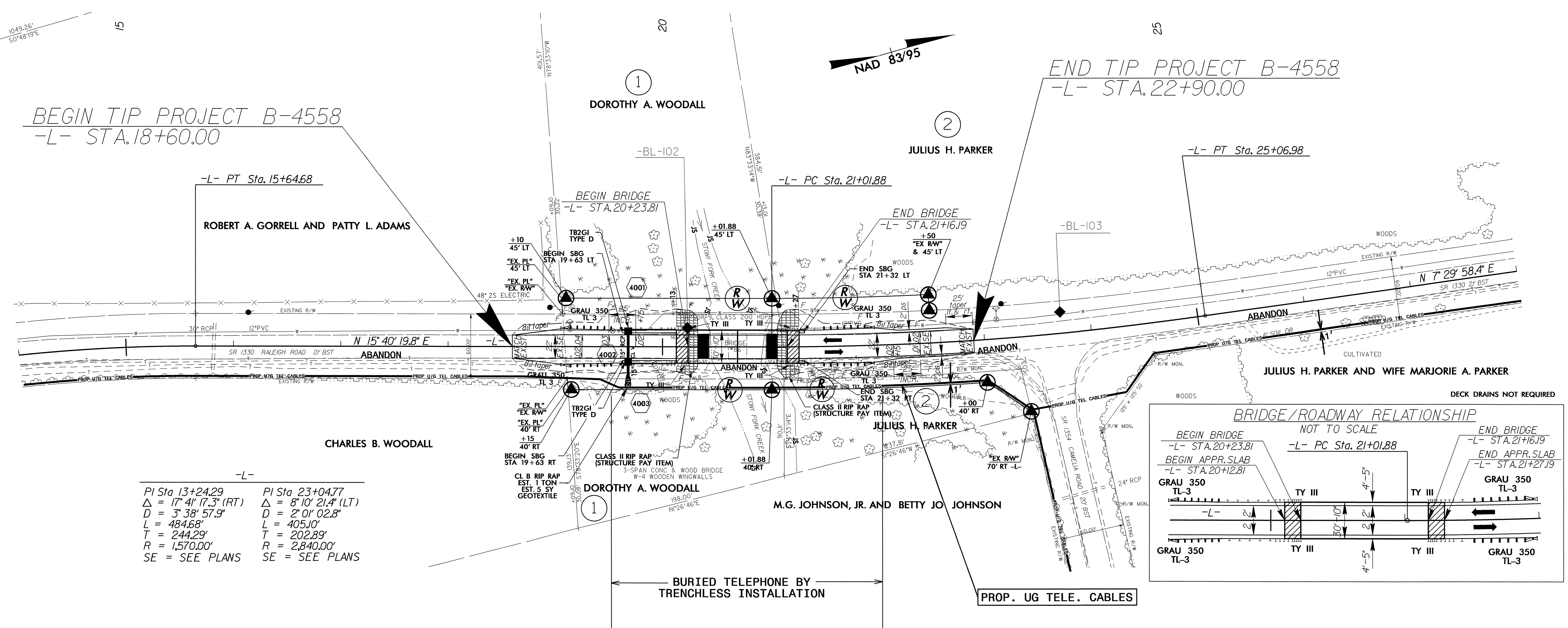
Roger Worthington, P.E. UTILITIES SECTION ENGINEER
Corey Bousquet, P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER
Nabil Hamdan UTILITIES PROJECT DESIGNER

04-DEC-2012 15:58
RA\UT\TIP\JOHNSTON\UO\Proj\B4558_rdy_UO_1.sh.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$

UTILITIES BY OTHERS

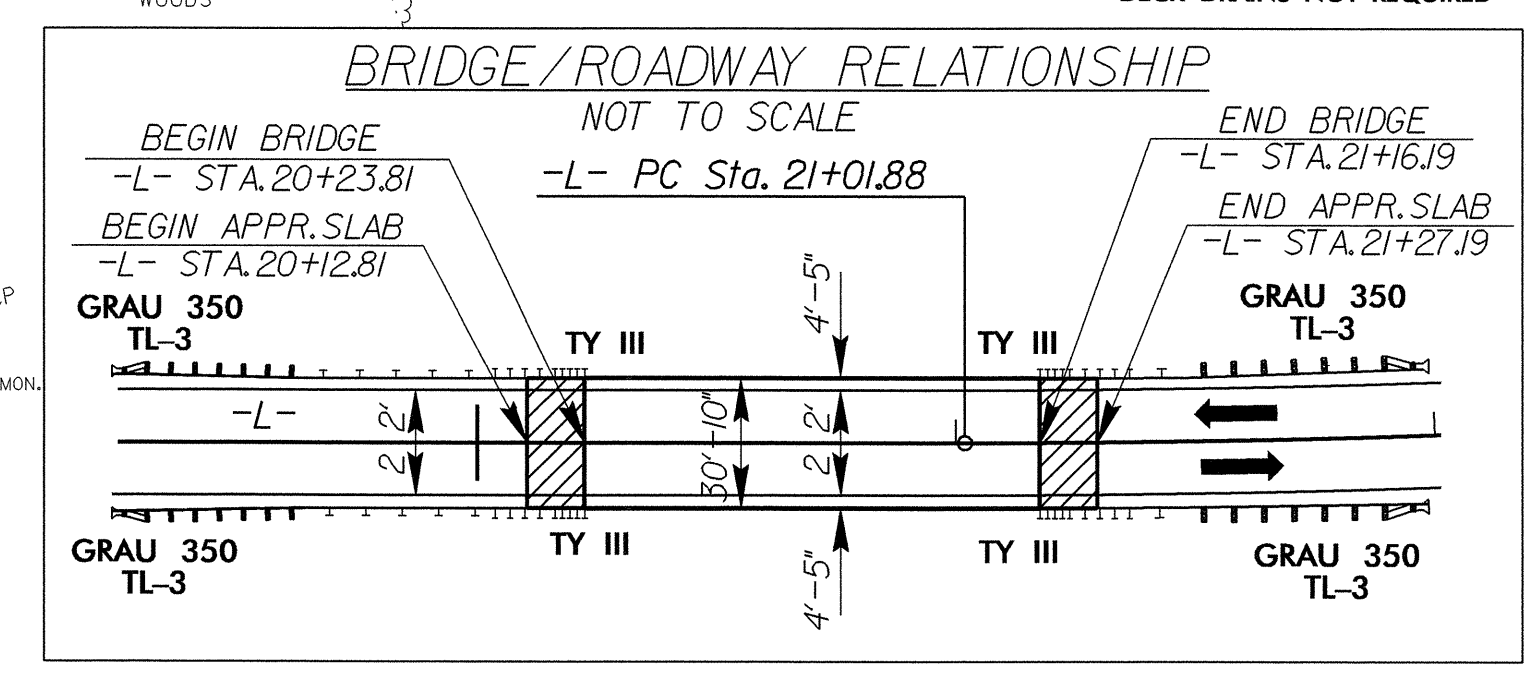
NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS

5/14/99
04-DEC-2012 15:58
R:\N\11108\SR\Road\UT\PC\NB4558_Rd\jph_Ut_U002.dgn



-L-

PI Sta 13+24.29	PI Sta 23+04.77
$\Delta = 17^{\circ} 41' 17.3''$ (RT)	$\Delta = 8^{\circ} 10' 21.4''$ (LT)
$D = 3^{\circ} 38' 57.9''$	$D = 2^{\circ} 01' 02.8''$
$L = 484.68'$	$L = 405.10'$
$T = 244.29'$	$T = 202.89'$
$R = 1,570.00'$	$R = 2,840.00'$
SE = SEE PLANS	SE = SEE PLANS



BURIED TELEPHONE BY
TRENCHLESS INSTALLATION

PROP. UG TELE. CABLES