

STATE OF OHIO  
DEPARTMENT OF HIGHWAYS  
**HAS-799-3.20**  
**HARRISON COUNTY**  
**NOTTINGHAM TOWNSHIP**

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		1948

**HAS-799-3.20**

1  
43

**CONVENTIONAL SIGNS**

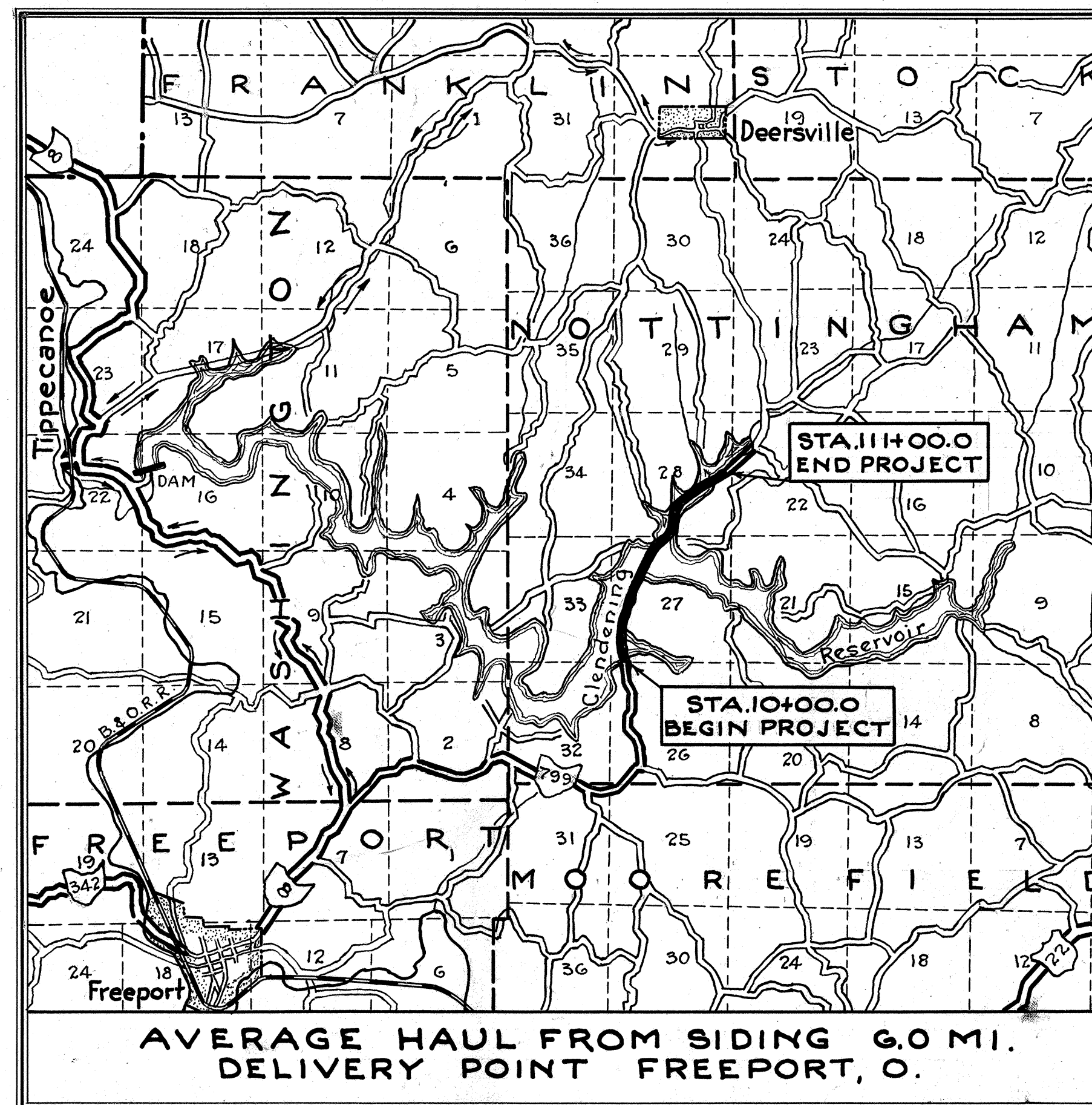
COUNTY LINE	-----
TOWNSHIP LINE	-----
SECTION LINE	-----
CORPORATION LINE	-----
PROPERTY LINE	-----
FENCE LINE	-----
CENTER LINE	-----
POLE LINE	-----
STEAM RAILROADS	-----
GUARD RAIL (OLD)	-----
GUARD RAIL (NEW)	-----

**INDEX OF SHEETS**

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**LINE DATA**

BEGIN PROJECT	STA. 10+00
END PROJECT	STA. 111+00
NO DEDUCTIONS OR ADDITIONS	
NET LENGTH OF PROJECT	10,100.00 LIN. FT. OR 1.912 MILES



**LOCATION PLAN**

Scale 1" = 1 Mi.

PORTION TO BE IMPROVED	=====
STATE HIGHWAYS	=====
FEDERAL HIGHWAYS	=====
OTHER ROADS	-----
DETOURS	-----

**SCALES**

PLAN	1" = 100'
PROFILE HORIZONTAL	1" = 100'
PROFILE VERTICAL	1" = 10'
CROSS SECTIONS	1" = 10'

The Standard Specifications of The State of Ohio, Department of Highways, including changes and Supplemental Specifications listed in the proposal shall govern this improvement.

I hereby approve these plans and declare that the making of this improvement will require the closing of the highway to traffic, and that a temporary route will be provided as shown on Sheets No 1 & 2 of these plans.

The right of way necessary for this improvement will be provided by The State of Ohio.

Approved E.R. McCallough  
Date 9-14-48 Division Deputy Director.

Approved \_\_\_\_\_  
Date \_\_\_\_\_ Chief Engineer, Bureau of Maintenance.

Approved J. P. Dugan  
Date 10-15-48 Chief Engineer, Bureau of Bridges & R.R. Crossings.

Approved George J. Thorny  
Date 10/15/48 Chief Engineer, Bureau of Location & Design.

Approved Frank M. Williams  
Date 10-15-48 First Assistant Director & Chief Engineer.

Approved Earl L. Reeb  
Date 10/15/48 Director of Highways.

CONSTRUCTION BUREAU  
NOV 23 1956  
GROUND PHOTOLAB

STANDARD DRAWINGS					
G-8.07	2-1-47	I-15 No. 1	3-1-47	I-15 No. 9	2-1-47
I-1, 2, 3, 4 & 5	2-20-45	I-15 No. 3	2-1-47		
I-8 C.B. 2-2-A & B	12-15-41	I-15 No. 4	2-1-47		
S-27 P.C. 1	3-1-39	I-15 No. 5	2-1-47		
S-27 P.C. 2	3-15-48	I-15 No. 6	2-1-47		
S-27 P.C. 3	2-20-45	I-15 No. 7	2-1-47		

SUPPLEMENTAL SPECIFICATIONS	
E-401	11-1-44

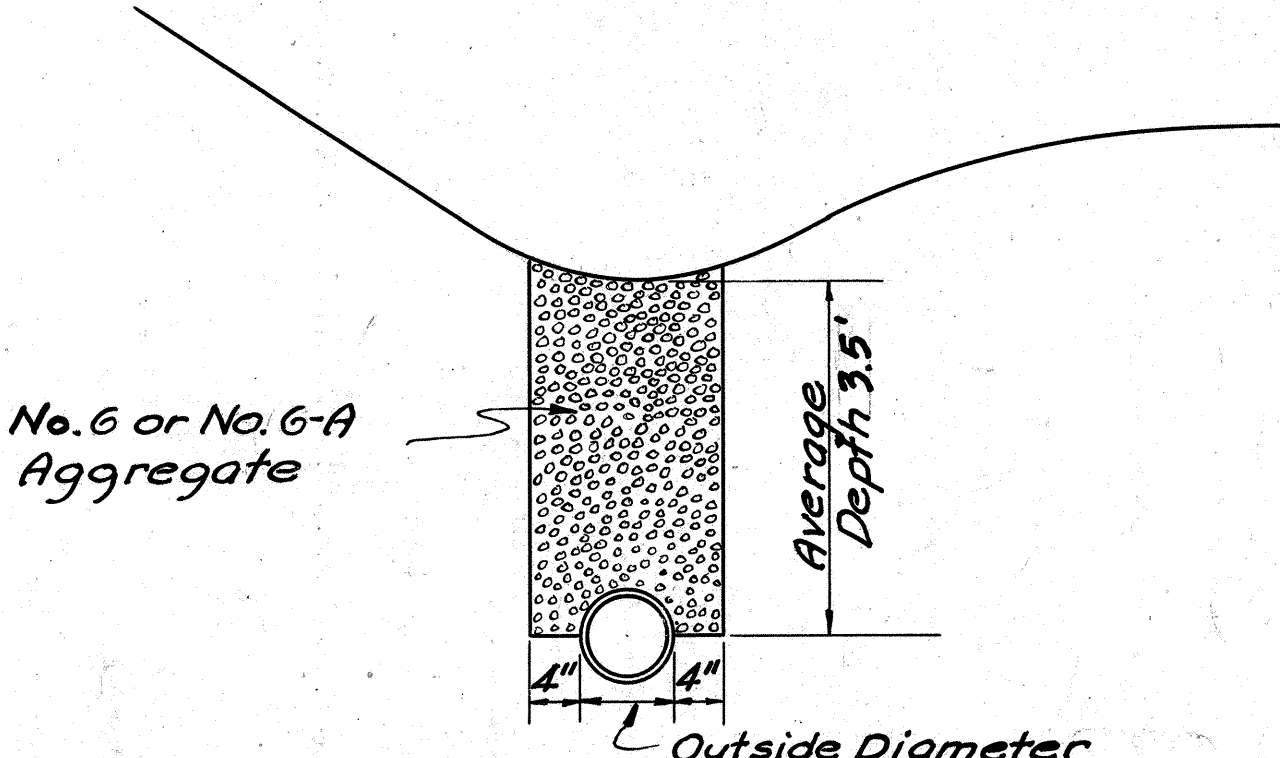
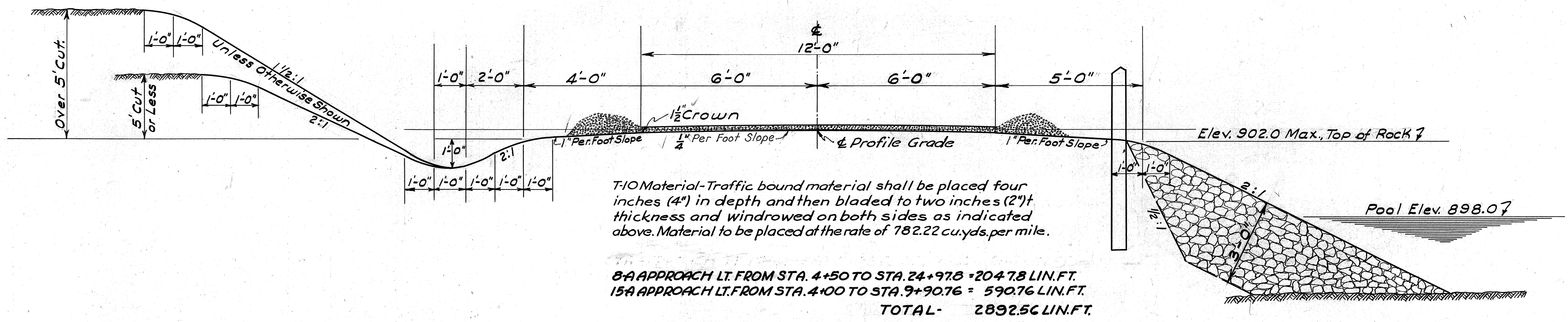
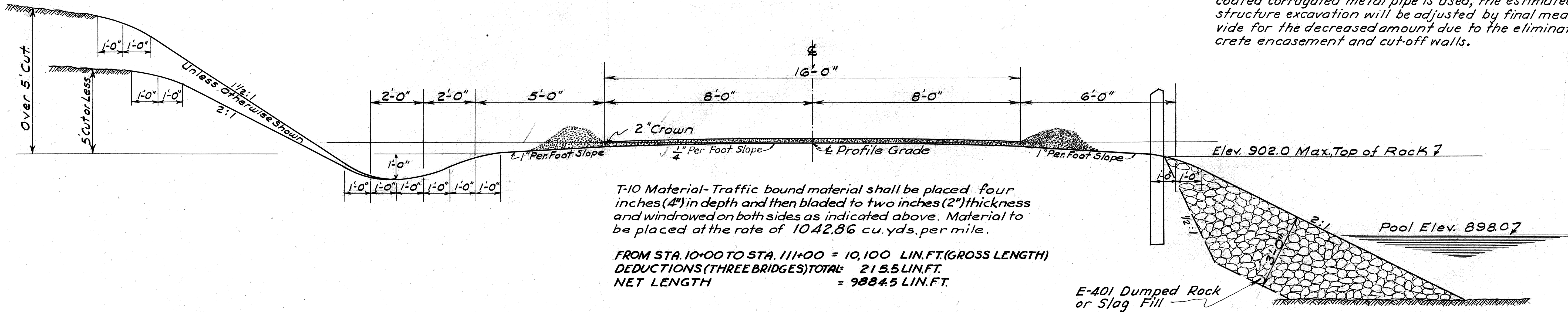
FILE No	HAS-799-3.20
DATE OF LETTING	194
CONTRACT No	

FED. RD.	STATE	H.I.E. PROJECT	FISCAL YEAR
2	OHIO		1948

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# TYPICAL SECTION TYPE T-10 SCALE 1/2"=1'-0"

**ALTERNATE PIPE FOR ENCASED VITRIFIED SEWER PIPE**  
Paved bituminous coated corrugated metal pipe Sec. M-6.4(d) will be permitted as an alternate for V. S. P. (Encased). If paved bituminous coated corrugated metal pipe is used, the estimated quantity of structure excavation will be adjusted by final measurement to provide for the decreased amount due to the elimination of the concrete encasement and cut-off walls.



TYPICAL SECTION OF 6" & 8" PIPE UNDERDRAIN

**Note:** Sandstone of acceptable quality for use as dumped-rock fill occurs in the immediate vicinity of this project in the form of outcrops and bedrock under cover near the valley bottoms and as loose boulders on the hill slopes.

**UTILITY ADJUSTMENT-** Any and all work required for Public or Private Utilities will be done by the respective owners and the Contractor shall co-operate with the Utility Companies by arranging his work in such a manner that needless conflicts will be avoided.

**GUARD RAIL-** Guard rail shall be flared to meet bridge railing in such a manner that the change in alignment of the guard rail will not exceed 1:10.

### GENERAL NOTES

**TRAFFIC-** Traffic over the temporary road indicated on sheet No. 1 will be maintained by Harrison County Road Forces at no cost to the State of Ohio.

**CURVES-** Superelevated curves shall be built without crown. The crown shall be worked out of the pavement in that portion between the beginning of the transition and the point where the superelevation equals twice the crown.

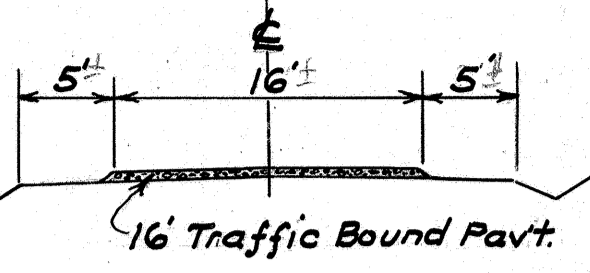
**TREES-** Payment for removal of trees and stumps shall be included for payment in the price bid per cu. yd. for Item E-1, Excavation, in accordance with Sec. E-1.02.

**I-17 GRADING REQUIREMENTS-** The grading requirement for material passing the No. 200 mesh sieve, as specified in Sec. I-17.02 may be modified as follows:

Passing 200 mesh - 0% to 20% provided compaction is obtained in accordance with Sec. I-17.02.

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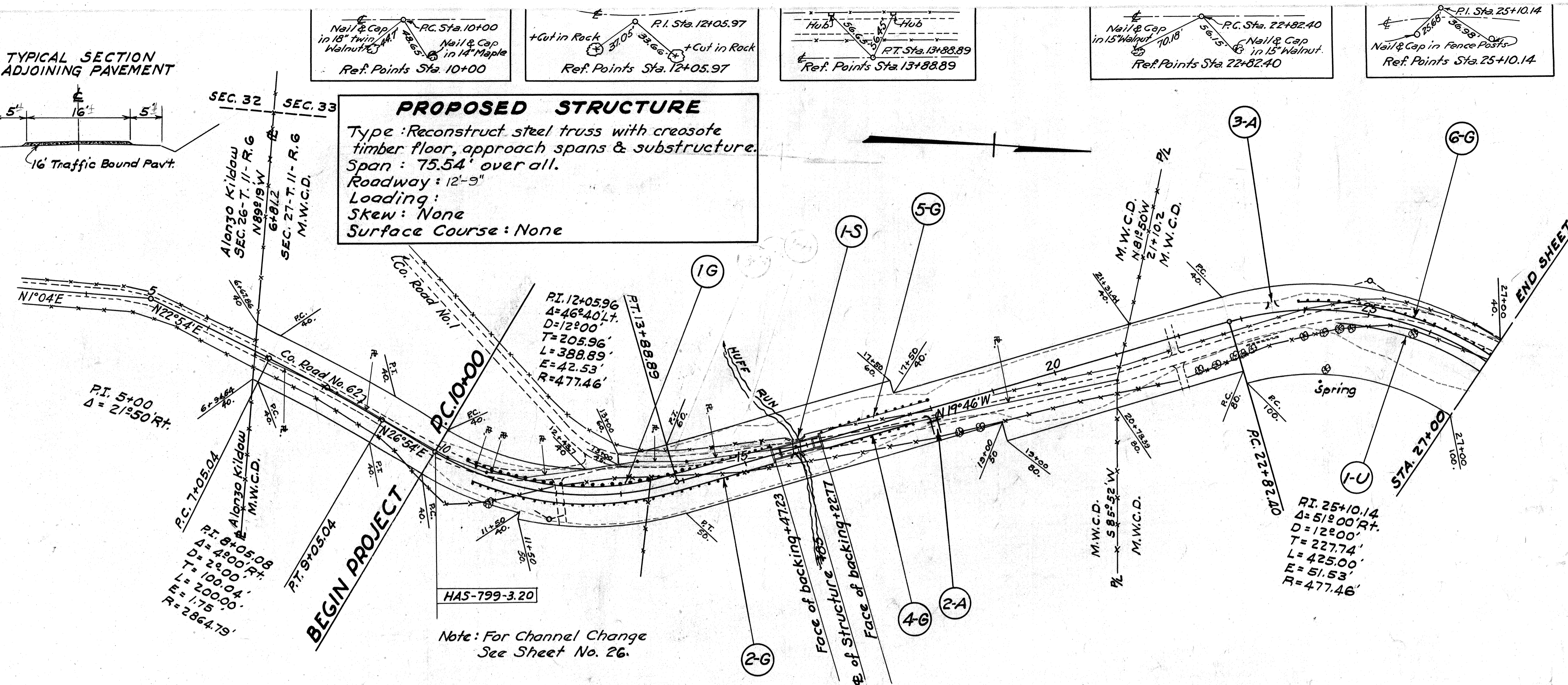
TYPICAL SECTION  
ADJOINING PAVEMENT



**PROPOSED STRUCTURE**  
 Type: Reconstruct steel truss with creosote timber floor, approach spans & substructure.  
 Span: 75.54' over all.  
 Roadway: 12'-9"  
 Loading:  
 Skew: None  
 Surface Course: None

BEGIN PROJECT

Note: For Channel Change  
See Sheet No. 26.



**PRIVATE DRIVES, ROAD & MAIL BOX APPROACHES**

REF. No.	STA.	SIDE	I-17 AGGR. CU.YDS.	15" PIPE LIN.FT.	REMARKS
2-A	18+00	Rt.	3	20	
3-A	23+50	Lt.	2		
Totals			5	20	

**STRUCTURES OVER 20' SPAN**

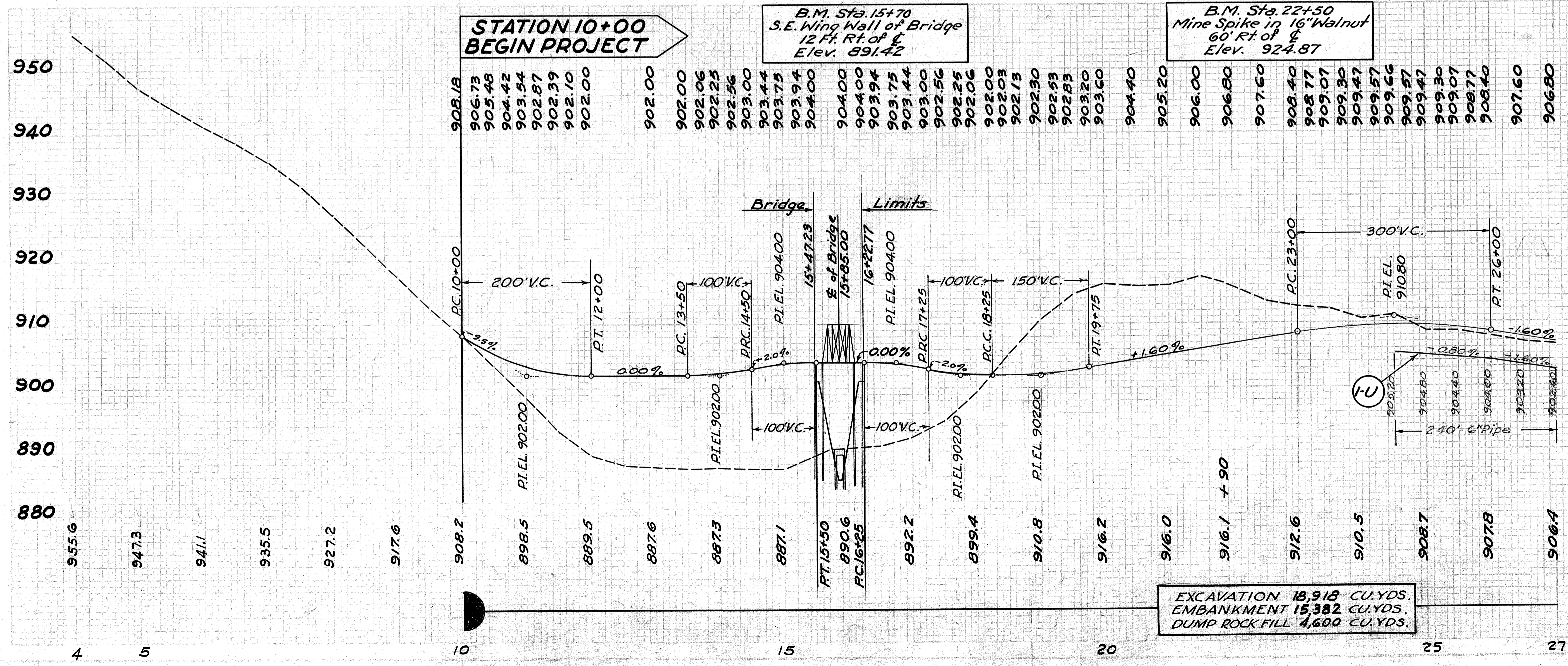
REF. No.	STA.	REMOVALS TYPE	REMOVALS LENGTH	NEW WORK TYPE	NEW WORK LENGTH	REMARKS
1-5	15+85	St. Top Br. 21' width	10' span	Steel Tr. 12.75' width	75.54'	See Sheet No. 33-35

**GUARD RAIL**

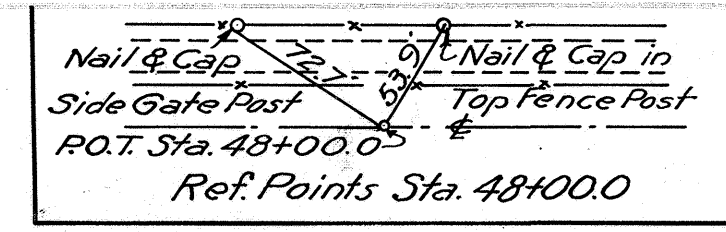
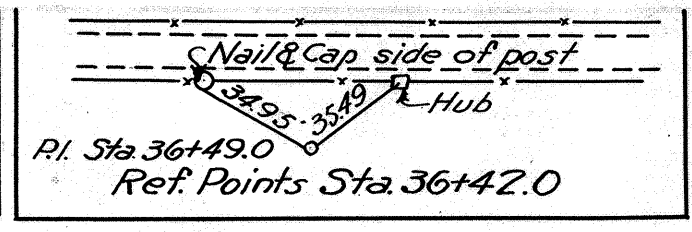
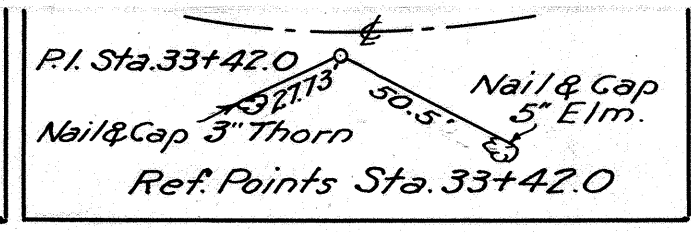
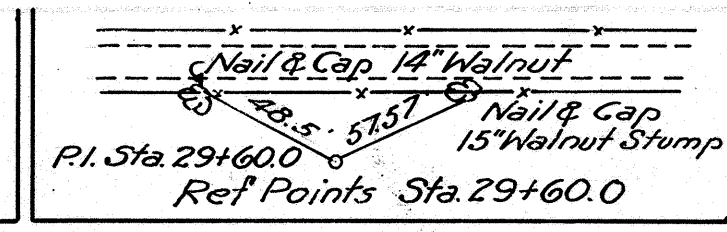
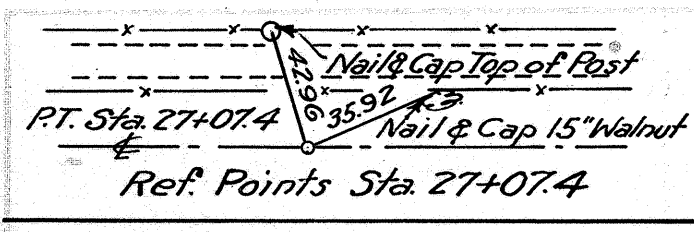
REF. No.	FROM STA.	TO STA.	SIDE	LIN. FT.
1-G	10+55.9	15+45.0	Lt.	480
2-G	10+72.7	15+45.0	Rt.	480
4-G	16+25.0	17+69.0	Rt.	144
5-G	16+25.0	18+01.0	Lt.	176
6-G	23+87.0	27+00.0	Lt.	321.8
Totals				1,601.8

**PIPE UNDERDRAIN**

REF. No.	FROM STA.	TO STA.	SIDE	6" PIPE LIN.FT.
1-U	24+50	27+00	Rt.	242
Totals				242

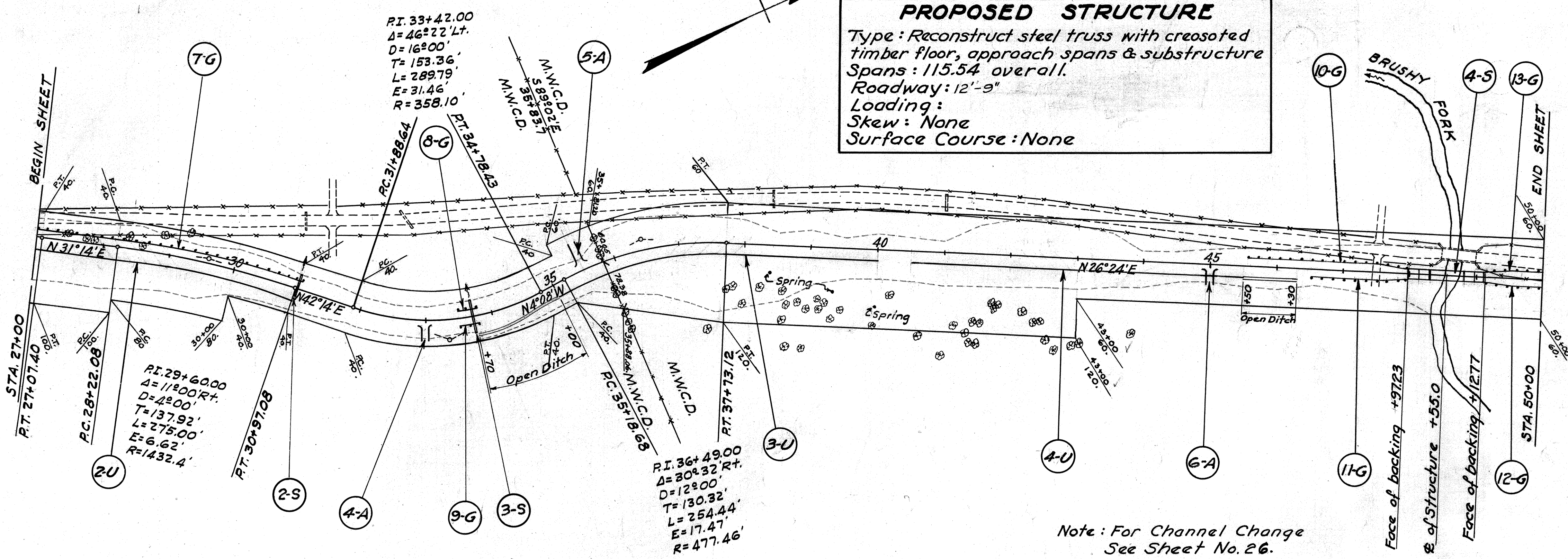


EXCAVATION 18,918 CU.YDS.  
 EMBANKMENT 15,382 CU.YDS.  
 DUMP ROCK FILL 4,600 CU.YDS.



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**PROPOSED STRUCTURE**  
 Type: Reconstruct steel truss with creosoted timber floor, approach spans & substructure  
 Spans: 115.54 overall.  
 Roadway: 12'-9"  
 Loading:  
 Skew: None  
 Surface Course: None



Note: For Channel Change See Sheet No. 26.

**PRIVATE DRIVES, ROAD & MAIL BOX APPROACHES**

REF. No.	STA.	SIDE	1-17 AGGR. CU. YDS.	15" PIPE LIN. FT.	REMARKS
4-A	33+00	Rt.	2		
5-A	35+50	Lt.	3		
6-A	45+00	Rt.	2	22	
Totals			7	22	

**STRUCTURES - 20' SPAN AND UNDER**

REF. No.	STA.	NEW WORK TYPE	SIZE	LENGTH	REMARKS
2-S	31+00	Std. S. Pier	15"	40'-0"	See Sheet No. 27
3-S	33+70	Std. S. Pier	36"	50'-0"	See Sheet No. 27

**GUARD RAIL**

REF. No.	FROM STA.	TO STA.	SIDE	TYPE	LENGTH
7-G	27+00	31+11.3	Lt.		414.2
8-G	33+50	33+83.0	Lt.		32
9-G	33+50	33+81.0	Rt.		32
10-G	45+55	47+95.0	Lt.		240
11-G	46+51	47+95.0	Rt.		144
12-G	49+15	50+00.0	Rt.		85
13-G	49+15	50+00.0	Lt.		85
Totals					1032.2

**PIPE UNDERDRAIN**

REF. No.	FROM STA.	TO STA.	SIDE	6" PIPE LIN. FT.	8" PIPE LIN. FT.
2-U	27+00	30+99	Rt.	100'	297
3-U	35+00	40+00	Rt.	200	292
4-U	40+50	45+50	Rt.	150	350
Totals					450 939

**STRUCTURES OVER 20' SPAN**

REF. No.	STA.	REMOVALS TYPE	NEW WORK TYPE	REMARKS
4-3	48+55	Salvaged	Steel Tr. 12.25' width / 115.54	See Sheet No. 36-38

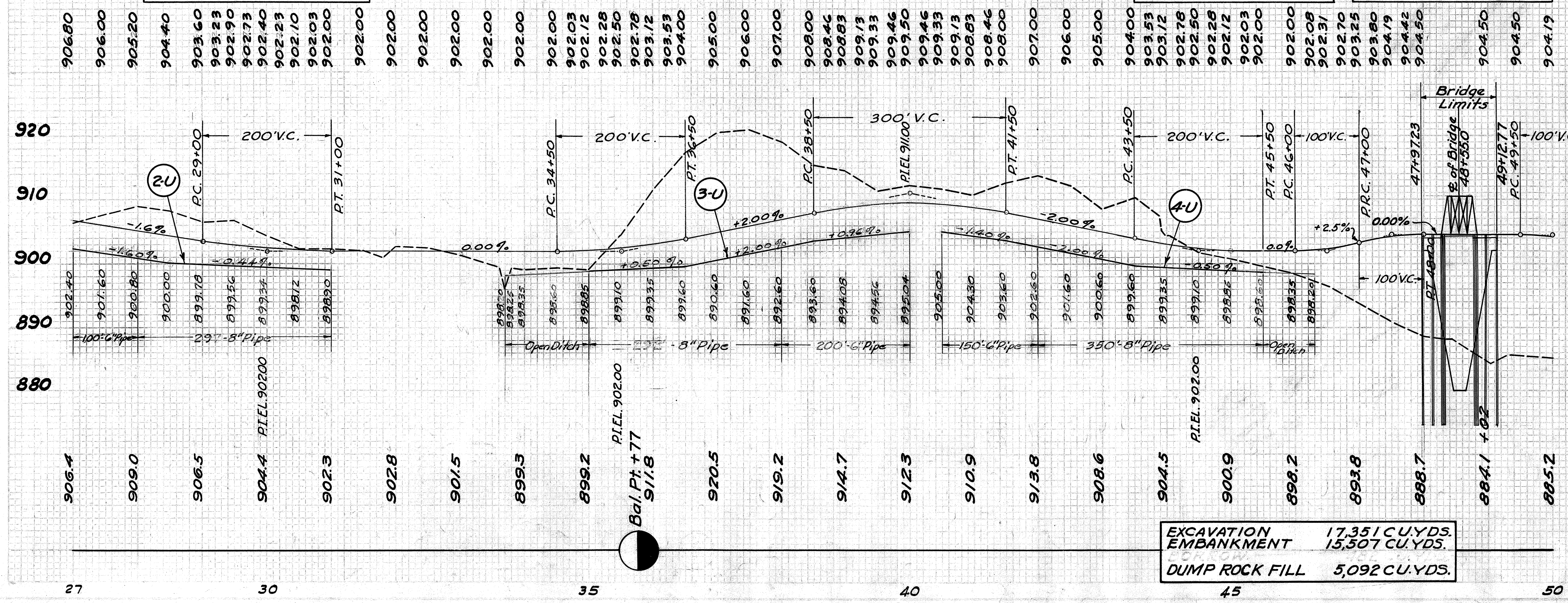
**PIPE TO BE REMOVED**

STATION	SIDE	DIST. FROM	TYPE	8" TO 15" INCL. REMOVE & DISPOSE OF LIN. FT.	18" TO 36" INCL. REMOVE & STORE LIN. FT.
30+85	Lt.	100	C.M.P.	28	
32+50	Lt.	150	C.M.P.		28
38+42	Lt.	70	C.M.P.	26	
41+00	Lt.	75	C.M.P.V.S.P.	25	
TOTALS				79	28

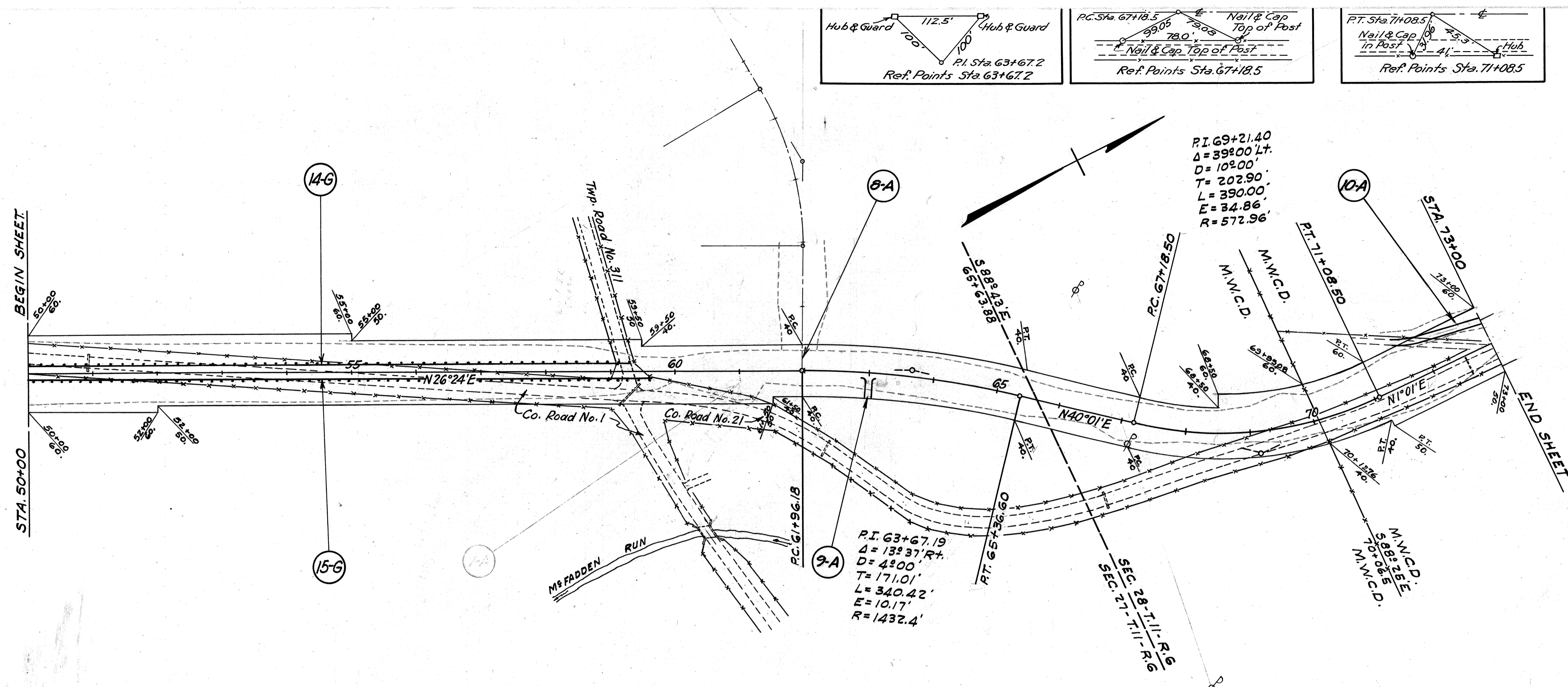
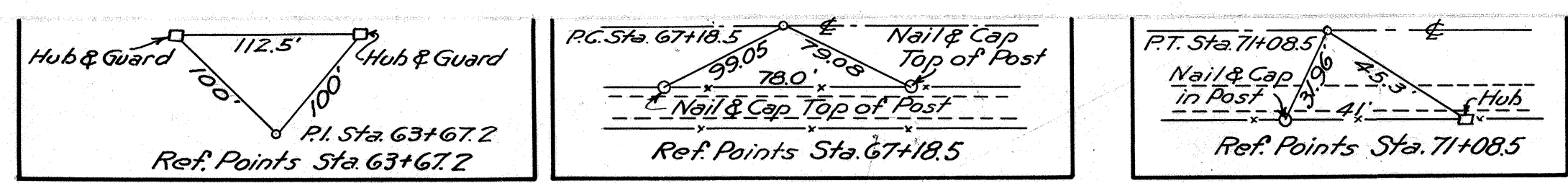
B.M. Sta. 29+30  
 Mine Spike in 14" Locust  
 40 Ft. Lt. of C  
 Elev. 898.52

B.M. Sta. 45+00  
 Mine Spike in 14" Walnut  
 20 Ft. Lt. of C  
 Elev. 919.64

B.M. Sta. 48+45  
 D Cut on S.E. Wing Wall  
 20 Ft. Lt. of C  
 Elev. 891.06



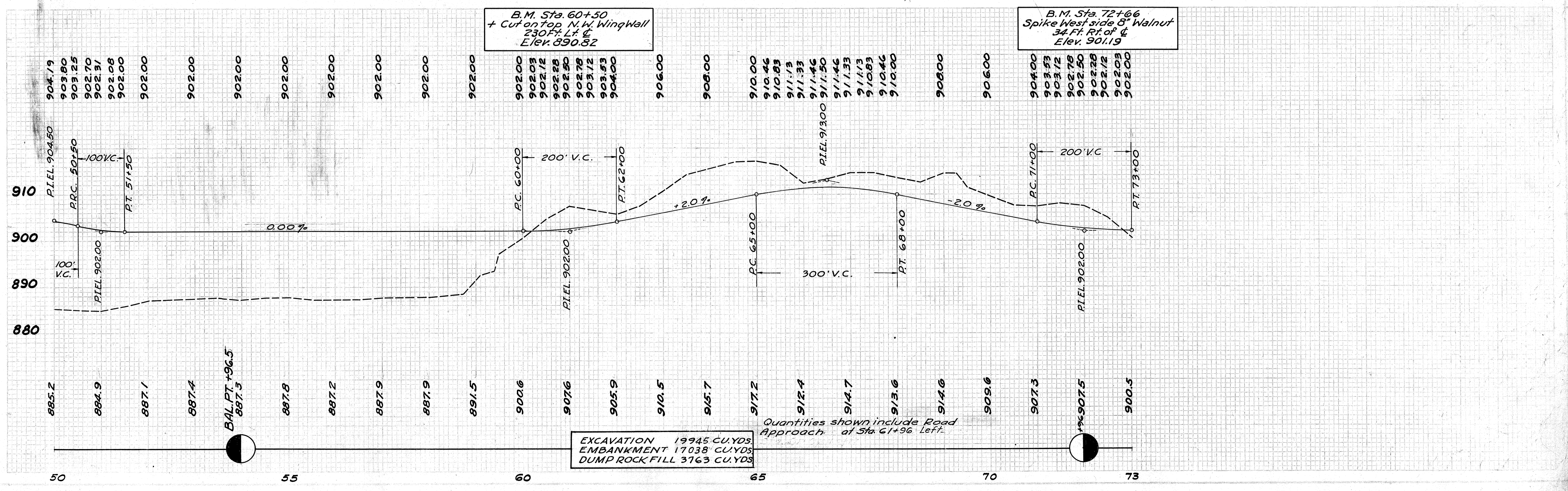
EXCAVATION 17,351 CU. YDS.  
 EMBANKMENT 15,507 CU. YDS.  
 DUMP ROCK FILL 5,092 CU. YDS.

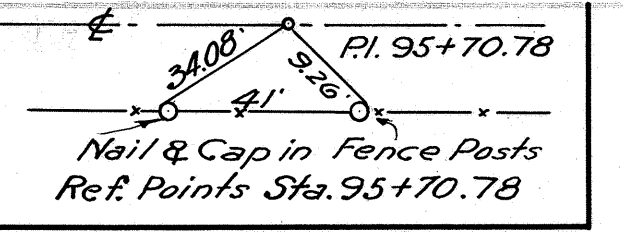
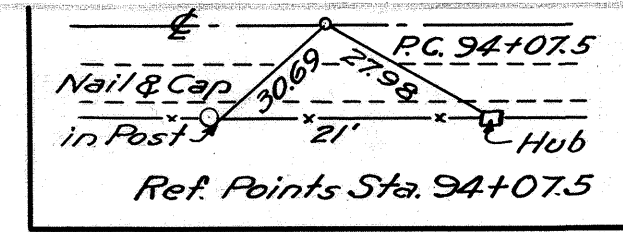
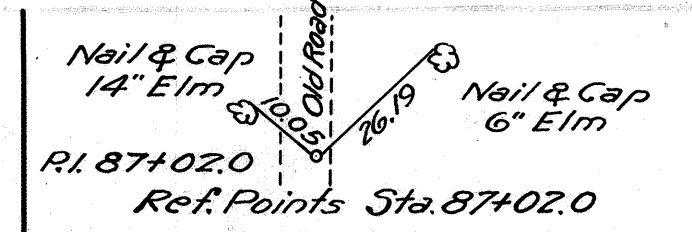
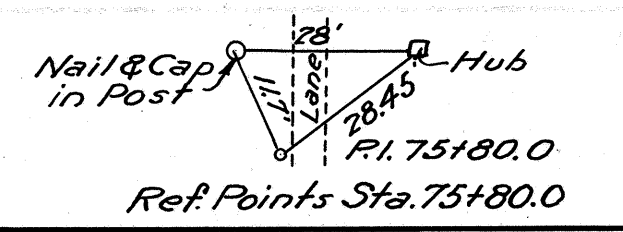


REF. No.	STA.	SIDE	E-17 AGG. CU.YDS.	REMARKS
8-A	61+96	Lt.	See Quantities on Detail Sheet No. 21	
9-A	63+00	Rt.	3	
Totals			3	

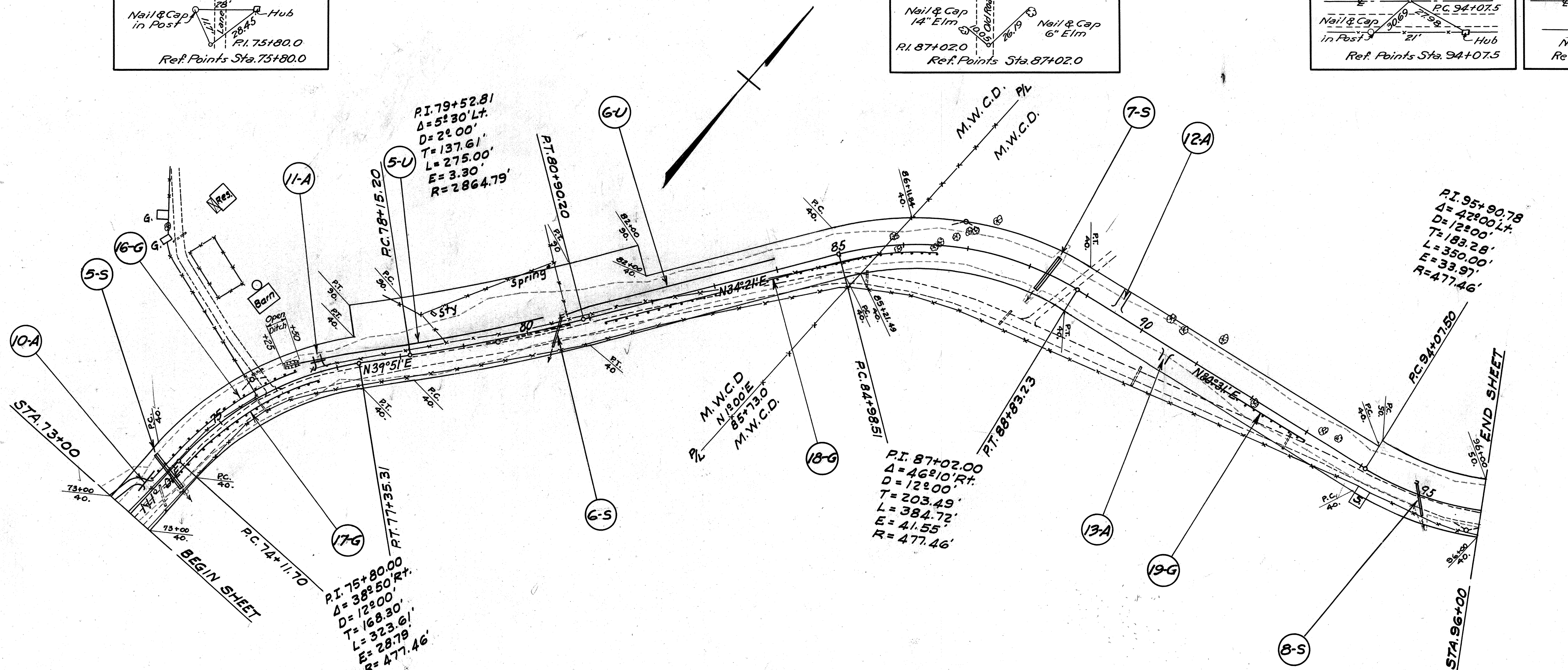
REF. No.	FROM STA.	TO STA.	SIDE	LIN. FT.
14-G	50+00	59+39	Lt.	939
15-G	50+00	59+71	Rt.	971
TOTALS				1,910

STATION	SIDE	DIST. FROM	TYPE	8" TO 15" INCL.		18" TO 36" INCL.	
				REMOVE & DISPOSE	REMOVE & STORE	REMOVE & DISPOSE	REMOVE & STORE
50+92	Lt.	16	C.M.P.				24
59+28	Rt.	40	C.M.P.		40		
62+40	Rt.	118	CIP Concrete Pipe		36		
67+00	Rt.	120	V.S.P.	24			
72+90	Rt.	18	V.S.P.	30			
TOTALS				54	76		24





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**PRIVATE DRIVES, ROAD & MAIL BOX APPROACHES**

REF. No.	STA.	SIDE &	I-17 AGGR. CU.YDS	15" PIPE LIN. FT.	REMARKS
10-A	73+50	Lt.	22	40	
11-A	76+75	Lt.	2	22	
12-A	89+50	Lt.	2		
13-A	90+50	Rt.	2		
<b>TOTALS</b>			<b>28</b>	<b>62</b>	

**STRUCTURES-20' SPAN AND UNDER**

REF. No.	STA.	REMOVALS		NEW WORK		REMARKS
		TYPE	SIZE LENGTH	TYPE	SIZE LENGTH	
5-S	73+82.20			Twin V.S. Piers	36" 66'	See Sheet No. 28
6-S	80+50			V.S. Piers	18" 50'	See Sheet No. 28
7-S	88+30.50			Twin V.S. Piers	30" 63'	See Sheet No. 29
8-S	95+00			V.S. Piers	18" 50'	See Sheet No. 29

**GUARD RAIL (POSTS ONLY)**

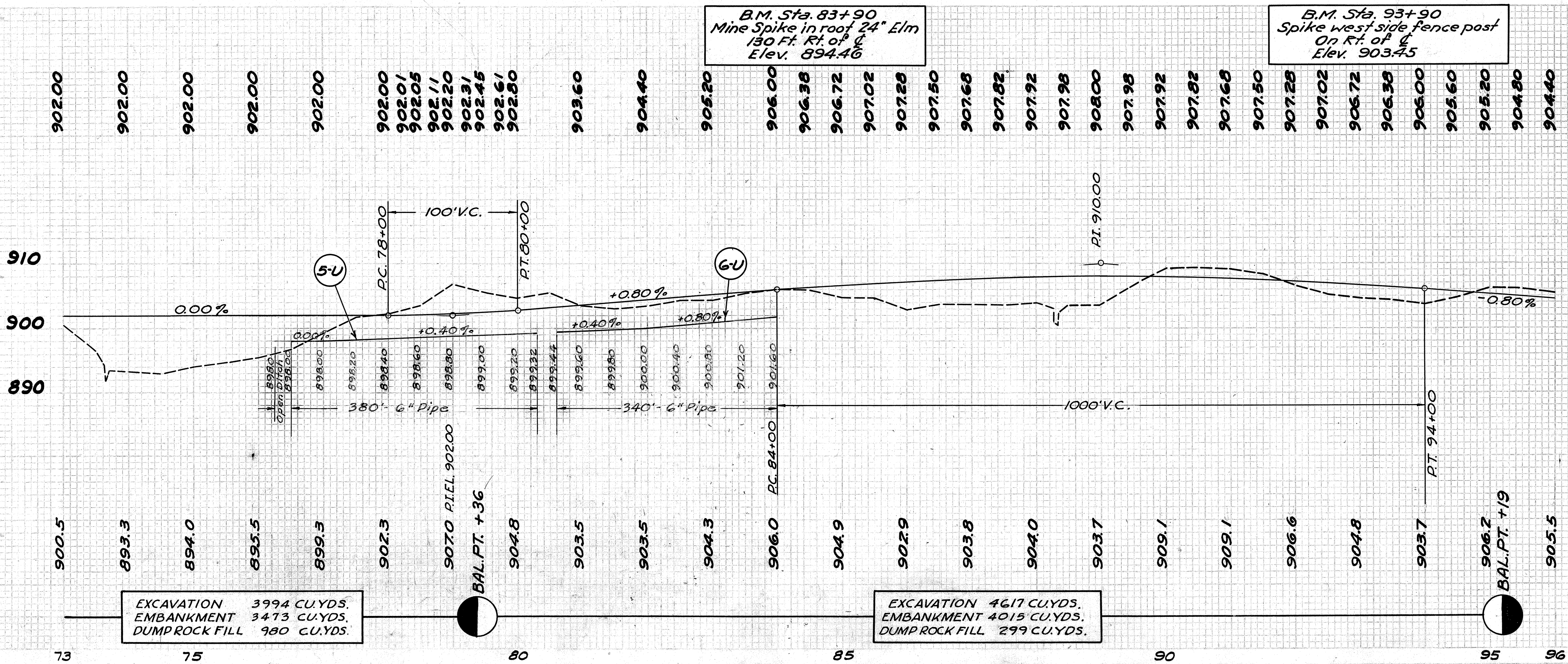
REF. No.	FROM STA.	TO STA.	SIDE &	LIN. FT.
16-G	73+60	76+41.7	Lt.	288
17-G	73+70	76+81.3	Rt.	304
18-G	81+20	86+52.2	Rt.	528
19-G	91+20	93+12	Rt.	192
<b>TOTALS</b>				<b>1312</b>

**PIPE UNDERDRAIN**

REF. No.	FROM STA.	TO STA.	SIDE &	PIPE		
				6" PIPE LIN. FT.	8" PIPE LIN. FT.	6" PIPE OUTLET LIN. FT.
5-U	76+50	80+30	Lt.	360		20
6-U	80+60	84+00		340		
<b>Totals</b>				<b>700</b>		<b>20</b>

**PIPE TO BE REMOVED**

STATION	SIDE &	DIST. FROM &	TYPE	8" TO 15" INCL.		18" TO 36" INCL.	
				REMOVE & DISPOSE OF LIN. FT.	REMOVE & STORE LIN. FT.	REMOVE & DISPOSE OF LIN. FT.	REMOVE & STORE LIN. FT.
73+66.2	Rt.	20'	C.M.P.C.P.				35
75+65	Rt.	10'	C.M.P.-V.S.P.			6	28
79+82	Rt.	11'	V.S.P.	86			
85+35	Rt.	49'	C.M.P.		26		
88+00	Rt.	92'	C.M.P.				28
90+31	Rt.	66'	C.M.P.		32		
92+81	Rt.	27'	C.M.P.		26		
<b>Totals</b>				<b>86</b>	<b>84</b>	<b>6</b>	<b>91</b>

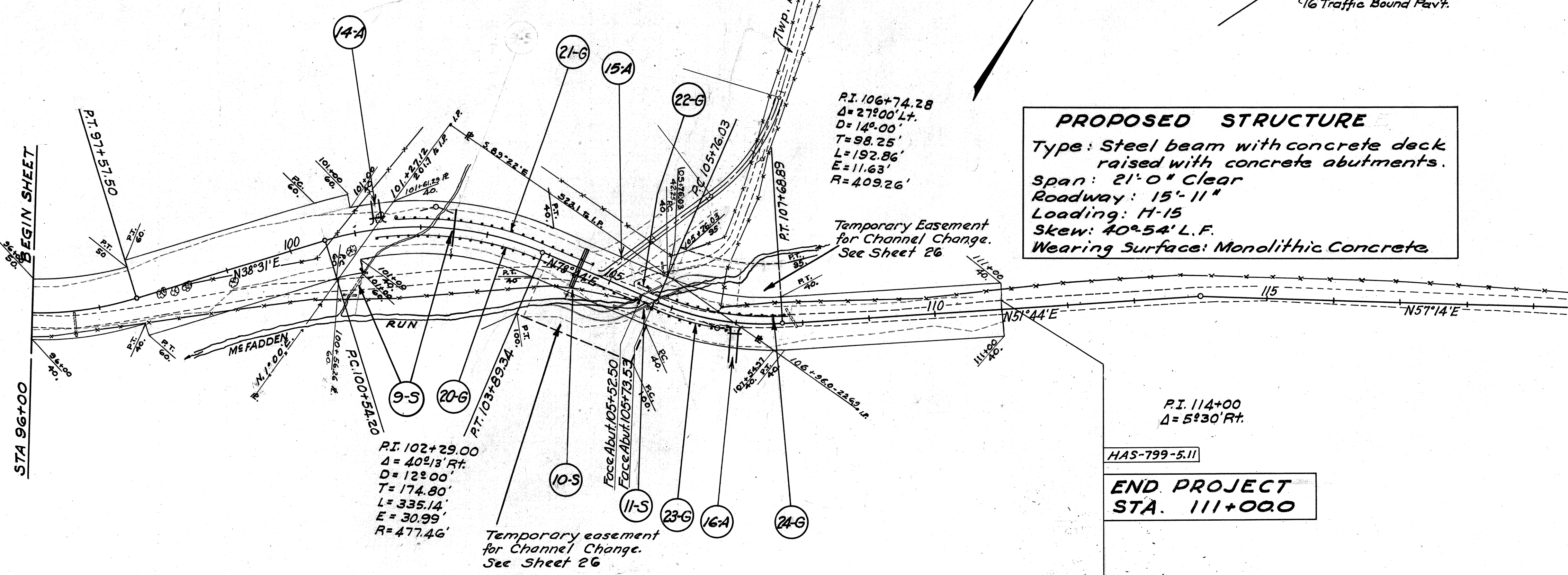
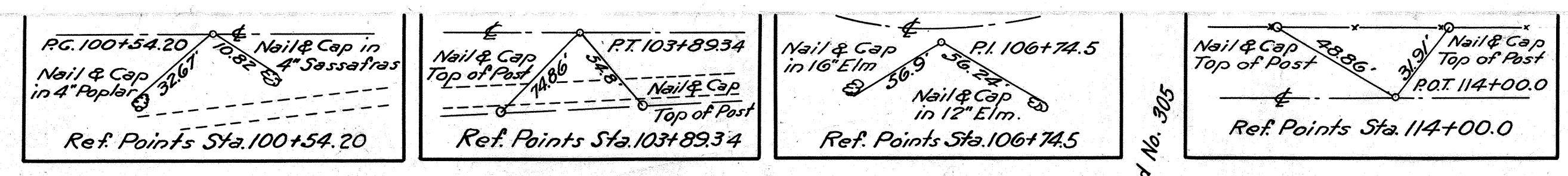
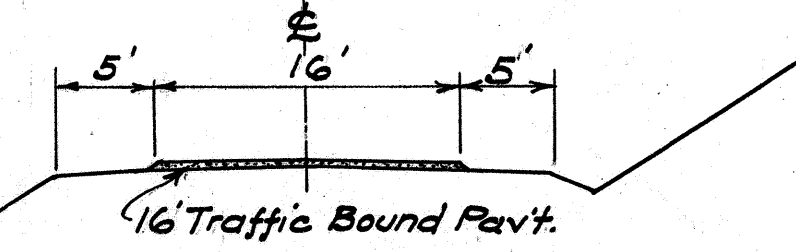


EXCAVATION 3994 CU.YDS.  
EMBANKMENT 3473 CU.YDS.  
DUMPROCK FILL 980 CU.YDS.

EXCAVATION 4617 CU.YDS.  
EMBANKMENT 4015 CU.YDS.  
DUMPROCK FILL 299 CU.YDS.

HARRISON COUNTY  
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TYPICAL SECTION  
ADJOINING PAVEMENT



**PROPOSED STRUCTURE**  
 Type: Steel beam with concrete deck raised with concrete abutments.  
 Span: 21'-0" Clear  
 Roadway: 15'-11"  
 Loading: H-15  
 Skew: 40°-54' L.F.  
 Wearing Surface: Monolithic Concrete

**PRIVATE DRIVES, ROAD & MAIL BOX APPROACHES**

REF. No.	STA.	SIDE &	I-17 AGGR. CUYDS.	15" PIPE LIN.FT.	18" PIPE LIN.FT.	REMARKS
14-A	101+35	Lt.	3	24		See Quantities on Detail Sheet No. 25
15-A	104+85	Lt.			32	
16-A	107+00	Rt.	4			
Totals			7	24	32	

**STRUCTURES 20' SPAN AND UNDER**

REF. No.	STA.	REMOVALS TYPE	REMOVALS SIZE	REMOVALS LENGTH	NEW WORK TYPE	NEW WORK SIZE	NEW WORK LENGTH	REMARKS
9-S	102+50	C.M.P.	48"	44'-0"	C.M.P.	48"	56'-0"	See Detail on Sheet No. 30
10-S	104+50				Twirl/S.P.C.	36"	60'-0"	See Detail on Sheet No. 30
Totals								

**GUARD RAIL (POSTS ONLY)**

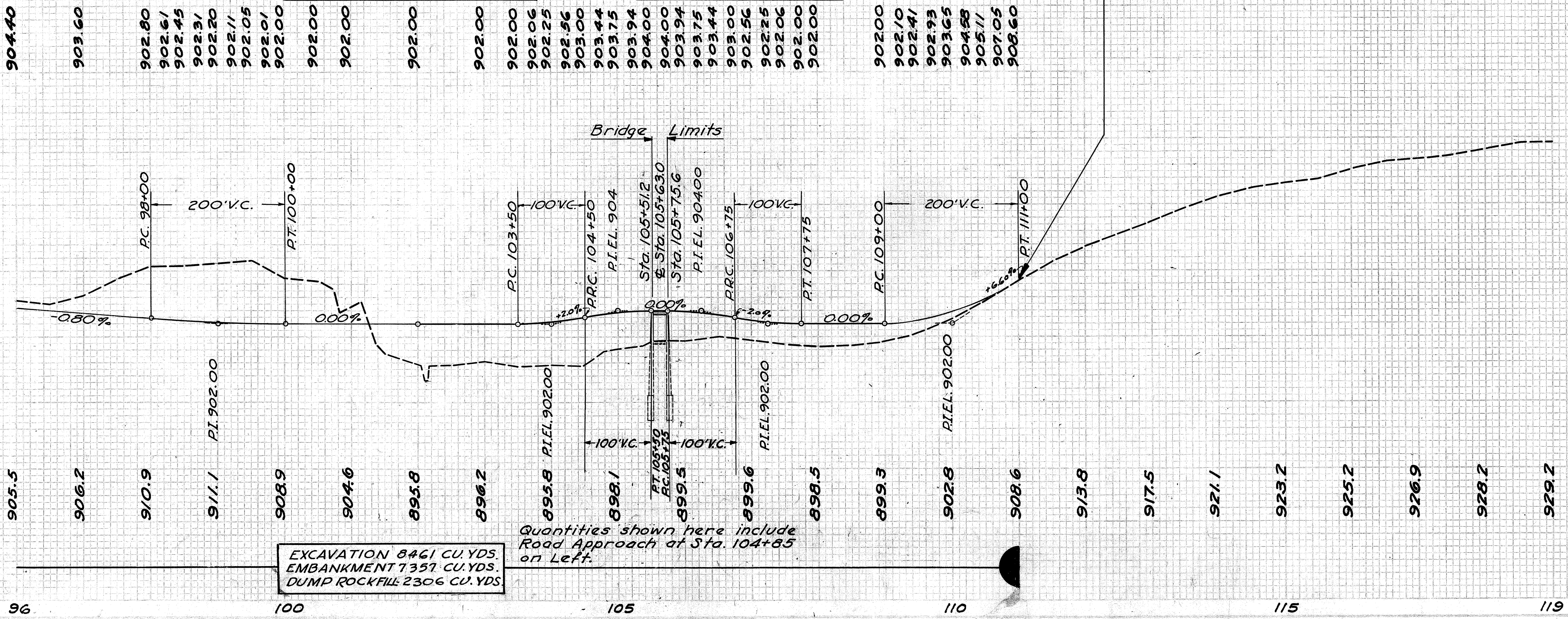
REF. No.	FROM STA.	TO STA.	SIDE &	LIN. FT.	REMARKS	
20-G	101+35.0	105+41.4	Rt.	400	Cont's as 2-G Rd. Appr. See Sheet 25	
21-G	101+67.7	To 2-G	Lt.	304		
22-G	From 1-G	105+57.0	Lt.	16	Cont's as 1-G Rd. Appr. See Sheet 25	
23-G	105+69.8	106+94.5	Rt.	128		
24-G	105+88.4	107+82.6	Lt.	192		
Totals					1040	

**STRUCTURES OVER 20' SPAN**

REF. No.	STA.	REMOVALS TYPE	REMOVALS SIZE	REMOVALS LENGTH	NEW WORK TYPE	NEW WORK SIZE	NEW WORK LENGTH	REMARKS
11-S	105+63							Raise existing Steel Beam Bridge See Sheet No. 39-42
Totals								

B.M. Sta. 100+75  
 Cut on S.E. Cor. Culvert. H.W.  
 55' Ft. of Elev. 897.99

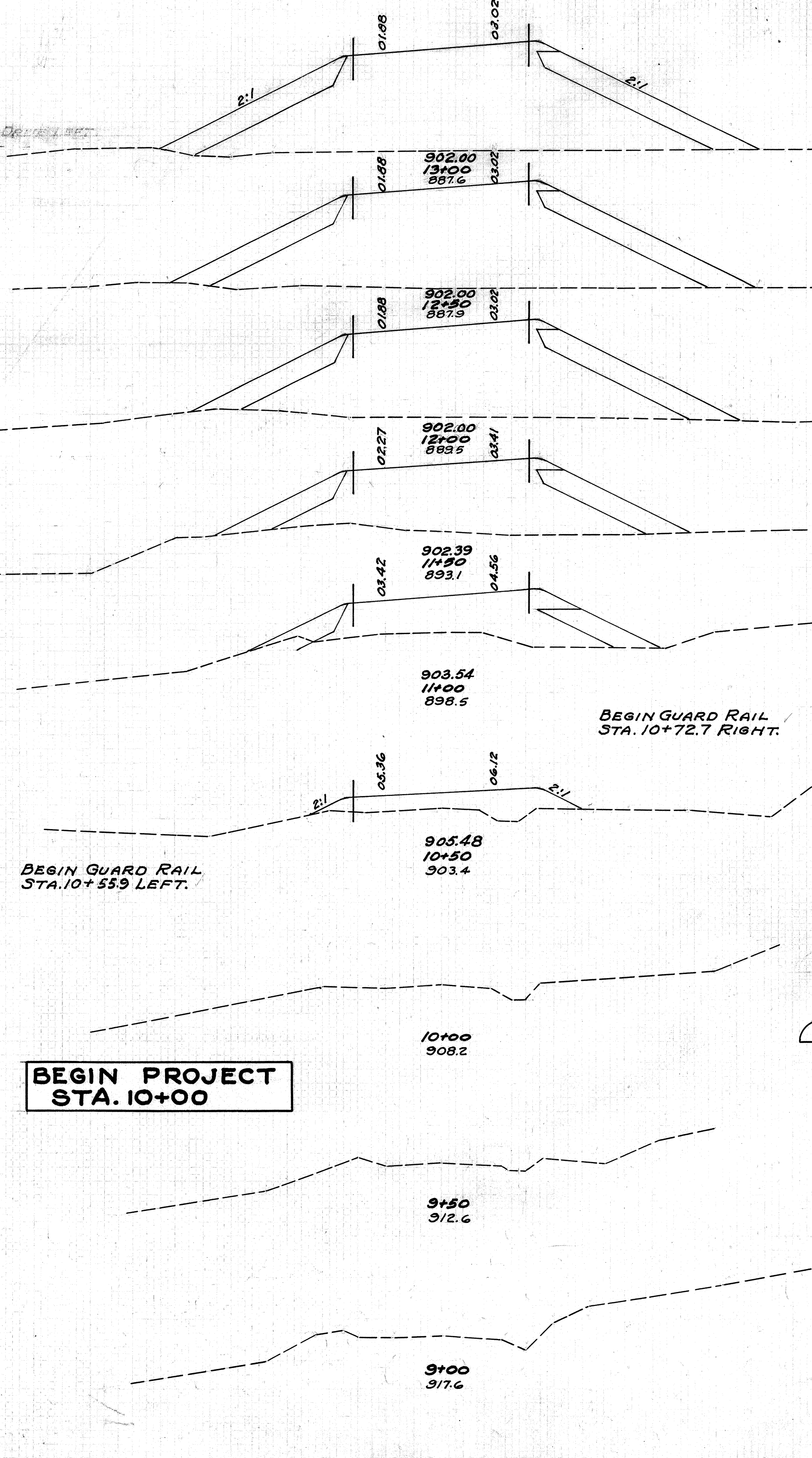
B.M. Sta. 106+60  
 Spike in root 20" Elm  
 60 Ft. Ft. of Elev. 901.44



EXCAVATION 8461 CU. YDS.  
 EMBANKMENT 7357 CU. YDS.  
 DUMP ROCK FILL 2306 CU. YDS.

Quantities shown here include  
 Road Approach at Sta. 104+85  
 on Left.

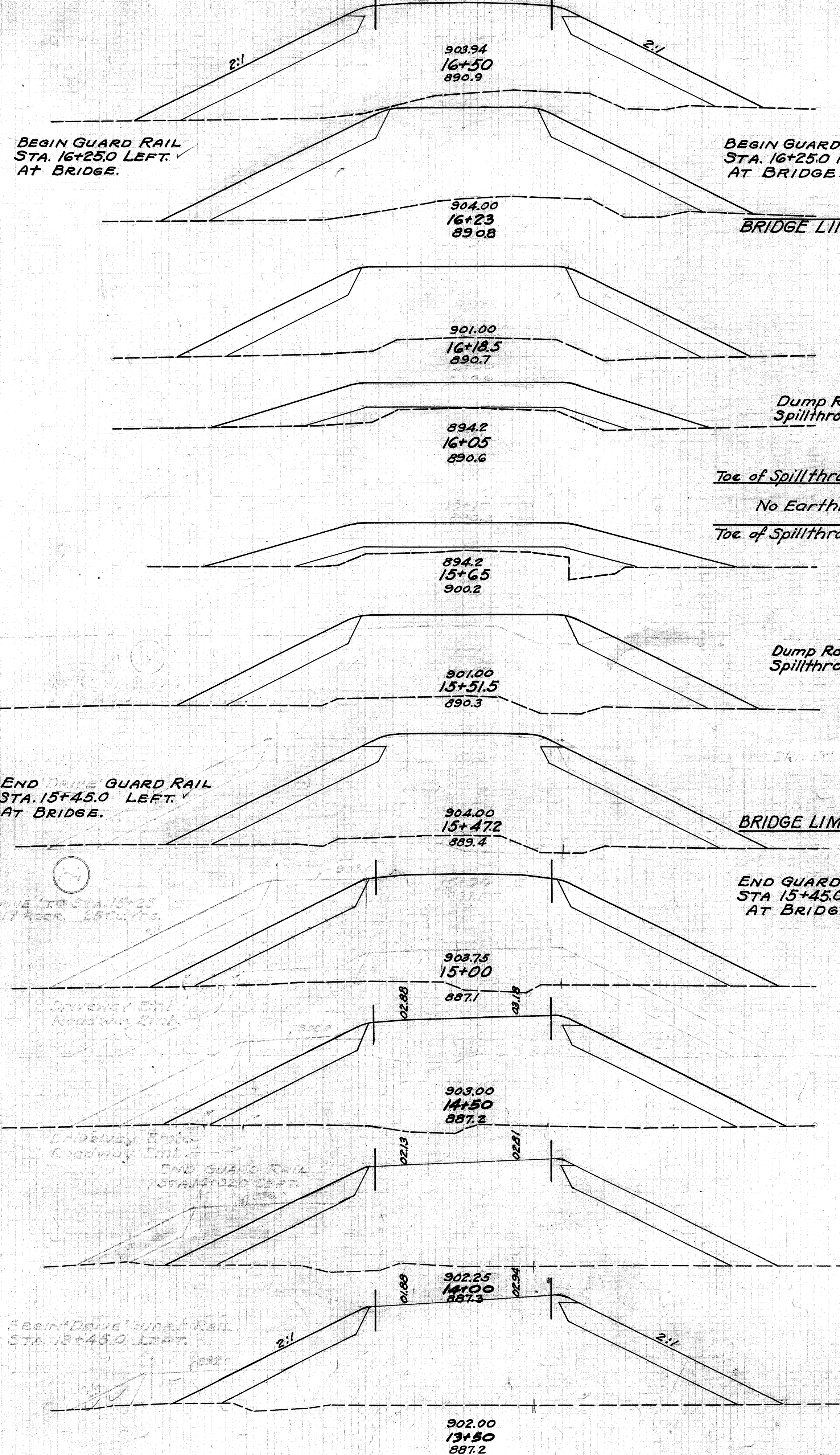
60 50 40 30 20 10 0 10 20 30 40 50 60



60 50 40 30 20 10 0 10 20 30 40 50 60

DUMPROCK END AREA CU. YDS.	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
306	0	1283		
170	0	679		
307	0	1238		
162	0	658		
281	0	1111		
141	0	542		
228	0	831		
105	0	356		
161	0	519		
69	0	204		
45	0	94		
	0	87		
	0	276		
	0	94		
	0	87		
	0	0		

60 50 40 30 20 10 0 10 20 30 40 50 60



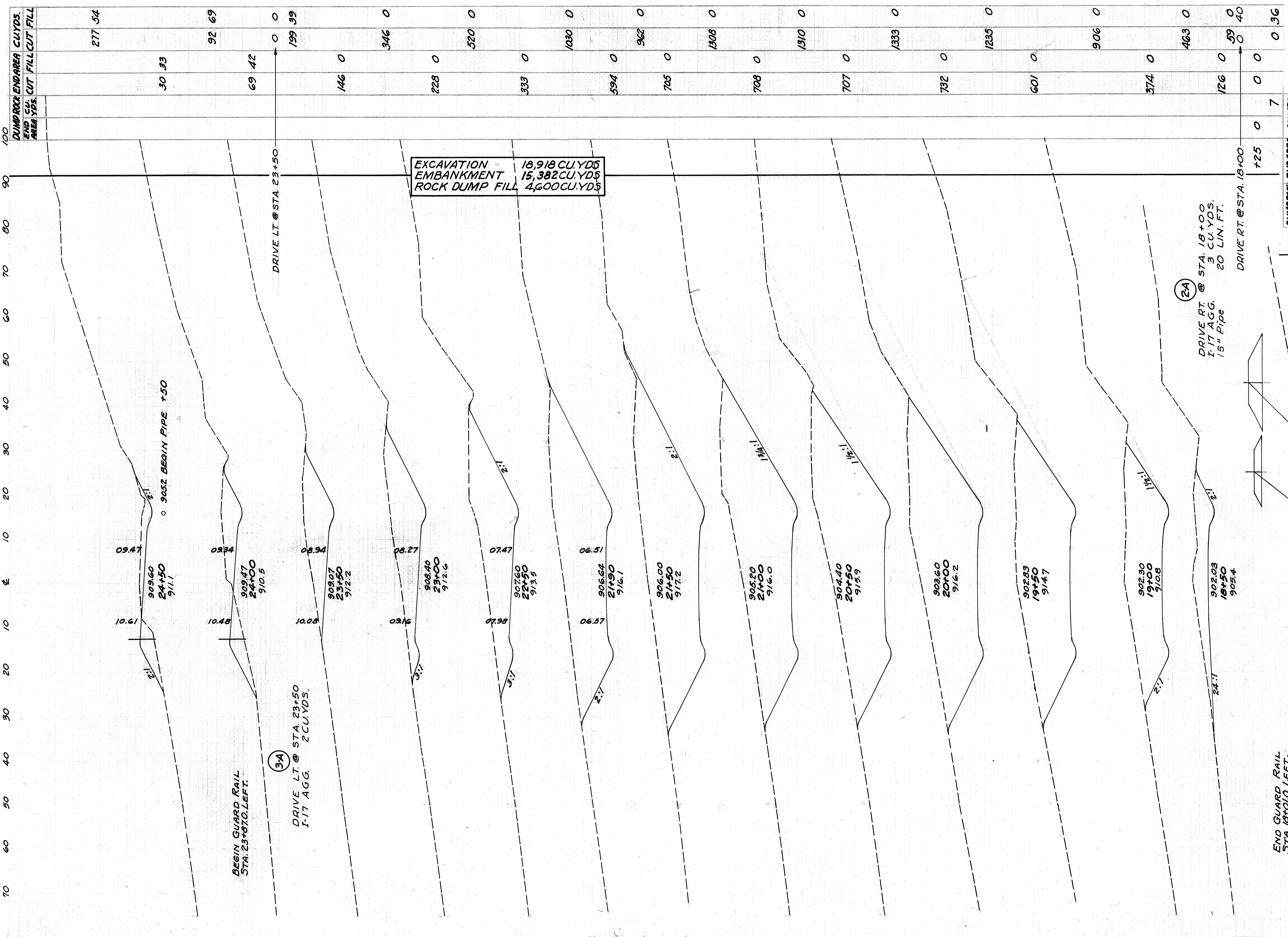
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DIV. H.I.F. **8**  
 2 OHIO 1948 **43**  
 HARRISON COUNTY  
 HAS-799-3.20

DUMPROCK END AREA CU. YDS.	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
177	0	658		
184	181	0	576	0
	28		0	90
	149		0	503
	365		0	131
			0	22
			0	0
			0	15
			0	54
			0	155
	153		0	566
	27		0	96
	181		0	646
	319		0	1194
	184		0	720
	322		0	1348
	164		0	726
	296		0	1337
	156		0	708
	293		0	1309
	160		0	706

STA 9+00 TO STA 16+50

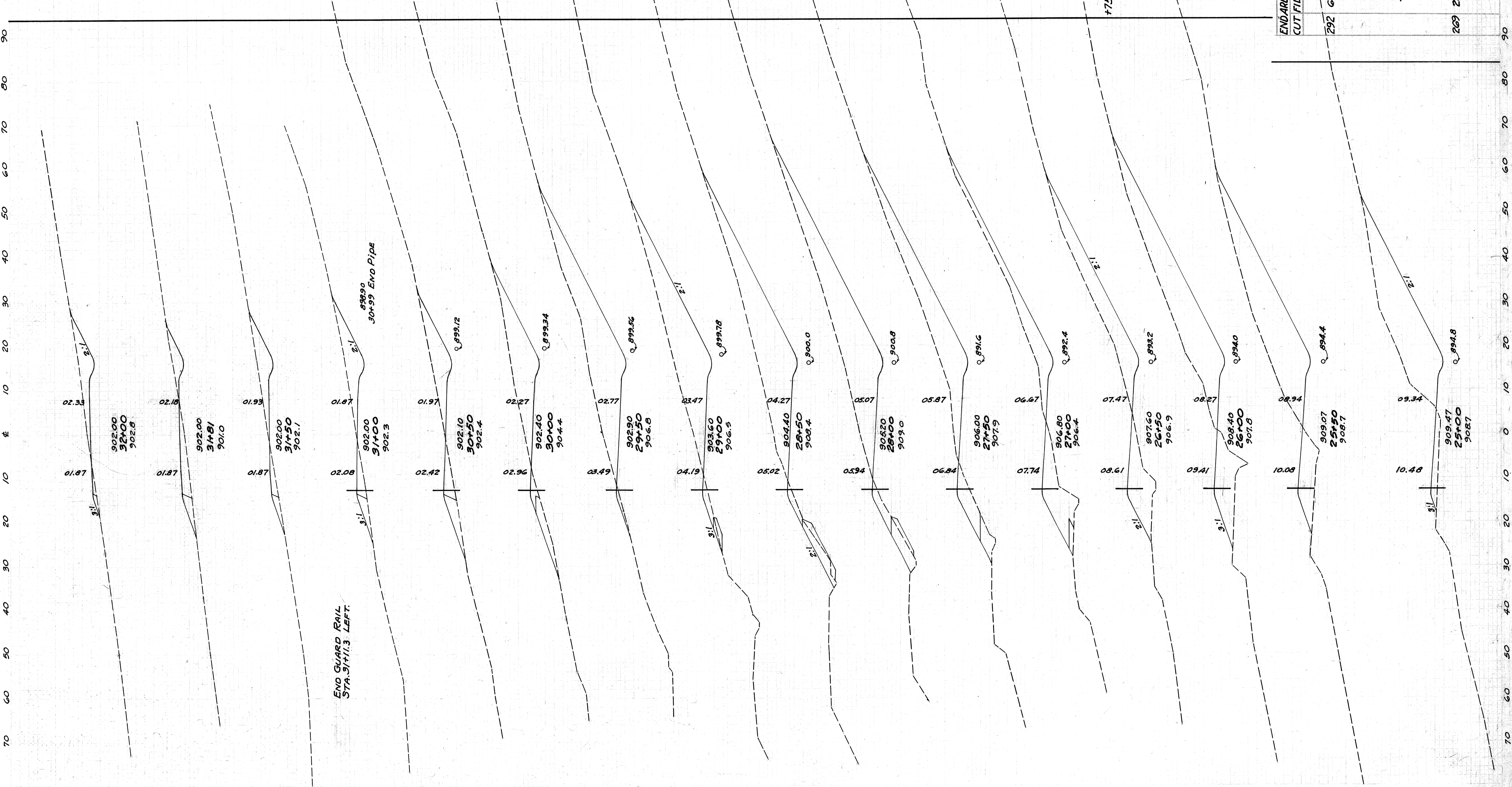




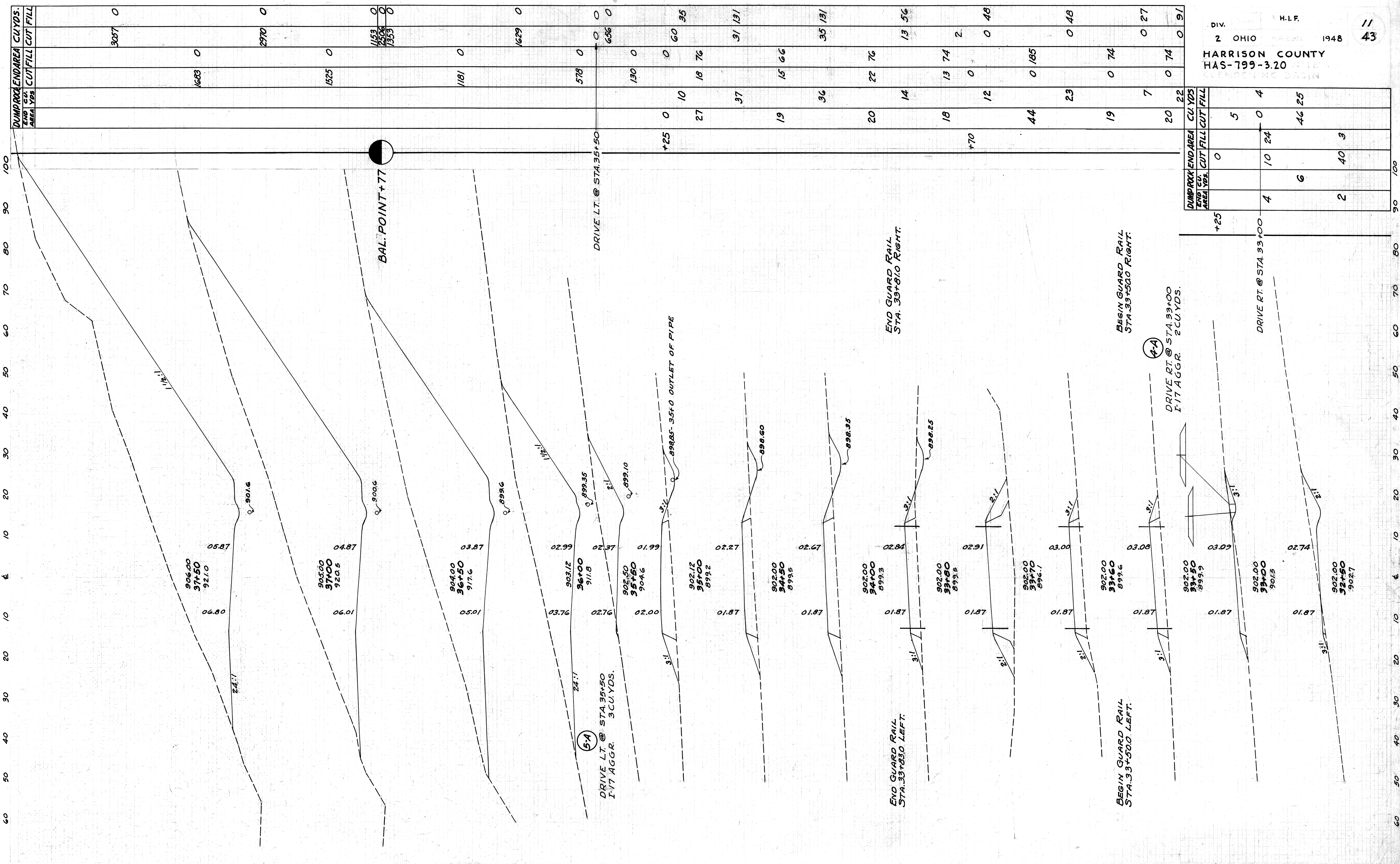
END CU. AREA YDS.	CUT FILL	CUT FILL	CUT FILL	CUT FILL
15	0	77	0	7
97	0	265	0	317
90	0	265	0	685
214	0	475	0	1049
141	0	294	0	1049

STA. 17+00 TO STA. 24+50

STATION	CUT	FILL	CUT	FILL	CUT	FILL
902+00	5	5	5	5	5	5
902+50	3	5	10	20	23	9
903+00	6	16	6	49	9	104
903+50	11	28	11	63	14	126
904+00	19	36	19	73	18	194
904+50	20	19	20	136	7	380
905+00	0	19	0	274	6	492
905+50	9	35	9	257	10	523
906+00	29	24	29	308	9	596
906+50	49	24	49	335	13	499
907+00	22	17	22	204	33	287
907+50	6	6	6	106	84	229
908+00	3	0	3	14	81	153
908+50	0	0	0	295	86	404
909+00	0	0	0	269	25	139



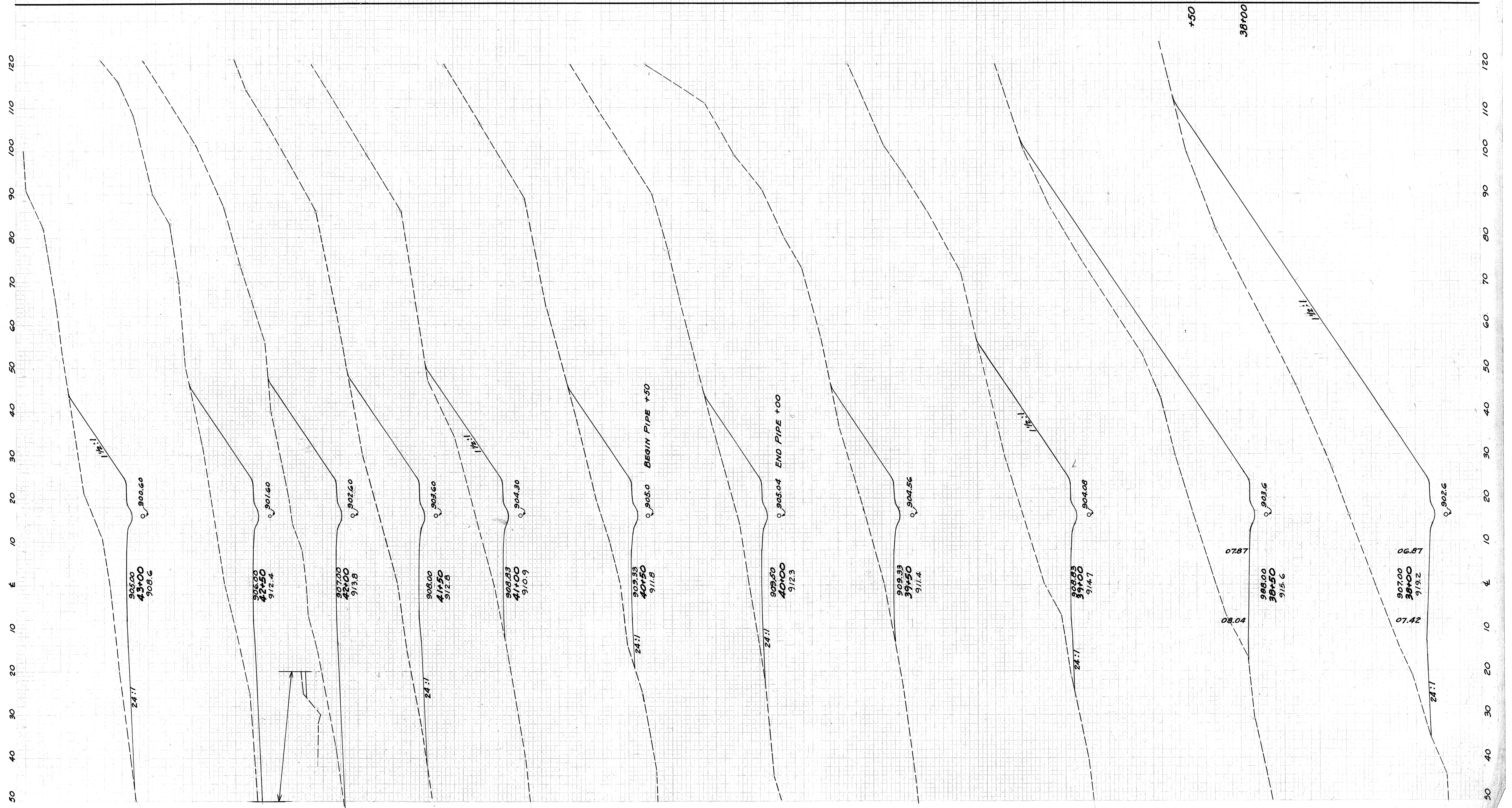
STATION	CUT	FILL	CUT	FILL
902+00	5	5	5	5
902+50	3	5	10	20
903+00	6	16	6	49
903+50	11	28	11	63
904+00	19	36	19	73
904+50	20	19	20	136
905+00	0	19	0	274
905+50	9	35	9	257
906+00	29	24	29	308
906+50	49	24	49	335
907+00	22	17	22	204
907+50	6	6	6	106
908+00	3	0	3	14
908+50	0	0	0	295
909+00	0	0	0	269



DUMP ROCK END AREA		CUT FILL CUT FILL	
END AREA YDS.	CUT FILL CUT FILL	CUT FILL CUT FILL	CUT FILL CUT FILL
0	0	0	0
1683	0	5	4
1525	0	0	46
1181	0	6	25
578	0	2	3
130	0	40	3
0	10	24	0
0	27	0	0
0	18	76	0
0	37	0	0
0	19	66	0
0	36	13	74
0	20	0	0
0	14	0	0
0	18	74	2
0	12	0	0
0	44	185	0
0	23	0	48
0	19	74	0
0	7	0	27
0	20	74	0
0	22	0	91

END AREA	CU. YDS.	CUT	FILL	CUT	FILL
		683	0		
		340	0		
		446	0		
		531	0		
		435	0		
		242	0		
		270	0		
		229	0		
		250	0		
		697	0		
		503	0		
		790	0		
		1619	0		
		2231	0		
		1197	0		
		728	0		
		905	0		
		894	0		
		627	0		
		474	0		
		462	0		
		444	0		

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 1948 43  
 HARRISON COUNTY  
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STA. 38+00 TO STA. 43+00

60 50 40 30 20 10 0 10 20 30 40 50

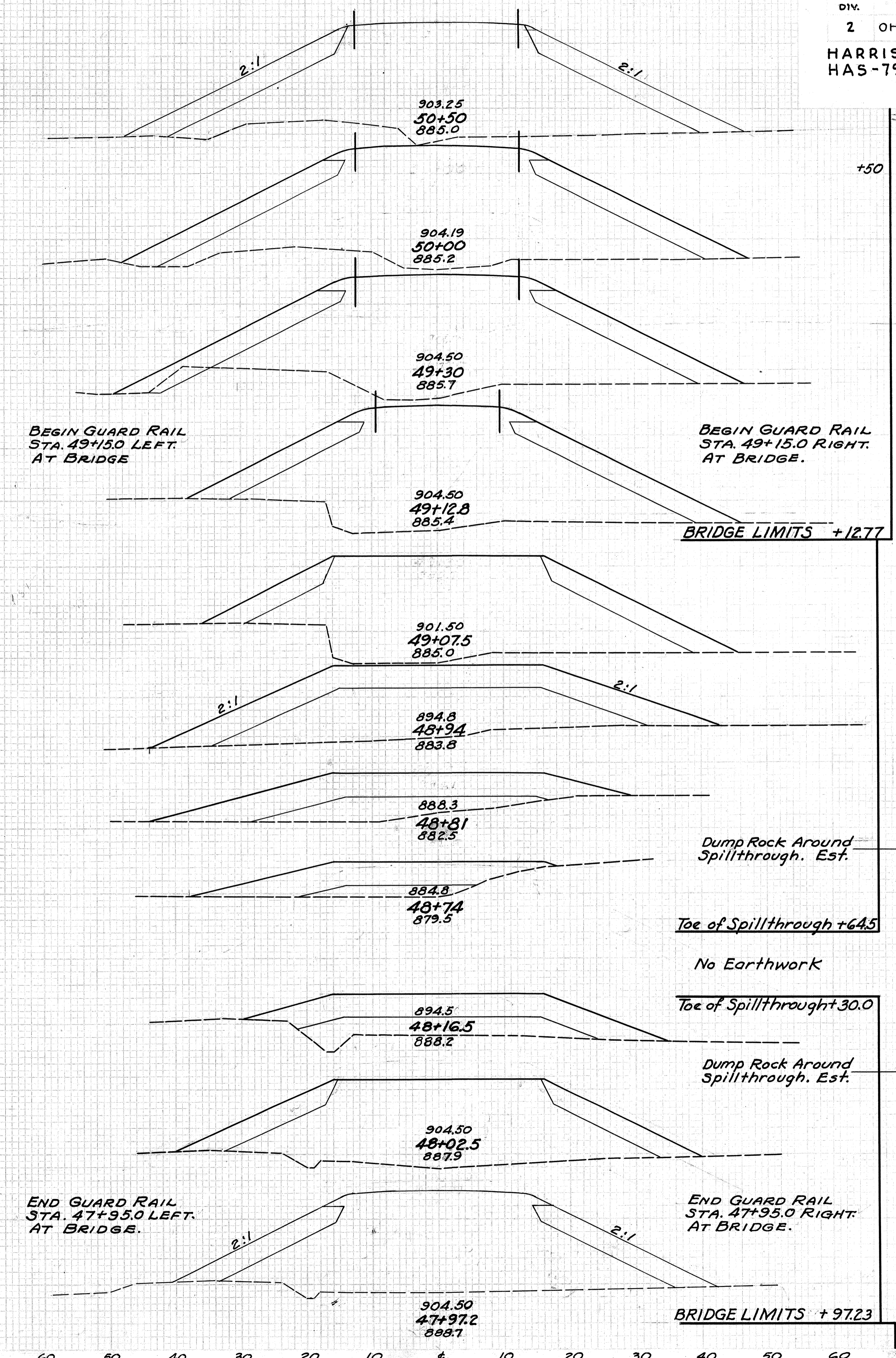
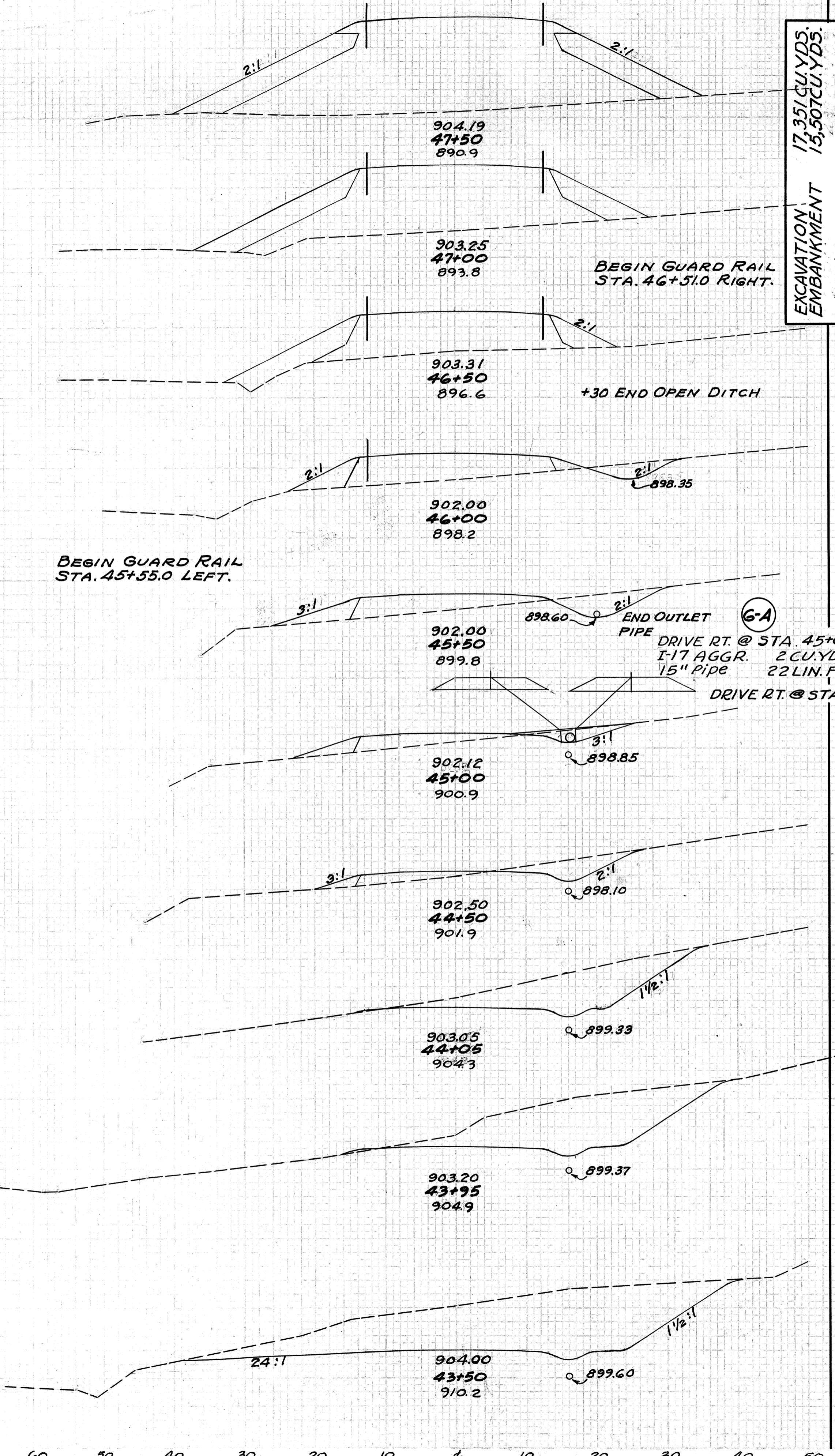
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EXCAVATION 17,351 CU.YDS.  
EMBANKMENT 15,907 CU.YDS.  
ROCK DUMP FILL 5,092 CU.YDS.

DUMPROCK END AREA CU.YDS.	
END AREA YDS.	CUT FILL CUT FILL
246	0 1076
130	0 540
211	0 806
98	0 330
155	463
69	0 170
83	9 252
21	16 102
36	44 147
18	32 57
26	42 83
10	13 33
14	38 46
5	28 17
5	133 14
0	132 0
	62 0
203	0
	501 0
398	0

DUMPROCK END AREA CU.YDS.	
END AREA YDS.	CUT FILL CUT FILL
195	0 804
362	0 1415
196	0 824
504	0 880
193	0 760
117	0 484
175	0 759
32	0 142
152	0 691
	0 261
	0 351
	0 108
	0 98
	0 17
	0 33
	0 0 6
	0 0
	0 30
	0 211
134	0 693
28	0 136
152	0 691



STA. 43+50 TO STA. 50+50

60 50 40 30 20 10 0 10 20 30 40 50

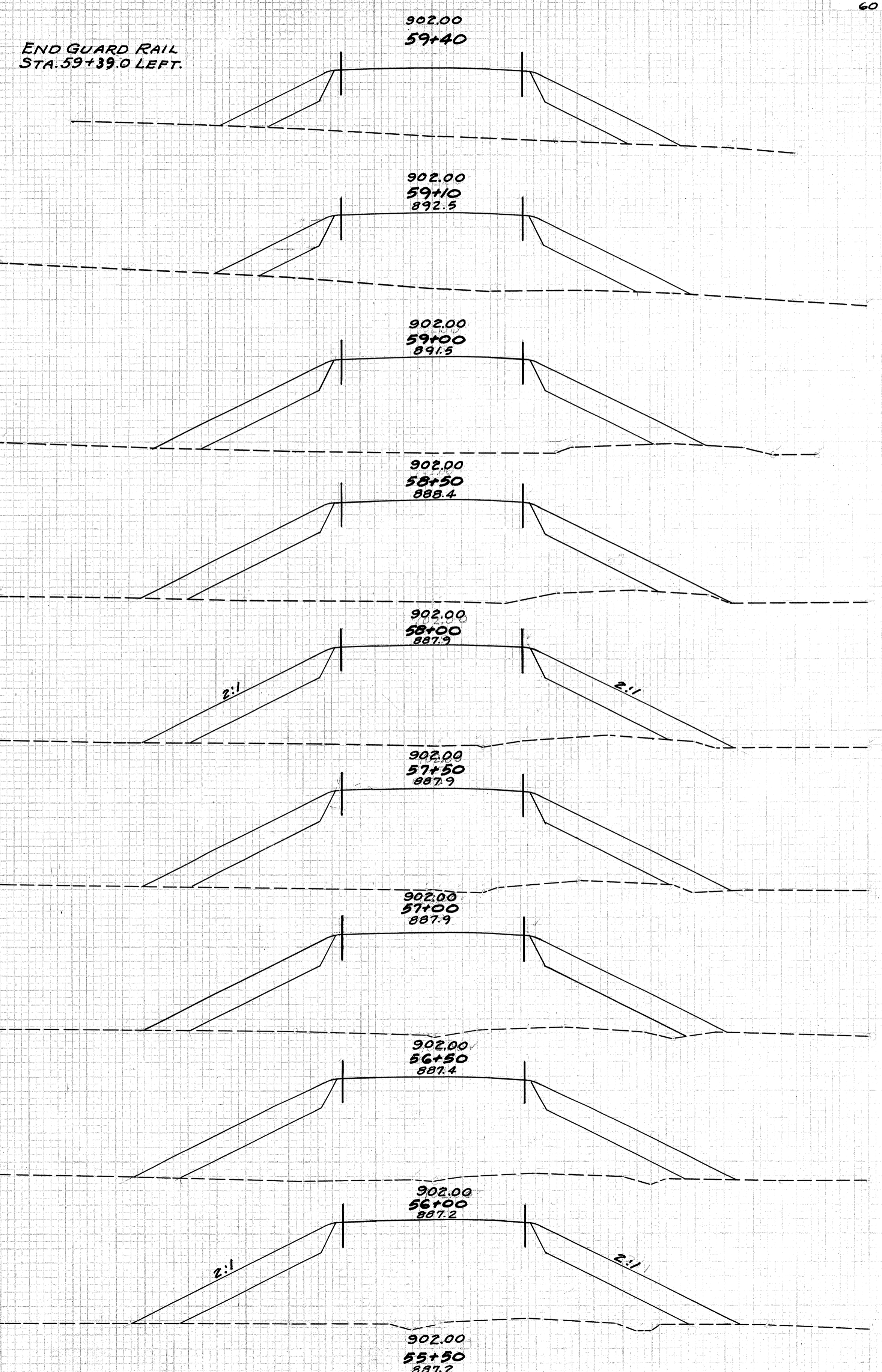
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DUMPROCK	END AREA	CU. YDS.	END AREA	CU. YDS.
END AREA	CUT	FILL	CUT	FILL
305	0	1180		
168	0	645		
312	0	1205		
169	0	656		
315	0	1242		
171	0	685		
22	0	86		
313	0	1251		
291	0	1165		
167	0	666		
315	0	1244		
173	0	677		
322	0	1246		
174	0	669		
316	0	1252		
167	0	683		
314	0	1268		
172	0	686		
335	1319			
189	0	738		
356	0	1428		

60 50 40 30 20 10 0 10 20 30 40 50

60 50 40 30 20 10 0 10 20 30 40 50

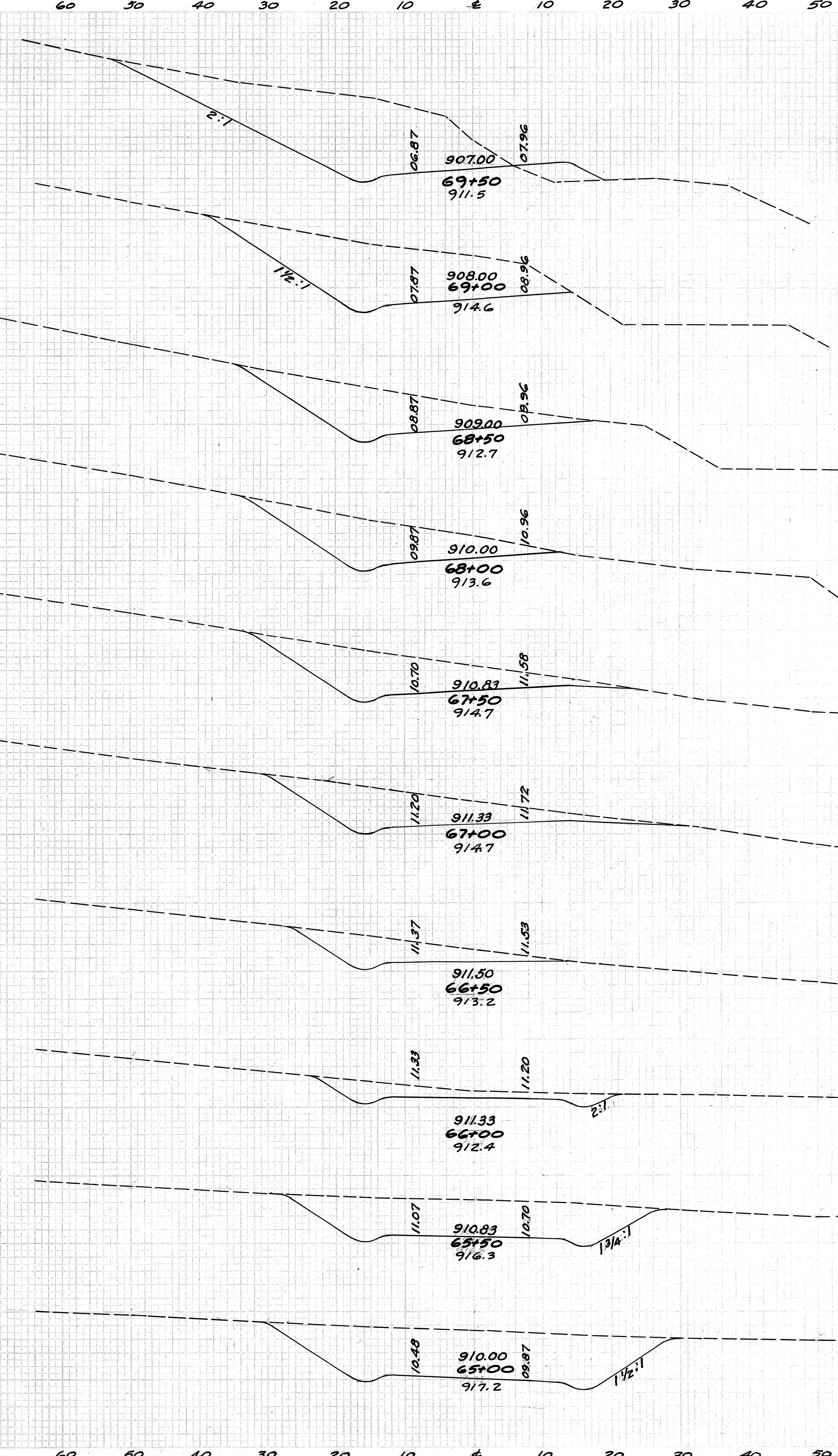
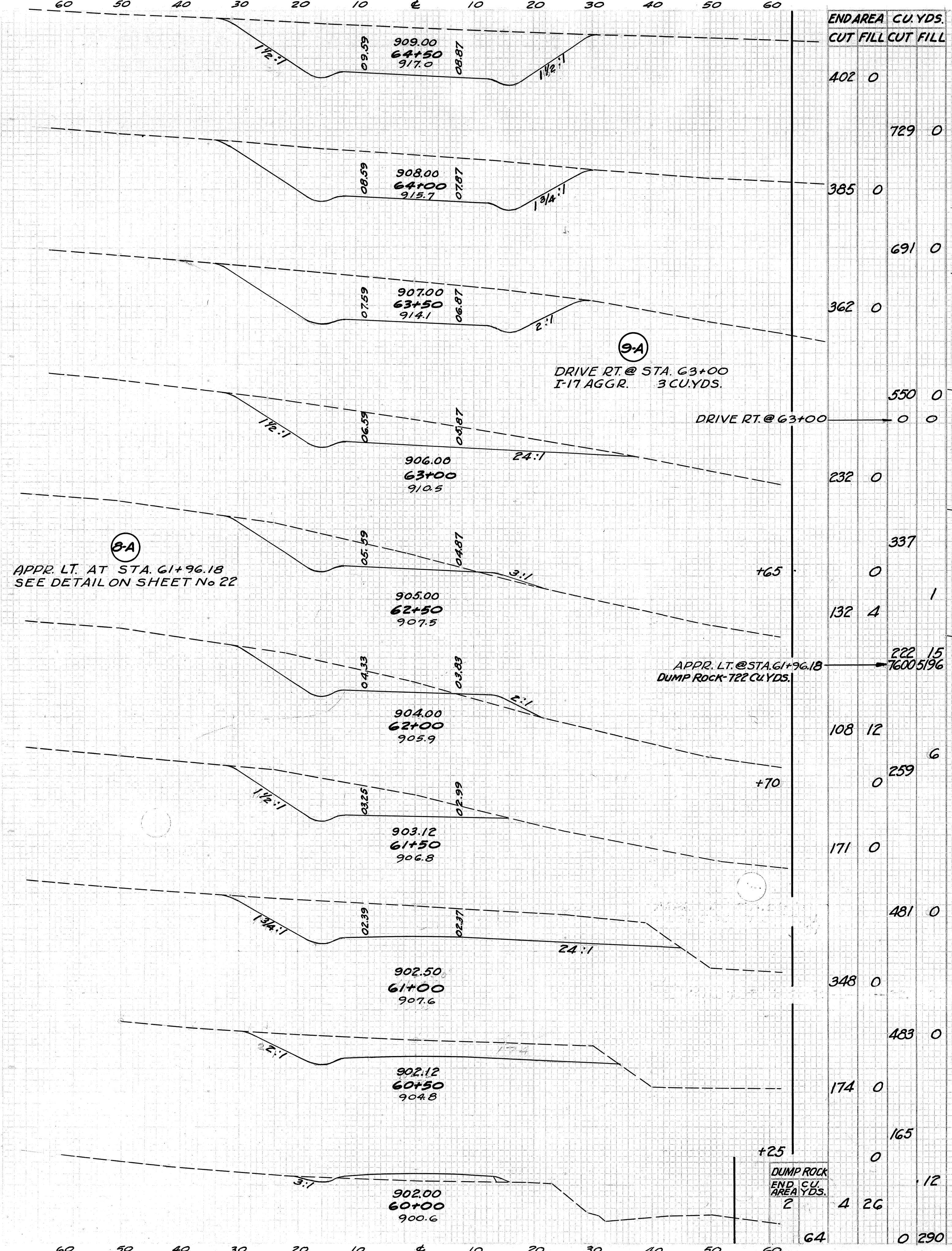
DIV. 2 OHIO H.I.F. 1948 14 43  
 HARRISON COUNTY HAS-799-3.20



DUMPROCK	END AREA	CU. YDS.	END AREA	CU. YDS.
END AREA	CUT	FILL	CUT	FILL
56	0	235		
83		0	306	
94	0	316		
36		0	127	
101	0	372		
219		0	839	
135	0	534		
257		0	1022	
143	0	570		
272		0	1061	
150	0	576		
285		0	1064	
157	0	573		
287		0	1028	
153	0	580		
288		0	1116	
158	0	625		
296		0	1161	
161	0	629		

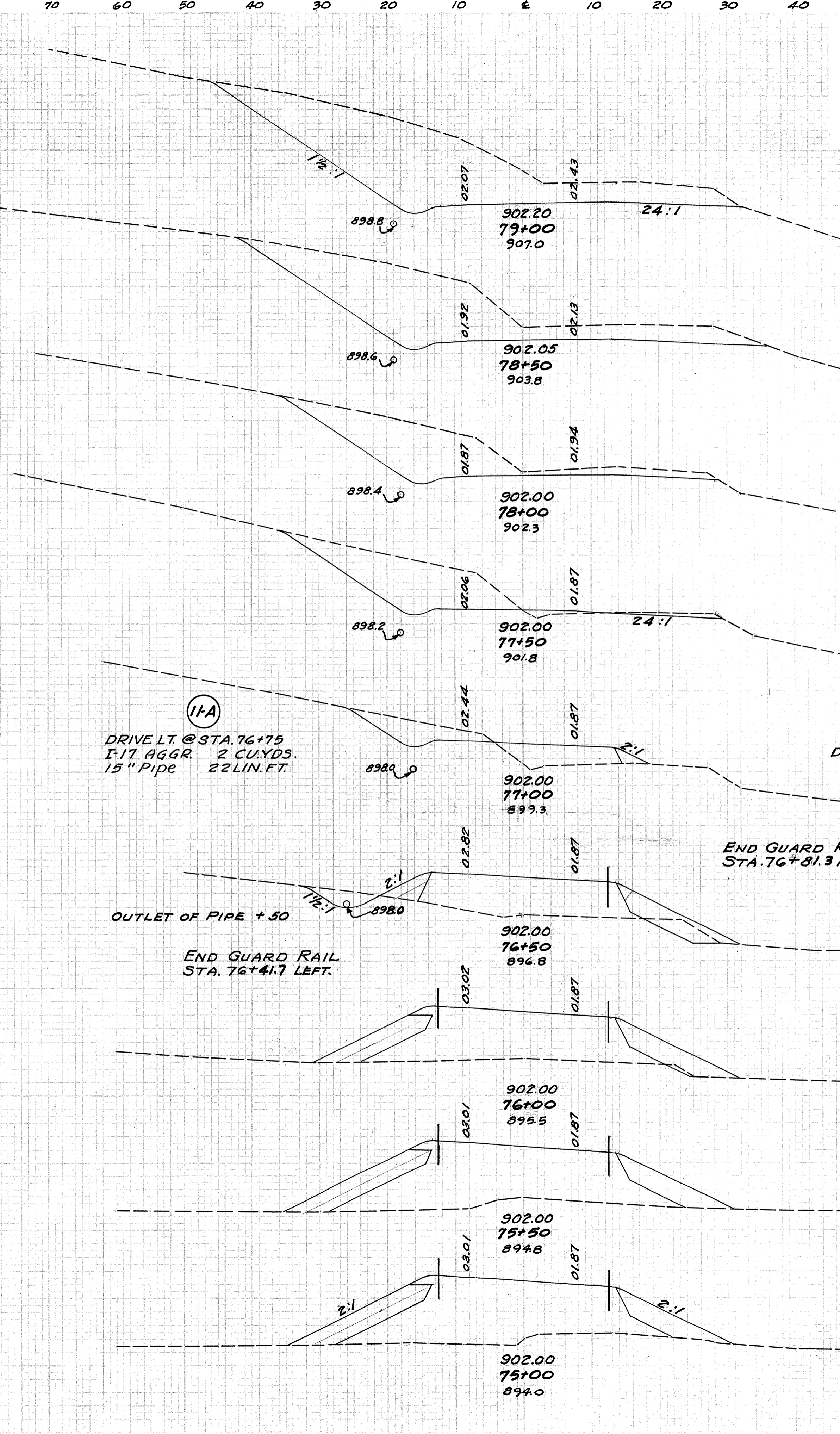
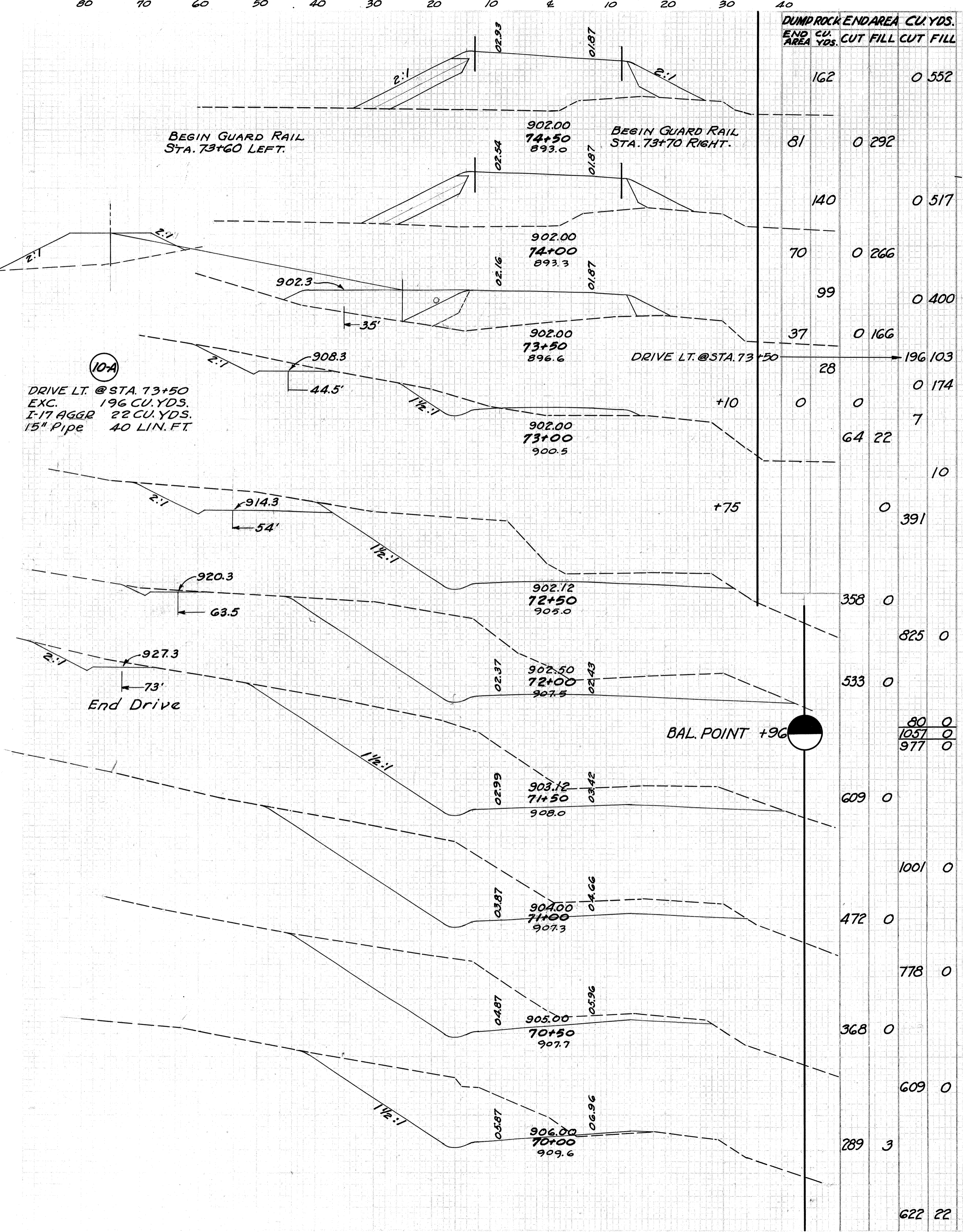
STA. 51+00 TO STA. 59+40

HARRISON COUNTY HAS-799-3.20



END AREA	CUT	FILL	CUT	FILL
402	0	0	0	0
729	0	0	0	0
385	0	0	0	0
691	0	0	0	0
362	0	0	0	0
550	0	0	0	0
0	0	0	0	0
232	0	0	0	0
337	0	0	0	0
132	4	1	0	0
222	15	7600	5196	0
108	12	0	0	0
0	259	6	0	0
171	0	0	0	0
481	0	0	0	0
348	0	0	0	0
483	0	0	0	0
174	0	0	0	0
165	0	0	0	0
0	12	0	0	0
64	0	290	0	0

EXCAVATION 19545 CU.YDS.  
 EMBANKMENT-17038 CU.YDS.  
 ROCK DUMP FILL-3763 CU.YDS.  
 QUANTITIES SHOWN INCLUDE ROAD  
 APPROACHE AT STA 61+96.18 LT.



END AREA	CUT	FILL	CUT	FILL
162			0	552
81			0	292
140			0	517
70			0	266
99			0	400
37			0	166
28			196	103
0			0	174
64			22	7
				10
			0	391
			358	0
			825	0
			533	0
			80	0
			1057	0
			977	0
			609	0
			1001	0
			472	0
			778	0
			368	0
			609	0
			289	3
			622	22

END AREA	CUT	FILL	CUT	FILL	
418	0				
		720	0		
360	0				
		520	0		
201	0				
		337			
		0		2	
163	9				
		190	51		
		0	5		
		5	2	42	46
		59		68	189
		58		32	158
		135		32	372
		87		2	244
		174		0	526
		101		0	314
		181		0	572
		94		0	304

EXCAVATION - 3994 CU.YDS.  
 EMBANKMENT - 3473 CU.YDS.  
 ROCK DUMP FILL - 980 CU.YDS.



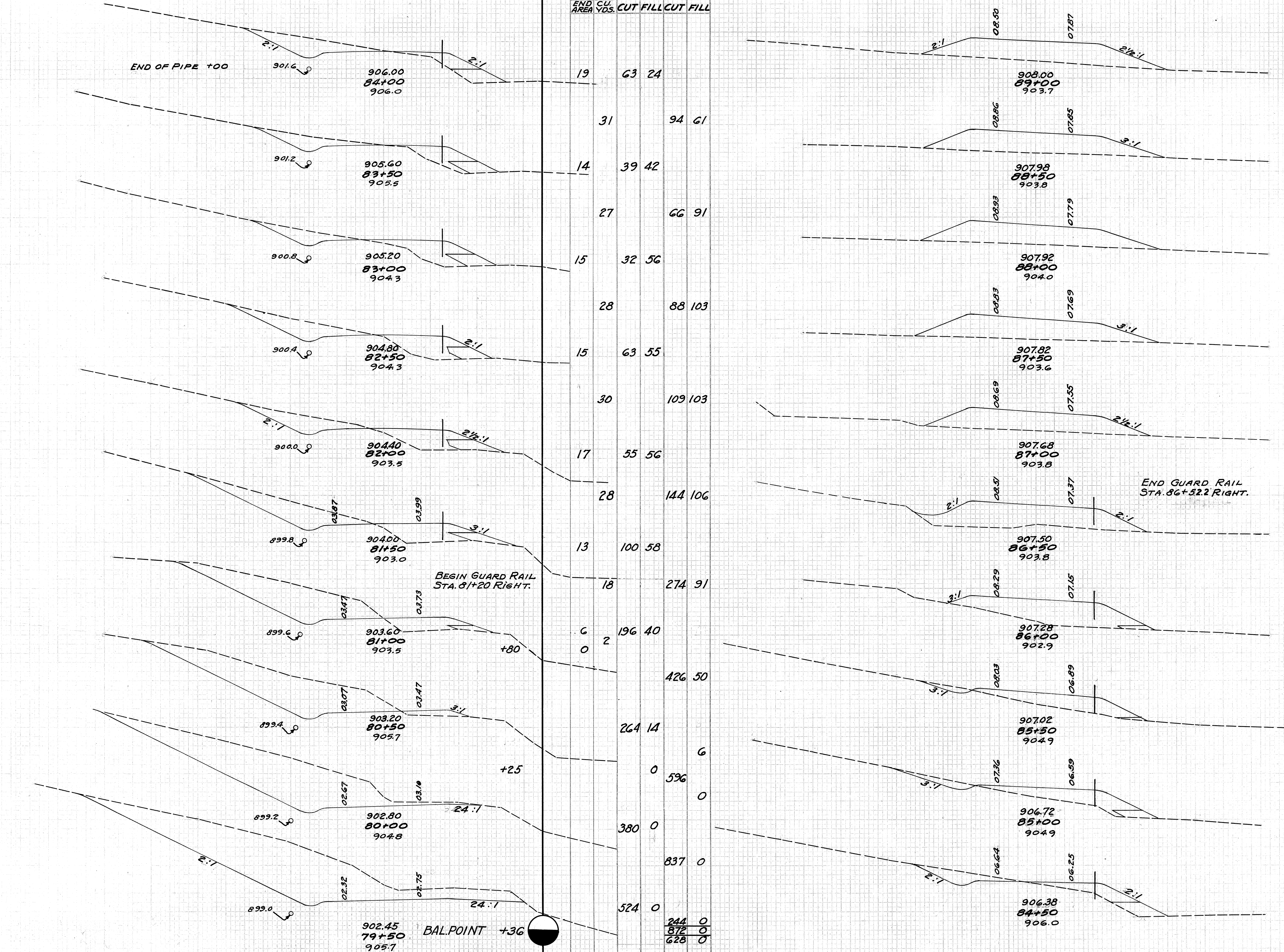
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DUMP ROCK END AREA CU.YDS.  
 END AREA CU.YDS. CUT FILL CUT FILL

END AREA CU.YDS.  
 CUT FILL CUT FILL

EXCAVATION 4617 CU.YDS.  
 EMBANKMENT 4015 CU.YDS.  
 ROCK DUMP FILL 299 CU.YDS.

DUMP ROCK END AREA CU.YDS.



244	0
872	0
628	0

0	176	0	322
0	171	0	315
0	169	0	320
0	176	0	310
0	159	0	322
0	189	0	319
0	2	0	155
6	0	0	216
9	0	1	78
3	8	13	22 144
11	16	27	43 107
18	30	35	86 57

80 70 60 50 40 30 20 10 ± 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490 500 510 520 530 540 550 560 570 580 590 600 610 620 630 640 650 660 670 680 690 700 710 720 730 740 750 760 770 780 790 800 810 820 830 840 850 860 870 880 890 900 910 920 930 940 950 960 970 980 990 1000

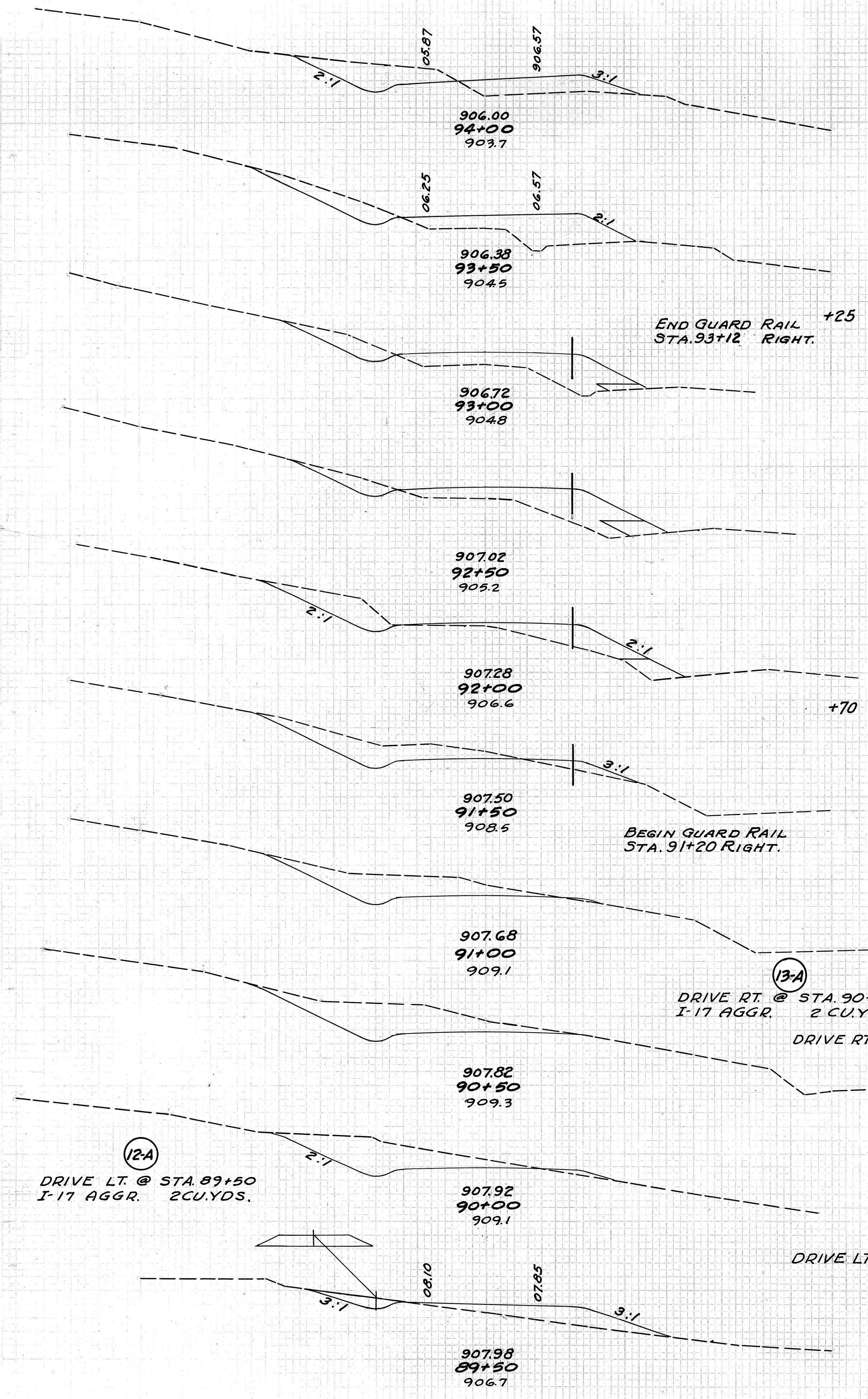
STA 79+50 TO STA. 89+00

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ENDAREA CUT FILL CUT FILL  
CU.YDS. CUT FILL

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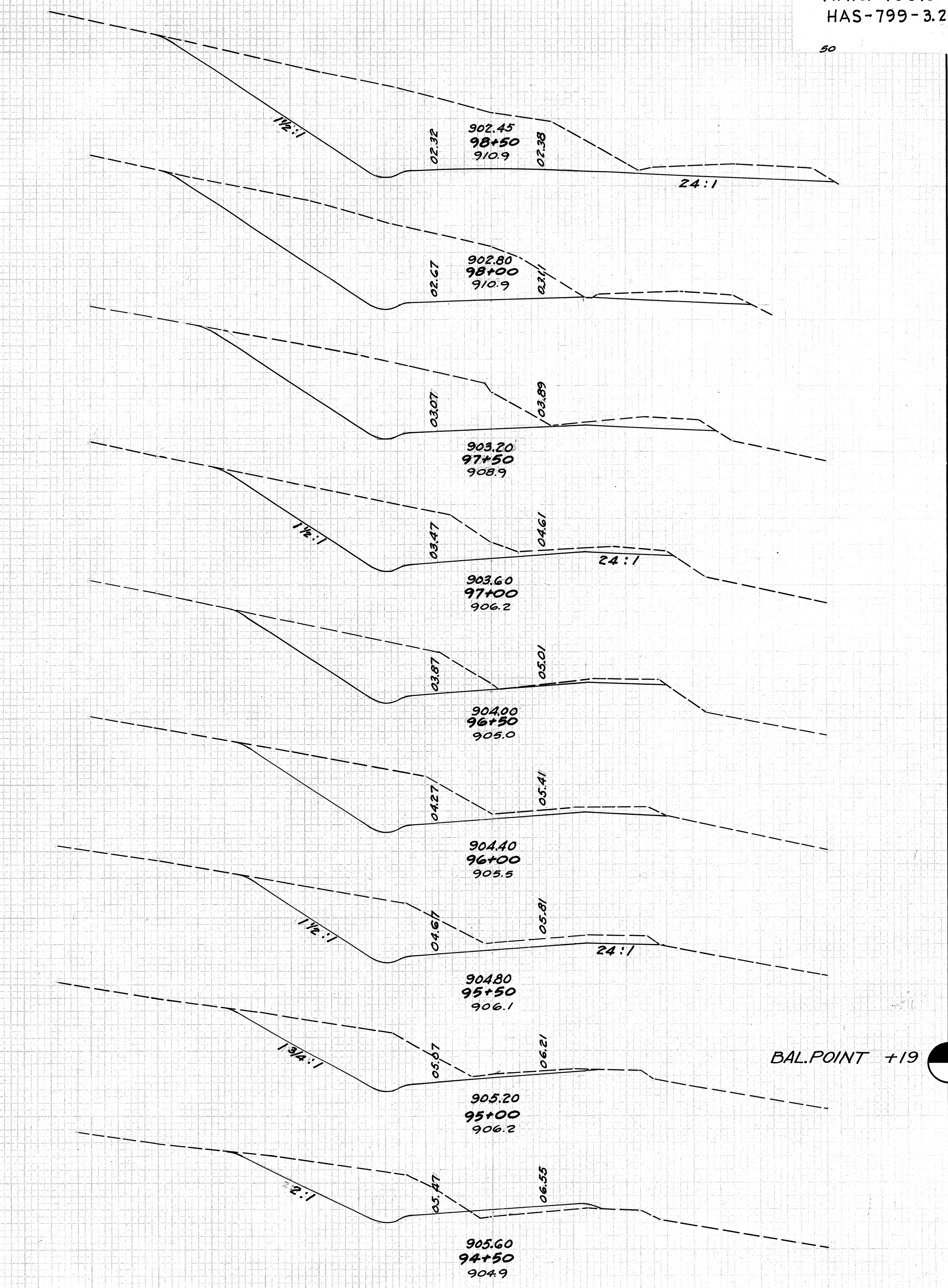
HARRISON COUNTY HAS-799-3.20



54	45
83	119
35	83
0	57 156
2	
5	26 85
17	43 159
13	20 87
23	56 127
12	7 40 50
0	
	99 59
	67 14
	142 14
	86 1
	181 1
	0 0
	109 0
	191 4
	97 4
	0 6
	103 52
	14 52 3
+40	0
	211

70 60 50 40 30 20 10 0 10 20 30 40 50

ENDAREA CUT FILL CUT FILL  
CU.YDS. CUT FILL



572	0
	968 0
473	0
	777 0
	366 0
	585 0
	266 0
	437 0
	206 0
	394 0
	220 0
	400 0
	212 0
	225 0
	364 0
	139 0
	181 0
	0 304 0
	7
	147 16
	186 57

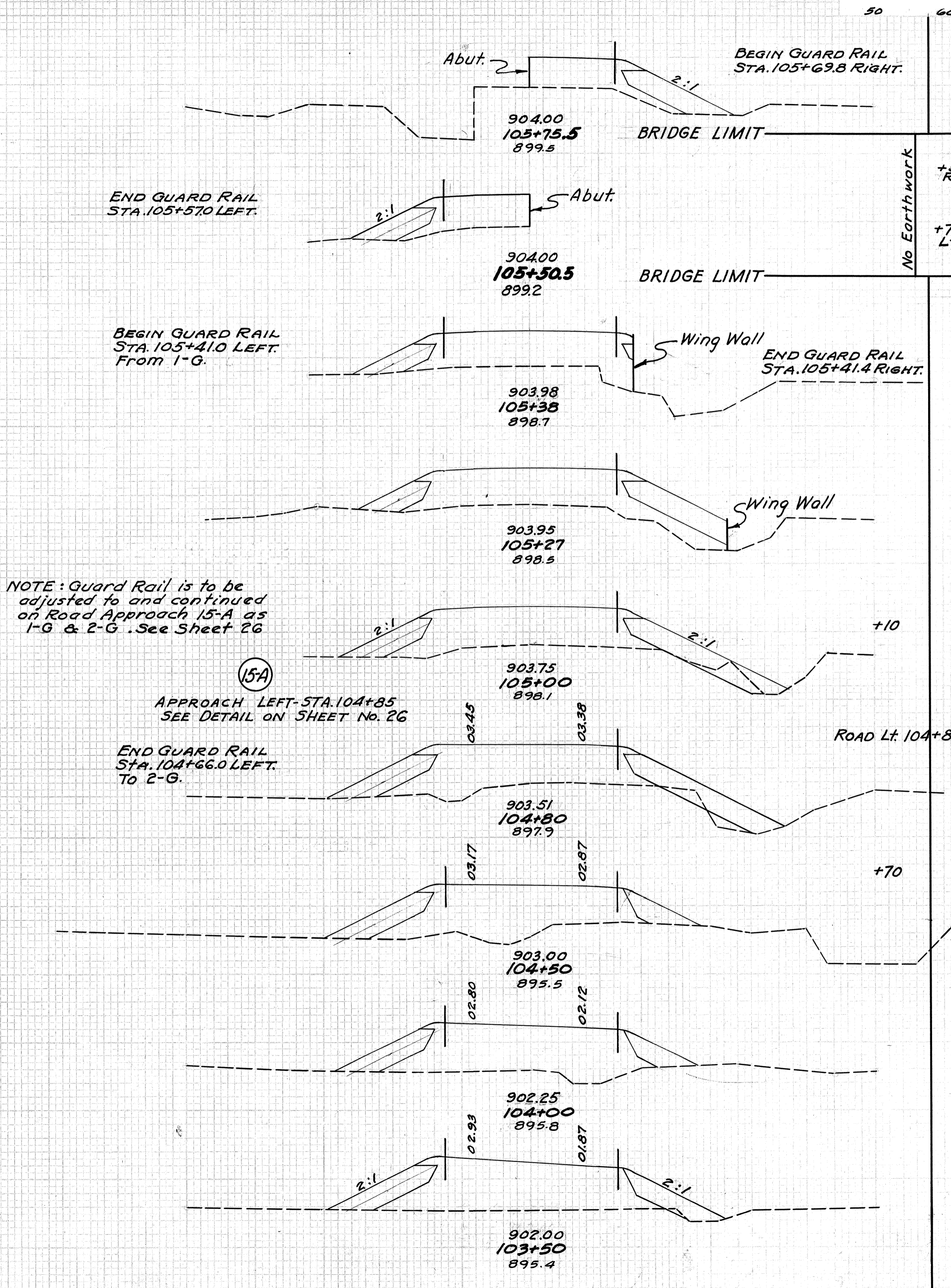
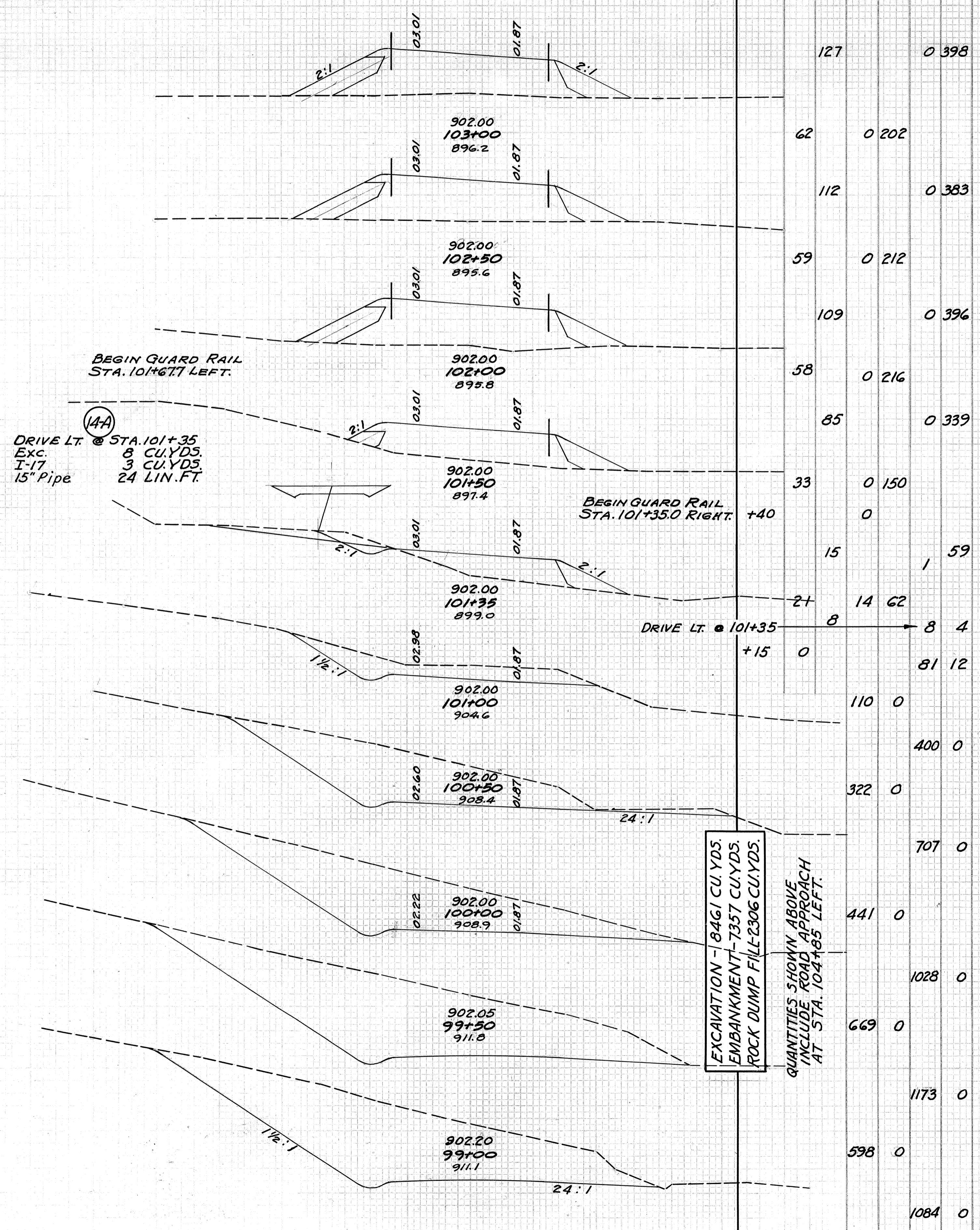
60 50 40 30 20 10 0 10 20 30 40 50 60

70 60 50 40 30 20 10 0 10 20 30 40 50

STA. 89+50 TO STA. 98+50

DUMPROCK END AREA CU. YDS.  
 END CU. AREA YDS. CUT FILL CUT FILL

DUMPROCK END AREA CU. YDS.  
 END CU. AREA YDS. CUT FILL CUT FILL



(14A)  
 DRIVE LT @ STA. 101+35  
 Exc. 8 CU. YDS.  
 I-17 3 CU. YDS.  
 15" Pipe 24 LIN. FT.

NOTE: Guard Rail is to be adjusted to and continued on Road Approach 15-A as 1-G & 2-G. See Sheet 26

(15A)  
 APPROACH LEFT - STA. 104+85  
 SEE DETAIL ON SHEET No. 26

EXCAVATION - 8461 CU. YDS.  
 EMBANKMENT - 7357 CU. YDS.  
 ROCK DUMP FILL - 2306 CU. YDS.  
 QUANTITIES SHOWN ABOVE INCLUDE ROAD APPROACH AT STA. 104+85 LEFT.

No Earthwork  
 +55 Rt.  
 +70 Lt.

60 50 40 30 20 10 0 10 20 30 40 50

60 50 40 30 20 10 0 10 20 30 40 50

DUMP ROCK END AREA CU. YDS.  
END CU. AREA YDS. CUT FILL CUT FILL

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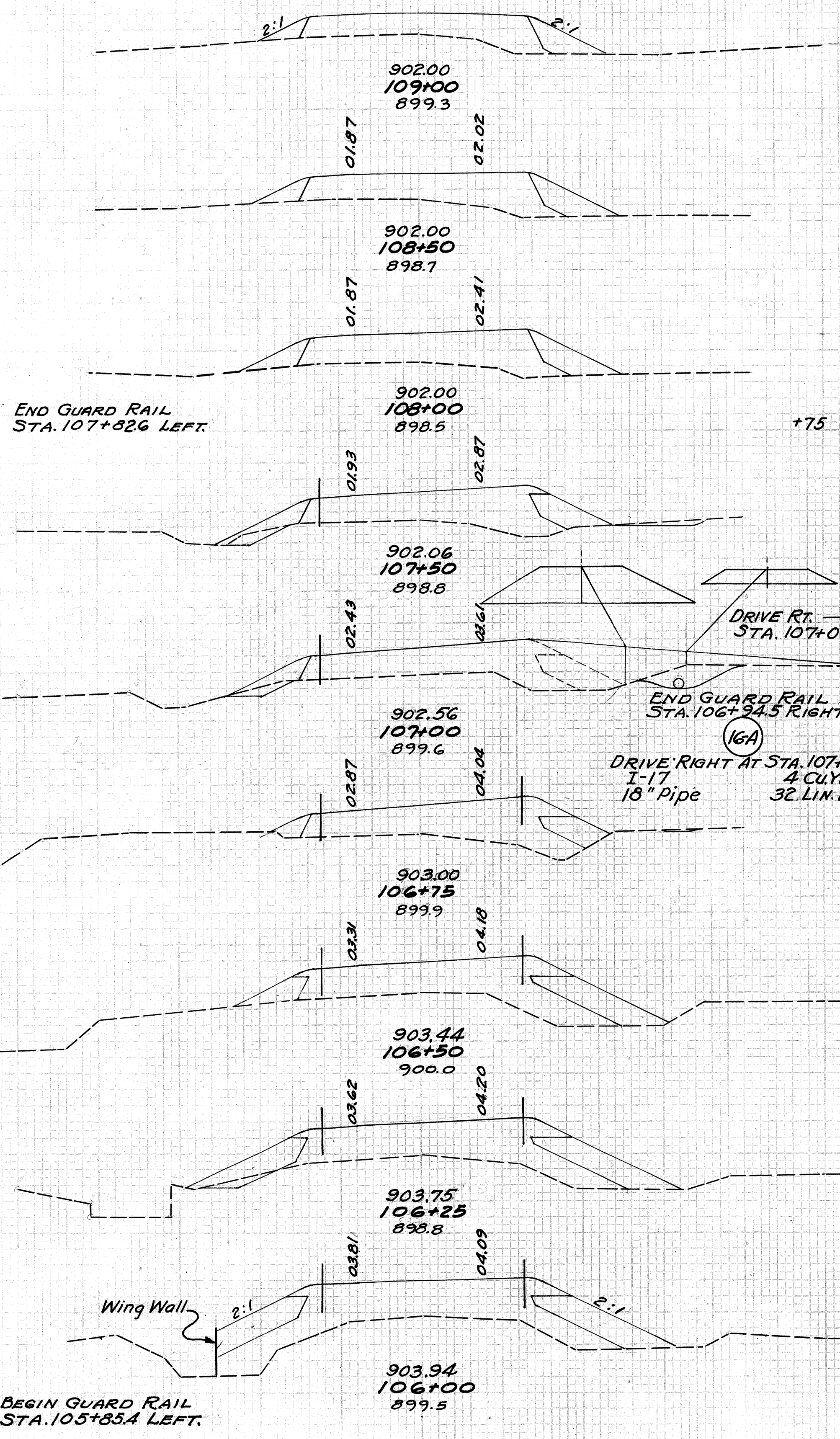
20  
43

END AREA CU. YDS.  
CUT FILL CUT FILL

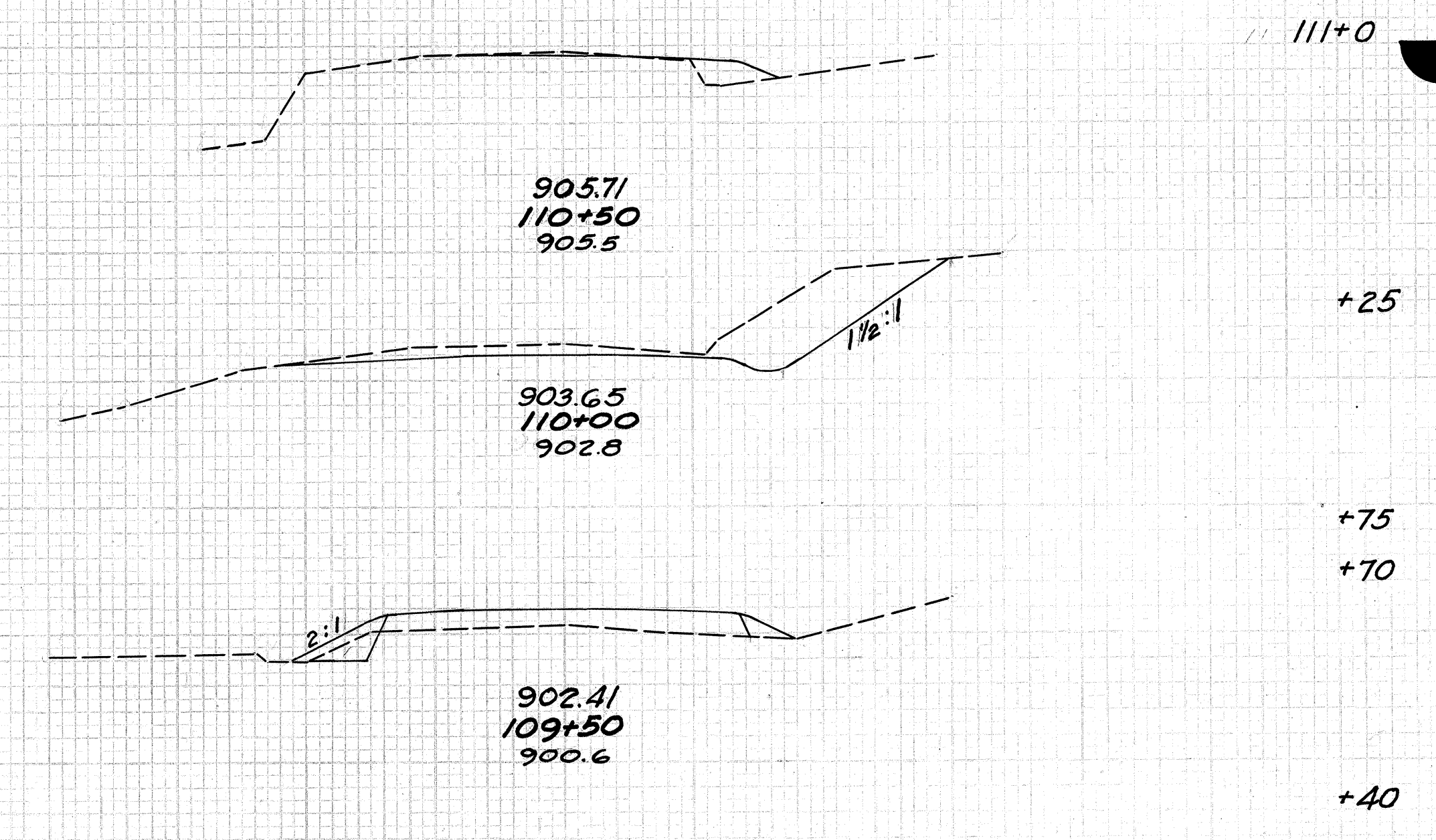
37	0	122
24	0	91
52	0	185
32	0	108
64	0	214
37	0	123
73	0	233
42	6	129
77	37	229
41	34	118
30	17	122
24	2	145
36	0	140
54	0	157
62	0	149
80	0	165
74	0	176
80	0	214
	0	131
54		

DUMP ROCK  
END CU. AREA YDS.

0	0	0	0
0	0	0	7
0	0	0	8
0	0	0	4
0	0	0	38
82	0	0	38
0	0	0	0
0	0	0	0
0	0	0	0
0	6	3	19
16	6	40	
0			1



END PROJECT  
STA. 111+00



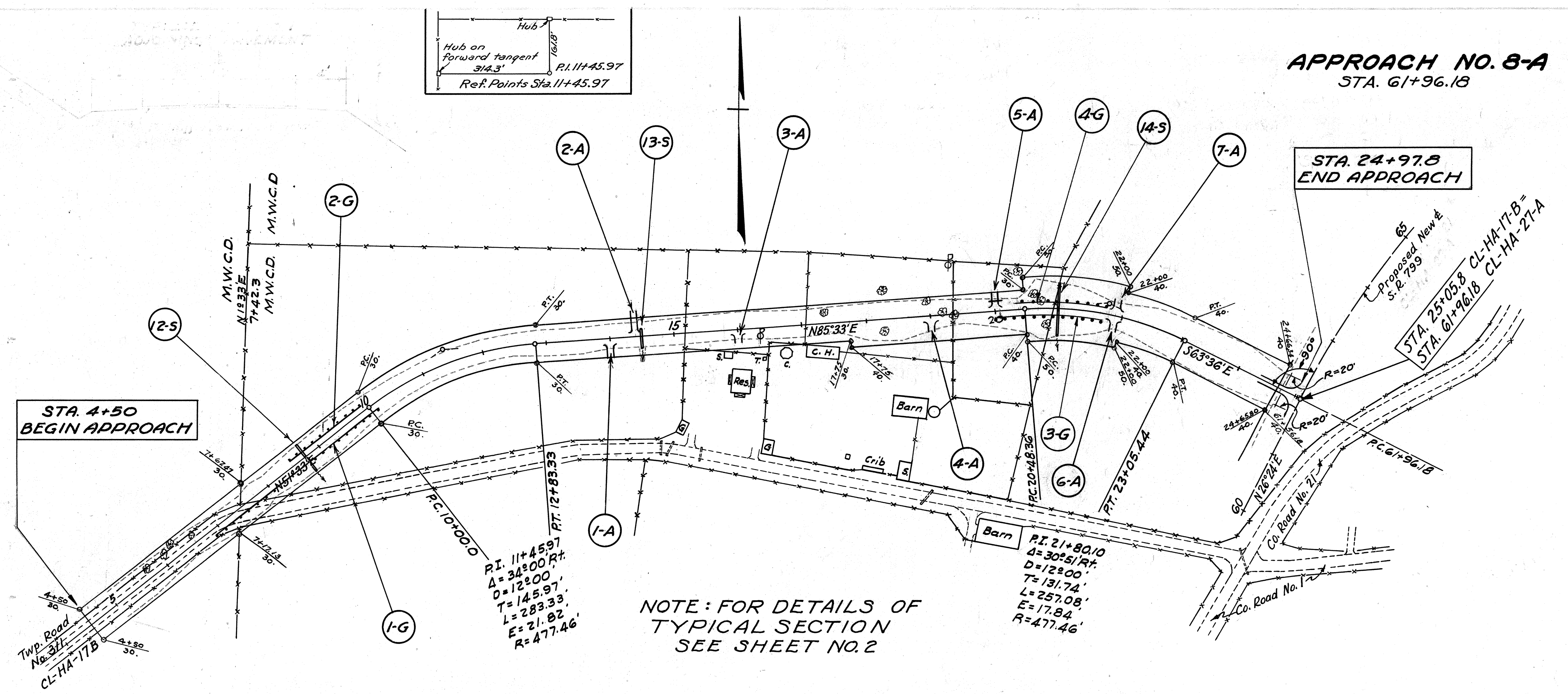
STA. 106+00 TO STA. 111+00

60 50 40 30 20 10 0 10 20 30 40 50

60 50 40 30 20 10 0 10 20 30 40 50

HARRISON COUNTY  
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**APPROACH NO. 8-A**  
STA. 61+96.18



PRIVATE DRIVES					
REF. No.	STA.	SIDE &	1-17 AGG. PIPE CUYDS.	12" PIPE LIN.FT.	REMARKS
1-A	14+00	Rt.	2		
2-A	14+40	Lt.	3		
3-A	16+00	Rt.	2		
4-A	19+00	Rt.	4		
5-A	20+00	Lt.	2	20	
6-A	21+90	Rt.	2		
7-A	21+90	Lt.	2		
<b>TOTALS</b>			<b>17</b>	<b>20</b>	

STRUCTURES-20' SPAN & UNDER						
REF. No.	STA.	REMOVALS		NEW WORK		REMARKS
		TYPE	SIZE LENGTH	TYPE	SIZE LENGTH	
12-5	8+74			V.S.PENC.	18" 52'-0"	See Detail on Sheet 31
13-5	14+50			V.S.PENC.	15" 30'-0"	See Detail on Sheet 31
14-5	21+00			V.S.PENC.	30" 84'-0"	See Detail on Sheet 32

GUARD RAIL					
REF. No.	FROM STA.	TO STA.	SIDE &	LIN. FT.	
1-G	6+88.0	10+08	Rt.	320	
2-G	8+50.0	9+94	Lt.	144	
3-G	20+00	21+78.6	Rt.	176	
4-G	20+36	21+77.4	Lt.	144	
<b>TOTALS</b>				<b>784</b>	

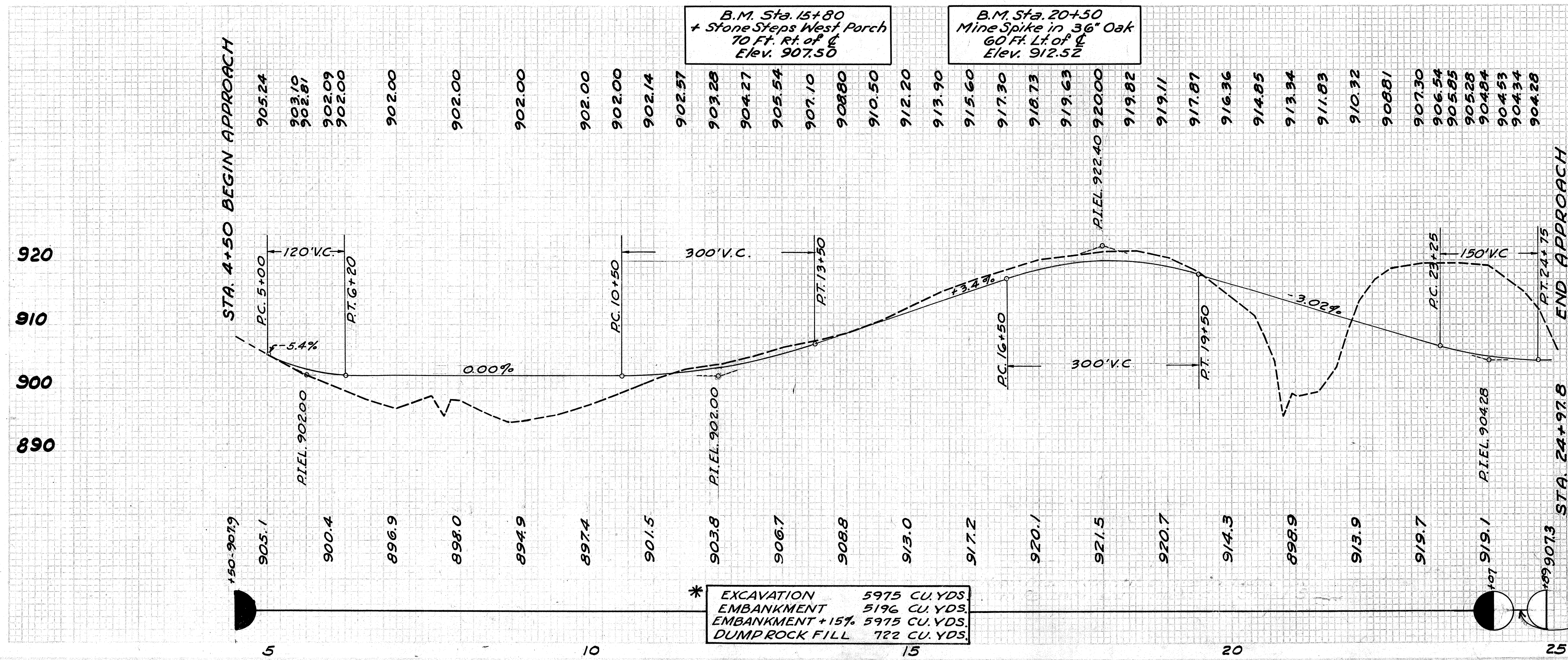
PIPE TO BE REMOVED							
STATION	SIDE &	DISTANCE FROM &	TYPE	8" TO 15" INCL.		18" TO 36" INCL.	
				REMOVE & DISPOSE OF LIN. FT.	REMOVE & STORE LIN. FT.	REMOVE & DISPOSE OF LIN. FT.	REMOVE & STORE LIN. FT.
14+66	Rt.	175'	C.M.P.		20		
14+82	Rt.	180'	V.S.P.		20		
15+28	Rt.	190'	V.S.P.		20		
18+72	Rt.	280'	C.M.P.				31
<b>TOTALS</b>					<b>60</b>		<b>31</b>

**DERIVATION OF PAVEMENT QUANTITIES**  
 BEGIN APPROACH - STA. 4+50. END APPROACH - STA. 24+97.8  
 LENGTH OF APPROACH - 2497.8 - 4.50 = 2,047.8 LIN. FT.  
 PAVEMENT - (2047.8 x 12 x 0.3332) ÷ 27 = 303.3 CU. YDS.  
 EXTRA PAVEMENT (EST.) FOR INTERSECTION = 2.1 CU. YDS.  
 TOTAL PAVEMENT FOR APPROACH = 305.4 CU. YDS.

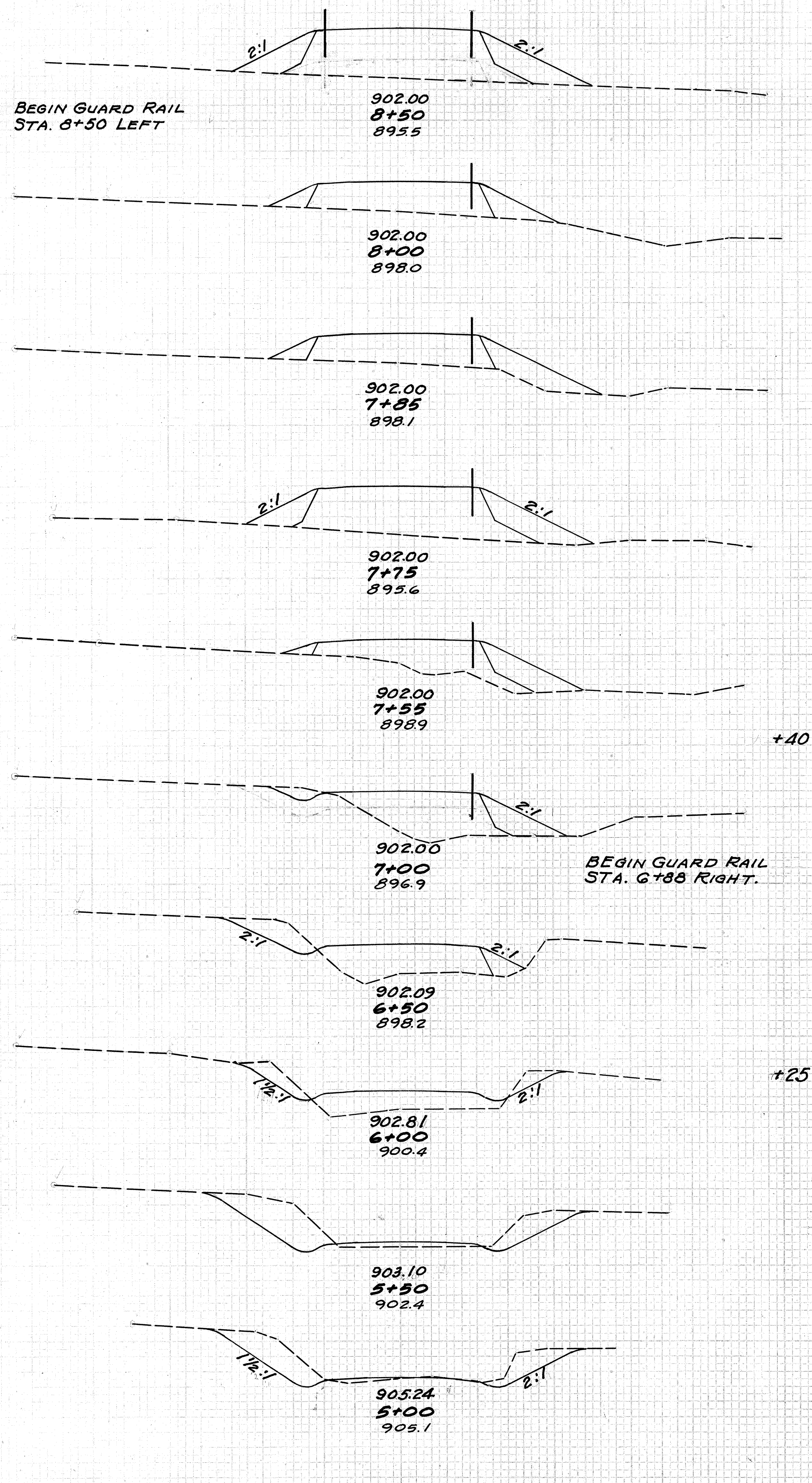
All Quantities shown above, carried direct to Summary.

\* **TOTAL EARTHWORK QUANTITIES**  
 EXCAVATION 7600 CU. YDS.  
 EMBANKMENT 5196 CU. YDS.  
 DUMP ROCK FILL 722 CU. YDS.

Note: These Quantities are included with Roadway Quantities - See Sheet 15.



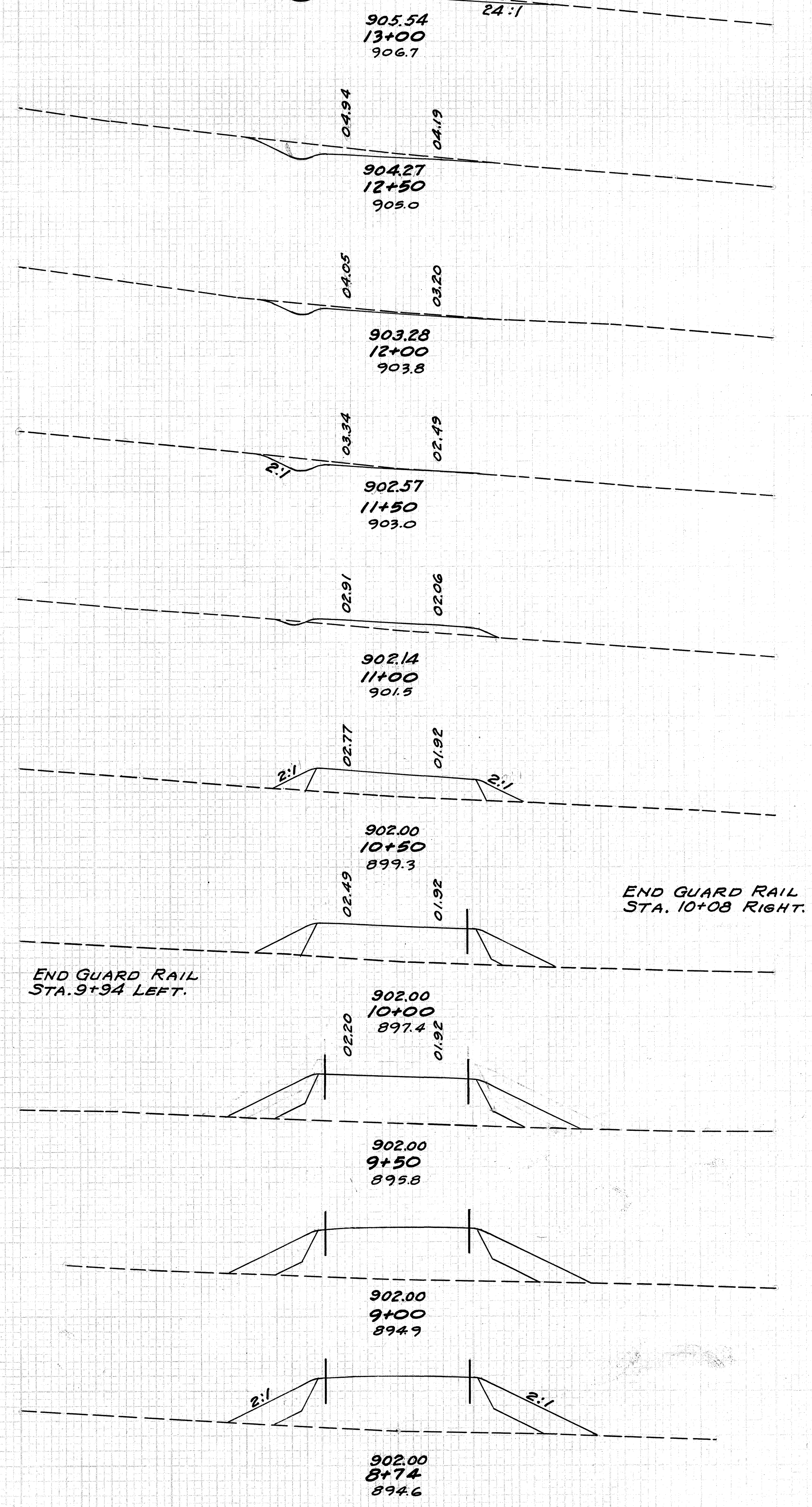
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STA. 4+50 BEGIN ROAD APPROACH

DUMPROCK END AREA CU. YDS.			
END STA.	CUT	FILL	CUT FILL
53	0	156	
56	0	164	
75	0	235	
25	0	90	
19	0	50	
44	0	88	
18	0	45	
52	0	154	
32	0	87	
34	0	84	0
58	3	180	
23	4	93	
31	24	157	
10	22	76	
5	41	120	
22	54		
	87	60	
72	11		
	120	14	
58	4		
	54	4	
0	0		

60 50 40 30 20 10 0 10 20 30 40 50



ROAD APPR. B-A. STA. 4+50 TO STA. 13+00

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 22  
 43

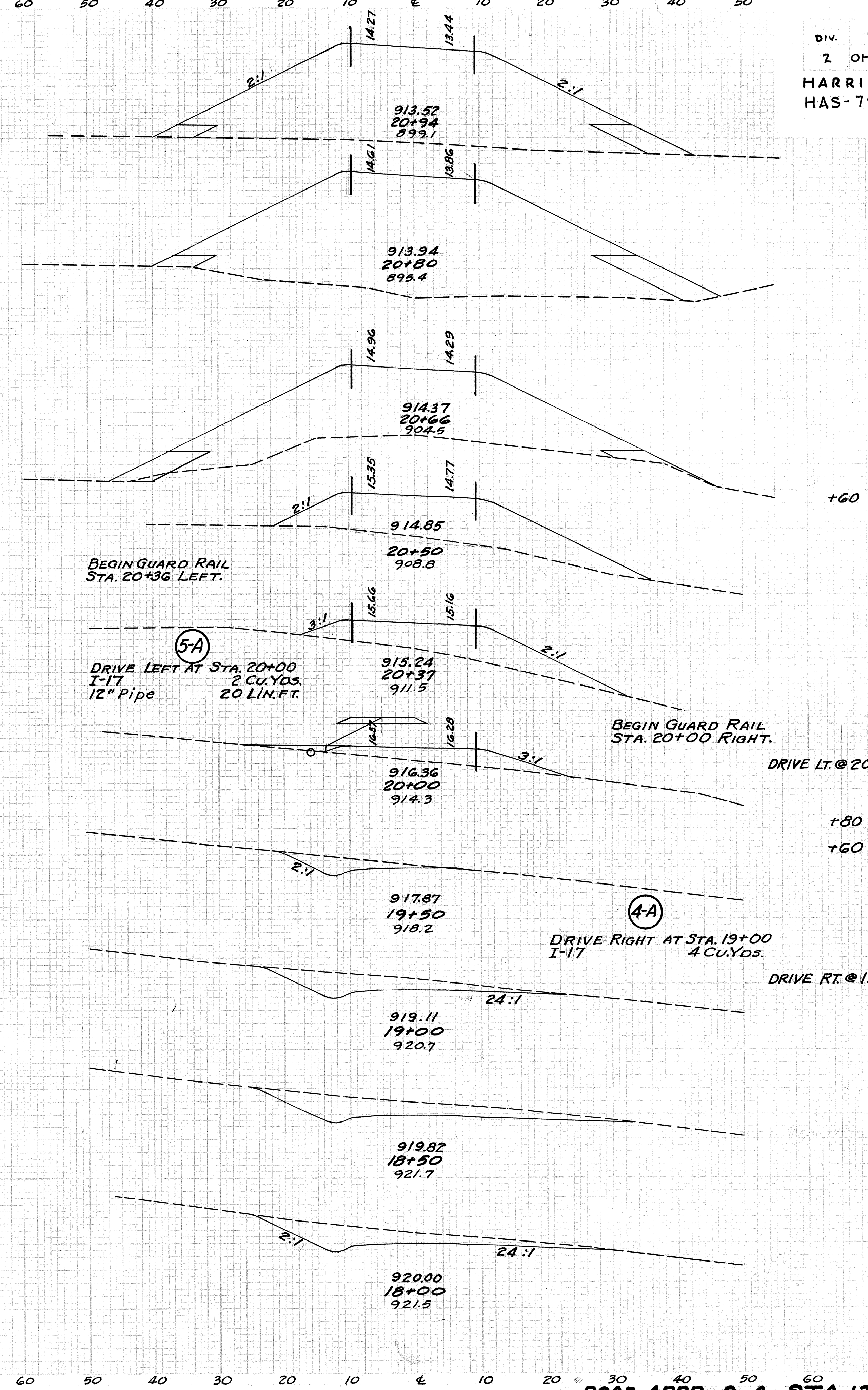
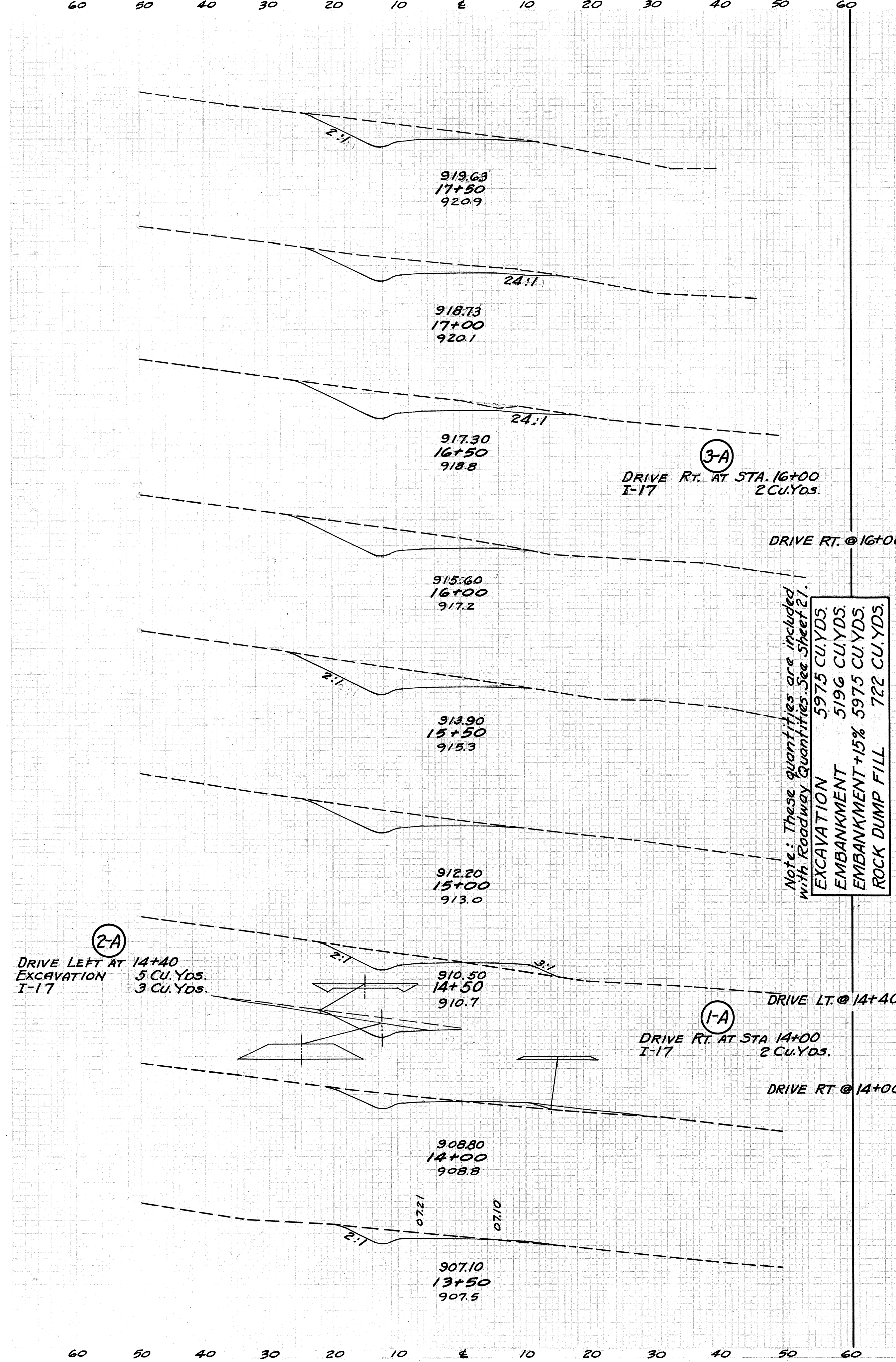
DUMPROCK END AREA CU. YDS.			
END STA.	CUT	FILL	CUT FILL
38	0	60	0
27	0		
		38	0
14	0		
		22	0
10	0		
		10	19
1	20		
0		0	78
6			
13	0	64	
44		0	157
34	0	106	
83		0	231
56	0	144	
109		0	300
61	0	180	
60		0	176
64	0	186	

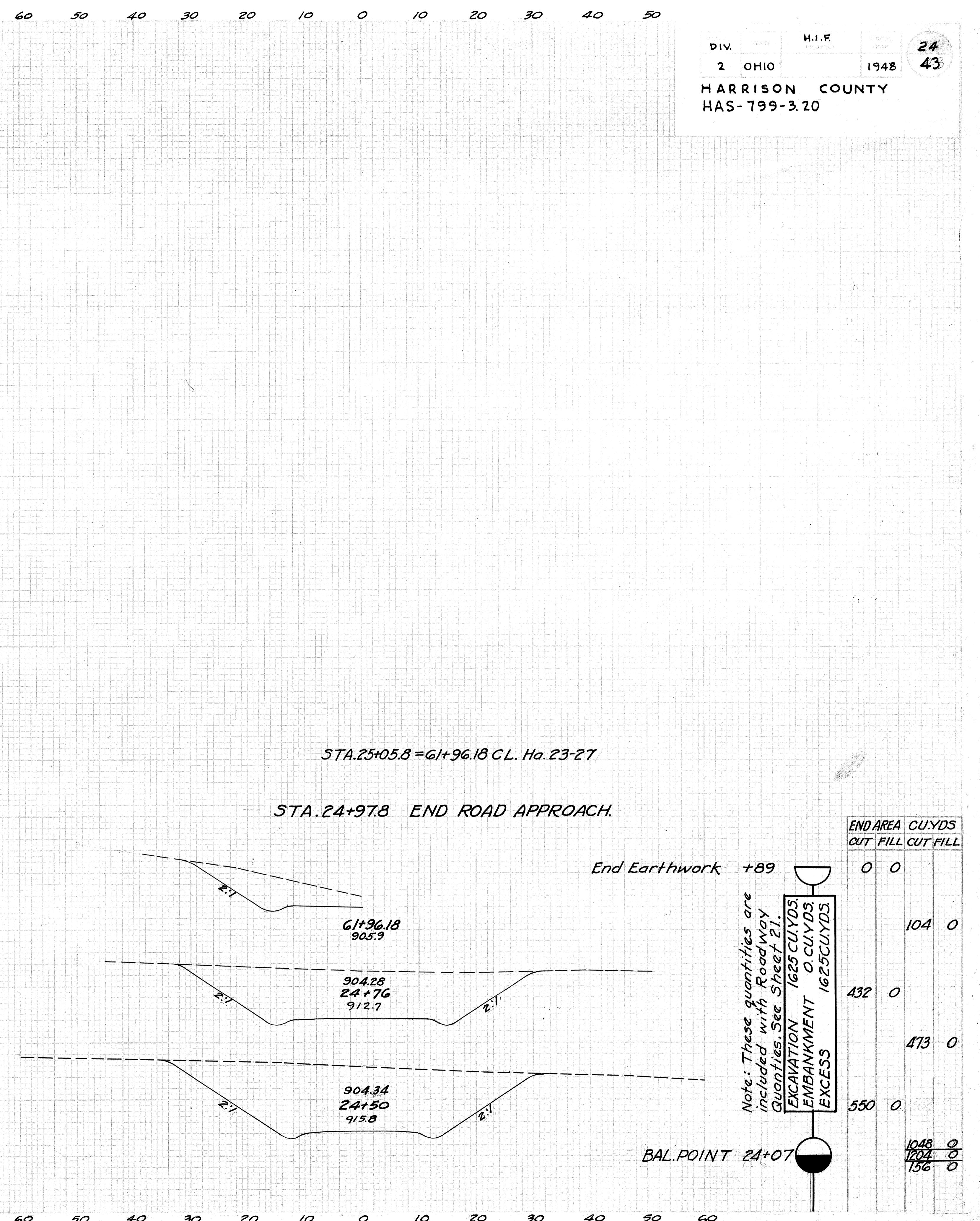
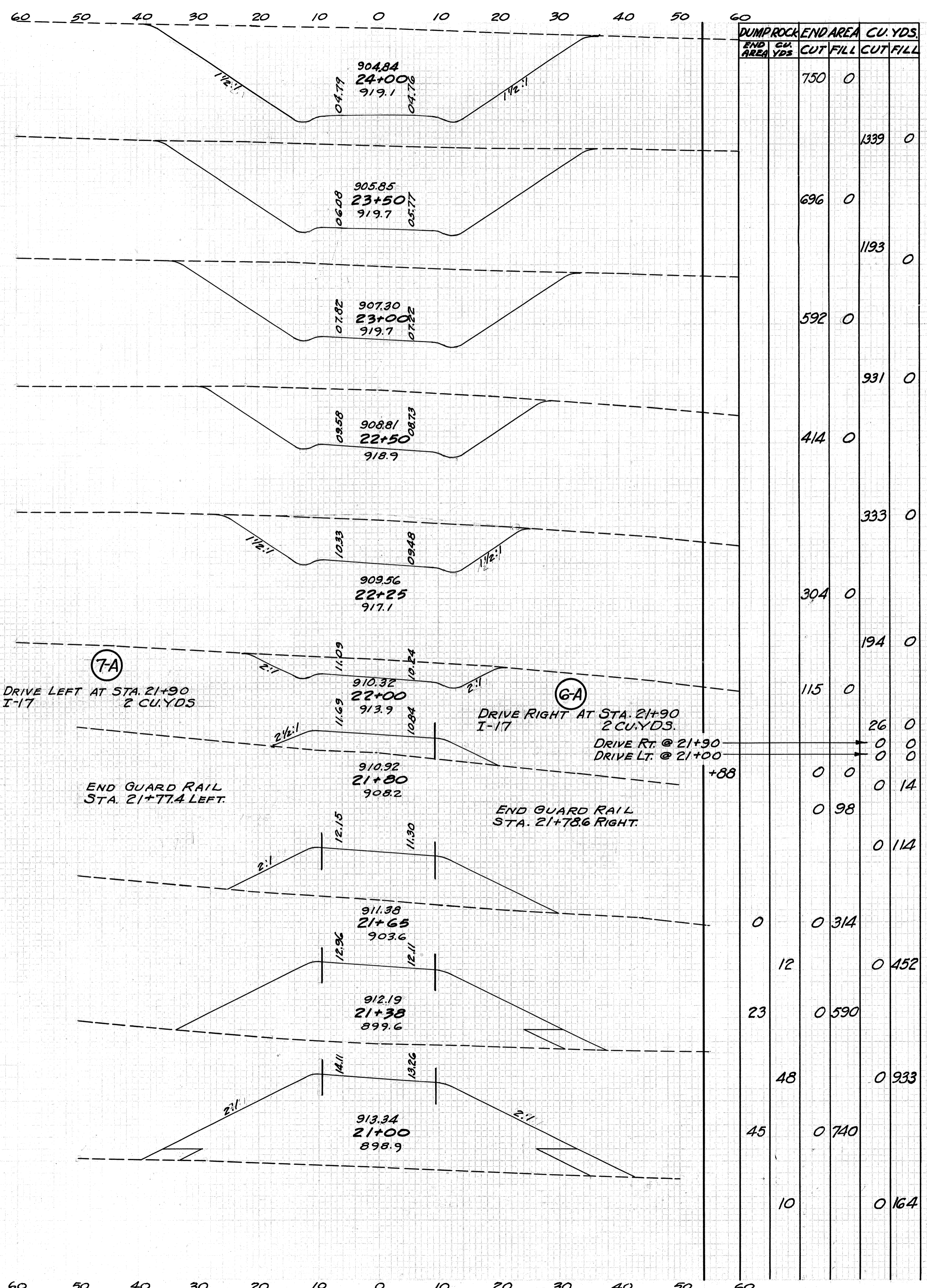
60 50 40 30 20 10 0 10 20 30 40 50

END AREA CU. YDS.	CUT	FILL	CUT	FILL
58				
107	0			
58	0			
117	0			
68	0			
131	0			
74	0			
130	0			
66	0			
104	0			
46	0			
70	9			
30	10			
5	8			
49	16			
0	3			
23	7			
38	7			
18	0			
52	0			
43	0	732		
26		0	431	
57	0	932		
29		0	445	
40	0	570		
4		0	234	
0		0	271	
		0	103	
		0	158	
		0	148	
		58	0	3
		0	43	
		0	16	
		29	0	
		89	0	
		0	0	
		67	0	
		151	0	
		96	0	
		160	0	
		77	0	
		125	0	

END AREA	CU. YDS.	CUT	FILL	CUT	FILL
58					
107	0				
58	0				
117	0				
68	0				
131	0				
74	0				
130	0				
66	0				
104	0				
46	0				
70	9				
30	10				
5	8				
49	16				
0	3				
23	7				
38	7				
18	0				
52	0				

Note: These quantities are included with Roadway Quantities. See Sheet 21.  
 EXCAVATION 5975 CU.YDS.  
 EMBANKMENT 5196 CU.YDS.  
 EMBANKMENT + 15% 5975 CU.YDS.  
 ROCK DUMP FILL 722 CU.YDS.





STA. 25+05.8 = 61+96.18 CL. Ho. 23-27

STA. 24+97.8 END ROAD APPROACH.

End Earthwork +89

Note: These quantities are included with Roadway quantities. See Sheet 21.  
 EXCAVATION 1625 CU.YDS.  
 EMBANKMENT 0 CU.YDS.  
 EXCESS 1625 CU.YDS.

BAL. POINT 24+07

ROAD APPR. 8-A, STA. 24+00 TO STA. 24+97.8



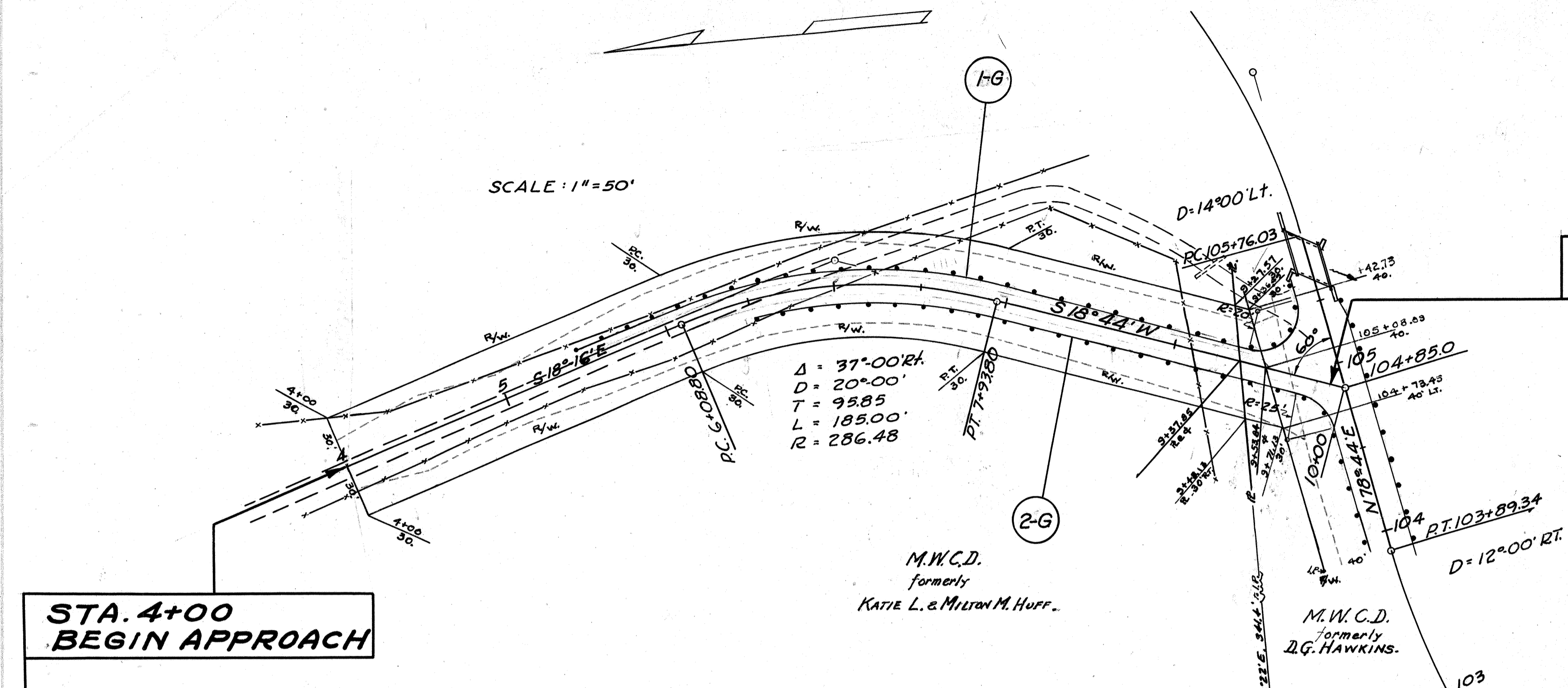
**APPROACH NO. 15-A.**  
STA. 104+85.0

HARRISON COUNTY  
HAS-799-3.20

GUARD RAIL				
REF. NO.	FROM STA.	TO END	SIDE &	LIN. FT.
1-G	5+46.0	A+22-G	Lt.	448
2-G	6+46.7	A+21-G	Rt.	352
Totals				800

**DERIVATION OF PAVEMENT QUANTITIES**  
 AREA OF APPR. FROM STA. 9+90.8 TO STA. 9+45.5 = 948.5 SQ. FT.  
 APPROACH FROM STA. 9+53 TO STA. 4+00 (353.0 X 12) = 6636 SQ. FT.  
 TOTAL AREA OF APPROACH = 7584.5 SQ. FT.  
 TOTAL CU. YDS @ 4" THICKNESS (7584.5) ÷ 9 = 93.6 CU. YDS.

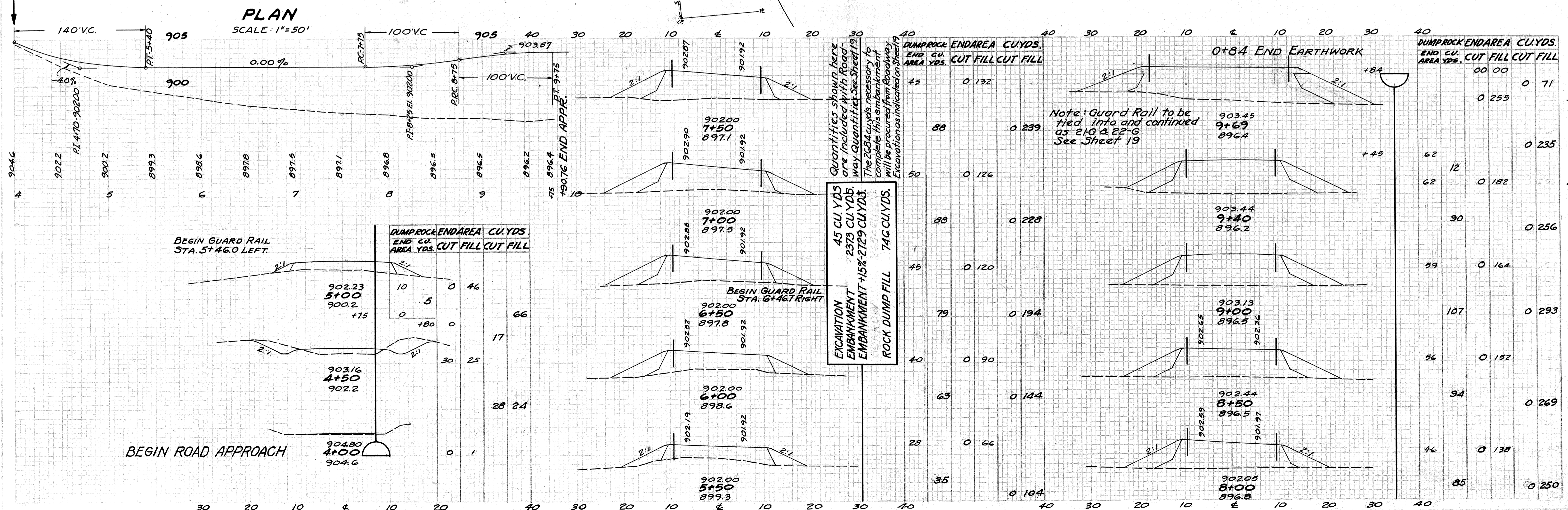
All Quantities shown above, carried direct to Summary.



**STA. 9+90.76  
END APPROACH**

**STA. 4+00  
BEGIN APPROACH**

NOTE: FOR DETAILS OF  
TYPICAL SECTION  
SEE SHEET NO. 2



BEGIN GUARD RAIL  
STA. 5+46.0 LEFT.

BEGIN GUARD RAIL  
STA. 6+46.7 RIGHT

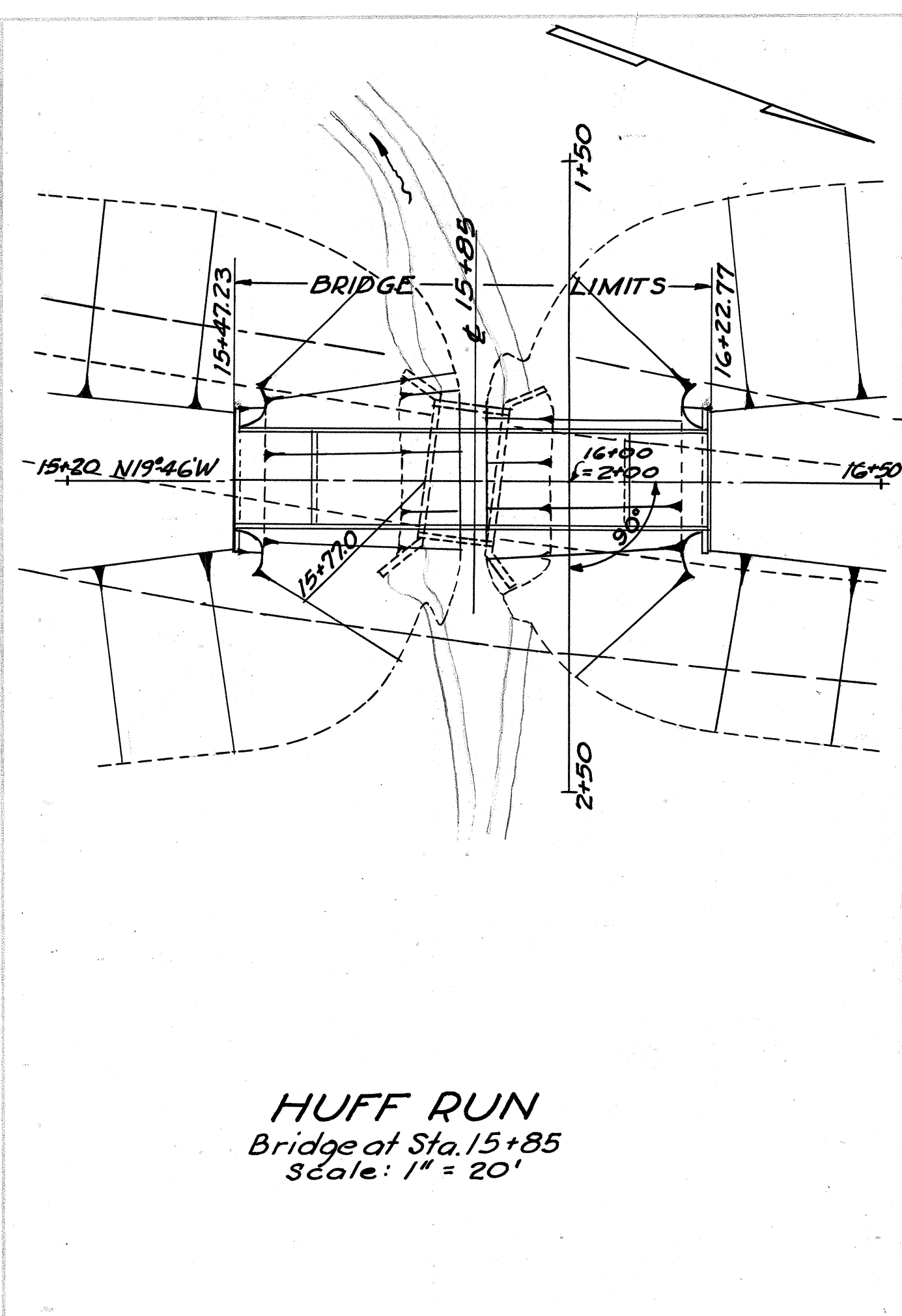
BEGIN ROAD APPROACH

DUMPROCK END AREA	CU. YDS.	CUT	FILL	CUT	FILL
10	5	0	46		
0	180	0	66		
		17			
		30	25		
		28	24		
		0	1		

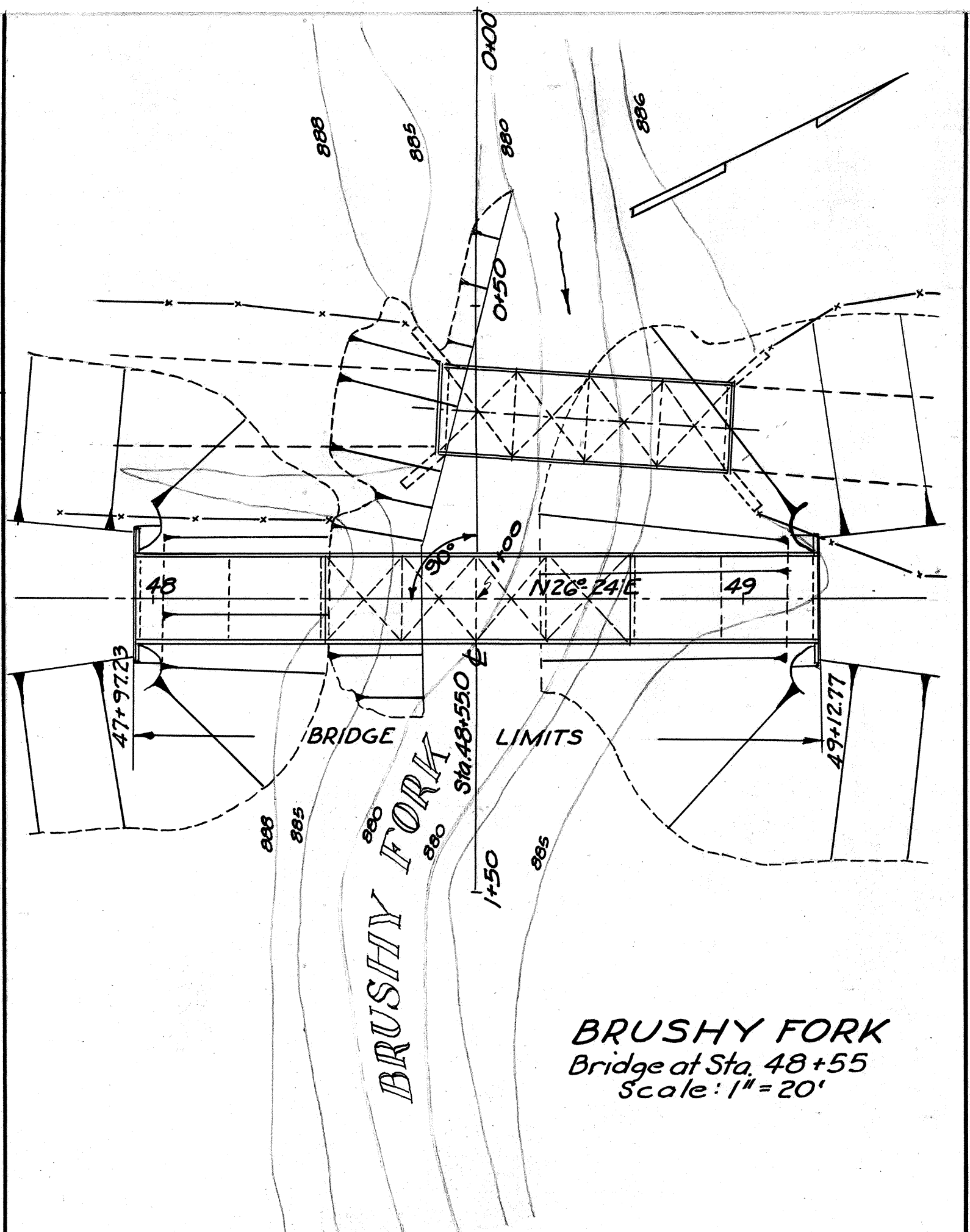
EXCAVATION  
EMBANKMENT  
ROCK DUMP FILL

Quantities shown here  
are included with Road-  
way Quantities See Sheet 19  
The 2684 cu. yds. necessary to  
complete this embankment  
will be procured from Roadway  
Excavation as indicated on Sheet 19

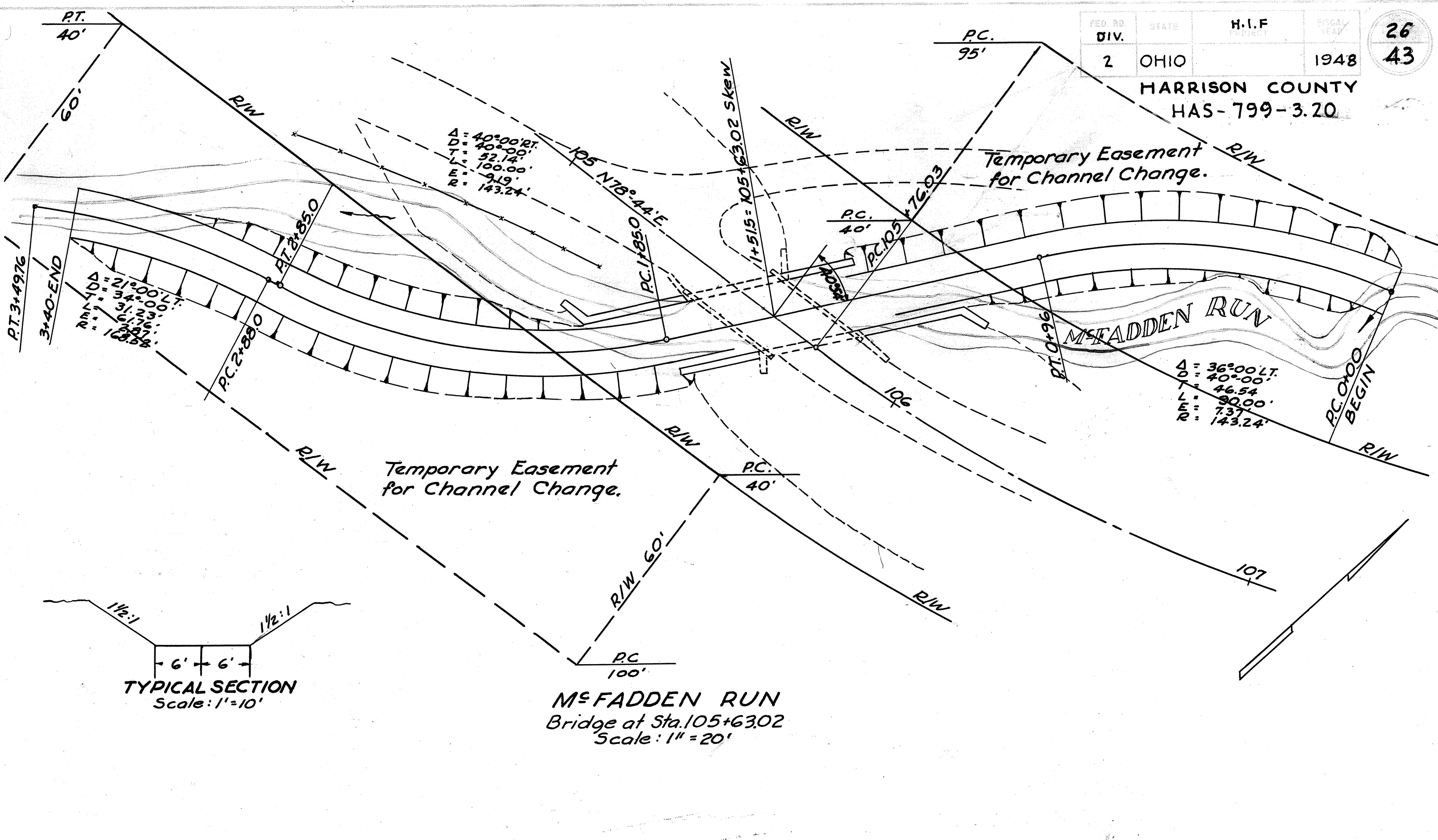
Note: Guard Rail to be  
tied into and continued  
as 21-G & 22-G  
See Sheet 19



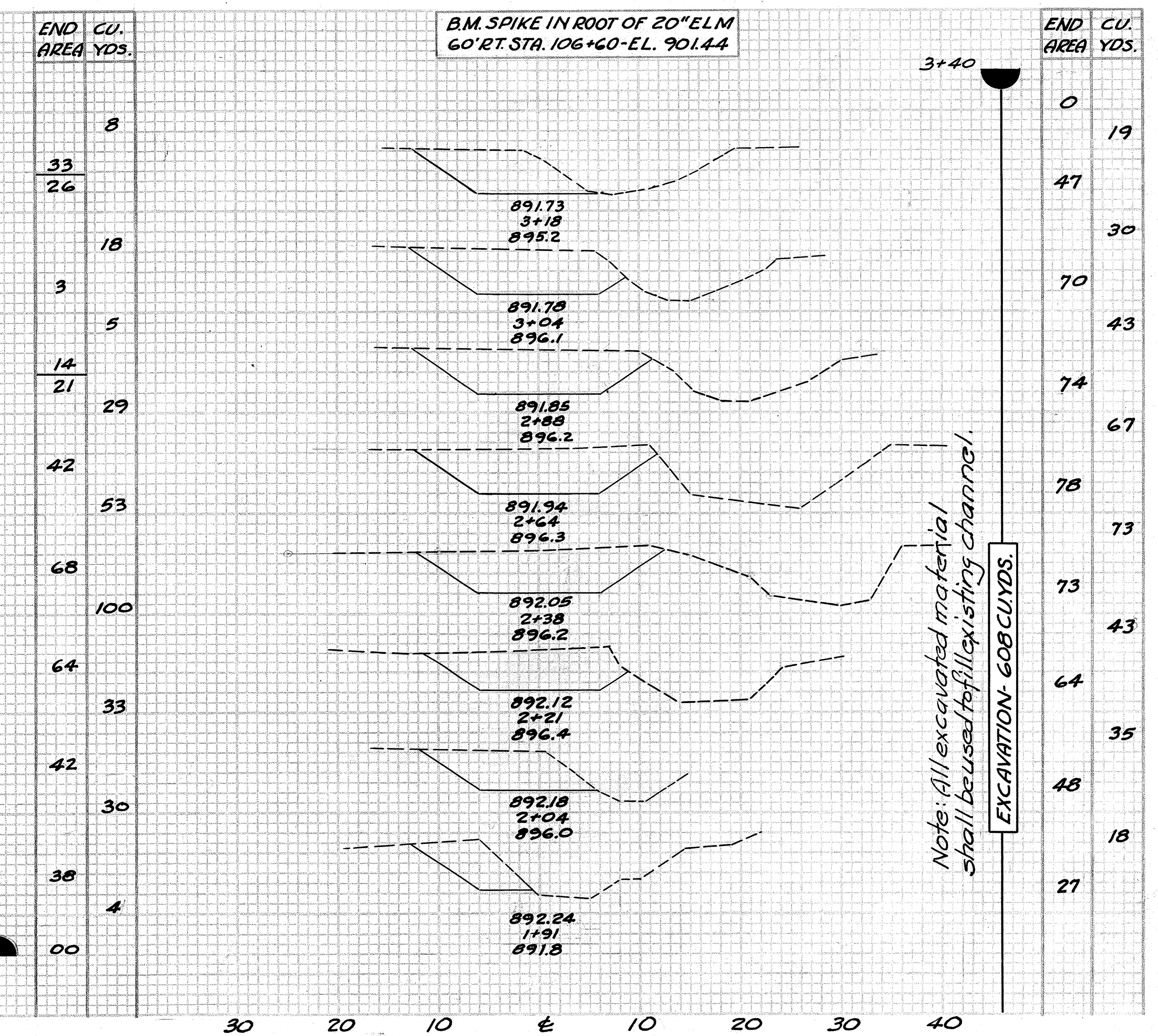
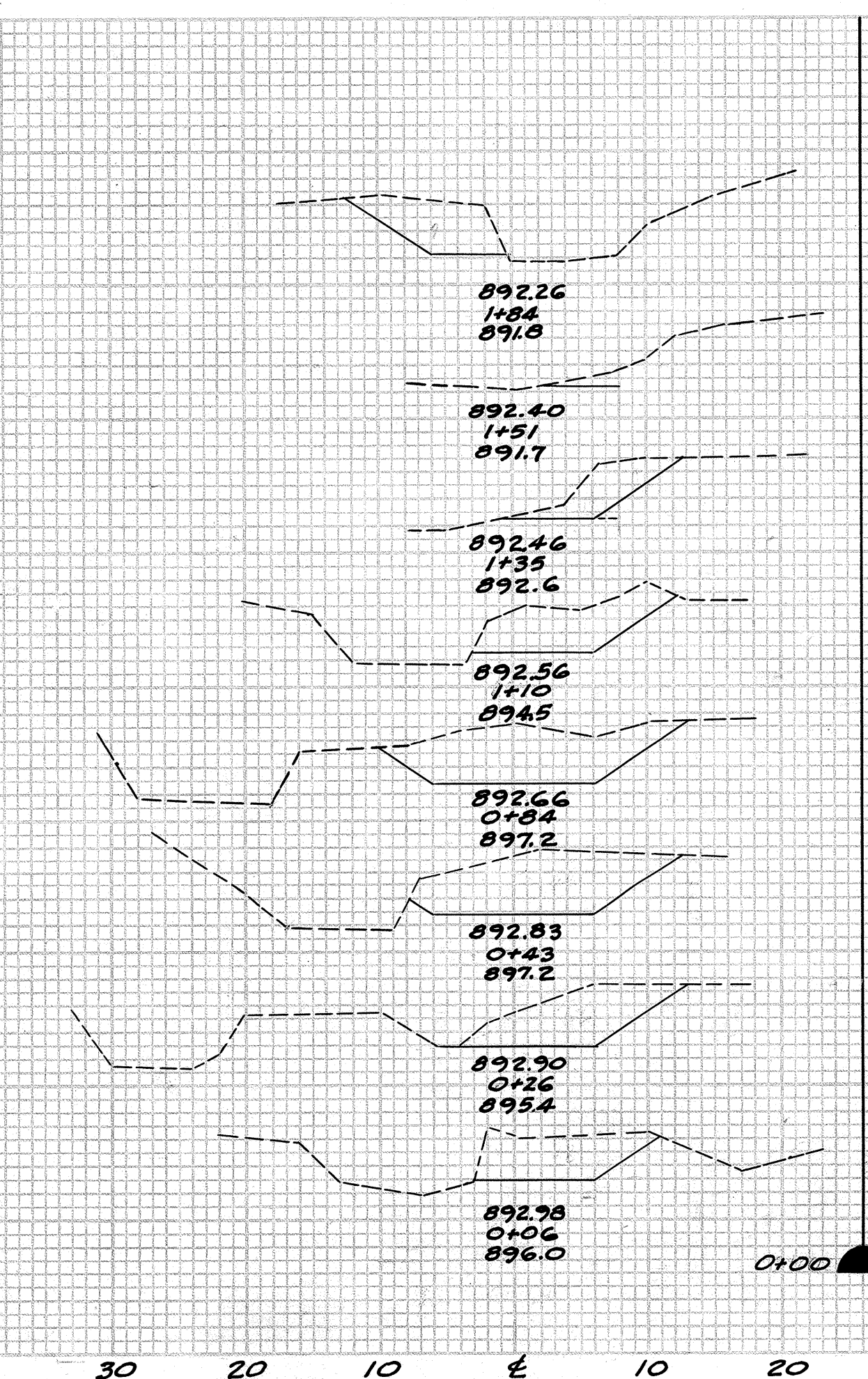
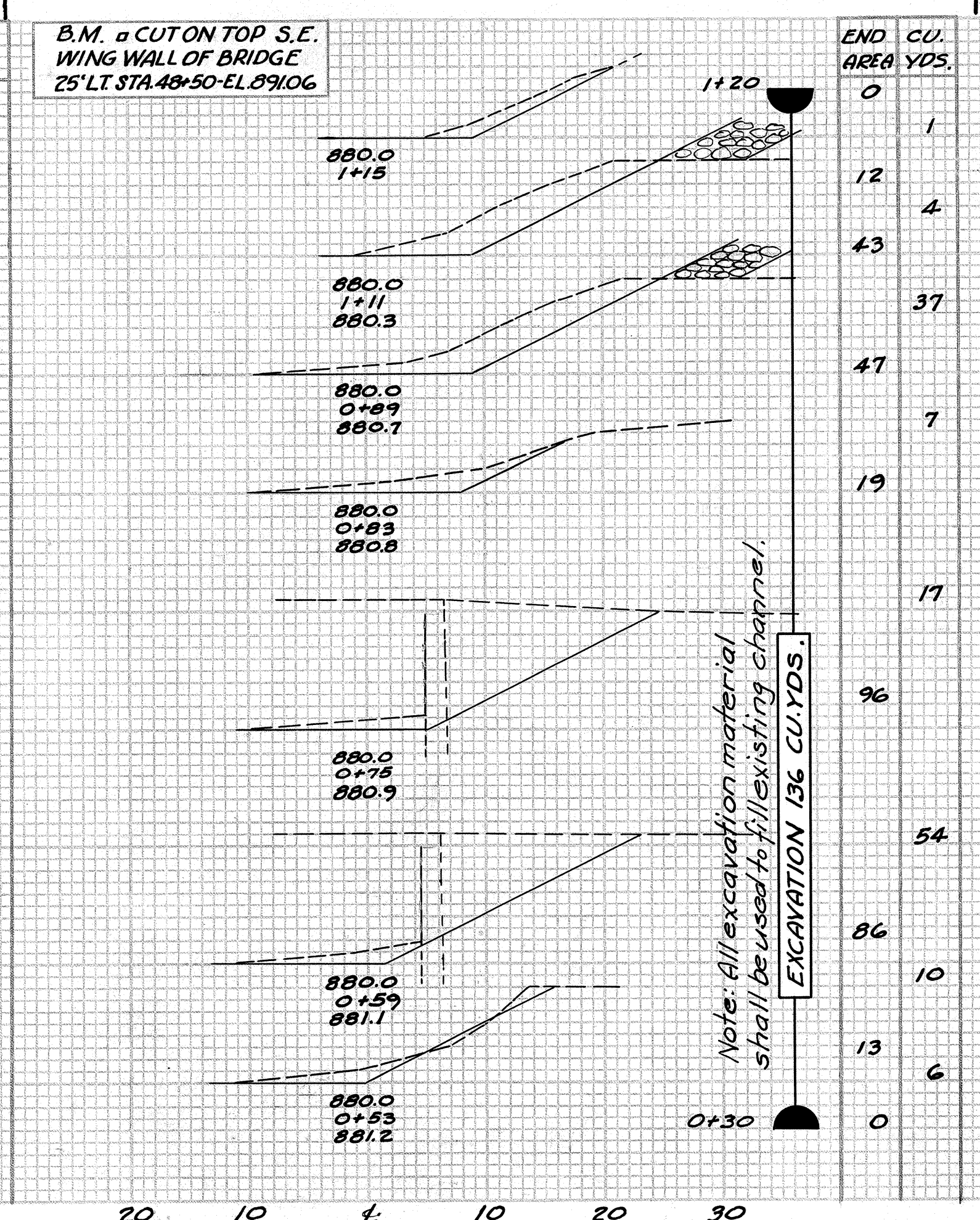
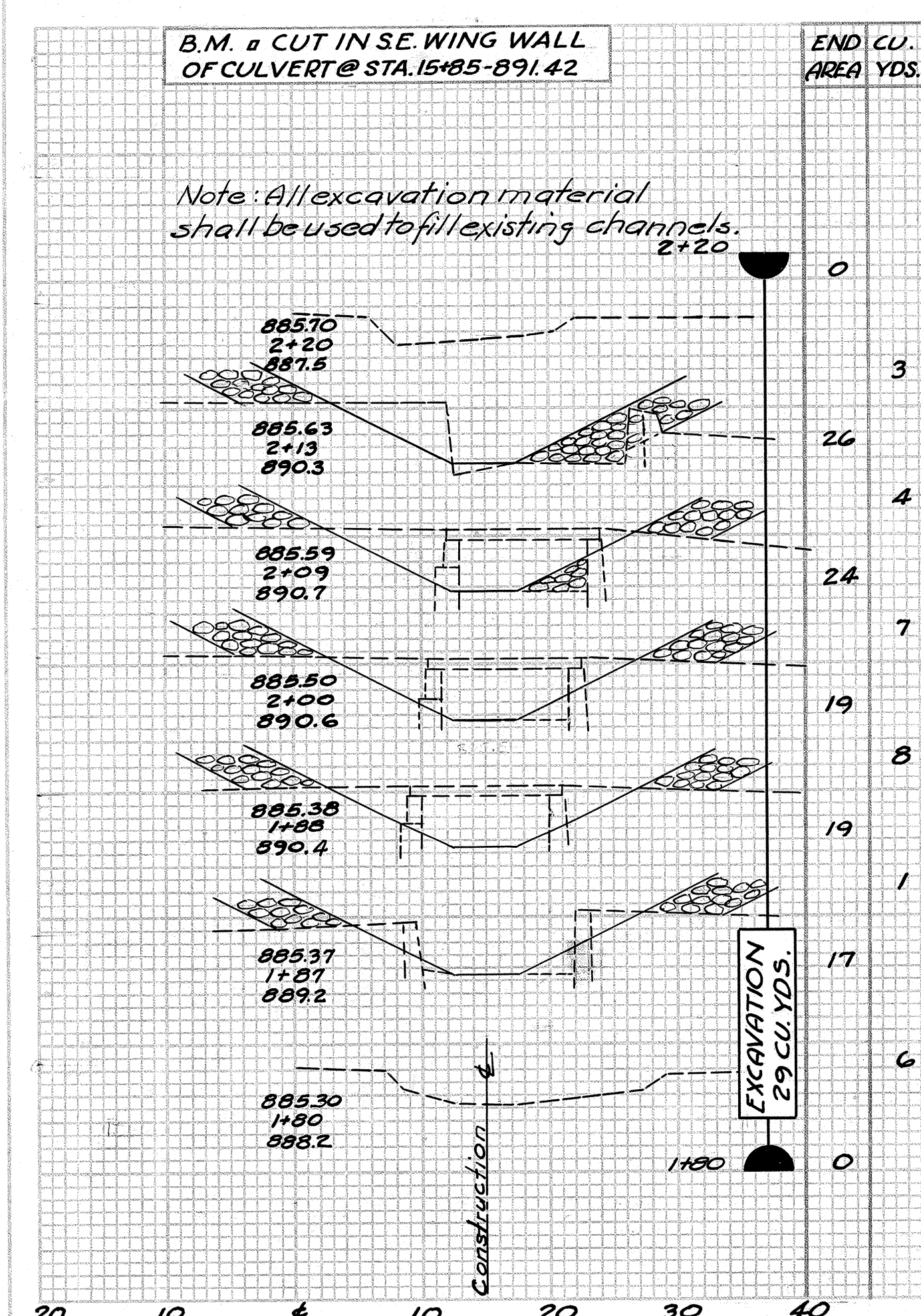
**HUFF RUN**  
Bridge at Sta. 15+85  
Scale: 1" = 20'



**BRUSHY FORK**  
Bridge at Sta. 48+55  
Scale: 1" = 20'

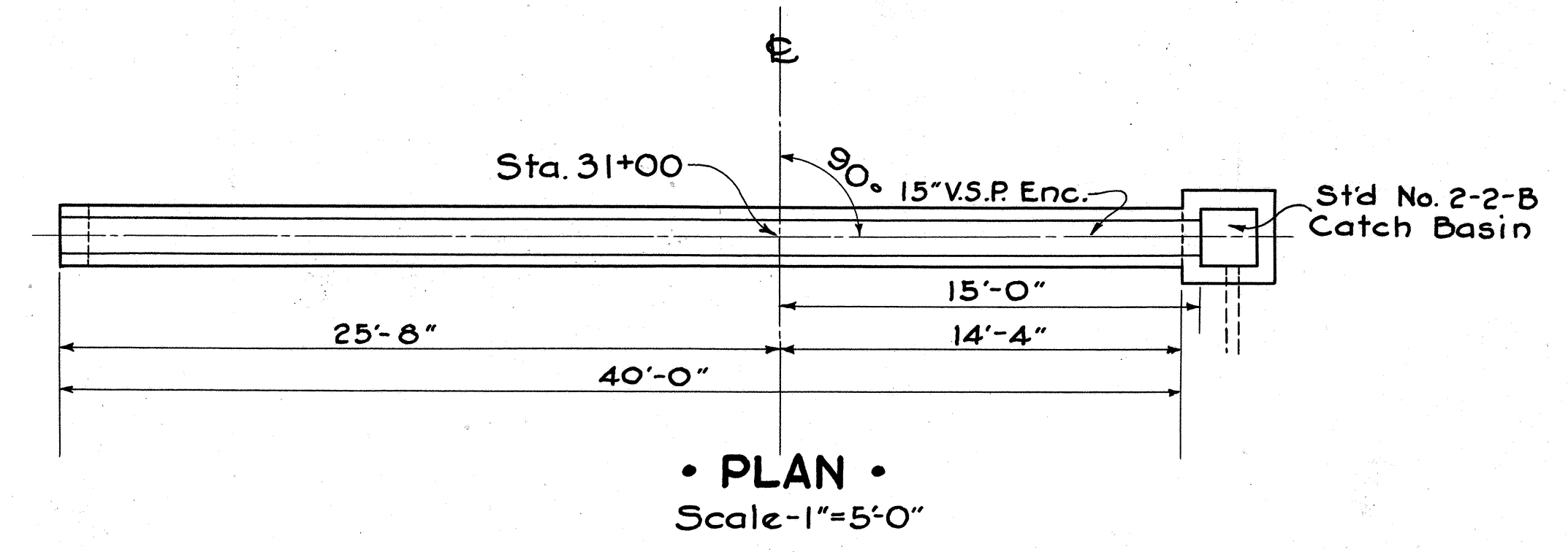


**McFADDEN RUN**  
Bridge at Sta. 105+63.02  
Scale: 1" = 20'



FED. RD. DIV.	STATE	H.I.E. PROJECT	FISCAL YEAR	27 43
2	OHIO		1948	

HARRISON COUNTY  
HAS-799-3.20

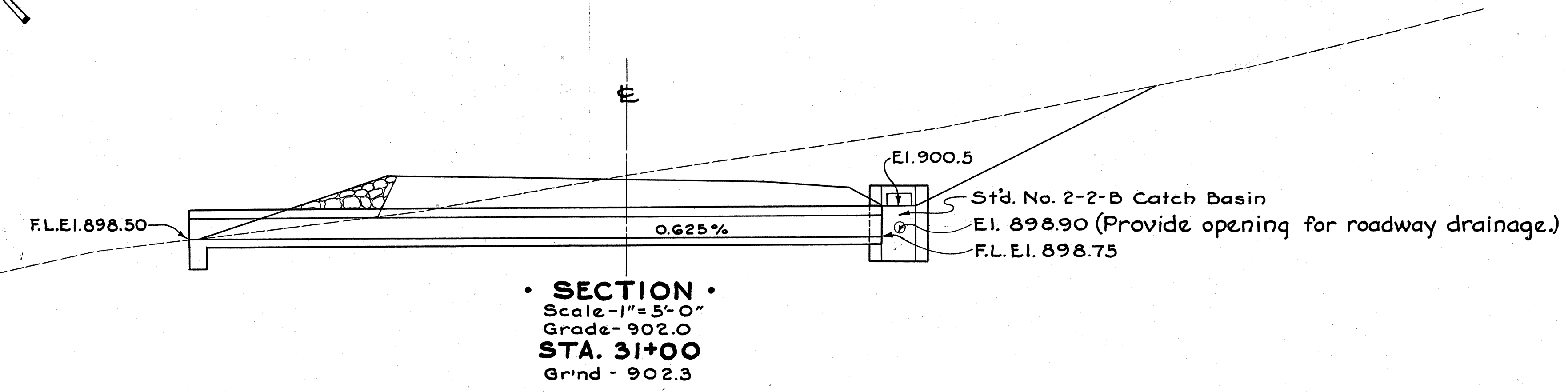


• STRUCTURE DATA •  
TYPE: Std. Pipe Culvert  
SIZE: 15" x 40'-0"  
WORK REQ'D: Build Standard 15" x 40'-0" V.S.P. Enc. Pipe Culvert with Std. No. 2-2-B Catch Basin on inlet end. Provide opening for lateral roadway drainage pipe in Catch Basin as shown.

• ESTIMATED QUANTITIES •  
STRUCTURE EXCAVATION 18.0 CU. YDS.  
15" V.S.P. ENCASED 40.0 LIN. FT.  
ST'D. No. 2-2-B CATCH BASIN 1 EACH  
CUTOFF WALLS (CLASS. CONC.) 0.4 CU. YDS.

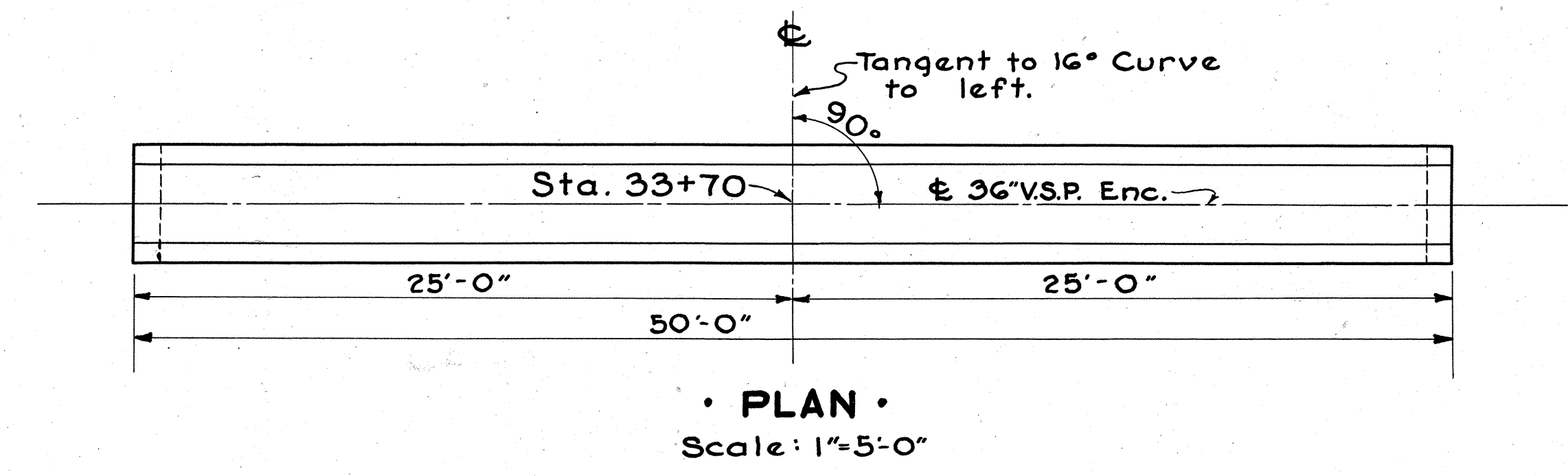
SEE SHEET NO.32 FOR ENCASEMENT DETAIL

REFERENCE DRAWINGS  
Catch Basins I-8 CB, 2-2-B



15" x 40'-0" V.S.P. ENC.  
STA. 31+00

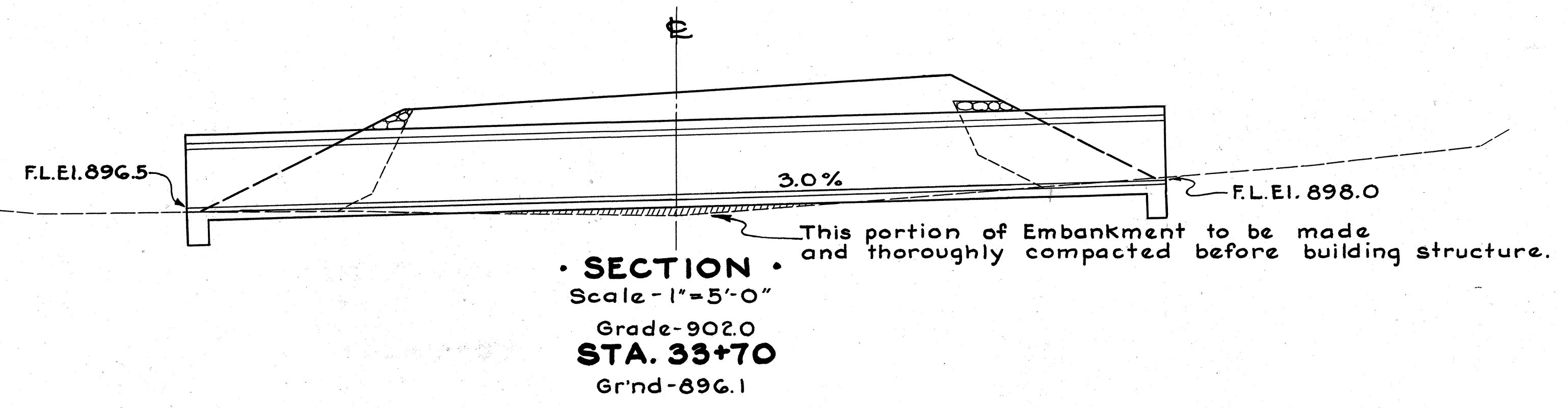
2-S



• STRUCTURE DATA •  
TYPE: Std. Pipe Culvert  
SIZE: 36" x 50'-0"  
WORK REQ'D: Build 36" x 50'-0" V.S.P. Enc. Roadway Culv't as shown.

• ESTIMATED QUANTITIES •  
STRUCTURE EXCAVATION 3 CU. YDS.  
36" V.S.P. ENCASED 50 LIN. FT.  
CUTOFF WALLS (CLASS. CONC.) 0.4 CU. YDS.

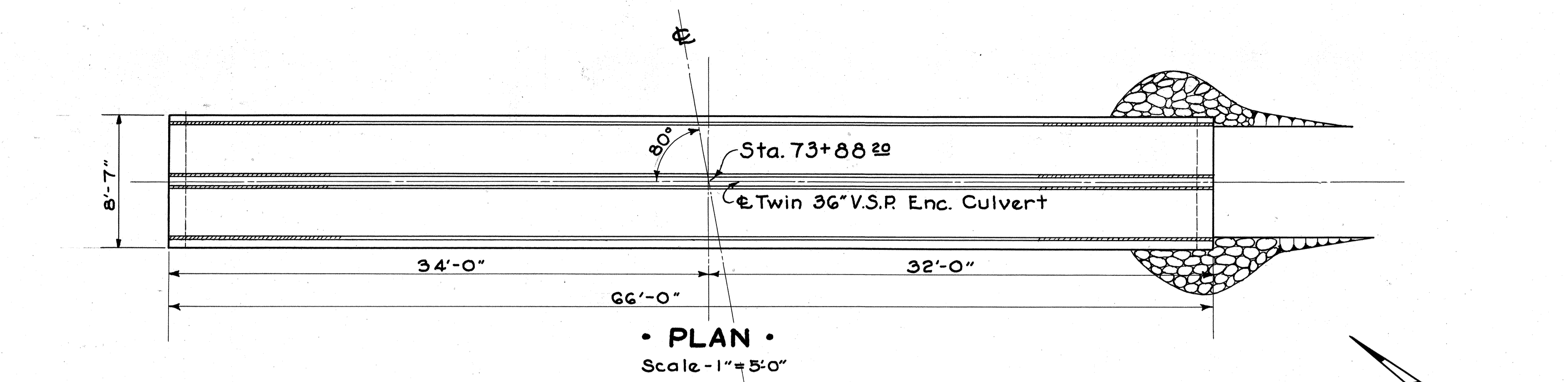
SEE SHEET NO.32 FOR ENCASEMENT DETAILS



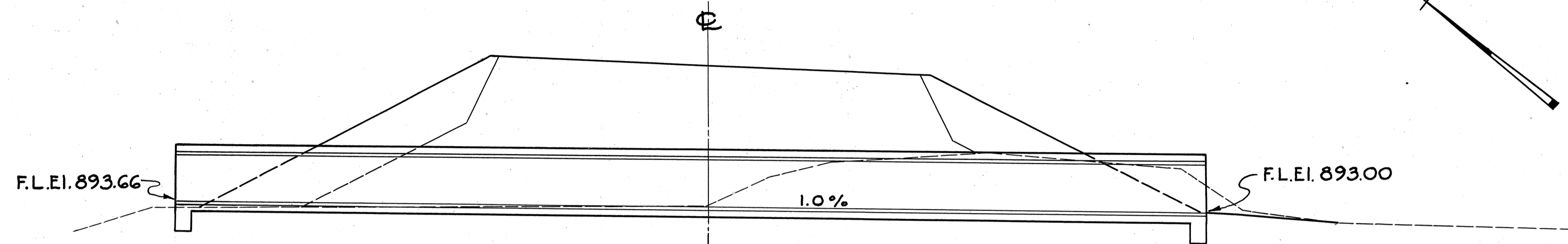
36" x 50'-0" V.S.P. ENC.  
STA. 33+70

3-S

HARRISON COUNTY  
HAS-799-3.20



• PLAN •  
Scale - 1" = 5'-0"



• SECTION •  
Scale - 1" = 5'-0"  
Grade - 902.00  
STA. 73+88.2  
Grnd - 893.4

• STRUCTURE DATA •

TYPE: Std. Roadway Pipe Culvert.  
SIZE: Twin-36"x 66'-0"  
WORK REQ'D: Build Std Twin 36"x 64'-0" V.S.P. Enc. Roadway Culvert as shown and excavate outlet channel. Build Type B Rip-rap around outlet end.

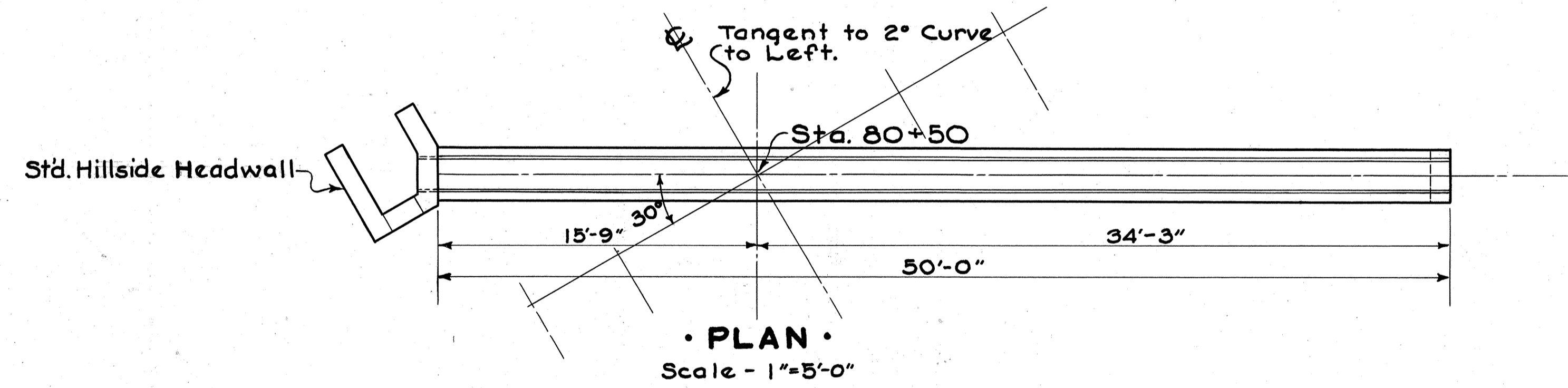
• ESTIMATED QUANTITIES •

EXCAVATION (UNCL)	55 CU. YDS.
36" V.S.P. ENC.	132 LIN. FT.
TYPE B RIP-RAP	8 SQ. YDS.
CUTOFF WALLS (CLASS C CONC.)	21 CU. YDS.

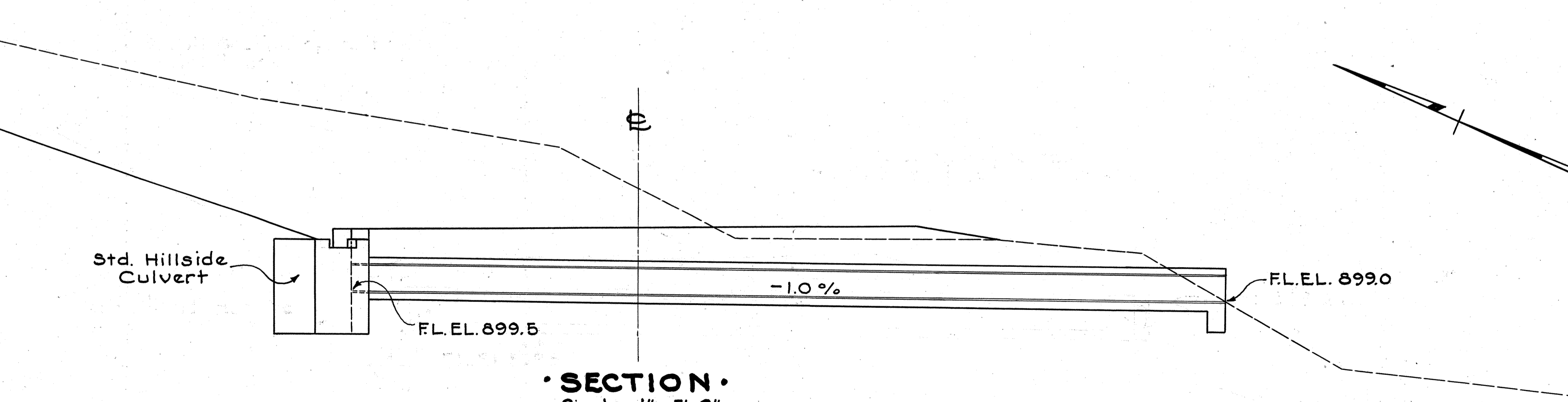
SEE SHEET No. 32 FOR ENCASEMENT DETAILS

TWIN 36"x 66'-0" V.S.P. ENC.  
STA. 73+88.20

5-S



• PLAN •  
Scale - 1" = 5'-0"



• SECTION •  
Scale - 1" = 5'-0"  
Grade - 903.2  
STA. 80+50  
Grnd - 905.7

• STRUCTURE DATA •

TYPE - Std. Roadway Pipe Culvert.  
SIZE - 18"x 50'-0"  
WORK REQ'D - Build Std 18"x 50' V.S.P. Enc. Roadway Culvert at Sta 80+50 as shown with 30° L.F. Skew. Build Std. Hillside Headwall on Inlet end.

• ESTIMATED QUANTITIES •

EXCAVATION	42 CU. YDS.
18" V.S.P. ENC.	50 LIN. FT.
CUTOFF & HEADWALLS (CLASS C CONC.)	21 CU. YDS.
REINF. STEEL	25 LBS.

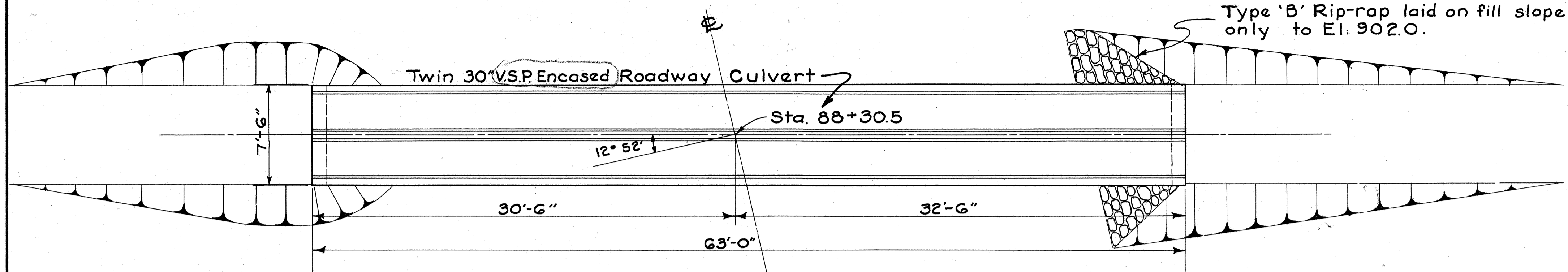
SEE SHEET No. 32 FOR ENCASEMENT DETAILS

REFERENCE DRAWINGS

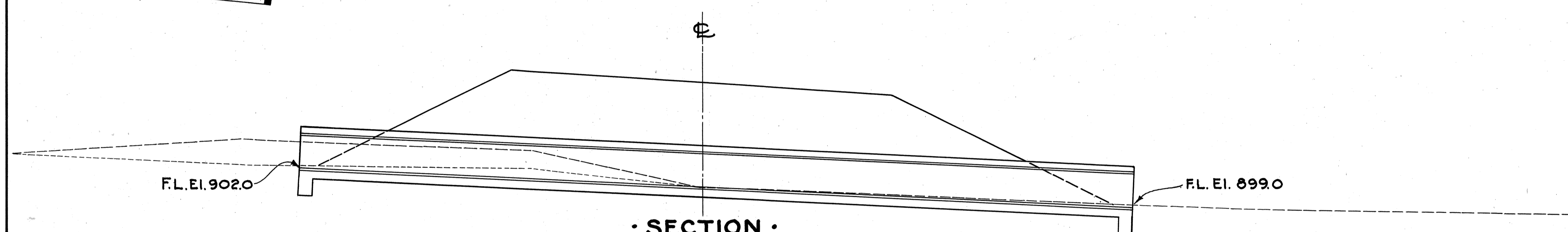
Pipe Culverts S-27 P.C.11

18"x 50'-0" V.S.P. ENCASED  
STA. 80+50

6-S



• PLAN •  
Scale - 1" = 5'-0"



• SECTION •  
Scale - 1" = 5'-0"  
Grade - 907.95  
STA. 88+30.5  
Grnd - 900.5

• STRUCTURE DATA •

TYPE - Std Roadway Pipe Culvert  
 SIZE - Twin 30" x 63'-0"  
 WORK REQ'D - Build Std Twin 30" x 63'-0" V.S.P. Enc. Roadway Culvert on 12° 52' L.F. Skew as shown at Sta. 88+30.5  
 Excavate channel on inlet & outlet end and lay Type 'B' Rip-rap around outlet.

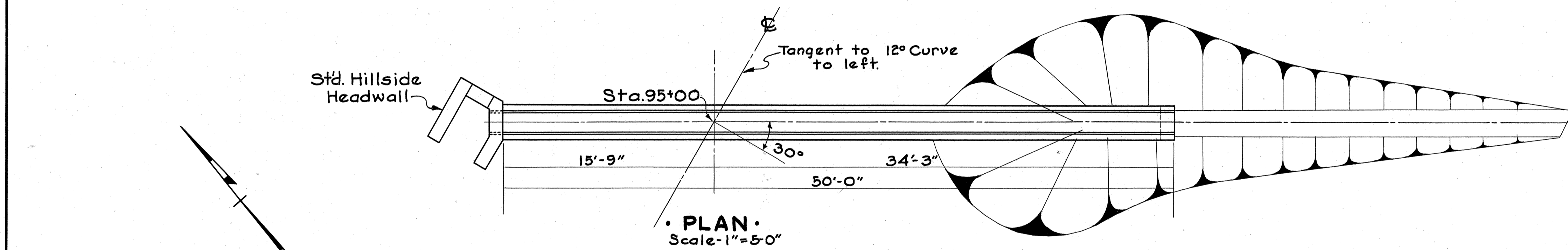
• ESTIMATED QUANTITIES •

EXCAVATION (STRUCT.)	50 CU. YDS.
EXCAVATION (CHANNEL)	30 CU. YDS.
30" V.S.P. ENC.	126 LIN. FT.
TYPE 'B' RIP-RAP	5 SQ. YDS.

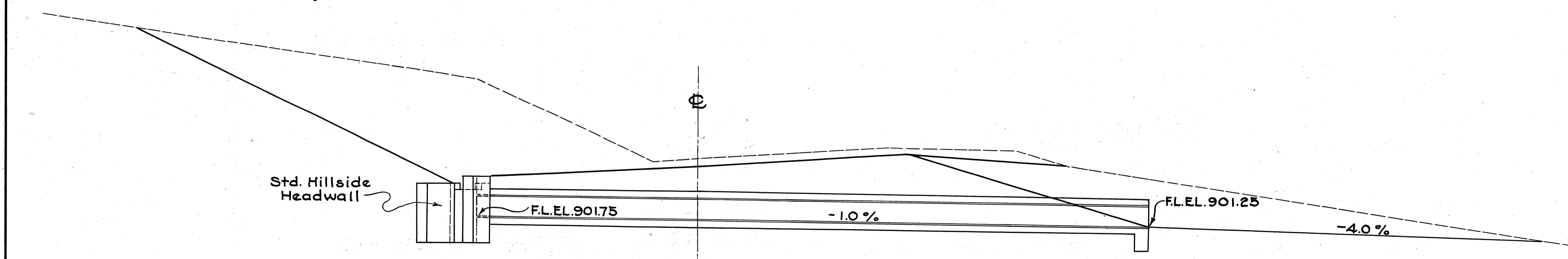
SEE SHEET No. 32 FOR ENCASMENT DETAIL

TWIN 30" x 63'-0" V.S.P. ENC.  
STA. 88+30.5

7-S



• PLAN •  
Scale - 1" = 5'-0"



• SECTION •  
Scale - 1" = 5'-0"  
Grade - 905.2  
STA. 95+00  
Grnd - 906.2

• STRUCTURE DATA •

TYPE - Std. Roadway Pipe Culvert.  
 SIZE - 18" x 50'-0"  
 WORK REQ'D - Build Std 18" x 50'-0" V.S.P. Enc. Roadway Culvert at Sta. 95+00 on 30° R.F. Skew with Std Hillside Headwall on Inlet end. Excavate channel on outlet end.

• ESTIMATED QUANTITIES •

EXCAVATION (STRUCT.)	38 CU. YDS.
EXCAVATION (CHANNEL)	22 CU. YDS.
18" V.S.P. ENCASED	50 LIN. FT.
CLASS 'C' CONC. FOR HEADWALLS	2 CU. YDS.
REINF. STEEL	25 LBS.

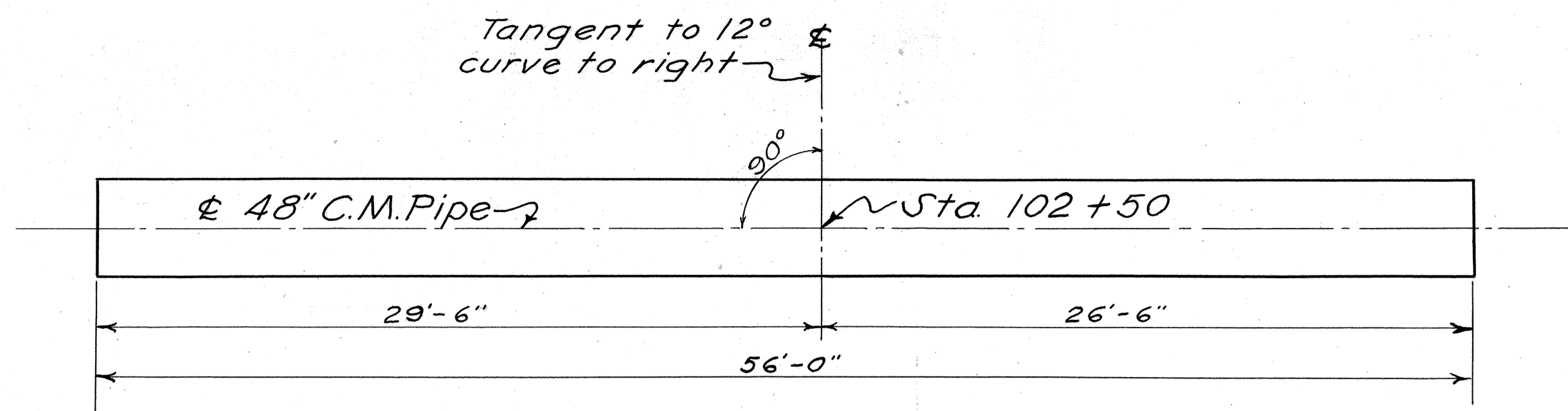
SEE SHEET No. 32 FOR ENCASMENT DETAILS

• REFERENCE DRAWINGS

Pipe Culverts S-27 P.C. 1

18" x 50'-0" V.S.P. ENCASED  
STA. 95+00

8-S



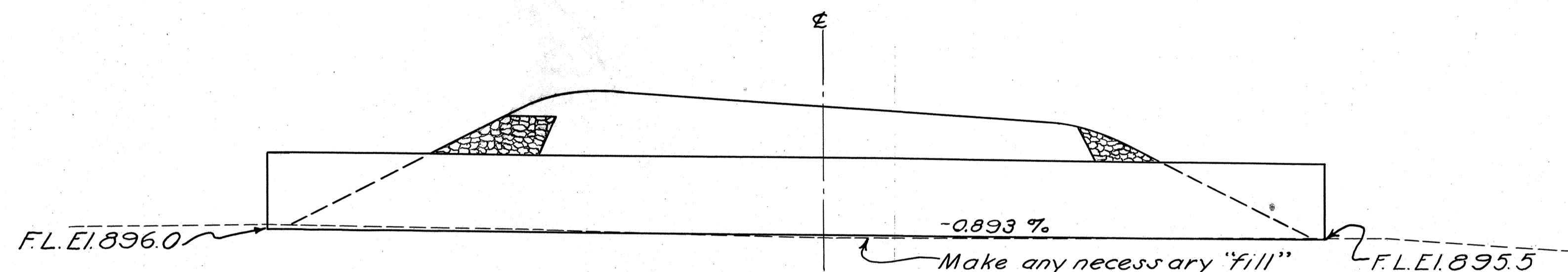
PLAN  
Scale 1"=5'-0"

**STRUCTURE DATA**

Type:- St'd Roadway Pipe Culvert.  
Size:- 48" x 56'-0"  
Work Req'd:- Salvage 44'-0" of 48" C.M.P. 70± Right of Sta. 100+50. Add to 12'-0" of new C.M.P.

**ESTIMATED QUANTITIES**

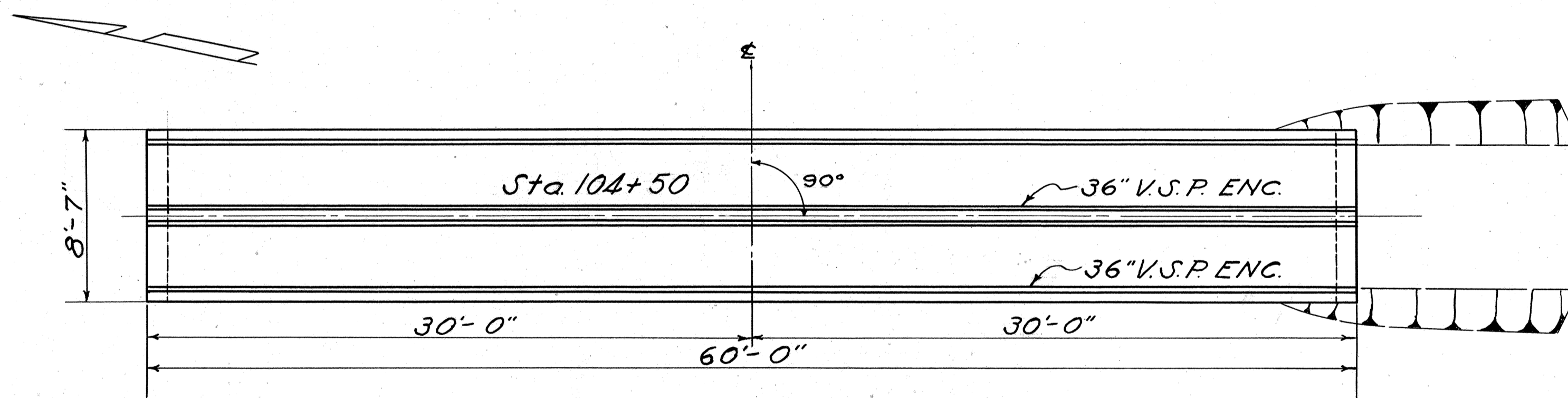
STRUCTURE EXCAVATION	7 CU.YDS.
48" C.M.P. REMOVED FOR RE-USE	44 LIN. FT.
48" C.M.P. RELAID FOR RDWY. CULVT.	44 LIN. FT.
48" C.M.P. FOR ROADWAY CULVERT	12 LIN. FT.



SECTION  
Scale-1"=5'-0"  
Grade- 902.0  
Sta.-102+50  
Grnd.- 895.6

48" x 56'-0" CORR. M.P.  
STA. 102 + 50

9-S



PLAN  
Scale-1"=5'-0"

**STRUCTURE DATA**

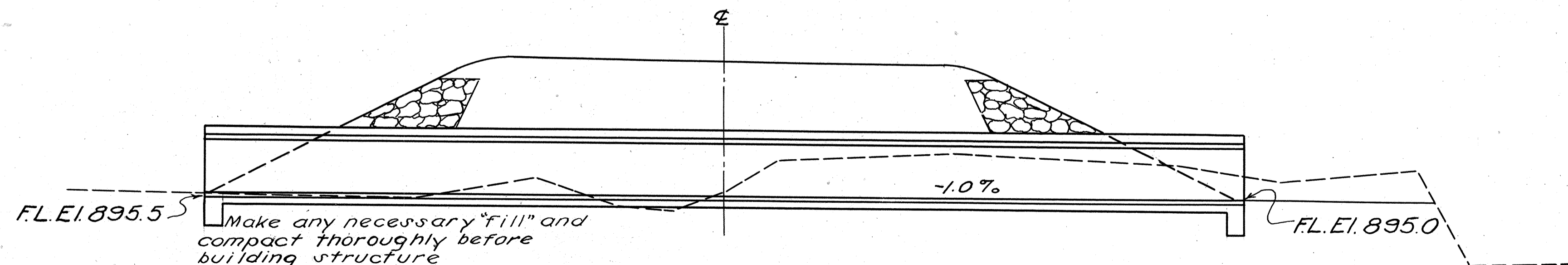
Type:- St'd Roadway Pipe Culvert.  
Size:- Twin 36" x 60'-0"  
Work Req'd:- Build Twin 36" x 60'-0" V.S.P. Encased Culvert and excavate outlet channel as shown.

**ESTIMATED QUANTITIES**

STRUCTURE EXCAVATION	43 CU.YDS.
CHANNEL EXCAVATION	6 CU.YDS.
36" V.S.P. (Including Encasement)	120 LIN. FT.

OUTLET CHAN. CONC. (CLAS. 0) 23 CU.YDS.

SEE SHEET NO. 32 FOR ENCASEMENT DETAIL.



SECTION  
Scale-1"=5'-0"  
Grade- 903.0  
Sta.-104+50  
Grnd.- 895.5

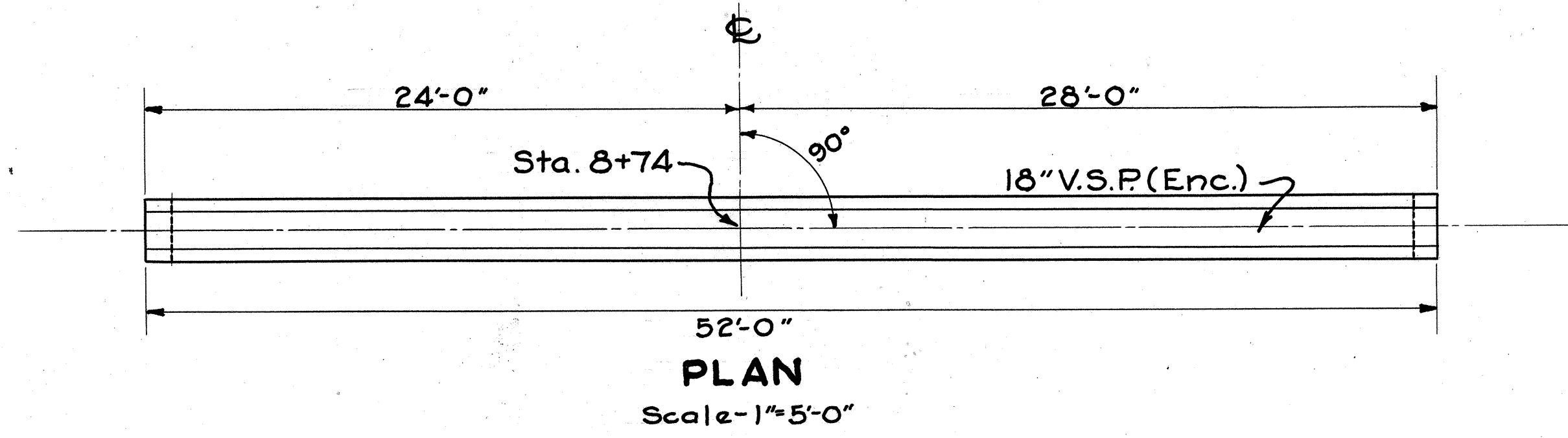
TWIN 36" x 60'-0" V.S.P. ENC.  
STA. 104 + 50

10-S

FED. RD. DIV.	STATE	H.I.F. PROJECT	FISCAL YEAR
2	OHIO		1948

31  
43

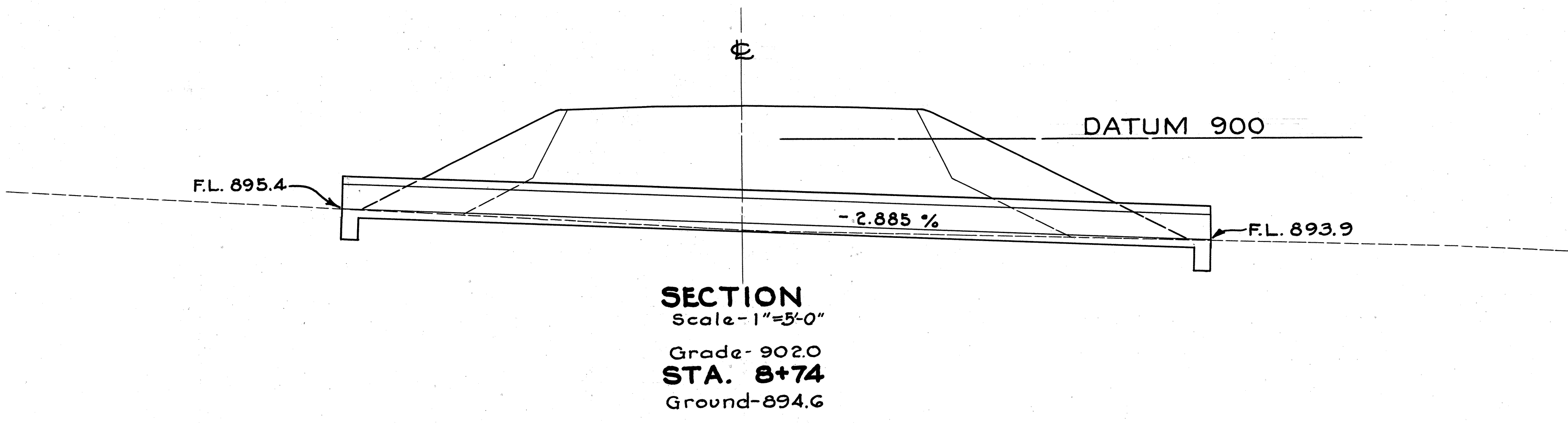
HARRISON COUNTY  
HAS-799-3.20



**STRUCTURE DATA**  
 TYPE - Standard Pipe Culvert.  
 SIZE - 18" x 52'-0".  
 WORK REQ'D - Build Standard 18" x 52'-0" V.S.P. Encased Culvert.

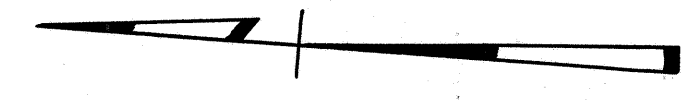
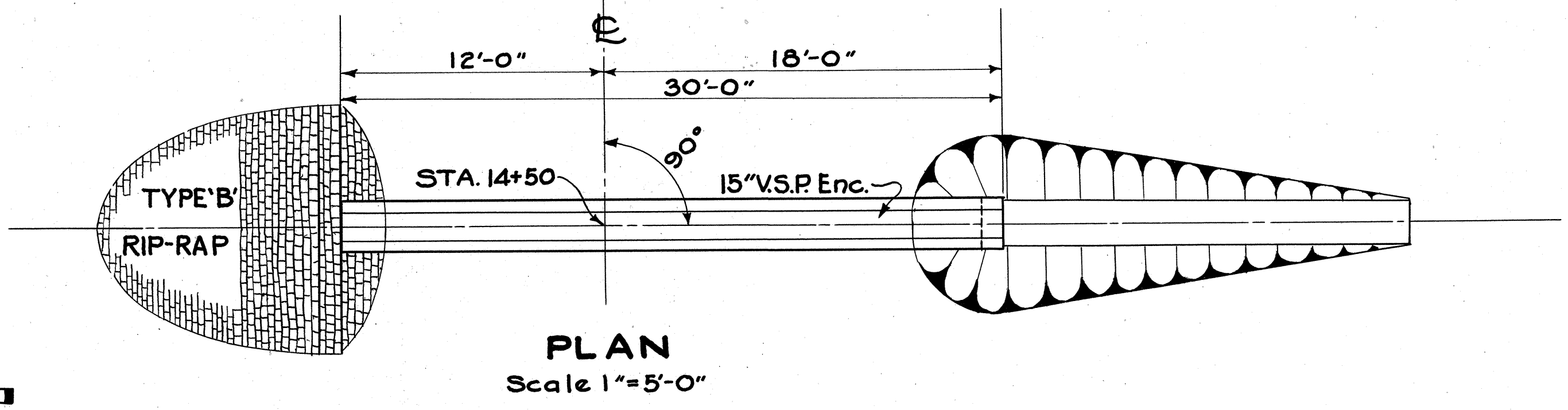
**ESTIMATED QUANTITIES**  
 STRUCTURE EXCAVATION 3 CU. YDS.  
 18" V.S.P. ENC. 52 LIN. FT.  
 CUT-OFF WALLS CONC. (CLASS 'C') 3 CU. YDS.

SEE SHEET No. 32 FOR ENCASEMENT DETAIL



18" x 52'-0" V.S.P. ENC.  
 STA. 8+74 ON ROAD APPR.  
 NO. 8-A

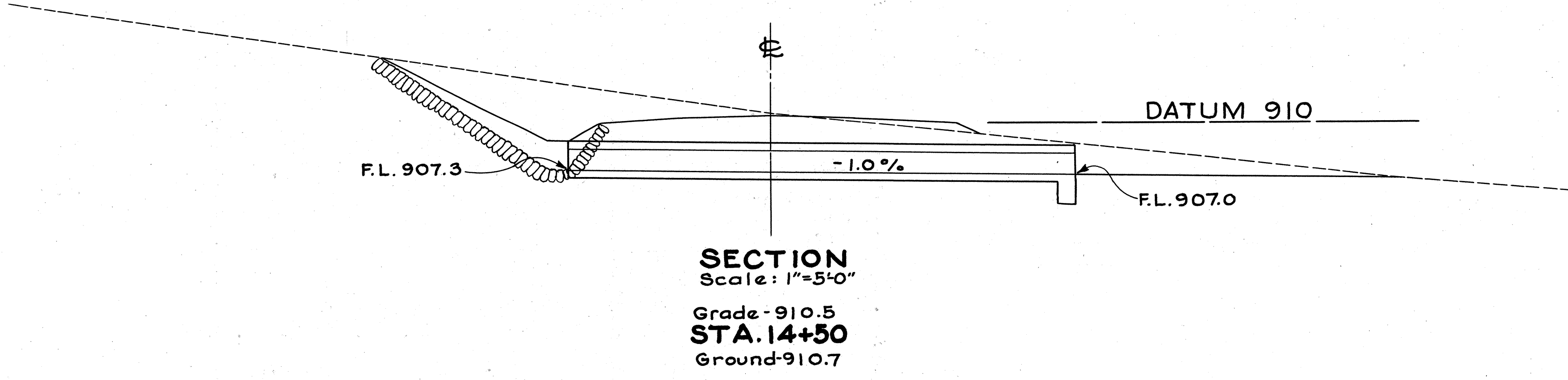
12-S



**STRUCTURE DATA**  
 TYPE : Standard Pipe Culvert.  
 SIZE : 15" x 30'-0"  
 WORK REQ'D : Build standard 15" x 30'-0" V.S.P. Encased Culvert. Rip-rap inlet end as shown.

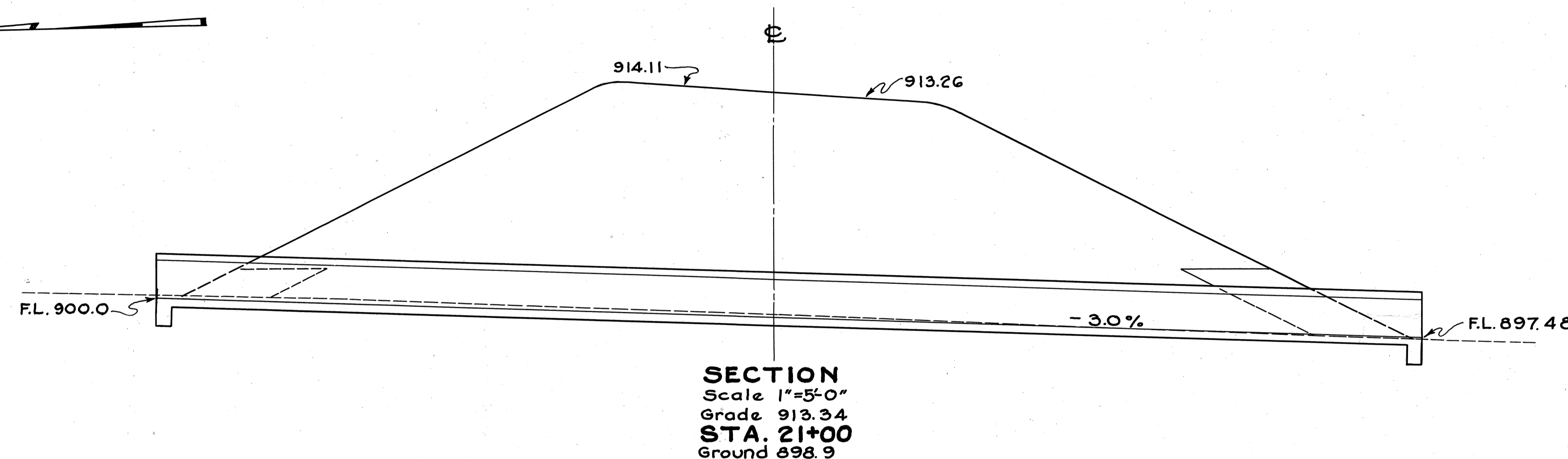
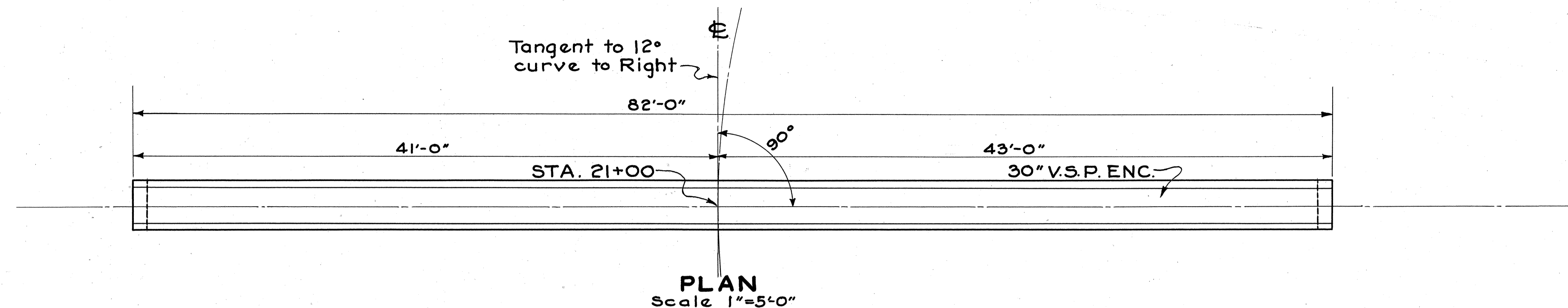
**ESTIMATED QUANTITIES**  
 STRUCTURE EXCAVATION 20 CU. YDS.  
 CHANNEL EXCAVATION 7 CU. YDS.  
 15" V.S.P. ENC. 30 LIN. FT.  
 TYPE 'B' RIP-RAP 12 SQ. YDS.  
 CUT-OFF WALL CONC. (CLASS 'C') 1 CU. YDS.

SEE SHEET No. 32 FOR ENCASEMENT DETAIL



15" x 30'-0" V.S.P. ENC.  
 STA. 14+50 ON ROAD APPR.  
 NO. 8-A

13-S



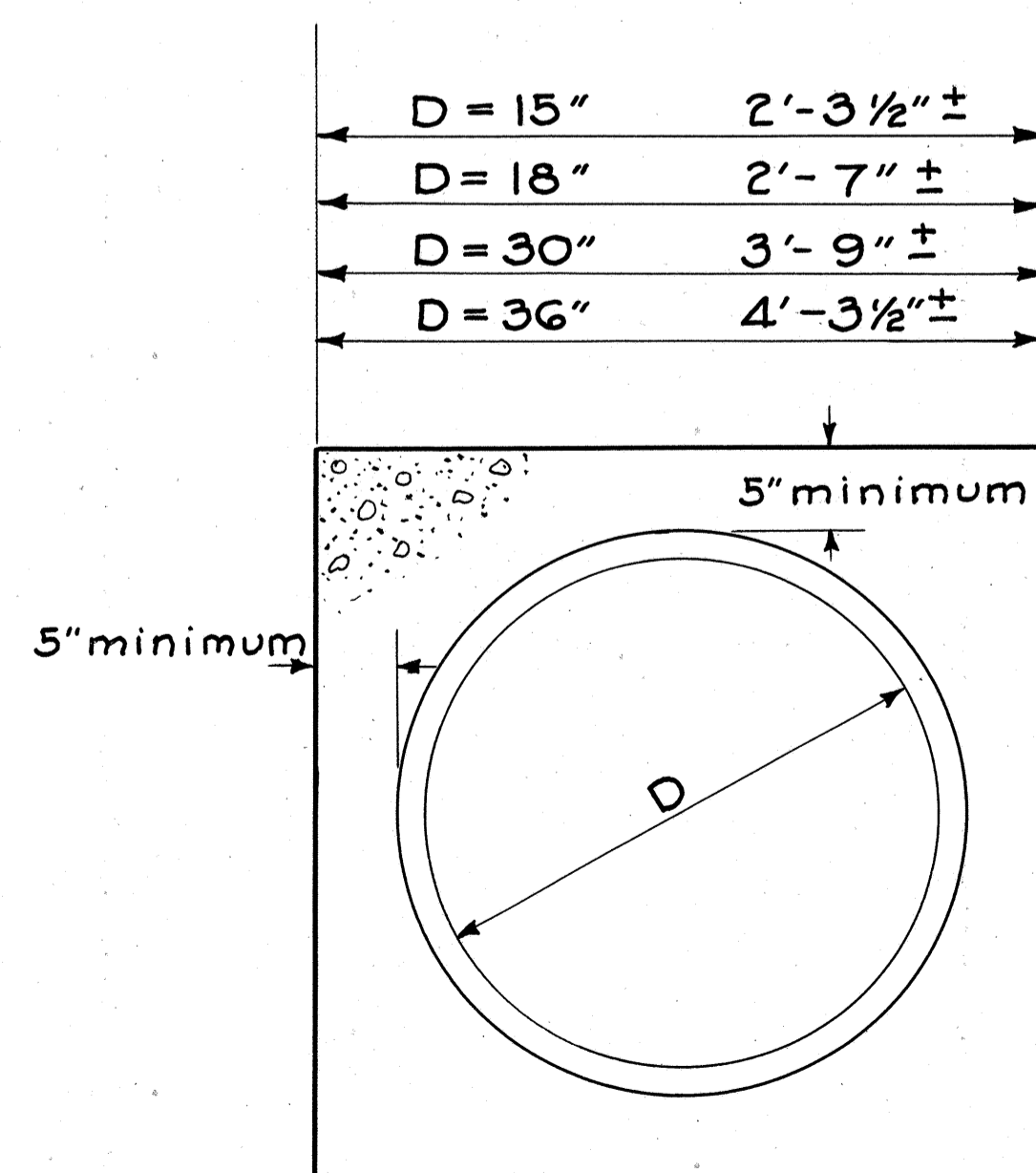
**STRUCTURE DATA**  
 TYPE : Standard Pipe Culvert.  
 SIZE : 30" x 84'-0"  
 WORK REQ'D : Build Standard 30" x 82'-0" Pipe Culvert.

**ESTIMATED QUANTITIES**  
 STRUCTURE EXCAVATION 13 CU.YDS  
 30" V.S.P. ENCASED 84 LIN. FT.  
 CUT-OFF WALLS - CONC. CLASS C (400 YDS)

30" x 84'-0" V.S.P. ENC.  
 STA. 21+00 ON ROAD APPR.  
 NO. 8-A

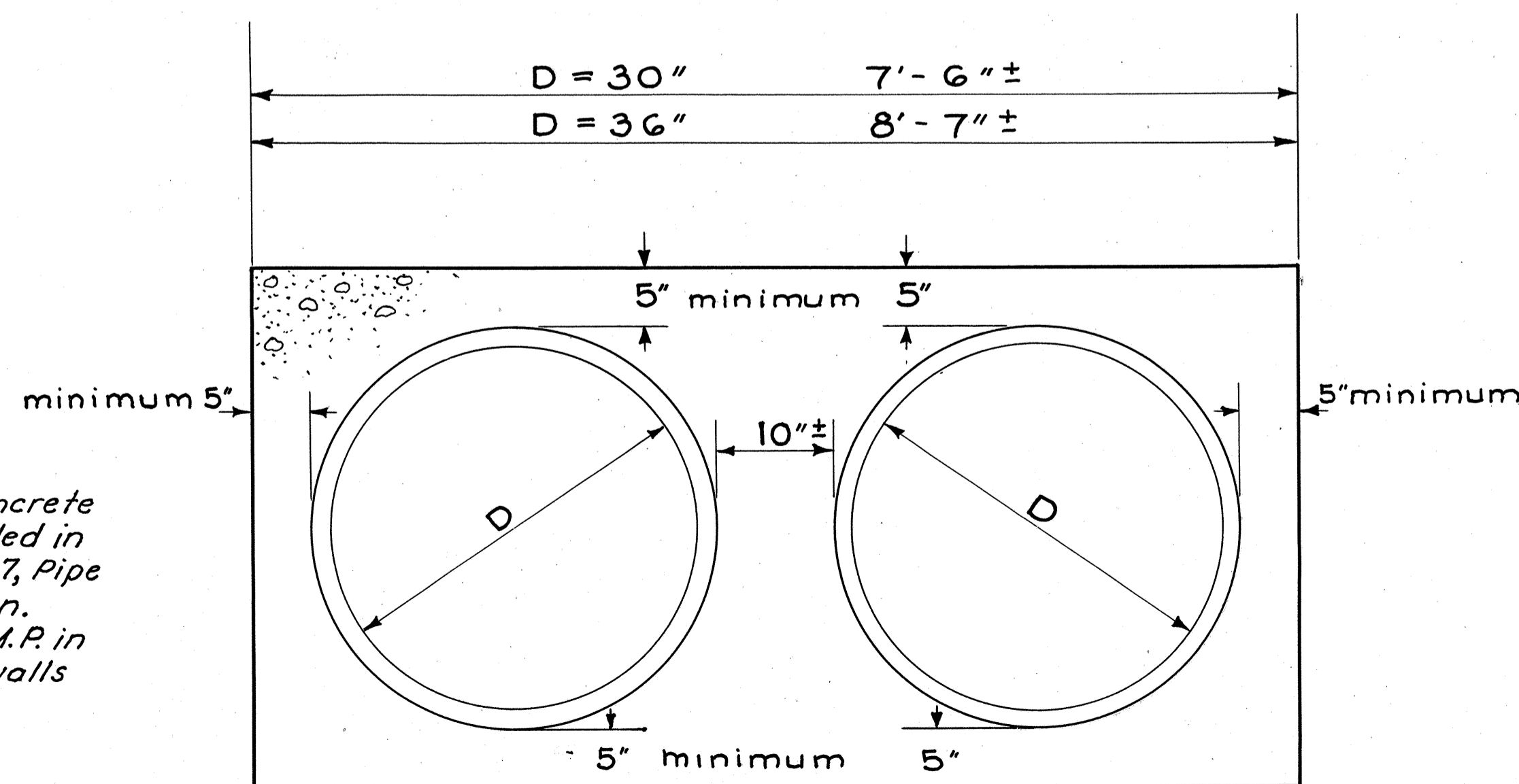
14-S

## ENCASEMENT DETAILS



DETAIL OF 5" ENCASEMENT  
FOR PIPE CULVERTS

**NOTE:**  
 Payment for Class "C" concrete for cut-off walls shall be included in price bid per lin. ft. for Item S-27, Pipe For Roadway Culverts, As Per Plan.  
 If contractor elects to use C.M.P. in lieu of V.S.P. (Encased) cut-off walls will not be required.



DETAIL OF 5" ENCASEMENT  
FOR TWIN PIPE CULVERTS

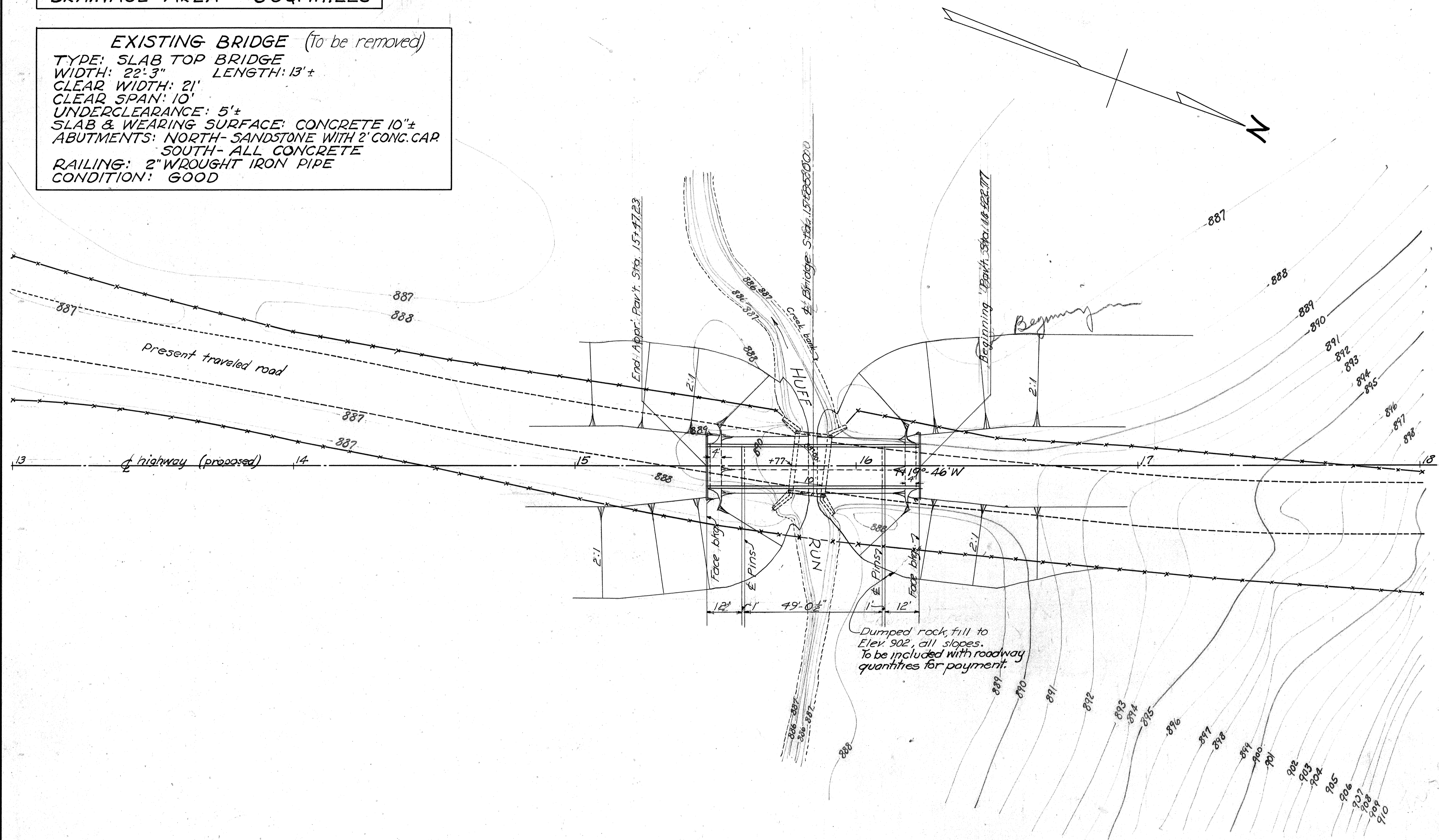


DRAINAGE AREA 3.50 MILES

FED. RD. DIV. NO.	STATE	PROJECT	FISCAL YEAR	33 43
2	OHIO	H.I.F.	1948	

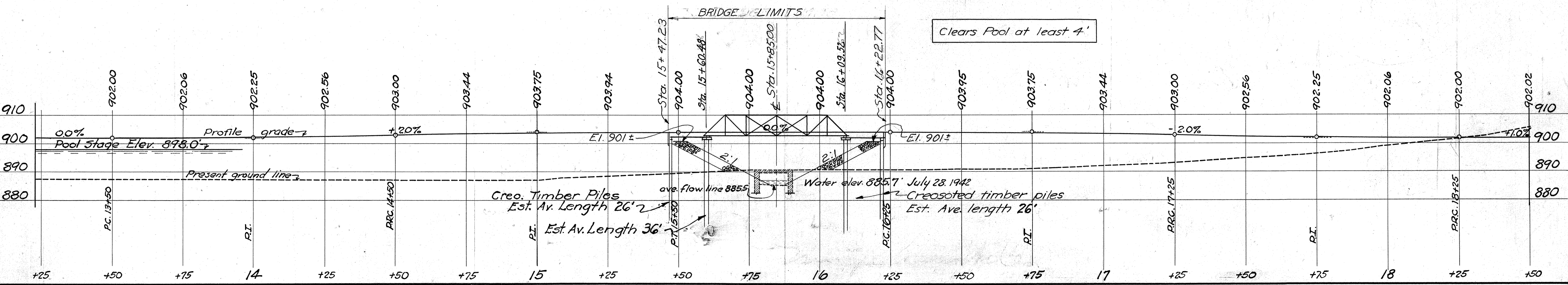
HARRISON COUNTY  
HAS-799-3.20  
CLENENDING BASIN  
About 4 miles N. of Piedmont

**EXISTING BRIDGE (To be removed)**  
 TYPE: SLAB TOP BRIDGE  
 WIDTH: 22'-3" LENGTH: 13'±  
 CLEAR WIDTH: 21'  
 CLEAR SPAN: 10'  
 UNDERCLEARANCE: 5'±  
 SLAB & WEARING SURFACE: CONCRETE 10"±  
 ABUTMENTS: NORTH- SANDSTONE WITH 2' CONG. CAP  
 SOUTH- ALL CONCRETE  
 RAILING: 2" WROUGHT IRON PIPE  
 CONDITION: GOOD



The estimated average piling lengths shown on these plans and used as a basis for the approximate estimate have been chosen as the result of a few rod soundings made at the site. This information is available to bidders, but the contractor shall assume responsibility for lengths of piling selected for driving.

**PROPOSED STRUCTURE**  
 TYPE: Reerected steel truss with new timber deck, new timber approach spans, and new timber substructures.  
 SPAN: 75.57' overall.  
 ROW: 12.13"  
 LOADING: S-12-40.  
 SKEW: None.  
 SURF COURSE: None.



STATE OF OHIO  
DEPARTMENT OF HIGHWAYS  
BUREAU OF BRIDGES

**SITE PLAN**  
 BRIDGE OVER HUFF RUN  
 HARRISON COUNTY  
 HAS-799-3.20 BRIDGE NO-HA-799-33

JULY 1942 STATION 15+85 SCALE 1"=20'

EXISTING TOPOGRAPHY	PROPOSED WORK
SURVEYD	DRAWN
TRACED	DESIGN
WCR	HGM
	REVIEWED

Revised 10-13-48

### GENERAL NOTES

The disassembled low-truss bridge, which formerly spanned Brushy Fork 2 miles downstream from this site, shall be hauled from the storage lot of the State Highway Division Garage at New Philadelphia and re-erected complete, as per plan.

Truss "A" has top chord of 5" channels and 10" x 1/4" cover-plate.

Truss "B" has top chord of 7" channels and 12" x 1/4" cover-plate.

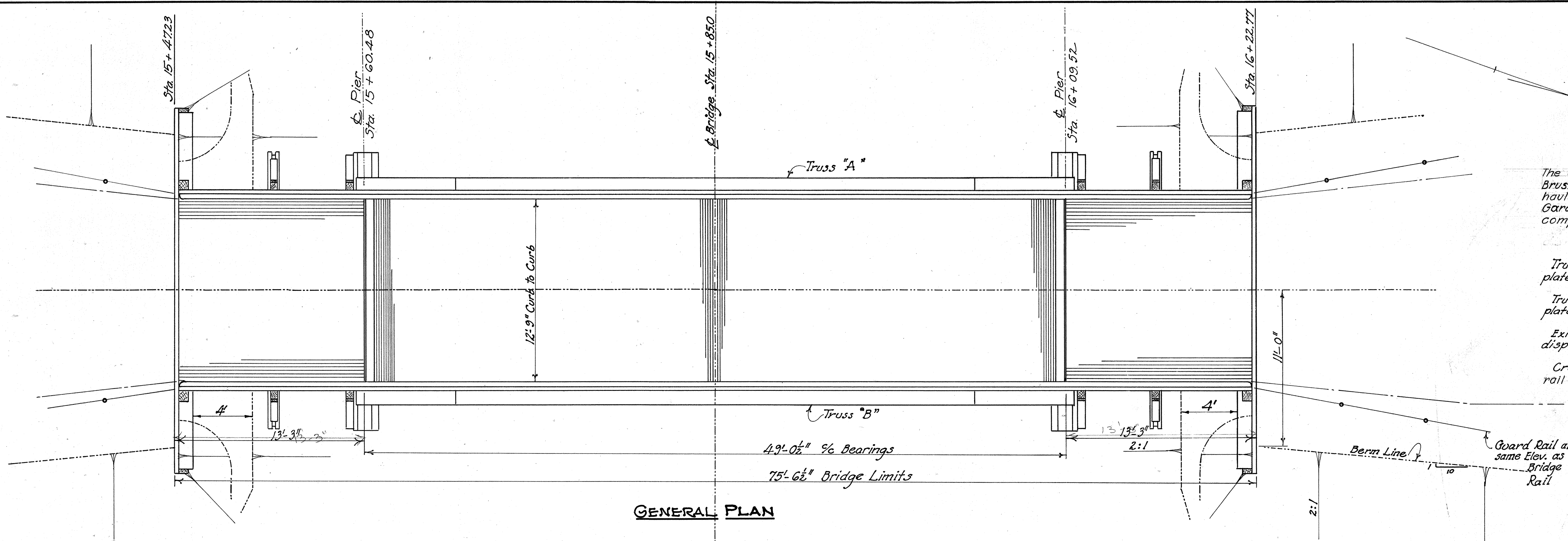
Existing concrete structure shall be removed and disposed of in embankment.

Creosoting. New bridge timber, except railing rail and rail on re-used steel railing, shall be creosoted.

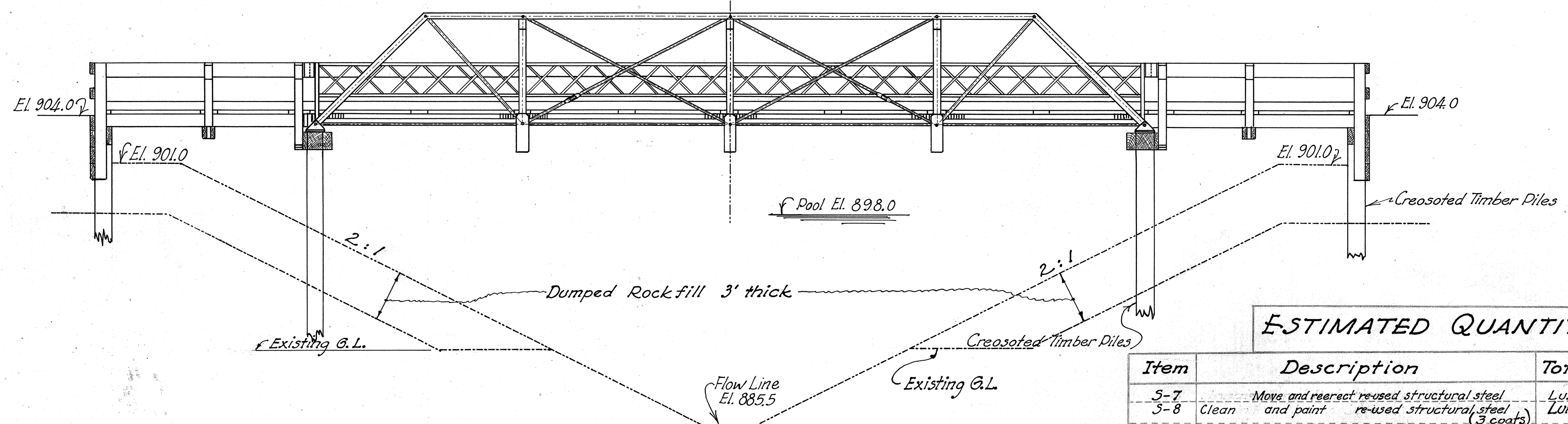
Painting. Structural steel shall be thoroughly cleaned and painted one prime coat and two field coats, Sec. 5-8.06, except the two field coats for the stringers shall be graphite paint, Sec. M-9.11.

Piling shall be driven to a minimum bearing capacity of 15 tons.

Dumped Rock Fill is included with roadway quantities, for payment.



GENERAL PLAN



GENERAL ELEVATION.

### ESTIMATED QUANTITIES

Item	Description	Total	Unit	Change Order	Final Quantity
5-7	Move and reerect re-used structural steel	Lump	Sum		Lump
5-8	Clean and paint re-used structural steel (3 coats)	Lump	Sum		Lump
5-13	Bridge Timber (creosoted)	3.04	MBM		3.04
5-13	3" x 10" Strip Flooring (creosoted)	365	Sq. Ft.		365
5-13	3" x 4" strip flooring (creosoted)	686	Sq. Ft.		686
5-14	Timber Railing, including Posts & Braces	76	Lin. Ft.		76
5-14	Timber Rail on re-used Steel Railing	98	Lin. Ft.		98
5-16	First Test Pile	Lump	Sum		Lump
5-18	Timber Piling (creosoted)	700	Lin. Ft.	1,440,455.5	995.5
5-24	Remove Existing Concrete Structure	Lump	Sum		Lump
E-3	Channel excavation	29	Cu. Yd.		29

STATE OF OHIO  
DEPARTMENT OF HIGHWAYS  
BUREAU OF BRIDGES

**GENERAL ARRANGEMENT,  
NOTES, QUANTITIES**  
BRIDGE NO. HA-799-33  
OVER HUFF RUN

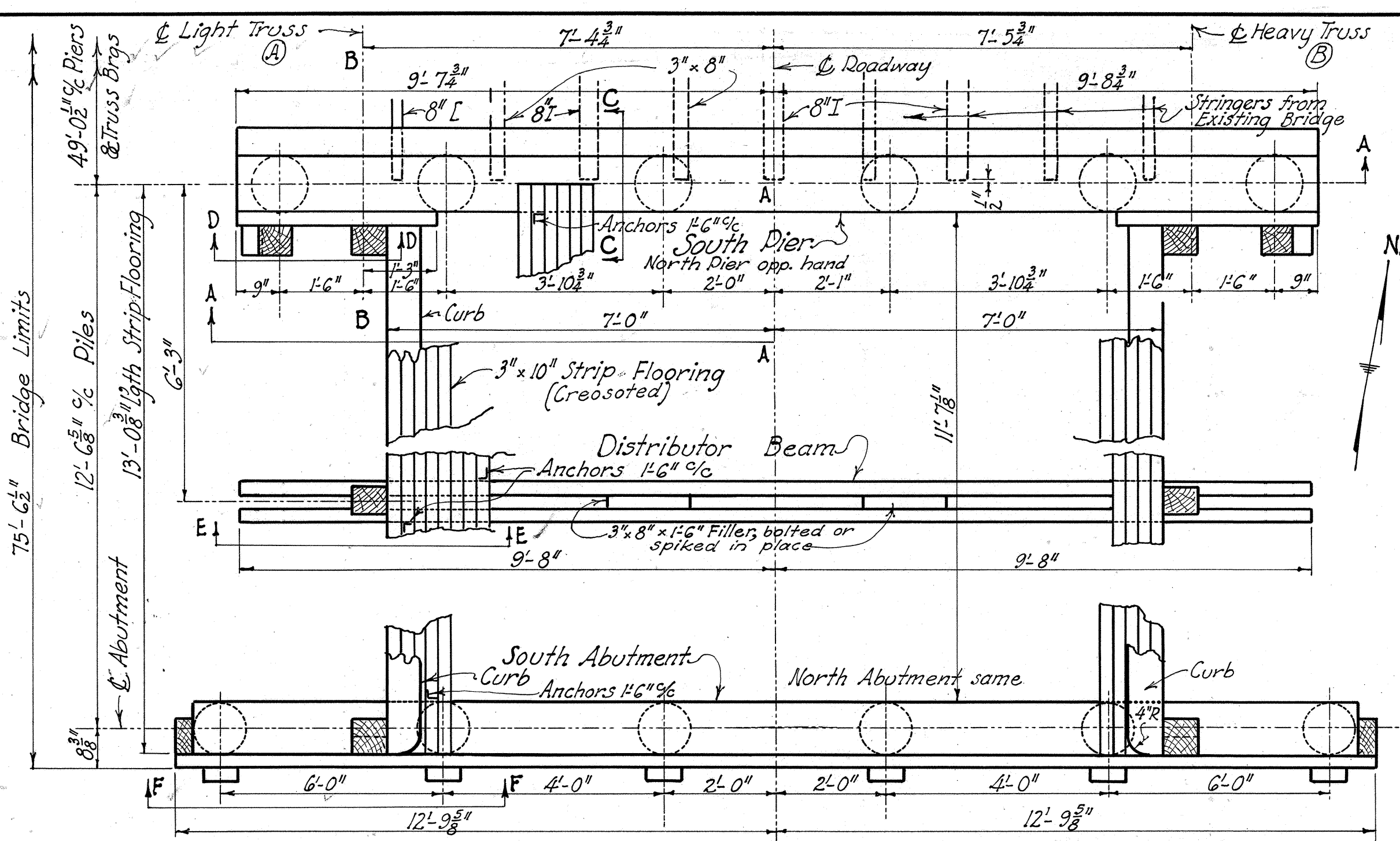
HARRISON Co.  
HA5-799-3.20

DESIGNED: FHS  
DRAWN: FHS  
CHECKED: [Signature]  
REVIEWED: [Signature]  
DATE: 9-10-48

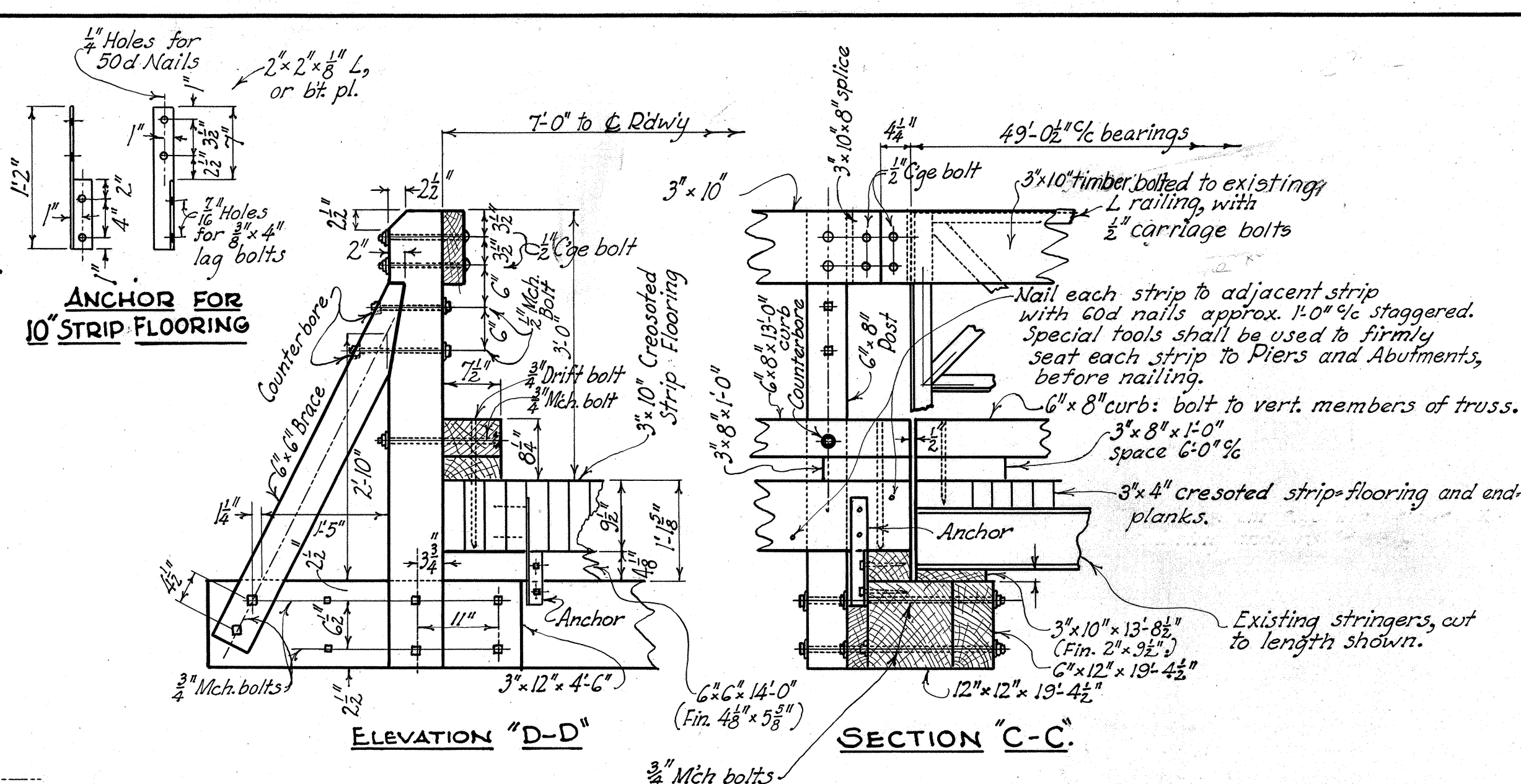
STA. 15+85.0  
REVISION: 10-13-48

Revised As-Built

HARRISON COUNTY,  
HAS-799-3.20

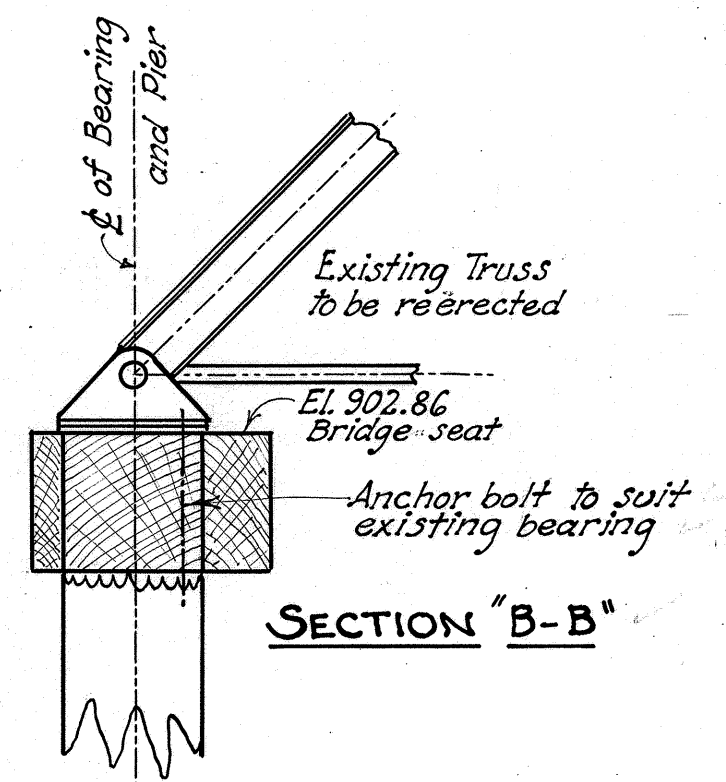


PLAN OF APPROACH SPAN.

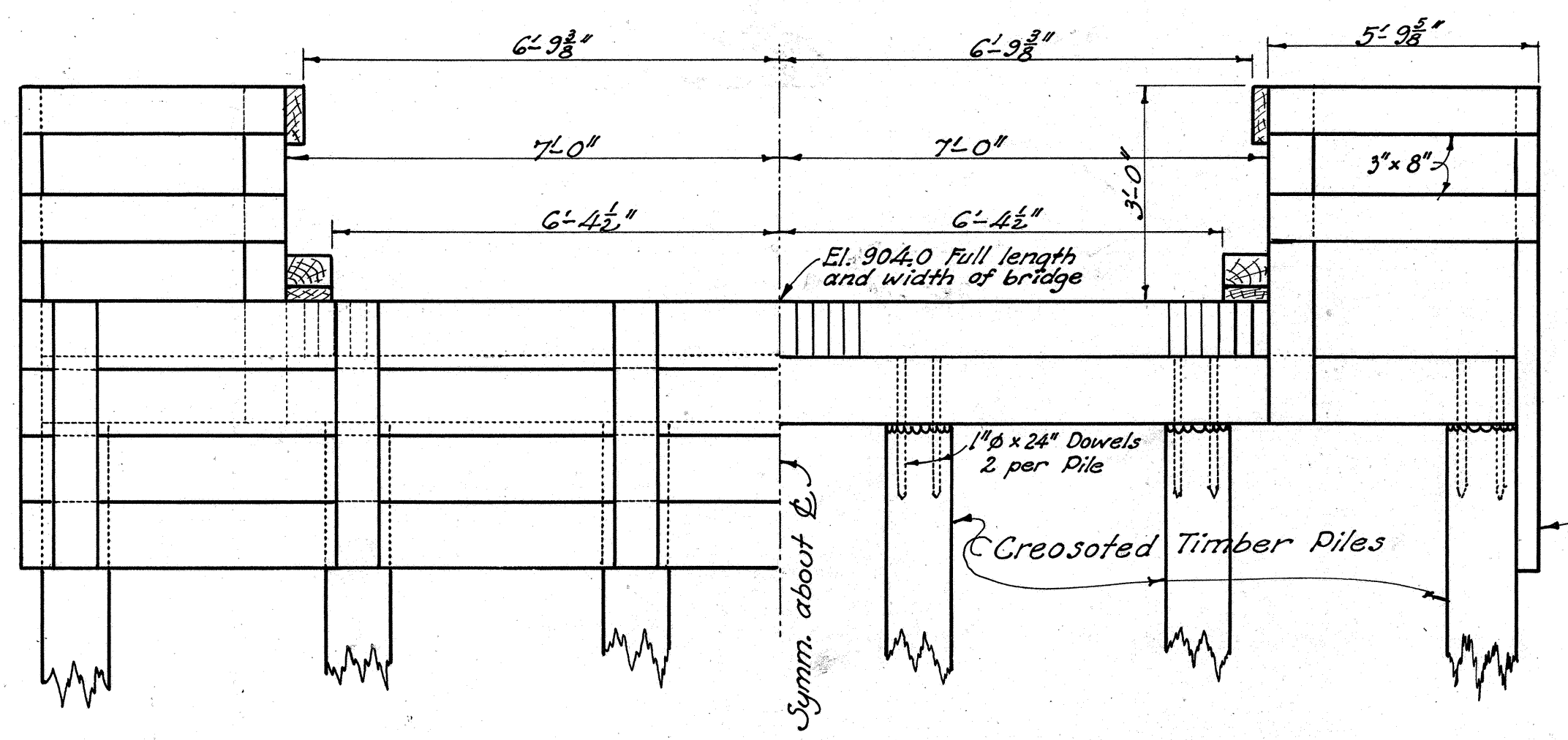


ELEVATION "D-D"

SECTION "C-C"

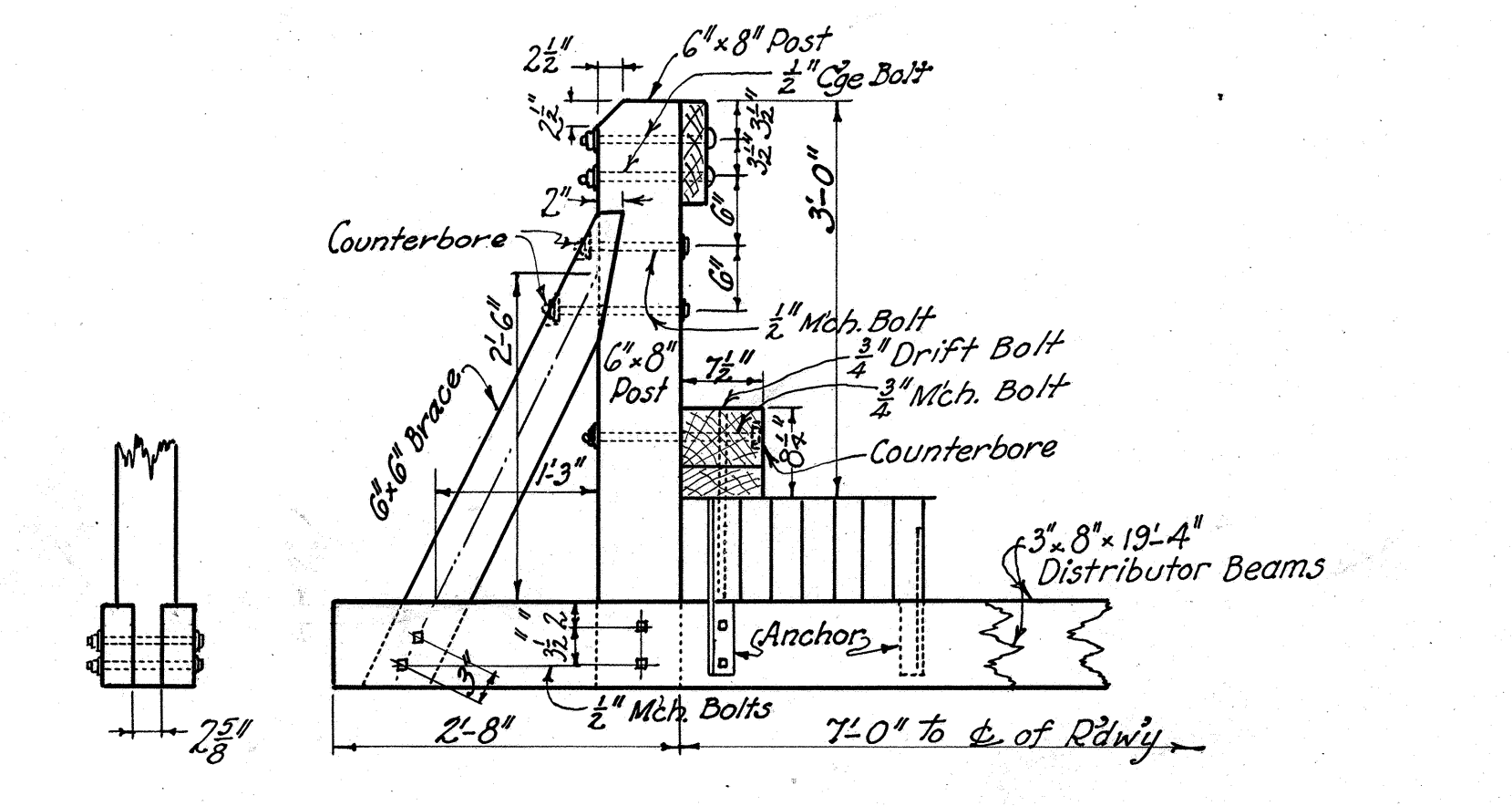


SECTION "B-B"

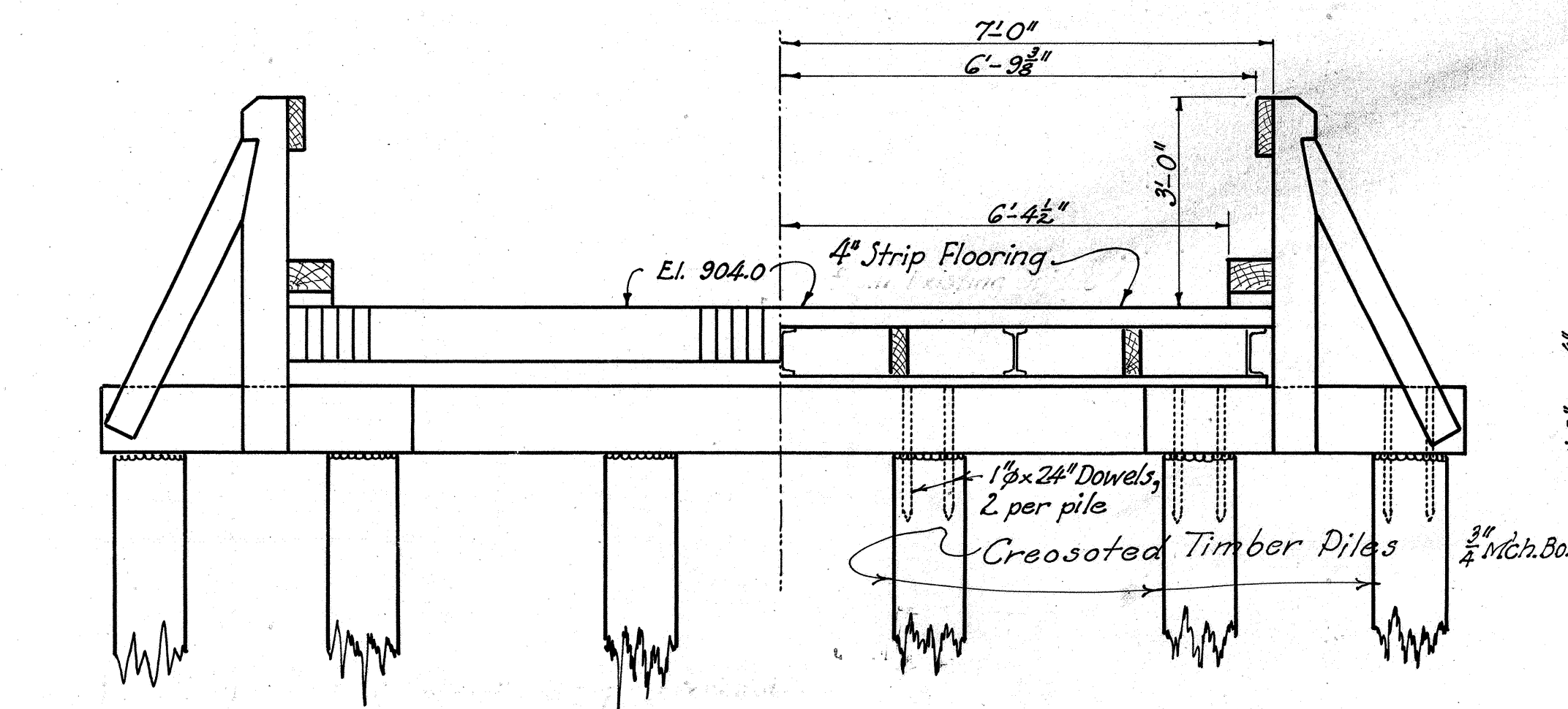


HALF ELEVATION OF ABUTMENT

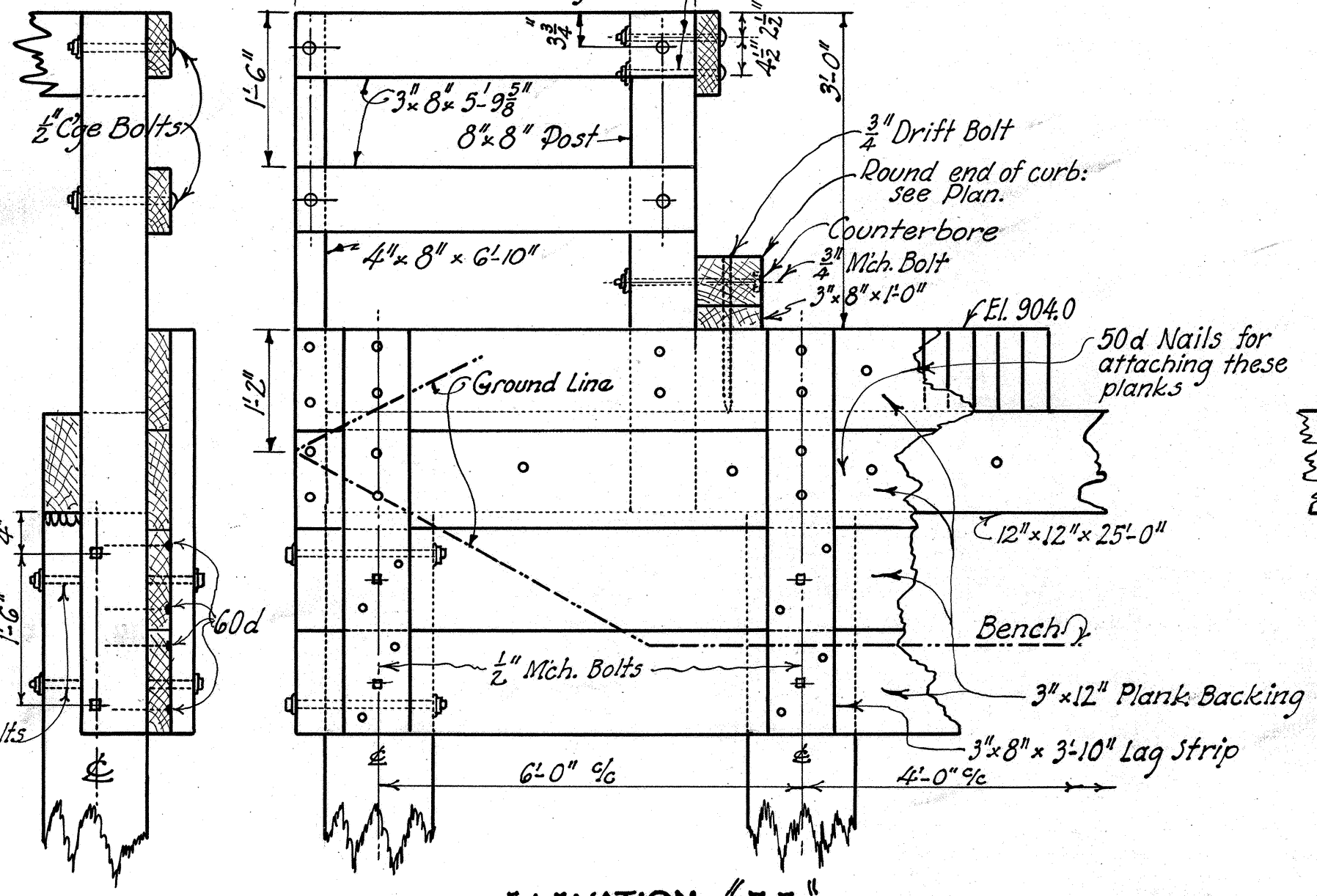
HALF ELEV. OF ABT. WITHOUT PLANK BACKING



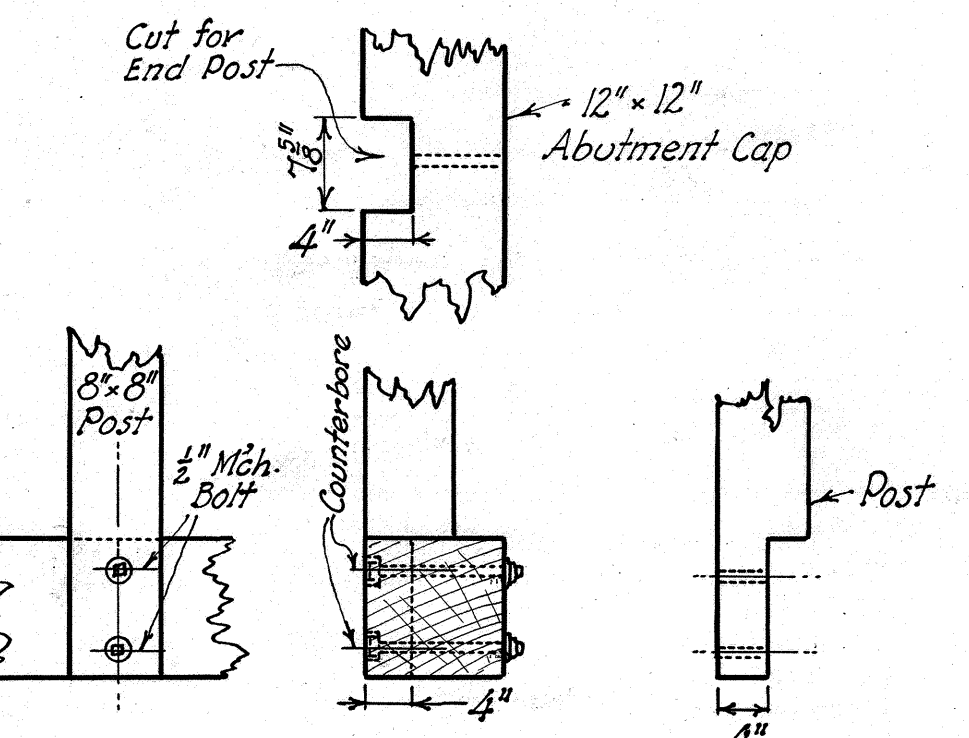
SECTION "E-E"



SECTION "A-A"  
SHOWING SOUTH PIER.



ELEVATION "F-F"



DETAIL OF END POST CONNECTION  
TO ABUTMENT CAP  
(PLANK BACKING NOT SHOWN.)

STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES					
DIERS AND ABUTMENTS BRIDGE NO. HA-799-33 OVER HUFF RUN					
HARRISON COUNTY HAS-799-3.20					
STA. 15 + 85.0					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
FHS	FHS	W.C.	W.C.	W.C.	7-10-43

DRAINAGE AREA 50 SQ. MILES

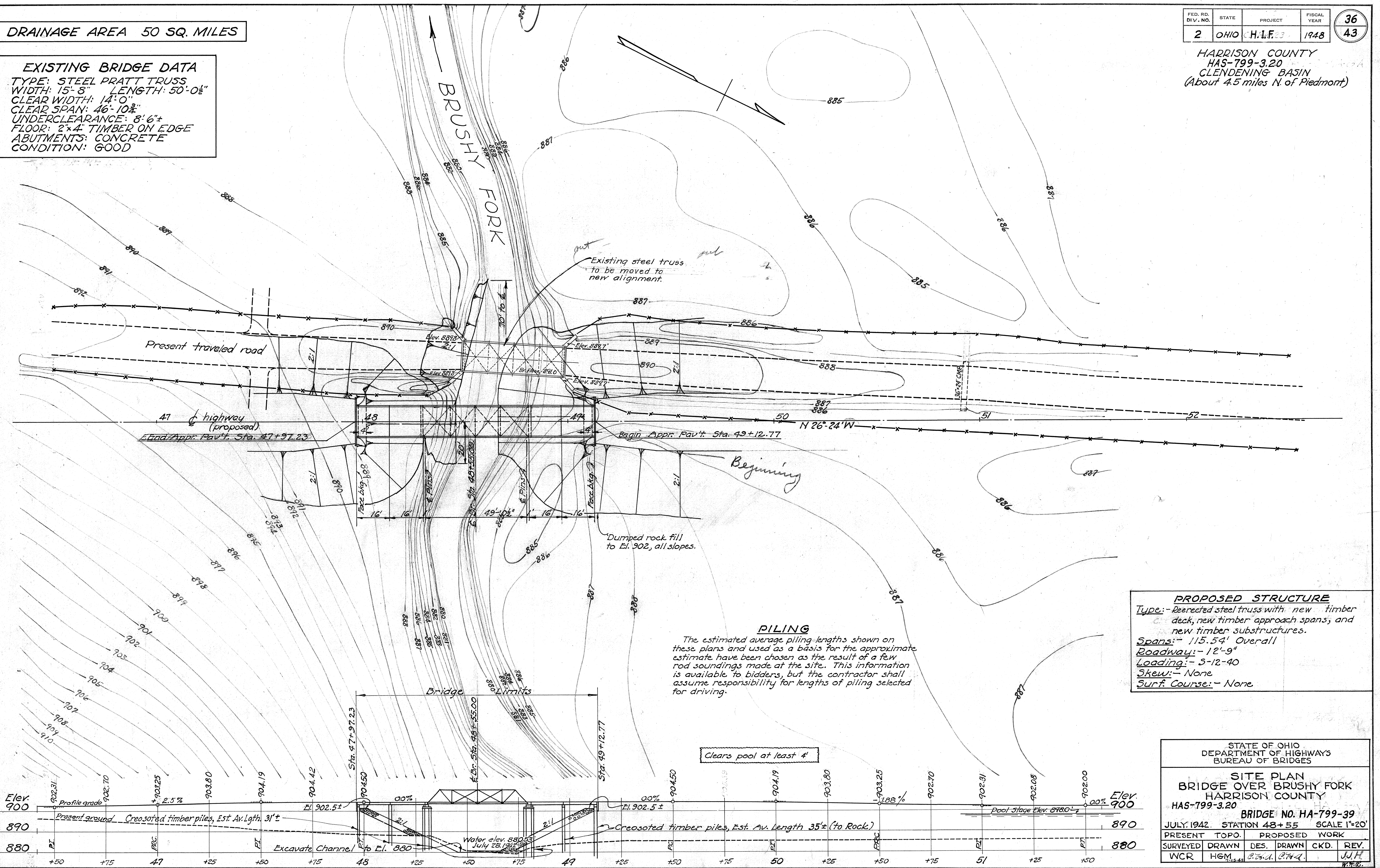
**EXISTING BRIDGE DATA**

TYPE: STEEL PRATT TRUSS  
 WIDTH: 15'-8" LENGTH: 50'-0"  
 CLEAR WIDTH: 14'-0"  
 CLEAR SPAN: 46'-10"  
 UNDERCLEARANCE: 8'-6"  
 FLOOR: 2x4 TIMBER ON EDGE  
 ABUTMENTS: CONCRETE  
 CONDITION: GOOD

FED. RD. DIV. NO.	STATE	PROJECT	FISCAL YEAR
2	OHIO	H.I.F. 23	1948

36  
43

HARRISON COUNTY  
 HAS-799-3.20  
 CLENDENING BASIN  
 (About 4.5 miles N. of Piedmont)



**PILING**

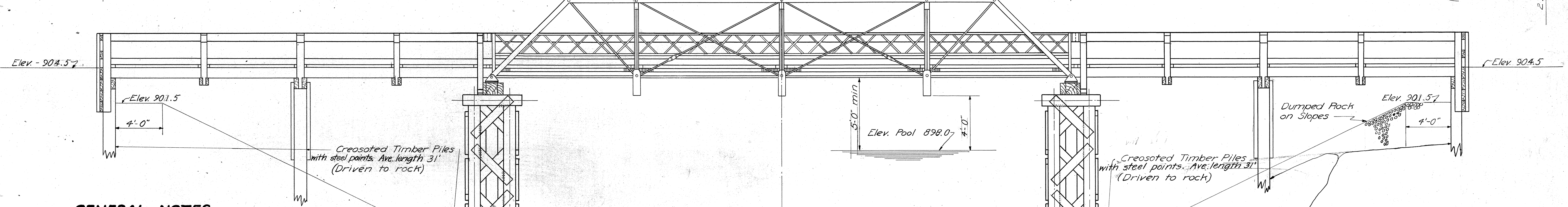
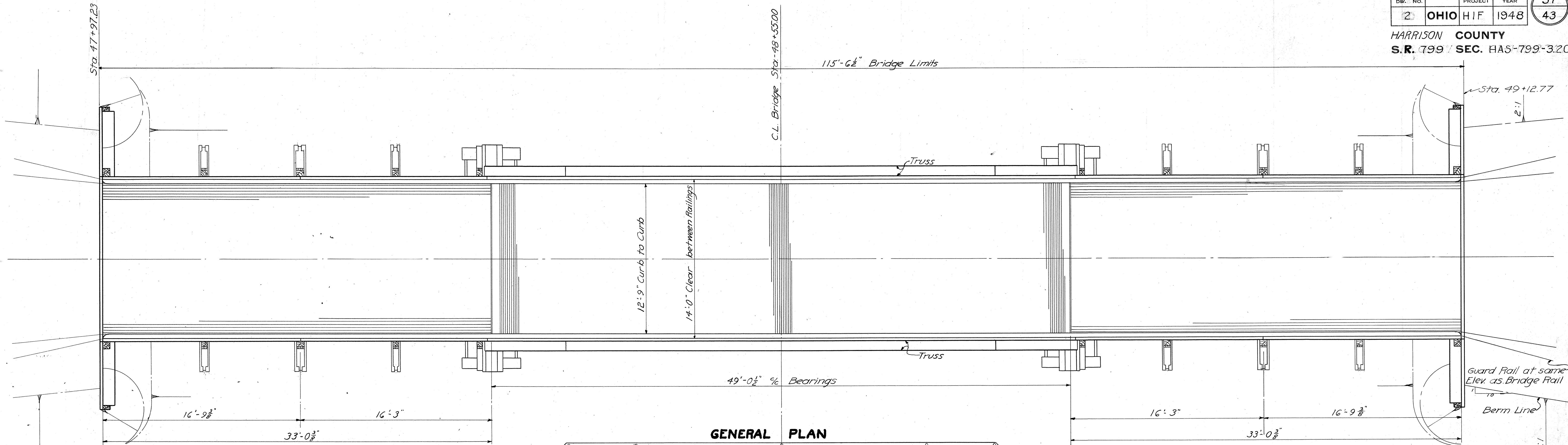
The estimated average piling lengths shown on these plans and used as a basis for the approximate estimate have been chosen as the result of a few rod soundings made at the site. This information is available to bidders, but the contractor shall assume responsibility for lengths of piling selected for driving.

**PROPOSED STRUCTURE**

Type: - Reerected steel truss with new timber deck, new timber approach spans, and new timber substructures.  
 Spans: - 115.54' Overall  
 Roadway: - 12'-9"  
 Loading: - 5-12-40  
 Skew: - None  
 Surf. Course: - None

STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES				
SITE PLAN BRIDGE OVER BRUSHY FORK HARRISON COUNTY HAS-799-3.20				
BRIDGE NO. HA-799-39				
JULY, 1942		STATION 48+55		SCALE 1"=20'
PRESENT TOPO.	PROPOSED WORK			
SURVEYED	DRAWN	DES.	DRAWN	CKD.
WCR	HGM	C.S.A.	C.F.A.	J.H.

Revised 10-13-48



**GENERAL NOTES**

**LOW TRUSS TYPE BRIDGE** shall be moved and erected on New Timber Piers.

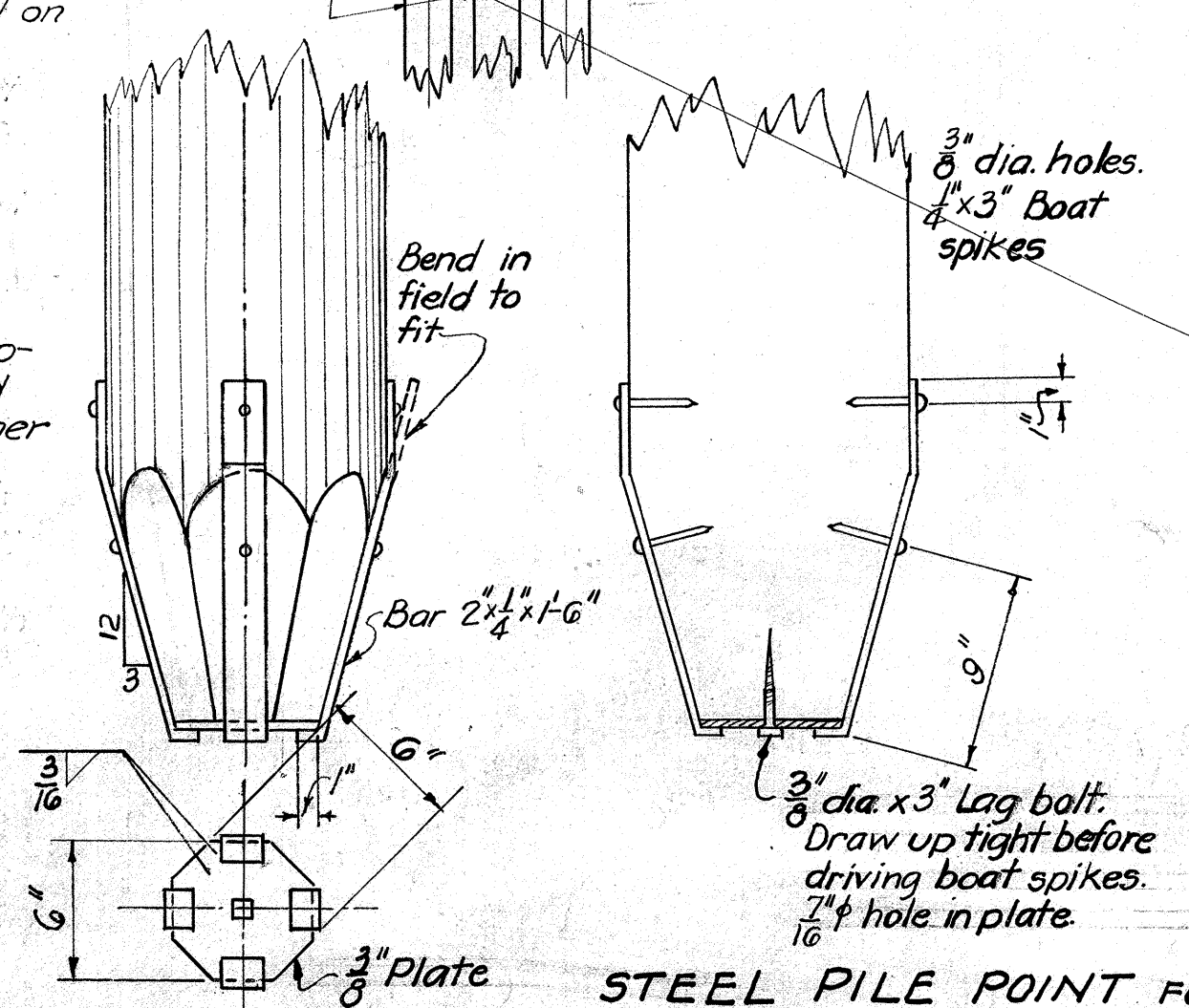
**EXISTING CONCRETE SUBSTRUCTURE** shall be removed to one foot below finished ground line and disposed of in Embankments.

**CREOSOTING** - All new Bridge Timber, except Railing Rail and Rail on existing steel railing, shall be creosoted.

**PAINTING** - Structural Steel shall be thoroughly cleaned and painted one prime coat and two field coats as per Sec. 5-8.06 except the two field coats for the stringers shall be graphite paint, Sec. M-9.11

**PILING** shall be driven to rock with a minimum Bearing Capacity of 18 Tons for Piles in Piers supporting Trusses and to a minimum Bearing Capacity of 15 Tons for all other piles.

**DUMPED ROCK FILL** is included with Roadway Quantities for payment.



STEEL PILE POINT FOR TIMBER PILES

**GENERAL QUANTITIES**

ITEM	DESCRIPTION	TOTAL
S-3	Stringing	
S-13	Bridge Timber (creosoted)	5.34 M.B.M.
S-13	3"x10" Strip Flooring (creosoted)	92.5 Sq. Ft.
S-14	Timber Railing (including Posts & Braces)	15.3 Lin. Ft.
S-14	Timber Rail on Existing Steel Railing	98 Lin. Ft.
S-10	Timber Piling (creosoted) including steel points	1344 Lin. Ft.
S-7	Moving and re-erecting existing superstructure	Lump Sum
S-8	Cleaning & Painting Existing Structural Steel (3 coats)	Lump Sum
S-24	Removal of Existing Substructure (as per plan)	Lump Sum
S-16	First Test Pile	Lump
S-18	Steel pile points	42
S-13	3"x4" strip-flooring (creosoted)	687 Sq. ft.
E-3	Channel excavation	136 Cu. yd.

**AS BUILT QUANTITIES**

Item	Change Order	Final Quantity
S-13		5.34
S-13		92.5
S-14		15.3
S-14		98
S-10	#2, +156.6	1500.6
S-7		Lump
S-8		Lump
S-24		Lump
S-16		Lump
S-18		42
S-13		687
E-3		136

STATE OF OHIO  
DEPARTMENT OF HIGHWAYS  
BUREAU OF BRIDGES

**GENERAL ARRANGEMENT AND NOTES & QUANTITIES**

BRIDGE NO. HA-799-39  
OVER BRUSHY FORK

HARRISON CO. SEC. HAS-799-3.20		S.R. 799 STA. 48+55.00	
DESIGNED	DRAWN	TRACED	CHECKED
FHS	FHS	RS	W.C.
DATE	DATE	DATE	DATE
		10-13-48	9-10-48



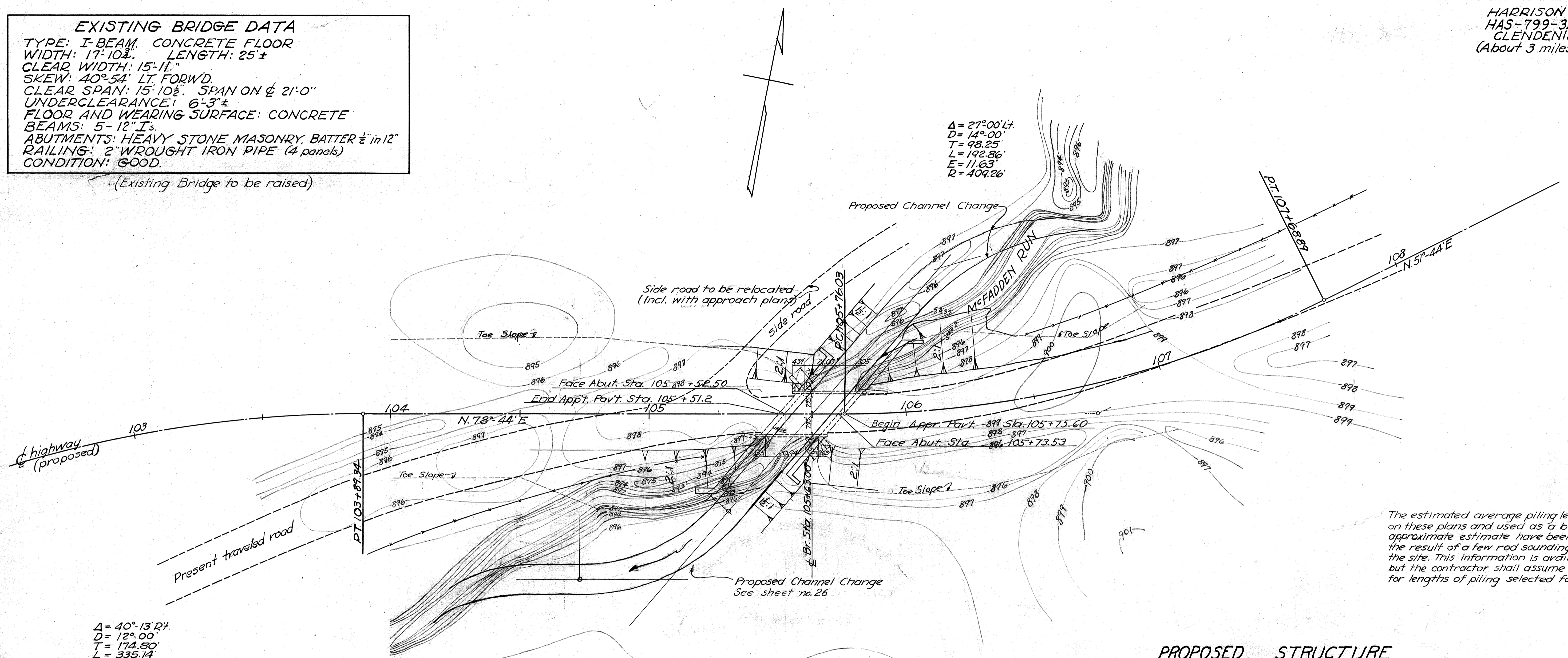
DRAINAGE AREA 7 SQ. MILES

FED. RD. DIV. NO.	STATE	PROJECT	FISCAL YEAR	39
2	OHIO	H.I.F.	1948	43

**EXISTING BRIDGE DATA**  
 TYPE: I-BEAM CONCRETE FLOOR  
 WIDTH: 17'-10". LENGTH: 25'±  
 CLEAR WIDTH: 15'-11"  
 SKEW: 40°-54' LT. FORWD.  
 CLEAR SPAN: 15'-10". SPAN ON  $\phi$  21'-0"  
 UNDERCLEARANCE: 6'-3"±  
 FLOOR AND WEARING SURFACE: CONCRETE  
 BEAMS: 5-12" I's.  
 ABUTMENTS: HEAVY STONE MASONRY. BATTER  $\frac{1}{2}$ " in 12"  
 RAILING: 2" WROUGHT IRON PIPE (4 panels)  
 CONDITION: GOOD.

(Existing Bridge to be raised)

HARRISON COUNTY  
 HAS-799-3.20  
 GLENDENING BASIN  
 (About 3 miles S. of Deersville)



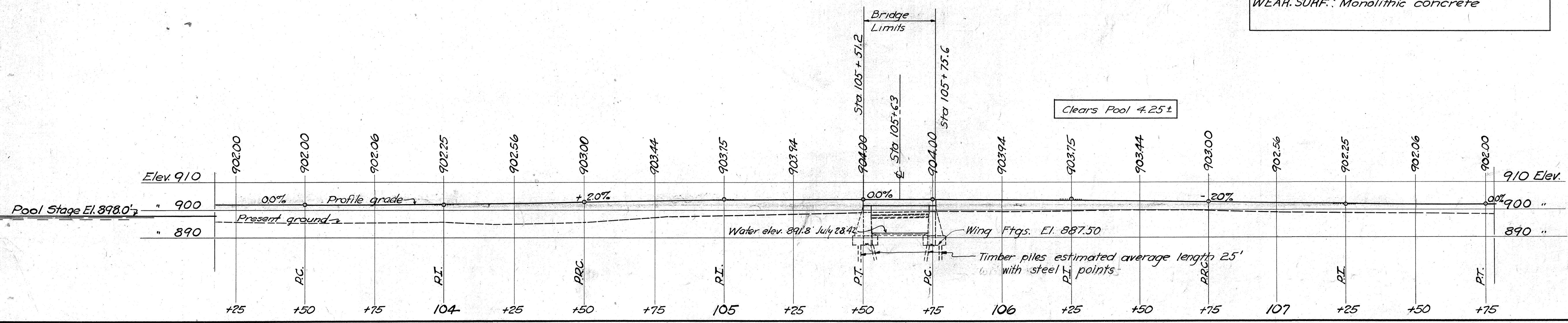
$\Delta = 27^\circ 00' \text{ Lt.}$   
 $D = 14^\circ 00'$   
 $T = 93.25'$   
 $L = 192.86'$   
 $E = 11.63'$   
 $R = 409.26'$

$\Delta = 40^\circ 13' \text{ Rt.}$   
 $D = 12^\circ 00'$   
 $T = 174.50'$   
 $L = 335.14'$   
 $E = 30.99'$   
 $R = 477.46'$

The estimated average piling lengths shown on these plans and used as a basis for the approximate estimate have been chosen as the result of a few rod soundings made at the site. This information is available to bidders, but the contractor shall assume responsibility for lengths of piling selected for driving.

**PROPOSED STRUCTURE**  
 TYPE: Steel beam with concrete deck to be raised by means of concrete cap on existing abutments; new concrete wings  
 SPAN: 21' clear  
 RDWY: 15'-11"  
 LOADING: H-15  
 SKEW: 40°-54' L.F.  
 WEAR. SURF.: Monolithic concrete

Appr. Pav't. 16' traffic bound End Appr. Ebnwork Sta. 105+50.50  $\phi$  Sta. 105+75.53



STATE OF OHIO  
 DEPARTMENT OF HIGHWAYS  
 BUREAU OF BRIDGES

**SITE PLAN**  
 BRIDGE OVER McFADDEN RUN  
 HARRISON COUNTY  
 HAS-799-3.20 BRIDGE NO. HA-799-50

JULY 1942 STATION 105+63 SCALE 1"=20'

EXISTING TOPOGRAPHY	PROPOSED WORK
SURVEYED DRAWN	TRACED DESIGN DRAWN
WCR	HGM
	2.8.4. 2.8.4. 1/12/48

Revised 10-13-48

### GENERAL NOTES

**EXISTING BRIDGE:**

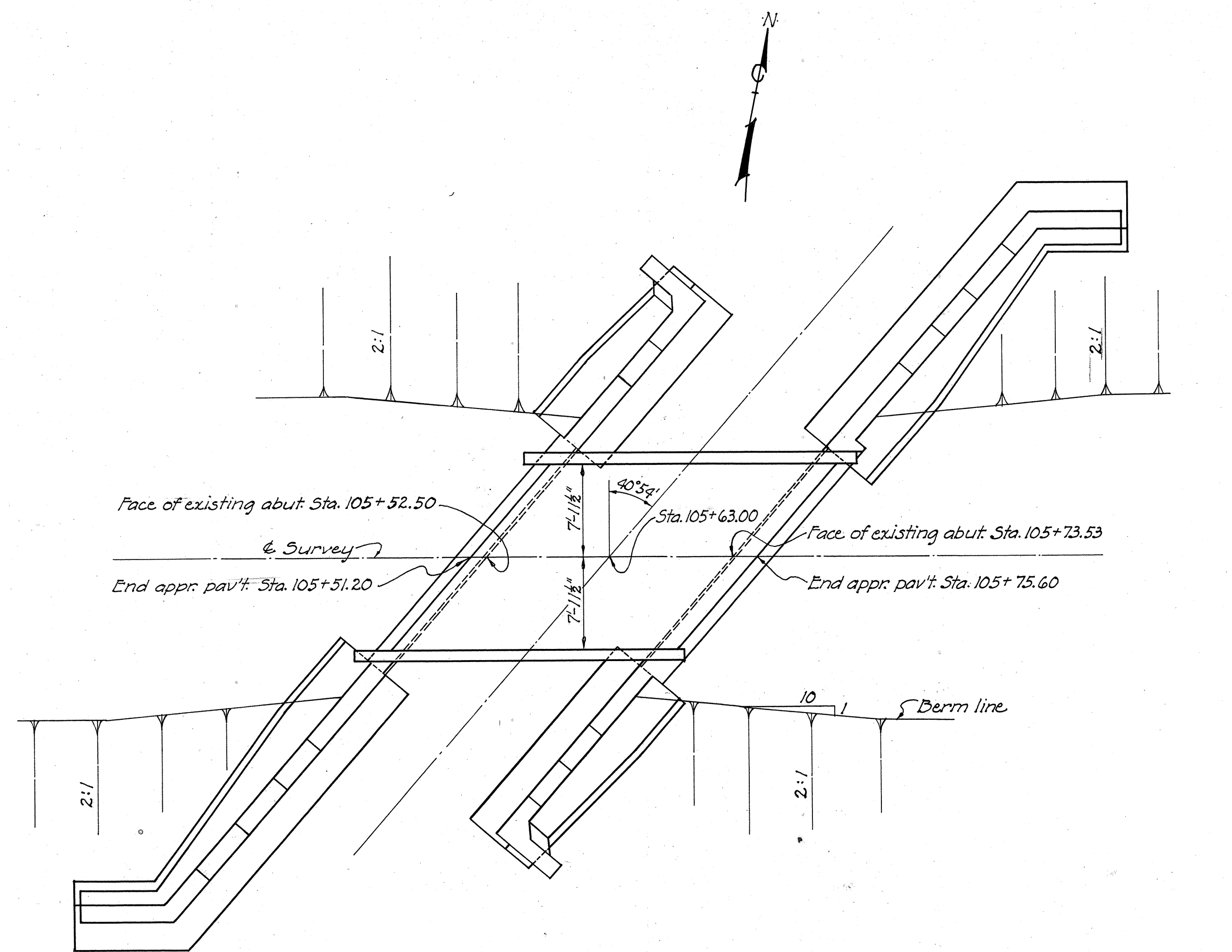
Existing superstructure shall be raised to new grade line and reused without alteration. The structural steel shall be cleaned, spot painted and given two field coats of paint. Contractor shall take all necessary precautions during the lifting operations to avoid damage to the superstructure, and to leave it in a condition as good as before the work was done. Existing stone abutments shall be capped with concrete and existing breastwall extended with concrete wing walls.

**PILING:**

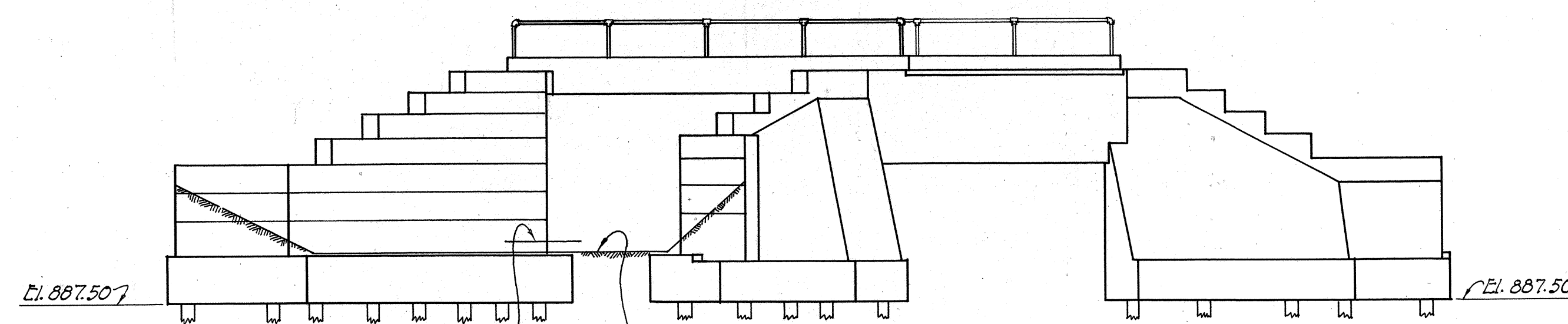
All piles shall be timber with steel points, driven to a minimum bearing capacity of 18 tons. Test pile should be driven near Sta. 105+90.00, 13'-0" left of C. of survey. For details of steel points see sheet No. 37.

**POROUS BACKFILL:**

Porous backfill 2'-0" thick shall extend up to a point 2'-0" below finished ground surface. Impervious soil shall be placed above this porous material.



GENERAL PLAN



SOUTH ELEVATION

REINFORCING STEEL LIST						Bending Diagram			
Mark	Size	No.	Length	Weight	Shape				
WEST ABUTMENT									
F4a	5/8"	33	4'-3"	150	Bt.				
A4a	5/8"	19	3'-9"	70	Bt.				
EAST ABUTMENT									
F4a	5/8"	33	4'-3"	150	Bt.				
A4a	5/8"	18	3'-9"	70	Bt.				
REPLACEMENT STEEL									
RE4	5/8"	1	6'-6"	10	Str.				

ESTIMATED QUANTITIES							
Item	Description	West Abut.	East Abut.	General	Total	Change Order	Final Quantity
E-2	Cofferdams and pumping			Lump	Lump Sum		Lump
E-2	Excavation for structures, wet	80	90		170 Cu. Yd.		170
E-2	Excavation for structures, dry	45	55		100 Cu. Yd.		100
S-1	Class "E" concrete, walls	63	68		131 Cu. Yd.		131
S-1	Class "E" concrete, footings	45	45		90 Cu. Yd.		90
S-3	Type "B" waterproofing	12	12		24 Sq. Yd.		24
S-4	Reinforcing steel	220	220	10	450 Lb.		450
S-9	4" Premolded expansion joint filler	8	13		21 Sq. Ft.		21
S-16	First test pile			Lump	Lump Sum		Lump
S-18	Untreated timber piling	500	500		1,000 Lin. Ft.	2,81.90	918.1
S-29	Porous backfill	35	40		75 Cu. Yd.		75
S-7	Raising existing superstructure			Lump	Lump Sum		Lump
S-18	Steel pile points	20	20		40		40
S-22	Removal of portions of existing structure			Lump	Lump Sum		Lump
E-3	Channel excavation			608	608 Cu. yd.		608
S-8	Cleaning, spot painting and two field coats			Lump	Lump Sum		Lump

STATE OF OHIO  
DEPARTMENT OF HIGHWAYS  
BUREAU OF BRIDGES

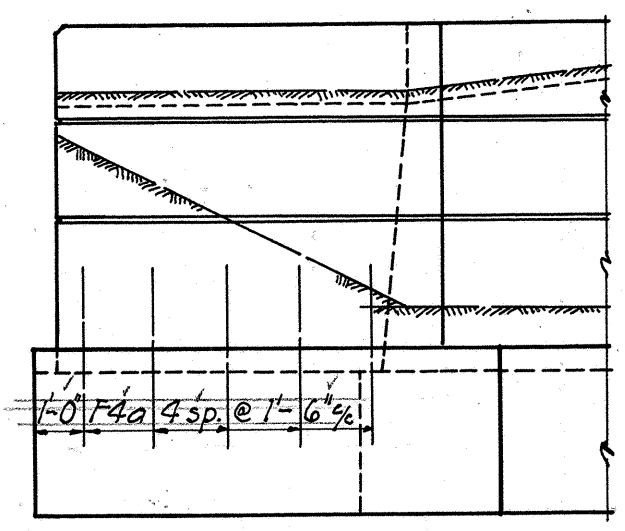
**GENERAL PLAN AND ELEVATION  
NOTES AND ESTIMATED QUANTITIES  
REINFORCING STEEL LIST  
BRIDGE OVER M<sup>c</sup>FADDEN RUN  
BRIDGE NO. HA-799-50  
SEC. HAS-799-3.20  
HARRISON COUNTY**

STA. 105+63.00

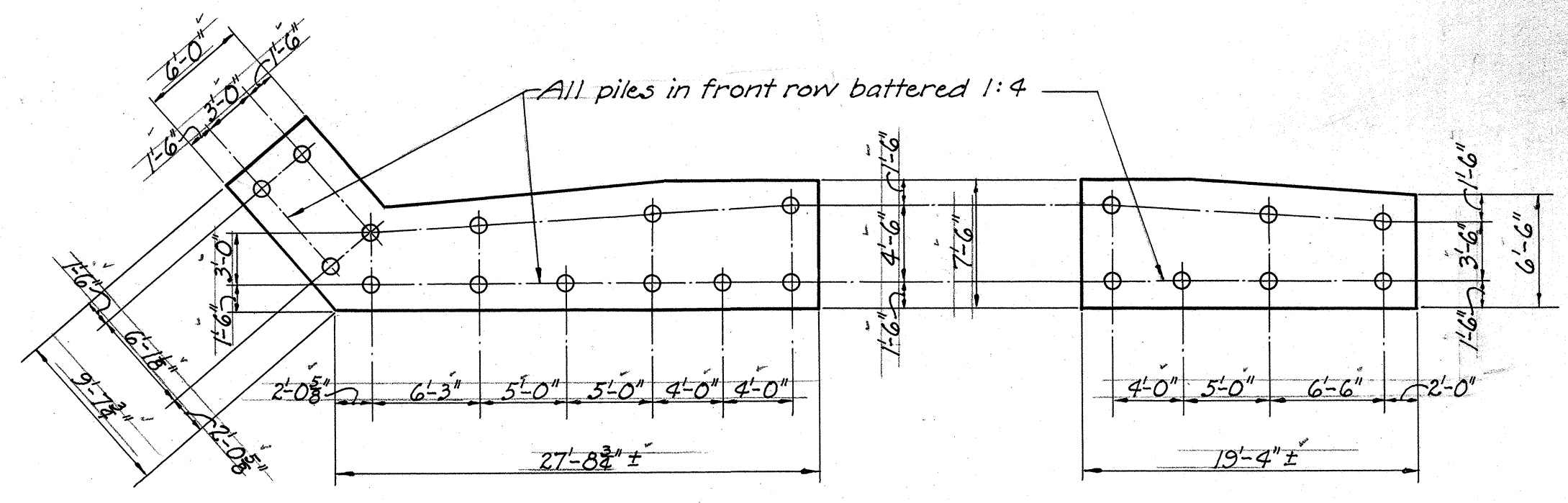
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BFG	BFG	JJA	C.S.D.	M.H.C.	9-8-48	9-13-48 10-13-48



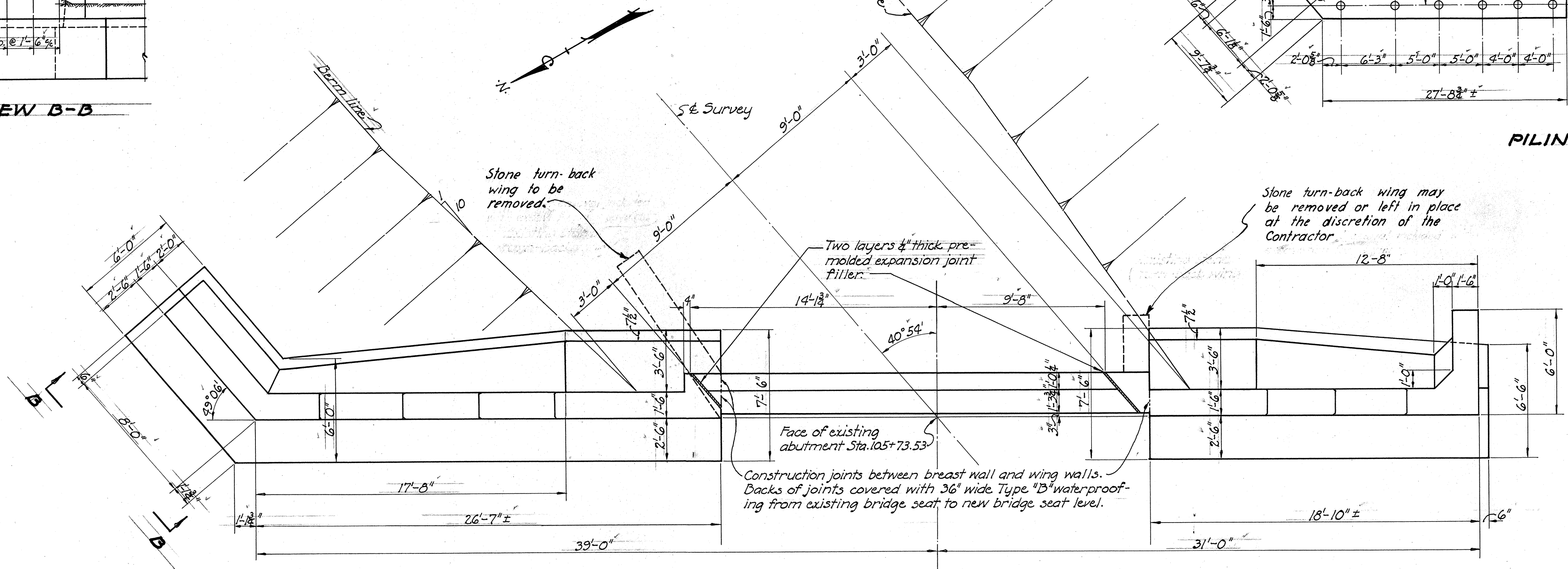
HARRISON COUNTY  
HAS-799-3.20



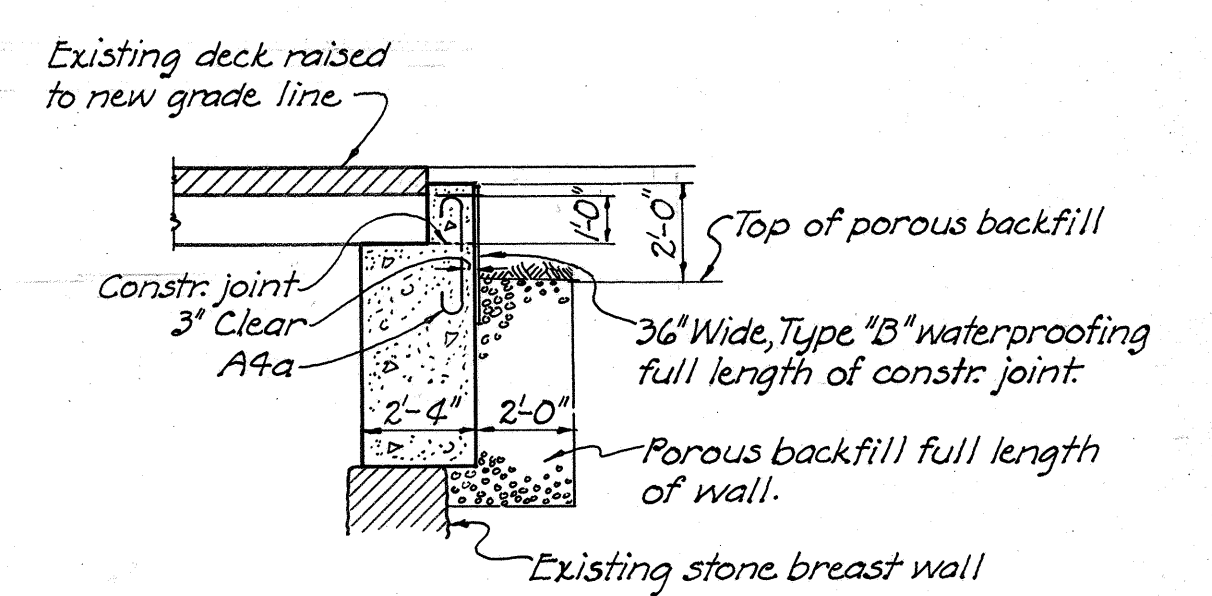
VIEW B-B



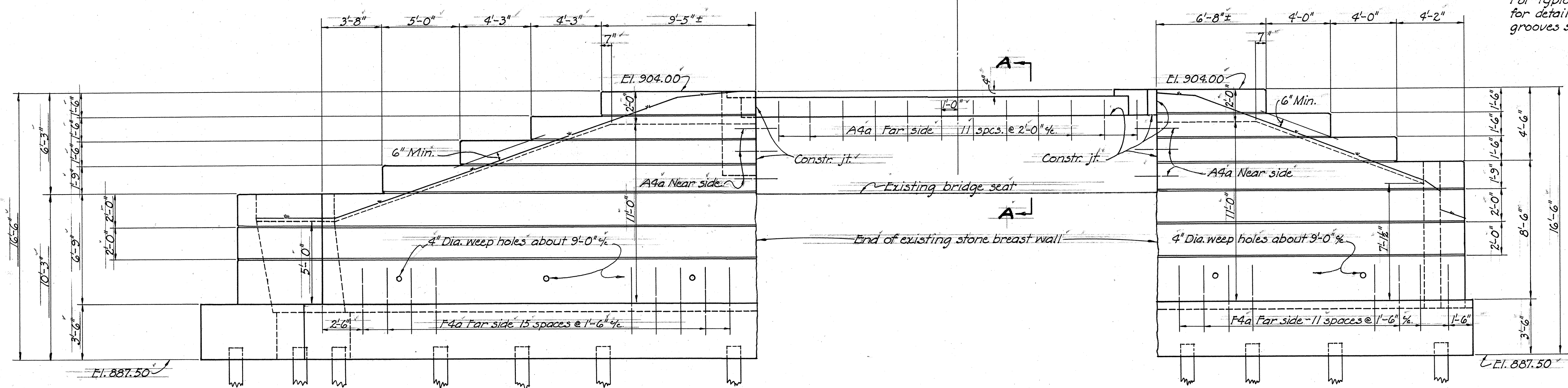
PILING DIAGRAM



PLAN OF EAST ABUTMENT

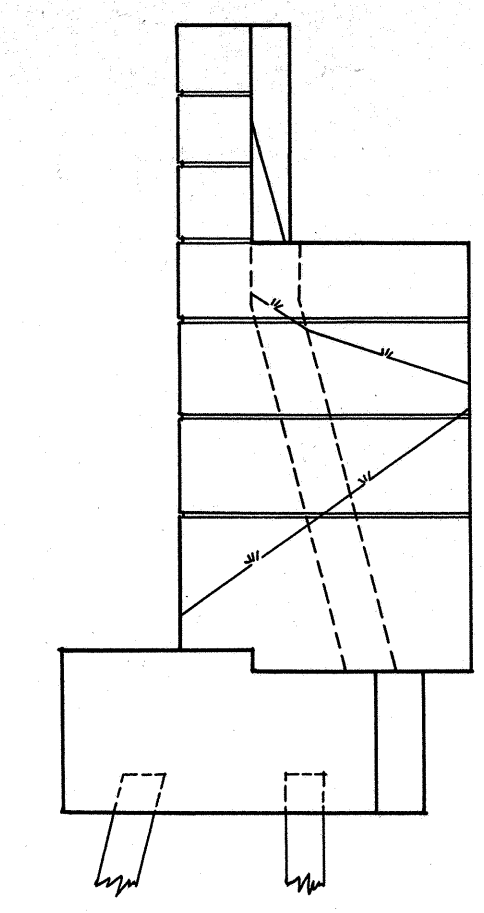


SECTION A-A



ELEVATION OF EAST ABUTMENT

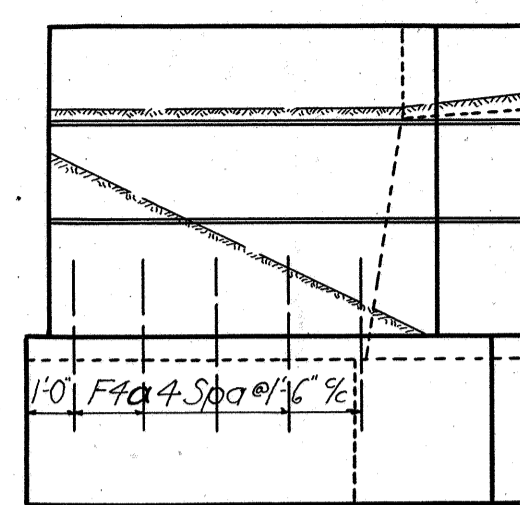
For typical wall section and for details of rustication grooves see Sheet No. 42



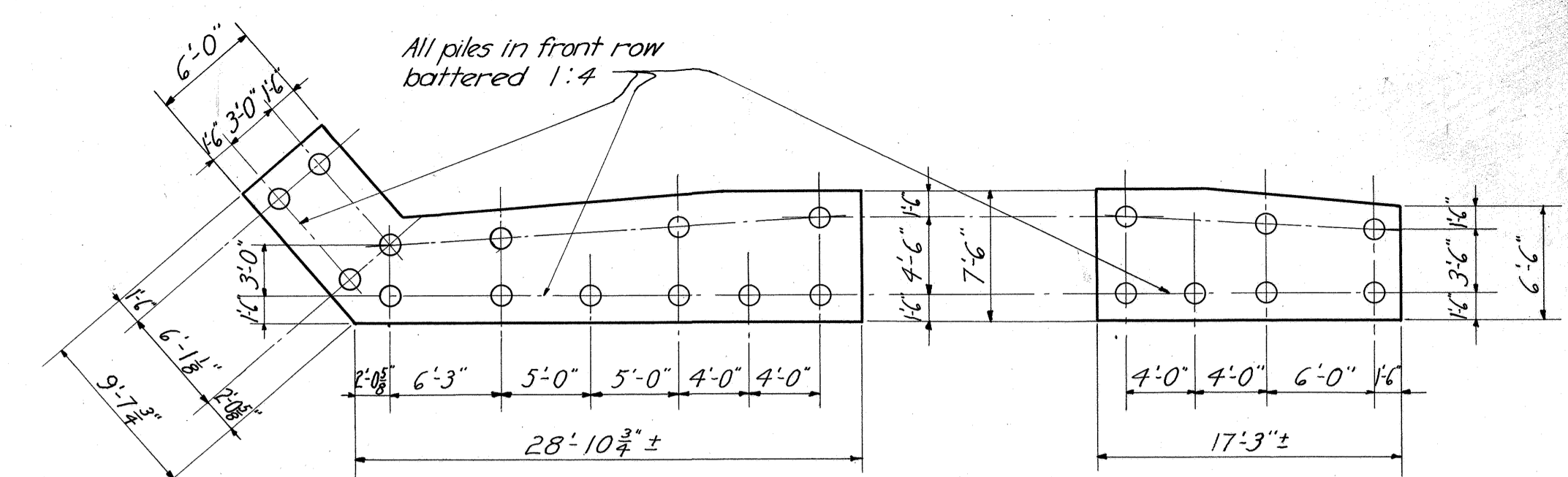
END ELEVATION

STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES						
<b>EAST ABUTMENT DETAILS</b>						
BRIDGE OVER McFADDEN RUN HAS-799-3.20 BRIDGE NO. HA-799-50						
HARRISON COUNTY STA. 105+63.00						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BFG	BFG	J.P.R.	C.S.D.	W.B.	9-8-43	7-13-48 10-13-48

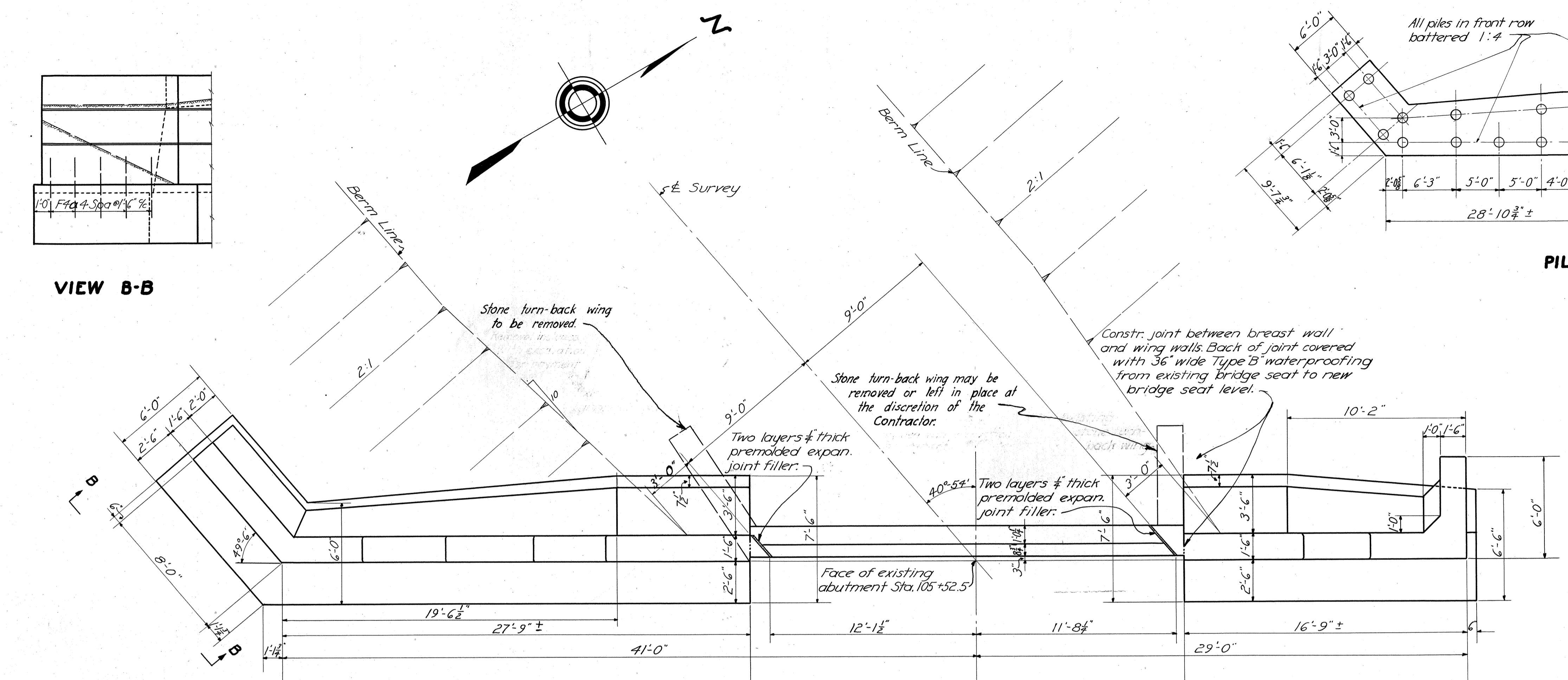
HARRISON COUNTY  
HAS-799-3.20



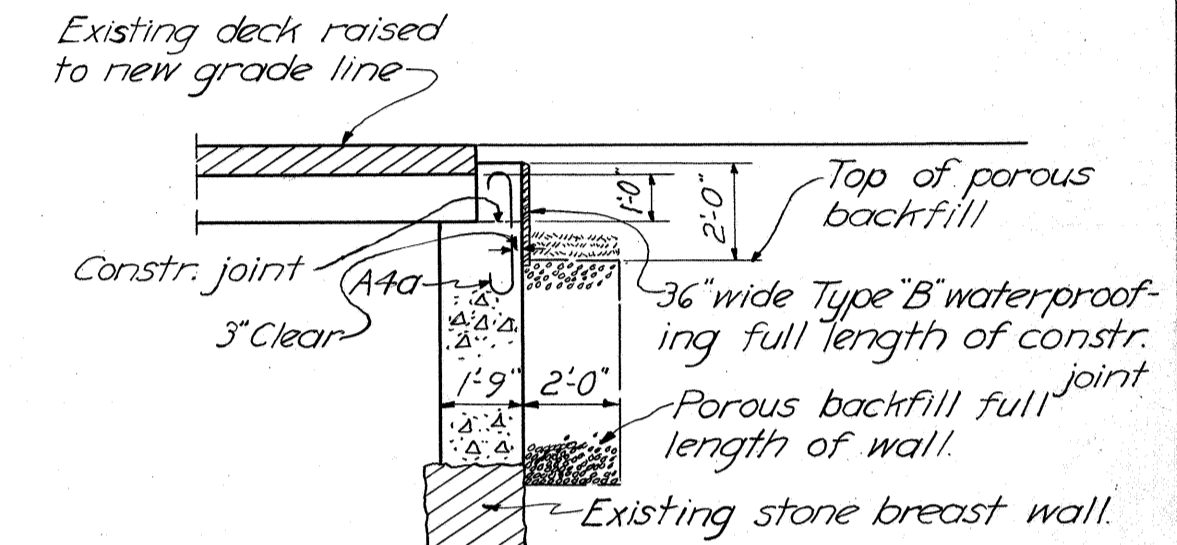
VIEW B-B



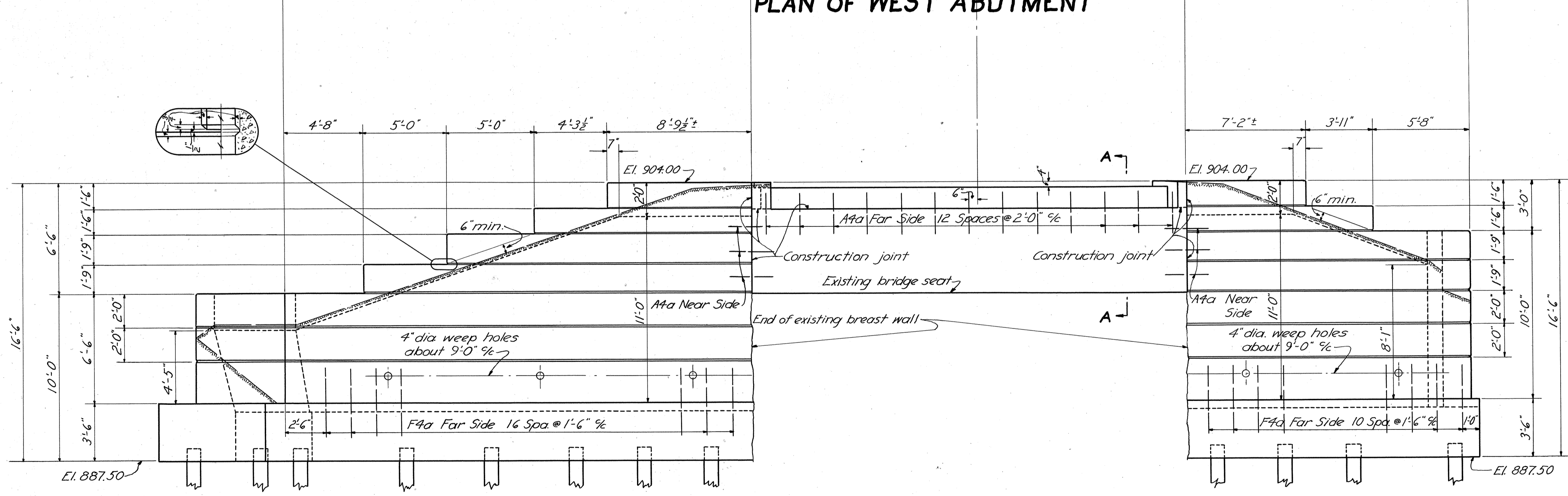
PILING DIAGRAM



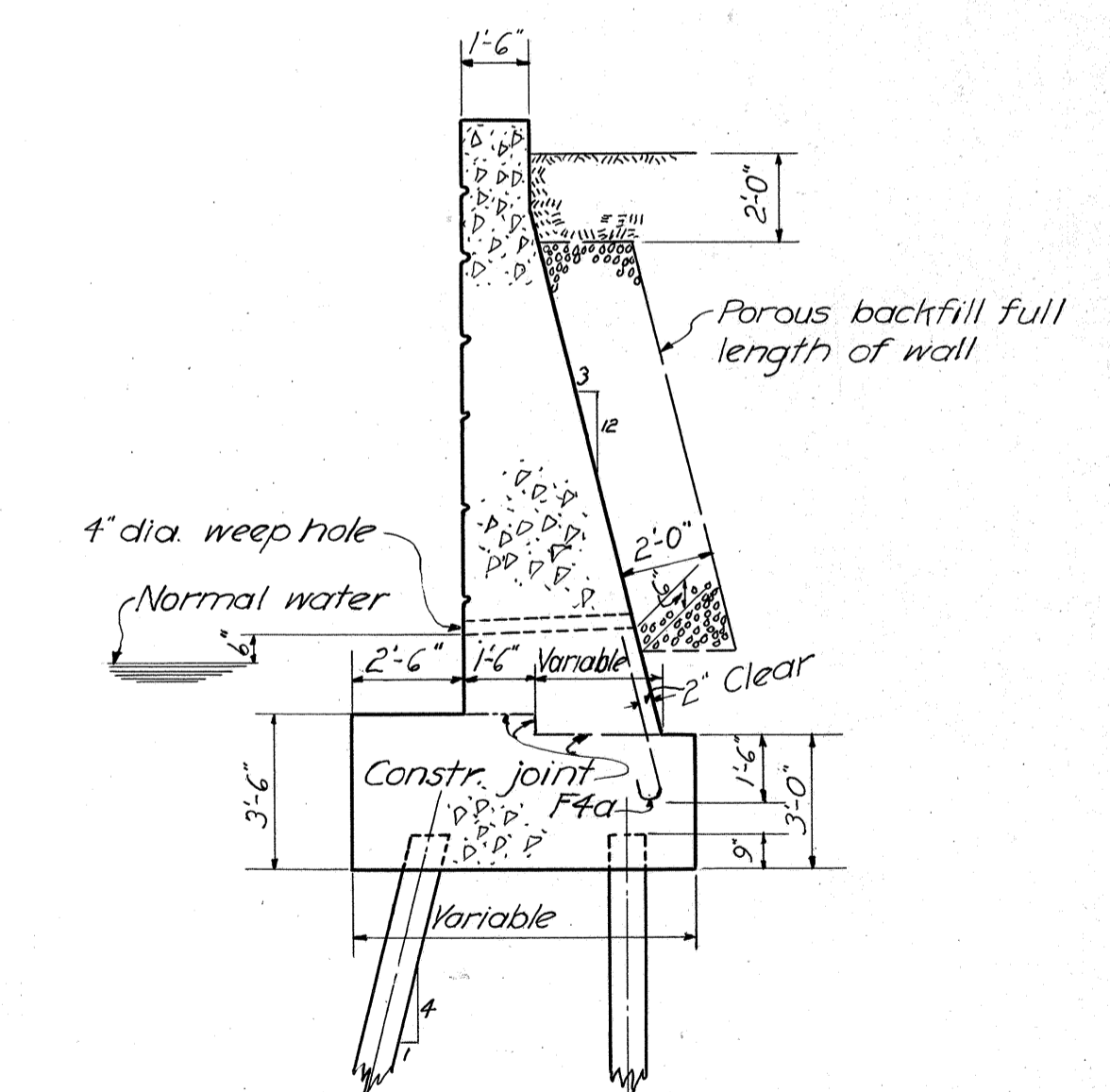
PLAN OF WEST ABUTMENT



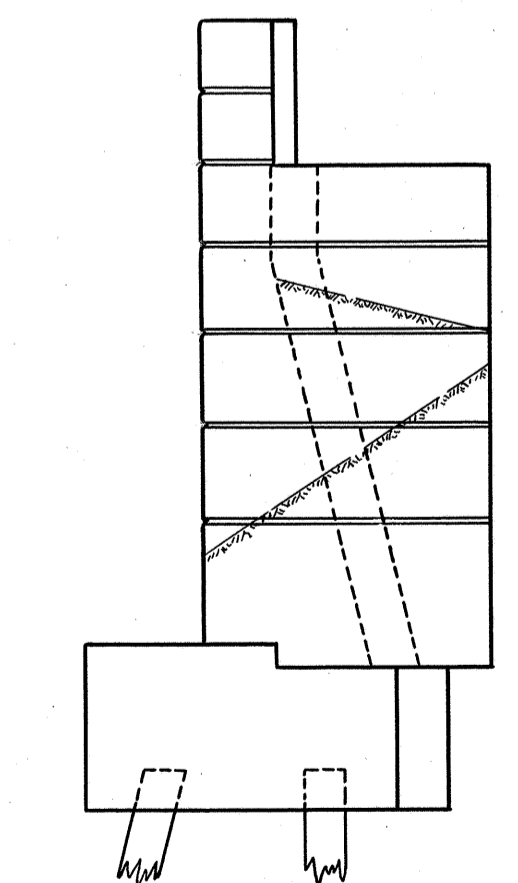
SECTION A-A



ELEVATION OF WEST ABUTMENT



TYPICAL WALL SECTION



END ELEVATION

STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES				
<b>WEST ABUTMENT DETAILS</b>				
BRIDGE OVER MCFADDEN RUN HAS-799-3.20 BRIDGE NO. HA-799-50				
HARRISON COUNTY			STA. 105+63.00	
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED
BFG	BFG	RS	W.H.C.	W.H.C.
			DATE	DATE
			9-8-43	9-13-48

