

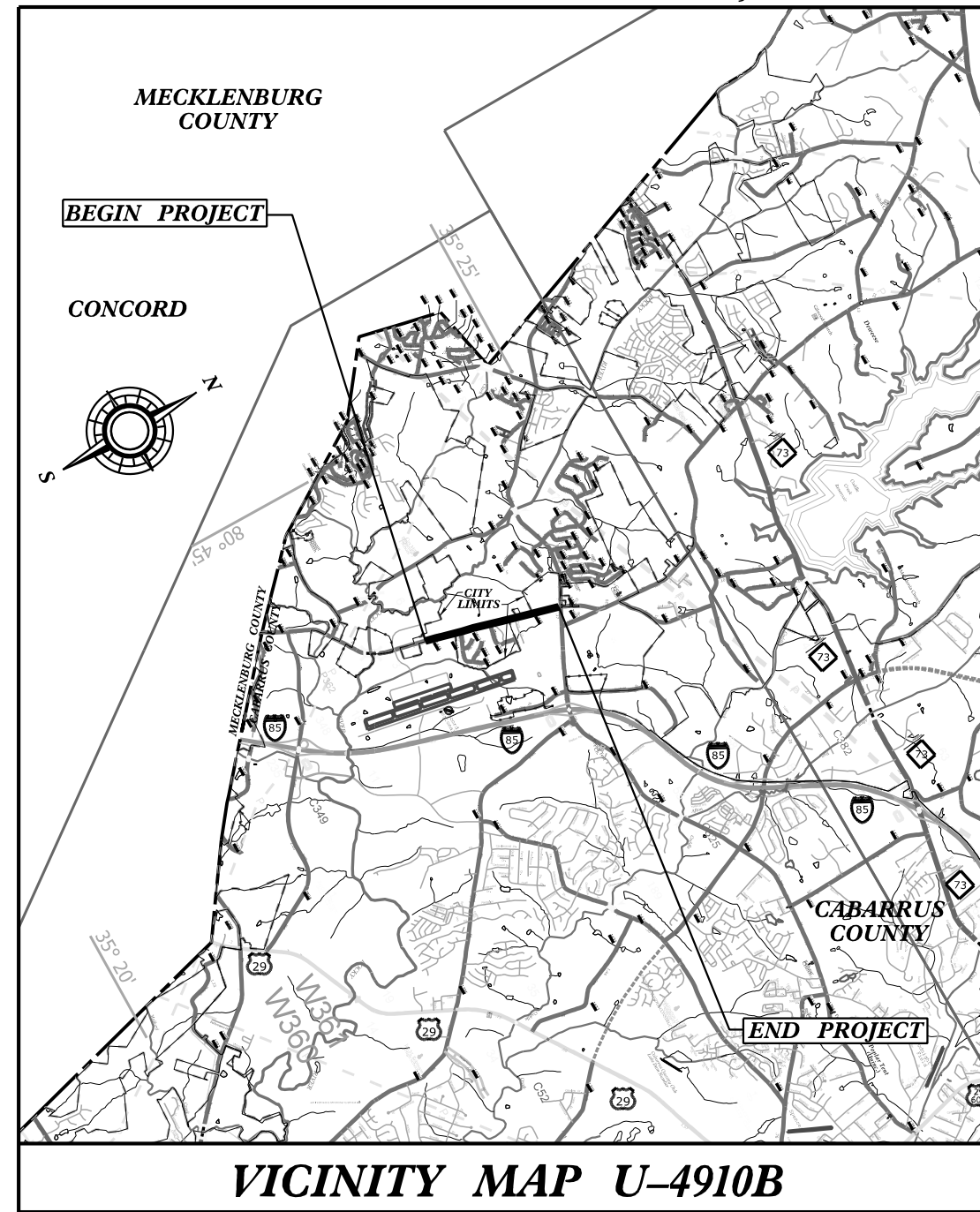
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**This file or an individual page  
shall not be considered a certified document.**

09/08/99

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



VICINITY MAP U-4910B

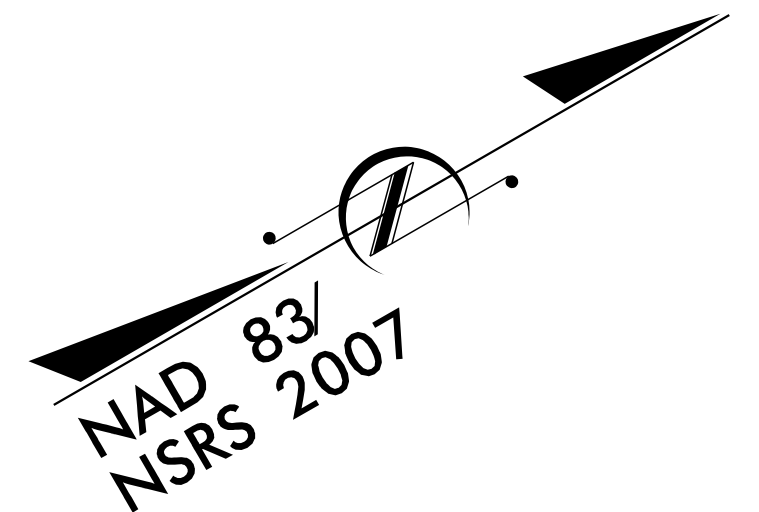
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**CABARRUS COUNTY**

**LOCATION: SR 1445 (DERITA ROAD) FROM AVIATION BOULEVARD TO SR 1394 (POPLAR TENT ROAD).**

**TYPE OF WORK: GRADING, PAVING, DRAINAGE & SIGNALS**

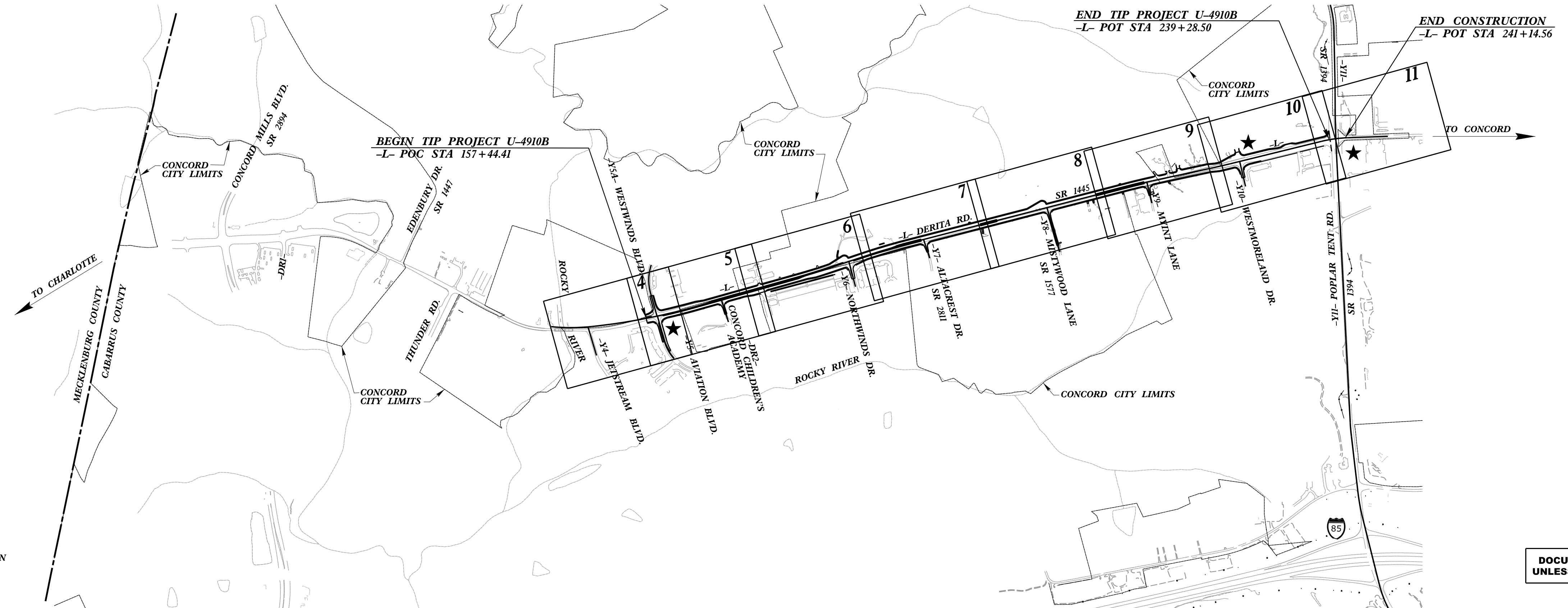
**PART II OF II**



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4910B	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
40373.1.F3	HPP-1445(7)	PE	
40373.2.F2	HPP-1445(7)	R/W & UTIL	
40373.3.3	STPDA-1445(008)	CONST	

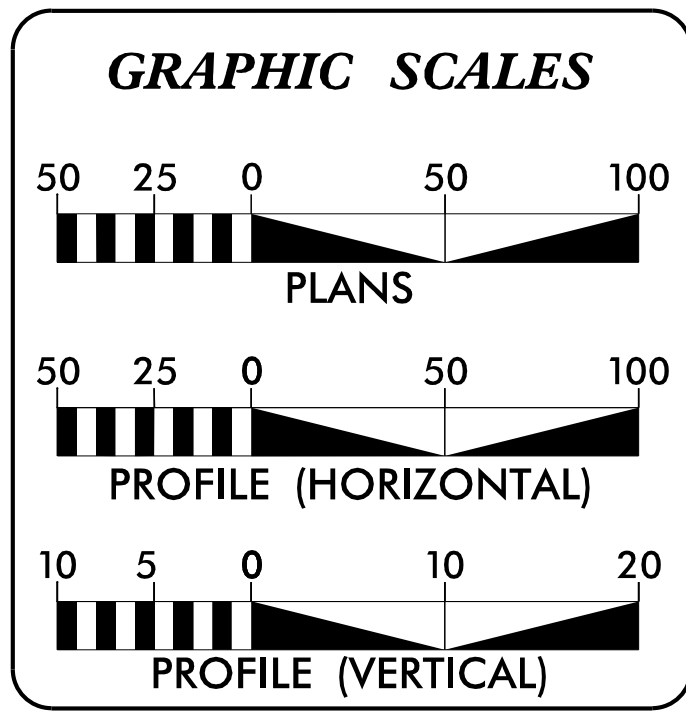
**TIP PROJECT: U-4910B**

**CONTRACT NO: C203661**



★ - PROPOSED SIGNALIZED INTERSECTION

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



**DESIGN DATA**

ADT 2011 =	11,000
ADT 2035 =	28,300
K =	12 %
D =	65 %
T =	4 % *
V =	50 MPH
* TTST =	1% DUAL 3%

FUNC CLASS - ARTERIAL  
SUBREGIONAL DESIGN

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT	=	1.550 MILES
LENGTH STRUCTURE TIP PROJECT	=	0.00 MILES
TOTAL LENGTH TIP PROJECT	=	1.550 MILES

Prepared in the Office of:

**AECOM**  
NC FIRM LICENSE No: F-0342  
701 Corporate Center Drive, Suite 475  
Raleigh, NC 27607  
(919) 854-6200 - (919) 854-6259(FAX)

2012 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
SEPT. 18, 2014

**LETTING DATE:**  
FEB. 21, 2017

**KEVIN J. VAN METRE, P.E.**  
PROJECT ENGINEER

**NEIL DEAN, P.E.**  
PROJECT DESIGNER

**THAD F. DUNCAN, P.E.**  
PROJECT ENGINEER  
NCDOT ROADWAY DESIGN

**HYDRAULICS ENGINEER**

DocuSigned by:  
*W. Henry Wells*  
SEAL 9334  
12/19/2016

**ROADWAY DESIGN ENGINEER**

DocuSigned by:  
*Kevin J. Van Metre*  
SEAL 18187  
12/20/2016

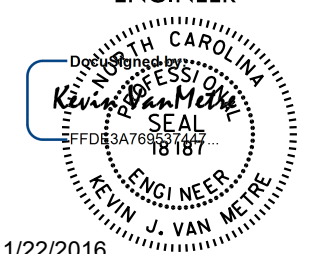
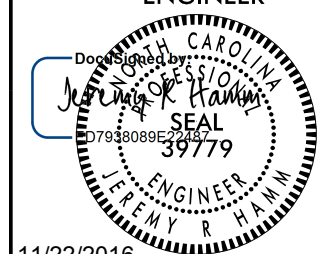

**DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA**

STATE HIGHWAY DESIGN ENGINEER

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TIME: 2:48:48 PM  
DWG: R:\Roadway\Proj\U4910\_rdy\_1sh.dgn





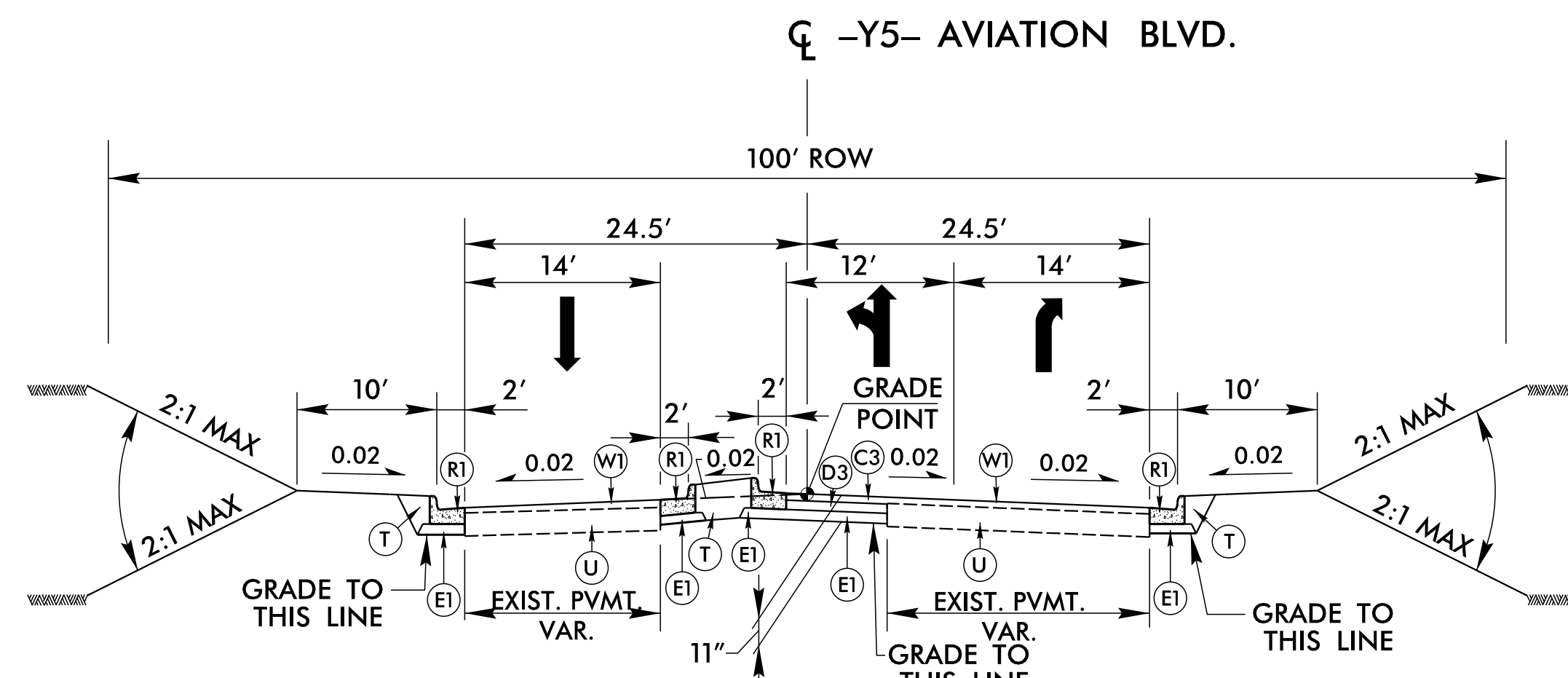
PROJECT REFERENCE NO. <b>U-4910B</b>	SHEET NO. <b>2A-2</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 	PAVEMENT ENGINEER 
11/22/2016	11/22/2016
Prepared in the Office of:  NC FIRM LICENSE No. F-0342 701 Corporate Center Drive, Suite 475 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259(FAX)	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

PAVEMENT DESIGN	
C1	1 1/2" S9.5B
C2	2" S9.5B
C3	3" S9.5B
C4	VAR. DEPTH S9.5B
D1	2 1/2" I19.0B
D2	3" I19.0B
D3	4" I19.0B
D4	VAR. DEPTH I19.0B
E1	4" B25.0B
E2	4 1/2" B25.0B
E3	5 1/2" B25.0B
E4	VAR. DEPTH B25.0B
J1	8" ABC
J2	10" ABC
J3	12" ABC
J4	VAR. DEPTH ABC
R1	2'-6" C & G
R2	1'-6" C & G
R3	5" MONO. ISLAND KEYED IN
R4	EXIST. C & G
R5	2'-9" C & G
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V	MILLING 1 1/2"
W1	WEDGING
W2	WEDGING

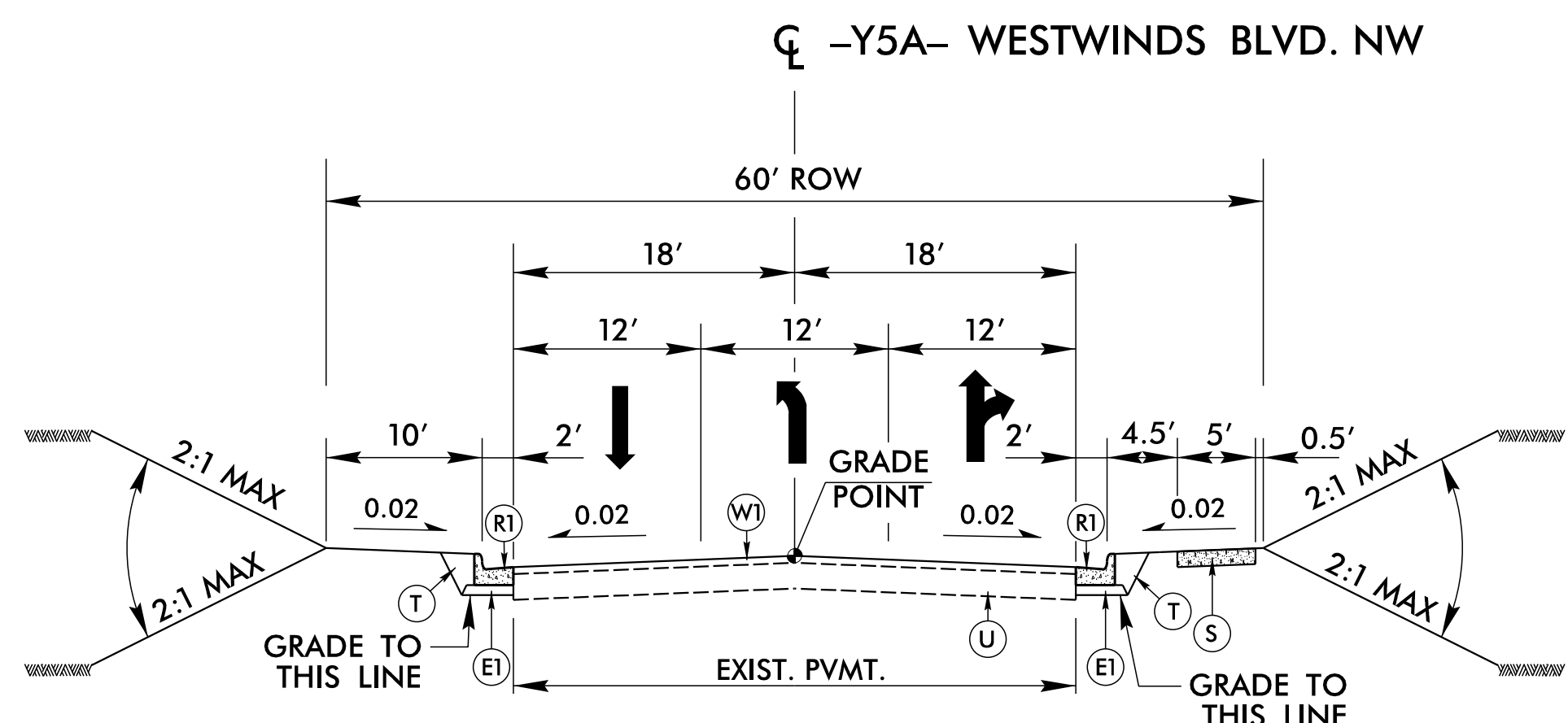
REVISIONS

Revisions:

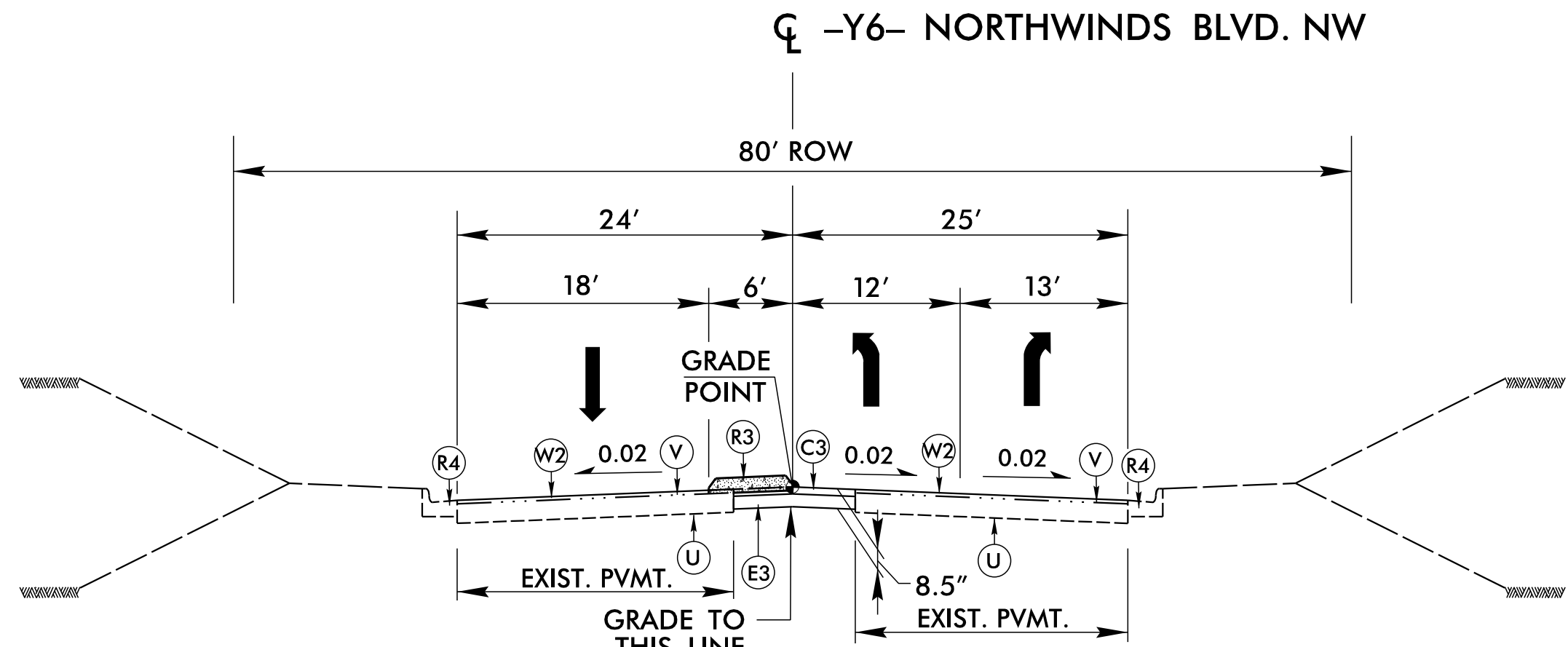
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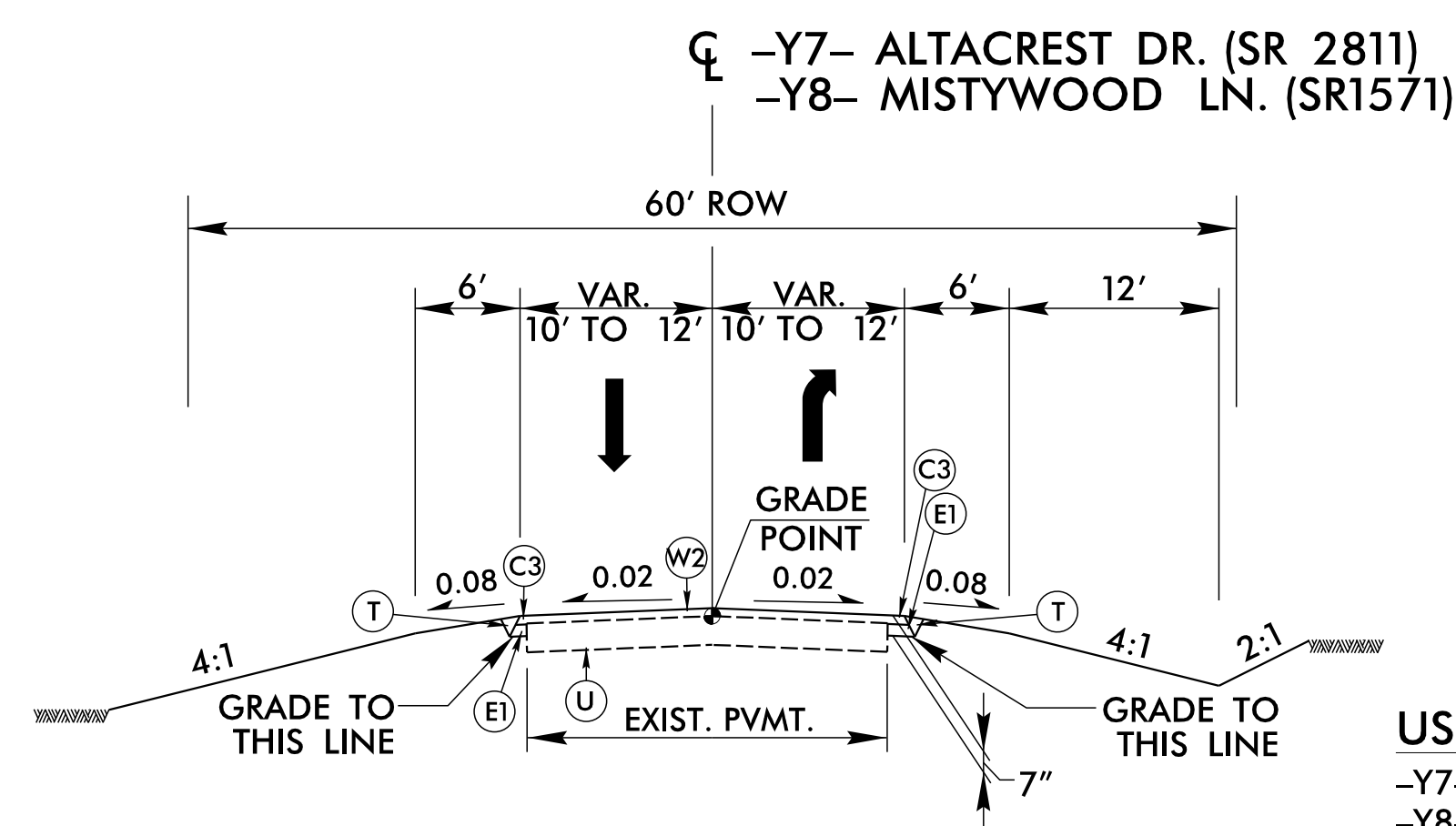
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 -Y5- STA. 11+00.00 TO 14+83.97 (RESURF)



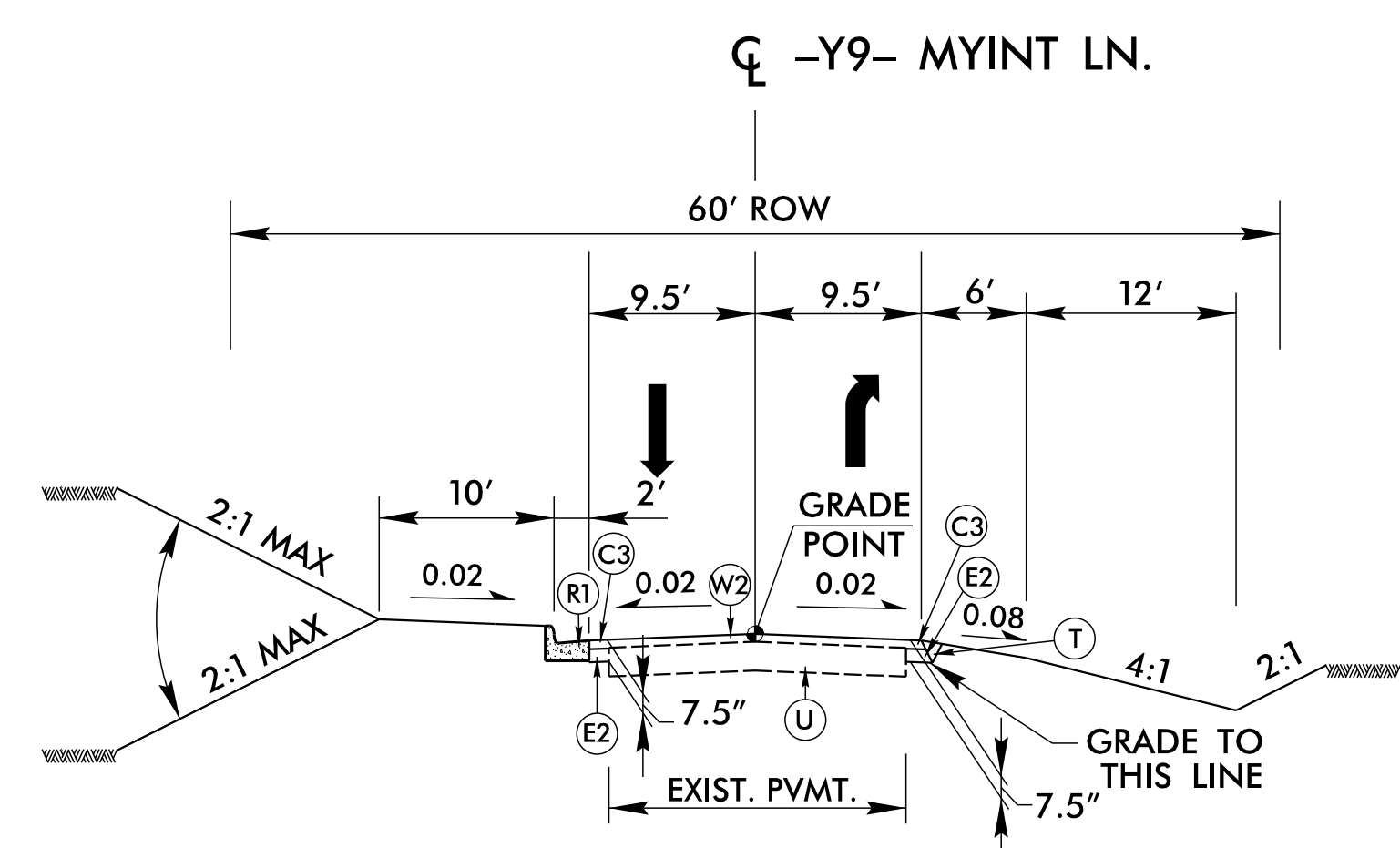
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 USE TYPICAL SECTION NO. 4  
 -Y5A- STA. 10+49.60 TO 12+45.00 (RESURF)



**TYPICAL SECTION NO. 5**  
 USE TYPICAL SECTION NO. 5  
 -Y6- STA. 10+95.00 TO 12+51.06 (RESURF)



**TYPICAL SECTION NO. 6**  
 USE TYPICAL SECTION NO. 6  
 -Y7- STA. 10+74.93 TO 11+90.31 (RESURF)  
 -Y8- STA. 7+75.13 TO 9+25.00 (RESURF)  
 -Y8- STA. 9+25.00 TO 11+24.55 (FULL DEPTH)  
 -Y8- STA. 11+24.55 TO 11+97.02 (RESURF)



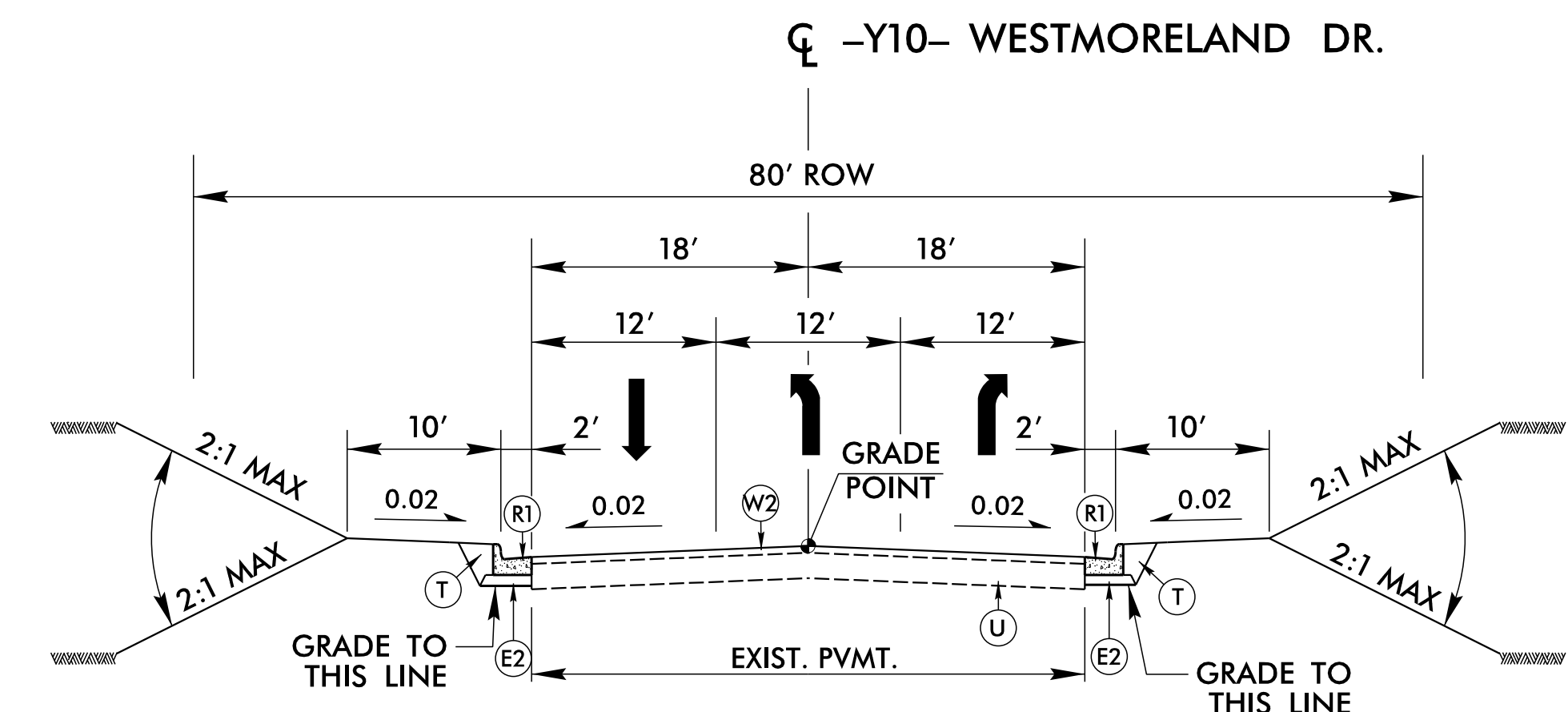
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 -Y9- STA. 10+88.13 TO 12+13.56 (RESURF)

PROJECT REFERENCE NO. <b>U-4910B</b>	SHEET NO. <b>2A-3</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 	PAVEMENT ENGINEER 
Prepared in the Office of:  NC FIRM LICENSE No. F-0342 701 Corporate Center Drive, Suite 475 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259(FAX)	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

PAVEMENT DESIGN	
C1	1 1/2" S9.5B
C2	2" S9.5B
C3	3" S9.5B
C4	VAR. DEPTH S9.5B
D1	2 1/2" I19.0B
D2	3" I19.0B
D3	4" I19.0B
D4	VAR. DEPTH I19.0B
E1	4" B25.0B
E2	4 1/2" B25.0B
E3	5 1/2" B25.0B
E4	VAR. DEPTH B25.0B
J1	8" ABC
J2	10" ABC
J3	12" ABC
J4	VAR. DEPTH ABC
R1	2'-6" C & G
R2	1'-6" C & G
R3	5" MONO. ISLAND KEYED IN
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R5	2'-9" C & G
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V	MILLING 1 1/2"
W1	WEDGING
W2	WEDGING

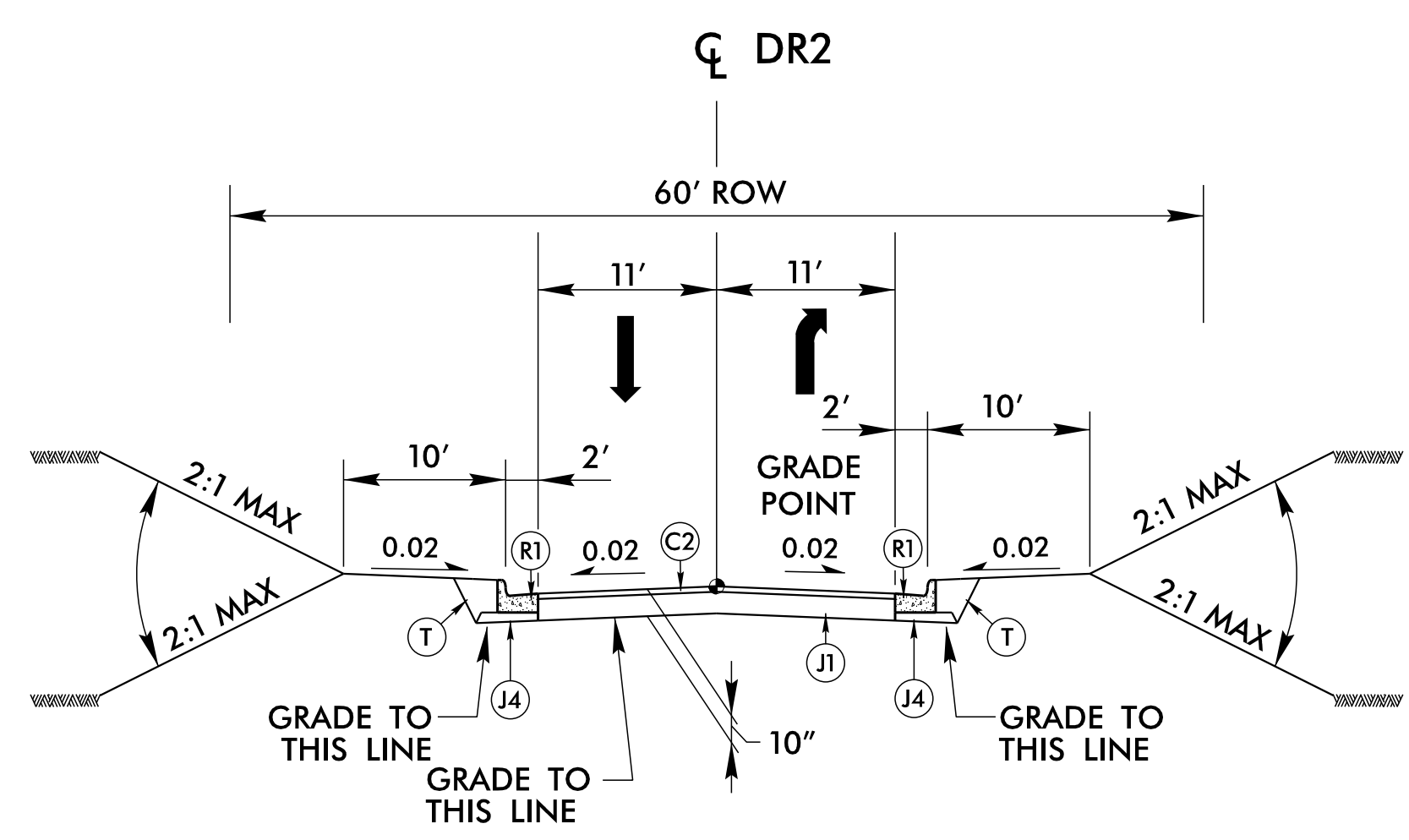
REVISIONS

Revisions:



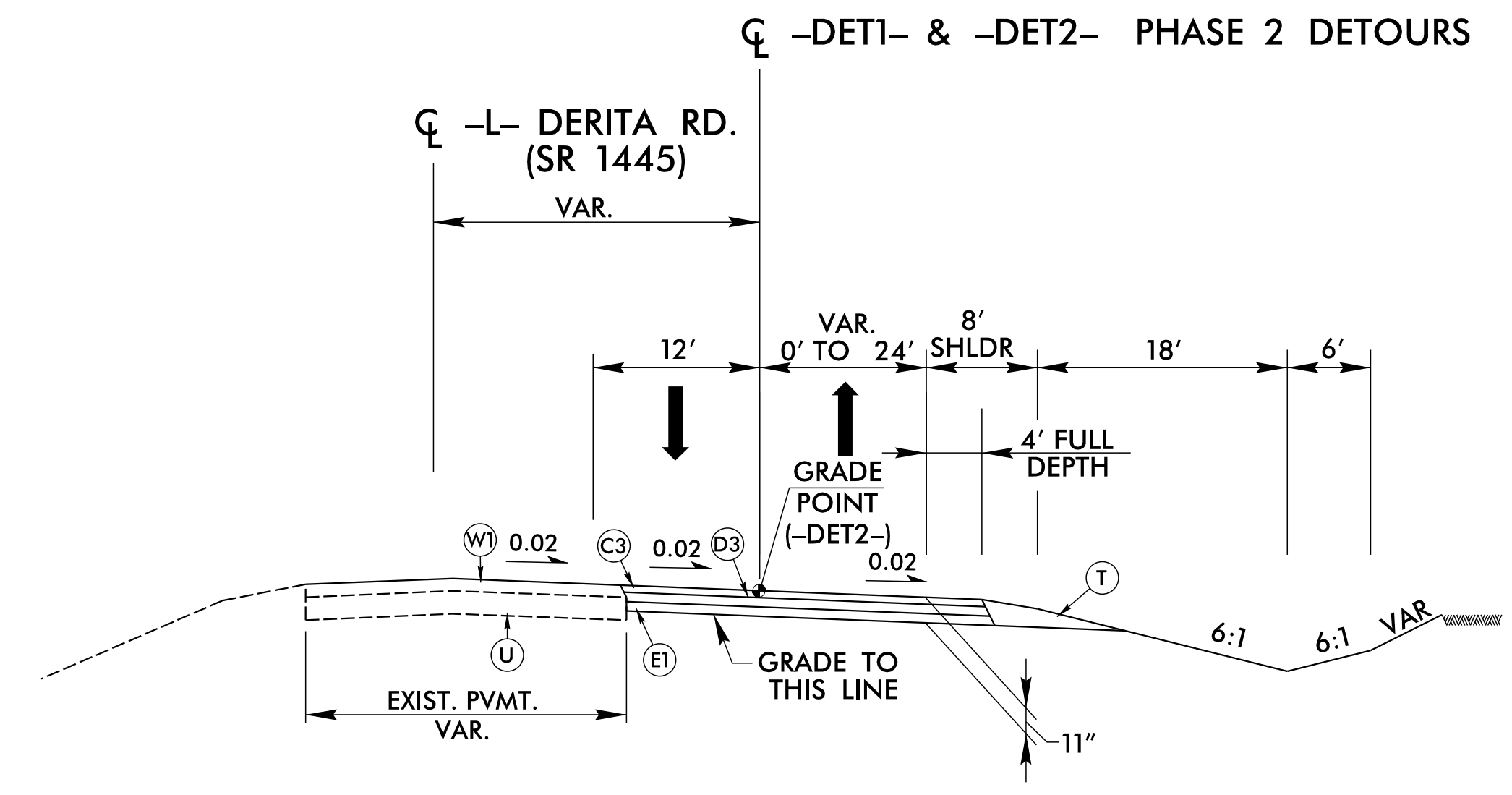
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USE TYPICAL SECTION NO. 8  
-Y10- STA. 11+05.00 TO 12+48.17 (RESURF)



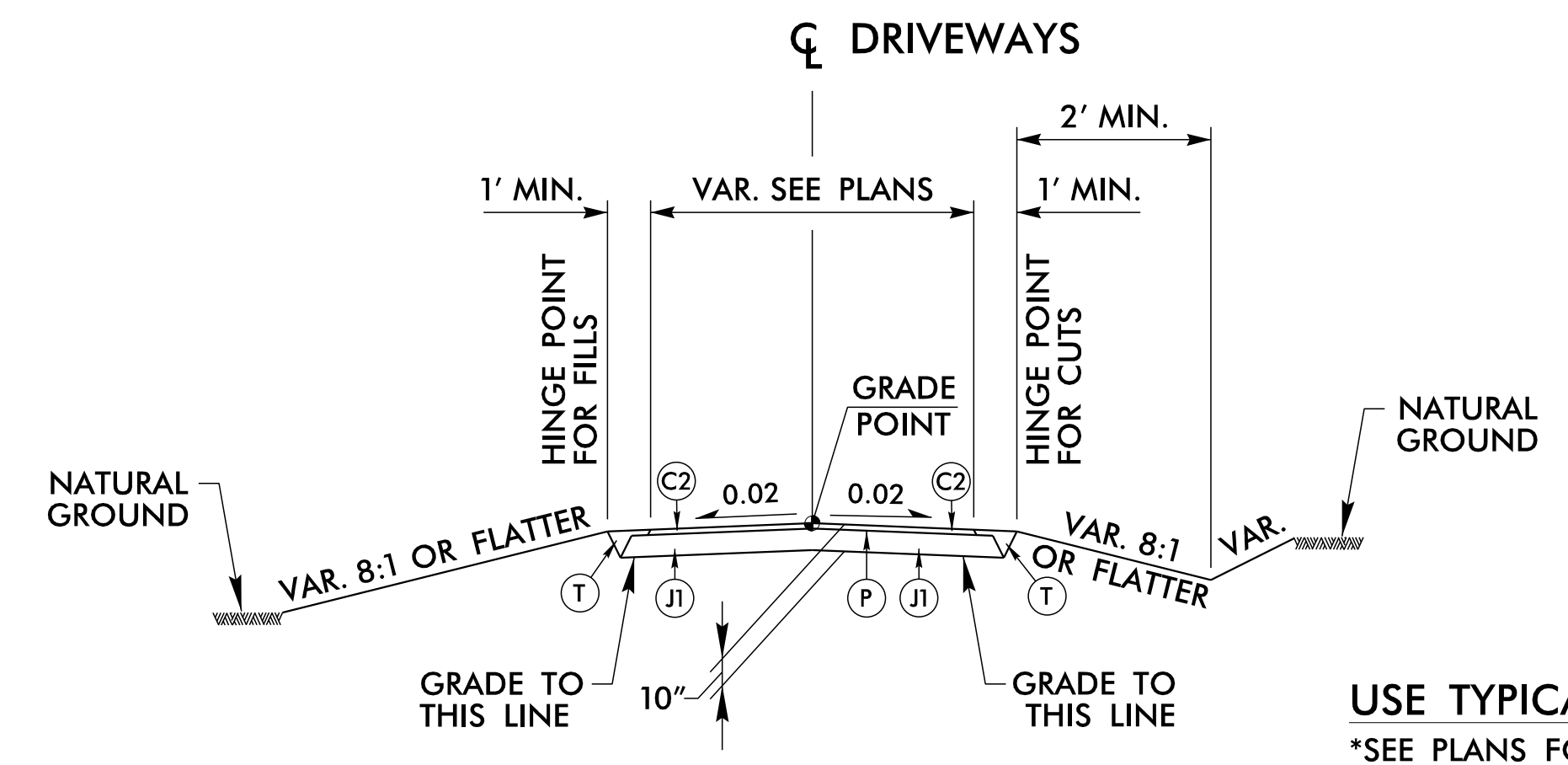
**TYPICAL SECTION NO. 9**

USE TYPICAL SECTION NO. 9  
-DR2- STA. 9+95.00 TO 11+37.59 (FULL DEPTH)



**TYPICAL SECTION NO. 10**

USE TYPICAL SECTION NO. 10  
-DET1- STA. 11+77.56 TO 13+86.97  
-DET1- STA. 15+50.29 TO 23+52.39  
-DET2- STA. 16+00.45 TO 19+34.23  
-DET2- STA. 21+98.52 TO 24+03.12 (OPP HAND)



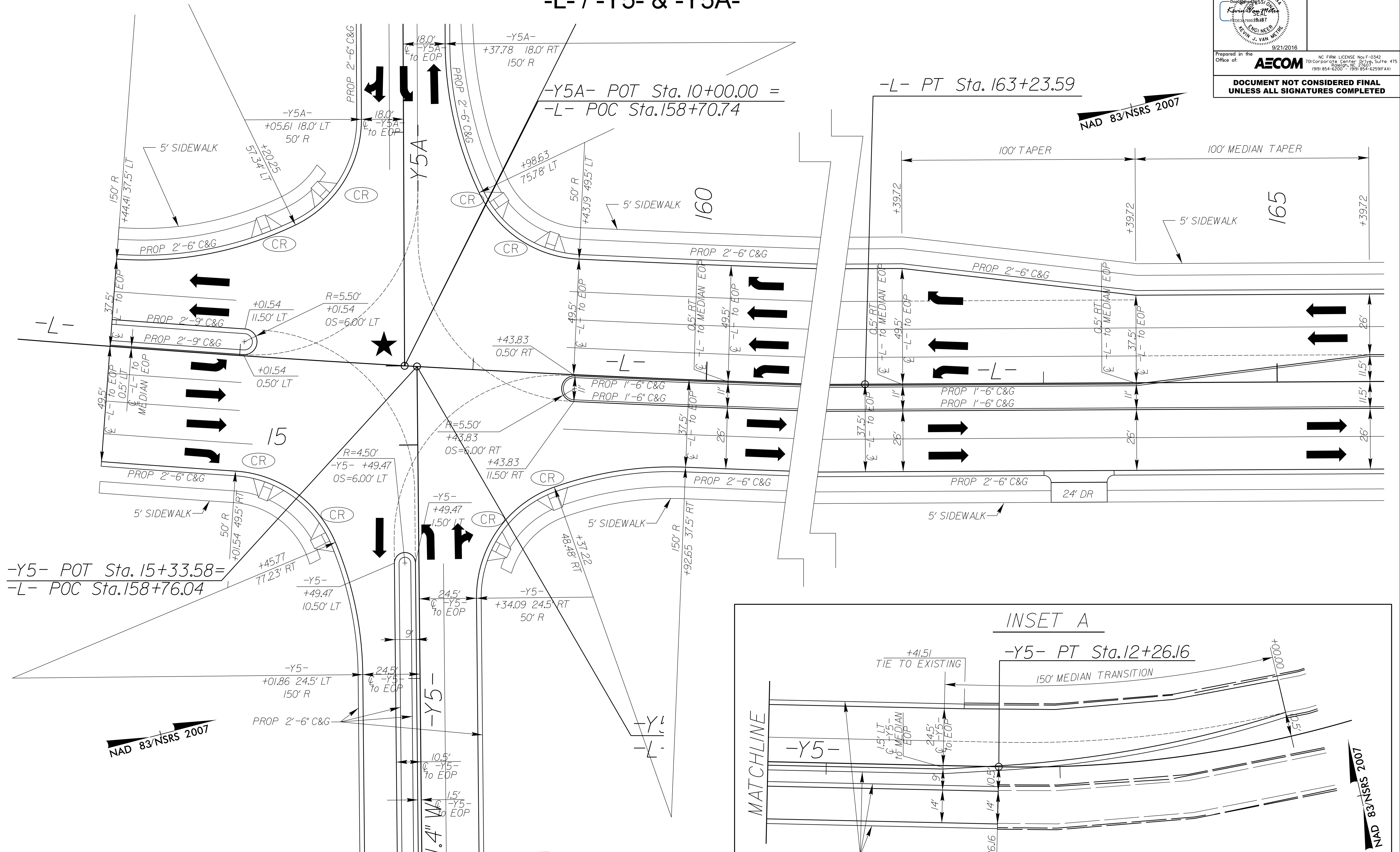
**TYPICAL SECTION NO. 11**

USE TYPICAL SECTION NO. 11  
\*SEE PLANS FOR LOCATIONS

# INTERSECTION DETAIL SHEET

## -L- / -Y5- & -Y5A-

PROJECT REFERENCE NO. U-4910B	SHEET NO. 2B-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
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REVISIONS

Revisions:

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★ PROPOSED SIGNAL  
 SEE SHEET 4 & 5 FOR PLAN VIEW



NAD 83/NSRS 2007

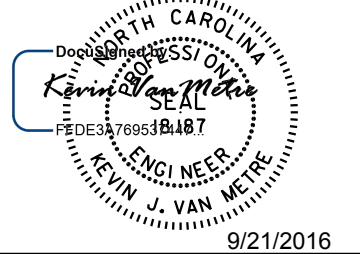
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NAD 83/NSRS 2007



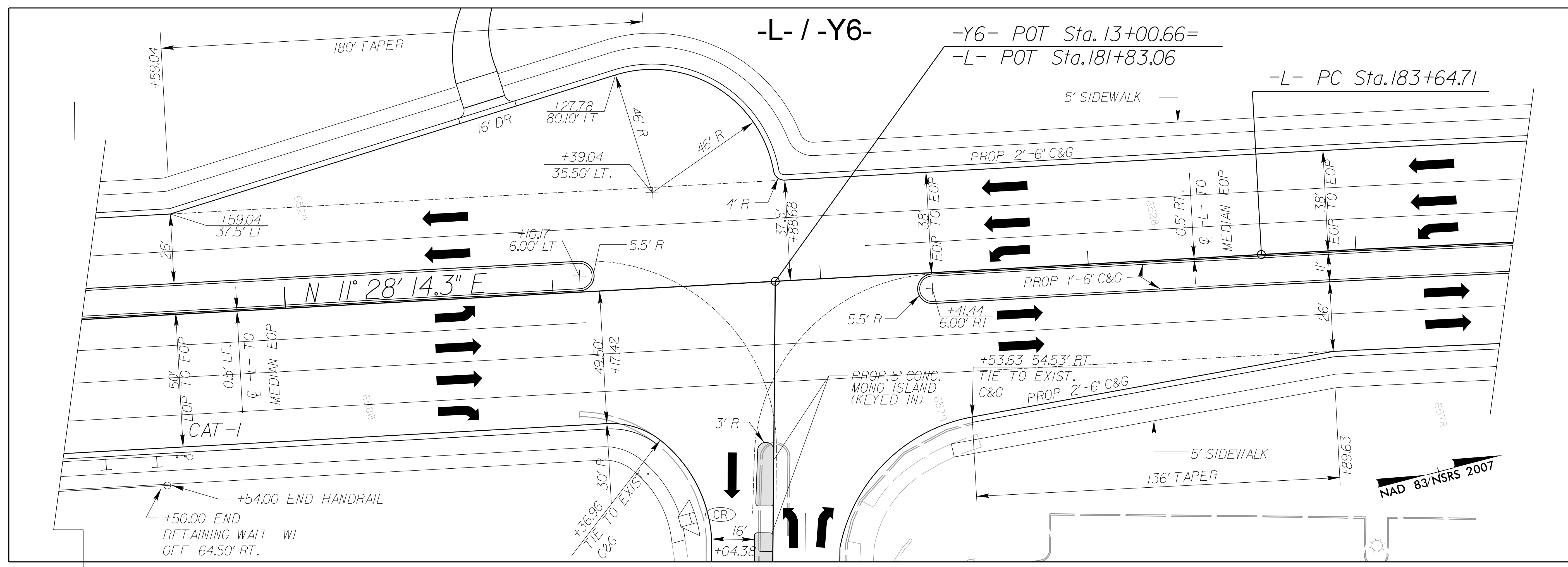
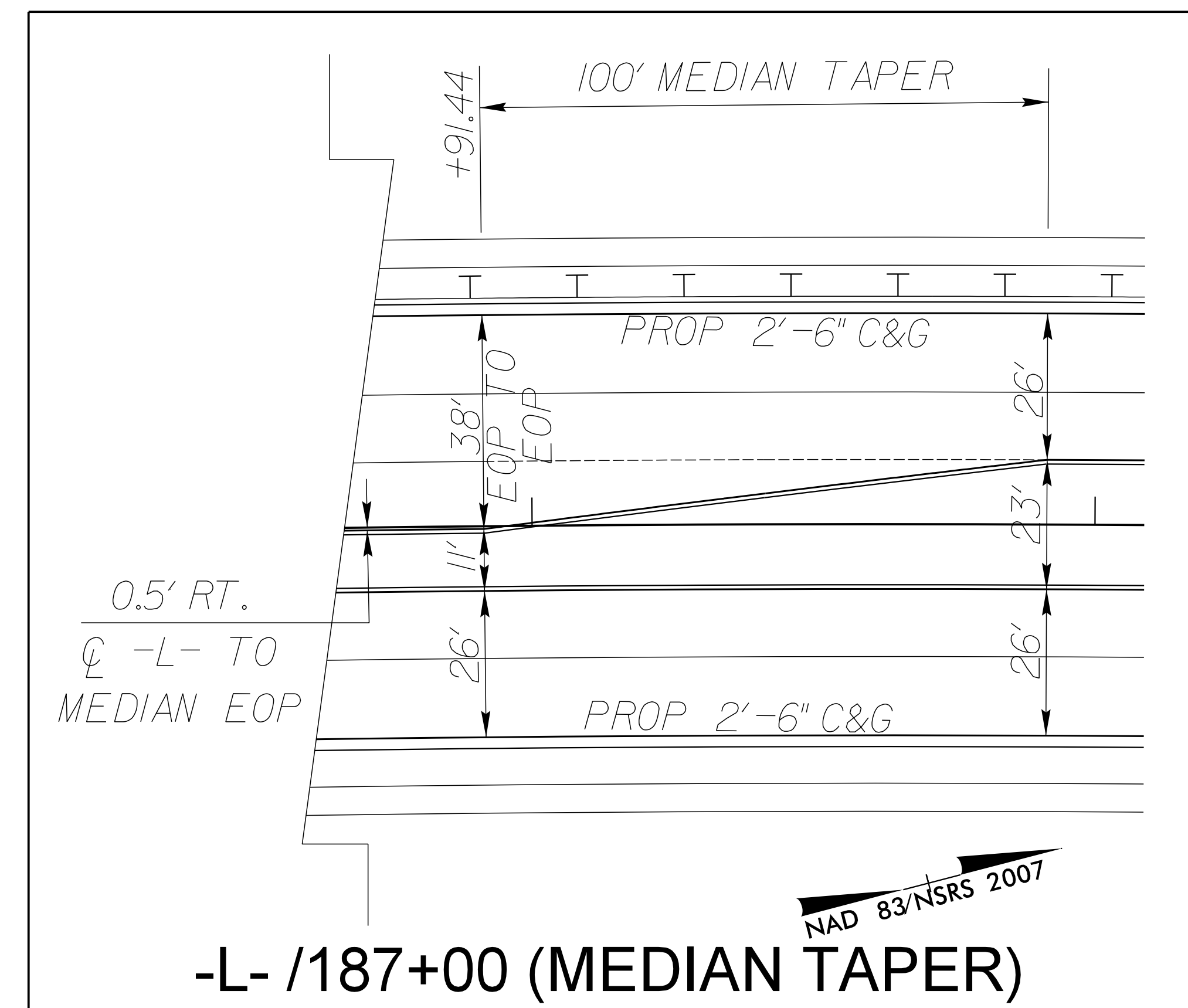
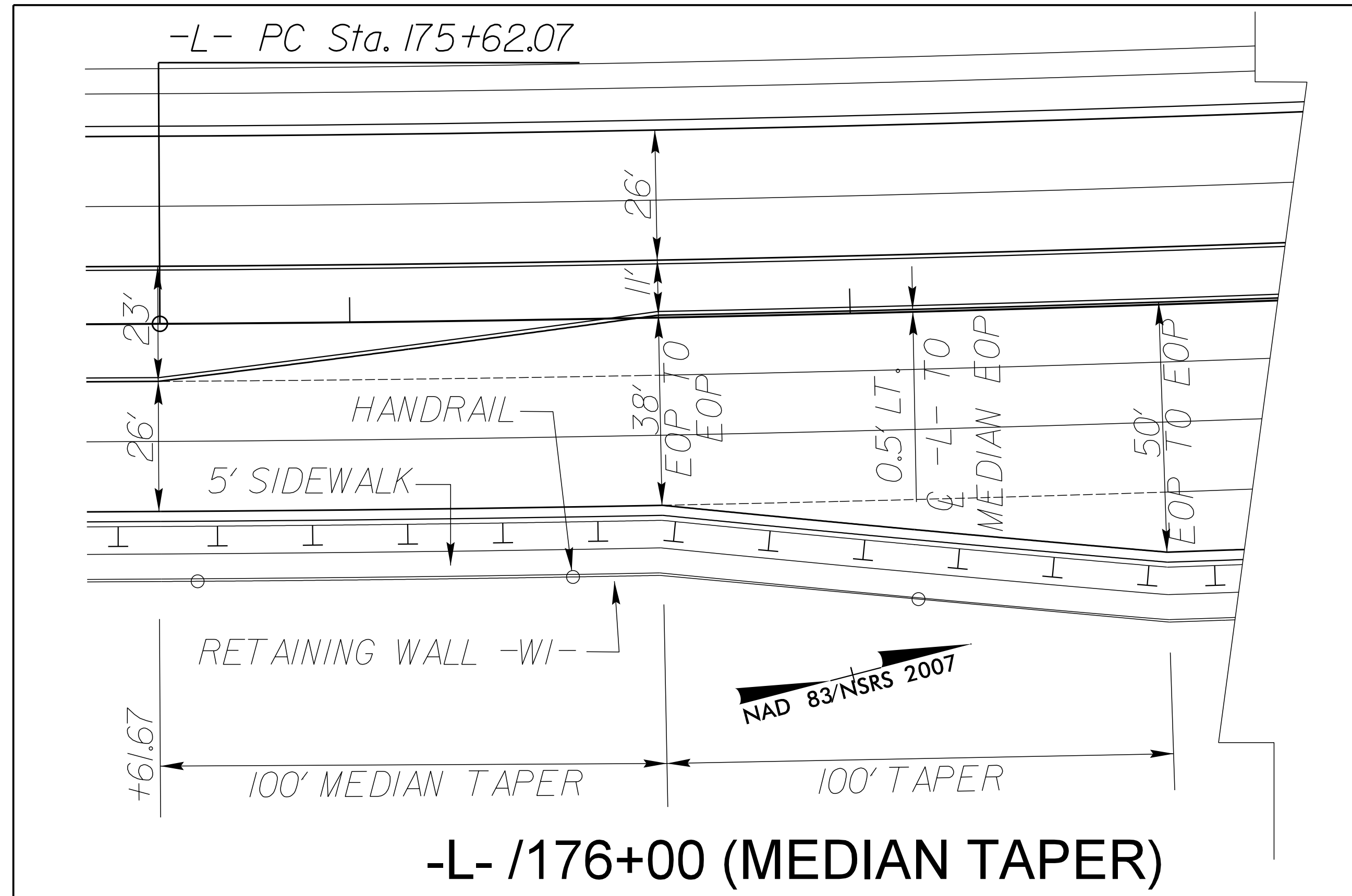


# INTERSECTION DETAIL SHEET

PROJECT REFERENCE NO. U-4910B	SHEET NO. 2B-3
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
	
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SEE SHEET 6 & 7 FOR PLAN VIEW



REVISIONS

Revisions:

DATE: 9/19/2016  
TIME: 2:33:06 PM

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Date: 9/19/2016  
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# INTERSECTION DETAIL SHEET

## -L- /-Y10-

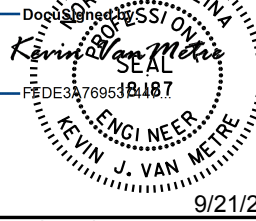
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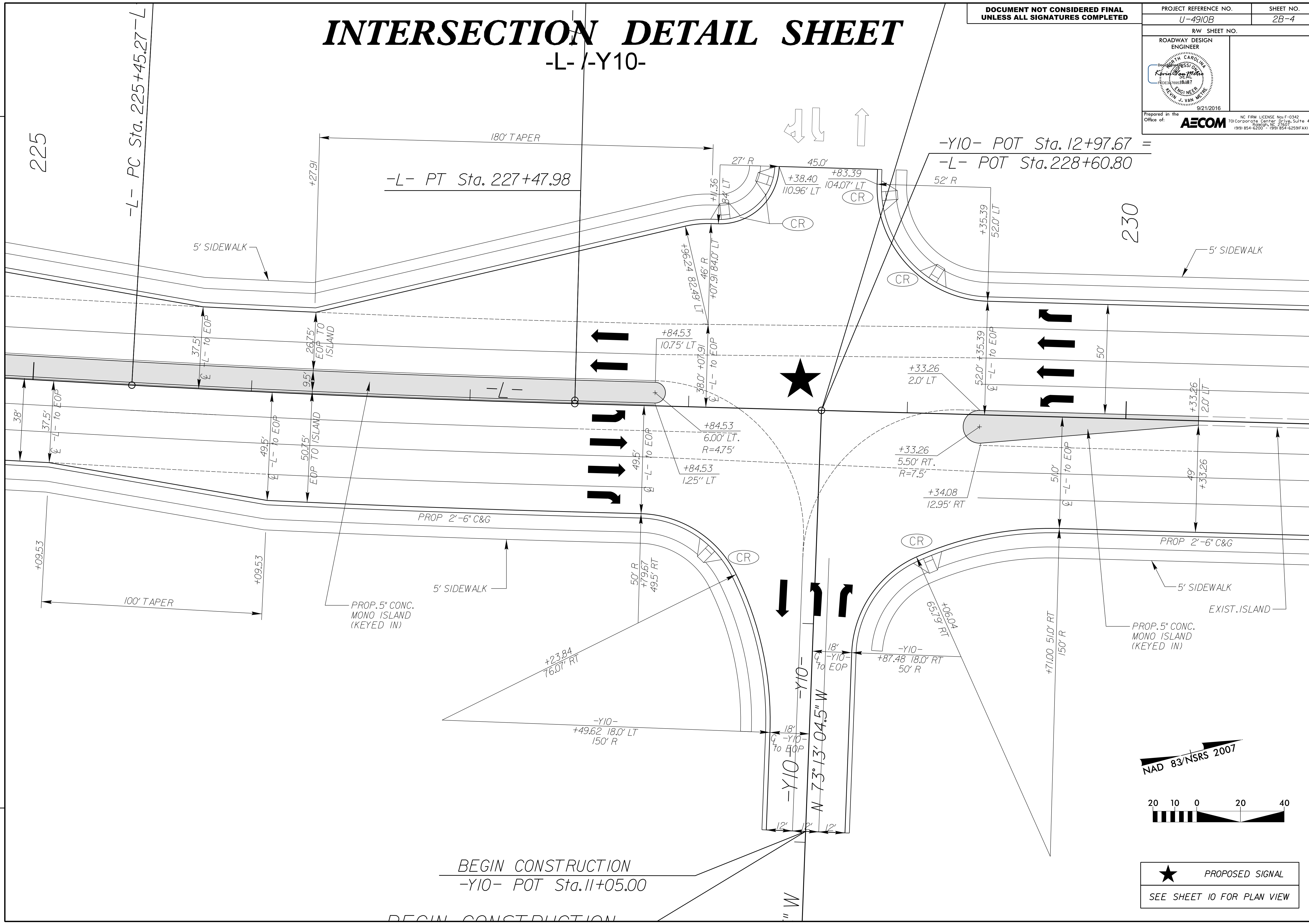
RW SHEET NO.

ROADWAY DESIGN ENGINEER

ROADWAY DESIGN ENGINEER



Prepared in the Office of: **AECOM** NC FIRM LICENSE No. F-0342  
701 Corporate Center Drive, Suite 475  
Raleigh, NC 27607  
(919) 854-6200 • (919) 854-6259(FAX)



REVISIONS

Revisions:

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Date: 9/19/2016  
Time: 2:33:06 PM

NAD 83/NSRS 2007



★ PROPOSED SIGNAL  
SEE SHEET 10 FOR PLAN VIEW

BEGIN CONSTRUCTION  
-Y10- POT Sta. 11+05.00

BEGIN CONSTRUCTION

# INTERSECTION DETAIL SHEET

## -L- /-Y11-

PROJECT REFERENCE NO. U-4910B	SHEET NO. 2B-5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
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<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

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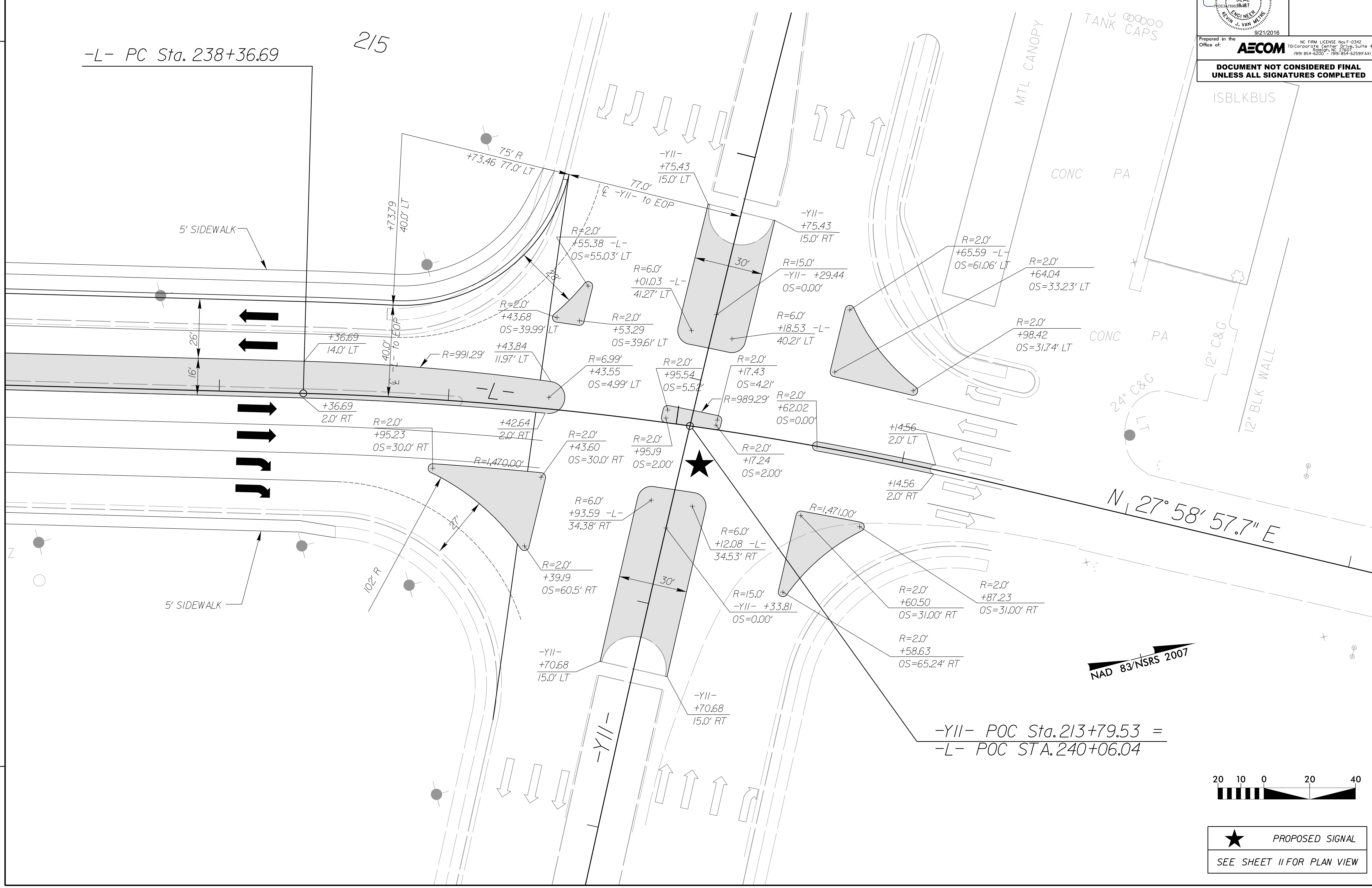
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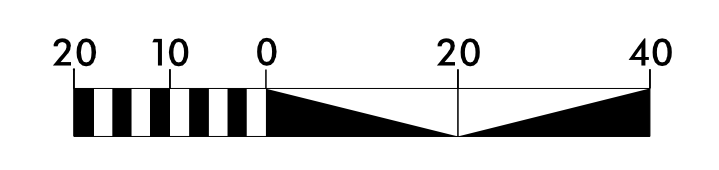
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-Y11- POC Sta. 213+79.53 =  
-L- POC STA. 240+06.04

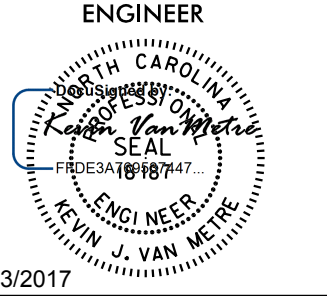
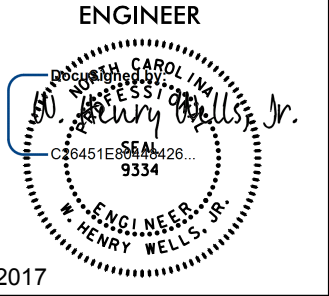


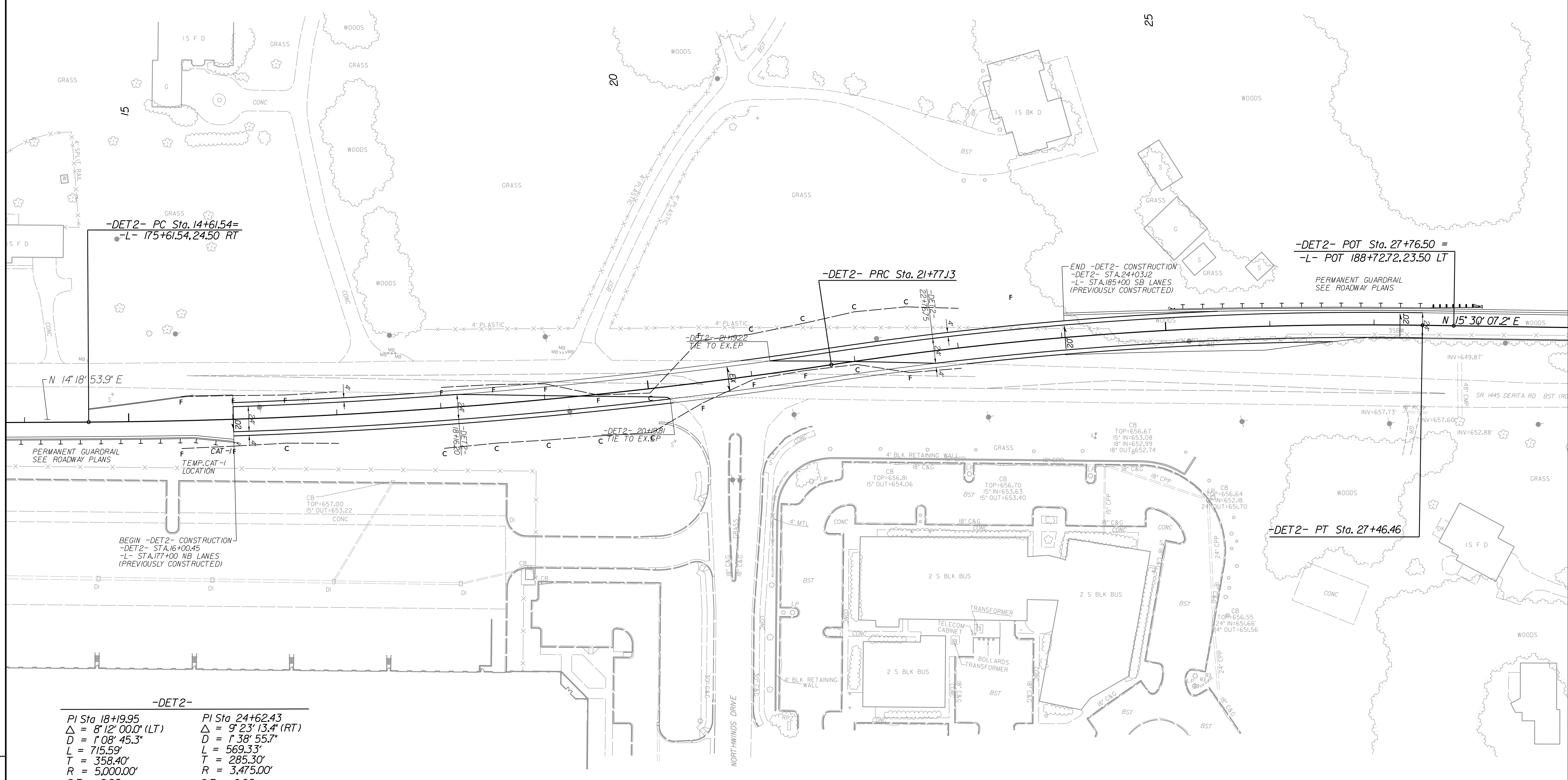
★ PROPOSED SIGNAL  
SEE SHEET II FOR PLAN VIEW

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User: schmid  
Date: 9/19/2016  
Time: 2:33:09 PM

# -DET2- DETOUR DETAIL

NAD 83/NSRS 2007

PROJECT REFERENCE NO. <b>U-4910B</b>	SHEET NO. <b>2B-6</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER 
1/23/2017	1/23/2017
Prepared in the Office of: <b>AECOM</b>	NC FIRM LICENSE No: F-0342 701 Corporate Center Drive, Suite 475 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259(FAX)
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**-DET2-**

PI Sta 18+19.95	PI Sta 24+62.43
$\Delta = 8^{\circ}12'00.0''$ (LT)	$\Delta = 9^{\circ}23'13.4''$ (RT)
$D = 1^{\circ}08'45.3''$	$D = 1^{\circ}38'55.7''$
$L = 715.59'$	$L = 569.33'$
$T = 358.40'$	$T = 285.30'$
$R = 5,000.00'$	$R = 3,475.00'$
$S.E. = 0.02$	$S.E. = 0.02$

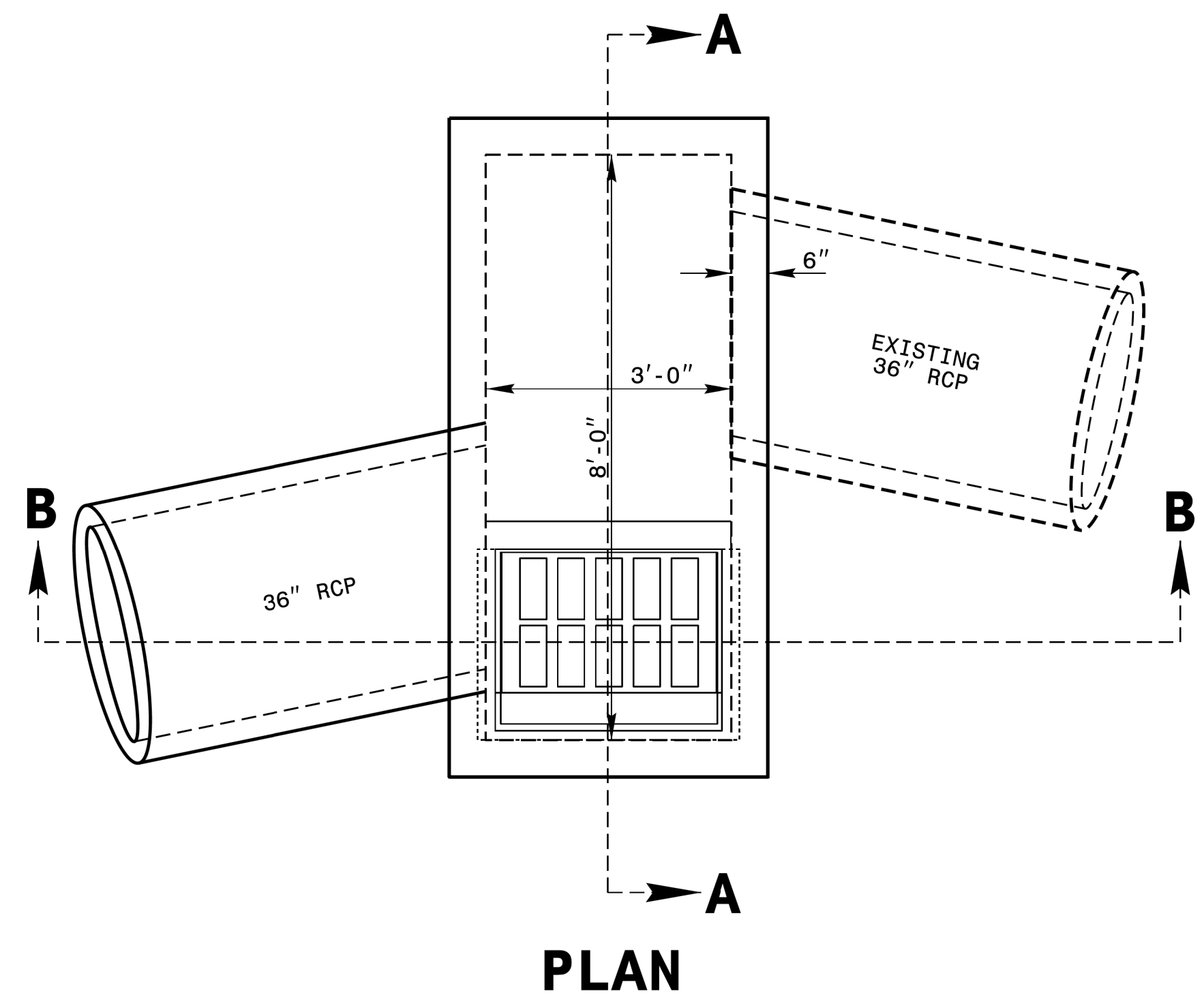
REVISIONS

Revisions:

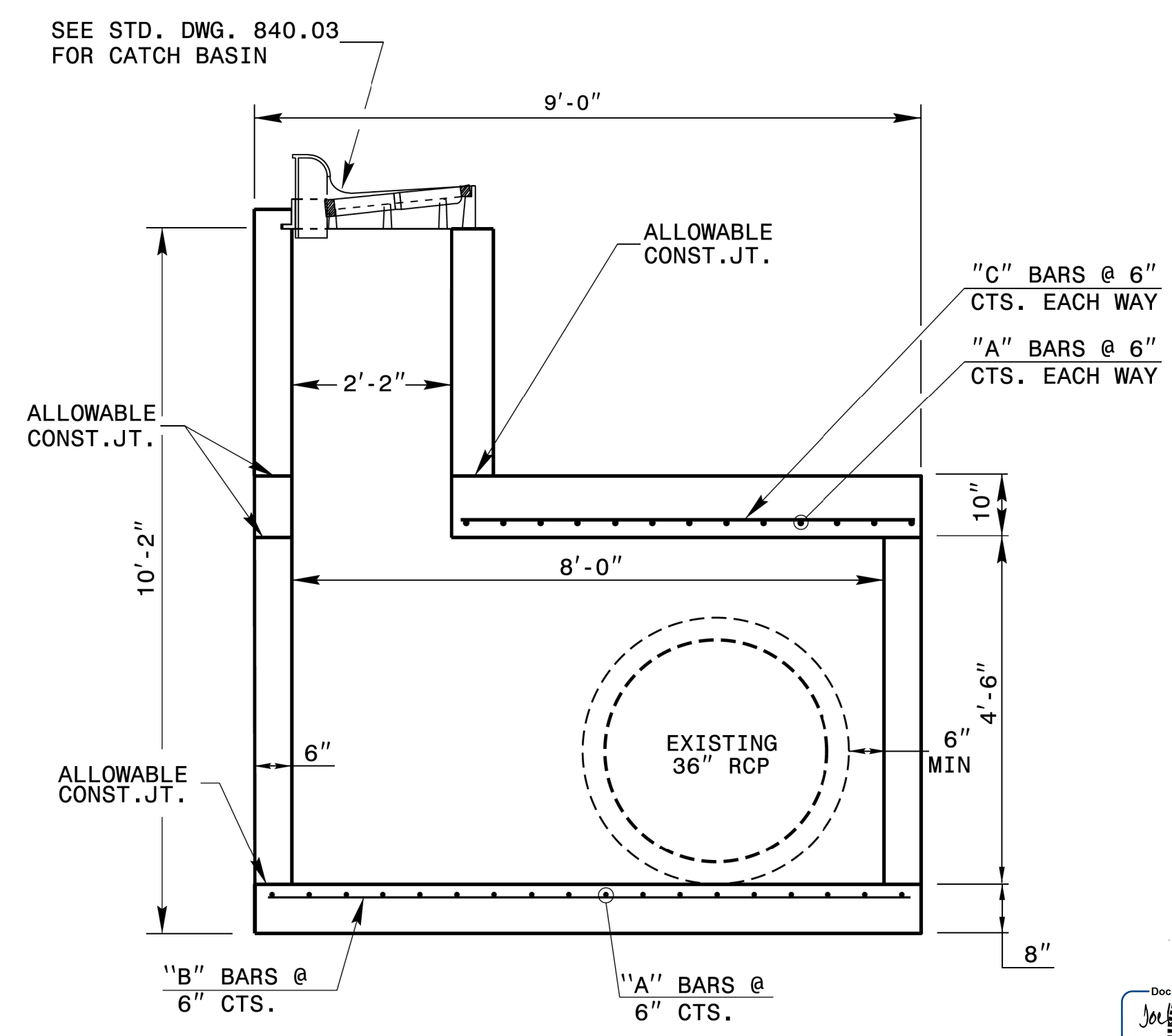
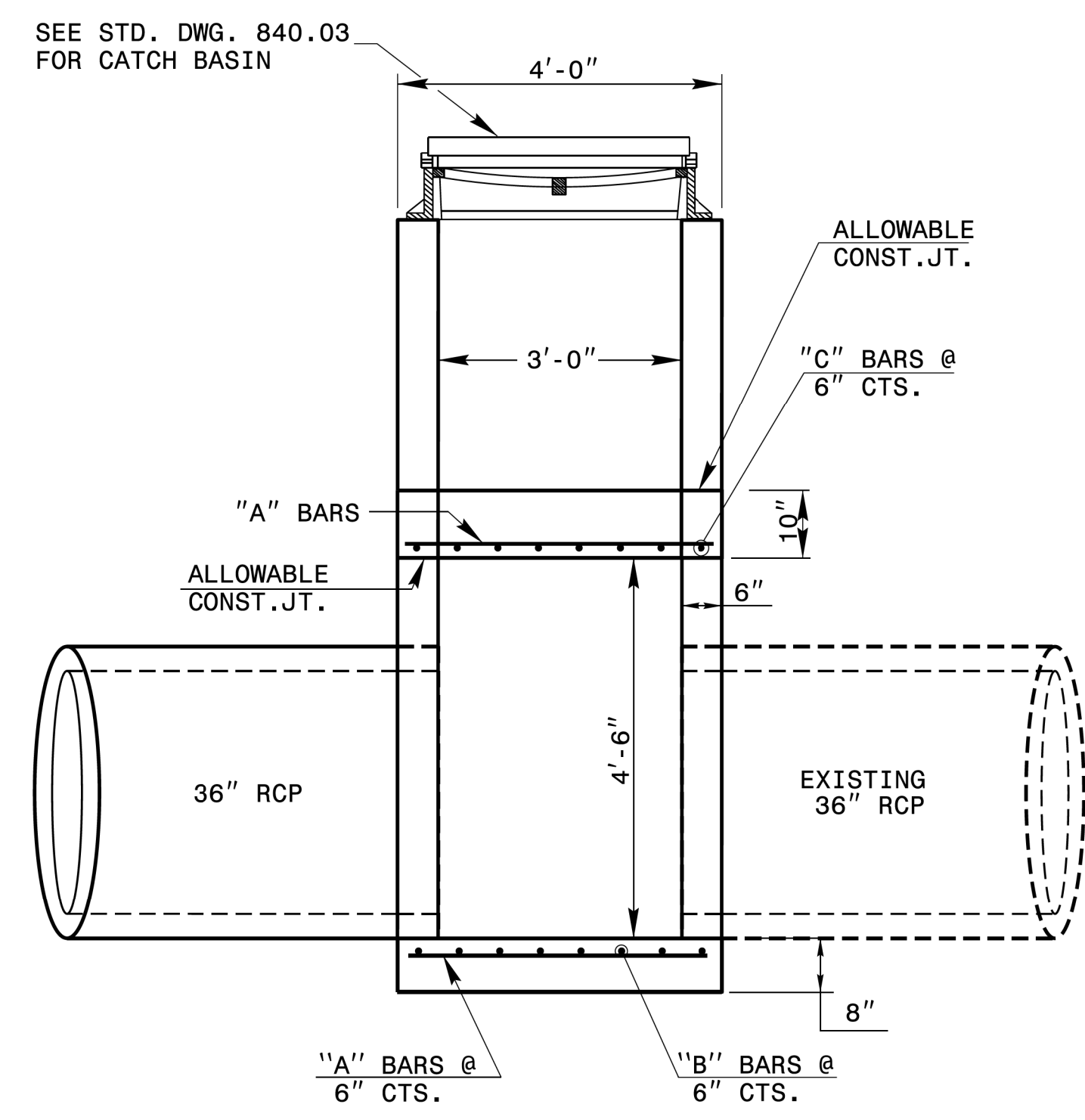
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 TIME: 9:26:53 AM

SEE SHEET 17 FOR PROFILE





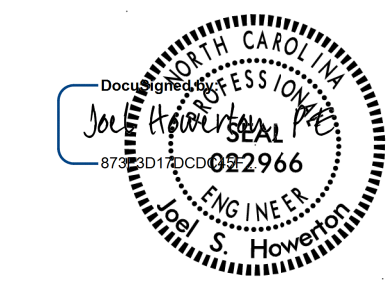
- GENERAL NOTES:**
1. USE CLASS "B" CONCRETE THROUGHOUT.
  2. CONSTRUCT CONCRETE BOX IN ACCORDANCE WITH SECTION 825 OF THE STANDARD SPECIFICATIONS.
  3. USE FORMS TO CONSTRUCT THE BOTTOM SLAB.
  4. ADJUST LENGTH OF STEEL BARS AS NEEDED TO COMPENSATE FOR PIPES AND FRAME AND GRATE OPENINGS.
  5. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 400.
  6. CUT OR BEND STEEL BARS AS NEEDED TO PROVIDE 2" CLEARANCE.
  7. LOCATE FRAME AND GRATE AS FIELD CONDITIONS DICTATE AND AS DIRECTED BY THE ENGINEER.
  8. DIMENSIONS OF CATCH BASIN MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.



**BILL OF MATERIALS**

BAR	QTY	SIZE	LENGTH	WEIGHT
A	29	#5	3'-8"	111
B	8	#5	8'-8"	72
C	8	#5	5'-6"	46
TOTAL REINF. STEEL (lbs.)				230
TOTAL CONC. CU. YDS.				4.8
DEDUCTIONS FOR ONE PIPE				
36" RC PIPE				0.20

NO DEDUCTIONS HAVE BEEN MADE TO ACCOMMODATE PIPES OR CATCH BASIN OPENING.



**CONTRACTS STANDARDS AND DEVELOPMENT UNIT**  
Office 919-707-6950 FAX 919-250-4119

**DETAIL OF SPECIAL OFFSET CATCH BASIN**

ORIGINAL BY: tsspell DATE: 05-22-2008  
 MODIFIED BY: rnbritt DATE: 06-07-2016  
 CHECKED BY: DATE:  
 FILE SPEC.: details/rbritten/english/urban/u4910b.cb36rcp.offset.dgn

**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**

REVISIONS

Revisions:

DWG: R:\Roadway\Proj\4910C\_rdy\_detail\012C\_2.dgn  
 USER: scheid  
 DATE: 9/19/2016  
 TIME: 2:33:29 PM

REVISIONS

Revisions:

\*\*\*\*\*ACTIVE\*\*\*\*\*  
 \*\*\*\*\*CONDITIONS\*\*\*\*\*  
 \*\*\*\*\*USERNAMLS\*\*\*\*\*

5/14/99

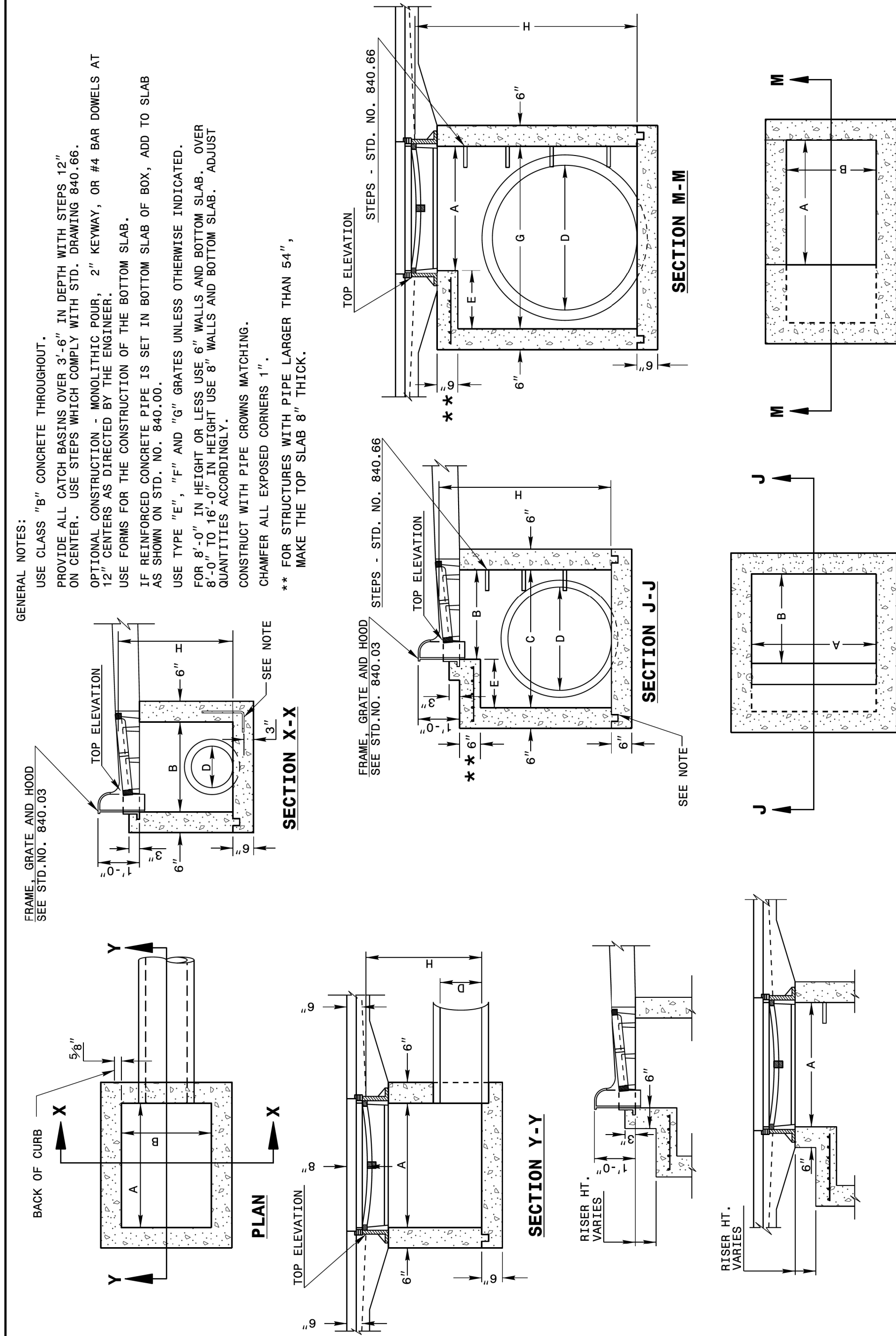
STATE OF NORTH CAROLINA  
 DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 RALEIGH, N.C.

GENERAL NOTES:  
 USE CLASS "B" CONCRETE THROUGHOUT.  
 PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.  
 OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.  
 USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.  
 IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.  
 USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.  
 FOR 8'-0" IN HEIGHT OR LESS USE 6" WALLS AND BOTTOM SLAB OVER 8'-0" TO 16'-0" IN HEIGHT USE 8" WALLS AND BOTTOM SLAB. ADJUST QUANTITIES ACCORDINGLY.  
 CONSTRUCT WITH PIPE CROWNS MATCHING.  
 CHAMFER ALL EXPOSED CORNERS 1".  
 \*\* FOR STRUCTURES WITH PIPE LARGER THAN 54", MAKE THE TOP SLAB 8" THICK.

STATE OF NORTH CAROLINA  
 DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR  
 MINIMUM DEPTH  
 CONCRETE CATCH BASIN  
 12" THRU 84" PIPE

ENGLISH DETAIL DRAWING FOR  
 MINIMUM DEPTH  
 CONCRETE CATCH BASIN  
 12" THRU 84" PIPE



SHEET 1 OF 2  
 840D02

SHEET 1 OF 2  
 840D02

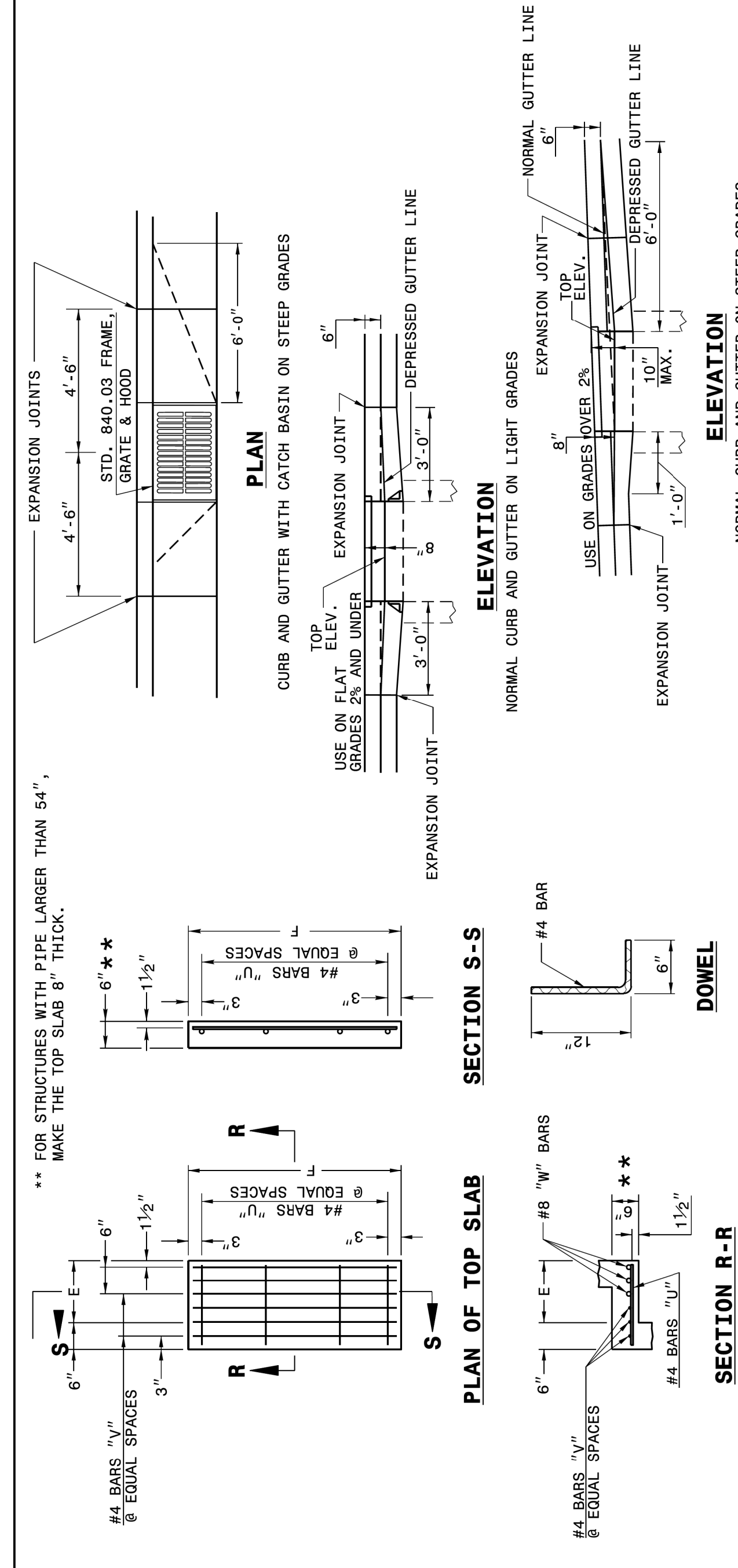
STATE OF NORTH CAROLINA  
 DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 RALEIGH, N.C.

\*\* FOR STRUCTURES WITH PIPE LARGER THAN 54", MAKE THE TOP SLAB 8" THICK.

STATE OF NORTH CAROLINA  
 DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR  
 MINIMUM DEPTH  
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 12" THRU 84" PIPE

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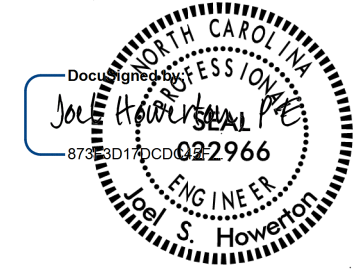
\* RISER HAS .228 CUBIC YARDS OF CONCRETE PER FOOT HEIGHT

PIPE D	MINIMUM DIMENSIONS OF BOX AND PIPE				COVER DIMENSION E	F	G	H	HEIGHT	BARS-V NO.	LENGTH	BARS-W NO.	LENGTH	TOTAL LBS.	CU. YDS. CONC. IN BOX		DEDUCTIONS ONE PIPE		
	SPAN A	WIDTH B	DEPTH C	MIN. SPAN											TOP SLAB HEIGHT	BOTTOM SLAB HEIGHT		C.M.	R.C.
12"	3'-0"	2'-2"	2'-2"	2'-2"	2'-0"	2'-3"	2'-6"	3'-1"	3'-10"	4	1'-5"	2	4'-1"	39	0.123	0.347	1.493	0.092	0.127
15"	3'-0"	2'-2"	2'-2"	2'-2"	2'-0"	2'-3"	2'-6"	3'-1"	3'-10"	4	1'-5"	2	4'-1"	39	0.123	0.347	1.493	0.092	0.127
18"	3'-0"	2'-2"	2'-2"	2'-2"	2'-0"	2'-3"	2'-6"	3'-1"	3'-10"	4	1'-5"	2	4'-1"	39	0.123	0.347	1.493	0.092	0.127
24"	3'-0"	2'-2"	2'-2"	2'-2"	2'-0"	2'-3"	2'-6"	3'-1"	3'-10"	4	1'-5"	2	4'-1"	39	0.123	0.347	1.493	0.092	0.127
30"	3'-0"	2'-2"	2'-2"	2'-2"	2'-0"	2'-3"	2'-6"	3'-1"	3'-10"	4	1'-5"	2	4'-1"	39	0.123	0.347	1.493	0.092	0.127
36"	3'-0"	2'-2"	2'-2"	2'-2"	2'-0"	2'-3"	2'-6"	3'-1"	3'-10"	4	1'-5"	2	4'-1"	39	0.123	0.347	1.493	0.092	0.127
42"	3'-0"	2'-2"	2'-2"	2'-2"	2'-0"	2'-3"	2'-6"	3'-1"	3'-10"	4	1'-5"	2	4'-1"	39	0.123	0.347	1.493	0.092	0.127
48"	3'-0"	2'-2"	2'-2"	2'-2"	2'-0"	2'-3"	2'-6"	3'-1"	3'-10"	4	1'-5"	2	4'-1"	39	0.123	0.347	1.493	0.092	0.127
54"	3'-0"	2'-2"	2'-2"	2'-2"	2'-0"	2'-3"	2'-6"	3'-1"	3'-10"	4	1'-5"	2	4'-1"	39	0.123	0.347	1.493	0.092	0.127
60"	3'-0"	2'-2"	2'-2"	2'-2"	2'-0"	2'-3"	2'-6"	3'-1"	3'-10"	4	1'-5"	2	4'-1"	39	0.123	0.347	1.493	0.092	0.127
66"	3'-0"	2'-2"	2'-2"	2'-2"	2'-0"	2'-3"	2'-6"	3'-1"	3'-10"	4	1'-5"	2	4'-1"	39	0.123	0.347	1.493	0.092	0.127
72"	3'-0"	2'-2"	2'-2"	2'-2"	2'-0"	2'-3"	2'-6"	3'-1"	3'-10"	4	1'-5"	2	4'-1"	39	0.123	0.347	1.493	0.092	0.127
78"	3'-0"	2'-2"	2'-2"	2'-2"	2'-0"	2'-3"	2'-6"	3'-1"	3'-10"	4	1'-5"	2	4'-1"	39	0.123	0.347	1.493	0.092	0.127
84"	3'-0"	2'-2"	2'-2"	2'-2"	2'-0"	2'-3"	2'-6"	3'-1"	3'-10"	4	1'-5"	2	4'-1"	39	0.123	0.347	1.493	0.092	0.127

SHEET 2 OF 2  
 840D02

SHEET 2 OF 2  
 840D02

9/22/2016



CONTRACT STANDARDS  
 AND DEVELOPMENT UNIT  
 Office 919-707-6950 FAX 919-250-4119

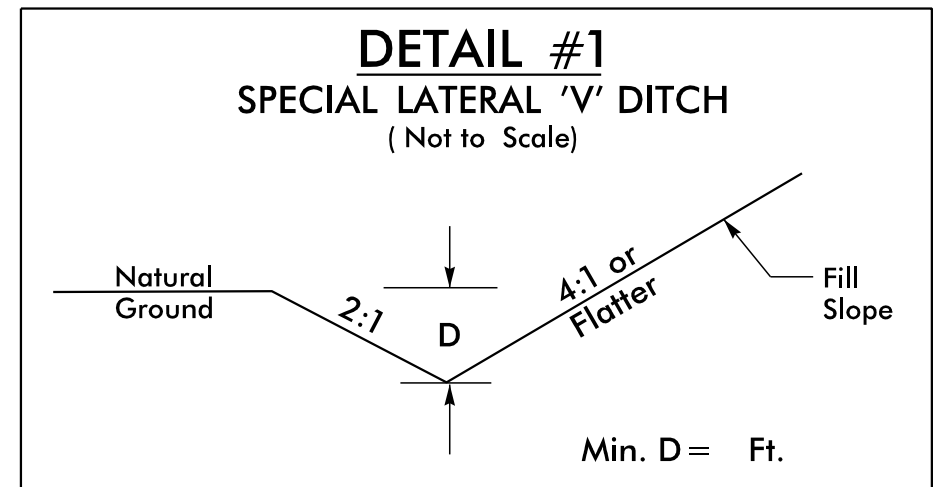
SEE PLATE FOR TITLE

ORIGINAL BY: 2002 Std.840.01 DATE:  
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 CHECKED BY: DATE:  
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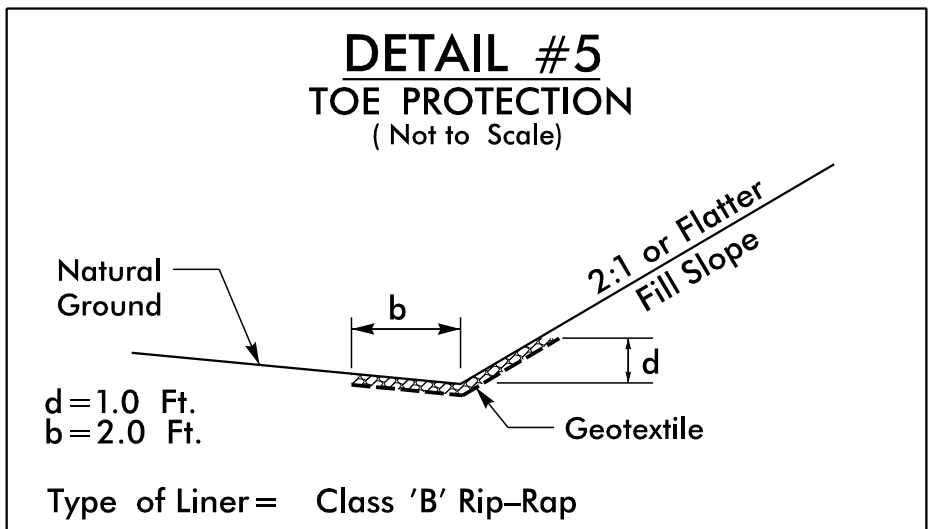
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 UNLESS ALL SIGNATURES COMPLETED

# DRAINAGE DETAILS

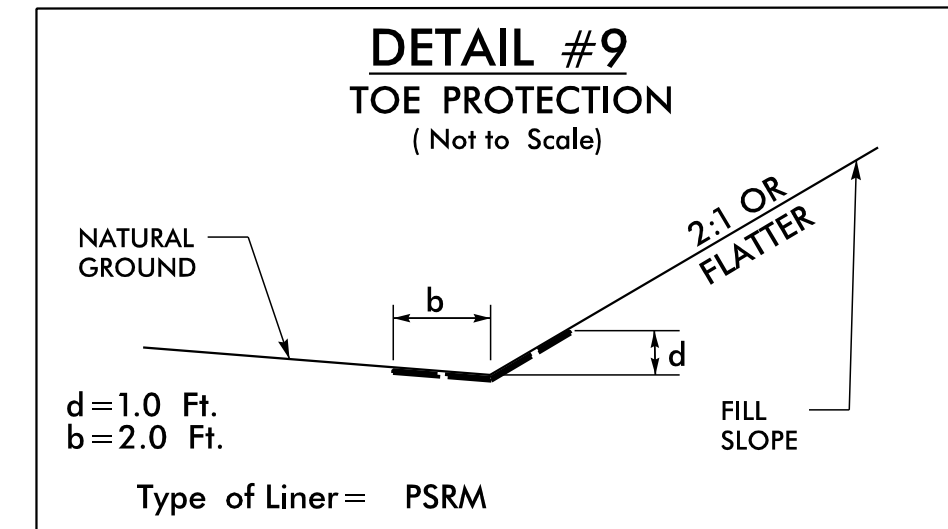
PROJECT REFERENCE NO. <i>U-4910B</i>	SHEET NO. <i>2D-1</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
Prepared in the Office of: <b>AECOM</b> NC FIRM LICENSE No. F-0342 701 Corporate Center Drive, Suite 475 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259(FAX)	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	



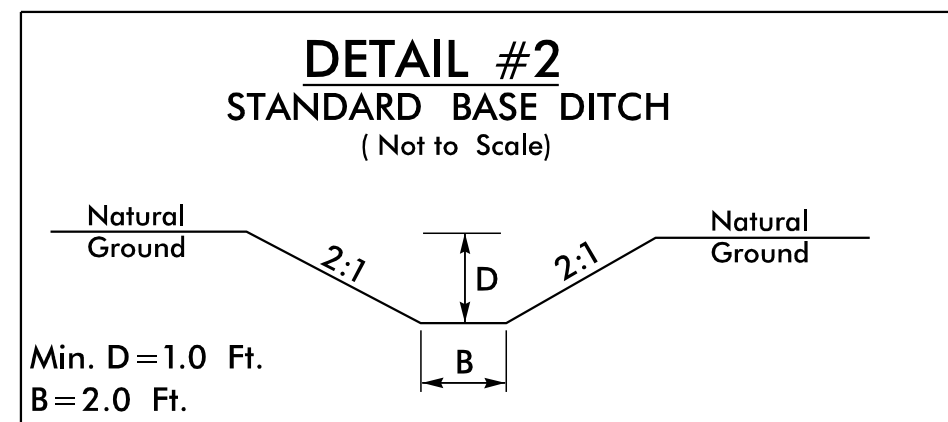
FROM STA. 161+50 TO STA. 166+50 -L- LT  
 FROM STA. 176+50 TO STA. 178+00 -L- LT  
 FROM STA. 184+00 TO STA. 187+26 -L- RT  
 FROM STA. 209+50 TO STA. 210+20 -L- RT  
 FROM STA. 211+20 TO STA. 215+90 -L- RT  
 FROM STA. 14+00 TO STA. 14+50 -Y5- RT  
 FROM STA. 11+30 TO STA. 11+80 -Y9- RT



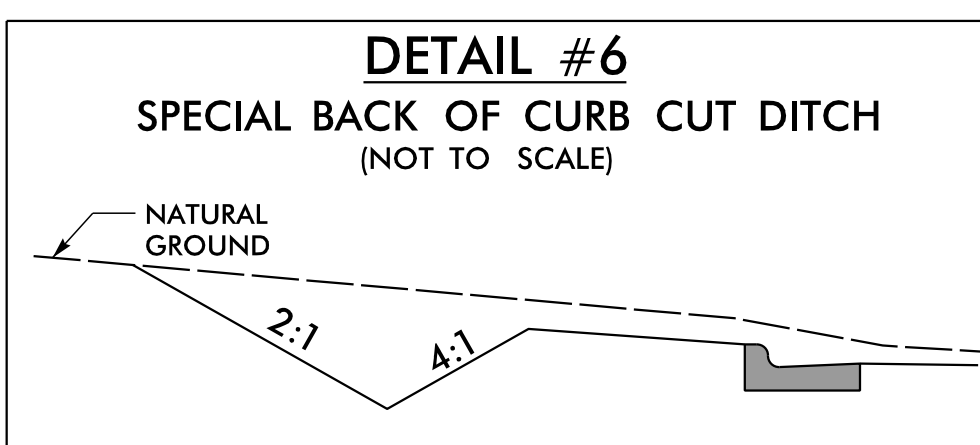
FROM STA. 187+50 TO STA. 190+00 -L- LT



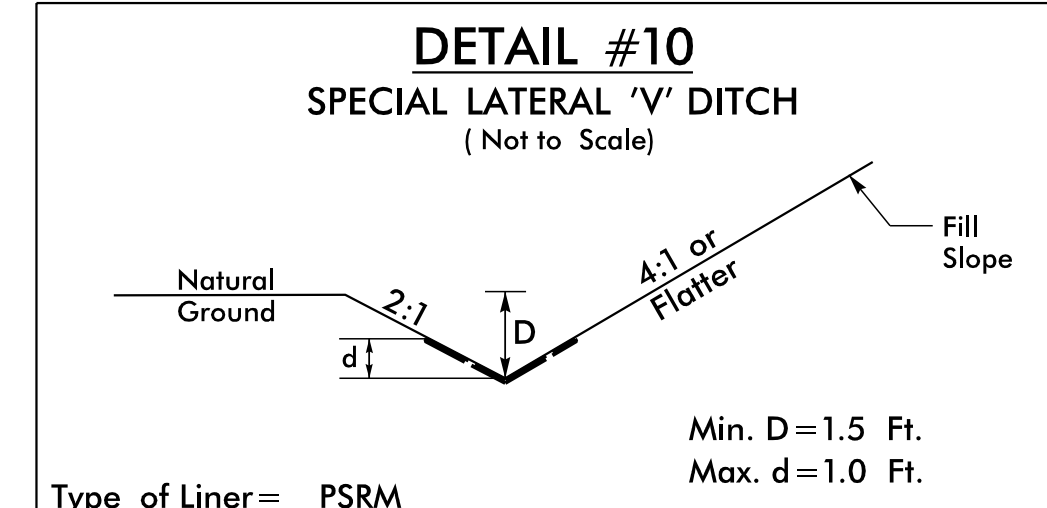
FROM STA. 216+00 TO STA. 218+00 -L- LT



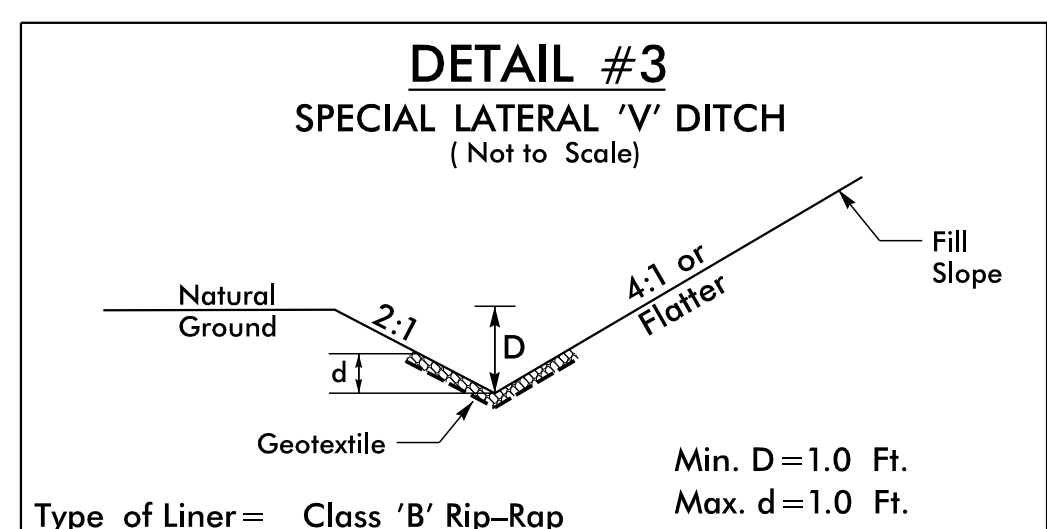
STA. 222+81 -L- RT



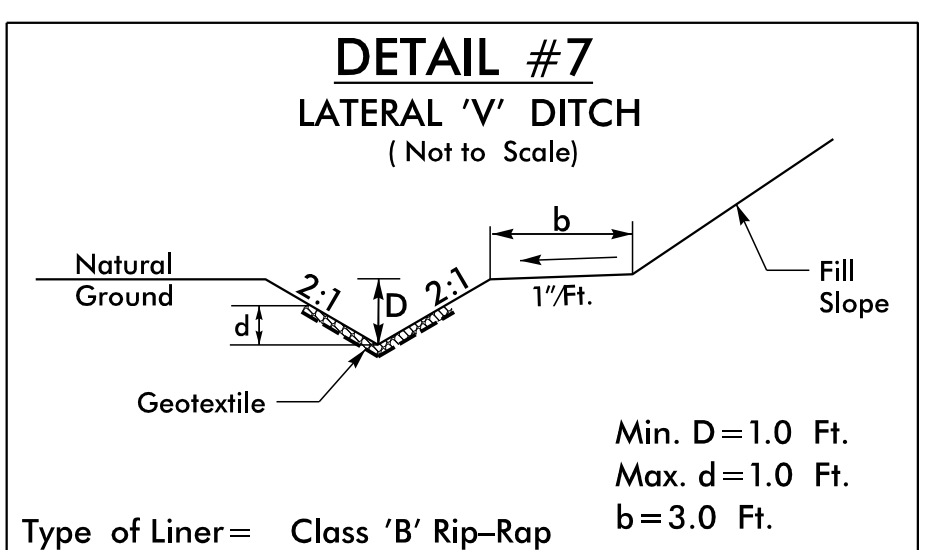
FROM STA. 167+00 TO STA. 167+50 -L- RT  
 FROM STA. 159+30 TO STA. 161+50 -L- RT



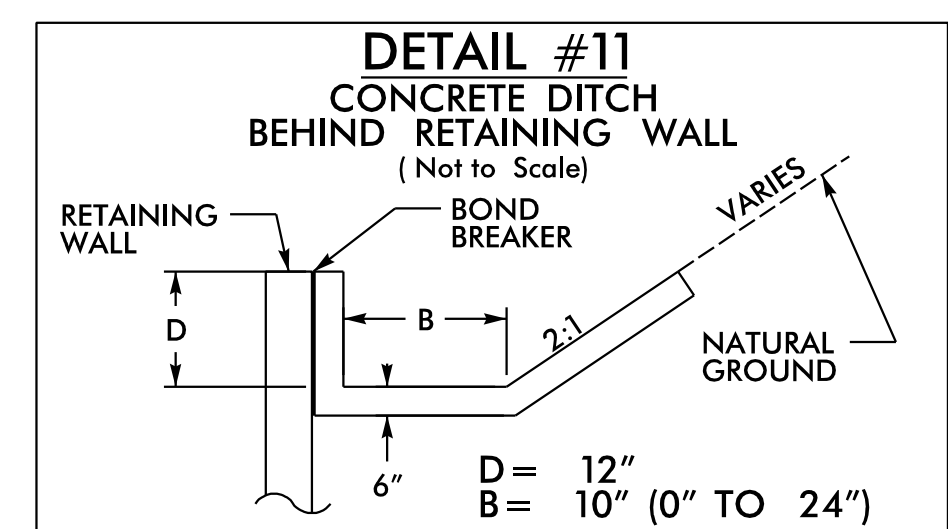
FROM STA. 9+00 TO STA. 10+00 -Y8- RT



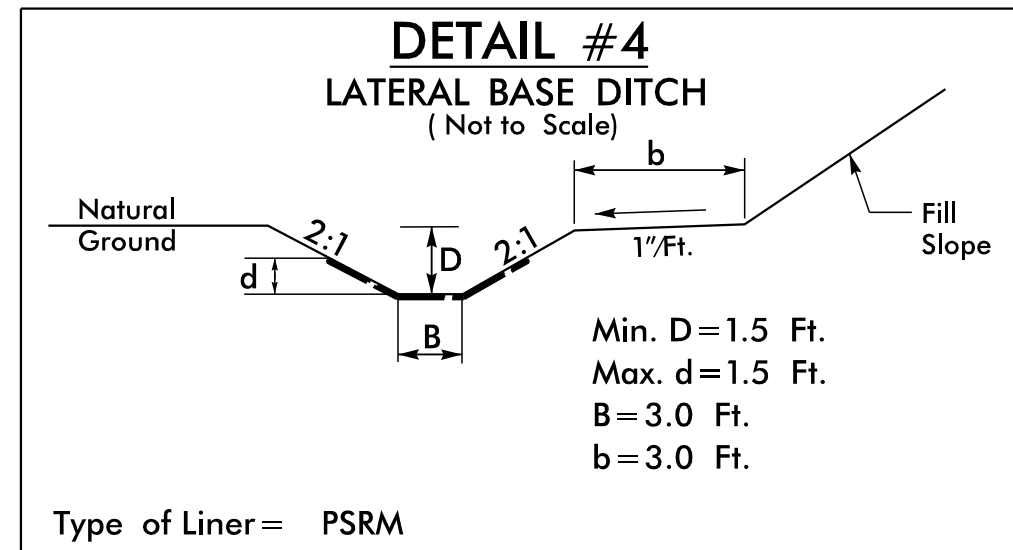
FROM STA. 191+40 TO STA. 192+50 -L- RT  
 FROM STA. 10+50 TO STA. 11+00 -Y8- LT



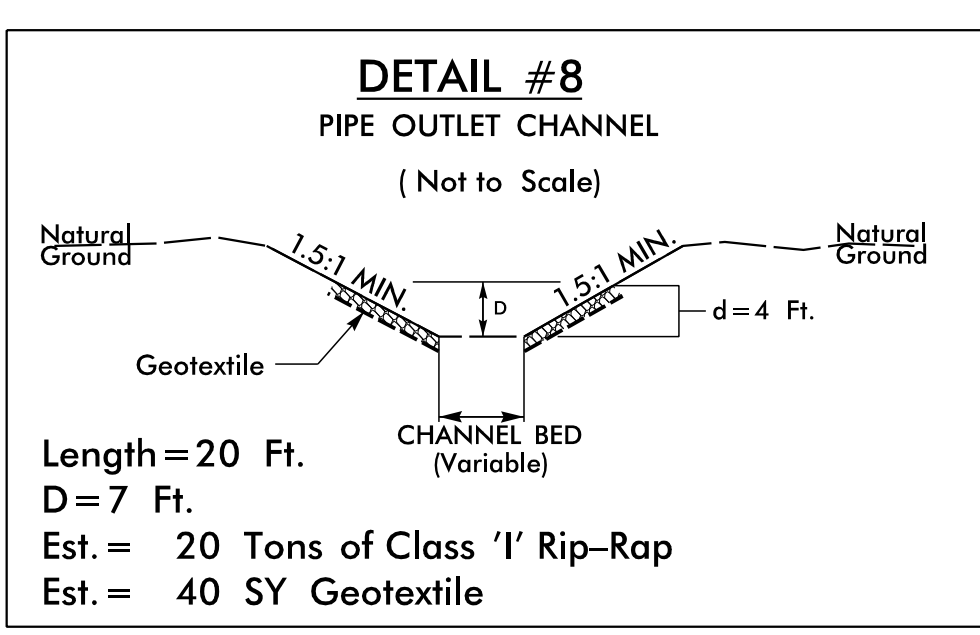
FROM STA. 9+60 TO STA. 10+50 -Y8- LT



FROM STA. 172+15 TO STA. 179+60 -L- RT



FROM STA. 187+26 TO STA. 190+10 -L- RT



FROM STA. 186+70 TO STA. 186+90 -L- LT

REVISIONS

Revisions:

Dwg: R:\Roadway\Proj\4910B\RD\detail\012D.dwg  
 USER: scheid  
 DATE: 1/12/2017  
 TIME: 10:50:46 AM





STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
**SUMMARY OF EARTHWORK**  
IN CUBIC YARDS

PROJECT REFERENCE NO. <i>U-4910B</i>	SHEET NO. <i>3B-2</i>
RW SHEET NO.	
Prepared in the Office of: <b>AECOM</b>	
NC FIRM LICENSE No: F-0342 701 Corporate Center Drive, Suite 4175 Raleigh, NC 27617 (919) 854-6200 • (919) 854-6259(FAX)	
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STATION TO STATION	SIDE	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT + %	BORROW	WASTE
-L- 157+00 TO 187+00	LT	1,905	700	13,594	11,689	700
-DET2- 176+50 TO 184+50		894		526		368
-Y5A- 11+00 TO 12+00		35		42	7	
<b>SUBTOTAL</b>		<b>2,834</b>	<b>700</b>	<b>14,161</b>	<b>11,695</b>	<b>1,068</b>
-L- 187+00 TO 217+00	LT	13,962		21,965	8,553	550
-L- 217+00 TO 239+50	LT	2,429		2,384		45
-L- 157+00 TO 187+00	RT	9,436		9,389		47
-Y5- 11+00 TO 14+50		297		24		273
-DR2- 10+00 TO 11+00		261				261
-Y6- 11+00 TO 12+00		30				30
<b>SUBTOTAL</b>		<b>10,024</b>		<b>9,412</b>		<b>611</b>
-L- 187+00 TO 217+00	RT	10,518		7,849		2,669
-Y7- 11+00 TO 11+50		33		104	71	
-Y8- 8+00 TO 11+50		307		1,577	1,270	
<b>SUBTOTAL</b>		<b>10,858</b>		<b>9,530</b>	<b>1,341</b>	<b>2,669</b>
-L- 217+00 TO 239+00	RT	380		2,657	2,277	
-Y9- 11+00 TO 12+00		42		313	271	
-Y10- 11+50 TO 12+00		6		25	19	
<b>SUBTOTAL</b>		<b>428</b>		<b>2,995</b>	<b>2,567</b>	
<b>SUMMARY TOTALS</b>		<b>40,535</b>	<b>700</b>	<b>60,446</b>	<b>24,155</b>	<b>4,941</b>
MATERIAL FOR SHOULDER CONSTRUCTION				312	312	
ADDITIONAL UNDERCUT			650	780	780	650
UNSUITABLE UNCLASS. EXCAV. (CONTINGENCY)					1,135	1,135
WASTE IN LIEU OF BORROW					-3,691	-3,691
<b>PROJECT TOTALS</b>		<b>40,535</b>	<b>1,350</b>	<b>61,538</b>	<b>23,826</b>	<b>3,035</b>
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT					1,135	
<b>GRAND TOTALS</b>		<b>40,535</b>	<b>1,350</b>	<b>61,538</b>	<b>23,826</b>	<b>3,035</b>
<b>SAY</b>		<b>40,600</b>	<b>1,400</b>		<b>23,900</b>	

ESTIMATED DDE = 330 CY  
 ESTIMATED SHALLOW UNDERCUT BY STATIONS = 2,250 CY  
 ESTIMATED SHALLOW UNDERCUT CONTINGENCY = 325 CY  
 TOTAL SHALLOW UNDERCUT = 2,720 CY  
 PAVEMENT STRUCTURE VOLUME = 11,152 CY

Earthwork quantities are calculated by the Roadway Design Unit. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

REVISIONS

Revisions:

DOH: R:\Roadway\Pro\4910\rdy\dwg\3b-2.dgn  
 USER: scheid  
 DATE: 1/23/2017  
 TIME: 10:43:38 AM











8/17/99

# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. <i>U-4910B</i>	SHEET NO. <i>3P-1</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
Prepared in the Office of: <b>AECOM</b> NC FIRM LICENSE No: F-0342 701 Corporate Center Drive, Suite 475 19060P, NC 27607 (919) 854-6200 • (919) 854-6259(FAX)	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

## PARCEL INDEX

PARCEL NO.	PROPERTY OWNERS NAME	SHEET NO.
19	JEFFERY C RILEY DB 9319 PG 200	4
21	JRNC INVESTMENTS LLC DB 8456 PG 142	4
22	ROUSH FENWAY RACING, LLC DB 07945 PG 0082	4
23	DELAWARE GENERAL CORPORATION DB 3811 PG 225	4, 5
24	SL AVIATION BLVD., LLC DB 11092 PG 0286	4, 5
25	S & J VENTURES LLC DB 8872 PG 179	5
26	Z & T REAL ESTATE LLC DB 10141 PG 0127	5
27	MOTLEY-DERITA PROPERTIES LLC DB 8881 PG 271	5, 6
28	NOT USED	
29	SL CONCORD AIRPORT BUSINESS PARK LLC DB 10732 PG 0248	5, 6
29A	SL CONCORD AIRPORT BUSINESS PARK LLC DB 11178 PG 69	6
30	JENNIFER RENE MOTLEY DB 8713 PG 231	6
31	JENNIFER RENE MOTLEY DB 1429 PG 180	6
32	WAYNE A & BARBARA MOTLEY DB 9335 PG 120	6
33	WAYNE A & BARBARA MOTLEY DB 2887 PG 178	6
34	JAMES A & NICOLE P MOTLEY DB 9070 PG 140	6
35	ROBERT M & CHARLENE S MOTLEY DB 2157 PG 320	6, 7
36	2 ONE 2 OF CONCORD LLC, A NORTH CAROLINA LIMITED LIABILITY COMPANY DB 11572 PG 240	6, 7
37	FIRST UNION NATNL BNK TRUSTEES DB 1114 PG 207	7, 8, 9
38	KIMBERLY A. SEAMANS & SCOTT A. SEAMANS DB 09831 PG 0132	7
39	ALTA II NO DEED REFERENCE	7
40	NOT USED	
41	NOT USED	
42	JOHN C & DANA R MCNEILL DB 1091 PG 191	7, 8
43	ALTA II NO DEED REFERENCE	8
44	THE FRED AND HELEN BLACKWELDER REVOCABLE TRUST DB 3568 PG 90	8
45	GLENN R & LINDA GRINDSTAFF NO DEED REFERENCE	8
46	GLENN R GRINDSTAFF JR DB 4224 PG 186	8
47	VAN R & MAE N GILLELAND DB 529 PG 629	8
48	WAYNE A & RENEE L MOTLEY DB 4061 PG 318	8, 9
49	WAYNE A & BARBARA W MOTLEY NO DEED REFERENCE	8, 9
50	NOT USED	
51	KEYSTONE PROPS & DEVELOPMT LLC DB 8560 PG 103	9
51A	2 PAWTNERS, LLC DB 10704 PG 233	9
52	NOT USED	
53	U SHWE & CHRISTINE MYINT DB 664 PG 149	9
54	BRUCE A SILVER DB 6203 PG 95	9
55	BRUCE A. SILVER DB 11300, PG 0006	9
56	RIVEROAKS LAND, LLC DB 10038 PG 0326	9, 10
57	NOT USED	
58	FJC REAL PROPERTY LLC A NC LLC DB 4959 PG 41	9, 10
59	EARL E SR & EDNA STARNES DB 820 PG 399	9, 10
60	CAROLINA TRACTOR & EQUIPMNT CO DB 7433 PG 184	9, 10, 11
61	NEW BREMEN INVESTMENTS LLC DB 8112 PG 219	10
62	A R L FAMILY LTD PARTNERSHIP DB 2792 PG 62	10, 11
63	VIRPUR JALARAM LLC DB 6327 PG 25	10, 11

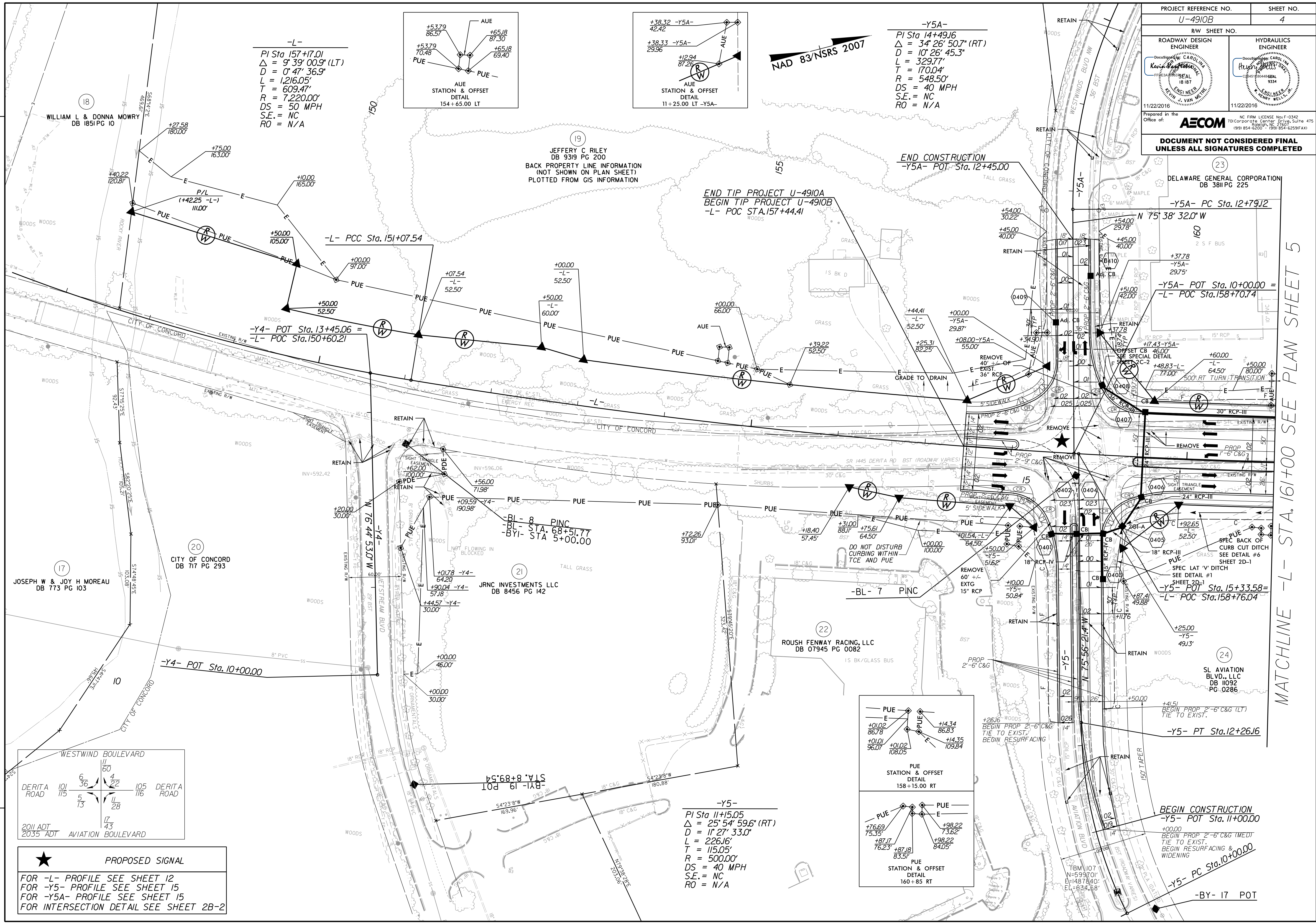
REVISIONS

Revisions:

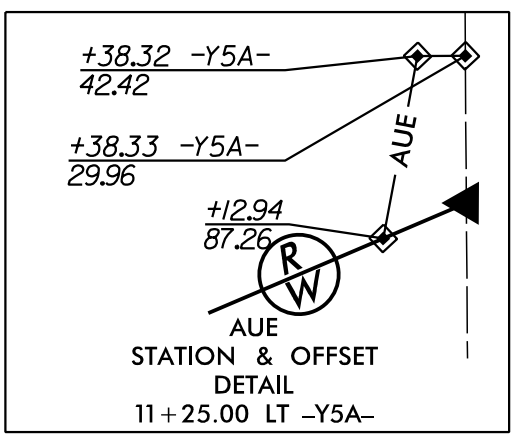
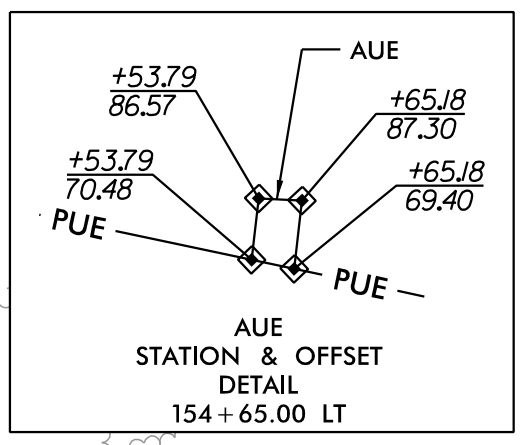
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 TIME: 4:43:38 PM



PROJECT REFERENCE NO. <b>U-4910B</b>	SHEET NO. <b>4</b>
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	SEAL
11/22/2016	11/22/2016
<p><b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b></p>	
<p>DELAWARE GENERAL CORPORATION DB 381PG 225</p>	



**-L-**  
 PI Sta 157+17.01  
 $\Delta = 9' 39'' 00.9''$  (LT)  
 $D = 0' 47'' 36.9''$   
 $L = 1216.05'$   
 $T = 609.47'$   
 $R = 7,220.00'$   
 $DS = 50$  MPH  
 $S.E. = NC$   
 $RO = N/A$



**NAD 83/NSRS 2007**

**-Y5A-**  
 PI Sta 14+49.16  
 $\Delta = 34' 26'' 50.7''$  (RT)  
 $D = 10' 26'' 45.3''$   
 $L = 329.77'$   
 $T = 170.04'$   
 $R = 548.50'$   
 $DS = 40$  MPH  
 $S.E. = NC$   
 $RO = N/A$

**END CONSTRUCTION**  
 -Y5A- POT Sta. 12+45.00

**END TIP PROJECT U-4910A**  
**BEGIN TIP PROJECT U-4910B**  
 -L- POC STA. 157+44.41

**-Y5A- PC Sta. 12+79.12**

**-Y5A- POT Sta. 10+00.00 =**  
**-L- POC Sta. 158+70.74**

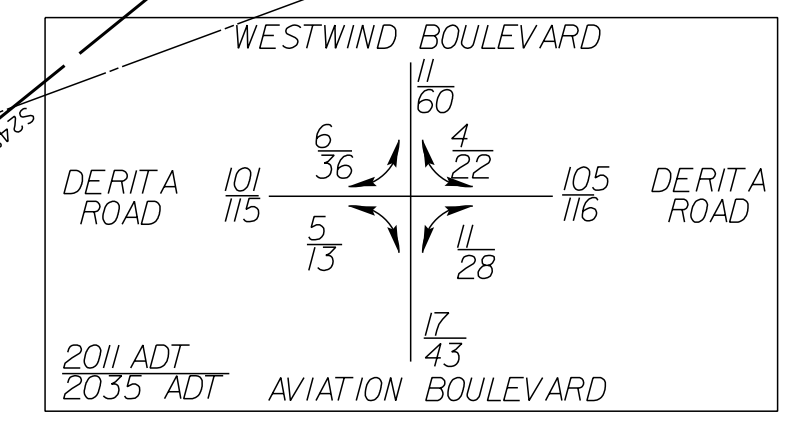
**-Y5- POT Sta. 15+33.58 =**  
**-L- POC Sta. 158+76.04**

**-Y5- PT Sta. 12+26.16**

**BEGIN CONSTRUCTION**  
 -Y5- POT Sta. 11+00.00

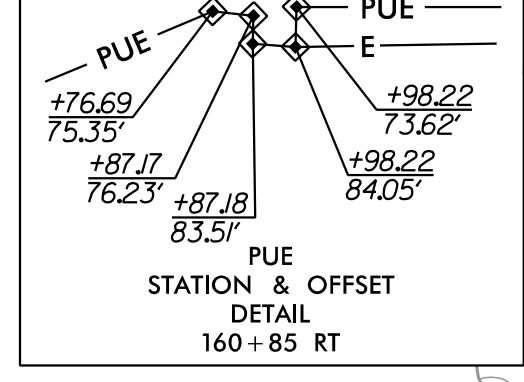
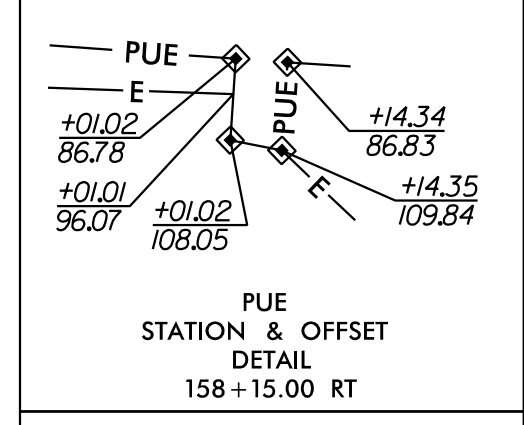
**+00.00**  
 BEGIN PROP 2'-6" C&G (MED)  
 TIE TO EXIST.  
 BEGIN RESURFACING &  
 WIDENING

**-Y5- PC Sta. 10+00.00**



**★ PROPOSED SIGNAL**

FOR -L- PROFILE SEE SHEET 12  
 FOR -Y5- PROFILE SEE SHEET 15  
 FOR -Y5A- PROFILE SEE SHEET 15  
 FOR INTERSECTION DETAIL SEE SHEET 2B-2



**-Y5-**  
 PI Sta 11+15.05  
 $\Delta = 25' 54'' 59.6''$  (RT)  
 $D = 11' 27'' 33.0''$   
 $L = 226.16'$   
 $T = 115.05'$   
 $R = 500.00'$   
 $DS = 40$  MPH  
 $S.E. = NC$   
 $RO = N/A$

MATCHLINE -L- STA. 161+00 SEE PLAN SHEET 5

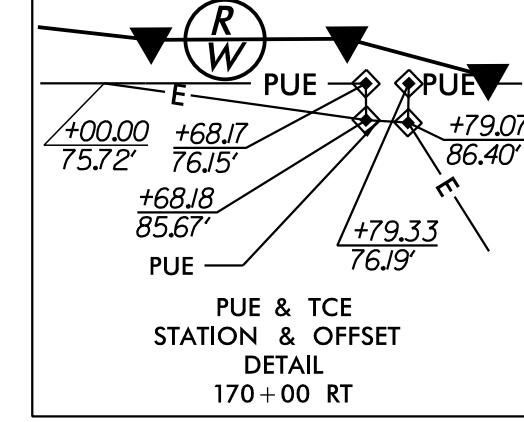
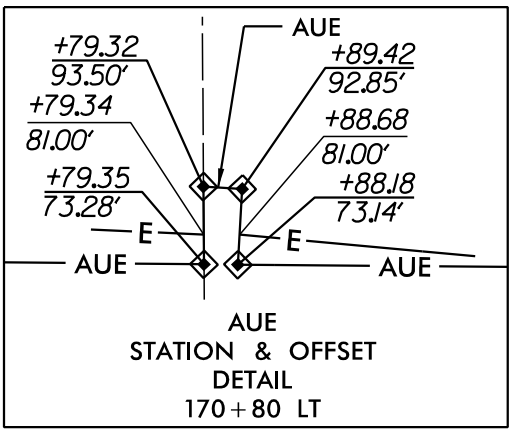
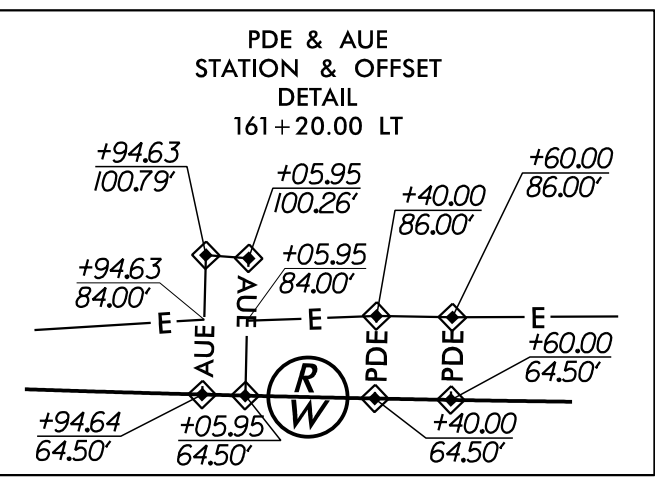
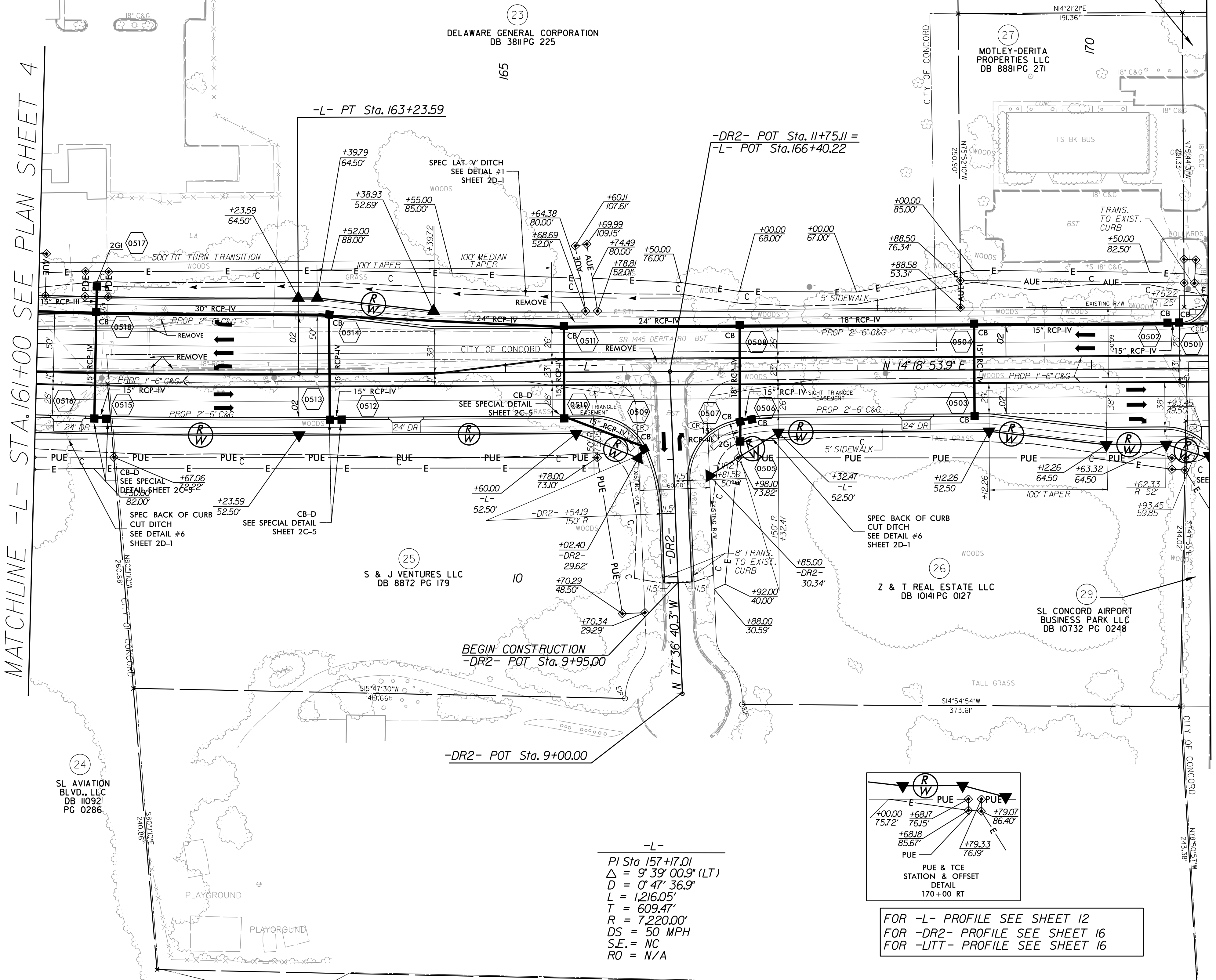
Revisions:  
 2011 ADT  
 2035 ADT  
 USER: scheid  
 DATE: 11/21/2016  
 TIME: 3:44:45 PM

PROJECT REFERENCE NO. <b>U-4910B</b>	SHEET NO. <b>5</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER <i>Kevin S. ...</i>	HYDRAULICS ENGINEER <i>...</i>
11/22/2016	11/22/2016
Prepared in the Office of: <b>AECOM</b>	
<small>NC FIRM LICENSE No. F-0342 701 Corporate Center Drive, Suite 475 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259(FAX)</small>	
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NAD 83/NSRS 2007

MATCHLINE -L- STA. 161+00 SEE PLAN SHEET 4

MATCHLINE -L- STA. 171+00 SEE PLAN SHEET 6



-L-  
 PI Sta 157+71.01  
 $\Delta = 9' 39'' 00.9''$  (LT)  
 $D = 0' 47'' 36.9''$   
 $L = 1,216.05'$   
 $T = 609.47'$   
 $R = 7,220.00'$   
 $DS = 50$  MPH  
 S.E. = NC  
 RO = N/A

FOR -L- PROFILE SEE SHEET 12  
 FOR -DR2- PROFILE SEE SHEET 16  
 FOR -LITT- PROFILE SEE SHEET 16

REVISIONS

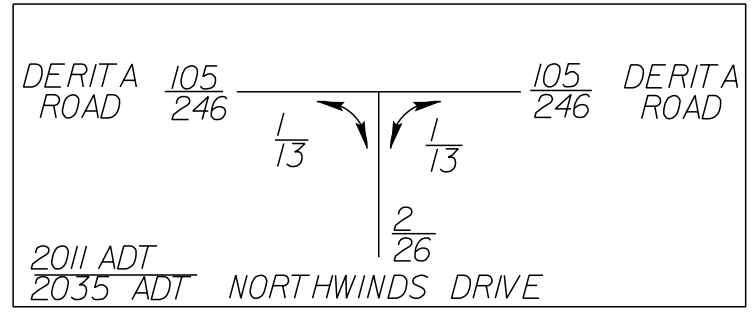
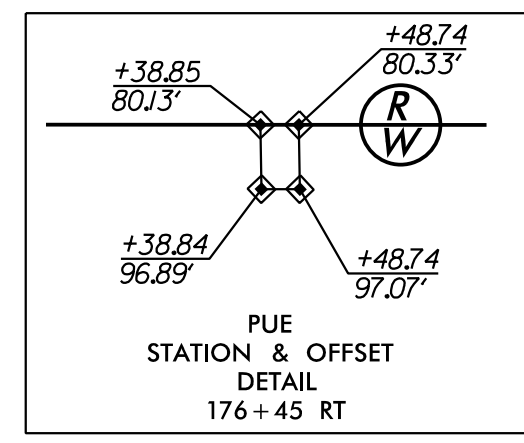
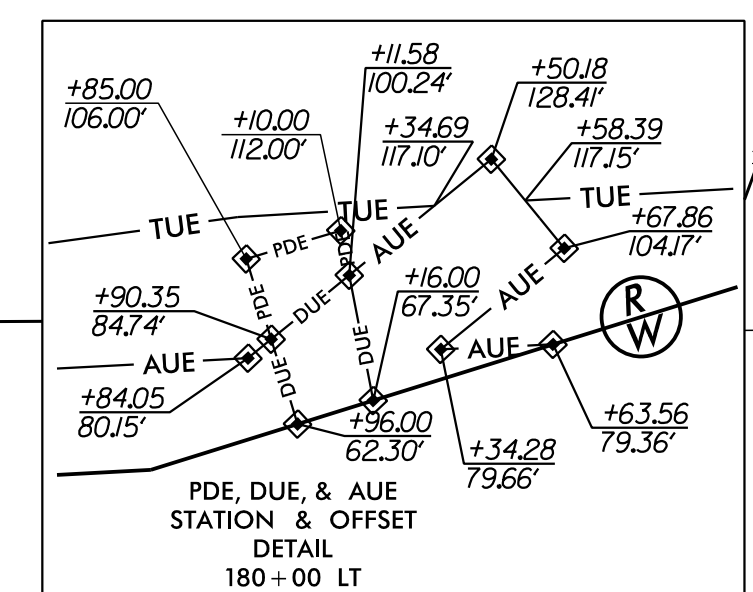
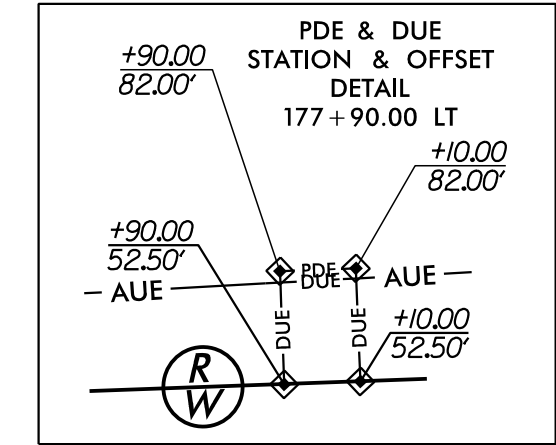
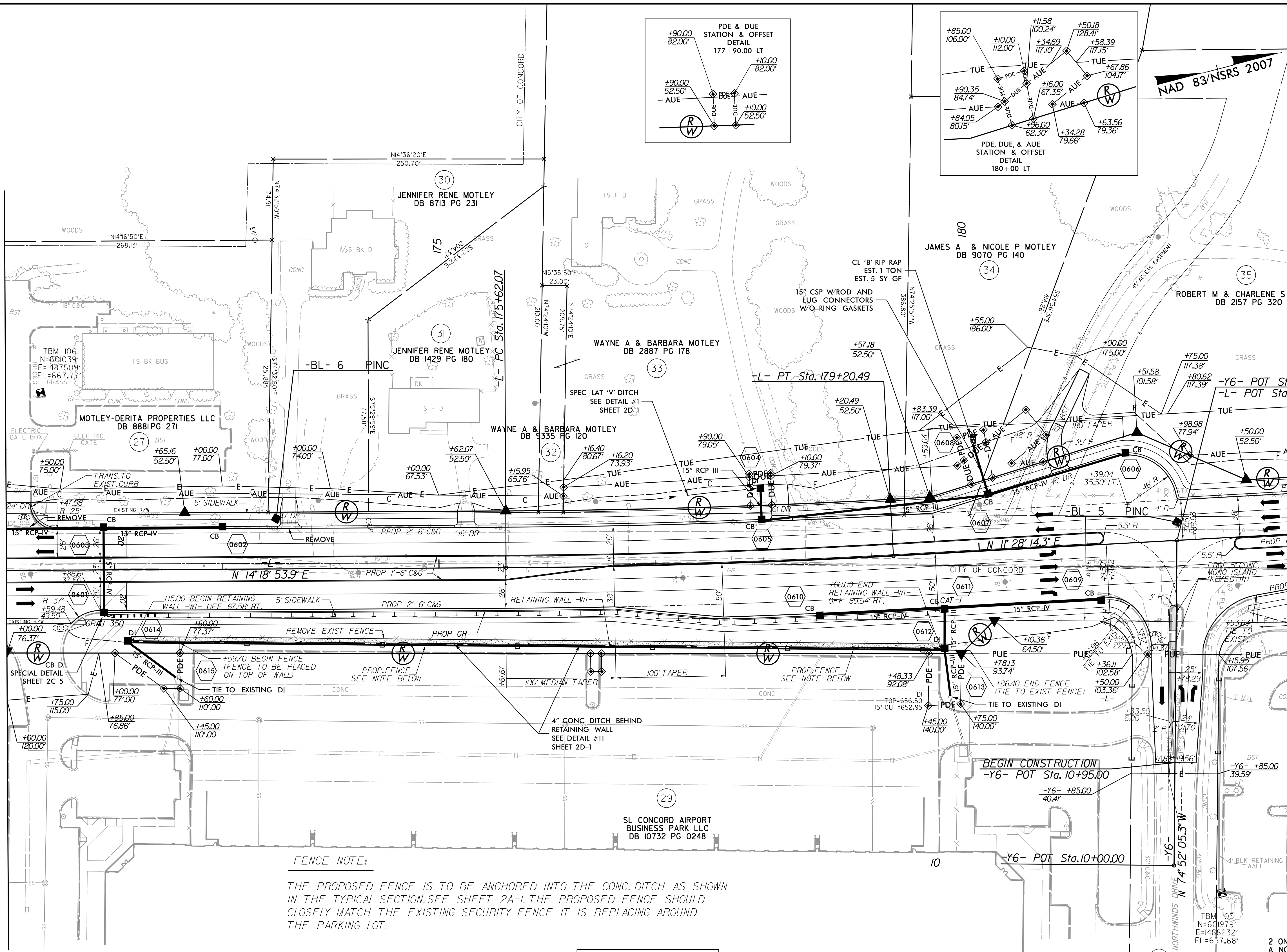
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 Time: 3:42:04 PM

PROJECT REFERENCE NO. <b>U-4910B</b>		SHEET NO. <b>6</b>	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		ENGINEER	
1/18/2017		1/18/2017	
Prepared in the Office of:		<b>AECOM</b> <small>NC FIRM LICENSE No. F-0342      701 Corporate Center Drive, Suite 475      Raleigh, NC 27607      (919) 854-6200 • (919) 854-6259(FAX)</small>	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>			

MATCHLINE -L- STA. 171+00 SEE PLAN SHEET 5

MATCHLINE -L- STA. 184+00 SEE PLAN SHEET 7



**FENCE NOTE:**  
 THE PROPOSED FENCE IS TO BE ANCHORED INTO THE CONC. DITCH AS SHOWN IN THE TYPICAL SECTION. SEE SHEET 2A-I. THE PROPOSED FENCE SHOULD CLOSELY MATCH THE EXISTING SECURITY FENCE IT IS REPLACING AROUND THE PARKING LOT.

**-L-**

PI Sta 177+41.32	PI Sta 186+18.82
$\Delta = 2' 50'' 39.6''$ (LT)	$\Delta = 4' 01'' 53.0''$ (RT)
$D = 0' 47'' 36.9''$	$D = 0' 47'' 36.9''$
$L = 358.42'$	$L = 508.01'$
$T = 179.25'$	$T = 254.11'$
$R = 7,220.00'$	$R = 7,220.00'$
$DS = 50$ MPH	$DS = 50$ MPH
S.E. = NC	S.E. = NC
RO = N/A	RO = N/A

SEE W SERIES SHEETS FOR RETAINING WALL DETAILS  
 FOR -L- PROFILE SEE SHEET 12  
 FOR -Y6- PROFILE SEE SHEET 15

REVISIONS

Revisions:

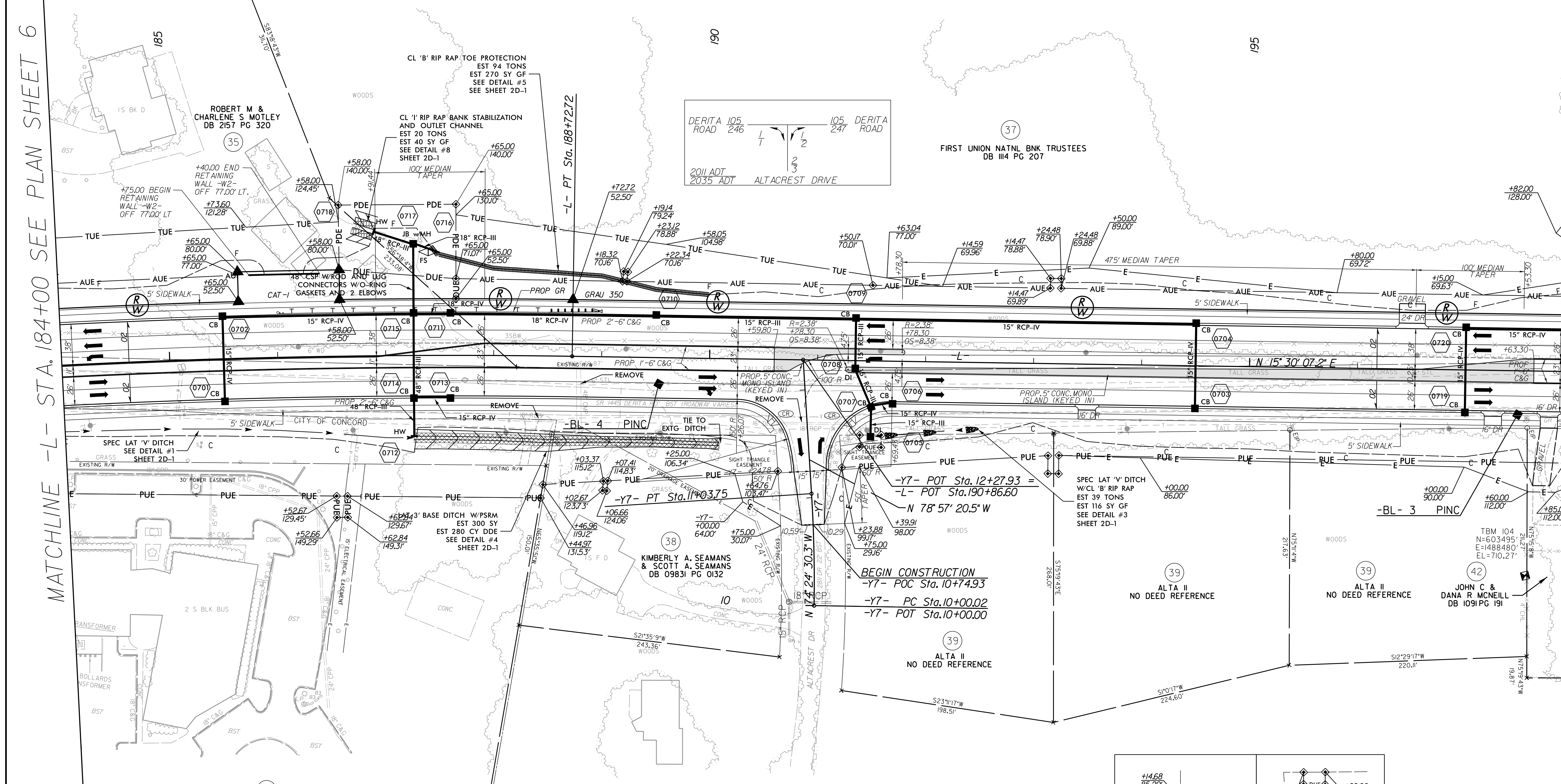
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PROJECT REFERENCE NO. <b>U-4910B</b>	SHEET NO. <b>7</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER 
11/22/2016	11/22/2016
Prepared in the Office of: <b>AECOM</b>	NC FIRM LICENSE No. F-0342 701 Corporate Center Drive, Suite 475 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259(FAX)
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

NAD 83/NSRS 2007

MATCHLINE -L- STA. 184+00 SEE PLAN SHEET 6

MATCHLINE -L- STA. 198+00 SEE PLAN SHEET 8



REVISIONS

Revisions:

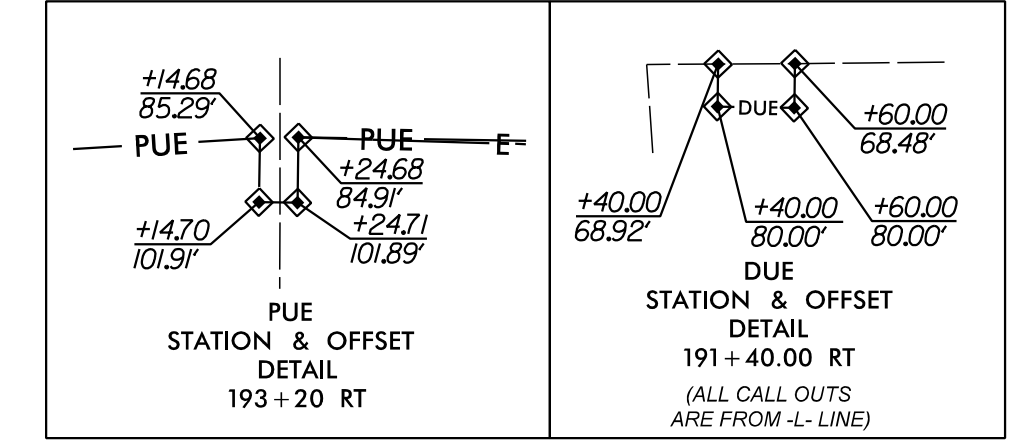
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 Date: 11/21/2016  
 Time: 3:42:59 PM

36  
 2 ONE 2 OF CONCORD LLC,  
 A NORTH CAROLINA LIMITED  
 LIABILITY COMPANY  
 DB 11572 PG 240

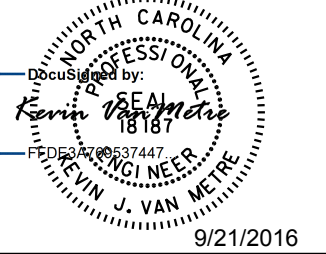

SEE W SERIES SHEETS FOR RETAINING WALL DETAILS

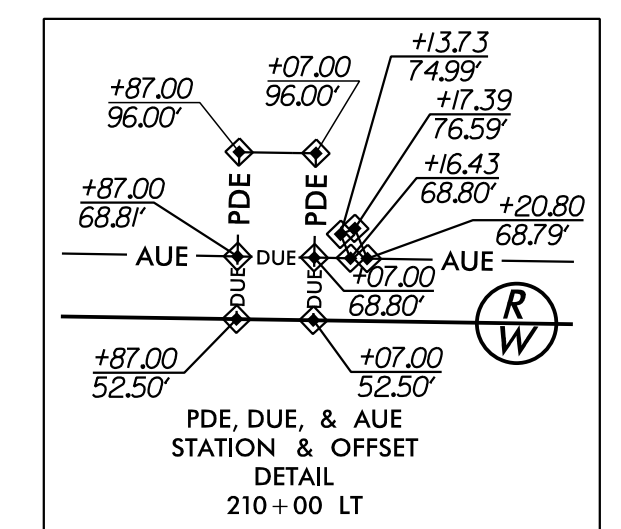
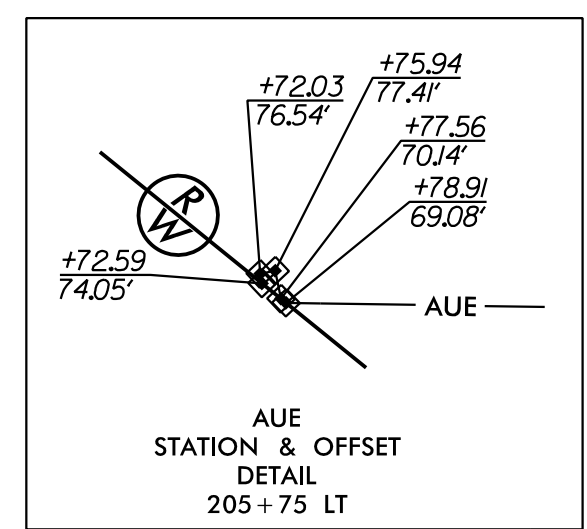
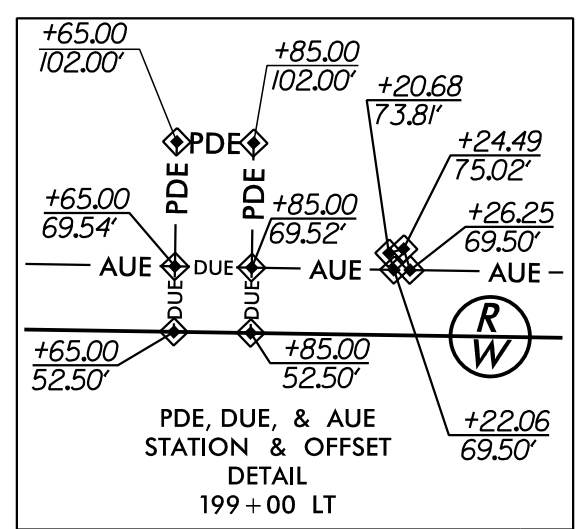
-L-  
 PI Sta 186+18.82  
 $\Delta = 4' 01'' 53.0''$  (RT)  
 $D = 0' 47'' 36.9''$   
 $L = 508.01'$   
 $T = 254.11'$   
 $R = 7,220.00'$   
 $DS = 50$  MPH  
 $S.E. = NC$   
 $RO = N/A$

-Y7-  
 PI Sta 10+51.91  
 $\Delta = 4' 32'' 50.2''$  (LT)  
 $D = 4' 23'' 01.5''$   
 $L = 103.73'$   
 $T = 51.89'$   
 $R = 1,307.00'$   
 $DS = 40$  MPH  
 $S.E. = NC$   
 $RO = N/A$



FOR -L- PROFILE SEE SHEET 13  
FOR -Y7- PROFILE SEE SHEET 15

PROJECT REFERENCE NO. <b>U-4910B</b>		SHEET NO. <b>8</b>	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
			
Prepared in the Office of:		NC FIRM LICENSE No. F-0342 701 Corporate Center Drive, Suite 415 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259(FAX)	
AECOM		AECOM	
<p><b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b></p>			

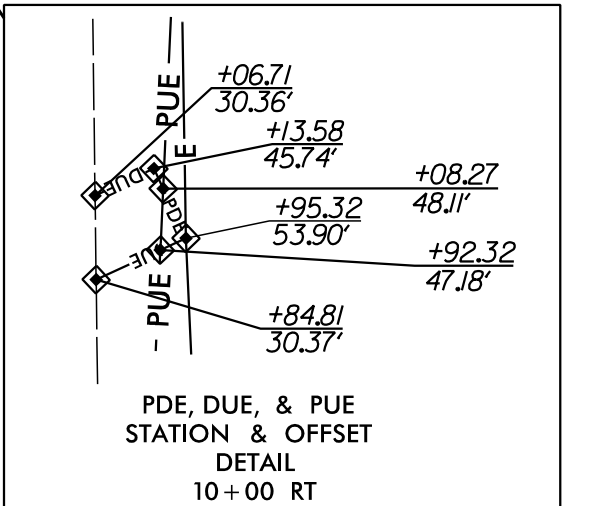
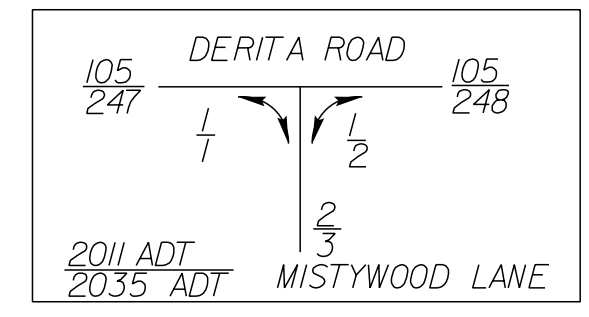
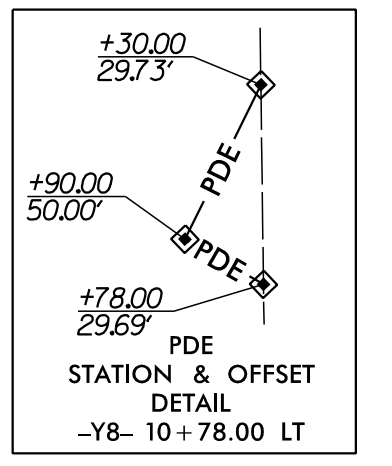
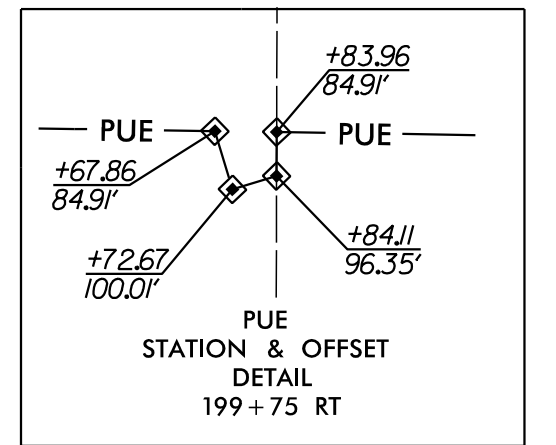
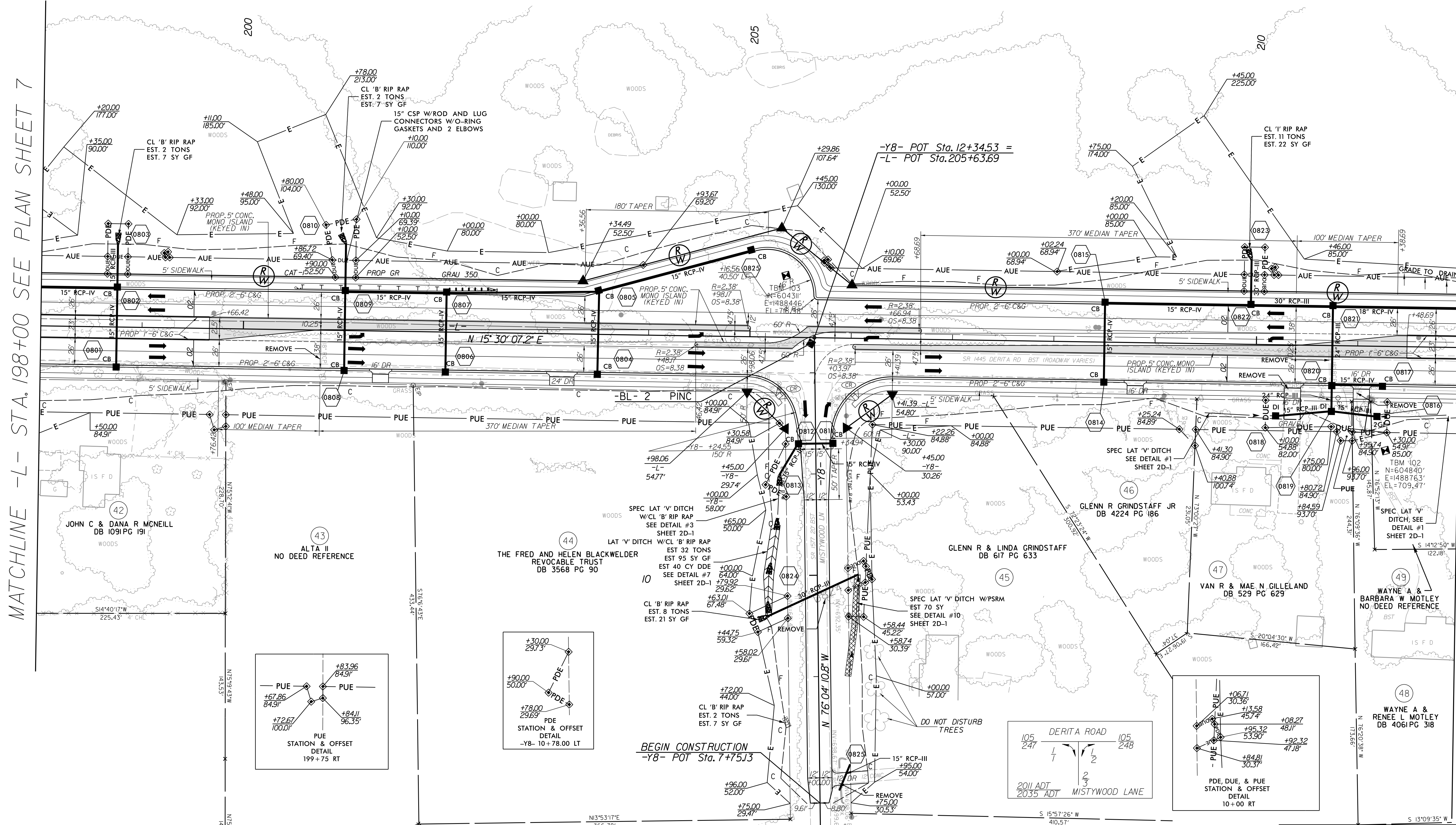


37  
FIRST UNION NATNL BNK TRUSTEES  
DB III4 PG 207

NAD 83/NSRS 2007

MATCHLINE -L- STA. 198+00 SEE PLAN SHEET 7

MATCHLINE STA. 212+00 SEE PLAN SHEET 9



FOR -L- PROFILE SEE SHEET 13  
FOR -Y8- PROFILE SEE SHEET 15

REVISIONS

Revisions:

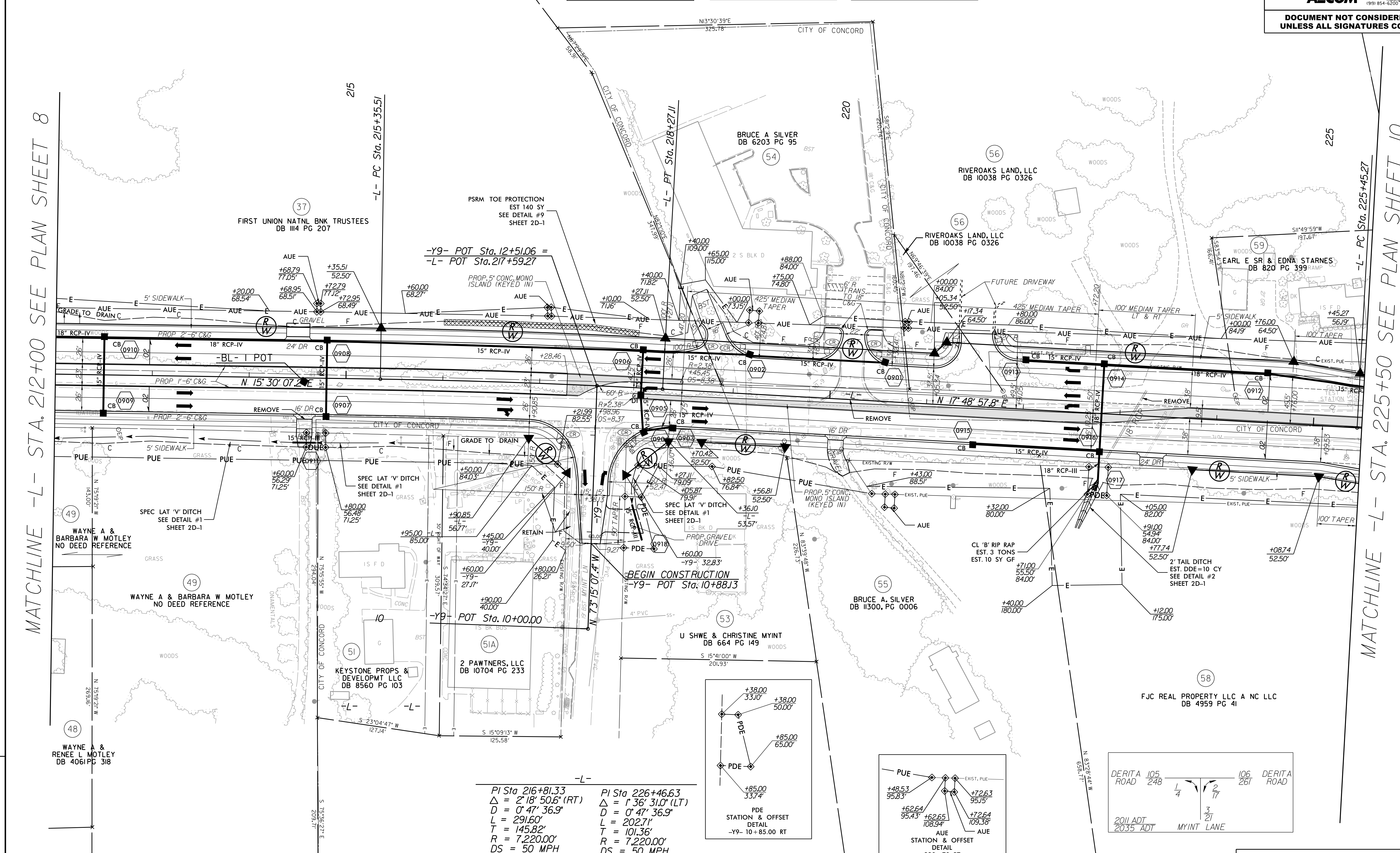
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PROJECT REFERENCE NO. <b>U-4910B</b>		SHEET NO. <b>9</b>	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
Prepared in the Office of:		NC FIRM LICENSE No. F-0342	
<b>AECOM</b>		701 Corporate Center Drive, Suite 415 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259(FAX)	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>			

NAD 83/NSRS 2007

MATCHLINE -L- STA. 212+00 SEE PLAN SHEET 8

MATCHLINE -L- STA. 225+50 SEE PLAN SHEET 10



REVISIONS

Revisions:

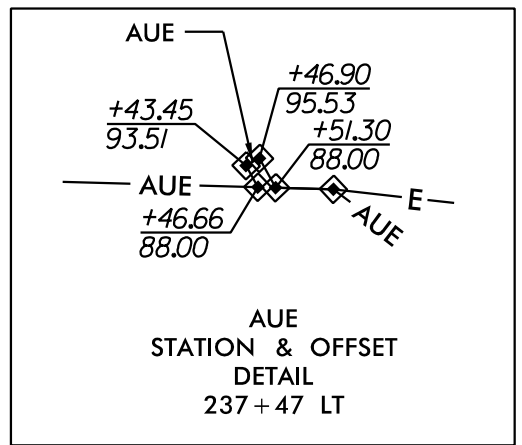
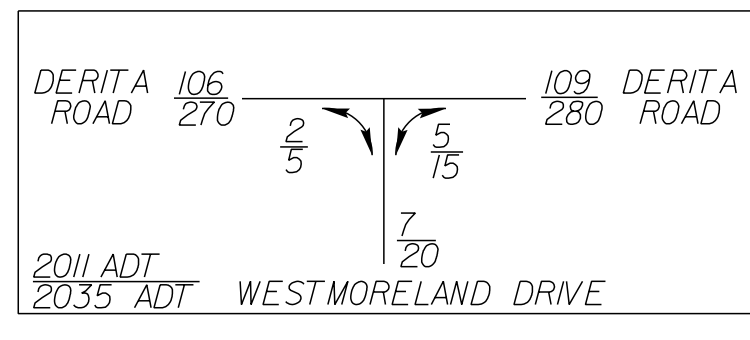
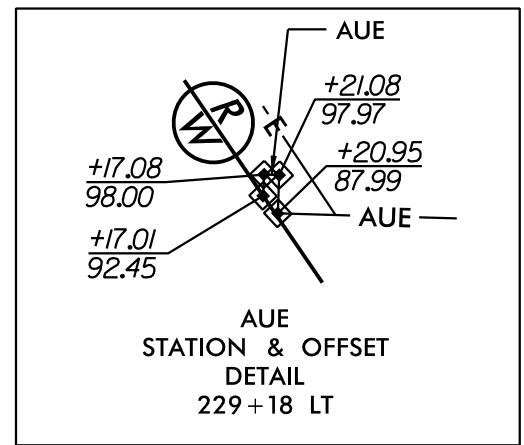
-L-

$PI\ Sta\ 216+81.33$ $\Delta = 2' 18" 50.6" (RT)$ $D = 0' 47" 36.9"$ $L = 291.60'$ $T = 145.82'$ $R = 7,220.00'$ $DS = 50\ MPH$ $S.E. = NC$ $RO = N/A$	$PI\ Sta\ 226+46.63$ $\Delta = 1' 36" 31.0" (LT)$ $D = 0' 47" 36.9"$ $L = 202.71'$ $T = 101.36'$ $R = 7,220.00'$ $DS = 50\ MPH$ $S.E. = NC$ $RO = N/A$
--	--

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FOR -L- PROFILE SEE SHEET 14  
 FOR -Y9- PROFILE SEE SHEET 16

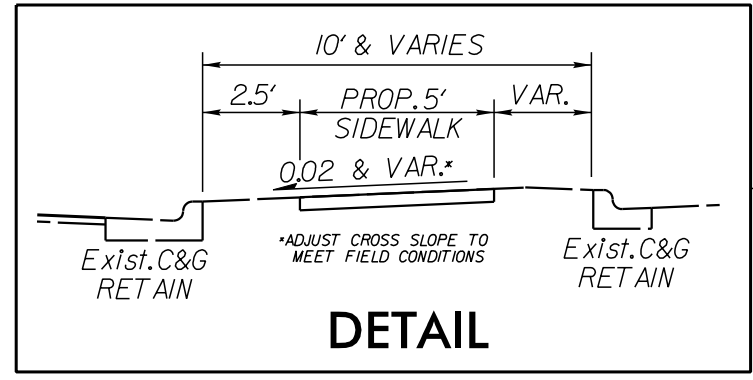
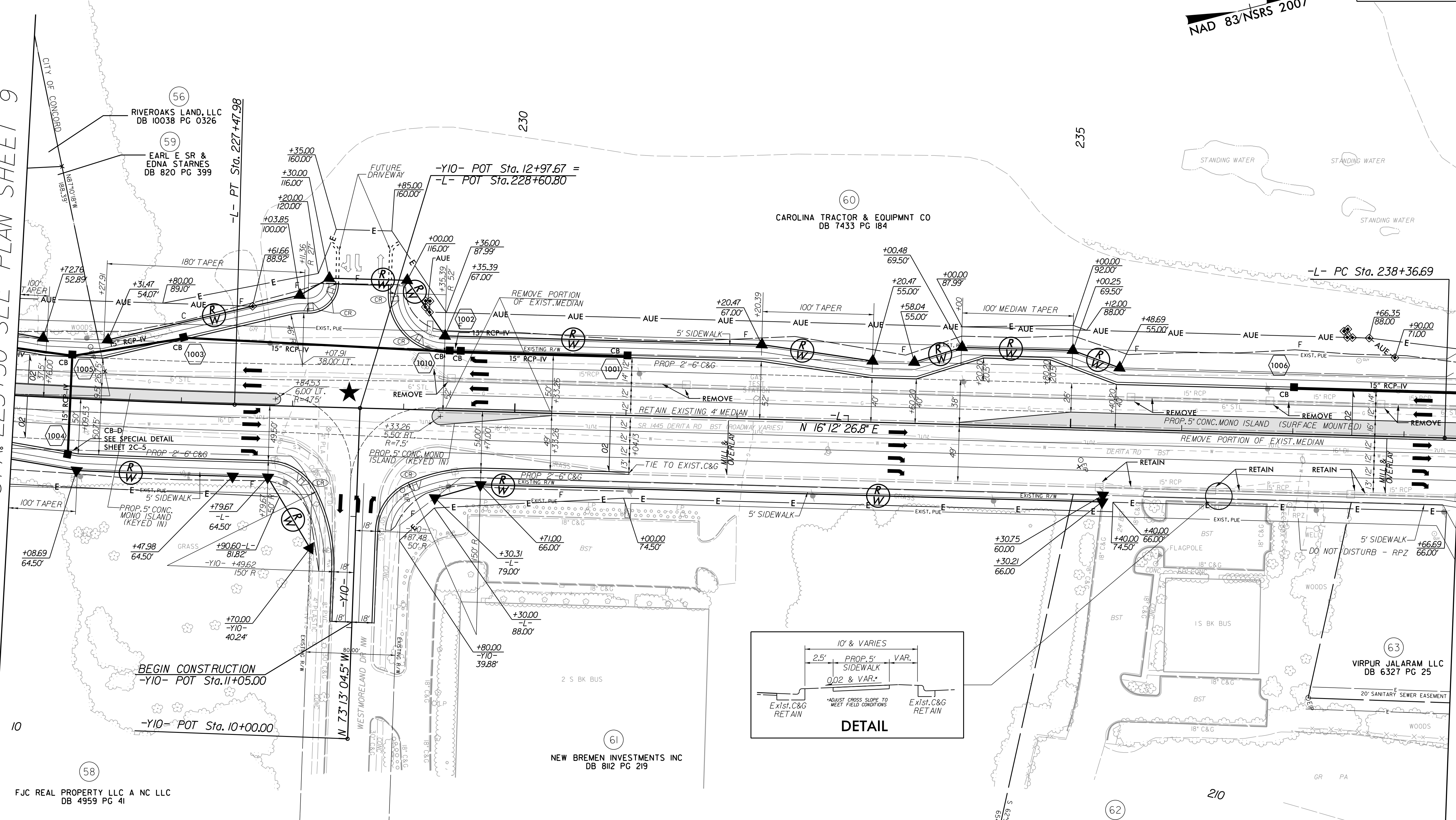
PROJECT REFERENCE NO. <b>U-4910B</b>	SHEET NO. <b>10</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER <i>[Signature]</i>	HYDRAULICS ENGINEER <i>[Signature]</i>
12/16/2016	12/16/2016
<p>Prepared in the Office of:</p> <p><b>AECOM</b></p> <p>NC FIRM LICENSE No. F-0342 701 Corporate Center Drive, Suite 475 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259(FAX)</p>	
<p><b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b></p>	



NAD 83/NSRS 2007

MATCHLINE -L- STA. 225+50 SEE PLAN SHEET 9

MATCHLINE -L- STA. 238+50 SEE PLAN SHEET 11



-L-	
PI Sta 226+46.63	PI Sta 239+91.37
$\Delta = 1' 36' 31.0''$ (LT)	$\Delta = 1' 46' 30.9''$ (RT)
$D = 0' 47' 36.9''$	$D = 3' 49' 11.0''$
$L = 202.71'$	$L = 308.28'$
$T = 101.36'$	$T = 154.68'$
$R = 7,220.00'$	$R = 1,500.00'$
$DS = 50$ MPH	$DS = 50$ MPH
S.E. = NC	S.E. = 04
RO = N/A	RO = 66'

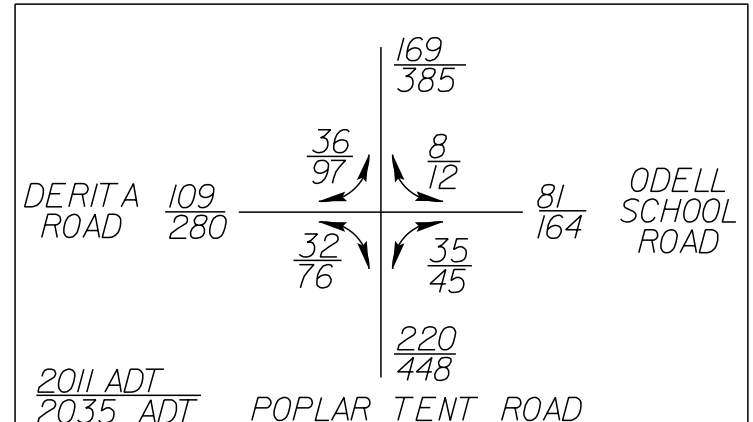
★ PROPOSED SIGNAL  
FOR -L- PROFILE SEE SHEET 14  
FOR -Y10- PROFILE SEE SHEET 16

REVISIONS

Revisions:

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User: schmid  
Date: 12/16/2016  
Time: 9:59:50 AM

PROJECT REFERENCE NO. <b>U-4910B</b>	SHEET NO. <b>11</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER 
Prepared in the Office of: <b>AECOM</b> NC FIRM LICENSE No. F-0342 701 Corporate Center Drive, Suite 475 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259(FAX)	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	



NAD 83/NSRS 2007

MATCHLINE -L- STA. 238+50 SEE PLAN SHEET 10

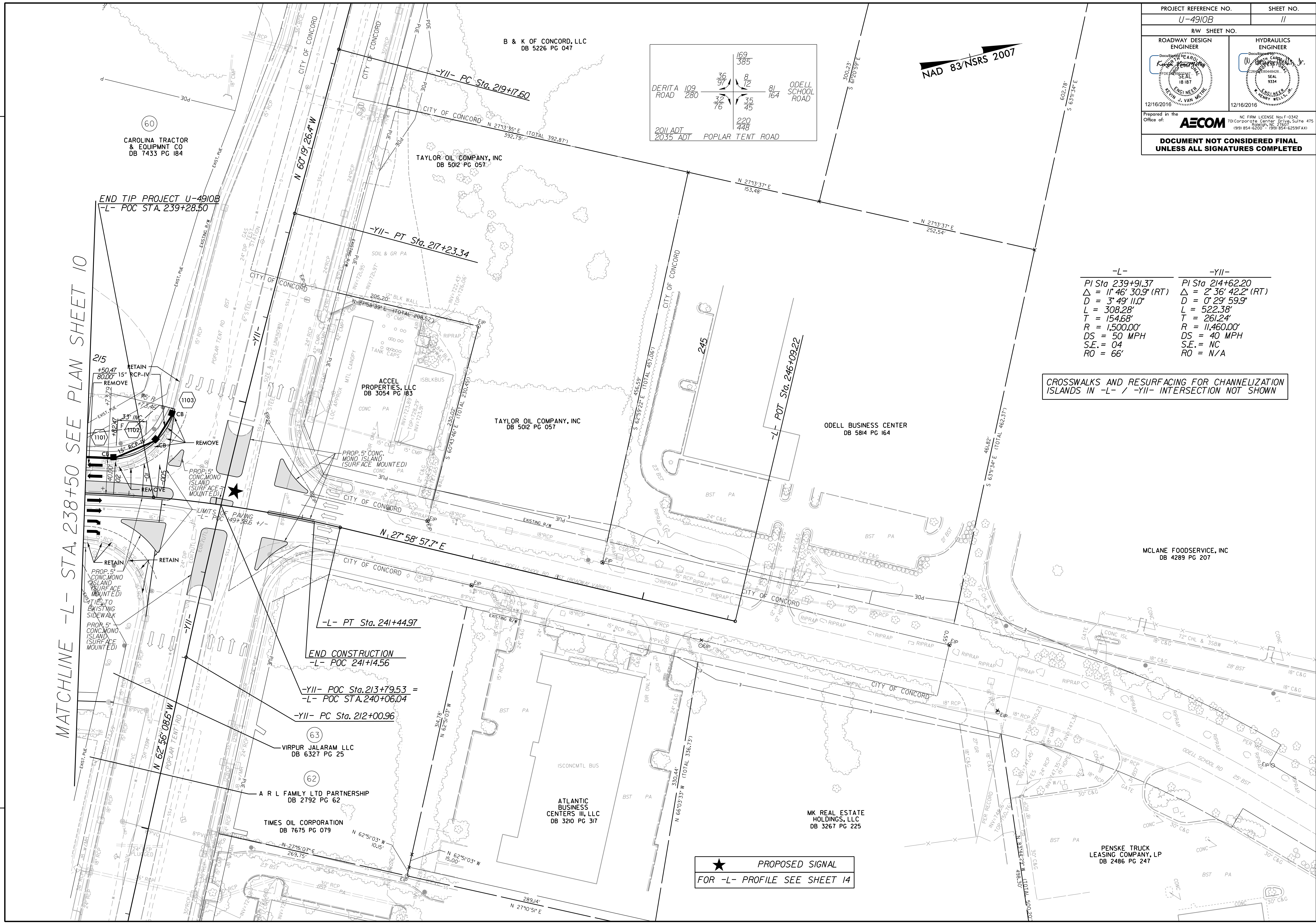
-L-	-YII-
PI Sta 239+91.37	PI Sta 214+62.20
$\Delta = 11' 46' 30.9''$ (RT)	$\Delta = 2' 36' 42.2''$ (RT)
D = 3' 49' 11.0"	D = 0' 29' 59.9"
L = 308.28'	L = 522.38'
T = 154.68'	T = 261.24'
R = 1,500.00'	R = 11,460.00'
DS = 50 MPH	DS = 40 MPH
S.E. = 04	S.E. = NC
RO = 66'	RO = N/A

CROSSWALKS AND RESURFACING FOR CHANNELIZATION ISLANDS IN -L- / -YII- INTERSECTION NOT SHOWN

REVISIONS

Revisions:

Drawn: R:\Roadway\Proj\U4910B\Drawn\Drawn.dwg  
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 Date: 12/15/2016  
 Time: 4:20:07 PM



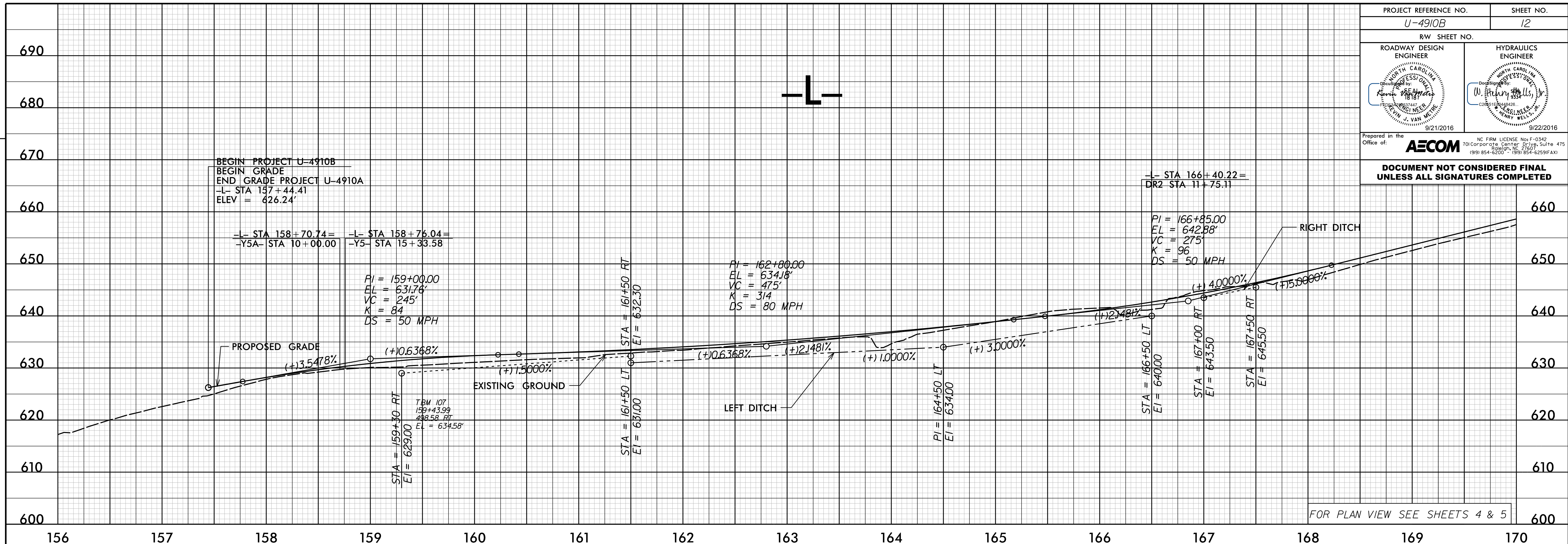
★ PROPOSED SIGNAL  
 FOR -L- PROFILE SEE SHEET 14



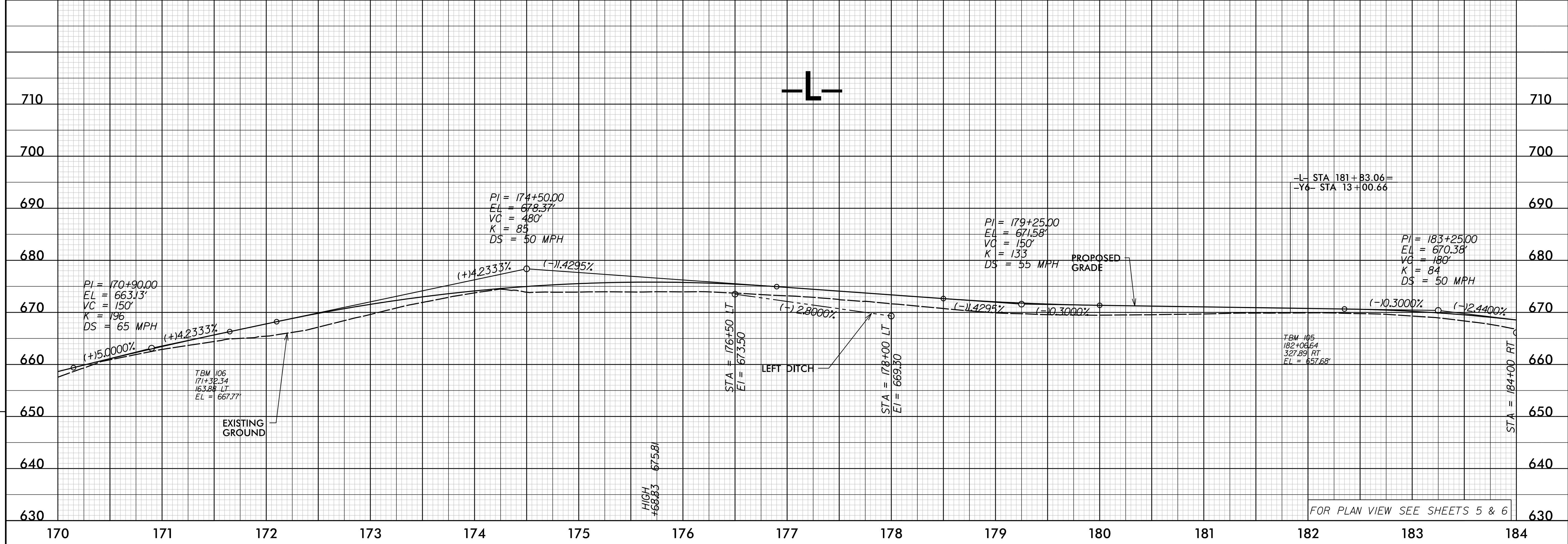
PROJECT REFERENCE NO. U-4910B	SHEET NO. 12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER <i>[Signature]</i>	HYDRAULICS ENGINEER <i>[Signature]</i>
9/21/2016	9/22/2016

Prepared in the Office of: **AECOM**  
 NC FIRM LICENSE No. F-0342  
 701 Corporate Center Drive, Suite 475  
 Raleigh, NC 27607  
 (919) 854-6200 • (919) 854-6259(FAX)

**DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED**



FOR PLAN VIEW SEE SHEETS 4 & 5



FOR PLAN VIEW SEE SHEETS 5 & 6

REVISIONS

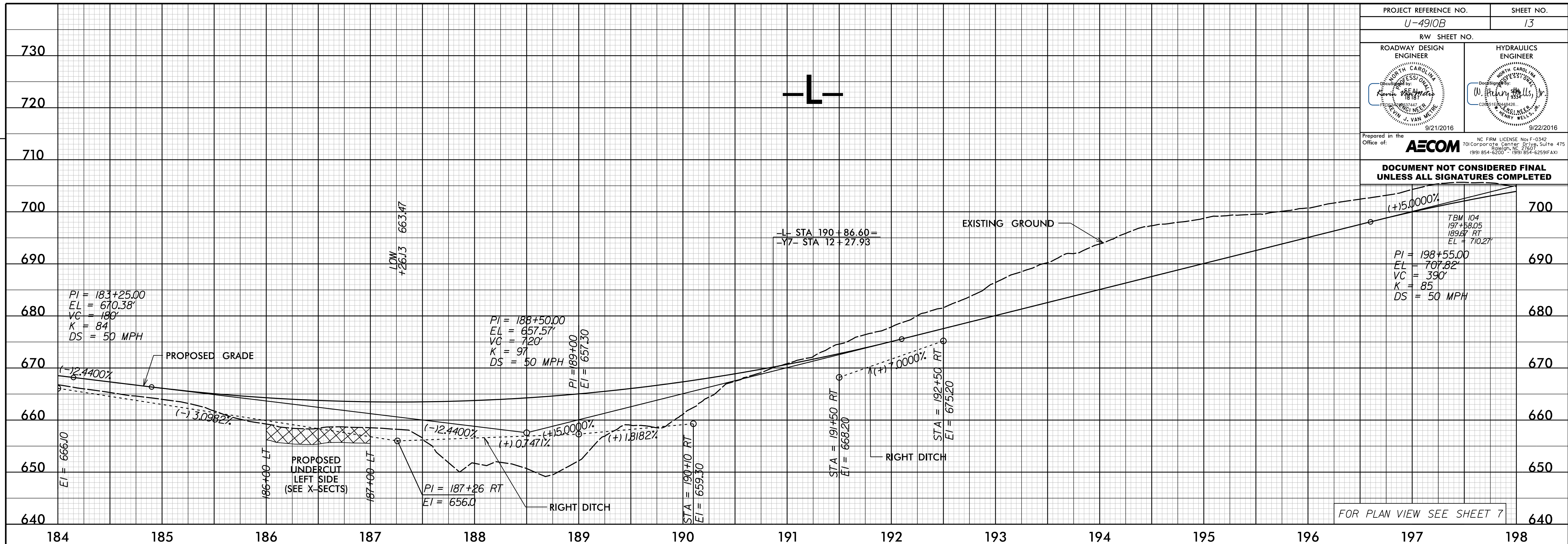
Revisions:

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 Time: 2:47:46 PM

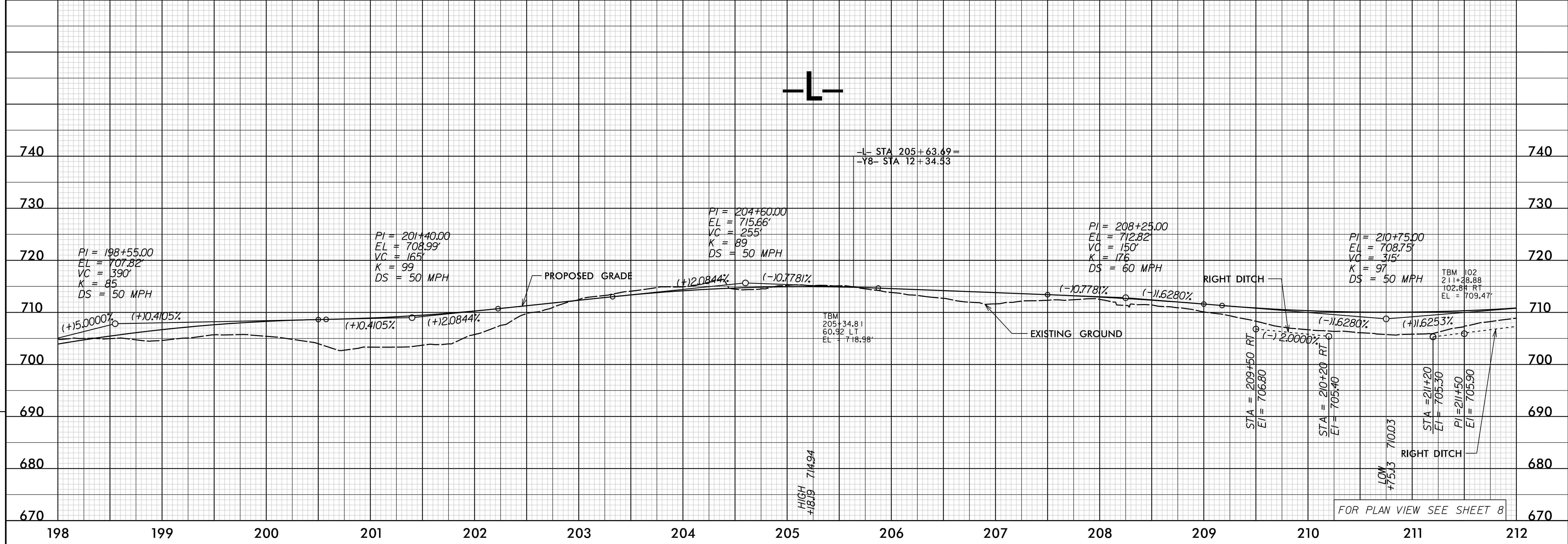
PROJECT REFERENCE NO. U-4910B	SHEET NO. 13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER <i>[Signature]</i>	HYDRAULICS ENGINEER <i>[Signature]</i>
9/21/2016	9/22/2016

Prepared in the Office of: **AECOM**  
 NC FIRM LICENSE No. F-0342  
 701 Corporate Center Drive, Suite 475  
 Raleigh, NC 27607  
 (919) 854-6200 • (919) 854-6259(FAX)

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FOR PLAN VIEW SEE SHEET 7



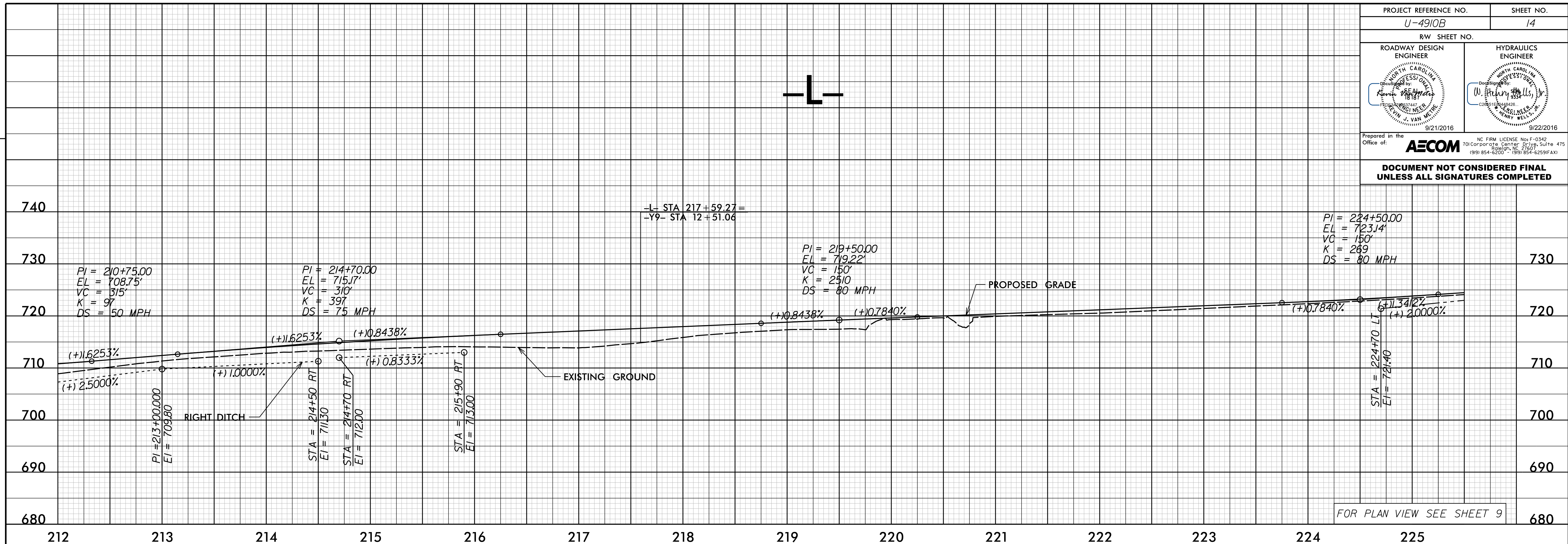
FOR PLAN VIEW SEE SHEET 8

REVISIONS

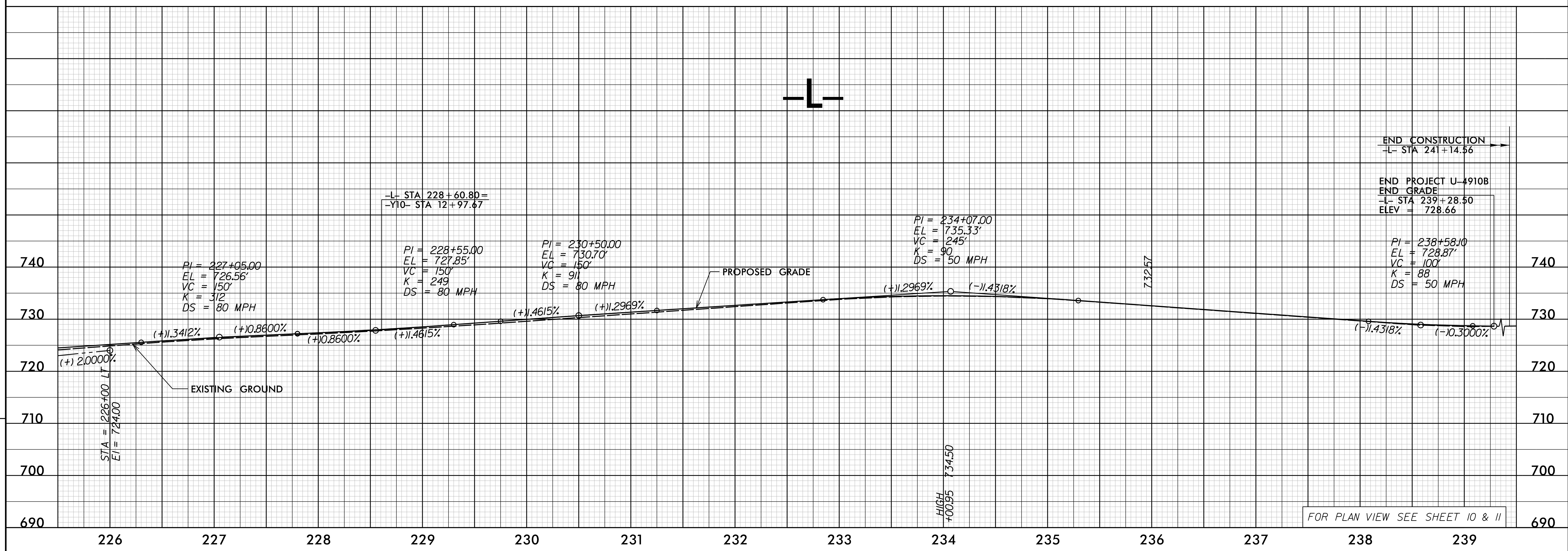
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 Time: 2:47:48 PM

PROJECT REFERENCE NO. U-4910B	SHEET NO. 14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
Prepared in the Office of: <b>AECOM</b>	
NC FIRM LICENSE No. F-0342 701 Corporate Center Drive, Suite 475 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259(FAX)	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	



FOR PLAN VIEW SEE SHEET 9



FOR PLAN VIEW SEE SHEET 10 & 11

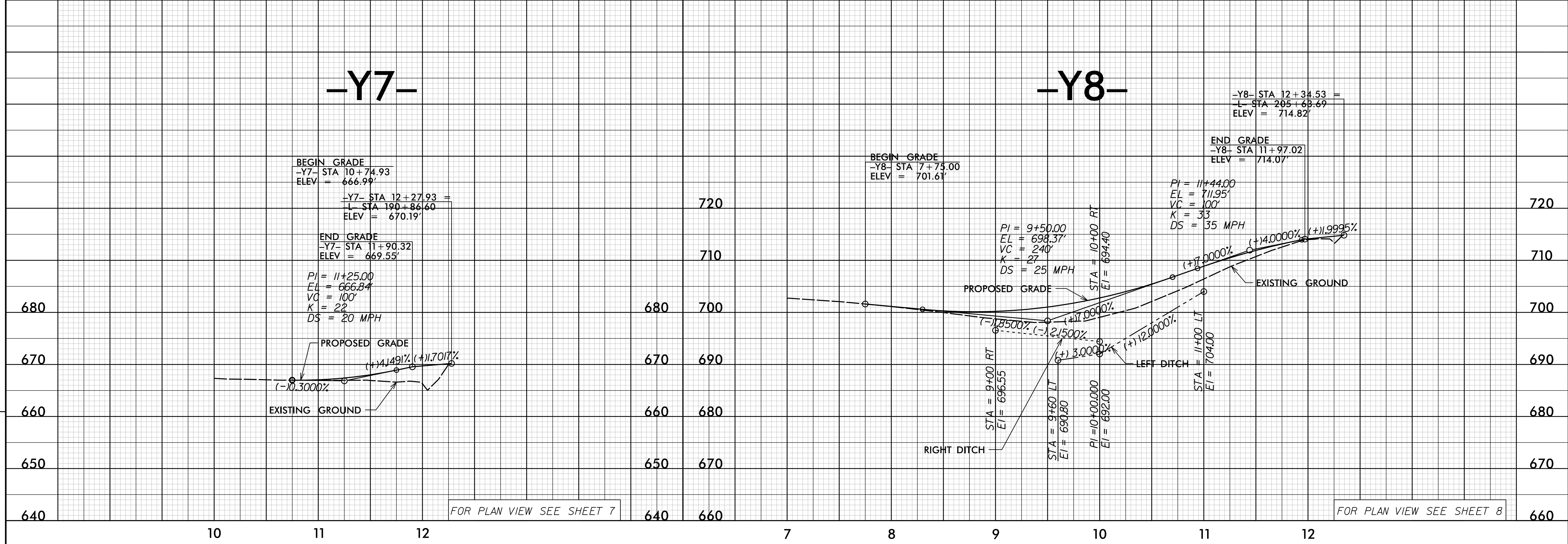
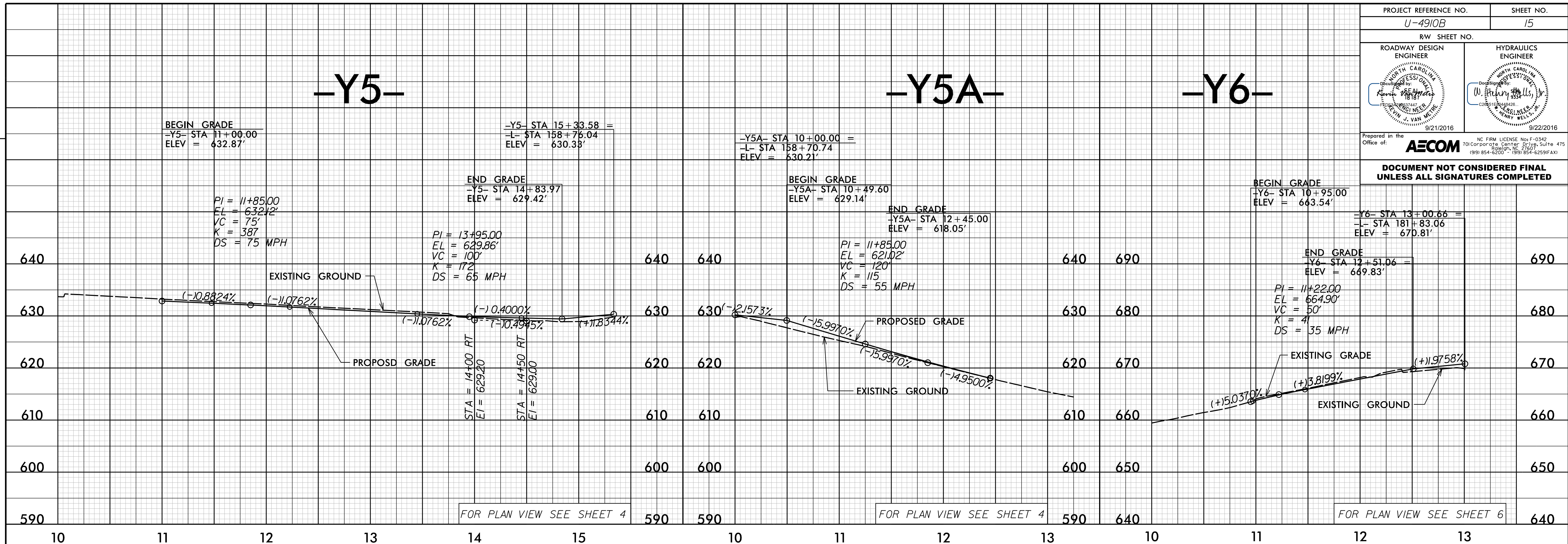
REVISIONS

Revisions:

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Date: 9/19/2016  
Time: 2:47:48 PM

PROJECT REFERENCE NO. U-4910B	SHEET NO. 15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
Prepared in the Office of:	NC FIRM LICENSE No. F-0342 701 Corporate Center Drive, Suite 415 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259(FAX)

9/21/2016 9/22/2016  
**DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED**



REVISIONS

Revisions:

Drawn: R:\Roadway\Proj\4910B\Drawings\1015.dwg  
 User: schmid  
 Date: 9/19/2016  
 Time: 2:47:48 PM

FOR PLAN VIEW SEE SHEET 4

FOR PLAN VIEW SEE SHEET 4

FOR PLAN VIEW SEE SHEET 6

FOR PLAN VIEW SEE SHEET 7

FOR PLAN VIEW SEE SHEET 8

PROJECT REFERENCE NO. <b>U-4910B</b>	SHEET NO. <b>16</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER 
Prepared in the Office of: <b>AECOM</b> 701 Corporate Center Drive, Suite 475 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259(FAX)	

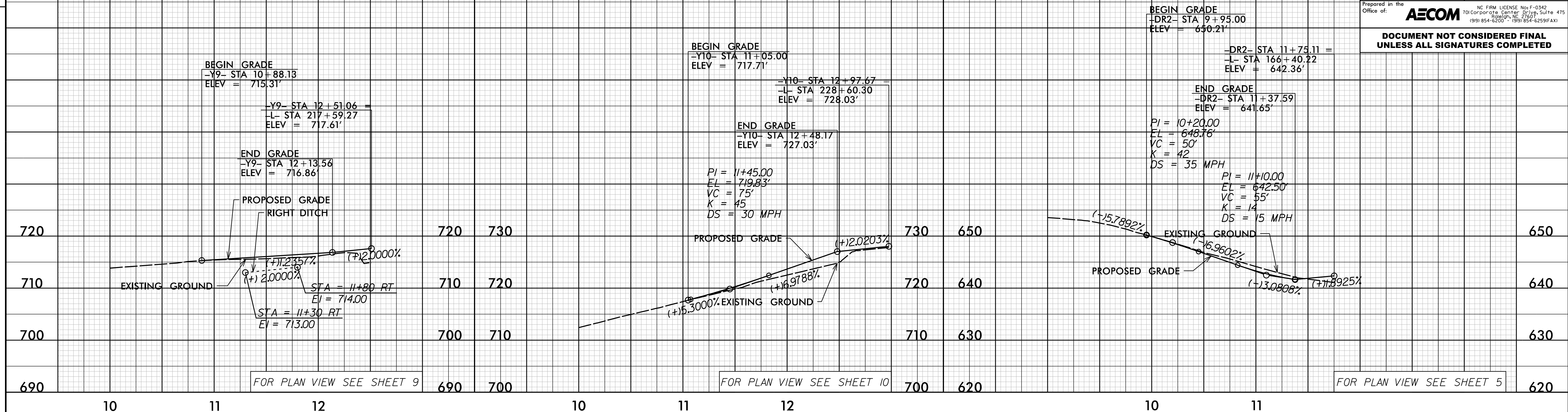
9/21/2016 9/22/2016

**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**

**-Y9-**

**-Y10-**

**-DR2-**

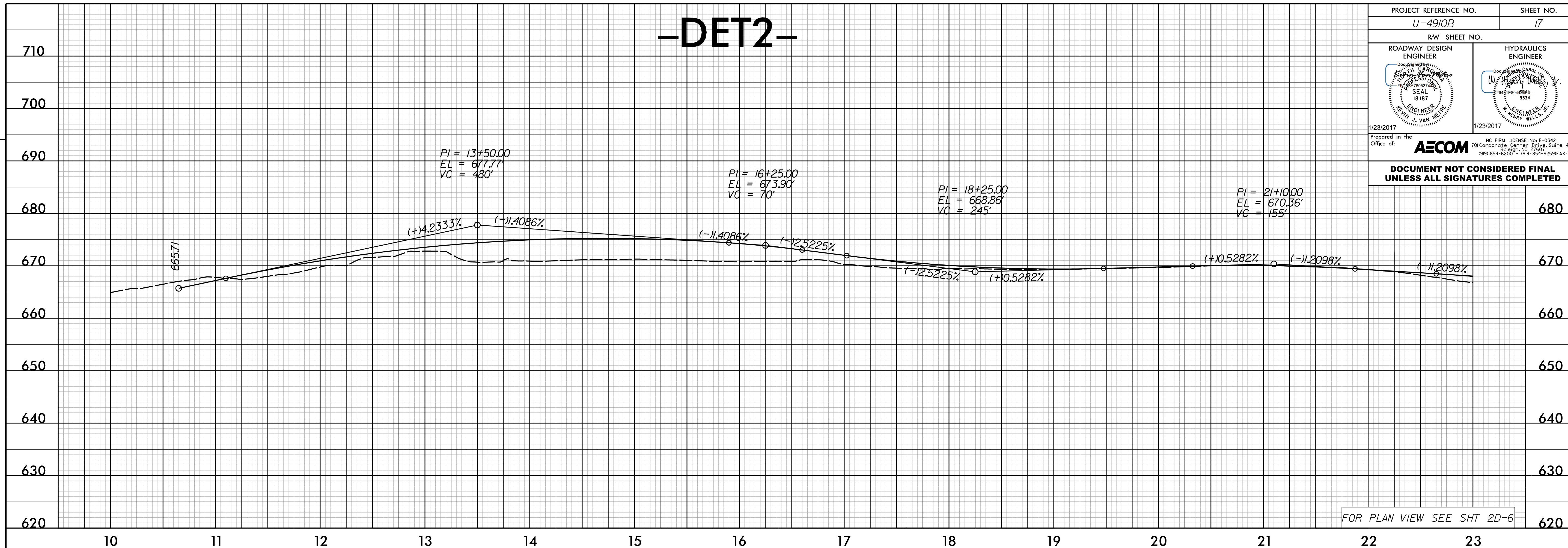


REVISIONS

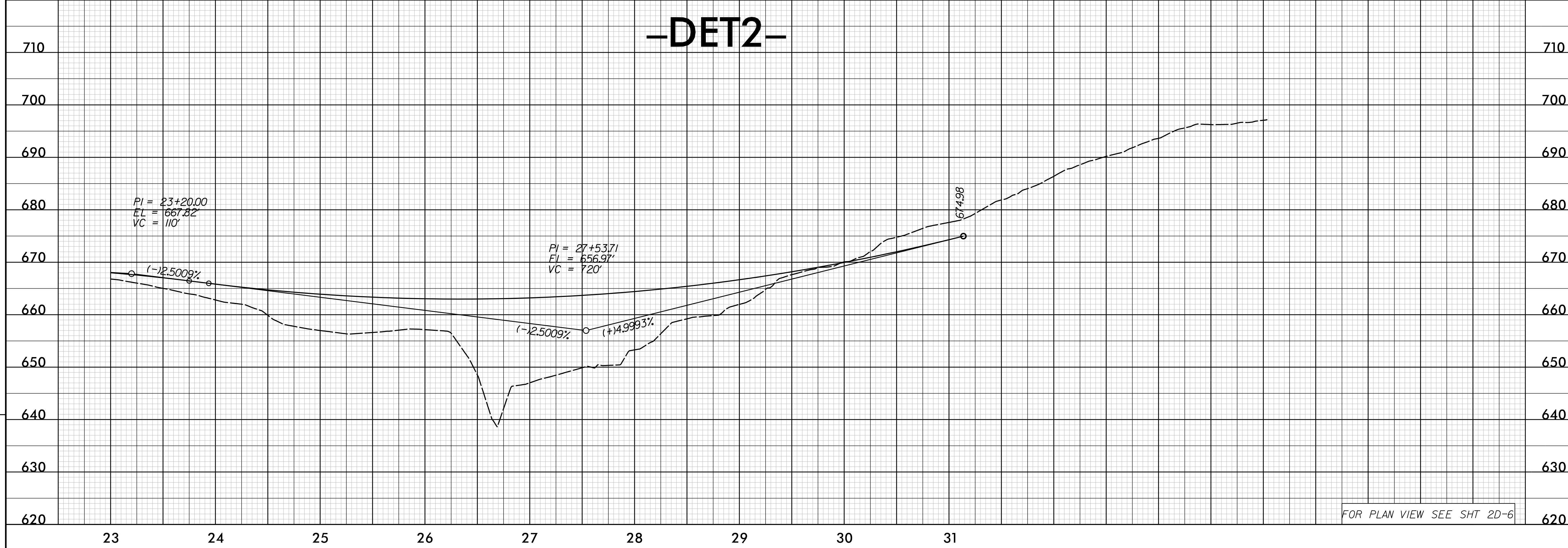
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 TIME: 2:47:50 PM

# -DET2-

PROJECT REFERENCE NO. U-4910B	SHEET NO. 17
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER 
Prepared in the Office of: <b>AECOM</b> NC FIRM LICENSE No. F-0342 701 Corporate Center Drive, Suite 475 Raleigh, NC 27607 (919) 854-6200 • (919) 854-6259(FAX)	
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# -DET2-



REVISIONS

Revisions:

DGN: R:\Roadway\Proj\4910B\RD\DET2\OUT.dgn  
 USER: schmid  
 DATE: 1/23/2017  
 TIME: 9:56:03 AM