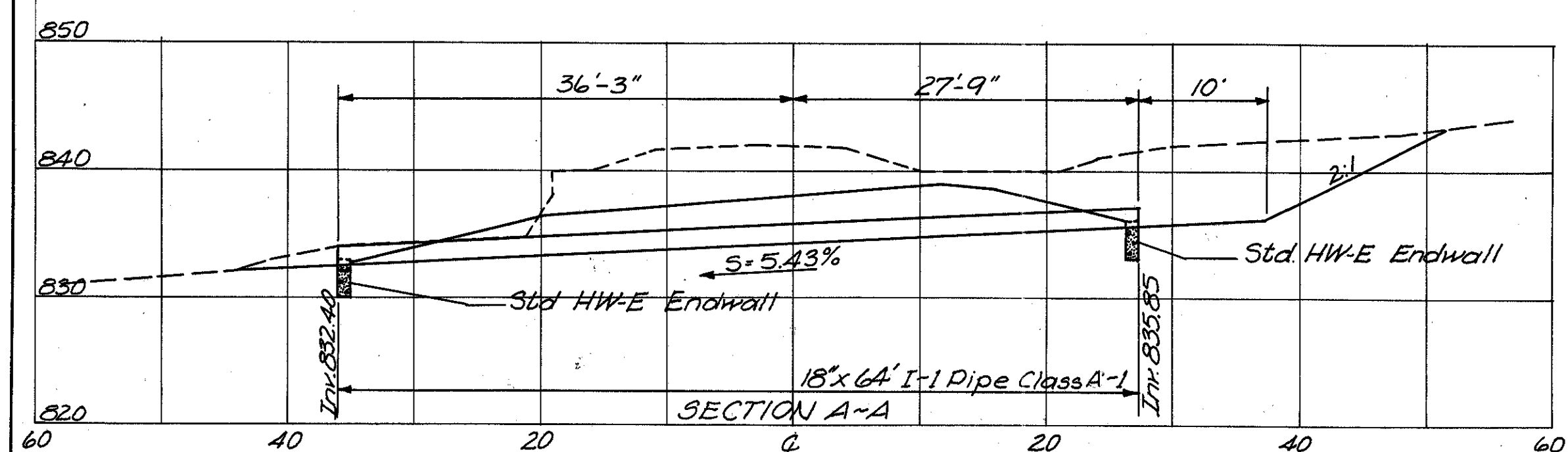
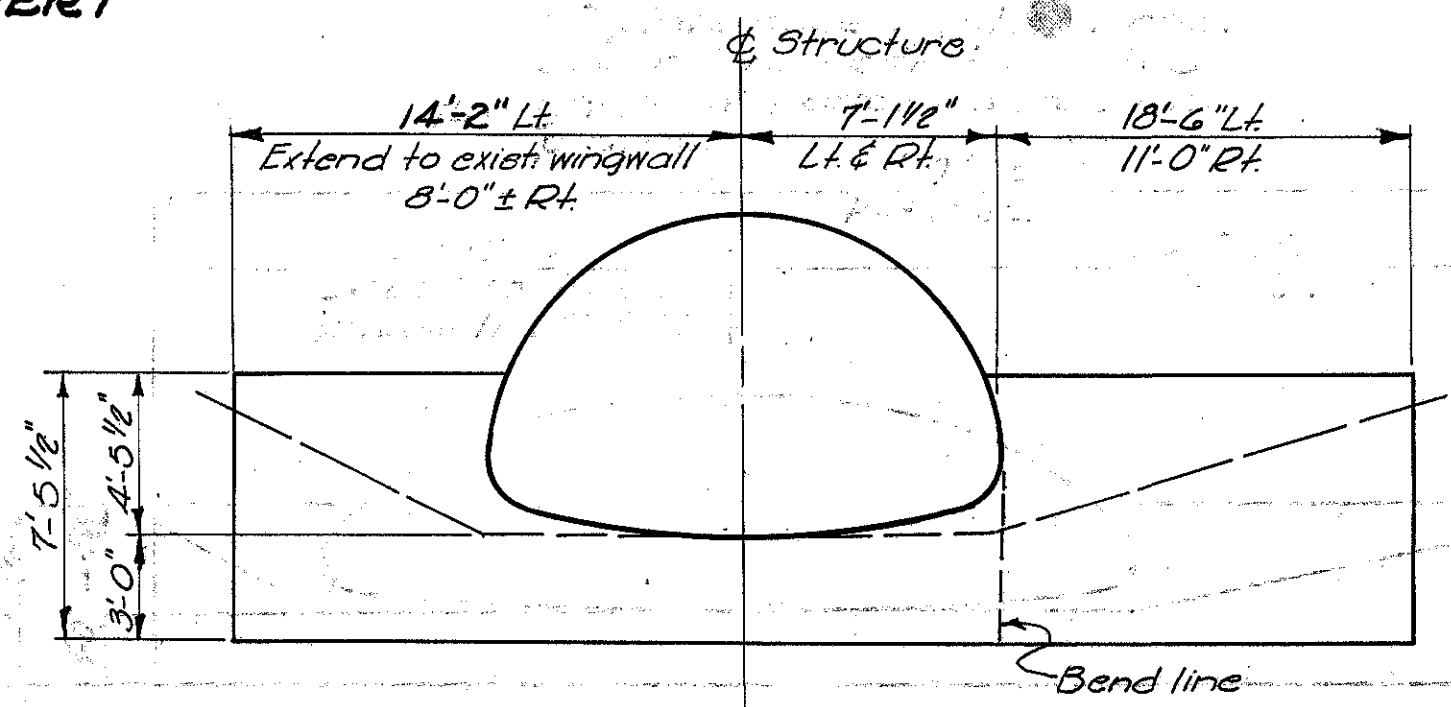


SECTIONAL PIPE ARCH CULVERT
STA 318+28
SKEW: 61° Rt. FWD.
Scale: 1"=10'-0"

* First number indicates gage of plate except bottom row. Second number indicates gage of bottom and corner plates.



PIPE CULVERT
STA 316+19
SKEW: 3° Rt. FWD.
Scale: 1"=10'-0"



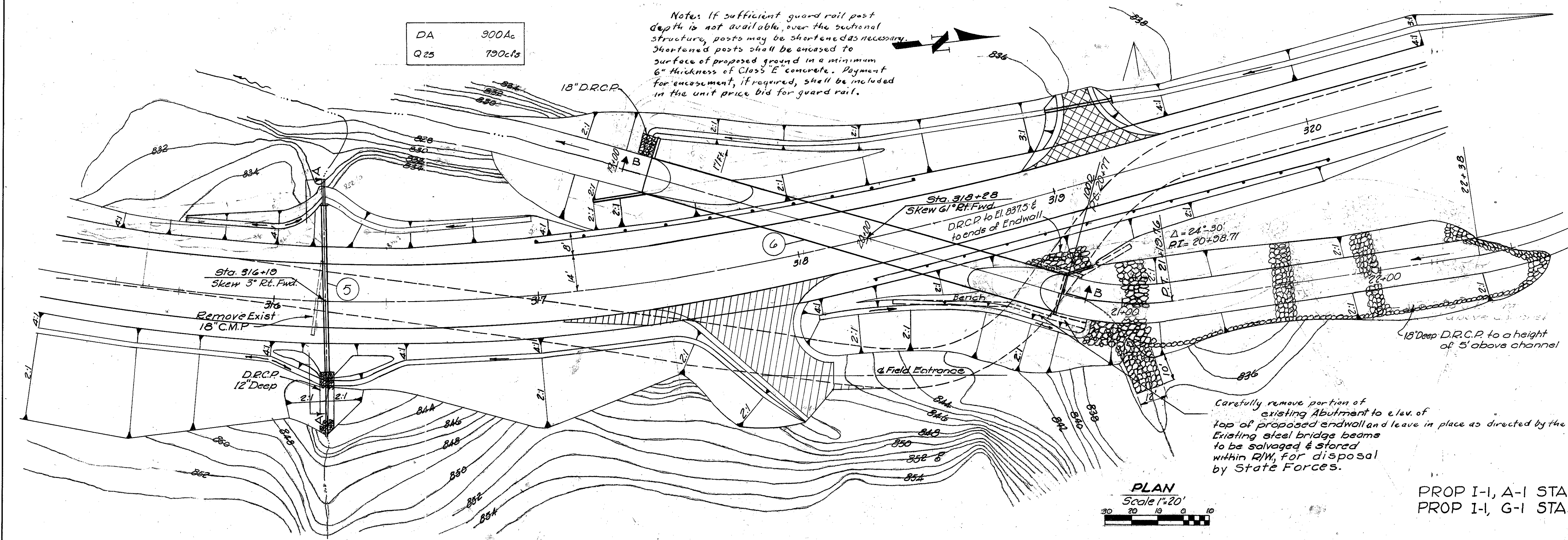
SP-53 ENDWALLS (Developed)
DETAIL
STA 318+28
Scale: 3/16"=1'-0"

ESTIMATED QUANTITIES ⑤ ⑥

I-2	Masonry Class "C"	0.6 C.Y.
I-2	Masonry Class "E"	25.6 C.Y.
I-1	14'-3" x 8'-11" Class B-1 Galge 5-3, M-6, A-1(g)	164 L.F.
I-1	18" I-1 Pipe Class A-1	64 L.F.
I-10	Dumped Rock Channel Protection	369 C.Y.
3-24	Removal of Existing Structure, as per plan	Lump
E-12	Pipe Removal	28 L.F.
See X-Sections for Channel Excav.		

DA	300Ac
Q 25	790c13

Note: If sufficient guard rail post depth is not available, over the sectional structure, posts may be shortened as necessary. Shortened posts shall be encased to surface of proposed ground in a minimum 6" thickness of Class "E" concrete. Payment for encasement, if required, shall be included in the unit price bid for guard rail.



PLAN
Scale 1"=20'

Carefully remove portion of existing Abutment to elev. of top of proposed endwall and leave in place as directed by the Engineer. Existing steel bridge beams to be salvaged & stored within R/W, for disposal by State Forces.

PROP I-1, A-1 STA. 316+19 ⑤
PROP I-1, G-1 STA. 318+28 ⑥

FED. RD. DIVISION	STATE	PROJECT	15 33
	OHIO		

BPO 305 - (4.85) (5.91) (6.90)

FINAL SURVEYED	BY	DATE
SURVEY PLOTTED		
NOTE BOOK NO.		
AREAS CHECKED		

ORIGINAL SURVEYED	BY	DATE
SURVEY PLOTTED		
NOTE BOOK NO.		
AREAS CHECKED		

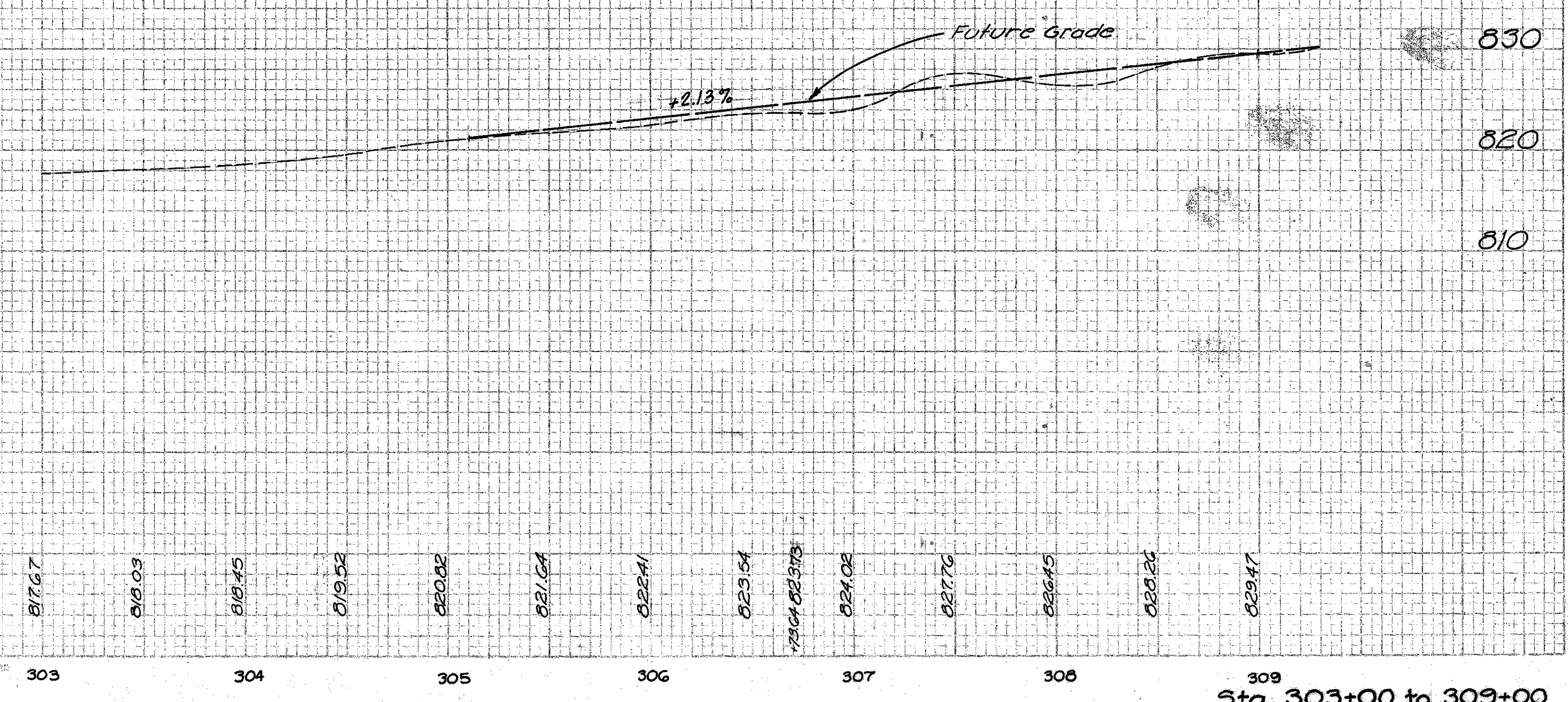
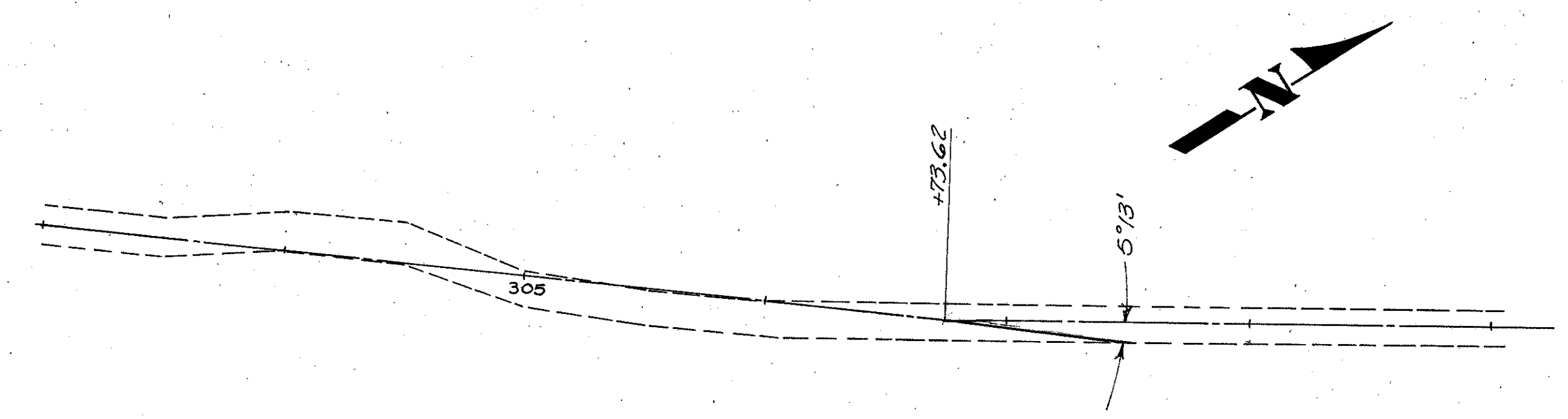


PLATE A - CROSS SECTION ON 4 R.L.T. STANDARD PROVISION PAPER CO. DRAWING

Sta. 303+00 to 309+00

CURVE DATA

$\Delta = 38^{\circ}29' Lt$
 $D_c = 8^{\circ}00'$
 $R = 716.20'$
 $L_s = 150.00'$
 $C_s = 6^{\circ}00'$
 $P = 1.31'$
 $K = 74.91'$
 $X_c = 149.84'$
 $Y_c = 5.23'$
 $T_s = 325.36'$
 $E_s = 43.73'$
 $L_c = 331.00'$

KENNETH HALL VIRABLE HALL
 12" Loc. @ 27.15' 44.00'

Spike 76.14'
 REFERENCE POINT
 S.C. Sta. 314+23.64

Spike 76.14'
 REFERENCE POINT
 S.C. Sta. 314+23.64

Spike 76.14'
 REFERENCE POINT
 S.C. Sta. 314+23.64

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Spike 76.14'
 REFERENCE POINT
 S.C. Sta. 314+23.64

Spike 76.14'
 REFERENCE POINT
 S.C. Sta. 314+23.64

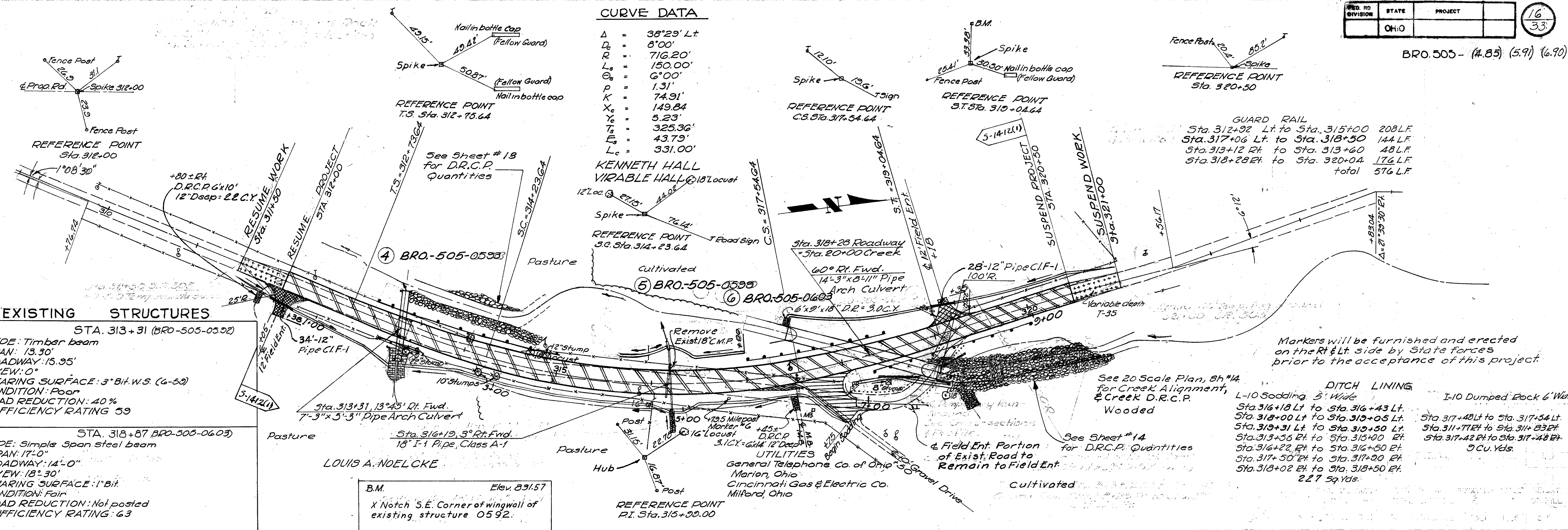
Spike 76.14'
 REFERENCE POINT
 S.C. Sta. 314+23.64

Spike 76.14'
 REFERENCE POINT
 S.C. Sta. 314+23.64

Spike 76.14'
 REFERENCE POINT
 S.C. Sta. 314+23.64

Spike 76.14'
 REFERENCE POINT
 S.C. Sta. 314+23.64

Spike 76.14'
 REFERENCE POINT
 S.C. Sta. 314+23.64



EXISTING STRUCTURES

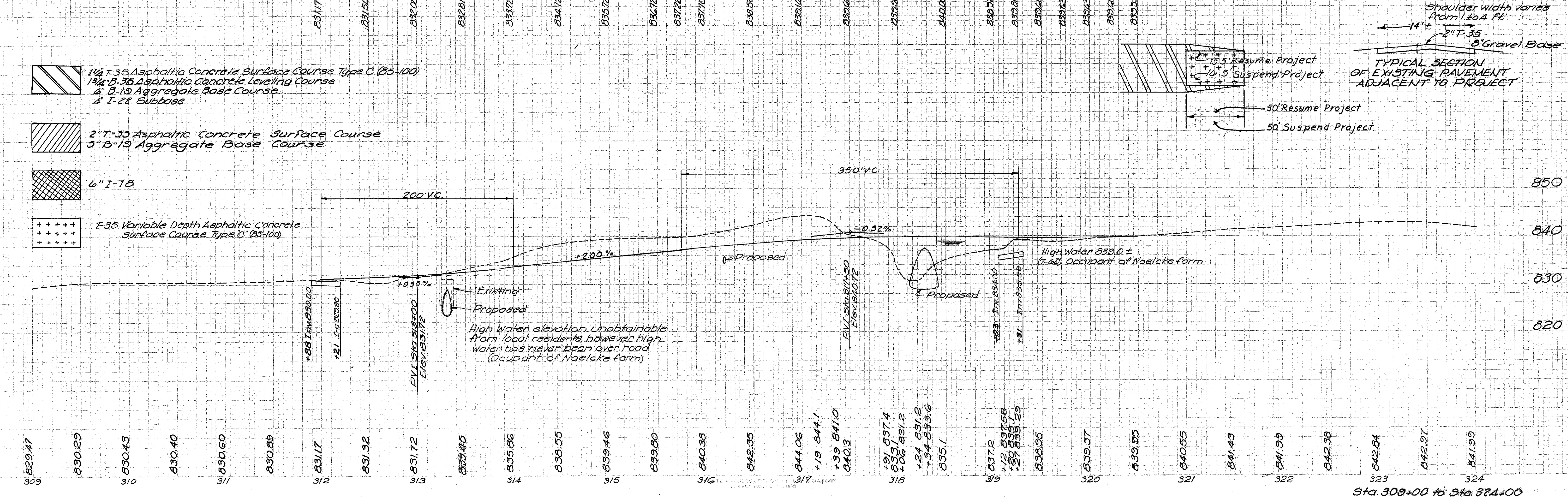
STA. 313+31 (BRO-505-0592)
 TYPE: Timber beam
 SPAN: 13.30'
 ROADWAY: 15.95'
 SKEW: 0°
 WEARING SURFACE: 3" Bit. W.S. (6-59)
 CONDITION: Poor
 LOAD REDUCTION: 40 %
 SUFFICIENCY RATING: 59

STA. 318+87 (BRO-505-0603)
 TYPE: Simple Span steel beam
 SPAN: 17.0"
 ROADWAY: 14.0"
 SKEW: 18° 30'
 WEARING SURFACE: 1" Bit.
 CONDITION: Fair
 LOAD REDUCTION: Not posted
 SUFFICIENCY RATING: 63

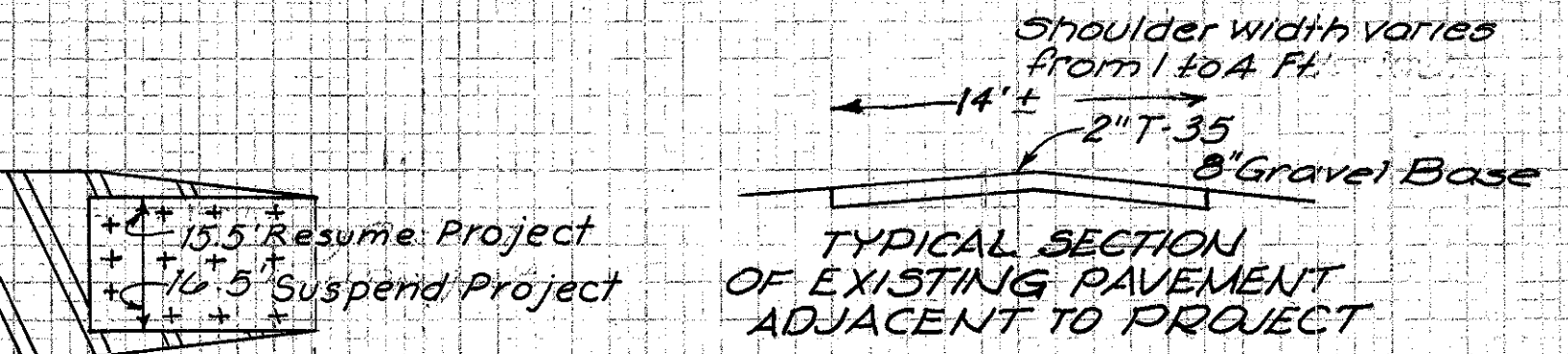
GUARD RAIL
 Sta. 312+92 Lt. to Sta. 315+00 208 L.F.
 Sta. 317+06 Lt. to Sta. 318+50 144 L.F.
 Sta. 313+12 Rt. to Sta. 313+60 48 L.F.
 Sta. 318+28 Rt. to Sta. 320+04 176 L.F.
 total 576 L.F.

DITCH LINING
 L-10 Sodding 3' Wide
 Sta. 316+18 Lt. to Sta. 316+43 Lt.
 Sta. 318+00 Lt. to Sta. 319+05 Lt.
 Sta. 319+31 Lt. to Sta. 319+50 Lt.
 Sta. 313+36 Rt. to Sta. 315+00 Rt.
 Sta. 316+22 Rt. to Sta. 316+50 Rt.
 Sta. 317+50 Rt. to Sta. 317+90 Rt.
 Sta. 318+02 Rt. to Sta. 318+50 Rt.
 227 Sq. Yds.

I-10 Dumped Rock 6' Wide
 Sta. 317+48 Lt. to Sta. 317+54 Lt.
 Sta. 311+77 Rt. to Sta. 311+83 Rt.
 Sta. 317+42 Rt. to Sta. 317+48 Rt.
 9 Cu. Yds.



- 1 1/2" T-35 Asphaltic Concrete Surface Course Type C (85-100)
- 1 3/4" B-35 Asphaltic Concrete Leveling Course
- 6" B-19 Aggregate Base Course
- 4" I-28 Subbase
- 2" T-35 Asphaltic Concrete Surface Course
- 5" B-19 Aggregate Base Course
- 6" I-18
- T-35 Variable Depth Asphaltic Concrete Surface Course Type C (85-100)



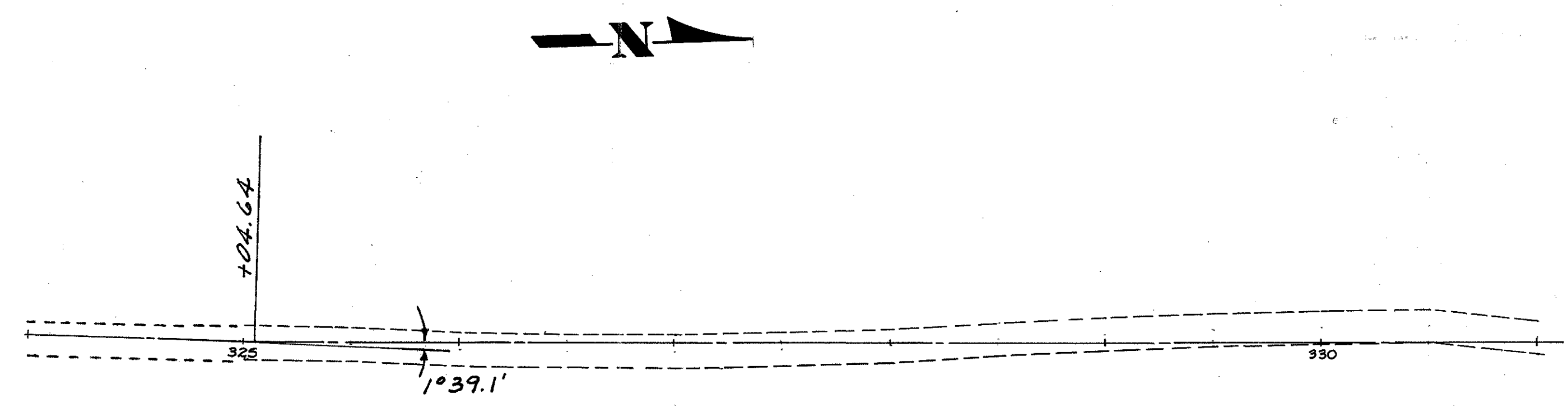
50' Resume Project
 50' Suspend Project

High water elevation unobtainable from local residents, however high water has never been over road (Occupant of Noelcke farm)

BRO. 505--(4.85)--(5.91)--(6.90)

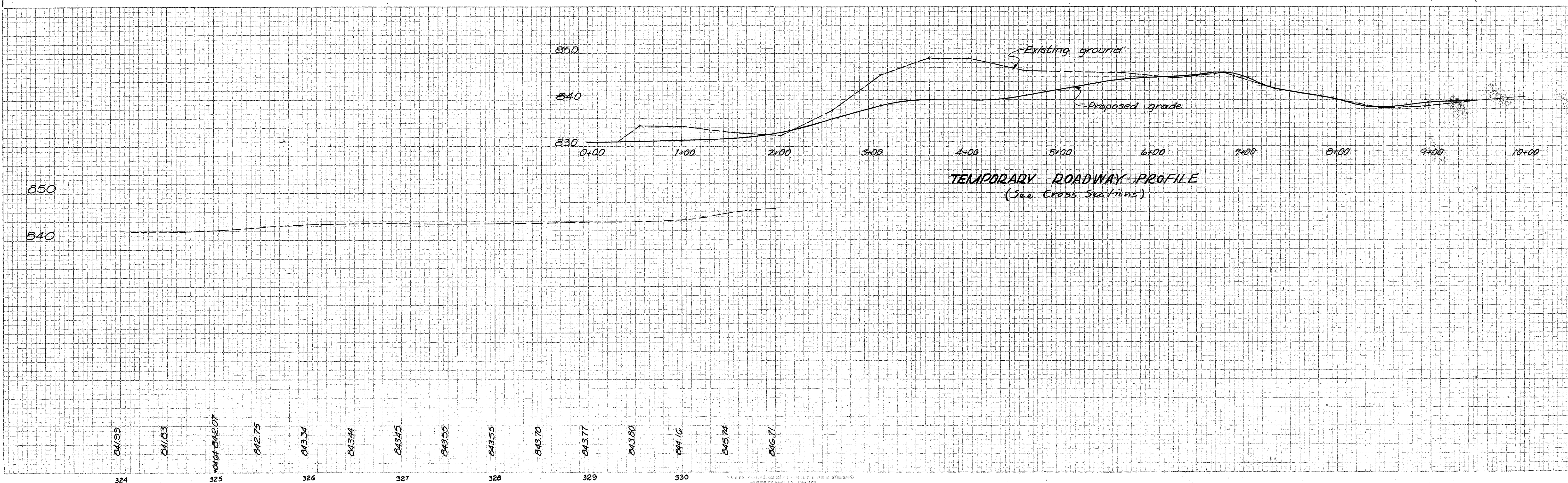
SUPERELEVATION TABLE

STATION	DISTANCE FROM LT. EDGE TO C.	LEFT EDGE	CENTER LINE	RIGHT EDGE
312+11.14		831.07	831.23	831.07
+25		831.17	831.33	831.21
+50		831.38	831.54	831.48
T.S. 312+73.64	10.00	831.61	831.77	831.77
+25	10.04	831.63	831.79	831.80
313+00	10.70	831.85	832.08	832.23
+25	11.37	832.02	832.42	832.71
+50	12.04	832.21	832.81	833.23
+75	12.70	832.45	833.24	833.80
314+00	13.37	832.73	833.72	834.42
S.C.S. 14+23.64	14.00	833.06	834.19	834.99
+25		833.08	834.22	835.02
+50		833.55	834.72	835.55
+75		834.05	835.22	836.05
315+00		834.55	835.72	836.55
+25		835.05	836.22	837.05
+50		835.55	836.72	837.55
+75		836.05	837.22	838.05
316+00		836.55	837.70	838.53
+25		836.96	838.13	838.96
+50		837.35	838.52	839.35
+75		837.69	838.86	839.69
317+00		837.99	839.16	839.99
+25		838.24	839.41	840.24
+50		838.47	839.62	840.43
C.S. 17+54.64	14.00	838.52	839.65	840.45
+75	13.46	838.77	839.78	840.50
318+00	12.79	839.08	839.90	840.47
+25	12.13	839.35	839.97	840.42
+50	11.46	839.57	840.00	840.30
+75	10.79	839.75	839.98	840.14
319+00	10.12	839.76	839.92	839.95
S.T. 19+04.64	10.00	839.74	839.91	839.91
+25		839.65	839.81	839.75
+50		839.50	839.66	839.58
319+67.14		839.34	839.50	839.34



FINAL SURVEY BY DATE
 SURVEY FLOTTED
 NOTE BOOK NO.
 TEMP. DATE
 AREAS CHECKED

ORIGINAL SURVEY BY DATE
 SURVEY FLOTTED
 NOTE BOOK NO.
 TEMP. DATE
 AREAS CHECKED



END AREA CU. YDS.	
CUT	FILL
143	79
203 98	
76	27
61 -80	
151	37
87 6	
129 9	
52	4
48 4	
0	0

Prop. 7'-3" x 5'-3" x 74' I-1, G-1 Sta. 313+31

Temporary Roadway

Add for Channel thru Ex. Struct.
Deduct for Prop. Culvert

832.08
313+00
831.72

829.36

Begin Guard Rail Sta. 312+92

Temporary Roadway

Field Entrance

831.54
312+50
831.32

829.51

RESUME PROJECT
STA. 312+00

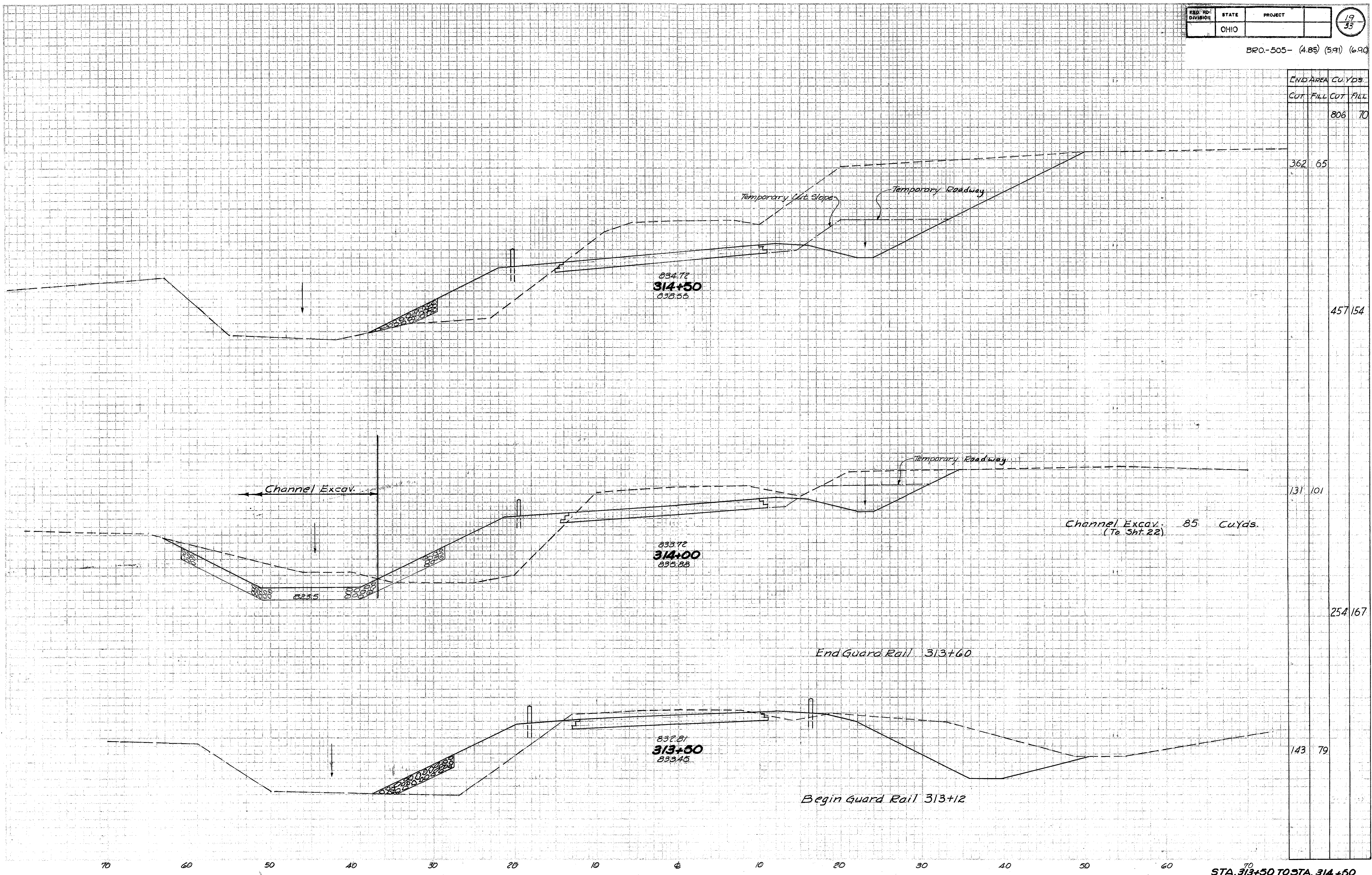
831.17
312+00
831.17

RESUME WORK
STA. 311+50

311+50
830.82

DATE: _____
BY: _____
CHECKED: _____
APPROVED: _____

DATE: _____
BY: _____
CHECKED: _____
APPROVED: _____



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
		806	70
362	65		
		457	154
131	101		
		254	167
143	79		

Channel Excav. 85 Cu.Yds.
(To Sht. 22)

End Guard Rail 313+60

Begin Guard Rail 313+12

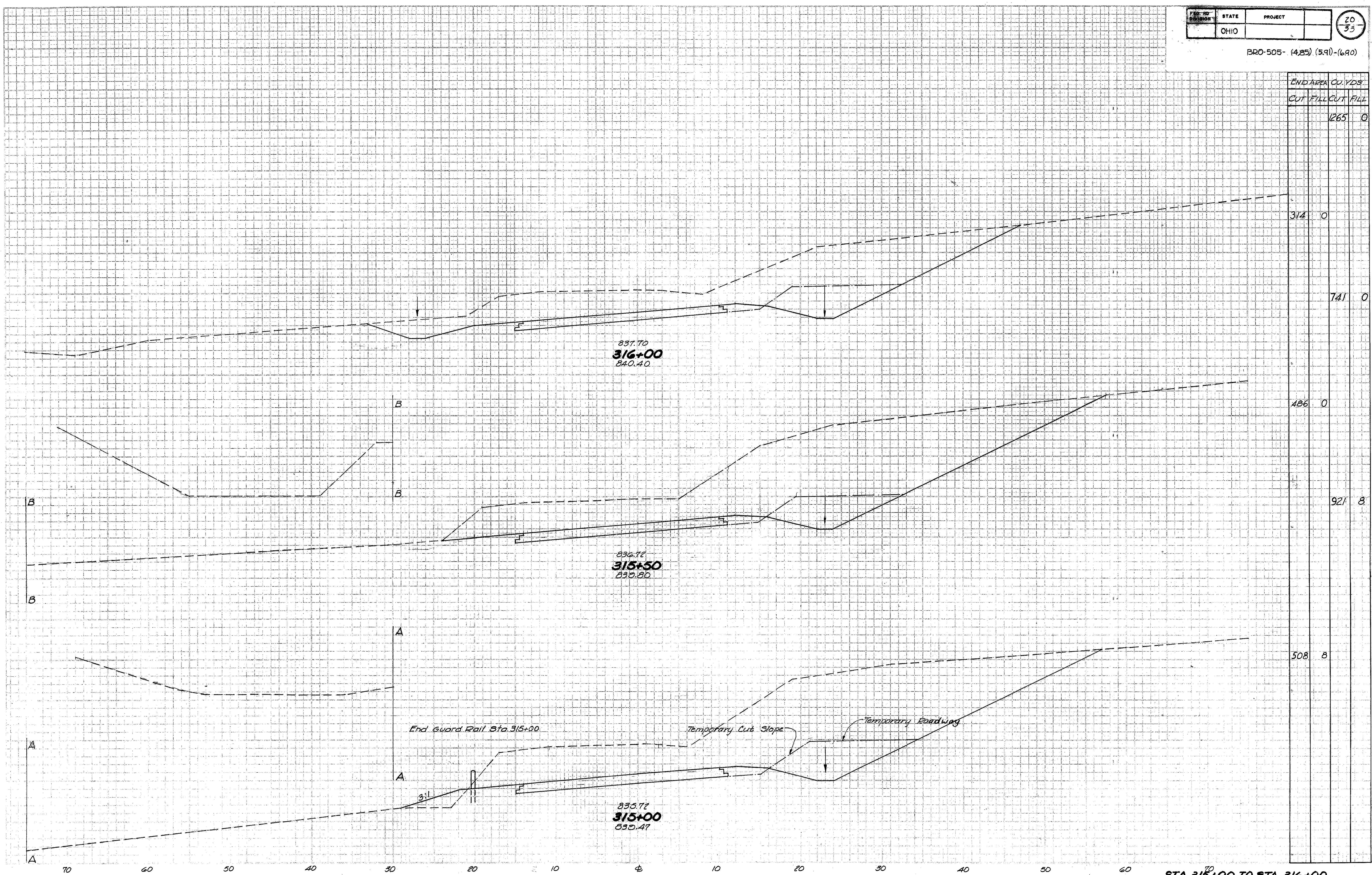
FED. RD. DIVISION	STATE	PROJECT
	OHIO	

20
33

BR0-505- (4.85) (5.91)-(6.90)

END AREA CU. YDS.	
CUT	FILL

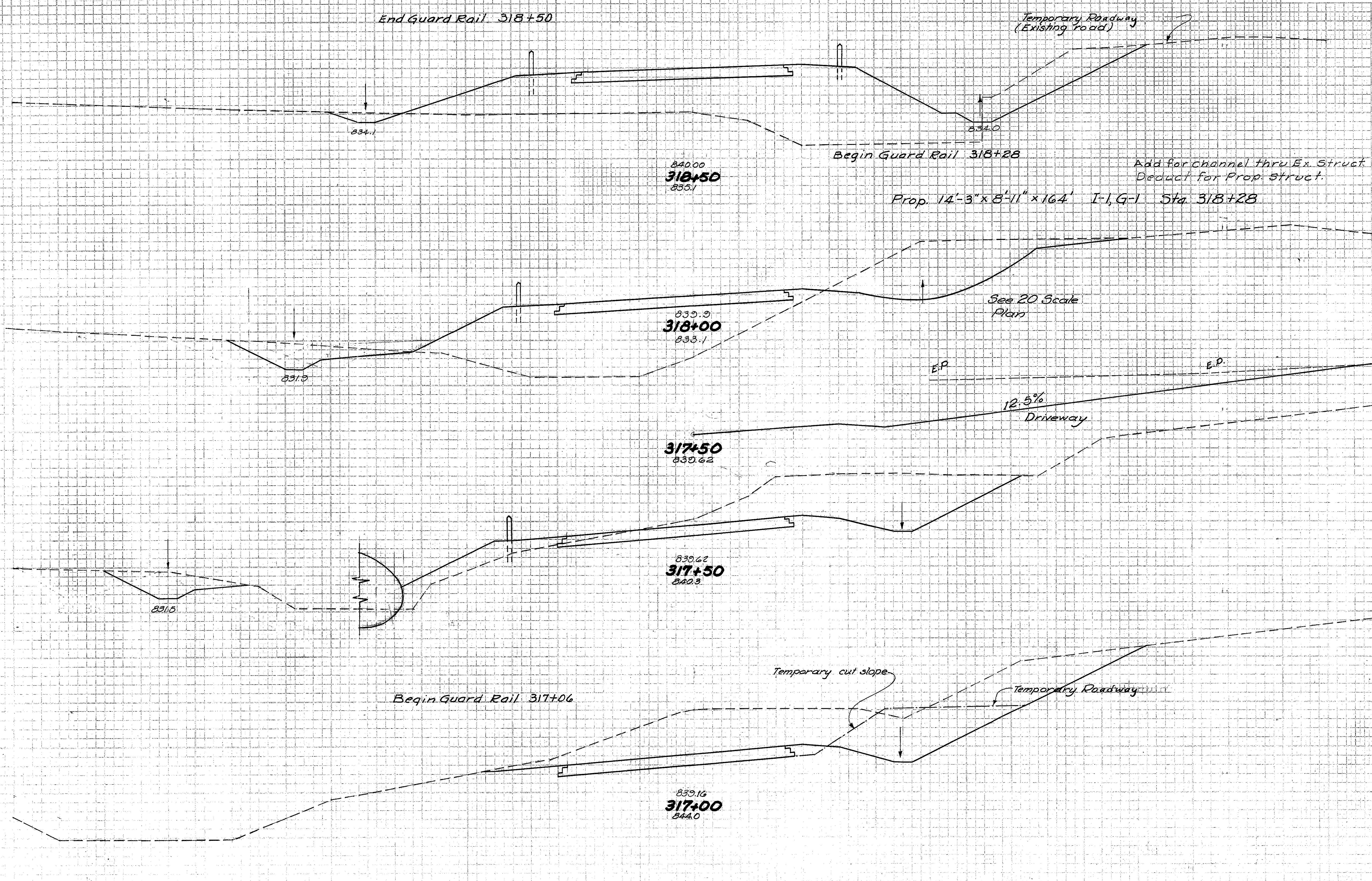
	1265	0
	314	0
	741	0
	486	0
	921	8
	508	8



PROJECT NO. 2033
 SHEET NO. 10
 DATE 10/1/55
 DRAWN BY J. W. BROWN
 CHECKED BY J. W. BROWN
 APPROVED BY J. W. BROWN

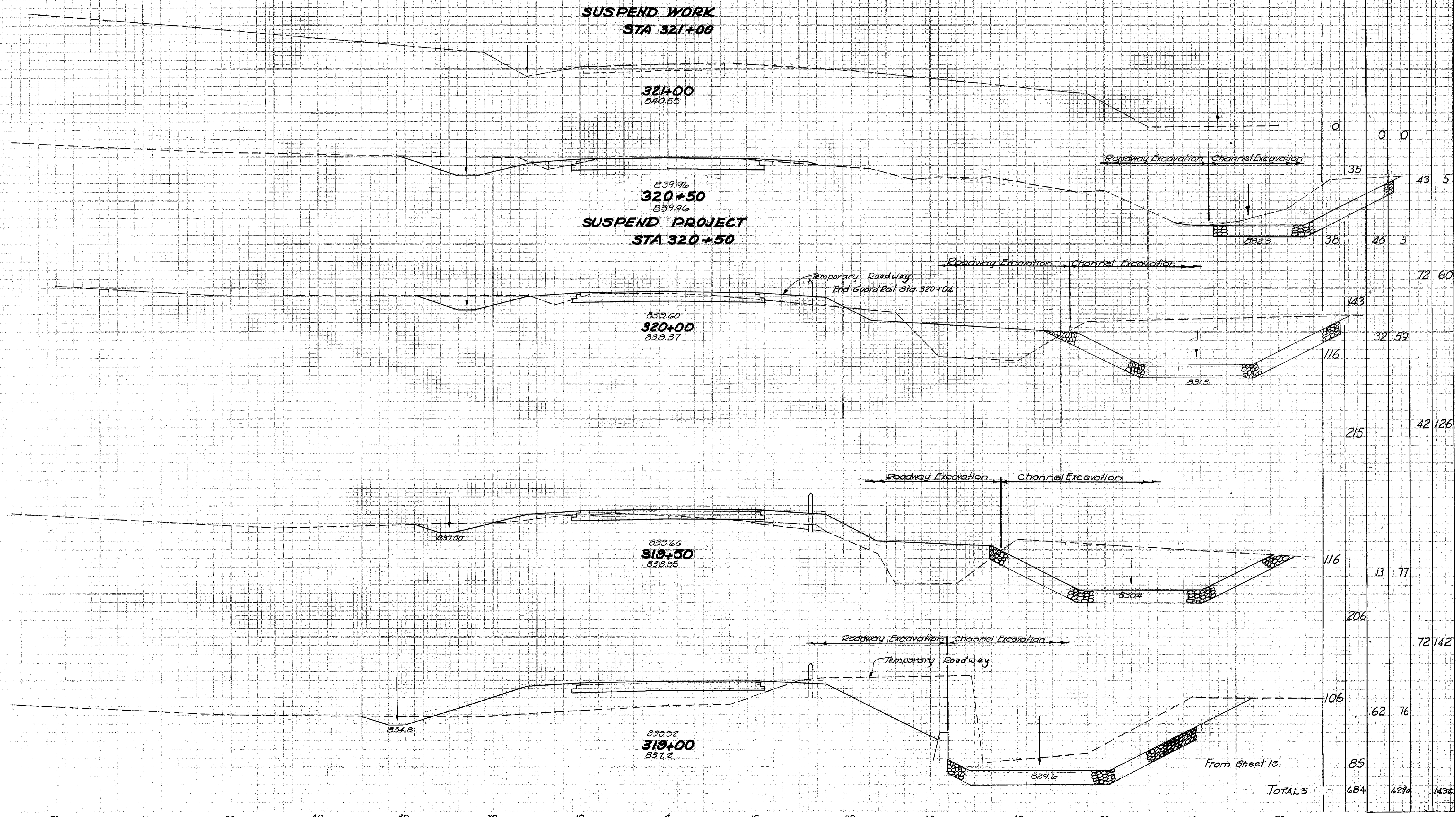
PROJECT NO. 2033
 SHEET NO. 10
 DATE 10/1/55
 DRAWN BY J. W. BROWN
 CHECKED BY J. W. BROWN
 APPROVED BY J. W. BROWN

STA. 315+00 TO STA. 316+00



END AREA		CU YDS	
CUT	FILL	CUT	FILL
10.3	3.39		
49	290		
		160	481
		78	
		-59	
		123	229
		297	242
		198	32
		526	30
		370	0

B20-505-(485)-(591)-(690)



CUT End Area	CU Yds.	Channel		Roadway	
		CUT	FILL	CUT	FILL
0	0			0	0
35	43			5	
38	46			5	
143	116			32	59
215	116			42	126
116	116			13	77
206	106			72	142
106	85			62	76
85	85				
TOTALS	684			6290	1434

70 STA. 319+00 TO STA. 321+00

**BROWN COUNTY
 LEWIS TWP**

CURVE DATA
 $\Delta = 38^{\circ}29'00''$ L_c
 D_c = 8'00"
 P = 716.20
 L_s = 150.00
 $\theta_c = 6^{\circ}00'00''$
 C = 1.31
 K = 74.91
 X_c = 149.84
 Y_c = 5.23
 L_c = 331.00
 E_c = 43.79
 T_c = 325.36

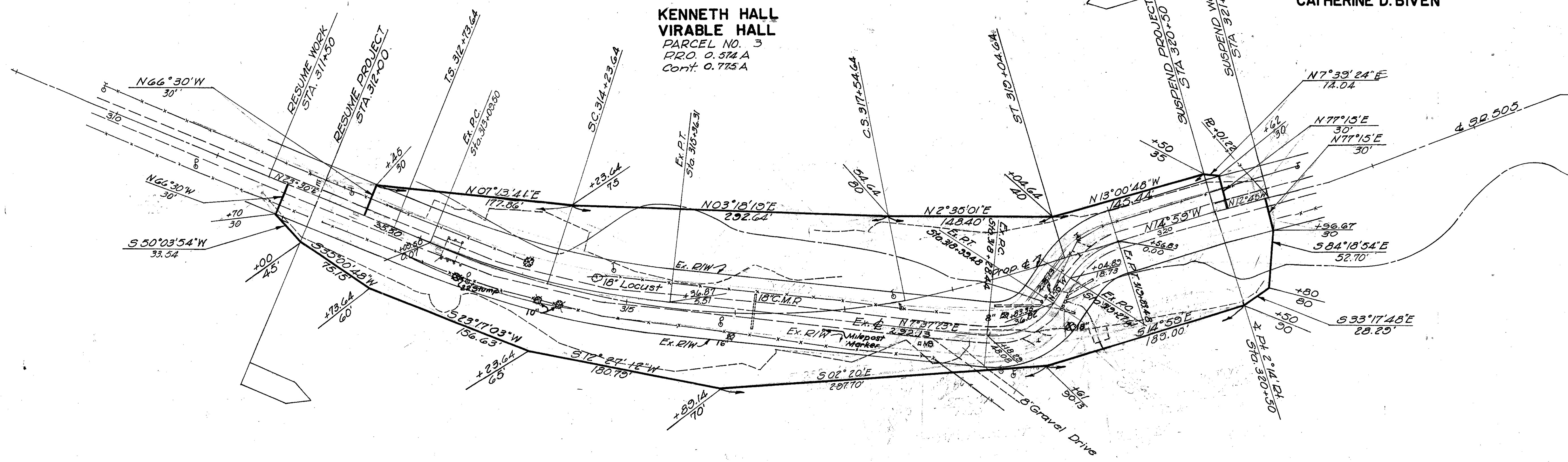
Ex. Curve Data
 P.I. 314+23.64
 $\Delta = 15^{\circ}52'37''$
 D_c = 7'
 L = 226.81
 P = 818.50
 T = 114.14



**CECIL BIVEN &
 CATHERINE D. BIVEN**

**KENNETH HALL
 VIRABLE HALL**
 PARCEL NO. 3
 P.R.O. 0.574 A
 Cont. 0.775 A

LOUIS A. NOELCKE PAULINE F. NOELCKE
 PARCEL NO. 4
 P.R.O. 0.663 A
 Cont. 0.627 A



Ex. Curve Data
 P.I. 318+67.98
 $\Delta = 62^{\circ}37'23''$
 P = 65.0
 T = 39.54
 L = 71.04

Ex. Curve Data
 P.I. 319+56.74
 $\Delta = 40^{\circ}01'$
 P = 80.0
 T = 29.13
 L = 55.87

SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED

Parcel	Owner	Deed Record		Deed Area	To be Acquired		Residue		Sheet No.	Remarks
		Book	Page		Land	Bldgs.	Left	Right		
3	KENNETH HALL & VIRABLE HALL	77	104	111.31	0.775	None	110.535	—	2 of 3	P.R.O. 0.574 Pertains to Limits Shown on Plan
4	LOUIS A. NOELCKE & PAULINE F. NOELCKE	38	583	140.0	0.697	"	—	139.303	"	P.R.O. 0.663 Pertains to Limits Shown on Plan

Completion Date		
Revised	Revision Description	By