

MICROPICTURED  
JAN 8 1988

STATE OF OHIO  
DEPARTMENT OF HIGHWAYS

I-1G-75-G(1G)179

FED. ID. DIVISION	STATE	PROJECT
2	OHIO	I-1G-75-G(1G)179

WOO-75-14.91

1  
182

CONVENTIONAL SIGNS

Township Line	-----
Section Line	-----
Center Line	-----
Corporation Line	-----
Property Line	-----
Fence Line	-----
Limited Access and Right of Way	LA R/W
Limited Access Only	LA
Right of Way Only	R/W
Existing Right of Way	-----
Guard Rail	-----
Railroads	-----
Pole Lines	-----
Drainage Lines	-----
Trees or Stumps	-----
New Exist.	-----
Existing Exist.	-----
Remove	-----
Telephone & Power	-----
New Exist.	-----
Remove	-----

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LINE DATA

I-75-G(1G)179  
Sta. 792+53.22 to Sta. 990+00.00 = 19746.78 Lin.Ft.  
Sta. 1020+00 to Sta. 1057+00 = 3700.00 Lin.Ft.  
Net Length of Project I-75-G(1G)179 = 23446.78 Lin.Ft. or 4.440 Miles  
Add for Approaches (See Sht. No. 2)  
Net Length of Work I-75-G(1G)179 = 9996.22 Lin.Ft.  
= 33443.00 Lin.Ft. or 6.333 Miles

IG-75-G(1G)179  
Sta. 990+00 to Sta. 1020+00 = 3000.00 Lin.Ft. or 0.568 Miles  
Net Length of Project & Work IG-75-G(1G)179 = 23446.78 + 3000.00 = 26446.78 Lin.Ft. or 5.008 Miles

I-1G-75-G(1G)179  
Total Length of Project = 23446.78 + 3000.00 = 26446.78 Lin.Ft. or 5.008 Miles  
Total Length of Work = 33443.00 + 3000.00 = 36443.00 Lin.Ft. or 6.902 Miles

STANDARD CONSTRUCTION DRAWINGS							
DRAWING NO.	DATE	DRAWING NO.	DATE	DRAWING NO.	DATE	DRAWING NO.	DATE
MC-1	6-1-65	GP-5A	6-1-65	HW-C	7-15-57		
MC-3	5-1-66	GR-C	6-1-65	HW-E	6-1-65	SD-1-63 (Sh. 1, 2, 3, 4)	11-12-63
BP-1	6-1-65	GP-5B	6-1-65	MC-4	6-1-65	FSB-1-62	1-15-63
BD-2	6-1-65	L-1	6-1-65	CB-2-2A&D	6-1-65	SD-2-64	11-25-64
F-2	6-1-65			CB-3	6-1-65	CS-2-65 (Sh. 1 & 2)	6-1-65
F-3	6-1-65			SP-53	6-30-65		
BP-3	6-1-65	BD-3	6-1-65	HW-2	6-1-65	BR-1-65 (Sh. 1 & 2)	11-20-65
FACI-1	6-1-65	BP-3	6-1-65	HW-3	6-1-65	SD-1-65	8-11-65
FACI-2	6-1-65	BP-4	6-1-65	CB-4	6-1-65	RB-1-55	2-2-59
GR-1	6-1-65		AS-1-54		8-10-65		
GR-2A	9-1-65						

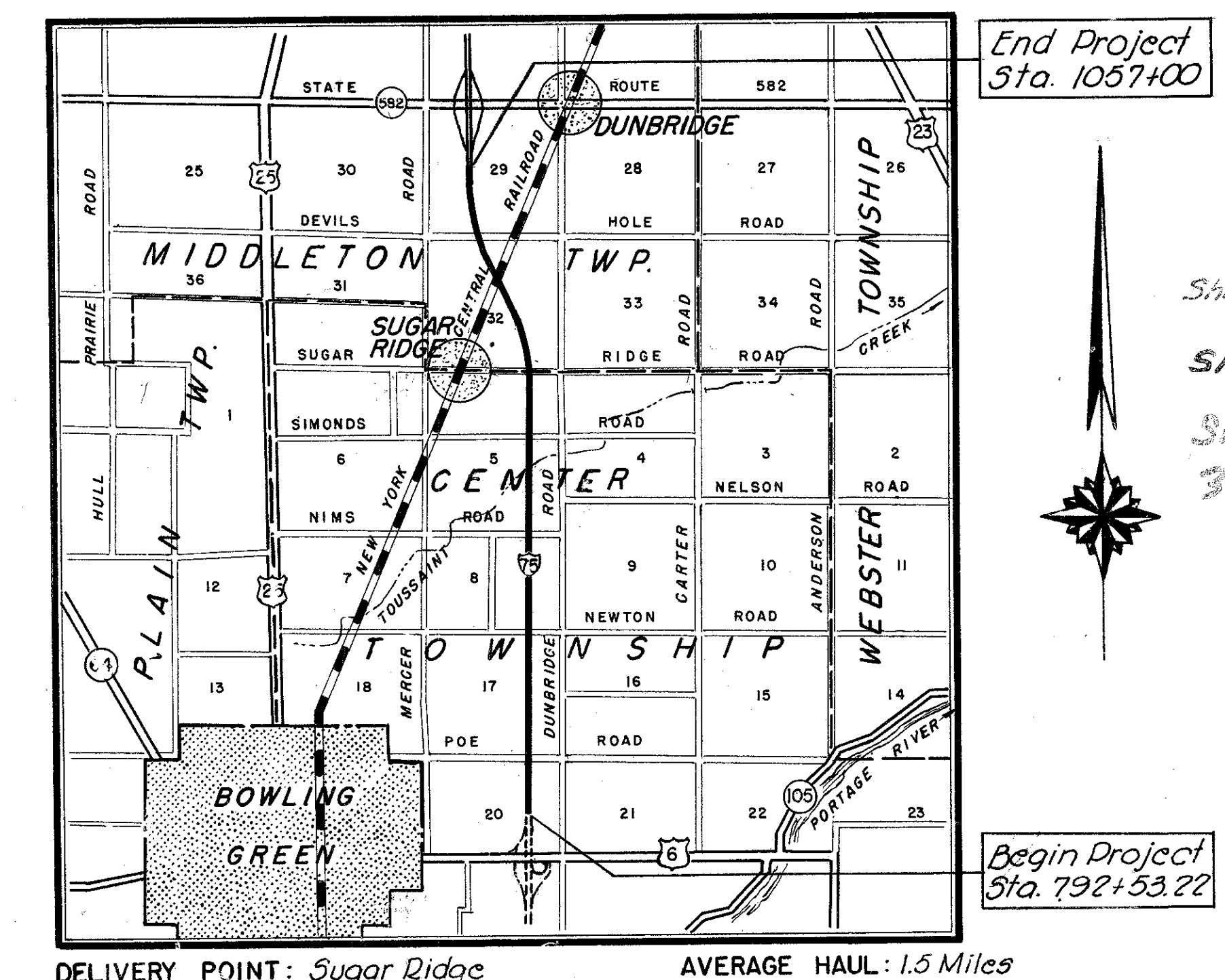
File No. WOO-75-14.91  
Date of Letting  
Contract No.

19

WOO-75-14.91

CENTER AND MIDDLETON TOWNSHIPS  
WOOD COUNTY

GRADE SEPARATION WITH THE NEW YORK CENTRAL RAILROAD



LOCATION MAP

SCALE OF MILES

Portion to be Improved

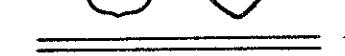
State Roads



Federal Roads



Other Roads



SCALE

Plan



Profile: Horizontal



Profile: Vertical



Cross Sections



SUPPLEMENTAL SPECIFICATIONS

Specification No.	Date	Specification No.	Date
828	3-21-66		
825	4-22-65		
803	8-24-65		
806	3-3-66		
801	9-2-65		
1001	3-21-66		
EII	3-29-65		
608	2-7-66		

PLANS PREPARED BY  
CHARLES L. BARBER & ASSOCIATES  
CONSULTING ENGINEERS  
TOLEDO, OHIO

Charles L. Barber Oct. 16, 1964  
Date

DEPARTMENT OF COMMERCE  
BUREAU OF PUBLIC ROADS

APPROVED:

DIVISION ENGINEER

DATE

Rev. 2-2-67 CEH

3-10-72 Revised As-Built G.P.J.

LIMITED ACCESS

This improvement is especially designed for through traffic and has been declared a Limited Access Highway or Freeway by action of the Director of Highways in accordance with the provisions of Section 5511.02 of the Revised Code of Ohio.

1965 SPECIFICATIONS (See Note Sht. No. 2)

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 for this improvement will be provided by the State of Ohio.

I hereby approve these plans and declare the making of this improvement will not require the closing of the highway to traffic, and that provisions for the maintenance and safety of traffic will be as set forth on the plans and estimates.

Sheet Nos. 111A, 121, 123, 124, 125, 126, 128, 130, 131, 132, 133, 139, 141, 142, 143, 144, 146, 147, 148, 149, 150, 152 and 158 revised 1-27-67

Sheet Nos. 153 & 155 revised 4-21-67

Sheets 121, 128, 135, 137, 146, 152

3-19-67 Revised As-Built G.P.J.

Approved Date Nov 4, 1964

Approved Date 6-1-65

Approved Date 6-17-66

Approved Date 8-1-66

Approved Date 8-5-66

Thomas M. May  
Division Deputy Director

C. V. Adelstein

Engineer of Bridges

R. V. Richter

Engineer of Location & Design

R. E. Shultz

Deputy Director of Design & Construction

T. A. Borard

Deputy Director of Right-Of-Way

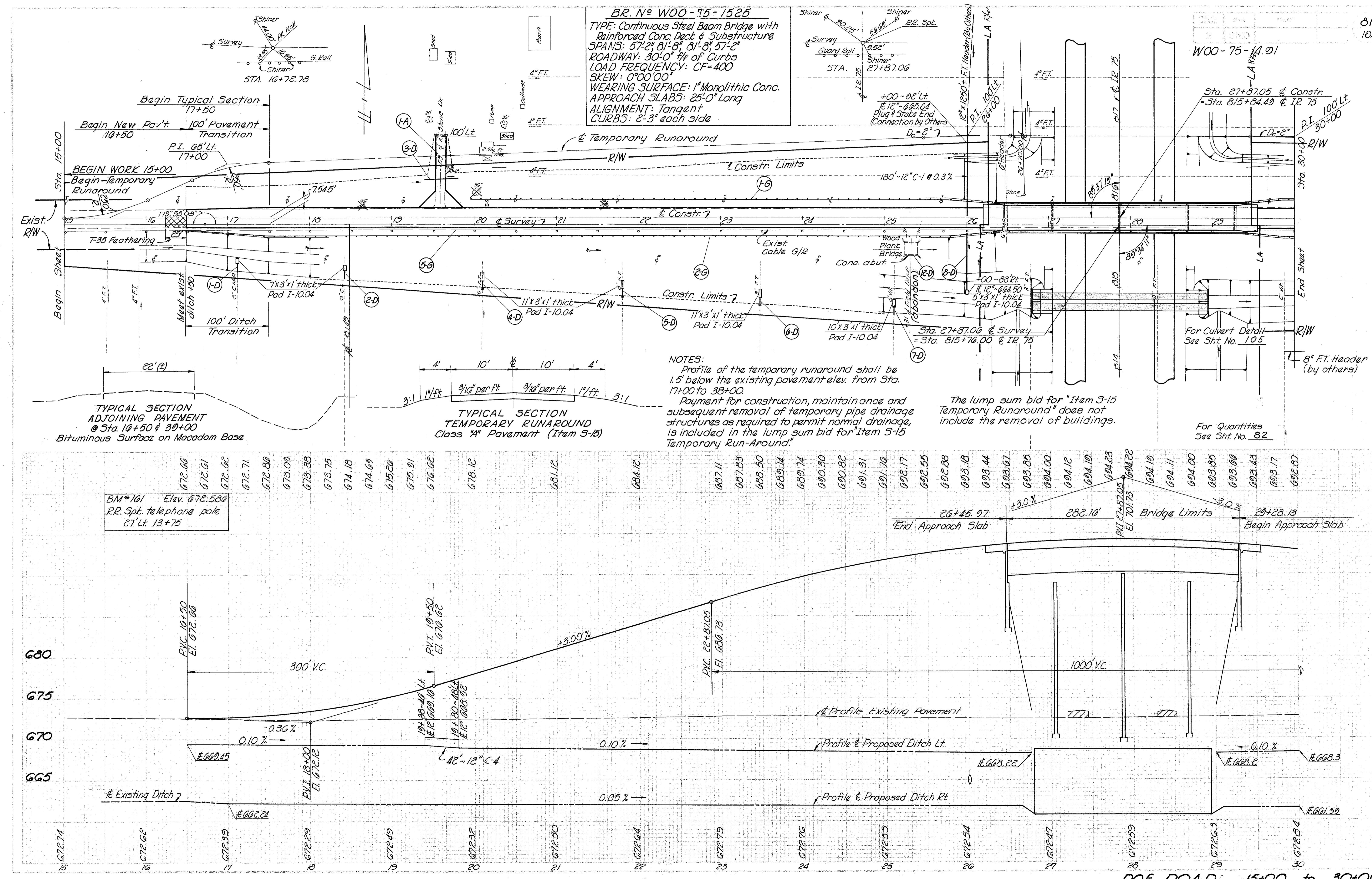
J. W. Wilson

Deputy Director of Planning & Programming

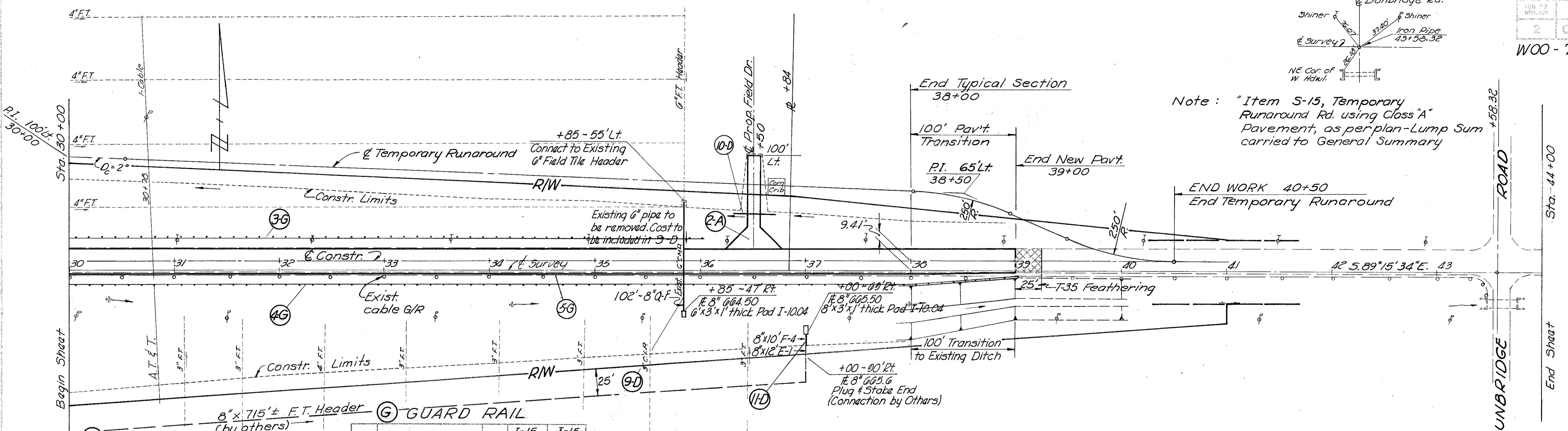
First Assistant Director

P. J. Marshall

Director of Highways



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182  
WOO - 75-14.91

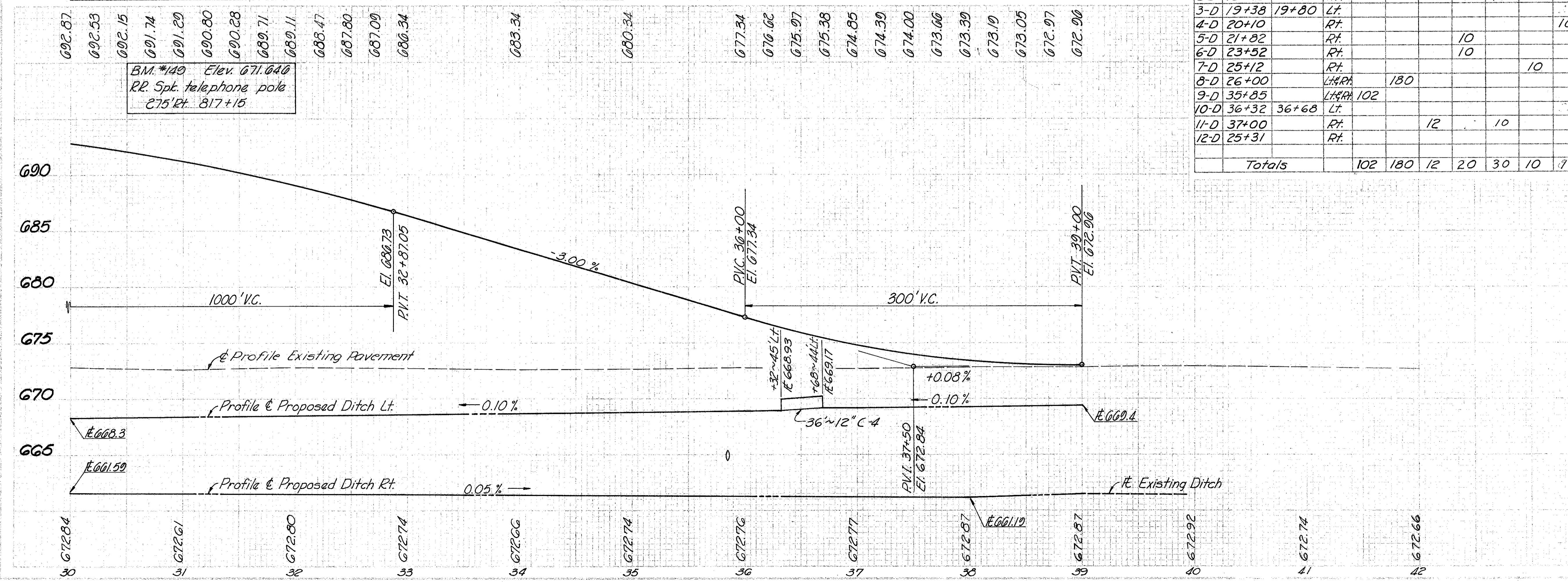


(A) DRIVES				
Ref. No	Station	Side	Width	B-19 6" Spec. Calcium Chloride
1-A	19+59	L.	12	27 .08
2-A	36+50	L.	12	27 .08
Totals			54	.16

Ref. No	Station	Side	I-15 Steel Beam	I-15 Remove Dispose
	From	To	L.F.	L.F.
1-G	19+96.20	26+33.70	Lt. G37.50	
2-G	16+46.20	26+33.70	Rt. G37.50	
3-G	29+40.40	36+02.90	Lt. 662.50	
4-G	29+40.40	39+02.90	Rt. 962.50	
5-G	16+46	39+03	Rt. 2257	
	Totals		3250	2257

POE RD. PAVEMENT									
Station	T-35	B-35	T-30	B-20	I-22	I-7	Appr	E-1	I-1
From	1/4	1/4" @ 0.4	8"	6	6	S.Y.	Comp.	Crush.	5-24 I-1
16+25	39+25	C.Y.	C.Y.	S.Y.	S.Y.	S.Y.	Subgd.	Rem. C4	
	179	389	2037	5305	920	182	5092	Agg. Exist.	
								Slope Struct.	
								M-6.46(M-6.46)	
								Prot.	
								Lin. Ft.	
								5yd. Lump	

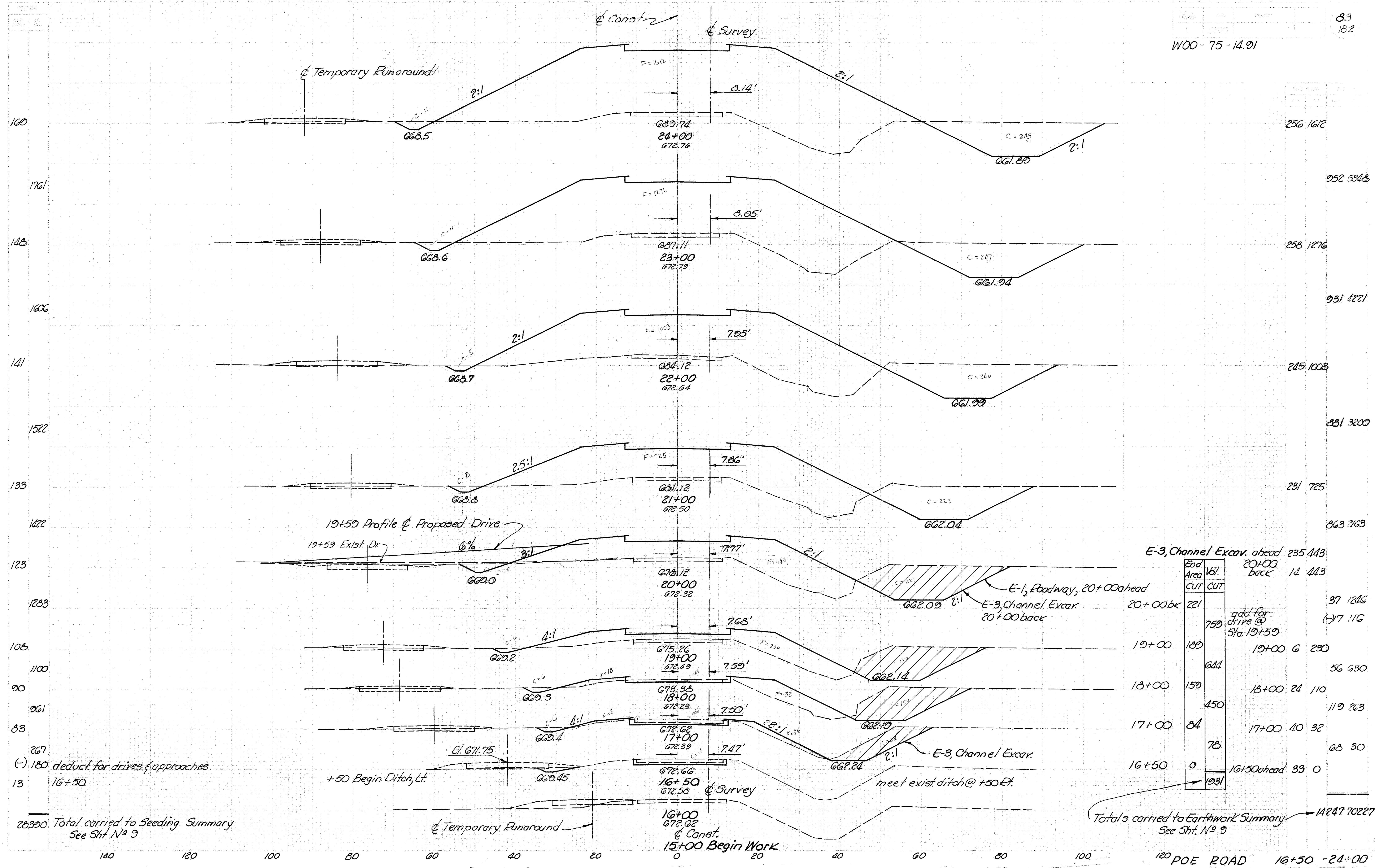
D DRAINAGE									
Ref. No	Station	Side	F	C-1	C.I.F-1	C.I.F-4	I-10	5-24	I-1
1-D	17+12	Rt.	8"	12	8"	6" 10" 12"	10	2.3	
2-D	18+43	Rt.	Sec. Sec.				10	2.3	
3-D	19+38	Lt.							
4-D	20+10	Rt.					10	3.7	
5-D	21+82	Rt.					10	3.7	
6-D	23+52	Rt.					10	3.7	
7-D	25+12	Rt.					10	3.3	
8-D	26+00	Lt.Rt.					10	1.7	
9-D	35+85	Lt.Rt.					102	2.0	
10-D	36+32	36+68	Lt.						
11-D	37+00	Rt.					12	10	2.7
12-D	25+31	Rt.							Lump
							Totals	102	180
									20
									30
									10
									90
									25.4
									Lump
									78

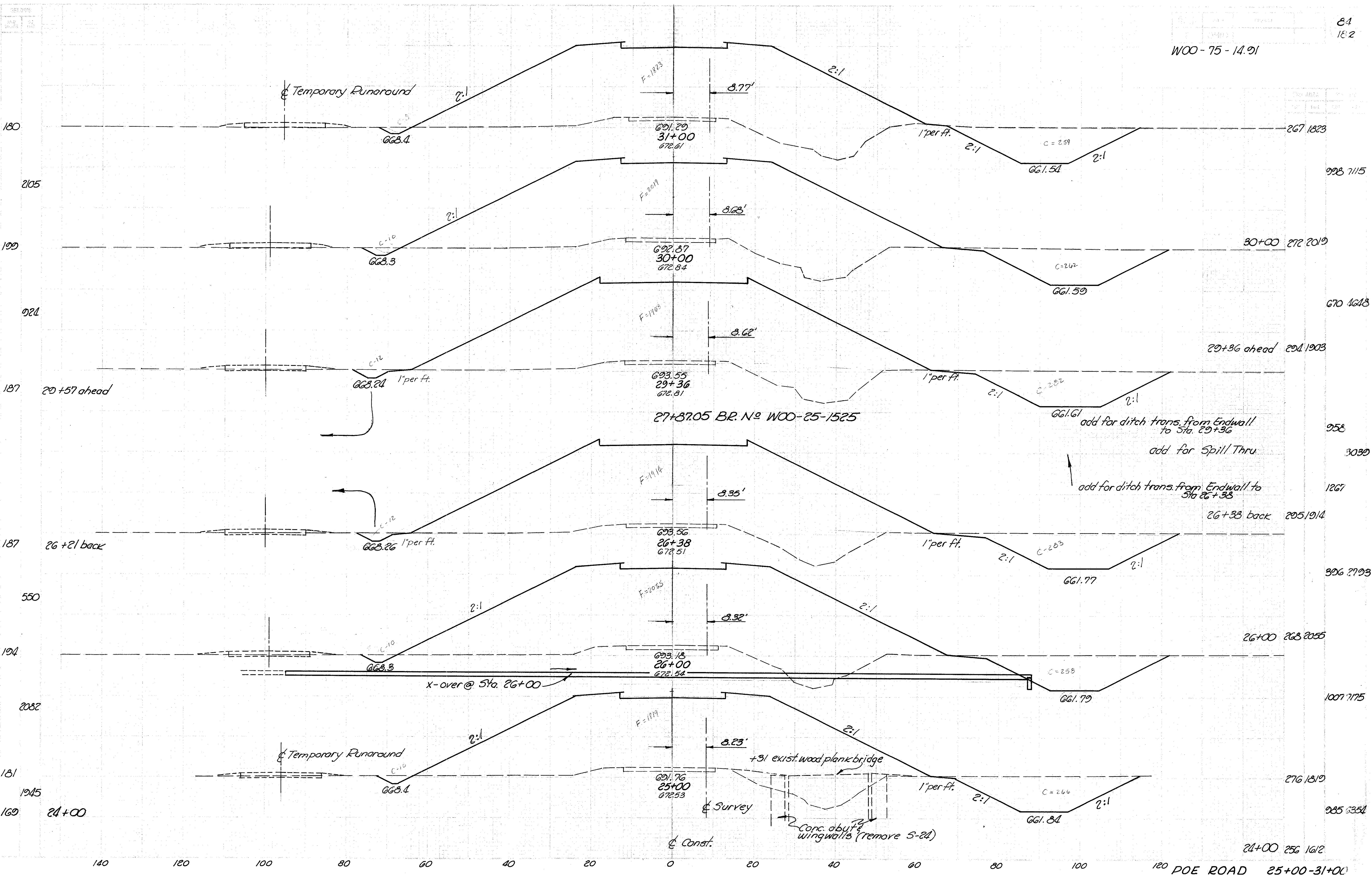


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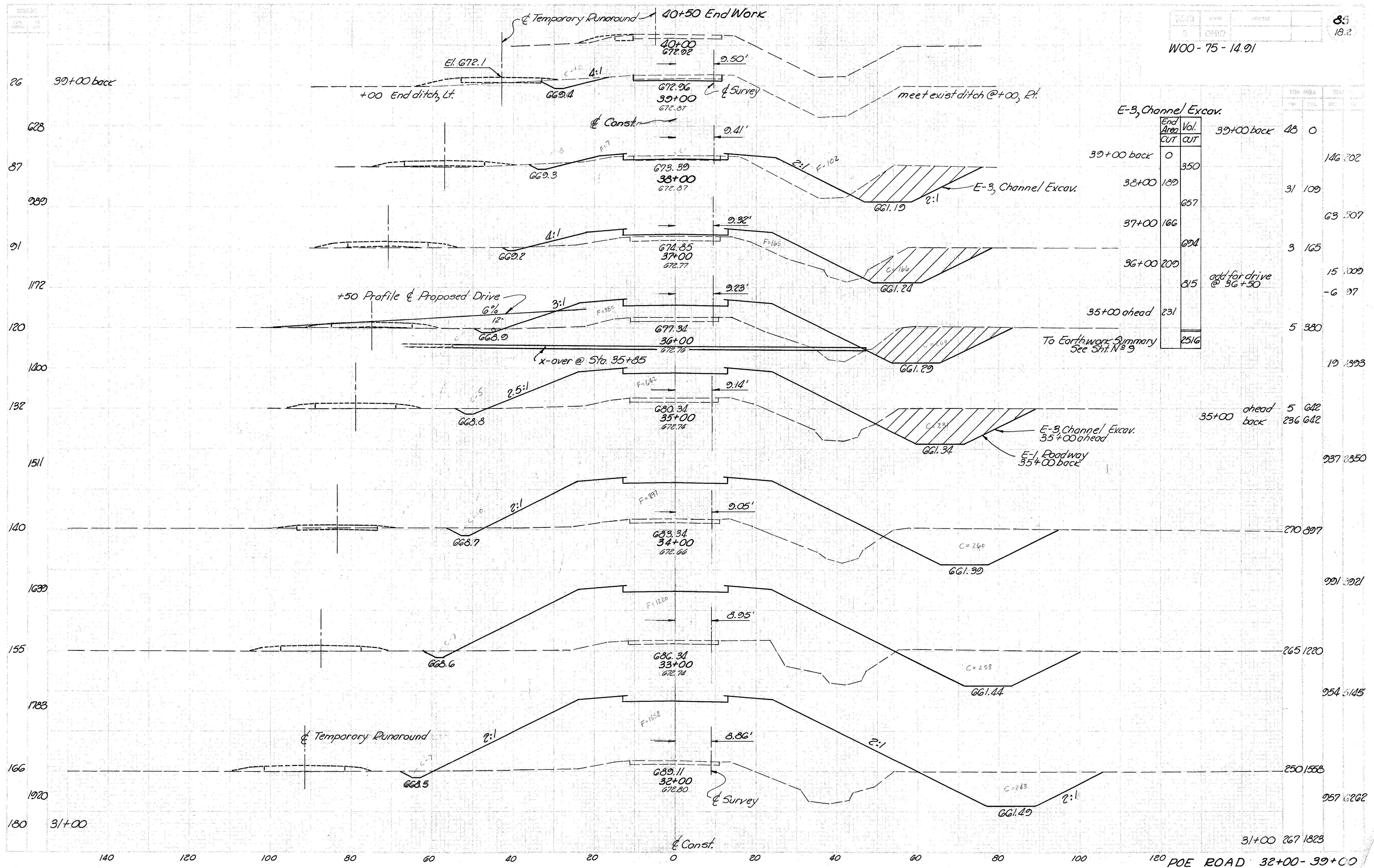
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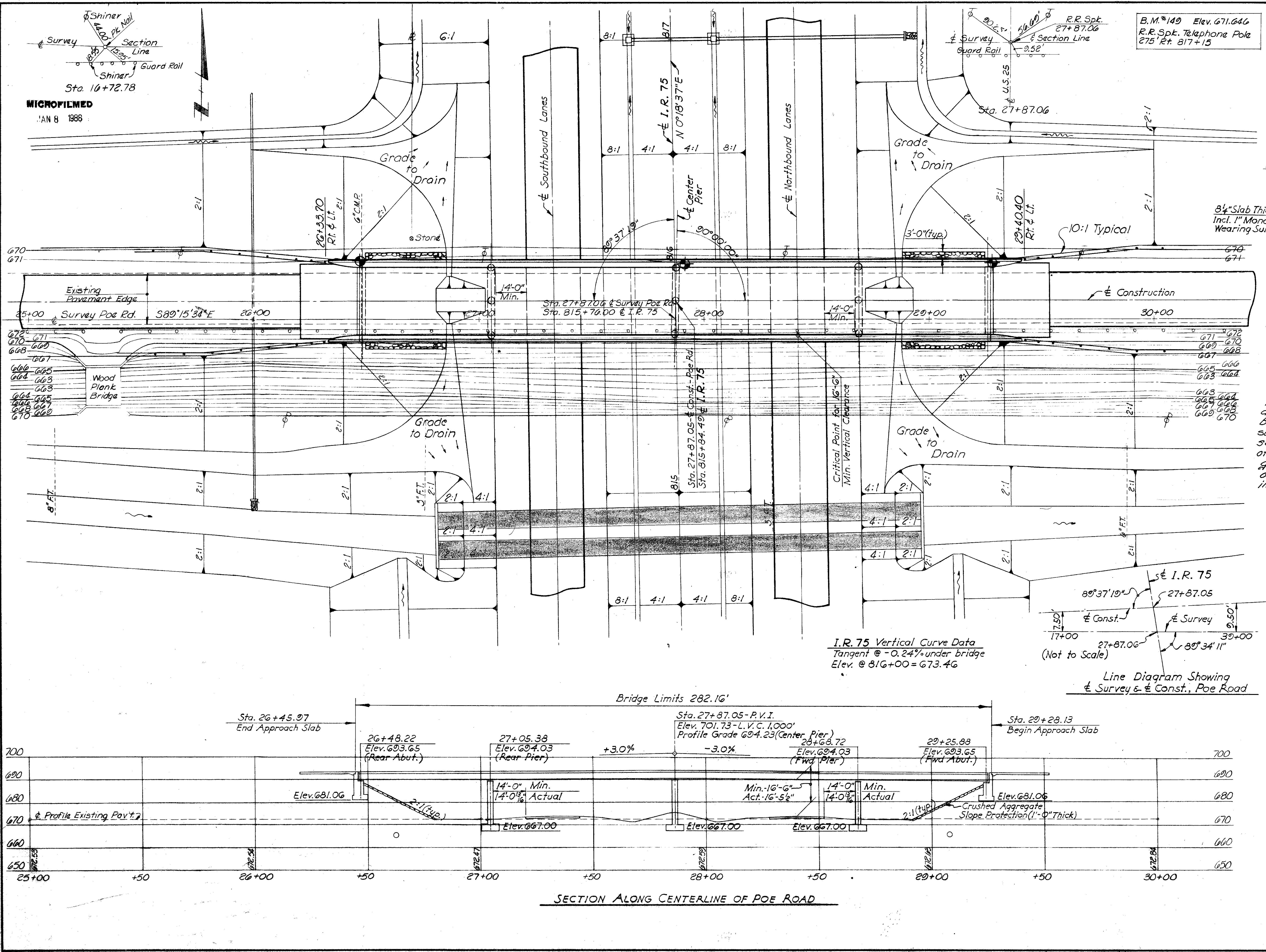
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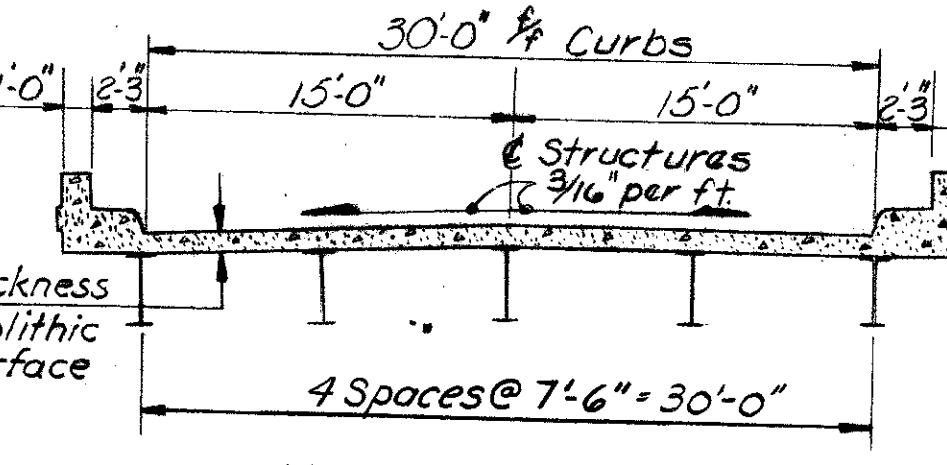
WOO-75-14.91





FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

WOO-75-14.91



## NORMAL BRIDGE SECTION

TEST BORING LEGEND  
Shelby Tube Borings

**FOUNDATION SOUNDINGS:** Foundation design and foundation quantities are based on a study of soil-sampling soundings made at the site. This sounding information, the accuracy of which the State does not guarantee, may be examined in the office of the Bureau of Bridges in Columbus or in the Division office.

## PROPOSED STRUCTURE

TYPE: Continuous Steel Beam Bridge with Reinforced Concrete Deck & Substructure.  
SPANS: 57'-2", 81'-8", 81'-8", 57'-2".  
ROADWAY: 30'-0",  $\frac{1}{4}$  of Curbs.  
LOAD FREQUENCY: CF=400  
SKEW: 0°00'00"  
WEARING SURFACE: 1" Monolithic Concrete.  
APPROACH SLABS: 25'-0" Long.  
ALIGNMENT: Tangent  
CURBS: 2'-3", each side.

Traffic on Poe Road:  
1963 traffic = 1,754 V.P.D.  
1983 " = 424 V.P.D.

CHARLES L. BARBER & ASSOCIATES  
ENGINEERS  
TOLEDO, OHIO

SITE PLAN

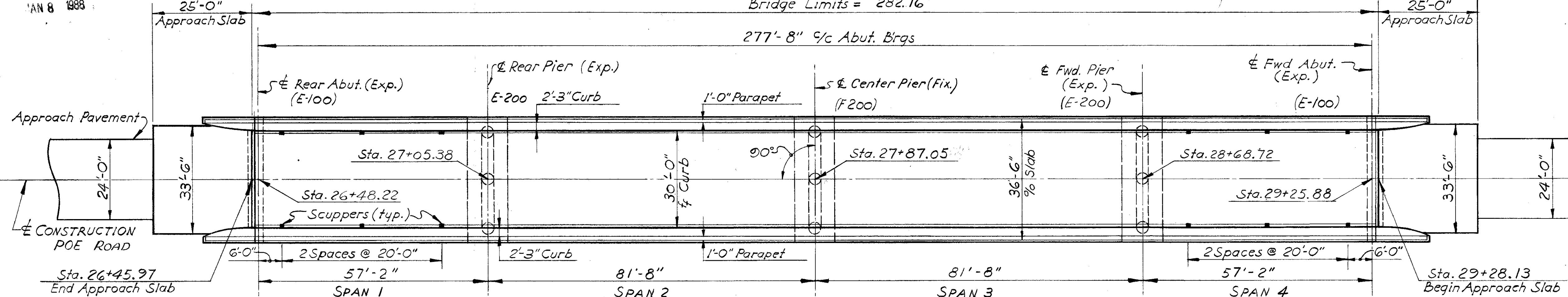
BRIDGE NO. WOO-25-1525

I.R. 75 UNDER POE RD.  
WOOD CO. STA. 26+45.97  
SCALE: 1"=20'-0" STA. 29+28.13

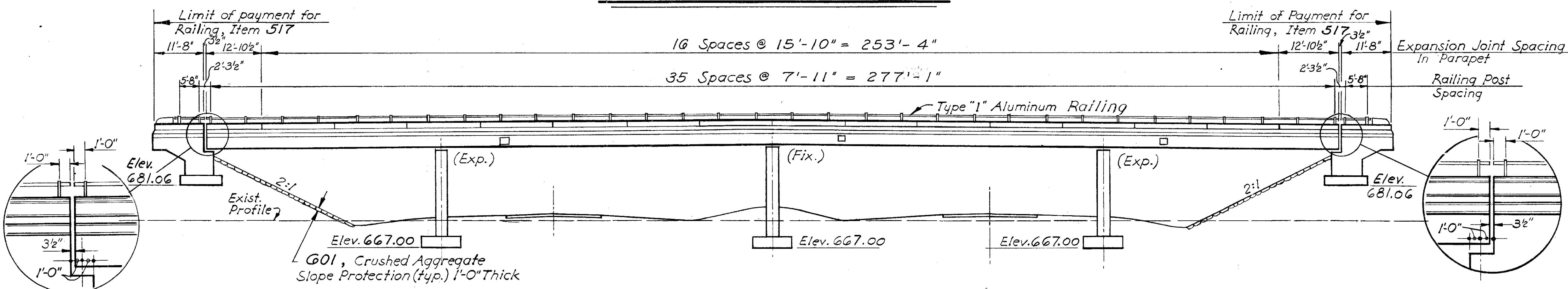
PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
A.B.	G.K.	K.R.R.	K.R.R.	W.B.D.	J.N.G.

MICROFILMED

JAN 8 1988



GENERAL PLAN



ELEVATION

ESTIMATED QUANTITIES								
ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUTS.	PIERS	GEN'L	AS BUILT
503	598	Cu.Yds.	Unclassified Excavation		372	226		479
511	329	Cu.Yds.	Class "C" Concrete (Superstructure)	329				
511	72	Cu.Yds.	Class "C" Concrete (Piers Above Footing)			72		
511	149	Cu.Yds.	Class "E" Concrete (Abutments)		149			
511	85	Cu.Yds.	Class "E" Concrete (Pier Footings)			85		
808	329	Units	Water Reducing - Set Retarding Admixture	329				329
	125,551			80,718	12,351	32,488		
509	125,712	Lbs.	Reinforcing Steel	80,966	12,026	32,720		
513	312,500	Lbs.	Structural Steel	312,500				
514	312,500	Lbs.	Field Painting of Structural Steel	312,500				
517	606,000	Lin.Ft.	Bridge Railing, Type "I"	606,000				
825	1347	Sq.Yds.	Concrete surface treatment	1275	72			
518	58	Lin.Ft.	G" Perforated Helical C.M.P. 707.06 including specials	58				
518	72	Lin.Ft.	G" Helical C.M.P. 707.06 non-perforated		72			
518	32	Cu.Yds.	Porous Backfill		32			
518	12	Each	Scuppers, including supports	12				
G01	0.324	Sq.Yds.	Crushed Aggregate Slope Protection	324				
828	60	1/17.Ft.	Jointsealer (end dam)		60			

## GENERAL NOTES

## DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE REQUIREMENTS OF "DESIGN SPECIFICATIONS FOR HIGHWAY STRUCTURES OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS", DATED 9-1-57, TOGETHER WITH CURRENT REVISIONS THEREOF.

## DESIGN LOADING

CF=400

CONCRETE CLASS "C" BASIC UNIT STRESS 1,333 P.S.I.  
CONCRETE CLASS "E" BASIC UNIT STRESS 1,133 P.S.I.

STRUCTURAL STEEL ASTM A36 - BASIC UNIT STRESS 20,000 P.S.I.,

## REINFORCING STEEL

ASTM A-15, A16, A160, DEFORMED, INTERMEDIATE, OR HARD GRADE, BASIC UNIT STRESS 20,000 P.S.I., EXCEPT SPIRAL REINFORCEMENT MAY BE PLAIN STRUCTURAL GRADE WITH BASIC UNIT STRESS OF 18,000 P.S.I.

## REFERENCE DRAWINGS

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS BR-1-G5, rev. 11-24-65, Sheet 1, SD-1-63, DATED 11-12-63, FSB-1-62 REVISED 1-15-63, SD-2-64 DATED 11-25-64, SUPPLEMENTAL SPECIFICATIONS B1 DATED 3-29-65 AND B2B DATED 2-7-66, B2C DATED 4-22-65 and B2B DATED 3-21-66.

ALL EXPENSE INVOLVED IN RELOCATION (INSTALLING) THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE OWNERS. THE CONTRACTOR AND OWNERS ARE REQUESTED TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

## EMBANKMENT PROCEDURE

THE EMBANKMENT SHALL BE PLACED AND COMPAKTED UP TO THE FINISHED SPILL THRU SLOPE AND TO THE LEVEL OF THE SUBGRADE FOR A DISTANCE OF 200 FEET BACK OF THE ABUTMENTS. AFTER WHICH EXCAVATION SHALL BE MADE FOR THE ABUTMENTS, AND PILES DRIVEN.

## EXCAVATION QUANTITY

THE EXCAVATION QUANTITY FOR THE ABUTMENTS INCLUDES THE REMOVAL OF FILL MATERIAL REQUIRED FOR CONSTRUCTION OF THE ABUTMENTS.

## FOUNDATION BEARING PRESSURE

ABUTMENT AND PIER FOOTINGS ARE DESIGNED FOR A MAXIMUM BEARING PRESSURE OF 3 TONS PER SQ. FT.

## REINFORCING BAR SIZE

BAR SIZE FOR REINFORCING STEEL IS INDICATED IN THE BAR MARK. THE FIRST DIGIT INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, S601 IS A NO. 6 SIZE BAR.

## DECK SLAB HAUNCH

THE HAUNCH IN THE DECK SLAB ADJACENT TO THE TOP OF THE STEEL BEAMS, WHICH IS SHOWN AS 9" WIDE, MAY VARY FROM THIS DIMENSION BETWEEN THE LIMITS OF 6 AND 12 INCHES, EXCEPT THAT THE MAXIMUM SLOPE SHALL NOT EXCEED 3 INCHES PER FT. PAYMENT FOR DECK SLAB CONCRETE SHALL BE BASED ON THE 9 INCH WIDTH.

CHARLES L. BARBER & ASSOCIATES  
ENGINEERS  
TOLEDO, OHIO

## GENERAL PLAN

## &amp; ELEVATION

BRIDGE NO. WOO-25-1525

I.R.75 UNDER POE ROAD

WOOD CO. STA. 26+45.97

STA. 29+28.13

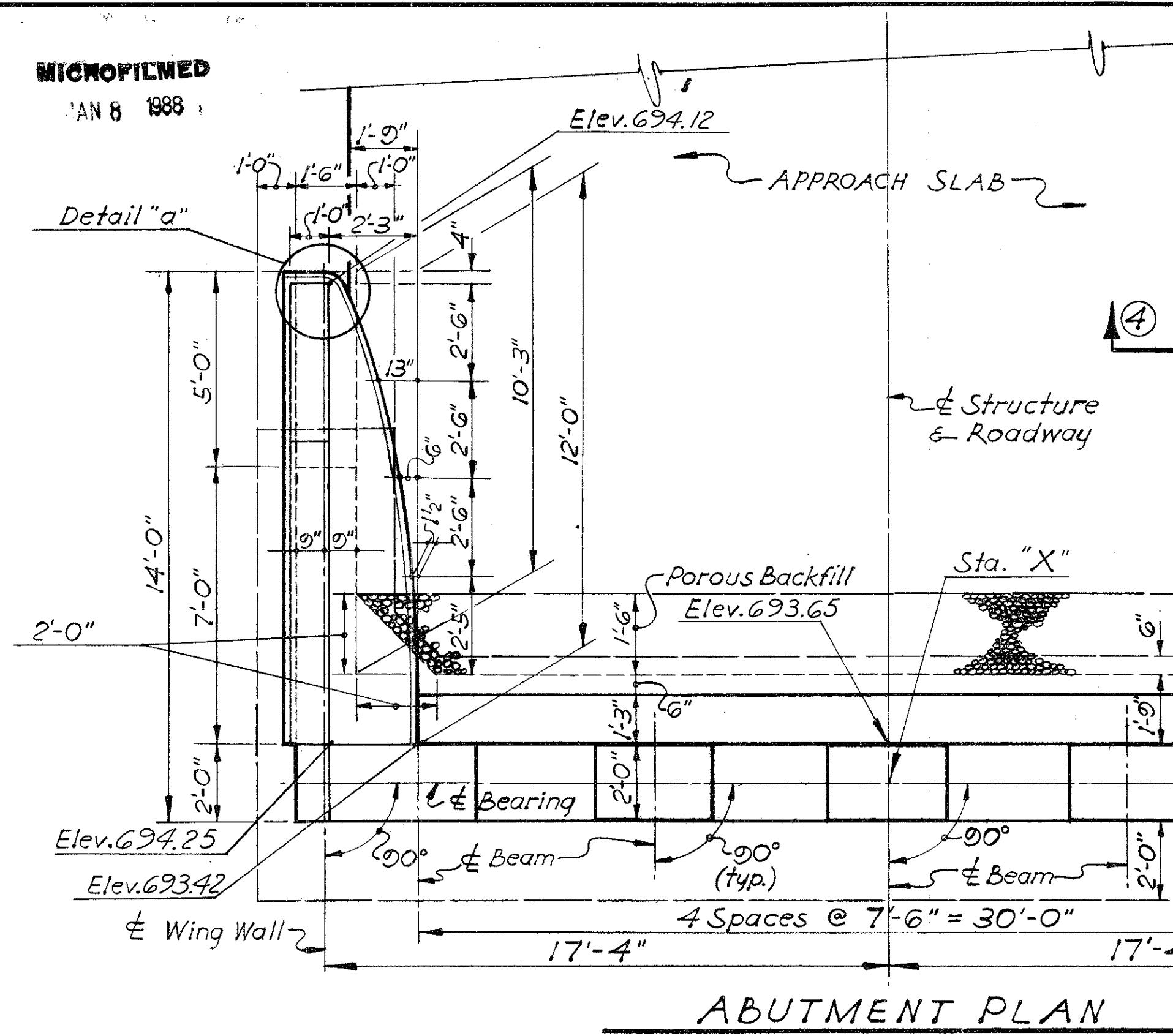
DESIGNED DRAWN TRACED CHECKED REVIEWED DATE REVISED  
W.B.D. W.B.D. H.C.M. K.R.R. J.M.G. 10-1-65  
12-1-71

3-10-70 10 Revised As-Built G.P.J.

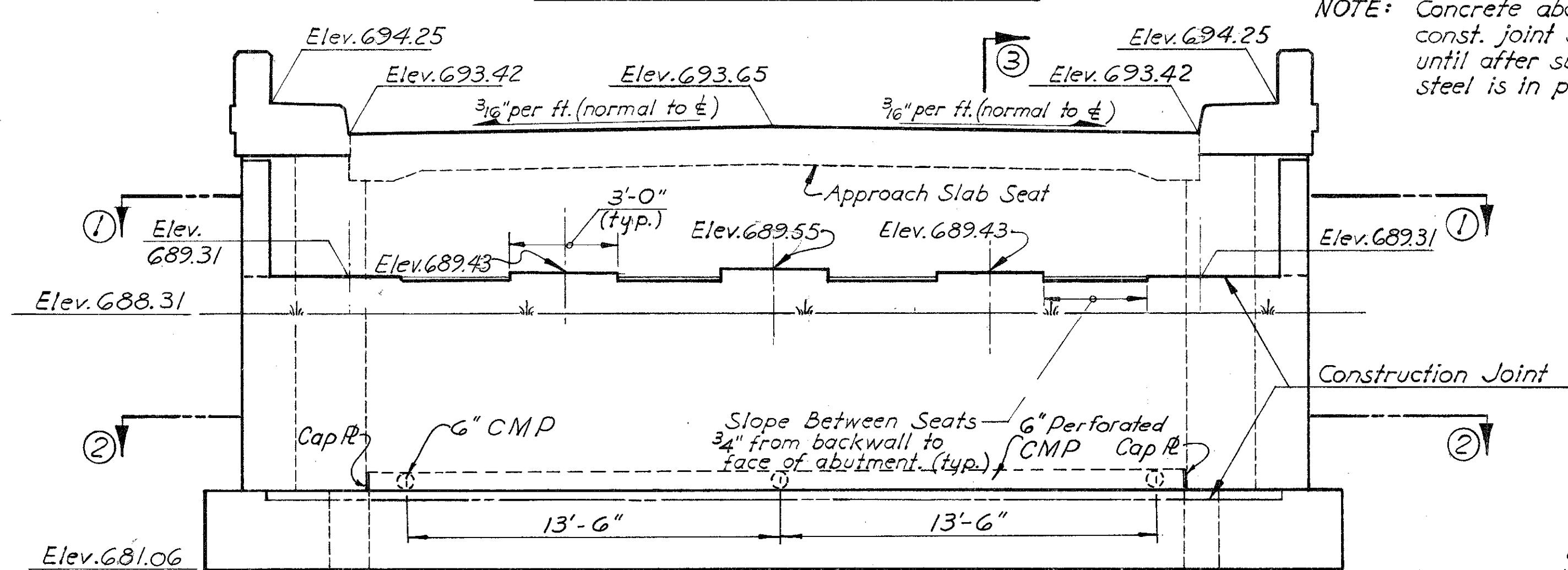
FED. RD. DIVISION	STATE	PROJECT
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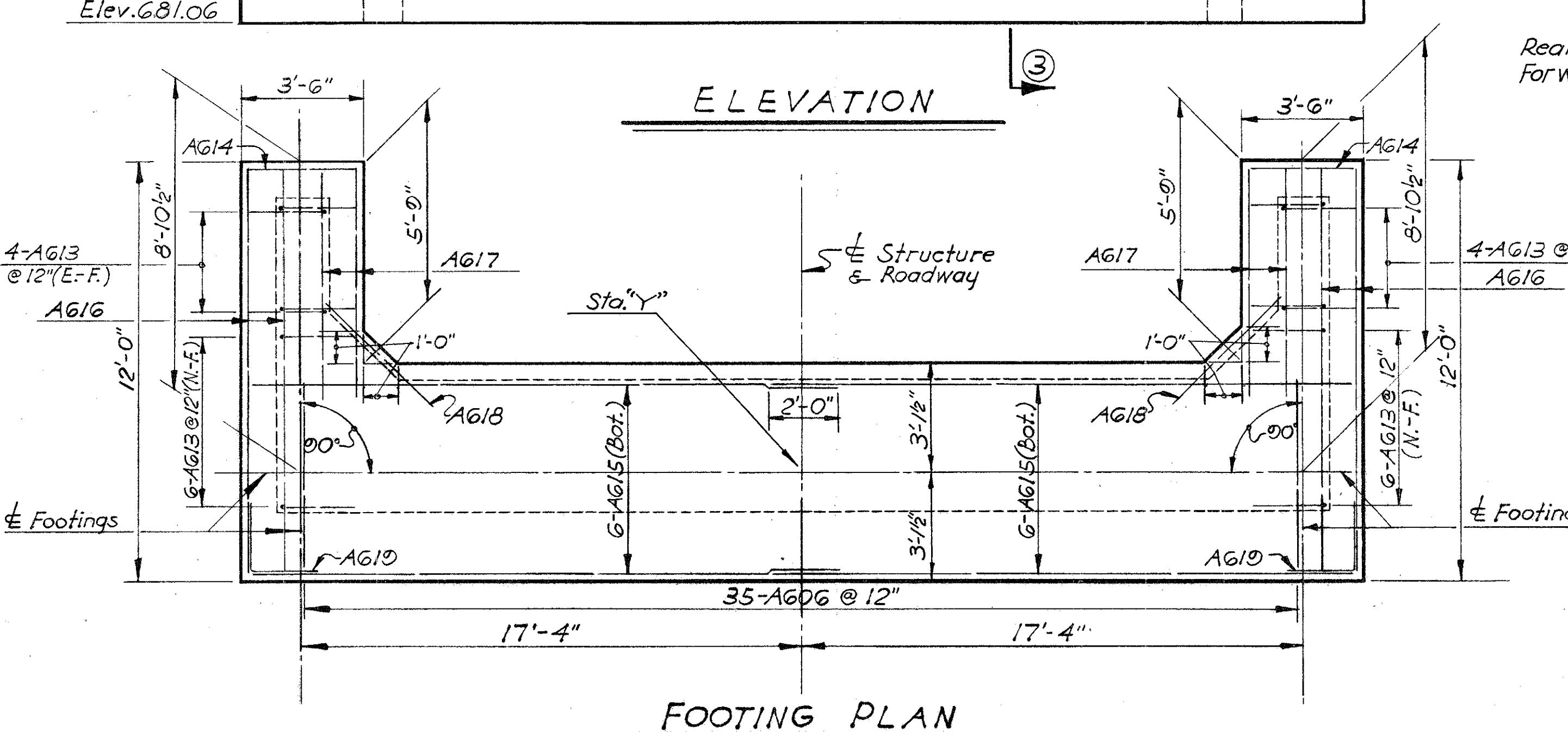
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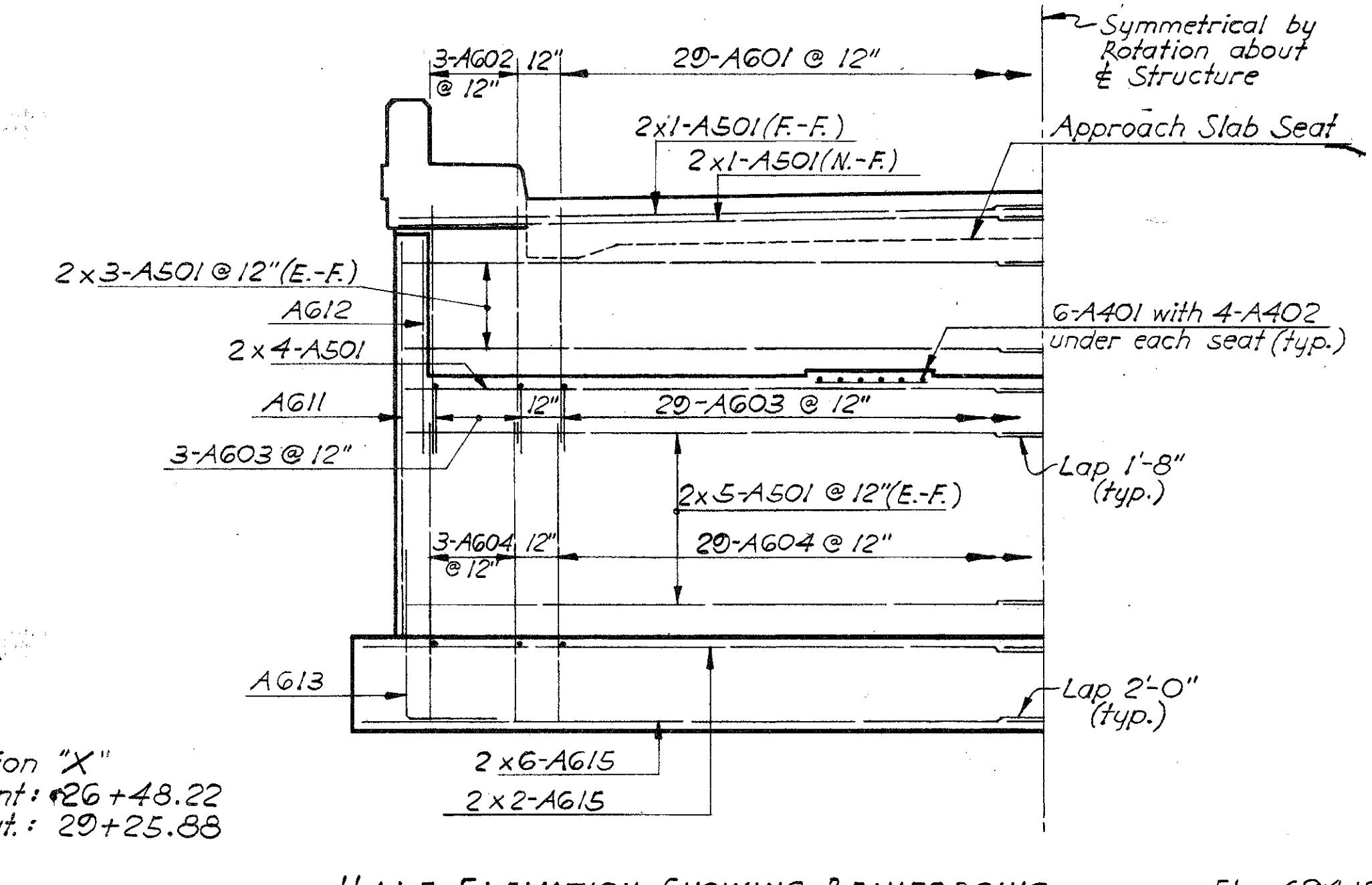
ABUTMENT PLAN



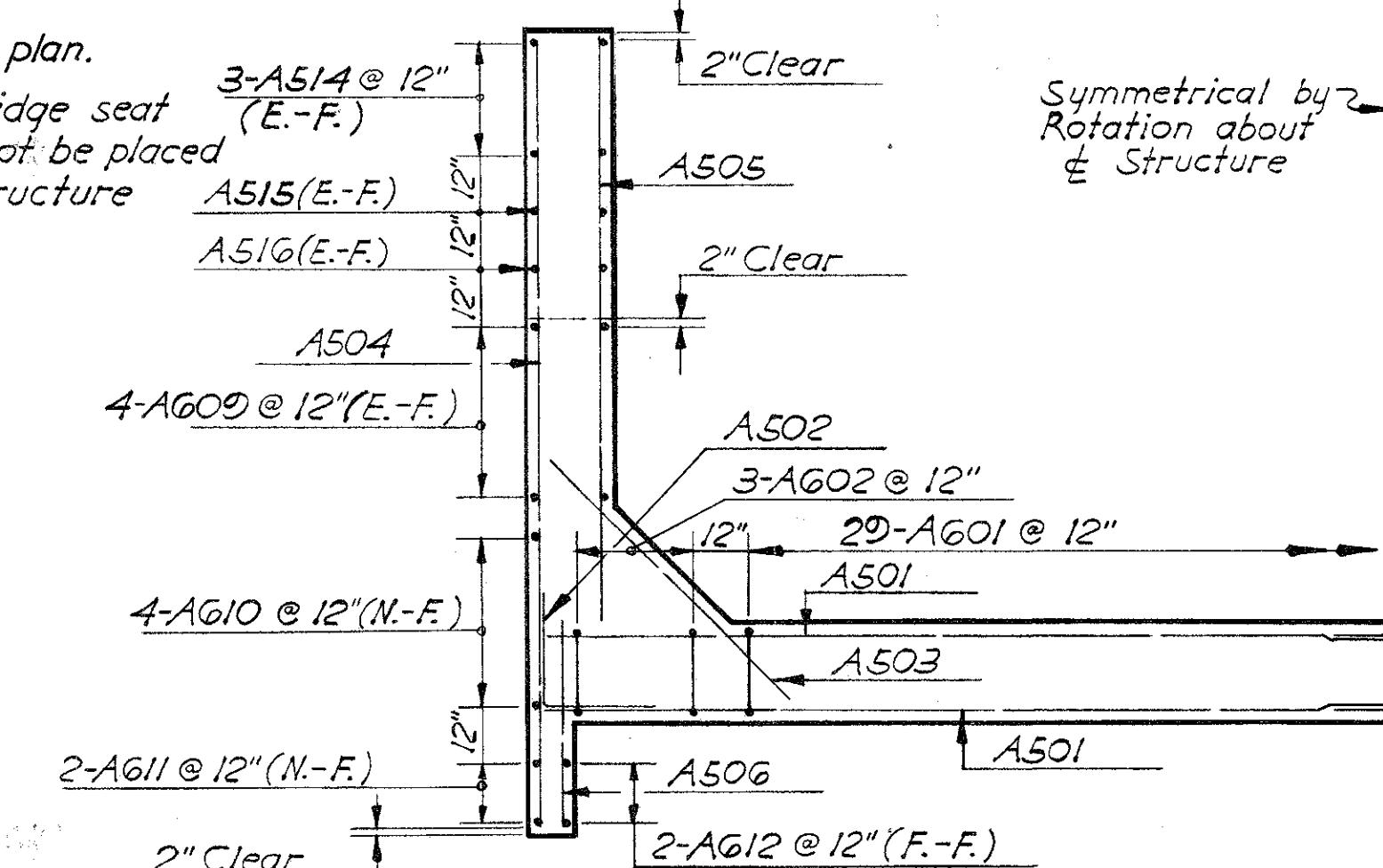
ELEVATION



FOOTING PLAN

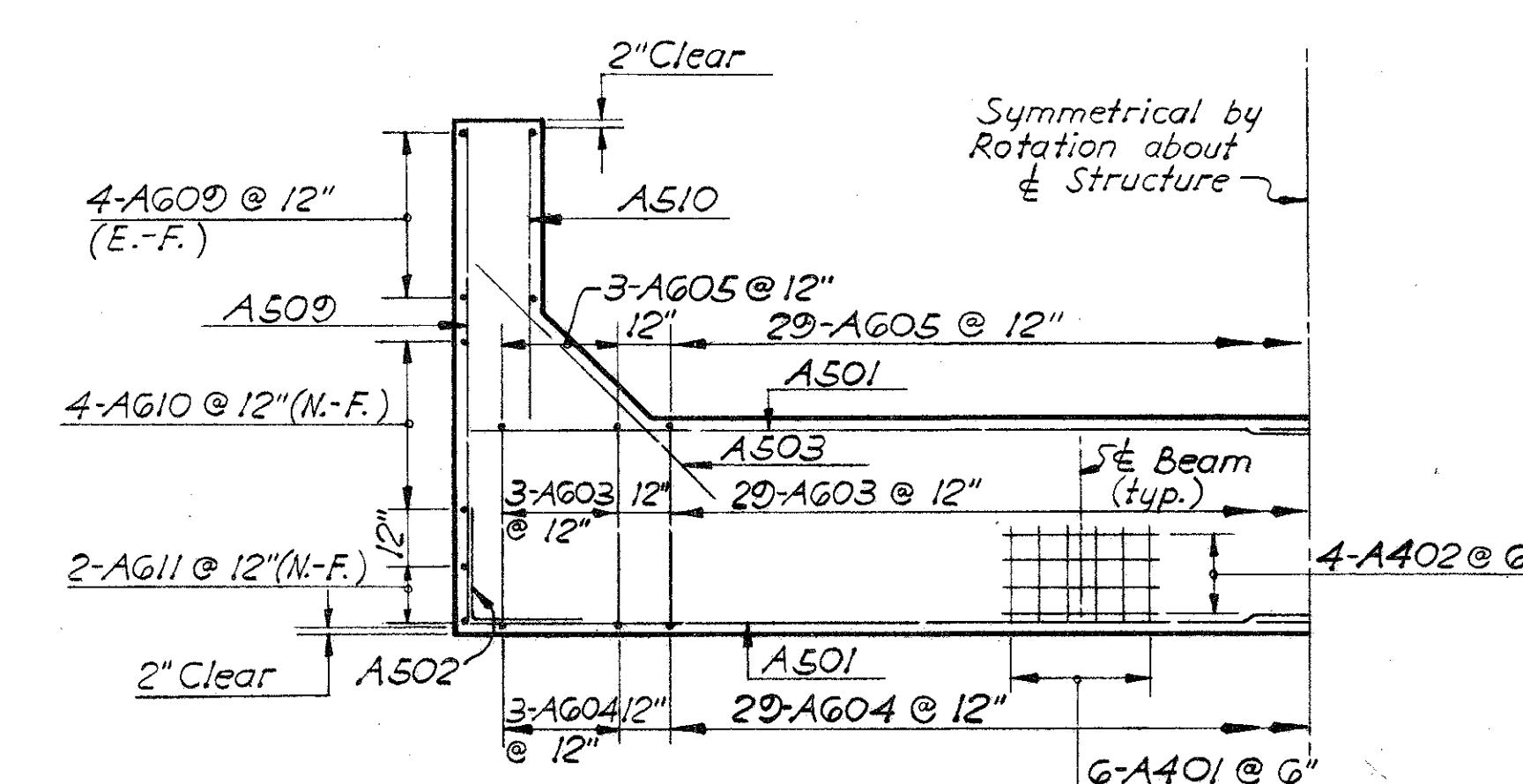


HALF ELEVATION SHOWING REINFORCING

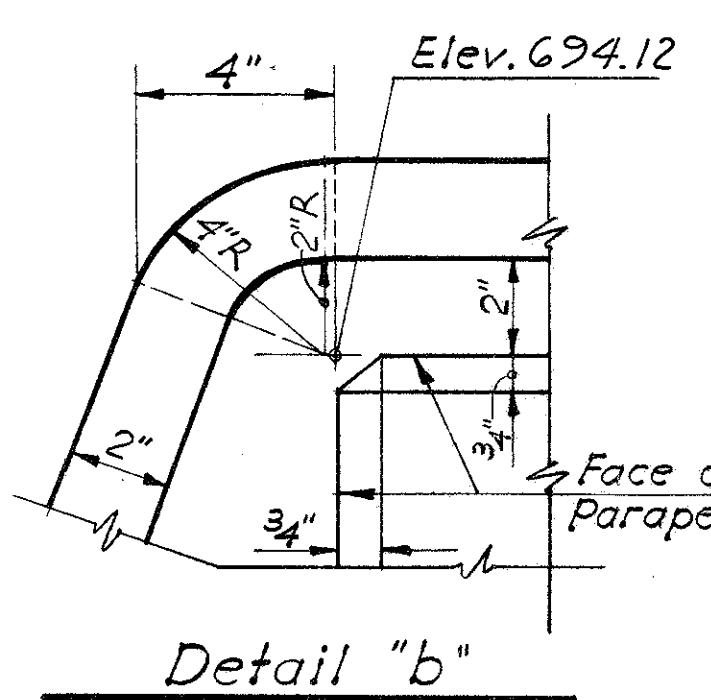
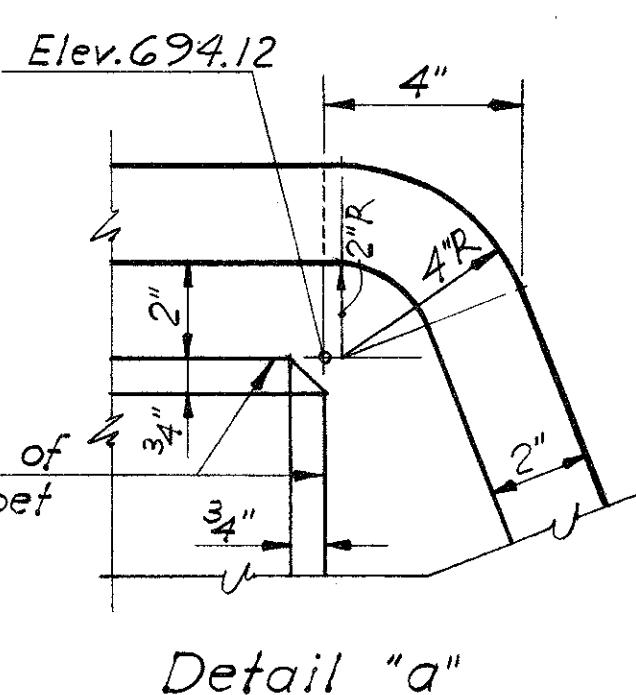


HALF SECTION 1-1

**STATION "Y"**  
Rear Abutment: 26+48.09  
Forward Abutment: 29+26.01



HALF SECTION 2-2



Concrete End Post not shown in Details "a" and "b".

- NOTES
1. Reinforcement bars shall clear the face of concrete by 2", unless otherwise noted.
  2. Bars of a series shall vary by a constant increment.
  3. N-F. denotes Near Face.
  4. F-F. denotes Far Face.
  5. E-F. denotes Each Face.
  6. Porous backfill, 1'-6" thick, full length of abutment backwall, shall extend upto underside of approach slab. Excavation therefore, in excess of that required for construction of the footing shall be considered as paid for in the bid price per cu. yd. paid for porous backfill.
  7. Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the location of anchor bar holes.
  8. For other details and reinforcement schedule, See Sheet No. 123.

FOOTING-DESIGN BEARING PRESSURE	
DL+LL	3.00 T/FT <sup>2</sup>
DL+LL Thermal Forces	3.45 T/FT <sup>2</sup>
DL+LL+Thermal Forces + wind	3.75 T/FT <sup>2</sup>

CHARLES L. BARBER & ASSOCIATES  
ENGINEERS  
TOLEDO, OHIO

ABUTMENT DETAILS

BRIDGE NO. WO0-25-1525  
I. R. 75 UNDER POE ROAD  
WOOD CO. STA.26+45.97  
STA.29+28.13

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.R.R.	K.R.R.	H.C.M.	W.B.D.	J.M.G.	64	10-1-65





**MICROFICHE**

JAN 8 198

$\rightarrow S \notin$  Abut. Brdg's  
Exp. (E-100) typ

SPAN 1 - 57'-2" %c Birgs

Rear Pier  
Brg's (Exp.)  
(E-200) typ.

SPAN 2 - 81'-8" % C Brg

~~S~~ Center Pier &  
Brg's (Fix.)  
F-200 typ.

SPAN 3-81'-8" ½ Brdg

$\notin$  Fwd Pier  $\in$   
Brg's (Exp.)  
E-200 typ.

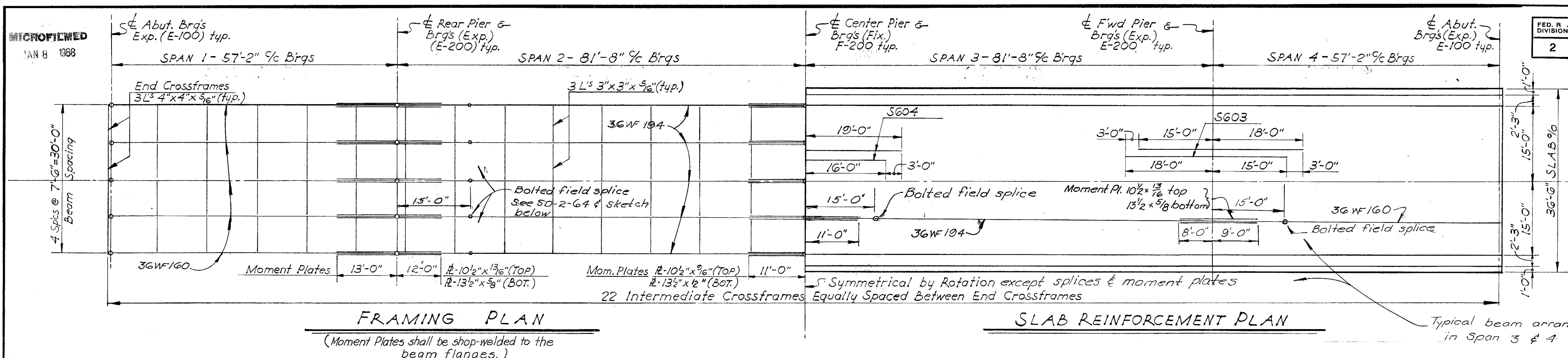
SPAN 4 - 57'-2" % Brgs

€ Abut.  
Brig's (Exp.) ↗  
E-100 typ.

FED. R. DIVISION	STATE	PROJECT	
2	OHIO		

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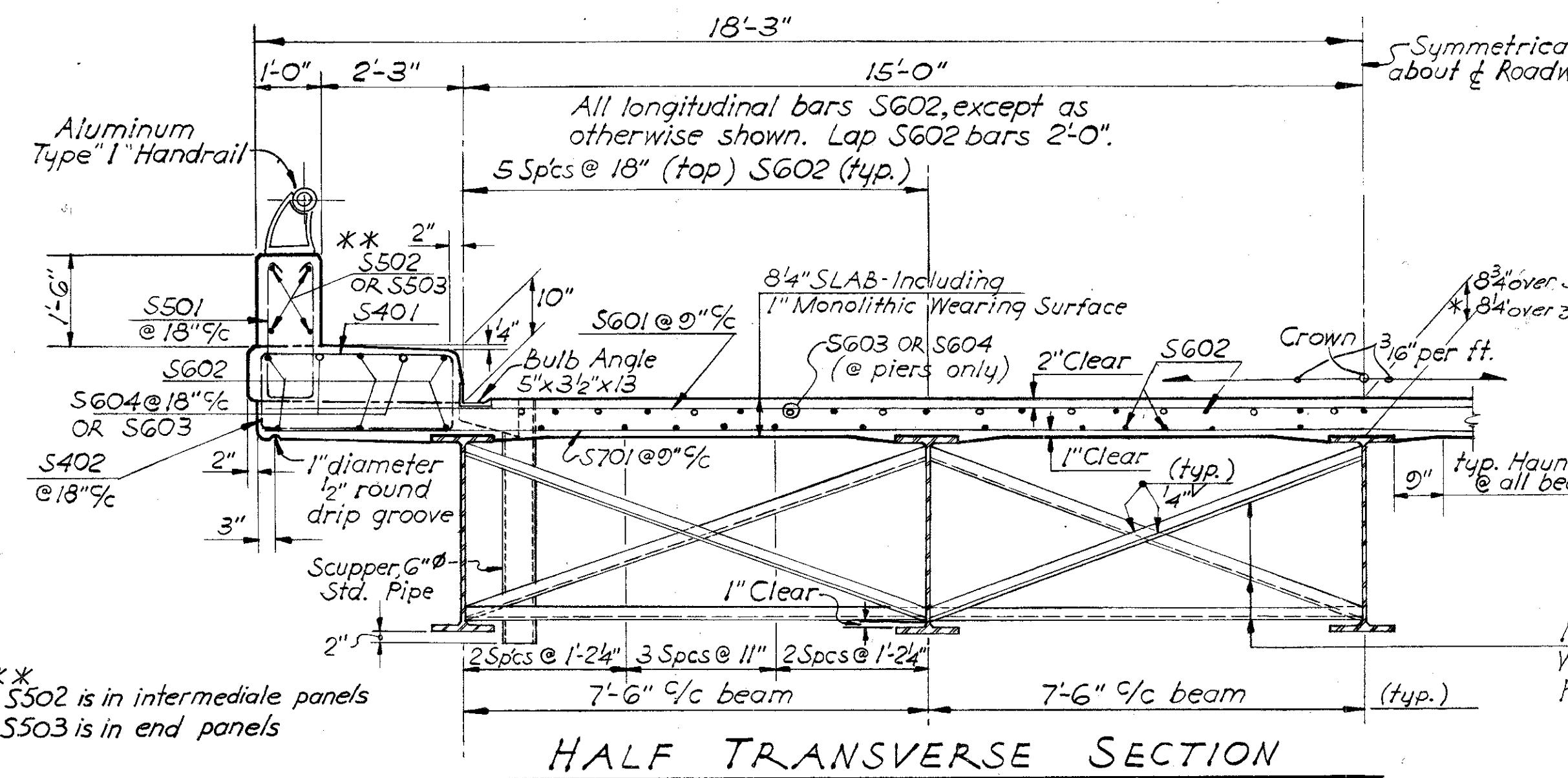


## FRAMING PLAN

(Moment Plates shall be shop-welded to the beam flanges.)

## SLAB REINFORCEMENT PLAN

- Typical beam arrangement  
in Span 3 & 4



# HALF TRANSVERSE SECTION

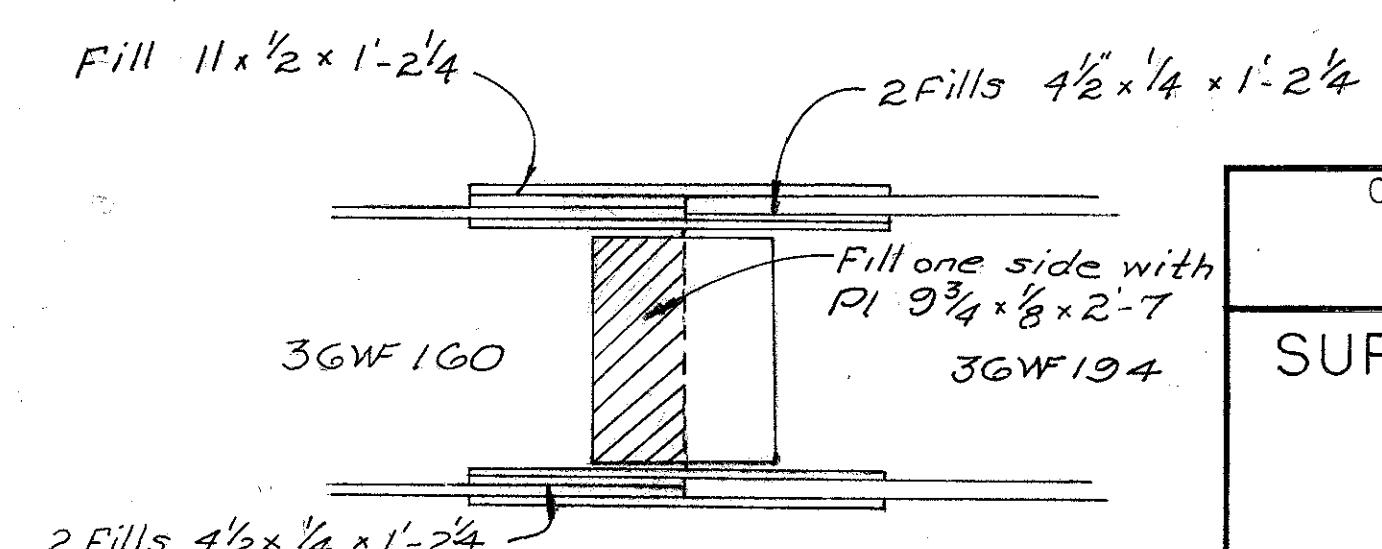
\* This is the nominal dimension. The quantity of  
deck concrete to be paid for shall be based on  
this dimension even though deviation from it may be  
necessary because the top flange of the beam may  
not have the exact camber or conformation required  
to place it parallel to the finished grade. Deduction  
shall be made for volume of encased steel plate  
as per Sec. 511.19 of the construction and Material  
Specifications.

Intermediate Crossframe Angles  $3'' \times 3'' \times \frac{5}{16}''$ .  
Weld both sides of vertical leg and top side of horizontal leg to beam with  $\frac{1}{4}''$  continuous weld.

CAMBER & DEFLECTION TABLE								
Beam	Exterior				Interior			
SPANS	1	2	3	4	1	2	3	4
Deflection Due To Steel Weight	1/16"	5/32"	5/32"	1/16"	1/16"	5/32"	5/32"	1/16"
Deflection Due To Remaining Dead Load	1/4"	5/8"	5/8"	1/4"	3/16"	9/16"	9/16"	3/16"
Convexity Required For Vertical Curve	5/16"	3/8"	3/8"	5/16"	5/16"	3/8"	3/8"	5/16"
Sum of Deflection and Convexity	5/8"	15/32"	15/32"	5/8"	9/16"	13/32"	13/32"	9/16"
Camber Required	0	1 3/16"	1 3/16"	0	0	1 1/8"	1 1/8"	0

REINFORCEMENT SCHEDULE				
Mark	Number	Length	Shape	Weight
S401	374	4'-2 1/2"	Bent	1,042 → 1020
S402	374	6'-2"	Bent	1,542 → 1478
		- 5'-11 1/2"		
S501	374	5'-10"	Bent	2,275 → 2113
S502	128	15'-6"	Str.	***
S503	16	12'-7"	Str.	***
S601	374	36'-2"	Str.	20,313
S602	550	29'-8"	Str.	24,510
S603	48	33'-0"	Str.	2,379
S604	24	35'-0"	Str.	1,262
S701	374	36'-2"	Str.	27,643
		TOTAL POUNDS	80,966	→ 80,718

\*\*\* Payment for horizontal reinforcement in parapet  
is included in railing, Item 517



NOMINAL FILLS FOR  
BOLTED FIELD SPLICES  
IN SPANS 2 & 4

CHARLES L. BARBER & ASSOCIATES  
ENGINEERS  
TOLEDO, OHIO

# SUPERSTRUCTURE DETAILS

BRIDGE NO. WOO-25-1525

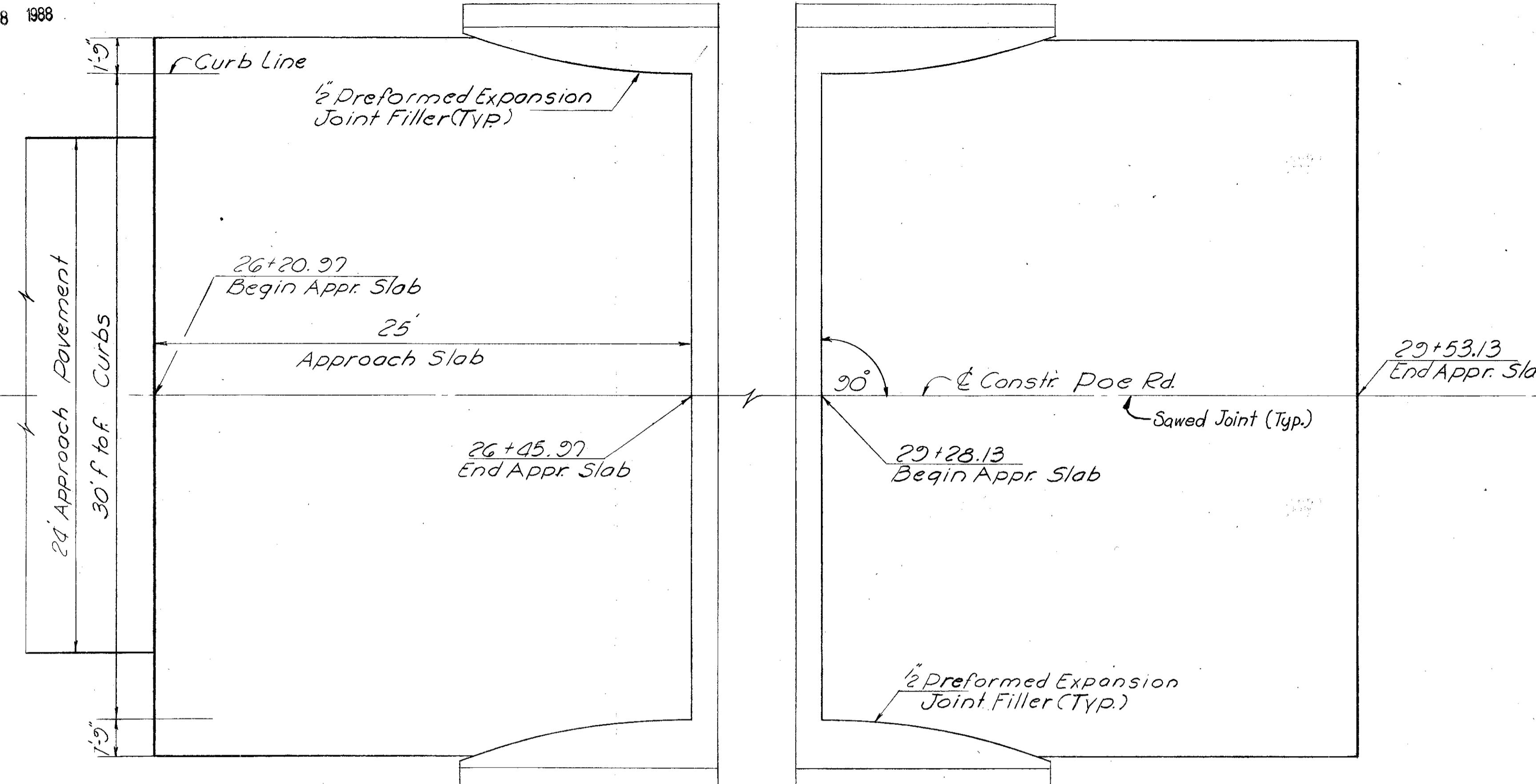
I.R. 75 UNDER POE ROAD  
W.C.D. 25 STA 26+45.97

STA.29+28.13
DRAWN TRACED CHECKED REVIEWED DATE REVISED D. W.B.D. H.C.M. K.R.R. J.M.G. 10-1-65 1-27-77

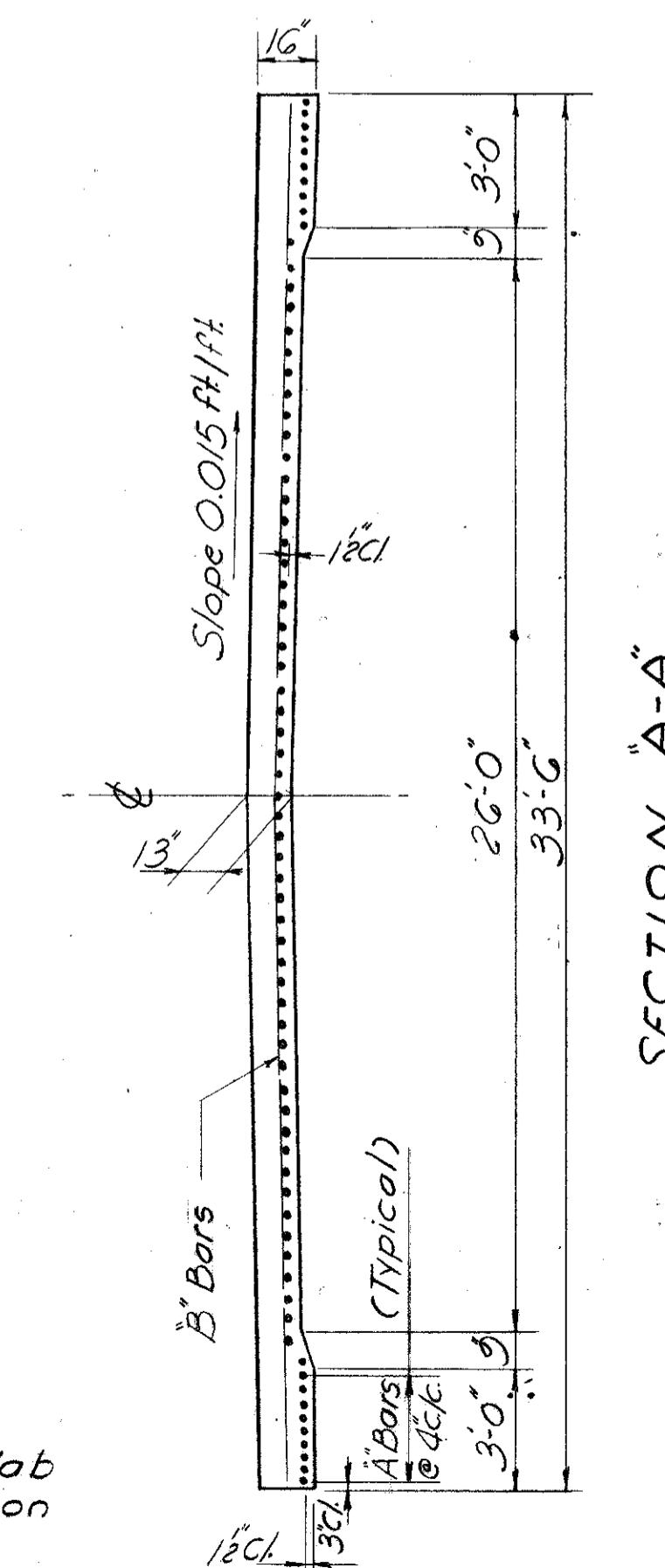
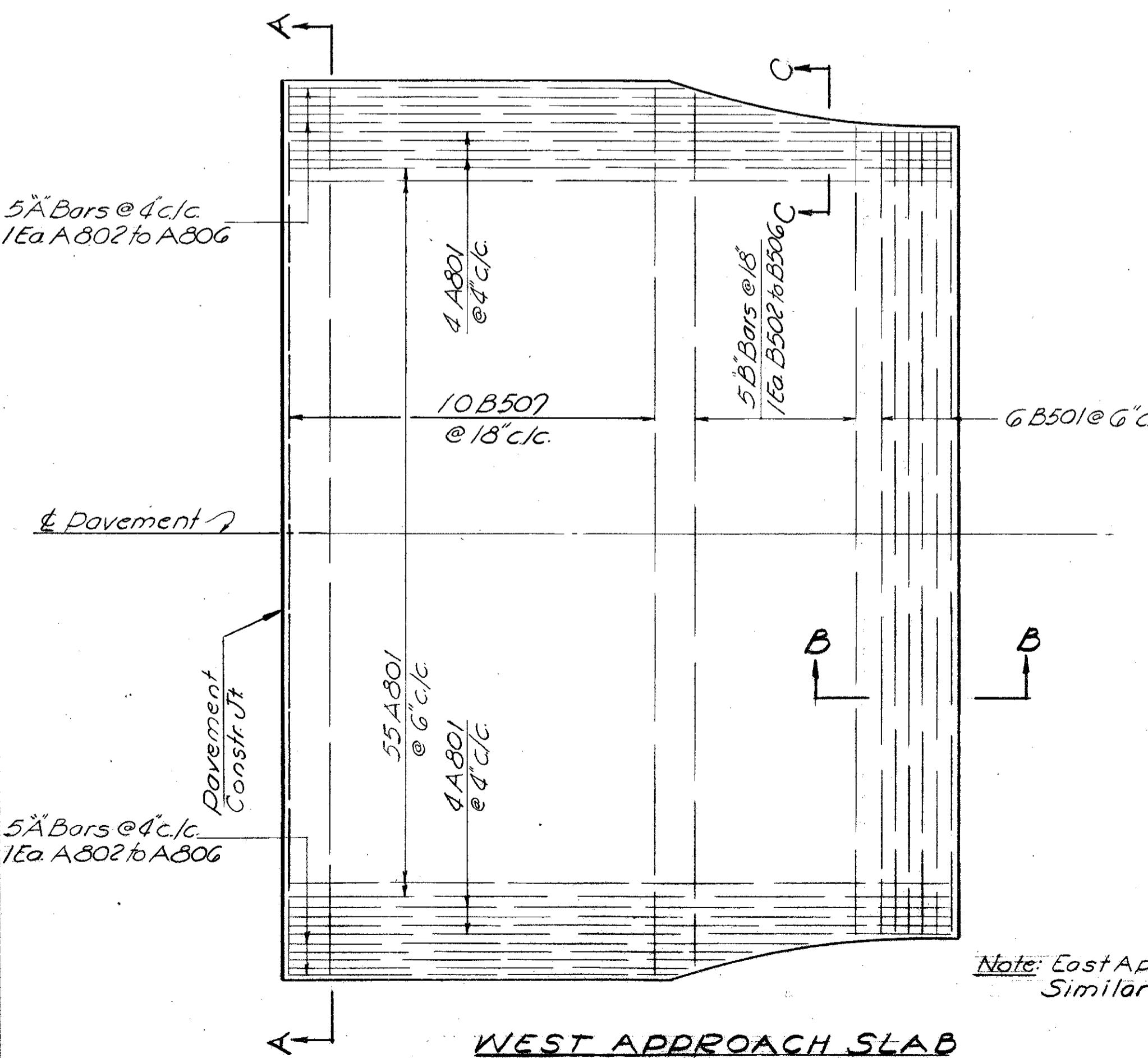
MICROFILMED  
JAN 8 1988

FED. R DIVISION	STATE	PROJECT
2	OHIO	126 182

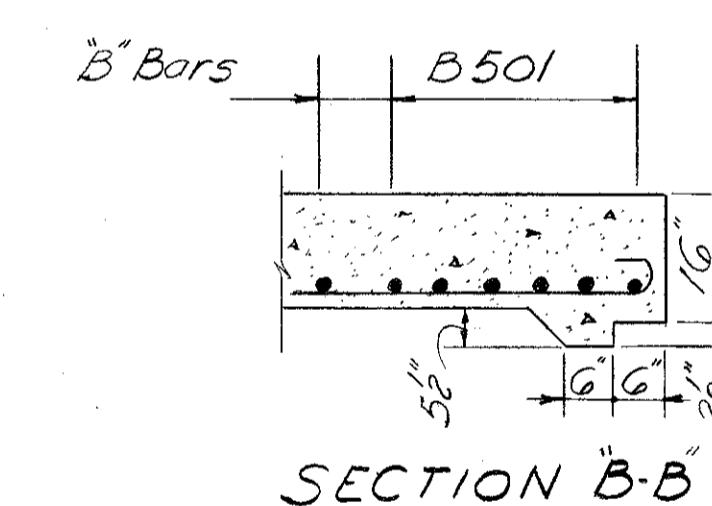
WOO-75-14.91



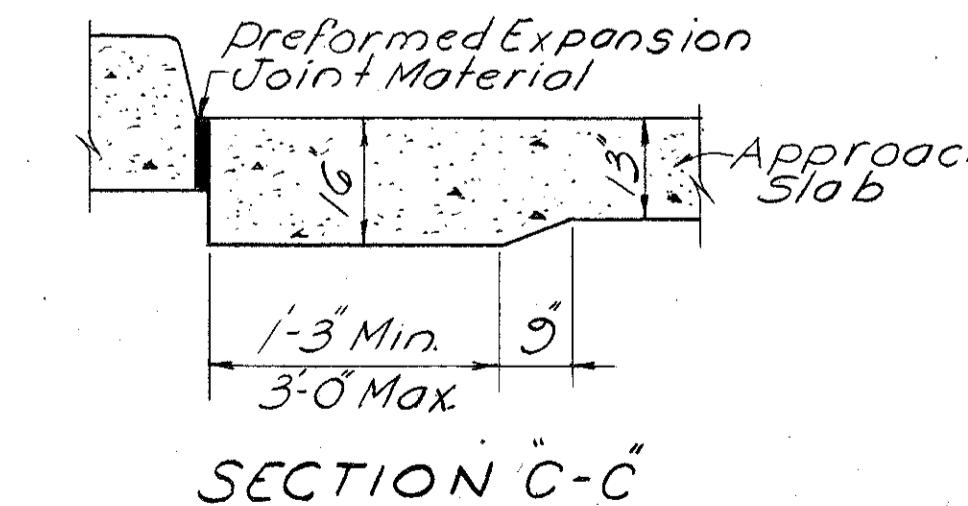
GENERAL PLAN



SECTION A-A'



SECTION B-B'



SECTION C-C'

REINFORCING STEEL LIST BOTH APPROACH SLABS						
Mark	Length	Shape	a	No.	Weight	Bor Diagram
A801	25'-0"	S B	28'-6"	126	8,006	
A802	22'-4"	S B	21'-3	4	239	
A803	19'-10"	S B	18'-9	4	212	
A804	18'-4"	S B	17'-3	4	196	
A805	17'-1"	S B	16'-0	4	182	
A806	16'-1"	S B	15'-0	4	172	
B501	29'-6"	S		12	369	
B502	29'-9"	S		2	62	
B503	30'-0"	S		2	63	
B504	30'-6"	S		2	64	
B505	31'-3"	S		2	65	
B506	32'-3"	S		2	67	
B507	32'-9"	S		20	683	
					Total	10,980

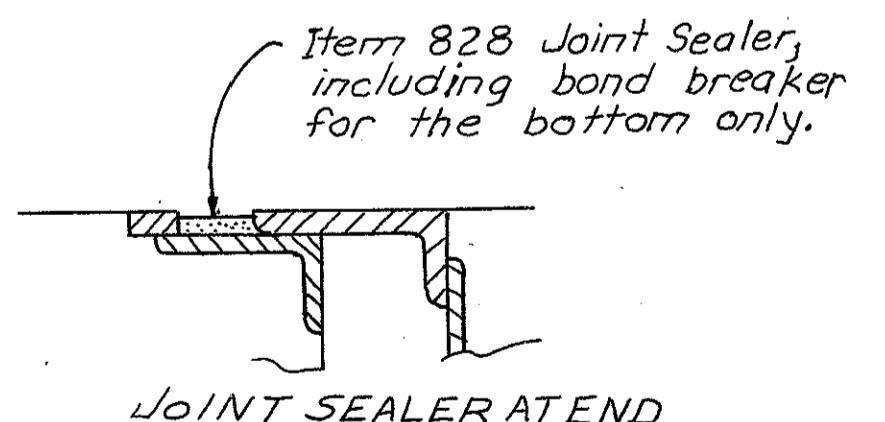
BAR SIZE Is Indicated In The Bar Mark. The First Digit Where Three Digits Are Used, Indicates The Bar Size Number. For Example, A801 Is A No. 8 Size Bar.

CONCRETE Shall Be Class C"

DREMOLDED EXPANSION JOINT FILLER At The Approach Slabs Shall Be Included With The Approach Slabs For Payment.

SAWED JOINT: See Standard Drawing A5-1-54 revised 8-10-65.

G11, Approach Slabs		
Station	Area	Sq. Yds.
From 26+20.97	To 26+45.97	91
29+28.13	29+53.13	91
Totals		182



JOINT SEALER AT END

CHARLES L. BARBER & ASSOCIATES  
ENGINEERS  
TOLEDO OHIO

APPROACH SLABS

BRIDGE NO. WOO-25-1525  
I.R. 75 UNDER POE ROAD  
WOOD CO. STA. 26+45.97  
STA 29+28.13

DESIGNED DRAWN TRACED CHECKED REVIEWED DATE REVISED  
J.M.G J.M.G J.M.G. LAB. J.M.G. 10-1-65  
64