

KENTUCKY DEPARTMENT OF HIGHWAYS

FULTON COUNTY

JACKSON PURCHASE PARKWAY

U.S. 51 OVER J.P.P.

REFERENCE AND ESTIMATE OF QUANTITIES

LOCATION	ITEM	SHEET NO.	CONCRETE CU. YD.		REINF. STEEL LB.	STR. EXC. CU. YD.	END BENT BACKFILL CU. YD.	HIGH STRENGTH HANDRAIL LIN. FT.	CRUSHED AGGREGATE SLOPE PROT. SQ. YD.	STRUCTURAL STEEL LUMP SUM BID (1)	LINSEED OIL PROT. COATING SQ. YD.	CONCRETE PILING L.F. (SEE GENERAL NOTE FOR DESCRIPTION OF ALT. PILES)						ELECT. CONDUIT LUMP SUM BID	
			CLASS A	CLASS AA								ALTERNATE 'A' FURNISH	ALTERNATE 'B' DRIVE	ALTERNATE 'C' FURNISH	ALTERNATE 'D' DRIVE	ALTERNATE 'E' FURNISH	ALTERNATE 'F' DRIVE		
QUANTITIES	1																		
NOTES	2																		
LAYOUT	3																		
SOUNDINGS	3																		
PILE RECORD	4 & 5																		
ABUTMENT 1	6, 10, 11		160.3	105.6	45,926	370	185		185			1,480	1,480	1,480	1,480	1,480	1,480	1,480	1,480
ABUTMENT 2	6, 10, 11		160.3	105.6	45,926	370	185		185			1,480	1,480	1,480	1,480	1,480	1,480	1,480	1,480
PIER 1	10 & 11		124.6		24,005							1,610	1,610	1,610	1,610	1,610	1,610	1,610	1,610
SUPERSTRUCTURE	12-17			854.7	297,116			458		①	1,870								
ELEVATIONS	18-19																		②
ELECTRICAL CONDUIT	20																		
SUPERSTRUCTURE TOTALS				854.7	297,116			458		①	1,870								②
SUBSTRUCTURE TOTALS			445.2	211.2	115,985	740	370		370			4,570	4,570	4,570	4,570	4,570	4,570	4,570	4,570
TOTALS			445.2	1,075.9	403,101	740	370	458	370	①	1,870	4,570	4,570	4,570	4,570	4,570	4,570	4,570	②

- ① Approximate weight of Structural Steel is 22,925 Lbs.
② For Electrical Conduit Quantities, see sheet 20

* Linear feet of one of alternate types of piles A, B, or C shall be used in the Abutments and be paid for at the unit prices bid for furnishing and driving respectively for alternates D, E, or F.

BILL OF INCIDENTAL MATERIAL

ITEM	NO.	SIZE & LOCATION
Joint Sealing Compound	2	1" x 3" x 78'-9" long @ Exp. Dams
Galv. Steel Drains	32	3" x 1'-0" long in Bottom Slab
Core Joint Filler	16	6" x 5" x 3'-3" @ Pier Columns

NOTE

Quantities shown in Bill of Incidentol Material are approximate only and the contractor is responsible for furnishing enough material to complete this work according to plans and specs.

STANDARD DRAWINGS

ED3	AE1	P22
H11G A	P2	P23
H130B	P20	P24
SF3	P21	G3548

Special Provisions for:

Joint Sealing Compound, dated 5-24-65.
Linseed Oil Protective Coating, dated 4-14-64.
High Strength Cast Aluminum Bridge Rolling Post, dated 10-2-64.
Class "AA" Concrete, dated 7-15-56.
Jackson Purchase Parkway Appr. 6-15-66.

U.S. 51 OVER JPP

SHEET 1 OF 20

COMMONWEALTH OF KENTUCKY	
DEPARTMENT OF HIGHWAYS	
FRANKFORT	
COUNTY OF	
FULTON	
JACKSON PURCHASE PARKWAY	
74+99.42 JPP = ROAD	SP38-657
STATION 50+00.00 U.S. 51	PROJECT NO. JPP 11-3
BRIDGE NUMBER	DRAWING NO. 16696

FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				

GENERAL NOTES

SPECIFICATIONS: Kentucky Department of Highways Standard Specifications, current Edition with revisions.

DESIGN LOAD: Bridge designed for HS20-A with loading as specified in 1961 HSHO Specifications and Design Memorandum 05-13 of Division of Bridges, Kentucky Department of Highways. Slab designed for 16 kip wheel load.

DESIGN STRESSES: For reinforced concrete, Class A, $f_c = 4000 \text{ psi}$, $f_s = 20,000 \text{ psi}$; Class B, $f_c = 3000 \text{ psi}$, $f_s = 16,000 \text{ psi}$; for prestressed concrete, $f_c = 4000 \text{ psi}$, $f_s = 20,000 \text{ psi}$; for steel, $f_s = 36,000 \text{ psi}$.

FOUNDATION PRESSURE: Axial computed load per pile is 125 kips (Abutments) & 125 kips (Pier). Horizontal component of the battered piles at the abutments is larger than the horizontal shear on the pile group. These loads are for group loading.

CONCRETE: Class A concrete to be used throughout except in piles, high strength concrete. Reinforced concrete above center joint of bridge shall be Class B concrete. Class B concrete to be used in alternate piles. Class A concrete to be used in superstructure, in abutments above center joint of bridge, seat as shown on plans.

REINFORCEMENT: Dimensions shown from face of concrete to bars use clear distances spacing of bars is from center to center of bars.

BEVELED EDGES: All exposed edges shall be beveled $\frac{1}{8}$ " unless otherwise shown.

JOINT SEALING COMPOUND: The cost of this item to be included in the cost of Class A concrete.

PLACING FILLS: See Std. Dwg. SF-3

PILING: Piles shall be driven to refusal or to sustain a load of 50 tons per pile. Test piles shall be driven where designated on the plans to determine the length required. All test piles shall be accurately located so that they may be used in the finished structure.

DRIVING PILES: Cored pilot holes thru the Abutment embankments will be required for driving piles. The cost of this work is to be included in the unit price and per linear foot for driving piles. See Note, sheet 3.

ALTERNATE TYPES OF PILES: The contractor shall use one of the following types of piles throughout, except that alternate A, B, and C will not be permitted for abutments.

Alternate A: 14" Reinforced Concrete Precast pile, Std. Dwg. P2.

Alternate B: 14" Cast in place Concrete pile, Std. Dwg. P2.

Alternate C: 14" Cast in place pile, Corrugated Steel Sheet-Pile, Std. Dwg. P2.

Alternate D: 14" Cast in place pile, Corrugated Steel Sheet-Pile, Std. Dwg. P2.

Alternate E: 14" Cast in place concrete pile, Corrugated Steel Sheet-Pile, Std. Dwg. P2.

BRONZE PLATES: All plates to be ASTM B-221 Alloy A or B-221 Alloy B or B-221 Alloy C, current specifications, with sliding surfaces finely polished. Cost of plates is to be included in "Pump Sum Bid" for Structural Steel.

PROTECTIVE COATING: The protective coating shall be according to the Special Provision for Unseal of Protective Coating, approved 4-14-64.

CRUSHED AGGREGATE SLOPE PROTECTION: Crushed aggregate slope protection shall consist of Size No. 1 or Size No. 2 crushed limestone or slag meeting the applicable requirements of the current Specs. The crushed aggregate may be dumped in place. The placing shall be conducted in such a manner as will produce a uniform surface varying not more than $\frac{1}{8}$ inches in 4 feet from a true plane. Hand placing will not be required other than is necessary to correct irregularities excess. The specified tolerances, unless otherwise shown on the plans, the crushed aggregate shall be placed to a depth of 12 inches, measured perpendicular to the slopes, flush with the embankment slopes under the bridge, shall extend from the face of the abutments across the berm and down the slope to 2' below the toe of the slope, and shall extend laterally to $\frac{1}{2}$ feet beyond the outer edges of the superstructure.

OPTIONAL TYPES OF HIGH STRENGTH MINERAL: The contractor shall provide throughout the project at his option either High Strength Aluminum Handrail in accordance with Std. Dwg. H116 or High Strength Concrete Handrail in accordance with Std. Dwg. H150.

STRUCTURAL STEEL: "Pump Sum Bid" for structural steel shall be full payment for all structural steel, precast plates, rivets, bolts, washers, lead plates, anchor lead, welding and welding materials, paint and oil labor and materials necessary to erect the steel in accordance with the plans and specifications. All structural steel shall conform to ASTM Specification A36-63.

PAINT: All structural steel except bearing surfaces in sheets shall be given one shop coat of type 1 red lead paint and two field coats of aluminum paint. Exposed surfaces of expansion dams not accessible after erection. Shop holes where high strength bolts are to be used for field connections and shall not be applied to steel surfaces in contact with concrete.

CONSTRUCTION PROCEDURE FOR ABUTMENTS:

1. Place fill of abutment to approximate limits of finished grade as shown on roadway plans.

2. Erect form for footings and drive piles.

3. Drive aggregate at footings and place stone or mortar base. Pour with footings. Step 1, sheet 1, sheet 1.

4. After backfilling at the front footing excavate for sidewalks, place stone or mortar base, place forms for sidewalks and pour front and sidewalk to bridge seat. Step 2, sheet 1, sheet 1.

5. Backfill sidewalks and make final grading inside of abutment before placing forms and shoring for deck girders. Special care shall be exercised to avoid damage to finished backfill, backwall, and sidewalks.

6. Complete pouring of the girders and slabs. Step 3, sheet 1, sheet 1.

7. Place the curbs and wings. Step 4, sheet 1, sheet 1.

8. Place finish and rolling continuously over abutments and superstructure. Step 5, sheet 1, sheet 1.

WIND LOADS: This structure is designed using wind loads based on a wind velocity of 84 mph.

MILL TEST REPORTS: Necessary test reports in triplicate shall be furnished the Kentucky Department of Highways showing that all materials furnished conform to the specifications.

CONSTRUCTION IDENTIFICATION: The names of the prime contractor and the sub-contractor shall be imprinted in the concrete with one inch letters at a location designated by the Engineer. The contractor shall furnish all plans, equipment, and labor necessary to do the work, for which no direct payment will be made.

WORKS: The removal of all material from inside the box girders is mandatory.

TORR JOINT FILLER: The cost of this item to be included in the cost of Class A concrete.

U.S. 51 OVER J.P.P.

SHEET 2

COMMONWEALTH OF KENTUCKY

DEPARTMENT OF HIGHWAYS

FRANKFORT

COUNTY OF

FULTON

JACKSON PURCHASE PARKWAY

74+99.42 J.P.P. = ROAD

STATION 50+00.00 U.S. 51

PROJECT NO.

BRIDGE NUMBER

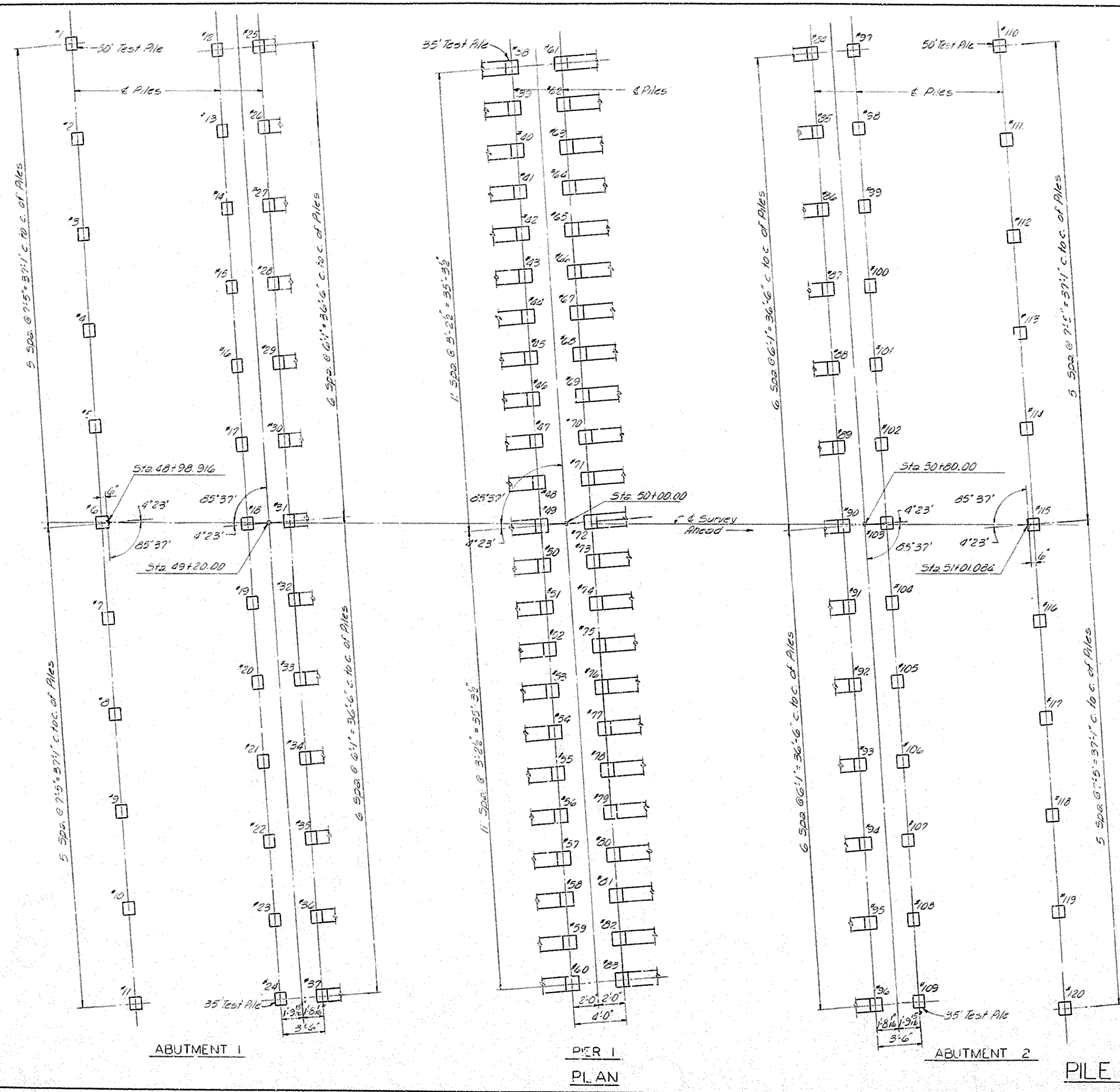
16696

INDEX

GENERAL NOTES



FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



NOTE -

This pile record does not replace the other records of piles required to be kept and submitted by the Resident Engineer. After all piles have been driven the Resident Engineer shall record the tip of pile elevation as driven, the length of pile in place, the calculated bearing capacity of each pile, and shall return one blue print copy of this sheet with this data to the Director of Bridges so that the data may be recorded on the original plans. Lengths of piles in place shown hereon are the actual lengths of piles in the finished structure below cut-off elevation and are not necessarily pay items.

Alternate 'A' - 14" Reinforced Concrete Piles - For notes and details see Std. Dwg. P2.

Alternate 'B' - 14" Seamless Steel or Welded Pipe Shell Concrete Filled Piles - For notes and details see Std. Dwg. P20.

Alternate 'C' - 14" Metal Shells Concrete Filled Piles - For notes and details see Std. Dwg. P21.

Alternate 'D' - Corrugated Steel Sheet Pile Concrete Filled Piles - For notes and details see Std. Dwg. P22.

Alternate 'E' - Prestressed Concrete Piles - For notes and details see Std. Dwg. P23.

Alternate 'F' - 10" Cast in Place Concrete Piles, Corrugated Steel Sheet, Uniform Shell - For notes and details see Std. Dwg. P24. See Sheet 3+10 for batter on piles.

U.S. 51 OVER J.P.P.		SHEET 4	
COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS FRANKFORT COUNTY OF FULTON JACKSON PURCHASE PARKWAY 74+99.42 J.P.P. = ROAD STATION 50+00.00 U.S. 51 PROJECT NO.			
BRIDGE NUMBER	16696	DESIGNED BY	INDEX

PILE RECORD

PILE RECORD

Location	Pile No.	Cut-off Elev. Above Pile	Cut-off Elev. Below Pile	Tip of Pile Elevation as driven	Pile Length in Place (Lin. Ft.)	Calculated Bearing Capacity (Tons)	Location	Pile No.	Cut-off Elev. Above Pile	Cut-off Elev. Below Pile	Tip of Pile Elevation as driven	Pile Length in Place (Lin. Ft.)	Calculated Bearing Capacity (Tons)
Abut. 1	1	426.78	---	392.41	34.37	65	Pier 1	61	410.54	410.54	393.44	17.10	25
"	2	"	---	392.67	34.11	65	"	62	"	"	392.07	18.47	25
"	3	"	---	392.40	34.38	71	"	63	"	"	392.89	18.65	28
"	4	"	---	392.13	34.65	77	"	64	"	"	392.62	19.40	28
"	5	"	---	392.85	33.93	97	"	65	"	"	392.00	19.56	28
"	6	"	---	392.43	34.35	71	"	66	"	"	392.83	20.23	28
"	7	"	---	392.33	34.65	71	"	67	"	"	392.07	20.47	28
"	8	"	---	392.11	34.87	71	"	68	"	"	392.17	20.59	28
"	9	"	---	392.94	33.94	85	"	69	"	"	392.12	20.58	28
"	10	"	---	392.72	34.22	98	"	70	"	"	392.81	20.70	28
"	11	"	---	392.35	34.59	98	"	71	"	"	392.41	20.83	28
"	12	411.81	---	392.77	34.04	71	"	72	"	"	392.82	20.82	28
"	13	"	---	392.18	34.62	73	"	73	"	"	392.43	20.81	28
"	14	"	---	392.86	34.14	73	"	74	"	"	392.55	20.18	28
"	15	"	---	392.18	34.62	73	"	75	"	"	392.37	20.87	28
"	16	"	---	392.63	34.16	73	"	76	"	"	392.49	20.87	28
"	17	"	---	392.06	34.72	71	"	77	"	"	392.09	20.67	28
"	18	"	---	392.01	34.86	87	"	78	"	"	392.97	20.52	28
"	19	"	---	392.79	34.02	75	"	79	"	"	392.25	20.82	28
"	20	"	---	392.60	34.12	62	"	80	"	"	392.00	20.76	28
"	21	"	---	392.11	34.79	92	"	81	"	"	392.06	20.80	28
"	22	"	---	392.44	34.15	87	"	82	"	"	392.41	20.83	28
"	23	"	---	392.91	34.09	78	"	83	"	"	392.50	20.83	28
"	24	"	---	392.41	34.20	92	Abut. 2	84	410.45	---	392.08	20.82	28
"	25	"	---	392.27	34.81	78	"	85	"	---	392.29	20.86	28
"	26	"	---	392.07	34.97	65	"	86	"	---	392.52	20.86	28
"	27	"	---	392.07	34.98	87	"	87	"	---	392.91	20.86	28
"	28	"	---	392.70	34.41	71	"	88	"	---	392.47	20.86	28
"	29	"	---	392.58	34.54	82	"	89	"	---	392.64	20.86	28
"	30	"	---	392.13	34.96	71	"	90	"	---	392.05	20.86	28
"	31	"	---	392.82	34.29	78	"	91	"	---	392.46	20.86	28
"	32	"	---	392.48	34.54	75	"	92	"	---	392.42	20.86	28
"	33	"	---	392.93	34.17	98	"	93	"	---	392.83	20.86	28
"	34	"	---	392.99	34.20	75	"	94	"	---	392.82	20.86	28
"	35	"	---	392.16	34.88	78	"	95	"	---	392.60	20.86	28
"	36	"	---	392.62	34.44	98	"	96	"	---	392.94	20.86	28
"	37	"	---	392.58	34.42	83	"	97	"	---	392.79	20.86	28
Pier 1	38	410.54	410.54	392.62	17.92	120	"	98	"	---	392.97	20.86	28
"	39	"	"	392.88	17.66	120	"	99	"	---	392.82	20.86	28
"	40	"	"	392.90	17.64	87	"	100	"	---	392.40	20.86	28
"	41	"	"	392.61	17.85	73	"	101	"	---	392.25	20.86	28
"	42	"	"	392.75	17.70	112	"	102	"	---	392.72	20.86	28
"	43	"	"	392.33	18.35	131	"	103	"	---	392.99	20.86	28
"	44	"	"	392.18	18.30	112	"	104	"	---	392.90	20.86	28
"	45	"	"	392.51	18.05	78	"	105	"	---	392.29	20.86	28
"	46	"	"	392.70	17.81	105	"	106	"	---	392.03	20.86	28
"	47	"	"	392.87	18.63	68	"	107	"	---	392.65	20.86	28
"	48	"	"	392.53	18.98	50	"	108	"	---	392.03	20.86	28
"	49	"	"	392.18	19.00	92	"	109	"	---	392.51	20.86	28
"	50	"	"	392.44	18.85	105	"	110	425.07	---	392.78	22.28	28
"	51	"	"	392.78	18.65	91	"	111	"	---	392.75	22.28	28
"	52	"	"	392.27	18.93	71	"	112	"	---	392.13	22.75	28
"	53	"	"	392.76	18.01	60	"	113	"	---	392.95	23.12	28
"	54	"	"	392.98	18.98	121	"	114	"	---	392.82	22.85	28
"	55	"	"	392.99	18.88	131	"	115	"	---	392.33	22.75	28
"	56	"	"	392.93	18.83	78	"	116	"	---	392.57	22.50	28
"	57	"	"	392.77	18.00	65	"	117	"	---	392.87	22.50	28
"	58	"	"	392.23	18.99	78	"	118	"	---	392.76	22.50	28
"	59	"	"	392.72	18.77	83	"	119	"	---	392.45	22.50	28
"	60	"	"	392.52	18.60	92	"	120	"	---	392.42	22.65	28

FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				

DESIGNED BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____
 TRACED BY: _____ DATE: _____

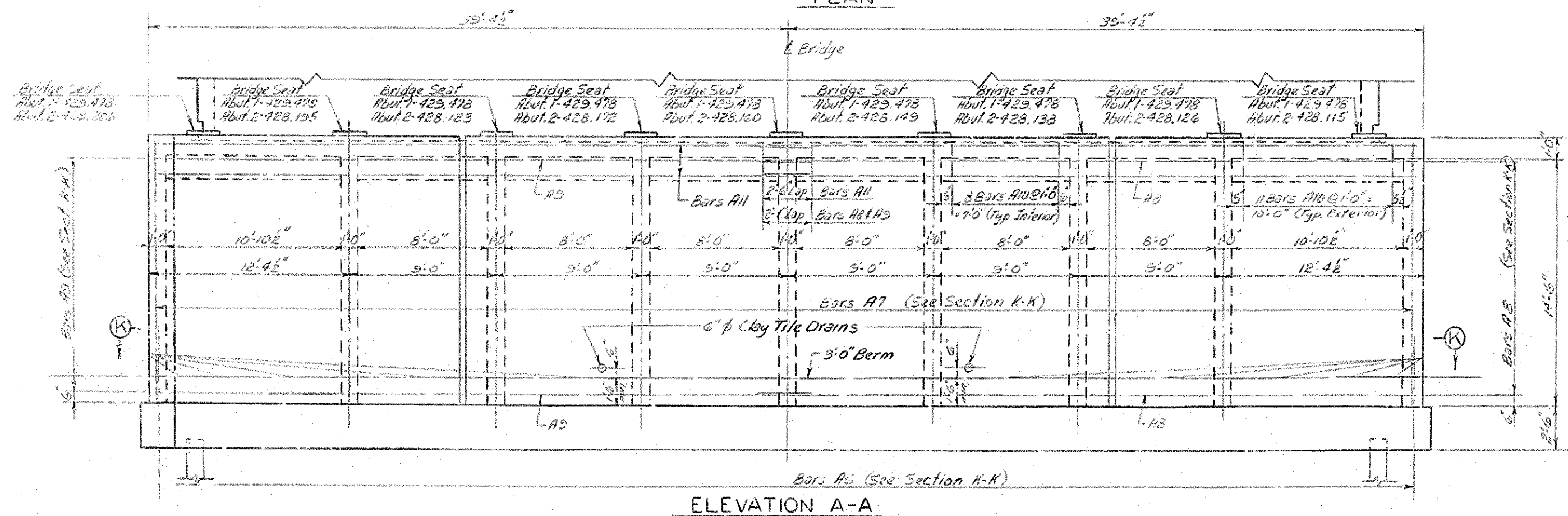
PILE RECORD

U.S. 51 OVER J.P.R.

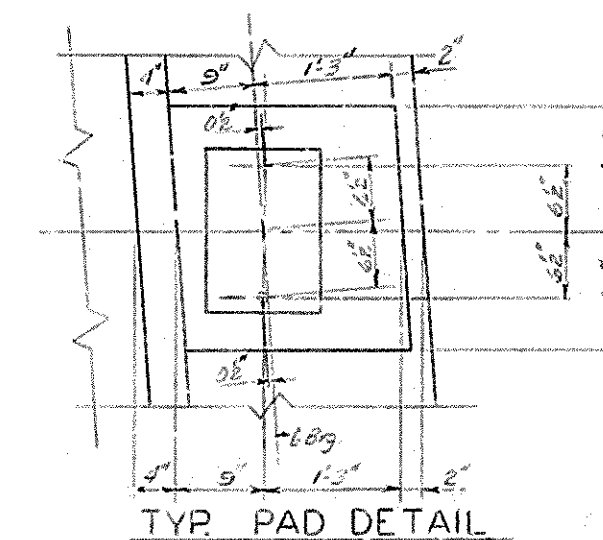
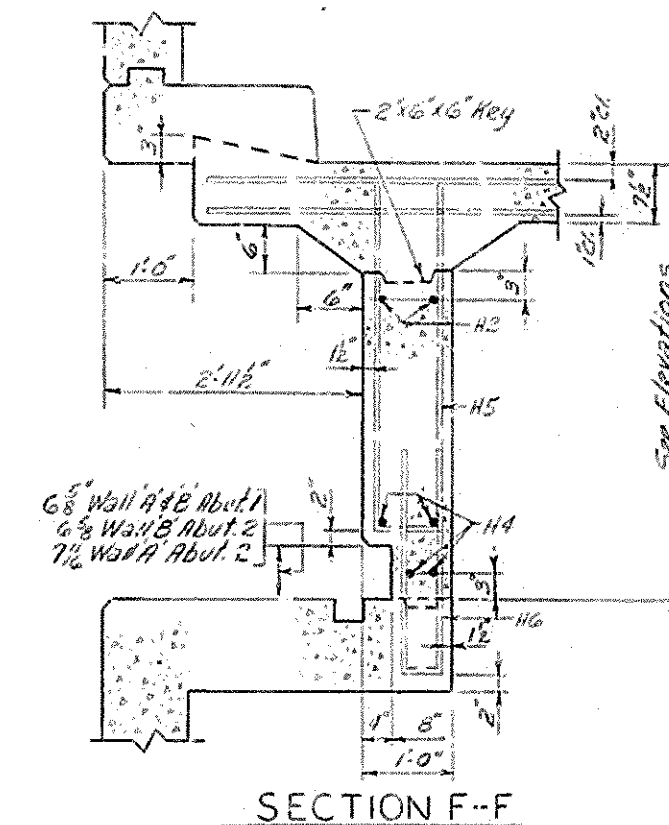
SHEET 5

COMMONWEALTH OF KENTUCKY	
DEPARTMENT OF HIGHWAYS	
FRANKFORT	
COUNTY OF	
FULTON	
JACKSON PURCHASE PARKWAY	
74+99.42 J.P.R. ROAD	
STATION 50+00.00 U.S. 51	PROJECT NO.
BRIDGE NUMBER	16696

BRIDGE

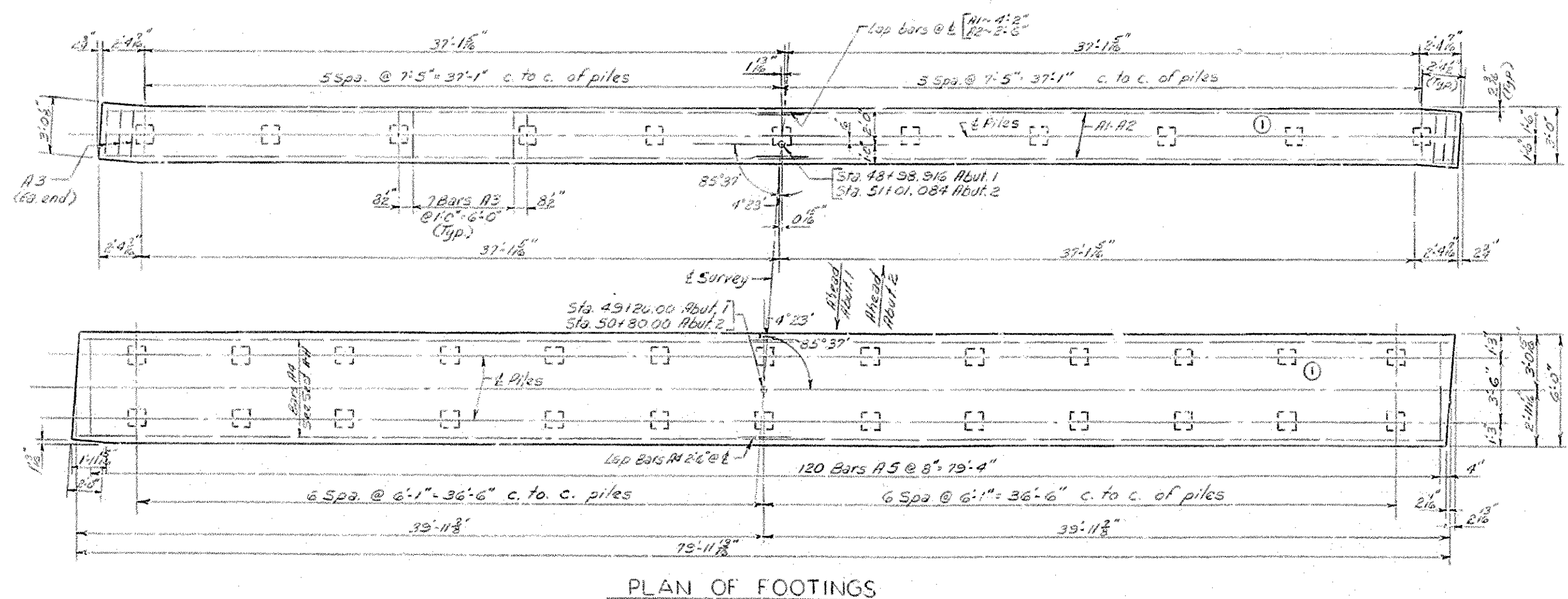
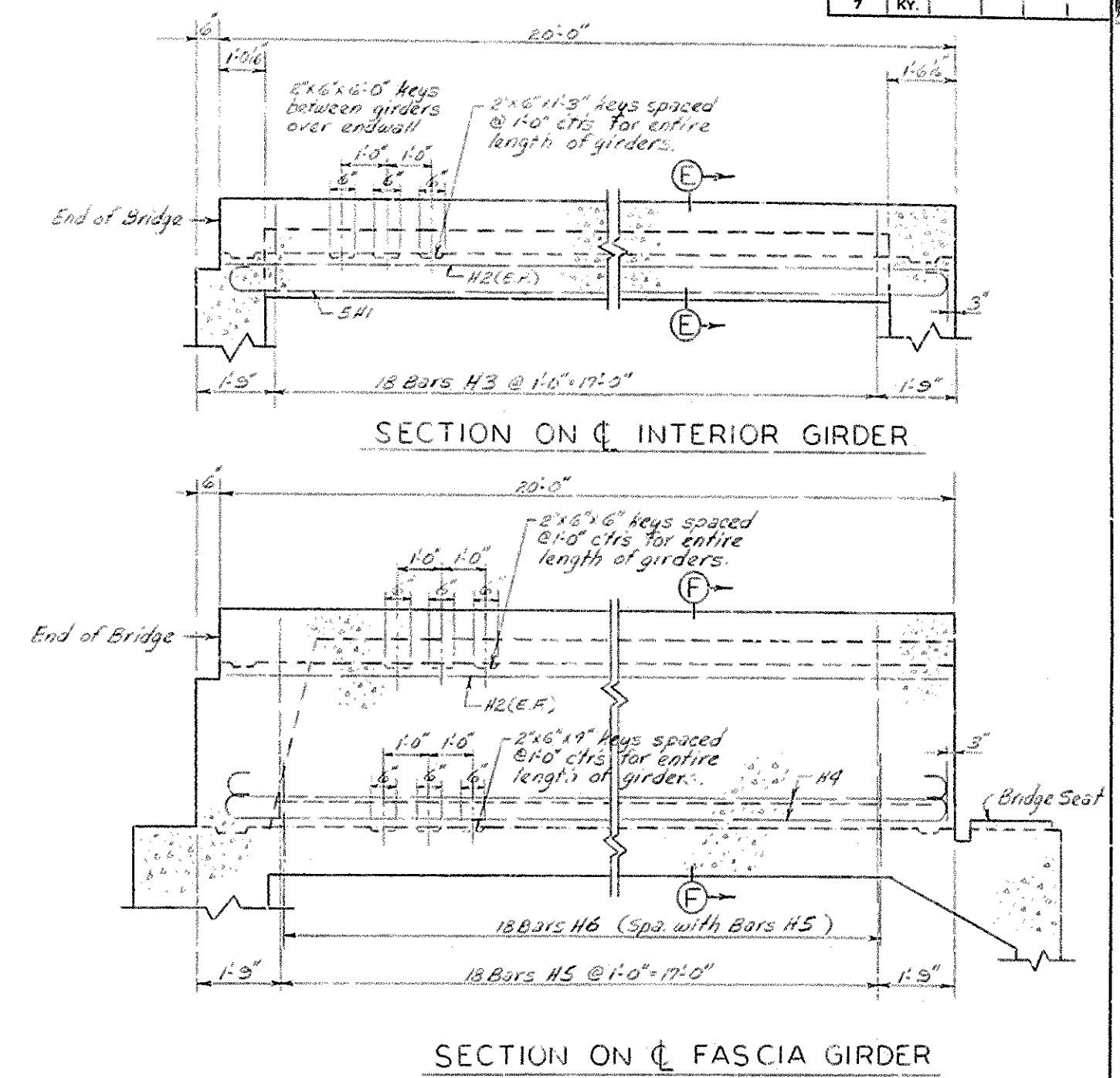
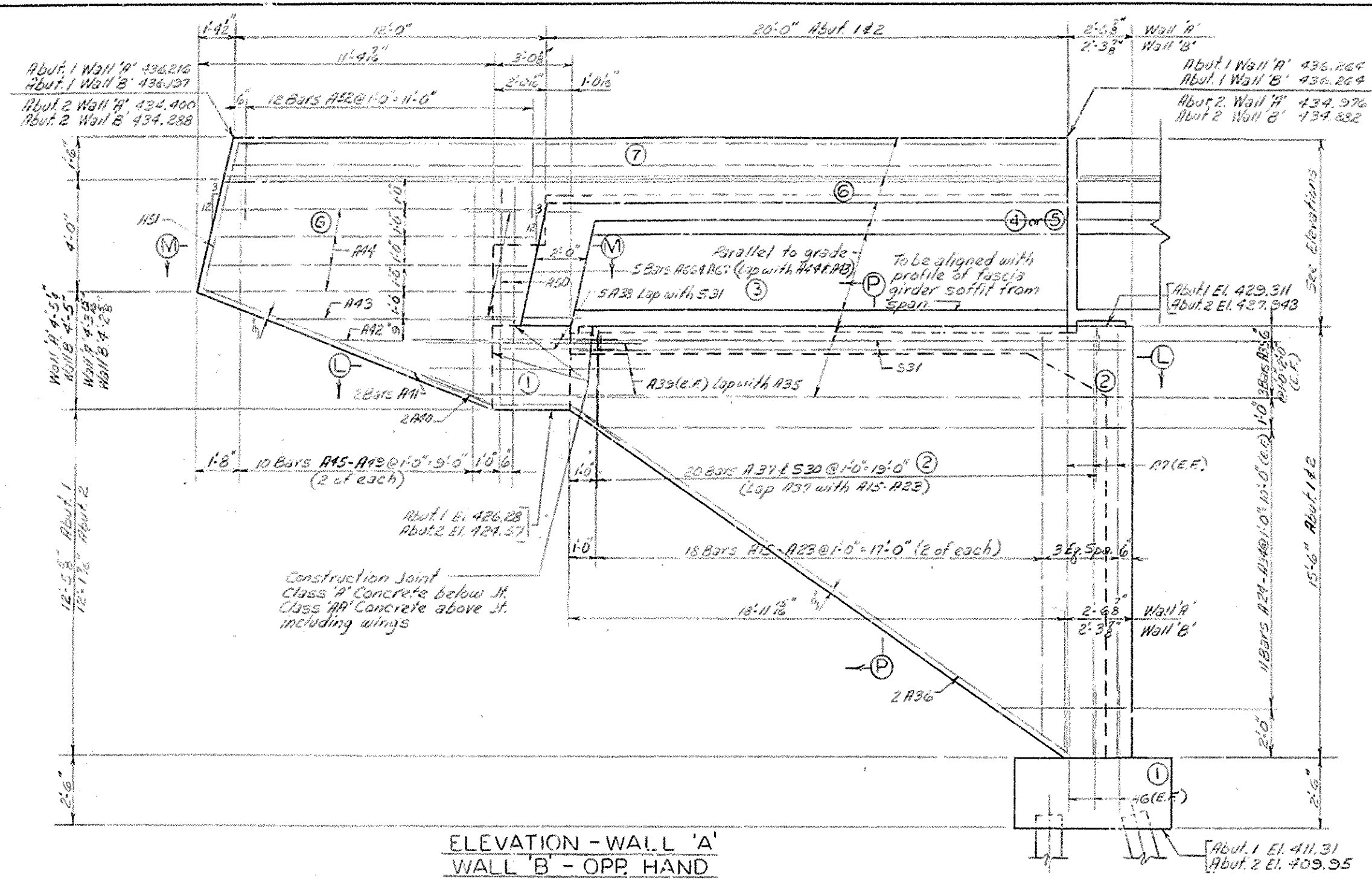
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ABUTMENTS



U.S. 51 OVER J.P.P.		SHEET 6	
COMMONWEALTH OF KENTUCKY			
DEPARTMENT OF HIGHWAYS			
FRANKFORT			
COUNTY OF			
FULTON			
JACKSON PURCHASE PARKWAY			
74199.42 J.P.P.		ROAD	
STATION 50+00.00 US 51		PROJECT NO.	
BRIDGE NUMBER	DRAWING NO. 16696		INDEX

FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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NOTE: Pouring Procedure Steps are marked thus (A) See General Note, sheet 2.

ABUTMENTS

US 51 OVER JPP. SHEET 7

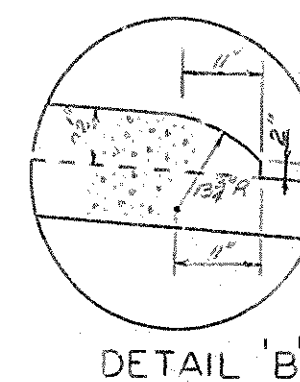
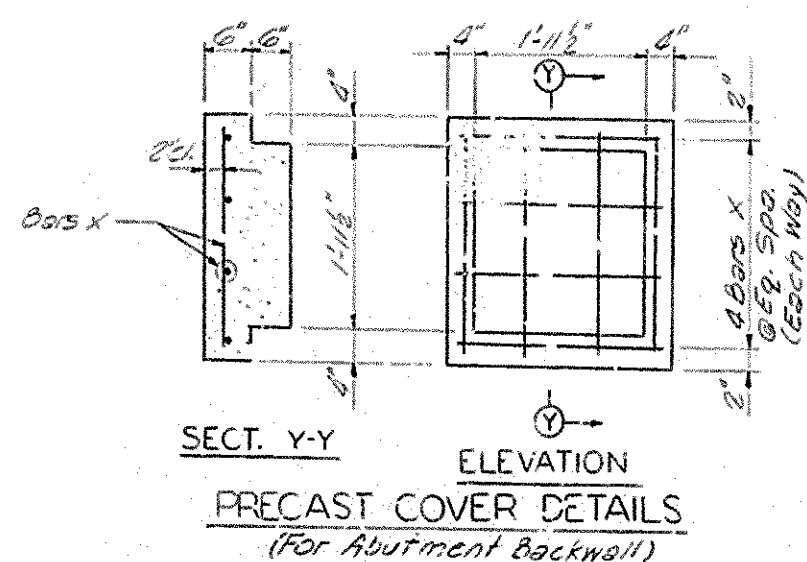
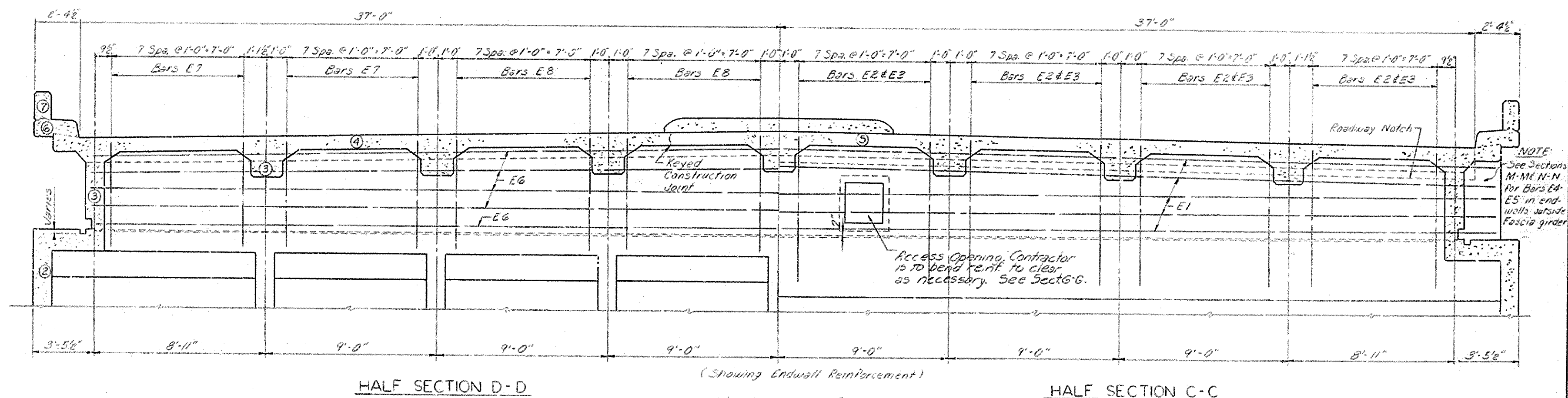
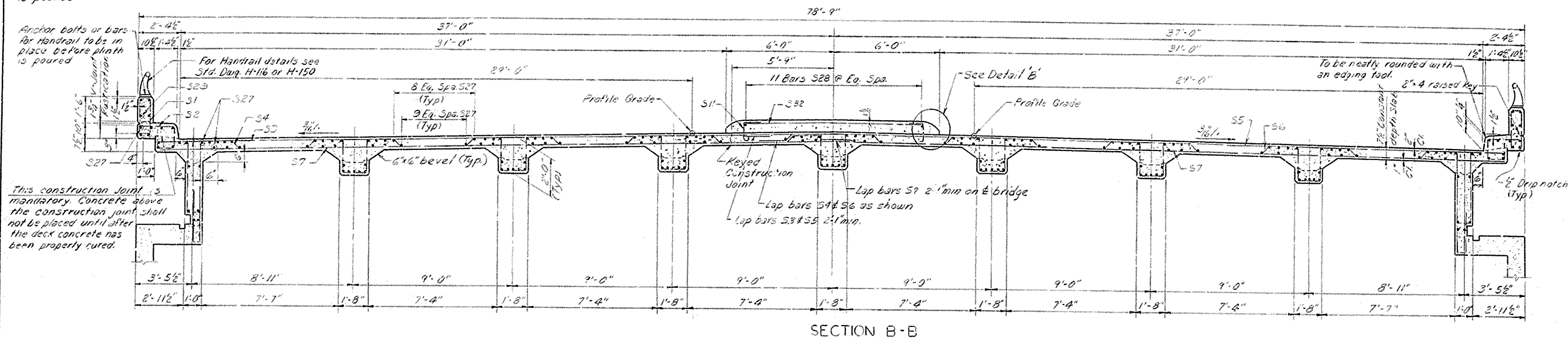
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
FULTON
JACKSON PURCHASE PARKWAY

74139.42 JPP = ROAD
STATION 50+00.00 US 51 PROJECT NO.

BRIDGE NUMBER DRAWING NO. 16696 INDEX



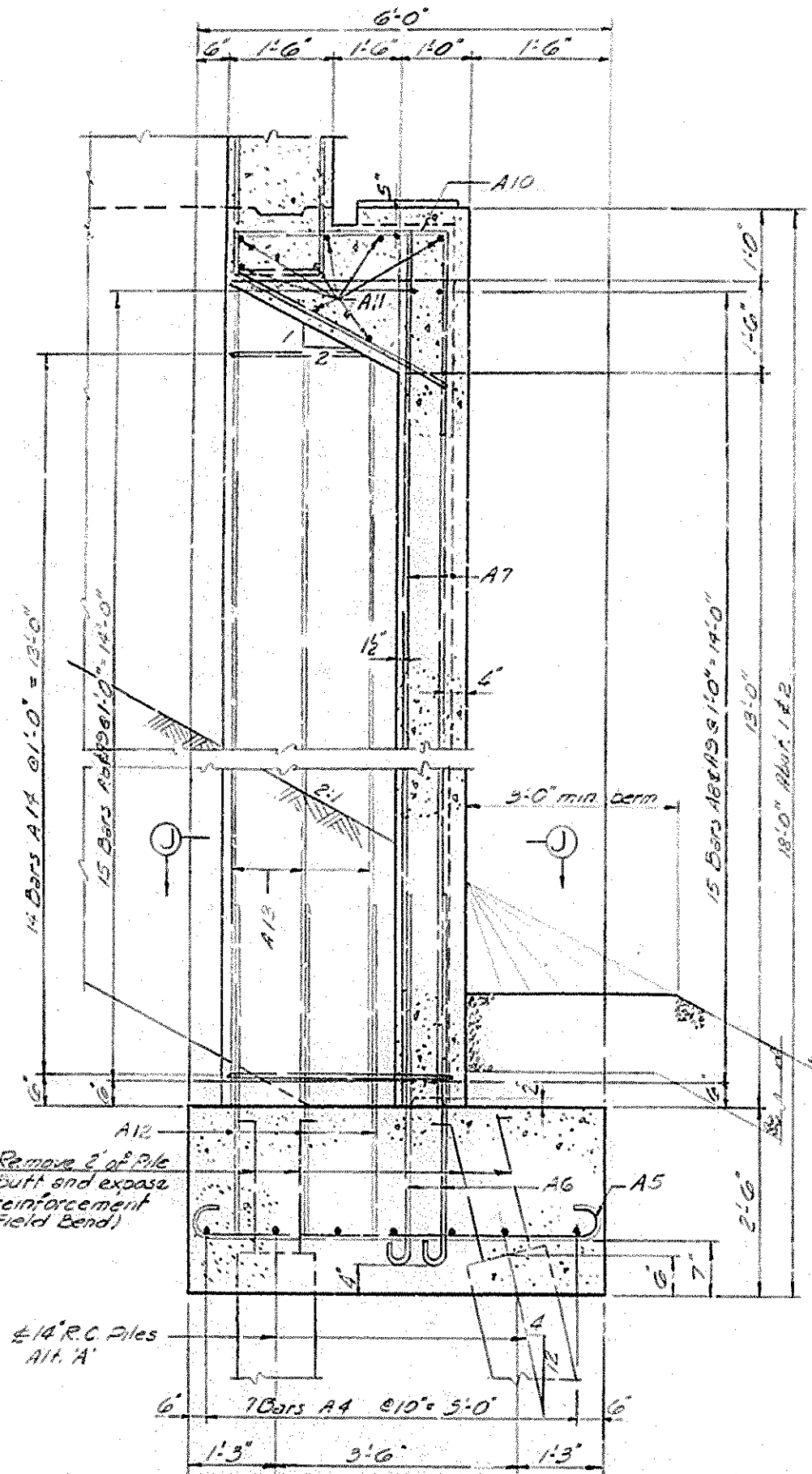
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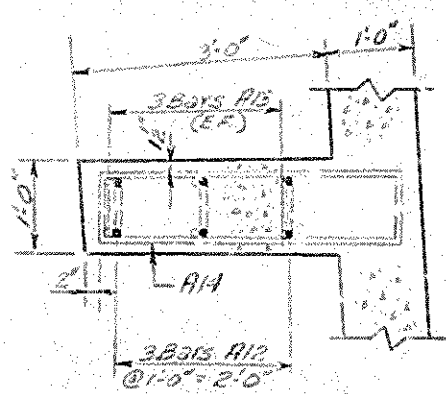
ABUTMENTS

U.S. 51 OVER J.R.P.		SHEET 8	
COMMONWEALTH OF KENTUCKY			
DEPARTMENT OF HIGHWAYS			
FRANKFORT			
COUNTY OF			
FULTON			
JACKSON PURCHASE PARKWAY			
74+99.42 J.R.P. = ROAD		PROJECT NO.	
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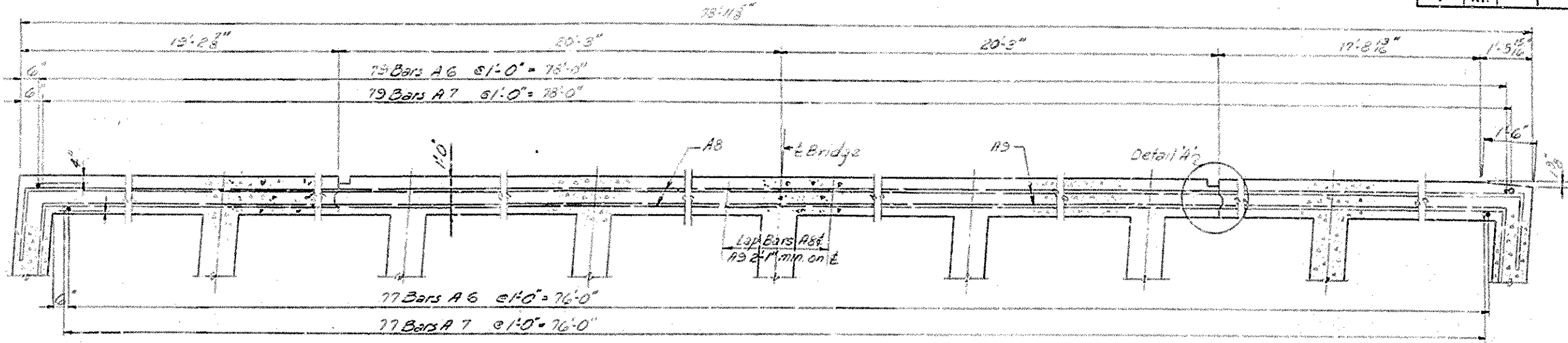
BRIDGES



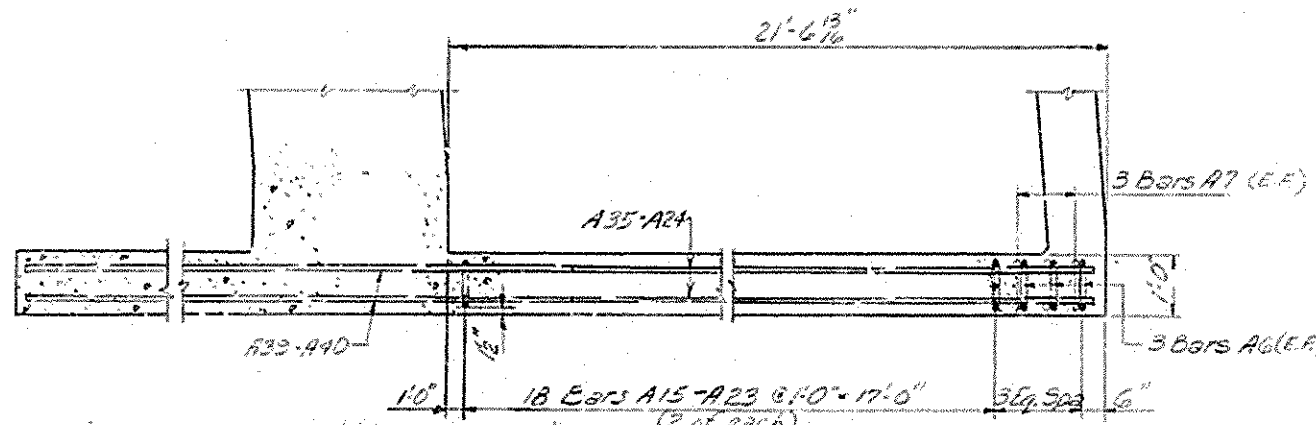
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(P.H. Piles Shown - For Alternatives B & C see General Notes)



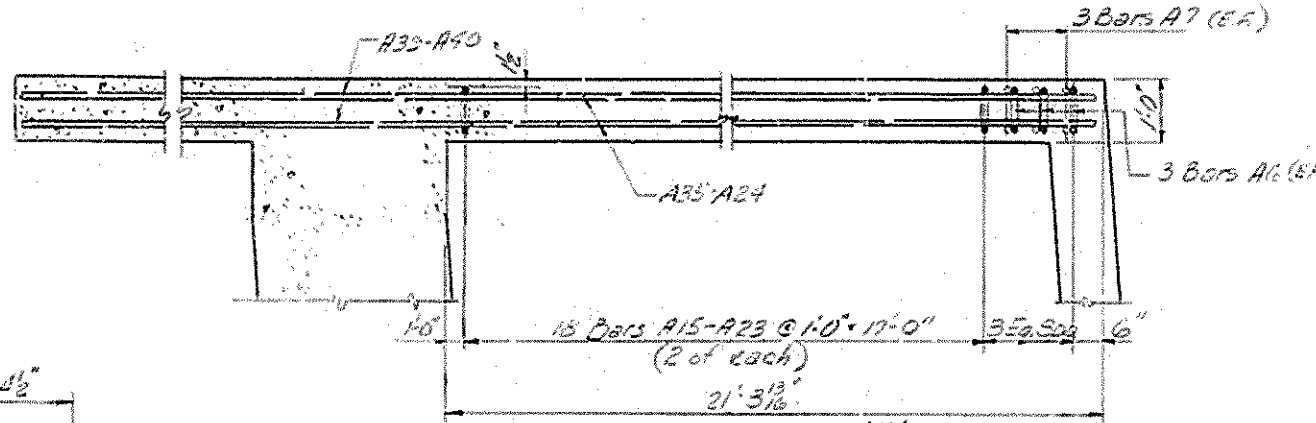
SECTION J-J



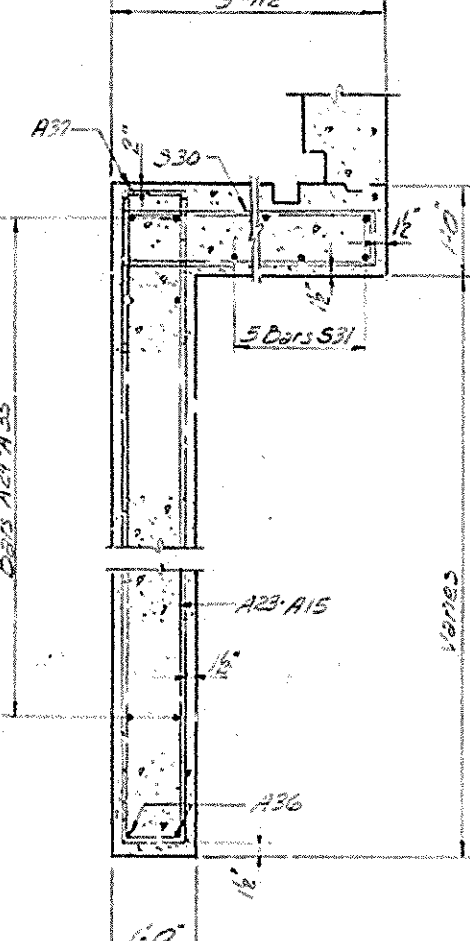
SECTION K-K



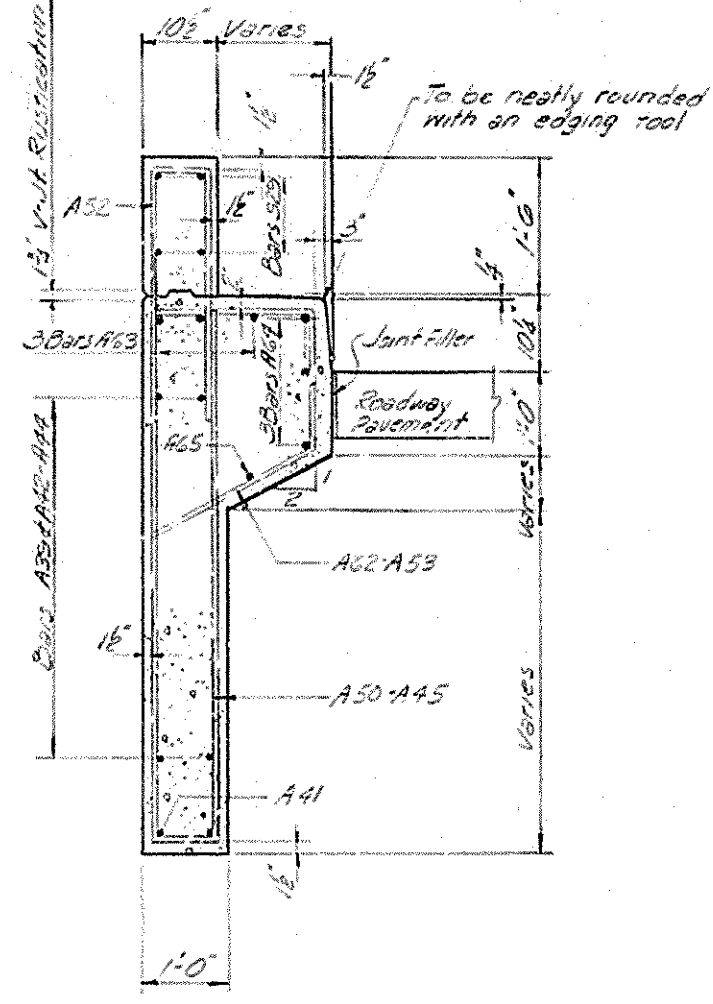
SECTION L-L WALL 'A'



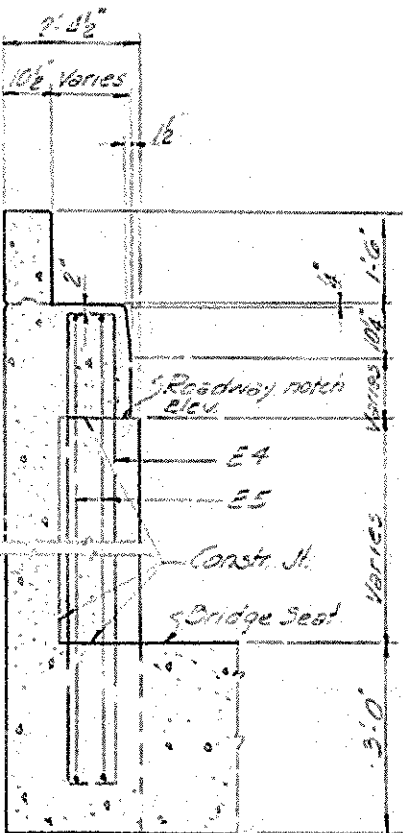
SECTION L-L WALL 'B'



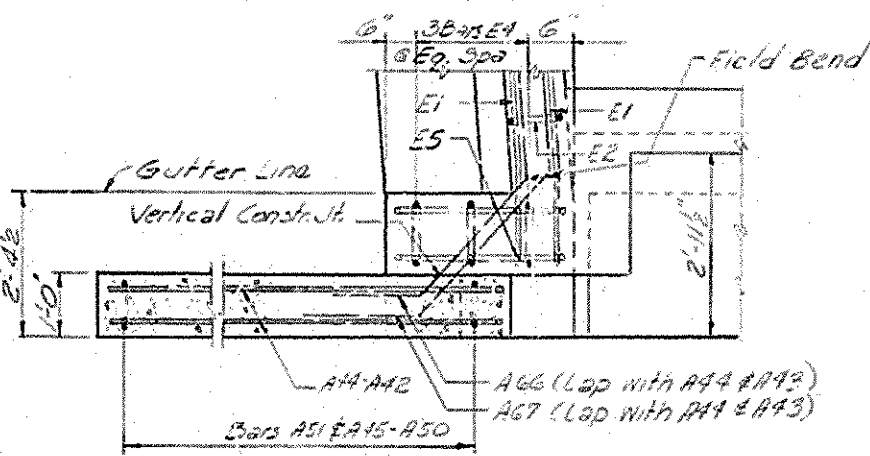
SECTION P-P



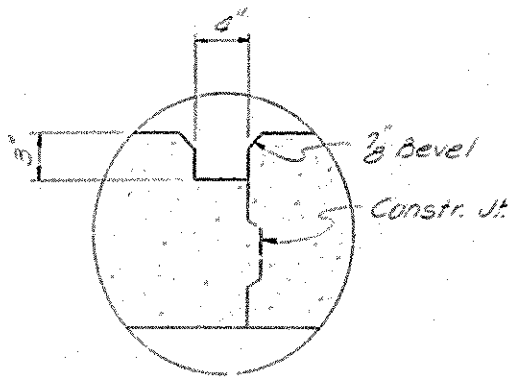
SECTION R-R



SECTION N-N



SECTION M-M



DETAIL 'A'

(Rustication Detail)

ABUTMENTS

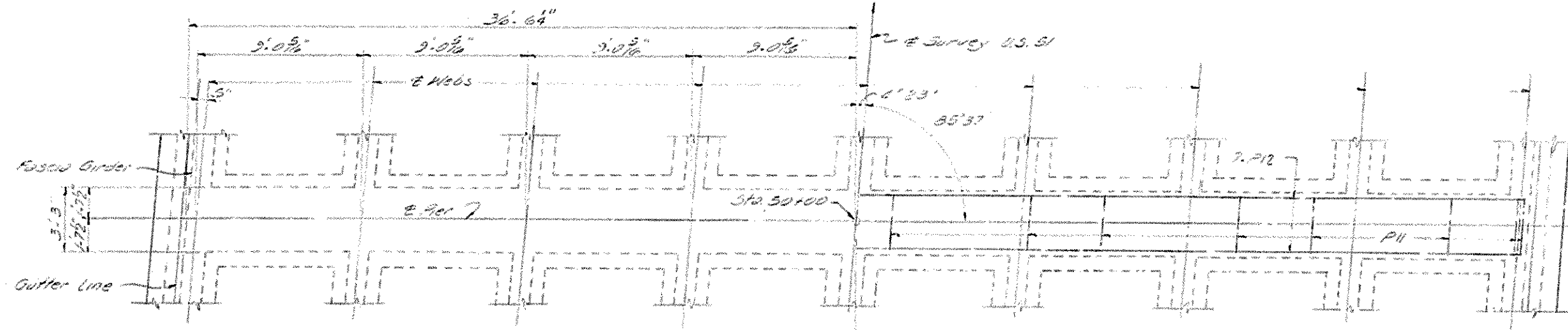
ESTIMATE OF QUANTITIES

	Abutment 1	Abutment 2
Concrete, Class 'A'	160.3	160.3
Concrete, Class 'B'	105.6	105.6
Reinforcement	25,990	25,990

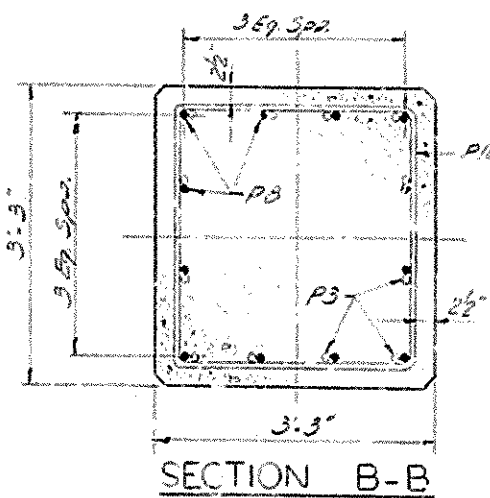
U.S. 51 OVER J.R.P. ROAD
STATION 50+00.00 U.S. 51
BRIDGE NUMBER 16696

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
FULTON
JACKSON PURCHASE PARKWAY
PROJECT NO. 16696

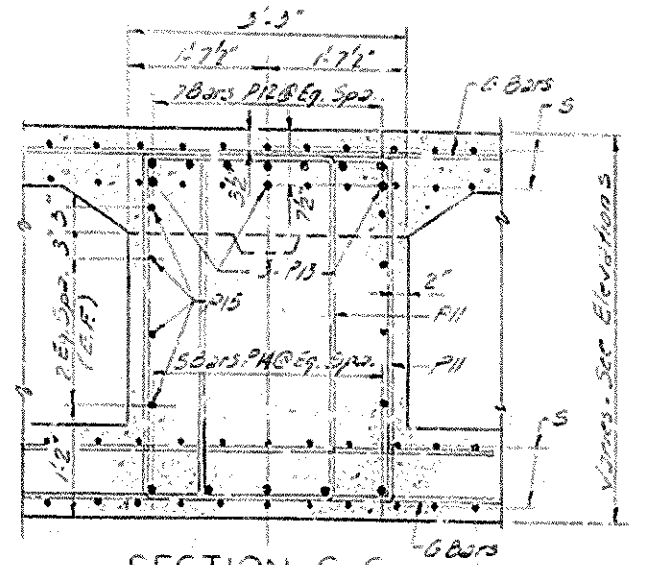
FIG. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	DIST. NO.	SHEET NO.
7	KY.				



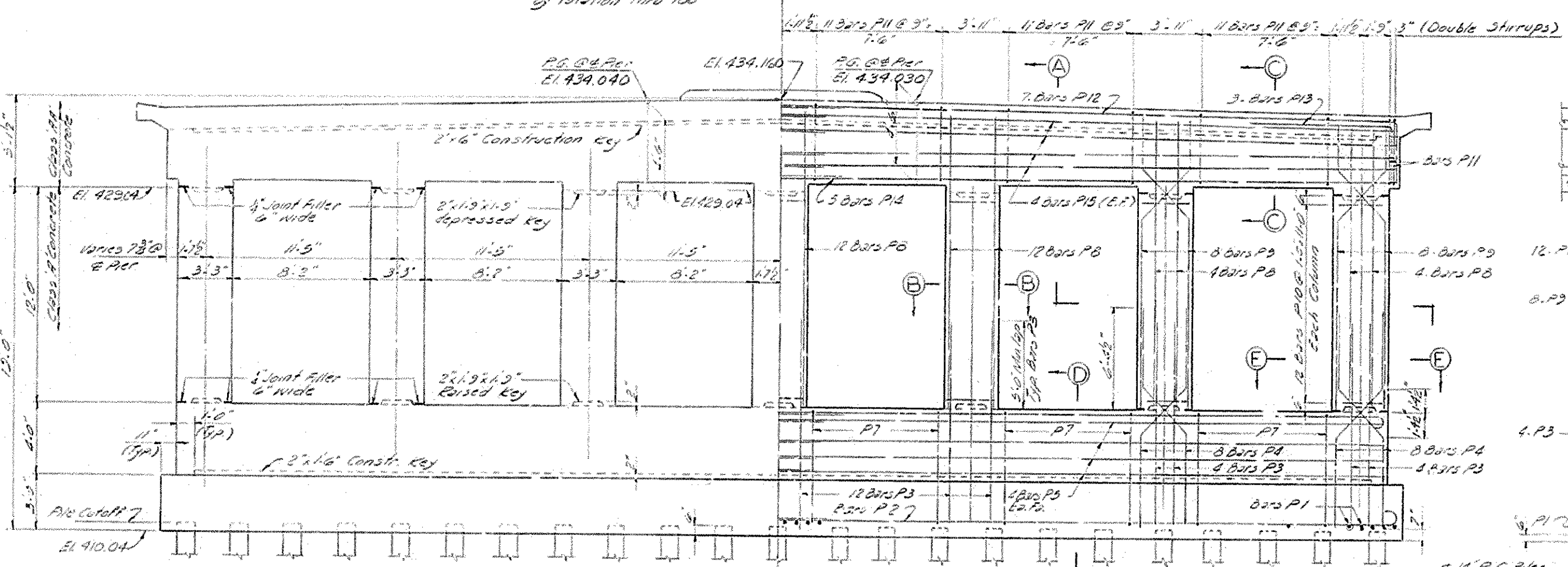
PLAN OF CAP



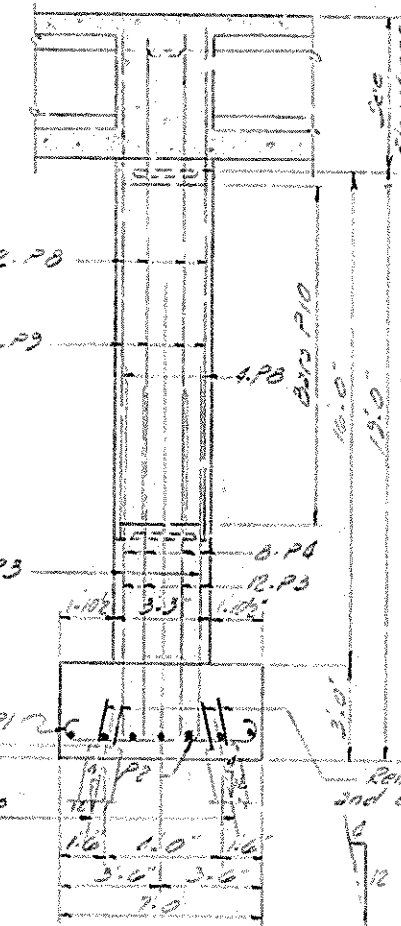
SECTION B-B



SECTION C-C



ELEVATION

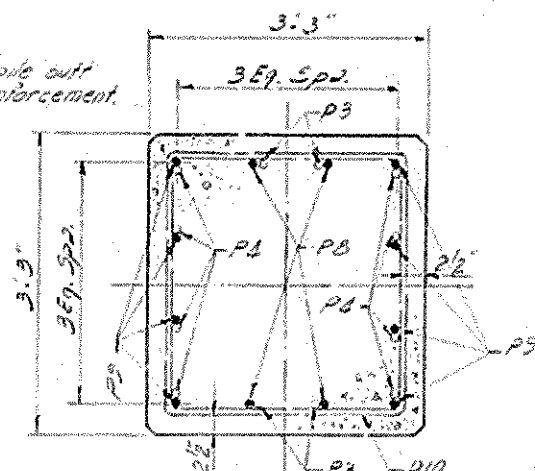


SECTIONAL ELEV. A-A
(Alternate A shown for alternates B, C, D, E, F. See General Notes.)

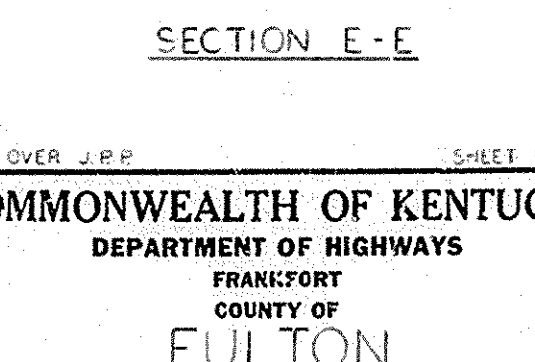
ESTIMATE OF QUANTITIES^①

Class A Concrete	124.6 Cu Yds
Reinforcement	24,005 Lbs

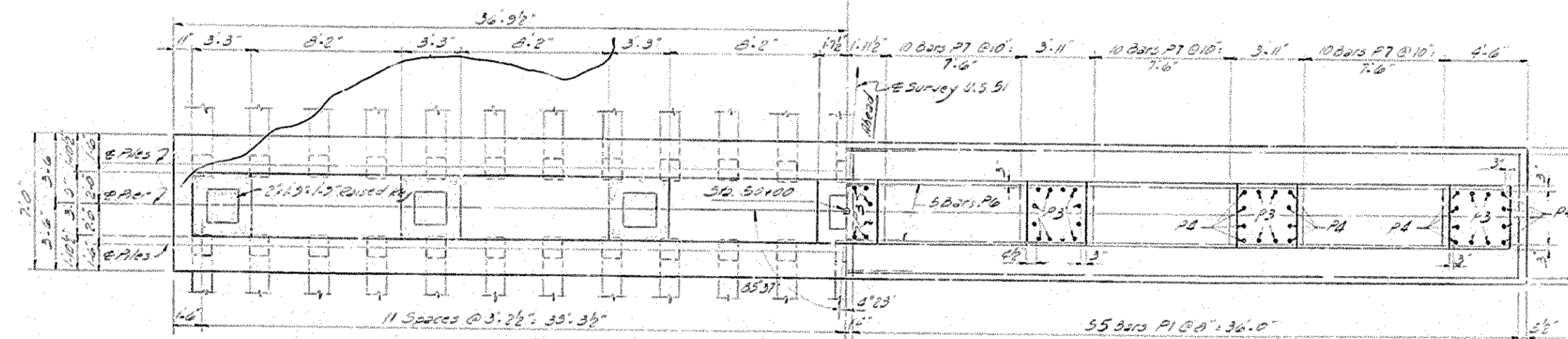
Concrete quantities shown includes concrete below constr. jt. at top of cap. units only. Concrete above this joint is included in the superstructure quantities. Reinforcement quantities is for all bars shown in Bill of Reinforcement.



SECTION D-D



SECTION E-E



PLAN OF FOOTING

SHOWING REINFORCEMENT

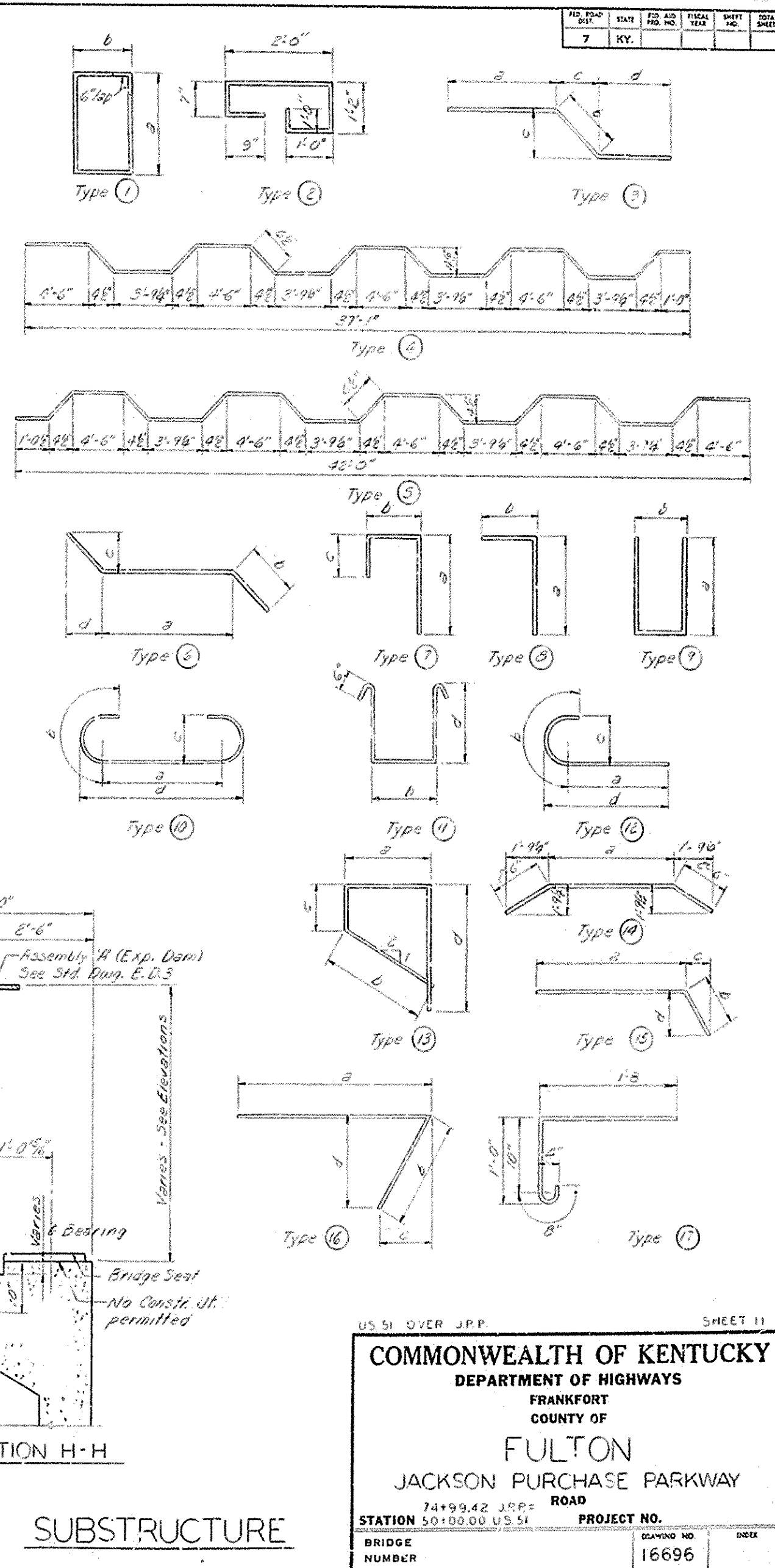
PIER

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
FULTON
JACKSON PURCHASE PARKWAY
ROAD
STATION 74+95.42 J.P.P. U.S. 51 PROJECT NO.
BRIDGE NUMBER 16696

BRIDGE

BILL OF MATERIALS

Mark	Type	No.		Bar Size	Length Ft. In.	Location	a		b		c		d		Mark	Type	No.		Bar Size	Length Ft. In.	Location	a		b		c		d		
		Rein.	Form.				Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.			Rein.	Form.				Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	
A1	Str.	22	22	10	41	Footings									S29	Str.	8	8	5	31	9	Plinth								
A2	"	8	8	6	40	"									S30	(1)	40	40	4	9	2	Slab's Top of Wall	3	8 1/2	0	6				
A3	(7)	76	76	5	11	"	2	8	2	8					S31	Str.	10	10	6	21	0	" " " "								
A4	Str.	12	12	6	41	"									S32	Str.	20	20	4	10	2	Median								
A5	(12)	180	180	6	7	"	5	2	1	0	0	6	5	8																
A6	(12)	168	168	6	6	Wall Dowels	5	3	1	0	0	6	5	6	E1	Str.	20	20	5	39	6	Endwalls								
A7	Str.	168	168	5	15	Wall									E2	(7)	64	64	6	10	2	"	7	2	0	9	2	6		
A8	(16)	30	30	5	42	"	40	5	2	0	0	13	1	11 3/8	E3	(8)	64	64	7	6	5	"	5	3	1	3				
A9	(16)	30	30	5	42	"	40	5	2	0	0	13	1	11 3/8	E4	(1)	6	6	5	18	4	"	7	8	1	16				
A10	(16)	70	70	6	12	Bracket	3	8	4	1	0	6	4	0	E5	"	4	4	5	21	3	"	7	6	2	9				
A11	Str.	16	16	6	40	"									E6	Str.	20	20	5	37	5	"								
A12	(7)	21	21	6	11	Wall Dowels	5	6	0	7 3/4					E7	(9)	32	32	5	11	5	"	5	2	1	3				
A13	Str.	42	42	6	15	Walls									E8	"	32	32	5	12	3	"	5	7	1	3				
A14	(7)	78	78	5	8	"	3	4	0	9																				
A15	(7)	4	4	5	6	"	3	2	0	9																				
A16	"	4	4	5	7	"	4	6	0	9																				
A17	"	4	4	5	12	"	5	9	0	9					H1	(10)	35	35	17	22	4	Beams	18	4	2	0	1	2	19	6
A18	"	4	4	5	14	"	7	1	0	9					H2	Str.	18	18	6	19	8	"								
A19	"	4	4	5	17	"	8	5	0	9					H3	(11)	182	182	4	5	8	"	1	9	1	5				
A20	"	4	4	5	20	"	9	0	0	9					H4	(10)	8	8	4	21	8	"	18	8	1	6	0	1		

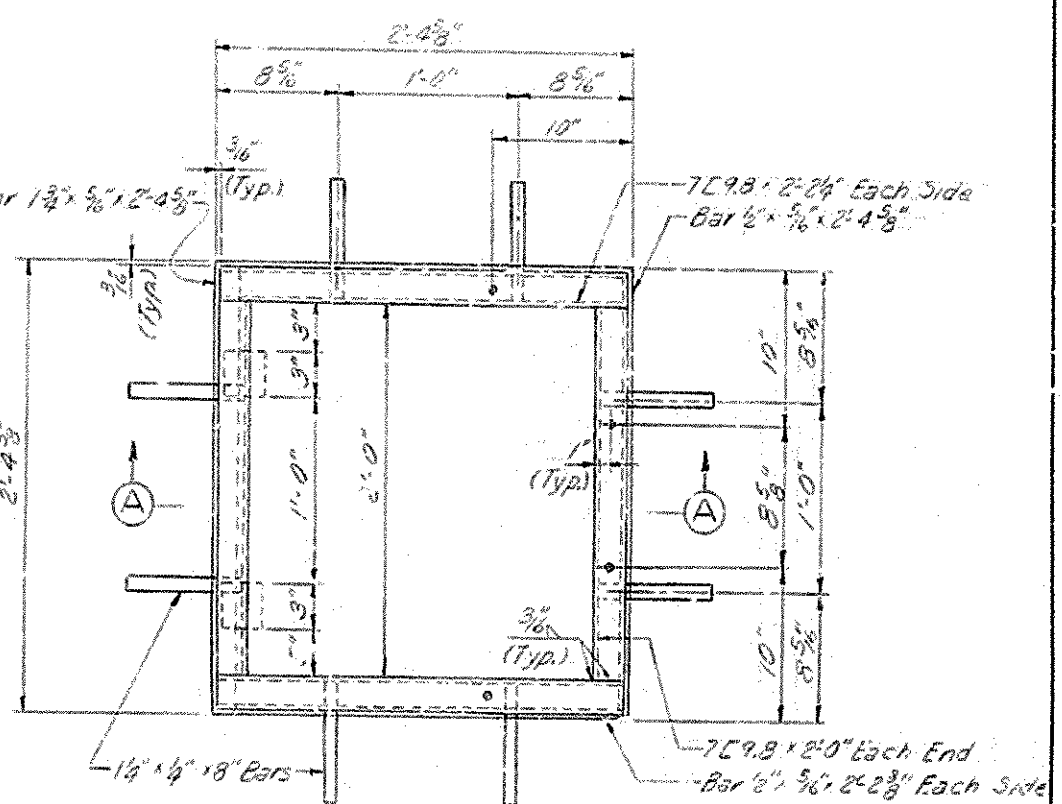
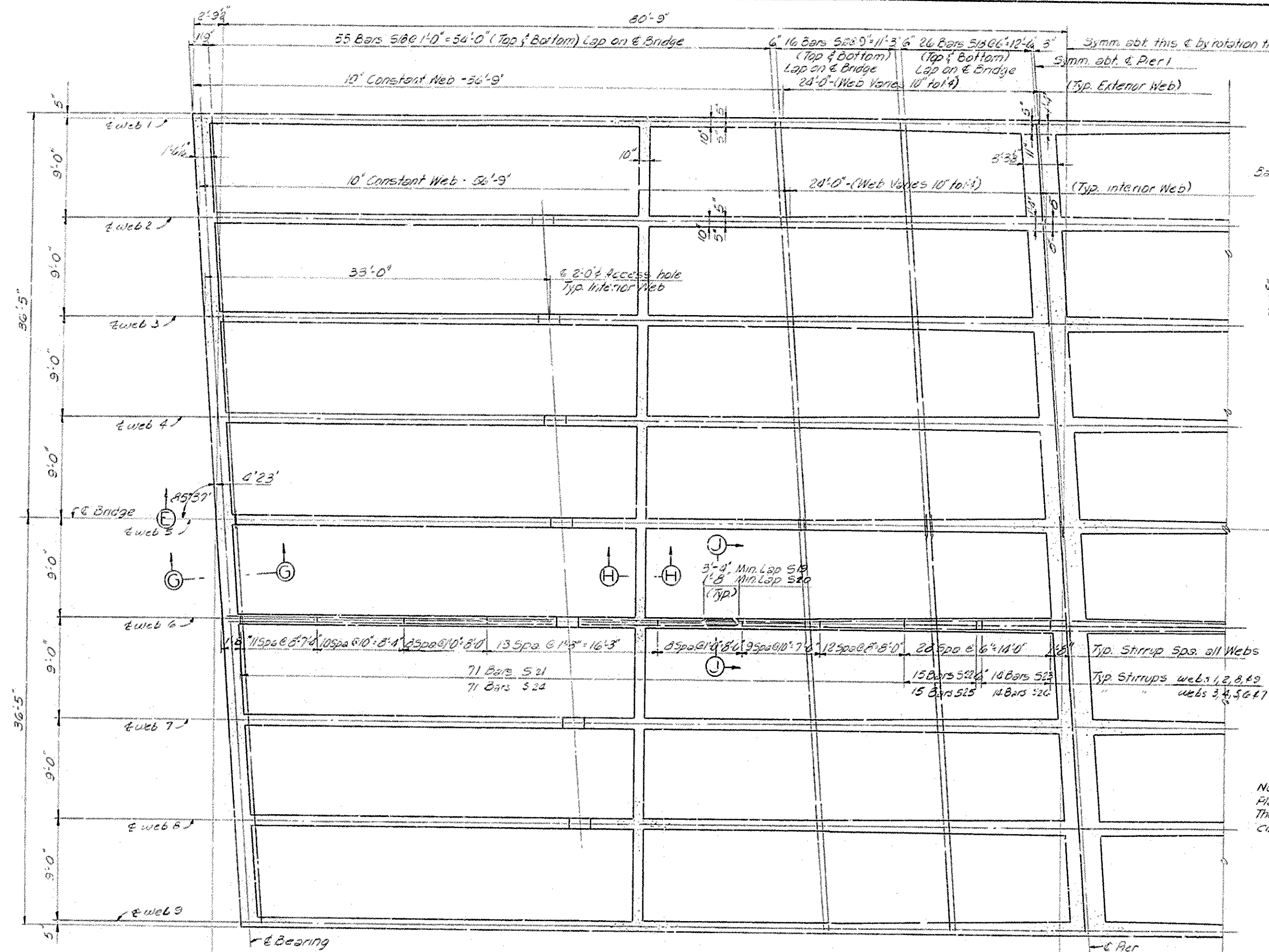


US 51 OVER JRP. SHEET 11

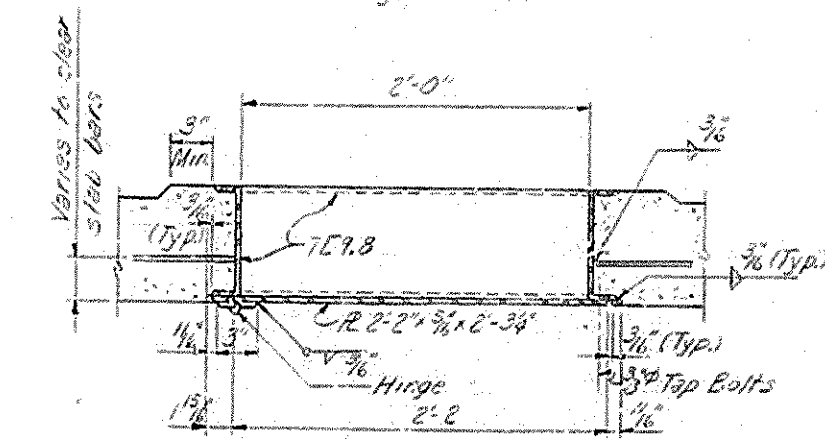
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
FULTON
JACKSON PURCHASE PARKWAY

74+99.42 JRP= ROAD
STATION 50+00.00 US 51 PROJECT NO.

BRIDGE NUMBER	DRAWING NO 16696	INDEX
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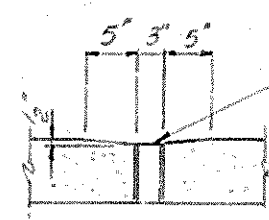


PLAN OF ACCESS DOOR IN
BOTTOM SLAB
Weight: 159 Lb. Each
Four Required



NOTE:
Place 3/4" galvanized steel drain in low corner of each cell (bottom slab).
These drains are to be incidental to and included in unit price bid for Class "A" concrete.

14 Mesh Copper Hardware Cloth
soldered to pipe and trimmed to fit.



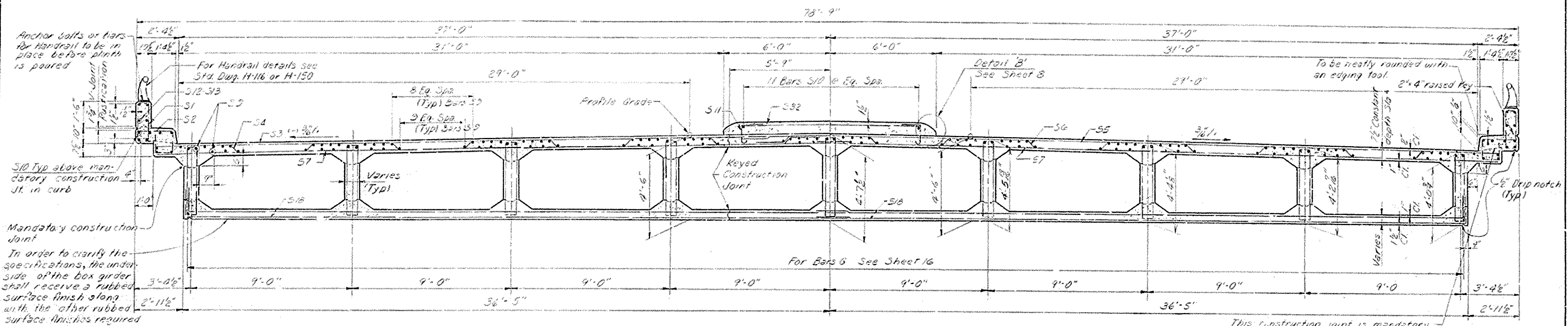
DRAIN DETAIL

U.S. 51 OVER J.R.P. SHEET 13

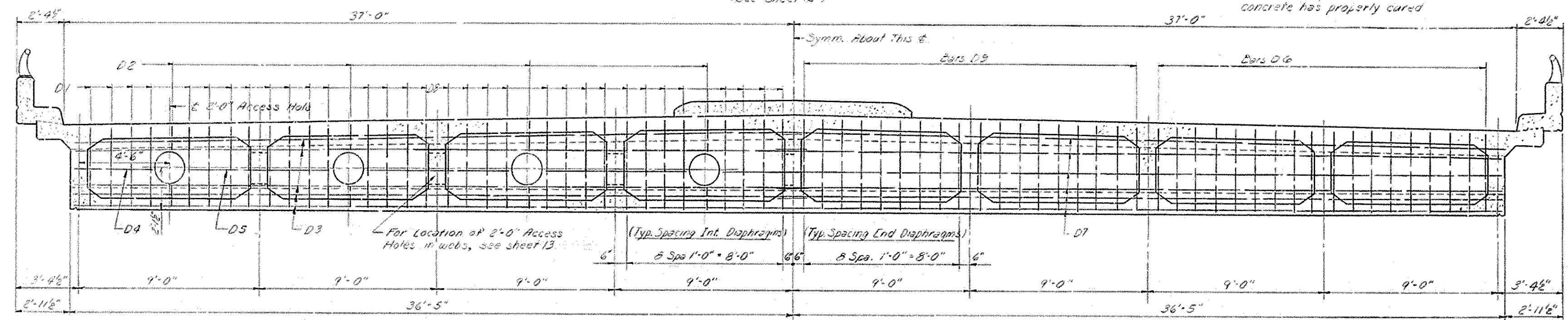
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
FULTON
JACKSON PURCHASE PARKWAY
74+99.42 J.R.P. = ROAD
STATION 50+00.00 U.S. 51 PROJECT NO.
BRIDGE NUMBER 16696 INDEX

SUPERSTRUCTURE

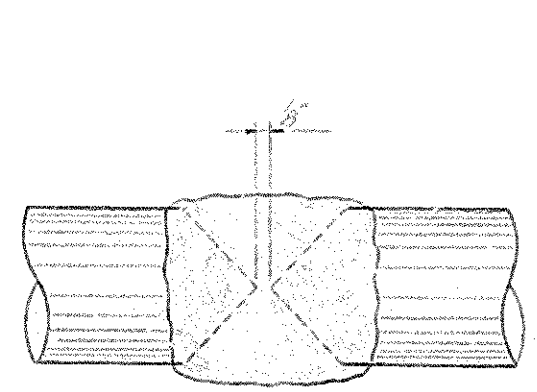
BRIDGE

[illegible]

SECTION A-A
(See Sheet 12)



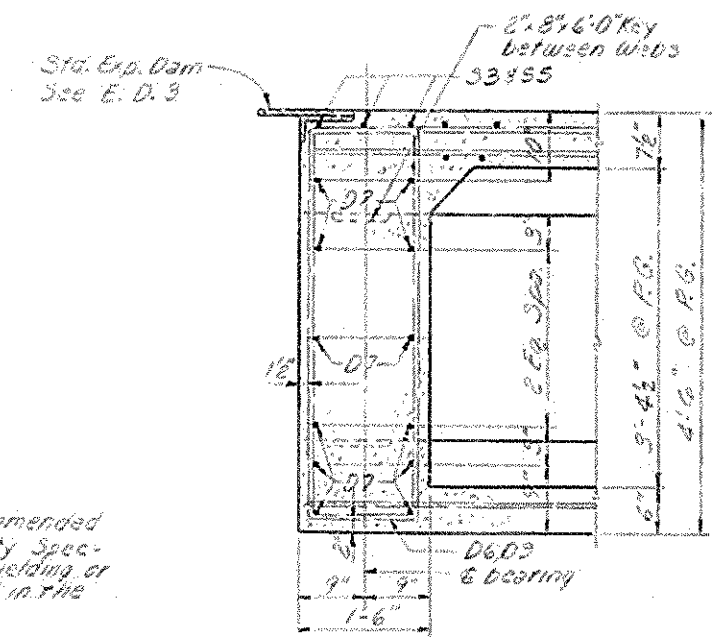
SECTION F - F
(See Sheet 12)



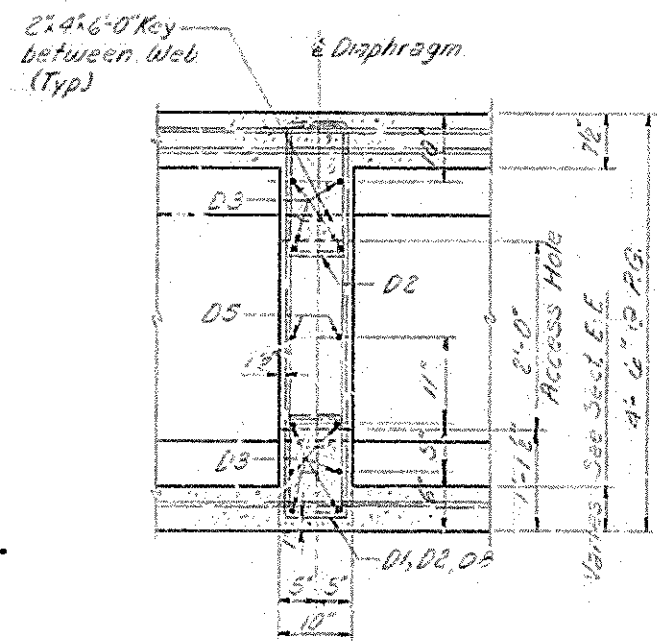
TYP BAR WELD

Indicates Bar Shop weld.

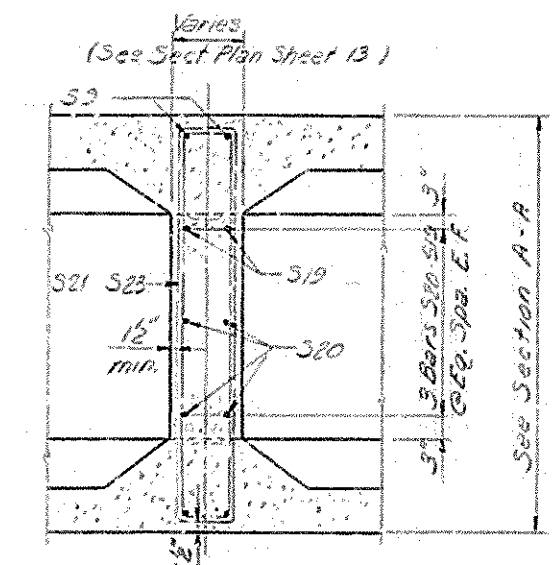
The welding and welding material shall conform to the "Recommended Practices for welding Reinforcing Steel, American Welding Society Specification AWS D1.1-61. No direct payment shall be made for welding or weld material, but the cost of these items shall be included in the unit price bid per pound for reinforcement.



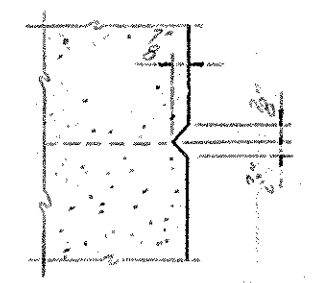
SECTION G-G



SECTION H-H



SECTION J - J

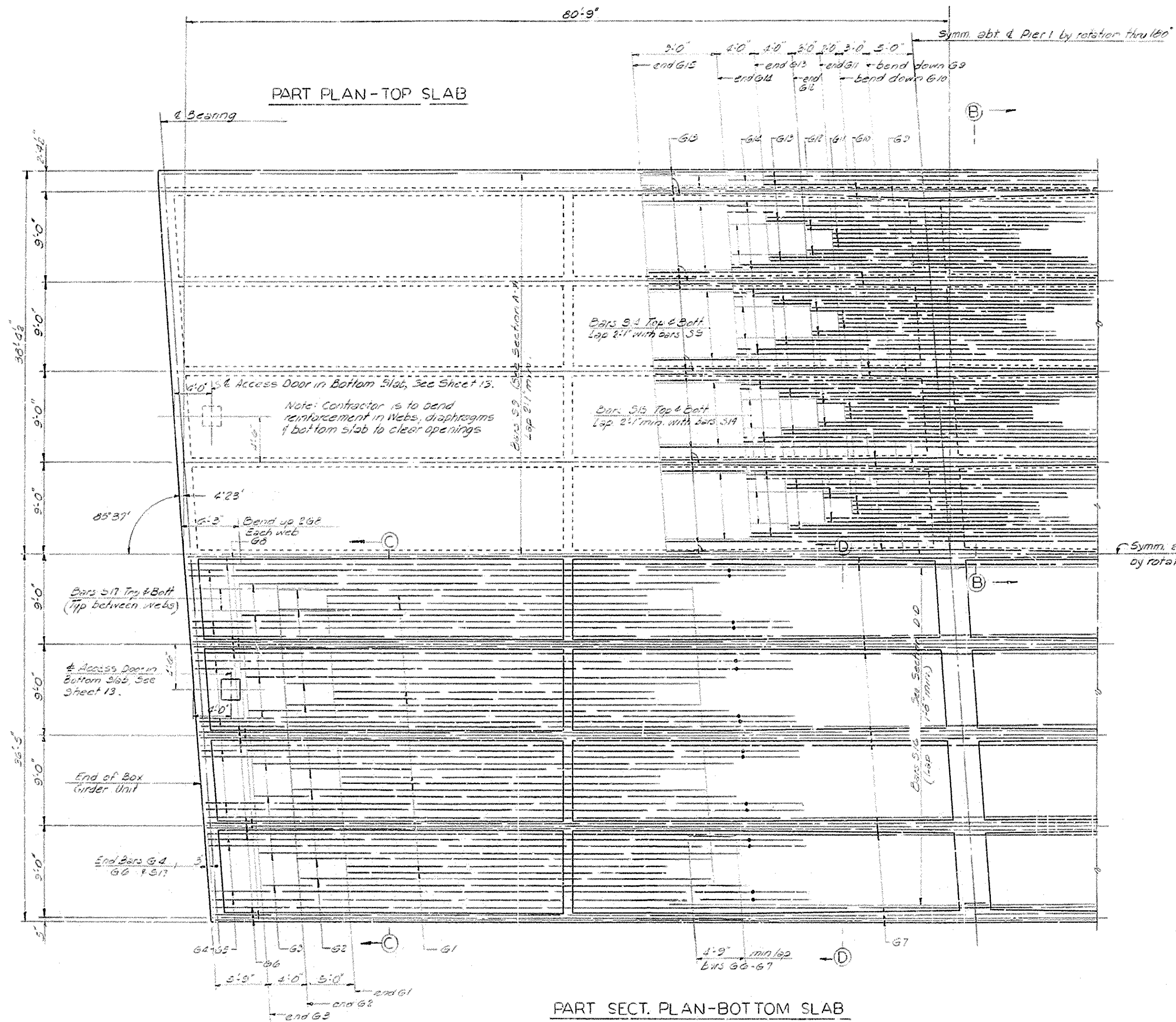


RUSTICATION DETAIL

U.S. 51 OVER J.P.P.		SHEET 14	
COMMONWEALTH OF KENTUCKY			
DEPARTMENT OF HIGHWAYS			
FRANKFORT			
COUNTY OF			
FULTON			
JACKSON PURCHASE PARKWAY			
ROAD			
STATION 74+99.42 J.P.P. 50+00.00 U.S. 51		PROJECT NO.	
BRIDGE NUMBER		DRAWING NO. 16696	INDEX

BRIDGES

FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				

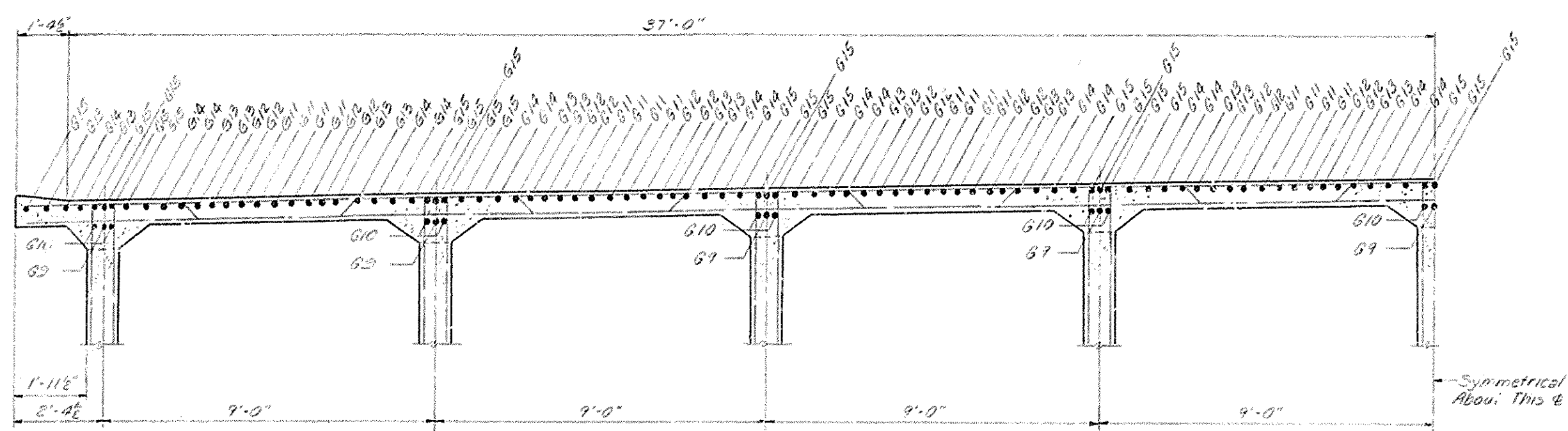


SUPERSTRUCTURE

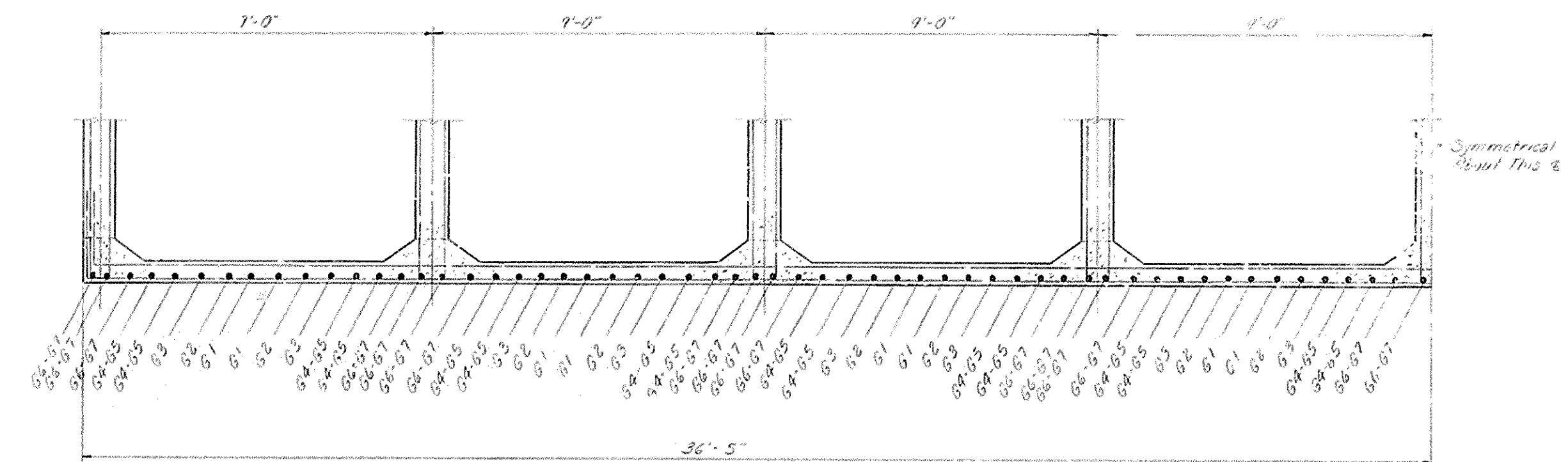
U.S. 51 OVER J.R.R.		SHEET 15	
COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS FRANKFORT COUNTY OF FULTON JACKSON PURCHASE PARKWAY 74+99.42 JRP = ROAD STATION 50+00.00 U.S. 51			
PROJECT NO.		DRAWING NO.	
16696		16696	
BRIDGE NUMBER		INDEX	

BRIDGE

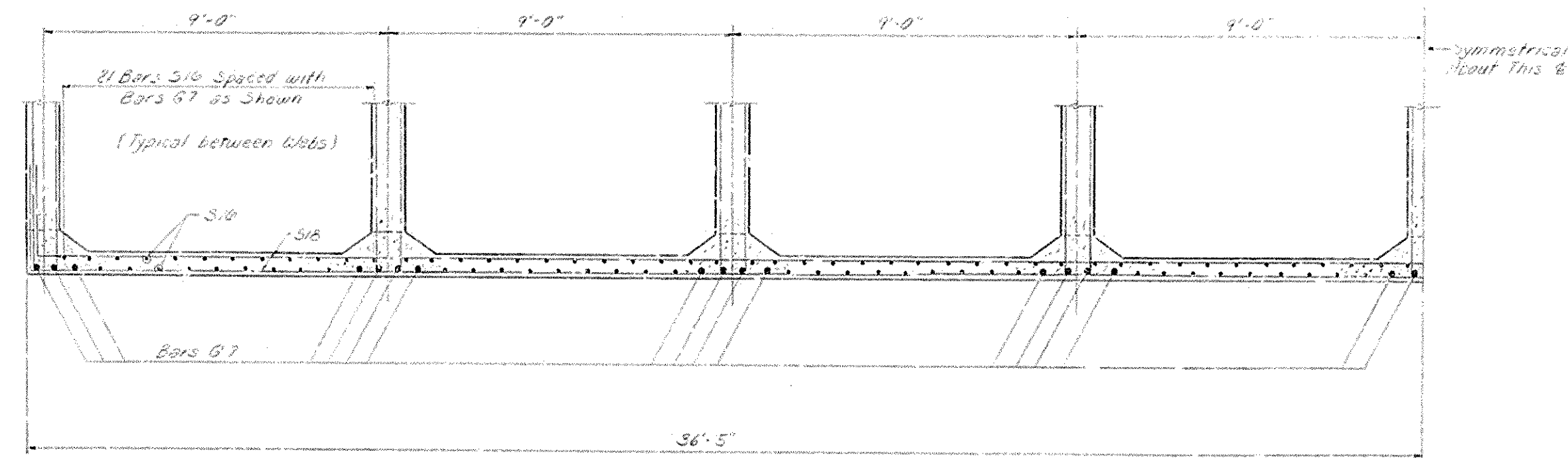
FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



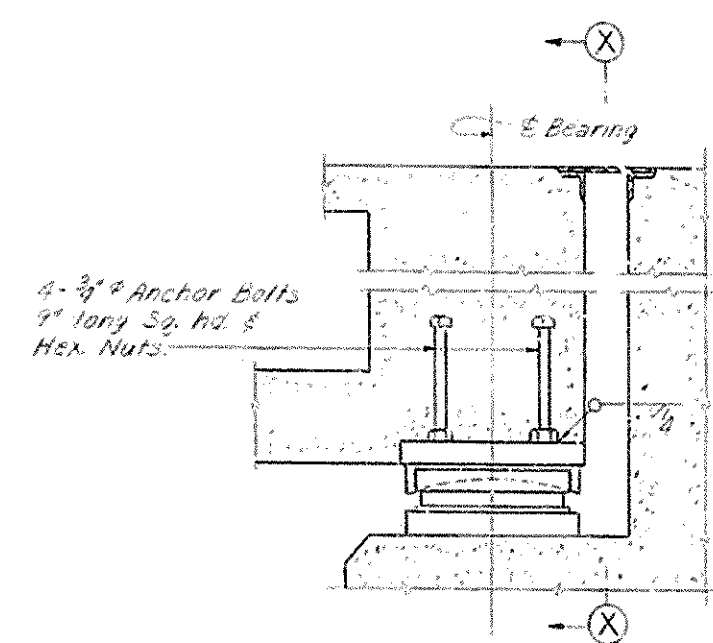
SECTION B-B
Top of Slab Reinforcement



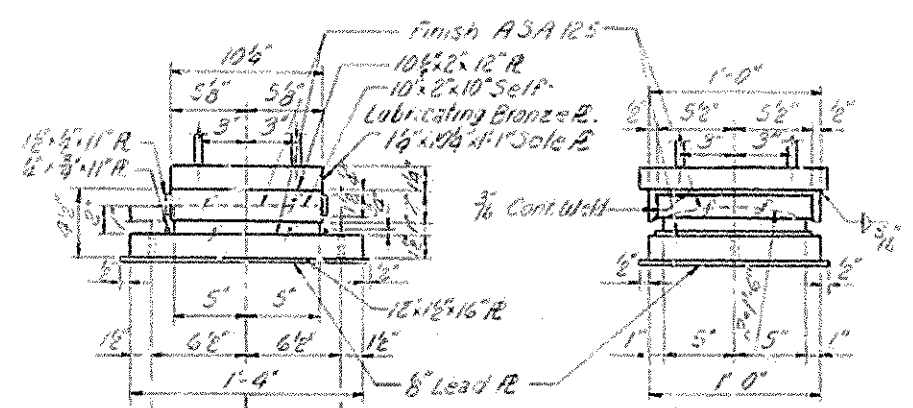
SECTION C-C
Bottom of Slab Reinforcement



SECTION D-D

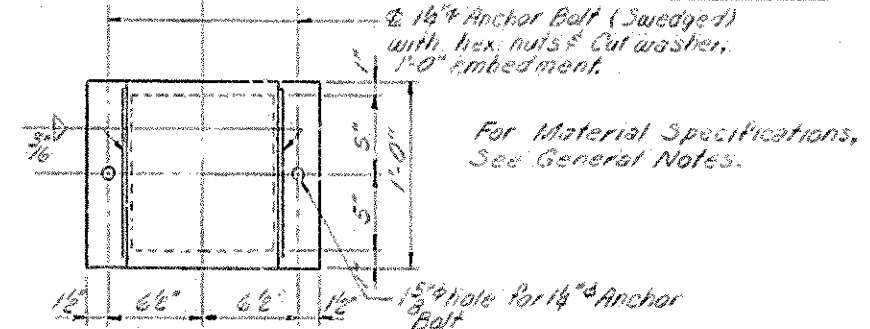


TYPICAL SHOE ASSEMBLY AT END OF SPAN



ELEVATION X-X

END ELEVATION



BOTTOM PLATE DETAIL

SHOE DETAIL

ANCHOR BOLT NOTE -

The cost of lead required to set anchor bolts and the cost of drilling anchor bolt holes shall be included in the 'Lump Sum Bid' for Structural Steel. The contractor shall be responsible for keeping holes dry in wet and freezing weather. At the time of setting, anchor bolts are to be heated to a blue heat to assure free flow of lead to bottom of hole.

U.S. 51 OVER J.P.P. SHEET 16

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
FULTON
JACKSON PURCHASE PARKWAY

74-0942 J.P.P. = ROAD
 STATION 50+0000 U.S. 51 PROJECT NO.

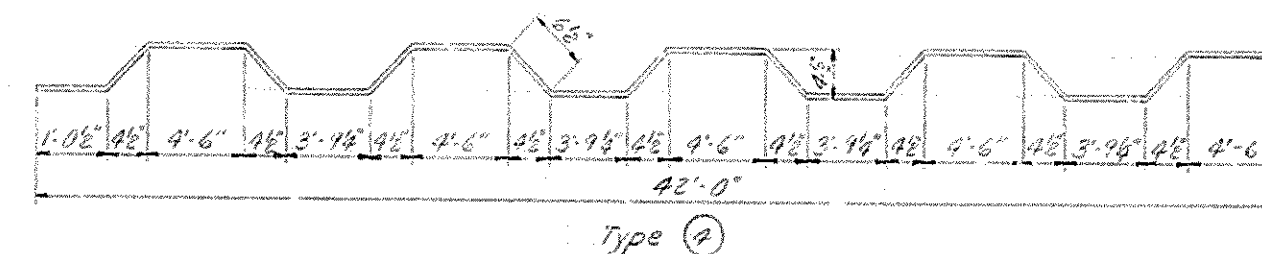
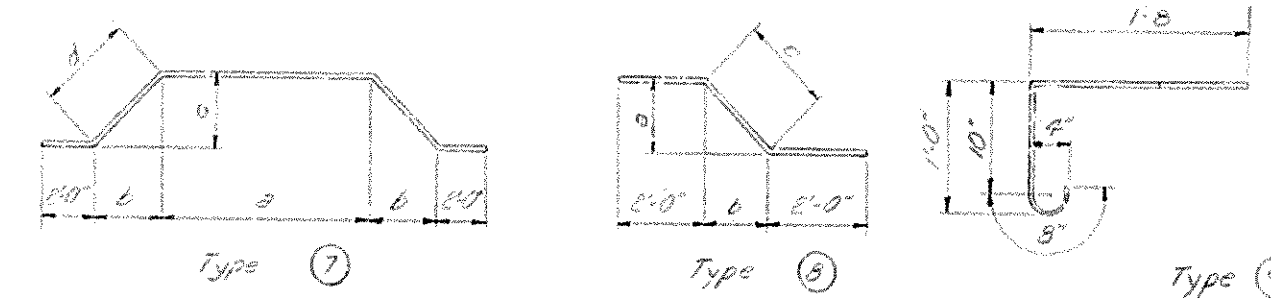
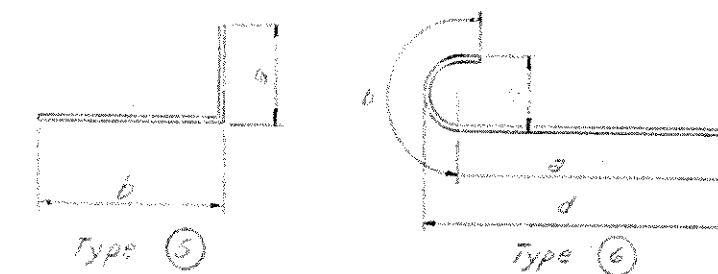
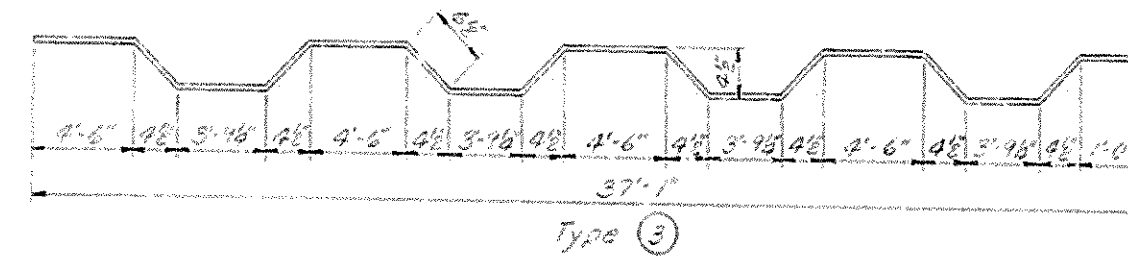
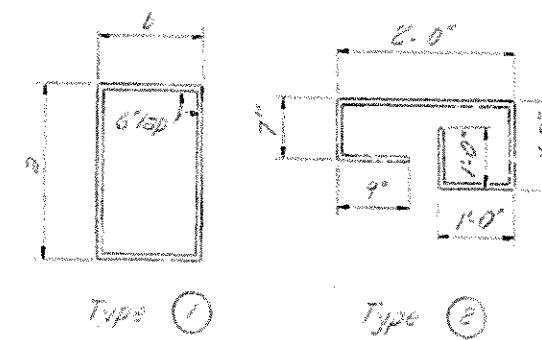
BRIDGE NUMBER 16696

SUPERSTRUCTURE

BRIDGE

BILL OF REINFORCEMENT

Mark	Type	No.	Bar Size	Length	Location	a	b	c	d
				Feet		Feet	Feet	Feet	Feet
G1	Str.	32	#11	34	0				
G2	"	32	#11	44	0				
G3	"	32	#11	51	0				
G4	(6)	64	#11	59	1	57	1	2	0
G5	Str.	64	#11	6	0				
G6	(6)	64	#11	56	10	54	10	2	0
G7	Str.	34	#11	60	0				
G8	(8)	36	#8	9	4	3	9	9	4
G9	(1)	9	#11	62	5	10	0	3	4
G10	"	18	#11	27	5	16	0	3	4
G11	Str.	32	#11	20	0				
G12	"	32	#11	26	0				
G13	"	36	#11	34	0				
G14	"	34	#11	42	0				
G15	"	45	#11	60	0				
D1	(1)	64	#4	9	5	3	9	0	7
D2	"	32	#4	4	1	1	1	0	7
D3	Str.	40	#5	37	4				
D4	"	3	#5	3	8				
D5	"	28	#5	2	9				
D6	(1)	72	#4	10	1	3	9	1	3
D7	Str.	48	#5	37	5				
D8	(1)	64	#4	9	11	4	0	0	7
D9	"	72	#4	11	3	4	0	1	3
S1	(1)	324	#5	6	3	2	1	0	7 1/2
S2	(2)	324	#5	6	3				
S3	Str.	164	#5	35	0				
S4	(3)	156	#6	38	5				
S5	Str.	169	#5	43	7				
S6	(4)	156	#6	43	6				
S7	Str.	313	#5	37	4				
S8	"	52	#6	10	0				
S9	"	1152	#5	27	5				
S10	"	115	#5	33	11				
S11	(9)	324	#4	5	1				
S12	Str.	16	#5	8	5				
S13	"	16	#5	11	8				
S14	"	440	#5	11	1				
S15	"	208	#5	10	1				
S16	"	336	#4	33	4				
S17	"	60	#4	16	2				
S18	(5)	776	#4	38	7	1	6	37	2
S19	Str.	70	#8	34	11				
S20	"	150	#4	33	7				
S21	(1)	528	#6	9	7	3	10	0	7
S22	"	120	#6	9	11	3	10	0	9
S23	"	112	#6	10	1	3	10	0	11
S24	"	710	#6	10	1	4	7	0	7
S25	"	150	#6	10	5	4	1	0	9
S26	"	140	#6	10	9	4	1	0	11
S32	Str.	162	#4	10	2				



ESTIMATE OF QUANTITIES

Concrete Class "A" 864.7 Cu. Yd.
Reinforcement 287,116 Lb.

SUPERSTRUCTURE

U.S. 51 OVER J.P.P. SHEET 17

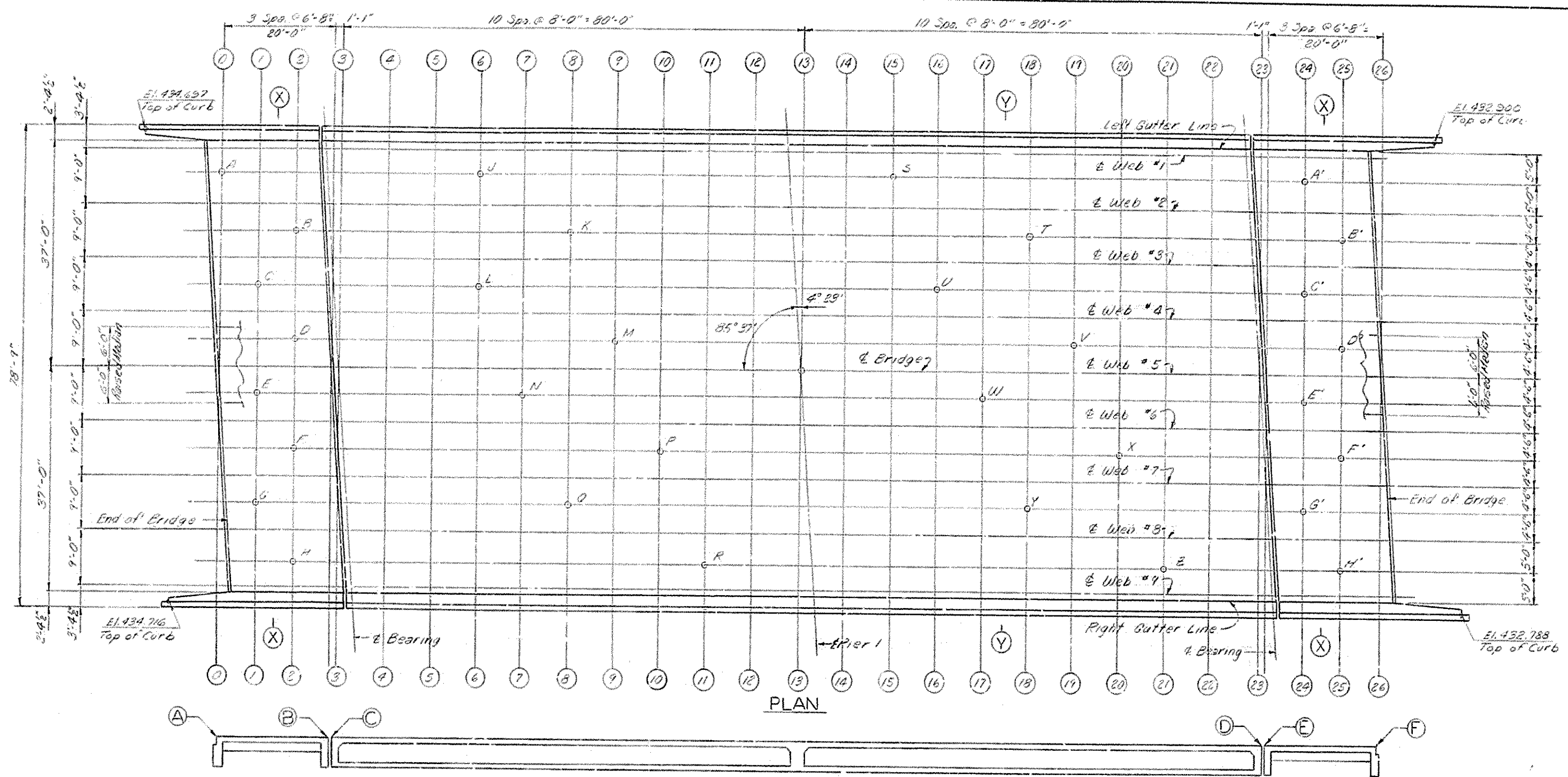
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
FULTON
JACKSON PURCHASE PARKWAY

7.1-95.42 J.P.P. ROAD
STATION 50+000 U.S. 51 PROJECT NO.

BRIDGE NUMBER 16696 INDEX

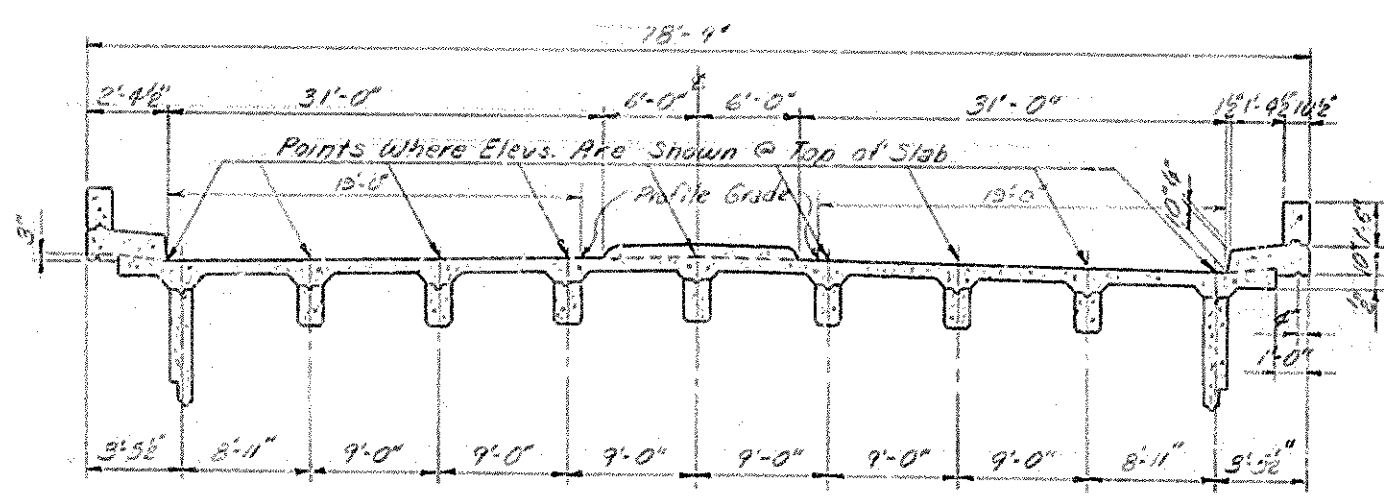
BRIDGE

FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				

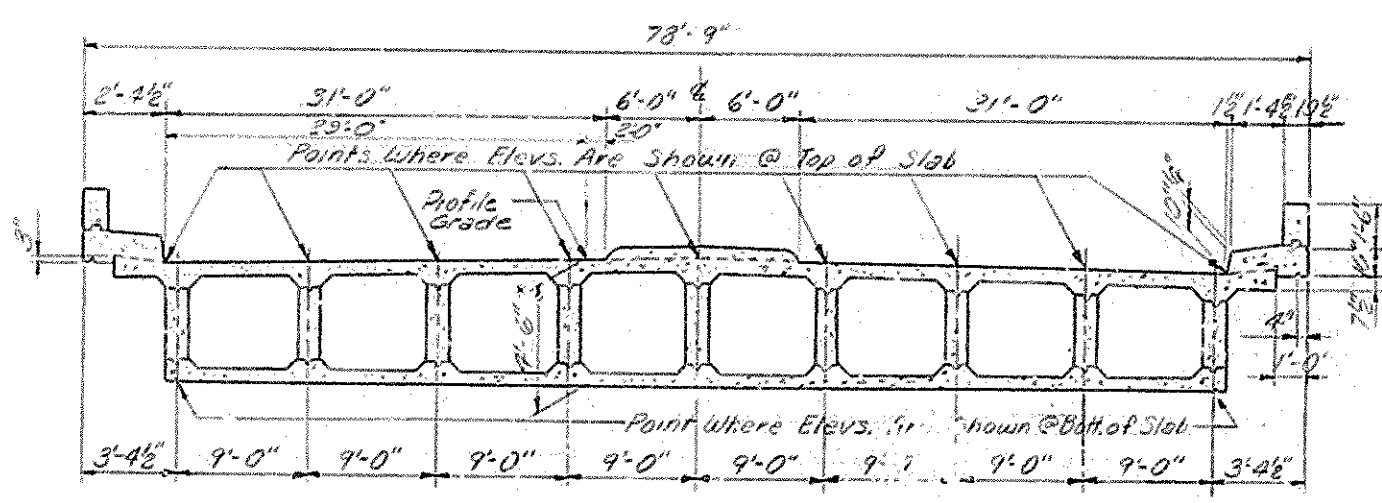


PLAN

SECTION ON C OF GIRDER



SECTION X-X



SECTION Y-Y

* 4'-6" Dimensions is from Profile grade to Bottom of Box Girder.

ELEVATIONS

US 51 OVER J.P.R. SHEET 18

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
FULTON
JACKSON PURCHASE PARKWAY

ROAD
 STATION 74+95.42 J.P.R. 50+00.00 U.S. 51 PROJECT NO.
 BRIDGE NUMBER 16696

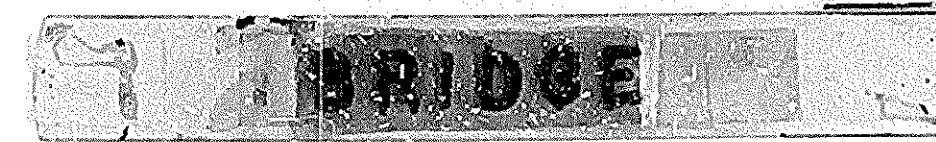


TABLE OF ELEVATIONS

Section	Top of Slab Left Gutter Line	Bottom of Girder & Slab #1	Top of Slab #2	Top of Slab #3	Top of Slab #4	Top of Slab & Bridge #5	Top of Slab #6	Top of Slab #7	Top of Slab #8	Bottom of Girder & Slab #9	Top of Slab Right Gutter Line
A	433.881		434.039	434.181	434.324	434.466	434.527	434.187	434.038		433.893
B	.910		.067	.207	.348	.489	.348	.208	.067		.911
C	.910		.067	.207	.348	.489	.348	.208	.067		.911
D	.874		.047	.187	.326	.466					
E	.911		.066	.207	.347	.486	434.346	434.205	434.064		433.907
F	.915		.072	.214	.356	.494	.355	.215	.075		.919
G	.926	429.879	.078	.215	.352	.489	.352	.209	.069		.915
H	.968	.921	.120	.257	.395	.533	.387	.244	.099	429.892	.939
I	.976	.949	.150	.287	.425	.563	.418	.275	.131	.922	.969
J	434.000	.953	.155	.294	.431	.573	.431	.295	.153	.947	.994
K	433.984	.937	.140	.281	.421	.562	.421	.281	.140	.937	.984
L	.144	.879	.102	.243	.384	.527	.380	.240	.100	.899	.946
M	.885	.838	.043	.186	.328	.472	.326	.187	.048	.937	.984
N	.811	.764	433.970	.114	.255	.400	.261	.123	433.984	.783	.830
O	.731	.684	.889	.034	.175	.317	.181	.043	.903	.706	.753
P	.652	.605	.809	433.952	.093	.234	.097	433.959	.820	.619	.666
Q	.584	.538	.740	.880	.019	.160	.019	.880	.740	.537	.584
R	.534	.487	.688	.827	433.965	.104	433.961	.820	.677	.473	.520
S	.525	.478	.641	.779	.917	.055	.911	.770	.625	.420	.467
T	.435	.388	.589	.728	.866	.005	.860	.719	.575	.369	.416
U	.367	.320	.521	.660	.799	433.945	.801	.659	.516	.311	.358
V	.287	.240	.441	.581	.721	.868	.725	.584	.443	.238	.285
W	.173	.146	.349	.490	.630	.771	.630	.490	.349	.146	.193
X	.069	.022	.228	.370	.512	.650	.503	.367	.230	.028	.075
Y	432.974	428.867	.076	.220	.363	.508	.370	.232	.095	428.894	432.941
Z	.753	.706	432.913	.058	.201	.347	.209	.071	432.934	.735	.782
AA	.597		.751	432.891	.030	.171	.034	432.897	.760	.561	.608
AB	.473		.629	.769	432.909	.049	432.908	.768	.626		.467
AC	.352		.509	.650	.791	432.931	.792	.652	.511		.356
AD					.801	.661	.522	.392			432.229
AE	432.627		432.771	432.900	433.030	433.159	433.007	.855	.702		.533
AF	.622		.766	.895	.024	.153	.001	.849	.697		.528
AG	.275		.417	.545	432.673	432.801	432.647	.494	.340		.169

Note: Elevations on this sheet include construction camber and must be maintained with falsework in place.
 * After the slab forms are erected and before the slab reinforcement is placed, the resident engineer shall take field elevations at the slab thickness check points, and enter them in the table in the space provided. The slab thickness shall then be computed. If the computed slab thickness varies more than 1/4" from the plan thickness, allowing 1/80" of the slab span for deflection of the form work, the form shall be adjusted until the computed slab thickness is within the tolerance allowed.

TABLE OF ELEVATIONS FOR CONTROL OF TOP SLAB THICKNESS *

Slab Check Point	Top of Slab Elevation	Bottom of Slab Elevation	Computed Slab Thickness
A	433.971	432.328	0.643
B	434.143	432.356	0.643
C	.277	432.357	0.643
D	.415	432.357	0.643
E	.416	432.357	0.643
F	.285	432.357	0.643
G	.135	432.357	0.643
H	433.996	432.356	0.640
I	434.078	432.357	0.641
J	.173	432.357	0.643
K	.364	432.357	0.643
L	.200	432.357	0.643
M	.472	432.357	0.643
N	.192	432.357	0.643
O	.170	432.357	0.643
P	433.829	432.357	0.643
Q	434.583	432.356	0.643
R	433.511	432.357	0.641
S	.797	432.357	0.643
T	.701	432.357	0.643
U	.873	432.357	0.643
V	.439	432.357	0.643
W	.514	432.357	0.643
X	.018	432.357	0.643
Y	432.551	431.933	0.618
Z	.580	431.936	0.618
AA	.839	432.357	0.643
AB	.861	432.357	0.643
AC	.978	432.357	0.643
AD	.722	432.357	0.643
AE	.697	432.357	0.643
AF	.434	432.357	0.643

DESIGNED BY: T.B. DATE: 7-1-54
 CHECKED BY: T.B. DATE: 7-1-54
 REVISIONS BY: T.B. DATE: 7-1-54

ELEVATIONS

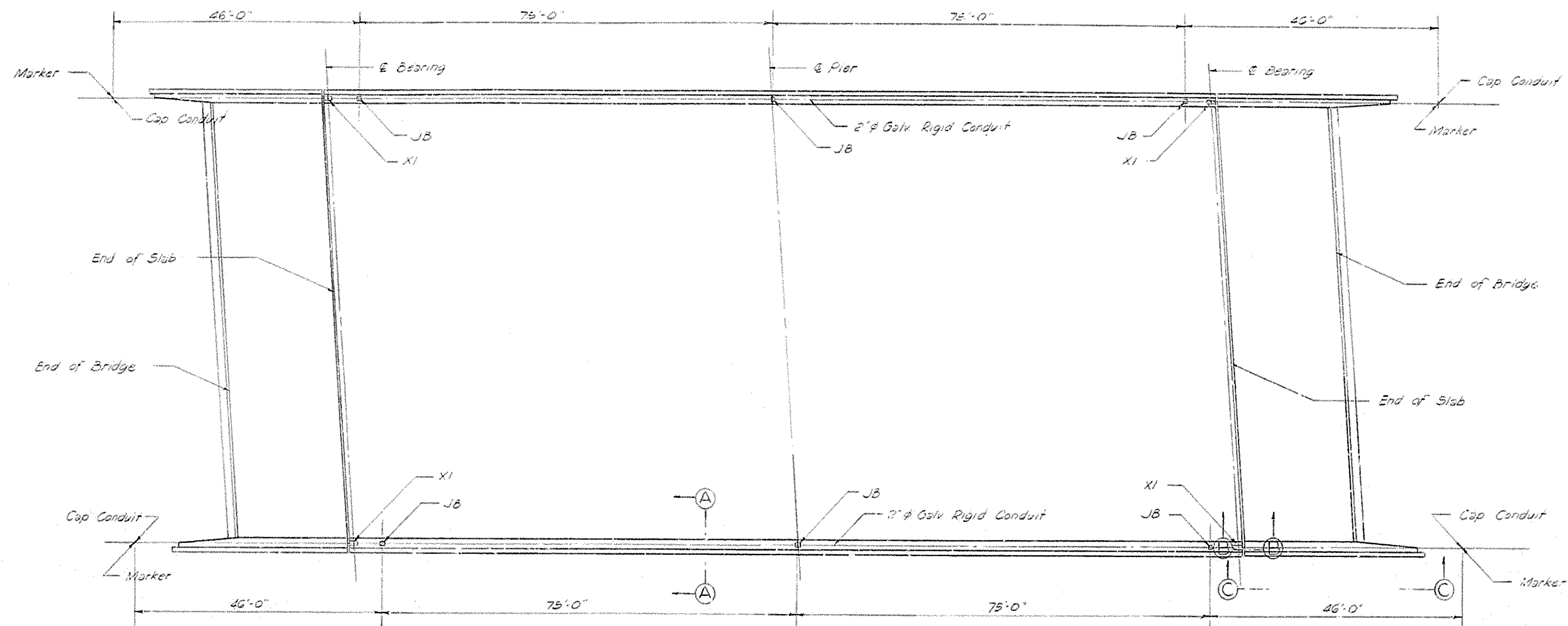
U.S. 51 OVER J.R.P. SHEET 19

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
FULTON
 JACKSON PURCHASE PARKWAY ROAD

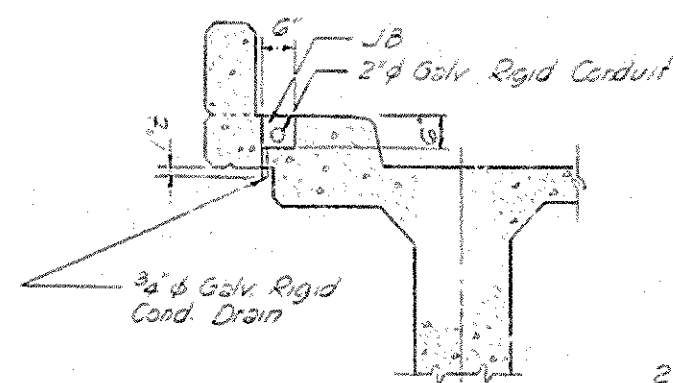
74+9942 J.R.P. ROAD
 STATION 50+0000 U.S. 51 PROJECT NO.

BRIDGE NUMBER 16696

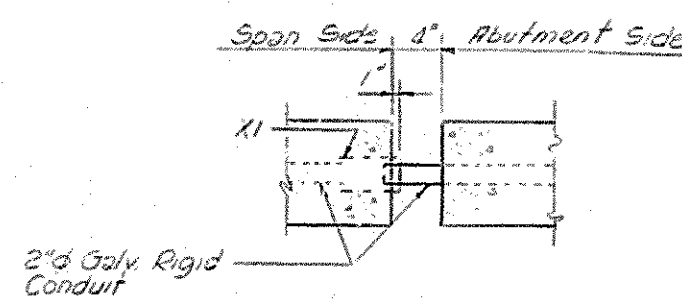
BRIDGE



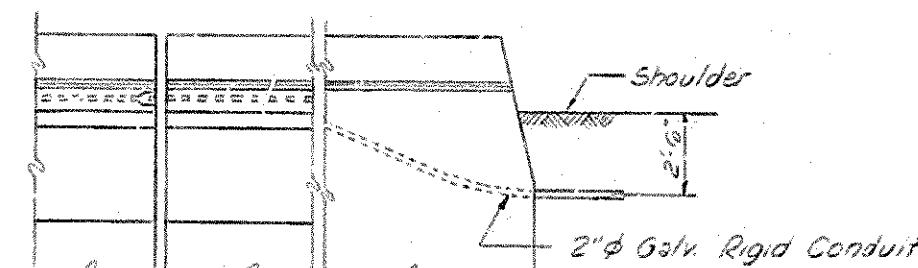
PLAN



SECTION A-A



SECTION B-B



ELEVATION C C

NOTES:

XI = Expansion Joint-Crouse-Hinds XUG41 with G100 grounding straps or approved equal.
 JB = Junction Box-OZ Type YU 16" long, 6" wide, 6" deep or approved equal. All conduit to be rigid galvanized.
 Junction Boxes and conduit are to be placed so as to interfere with a minimum amount of reinforcement where necessary.
 Mark all terminal points of metal conduit under ramps and main roadways. The marker to consist of 4" x 4" x 36" reinforced concrete post with 4 Size #2 deformed reinforcing steel rods, a 2" brass disc cast in the end of the post, and inscribed, "End of Duct." Marker to be 2" above grade with disc exposed.

BILL OF MATERIALS

2" Galvanized Rigid Conduit
 3/4" Galvanized Rigid Conduit
 16"x6"x6" Junction Boxes - (OZ type YU or approved equal)
 Expansion Fittings - (Crouse-Hinds XUG41 with G100 grounding strap or approved equal.)
 2" Galvanized Conduit Caps
 Markers

492 Lin. Ft.
 3 Lin. Ft.
 6
 6
 4
 4

ELECTRICAL CONDUIT

US 51 OVER JRP		SHEET 20	
COMMONWEALTH OF KENTUCKY			
DEPARTMENT OF HIGHWAYS			
FRANKFORT			
COUNTY OF			
FULTON			
JACKSON PURCHASE PARKWAY			
ROAD			
STATION 74+99.42 JRP =		PROJECT NO.	
50+00.00 US 51			
BRIDGE NUMBER	16695	DRAWING NO.	INDEX

BRIDGE

Elevations shown on const. elevation sheet are top of steel at points shown.

1" 3/8" Joint Sealing Compound. Destroy bond between Sealing Compound and 8" x 4" plate using film or foil backing.

See Detail 'X'

2" x 1/2" Bar

2" x 1/2" Bar

Formwork Const. 1/2" Free to Slide

Removable 1/2" R and Timber Strive

2" x 1/2" Bar

2" x 1/2" Bar

2" x 1/2" Bar

2" x 1/2" Bar

2" x 1/2" Bar

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2" x 1/2" Bar

2" x 1/2" Bar

2" x 1/2" Bar

CROSS SECTION OF EXPANSION DAM AT ABUTMENT

CROSS SECTION OF EXPANSION DAM AT JUNCTION OF SPANS

DETAIL 'U'

SECTION A-A

SECTION B-B

SECTION F-F

SECTION THROUGH CURB

SECTION C-C

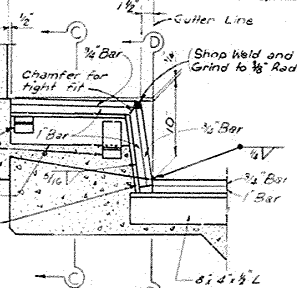
SECTION D-D

SECTION E-E

DETAIL 'X'

*This dimension to be maintained at normal temperature of 60° Fahrenheit. For each 10° above or below 60°, decrease or increase respectively by increment shown in Table "X".

For roadway width See General Plan



WEIGHT OF EXPANSION DAM

ITEM	ASSEMBLY A	ASSEMBLY B	ASSEMBLY C	ASSEMBLY D	ASSEMBLY E
THROUGH MEMBERS	58.3	34.8	37.9	51.8	34.8
BRACKETS	39.0	—	39.4	—	—

WEIGHT OF CURB PLATE ASSEMBLY (EACH CURB SEE SECT D-D)

ITEM	STRAIGHT BRIDGE	30° SKEW BRIDGE	45° SKEW BRIDGE
WT. LBS.	55.4	64.0	78.4
EACH			

TABLE "X"

ITEM	INCREMENT FOR EACH 10° TEMPERATURE CHANGE
SPANS THRU 60'	1/32"
SPANS 61 THRU 100'	1/16"
SPANS 101 THRU 140'	3/32"
SPANS 141 THRU 180'	1/8"
SPANS 181 THRU 220'	5/32"
SPANS 221 THRU 240'	3/16"

GENERAL NOTE

MATERIALS

SPECIFICATIONS

PAINT

WELDING SPECIFICATIONS

BELDING AND WELDING MATERIALS

TEST REPORTS

SHOP DETAIL PLANS

JOINT SEALING COMPOUND

OPTIONAL PLATE

BONDING SURFACE FINISH

The following current A.S.T.M. Designations shall govern the materials furnished:

Structural Steel: A.S.T.M. A36
Machine Bolts and Nuts: A.S.T.M. A307

Kentucky Department of Highways Standard Specifications, Current Edition with Revisions

4th edition shown on this sheet shall be given one shop coat of type 1 red lead paint according to the specifications, except as noted below. All exposed surfaces not in contact with concrete shall be given two field coats of aluminum paint in accordance with the specifications, except as noted below. Exposed surfaces not accessible after erection shall be given two field coats of aluminum paint before erection, except as noted below.

All welding materials, welding technique and welding procedure shall comply with American Welding Society Standard Specifications for Bridge Welding, and Highway Bridges, Current Edition.

The cost of welding, welding material and labor to be included in the lump sum bid for structural steel. No direct payment will be made for welding and welding material.

Noted statements in specific shall be furnished the Department of Highways showing that all structural steel furnished meets the Specifications.

The contractor shall submit shop detail plans for approval prior to fabrication in accordance with the Specifications.

Cold applied elastomer joint sealing compound shall conform to the special provision for this material. The special provision governs material requirements, sampling and testing, application and payment.

Use of 11" x 1/8" plate in assembly B is optional. Weight of this plate is not included in assembly weight shown and it shall be included in the lump sum bid for structural steel. Details of plate, if used, shall be incorporated in shop plans submitted for approval.

Vertical edges of steel bars which require bonding to joint sealing compound shall receive heavy shop paint not field paint. Before applying joint sealing compound, vertical edges of steel bars shall be cleaned to bare metal.

NOTE:

Dimensions shown on Curb Details are for Straight Bridge

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT

STANDARD EXPANSION DAM FOR
CONCRETE SPANS WITH CURBS

REVISED
NO. ED-38

BRIDGE