

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

F.A.P. No. S-1169(1)

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	S-1169(1)	

1/27

MED-252-3.76

MED-252-3.76

MEDINA COUNTY

LIVERPOOL TOWNSHIP

CONVENTIONAL SIGNS

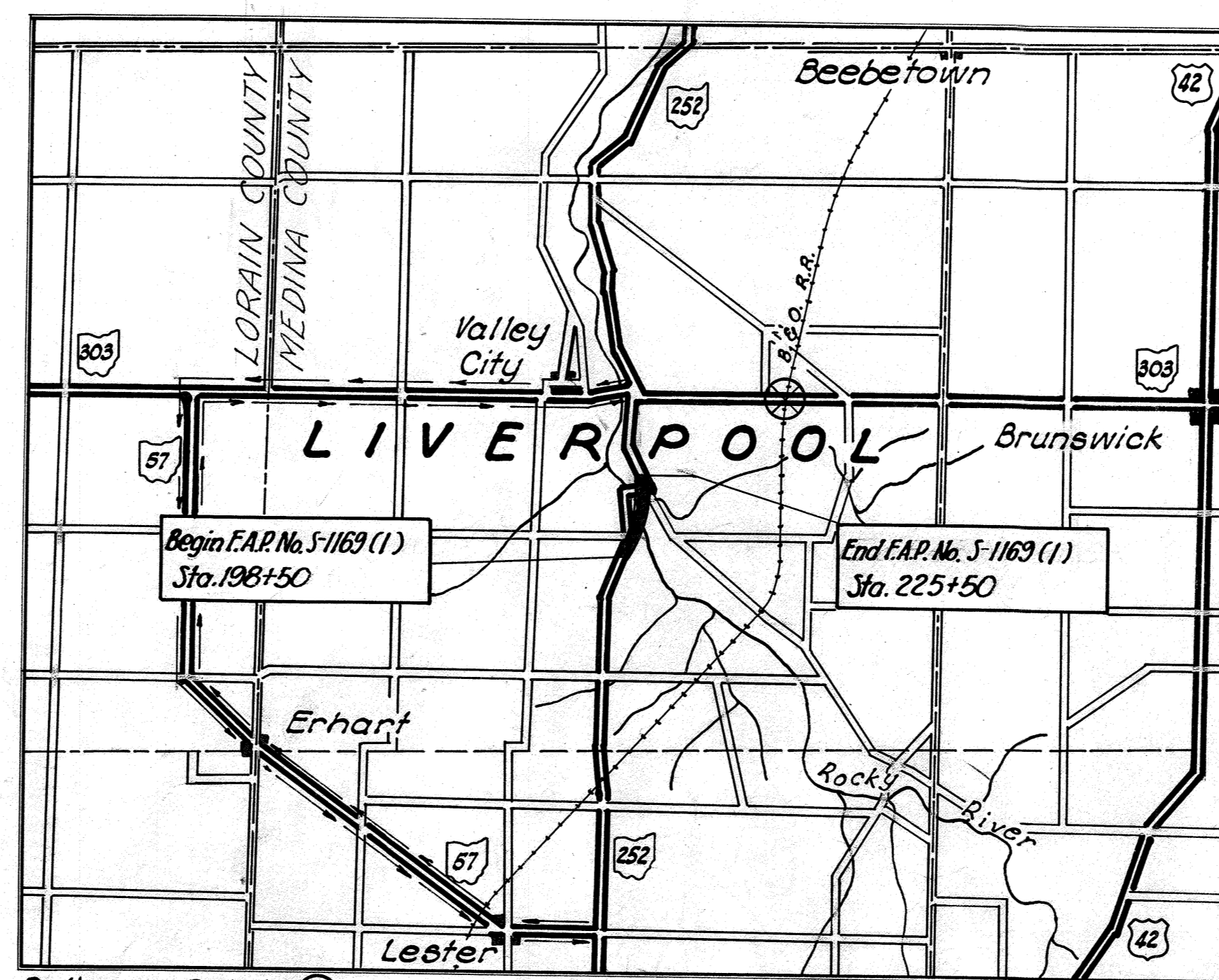
- County Line _____
- Township Line _____
- Corporation Line _____
- Center Line _____
- Railroad Line _____
- Pole Line (Telephone & Power) Ⓢ Ⓢ Ⓢ Ⓢ Ⓢ

INDEX OF SHEETS

- Title Sheet 1
- Typical Section 2
- General Notes 4
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LINE DATA

BEGIN	WORK	PROJECT
Sta. 197+70	Sta. 197+70	Sta. 198+50
END	Sta. 226+00	Sta. 225+50
GROSS LENGTH	2830 Lin.Ft.	2700 Lin.Ft.
NO ADDITIONS OR DEDUCTIONS		
NET LENGTH	2830 Lin.Ft.	2700 Lin.Ft.
	or 0.535 Miles	or 0.511 Miles



LOCATION PLAN

Portion to be Improved
State Highways
Other Roads
Detours Shown Thus

SCALES

- Plan 1" = 50'
- Profile Horizontal 1" = 50'
- Profile Vertical 1" = 5'
- Cross Sections 1" = 5'

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

The Right-of-Way necessary for this improvement will be provided by the State of Ohio.

I hereby approve these Plans and declare that the making of this improvement will require the part time closing of the Highway to traffic as noted on Sheet No. 4, during which time detours will be provided as shown hereon. Provisions for the maintenance and safety of traffic will be as set forth on the Plans and Estimates.

Approved [Signature]
Date 2-2-54 Division Deputy Director

Approved [Signature]
Date 11-19-54 Deputy Director of Planning and Programming

Approved [Signature]
Date _____ Engineer of Bridges

Approved [Signature]
Date 11-12-54 Engineer of Location & Design

Approved [Signature]
Date 11-2-54 Deputy Director of Design and Construction

Approved [Signature]
Date 11-19-54 First Assistant Director

Approved [Signature]
Date 11-22-54 Director of Highways

**Submitted to B.P.R. for Approval
*Accepted by B.P.R.

STANDARD CONSTRUCTION DRAWINGS			
*I-8 C.B. 1-2A & B	5-1-52	I-15 No. 2	12-1-54
*G-707	1-2-53	I-35	10-1-52
*RI-1	6-1-53	AS-3-47 AS-4-47	7-27-49
I-1234 & 5	2-20-45		
S-27 PC-3	2-20-45		
L-1	4-1-50		
L-3	4-1-50		
L-3A	4-1-50		
**I-15 No. 1	12-1-54		

SUPPLEMENTAL SPECIFICATIONS			
B-119	Rev.	12-1-54	
L-209.12		7-17-54	

CONSTRUCTION BUREAU
FEB 20 1957
GROUND PHOTOLAB

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED: _____
DISTRICT ENGINEER _____ DATE _____

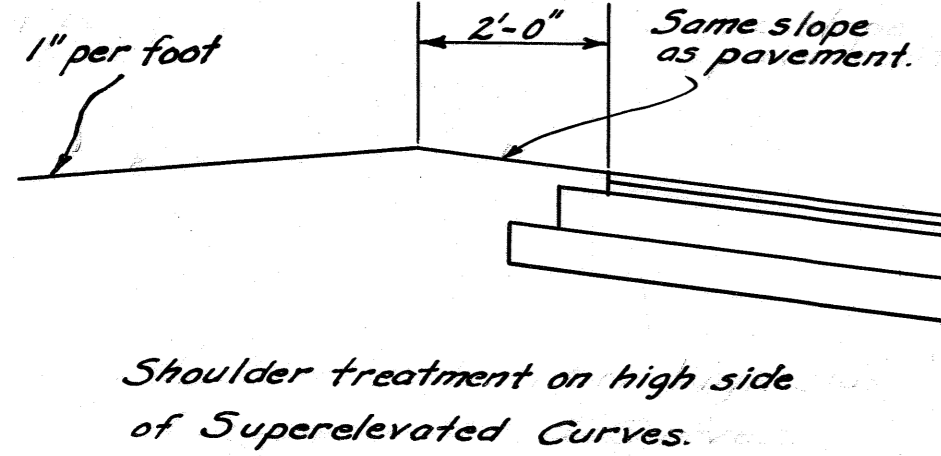
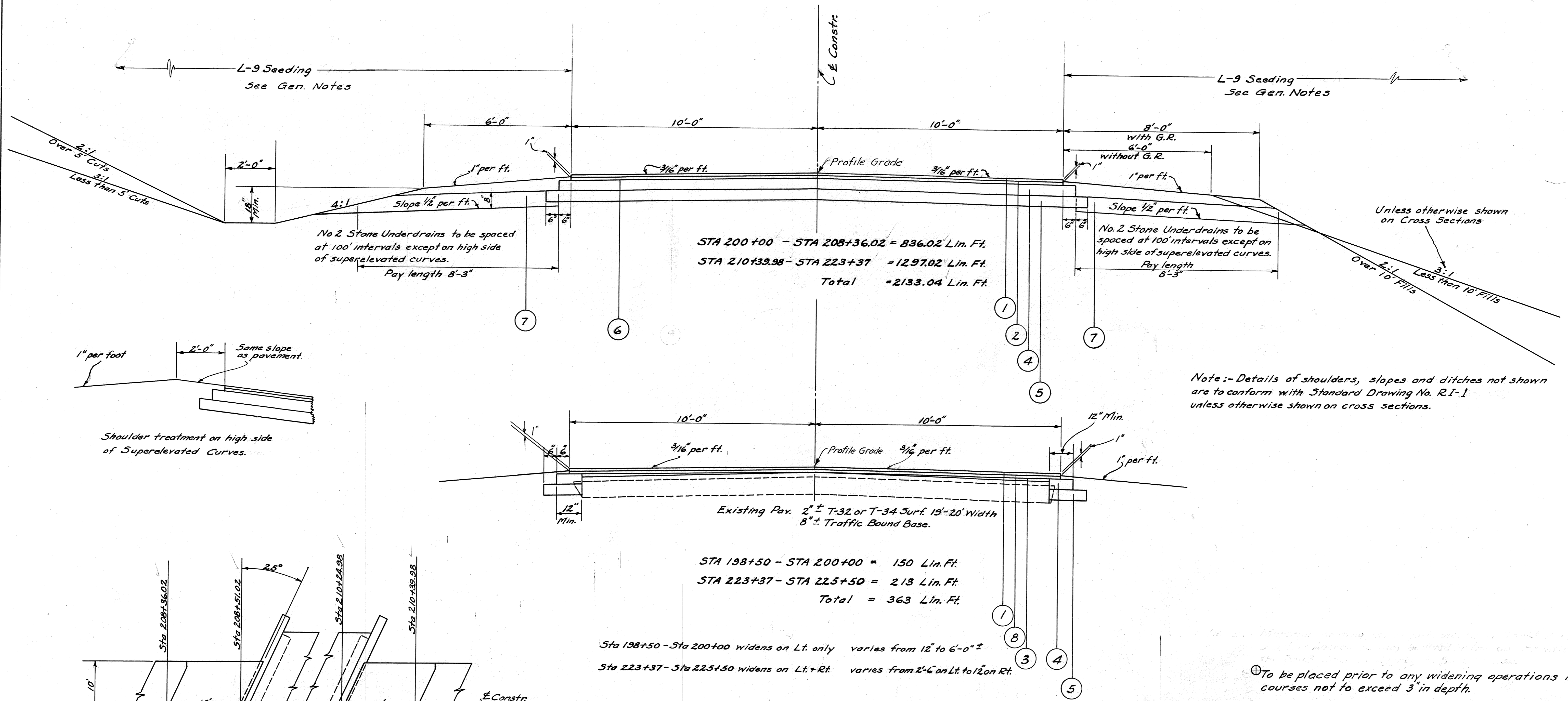
File MED-252-3.76
No. _____
Date of Letting _____
Contract No. _____

TYPICAL SECTIONS T-35

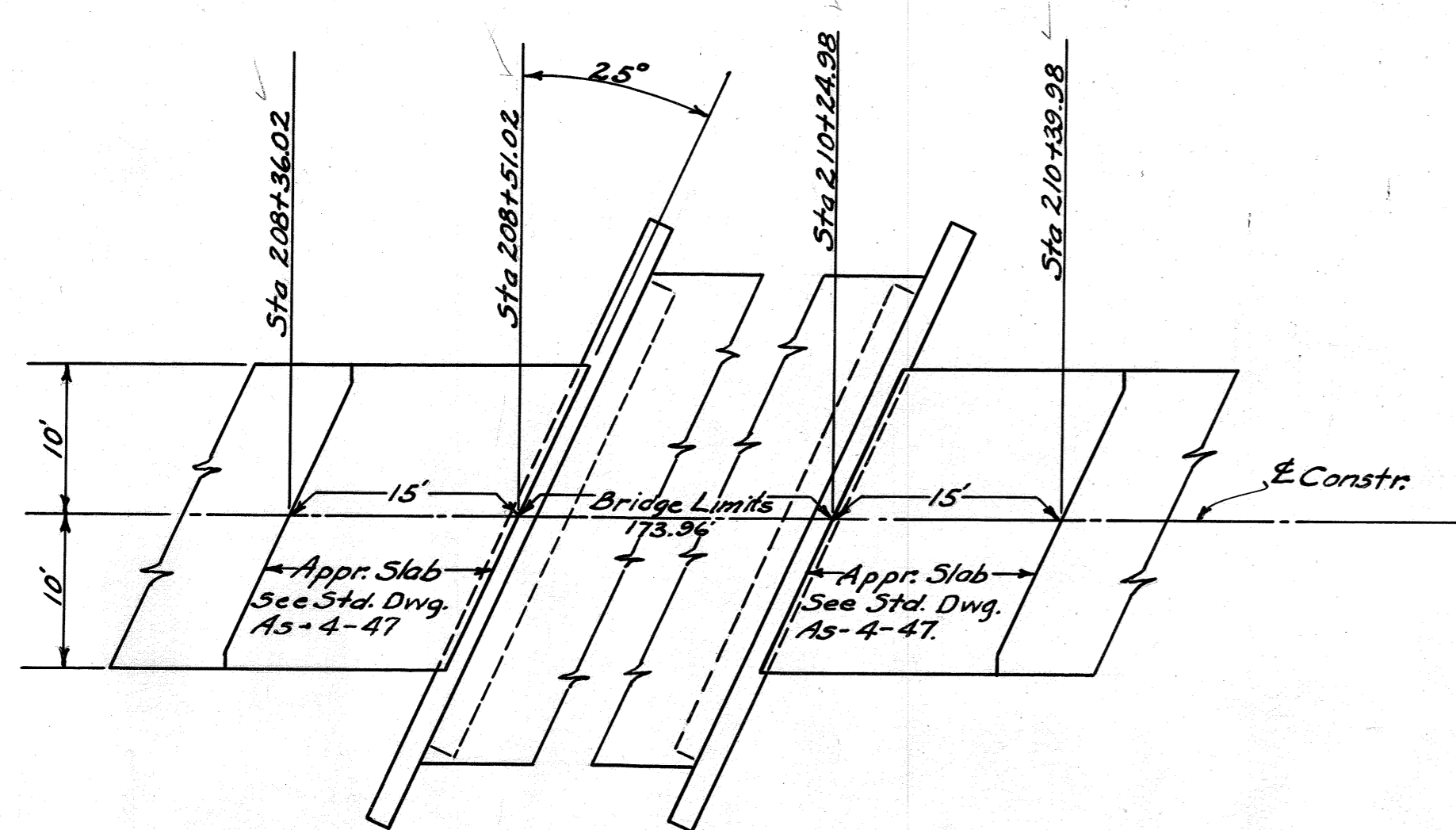
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

MED - 252 - 3.76

2
27



Note:- Details of shoulders, slopes and ditches not shown are to conform with Standard Drawing No. R1-1 unless otherwise shown on cross sections.



ESTIMATED QUANTITIES - APPROACH SLABS

T-35	1/4" Asphaltic Concrete Surface Course	66.7 Sq. Yds.
B-35	1/4" Asphaltic Concrete Leveling Course	66.7 Sq. Yds.
I-7	Reinforced Concrete Approach Slabs	66.7 Sq. Yds.
* T-30	Bituminous Tack Coat	7 Gal.
I-22	5" Subbase	11 Cu. Yds.
E-1	Compacted Subgrade	66.7 Sq. Yds.

* Item T-30 Bituminous Tack Coat, Sec M-5.5 MS-2 or SS-1 or Sec M-5.2 RC-1 or RC-2 applied at rate of 0.10 Gal. per sq. yd. (See note in Proposal.)

- ① T-35 1/4" Asphaltic Concrete Surface Course Type A (85-100)
- ② B-35 1/4" Min. Asphaltic Concrete Leveling Course (85-100)
- ③ B-35 ①" Min. Asphaltic Concrete Preleveling Course (85-100)
- ④ B-119 5" Crushed Aggregate Base Course.
- ⑤ I-22 5" Subbase
- ⑥ T-30 Bituminous Prime Coat, Sec M-5.7 RT-2 or RT-3 or Sec M-5.3 MC-0 or MC-1 applied at rate of 0.35 Gal. per Sq. Yd.
- ⑦ I-9 Std. No. 2 Stone Underdrains.
- ⑧ B-35 1/4" Asphaltic Concrete Leveling Course (85-100)

SUMMARY

EARTHWORK TABLE

Sheet No.	Excavation	Embankment	Emb.+20%
6	449	8261	9913
7	499	10100	12120
8	706	1599	1919
Totals	1654	19960	23952

23952 - 1654 = 22298 Cu.Yds. Borrow

Calculations	CODE 6201					ITEM	QUANT.	UNITS	DESCRIPTION
	2	4	6	7	8				
ROADWAY									
5467						E-1	1654	Cu.Yds.	Roadway Excavation
						E-1	5467	Sq.Yds.	Compacted Subgrade
						E-4	22298	Cu.Yds.	Borrow
			278	300		E-8	578	Sq.Yds.	Removal and Disposal of Existing Pavement.
						E-9	Lump Sum	Lump Sum	Removal of Trees and Stumps.
128						E-11	128	M. Gal.	Water
			56			E-12	94	Lin.Ft.	Pipe Removed (15" and Under)
25600						L-9	25600	Sq.Yds.	Seeding and Protecting
2.30						L-9	2.30	Tons	Commercial Fertilizer (10-6-4)
GUARDRAIL									
						I-15	1052.08	Lin.Ft.	Guard Rail Steel Beam Type (Deep)
						T-10	20	Cu.Yds.	Traffic Compacted Surface Course for Maintaining Traffic
DRAINAGE									
						I-1	28	Lin.Ft.	8" Pipe for Driveways.
						I-1	28	Lin.Ft.	12" Pipe for Driveways
						I-1	28	Lin.Ft.	15" Pipe for Driveways
						I-2	366	Lin.Ft.	12" Class "A" Storm Sewers
						I-2	56	Lin.Ft.	12" Class "A" Storm Sewers under Pavement or Approaches
						I-8	2	Each	Catch Basins Std No 1-2A
347						I-9	347	Lin.Ft.	Stone Underdrains No.2
						I-10	80	Sq.Yds.	Riprap Type "A" Grouted.
						E-2	26	Cu.Yds.	Excavation for Structures.
						E-3	29	Cu.Yds.	Channel Excavation
						S-27	112	Lin.Ft.	15" Pipe for Roadway Culverts
						S-27	48	Lin.Ft.	72" Standard Strength Reinforced Conc. Culv. Pipe Sec. M-6.6(b) for Roadway Culverts.
PAVEMENT									
266						T-35	266	Cu.Yds.	Asphaltic Concrete Surface Course Type A (85-100)
393						B-35	393	Cu.Yds.	Asphaltic Concrete Leveling Course (85-100)
67						I-7	67	Sq.Yds.	Reinforced Concrete Approach Slabs.
925						B-119	925	Cu.Yds.	Crushed Aggregate Base.
782						I-22	782	Cu.Yds.	Subbase
7						T-30	7	Gals.	Bituminous Tack Coat. As per plan.
1895						T-30	1895	Gals.	Bituminous Prime Coat, Sec M-5.7 RT-2 or RT-3 or Sec M-5.3 MC-0 or MC-1
STRUCTURES OVER 20' SPAN									
See Sheet No.23 for Quantities.									

GENERAL NOTES

MED-252-3.76

DESIGN SPEED:- 50 miles per hour.

UTILITY ADJUSTMENTS:- Any and all work required for the adjustment of public and private utilities shall be done by and at the expense of their respective owners unless otherwise noted on the plans.

FIELD OFFICE:- The contractor shall provide a suitable field office in accordance with Section 5-0.01(b) having a minimum floor area of 150 sq.ft. The contractor shall have a telephone installed and maintained during the construction of this project.

COMPACTED SUBGRADE:- In lieu of the requirements of Sec. 2-10.01(a) the subgrade under the widening shall be compacted for a depth of six (6) inches to the quality requirements in Table III, E-1. Payment for subgrade compaction under existing or specified above shall be included in the price bid for Item E-1, General Excavation.

SANITARY:- No drains, either existing or proposed, carrying domestic wastes shall be connected to any portion of the proposed drainage system on this project.

MAIL BOX TURNOUTS:- The estimated number of five (5) mail box turnouts for this project are included in calculations for payment of T-35 and B-119 quantities. The grouping of Mail Boxes and locations of Turnouts shall be determined by the Engineer. Payment will be based on final measurements.

CALCULATIONS:- All calculations are on file in the Division Office.

STONE UNDERDRAINS:- In the final finishing of slopes and ditches, care shall be exercised to assure that the exposed edges of the stone underdrains will be left free of earth cover that would impede free drainage.

RIGHT OF WAY:- Right of way lines are referenced to the Centerline of Right of Way as shown on Right of Way Plans.

TREE AND STUMP REMOVAL:- The number of trees and stumps shown in Table is for informational purposes only and 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. Trees and Stumps under 12" are not listed.

	12"-18"	18"-24"	24"-30"	30"-36"	36"-42"
Trees	28	2	4	0	1
Stumps	5				

PAVEMENT REMOVAL:- Existing pavement is non-rigid. All necessary pavement removal within the construction limits shall be considered E-1 Roadway Excavation and paid for as such. Pavement removal outside the construction limits shall be paid for as Item E-8, Removal of Existing Pavement. After pavement outside of construction limits is removed the old roadway shall be plowed, harrowed, and dragged to a smooth grade, the ditches filled and the entire area left in a neat condition. Cost of this work shall be included in the price bid for Pavement Removal, Item E-8. The areas shall then be seeded and mulched, Item L-9. This seeded area included in summary quantity.

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.

TRAFFIC:- Traffic shall be maintained on the existing facility at all times except for a continuous period not to exceed 60 calendar days, during which time traffic will be detoured as indicated on Sheet 1, and construction completed to a point where traffic can be placed on completed pavement. Closing date shall be at the option of the Contractor, but a minimum of 10 days advance notice shall be given to the Engineer prior to the closing date. Two way traffic shall be maintained except over the existing structure which is only rated as a single lane structure.

SEEDING AND PROTECTING:- Seeding and Protection Seed shall be sown at the rate of 3 pounds per 1000 sq. ft. and shall have a formula of 70% Kentucky 31 Fescue, 15% Kentucky Blue Grass, 10% Domestic Rye Grass, 5% Alsike Clover. Quantities for seeding are calculated for the soil areas within the construction limits as shown on the cross sections and payment for seeding beyond these limits will not be allowed.

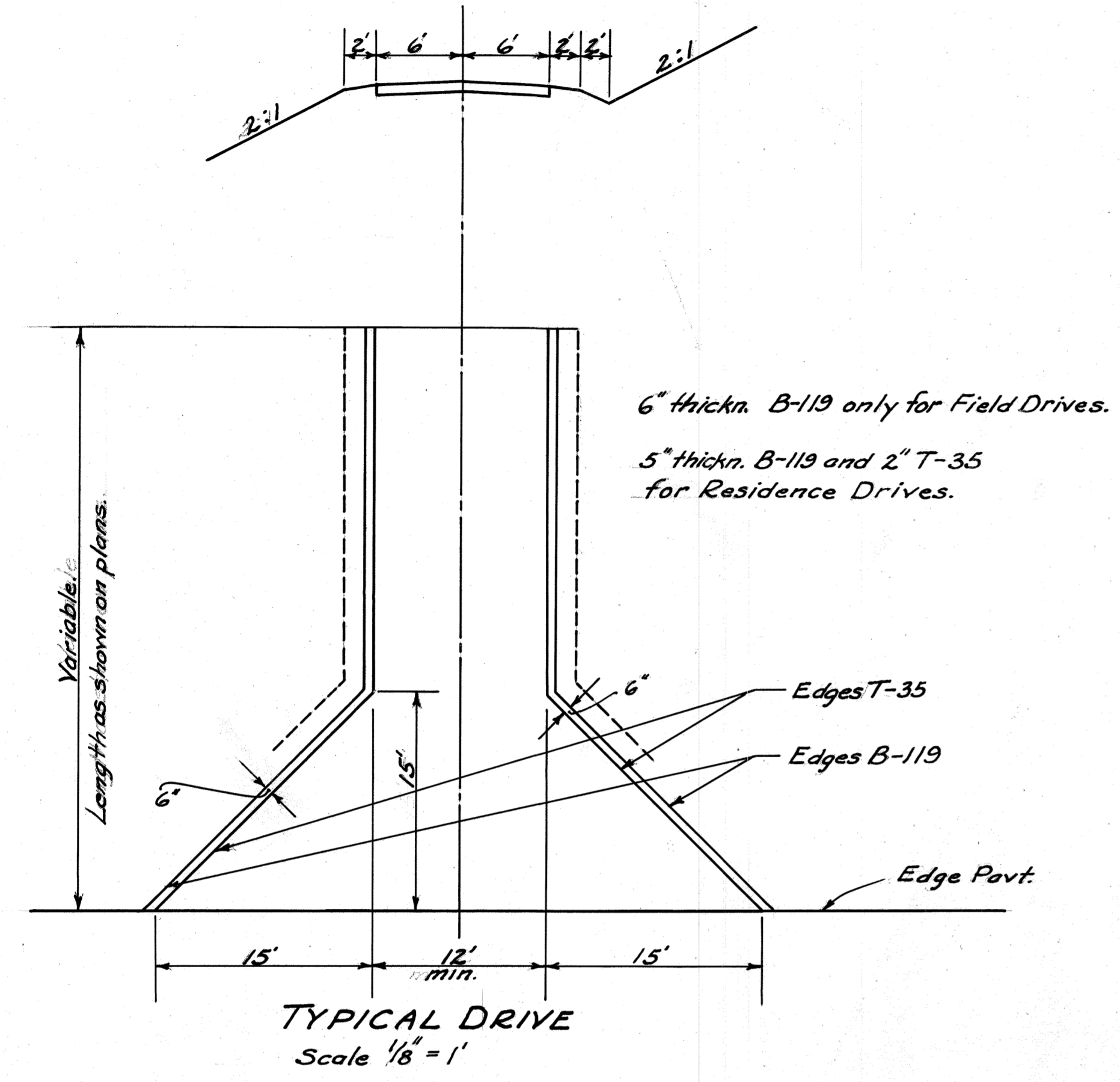
All trees outside these limits where the relative growth has been injuriously disturbed and destroyed by the contractor shall be restored and seeded in accordance with the provisions of Item L-3 by the contractor at his own expense.

Seeding areas shall be fertilized using a Commercial Fertilizer having a formula of 10-6-4. Seeding limits are indicated on the cross sections by the symbol \times .

BURIED PITS:- Buried Pits shall not be deeper than five hundred (500) feet from any highway unless under special conditions authorized from the District Engineer for permission to excavate a borrow pit deeper than 500 feet to any highway shall be accompanied by a sketch showing the location, depth of proposed cut, approximate lines of proposed excavation, and provision for drainage.

MAINTENANCE OF LOCAL TRAFFIC

In lieu of the last sentence of Section 5-4.05, the lump sum bid for the maintenance of local traffic shall be for the maintenance of local traffic during the construction of this project. The amount of this bid shall be based on the estimated cost of maintaining a minimum number of local traffic. Aggregate bid as directed by the Engineer will be paid for at the same price and conditions. Estimated 29 items T-9.

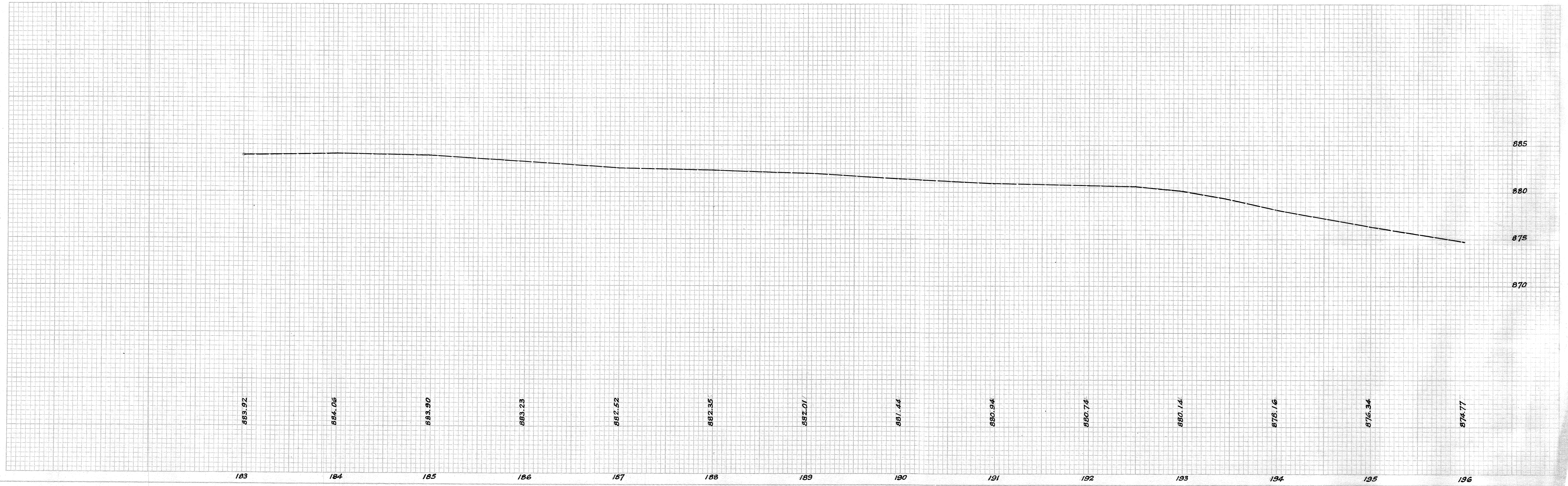
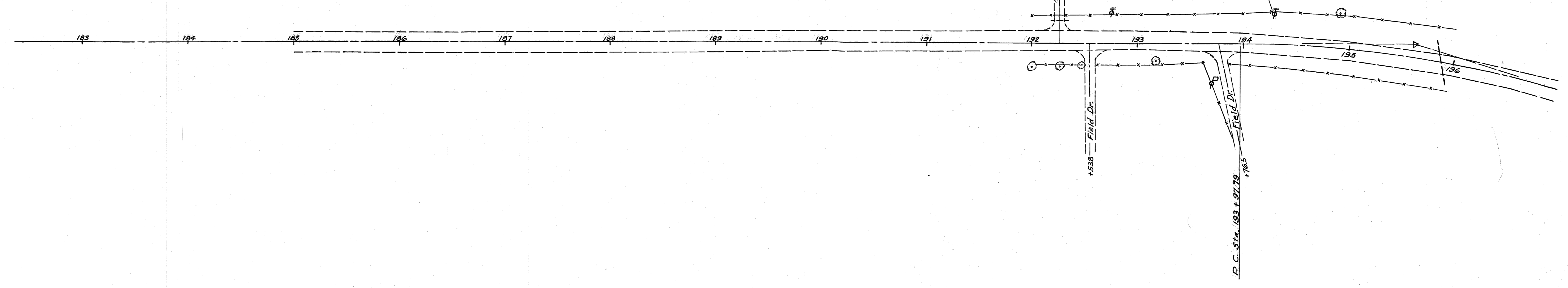


TYPICAL DRIVE
Scale 1/8" = 1'

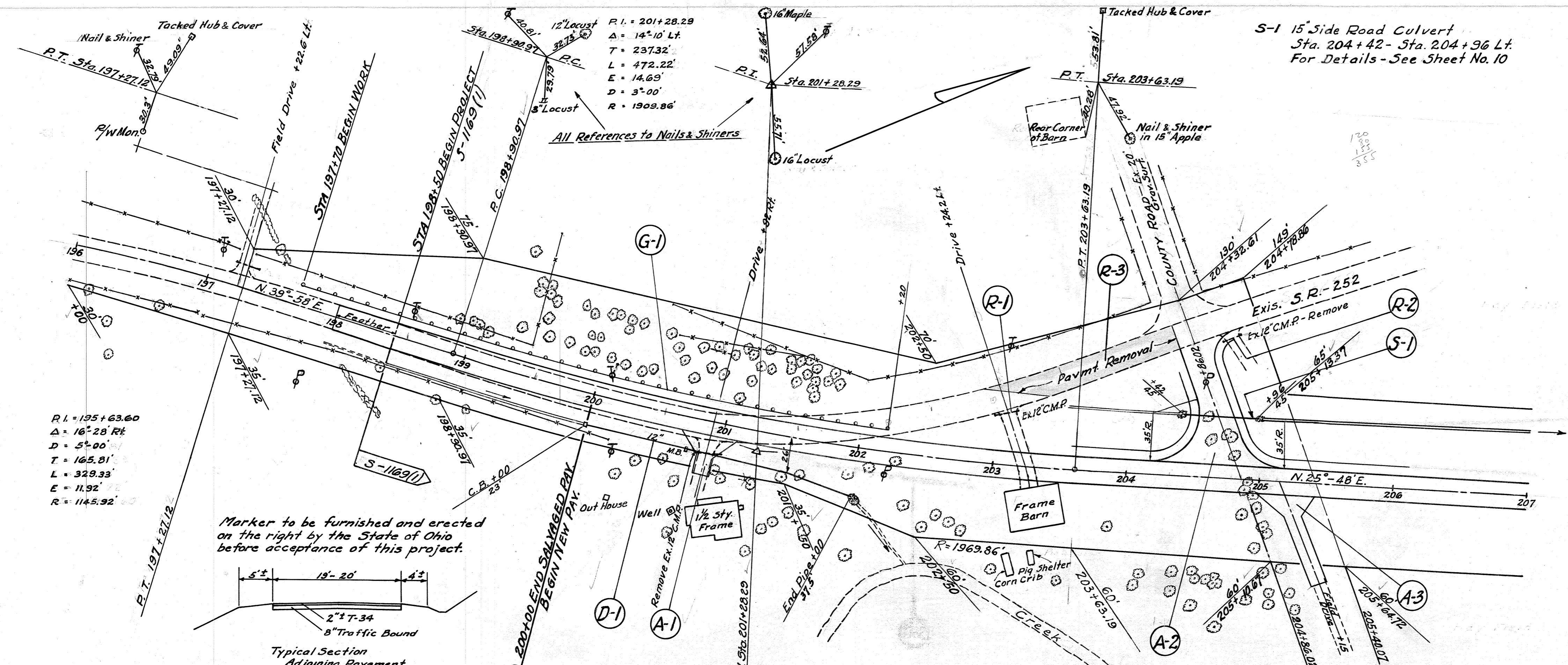
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

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Supplementary Alignment and Profile Sta. 183+00 - Sta. 196+00



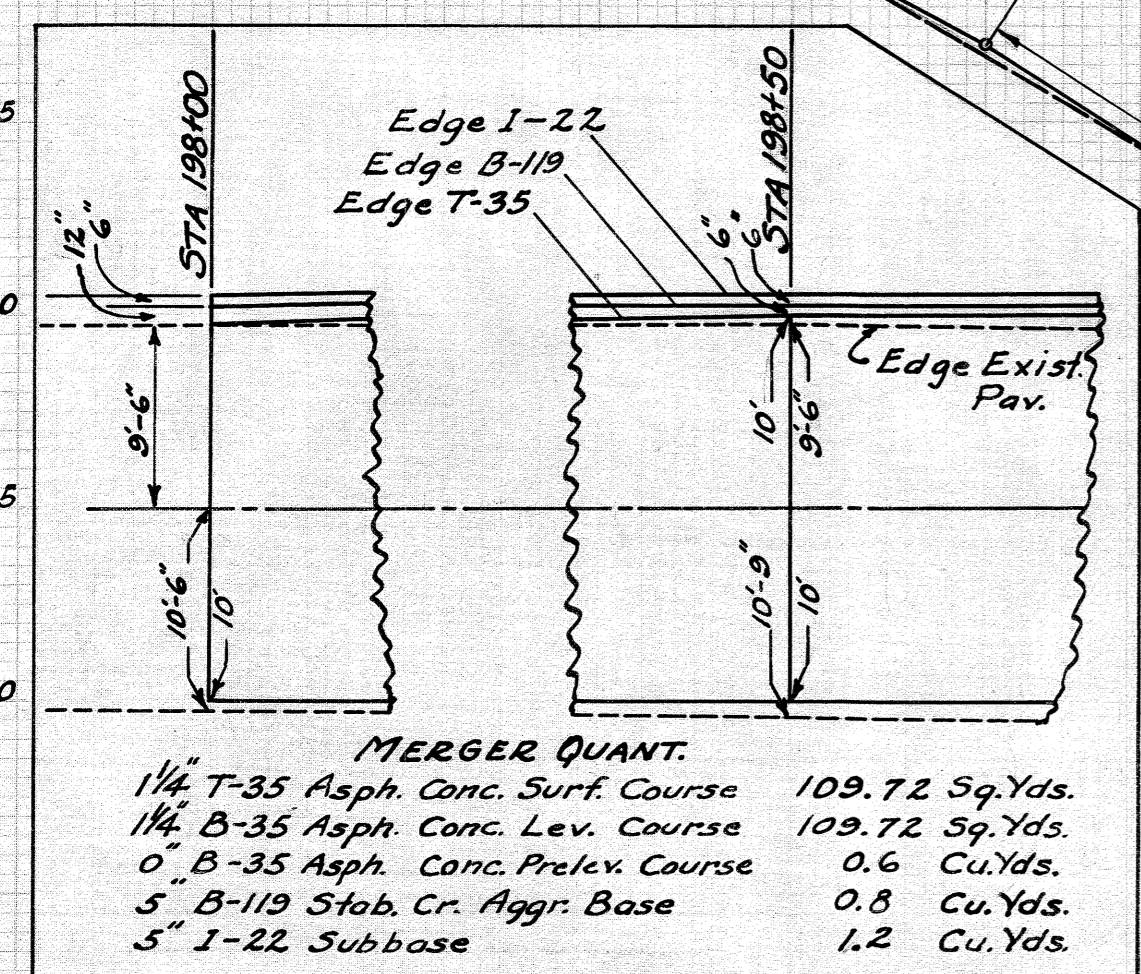
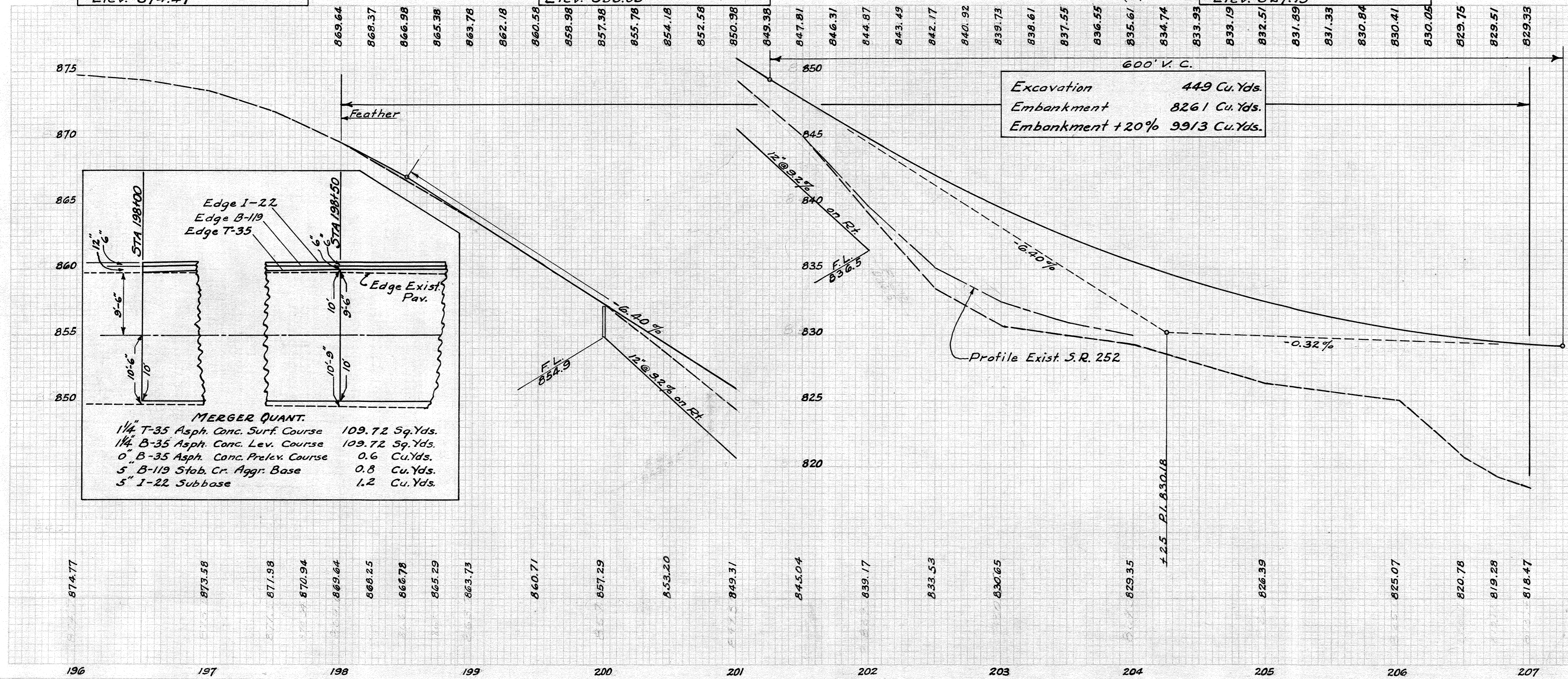
Ref.	From Sheet No.	Station	2" Asph. Conc. Surf. Course	I-1 Pipe for Drives	I-2 Class A Storm Sew. 12" Dia.	I-8 Catch Basins	I-10 Riprap Type A Grouted	E-12 Pipe Removed	I-15 Disposed of Guard Rail	E-1 Steel Beam (Deep)	Compacted Subgrade	B-119 Stab. Crushed Aggr. Base Course	E-2 Excavation for Structures	S-27 Pipe for Culvert	E-8 Pavement Removal
			Cu. Yds.	Lin. Ft.	Lin. Ft.	Units	Sq. Yds.	Lin. Ft.	Lin. Ft.	Sq. Yds.	Sq. Yds.	Cu. Yds.	Cu. Yds.	Lin. Ft.	Sq. Yds.
A-1		200+92 Rt.	3.68	28				20				10			
A-2	10	204+86 Lt.	16.84							303.11		61			
A-3		205+15 Rt.										20			
D-1		200+00-202+00 Rt.		172.28	1	10									
G-1		197+70-202+20 Lt.						450							
R-1		202+99-203+17 Lt.						18							
R-2		204+66-204+86 Lt.						18							
R-3		203+15-204+32 Lt.												278	
S-1	10	204+42-204+96 Lt.					3						9	54	
Totals			20.52	28	172.28	1	13	56	450	303.11	91	9	54	278	

A-2 (from Sheet No. 10) T-30 Prime Coat 106 Gal.

B.M. Top of R/W Monument
30' Rt. of Sta. 197+23
Elev. 874.47

B.M. Spike in Root 15' Maple
49.5' Rt. of Sta. 200+72.6
Elev. 853.08

B.M. Spike in 21' Elm
94.8' Rt. of Sta. 205+31
Elev. 827.13



MERGER QUANT.

114 T-35 Asph. Conc. Surf. Course	109.72 Sq. Yds.
114 B-35 Asph. Conc. Lev. Course	109.72 Sq. Yds.
0.6 B-35 Asph. Conc. Prelev. Course	0.6 Cu. Yds.
5 B-119 Stab. Cr. Aggr. Base	0.8 Cu. Yds.
5 I-22 Subbase	1.2 Cu. Yds.

SUPERELEVATION TABLE

Lt. Edge	Station	Rt. Edge
869.48	198+00	869.48
868.21	+25	868.37
866.82	+50	867.15
865.17	+75	865.66
863.62	199+00	864.27
862.02	+25	862.84
860.42	+50	861.40
858.82	+75	859.80
857.22	200+00	858.20
855.62	+25	856.60
854.02	+50	855.00
852.42	+75	853.40
850.82	201+00	851.80
849.22	+25	850.20
847.65	+50	848.63
846.15	+75	847.13
844.65	202+00	845.63
843.33	+25	844.31
842.01	+50	842.99
840.76	+75	841.74
839.57	203+00	840.55
838.48	+25	839.46
837.39	+50	838.21
836.39	+75	837.04
835.45	204+00	835.94
834.58	+25	834.91
833.77	+50	833.93
833.03	+75	833.03

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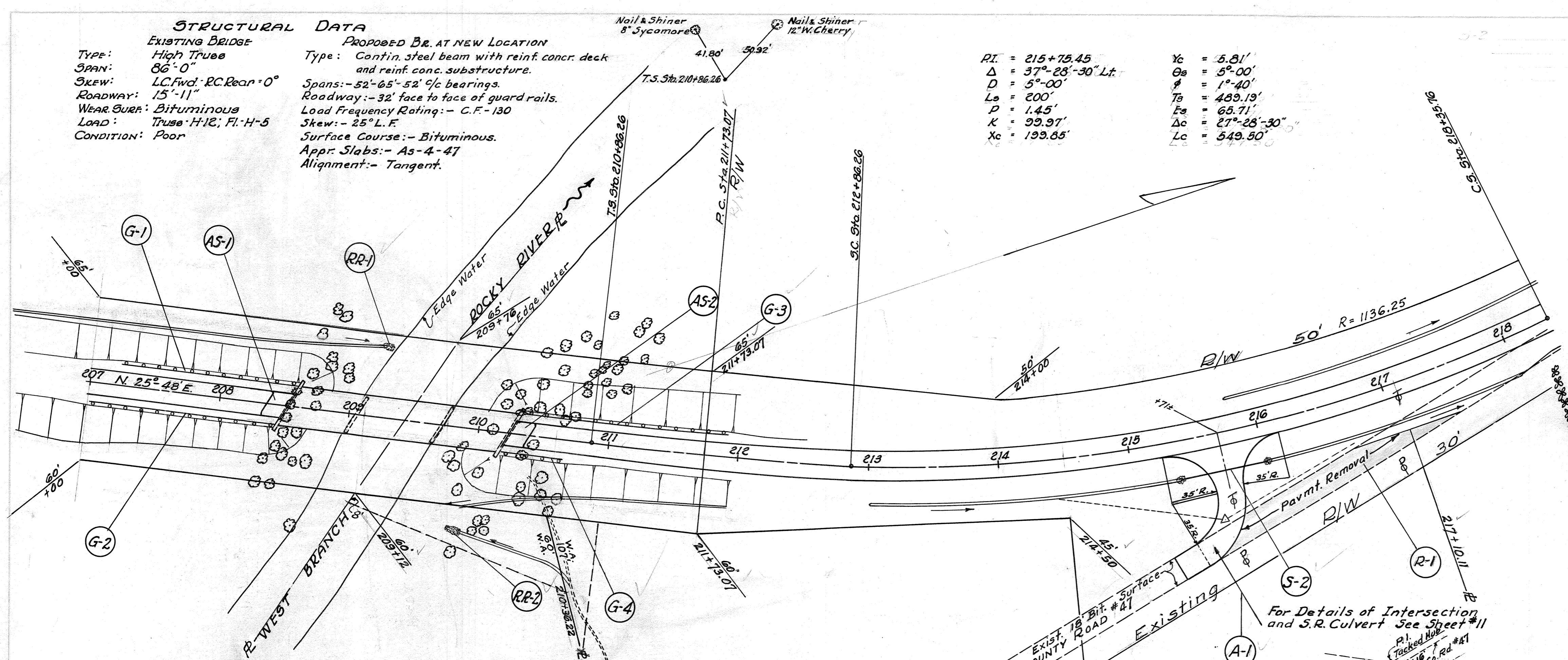
STRUCTURAL DATA

EXISTING BRIDGE
 Type: High Truss
 Span: 86'-0"
 Skew: L.C. Fwd. R.C. Rear 0°
 Roadway: 15'-11"
 WEAR SURF: Bituminous
 Load: Truss H-12, Fl. H-5
 CONDITION: Poor

PROPOSED BR. AT NEW LOCATION
 Type: Contin. steel beam with reinf. conc. deck and reinf. conc. substructure.
 Spans: -52'-65'-52' @ bearings.
 Roadway: -32' face to face of guard rails.
 Load Frequency Rating: - C.F. - 130
 Skew: - 25° L.F.
 Surface Course: - Bituminous.
 Appr. Slabs: - As-4-47
 Alignment: - Tangent.

$PI = 215+75.45$
 $\Delta = 37^{\circ}28'30'' Lt.$
 $D = 5^{\circ}00'$
 $L_s = 200'$
 $P = 1.45'$
 $K = 99.97'$
 $X_c = 199.85'$

$Y_c = 5.81'$
 $\theta_a = 5^{\circ}00'$
 $\phi = 1^{\circ}40'$
 $T_s = 489.19'$
 $E_s = 65.71'$
 $\Delta_c = 27^{\circ}28'30''$
 $L_c = 549.50'$



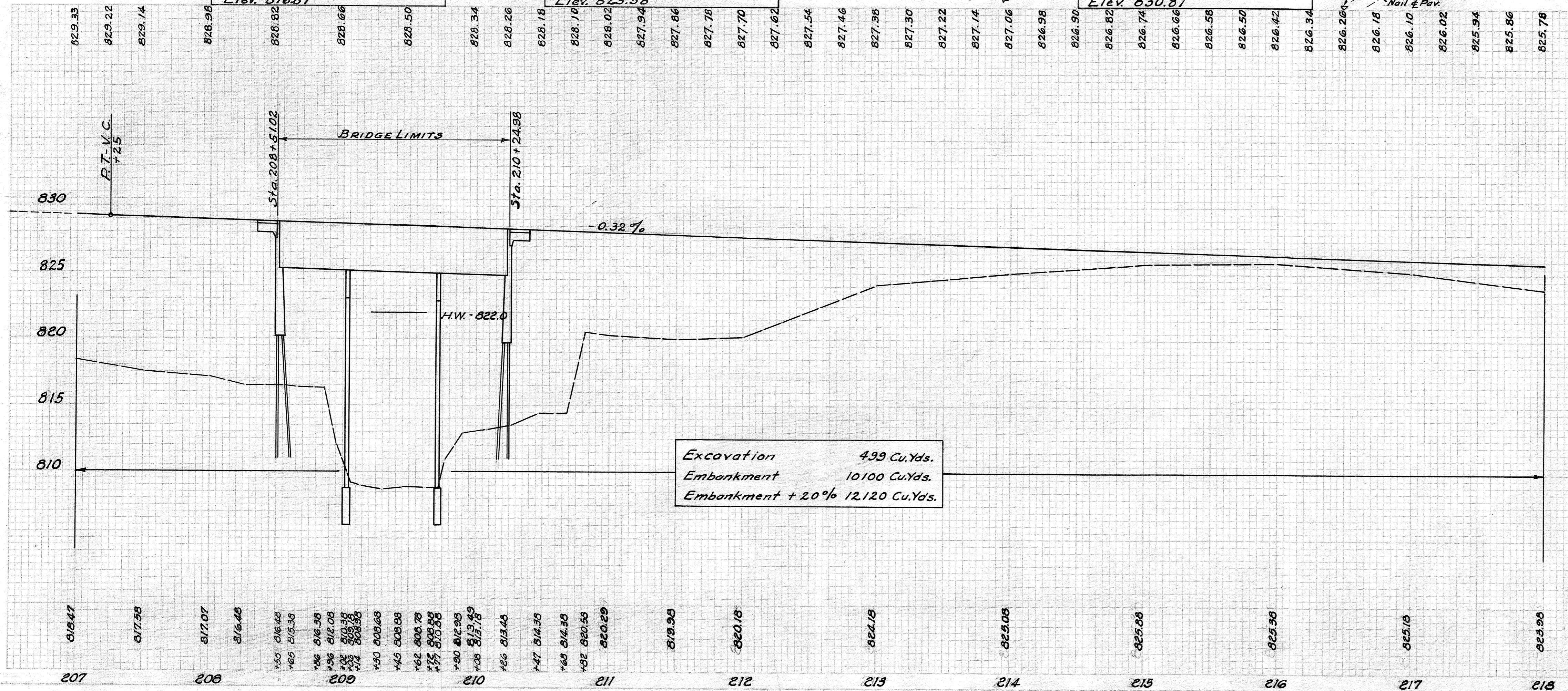
Ref.	From Sheet No.	Station	T-35 2" Asph. Conc. Surf. Course Cu. Yds.	B-35 0" Min. Asph. Conc. Lev. Course Cu. Yds.	B-11/2 Slab Crushed Aggr. Base Course Cu. Yds.	T-30 Bituminous Prime Coat Gals.	I-10 Riprap Type A Grooted Sq. Yds.	I-15 Guard Rail Burr Type Lin. Ft.	E-1 Compacted Subgrade Sq. Yds.	E-2 Excavation for structures Cu. Yds.	S-27 Pipe for Roadway Culverts Lin. Ft.	E-8 Pavement Removal Sq. Yds.
A-1	11		16.67	3.00	41	73			196			
RR-1		209+20± Lt.						4				
RR-2		209+90± Rt.						6				
G-1		207+26.86-208+58.48						131.62				
G-2		206+28.14-208+43.56						144.42				
G-3		210+32.44-211+89.96						156.92				
G-4		210+77.52-210+61.64						44.12				
AS-1	*	208+36.02-208+51.02										
AS-2	*	210+24.98-210+39.98										
R-1		215+72-217+00										300
S-2	11	215+42-216+00 Rt.					3			11	58	
Totals			16.67	3.00	41	73	13	47.08	196	11	58	300

* Quantities on Sheet 2

B.M. Spike in N. Side 14" Walnut
368' Lt. of Sta 208+83
Elev. 816.87

B.M. Spike in W. Side 20" Elm
150.7' Rt. of Sta 211+08.3
Elev. 823.38

B.M. S.W. Cor. lowest Brick Step
258.5' Rt. of Sta 214+11.5
Elev. 830.87

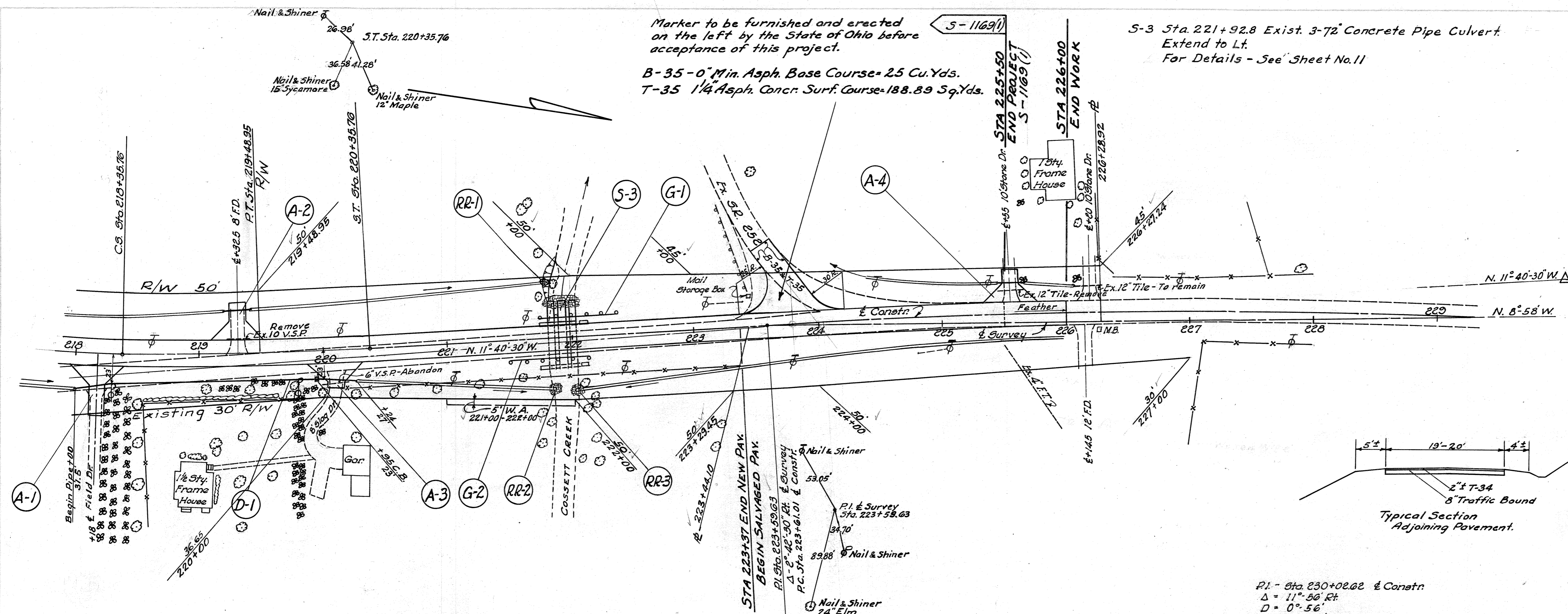


SUPERELEVATION TABLE

Width on Lt.	Lt. Edge	Station	Rt. Edge	Width on Rt.
10.00	828.02	210+50	828.02	10.00
10.00	827.94	+75	828.02	
10.00	827.86	211+00	828.05	
10.25	827.78	+25	828.15	
10.50	827.70	+50	828.27	
10.75	827.61	+75	828.39	
11.00	827.53	212+00	828.51	
11.25	827.44	+25	828.63	
11.50	827.36	+50	828.75	
11.75	827.27	+75	828.87	
12.00	827.19	213+00	828.99	
	827.11	+25	828.91	
	827.03	+50	828.83	
	826.95	+75	828.75	
	826.87	214+00	828.67	
	826.79	+25	828.59	
	826.71	+50	828.51	
	826.63	+75	828.43	
	826.55	215+00	828.35	
	826.47	+25	828.27	
	826.39	+50	828.19	
	826.31	+75	828.11	
	826.23	216+00	828.03	
	826.15	+25	827.95	
	826.07	+50	827.87	
	825.99	+75	827.79	
	825.91	217+00	827.71	
	825.83	+25	827.63	
	825.75	+50	827.55	
	825.67	+75	827.47	
	825.59	218+00	827.39	
	825.51	+25	827.31	
	825.43	+50	827.23	
	825.36	+75	827.15	
	825.28	219+00	827.07	
	825.20	+25	827.00	
	825.13	+50	826.92	
	825.05	+75	826.84	
	824.98	220+00	826.76	
	824.90	+25	826.68	
	824.82	+50	826.60	
	824.74	+75	826.52	

Extra Pavement = 161.11 Sq. Yds.

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S-3 Sta. 221+92.8 Exist. 3-72" Concrete Pipe Culvert. Extend to Lt.
For Details - See Sheet No. 11

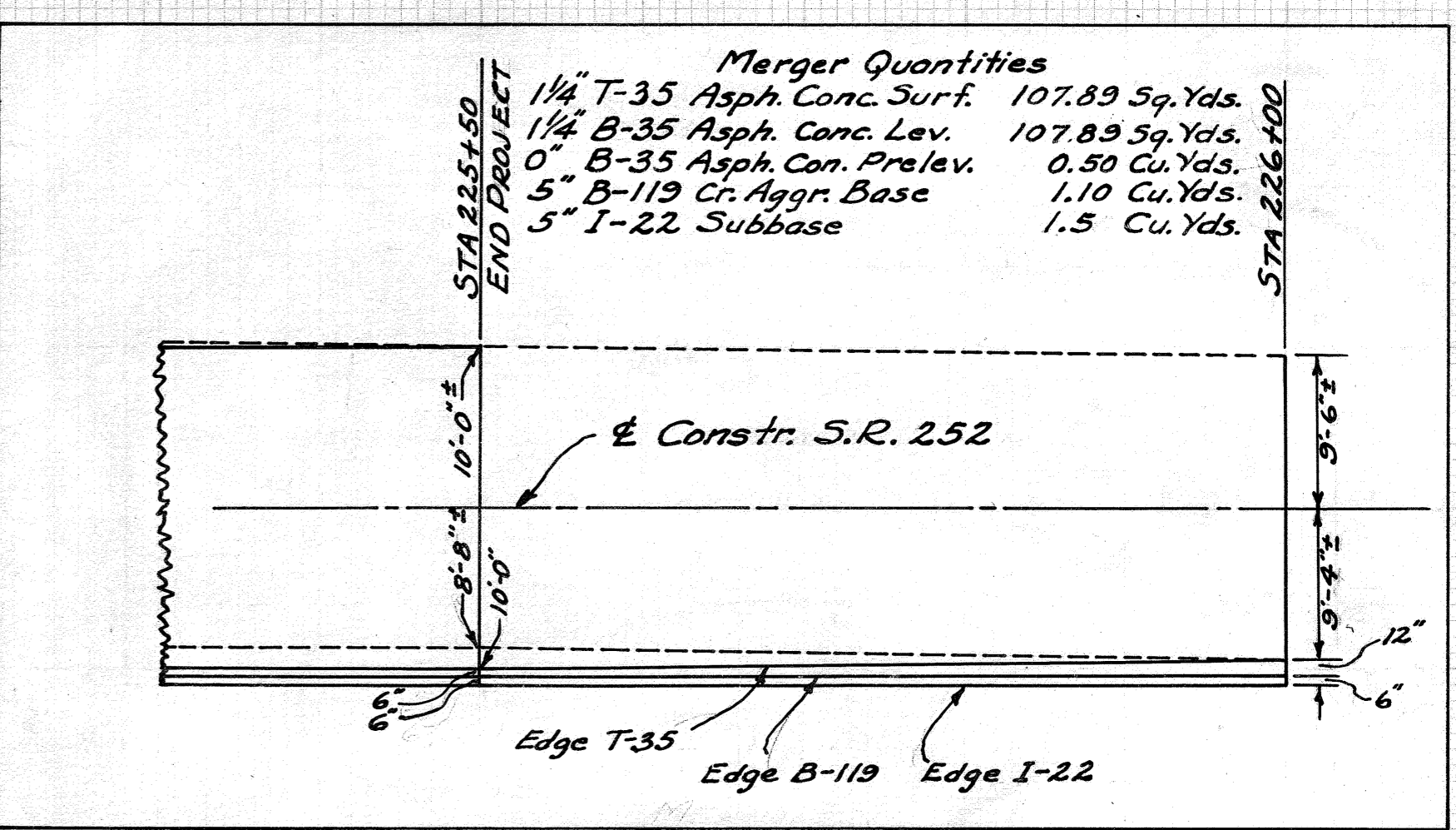
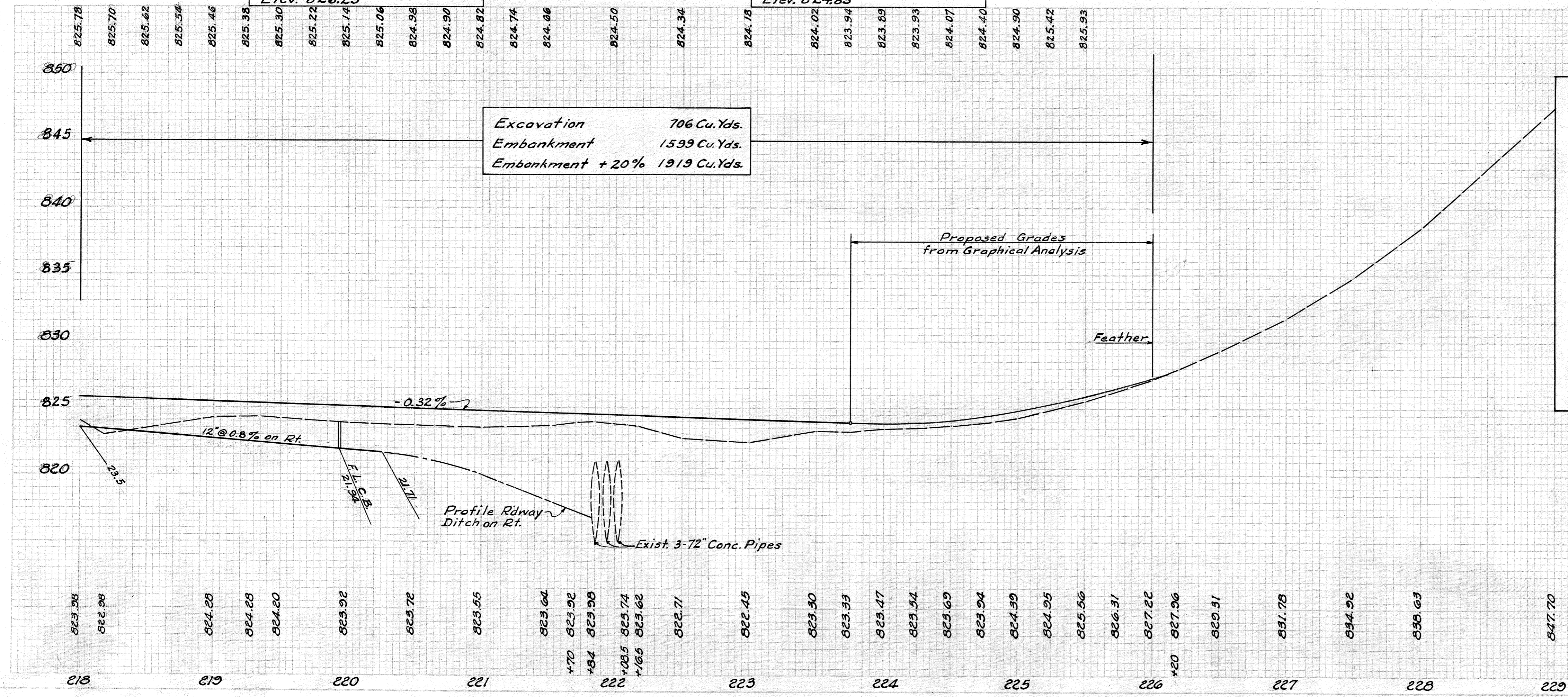
Marker to be furnished and erected on the left by the State of Ohio before acceptance of this project.
S-1169(1)
B-35-0" Min. Asph. Base Course=25 Cu.Yds.
T-35 1/4" Asph. Conc. Surf. Course=188.89 Sq.Yds.

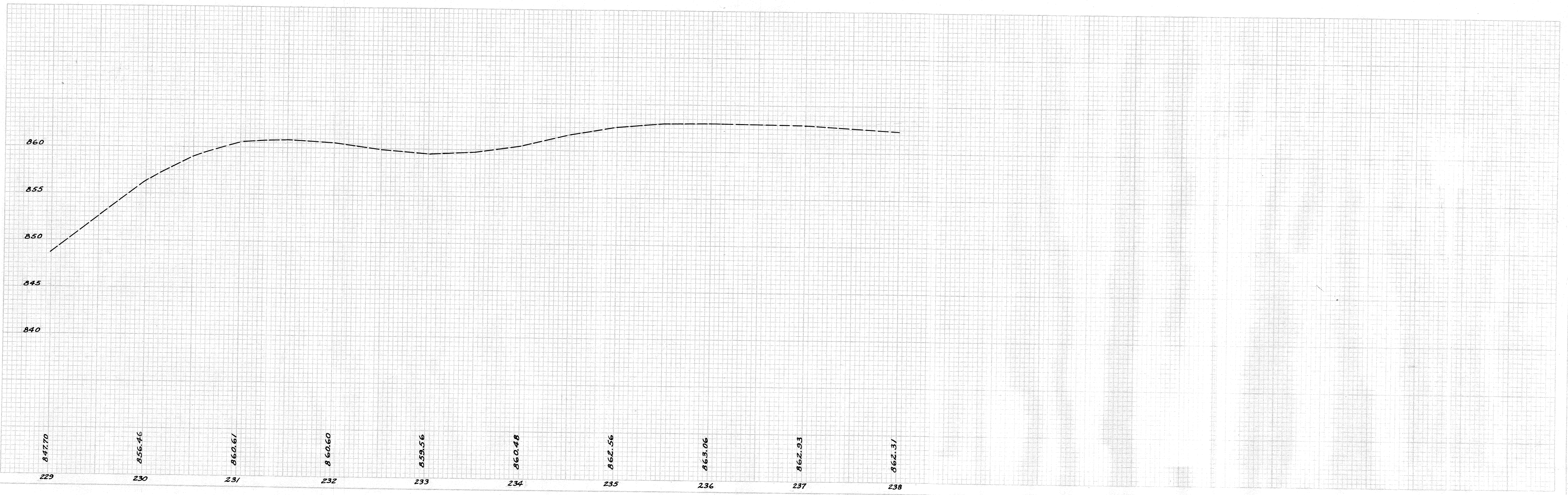
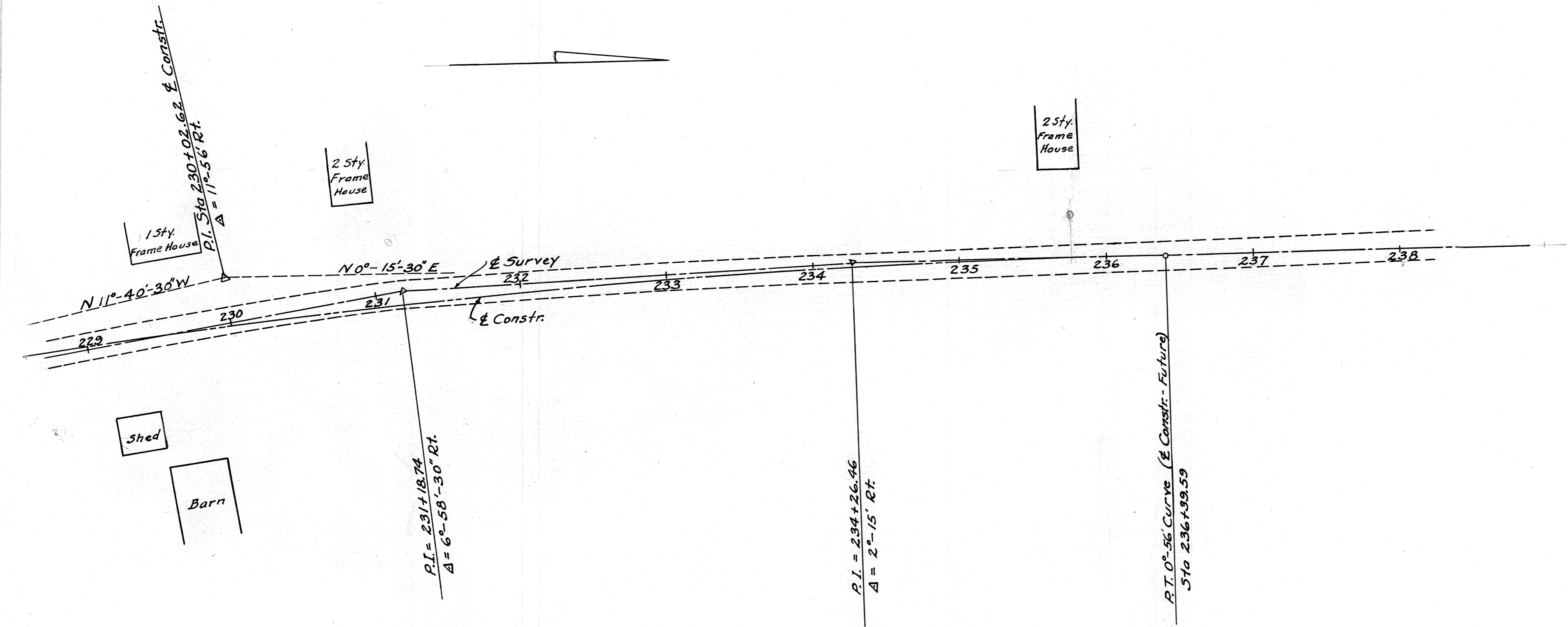
Ref.	From Sheet No.	Station	T-35 2" Asph. Conc. Surf. Course Cu.Yds.	I-1 Pipe Lin.Ft.	I-2 Class 2A Drives Lin.Ft.	I-8 Sibram Sensors Under Drive Units	I-10 Catch Basins Sq.Yds.	I-15 Riprap Type A Grouted Sq.Yds.	E-12 Guard Rail Type B Lin.Ft.	E-2 Pipe Removed and Disposed of for Excavation for Structures Cu.Yds.	E-3 Channel Excavation Cu.Yds.	S-27 Pipe for Edm. Curb M. & G. Lin.Ft.	B-119 5" Stab. Cr. Aggr. Base Course Cu.Yds.	
A-1		218+18 Rt.											13	
A-2		219+32.5 Lt.		28						18			11	
A-3		220+10 Rt.	2.94										8	
A-4		225+55 Lt.	3.40	28					20				9	
D-1		218+00-220+24 Rt.			194.28	1								
RR-1									3					
RR-2									3					
RR-3									3					
G-1		221+75-222+37.5 Lt.							62.5					
G-2		221+50-222+12.5 Rt.							62.5					
S-3	11						45			6	29	48		
Totals			6.34	28	28	194.28	1	54	125	38	6	29	48	41

PI - Sta. 230+02.02 & Constr.
Δ = 11° 56' Rt.
D = 0° 56'
T = 643.41'
L = 1278.58'
E = 33.44'

B.M. Spike in W. Root 26" Oak
73.5' Rt. of Sta. 220+22
Elev. 826.25

B.M. Spike in Root 36" Oak East
of E. Abut. 127' Lt. Sta. 223+50
Elev. 824.83

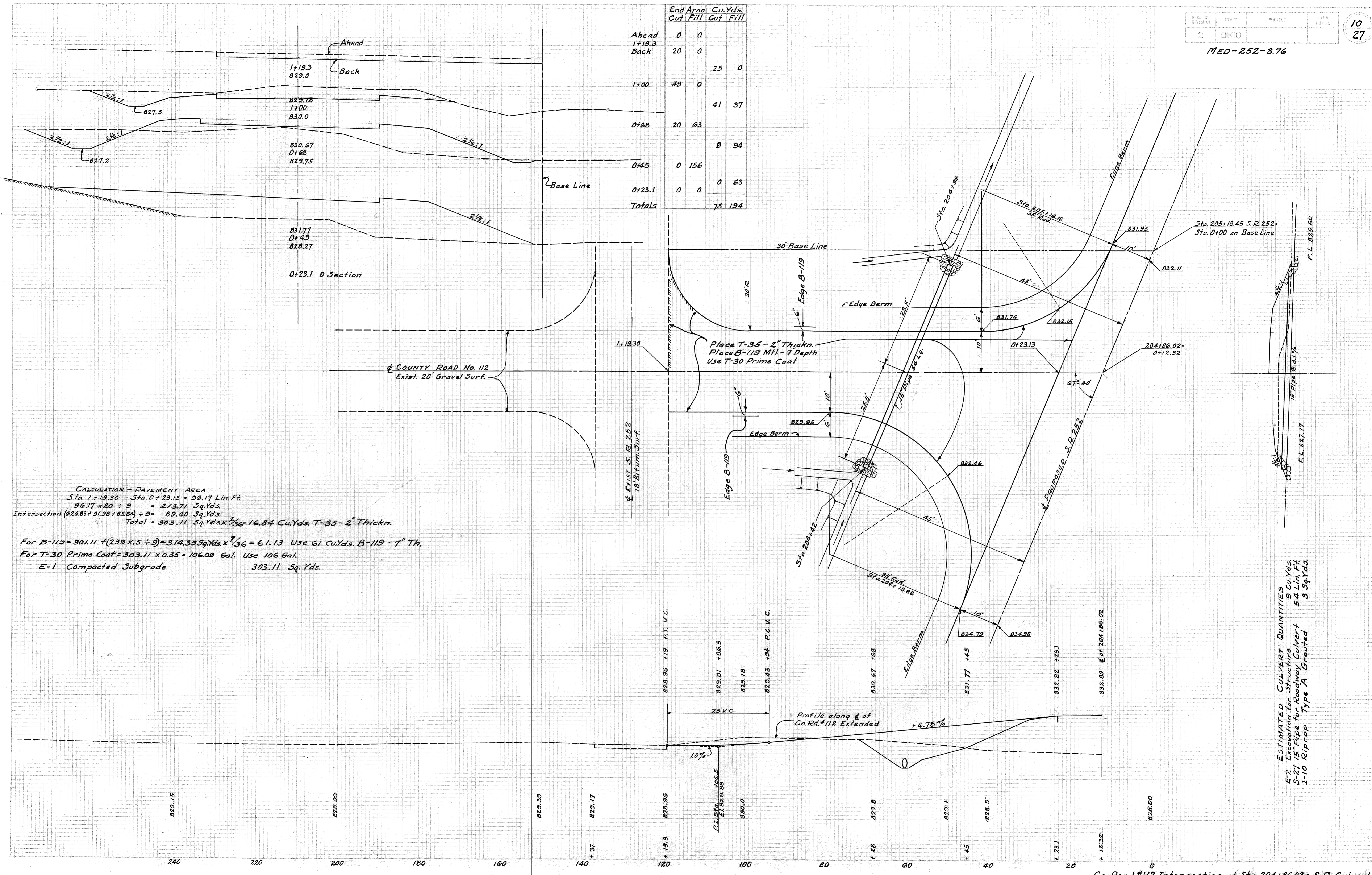




Supplementary Alignment and Profile

MED-252-3.76

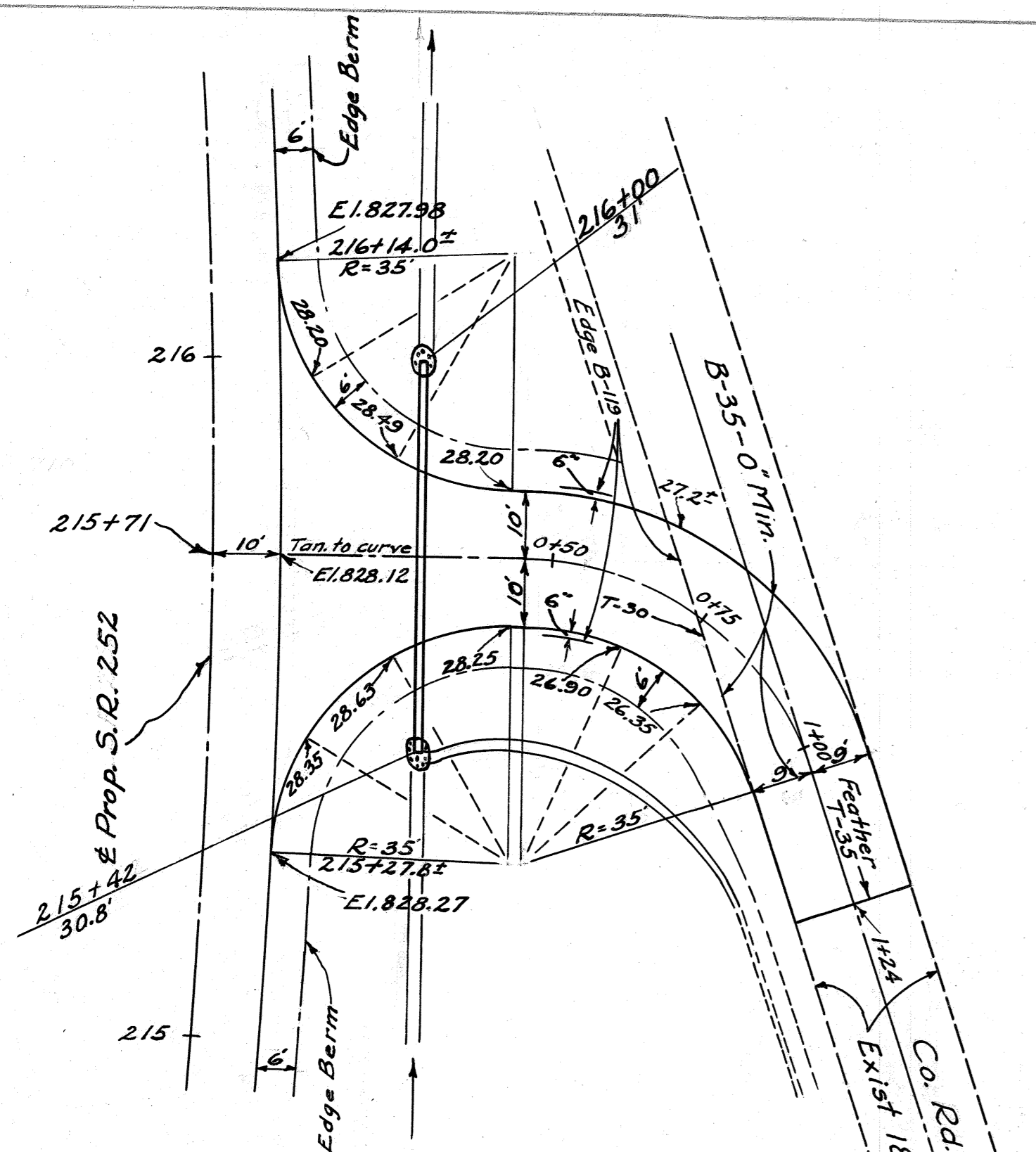
	End Area		Cu. Yds.	
	Cut	Fill	Cut	Fill
Ahead	0	0		
1+19.3	20	0	25	0
Back				
1+00	49	0	41	37
0+68	20	63	9	94
0+45	0	156	0	63
0+23.1	0	0	75	194
Totals				



CALCULATION - PAVEMENT AREA
 Sta. 1+19.30 - Sta. 0+23.13 = 96.17 Lin. Ft.
 $96.17 \times 20 \div 9 = 213.71$ Sq. Yds.
 Intersection $(62683 + 91.98 + 85.84) \div 9 = 89.40$ Sq. Yds.
 Total = 303.11 Sq. Yds. $\times \frac{2}{36} = 16.84$ Cu. Yds. T-35 - 2" Thickn.
 For B-119 = $303.11 \div (239 \times 5 \div 9) = 314.39$ Sq. Yds. $\times \frac{1}{36} = 61.13$ Use 61 Cu. Yds. B-119 - 7" Th.
 For T-30 Prime Coat = $303.11 \times 0.35 = 106.09$ Gal. Use 106 Gal.
 E-1 Compacted Subgrade 303.11 Sq. Yds.

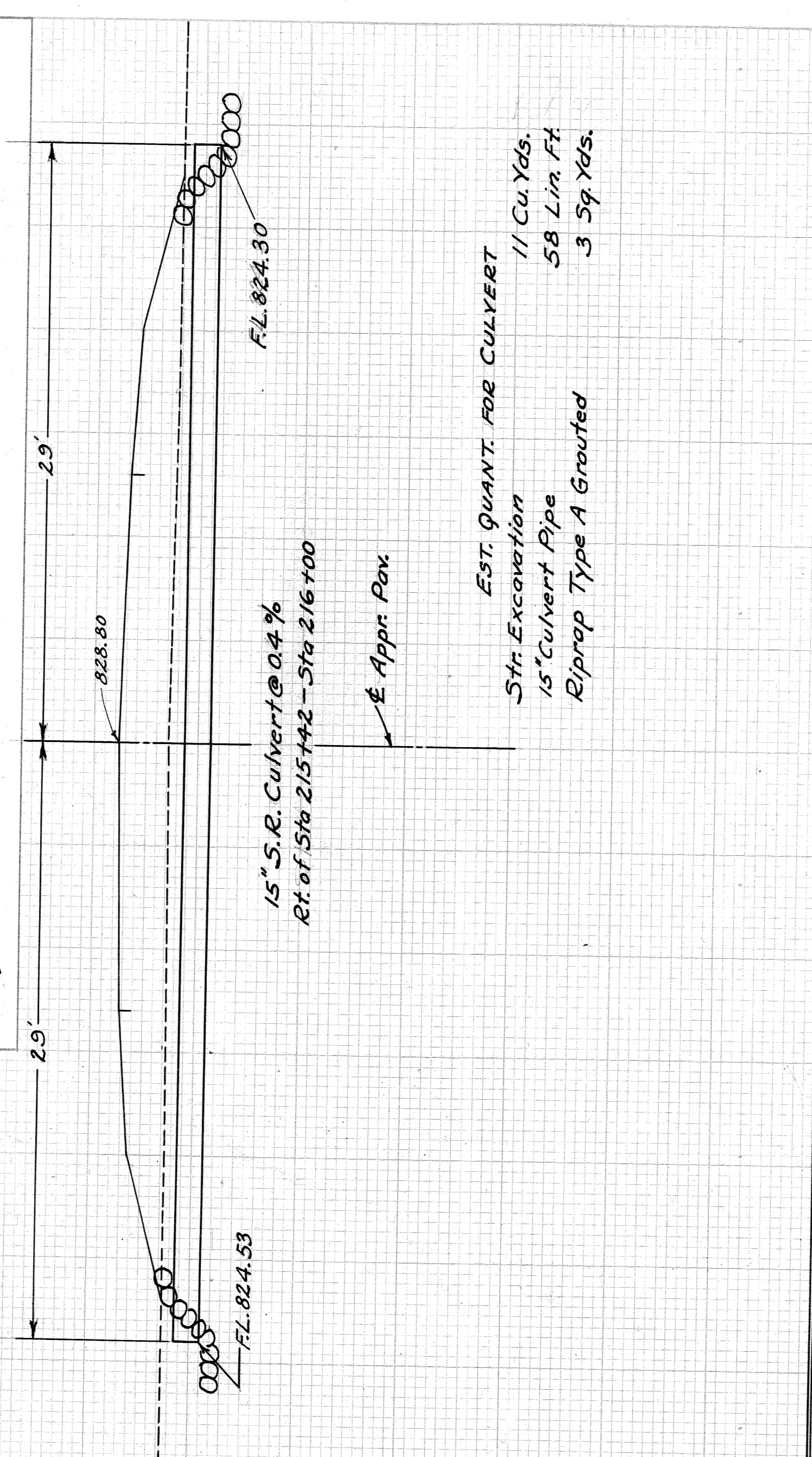
ESTIMATED CULVERT QUANTITIES
 E-2 Excavation for Structure 9 Cu. Yds.
 S-27 15" Pipe for Roadway Culvert 54 Lin. Ft.
 I-10 Riprap Type A Grouted 3 Sq. Yds.

MED - 252-3.76

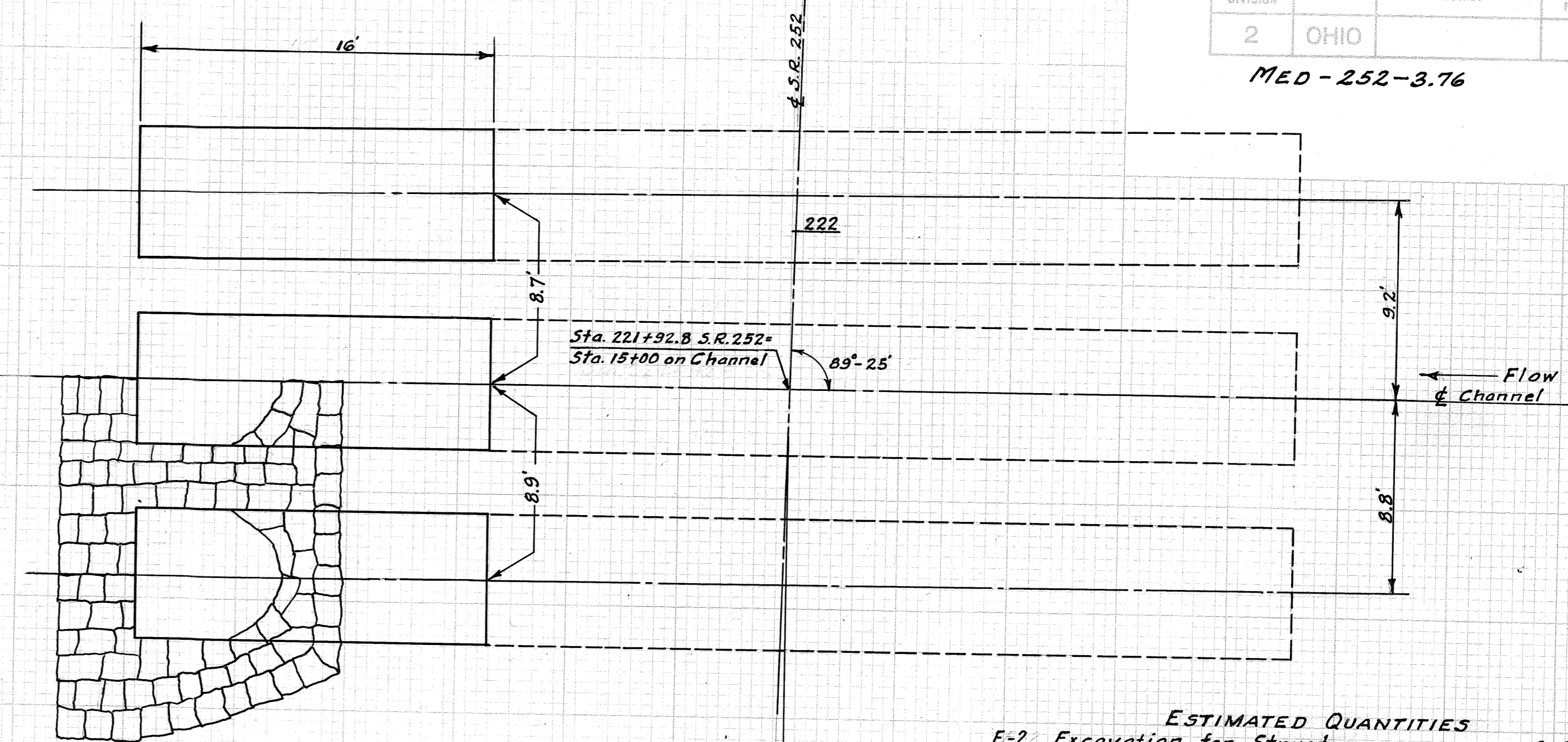


- T-35 - 2" Asph. Conc. Surface Course 16.67 Cu. Yds.
- B-35 - 0" Min. Asph. Conc. Base Course 3 Cu. Yds.
- B-119 - 7" Stab. Crushed Aggr. Base Course 41 Cu. Yds.
- T-30 Prime Coat 73 Gal.
- E-1 Compacted Subgrade 196 Sq. Yds.

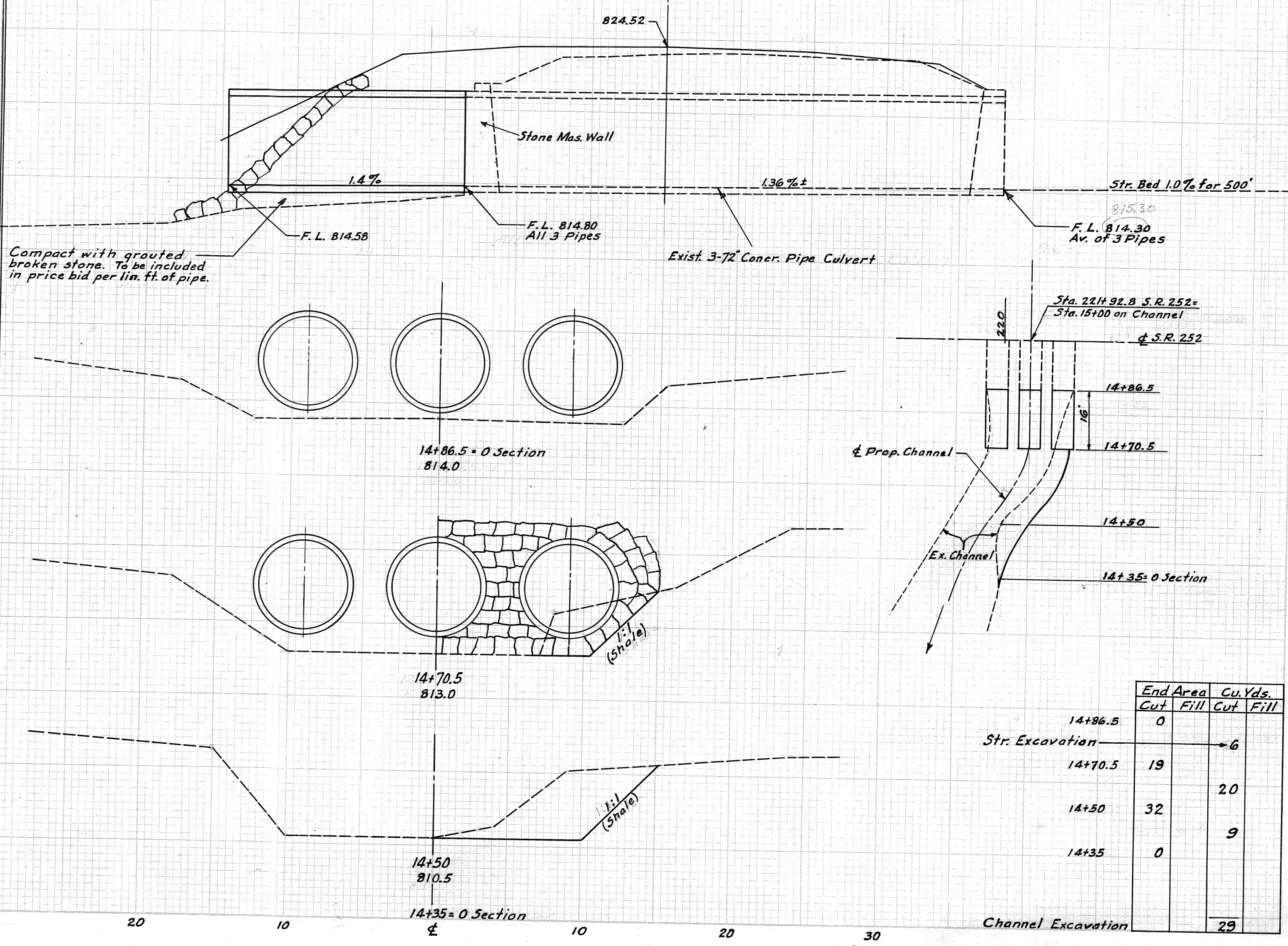
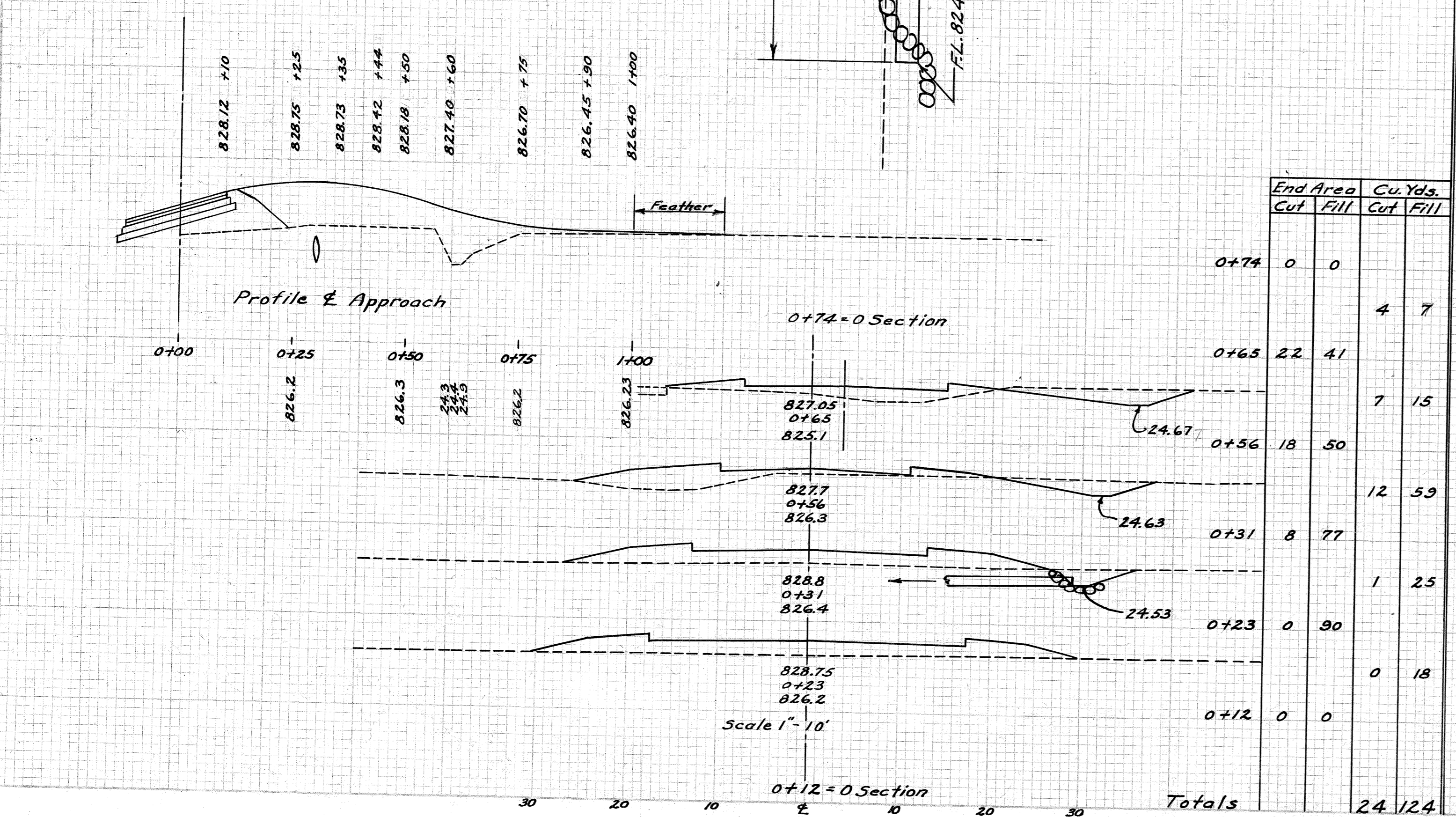
CALCULATIONS
 Area of T-35 = 2700 sq. ft. x 2/12 ÷ 27 = 16.67 Cu. Yds.
 Area of B-119 = 1885 sq. ft. x 2/12 ÷ 27 = 40.73 Cu. Yds. - Use 41 or 209.44 Sq. Yds.
 For T-30 = 209.44 x 0.35 = 73.3 Gal. - Use 73



EST. QUANT. FOR CULVERT
 11 Cu. Yds. Sth. Excavation
 58 Lin. Ft. 15" Culvert Pipe
 3 Sq. Yds. Riprap Type A Grouted



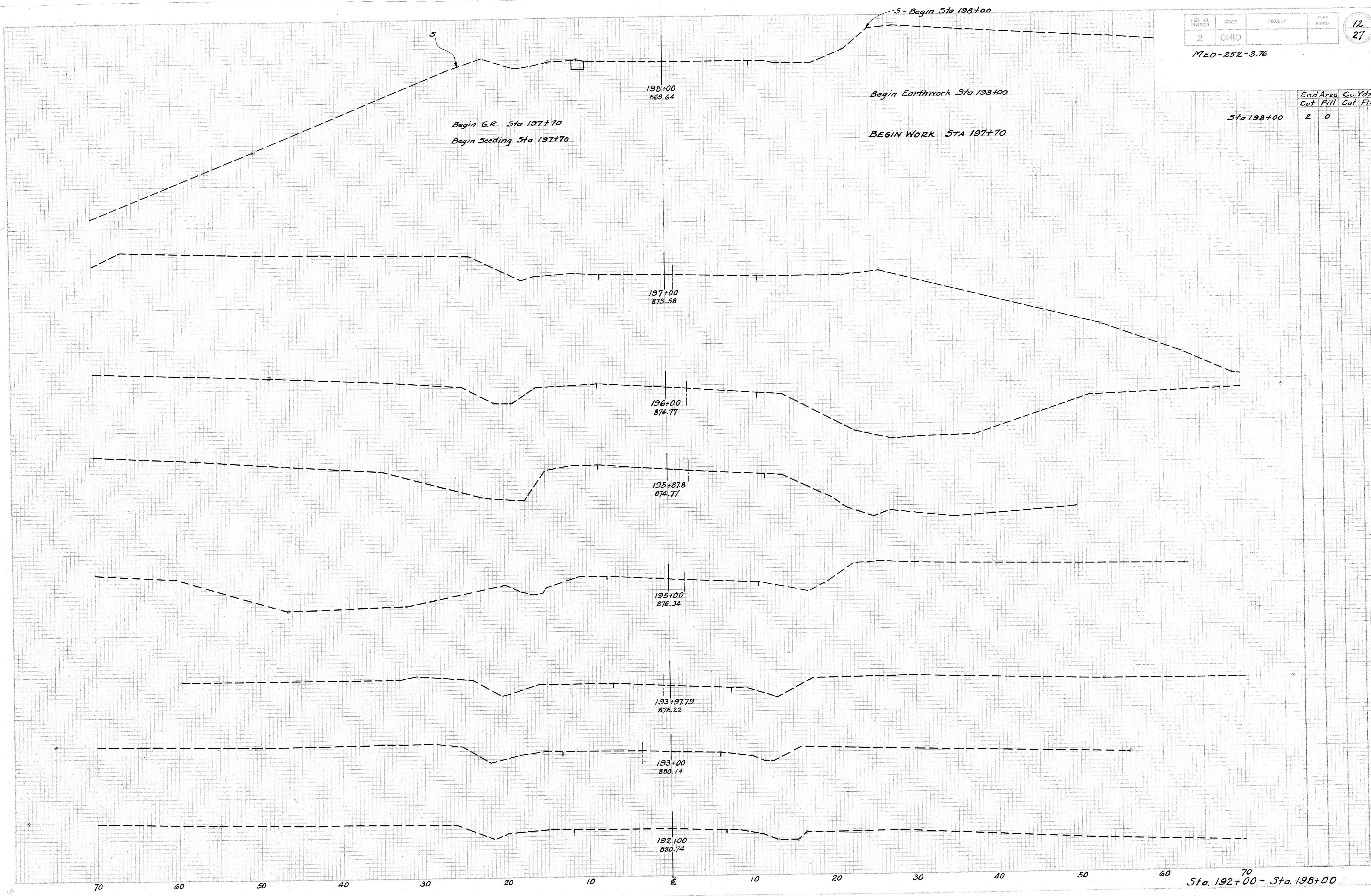
- ESTIMATED QUANTITIES**
- E-2 Excavation for Structure 6 Cu. Yds.
 - E-3 Channel Excavation 29 Cu. Yds.
 - S-21 72" Reinf. Conc. Pipe - Sec. M-6.6(b) 48 Lin. Ft.
 - I-10 Riprap - Type A grouted 45 Sq. Yds.



Co. Road #47 Intersection at Sta 215+71 and S.R. Culvert

Culvert Extension Sta 221+92.8

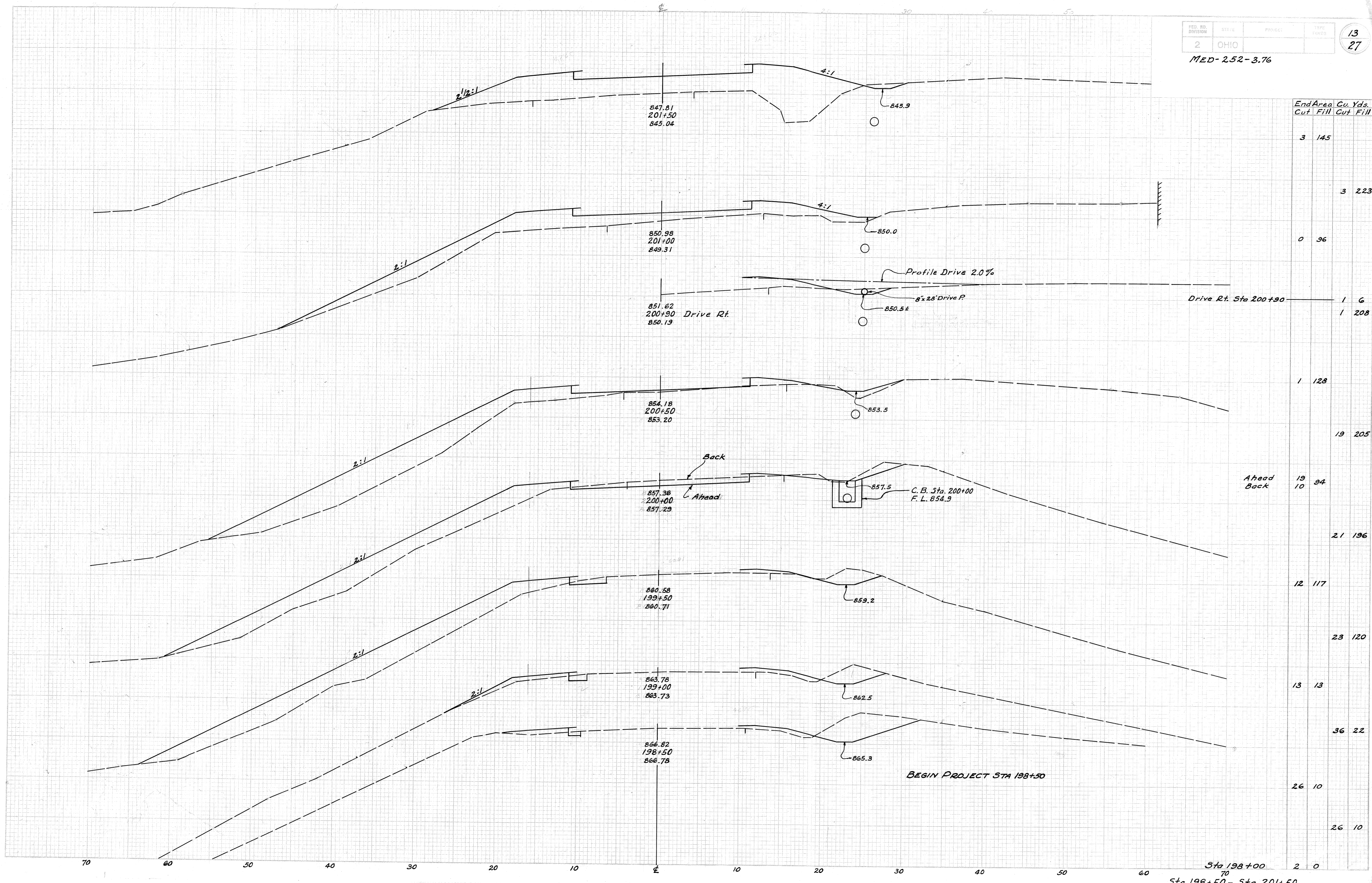
MED-252-3.76



Sta	End Area		Cu. Yds.	
	Cut	Fill	Cut	Fill
Sta 198+00	2	0		

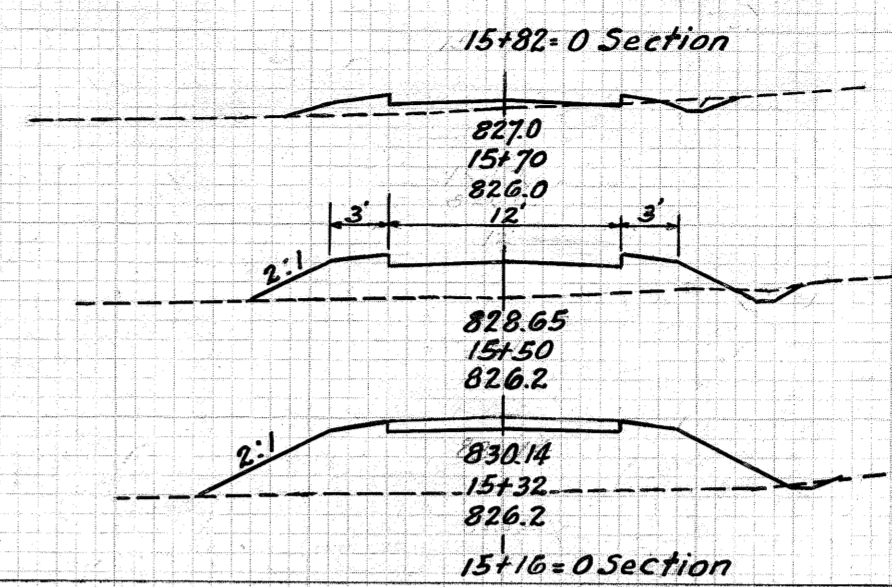
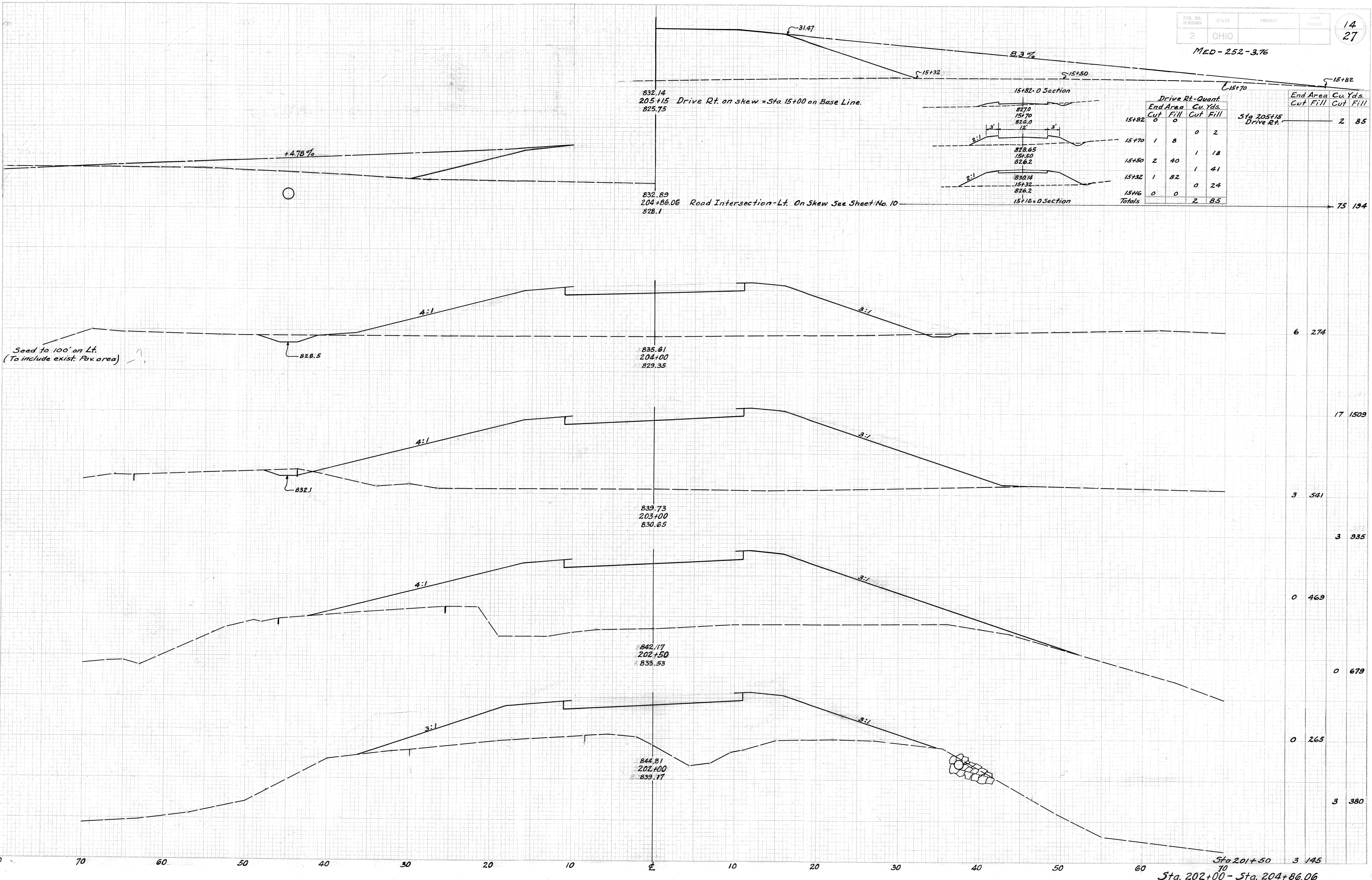
70 60 50 40 30 20 10 0 10 20 30 40 50 60 70
Sta. 192+00 - Sta. 198+00

MED-252-3.76



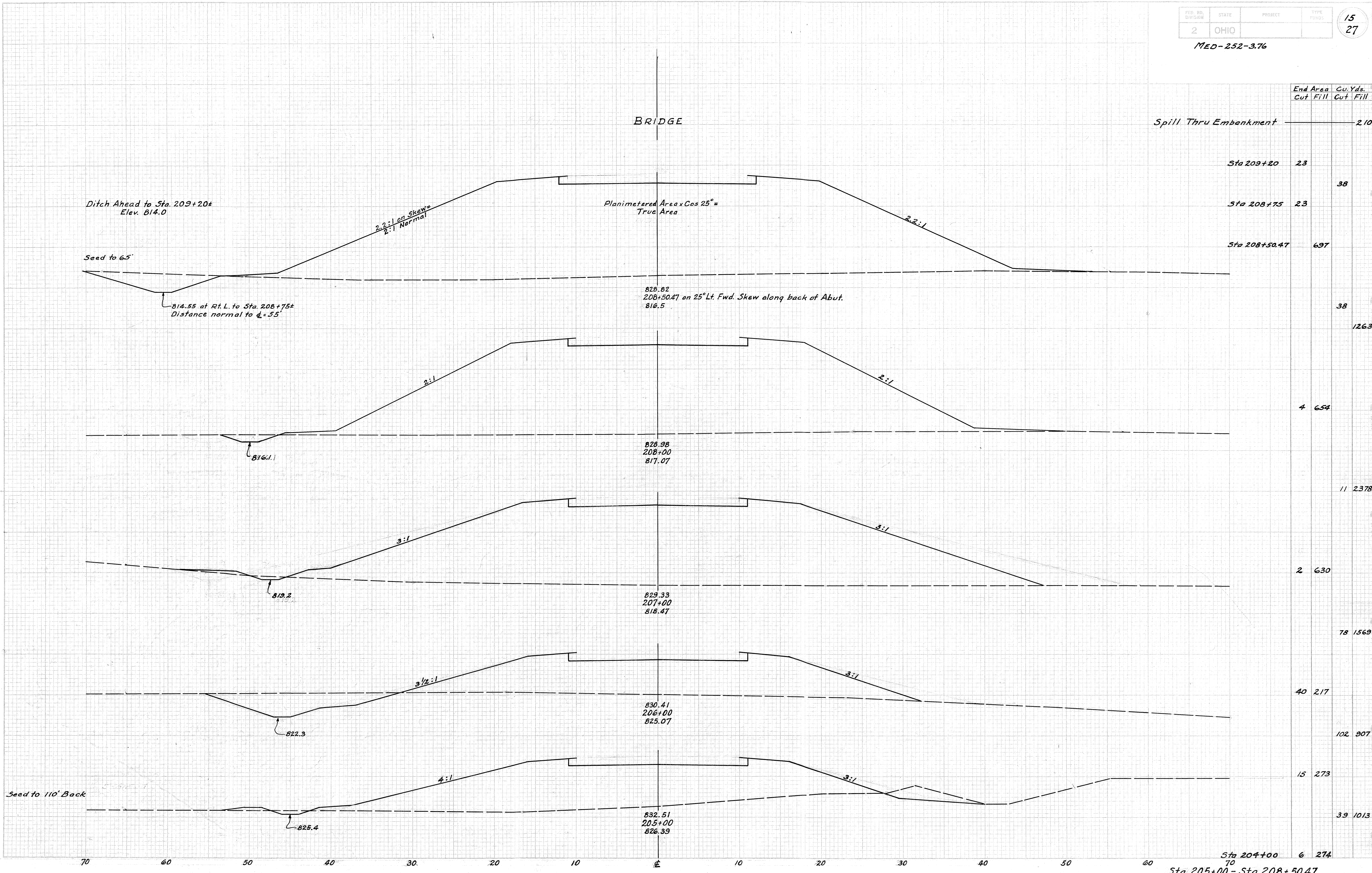
Station	End Area		Cu. Yds.	
	Cut	Fill	Cut	Fill
201+50	3	145		
201+00	0	96	3	223
200+90	1	6	1	208
200+50	1	128	19	205
200+00	19	94	21	196
199+50	12	117	23	120
199+00	13	13	36	22
198+50	26	10	26	10
198+00	2	0		

Sta. 198+50 - Sta. 201+50



Sta	Drive Rt. Quant		Cu. Yds.		End Area	Cu. Yds.
	Cut	Fill	Cut	Fill		
15+82	0	0	0	2	2	85
15+70	1	8	1	18		
15+50	2	40	1	41		
15+32	1	82	0	24		
15+16	0	0	2	8.5		
Totals			2	8.5	75	194

MED-252-376



End Area		Cu. Yds.	
Cut	Fill	Cut	Fill

Spill Thru Embankment 2.10

Sta 209+20	23		
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38

Sta 208+75	23		
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Sta 208+50.47	697		
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38

1263

	4	654	
--	---	-----	--

11 2378

	2	630	
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78 1569

	40	217	
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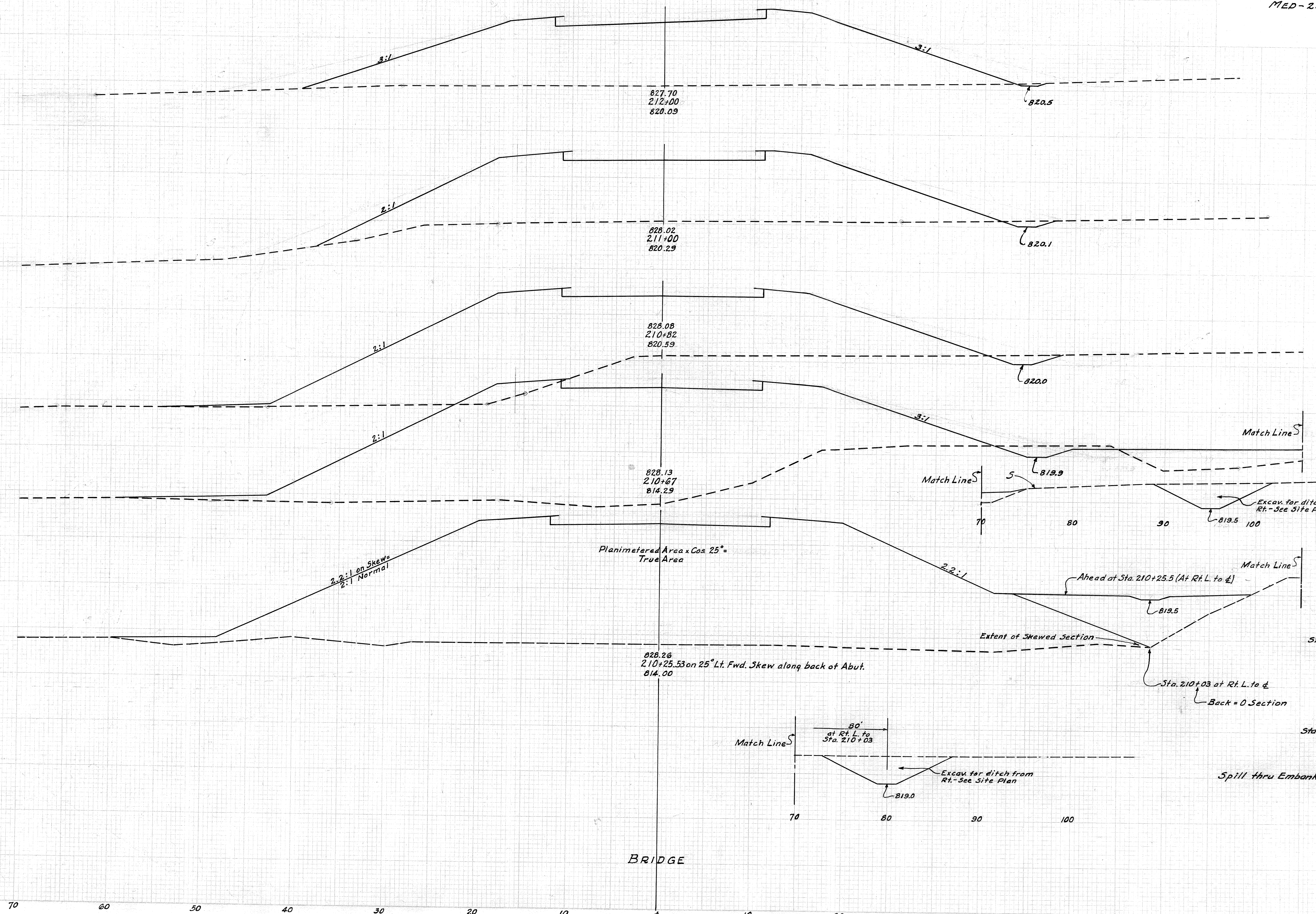
102 907

	15	273	
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39 1013

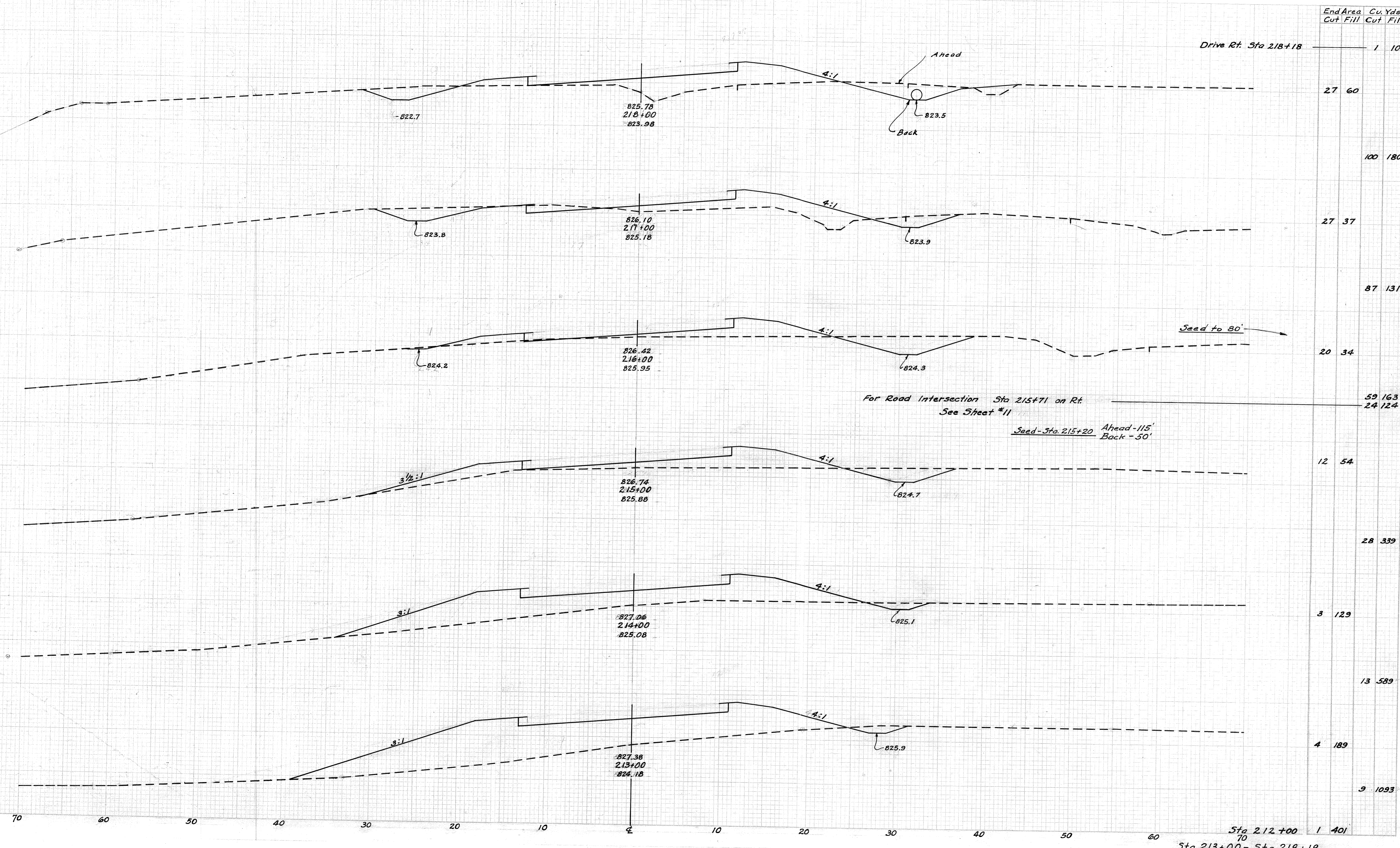
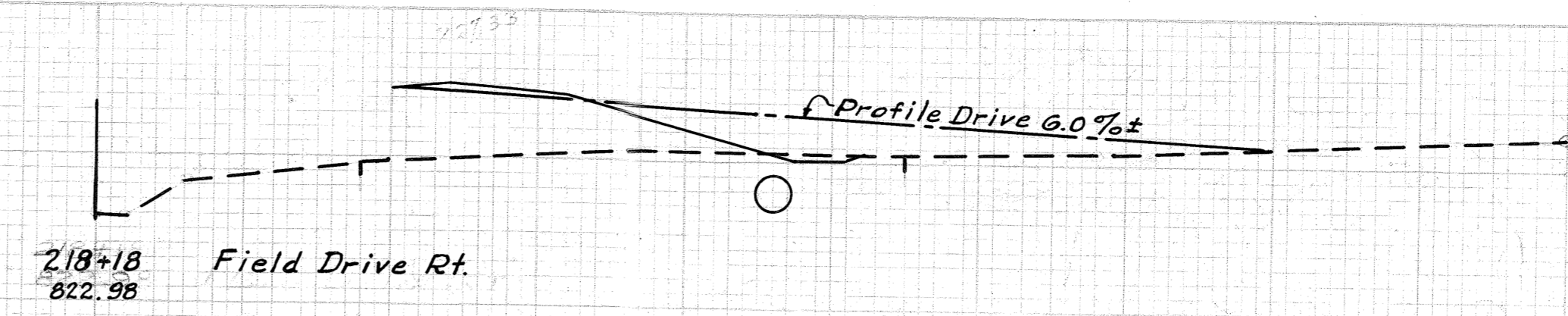
Sta 204+00	6	274	
Sta. 205+00 - Sta. 208+50.47			

MED-252-3.76



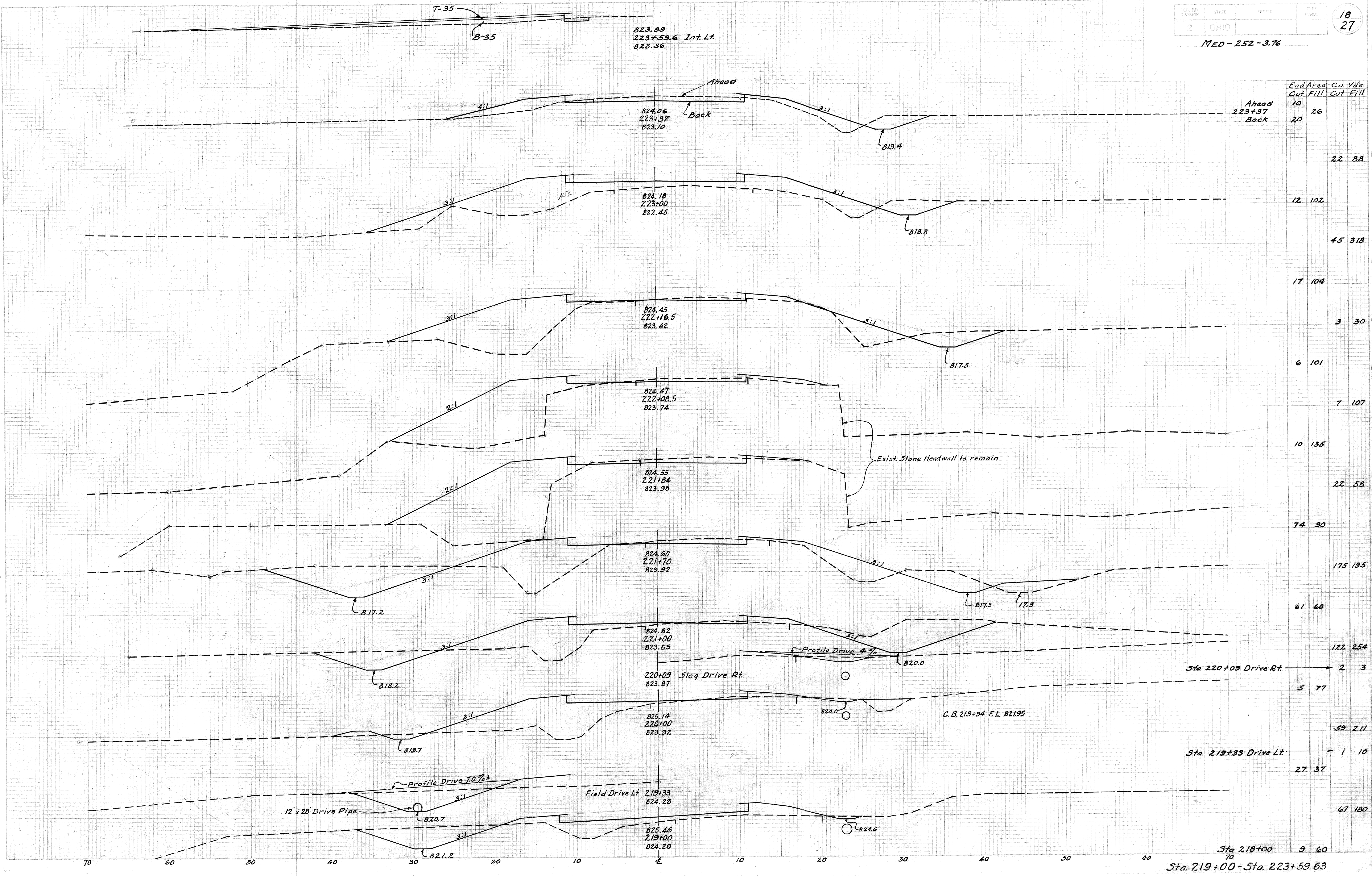
End Area	Cu. Yds.
Cut	Fill
1	401
	7 1450
3	382
	3 292
5	495
	11 332
210+67	34 701
	1256
	71
Ahead Sta. 210+25.53	934
Back	73
	30
Ahead Sta. 210+03	26
Back	0 0
	270

Sta. 210+25.5 - Sta. 212+00



End Area	Cu. Yds.
Cut	Fill
1	10
27	60
100	180
27	37
87	131
20	34
59	163
24	124
12	54
28	339
3	129
13	589
4	189
9	1093
1	401

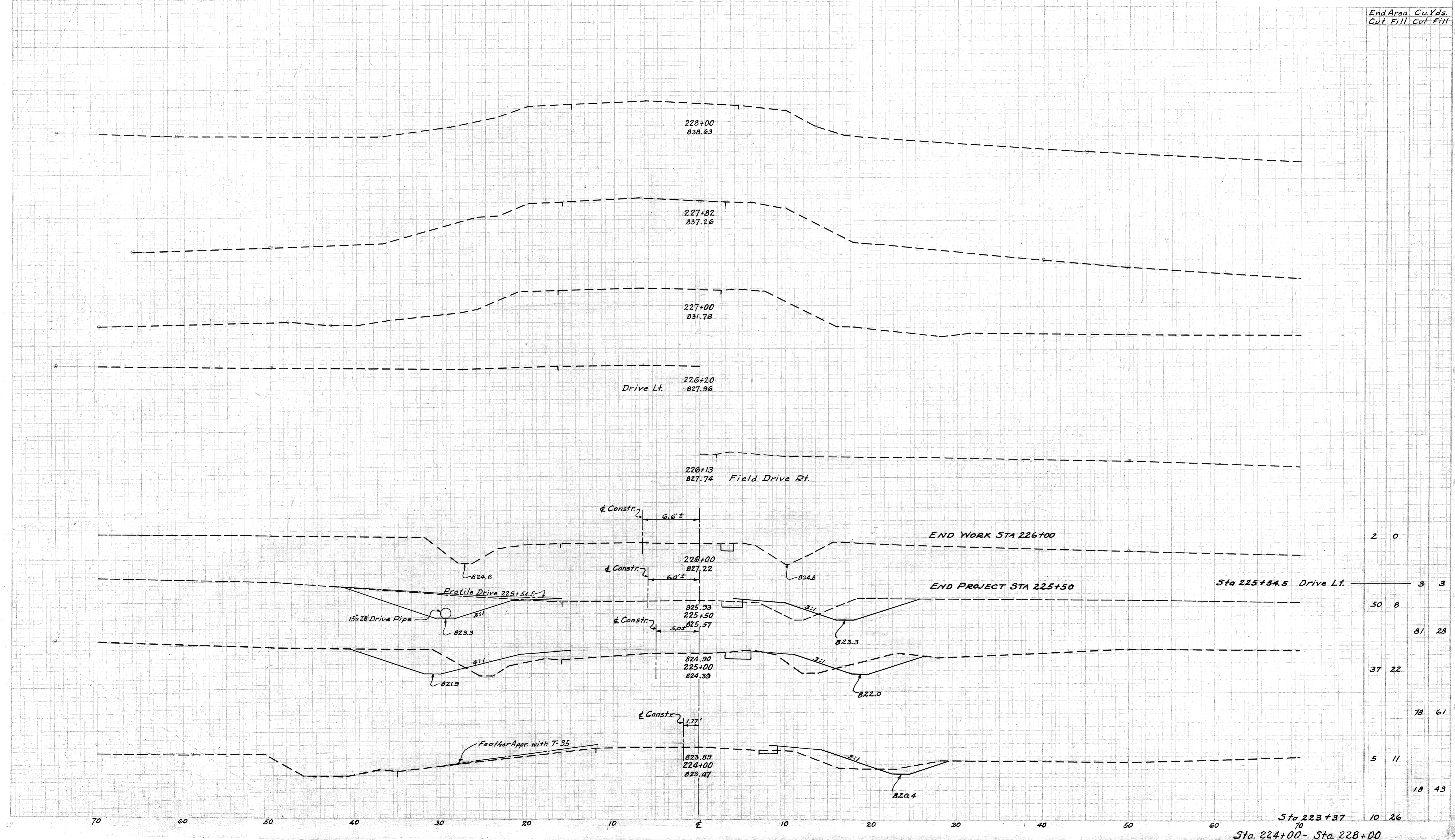
Sta 212+00
70
Sta. 213+00 - Sta. 218+18



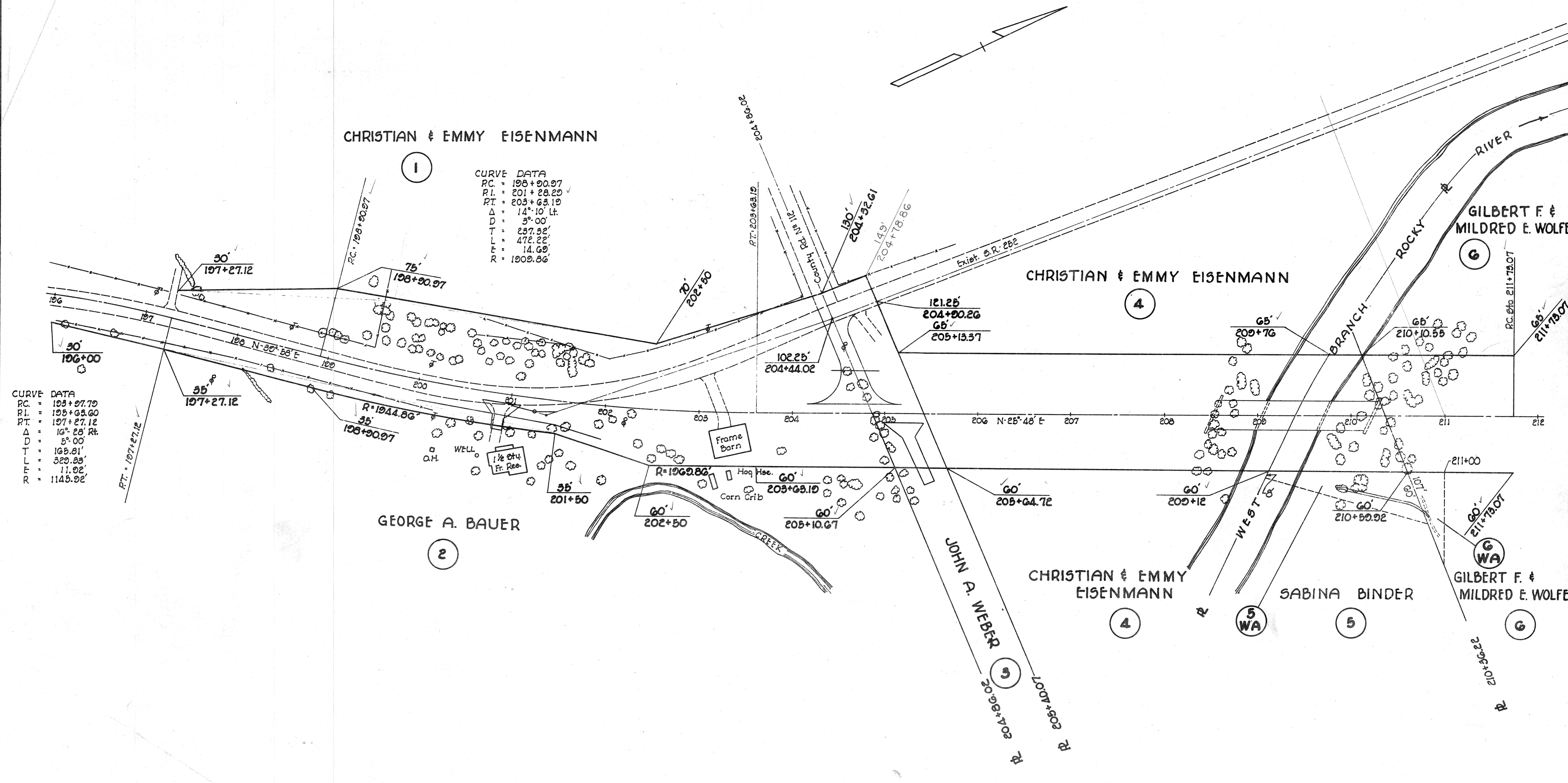
End Area	Cu. Yds.
Cut	Fill
10	26
20	26
	2.2 88
12	102
	4.5 318
17	104
	3 30
6	101
	7 107
10	135
	22 58
74	30
	175 195
61	60
	122 254
2	3
5	77
	59 211
1	10
27	37
	67 180
9	60

Sta. 218+00
Sta. 219+00 - Sta. 223+59.63

MED-252-3.76



Station	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
226+13				
226+20				
227+00				
227+82				
228+00				
226+13	2	0		
226+00				
225+54.5	3	3		
225+90	50	8		
225+00	37	22		
224+00	78	61		
224+00	5	11		
223+37	10	26		
224+00 - 228+00	18	43		



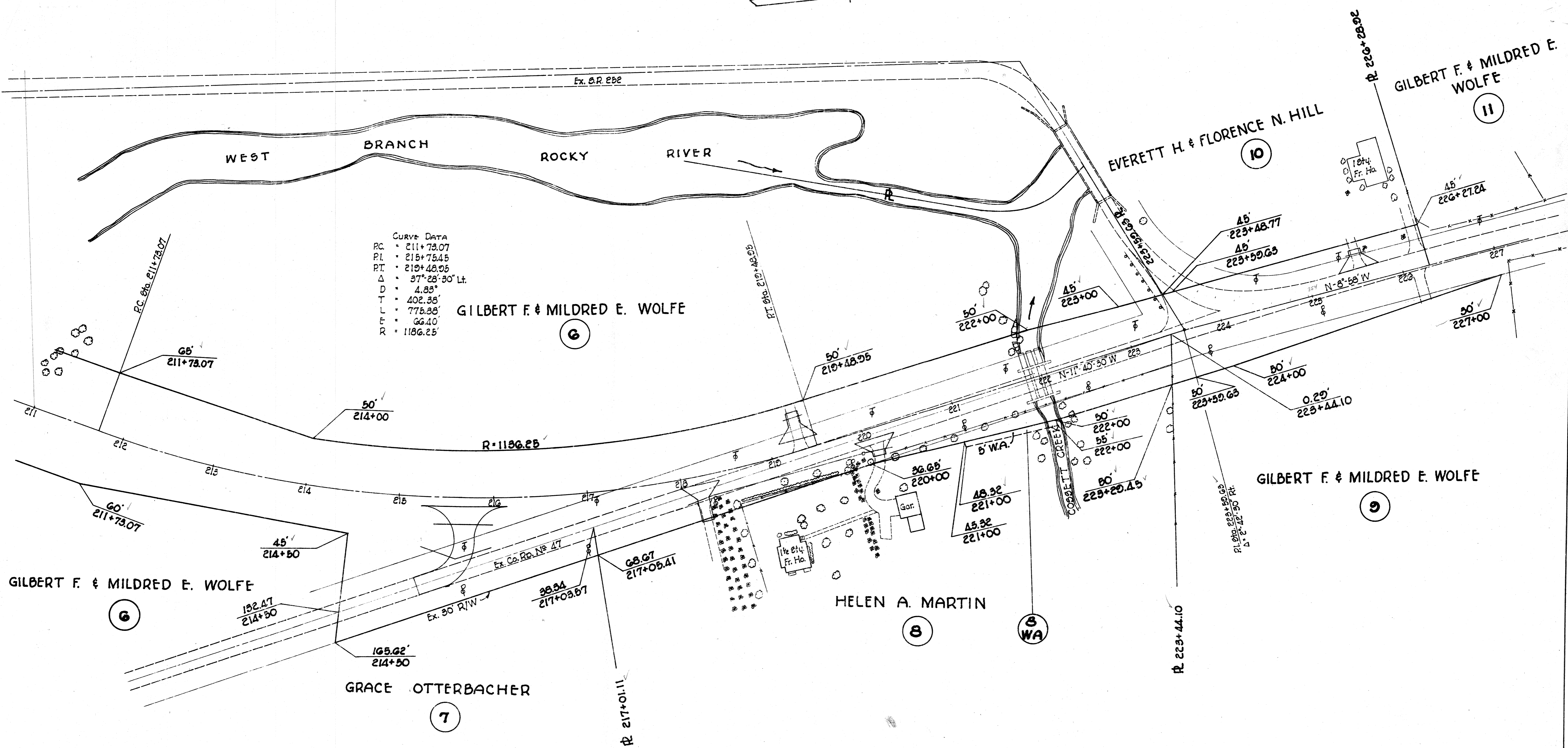
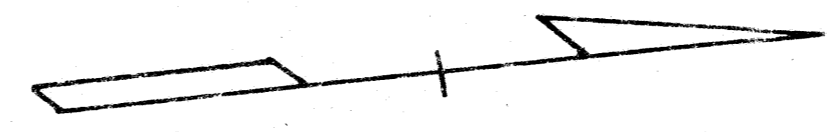
MEDINA COUNTY LIVERPOOL TOWNSHIP LOT 18 T 4 N R 15 W

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

MED-252-3.76
RIGHT-OF-WAY PLANS

21
27
2
2

1000
140
140
140
1120

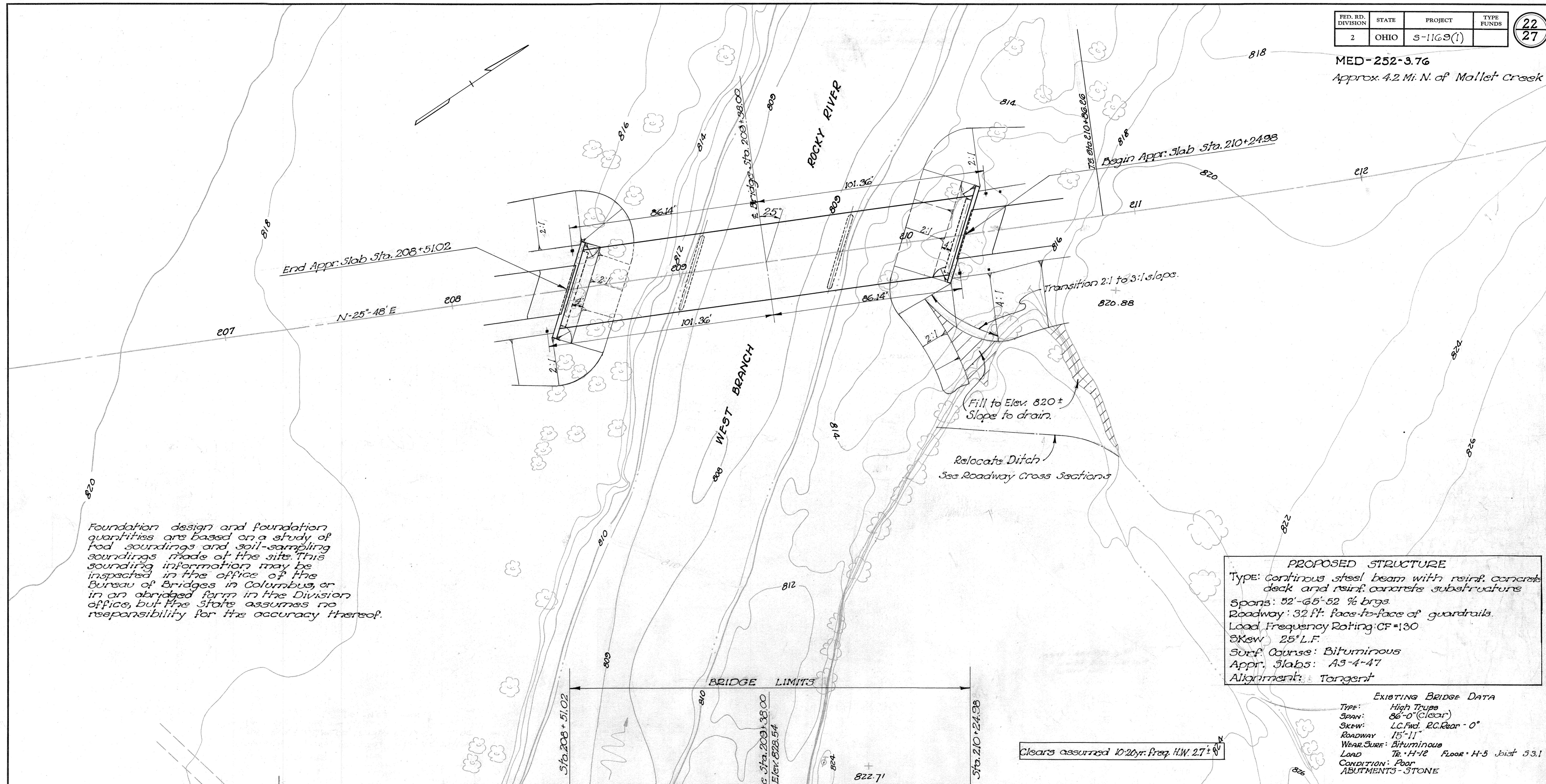


MEDINA COUNTY LIVERPOOL TOWNSHIP LOT 18 T 4 N R 15 W

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	S-1163(1)	

22
27

MED-252-3.76
Approx. 4.2 Mi. N. of Mallet Creek

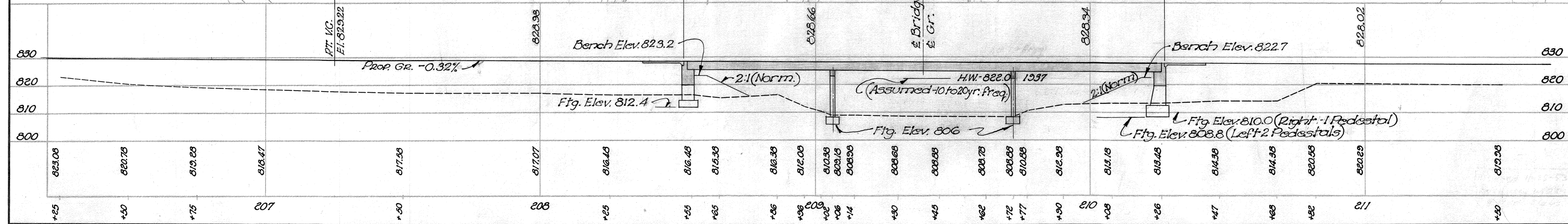


Foundation design and foundation quantities are based on a study of rod soundings and soil-sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus, or in an abridged form in the Division office, but the State assumes no responsibility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

PROPOSED STRUCTURE
 Type: Continuous steel beam with reinf. concrete deck and reinf. concrete substructure
 Spans: 52'-65'-52' brgs.
 Roadway: 32 ft. face-to-face of guardrails.
 Load Frequency Rating: CF=130
 Skew: 25° L.F.
 Surf. Course: Bituminous
 Appr. Slabs: A5-4-47
 Alignment: Tangent

EXISTING BRIDGE DATA
 Type: High Truss
 Span: 86'-0" (Clear)
 Skew: L.C. Fwd. R.C. Rear - 0°
 Roadway: 15'-11"
 Wear Surf: Bituminous
 Load: Te. H-12 Floor + H-5 Joist 53.1
 Condition: Poor
 Abutments - Stone

Clears assumed 10-20 yr. Freq. H.W. 2.7' ±



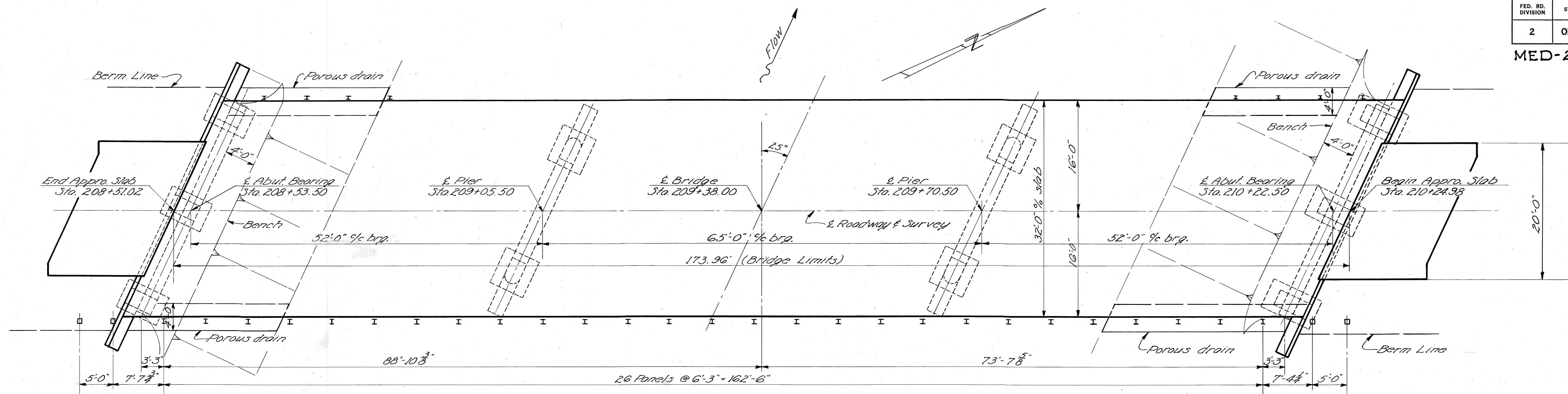
Drainage Area - 116 Sq. Mi.

STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
 BUREAU OF BRIDGES

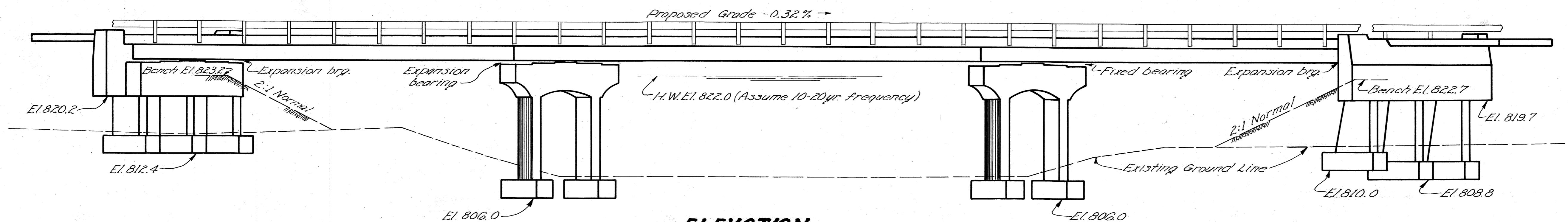
SITE PLAN
 BRIDGE NO. ME - 252 - 42
 W. BRANCH of ROCKY RIVER
 MEDINA CO. S.R. 252
 SEC. MED-252-3.76 STA. 209+38.00
 SCALE 1" = 20'

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
and	and	J.P.F.	J.P.F.	P.E.S.	C.H.D.

BFG 8-19-54



GENERAL PLAN



ELEVATION

GENERAL NOTES

- EXCAVATION QUANTITY** includes removal of fill material between top of earth bench and bottom of abutment crossbeam.
- WELDING** of structural steel shall be Class "A."
- PAINTING**, both shop and field, shall be according to Item 5-8 except that the paint shall be applied by brushing. Spray application will not be permitted. Field paint for rails shall be same color as for railing on approaches.
- POROUS DRAINS**, extending from face of abutments down to existing ground, shall be placed on and flush with embankment slopes at all four corners of the bridge. The drains shall be 4 in. wide and one foot thick. They shall be centered under edge of deck. They shall be composed of No. 1 or No. 12 gravel, stone, or slag. Construction procedure shall conform essentially to Item I-9. Trench excavation shall be included for payment with the price per cu. yd. bid for "Porous drains on embankment slopes."
- SURFACE FINISH OF CONCRETE**: Fascia of deck slab shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item 5-1.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPERS.	ABUTS.	PIERS	GENERAL
E-2	sum	sum	Cofferdams, cribs and sheeting.				sum
E-2	105	Cu.Yds.	Unclassified excavation, including shale.		44	47	14
S-1	133	Cu.Yds.	Class "C" concrete, superstructure.	133			
S-1	97	Cu.Yds.	Class "C" concrete, abutment except footings.		46	51	
S-1	38	Cu.Yds.	Class "C" concrete, pier caps and columns.				38
S-1	29	Cu.Yds.	Class "E" concrete, footings.		8	10	11
S-3	606	Sq.Yds.	Type "C" waterproofing.	606			
S-4	50,878	Lbs.	Reinforcing steel.	37,432	3,678	3,968	5,895
S-7	130,760	Lbs.	Structural steel.	130,760			
S-8	130,760	Lbs.	Field painting of structural steel.	130,760			
S-14	347.92	Lin. Ft.	Railing (Type I-15.13 with galvanized steel posts).	347.92			
S-29	15	Cu.Yds.	Porous drains on embankment slopes.				15
T-35	39	Cu.Yds.	Asphaltic concrete surface course, Type A or C (85-100)	39			

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

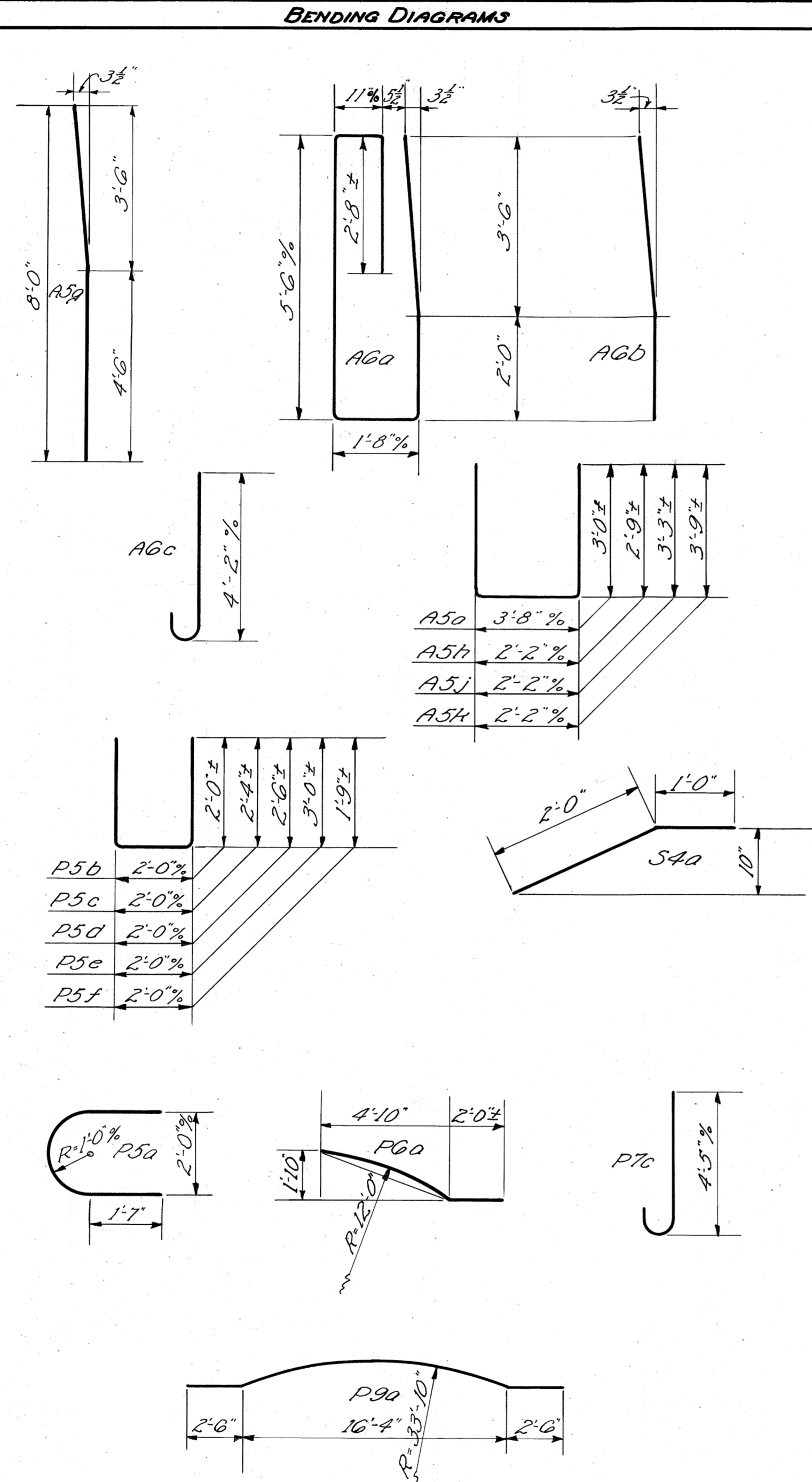
**GENERAL PLAN, ELEVATION,
NOTES & ESTIMATED QUANTITIES**

BRIDGE NO. ME-252-42
OVER WEST BRANCH OF ROCKY RIVER
MEDINA COUNTY
SEC. MED-252-3.76 STA 209+38.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.V.G.	J.V.G.	EA	C.W.	B.F.G.	8-19-54	11-2-54

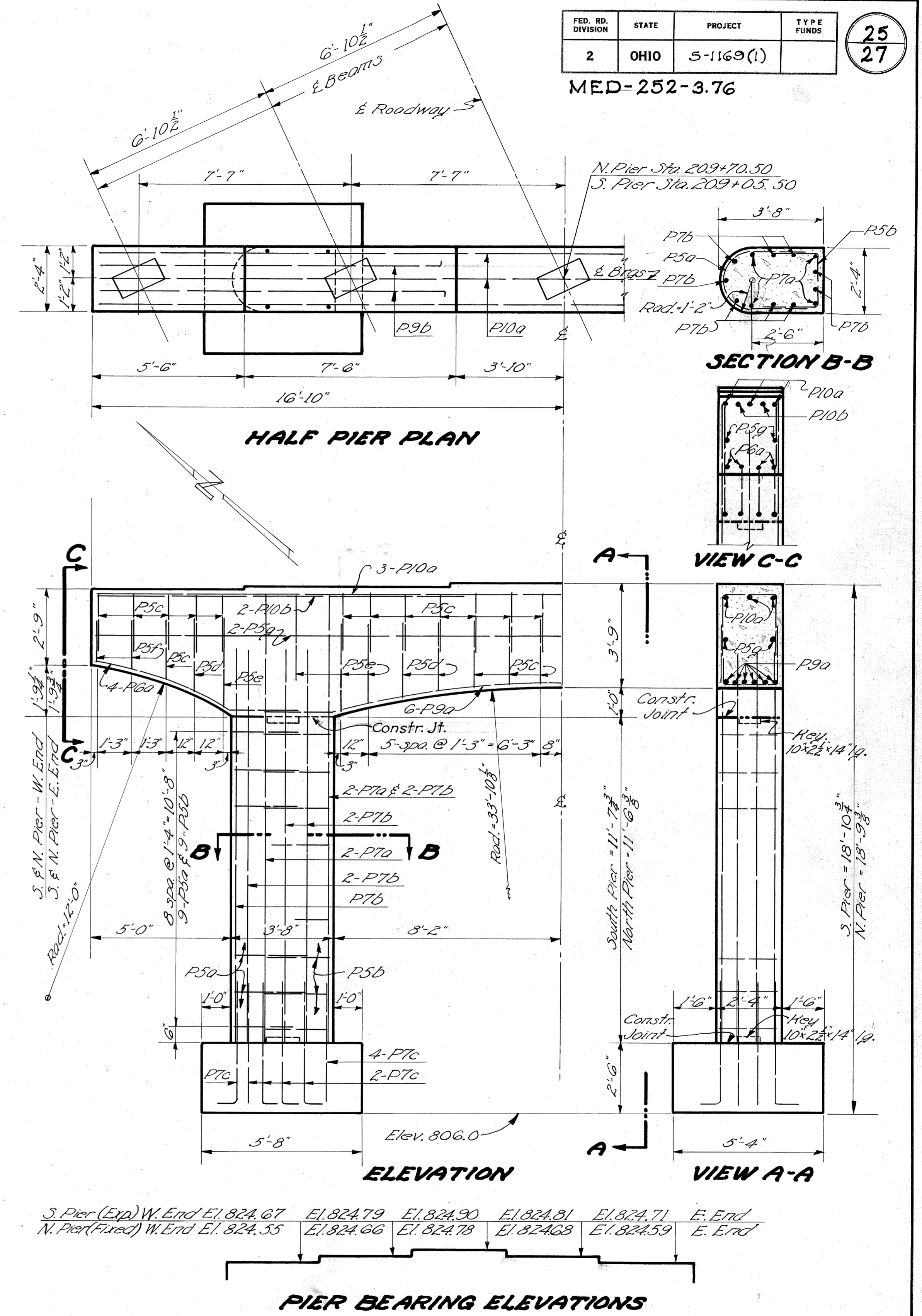
MED-252-3.76

REINFORCING STEEL LIST				
MARK	NO.	LENGTH	WEIGHT	SH'S
NORTH ABUTMENT				
A8a	12	34'-0"	1,089	5
A8b	6	24'-3"	389	3
A6a	17	15'-5"	394	B
A6b	17	5'-6"	140	B
A6c	33	4'-10"	240	B
A6d	22	10'-4"	341	S
A6e	11	9'-0"	149	S
A5a	46	9'-5"	452	B
A5b	10	23'-8"	247	S
A5c	1	11'-0"	11	S
A5d	1	12'-0"	13	S
A5e	6	6'-8"	42	S
A5f	13	8'-0"	108	S
A5g	7	8'-0"	58	B
A5h	12	7'-5"	93	B
A5j	12	8'-5"	105	B
A5k	10	9'-5"	98	B
SOUTH ABUTMENT				
A8a	12	34'-0"	1,089	5
A8b	6	24'-3"	388	5
A6a	17	15'-5"	394	B
A6b	17	5'-6"	140	B
A6c	30	4'-10"	218	B
A6f	30	7'-3"	327	S
A5a	46	9'-5"	452	B
A5b	10	23'-8"	247	S
A5c	1	11'-0"	11	S
A5d	1	12'-0"	13	S
A5e	6	6'-8"	42	S
A5f	13	8'-0"	108	S
A5g	7	8'-0"	58	B
A5h	24	7'-5"	186	B
PIERS				
P10a	6	33'-4"	861	S
P10b	8	13'-0"	448	S
P9a	12	21'-6"	877	B
P7a	16	15'-10"	518	S
P7b	36	13'-6"	993	S
P7c	52	5'-3"	338	B
P6a	16	7'-0"	168	B
P5a	36	6'-2"	232	B
P5b	36	5'-9"	216	B
P5c	64	6'-5"	428	B
P5d	12	6'-9"	84	B
P5e	16	7'-9"	129	B
P5f	8	5'-3"	44	B
P5g	4	33'-4"	139	S
REPLACEMENT BARS				
RE10	1	7'-2"	31	S
RE9	1	6'-10"	23	S
RE8	1	6'-6"	17	S
RE7	1	6'-2"	13	S
RE6	1	5'-11"	9	S
RE5	2	5'-7"	12	S
RE4	1	5'-3"	4	S



NOTE: In the reinforcing steel bar marks, the numeral following the first letter is the Bar Number which indicates the size of the bar.

MARK	NO.	LENGTH	WEIGHT	SH'S
SUPERSTRUCTURE				
S6a	267	28'-6"	11,429	S
S6a1	2	29'-1"	87	S
S6a2	2	27'-10"	84	S
S6a3	2	26'-7"	80	S
S6a4	2	25'-4"	76	S
S6a5	2	24'-1"	72	S
S6a6	2	22'-10"	69	S
S6a7	2	21'-7"	65	S
S6a8	2	20'-4"	61	S
S6a9	2	19'-1"	57	S
S6a10	2	17'-10"	54	S
S6a11	2	16'-7"	50	S
S6a12	2	15'-4"	46	S
S6a13	2	14'-1"	42	S
S6a14	2	12'-10"	39	S
S6a15	2	11'-7"	35	S
S6a16	2	10'-4"	31	S
S6a17	2	9'-1"	27	S
S6a18	2	7'-10"	24	S
S6a19	2	6'-7"	20	S
S6a20	2	5'-4"	16	S
S6a21	8	4'-1"	49	S
S5a	267	31'-8"	8,819	S
S5a1	2	30'-8"	64	S
S5a2	2	29'-5"	61	S
S5a3	2	28'-2"	59	S
S5a4	2	26'-11"	56	S
S5a5	2	25'-8"	54	S
S5a6	2	24'-5"	51	S
S5a7	2	23'-2"	48	S
S5a8	2	21'-11"	46	S
S5a9	2	20'-8"	43	S
S5a10	2	19'-5"	41	S
S5a11	2	18'-2"	38	S
S5a12	2	16'-11"	35	S
S5a13	2	15'-8"	33	S
S5a14	2	14'-5"	30	S
S5a15	2	13'-2"	27	S
S5a16	2	11'-11"	25	S
S5a17	2	10'-8"	22	S
S5a18	2	9'-5"	20	S
S5a19	2	8'-2"	17	S
S5a20	2	6'-11"	14	S
S5a21	2	5'-8"	12	S
S5a22	8	4'-5"	37	S
S5b	335	35'-8"	12,462	S
S5c	56	28'-0"	1,639	S
S4a	384	3'-0"	1,170	B



NOTE: PIER FOOTINGS shall extend 3 inches into sandy shale or to the elevation shown, whichever is lower.

REINFORCING BARS shall be 2 inches clear from face of concrete unless otherwise noted. Reinforcing in pier caps shall be placed to clear bearing anchor bars.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

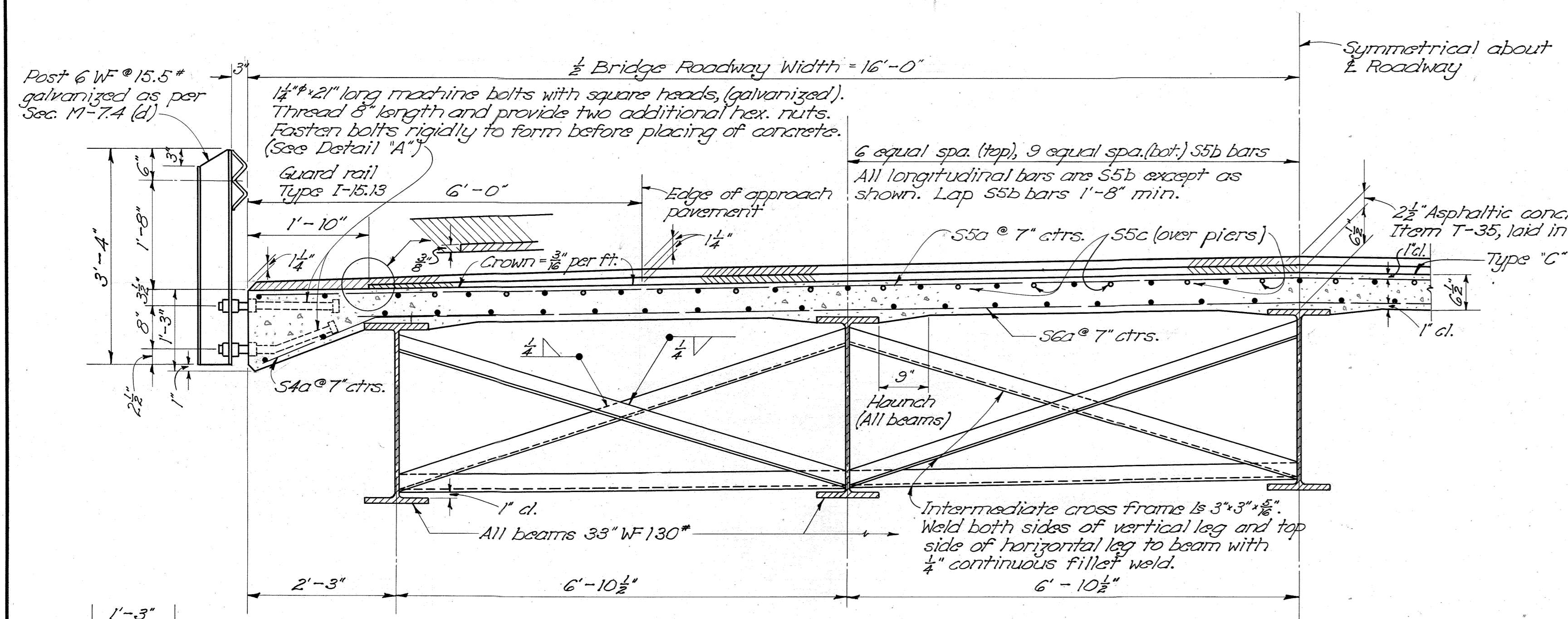
PIER DETAILS AND REINFORCING STEEL LIST

BRIDGE NO. ME-252-42
OVER WEST BRANCH OF ROCKY RIVER

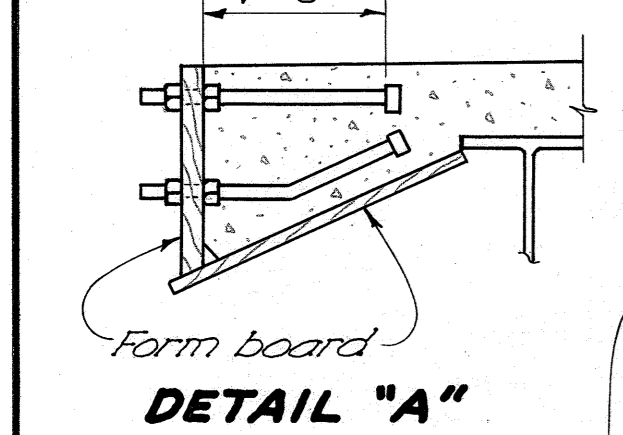
MEDINA COUNTY
SEC. MED-252-3.76 STA. 209+32.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.V.G.	J.V.G.	EA	C.W.	BFG	8-19-54	

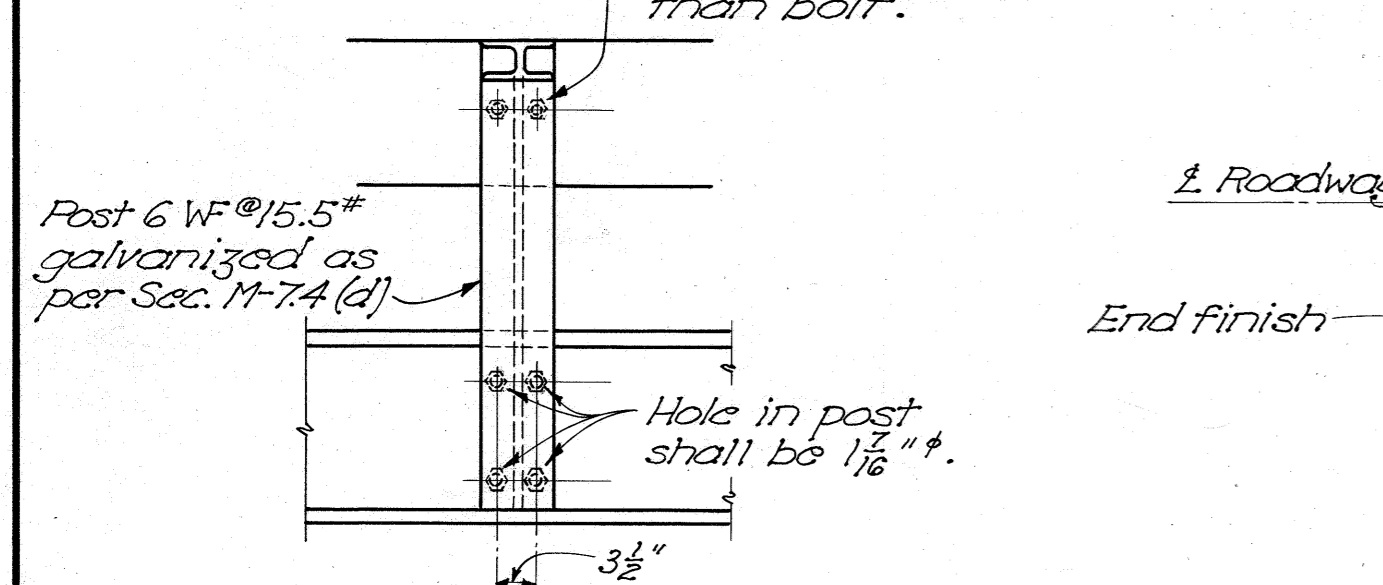
MED-252-376



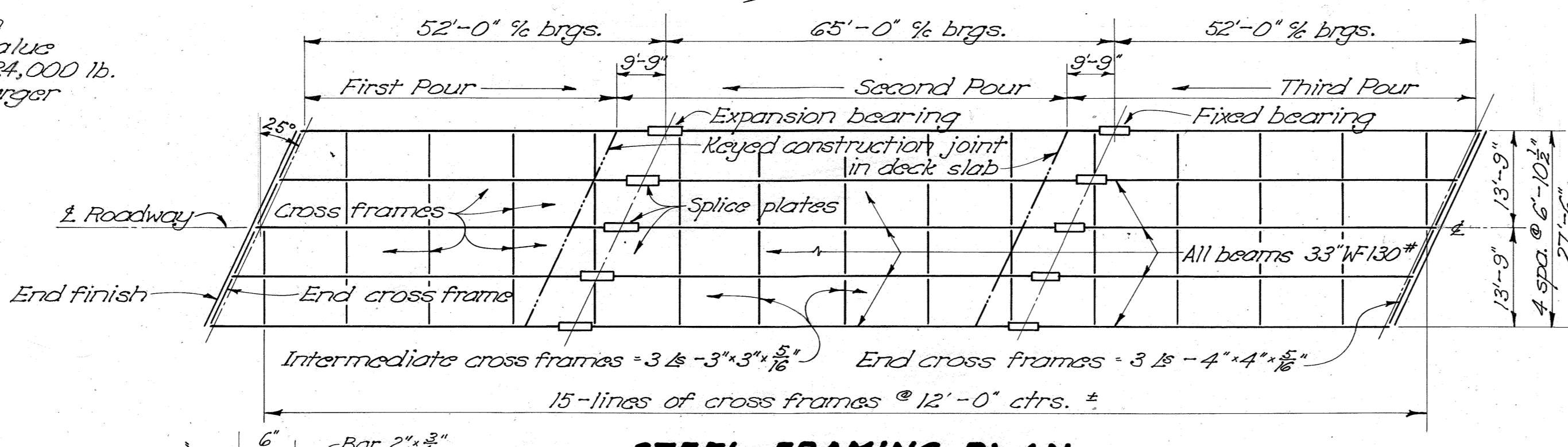
TRANSVERSE HALF SECTION



DETAIL "A"

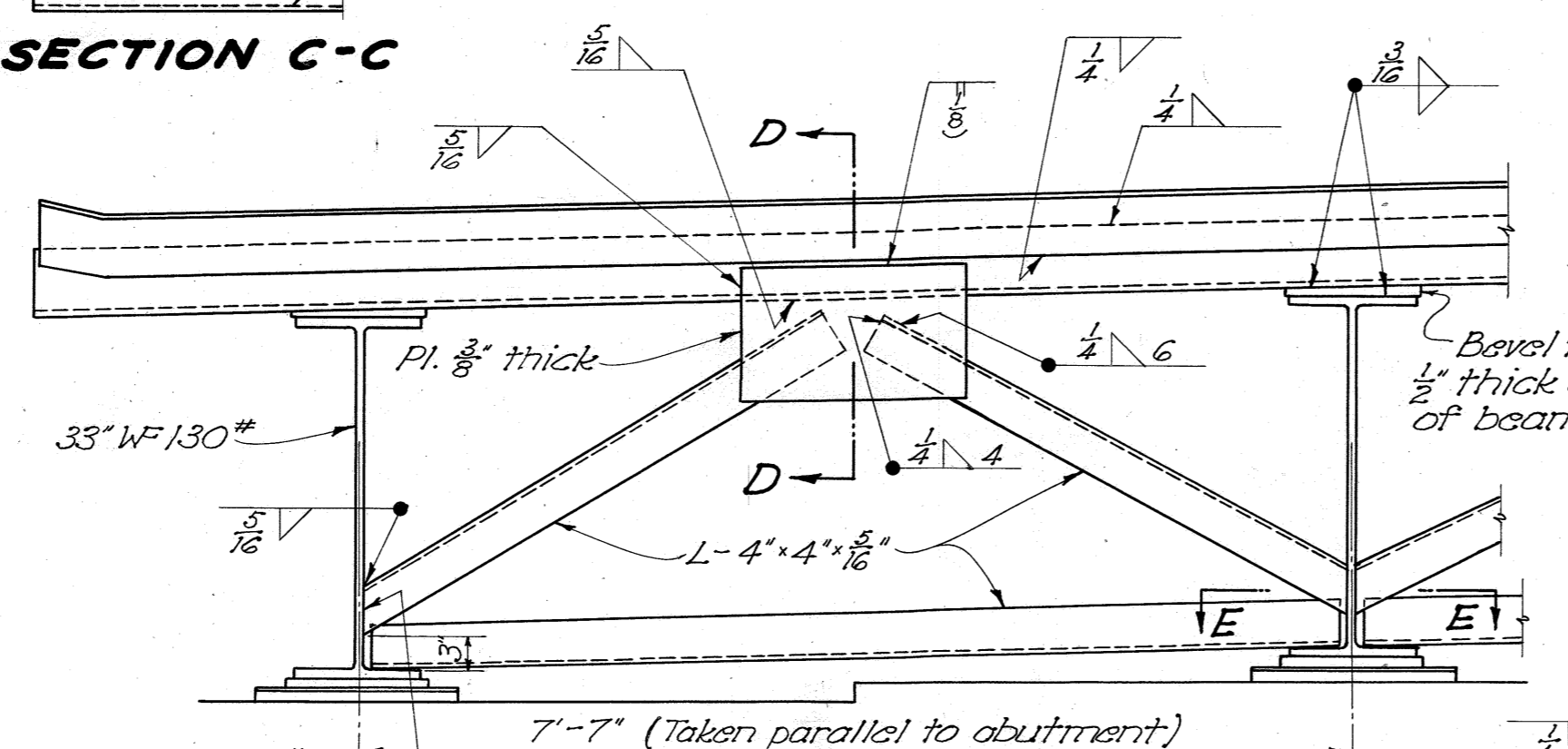


ELEVATION OF RAILING POST

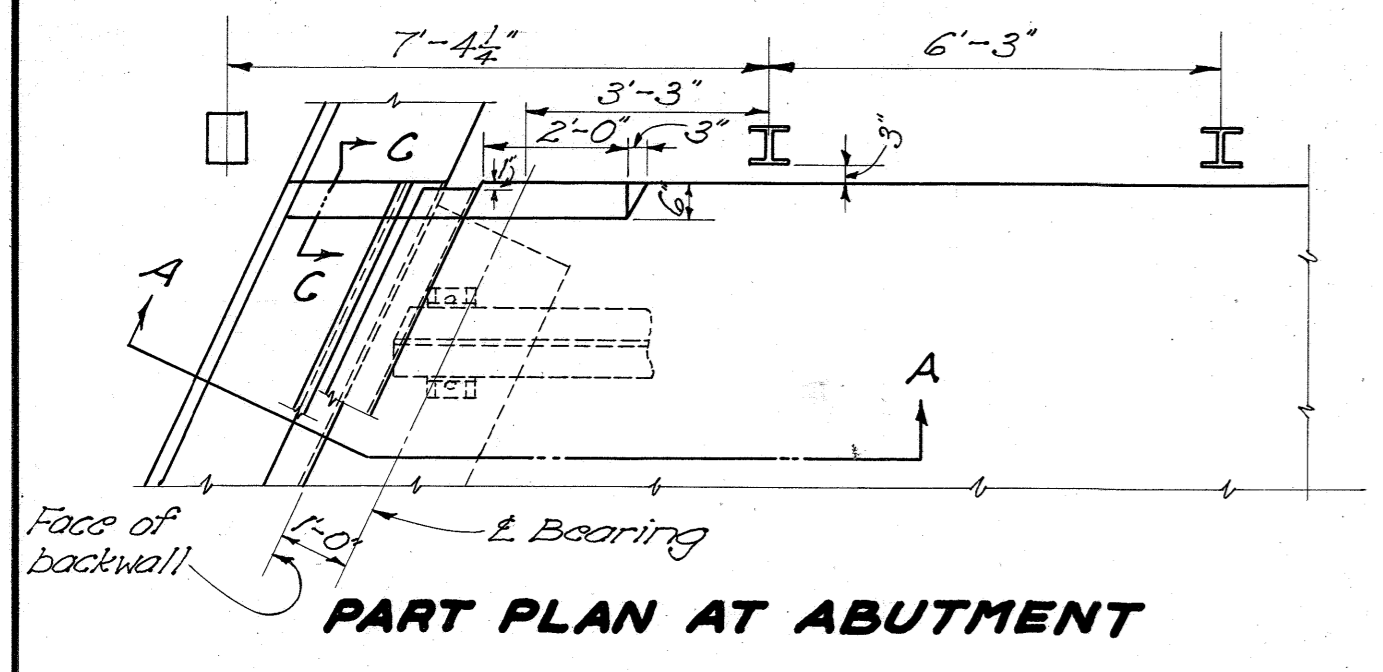


STEEL FRAMING PLAN
Slab pouring sequence shown.

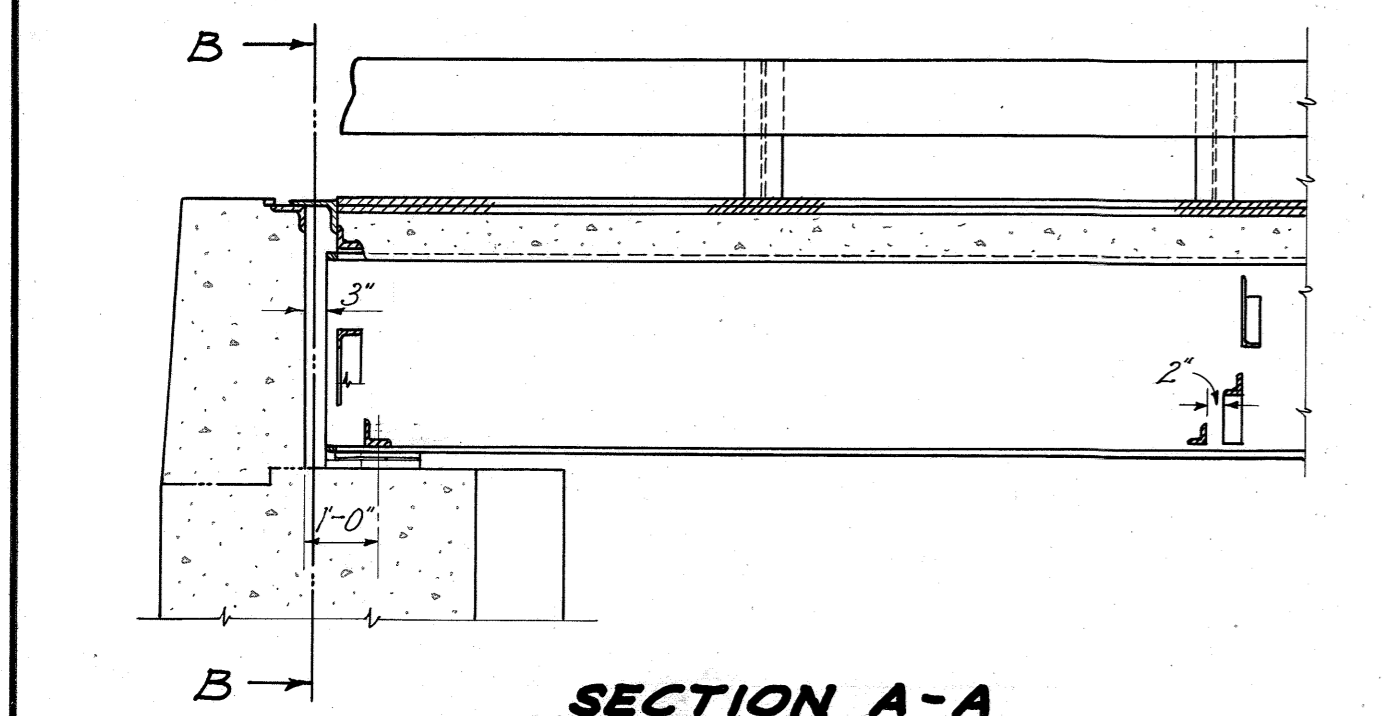
SECTION C-C



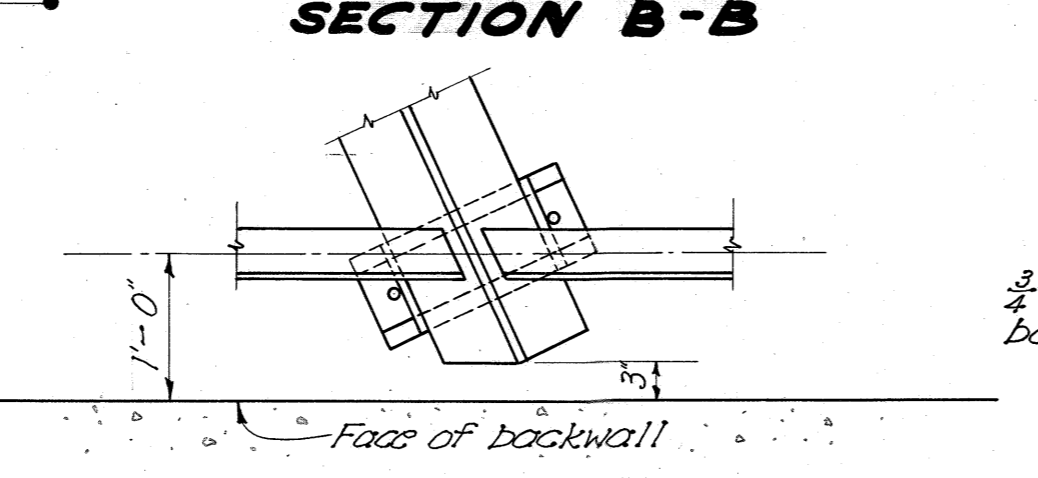
SECTION B-B



PART PLAN AT ABUTMENT



SECTION A-A



SECTION E-E

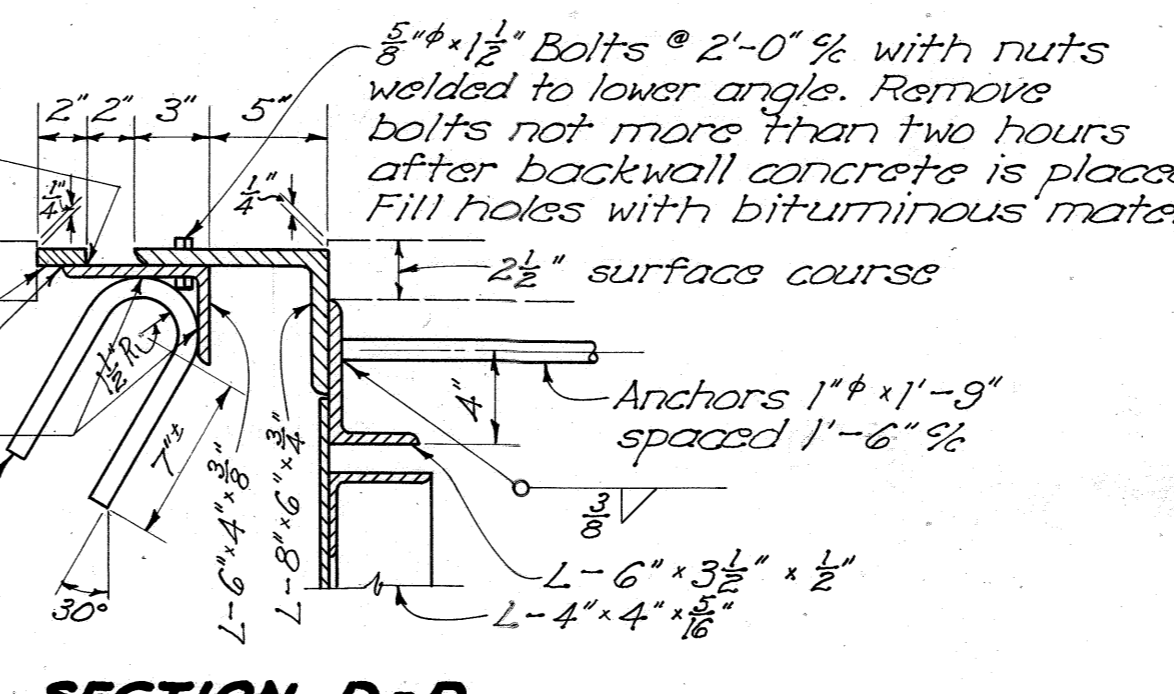
BEAM SPLICE WELDING PROCEDURE:

1. Raise abutment end of beams 1 inch.
2. Butt-weld the beam flanges and web.
3. Weld the bottom and top moment plates.
4. Lower the beam ends to final position.

NOTE:

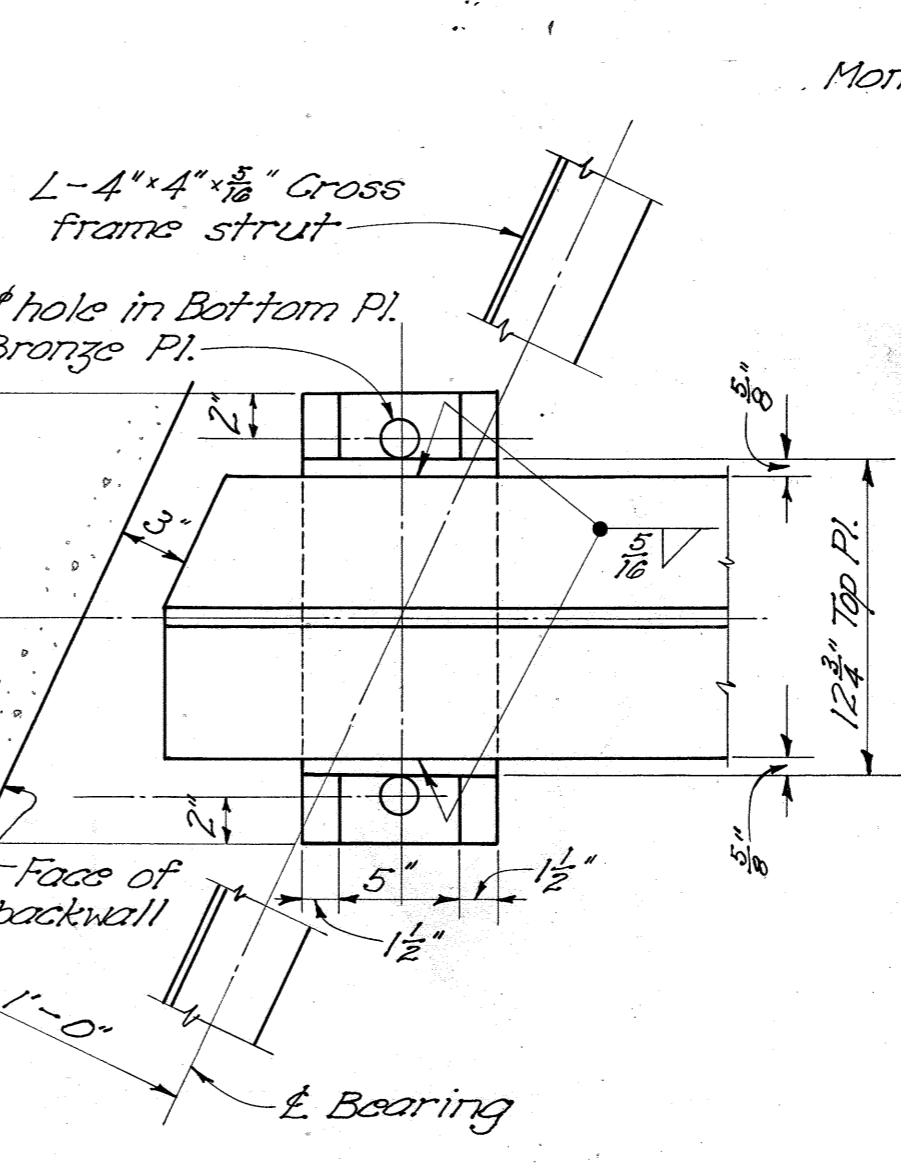
BEARING PLATES: Cast leaded-bronze sliding plates and sheet lead are included with structural steel for payment.

CAMBER: No mill-cambering is required. Beams shall be so fabricated that any curved beams shall be placed convex flange up.

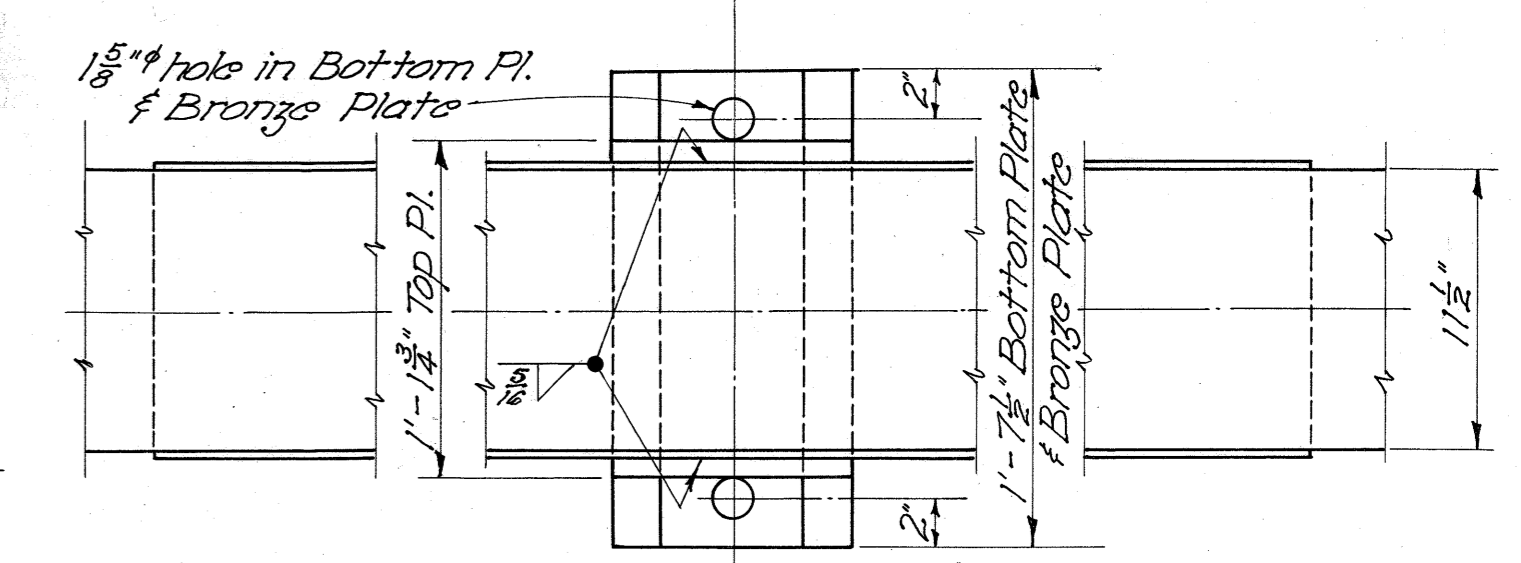
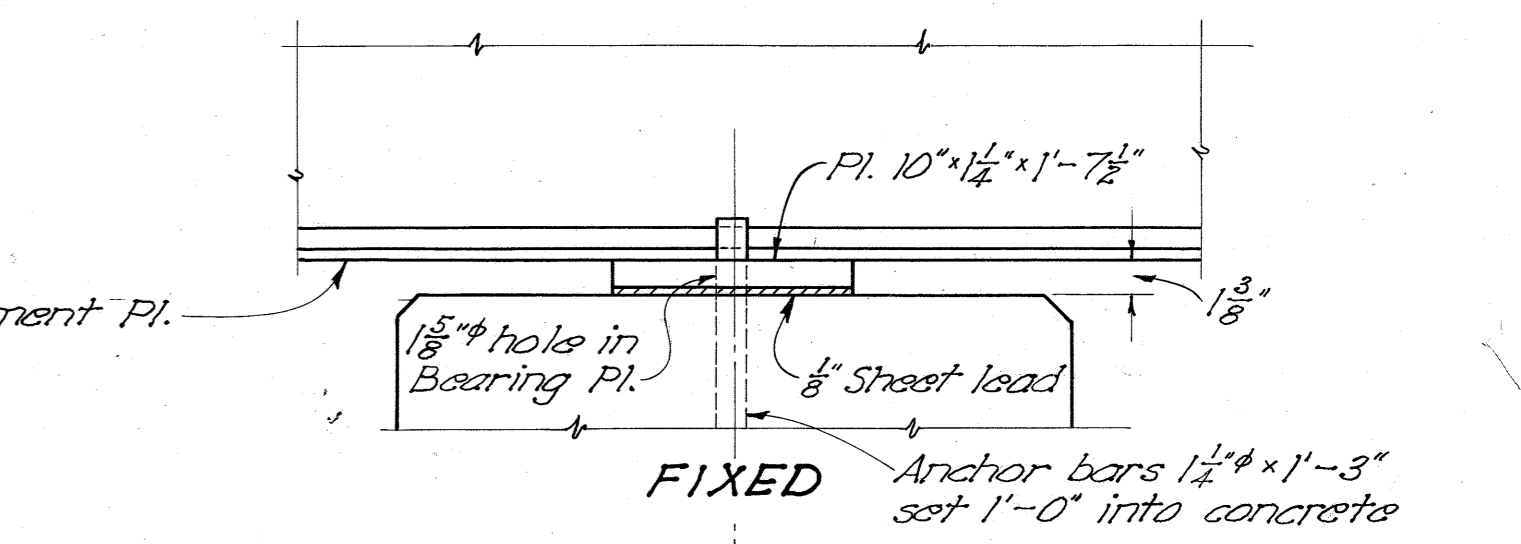


SECTION D-D

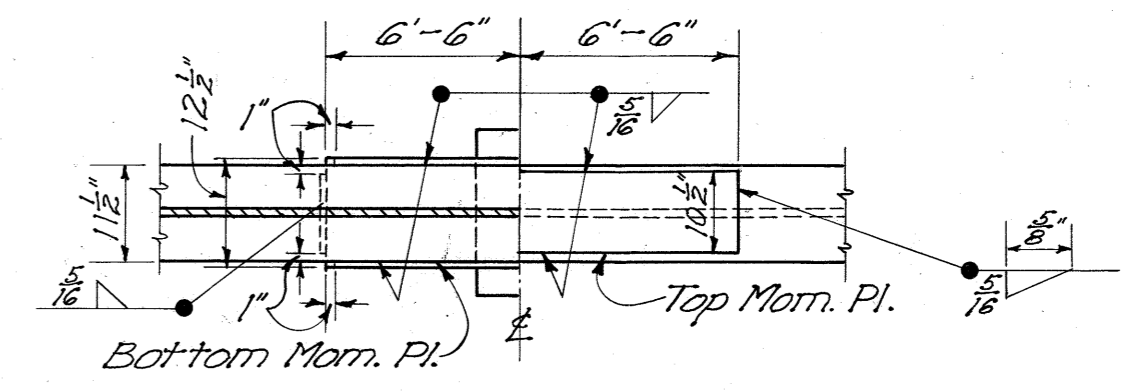
DIAGRAM SHOWING STAGGER OF S5c BARS OVER PIERS



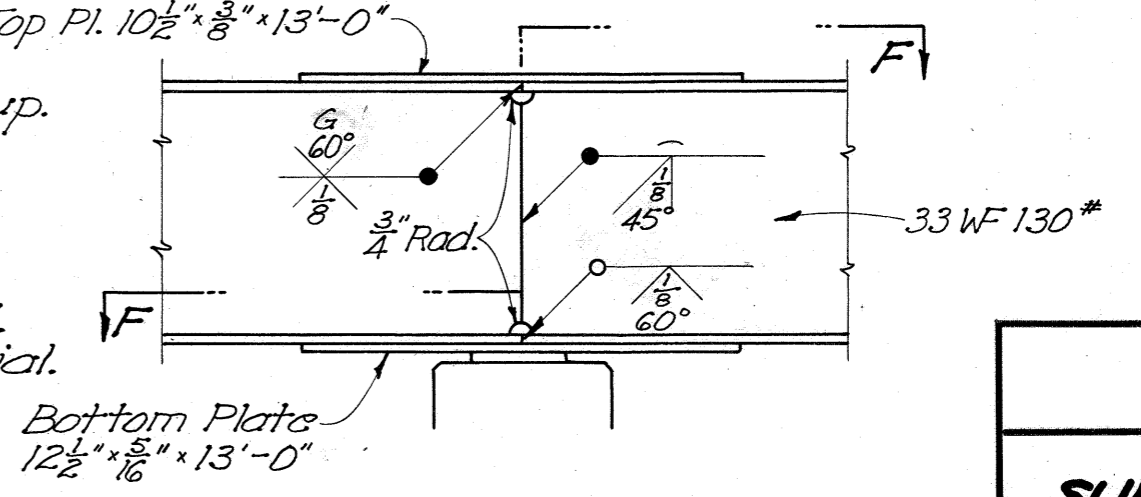
ABUTMENT BEARING PLATES



EXPANSION PIER BEARING PLATES

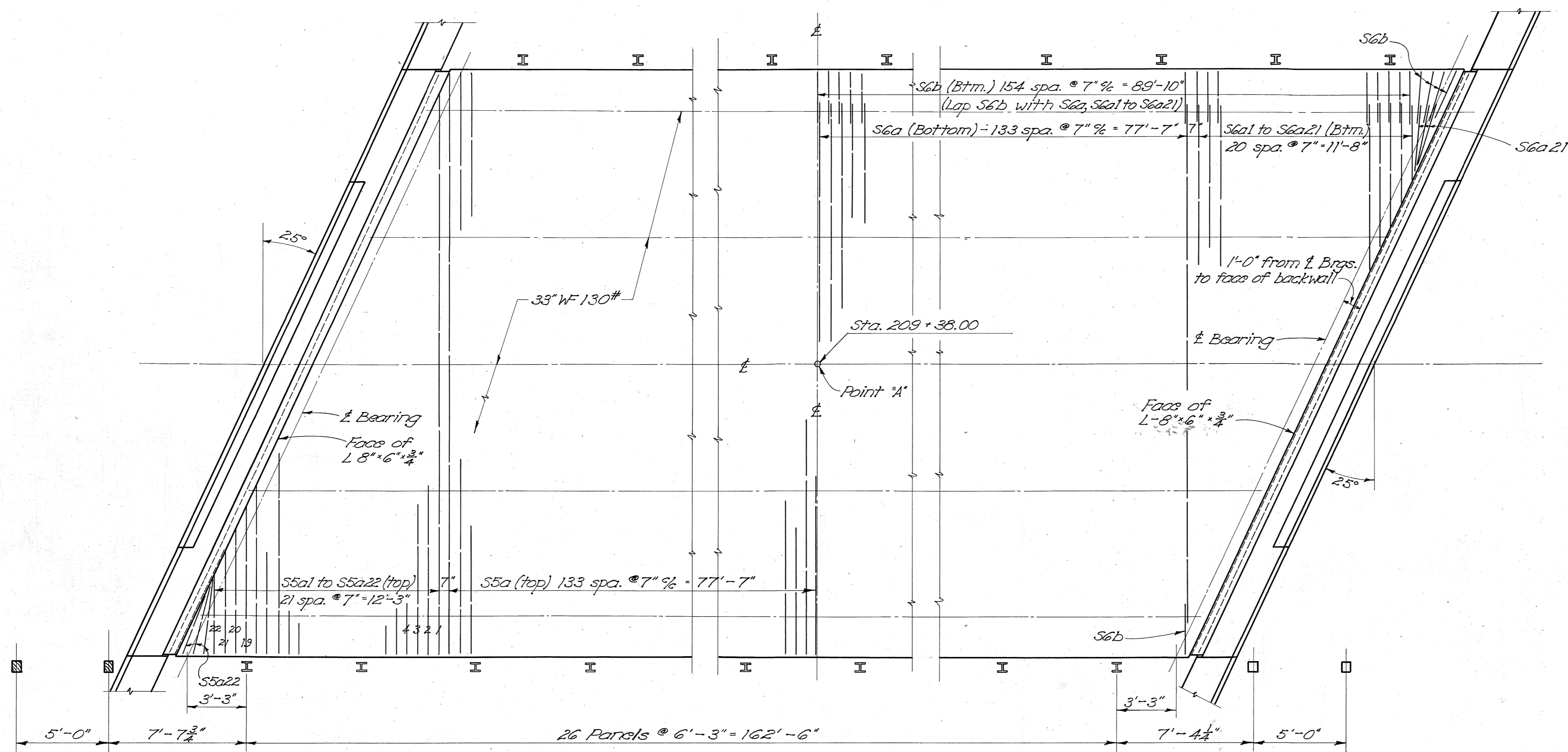


SECTION F-F



BEAM SPLICE DETAILS

STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES AND RAILROAD CROSSINGS					
SUPERSTRUCTURE DETAILS					
BRIDGE No. ME-252-42 over W. BRANCH of ROCKY RIVER					
Medina County Sec. MED-252-376 Sta. 209 + 38.00					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
J.V.G.	J.V.G.		C.W.	BFG	8-19-54



PLAN OF SUPERSTRUCTURE SHOWING TRANSVERSE REINFORCING
(Symmetrical by rotation about Point "A")

STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES AND RAILROAD CROSSINGS					
SUPERSTRUCTURE PLAN					
BRIDGE No. ME-252-42 over WEST BRANCH of ROCKY RIVER					
Medina County Sec. MED-252-3.76 Sta. 209+38.00					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
J.V.G.	J.V.G.		C.W.	BFG	8-19-54