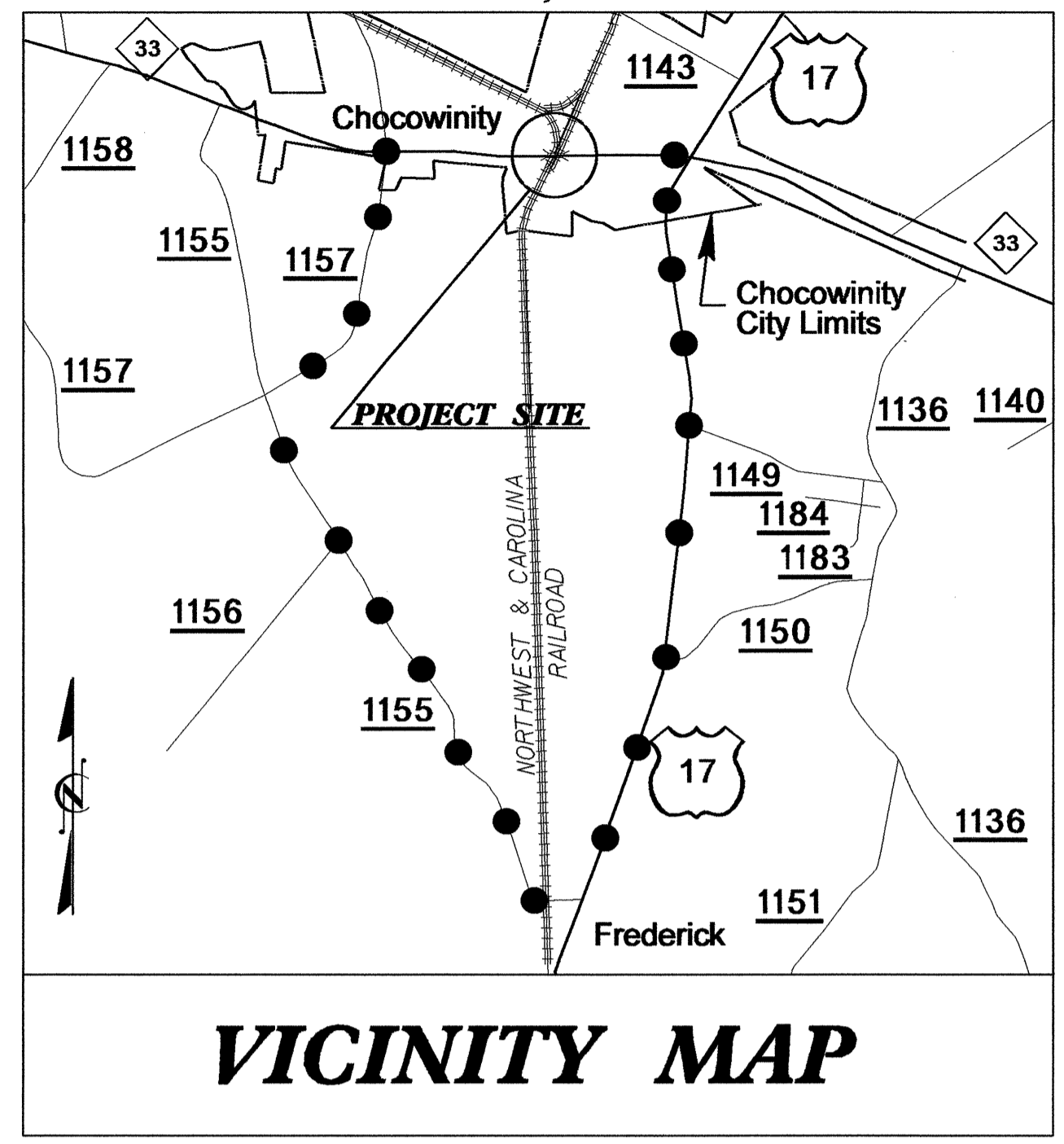


09/08/99

TIP PROJECT: B-4416

T.I.P. NO.	SHEET NO.
B-4416	UC-1

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols

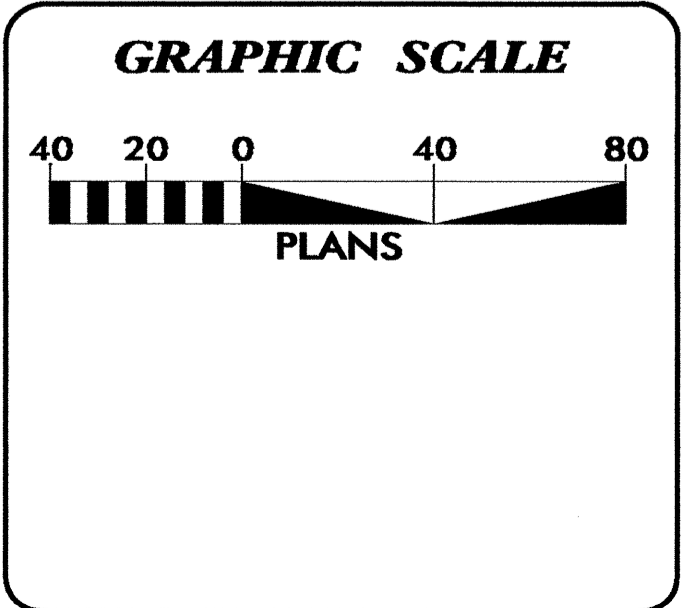
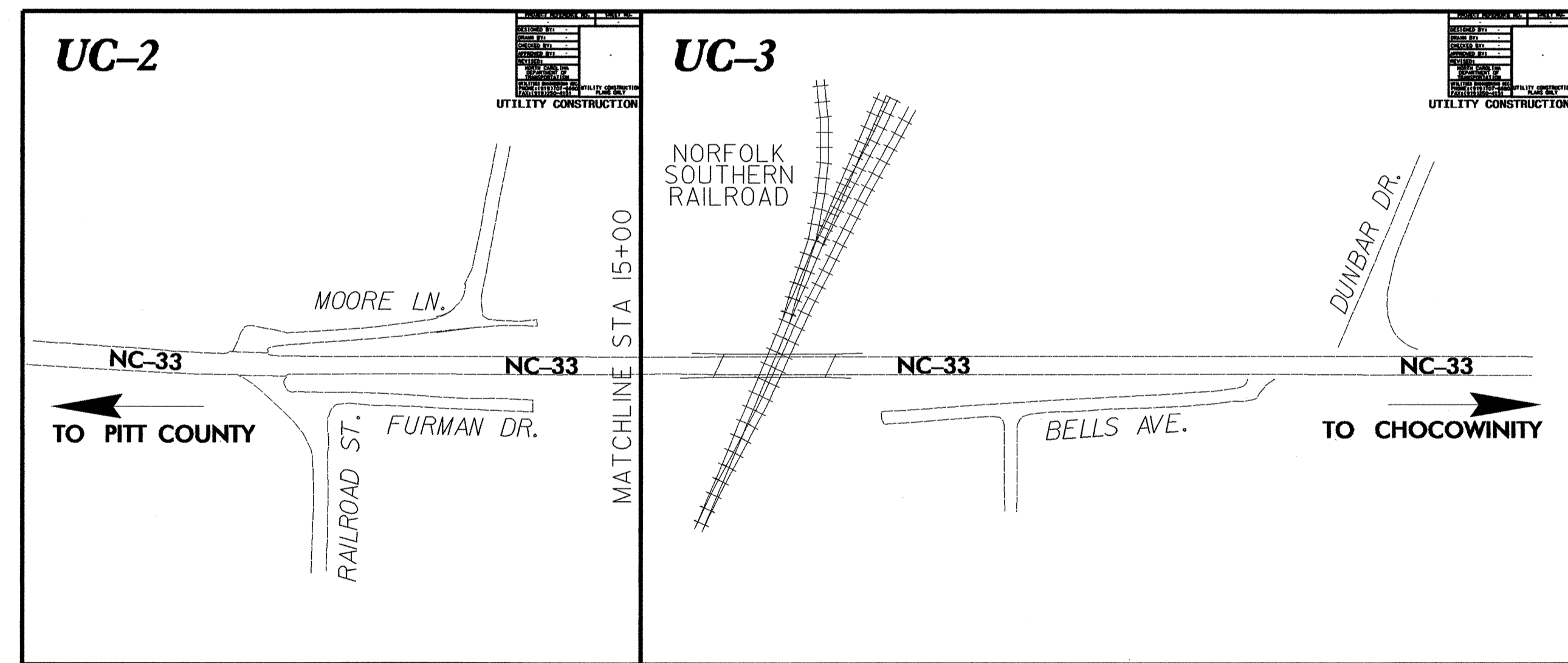
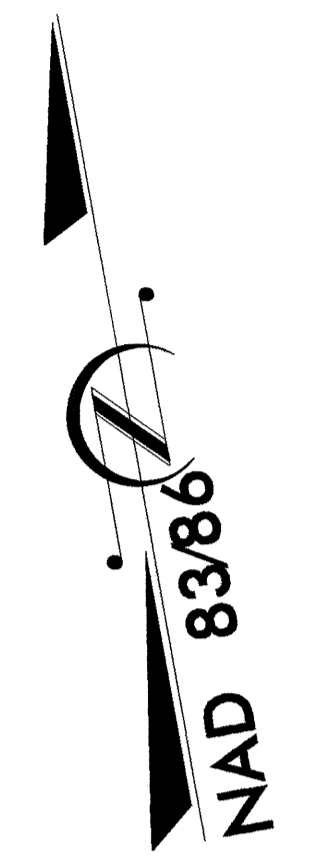


VICINITY MAP

●●●●● OFFSITE DETOUR

UTILITY CONSTRUCTION PLANS BEAUFORT COUNTY TOWN OF CHOCOWINITY

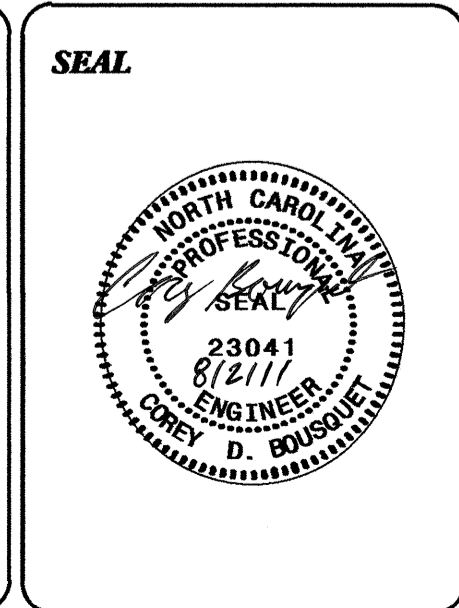
LOCATION: NC-33 OVER NORFOLK SOUTHERN RAILROAD TRACKS
TYPE OF WORK: WATER AND SANITARY SEWER RELOCATIONS



INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2, UC-3	PLAN SHEETS
UC-4, UC-5	DETAIL SHEETS
UC-6	SIGNING SHEET

WATER AND SEWER OWNERS ON PROJECT

(1) WATER...TOWN OF CHOCOWINITY
(2) SANITARY SEWER...TOWN OF CHOCOWINITY



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

1591 MAIL SERVICES CENTER
RALEIGH NC 27699-1591
PHONE (919) 254-4128
FAX (919) 254-4119

Roger Worthington, P.E. UTILITIES SECTION ENGINEER
Corey Bousquet, P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER
Eric Haugaard UTILITIES PROJECT DESIGNER

02-AUG-2011 12:59 PM
D:\UTILITIES\BEAUFORT\B4416_ewh_title_sheet_UC1(08-02-II).dgn
\$\$\$\$USERNAME\$\$\$\$

5/14/99

B-4416 SEWER MAIN PROFILE

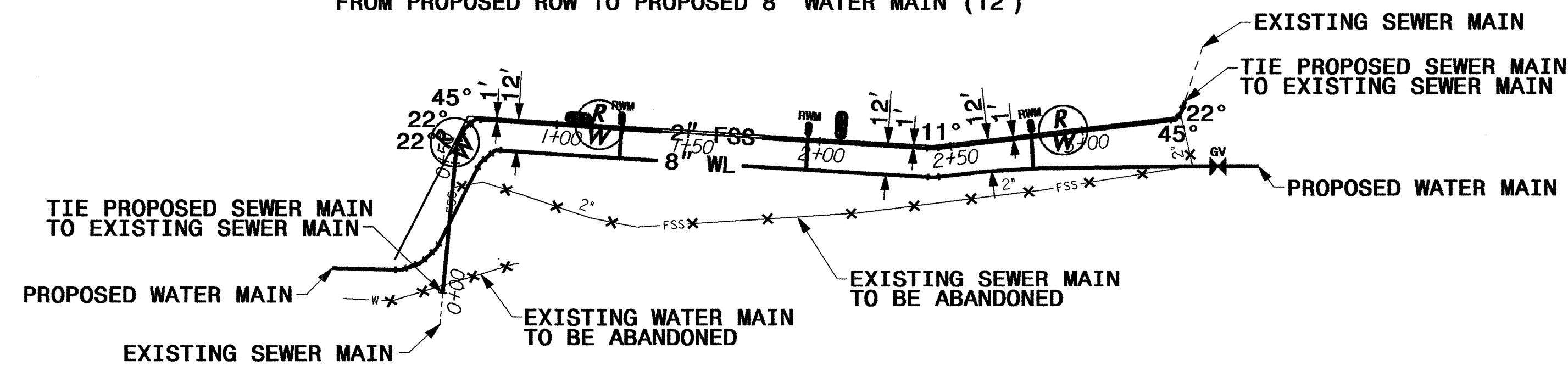
SHOWS PROFILE OF PROPOSED 2" FORCE MAIN
ALONG LEFT SIDE OF ROADWAY/ALIGNMENT FROM
L-STA 10+00 TO L-STA 13+00 (APPROXIMATE)

PROJECT REFERENCE NO. B-4416	SHEET NO. UC-2A
DESIGNED BY: EWH	
DRAWN BY: EWH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919)250-4128 FAX: (919)250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

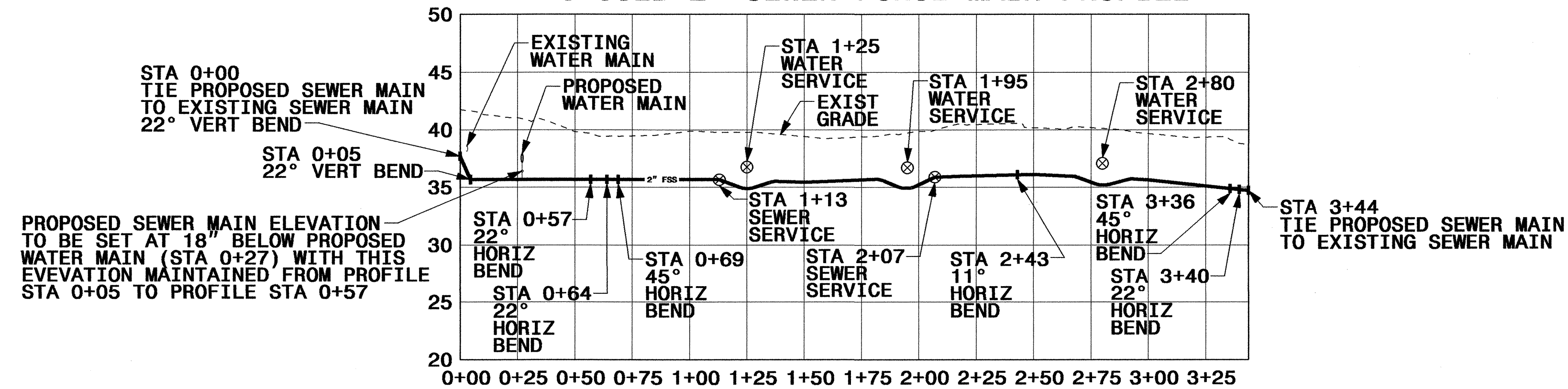
UTILITY CONSTRUCTION

PLAN SCALE:
 1"=40' (FULL-SIZE SHEET)
 1"=80' (HALF-SIZE SHEET)

NOTE: HORIZONTAL DIMENSIONS (1', 12') REFER TO DISTANCES
 FROM PROPOSED ROW TO PROPOSED 2" SEWER MAIN (1') AND
 FROM PROPOSED ROW TO PROPOSED 8" WATER MAIN (12')



PROPOSED 2" SEWER FORCE MAIN PROFILE



PROFILE SCALE:
 FULL-SIZE SHEET
 1"=40' (HORIZONTAL)
 1"=8' (VERTICAL)

PROFILE SCALE:
 HALF-SIZE SHEET
 1"=80' (HORIZONTAL)
 1"=16' (VERTICAL)

PROFILE GENERAL NOTES:

- (1) PROPOSED 2" SEWER MAIN TO MAINTAIN 18" CLEARANCE BELOW ALL WATER MAINS AND WATER SERVICE LINES
- (2) PROPOSED SEWER SERVICE LINE AND WATER SERVICE LINE LOCATIONS MAY BE ADJUSTED IN THE FIELD TO ACCOMMODATE EXISTING CONDITIONS AND MUST MAINTAIN 10' (MIN) HORIZONTAL SEPARATIONS AT ALL TIMES

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MATCHLINE STA 15+00

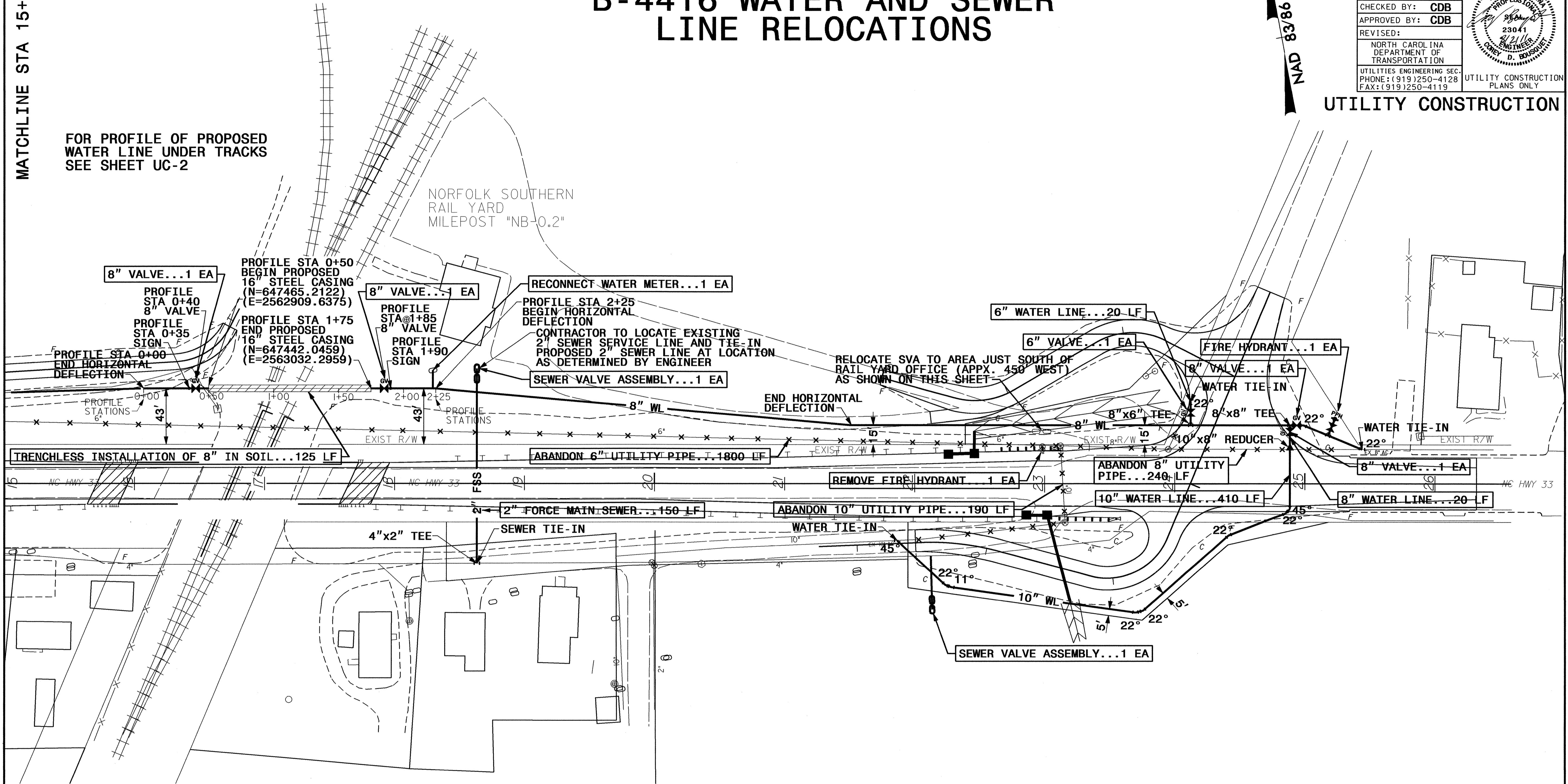
B-4416 WATER AND SEWER LINE RELOCATIONS

PROJECT REFERENCE NO.	SHEET NO.
B-4416	UC-3
DESIGNED BY: EWH	
DRAWN BY: EWH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

NAD 83/86

FOR PROFILE OF PROPOSED WATER LINE UNDER TRACKS SEE SHEET UC-2



MATCHLINE STA 15+00

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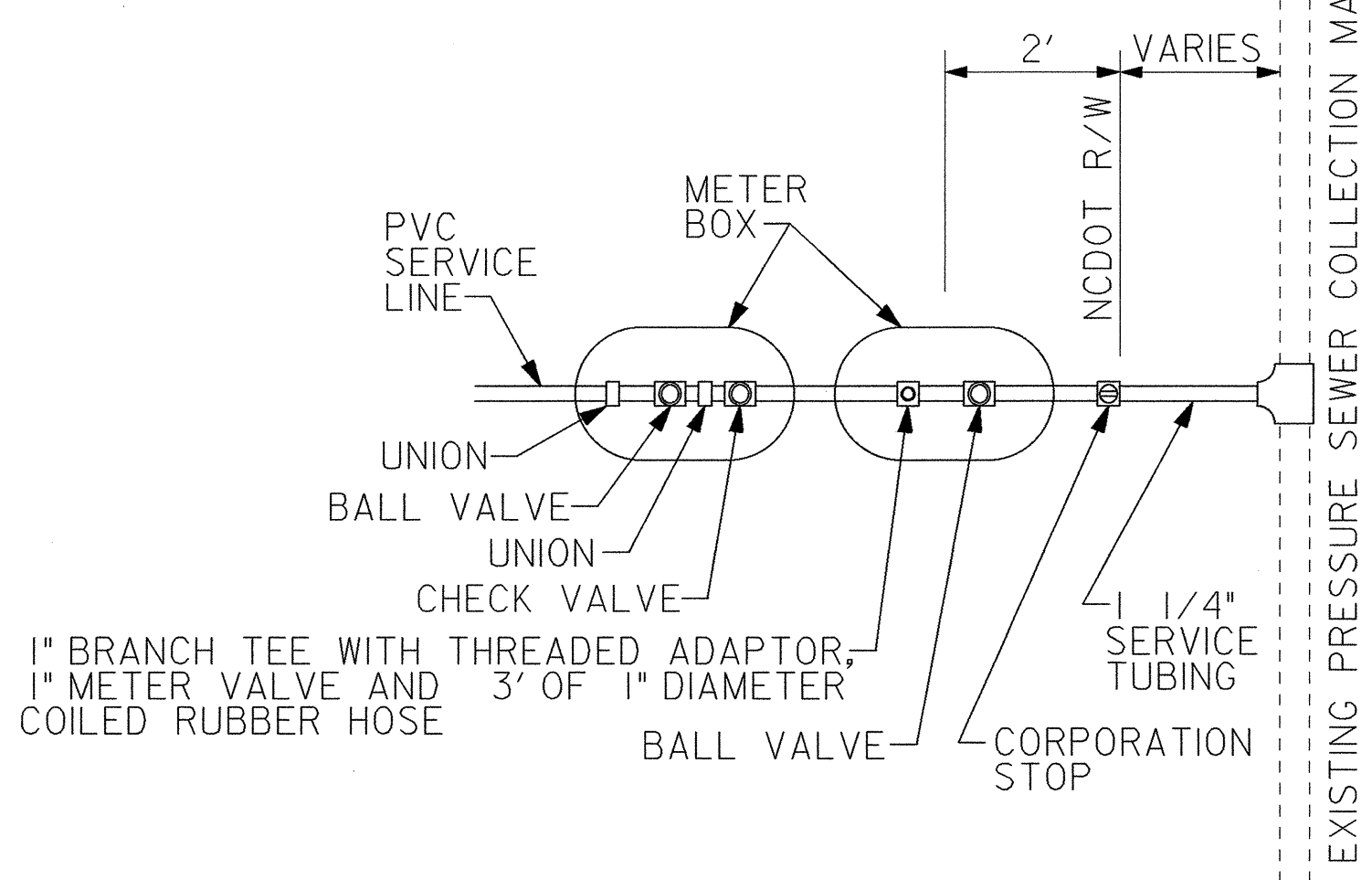
PLAN SCALE:
1"=40' (FULL-SIZE SHEET)
1"=80' (HALF-SIZE SHEET)

5/14/99

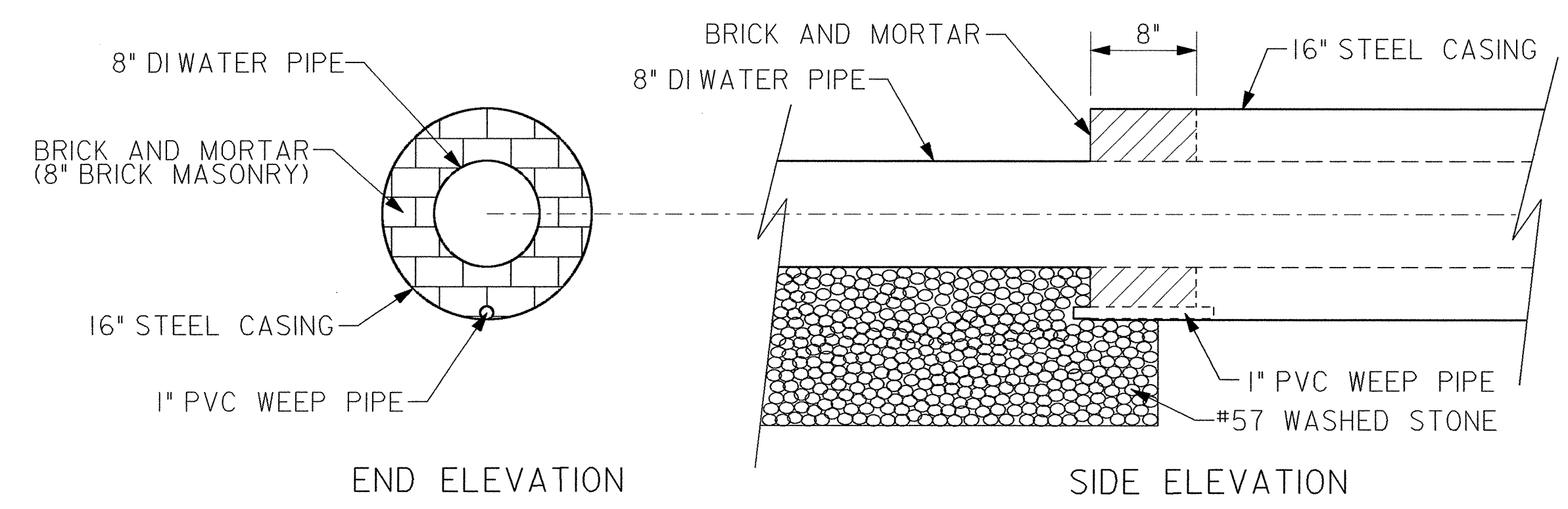
B-4416 WATER AND SEWER LINE RELOCATIONS DETAIL SHEET

PROJECT REFERENCE NO.	SHEET NO.
B-4416	UC-4
DESIGNED BY: EWH	
DRAWN BY: EWH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

SEWER VALVE ASSEMBLY



ENCASEMENT END SEAL



UTILITY CONSTRUCTION

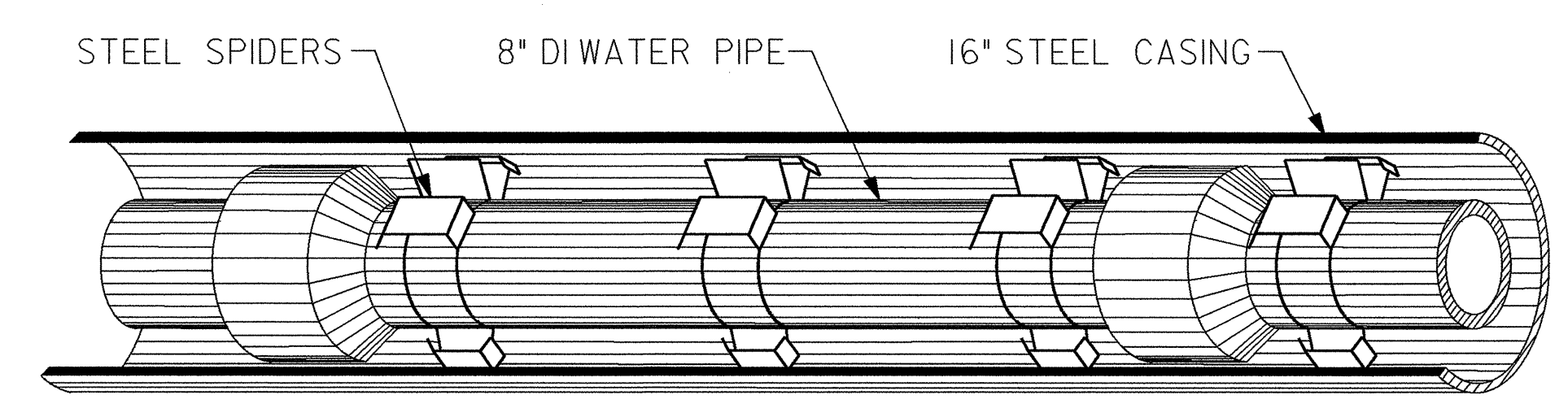
ENCASEMENT END SEAL NOTES:

- (1) GROUT MASONRY AND AROUND WEEP PIPE AS REQUIRED FOR WATERTIGHT SEAL.
- (2) PLACE 5 CUBIC YARDS OF #57 WASHED STONE AT EACH END OF CASING WITH APPROXIMATE DIMENSIONS OF STONE DRAINAGE BED TO BE 10'x10'x1.5' (DEEP).
- (3) ALL WORK ASSOCIATED WITH ENCASEMENT END SEALS TO BE INCLUDED IN PAY ITEM "TRENCHLESS INSTALLATION OF 8" IN SOIL."

WATER AND SEWER TRENCH NOTES

PLACE FOUNDATION CONDITIONING MATERIAL BELOW BEDDING IF REQUIRED, AS DIRECTED BY ENGINEER. PIPE BEDDED IN SELECT MATERIAL, CLASS IV. 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 APPROX. 95% DENSITY IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY THE DEPARTMENT OF TRANSPORTATION.

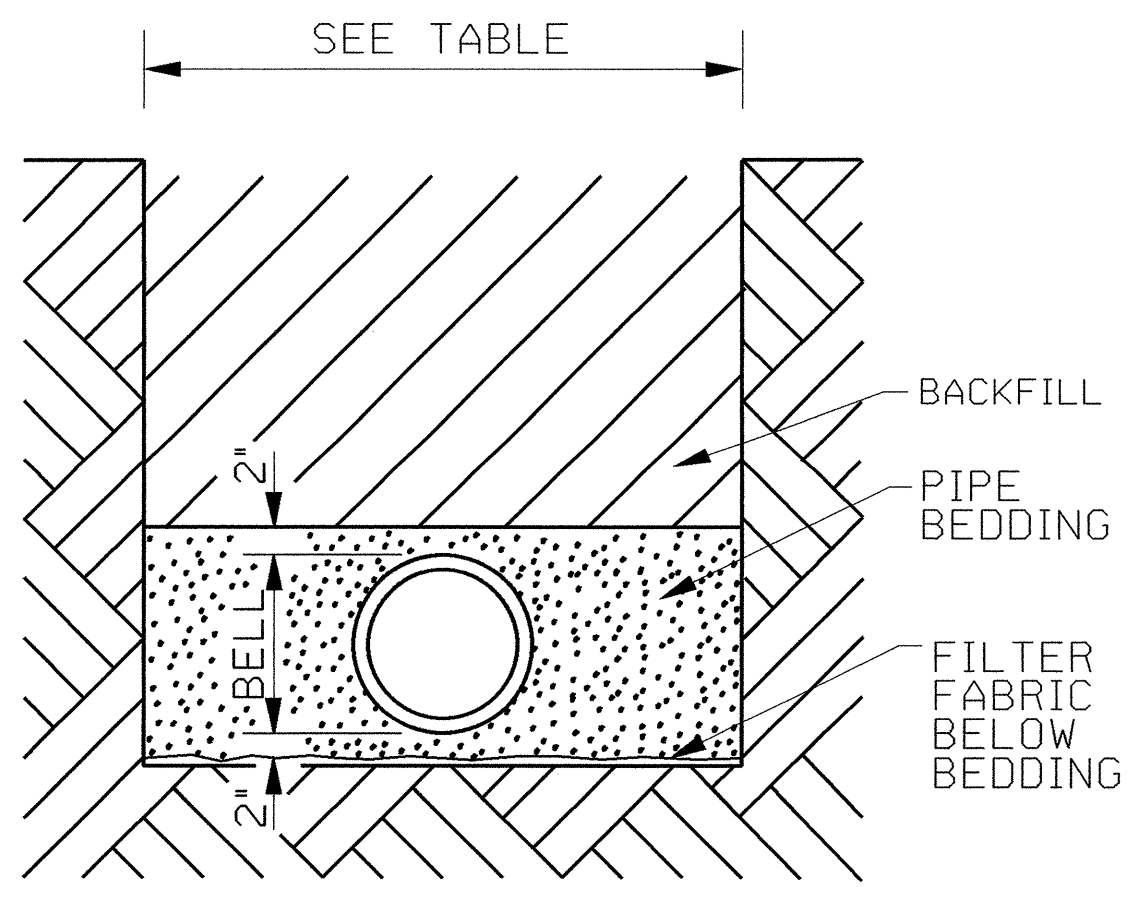
ENCASEMENT INTERIOR



ENCASEMENT INTERIOR NOTES:

- (1) ONE SPIDER SHALL BE PLACED NOT MORE THAN 24" FROM EACH END OF CASING. SUBSEQUENT SPIDERS SHALL BE PLACED ON EACH SIDE OF CARRIER (I.E. 8" WATER) PIPE JOINTS (WITHIN 24" OF JOINT) AND ONE SPIDER SHALL BE PLACED AT MID-SPAN OF EACH CARRIER (I.E. 8" WATER) PIPE.
- (2) INSTALL BRICK MASONRY END SEAL (DETAIL THIS SHEET) EACH END OF CASING PIPE.
- (3) ALL WORK ASSOCIATED WITH INSTALLATION OF CARRIER (I.E. 8" WATER) PIPE AND SPIDERS TO BE INCLUDED IN PAY ITEM "TRENCHLESS INSTALLATION OF 8" IN SOIL."

WATER AND SEWER TRENCH DETAIL

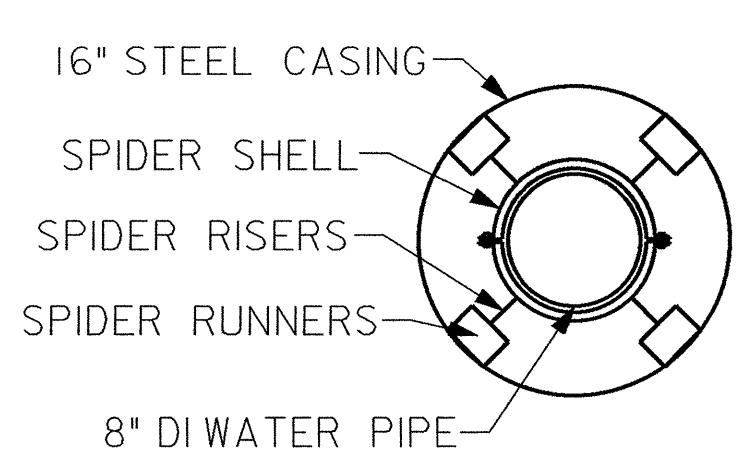


WATER AND SEWER MAXIMUM TRENCH WIDTHS AT TOP OF PIPES

NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)
4	28
6	30
8	32
10	34

SPIDER PIPE SUPPORTS

SPIDER PIPE SUPPORT NOTES:



- (1) SPIDERS SHALL BE MADE OF T-304 STAINLESS STEEL WITH A MINIMUM 14 GAGE THICKNESS. CONNECTING FLANGES SHALL HAVE A MINIMUM OF THREE 3/16" DIAMETER, T-304 BOLTS.
- (2) THE SHELL SHALL BE LINED WITH A RIBBED PVC EXTRUSION WITH A RETAINING SECTION THAT OVERLAPS THE EDGES OF THE SHELL AND PREVENTS SLIPPAGE.
- (3) RISERS SHALL BE MADE OF T-304 STAINLESS STEEL WITH A MINIMUM 10 GAGE THICKNESS.
- (4) RUNNERS SHALL BE MADE OF ULTRA-HIGH MOLECULAR WEIGHT POLYMER WITH A LOW COEFFICIENT OF FRICTION.
- (5) CENTER SPIDER (AND WATER PIPE) INSIDE CASING.

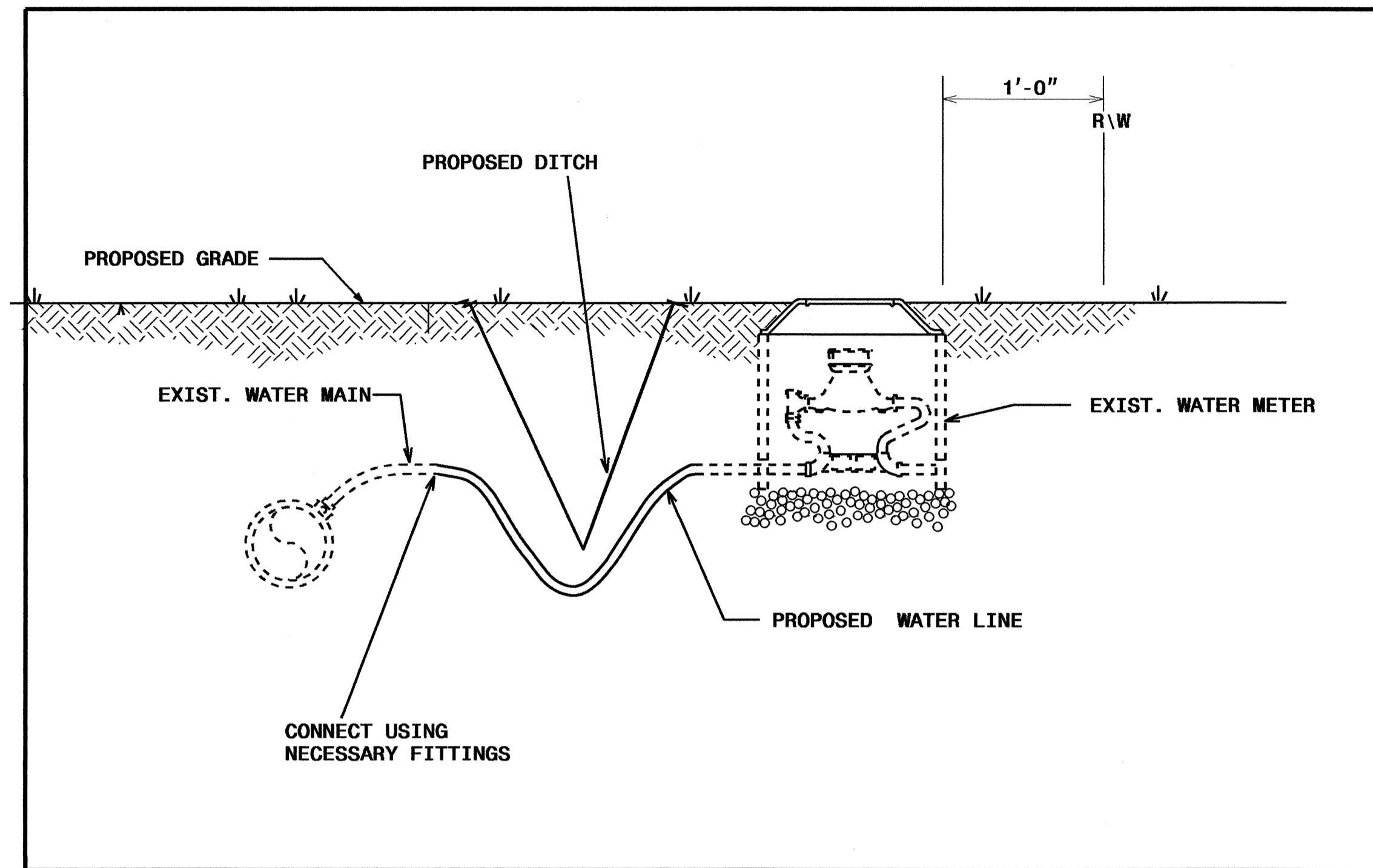
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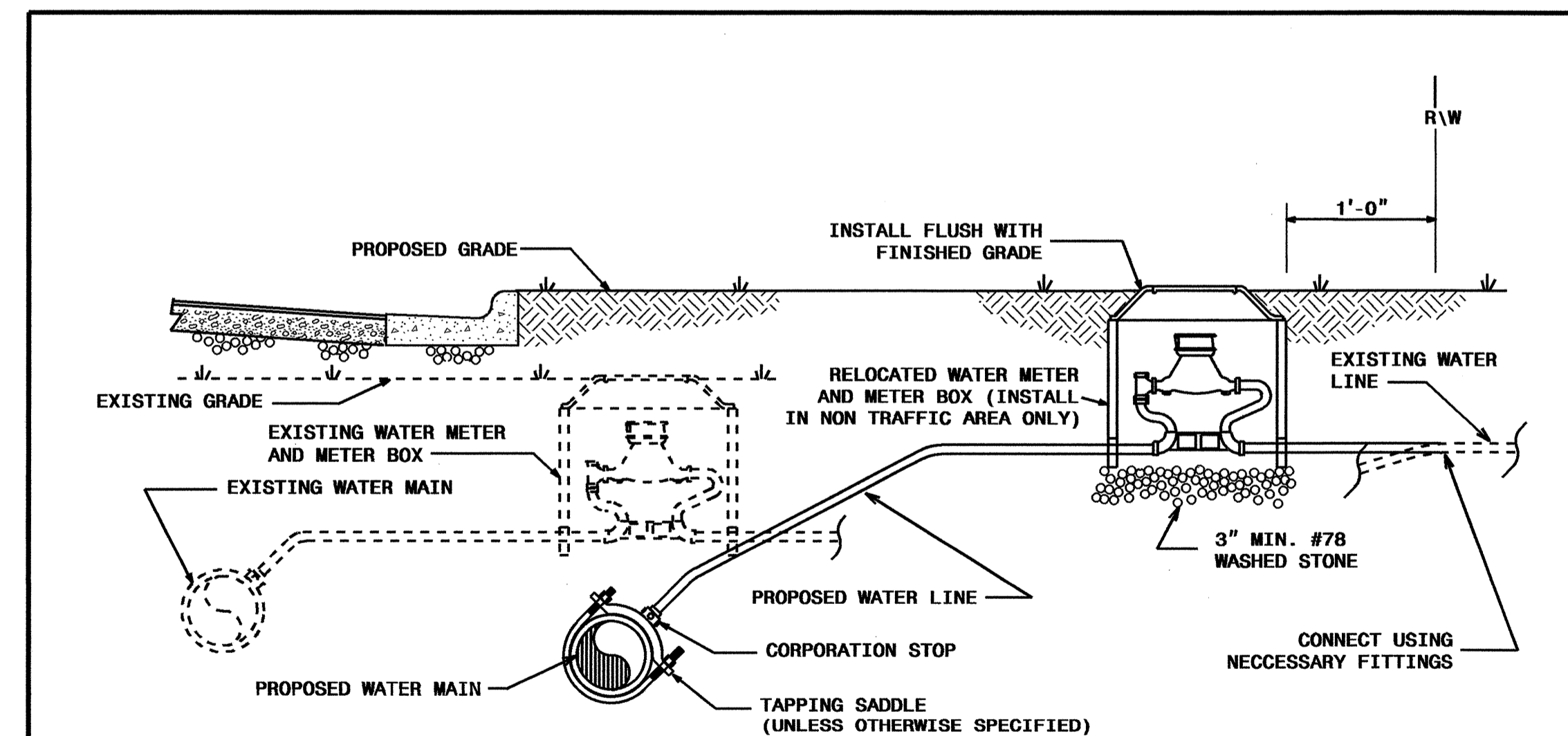
B-4416 WATER AND SEWER LINE RELOCATIONS DETAIL SHEET

PROJECT REFERENCE NO.	SHEET NO.
B-4416	UC-5
DESIGNED BY: EWH	
DRAWN BY: EWH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



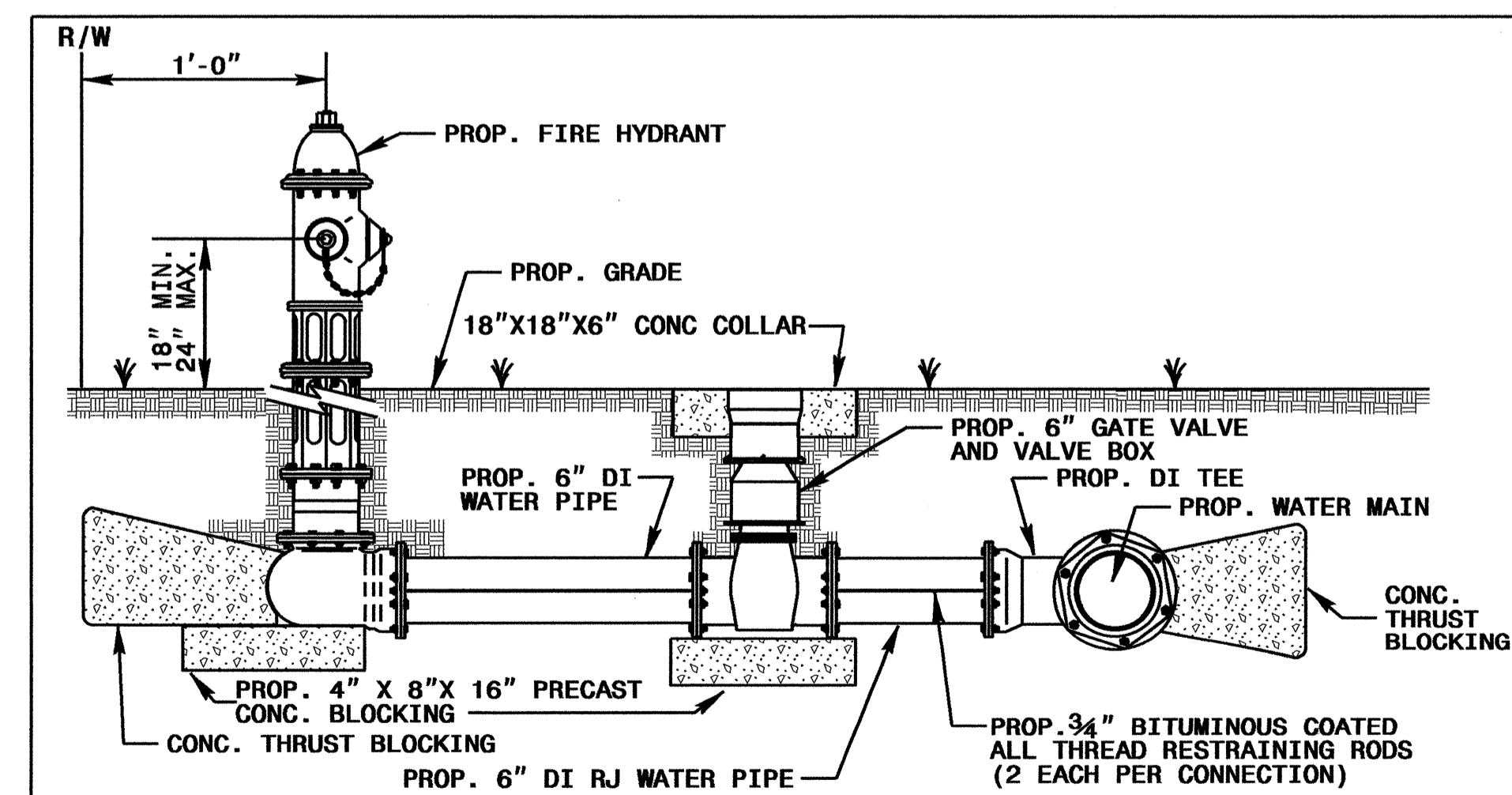
RECONNECT EXISTING WATER METER DETAIL



NOTES:

1. RELOCATION SHALL INCLUDE THE REMOVAL AND INSTALLATION AT THE APPROPRIATE LOCATION OF THE WATER METER, METER SETTER AND YOKE, METER VALVES, AND METER BOX WITH LID.
2. THE NEW WATER SERVICE LINE SHALL BE OF THE SAME TYPE AND GRADE AS THE EXISTING WATER SERVICE LINE UNLESS OTHERWISE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.
3. THE NEW WATER SERVICE LINE SHALL BE INSTALLED WITH A MINIMUM OF 36" COVER BELOW FINISHED GRADE.

WATER METER RELOCATION DETAIL



FIRE HYDRANT INSTALLATION DETAIL

02-AUC-2011246
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5/14/99

B-4416 WATER AND SEWER LINE RELOCATIONS SIGNING SHEET

PROJECT REFERENCE NO. B-4416	SHEET NO. UC-6
DESIGNED BY: EWB	
DRAWN BY: EWB	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919)250-4128 FAX: (919)250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

SIGN NUMBER: name
TYPE: D
QUANTITY: 2
SIGN WIDTH: 2'-0"
HEIGHT: 1'-6"
TOTAL AREA: 3.0 Sq.Ft.
BORDER TYPE: FLUSH
RECESS: 0.38"
WIDTH: 0.63"
RADII: 1.13"
NO. Z BARS:
LENGTH:

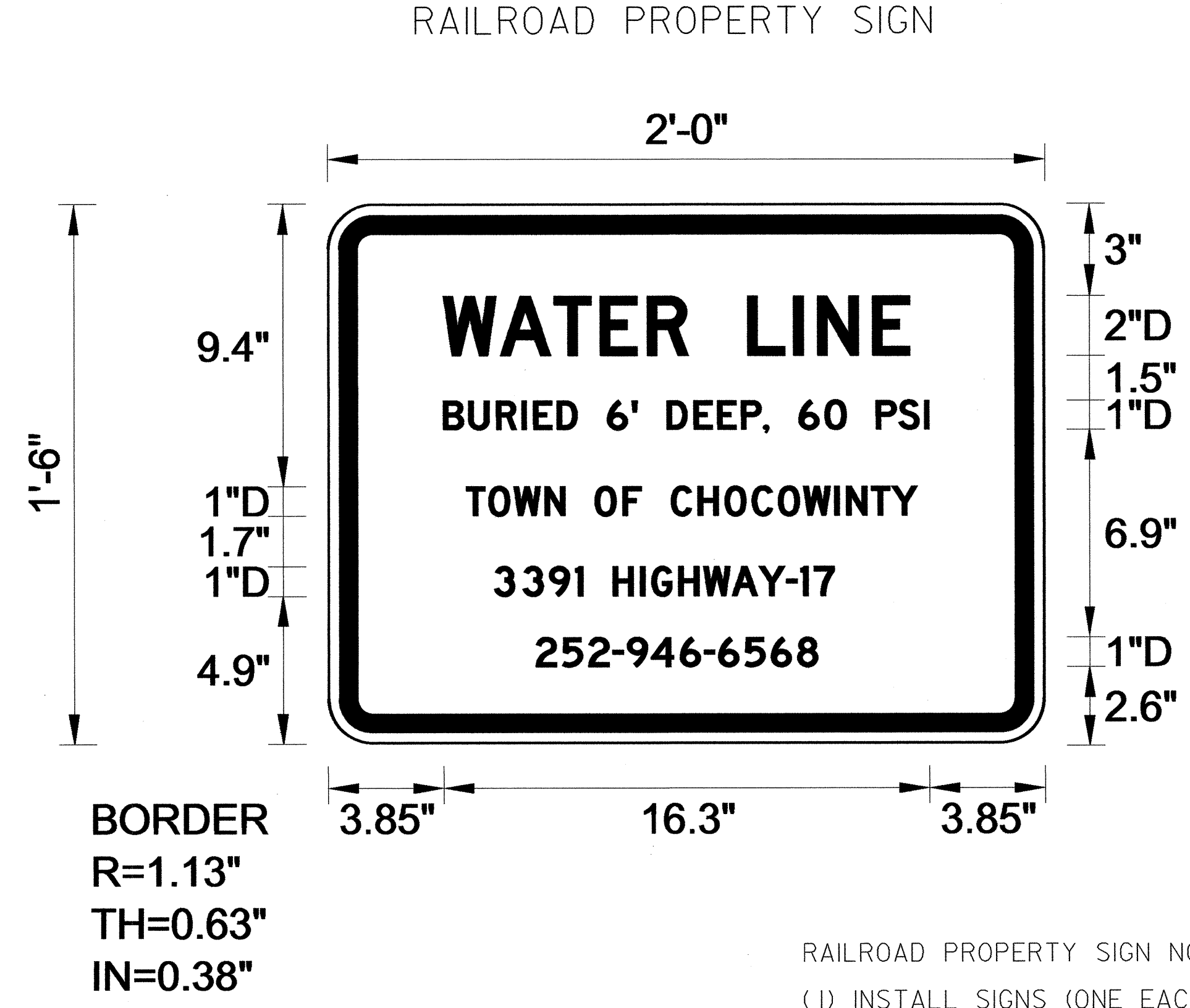
BACKG COLOR: White
COPY COLOR: Black

SYMBOL	X	Y	WID	HT

MAT'L: 0.125" (3.2 mm) ALUMINUM

USE NOTES: 1,2

1. Legend and border(except those that are colored black) shall be direct applied Grade C sheeting.
2. Background shall be Grade C reflective sheeting.



BORDER
 R=1.13"
 TH=0.63"
 IN=0.38"

RAILROAD PROPERTY SIGN NOTES:
 (1) INSTALL SIGNS (ONE EACH SIDE OF RAILROAD TRACKS) AT LOCATIONS SHOWN ON PLAN SHEET UC-3.

LETTER POSITIONS

Letter spacings are to start of next letter																							Series/Size	
																							Text Length	
		W	A	T	E	R		L	I	N	E												D 2000	
	3.9	1.9	1.8	1.5	1.6	1.4	2	1.5	0.8	1.8	1.2	4.5											15.6	
		B	U	R	I	E	D		6	'		D	E	E	P	,		6	0		P	S	I	D 2000
	3.9	0.8	0.9	0.9	0.4	0.8	0.7	1	0.8	0.2	1	0.9	0.8	0.8	0.7	0.2	1	0.9	0.7	1	0.8	0.9	0.2	3.9
		T	O	W	N		O	F		C	H	O	C	O	W	I	N	T	Y					D 2000
	4	0.8	0.8	1	0.7	1	0.9	0.6	1	0.9	0.9	0.9	0.9	0.8	1	0.4	0.8	0.7	0.9	4.9			15.1	
		3	3	9	1		H	I	G	H	W	A	Y	-	1	7								D 2000
	5.6	1	0.9	0.9	0.3	1	0.9	0.4	0.9	0.8	0.9	0.9	0.9	0.5	0.4	0.7	7						11.4	
		2	5	2	-	9	4	6	-	6	5	6	8											D 2000
	7	0.9	0.9	0.8	0.5	0.8	1	0.8	0.5	0.9	0.9	0.9	0.7	7.6									9.4	

FILENAME: WATER LINE

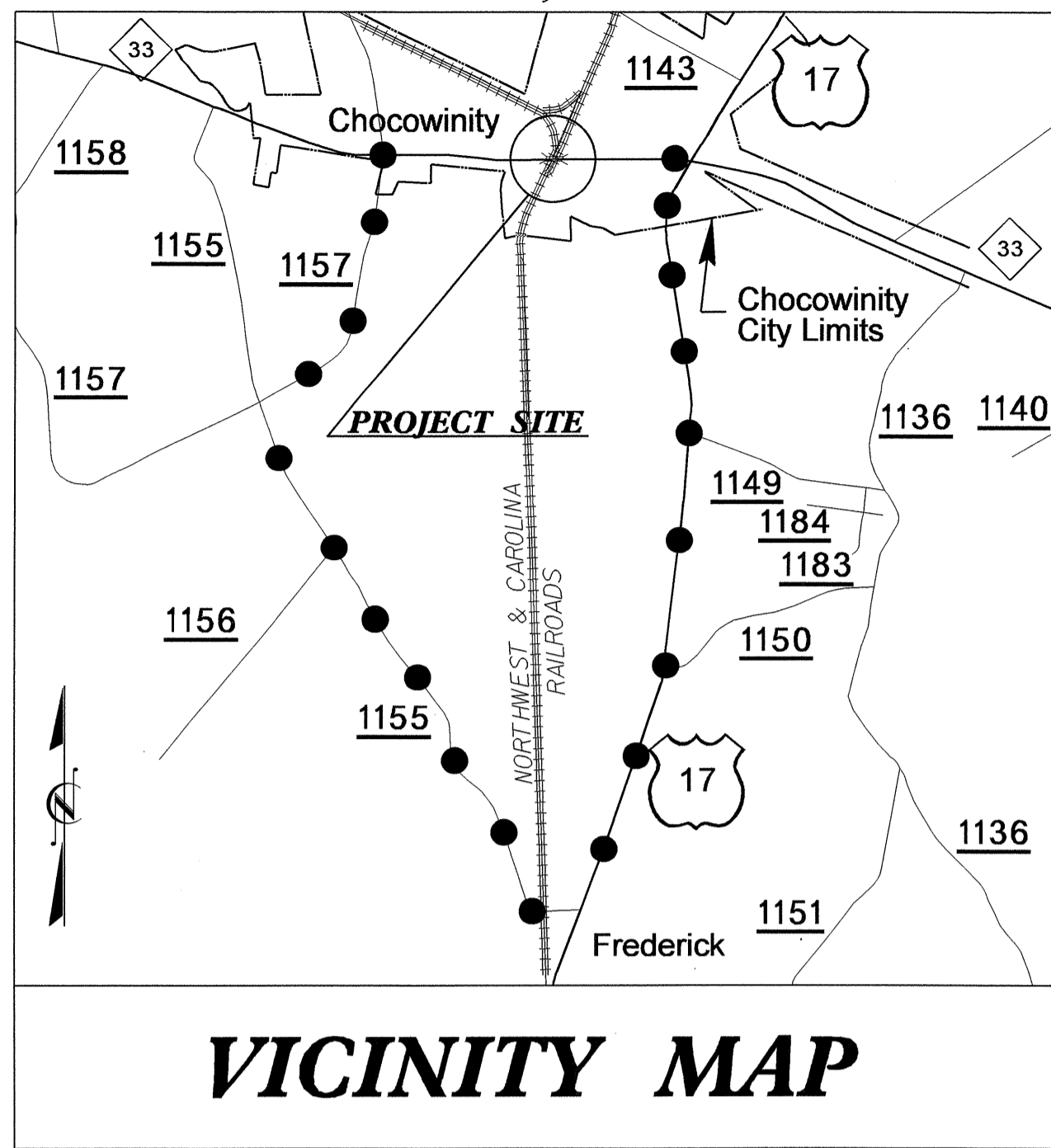
NORTH CAROLINA D.O.T. SIGN DETAIL

03 AUG 2011 15:17
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 EWB:EWB
 CDB:

09/08/99

TIP PROJECT: B-4416

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols



VICINITY MAP

●●●●● OFFSITE DETOUR

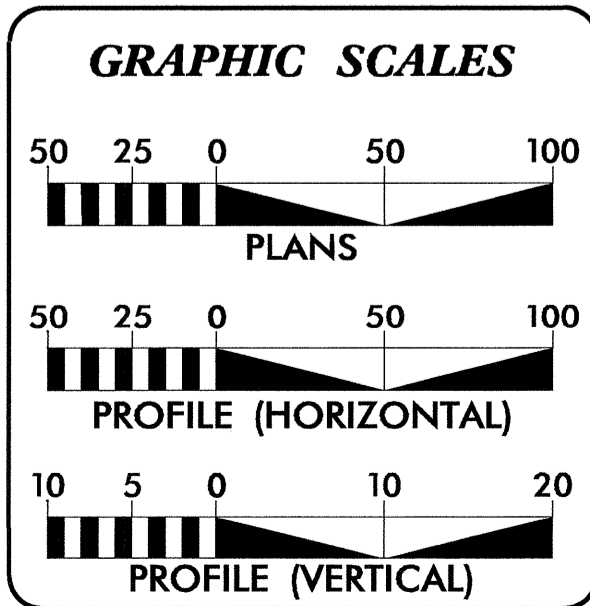
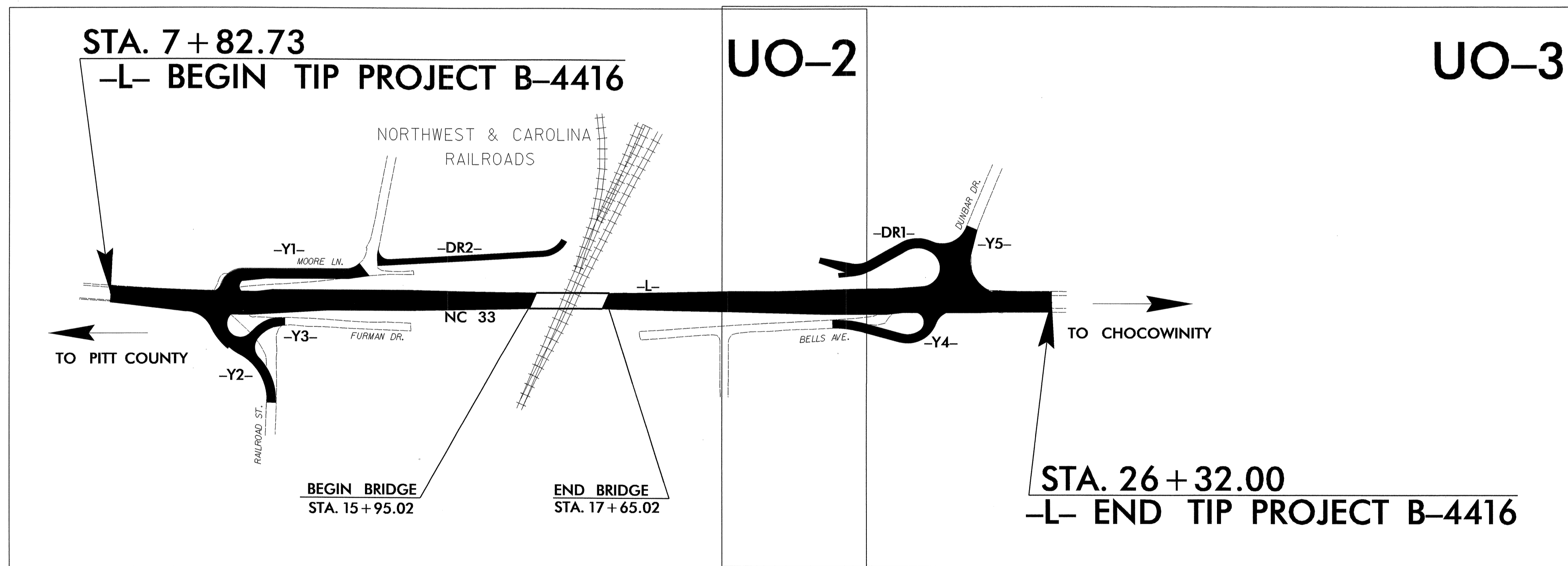
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITIES BY OTHERS PLANS
BEAUFORT COUNTY

LOCATION: BRIDGE 76 OVER THE CAROLINA &
NORTHWEST RAILROADS ON NC 33


TYPE OF WORK: UTILITY BY OTHERS RELOCATION

T.I.P. NO.	SHEET NO.
B-4416	UO-1



INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2 THRU UO-3	UTILITY BY OTHERS PLAN SHEETS

UTILITY OWNERS ON PROJECT
(1) CENTURLINK - TELEPHONE
(2) PROGRESS ENERGY - POWER
(3) SUDDENLINK - CABLE


 PREPARED IN THE OFFICE OF:
DIVISION OF HIGHWAYS
UTILITIES ENGINEERING SECTION
 1555 MAIL SERVICES CENTER
 RALEIGH NC 27699-1555
 PHONE (919) 707-6690
 FAX (919) 250-4151

Roger Worthington, P.E. UTILITIES SECTION ENGINEER
Corey Bousquet, P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER
Stephanie Athey UTILITIES PROJECT DESIGNER

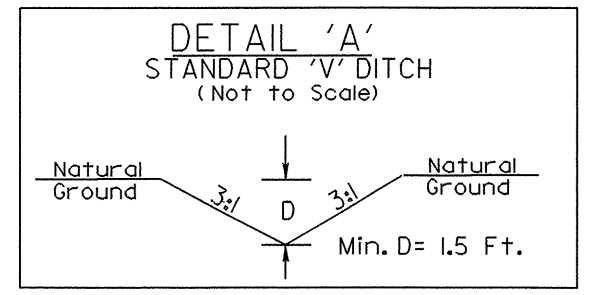
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\$\$\$\$\$USERNAME\$\$\$\$\$

UTILITIES BY OTHERS

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

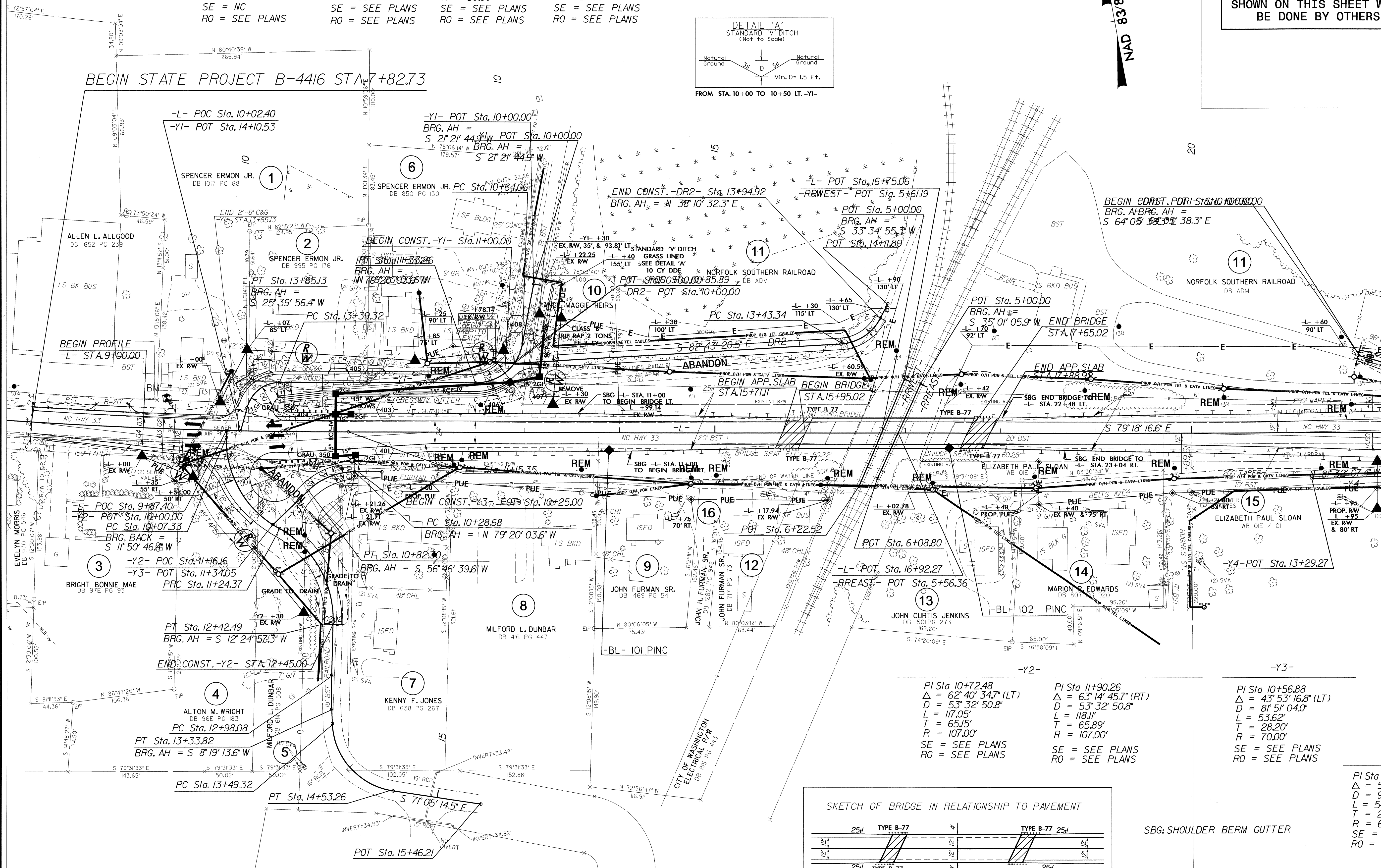
-L-	-Y1-	-DR2-
PI Sta 8+76.33 Δ = 5° 20' 15.7" (LT) D = 106' 56.8" L = 478.38' T = 239.36' R = 5,135.00' SE = NC RO = SEE PLANS	PI Sta 13+66.17 Δ = 75° 00' 00.0" (LT) D = 163' 42' 08.0" L = 45.81' T = 26.86' R = 35.00' SE = SEE PLANS RO = SEE PLANS	PI Sta 11+05.50 Δ = 79° 18' 11.5" (RT) D = 114' 35' 29.6" L = 69.21' T = 41.44' R = 50.00' SE = SEE PLANS RO = SEE PLANS
		PI Sta 13+71.69 Δ = 59° 06' 07.2" (LT) D = 114' 35' 29.6" L = 51.58' T = 28.35' R = 50.00' SE = SEE PLANS RO = SEE PLANS

A REINFORCED SOIL SLOPE SHALL BE PLACED FROM STA. 10+50+/- TO STA. 15+95.47+/- -L- (LEFT), FROM STA. 10+50+/- TO STA. 15+76.25+/- -L- (RIGHT), FROM STA. 17+83.75+/- TO STA. 23+00.00+/- -L- (LEFT), AND FROM STA. 17+64.58+/- TO STA. 23+50.00+/- -L- (RIGHT). SEE REINFORCED SOIL SLOPE SPECIAL PROVISION.



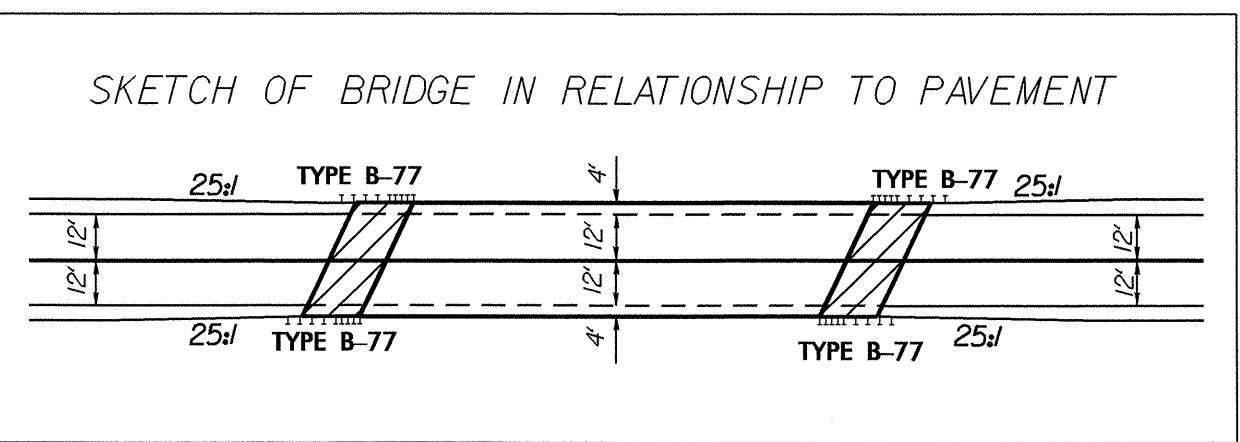
NAD 83/86

6/17/99
01-AUC-2011044
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MATCH LINE -L- STA. 22+00 SEE SHEET U0-3

PI Sta 10+72.48 Δ = 62° 40' 34.7" (LT) D = 53' 32' 50.8" L = 117.05' T = 65.15' R = 107.00' SE = SEE PLANS RO = SEE PLANS	PI Sta 11+90.26 Δ = 63° 14' 45.7" (RT) D = 53' 32' 50.8" L = 118.11' T = 65.89' R = 107.00' SE = SEE PLANS RO = SEE PLANS	PI Sta 10+56.88 Δ = 43° 53' 16.8" (LT) D = 87° 51' 04.0" L = 53.62' T = 28.20' R = 70.00' SE = SEE PLANS RO = SEE PLANS
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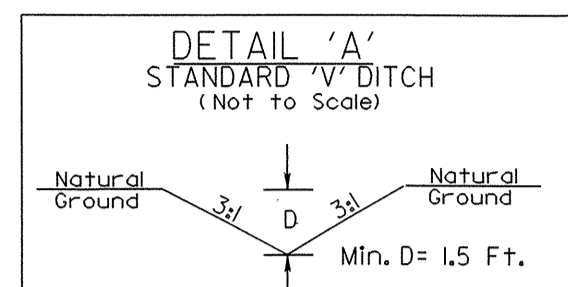
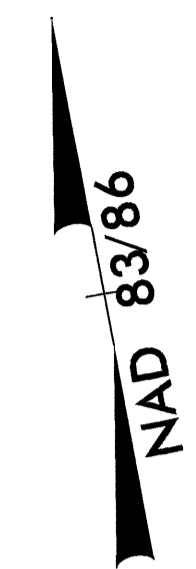


SBG: SHOULDER BERM GUTTER

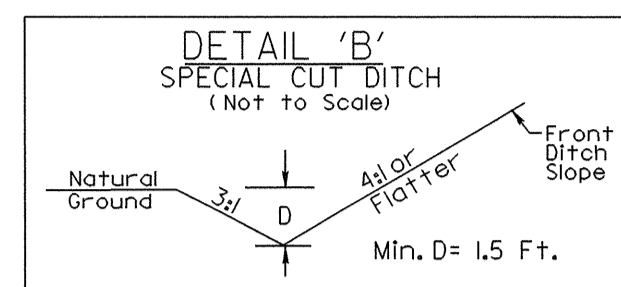
FOR -L- PROFILE SEE SHEET 6
FOR -Y1-, -Y2-, & -Y3- PROFILES SEE SHEET 7
FOR -DR2- PROFILE SEE SHEET 8

UTILITIES BY OTHERS

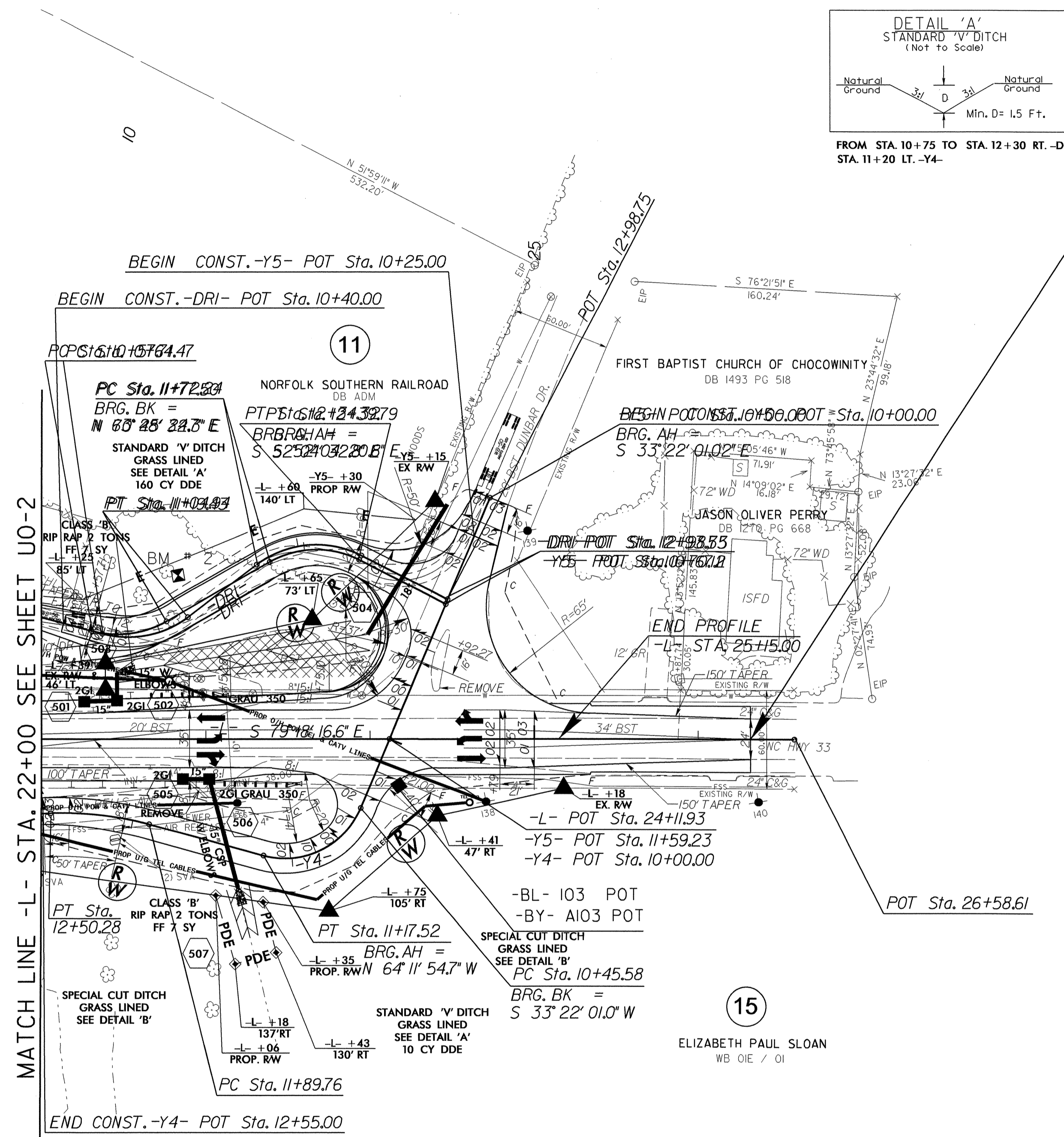
NOTE:
 ALL PROPOSED UTILITY WORK
 SHOWN ON THIS SHEET WILL
 BE DONE BY OTHERS



FROM STA. 10+75 TO STA. 12+30 RT. -DRI-
 STA. 11+20 LT. -Y4-



FROM STA. 11+00 TO STA. 11+30 LT. -Y4-
 FROM STA. 11+30 TO STA. 11+50 LT. -Y4-



END STATE PROJECT B-4416 STA. 26+32.00

A REINFORCED SOIL SLOPE SHALL BE PLACED FROM STA. 10+50 +/- TO STA. 15+95.47 +/- -L- (LEFT), FROM STA. 10+50 +/- TO STA. 15+76.25 +/- -L- (RIGHT), FROM STA. 17+83.75 +/- TO STA. 23+00.00 +/- -L- (LEFT), AND FROM STA. 17+64.58 +/- TO STA. 23+50.00 +/- -L- (RIGHT). SEE REINFORCED SOIL SLOPE SPECIAL PROVISION.

MATCH LINE -L- STA. 22+00 SEE SHEET U0-2

-DRI-		-Y4-	
10+94.04	PI Sta 12+10.0	PI Sta 10+89.38	PI Sta 12+20.25
2' 28" 57.0" (LT)	Δ = 64' 30" 14.5" (RT)	Δ = 82' 26" 04.2" (RT)	Δ = 17' 20" 12.7" (LT)
5' 29' 34.7"	D = 95' 29' 34.7"	D = 114' 35' 29.6"	D = 28' 38' 52.4"
1.96'	L = 67.55'	L = 71.94'	L = 60.52'
9.58'	T = 37.86'	T = 43.80'	T = 30.49'
0.00'	R = 60.00'	R = 50.00'	R = 200.00'
SEE PLANS	SE = SEE PLANS	SE = SEE PLANS	SE = SEE PLANS
SEE PLANS	RO = SEE PLANS	RO = SEE PLANS	RO = SEE PLANS

5/14/99
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