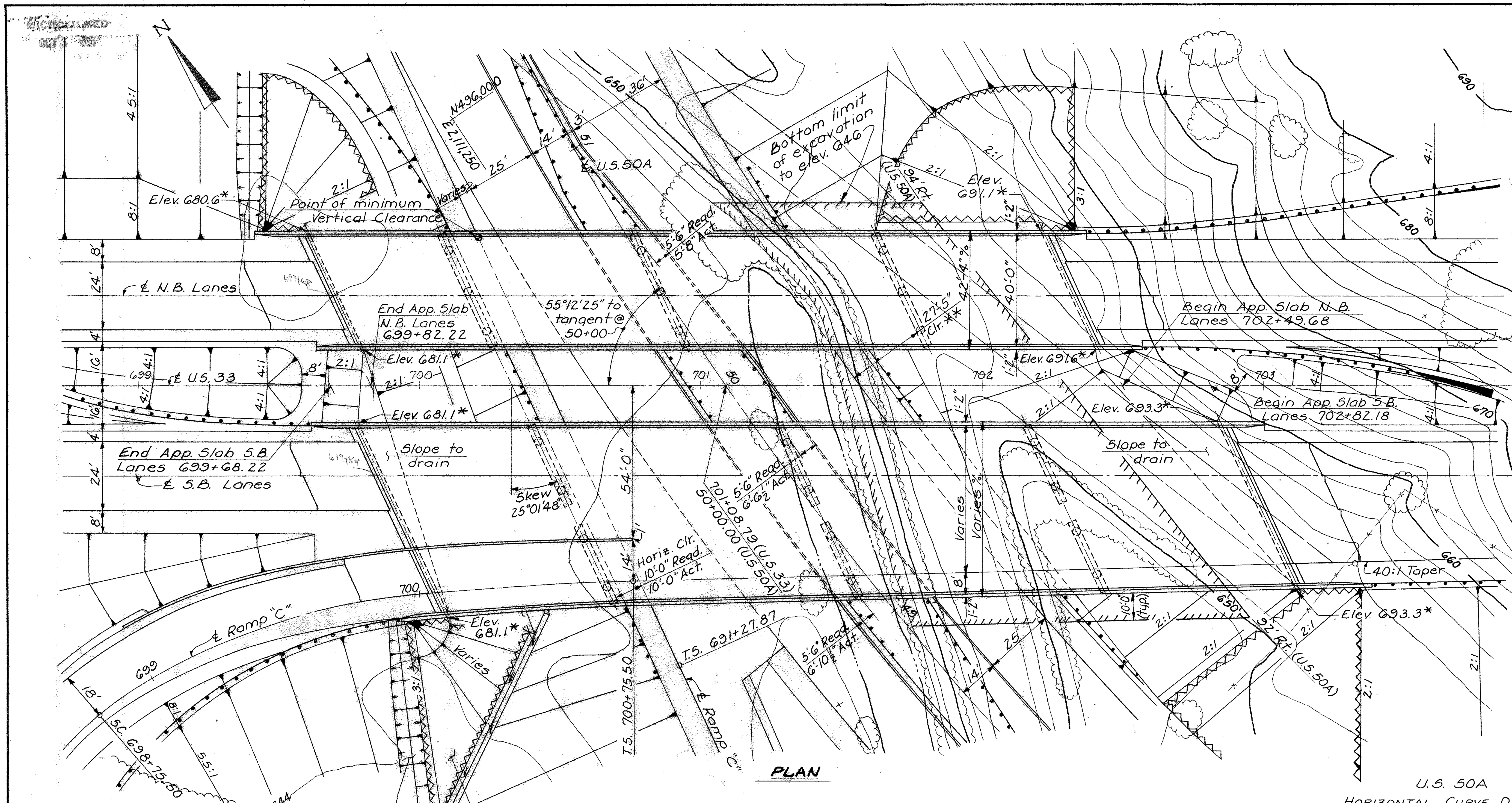
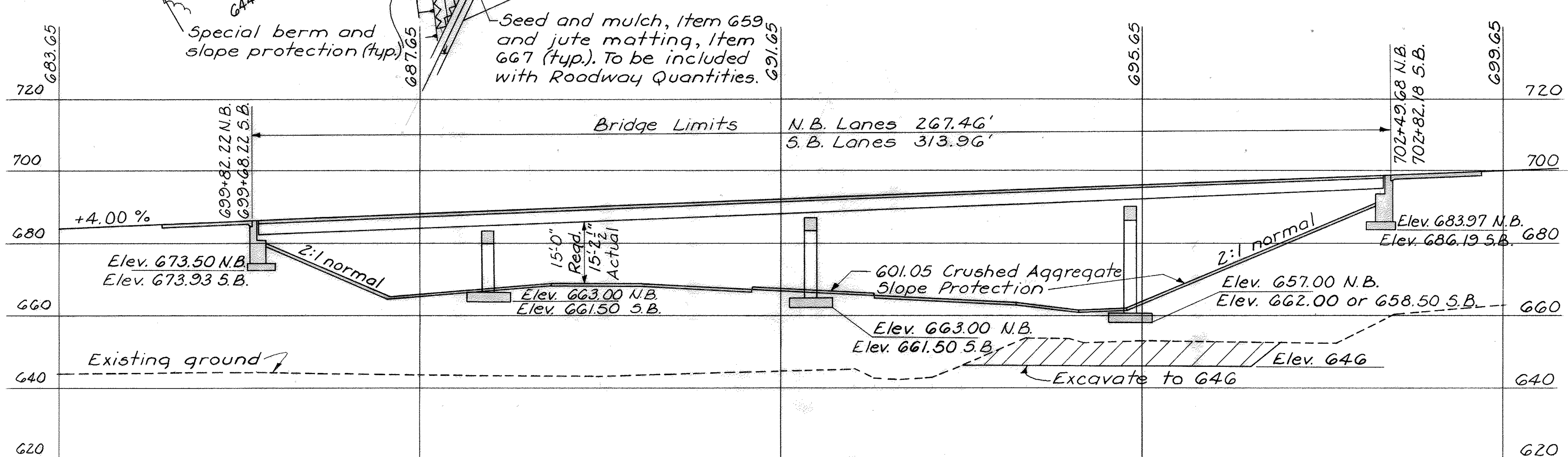
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

ATHENS COUNTY
ATH-33-12.96



PLAN



PROFILE ALONG ℄ U.S. 33

PROPOSED STRUCTURE

TYPE - Continuous steel beam with reinforced concrete deck and substructure
SPANS - 48'-0" - 68'-6" - 86'-0" - 60'-0" - N.B. Lanes, 62'-0" - 88'-3" - 88'-3" - 70'-6" - S.B. Lanes, c/c bearings along ℄ U.S. 33
ROADWAY - 40'-0" N.B., variable (61'-6" Avg.) S.B., f/f barrier railing
LOADING - HS 20-44
WEARING SURFACE - 1" monolithic concrete
SKEW - 25°01'48" right forward
ALIGNMENT - Tangent
APPROACH SLABS - 25'-0" long, see AS-1-67
SUPERELEVATION - 1"/ft. @ Sta. 698+75.50 to 3/16"/ft. @ Sta. 700+75.50, 3/16"/ft. from Sta. 700+75.50 forward along Ramp "C"

NOTES

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

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

** Required for sight distance from Ramp "B".

ADT = 17,020 (1990)

U.S. 50A
HORIZONTAL CURVE DATA

P.I.	53+87.55
Δ	89°26'23"
D_c	4°30'
L_c	1987.55
T	1260.85'

U.S. 50A
VERTICAL CURVE DATA

P.V.I.	54+00
V.C.	600'
Elev.	673.56
Corr.	-1.92
P.G.	671.64
G_1	+1.76 %
G_2	-0.80 %

RAMP "C"
HORIZONTAL CURVE DATA

P.I.	699+45.09
Δ	38°00'00"
D	38°00'00"
R	150.78'
L_s	200.00'
Q_s	38°00'00"
L.T.	136.54'
S.T.	69.59'
(Spiral)	

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SITE PLAN
BRIDGE Nº ATH-33-1325 L & R
U.S. 33 OVER U.S. 50A

ATHENS COUNTY
STA. 699+82.22 N.B. & 699+68.22 S.B. to STA. 702+49.68 N.B. & 702+82.18 S.B.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
GEA	GEA	GTR	TLU	JP	1/31/69	

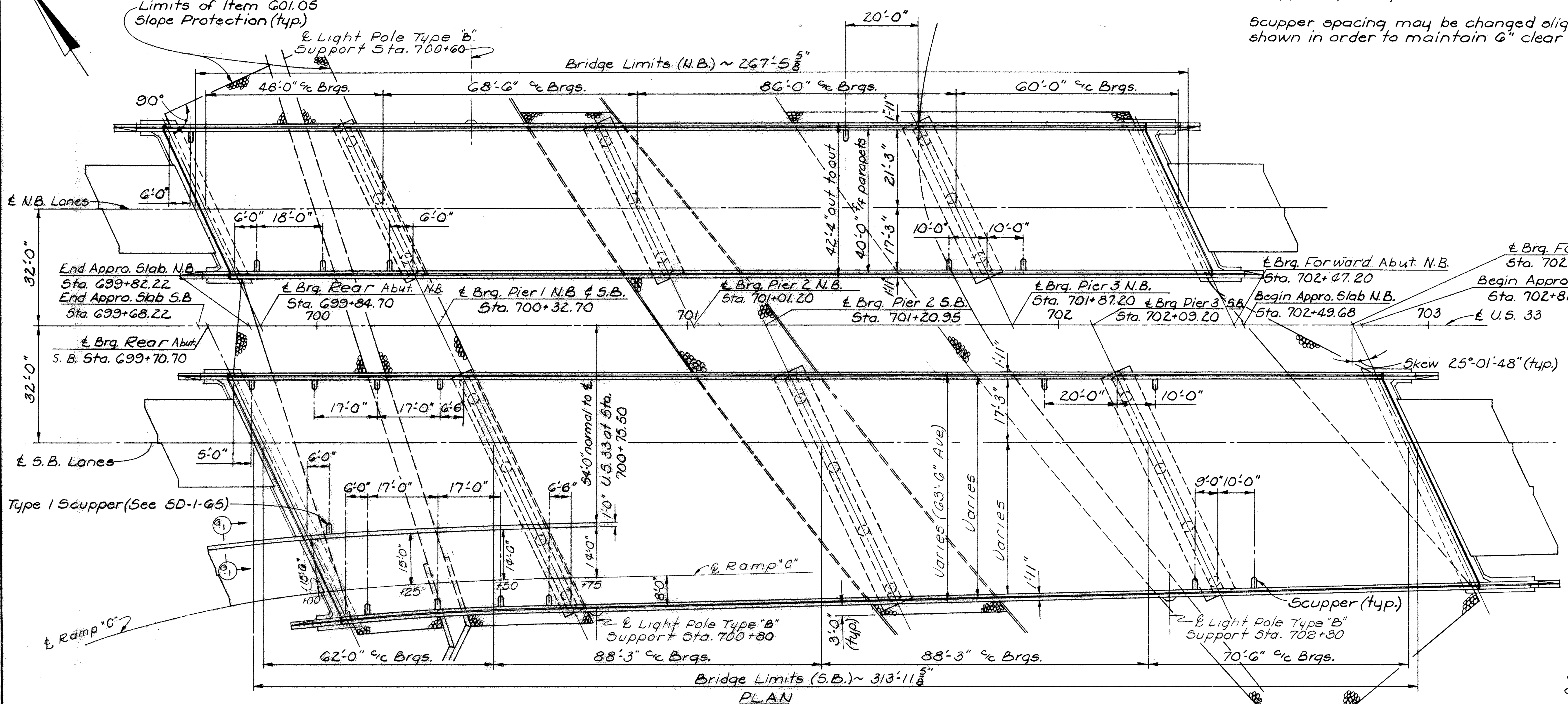
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

NOTES

Scupper spacings shown are c/c along face of curb.

Scupper spacing may be changed slightly from that shown in order to maintain 6" clear from crossframes.

ATHENS COUNTY
ATH-33-12.96



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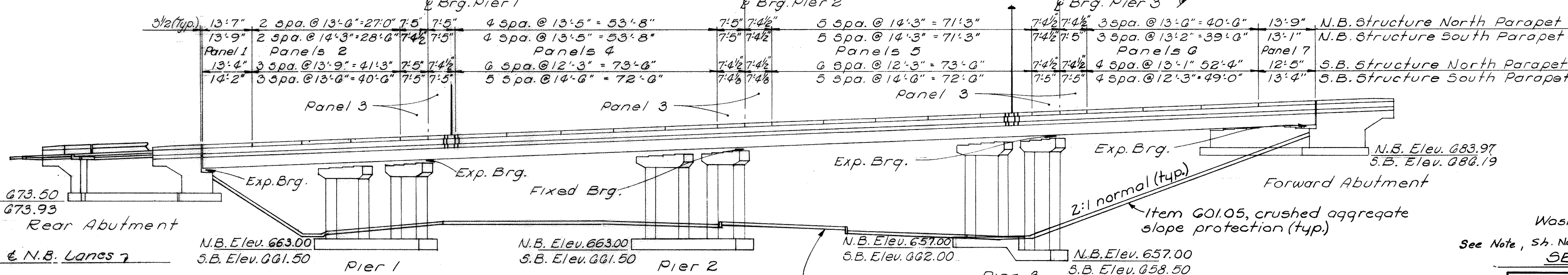

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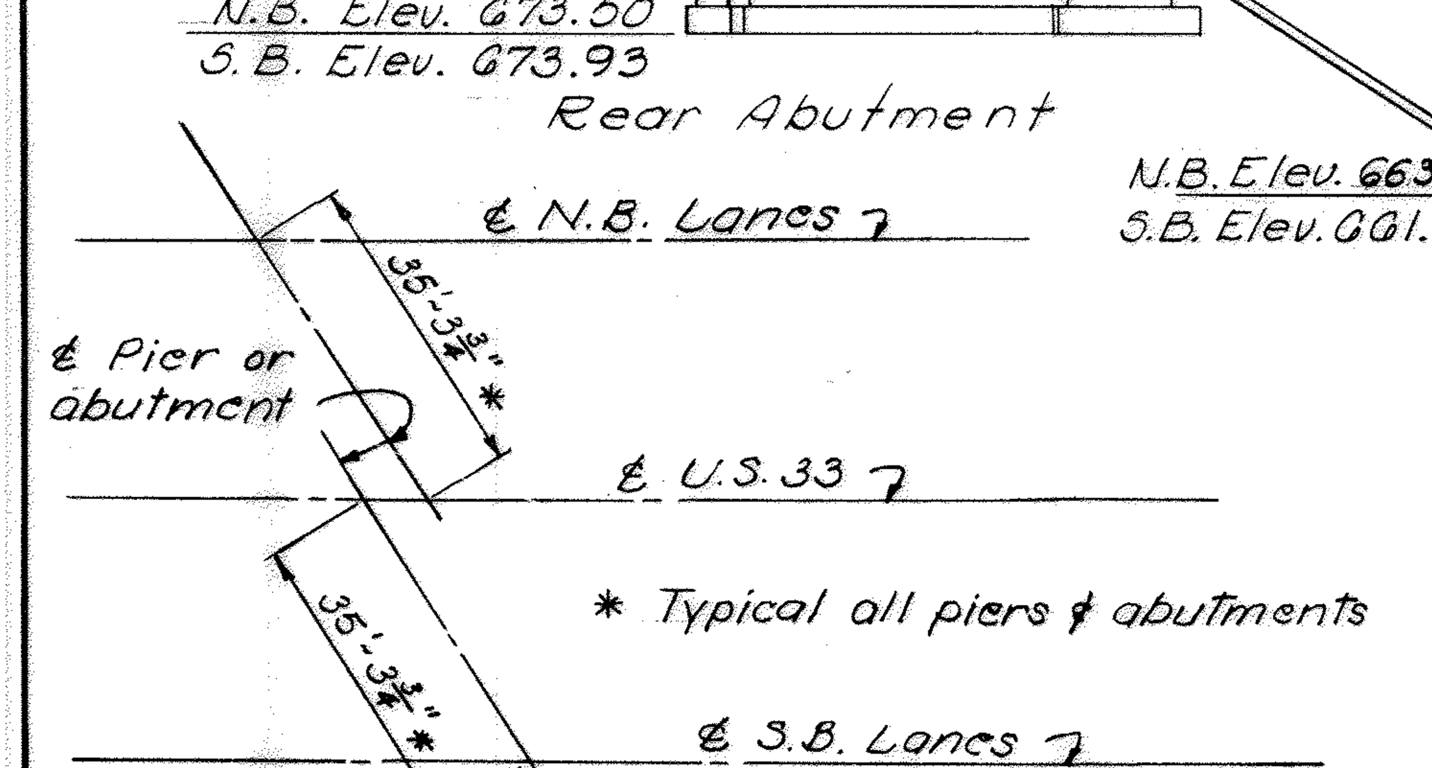
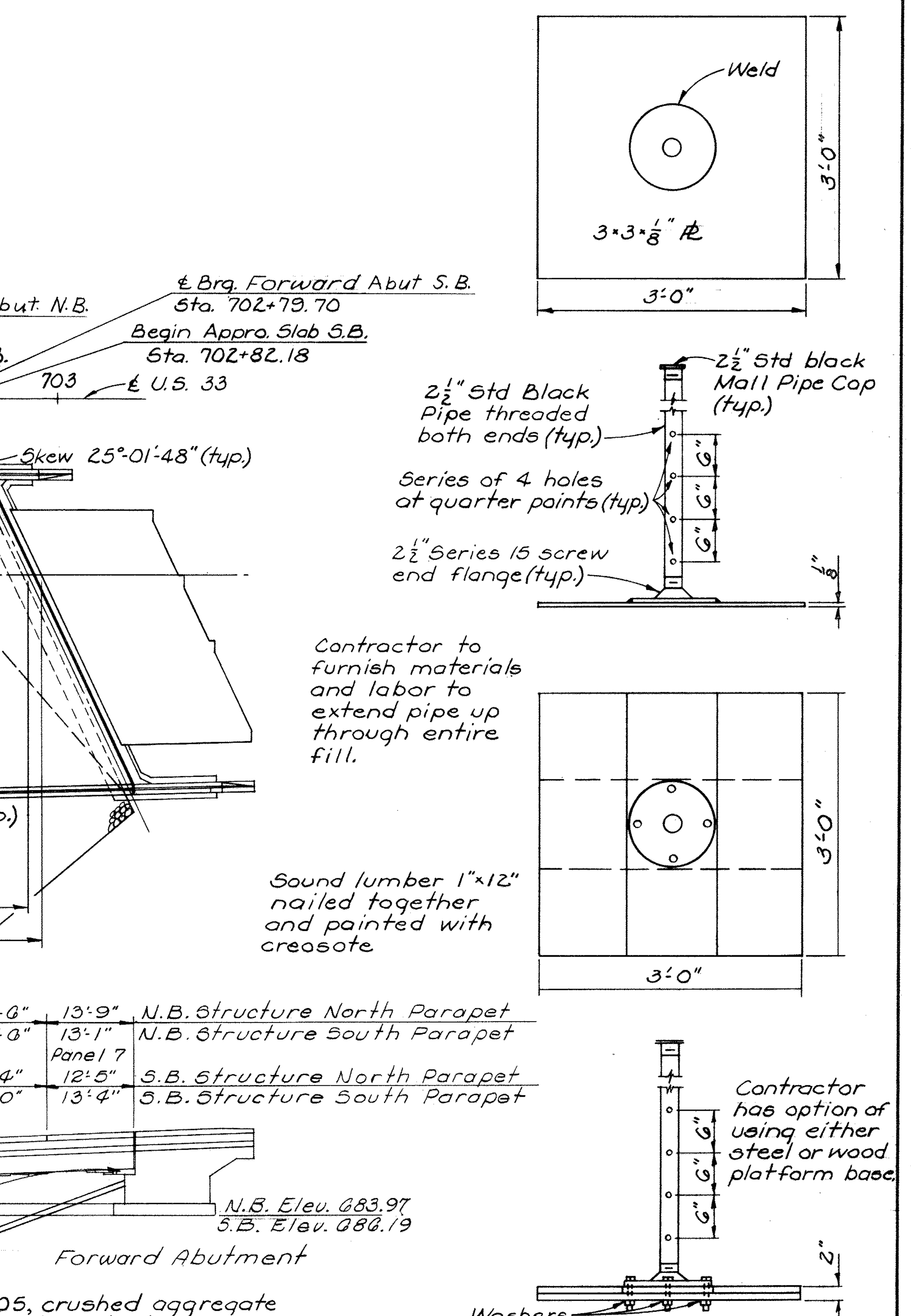
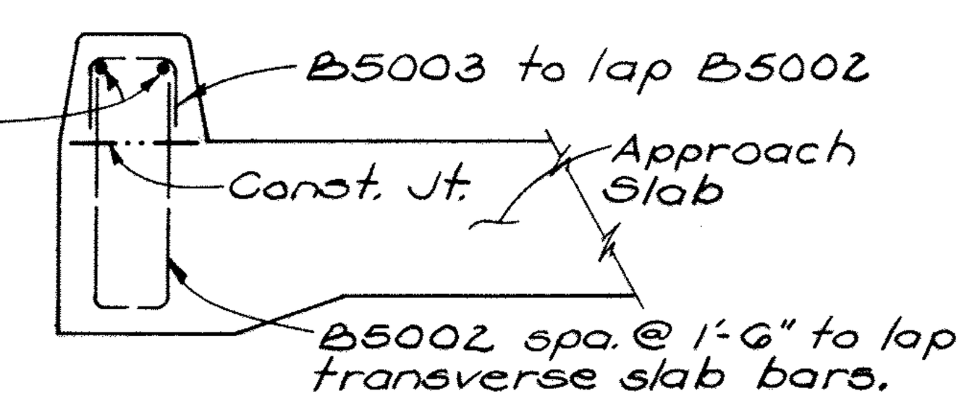


SUBSTRUCTURE UNITS LAYOUT



See Note, Sh. No. 19 DETAILS OF SETTLEMENT PLATFORMS



The height and shape of the curb shall match the approach barrier curb.

SECTION G1~G1

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GENERAL PLAN AND ELEVATION
BRIDGE Nº ATH-33-1325 L&R
U.S. 33 over U.S. 50A Reloc.
ATHENS COUNTY Sta. 699+82.22 N.B. & 699+68.22 S.B. to Sta. 702+49.68 N.B. & 702+82.18 S.B.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JP	JEK		GEA	TZU	1/24/69	

REFERENCES:

Standard Drawings:

Superstructure Details	SD-1-65	Sheets 1, 2, & 3 Dated 11-8-65
Railing	BR-1-67	Sheet 1 Dated 2-1-68
Rockers & Bolsters	RB-1-55	Revised 2-2-59
Approach Slabs	AS-1-67	Revised 1-11-68
Highway Lighting	HL-4	Dated 1-1-66

Supplemental Specifications:

Water-Reducing, Set-Retarding Admixture	808	Dated 1-1 -69
Examination of Welds, Parts I & II	811	Dated 1-1-69
Concrete Surface Treatment	825	Revised 1 -1 -69

Common Details:

Lighting	Sheet No. 465
Contraction Joints	Sheet No. 466
Scuppers	Sheet No. 466
Curb Plate Details	Sheet No. 466

DESIGN SPECIFICATIONS: This structure conforms to "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: HS 20-44

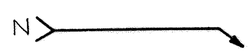
Concrete Class C: Unit stress 1200 p.s.i. for superstructure.
Unit stress 1333 p.s.i. for substructure.

Structural Steel, ASTM A36-unit stress 20,000 p.s.i.

Reinforcing Steel, ASTM A615,A616,A617 Deformed, Intermediate or Hard Grade.
Unit stress 20,000 p.s.i.
except that spiral reinforcement shall be plain bars, A306 or A499.

WELDS

Welds on non-stress carrying members are indicated thus:



FOUNDATION BEARING PRESSURE

Abutment and pier footings are designed for a maximum bearing pressure of 2.5 tons per sq. ft.

PROCEDURE: Prior to the excavation for the substructure units the following procedure shall be followed:

1. The area from 701 + 50 to 702 + 29, as indicated on the Site Plan, shall be excavated to elevation 646 using a 1:1 slope from the existing ground surface to elevation 646.
2. Settlement platforms shall be placed as indicated in the Roadway Plans.
3. An embankment surcharge shall be placed to elevation 680, from approximately 699 + 85 to 702 + 20. The top of the embankment shall extend from 10 feet outside the south fascia of the southbound structure to 10 feet outside the north fascia of the northbound structure. The embankment shall be placed with a 1:1 slope normal to the fascias down to the permanent embankment.
4. The Engineer shall observe the settlement platforms to determine when the embankment surcharge may be removed. It is anticipated that the settlement of the underlying material will be completed within 4 to 6 months after the completion of the embankment.
5. After the settlement is complete, as noted in 4, the surcharge may be removed. The embankment for the abutments shall then be constructed to the level of the subgrade for a minimum distance of 200 feet back of the abutments prior to the excavation for the abutments and piers 1 and 3.

SETTLEMENT PLATFORMS

Description: This item shall consist of furnishing all necessary materials for the construction, placing and maintaining of settlement platforms as detailed on the Plans and at the locations ordered by the Engineer. At the option and expense of the Contractor additional settlement platforms may be installed at locations approved by the Engineer.

Materials: Lumber for the base shall be 1" X 6" T. & G. sound lumber. Pipe shall be 2 1/2" standard black pipe with threaded fittings as shown on the Plans. A steel plate, 36" X 36" X 1/8", may be furnished instead of lumber for the platforms, at the contractor's option.

Construction Methods: The 3' X 3' platform shall conform with the details shown on the Plans. The platform shall be carefully set and leveled. The pipes, firmly secured by flanges to the platforms, shall be kept plumb. If the platforms or pipes are disturbed during construction they shall be restored to their proper condition. Pipes shall be marked at intervals by the Contractor to facilitate measurement of the depth of fill and settlement. The Contractor shall stop work in any location where any settlement platforms have been disturbed or damaged until the necessary maintenance or replacement has been performed.

Prior to paving, the settlement platform extension shall be cut off 2 feet below the top of the finished surface of the subgrade or topsoiled surface, whichever is applicable.

Method of Measurement: The amount to be included under the item of settlement platforms shall be the actual number of settlement platforms completed, maintained and accepted, as called for on the Plans or directed by the Engineer. No payment will be made for settlement platforms which are displaced or destroyed by the Contractor's operations during construction.

Basis of Payment: Settlement platforms will be paid for at the contract unit price each for "Settlement Platforms", which price shall include furnishing and installing, including all materials, equipment, tools, and labor incidental thereto and maintaining and replacing them subsequently, if deemed necessary by the Engineer, and burning and removing extensions as directed by the Engineer. Payment for"settlement platforms"is included with the roadway quantities.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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ATHENS COUNTY
ATH-33-12.96

ESTIMATED QUANTITIES (2 BRIDGES) *

Item	Total	Unit	Description	Abut.	Pier	Supers.	General
503	1353	C.Y.	Unclassified Excavation	710	643		
509	408,660 (413,741)	Lb.	Reinforcing Steel	24,185	109,708 (114,789)	274,767	
511	925	C.Y.	Class "C" Concrete, Superstructure			925	
511	232	C.Y.	Class "C" Concrete, Pier Caps and Columns		232		
511	330	C.Y.	Class "C" Concrete, Abutments above Footings	330			
511	373	C.Y.	Class "C" Concrete, Footings	133	240		
512	20	L.F.	Premolded Sealing Strip	20			
513	939,600	Lb.	Structural Steel			939,600	
514	939,600	Lb.	Field Painting of Structural Steel			939,600	
518	120	C.Y.	Porous Backfill	120			
518	210	L.F.	6" Perforated, Helical Corrugated Metal Pipe, including specials 707.01	210			
518	298	L.F.	6" Non-perforated, Helical Corrugated Metal Pipe, 707.01	298			
518	20	Each	Scuppers, including supports			20	
601	3190	Sq.Yd	Crushed Aggregate Slope Protection				3190
625			See sheet 373/502 for Lighting Summary				
808	925	Units	Water Reducing, Set Retarding Admixture			925	
825	3700	Sq.Yd	Concrete Surface Treatment	50		3650	

* Primary (No City Participation).

MAINTENANCE OF TRAFFIC

Two lanes of traffic with a minimum horizontal width of 24' and a minimum vertical clearance of 14' shall be maintained on U.S.50A at all times.

JOINT SEALER:

Item 828 joint sealer including bond breaker, shown in Section A-A of Std. Dwg. SD-1-65, Sheet No. 1, shall be omitted.

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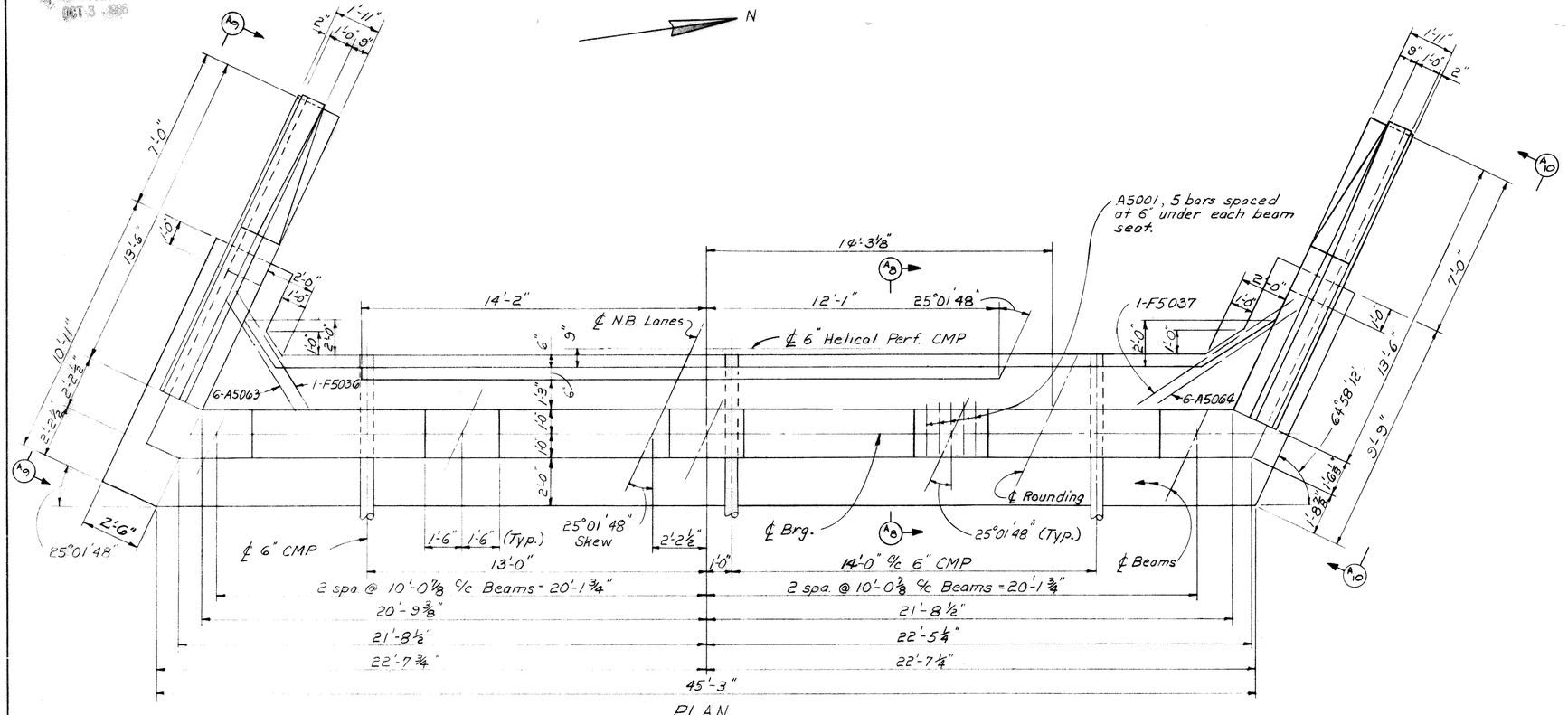
GENERAL NOTES AND ESTIMATED QUANTITIES
BRIDGE Nº ATH-33-13.25 L&R
U.S. 33 OVER U.S.50A
Sta. 699+82.22 N.B. & 699+68.22 S.B.
to Sta. 702+49.68 N.B. & 702+82.18 S.B.
ATHENS COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JP	GTR		GEA	TLW	1/24/69	8-5-69

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

394 / 502

ATHENS COUNTY
ATH - 33 - 12.96



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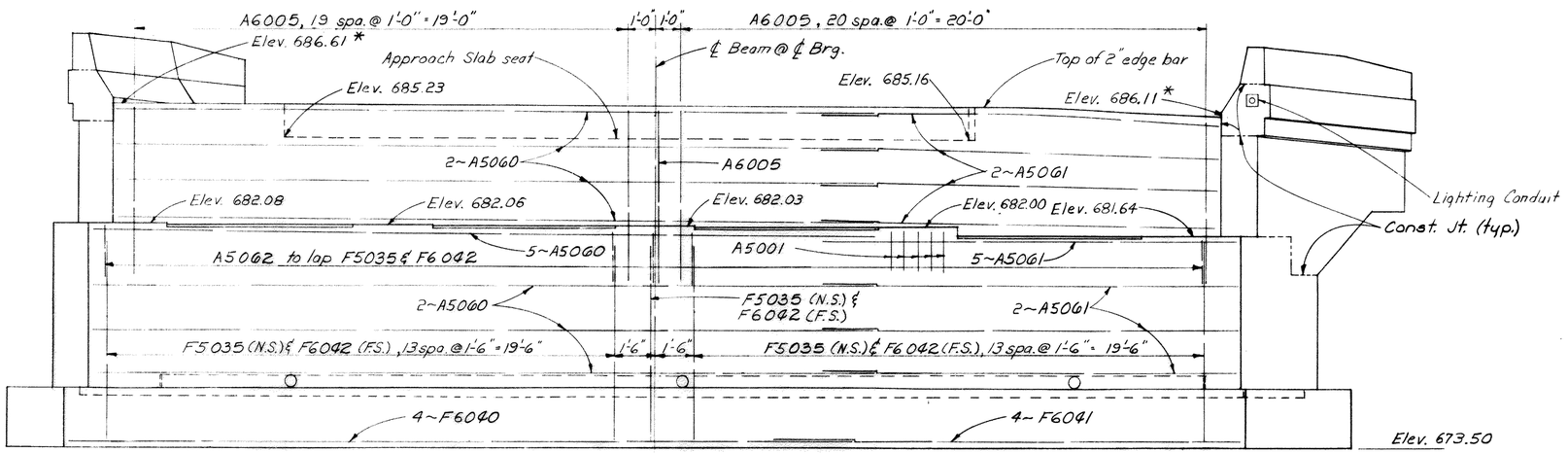

ELEVATION

NOTES

*Elevations marked with an asterisk are at top of ℄ of 2" edge bar at face of curb.

Reinforcing Steel Location
N.S. indicates near side
F.S. indicates far side

Porous backfill shall be placed between the inside faces of the wingwalls and shall extend upward to the approach slab. Excavation therefore in excess of that required for construction of the abutment shall be considered as paid for in the bid price per cubic yard for porous backfill.

For Contraction Joint Detail, see Common Details 466 / 502

6" Helical Perforated CMP shall have all end capped.

For detail of lighting conduit in abutment backwall see Standard Construction Drawing HL-4.

For additional details see sheets 5 | 20 and 6 | 20

For additional notes and details see Std. Dwg. BR-1-67, Sheet No 1.

Field bending of abutment bars to be included with Item 509 for payment

Adjustable type elbows meeting specification requirements for gage and coating are acceptable for making bends in perforated corrugated metal pipe. Elbows and the stem of tees need not be perforated.

For guard rail connections see Std. Dwg. BR-1-67 sheet 1 of 3.

For details of lighting conduit in abutment railing see Bridge Lighting Details sheet 465 / 502

Provide break in end dam at contraction joints.

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4 / 20

REAR ABUTMENT N.B.

BRIDGE No ATH-33-1325 L
US 33 OVER US 50 A Reloc.
Sta. 699+82.22 N.B.
Sta. 702+49.68 N.B.
ATHENS COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FTJ	FTJ		GEA	JP	1/24/69	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

395
502

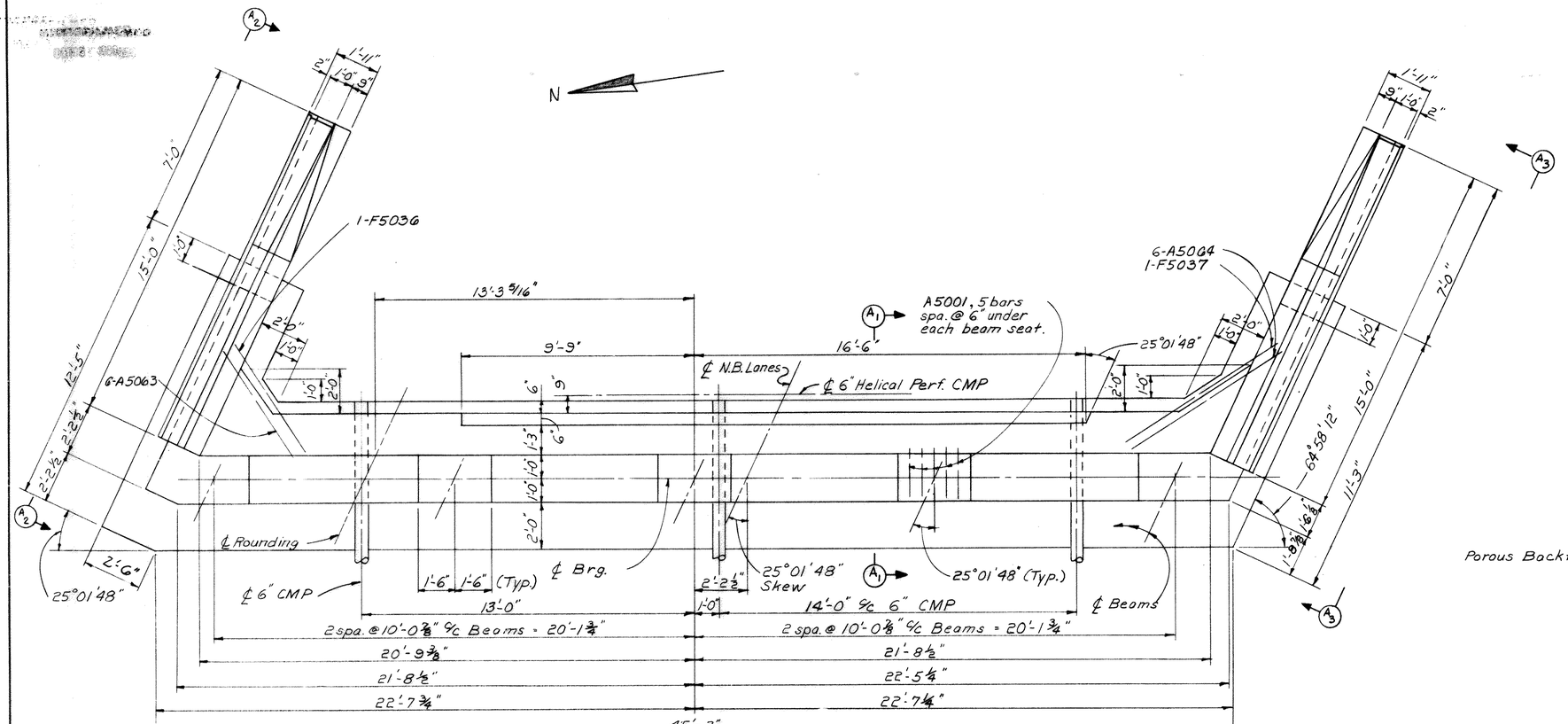
ATHENS COUNTY
ATH-33-12.96

NOTES

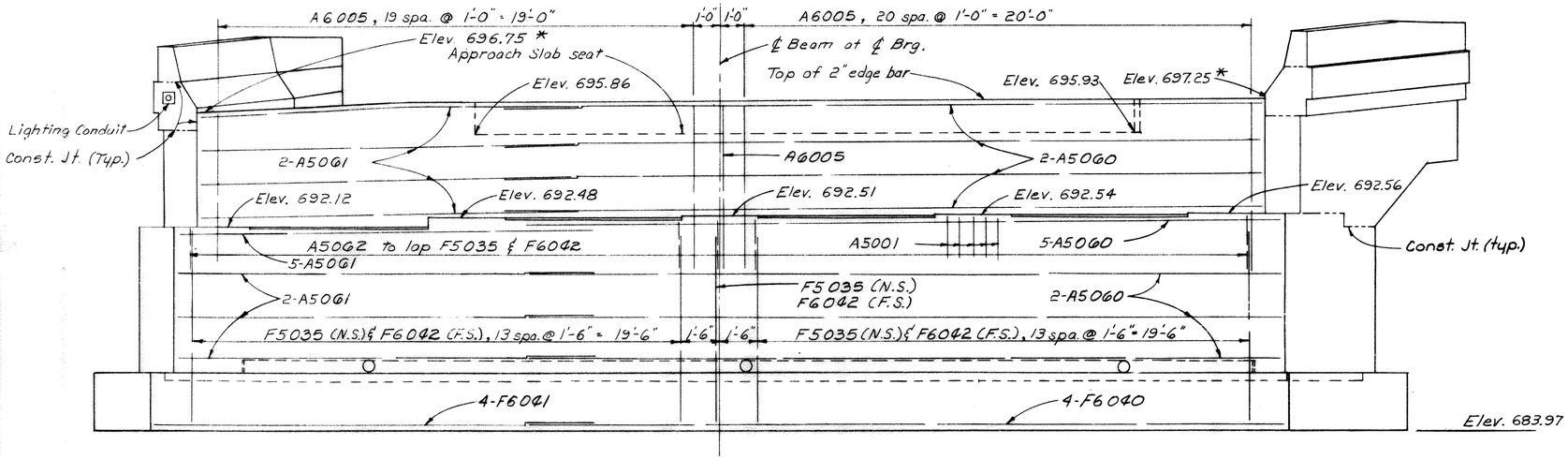
Reinforcing Steel Location
N.S. indicates near side
F.S. indicates far side

For additional notes see sheet 4/20

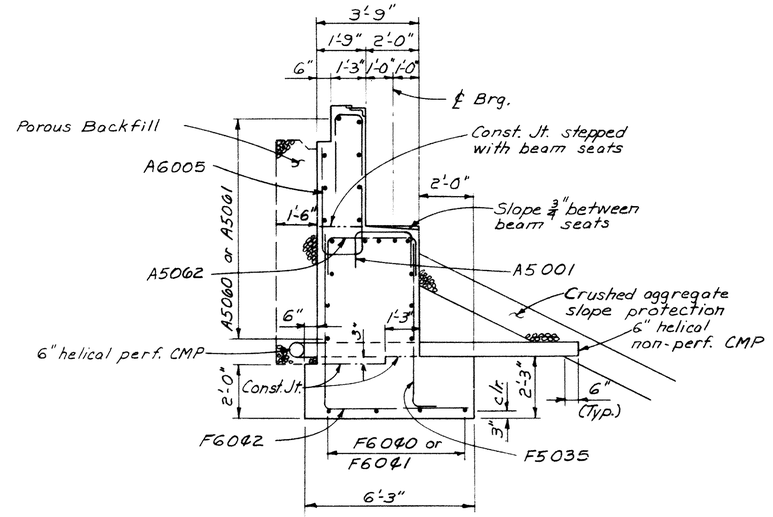
For additional details see sheet 6/20



PLAN



ELEVATION



SECT. A1~A1
or SECT. A8~A8

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5/20

FORWARD ABUTMENT, N.B.
BRIDGE No. ATH-33-1325L
US 33 OVER US 50A Reloc.
ATHENS COUNTY
STA. 699+82.22 N.B.
STA. 702+49.68 N.B.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FTJ	FTJ		GEA	JP	11/24/69	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

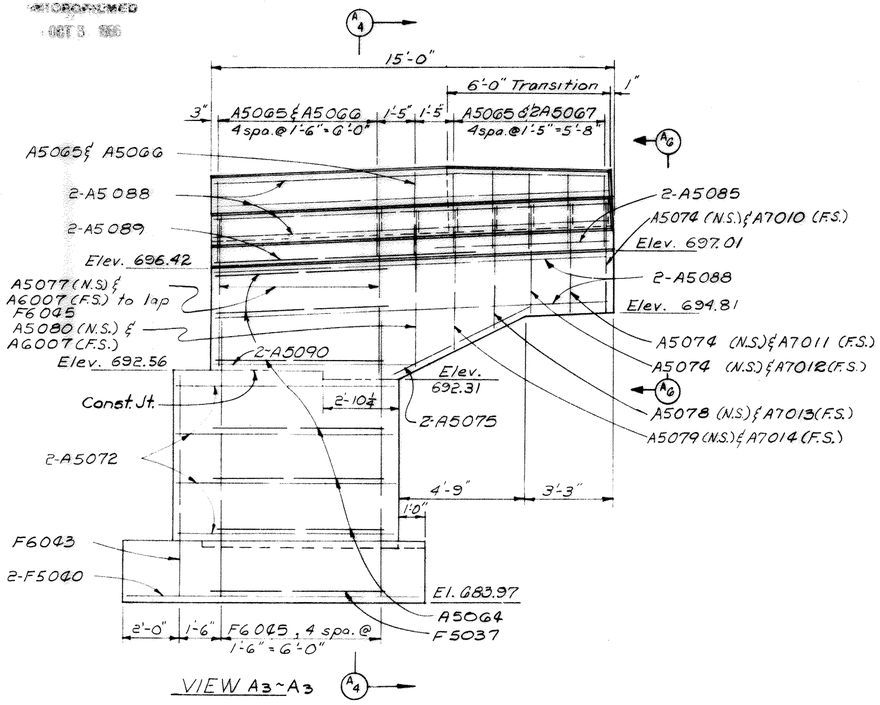
396
502

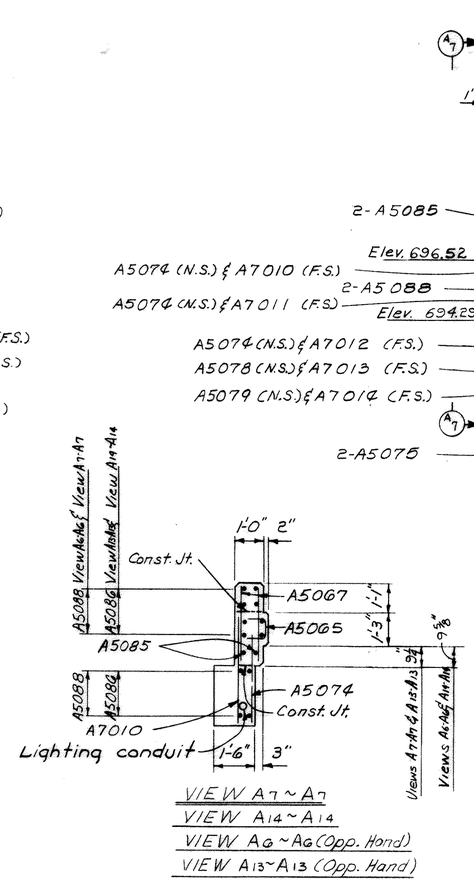
ATHENS COUNTY
ATH 33-12.96

NOTES

For additional notes see sheet 4 20.

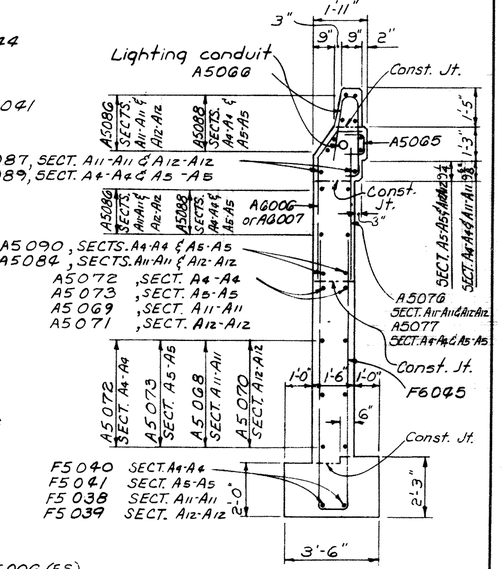
For additional details see sheet 5 20





VIEW A7~A7
VIEW A14~A14
VIEW A6~A6 (Opp. Hand)
VIEW A13~A13 (Opp. Hand)

VIEW A2~A2



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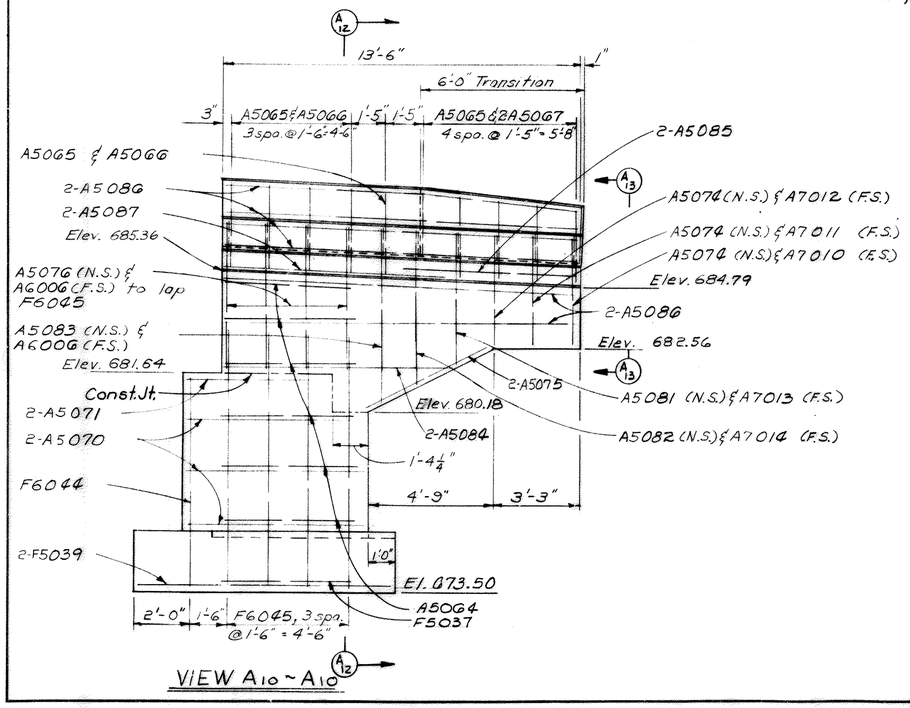
or SECT. A5~A5
or SECT. A11~A11
or SECT. A12~A12



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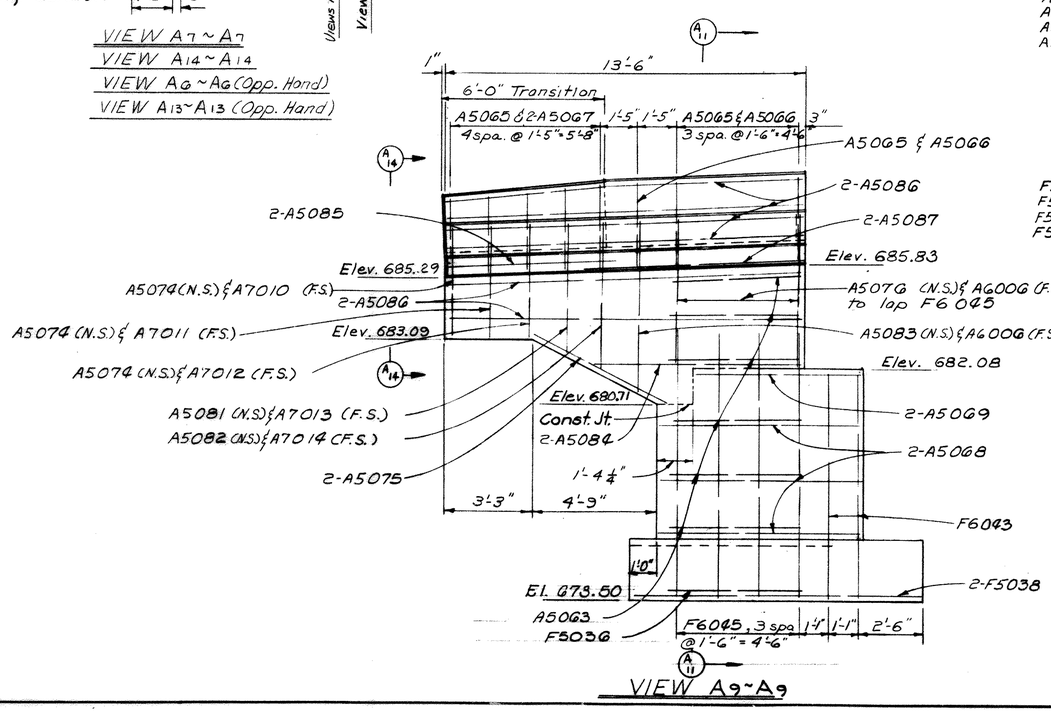

VIEW A9~A9

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6 20

N.B. ABUTMENT DETAILS
BRIDGE Nº ATH-33-1325 L
US 33 OVER US50A Reloc.

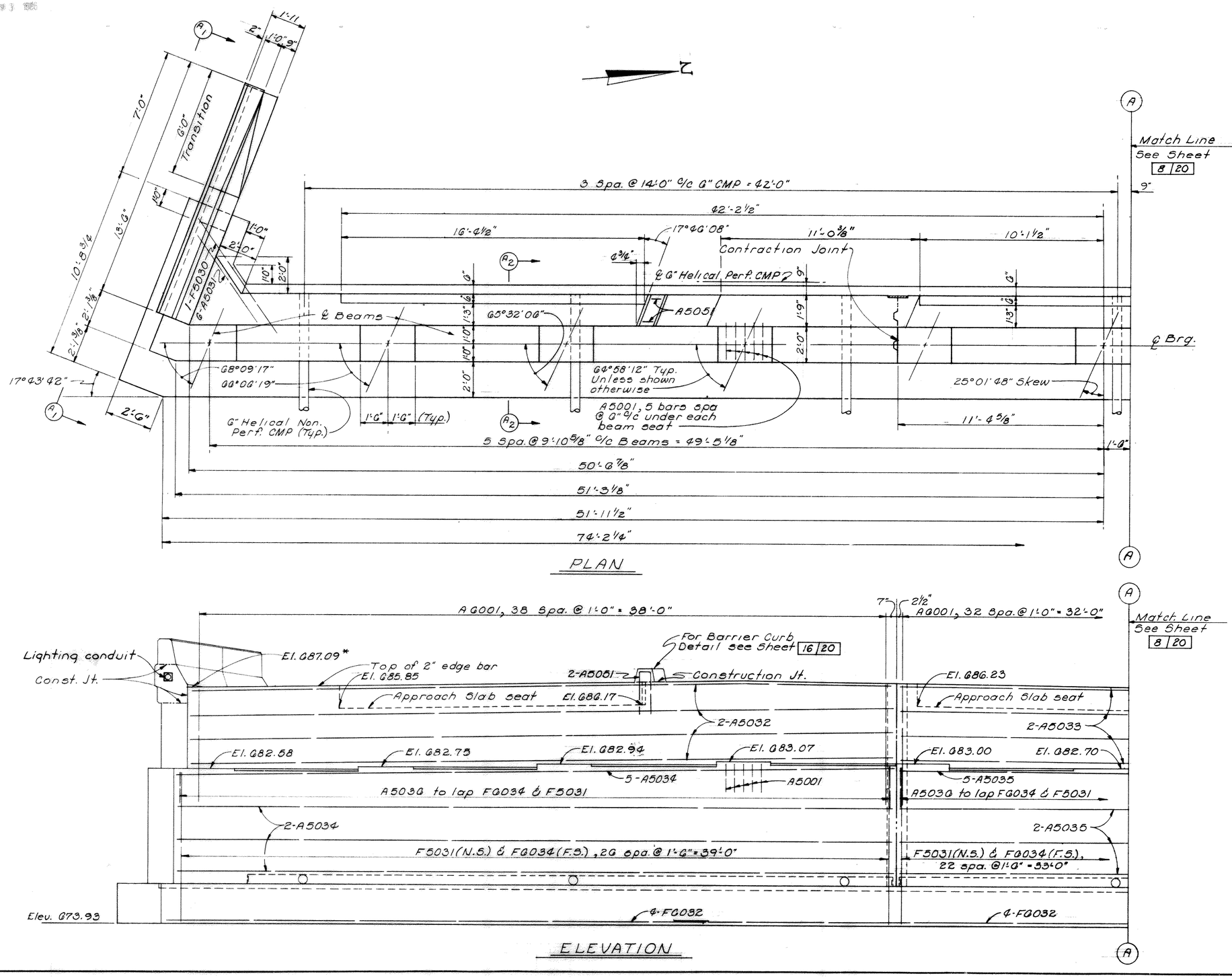
ATHENS COUNTY
STA. 699+82.22 N.B.
STA. 702+49.68 N.B.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FTJ	FTJ		GEA	JP	1/24/69	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

391
502

ATHENS COUNTY
ATH-33-12.90



PLAN

ELEVATION

NOTES

For remainder of abutment and additional details see sheet 8 20

For additional notes see sheet 4 20

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7 20

REAR ABUTMENT ~ S.B.

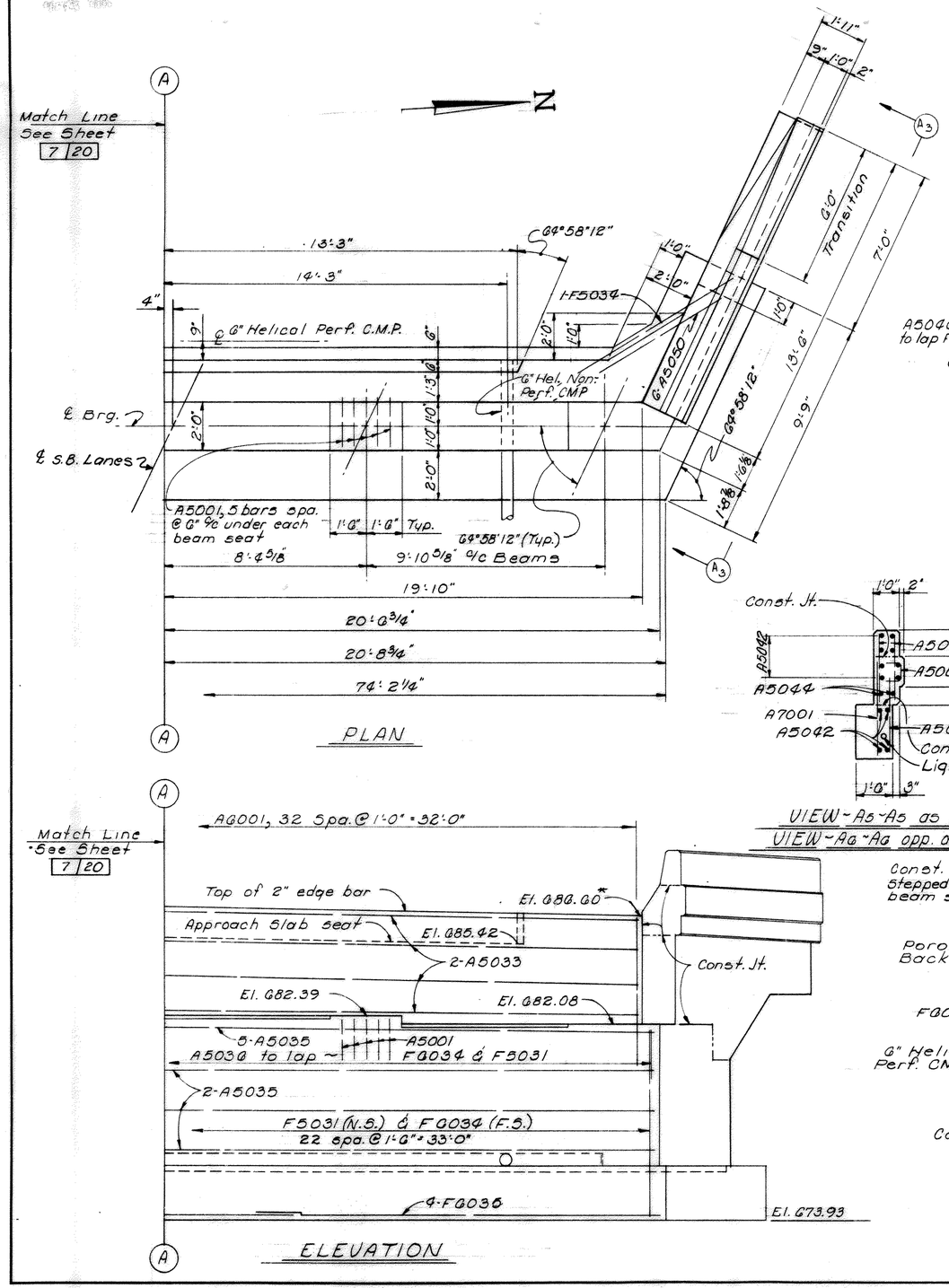
BRIDGE Nº ATH-33-1325 R
U.S. 33 over U.S. 50A Reloc.
ATHENS COUNTY
STA. 699+68.22 S.B.
STA. 702+82.18 S.B.

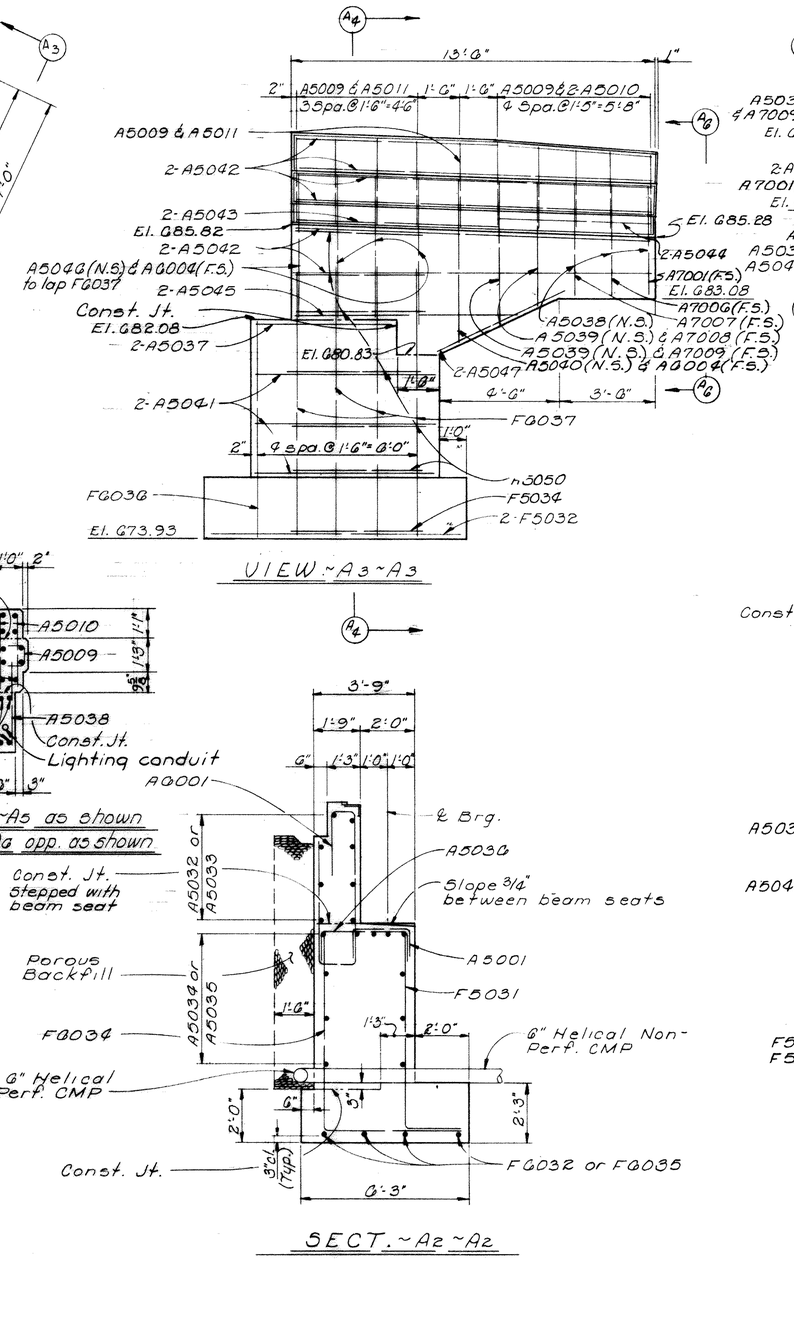
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FTJ	JEK		GEA	JP	11/24/69	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

398
502

ATHENS COUNTY
ATH-33-12.96





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8 20

REAR ABUTMENT ~ S.B.

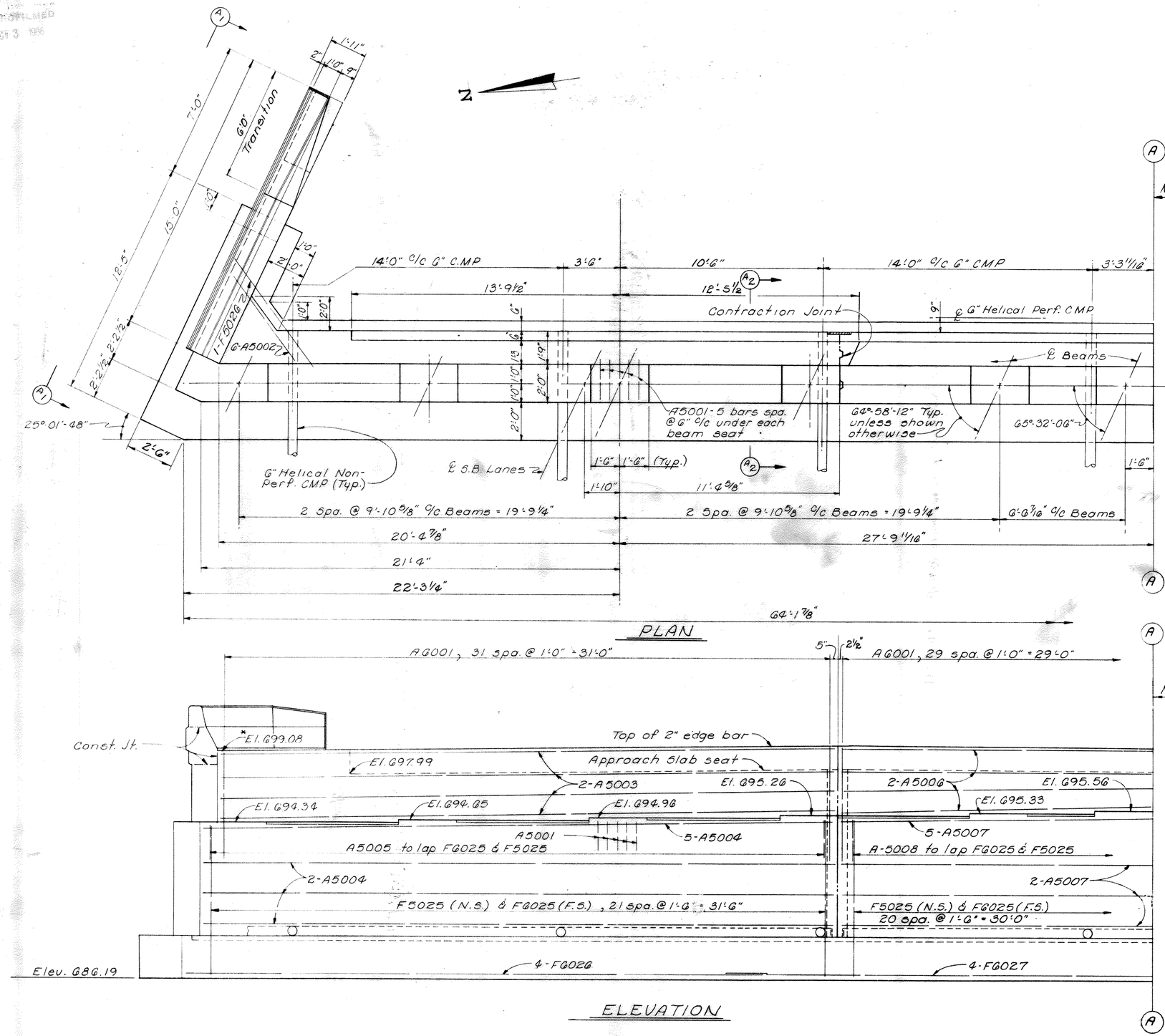
BRIDGE Nº ATH-33-1325 R
U.S. 33 over U.S. 50A Reloc.
ATHENS COUNTY
STA. 699+68.22 S.B.
STA. 702+82.18 S.B.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FTJ	JEK		GEA	JP	1/24/69	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

399
502

ATHENS COUNTY
ATH-33-12.96



NOTES

For remainder of abutment and additional details see sheet 10 20

For additional notes see sheet 4 20

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9 20

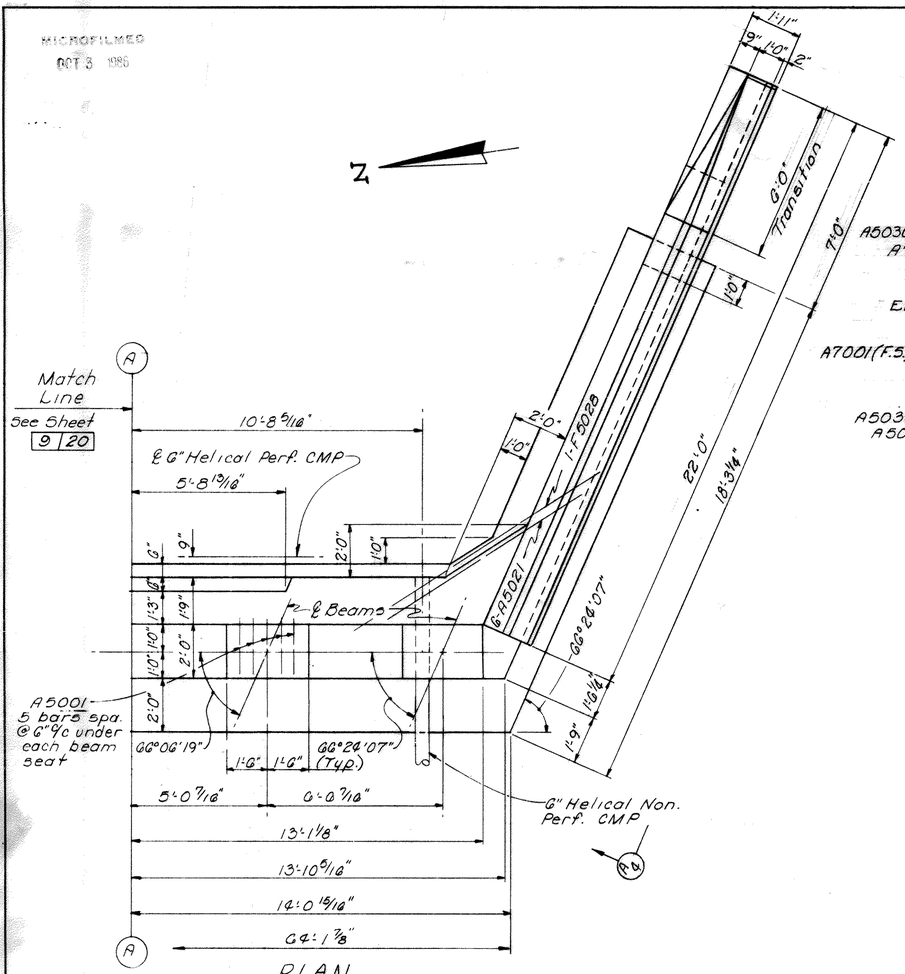
FORWARD ABUTMENT - S.B.
BRIDGE Nº ATH-33-1325 R
U.S. 33 over U.S. 50A Reloc.
ATHENS COUNTY
STA. 699+68.22 S.B.
STA. 702+82.18 S.B.

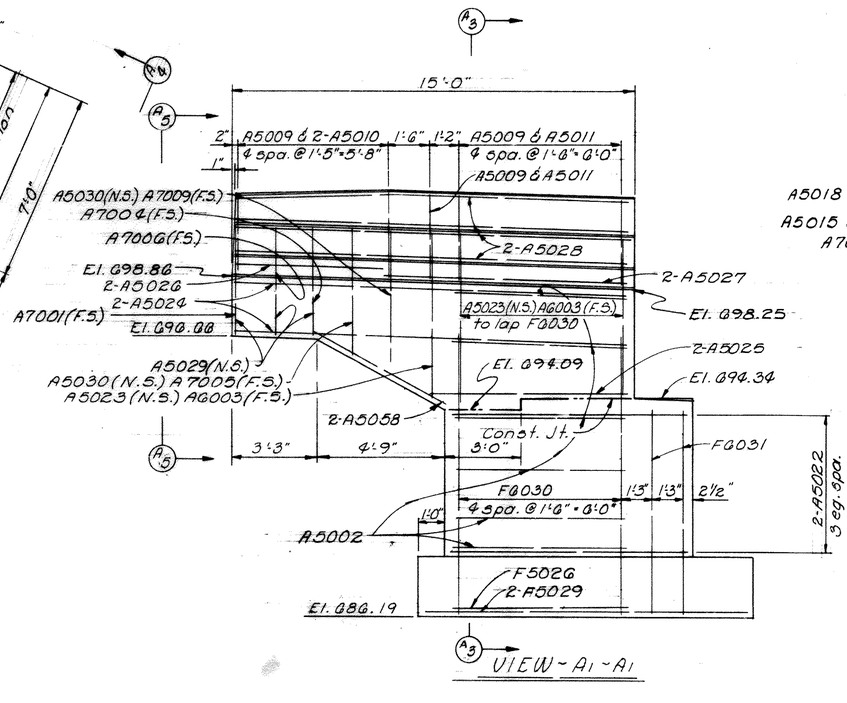
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FTJ	JEK		GEA	JP	1/24/69	

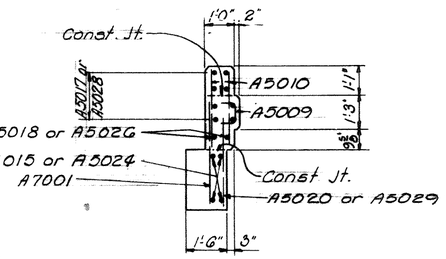
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

400/602

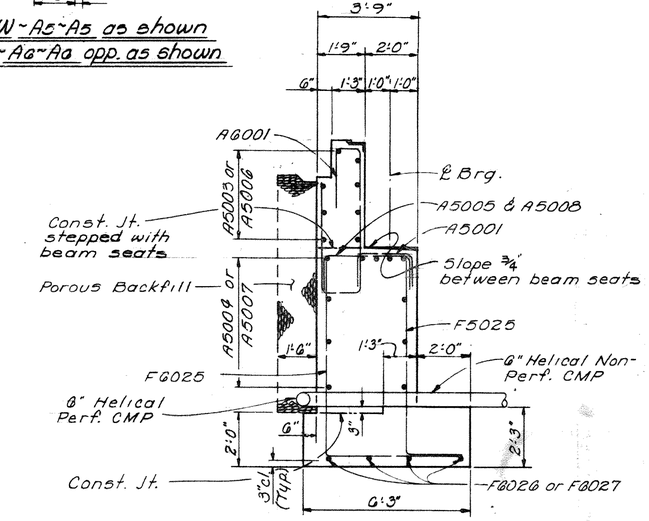
ATHENS COUNTY
ATH-33-12.96



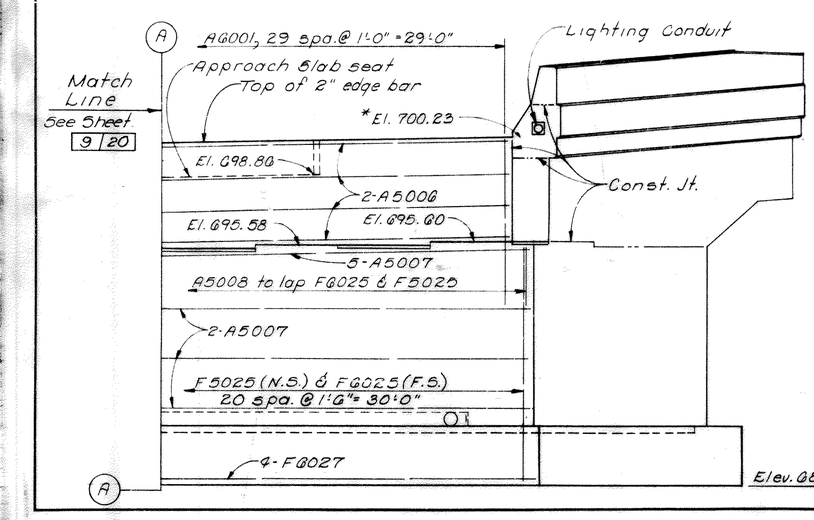


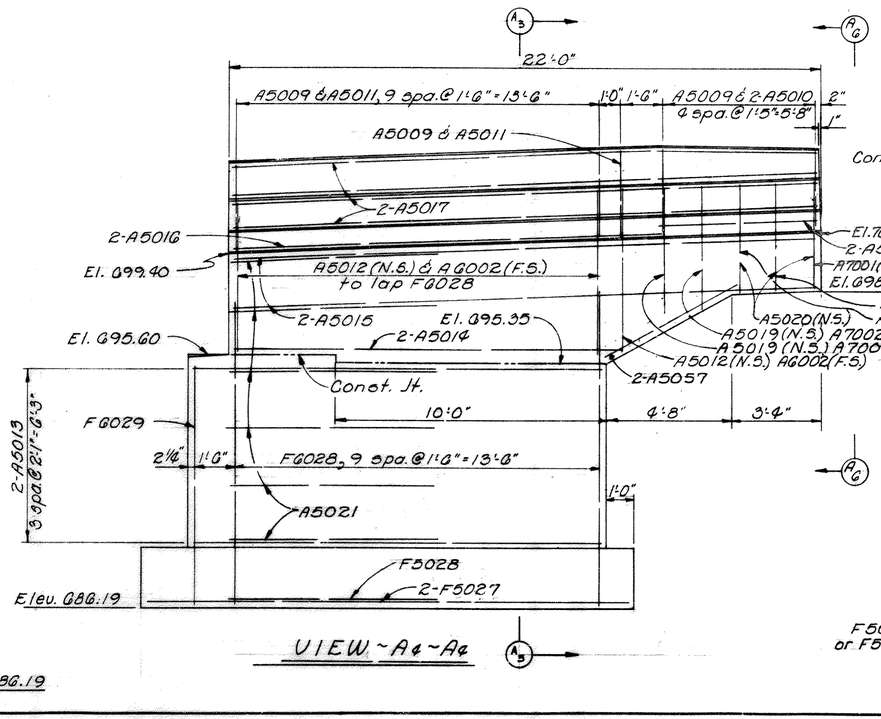


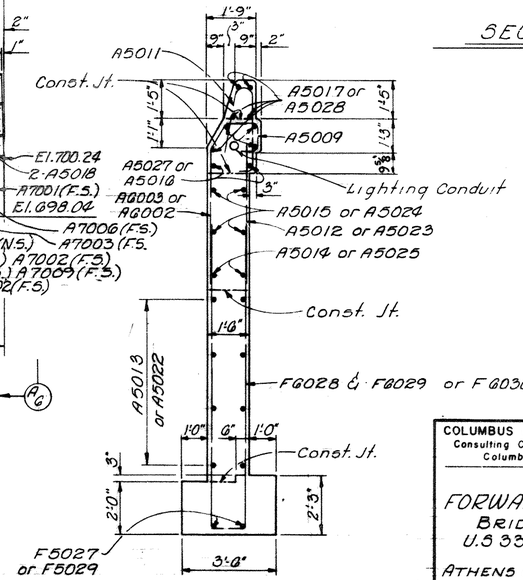
VIEW~A6~A6 as shown
VIEW~A8~A8 opp. as shown



SECT.~A2~A2







SECT.~A3~A3

COLUMBUS ENGINEERING CONSULTANTS, LTD.
Consulting Civil Engineers
Columbus, Ohio
SUCCESSORS TO ATKINS MERCER UNDERWOOD, LTD.

10|20

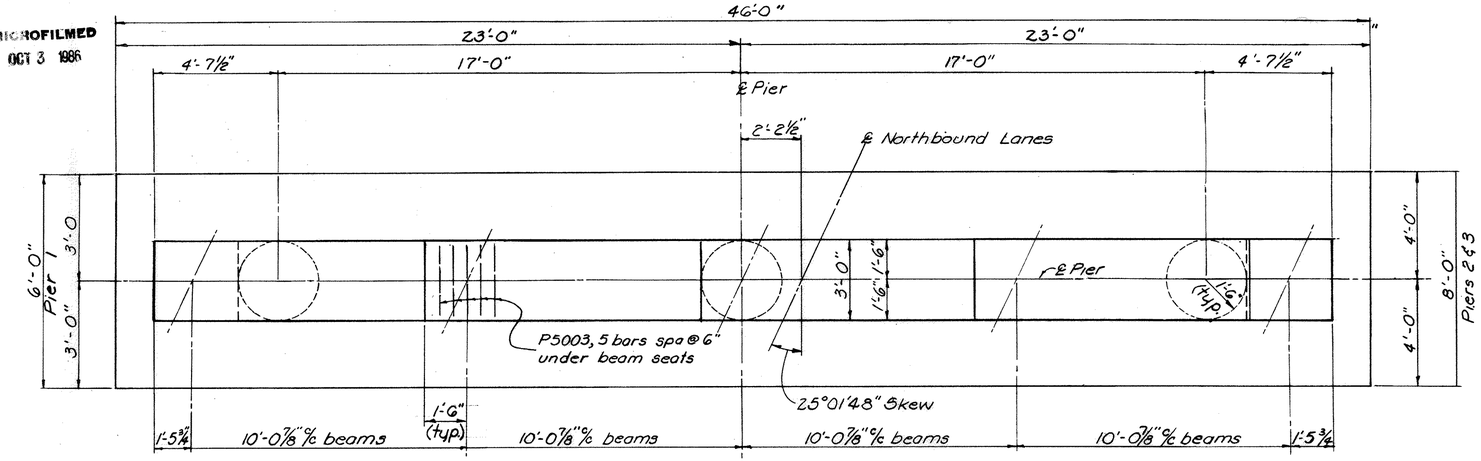
FORWARD ABUTMENT ~ S.B.
BRIDGE Nº ATH-33-1325 R
U.S 33 over U.S. 50A Reloc.
ATHENS COUNTY
STA. 699+08.22 S.B.
STA. 702+82.18 S.B.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FTJ	JEK		GEA	JP	1/24/69	—

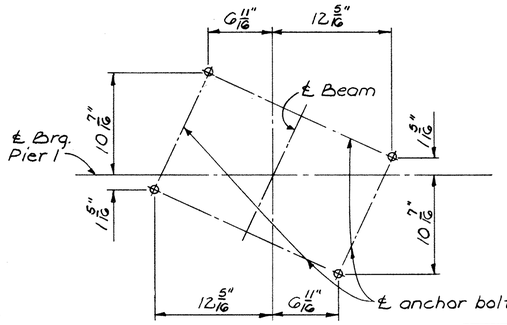
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

401
502

ATHENS COUNTY
ATH-33-12.96



PLAN

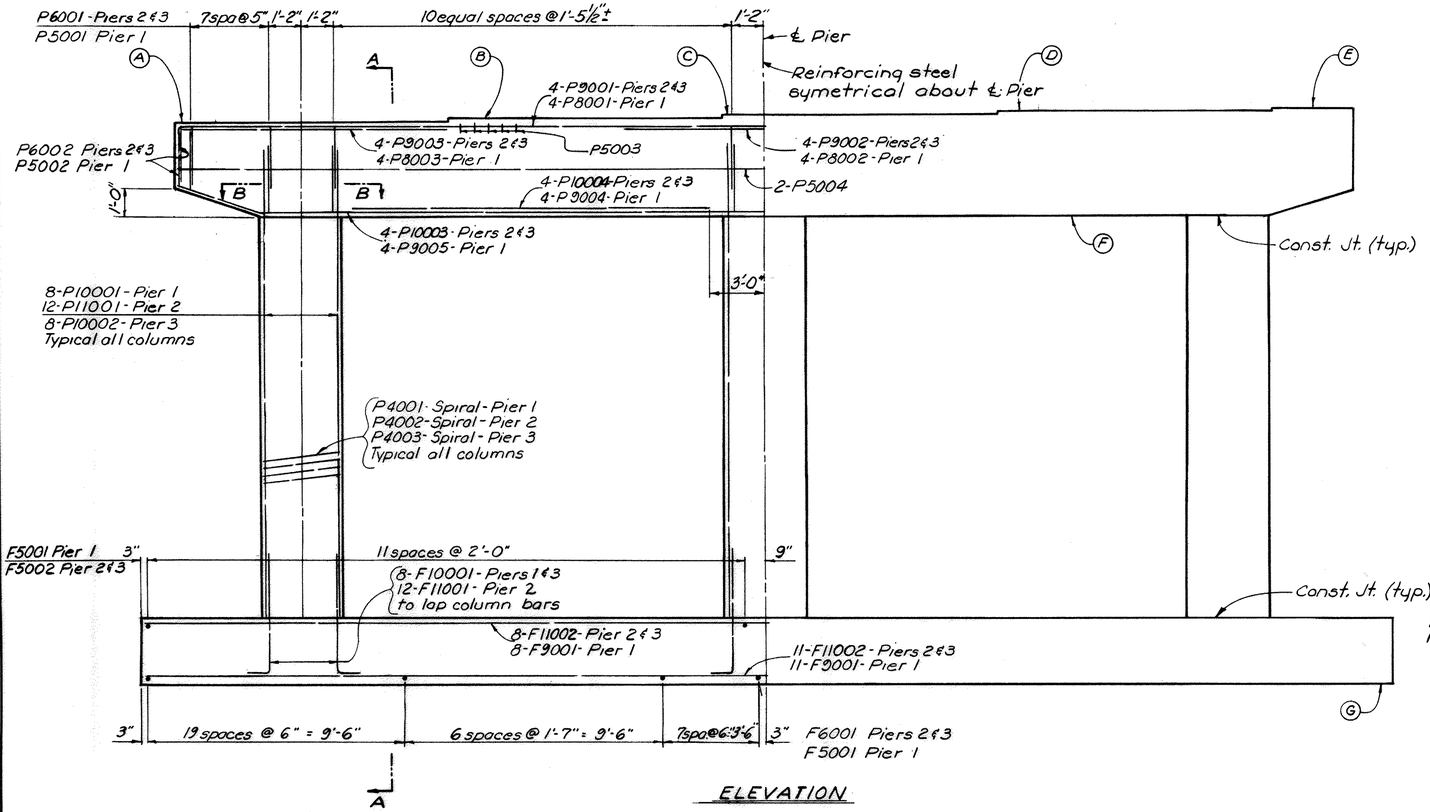


ANCHOR BOLT LOCATION DETAIL PIER 2

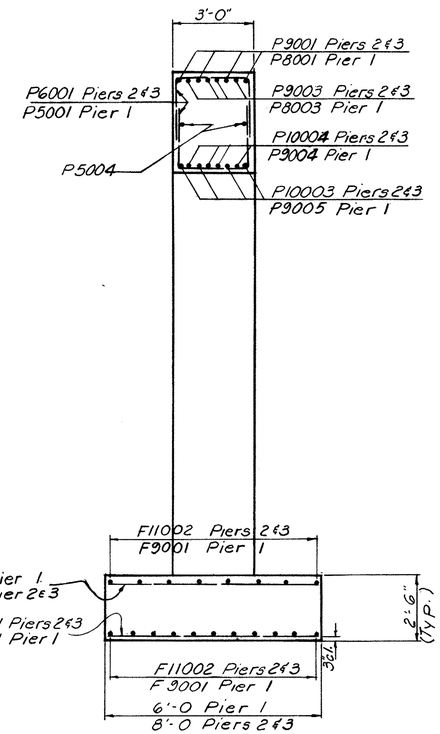
Bridge Seat Reinforcing: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of the anchor bolt holes.

For additional notes see sheet 13|20.

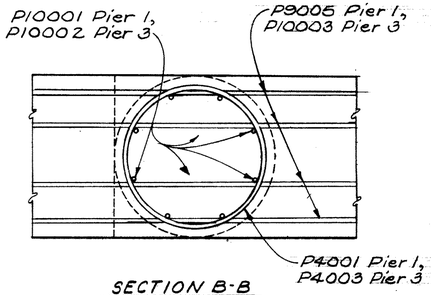
ELEVATION			
Point	Pier 1	Pier 2	Pier 3
A	683.15	685.72	689.16
B	683.50	686.08	689.52
C	683.53	686.11	689.55
D	683.56	686.13	689.57
E	683.59	686.16	689.60
F	679.65	682.22	685.66
G	663.00	663.00	657.00



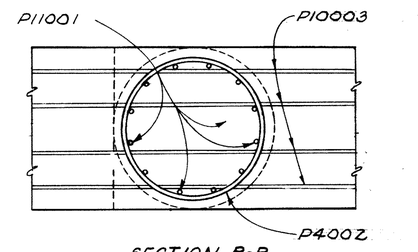
ELEVATION



SECTION A-A



SECTION B-B
(Piers 1&3)



SECTION B-B
(Pier 2)

COLUMBUS ENGINEERING CONSULTANTS, LTD.
Consulting Civil Engineers
Columbus, Ohio
SUCCESSORS TO
ATKINS-MERCER-UNDERWOOD, LTD.

11|20

NORTHBOUND PIERS
BRIDGE Nº ATH-33-1325 L. & R
US 33 over US 50A

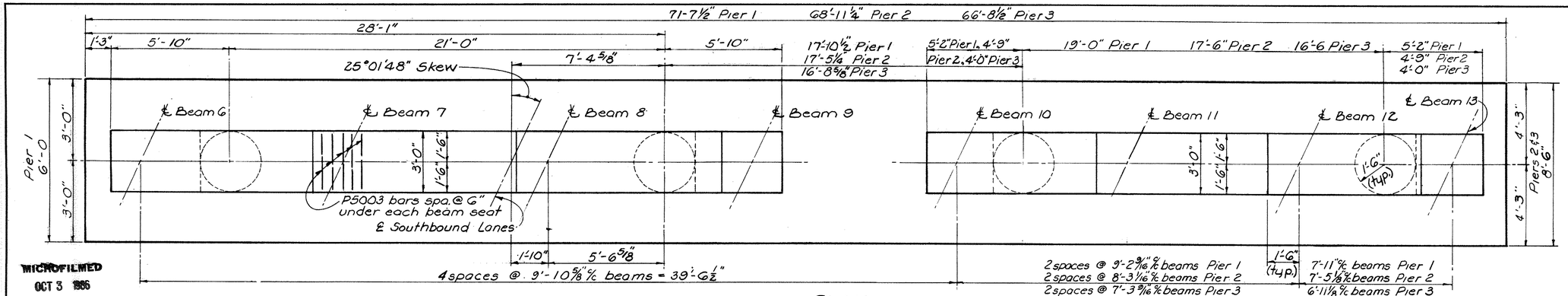
ATHEN COUNTY Sta. 699+82.22 N.B. & 699+68.22 S.B. to Sta. 702+49.68 N.B. & 702+82.18 S.B.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.P			FTJ GEA	TJU	1/24/69	

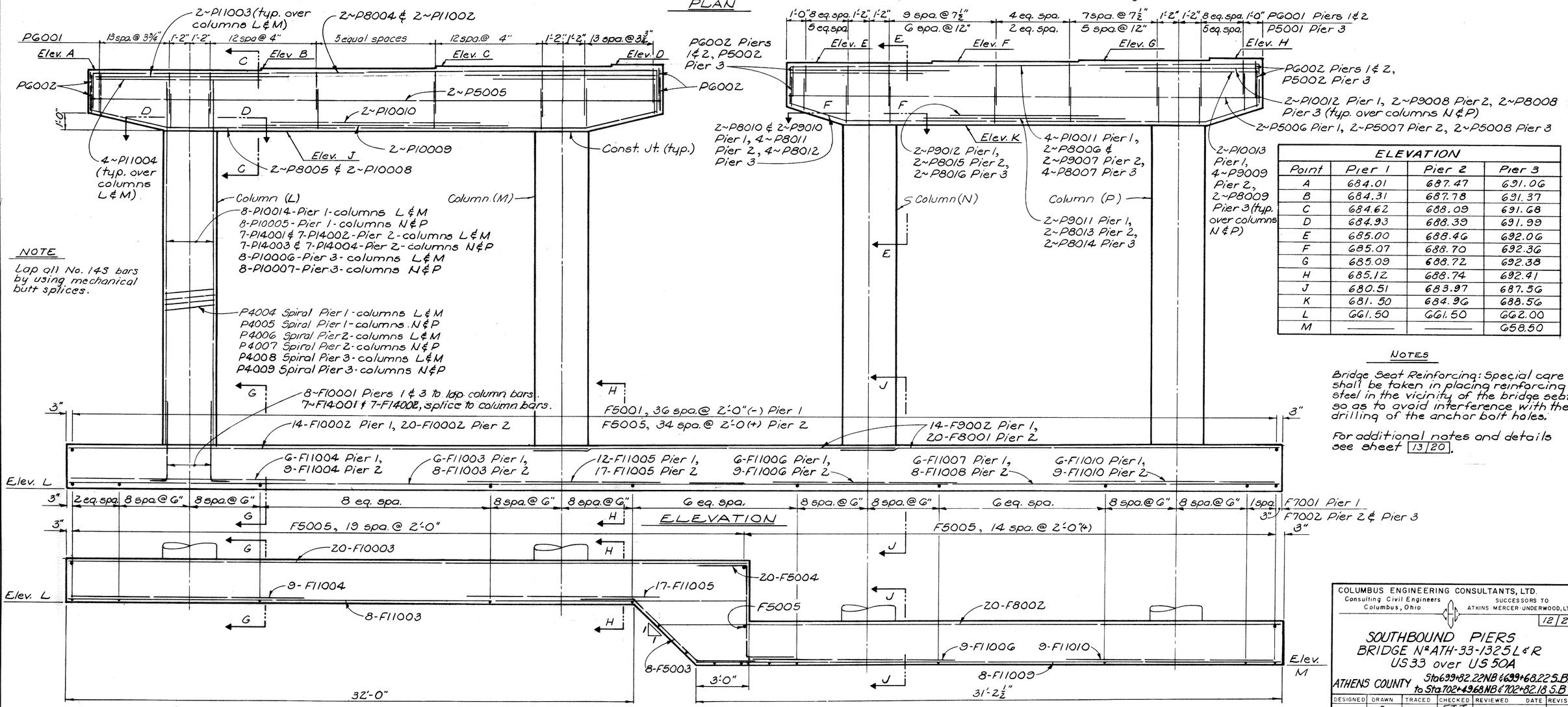
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

402
502

ATHENS COUNTY
ATH-33-12.96



PLAN



ELEVATION			
Point	Pier 1	Pier 2	Pier 3
A	684.01	687.47	691.06
B	684.31	687.78	691.37
C	684.62	688.09	691.68
D	684.93	688.39	691.99
E	685.00	688.46	692.06
F	685.07	688.70	692.36
G	685.09	688.72	692.38
H	685.12	688.74	692.41
J	680.51	683.97	687.56
K	681.50	684.96	688.56
L	661.50	661.50	662.00
M	———	———	658.50

NOTE

Lap all No. 145 bars by using mechanical butt splices.

FOOTING ELEVATION ~ PIER 3

NOTES

Bridge Seat Reinforcing: 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 the anchor bolt holes.

For additional notes and details see sheet 13|20.

COLUMBUS ENGINEERING CONSULTANTS, LTD.
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Columbus, Ohio
SUCCESSORS TO
ATKINS MERCER-UNDERWOOD, LTD.

12|20

SOUTHBOUND PIERS
BRIDGE NºATH-33-1325L&R
US 33 over US 50A

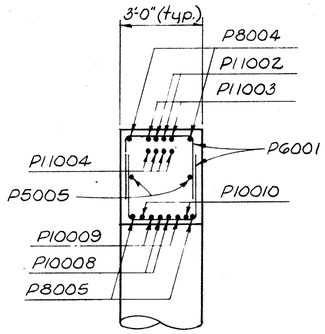
ATHENS COUNTY Sta 699+82.22 NB & 699+68.22 S.B. to Sta 702+49.68 NB & 702+82.18 S.B.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JP	8 of 8		FTJ GEA	TLV	1/24/69	

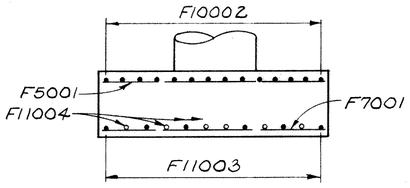
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

403/502

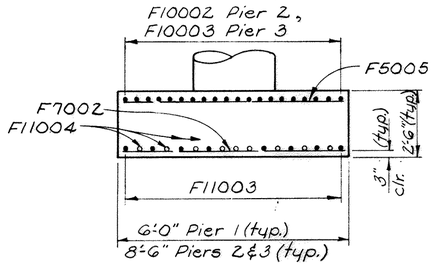
ATHENS COUNTY
ATH~33~12.96



SECT. C~C PIERS 1, 2, & 3

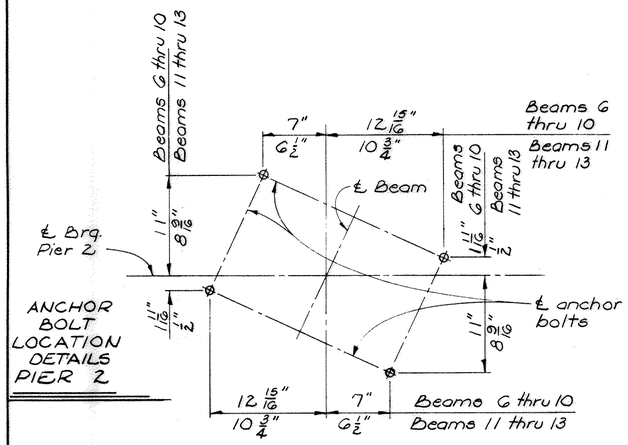


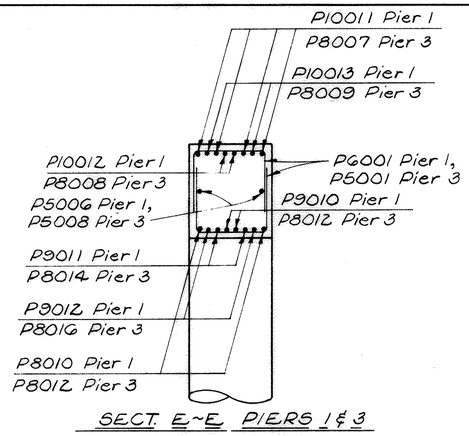
SECT. G~G PIER 1



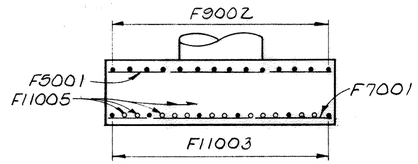
SECT. G~G PIERS 2 & 3

For arrangement of footing reinforcing steel under column P see Section G-G

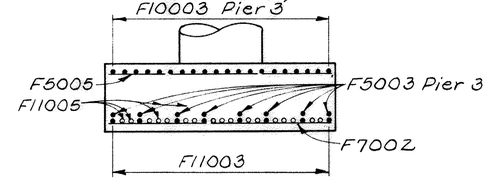




SECT. E~E PIERS 1 & 3



SECT. H~H PIER 1



SECT. H~H PIER 2 & 3

NOTES

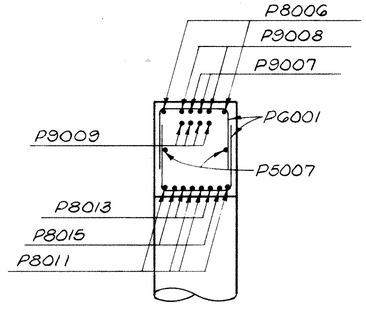
Mechanical butt splicing: Mechanical butt splicing shall be done using a standard, approved method. The splice shall develop 125 percent of the yield strength of the bar.

For additional notes and details see sheet 12/20.

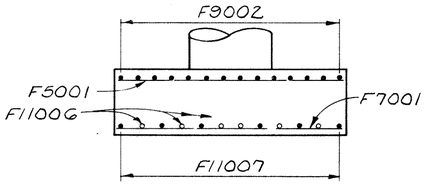
For sign lighting details see sheet 356/502.

For underpass lighting details see sheet 387/502.

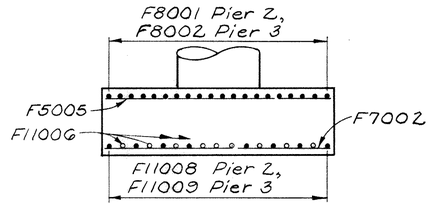
For structure grounding details see Std. Dwg HL-4 and sheet 378/502.



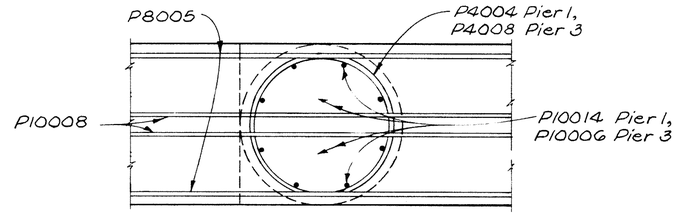
SECT. E~E PIER 2



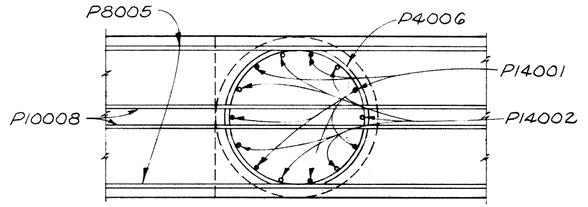
SECT. J~J PIER 1



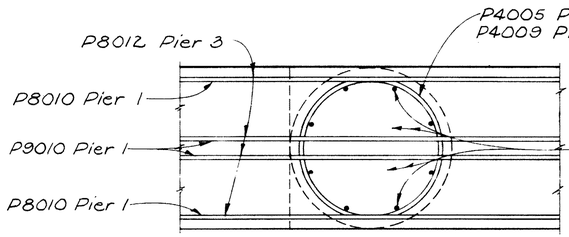
SECT. J~J PIERS 2 & 3



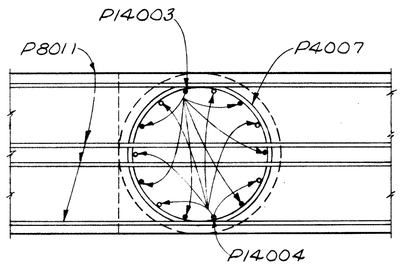
SECT. D~D PIERS 1 & 3



SECT. D~D PIER 2



SECT. F~F PIERS 1 & 3



SECT. F~F PIER 2

COLUMBUS ENGINEERING CONSULTANTS, LTD.
Consulting Civil Engineers
Columbus, Ohio
SUCCESSORS TO
ATKINS MERCER-UNDERWOOD, LTD.

13/20

SOUTHBOUND PIERS

BRIDGE Nº ATH-33-1325 L & R
U.S. 33 OVER U.S. 50A
ATHENS COUNTY Sta. 699+82.22 NB & 699+68.22 SB to Sta. 702+49.68 NB & 702+82.18 SB

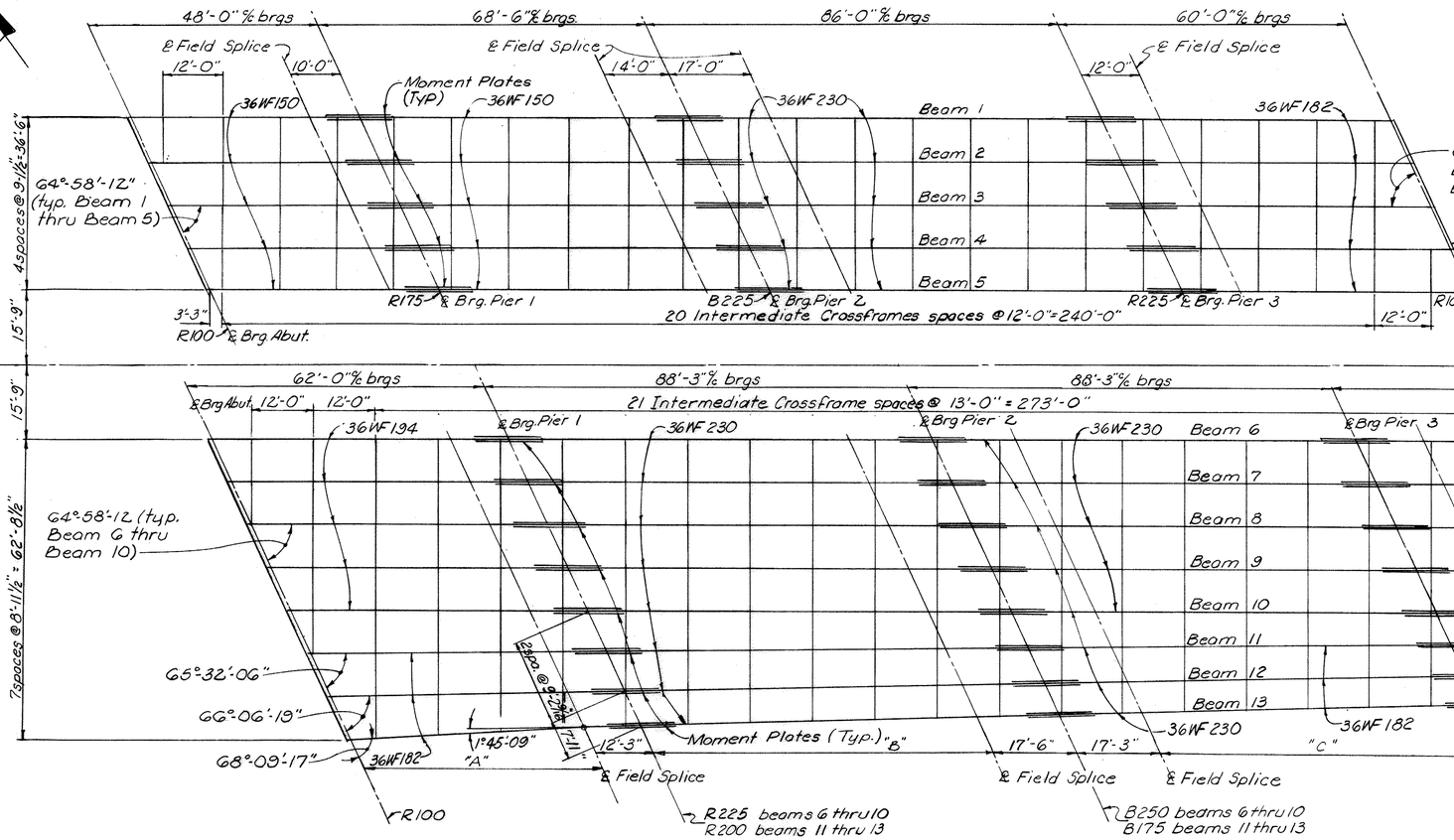
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JP	GTR		FTJ GEA	TZU	1/24/69	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

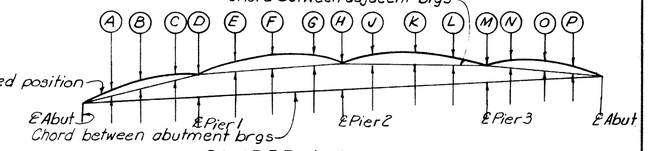
404
502

ATHEN COUNTY
ATH-33-12.96

MICROFILMED
OCT 3 1986



FRAMING PLAN



CAMBER & BLOCKING DIAGRAM

Vertical offsets of bearing points from work line

	Beams 1 thru 5	Beams 6 thru 10	Beam 11	Beam 12	Beam 13
D	1/16	1/4	1 9/16	3 3/8	5 3/8
H	1/8	1/8	1 1/4	2 3/16	3 3/8
M	3/16	1/16	5/16	1 5/16	1 1/2

NOTES:

Place intermediate crossframes normal to ℄ U.S. 33.

Place transverse ℄ of bearing devices normal to ℄ U.S. 33.

The intermediate crossframe shown with double lines shall be L 4 x 4 x 5/16 as shown on sheet 16 | 20. This crossframe shall be placed immediately upon completion of all bolting of the adjacent field splices before stress is induced into these splices.

The distance from the ℄ of the piers to the ℄ of field splices is measured along beam. See table of beam lengths, sheet 15 | 20 for overall beam lengths and dimensions "A", "B", "C" and "D".

DEFLECTION AND CAMBER

SPAN 1

LOCATION	Beams 1 & 5			Beams 2 thru 4			Beam 6			Beams 7 thru 9			Beam 10			Beams 11 & 12			Beam 13		
	¼ Pt A	½ Pt B	splice Pt C	¼ Pt A	½ Pt B	splice Pt C	¼ Pt A	½ Pt B	splice Pt C	¼ Pt A	½ Pt B	splice Pt C	¼ Pt A	½ Pt B	splice Pt C	¼ Pt A	½ Pt B	splice Pt C	¼ Pt A	½ Pt B	splice Pt C
Defl. due to weight of steel	0	0	0	0	0	0	1/16	1/16	0	1/16	1/16	0	1/16	1/16	0	1/16	1/16	0	1/16	1/16	0
Defl. due to remaining D.L.	1/8	1/8	1/16	3/16	3/16	1/16	1/4	1/4	1/16	1/4	5/16	1/16	1/4	5/16	1/16	1/4	5/16	1/16	1/4	1/4	1/16
Adj reqd. for horizontal curve	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1/16	0	3/16	1/4	3/16
Reqd shop camber	1/8	1/8	1/16	3/16	3/16	1/16	5/16	5/16	1/16	5/16	3/8	1/16	5/16	3/8	1/16	5/16	7/16	1/16	1/2	9/16	1/4

SPAN 2

LOCATION	Beams 1 & 5			Beams 2 thru 4			Beam 6			Beams 7 thru 9			Beam 10			Beams 11 & 12			Beam 13		
	¼ Pt E	½ Pt F	splice Pt G	¼ Pt E	½ Pt F	splice Pt G	¼ Pt E	½ Pt F	splice Pt G	¼ Pt E	½ Pt F	splice Pt G	¼ Pt E	½ Pt F	splice Pt G	¼ Pt E	½ Pt F	splice Pt G	¼ Pt E	½ Pt F	splice Pt G
Defl. due to weight of steel	0	1/16	0	0	1/16	0	1/8	3/16	1/16	1/8	3/16	1/16	1/8	3/16	1/16	1/8	3/16	1/16	1/8	3/16	1/16
Defl. due to remaining D.L.	1/8	3/16	0	3/16	1/4	0	3/8	5/8	1/8	7/16	11/16	1/4	7/16	5/8	1/4	3/8	5/8	1/4	3/8	9/16	1/4
Adj reqd. for horizontal curve	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3/8	1/4	1/8	1/2	5/16	1/8
Reqd shop camber	1/8	1/4	0	3/16	5/16	0	1/2	13/16	5/16	9/16	7/8	5/16	9/16	13/16	5/16	7/8	1 1/16	7/16	1	1 1/16	7/16

SPAN 3

LOCATION	Beams 1 & 5			Beam 2 thru 4			Beam 6			Beams 7 thru 9			Beam 10			Beams 11 & 12			Beam 13		
	splice Pt J	½ Pt K	¾ Pt L	splice Pt J	½ Pt K	¾ Pt L	splice Pt J	½ Pt K	¾ Pt L	splice Pt J	½ Pt K	¾ Pt L	splice Pt J	½ Pt K	¾ Pt L	splice Pt J	½ Pt K	¾ Pt L	splice Pt J	½ Pt K	¾ Pt L
Defl. due to weight of steel	1/16	3/16	1/8	1/16	3/16	1/8	1/16	3/16	1/16	1/16	3/16	1/16	1/16	3/16	1/16	1/16	3/16	1/8	1/16	3/16	1/8
Defl. due to remaining D.L.	5/16	11/16	3/8	3/8	13/16	1/2	1/4	9/16	5/16	1/4	5/8	3/8	1/4	9/16	5/16	1/4	5/8	3/8	1/4	11/16	3/8
Adj reqd. for horizontal curve	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reqd shop camber	3/8	7/8	1/2	7/16	1	5/8	5/16	3/4	3/8	5/16	13/16	7/16	5/16	3/4	3/8	5/16	13/16	1/2	5/16	7/8	1/2

SPAN 4

LOCATION	Beams 1 & 5			Beams 2 thru 4			Beam 6			Beams 7 thru 9			Beam 10			Beams 11 & 12			Beam 13		
	splice Pt N	½ Pt O	¾ Pt P	splice Pt N	½ Pt O	¾ Pt P	splice Pt N	½ Pt O	¾ Pt P	splice Pt N	½ Pt O	¾ Pt P	splice Pt N	½ Pt O	¾ Pt P	splice Pt N	½ Pt O	¾ Pt P	splice Pt N	½ Pt O	¾ Pt P
Defl. due to weight of steel	0	1/16	1/16	0	1/16	1/16	1/16	1/8	1/8	1/16	1/8	1/8	1/16	1/8	1/8	1/16	1/8	1/8	1/16	1/8	1/8
Defl. due to remaining D.L.	0	3/16	3/16	0	1/4	1/4	1/8	7/16	3/8	3/16	1/2	7/16	1/8	7/16	3/8	3/16	1/2	7/16	3/16	9/16	1/2
Adj reqd. for horizontal curve	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reqd shop camber	0	1/4	1/4	0	5/16	5/16	3/16	9/16	1/2	1/4	5/8	9/16	3/16	9/16	1/2	1/4	5/8	9/16	1/4	11/16	5/8

COLUMBUS ENGINEERING CONSULTANTS, LTD.
Consulting Civil Engineers, Columbus, Ohio
SUCCESSORS TO ATKINS-MERCER UNDERWOOD, LTD.

14 | 20

SUPERSTRUCTURE DETAILS
BRIDGE Nº ATH-33-1325 L & R.
US 33 over US 50A
ATHENS COUNTY Sta. 699+82.22 N.B. & 699+68.22 S.B to Sta. 702+49.68 N.B & 702+82.18 S.B

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JP	[illegible]		GEA	TLV	1/24/69	

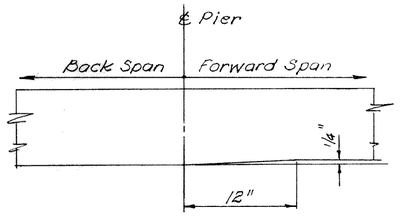
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

405
502

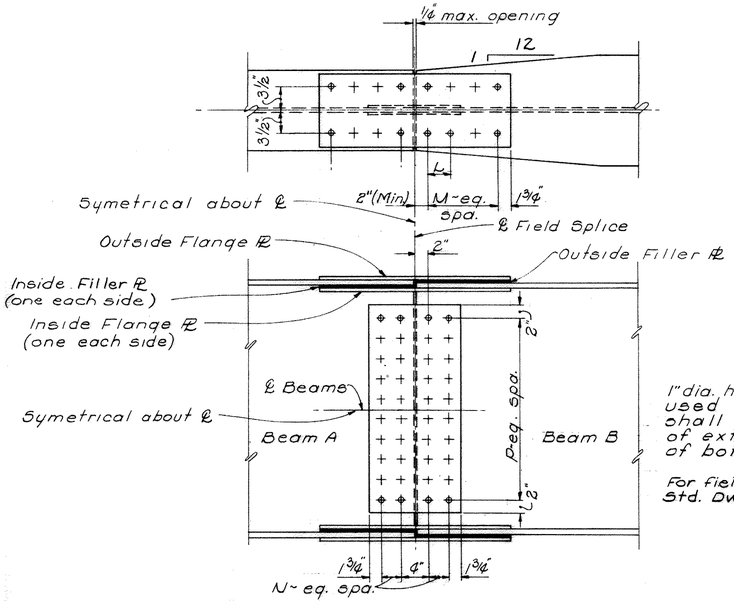
ATHENS COUNTY
ATH-33-12.96

TABLE OF BEAM LENGTHS					DIMENSION *			
BEAM Nº	SPAN 1	SPAN 2	SPAN 3	SPAN 4	"A"	"B"	"C"	"D"
Beams 1 thru 5	48'-0"	68'-0"	86'-0"	60'-0"	38'-0"	54'-6"	69'-0"	48'-0"
Beams 6 thru 10	62'-0"	88'-3"	88'-3"	70'-6"	49'-9"	70'-9"	71'-0"	56'-6"
Beam 11	61'-8 5/16"	87'-10 1/4"	87'-10 1/4"	70'-2 1/8"	49'-5 1/8"	70'-4 1/4"	70'-7 1/4"	56'-2 1/16"
Beam 12	61'-5 5/16"	87'-5 9/16"	87'-5 1/2"	69'-10 3/8"	49'-2 5/16"	69'-11 3/16"	70'-2 1/16"	55'-10 3/16"
Beam 13	60'-8 1/16"	87'-3 1/8"	87'-3 1/8"	69'-8 1/2"	48'-5 1/16"	69'-9 1/16"	70'-0 1/16"	55'-8 1/16"

* Along ℄ beam



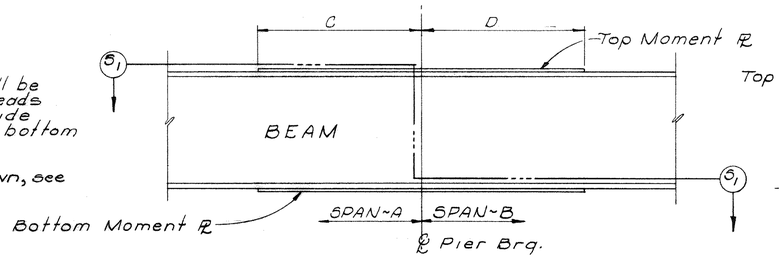
HAUNCH DETAIL AT BAYS 5, 6 & 7



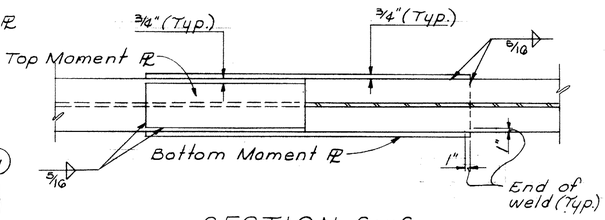
FIELD SPLICE DETAIL

1" dia. high strength bolts shall be used with 1 1/16" holes. Bolt heads shall be placed on facia side of exterior beams and on bottom of bottom flanges.

For field splice details not shown, see Std. Dwg. SD-1-65 sheet 3 of 3.



MOMENT PLATE DETAILS



SECTION S1-S1

BEAM SPLICE PLATES													
		FLANGE SPLICE								WEB SPLICE			
		FLANGE ℞		FLG. BOLTS			FILLER ℞			WEB PLATES	WEB BOLTS		
Beam A	Beam B	OUTSIDE 2 REQ'D.	INSIDE 4 REQ'D.	Nº	M	L	OUTSIDE 2 REQ'D.	INSIDE 4 REQ'D.		2 REQ'D.	Nº	N	P
36WF150	36WF230	11"x 7/16"x 2'-4 1/2"	4 1/2"x 3/16"x 2'-4 1/2"	32	3	3 1/2	———	4 1/2"x 5/16"x 1'-2 1/8"		13 1/2"x 3/8"x 2'-7	40	1	9
36WF182	36WF230	11"x 9/16"x 2'-11 1/2"	4 1/2"x 1/16"x 2'-11 1/2"	40	4	3 1/2	11"x 1/4"x 1'-5 5/8	4 1/2"x 5/16"x 1'-5 5/8		19 1/2"x 3/8"x 2'-7	48	2	7
36WF194	36WF230	11"x 5/8"x 2'-11 1/2"	4 1/2"x 3/4"x 2'-11 1/2"	40	4	3 1/2	11"x 5/16"x 1'-5 5/8	4 1/2"x 5/16"x 1'-5 5/8		19 1/2"x 7/16"x 2'-7	54	2	8
36WF182	36WF160	11"x 1/2"x 2'-4 1/2"	4 1/2"x 9/16"x 2'-4 1/2"	32	3	3 1/2	11"x 3/16"x 1'-2 1/8	———		19 1/2"x 3/8"x 2'-7	48	2	7

MOMENT PLATES								
	SPAN A	SPAN B	BEAM	Top Mom. Plate	Bottom Mom. Plate	C	D
N.B.	1	2	36WF150	10 1/2"x 7/16"x 9'-0"	13 1/2"x 1/2"x 9'-0"	4'-6"	4'-6"
	2	3	36WF230	15"x 3/8"x 9'-0"	18"x 11/16"x 9'-0"	4'-6"	4'-6"
	3	4	36WF230	15"x 5/8"x 9'-0"	18"x 11/16"x 9'-0"	4'-6"	4'-6"
S.B. Bms. 1 2 3 thru 10	1	2	36WF230	15"x 5/8"x 11'-0"	18"x 11/16"x 11'-0"	5'-6"	5'-6"
	2	3	36WF230	15"x 5/8"x 10'-0"	18"x 11/16"x 10'-0"	8'-0"	8'-0"
	3	4	36WF230	15"x 5/8"x 14'-6"	18"x 11/16"x 14'-6"	7'-0"	7'-6"
	1	2	36WF230	15"x 5/8"x 9'-0"	18"x 11/16"x 9'-0"	4'-6"	4'-6"
	2	3	36WF230	15"x 5/8"x 9'-0"	18"x 11/16"x 9'-0"	4'-6"	4'-6"
	3	4	36WF182	10 1/2"x 7/16"x 12'-0"	13 1/2"x 1/2"x 12'-0"	4'-6"	7'-6"

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SUPERSTRUCTURE DETAILS

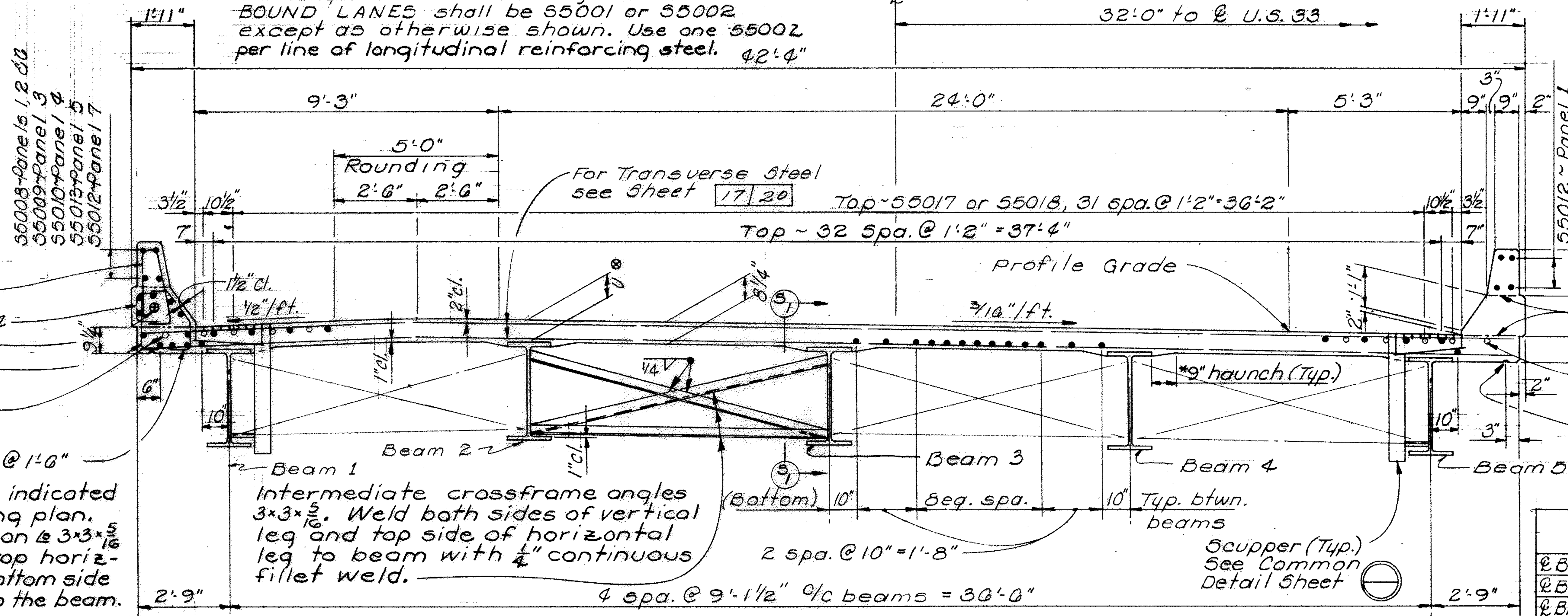
BRIDGE Nº ATH-33-1325 L&R
U.S. 33 over U.S. 50A RELOC.
Sta. 699+82.22 N.B. & 699+68.22 S.B.
ATHENS COUNTY to Sta. 702+49+68 N.B. & 702+82.18 S.B.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JP	JEK		GEA	TZU	1/24/69	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		406/502

ATHENS COUNTY
ATH~33~12.96

All longitudinal reinforcing for NORTH BOUND LANES shall be 55001 or 55002 except as otherwise shown. Use one 55002 per line of longitudinal reinforcing steel.

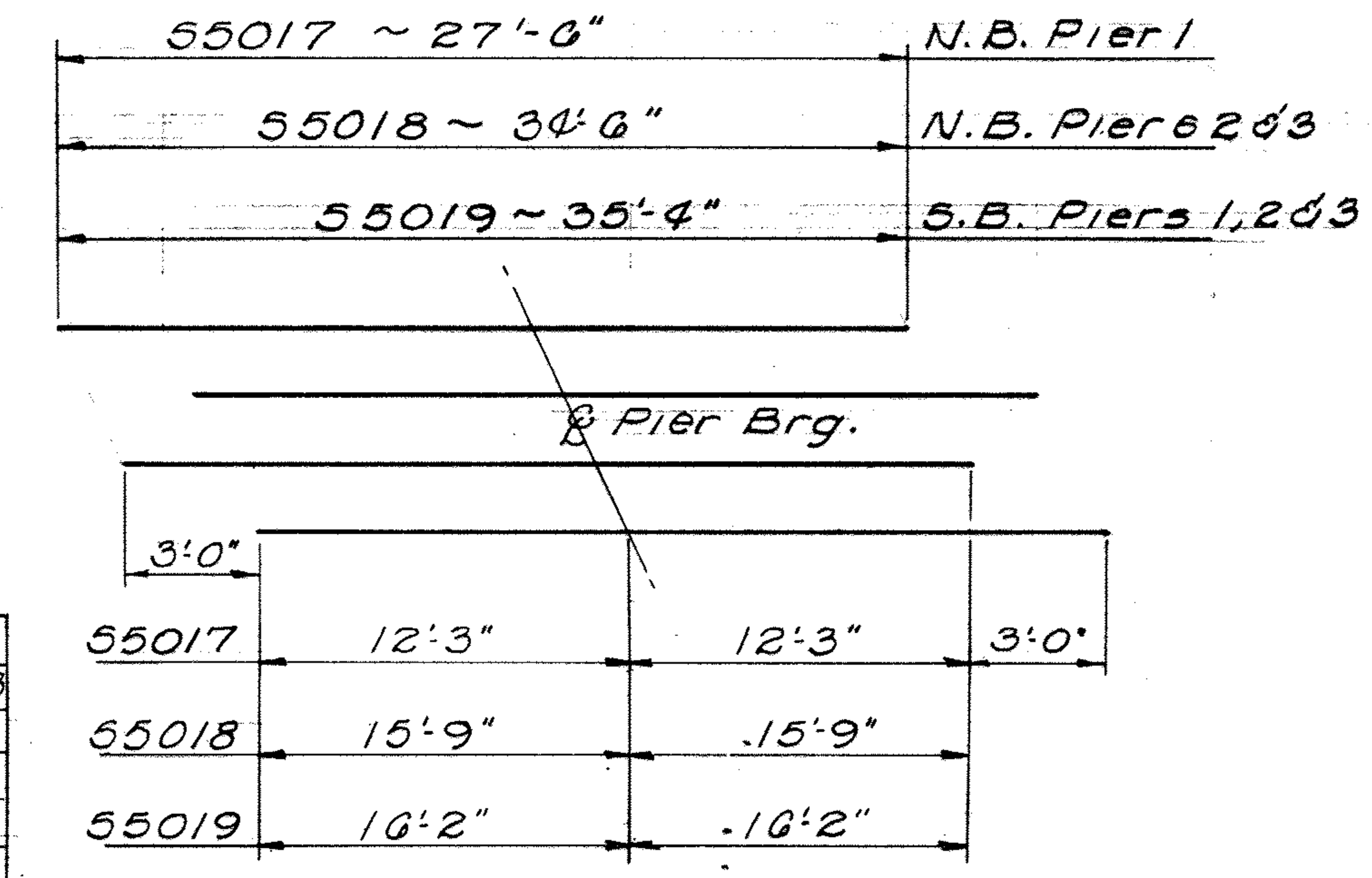


TRANSVERSE SECTION ~ NORTH BOUND LANES

Bridge railing details typical both sides except as shown

Values for "U" ®

	BEAMS		
	1 thru 5	6 thru 10	11 thru 13
℄ Brg. Rear Abut.	8½	8¼	8¼
℄ Brg. Pier 1	8½	8 9/16	8½
℄ Brg. Pier 2	8½	8 9/16	8½
℄ Brg. Pier 3	8½	8 9/16	8¼
℄ Brg. Fwd. Abut.	8¼	8 9/16	8 7/16



BAR STAGGER DIAGRAM

Showing stagger of 55017, 55018 & 55019 bars over piers

NOTES

*** Typical for crossframe indicated by double lines on the framing plan. Welding shall be as indicated on ℄ 3×3×5/16 with the exception that the top horizontal angle shall have the bottom side of the horizontal leg welded to the beam.

® The distance shown from the top of deck slab to the top of steel beam 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. Deductions shall be made for volume of encased steel as per Section 511.19 of the Construction and Material Specifications.

* 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 be not more than 1:4 for a haunch less than 9" in width.

** Lighting conduit shall be placed 1" clear above constr. joint at top of slab.

Longitudinal reinforcing steel shall be field cut as necessary to avoid interference with scuppers.

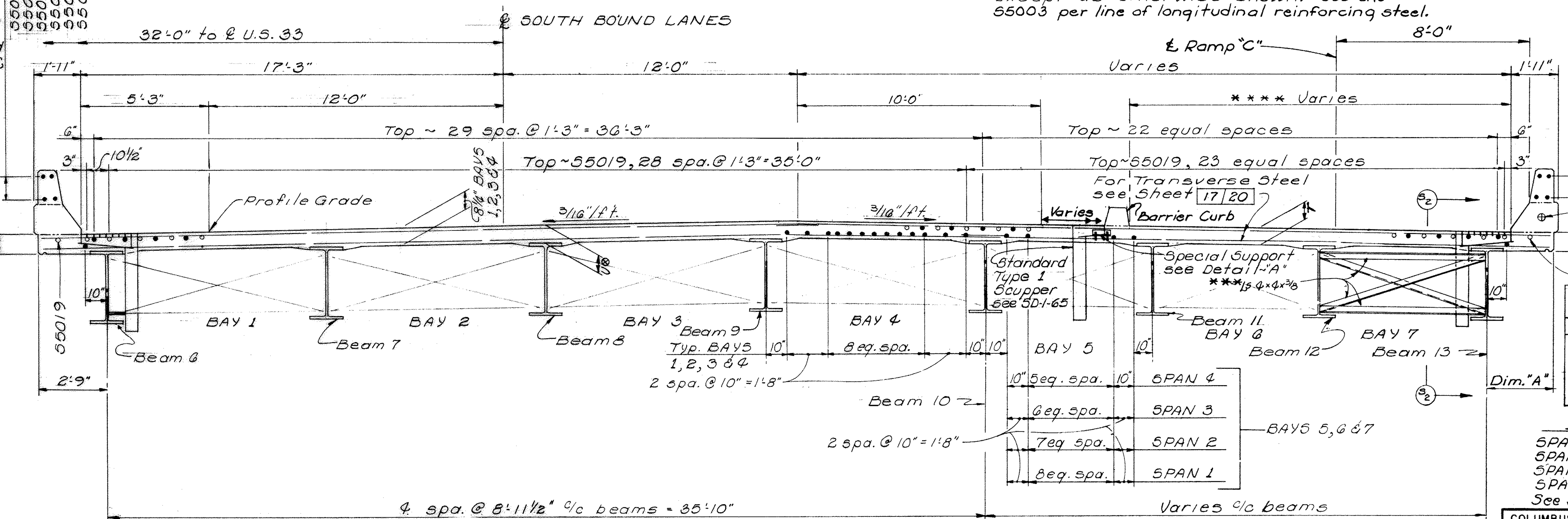
Field bend transverse bars to fit crown. Field bending to be included in Item 509 for payment.

Lap longitudinal reinforcing steel 1'-7" min.

For Parapet panel locations see General Plan Sheet 2/20

Use CF 2000 for end dam data on Std. Dwg. SD-1-65, sheet 1 of 3.

All longitudinal reinforcing for SOUTH BOUND LANES shall be 55001 or 55003 except as otherwise shown. Use one 55003 per line of longitudinal reinforcing steel.



SLAB CANTILEVER S.B. ~ S. SIDE	
LOCATION	Dim. "A"
℄ Rear Abutment	3'-1⅛"
℄ Span Nº 1	2'-6⅛"
℄ Pier Nº 1	2'-9⅛"
All other locations	2'-9"

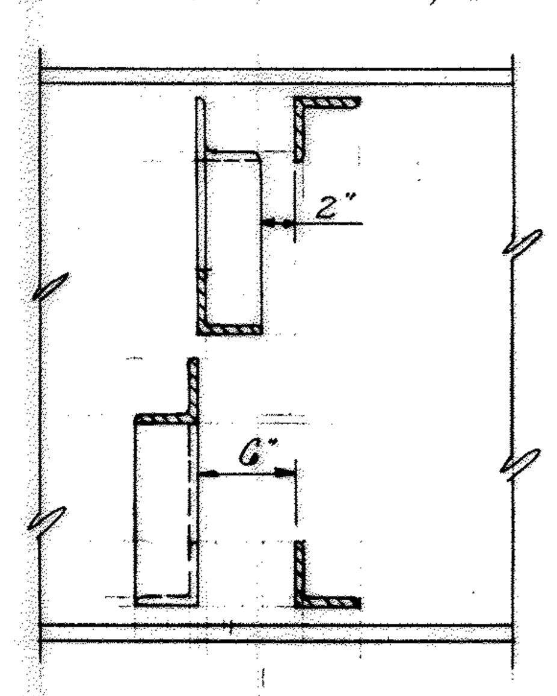
BAYS 5, 6 & 7

SPAN 1 ~ T= 8¼"
SPAN 2 ~ T= 8"
SPAN 3 ~ T= 7¾"
SPAN 4 ~ T= 7½"

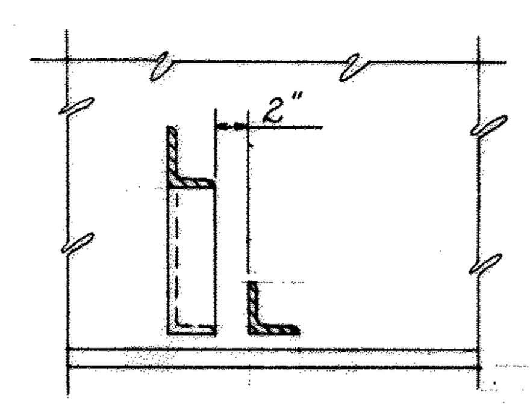
See Sheet 15/20 for haunch detail.

TRANSVERSE SECTION ~ SOUTH BOUND LANES

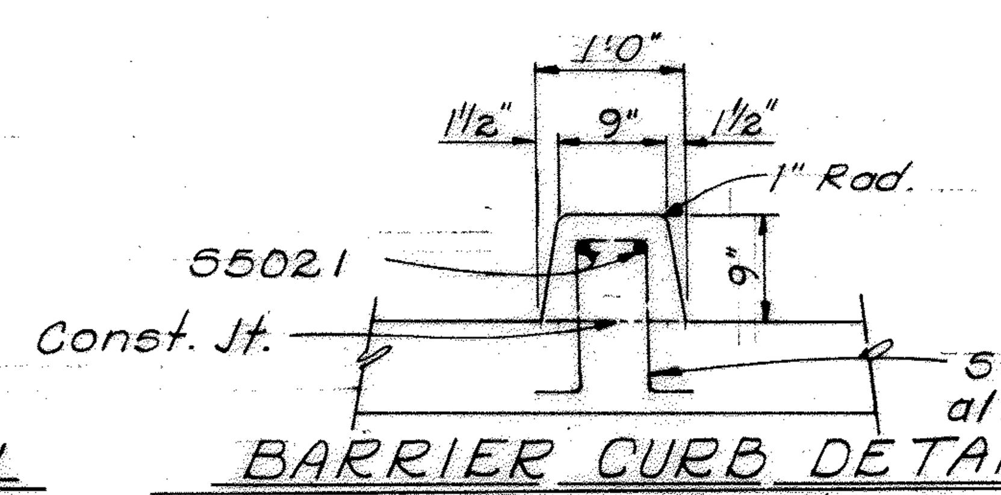
For details not shown see Transverse Section, North Bound Lanes



SECTION S2~S2



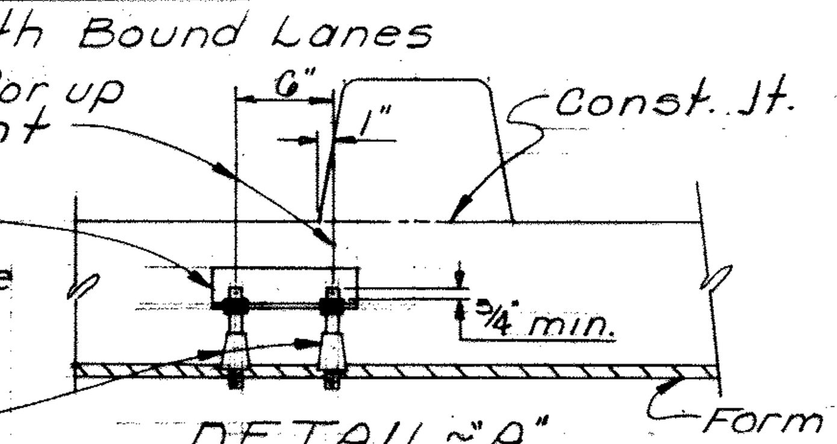
SECTION~S1~S1



BARRIER CURB DETAIL

**** For Barrier Curb location see General Plan, sheet 2/20

5/8" ⌀ bolt threaded for up and down adjustment
2 Ls ~ 2½ × 2½ × ¼ one each side of scupper
Indent form at base of cone and set cone perpendicular. Clamp cone firmly to form. Remove cone with form and fill hole with grout.



DETAIL~"A"

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16/20

SUPERSTRUCTURE DETAILS

BRIDGE Nº ATH~33~1325 L&R
U.S. 33 over U.S. 50A Reloc.

ATHENS COUNTY Sta. 699+82.22 N.B. & 699+68.22 S.B. to Sta. 702+49.68 N.B. & 702+82.18 S.B.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JP	JEK		GEA	72U	1/24/69	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

407/502

ATHENS COUNTY
ATH-33-12.96

3 spa. @ 7" = 1'-9", S7026
11 spa. @ 7" = 6'-5", S7025 thru S7014
11 spa. @ 9" = 8'-3", S7013 thru S7002

S7001 (Top & Bottom), 327 spa. @ 9" = 245'-3"

11 spa. @ 9" = 8'-3", S7002 thru S7013
11 spa. @ 7" = 6'-5", S7014 thru S7025

3 spa. @ 7" = 1'-9", S7026

℄ Northbound Lanes

NORTHBOUND STRUCTURE

N

Top & Bottom ~ SG124 thru SG139, 15 spa. @ 5½" = 6'-10½"
Top ~ SG102 thru SG111, 9 spa. @ 7" = 5'-3"
Bottom ~ SG112 thru SG117, 5 spa. @ 7" = 2'-11"

℄ U.S. 33

Top ~ SG001, 25 spa. @ 7" = 14'-7"
Bottom ~ SG010, 29 spa. @ 7" = 16'-11"

Top ~ SG001 & Bottom ~ SG010, 479 spa. @ 7" = 279'-5"

Top ~ SG036 thru SG052, 16 spa. @ 7" = 9'-4"
Bottom ~ SG150 thru SG170, 20 spa. @ 7" = 11'-8"

Top & Bottom ~ SG035, 4 spa. @ 5½" = 1'-10"

℄ Southbound Lanes

SOUTH BOUND STRUCTURE

Top & Bottom ~ SG035, 4 spa. @ 5½" = 1'-10"

Bottom ~ SG173 thru SG183
10 spa. @ 7" = 5'-10"

Bottom ~ SG172
21 spa. @ 7" = 12'-3"

Top ~ SG019, 17 spa. @ 7" = 9'-11"
Top ~ SG020 thru SG034, 14 spa. @ 7" = 8'-2"
Top & Bott. ~ SG140 thru SG149, 9 spa. @ 5½" = 4'-1½"

Top ~ SG009
Bott. ~ SG018
28 spa. @ 7" = 16'-4"

Top ~ SG008
Bottom ~ SG017
45 spa. @ 7" = 26'-3"

Top ~ SG007
Bottom ~ SG016
59 spa. @ 7" = 34'-5"

Top ~ SG006
Bottom ~ SG015
68 spa. @ 7" = 39'-8"

Top ~ SG005
Bottom ~ SG014
68 spa. @ 7" = 39'-8"

Top ~ SG004
Bottom ~ SG013
68 spa. @ 7" = 39'-8"

Top ~ SG003
Bottom ~ SG012
68 spa. @ 7" = 39'-8"

Top ~ SG002
Bottom ~ SG011
68 spa. @ 7" = 39'-8"

Top ~ SG054 thru SG079
25 spa. @ 7" = 14'-7"
Bottom ~ SG185 thru SG213
28 spa. @ 7" = 16'-4"

TRANSVERSE SLAB REINFORCING

NOTE:
Transverse slab reinforcing shall be placed normal to the parallel beams in each structure

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SUPERSTRUCTURE DETAILS

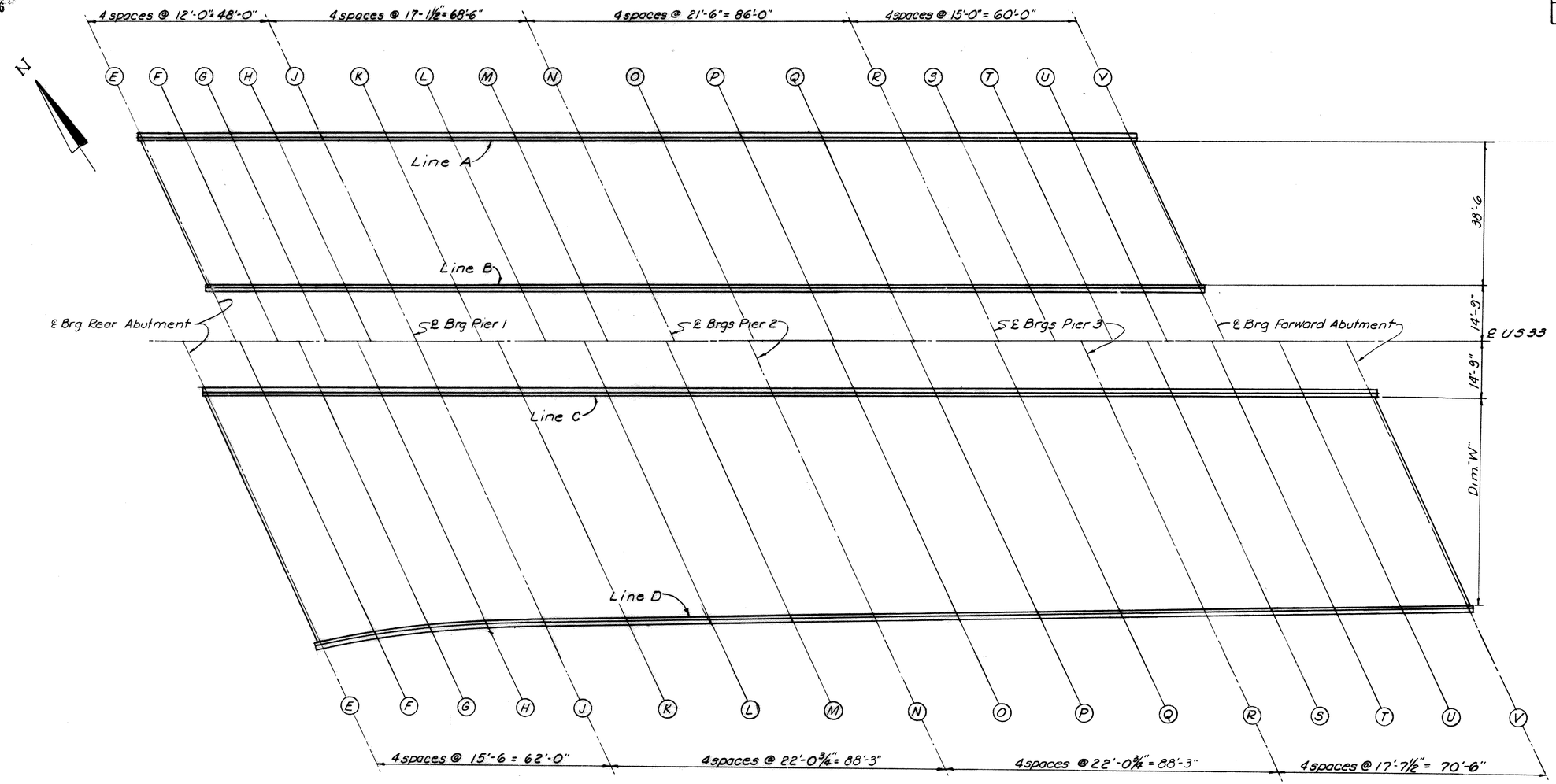
BRIDGE Nº ATH-33-1325 L&R
U.S. 33 over SOA Reloc.
Sta. 699+82.22 N.B. & 699+68.22 S.B.
ATHENS COUNTY to Sta. 702+49.68 & 702+82.18 S.B.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JP	JEK		GEA	TZU	1/24/69	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

408
502

ATHENS COUNTY
ATH-33-12.96



The elevations shown at the top of slab and face of curb are those which are required before the concrete deck is placed. Proper allowance has been made for the dead load deflections caused by the weight of concrete.

TABLE OF SCREED ELEVATIONS

	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U	V
Line A	686.18	686.67	687.15	687.62	688.10	688.79	689.48	690.15	690.84	691.73	692.61	693.45	694.28	694.88	695.49	696.09	696.68
Line B	686.68	687.17	687.65	688.13	688.60	689.30	689.99	690.66	691.34	692.23	693.12	693.95	694.78	695.38	696.00	696.60	697.18
Line C	686.67	687.31	687.93	688.54	689.15	690.07	690.97	691.83	692.68	693.59	694.49	695.36	696.21	696.93	697.66	698.36	699.03
Line D	687.18	687.97	688.73	689.47	690.20	691.17	692.06	692.92	693.78	694.69	695.60	696.45	697.30	698.03	698.76	699.45	700.12
Dim. W	65'-0½"	63'-8⅜"	62'-9¼"	62'-1⅜"	61'-8⅛"	61'-1⅝"	60'-7⅛"	60'-0½"	59'-6"	58'-11½"	58'-4¾"	57'-10⅛"	57'-3⅜"	56'-10⅝"	56'-5⅜"	56'-0⅛"	55'-6⅞"

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SCREED ELEVATIONS
BRIDGE Nº ATH-33-1325 L & R.
US 33 over US 50A

ATHENS COUNTY Sta. 699+82.22 N.B. & 699+68.22 S.B. to Sta. 702+43.68 N.B. & 702+32.18 S.B.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JP	[illegible]		GEA	TLU	1/24/69	

REINFORCING STEEL LIST

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

409/502

ATHENS COUNTY
ATH-33-12.96

SUPERSTRUCTURE

Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shp
55001	2571	30-0	80447							st.
55002	107	7-9	865							st.
55003	150	25-10	4041							st.
55004	764	3-1	2454	11	0-9	0-9	0-11½	0-9	0-6	bt.
55005	764	2-0	1594	1		0-7½	1-0	0-7½		bt.
55006	764	1-11	1530	1	0-6	1-7				bt.
55007	764	5-4	4247	10	2-2	0-2¼	2-5	0-7½		bt.
55008	36	13-2	495							st.
55009	96	7-0	701							st.
55010	40	13-0	542							st.
55011	32	12-9	426							st.
55012	24	13-5	336							st.
55013	48	13-11	697							st.
55014	40	14-2	591							st.
55015	64	11-11	796							st.
55016	4	12-1	50							st.
55017	36	27-6	1033							st.
55018	72	34-6	2591							st.
55019	165	35-4	6080							st.
55020	59	3-8	226	1	0-8	1-2	0-7	1-2	0-8	bt.
55021	6	27-0	169							st.
56001	506	35-0	26600							st.
56002	69	27-4	2832							st.
56003	69	28-4	2936							st.
56004	69	29-4	3040							st.
56005	69	30-4	3143							st.
56006	69	31-4	3247							st.
56007	60	32-4	2914							st.
56008	46	33-9	2332							st.
56009	29	35-2	1532							st.
56010	510	30-0	22981							st.
56011	69	32-4	3351							st.
56012	69	33-4	3454							st.
56013	69	34-4	3558							st.
56014	69	35-4	3662							st.
56015	69	36-4	3765							st.
56016	60	37-4	3364							st.
56017	46	38-9	2677							st.
56018	29	40-3	1753							st.
56019	18	35-0	946							st.
56020	1	33-9								st.
thru		Δ=1-3	563							
56034	1	16-3								st.
56035	20	5-2	155							st.
56036	1	23-10								st.
thru		Δ=1-3	353							
56052	1	3-10								st.
56054	1	33-11								st.
thru		Δ=1-3	714							
56079	1	2-8								st.
56102	1	33-5								st.
thru		Δ=1-3	417							
56111	1	22-2								st.
56112	1	28-9								st.
thru		Δ=1-3	231							
56117	1	22-6								st.

SUPERSTRUCTURE (CONT.)

Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shp
56124	2	21-0								st.
thru		Δ=1-0	649							
56139	2	6-0								st.
56140	2	15-0								st.
thru		Δ=1-0	315							
56149	2	6-0								st.
56150	1	28-10								st.
thru		Δ=1-3	515							
56170	1	3-10								st.
56172	22	30-0	991							st.
56173	1	28-9								st.
thru		Δ=1-3	372							
56183	1	16-3								st.
56185	1	39-0								st.
thru		Δ=1-3	936							
56213	1	4-0								st.
57001	656	41-8	55874							st.
57002	4	39-5								st.
thru		Δ=1-7½	3001							
57013	4	21-9¼								st.
57014	4	20-2								st.
thru		Δ=1-3	1304							
57025	4	6-5								st.
57026	16	5-2	169							st.

ABUTMENTS

Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shp
A5001	130	4-11	667	1		1-6	2-2	1-6		bt.
A5002	6	5-3	33							st.
A5003	8	31-5	262							st.
A5004	11	32-4	371							st.
A5005	22	8-2	187	1		2-6	3-5	2-6		bt.
A5006	8	29-11	250							st.
A5007	11	29-11	343							st.
A5008	21	8-10	193	1		2-10	3-5	2-10		bt.
A5009	47	2-0	98	1		0-7½	1-0	0-7½		bt.
A5010	40	2-11	122							st.
A5011	27	6-2	174	(12) (14)	0-7½	3-0	0-2¼	2-5		bt.
A5012	11	5-4	61							st.
A5013	8	15-2	127							st.
A5014	2	14-4	30							st.
A5015	4	21-8	90							st.
A5016	2	16-0	33							st.
A5017	8	21-8	181							st.
A5018	2	7-3	15							st.
A5019	2	4-1	9							st.
A5020	3	3-7	11							st.
A5021	6	8-5	53							st.
A5022	8	8-10	74							st.

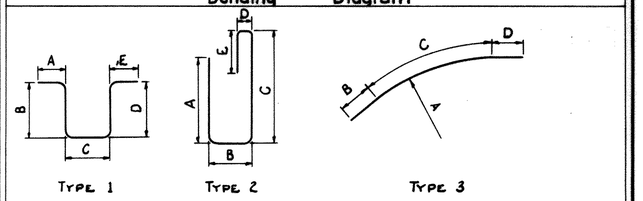
ABUTMENTS

Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shp
A5023	6	5-7	35							st.
A5024	4	14-8	61							st.
A5025	2	7-6	16							st.
A5026	2	7-3	15							st.
A5027	2	9-0	19							st.
A5028	8	14-8	122							st.
A5029	3	3-7	11							st.
A5030	2	4-1	9							st.
A5031	6	5-3	33							st.
A5032	8	38-10	324							st.
A5033	8	33-11	283							st.
A5034	11	39-8	455							st.
A5035	11	33-1	380							st.
A5036	50	8-4	435	1		2-7	3-5	2-7		bt.
A5037	2	5-1	11							st.
A5038	6	3-7	22							st.
A5039	4	4-1	17							st.
A5040	2	5-4	11							st.
A5041	6	6-7	41							st.
A5042	24	13-2	330							st.
A5043	4	7-6	31							st.
A5044	4	7-3	30							st.
A5045	4	8-0	33							st.
A5046	8	5-7	47							st.
A5047	4	4-9	20							st.
A5048	2	4-9	10							st.
A5049	6	7-3	45							st.
A5050	6	7-9	48							st.
A5051	2	4-2	9	1		2-0	0-5	2-0		bt.
A5057	2	5-6	11							st.
A5058	2	6-0	13							st.
A5060	38	30-0	1189							st.
A5061	38	17-0	674							st.
A5062	58	7-2	434	1		2-0	3-5	2-0		bt.
A5063	12	5-0	63							st.
A5064	12	8-3	103							st.
A5065	42	2-0	88	1		0-7½	1-0	0-7½		bt.
A5066	22	6-2	142	(12) (14)	0-7½	3-0	0-2¼	2-5		bt.
A5067	40	2-11	122							st.
A5068	6	7-4	46							st.
A5069	2	6-0	13							st.
A5070	6	6-8	42							st.
A5071	2	5-4	11							st.
A5072	8	8-2	68							st.
A5073	8	8-10	74							st.
A5074	12	3-10	48							st.
A5075	8	5-6	46							st.
A5076	8	5-4	44							st.
A5077	10	5-5	56							st.
A5078	2	4-2	9							st.
A5079	2	4-10	10							st.
A5080	2	5-7	12							st.
A5081	2	4-5	9							st.
A5082	2	5-1	11							st.
A5083	2	5-10	12							st.
A5084	4	7-8	32							st.
A5085	8	7-3	60							st.
A5086	24	13-2	330							st.
A5087	4	7-6	31							st.
A5088	24	14-8	367							st.
A5089	4	9-0	38							st.
A5090	4	7-6	31							st.

ABUTMENTS (CONT.)

Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shp
A6001	134	15-9	3170	2	4-11	1-5	6-3	0-11	2-10	bt.
A6002	11	6-6	107	11	0-9	0-9	0-11½	4-8		bt.
A6003	6	6-8	60	11	0-9	0-9	0-11½	4-10		bt.
A6004	10	6-4	95	11	0-9	0-9	0-11½	4-6		bt.
A6005	84	15-11	2008	2	5-0	1-5	6-4	0-11	2-10	bt.
A6006	10	6-4	95	11	0-9	0-9	0-11½	4-6		bt.
A6007	12	6-6	117	11	0-9	0-9	0-11½	4-8		bt.
A7001	4	4-0	33							st.
A7002	1	4-11	10	11	0-9	0-6	0-11½	3-2		bt.
A7003	1	4-8	10	11	0-9	0-4	0-11½	3-0		bt.
A7004	1	4-8	10	11	0-9	0-4	0-11½	3-0		bt.
A7005	1	4-11	10	11	0-9	0-6	0-11½	3-2		bt.
A7006	4	4-7	37	11	0-9	0-2¼	0-11½	3-0		bt.
A7007	2	4-8	19	11	0-9	0-4	0-11½	3-0		bt.
A7008	2	4-11	20	11	0-9	0-6	0-11½	3-2		bt.
A7009	4	5-0	41	11	0-9	0-9	0-11½	3-2		bt.
A7010	4	3-10	31							st.
A7011	4	4-7	37	11	0-9	0-2¼	0-11½	3-0		bt.
A7012	4	4-8	38	11	0-9	0-4	0-11½	3-0		bt.
A7013	4	4-11	40	11	0-9	0-6	0-11½	3-2		bt.
A7014	4	5-0	41	11	0-9	0-9	0-11½	3-2		bt.
F5025	43	8-0	359	1	0-6	7-8				bt.
F5026	1	8-0	8							st.
F5027	2	17-11	37							st.
F5028	1	13-0	14							st.
F5029	2	12-1	25							st.
F5030	1	8-0	8							st.
F5031	50	8-1	422	1	0-6	7-9				bt.
F5032	2	9-5	20							st.
F5033	2	10-4	22							st.
F5034	1	10-0	10							st.
F5035	58	8-0	484	1	0-6	7-8				bt.
F5036	2	8-6	18							st.
F5037	2	10-0	21							st.
F5038	2	10-7	22							st.
F5039	2	9-5	20							st.
F5040	2	10-11	23							st.
F5041	2	12-1	25							st.

Bending Diagram



NOTE: In the reinforcing steel bar marks, the first digit where four digits are used and the first two where five are used is the bar number which indicates the size of the bar.

Δ = Indicates dimension varies by tabulated amount.

COLUMBUS ENGINEERING CONSULTANTS, LTD.
Consulting Civil Engineers
Columbus, Ohio
SUCCESSORS TO
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REINFORCING STEEL LIST

BRIDGE Nº ATH.-33-13.25 L&R
U.S. 33 OVER U.S. 50A
ATHENS COUNTY Sta. 699+82.22 N.B. & 699+68.22 S.B. to Sta. 702+49.68 N.B. & 702+82.18 S.B.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JP	GTR		GEA	TLV	1/24/69	5-8-69

REINFORCING STEEL LIST

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

410/502

ATHENS COUNTY
ATH-33-12.96

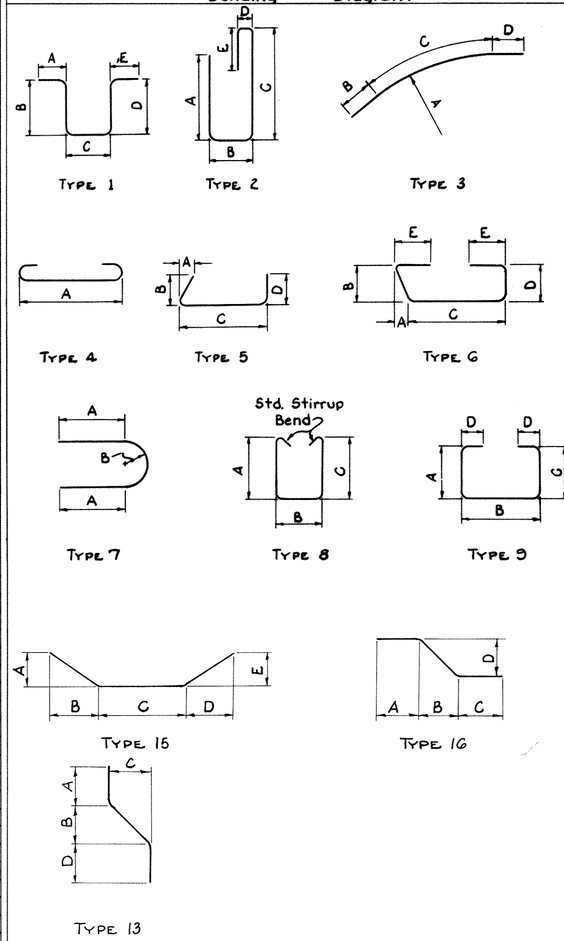
Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shp
		ABUTMENTS (CONT.)								
FG025	43	12-11	834	1	5-5	7-8				bt.
FG026	4	30-0	180							st.
FG027	4	37-6	225							st.
FG028	10	24-2	363	1		11-8	1-2	11-8		bt.
FG029	1	18-10	28	1		9-0	1-2	9-0		bt.
FG030	5	21-2	159	1		10-2	1-2	10-2		bt.
FG031	2	16-2	49	1		7-8	1-2	7-8		bt.
FG032	8	30-0	360							st.
FG034	50	13-0	976	1	5-5	7-9				bt.
FG035	4	19-10	119							st.
FG036	1	16-2	24	1		7-8	1-2	7-8		bt.
FG037	8	22-0	264	1		10-7	1-2	10-7		bt.
FG038	2	17-2	52	1		8-2	1-2	8-2		bt.
FG040	8	30-0	360							st.
FG041	8	19-6	234							st.
FG042	58	12-11	1125	1	5-5	7-8				bt.
FG043	3	17-2	77	1		8-2	1-2	8-2		bt.
FG044	3	16-2	73	1		7-8	1-2	7-8		bt.
FG045	18	21-10	590	1		10-6	1-2	10-6		bt.
		PIERS								
P5001	128	7-3	968	1		2-5	2-8	2-5		bt.
P5002	8	6-9	56	1		2-2	2-8	2-2		bt.
P5003	195	5-5	1102	1		1-6	2-8	1-6		bt.
P5004	6	42-11	269							st.
P5005	6	32-4	202							st.
P5006	2	29-0	60							st.
P5007	2	26-8	56							st.
P5008	2	24-2	50							st.
PG001	656	7-6	7390	1		2-7	2-8	2-7		bt.
PG002	28	6-8	280	1		2-2	2-8	2-2		bt.
P8001	4	46-10	500	1		2-2	42-11	2-2		bt.
P8002	4	8-0	85							st.
P8003	8	9-0	192							st.
P8004	6	36-2	579	1		2-2	32-4	2-2		bt.
P8005	6	32-8	523	15	1-0	4-2	24-0	4-2	1-0	bt.
P8006	2	30-6	163	1		2-2	26-8	2-2		bt.
P8007	4	28-0	299	1		2-2	24-2	2-2		bt.
P8008	4	8-8	93							st.
P8009	4	7-8	82							st.

Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shp
		PIERS (CONT.)								
P8010	2	29-0	155	15	1-0	3-6	22-0	3-6	1-0	bt.
P8011	4	26-10	287	15	1-0	3-1	20-6	3-1	1-0	bt.
P8012	4	24-4	260	15	1-0	2-4	19-6	2-4	1-0	bt.
P8013	2	13-3	71							st.
P8014	2	13-4	71							st.
P8015	2	12-3	65							st.
P8016	2	11-4	61							st.
P9001	8	46-9	1272	1		2-2	42-11	2-2		bt.
P9002	8	8-0	218							st.
P9003	16	9-0	490							st.
P9004	8	12-0	326							st.
P9005	4	42-11	584	15	1-0	3-1½	36-8	3-1½	1-0	bt.
P9007	2	30-6	207	1		2-2	26-8	2-2		bt.
P9008	4	9-2	125							st.
P9009	8	8-2	222							st.
P9010	2	29-0	197	15	1-0	3-6	22-0	3-6	1-0	bt.
P9011	2	15-0	102							st.
P9012	2	13-0	88							st.
P10001	24	17-2	1773							st.
P10002	24	29-2	3012							st.
P10003	8	42-11	1477	15	1-0	3-1½	36-8	3-1½	1-0	bt.
P10004	16	12-0	826							st.
P10005	16	20-6	1411							st.
P10006	16	26-1	1796							st.
P10007	16	30-7	2106							st.
P10008	6	32-8	843	15	1-0	4-2	24-0	4-2	1-0	bt.
P10009	6	17-0	439							st.
P10010	6	15-0	387							st.
P10011	4	32-8	562	1		2-2	29-0	2-2		bt.
P10012	4	10-0	172							st.
P10013	4	9-0	155							st.
P10014	16	19-6	1343							st.
P11001	36	19-9	3778							st.
P11002	6	36-0	1148	1		2-2	32-4	2-2		bt.
P11003	12	12-0	765							st.
P11004	24	10-0	1275							st.

Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shp
		PIERS (CONT.)								
P14001	14	19-0	2035							st.
P14002	14	17-0	1821							st.
P14003	14	20-0	2142							st.
P14004	14	18-0	1928							st.
F5001	127	5-8	751							st.
F5002	48	7-8	384							st.
F5003	8	11-0	92	16	3-0	3-6	3-0	3-6		bt.
F5004	20	11-4	236	1	3-0	5-6	3-0			bt.
F5005	70	8-2	596							st.
FG001	132	7-8	1520							st.
F7001	88	5-8	1019							st.
F7002	176	8-2	2938							st.
F8001	40	21-10	2332							st.
F8002	20	33-0	1762							st.
F9001	19	45-8	2950							st.
F9002	28	23-4	2221							st.
F10001	112	6-7	3173	1	1-5	5-6				bt.
F10002	34	29-6	4316							st.
F10003	20	38-2	3285							st.

Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shp
		PIERS (CONT.)								
F11001	36	7-2	1371	1	1-8	5-10				bt.
F11002	38	45-8	9220							st.
F11003	22	38-2	4461							st.
F11004	24	13-8	1743							st.
F11005	46	12-0	2933							st.
F11006	24	11-0	1403							st.
F11007	6	37-0	1179							st.
F11008	8	34-3	1456							st.
F11009	8	31-0	1318							st.
F11010	24	10-6	1339							st.
F14001	78	8-2	1749	1	2-5	6-3				bt.
F14002	28	10-2	2178	1	2-5	8-3				bt.
		LIGHT POLE REINFORCEMENT								
L5001	24	3-7	87	13	0-7	1-10	1-10	0-7		bt.
L5002	6	2-11	18	1	1-10	1-3				bt.
L5003	9	6-0	57	1	3-1	3-1				bt.
L5004	9	3-1	30	1	2-2	1-1				bt.
L5005	6	3-0	18	1	1-7	1-7				bt.
		REPLACEMENT STEEL								
RE5001	7	6-7								st.
RE6001	7	6-11								st.
RE7001	4	7-2								st.
RE8001	1	7-6								st.
RE9001	1	7-10								st.
RE10001	2	8-2								st.
RE11001	2	8-6								st.
RE14001	1	2-6								st.
		REPLACEMENT STEEL FOR SPIRALS								
RE4001	1	6-3		3	1-3½		6-3			bt.

Bending Diagram



NOTE: In the reinforcing steel bar marks, the first digit where four digits are used and the first two where five are used is the bar number which indicates the size of the bar.

Spirals

The Length shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap.

Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item 509, 1½ closed coils shall be provided at the ends of each spiral unit. Four steel channel, tee or angle spacers weighing approximately 0.68 (0.80) lb. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

SPIRALS

Mark	Nº	Length (Height)	Weight	Shp.	Bending Diagrams
Spirals - Core Diam. 32" % - Pitch 4½" c/c - Other details in accordance with CRSI standard practice					
P4001	3	14-2	285	bt.	811
P4002	3	16-9	337	bt.	949
P4003	3	26-3	529	bt.	1460
P4004	2	16-6	222	bt.	625

Mark	Nº	Length (Height)	Weight	Shp.	Bending Diagrams
P4005	2	17-6	235	bt.	660
P4006	2	20-0	269	bt.	749
P4007	2	21-0	282	bt.	785
P4008	2	23-1	310	bt.	860
P4009	2	27-7	370	bt.	1021

COLUMBUS ENGINEERING CONSULTANTS, LTD.
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REINFORCING STEEL LIST

BRIDGE Nº ATH-33-13.25 L&R
U.S. 33 OVER U.S. 50 A
ATHENS COUNTY Sta. 699+82.22 N.B. & 699+68.22 S.B. to Sta. 702+49.68 N.B. & 702+87.18 S.B.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JP	GTR		GEA	TZU	1/24/69	12-5-69