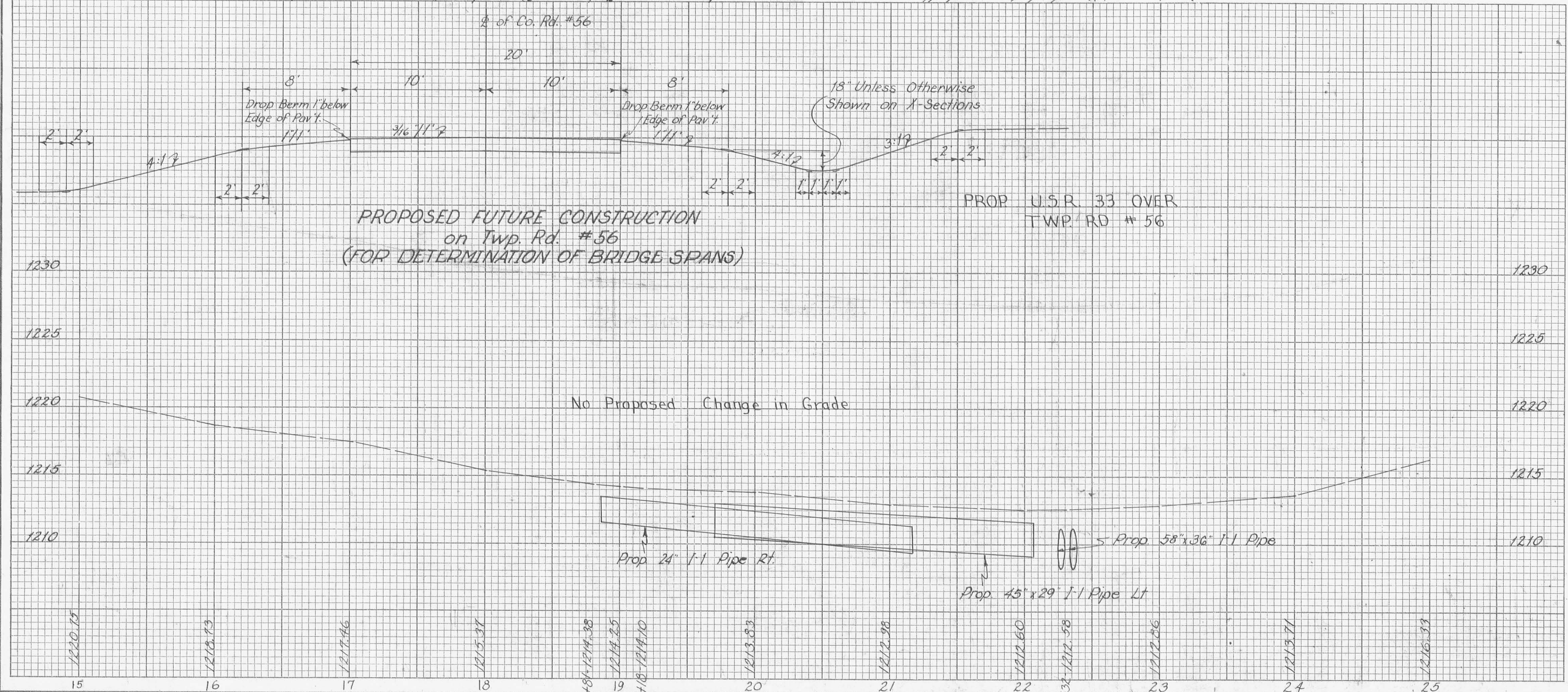
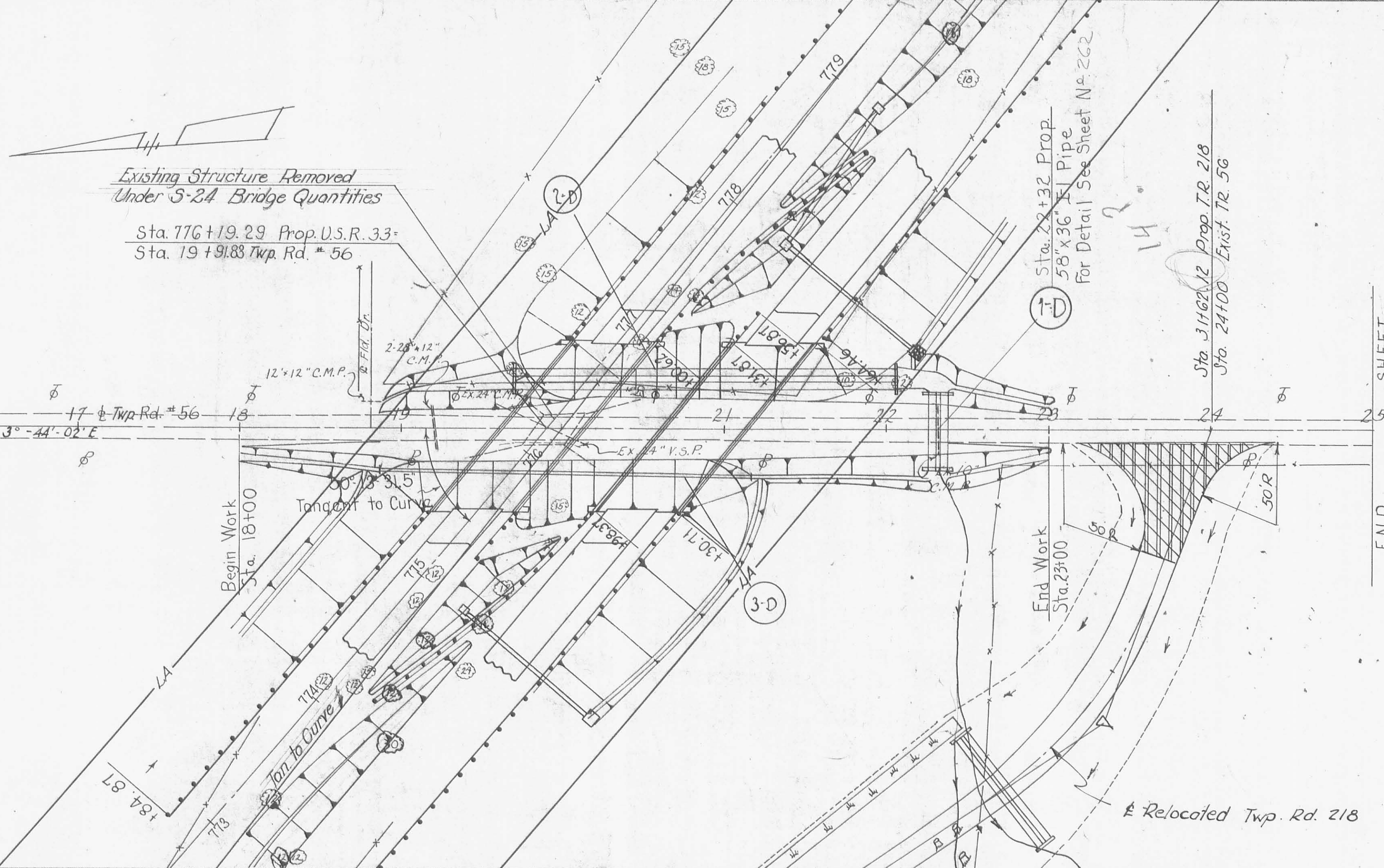


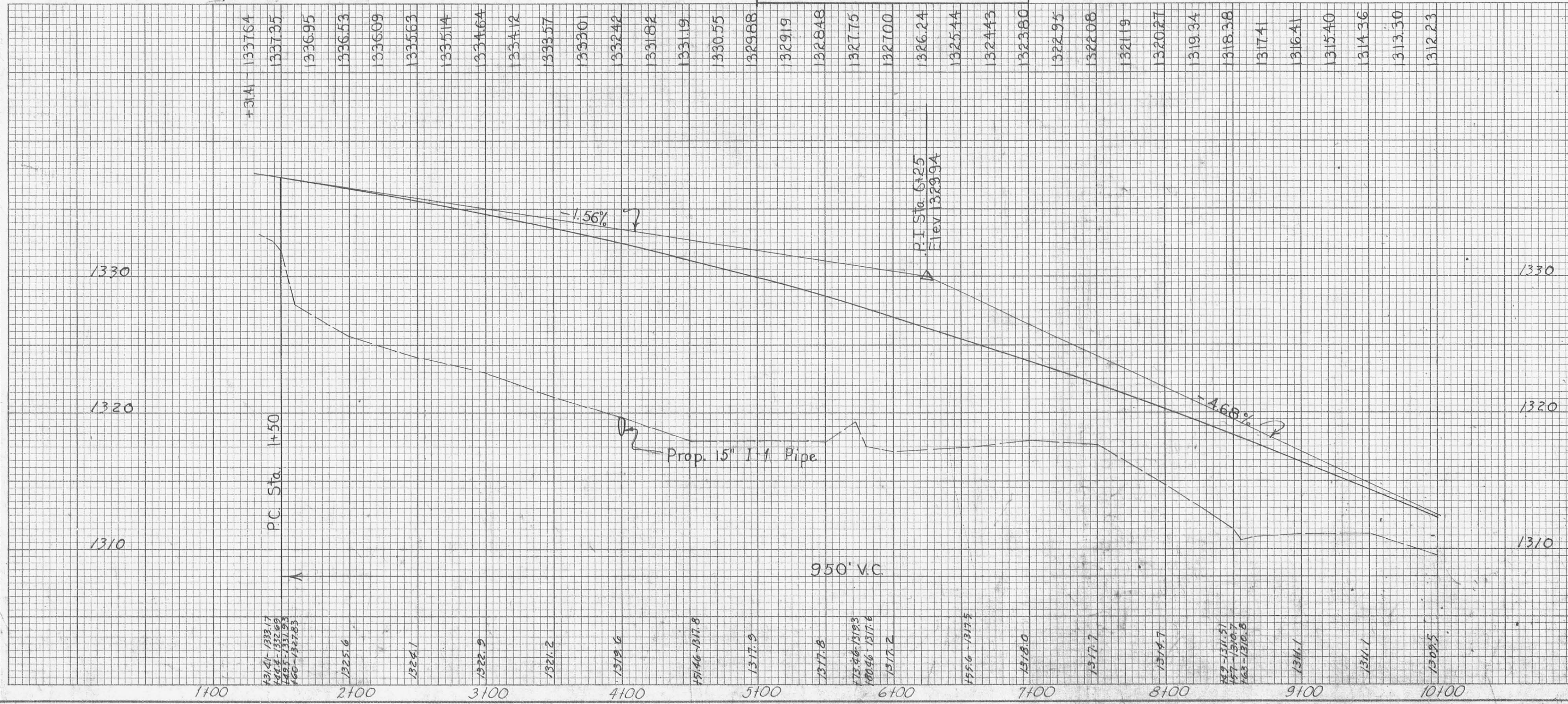
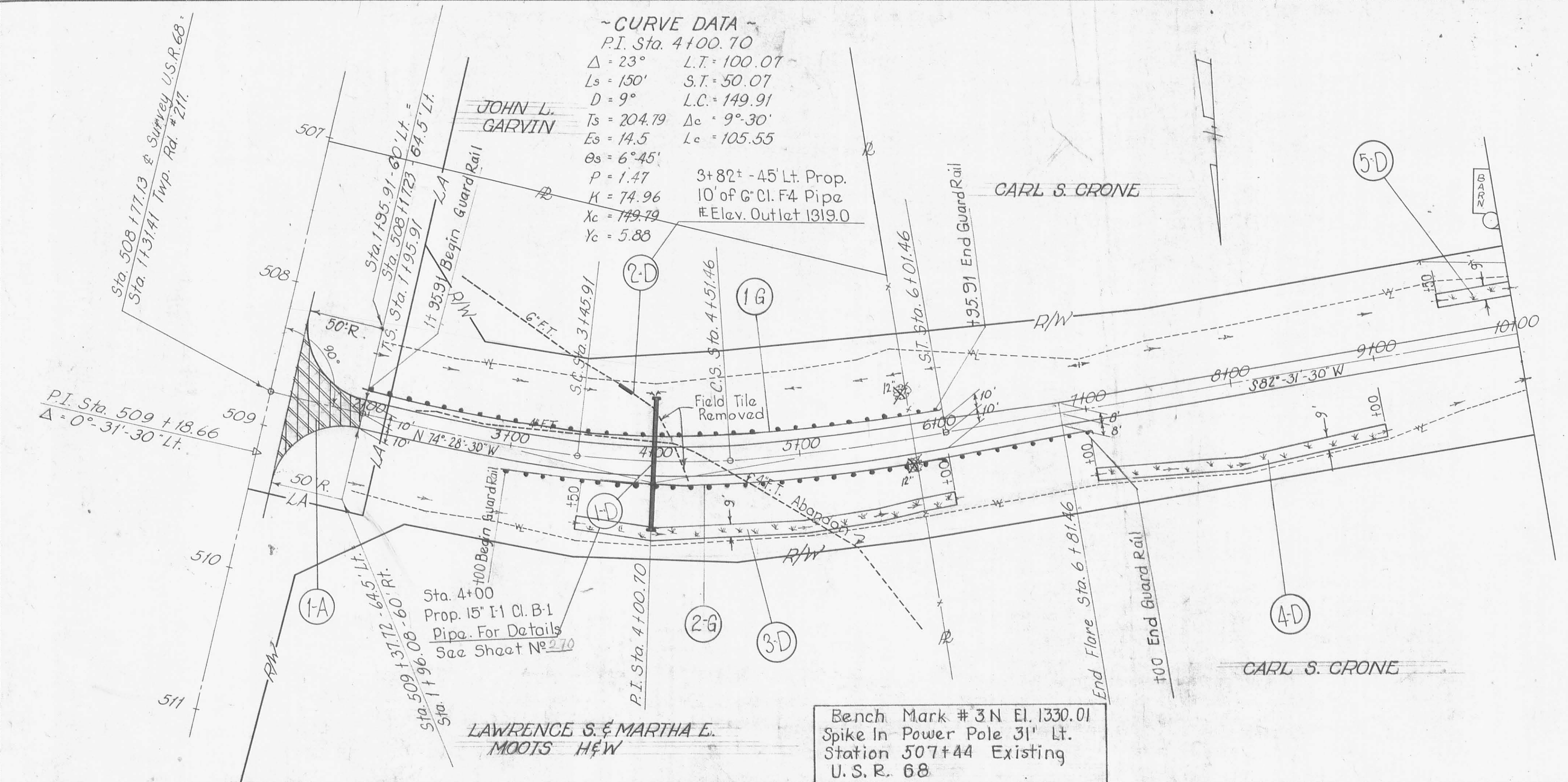
Plan & Profile 2 of 5

SHEET
15
16
17
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25

BEGIN
END



ESTIMATED QUANTITIES



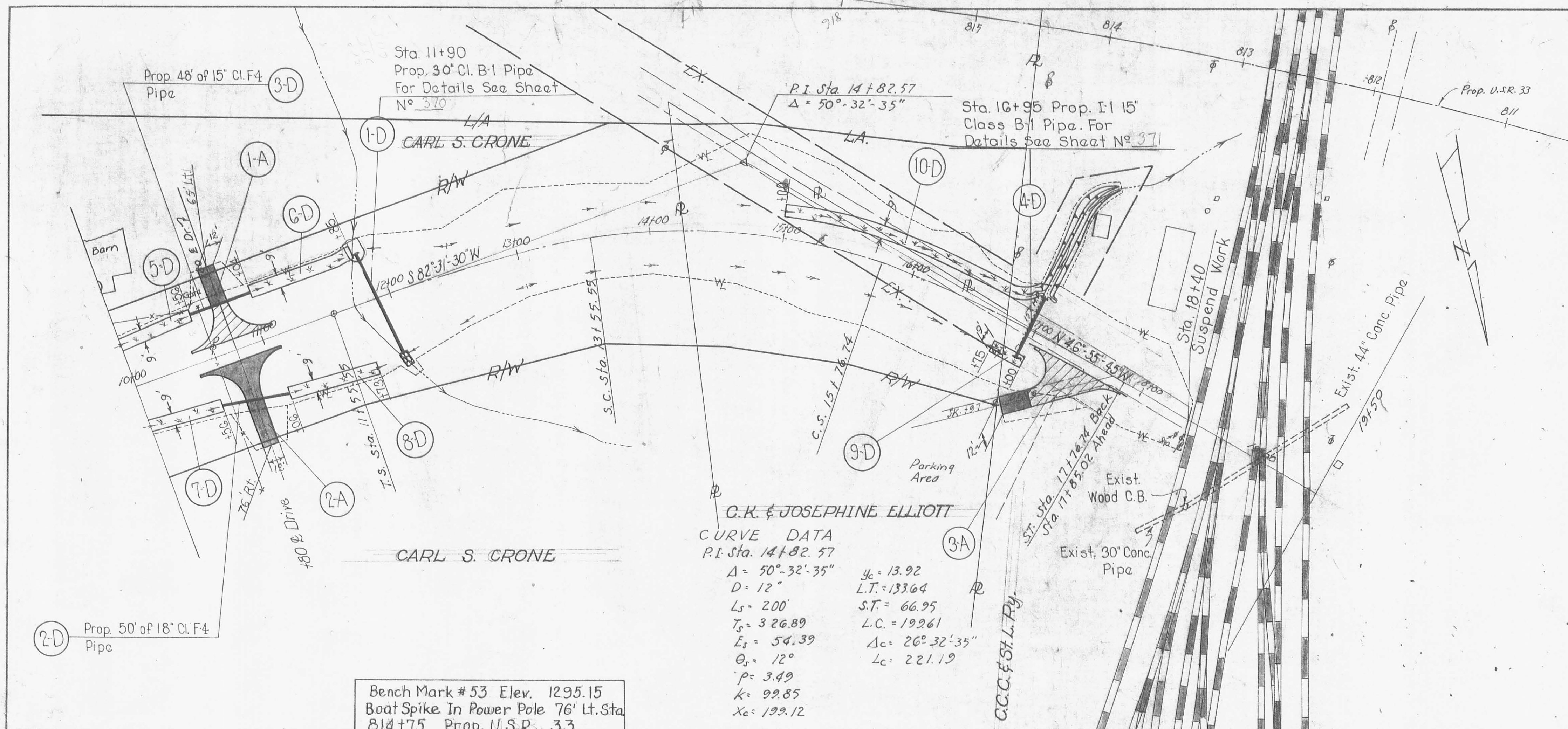
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	T-35 Asphaltic Conc. Surf. Course	B-35 Asphaltic Conc. Base Course	B-20 Asphaltic Conc. Base Course	T-30 Prime Coat	T-22 Bituminous Subbase	L-10 Soading Type Deep Subgrade	I-15 Guard Rail Type Deep Subgrade	E-1 15" Cl. B-1 Pipe	I-1 6" Cl. F-4 Pipe	I-2 Masonry 15" Under Cul. Yds.	E-12 Pipe Removed	I-9 Storm Underdrains No. 2	SEE SHEET NO.									
1-A	1+45.91 to 1+95.91	Lt. Rt.	6.4	9.6	19.4	9.6	47.5																	
1-D	4+00	Lt. Rt.																						
2-D	3+82 to 6+00	Lt. Rt.					250					0.52	7.5											
4-D	7+00 to 9+00	Lt. Rt.					200																	
5-D	9+50 to 10+00	Lt. Rt.					50																	
	2+00 to 10+00	Lt. Rt.																						
1-G	1+95.91 to 5+95.91	Lt. Rt.							400															
2-G	3+00 to 7+00	Lt. Rt.						400																
TOTALS TO CALCULATIONS															92	10	0.52	7.5						
TOTALS TO SUMMARY															92	10	0.52	7.5						

PLAN & PROFILE ~ Sta. 1+31.41 to Sta. 10+00 Twp. Rd. # 217

LOGAN COUNTY LOG - 33 - 10.85

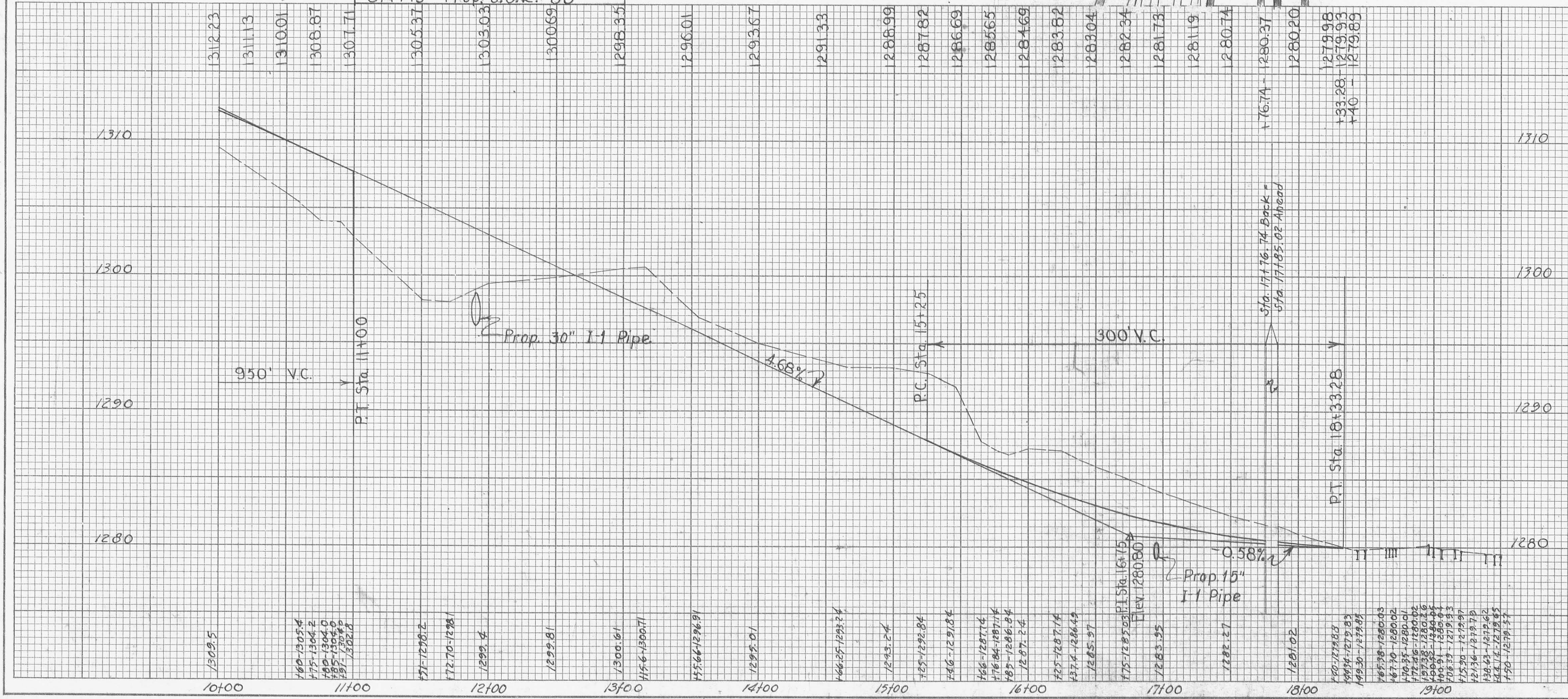
FED. RD. DIVISION	STATE	PROJECT	266
2	OHIO		



CURVE DATA
 P.I. Sta. 14+82.57
 $\Delta = 50^\circ 32' 35''$
 $D = 12''$
 $L_s = 200'$
 $T_s = 326.89$
 $E_s = 54.39$
 $\theta_s = 12^\circ$
 $P = 3.49$
 $K = 99.85$
 $X_c = 199.12$

$y_c = 13.92$
 $L.T. = 133.64$
 $S.T. = 66.95$
 $L.C. = 199.61$
 $\Delta_c = 26^\circ 32' 35''$
 $L_c = 221.19$

Bench Mark # 53 Elev. 1295.15
 Boat Spike In Power Pole 76' Lt. Sta. 814+75 Prop. U.S.R. 33

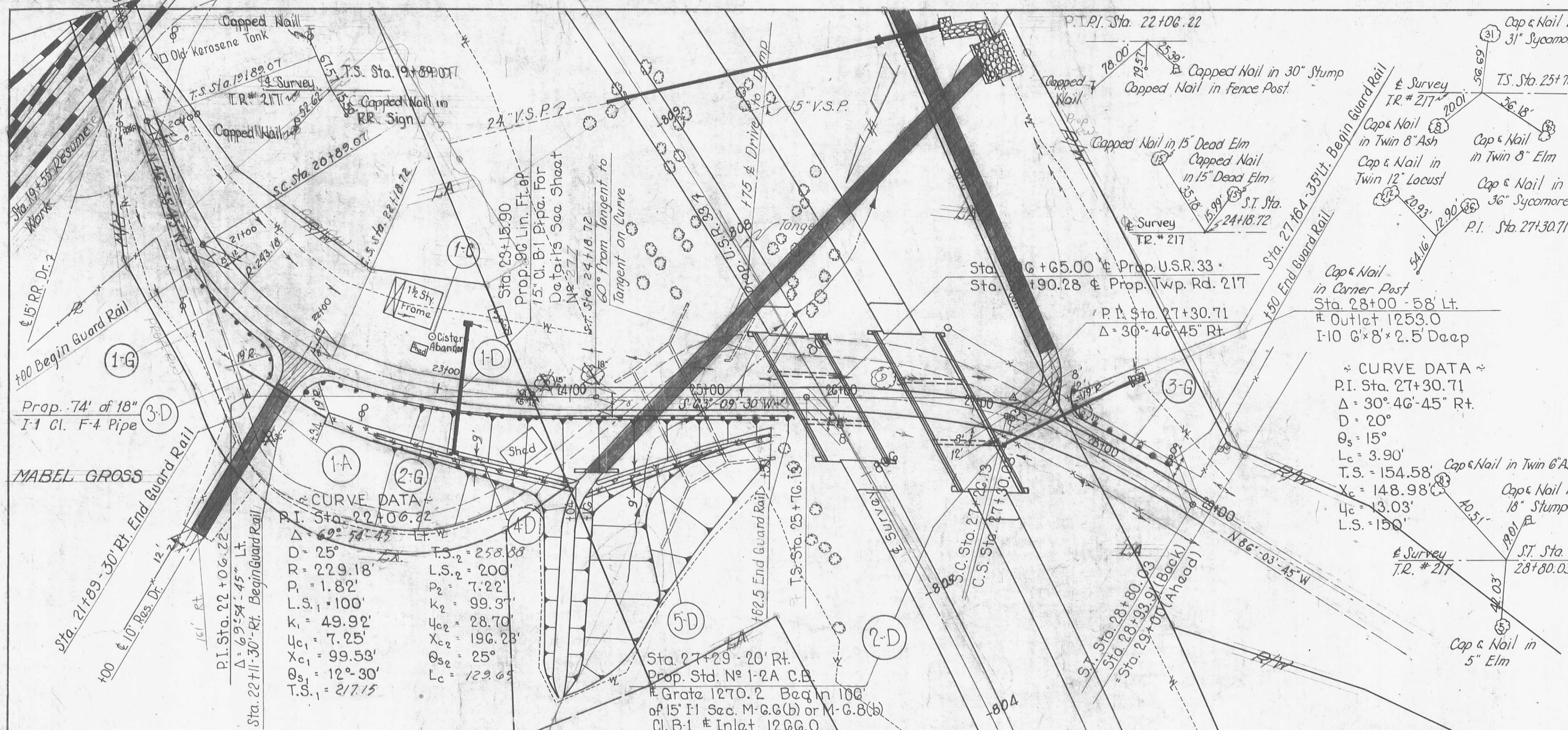


REF. NO.	STATION TO STATION	SIDE	T-35 Asphaltic Concrete Surface Course	T-30 Bituminous Prime Coat	B-19 Crushed Aggregate Base Course	I-18 Stabilized Crushed Aggr. Subgrade	L-10 Sodding Underdrains	F-9 Stone Underdrains	E-5 Channel Excavation	SEE SHEET NO.						
1-A	10+80	Lt.	3.89	2.8	10.32	6.90										
2-A	10+80	Rt.			20.8											
3-A	17+67	Rt.	7.26	52.3	18.1	4.90										
1-D	11+90	Lt.														
2-D	10+55 to 11+05	Rt.							2							
3-D	10+56 to 11+04	Rt.														
4-D	16+95	Lt.							37							
5-D	10+00 to 10+56	Lt.														
6-D	11+04 to 11+85	Lt.														
7-D	10+00 to 10+56	Rt.														
8-D	11+06 to 11+73	Rt.														
9-D	16+75 to 17+00	Rt.														
10-D	16+00 to 16+95	Lt.														
	10+00 to 18+00	Lt.					184									
TOTALS TO CALCULATIONS										11.15	80.3	28.42	32.60	4.80	1.84	1.39
TOTALS TO GENERAL SUMMARY										12.2	50	48	74	50	1.54	7.7

LOGAN COUNTY LOG-33-10.85

LOGAN COUNTY LOG-33-10.85

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

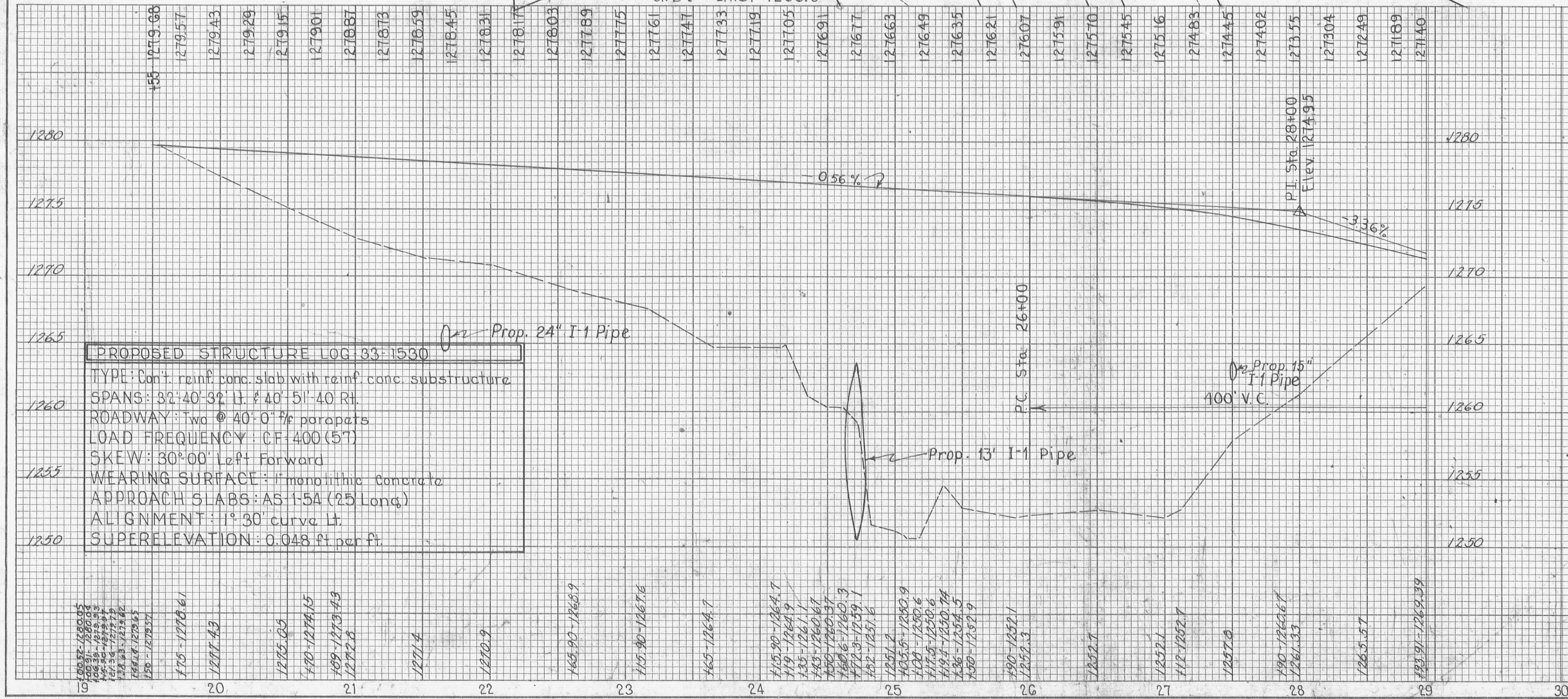


CURVE DATA
P.I. Sta. 22+06.22

Δ	25°	$F.S._2 = 258.88$
D	$229.18'$	$L.S._2 = 200'$
P	$1.82'$	$P_2 = 7.22'$
$L.S._1$	$100'$	$K_2 = 99.30'$
K	$49.92'$	$U_{c2} = 28.70'$
U_{c1}	$7.25'$	$X_{c2} = 196.23'$
X_{c1}	$99.53'$	$\theta_{c2} = 25^\circ$
θ_{c1}	$12^\circ 30'$	$L_c = 123.69'$
$T.S._1$	217.15	

CURVE DATA
P.I. Sta. 27+30.71

Δ	$30^\circ 46' 45''$ Rt.
D	20°
θ_s	15°
L_c	$3.90'$
$T.S.$	$154.58'$
X_c	$148.98'$
U_c	$3.03'$
$L.S.$	$150'$

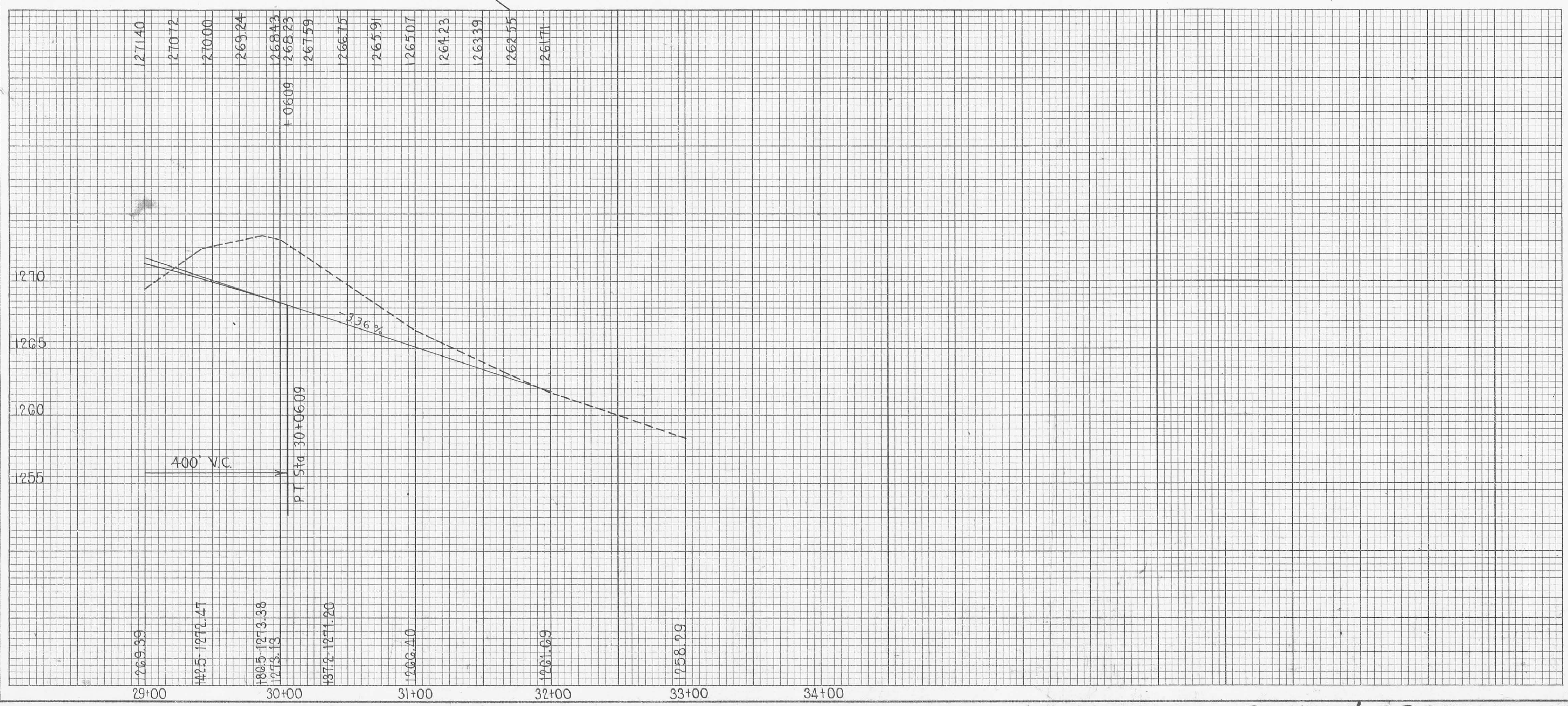
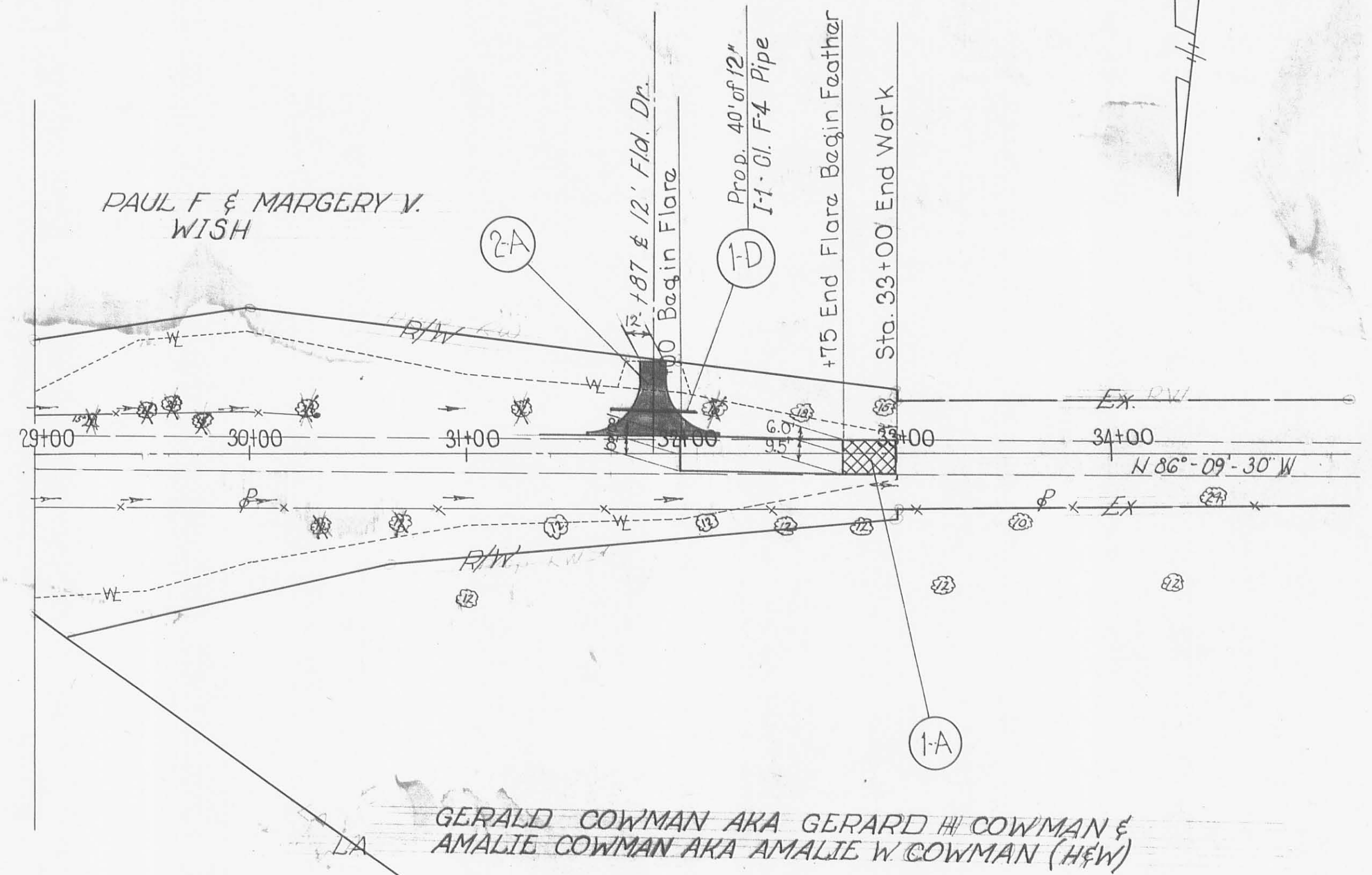


PROPOSED STRUCTURE LOG 33-1530
 TYPE: Cont. reinf. conc. slab with reinf. conc. substructure
 SPANS: 32' 40" 32' 11" 40' 51" 40' 0" Rt.
 ROADWAY: Two @ 40' 0" w/ parapets
 LOAD FREQUENCY: CF-400 (5')
 SKEW: 30° 00' Left Forward
 WEARING SURFACE: Monolithic concrete
 APPROACH SLABS: AS-154 (25' Long)
 ALIGNMENT: 1° 30' curve Lt.
 SUPERELEVATION: 0.048 ft per ft.

REF. NO.	STATION TO STATION	SIDE	T-35	T-30	B-19	I-18	L-10	I-9	I-15	ESTIMATED QUANTITIES
			Asph. Conc. Bituminous Surface Course	Prime Coat	Crushed Stone	Aggr. Base	Sounding	Stone Underdrain	Guard Rail	Special Cistern
			Cu. Yds.	Gals.	Cu. Yds.	Cu. Yds.	Sq. Yds.	No. 2	Lin. Ft.	Each
1-A	22+00	Rt.	3.85	2.8	10.32	27.72				
1-D	23+15.90	Lt.								
2-D	27+29 to 28+00	Rt.								
3-D	21+64 to 22+36	Rt.				194				
4-D	22+34 to 24+04	Rt.				141				
5-D	24+16 to 25+50	Rt.								
	20+100 to 29+100	Lt.						200		
1-G	24+00 to 30+00 of 21+89	Rt.							100	
2-G	30+00 of 22+11 to 25+82.5	Rt.							362.5	
3-G	33.5 Lt. of 27+64 to 28+50	Lt.							100	
1-C	22+92	Lt.								
TOTALS TO CALCULATIONS										3.89
TOTALS TO SUMMARY										562.5

PLAN & PROFILE STA. 19+00 TO STA. 29+00 TWP RD. 217

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	



ESTIMATED QUANTITIES

SEE SHEET NO.	STATION TO STATION	SIDE	T35 Applying Conc. Surf. Course Cu. Yds.	B-35 Applying Asphaltic Course Cu. Yds.	I-18 Applying Crushed Stone Aggr. for Spall Coat. Cu. Yds.	I-1 12" Cl. F4 Pipe Lin. Ft.	I-9 Stone Underdrain No. 2 Lin. Ft.
I-A	29+75 to 30+00	LFRR	1.33	0.44	13.43		
I-A	31+87	L+				40	
I-D	31+67 to 32+07	L+					150
	29+00 to 33+00	LFRR					
TOTALS TO CALCULATIONS			1.33	0.44	13.43	40	150
TOTALS TO SUMMARY							665

~ CURVE DATA ~
 P.I. Sta. 27+30.71
 $\Delta = 30^\circ - 46' - 45''$ Rt.
 $D = 20'$
 $Q_c = 15'$
 $L_c = 390'$
 $T.S. = 154.58'$
 $X_c = 148.98'$
 $y_c = 13.03'$
 $L.S. = 150.00'$



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	T-35	B-19	T-30	T-18	F-1	F-2	F-10	
1-A	0+00 To 0+58.28	L.F.P.H.	Asph. Conc. Crushed Bitum. Stabilized Surface	Agg. Base Course	Prime Coat	Crushed Aggregate	30" Ci. C-1	Masonry	Dump Rack	
2-A	0+58.28 To 3+82.5	L.F.P.H.	5.9	15.1	4.1	38.5	42	1.70	2.5	
I-D	3+19.67	L.F.P.H.								
TOTALS			59	151	41	36.5	42	1.70	2.5	
TOTALS			To Calculations							25
TOTALS			To Summary							25

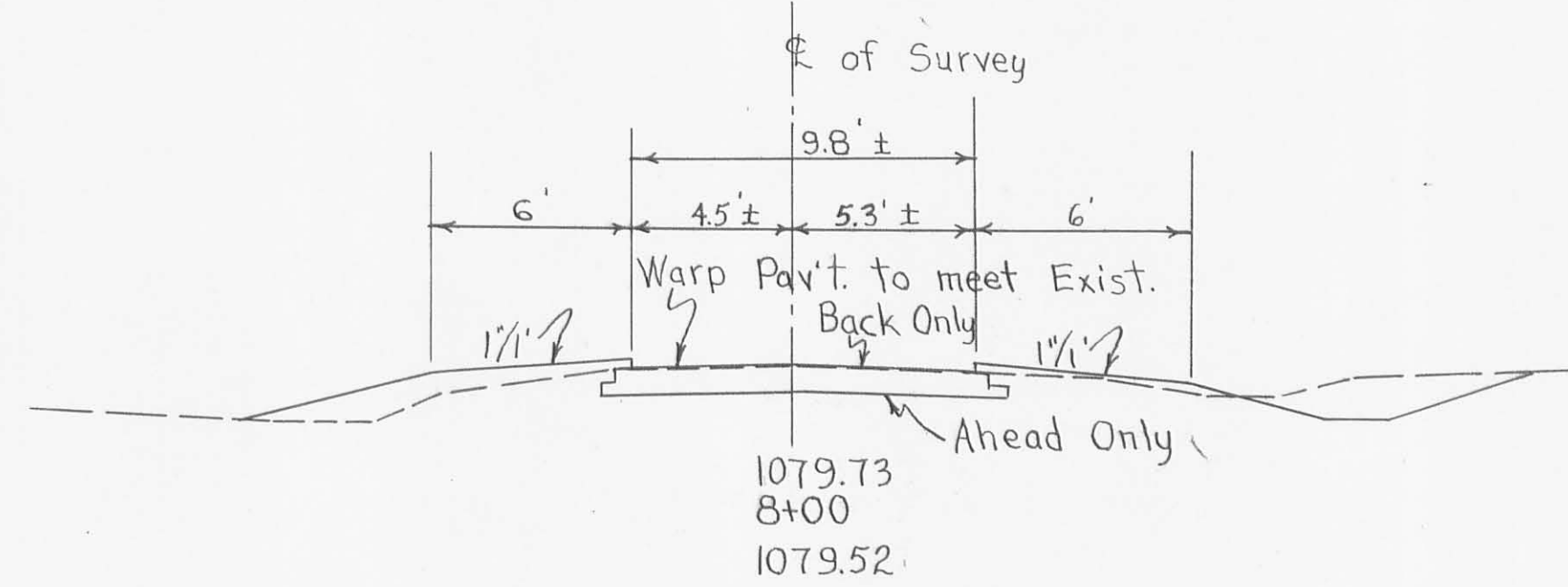
PLAN & PROFILE STA. 0+00 TO STA. 4+00 DRIVE TO DUMP COUNTY ROAD # 217

ROAD APPROACH EXIST. TWP. RD. #221

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

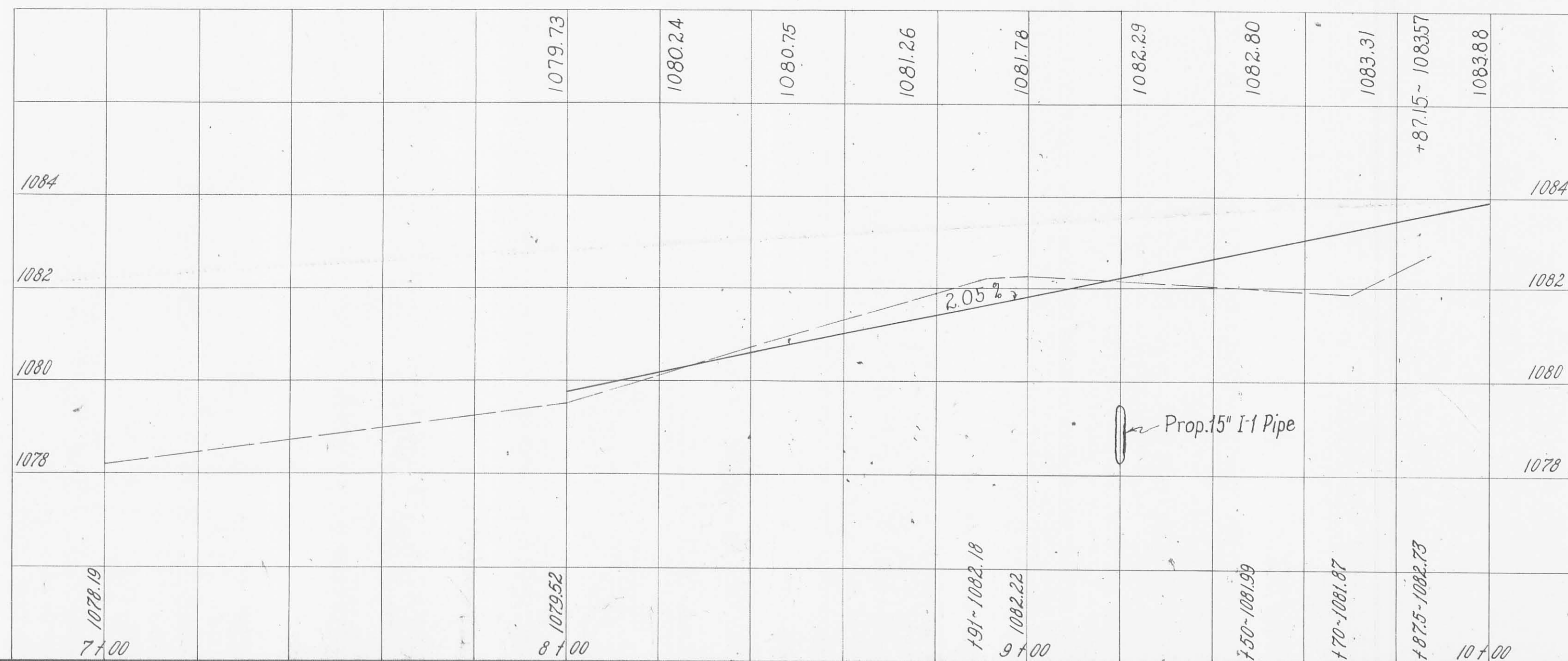
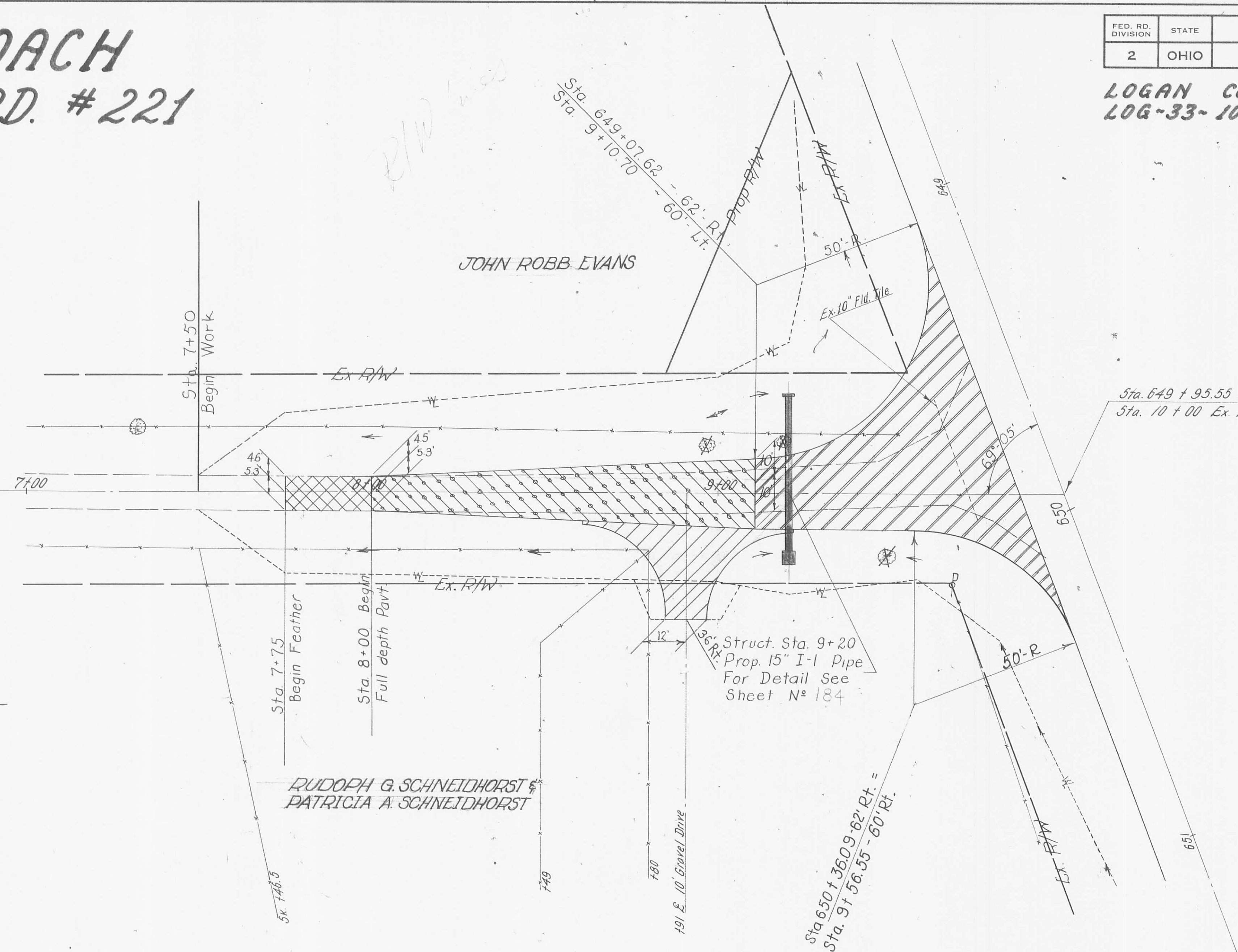
LOGAN COUNTY
LOG-33-1085

123



TYPICAL SECTION OF ADJOINING PAVEMENT
STA. 8+00

~ESTIMATED QUANTITIES~		
ITEM DESCRIPTION	UNIT	QUANTITY
T-35 Asph. Conc. Surface Type "C"	Cu. Yds.	23.0
B-35 Asph. Conc. Leveling Course	Cu. Yds.	21.2
B-35 Asph. Conc. Base Course	Cu. Yds.	29.1
T-30 Bit Prime Coat @ 0.4 Gals./Sq. Yd.	Gals.	236
J-9 Stone Underdrains N°2	Lin. Ft.	66
I-2.2 Subbase	Cu. Yds.	77.6
B-19 Aggregate Base Course	Cu. Yds.	117.8
E-1 Compacted Subgrade	Sq. Yds.	513



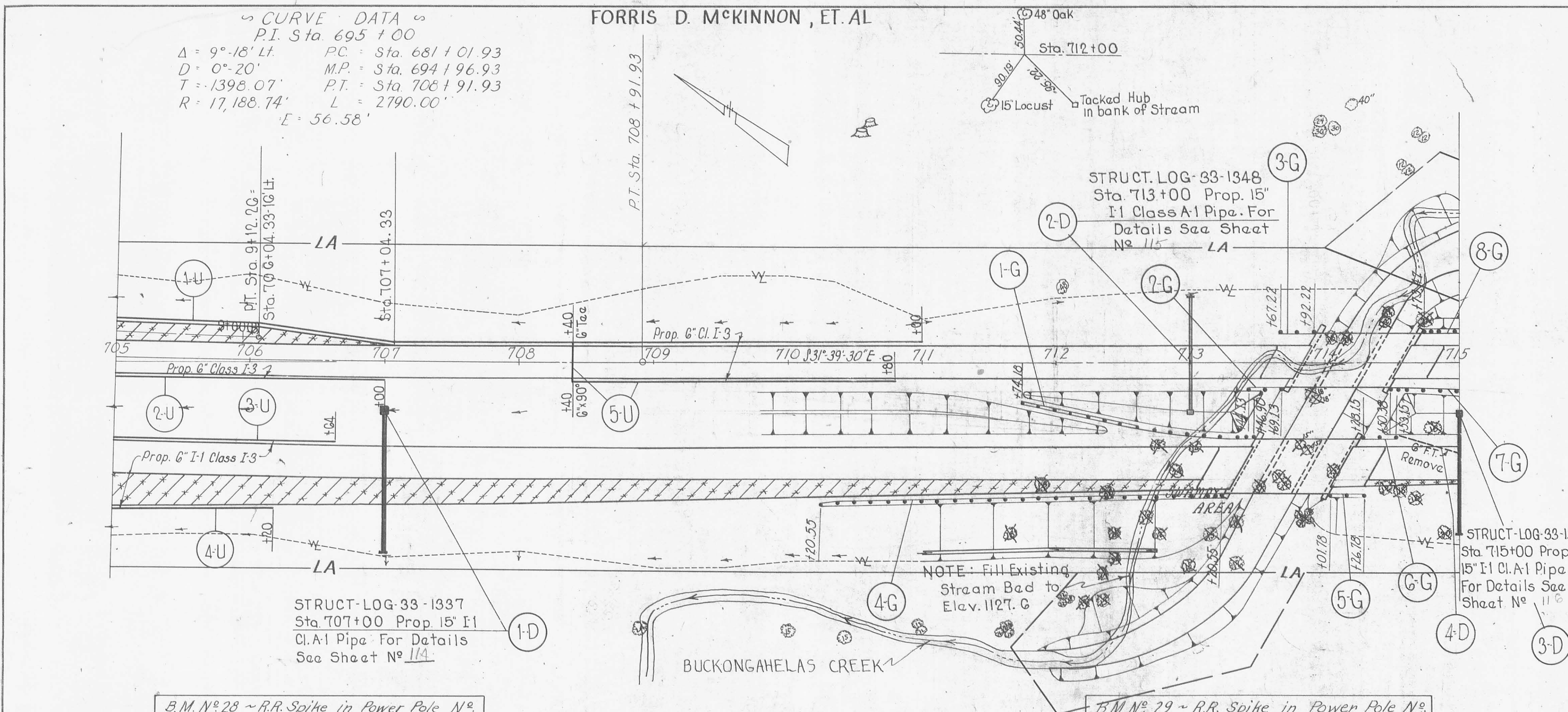
CURVE DATA
 P.I. Sta. 695 + 00
 $\Delta = 9^{\circ}18'14''$ PC = Sta. 681 + 01.93
 $D = 0^{\circ}20'$ M.P. = Sta. 694 + 96.93
 $T = 1398.07'$ PT = Sta. 708 + 91.93
 $R = 17,188.74'$ L = 2790.00'
 $E = 56.58'$

FORRIS D. MCKINNON, ET AL

LOGAN COUNTY
 LOG-33-10.85

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

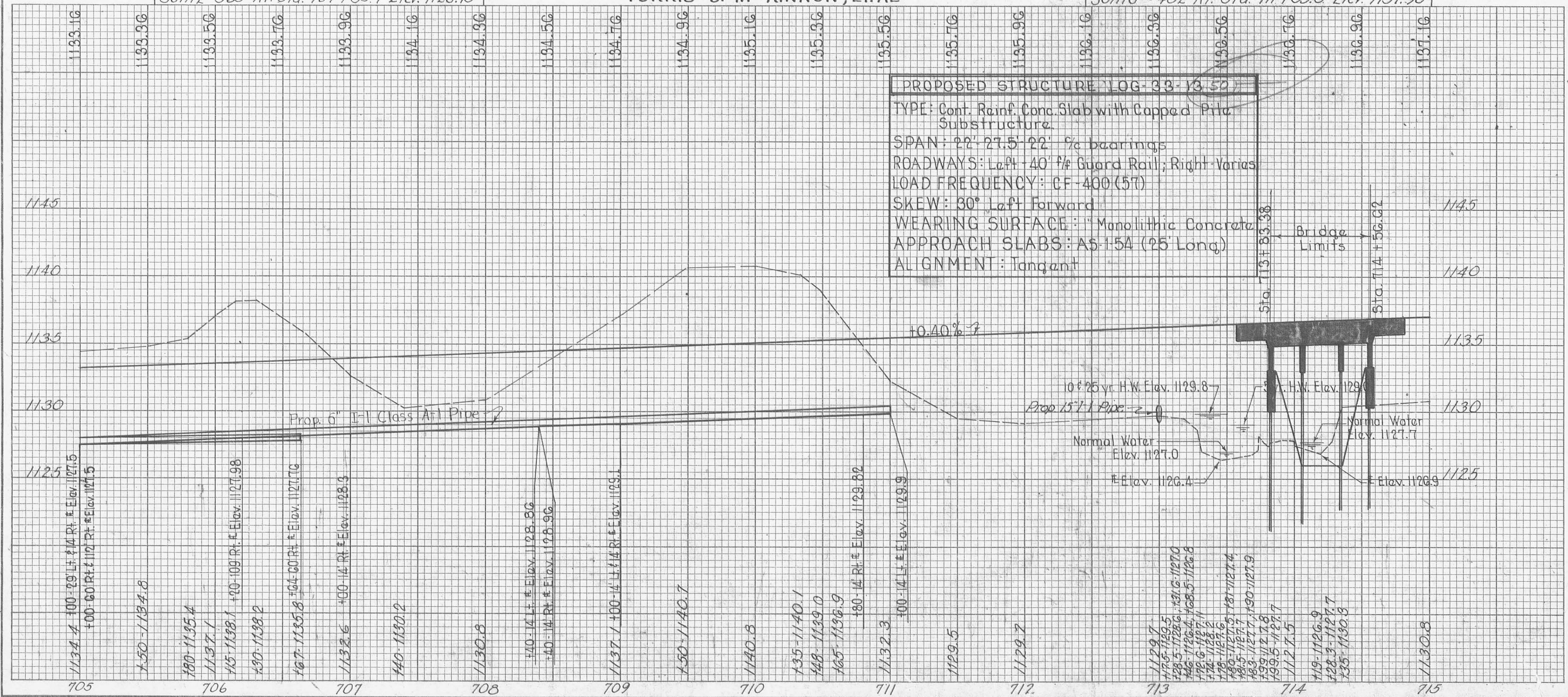
60



B.M. No. 28 ~ R.R. Spike in Power Pole No. 301112 ~ 365' Rt. Sta. 707 + 35.7 Elev. 1128.75

FORRIS D. MCKINNON, ET AL

B.M. No. 29 ~ R.R. Spike in Power Pole No. 301110 ~ 432' Rt. Sta. 711 + 33.5 Elev. 1131.90

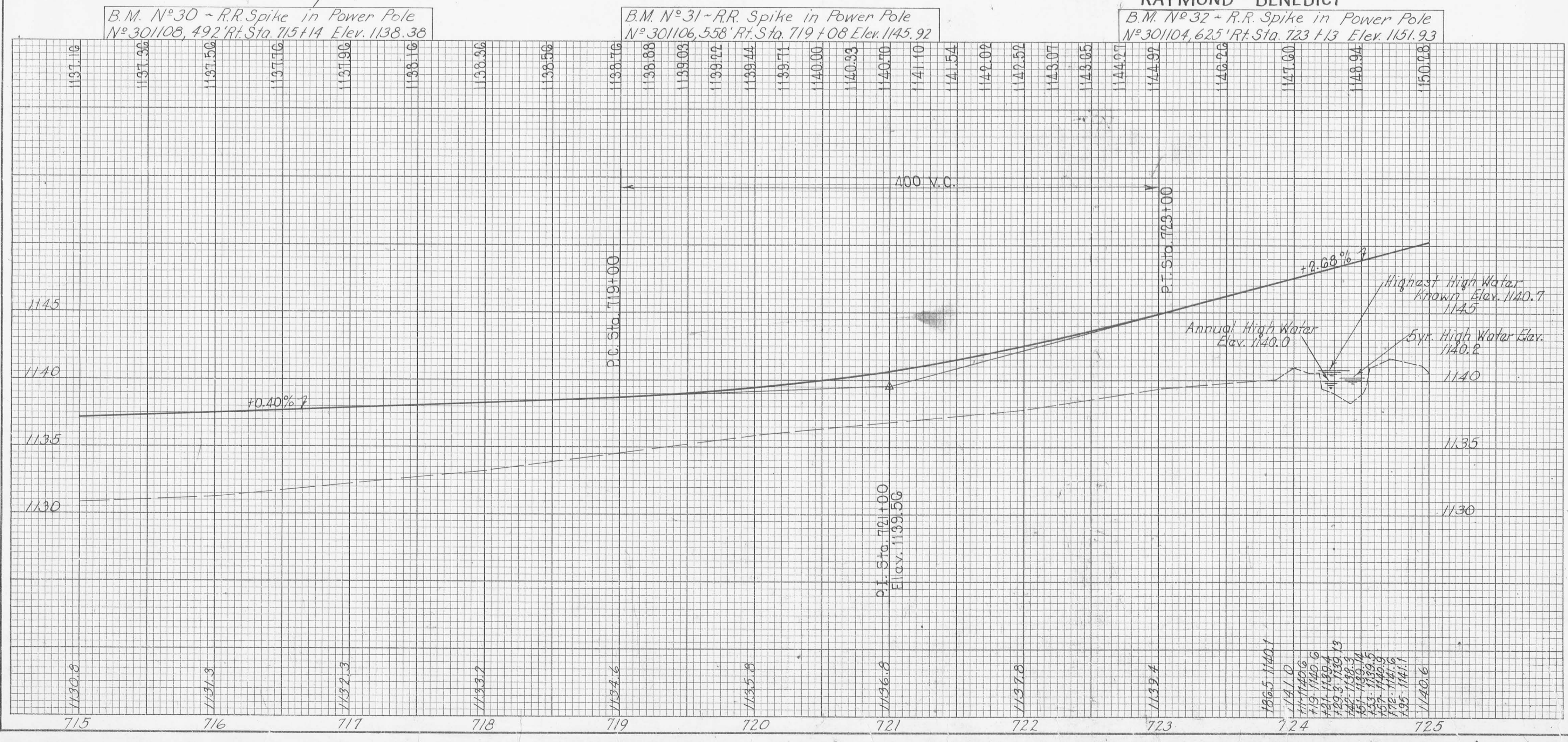
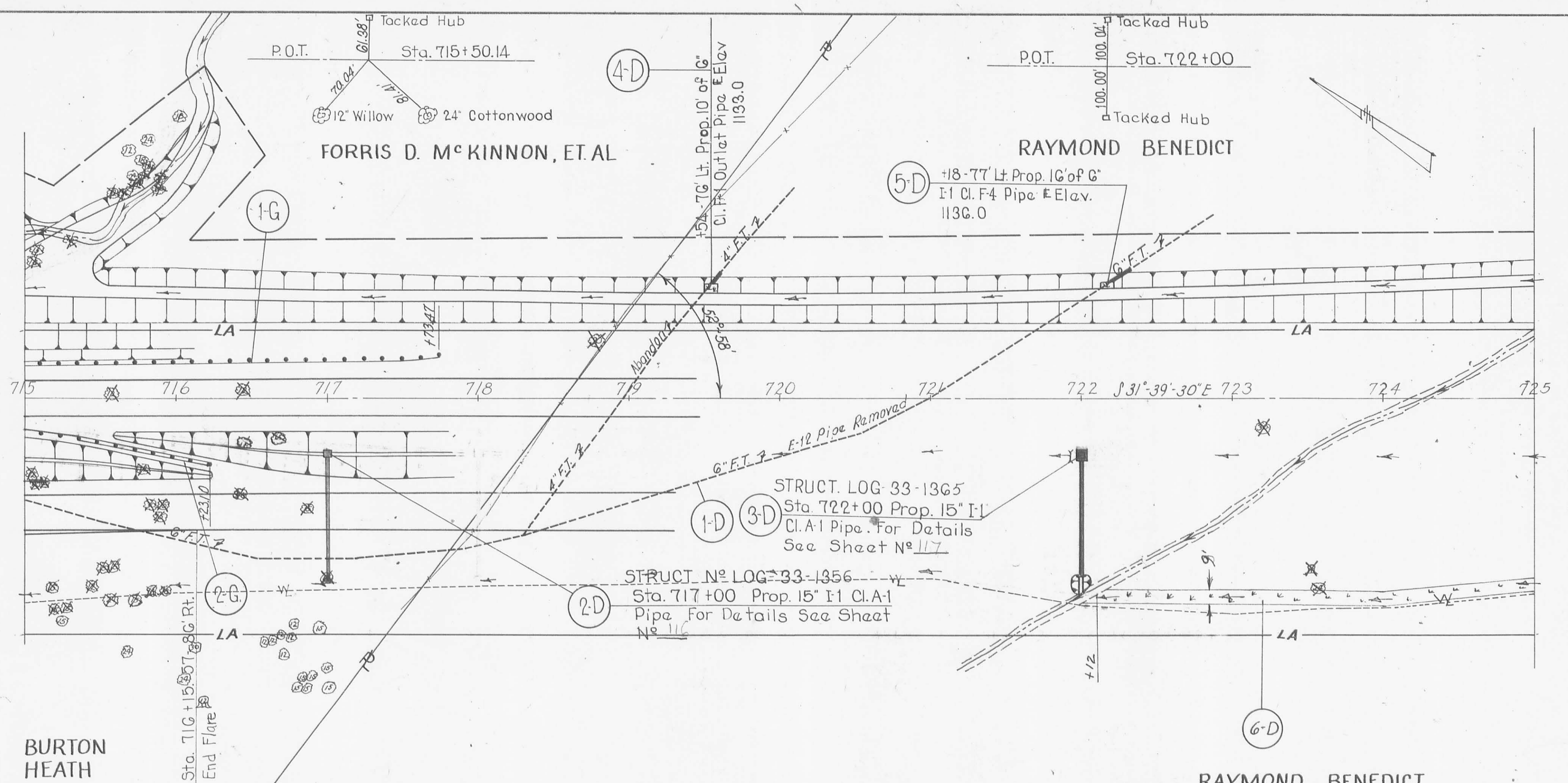


ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	I-1 Cl. A1 Pipe Sec. M & B or M & B for I-3	I-1 Cl. A1 Pipe Sec. M & B or M & B for I-3	I-5 6" Pipe Spec. M & B for I-3	I-15 Guard Rail	I-15 Barrier Guard Rail	I-1 15" Cl. A1 Pipe Sec. M & B or M & B for I-3	I-2 Masonry Structure	I-9 Stone Under Structure
Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Each	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Qu. Yds.	Lin. Ft.
1-U	705+00 to 711+00	Lt	600		1					
2-U	705+00 to 707+00	Rt	200							
3-U	705+00 to 706+04	Rt	164							
4-U	705+00 to 706+20	Rt	120							
5-U	708+40 to 710+80	Rt	240		1					
1-D	707+00	Rt		28						
2-D	713+00	Lt								
3-D	715+00	Rt								
4-D	714+55 to 715+00	Rt								
1-G	711+74.8 to 713+45.90	Rt				87.50				
2-G	713+44.1 to 713+39.22	Lt				25.00				
3-G	713+37.22 to 713+39.22	Lt				300.00				
4-G	714+0.18 to 714+26.18	Rt				25.00				
5-G	714+0.18 to 714+26.18	Rt				25.00				
6-G	714+88.15 to 714+53.15	Rt				49.02				
7-G	714+80.38 to 715+00	Rt				26.53				
8-G	714+73.47 to 715+00	Lt								
707+00 to 715+00										
TOTALS TO CALCULATIONS										
TOTALS TO SUMMARY										

PLAN & PROFILE STA. 705+00 TO STA. 715+00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	



ESTIMATED QUANTITIES

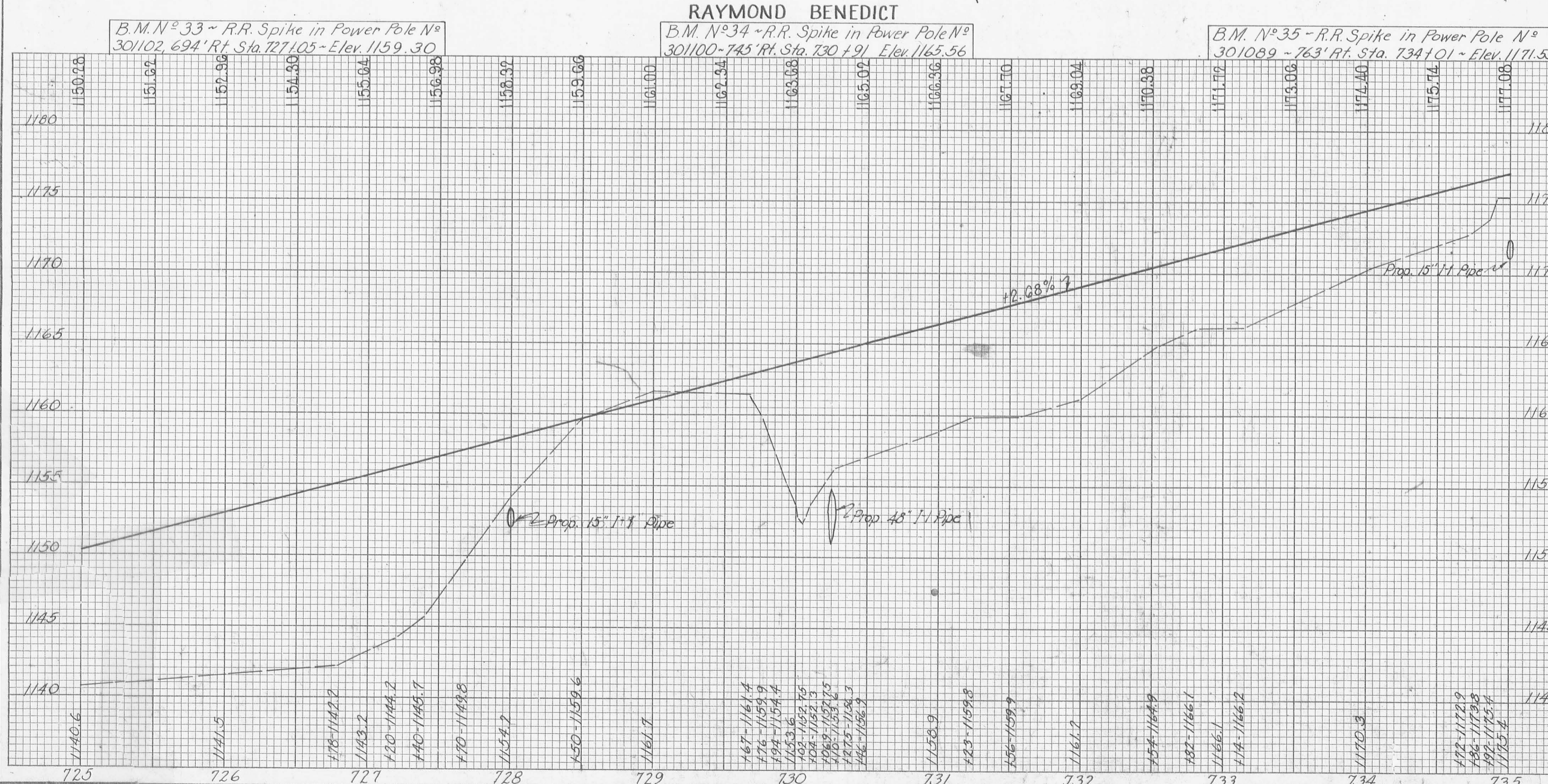
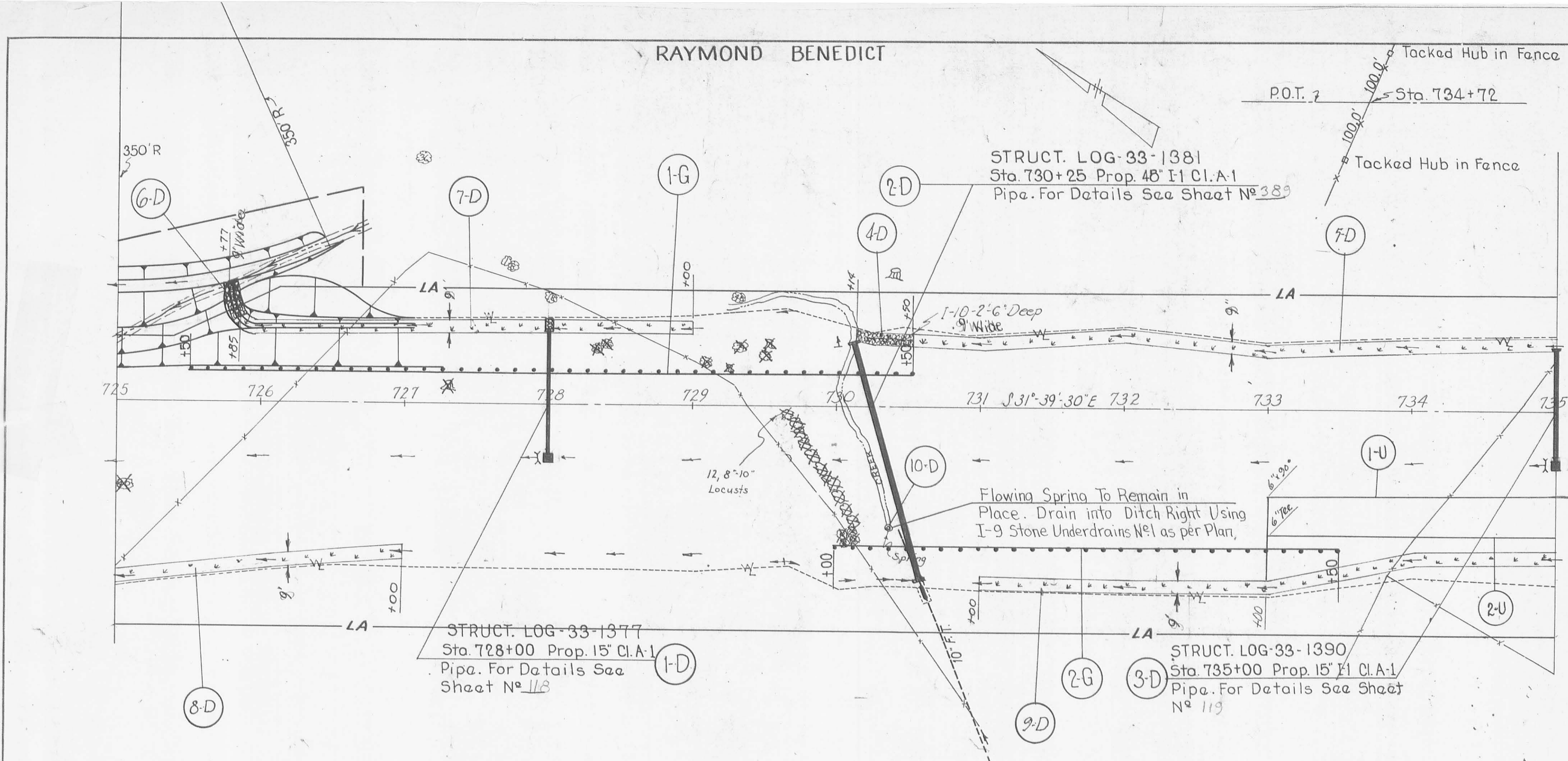
REF. NO.	STATION TO STATION	SIDE	E12 Pipe Removed (15" Dia) Lin. Ft.	I-1 15" C.I.A. or M.C.G. (15" Dia) Lin. Ft.	I-1 6" C.I.F.4 Outlet Pipe Lin. Ft.	I-8 Std. No. 8 Catch Basin Each	I-15 Guard Rail Lin. Ft.	I-15 Barrier Guard Rail Lin. Ft.	L-0 Sodding/Stone Underdrain Sq. Yds. Lin. Ft.	I-9 Asphalt Lin. Ft.
1-D	715+00 to 722+18	Rt.	785	82						
2-D	717+00	Rt.	80			1			6	
3-D	722+00	Lt.				1			4	
4-D	719+54	Lt.			10				208	
5-D	722+18	Lt.			16					
6-D	722+12 to 725+00	Rt.								
I-G	715+00 to 717+13.47	Lt.					279.47			
2-G	715+00 to 716+23.10	Rt.					37.88	87.50		
	715+00 to 725+00	Lt.								1925
ALLOCATION SUMMARY										298
										290
										765
										162
										20
										20
										1525

RAYMOND BENEDICT

LOGAN COUNTY
LOG-33-10.85

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

67



REF. NO.	STATION TO STATION	SIDE	I-10 Dump Box (15' Cl. A-1) Protection (R. & L.) Cu. Yds.	I-1 15' Cl. A-1 Pipe Lin. Ft.	I-2 Masonry Culverts Cu. Yds.	I-8 Catch Basin Each	I-5 Guard Rail Lin. Ft.	I-1 48' Cl. A-1 Pipe Sec. M. & S. Lin. Ft.	I-1 10' Cl. F.A. Pipe Lin. Ft.	I-9 10' Cl. F.A. Under drains N#2 Lin. Ft.	I-1 6' Cl. F-4 Pipe Lin. Ft.	I-1 6' Cl. F-3 Pipe Lin. Ft.	I-1 6' Cl. F-4 Pipe Lin. Ft.	I-9 Stone Under drains N#1 Lin. Ft.	E-12 Pipe Removal 15' Under Pipe Lin. Ft.	I-1 18' Cl. F-4 Pipe Lin. Ft.	I-5 Pipe Specials for I-1 Pipe Cl. F-4 Each	L-10 Sodding Pipe Spec. for 6" Cl. F-3 Each Sq. Yds.	L-10 Sodding Pipe Spec. for 6" Cl. F-3 Each Sq. Yds.	SEE SHEET NO.	
1-D	728+00 to 730+50	Lt.		62	0.28	1		172	10							30	2				
2-D	730+25	Lt.		80	0.26	1	500														
3-D	735+00	Rt.					350														
4-G	725+50 to 730+50	Lt.																			
2-G	730+00 to 735+50	Rt.																			
4-D	730+14 to 735+50	Lt.	30.0																450		
5-D	730+50 to 735+00	Lt.																			
6-D	725+77 to 725+85	Lt.	20.8																		
7-D	725+85 to 729+00	Lt.																			
8-D	725+00 to 727+00	Rt.																			
9-D	731+00 to 735+50	Rt.																			
10-D	730+38.1	Rt.																			
	725+00 to 735+00	Lt.								1542											
1-U	733+00 to 735+00																				
2-U	733+00 to 735+00																				
TOTALS TO SUMMARY			55.4	142	2.24	2	850	172	10	1542	10	420	28	40	40	30	2		1362	1362	2

PLAN & PROFILE

STA. 725 + 00 TO

10 CALCULATIONS TO SUMMARY