

SUPPLEMENTAL SPECIFICATIONS	
E-101	1-1-57
B-119	Rev. 8-11-5

TYPICAL SECTIONS

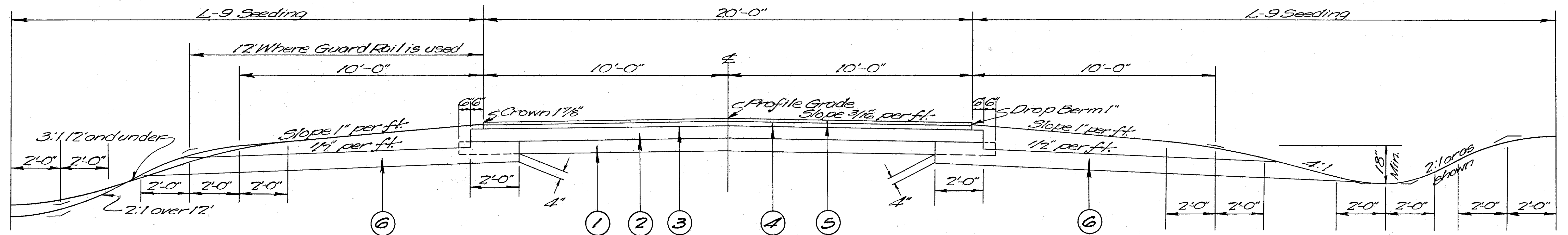
TYPE T-35 ON B-119

Scale 1/2" = 1'-0"

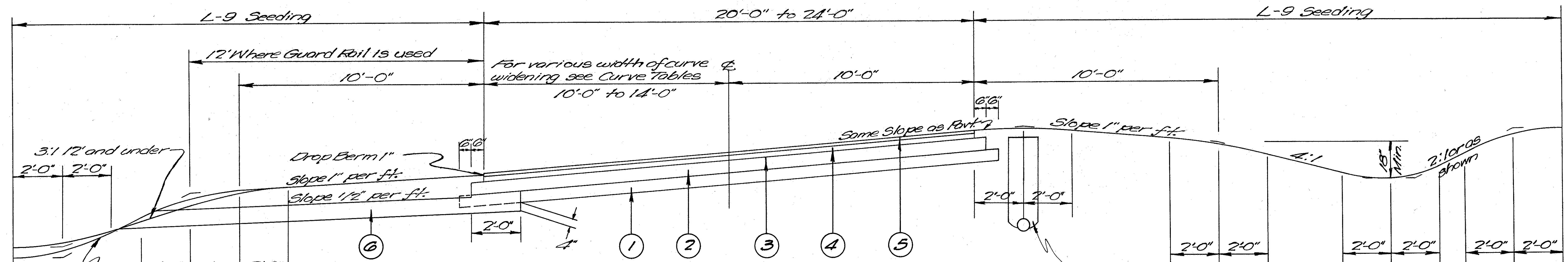
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

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2
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STA. 88+50 TO STA. 89+50 = 100 LIN. FT.
STA. 103+75 TO STA. 105+27.57 = 152.57 LIN. FT.
252.57 LIN. FT.



STA. 44+00 TO STA. 75+63 = 3163 LIN. FT.
STA. 75+73 TO STA. 78+01.25 = 228.25 LIN. FT.
STA. 79+30.75 TO STA. 88+50 = 919.25 LIN. FT.
STA. 89+50 TO STA. 103+75 = 1425 LIN. FT.
5735.50 LIN. FT.

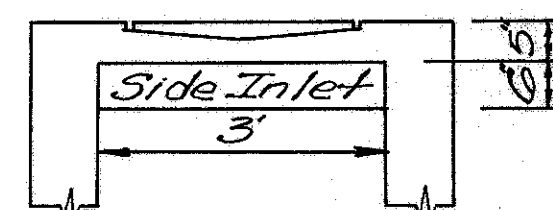
6" Pipe Underdrain where shown on Plans.
(For treatment of underdrains on normal sections and low side of superelevated sections, see Sheet 3)

- KEY -

- ① Item I-22-6" Subbase.
- ② Item B-119-6" Crushed Aggregate Base Course.
- ③ Item T-30- Bituminous Prime Coat, using 0.35 gal. per sq. yd.
- ④ Item B-35-2 1/2" Asphaltic Concrete Leveling Course (85-100).
- ⑤ Item T-35-1 1/2" Asphaltic Concrete Surface Course, Type "A", (85-100).
- ⑥ Item I-9 - Stone Underdrains, No 2, as per plan

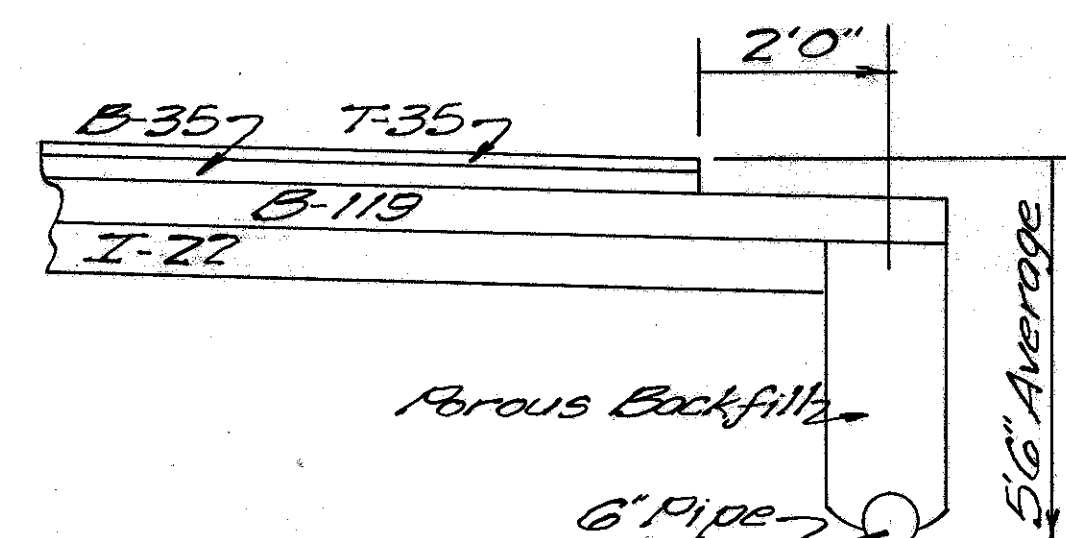
DETAILS AND GENERAL NOTES

DETAIL No.2-3 CATCH BASIN MODIFIED



Side inlet shall be 3'0" X 6" and shall be placed on uphill side except where otherwise noted on plans. Floor standard ditch from 2' to 3' within 10' of Catch Basin.

DETAIL PIPE UNDERDRAIN



TRAFFIC: The Contractor shall maintain traffic at all times in accordance with the requirements of Sec. G-7.07 and Item S-15. The length of one way traffic zones shall be kept to a minimum consistent with the requirements of the work. The Contractor shall maintain the existing pavement, roadway and structures while traffic is being maintained thereon. Temporary traffic lanes shall be surfaced with Traffic Bound Material, treated with Calcium Chloride, and the surface maintained daily in a manner satisfactory to the Engineer. Two way traffic lanes shall be surfaced with aggregate at least 20 feet wide and one way traffic lanes shall have the surface aggregate not less than 12 feet wide. Maximum use shall be made of the existing pavement for traffic maintenance, holding the length and duration of use of temporary traffic lanes to a minimum. Payment for constructing, maintaining and removing temporary traffic lanes and for all other items required for the maintenance of traffic, except those provided under Items S-15, shall be included in the lump sum bid for "Maintaining Traffic."

CHANNEL EXCAVATION:

Where channel excavation is carried through a proposed pipe structure site, additional excavation required to obtain a suitable foundation for the structure shall be measured and paid for as Item E-3, Channel Excavation.

DESIGN SPEED: The geometrics for this project have been planned for a design speed of 50 M.P.H.

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.

FIELD OFFICE: The contractor shall provide a suitable field office in accordance with section S-0.01(b) having a minimum floor area of 300 sq. ft. The contractor shall have a telephone installed and maintained during the construction of this project.

UTILITIES: Any and all work required for removing, relocating and constructing new facilities for private or public utilities will be done by and at the expense of their respective owners unless otherwise noted on the Plans.

REMOVAL OF TREES AND STUMPS: The number and size of trees and stumps shown below for removal under the construction as detailed on these plans are as nearly correct as available information permits. The State of Ohio will not be responsible for any variations found during construction. The lump sum bid for Item E-9, removal of trees and stumps, shall constitute full payment for this item and no additional compensation will be allowed. The number and size of trees and stumps are estimated below.

12" to 18"	33
18" to 24"	10
24" to 30"	9
30" to 36"	3
36" to 42"	5

COMPACTED SUBGRADE: The subgrade under B-119 material used on drives and mail box approaches shall be compacted for a depth of 6 inches to the density requirements in Table III, Item E-101. Payment for subgrade compaction, as specified above, shall be included in the unit price bid for Item E-101, Roadway Excavation.

STONE UNDERDRAINS: No. 2 Stone Underdrains shall be constructed at intervals not to exceed 100 feet on both sides of pavement on tangents and on the low side of pavement on curves, except where pipe underdrain is used. Additional underdrains may be required and shall be constructed at locations determined by the Engineer. An estimated quantity of 1000 lin. ft. has been included in the General Summary. In the final finishing of slopes and ditches care shall be exercised to assure that the exposed edges of the underdrain will be left free of earth cover that would impede free drainage.

ESTIMATED QUANTITIES:

Specific locations and usage of estimated quantities set up on these plans to be used "where directed by the Engineer" shall be made a matter of record by incorporation into the final change order governing construction of this project.

SEEDING: Quantities for seeding are calculated for the soil areas within the work limits as shown on the cross sections. Seeding shall not be used on areas where rock or hard shale is encountered in cut slopes or where fill slopes are composed of rock. The existing road right of Sta. 56+50 to Sta. 61+20, left of Sta. 62+50 to Sta. 67+00, left of Sta. 75+50 to Sta. 83+50 left of Sta. 90+00 to Sta. 94+50 and left of Sta. 95+00 to Sta. 102+50 shall be plowed, harrowed and dragged to a smooth grade and the entire area left in a neat condition for seeding. Cost of this work shall be included in the unit price bid per square yard for Item L-9, Seeding and Protecting.

ITEM S-15, MODIFIED TRAFFIC COMPACTED MATERIAL: This item shall consist of furnishing No. 3 or No. 3A aggregate in lieu of the grading specified under Item T-10. All other provisions of Item S-15 shall apply. The unit prices bid for Items S-15 shall include the cost of maintaining the aggregate beyond the limits of the temporary runaround.

GUARD RAIL REMOVED AND DISPOSED OF: Existing guard rail left of Sta. 43+68 to Sta. 44+58 and right of Sta. 43+77 to Sta. 45+47 shall be removed. Existing end finishes shall be carefully dismantled and reset at the ends of the guard rails to remain. All other removed materials at the above locations shall become the property of the Contractor and shall be disposed of by him. Payment for all of the above shall be included in the unit price bid for Item I-15, Guard Rail Removed and Disposed of.

GUARD RAIL REMOVED AND STORED: All existing guard rail from Sta. 57+60 to Sta. 105+23 shall be removed and stored in accordance with Sec. I-15.08. The end finish on the existing rail left of Sta. 101+82 shall be carefully dismantled and reset left of Sta. 105+23. The remainder of the rail elements, joints, brackets and hardware shall be carefully stored on the right of way as directed by the Engineer and left for disposal by State Forces. All other removed guard rail materials between the above limits shall become the property of the Contractor and shall be disposed of by him. Payment for all of the above shall be included in the unit price bid for Item I-15, Guard Rail Removed and Stored.

PART WIDTH CONSTRUCTION: Where necessary for the satisfactory maintenance of traffic, pavement shall be constructed part width at a time. Care shall be exercised to prevent the construction of a butt joint on centerline in B-119 and I-22 courses. This shall be accomplished by building the B-119 and I-22 courses, placed with the first portion of the pavement built, to extend at least 18 inches beyond the centerline and by surfacing no closer than 18 inches to this edge. When the second portion of the pavement is built, a 12 inch width of the projecting courses shall be broken down and thoroughly keyed in with the newly placed corresponding courses in the second portion of the pavement. All additional costs shall be included in the unit prices bid for the pertinent pavement items.

SUMMARY OF QUANTITIES

PAYEMENT CALCULATIONS

Net Length of Pavement = 5988.07 Lin. Ft.
Area of Pavement $5988.07 \times 20 \div 9 = 13307$ Sq. Yds.
Curve Widening $97 \times 294 \div 36 = 775$
Total Area of Pavement = 14,082 Sq. Yds.

Item E-101, Subgrade Compaction
Pavement Area + Approach Slabs $14082 + 111 = 14,193$ Sq. Yds.

Item I-22
Curve Widening $5988.07 \times 22 \times 0.5 \div 27 = 2440$ Cu. Yds.
Approach Slabs $775 \times 6 \div 36 = 129$ Cu. Yds.
Add for Extension of Underdrains $50 \times 22 \times 0.5 \div 27 = 20$ Cu. Yds.
Total I-22 = 5 Cu. Yds.
2,594 Cu. Yds.

Item B-119
Curve Widening $5988.07 \times 21 \times 0.5 \div 27 = 2329$ Cu. Yds.
Add for Extension of Underdrains $775 \times 6 \div 36 = 129$ Cu. Yds.
Total B-119 = 30 Cu. Yds.
2,488 Cu. Yds.

Item T-30
Curve Widening $5988.07 \times 21 \div 9 = 13972 \times 0.35 = 4890$ Gals.
Total T-30 $775 \times 0.35 = 271$ Gals.
5,161 Gals.

Item B-35
 $14082 \times 2 1/2 \div 36 = 978$ Cu. Yds.

Item T-35
 $14082 \times 1 1/2 \div 36 = 587$ Cu. Yds.

Item S-15 for Maintaining Traffic
Estimated Length including Temporary Runaround = 4500 Lin. Ft.
Total S-15 $4500 \times 133 \div 100 = 5985$ Use 6,000 Cu. Yds.

Item S-15 Calcium Chloride
 $6000 \div 50 = 120$ Tons

Station		EARTHWORK		AND SEEDING		
From	To	Excav. Cu. Yds.	Emb. Cu. Yds.	Seeding Sq. Yds.	Fertilizer Lbs.	Lime Lbs.
41+50	105+27.57	117,128	33,858	68,853	12,394	61,968
Grand Totals		117,128	33,858	68,853	12,394	61,968

Water for Embankment, I-22 and B-119
 $(33,858 + 3,000 + 3,100) \times 5 \div 1000 = 200$ M-Gals.

GENERAL NOTES (CONTINUED)

PAVED BITUMINOUS COATED ITEM 5-28 STRUCTURES

The sectional corrugated metal structures shall be shop coated and field paved in accordance with Sec. M-6.4(d).

Results obtained from the field paving shall meet the satisfaction of the Engineer. The bituminous paving may consist of an acceptable mixture of hot sand and Sec. M-5.1 Asphalt Cement, spread and compacted to the satisfaction of the Engineer, forming a smooth, durable pavement having a minimum average thickness of approximately one inch over the inside crests of the corrugations.

After installation of the structures, damaged or worn spots in the bituminous coating on the inside of the structures shall be re-coated using materials and methods recommended by the manufacturer and as directed by the Engineer.

Payment for all of the above is included in the unit prices bid for the Item 5-28 Structures.

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APPROACHES

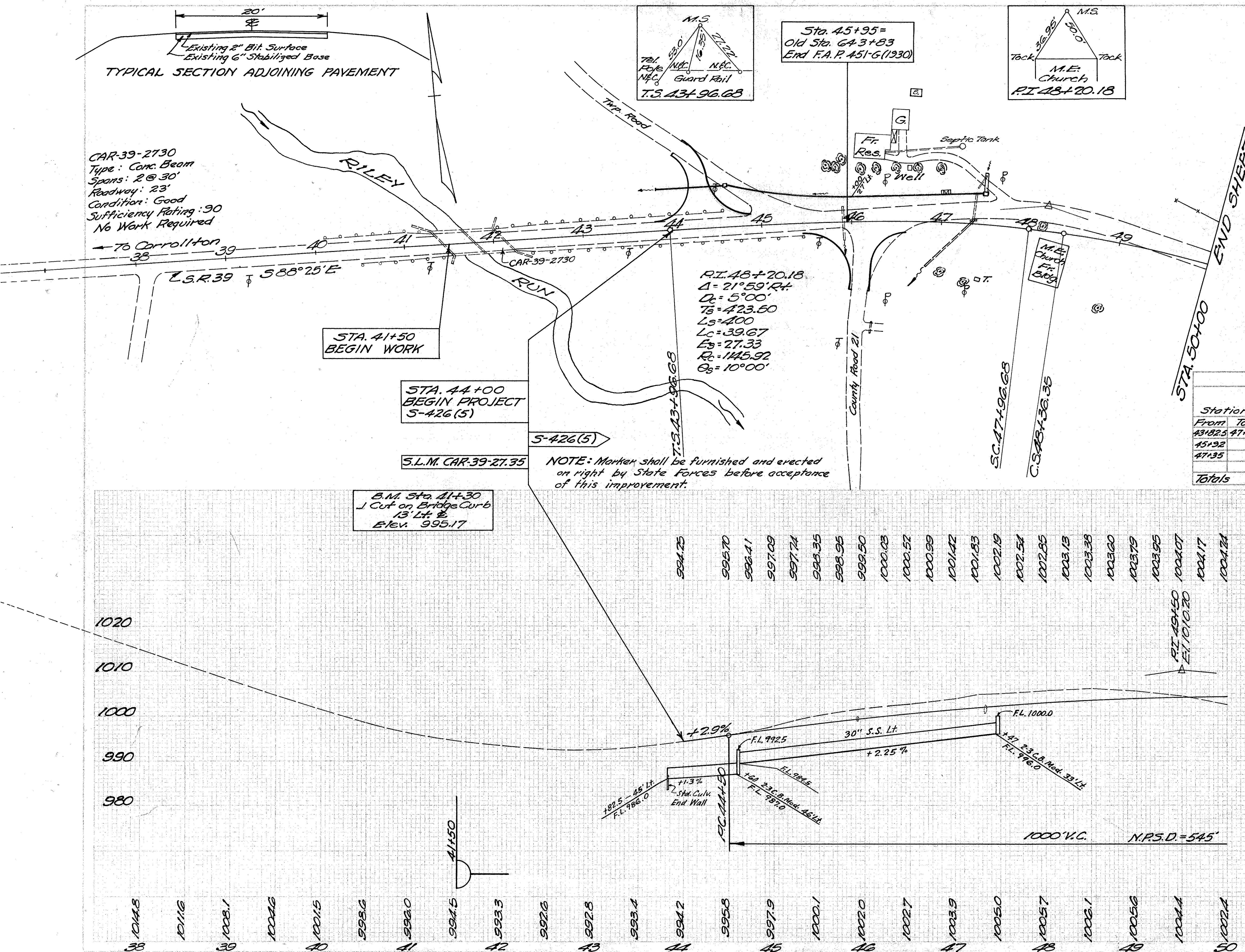
	Side	See	Remove 12" Pipe
Station	&	Sheet	Lir. Ft.
44+30.03	Lt.	26	
46+15	Rt.	26	
47+45	Lt.	6	18
Total			18

GUARD RAIL

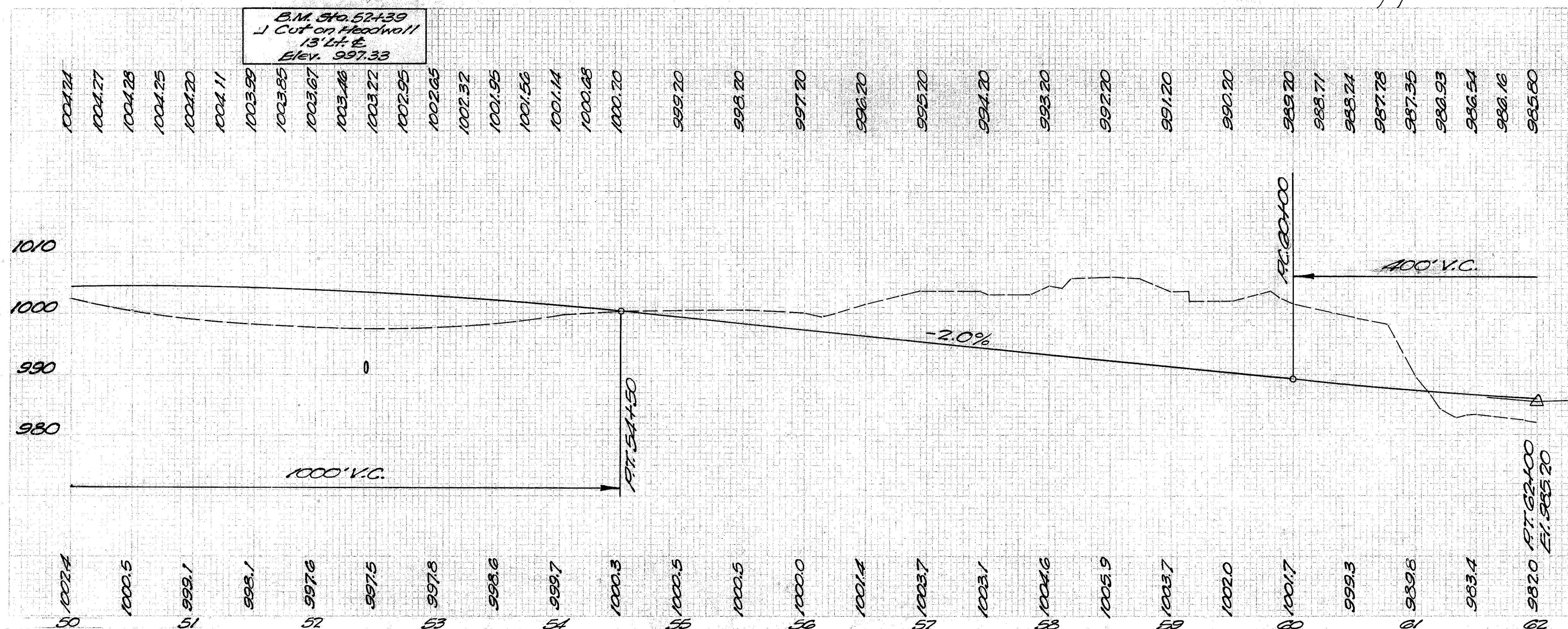
<i>From Sta.</i>	<i>To Sta.</i>	<i>Side E</i>	<i>See Street</i>	<i>Remove Linft.</i>
A3+68	44+53	Lt.	3 * G	90
A3+77	45+47	Rt.	3 * G	170
<i>Total</i>				260

DRAINAGE

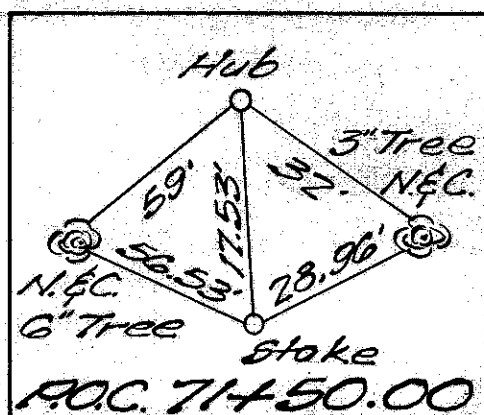
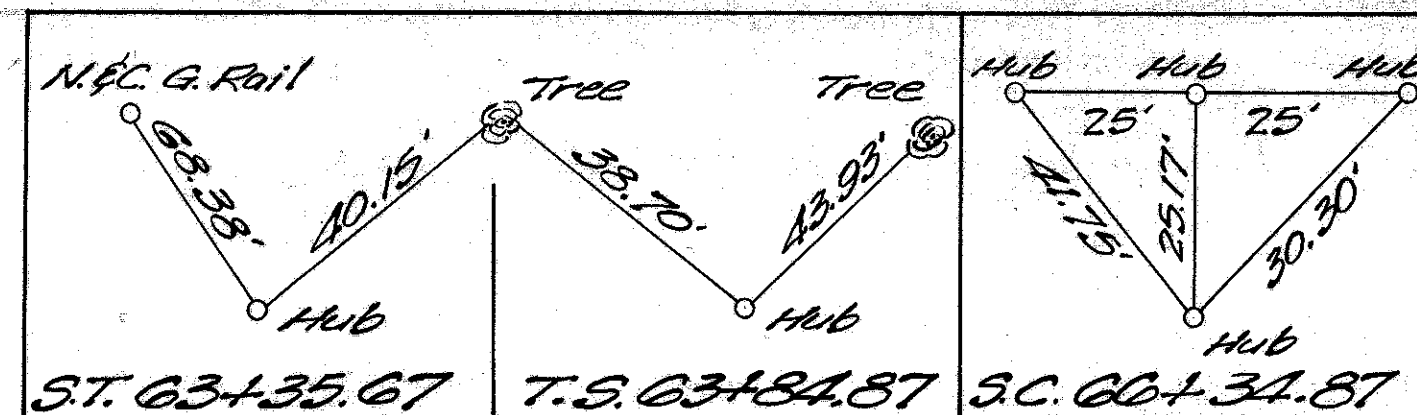
Stations		Side	See	30" Class A St. Sewer-Lin Ft.	2-3 C. B.	Class E	Type 3 Gutter Lin. Ft.	Removals	
From	To	&	Sheet	Under Apex	Mod. Co.	Conc. Cu. Yds.	Pipe Lin. Ft.	24" Head Pipe Wells Lin. Ft.	24" Head Wells Cu. Yds.
43+82.5	47+47	Lt.	G	290	76	2	0.5	21	
45+32		Rt.	G					39	
47+35		Rt.	G					106	4
Totals				290	76	2	0.5	21	39 106 4



DRAINAGE							
Station	See Sheet	Removal			New Work		
		Type	Size	Length	Type	Size	Length
52+42	31	Pipe	24"	31'	Pipe	24"	80'



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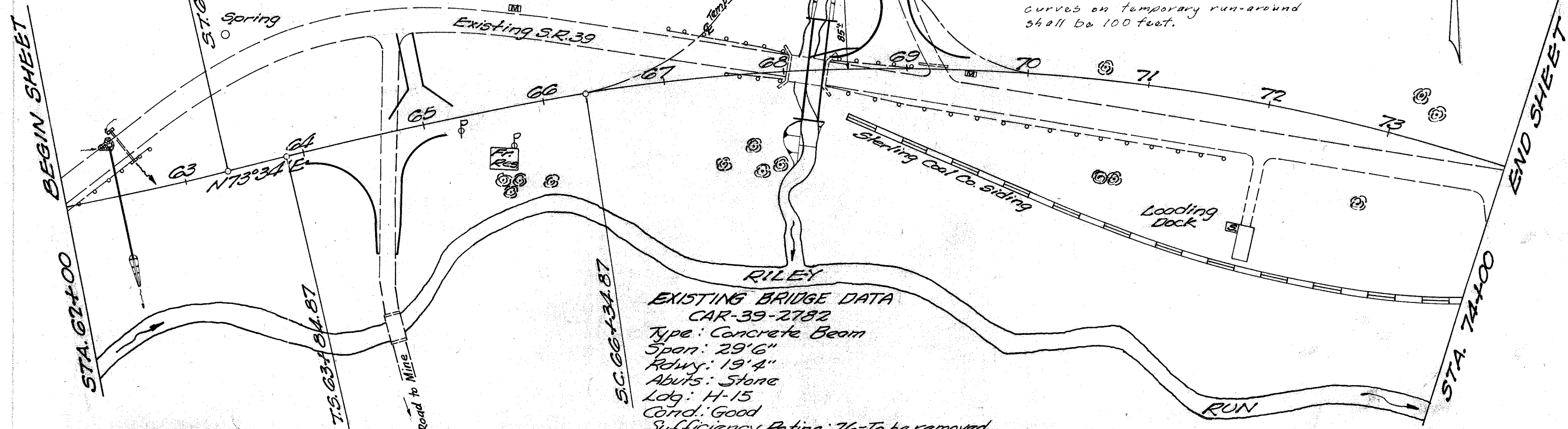
$P.I. 71+66.06$
 $\Delta = 74^\circ 57' R.$
 $C_c = 3^\circ 30'$
 $T_b = 1381.19$
 $L_s = 250$
 $L_c = 1891.43$
 $E_s = 427.71$
 $R_c = 163.102$
 $O_s = 4.375^\circ$

NOTE: Minimum radius of horizontal curves on temporary run-around shall be 100 feet.

APPROACHES				
Station	Side E	See Sheet	B-119 Aggr. Cu. Yds.	T-35 Surf. Cu. Yds.
64+75	Rt.	27		
65+00	Lt.	17	23	
68+58	Lt.	18	2	0.8
69+00	Lt.	27		
Totals			25	0.8

GUARD RAIL			
From Sta.	To Sta.	Side E	Remove - Lin. Ft.
62+00	62+77	R. & L.	85
67+10	69+04	Lt.	165
67+49	71+73	L. & R.	380
Total			630

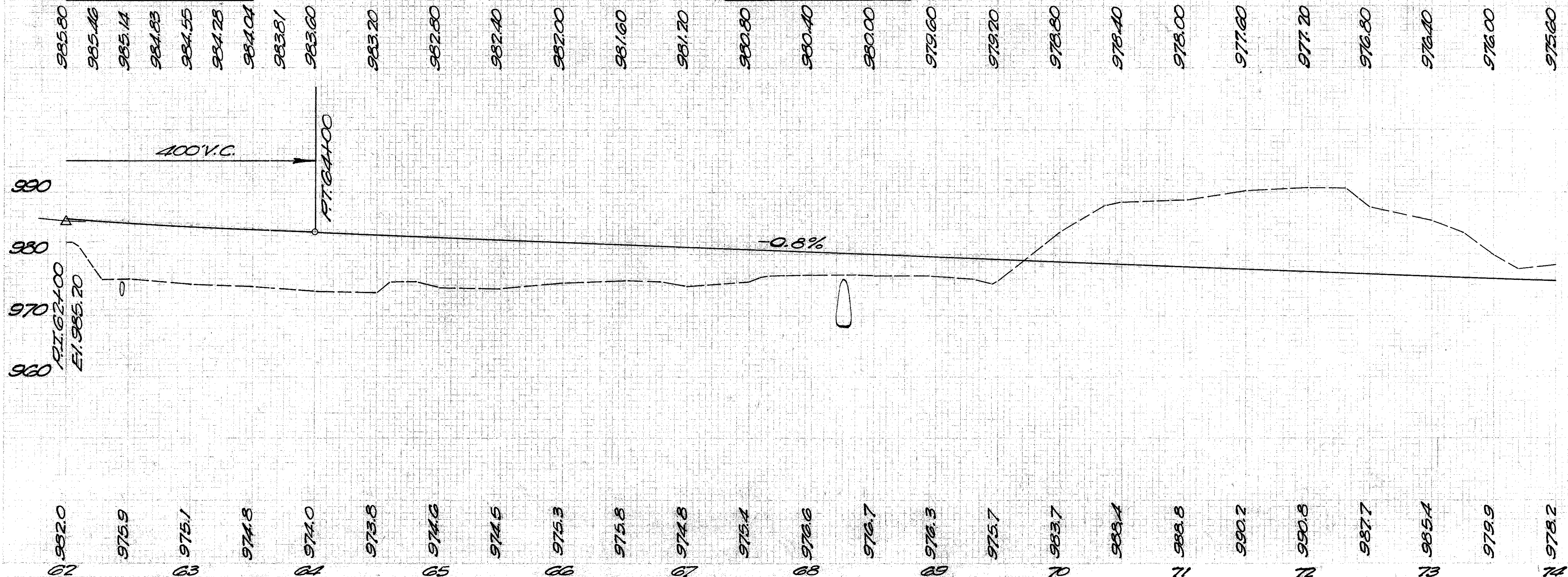
DRAINAGE					
Station	See Sheet	Removals		New Work	
		Type	Size	Type	Size
62+45	32	Pipe	18"	Pipe	30"
68+26	33	C.B. Bridge	29'6" Span	Pipe Arch	12'6" T 11"

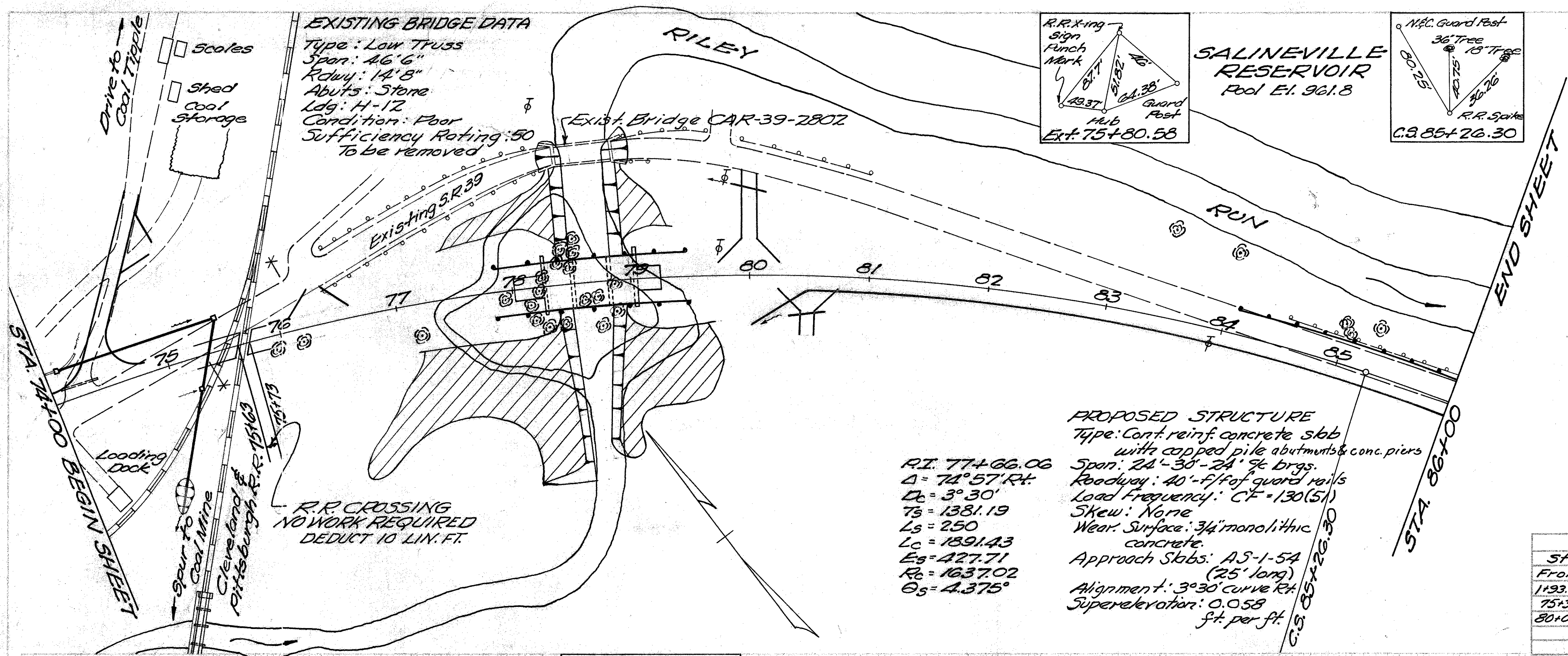


EXISTING BRIDGE DATA
 CAR-39-2782
 Type: Concrete Beam
 Span: 29'6"
 Rwy: 19'4"
 Abuts: Stone
 Ldg: H-15
 Cond: Good
 Sufficiency Rating: 76-To be removed

B.M. 546.62+50
 Cut on Headwall
 56' Lt. E.
 Elev. 981.57

B.M. 546.68+04
 Cut on Bridge Curb
 13' Lt. E.
 Elev. 977.00





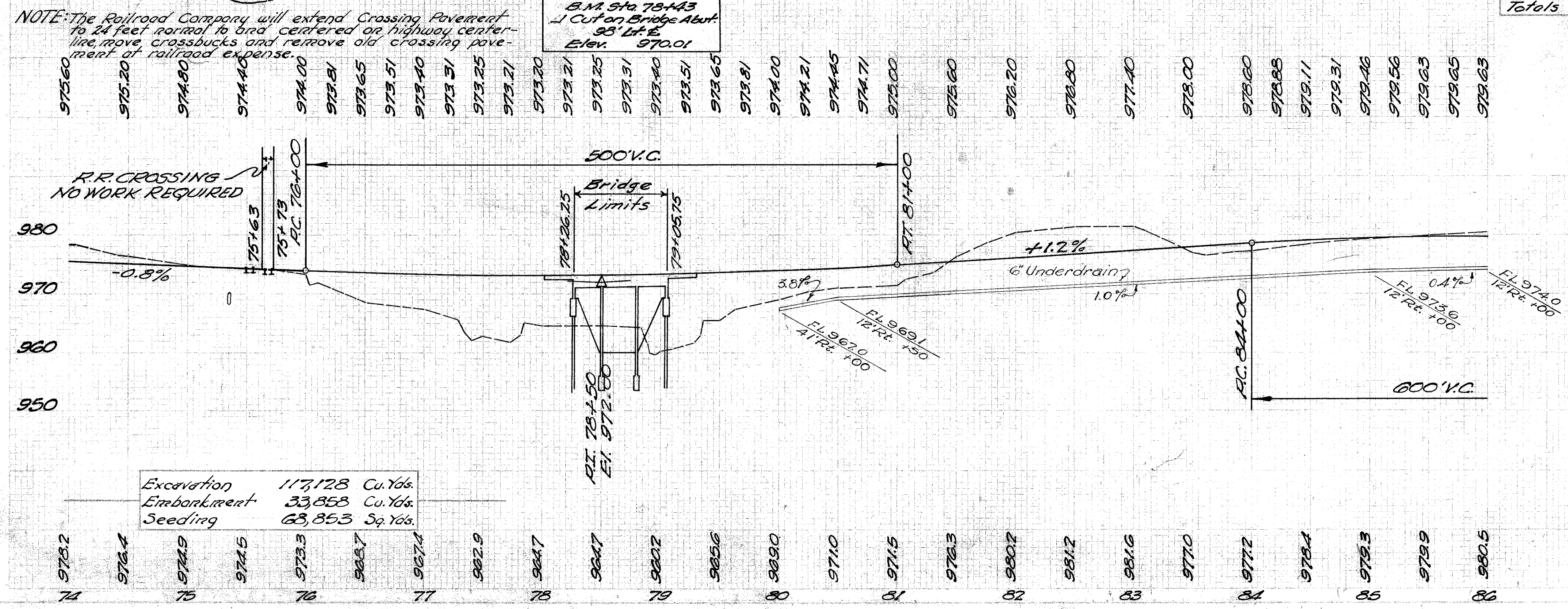
APPROACHES					
Station	Side	See Sheet	B-119 Aggr. Cu. Yds.	Pipe Lin. Ft.	
74+22	Lt.	28		12" 15"	
76+35	Lt.	19	12		
80+00	Lt.	20	24	30	
80+50	Rt.	20	16		30
Totals			52	30	30

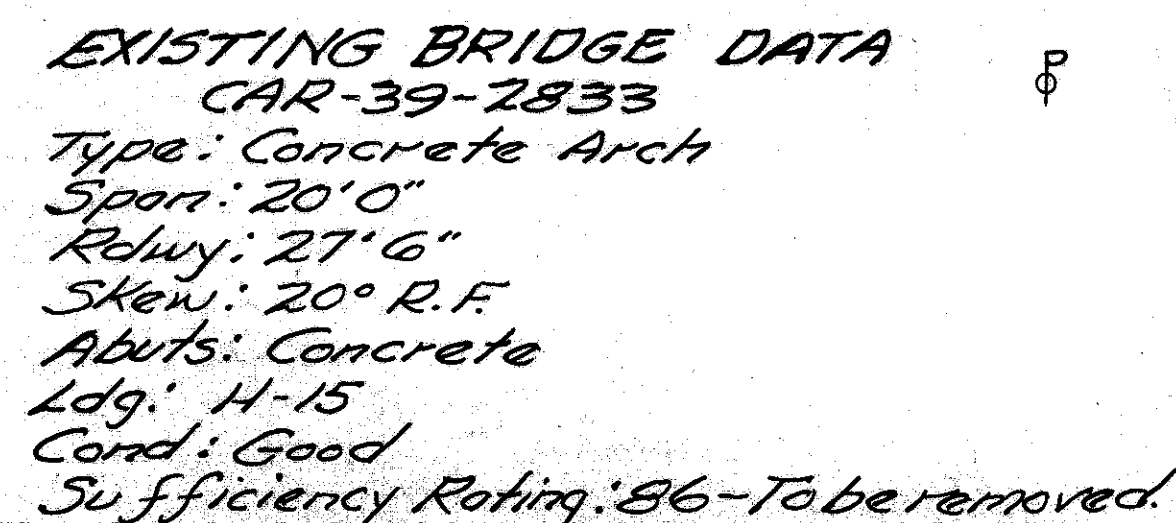
GUARD RAIL				
From Sta.	To Sta.	Side	Remove - Lin. Ft.	New - Lin. Ft.
76+38	79+30	Lt.	250	
76+41	80+36	Lt.	410	
77+83.60	79+48.10	Rt.		* 83
77+85.88	79+46.42	Lt.		* 83
84+10	86+85	Lt.	305	275
Totals			965	441

*79.5' for Bridge Railing has been deducted.

DRAINAGE						
Station	Side	See	Lin. Ft.	New Culverts		
From	To	E	Sheet	6" U.D.	6" Outlet	Type Size Length
1+93.75			34			Pipe 24" 137
75+35			35			Pipe 24" 137
80+00	87+00	Rt.	9+10	694	10	
Totals				694	10	

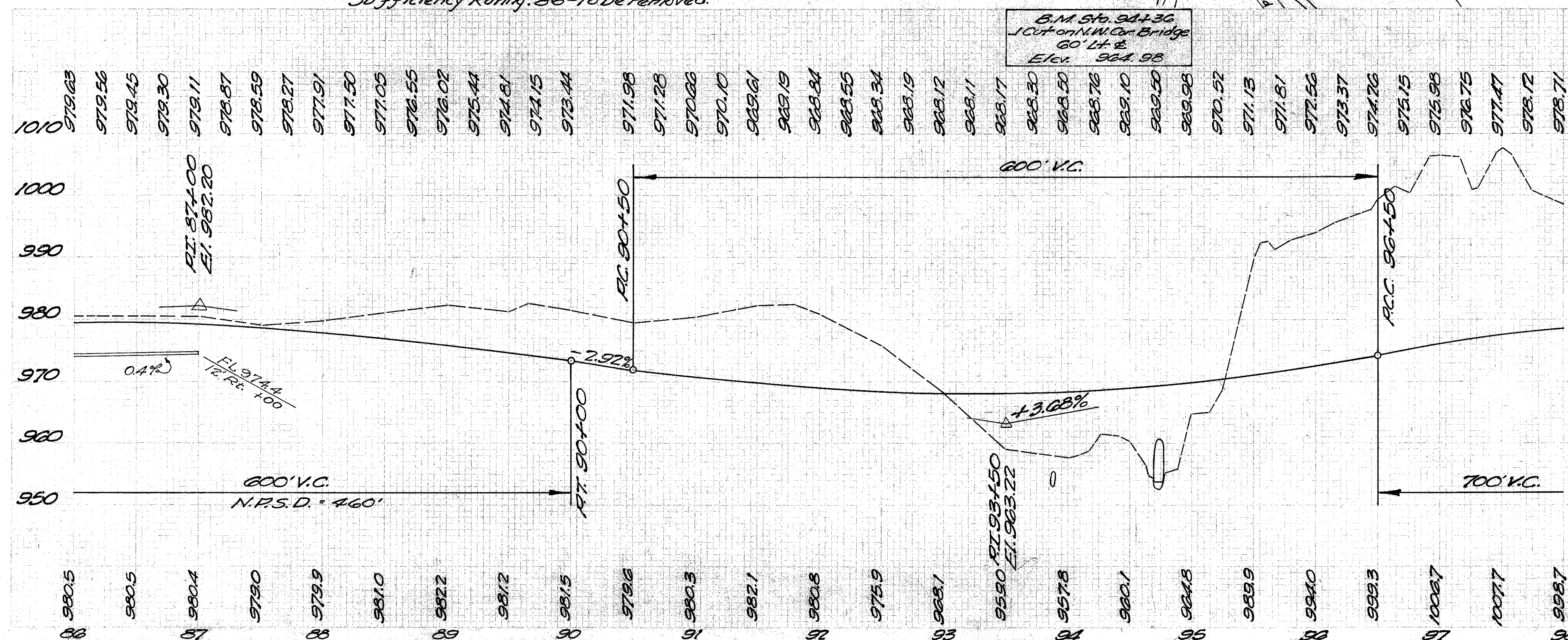
APPROACH SLABS			
From Sta.	To Sta.	Sq. Yds.	Type
78+01.25	78+26.25	55.5	AS-1-54
79+05.75	79+30.75	55.5	AS-1-54
Totals		111	



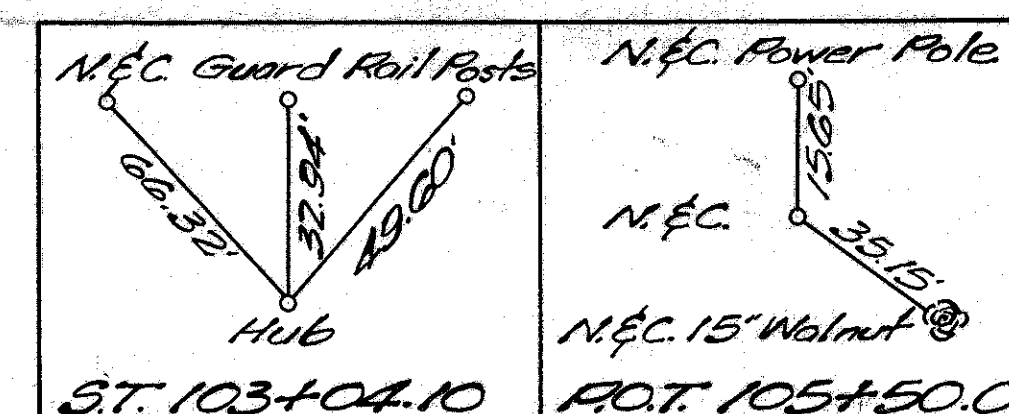


GUARD RAIL				
From Sta.	To Sta.	Side E	Remove-Lin. Ft.	New-Lin. Ft.
93+50	94+75	Lt	115	125
93+56	95+13	Lt	115	
+77± on Appr.	95+25±	L. & R.		200
Totals			230	325

DRAINAGE							
Station	See Sheet	Removals			New Work		
		Type	Size	Length	Type	Size	Length
93+90	36	Pipe	18"	51'	Pipe	30"	114'
94+73	37	conc Arch	20' Span		Pipe	36"	114'



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18'

3"

Existing 3" Bit. Mac. Pavement

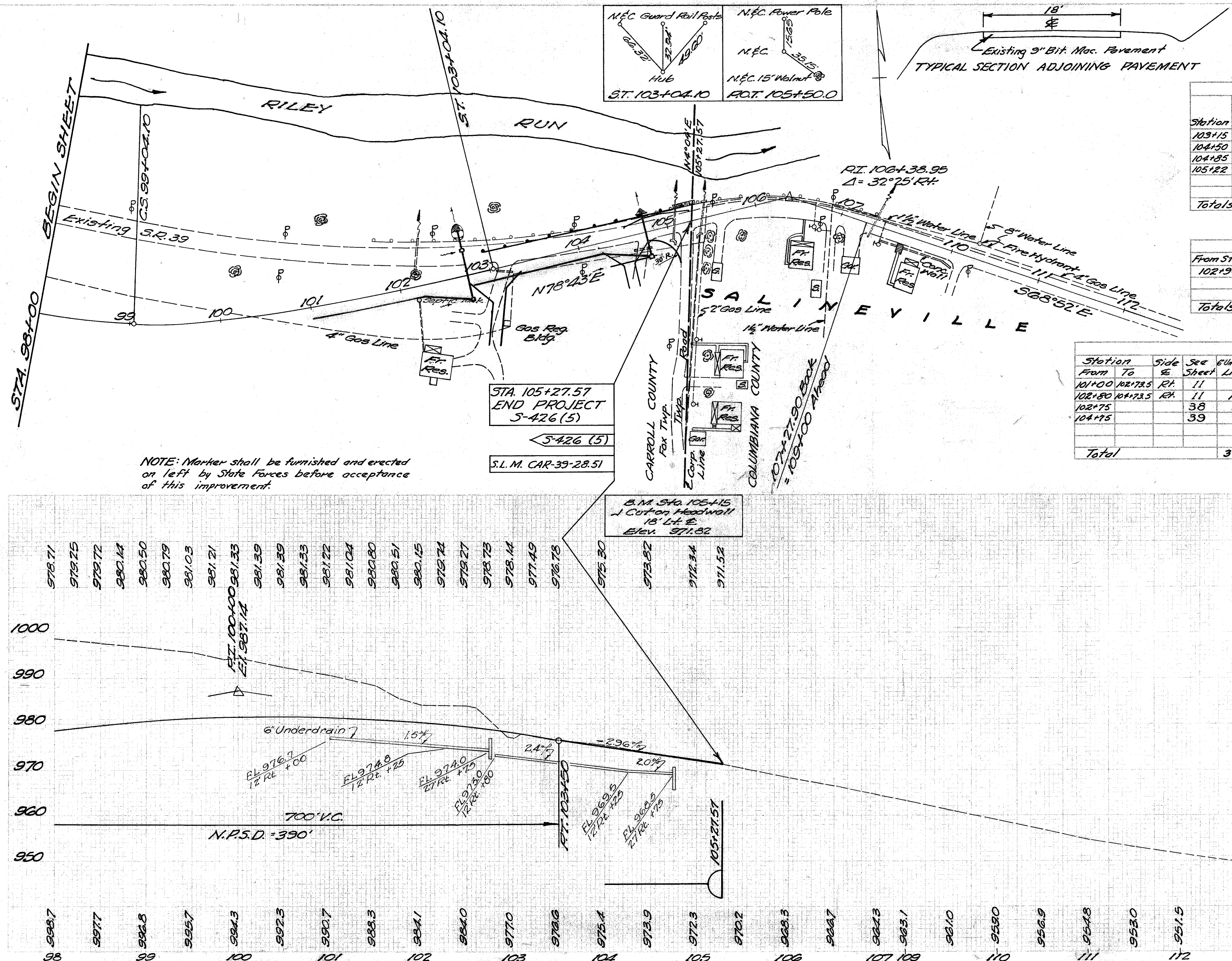
TYPICAL SECTION ADJOINING PAVEMENT

APPROACHES						
Station	Side	See Street	B-119 Aggr. Cu. Yds.	T-35 Surf. Cu. Yds.	12" Pipe Lin. Ft.	Pipe Removed 15" & Under Lin. Ft.
103+15	Rt.	25	21	8.4		17
104+50	Rt.	25	17		44	20
104+85	Lt.	25	5	2		
105+22	Rt.	25	12			
Totals			55	10.4	44	37

GUARD RAIL				
<i>From Sta.</i>	<i>To Sta.</i>	<i>Side &</i>	<i>Remove - Lin. Ft.</i>	<i>New - Lin. Ft.</i>
102+98	105+23	Lt.	345	225
Totals			345	225

					DRAINAGE					
Station		Side	See	6' Underdrain	Removals			New Work		
From	To	&	Sheet	Lin. Ft.	Type	Size	Length	Type	Size	Length
101+00	102+73.5	RT.	11	177						
102+80	104+73.5	RT.	11	195						
102+75			38		Stone Box	18"x18"	39'	Pipe	24"	73
104+75			39		N' wall			Pipe	18"	47
Total				372						

NOTE: Marker shall be furnished and erected on left by State Forces before acceptance of this improvement.



CURVE TABLES

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

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T.S. 43+96.68 S.C. 47+96.68			D = 5°-00' Rt.		C.S. 48+36.35 S.T. 52+36.35		
Left Edge	Width	Add Super	STATION	± Grade	Deduct Crown	Width	Right Edge
			T.S. 43+96.68	994.15	10.00		
994.18	10.00		44+00	994.25	10.02	994.00	
995.08			+25	994.98	10.14	994.78	
995.91			+50	995.70	10.27	995.52	
996.73			+75	996.41	0.16	10.39	996.25
997.51			45+00	997.09		10.52	996.93
998.27			+25	997.74		10.64	997.58
998.98			+50	998.35		10.77	998.19
999.68			+75	998.95		10.89	998.79
1000.33			46+00	999.50		11.02	999.34
1000.95			+25	1000.03		11.14	999.67
1001.56			+50	1000.52		11.27	1000.36
1002.13			+75	1000.99		11.39	1000.83
1002.66			47+00	1001.42		11.52	1001.26
1003.18			+25	1001.83		11.64	1001.67
1003.65			+50	1002.19		11.77	1002.03
1004.09			+75	1002.54		11.89	1002.38
1004.43			S.C. 47+96.68	1002.81	12.00	1002.65	
1004.48			48+00	1002.85		12.00	1002.69
1004.77			+25	1003.13		12.00	1002.97
1004.87			C.S. 48+36.35	1003.24	12.00	1003.08	
1004.96			+50	1003.38		11.93	1003.22
1005.08			+75	1003.60		11.81	1003.44
1005.17			49+00	1003.79		11.68	1003.63
1005.23			+25	1003.95		11.56	1003.79
1005.24			+50	1004.07		11.43	1003.91
1005.24			+75	1004.17		11.31	1004.01
1005.21			50+00	1004.24		11.18	1004.08
1005.14			+25	1004.27		11.06	1004.11
1005.04			+50	1004.28		10.93	1004.12
1004.91			+75	1004.25		10.81	1004.09
1004.76			51+00	1004.20		10.68	1004.04
1004.57			+25	1004.11		10.56	1003.95
1004.34			+50	1003.99		10.43	1003.83
1004.10			+75	1003.85	0.16	10.31	1003.69
1003.82			52+00	1003.67		10.18	1003.55
1003.52			+25	1003.46		10.06	1003.38
1003.39			S.T. 52+36.35	1003.35	10.00	1003.32	
1003.22			+50	1003.22		10.00	1003.22
1002.96	10.00		T.S. 52+69.0	1003.02	10.00	1003.07	
1002.88	10.06		+75	1002.95		10.00	1003.02
1002.52	10.31		53+00	1002.65		10.00	1002.80

T.S. 52+69.0 S.C. 56+69.0			D = 6°-00' Lt.		C.S. 59+35.67 S.T. 63+35.67		
Left Edge	Width	Deduct Crown	STATION	± Grade	Add Super	Width	Right Edge
1003.39	10.00		T.S. 52+69.0	1003.35	10.00	1003.32	
1003.22	10.00		+50	1003.22		1003.22	
1002.96	10.00		T.S. 52+69.0	1003.02		1003.07	
1002.88	10.06		+75	1002.95		1003.02	
1002.52	10.31		53+00	1002.65		1002.80	
1002.17	10.56		+25	1002.32		1002.58	
1001.79	10.81	0.16	+50	1001.95		1002.32	
1001.40	11.06		+75	1001.56		1002.05	
1000.98	11.31		54+00	1001.14		1001.74	
1000.52	11.56		+25	1000.68		1001.40	
1000.04	11.81		+50	1000.20		1001.03	
999.54	12.06		+75	999.70		1000.65	
999.04	12.31		55+00	999.20		1000.26	
998.54	12.56		+25	998.70		999.88	
998.04	12.81		+50	998.20		999.49	
997.54	13.06		+75	997.70		999.11	
997.04	13.31		56+00	997.20		998.72	
996.54	13.56		+25	996.70		998.34	
996.04	13.81		+50	996.20		997.95	
995.66	14.00		S.C. 56+69.0	995.82		997.64	
995.54			+75	995.70		997.53	
995.04			57+00	995.20	2.00	997.04	
994.54			+25	994.70		996.54	
994.04			+50	994.20		996.04	
993.54			+75	993.70		995.54	
993.04			58+00	993.20		995.04	
992.54			+25	992.70		994.54	
992.04			+50	992.20		994.04	
991.54			+75	991.70		993.54	
991.04			59+00	991.20	2.00	993.04	
990.54			+25	990.70		992.53	
990.33	14.00		C.S. 59+35.67	990.49		992.31	
990.04	13.86		+50	990.20		991.97	
989.54	13.61		+75	989.70		991.36	
989.04	13.36		60+00	989.20		990.74	
988.55	13.11		+25	988.71		990.14	
988.08	12.86		+50	988.24		989.55	
987.62	12.61		+75	987.78		988.98	
987.19	12.36		61+00	987.35		988.43	
986.77	12.11		+25	986.93		987.90	
986.38	11.86		+50	986.54		987.39	
986.00	11.61		+75	986.16		986.90	
985.64	11.36		62+00	985.80		986.42	
985.30	11.11		+25	985.46		985.98	
984.98	10.86		+50	985.14		985.53	
984.67	10.61	0.16	+75	984.83		985.11	
984.42	10.36		63+00	984.55		984.71	
984.20	10.11		+25	984.28		984.38	
984.12	10.00		S.T. 63+35.67	984.17		984.25	
984.00			+50	984.04		984.06	
983.83			+75	983.81		983.77	
983.77	10.00		T.S. 63+84.87	983.72	10.00	983.67	

T.S. 63+84.87 S.C. 66+84.87			D = 3°-30' Rt.		C.S. 85+26.30 S.T. 87+76.30		
Left Edge	Width	Add Super	STATION	± Grade	Deduct Crown	Width	Right Edge
984.12	10.00		T.S. 63+84.87	984.17	10.00	984.25	
984.00			+50	984.04		984.06	
983.83			+75	983.81		983.77	
983.77			C.S. 63+84.87	983.72		983.67	
983.68			64+00	983.60		983.49	
983.56			+25	983.40	0.16	983.24	
983.46			+50	983.20		983.04	
983.36			+75	983.00		982.84	
983.26			65+00	982.80		982.64	
983.16			+25	982.60		982.44	
983.06			+50	982.40		982.24	
982.96			+75	982.20		982.04	
982.86			66+00	982.00		981.84	
982.75			+25	981.80		981.64	
982.69			S.C. 66+84.87	981.72		981.56	
982.59			+50	981.60		981.44	
982.40	1.16'		+75	981.40		981.24	
982.20			67+00	981.20		981.04	
982.00			+25	981.00		980.84	
981.80			+50	980.80		980.64	
981.60			+75	980.60		980.44	
981.40			68+00	980.40		980.24	
981.20			+25	980.20		980.04	
981.00			+50	980.00		979.84	
980.80			+75	979.80		979.64	
980.60			69+00	979.60		979.44	
980.40			+25	979.40		979.24	
980.20			+50	979.20		979.04	
980.00			+75	979.00		978.84	
979.80			70+00	978.80		978.64	
979.60			+25	978.60		978.44	
979.40			+50	978.40		978.24	
979.20			+75	978.20		978.04	
979.00			71+00	978.00		977.84	
978.80			+25	977.80		977.64	
978.60			+50	977.60		977.44	
978.40			+75	977.40		977.24	
978.20			72+00	977.20		977.04	
978.00			+25	977.00		976.84	
977.80			+50	976.80		976.64	
977.60			+75	976.60		976.44	
977.40	1.16'		73+00	976.40		976.24	
977.18			+25	976.20		976.04	
976.90			+50	976.00		975.84	
976.57			+75	975.80		975.64	
976.22			74+00	975.60		975.44	
975.87			+25	975.40		975.24	
975.52			+50	975.20		975.04	
975.17			+75	975.00		974.84	
974.82			75+00	974.80		974.64	
974.50			+25	974.60	0.16	974.44	
974.33			+50	974.40		974.30	
974.28			+75	974.20		974.28	
974.28	10.00		76+00	974.00		974.21	

974.27	10.00'		76+25	973.81		10.00	974.05
974.26			+50	973.65			973.85
974.25			+75	973.51			973.65
974.24			77+00	973.40			973.45
974.23			+25	973.31			973.30
974.22			+50	973.25			973.17
974.21			+75	973.21			973.08
974.20		1.16'	78+00	973.20	0.16		973.04
974.21			+25	973.21			973.05
974.25			+50	973.25			973.09
974.31			+75	973.31			973.15
974.40			79+00	973.40			973.24
974.51			+25	973.51			973.35
974.65			+50	973.65			973.49
974.81			+75	973.81			973.65
975.00			80+00	974.00			973.84
975.21			+25	974.21			974.05
975.45			+50	974.45			974.29
975.71			+75	974.71			974.55
976.00			81+00	975.00			974.84
976.30			+25	975.30			975.14
976.60			+50	975.60			975.44
976.90			+75	975.90			975.74
977.20			82+00	976.20			976.04
977.50			+25	976.50			976.34
977.80			+50	976.80			976.64
978.10			+75	977.10			976.94
978.40			83+00	977.40			977.24
978.70			+25	977.70			977.54
979.00			+50	978.00			977.84
979.30			+75	978.30			978.14
979.60			84+00	978.60			978.44
979.88			+25	978.88			978.72
980.11			+50	979.11			978.95
980.31			+75	979.31			979.15
980.46		1.16'	85+00	979.46			979.30
980.55			+25	979.56			979.40
980.56			C.S. 85+26.30	979.57			979.41
980.54			+50	979.63			979.47
980.48			+75	979.65			979.49
980.34			86+00	979.63			979.47
980.17			+25	979.56			979.40
979.96			+50	979.45			979.29
979.71			+75	979.30			979.14
979.42			87+00	979.11			978.95
979.08			+25	978.87			978.71
978.70			+50	978.55			978.43
978.30			+75	978.27			978.11
978.29			S.T. 87+76.30	978.25			978.09
977.65			88+00	977.91			977.75
977.39			+25	977.50			977.34
976.89	10.00'		+50	977.05	0.16	10.00'	976.89
					</		

CURVE TABLES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

13
51

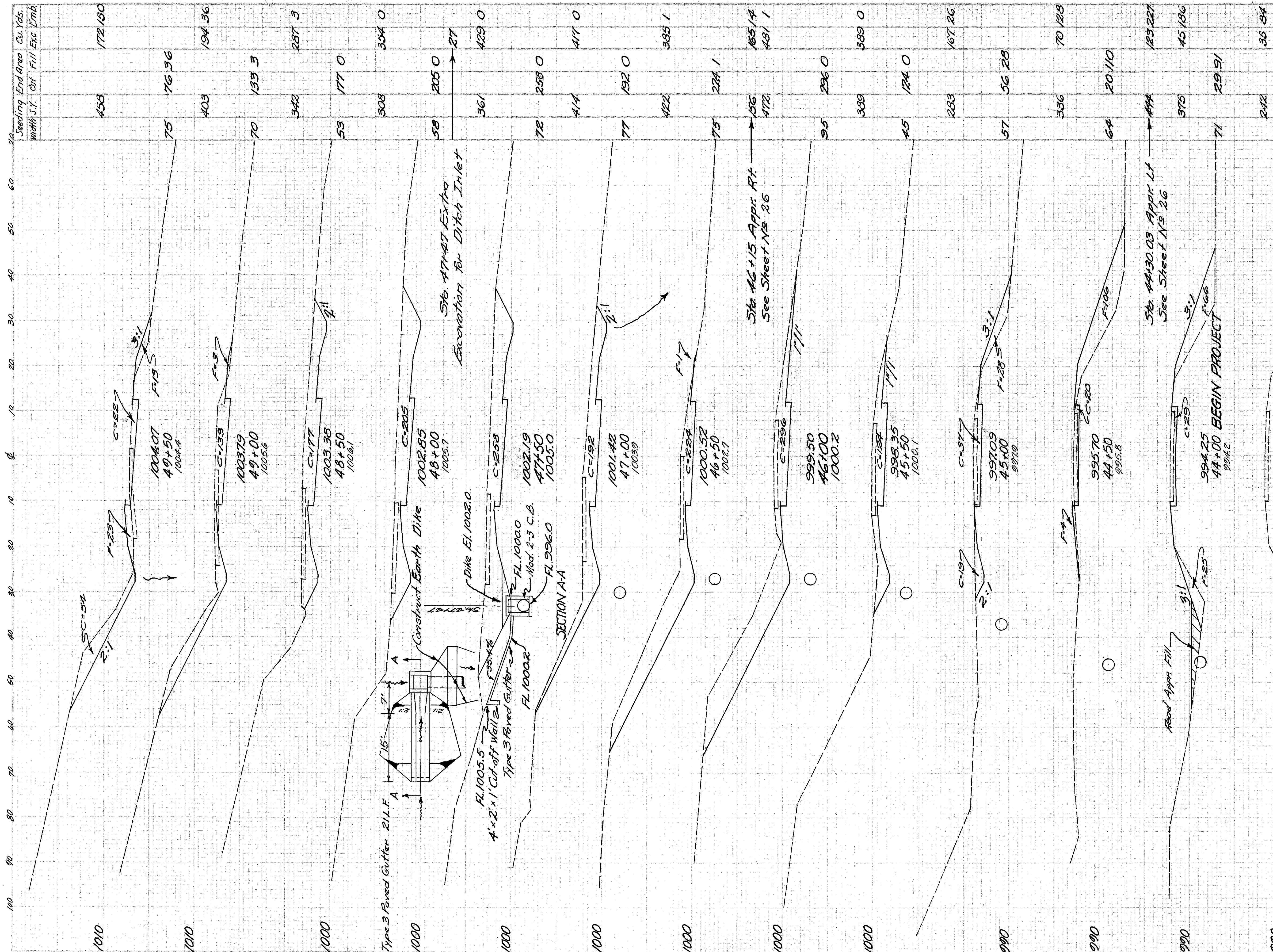
CAR-39-(27.35-27.38)

T.S. 90+31.60 S.C. 94+31.60			D= 8° 00' Lt.		C.S. 99+04.10 S.T. 103+04.10		
Left Edge	Width	Deduct Crown	STATION	E Grade	Add Super	Width	Right Edge
974.65	10.00	0.16	89+50	974.81		10.00	974.65
973.99			+75	974.15			974.00
973.28			90+00	973.44			973.34
972.55			+25	972.71			972.65
972.36	10.00		T.S. 90+31.60	972.52			972.52
971.82	10.18		+50	971.98			972.06
971.12	10.43		+75	971.28			971.48
970.50	10.68		91+00	970.66			970.97
969.94	10.93		+25	970.10			970.53
969.45	11.18		+50	969.61	Graphically		970.15
969.03	11.43		+75	969.19			969.85
968.68	11.68		92+00	968.84			969.61
968.39	11.93		+25	968.55			969.44
968.18	12.18		+50	968.34	Obtained		969.34
968.03	12.43		+75	968.19			969.31
967.96	12.68		93+00	968.12			969.35
967.95	12.93		+25	968.11			969.46
968.01	13.18		+50	968.17	Obtained		969.63
968.14	13.43		+75	968.30			969.88
968.34	13.68		94+00	968.50			970.19
968.60	13.93		+25	968.76			970.57
968.68	14.00		S.C. 94+31.60	968.84			970.66
968.94			+50	969.10	2.00		970.94
969.34			+75	969.50			971.34
969.82			95+00	969.98			971.82
970.36			+25	970.52			972.36
970.97			+50	971.13			972.97
971.65			+75	971.81			973.65
972.40			96+00	972.56			974.40

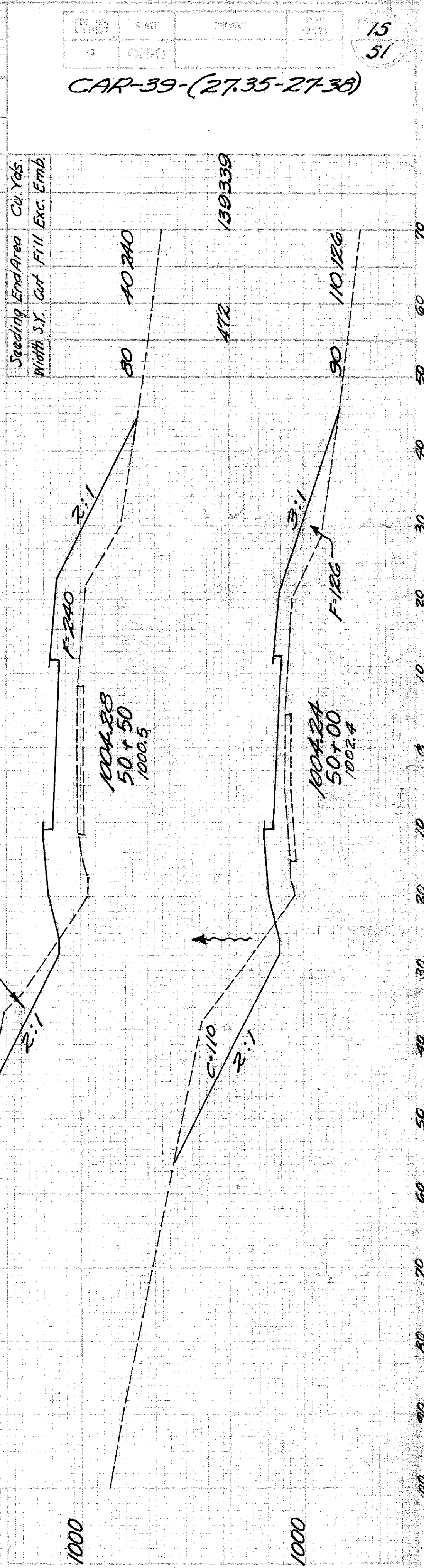
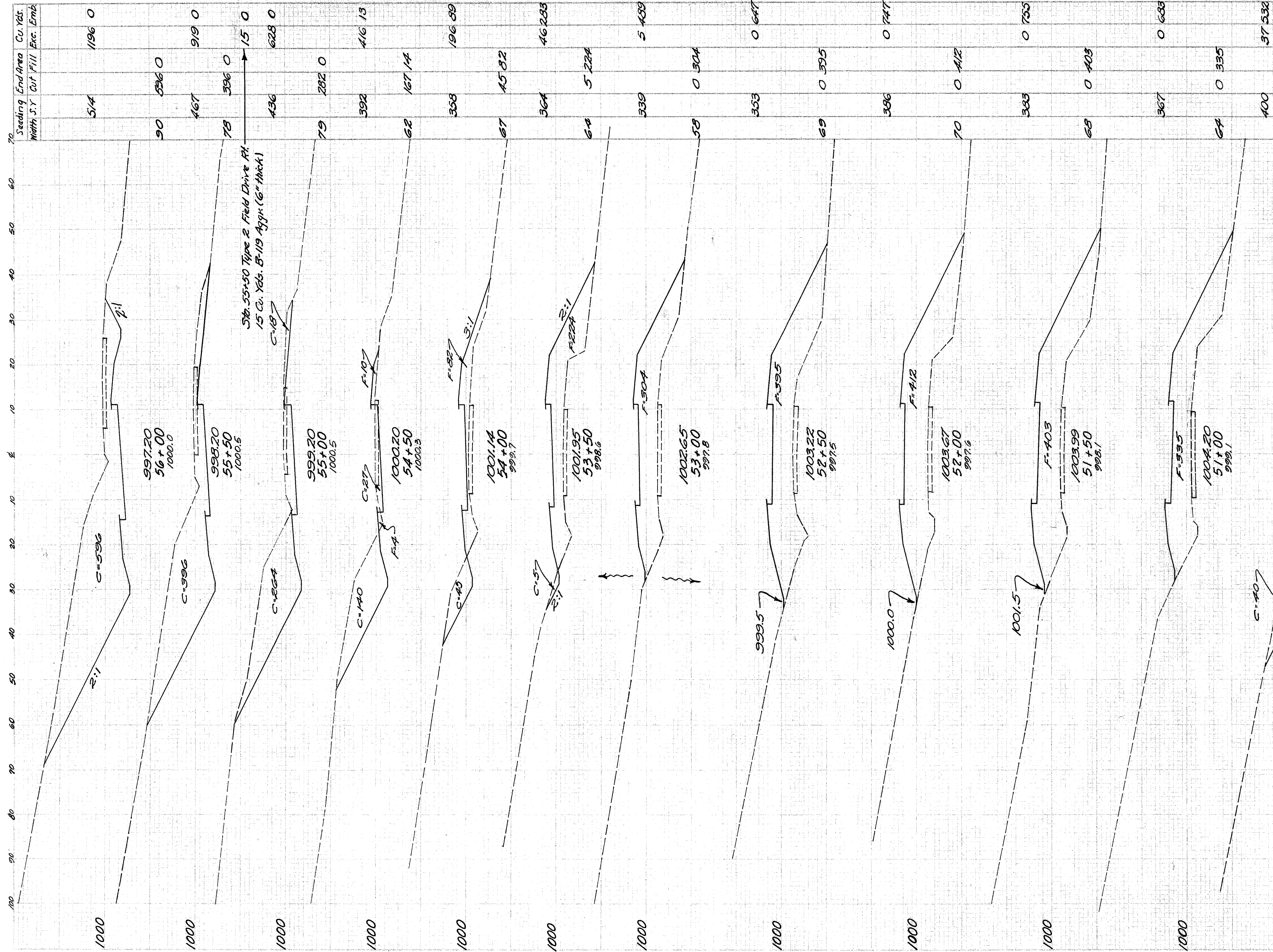
973.21				+25	973.37			975.21
974.10				+50	974.26			976.10
974.99				+75	975.15			976.99
975.82				97+00	975.98			977.82
976.59				+25	976.75			978.59
977.31				+50	977.47			979.31
977.96				+75	978.12			979.96
978.55				98+00	978.71			980.55
979.09				+25	979.25			981.09
979.56				+50	979.72			981.56
979.98				+75	980.14	2.00		981.98
980.34				99+00	980.50			982.31
980.59	14.00		C.S. 99+04.10		980.55			982.35
980.63	13.79		+25	980.79				982.53
980.87	13.54		+50	981.03	Graphically			982.66
981.05	13.29		+75	981.21				982.72
981.17	13.04		100+00	981.33				982.73
981.23	12.79		+25	981.39				982.67
981.23	12.54		+50	981.39	Obtained			982.56
981.17	12.29		+75	981.33				982.38
981.06	12.04		101+00	981.22				982.16
980.88	11.79		+25	981.04				981.86
980.64	11.54		+50	980.80	Obtained			981.51
980.35	11.29		+75	980.51				981.10
979.99	11.04		102+00	980.15				980.63
979.58	10.79		+25	979.74				980.10
979.11	10.54		+50	979.27				979.52
978.57	10.29		+75	978.73				978.86
977.98	10.04		103+00	978.14				978.16
977.88	10.00		S.T. 103+04.10	978.04				978.02
977.33	10.00		+25	977.49				977.40
976.62	10.00		+50	976.78				976.63
975.88	10.00	0.16	+75	976.04		10.00		975.88

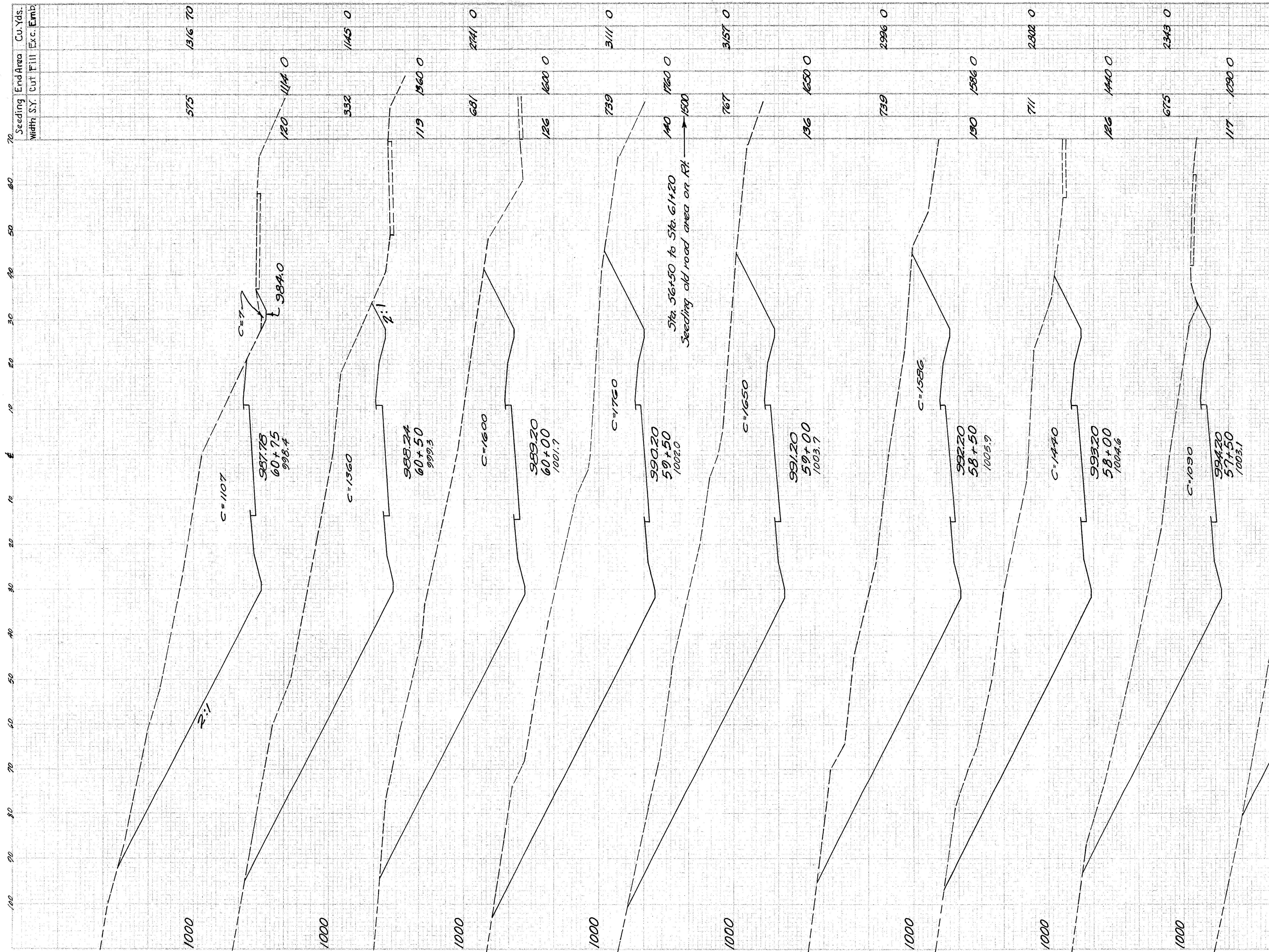
Curve Widening = 384 Sq. Yds.

The Design Speed is 50 M.P.H.



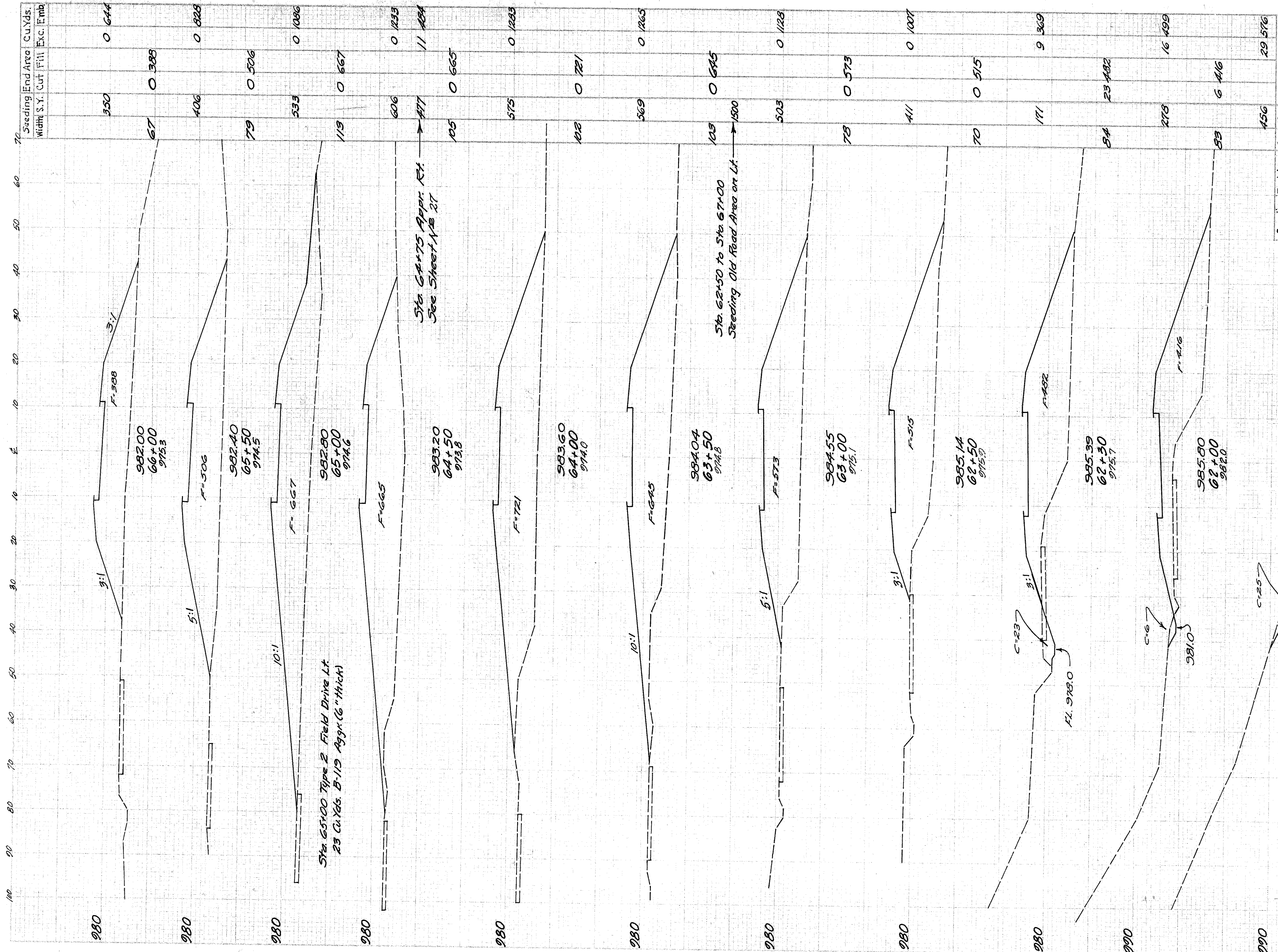
Station	Width S.Y.	Cut	Fill	Exc.	Emb.
100	16	9	0		
90	89		17	0	
80	16	9	0		
70	92		20	0	
60	17	13	0		
50	89		18	0	
40	15	6	0		
30	10	0	0		
20	10	0	0		
10	10	0	0		
0	10	0	0		
10	10	0	0		
20	10	0	0		
30	10	0	0		
40	10	0	0		
50	10	0	0		
60	10	0	0		
70	10	0	0		
80	10	0	0		
90	10	0	0		
100	10	0	0		

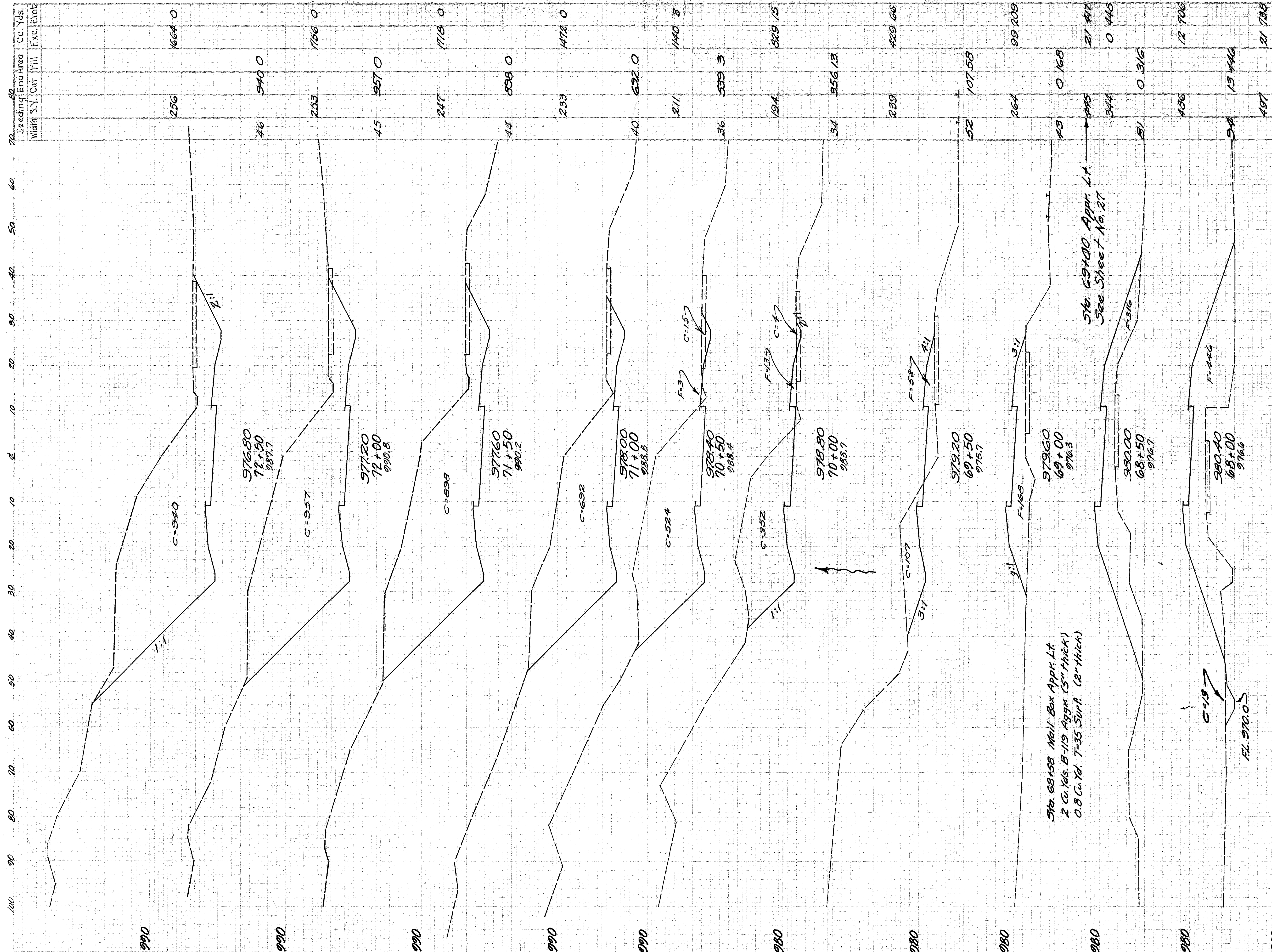




Seeding End Area				Cu. Yds.	
Width	S.Y.	Cut	Fill	Exc.	Emb.
614				1834	0
104				912	0
553				1489	0
95				696	0

STA. 56+50 TO STA. 60+75



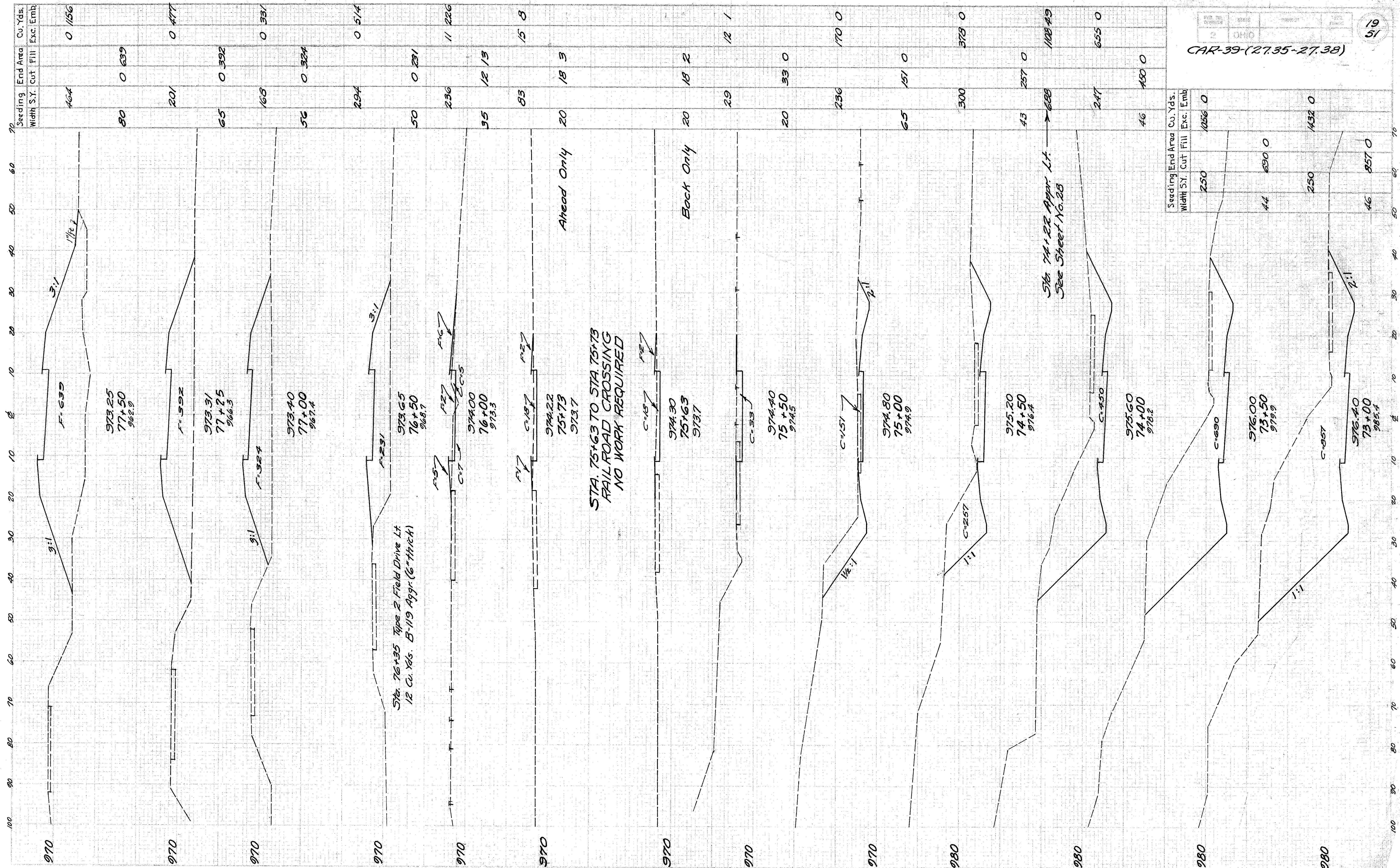


Station	Seeding End Area		Cu. Yds.	
	Width	St. Cut	Fill	Exc. Emb.
976.80	256			1664 0
977.20	46		940 0	
977.60	253			1756 0
978.00	45		957 0	
978.40	247			1718 0
978.80	44		938 0	
979.20	233			1472 0
979.60	40		632 0	
980.00	211			1140 3
980.40	36		539 3	
980.80	194			329 15
981.20	34		356 13	
981.60	239			429 66
982.00	52		107 58	
982.40	264			99 209
982.80	43		0 168	
983.20	344			21 417
983.60	51		0 316	
984.00	436			12 706
984.40	54		13 446	
984.80	497			21 738
Station	Seeding End Area		Cu. Yds.	
	Width	St. Cut	Fill	Exc. Emb.
985.20	85		10 351	
985.60	59		0 334	
986.00	328			0 594
986.40	59		0 307	

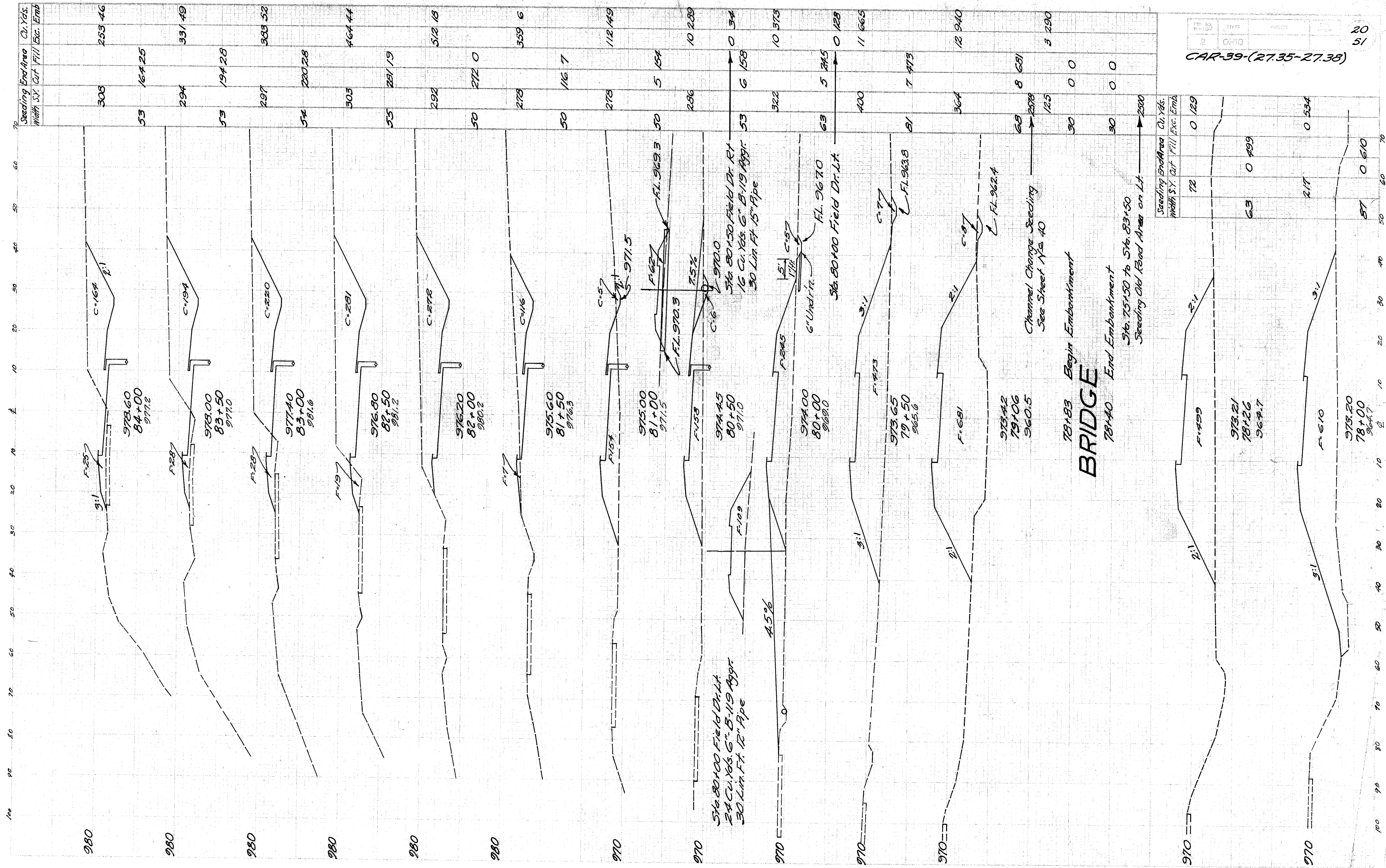
Sta. 68+58 Mail Box Appx Lt.
2 Cu. Yds. B-119 Aggm (3" Thick)
0.8 Cu. Yd. 7-35 Surf. (2" Thick)

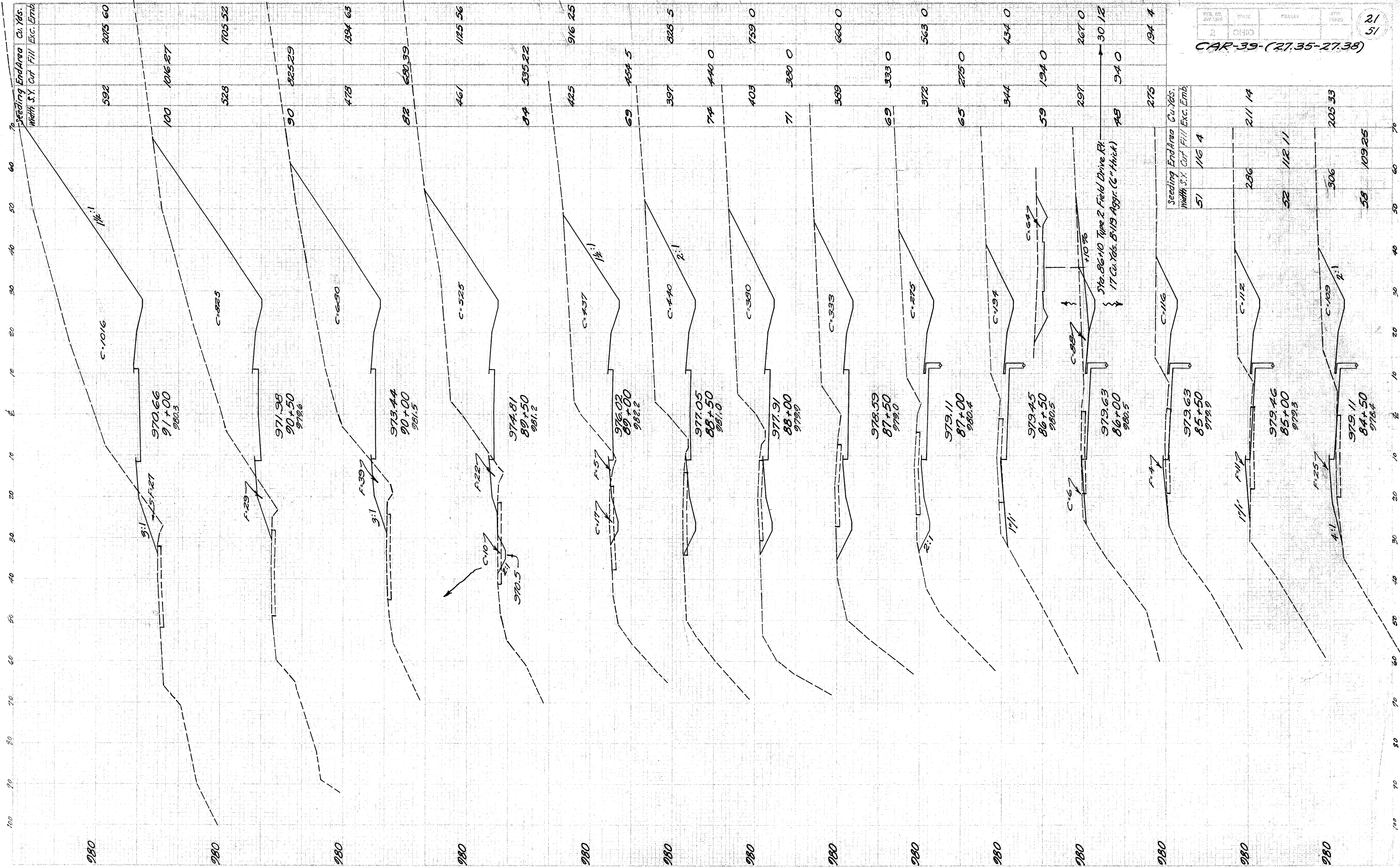
Sta. 69+00 Appx Lt.
See Sheet 16.27

Sta. 66+50 to Sta. 70+00
Seeding Temporary Rwy.
around Area on Lt.

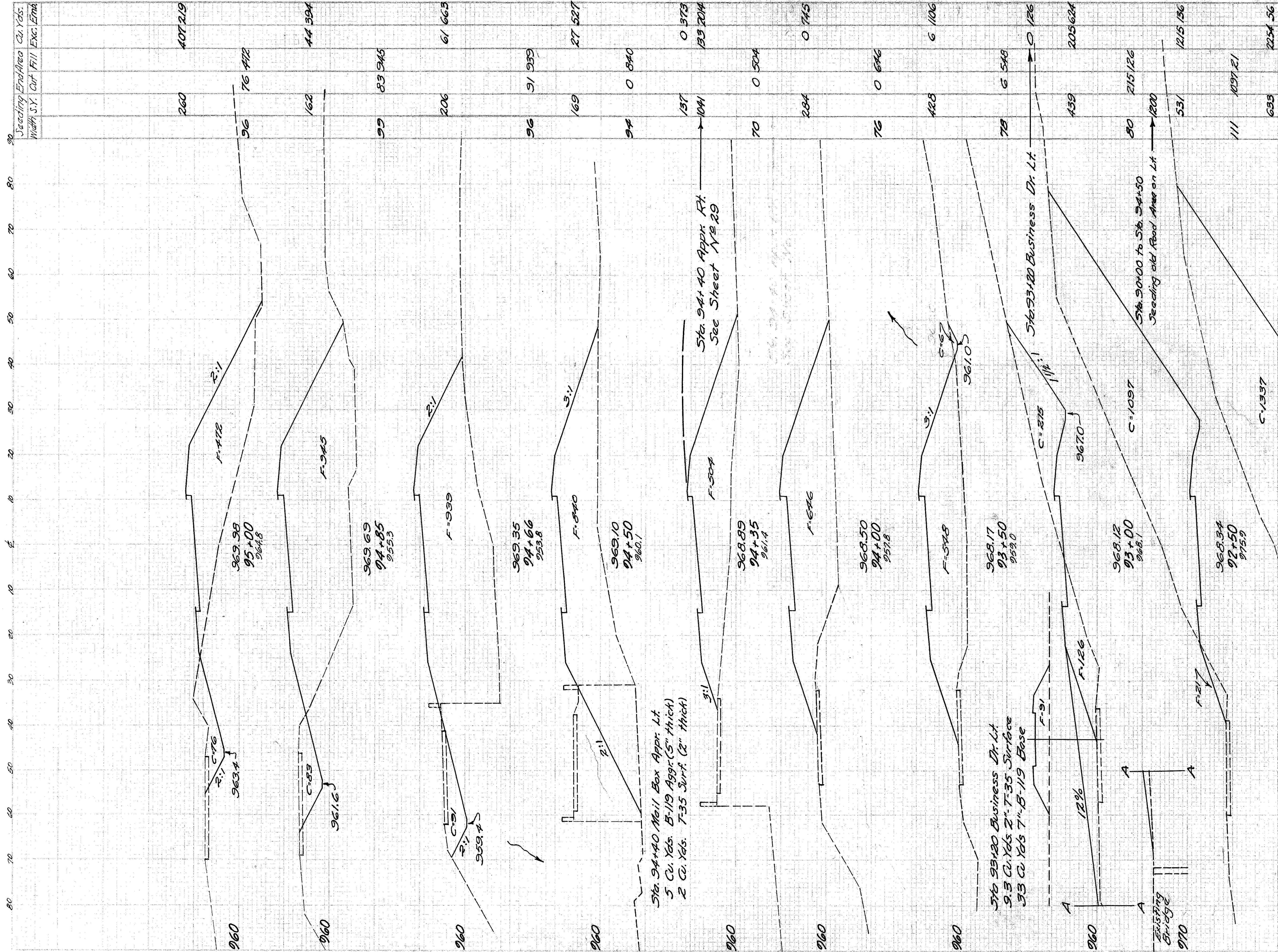


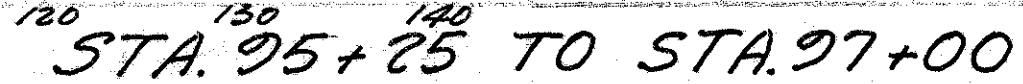
STA. 73+00 TO STA. 77+50

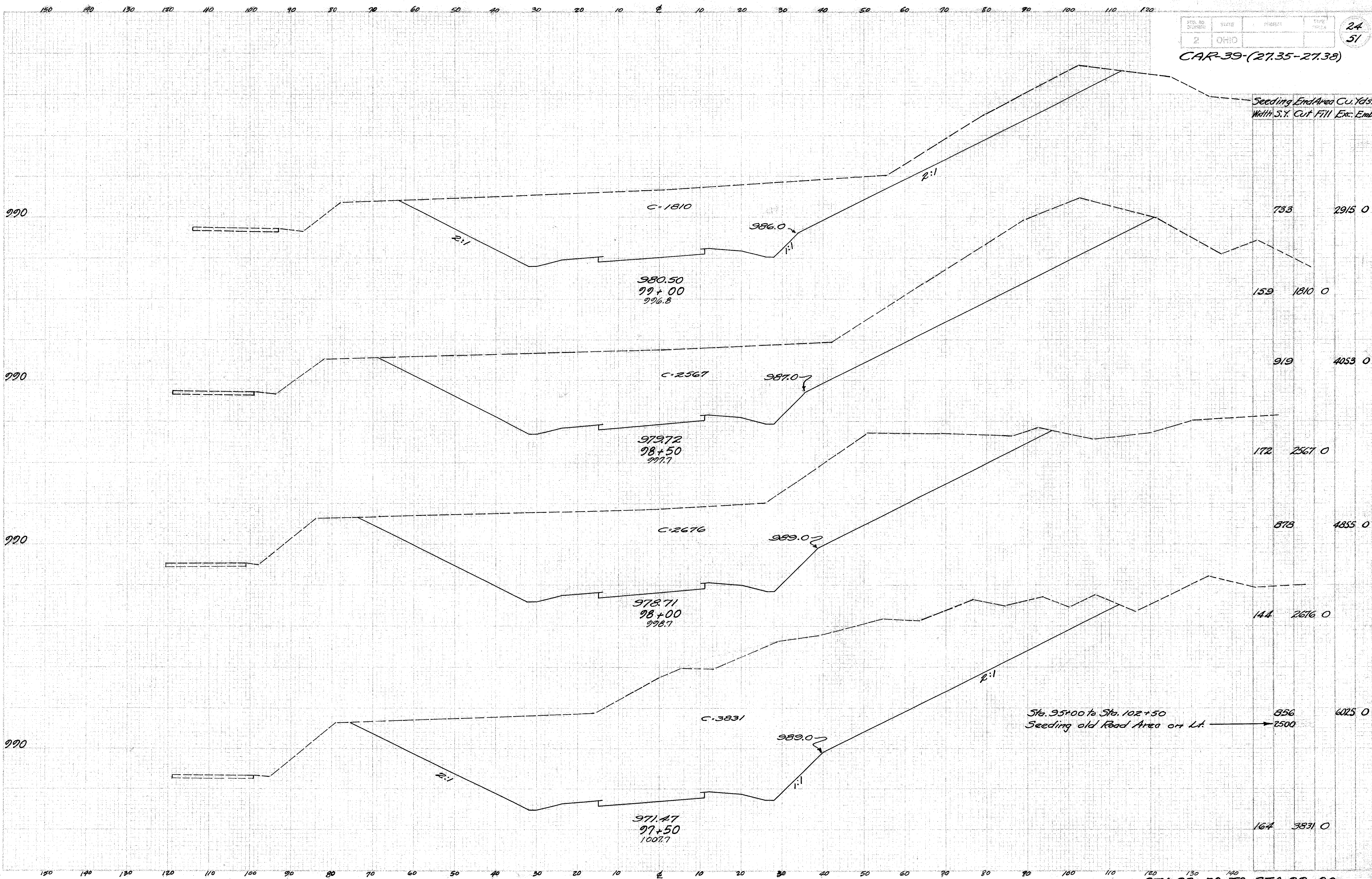




Seeding	End Area	Cu. Yds.
Width S.Y.	Cut	Fill Exc. Emb.
51	116	4
286		
32	112	11
306		
58	109	25

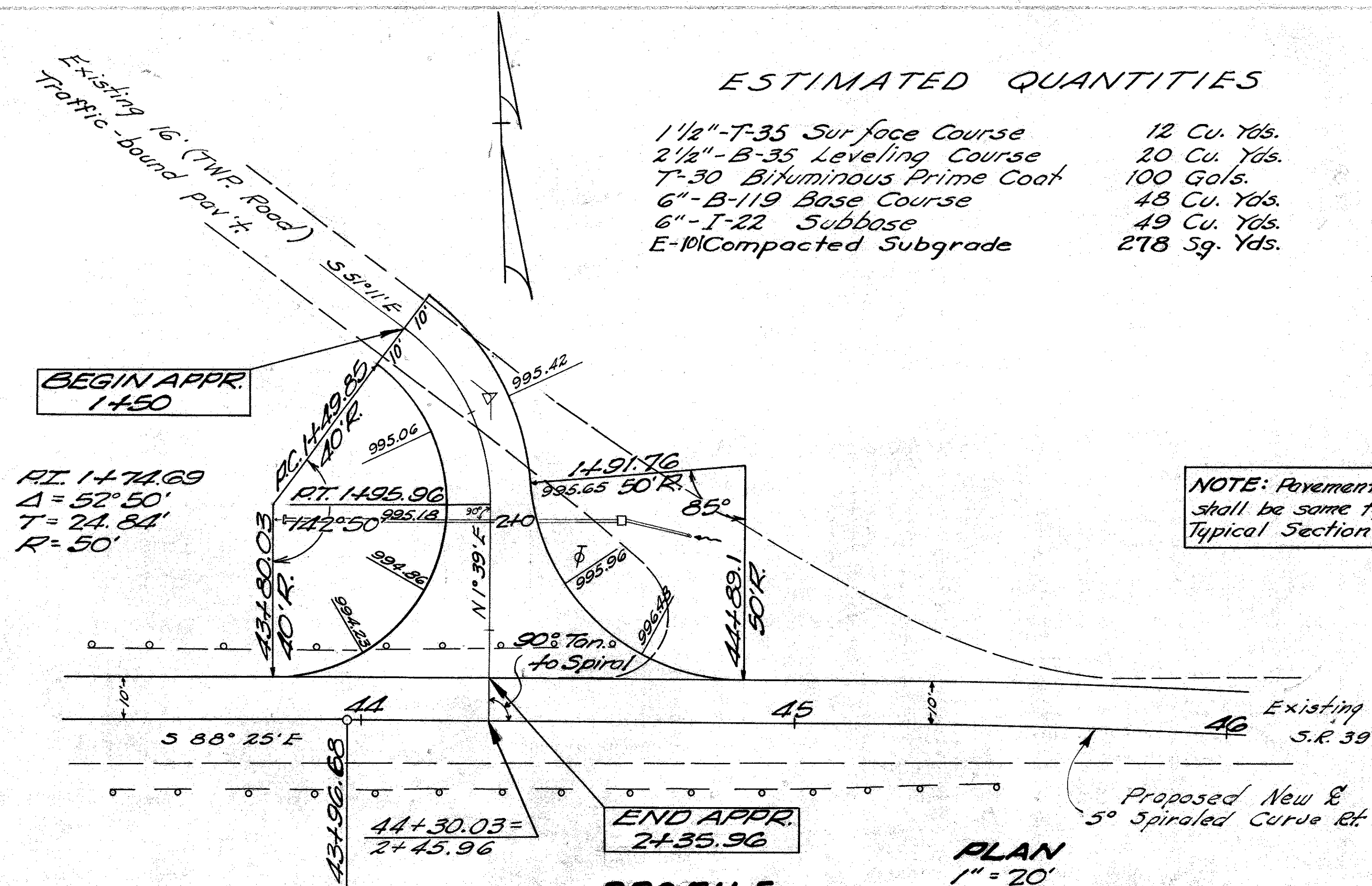






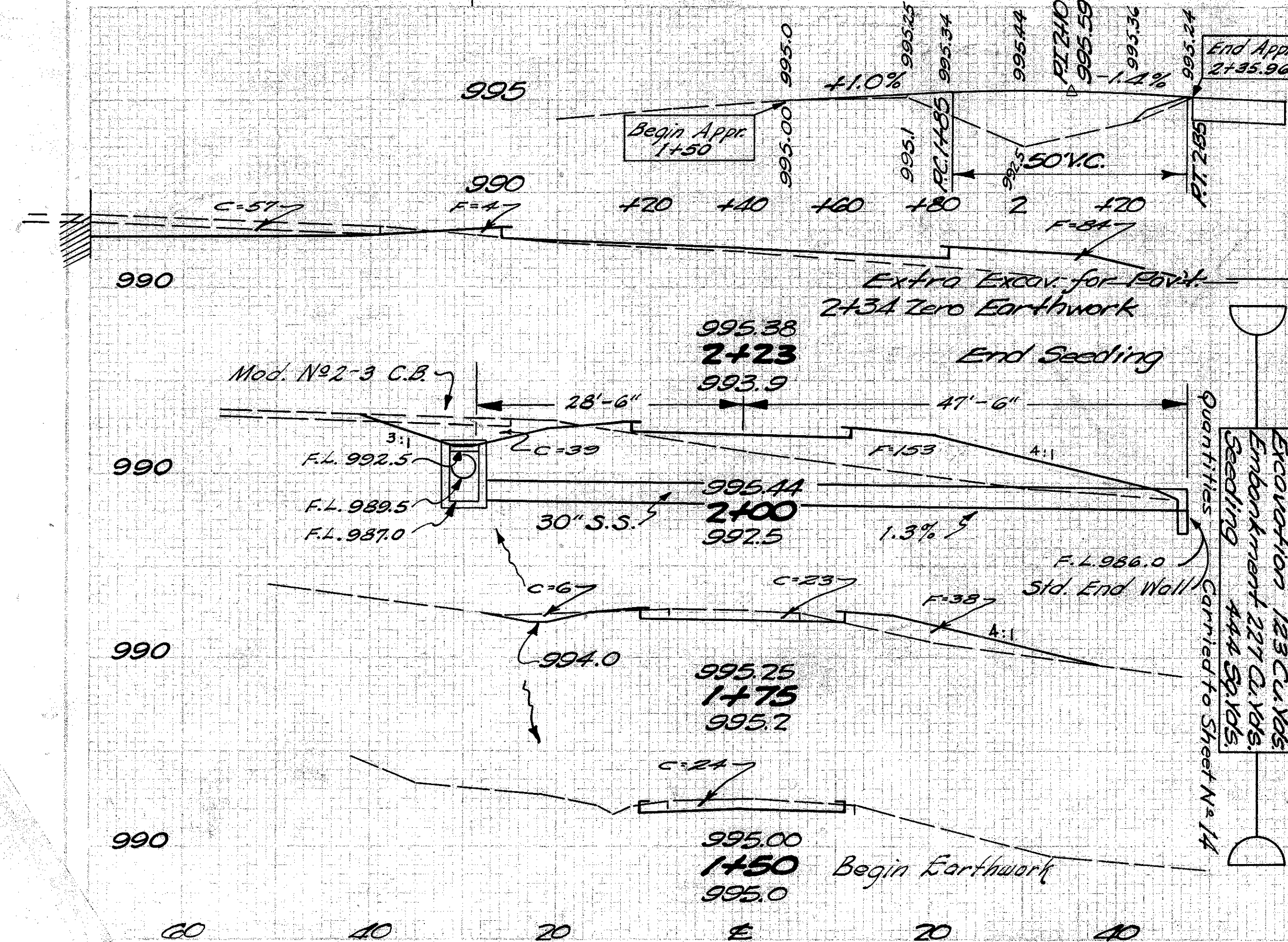
ESTIMATED QUANTITIES

1 1/2"-T-35 Surface Course	12 Cu. Yds.
2 1/2"-B-35 Leveling Course	20 Cu. Yds.
T-30 Bituminous Prime Coat	100 Gals.
6"-B-119 Base Course	48 Cu. Yds.
6"-I-22 Subbase	49 Cu. Yds.
E-M Compacted Subgrade	278 Sq. Yds.

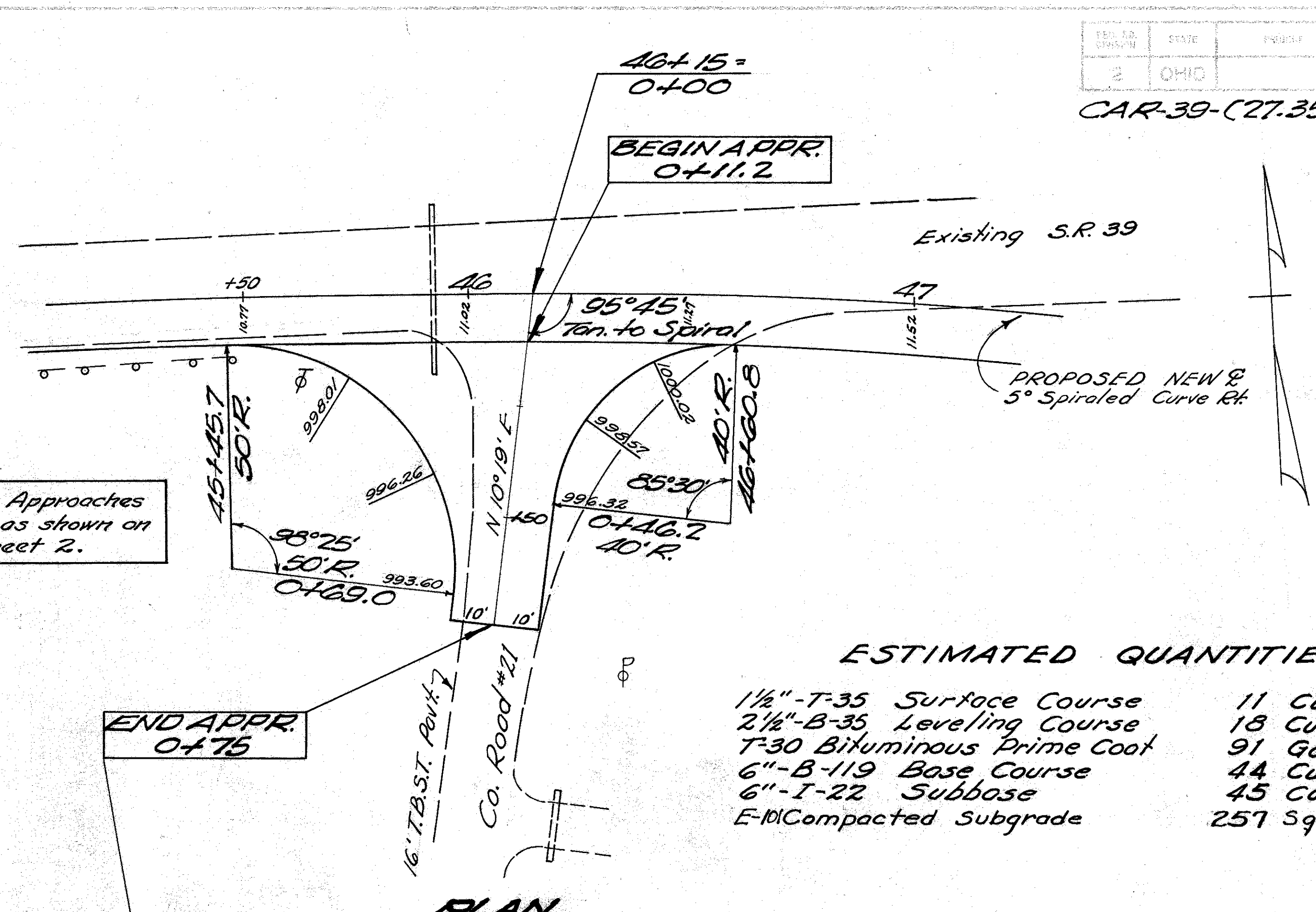


PROFILE

1" = 20' Hor. : 1" = 5' Ver.

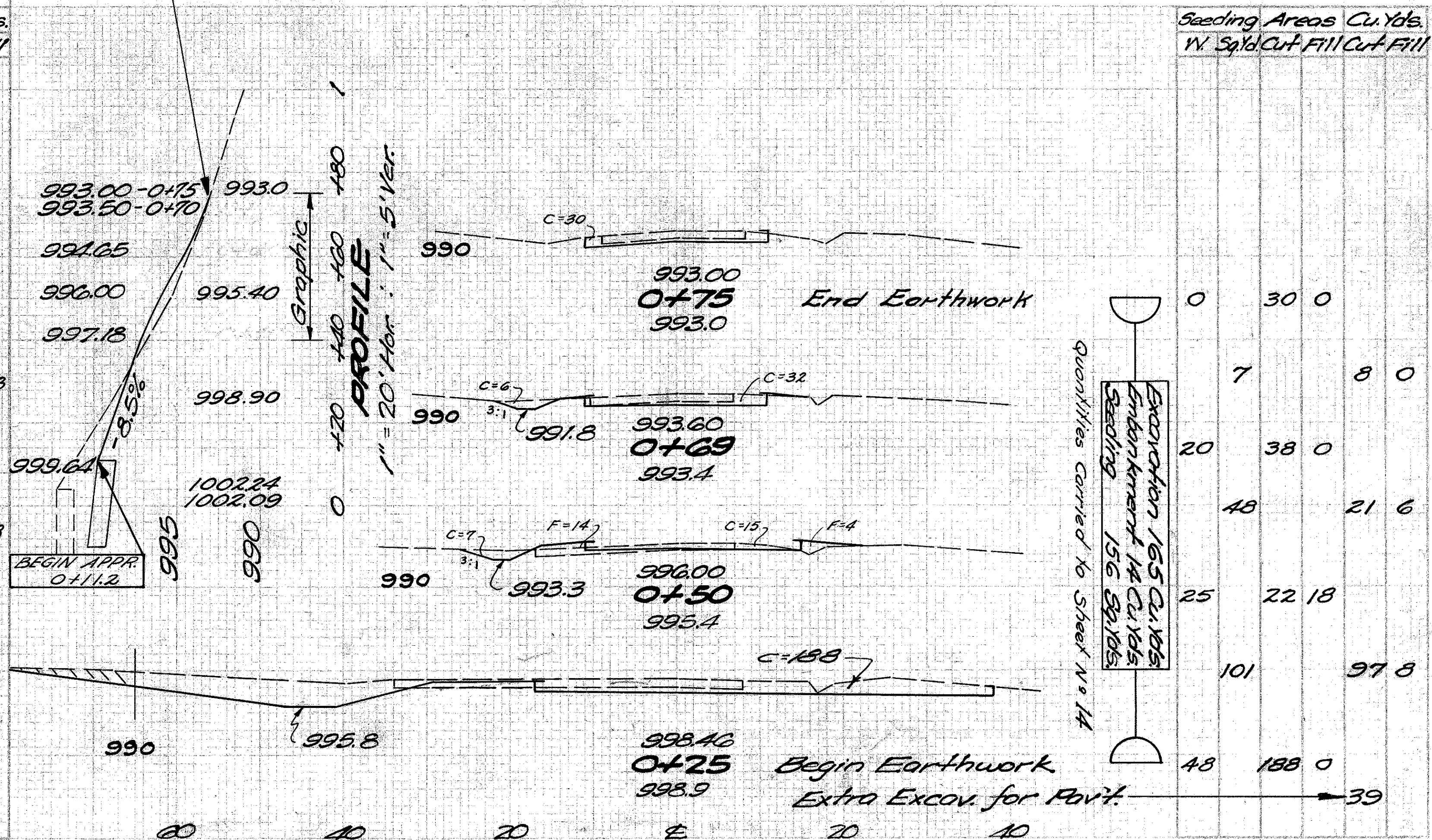


APPROACH LT. STA. 44+30.03

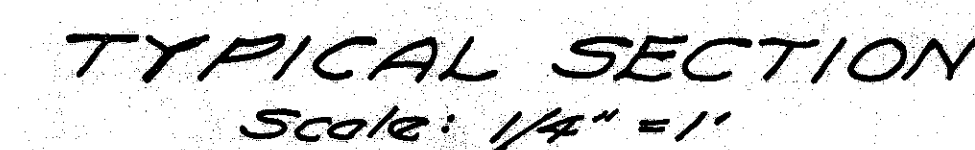


ESTIMATED QUANTITIES

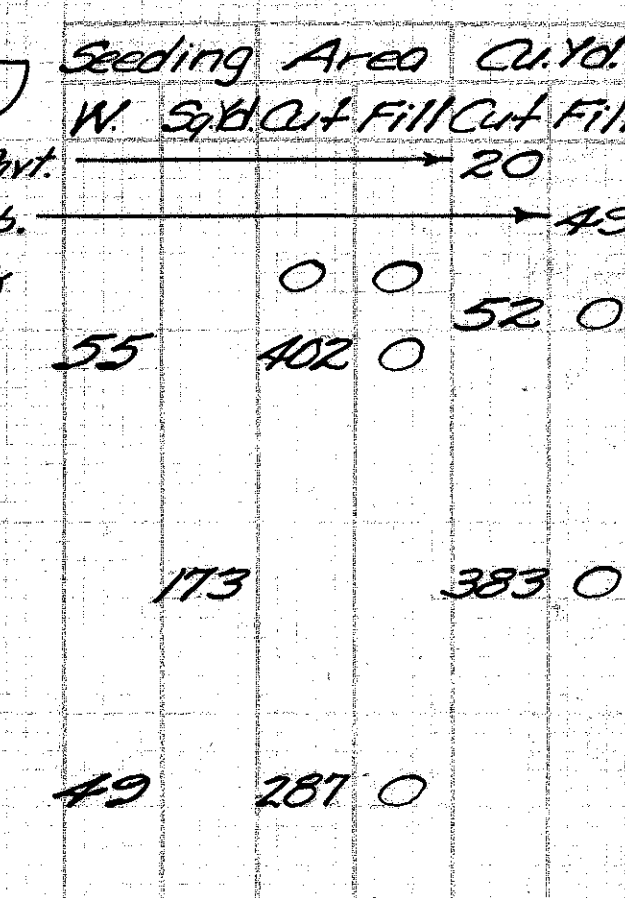
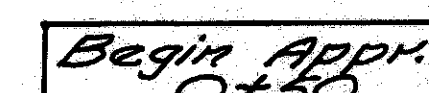
1 1/2"-T-35 Surface Course	11 Cu. Yds.
2 1/2"-B-35 Leveling Course	18 Cu. Yds.
T-30 Bituminous Prime Coat	91 Gals.
6"-B-119 Base Course	44 Cu. Yds.
6"-I-22 Subbase	45 Cu. Yds.
E-M Compacted Subgrade	257 Sq. Yds.



APPROACH RT. STA. 46+15



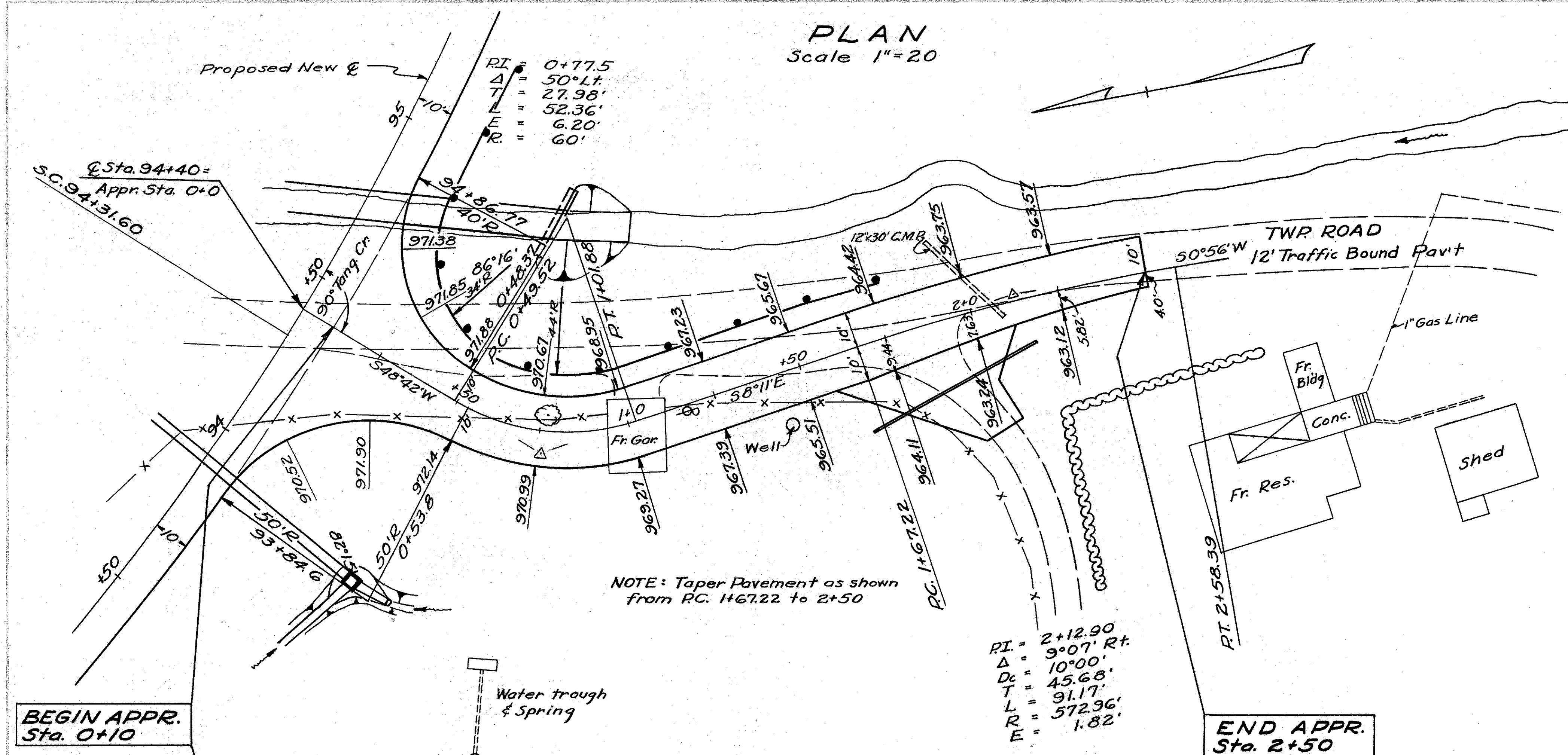
T-35 Surface Course	12 Cu.Yds.
B-35 Levelling Course	20 Cu.Yds.
T-30 Bituminous Prime Coat	103 Gals.
B-119 Base Course (49+14)	63 Cu.Yds.
I-22 Subbase	52 Cu.Yds.
E-101 Compacted Subgrade	279 Sq.Yds.



APPROACH LT. STA. 74+22

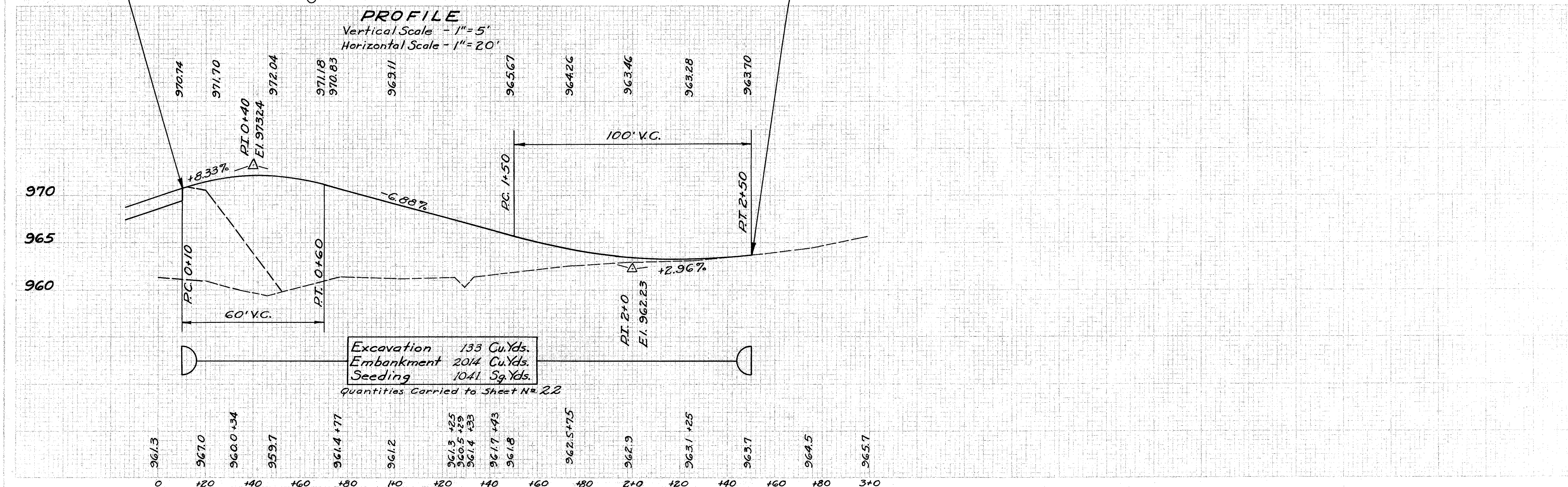
CAR-39-(27.35-27.38)

NOTE: Pavement on Approach shall be same type as shown on Typical Section Sheet 2.

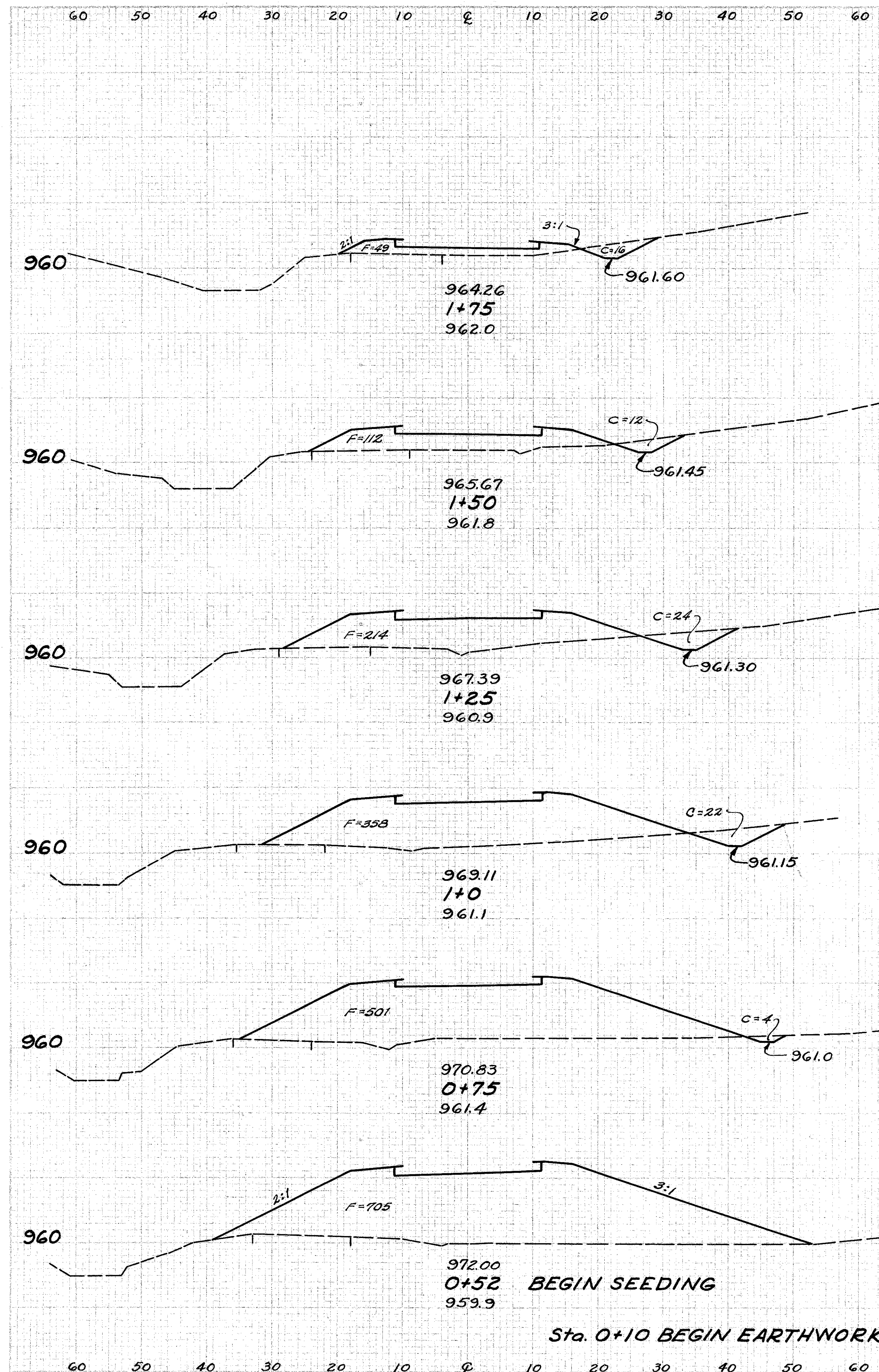


ESTIMATED QUANTITIES

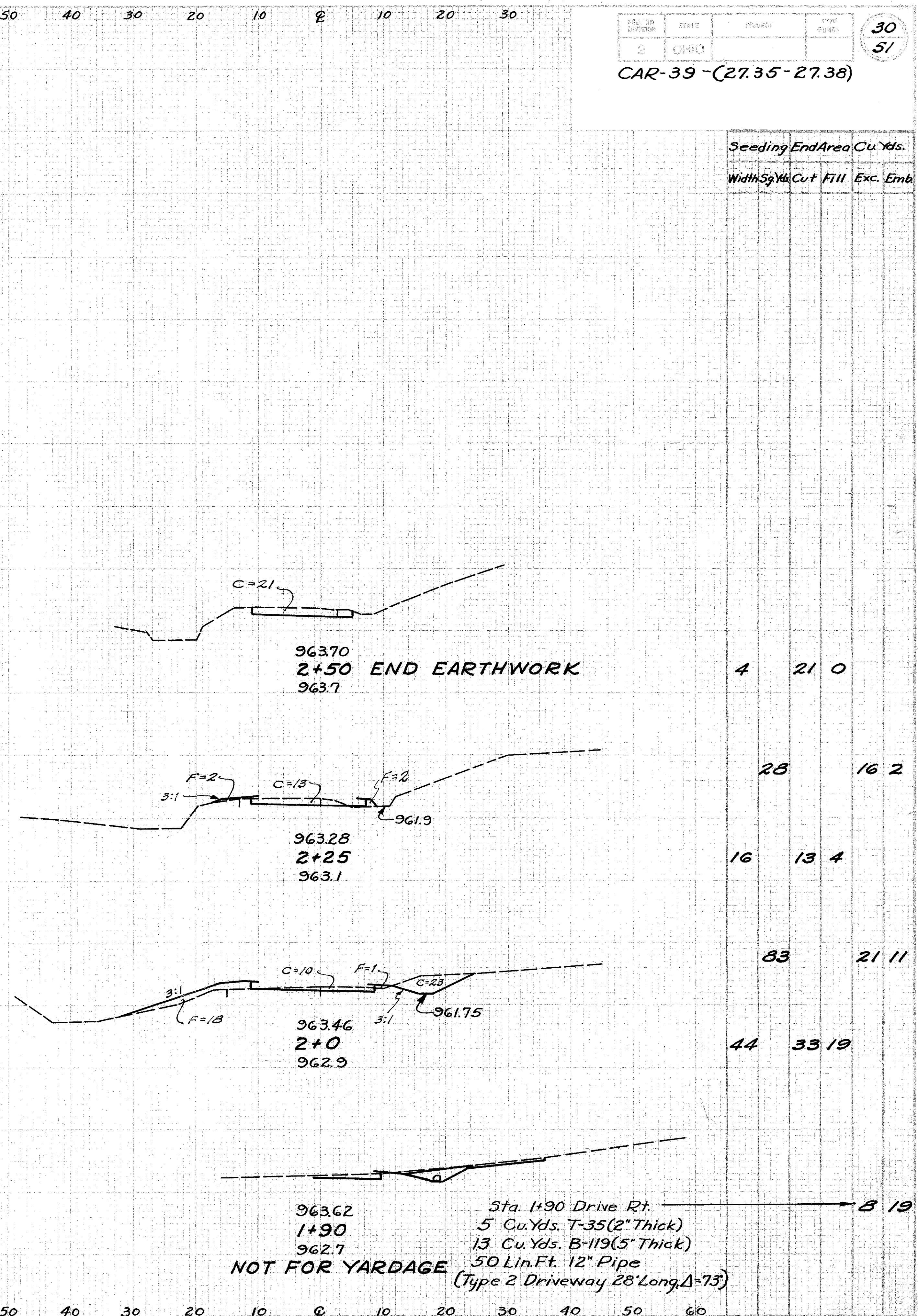
1½" T-35 Surface Course	25	Cu.Yds.
2½" B-35 Leveling Course	41	Cu.Yds.
T-30 Bituminous Prime Coat	216	Gals.
6" B-119 Base Course	103	Cu.Yds.
6" I-22 Subbase	107	Cu.Yds.
E-11 Compacted Subgrade	594	Sq.Yds.
12" Pipe Removal	30	Lin.Ft.

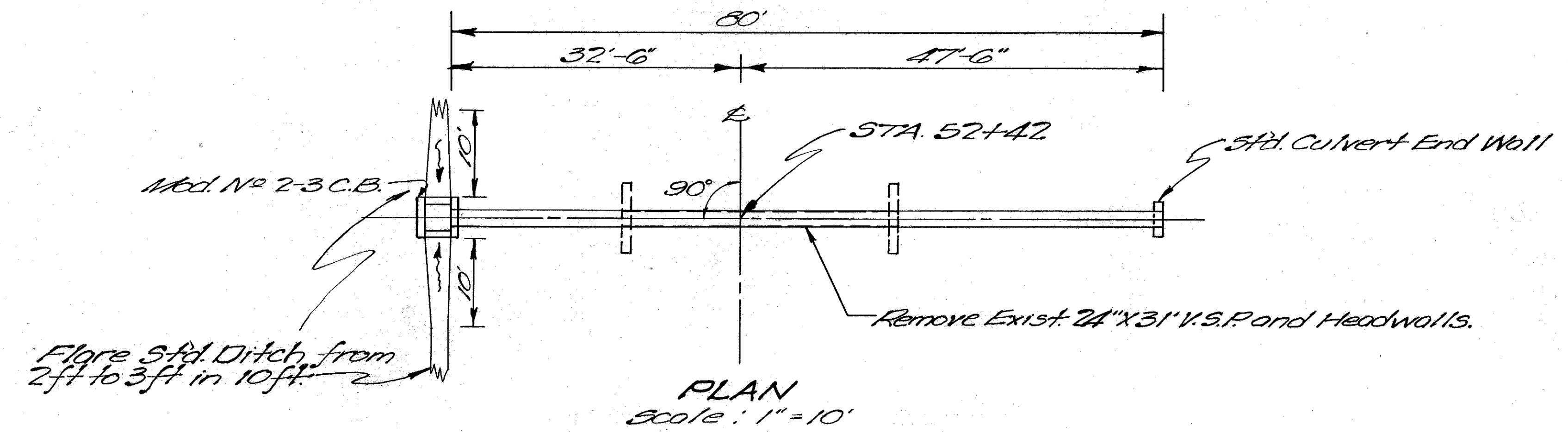


APPROACH RT. STA. 94+40



Seeding		End Area		Cu. Yds.	
Width	Sq. Yds.	Cut	Fill	Exc.	Emb.
111				23	31
36		16	49		
114				13	75
46		12	112		
142				17	151
56		24	214		
172				21	265
68		22	358		
194				12	398
72		4	501		
197				2	514
82		0	705		
		0		0	548

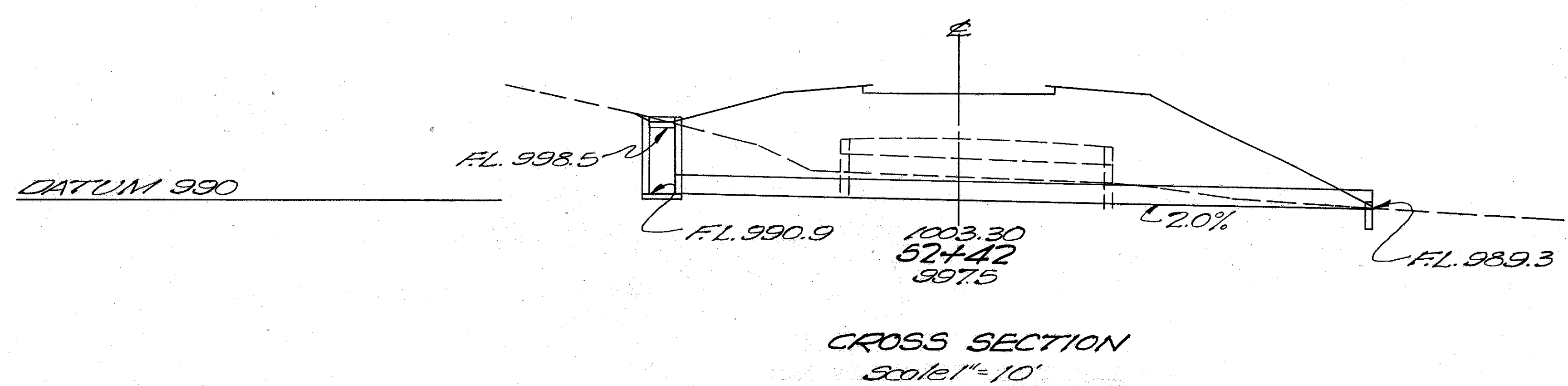




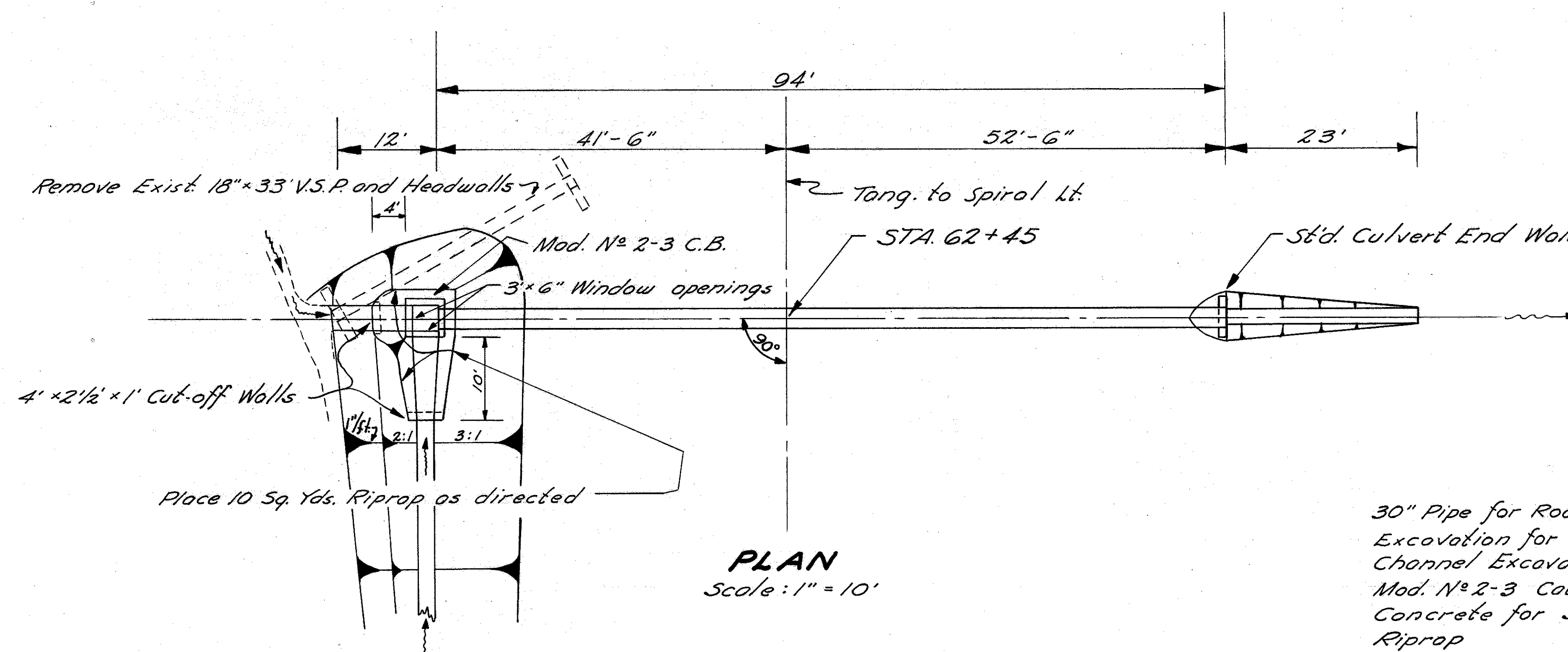
ESTIMATED QUANTITIES

24" Pipe for Roadway Culverts	80 Lin Ft
Excavation for Structures	43 Cu Yds
Concrete for Structures "Class E."	0.40 Cu Yds
Mod. No. 2-3 Catch Basin	1 Each
24" Pipe Removed (V.S.P.)	31 Lin Ft
Removal of Portions of Existing Structures	5 Cu Yds

Area: 6 acres
Q₂₅: 15 c.f.s.



STA. 52+42
24"X80' PIPE CULVERT



PLAN
Scale: 1" = 10'

ESTIMATED QUANTITIES

30" Pipe for Roadway Culverts
Excavation for Structures
Channel Excavation
Mod. N° 2-3 Catch Basin
Concrete for Structures "Class E"
Riprap
18" Pipe Removed (V.S.P.)
Removal of Portions of Existing Structures

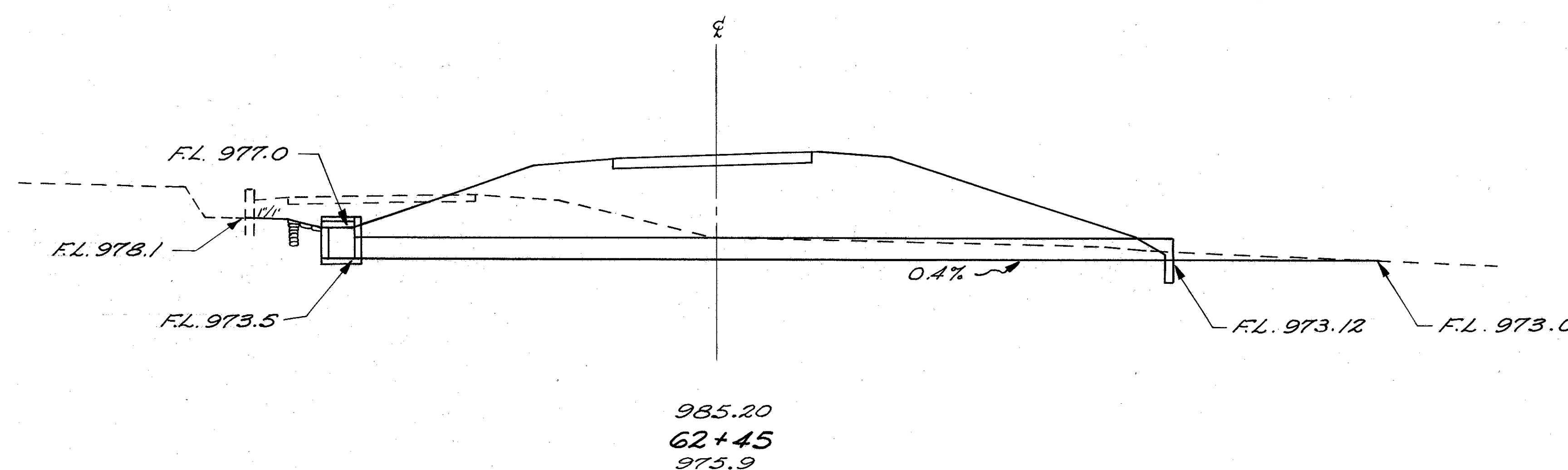
94 Lin. Ft.
74 Cu. Yds.
45 Cu. Yds.
1 Each
0.5 Cu. Yds.
10 Sq. Yds.
33 Lin. Ft.
3 Cu. Yds.

Area: 16 acres
Q₂₅: 29 cfs.

990

DATUM 980

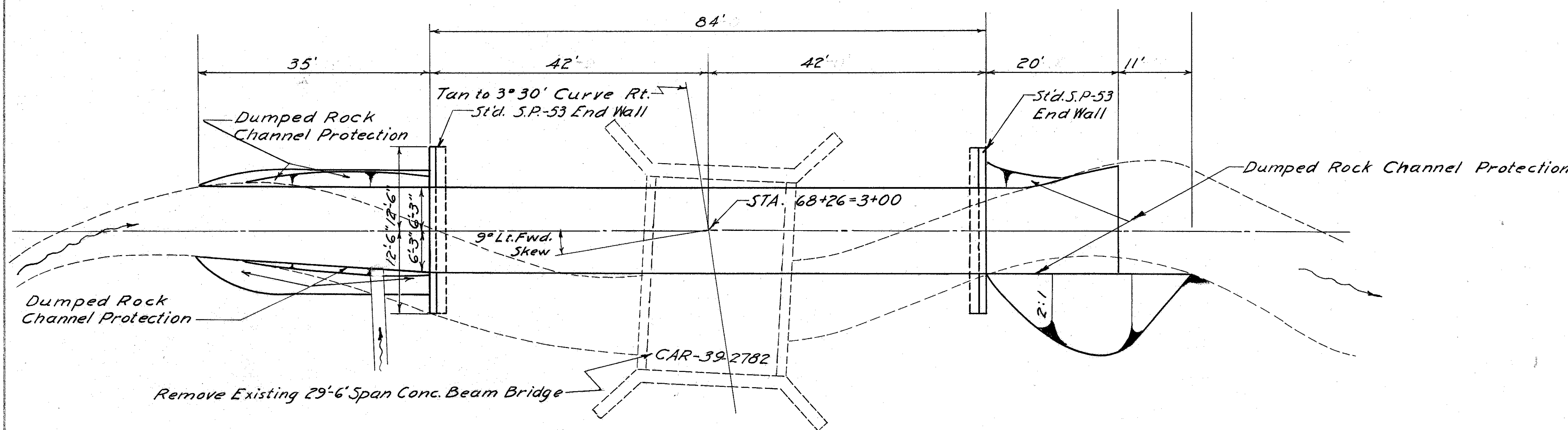
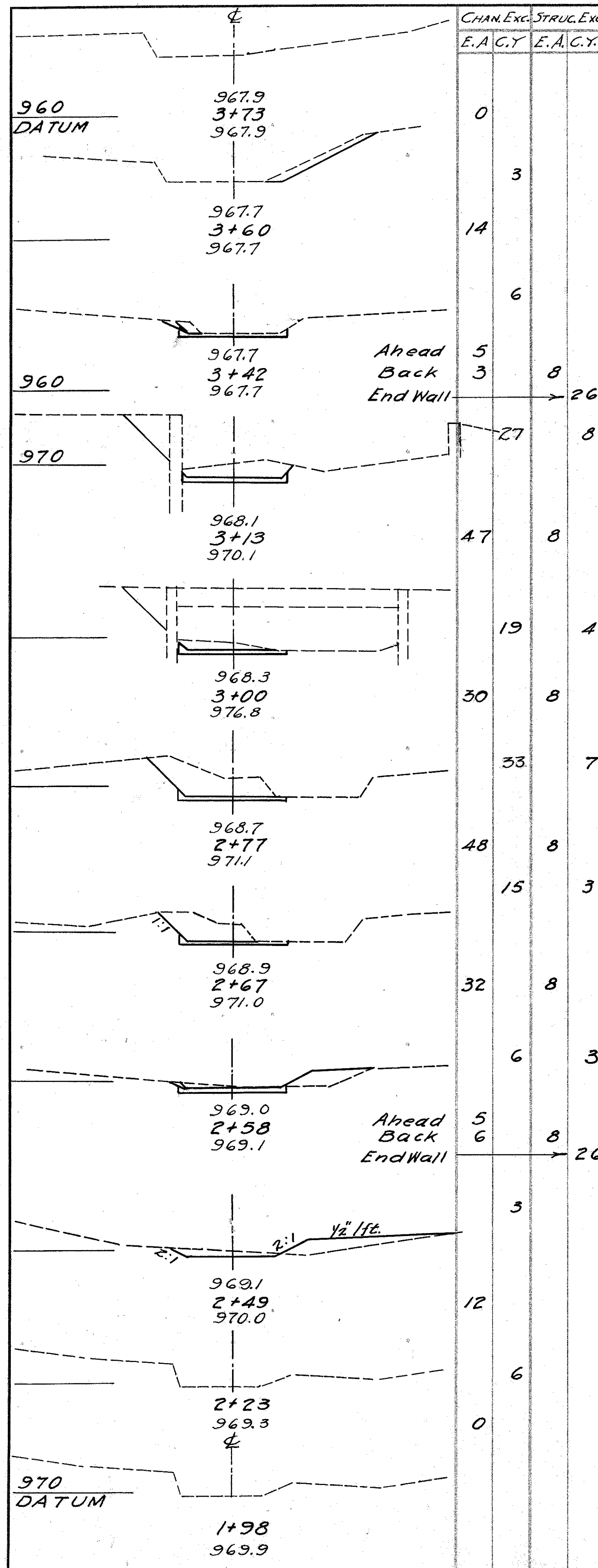
970



CROSS SECTION
Scale: 1" = 10'

STA. 62+45
30" x 94' PIPE CULVERT

CAR-39-2770



PLAN
Scale 1"=10'

NOTE: Channel Excavation has been calculated through the roadway area for the entire length of pipe culvert. Backfill around the structure shall be placed in accordance with the requirements of Sec. E-2.08.

NOTE: For details not shown see Std. Drawing SP-53. Plates shall be formed with 2" corrugations and shall be No. 7 gage for bottom and corner plates and No. 8 gage for all others.

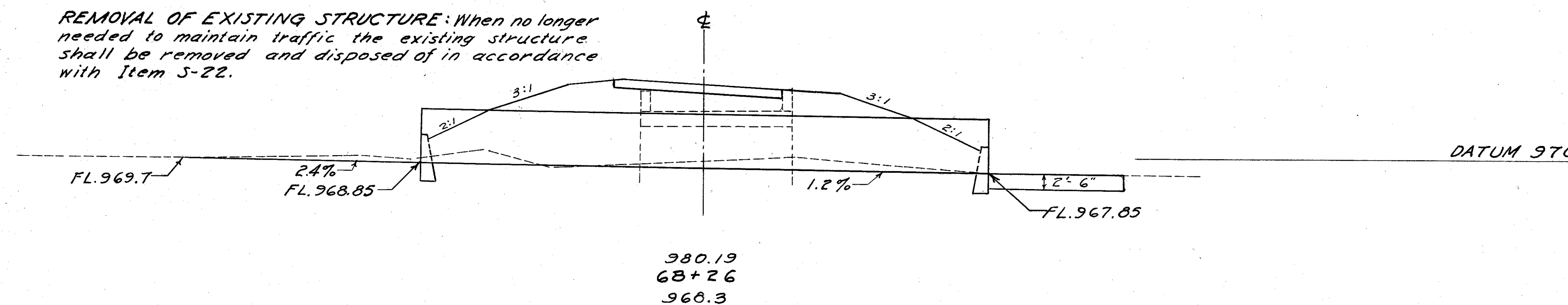
TEMPORARY RUN-AROUND BRIDGE AND APPROACHES: Bridge frequency rating, CF=130. Grade to be approximately the same as the existing pavement. Surface course shall be traffic compacted and quantities of aggregate and chloride are included in the General Summary, see Sheet No. 5.

REMOVAL OF EXISTING STRUCTURE: When no longer needed to maintain traffic the existing structure shall be removed and disposed of in accordance with Item S-22.

ESTIMATED QUANTITIES

12'-6" x 7'-11" Sectional Plate Pipe-Arch for Roadway Culverts.
Sec. M-6.4(g)(d) Gage 8-7 ✓
Excavation for Structures
Channel Excavation
Concrete for Structures "Class E"
Removal of Portions of Existing Structures
Dumped Rock Channel Protection
Temporary Run-Around Bridge and Approaches
Area: 1333 acres
Q₂₅: (Calculated) 650 cfs

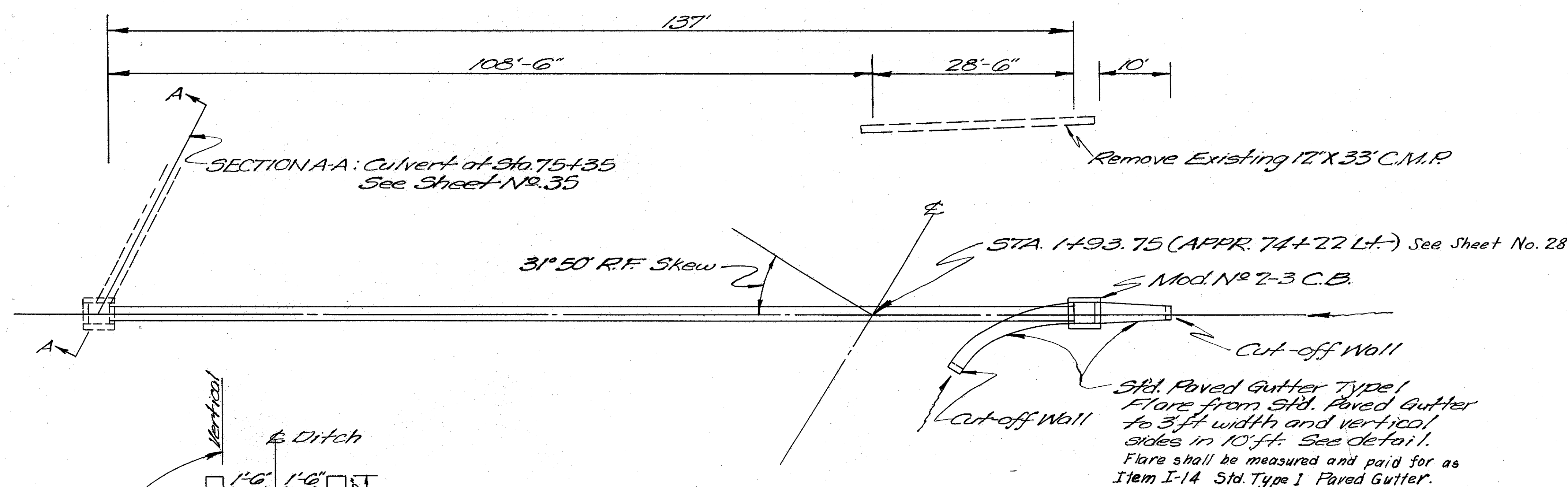
84 Lin. Ft.
77 Cu. Yds.
118 Cu. Yds.
17.4 Cu. Yds.
43 Cu. Yds.
45 Cu. Yds.
Lump Sum



CROSS SECTION
Scale: 1"=10'

STA. 68+26
84' x 12'-6" x 7'-11" PLATE ARCH CULVERT

CAR-39-2781



PLAN
Scale: 1" = 10'

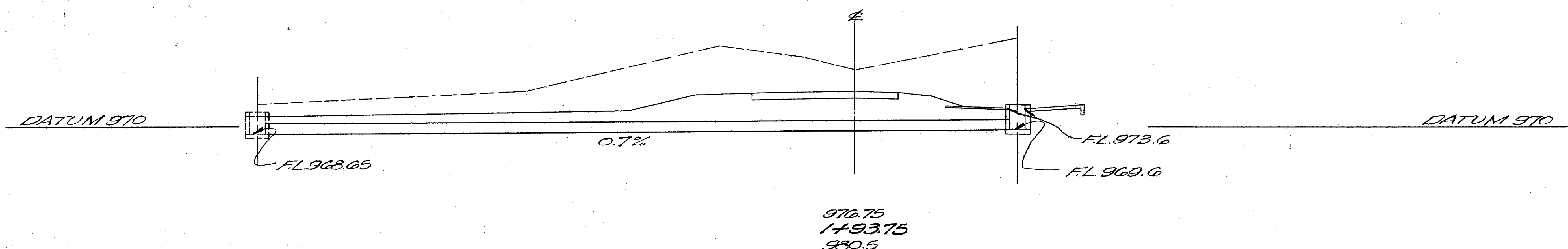
DETAIL OF PAVED GUTTER TRANSITION
Scale: 1" = 2'

ESTIMATED QUANTITIES

24" Pipe for Roadway Culverts
Excavation for Structures
Mod. No. 2-3 Catch Basin
Std. Paved Gutter Type 1
12" Pipe Removed (C.M.P.)

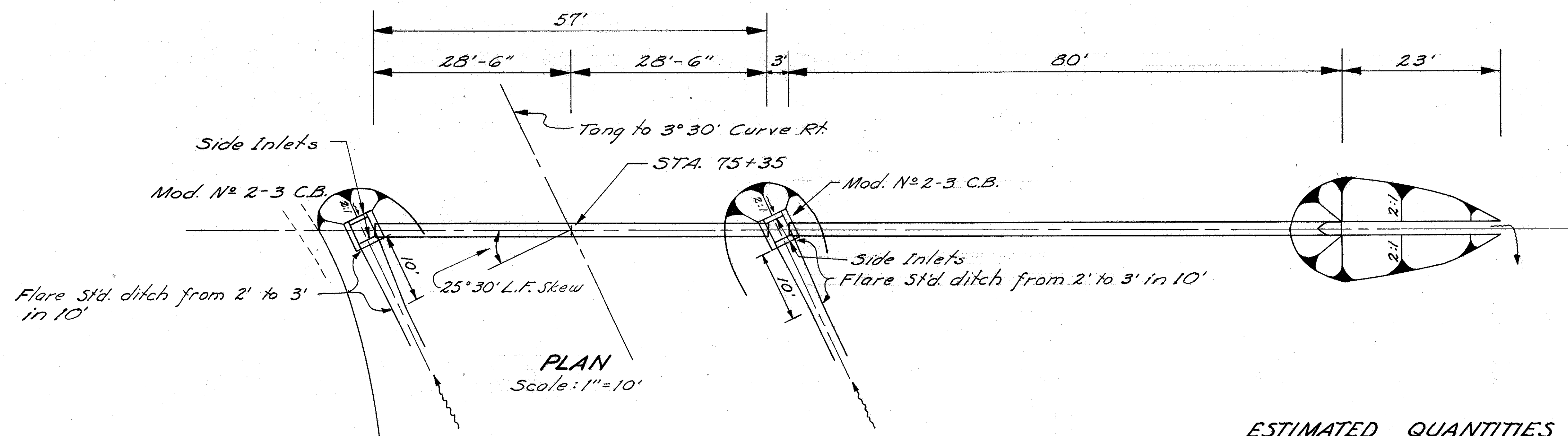
137 Lin. Ft.
93 Cu. Yds.
1 Each
30 Lin. Ft.
33 Lin. Ft.

Area: 6 acres
Qts: 15 cfs.



CROSS SECTION
Scale: 1" = 10'

STA. 1+93.75 ON APPR. 74+22 L+/-
24" X 137' PIPE CULVERT

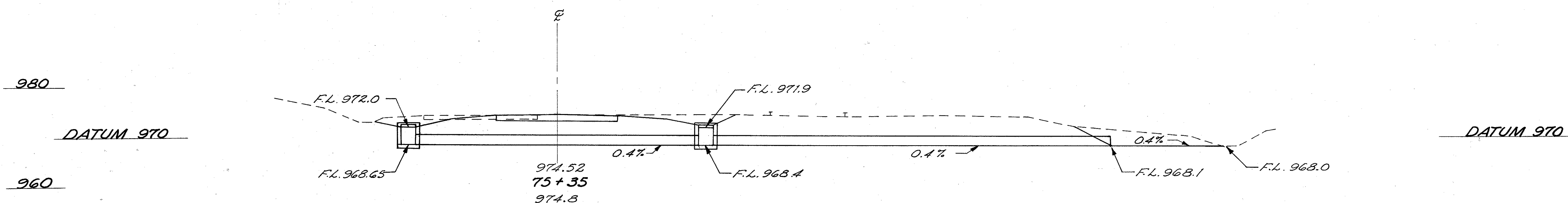


ESTIMATED QUANTITIES

24" Pipe for Roadway Culverts
Excavation for Structures
Channel Excavation
Mod. N° 2-3 Catch Basin

137 Lin. Ft.
105 Cu. Yds.
17 Cu. Yds.
2 Each

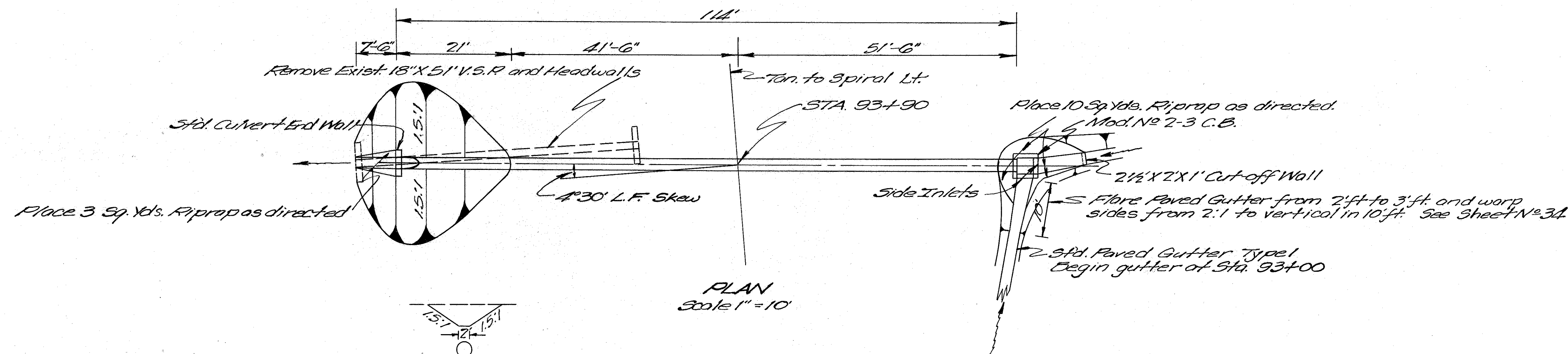
Area: 6 acres
Q₂₅: 15 c.f.s.



CROSS SECTION

Scale: 1" = 10'

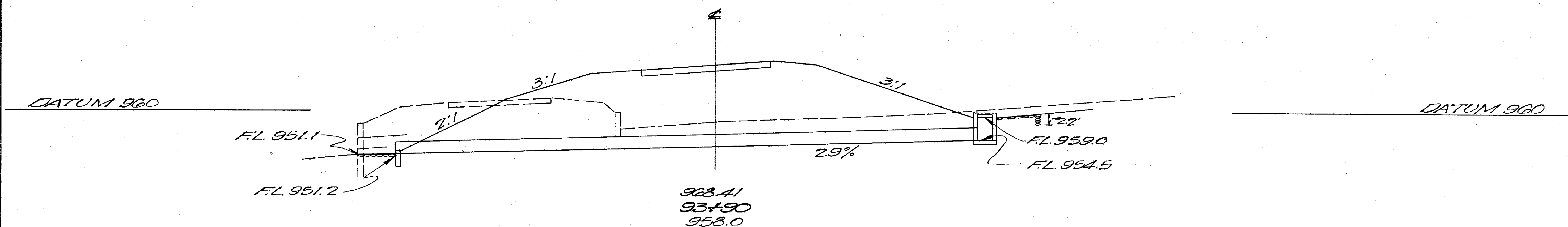
CAR-39-2794
STA. 75+35
24" x 137' PIPE CULVERT



ESTIMATED QUANTITIES

30" Pipe for Roadway Culverts	114 Lin. Ft.
Excavation for Structures	142 Cu. Yds.
Channel Excavation	90 Cu. Yds.
Mod. No 2-3 Catch Basin	1 Each
Concrete for Structures "Class E"	0.5 Cu. Yds.
18" Pipe Removed (V.S.P.)	51 Lin. Ft.
Removal of Portions of Existing Structures	4 Cu. Yds.
Std Paved Gutter Type 1	92 Lin. Ft.
Riprap	13 Sq. Yds.

Area: 15 acres
Q2s: 28 c.f.s.



STA. 93+90
30" X 114' PIPE CULVERT

CAR-39-(27.35-27.38)

Std. Paved Gutter Type 3
Begin at Sta 95+75

Std. Paved Gutter Type 3
Begin at Sta. 95+50

Remove Exist. 20' span Conc. Arch
Remove Wing Wall to Elev. 953.07

Tan to 8° Curve Lt.

STA. 94+73
= 2+00

Std. SP-53 End Wall

PLAN
Scale: 1"=10'

23° Rt. Forward J Kew

Mod. SP-53 End Wall

NOTE: Channel Excavation has been calculated through the roadway area for the entire length of pipe culvert. Backfill around the structure shall be placed in accordance with the requirements of Sec. E-2.0B.

NOTE: For details not shown see Std. Drawing SP-53. Plates shall be formed with 2" corrugations and shall be No. 8 for bottom plates and No. 10 for all others.

REMOVAL OF EXISTING STRUCTURE: The proposed culvert shall be constructed in such a manner that traffic can be maintained on the existing bridge until it can be re-routed over the new roadway. When no longer needed to maintain traffic the existing structure shall be removed to Elevation 955±, and lower where required for new construction, as directed by the Engineer, and in accordance with Item S-22.

ESTIMATED QUANTITIES

96" Sectional Plate Corrugated Metal Pipe for Roadway
Culverts Sec. M-6.4 (g)(d) Gage 10-8 ✓
Channel Excavation
Excavation for Structures
Concrete for Structures "Class E"
Dumped Rock Channel Protection
Removal of Portions of Existing Structures
Std. Paved Gutter Type 3

114 Lin. Ft.
112 Cu. Yds.
82 Cu. Yds.
19.3 Cu. Yds.
26 Cu. Yds.
95 Cu. Yds.
186 Lin. Ft.

Area: 650 acres
Q₂₅: 425 cfs.

CROSS SECTION
Scale 1"=10'

STA. 94+73
96"×114' PIPE CULVERT

CAR-39-2831

Datum 960

Granular Bedding

1.5%

Datum 960

F.L. 951.7

Dumped Rock
Channel Protection

969.47
94+73
953.8

F.L. 953.4

F.L. 955.2

F.L. 955.9

DATUM 950

2+74
955.1

953.4
2+55
954.7

953.0
2+24
954.7

952.6
2+00
953.8

953.0
1+98
952.7

952.1
1+75
952.7

951.7
1+41
950.7

949.6
1+23
951.1

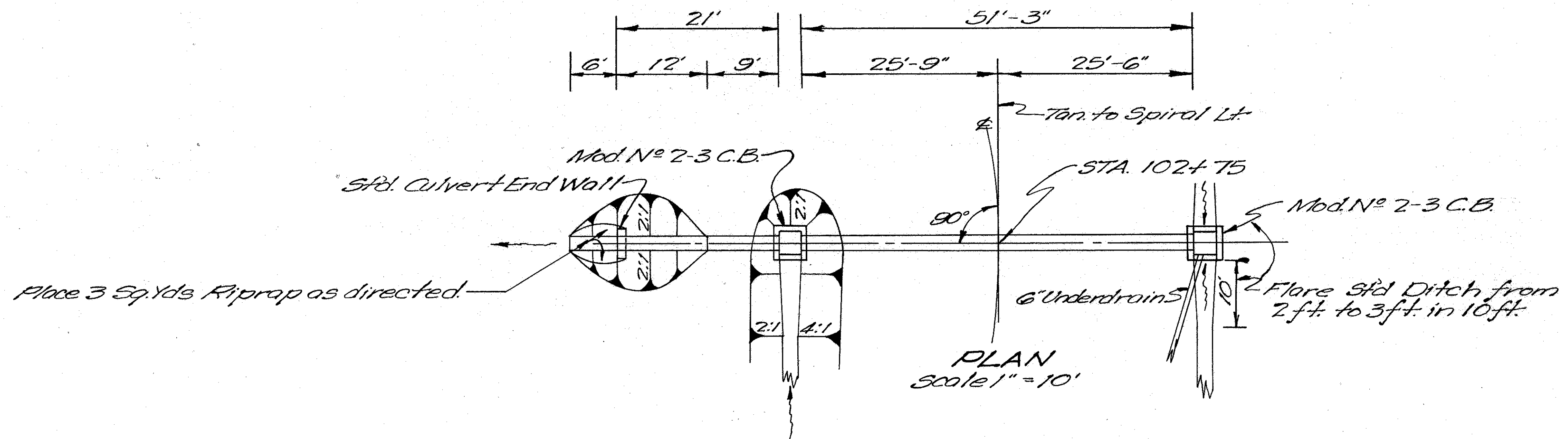
DATUM 950

0+98
949.5

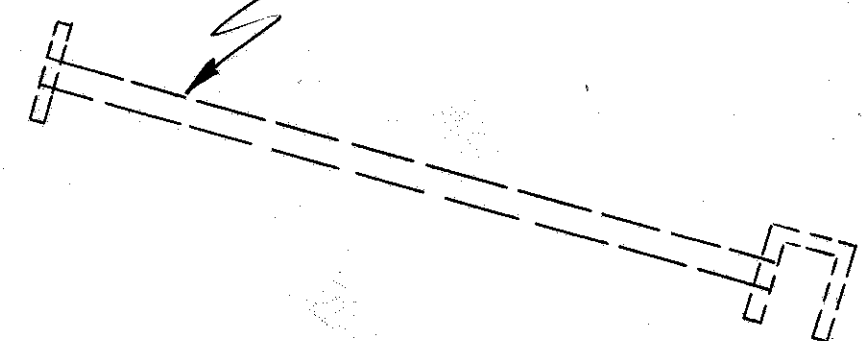
END WALL

Sta. 1+74
END WALL

Chan. Exc.	Struc. Exc.	Exc.
E.A.C.Y.	E.A.C.Y.	E.A.C.Y.
0	0	
8	7	
24	6	33
25	7	
20	6	
16	5	
16	6	
1	1	
6	6	
4	5	
3	1	6
0	6	1
		23
0		
24		
72		
33		
0		



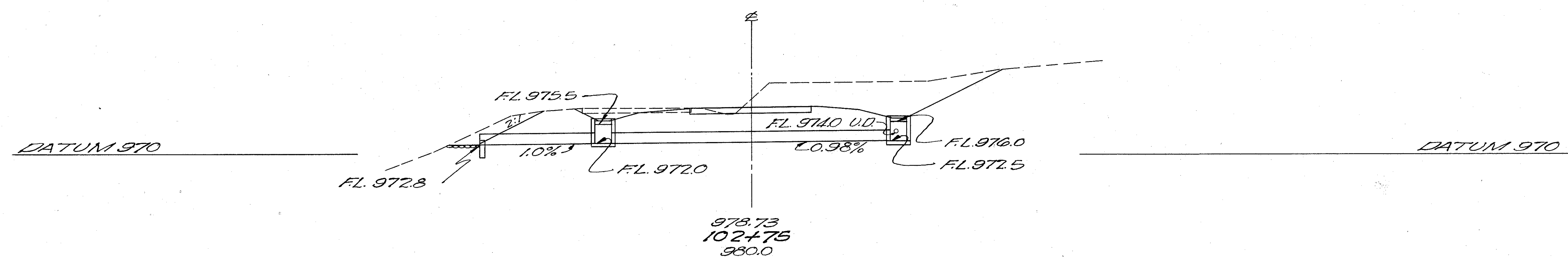
Remove Exist. 18" X 18" X 39' Stone Box Culvert and Headwalls



ESTIMATED QUANTITIES

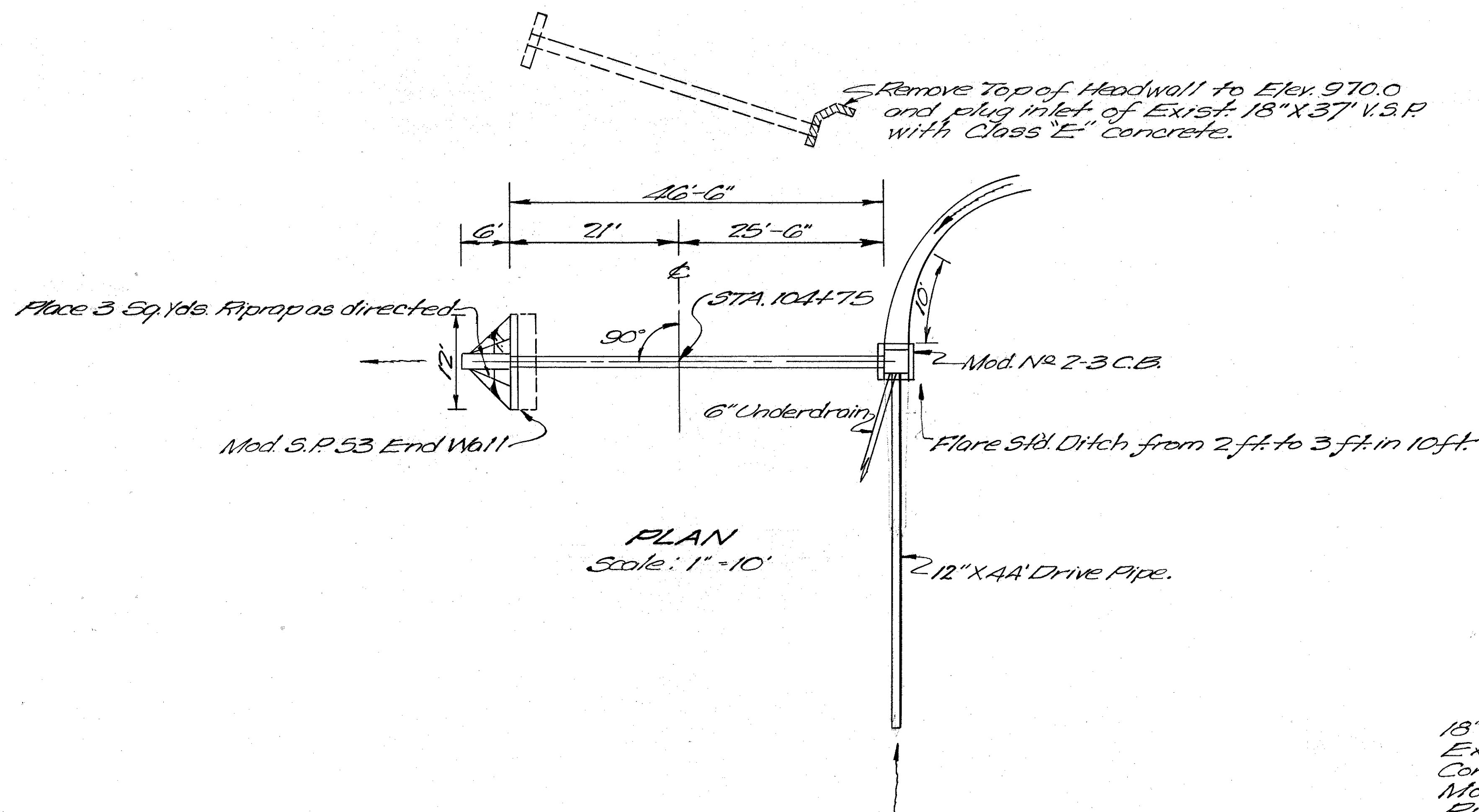
24" Pipe for Roadway Culverts	73 Lin. Ft.
Excavation for Structures	53 Cu. Yds.
Channel Excavation	8 Cu. Yds.
Mod. No 2-3 Catch Basins	2 Each
Concrete for Structures "Class E."	0.4 Cu. Yds.
Riprap	3 Sq. Yds.
Removal of Portions of Existing Structures.	7 Cu. Yds.

Area: 0.0 acres
Q₂₅: 10 cfs.



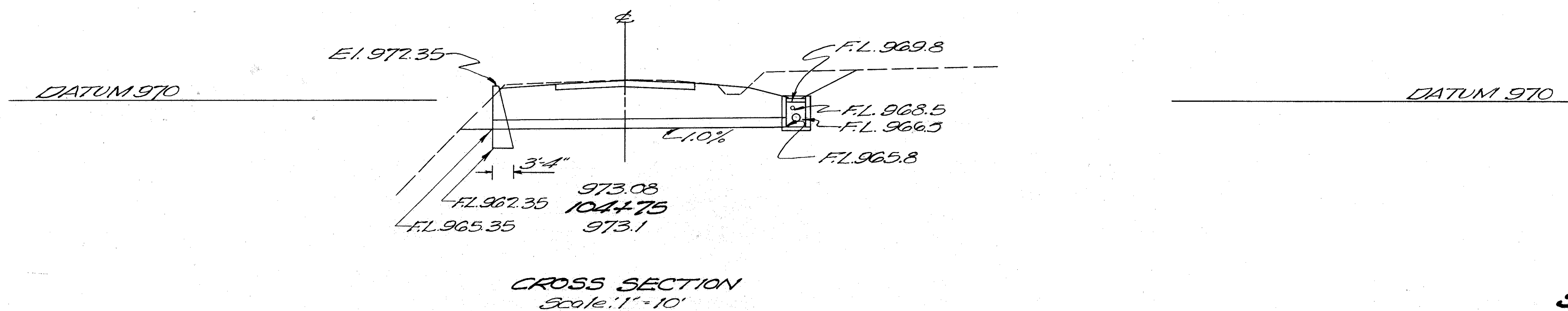
CROSS SECTION
Scale: 1" = 10'

STA. 102+75
24" X 73' PIPE CULVERT



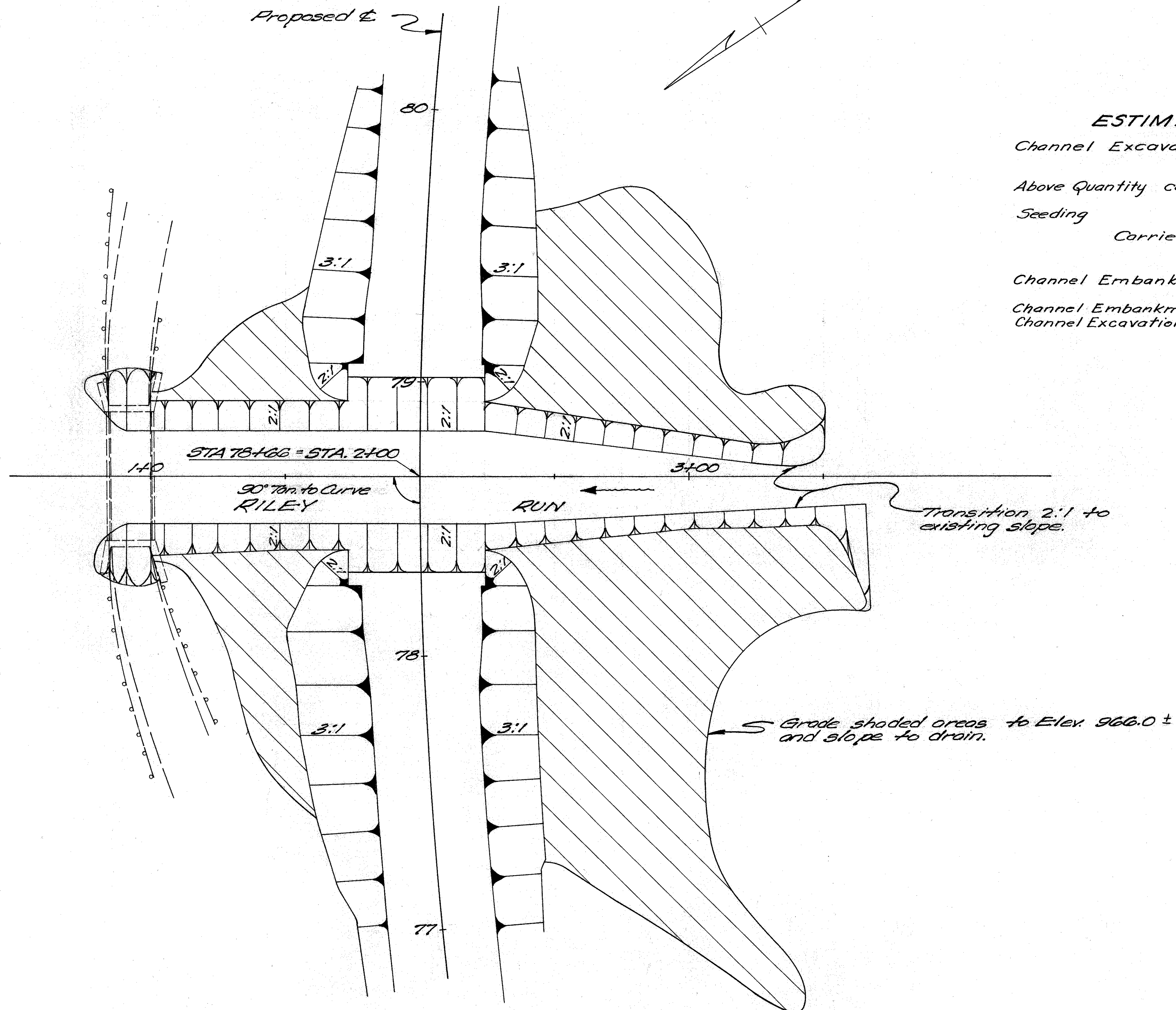
ESTIMATED QUANTITIES

18" Pipe for Roadway Culverts	47 Lin. Ft.
Excavation for Structures	58 Cu. Yds.
Concrete for Structures "Class E"	90 Cu. Yds.
Mod. No 2-3 Catch Basin	1 Each
Riprap	3 Sq. Yds.
Removal of Portions of Existing Structures	1 Cu. Yd.



STA. 104+75
18" X 47' PIPE CULVERT

PLAN
Scale 1" = 20'



ESTIMATED QUANTITIES

Channel Excavation 906 Cu. Yds.

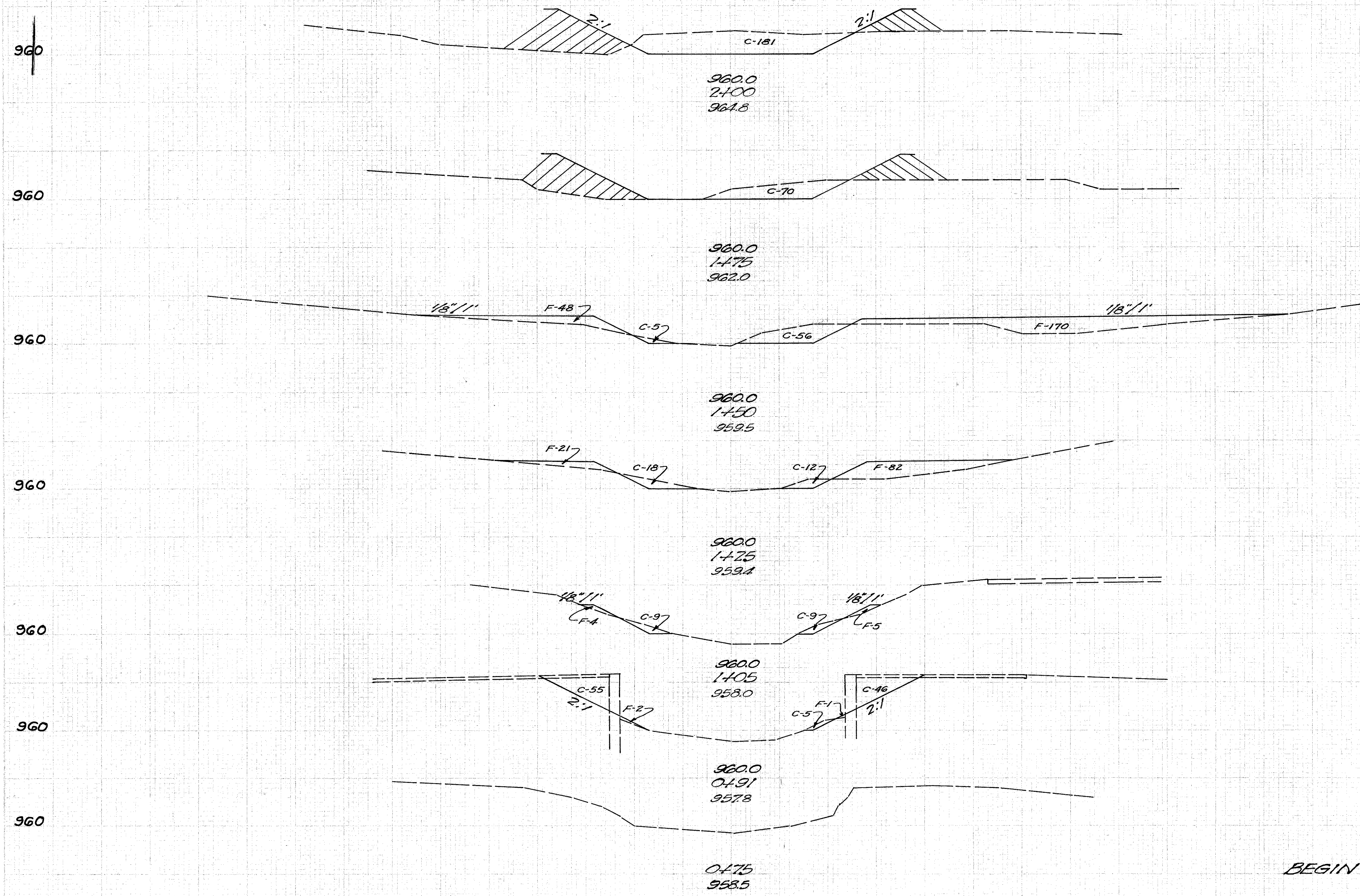
Above Quantity carried to Bridge Summary Sheet No. 49

Seeding 2578 Sq. Yds.

Carried to Sheet No. 20

Channel Embankment 1264 Cu. Yds.

Channel Embankment to be made from suitable Channel Excavation and excess Roadway Excavation.



Excav. Area C.Y.	Emb. Area C.Y.	Seeding Area Sqft.
181	0	0
116	0	0
70	0	0
61	101	174
61	218	125
42	149	244
30	103	51
18	41	68
18	9	10
32	3	16
106	3	10
31	1	9
0	0	0

960
960
960
960
960
960
960

END WORK

Excavation 906 Cu.Yds
Embankment 1264 Cu.Yds
Seeding 2578 Sq.Yds

Excav. Area C.Y.	Emb. Area C.Y.	Seeding Area Sq.Yd.
0	0	0
1	13	31
1	40	33
17	50	126
35	68	58
31	112	407
32	174	235
42	272	640
58	413	226
128	353	583
218	350	194
210	169	280
218	0	0
177	0	0

CHANNEL CHANGE STA. 78+60

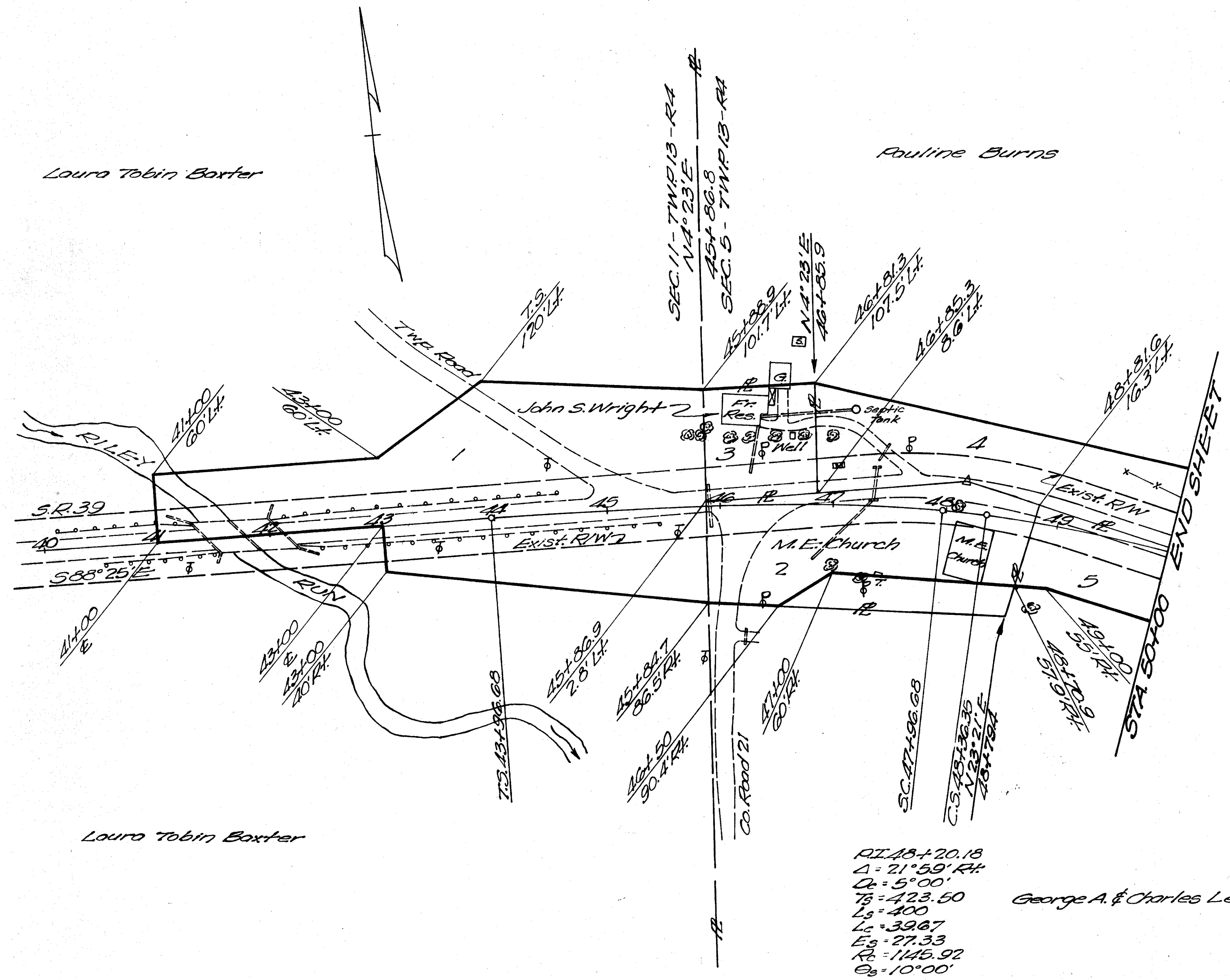
SUMMARY OF ADDITIONAL R/W REQUIRED					
Parcel No.	OWNER	Area Acres	Exist. Shd. Bldg. No.	Remarks	
1	Laura Tobin Baxter	0.85	No		
2	M.E. Church	0.33	Yes		
3	John S. & Marie M. Wright	0.16	Yes		
4	Pauline Burns	2.79	Yes		
4A	"	0.06	No		
4B	"	1.07	No		
5	George A. & Charles Leishman	0.53	No		
5A	"	0.75	No		
6	Sterling Coal Co.	1.11	No		
7	Willard Madison	0.26	No		
8	Board of Public Affairs	-	No		
9	Charles Hetherington	4.09	Yes		
9X	"	0.86	No		
10	Village of Salineville	-	No		
11	Orville D. Hetherington	3.27	No		
12	Harold W. & Doris J. Twiddle	0.26	Yes		
13	Jane Dunlap House	0.21	No		
4-T	Pauline Burns	0.03	No		
4A-T	"	0.03	No		
6-T	Sterling Coal Co.	0.04	No		

FOX TWP - SEC 5 & 11 - TWP 13 - R4

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

43
51

CAR 39-(27.35-27.38)
RIGHT OF WAY PLAN



1
Laura Tobin Baxter
P.R.O. = 0.53 A^c
T.B.A. = 0.85 A^c

2
M.E. Church
P.R.O. = 0.21 A^c
T.B.A. = 0.33 A^c

3
John S. & Marie M. Wright
P.R.O. = 0.07 A^c
T.B.A. = 0.16 A^c

George A. & Charles Leishman
P.R.O. = 0.53 A^c
T.B.A. = 0.85 A^c

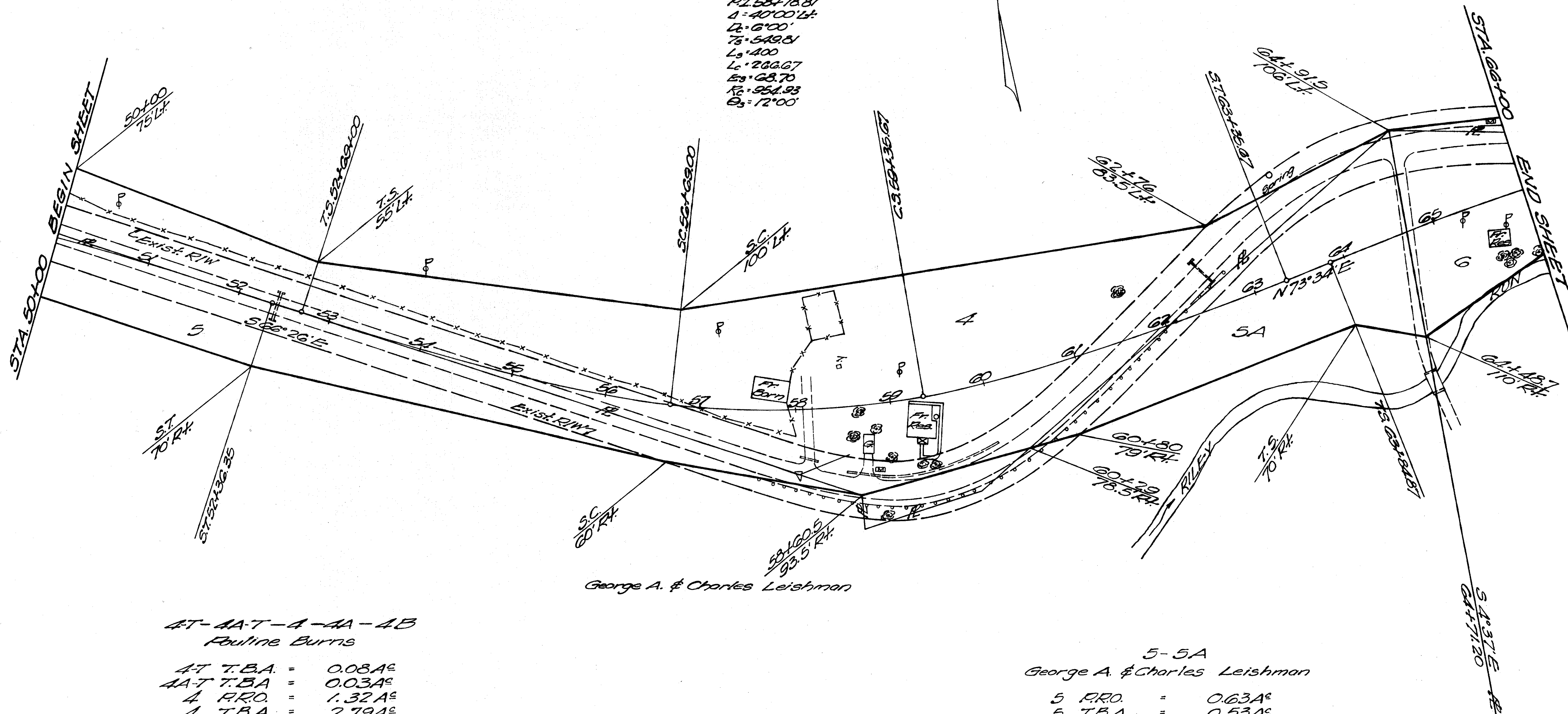
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

44

51

Pauline Burns

$P.I. = 58 + 18.81$
 $\Delta = 40^{\circ}00'12''$
 $D_2 = 6^{\circ}00'$
 $T_2 = 549.81$
 $L_2 = 400$
 $L_c = 266.67$
 $E_2 = 68.70$
 $K_c = 954.93$
 $O_2 = 12^{\circ}00'$



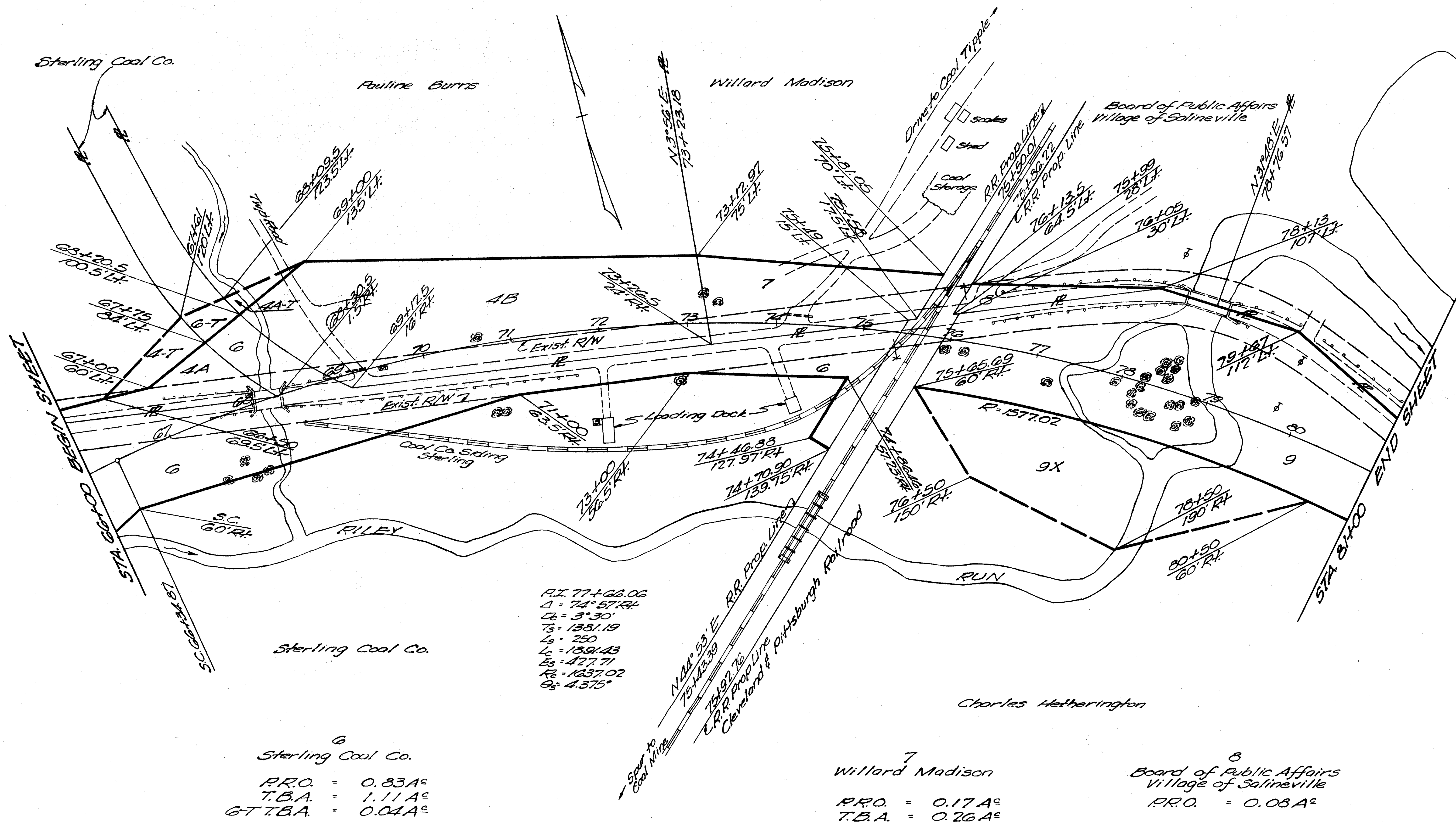
4T-4A-T-4-4A-4B
Routine Burns

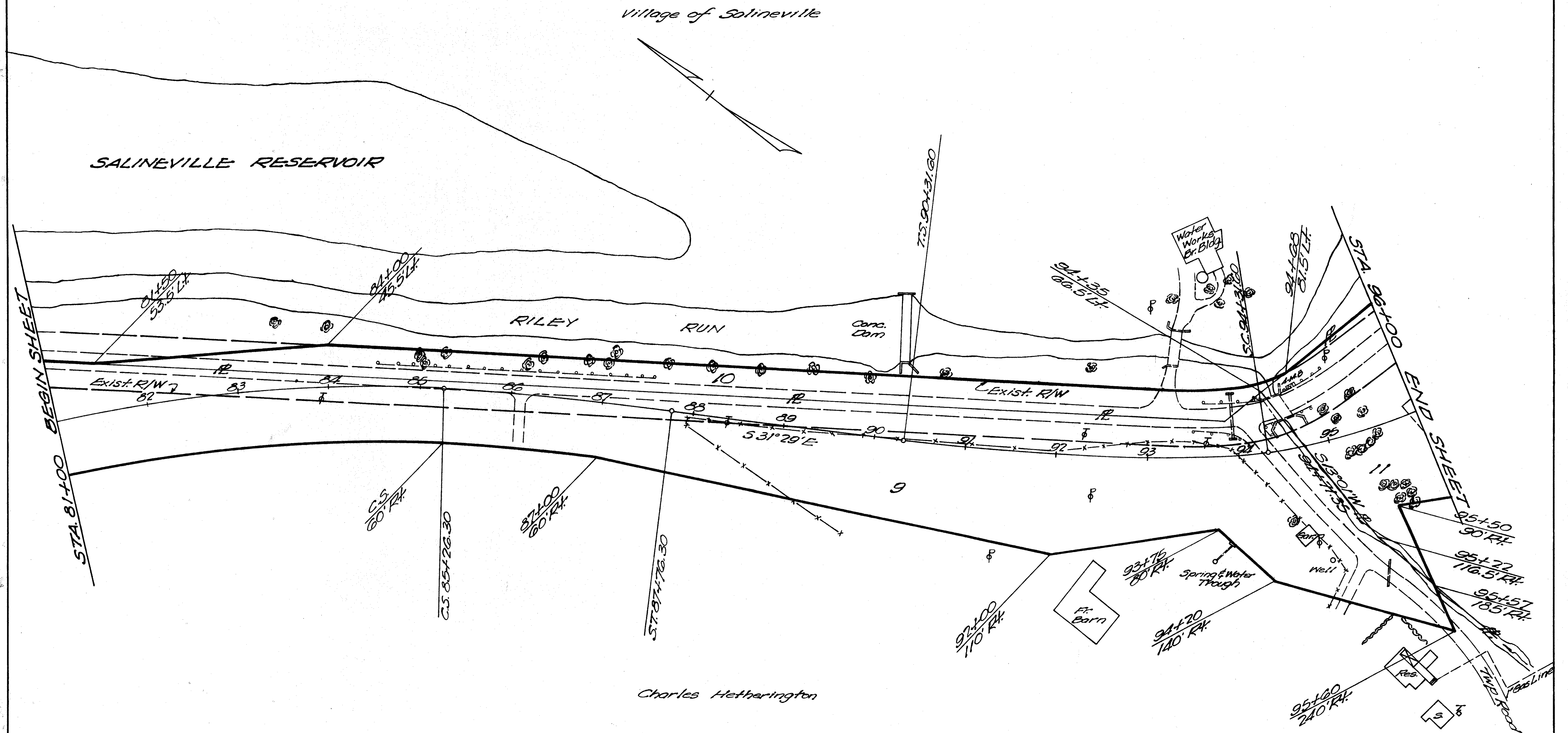
4T T.B.A.	=	0.08A ^g
4A-T T.B.A.	=	0.03A ^g
4 P.R.O.	=	1.32A ^g
4 T.B.A.	=	2.79A ^g
4A P.R.O.	=	0.16A ^g
4A T.B.A.	=	0.06A ^g
4B P.R.O.	=	0.29A ^g
4B T.B.A.	=	1.07A ^g

5-5A
George A. & Charles Leishman

5 PRO.	=	0.634%
5 T.B.A.	=	0.534%
5A PRO.	=	0.194%
5A T.B.A.	=	0.754%

FOX TWP - SEC 5 - TWP 13 - R 4



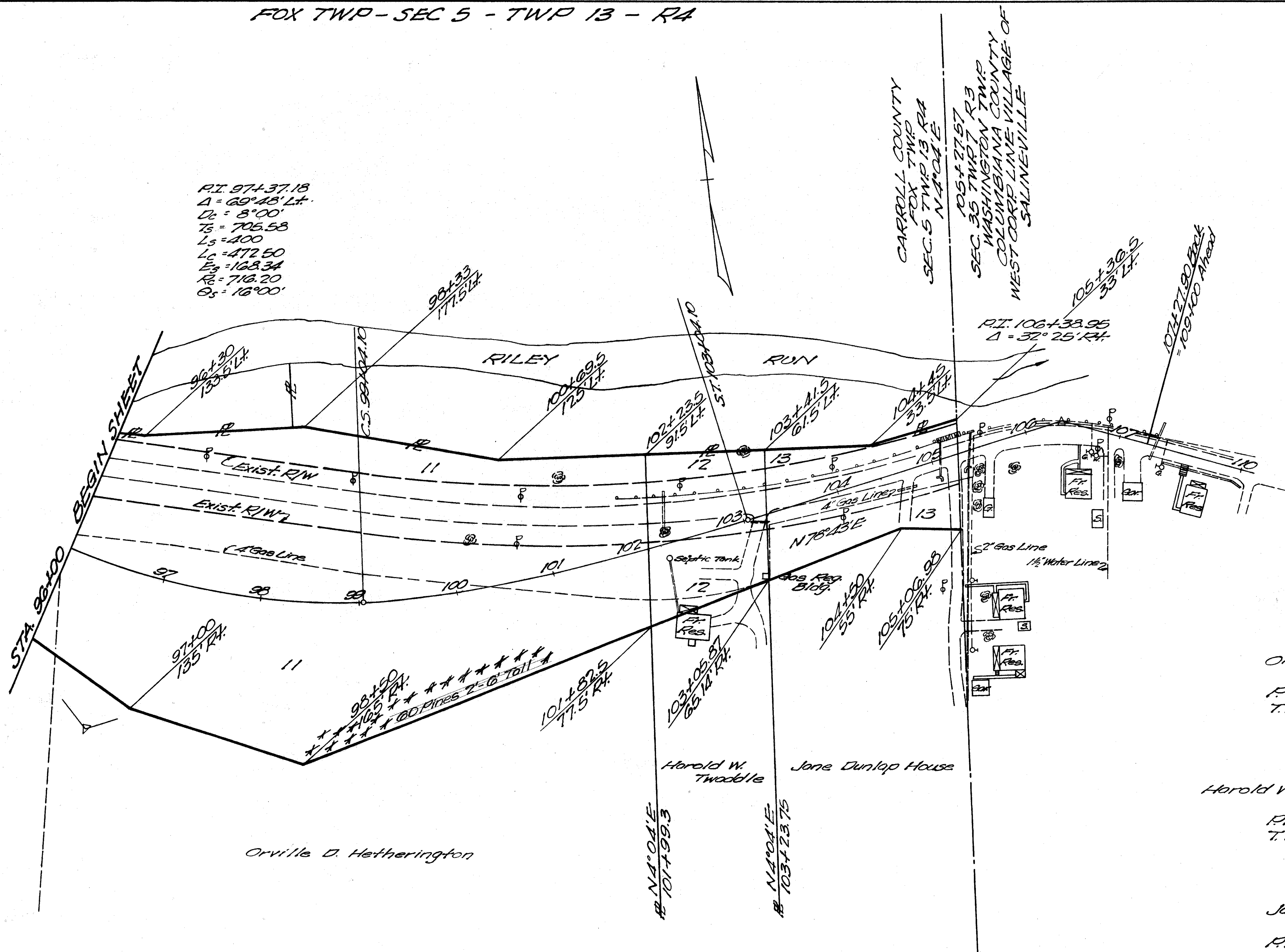


9-9X
Charles Hetherington

P.R.O. = 1.304[±]
T.B.A. = 4.094[±]
9XT.B.A. = 0.864[±]

10
Village of Salineville

P.R.O. = 0.844[±]



11
Orville D. Hetherington

P.R.O. = 0.96 A^c
T.B.A. = 3.27 A^c

12
Harold W. & Doris J. Twaddle

P.R.O. = 0.17 A^c
T.B.A. = 0.26 A^c

13
Jane Dunlap House

P.R.O. = 0.28 A^c
T.B.A. = 0.21 A^c

CAR-39-(27.35-27.38)

GENERAL NOTES

REFERENCE shall be made to Standard Drawing GS-1-54
revised 7-16-56

REMOVAL OF EXISTING STRUCTURE: When no longer needed to maintain traffic the existing structure shall be removed. The stringers shall be carefully dismantled and piled along the right-of-way for disposal by the State's forces. Suitable waste masonry may be placed as bank protection at the direction of the Engineer.

PILES shall be driven to firm contact with rock. If the length of penetration is approximately equal to the depth to rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. 5-18.05 is not less than the following value for a pile hammer of the indicated energy rating:

For the abutment piles:

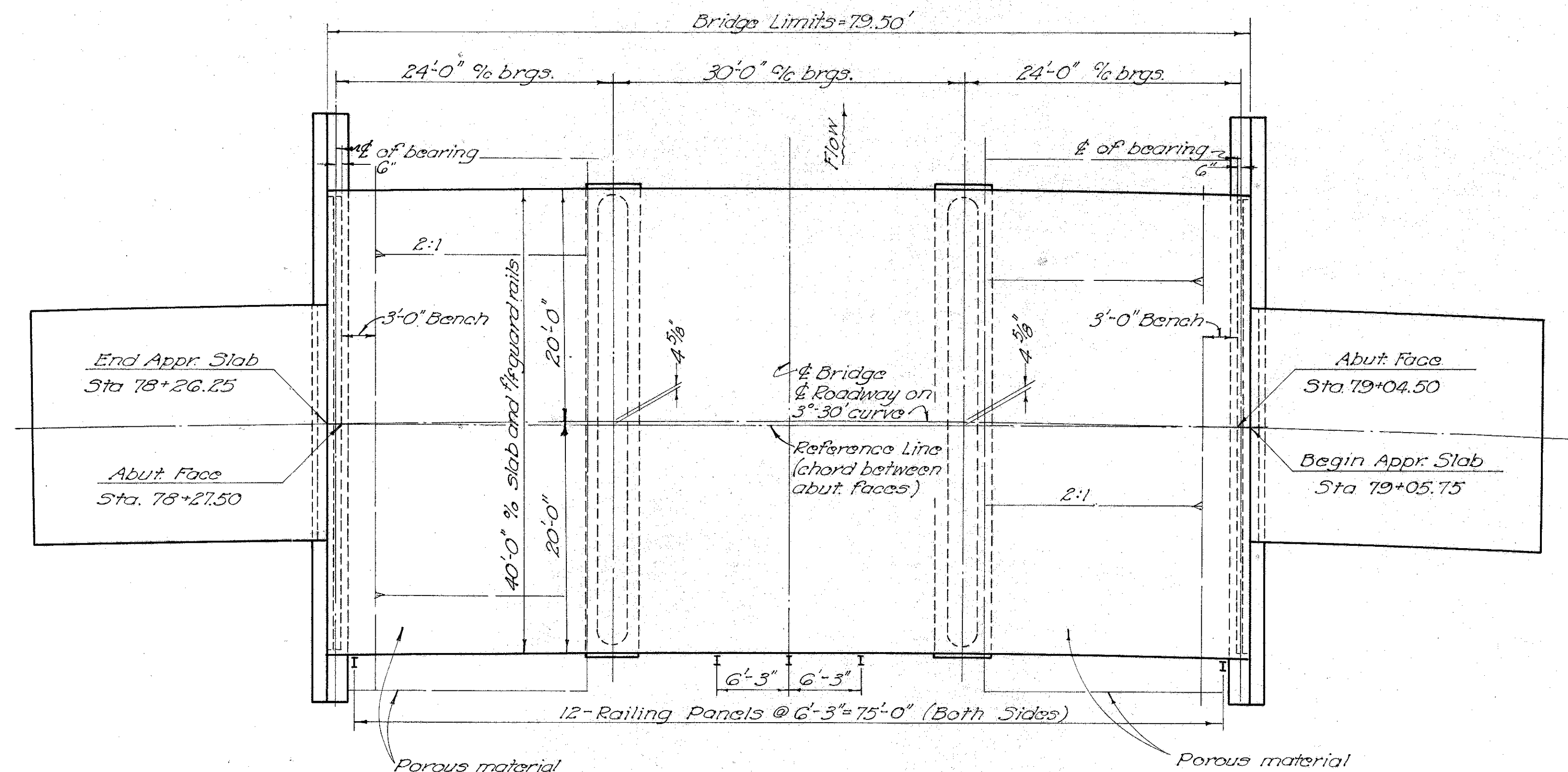
- 35 tons per pile using a 7000 ft. lb hammer
- 28 tons per pile using a 11000 ft. lb hammer
- 27 tons per pile using a 15,000 ft. lb. or greater hammer

If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 20 tons per pile.

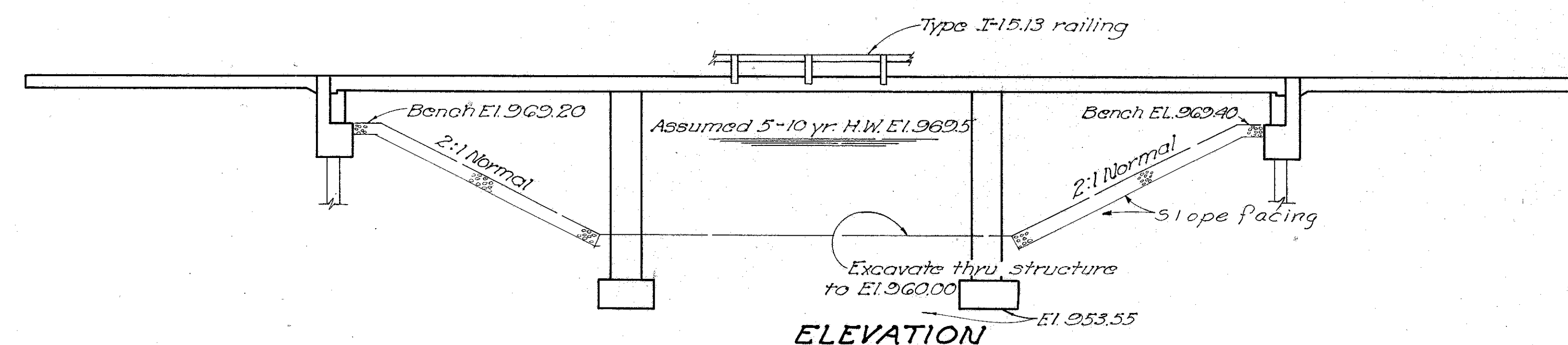
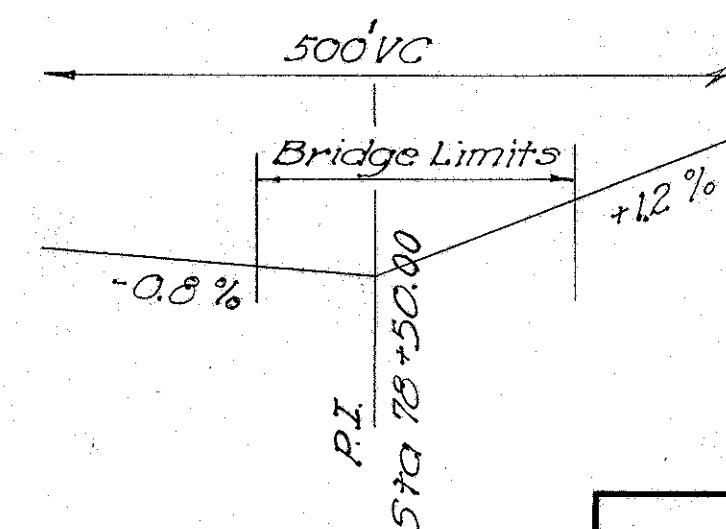
PIER FOOTINGS shall extend a minimum of 3" into solid rock or to the elevation shown, whichever is lower.

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 5 tons per sq. ft.

SLOPE FACING (S-29.05 type) shall be provided under the structure at both abutments. The porous drain material shall be 12" thick and shall extend from the face of the abutment down to Elev. 960.0 and transversely to 3ft. outside the edge of the superstructure.



GENERAL PLAN



ELEVATION

ESTIMATED QUANTITIES

[illegible]

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

**GENERAL PLAN & ELEVATIONS & NOTES
4 ESTIMATED QUANTITIES**

**BRIDGE No. CAR-39-2800
OVER RILEY RUN
CARROLL CO. STA 78+26.25
79+05.75**

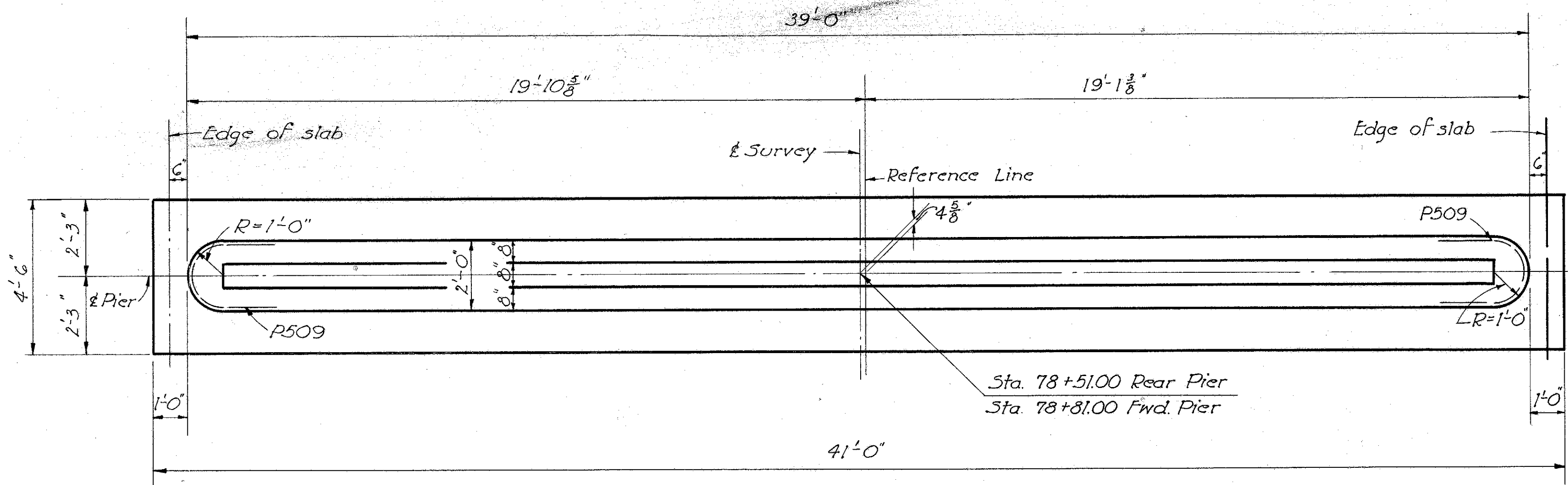
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
<i>Walt</i>	<i>John</i>	<i>RHD</i>	<i>JDJ</i>	<i>DGF</i> <i>4-8-57</i>	<i>12-31-57</i>	

CAR-39-(2735-2738)

REINFORCING STEEL

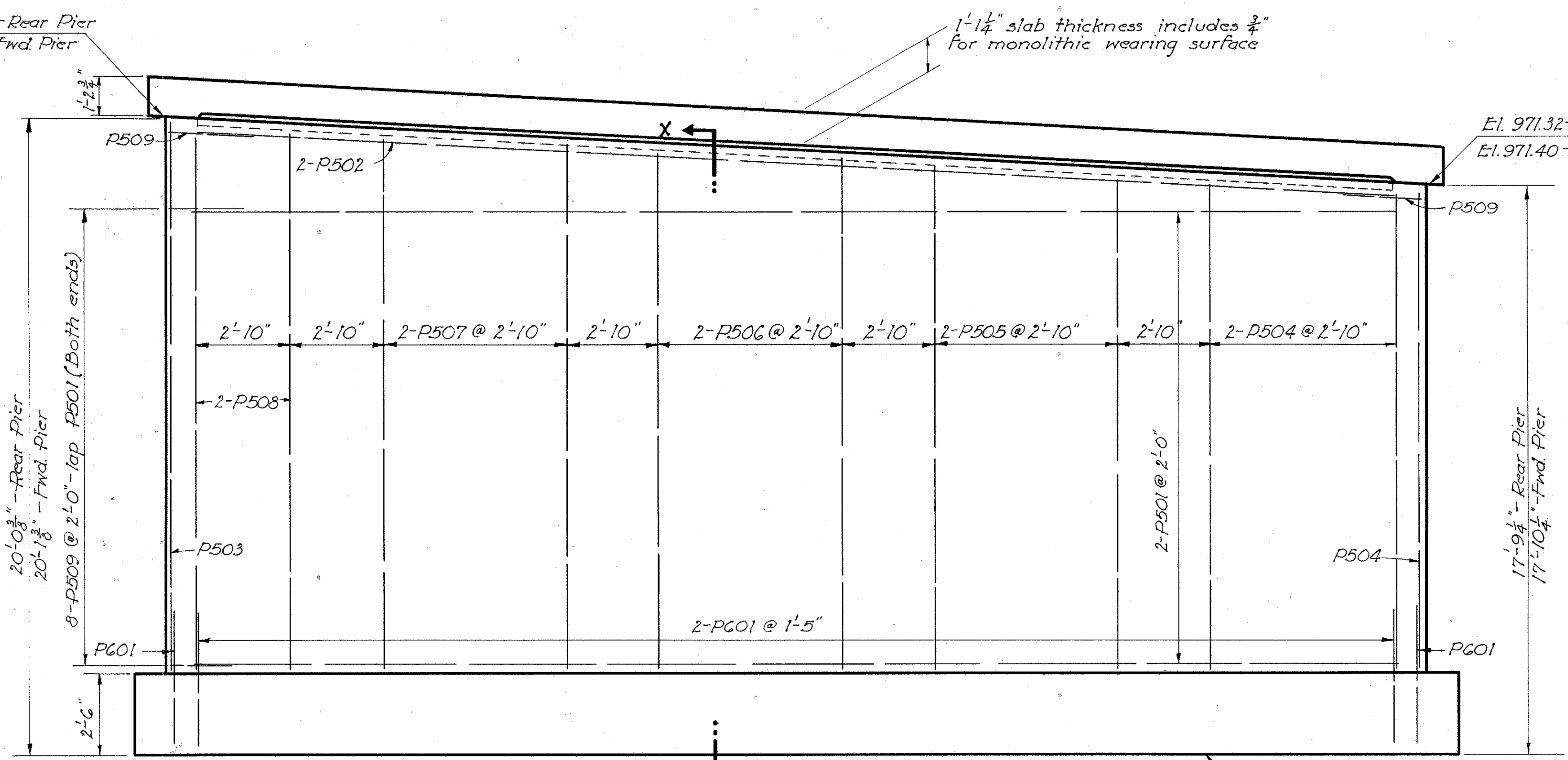
Superstructure					Abutments				
Mark	No.	Length	Weight	Str.	Mark	No.	Length	Weight	Str.
F924	72	21'-3"	5202	S	R1001	16	21'-7"	1486	S
G924	34	10'-6"	1214	S	R801	16	26'-6"	1132	S
H924	36	8'-2"	1000	S	R501	16	26'-1"	435	S
A824	108	28'-1"	8098	S	R502	156	6'-7"	1071	B
B824	34	21'-0"	1906	B	R503	8	20'-1"	168	S
C824	36	18'-4"	1762	B	R504	12	4'-11"	62	S
D824	17	19'-6"	885	S	R505	8	5'-10"	49	S
E824	18	15'-10"	761	S	R506	4	7'-6"	31	S
J601	36	15'-3"	825	S	R507	4	6'-8"	28	S
K601	18	13'-10"	374	S	R508	4	5'-9"	24	S
M601	80	39'-6"	4746	S	R509	14	9'-7"	140	B
N601	54	39'-6"	3204	S	R510	14	13'-1"	191	B
Replacement Bars					R511	16	10'-5"	174	B
RE1001	1	7'-2"	-	S	R512	12	11'-5"	143	B
RE901	1	6'-10"	-	S	R513	4	12'-8"	53	S
RE801	1	6'-6"	-	S	R514	8	4'-11"	41	S
RE601	1	5'-11"	-	S	R515	12	9'-10"	123	S
RE501	1	5'-7"	-	S	R516	28	6'-0"	175	B
RE401	1	5'-5"	-	B	R517	4	13'-2"	55	S
Piers					R401	64	5'-5"	231	B
					P601	112	5'-5"	911	B
					P501	32	37'-0"	1235	S
					P502	4	37'-3"	155	S
					P503	2	17'-2"	36	S
					P504	14	14'-11"	218	S
					P505	12	15'-6"	194	S
					P506	42	16'-0"	200	S
					P507	12	16'-6"	207	S
					P508	8	16'-10"	140	S
					P509	36	5'-5"	203	B

Replacement Bars: IF reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Highway Testing Laboratory, test samples as provided in Sec. 5-4.02 need not be furnished and replacement bars will not be required.



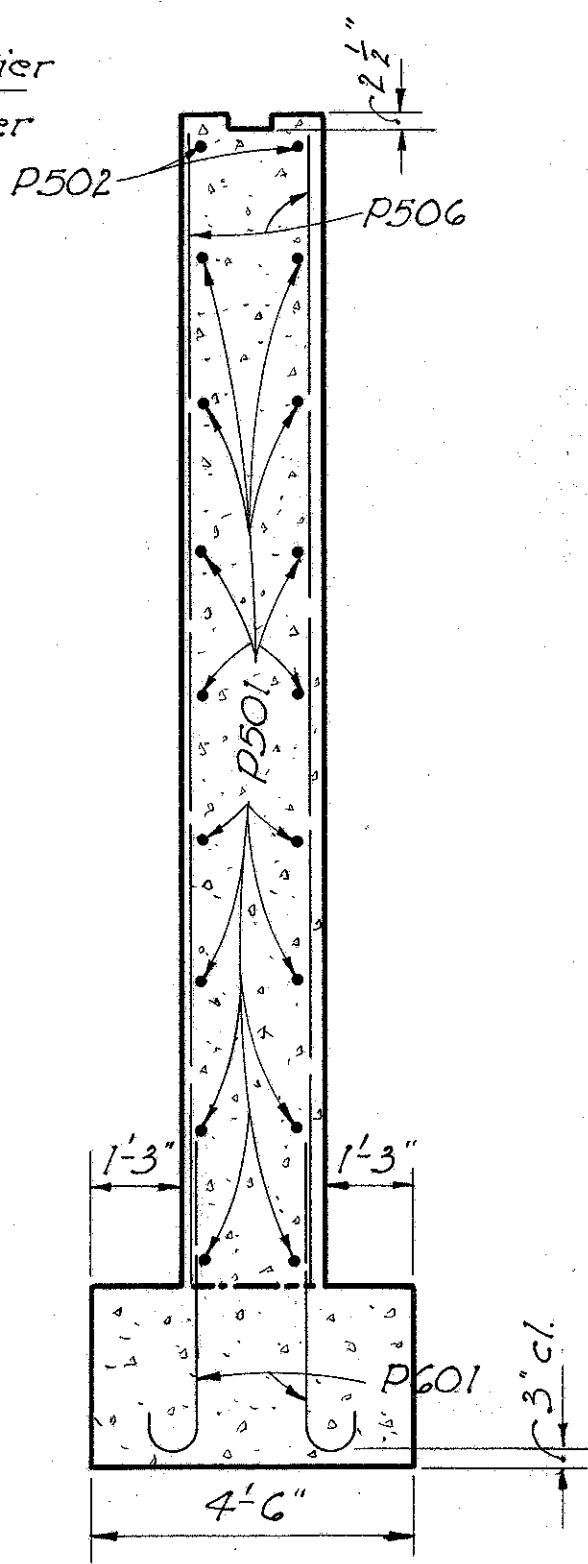
PIER PLAN

El. 973.58 - Rear Pier
El. 973.66 - Fwd. Pier



ELEVATION

El. 971.32 - Rear Pier
El. 971.40 - Fwd. Pier



SECTION X-X

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

PIER DETAILS &
REINFORCING STEEL LIST
BRIDGE NO. CAR-39-2800
OVER RILEY RUN
CARROLL COUNTY STA. 78+26.25
79+05.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
		Grasselli	J.D.J.	9/8/78	12-31-57	

LEGEND FOR PROJECT - AVERAGE RESULTS OF TESTS -

DESCRIPTION	H. R. B. CLASS	OHIO CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
Stone fragments with sand	A-1-b(0)	A-1-b	47	4	25	12	12	NP	NP	11	1
Stone fragments with sand and silt	A-2-4(0)	A-2-4	46	7	18	17	12	26	6	12	5
Sandy silt	A-4(4)	A-4a	20	10	18	29	23	21	7	14	23
Silt	A-4(8)	A-4b	3	3	10	54	30	29	8	22	4
Silt and clay	A-6(8)	A-6a	16	5	8	37	34	33	12	17	29
Silt clay	A-6(10)	A-6b	6	3	5	36	50	39	16	19	3
Clay	A-7-6(11)	A-7-6	7	4	7	38	44	44	14	32	3
Coal or coal blossom											
Limestone											
Sandstone											

General Note: Existing bituminous pavement fair to poor condition; patched and thin. "Rough Road" signs posted.

Visual Classification

NOTE: Figures beside borings indicate water content in per cent.

Water content nearly equal to or greater than liquid limit.

This A-4a soil will be rubbery and unstable at water contents which exceed the optimum.

Berm material

Sod & Topsoil = X' = approx. depth

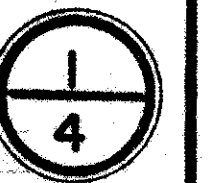
Auger boring plotted to vertical scale only.

Auger boring plan view

Samples Taken Lab. Nos. So. 72207-72230 incl. 72239-72288 incl.

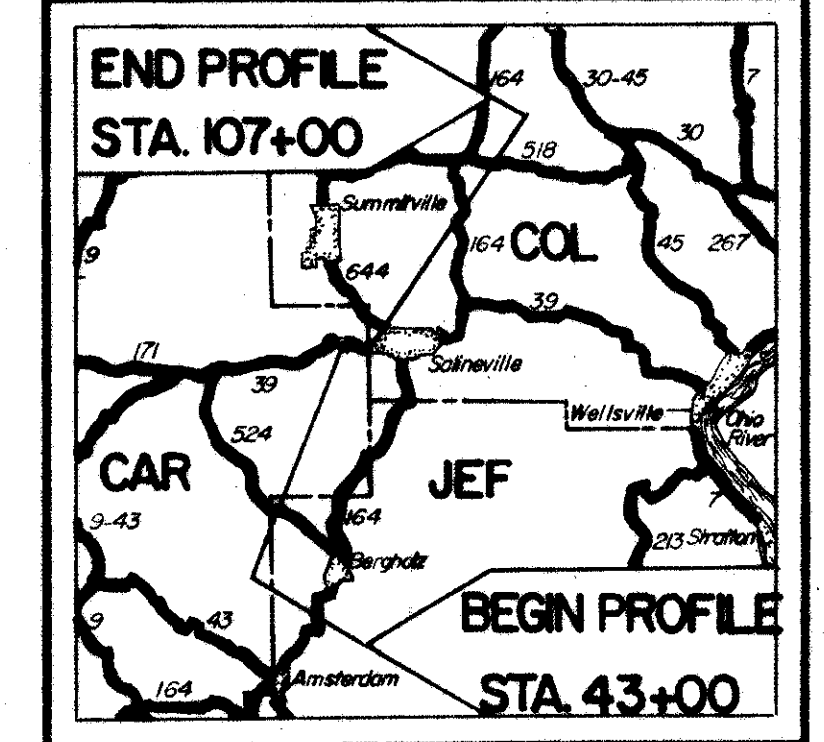
SOIL PROFILE CARROLL COUNTY CAR-39 (2735-27.38)

STATE HIGHWAY TESTING AND
RESEARCH LABORATORY
O. S. U. CAMPUS, COLUMBUS, OHIO



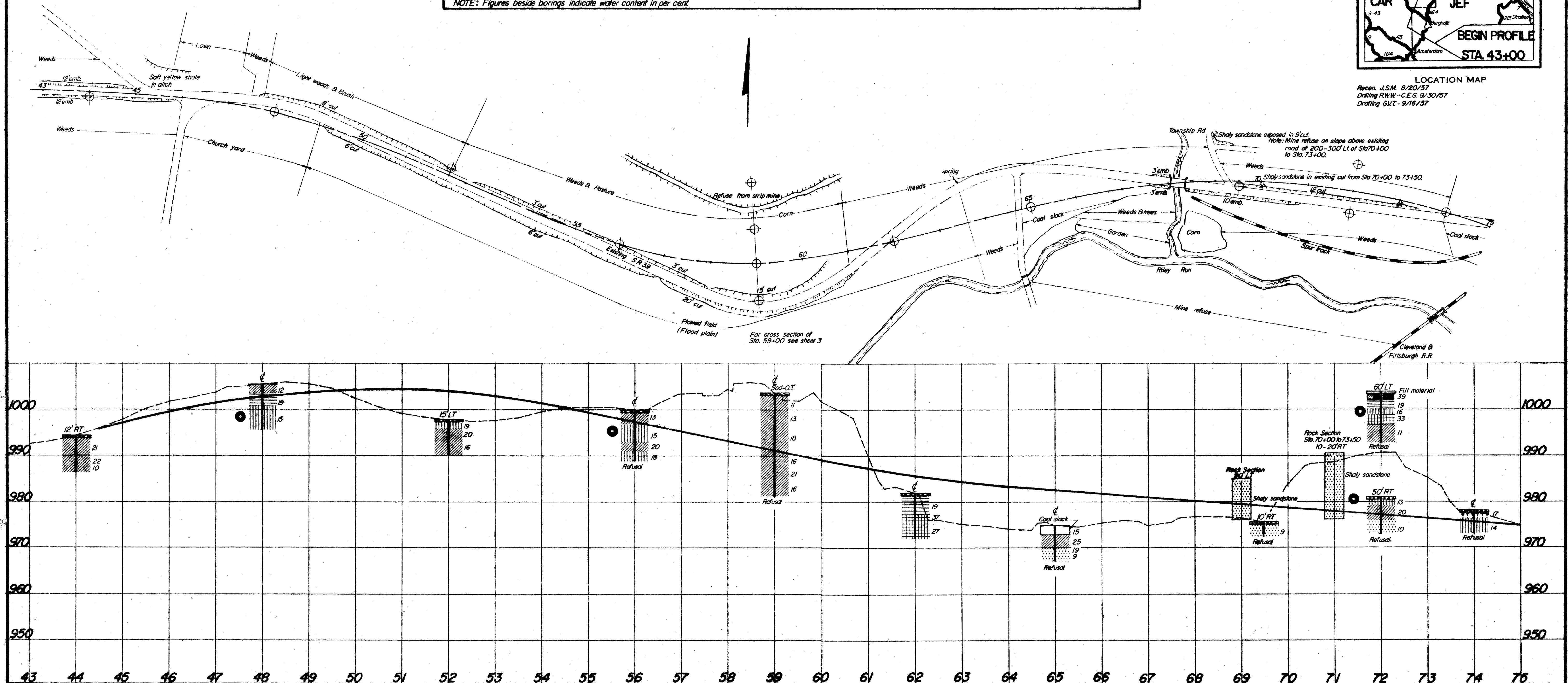
NOTE: THE INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS SECURED FOR THE USE OF THE STATE OF OHIO AND IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING THE CONSTRUCTION OF THE PROJECT.

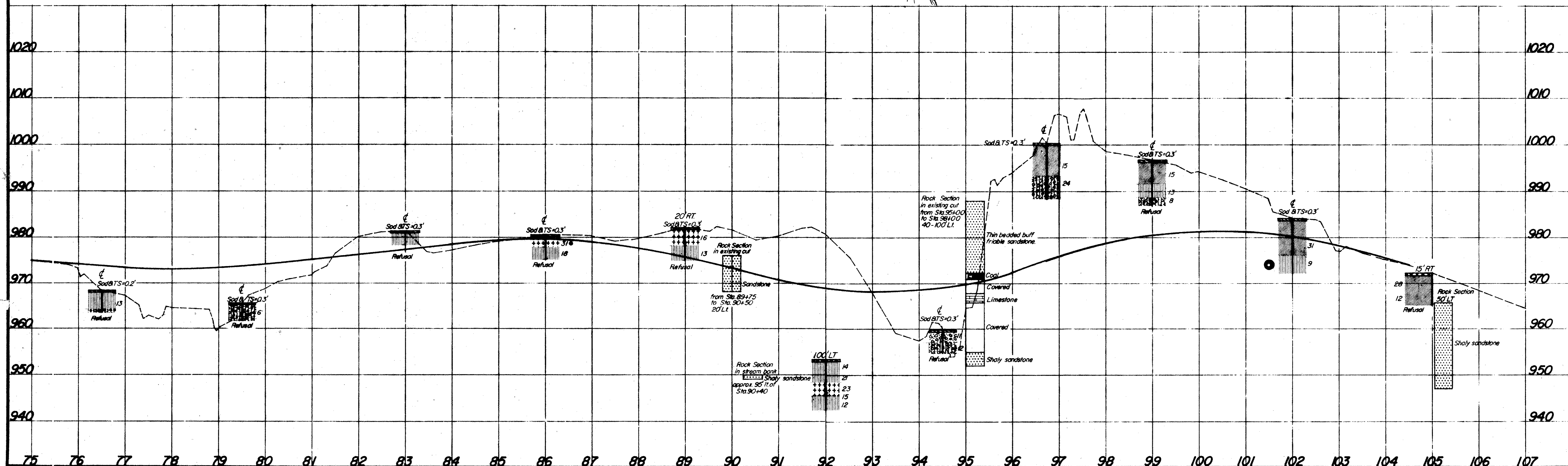
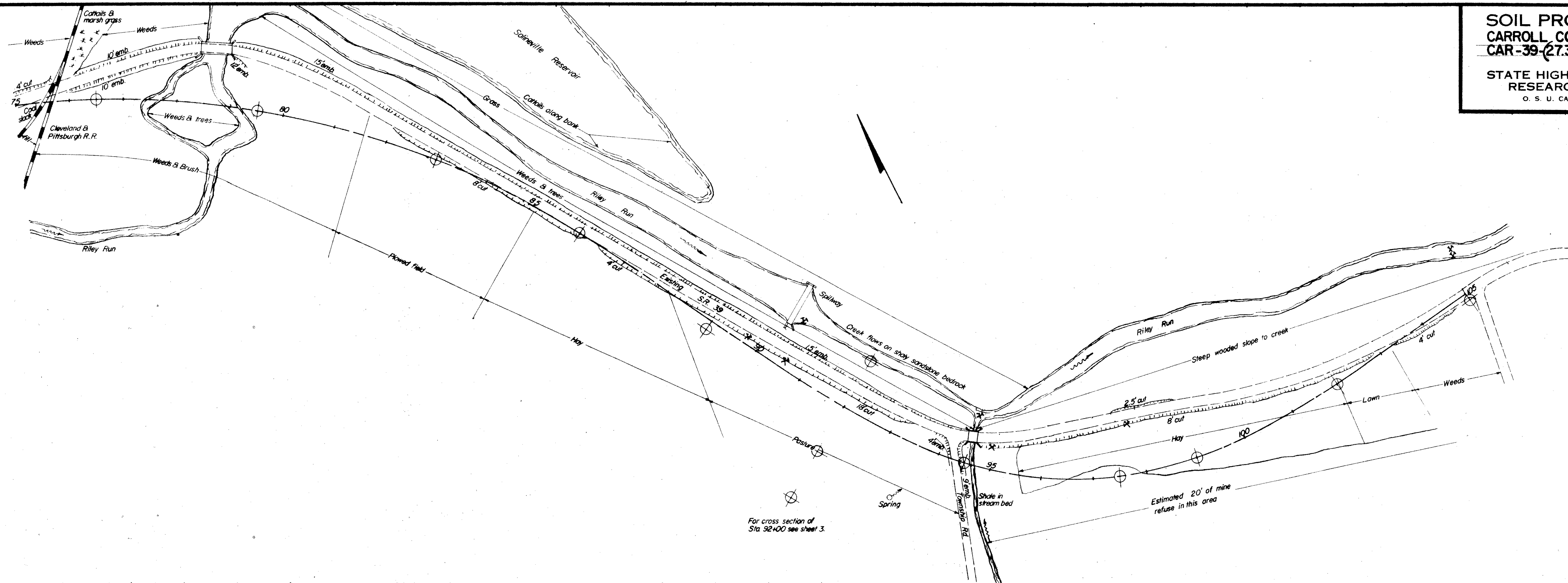
FED. NO. S-426 (5)



LOCATION MAP

Recon. J.S.M. 8/20/57
Drilling R.W.W.-C.E.G. 9/30/57
Drafting G.K.T. - 9/16/57



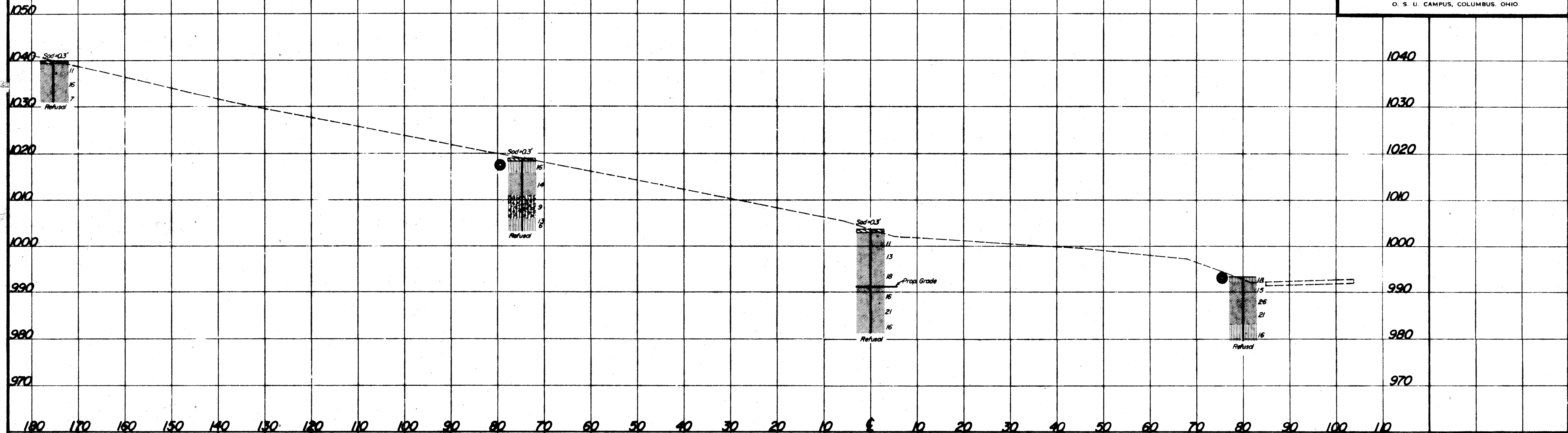


8548
10-3-57

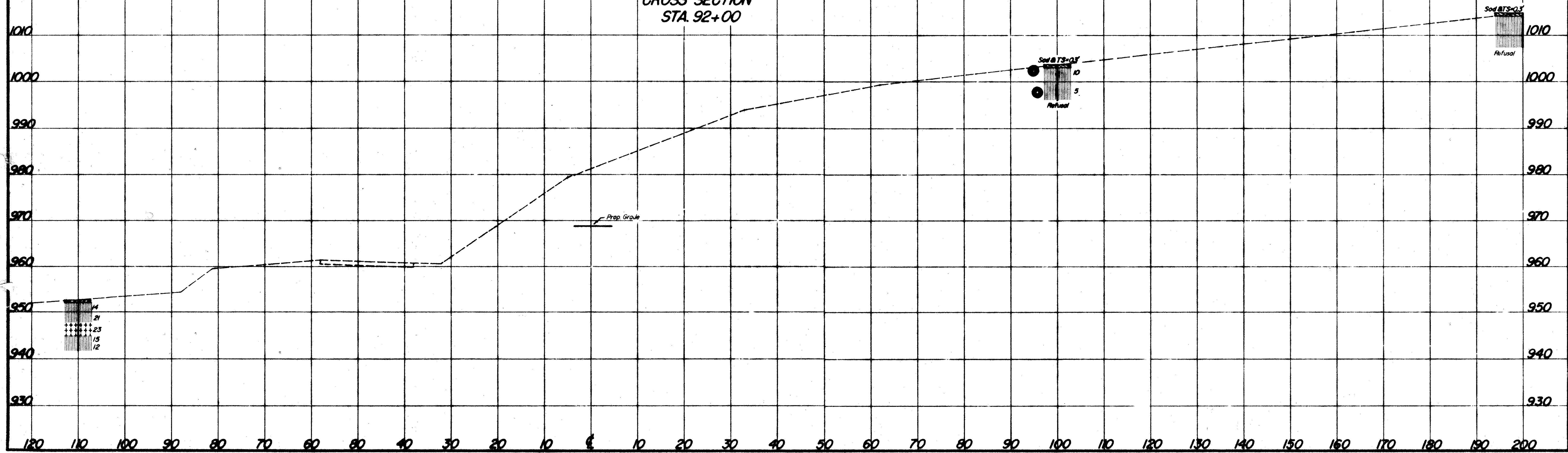
CROSS SECTION
STA. 59+00

SOIL PROFILE
CARROLL COUNTY
CAR-39-(27.35-27.38)
STATE HIGHWAY TESTING AND
RESEARCH LABORATORY
O. S. U. CAMPUS, COLUMBUS, OHIO

3
4



CROSS SECTION
STA. 92+00



SUMMARY OF SOIL TEST DATA

Station & Offset	Depth From-To	% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI	% W.C.	SHFL Class.
44+00 12'Rt.	0.5-5.0	11	8	11	37	33	34	14	21	A-6a
	5.0-7.0	23	6	5	37	29	36	14	22	A-6a
	7.0-8.0	63	9	3	14	11	31	12	10	A-6a
48+00 CL	0.0-2.0	11	6	9	45	29	40	15	12	A-6a
	2.0-5.0	8	3	6	47	36	39	16	19	A-6b
	5.0-10.0	18	11	10	38	23	26	5	15	A-4a
52+00 15'Lt.	0.5-2.0	8	8	16	40	28	27	10	19	A-4a
	2.0-4.0	0	3	6	46	34	14	20	14	A-6a
	4.0-3.0	8	7	8	35	42	35	11	16	A-6a
56+00 CL	0.5-3.0	14	9	10	37	30	29	11	13	A-6a
	3.0-7.0	18	9	9	35	29	26	5	15	A-4a
	7.0-9.0	10	1	4	32	53	33	11	20	A-6a
59+00 CL	9.0-11.0	17	8	20	31	24	29	10	18	A-4a
	0.3-4.0	29	5	7	36	23	30	11	11	A-6a
	4.0-7.0	19	9	8	36	28	27	11	15	A-6a
59+00 75'Lt.	7.0-12.0	16	6	3	32	38	30	12	18	A-6a
	12.0-16.0	36	6	5	25	30	11	16	11	A-6a
	16.0-19.0	13	4	14	36	33	36	13	21	A-6a
59+00 175'Lt.	19.0-22.5	12	9	22	30	27	34	15	16	A-6a
	0.3-3.0	28	5	7	25	35	26	6	16	A-4a
	3.0-8.0	26	10	6	37	21	32	11	14	A-6a
59+00 80'Rt.	8.0-13.0	43	19	6	19	13	28	8	9	A-2-4
	13.0-14.0	15	19	25	14	27	31	7	13	A-4a
	14.0-15.5	15	28	19	23	15	29	10	6	A-4a
62+00 CL	0.3-3.0	5	4	4	47	40	33	11	11	A-6a
	3.0-7.0	8	7	8	36	41	33	11	16	A-6a
	7.0-9.0	24	7	8	35	26	30	12	7	A-6a
65+00 CL	0.0-1.0	17	11	12	28	32	32	8	18	A-4a
	1.0-4.0	7	6	9	43	35	30	11	15	A-6a
	4.0-6.0	0	0	1	54	45	34	13	26	A-6a
65+00 10'Rt.	6.0-10.0	4	1	7	41	47	33	13	21	A-6a
	10.0-13.5	12	12	25	24	27	27	10	16	A-4a
69+50 60'Lt.	0.5-5.0	7	5	7	34	47	37	16	19	A-6b
	5.0-6.0	1	2	3	47	41	14	37	19	A-7-6
	6.0-10.0	11	1	6	34	48	45	20	27	A-7-6
72+00 50'Rt.	0.0-2.0	5	VISUAL CLASSIFICATION					12	25	COAL
	2.0-5.0	3	29	30	33	32				A-6a
	5.0-6.0		VISUAL CLASSIFICATION							SANDSTONE
72+00 60'Lt.	6.0-7.5		VISUAL CLASSIFICATION							SANDSTONE
	0.5-3.0		VISUAL CLASSIFICATION							SANDSTONE
	0.6-2.0		VISUAL CLASSIFICATION							COAL BLOSSOM
72+00 50'Rt.	2.0-4.0	2	0	1	29	68	40	16	19	A-6b
	4.0-5.0	3	17	11	36	33	31	6	16	A-4a
	5.0-7.0	9	9	12	32	38	46	18	33	A-7-6
74+00 CL	7.0-11.0	12	6	7	39	36	31	11	11	A-6a
	0.5-2.0	7	13	19	37	24	24	5	13	A-4a
	2.0-5.0	3	4	45	44	35		15	20	A-6a
76+50 CL	5.0-8.5		VISUAL CLASSIFICATION							SANDSTONE
	0.5-2.0	0	2	12	53	33	27	7	17	A-4b
	2.0-5.0	19	21	23	17	20	27	9	14	A-4a
79+50 CL	0.2-4.0	22	5	15	31	27	27	8	13	A-4a
	0.3-4.0	39	6	27	18	10	21	4	6	A-2-4
86+00 CL	0.3-3.0	5	3	9	59	24	32	5	31	A-4b
	3.0-5.5	33	10	18	19	18	28	9	18	A-4a
89+00 20'Rt.	0.3-4.0	9	5	8	51	27	29	9	16	A-4b
	4.0-7.0	34	4	21	24	17	24	7	13	A-4a
92+00 100'Rt.	4.3-5.0	27	5	13	32	23	30	10	10	A-4a
	5.0-7.0	23	8	24	27	13	33	5	5	A-4a
92+00 100'Lt.	0.2-3.0	17	8	22	36	17	24	4	14	A-4a
	3.0-5.0	36	10	30	22	28	7	21	21	A-4a
	5.0-8.0	0	1	13	53	33	28	10	23	A-4b
94+50 CL	8.0-9.0	4	5	42	30	19	22	2	15	A-4a
	9.0-11.0	35	6	22	23	14	24	5	12	A-4a
97+50 CL	0.3-3.0	47	4	25	12	12	NP	NP	11	A-1-b
	3.0-5.0	42	8	21	16	13	NP	8	12	A-2-4
99+00 CL	0.2-7.0	10	5	7	43	35	31	11	15	A-6a
	7.0-9.0	63	2	9	14	12	36	8	24	A-2-4
102+00 CL	0.3-5.0	7	4	4	52	33	34	14	15	A-6a
	5.0-8.0	17	6	33	23	21	22	6	13	A-4a
	8.0-10.0	43	2	27	15	13	19	3	8	A-2-4
104+00 15'Rt.	0.3-8.0	34	2	3	35	26	36	13	31	A-6a
	8.0-12.0	39	4	7	34	16	27	9	9	A-4a
	0.3-5.0	33	4	6	30	27	39	12	28	A-6a
104+00 15'Lt.	5.0-7.0	17	1	45	35	35	32	11	12	A-6a

NOTE: NP in Plasticity Index and Liquid Limit columns indicates that the material is non-plastic.