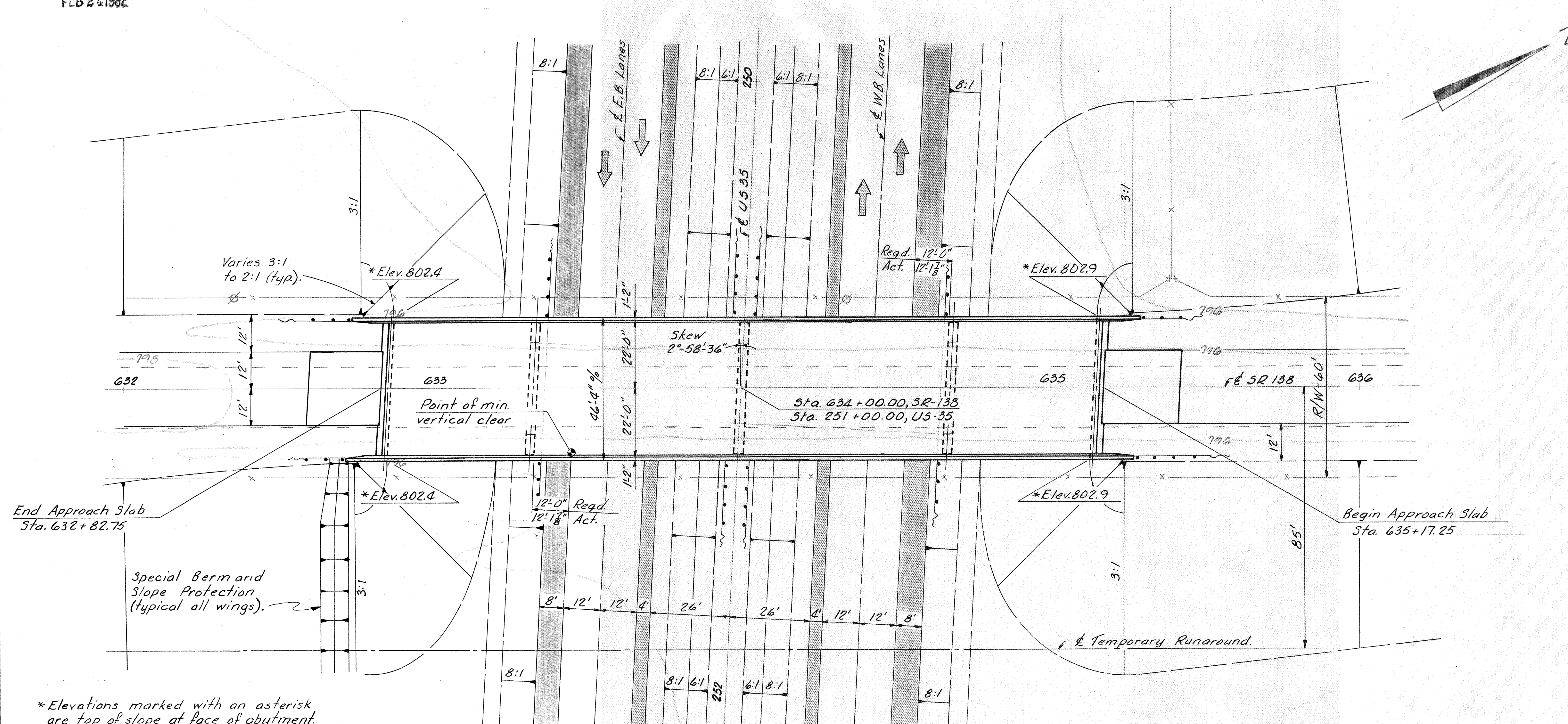


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FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

333
433

ROSS COUNTY
ROS-35-4.38



*Elevations marked with an asterisk are top of slope at face of abutment.

Earthwork limits shown are schematic. Actual slopes shall conform to plan cross-sections.

Wingwall lengths are based on a 2:1 slope from face of abutment.

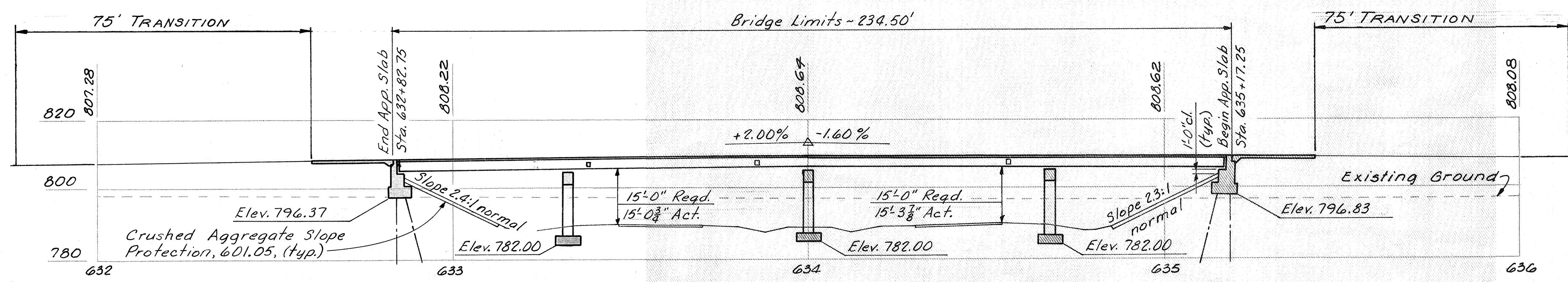
PLAN

THE VERTICAL CURVE DATA DOES NOT APPLY TO BRIDGE OR GRAPHIC CURVE ELEVATIONS. THE BRIDGE ELEVATIONS WERE OBTAINED BY ADDING 1 1/2" TO ELEVATIONS OBTAINED FROM VERTICAL CURVE DATA. 75' TRANSITION WILL BE PROVIDED BEYOND THE ENDS OF THE APPROACH SLABS.

VERTICAL CURVE DATA

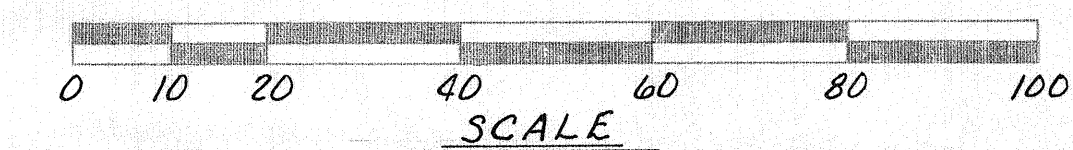
PVI : Sta. 634+00
V.C. : 850'
Elev. : 812.33
Corr. : -3.82'
PG. : 808.51
g₁ : +2.00% g₂ : -1.60%

PROPOSED STRUCTURE
TYPE: Continuous steel beam with reinforced concrete deck and substructure.
SPANS: 47'-3", 67'-9", 67'-9", 47'-3" c/c brg. along SR 138.
ROADWAY: 44'-0" 1/2 concrete barrier type parapet.
LOADING: H 30-44.
SURFACE COURSE: 1 1/2" Asphalt - concrete
SKEW: 2° 58' 36" Lt. Fwd.
ALIGNMENT: Tangent
APPROACH SLABS: A5-1-67, 25'-0" long.



PROFILE along SR 138

All piles shall be 12" Cast-in-Place Reinforced Concrete.
Estimated average pay length:
Rear Abutment ~ 30 ft.
Forward Abutment ~ 25 ft.



1992 ADT ~ 1283

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO						
SITE PLAN						
BRIDGE NO. ROS-35-0475 US 35 UNDER SR 138						
ROSS COUNTY			STA. 251+00.00			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
fwd	fwd	DW	DLM	JEV	8/11/69	

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FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

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ROSS COUNTY
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GENERAL NOTES

STANDARD DRAWING REFERENCES

DESCRIPTION	DWG. NO.	SHT.	DATE
END DAM AND END CROSSFRAME	SD-1-69	1-2	6-12-69
SCUPPERS	SD-1-69	3	6-12-69
BRIDGE ROADWAY RAILING	BR-1-67	1	10-15-71 R
ROCKERS AND BOLSTERS	RB-1-55		2- 2-59 R
APPROACH SLABS	AS-1-67		6-12-69 R

(R INDICATES REVISED DATE)

SUPPLEMENTAL SPECIFICATION REFERENCES

DESCRIPTION	NO.	DATE
CHEMICAL ADMIXTURE FOR CONCRETE, TYPE A, B OR D	808	1- 1-71
CONCRETE CURING AND PROTECTIVE MEMBRANE	836	1- 1-71

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE 'STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES' ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS, 1965, INCLUDING THE OHIO 'SUPPLEMENT' TO THESE SPECIFICATIONS.

DESIGN DATA

DESIGN LOADING - HS20-44
 CONCRETE CLASS C - UNIT STRESS 1200 PSI FOR SUPERSTRUCTURE
 UNIT STRESS 1333 PSI FOR SUBSTRUCTURE
 STRUCTURAL STEEL - ASTM A36 - UNIT STRESS 20000 PSI
 REINFORCING STEEL - ASTM A615, A616 OR A617 - UNIT STRESS 20000 PSI.
 IF BARS IN ACCORDANCE WITH ASTM A616 ARE PROVIDED THEY SHALL BE SUBJECT TO BEND TESTS AS PER AASHO DESIGNATION M42-70. SPIRAL REINFORCEMENT MAY BE PLAIN BARS ASTM A82, A306, A499 OR A615.

EMBANKMENT CONSTRUCTION

THE EMBANKMENTS SHALL BE CONSTRUCTED TO THE LEVEL OF THE SUBGRADE FOR A MINIMUM DISTANCE OF 200 FEET BACK OF THE ABUTMENTS. EXCAVATION SHALL THEN BE MADE FOR THE ABUTMENTS.

PILES

PILES SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF-
 40 TONS PER PILE FOR THE ABUTMENTS

FOUNDATION BEARING PRESSURE

PIER FOOTINGS ARE DESIGNED FOR A MAXIMUM BEARING PRESSURE OF 2.5 TONS PER SQUARE FOOT.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	ABUTS.	PIERS	SUPER.	GENERAL		
503	LUMP	SUM	COFFERDAMS, CRIBS AND SHEETING				LUMP		
503	530	C.Y.	UNCLASSIFIED EXCAVATION	235	295				
505	LUMP	SUM	TEST PILE				LUMP		
507	720	L.F.	12 INCH CAST-IN-PLACE REINFORCED CONCRETE PILES	720					
509	127040	LB	REINFORCING STEEL	12651	25408	88981			
511	337	C.Y.	CLASS C CONCRETE, SUPERSTRUCTURE			337			
511	96	C.Y.	CLASS C CONCRETE, ABUTMENTS ABOVE FOOTINGS	96					
511	88	C.Y.	CLASS C CONCRETE, PIER CAPS AND COLUMNS		88				
511	155	C.Y.	CLASS C CONCRETE, FOOTINGS	71	84				
513	240900	LB	STRUCTURAL STEEL			240900			
514	240900	LB	FIELD PAINTING OF STRUCTURAL STEEL			240900			
518	50	C.Y.	POROUS BACKFILL	50					
518	77	L.F.	6 INCH PERFORATED, HELICAL CMP, 707.01	77					
518	88	L.F.	6 INCH NON-PERFORATED, HELICAL CMP, INCLUDING SPECIALS, 707.01	88					
518	10	EA	SCUPPERS INCLUDING SUPPORTS			10			
601	440	S.Y.	CRUSHED AGGREGATE SLOPE PROTECTION				440		
808	337	UNIT	CHEMICAL ADMIXTURE FOR CONCRETE, TYPE A, B OR D			337			
404	30	C.Y.	ASPHALT CONCRETE (70-85 or AC 20)			30			
SPECIAL	15	C.Y.	SAND- ASPHALT (SEE PROPOSAL NOTE)			15			
SPECIAL	1170	S.Y.	MEMBRANE WATERPROOFING(SEE PROPOSAL NOTE)			1170			

2/11

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GENERAL NOTES AND
 ESTIMATED QUANTITIES
 BRIDGE NO. ROS-35-0475
 US 35 UNDER SR 138

ROSS COUNTY STA. 251+00.00

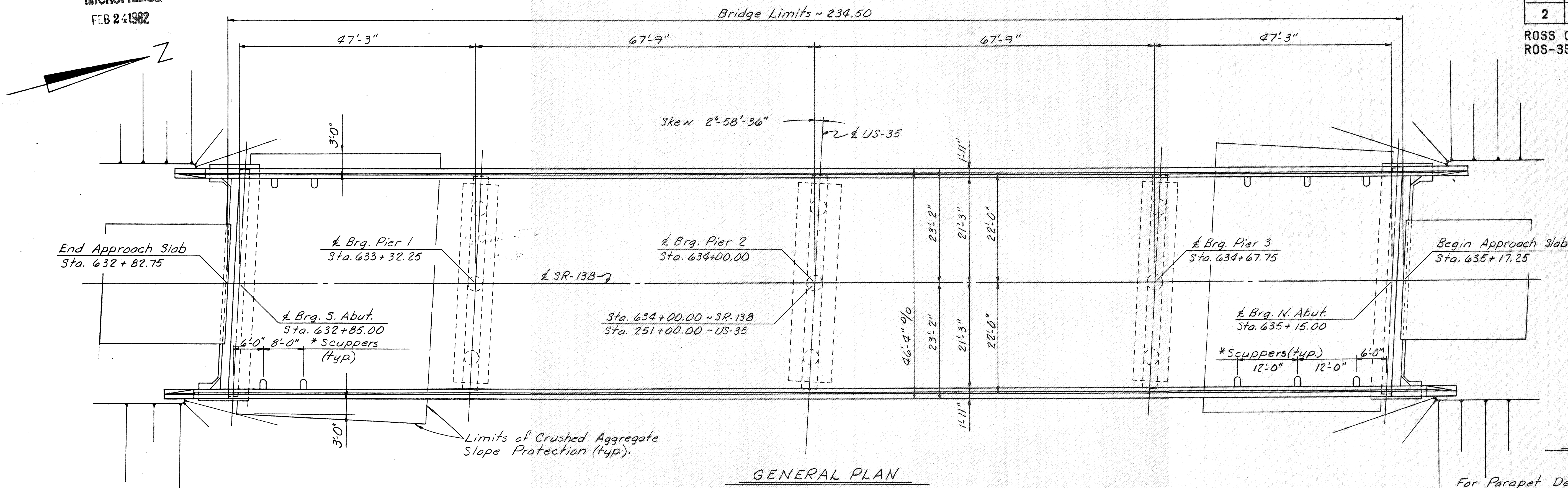
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RT			PHB 2-20-70		fnd 4/2/70	

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FEB 24 1982

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

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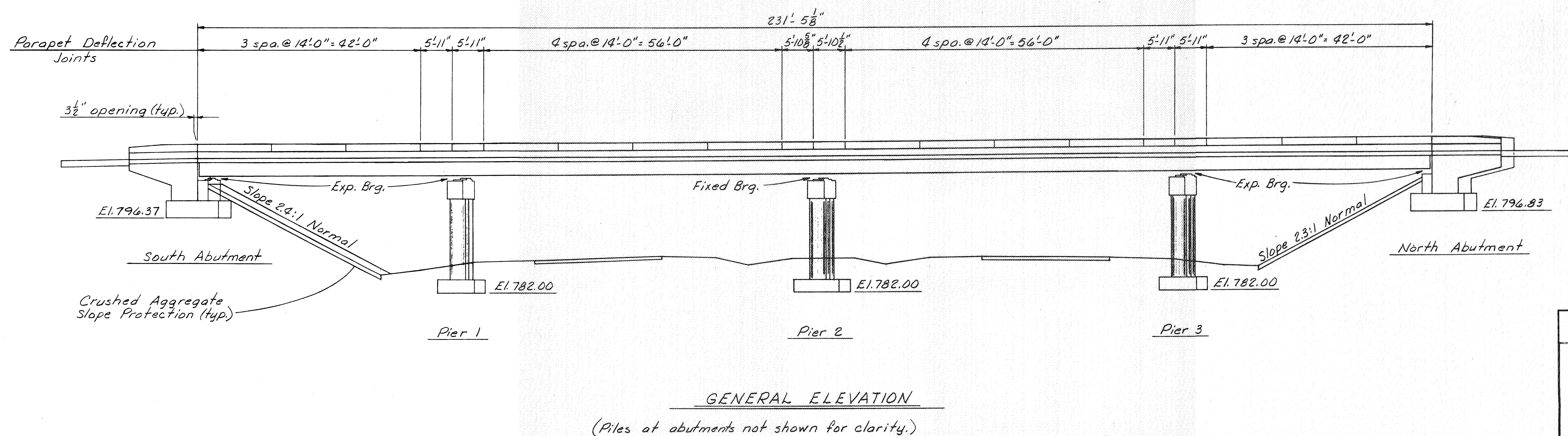
ROSS COUNTY
ROS-35-4.38



NOTES

For Parapet Deflection Joint Details see Std. Dwg. BR-1-67.

* For Scupper Details see sheet 8/11.



3/11

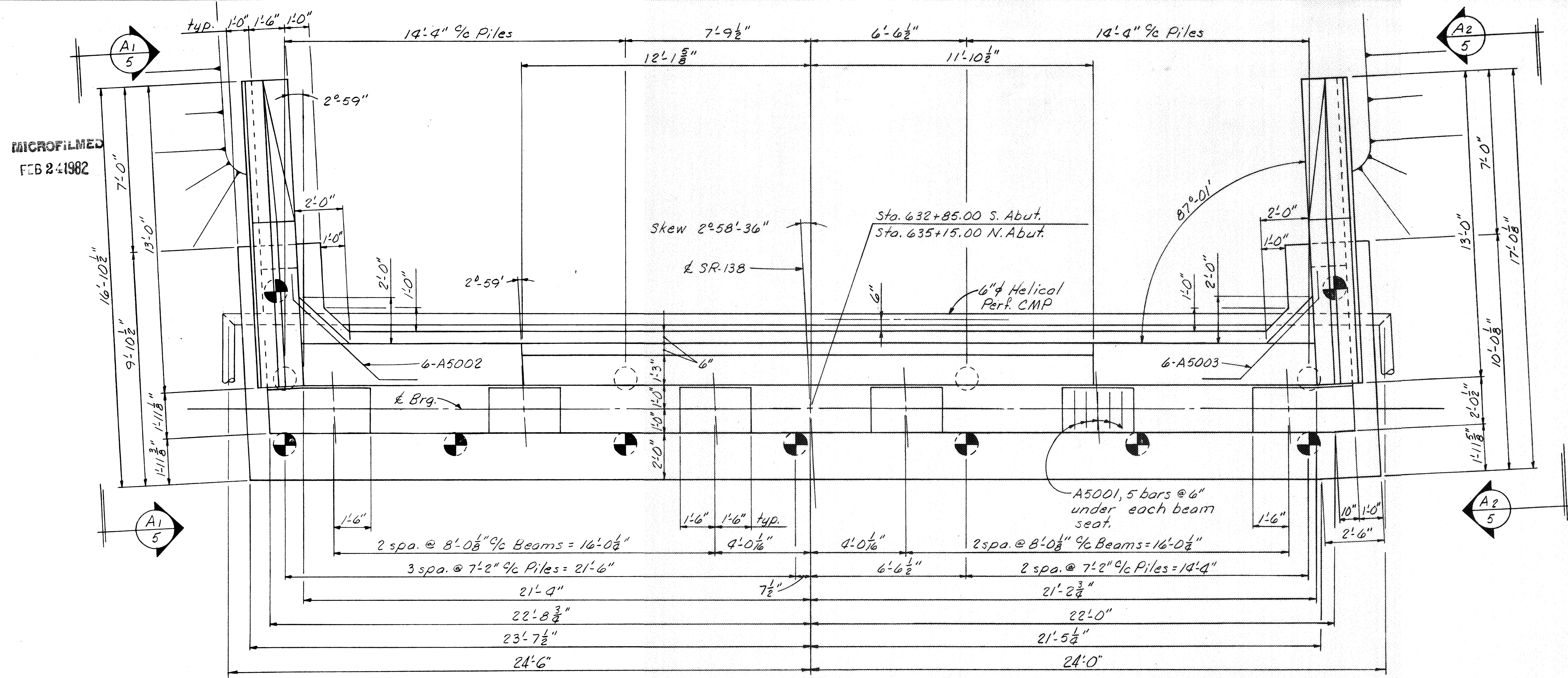
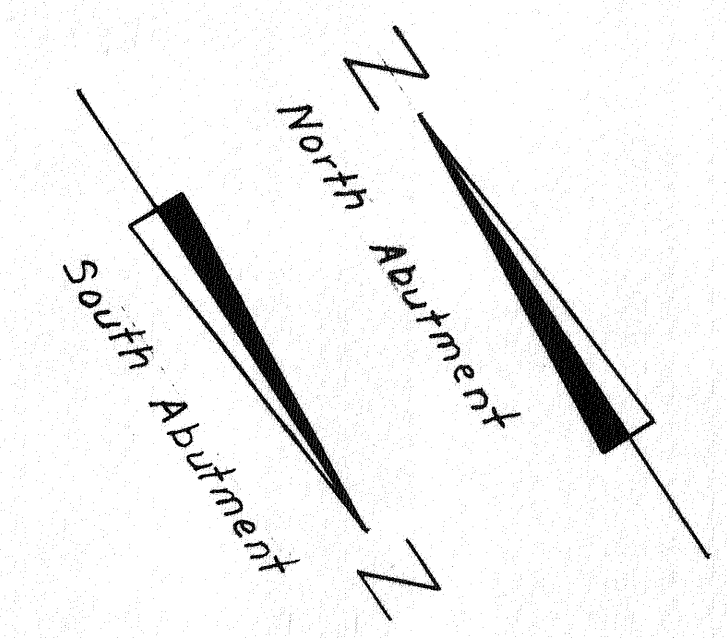
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GENERAL PLAN
AND ELEVATION

BRIDGE NO. ROS-35-0475
US 35 UNDER SR 138
ROSS COUNTY STA. 251+00.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RT	DW		PHB		4-2-70	

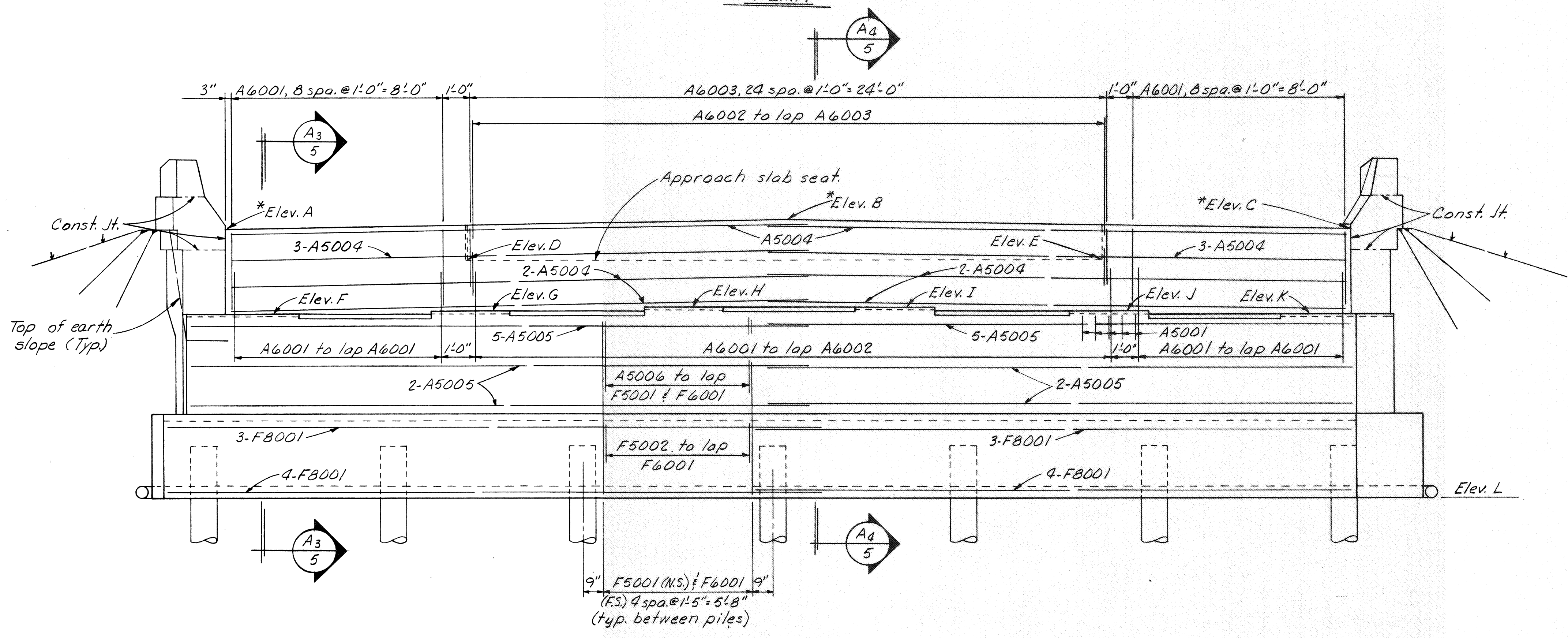
ROSS COUNTY
ROS-35-4.38



PLAN

NOTES

- All piles shall be 12" cast-in-place reinforced concrete piles: ○ indicates vertical, ● indicates battered 1:4.
- Reinforcing steel location:
N.S. indicates near side.
F.S. indicates far side.
- Top of backwall shall conform to the roadway crown.
- * Elevations marked with an asterisk are to top of 2" edge bar.
- Porous backfill, full length of abutment and wings, shall extend up to the subgrade or to the bottom of the approach slab.
- All reinforcing in footing shall have 3" minimum cover.
- Adjustable type elbows meeting specification requirements for gage and coating are acceptable for making bends in corrugated metal pipe.
- Only that portion of the CMP located in the Porous backfill shall be perforated.
- For additional details see sheet 5/11.



ELEVATION

Elev.	S. Abut.	N. Abut.
A	807.74	808.22
B	808.08	808.55
C	807.76	808.22
D	806.45	806.93
E	806.46	806.93
F	803.41	803.86
G	803.54	803.99
H	803.66	804.12
I	803.66	804.12
J	803.53	803.99
K	803.40	803.87
L	796.37	796.83

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ABUTMENT DETAILS

BRIDGE NO. ROS-35-0475
US 35 UNDER SR 138
ROSS COUNTY STA. 251+00.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISD
RT	DW		PHB	fwd	4-2-70	

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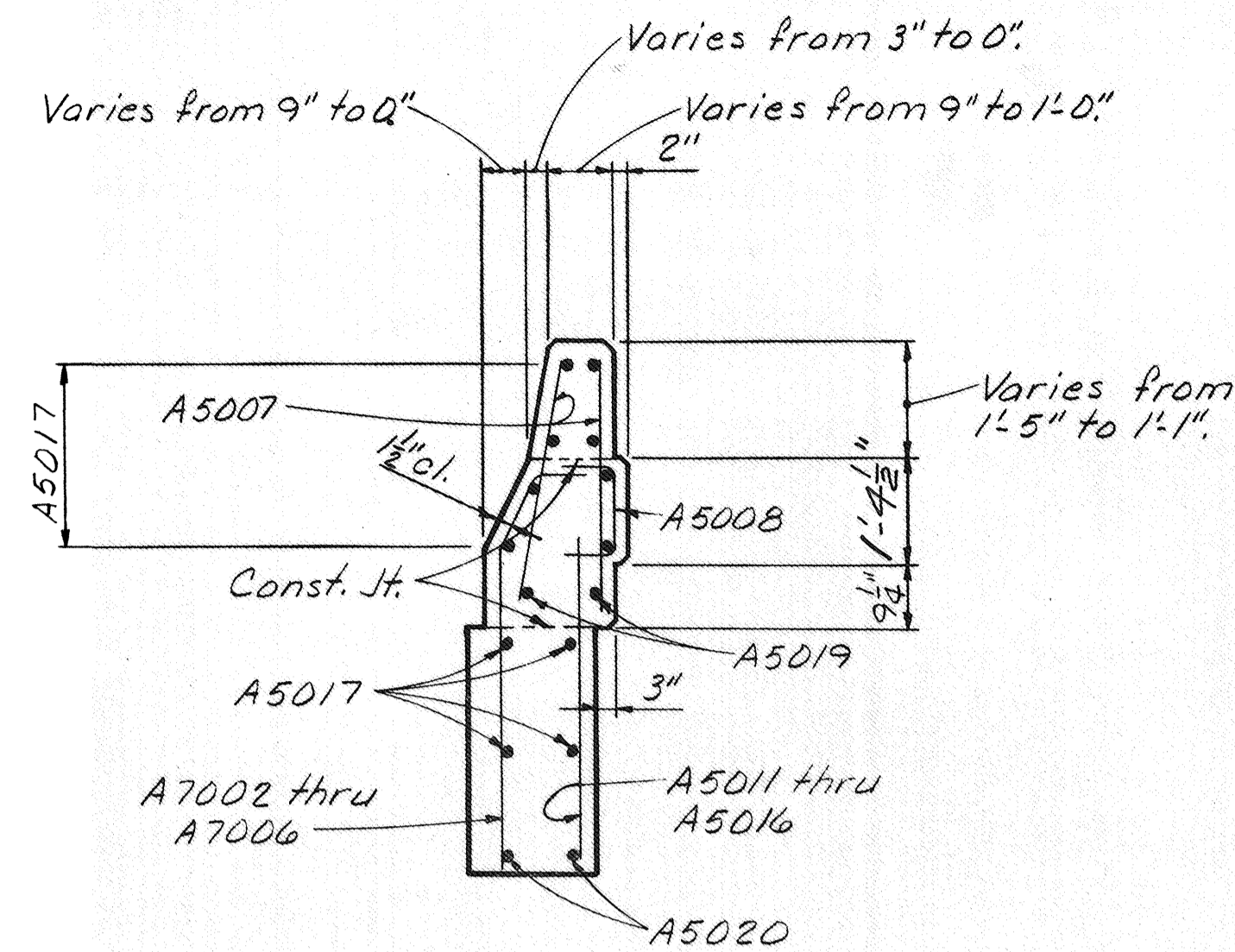
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

ROSS COUNTY
ROS-35-4.38

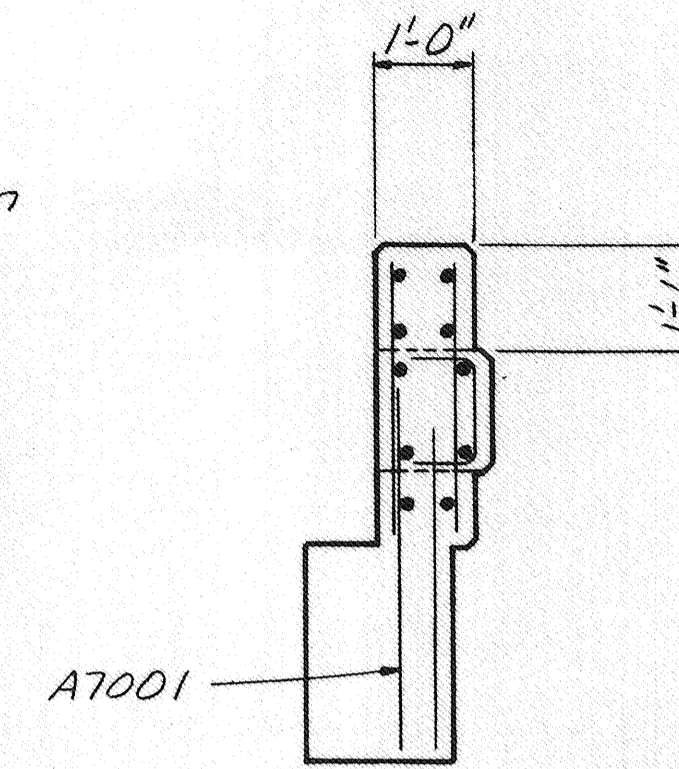
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TABLE of ELEVATIONS

Elev.	S.E. Wing	S.W. Wing	N.E. Wing	N.W. Wing
A	806.78	806.80	807.31	807.31
B	806.88	806.89	807.35	807.35
C	804.55	804.57	805.08	805.08
D	803.41	803.40	803.87	803.86
E	802.55	802.56	803.01	803.02
F	796.37	796.37	796.83	796.83

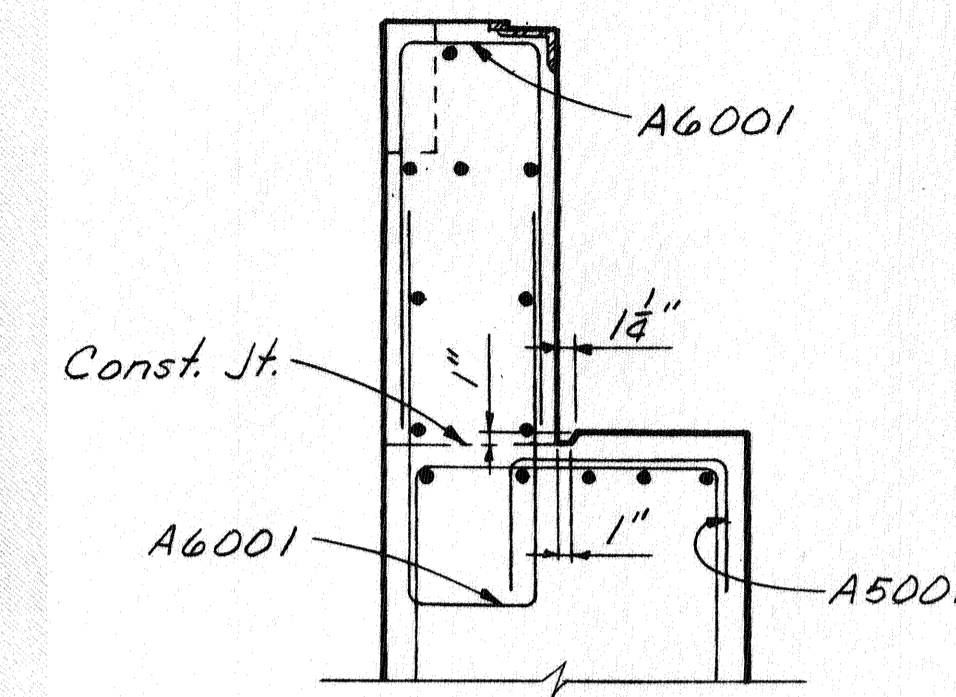


SECTION-A6-A6



SECTION-A5-A5

(Reinforcing and dimensions not shown same as Section-A6-A6)



SECTION-A3/4

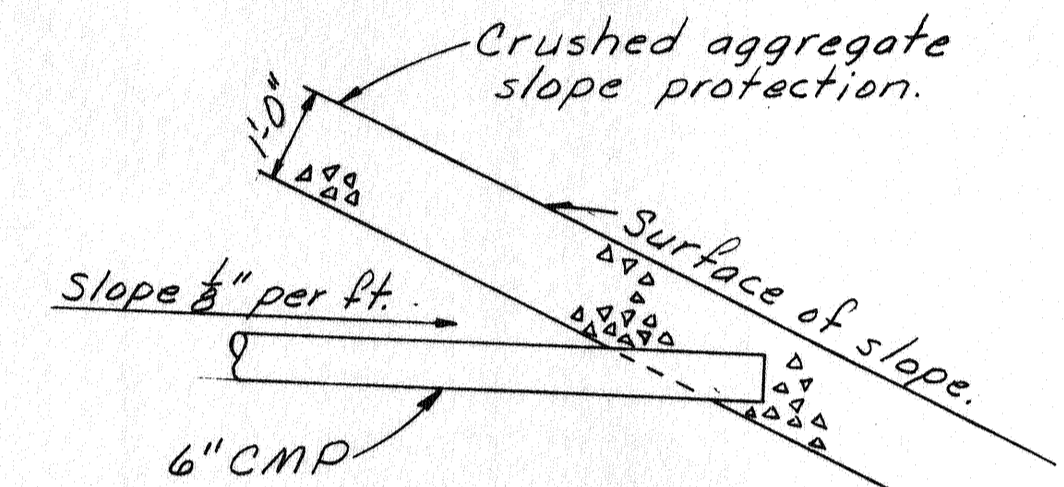
(At Beam seat.)
(Reinforcing and dimension not shown same as Section-A4/4.)

NOTES

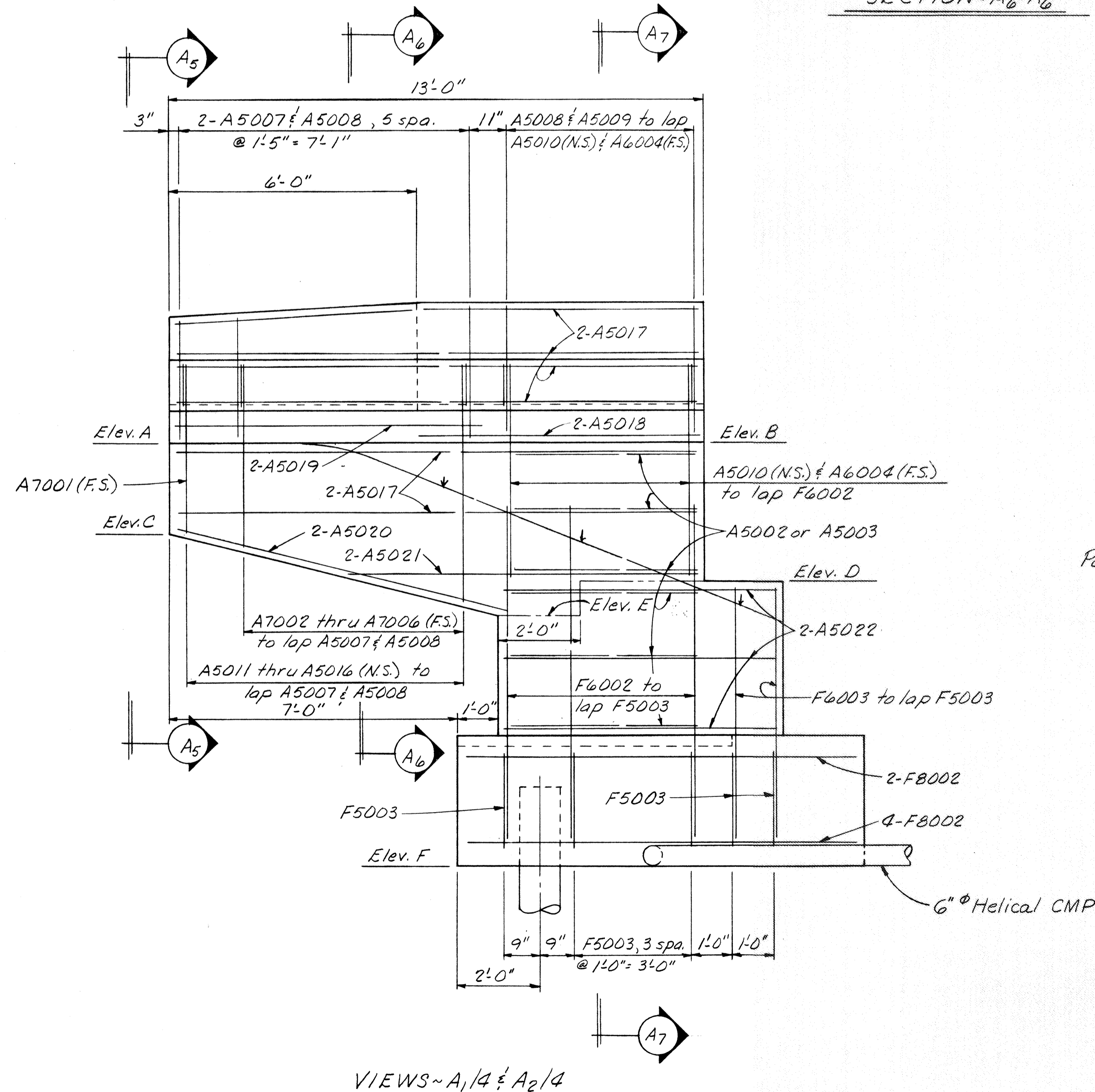
Reinforcing steel location:
N.S. indicates near side.
F.S. indicates far side.

For additional notes and details see sheet 4/11.

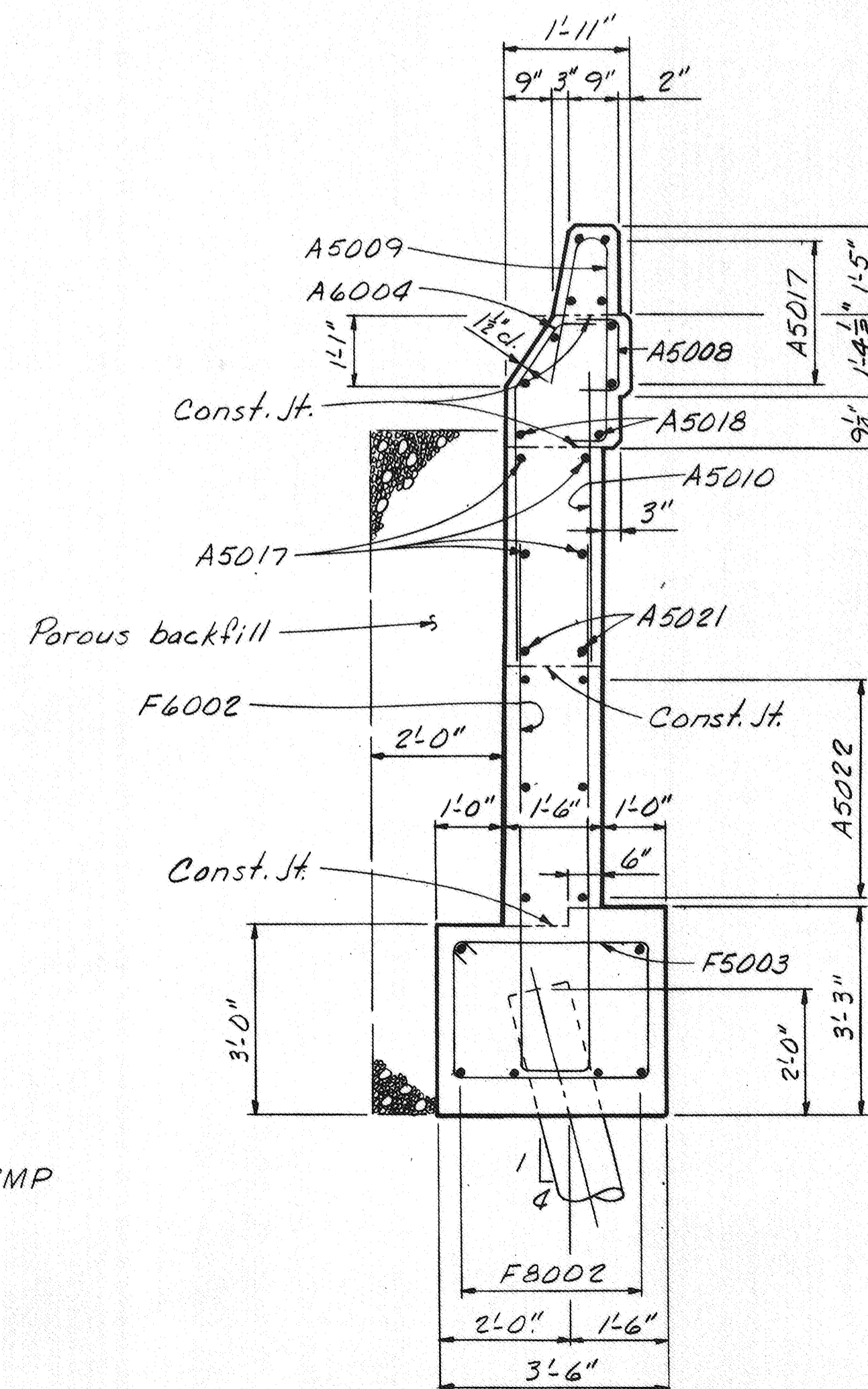
Parapet Transitions and Wingwall Ends shall be as shown on Std. Dwg. BR-1-67 revised 10-15-71. Reinforcing steel shall be field bent or cut to fit the revised shape.



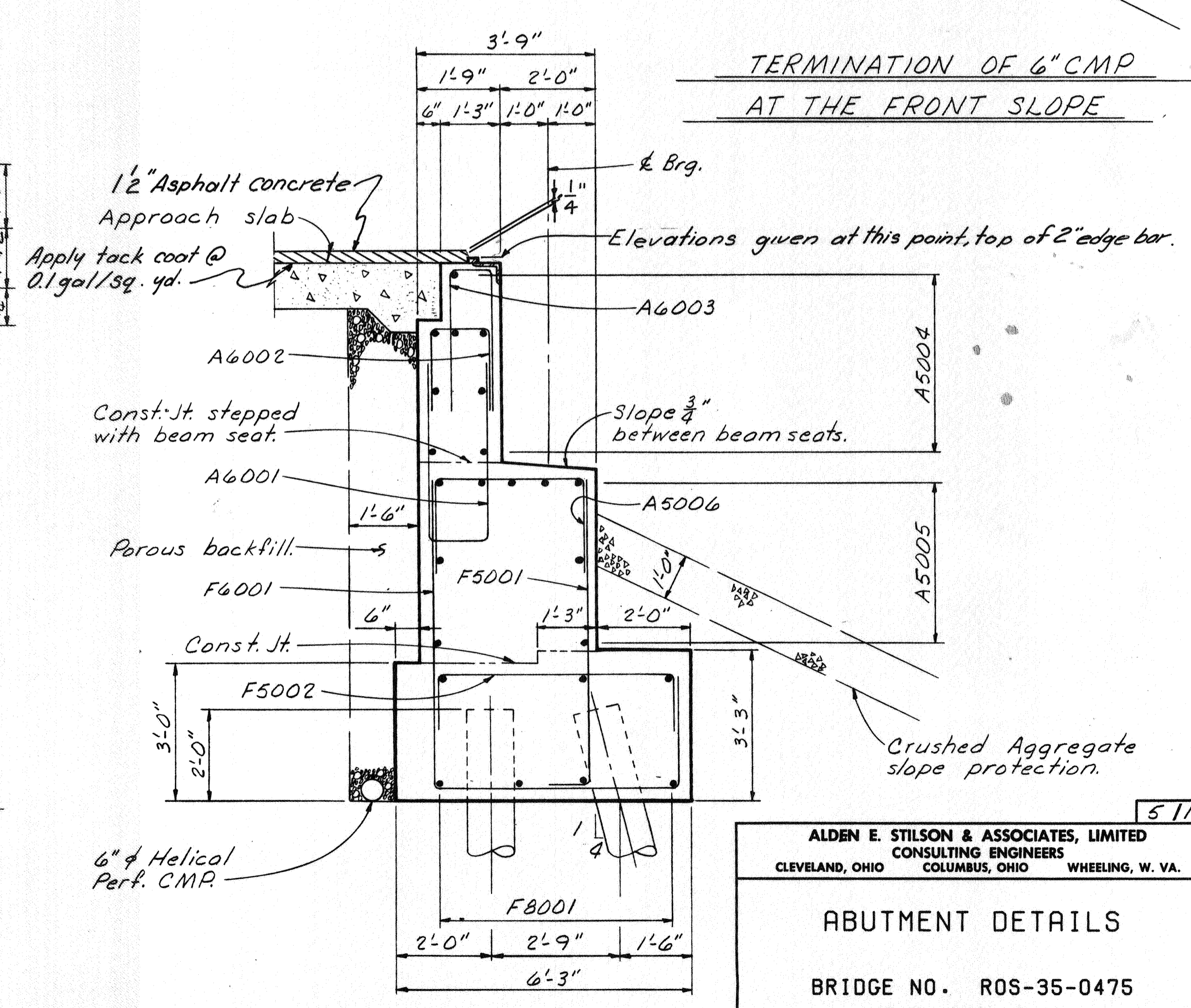
TERMINATION OF 6" CMP AT THE FRONT SLOPE



VIEWS-A1/4 & A2/4



SECTION-A7-A7



SECTION-A4/4

(Between Beam seats.)

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ABUTMENT DETAILS

BRIDGE NO. ROS-35-0475
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ROSS COUNTY STA. 251+00.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RT	DW		PHB	fwd	4-2-70	

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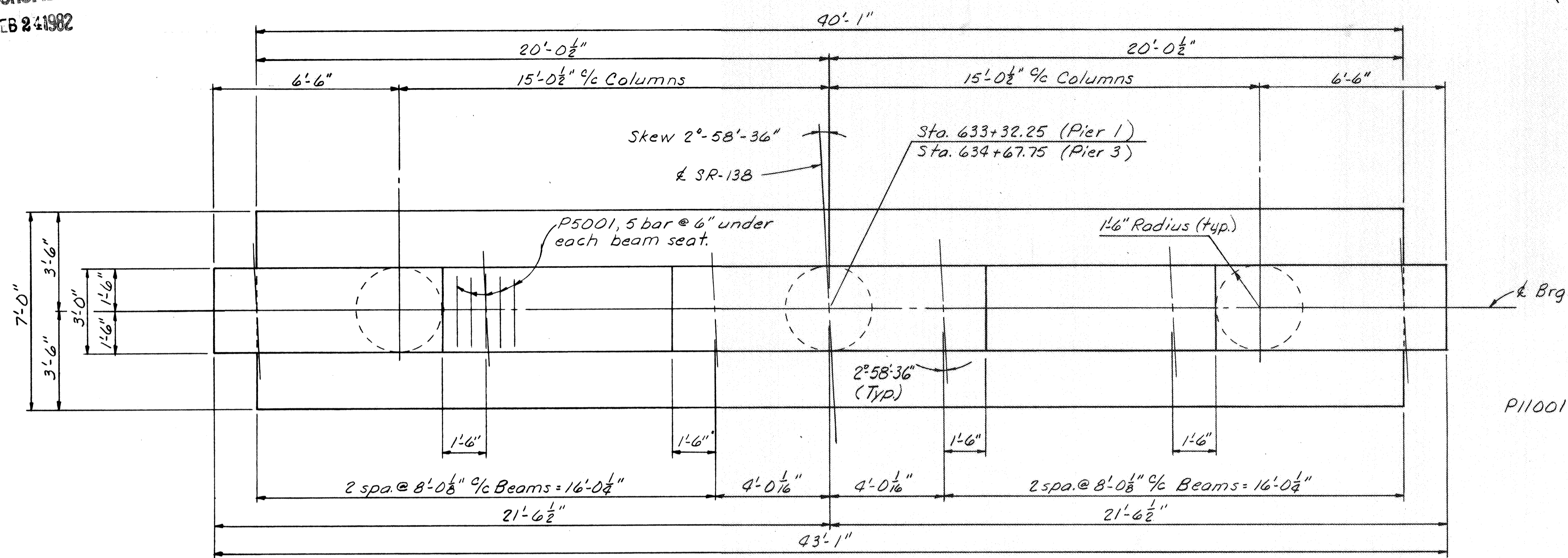
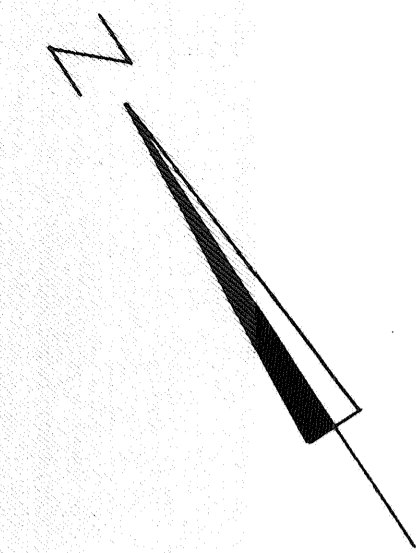
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

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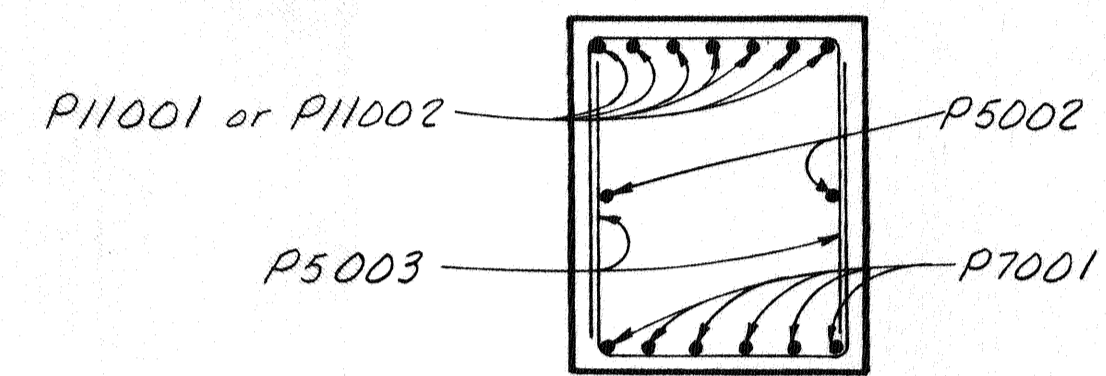
ROSS COUNTY
ROS-35-4.38

NOTE

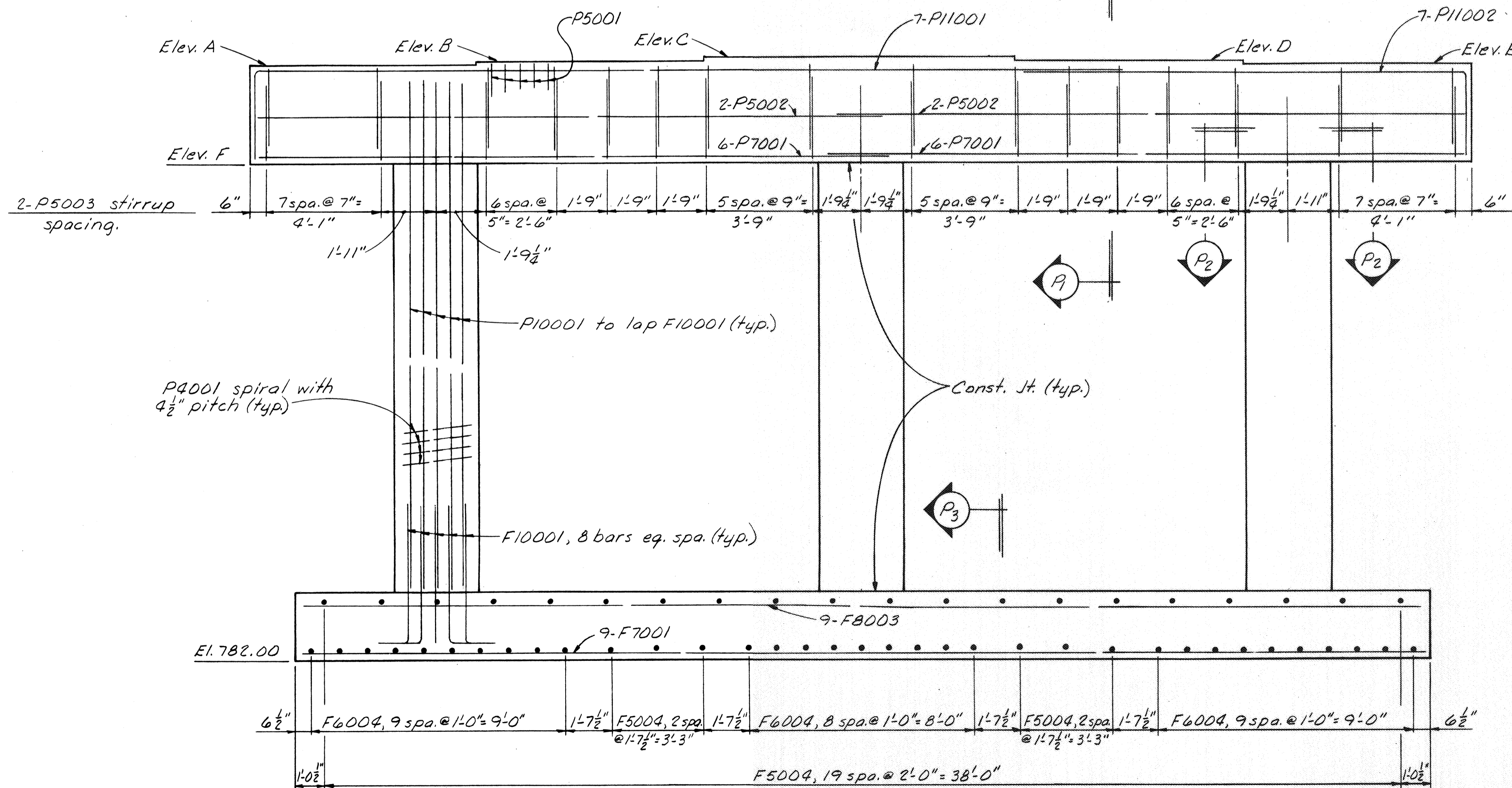
All reinforcing in footings shall have 3" minimum cover.



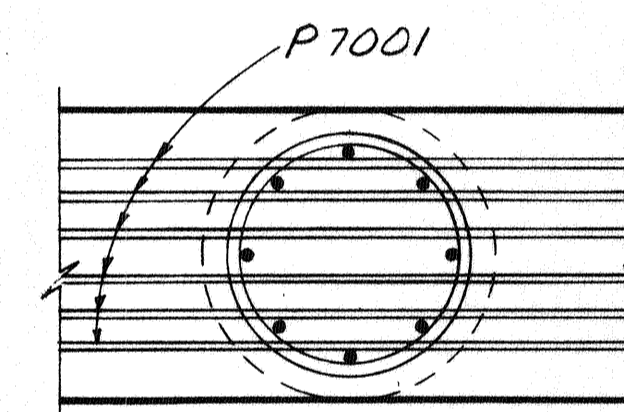
PLAN



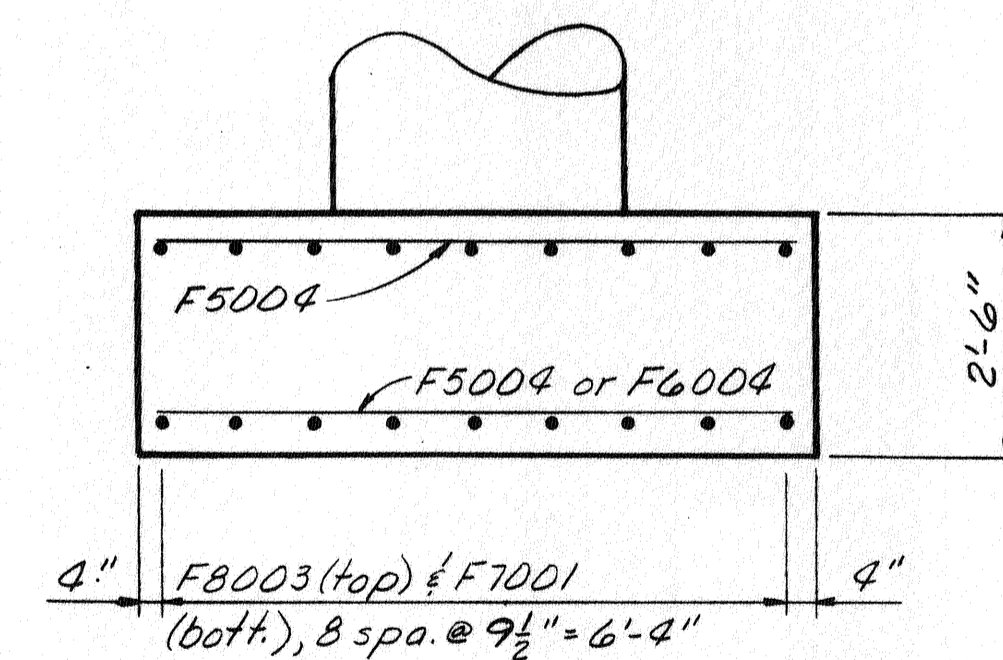
SECTION-A-A



ELEVATION



SECTION-P2-P2



SECTION-P3-P3

Elev.	Pier 1	Pier 3
A	803.33	803.60
B	803.46	803.73
C	803.58	803.85
D	803.46	803.75
E	803.33	803.60
F	799.83	800.10

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PIER 1 AND 3 DETAILS

BRIDGE NO. ROS-35-0475

US 35 UNDER SR 138

ROSS COUNTY

STA. 251+00.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RT	DW		PHB	fwd	4-2-70	

611

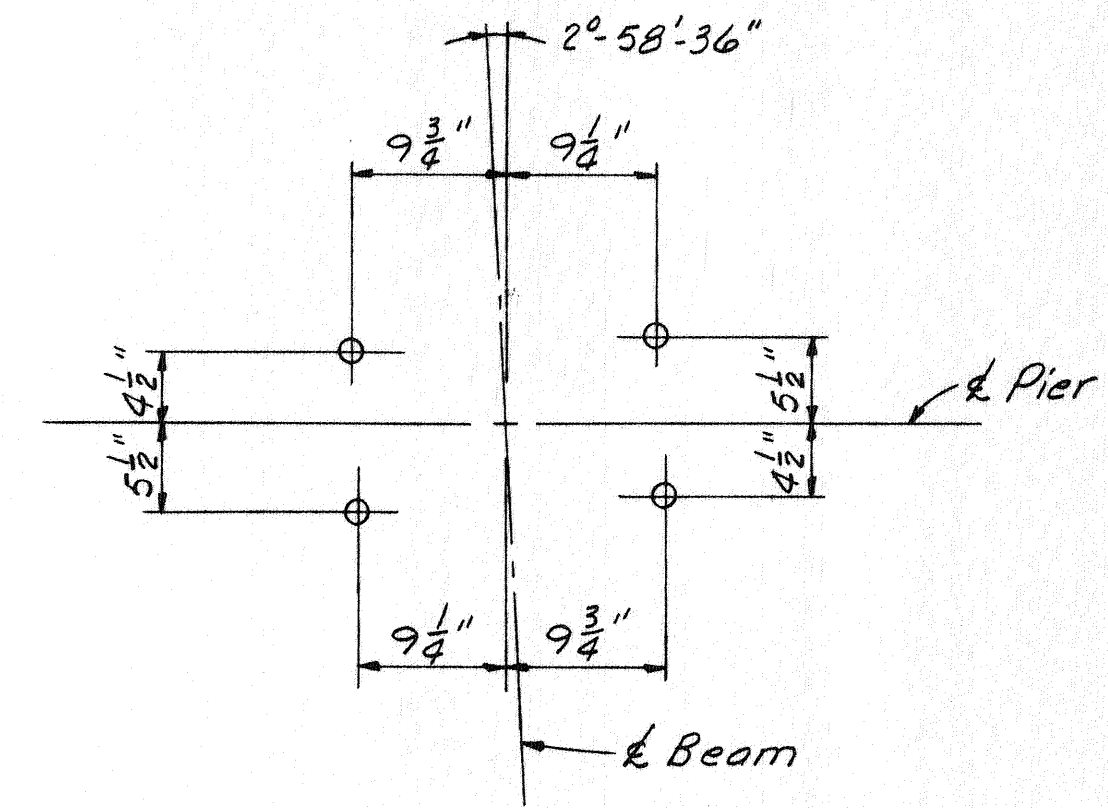
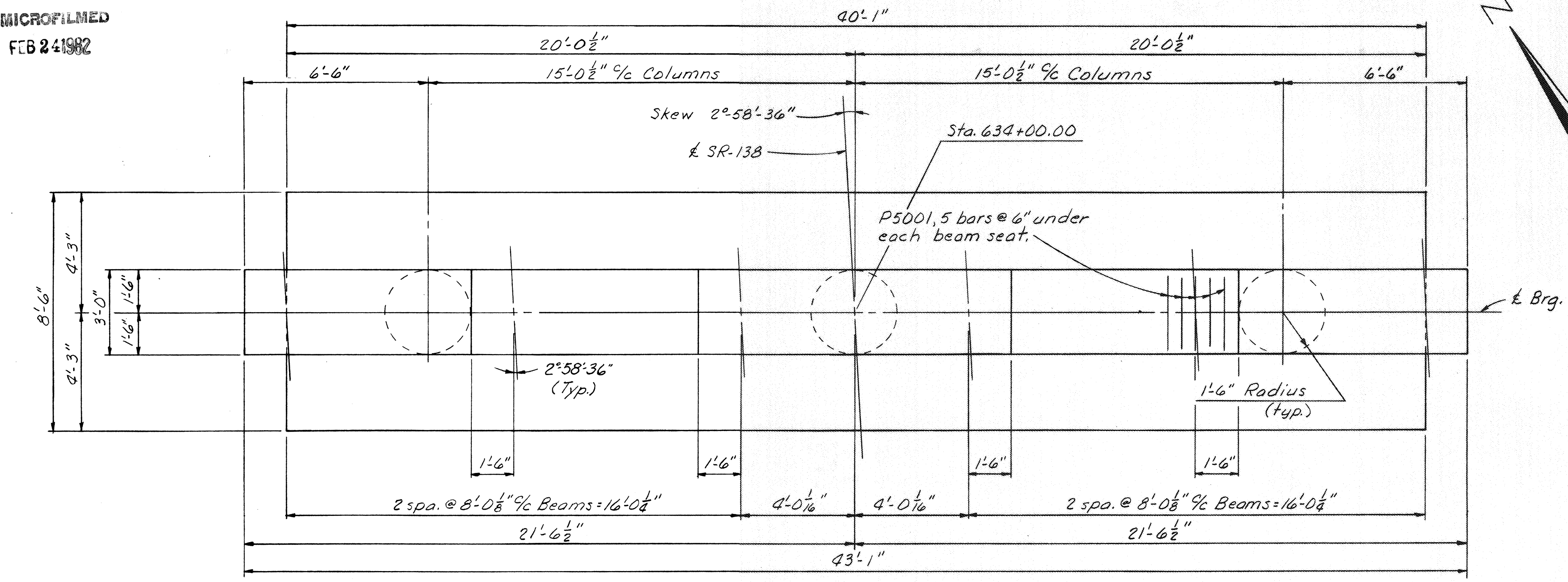
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FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

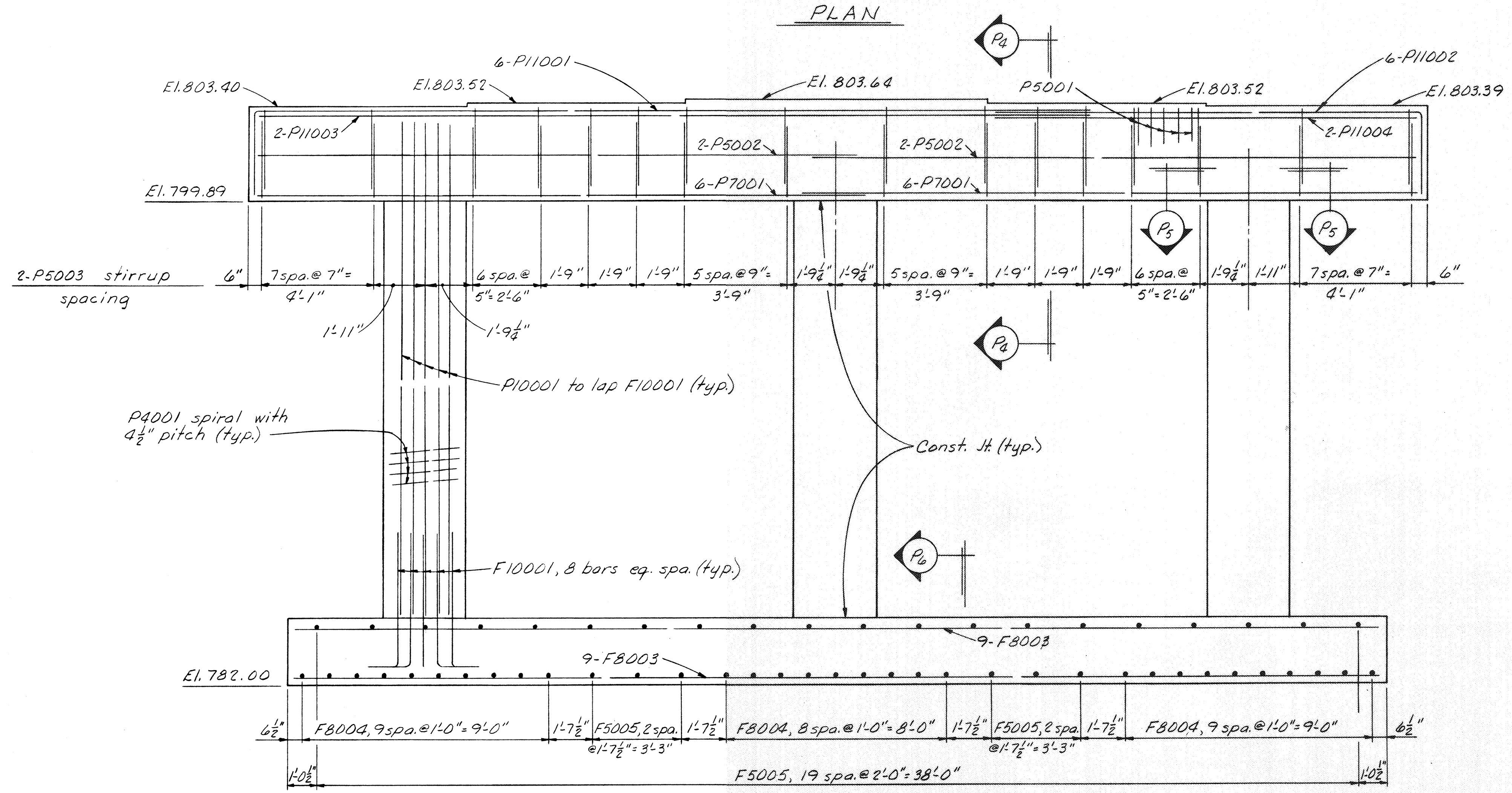
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ROSS COUNTY
ROS-35-4.38

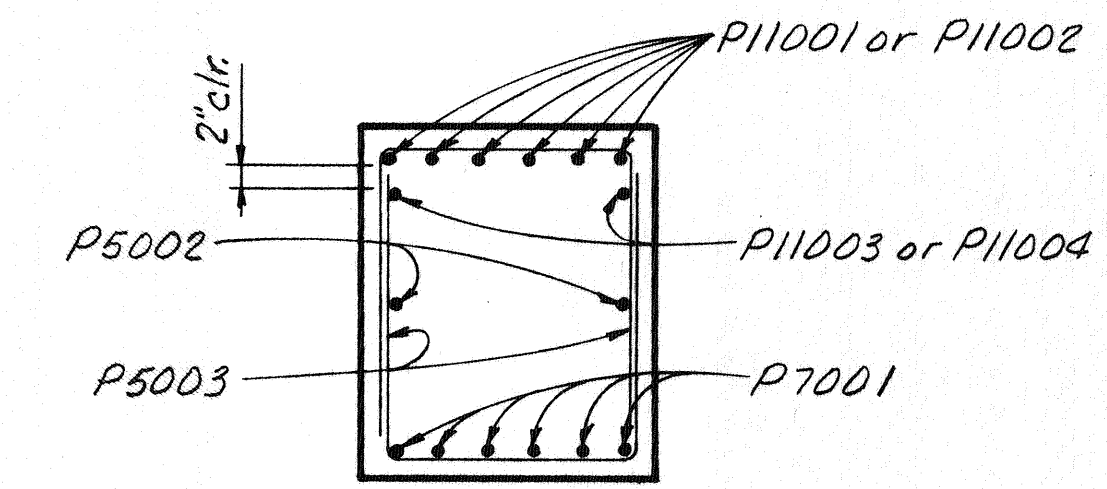
Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bolt holes.



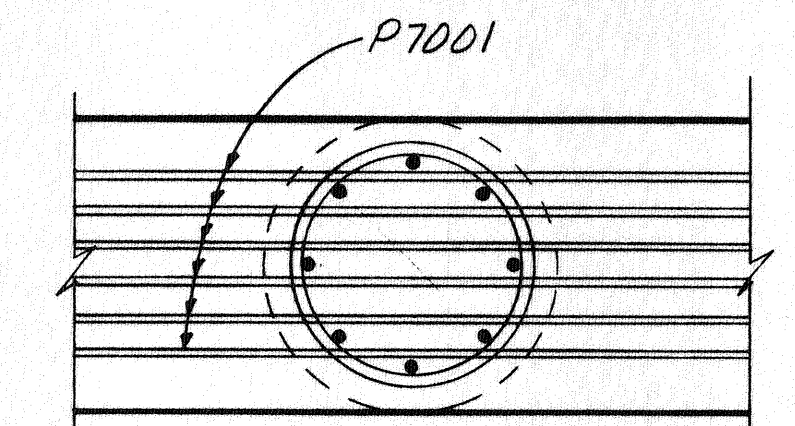
ANCHOR BOLT SETTING DETAIL



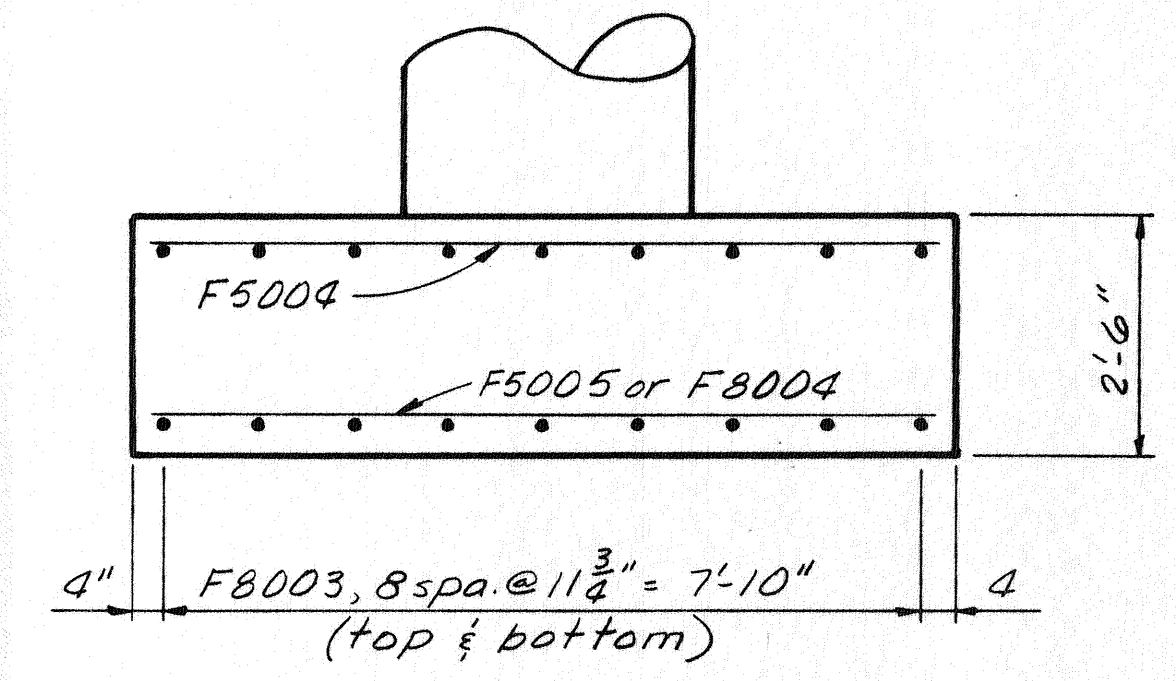
ELEVATION



SECTION-P₂-P₄



SECTION-P₂-P₅



SECTION-P₆-P₆

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PIER 2 DETAILS

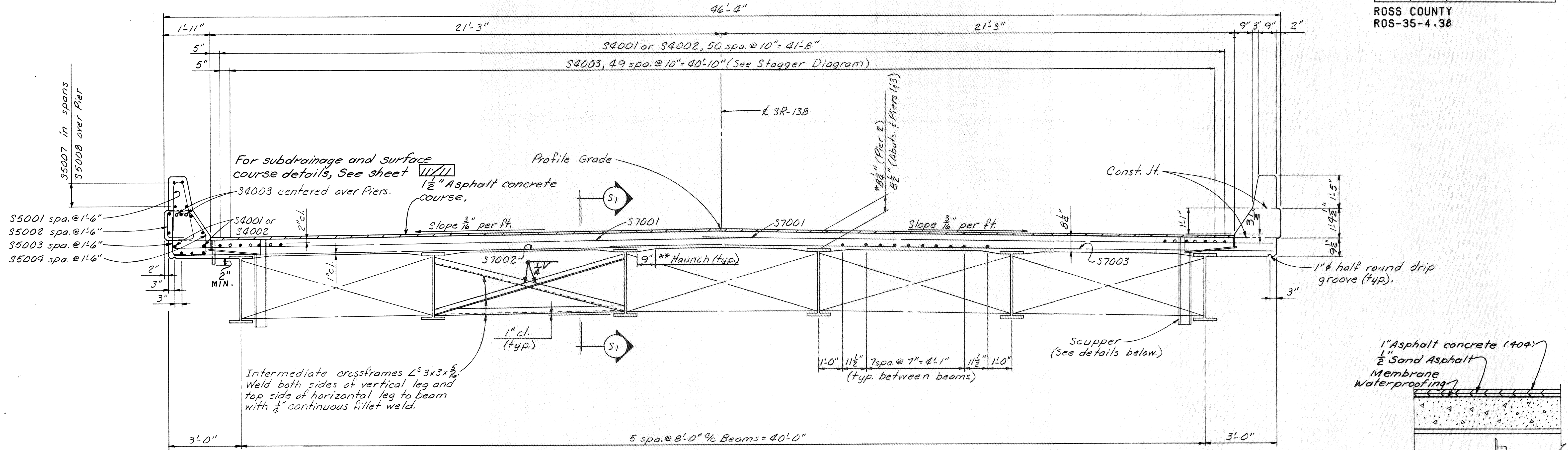
BRIDGE NO. ROS-35-0475
US 35 UNDER SR 138
ROSS COUNTY STA. 251+00.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RT	DW		PHB	fwa	4-2-70	

All longitudinal reinforcing steel shall be S5005 or S5006 unless otherwise noted.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS	340 433
2	OHIO			

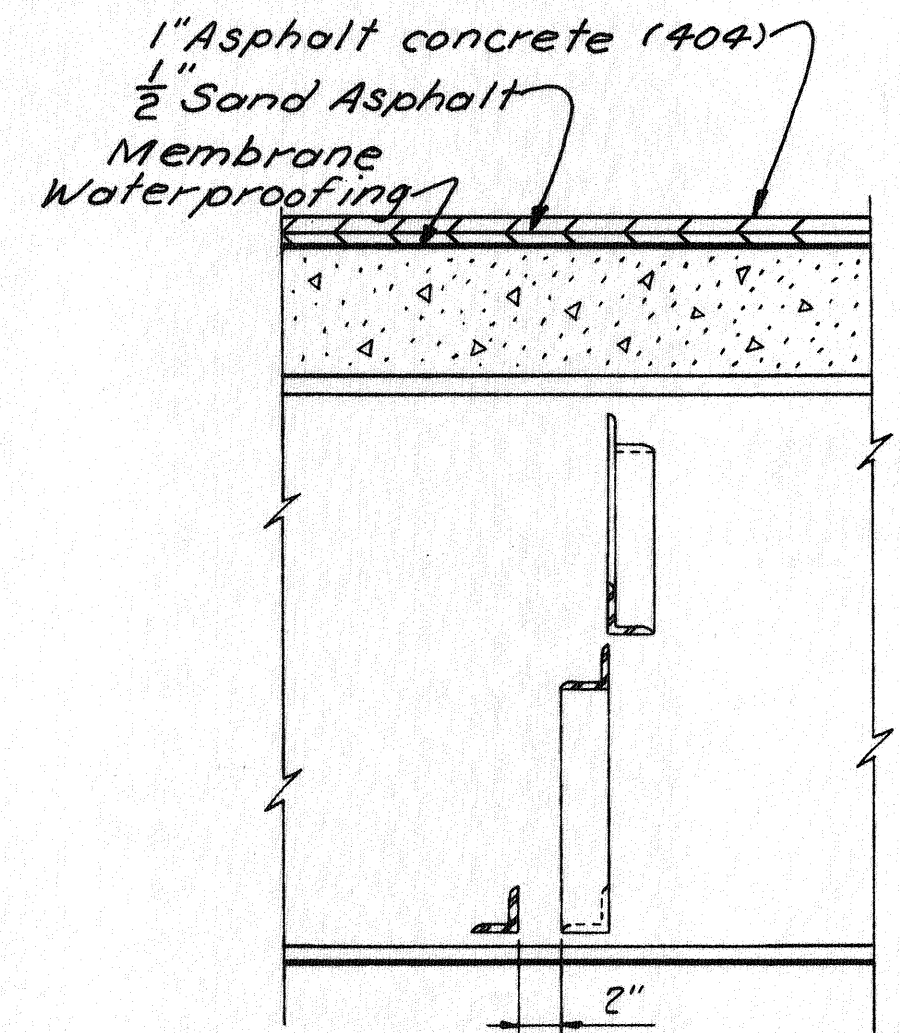
ROSS COUNTY
ROS-35-4.38



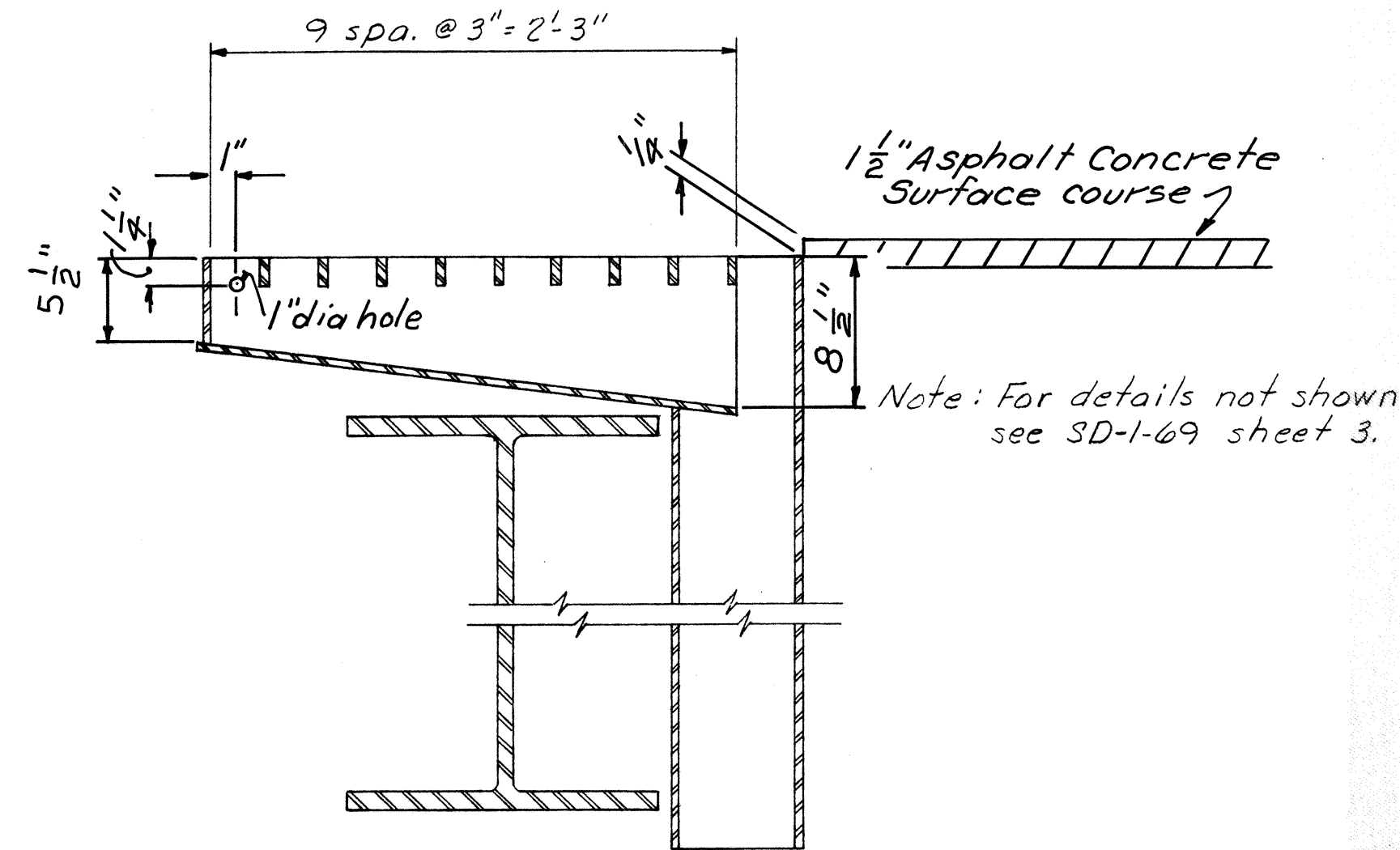
DECK FINISHING: Texturing of the deck surface as provided in 451.09 shall not be done.

DECK REINFORCING BARS: At the Contractor's option, a portion (not to exceed 25%) of the upper longitudinal bars S4001 & S4002 in the deck slab may be placed beneath the upper transverse bars for support of the top mat.

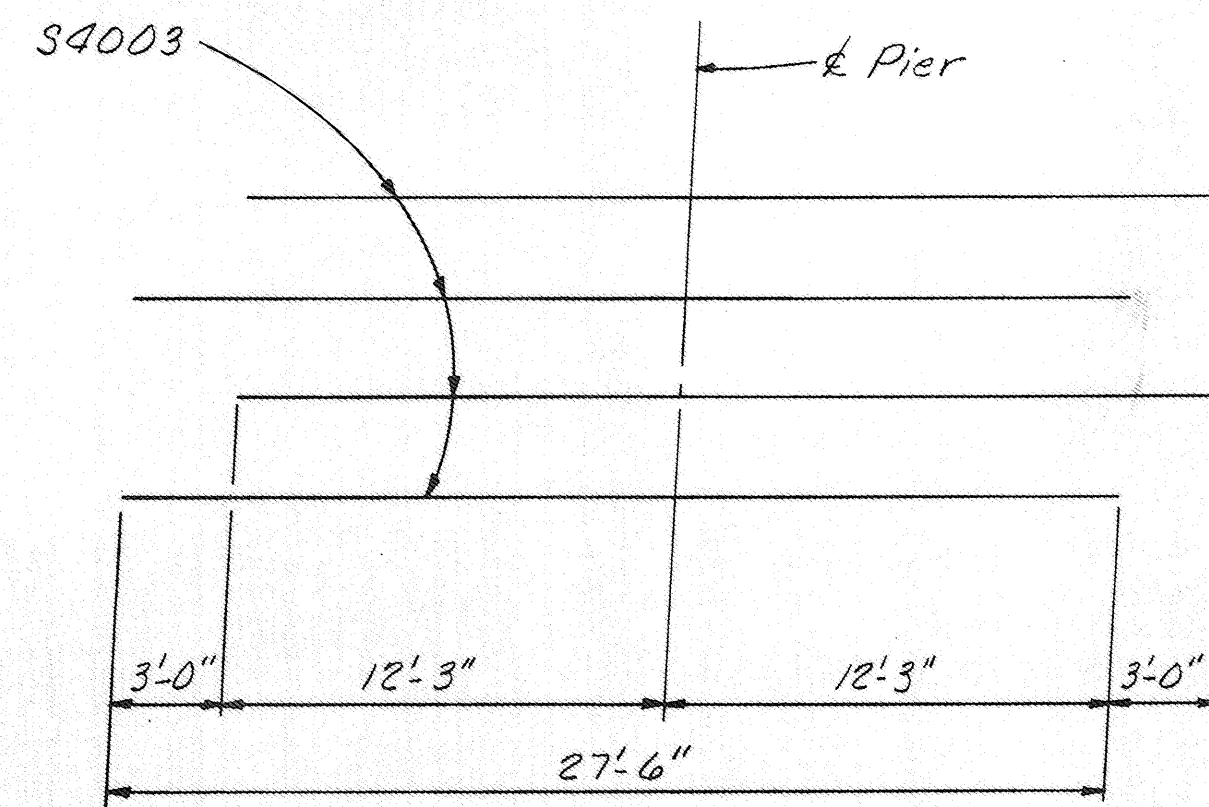
TRANSVERSE SECTION



SECTION ~ S1-S1



SCUPPER DETAIL



STAGGER DIAGRAM

NOTES

* The distance shown from the top of the deck slab to top of beam is the design 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.

** A typical haunch width of 9" shall be used for computing quantity of concrete. However, the haunch width may vary between 6" and 12" provided that the slope shall not be more than 1:4 for a haunch less than 9" in width.

Transverse reinforcing shall be spaced @ 10" % along £ SR-138.

Lap S4001 and S4002 bars 1'-3" min.

Lap S5005 and S5006 bars 1'-7" min.

Quantities of concrete and reinforcing steel for railing shall be included with their appropriate Items for payment.

For additional notes and details see sheets 941011.

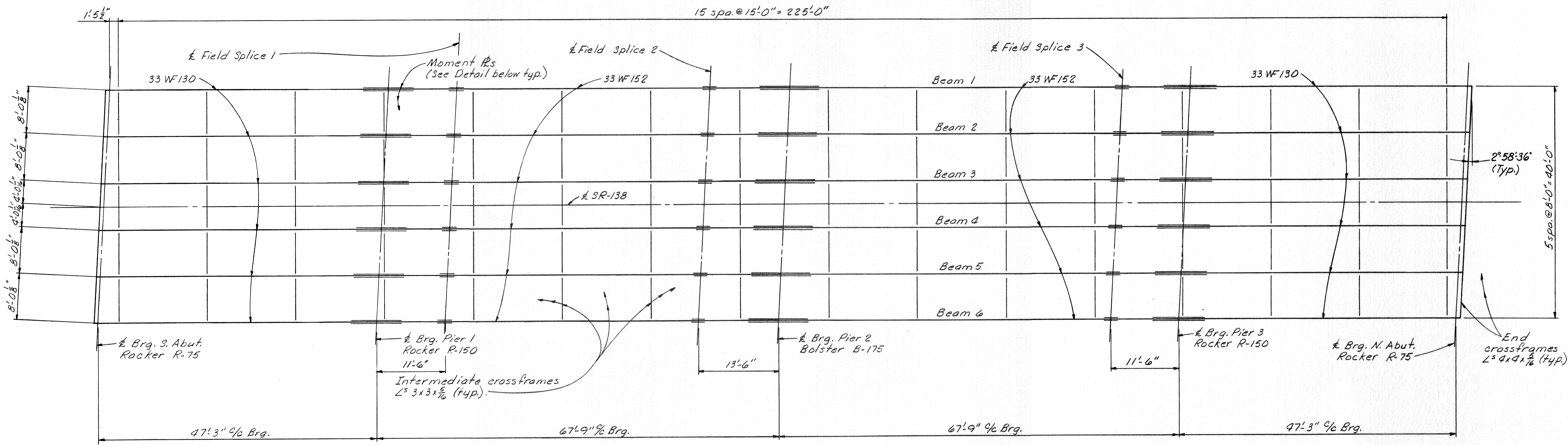
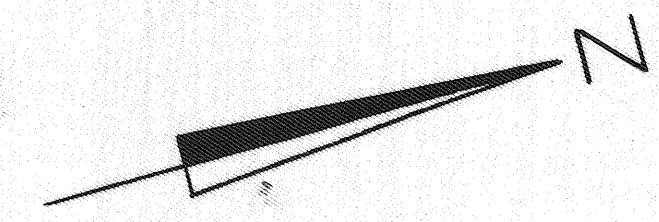
ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS CLEVELAND, OHIO COLUMBUS, OHIO WHEELING, W. VA.					
SUPERSTRUCTURE DETAILS					
BRIDGE NO. ROS-35-0475 US 35 UNDER SR 138					
ROSS COUNTY STA. 251+00.00					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
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					8-9-73

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FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

ROSS COUNTY
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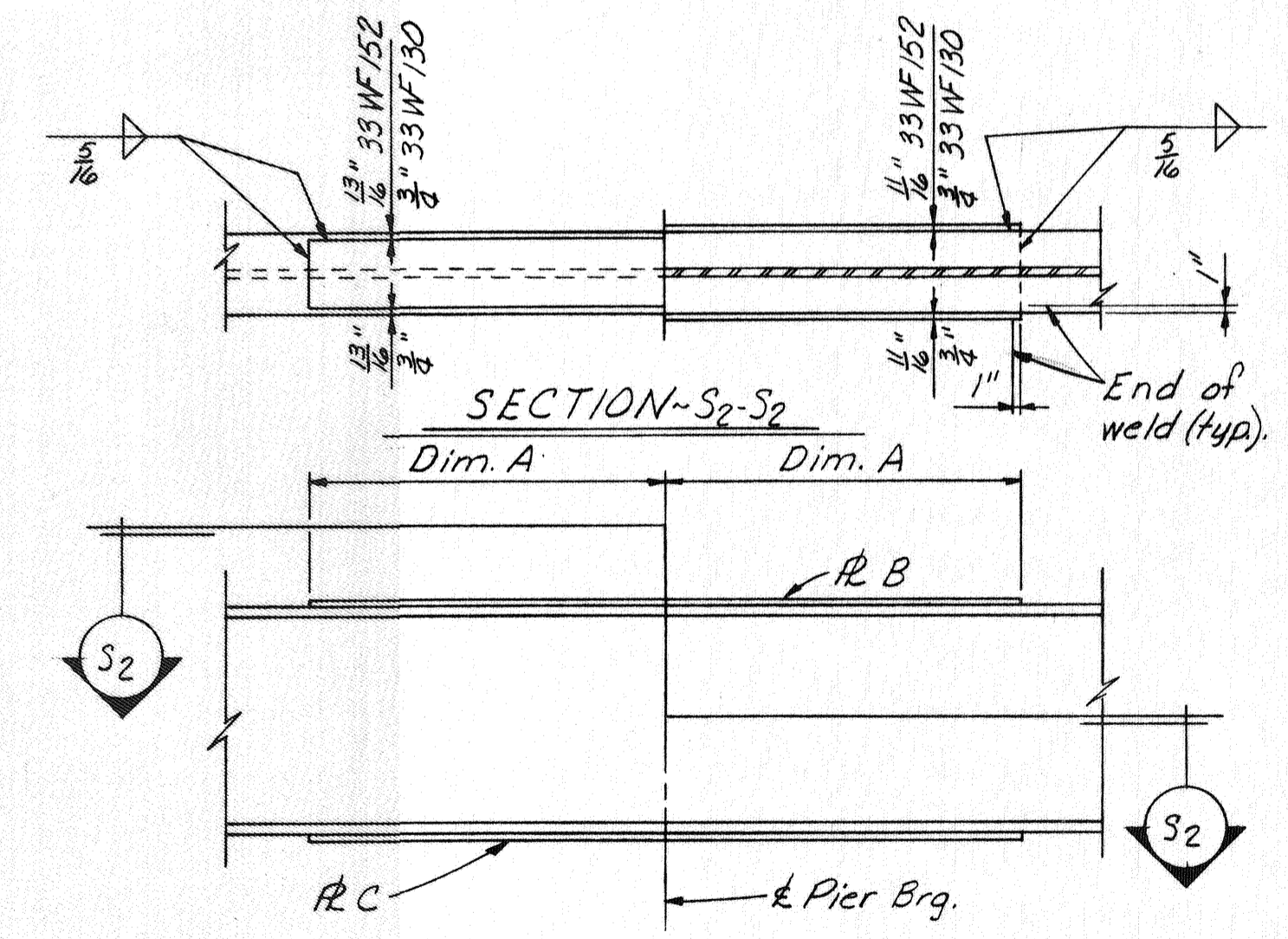
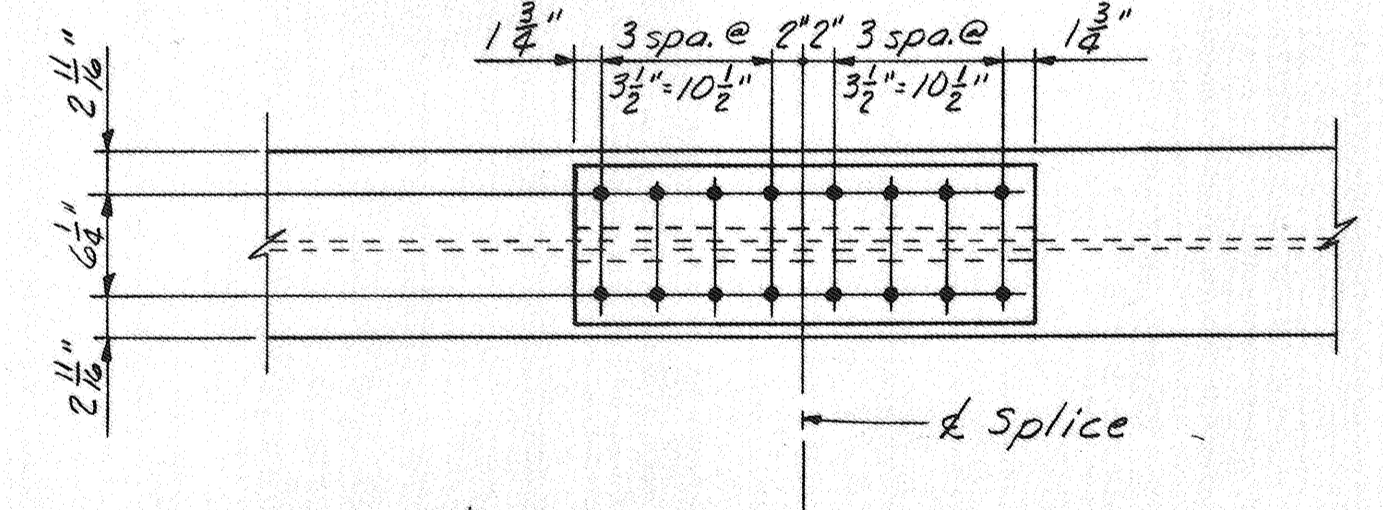
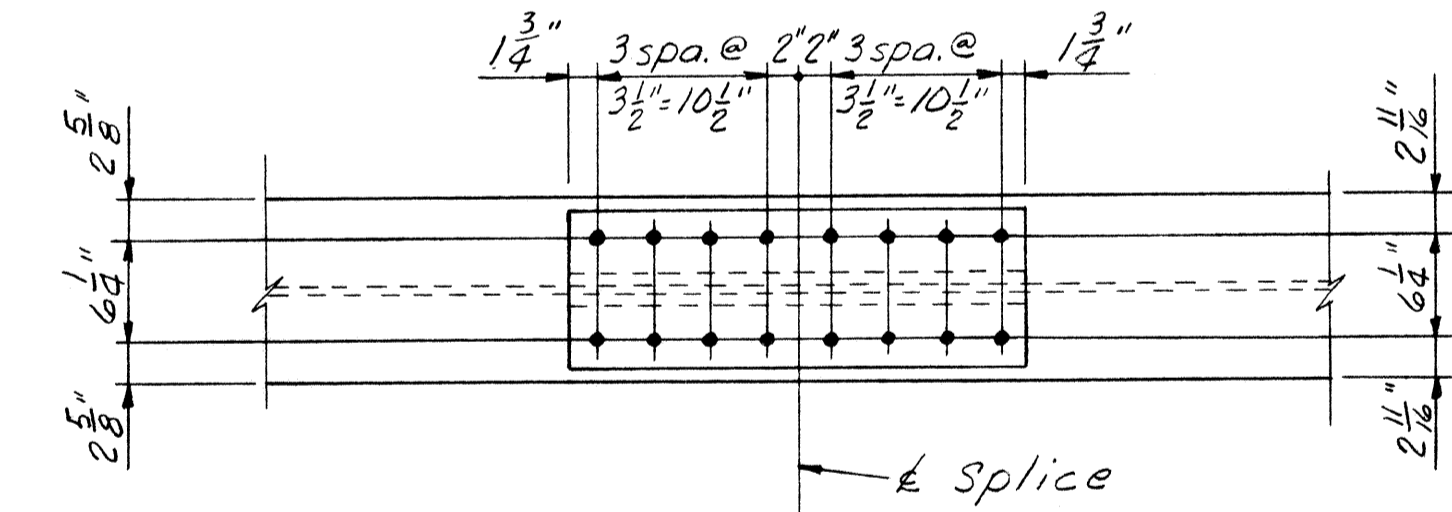
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433



FRAMING PLAN
(Beams parallel to & SR-138.)

NOTES

- Place bearing devices normal to & beams at all substructure units.
- Place intermediate crossframes normal to & beams.
- End Crossframes, Curb Plates, and Steel See 9D-1-69 for additional details.
- Bolts shall be 1" high strength.
- Bolt heads shall be placed on the fascia side of exterior beams and on the bottom side of bottom flanges.
- For additional notes and details see sheets 8/10/11.
- For End Dam details, see sheet 9/11.



MOMENT R DETAILS

Piers	Dim. A	R B	R C
1	4'-6"	10x7/16x9'-0"	13x1/2x9'-0"
2	5'-0"	10x9/16x9'-0"	13x1/2x9'-0"
3	4'-6"	10x7/16x9'-0"	13x1/2x9'-0"

FIELD SPLICE 1 DETAILS

FIELD SPLICE 2 DETAILS

(Field Splice 3 opposite hand.)

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SUPERSTRUCTURE DETAILS

BRIDGE NO. ROS-35-0475
US 35 UNDER SR 138
ROSS COUNTY STA. 251+00.00

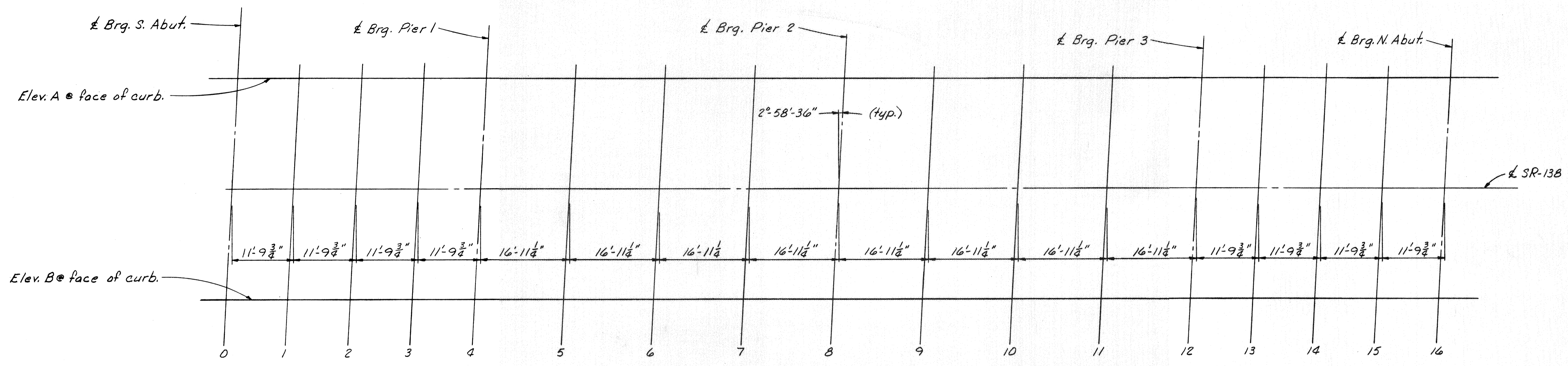
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RT	DW		PHB	fwd	4-2-70	

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FEB 24 1982

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

342
433

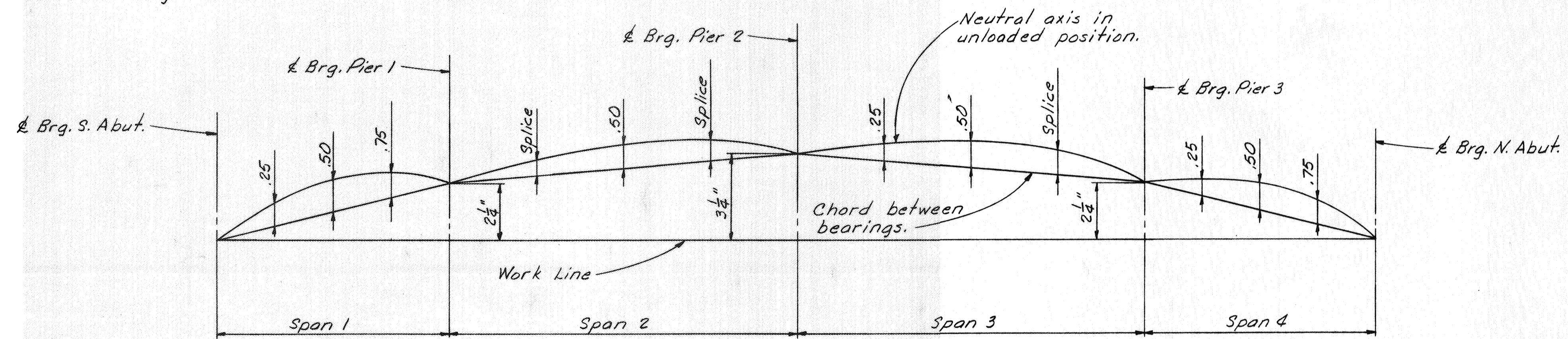
ROSS COUNTY
ROS-35-4.38



Line	Elev. A	Elev. B
0	807.67	807.66
1	807.76	807.74
2	807.83	807.82
3	807.89	807.88
4	807.95	807.94
5	808.04	808.03
6	808.12	808.11
7	808.16	808.15
8	808.18	808.17
9	808.22	808.22
10	808.25	808.25
11	808.24	808.24
12	808.21	808.21
13	808.20	808.21
14	808.19	808.19
15	808.16	808.17
16	808.12	808.13

Screed elevations are at top of slab concrete before the concrete deck is placed. Proper allowance has been made for the dead load deflection due to the weight of the concrete.

For additional notes and details see sheets 89/11.



Camber Description	Span 1		Span 2		Span 3		Span 4				
	.25	.50	.75	Splice	.50	Splice	.25	.50	.75		
Defl. due to weight of steel.	0	1/16	0	0	1/16	0	0	1/16	0	1/16	0
Defl. due to rem. Dead Load.	1/8	1/8	1/16	3/16	3/8	1/8	3/16	3/8	1/8	1/8	1/8
Adjust. due to curvature.	1/8	3/16	1/8	3/16	5/16	3/16	3/16	5/16	3/16	3/16	1/8
Required shop camber.	1/4	3/8	3/16	3/8	5/16	3/8	3/8	5/16	3/16	3/8	1/4

10/11

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
CLEVELAND, OHIO COLUMBUS, OHIO WHEELING, W. VA.

SUPERSTRUCTURE DETAILS

BRIDGE NO. ROS-35-0475
US 35 UNDER SR 138
ROSS COUNTY STA. 251+00.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RT	DW		PHB	FWD	4-2-70	

