

VS-0025

COMPUTED BY: MSR DATE: 1/30/2020
CHECKED BY: CRS DATE: 2/3/2020

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO. R-4707 SHEET NO. 3D-5

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

Table with columns for Line & Station, Offset, Structure Number, Pipe Type (Side Drain Pipe, C.S. PIPE, R.C. PIPE CLASS III/IV, Ductile Iron Pipe, etc.), Quantities for Sealed Drainage Structures, Quantities for Drainage Structures, Frame/Grates/Hood, and Remarks. Includes a SHEET TOTALS row at the bottom.

ABBREVIATIONS table listing symbols and their corresponding material or structure names, such as C.A.A. CORRUGATED ALUMINUM ALLOY, C.B. CATCH BASIN, etc.

REMARKS

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

SUMMARY OF SUBSURFACE DRAINAGE

LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
CONTINGENCY				SD	500
TOTAL LF:					500

*UD = Underdrain
 *BD = Blind Drain
 *SD = Subsurface Drain

SUMMARY OF GEOTEXTILE FOR PAVEMENT STABILIZATION

LINE	Station	Station	Geotextile for Pavement Stabilization SY	Class IV Subgrade Stabilization TONS
CONTINGENCY			29135	12245
TOTAL SY/TONS:			29135	12245*

*Total tons of "Class IV Subgrade Stabilization" is only the estimated quantity for pavement stabilization and may only represent a portion of the subgrade stabilization quantity shown in the Item Sheets of the Proposal.

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

LINE	Station	Station	Aggregate Type* ASU(1/2)/AST	Aggregate Thickness INCHES [8" for ASU(2)]	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Soil Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
-RPC-	13+75	16+75	ASU	18	575	1250	1325		
-RPA-	14+75	16+25	ASU	18	200	400	420		
-Y1-	10+00	11+75	ASU	18	575	1350	1425		
-Y1-	24+25	34+75	ASU	18	850	3400	3530		
CONTINGENCY			ASU	18	500	950	1000	500	
TOTAL CY/TONS/SY:					2700	7350**	7700**	500	0

*ASU(1/2) = Aggregate Subgrade (Type 1 or 2)
 *AST = Aggregate Stabilization

**Total tons of "Class IV Subgrade Stabilization" and total square yards of "Geotextile for Soil Stabilization" are only the estimated quantities for ASU(1/2)/AST and may only represent a portion of the subgrade stabilization and geotextile quantities shown in the Item Sheets of the Proposal.

SUMMARY OF ROCK PLATING

LINE	Beginning Slope (H:V)	Approx. Station	Ending Slope (H:V)	Approx. Station	Location LT/RT	Rock Plating Detail No. 1/2/3/4	Riprap Class* 1/2/B	Rock Plating SY
-RPD-	2:1	14+25	1.5:1	14+50	LT	2		100
-RPD-	1.5:1	14+50	2:1	14+75	LT	2		90
-RPB-	2:1	28+75	1.5:1	29+00	LT	2		80
-RPB-	1.5:1	29+00	1.5:1	29+50	LT	2		160
-RPB-	1.5:1	29+50	2:1	29+75	LT	2		95
TOTAL SY:								525

*Use Class 1, 2 or B riprap if riprap class is not shown for rock plating location.

SUMMARY OF BRIDGE WAITING PERIODS

Bridge Description	End Bent/ Bent No.	MONTHS
Bridge on -Y- over -L- at Sta. 41+39.51 -Y-	1	1
Bridge on -Y- over -L- at Sta. 41+39.51 -Y-	2	1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
PARCEL INDEX SHEET

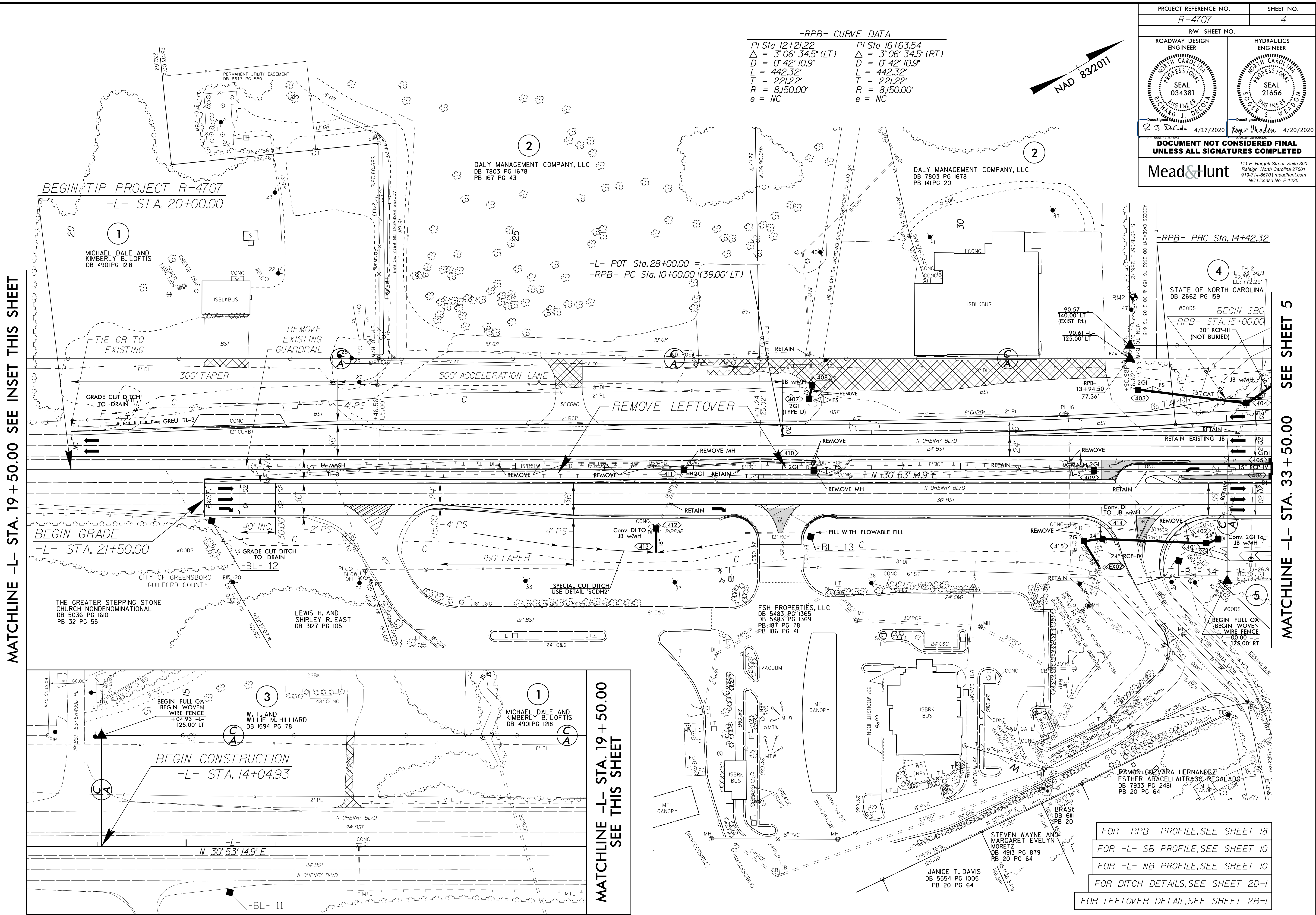
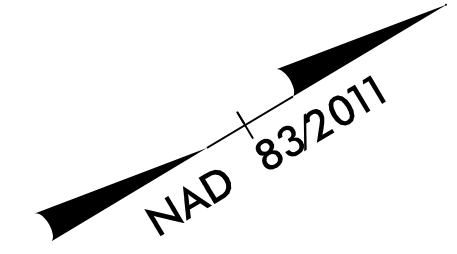
PARCEL No.	SHEET No.	PROPERTY OWNER NAME
1	4	Michael Dale and Kimberly B. Loftis
2	4	Daly Management Company, LLC
3	4	W. T. and Willie M. Hilliard
4	4, 5	State of North Carolina
5	4, 5, 6, 9	Delta Phoenix, Inc.
6	6, 8	Reedy Fork Associates, LLC
7	6, 8	Greentree, Inc.
8	6	Piedmont Authority for Regional Transportation
9	6, 7	City of Greensboro Real Estate Division
10	7	AF-Reedy Fork, LLC
11	6, 8	Summit Distribution, LLC
12	8	The Procter & Gamble Manufacturing Company
13	9	AF-Reedy Fork Commercial, LLC
14	9	AF-Reedy Fork Commercial, LLC
15	9	AF-Reedy Fork Commercial, LLC

8.17.19

PROJECT REFERENCE NO. R-4707		SHEET NO. 4	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER R S DeCh NORTH CAROLINA PROFESSIONAL SEAL 034381 4/17/2020		HYDRAULICS ENGINEER Roger Weadon NORTH CAROLINA PROFESSIONAL SEAL 21656 4/20/2020	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
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-RPB- CURVE DATA

PI Sta 12+21.22	PI Sta 16+63.54
$\Delta = 3^{\circ} 06' 34.5" (LT)$	$\Delta = 3^{\circ} 06' 34.5" (RT)$
$D = 0^{\circ} 42' 10.9"$	$D = 0^{\circ} 42' 10.9"$
$L = 442.32'$	$L = 442.32'$
$T = 221.22'$	$T = 221.22'$
$R = 8,150.00'$	$R = 8,150.00'$
$e = NC$	$e = NC$



MATCHLINE -L- STA. 19 + 50.00 SEE INSET THIS SHEET

MATCHLINE -L- STA. 33 + 50.00 SEE SHEET 5

BEGIN TIP PROJECT R-4707
-L- STA. 20+00.00

-L- POT Sta. 28+00.00 =
-RPB- PC Sta. 10+00.00 (39.00' LT)

-RPB- PRC Sta. 14+42.32

BEGIN GRADE
-L- STA. 21+50.00

BEGIN CONSTRUCTION
-L- STA. 14+04.93

MATCHLINE -L- STA. 19 + 50.00
SEE THIS SHEET

FOR -RPB- PROFILE, SEE SHEET 18
FOR -L- SB PROFILE, SEE SHEET 10
FOR -L- NB PROFILE, SEE SHEET 10
FOR DITCH DETAILS, SEE SHEET 2D-1
FOR LEFTOVER DETAIL, SEE SHEET 2B-1

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8.17.19

-L- CURVE DATA
 PI Sta 52+64.99
 $\Delta = 3^{\circ} 42' 45.0''$ (LT)
 D = 0' 15' 00.0"
 L = 1,485.00'
 T = 742.76'
 R = 22,918.31'
 e = NC

-LSBI- CURVE DATA
 PI Sta 47+72.06
 $\Delta = 1^{\circ} 15' 00.6''$ (LT)
 D = 0' 15' 00.7"
 L = 499.65'
 T = 249.83'
 R = 22,899.31'
 e = NC

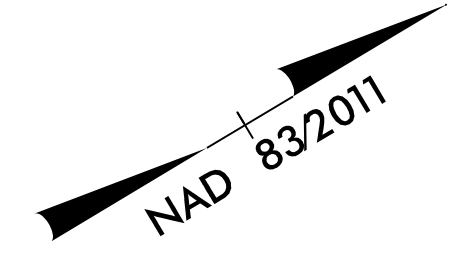
-RPB- CURVE DATA
 PI Sta 16+63.54
 $\Delta = 3^{\circ} 06' 34.5''$ (RT)
 D = 0' 42' 10.9"
 L = 442.32'
 T = 221.22'
 R = 8,150.00'
 e = NC

-RPB- CURVE DATA
 PIs Sta 26+74.65
 $\Theta_s = 1^{\circ} 50' 29.9''$
 D = 0' 42' 10.9"
 L = 442.32'
 T = 221.22'
 R = 8,150.00'
 e = NC

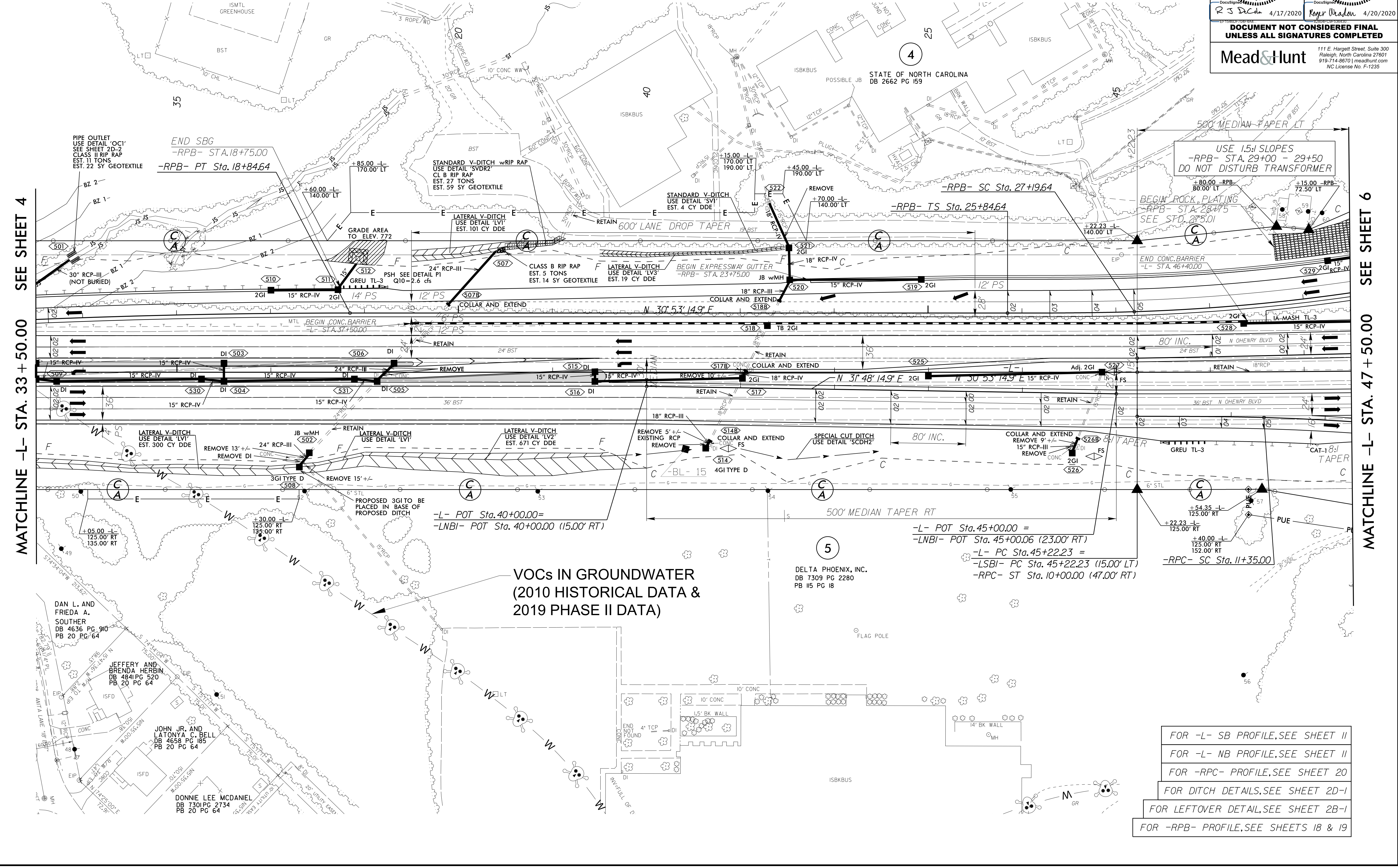
-RPB- CURVE DATA
 PI Sta 28+60.83
 $\Delta = 7^{\circ} 41' 32.6''$ (LT)
 D = 2' 43' 42.1"
 L = 281.94'
 T = 141.18'
 R = 2,100.00'
 e = 0.05

-RPC- CURVE DATA
 PIs Sta 10+90.00
 $\Theta_s = 1^{\circ} 36' 41.2''$
 D = 0' 42' 10.9"
 L = 442.32'
 T = 221.22'
 R = 8,150.00'
 e = NC

-RPC- CURVE DATA
 PI Sta 12+39.90
 $\Delta = 5^{\circ} 00' 20.0''$ (RT)
 D = 2' 23' 14.4"
 L = 209.67'
 T = 104.90'
 R = 2,400.00'
 e = 0.05



PROJECT REFERENCE NO. R-4707		SHEET NO. 5	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		SEAL 21656	
R. S. DeCh 4/17/2020		R. S. Weaton 4/20/2020	
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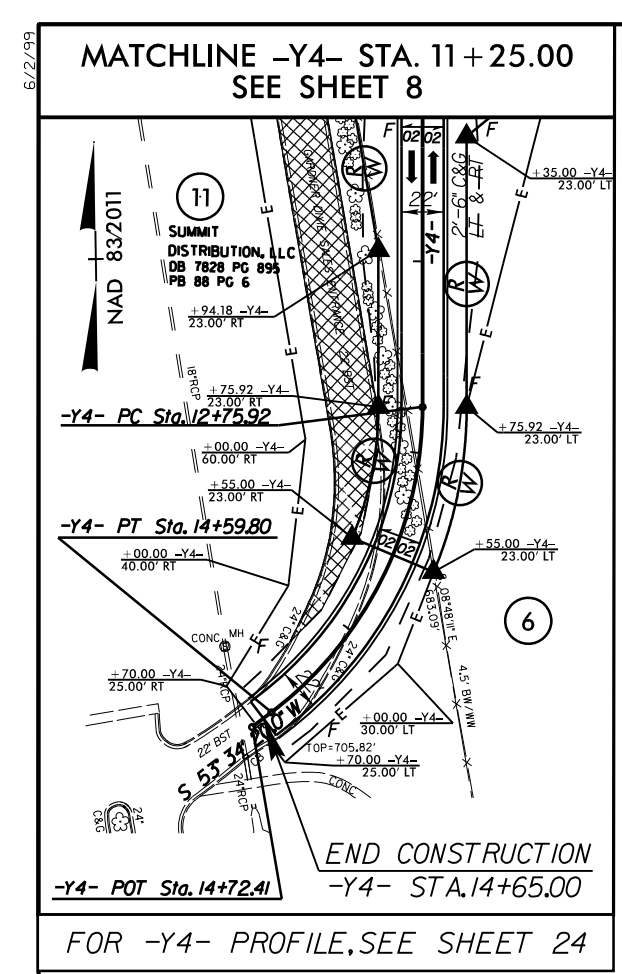
MATCHLINE -L- STA. 33 + 50.00 SEE SHEET 4

MATCHLINE -L- STA. 47 + 50.00 SEE SHEET 6

VOCs IN GROUNDWATER
 (2010 HISTORICAL DATA &
 2019 PHASE II DATA)

FOR -L- SB PROFILE, SEE SHEET 11
 FOR -L- NB PROFILE, SEE SHEET 11
 FOR -RPC- PROFILE, SEE SHEET 20
 FOR DITCH DETAILS, SEE SHEET 2D-1
 FOR LEFTOVER DETAIL, SEE SHEET 2B-1
 FOR -RPB- PROFILE, SEE SHEETS 18 & 19

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TRAFFIC VOLUME DATA

9,200	REEDY FORK PARKWAY		
13,000			
40,200	5,400	2,800	35,000
49,000	7,600	3,800	39,800
US 29	3,000	400	US29
	6,400	1,000	
2020 AADT	4,400	REEDY FORK PARKWAY	
2040 AADT	9,000		

-Y4- CURVE DATA
 PI Sta 13+74.94
 $\Delta = 52^\circ 40' 40.7''$ (RT)
 $D = 28^\circ 38' 52.4''$
 $L = 183.88'$
 $T = 99.02'$
 $R = 200.00'$

-Y1- CURVE DATA
 PI Sta 20+29.91
 $\Delta = 61^\circ 41' 51.8''$ (LT)
 $D = 7^\circ 09' 43.1''$
 $L = 861.46'$
 $T = 477.82'$
 $R = 800.00'$
 $e = 0.02$

-Y1A- CURVE DATA
 PI Sta 31+54.91
 $\Delta = 98^\circ 00' 00.0''$ (LT)
 $D = 11^\circ 35' 29.6''$
 $L = 85.52'$
 $T = 57.52'$
 $R = 50.00'$
 $e = 0.02$

PROJECT REFERENCE NO. **R-4707** SHEET NO. **6**

RW SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

SEAL 034381

SEAL 21656

4/17/2020

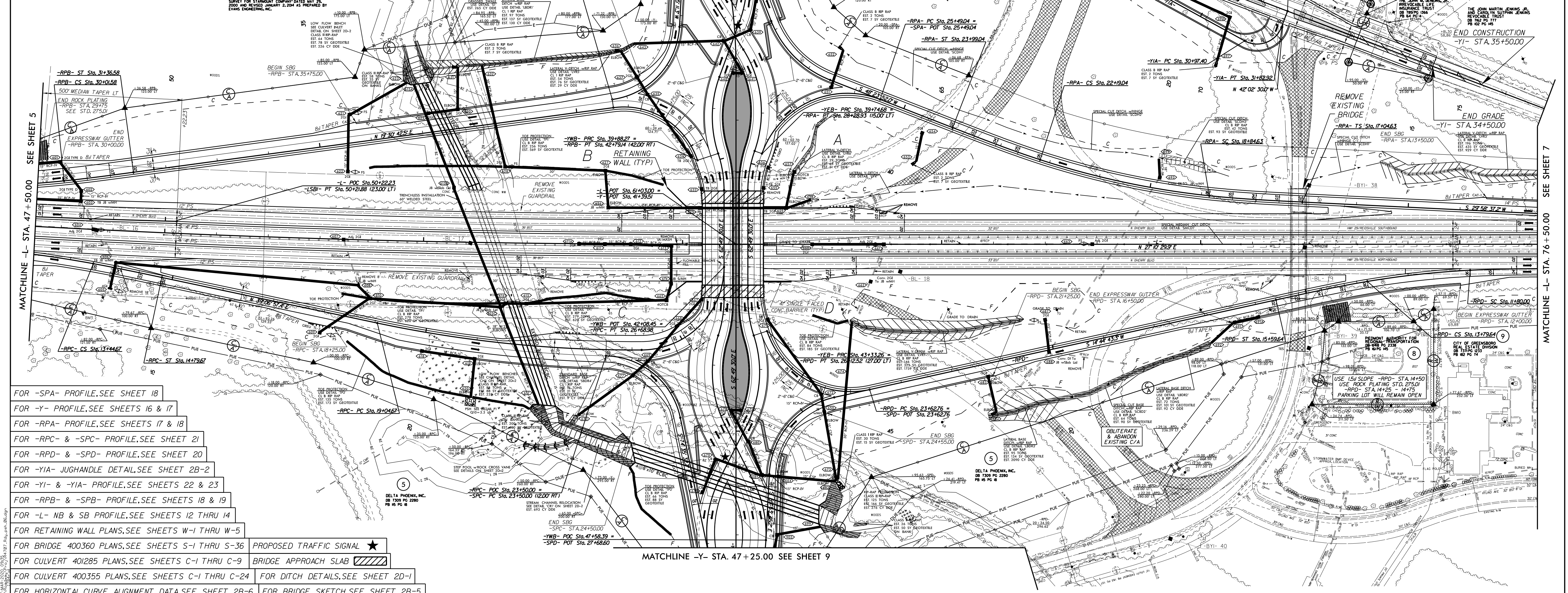
4/20/2020

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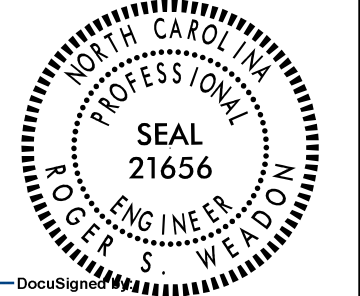
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 PLANS

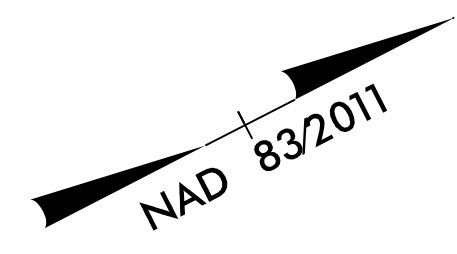


- FOR -SPA- PROFILE, SEE SHEET 18
- FOR -Y- PROFILE, SEE SHEETS 16 & 17
- FOR -RPA- PROFILE, SEE SHEETS 17 & 18
- FOR -RPC- & -SPC- PROFILE, SEE SHEET 21
- FOR -RPD- & -SPD- PROFILE, SEE SHEET 20
- FOR -Y1A- JUGHANDLE DETAIL, SEE SHEET 2B-2
- FOR -Y1- & -Y1A- PROFILE, SEE SHEETS 22 & 23
- FOR -RPB- & -SPB- PROFILE, SEE SHEETS 18 & 19
- FOR -L- NB & SB PROFILE, SEE SHEETS 12 THRU 14
- FOR RETAINING WALL PLANS, SEE SHEETS W-1 THRU W-5
- FOR BRIDGE 400360 PLANS, SEE SHEETS S-1 THRU S-36
- FOR CULVERT 401285 PLANS, SEE SHEETS C-1 THRU C-9
- FOR CULVERT 400355 PLANS, SEE SHEETS C-1 THRU C-24
- FOR HORIZONTAL CURVE ALIGNMENT DATA, SEE SHEET 2B-6
- PROPOSED TRAFFIC SIGNAL ★
- BRIDGE APPROACH SLAB
- FOR DITCH DETAILS, SEE SHEET 2D-1
- FOR BRIDGE SKETCH, SEE SHEET 2B-5

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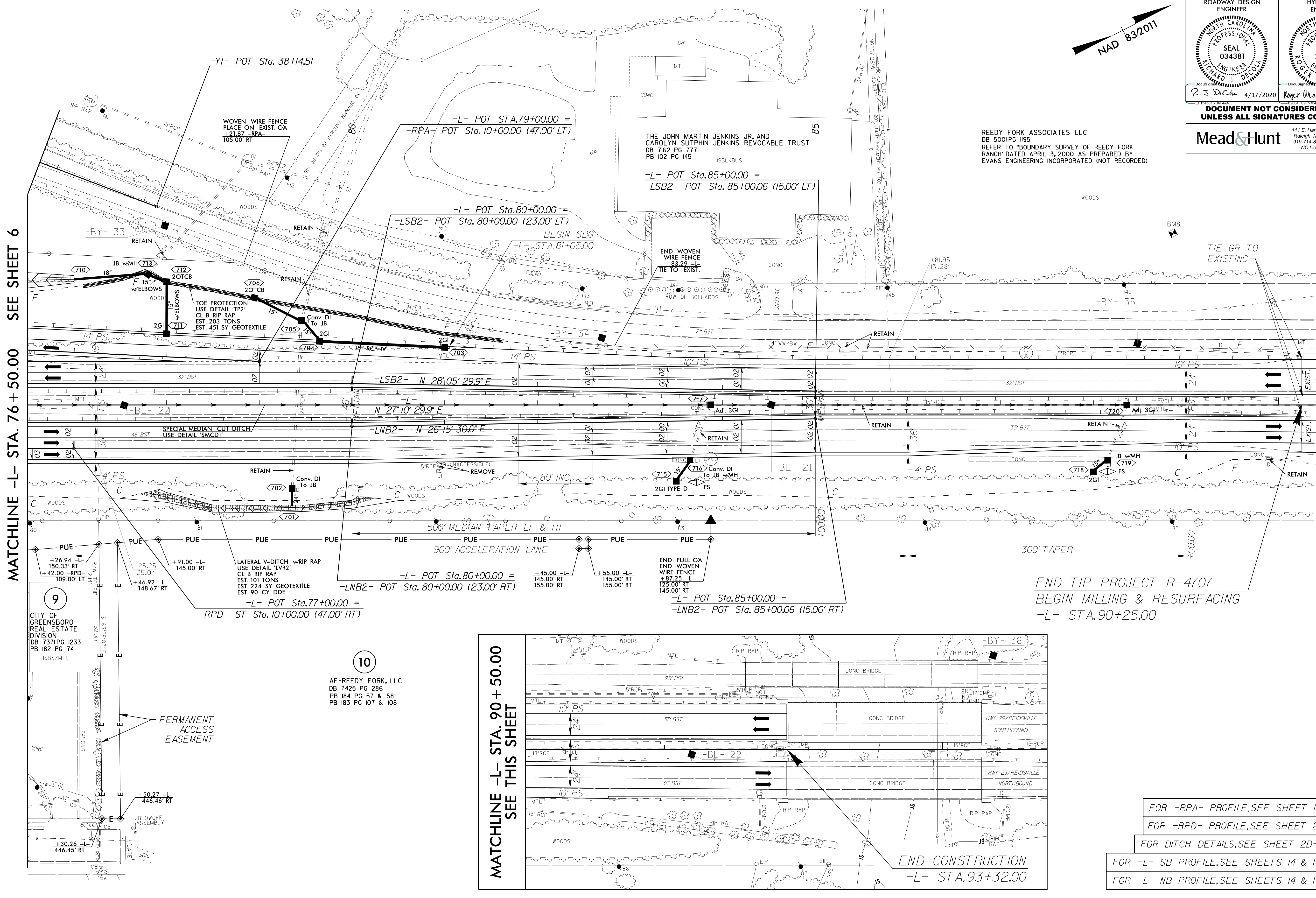
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PROJECT REFERENCE NO. R-4707		SHEET NO. 7	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
			
R. S. DeChant 4/17/2020		Roger Weaden 4/20/2020	
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MATCHLINE -L- STA. 76 + 50.00 SEE SHEET 6

MATCHLINE -L- STA. 90 + 50.00 SEE INSET THIS SHEET



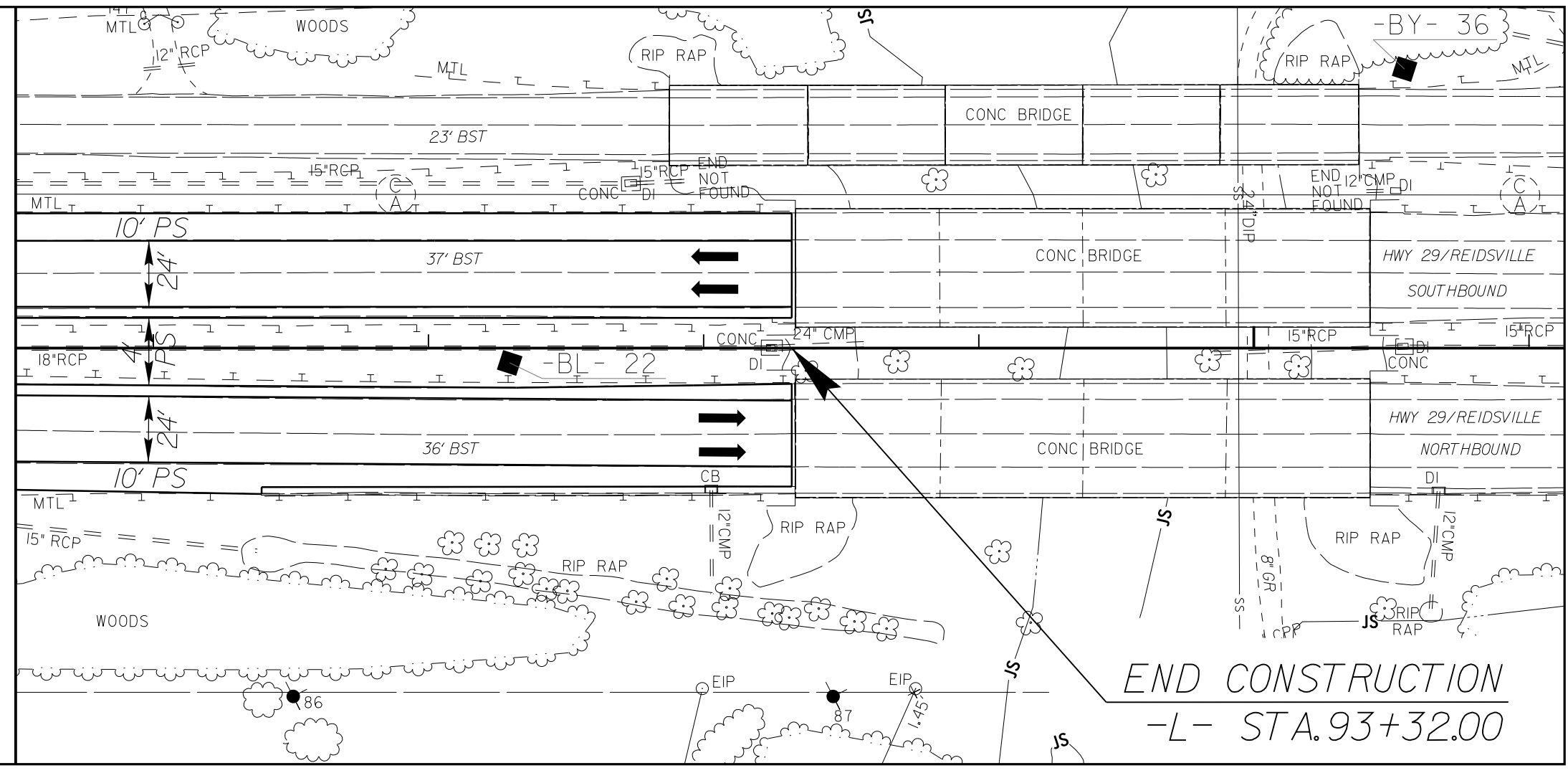
REEDY FORK ASSOCIATES LLC
DB 5001 PG 195
REFER TO 'BOUNDARY SURVEY OF REEDY FORK RANCH' DATED APRIL 3, 2000 AS PREPARED BY EVANS ENGINEERING INCORPORATED (NOT RECORDED)

THE JOHN MARTIN JENKINS JR. AND CAROLYN SUTPHIN JENKINS REVOCABLE TRUST
DB 762 PG 777
PB 102 PG 145

9
CITY OF GREENSBORO
REAL ESTATE
DIVISION
DB 737 PG 1233
PB 182 PG 74
ISBK/MTL

10
AF-REEDY FORK, LLC
DB 7425 PG 286
PB 184 PG 57 & 58
PB 183 PG 107 & 108

MATCHLINE -L- STA. 90 + 50.00 SEE THIS SHEET



- FOR -RPA- PROFILE, SEE SHEET 17
- FOR -RPD- PROFILE, SEE SHEET 21
- FOR DITCH DETAILS, SEE SHEET 2D-1
- FOR -L- SB PROFILE, SEE SHEETS 14 & 15
- FOR -L- NB PROFILE, SEE SHEETS 14 & 15

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PROJECT REFERENCE NO. R-4707	SHEET NO. 8
ROADWAY DESIGN ENGINEER R S Deane 4/17/2020	HYDRAULICS ENGINEER Roger Wearden 4/20/2020
SEAL 034381	SEAL 21656
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BEGIN CONSTRUCTION
-DR2B- STA.10+65.00
NOTE: SAWCUT EXIST.
PAVEMENT AND TIE
PROPOSED PAVEMENT
TO EXIST. ELEVATION

-DR2A- CURVE DATA

PI Sta 13+19.25 Δ = 80° 23' 48.6" (LT) D = 38' 11" 49.9" L = 210.48' T = 126.75' R = 150.00'	PI Sta 15+41.81 Δ = 69° 32' 05.6" (RT) D = 28' 38" 52.4" L = 242.72' T = 138.84' R = 200.00'
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-DR2B- CURVE DATA

PI Sta 12+46.52 Δ = 100° 01' 18.2" (LT) D = 38' 11" 49.9" L = 261.86' T = 178.83' R = 150.00'	PI Sta 13+66.68 Δ = 21° 02' 11.0" (RT) D = 28' 38" 52.4" L = 73.43' T = 37.13' R = 200.00'
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-DRI- CURVE DATA

PI Sta 10+91.04 Δ = 36° 27' 35.0" (LT) D = 38' 11" 49.9" L = 95.45' T = 49.40' R = 150.00'

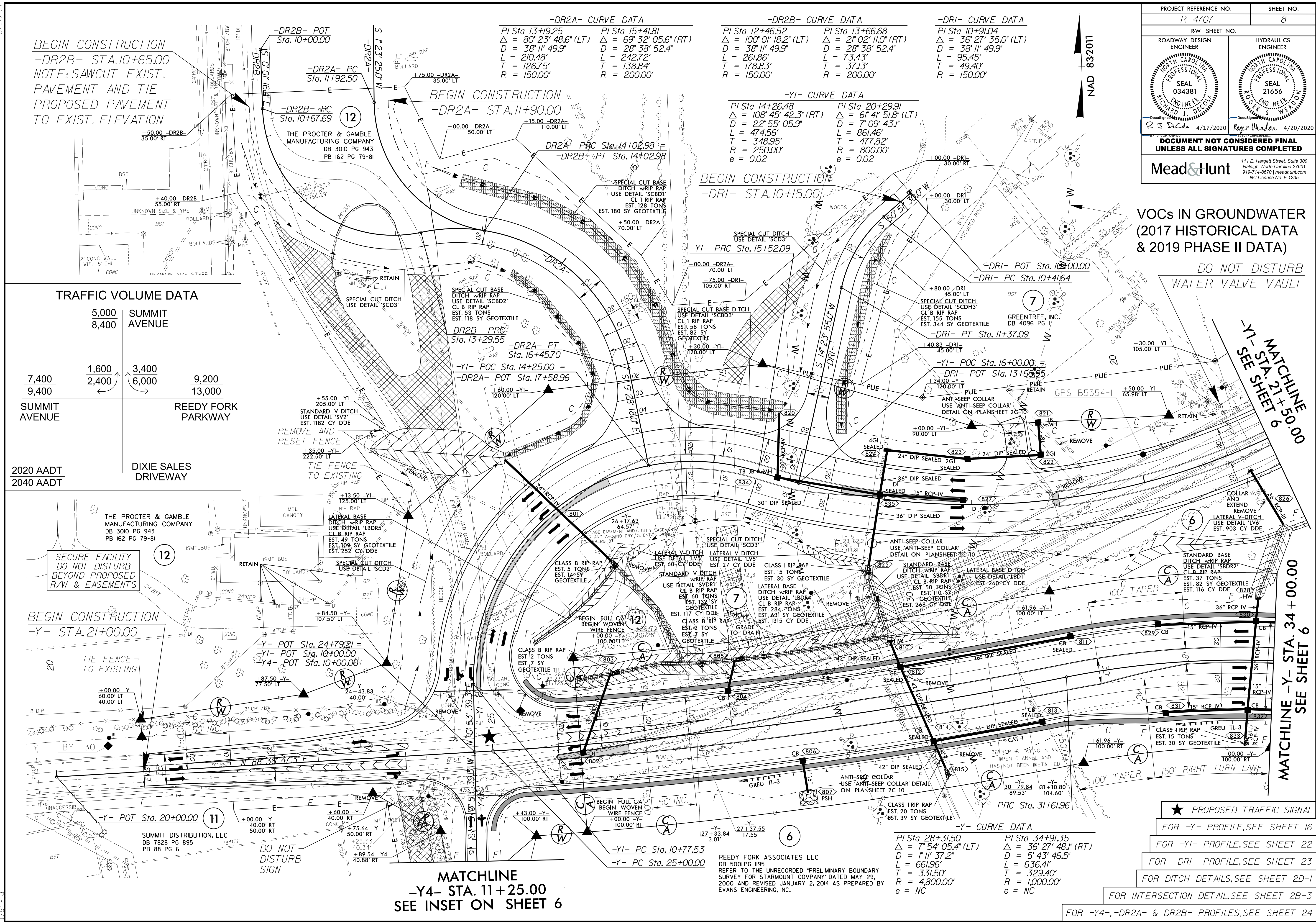
-YI- CURVE DATA

PI Sta 14+26.48 Δ = 108° 45' 42.3" (RT) D = 22° 55' 05.9" L = 474.56' T = 348.95' R = 250.00' e = 0.02	PI Sta 20+29.91 Δ = 61° 41' 51.8" (LT) D = 7° 09' 43.1" L = 861.46' T = 477.82' R = 800.00' e = 0.02
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TRAFFIC VOLUME DATA

5,000	SUMMIT AVENUE		
8,400			
7,400	1,600	3,400	9,200
9,400	2,400	6,000	13,000
SUMMIT AVENUE		REEDY FORK PARKWAY	
2020 AADT		DIXIE SALES DRIVEWAY	
2040 AADT			

VOCs IN GROUNDWATER
(2017 HISTORICAL DATA
& 2019 PHASE II DATA)
DO NOT DISTURB
WATER VALVE VAULT



SECURE FACILITY
DO NOT DISTURB
BEYOND PROPOSED
R/W & EASEMENTS

BEGIN CONSTRUCTION
-Y- STA.21+00.00
TIE FENCE TO EXISTING

BEGIN FULL CA
BEGIN WOVEN
WIRE FENCE

MATCHLINE
-Y4- STA. 11+25.00
SEE INSET ON SHEET 6

MATCHLINE
-Y1- STA. 10+50.00
SEE SHEET 6




MATCHLINE -Y- STA. 34+00.00
SEE SHEET 6

- ★ PROPOSED TRAFFIC SIGNAL
FOR -Y- PROFILE, SEE SHEET 16
- FOR -YI- PROFILE, SEE SHEET 22
- FOR -DRI- PROFILE, SEE SHEET 23
- FOR DITCH DETAILS, SEE SHEET 2D-1
- FOR INTERSECTION DETAIL, SEE SHEET 2B-3
- FOR -Y4-, -DR2A- & DR2B- PROFILES, SEE SHEET 24

-Y- CURVE DATA

PI Sta 28+31.50 Δ = 7° 54' 05.4" (LT) D = 1° 11' 37.2" L = 661.96' T = 331.50' R = 4,800.00' e = NC	PI Sta 34+91.35 Δ = 36° 27' 48.1" (RT) D = 5° 43' 46.5" L = 636.41' T = 329.40' R = 1,000.00' e = NC
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PROJECT REFERENCE NO. R-4707	SHEET NO. 9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER R S DeCh... 4/17/2020	HYDRAULICS ENGINEER Reger Weaden 4/20/2020
 NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 034381 R S DeCh... 4/17/2020	 NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 21656 Reger Weaden 4/20/2020
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TRAFFIC VOLUME DATA

	OLD REEDY FORK PARKWAY	
	4,400	3,400
	9,000	8,100
REEDY FORK PARKWAY	1,700	700
	2,100	1,200
		ECKERSON ROAD
2020 AADT	2,400	
2040 AADT	3,300	

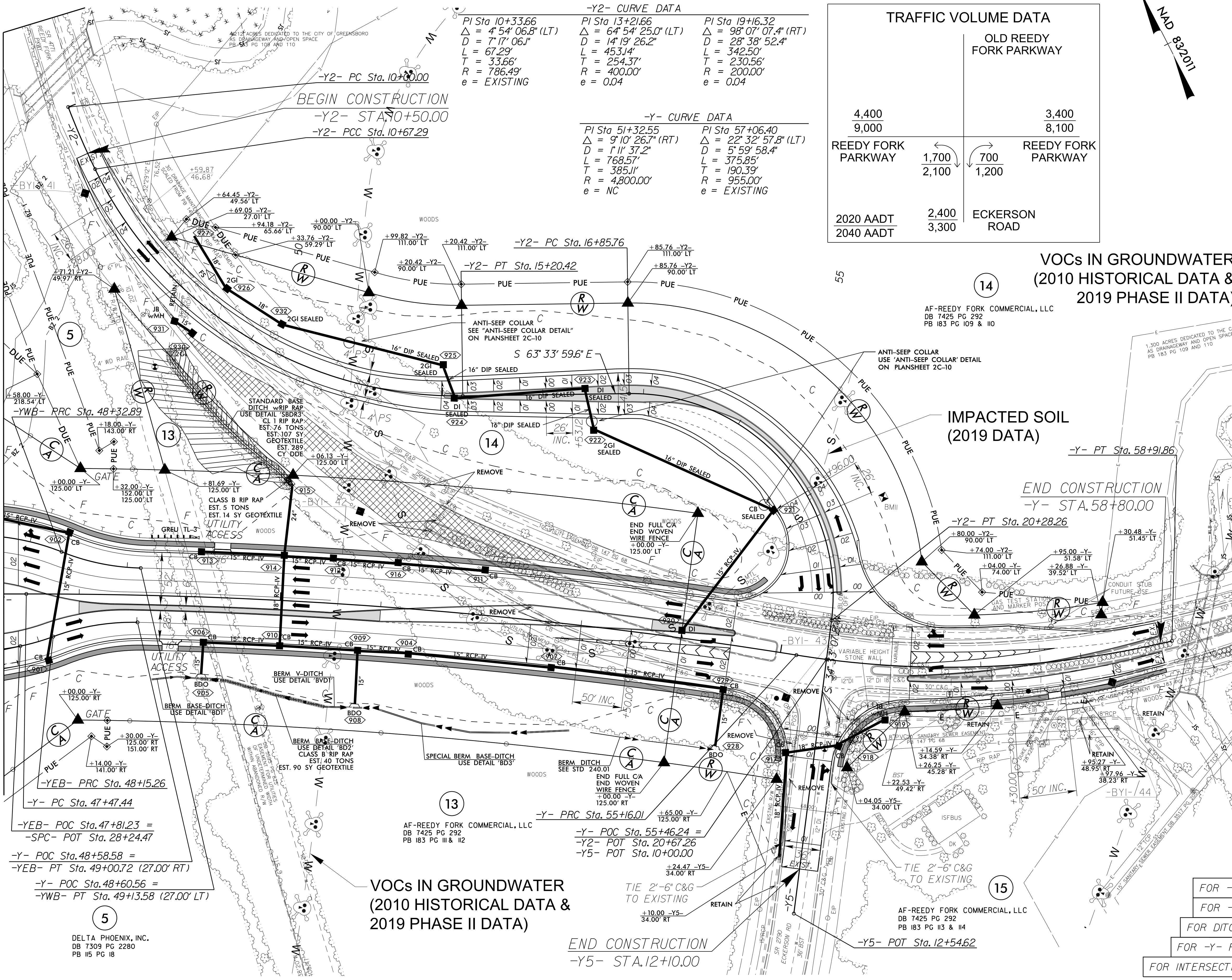
-Y2- CURVE DATA

PI Sta 10+33.66 Δ = 4° 54' 06.8" (LT) D = 7' 17" 06.1" L = 67.29' T = 33.66' R = 786.49' e = EXISTING	PI Sta 13+21.66 Δ = 6° 54' 25.0" (LT) D = 14' 19" 26.2" L = 453.14' T = 254.37' R = 400.00' e = 0.04	PI Sta 19+16.32 Δ = 98° 07' 07.4" (RT) D = 28' 38" 52.4" L = 342.50' T = 230.56' R = 200.00' e = 0.04
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-Y- CURVE DATA

PI Sta 51+32.55 Δ = 9° 10' 26.7" (RT) D = 1° 11' 37.2" L = 768.57' T = 385.11' R = 4,800.00' e = NC	PI Sta 57+06.40 Δ = 22° 32' 57.8" (LT) D = 5° 59' 58.4" L = 375.85' T = 190.39' R = 955.00' e = EXISTING
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MATCHLINE -Y- STA. 47 + 25.00 SEE SHEET 6

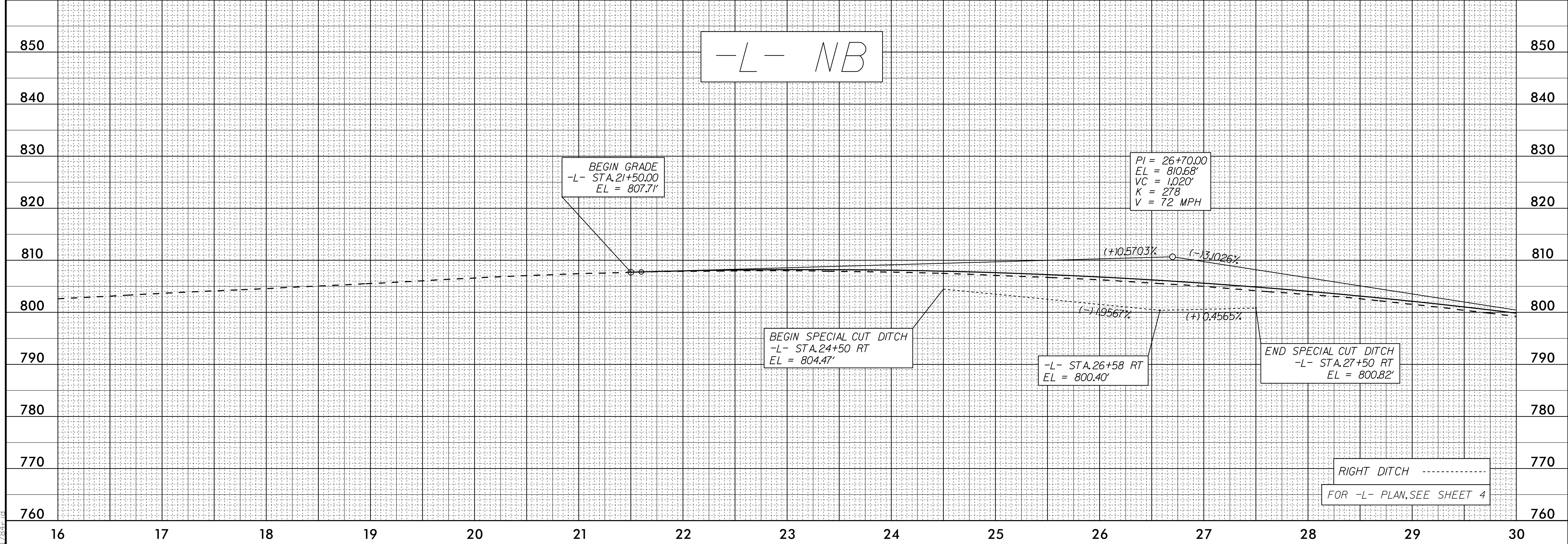
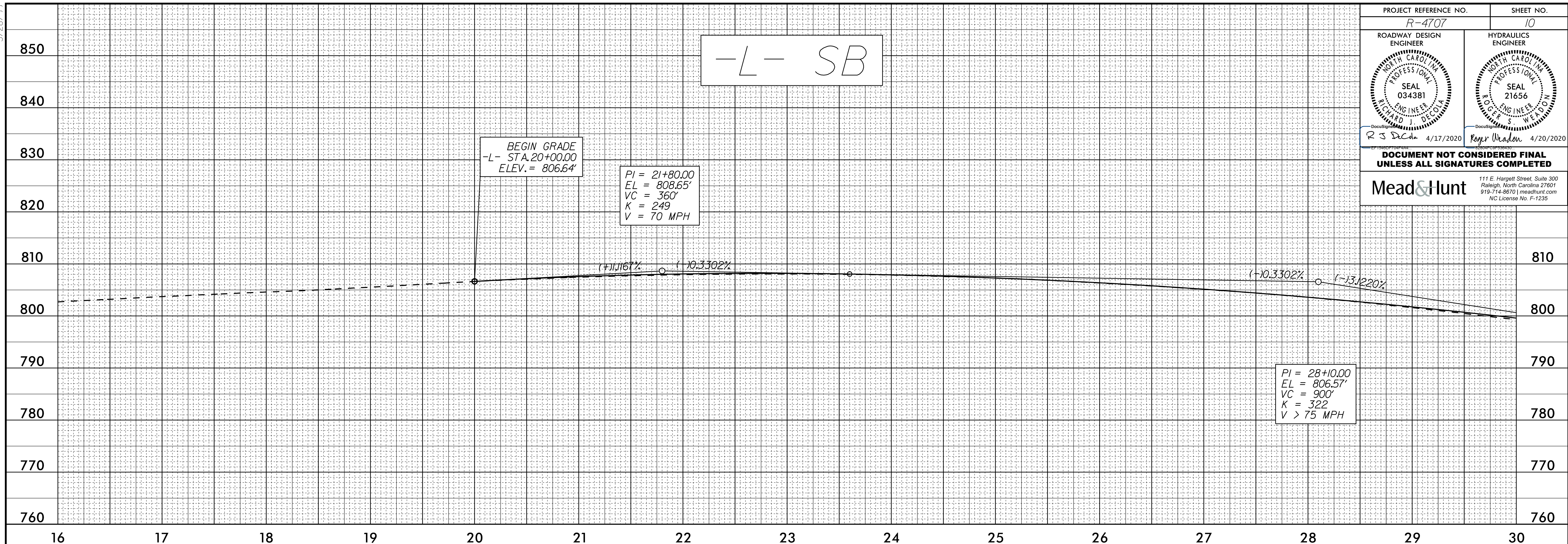


FOR -Y2- PROFILE, SEE SHEET 23
 FOR -Y5- PROFILE, SEE SHEET 24
 FOR DITCH DETAILS, SEE SHEET 2D-1
 FOR -Y- PROFILE, SEE SHEETS 16 & 17
 FOR INTERSECTION DETAIL, SEE SHEET 2B-4

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5/28/19

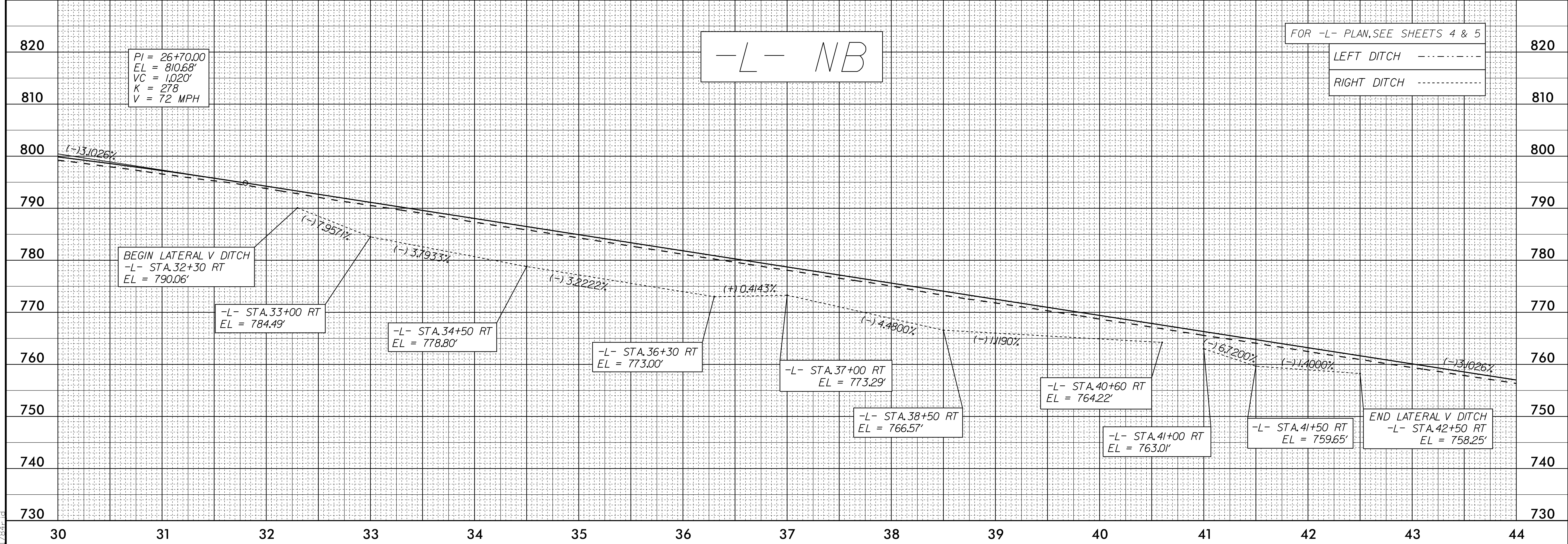
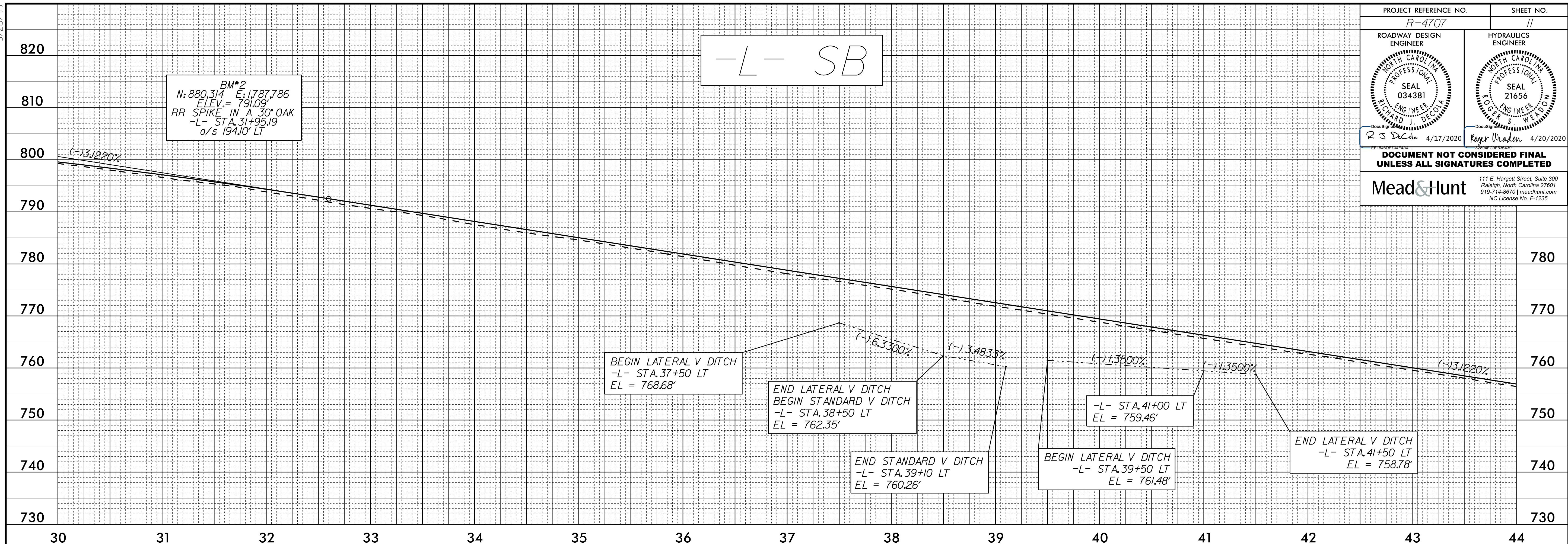
PROJECT REFERENCE NO. R-4707	SHEET NO. 10
ROADWAY DESIGN ENGINEER SEAL 034381 RICHARD S. WEAVER 4/17/2020	HYDRAULICS ENGINEER SEAL 21656 R. S. WEAVER 4/20/2020
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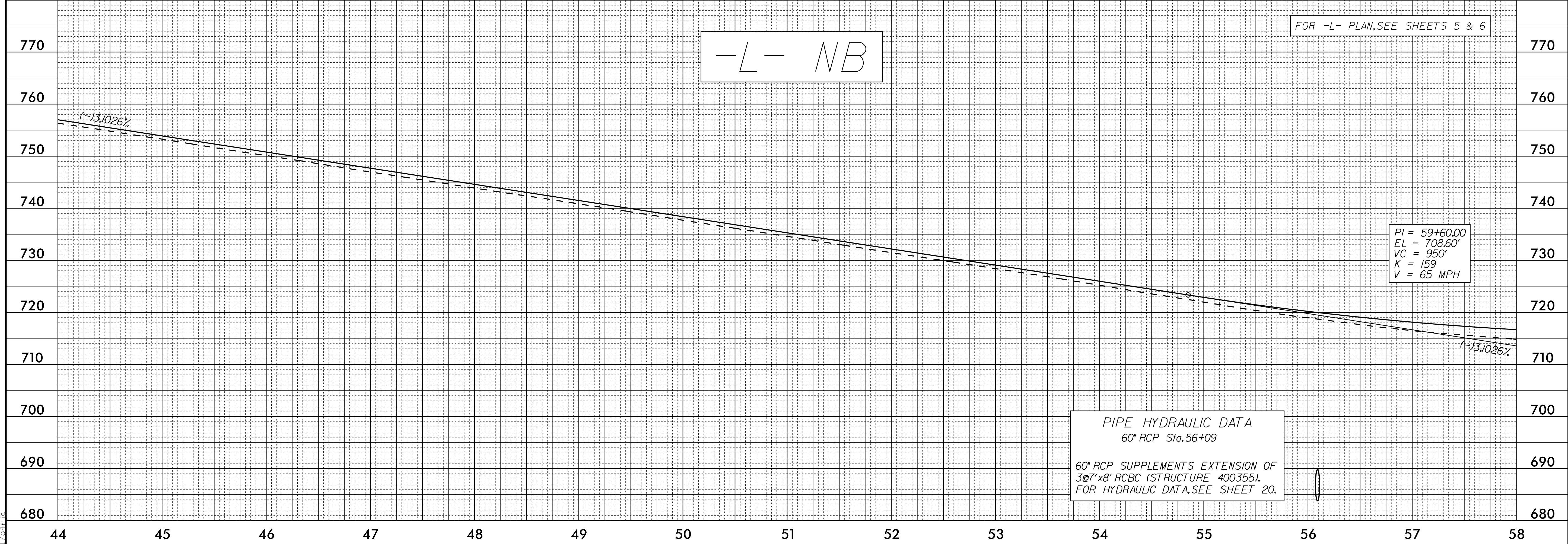
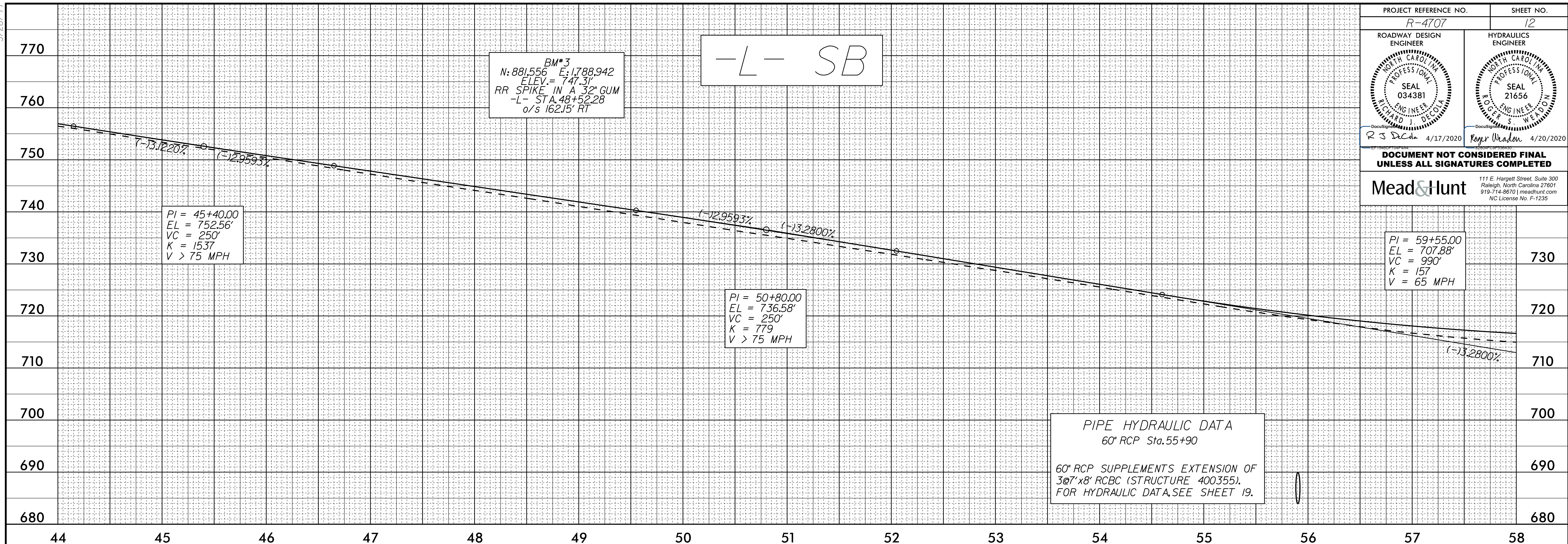
PROJECT REFERENCE NO. R-4707	SHEET NO. 11
ROADWAY DESIGN ENGINEER SEAL 034381 RICHARD S. DELOACH 4/17/2020	HYDRAULICS ENGINEER SEAL 21656 R. W. MEAD 4/20/2020
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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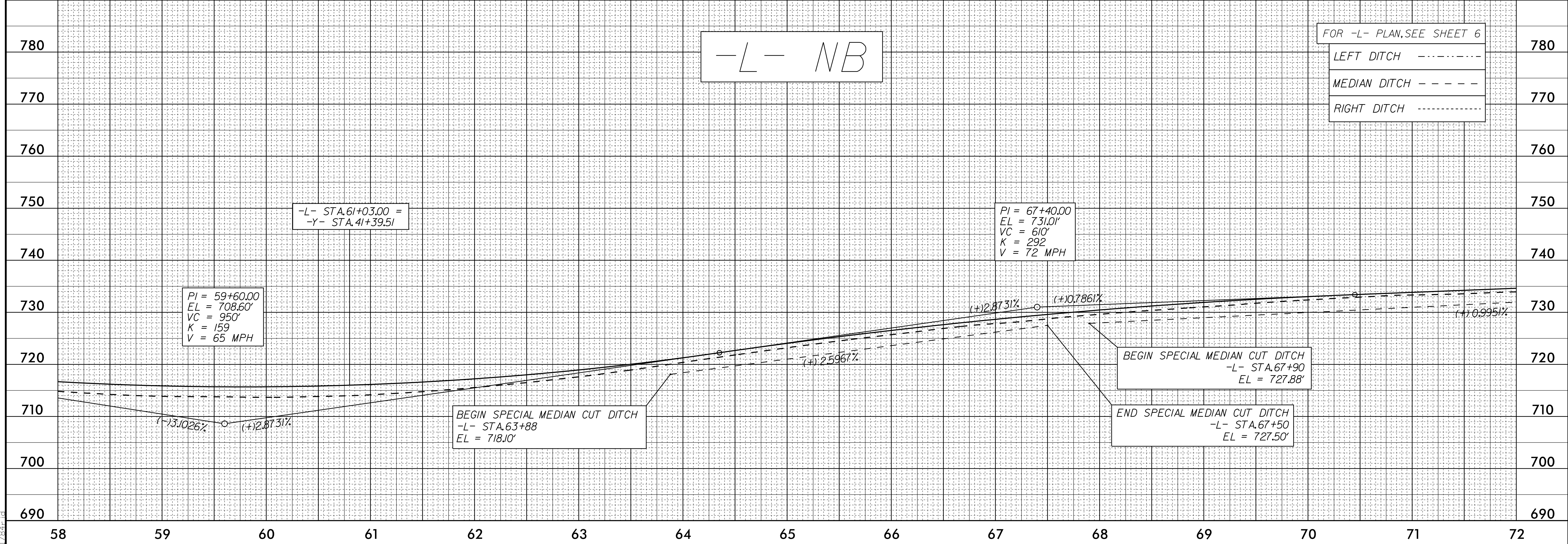
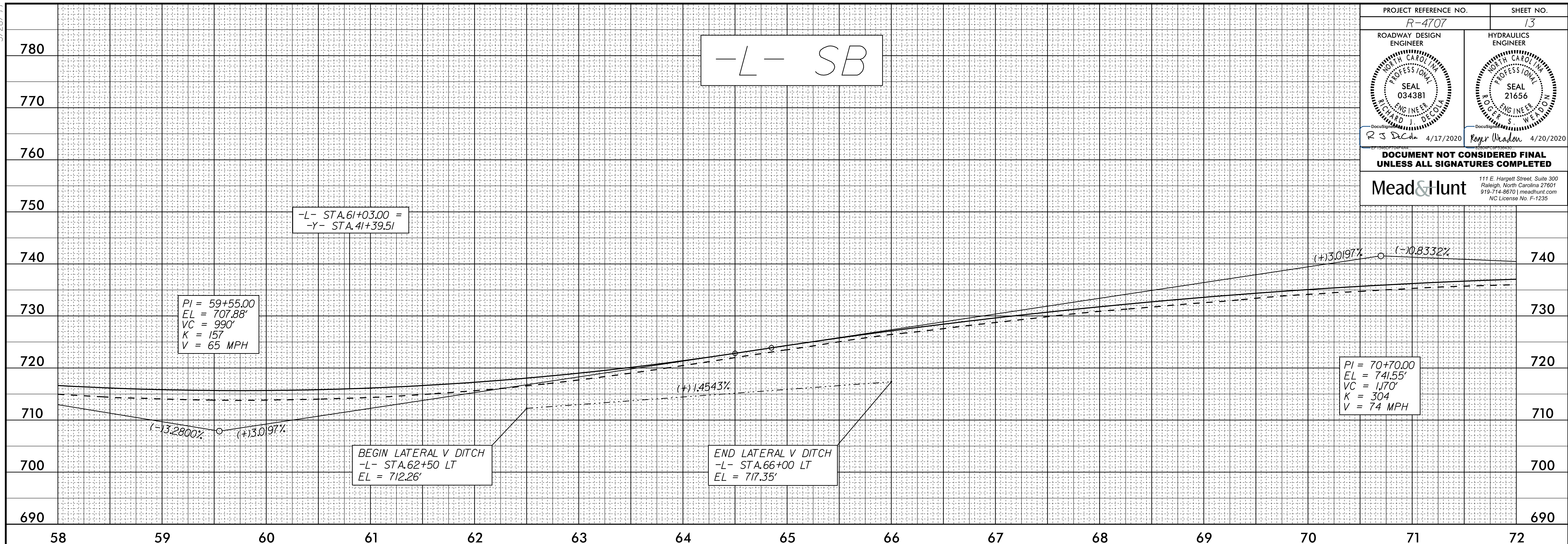
PROJECT REFERENCE NO. R-4707	SHEET NO. 12
ROADWAY DESIGN ENGINEER RICHARD S. DEAN	HYDRAULICS ENGINEER ROPER WEAVER
DocuSign 4/17/2020	DocuSign 4/20/2020
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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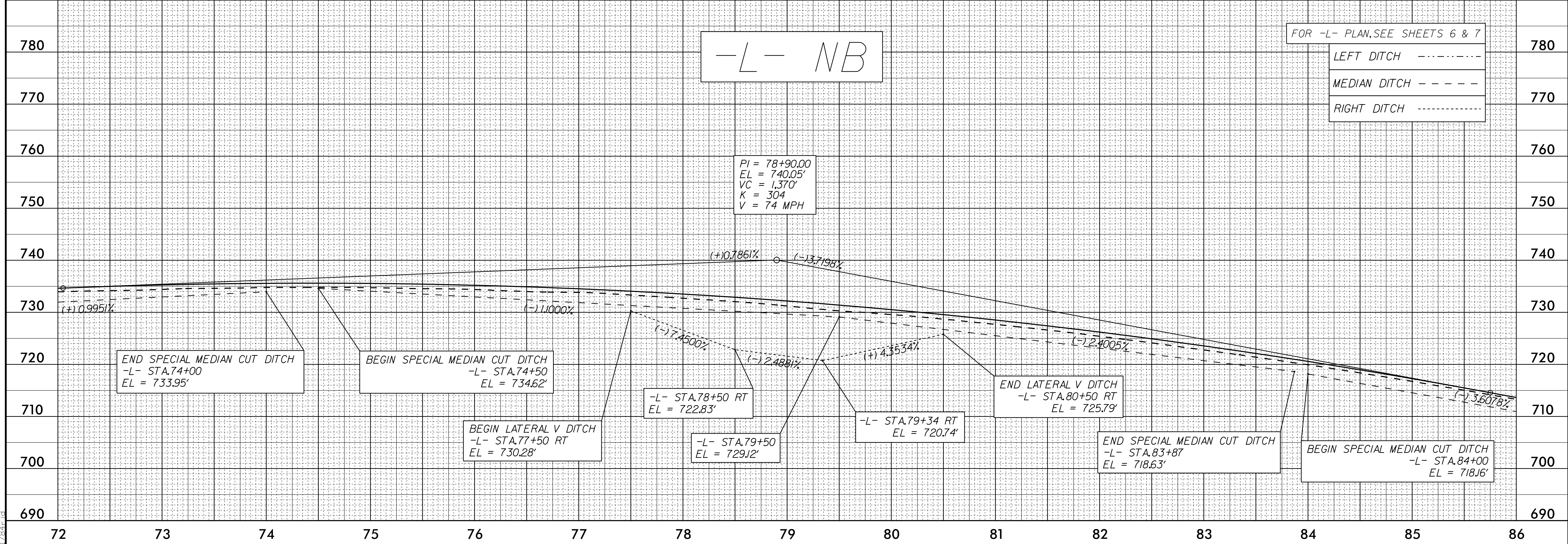
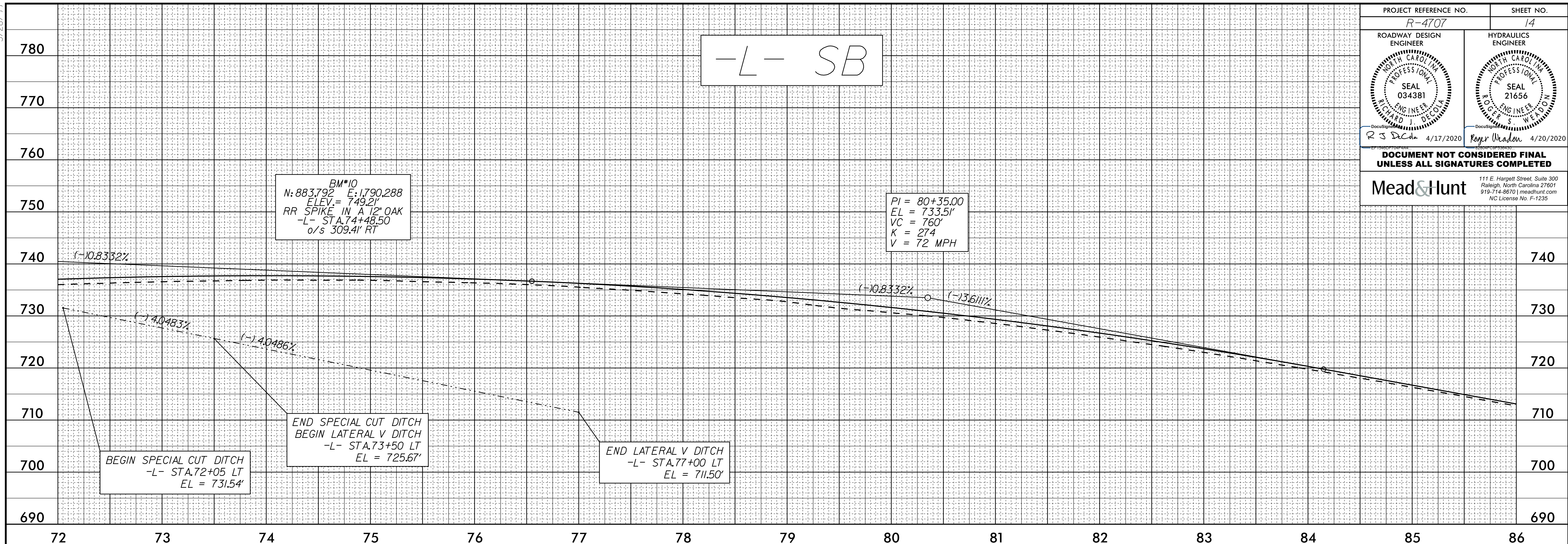
PROJECT REFERENCE NO. R-4707	SHEET NO. 13
ROADWAY DESIGN ENGINEER RICHARD DECOIA SEAL 034381 4/17/2020	HYDRAULICS ENGINEER Roger Meadon SEAL 21636 4/20/2020
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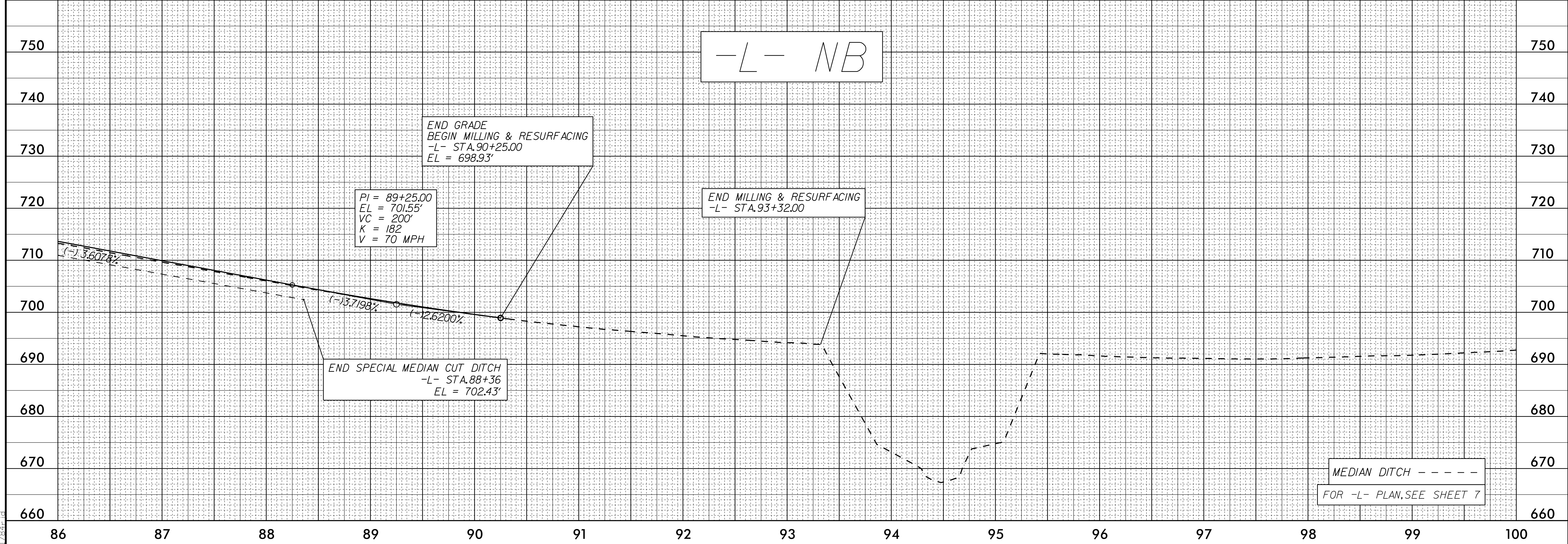
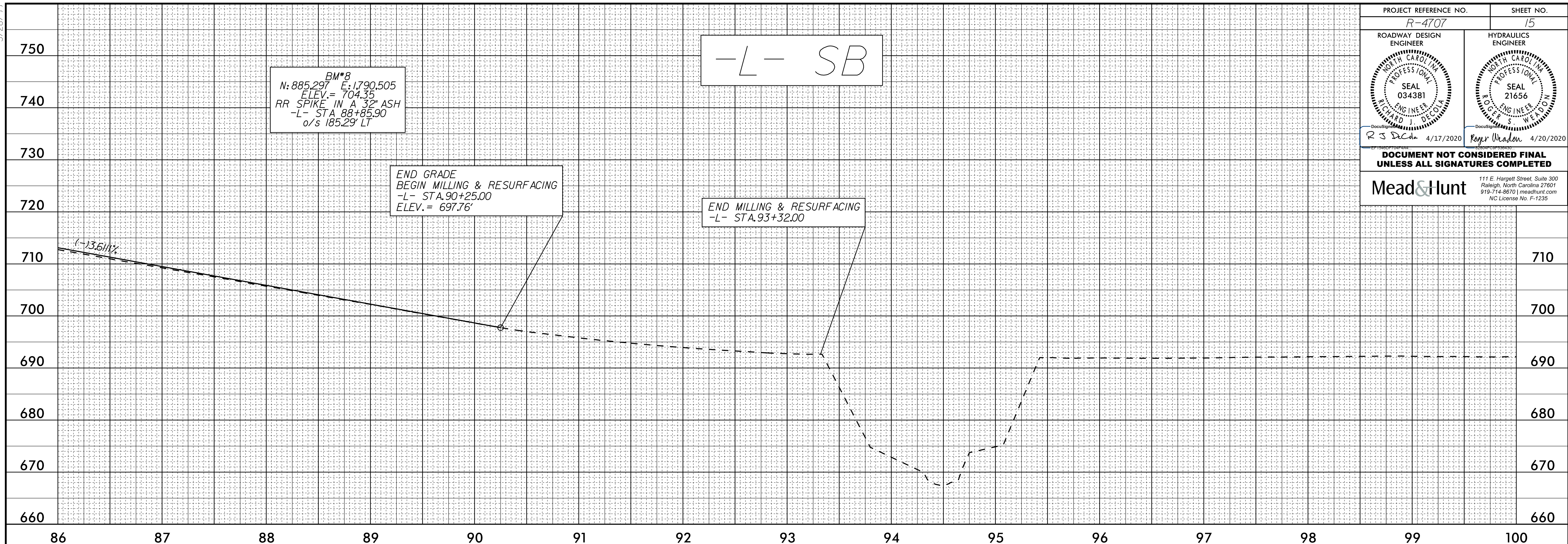
PROJECT REFERENCE NO. R-4707	SHEET NO. 14
ROADWAY DESIGN ENGINEER RICHARD DECOIA SEAL 034381 4/17/2020	HYDRAULICS ENGINEER Roger Meadon SEAL 21656 4/20/2020
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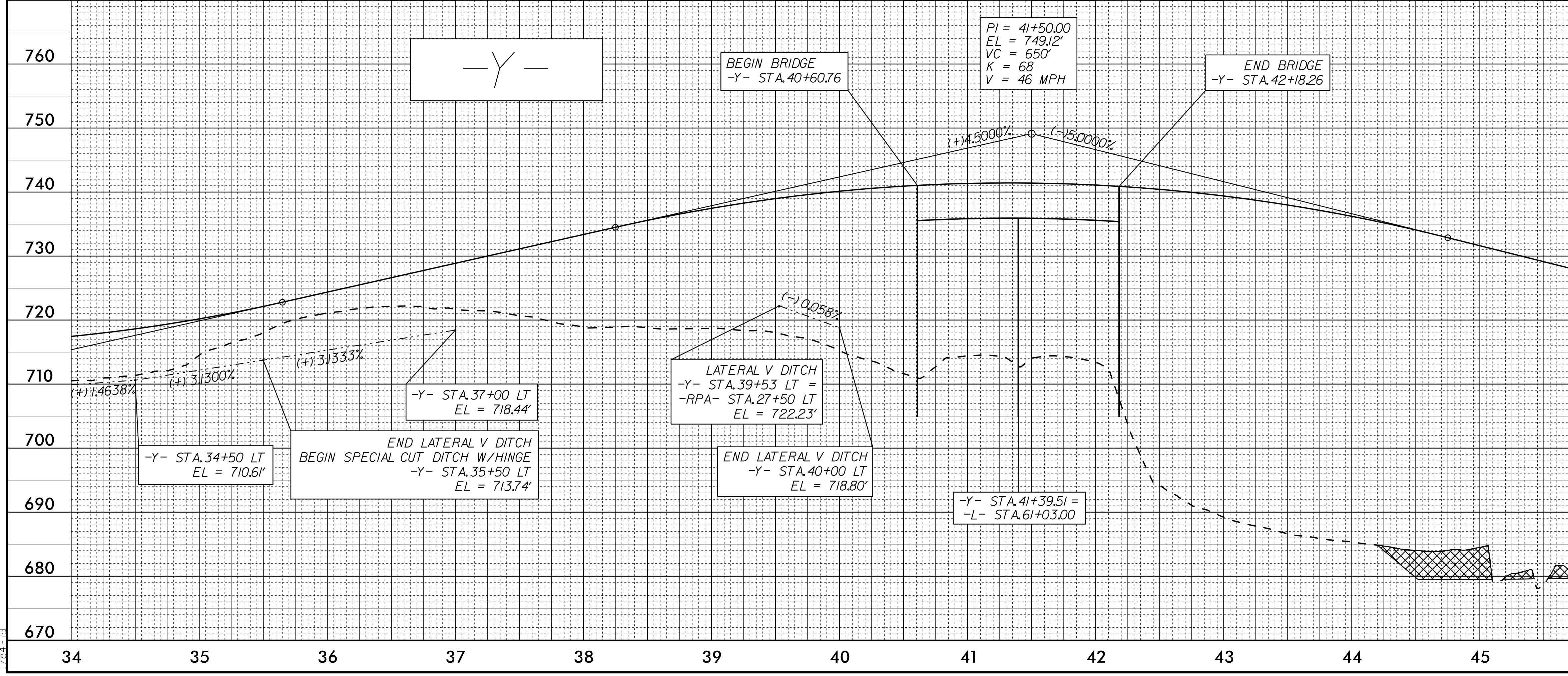
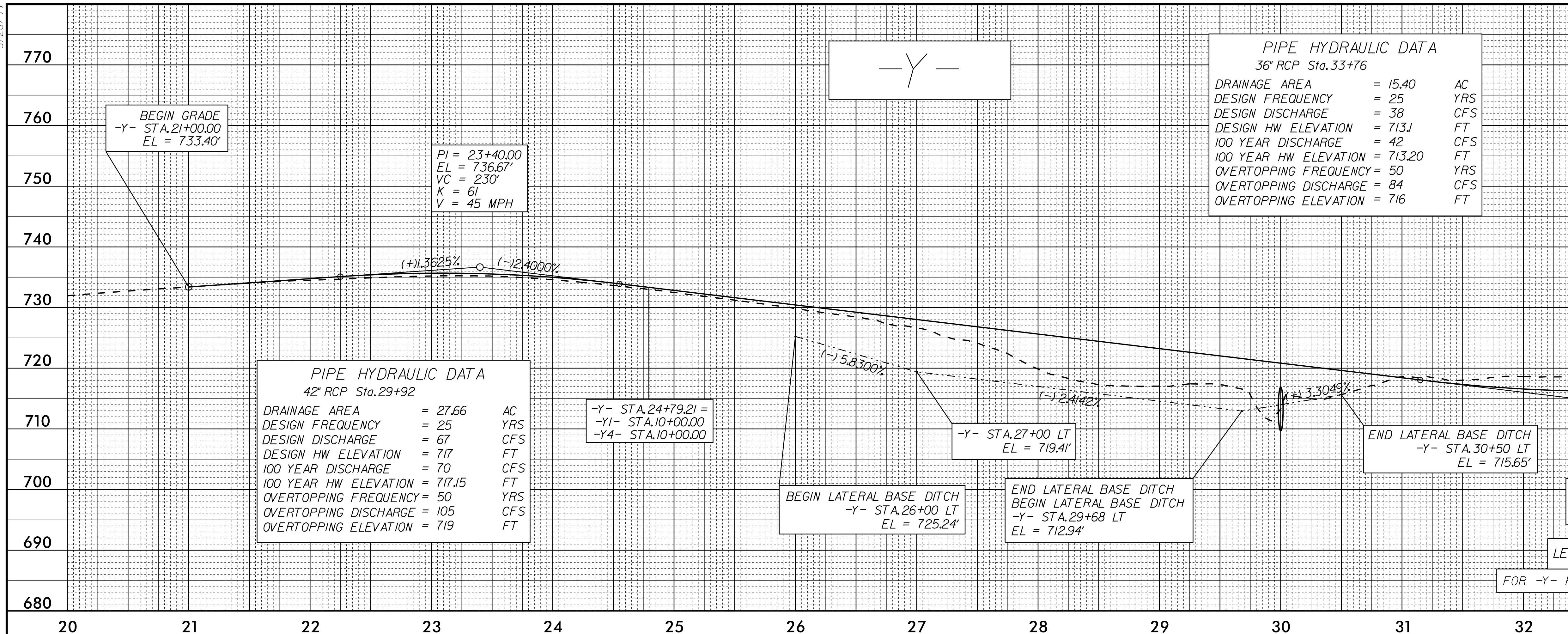
PROJECT REFERENCE NO. R-4707	SHEET NO. 15
ROADWAY DESIGN ENGINEER RICHARD S. DELOACH PROFESSIONAL SEAL 034381 4/17/2020	HYDRAULICS ENGINEER R. W. MEAD PROFESSIONAL SEAL 21656 4/20/2020
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PROJECT REFERENCE NO. R-4707	SHEET NO. 16
ROADWAY DESIGN ENGINEER SEAL 034381 R. S. DeLoe 4/17/2020	HYDRAULICS ENGINEER SEAL 21636 R. J. W. DeLoe 4/20/2020
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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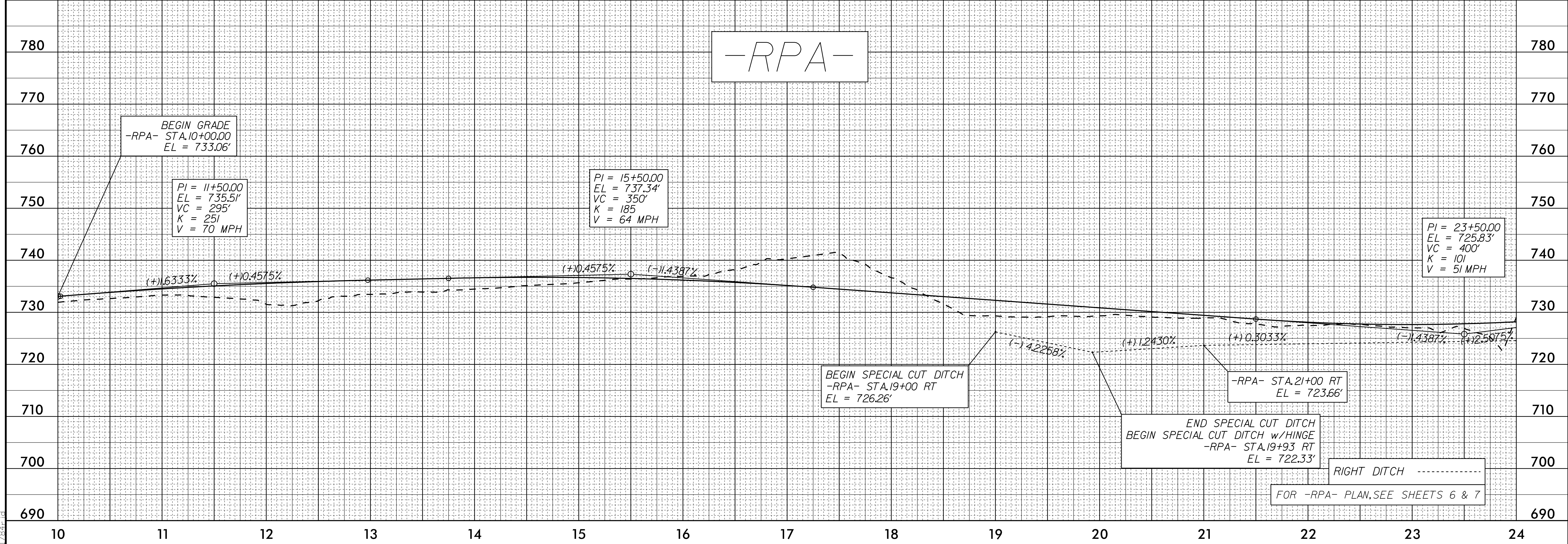
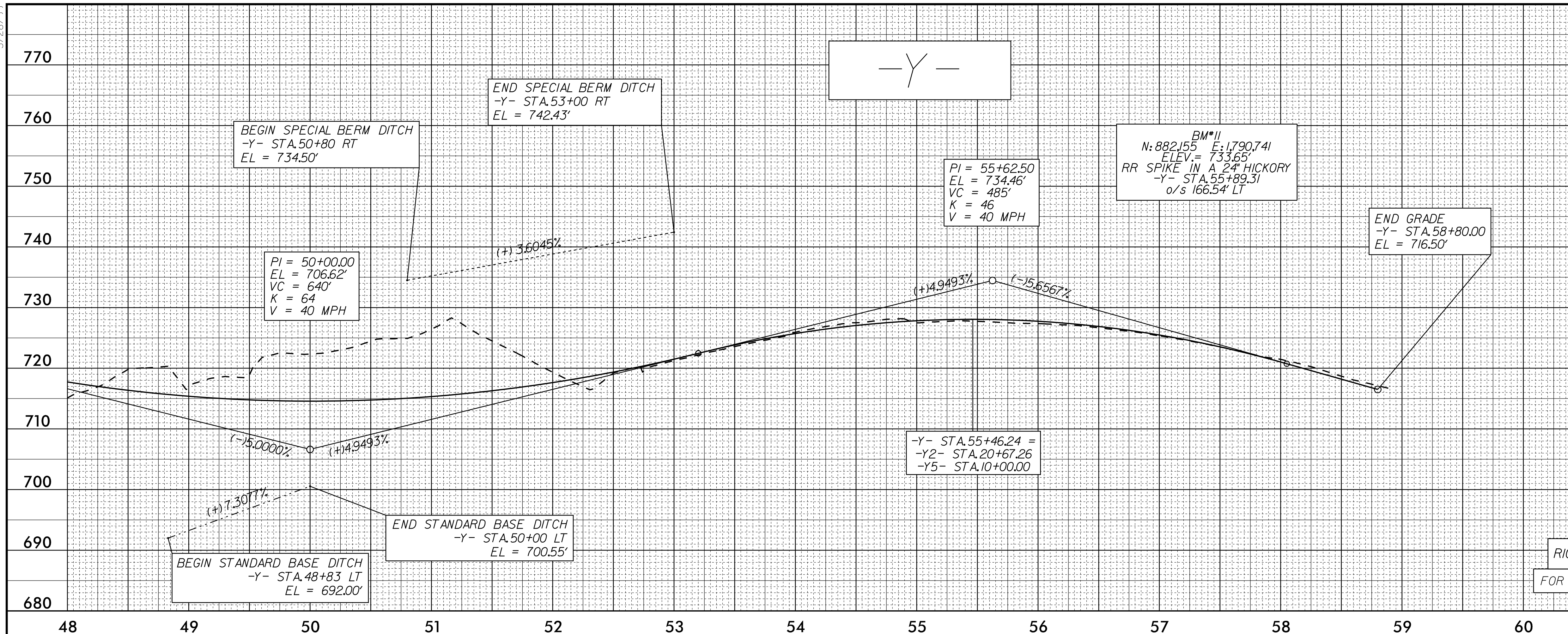


DESIGN DISCHARGE = 1,700 CFS	760
DESIGN FREQUENCY = 50 YRS	760
DESIGN HW ELEVATION = 687.6 FT	760
BASE DISCHARGE = 2,100 CFS	750
BASE FREQUENCY = 100 YRS	750
BASE HW ELEVATION = 689.5 FT	750
OVERTOPPING DISCHARGE = 8,380 CFS	740
OVERTOPPING FREQUENCY = 500+ YRS	740
OVERTOPPING ELEVATION = 719.6 FT	740
DATE OF SURVEY = 5/31/2018	740
W.S. ELEVATION AT DATE OF SURVEY = 681.1 FT	740

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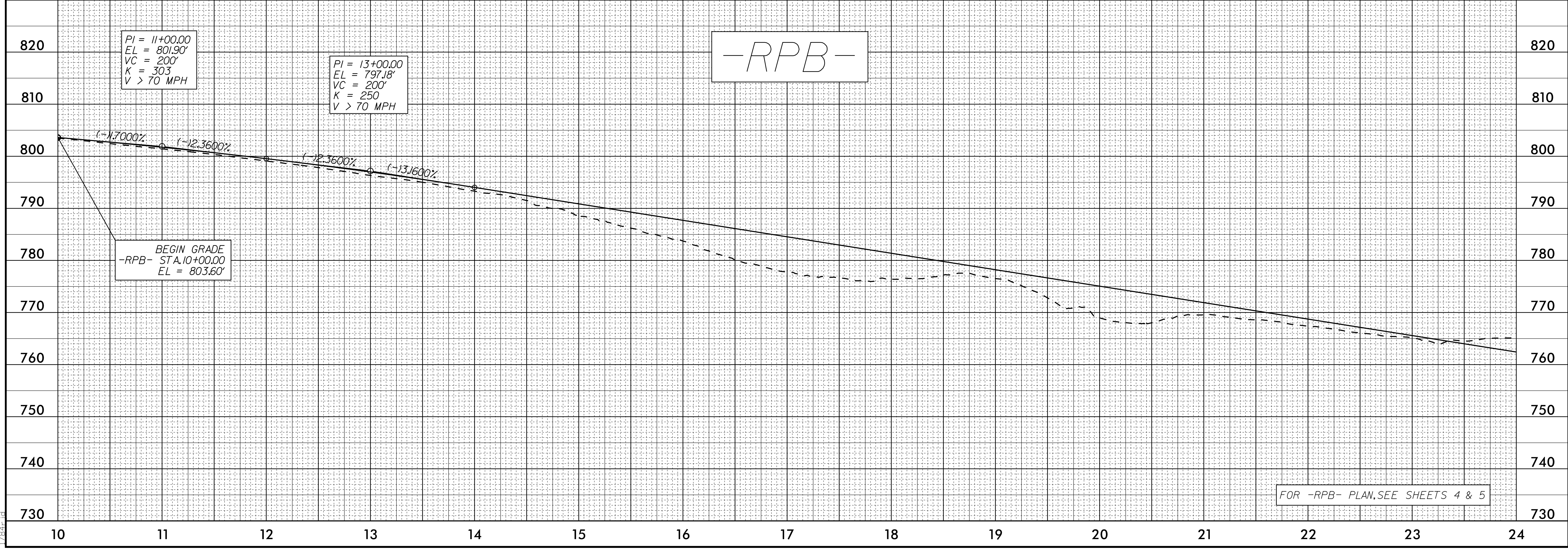
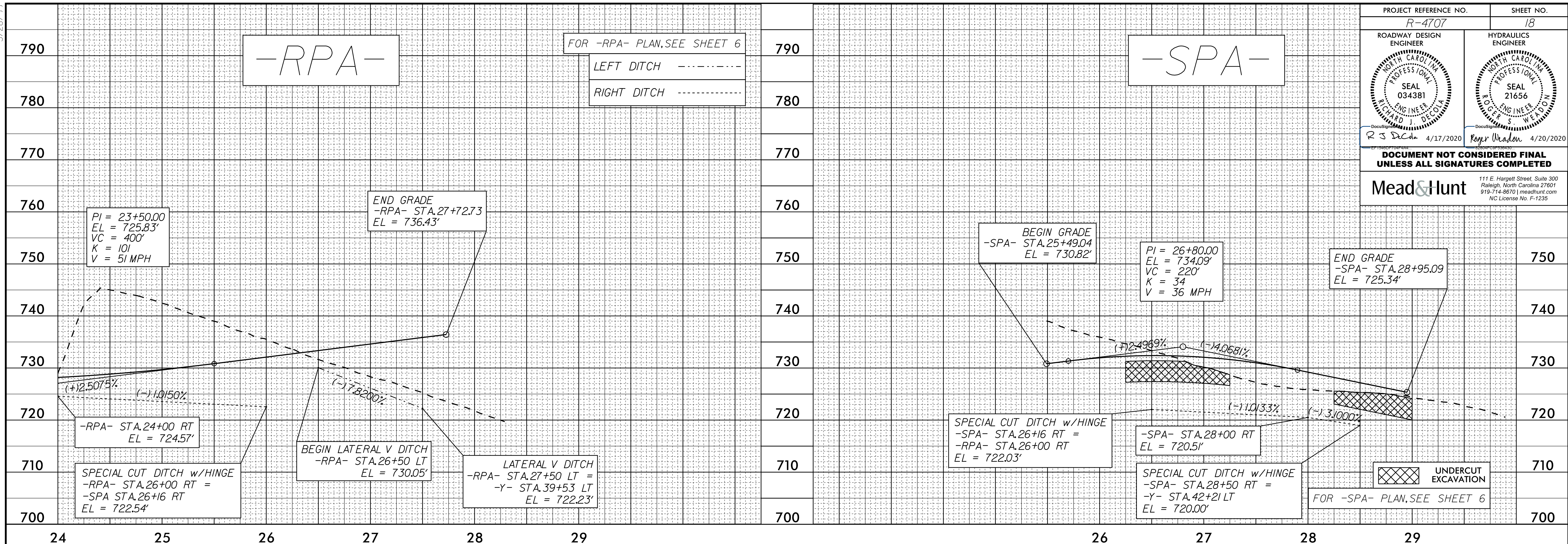
PROJECT REFERENCE NO. R-4707	SHEET NO. 17
ROADWAY DESIGN ENGINEER SEAL 034381 RICHARD S. DEOLA 4/17/2020	HYDRAULICS ENGINEER SEAL 21636 ROGER W. MEADON 4/20/2020
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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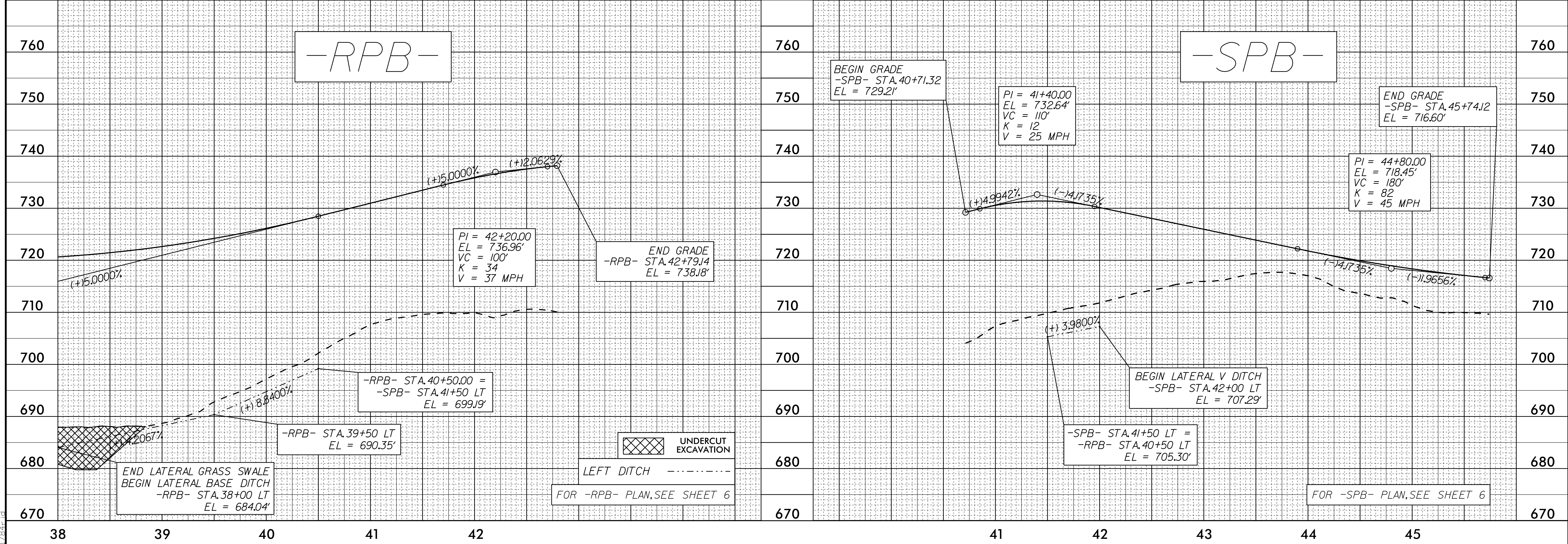
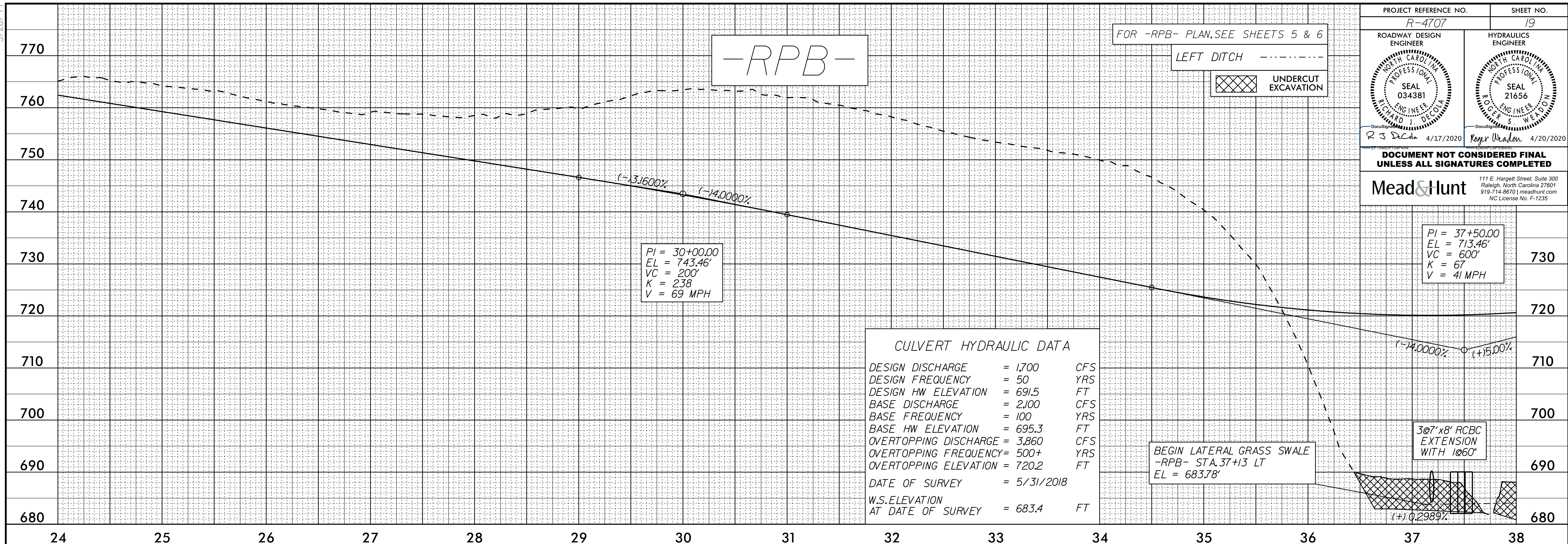
PROJECT REFERENCE NO. R-4707	SHEET NO. 18
ROADWAY DESIGN ENGINEER RICHARD S. DECA SEAL 034381 4/17/2020	HYDRAULICS ENGINEER ROGER W. MEADON SEAL 21656 4/20/2020
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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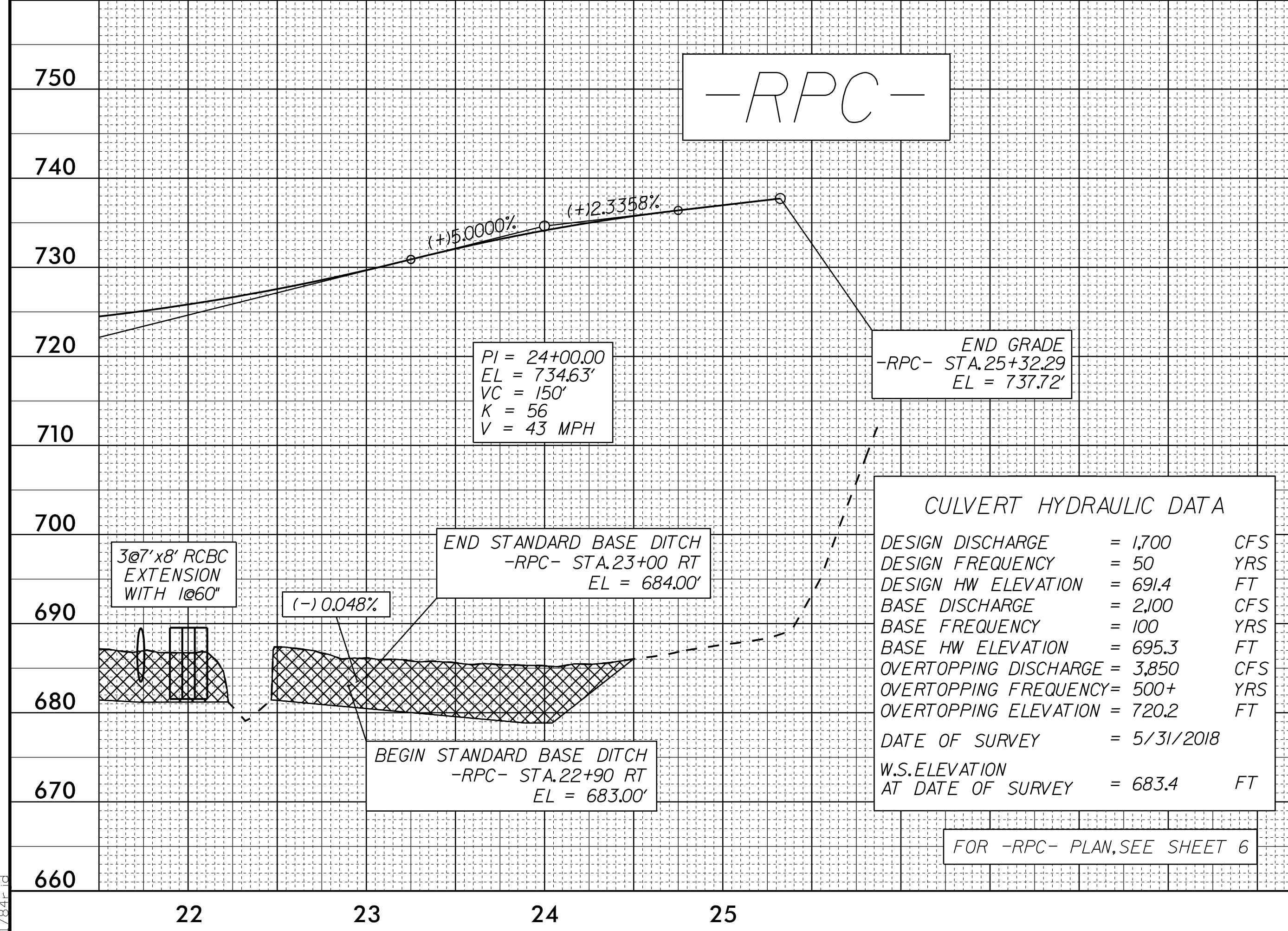
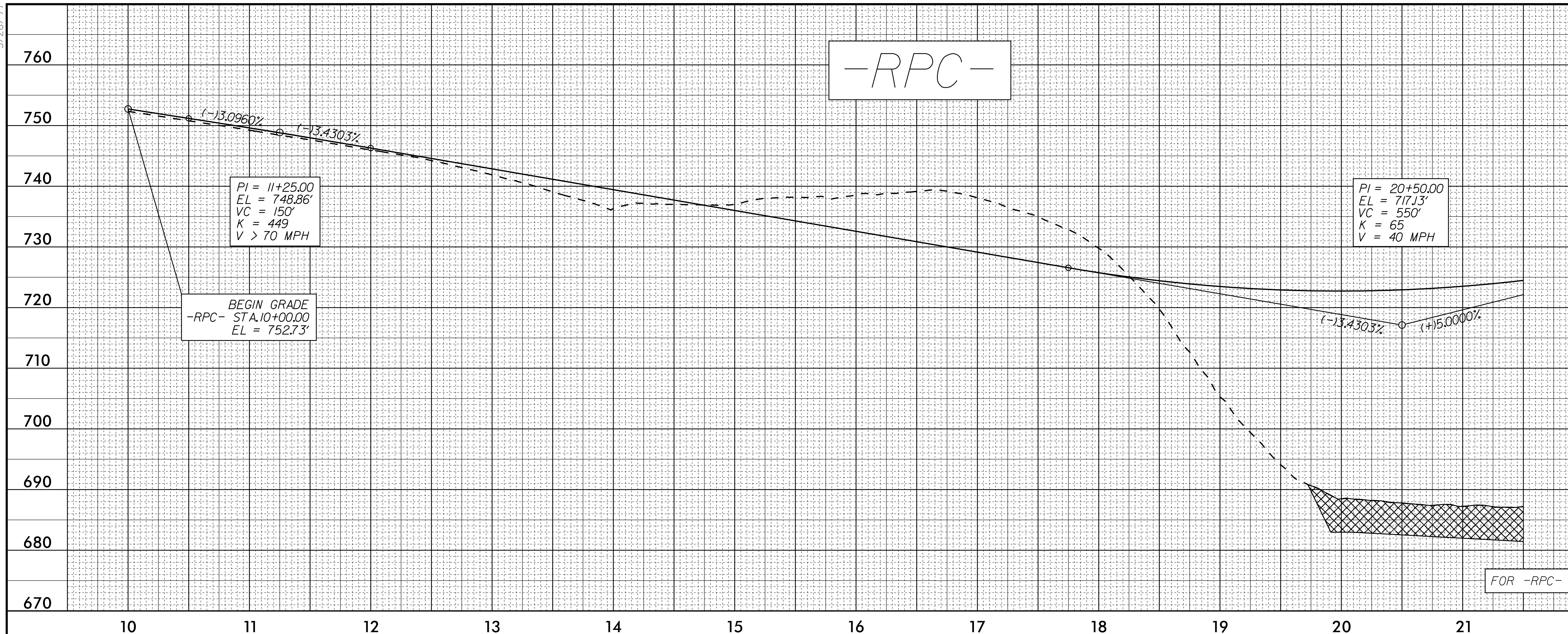
PROJECT REFERENCE NO. R-4707	SHEET NO. 19
ROADWAY DESIGN ENGINEER SEAL 034381 RICHARD DEOLA	HYDRAULICS ENGINEER SEAL 21656 ROGER WEAVER
4/17/2020	4/20/2020
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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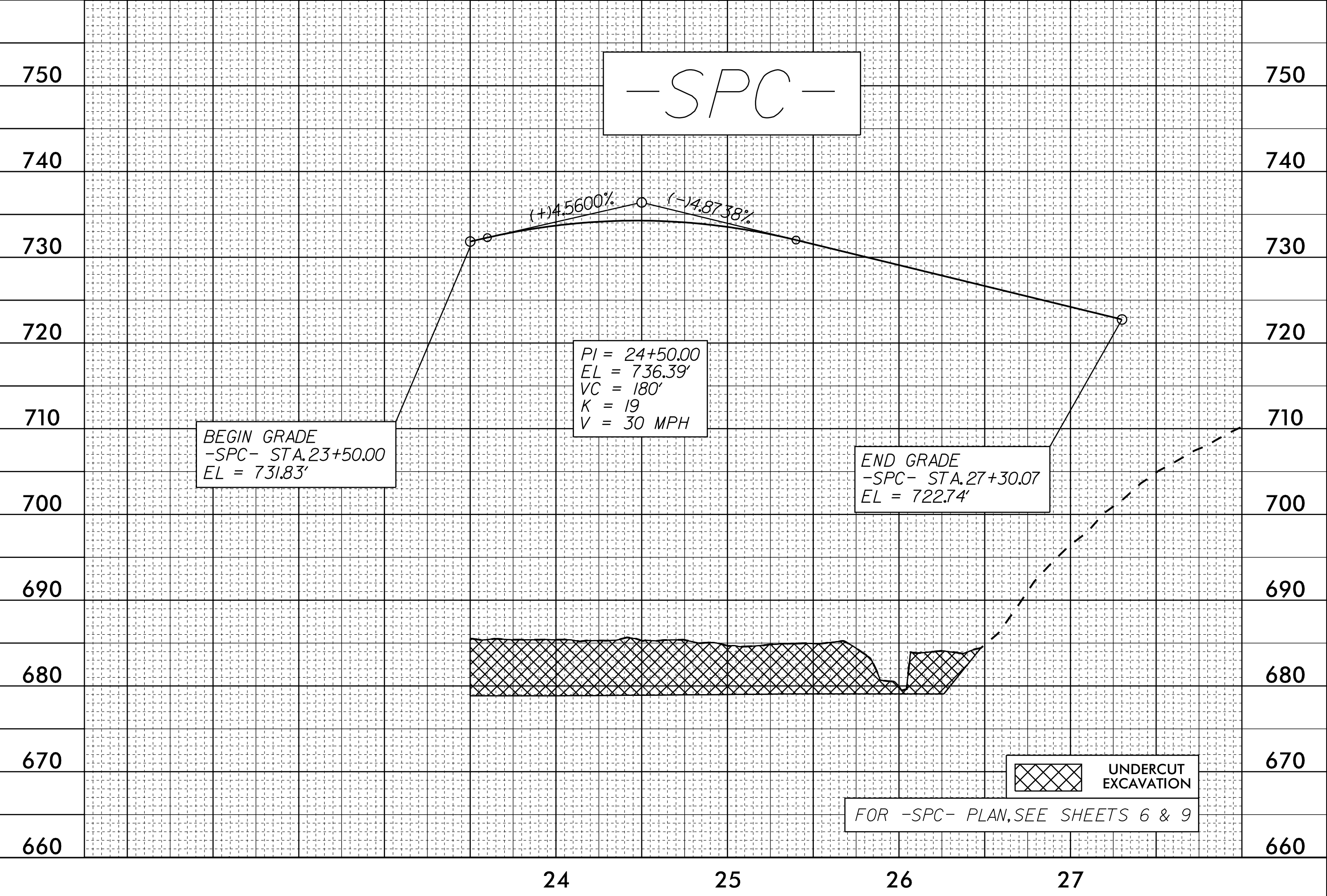
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PROJECT REFERENCE NO. R-4707	SHEET NO. 20
ROADWAY DESIGN ENGINEER RICHARD S. DELOACH SEAL 034381 4/17/2020	HYDRAULICS ENGINEER ROGER W. MEAD SEAL 21636 4/20/2020
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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CULVERT HYDRAULIC DATA

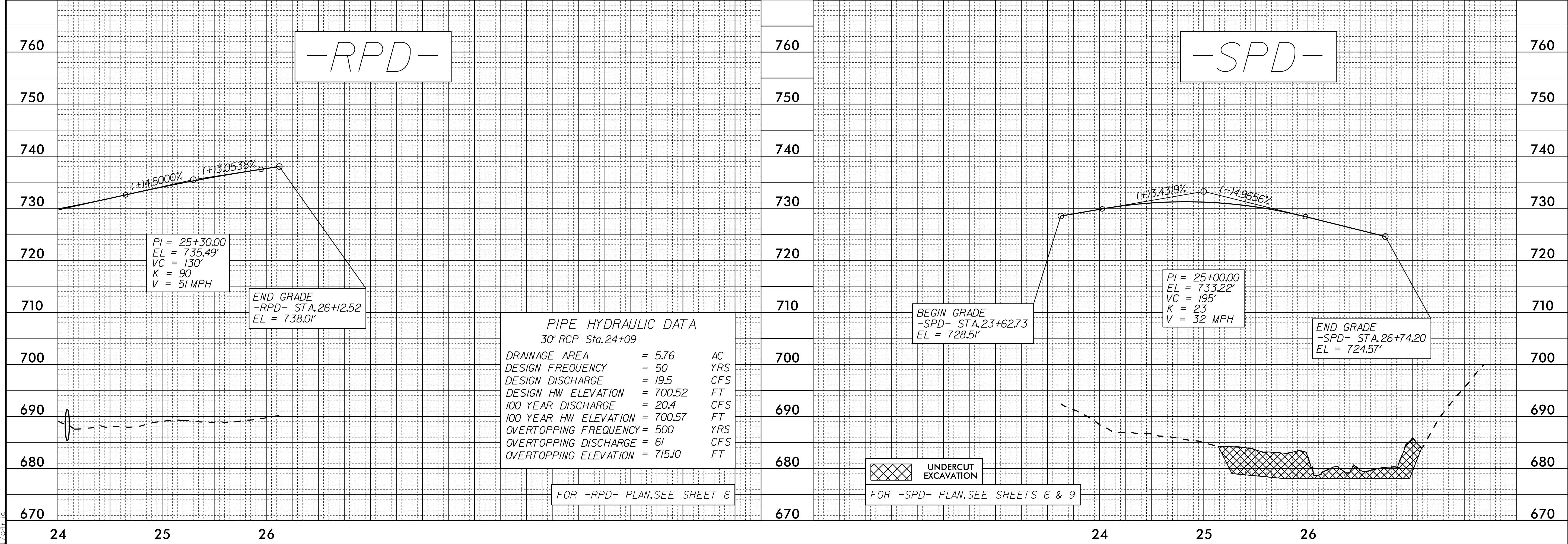
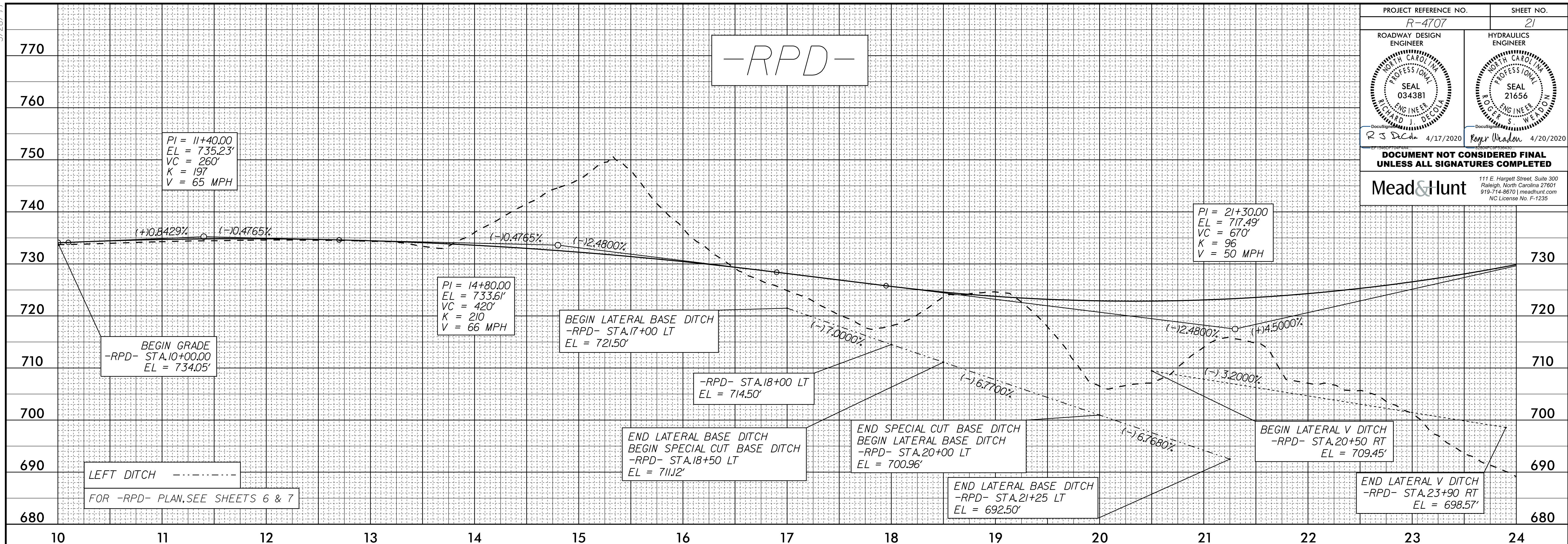
DESIGN DISCHARGE	= 1,700	CFS
DESIGN FREQUENCY	= 50	YRS
DESIGN HW ELEVATION	= 691.4	FT
BASE DISCHARGE	= 2,100	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 695.3	FT
OVERTOPPING DISCHARGE	= 3,850	CFS
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING ELEVATION	= 720.2	FT
DATE OF SURVEY	= 5/31/2018	
W.S. ELEVATION AT DATE OF SURVEY	= 683.4	FT



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 1784618

5/28/19

PROJECT REFERENCE NO. R-4707	SHEET NO. 21
ROADWAY DESIGN ENGINEER RICHARD DECOIA	HYDRAULICS ENGINEER R. S. DECOIA
SEAL 034381 4/17/2020	SEAL 21636 4/20/2020
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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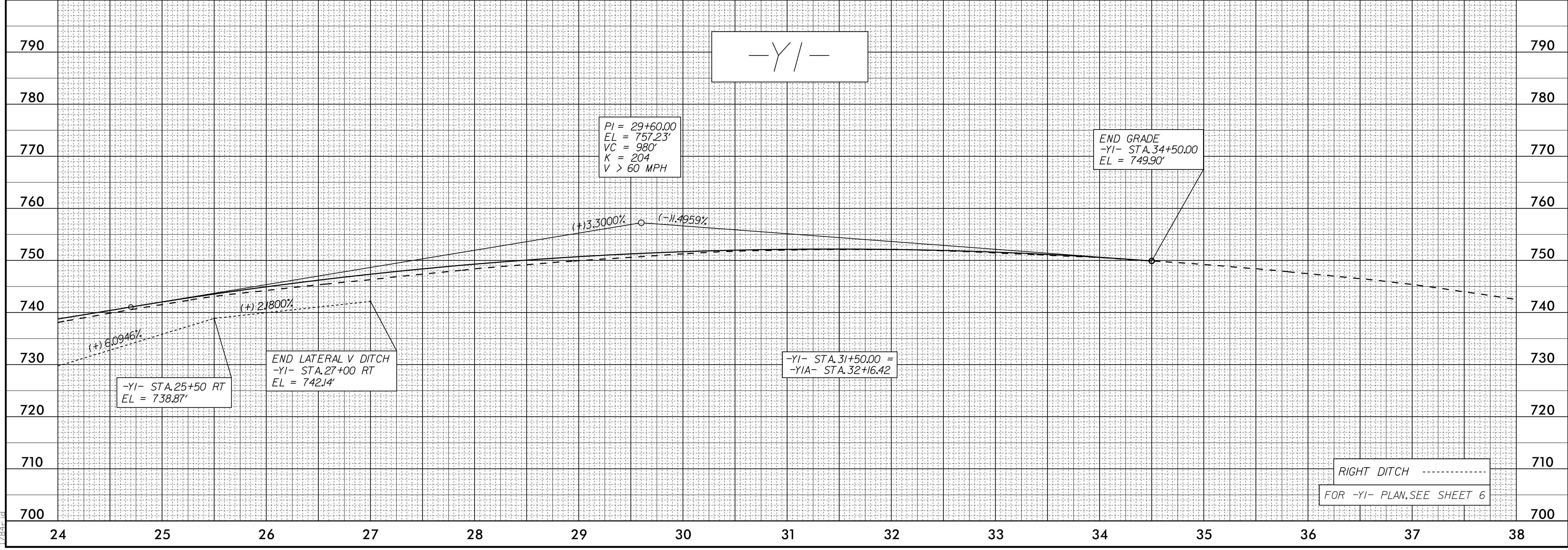
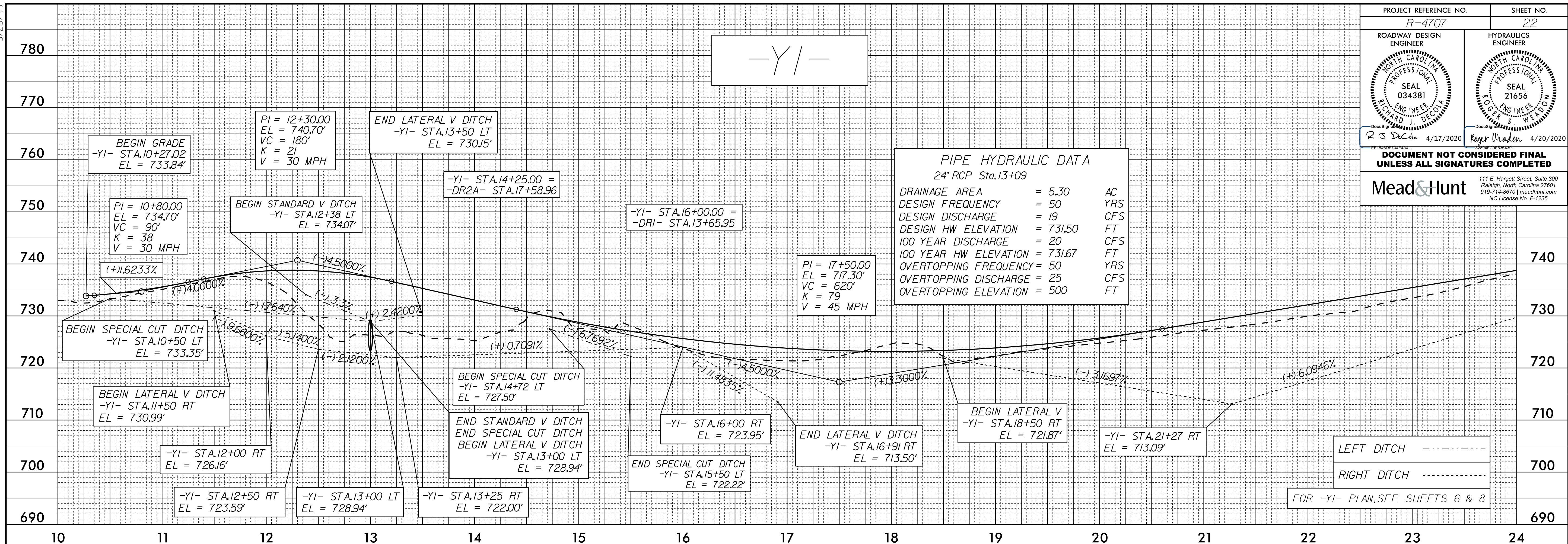
PIPE HYDRAULIC DATA
30" RCP Sta.24+09

DRAINAGE AREA	= 5.76	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 19.5	CFS
DESIGN HW ELEVATION	= 700.52	FT
100 YEAR DISCHARGE	= 20.4	CFS
100 YEAR HW ELEVATION	= 700.57	FT
OVERTOPPING FREQUENCY	= 500	YRS
OVERTOPPING DISCHARGE	= 61	CFS
OVERTOPPING ELEVATION	= 715.10	FT

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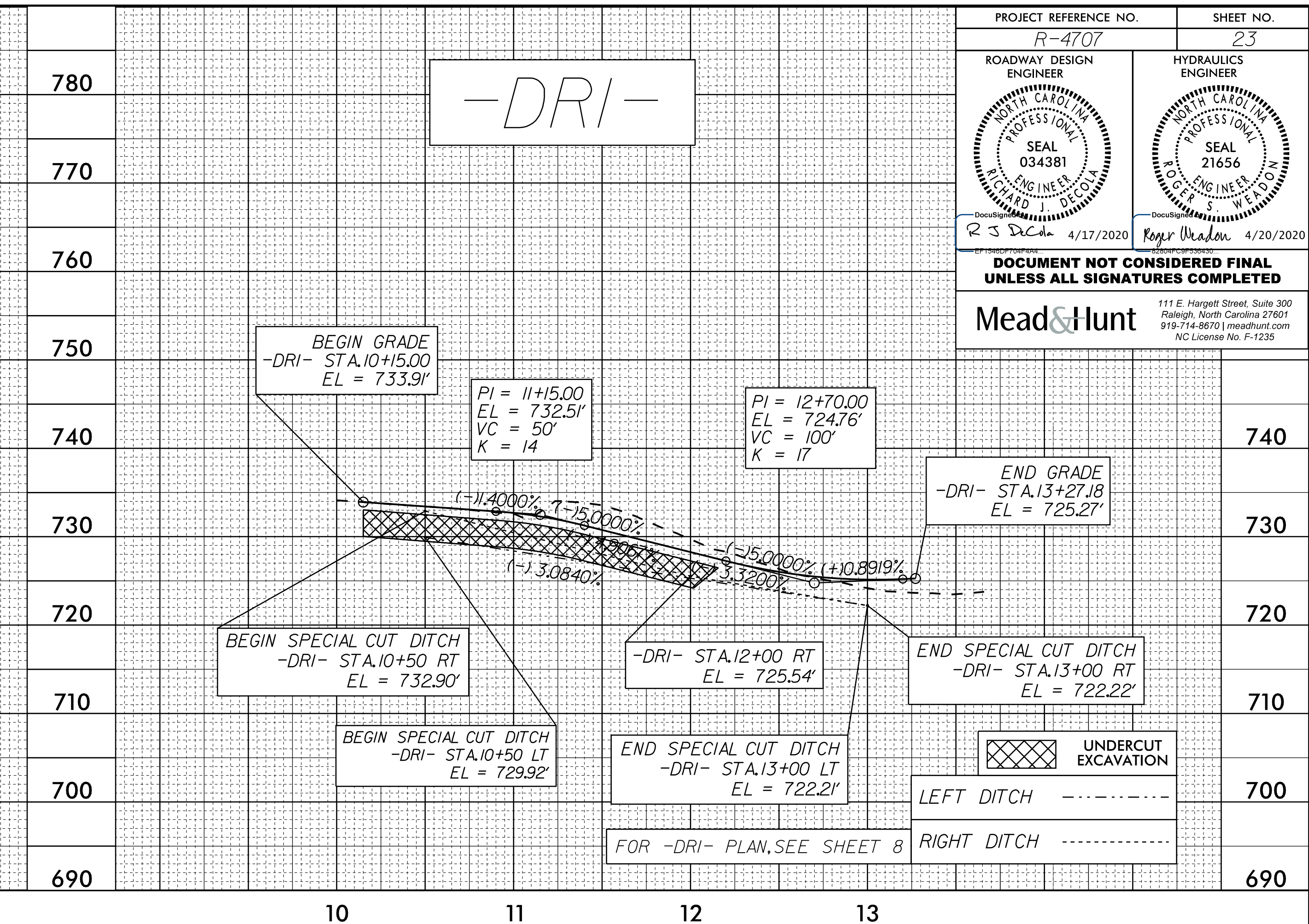
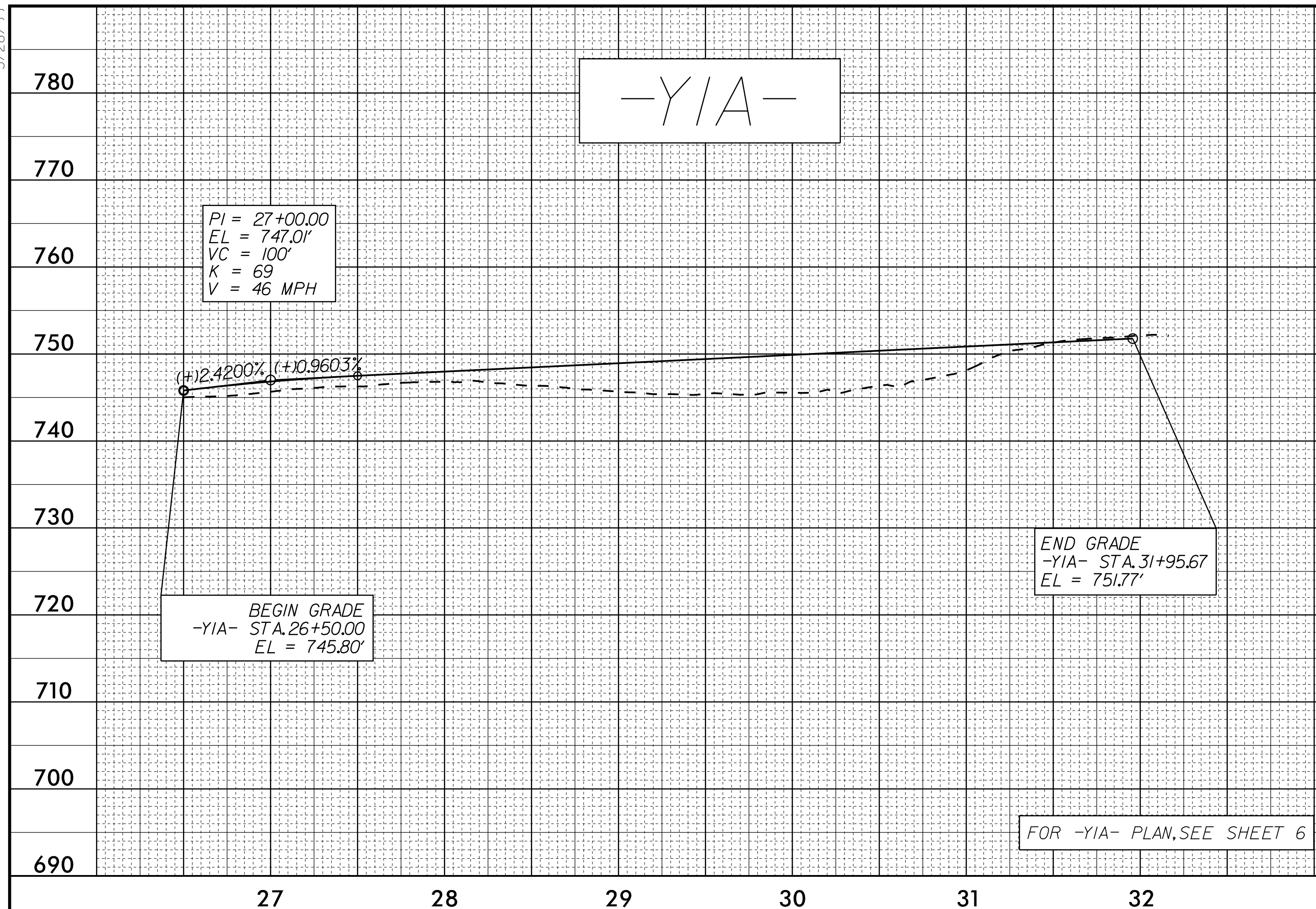
PROJECT REFERENCE NO. R-4707	SHEET NO. 22
ROADWAY DESIGN ENGINEER SEAL 034381 RICHARD DECOIA	HYDRAULICS ENGINEER SEAL 21636 ROGER WEAVER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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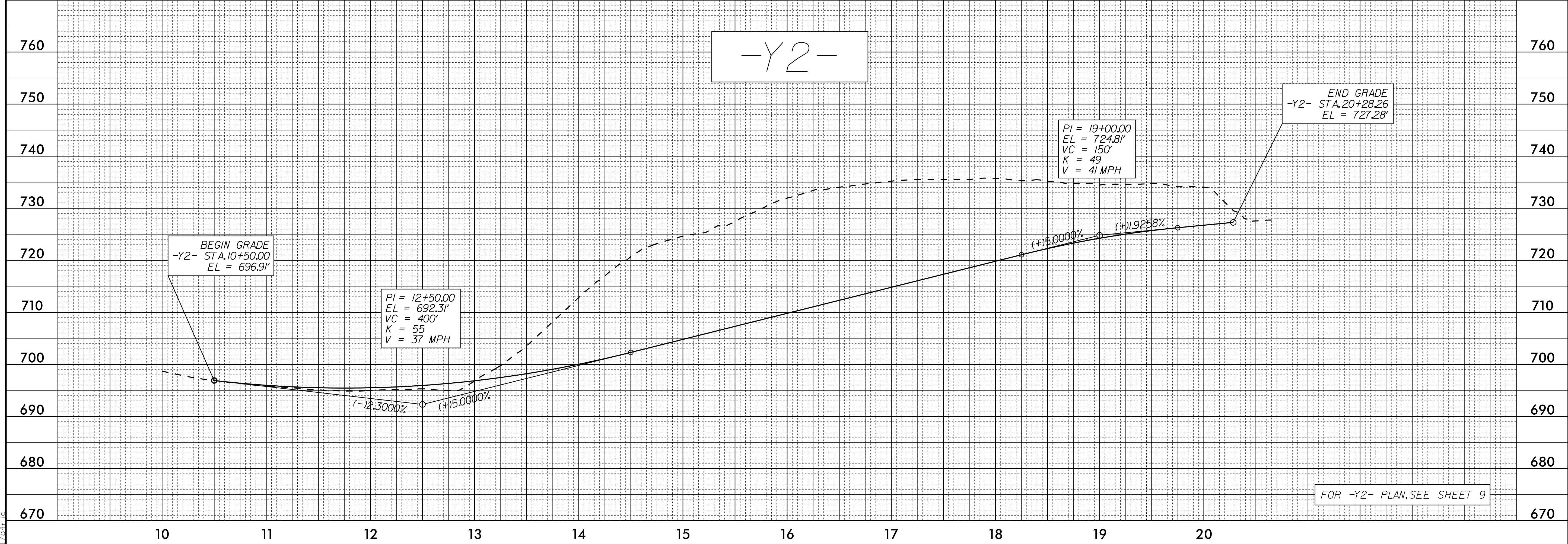
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5/28/19

PROJECT REFERENCE NO. R-4707	SHEET NO. 23
ROADWAY DESIGN ENGINEER RICHARD S. DELOACH SEAL 034381 4/17/2020	HYDRAULICS ENGINEER ROGER W. MEAD SEAL 21656 4/20/2020
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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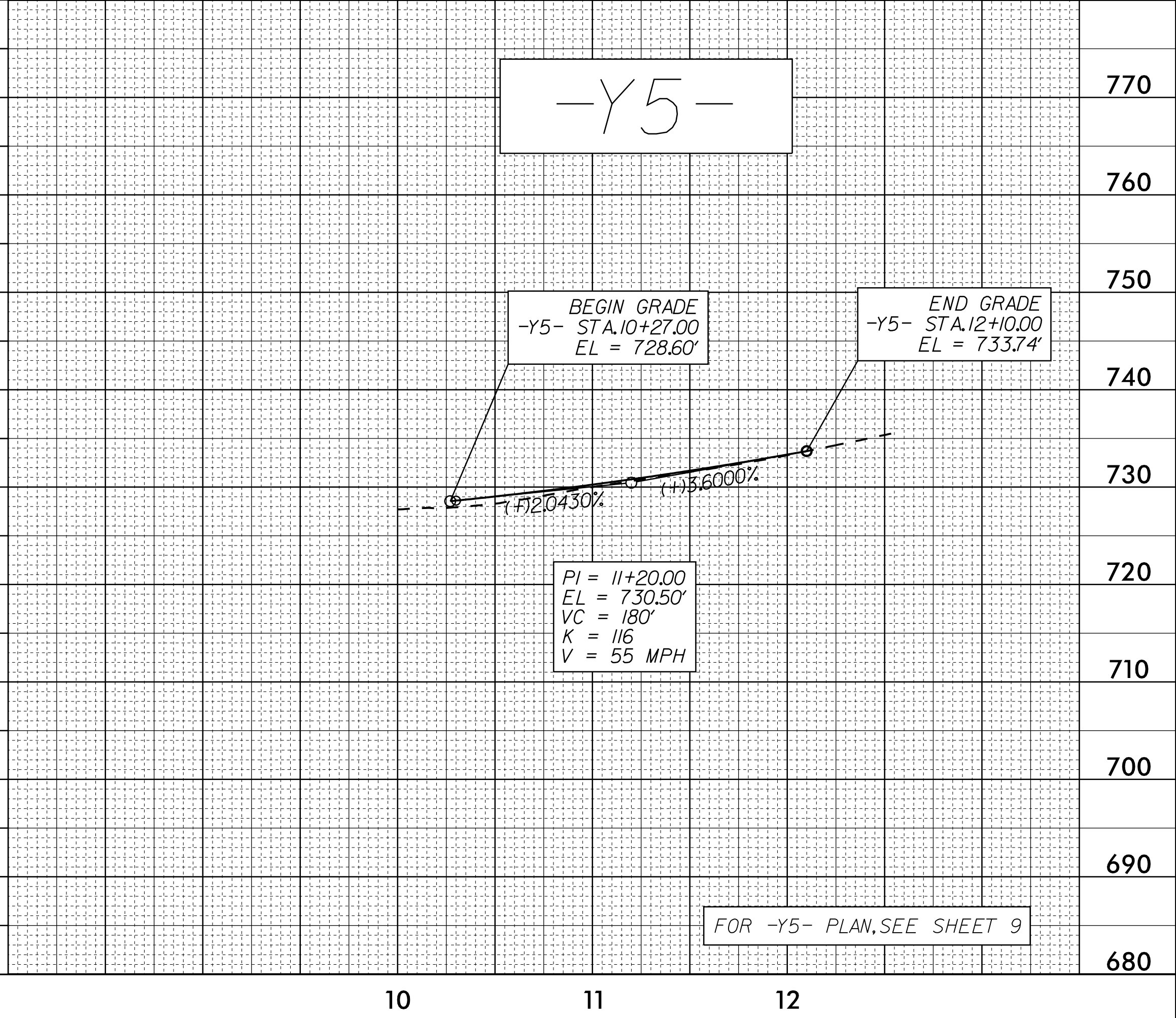
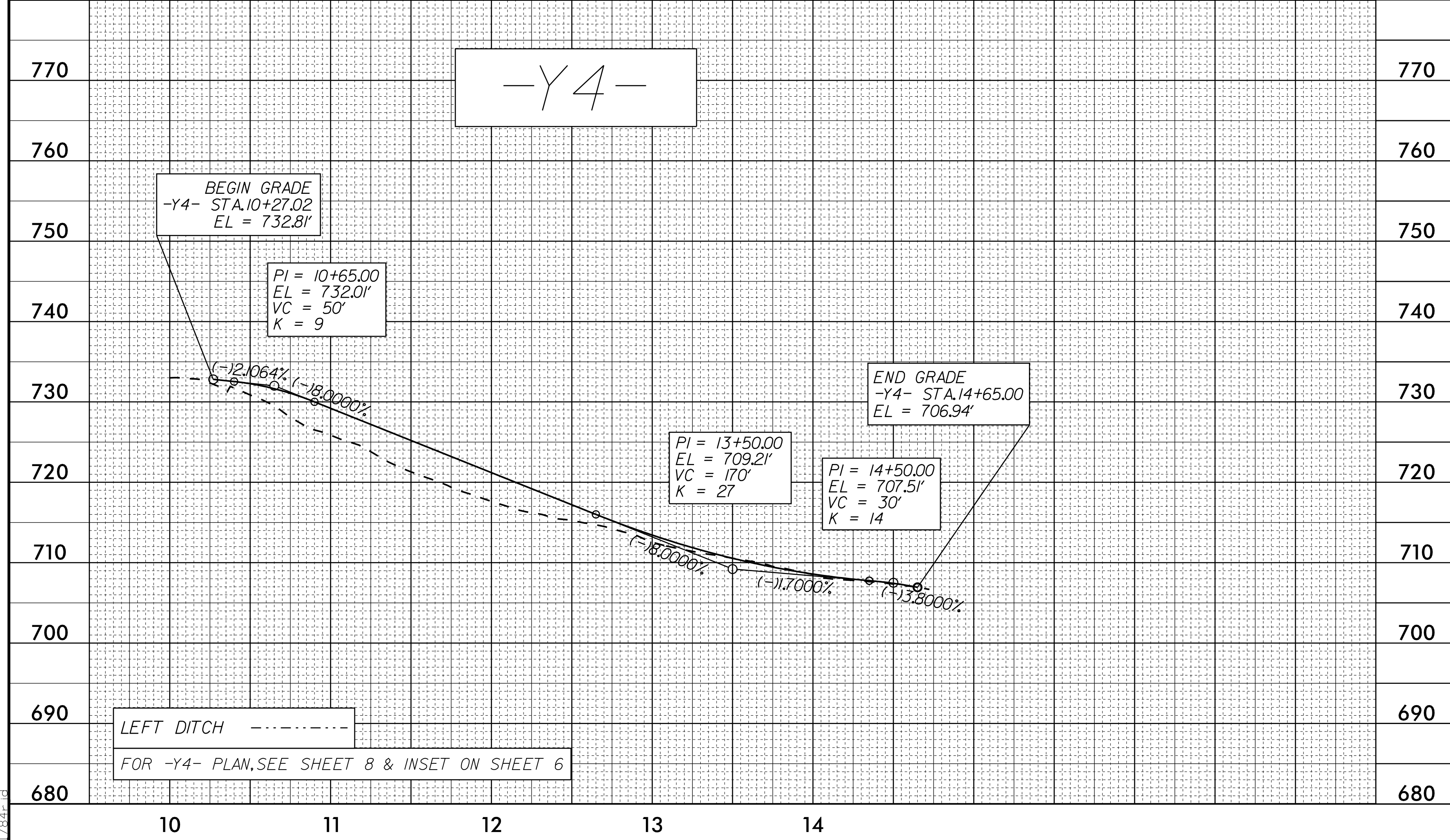
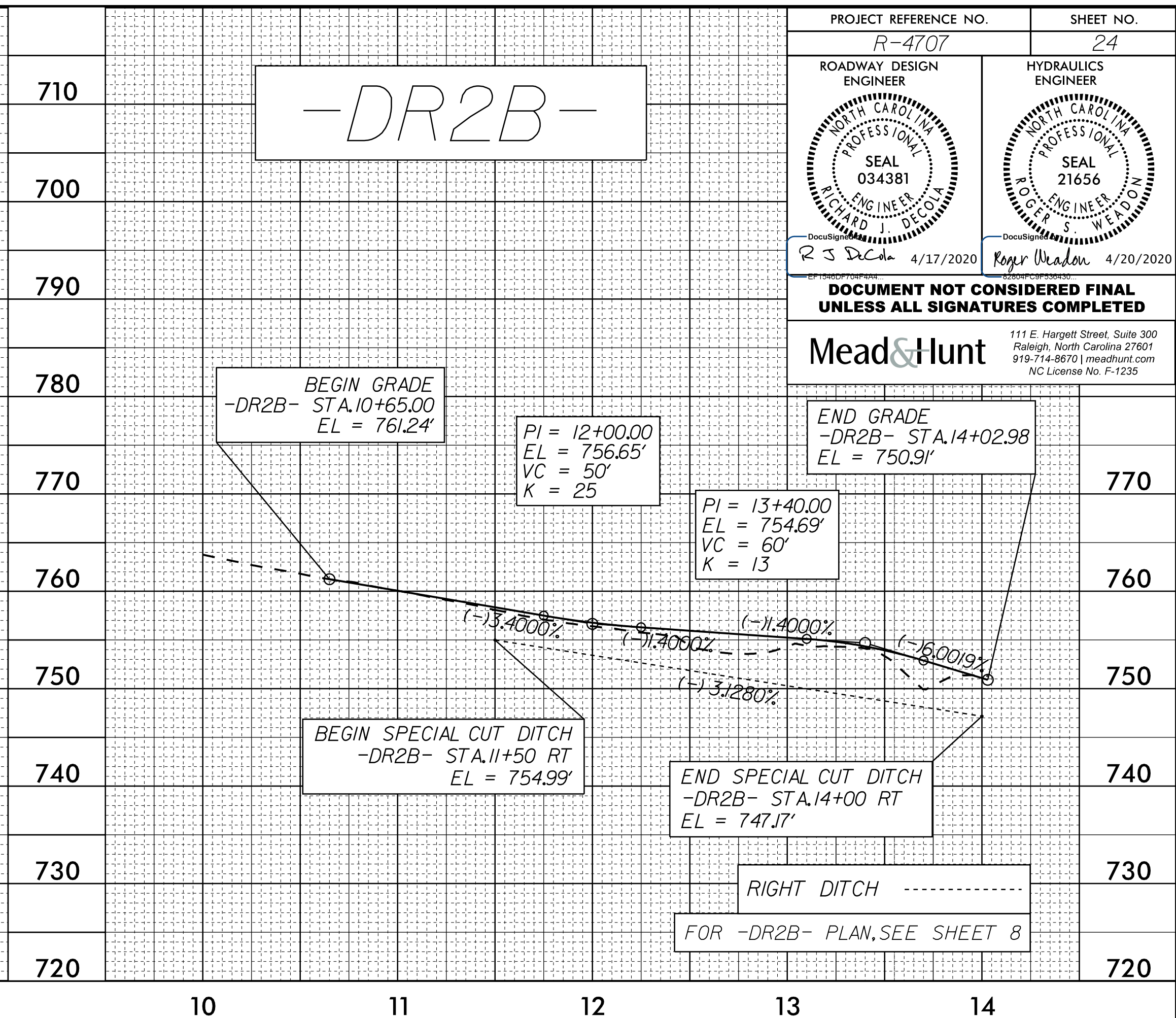
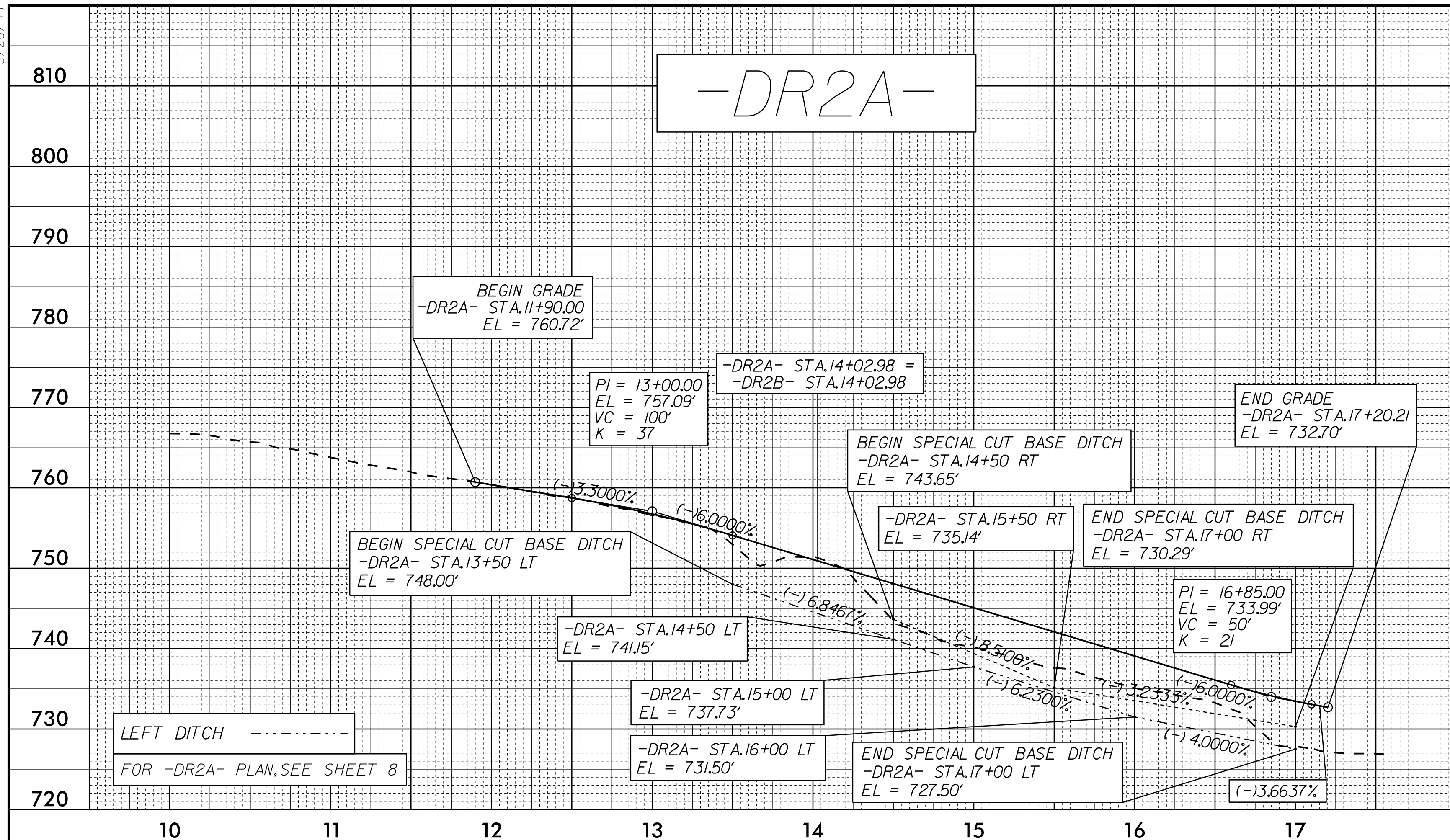


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5/28/20

PROJECT REFERENCE NO. R-4707	SHEET NO. 24
ROADWAY DESIGN ENGINEER RICHARD DELOACH SEAL 034381 4/17/2020	HYDRAULICS ENGINEER ROGER WEAVER SEAL 21656 4/20/2020
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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