

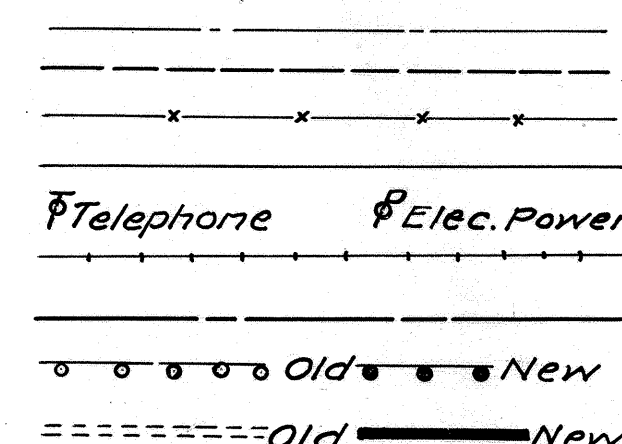
LIMITED ACCESS

This improvement is especially designed for through traffic and has been declared a limited access highway or freeway by action of the Director of Highways in accordance with the provisions of Section 5511.02 of the Revised Code of Ohio.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
COL-14A-7.94
COLUMBIANA AND MAHONING COUNTIES
FAIRFIELD AND BEAVER TOWNSHIPS
VILLAGE OF COLUMBIANA

CONVENTIONAL SIGNS

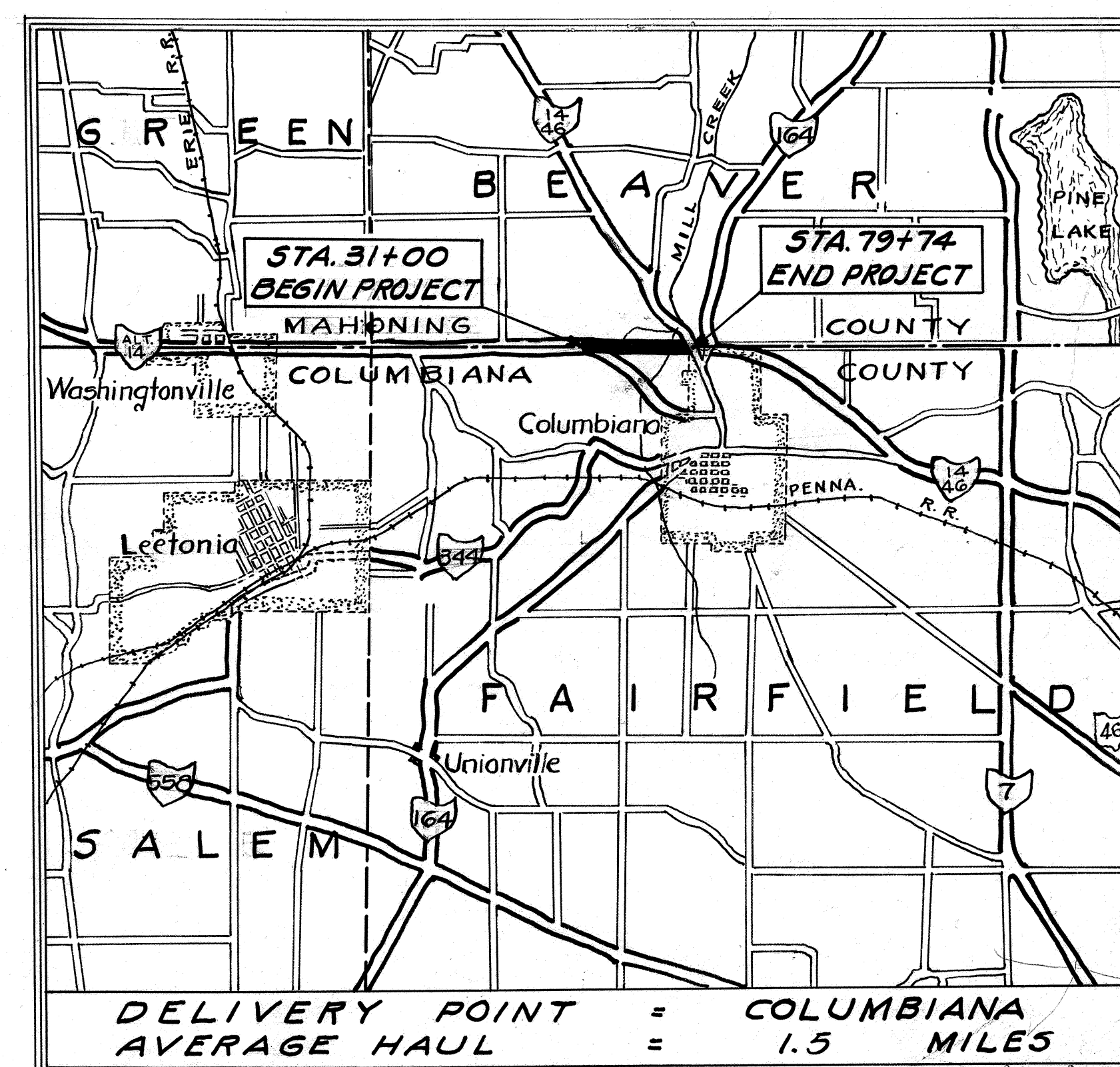
CENTER LINE
TOWNSHIP LINE
FENCE LINE
PROPERTY LINE
POLE LINE
RAILROAD
COUNTY LINE
GUARD RAIL
DRAIN PIPE



INDEX OF SHEETS

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LINE DATA	
BEGIN PROJECT AND RURAL	STA. 31+00
END RURAL	STA. 77+99.4
NET LENGTH OF RURAL	= 4699.4 LIN. FT. OR 0.890 MILE
BEGIN MUNICIPAL	STA. 77+99.4
END MUNICIPAL AND PROJECT	STA. 79+74
NET LENGTH OF MUNICIPAL	= 174.6 LIN. FT. OR 0.033 MILE
NET LENGTH OF PROJECT	= 4874 LIN. FT. OR 0.923 MILE
BEGIN WORK	STA. 30+50
END WORK	STA. 80+75
ADD FOR APPR. RT. STA. 39+45	535.53 LIN. FT.
NET LENGTH OF WORK	= 5560.53 LIN. FT. OR 1.053 MILES



LOCATION PLAN
Scale - 1" = 1 Mile

PORTION TO BE IMPROVED
STATE HIGHWAYS
OTHER ROADS

SCALES

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

REVIEWED AND APPROVED *[Signature]*
DATE 7/27/55 ENGINEER OF TRAFFIC

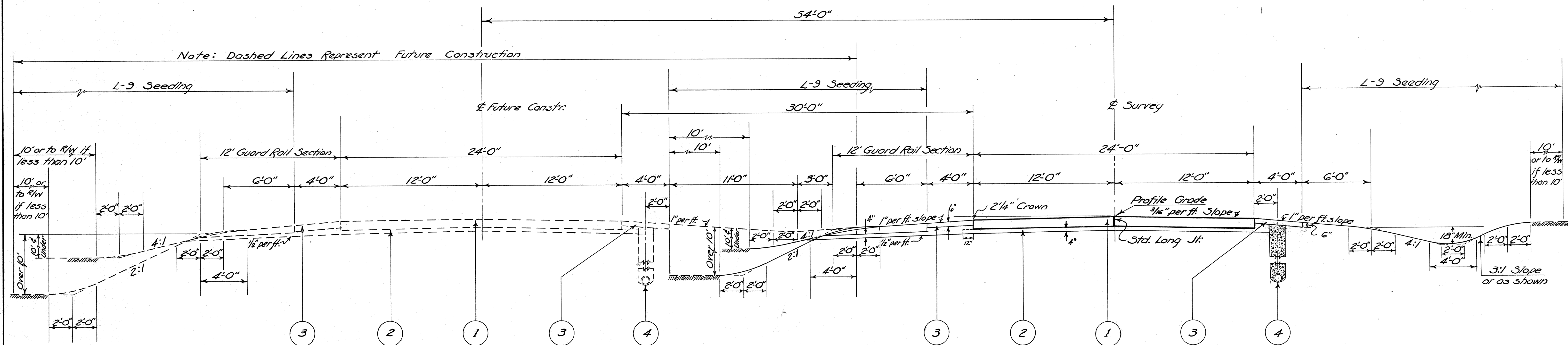
STANDARD DRAWINGS					
G-7.07	1-2-53	I-1, 2, 3, 4 & 5	2-20-45	B-T-71 R	3-2-53
T-35	10-1-52	I-8 C.B. No. 3-A	5-1-52	L.J. No. 1	7-1-55
DR-1	1-3-55	I-12	7-1-54	T.J.	7-1-55
RI-1	1-3-55	I-15 No. 1	8-1-55		
L-1	4-1-50	I-15 No. 2	12-1-54		
L-3	4-1-50	SP-53	7-21-53		
L-3-A	4-1-50	C5B-5-50 (5ths 182)	5-12-50		
5-27-P.C.3	2-20-45	A5-1-54	12-1-54		
5-27-P.C.4	1-4-54	B-T-50-70-71 E No. 1	10-1-47		

SUPPLEMENTAL SPECIFICATIONS

L-209.12	7-17-54		
5	6-8-55		
M-110.27	9-9-52		

FILE No.	COL-14A-7.94
DATE OF LETTING	195
CONTRACT No.	

TYPICAL SECTION TYPE T-71 SCALE: 1/4"=1'-0"

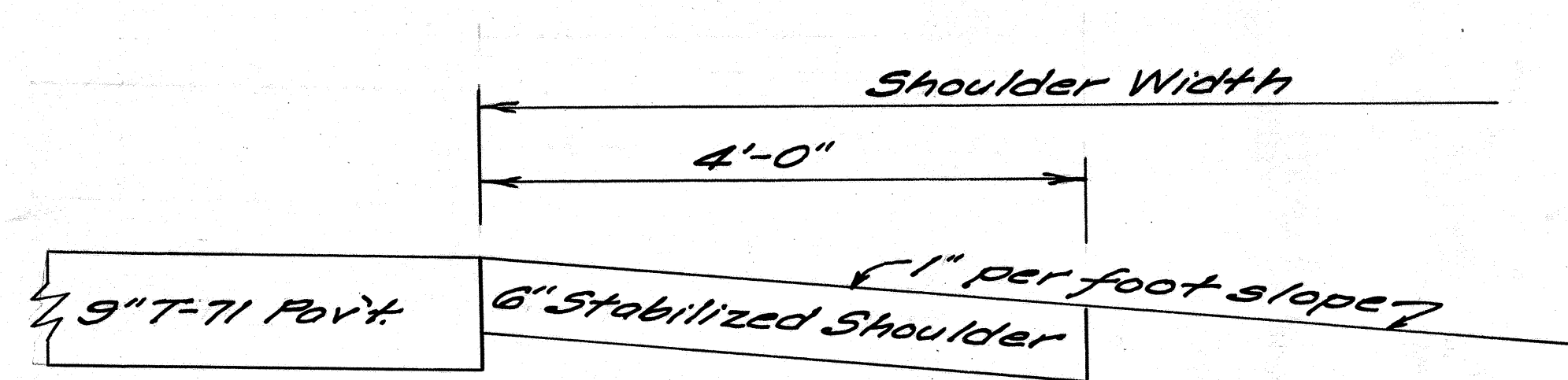


DETAILS AND GENERAL NOTES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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3
37



STABILIZED SHOULDER DETAIL

SUPERELEVATION: - 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.

BERMS AND SLOPES: - Berms and slopes shall be finished in accordance with the Typical Sections except where otherwise shown on the cross sections. While the cross sections, as drawn, show straight lines and angles, in construction all corners shall be rounded as shown on the Typical Sections.

FIELD OFFICE: - The Contractor shall provide a suitable "Field Office" in accordance with Sec. 5-0.01(b) having a minimum of 300 square feet of floor space. The Contractor shall have a telephone installed and maintained during construction.

UTILITY ADJUSTMENT: - Any and all work required for Public and Private Utilities shall 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.

TREES: - Payment for removal of trees and stumps shall be included in the lump sum bid for Item E-9, Removal of Trees and Stumps. Approximately 78 trees and stumps, 12 inches or more in diameter, are to be removed. No tree shall be removed until specifically marked for removal by the Engineer.

MISCELLANEOUS REMOVALS: - The following work within the right of way lines shall be performed by the contractor where necessary: Foundations, wells, buildings, cisterns, septic tanks, etc., shall be removed to a line at least two feet below the proposed grade, and floors, walls and walks broken up into pieces whose areas do not exceed one square foot and the entire hole filled with suitable material according to Sec. E-1.08, as directed by the Engineer. All foundations, cesspools, etc., cut by and extending beyond the right of way shall be completely filled. Small size pipes and miscellaneous masonry shall be removed and disposed of. Payment for all the above, unless otherwise shown on the plans, shall be included in the price bid per cubic yard for Item E-1, Roadway Excavation.

SMALL DRAINS: - Where drains from down spouts, field drains, etc., are encountered and not shown on the plans, they shall be given an unobstructed outlet as directed by the Engineer. Estimated additions of pipe are provided in the plans for this work. No drain carrying domestic waste shall be connected to any proposed drainage facility.

SEEDING QUANTITIES: Quantities for seeding are calculated for the soil areas between lines ten feet (10) outside the construction limits as shown on the cross sections or to the R/W line if such line is less than ten feet from the construction limits. All areas outside these limits where vegetative growth has been injuriously disturbed or destroyed by the contractor shall be restored and seeded in accordance with the provisions of Section G-1.09 by the contractor at his own expense.

SUBBASE COURSE: In the final finishing of slopes and ditches, care shall be exercised to assure that the exposed edge of the subbase course will be left free of earth cover that would impede free drainage.

PIPE SPECIALS: The length of pipe specials on this project is considered to be 4 feet.

CONSTRUCTION LAYOUT STAKES: See note in proposal describing the work included in this lump sum pay item.

EXISTING PAVEMENT REMOVAL: Where the existing pavement is removed outside of the proposed construction limits, the old roadway shall be plowed, harrowed and dragged to a smooth grade and the entire area left in a neat condition. Cost of this work shall be included in the unit price bid for Pavement Removal, Item E-8. Areas shall then be seeded in accordance with Item L-9.

LIMITATION OF ACCESS: This improvement has been declared a limited access highway or freeway by action of the Director of Highways, in accordance with the provisions of Sec. 5511.02 of the Revised Code of Ohio. All private drives and public approaches have been determined and negotiations entered into with the property owners on the basis of locations shown on these plans. No change in location of these drives or approaches shall be made during construction or thereafter, nor shall any additional drives or approaches to the proposed project be permitted during, construction or thereafter.

APPROACHES: Residence drives and mail box approaches shall be paved with T-70, Concrete Pavement, 7" inches thick. Business drives shall be paved with T-70, Concrete Pavement, 8" inches thick. Field drives shall be paved with 6" inches of I-18 material. Dimensions of drives shall be in accordance with Type 2 Driveway on Standard Drawing DR-1, unless otherwise shown on the plans.

TRAFFIC: The contractor shall maintain traffic at all times in accordance with the requirements of Sec. G-7.07. The length of one way traffic zones shall be kept to a minimum consistent with the requirements of the work. The item of "Maintaining Traffic" shall include furnishing signs, lights, barricades and watchmen necessary to secure the flow of traffic twenty-four (24) hours daily.

STONE UNDERDRAINS: No. 2 Stone Underdrains shall be constructed at locations determined by the Engineer. Estimated quantity is 800 lin. ft. carried direct to the General Summary.

DESIGN SPEED: The design speed for this project is 70 miles per hour.

SUBGRADE COMPACTION: The subgrade under Item T-70 used on drives and mail box turnouts shall be compacted for a depth of six (6) inches to the density requirements in Table III, Item E-1. Payment for subgrade compaction as specified above shall be included in the unit price bid for Item E-1, Roadway Excavation.

*Extra Quantities to be placed where directed by the Engineer.

SUMMARY OF QUANTITIES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		4 37

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PAVEMENT CALCULATIONS

Net Length of Pavement = 4,722.50 Lin. Ft.

Item T-71
 $4,722.5 \times 24 \div 9 = 12,594$ Sq. Yds.

Item E-1, Subgrade Compaction
 $12,594 + (1613 + 212 \text{ from Apprs}) = 14,419$ Sq. Yds.
Add for Approach Slabs = 80 Sq. Yds.
Total = 14,499 Sq. Yds.

Item I-22
Sta. 40+00 to Sta. 42+00 = $200 \times 27 \times 0.3333 \div 27 = 67$
Sta. 45+50 to Sta. 52+00 = $650 \times 49 \times 0.3333 \div 27 = 393$
Sta. 54+00 to Sta. 56+00 = $200 \times 27 \times 0.3333 \div 27 = 67$
Sta. 56+00 to Sta. 60+00 = $400 \times 49 \times 0.3333 \div 27 = 242$
Sta. 60+00 to Sta. 66+00 = $600 \times 27 \times 0.3333 \div 27 = 200$
Sta. 66+00 to Sta. 68+36.25 = $236.25 \times 45 \times 0.3333 \div 27 = 131$
Sta. 69+57.75 to Sta. 79+00 = $942.25 \times 50 \times 0.3333 \div 27 = 582$
Addition for extra thickness of I-22 under I-18 = 150
Total I-22 = 1,832 Cu. Yds.

Item T-10 for Maintaining Traffic.
Estimated Length = $1340 \times 150 \div 100 = 2010$ Use 2,000 Cu. Yds.

Item M-10
 $2000 \div 50 = 40$ Tons

EARTHWORK AND SEEDING

Station		Excav.	Emb.	Emb.+20%	Seeding	Fertilizer	Lime
From	To	Cu. Yds.	Cu. Yds.	Cu. Yds.	Sq. Yds.	Lbs.	Lbs.
30+50	70+50	23,677	21,133	25,360	37,887	6,820	34,098
70+50	79+80	1,848	57,617	69,140	16,498	2,970	14,848
Totals		25,525	78,750	94,500	54,385	9,790	48,946

Borrow = $94,500 - (25,525 + 475 \text{ from Channel Excav.}) = 68,500$ Cu. Yds.

Water = $78,750 \times 5 \div 1000 = 394$ M-Gals.
For I-18 = $900 \times 5 \div 1000 = 5$ M-Gals.
Total Water = 399 Use 400 M-Gals.

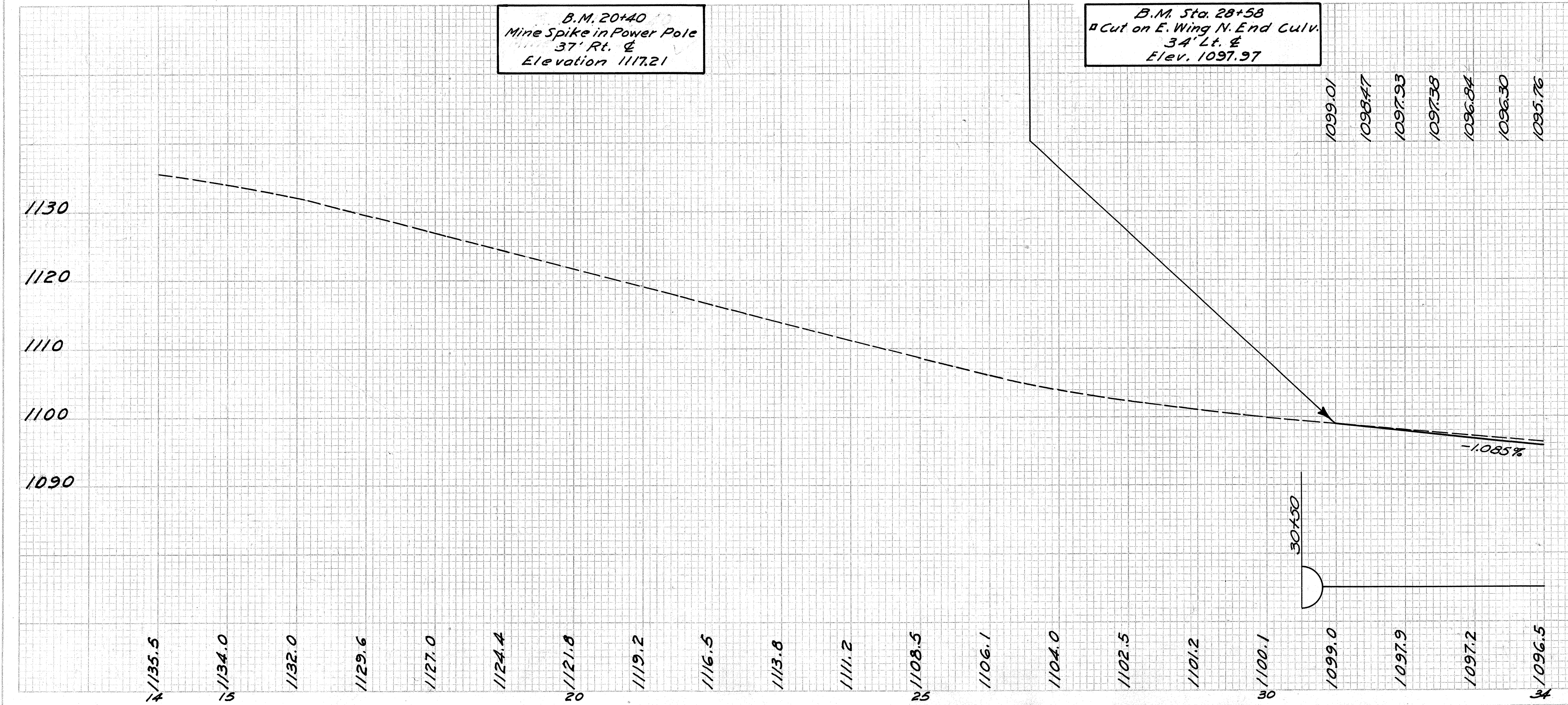
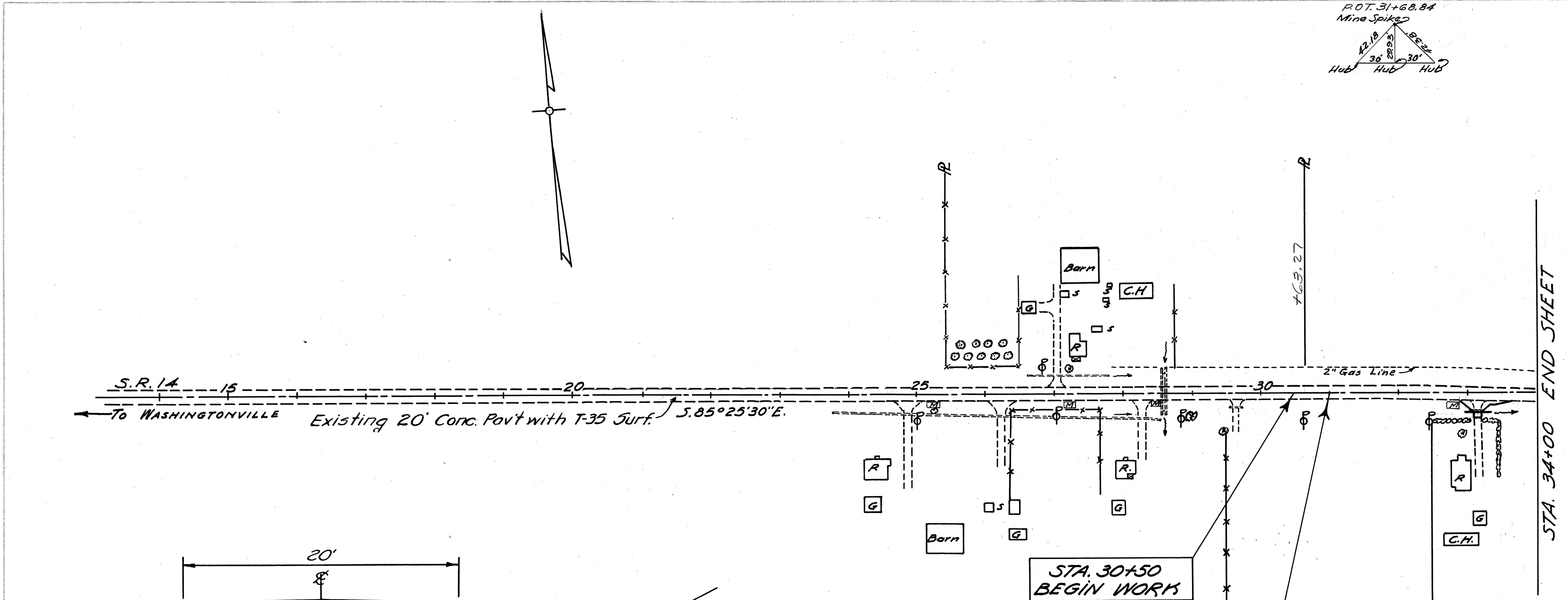
GENERAL SUMMARY

Carried from Sheet No.										ITEM		QUANTITY	UNIT	DESCRIPTION	
3	4	5	6	7	8	30	31	4						ROADWAY	
	25,525									E-1		25,525	Cu. Yds.	Roadway Excavation, as per plan	
	14,499							11		E-1		14,510	Sq. Yds.	Compacted Subgrade	
	68,500									E-4		68,500	Cu. Yds.	Borrow	
		667	2323							E-8		2,990	Sq. Yds.	Removal and Disposal of Existing Pavement, as per Plan.	
					137					E-8		137	Lin. Ft.	Removal and Disposal of Existing Curb and Gutter.	
Lump										E-9	Lump			Removal of Trees and Stumps.	
	400									E-11		400	M-Gals.	Water	
		20	19							E-12		39	Lin. Ft.	Pipe Removed, 15" and Under.	
			25				236			E-12		261	Lin. Ft.	Pipe Removed, Over 15"	
				119	894			50		I-15		2,051	Lin. Ft.	Guard Rail Steel Beam Type (Deep)	
		32	287	280	84			67		I-18		750	Cu. Yds.	Stabilized Crushed Aggregate Shoulders and Approaches	
	54,385							615		L-9		55,000	Sq. Yds.	Seeding and Protecting	
	4.90							0.05		L-9		4.95	Tons	Commercial Fertilizer (10-6-4)	
	24.47							0.28		L-9		24.75	Tons	Agricultural Ground Limestone	
	40									M-10		40	Tons	Calcium Chloride Furnished and Applied for Maintaining Traffic.	
	2000									T-10		2,000	Cu. Yds.	Traffic Compacted Surface Course for Maintaining Traffic	
						65	60			E-2		125	Cu. Yds.	Excavation for Structures	
						560	230			E-3		790	Cu. Yds.	Channel Excavation	
		36	34							I-1		70	Lin. Ft.	12" Pipe for Driveways	
			118							I-1		118	Lin. Ft.	15" Pipe for Driveways	
			30							I-1		30	Lin. Ft.	18" Pipe for Driveways	
			36							I-1		36	Lin. Ft.	24" Pipe for Driveways	
					88					I-2		88	Lin. Ft.	12" Class "B" Storm Sewers	
			1472	2017				311		I-4		3,800	Lin. Ft.	6" Underdrains	
			20	80				20		I-4		120	Lin. Ft.	6" Outlets for Underdrains	
			1							I-5		1	Each	18" Pipe Special for Driveways	
					1					I-8		1	Each	Std. No. 3-A Catch Basin	
800										I-9		800	Lin. Ft.	Stone Underdrains, No. 2	
						10	15	25		I-10		50	Sq. Yds.	Riprap, Type A, Grout Filled	
						7.4	1.2	1.4		S-1		10.0	Cu. Yds.	Concrete for Structures, Class E.	
						87				S-27		87	Lin. Ft.	36" Pipe for Roadway Culverts	
						98				S-27		98	Lin. Ft.	72" Pipe for Roadway Culverts	
							165			S-27		165	Lin. Ft.	36" Extra Strength Reinforced Concrete Culvert Pipe, Sec. M-6.6(c) or Paved Bituminous Coated Corrugated Metal Pipe, Sec. M-6.4(d), for Roadway Culverts	
														PAVEMENT	
								118		I-22		1950	Cu. Yds.	Subbase	
					8	26		6		T-30		40	Gals.	Bituminous Tack Coat, as per Plan.	
					5.6	40		1.4		T-35		47	Cu. Yds.	Asphaltic Concrete Surface Course, Type "C" (70-80)	
		90	524					6		T-70		620	Sq. Yds.	7" Portland Cement Concrete Pavement	
			100	185						T-70		285	Sq. Yds.	8" Portland Cement Concrete Pavement	
	12,594		1,613			212		11		T-71		14,430	Sq. Yds.	9" Reinforced Portland Cement Concrete Pavement	
					80					I-7		80	Sq. Yds.	Reinforced Concrete Approach Slabs (T=10")	
			134		156			10		I-12		300	Lin. Ft.	Std. Type 2-A Concrete Curb	
														STRUCTURE OVER 20' SPAN	
														See Sheet No. 34 for Quantities	
Lump										Lump	Lump			Construction Layout Stakes	

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APPROACHES AND BERM MATERIAL						
Station	Side	See Sheet	7" F-70 Pavt Sq. Yds.	Pipe-Lin. Ft. 12"	Remove 12" J-18 Aggr. Pipe-Lin. Ft.	Cu. Yds.
33+13	Rt.	10	20	36	20	32
31+00 to 34+00	Rt. & Lt.	3 & 5				
Totals			90	36	20	32

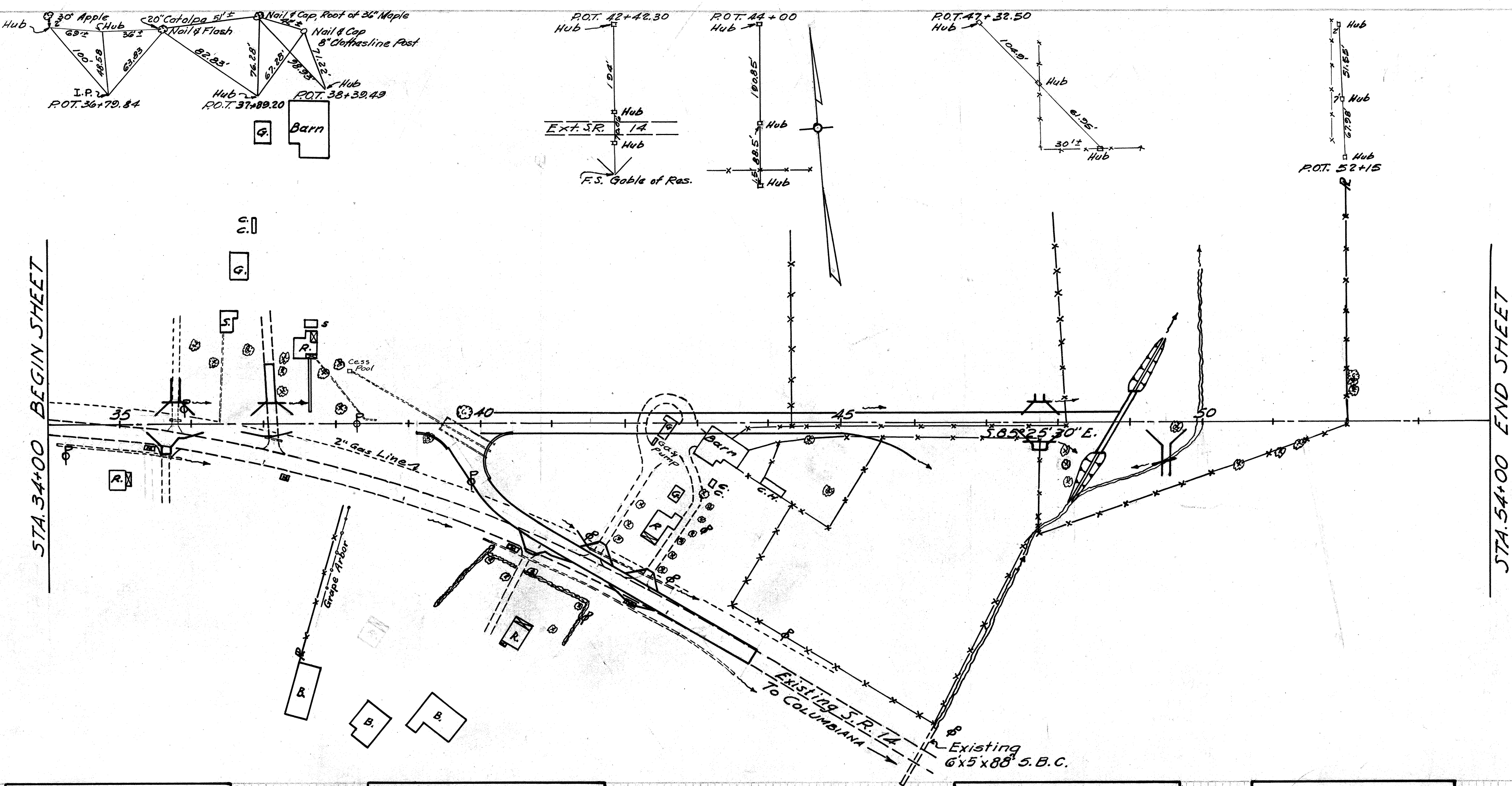
REMOVALS				
Station From	To	Side	Pavement Sq. Yds.	
31+00	34+00	Rt. & Lt.	667	
Totals			667	



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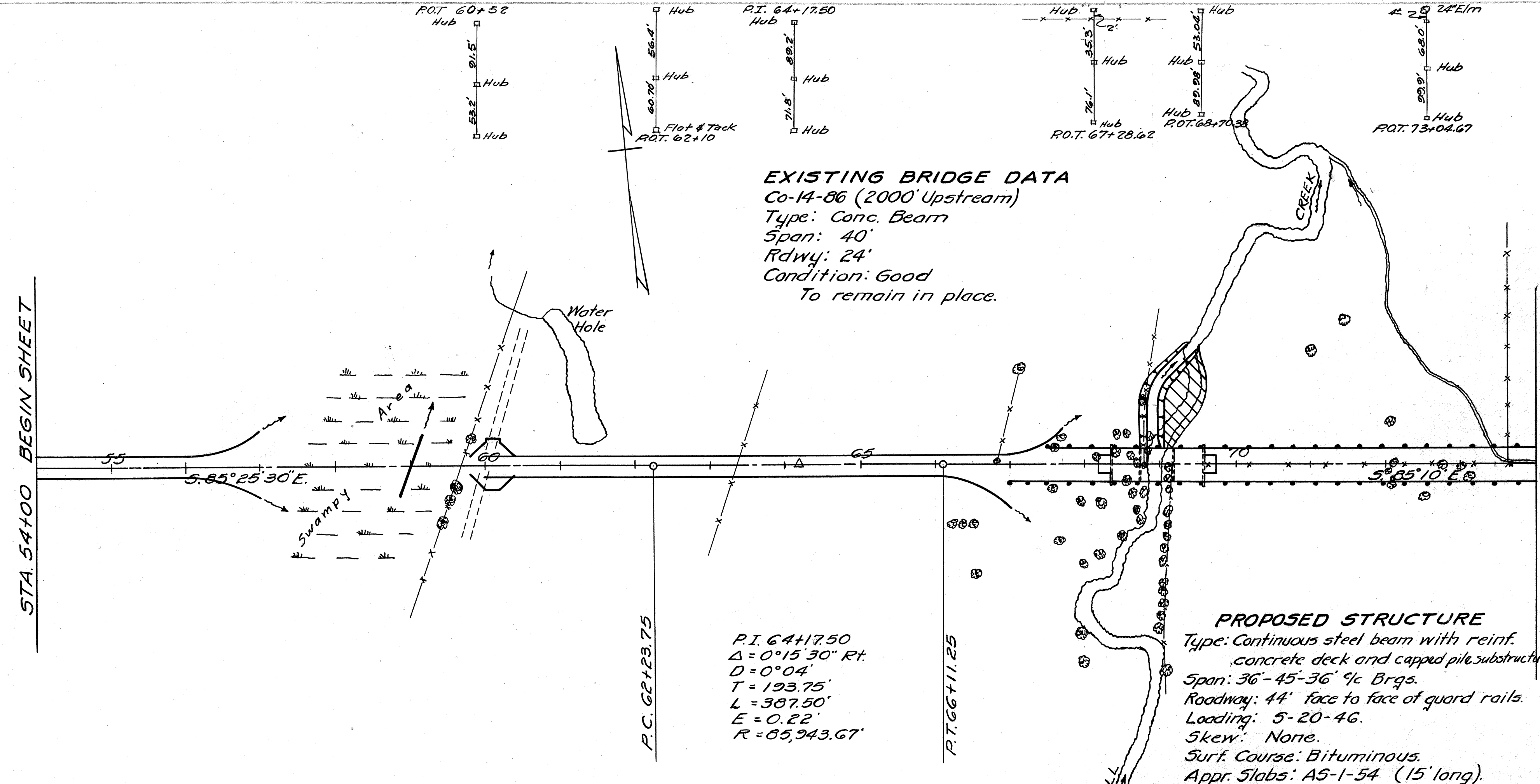
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APPROACHES AND BERM MATERIAL																
Station		Side Sheet	See No.	T-70 Pav't		9" T-71 Pav't	I-18 Aggr.	Pipe for Driveways				Pipe Removed	18"x 22½"	Std. 2-A Curb		
From	To			Sq. Yds.	5' thick			Lin. Ft.	12"	15"	18"	24"	Lin. Ft.		Bend	Each
35+61		Rt.	10	97												
35+79		Lt.	10				19		36		19					
37+10		Rt.	11	31												
37+10		Lt.	11	140					30			25				
39+45		Rt.	27-28			1613								134		
42+08		Rt.	27-28	83												
42+91		Lt.	27-28	71						30			1			
43+66		Rt.	27-28	31												
43+66		Lt.	27-28	71												
47+75		Rt.	13		100				44							
47+75		Lt.	13				13				36					
49+50		Rt.	14				20	34								
54+00	54+00	Rt.	2-3-6				110									
54+00	54+00	Lt.	2-3-6				125									
Totals					524	100	1613	287	34	118	30	36	19	25	1	134

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APPROACHES AND BERM MATERIAL

Station	Side	See	6"-70" Pavt Sq. Yds.	I-18 Aggr. Cu. Yds.
From To	£	Sheet		
60+10	Rt.	17	89	
60+10	Lt.	17	96	
54+00	Rt.	247		140
54+00	Lt.	247		140
Totals			185	280

GUARD RAIL

Station	Side	New Lin. Ft.
From To	£	
66+36.85	Rt.	581.65*
67+47.15	Lt.	531.35*
Total		1113

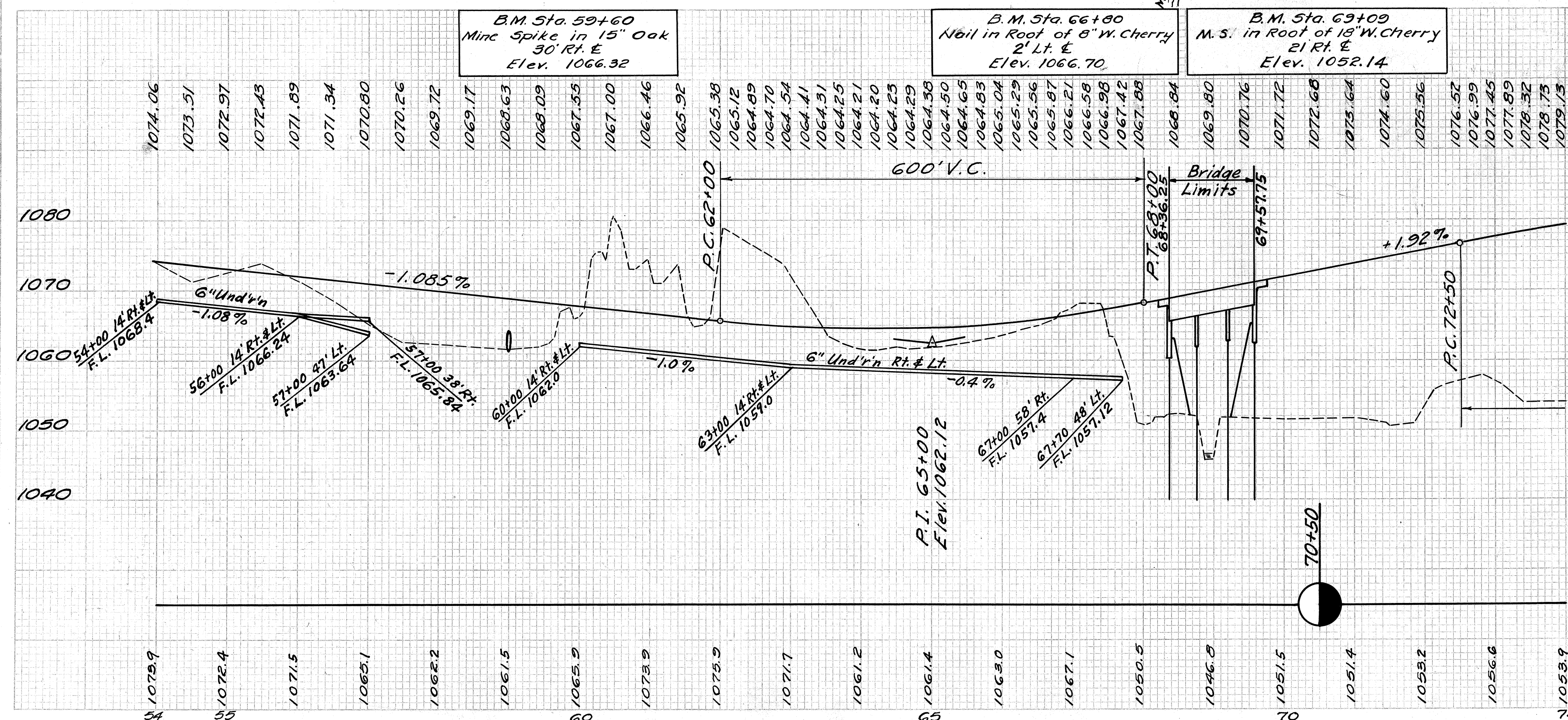
* 121.5' is Bridge Railing

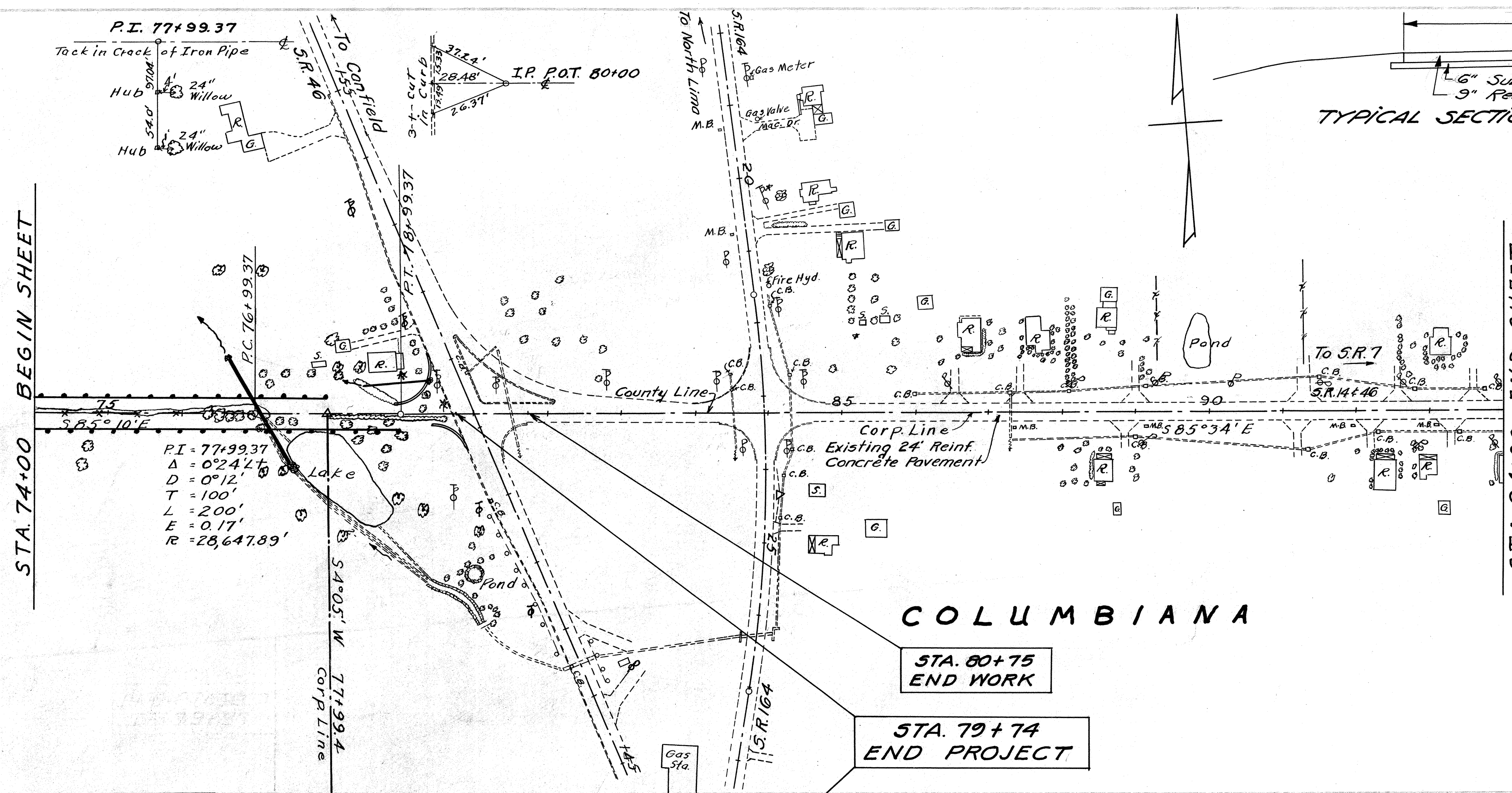
CULVERTS AND DRAINAGE

Station	Side	See	New Culverts	6" Underdrains - Lin. Ft.
From To	£	Sheet	Type Size Length	Pipe Outlet
59+00	Rt.	30	Pipe 36" 67'	
54+00	Rt.	7		283
54+00	Lt.	7		286
60+00	Rt.	7		620
60+00	Lt.	7		758
Totals				2017

REMOVALS AND APPROACH SLABS

Station	Side	Trees and Stumps - Each	Slab T-35 Surf. Sq. Yds.	T-30 Tack Cu. Yds.	T-30 Tack Gals.
From To	£	12"-18" 18"-24" 24"-30" 30"-36" 36"-42" 42"-48"			
59+40	Rt.	2			
59+80	Lt.	1			
67+50	Rt.	6	4	2	3
67+50	Lt.	9	2	1	2
68+21.25	Rt.			40	2.8
69+21.75	Rt.			40	2.8
Totals			34	80	5.6

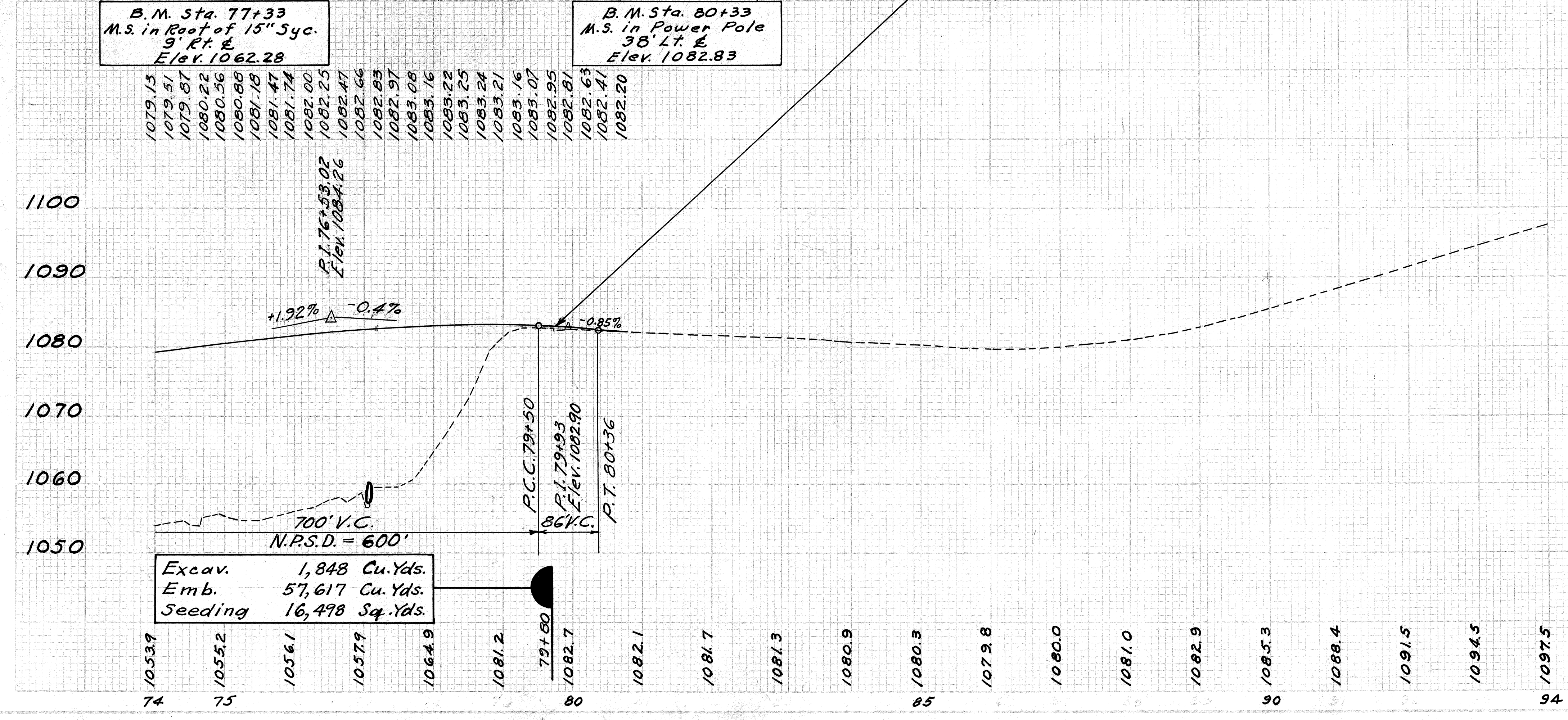


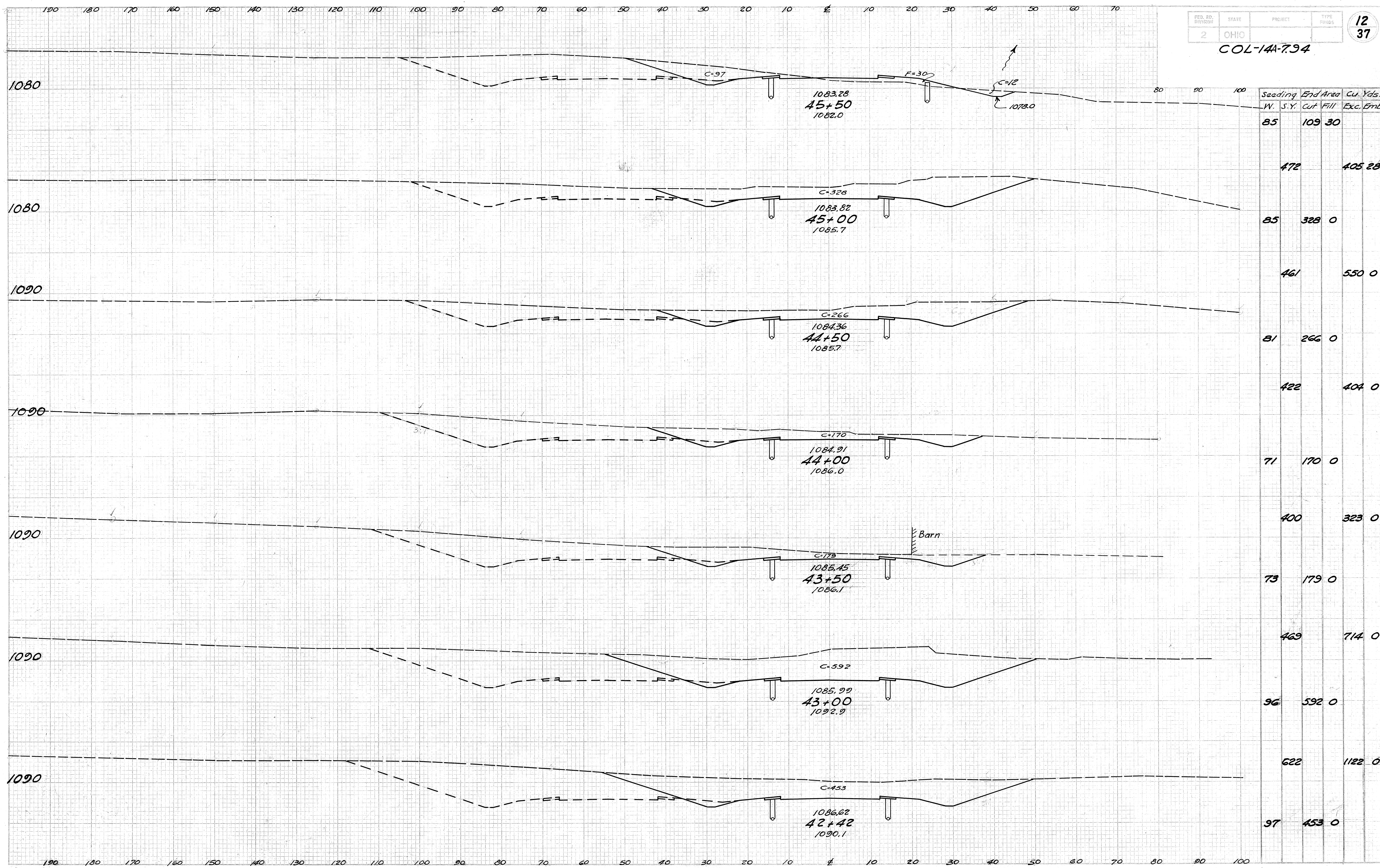


APPROACHES AND BERM MATERIAL									
Station	Side	See	9" T-71 Pav't	I-18 Aggr.	Type 2-A Curb	Tack Coat	Remove Curb and Gutter	T-35 Surface	
From To	E	Sheet	Sq. Yds.	Cu. Yds.	Lin. Ft.	Gals.	Lin. Ft.	Cu. Yds.	
78+91.07 80+75	Rt. Lt.	29	212		156	26	137	40	
74+00 79+44	Rt.	24		44					
74+00 78+91	Lt.	24		40					
Totals			212	84	156	26	137	40	

CULVERTS AND DRAINAGE									
Station	Side	See	New Culverts			Storm Sewer - Lin. Ft. C. B's Each			
From To	E	Sheet	Type	Size	Length	12" Class B		No. 3-A	
77+08 78+50	Rt. Lt.	31 29	Pipe	36"	165'	88		1	
Totals						88		1	

REMOVALS AND GUARD RAIL									
Station	Side	Trees and Stumps - Each				New Guard Rail - Lin. Ft.			
From To	E	12"-18"	18"-24"	24"-30"	30"-36"				
74+00 78+96.85	Rt.					496.85			
74+00 77+97.15	Lt.					397.15			
74+50 79+25	Rt.	11	4	2	2				
77+00 79+70	Lt.	12	1						
Totals						894			



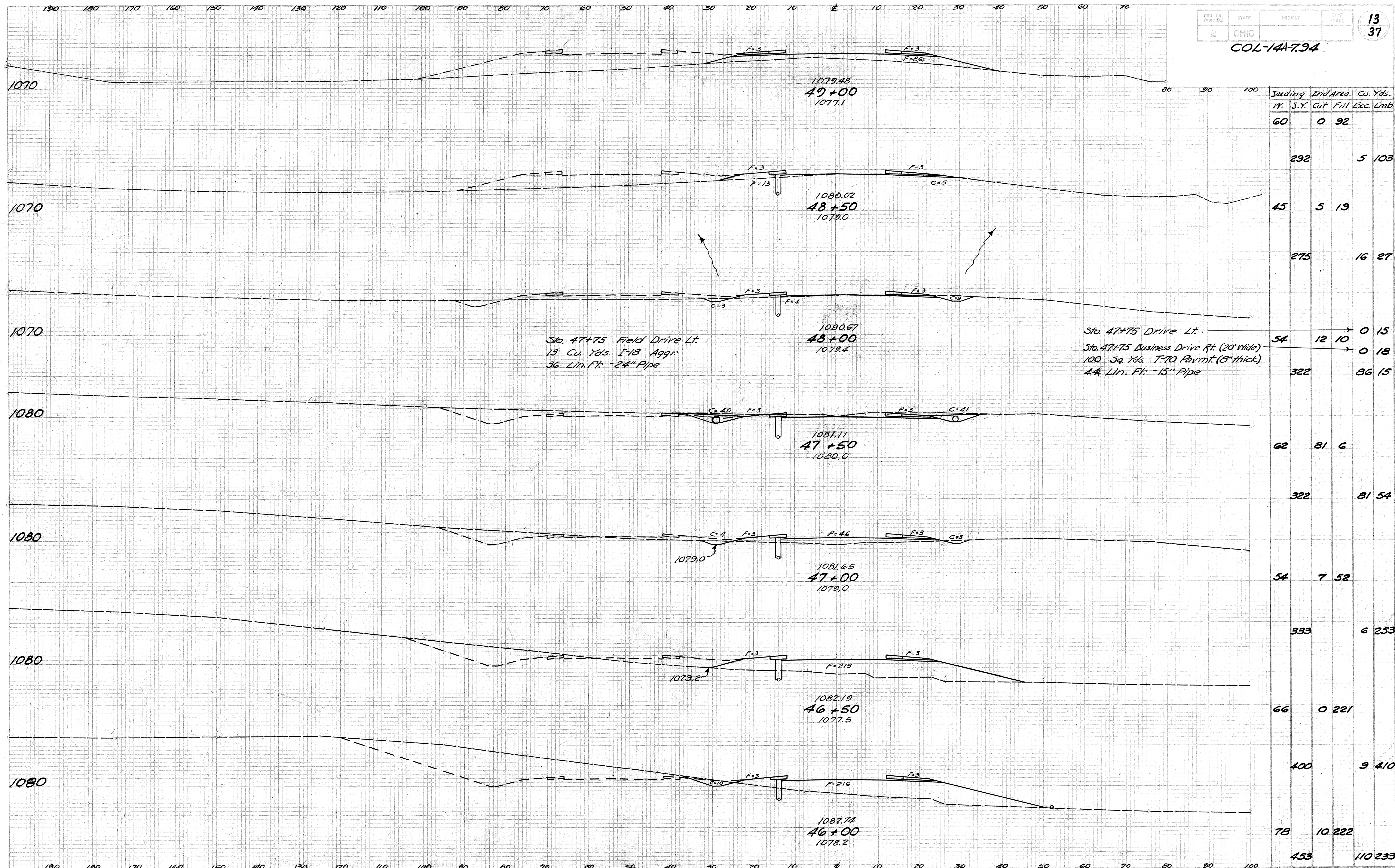


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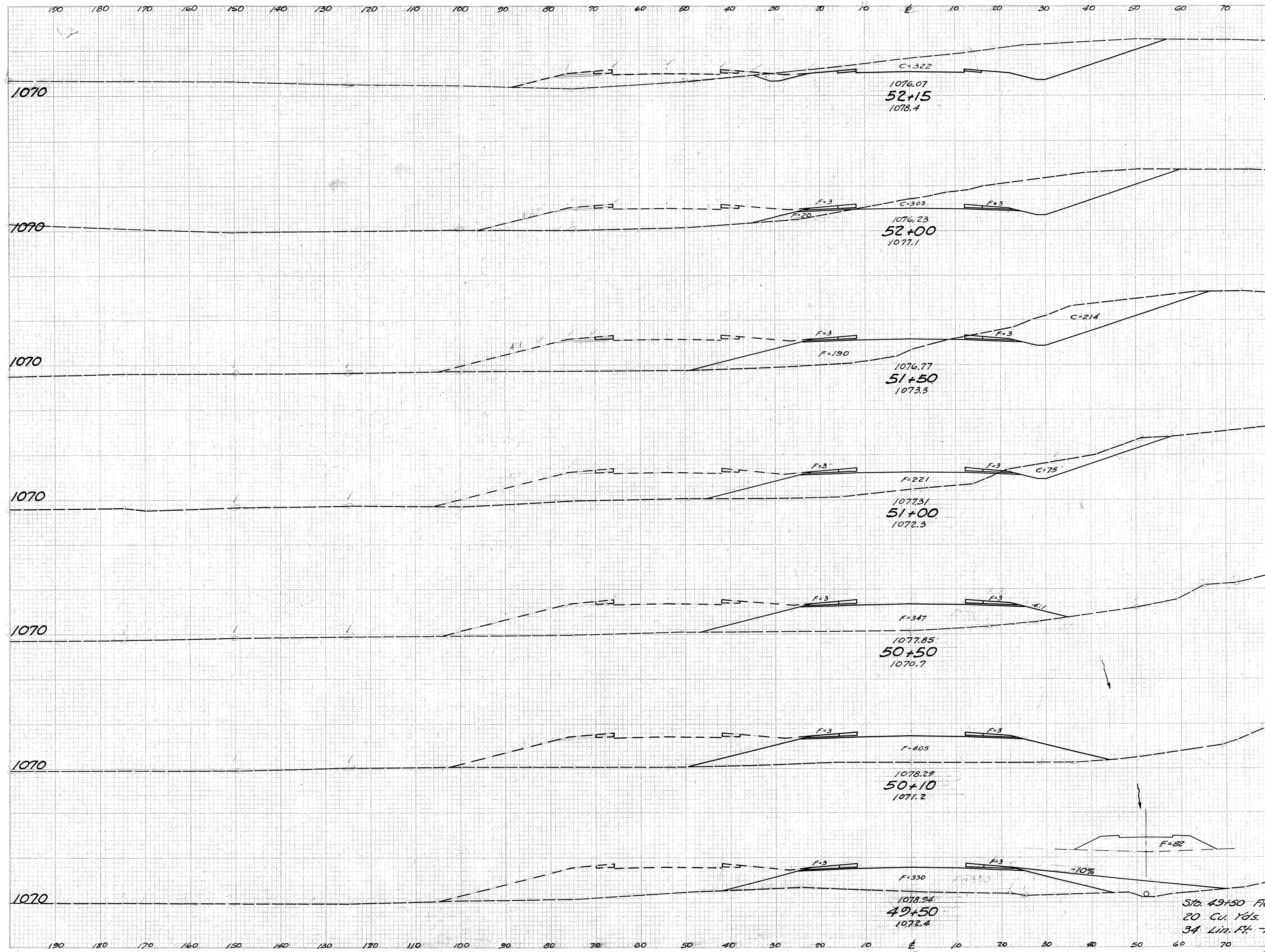
Seading W. S.Y.	End Area		Cu. Yds.	
	Cut	Fill	Exc.	Embl.
85	109	30		
	472		405	28
85	328	0		
	461		550	0
81	266	0		
	422		404	0
71	170	0		
	400		323	0
73	179	0		
	469		714	0
96	592	0		
	622		1122	0
97	453	0		

STA. 42+42 ~ STA. 45+50

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STA. 46+00 ~ STA. 49+00

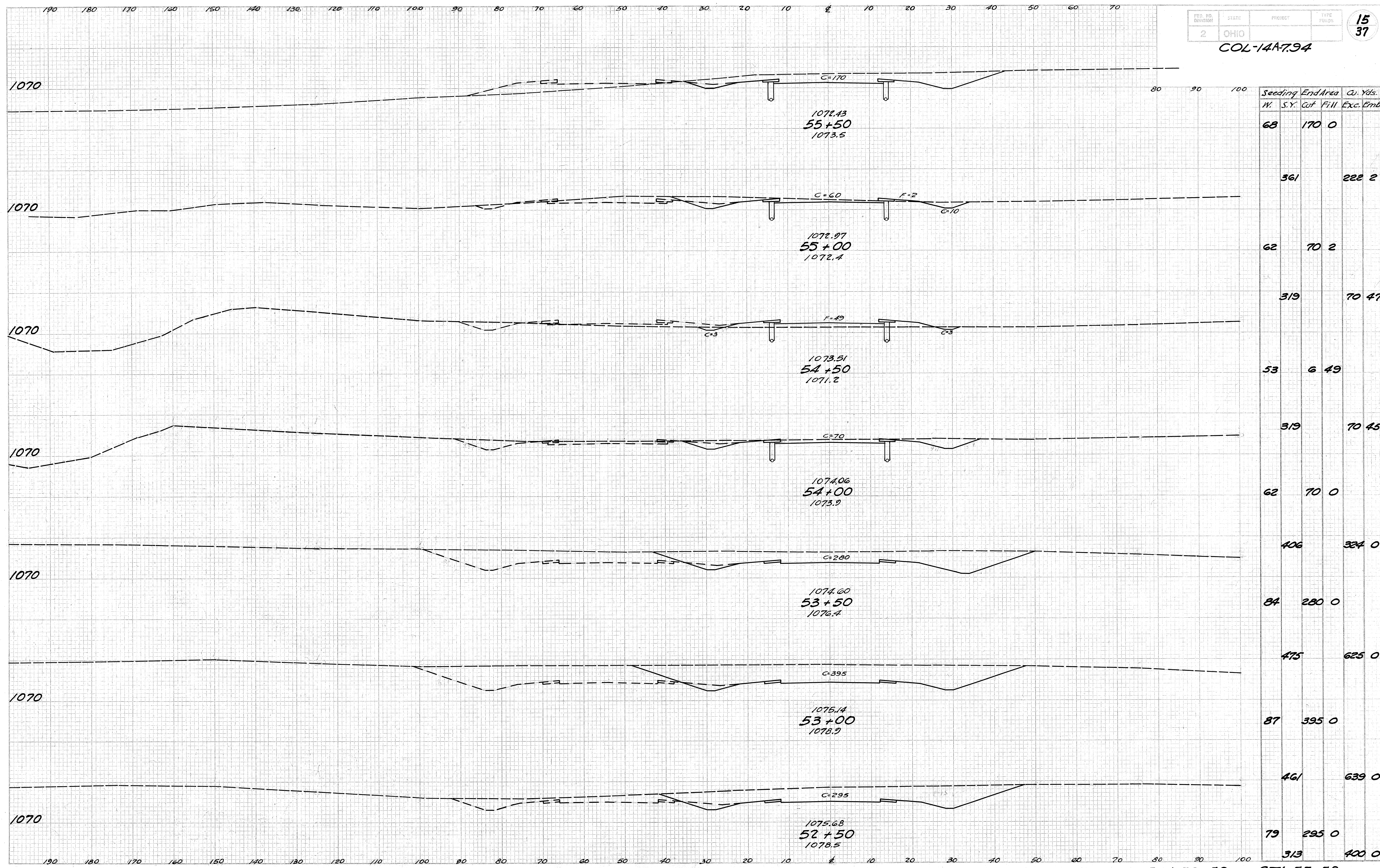


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Station	Seeding		End Area		Cu. Yds.	
	W. S.Y.	Cut	Fill	Exc.	Emb.	
82		322	0			
139					174	7
85		303	26			
533					479	206
107		214	196			
558					268	392
94		75	227			
458					69	537
71		0	353			
344					0	566
84		0	411			
533					0	830
76		0	336		0	74
378					0	396

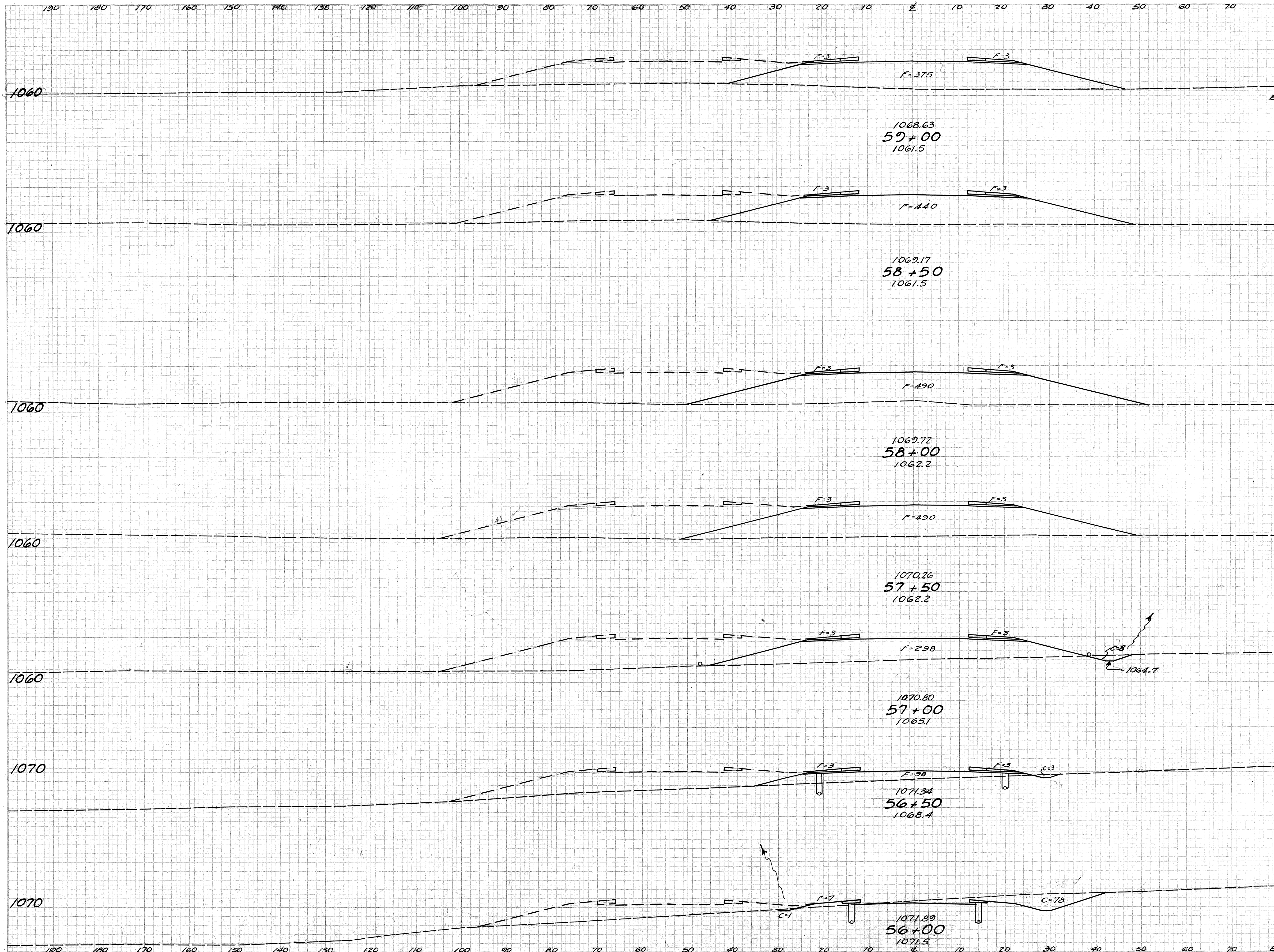
Sta. 49+50 Field Drive Rt.
20 Cu. Yds. I-18 Aggr.
34 Lin. Ft. 12" Pipe

STA. 49+50 ~ STA. 52+15



Stn.	S.Y.	End Area		Cu. Yds.	
		Cut	Fill	Exc.	Emb.
68		170	0		
	361			222	2
62		70	2		
	319			70	47
53		6	49		
	319			70	45
62		70	0		
	406			324	0
84		280	0		
	475			625	0
87		395	0		
	461			639	0
79		295	0		
	313			400	0

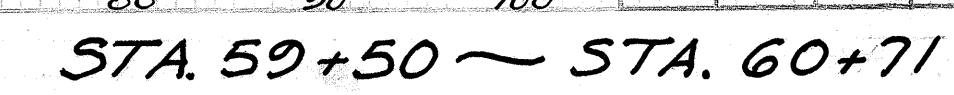
STA. 52+50 ~ STA. 55+50

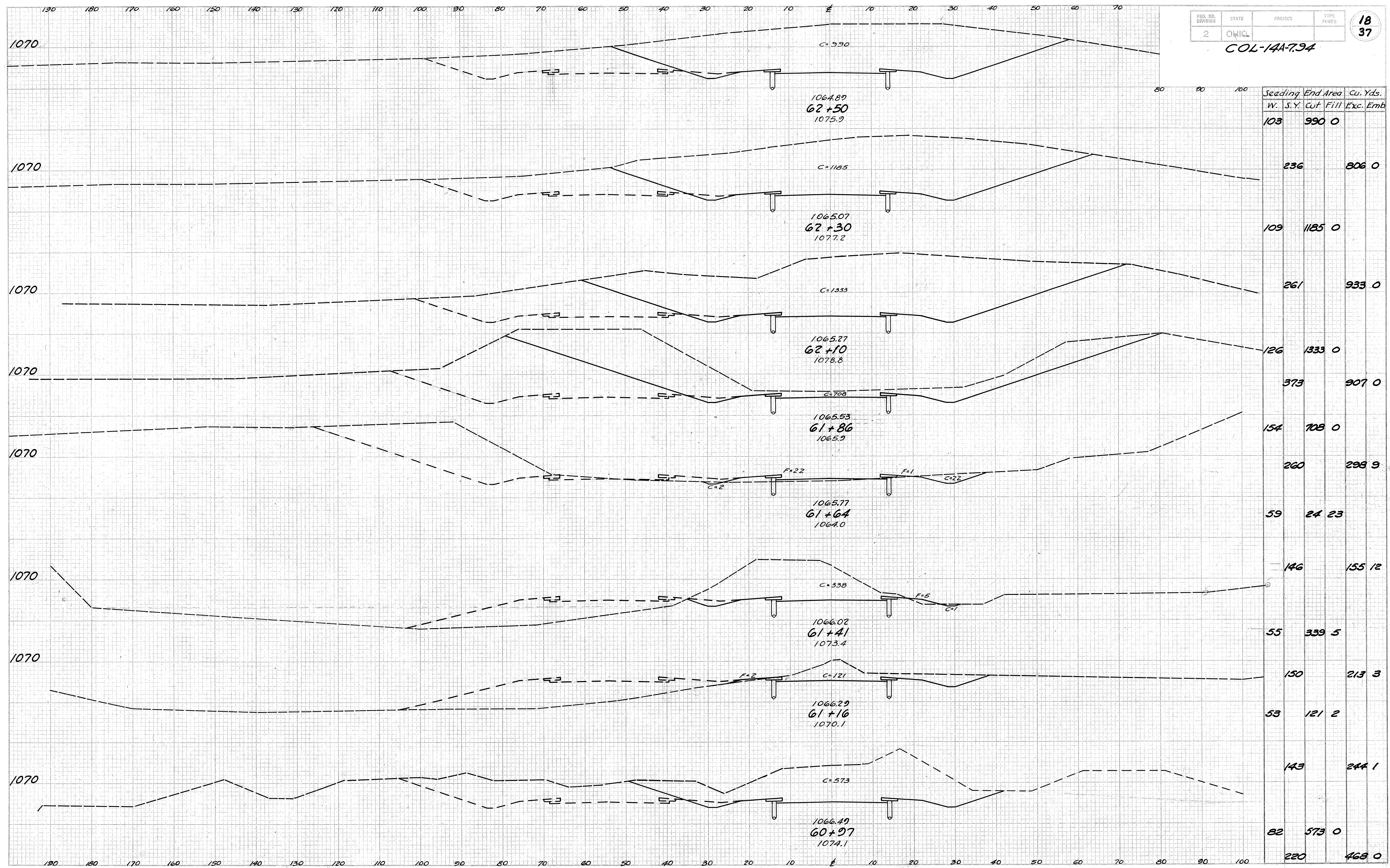


COL-14A-7.94

Seeding		End Area		Cu. Yds.	
W.	S.Y.	Cut	Fill	Exc.	Emb.
78		0	381		
	450				0 766
84		0	446		
	439				0 872
92		0	496		
	506				0 919
90		0	496		
	481				7 741
83		8	304		
	386				10 378
56		3	104		
	328				76 103
62		79	7		
	361				231 6

STA. 56+00 ~ STA. 59+00



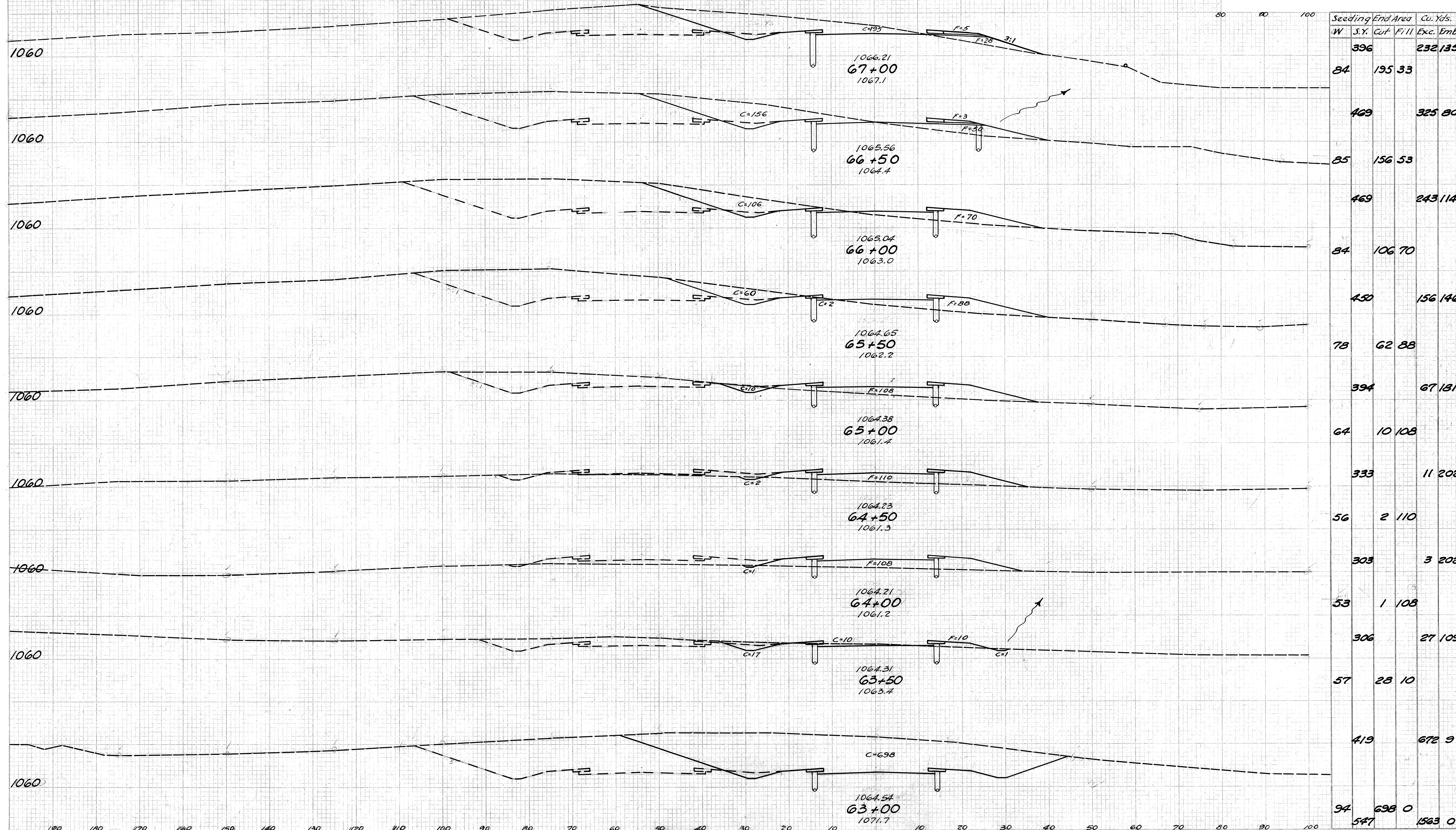


COL-14A-7.94

Stading	End Area		Cu. Yds.	
	W.	S.Y.	Cut	Fill
103	990	0		
236				806 0
109	1185	0		
261				933 0
126	1333	0		
373				907 0
154	108	0		
260				298 9
59	24	23		
146				155 12
55	339	5		
150				213 3
53	121	2		
143				244 1
82	573	0		
220				468 0

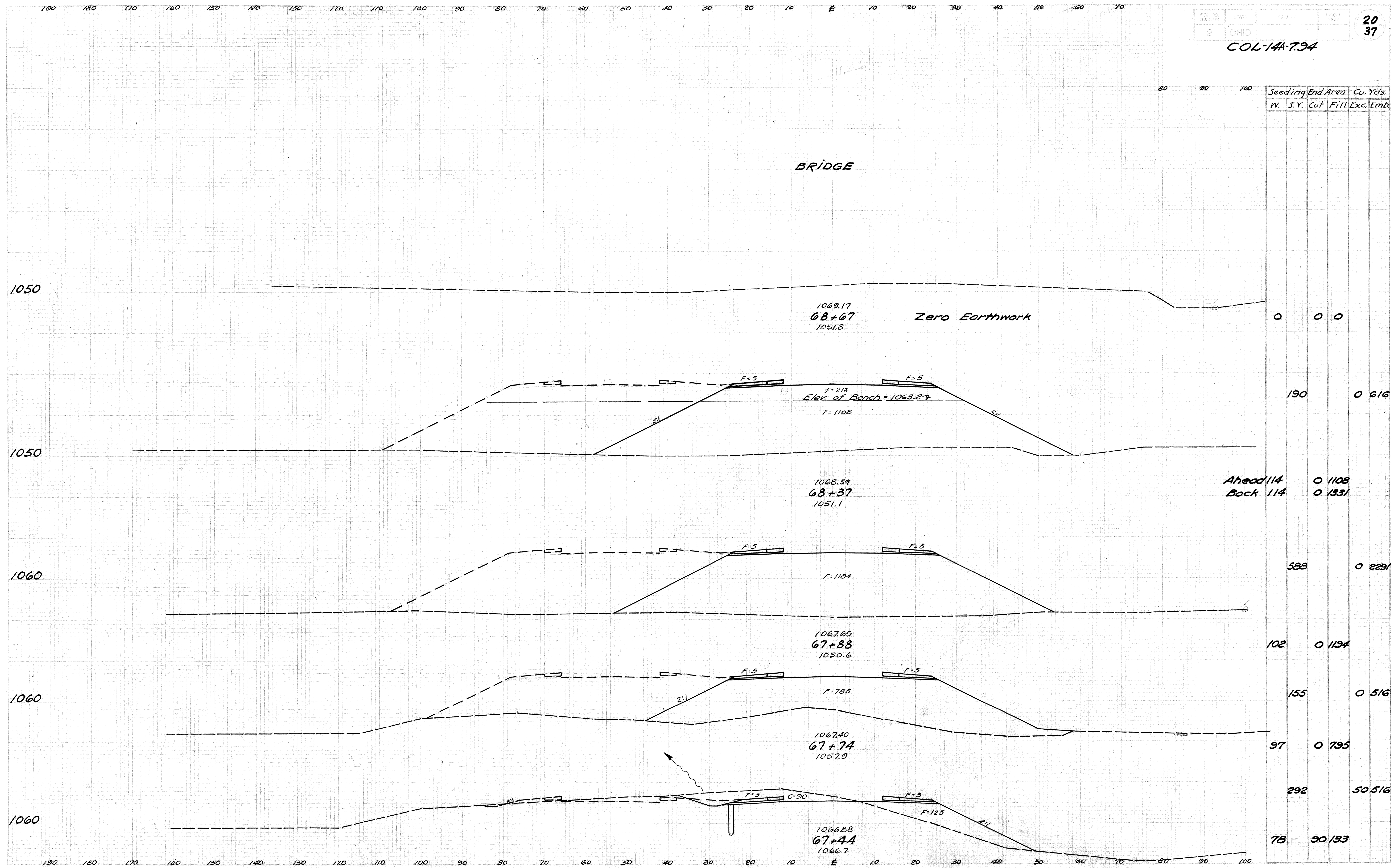
STA. 60+97 ~ STA. 62+50

COL-14A-7.94



Seeding		End Area		Cu. Yds.	
W	S.Y.	Cut	Fill	Exc.	Emb.
396				232	135
84	195	33			
469				325	80
85	156	53			
469				243	114
84	106	70			
450				156	146
78	62	88			
394				67	181
64	10	108			
333				11	202
56	2	110			
303				3	202
53	1	108			
306				27	109
57	28	10			
419				672	9
94	698	0			
547				1563	0

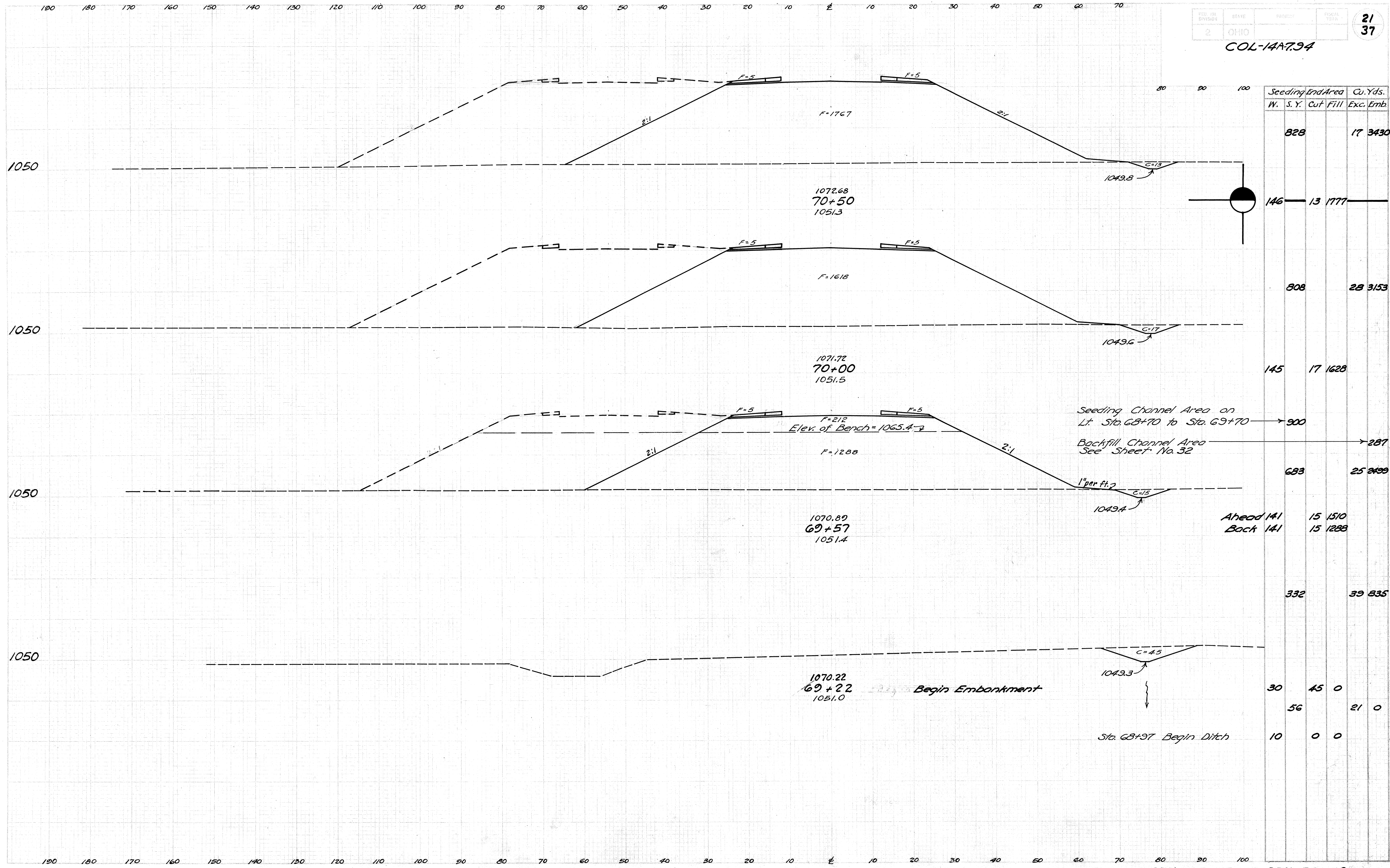
STA. 63+00 ~ STA. 67+00



COL-14A-794

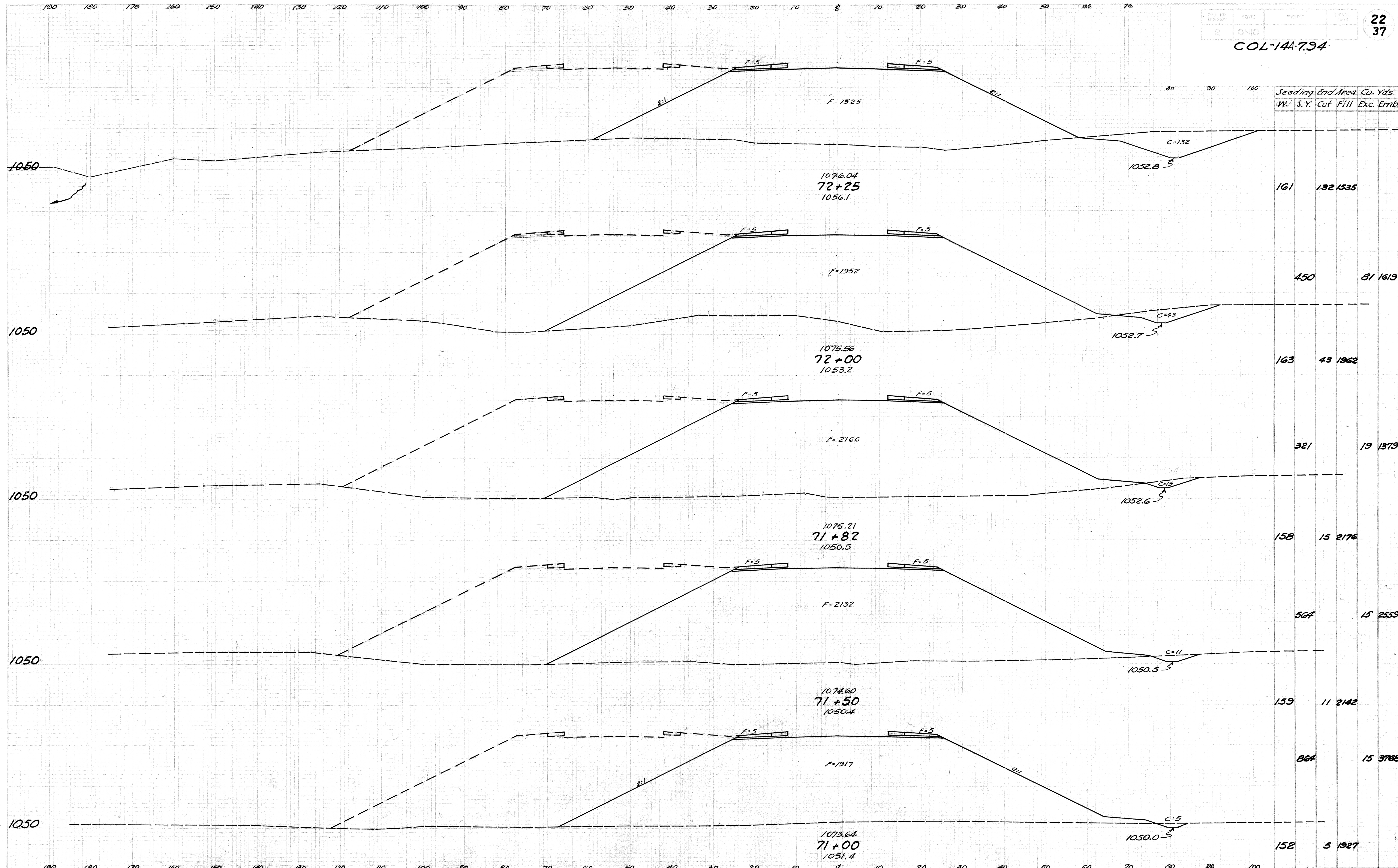
Seeding		End Area		Cu. Yds.	
W.	S.Y.	Cut	Fill	Exc.	Emb.
0		0	0		
190				0	616
	Ahead 114	0	1108		
	Back 114	0	1331		
588				0	2291
102		0	1134		
155				0	516
97		0	795		
292				50	516
78		90	133		

STA. 67+74 ~ STA. 68+67

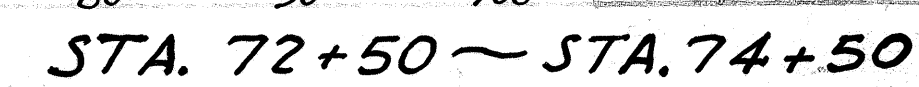


Seeding End Area		Cu. Yds.	
W.	S. Y.	Cut	Fill
828			17 3430
146	13	1777	
808			28 3153
145	17	1628	
683			25 2499
Ahead 141	15	1510	
Back 141	15	1288	
332			39 835
30	45	0	
56			21 0
10	0	0	

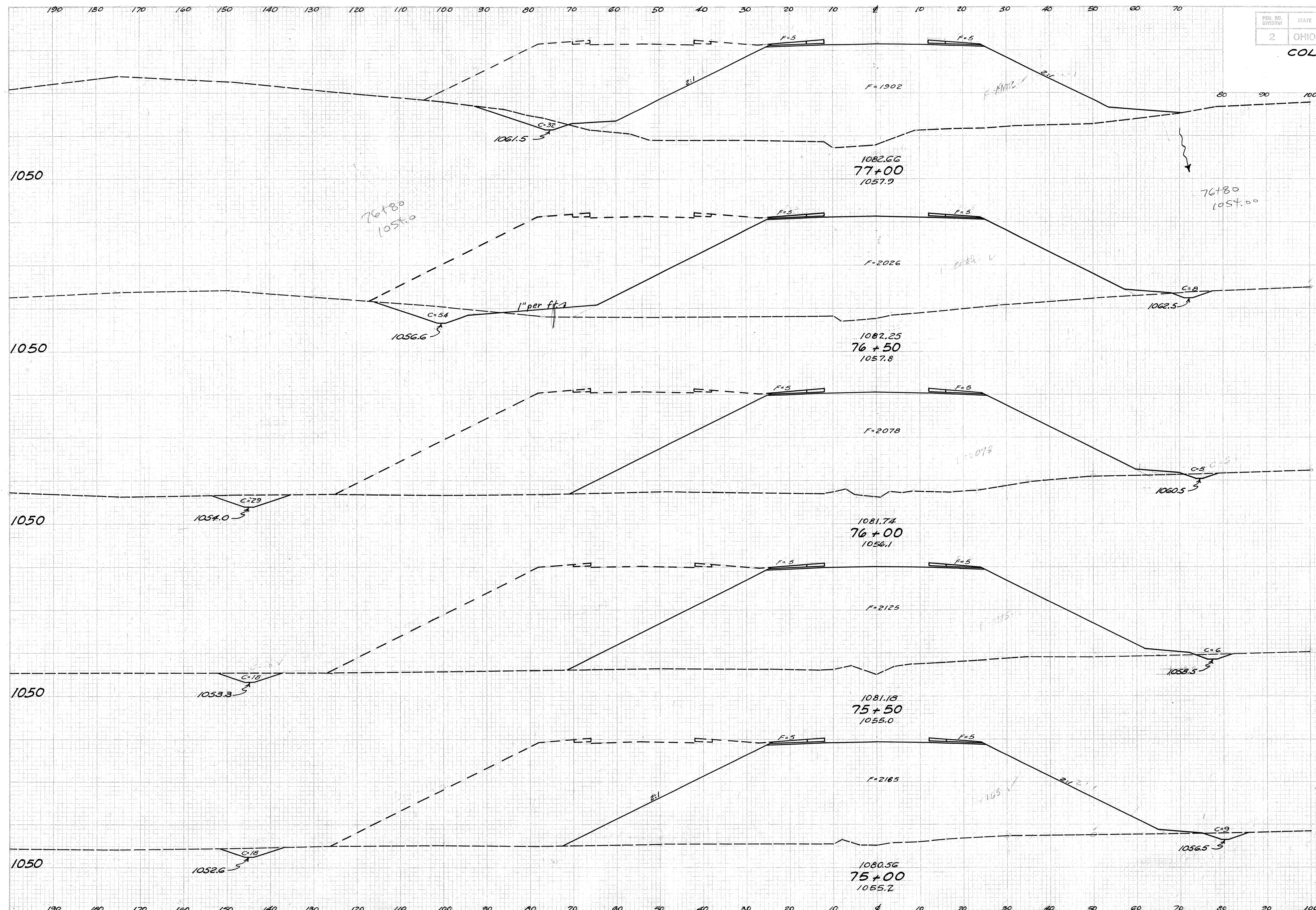
COL-14A-794



STA. 71+00 ~ STA. 72+25



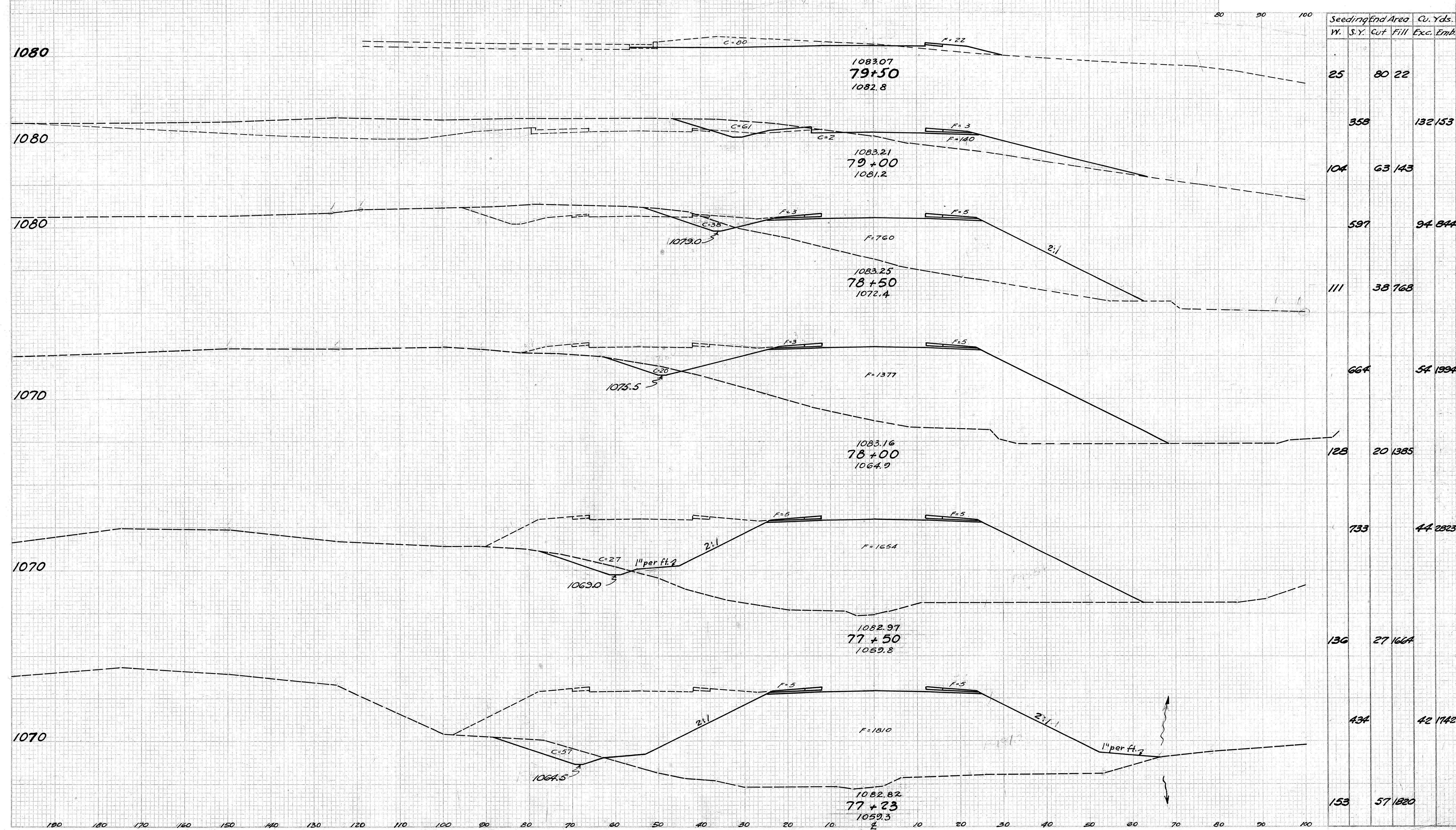
COL-14A-7.94



W.	S.Y.	End Area		Cu. Yds.	
		Cut	Fill	Exc.	Emb.
		401		38	1590
161		32	1912		
				983	87 3656
193		62	2036		
				1061	89 3819
189		34	2088		
				1053	54 3910
190		24	2135		
				1067	47 3991
194		27	2175		

STA. 75+00 ~ STA. 77+00

COL-14A-7.94



STA. 77+23 ~ STA. 79+50

COL-14A-7.94

1080

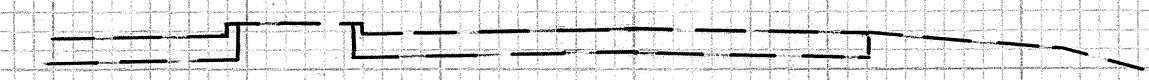
1080

1080

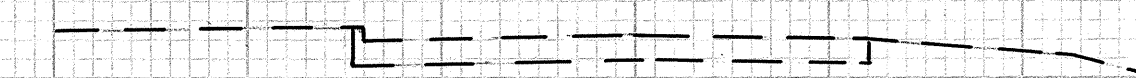
1080

1080

1080

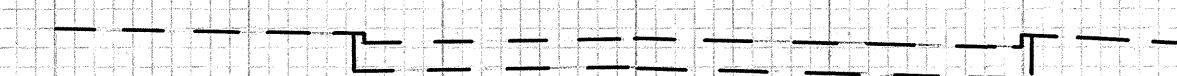


81+00
1082.1

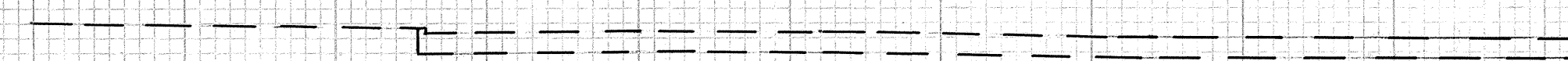


80+75
1082.2

END WORK

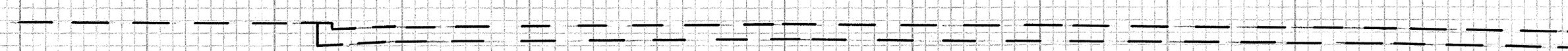


80+50
1082.3



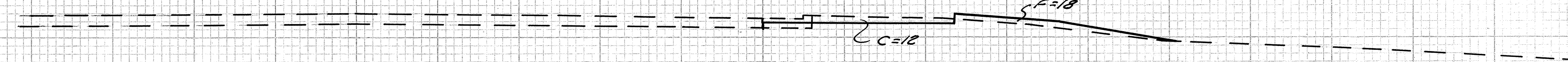
80+25
1082.5

1 22
26

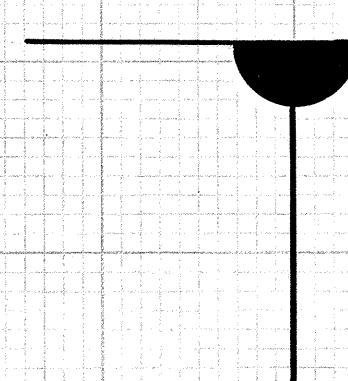


80+00
1082.7

STA. 79+80 END EARTHWORK



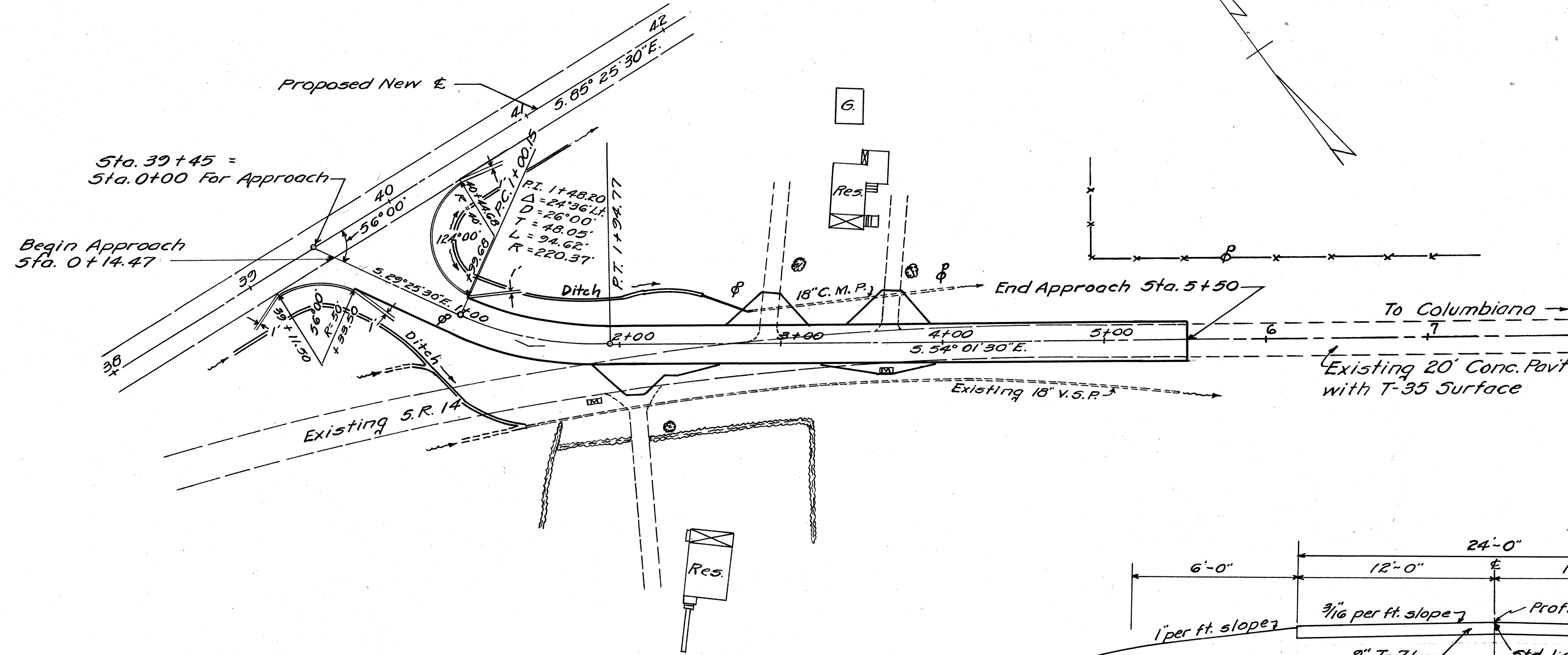
1082.35
79+74
1082.4



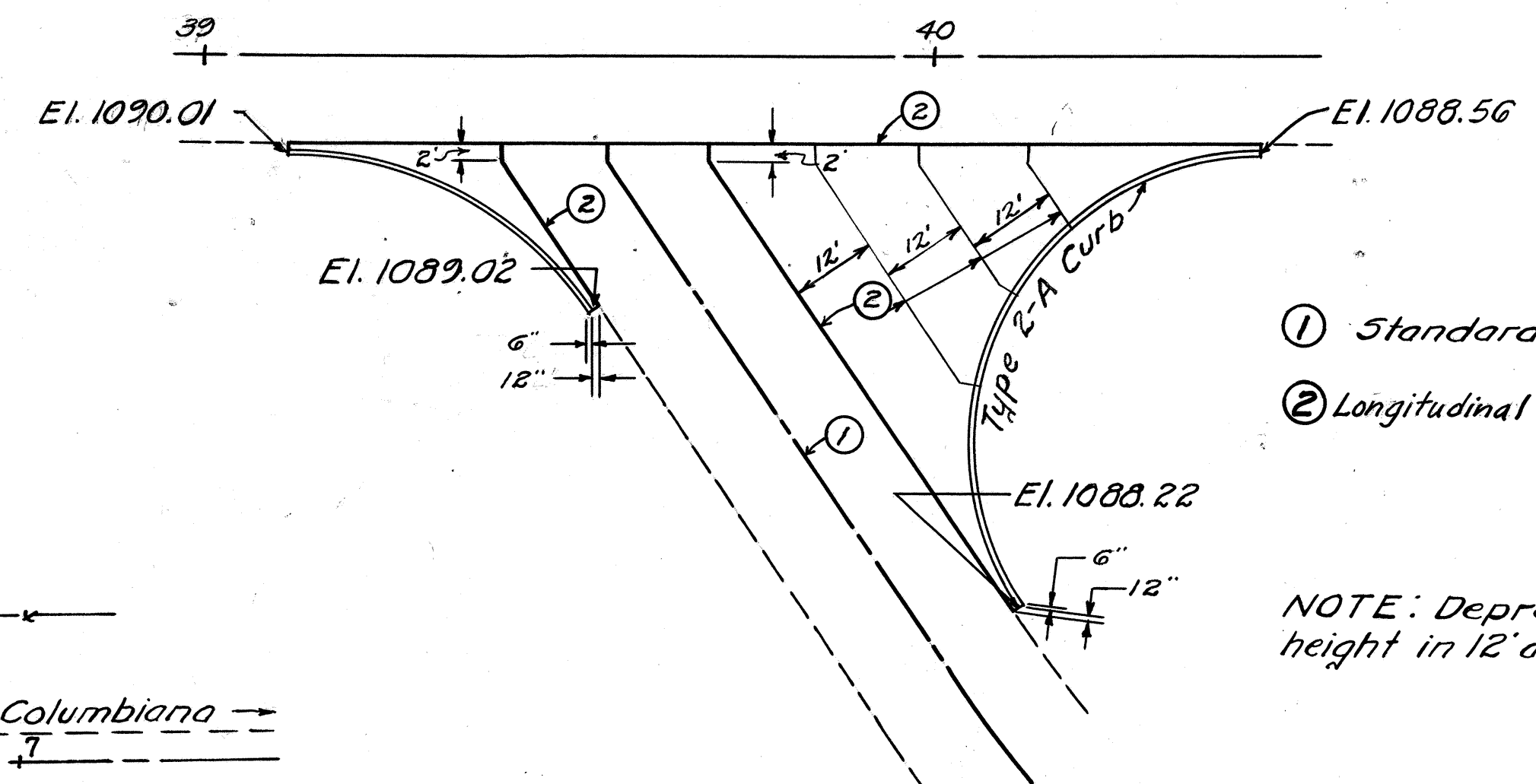
SEEDING		END AREA		CUL. YDS.	
Width	Se. Yds.	Cut	Fill	Exc.	Emb.
10			0	0	
	16			1	2
38		12	18		
84				41	18

STA. 79+74 — STA. 81+00

COL-14A-7.94



PLAN
Scale 1" = 50'



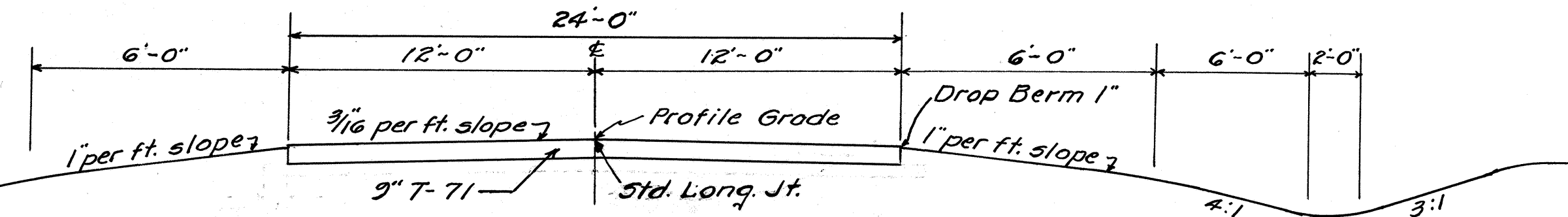
JOINT LAYOUT

- ① Standard Longitudinal Joint.
- ② Longitudinal Key Joint Without Tie Bars

NOTE: Depress curb from 6" to 1" height in 12' at each end.

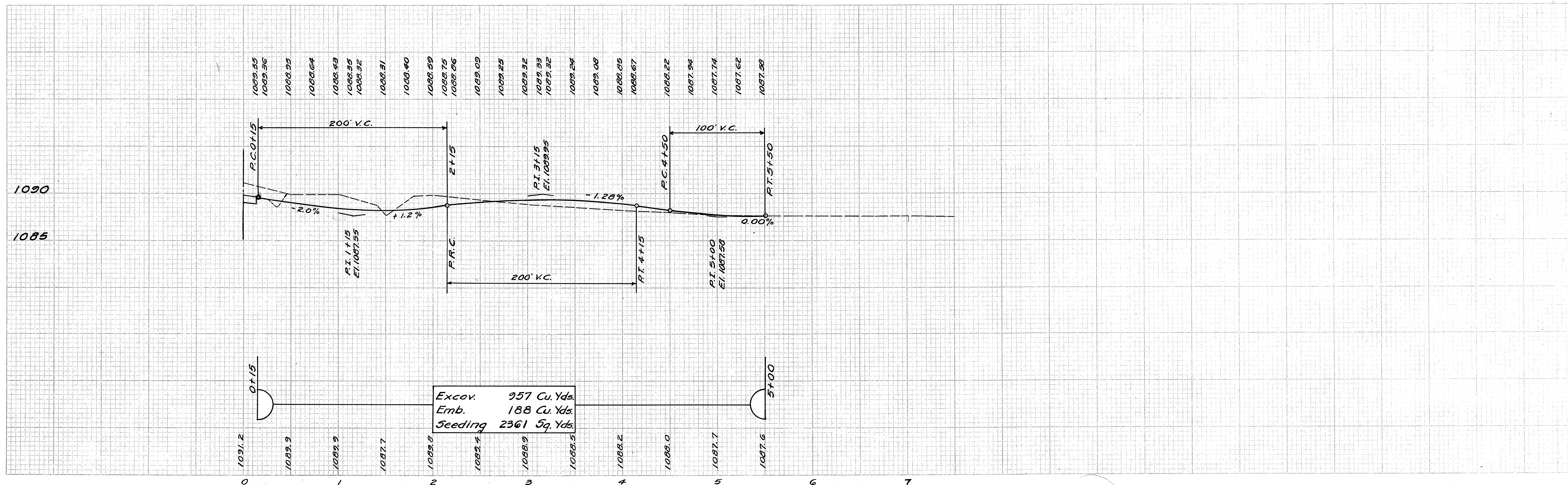
ESTIMATED QUANTITIES

9" T-71 Pavement	1613	Sq. Yds.
Concrete Curb, Std. Type 2-A	134	Lin. Ft.

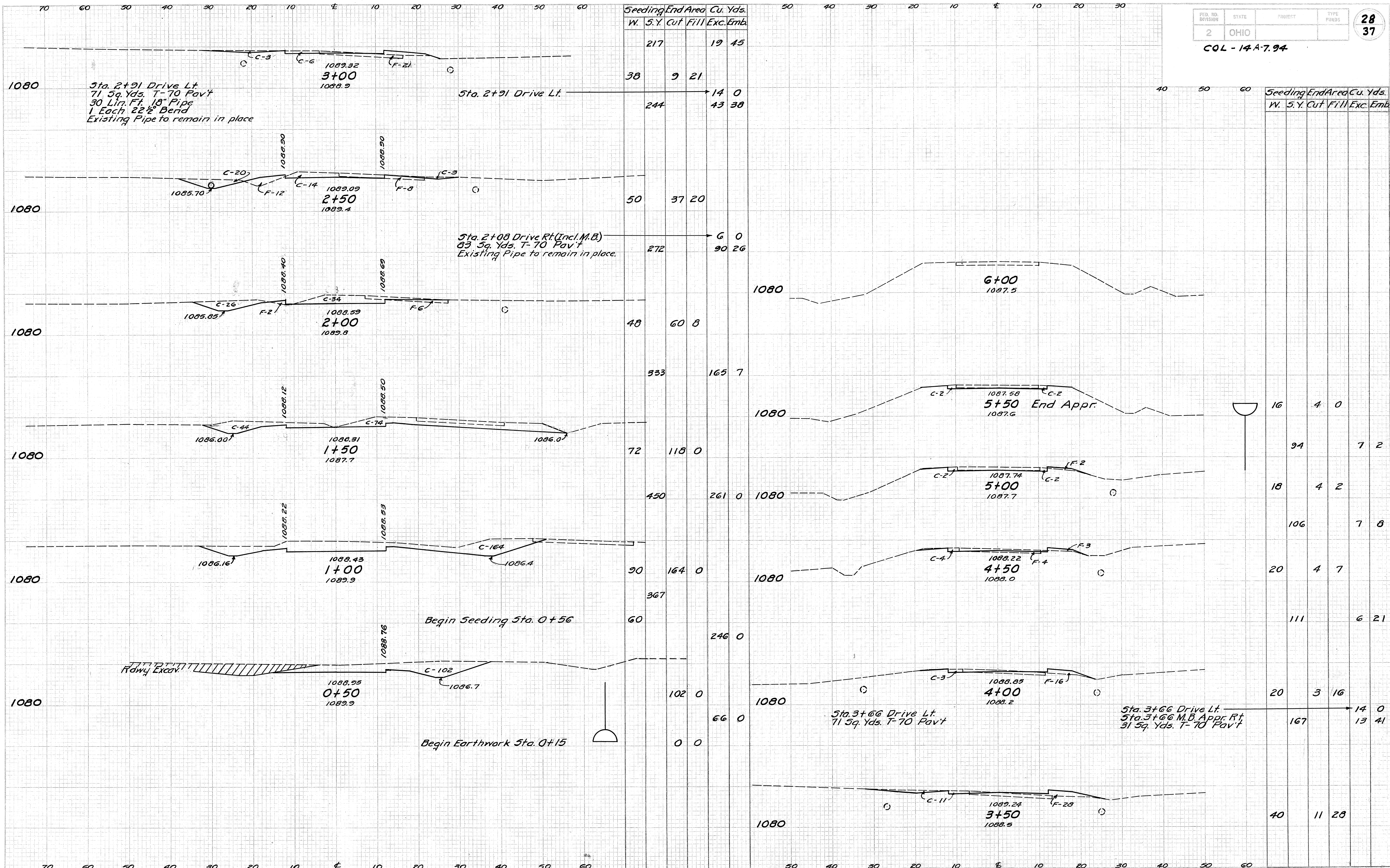


TYPICAL SECTION
Scale 1" = 5'

NOTE: Intersection pavement may be hand finished in accordance with Sec. T-71.211



Excav. 957 Cu. Yds.
Emb. 188 Cu. Yds.
Seeding 2361 Sq. Yds.



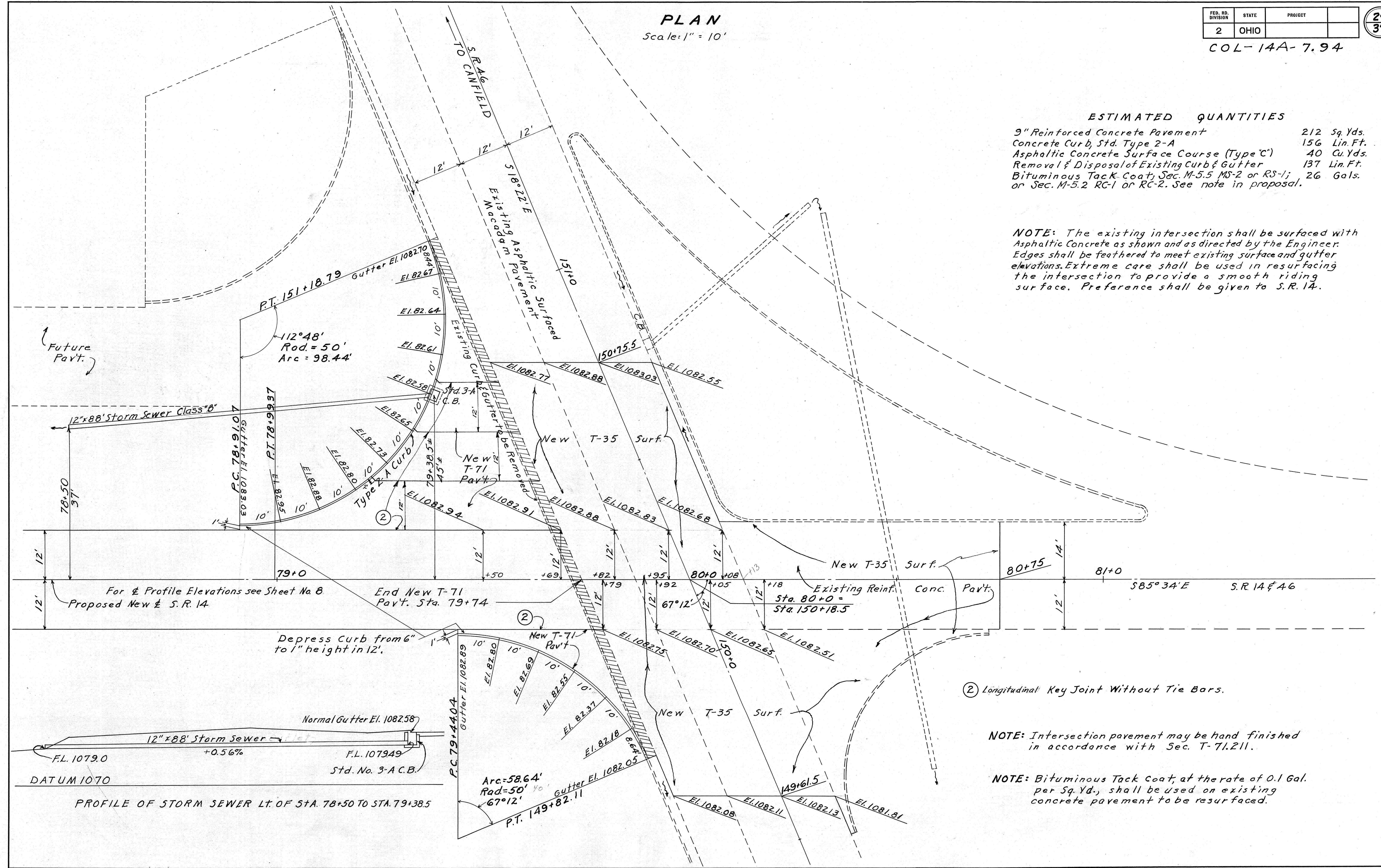
PLAN Scale: 1" = 10'

COL-14A-7.94

ESTIMATED QUANTITIES

9" Reinforced Concrete Pavement	212 Sq. Yds.
Concrete Curb, Std. Type 2-A	156 Lin. Ft.
Asphaltic Concrete Surface Course (Type "C")	40 Cu. Yds.
Removal & Disposal of Existing Curb & Gutter	137 Lin. Ft.
Bituminous Tack Coat, Sec. M-5.5 MS-2 or RS-1;	26 Gals.
or Sec. M-5.2 RC-1 or RC-2. See note in proposal.	

NOTE: The existing intersection shall be surfaced with Asphaltic Concrete as shown and as directed by the Engineer. Edges shall be feathered to meet existing surface and gutter elevations. Extreme care shall be used in resurfacing the intersection to provide a smooth riding surface. Preference shall be given to S.R. 14.



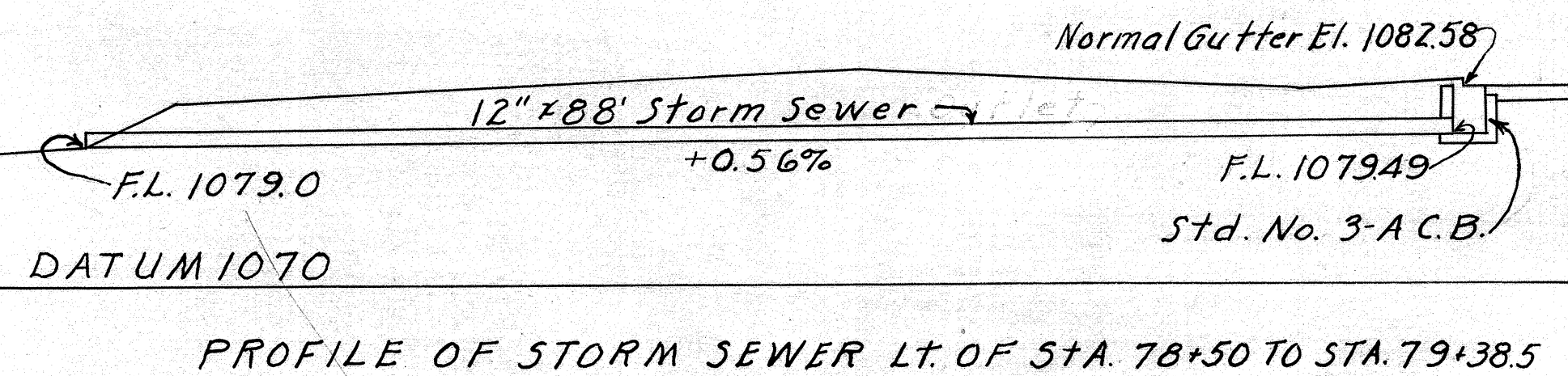
② Longitudinal Key Joint Without Tie Bars.

NOTE: Intersection pavement may be hand finished in accordance with Sec. T-71.211.

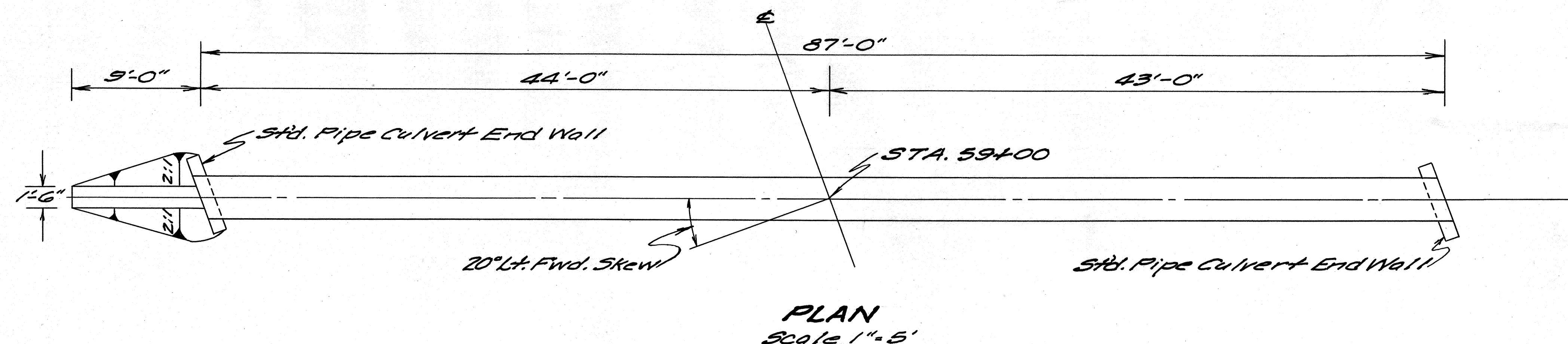
NOTE: Bituminous Tack Coat, at the rate of 0.1 Gal. per Sq. Yd., shall be used on existing concrete pavement to be resurfaced.

For & Profile Elevations see Sheet No. 8
Proposed New & S.R. 14

End New T-71
Pav't. Sta. 79+74



COL-14A7.94



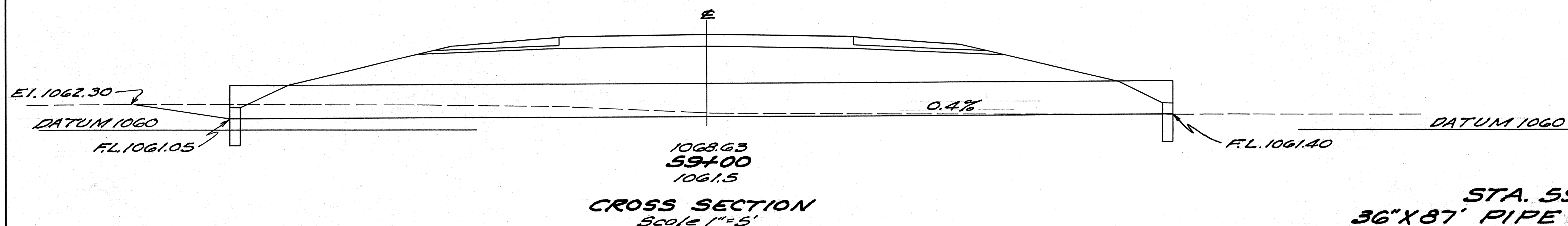
WORK REQUIRED

Build Std Pipe Culvert as shown.

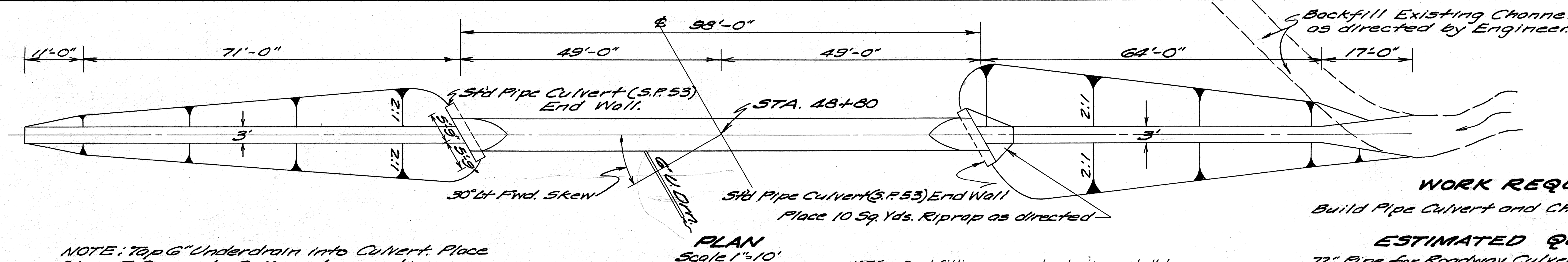
ESTIMATED QUANTITIES

36" Pipe for Roadway Culvert	87 Lin. Ft.
Excavation for Structures	21 Cu. Yds.
Concrete for Structures (Class E)	1.2 Cu. Yds.

Area: 150 acres
Q: 27 cfs



STA. 59+00 36" X 87' PIPE CULVERT



WORK REQUIRED

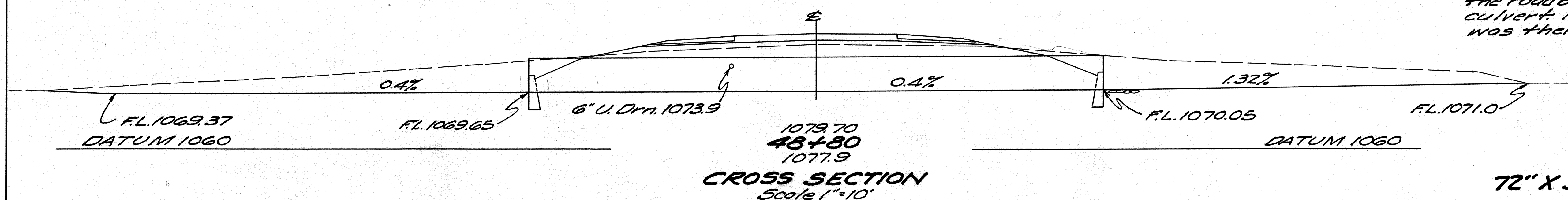
Build Pipe Culvert and Channels as shown.

ESTIMATED QUANTITIES

72" Pipe for Roadway Culvert	98 Lin. Ft.
Channel Excavation	560 Cu. Yds.
Excavation for Structures	44 Cu. Yds.
Concrete for Structures (Class E)	6.2 Cu. Yds.
Riprap	10 Sq. Yds.

NOTE: Channel Excavation is calculated across the roadbed for the entire length of pipe culvert. Remaining Structure Excavation was then calculated.

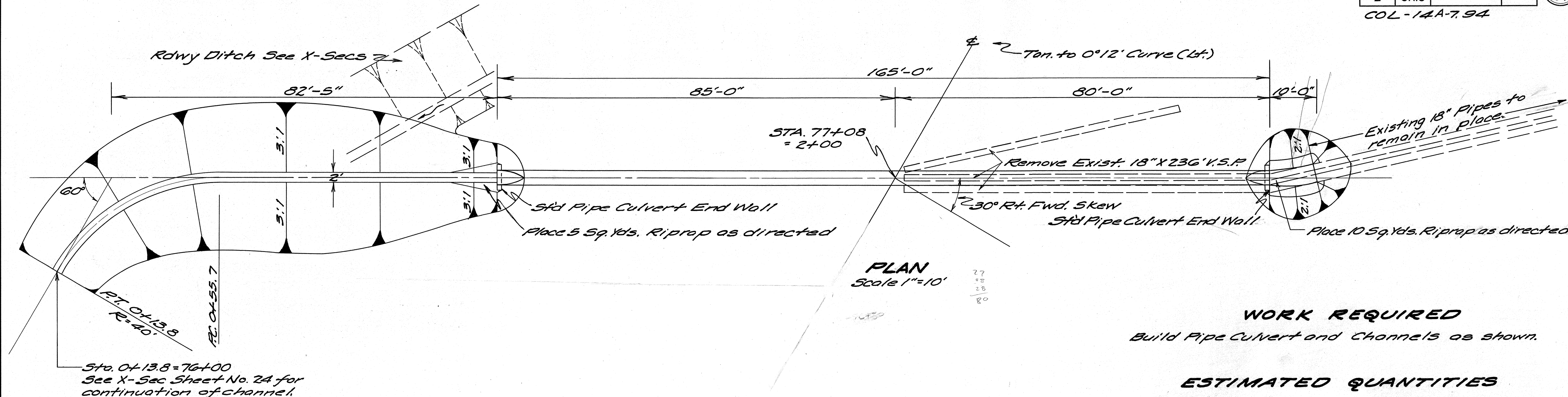
Area: 250 acres
Q: 200 cfs



STA. 48+80 72" X 98' PIPE CULVERT

NOTE: Top 6" Underdrain into Culvert. Place Class E Concrete Collar at connection as directed by Engineer. Cost of connection including collar shall be included in price bid per Lin. Ft. for 72" Pipe.

NOTE: Backfilling around structure shall be in accord with Item E-2 & cost shall be included in Item E-3 for payment. If Sec. M-6.4(g) material is used in the construction of this item, the gage shall be 10-10.



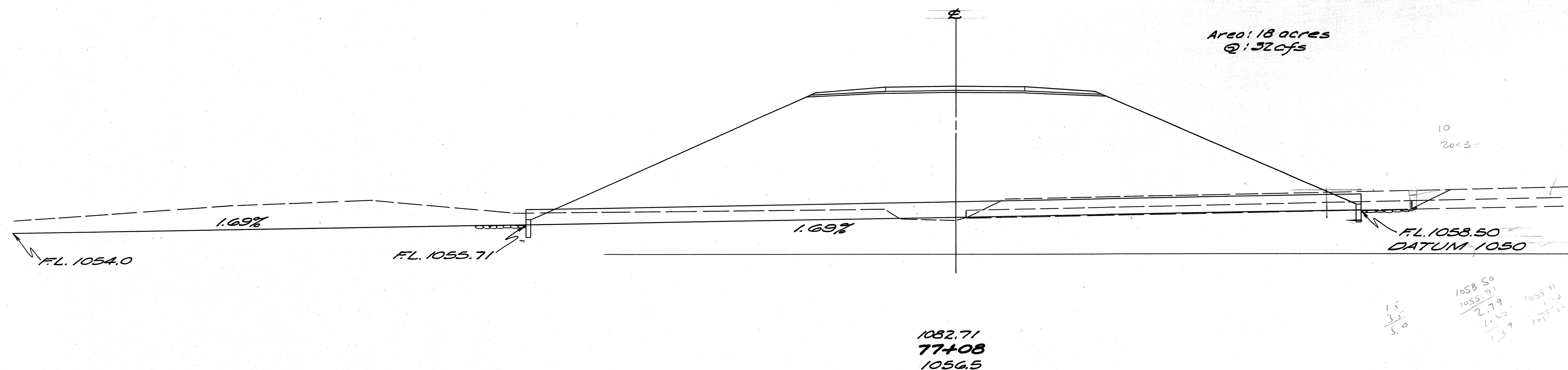
WORK REQUIRED

Build Pipe Culvert and Channels as shown.

ESTIMATED QUANTITIES

36" Extra Strength Reinforced Concrete Culvert Pipe Sec. M-G.66) or Paved Bituminous Coated Corr. Metal Pipe Sec. M-G.4 (d)	
12 Gage for Roadway Culverts.	165 Lin. Ft.
Excavation for Structures	60 Cu. Yds.
Channel Excavation	230 Cu. Yds.
Concrete for Structures (Class E)	1.2 Cu. Yds.
Riprap	15 Sq. Yds.
18" Pipe Removed	236 Lin. Ft.

Area: 18 acres
@ 1.32 cfs



PLAN SCALE: 1" = 20'

P.I. 0+95.84
Δ = 45° 12' LT.
T = 27.06'
L = 51.28'
R = 65'

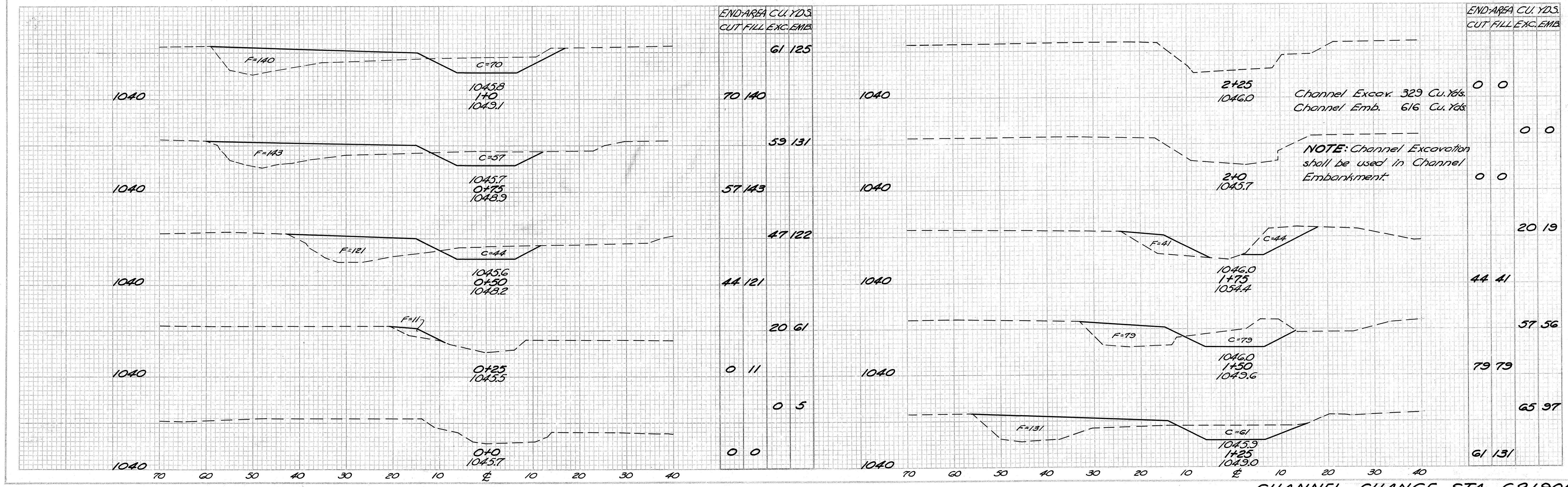
Backfill as shown
on Cross-Sections

PROPOSED NEW

68+90.5 =
2+00

CREEK

NOTE: Channel Excavation is carried
to Bridge Summary - See Sheet 34.



CHANNEL CHANGE STA. 68+90.5

COL-14A-7.94
0.2 mi. West of Columbiana

EXISTING BRIDGE DATA
COL-14-86 (2000' Upstream)
Type: Conc. Beam
Span: 40'
Rdwy: 24'
Condition: Good
To remain in place

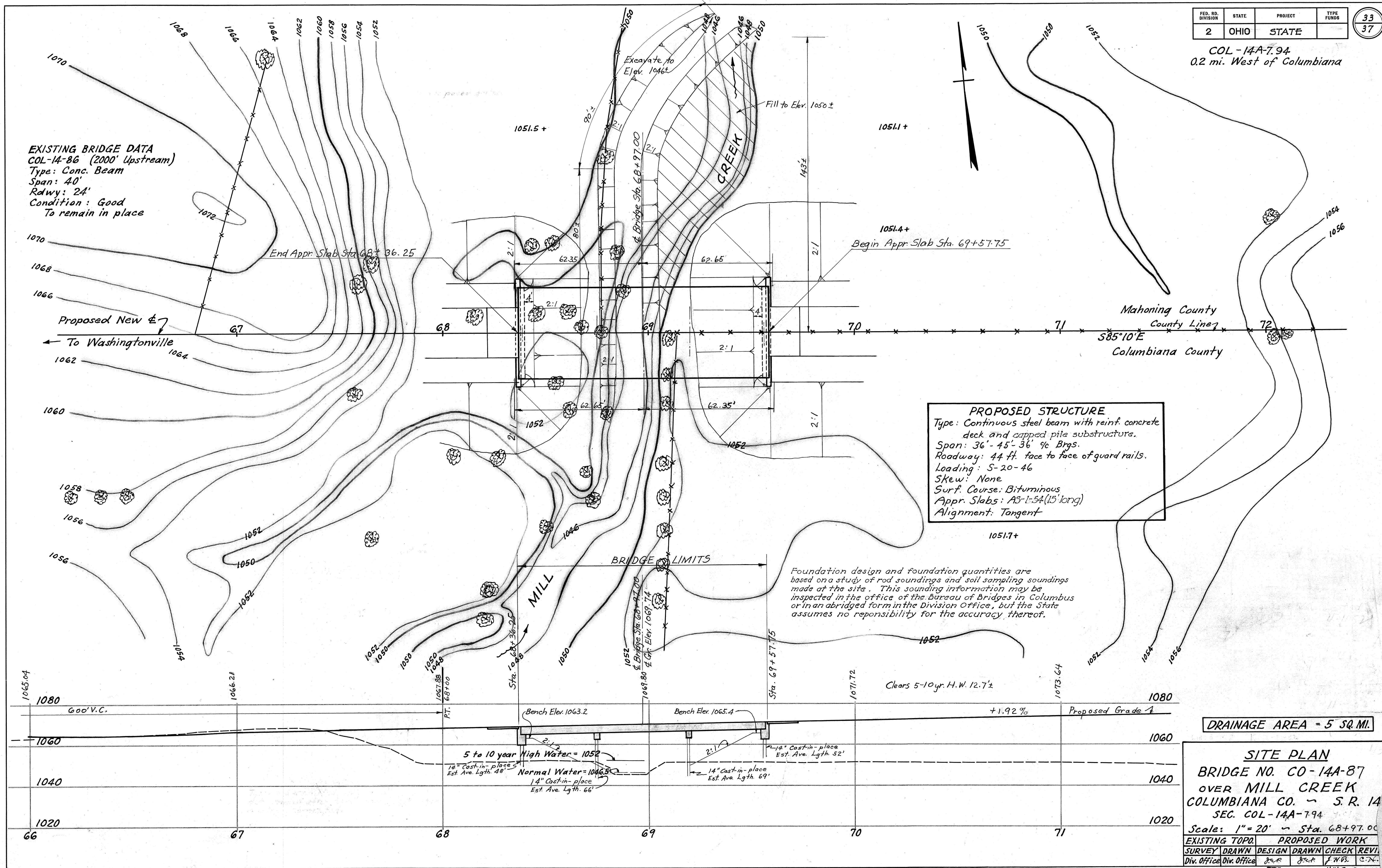
PROPOSED STRUCTURE
Type: Continuous steel beam with reinf. concrete deck and capped pile substructure.
Span: 36'-45'-36' % Brgs.
Roadway: 44 ft. face to face of guard rails.
Loading: S-20-46
Skew: None
Surf. Course: Bituminous
Appr. Slabs: A5-1-54 (15' long)
Alignment: Tangent

Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division Office, but the State assumes no responsibility for the accuracy thereof.

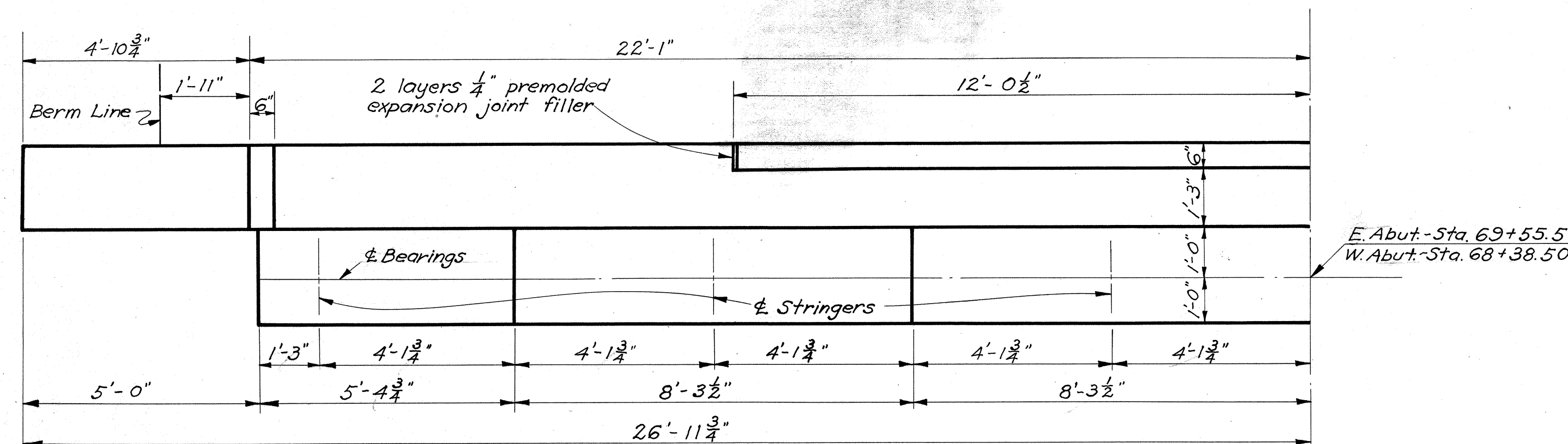
DRAINAGE AREA = 5 SQ. MI.

SITE PLAN
BRIDGE NO. CO-14A-87
OVER MILL CREEK
COLUMBIANA CO. ~ S.R. 14
SEC. COL-14A-7.94

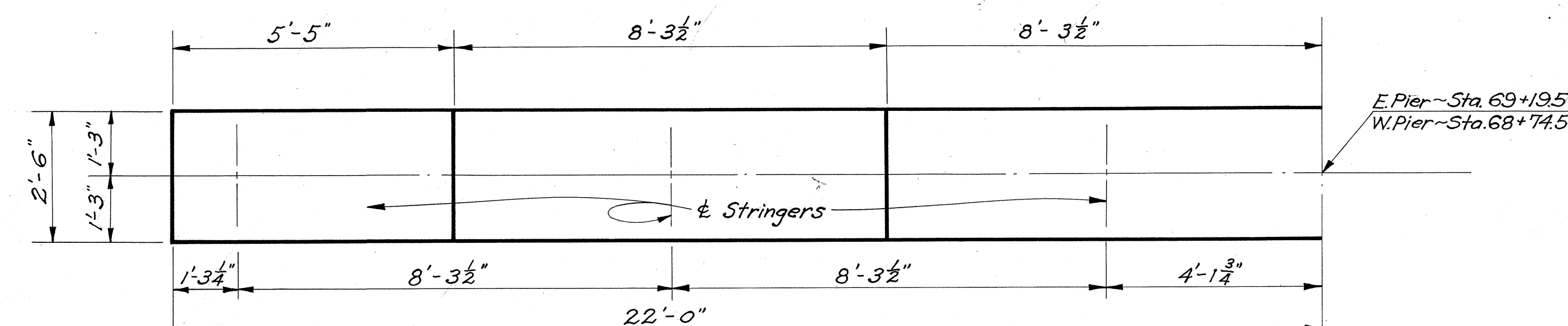
Scale: 1" = 20' ~ Sta. 68+97.00
EXISTING TOPG. PROPOSED WORK
SURVEY DRAWN DESIGN DRAWN CHECK REV.
Div. Office Div. Office J.R.P. J.R.P. J.H.B. C.N.
DATE 9-11-52



COL-14A7.94



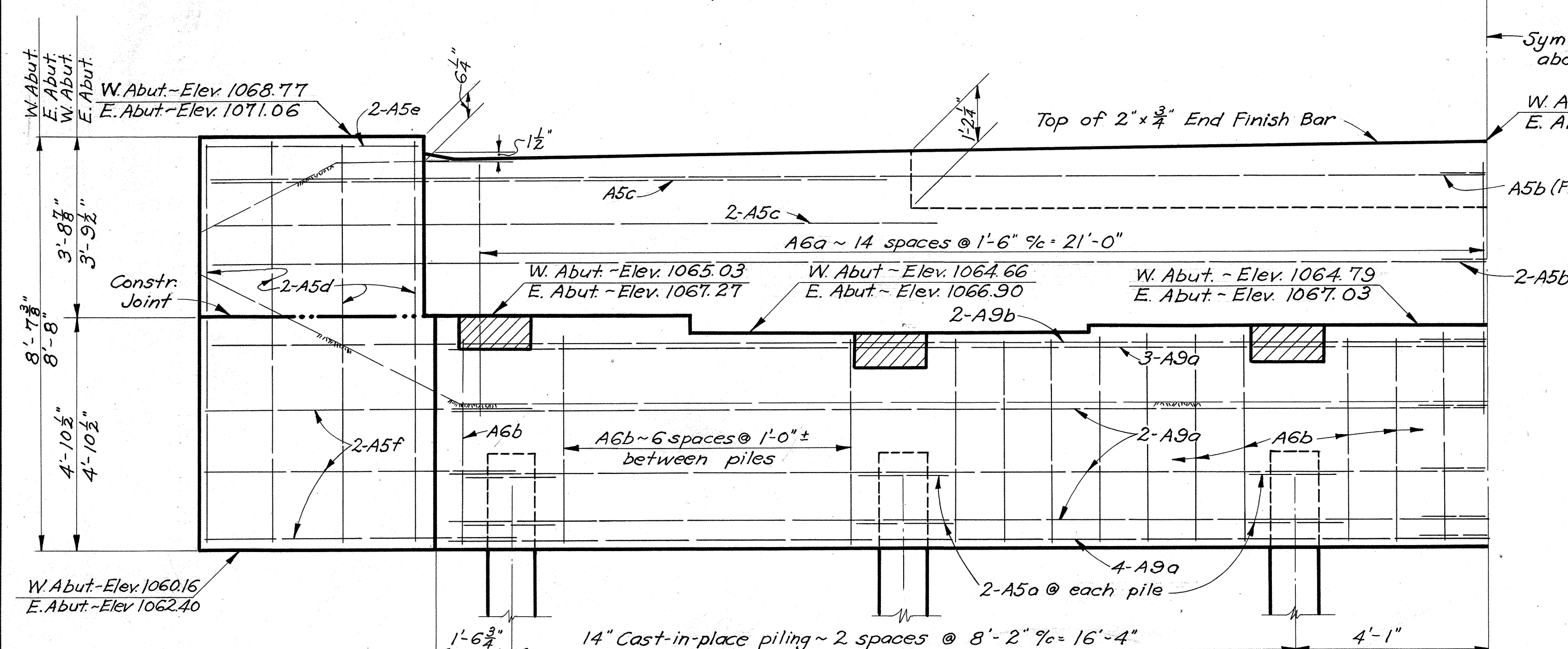
HALF ABUTMENT PLAN
End finish not shown.



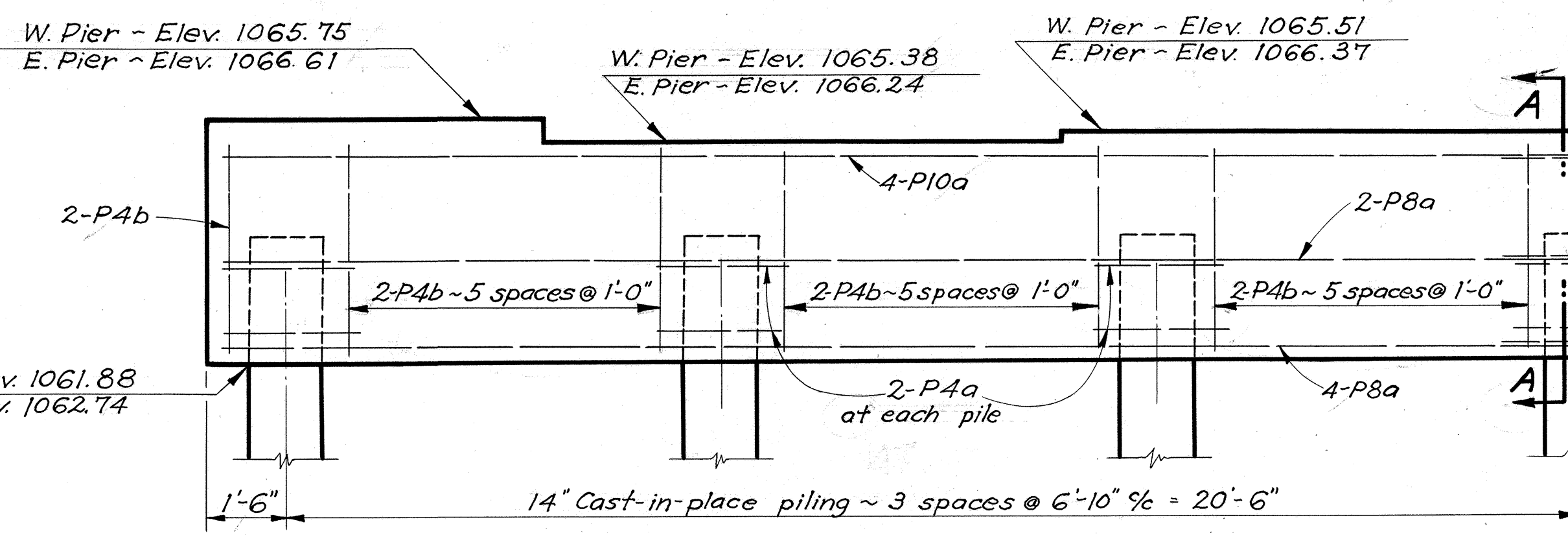
HALF PIER PLAN

NOTES:

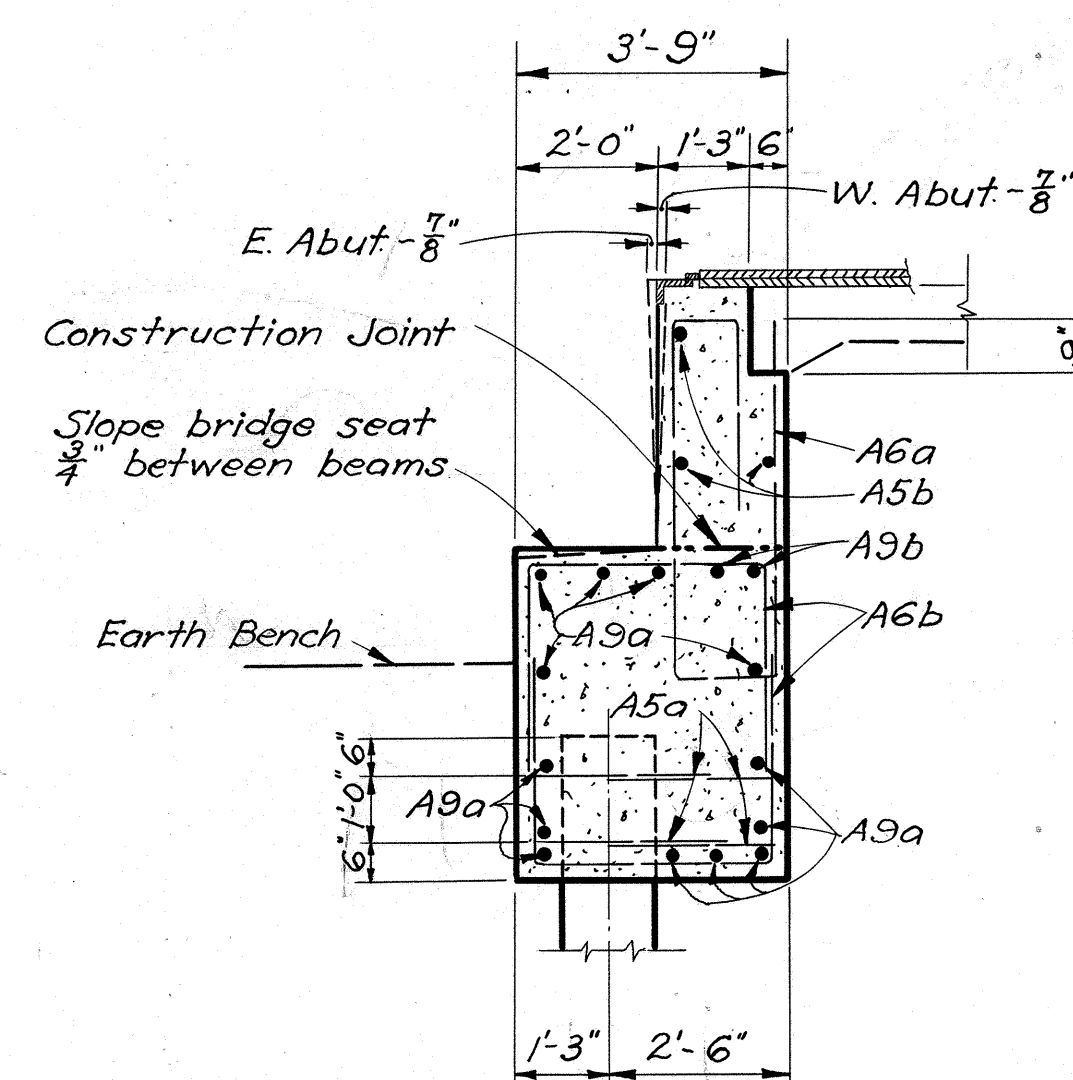
The exposed portion of the piles above the encasement shall be painted in accordance with Item S-8 using two coats M-9.9, M-9.20 or M-9.21 and two coats M-9.12. If metal forms for encasement are left in place the exposed portions shall be similarly painted unless galvanized.
The metal casing of cast-in-place concrete piles shall have, above the concrete encasement, a minimum thickness of No. 7 gage and a uniform section (not tapered).
Cut-off elevation of piles, for measurement of pay length, shall be considered as 2'-0" above bottom of cap.
All reinforcement shall be 2" clear from surface of concrete.



HALF ABUTMENT ELEVATION



HALF PIER ELEVATION



SECTION ON & R'DW'Y

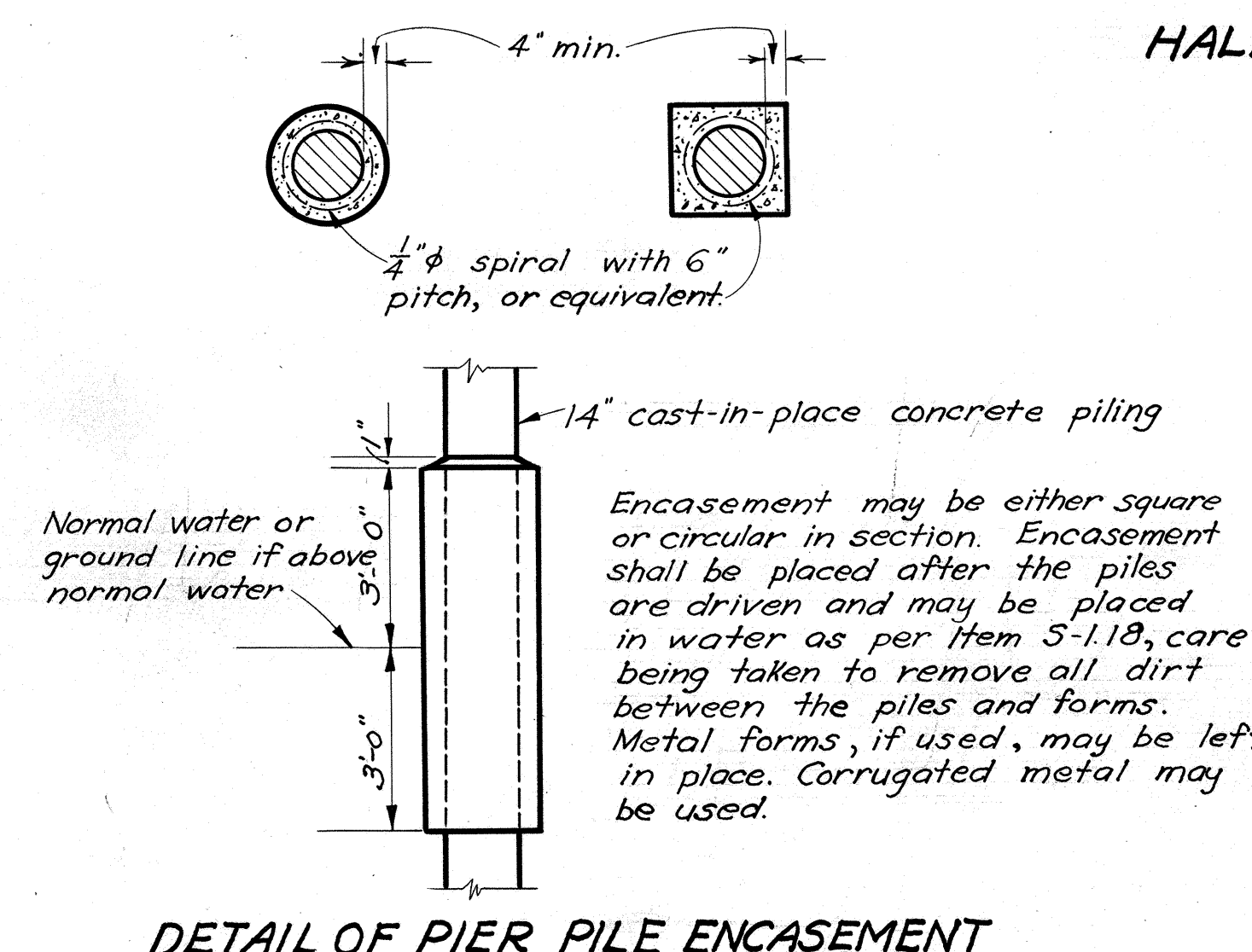
NOTES:

All earth fill around abutments shall be made full height of earth bench. Excavation shall then be made for abutment cap, after which piling shall be driven.

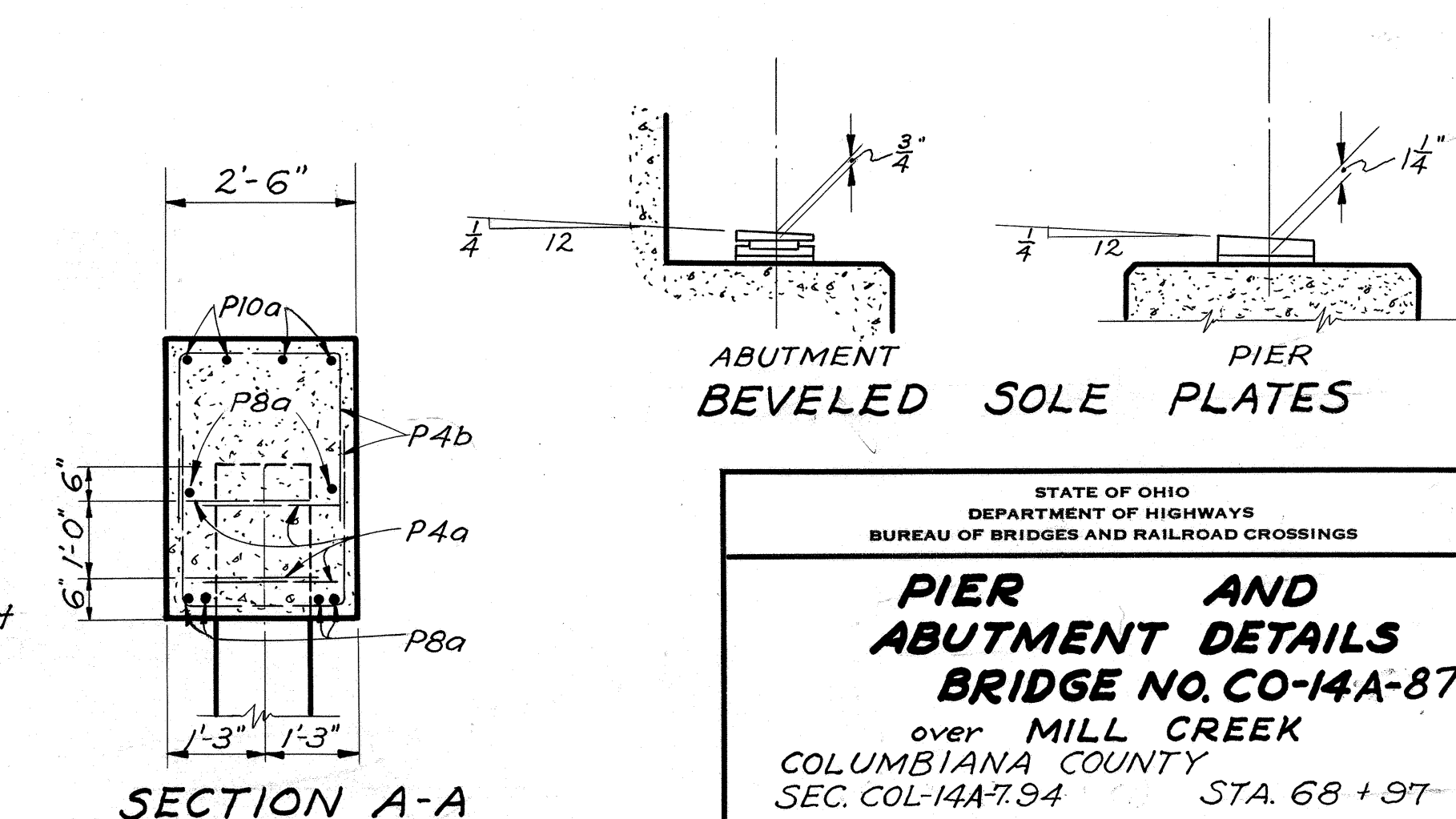
Concrete above bridge seat construction joint shall not be placed until after steelwork is erected. Steel end finish shall be used as a template for top of backwall.

Shaded areas on abutment face (9" x 1'-6" centered at each stringer) shall be finished with particular care, to provide plane surfaces at right angles with the grade of the structure, insuring full bearing for bumper angles.

All reinforcement shall be 2" clear from surface of concrete.



DETAIL OF PIER PILE ENCASEMENT

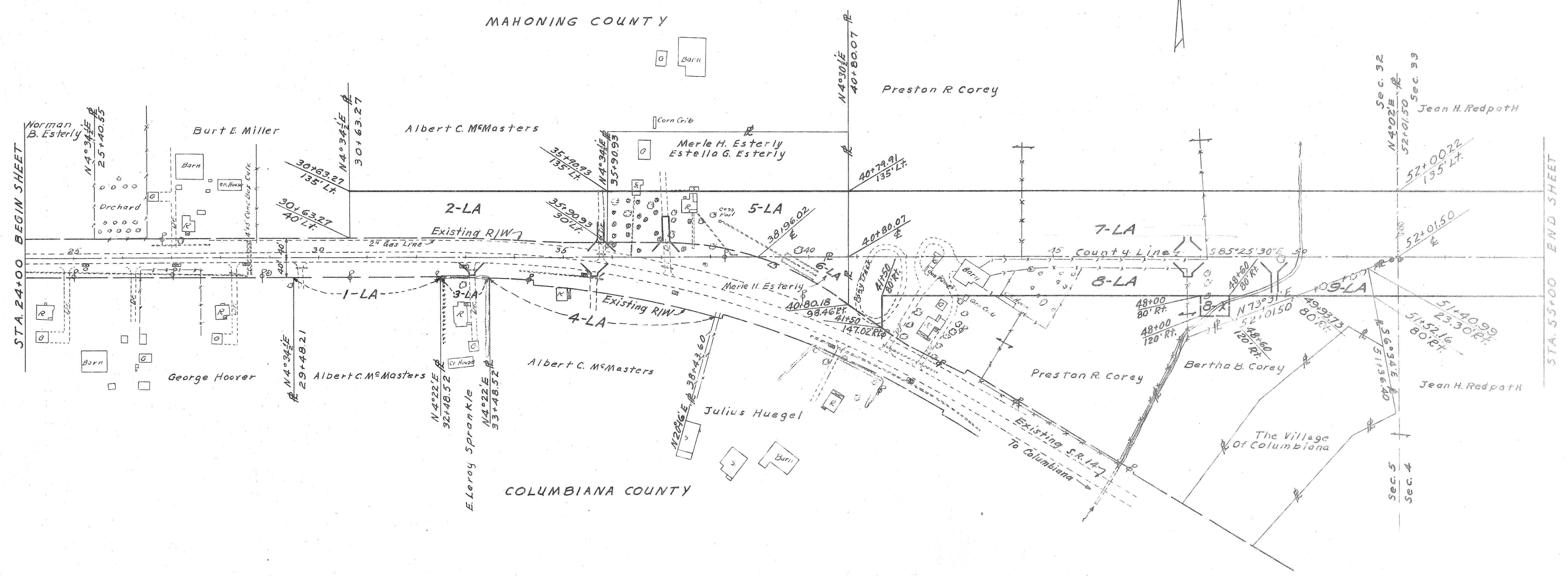


SECTION A-A

STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES AND RAILROAD CROSSINGS						
PIER AND ABUTMENT DETAILS BRIDGE NO. CO-14A-87 over MILL CREEK COLUMBIANA COUNTY SEC. COL-14A-7.94 STA. 68+97						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.W.	C.W.	D.H.S.	D.H.S.	BFG	9-11-52	

5-LA
Merle H. Esterly
Estella G. Esterly
1.35 Ac.

6-LA
Merle H. Esterly
0.19 Ac.

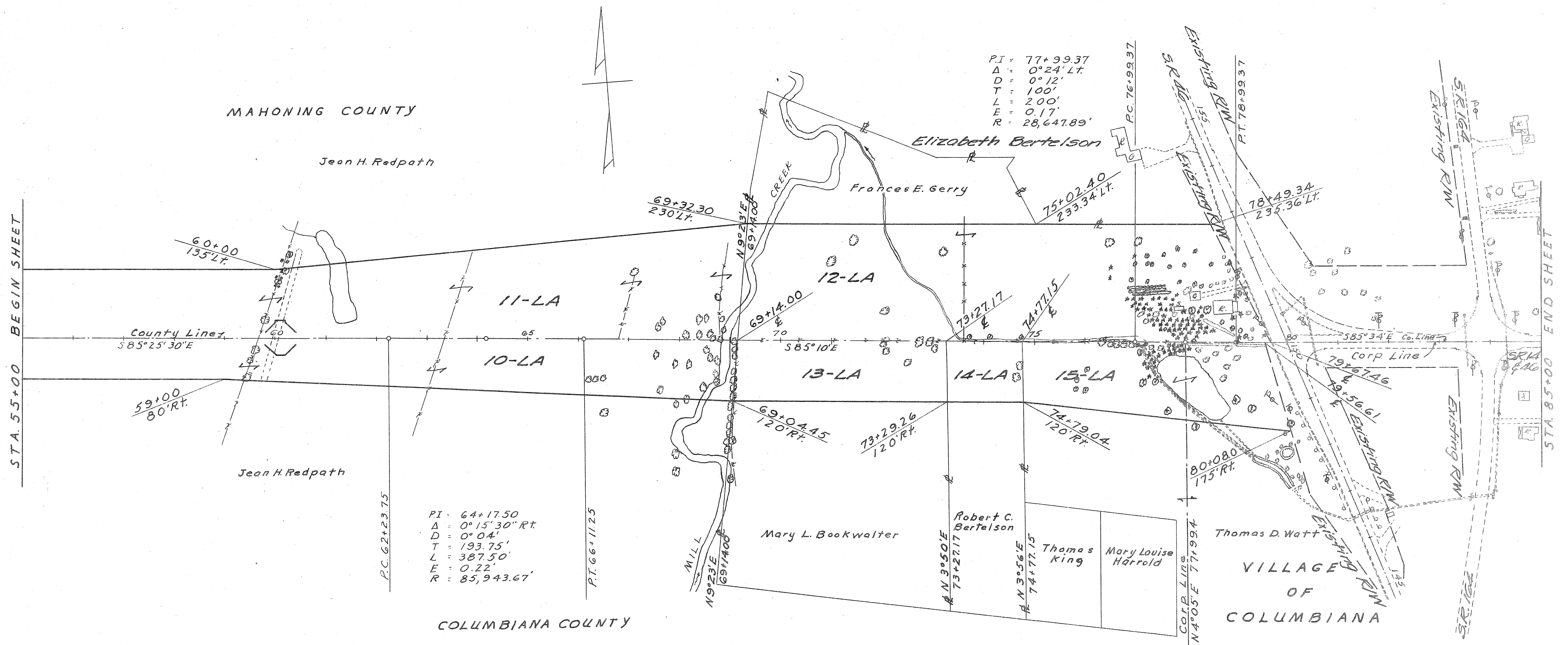


1-LA, 2-LA, 4-LA
Albert C. McMasters
1-LA: Limited Access Only
2-LA: 1.18 Ac.
4-LA: Limited Access Only

3-LA
E. Leroy Sprankle
Limited Access Only

7-LA, 8-LA, 8-X
Preston R. Corey
7-LA: 3.47 Ac.
8-LA: 1.94 Ac.
8-X: 0.055 Ac.

9-LA
Bertha B. Corey
0.10 Ac.



10-LA, 11-LA
Jean H. Redpath
10-LA: 3.70 Ac.
11-LA: 6.33 Ac.

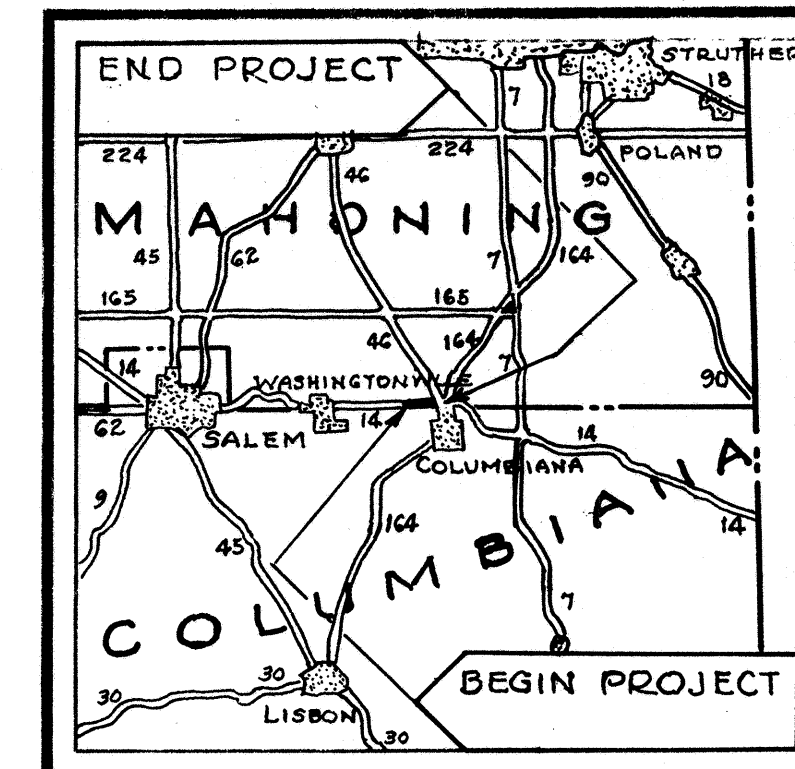
12-LA
Frances E. Gerry
5.26 Ac.

13-LA
Mary L. Bookwalter
1.15 Ac.

14-LA
Robert C. Bertelson
0.41 Ac.

15-LA
Thomas D. Watt
1.69 Ac.

NOTE: THE INFORMATION SHOWN BY THIS SUB-
GRADE PROFILE WAS SECURED FOR THE INFOR-
MATION OF THE STATE OF OHIO. THE STATE DOES
NOT GUARANTEE THE CORRECTNESS THEREOF AND
DOES NOT INCLUDE IT AS A PART OF THE PLANS
GOVERNING THE CONSTRUCTION OF THE PROJECT.



LOCATION MAP

LEGEND FOR PROJECT-AVERAGE RESULTS OF TESTS- 59 SAMPLES TESTED

DESCRIPTION	H. R. B. CLASS	S. H. T. L. CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
GRAVEL, SAND & SOIL	A-1-b(6)	2	43	21	11	16	9	20	4	11	7
GRAVEL & SAND	A-1-b(6)	3	46	29	10	9	6	17	2	10	2
SAND	A-2-4(6)	4	4	38	28	19	11	18	1	10	4
BERM MATERIAL		7	CLASSIFIED BY VISUAL INSPECTION								
SILT	A-4(8)	8	2	5	8	62	23	25	7	23	7
SANDY SILT	A-4(4)	9	12	17	16	39	16	21	5	17	16
TOP SOIL		10	CLASSIFIED BY VISUAL INSPECTION								
SILT & CLAY	A-6(9)	11	5	8	9	48	30	31	12	22	9
ELASTIC SILT & CLAY WITH ORGANIC MATERIAL	A-7-5(12)	12	10	8	12	50	20	54	15	49	1
CLAY & SILT	A-6(11)	15	3	6	6	47	38	38	17	19	7
CLAY	A-7-6(16)	16	2	3	4	43	48	48	25	28	6

EXISTING PAVEMENT

AUGER BORINGS PLOTTED TO
VERTICAL SCALE ONLY

MOISTURE CONTENT NEARLY
EQUAL TO OR GREATER THAN
THE LIQUID LIMIT.

SAMPLES TESTED -
LAB. NOS. 50 - 86613 - 86639 INCL.
86679 - 86710 INCL.

MOISTURE DENSITY SAMPLES -
LAB. NOS. 50 - 86639 & 86710

NOTE: - FIGURES BESIDE BORINGS INDICATE WATER CONTENT IN PERCENT.

