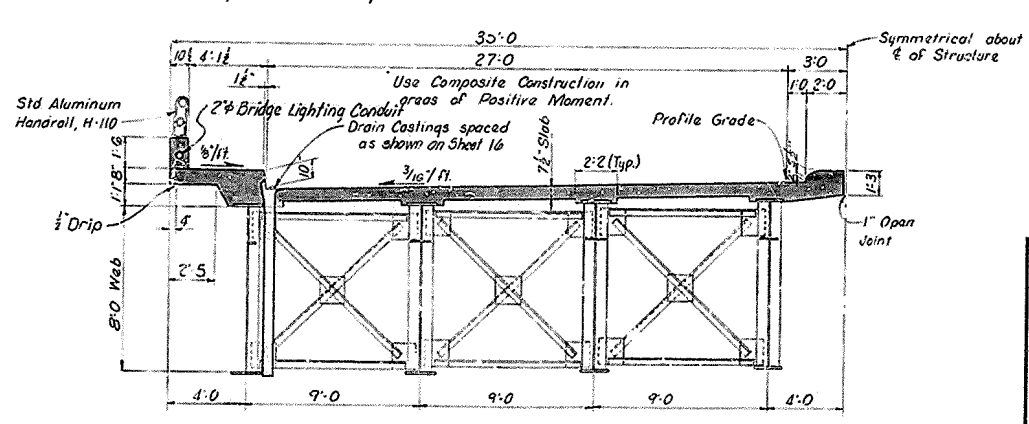
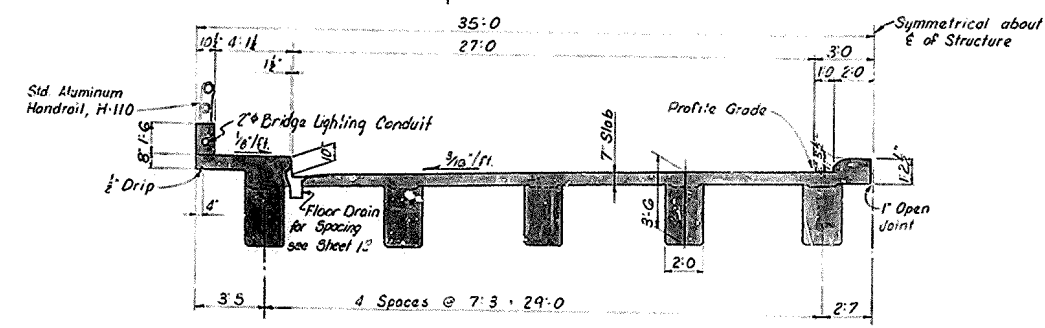
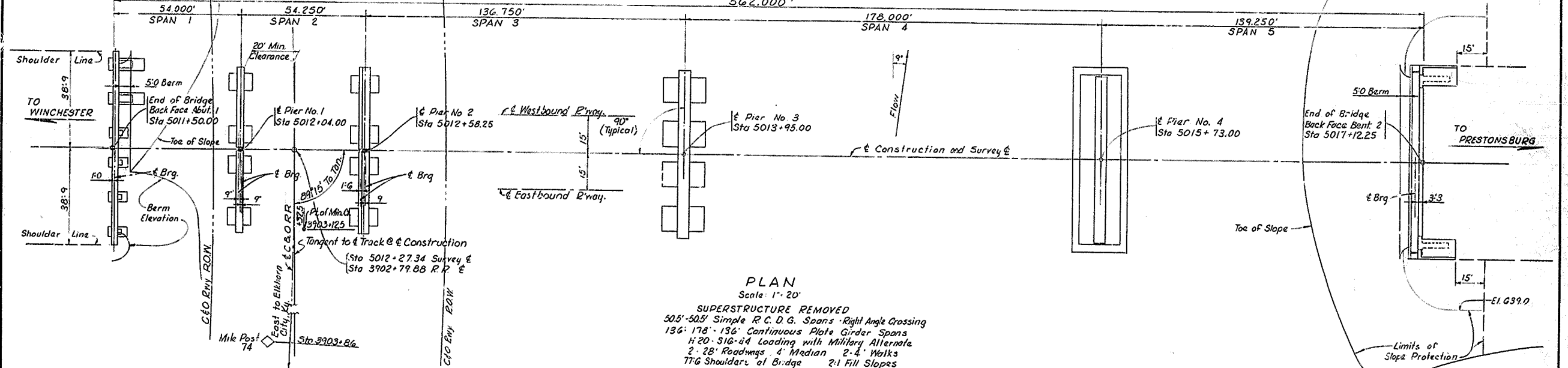
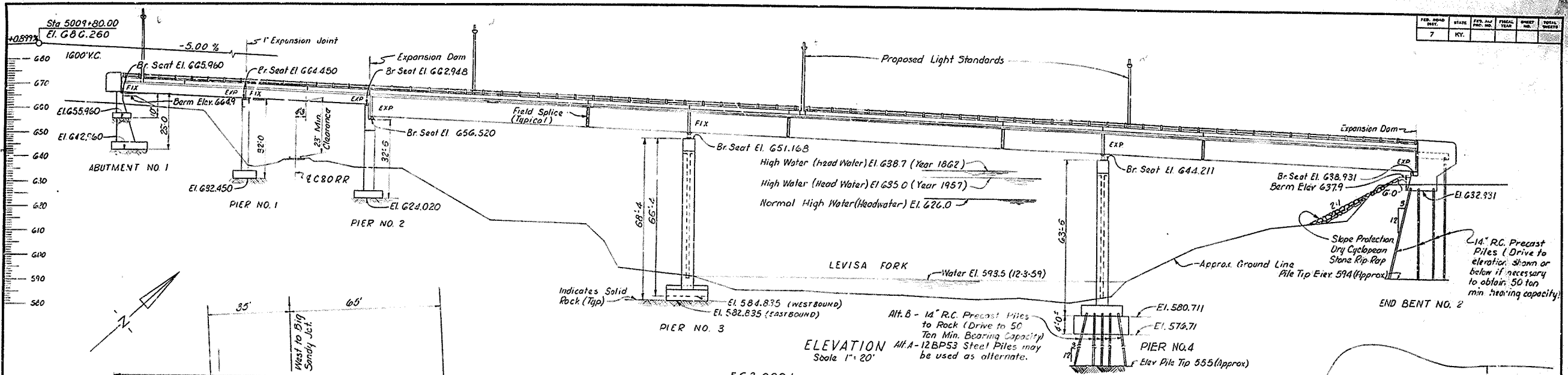


FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



DESIGNED BY: DATE: 1/25/54
 CHECKED BY: DATE: 1/25/54
 DRAWN BY: DATE: 1/25/54
 TRACED BY: DATE: 1/25/54
 APPROVED: DATE: 1/25/54
 REVISIONS:

C. & O. RAILWAY BRIDGE DESIGNATION NO. FH740

BRIDGE OVER LEVISA FORK AND C & O RY. SHEET 2 OF 27

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
FLOYD

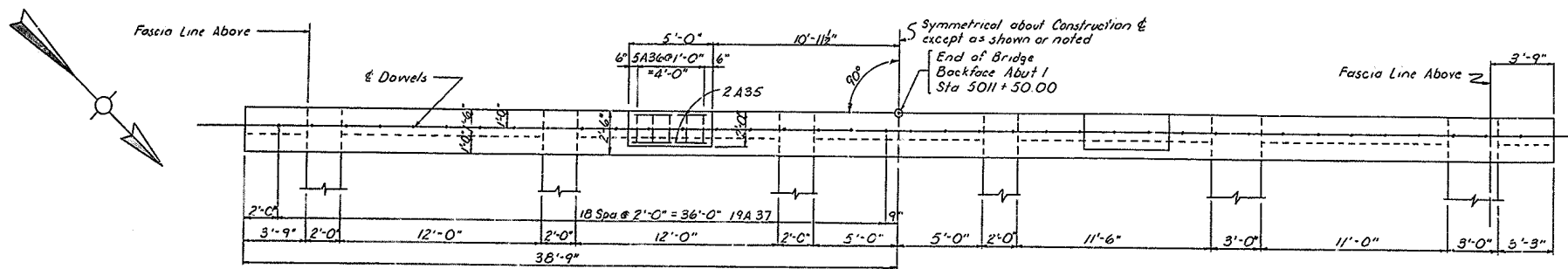
SALYERSVILLE - PRESTONSBURG
ROAD
5267(5)

STATION 5014+31 PROJECT NO. SP 36-156-14L

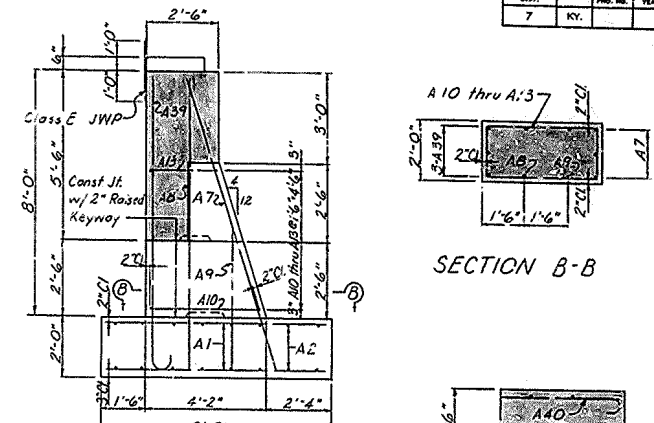
BRIDGE NUMBER	EK 6-1-5	SECTION NO.	6	DRAWING NO.	14846	INDEX	
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LAYOUT

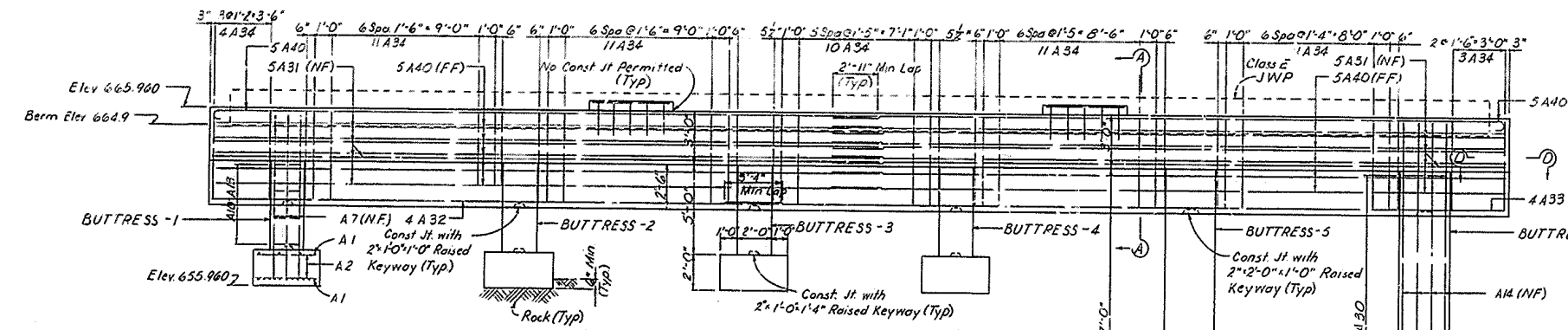
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



PLAN OF CAP



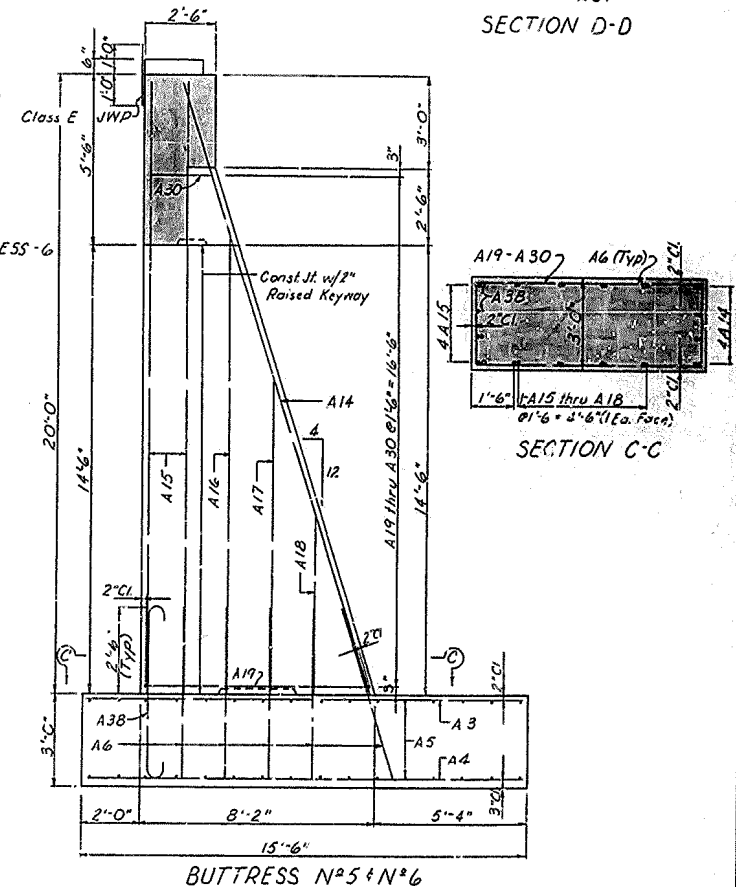
BUTTRESS N°1 THRU N°4



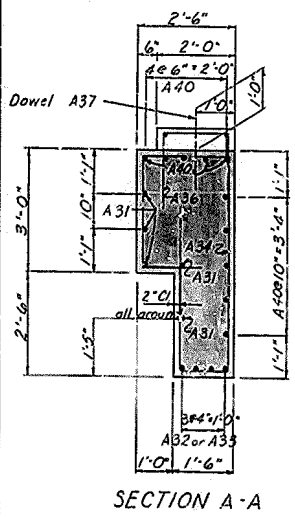
ELEVATION

NOTE:
Footing Elevation may be changed by the Engineer to conform with variations in the elevation of the top of Rock. Buttress steel shall not be ordered until final footing elevations are determined.

Note: Buttress 1, 2, 3 & 4 Identical
Buttress 5 & 6 Identical

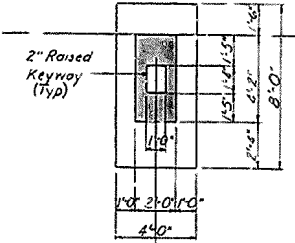


BUTTRESS N°5 & N°6

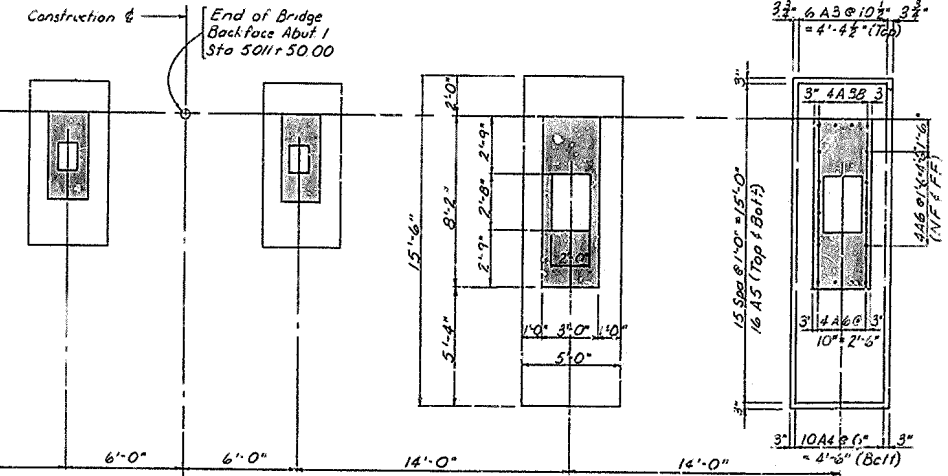


SECTION A-A

Typical Footing Reinforcement Buttresses 1 thru 4



Typical Footing Dimensions Buttresses 1 thru 4



PLAN OF FOOTING

Typical Footing Dimensions Buttresses 5 & 6

Typical Footing Reinforcement Buttresses 5 & 6

BRIDGE OVER LEVISA FORK AND C. & O. RY. SHEET 3 OF 27

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
FLOYD

SALYERSVILLE - PRESTONSBURG
ROAD 5 267 (5)
STATION 5014+3' PROJECT NO. SP 36-156-14L

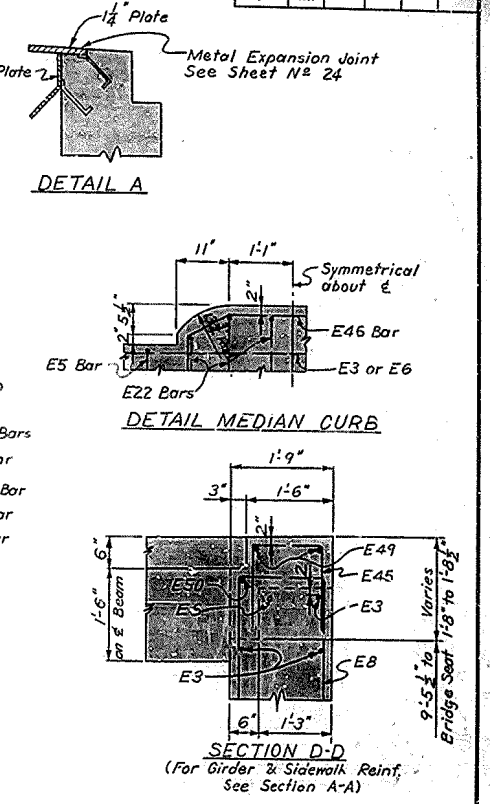
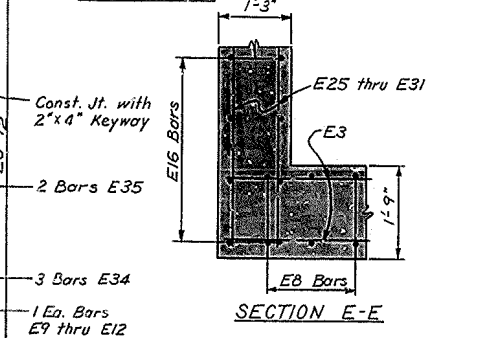
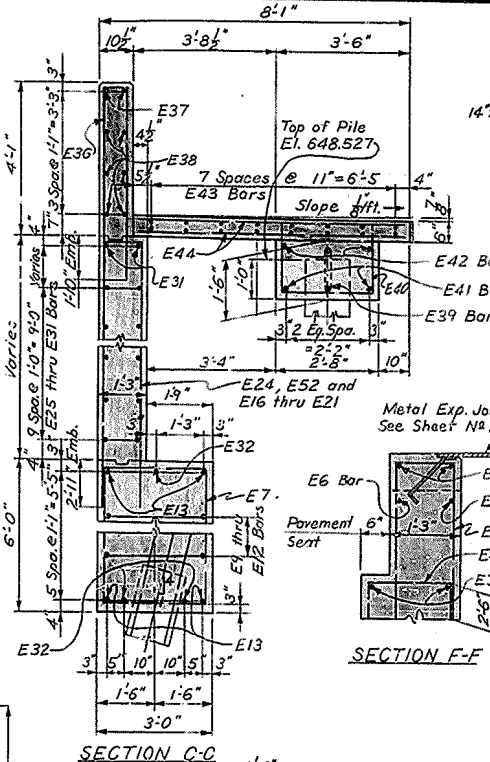
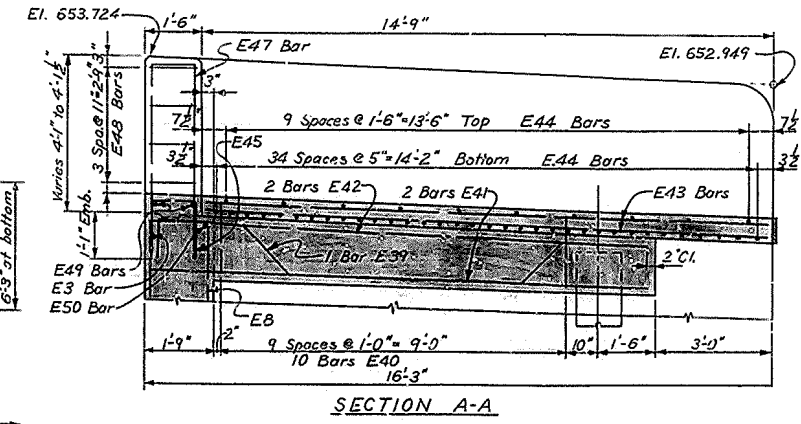
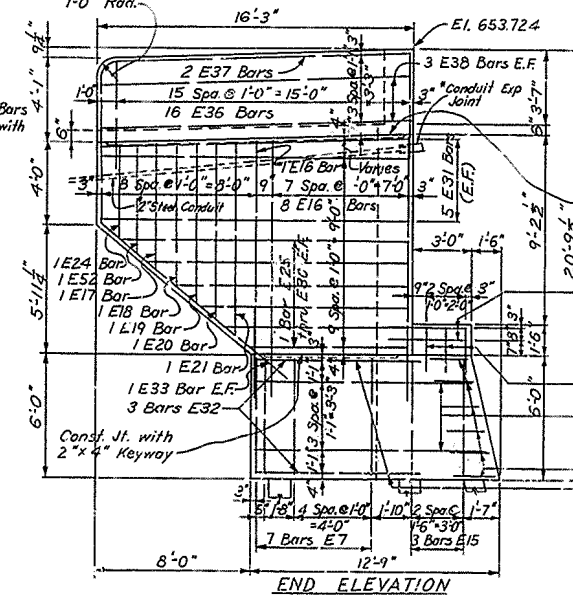
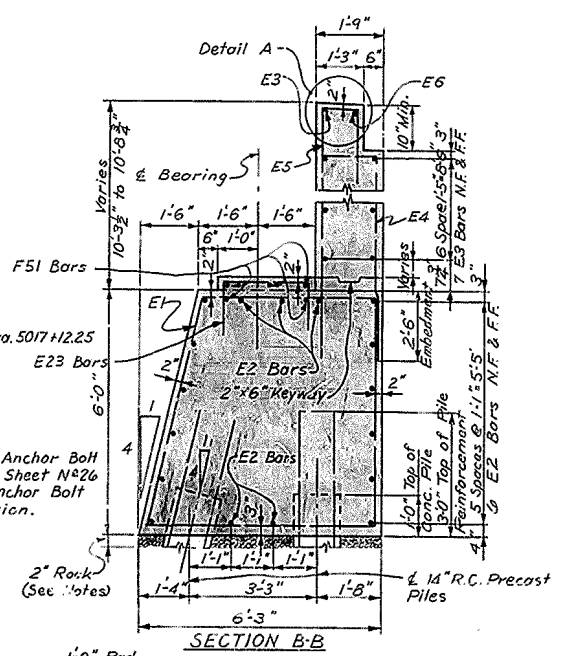
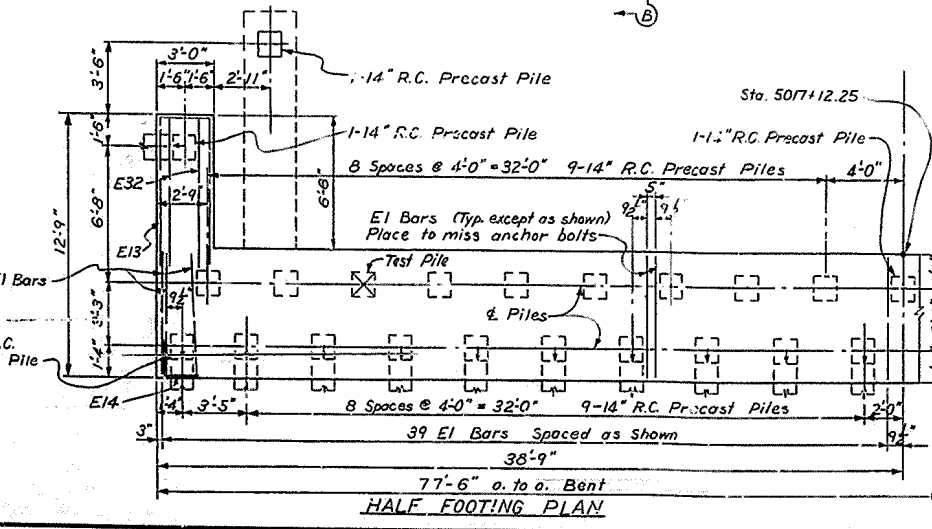
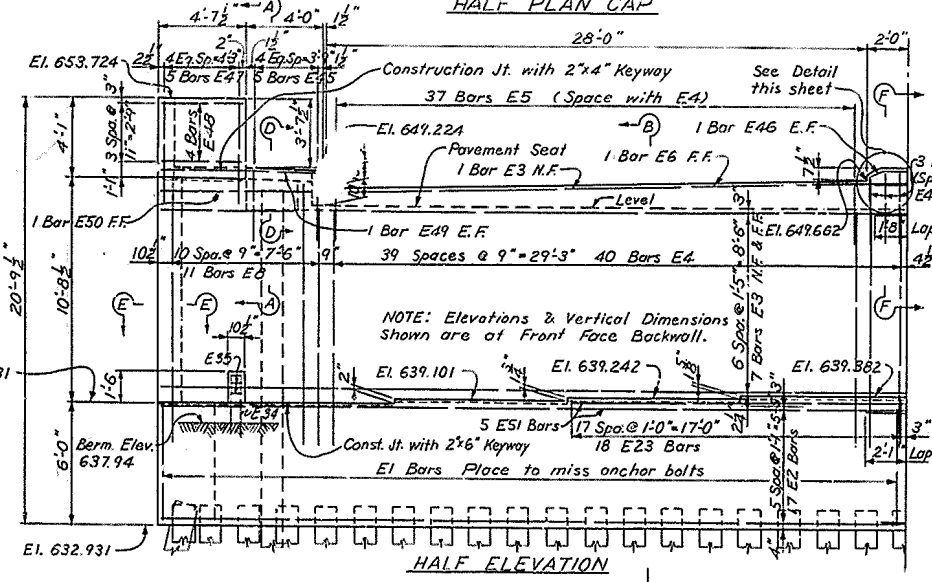
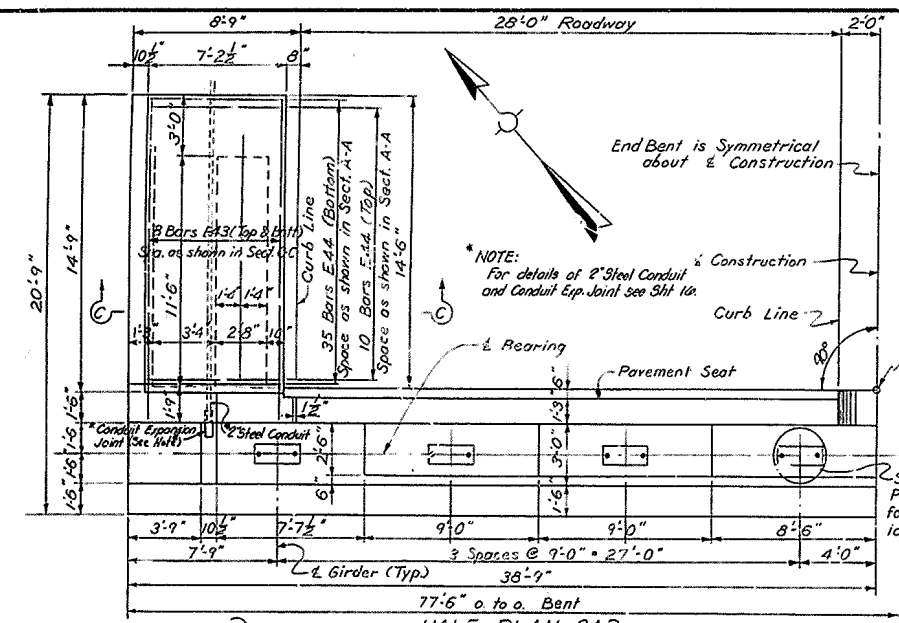
BRIDGE NUMBER	SECTION NO.	DRAWING NO.	INDEX
EK 6-1-5	6	14846	

See Sheet N° 5 for Bill of Reinforcement and Estimate of Quantities.
NF indicates near face.
FF indicates far face.
JWP indicates Class E Joint Waterproofing.
Maximum Footing Pressure under DL + LL + Overturning = 11,300 #/sq. ft.

ABUTMENT NO. 1

DESIGNED BY: C.B.K. CHECKED BY: C.L.H. DATE: 5-21-60
 REVISED BY: E.R.S. CHECKED BY: S.P.L. DATE: 5-21-60
 TRACED BY: DATE:

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



NOTES-

Dress subgrade to 2" below plan elevation for bottom of cap. Add a 2" layer of #6 crushed stone or gravel and tamp this layer into the subgrade. Place 1/2 cement mortar up to the bottom of cap elevation. Side forms for cap may be placed as soon as mortar has set a sufficient time to support men & forms without being disturbed. This method is to be used instead of bottom of cap forms and the cost of this work shall be incidental to and shall be included in the unit price bid for Concrete, Class 'A'.

Top of Cap bars are to be accurately located in accordance with the plans so that they do not interfere with drilling of anchor bolt holes.

Do not backfill above bridge seat until superstructure is in place.

See Sheet No. 5 for Bill of Steel Reinforcement and Estimate of Quantities.

14" R.C. Precast Piles are to be driven to elevation and bearing capacity shown on Sheet No. 2

BRIDGE OVER LEVISA FORK AND C. & O. RY. SHEET 4 OF 27

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
FLOYD

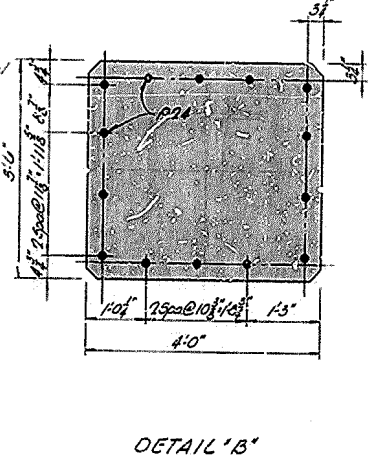
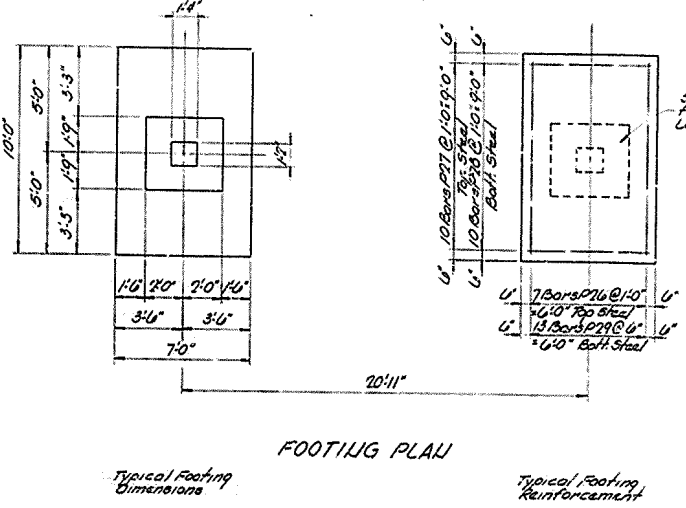
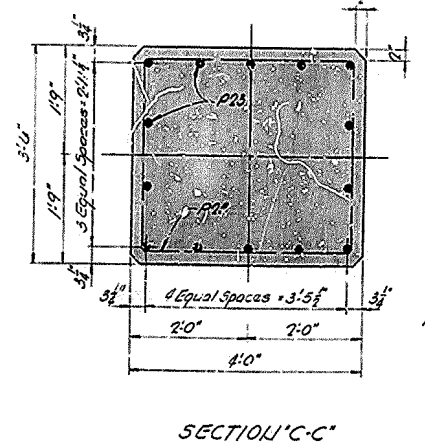
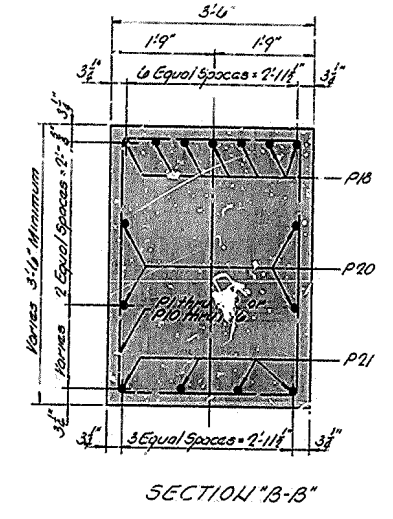
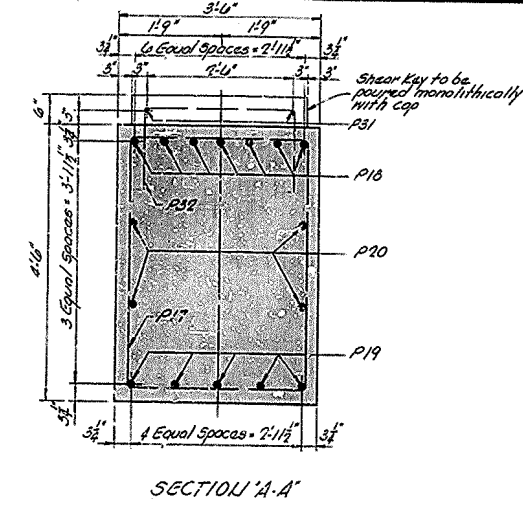
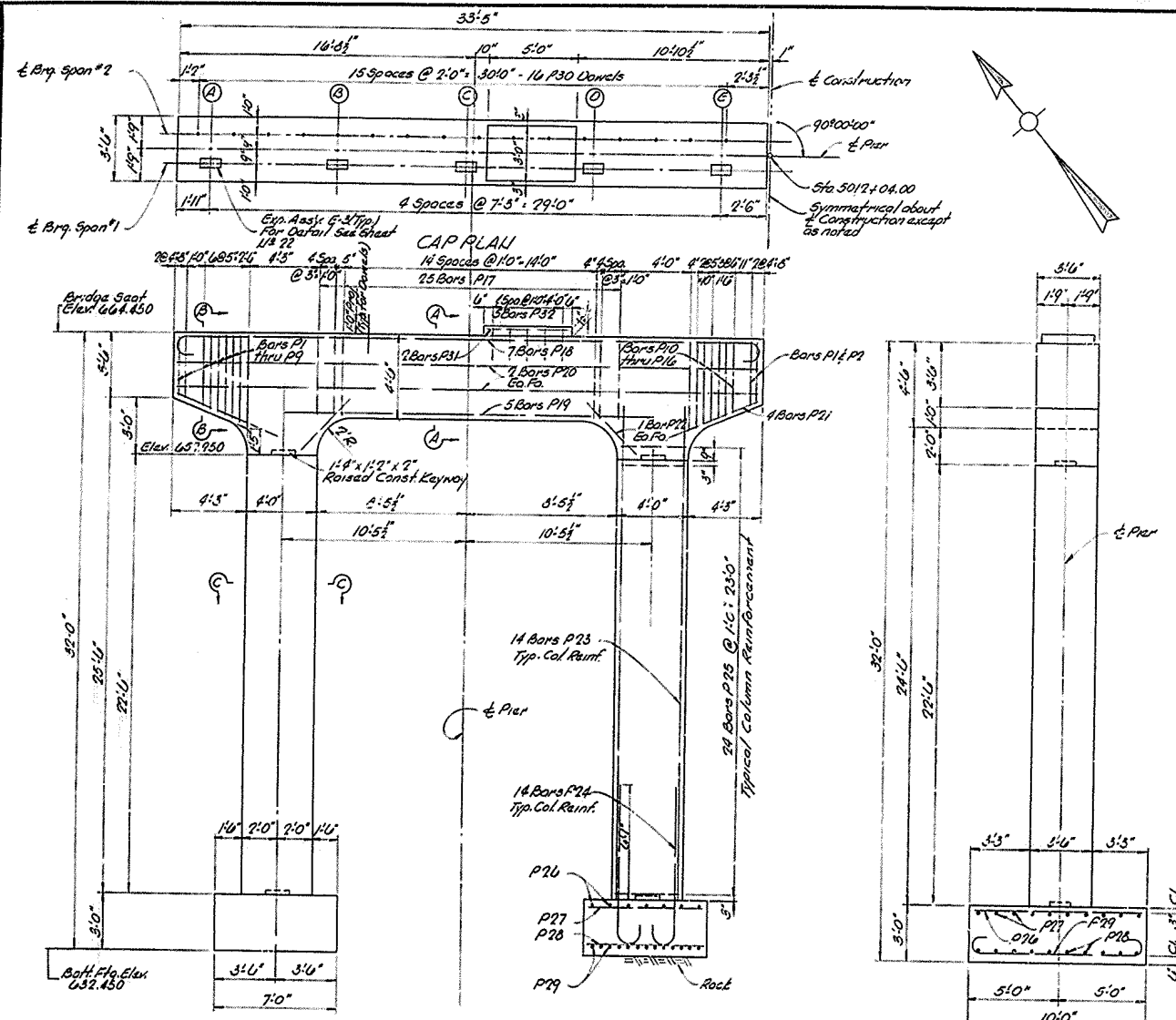
SALYERSVILLE - PRESTONSBURG
ROAD S 27157

STATION 5014+31 PROJECT NO. SP 36-156-14L

BRIDGE NUMBER	EK 6-1-5	SECTION NO.	6	DRAWING NO.	14846
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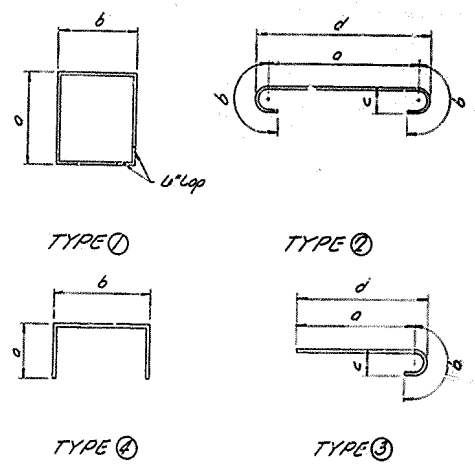
END BENT NO. 2

APPROVED BY: C.B.V. DATE: 7-11-50
 CHECKED BY: D.A.F. DATE: 7-11-50
 DRAWN BY: C.B.V. DATE: 7-11-50
 REVISIONS:



BILL OF REINFORCEMENT

Mark	Type	Size	Number	Length Ft. In.	Location	a	b	c	d
						Ft. In.	Ft. In.	Ft. In.	Ft. In.
P1	○	5	4	13 8	Cap	3 3/4	3 2		
P2	○	5	6	13 11	Cap	3 5	3 2		
P3	○	5	2	14 3	Cap	3 9 1/2	3 2		
P4	○	5	2	15 0	Cap	3 11 1/2	3 2		
P5	○	5	2	15 4	Cap	4 1 1/2	3 2		
P6	○	5	2	15 8	Cap	4 5 1/2	3 2		
P7	○	5	2	15 11	Cap	4 9 1/2	3 2		
P8	○	5	2	16 3	Cap	4 13 1/2	3 2		
P9	○	5	2	16 6	Cap	4 17 1/2	3 2		
P10	○	5	2	16 7	Cap	4 18 1/2	3 2		
P11	○	5	2	15 0	Cap	3 9 1/2	3 2		
P12	○	5	2	15 3	Cap	4 1 1/2	3 2		
P13	○	5	2	15 9	Cap	4 7 1/2	3 2		
P14	○	5	2	16 0	Cap	4 8 1/2	3 2		
P15	○	5	2	16 4	Cap	4 12 1/2	3 2		
P16	○	5	2	16 7	Cap	4 15 1/2	3 2		
P17	○	5	30	13 5	Cap	4 2 3/4	3 2		
P18	○	9	11	35 5	Cap	32 0 1/2	1 8 0 1/2	33 0	
P19	SH	11	10	21 0	Cap				
P20	SH	6	3	33 0	Cap				
P21	SH	8	10	6 6	Cap				
P22	SH	6	3	4 0	Cap				
P23	SH	11	30	27 5	Column				
P24	○	11	30	10 0	Footring	8 0 1/2	2 0 1 1/2	8 7	
P25	○	4	96	14 5	Column	3 8 3 2			
P26	SH	5	26	9 6	Footring				
P27	SH	5	30	6 6	Footring				
P28	SH	6	10	6 6	Footring				
P29	○	7	32	11 3	Footring	8 11 1 2	0 7 9 6		
P30	SH	4	32	2 0	Demol Cap				
P31	SH	3	4	4 8	Shear Key				
P32	○	5	10	5 10	Shear Key	1 8 2 0			



ESTIMATE OF QUANTITIES
 Concrete Class "A" 181.4 Cu Yds
 Steel Reinforcement 1921.5 Lbs
 Structure Excavation, Solid Rock Item II 125 Cu Yds

NOTES:
 Top of Cap bars are to be accurately located in accordance with the plans so that they clear interference with the placing of Expansion Assembly E-3 For Anchor Bolt Location See Sheet L/S 24
 Maximum Footing Pressure under DL + LL + Overturning = 12,360 Lsq ft.

BRIDGE OVER LEVISA FORK AND C. & O. RY. SHEET 6 OF 27

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
FLOYD

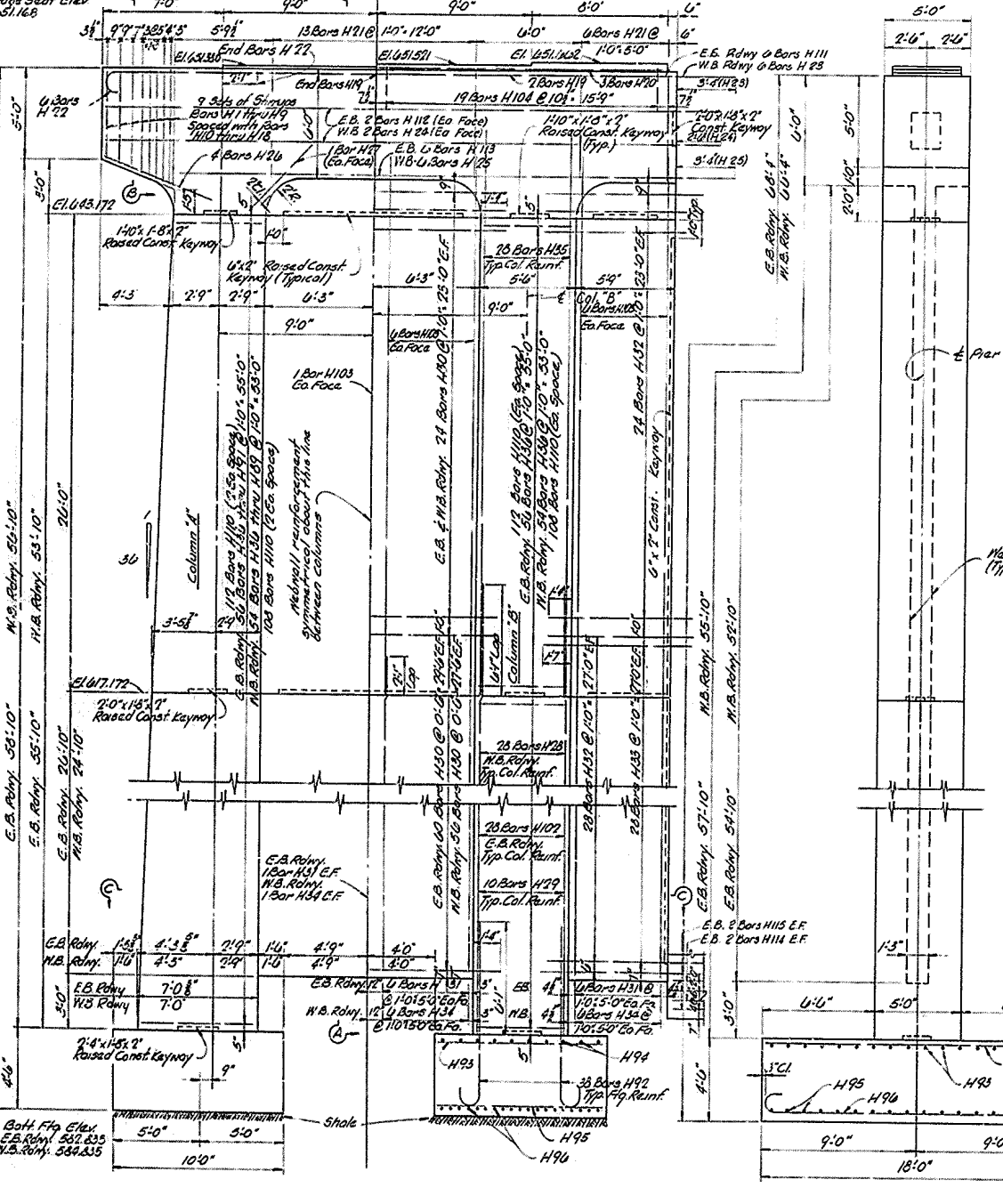
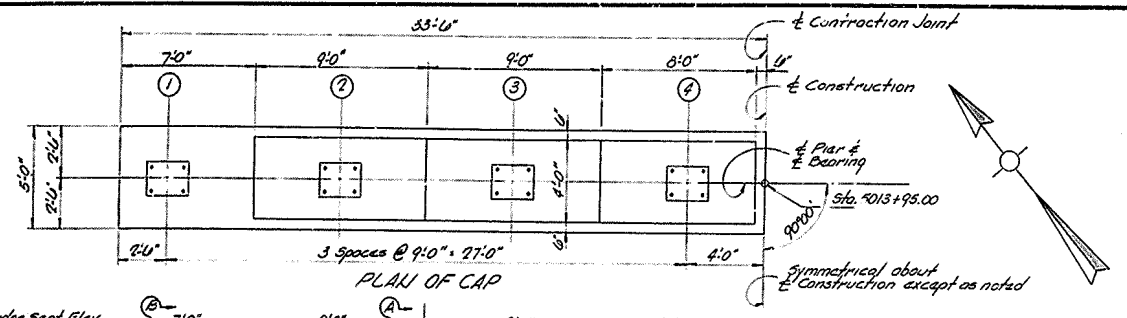
SALYERSVILLE - PRESTONSBURG
 ROAD 5267 (S)

STATION 5014 + 31 PROJECT NO. SP 36-156-14L
 BRIDGE NUMBER 1-1-5 SECTION NO. 14846

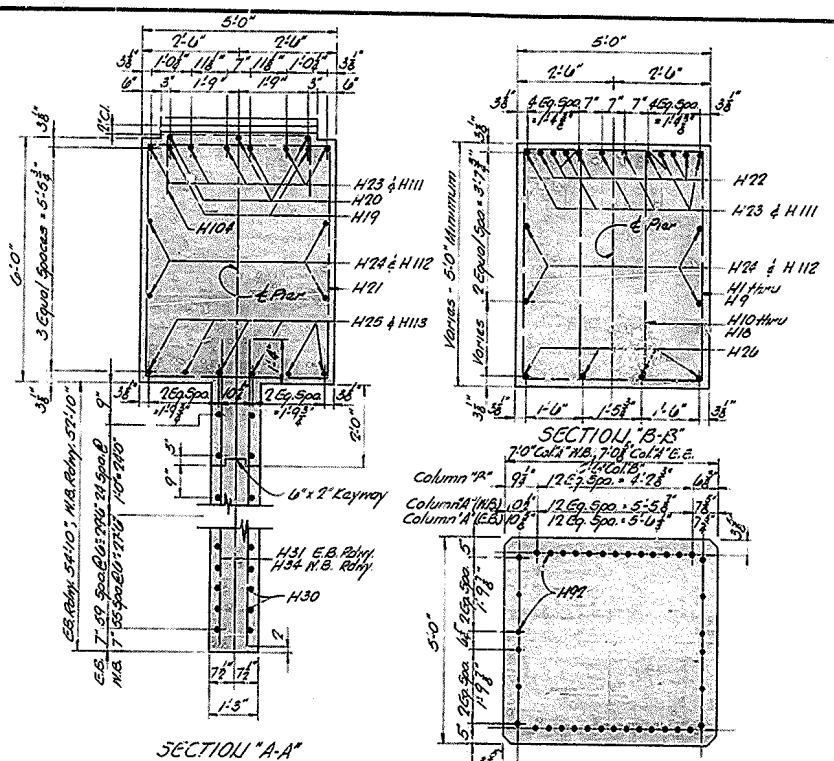
PIER NO. 1

DESIGNED BY: EMM
 CHECKED BY: C.L.E.
 DATE: 8-23-60
 TRACED BY: EMM
 DATE: 8-23-60

REV.	DATE	BY	CHKD.	NO.	TOTAL SHEETS
7					

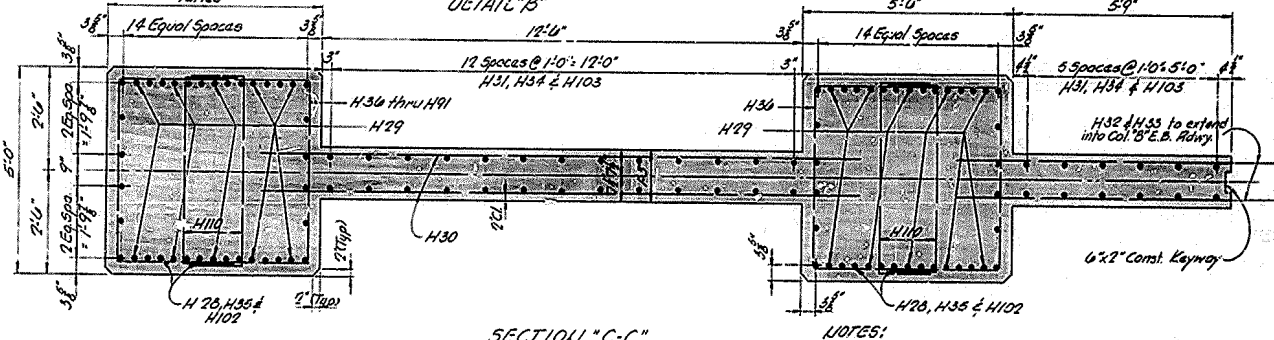


ELEVATION



SECTION 'A-A'

SECTION 'B-B'

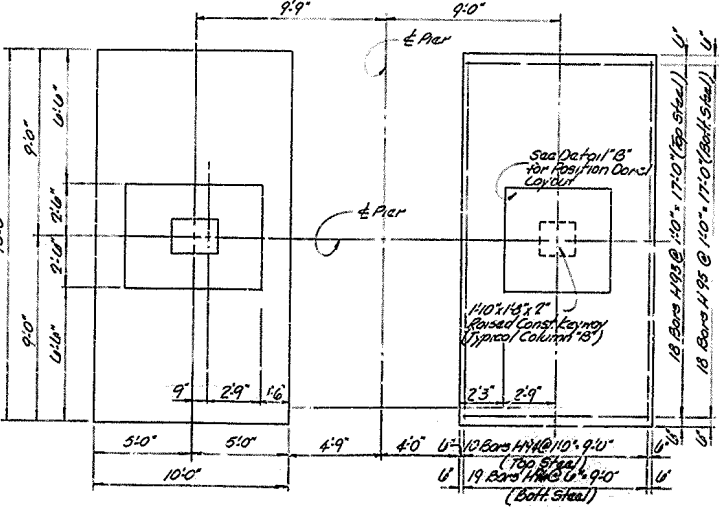


SECTION 'C-C'

NOTES:
 Forms under web wall shall be of sufficient strength and rigidity to support the full weight of web wall without appreciable deflection of settlement.
 For Anchor Bolt Connection see Sheet LR 70
 For Bill of Materials see Sheet LR 10
 E.F. denotes Each Face
 Top of cap bars are to be accurately located in accordance with the plans so that they do not interfere with drilling anchor bolt holes.
 Maximum Tensile Pressure under DL+LL+Overturning
 = 12,950 #/sq.ft.
 = 17,100 #/sq.ft. (Ice Condition)

WORK THIS SHEET WITH SHEET LR 10

END VIEW



Typical Footing Dimensions FOOTING PLAN

Typical Footing Reinforcement

PIER NO. 3

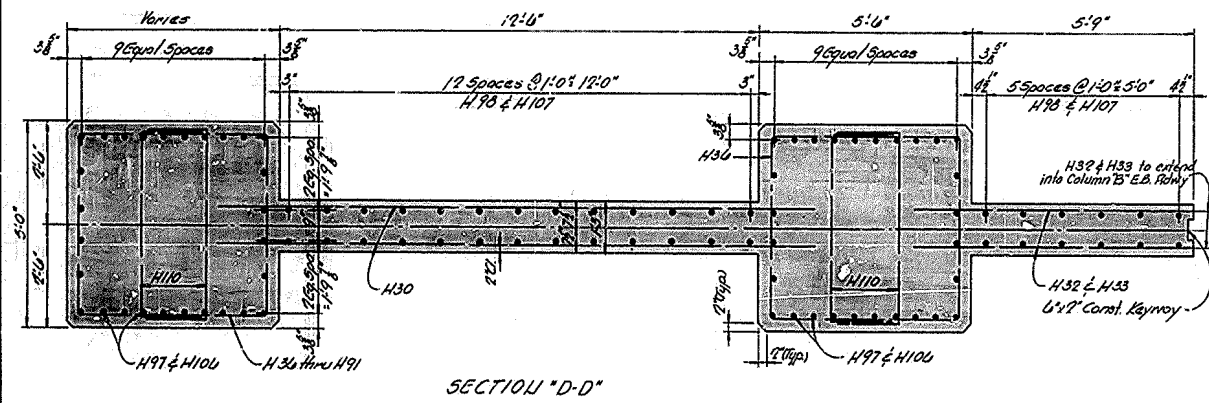
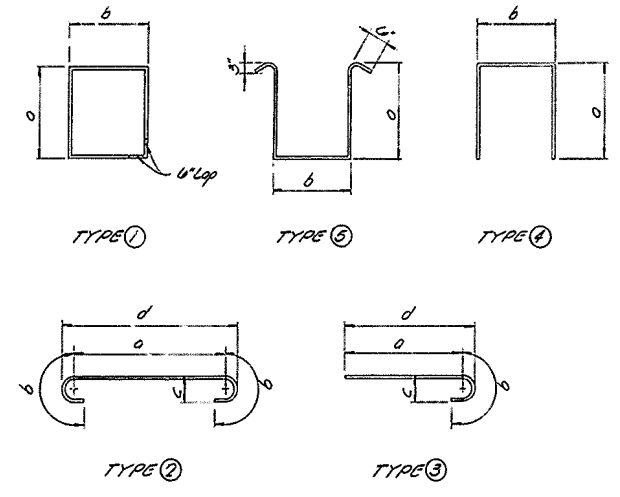
BRIDGE OVER LEVISA FORK AND C.O.R.Y. SHEET 3 OF 27

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
FLOYD

SALYERSVILLE - PRESTONSBURG
 ROAD 5247 (S)
 STATION 5 014 + 31 PROJECT NO. SP 36-156-14L

BRIDGE NUMBER	EK 6-1-5	SECTION NO.	6	DRAWING NO.	14846
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DESIGNED BY: ELW
 CHECKED BY: EMM
 DATE: 8-23-60



Mark	Type	Size	Number	Length	Location	a		b		c		d		
						Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	
H11	⊙	5	2	19	8	Cap	4	9 1/2	4	8				
H12	⊙	5	2	20	2	Cap	5	0 1/2	4	8				
H13	⊙	5	2	20	9	Cap	5	4	4	8				
H14	⊙	5	2	21	2	Cap	5	0 1/2	4	8				
H15	⊙	5	2	21	6	Cap	5	8 1/2	4	8				
H16	⊙	5	2	21	10	Cap	5	10 1/2	4	8				
H17	⊙	5	2	22	2	Cap	6	0 1/2	4	8				
H18	⊙	5	2	22	5	Cap	6	1 1/2	4	8				
H19	⊙	5	2	22	7	Cap	6	2 1/2	4	8				
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H21	⊙	5	2	22	7	Cap	5	0 1/2	1	8				
H22	⊙	5	2	22	2	Cap	5	4	1	8				
H23	⊙	5	2	22	7	Cap	5	6 1/2	1	8				
H24	⊙	5	2	22	11	Cap	5	8 1/2	1	8				
H25	⊙	5	2	22	3	Cap	5	10 1/2	1	8				
H26	⊙	5	2	22	7	Cap	6	0 1/2	1	8				
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H28	⊙	5	2	22	0	Cap	6	2 1/2	1	8				
H29	Str.	4	4	17	3	Riser								
H30	Str.	5	6	14	3	Riser								
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H35	Str.	8	6	32	1	Cap								
H36	Str.	8	8	7	0	Cap								
H37	Str.	4	12	5	0	Cap								
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H39	Str.	11	40	12	0	Column								
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H41	Str.	5	33	28	9	Web Wall								
H42	Str.	5	104	104	14	2	Web Wall							
H43	Str.	6	50	70	14	8	Web Wall							
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H65	⊙	4	2	21	1	Column	5	7	4	7				
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Mark	Type	Size	Number	Length	Location	a		b		c		d		
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H94	⊙	4	2	22	7	Column	6	4	4	7				
H95	⊙	4	2	22	8	Column	6	4 1/2	4	7				
H96	⊙	4	2	22	8	Column	6	4 1/2	4	7				
H97	⊙	4	2	22	9	Column	6	5	4	7				
H98	⊙	4	2	22	9	Column	6	5	4	7				
H99	⊙	4	2	22	10	Column	6	5 1/2	4	7				
H100	⊙	4	2	22	10	Column	6	5 1/2	4	7				
H101	⊙	4	2	22	11	Column	6	6	4	7				
H102	⊙	4	2	23	0	Column	6	6 1/2	4	7				
H103	⊙	4	2	23	0	Column	6	6 1/2	4	7				
H104	⊙	4	2	23	1	Column	6	7	4	7				
H105	⊙	4	1	23	2	Column	6	7 1/2	4	7				
H106	⊙	11	157	11	6	Footing	9	6 1/2	2	0	1	1 1/2	10	1
H107	Str.	5	72	9	4	Footing								
H108	Str.	5	40	68	17	4	Footing							
H109	Str.	6	72	9	4	Footing								
H110	⊙	10	76	20	2	Footing	10	5 1/2	1	10	1	0 1/2	17	6
H111	Str.	11	76	112	33	1	Column							
H112	Str.	5	70	99	1	Web Wall								
H113	Str.	5	78	33	9	Footing								
H114	Str.	6	73	33	9	Footing								
H115	⊙	10	116	20	2	Footing	10	5 1/2	1	10	1	0 1/2	17	6
H116	Str.	11	50	30	0	Column								
H117	Str.	5	70	29	4	Web Wall								
H118	⊙	5	38	34	6	Riser	1	4	3	8				
H119	⊙	11	112	10	7	Footing	8	7 1/2	2	0	1	1 1/2	9	2
H120	Str.	11	112	99	0	Column								
H121	Str.	5	70	97	4	Web Wall								
H122	Str.	5	78	35	10	Footing								
H123	Str.	6	78	34	3	Footing								
H124	⊙	4	480	608	7	10	Column	1	8	4	7			
H125	⊙	8	6	6	54	4	Cap	32	10	1	6	10	55	3
H126	Str.	6	4	4	58	3	Cap							
H127	Str.	8	6	6	28	9	Cap							
H128	Str.	5	4	6	11	Web Wall								
H129	Str.	6	8	7	2	Web Wall								

ESTIMATE OF QUANTITIES PIER #3
 Concrete Class "A" 535.6 Cu.Yds.
 Steel Reinforcement 83,099 Lbs.
 Structure Excavation, Common Item I 385 Cu.Yds.
 Structure Excavation, Solid Rock Item I 100 Cu.Yds.

ESTIMATE OF QUANTITIES PIER #4
 Concrete Class "A" 843.4 Cu.Yds.
 Steel Reinforcement 89,870 Lbs.
 Structure Excavation, Common Item I 680 Cu.Yds.
 Concrete Piles 270 Lin.Ft.

WORK THIS SHEET WITH SHEET NR 3 & 9

BRIDGE OVER LEVISA FORK AND C. & O. RY. SHEET 10 OF 21

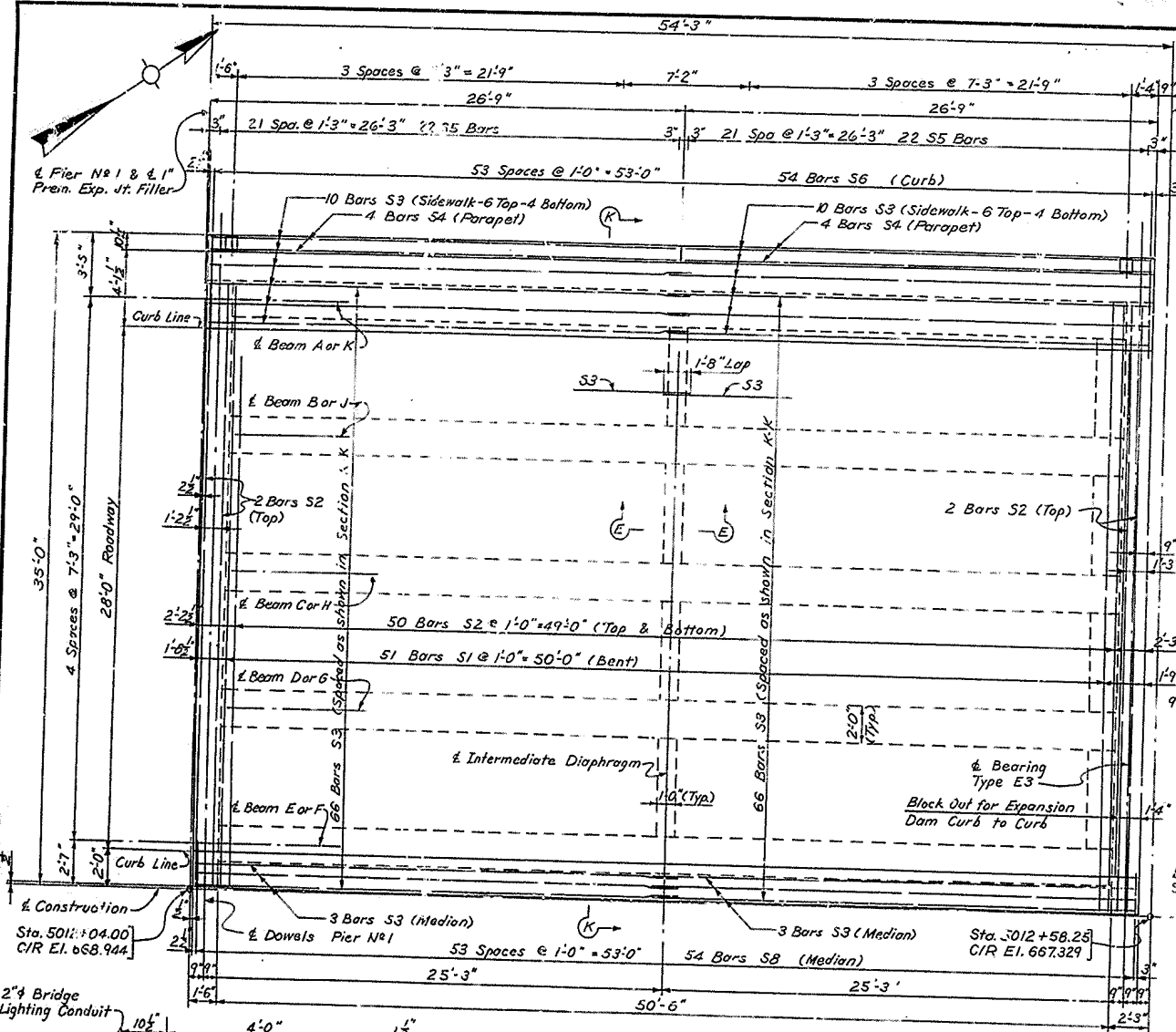
COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
FLOYD

SALYERSVILLE - PRESTONSBURG
 ROAD 5267(5)
 STATION 5014+31 PROJECT NO. SP 36-156-14L

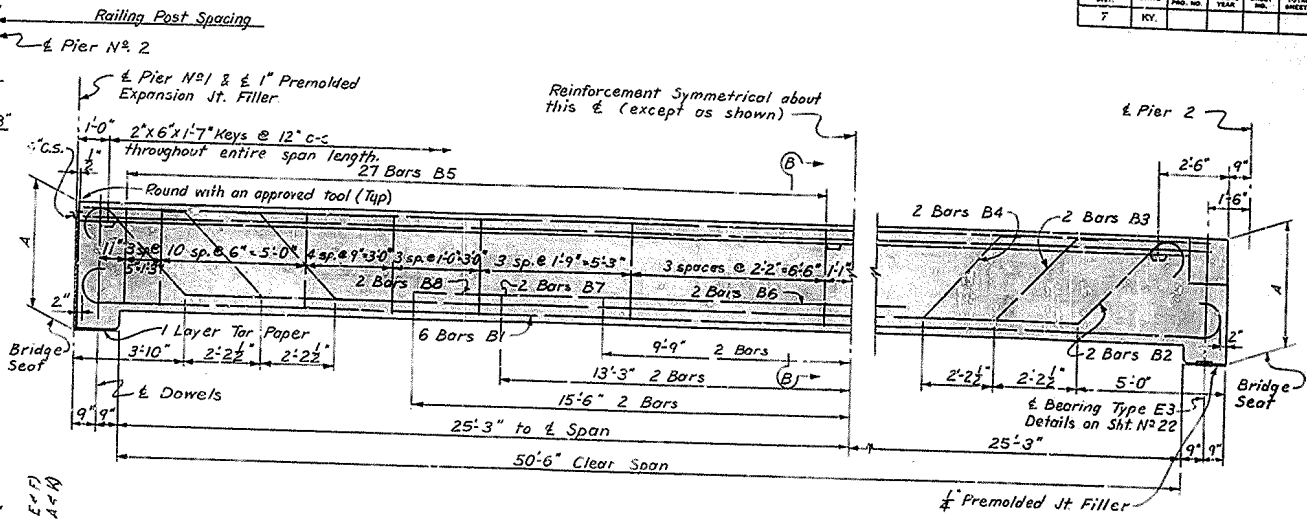
BRIDGE NUMBER	EK 6-1-5	SECTION NO.	6	DRAWING	14846	INDEX	
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PIERS NO. 3 & 4

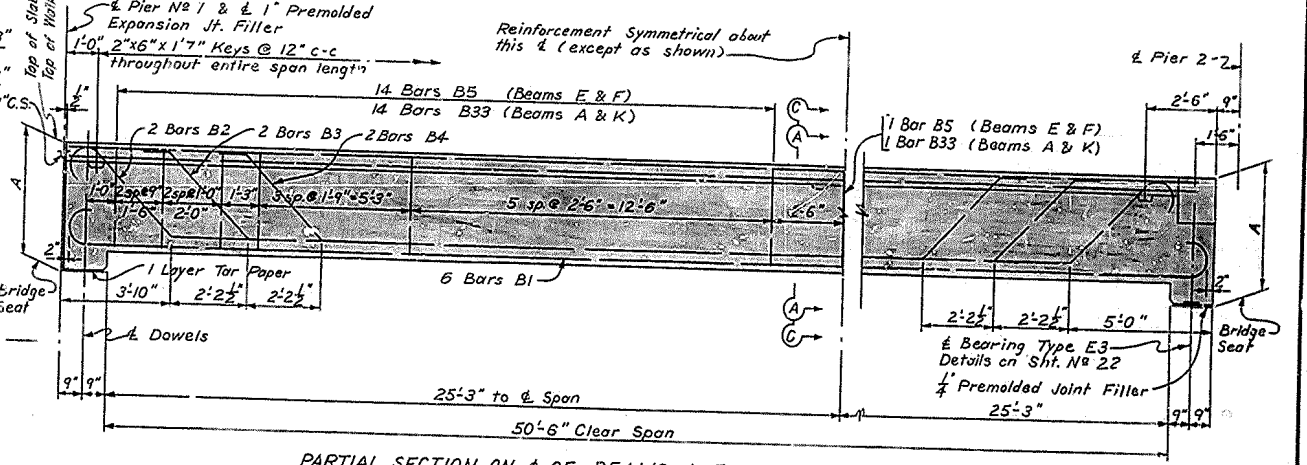
FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



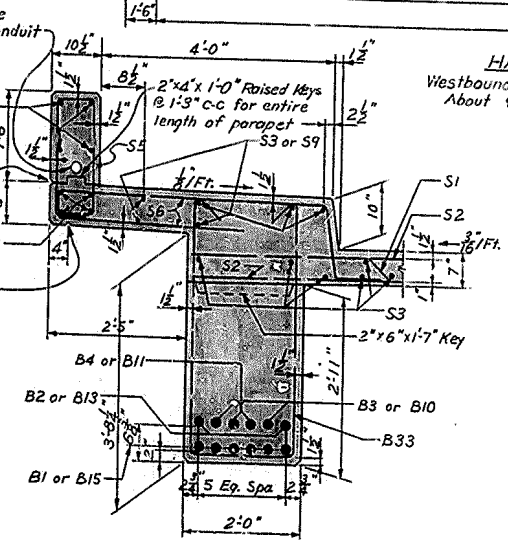
HALF-PLAN SPAN NO. 2
Westbound Lanes Shown - Eastbound Lanes Symmetrical About Construction Except As Shown or Noted



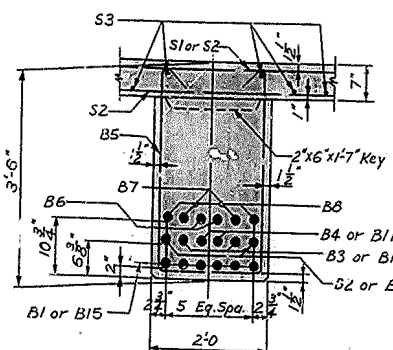
PARTIAL SECTION ON & OF BEAMS B, C, D, G, H & J
SPAN NO. 2



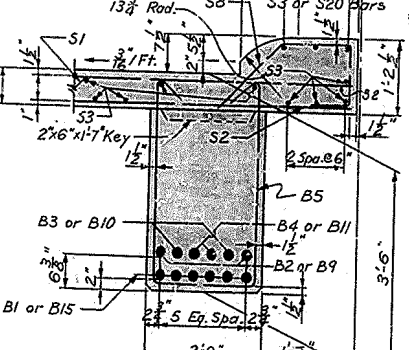
PARTIAL SECTION ON & OF BEAMS A, E, F & K
SPAN NO. 2



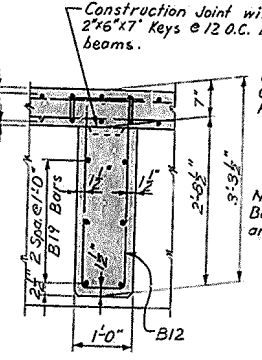
SECTION A-A
Beams A & K



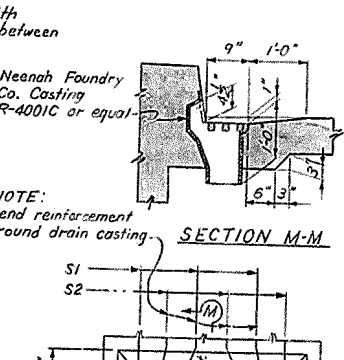
SECTION B-B
Beams B, C, D, G, H & J



SECTION C-C
Beams E & F



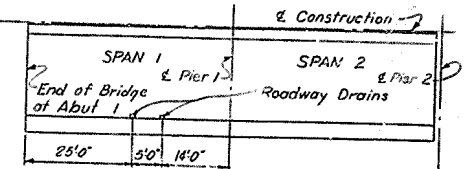
SECTION E-E



SECTION M-M

BEAM	A Dist. @ Pier 1	A Dist. @ Pier 2
A or K	4'-11"	4'-10"
B or J	4'-18"	4'-0 3/8"
C or H	4'-3 1/2"	4'-2 1/2"
D or G	4'-4 1/8"	4'-3 1/4"
E or F	4'-6"	4'-4 3/8"

PLAN OF ROADWAY DRAIN



LOCATION OF ROADWAY DRAINS

NOTE: Drains to be gray iron castings ASTM A48-56 Spec. except that tensile and transverse tests not required. Cast Iron Drains shall be painted inside and outside with one (1) coat red lead paint and one (1) coat aluminum paint according to specifications. Form T-521 report of field inspection of castings is to be submitted to the laboratory. Payment for Drain Castings will be included in lump sum bid price of Structural Steel.

BRIDGE OVER LEVISA FORK AND C. & O. RY. SHEET 12 OF 27

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
FLOYD

SALYERSVILLE - PRESTONSBURG
ROAD
5267(5)

STATION 5014+31 PROJECT NO. SP 36-156-14L
BRIDGE NUMBER EK 6-1-5 SECTION NO. DRAWING NO. 14846 INDEX

Work this Sheet with Sheets No. 11 & 15

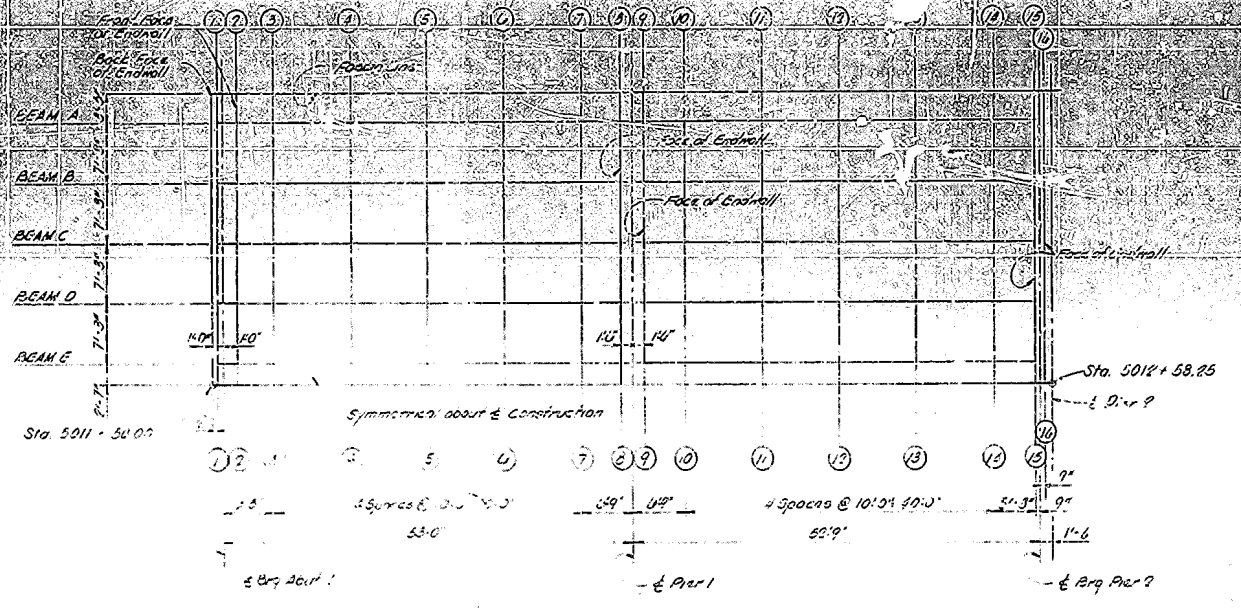
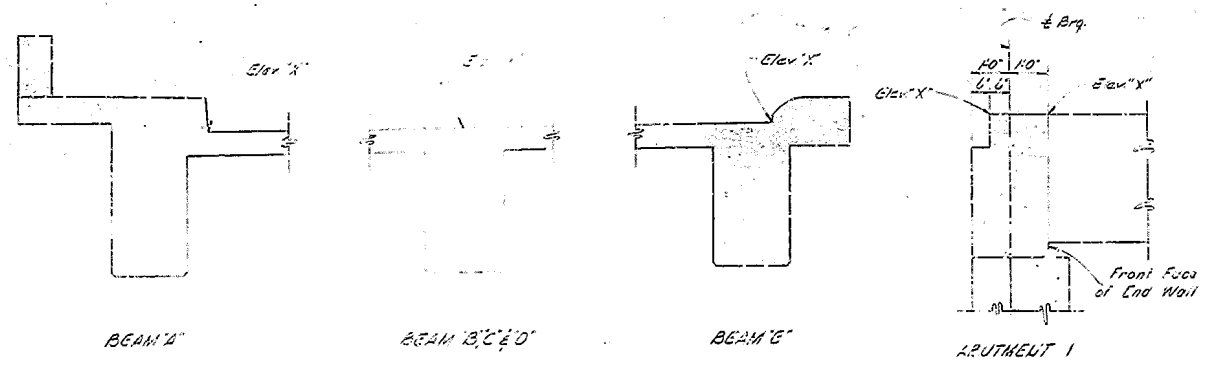
SUPERSTRUCTURE - SPANS 1 & 2

DESIGNED BY: **DAW** CHECKED BY: **CEK** DATE: **6-22-60**
 DRAWN BY: **DAW** CHECKED BY: **RAE** DATE: **6-22-60**
 REVISIONS: **ADDED LIGHTING DETAILS**

NO.	DATE	BY	CHKD.	APP'D.	REVISION
1					

NOTE:
 Construction Elevations show elevations of top of S.S. These elevations include the deformation due to deadload and shall be maintained until future work is in place.

SECTION	TABLE OF ELEVATIONS				
	BEAM A	BEAM B	BEAM C	BEAM D	BEAM E
1	670.006	670.097	670.010	670.323	670.454
2	669.968	670.057	670.116	670.283	670.406
3	669.858	669.947	670.060	670.173	670.296
4	669.628	669.716	669.829	669.948	670.065
5	669.304	669.423	669.568	669.688	669.803
6	669.079	669.161	669.271	669.387	669.512
7	668.747	668.831	668.949	669.067	669.182
8	668.502	668.584	668.707	668.820	668.938
9	668.322	668.411	668.524	668.637	668.750
10	668.179	668.268	668.381	668.494	668.610
11	668.054	668.147	668.261	668.374	668.490
12	667.978	668.077	668.217	668.348	668.486
13	667.928	668.034	668.186	668.315	668.465
14	667.914	668.022	668.185	668.317	668.461
15	667.917	668.027	668.191	668.314	668.464
16	667.918	668.025	668.176	668.292	668.414
17	667.931	668.019	668.122	668.236	668.368



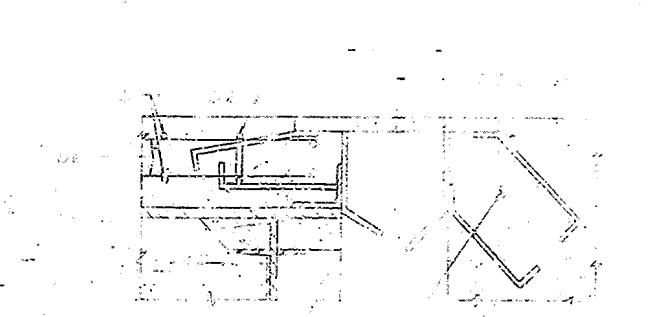
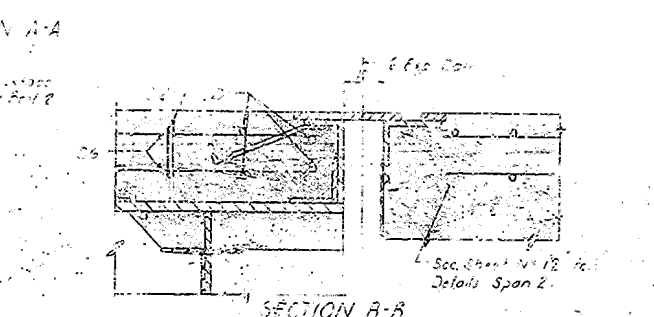
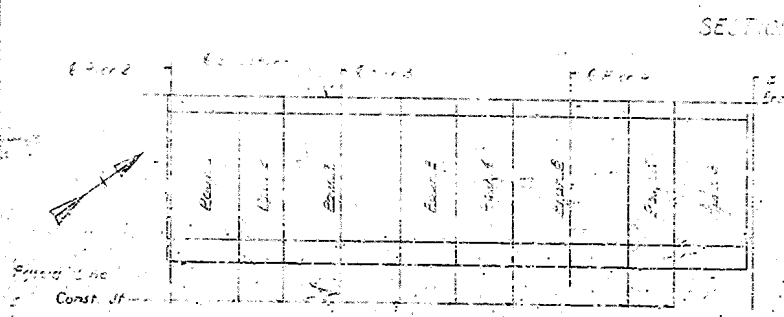
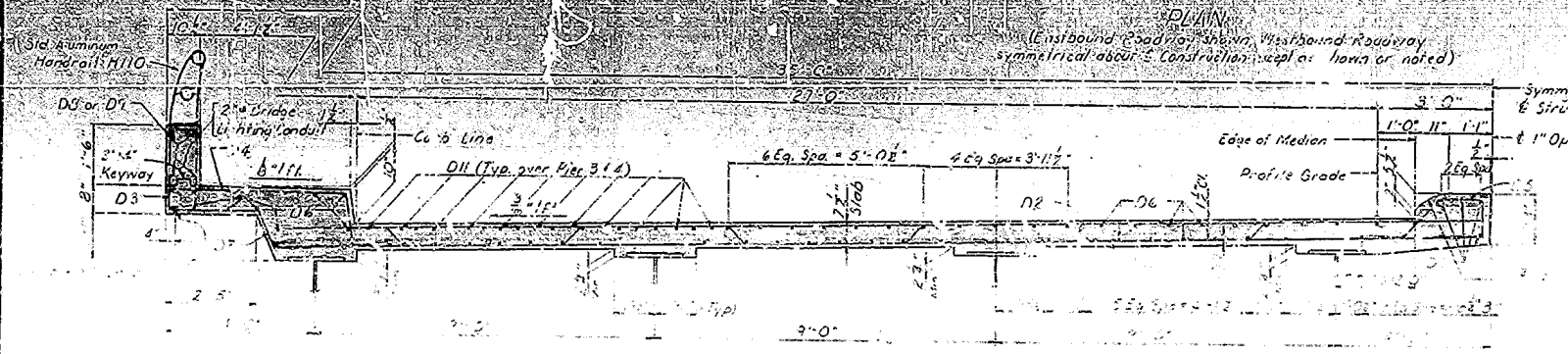
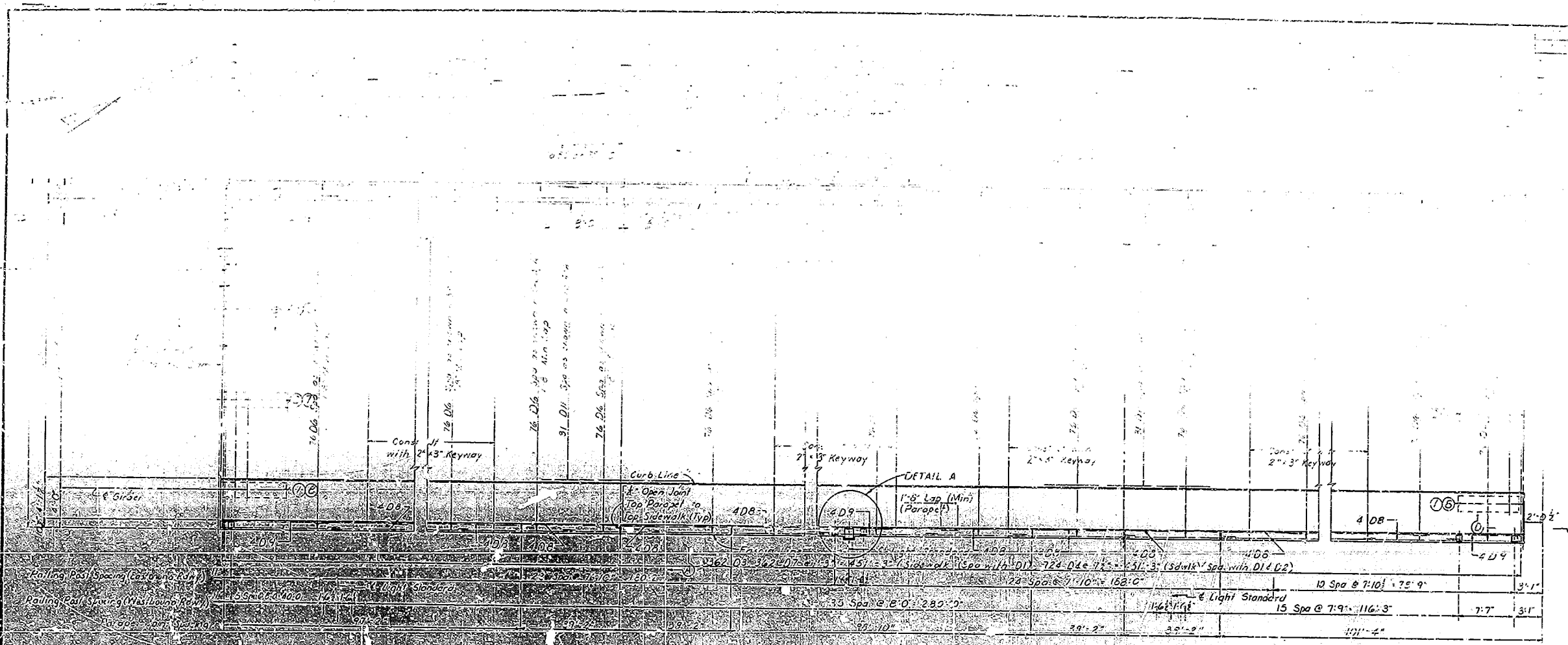
DESIGNED BY: S. J. B. C.
 CHECKED BY: S. J. B. C.
 DATE: 12/1/54
 PROJECT NO. SP 36-166-141

CONSTRUCTION ELEVATIONS- SPANS 1 & 2

BRIDGE OVER LEVISA FORK AND U.S. 31 SHEET 14 OF 27

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FLOYD COUNTY
 SALYERSVILLE - PRESTONSBURG
 ROAD 57-2-704

STATION 3014+31	PROJECT NO. SP 36-166-141
BRIDGE NUMBER EK 6-1-5	SECTION NO. 6
	14846



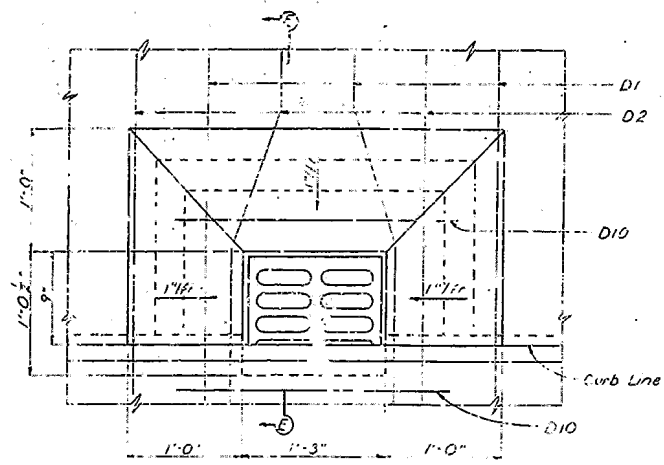
NOTES
 For details of Metal Exp. Joints see Sheets N° 23 & 24
 For reinforcement details see Sheet N° 16
 For Quantities see Sheet N° 16
 For Damage details see Sheet N° 16
 For Detail A see Sheet N° 16

BRIDGE OVER LEWIS FORK AND ...	
COMMONWEALTH OF KENTUCKY	
DEPARTMENT OF HIGHWAYS	
FRANKFORT	
COUNTY OF	
FLOYD	
SALYERSVILLE - PRESTONSBURG	
STATION 5014+3	PROJ. NO. SP 30-56-CL
BRIDGE NUMBER EX 5-1-5	SECTION NO. 6
	MB-5

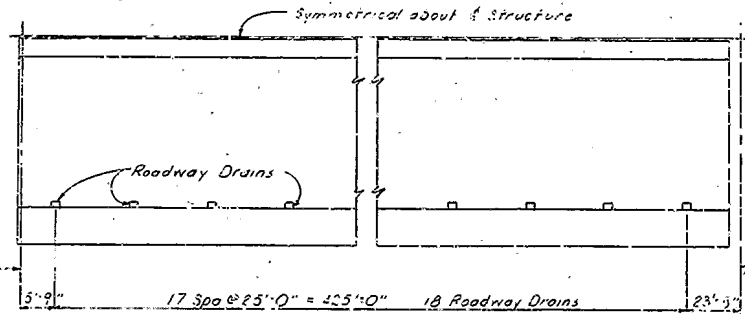
SECTION C-C
 SUPERSTRUCTURE - SPANS 3, 4, & 5

BRIDGE

REV.	BY	DATE	DESCRIPTION
7			



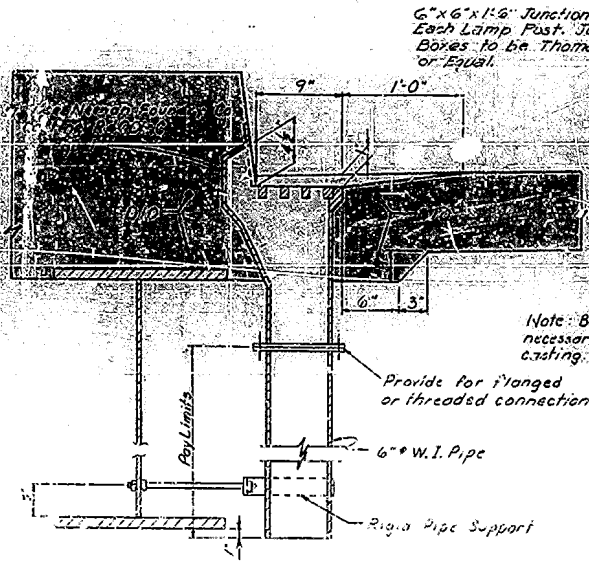
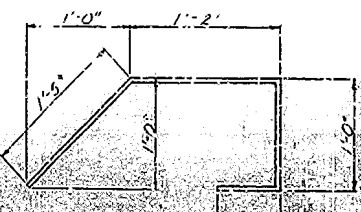
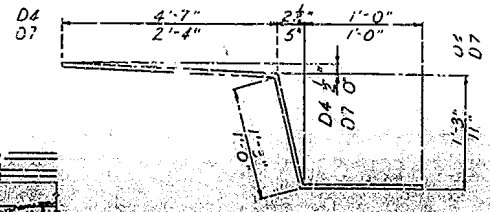
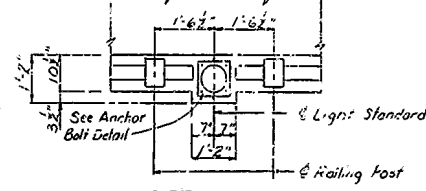
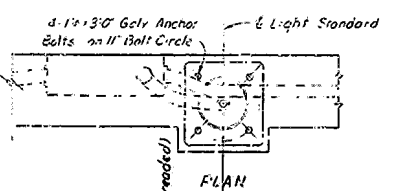
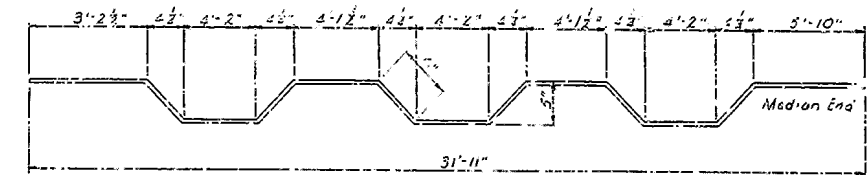
PLAN OF ROADWAY DRAIN



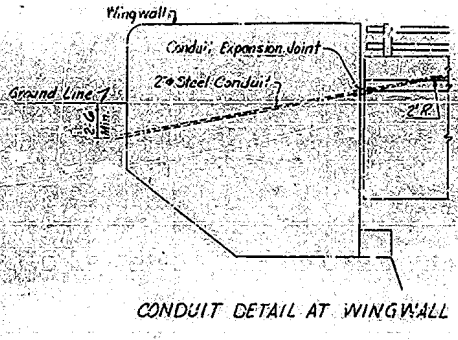
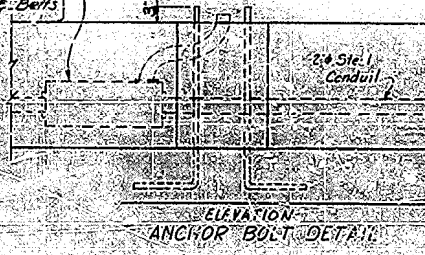
LOCATION OF ROADWAY DRAINS

BILL OF REINFORCEMENT
SUPERSTRUCTURE - SPANS 3, 4 & 5

Mark	Type	Size	Nr	Length	Location
				ft. in.	
D1	Str	6	144	31	Trans - Slab
D2	①	6	720	32	Trans - Slab
D3	②	4	724	5	Sidewalk
D4	③	4	144	6	Sidewalk
D5	④	4	724	3	Median
D6	Str	4	1824	34	Long - Slab
D7	⑤	4	124	4	Sidewalk
D8	Str	4	80	39	Parapet
D9	Str	4	28	24	Parapet
D10	SI	4	144	2	8 Roadway Drains
D11	Str	6	144	14	Long - Slab



SECTION E-E



NOTES:
Foundry Note:
 Drains to be gray iron castings A.S.T.M. A48-56 Spec. except that tensile and transverse tests not required.
 Cast Iron Drains shall be painted inside and outside with one (1) coat red lead paint and one (1) coat aluminum paint according to specifications.
 Form T-52i report of field inspection of castings is to be submitted to the laboratory. Payment for Drain Castings will be included in lump sum bid price of structural steel.

6" Wrought Iron Pipe:
 Wrought Iron Pipe is to be 3/4" Standard Weight 1.90 lb per linear foot in accordance with A.S.T.M. A72. Continuous Weld Pipe is to be 3/4" Standard Weight containing a minimum of 75% Carbon and 1.5% Manganese and having a minimum tensile strength of 50,000 psi.
 Pipe, fittings and connections, complete and in place are to be paid for at the unit price per linear foot of 6" Wrought Iron Pipe. Pipe and all fittings are to be given one coat of red lead paint and two coats of aluminum paint.

2" Steel Conduit:
 The contractor shall furnish all anchor bolts, conduit, conduit fittings, splices, junction boxes, expansion joints, etc. as required to install same as indicated. Conduit expansion joints shall be installed at all open joints or expansion joints on the bridge. All conduit shall be rigid steel hot dipped galvanized inside and out. Ends of conduit shall be reamed and threads painted with white lead when fitted up. Conduit and fittings shall be provided with suitably located drain holes and shall be spaced that any moisture that may accumulate will drain out.
 The conduit shall run from light standards to East end of bridge, and off bridge as shown by detail.
 The items listed above are part of the lighting system and are included in the lump sum bid for the lighting system. See Sheets 22A & 22B Roadway Plans.

ESTIMATE OF QUANTITIES

Concrete - Class 'A'	944.2 Cu Yd
Steel Reinforcement	171,764 lbs.
Aluminum Handrail	840.3 Lbs
6" Wrought Iron Pipe	279 Lbs

DESIGNED BY: J.L.C. & E.O.G.
 CHECKED BY: D.A. & J.C.
 APPROVED BY: R.C.O.
 DATE: 07.12.60

SUPERSTRUCTURE - SPANS 3, 4 & 5

BRIDGE OVER LEVISA FORK A.D. C.B.O. KY. SHEET 16 OF 27

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
FLOYD

SALYERSVILLE - PRESTONSBURG
 ROAD

STATION 5014+71. PROJECT NO. SP 38-156-ML

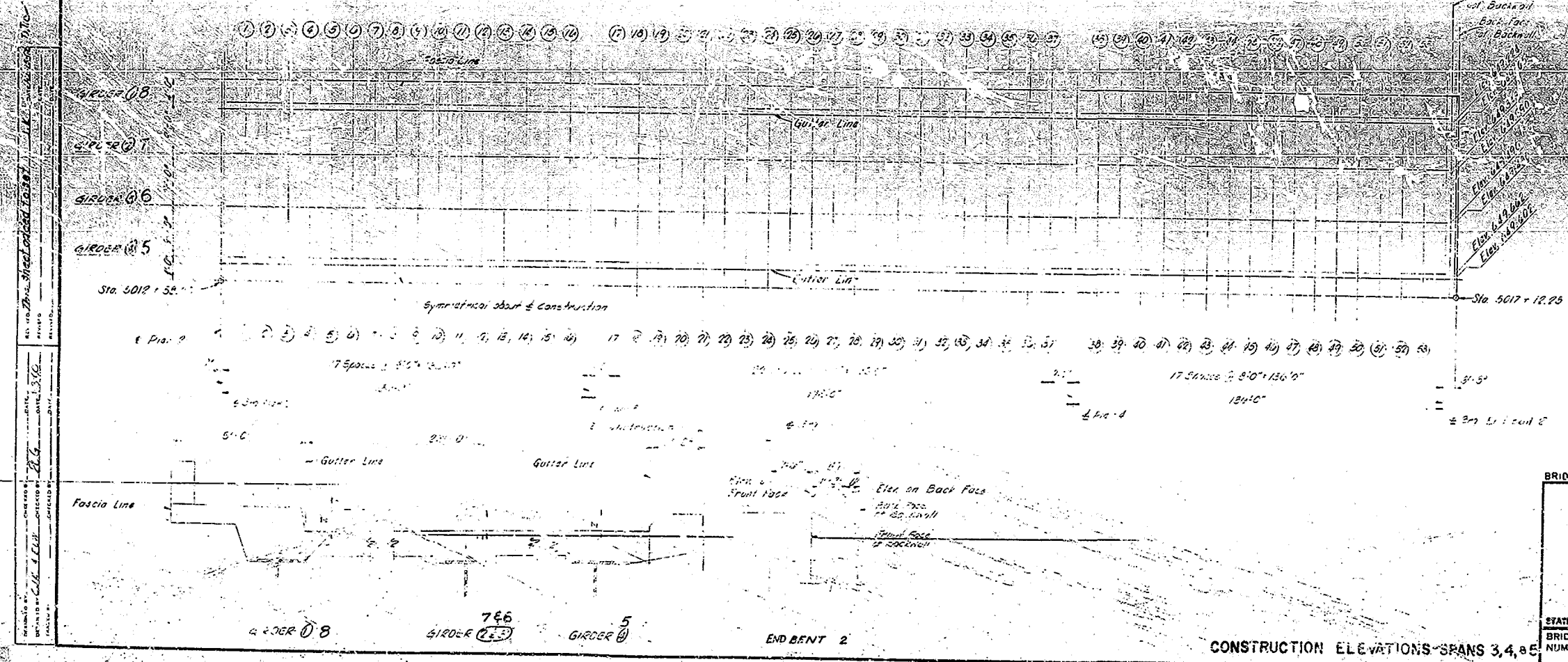
BRIDGE NUMBER	EK - 5	SECTION NO.	6	DATE	1960
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(East Bound or Rt. Side, up River.)

SECT. NO.	GIRDER 8			GIRDER 7			GIRDER 6			GIRDER 5		
	Station	Y	Z	Y	Z	Y	Z	Y	Z	Y	Z	
1	666.722	666.072	82	666.289	770	666.362	788	666.492	839			
2	665.852	665.852	814	665.991	792	666.097	827	666.242	860			
3	665.604	665.604	838	665.744	826	665.850	873	666.007	868			
4	665.367	665.367	845	665.500	815	665.597	838	665.747	896			
5	665.117	665.117	859	665.255	818	665.391	873	665.502	909			
6	664.867	664.867	889	665.002	823	665.102	883	665.241	919			
7	664.611	664.611	907	664.752	816	664.891	865	664.982	924			
8	664.352	664.352	935	664.494	824	664.641	872	664.722	923			
9	664.102	664.102	950	664.232	809	664.372	860	664.452	925			
10	663.852	663.852	963	663.991	804	664.131	854	664.182	920			
11	663.602	663.602	977	663.742	781	663.882	835	663.924	896			
12	663.352	663.352	989	663.492	777	663.632	819	663.652	850			
13	663.102	663.102	1000	663.242	771	663.382	790	663.440	802			
14	662.852	662.852	1010	662.992	742	663.132	778	663.137	812			
15	662.602	662.602	1019	662.742	728	662.882	760	662.870	771			
16	662.352	662.352	1028	662.492	715	662.632	745	662.632	735			
17	662.102	662.102	1037	662.242	702	662.382	730	662.400	679			
18	661.852	661.852	1046	661.992	690	662.132	715	662.152	671			
19	661.602	661.602	1055	661.742	678	661.882	700	661.799	679			
20	661.352	661.352	1064	661.492	667	661.632	685	661.482	710			
21	661.102	661.102	1073	661.242	657	661.382	670	661.159	757			
22	660.852	660.852	1082	661.092	647	661.232	655	660.882	757			
23	660.602	660.602	1091	660.842	638	661.082	640	660.630	739			
24	660.352	660.352	1100	660.592	629	660.932	625	660.372	804			
25	660.102	660.102	1109	660.342	620	660.782	610	659.957	843			
26	659.852	659.852	1118	660.092	611	660.632	595	659.641	870			
27	659.602	659.602	1127	659.842	602	660.482	580	659.312	904			
28	659.352	659.352	1136	659.592	593	660.332	565	658.882	932			
29	659.102	659.102	1145	659.342	584	660.182	550	658.577	960			
30	658.852	658.852	1154	659.092	575	660.032	535	658.341	977			

SECT. NO.	GIRDER 8			GIRDER 7			GIRDER 6			GIRDER 5		
	Station	Y	Z	Y	Z	Y	Z	Y	Z	Y	Z	
31	658.602	658.602	1163	658.842	566	659.882	520	658.102	953			
32	658.352	658.352	1172	658.592	557	659.732	505	657.782	981			
33	658.102	658.102	1181	658.342	548	659.582	490	657.432	1009			
34	657.852	657.852	1190	658.092	539	659.432	475	657.082	1037			
35	657.602	657.602	1199	657.842	530	659.282	460	656.732	1065			
36	657.352	657.352	1208	657.592	521	659.132	445	656.382	1093			
37	657.102	657.102	1217	657.342	512	658.982	430	656.032	1121			
38	656.852	656.852	1226	657.092	503	658.832	415	655.682	1149			
39	656.602	656.602	1235	656.842	494	658.682	400	655.332	1177			
40	656.352	656.352	1244	656.592	485	658.532	385	654.982	1205			
41	656.102	656.102	1253	656.342	476	658.382	370	654.632	1233			
42	655.852	655.852	1262	656.092	467	658.232	355	654.282	1261			
43	655.602	655.602	1271	655.842	458	658.082	340	653.932	1289			
44	655.352	655.352	1280	655.592	449	657.932	325	653.582	1317			
45	655.102	655.102	1289	655.342	440	657.782	310	653.232	1345			
46	654.852	654.852	1298	655.092	431	657.632	295	652.882	1373			
47	654.602	654.602	1307	654.842	422	657.482	280	652.532	1401			
48	654.352	654.352	1316	654.592	413	657.332	265	652.182	1429			
49	654.102	654.102	1325	654.342	404	657.182	250	651.832	1457			
50	653.852	653.852	1334	654.092	395	657.032	235	651.482	1485			
51	653.602	653.602	1343	653.842	386	656.882	220	651.132	1513			
52	653.352	653.352	1352	653.592	377	656.732	205	650.782	1541			
53	653.102	653.102	1361	653.342	368	656.582	190	650.432	1569			
54	652.852	652.852	1370	653.092	359	656.432	175	650.082	1597			
55	652.602	652.602	1379	652.842	350	656.282	160	649.732	1625			
56	652.352	652.352	1388	652.592	341	656.132	145	649.382	1653			
57	652.102	652.102	1397	652.342	332	655.982	130	649.032	1681			
58	651.852	651.852	1406	652.092	323	655.832	115	648.682	1709			
59	651.602	651.602	1415	651.842	314	655.682	100	648.332	1737			
60	651.352	651.352	1424	651.592	305	655.532	85	647.982	1765			

SECTION NOTES
 1. All elevations are in feet above mean sea level.
 2. All dimensions are in feet unless otherwise noted.
 3. All girders are spaced 20 feet on center.
 4. All girders are to be installed in the order shown in the plan.
 5. All girders are to be installed in the order shown in the plan.
 6. All girders are to be installed in the order shown in the plan.
 7. All girders are to be installed in the order shown in the plan.
 8. All girders are to be installed in the order shown in the plan.
 9. All girders are to be installed in the order shown in the plan.
 10. All girders are to be installed in the order shown in the plan.



17A

BRIDGE OVER LEVISA FORK AND C.B.O. RY. SHEET (OF 17)

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
FLOYD

SALYERSVILLE - PRESTONSBURG
 ROAD

STATION	5014+31	PROJECT NO.	SP 36-156-14L
BRIDGE NUMBER	EK 6-1-5	SECTION NO.	6
		SCALE	1/4" = 1'-0"

GENERAL NOTES

REV.	DATE	BY	REASON
7	NY		

SPECIFICATIONS: Kentucky Department of Highways, 1956 Standards with Amendments.
DESIGN LOADS: HQ-20-S-40 loading as specified in A.A.S.H.O. Specifications, 1957 Edition, with modification of live load for the National System of Interstate Highways.
STRUCTURAL STEEL: All materials to conform with A.S.T.M. Specifications. Pins and rollers 7" or less in diameter A106-50S (Grade 1016 to 1030 inclusive) Structural Steel (17" wide and longitudinal stiffeners, bracing, cross frames, deck plates, Pipe Supports, Deck Plates, Shear and Bearing Plates) A7-50T. Structural Steel (Flange and Web of Girders and Bearing Stiffeners) A37-50T. High Strength Bolts, Nuts and Washers A325-50T. Machine Bolts and Nuts A307-50T. Lead Flanges - Commercial Grade ASTM B77. Wrought Iron Pipe - ASTM A72-50. Current Specifications, any type.

TEMPERATURES: Dimensions are for normal temperature of 60 degrees Fahrenheit with full dead load on the structure.
TEST REPORTS: Inspected Test Reports, in triplicate, shall be furnished the Department of Highways showing that all steel materials furnished meet the Specifications.
PAINT: All Structural Steel shall be given one shop coat and one field coat and lead paint, Type I, and two field coats of "Wagon Paint" in accordance with the Specifications, except as noted. Paint shall not be applied to any contact surface of field connections where high strength bolts are used to make such connections. Surfaces in contact with concrete (top of beams, top of end diaphragms and shear connectors) are not to be painted but shall be given a coat of approved linseed oil or other protective coating. All expansion and contraction joints shall have a shop coat of red lead paint, Type I. All exposed surfaces inaccessible after erection shall be given two coats of alkyd paint before erection. Field painting of drain pipes shall be in accordance with the requirements for expansion dams. The painting of structural steel and drain pipes shall be included in the lump sum cost of Structural Steel. Cleaning of weld spatter from welded assemblies in accordance with AWS 5.3a shall be required, before assemblies are shop painted.

SHOP CONNECTIONS: Riveted or bolted shop connections shall be 7/8" diameter rivets or 7/8" diameter high-strength bolts.
FIELD CONNECTIONS: Field connections shall be 7/8" diameter high-strength steel bolts in accordance with 5.2.3-A-5(1) of the Specifications.

WELDING: Welding shall be in accordance with the American Welding Society Specifications for Welded Highway and Railway Bridges, Edition of 1955, except as hereinafter provided. No direct payment shall be made for welding material but price for same shall be included in the lump sum bid for Structural Steel. The welding shall be done in accordance with the shop drawings and the thickness of members to be connected but not less than 1/4".

SHEAR CONNECTORS: Longitudinal shear will be taken on the following approximate types: Stud Shear Connectors, Spiral Shear Connectors and Channel Shear Connectors. Stud Shear Connectors shall be made of mild steel with a tensile strength of 50,000 psi and ultimate tensile strength of 65,000 psi. Spiral Shear Connectors shall be structural grade billet steel ASTM A15 current specification. Channel Shear Connectors shall be structural steel conforming with ASTM A37-50T. Shear Connectors shall be field or shop welded to the beams as shown on the plans. Shop detail drawings for shear connectors will be required as required for structural steel. The lump sum price bid shall include shear connectors, welding, materials, equipment, tools, labor, shop drawings, permit royalties, and all incidentals necessary to place shear connectors on beams. Before placing concrete, all surfaces (tops of beams, diaphragms and shear connectors) are to be thoroughly cleaned of all rust, grease and foreign matter. Stud Shear Connectors shall be welded with an approved type of welding equipment.

SHOP DETAIL DRAWINGS: The contractor shall submit shop detail drawings of all structural steel to the bridge engineer for approval in accordance with the Specifications. A set of line drawings of approved shop details shall become the property of the Department of Highways when the contract is completed and before final payment is made. No direct payment shall be made for record drawings but the cost shall be included in "lump sum bid" for structural steel. All material ordered or work done by the contractor before the shop drawings, including the welding procedures, are approved shall be at his risk. Qualification tests of all welding procedures shall be completed by the Contractor and approved by the Engineer prior to the final approval of shop drawings and the start of fabrication.

FABRICATION TOLERANCES: Fabrication tolerances for welded shop fabricated members shall be limited to the tolerances outlined in Sec. 507 of the AWS Specifications.

RADIOGRAPHIC TESTS: Tests for discontinuities of weld in girders shall be made by Kentucky Department of Highways in accordance with A.S.T.M. E94-50T. This service is to be an inspection operation whereby material is accepted or rejected. All parts and materials which have been accepted should be permanently, if possible, with a characteristic identifying symbol which will indicate to subsequent or final inspectors, the fact of X-Ray inspection. This service including responsibility for interpretation, interpretation and reports shall be provided by the Kentucky Department of Highways. All shop welds shall be of satisfactory quality as determined by radiographic inspection. The method of inspection shall be on the following outline: For shop butt welds, radiography shall be used in conjunction with procedure qualification to insure that the materials, methods, and workmen being used are producing work of radiographic quality. Where, for unusual circumstances not over 25% of the shop welds will be radiographed, but 100% of the Shop Butt Flange welds are to be radiographed. Radiographs shall be made of each welding operators work. For fillet welds, the web to the flange on built-up girders, sections of fillet welds that are shown by magnetic particle inspection to have major subsurface discontinuities shall be radiographed to determine the extent and exact nature of the defect. Unless so designated on plans, no radiographs will be made of the shear, rollers, etc. The Contractor (fabricator) will remove defective welds and replace it with acceptable work as is required in Paragraph 706(a) of the AWS Specifications. Sections of Butt Welds that are shown by radiography to have any one of the following imperfections shall be removed and repaired:

- Any kind of crack or seam of incomplete fusion or penetration.
- Any elongated slag inclusion which has a dimension greater than 1/4" for T up to 3/4", and 1/3 T for T from 3/4" to 2 1/4" where T is the thickness of the thinner plate being welded.
- Any group of slag inclusions in line having an aggregate length greater than T in length of 12 ft, unless the distance between inclusions exceeds 6 ft where L is the length of the longest imperfection in the group.
- Porosity in excess of that shown by picture standard as designated in Section VIII of the ASME Boiler Code, Paragraph W51, subparagraph (H)(h). For radiography of fillet welds, any section of weld shown to have any of the following imperfections shall be removed and repaired:
 - Any type of crack or seam of incomplete fusion or penetration.
 - Any elongated slag inclusion which has a dimension greater than 2/3 T where T is the thickness of the thinner plate being welded. Any such slag inclusion 1/4" or less shall be acceptable for any plate thickness.
 - Porosity is not a factor in welds subject to this type of spot radiography except as noted for surface porosity in Paragraph 509(a) of the AWS Specifications. In any of the above radiography, the discovery of poor workmanship shall require that additional radiographs be made of either the area of work showing defects or other work done by the same operator whose work is not acceptable.

FILLER METALS: Electrodes for manual shielded metal arc welding of A7 and A77 steels 1/2" and including 1/4" thickness shall conform to the requirements for Class E60 series ASTM A233 designation. For steel over 1/4" thickness, low hydrogen electrodes E7015, E7016, or E7018 conforming to ASTM designation A233 shall be used. For submerged arc welding of A7 and A77 steels the bare wire electrodes and the fluxing material used in combination shall be capable of producing weld metal having the properties listed in AWS Specification paragraph 50. The requirements for E6016 and E6025 electrodes contained in paragraph 501(f) of the AWS Specifications shall be applicable to all low hydrogen electrodes. Drying time may be reduced to one hour if heated from 600 degrees to 800 degrees Fahrenheit. Flux used for submerged arc welding shall be thoroughly dry and free from contamination from all foreign materials. Flux which shows evidence of moisture pick up shall be dried by heating to above 300 degrees Fahrenheit for a minimum of two hours. Flux which has been used, but not fused, shall be screened before reuse. Flux fused in welding shall not be re-used. The electrodes for manual welding and the wire and flux for submerged arc welding shall be subjected to the tests prescribed in appendix B of the AWS Specifications prior to approval for use. The Engineer, at his discretion, may accept evidence of previous testing.

WELDING PROCEDURES: The procedure of welding to be followed in fabrication shall be as established by the fabricator in accordance with Section 501(a) of AWS Specifications. The procedure specification shall be recorded as a part of the shop detail drawings and shall be submitted to the Director of Bridges for approval. The procedure specification shall outline the welding sequence for each welded shop assembly. The procedure specification shall specify for each type of weld, prequalification or other, the following: joint preparation, fit up, electrode specification, electrode diameter, welding position, polarity, amperage, and number of passes, indicating any procedure change from one pass to the next to a new weld and indicating the maximum thickness in a weldment layer. Where preheating of the base metal is required it shall be indicated with the weld symbol on the shop detail drawings. Expansion bars used in making butt welds shall be detailed on the shop detail drawings. Procedure specifications submitted which are not tailored to suit the particular work to be fabricated shall not be considered as fulfilling the requirements of the contract. A submerged arc fillet weld in the flat position is to be used to connect the flange plates to the web plates. The welding sequence outlined in the procedure specification shall be such as to avoid needless distortion and shrinkage stresses in accordance with section 506 of the AWS Specifications. For welded plate girders the broad outline of sequence shall be as follows:

- Flange butt weld
- Web cutt weld
- Web to flange weld
- Stiffeners to web welds
- Stiffeners to flange welds

QUALIFICATION: Welding procedures and welding operators shall be qualified in accordance with Section 6 of the AWS Specifications to the satisfaction of the Engineer. Prior to the start of actual welding operations the Inspector and welding person shall hold a conference to insure that agreement has been reached regarding details of the procedure and sequence of welding to be followed, the status of qualification of the welders, and approval of electrodes and other materials and equipment to be used.

SHOP SPLICES: All shop splices to flange plates and web plates shall be made before welding flange plates to web plates. All such proposed splices shall be shown on Shop Drawings.
SHOP WELDS: Expansion bars shall be used in making butt welds in the girder flanges. See AWS Section 505 (d)(6). A fully automatic submerged arc, fillet weld, in the flat position is to be used to connect flange plates to web plates.

AUTOMATIC WELDING PROCEDURE QUALIFICATION: In the welding of joints designed as stress carrying members, the use of semi-automatic ("squirt-gun") welding will not be allowed. For automatic welding procedure qualification to establish the current, voltage, and speed of travel to be used to guide the quality of workmanship as to appearance, spewiness, ductility, etc., test specimens will be required prior to the beginning of work for the types of tests outlined in appendix B, Section 502 of the AWS Specifications. Upon acceptance by the Inspector of the preceding tests, the values for voltage, current, and speed of travel shall be the procedure specification and shall be maintained within the limits as set under Section 506(f) of the AWS Specifications. Deviation from this shall require requalifying the procedure.

JOINT PREPARATION: Details of both welded joints shown on the design drawings are to be used with manual welding. When the use of submerged arc welding is anticipated, the welding procedure shall reflect the correct joint preparation to be used. In addition to the provisions of paragraph 502(c) of the AWS Specifications, the following will be required:

- Sheared plates to be used for webs of built-up members shall be ordered with sufficient additional width to allow for trimming of edges where built-in member is required. Plates with roller edges shall be trimmed.
- Universal mill plates to be used for webs of built-up members shall be ordered with sufficient additional width to allow for trimming of both edges.
- The facing surfaces of the web and flange plates and the adjacent surfaces that are to be fillet welded shall be cleaned by grinding prior to assembly and welding of web to flange.

MAGNETIC PARTICLE INSPECTION OF FILLET WELDS: Fillet welds in main girders between web and flanges shall be inspected by the dry powder magnetic particle inspection method in accordance with ASTM Specification E109-57T. This inspection shall be conducted by the Kentucky Department of Highways Inspector who shall accept or reject the weld. The Inspector shall demonstrate to the fabricator the performance and sensitivity of the equipment and the inspecting personnel on standard prepared specimens which will illustrate the following types of defects:

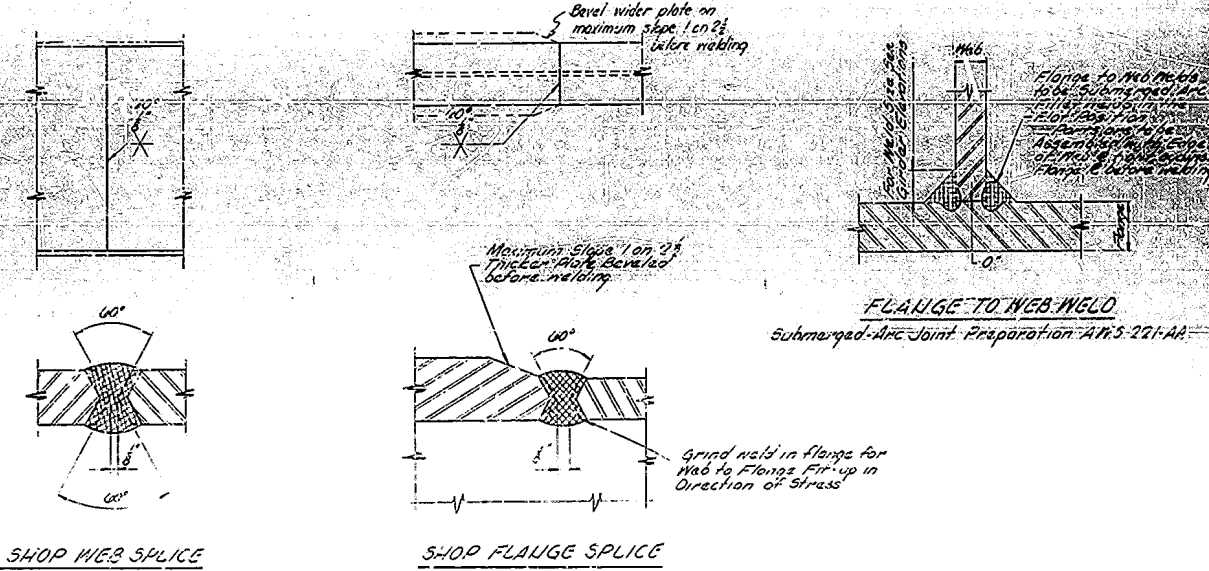
- Surface or subsurface cracking.
- Lack of penetration.
- Incomplete fusion.
- Slag inclusion.
- Porosity.

The demonstrated performance of the inspection technique on the standard defective specimens shall be the basis of acceptance or rejection of the weld. Any section of fillet weld shown to have the above types of imperfections shall be removed and repaired, except that porosity and slag inclusion having a dimension of 1/8" or less or 2/3 T or less, where T is the thickness of the thinner plate being welded, will be acceptable. The Inspector shall schedule and perform his work in such a manner as to keep interference with regular fabrication of girders to a minimum. The fabricator shall provide an adequate source of electrical current to the Inspector and furnish the current required to conduct the inspection. A minimum of 50% of the linear feet of web-to-flange fillets in main girders shall be tested by the magnetic particle inspection method.

SURFACE FINISH OF STEEL - SPECIFICATIONS

- Steel Slabs - ASA 2000
- Heavy Plates in Contact with $\frac{1}{2}$ " to be welded - ASA 1000
- Mild Ends of Compression Members & Top Flanges - ASA 1500
- Bridge Rollers and Rockers - ASA 250
- Pins and Pin Holes - ASA 125

NOTE: Joint preparations shown for shop splices are for manual shielded metal arc welding. Shop details are to show proper joint preparation if submerged arc welding is used.



SHOP ASSEMBLY FOR SPAN 2, 3 AND 4: General reaming of holes for each field splice shall be required with all parts for each splice completely shop assembled with parts adjusted to lines and number, fit for drilling or reaming. This applies to field splices in girders only. Girders shall remain assembled for inspection by the Department of Highways Inspector and are to be matchmarked while assembled. Other field connections shall be drilled or reamed in the shop with connecting parts assembled, or shall be drilled or reamed to a metal template without assembly.

CHANGES IN STRUCTURAL STEEL QUANTITIES: In the event that changes in steel quantities are required due to changes by the Engineer in the plans, additional payments therefor shall be made at a unit price which will be equal to the contract lump sum price divided by the estimated total weight.

BRIDGE OVER LEVISA FORK AND C. & O. RY. SHEET 18 OF 27

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 HANKFORD
 COUNTY OF
FLOYD

SALYERSVILLE - PRESTONSBURG
 ROAD 5267(5)

STATION 5014+31 PROJECT NO. SP 38-136-14L
 BRIDGE NUMBER EK 6-1-5 SECTION NO. 14846

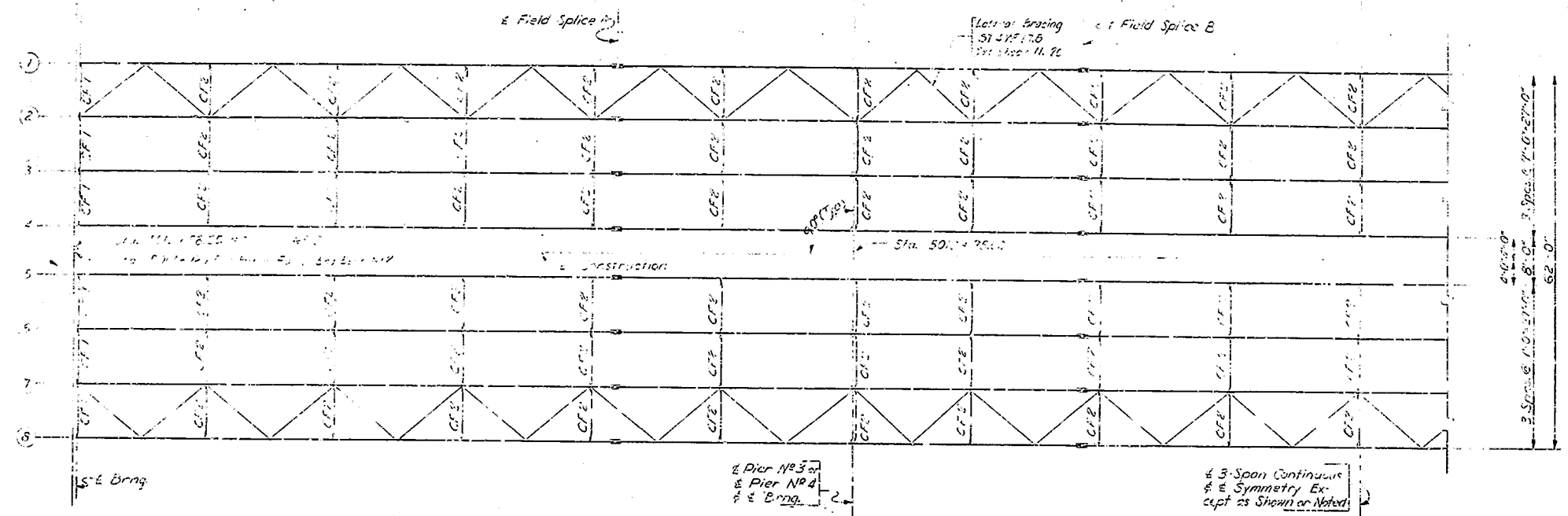
STRUCTURAL STEEL

Pier No. 3
End Bent 192.3

136'-0" Span NR3 & NR5
4 Sp. 25 @ 22'-8" 136'-0"
(Cross-panels Attached to W & E Stiffeners; Spacing Given c.t.c. of Stiffeners)

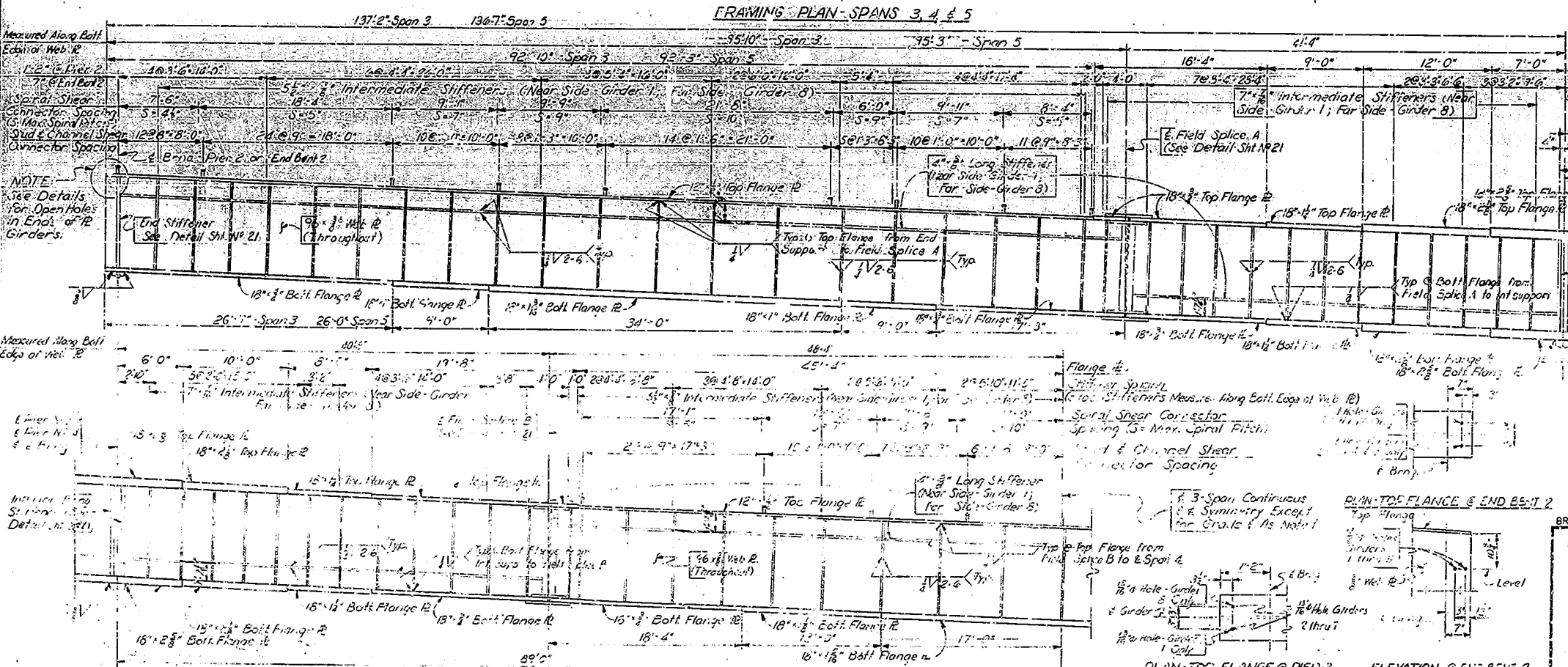
84'-0" Half Span NR4
3 Sp. 25 @ 28'-0" 84'-0"

REV.	DATE	BY	CHKD.	APP.	DESCRIPTION
1					



Note:
Girders shall be adequately supported in the lateral direction at all times.

Erection Note:
Girders shall be supported in the lateral direction during erection preferably by attaching the girders in pairs.



Note:
Bearing Stiffeners are to be plumb, intermediate Stiffeners and Field Splices are to be perpendicular to top and bottom edge of web plate.

Note:
Interior Brng Stiffener (See Detail Sh. No 21)

NOTE: Longitudinal Stiffeners are to run full length of spans 3, 4, 5 for Side Girders 1 & Near Side Girder 8.

GIRDERS 1 & 8 (Looking North)
(Girder 1 Shown; Girder 8 Same Except as Noted)

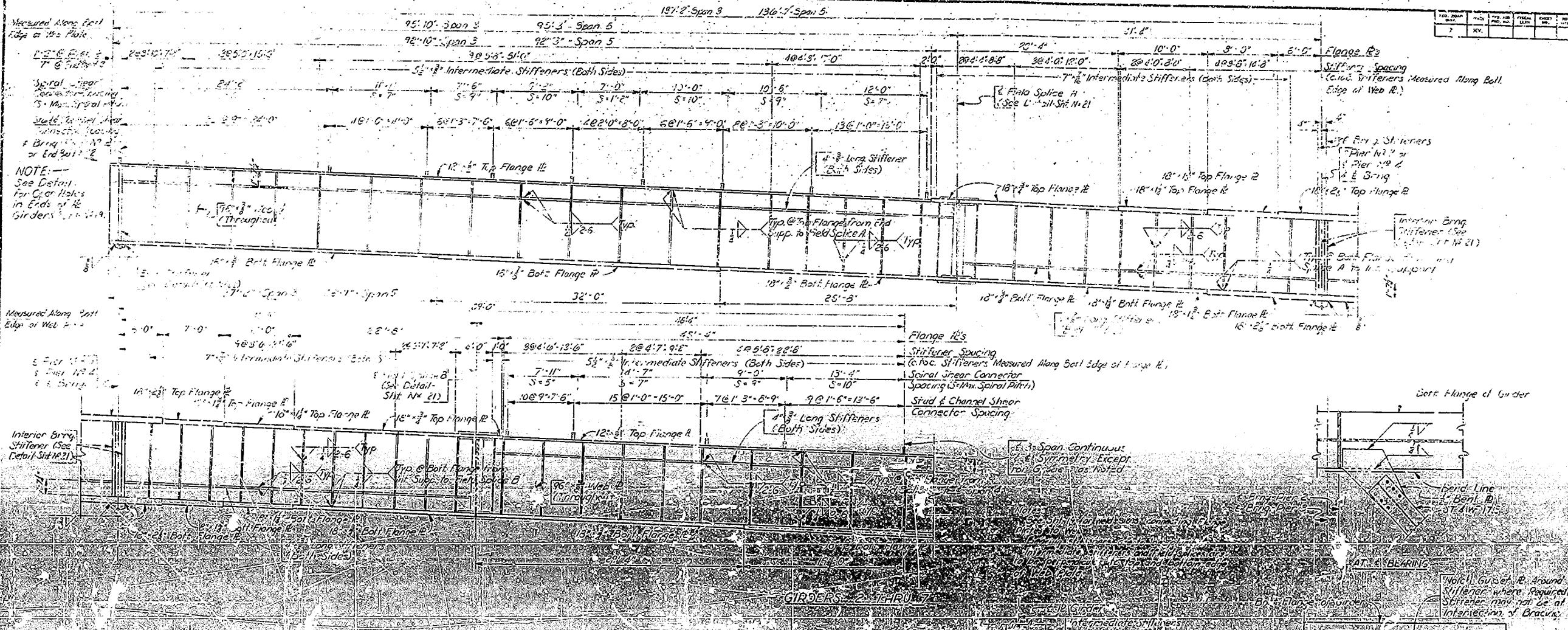
DETAILS - ENDS OF R GIRDERS
STRUCTURAL STEEL

BRIDGE OVER LEVISA FORK AND C.B.O. RY. SHEET 19 OF 27

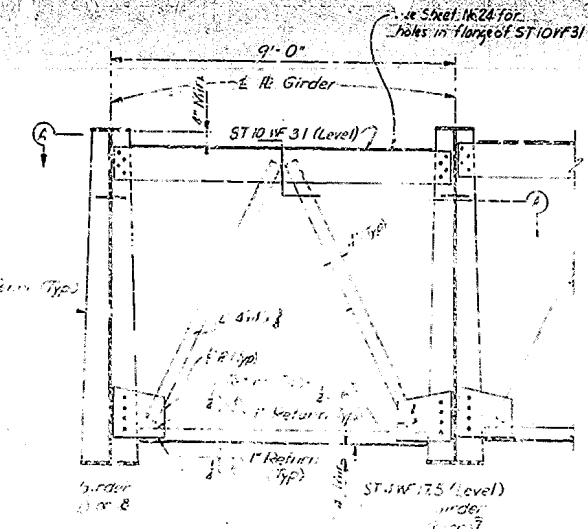
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
MANKFORD
COUNTY OF
FLOYD

SALYERSVILLE - PRESTONSBURG ROAD

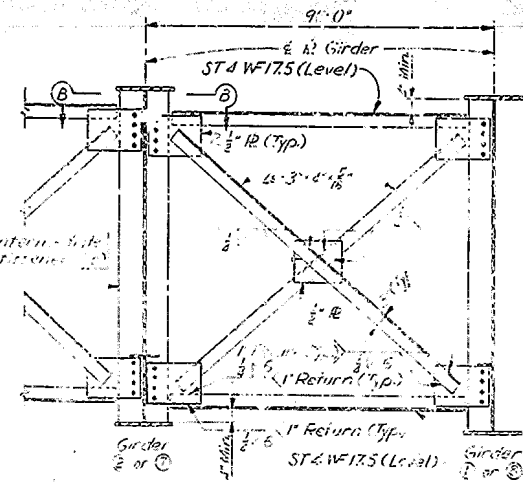
STATION 5014.231 PROJECT NO. SP 36-155-141
BRIDGE NUMBER EK 6-1-5 SECTION NO. 6 14846



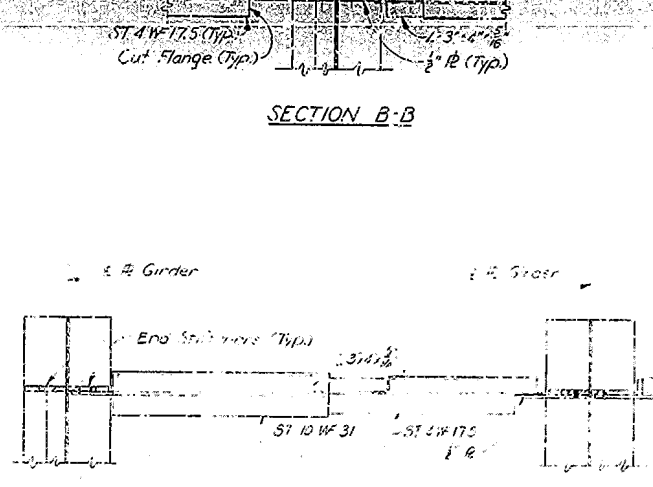
NOTE: See Detail for Cleat Holes in Ends of R Girders.



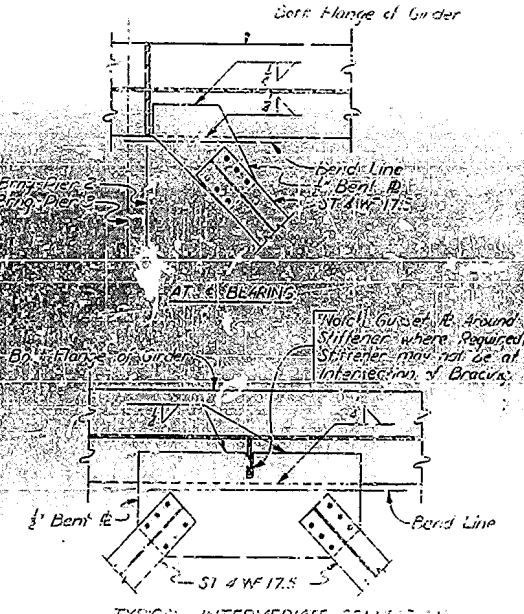
END CROSS FRAME - CF1



INTERMEDIATE CROSS FRAME - CF2



SECTION A-A



TYPICAL INTERMEDIATE CONNECTION LATERAL BRACING DETAILS

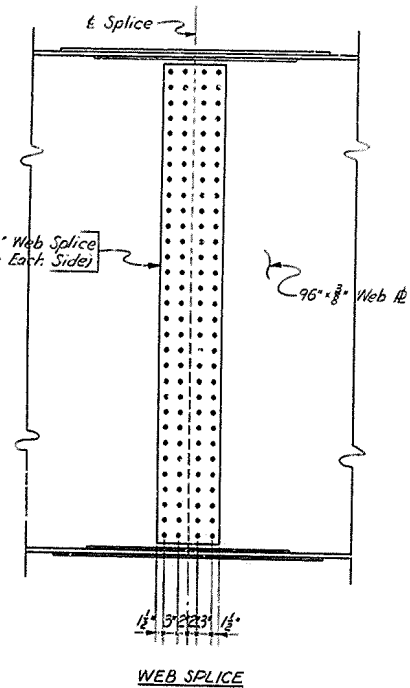
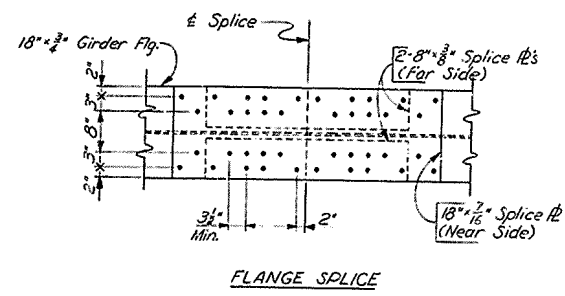
BRIDGE OVER LEVISA FORK AND C.O. RAILWAY SHEET 75 OF 77

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
LEXINGTON
COUNTY OF
FLOYD

SALYERSVILLE - PRESTONSBURG
ROAD 5267(S)

STATION 5014 + 31	PROJECT NO. SP 36-155-14L
BRIDGE NUMBER EK 6-1.5	SECTION NO. 6
	14846

STRUCTURAL STEEL



FIELD SPLICE DETAILS

NOTE: Use 3/8" φ Holes with 3/8" φ High Strength Steel Bolts.

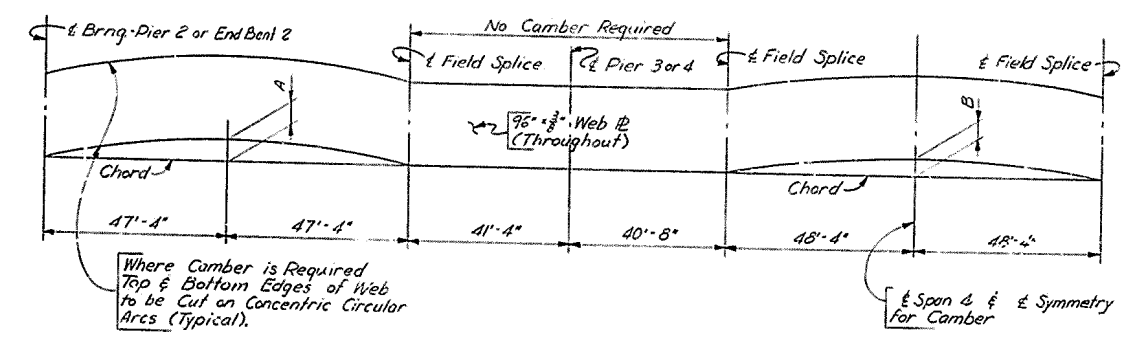
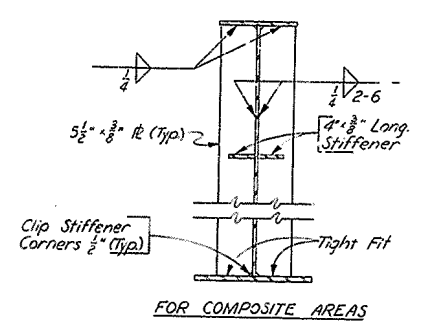
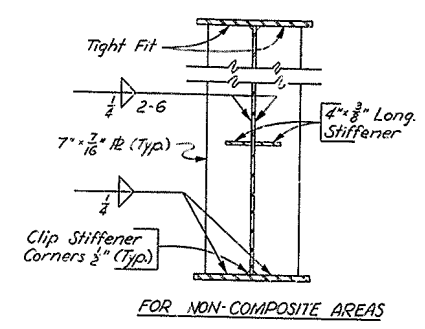


TABLE of SHOP CAMBER DIMENSIONS

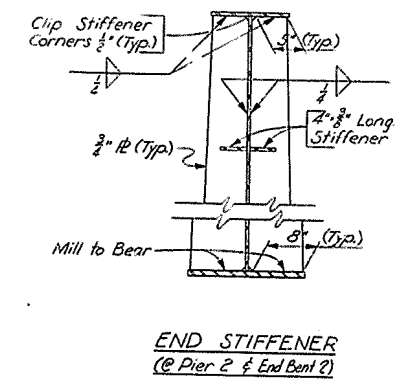
Girder	(1) (2)	(3) (6) (7)	(4) (5)
Dim A	1 1/2"	1 1/2"	1 1/2"
Dim B	1 1/2"	1 1/2"	1 1/2"



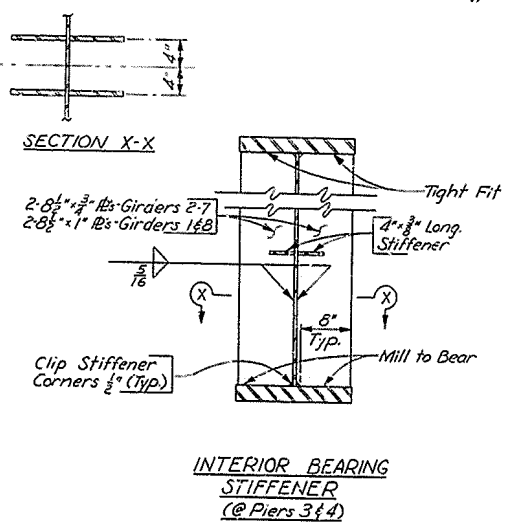
FOR COMPOSITE AREAS



FOR NON-COMPOSITE AREAS

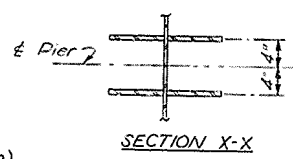


END STIFFENER (@ Pier 2 & End Bent 2)

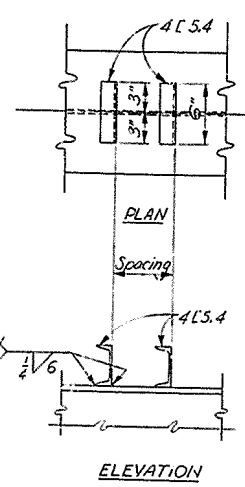


INTERIOR BEARING STIFFENER (@ Piers 3 & 4)

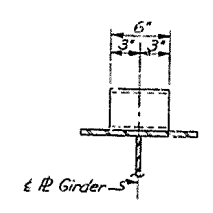
INTERMEDIATE STIFFENERS



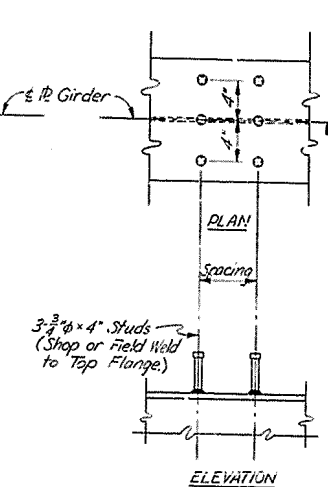
SECTION X-X



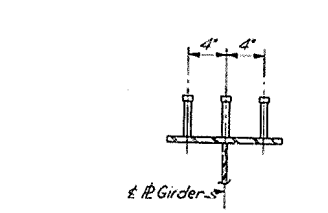
ELEVATION



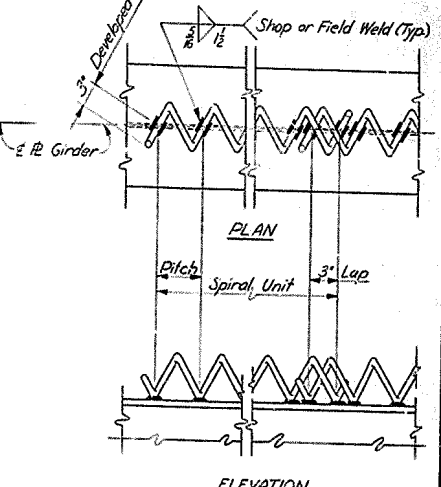
SECTION ALTERNATE 'C'



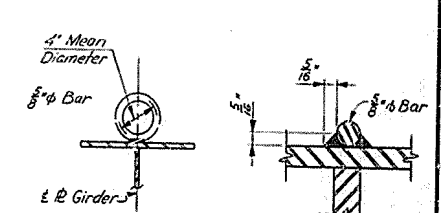
ELEVATION



SECTION ALTERNATE 'D'



ELEVATION



SECTION ALTERNATE 'E'

SHEAR CONNECTOR DETAILS

ESTIMATE OF QUANTITIES

** Structural Steel	1,155,825 Lbs.
Lead Plates	825 Lbs.
Wrought Iron Plates	3,340 Lbs.
Shear Connectors	TOTAL 1,159,990 Lbs* Lump Sum

* NOTE: For purposes of payment the lump sum item "Structural Steel" includes the structural steel, lead plates, wrought iron plates, lead for anchor bolt packing, but does not include 6" φ wrought iron pipe.
 ** Includes allowance for overrun of web plates but does not include weld material. Also includes weight of Bearings and Expansion Dam.

Work this sheet with Sheets No 18 thru 20 & 22

BRIDGE OVER LEVISA FORK AND C.O. RY. SHEET 21 OF 27

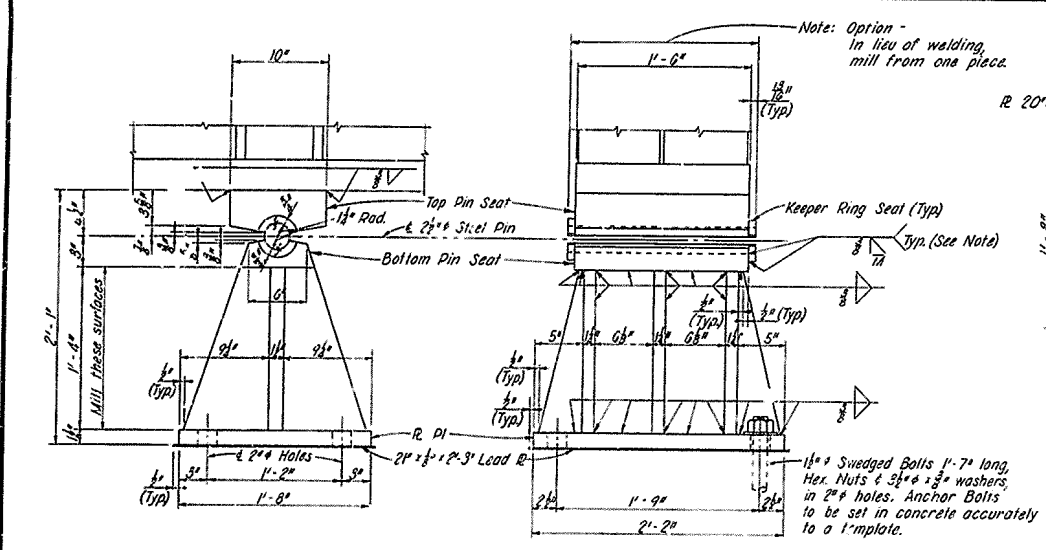
COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
FLOYD

SALYERSVILLE - PRESTONSBURG
 ROAD 5-267(5)

STATION 5014.731 PROJECT NO. SP 36-186-14L
 BRIDGE NUMBER EK 6-1-5 SECTION NO. 6 DIVISION 14846

STRUCTURAL STEEL

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



E-1 AT PIER 3
Capacity - 252 Tons

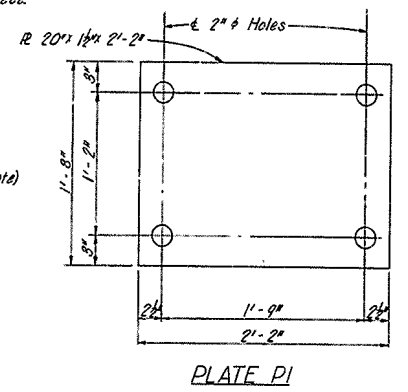
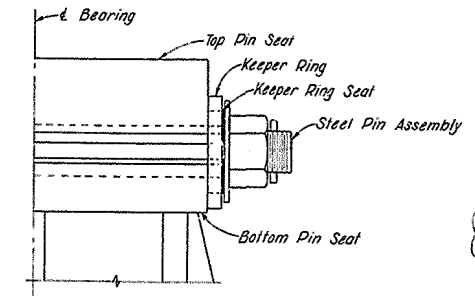
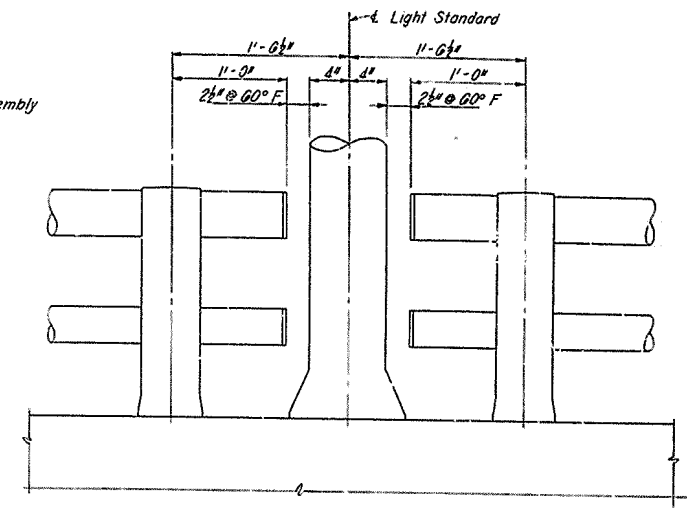


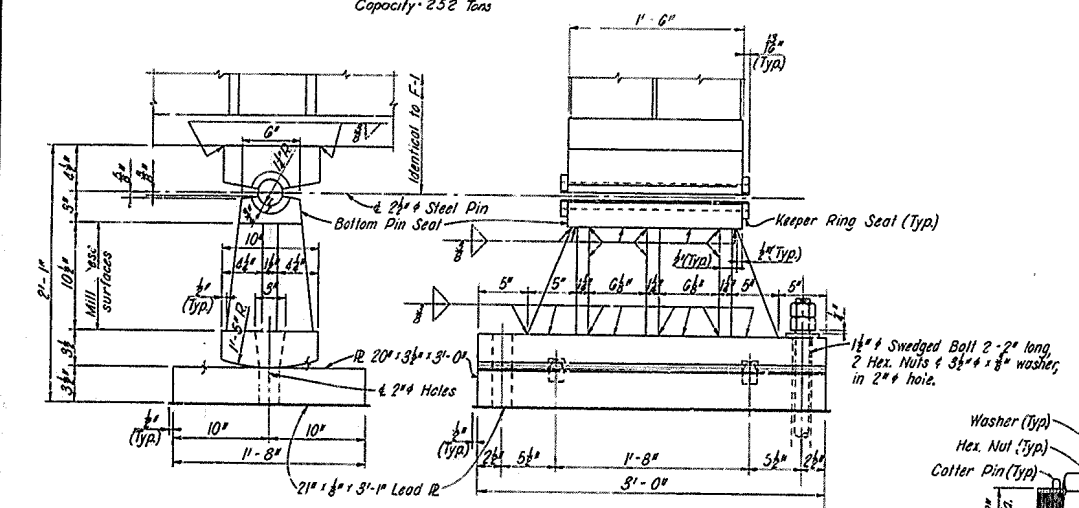
PLATE P1



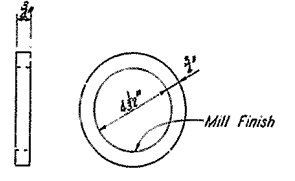
ASSEMBLY SHOWING STEEL PIN AND KEEPER RING IN PLACE



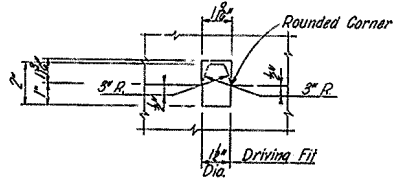
ALUMINUM HANDRAIL DETAIL AT LIGHT STANDARD



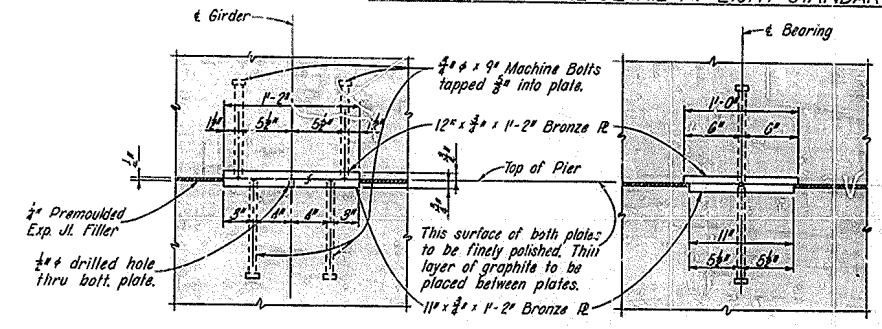
E-1 AT PIER 4
Capacity - 252 Tons



KEEPER RING DETAIL



PINTLE AND RECESS DETAIL

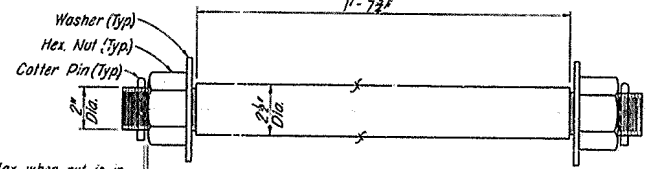


SIDE ELEVATION
(Perpendicular to Girder)

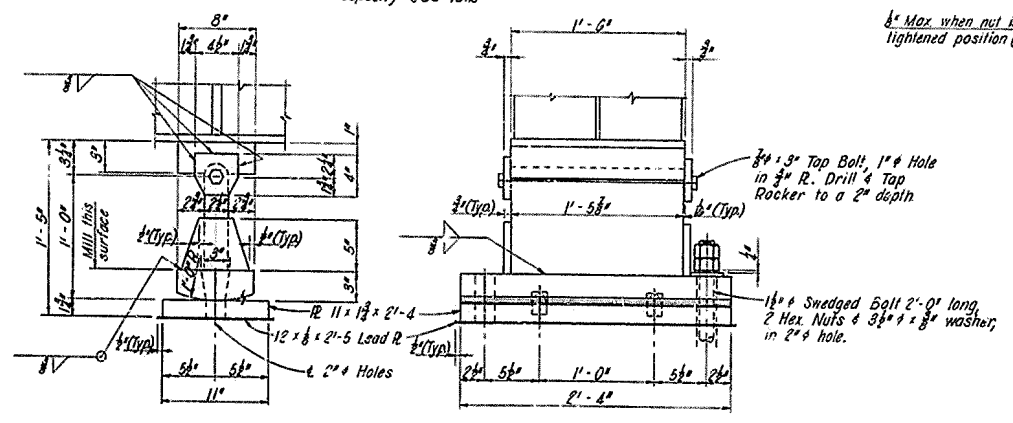
END ELEVATION
(Parallel to Girder)

E-3 AT PIERS 1 & 2

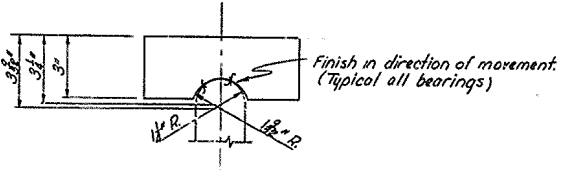
Bronze Plates to be A.S.T.M. B-22 Class C or B-100 Type 1 or 2 current specifications with sliding surfaces finely polished. Machine Bolts to be furnished but are not included in the weight of Plates given. Cost of Bolts to be included in unit price bid for Plates. See Sheet 11 for weight of Bronze Plates.



STEEL PIN ASSEMBLY



E-2 AT PIER 2 AND END BENT 2
Capacity - 82 Tons



TOP BEARING DETAIL FOR E-2

Finished surfaces of structural steel pins and pin bearing surfaces in steel shops shall be coated with white lead and follow in accordance with current specifications with amendments. Plates must be true and free of warp. For General Notes see Sheet 18. For Anchor Bolt settings see Sheet 26. Weight of Bearings included in Structural Steel weight shown on Sheet 21.

DESIGNED BY: E.L.W. DATE: 11-1-60
 CHECKED BY: C.W.H. DATE: 11-1-60
 APPROVED BY: E.L.W. DATE: 11-1-60
 DRAWN BY: E.L.W. DATE: 11-1-60
 REVISIONS:

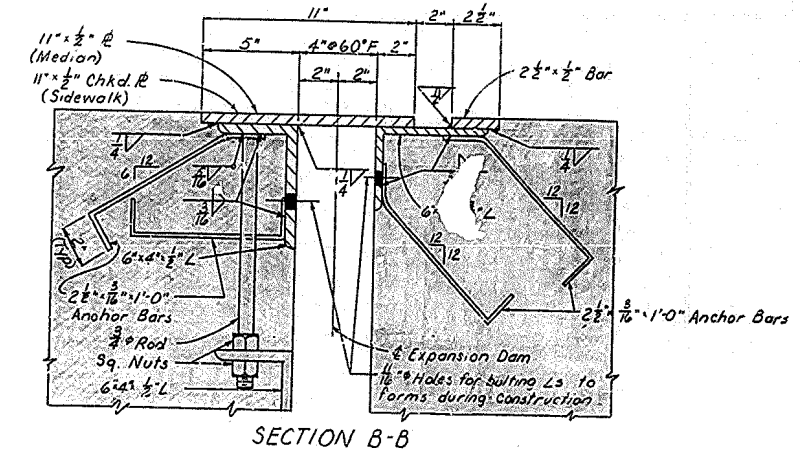
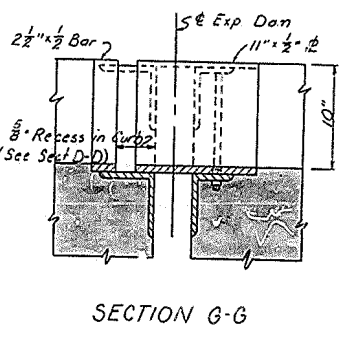
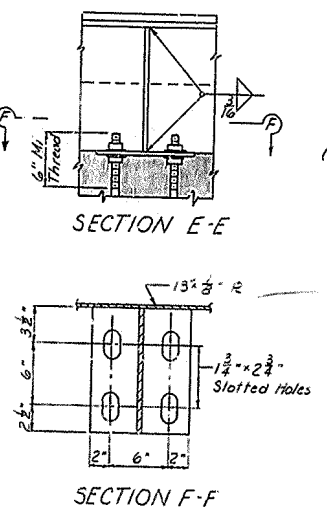
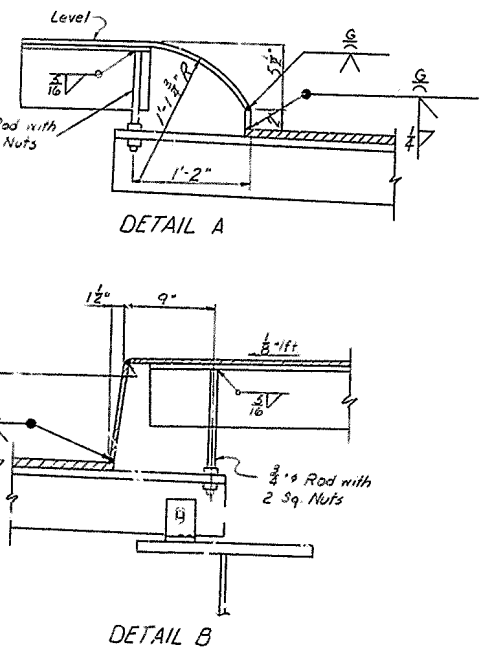
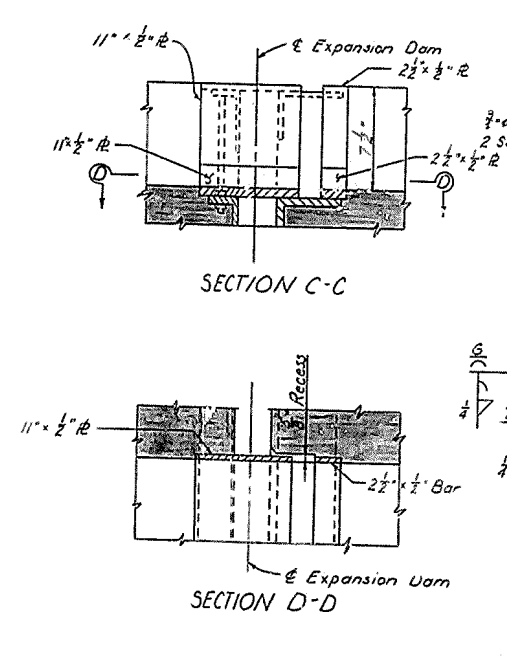
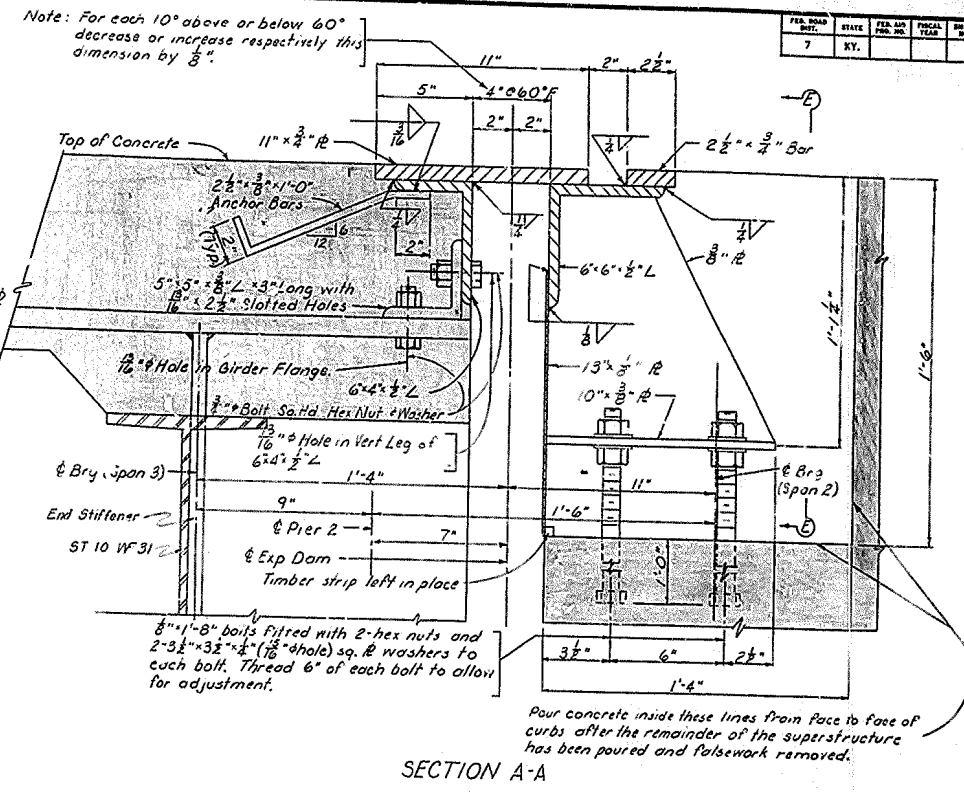
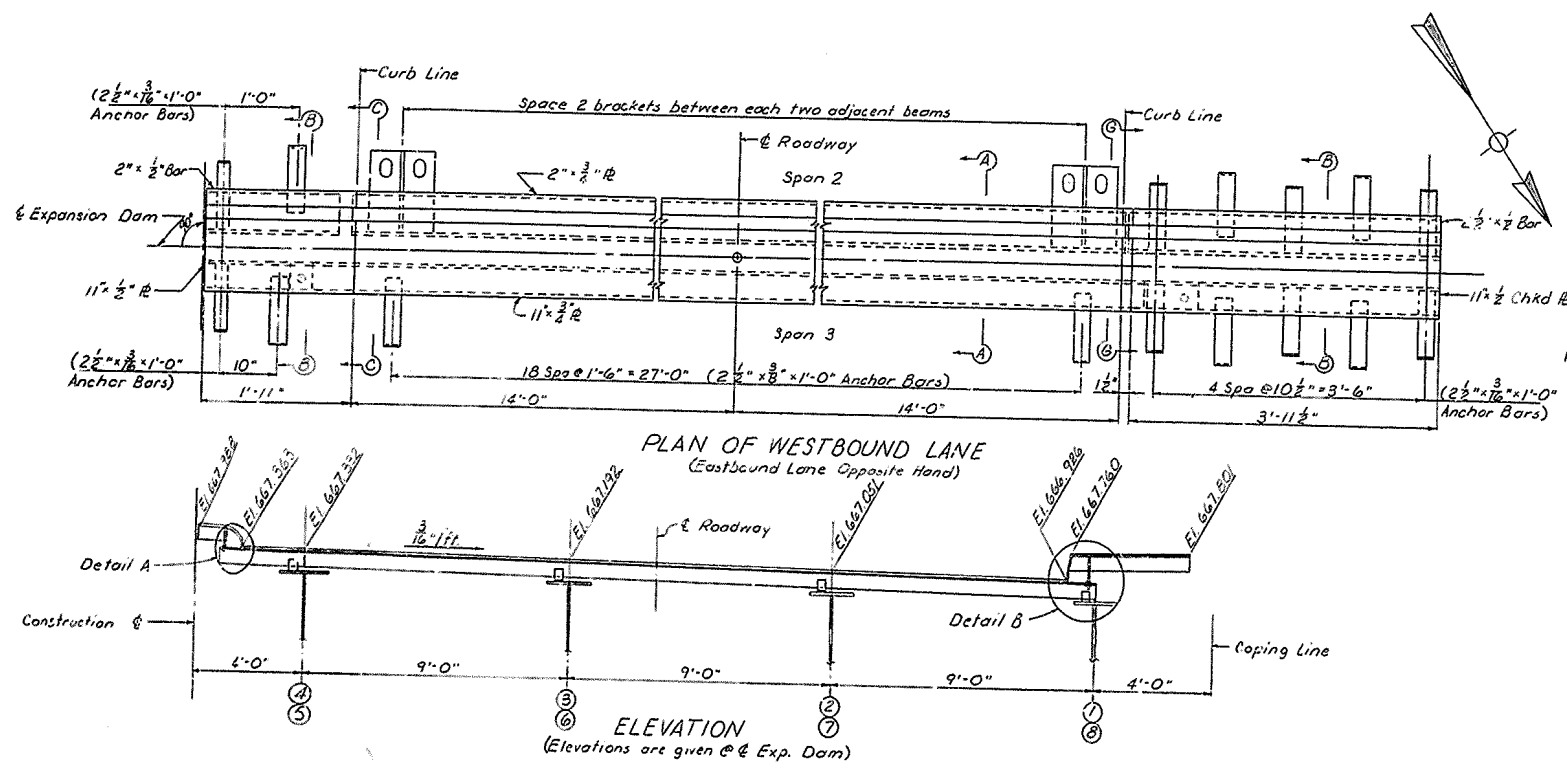
HANDRAIL AND BEARINGS

BRIDGE OVER LEVISA FORK AND C.B.C. RY. SHEET 22 OF 27

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
FLOYD

SALYERSVILLE - PRESTONSBURG
 ROAD 5247(5)
 STATION 5014+31 PROJECT NO. SP-36-156-14L
 BRIDGE NUMBER EK 6-1-5 SECTION NO. 6 DRAWING NO. 14846

REV. NO.	DATE	BY	CHKD.	APP. NO.	TOTAL SHEETS
7					



NOTES:

Material - All expansion dam material shall conform to current requirements of A.S.T.M. specifications. See Sheet 1B. Contact surfaces of all plates shall have a smooth surface. Plates must be true and free from warp.

Mill Test Report - Notarized statements in triplicate shall be furnished the Department of Highways showing that all structural steel meets specifications.

Shop Plans - The contractor shall furnish the Department of Highways with complete shop detail plans for approval.

Payment - The cost of expansion dam, bolts and nuts shall be included in the lump sum bid for structural steel. Such payment shall be complete compensation for all materials, equipment, tools, labor, and incidentals to complete the work.

Weight of Expansion Dam 5880 lbs.

EXPANSION DAM AT PIER 2

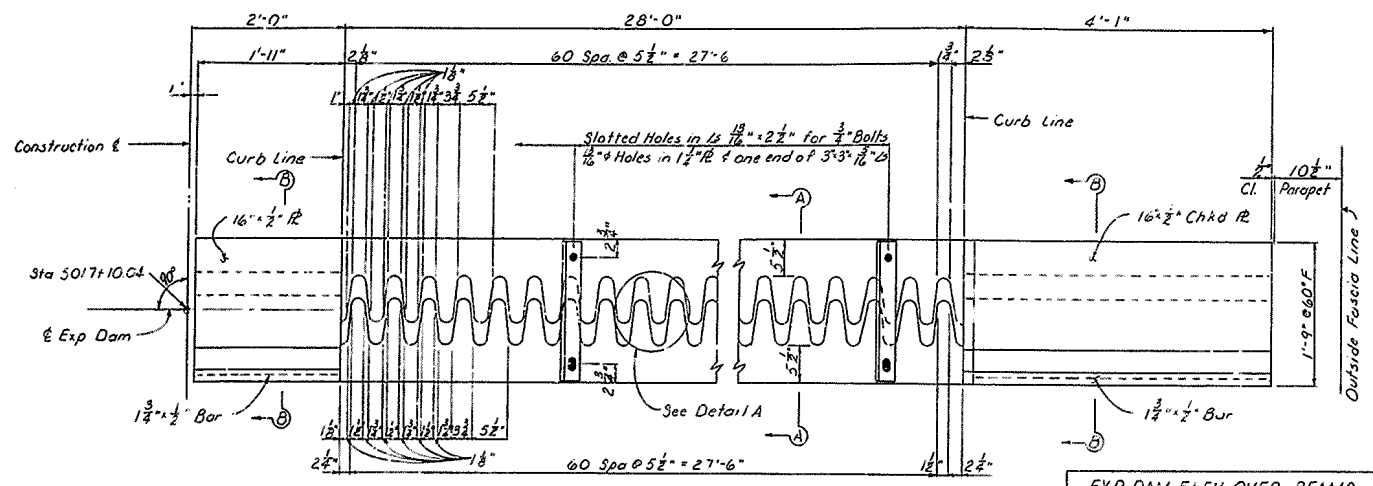
BRIDGE OVER LEVISA FORK AND C&O RY. SHEET 230F27

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
FLOYD

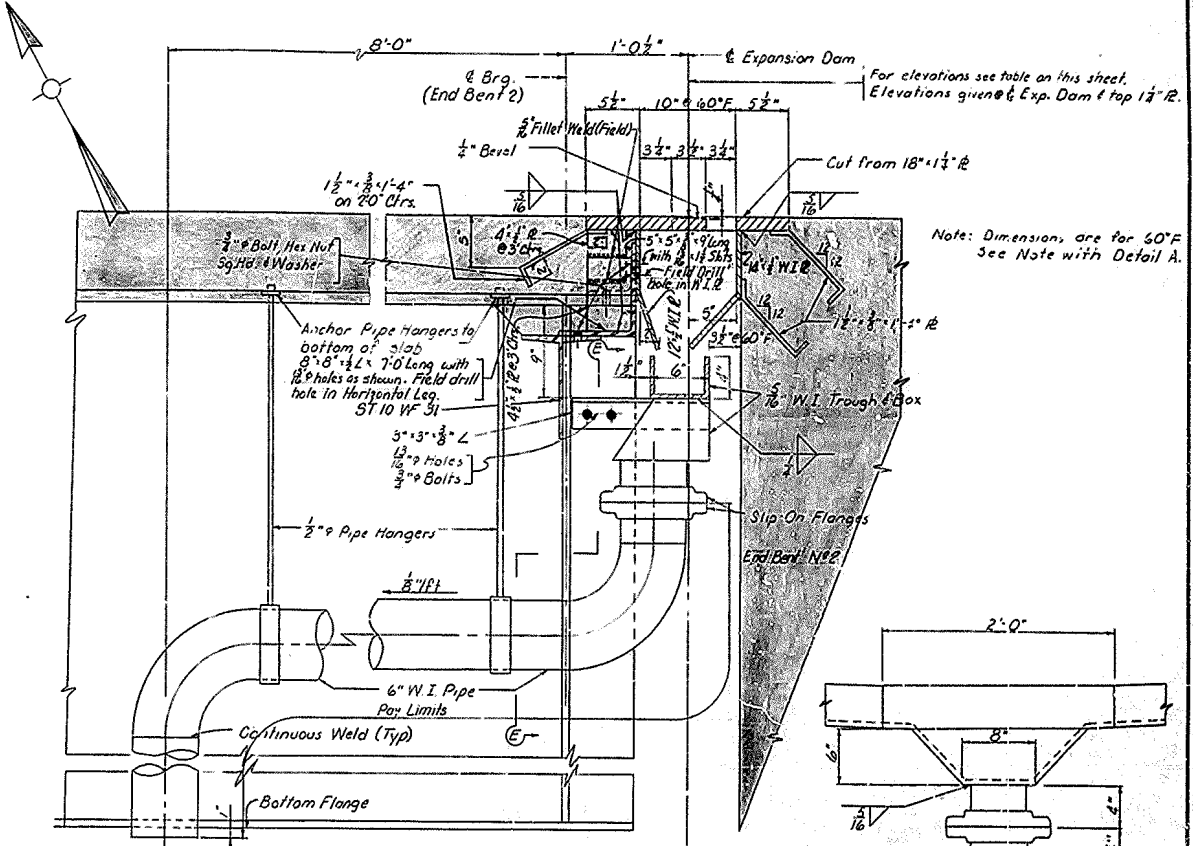
SALYERSVILLE - PRESTONSBURG
ROAD 5267(5)
STATION 5014+31 PROJECT NO. SP 36-156-14L
BRIDGE NUMBER EK 6-1-5 SECTION NO. DRAWING NO. 14846 INDEX

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

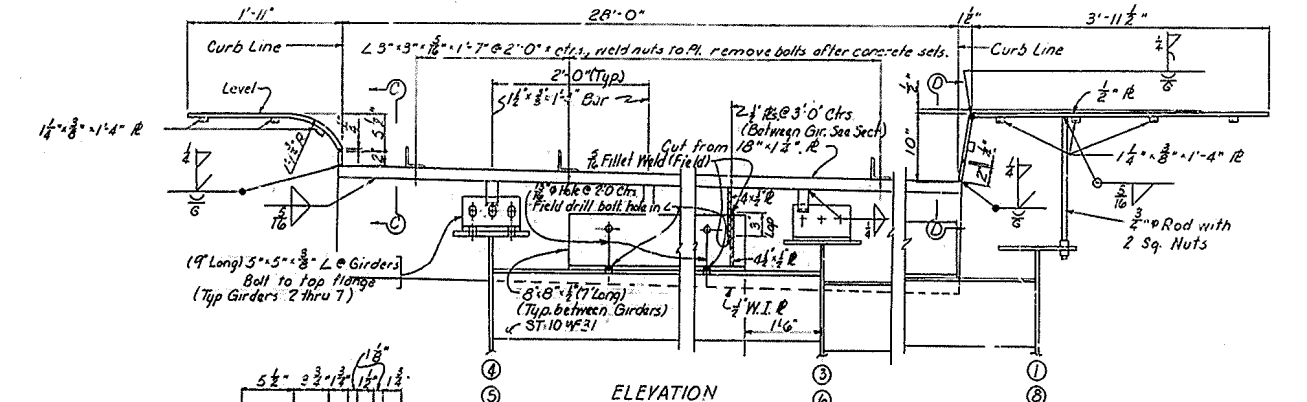
FILE NO.	DATE	BY	REVISION
7			



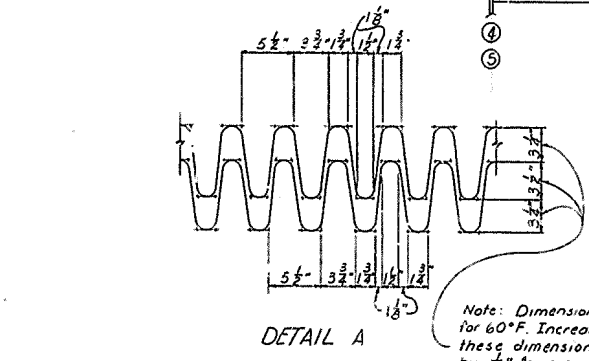
Beam	Elevation	Beam	Elevation
Parapet	650.121	3 & 6	649.512
Top Curb	650.080	4 & 5	649.652
Curb Line	649.247	Curb Line	649.683
2 & 7	649.371	Const. E.	650.308



SECTION A-A

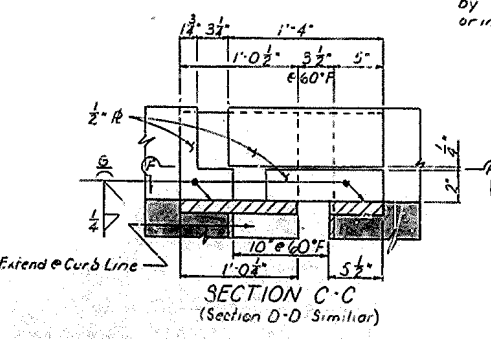


ELEVATION

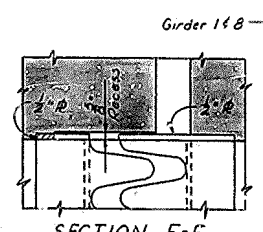


DETAIL A

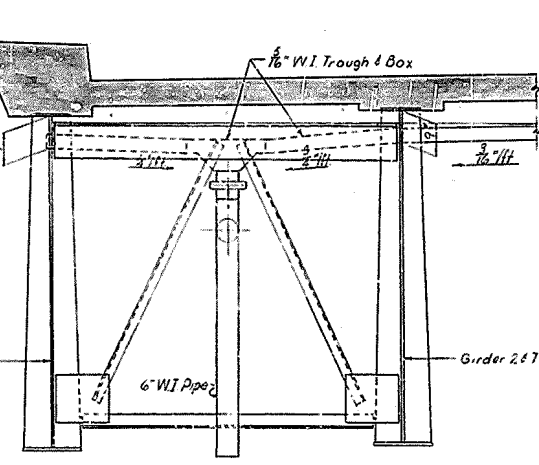
Note: Dimensions shown for 60°F. Increase or decrease these dimensions respectively by 1/4" for every 10° decrease or increase in temperature.



SECTION C-C (Section D-D Similar)



SECTION F-F

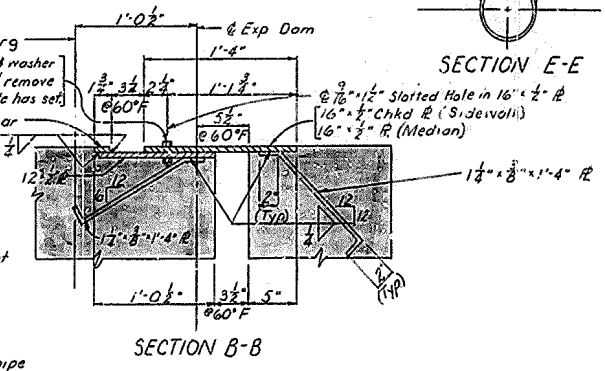


SECTION LOOKING TOWARD END BENT NO. 2

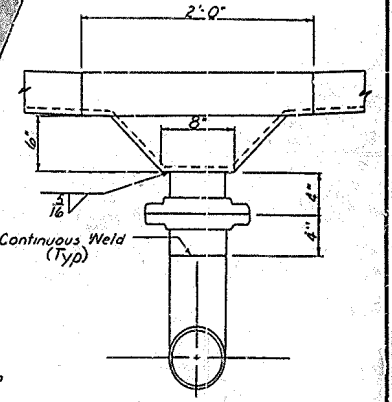
NOTES:

- Material.** All expansion dam material and wrought iron shall conform to current requirements of ASTM. Specifications. See Sheet N°18 for ASTM Specifications. Contact surfaces of all plates shall have a smooth surface. Plates must be true and free from warp. Wrought iron plates to be bent at right angles to the direction of rolling.
- Wrought iron pipe** is to be 6" Standard Weight 19.0 lb per linear foot in accordance with current ASTM Specifications. See Sheet N°18. Continuous weld pipe is to be 6" Standard Weight containing a minimum of .75% Copper and 15% Nickel and having a minimum tensile strength of 50,000 psi.
- Mill Test Report.** Notarized statements in triplicate shall be furnished the Department of Highways showing that all structural steel meets specifications.
- Shop Plans.** The Contractor shall furnish the Department of Highways with complete shop detail plans for approval.
- Painting.** All wrought iron plates, pipes, fittings, connections and brackets, and pipe hangers shall be given same paint as expansion dam. See Sheet N°18.
- Payment.** Payment for all expansion dam material, nuts and bolts, and wrought iron plates, shall be included in Lump Sum Bid for Structural Steel. Pipe, fittings, connections, brackets, and pipe hangers are to be paid for at the unit price per linear foot of 6" Wrought Iron Pipe complete in place. Such payment shall be complete compensation for all materials, equipment, tools, labor, and incidentals to complete the work.

Weight of Expansion Dam	6380 lbs
Weight of Wrought Iron Plates	3336 lbs
Weight of Wrought Iron Pipe	27 lin. ft.



SECTION B-B



SECTION E-E

DRAWING BY: EMM
 CHECKED BY: EMM
 DATE: 6-21-60
 PROJECT NO. SP 36-156-14L
 STATION: 60+4+31
 BRIDGE NUMBER: EK 6-1-5

EXPANSION DAM AT END BENT NO. 2

BRIDGE OVER LEVISA FORK AND C.O.R.Y. SHEET 24 OF 27

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
FLOYD

SALYERSVILLE - PRESTONSBURG
 ROAD 5267(5)
 PROJECT NO. SP 36-156-14L

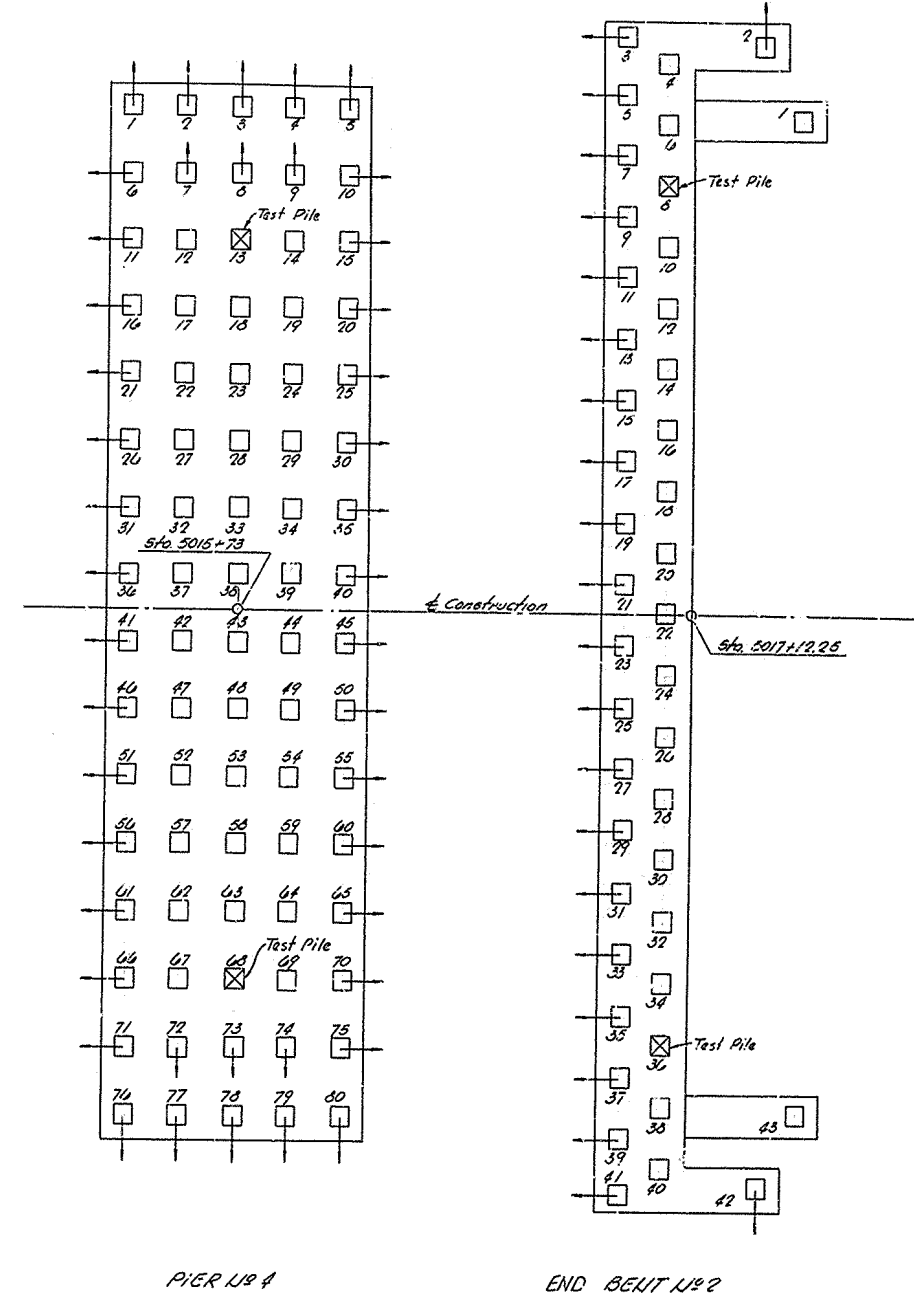
STATION	60+4+31
BRIDGE NUMBER	EK 6-1-5
SECTION NO.	6
DRAWING NO.	14846
NO.	

PIER LEG 4					
PILE NO.	CUT OFF ELEVATION	TIP OF PILE ELEVATION AS DRIVEN	LENGTH OF PILE IN PLACE	CALCULATED BEARING CAPACITY	PILE NO.
1	581.711				41
2					42
3					43
4					44
5					45
6					46
7					47
8					48
9					49
10					50
11					51
12					52
13					53
14					54
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16					56
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26					66
27					67
28					68
29					69
30					70
31					71
32					72
33					73
34					74
35					75
36					76
37					77
38					78
39					79
40	581.711				80

END BENT LEG 2				
PILE NO.	CUT OFF ELEVATION	TIP OF PILE ELEVATION AS DRIVEN	LENGTH OF PILE IN PLACE	CALCULATED BEARING CAPACITY
1	648.527			
2	633.931			
3				
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39				
40				
41				
42	633.931			
43	648.527			

TEST PILE LENGTHS	
Pier Leg 4	32'
End Bent Leg 2	47'

NOTES:
 This pile record does not replace 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 herein are the actual lengths of piles in the finished structure, below cut-off elevations and are not necessarily pay items.
 Where Concrete Piles are called for on the plans the following alternates may be used
 @ Pier Leg 4 - Alternate "A" - 12"Ø RC. Precast Piles, Std. Dwg. P.17
 Alternate "B" - 14"Ø RC. Precast Piles, Std. Dwg. P.2
 @ End Bent Leg 2 - Alternate "A" - 14"Ø RC. Precast Piles, Std. Dwg. P.2
 Alternate "B" - 14"Ø RC. Precast Piles, Std. Dwg. P.2



□ Indicates pile batter 3" to 12" in direction of Arrow
 ⊠ Indicates test pile

PILE RECORD

BRIDGE OVER LEVISA FORK AND C. & O. RY. SHEET 25 OF 27

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
FLOYD

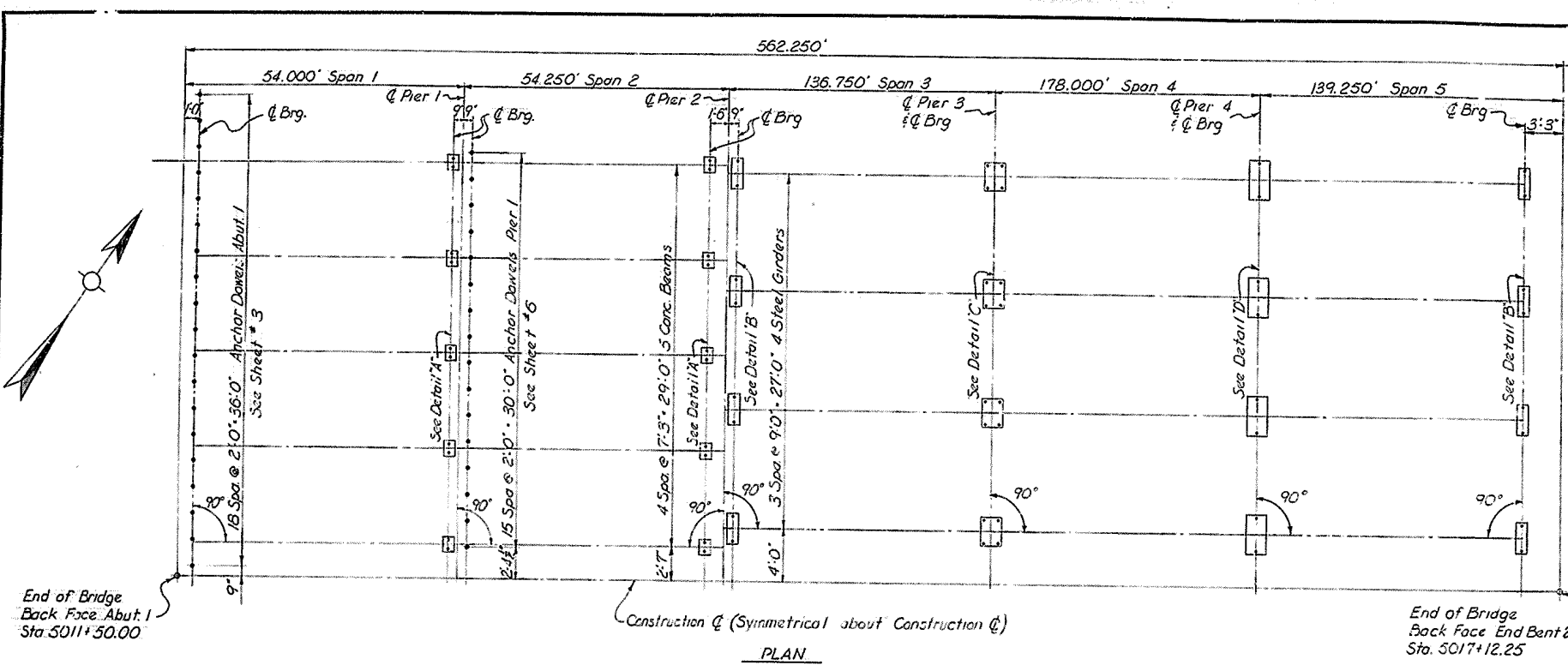
SALYERSVILLE - PRESTONSBURG
 ROAD 5267(5)

STATION 5014+31 PROJECT NO. SP 36-156-14L

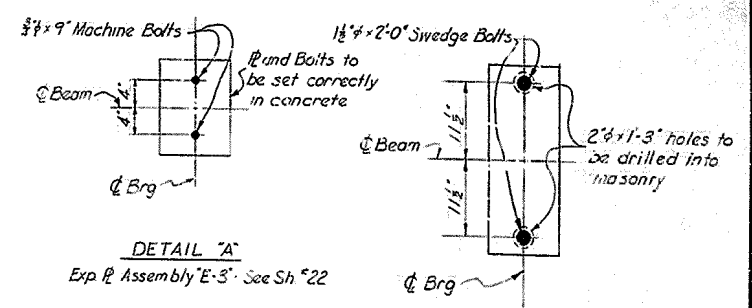
BRIDGE NUMBER	EK 6-1-5	SECTION NO.	6	DATE	1-46
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DESIGNED BY: [Signature] DATE: 12-28-60
 CHECKED BY: [Signature] DATE: 1-11-61
 DRAWN BY: [Signature] DATE: 1-11-61

PER. PROJ. NO.	STATE	FOR. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				

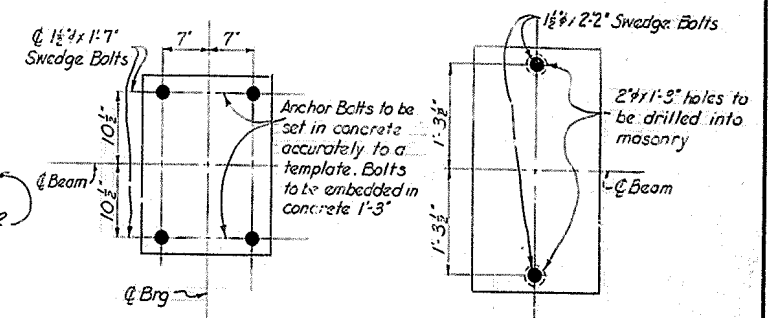


PLAN



DETAIL 'A'
Exp. Shoe Assembly 'E-3' - See Sh #22

DETAIL 'B'
Exp. Shoe Assembly 'E-2' - See Sh #22



DETAIL 'C'
Fix Shoe Assembly 'F-1' - See Sh #22

DETAIL 'D'
Exp. Shoe Assembly 'E-1' - See Sh #22

Anchor Bolts for "Fixed Shoe Assembly 'F-1'" are to be set in concrete accurately to a template. Holes for "Exp. Shoe Assemblies 'E-1' & 'E-2'" shall be drilled as shown for anchor bolts or dowels by the Super-structure Contractor who shall be responsible for keeping holes dry in freezing weather. After base plates are properly set and anchor bolts are placed in drilled holes, molten lead shall be poured in holes and packed until holes are completely filled flush to top of base plates. At the time of setting, anchor bolts are to be heated to a blue heat to assure free flow of lead to the bottoms of anchor bolt holes. The cost of drilling anchor bolt holes, furnishing lead, and filling holes with molten lead shall be incidental to and included in the lump sum bid for structural steel.

DESIGNED BY	CHEKED BY	DATE
TRACED BY	DATE	
DATE		

BRIDGE OVER LEVISA FORK AND C. & O. RY. SHEET 26 OF 27

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
FLOYD
SALYERSVILLE - PRESTONSBURG
ROAD **S 267(5)**
STATION 5014+31 PROJECT NO. SP 36-156-14L

BRIDGE NO.	SECTION NO.	NO.
NUMBER EK 6-1-5	6	14846

ANCHOR BOLT PLAN

