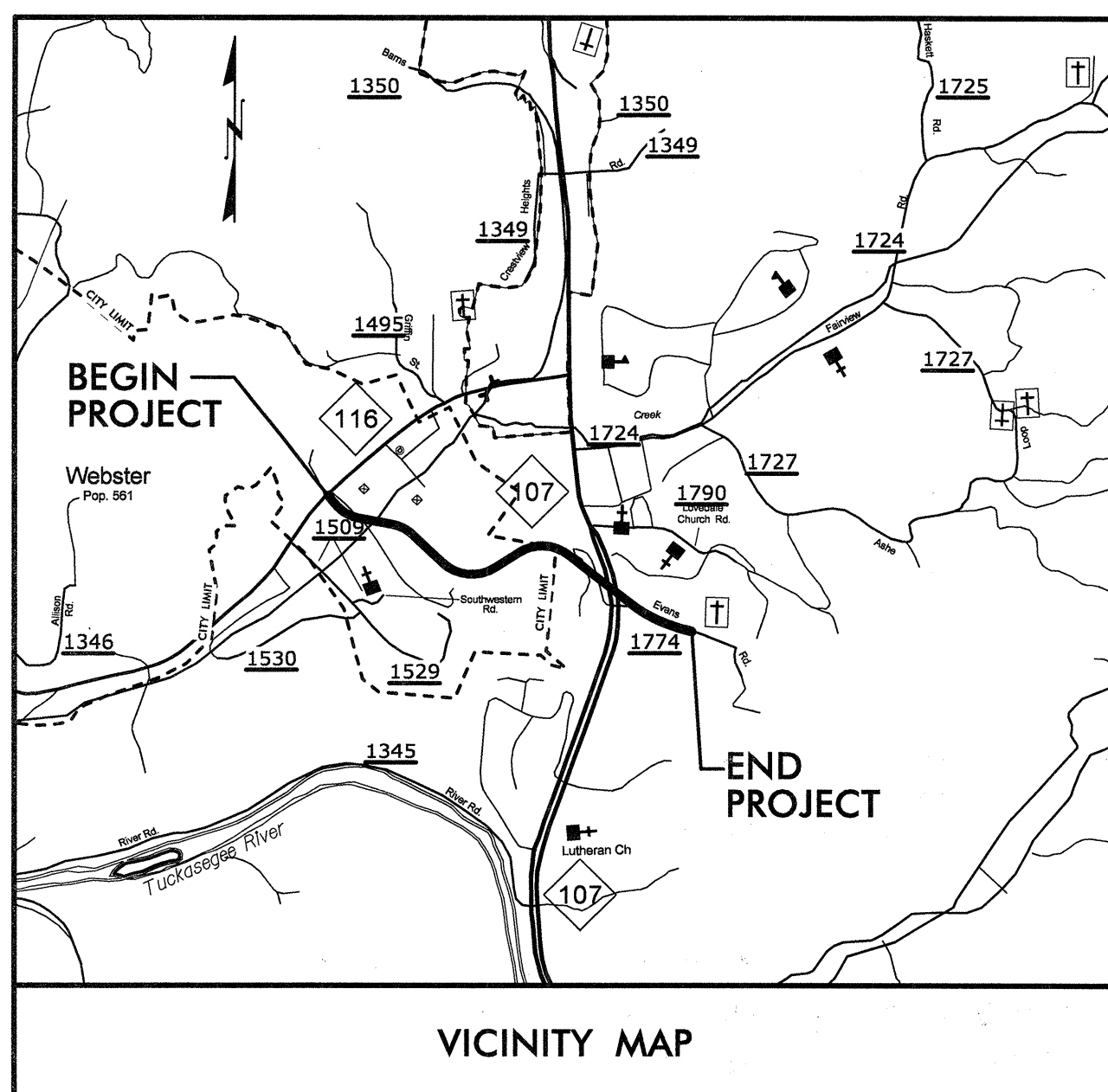


09/20/12/12

TIP PROJECT: R-5000

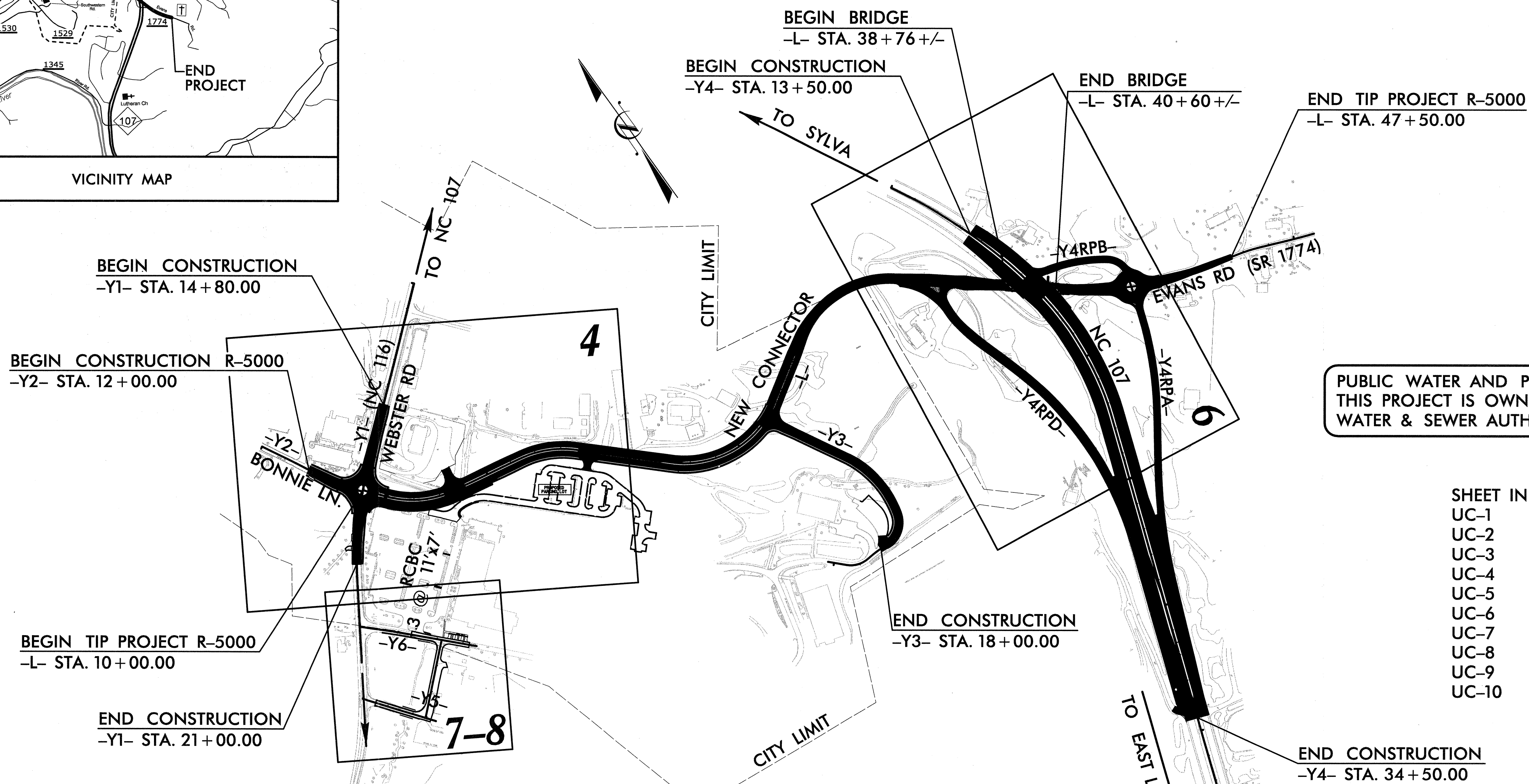
See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
JACKSON COUNTY

LOCATION: NEW LOCATION CONNECTOR ROAD FROM NC 116 TO EAST OF NC 107
TYPE OF WORK: UTILITY RELOCATION

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5000	UC-1	
WBS NO.	F.A. PROJ. NO.	DESCRIPTION	
41156.1.1		P.E.	
41156.2.1		R/W UTIL.	
41156.3.1		CONST.	



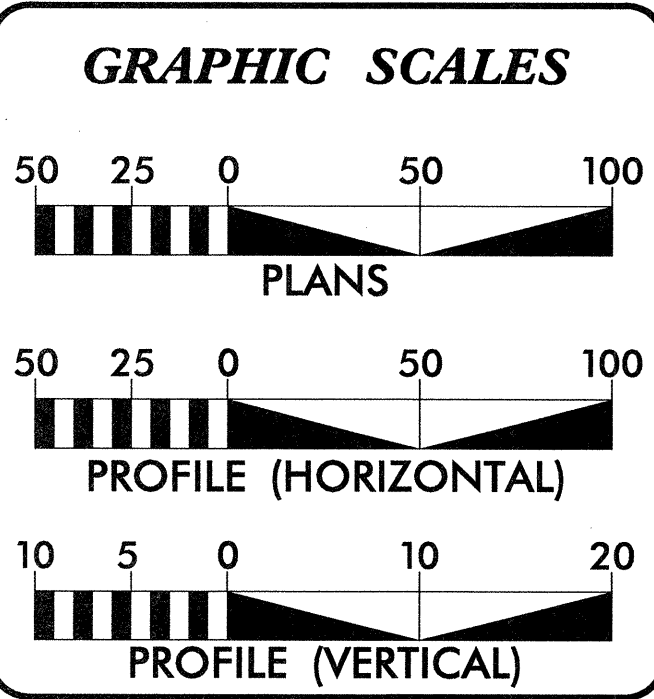
PUBLIC WATER AND PUBLIC SEWER ON THIS PROJECT IS OWNED BY TUCKASEEGEE WATER & SEWER AUTHORITY

SHEET INDEX

UC-1	COVER
UC-2	NO SHEET
UC-3	NO SHEET
UC-4	L LINE & Y1
UC-5	NO SHEET
UC-6	L LINE & Y4
UC-7	Y6
UC-8	Y5
UC-9	PROFILES
UC-10	PROFILES

A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF WEBSTER. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD _____. THIS IS A PARTIAL CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS AS SHOWN ON THE PLANS.

CONTRACT:



DESIGN DATA

ADT 2012 =	2,900
ADT 2035 =	6,700
DHV =	11 %
D =	55 %
T =	3 % *
V =	35 MPH
(* TTST 1% + DUALS 2%)	
FUNC CLASS =	URBAN COLLECTOR

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-5000	=	0.671 MILES
LENGTH STRUCTURE TIP PROJECT R-5000	=	0.039 MILES
TOTAL LENGTH TIP PROJECT R-5000	=	0.710 MILES

Prepared for:
NCDOT
DIVISION 14
253 Webster Rd., Sylva, NC 28779

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
NOVEMBER 2011

LETTING DATE:
NOVEMBER 20, 2012

NCDOT CONTACT: **STEPHEN WILLIAMS**
DIVISION 14 DESIGN CONSTRUCTION ENGINEER

Prepared by:
MULKEY
ENGINEERS & CONSULTANTS
PO BOX 33127
RALEIGH, NC 27636
(919) 881-1110 (FAX)
WWW.MULKEYINC.COM

JOHNNY BANKS
PROJECT ENGINEER

WARREN M. SUGG, PE
UTILITY DESIGN ENGINEER

UTILITY ENGINEER

Warren M. Sugg
SIGNATURE: WARREN M. SUGG



ROADWAY DESIGN ENGINEER

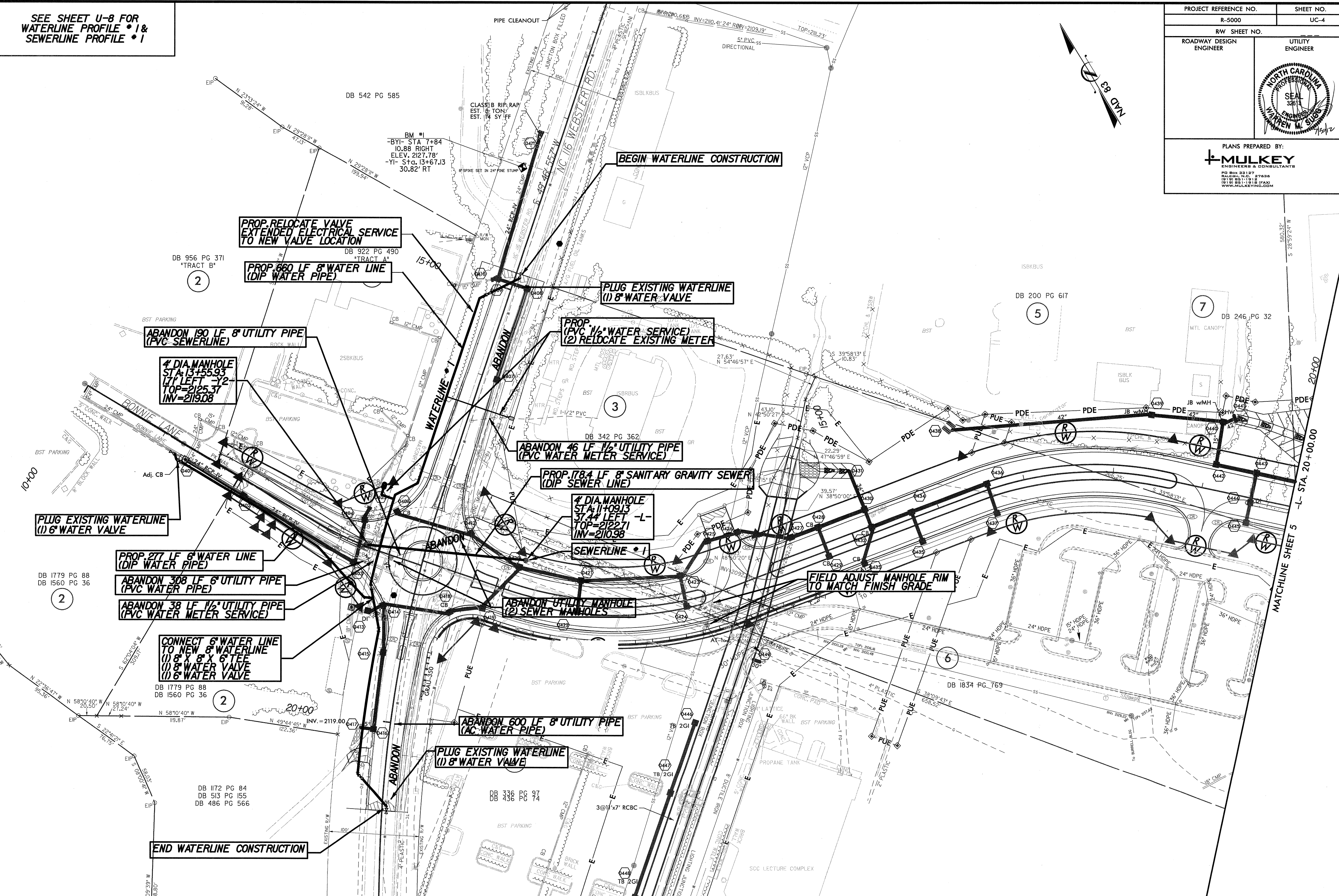
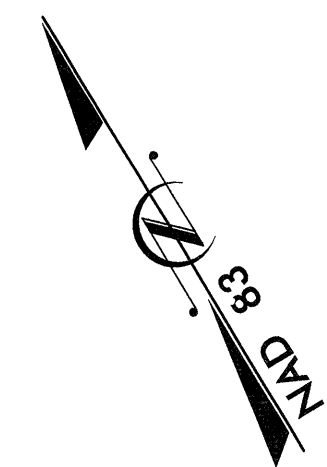
SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER 32613 WARREN M. SUGG

SIGNATURE: _____ P.E.

7/30/2012 6:18 PM G:\Projects\2006\246.05 R-5000\Roadway\Proj\U-1.dgn 10:38:07 AM

SEE SHEET U-8 FOR
WATERLINE PROFILE *1 &
SEWERLINE PROFILE *1

PROJECT REFERENCE NO. R-5000	SHEET NO. UC-4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	UTILITY ENGINEER
	
PLANS PREPARED BY:	
	
<small> P.O. Box 33127 Raleigh, NC 27636 (919) 851-1912 (919) 851-9181 FAX WWW.MULKEYING.COM </small>	



REVISIONS

8/17/99
 7/30/2012
 G:\Projects\2006\246.05 R-5000\Roadway\Proc\N-4.dgn
 10/23/25

PROP. RELOCATE VALVE
EXTENDED ELECTRICAL SERVICE
TO NEW VALVE LOCATION

PROP. 660 LF 8" WATER LINE
(DIP WATER PIPE)

BEGIN WATERLINE CONSTRUCTION

PLUG EXISTING WATERLINE
(1) 8" WATER VALVE

PROP. (PVC 1/2" WATER SERVICE)
(2) RELOCATE EXISTING METER

ABANDON 190 LF 8" UTILITY PIPE
(PVC SEWERLINE)

4" DIA. MANHOLE
STA: 13+55.35
17' LEFT -Y2
TOP=2125.37
INV=2119.08

ABANDON 46 LF 1/2" UTILITY PIPE
(PVC WATER METER SERVICE)

PROP. 178.4 LF 8" SANITARY GRAVITY SEWER
(DIP SEWER LINE)

4" DIA. MANHOLE
STA: 11+09.13
37.44' LEFT -L-
TOP=2122.71
INV=2110.98

PLUG EXISTING WATERLINE
(1) 6" WATER VALVE

PROP. 277 LF 6" WATER LINE
(DIP WATER PIPE)

ABANDON 308 LF 6" UTILITY PIPE
(PVC WATER PIPE)

ABANDON 38 LF 1/2" UTILITY PIPE
(PVC WATER METER SERVICE)

ABANDON UTILITY MANHOLE
(2) SEWER MANHOLES

FIELD ADJUST MANHOLE RIM
TO MATCH FINISH GRADE

CONNECT 6" WATER LINE
TO NEW 8" WATERLINE
(1) 8" X 8" X 6" TEE
(1) 8" WATER VALVE
(1) 6" WATER VALVE

DB 1779 PG 88
DB 1560 PG 36

DB 1779 PG 88
DB 1560 PG 36

ABANDON 600 LF 8" UTILITY PIPE
(AC WATER PIPE)

PLUG EXISTING WATERLINE
(1) 8" WATER VALVE

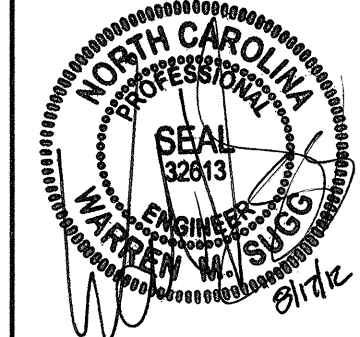
DB 1172 PG 84
DB 513 PG 155
DB 486 PG 566

END WATERLINE CONSTRUCTION

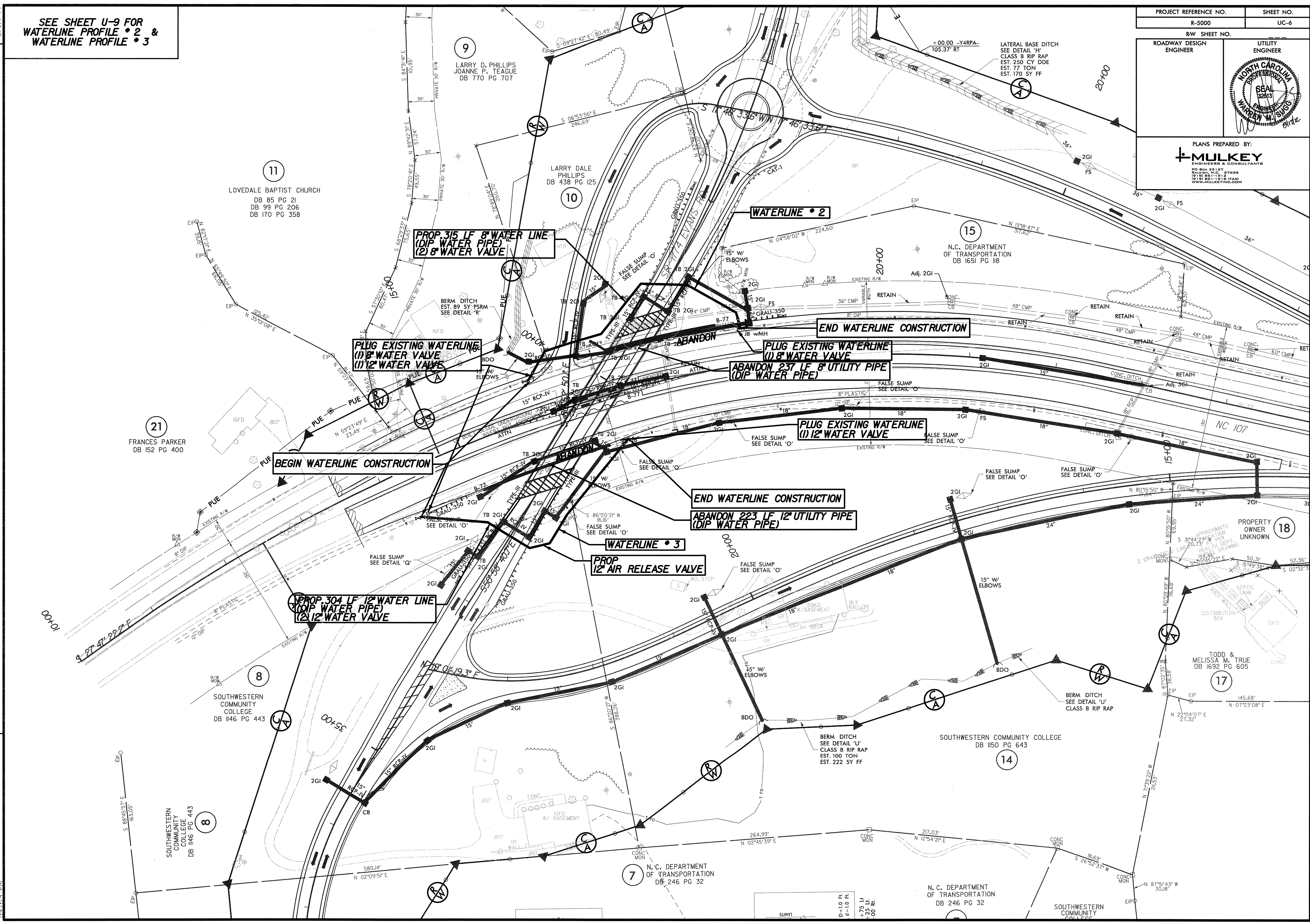
MATCHLINE SHEET 6
-L- STA. 22+00.00

FOR -L- PROFILE SEE SHEET 8
FOR -Y1- PROFILE SEE SHEET 9
FOR -Y2- PROFILE SEE SHEET 9
FOR ISLAND DIMENSIONS &
DETAILS SEE SHEET 2-C

SEE SHEET U-9 FOR
WATERLINE PROFILE * 2 &
WATERLINE PROFILE * 3



PROJECT REFERENCE NO. R-5000		SHEET NO. UC-6	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		UTILITY ENGINEER	
			
PLANS PREPARED BY: MULKEY ENGINEERS & CONSULTANTS			
<small> PG. BOX 33127 RALEIGH, N.C. 27636 (919) 851-1818 (FAX) WWW.MULKEYINC.COM </small>			

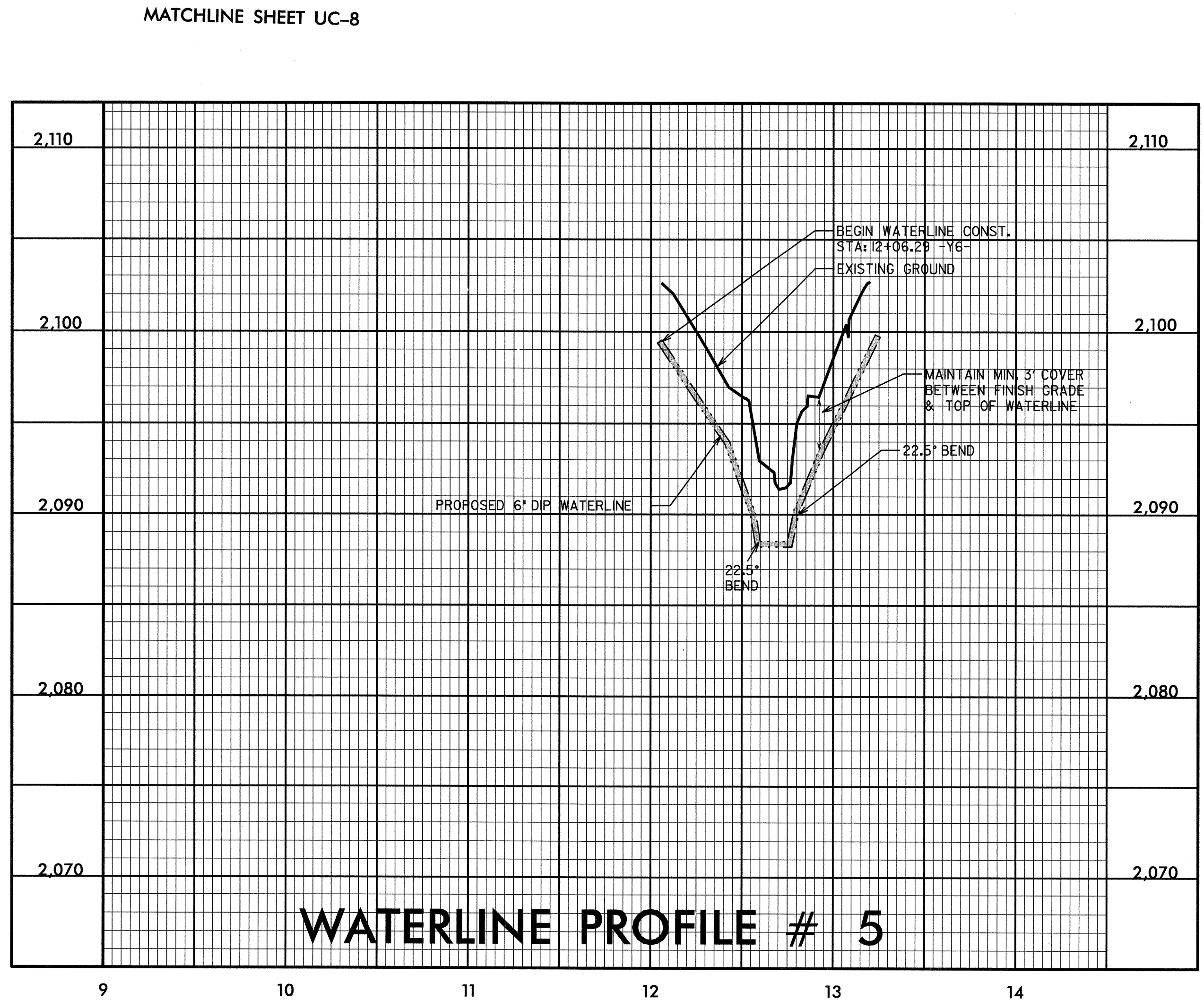
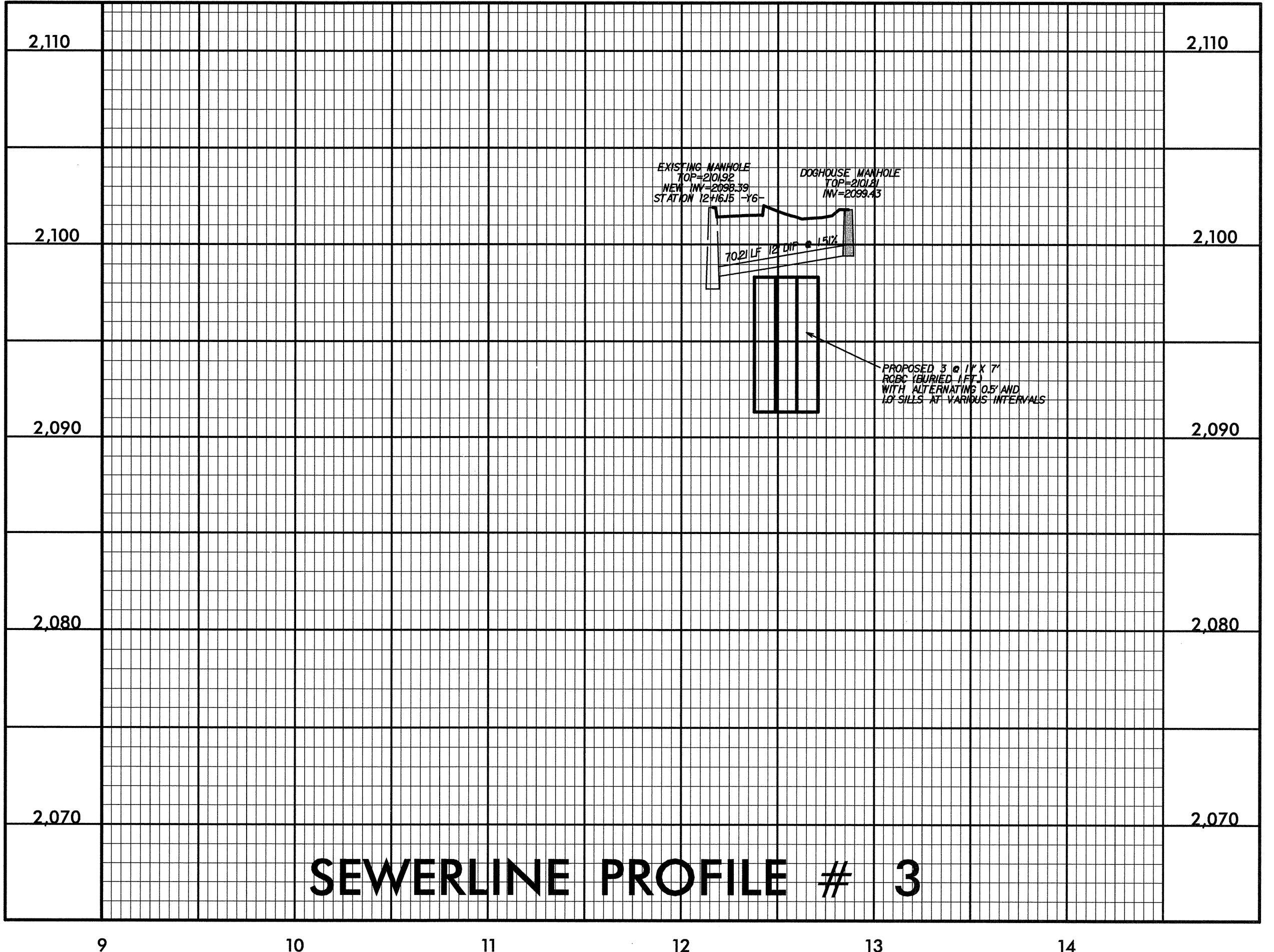
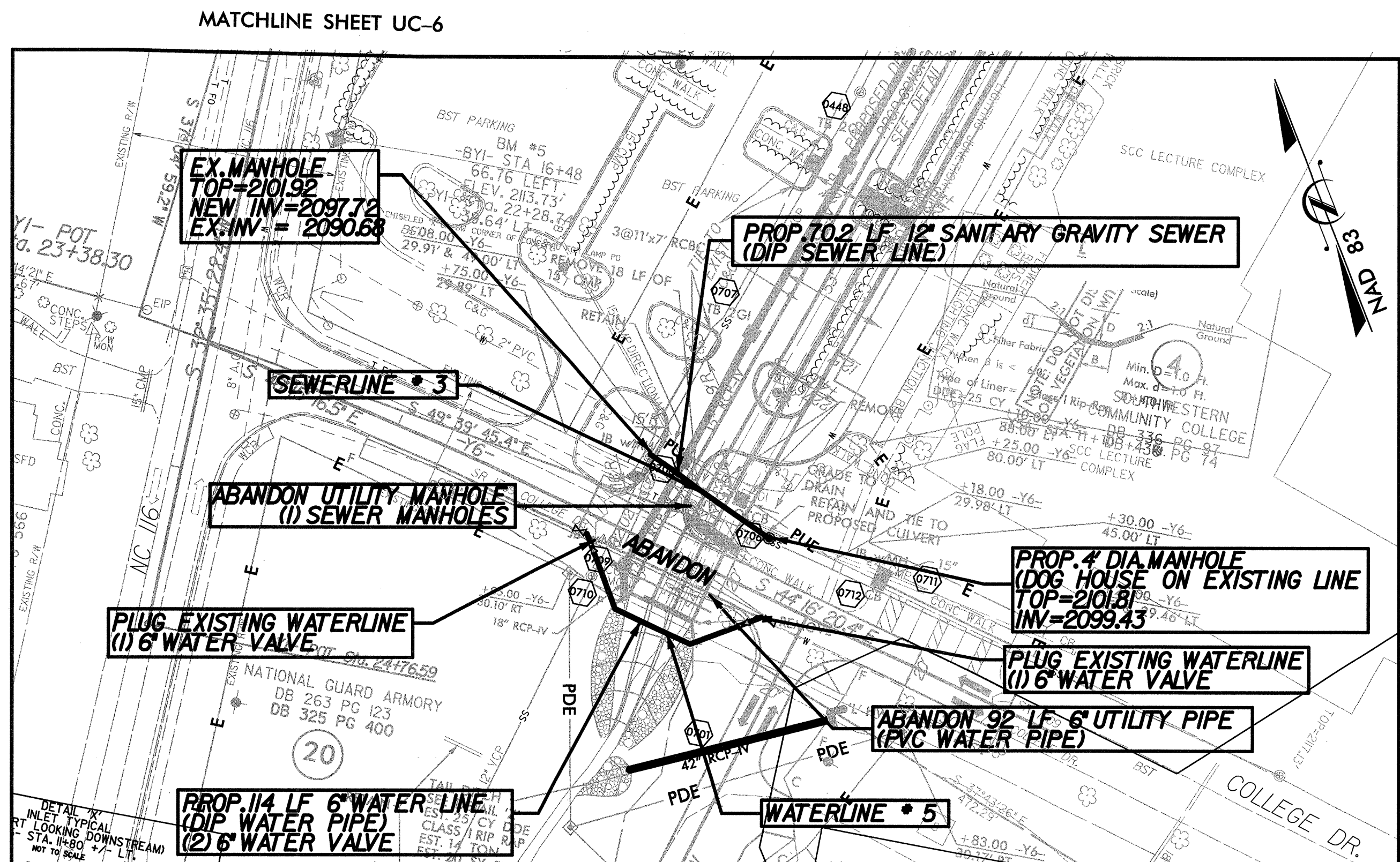
REVISIONS



8/17/99
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 8/17/2012
 C:\p\c\est\2006\246.05 R-5000\Roadway\Pro\N\U-6.dgn
 12:47:13 PM



SUMPS
 D = 1.0 FT.
 B = 1.0 FT.
 1.75 FT.
 1.0 FT.

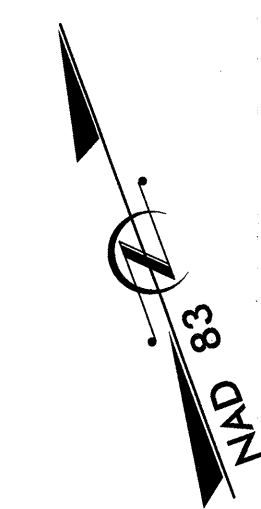
PROJECT REFERENCE NO. R-5000	SHEET NO. UC-7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	UTILITY ENGINEER
	
PLANS PREPARED BY:	
	
<small>PO Box 33127 Raleigh, N.C. 27636 (919) 851-1912 (919) 851-1918 FAX WWW.MULKEYINC.COM</small>	



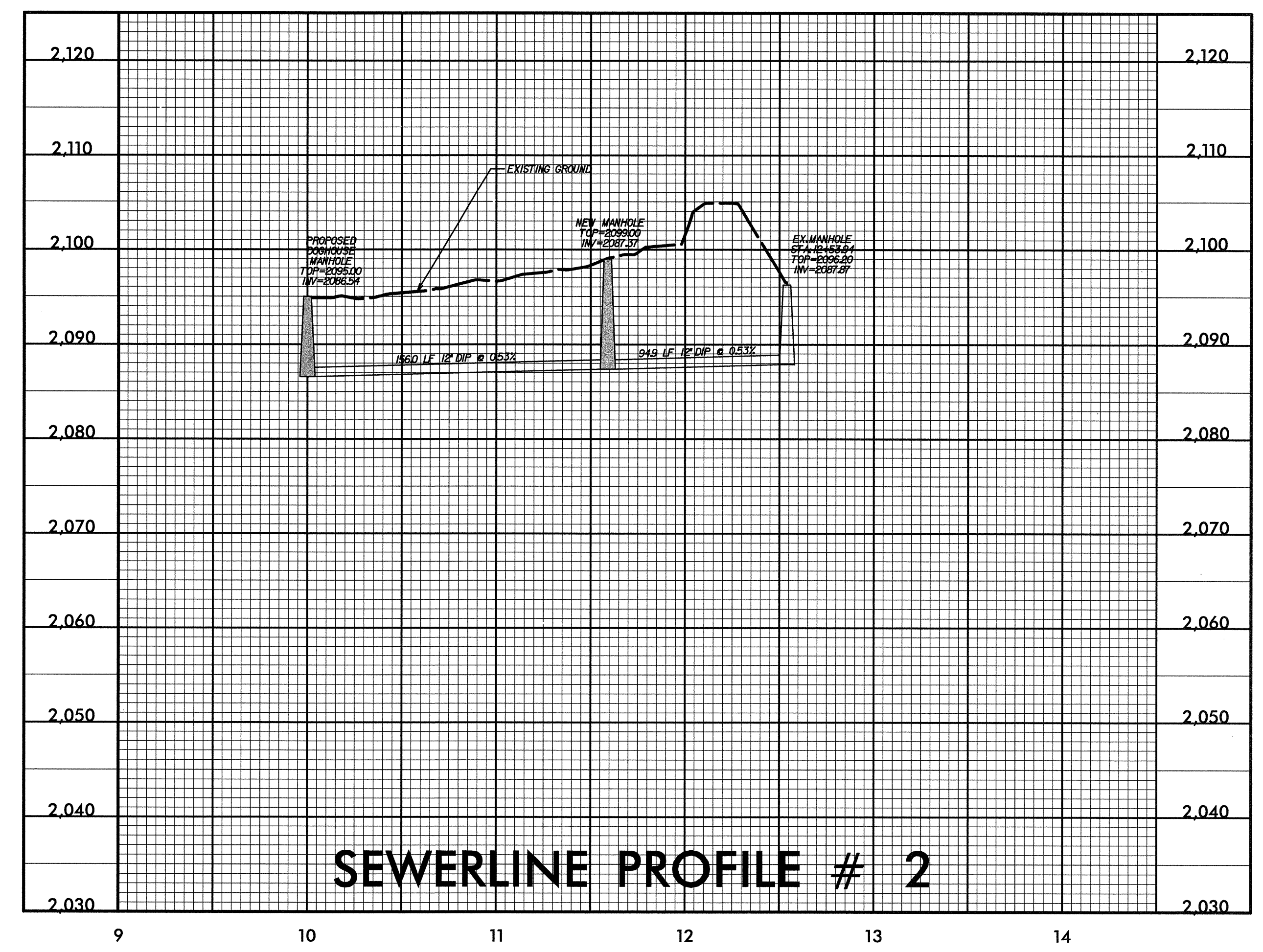
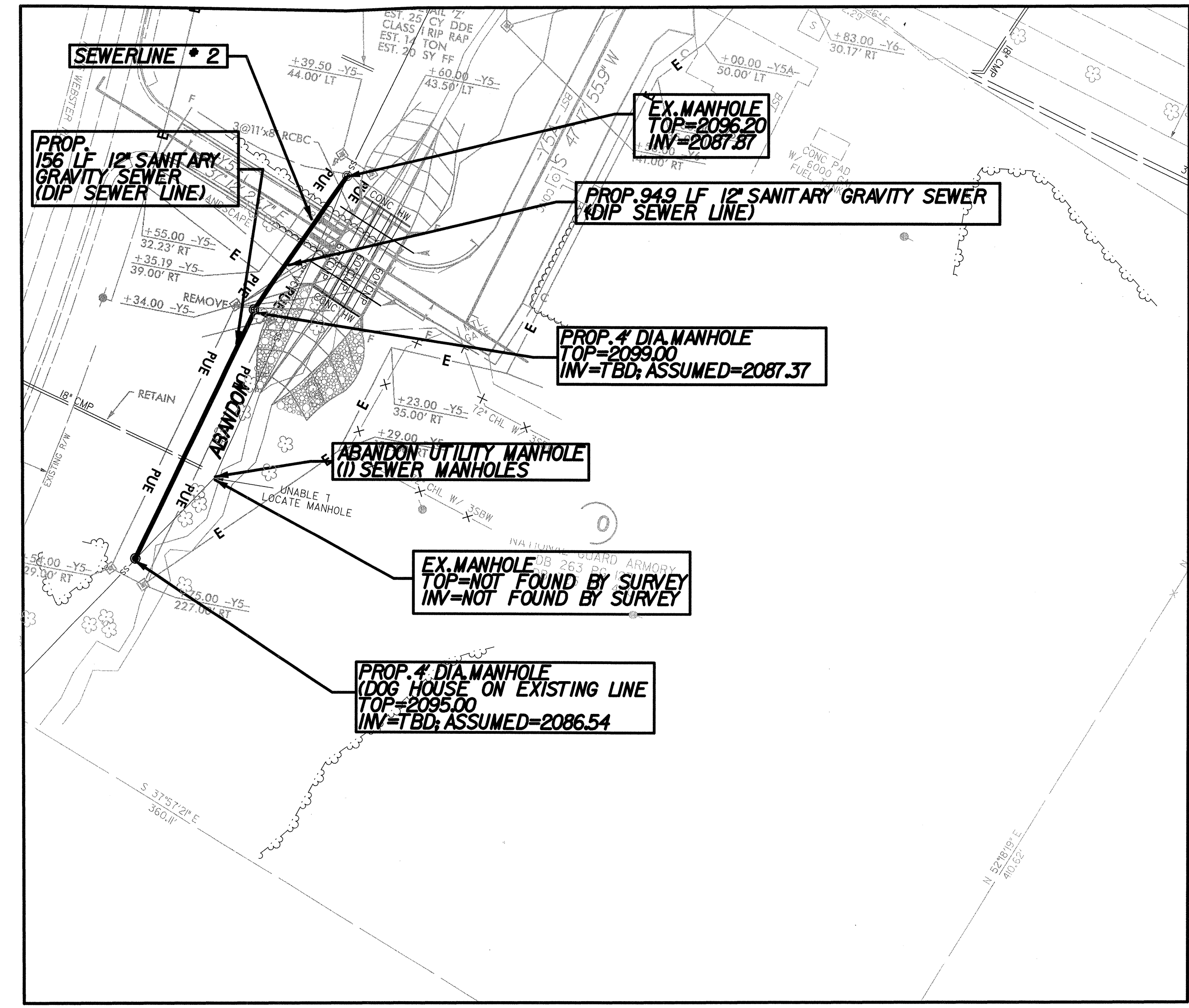
REVISIONS

8/17/09
7/30/2012
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PROJECT REFERENCE NO. R-5000	SHEET NO. UC-8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	UTILITY ENGINEER
	
PLANS PREPARED BY:	
 <small> P.O. Box 33127 Raleigh, N.C. 27636 (919) 851-1912 (919) 851-1918 (FAX) WWW.MULKEYINC.COM </small>	

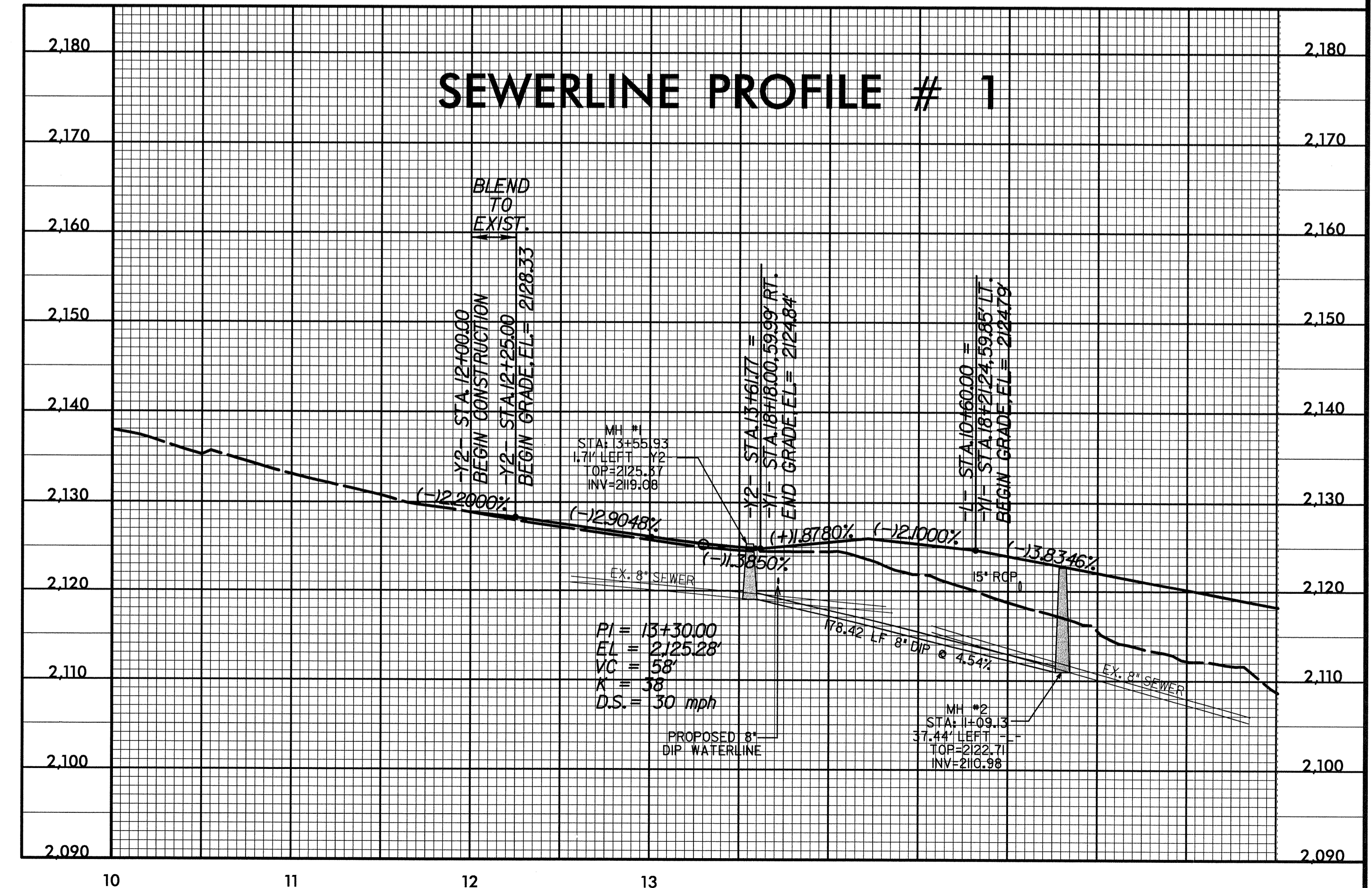
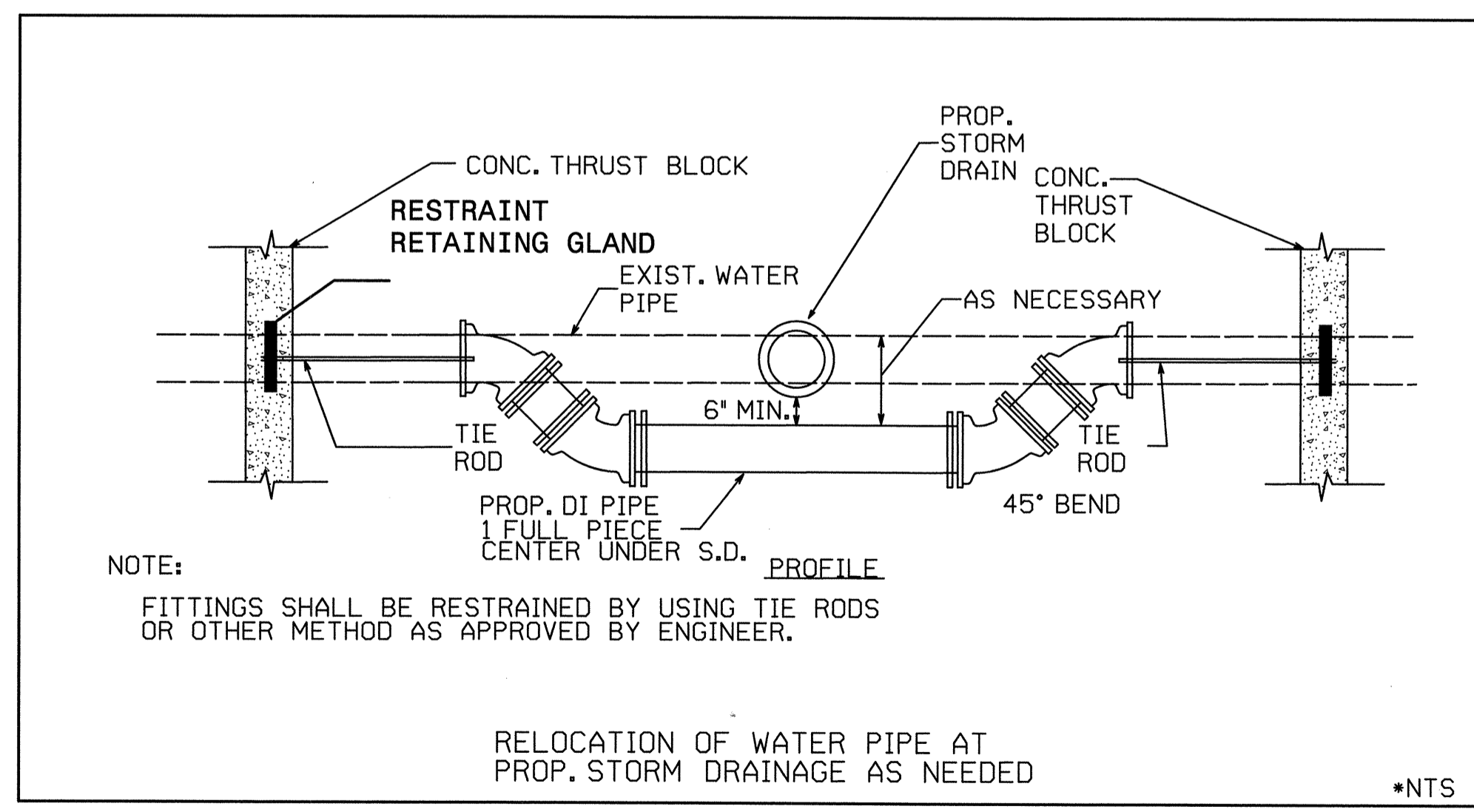
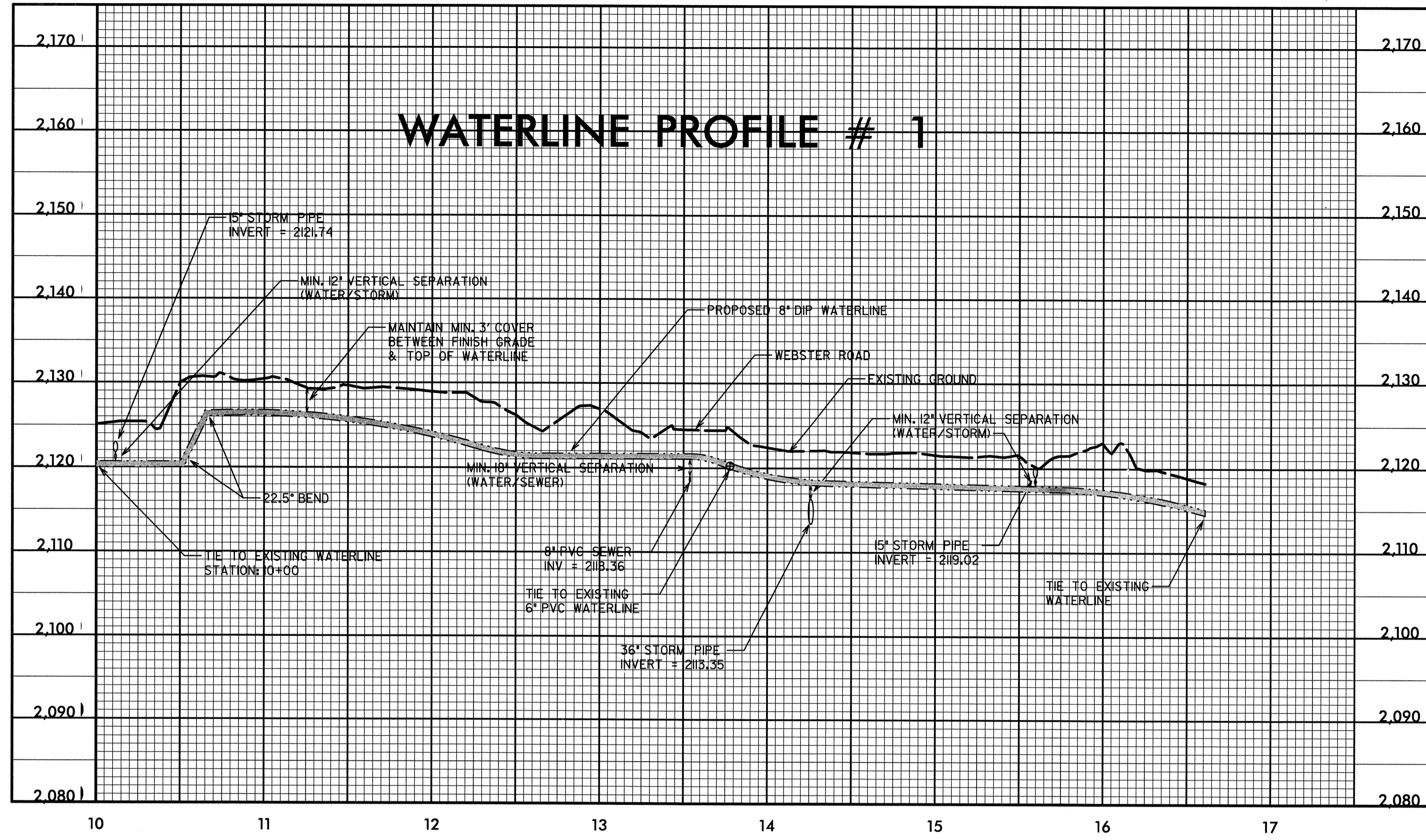


MATCHLINE SHEET UC-7

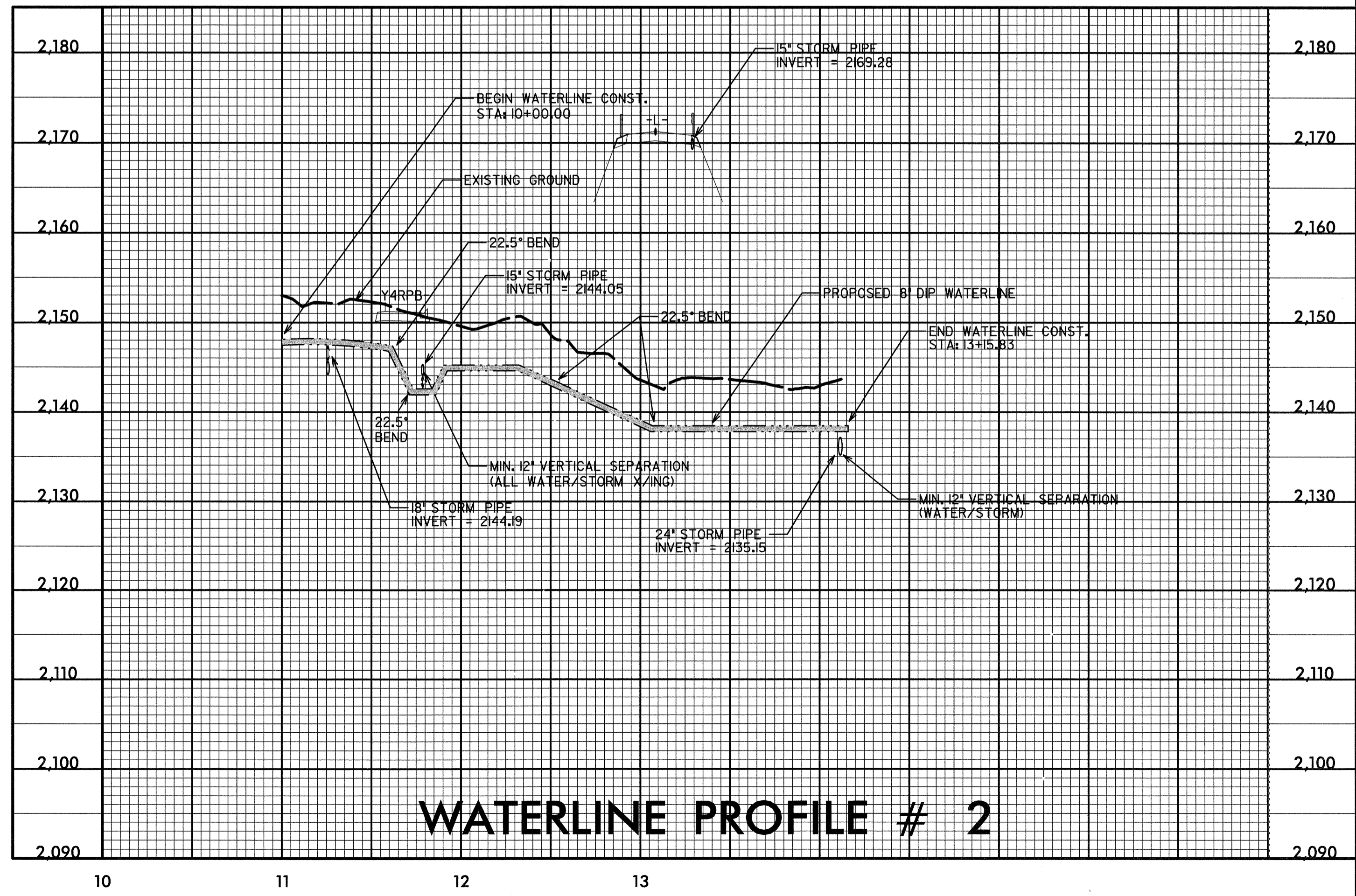
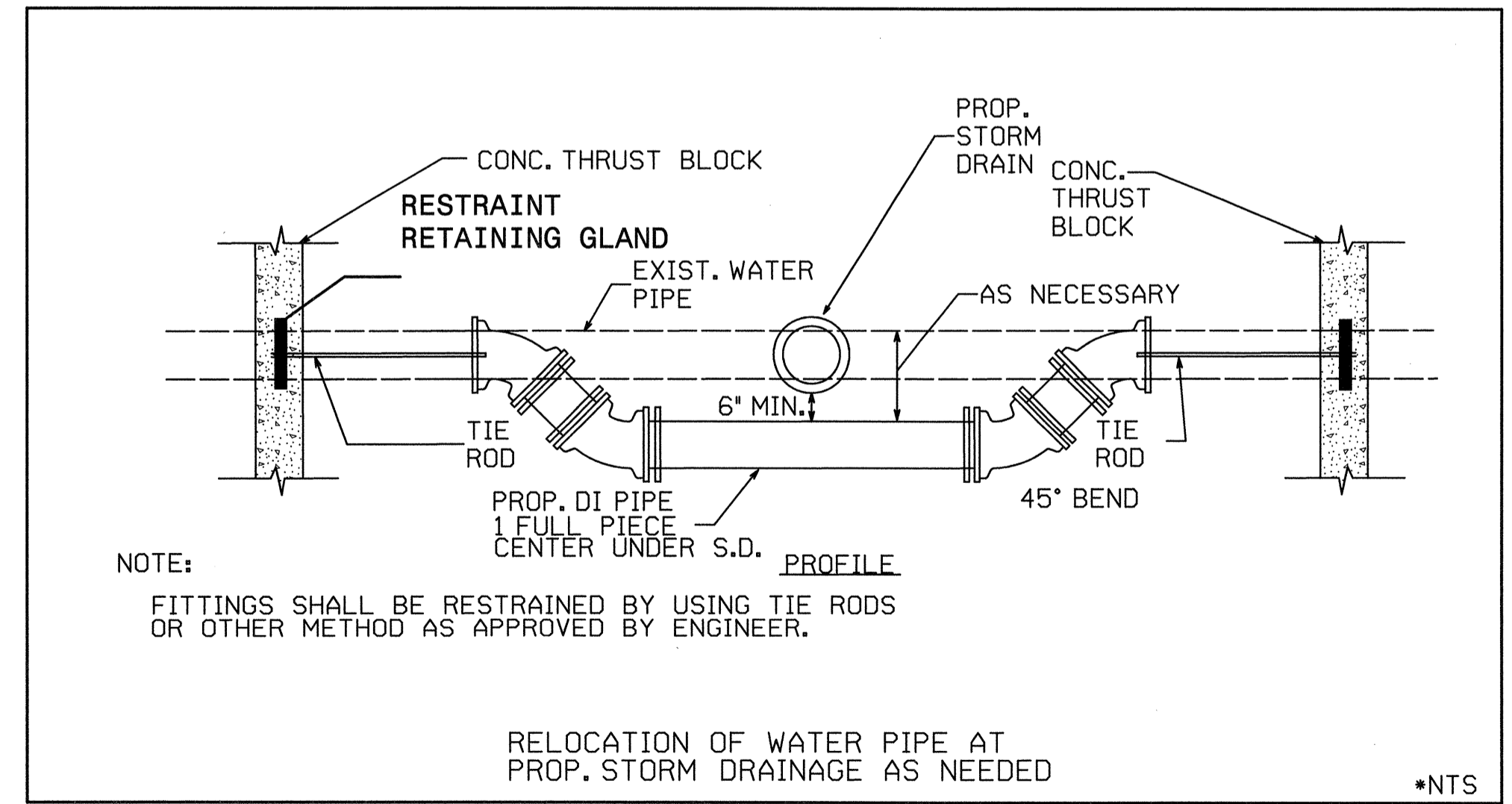
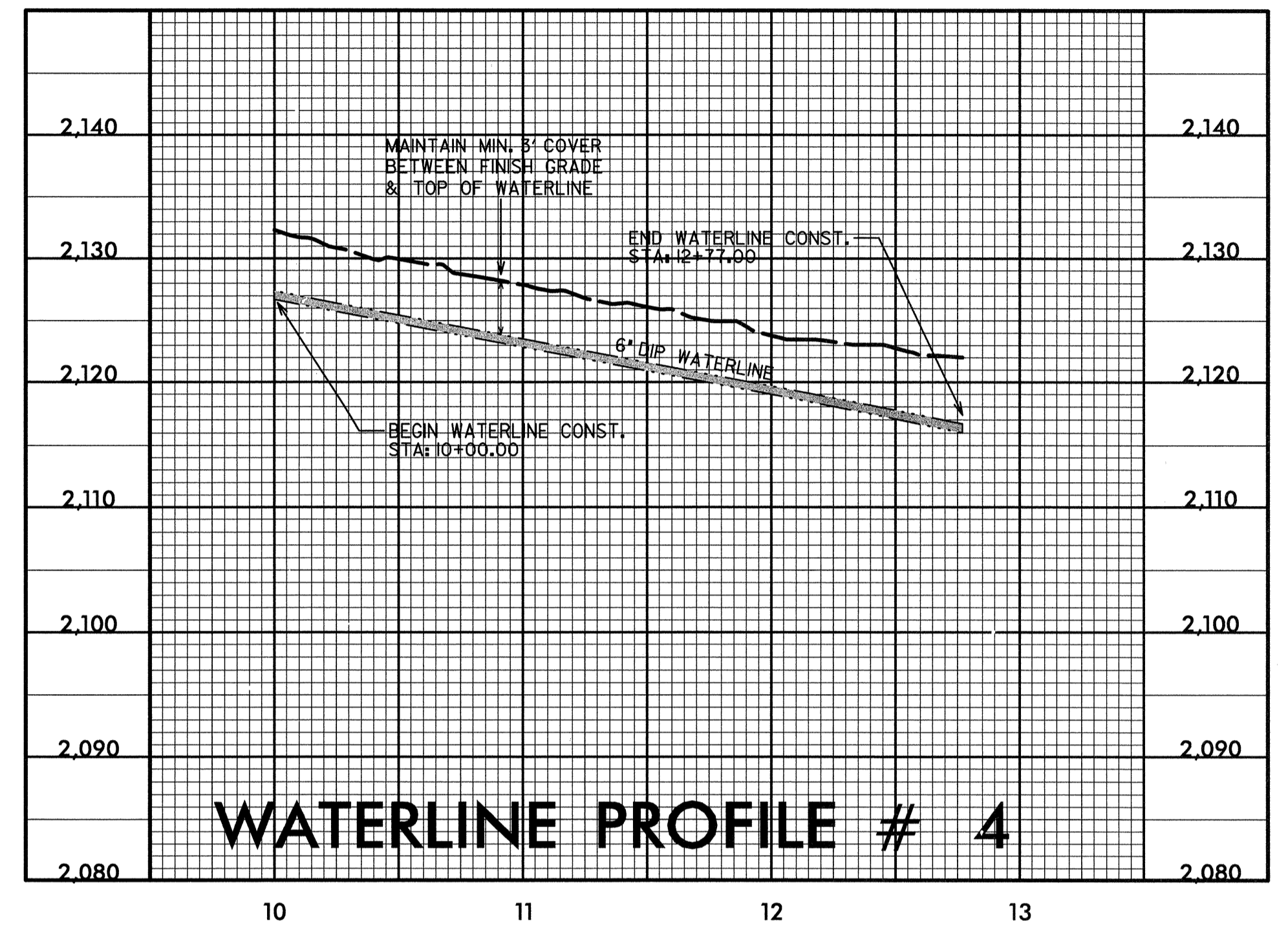
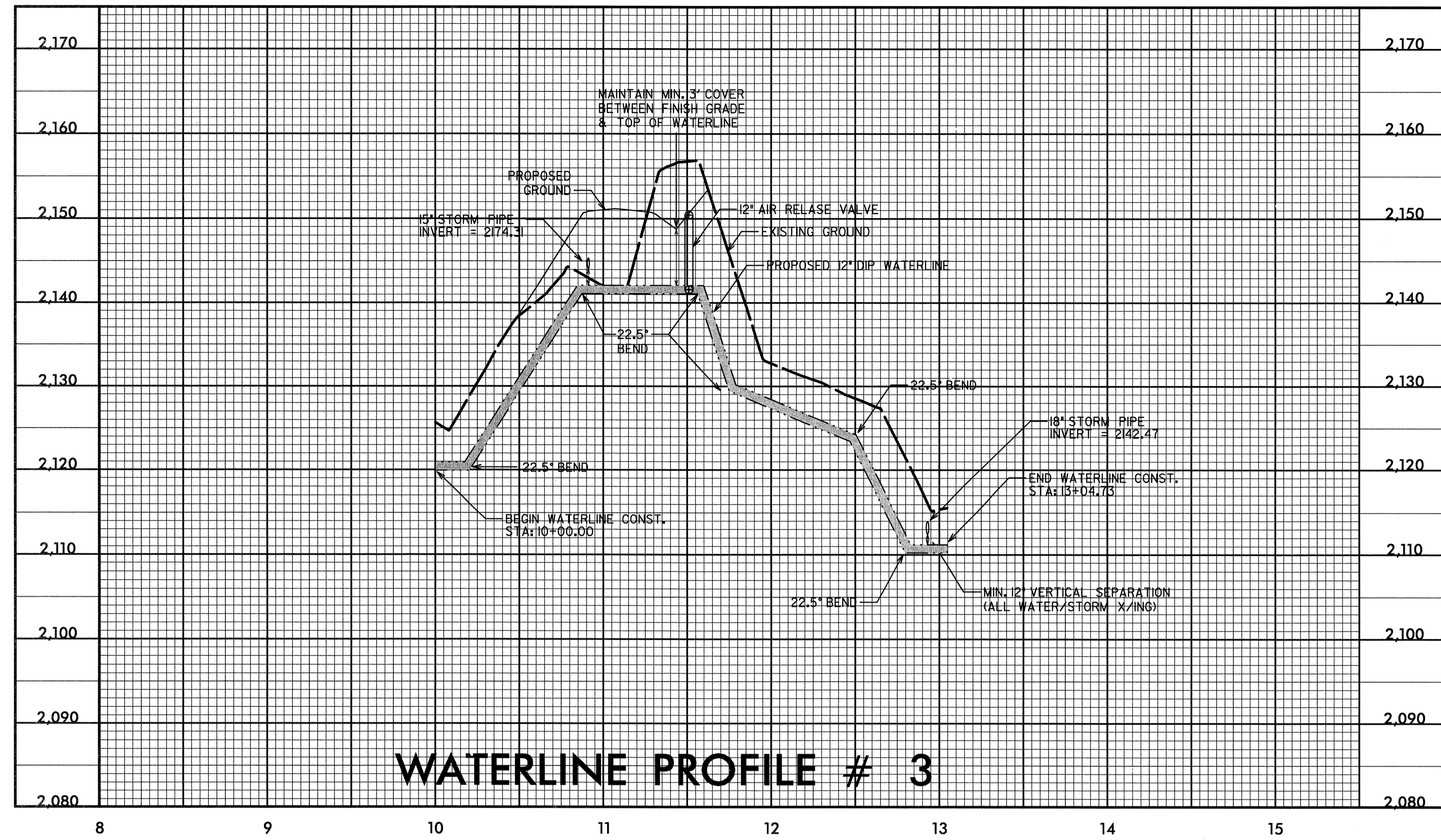


REVISIONS

7/30/2012
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 8/17/99



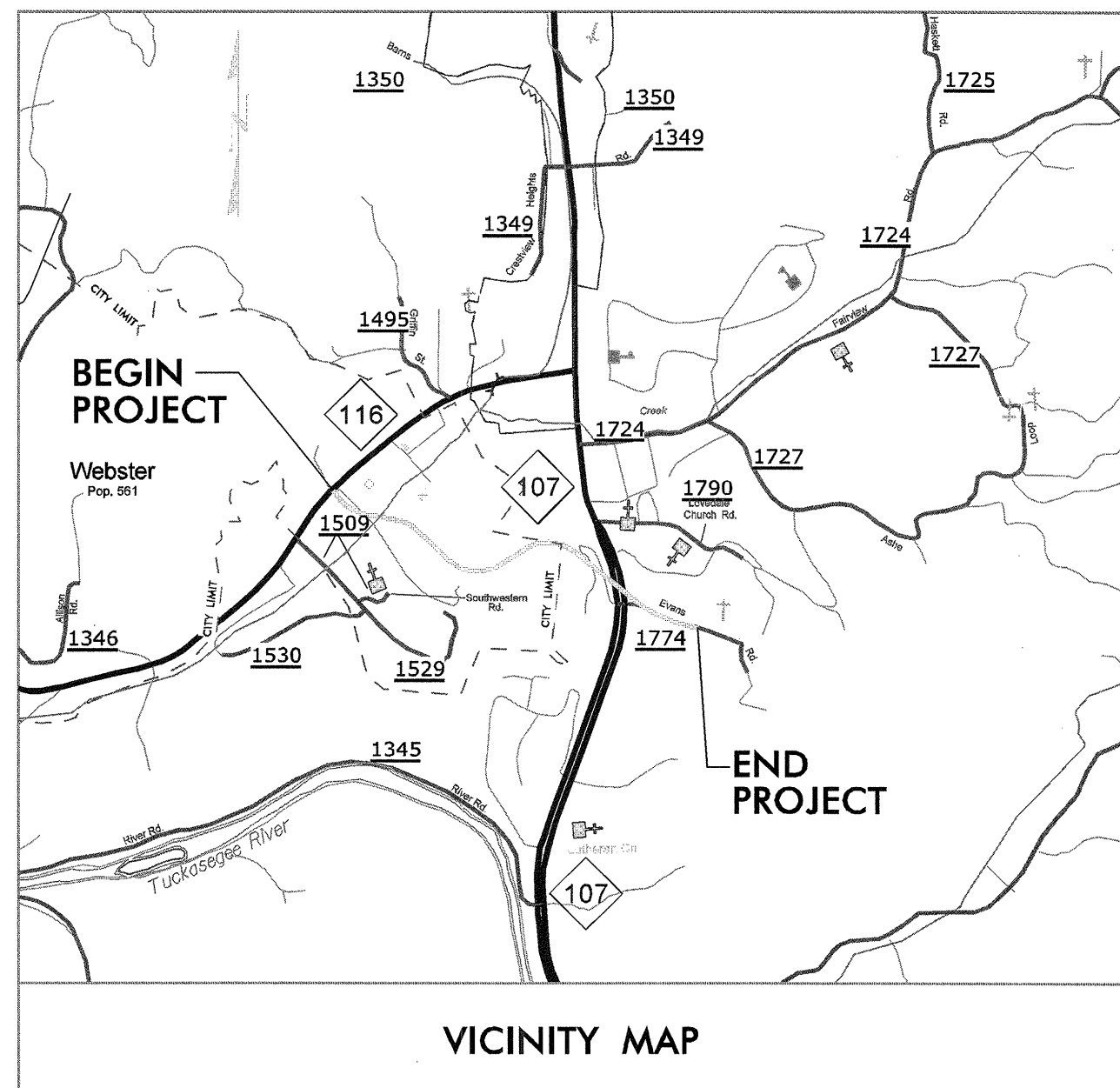
5/28/09



8/17/2012 8:17 PM C:\Users\j... \2006\246.05 R-5000\Roadway\Proc\U-10.dgn

T.I.P. NO.	SHEET NO.
R-5000	UO-1

TIP PROJECT: R-5000

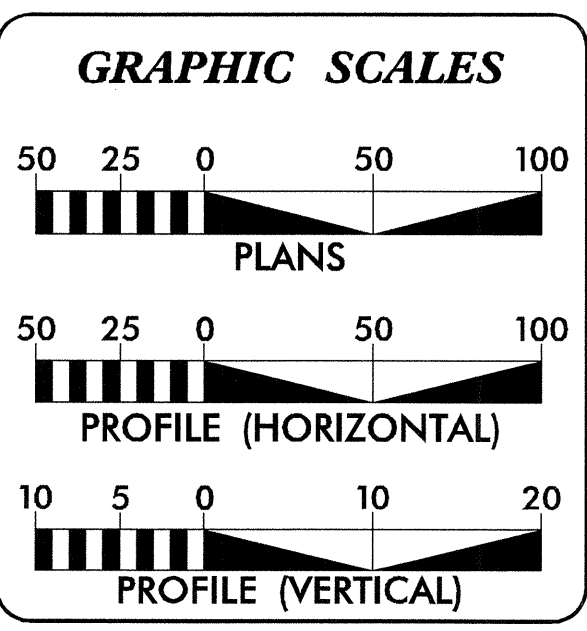
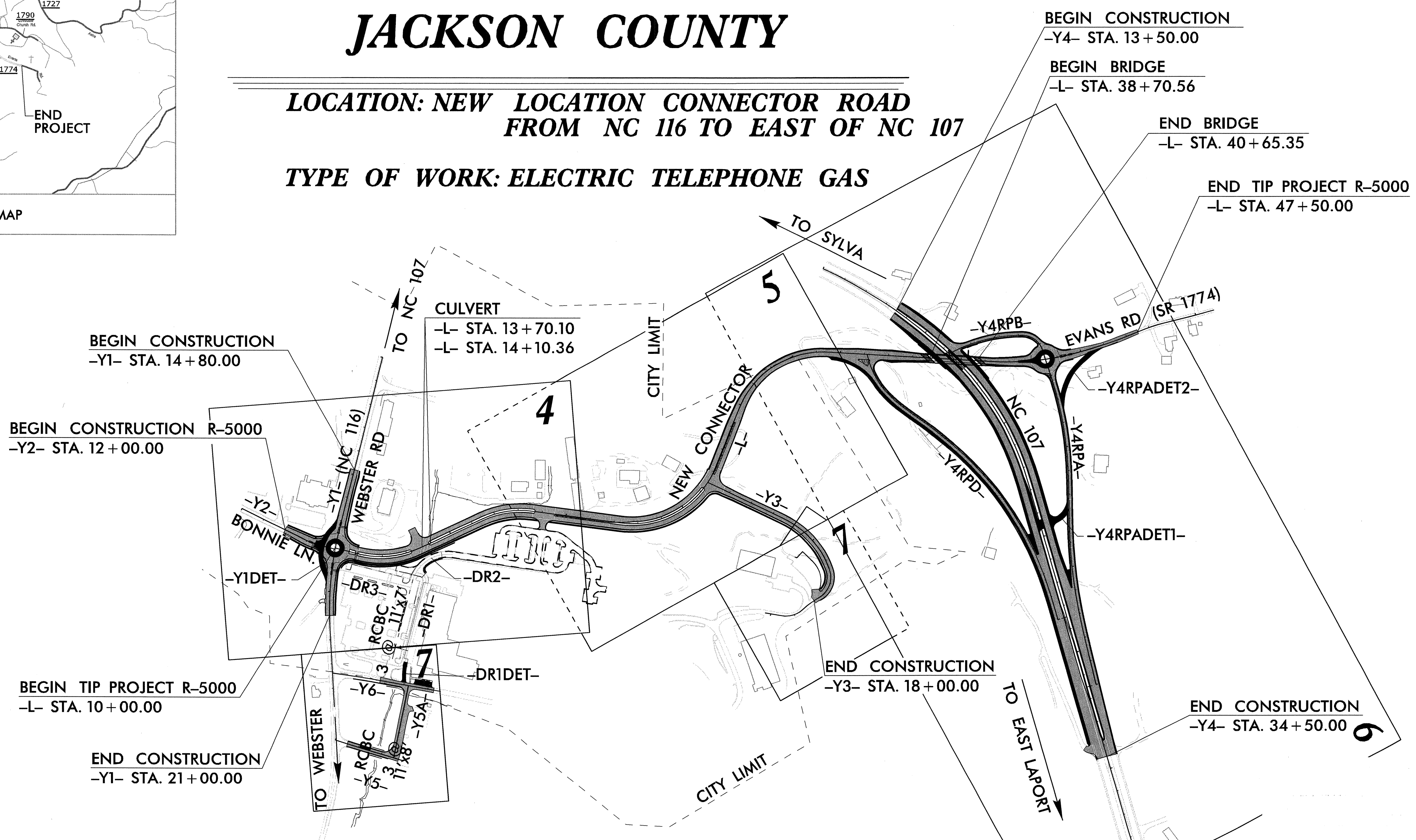
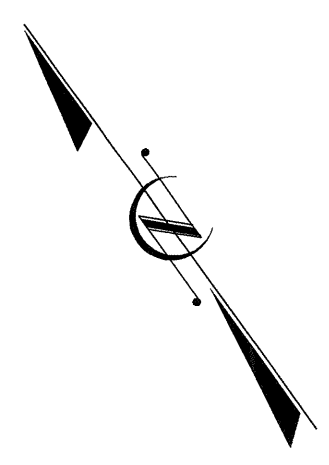


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

**UTILITIES BY OTHERS PLANS
JACKSON COUNTY**

**LOCATION: NEW LOCATION CONNECTOR ROAD
FROM NC 116 TO EAST OF NC 107**

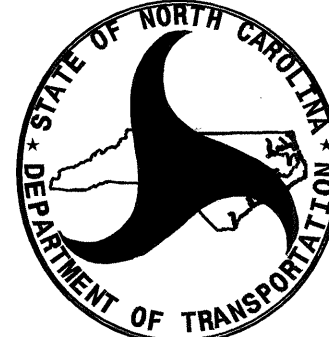
TYPE OF WORK: ELECTRIC TELEPHONE GAS



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-4 THRU UO-7	UTILITY BY OTHERS PLAN SHEETS
UO-2, UO-3	N/A

- UTILITY OWNERS ON PROJECT**
- (1) PSNC GAS
 - (2) DUKE ENERGY
 - (3) FRONTIER COMMUNICATIONS
 - (4) BALSAM WEST COMMUNICATIONS
 - (5) MORRIS BROADBAND
 - (6) METROSTAT TECHNOLOGIES



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
P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER
UTILITIES PROJECT DESIGNER

UTILITIES BY OTHERS

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

DATUM DESCRIPTION
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON 83/NSRS 2007 (OPUS) STATE PLANE COORDINATES FOR NCDOT MONUMENT "R-5000 GPS-103" WITH A NORTHING OF 607708.388(FIT) AND EASTING OF 746702.365(FIT). THE AVERAGE COMBINED FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS 0.999795221. ALL LINEAR DISTANCES ARE LOCALIZED HORIZONTAL DISTANCES. THE VERTICAL DATUM IS BASED ON NCDOT MONUMENT "R-5000 GPS-103" ELEV 2224.63 FT. (NAVD 1988).

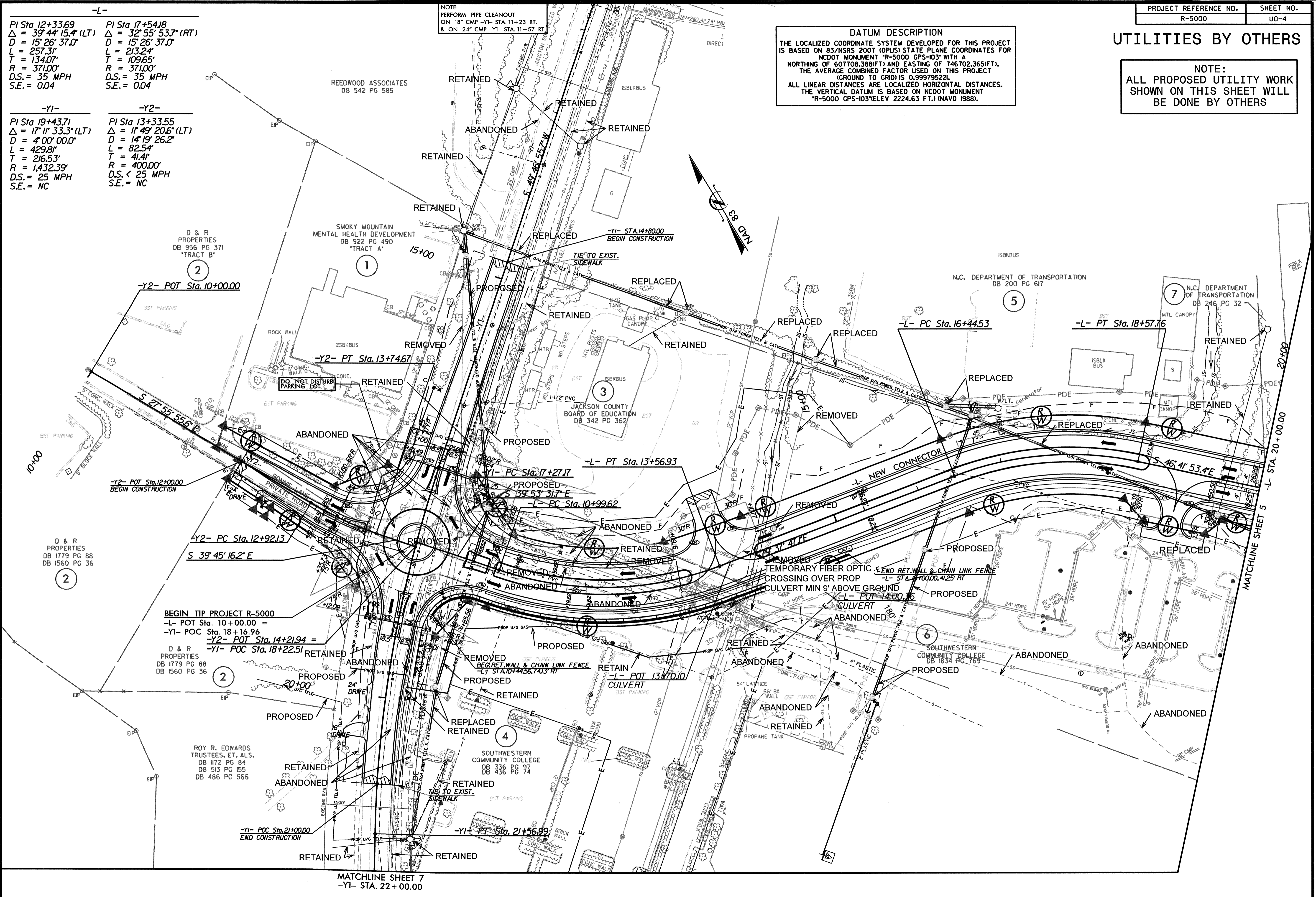
NOTE:
PERFORM PIPE CLEANOUT ON 18" CMP -Y1- STA. 11+23 RT. & ON 24" CMP -Y1- STA. 11+57 RT.

-L-
PI Sta 12+33.69 Δ = 39' 44" 15.4" (LT)
D = 15' 26" 37.0"
L = 257.31'
T = 134.07'
R = 371.00'
D.S. = 35 MPH
S.E. = 0.04

PI Sta 17+54.18 Δ = 32' 55" 53.7" (RT)
D = 15' 26" 37.0"
L = 213.24'
T = 109.65'
R = 371.00'
D.S. = 35 MPH
S.E. = 0.04

-Y1-
PI Sta 19+43.71 Δ = 17' 11" 33.3" (LT)
D = 4' 00" 00.0"
L = 429.81'
T = 216.53'
R = 1,432.39'
D.S. = 25 MPH
S.E. = NC

-Y2-
PI Sta 13+33.55 Δ = 11' 49" 20.6" (LT)
D = 14' 19" 26.2"
L = 82.54'
T = 41.41'
R = 400.00'
D.S. < 25 MPH
S.E. = NC

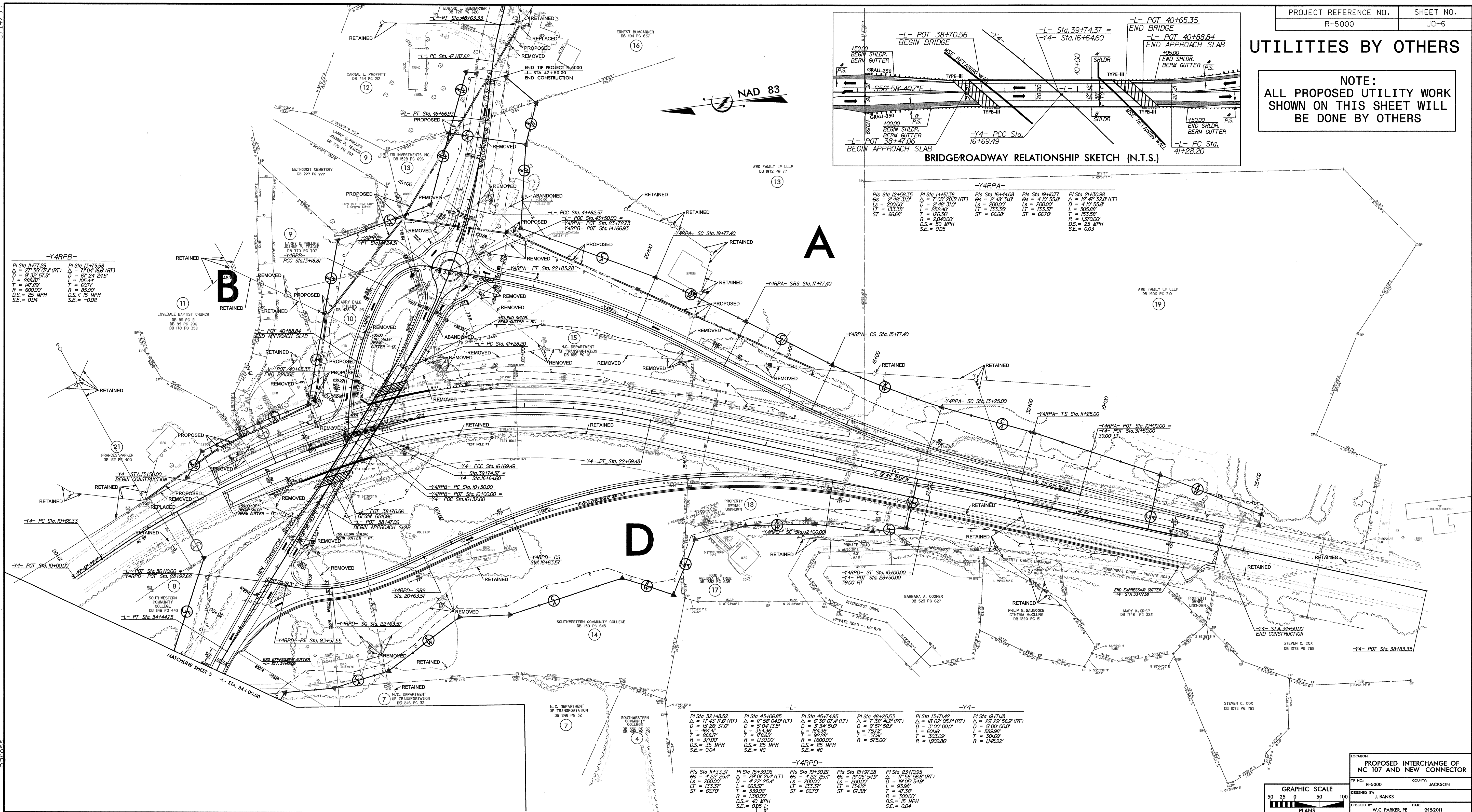
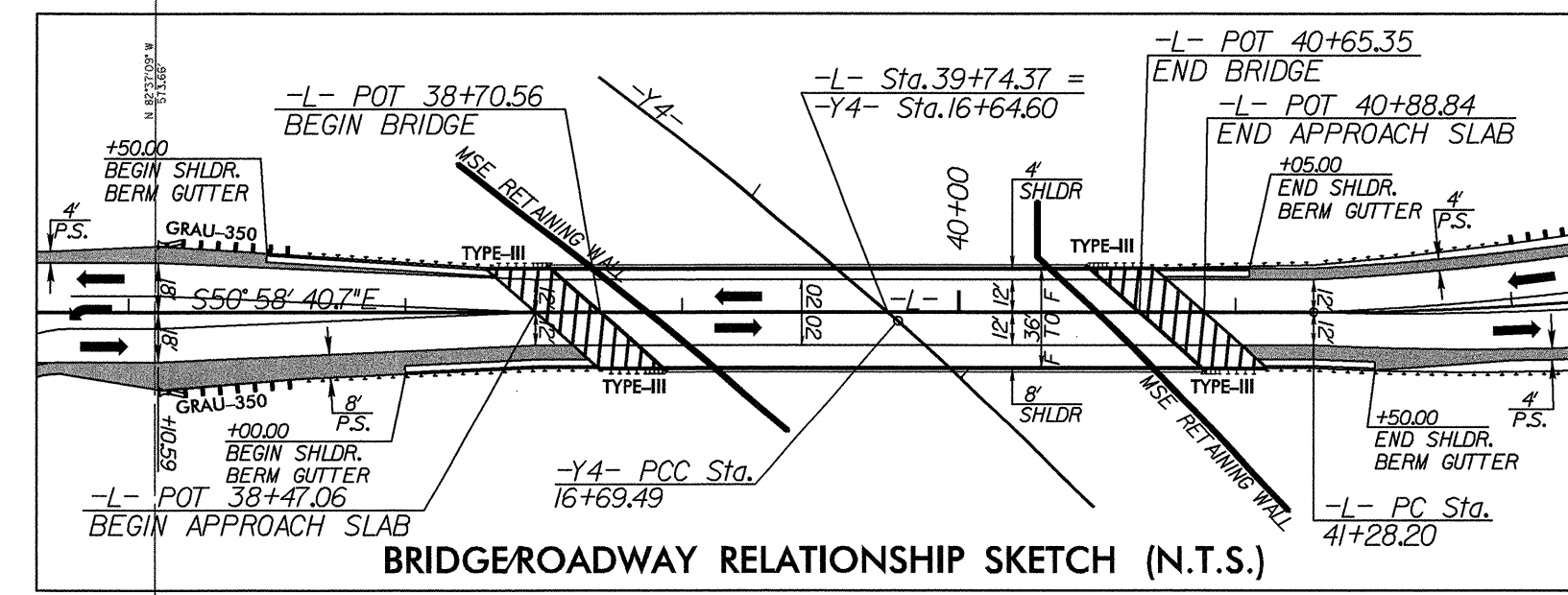


MATCHLINE SHEET 7
-Y1- STA. 22+00.00

5/14/99

UTILITIES BY OTHERS

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



-Y4RPB-

PI Sta 11+71.25	PI Sta 15+79.58
$\Delta = 27.35$ (RT)	$\Delta = 17.04$ (RT)
D = 532.57'	D = 67.24 245'
L = 288.81'	L = 105.44'
T = 141.29'	T = 52.71'
R = 600.00'	R = 65.00'
D.S. = 25 MPH	D.S. = 15 MPH
S.E. = 0.04	S.E. = -0.02

-Y4RPA-

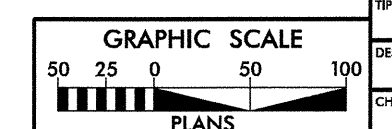
PI Sta 12+58.35	PI Sta 14+51.36	PI Sta 16+44.08	PI Sta 19+10.77	PI Sta 21+30.98
$\Delta = 2.48$ 310'	$\Delta = 7.05$ 60.3' (RT)	$\Delta = 2.48$ 310'	$\Delta = 4.07$ 55.8'	$\Delta = 12.47$ 32.0' (LT)
L = 200.00'	L = 252.40'	L = 200.00'	L = 133.37'	L = 305.88'
LT = 133.35'	T = 126.36'	LT = 133.35'	LT = 133.37'	T = 153.53'
ST = 66.68'	R = 1200.00'	ST = 66.68'	ST = 66.70'	R = 1200.00'
	D.S. = 50 MPH			D.S. = 25 MPH
	S.E. = 0.05			S.E. = 0.03

-L-

PI Sta 32+48.52	PI Sta 43+06.85	PI Sta 45+74.85	PI Sta 49+25.53	PI Sta 13+71.42	PI Sta 19+71.08
$\Delta = 71.43$ (RT)	$\Delta = 17.59$ 04.0' (LT)	$\Delta = 6.36$ 01.8' (LT)	$\Delta = 7.32$ 4.2' (RT)	$\Delta = 18.02$ 05.2' (RT)	$\Delta = 25.29$ 56.9' (RT)
D = 152.87 37.0'	D = 5.04 13.5'	D = 5.34 51.8'	D = 5.57 52.1'	D = 3.00 00.0'	D = 5.00 00.0'
L = 484.41'	L = 354.33'	L = 184.36'	L = 1.73 5.2'	L = 60.00 0.0'	L = 288.89'
T = 268.10'	T = 176.65'	T = 92.89'	T = 31.9'	T = 30.00 0.0'	T = 301.69'
R = 370.00'	R = 1300.00'	R = 1800.00'	R = 375.000'	R = 1200.000'	R = 1465.52'
D.S. = 35 MPH	D.S. = 25 MPH	D.S. = 25 MPH	D.S. = 25 MPH	D.S. = 15 MPH	D.S. = 15 MPH
S.E. = 0.04	S.E. = NC	S.E. = NC	S.E. = NC	S.E. = 0.04	S.E. = 0.04

-Y4RPD-

PI Sta 11+33.37	PI Sta 15+30.06	PI Sta 19+30.27	PI Sta 21+91.68	PI Sta 23+10.95
$\Delta = 4.22$ 25.4'	$\Delta = 5.01$ 01.4' (LT)	$\Delta = 4.52$ 25.4'	$\Delta = 12.05$ 54.9'	$\Delta = 17.50$ 36.8' (RT)
L = 200.00'	L = 2.22 2.4'	L = 200.00'	L = 15.05 54.9'	L = 15.05 54.9'
LT = 133.37'	L = 66.35'	LT = 133.37'	LT = 15.412'	L = 83.98'
ST = 66.70'	R = 1300.00'	ST = 66.70'	T = 47.38'	T = 301.69'
	D.S. = 40 MPH		D.S. = 15 MPH	D.S. = 15 MPH
	S.E. = 0.05		S.E. = 0.04	S.E. = 0.04



PROPOSED INTERCHANGE OF
NC 107 AND NEW CONNECTOR

LOCATION: R-5000 COUNTY: JACKSON

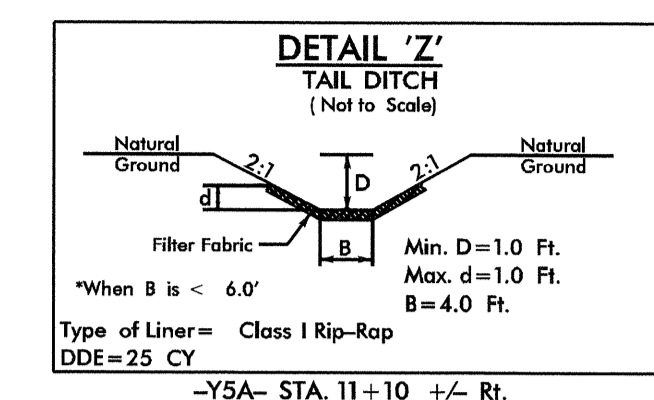
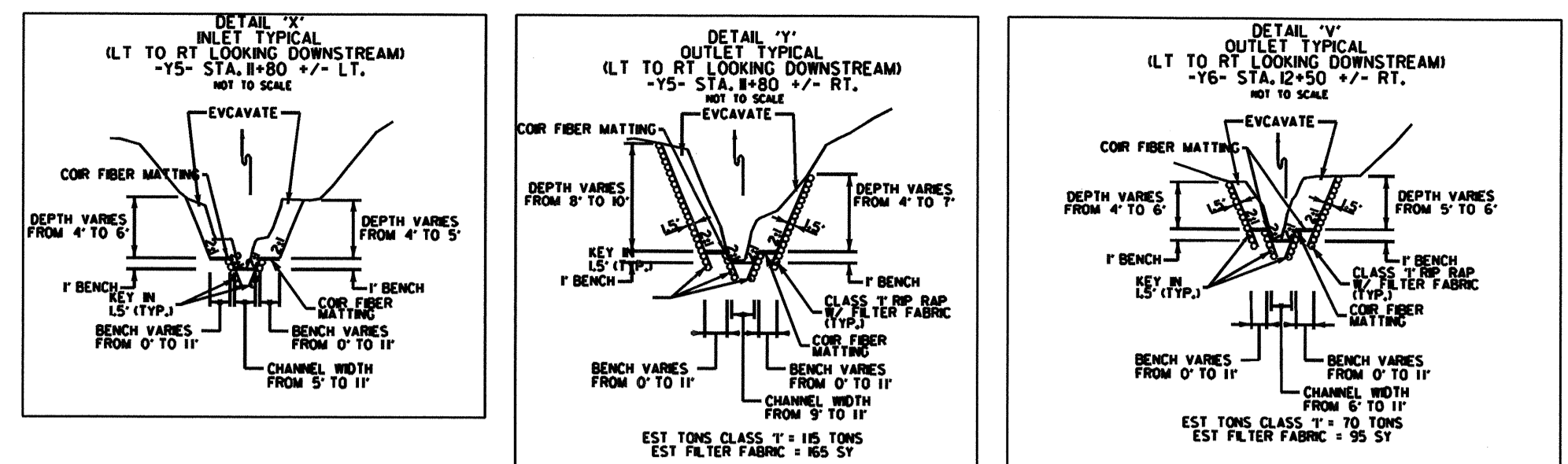
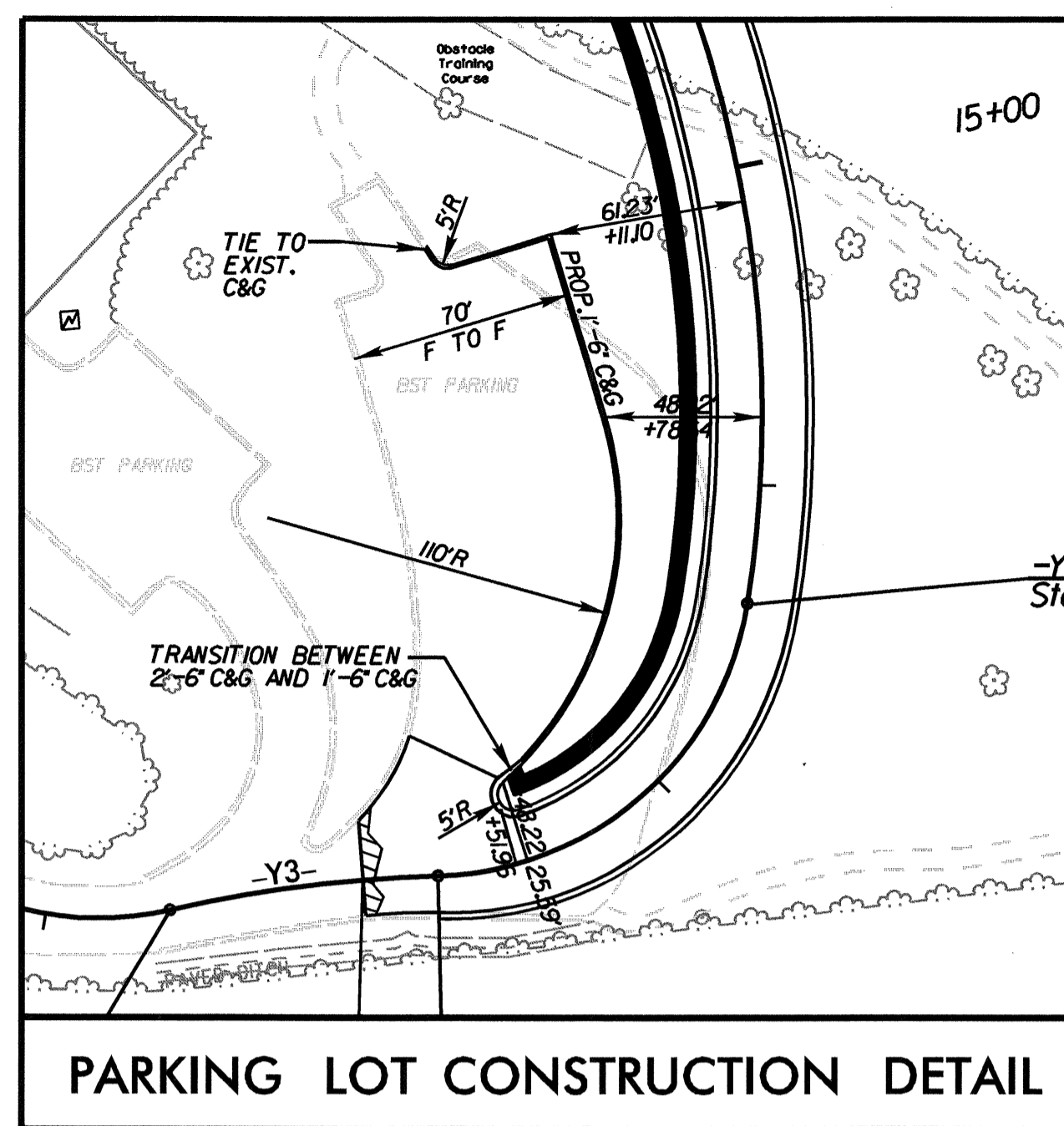
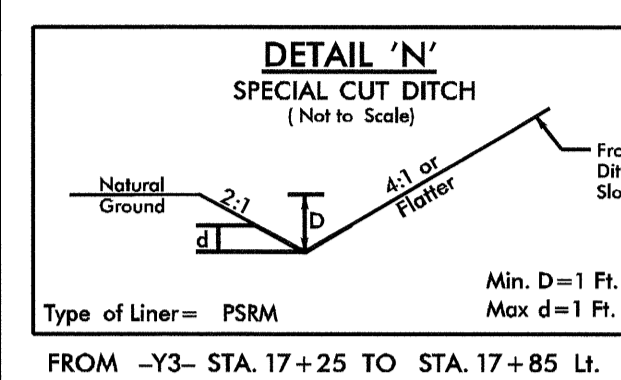
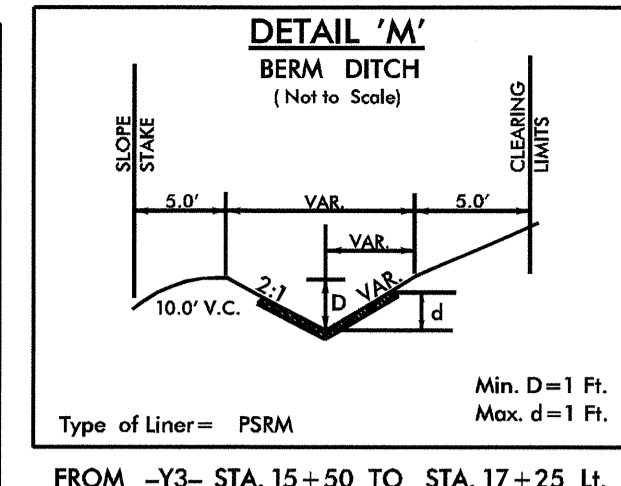
DESIGNED BY: J. BANKS

CHECKED BY: W.C. PARKER, PE DATE: 9/15/2011

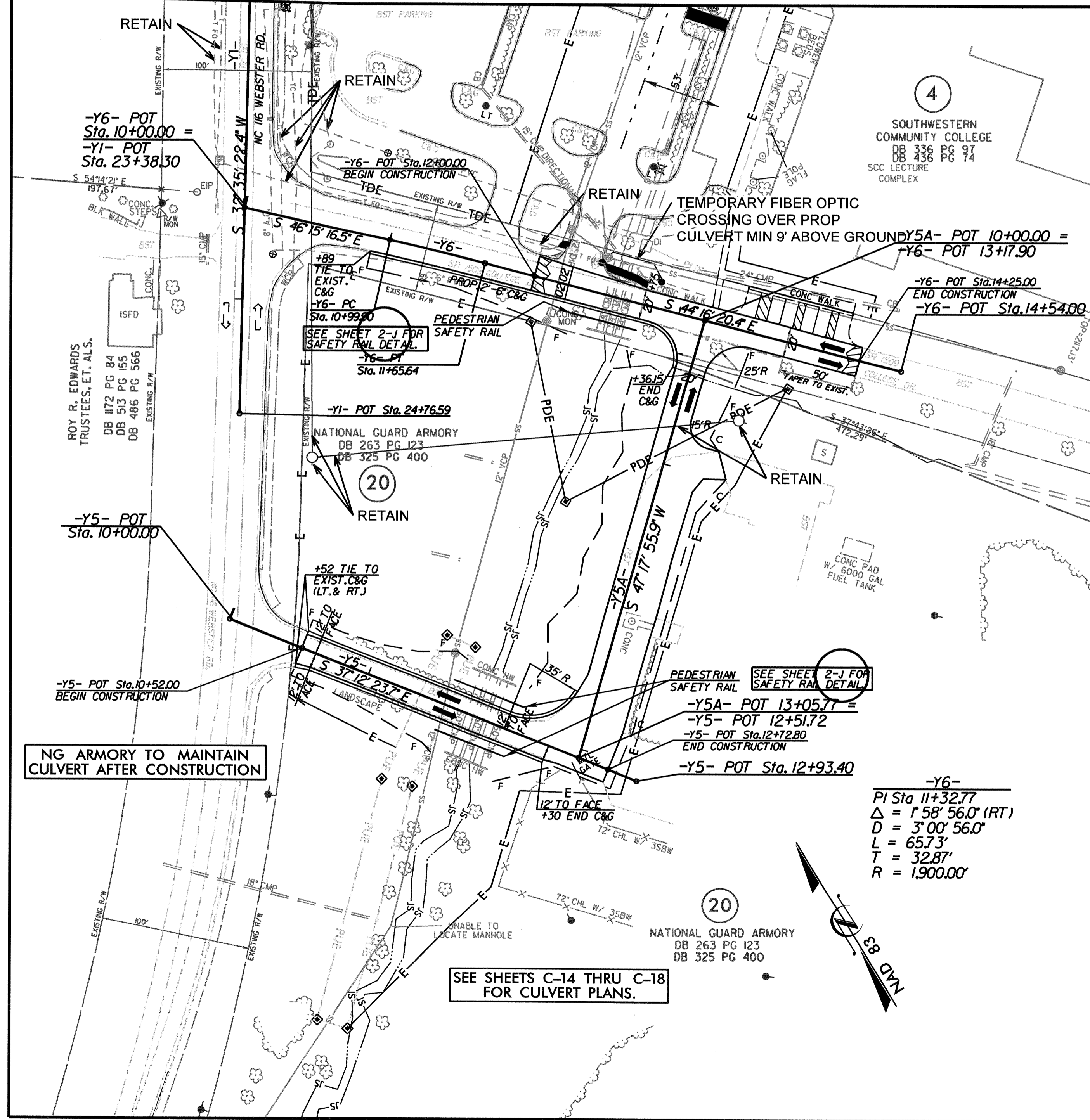
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UTILITIES BY OTHERS

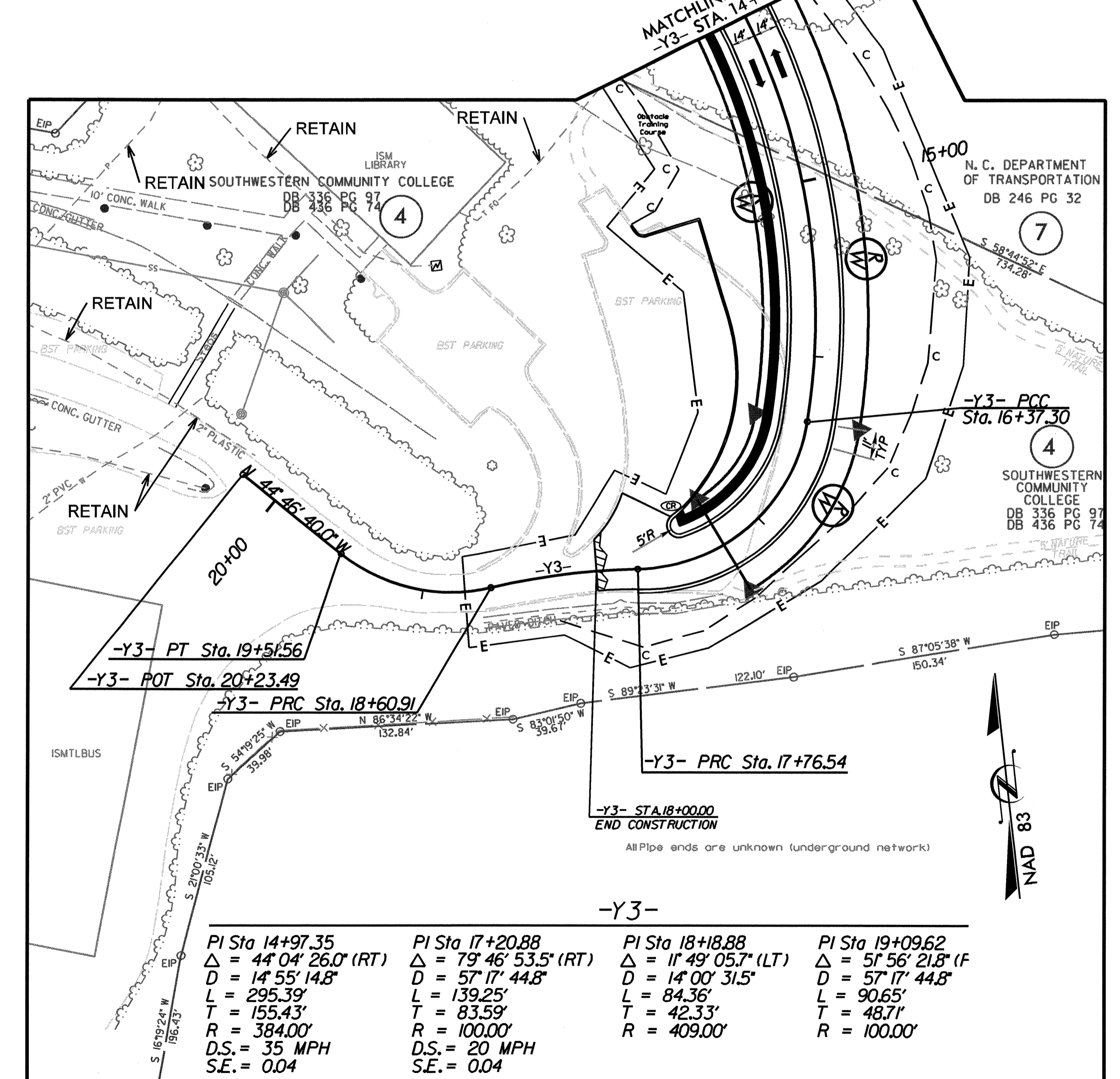
NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS



MATCHLINE SHEET 4
-Y1- STA. 22+00.00



MATCHLINE SHEET 5
-Y3- STA. 14+00.00



NG ARMOY TO MAINTAIN
CULVERT AFTER CONSTRUCTION

SEE SHEETS C-14 THRU C-18
FOR CULVERT PLANS.

5/14/99
R:\3277 - 13422 - EM - NCDOT - Cardno \R5000 - ubo - psh7.dgn