

09.08/99

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

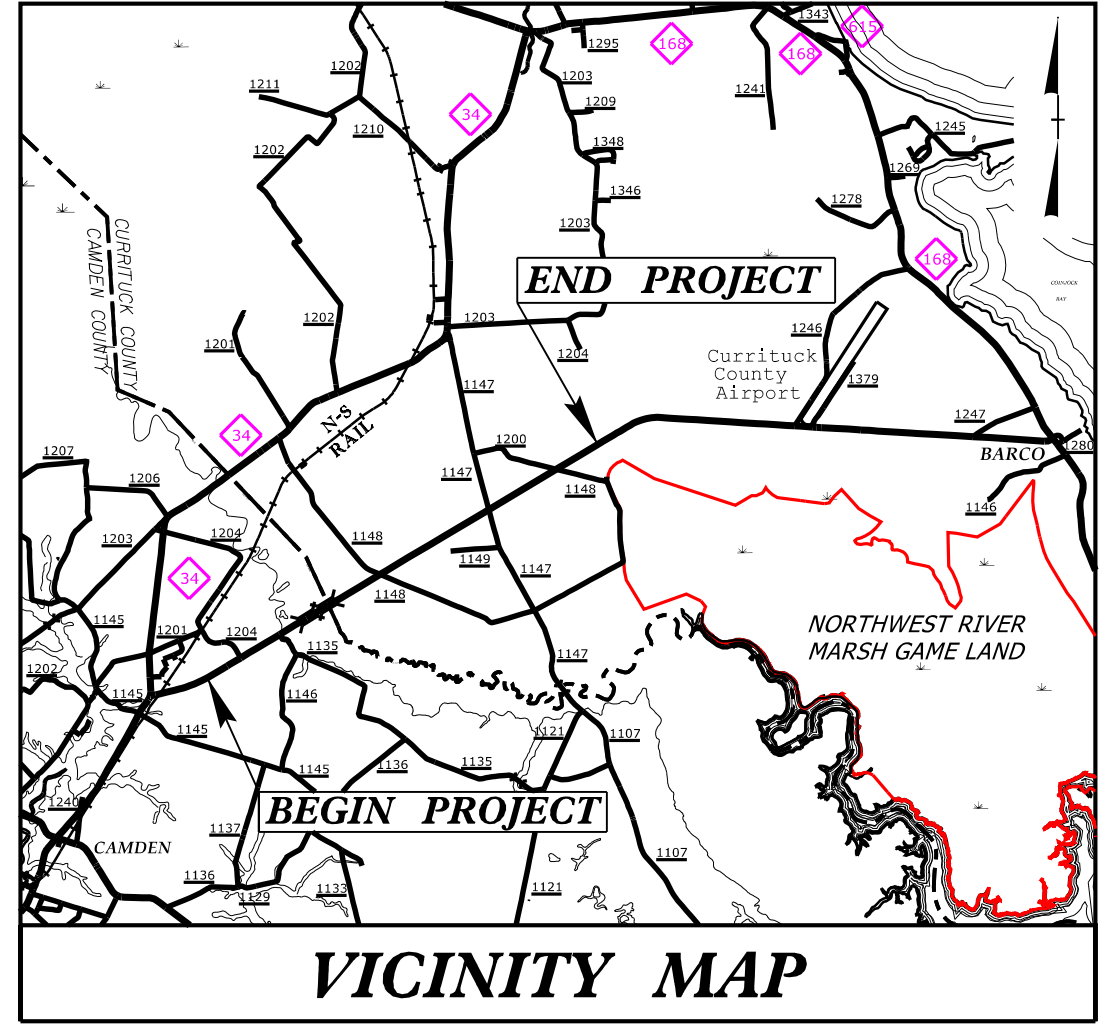
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2574A	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38802.1.2	N/A	PE	

CAMDEN & CURRITUCK COUNTIES

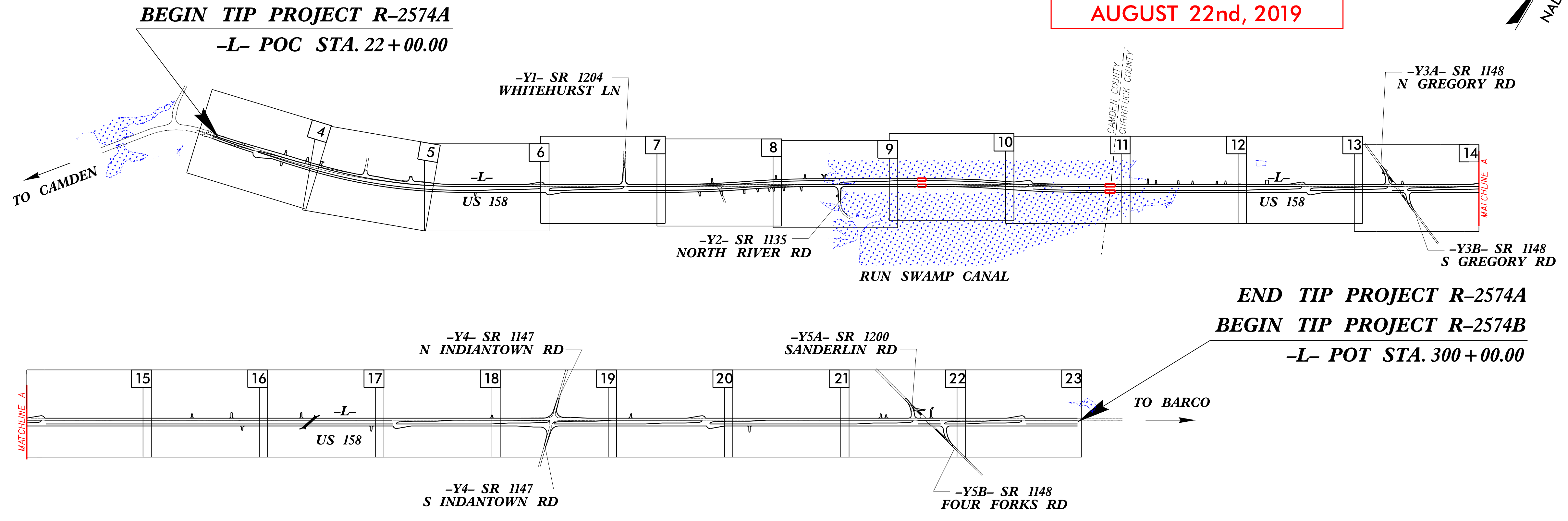
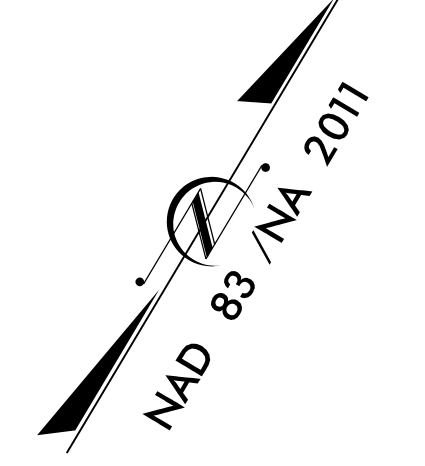
**LOCATION: US 158 FROM EAST OF NC 34 (SHAWBORO ROAD)
AT BELCROSS IN CAMDEN COUNTY TO EAST OF
SR 1200 (SANDERLIN ROAD) IN CURRITUCK COUNTY**
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURES

25% PLANS FOR REVIEW

TIP PROJECT: R-2574A



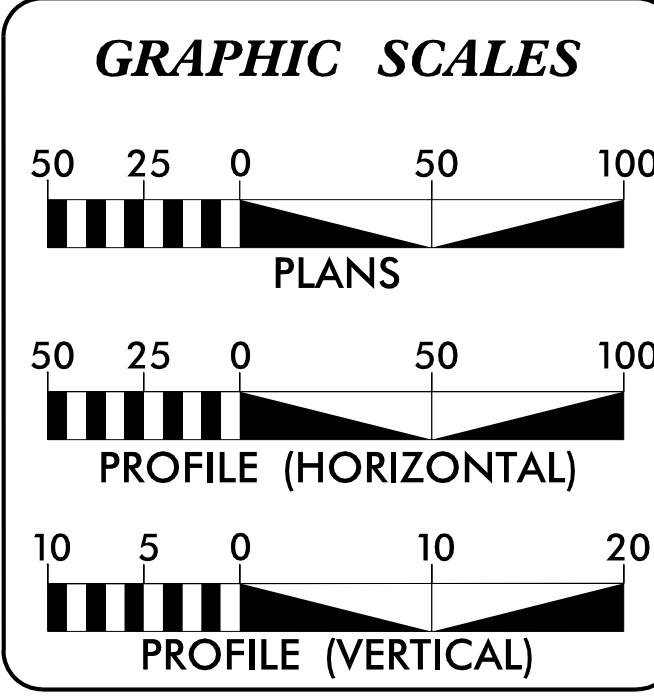
**CONCURRENCE POINT 4B
MEETING PLANS
AUGUST 22nd, 2019**



CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD ____.
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
THIS IS A PARTIAL CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS AS SHOWN ON THE PLANS.

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

CONTRACT:



DESIGN DATA

ADT 2024 =	9,100
ADT 2044 =	12,750
K =	9 %
D =	55 %
T =	6 % *
V =	60 MPH
* TTST 2%+ DUAL 4%	
FUNC CLASS =	MINOR ARTERIAL
	STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-2574A	=	5.223 MILES
LENGTH STRUCTURE TIP PROJECT R-2574A	=	0.042 MILES
TOTAL LENGTH TIP PROJECT R-2574A	=	5.265 MILES

Prepared for NCDOT in the Office of:

Mead&Hunt
133 Fayetteville Street, Suite 210
Raleigh, North Carolina 27601
919-714-8670 | meadhunt.com
NC License No. F-1235

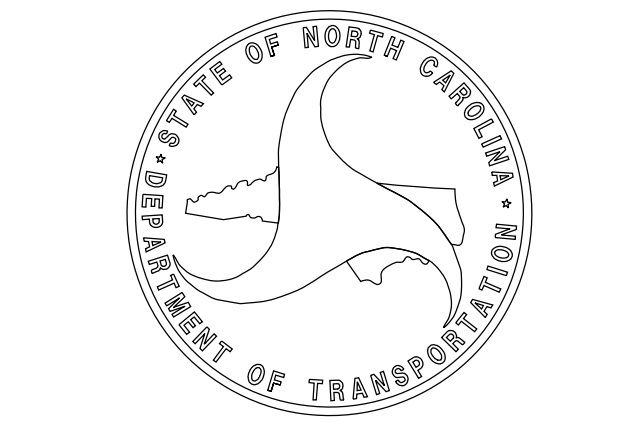
2018 STANDARD SPECIFICATIONS	
PRODUCTION RIGHT OF WAY DATE:	RICK DECOLA, PE PROJECT ENGINEER
NOVEMBER 15, 2019	TRAVIS COOK, PE PROJECT DESIGN ENGINEER
STIP LETTING DATE:	NICOLE HACKLER, PE NCDOT CONTACT
JULY 16, 2024	

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

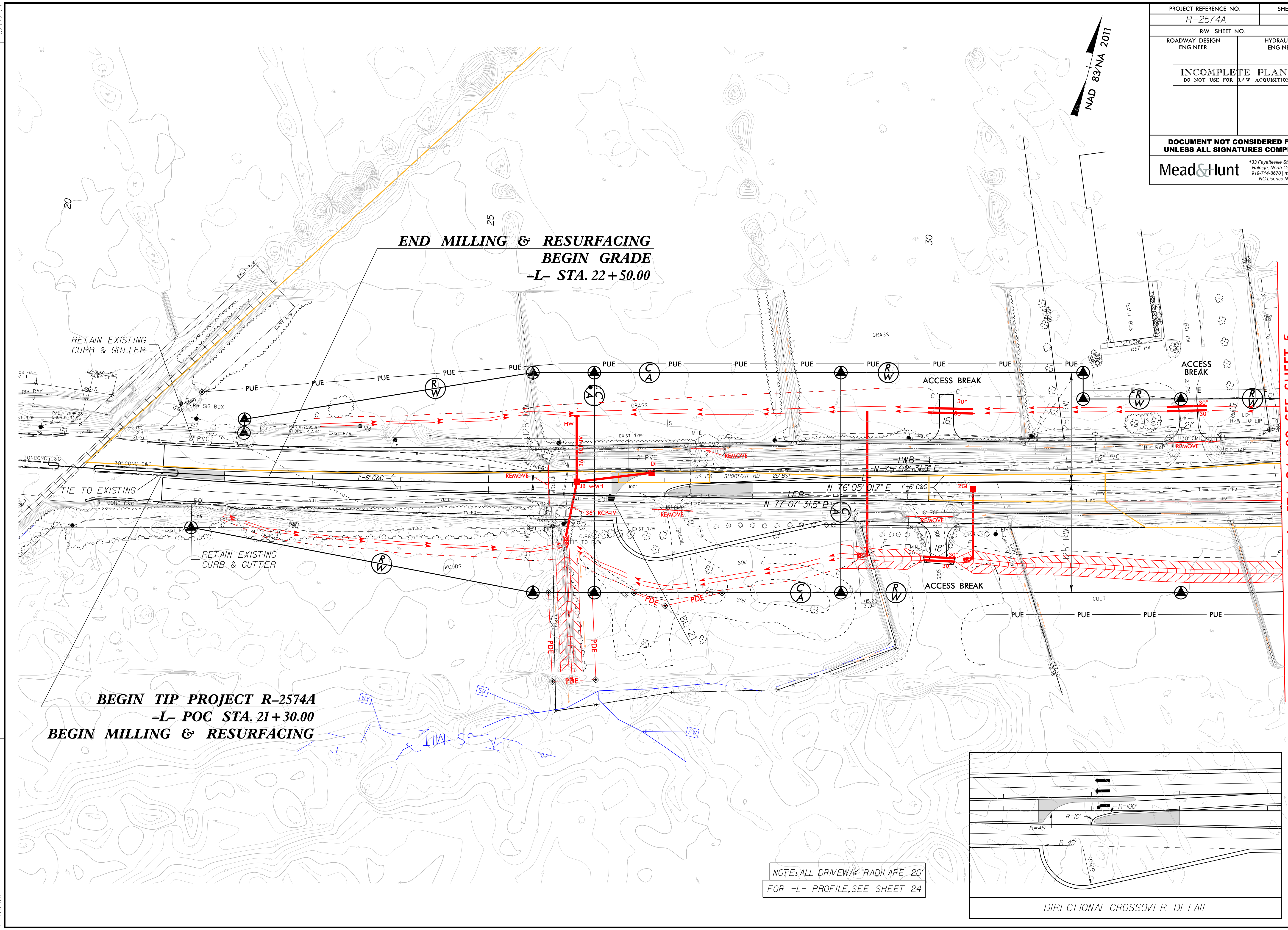
SIGNATURE: _____ P.E.



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PROJECT REFERENCE NO. <i>R-2574A</i>	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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NAD 83/NA 2011

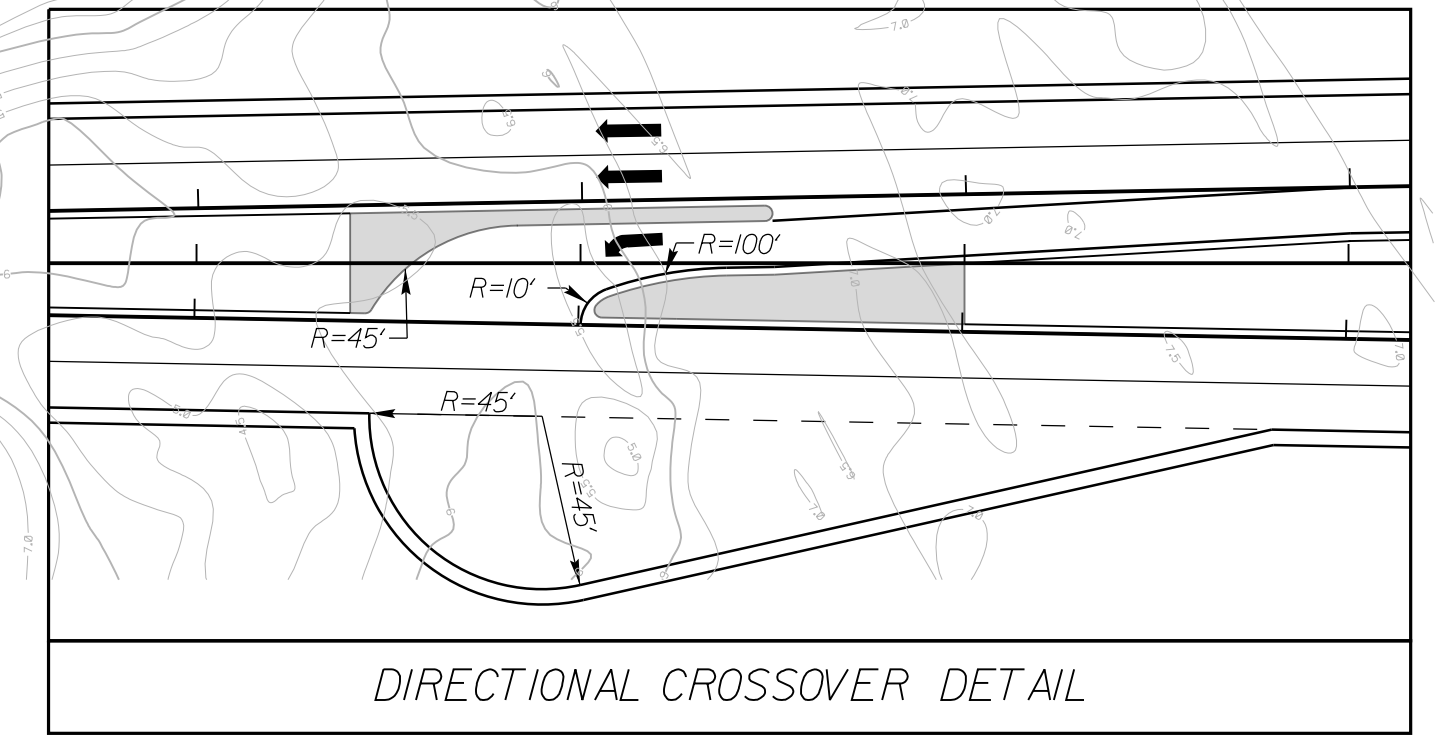


**END MILLING & RESURFACING
BEGIN GRADE
-L- STA. 22+50.00**

**BEGIN TIP PROJECT R-2574A
-L- POC STA. 21+30.00
BEGIN MILLING & RESURFACING**

MATCHLINE -L- STA. 34+00 SEE SHEET 5

NOTE: ALL DRIVEWAY RADII ARE 20'
FOR -L- PROFILE, SEE SHEET 24



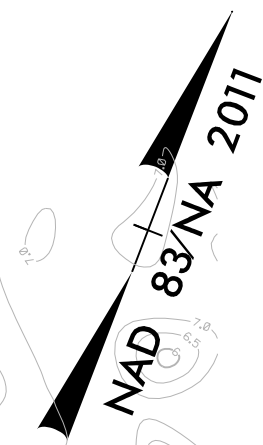
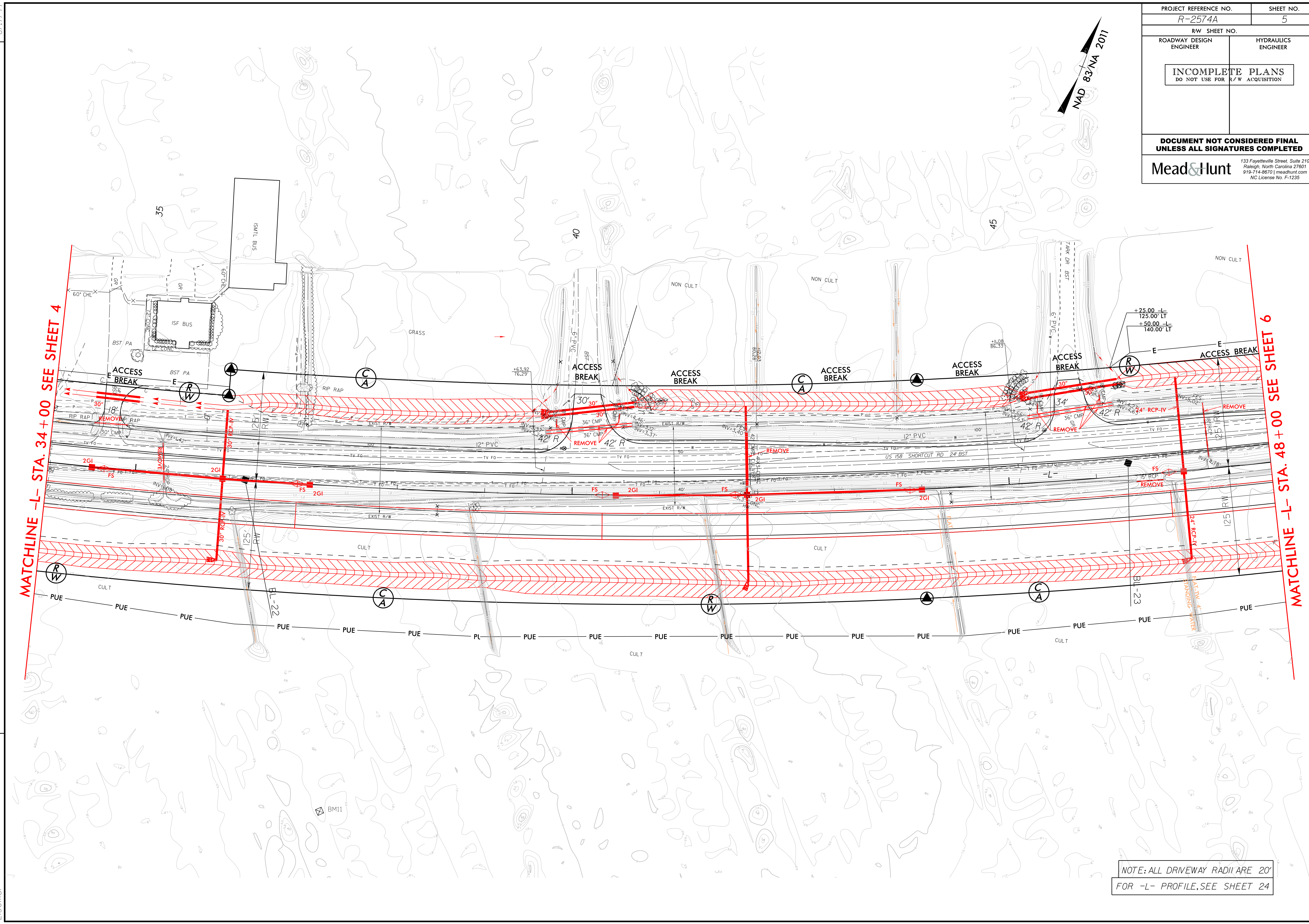
REVISIONS

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8/17/99

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REVISIONS



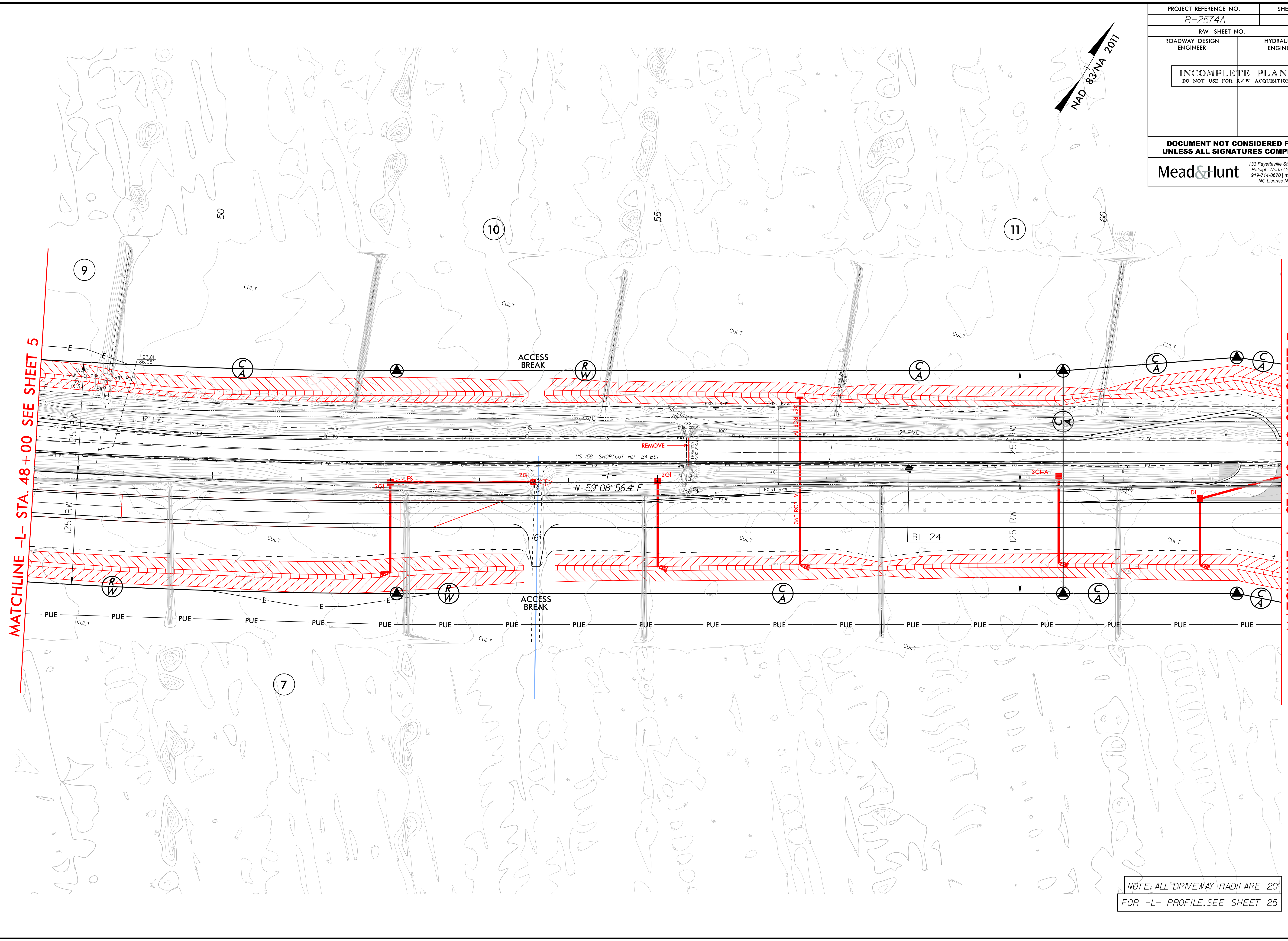
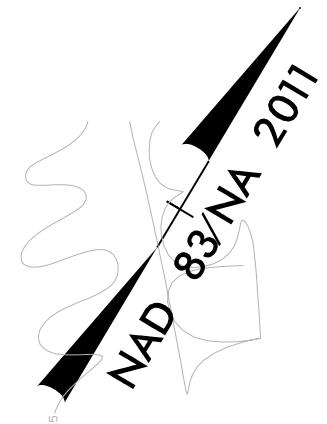
PROJECT REFERENCE NO. R-2574A	SHEET NO. 5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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MATCHLINE -L- STA. 34 + 00 SEE SHEET 4

MATCHLINE -L- STA. 48 + 00 SEE SHEET 6

NOTE: ALL DRIVEWAY RADII ARE 20'
 FOR -L- PROFILE, SEE SHEET 24

PROJECT REFERENCE NO. R-2574A	SHEET NO. 6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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MATCHLINE -L- STA. 48+00 SEE SHEET 5

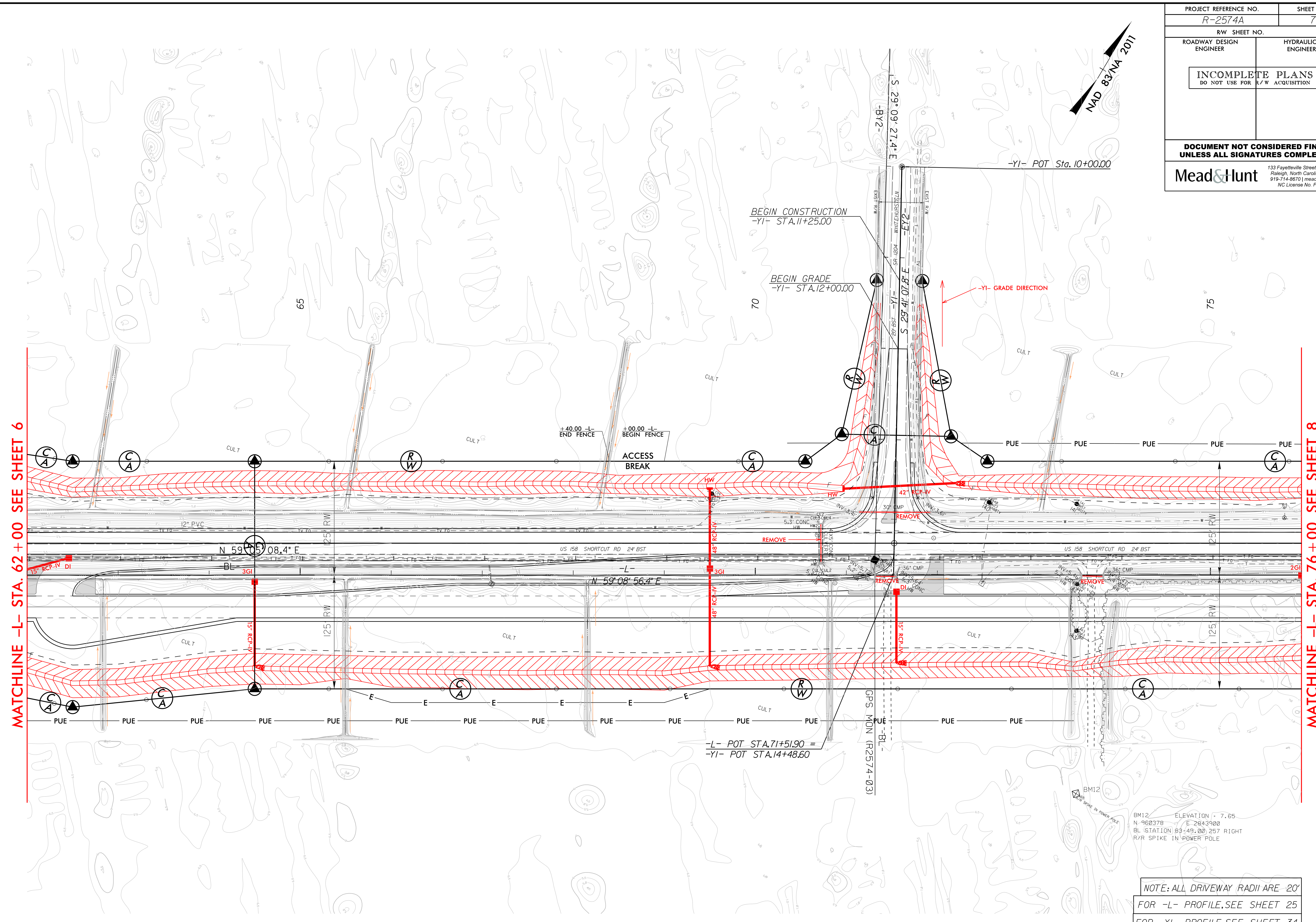
MATCHLINE -L- STA. 62+00 SEE SHEET 7

REVISIONS

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NOTE: ALL DRIVEWAY RADII ARE 20'
 FOR -L- PROFILE, SEE SHEET 25

PROJECT REFERENCE NO. R-2574A	SHEET NO. 7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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MATCHLINE -L- STA. 62 + 00 SEE SHEET 6

MATCHLINE -L- STA. 76 + 00 SEE SHEET 8

-L- POT STA. 71+51.90 =
-YI- POT STA. 14+48.60

NOTE: ALL DRIVEWAY RADII ARE 20'
FOR -L- PROFILE, SEE SHEET 25
FOR -YI- PROFILE, SEE SHEET 34

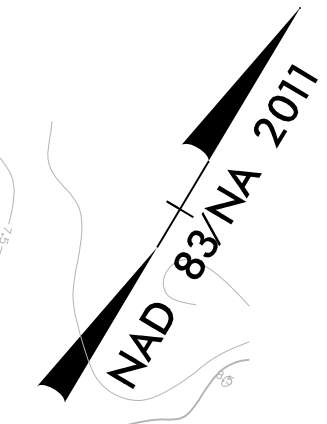
BM12 ELEVATION = 7.65
N 960378 E 2643900
BL STATION 89+49.00, 257 RIGHT
R/R SPIKE IN POWER POLE

REVISIONS

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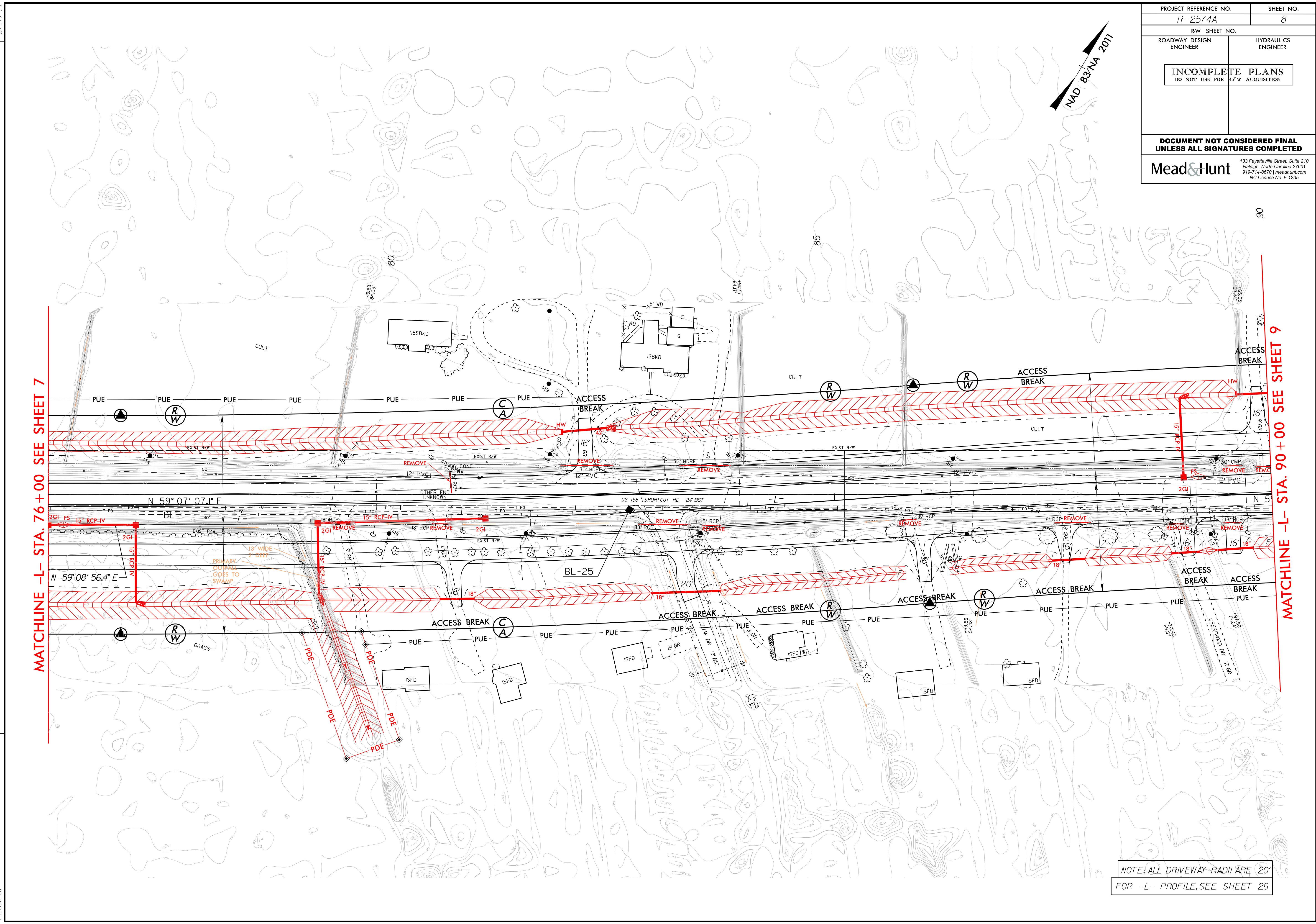
8/17/99

PROJECT REFERENCE NO. R-2574A	SHEET NO. 8
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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MATCHLINE -L- STA. 76+00 SEE SHEET 7

MATCHLINE -L- STA. 90+00 SEE SHEET 9



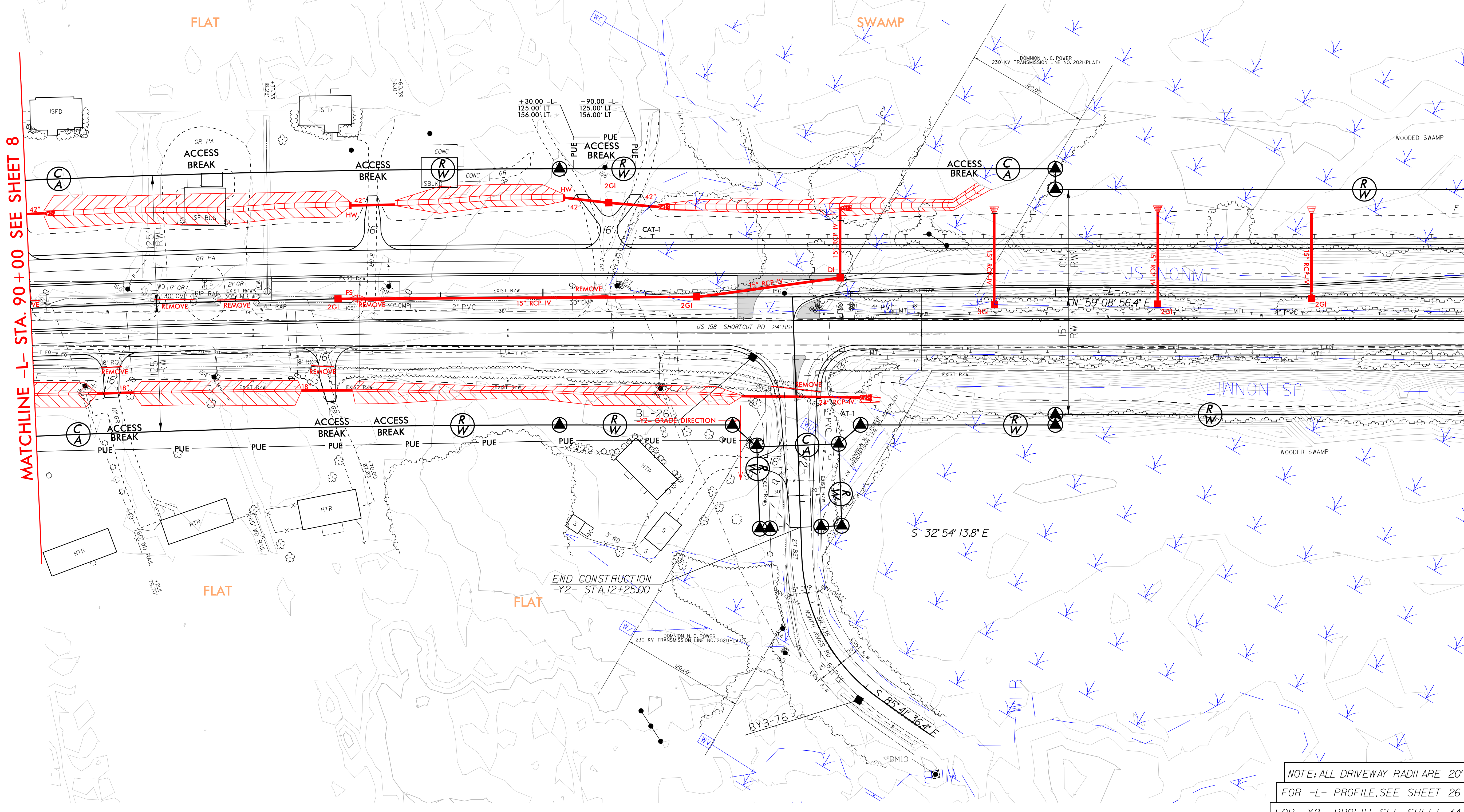
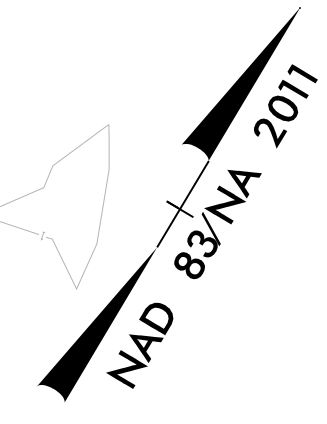
NOTE: ALL DRIVEWAY RADII ARE 20'
FOR -L- PROFILE, SEE SHEET 26

REVISIONS

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8/17/99

PROJECT REFERENCE NO. R-2574A	SHEET NO. 9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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MATCHLINE -L- STA. 90+00 SEE SHEET 8

MATCHLINE -L- STA. 104+00 SEE SHEET 10

REVISIONS

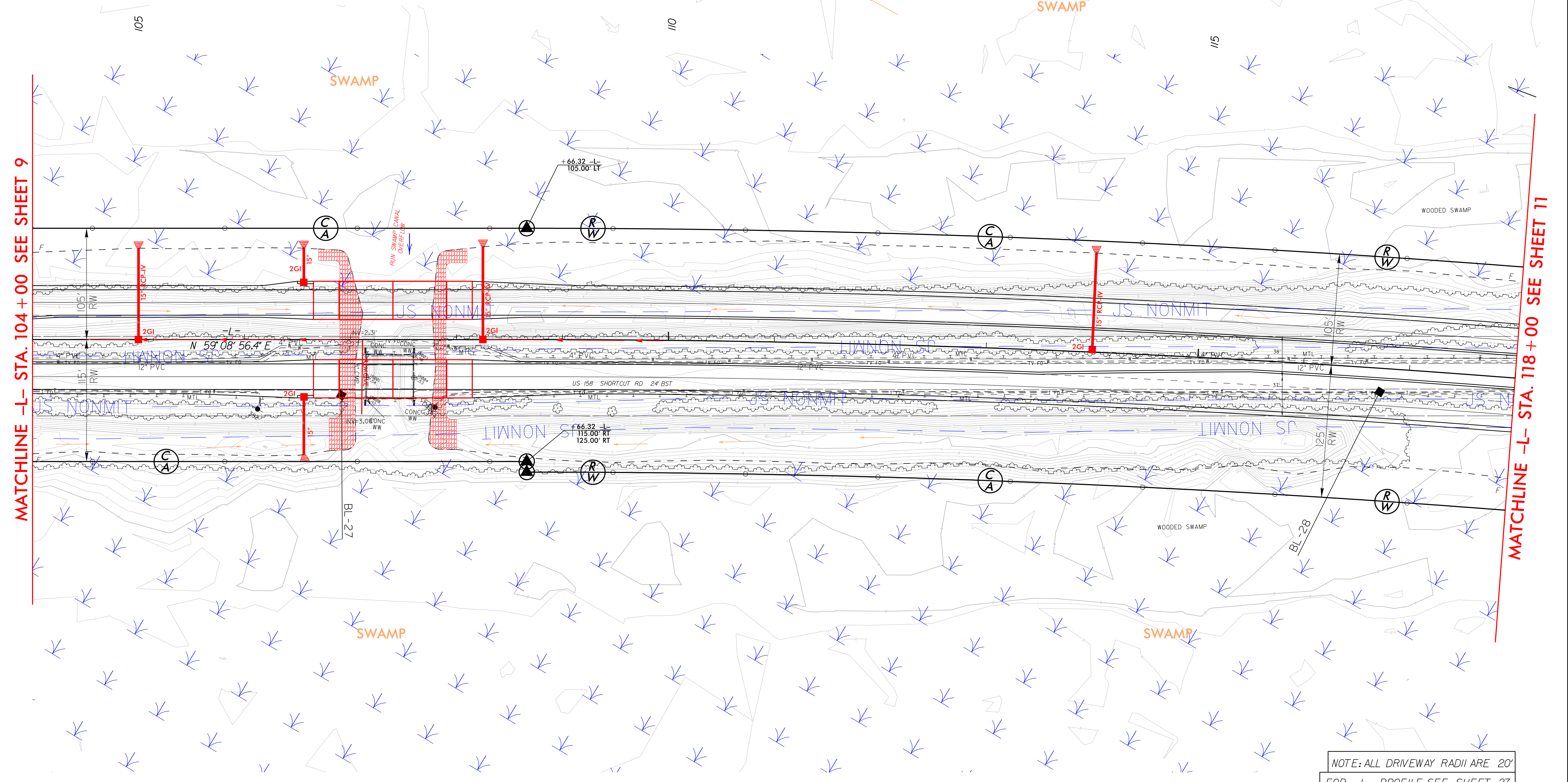
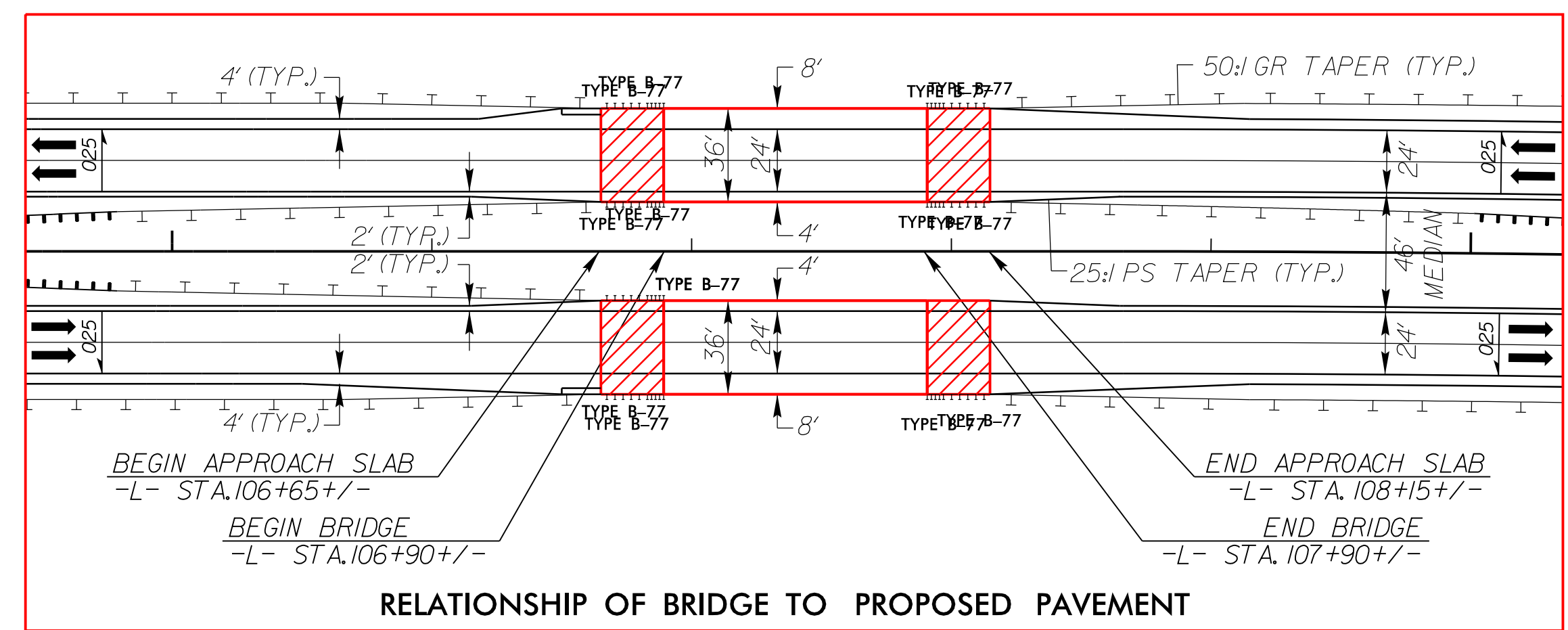
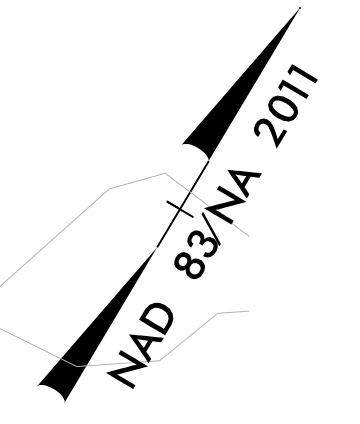
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NOTE: ALL DRIVEWAY RADII ARE 20'
FOR -L- PROFILE, SEE SHEET 26
FOR -Y2- PROFILE, SEE SHEET 34

8.17.99

8/17/99

PROJECT REFERENCE NO. R-2574A	SHEET NO. 10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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MATCHLINE -L- STA. 104 + 00 SEE SHEET 9

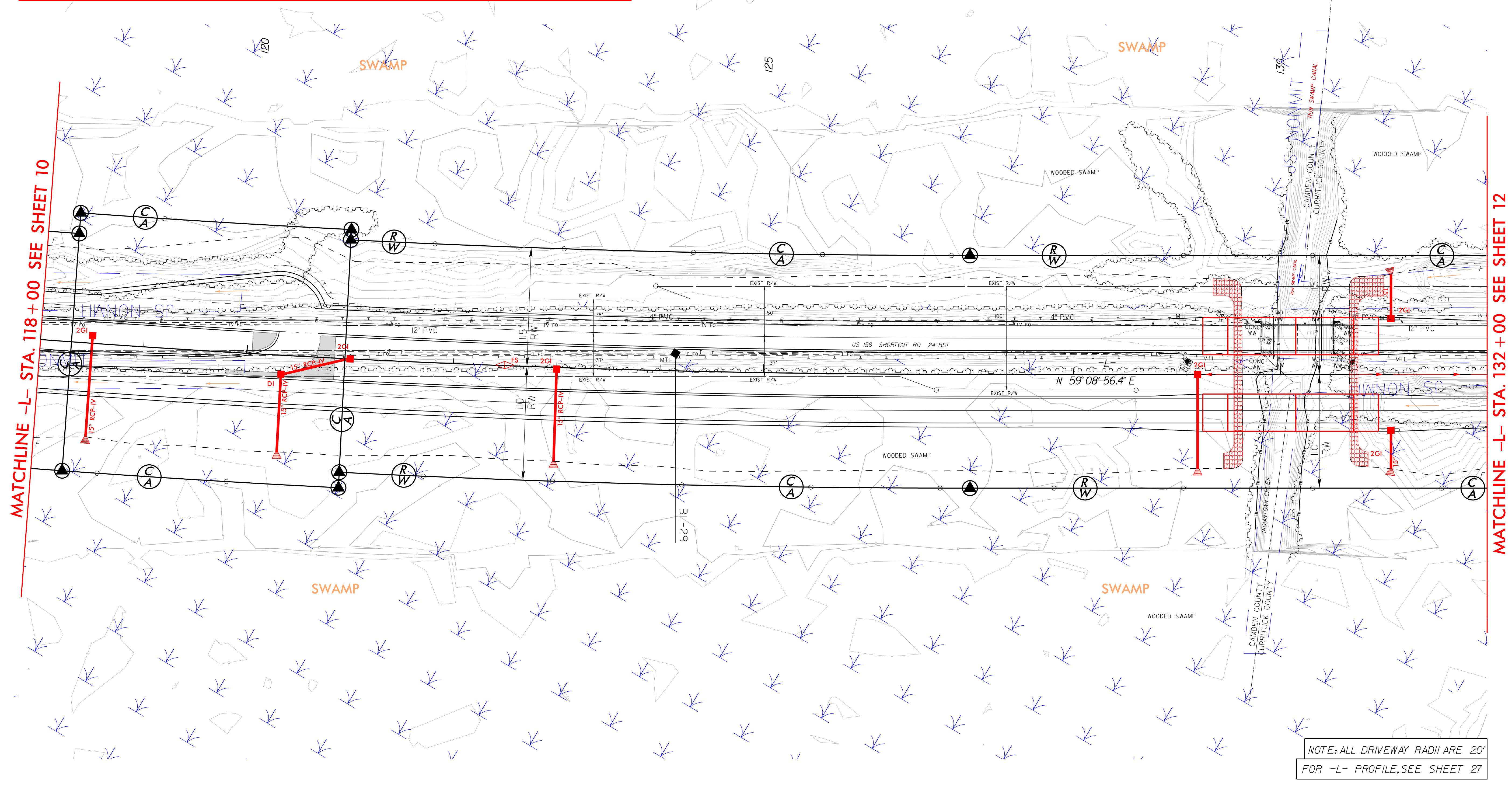
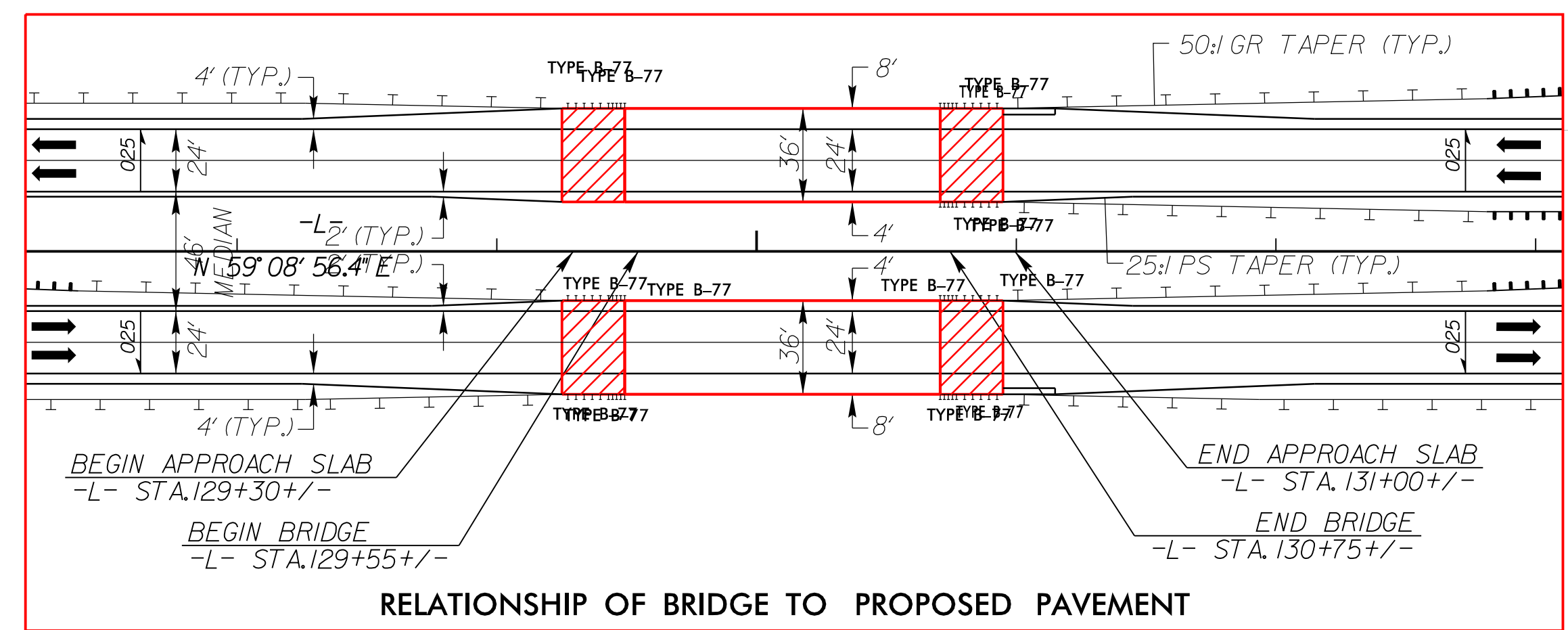
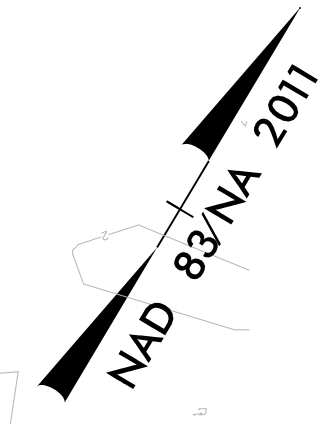
MATCHLINE -L- STA. 118 + 00 SEE SHEET 11

NOTE: ALL DRIVEWAY RADII ARE 20'
FOR -L- PROFILE, SEE SHEET 27

REVISIONS

07-AUG-2019 10:46
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PROJECT REFERENCE NO. R-2574A	SHEET NO. 11
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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MATCHLINE -L- STA. 118+00 SEE SHEET 10

MATCHLINE -L- STA. 132+00 SEE SHEET 12

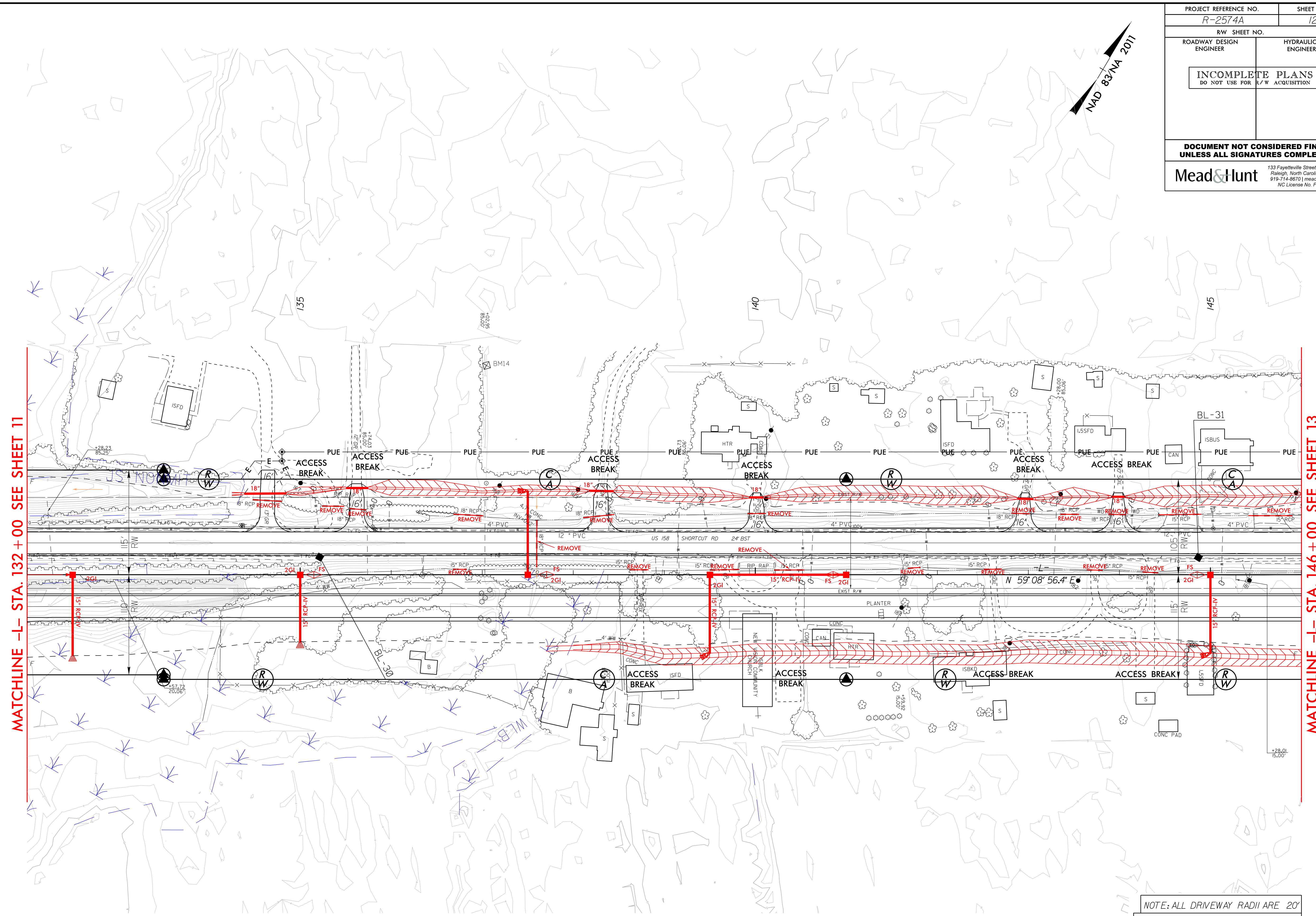
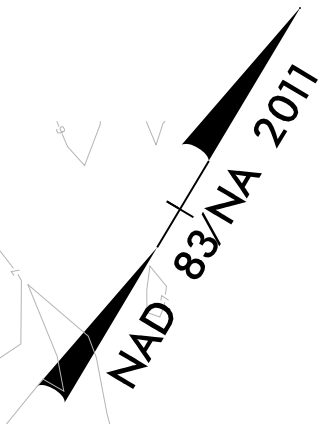
NOTE: ALL DRIVEWAY RADII ARE 20'
FOR -L- PROFILE, SEE SHEET 27

REVISIONS

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Z130msr

8.17.99

PROJECT REFERENCE NO. R-2574A	SHEET NO. 12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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MATCHLINE -L- STA. 132 + 00 SEE SHEET 11

MATCHLINE -L- STA. 146 + 00 SEE SHEET 13

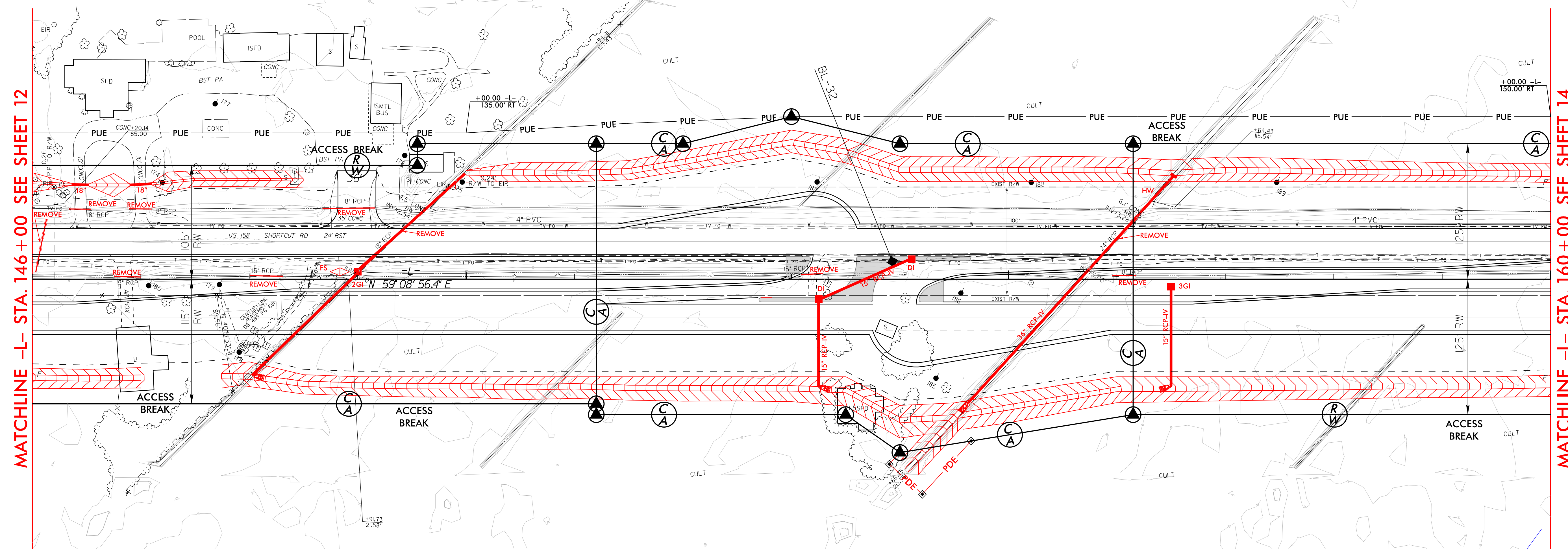
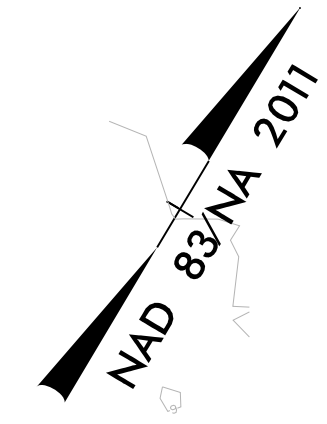
NOTE: ALL DRIVEWAY RADII ARE 20'
 FOR -L- PROFILE, SEE SHEET 28

REVISIONS

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8/17/99

PROJECT REFERENCE NO. R-2574A	SHEET NO. 13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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MATCHLINE -L- STA. 146 + 00 SEE SHEET 12

MATCHLINE -L- STA. 160 + 00 SEE SHEET 14

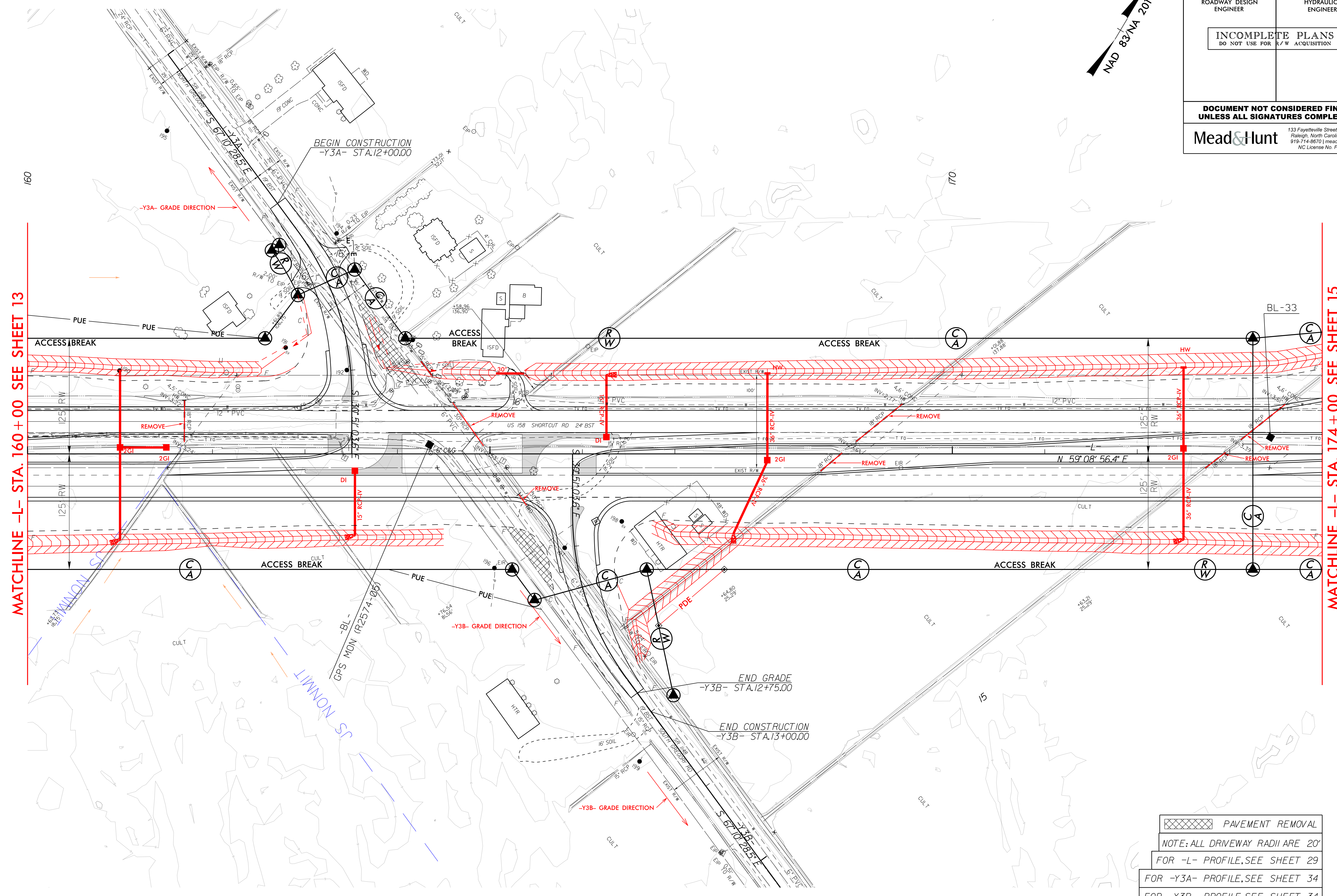
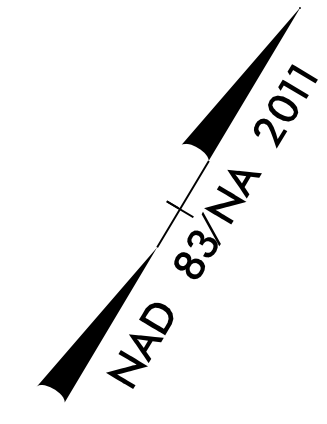
REVISIONS

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NOTE: ALL DRIVEWAY RADII ARE 20'
 FOR -L- PROFILE, SEE SHEET 28

8/17/99

PROJECT REFERENCE NO. R-2574A	SHEET NO. 14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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MATCHLINE -L- STA. 160 + 00 SEE SHEET 13

MATCHLINE -L- STA. 174 + 00 SEE SHEET 15

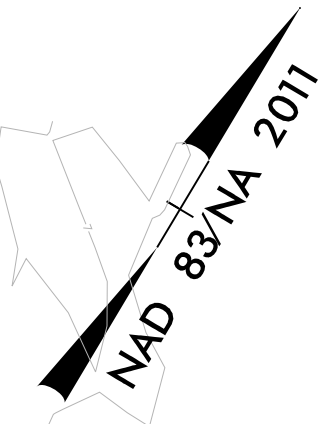
PAVEMENT REMOVAL
NOTE: ALL DRIVEWAY RADII ARE 20'
FOR -L- PROFILE, SEE SHEET 29
FOR -Y3A- PROFILE, SEE SHEET 34
FOR -Y3B- PROFILE, SEE SHEET 34

REVISIONS

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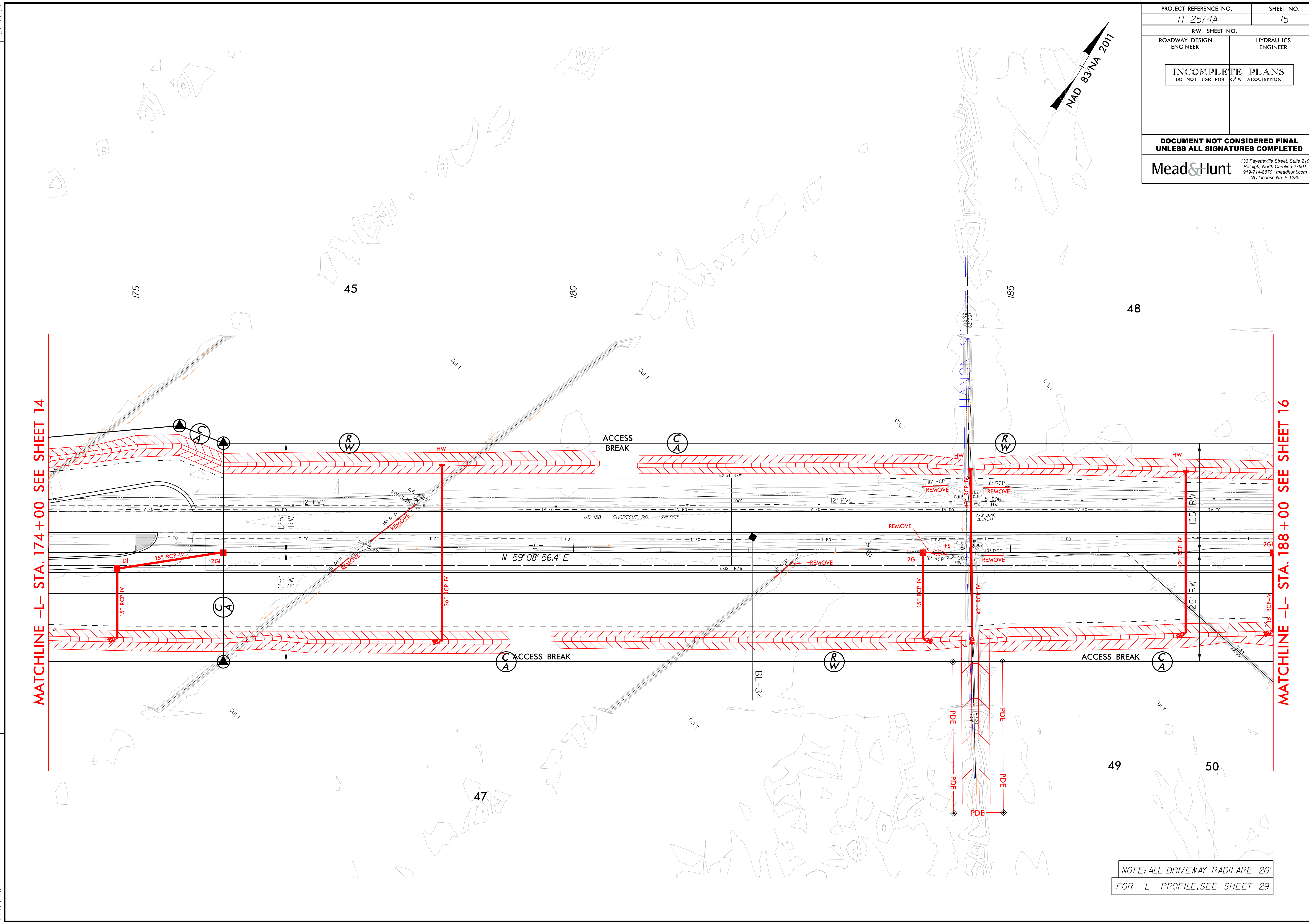
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PROJECT REFERENCE NO. R-2574A	SHEET NO. 15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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MATCHLINE -L- STA. 174 + 00 SEE SHEET 14

MATCHLINE -L- STA. 188 + 00 SEE SHEET 16

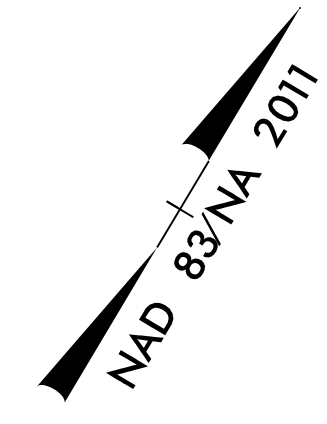


REVISIONS

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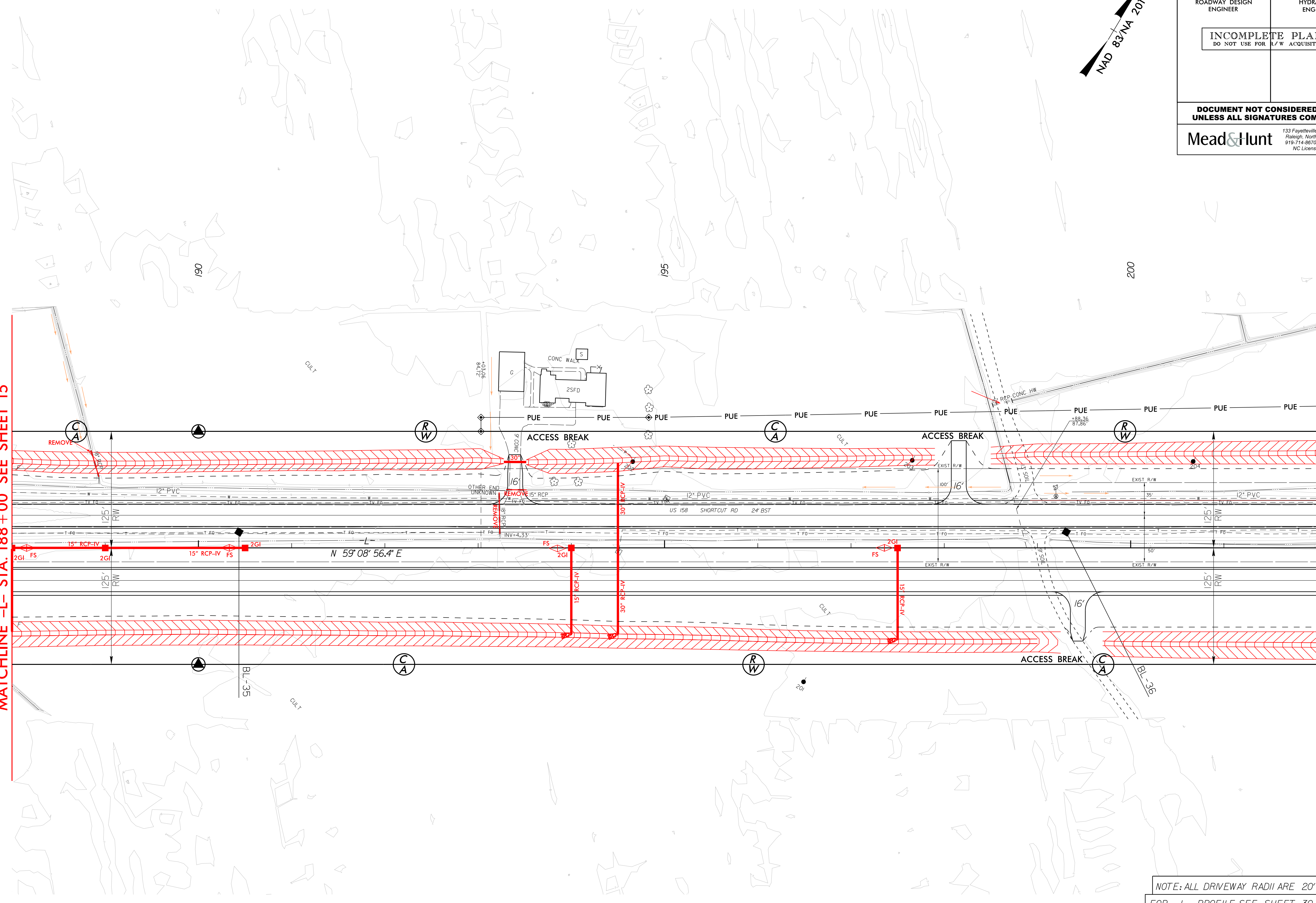
NOTE: ALL DRIVEWAY RADII ARE 20'
 FOR -L- PROFILE, SEE SHEET 29

PROJECT REFERENCE NO. R-2574A	SHEET NO. 16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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MATCHLINE -L- STA. 188 + 00 SEE SHEET 15

MATCHLINE -L- STA. 202 + 00 SEE SHEET 17



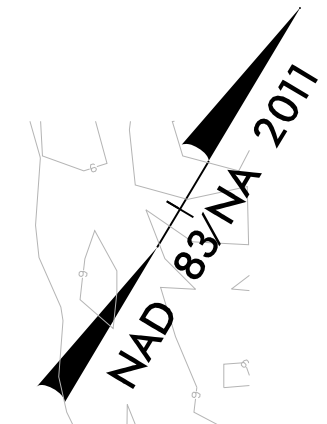
NOTE: ALL DRIVEWAY RADII ARE 20'
FOR -L- PROFILE, SEE SHEET 30

REVISIONS

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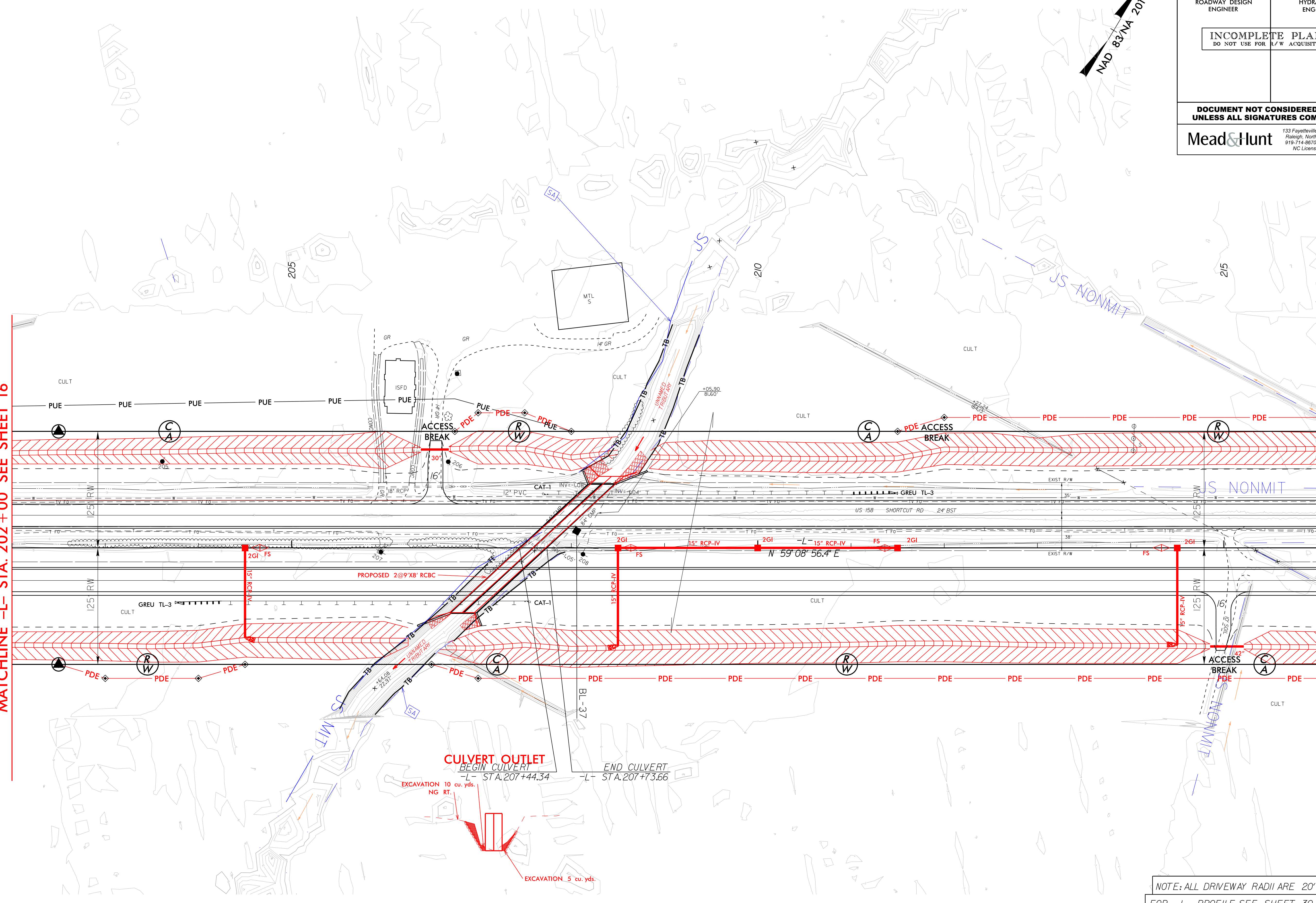
8/17/99

PROJECT REFERENCE NO. R-2574A	SHEET NO. 17
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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MATCHLINE -L- STA. 202 + 00 SEE SHEET 16

MATCHLINE -L- STA. 216 + 00 SEE SHEET 18



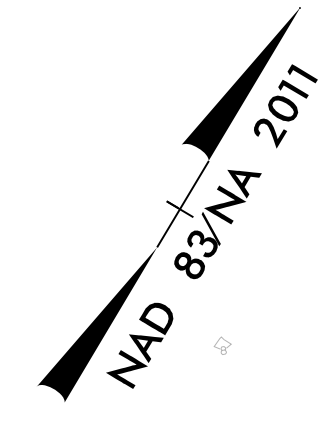
NOTE: ALL DRIVEWAY RADII ARE 20'
FOR -L- PROFILE, SEE SHEET 30

REVISIONS

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PROJECT REFERENCE NO. R-2574A	SHEET NO. 18
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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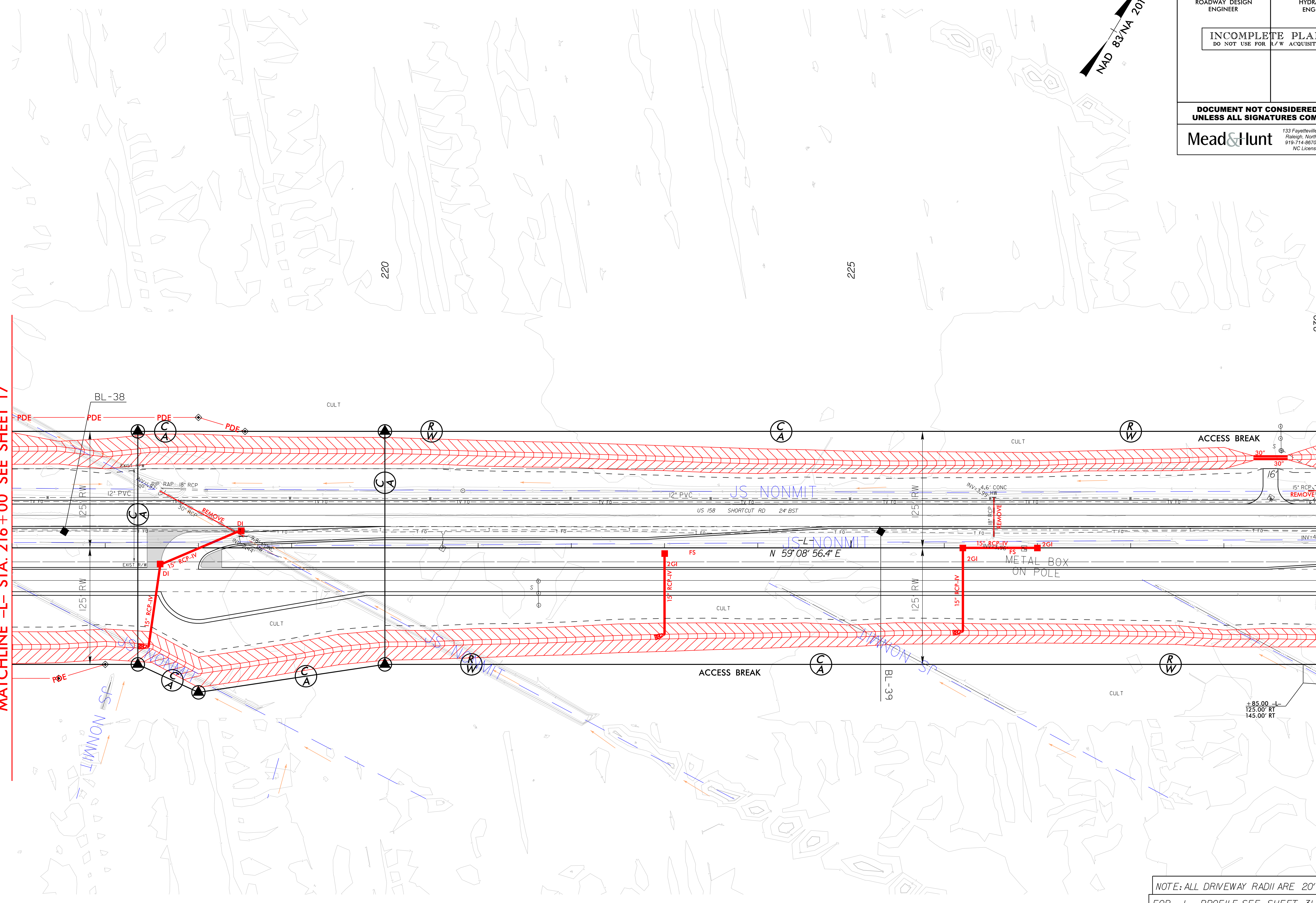
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REVISIONS

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MATCHLINE -L- STA. 216+00 SEE SHEET 17

MATCHLINE -L- STA. 230+00 SEE SHEET 19

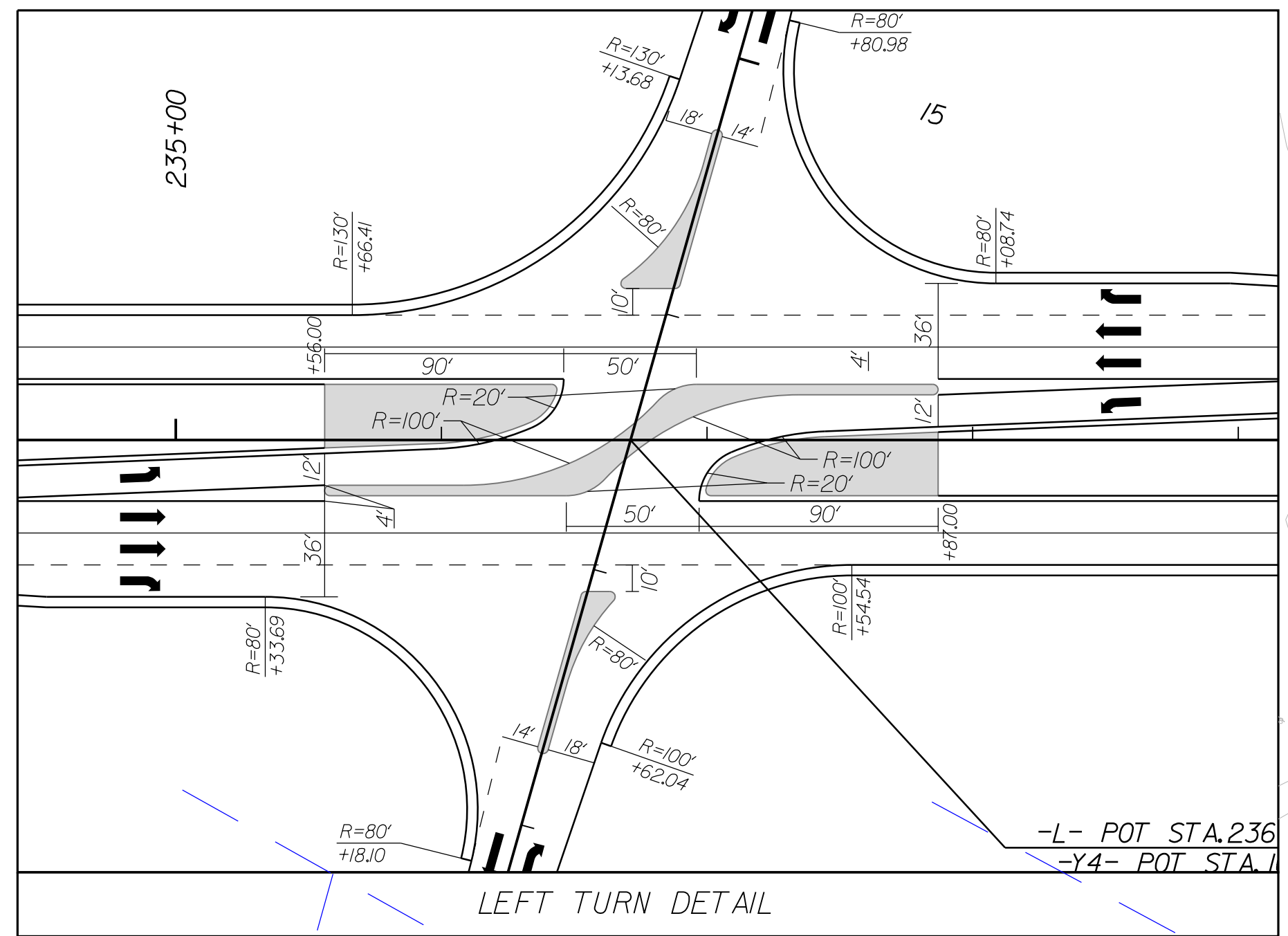
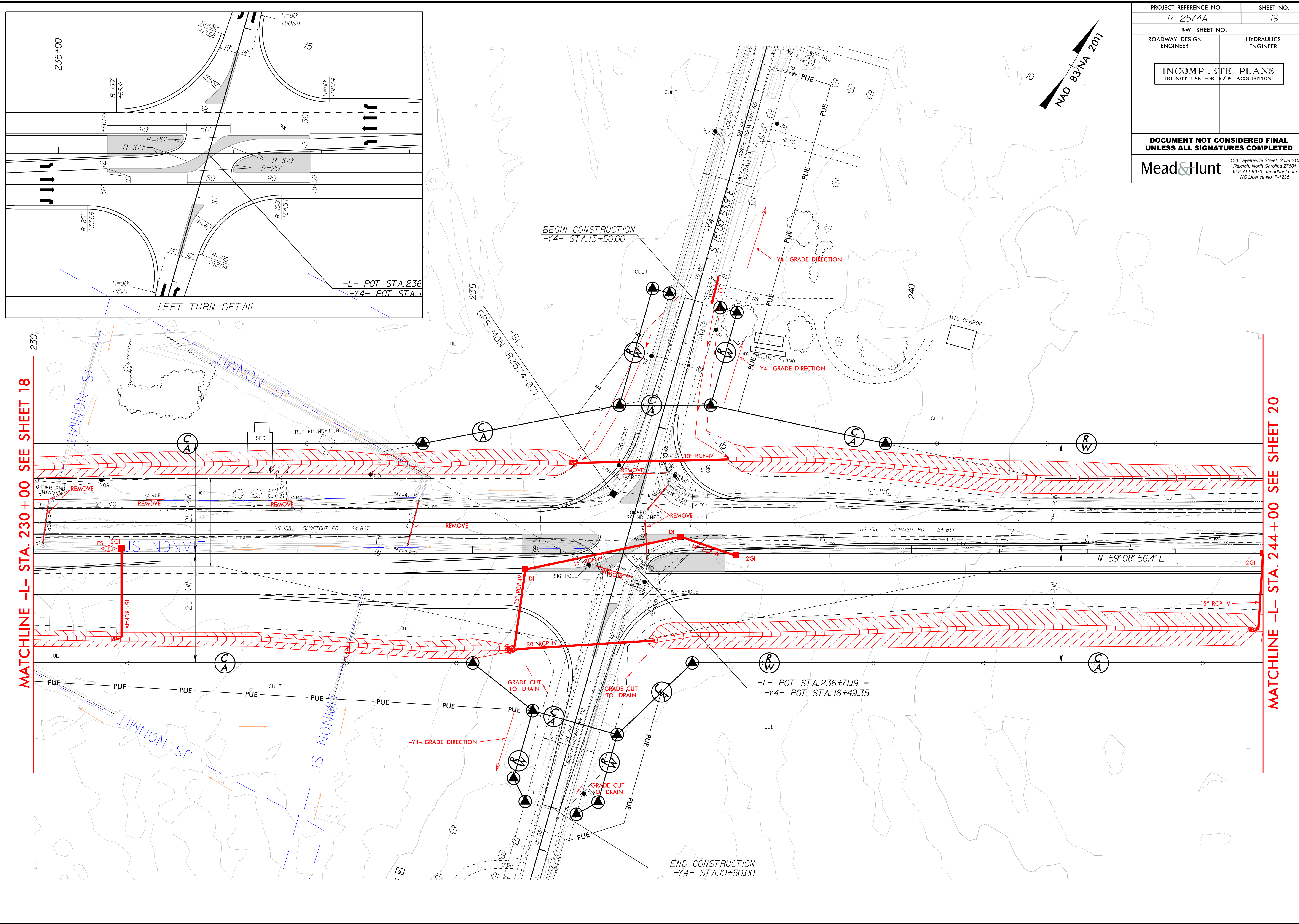


NOTE: ALL DRIVEWAY RADII ARE 20'
FOR -L- PROFILE, SEE SHEET 31

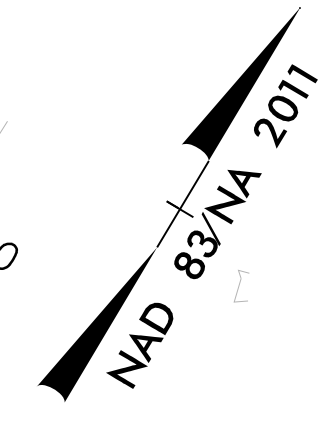
8/17/99

07-AUG-2019 10:46
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Z130msr

REVISIONS



PROJECT REFERENCE NO. R-2574A	SHEET NO. 19
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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MATCHLINE -L- STA. 230 + 00 SEE SHEET 18

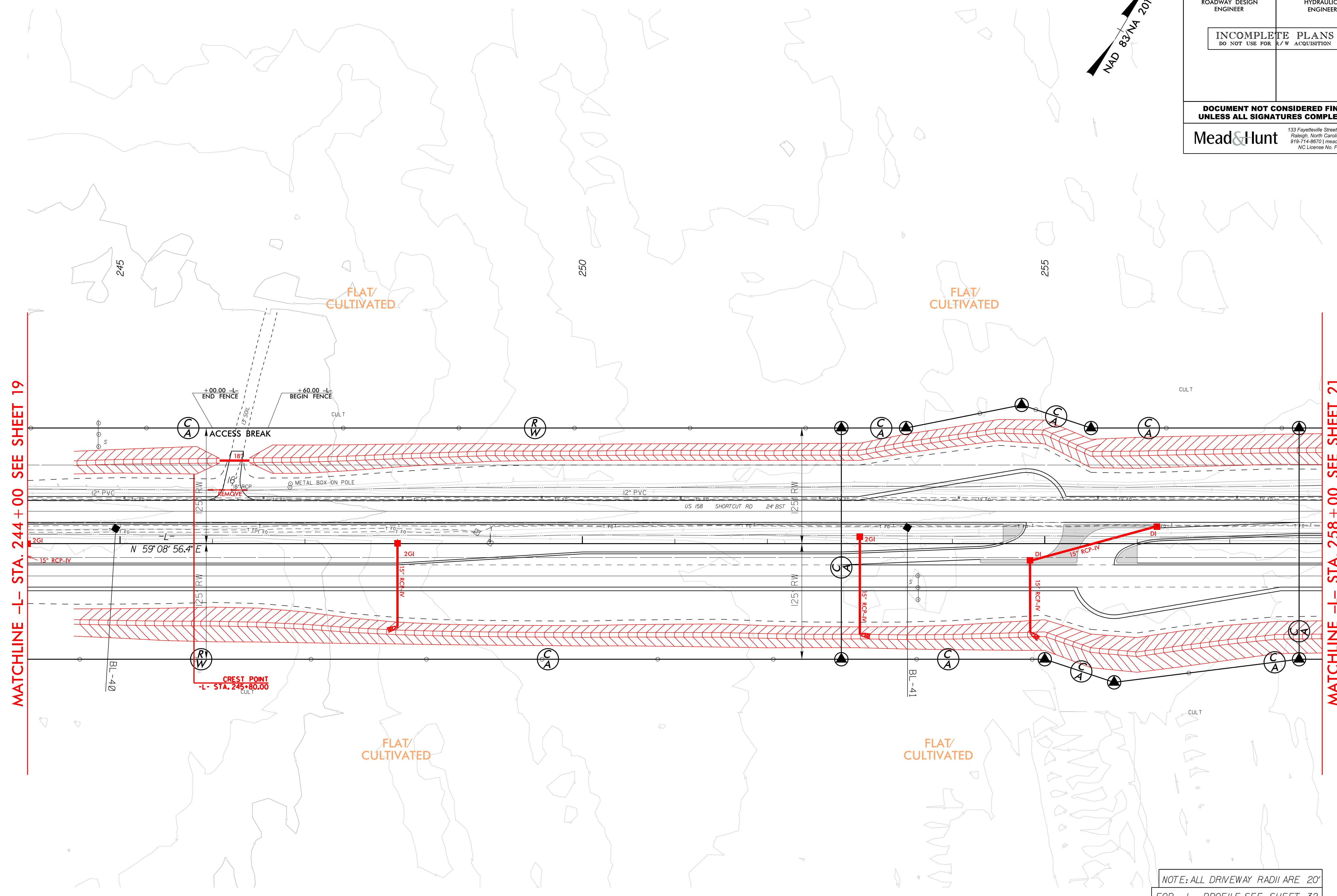
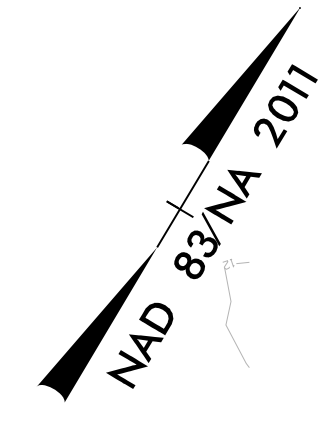
MATCHLINE -L- STA. 244 + 00 SEE SHEET 20

BEGIN CONSTRUCTION
-Y4- STA.13+50.00

END CONSTRUCTION
-Y4- STA.19+50.00

-L- POT STA.236+71.19 =
-Y4- POT STA.16+49.35

PROJECT REFERENCE NO. R-2574A	SHEET NO. 20
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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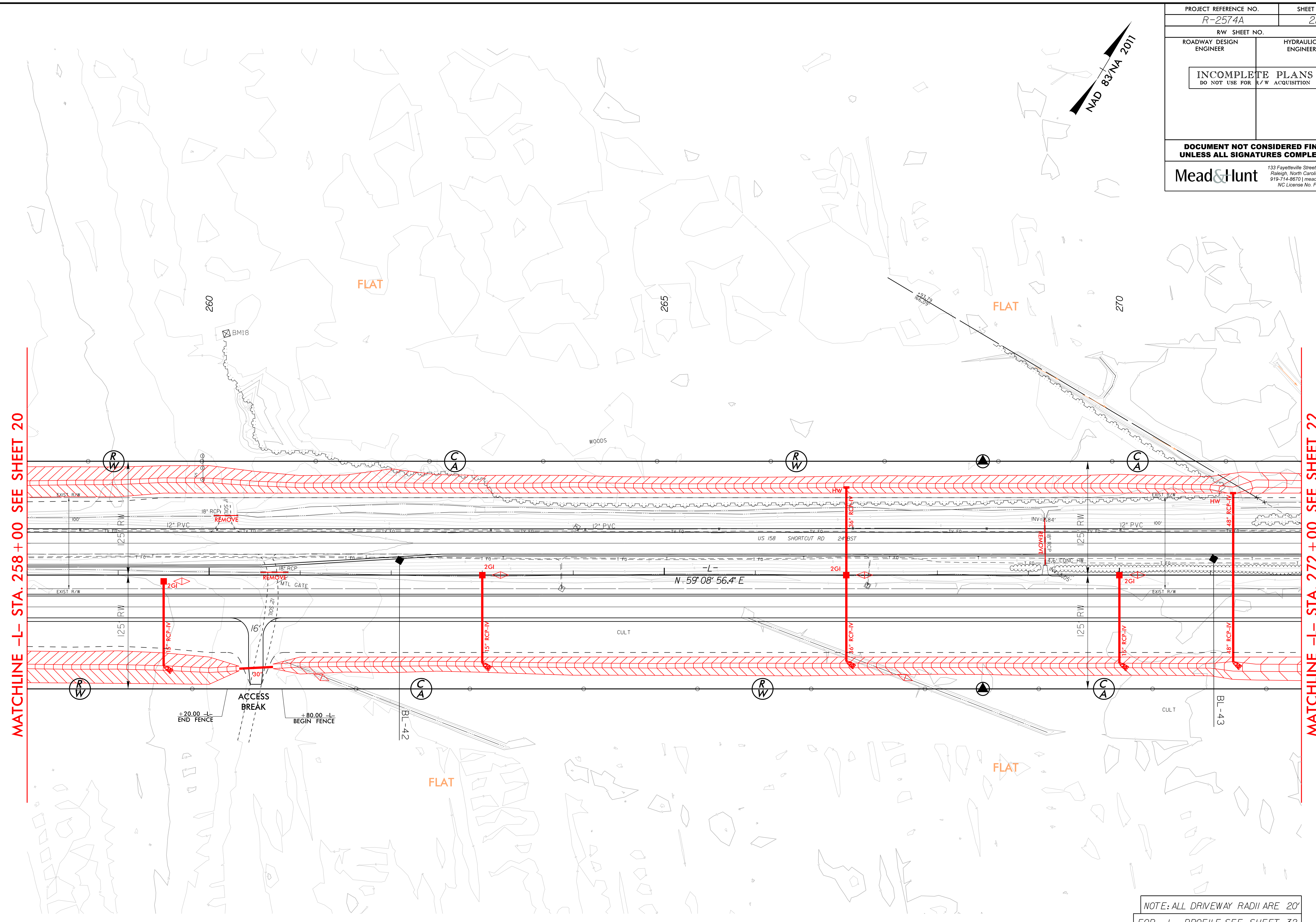
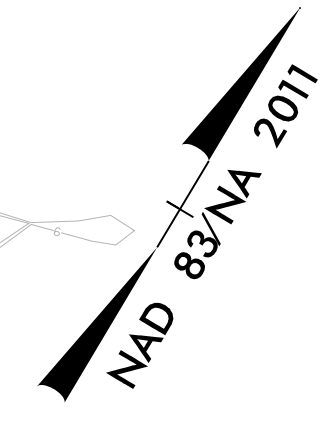
NOTE: ALL DRIVEWAY RADII ARE 20'
FOR -L- PROFILE, SEE SHEET 32

REVISIONS

07-AUG-2019 10:46
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Z:\30msr

8/17/99

PROJECT REFERENCE NO. R-2574A	SHEET NO. 21
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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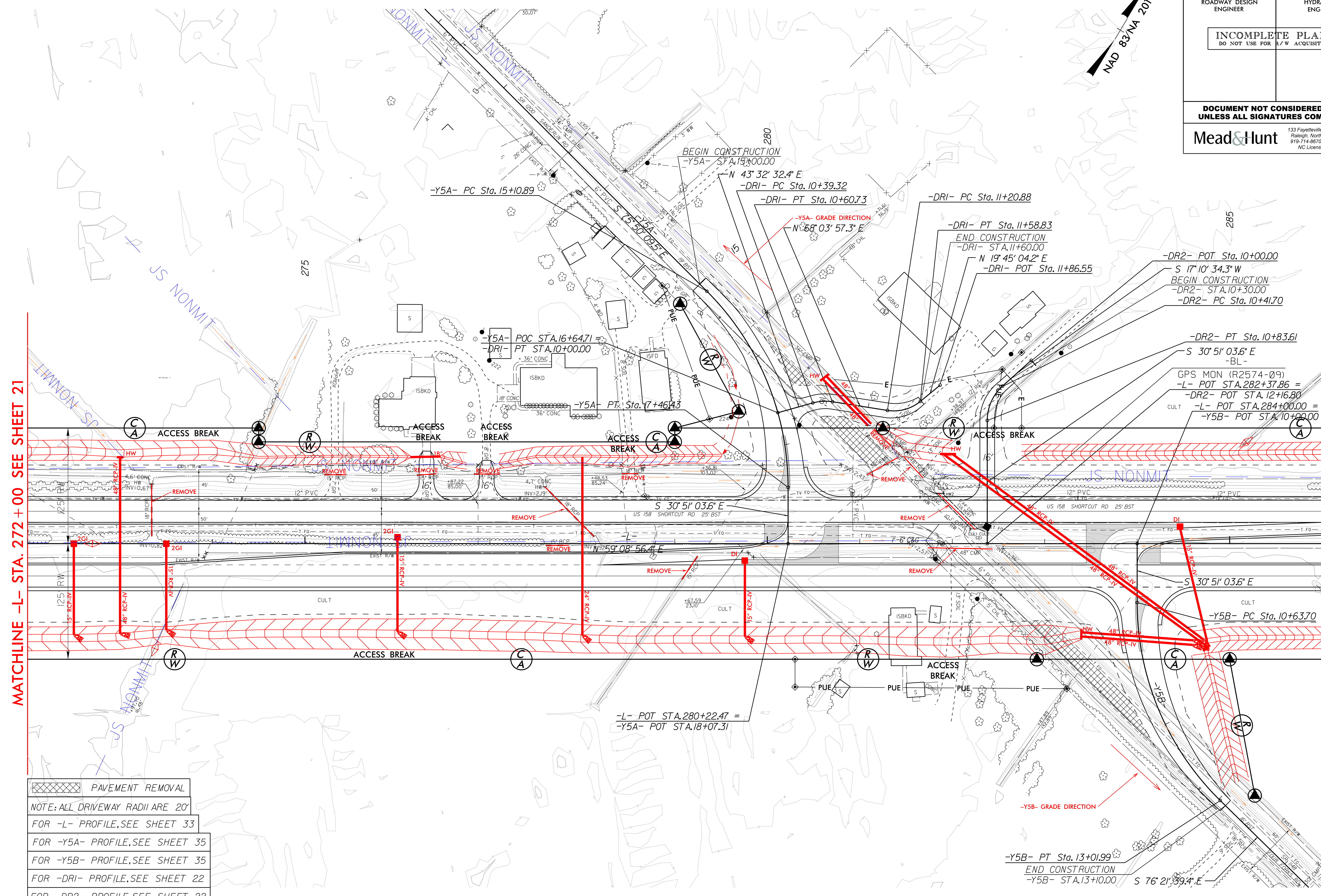
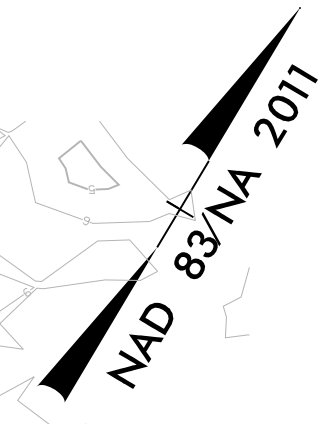
NOTE: ALL DRIVEWAY RADII ARE 20'
 FOR -L- PROFILE, SEE SHEET 32

REVISIONS

07-AUG-2019 10:46
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 Z130msr

8/17/99

PROJECT REFERENCE NO. R-2574A	SHEET NO. 22
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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MATCHLINE -L- STA. 272 + 00 SEE SHEET 21

MATCHLINE -L- STA. 286 + 00 SEE SHEET 23

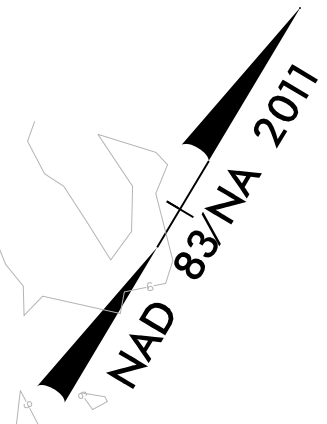
- PAVEMENT REMOVAL
- NOTE: ALL DRIVEWAY RADII ARE 20'
- FOR -L- PROFILE, SEE SHEET 33
- FOR -Y5A- PROFILE, SEE SHEET 35
- FOR -Y5B- PROFILE, SEE SHEET 35
- FOR -DRI- PROFILE, SEE SHEET 22
- FOR -DR2- PROFILE, SEE SHEET 22

REVISIONS

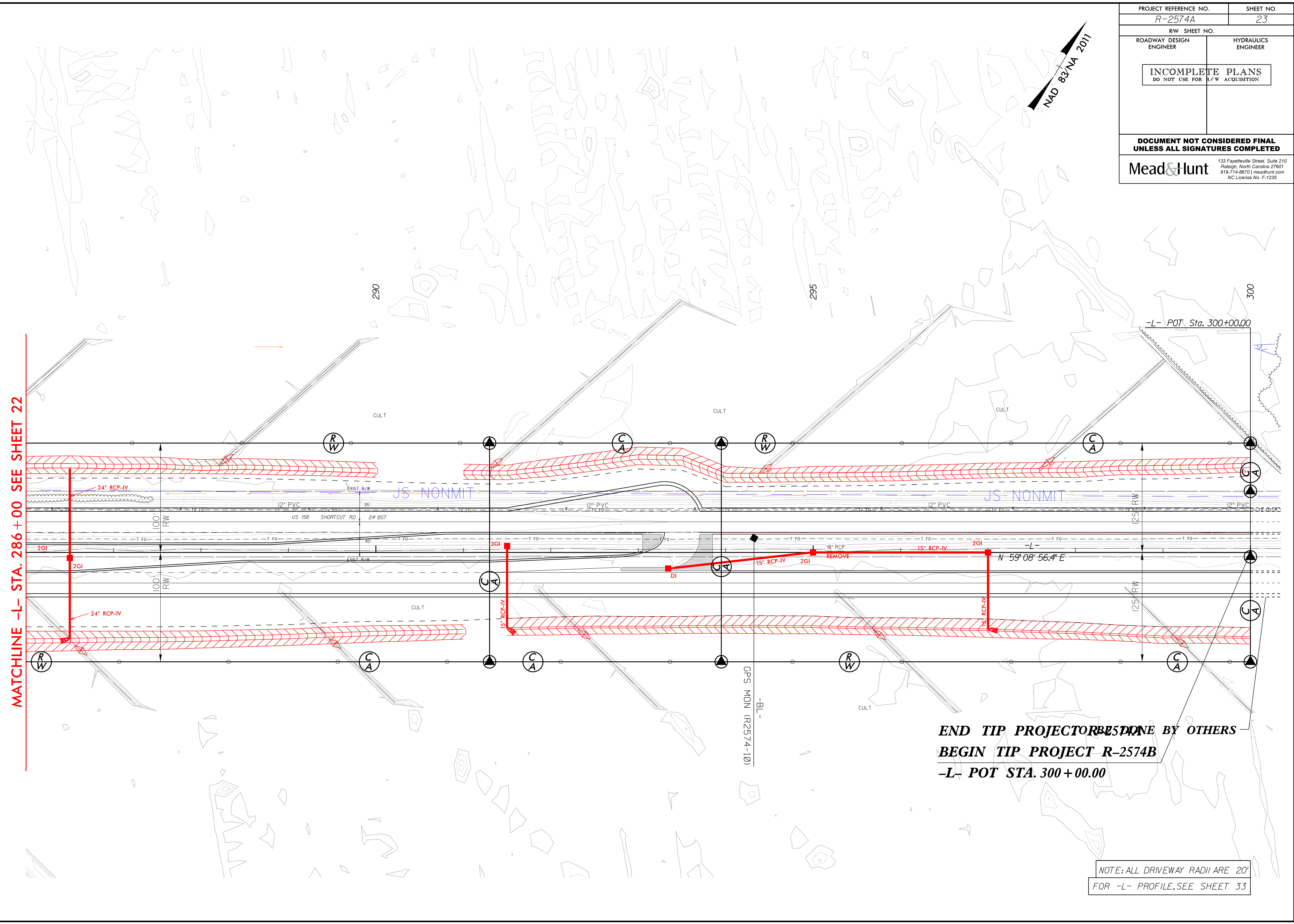
07-AUG-2019 10:46 R:\Hydraulics\PERMITS_Environmental\Drawings\4B Set\R2574A_Hyd_psh_22.dgn 2130msr

8/17/99

PROJECT REFERENCE NO. R-2574A	SHEET NO. 23
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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MATCHLINE -L- STA. 286 + 00 SEE SHEET 22



END TIP PROJECT ~~BE DONE~~ BY OTHERS
BEGIN TIP PROJECT R-2574B
-L- POT STA. 300 + 00.00

NOTE: ALL DRIVEWAY RADII ARE 20'
FOR -L- PROFILE, SEE SHEET 33

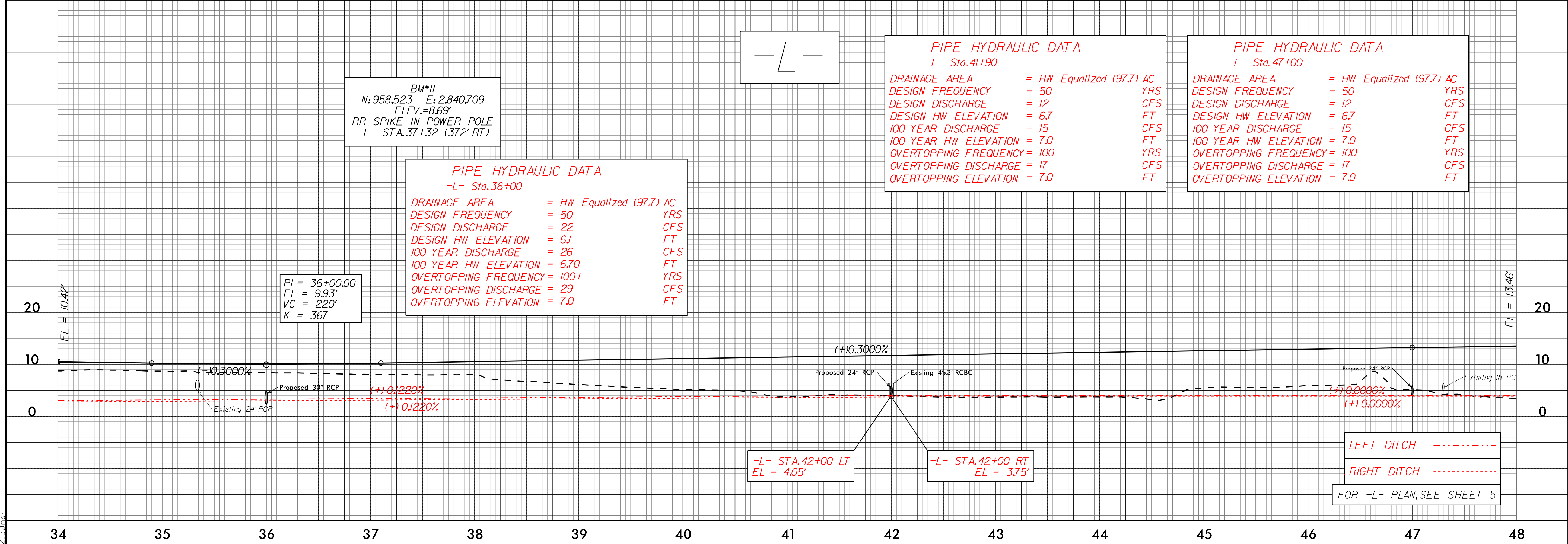
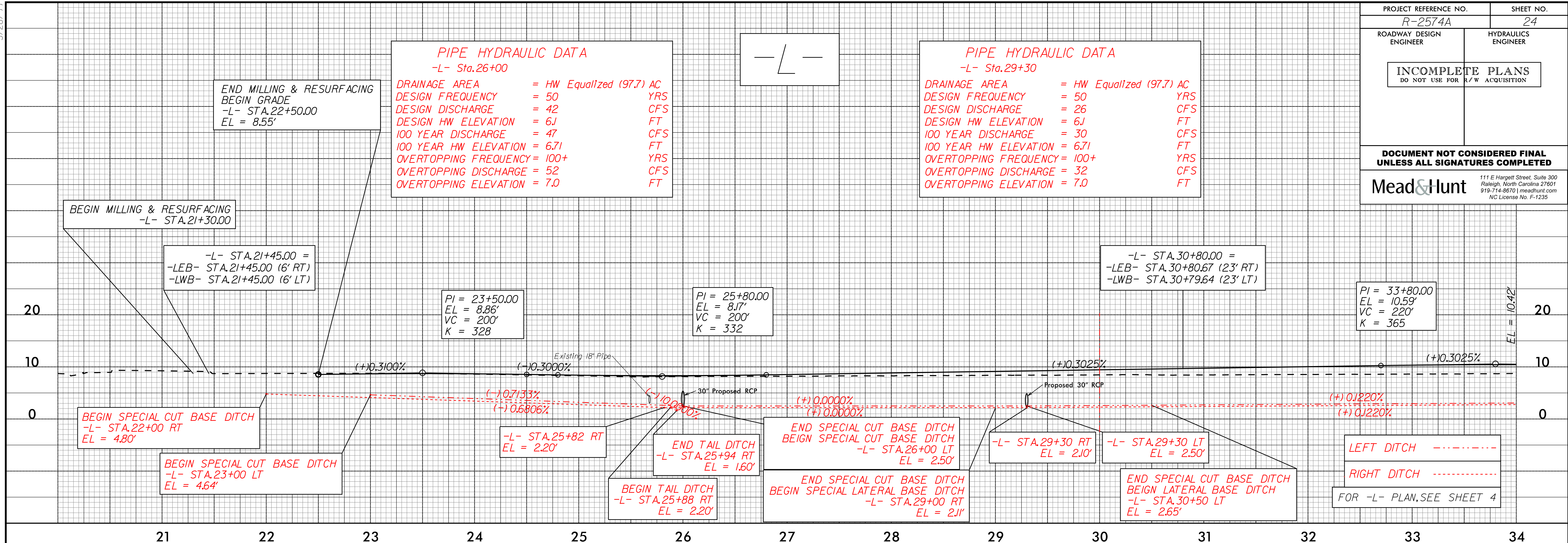
REVISIONS

07-AUG-2019 10:47
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2130msr

8/17/99

5/28/99

PROJECT REFERENCE NO. R-2574A	SHEET NO. 24
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
Mead&Hunt	
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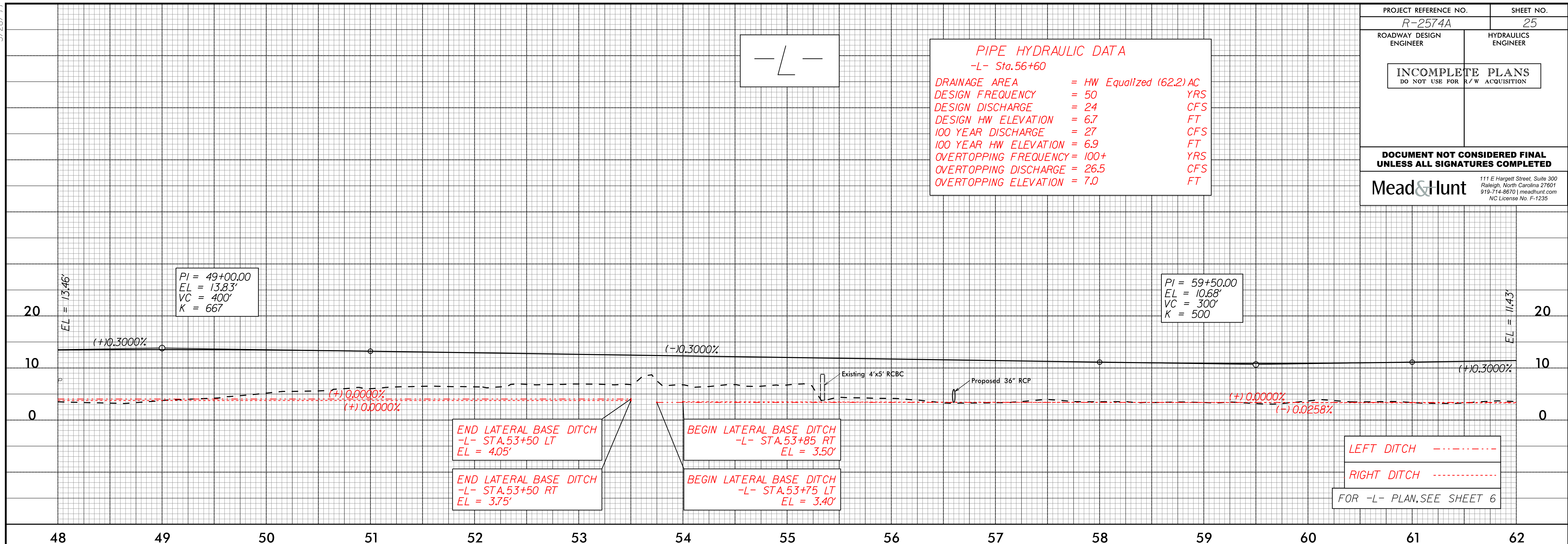
07-AUG-2019 10:47 AM C:\Users\pcoj\OneDrive\Projects\R2574A_Rdy.pfl_24.dgn

5/28/99

PROJECT REFERENCE NO. R-2574A	SHEET NO. 25
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
Mead & Hunt	
111 E Hargett Street, Suite 300 Raleigh, North Carolina 27601 919-714-8670 meadhunt.com NC License No. F-1235	

PIPE HYDRAULIC DATA
-L- Sta.56+60

DRAINAGE AREA = HW Equalized (62.2) AC
DESIGN FREQUENCY = 50 YRS
DESIGN DISCHARGE = 24 CFS
DESIGN HW ELEVATION = 6.7 FT
100 YEAR DISCHARGE = 27 CFS
100 YEAR HW ELEVATION = 6.9 FT
OVERTOPPING FREQUENCY = 100+ YRS
OVERTOPPING DISCHARGE = 26.5 CFS
OVERTOPPING ELEVATION = 7.0 FT



END LATERAL BASE DITCH
-L- STA.53+50 LT
EL = 4.05'

END LATERAL BASE DITCH
-L- STA.53+50 RT
EL = 3.75'

BEGIN LATERAL BASE DITCH
-L- STA.53+85 RT
EL = 3.50'

BEGIN LATERAL BASE DITCH
-L- STA.53+75 LT
EL = 3.40'

LEFT DITCH -----

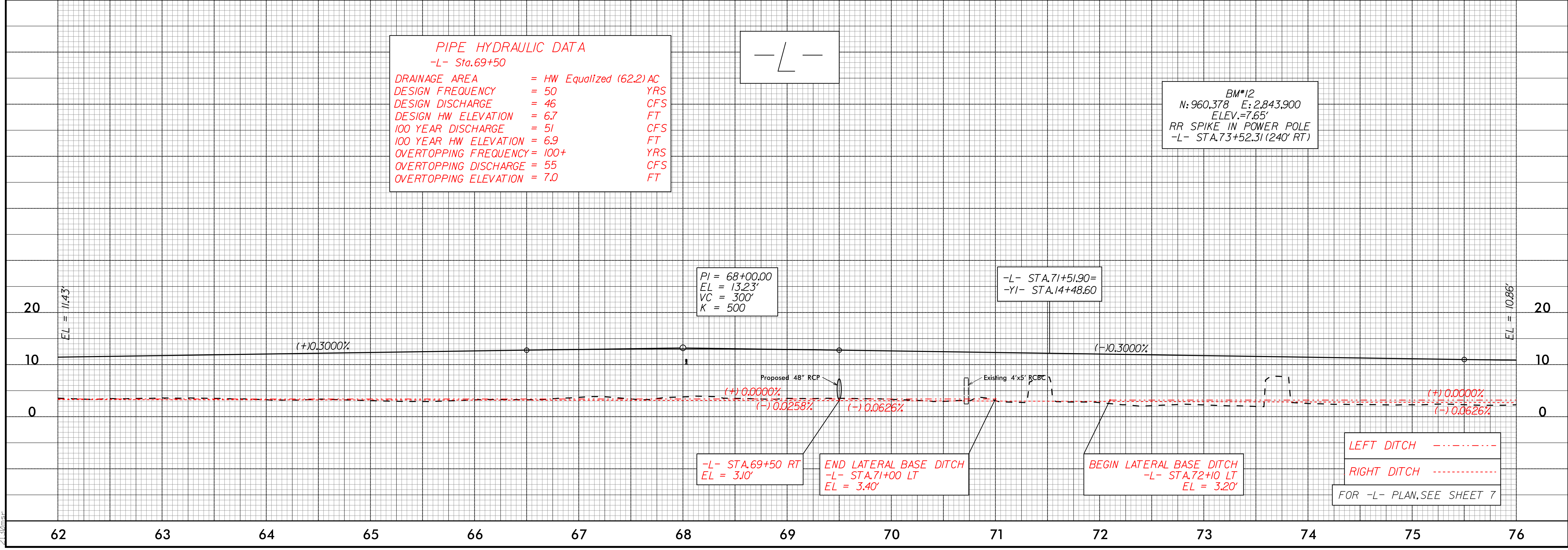
RIGHT DITCH -----

FOR -L- PLAN, SEE SHEET 6

PIPE HYDRAULIC DATA
-L- Sta.69+50

DRAINAGE AREA = HW Equalized (62.2) AC
DESIGN FREQUENCY = 50 YRS
DESIGN DISCHARGE = 46 CFS
DESIGN HW ELEVATION = 6.7 FT
100 YEAR DISCHARGE = 51 CFS
100 YEAR HW ELEVATION = 6.9 FT
OVERTOPPING FREQUENCY = 100+ YRS
OVERTOPPING DISCHARGE = 55 CFS
OVERTOPPING ELEVATION = 7.0 FT

BM#12
N: 960.378 E: 2,843.900
ELEV. = 7.65'
RR SPIKE IN POWER POLE
-L- STA.73+52.31 (240' RT)



-L- STA.69+50 RT
EL = 3.10'

END LATERAL BASE DITCH
-L- STA.71+00 LT
EL = 3.40'

BEGIN LATERAL BASE DITCH
-L- STA.72+10 LT
EL = 3.20'

LEFT DITCH -----

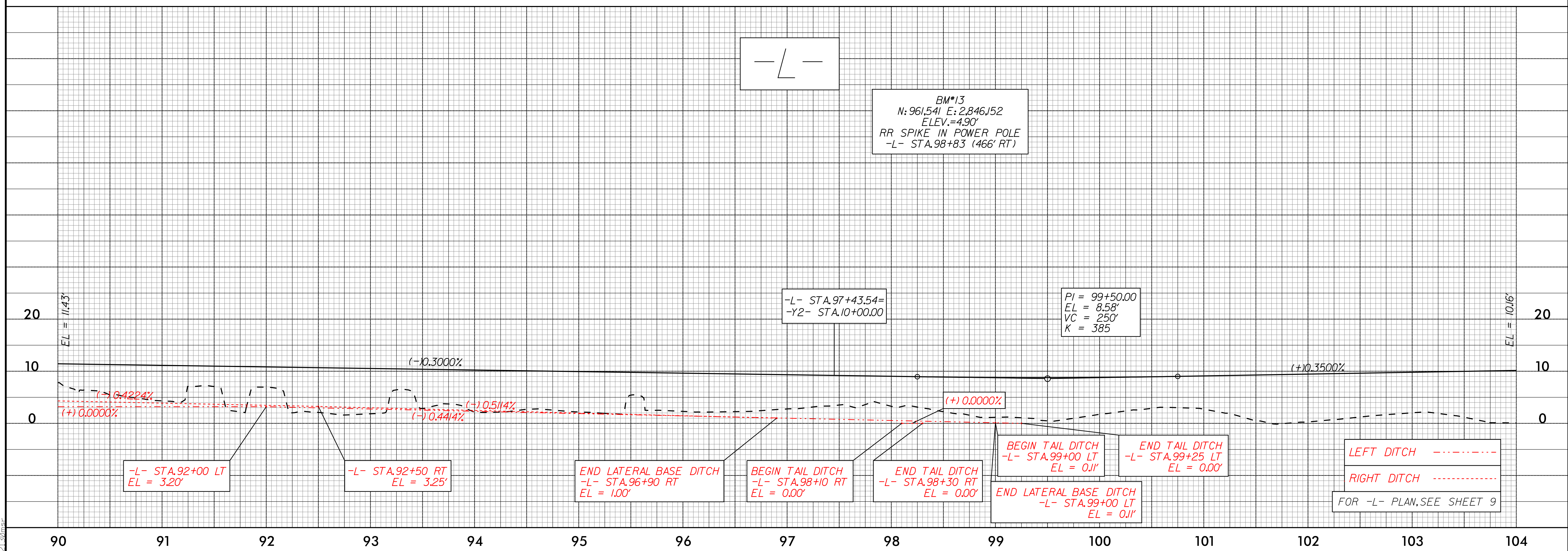
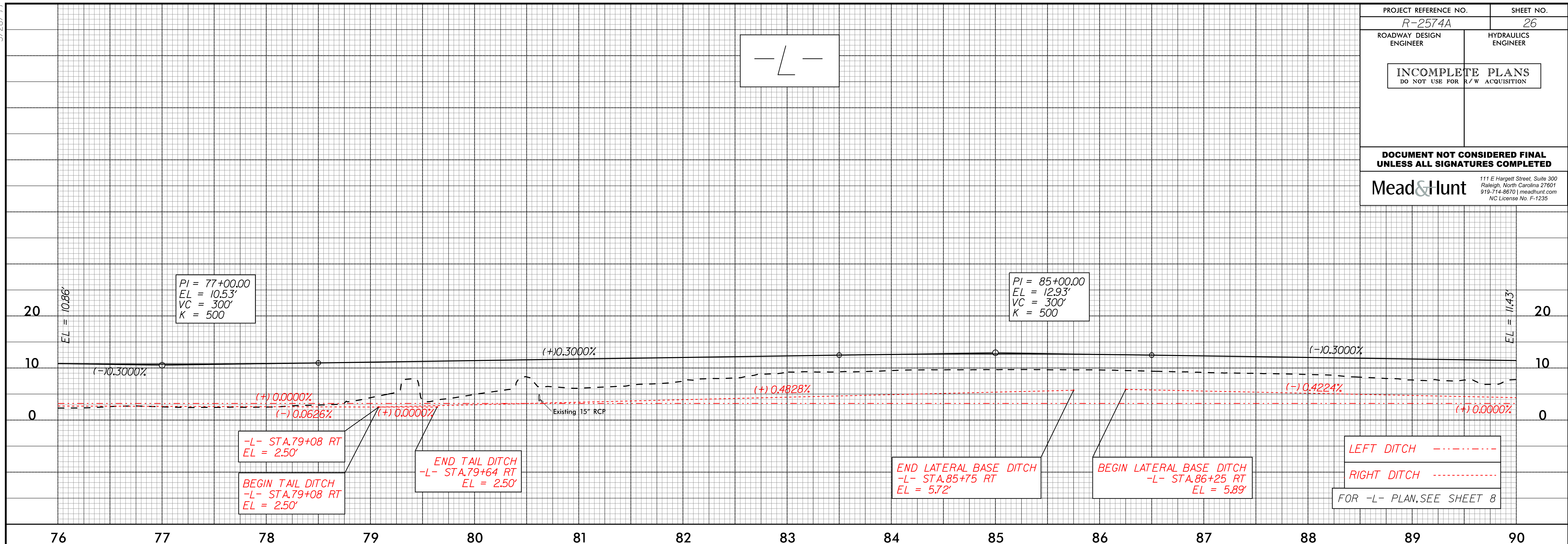
RIGHT DITCH -----

FOR -L- PLAN, SEE SHEET 7

07-AUG-2018 10:47
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21:30am

5/28/99

PROJECT REFERENCE NO. R-2574A	SHEET NO. 26
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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07 AUG 2019 10:47
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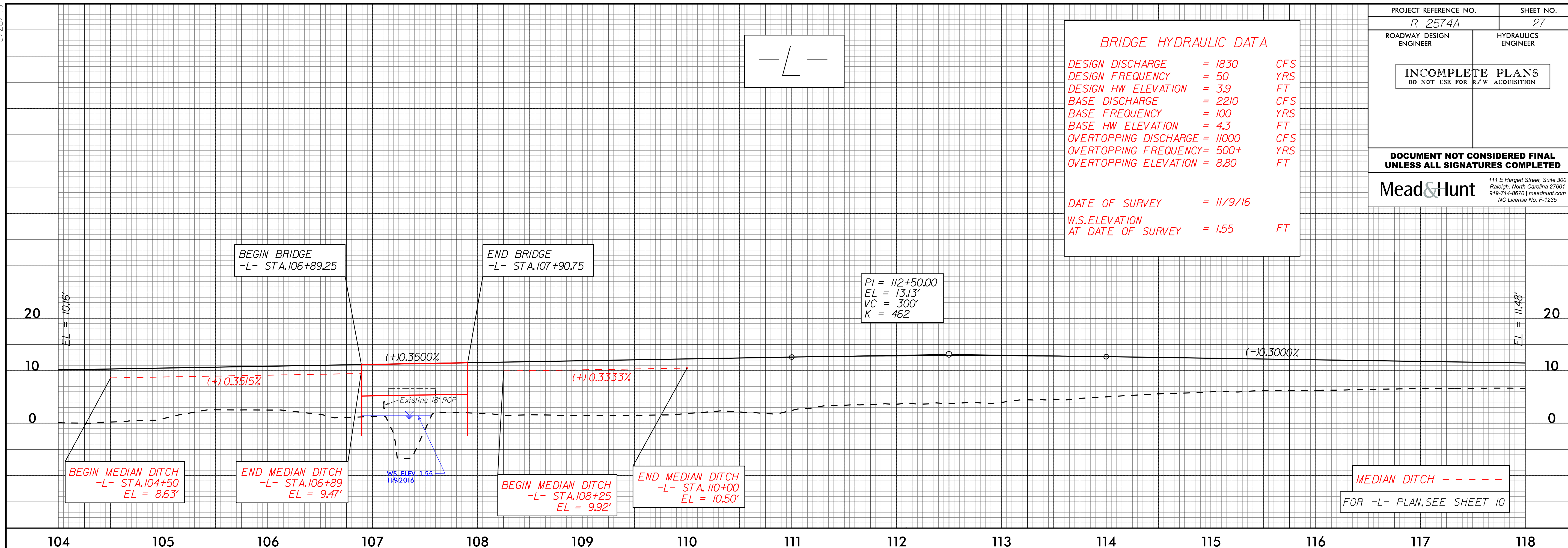
5/28/99

PROJECT REFERENCE NO. R-2574A	SHEET NO. 27
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
Mead&Hunt	
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BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE = 1830 CFS
DESIGN FREQUENCY = 50 YRS
DESIGN HW ELEVATION = 3.9 FT
BASE DISCHARGE = 2210 CFS
BASE FREQUENCY = 100 YRS
BASE HW ELEVATION = 4.3 FT
OVERTOPPING DISCHARGE = 11000 CFS
OVERTOPPING FREQUENCY = 500+ YRS
OVERTOPPING ELEVATION = 8.80 FT

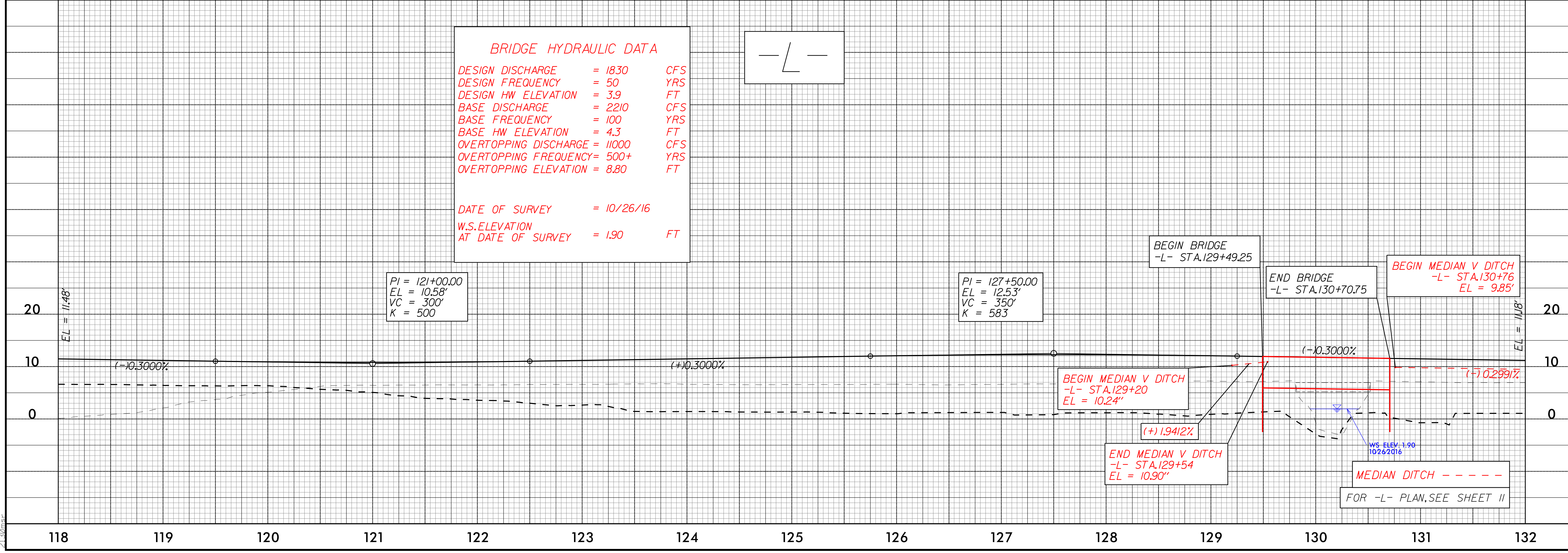
DATE OF SURVEY = 11/9/16
W.S.ELEVATION AT DATE OF SURVEY = 1.55 FT



BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE = 1830 CFS
DESIGN FREQUENCY = 50 YRS
DESIGN HW ELEVATION = 3.9 FT
BASE DISCHARGE = 2210 CFS
BASE FREQUENCY = 100 YRS
BASE HW ELEVATION = 4.3 FT
OVERTOPPING DISCHARGE = 11000 CFS
OVERTOPPING FREQUENCY = 500+ YRS
OVERTOPPING ELEVATION = 8.80 FT

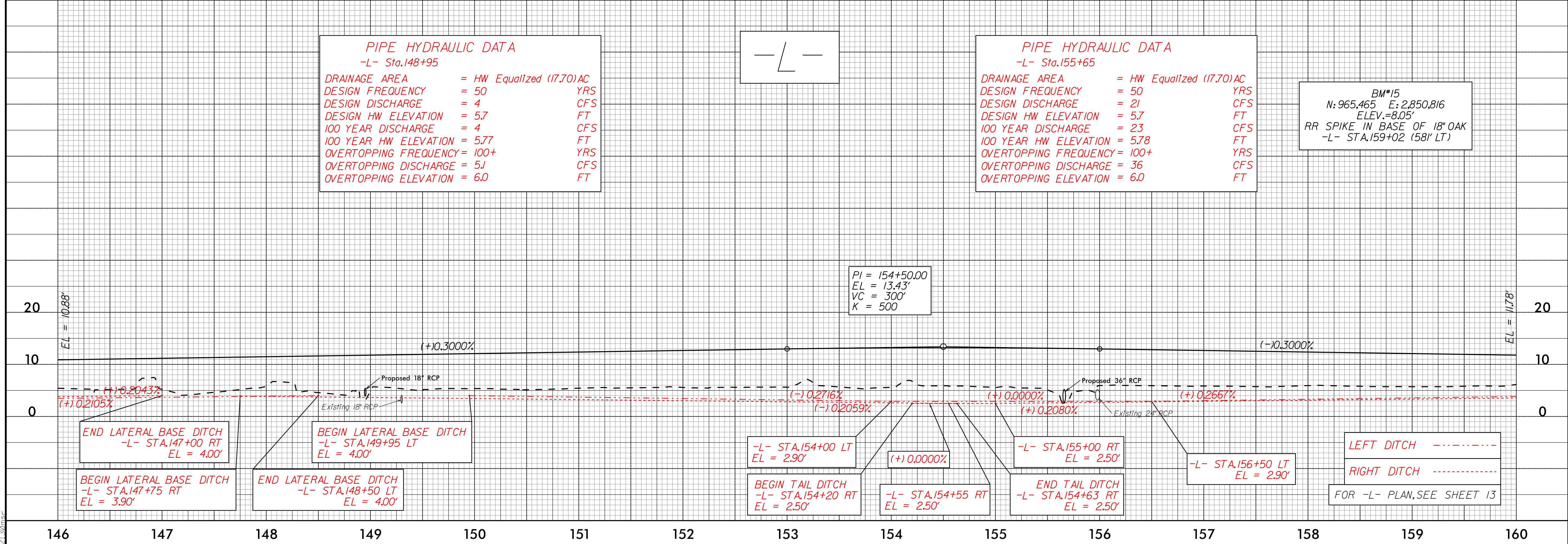
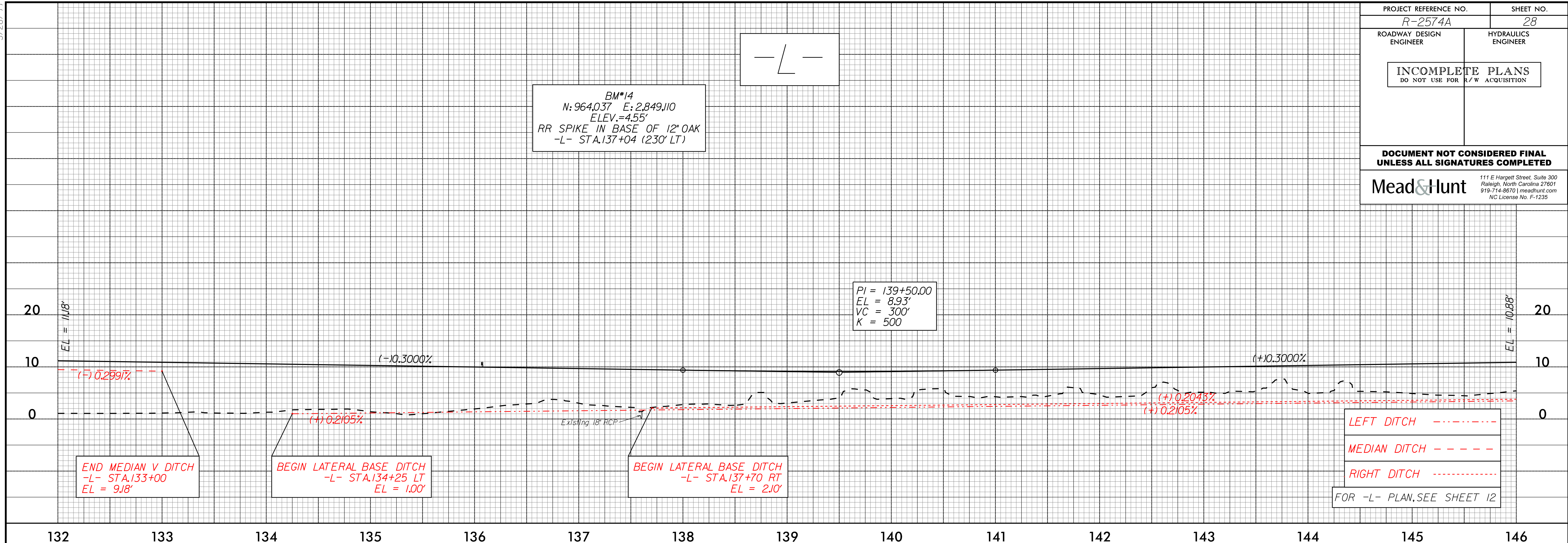
DATE OF SURVEY = 10/26/16
W.S.ELEVATION AT DATE OF SURVEY = 1.90 FT



07_AUG_2019 10:47 P:\Projects\2574A_Rdy.p1_27.dgn

5/28/99

PROJECT REFERENCE NO. R-2574A	SHEET NO. 28
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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07-AUG-2018 10:47
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21:30:00

5/28/99

PIPE HYDRAULIC DATA
-L- Sta.161+00

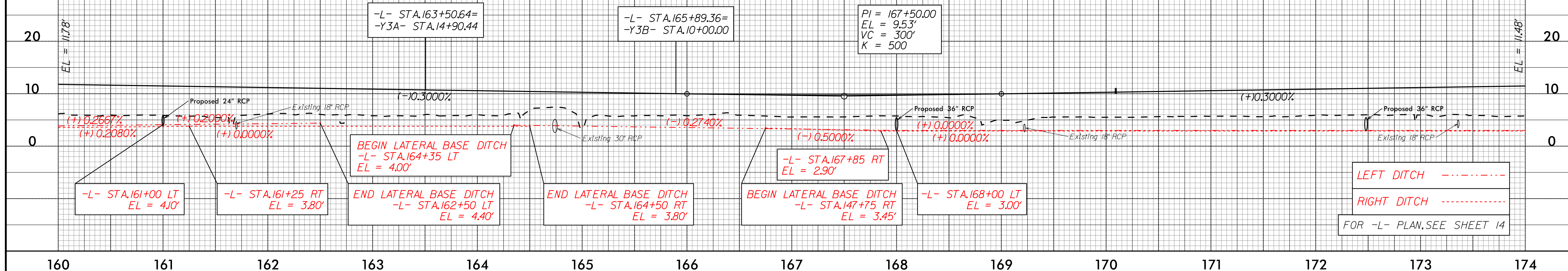
DRAINAGE AREA	=	HW Equalized (17.70) AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	9 CFS
DESIGN HW ELEVATION	=	5.7 FT
100 YEAR DISCHARGE	=	9.5 CFS
100 YEAR HW ELEVATION	=	5.78 FT
OVERTOPPING FREQUENCY	=	100+ YRS
OVERTOPPING DISCHARGE	=	11 CFS
OVERTOPPING ELEVATION	=	6.0 FT

PIPE HYDRAULIC DATA
-L- Sta.168+00

DRAINAGE AREA	=	HW Equalized (71.0) AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	24 CFS
DESIGN HW ELEVATION	=	5.8 FT
100 YEAR DISCHARGE	=	27 CFS
100 YEAR HW ELEVATION	=	5.90 FT
OVERTOPPING FREQUENCY	=	100+ YRS
OVERTOPPING DISCHARGE	=	29 CFS
OVERTOPPING ELEVATION	=	6.0 FT

PIPE HYDRAULIC DATA
-L- Sta.172+50

DRAINAGE AREA	=	HW Equalized (118.7) AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	24 CFS
DESIGN HW ELEVATION	=	5.8 FT
100 YEAR DISCHARGE	=	26 CFS
100 YEAR HW ELEVATION	=	5.90 FT
OVERTOPPING FREQUENCY	=	100+ YRS
OVERTOPPING DISCHARGE	=	28.8 CFS
OVERTOPPING ELEVATION	=	6.0 FT



PIPE HYDRAULIC DATA
-L- Sta.178+50

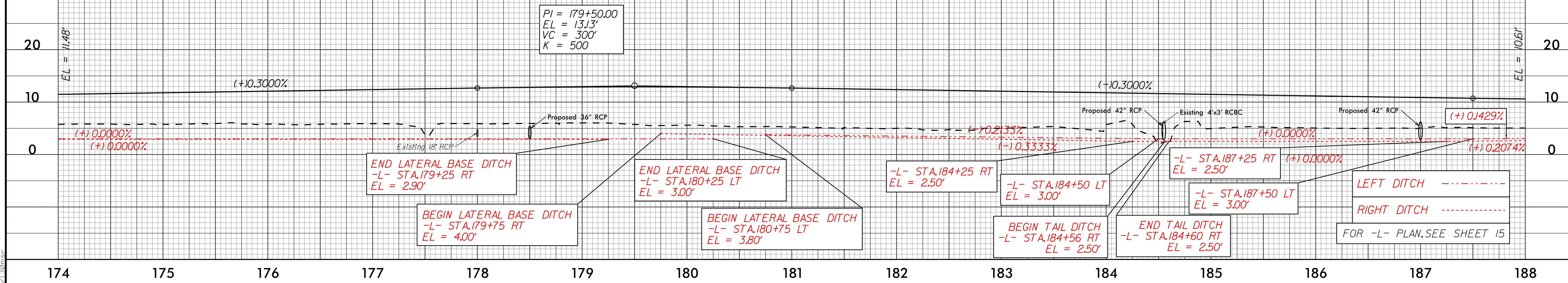
DRAINAGE AREA	=	HW Equalized (71) AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	24 CFS
DESIGN HW ELEVATION	=	5.8 FT
100 YEAR DISCHARGE	=	26 CFS
100 YEAR HW ELEVATION	=	5.90 FT
OVERTOPPING FREQUENCY	=	100+ YRS
OVERTOPPING DISCHARGE	=	28.4 CFS
OVERTOPPING ELEVATION	=	6.0 FT

PIPE HYDRAULIC DATA
-L- Sta.184+50

DRAINAGE AREA	=	HW Equalized (86.3) AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	45 CFS
DESIGN HW ELEVATION	=	6.0 FT
100 YEAR DISCHARGE	=	52 CFS
100 YEAR HW ELEVATION	=	6.35 FT
OVERTOPPING FREQUENCY	=	100+ YRS
OVERTOPPING DISCHARGE	=	55 CFS
OVERTOPPING ELEVATION	=	6.5 FT

PIPE HYDRAULIC DATA
-L- Sta.187+00

DRAINAGE AREA	=	HW Equalized (86.3) AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	45 CFS
DESIGN HW ELEVATION	=	6.0 FT
100 YEAR DISCHARGE	=	52 CFS
100 YEAR HW ELEVATION	=	6.30 FT
OVERTOPPING FREQUENCY	=	100+ YRS
OVERTOPPING DISCHARGE	=	55 CFS
OVERTOPPING ELEVATION	=	6.5 FT



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21:30pm

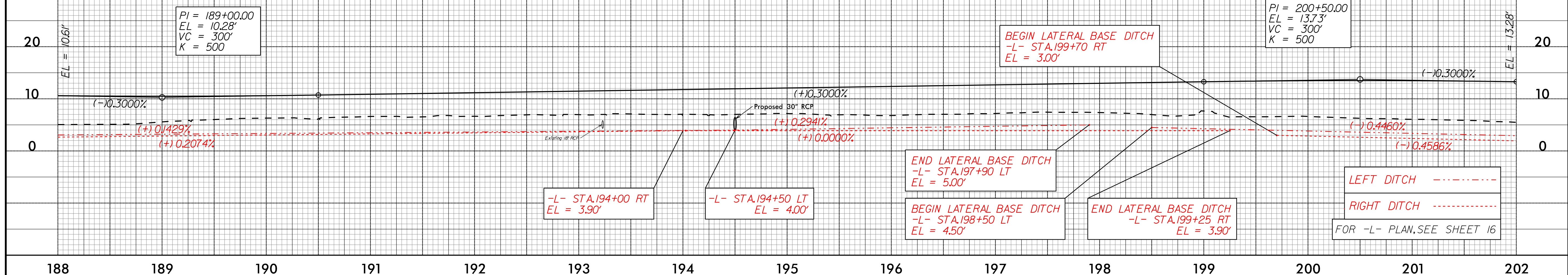
5/28/99

PROJECT REFERENCE NO. R-2574A	SHEET NO. 30
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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PIPE HYDRAULIC DATA
-L- Sta.194+50

DRAINAGE AREA = HW Equalized (86.3) AC
 DESIGN FREQUENCY = 50 YRS
 DESIGN DISCHARGE = 13 CFS
 DESIGN HW ELEVATION = 6.0 FT
 100 YEAR DISCHARGE = 17 CFS
 100 YEAR HW ELEVATION = 6.30 FT
 OVERTOPPING FREQUENCY = 100+ YRS
 OVERTOPPING DISCHARGE = 19 CFS
 OVERTOPPING ELEVATION = 6.5 FT

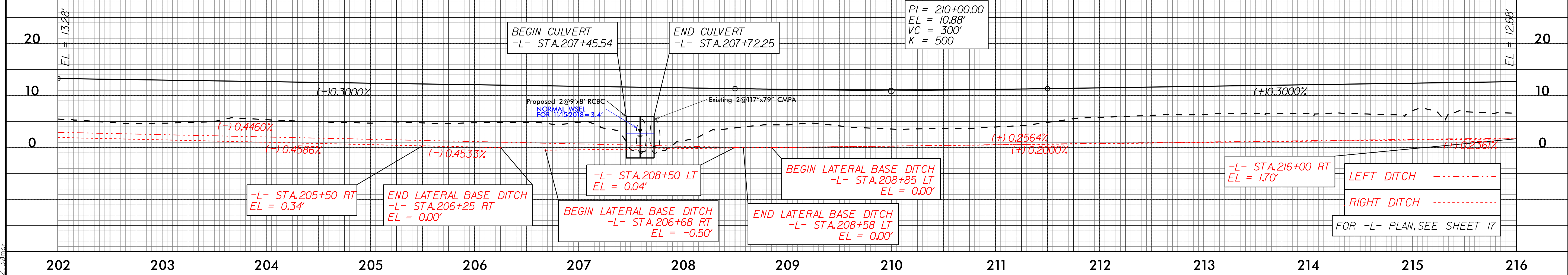
BM*16
N: 967,292 E: 2,853,452
ELEV.= 9.26'
RR SPIKE IN POWER POLE
-L- STA.191+01 (797' LT)



-L-

CULVERT HYDRAULIC DATA

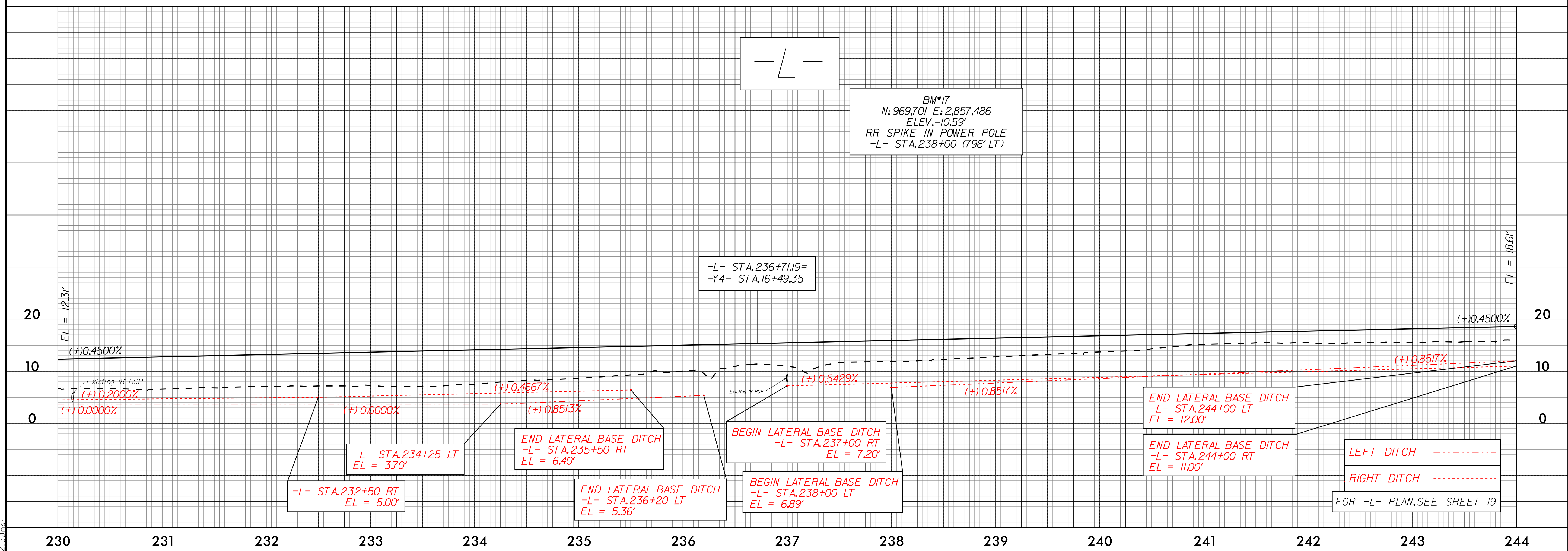
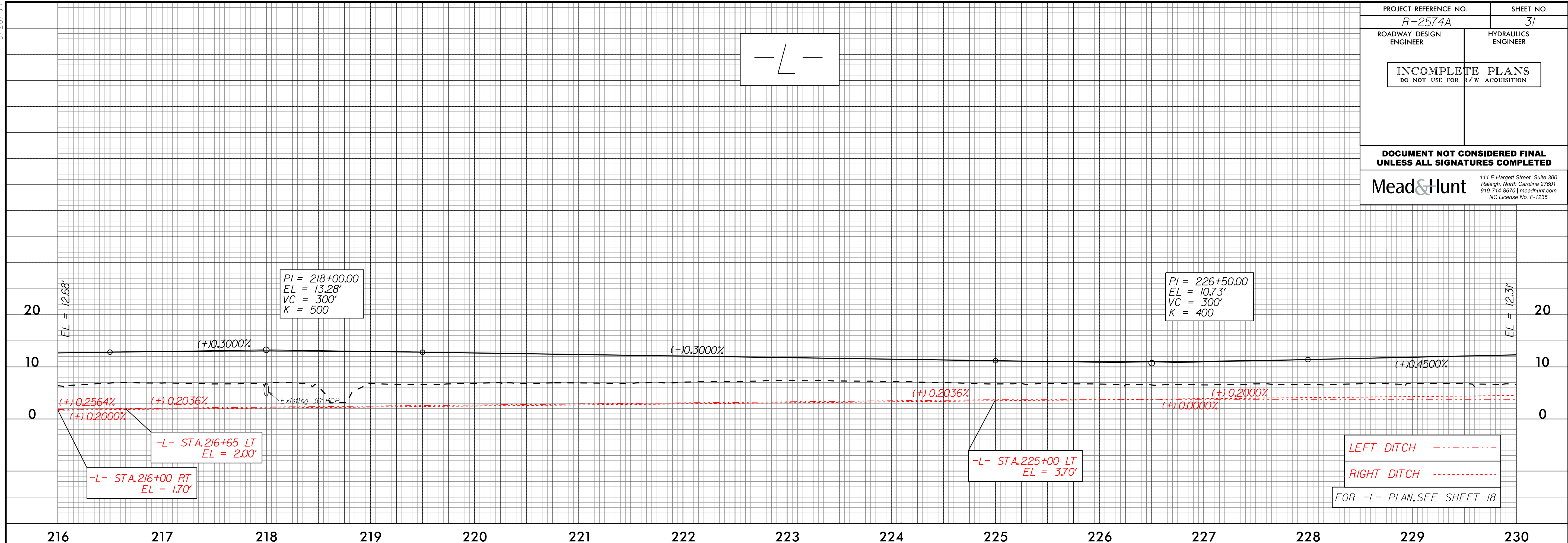
DESIGN DISCHARGE = 500 CFS
 DESIGN FREQUENCY = 50 YRS
 DESIGN HW ELEVATION = 6.6 FT
 BASE DISCHARGE = 600 CFS
 BASE FREQUENCY = 100 YRS
 BASE HW ELEVATION = 7.2 FT
 OVERTOPPING DISCHARGE = 1320 CFS
 OVERTOPPING FREQUENCY = 500+ YRS
 OVERTOPPING ELEVATION = 11J FT



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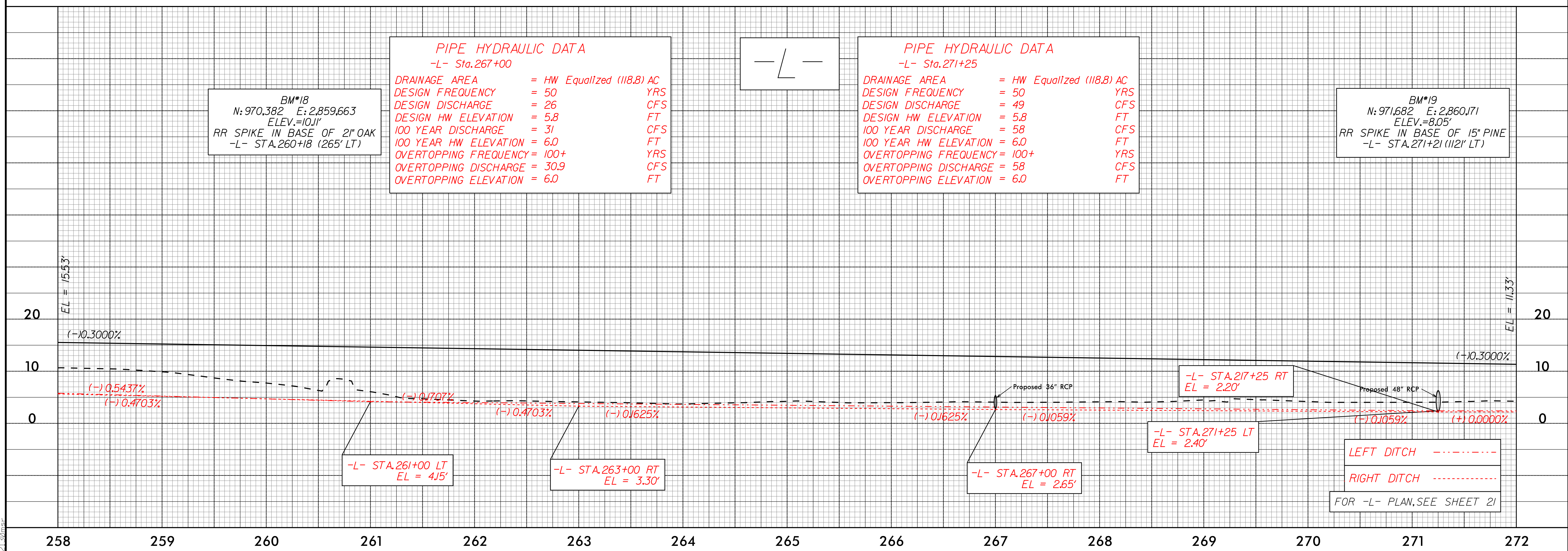
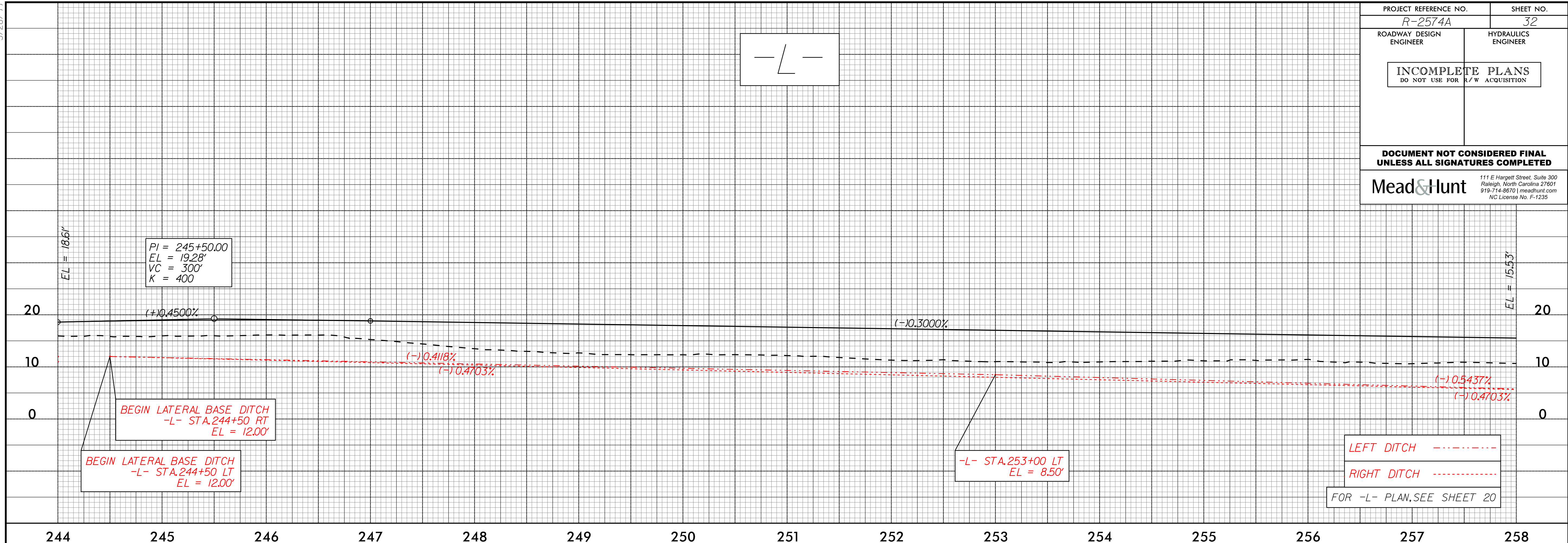
PROJECT REFERENCE NO. R-2574A	SHEET NO. 31
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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PROJECT REFERENCE NO. R-2574A	SHEET NO. 32
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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PI = 245+50.00
EL = 19.28'
VC = 300'
K = 400

BEGIN LATERAL BASE DITCH
-L- STA. 244+50 RT
EL = 12.00'

BEGIN LATERAL BASE DITCH
-L- STA. 244+50 LT
EL = 12.00'

-L- STA. 253+00 LT
EL = 8.50'

LEFT DITCH -----
RIGHT DITCH -----
FOR -L- PLAN, SEE SHEET 20

PIPE HYDRAULIC DATA
-L- Sta. 267+00

DRAINAGE AREA	=	HW Equalized (118.8) AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	26 CFS
DESIGN HW ELEVATION	=	5.8 FT
100 YEAR DISCHARGE	=	31 CFS
100 YEAR HW ELEVATION	=	6.0 FT
OVERTOPPING FREQUENCY	=	100+ YRS
OVERTOPPING DISCHARGE	=	30.9 CFS
OVERTOPPING ELEVATION	=	6.0 FT

PIPE HYDRAULIC DATA
-L- Sta. 271+25

DRAINAGE AREA	=	HW Equalized (118.8) AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	49 CFS
DESIGN HW ELEVATION	=	5.8 FT
100 YEAR DISCHARGE	=	58 CFS
100 YEAR HW ELEVATION	=	6.0 FT
OVERTOPPING FREQUENCY	=	100+ YRS
OVERTOPPING DISCHARGE	=	58 CFS
OVERTOPPING ELEVATION	=	6.0 FT

BM#19
N: 971682 E: 2,860,71
ELEV. = 8.05'
RR SPIKE IN BASE OF 15" PINE
-L- STA. 271+21 (112' LT)

BM#18
N: 970,382 E: 2,859,663
ELEV. = 10.11'
RR SPIKE IN BASE OF 2" OAK
-L- STA. 260+18 (265' LT)

LEFT DITCH -----
RIGHT DITCH -----
FOR -L- PLAN, SEE SHEET 21

07 AUG 2018 10:47
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5/28/99

PROJECT REFERENCE NO. R-2574A	SHEET NO. 33
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
Mead&Hunt <small>111 E Hargett Street, Suite 300 Raleigh, North Carolina 27601 919-714-8670 meadhunt.com NC License No. F-1235</small>	

PIPE HYDRAULIC DATA
-L- Sta.273+00

DRAINAGE AREA	= HW Equalized (118.8) AC
DESIGN FREQUENCY	= 50 YRS
DESIGN DISCHARGE	= 49 CFS
DESIGN HW ELEVATION	= 5.8 FT
100 YEAR DISCHARGE	= 58 CFS
100 YEAR HW ELEVATION	= 6.0 FT
OVERTOPPING FREQUENCY	= 100+ YRS
OVERTOPPING DISCHARGE	= 58.3 CFS
OVERTOPPING ELEVATION	= 6.0 FT

PIPE HYDRAULIC DATA
-L- Sta.278+00

DRAINAGE AREA	= HW Equalized (2.30) AC
DESIGN FREQUENCY	= 50 YRS
DESIGN DISCHARGE	= 9 CFS
DESIGN HW ELEVATION	= 5.6 FT
100 YEAR DISCHARGE	= 10 CFS
100 YEAR HW ELEVATION	= 5.66 FT
OVERTOPPING FREQUENCY	= 100+ YRS
OVERTOPPING DISCHARGE	= 16.4 CFS
OVERTOPPING ELEVATION	= 6.5 FT

PIPE HYDRAULIC DATA
-L- Sta.283+22

DRAINAGE AREA	= HW Equalized (79.4) AC
DESIGN FREQUENCY	= 50 YRS
DESIGN DISCHARGE	= 94 CFS
DESIGN HW ELEVATION	= 5.9 FT
100 YEAR DISCHARGE	= 110 CFS
100 YEAR HW ELEVATION	= 6J FT
OVERTOPPING FREQUENCY	= 100+ YRS
OVERTOPPING DISCHARGE	= 134.7 CFS
OVERTOPPING ELEVATION	= 6.5 FT

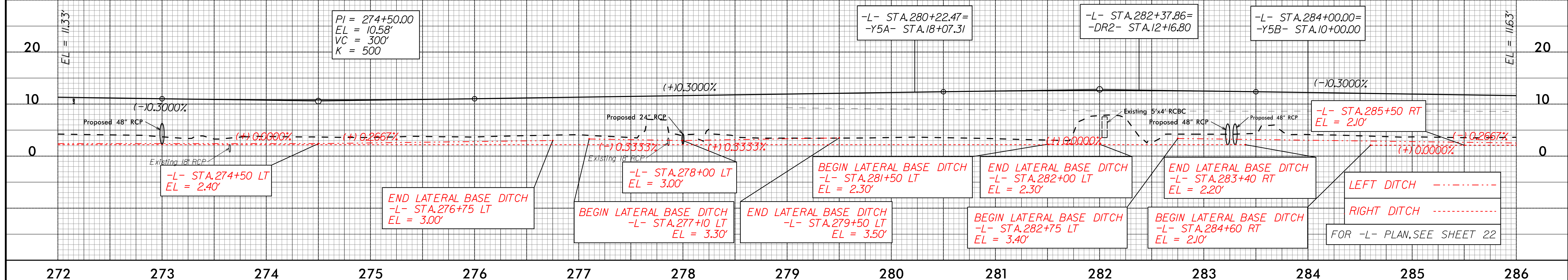
PI = 282+00.00
EL = 12.83'
VC = 300'
K = 500

PI = 274+50.00
EL = 10.58'
VC = 300'
K = 500

-L- STA.280+22.47=
-Y5A- STA.18+07.31

-L- STA.282+37.86=
-DR2- STA.12+16.80

-L- STA.284+00.00=
-Y5B- STA.10+00.00



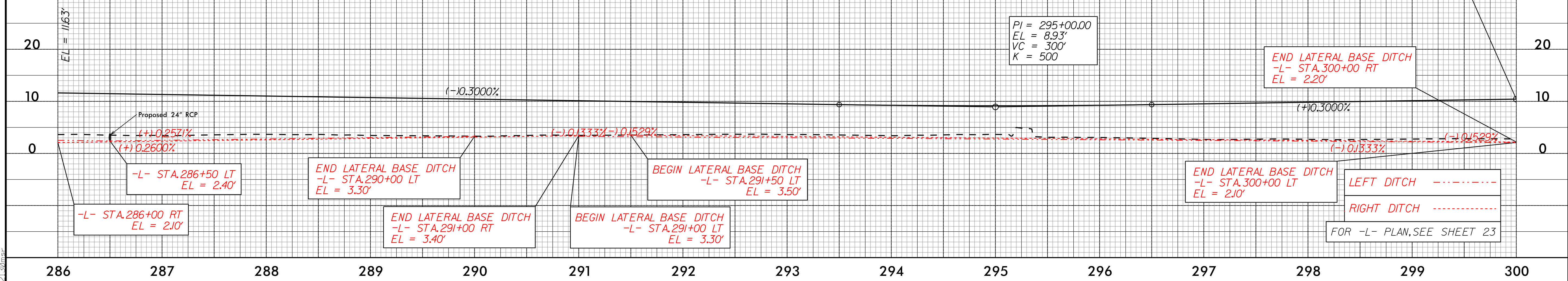
PIPE HYDRAULIC DATA
-L- Sta.286+50

DRAINAGE AREA	= HW Equalized (1.60) AC
DESIGN FREQUENCY	= 50 YRS
DESIGN DISCHARGE	= 6 CFS
DESIGN HW ELEVATION	= 4.2 FT
100 YEAR DISCHARGE	= 6 CFS
100 YEAR HW ELEVATION	= 4.24 FT
OVERTOPPING FREQUENCY	= 500+ YRS
OVERTOPPING DISCHARGE	= 10.0 CFS
OVERTOPPING ELEVATION	= 4.5 FT

-L-

PI = 295+00.00
EL = 8.93'
VC = 300'
K = 500

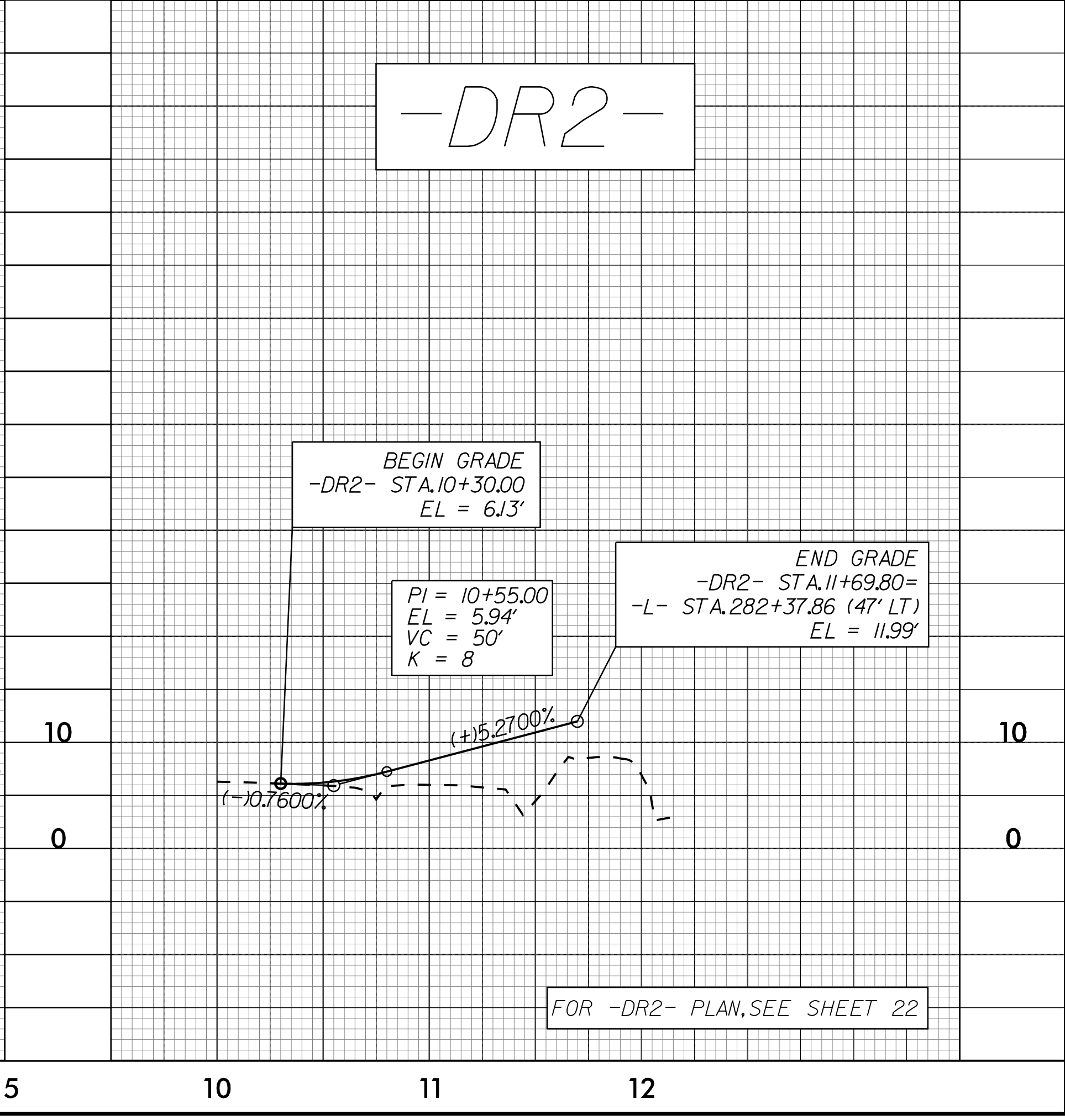
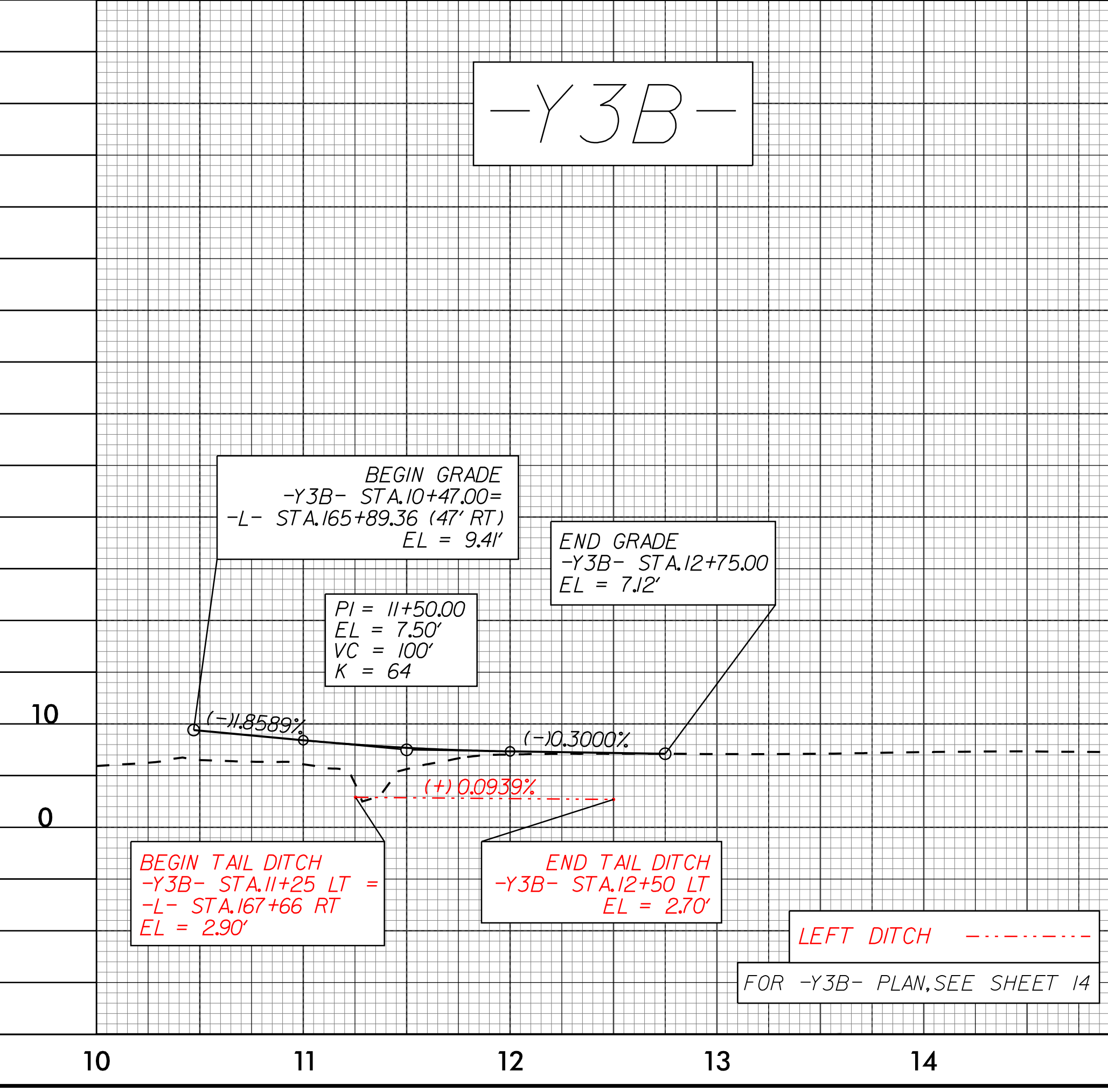
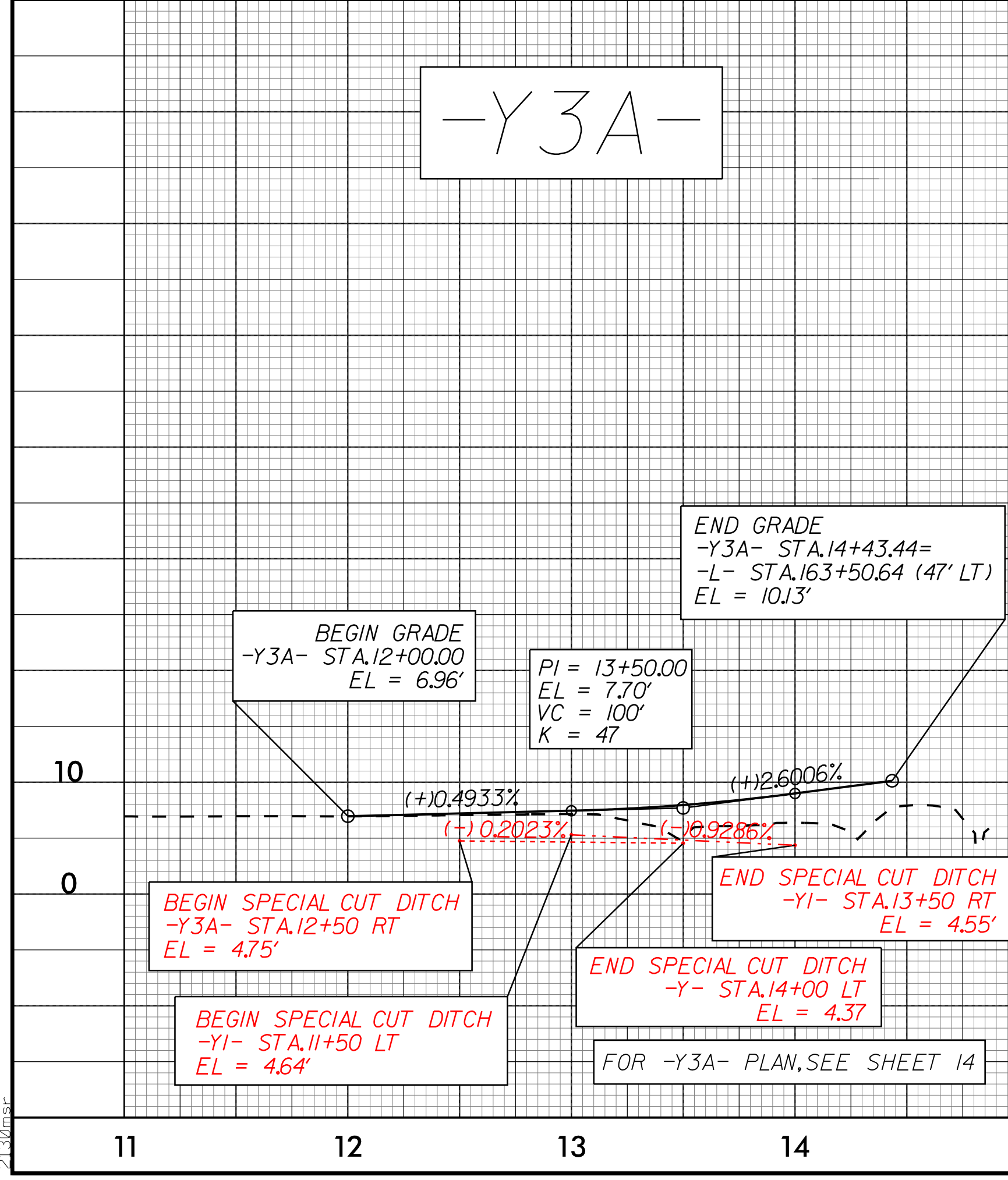
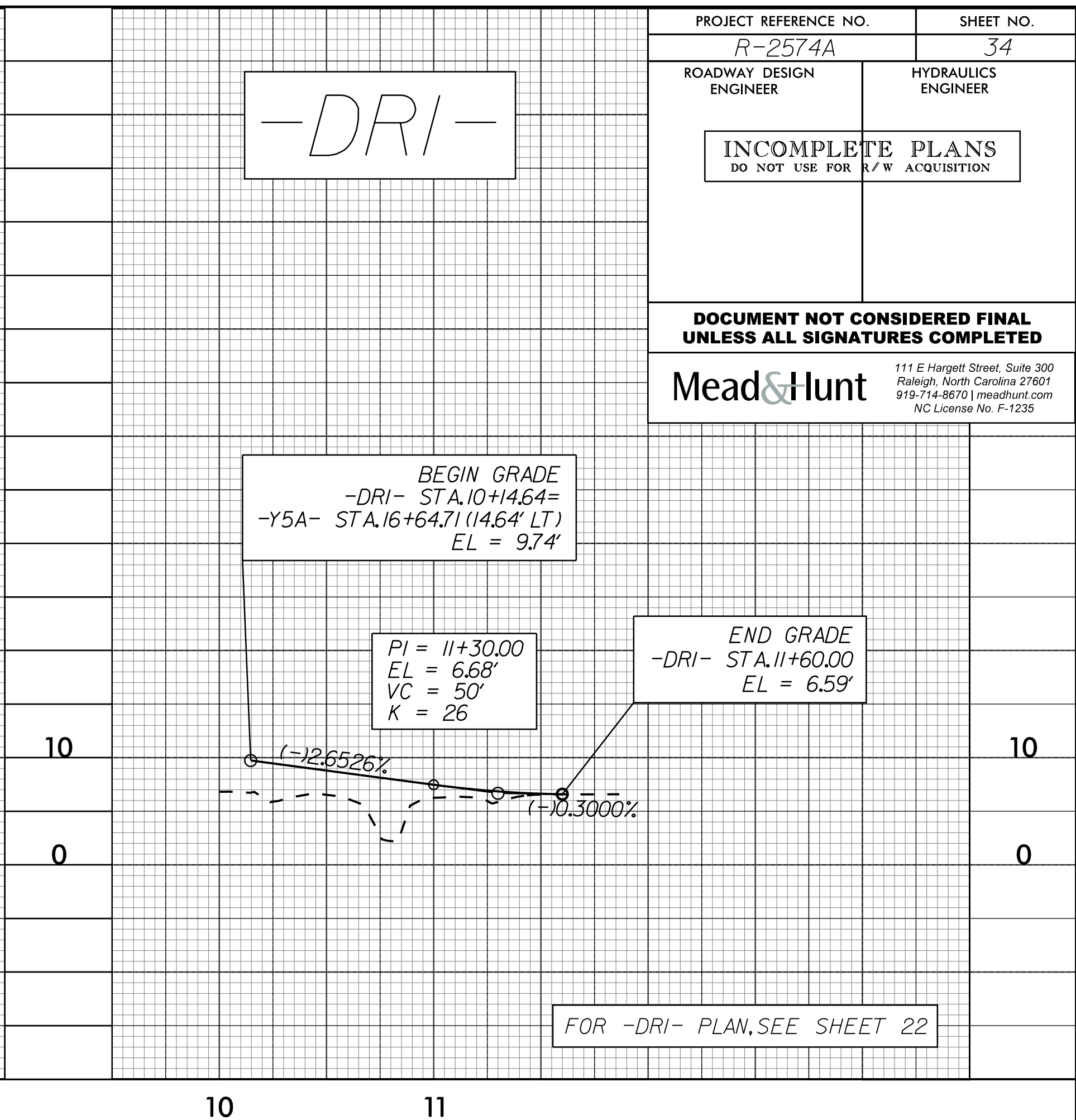
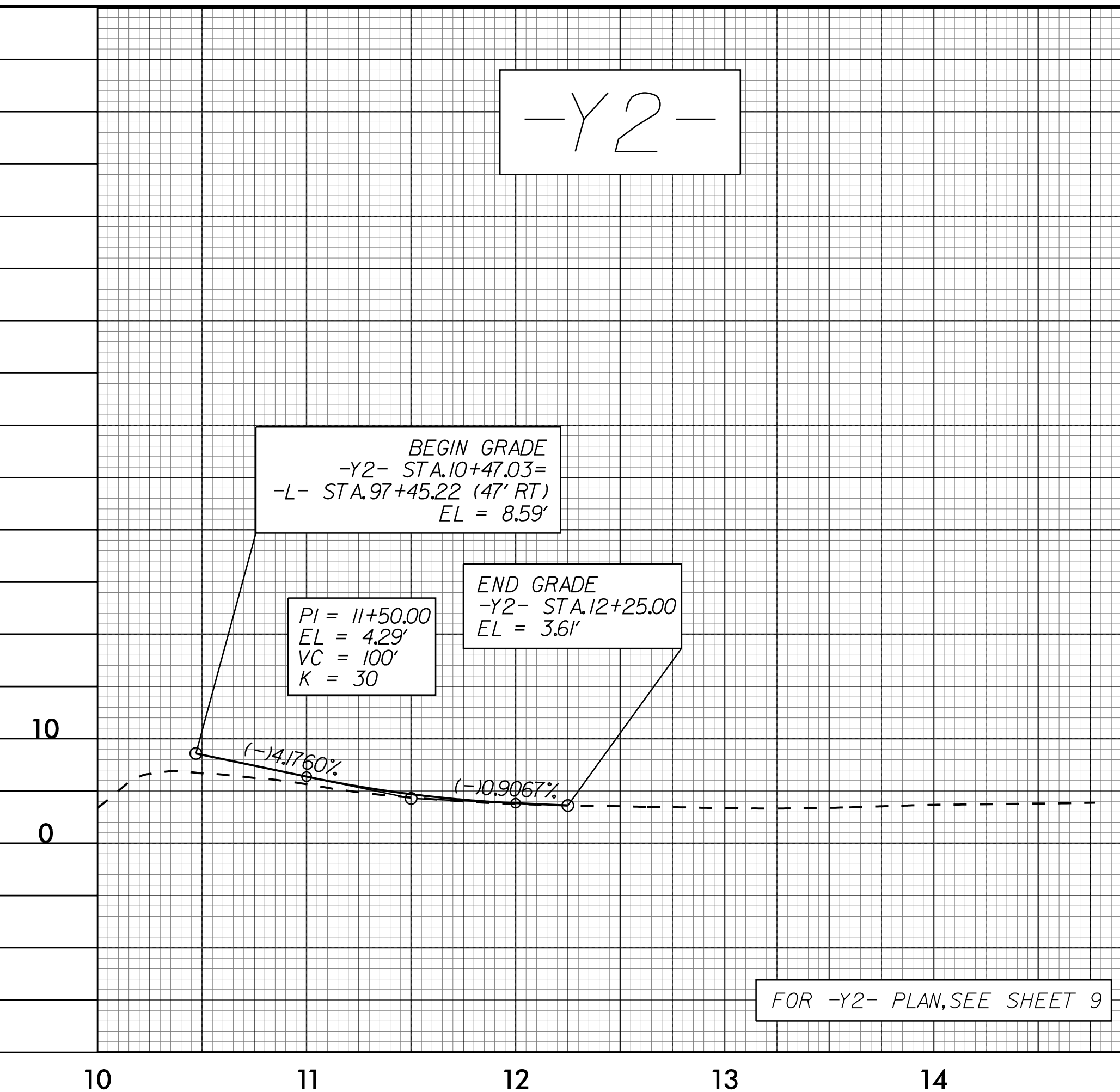
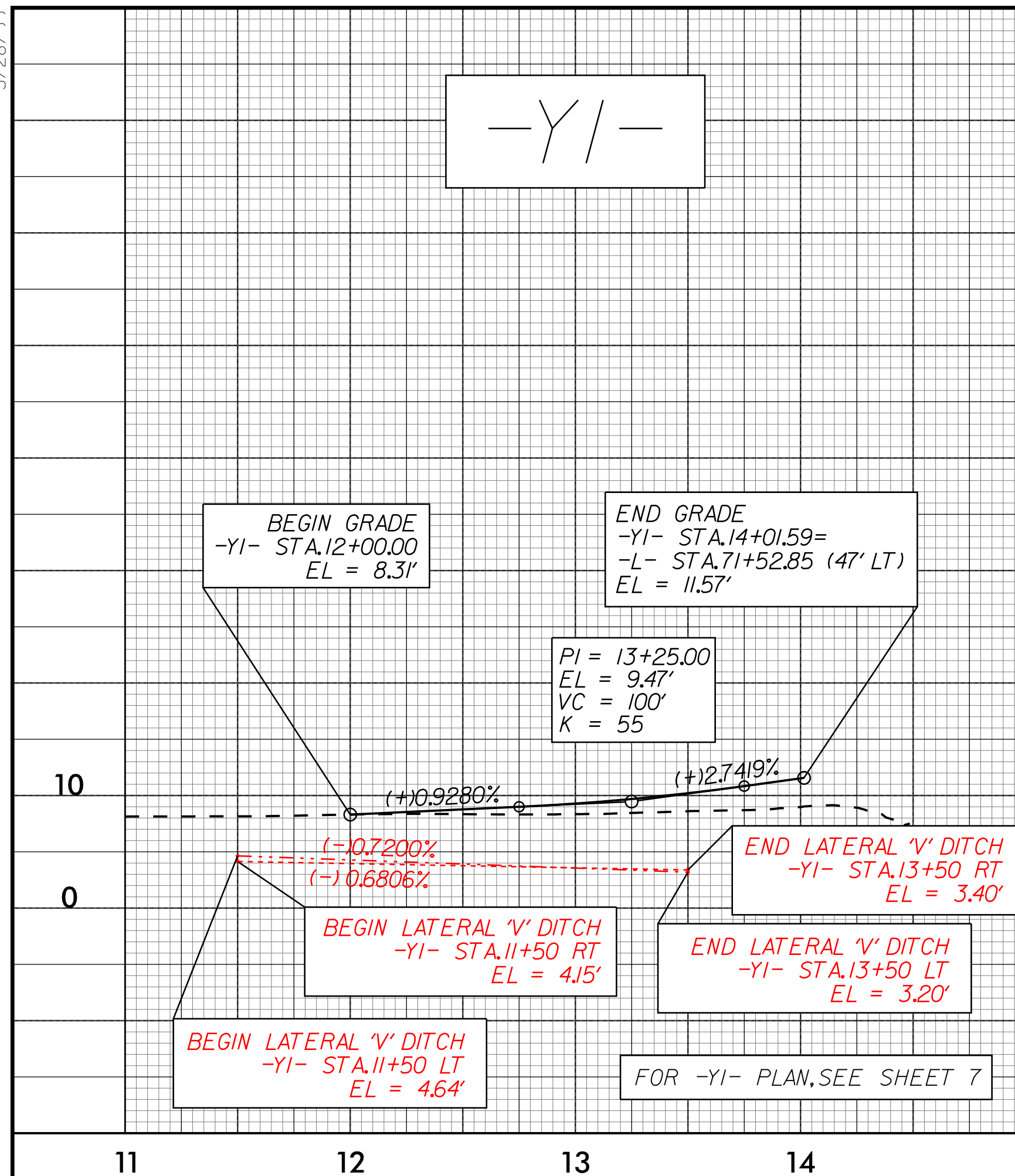
END GRADE
-L- STA.300+00.00
EL = 10.43'



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PROJECT REFERENCE NO. R-2574A	SHEET NO. 34
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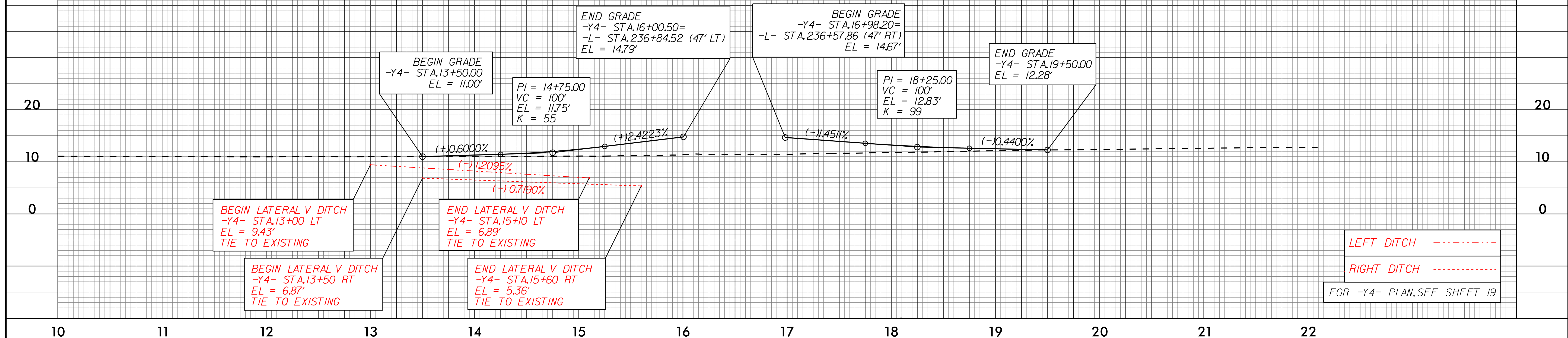


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PROJECT REFERENCE NO. R-2574A	SHEET NO. 35
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
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-Y4-



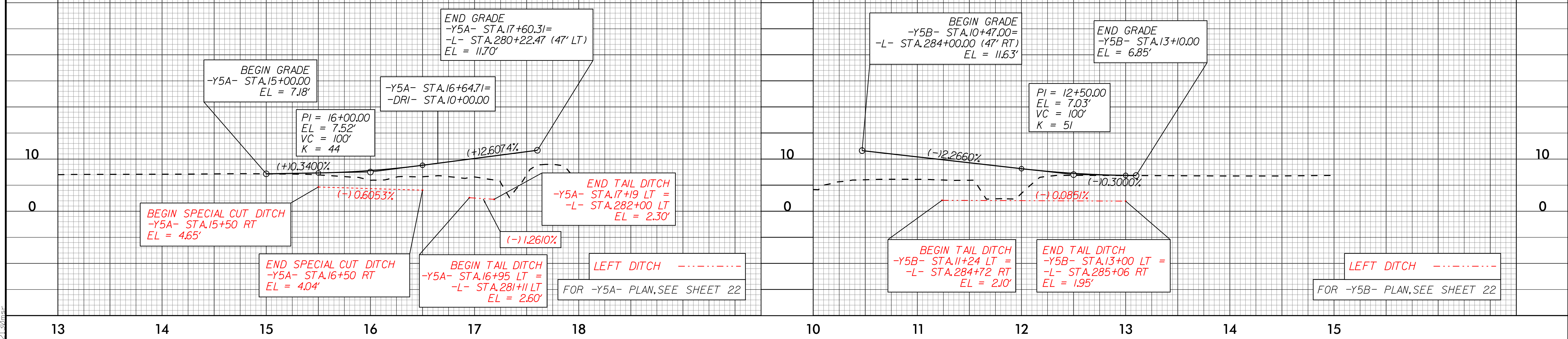
LEFT DITCH -----

RIGHT DITCH -----

FOR -Y4- PLAN, SEE SHEET 19

-Y5A-

-Y5B-



LEFT DITCH -----

FOR -Y5A- PLAN, SEE SHEET 22

LEFT DITCH -----

FOR -Y5B- PLAN, SEE SHEET 22

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