MICROFILMED-70

TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

KENTUCKY RESERVOIR
CONSTRUCTION PLANS

EGGNERS FERRY BRIDGE

ACROSS TENNESSEE RIVER
ON UNITED STATES HIGHWAY 68
PROJECT 8-1080

MARSHALL-TRIGG COUNTIES, KENTUCKY

*SUMMARY OF QUANTITIES†

ITEM NO.	125	401	404	418	421	411	413
ITEM	EARTH EXCAV FOR STRS	CLASS A CONC	CLASS S CONC	REINF STEEL	**STRUCT STEEL	**14" CONC PILING	**16" CAST-IN-PLACE PILING
UNIT	CU YD	CU YD	CU YD	LB	LB	LIN FT	LIN FT
WEST APPROACH							
ABUTMENT 1	50.4	87.3		12,386	47		450.8
BENT X	11.3	26.2		1,356	8,109		
BENTS 1 & 2	12.9	65.2		↓	549		
BENTS 3 & 4		64.8			876		
BENTS 5 & 6		67.6			560		
BENTS 7 & 8		67.9			524		
BENTS 9 & 10		66.5			228		
BENTS 11 & 12		67.7		231,372	488		
BENTS 13 & 14		68.0		↓	571		
BENTS 15 & 16		67.5			393		
BENTS 17 & 18		66.9			1,068		
BENTS 19 & 20		67.2		↓	1,068		
SUBSTRUCTURE	74.6	782.8		245,114	14,481		
SUPERSTRUCTURE		27.6	3.0	6,724	25,684		
TOTAL	74.6	810.4	3.0	251,838	40,165		450.8
RIVER BRIDGE							
PIER 1	86.2	493.7		37,615	1,529	855.8	
PIER 2	236.5	908.1		61,559	2,684	1001.8	
PIER 3		586.6		31,810	482		
PIER 4		559.6		30,721	638		
PIER 5		500.6		27,296	821		
PIER 6							
PIER 7							
SUBSTRUCTURE	322.7	3,048.6		189,001	6,154	2457.6	
SUPERSTRUCTURE		99.8		16,618	6,860		
TOTAL	322.7	3,148.4		205,619	13,014	2457.6	
EAST APPROACH							
BENTS 21 & 22		68.7		↓	1,049		
BENTS 23 & 24		70.1			916		
BENTS 25 & 26		70.7			720		
BENTS 27 & 28		70.6			422		
BENTS 29 & 30		70.6		207,469	318		
BENTS 31 & 32		70.6			318		
BENTS 33 & 34		68.8			339		
BENTS 35 & 36	49.6	68.0		↓	339		
BENT Y	1.5	5.4		436	8,109		
ABUTMENT 2	69.2	87.3		12,387	47		599.9
SUBSTRUCTURE	120.3	650.8		220,292	12,577		
SUPERSTRUCTURE		26.1	19.6	7,101	25,684		
TOTAL	120.3	676.9		227,393	38,261		599.9
TEMPORARY MISC MATL**							
SUBSTRUCTURE			15	4,800			
SUPERSTRUCTURE							
TOTAL			15	4,800			
TOTAL QUANTITIES							
SUBSTRUCTURE		4,482.2		654,407	33,212		
SUPERSTRUCTURE		153.5	22.6	30,443	58,228		
TOTAL	517.6	4,635.7	22.6	688,429	91,440	2,457.6	1050.7

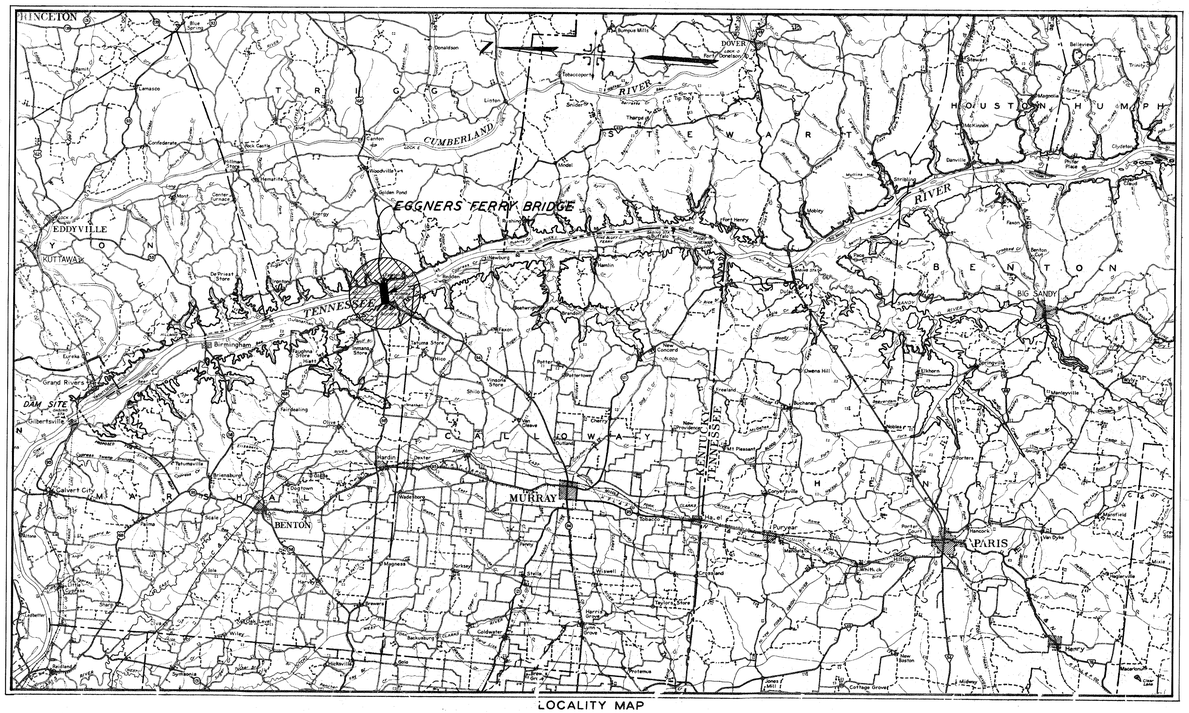
* In addition to items in table, work shall be performed under the following item:
Item -Raising Existing Eggners Ferry Bridge

** Weight includes cast steel, cast iron, and lead plates.

*** Cast-in-Place concrete piles may be used as an alternate for Precast concrete piles.

**** Temporary Miscellaneous Material not included in Total Quantities.

† In addition to quantities shown in table, work was performed under item 560-REPLACING DEFECTIVE CONCRETE-0.04 cu yd in superstructure of East Approach.



LOCALITY MAP

INDEX OF DRAWINGS

DRAWINGS BY TENNESSEE VALLEY AUTHORITY

GENERAL

1080 H	400	TITLE SHEET
	401	GENERAL DRAWING
	402	WEST APPROACH-TYPICAL SECTIONS
	403	EAST APPROACH-TYPICAL SECTIONS

SUBSTRUCTURE

1080H	411	ABUTMENTS 1 & 2-WALLS, GIRDERS, AND SLAB
	412	ABUTMENTS 1 & 2-PILING PLAN, PILING RECORD, AND MISCELLANEOUS DETAILS
	413	BENTS X & Y-CONCRETE EXTENSIONS
	414	BENTS 1 TO 20-CONCRETE EXTENSIONS
	415	BENTS 21 TO 24-CONCRETE ENCASEMENTS
	416	BENTS 25 TO 36-CONCRETE EXTENSIONS
	417	ABUTMENTS & BENTS-REINFORCING STEEL
1080H	421	BENT REVISIONS-WEST APPROACH
	422	BENT REVISIONS-EAST APPROACH
	423	BENTS X & Y-SPANS X & Y
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	433	PIER 1-SHEET 2
	434	PIER 2-SHEET 1
	435	PIER 2-SHEET 2
	436	PIERS 3, 4, & 5-ENCASEMENT
	437	PIER 3-EXTENSION
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	464	JACKING METHOD-PIER 3
	465	JACKING METHOD-PIER 4
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1080H	404	ANCHOR BOLT PLAN
	*423	BENTS X & Y-SPANS X & Y
	424	STRINGER REVISIONS-SPANS 1, 31, & 38
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	442	EXPANSION DEVICES & BEARINGS
	443	REVISIONS TO TRUSS FLOOR BEAMS
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1080H	451	SPANS X & Y-SLAB & RAILINGS
	452	ALTERATIONS TO SLAB & RAILING-EAST APPROACH
	453	ROADWAY SLAB ALTERATIONS AT PIERS 1 & 2
	454	ROADWAY SLAB ALTERATIONS AT PIERS 3, 4, 5, & 6
	455	SUPERSTRUCTURE-REINFORCING STEEL

*Listed with substructure drawings also.

SHOP DRAWINGS

1080H 3001-3018 SHOP DRAWINGS

Dwg #4504

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

Sh 1

APPROVED T.H. Cutler (S) DATE 2-12-43
STATE HIGHWAY ENGINEER

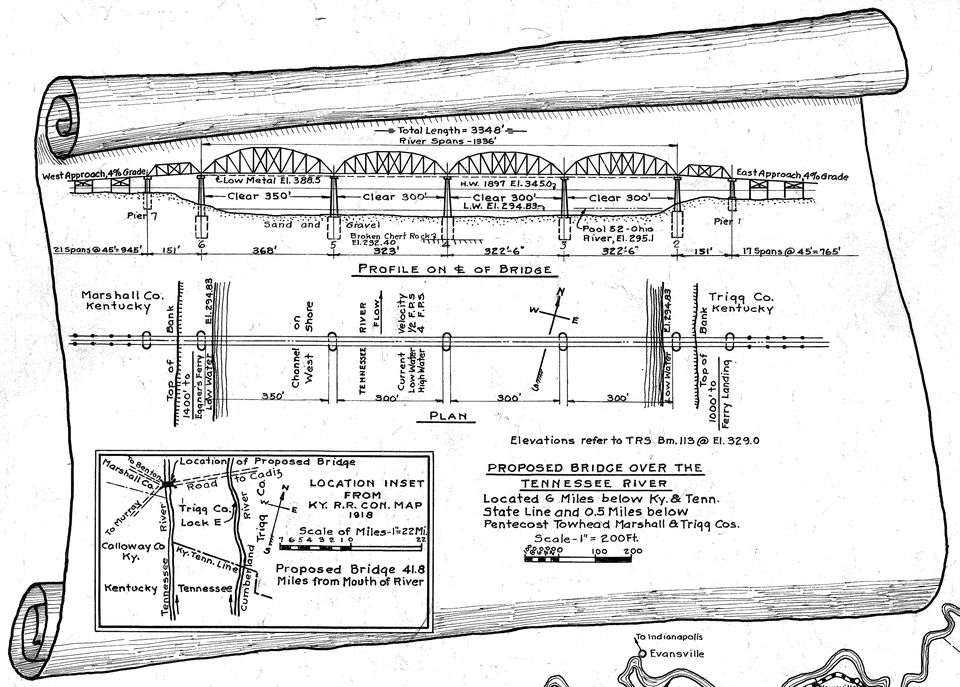
SUBMITTED Frank W. Webster DATE 10-26-42

RECOMMENDED Quincy L. Rib DATE 10-26-42
CHIEF DESIGN ENGINEER

APPROVED J. E. Barker DATE 10-26-42
CHIEF ENGINEER

KNOXVILLE | 10-22-42 | 8 | HR | 5 | 1080H 400 R2
RECORD DRAWING AS CONSTRUCTED
Frank L. Webster 7-1-44

Revised - Numbering of Piers. 11-18-'30



Dwg No. 4504

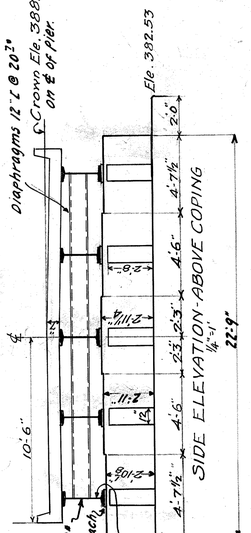
Sh 1A

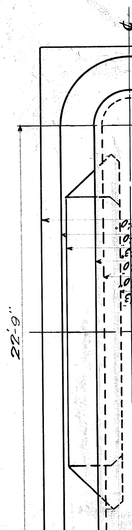
COMMONWEALTH OF KENTUCKY
PROPOSED BRIDGE OVER THE TENNESSEE RIVER AT EGGNER'S FERRY
MARSHALL & TRIGG COUNTIES

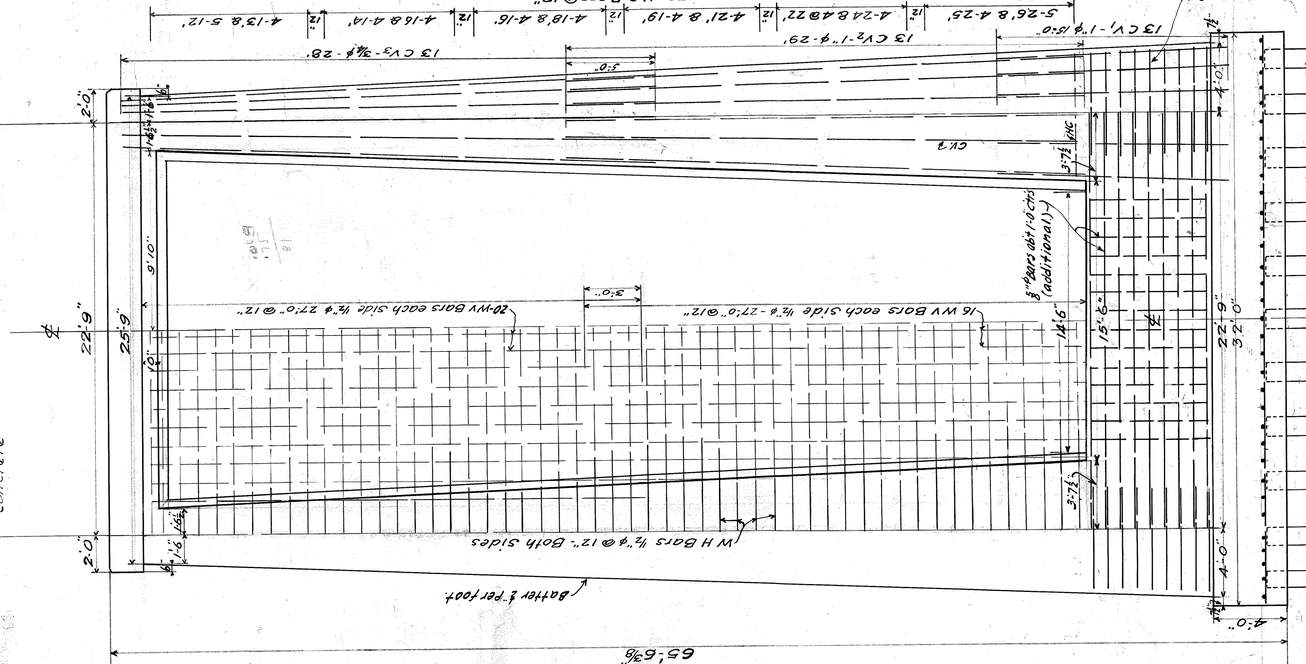
J. M. JOHNSON - CONSULTING ENGINEER - SEPT. - 1929

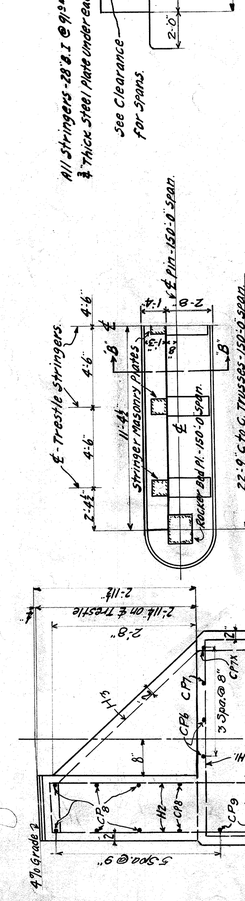
J. M. Johnson, Consulting Engr.

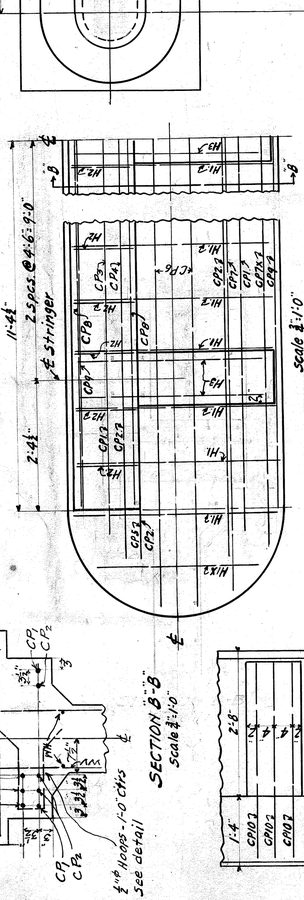
Revised- Concrete Piles instead of Wood Piles 11-1-30

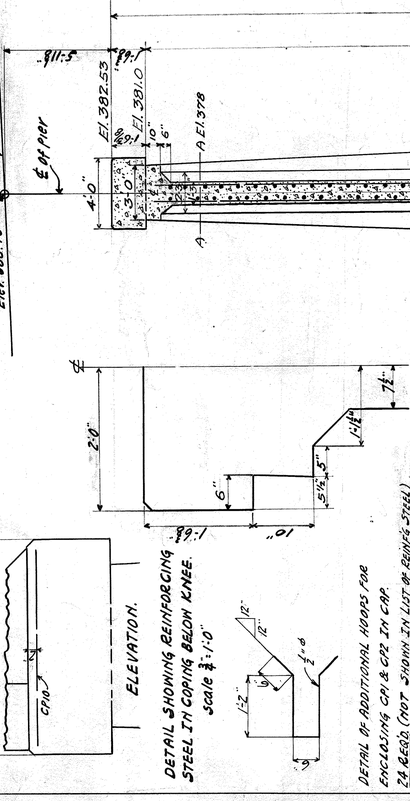


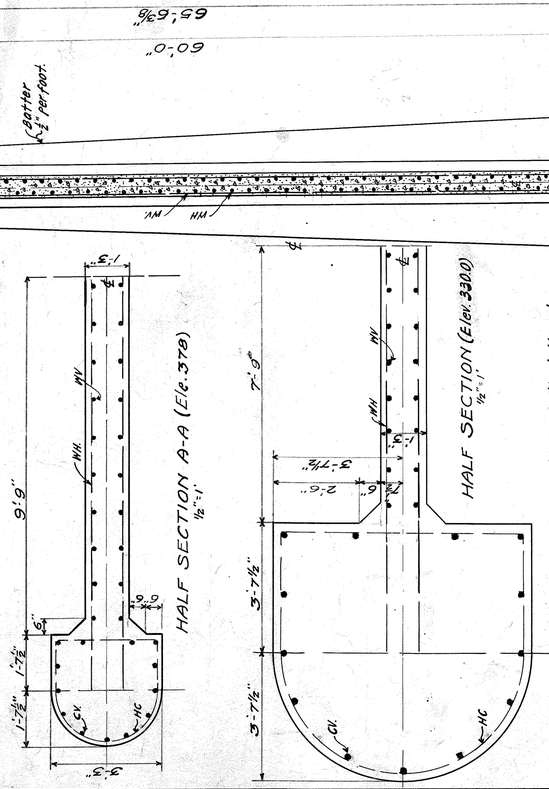












REINFORCING STEEL.					
MARK	NO	SIZE	LENGTH	LOCATION	REMARKS
CP1.	2.	1"ϕ	23'-6"	Below Coping	Straight.
CP2.	3.	1"ϕ	24'-6"	" "	"
CP3.	1.	1"ϕ	27'-2"	" "	Bent.
CP4.	1.	1"ϕ	28'-2"	" "	"
CP5.	1.	1"ϕ	24'-6"	" "	Straight
CP6.	2.	¾"ϕ	24'-4"	Coping	"
CP7.	1.	¾"ϕ	25'-10"	"	"
CP7X.	1.	¾"ϕ	24'-2"	"	"
CP8.	8.	¾"ϕ	22'-5"	Above Coping	"
CP9.	3.	¾"ϕ	22'-9"	Coping	"
CP10.	15.	1"ϕ	3'-8"	"	Bent.
H1.	24.	¾"ϕ	6'-8"	"	"
H1X.	2.	¾"ϕ	8'-2"	"	"
H2.	22.	¾"ϕ	6'-10½"	Coping & Above	"
H3.	10.	¾"ϕ	8'-4½"	" " "	"
CV1.	26.	1"ϕ	15'-0"	Column	Straight.
CV2.	26.	1"ϕ	29'-0"	"	"
CV3.	26.	¾"ϕ	28'-0"	"	"
WV.	72.	¾"ϕ	27'-0"	WEB.	"
WH.	104.	¾"ϕ	22'-9"	"	"
HM.	52.	¾"ϕ	25'-10"	"	"
HH.	52.	¾"ϕ	24'-2"	"	"

NOTE
Bars marked (additional) not shown in list of reinforcing steel.

REINFORCING STEEL.
HC Bars ½"ϕ following numbers and lengths.
10-25'-0" 8-25'-0" 8-24'-0" 8-22'-0" 8-21'-0"
8-19'-0" 8-18'-0" 16-16'-0" 8-14'-0" 8-13'-0" 10-12'-0"
10 SPCS. @ 2'-0" = 28'-9"

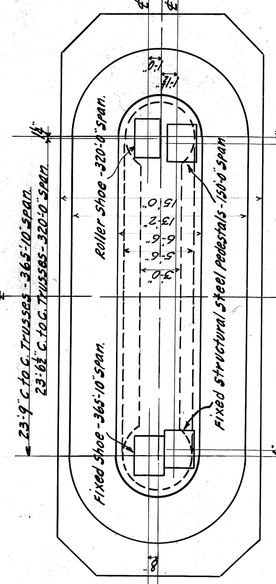
Dwg #4504
Dwg No. 4504

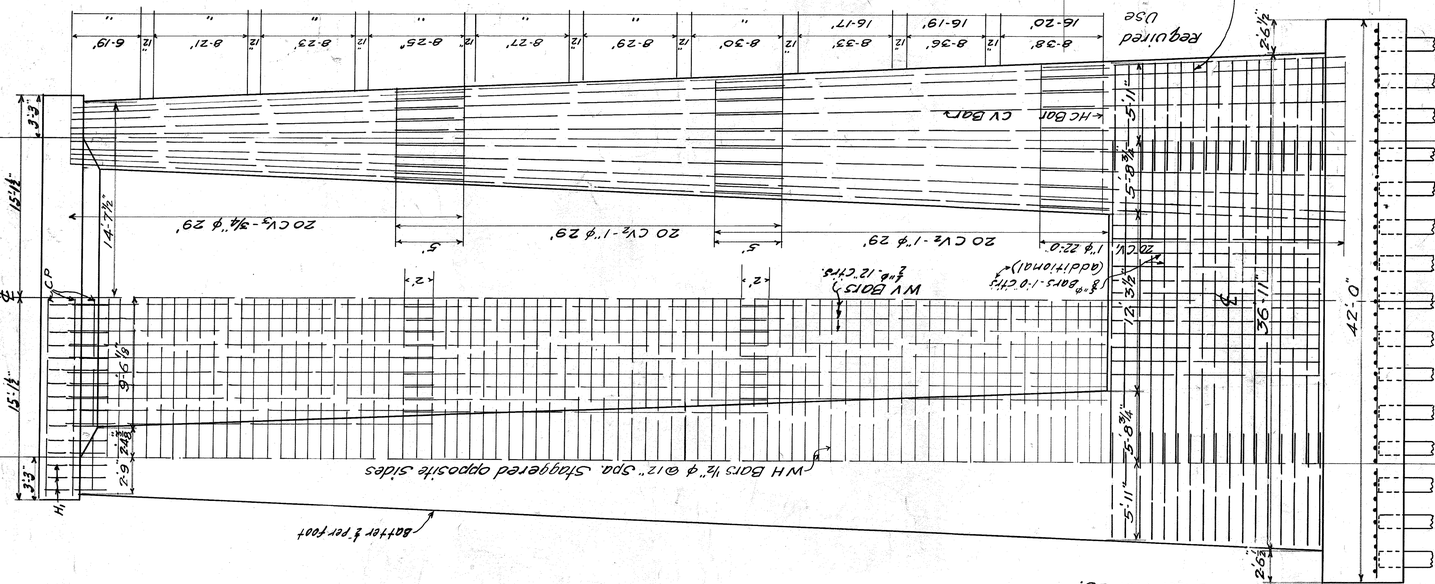
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF STATE ROADS AND HIGHWAYS
FRANKFORT
TENNESSEE RIVER BRIDGE
MARSHALL AND TRIGG COUNTIES
PIERS-No1 & No7
1929-30.

SUBMITTED BY J.M. Johnson CONSULTING ENGINEER
RECOMMENDED FOR APPROVAL BRIDGE ENGINEER
RECOMMENDED FOR APPROVAL CHIEF ENGINEER
APPPOVED-KENTUCKY STATE HIGHWAY COMMISSION
BY CHAIRMAN
DATE BOOK NO PAGE

SHEET 2 OF 18

PLAN





REINFORCING STEEL				
Mark	No	Size	Length	Location
H	30	1/2	18'0	Coping
CP1	4	1"	26'0	"
CP2	4	1"	28'0	"
CP3	2	1"	30'0	"
WH	77	1/2	23'6"	Web
WV	100	3/4	27'0	"
CV1	40	1"	21'0	Column
CV2	80	1"	29'0	"
CV3	40	3/4	29'0	"

HC Bars ½" ℄ following number and lengths - 32'-1", 44'-1", 32'-0" 16'-2", 16'-23", 16'-25", 16'-27", 16'-29", 16'-30".

NOTE

Bars marked (additional) not shown in list of reinforcing steel.

6'-0"

H Bars except 2 at ends of Coping

4'-0"

45°

Diameter Varies

Lap

ESTIMATED QUANTITIES

Reinforcing Steel 16400# (One Pier)

Concrete Class A 900 C.Y. (One Pier)

Concrete Piles 2800 Lin. Ft. (One Pier)

Note: For Additional Quantities, Additional Bill of Reinforcement see Pier No. 6 see Sheet No. 3A.

Dwg # 4504

Dwg No 4504

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF STATE ROADS AND HIGHWAYS
FRANKFORT
TENNESSEE RIVER BRIDGE —
MARSHALL AND TRIGG COUNTIES
PIERS-No2 & No 6
1929-30

SUBMITTED BY _____ CONSULTING ENGINEER

RECOMMENDED FOR APPROVAL _____ BRIDGE ENGINEER

RECOMMENDED FOR APPROVAL _____ CHIEF ENGINEER

APPROVED-KENTUCKY STATE HIGHWAY COMMISSION

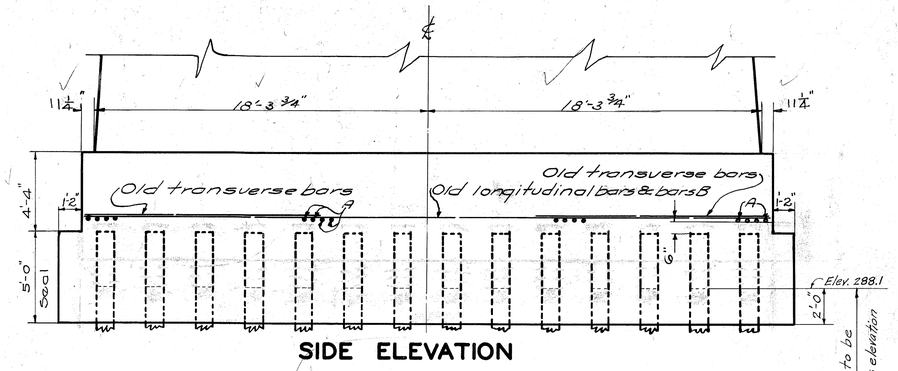
BY _____ CHAIRMAN

DATE _____ BOOK NO _____ PAGE _____

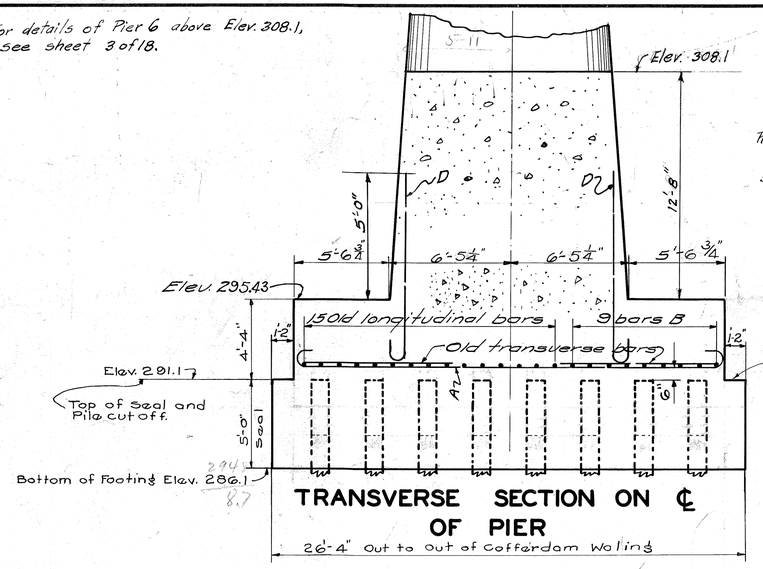
SHEET 3 OF 18

Fed. Road Dist. No.	State	Fed Aid Proj. No.	Fiscal Year	Sheet No.	Total Sheets
7	Ky				

For details of Pier 6 above Elev. 308.1, see sheet 3 of 18.



SIDE ELEVATION

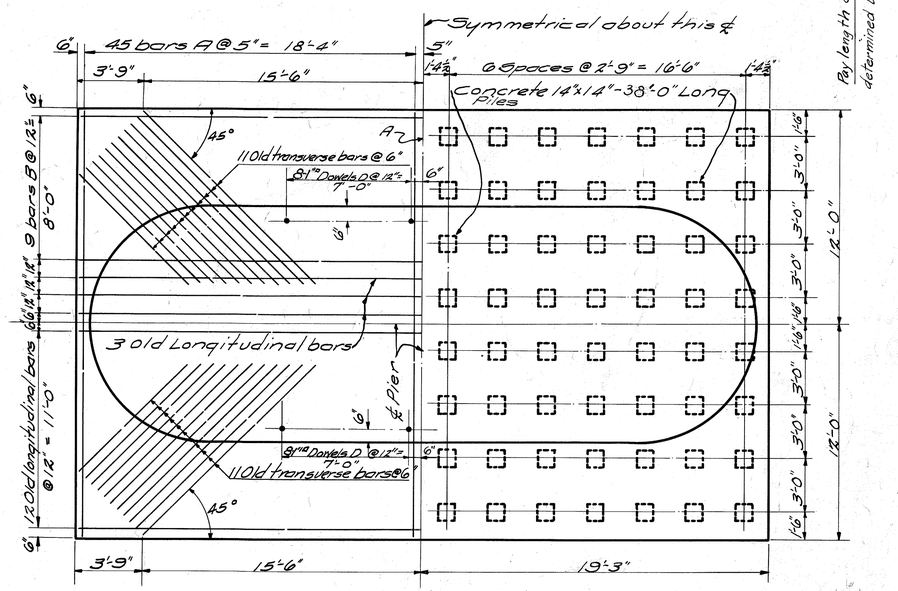


TRANSVERSE SECTION ON ℄ OF PIER

Revise steel shown on sheet 3 of 18 between Elev. 292.1 and Elev. 308.1 to fit revisions shown hereon.

Remove laitance on upper surface of concrete seal.

Pay length of piles to be determined below this elevation

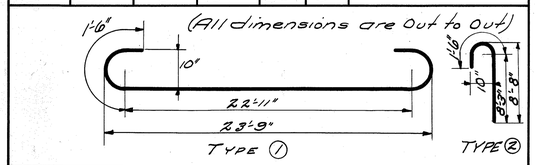


PLAN OF FOOTING - Above Elev. 291.1

(Showing Reinforcement) (Showing spacing of Piles)

BILL AND TYPES OF ADDITIONAL REINFORCEMENT FOR ONE PIER

Mark	Type	No.	Size	Length Ft.	Length In.	Location
A	①	91	1" ⌀	25	11	Bottom of Footing
B	Str.	9	5/8" ⌀	38	3	" " "
D	②	32	1" ⌀	9	9	Footing - Dowels



Note: Old 5/8" ⌀ bars to be cut and used as shown on Plans.

Dwg # 4504

ESTIMATE OF ADDITIONAL QUANTITIES (FOR ONE PIER)

Concrete, Class "A" 64.6 Cuyds.
Reinforcement 9440 lbs.
41 Concrete Piles - 40'-0" Long 1640 Lin ft.

NOTE: QUANTITIES TO BE REVISED ACCORDING TO LETTER OF MARCH 16, 1931

REVISION OF FOOTING BELOW ELEV. 292.1 FOR PIER NO. 6

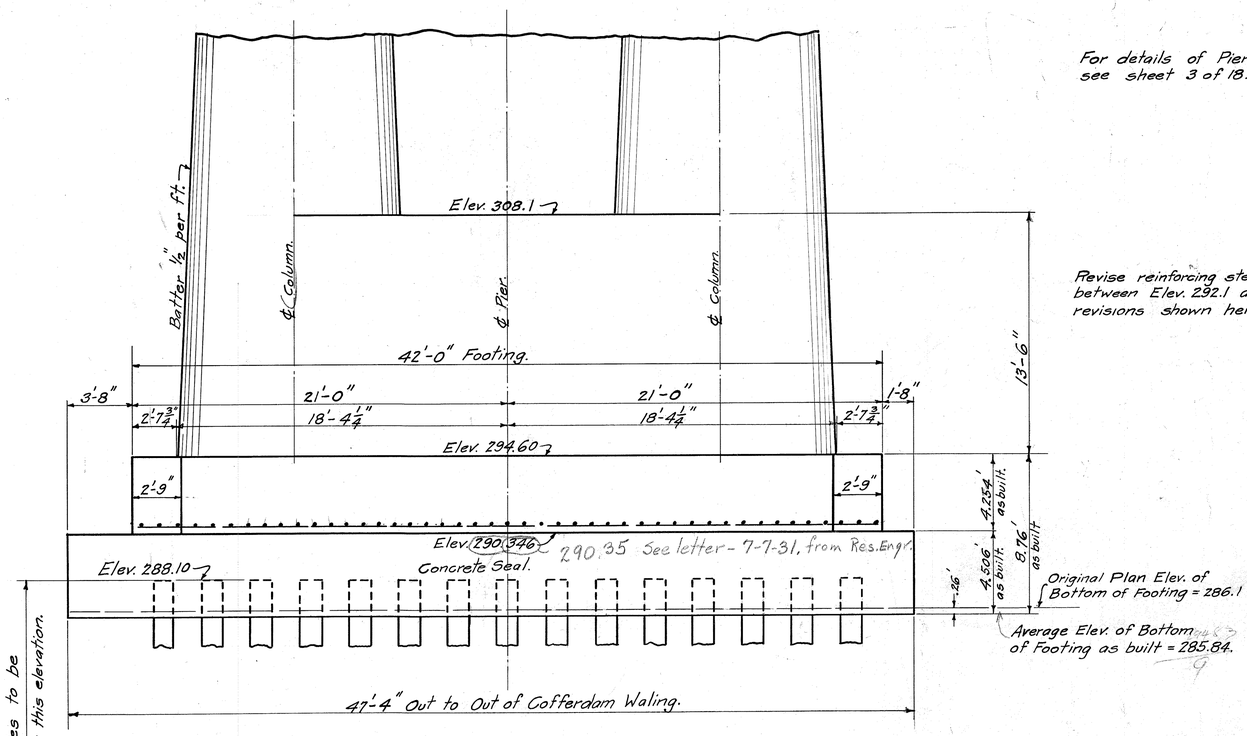
SHEET 3A OF 18

COMMONWEALTH OF KENTUCKY
STATE HIGHWAY DEPARTMENT
FRANKFORT
COUNTY OF
MARSHALL & TRIGG
TENNESSEE RIVER BRIDGE
STATION ROAD PROJECT NO.

SUBMITTED BY ..... BRIDGE ENGR.
APPROVED BY ..... CHIEF ENGR.
DRAWING NO. 4504
INDEX

DESIGNED BY J.T.P. DATE
TRACED BY C.C. Cook DATE 12-2-30
CHECKED BY E.R.S. DATE 12-3-30
REVISED (Footing) W.B.A. DATE 3/17/31
REVISED DATE
REVISED DATE

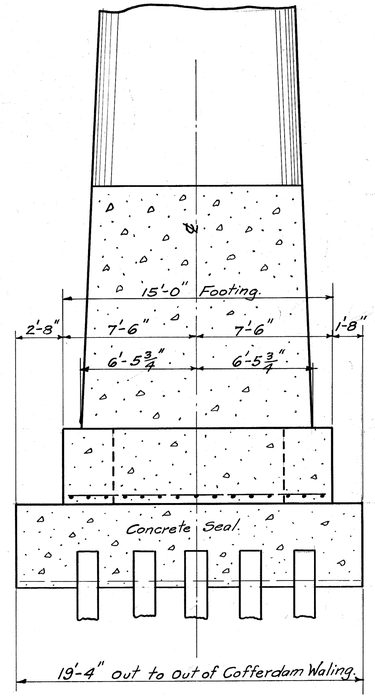
FED. ROAD DIST. NO.	STATE	FED. AID PRO. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



SIDE ELEVATION.

For details of Pier 2 above Elev. 308.1 see sheet 3 of 18.

Revise reinforcing steel shown on sheet 3 of 18 between Elev. 292.1 and Elev. 308.1 to fit revisions shown here.



TRANSVERSE SECTION ON ℄ OF PIER.

Pay length of piles to be determined below this elevation.

Detailed by W.S. Todd DATE 7-3-31 REVISED DATE
Traced by W.S.T. DATE 7-3-31 REVISED DATE
Checked by E.R.S. DATE 7-3-31 REVISED DATE

REVISION OF FOOTING - PIER NO. 2.

Dwg # 4504

Sheet 3B of 18.

COMMONWEALTH OF KENTUCKY
STATE HIGHWAY DEPARTMENT
FRANKFORT
COUNTY OF
MARSHALL & TRIGG
TENNESSEE RIVER BRIDGE

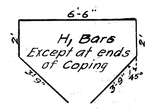
SUBMITTED BY ..... BRIDGE ENGR.
APPROVED BY ..... STATE HIGHWAY ENGR.
DRAWING No. 4504
INDEX

REVISED PIERS NO. 3, 4 & 5 REINFORCING STEEL. 1/28/31

Designed by -- M. W. Easley.
checked by -- G.S. Marchant - 1-30-31

REINFORCING STEEL				
Mark	No.	Size	Length	Location
H_1	30	½"φ	18'-0"	Coping
CP_1	4	1"□	26'-0"	"
CP_1	4	1"□	24'-0"	"
CP_2	2	1"□	29'-0"	"
CP_2	2	1"□	30'-0"	"
WH	89	½"φ	23'-9"	Web
WV	60	½"φ	32'-0"	"
WV	36	½"φ	30'-0"	"
CV_1	40	1"φ	10'-0"	Column
CV_2	80	1"φ	34'-0"	"
CV_3	40	¾"φ	32'-0"	"

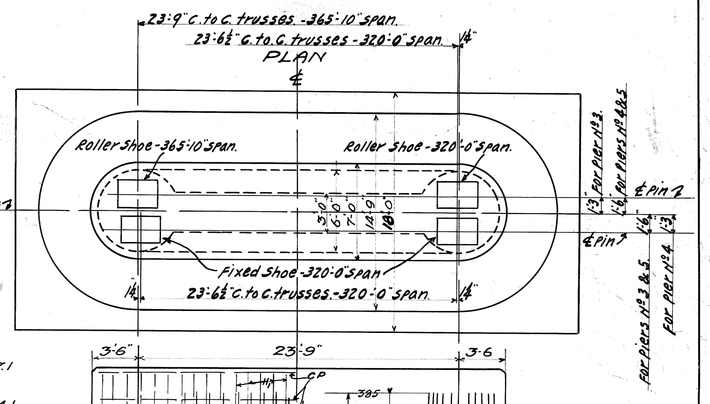
HC Bars ½"φ following number and lengths 16-17'. 32-18'. 40-19'. 32-20'. 40-21'. 16-28-22'. 8-23'. 8-24'. 8-25'. 8-26'. 8-27'. 8-28'. 16-29'. 8-31'.

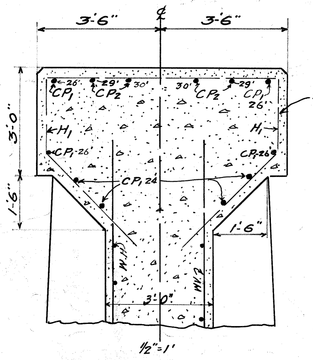


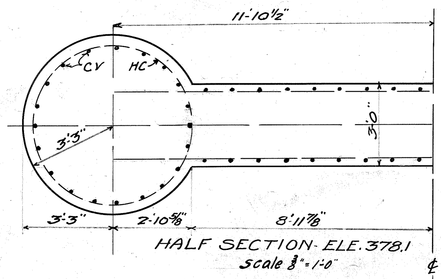


ESTIMATED QUANTITIES-

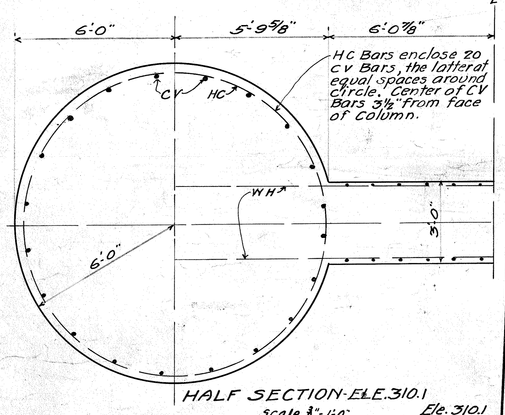
Reinforcing Steel	20,780#	21000	(One Pier)
Concrete (Battered) Class A	892 C.Y.		Pier No. 3
Concrete (Base) Class B	1434 C.Y.		
Concrete (Battered) Class A	892 C.Y.		Pier No. 4
Concrete (Base) Class B	1361 C.Y.		
Concrete (Battered) Class A	892 C.Y.		Pier No. 5
Concrete (Base) Class B	1293 C.Y.		



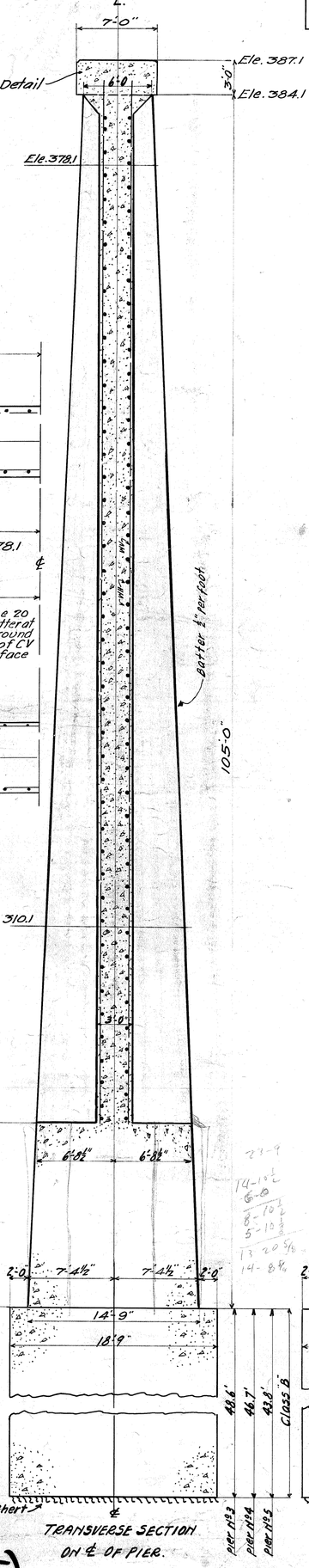




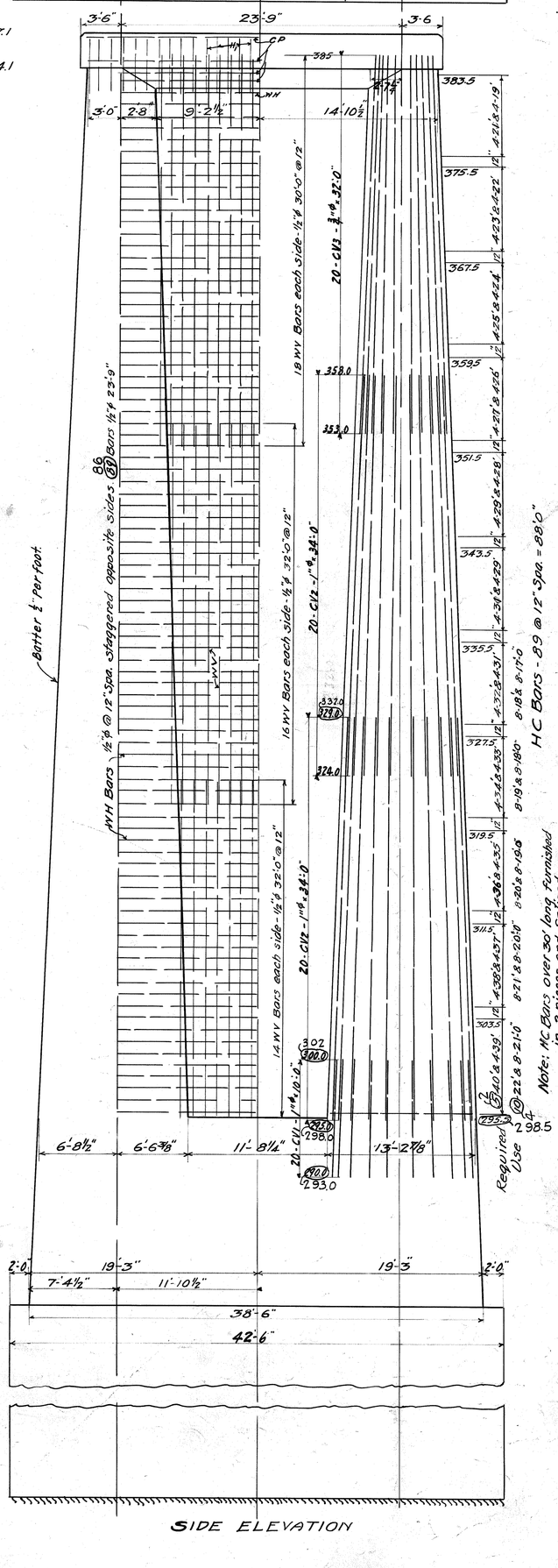
HALF SECTION - ELE. 378.1
Scale ⅜"=1'-0"



HALF SECTION - ELE. 310.1
Scale ⅜"=1'-0"



TRANSVERSE SECTION ON ℄ OF PIER.



SIDE ELEVATION

Note: For revised details of pier between Elev. 279.1 and 298.1 see sheet No. 4-A. of 18.

Note:- Foundation to be on compacted chert, of broken flint rock, cemented with clay.
If the manner of sinking requires concrete to be deposited in water to seal the Caisson, the concrete so deposited, will be made Class "A"

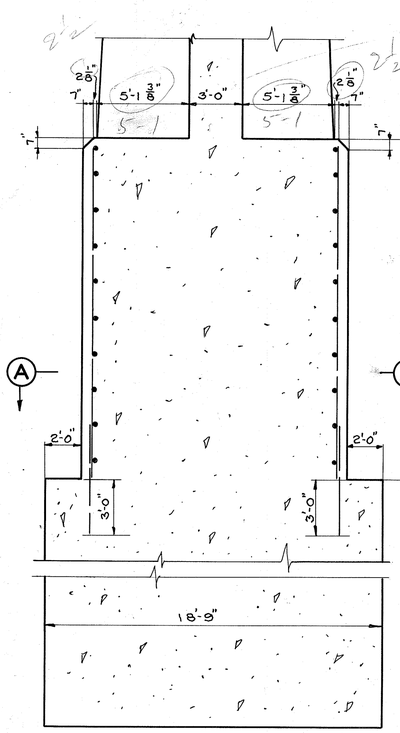
Concrete in the Base (below battered portion) deposited at or above atmospheric pressure to be Class "B"

Dwg No 4504

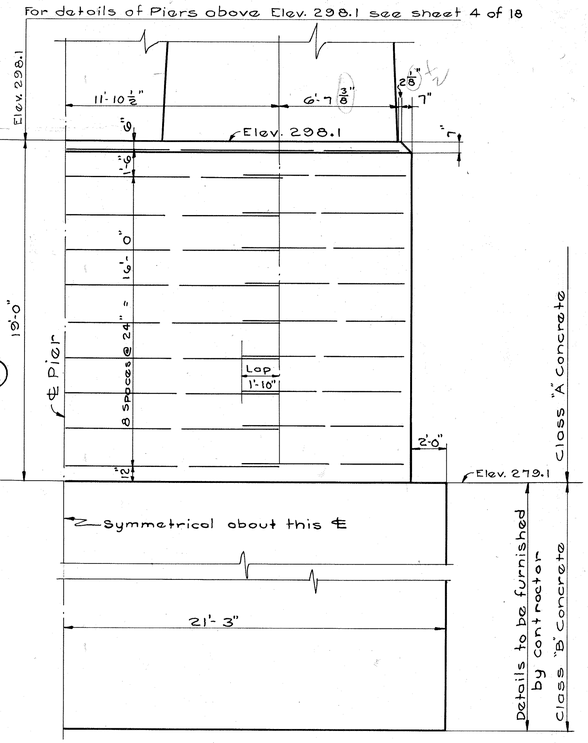
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF STATE ROADS AND HIGHWAYS
FRANKFORT
TENNESSEE RIVER BRIDGE
MARSHALL AND TRIGG COUNTIES
PIERS-No3, No4 & No5
1929-30

SUBMITTED BY [signature] CONSULTING ENGINEER
RECOMMENDED FOR APPROVAL BRIDGE ENGINEER
RECOMMENDED FOR APPROVAL CHIEF ENGINEER
APPROVED-KENTUCKY STATE HIGHWAY COMMISSION
BY CHAIRMAN
DATE BOOK NO. PAGE
SHEET 4 OF 18

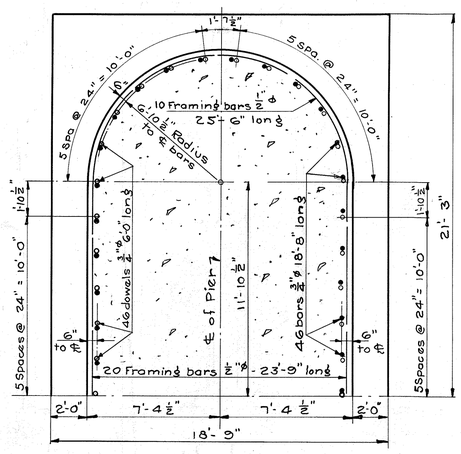
Fed. Road Dist. No.	State	Fed Aid Pro. No.	Fiscal Year	Sheet No.	Total Sheets
7	Ky				



TRANSVERSE SECTION ON ℄

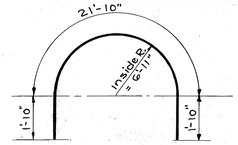


HALF SIDE ELEVATION



HALF SECTION A—A

Bill & Types of Reinforcement for One Pier Only						
Mark	Type	No.	Size	Length Ft.	Length In.	Location
C1	1	20	1/2" ϕ	25	6	Pedestal
C2	Str.	46	3/4" ϕ	6	0	Dowels-Pedestal into Footing
C3	"	46	"	18	8	Pedestal
C4	"	20	1/2" ϕ	23	9	"



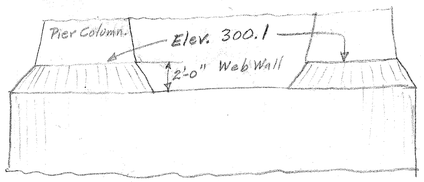
TYPE 1

ESTIMATED QUANTITIES BETWEEN ELEV'S. 279.1 & 298.1
(For One Pier Only)

Concrete Class "A"	366.8	cu. yds.
Reinforcement	2370	lbs.

March 31, 1932

Resident Engineer advises that actual construction at or near low water elevation was as follows:



NOTE: The volume of concrete in Piers 3, 4 and 5 above Elev. 279.1 to be paid for shall be the volume within the neat lines shown on sheet 4 of 18 of the original contract plans; it being understood that the revisions shown hereon are made for the convenience of the contractor during construction.

The additional steel, marked C_1 C_2 C_3 and C_4 as shown hereon shall be paid for at the contract unit price for reinforcing steel.

Dwg #4504

Eggners Ferry-Revision. Sheet 4A of 18

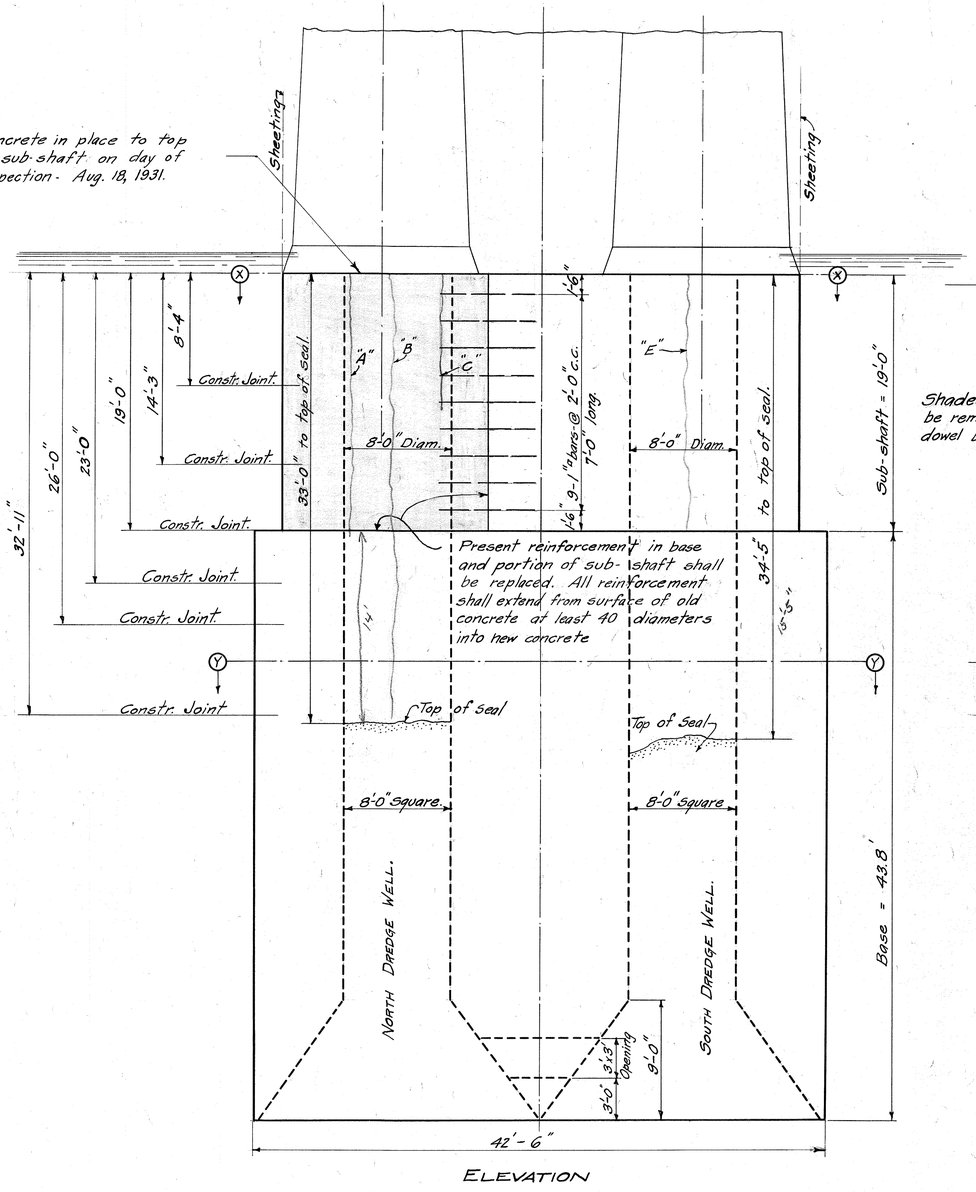
REVISION OF PIERS NO. 3, 4 & 5 BETWEEN ELEVATIONS 279.1 & 298.1

COMMONWEALTH OF KENTUCKY
STATE HIGHWAY DEPARTMENT
FRANKFORT
COUNTY OF
MARSHALL — TRIGG
TENNESSEE RIVER BRIDGE
ROAD
STATION PROJECT NO.

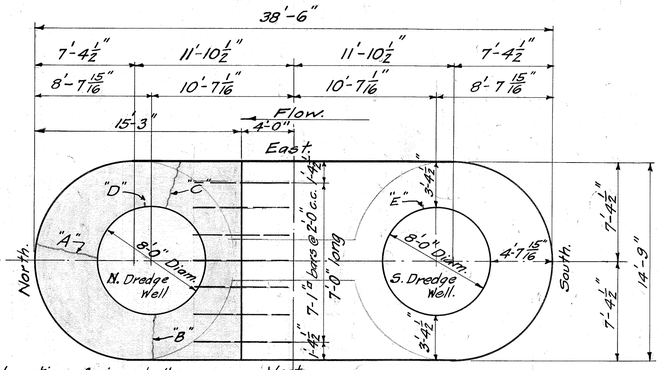
SUBMITTED BY ..... BRIDGE ENGR.
APPROVED BY ..... CHIEF ENGR.
DRAWING NO. 4504
INDEX

DESIGNED BY M. W. Easley DATE
TRACED BY [illegible] DATE 1/28/31
CHECKED BY G S Marchant DATE 1-29-31
REVISED DATE
REVISED DATE
REVISED DATE

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



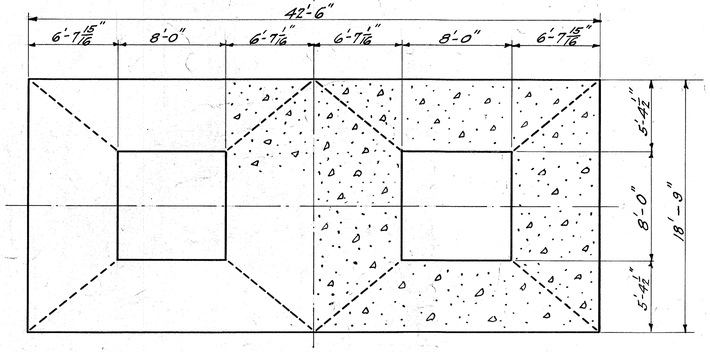
ELEVATION



PLAN VIEW X-X.

Shaded portion of pier shall be removed. Place 63-1"ø dowel bars thru joint in sub-shaft.

For details of reinforcement in base, see details prepared by Union Bridge and Constr. Co.; for reinforcement in sub-shaft, see sheet 4A of 18; and for reinforcement in remainder of pier, see sheet 4 of 18.



SECTION Y-Y.

Crack "A" - Located in North Dredge Well. Extends 19'-5" down from top of sub-shaft. Well defined crack- Crack has been calked.
Crack "B" - Located in North Dredge Well. Extends to top of seal, 33'-0" down from top of sub-shaft. Well defined crack down 19'-0" to top of base. Hair crack below top of base. Upper portion of crack has been calked.
Crack "C" - Located in North Dredge Well. Extends 10'-0" down from top of sub-shaft. Well defined crack.
Crack "D" - Located in North dredge well. Small crack extending down about 19'-0" to top of base. This crack does not extend entirely thru dredge well wall to outer sheeting.
Crack "E" - Located in south dredge well ~~at~~ Small crack extending down about 19'-0" to top of base. This crack does not extend entirely thru dredge well wall to outer sheeting.

DETAILS OF PIER 5 - EGGNER'S FERRY TOLL BRIDGE
Inspection made August 18, 1931.

DETAILED M. S. Todd DATE 6-21-31
DESIGNED BY
TRACED BY
CHECKED BY
REVISED DATE
REVISED DATE
REVISED DATE

Dwg #4504

4B
Sheet (4A) of 18

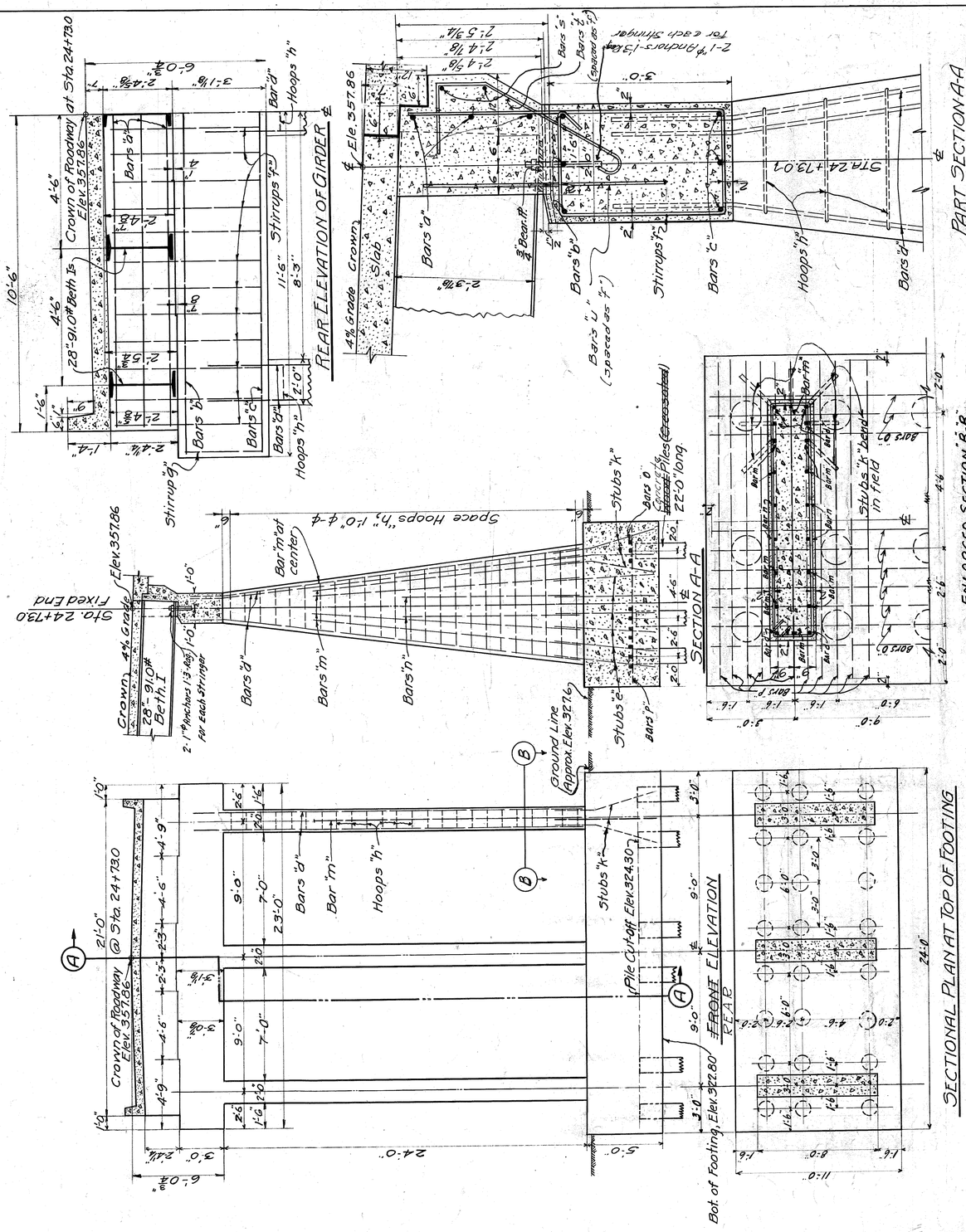
COMMONWEALTH OF KENTUCKY
STATE HIGHWAY DEPARTMENT
FRANKFORT
COUNTY OF
MARSHALL - TRIGG.

TENNESSEE RIVER TOLL BRIDGE AT EGGNER'S FERRY.

ROAD
STATION PROJECT NO.

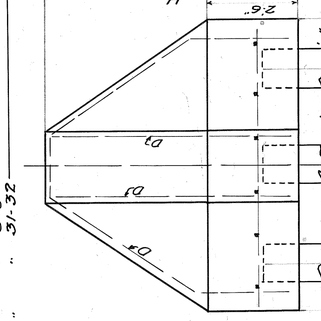
SUBMITTED BY ..... BRIDGE ENGR.
APPROVED BY ..... CHIEF ENGR.
DRAWING No. 4504
INDEX

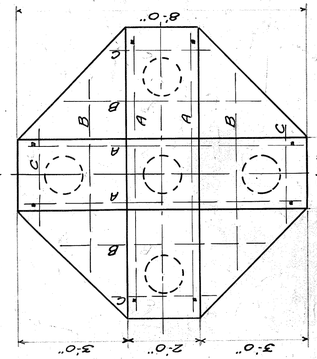
Rev: 1930: Increased thickness of flooring 3½ to 12" and supported it on Abutm ent. 11-13-30 Concrete Piles instead of Wood Piles 11-18-30



GENERAL PEDESTAL

For Bents 2-15-17-18-19-22-24-35-36-37 - H=4'-6"
" 4-6-16-20-21-23-27-28-29 — H=5'-0"
" 3-5-7-13-14-25-26 — H=5'-6"
" 10-11-12-34 — H=6'-0"
" 30-33 — H=6'-6"
" 8-9 — H=7'-0"
" 31-32 — H=7'-6"

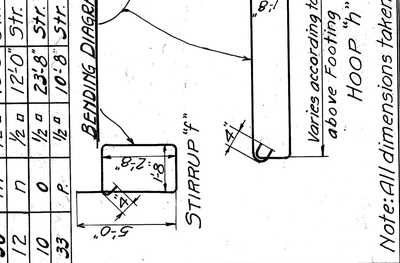


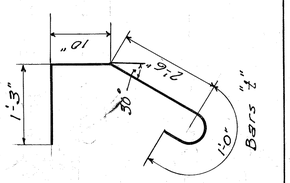


QUANTITY OF CONCRETE						
Class	H	CU.YDS.	H	Class	H	CU.YDS.
A	4'-6"	5.50	A	6'-0"	6.35	A	7'-6"	7.25
A	5'-0"	5.75	A	6'-6"	6.65			
A	5'-6"	6.00	A	7'-0"	7.00			

SCHEDULE OF REINFORCING STEEL (BENT No I)					
No. Bars	Mark	Size	Length	Kind	Remarks
3	a	⅞ ϕ	20'-8"	Str.	
3	b	⅞ ϕ	22'-8"	Str.	
3	c	⅞ ϕ	22'-8"	Str.	
18	d	½ □	26'0"	Bent	Bend in Field To Stub into Girder.
36	e	½ □	6'-8	Str.	
~~36~~	f	½ ϕ	11'-6"	Stirrups	See Bend Diag.
2	g	½ ϕ	9'-6"	Stirrups	See Bend Diag.
72	h	½ ϕ	Varies	Hoops	See Bend Diag.
21	k	½ □	7'-0	Bent	See Section B-B
30	m	½ □	18'-0"	Str.	
12	n	½ □	12'-0"	Str.	
10	o	½ □	23'-8"	Str.	
33	p	½ □	10'-8"	Str.	
2	s	½ ϕ	20'-8"	Str.	See Band Diag.
24	t	½ "	5'-6"	Bent	
24	u	½ "	4'0"	Str.	

BENDING DIAGRAMS





TOTAL WEIGHT REINFORCING STEEL	
H	LBS.
4'-6"	107
5'-0"	110
6'-0"	116
6'-6"	119
7'-0"	120
7'-6	126
5'-6"	114

Note: All dimensions taken inside to inside.

ESTIMATE OF QUANTITIES	
Concrete, Class A	84 ~~###~~ CU.YDS.
Reinforcement	3300 ~~7030~~ Lbs.
~~#####~~ Piles (Encased)	528 Lin. Ft.

SCHEDULE OF REINFORCING STEEL (PEDESTALS)					
No. Bars	Mark	Size	Length	Kind	Remarks
4	A	½ □	7'-6"	Str.	Each Pedestal
4	B	½ □	6'-8"	Str.	do.
4	C	½ □	3'-0"	Str.	do.
4	D	½ □	13'-0"	Bent	Where H=4'-6"
4	D	½ □	13'-8"	Bent	Where H=5'-0"
4	D	½ □	14'-6"	Bent	Where H=5'-6"
4	D	½ □	15'-3"	Bent	Where H=6'-0"
4	D	½ □	16'-0"	Bent	Where H=6'-6"
4	D	½ □	16'-10"	Bent	Where H=7'-0"
4	D	½ □	17'-10"	Bent	Where H=7'-6"

Note: For Estimate of quantities see Sheet No I
For Elevation of Top of Pedestals see Sheet No 17

Dwg #4504

Dwg No 4504

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF STATE ROADS AND HIGHWAYS
FRANKFORT
TENNESSEE RIVER BRIDGE
MARSHALL AND TRIGG COUNTIES
GENERAL PEDESTAL PLAN
AND
BENT No I-(EAST END)-STATION 24+73.0
1929-30

SUBMITTED BY J. M. Johnson CONSULTING ENGINEER
RECOMMENDED FOR APPROVAL BRIDGE ENGINEER
RECOMMENDED FOR APPROVAL CHIEF ENGINEER
APPROVED-KENTUCKY STATE HIGHWAY COMMISSION
BY CHAIRMAN
DATE ____ BOOK NO ____ PAGE ____

SHEET 5 OF 18

Revised: Increased thickness of flooring slab to 12", for Vertical Curve and adjusted pile lengths accordingly 11-13-30 Concrete Piles instead of Wood Piles 11-15-30

Engstrom Chief Asst. E.

1-5-31

HALF PLAN
Showing Bars G

HALF SECTIONAL PLAN
Showing Steel in Top & Bottom of Footing

Place 3" Clay Drain Tile Weepers in the abutment at such elevation as will afford best drainage of backfilling and pack loose rock behind them to prevent wash of earth)

FRONT ELEVATION A-A
Showing Steel in Front of Wall & Bars G
Steel in Back of Wall.

FRONT ELEVATION B-B
Showing Steel in Back of Wing

SECTION ON ℄

SECTION "C-C"

END ELEVATION WING

HALF PILING PLAN

2	3	1/2"ϕ	20'-8"	Str.	
22	t	"	5'-0"	Bent	See Bend Diag.
22	U	"	4'-0"	Str.	

BILL OF BENT REINFORCEMENT

Mark	Type	No.	Size	Length Ft.	Length In.	Location	a Ft.	a In.	b Ft.	b In.	c Ft.	c In.
A1	2	82	1/2 a	9	0	Bottom of Footing	8	4	0	8	0	4
A2	2	18	3/4 ϕ	7	6	do	6	6	1	0	0	6
A3	do	24	do	9	9	do	8	9	1	0	0	6
A4	do	32	do	12	3	do	11	3	1	0	0	6
D1	do	134	1"ϕ	9	0	End & Wing Walls	7	8	1	4	0	8
F1	1	17	1/2 a	27	4	End Wall	26	0	0	8	0	4
F3	3	22	do	24	3	Wing Walls	21	9	2	6	1	9
F4	do	2	do	22	0	do	19	6	2	6	1	9
F5	do	2	do	19	10	do	17	4	2	6	1	9
F6	do	2	do	17	8	do	15	2	2	6	1	9
F7	do	2	do	15	6	do	13	0	2	6	1	9
F8	do	2	do	13	4	do	10	10	2	6	1	9
F9	do	2	do	11	2	do	8	8	2	6	1	9
F10	do	2	do	9	0	do	6	6	2	6	1	9
G1	do	2	1/8" a	34	3	End & Wing Walls	18	0	16	3	12	9
G2	do	2	do	34	3	do	20	0	14	3	10	1
G3	do	2	do	28	3	do	12	0	16	3	11	6
G4	do	2	do	28	3	do	14	0	14	3	10	1

TYPES OF REINFORCEMENT
(All dimensions are out to out)

TYPE ① TYPE ② TYPE ③

BILL OF STRAIGHT REINFORCEMENT

Mark	No.	Size	Length Ft.	Length In.	Location
B1	60	1/2 a	8	6	Top of Footing
B2	18	7/8 ϕ	6	6	do
B3	24	do	8	6	do
B4	32	do	11	0	do
C1	18	1/2 a	30	0	Top & Bot. Footing
C2	32	do	20	0	do
C3	4	do	15	0	do
C4	8	do	10	0	do
D2	66	3/4 b	9	10	Back of End & Wing Walls
D3	30	do	19	3	Back of End Wall
D4	2	do	19	3	do
D5	4	do	9	10	Back of Wing Walls
D6	4	do	11	10	do
D7	4	do	13	0	do
D8	4	do	14	3	do
D9	4	do	15	6	do
D10	4	do	16	6	do
D11	4	do	17	6	do
D12	4	do	18	3	do
D13	4	do	19	0	do
F1	24	1/2 a	16	10	Front of End Wall
F2	17	do	23	6	do
F11	3	7/8 ϕ	20	8	Rear Bm. Encasing Wall

ESTIMATED QUANTITIES

Reinforcing Steel 14,160 ~~14000~~ Lbs.
Concrete, Class "A" 125 Cu. Yds.
~~Wood~~ Piles ~~(Creosoted)~~ 1012 Lin Ft.
Concrete

SPECIFICATIONS - State Highway Department, Special Toll Bridges
CONCRETE — Class "A" concrete to be used throughout.
REINFORCEMENT - To be new billet steel, Intermediate grade deformed bars. Dimensions from face of concrete to steel are clear distances. Dimensions for bar spacing are distances center to center of bars.
All reinforcement shall be securely held in position by means of pre-moulded concrete chairs and spacers and wired at intersections. Spacers and chairs shall not be spaced farther apart than 50 diameters of the supported bar.
CORNERS — All exposed corners to be chamferred ⅞" unless otherwise shown.

Dwg #4504

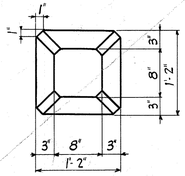
Dwg No 4504

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF STATE ROADS AND HIGHWAYS
FRANKFORT
TENNESSEE RIVER BRIDGE—
MARSHALL AND TRIGG COUNTIES
ABUTMENT (WEST END) - STA. 58+21.0

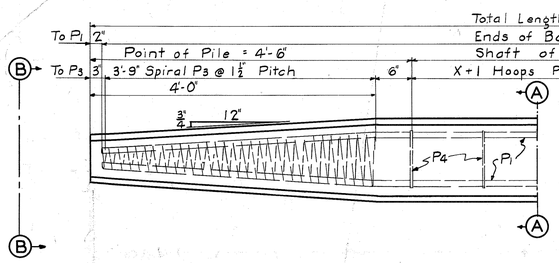
1929-30
SUBMITTED BY _____ CONSULTING ENGINEER
RECOMMENDED FOR APPROVAL _____ BRIDGE ENGINEER
RECOMMENDED FOR APPROVAL _____ CHIEF ENGINEER
APPROVED-KENTUCKY STATE HIGHWAY COMMISSION
BY _____ CHAIRMAN
DATE _____ BOOK NO _____ PAGE _____

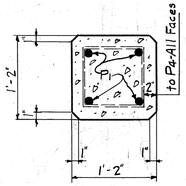
SHEET 6 OF 18

Fed. Road Dist. No.	State	Fed Aid Proj. No.	Fiscal Year	Sheet No.	Total Sheets
7	Ky				

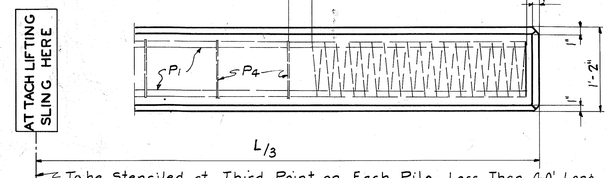


VIEW B-B





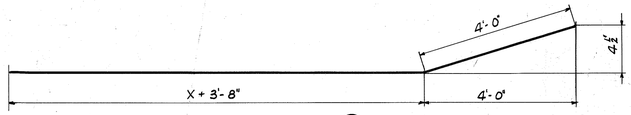
SECTION A-A



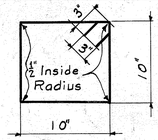
To be Stenciled at Third Point on Each Pile Less Than 40' Long.
For Piles over 40' Attach Two Slings about 1/5 of Length of Pile from Each End.
NOTE: When Water Jet is Used Contractor shall Make Necessary Arrangements for Jet.

BILL AND TYPES OF REINFORCEMENT FOR ONE PILE

MARK	TYPE	SIZE	LOCATION	20'		22'		24'		26'		28'		30'		32'		34'		36'		38'		40'		42'		44'		46'	
				NUMBER	LENGTH	NUMBER	LENGTH	NUMBER	LENGTH	NUMBER	LENGTH	NUMBER	LENGTH	NUMBER	LENGTH	NUMBER	LENGTH	NUMBER	LENGTH	NUMBER	LENGTH	NUMBER	LENGTH	NUMBER	LENGTH	NUMBER	LENGTH	NUMBER	LENGTH	NUMBER	LENGTH
P1	①	1" ϕ	Vertical	4	19'-8"	4	21'-8"	4	23'-8"	4	25'-8"	4	27'-8"	4	29'-8"	4	31'-8"	4	33'-8"	4	35'-8"	4	37'-8"	4	39'-8"	4	41'-8"	4	43'-8"	4	45'-8"
P2	Spiral	¼" ϕ	Head Spiral-10"×10"×3'-0"-2" Pitch	1	55'-6"	1	55'-6"	1	55'-6"	1	55'-6"	1	55'-6"	1	55'-6"	1	55'-6"	1	55'-6"	1	55'-6"	1	55'-6"	1	55'-6"	1	55'-6"	1	55'-6"	1	55'-6"
P3	Spiral	¼" ϕ	Point Spiral 10"×10" to 4"×4"×3'-9"-1½" Pitch	1	62'-6"	1	62'-6"	1	62'-6"	1	62'-6"	1	62'-6"	1	62'-6"	1	62'-6"	1	62'-6"	1	62'-6"	1	62'-6"	1	62'-6"	1	62'-6"	1	62'-6"	1	62'-6"
P4	②	¼" ϕ	Hoops - Thruout Shaft	13	3'-8"	15	3'-8"	17	3'-8"	19	3'-8"	21	3'-8"	23	3'-8"	25	3'-8"	27	3'-8"	29	3'-8"	31	3'-8"	33	3'-8"	35	3'-8"	37	3'-8"	39	3'-8



TYPE ①



TYPE ②

ESTIMATE OF QUANTITIES FOR ONE PILE

LENGTH OF PILE	20'	22'	24'	26'	28'	30'	32'	34'	36'	38'	40'	42'	44'	46'
Concrete - Class D-Cu.Yds.	0.93	1.04	1.14	1.24	1.34	1.44	1.54	1.64	1.74	1.84	1.94	2.04	2.14	2.24
Reinforcement - Lbs.	238	260	283	305	328	351	373	396	418	441	464	486	509	531

Dwg #4504 Sh 6A

DETAILS OF PRECAST CONCRETE PILES

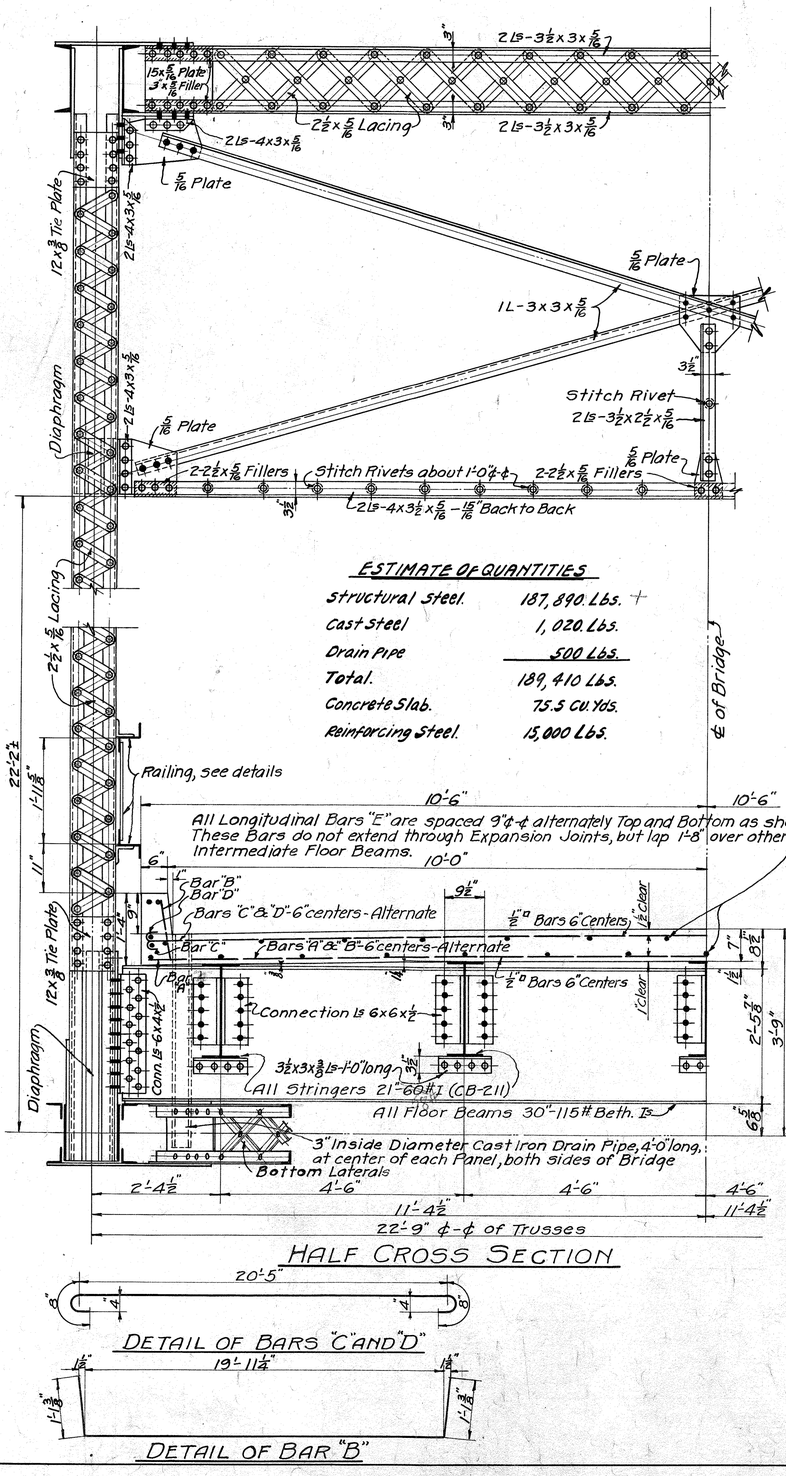
BRIDGE OVER THE CUMBERLAND RIVER AT CANTON, KENTUCKY
BRIDGE OVER THE TENNESEE RIVER AT EGGNER'S FERRY, KENTUCKY

BRIDGE AT CANTON -SHEET 8-A OF 16.
BRIDGE AT EGGNERS FERRY-SHEET 6-A OF 18.

DESIGNED BY J.B. Merchant DATE 11-28-36 REVISED DATE
TRACED BY G.S. Marchant DATE 11-29-36 REVISED DATE
CHECKED BY G.S. Marchant DATE 11-29-36 REVISED DATE

COMMONWEALTH OF KENTUCKY
STATE HIGHWAY DEPARTMENT
FRANKFORT
COUNTY OF
MARSHALL & TRIGG
MURRAY - CADIZ
STATION ROAD PROJECT NO.

SUBMITTED BY ..... BRIDGE ENGR.
APPROVED BY ..... CHIEF ENGR.
DRAWING NO. 4504
INDEX



HALF CROSS SECTION

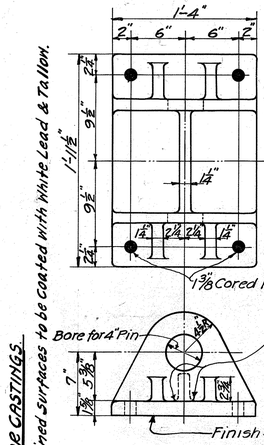
ESTIMATE OF QUANTITIES

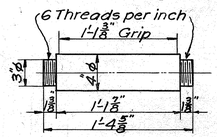
Structural Steel.	187,890 Lbs. +
Cast Steel	1,020 Lbs.
Drain Pipe	500 Lbs.
Total.	189,410 Lbs.
Concrete Slab.	75.5 Cu. Yds.
Reinforcing Steel.	15,000 Lbs.

DETAIL OF BARS "C" AND "D"

DETAIL OF BAR "B"

Revised: Wash on fixed shoes. Stringers from 21#@60# to 21"I@58#

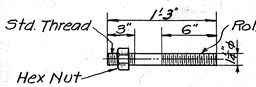




DETAIL OF PIN

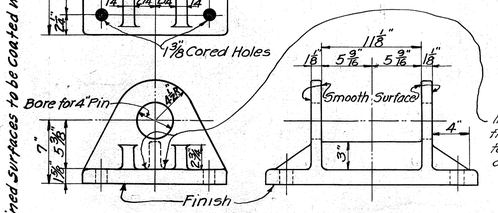
MATERIAL: FORGED STEEL

NOTE:- Furnish with each Pin
2- Std Hex Nuts-PIN 24.



ANCHOR BOLT-FIXED END

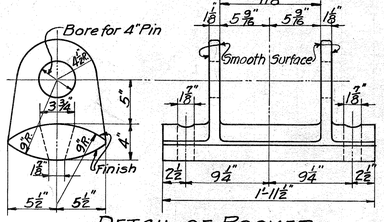
NOTE FOR CASTINGS
All Machined Surfaces to be coated with White Lead & Tallow.



Increase thickness of base from edges toward center to provide slight wash for drainage.

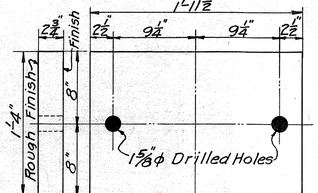
DETAIL OF FIXED SHOE

MATERIAL: CAST STEEL ANNEALED



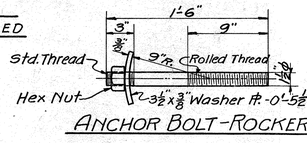
DETAIL OF ROCKER

MATERIAL: CAST STEEL ANNEALED



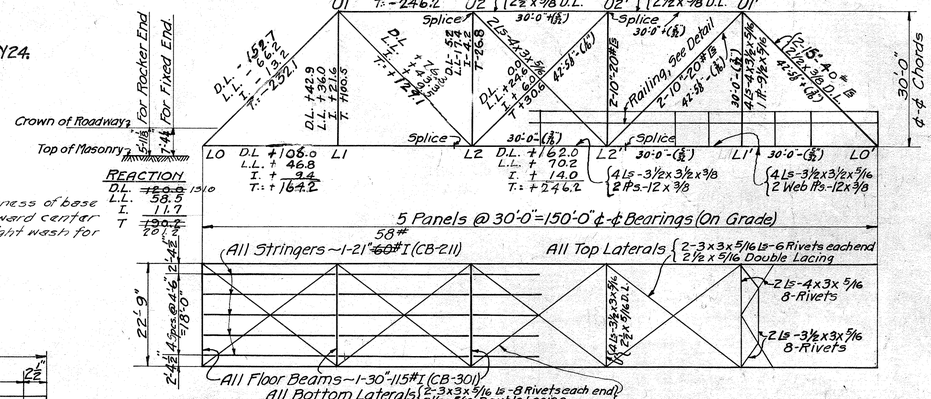
DETAIL OF ROCKER BED PLATE

MATERIAL: STRUCTURAL STEEL



ANCHOR BOLT-ROCKER END

+ Denotes Tension.
- Denotes Compression.



HALF PLAN OF FLOOR & BOTTOM LATERAL SYSTEM

HALF PLAN OF TOP BRACING

INTERMEDIATE FLOOR BEAMS

	Max. Shear	Max. Moment
D.L.	36.4 Kips	2 688.6 Inch Lb. Kips
L.L.	30.7 "	2 234.0 " " "
I.	8.7 "	633.6 " " "
Total	75.8 "	5 556.2 " " "

USE 30"-115# BETH. I

STRINGERS

	Max. Shear	Max. Moment
D.L.	7.13 Kips	640.8 Inch ~~lb.~~ Kips
L.L.	13.35 "	1110.0 " "
I.	4.02 "	333.6 " "
Total	24.50 "	2084.4 " "

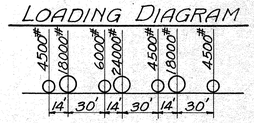
USE 21"-~~60#~~ 58# I (CB-211)

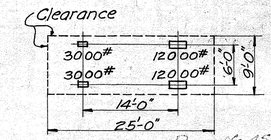
Note: End Floor Beam same section as Intermediate.

ASSUMED LOADS

Dead Load = 3600 Lbs. per Lin. Ft of Bridge
Live Load = 50 Lbs. per Sq. Ft plus 21000 Lbs. Concentrated Load at any Point or 1-15 Ton Truck per Lane preceded and followed by 11½ Ton Trucks.
Impact = $\frac{250L}{10L+500}$ but not to exceed 30%, except End Floor Beams & Hangers 60%. Connections all Floor Beams 60%.

LOADING DIAGRAM





Dwg No 4504

BILL OF REINFORCING IN CONCRETE FLOOR SLAB FOR SPAN No 6 - TENNESSEE RIVER

Panel	Mark	Number of Pcs.	Size	Length Ft.	Length Ins.	Remarks
L0-L1	A	30	½" a	20	9	Straight
	B	31	do.	22	2	Bent
	C	30	do.	21	9	do.
	D	31	do.	21	9	do.
	E	39	½" ϕ	31	3	Straight
L1-L2	A	30	½" a	20	9	Straight
	B	30	do	22	2	Bent
	C	30	do	21	9	do.
	D	30	do.	21	9	do.
	E	39	½" ϕ	30	10	Straight
L2-L2'	A	30	½" a	20	9	Straight
	B	30	do	22	2	Bent
	C	30	do.	21	9	do.
	D	30	do.	21	9	do.
	E	39	½" ϕ	29	8	Straight
L0'-L1'	A	31	½" a	20	9	Straight
	B	32	do.	22	2	Bent
	C	31	do.	21	9	do.
	D	32	do.	21	9	do.
	E	39	½" ϕ	33	8	Straight
L1'-L2'	Same as L1-L2					

Bill of Reinforcing Steel in Concrete Slab for Span No 6 to be exactly same as that shown for Span 6 above, except for a slight difference in End Panel L0'-L1' which must be made to suit Condition at Pier.

GENERAL NOTES:-

Specifications:- Kentucky State Highway, Special Toll Bridges.
Rivets:- Rivet Steel as per Specifications.
Structural Steel:- Medium Grade - 62000 to 72000 Tensile See INSET.
Details:- Rolled Channels used as Tension Members shall be attached through webs only. No Rivets permitted in flanges. In such members End Rivets shall not be less than 2" from ends.
Shop Drawings:- Sheets to be 22"x36" - See Specifications
Reaming:- General Reaming will be required for Main Truss Members, see Specifications
Reaming of Field Connections:- Preferably Riveted Trusses shall be fully assembled in Shop, reamed and match-marked. If extra care be taken in placing the different Members, about one-half of each Truss may be assembled, reamed and match-marked. Should this plan be adopted, the Continuous Middle Chord Sections are to be considered with each portion so assembled and reamed.
Paint and Painting:- See Specifications.
Forms:- See Specifications.
Concrete in Floor Slab to be Class F
Reinforcing Steel:- Deformed Bars to be O.H. Steel, Intermediate Grade.
Approval of Shop Drawings:- See Specifications.

INSET:- REFERRED TO IN GENERAL NOTES.
CARBON O.H. STEEL

Phosphorus:-
Acid 0.06
Basic 0.04
Sulphur 0.05
Tensile per sq. in. 62000 to 72000
Minimum Yield Point - 37000 per □"
Elongation in 8" $\frac{1500000}{\text{Tensile Strength}}$
Minimum Area Reduction 42%
Bend Test:-
Material ¾" or less 180° D = 1 T
Material over ¾" 180° D = 1½ T
Mill and Shop Practice:- See Specifications State Highway Department, Special Toll Bridges.

Dwg # 4504

NOTE:-
Sections of Floor Slab between Panels L2-L2' to be poured first.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF STATE ROADS AND HIGHWAYS
FRANKFORT
RIVETED THROUGH TRUSS BRIDGE
CONCRETE SLAB FLOOR 20'-0" ROADWAY
150'-0" SPAN
MARSHALL AND TRIGG COUNTIES
SUPERSTRUCTURE - STRESS SHEET & DETAILS
1929-30

SUBMITTED BY J. M. Robinson CONSULTING ENGINEER
RECOMMENDED FOR APPROVAL BRIDGE ENGINEER
RECOMMENDED FOR APPROVAL CHIEF ENGINEER
APPROVED - KENTUCKY STATE HIGHWAY COMMISSION
BY CHAIRMAN.
DATE ____ BOOK NO ____ PAGE ____

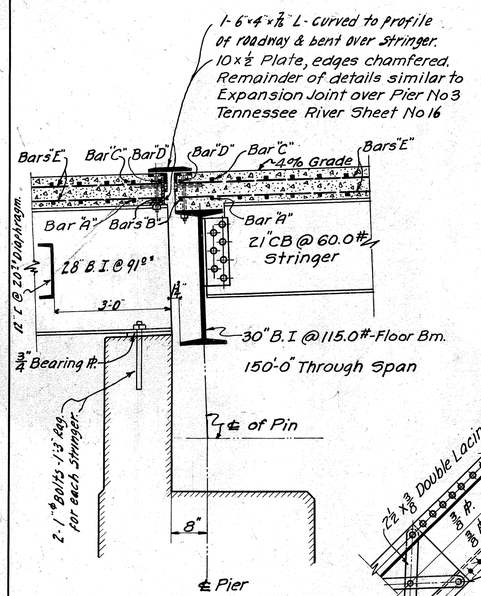
SHEET 7 OF 18

ESTIMATE OF QUANTITIES

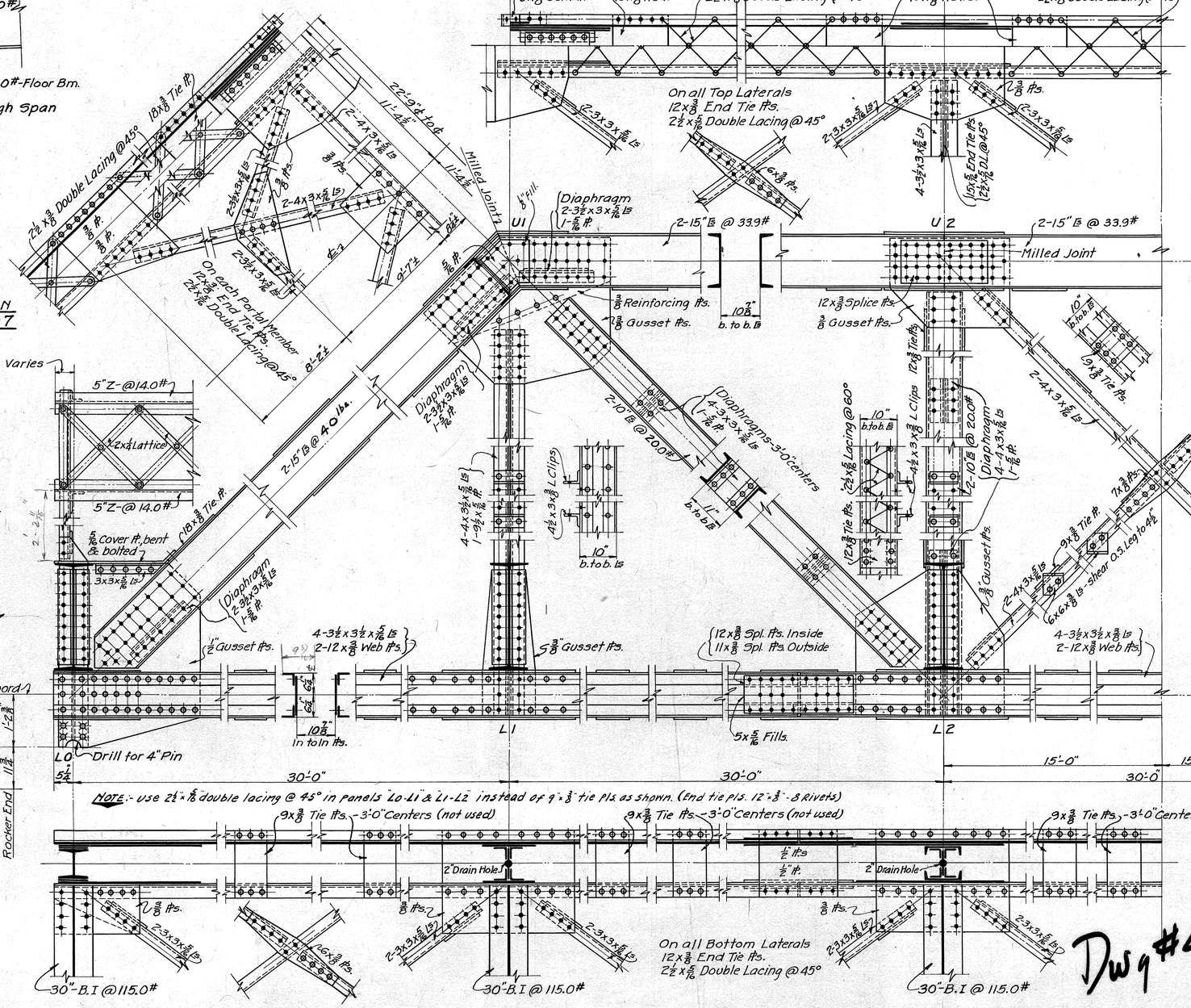
Structural Steel.	~~187,890~~ Lbs.	186390#
Cast Steel.	1,020. "	
Drain Pipe.	500. "	
Total.	~~189,410~~ Lbs.	187,910#
Concrete Slab.	75.5 Cu. Yds.	
Reinforcing Steel.	15,000 Lbs.	

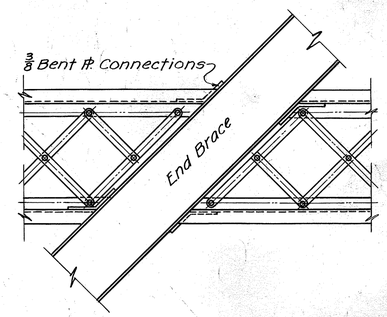
GENERAL NOTES

Rivets $\frac{7}{8}\phi$ throughout, except $\frac{3}{4}\phi$ in End Tie Plates and Lacing Bars of all Top Laterals, Bottom Laterals and Portal Members.
See also General Notes, Sheet No 7.

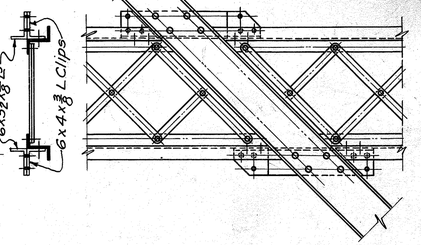


SECTION THROUGH EXPANSION JOINT OVER PIERS No 1 & No 7

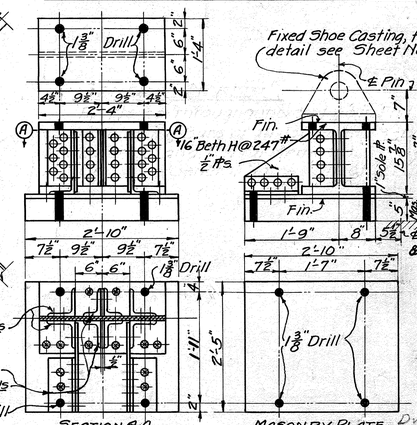




RAILING DETAIL AT END BRACE



RAILING DETAIL AT DIAGONAL U1-L2



DETAIL OF STRUCTURAL STEEL PEDESTAL (FIXED END OF 150'-0" SPAN)

Dwg No 4504

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF STATE ROADS AND HIGHWAYS
FRANKFORT

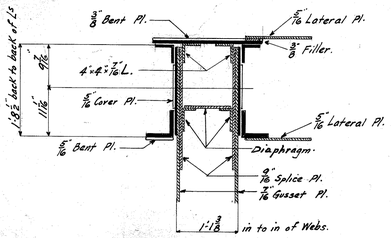
RIVETED THROUGH TRUSS BRIDGE
CONCRETE SLAB FLOOR 20'-0" ROADWAY
150'-0" SPAN
MARSHALL AND TRIGG COUNTIES
SUPERSTRUCTURE DETAILS
1929-30

SUBMITTED BY T. M. Johnson CONSULTING ENGINEER
RECOMMENDED FOR APPROVAL BRIDGE ENGINEER
RECOMMENDED FOR APPROVAL CHIEF ENGINEER
APPROVED-KENTUCKY STATE HIGHWAY COMMISSION
BY CHAIRMAN
DATE BOOK NO PAGE

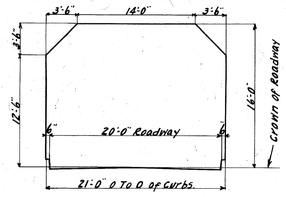
SHEET 8 OF 18

Dwg #4504

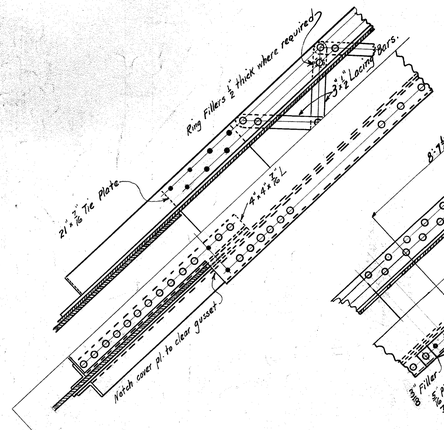
Revised:- Estimate of Quantities (Structural Steel)

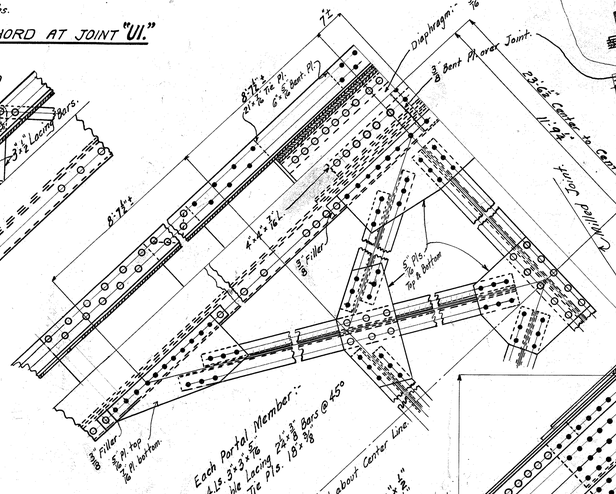


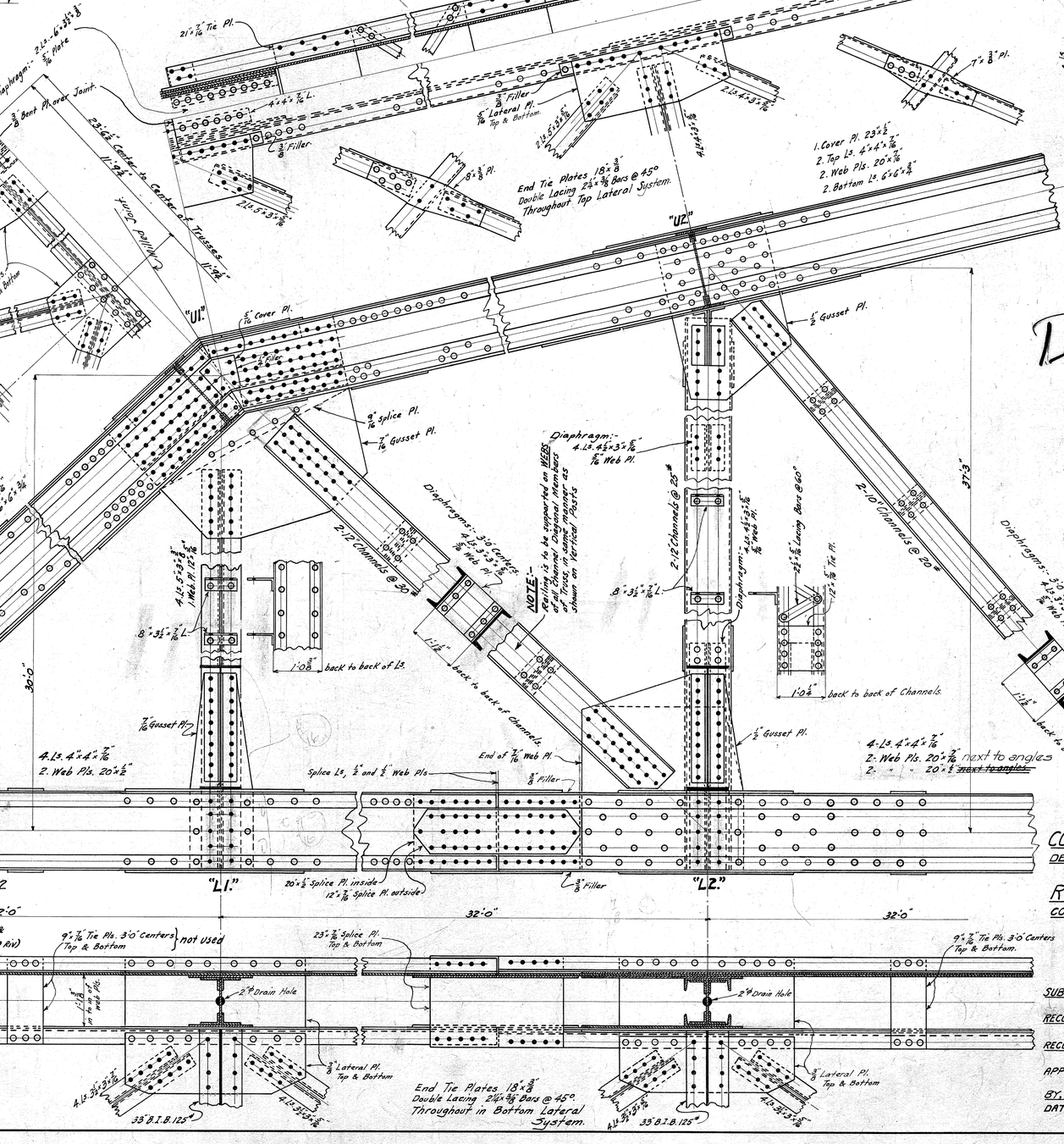
SECTION THROUGH END BRACE AND TOP CHORD AT JOINT "U1."

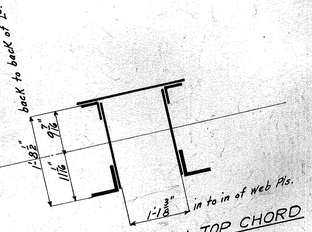


~ CLEARANCE DIAGRAM ~

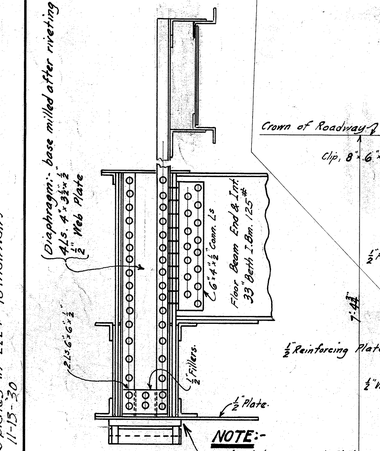




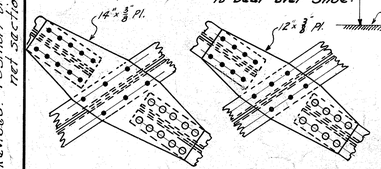




SECTION THROUGH TOP CHORD AND END BRACE.



NOTE:- Web Plates, Gusset Plates, Reinf'g Plates, & Diaphragm must be Milled to bear over Shoe.



INTERSECTION OF END PANEL BOTTOM LATERALS.

INTERSECTION OF 2ND AND 3RD PANEL BOTTOM LATERALS.

Revised:- Position of web plates in L2-L4 to maintain net section. 11-15-30

Dwg #4504

Sh 9

GENERAL NOTES:-

Rivets 7/8" throughout, except 3/4" in flanges of Intermediate Channel Posts.

Rivet Pitch in 4" Legs:-

Maximum 6"
Minimum 2 3/4" Compression

Rivet Pitch in 6" Legs:-

Maximum 9" 4 1/2" alt.

Minimum 3" 12" alt.

Rivet Pitch in Tension Members not less than 3".

Short spacing at ends of Top and Bottom Chord Members and End Brace, about 1 1/2 times the depth of Member, measured from last field Rivets.

See also General Notes on Sheet 9.

Dwg No 4504

COMMONWEALTH OF KENTUCKY.
DEPARTMENT OF STATE ROADS AND HIGHWAYS.
FRANKFORT.

RIVETED THROUGH TRUSS BRIDGE.

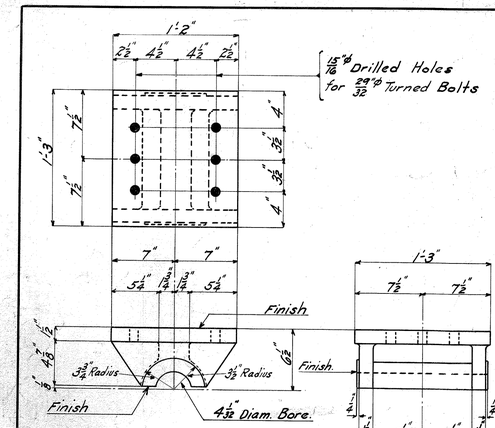
CONCRETE SLAB FLOOR - 20' ROADWAY.
320'-0" SPAN.
MARSHALL AND TRIGG COUNTIES.

SUPERSTRUCTURE DETAILS.

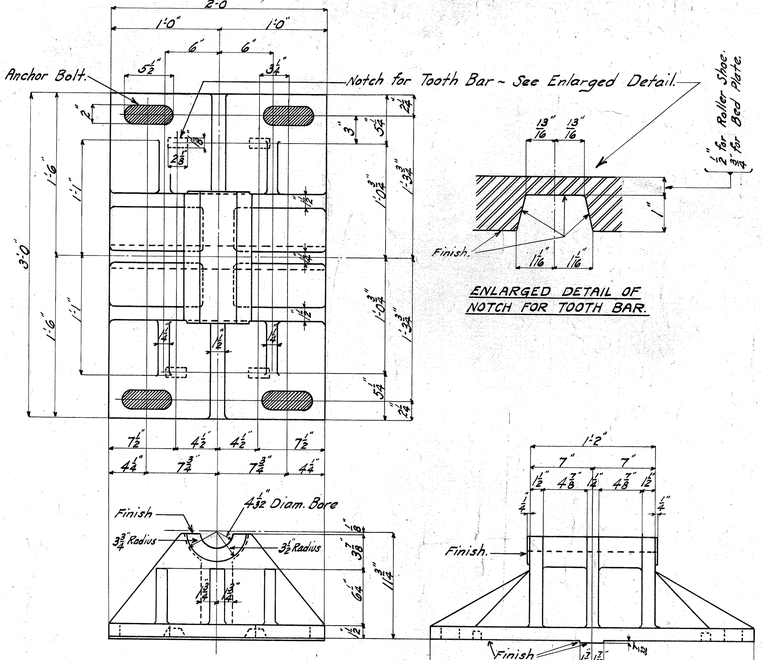
1929-30.

SUBMITTED BY, J. M. Johnson CONSULTING ENGINEER.
RECOMMENDED FOR APPROVAL, BRIDGE ENGINEER.
RECOMMENDED FOR APPROVAL, CHIEF ENGINEER.
APPROVED - KENTUCKY STATE HIGHWAY COMMISSION,
BY. CHAIRMAN.
DATE BOOK NO. PAGE

SHEET 10 OF 16 CUMB. RIV.
10 OF 18 TENN. RIV.



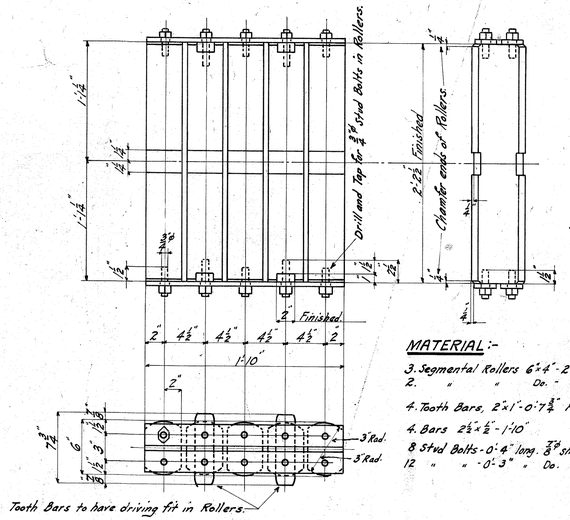
DETAIL OF UPPER SHOE.
Material:- Cast Steel Annealed.



ENLARGED DETAIL OF NOTCH FOR TOOTH BAR.

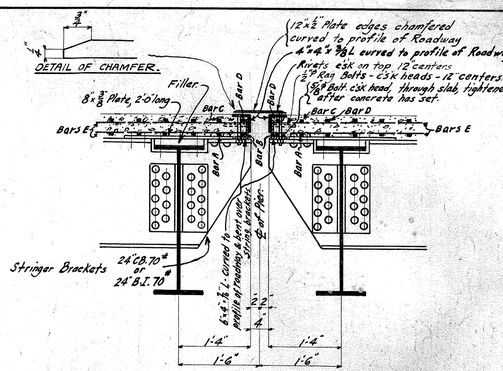
NOTE:-
All Machined surfaces to be coated with White Lead and Tallow.

DETAIL OF ROLLER SHOE.
Material:- Cast Steel Annealed.

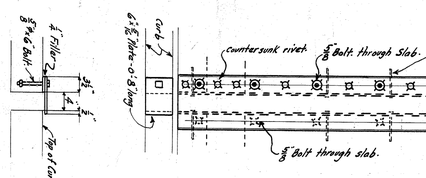


MATERIAL:-
3. Segmental Rollers 6"x4"-2'2½" } Forged Steel.
2. " " Do. - Do. } Finish all over.
4. Tooth Bars, 2'x1'-0"x7⅞" Finish all over.
4. Bars 2½"x½"-1'-10"
8 Stud Bolts - 0'-4" long. ⅞ϕ shouldered to ¾". Hex. Nut.
12 " " - 0'-3" " Do. " " Do. " " .

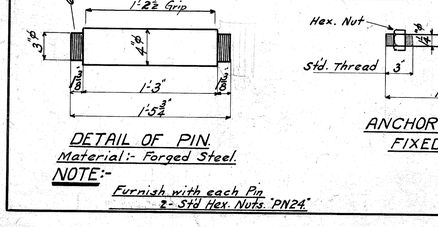
DETAIL OF ROLLER NEST.



SECTION THROUGH EXPANSION JOINT OVER PIER No. 3.

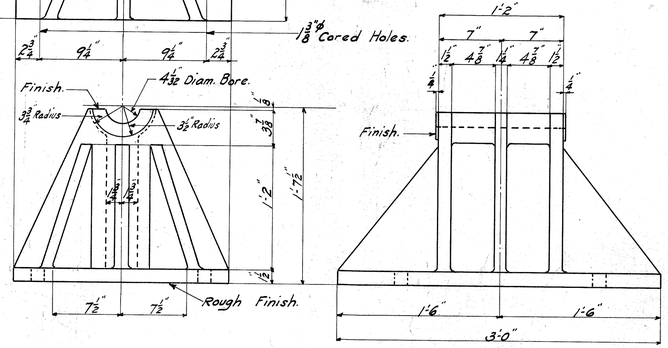


HALF PLAN AT EXPANSION JOINT.



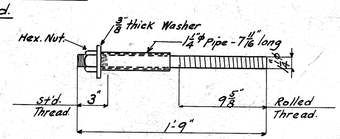
DETAIL OF PIN.
Material:- Forged Steel.

NOTE:-
Furnish with each Pin 2- Std Hex. Nuts "PN24"

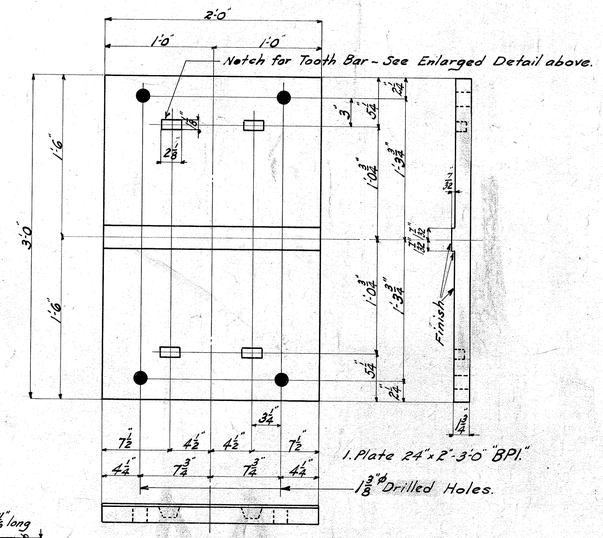


DETAIL OF LOWER SHOE - FIXED END.
Material:- Cast Steel Annealed.

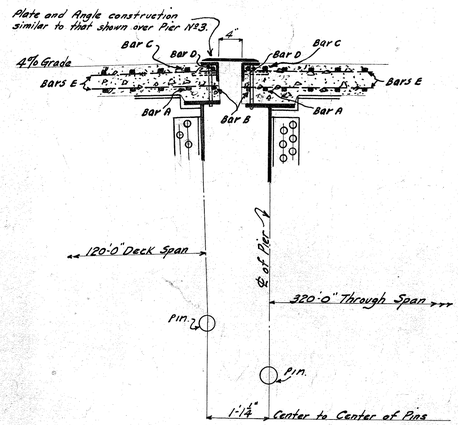
ANCHOR BOLT "A1."
FIXED END.



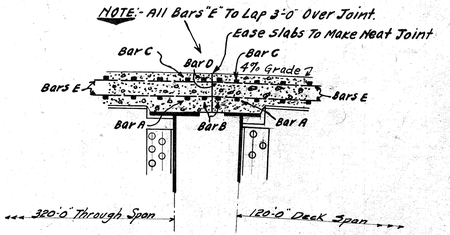
ANCHOR BOLT "A2."
EXPANSION END.



DETAIL OF ROLLER BED PLATE.
Material:- Structural Steel.



SECTION THROUGH EXPANSION JOINT OVER PIER No. 4.



SECTION THROUGH FLOOR SLAB OVER PIER No. 2.
BOTH ENDS FIXED.

Dwg #s 4504

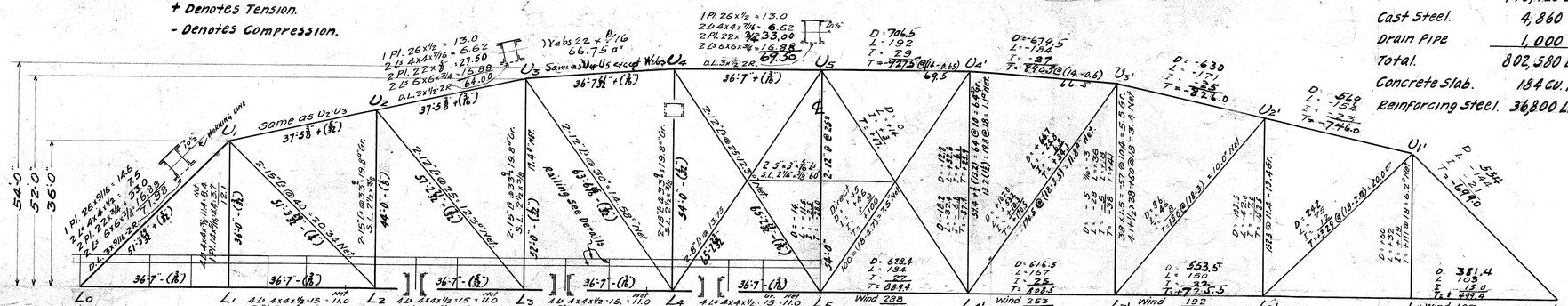
COMMONWEALTH OF KENTUCKY.
DEPARTMENT OF STATE ROADS AND HIGHWAYS.
FRANKFORT.

RIVETED THROUGH TRUSS BRIDGE.
CONCRETE SLAB FLOOR. - 20' ROADWAY.
320'-0" SPAN.
MARSHALL AND TRIGG COUNTIES.
SUPERSTRUCTURE DETAILS.
1929.-30.

SUBMITTED BY, J. M. Johnson CONSULTING ENGINEER.
RECOMMENDED FOR APPROVAL, BRIDGE ENGINEER.
RECOMMENDED FOR APPROVAL, CHIEF ENGINEER.
APPROVED - KENTUCKY STATE HIGHWAY COMMISSION.
BY. CHAIRMAN.
DATE ____ BOOK No. ____ PAGE.
SHEET 12 OF 16 CUMB. RIV. 12 OF 18 TENN. RIV.

Dwg # 4504
Sh 10

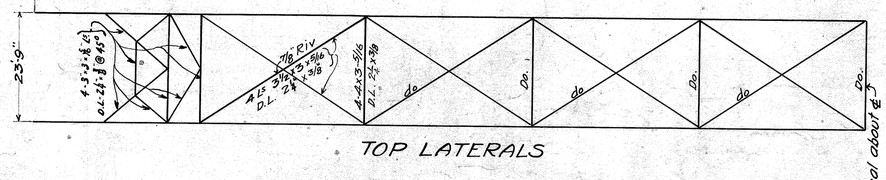
+ Denotes Tension.
- Denotes Compression.

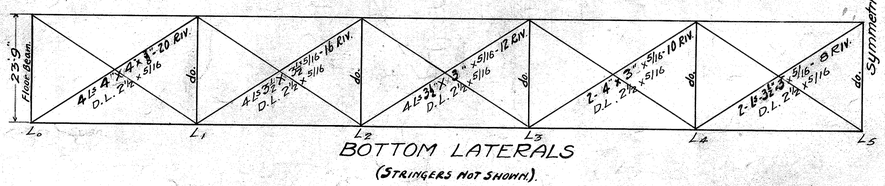


Reaction
D. ~~385.8~~ K 416.0K
L. 112.5 K
I. 18.7 K
T = ~~497.0~~ K 528.7

ASSUMED LOADS
Dead Load 4500# Per. L.F. Bridge.
Live Load 50# Per. Sq. F. plus 2000# Concentrated load of any point. Or 1-15 ton truck per lane preceded & followed by 11½ ton trucks.

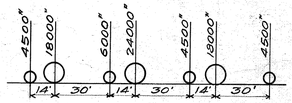
Impact 250 L/ 101.500 but not to exceed 30% except End Fl. Bms. & Hangers 60% Conns. all Fl. Bms. 60%

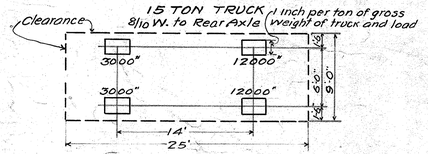


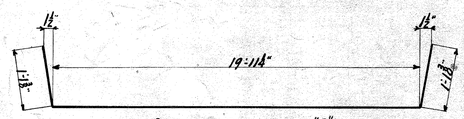


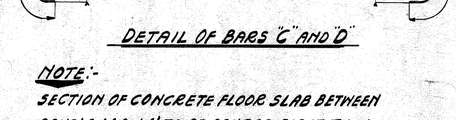
(STRINGERS NOT SHOWN).

LOADING DIAGRAM

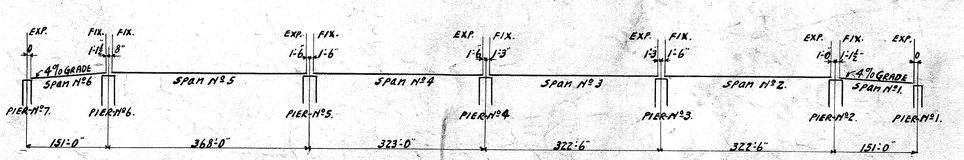








NOTE:-
SECTION OF CONCRETE FLOOR SLAB BETWEEN PANELS L4 & L4' TO BE POURED FIRST, THEN ALTERNATE DOUBLE PANELS TO ENDS.



PROFILE SKETCH
TENNESSEE RIVER - EGGNER'S FERRY.

STRINGERS

	Max. Shear	Max. Mom't.
D	9.3 K	D 1010 Inch Kips
L	13.9 K	L 1405 " "
I	4.1 K	I 420 " "
	27.3	2835

Web Reqd @ 12" = 2.25" — 2835 @ 18" = 157 Sec. Mod. (1) 24" Conn. ∠ @ 70° (CB241)

INTERMEDIATE FL. BMS.

Max. Shear	Max. Mom't.
D = ~~4.55~~ 4.97	D = ~~3580~~ 3950
L = 32.1	L = 2520
I = ~~8.3~~ 8.3	I = ~~655~~ 655
~~28.9~~ 30.1	~~6453~~ @ 18" = 373 Sec. Mod.

Web Reqd @ 12" = 7.15" — Use 33" Beth @ 125" (B331)

END FL. BEAMS

Max. Shear	Max. Mom't.
D = 23. K	D = 1780 Inch Kips
L = 31	L = 2440 " "
I = 18.6	I = 1470 " "
72.6	5690 @ 18" = 315 Sec. Mod.

Web Reqd @ 12" = 6.05" — Use 33" Beth @ 125" (B331)

Note: All Stresses in 1000# Units.

INSET - Referred to in GENERAL NOTES.

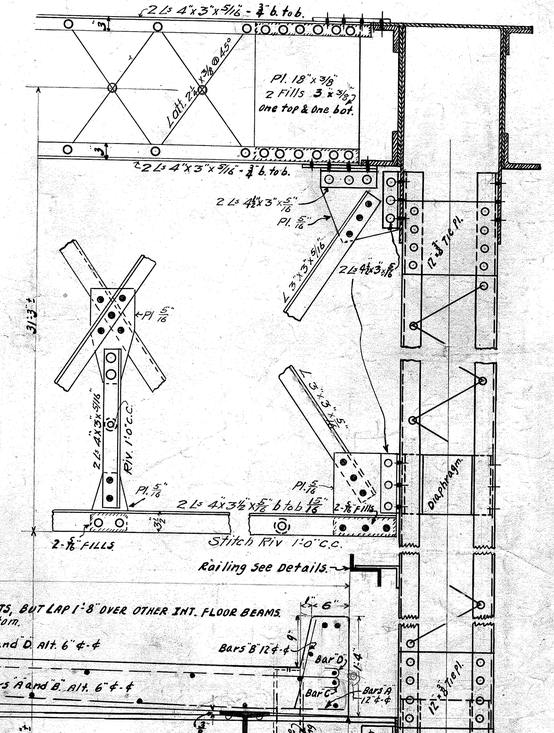
CARBON O.H. STEEL.
Phosphorus:-
Acid 0.06
Basic 0.04
Sulphur 0.05
Tensile per Sq In. 62000-72000
Minimum yield Point - 37000 per ☐"
Elongation in 8" } 1500000 / Tensile Strength.
Minimum Area Reduction 42%
Bend Test:-
Material ¾" or less 180° D = 1T.
Material over ¾" 180° D = 1½T.
Mill and Shop Practice:- See Specifications - State Highway Department, Special Toll Bridges

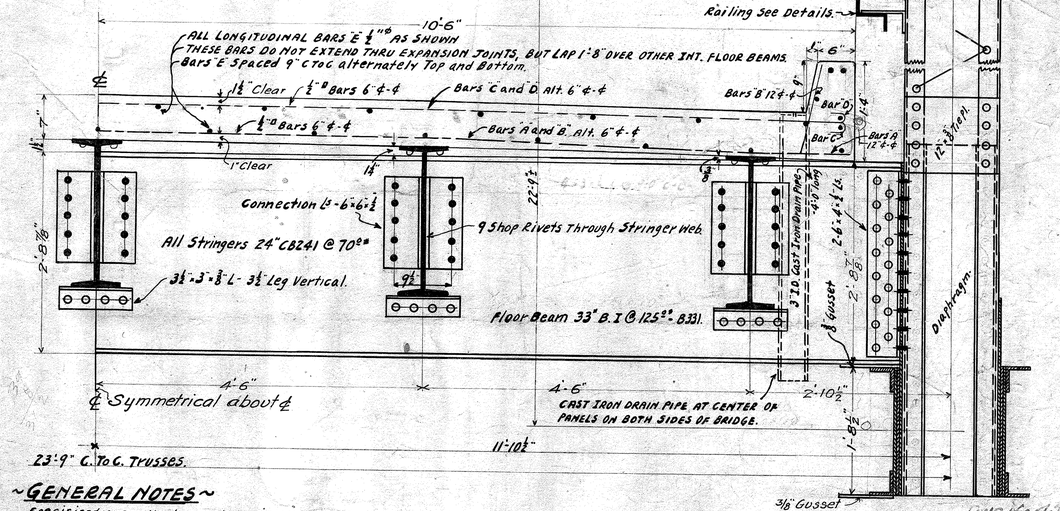
BILL OF REINFORCING STEEL IN CONCRETE FLOOR SLAB.

PANEL	MARK	NUMBER OF PIECES	SIZE	LENGTH FT.	LENGTH INS.	REMARKS
L0-L1.	A	37	½" ☐	20	9	Straight.
	B	38	do.	22	2	Bent.
	C	37	do.	21	9	"
	D	38	do.	21	9	"
	E1.	39	½" ⌀	40	3	Straight.
L1-L2.	A	37	½" ☐	20	9	"
	B	36	do.	22	2	Bent.
	C	37	do	21	9	"
	D.	36	do.	21	9	"
	E2.	39	½" ⌀	37	5	Straight.
L2-L3.	A	37	½" ☐	20	9	"
	B	37	do.	22	2	Bent.
	C	36	do.	21	9	"
	D	37	do.	21	9	"
	E2.	39	½" ⌀	37	5	Straight.
L3-L4.	A	37	½" ☐	20	9	"
	B	36	do.	22	2	Bent.
	C	37	do.	21	9	"
	D	36	do.	21	9	"
	E2.	39	½" ⌀	37	5	Straight.
L4-L5	A	37	½" ☐	20	9	"
	B	37	do.	22	2	Bent.
	C	36	do.	21	9	"
	D	37	do.	21	9	"
	E2.	39	½" ⌀	37	5	Straight.
L1'-L0'	A	37	½" ☐	20	9	"
	B	39	do.	22	2	Bent.
	C	37	do.	21	9	"
	D	39	do.	21	9	"
	E3.	39	½" ⌀	38	9	Straight.
L5-L4'	SAME AS L4-L5.					
L4'-L3'	SAME AS L3-L4.					
L3'-L2'	SAME AS L2-L3					
L2'-L1'	SAME AS L1-L2.					

ESTIMATE OF QUANTITIES

Structural Steel	796,720 Lbs.
Cast Steel.	4,860 "
Drain Pipe	1,000 "
Total.	802,580 Lbs.
Concrete Slab.	184 Cu. Yds.
Reinforcing Steel.	36,800 Lbs.





~GENERAL NOTES~

Specifications:- Kentucky State Highway Department, Special Toll Bridges.
Rivets:- Rivet Steel as per Specifications.
Structural Steel - Medium Grade - 62000 To 72000 Tensile.
See INSET.
Details:- Rolled Channels used as TENSION members, shall be attached through WEBS ONLY. No rivets permitted in flanges. In such members End rivets shall not be less than 2" from ends.
Shop Drawings - Sheets to be 22"x36" - See Specifications
Reaming:- General reaming will be required for Main Truss Members, See Specifications.
Reaming of Field Connections:- Preferably riveted Trusses shall be FULLY assembled in the shop, reamed and match-marked. If extra care be taken in placing the different members, about one half of each Truss may be assembled, reamed and match-marked. Should this plan be adopted, the continuous middle chord sections, are to be considered with each portion so assembled and reamed.
Paint and Painting:- See Specifications.
Forms:- See Specifications.
Concrete in Floor Slab to be Class F.
Reinforcing Steel - Deformed Bars to be O.H. steel Intermediate Grade.
Approval of Shop Drawings:- See Specifications.

COMMONWEALTH OF KENTUCKY.
DEPARTMENT OF STATE ROADS AND HIGHWAYS
FRANKFORT
RIVETED THROUGH TRUSS BRIDGE
CONCRETE SLAB FLOOR. - 20' ROADWAY
365'-10" SPAN.
MARSHALL AND TRIGG COUNTIES.
SUPERSTRUCTURE - STRESS SHEET AND DETAILS
1929-30

SUBMITTED BY. J. M. Johnson CONSULTING ENGINEER
RECOMMENDED FOR APPROVAL, BRIDGE ENGINEER
RECOMMENDED FOR APPROVAL, CHIEF ENGINEER
APPROVED - KENTUCKY STATE HIGHWAY COMMISSION.
BY CHAIRMAN
DATE BOOK NO. PAGE

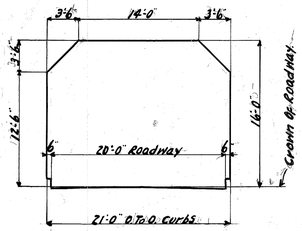
Dwg# 4504 Sh 11

Dwg No 4504

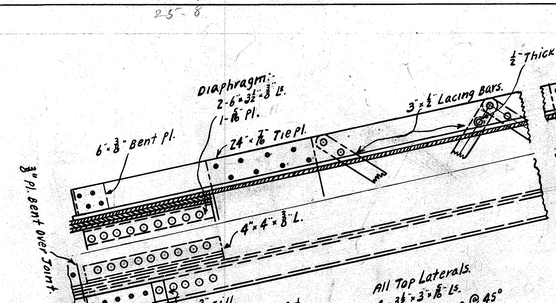
SHEET 13 OF 18

Revised:- Stresses in intermediate floor beams 11-13-30

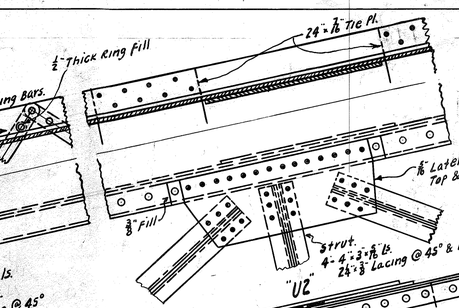
2 3-6/2
2-5-8

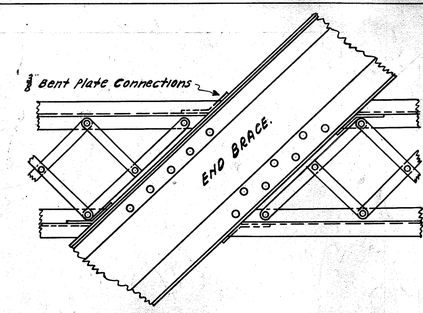


~ CLEARANCE DIAGRAM ~



~ SECTION A-A ~

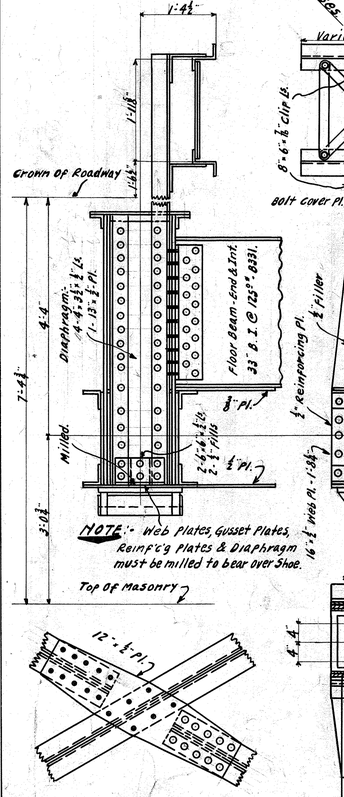


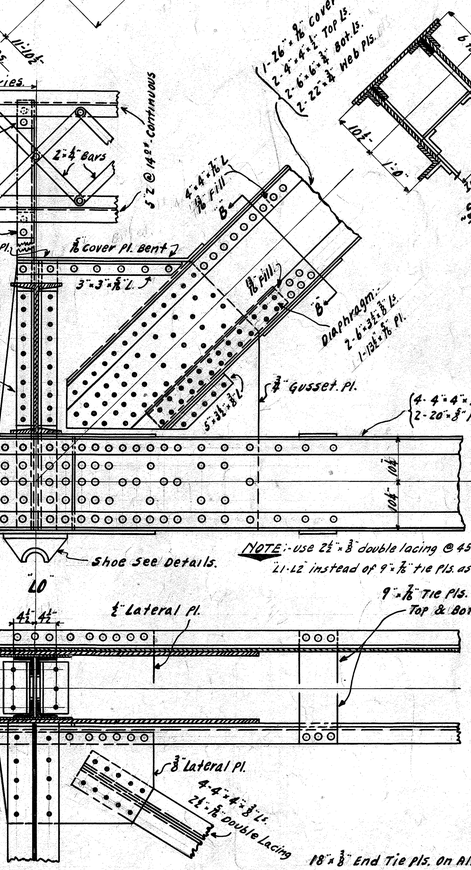


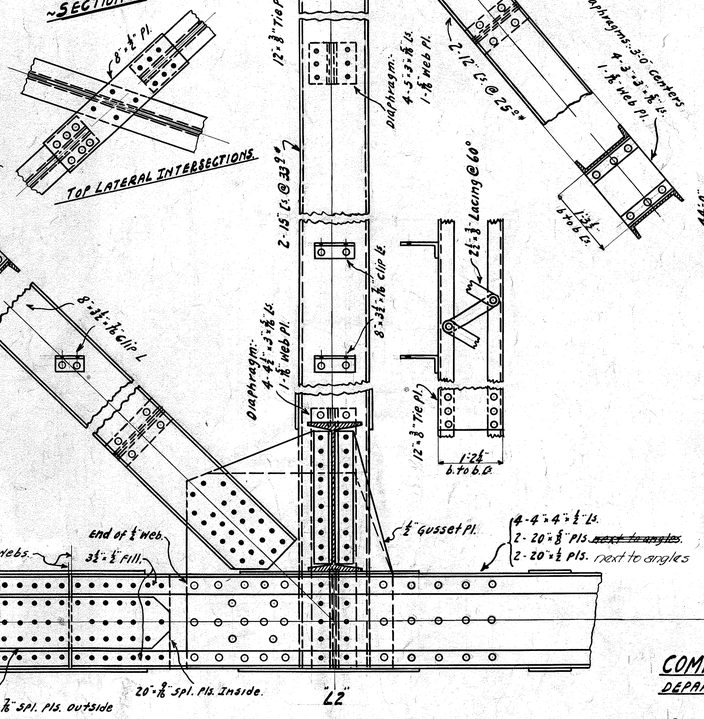
~ RAILING DETAIL AT END BRACE ~

Dwg # 4504

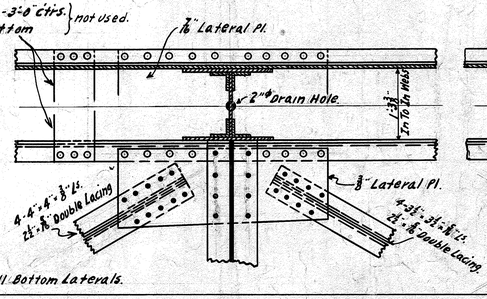
Sh 12



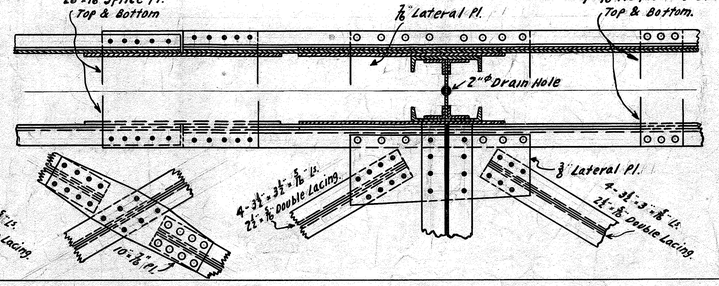




INTERSECTION OF END PANEL BOTTOM LATERALS.



18"×⅜" End Tie Pls. On All Bottom Laterals.

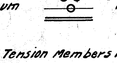


GENERAL NOTES:-

Rivets ⅞"ø Throughout except ¾"ø In Flanges Of Intermediate Channel Posts - Top & Bottom Lateral End Tie Pls. & Lacing Bars.

Rivet Pitch In 4" Legs:-
Maximum 6"
Minimum 2½" Compression.

Rivet Pitch In 6" Legs:-



Rivet Pitch In Tension Members Not less Than 3"

Short Spacing At ends Of Top And Bottom Chord Members And End Brace, About 1½ Times The Depth Of Member, Measured From Last Field Rivets.

See Also General Notes On Sheet 13

Dwg # 4504

COMMONWEALTH OF KENTUCKY.
DEPARTMENT OF STATE ROADS AND HIGHWAYS.
FRANKFORT.

RIVETED THROUGH TRUSS BRIDGE.
CONCRETE SLAB FLOOR 20' ROADWAY.
365'-10" SPAN.
MARSHALL AND TRIGG COUNTIES.
SUPERSTRUCTURE DETAILS
1929-30.

SUBMITTED BY. J. M. Johnson CONSULTING ENGINEER
RECOMMENDED FOR APPROVAL BRIDGE ENGINEER
RECOMMENDED FOR APPROVAL CHIEF ENGINEER
APPROVED - KENTUCKY STATE HIGHWAY COMMISSION.
BY. CHAIRMAN.
DATE BOOK No. PAGE

Revised - Position of web plates in L2L4 to maintain flat section 11-15-30

"U3" "U4" "U5"

"L3" "L4" "L5"

DETAIL OF INTERMEDIATE RAILING POST

Dwg #4504

Sh 13

SEE GENERAL NOTES ON SHEETS 13 & 14.

Dwg No 4504

COMMONWEALTH OF KENTUCKY.

DEPARTMENT OF STATE ROADS AND HIGHWAYS

FRANKFORT.

RIVETED THROUGH TRUSS BRIDGE

CONCRETE SLAB FLOOR 20' ROADWAY.

365'-10" SPAN.

MARSHALL AND TRIGG COUNTIES.

SUPERSTRUCTURE DETAILS

1929-30

SUBMITTED BY. J. M. Johnson CONSULTING ENGINEER.

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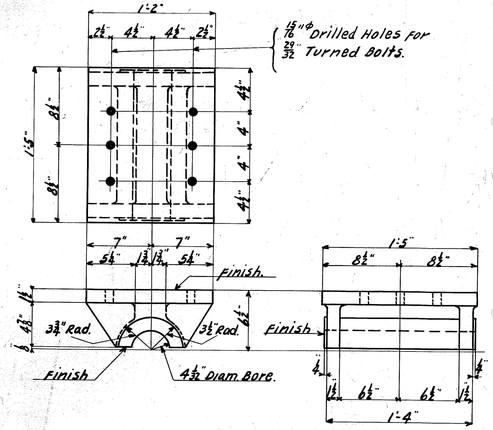
BY. CHAIRMAN.

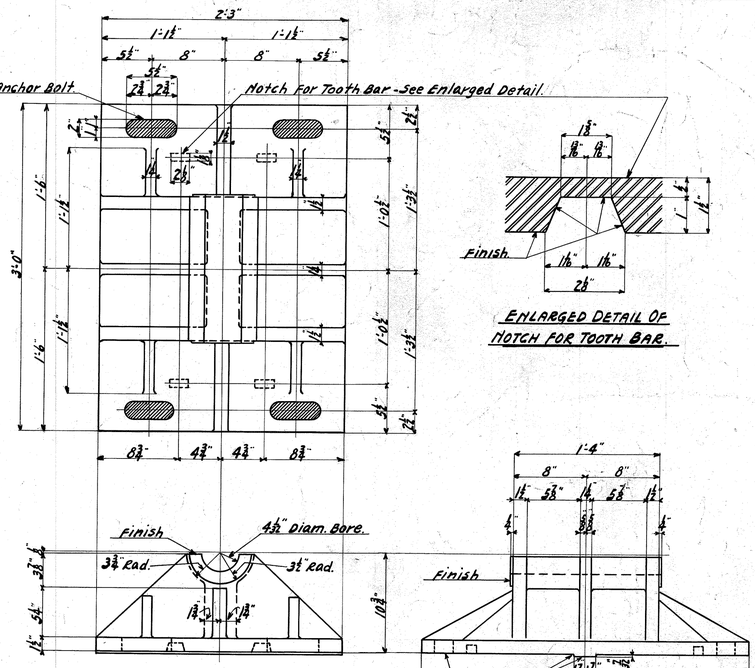
DATE BOOK No PAGE

SHEET 15 OF 18



DETAIL OF UPPER SHOE

Material:- Cast Steel Annealed



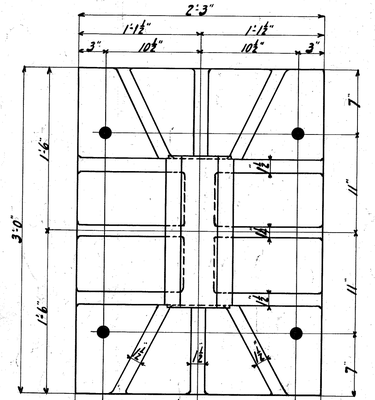
ENLARGED DETAIL OF NOTCH FOR TOOTH BAR.

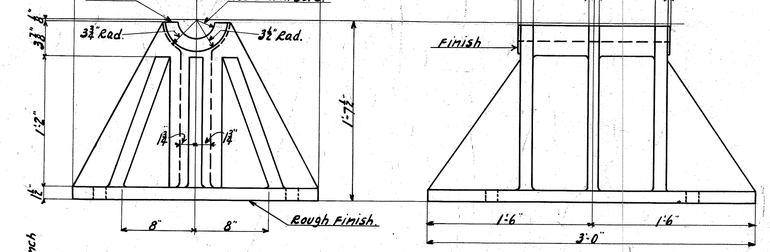
NOTE FOR CASTINGS.

All Machined Surfaces to be coated With White Lead & Tallow.

DETAIL OF ROLLER SHOE

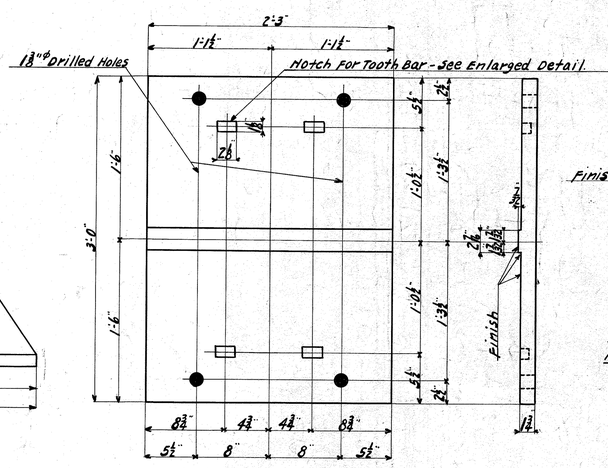
Material:- Cast Steel Annealed.

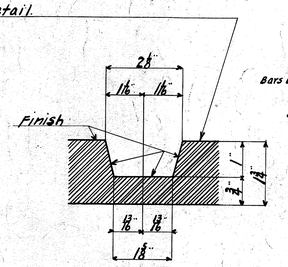




DETAIL OF LOWER SHOE - FIXED END

Material:- Cast Steel Annealed.

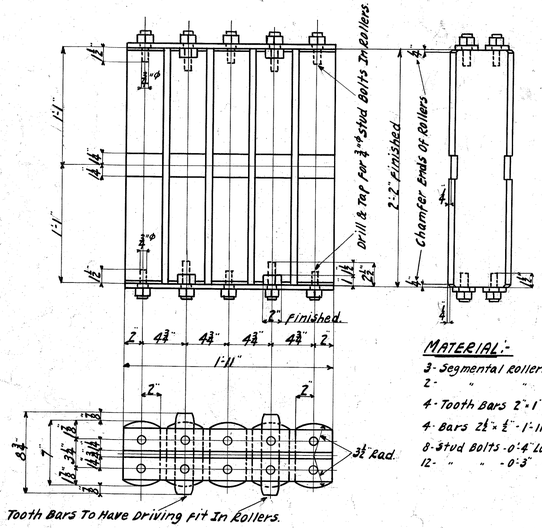




ENLARGED DETAIL OF NOTCH FOR TOOTH BAR.

DETAIL OF ROLLER BED PLATE

Material:- Structural Steel.

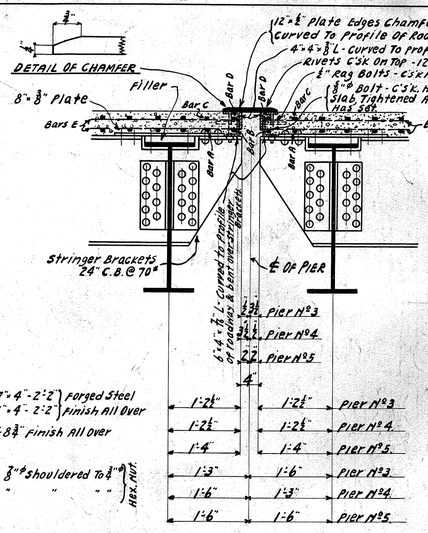


Tooth Bars To Have Driving Fit In Rollers.

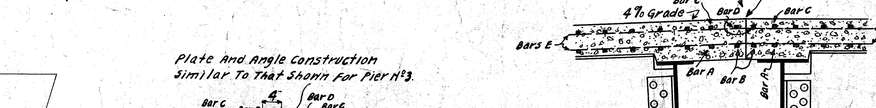
DETAIL OF ROLLER NEST.

MATERIAL:-

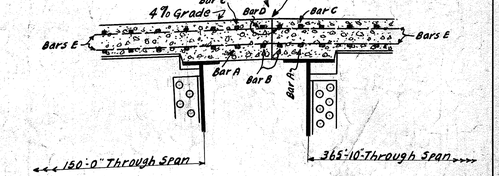
3- Segmental Rollers 7"×4'-2½" } Forged Steel
2- " " 7"×4'-2½" } Finish All Over
4- Tooth Bars 2"×1"-0'-8¾" Finish All Over
4- Bars 2½"×1"-1'-11"
8- Stud Bolts -0'-4" Long ⅞"ϕ Shouldered To ¾"ϕ } Hex. Nut.
12- " " -0'-3" " " " "



SECTION THROUGH EXPANSION JOINT OVER PIERS N° 3 - 4. & 5.

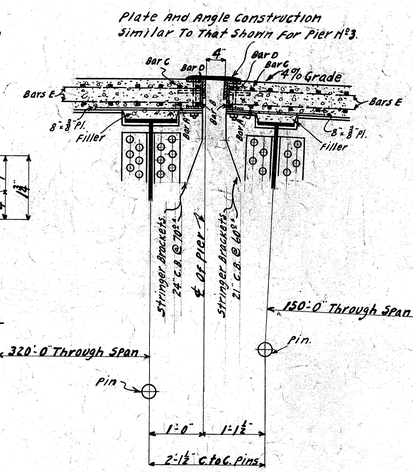


HALF PLAN OF EXPANSION JOINT.

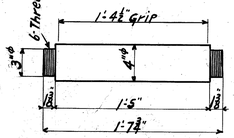


SECTION THROUGH FLOOR SLAB OVER PIER N° 6.

BOTH ENDS FIXED



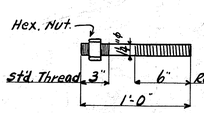
SECTION THROUGH EXPANSION JOINT OVER PIER N°2.



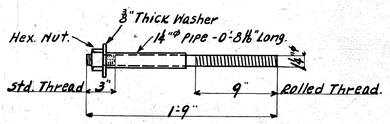
DETAIL OF PIN

Material:- Forged Steel.

NOTE:- Furnish With each Pin 2- Std. Hex. Nuts - "PN24"



ANCHOR BOLT - A1. FIXED END.



ANCHOR BOLT - A3. EXPANSION END.

Dwg # 4504 Sh 14

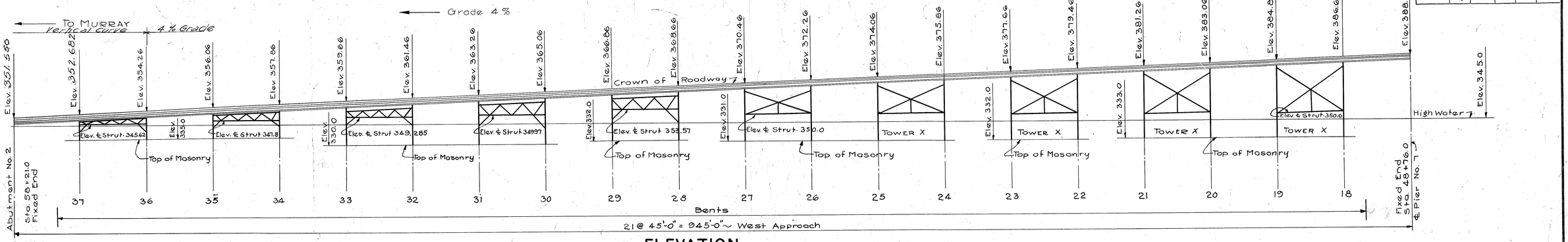
Dwg No. 4504 Sh 14

COMMONWEALTH OF KENTUCKY.
DEPARTMENT OF STATE ROADS AND HIGHWAYS
FRANKFORT.

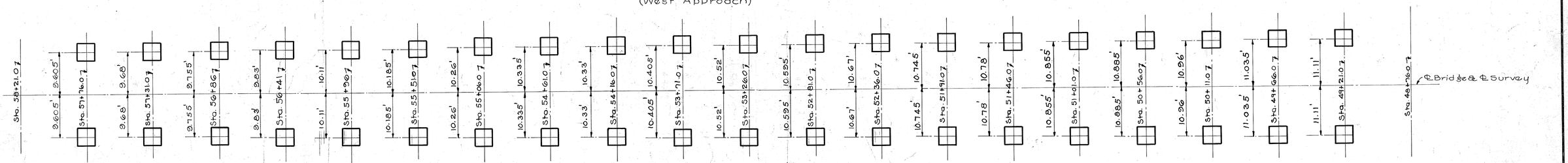
RIVETED THROUGH TRUSS BRIDGE
CONCRETE SLAB FLOOR 20' ROADWAY.
365'-10" SPAN
MARSHALL AND TRIGG COUNTIES.
SUPERSTRUCTURE DETAILS.
1929.-30.

SUBMITTED BY J. M. Johnson CONSULTING ENGINEER
RECOMMENDED FOR APPROVAL BRIDGE ENGINEER
RECOMMENDED FOR APPROVAL CHIEF ENGINEER
APPROVED - KENTUCKY STATE HIGHWAY COMMISSION.
BY CHAIRMAN
DATE BOOK N° PAGE

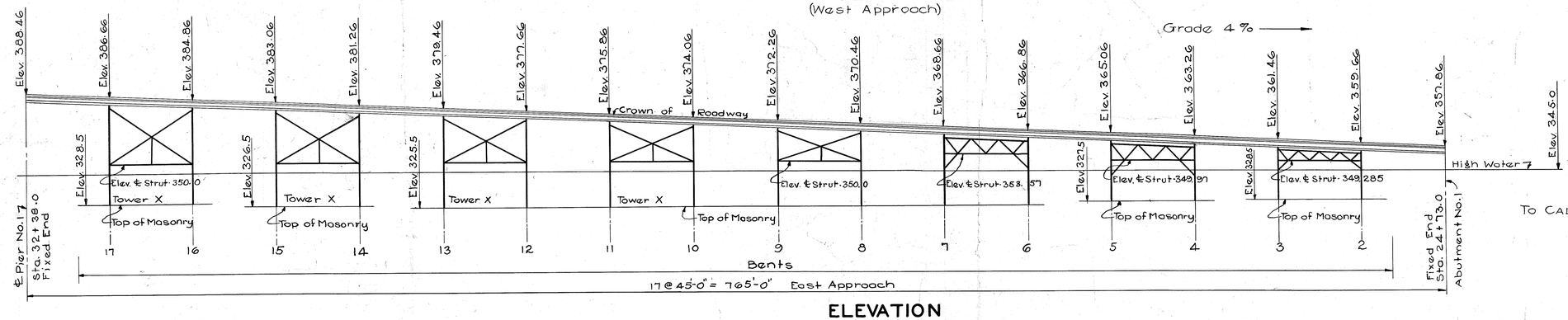
FED. ROAD DIST. NO.	STATE	FED AID PRO. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	Ky				



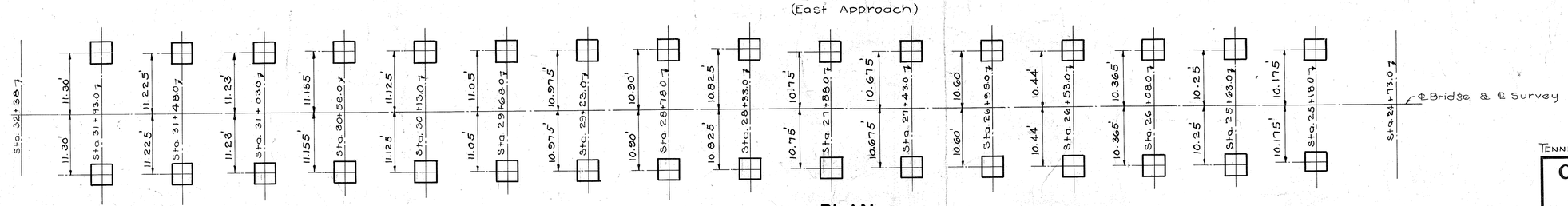
ELEVATION
(West Approach)



PLAN
(West Approach)



ELEVATION
(East Approach)



PLAN
(East Approach)

SURVEY DATA FOR PEDESTALS OF EAST AND WEST APPROACHES

Dwg # 4504

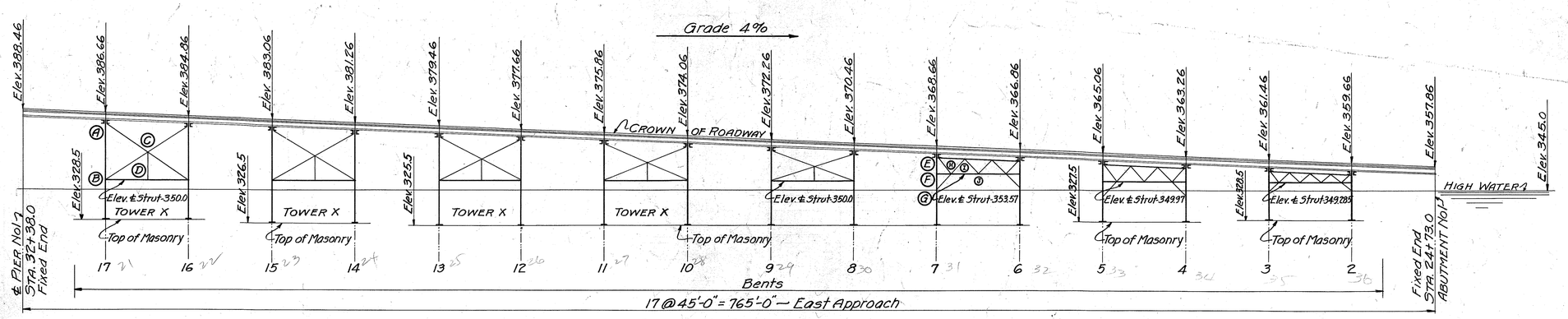
sh 15

DETAILED
DESIGNED BY W.H. Walker III DATE 11/13/36 REVISED Revised for Vertical Curve Eqations DATE 1-58
TRACED BY W.H. Walker III DATE 11/18/36 REVISED DATE
CHECKED BY [illegible] DATE 11/19/36 REVISED DATE

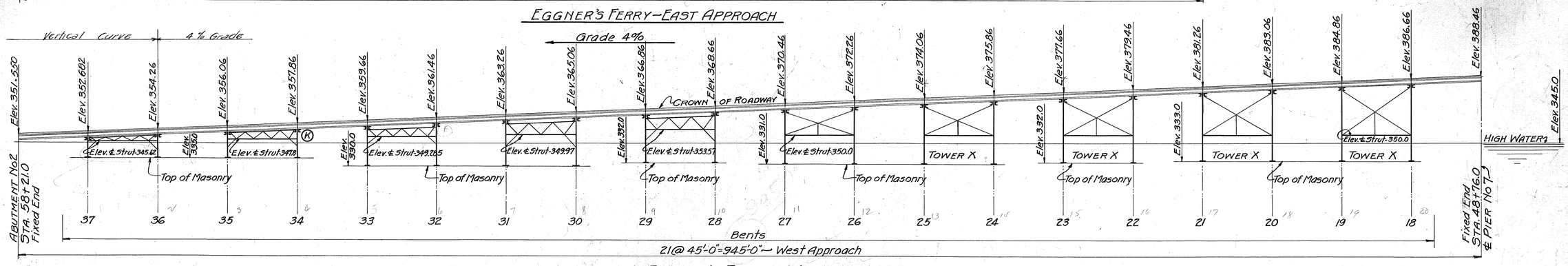
TENNESSEE RIVER BRIDGE-EGGNERS FERRY Sheet 17A of 18

COMMONWEALTH OF KENTUCKY
STATE HIGHWAY DEPARTMENT
FRANKFORT
COUNTY OF
TRIGG—MARSHALL
CADIZ — MURRAY
STATION ROAD PROJECT NO.

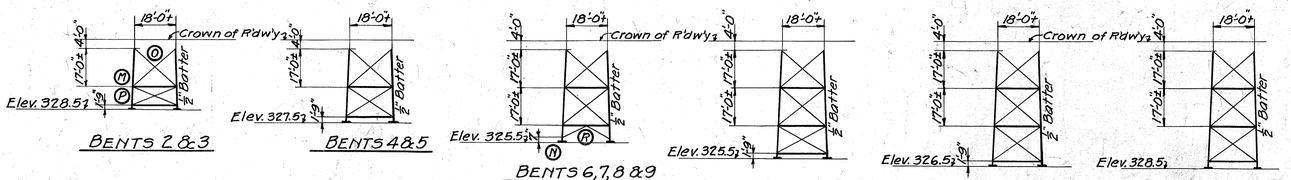
SUBMITTED BY ..... BRIDGE ENGR.
APPROVED BY ..... CHIEF ENGR.
DRAWING NO. 4504
INDEX



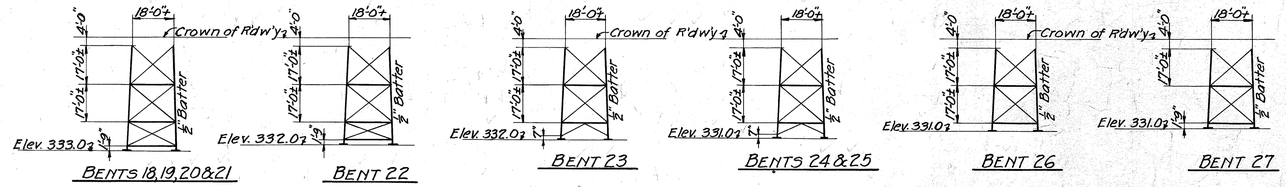
EGGNER'S FERRY—EAST APPROACH

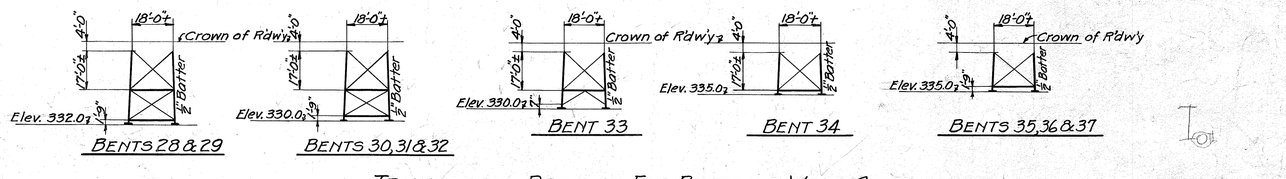


EGGNER'S FERRY—WEST APPROACH



TRANSVERSE BRACING FOR BENTS OF EAST APPROACH

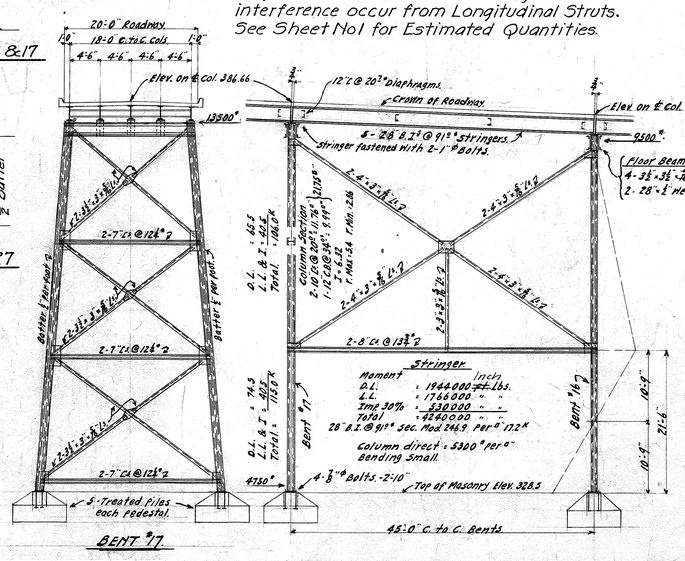




TRANSVERSE BRACING FOR BENTS OF WEST APPROACH

Revised— Moment and Section of Floor Beam 11-13-'30
" Vertical Curve 1-5-'31 Engstrom Dist. Engr.

Note: Vary Panels of Transverse Bracing should interference occur from Longitudinal Struts. See Sheet No 1 for Estimated Quantities.



Dwg #4504 Sh 16

Dwg No 4504

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF STATE ROADS AND HIGHWAYS
FRANKFORT

TENNESSEE RIVER BRIDGE —
MARSHALL AND TRIGG COUNTIES
PROFILE & SECTIONS - STEEL TRESTLE
1929-30

SUBMITTED BY _____ CONSULTING ENGINEER
RECOMMENDED FOR APPROVAL _____ BRIDGE ENGINEER
RECOMMENDED FOR APPROVAL _____ CHIEF ENGINEER
APPROVED - KENTUCKY STATE HIGHWAY COMMISSION
BY _____ CHAIRMAN
DATE _____ BOOK NO _____ PAGE _____

SHEET 17 OF 18

Dwg #4504

Crown of Roadway on ℄ Bent
Note: Stringer not shown.
Bev. ft.
1'-10⅜" In to In fts.
2-L 4"x4"x⅜" B.to B. Ls Floor Bm.
2-6x4x⅜" Ls
Note: Rivets in Flg. to stagger with rivets in Web.
⅝" fts.
9"x⅝" Tie fts.-3'-0" ℄
2-4"x3"x⅜" Ls
⅜" fts.
DETAIL (A)

Crown of Roadway on ℄ Bent
Note: Stringer not shown
Bev. ft.
1'-10⅜" In to In fts.
2-L 4"x4"x⅜" B.to B. Ls Floor Bm.
2-6x4x⅜" Ls
Note: Rivets in Flg. to stagger with rivets in Web.
12"x⅝" End Tie Pls. Top & Bot.
2"x⅜" Single lacing bars @ 60° Top & Bot.
10⅜" B.to B. of 10" Fills
⅞" rivs in flanges
2-7"ℓ @ 12¼#
2-4" Fills
⅜" fts.
2-2¾"x3"x⅜" Ls
Diaphragms-3'-0½"-℄ 1-10"ℓ @ 20# 1-⅛" thick Fill.
Omit
DETAIL (E)

Crown of Roadway on ℄ Bent
Note: Stringer not shown.
Bev. ft.
1'-10⅜" In to In fts.
2-L 4"x4"x⅜" B.to B. Ls Floor Bm.
2-6x4x⅜" Ls
⅝" fts.
2-7"ℓ @ 12¼#, 10⅜" B. to B.
Diaphragms same as on detail (E)
Omit
Tie fts same as detail (B) but cut to suit
2-3½"x3½"x⅜" Ls
2-6x4x⅜" Ls cut to suit
DETAIL (K)

Note:- See Sheet №15 Cumb. Riv. №17 Tenn. Riv. for Location of Details

NOTE:- All Rivets ⅞"ϕ except in flanges of 8" & 10" channels which will be ¾"ϕ

Crown of Roadway on ℄ Bent.
Note: Stringers not shown.
Diaphragm, 2-3x3x⅜ Ls, 1-9x⅜ ft.
10⅜" B.to B.
SECTION A-A
1'-10⅜" In to In fts.
2'-9¾" 2'-9¾"
¾" ft.
9x⅝ Batten ft.
2-5x3½x⅝ Ls, 10⅜" B.to B.
2-5x3½x⅝ Ls cut to fit
2-3x3x⅜ Ls
Note: Tie fts 6 x ⅜ on Diagonals & Knee throughout.
2-5x3½x⅝ Ls, 10⅜" B.to B.
⅝ fts.
9x⅝ Batten ft.
4x3½x½ L each side
⅞" Fills
Note: Rivets in L Flg. to stagger with rivets in Web.
DETAIL (L)
PART DETAIL OF 16 PANEL STRUT
APPLIES TO CUMBERLAND RIVER ONLY.

NOTE: For Roadway on Vertical Curve See Sheet 18-A

Concrete Rail & Posts
21'-0" Out to Out Curbs
1½" Crown - 20'-0" Roadway
All Longitudinal Bars "E" are ⅝ϕ spaced 9" centers, alternately top & bottom as shown. These bars do not extend through Expansion Joints.
Bars C & D, 6" centers, alternate
1½" clear
Crown of Roadway
Bars A & B, 6" centers, alt.
1" clear
Bar A
Bar B
Bar C
Bar D
Diaphragm 1-12"ℓ @ 20.7#
9"x⅝" ft.
1-3½"x3"x⅝" L
Stringers, 28" B.Is @ 91.0#
Mill Stringer Supports
Floor Beam, 4-3½"x3½"x⅝" Ls & 2-28"x½" Web fts.
Stringer Supports, 1-1" Web ft. 2-6"x4"x½" Seat Ls, 4-3½"x3½"x⅜" Conn. Ls and 2-3½"x½" Fills.
Cast Iron Drain Pipe, 4'0" long at center of each Panel on both sides of Roadway.
Bent 2-10⅝" @ 20.0# and 1-12"ℓ @ 34.0#
℄ Trestle
HALF CROSS SECTION

Stringer 28" B.I @ 91.0#
4'-6"
do
℄ Trestle
Floor Beam
Diaphragms 1-12"ℓ @ 20.7#
45'-0" Panel
PLAN SHOWING TYPICAL 45'-0 PANEL

Bottom Strut, 2-8"ℓ @ 13¾#
Hanger
Bent
1-4x3x⅝ L
7x⅜ Intersection ft.
SECTION B-B
2-3"x3"x⅜" Web ft.
Bottom Strut, 2-8"ℓ @ 13¾#
45'-0" Panel
PLAN OF HORIZONTAL BRACING AT BOTTOM STRUT
TOWERS - X

Note: For Transverse Section through Railing see Half Cross Section above.
6x⅝ Tie fts.-3'-0¼" ℄
2-3½"x3½"x⅝" Ls
3'-0¼" ℄ Diaphragms
2-4x3x⅝ Ls
1-⅞" B.to B. Ls
Exp. Joint
Precast Rail
SECTION C-C
Max Rivet Spacing 6" ℄
2-7"ℓ @ 12¼#
Bent
DETAIL (M)

Top of Masonry
Mill
BASE MATERIAL
1-12 x ½ Masonry ft.
1-12x⅜" Sole ft.
2-⅜" thick Wing ft.
2-7"x3½"x⅜" Web Ls
2-7"x3½"x⅝" Flg. Ls
4-⅞" ϕ x 2'-10" Anchor Bolts with 2-3x⅜ Tie Bars at bottom, Bolts to project about 4" above Masonry.
DETAIL OF BASE AT POINT (N)
SIMILAR FOR OTHER BENTS

Precast Rails
2 a Bars
¾" ϕ Bars
TYPICAL DETAILS OF CONCRETE RAILING
Note: Extreme End Posts of Railing to be 10"x16"

Note: Railing Post at Upgrade Ends of 120'-0" deck Span to be 10"x10" similar to Intermediate Posts shown on Typical Details of Concrete Railing above.
APPLIES TO CUMB. RIVER ONLY.

Grade 4 %
45'-0"
CONCRETE RAILING (TYPICAL INTERMEDIATE PANEL)

Note: Rivets in Flgs. to stagger with rivets in Web.
Note: Top & Bottom flanges laced in addition to web diaphragms.
1'-0¾" B.to B. Ls
9x⅝ Tie fts.-3'-0¼" ℄
2-4x3x⅜ Ls
10⅜" 10" ⅜" Fill.
12"x⅝" End Tie Pls. Top & Bot.
2"x⅜" Single lacing bars @ 60° Top & Bot.
℄ Strut,
2-8"ℓ @ 13¾# ⅞" rivs. in flanges
Diaphragms-3'-0½"-℄ 1-10"ℓ @ 20# 2-⅜" thick Fills.
Omit
DETAIL (B)

1'-0¾" B.to B. Ls
12"x⅝" End Tie Pls. Top & Bot.
2"x⅜" Single Lacing @ 60° Top & Bot.
Diaphragms same as shown on detail (E)
℄ Strut,
2-7"ℓ @ 12¼# ⅞" rivs in flanges
Note: Rivets in Flgs. to stagger with rivets in Web.
DETAIL (F)

9x⅝ Tie fts.-3'-0¼" ℄ throughout
2-4x3x⅝ Ls each
2-3"x3"x⅝" Ls
DETAIL (C)

1'-0¾" B.to B. Ls
2-4x3x⅜ Ls
2-4" Fills
⅝" fts.
Note: Rivets in Flgs. to stagger with rivets in Web.
DETAIL (G)

2-3½"x3"x⅝" Ls each
12"x⅝" End Tie Pls. Top & Bot.
2"x⅜" Single Lacing @ 60° Top & Bot.
℄ Strut,
2-7"ℓ @ 12¼# ⅝" rivs in flanges
⅝ fts.
2-4x3x⅝ Ls
9"x⅝" Tie ft.
2-6x4x⅜ Ls
6x⅝ Tie fts.-3'-0¼" ℄ on knees and diagonals throughout
DETAIL (H)

2-7"ℓ @ 12¼#
2-3½"x3"x⅝" Ls
⅝ fts.
2-3½"x3"x⅝" Ls
DETAIL (I)

2-3½"x3"x⅝" Ls each
⅝ fts.
12"x⅝" End Tie Pls. Top & Bot.
2"x⅜" Single Lacing @ 60° Top & Bot.
℄ Strut,
2-7"ℓ @ 12¼# ⅞" rivs in flanges
DETAIL (J)

2-3"x3"x⅜" Ls
9"x⅝" Tie fts.-3'-0¼" ℄
12"x⅝" End Tie Pls. Top & Bot.
2"x⅜" Single Lacing @ 60° Top & Bot.
2-3⅜" Fills
℄ Strut,
2-8"ℓ @ 13¾# ⅞" rivs. in flanges
DETAIL (D)

12"x⅝" End Tie Pls. Top & Bot.
2"x⅜" Single Lacing @ 60° Top & Bot.
6x⅝ Tie fts.-3'-0¼" ℄
2-7"ℓ @ 12¼# ⅞" rivs in flanges
2-4x3x⅜ Ls
2-4x3x⅜ Ls
DETAIL (R)

Diaphragm same as on detail (M)
12"x⅝" End Tie Pls. Top & Bot.
2"x⅜" Single Lacing @ 60° Top & Bot.
6x⅝ Tie fts.-3'-0¼" ℄
2-3½"x3½"x⅝" Ls
2-7"ℓ @ 12¼# ⅞" rivs in flanges
℄ Strut
⅝ fts.
Bent
11'-9" ℄ to Masonry
DETAIL (P)

2-3½"x3½"x⅝" Ls
6x⅝ Tie ft.
6x⅝ Tie ft.
2-3½"x3½"x⅝" Ls
2-6"x3⅜ Intersection fts.
DETAIL (O)

This dimension varies in the two End Spans to suit 6 Panels in 45'-0 Spans. See Sheet 19A of 19

Revised: Changed bolt holes in Floor Beam Shelf Angles from ¾ diameter to ⅞ diameter. Section at Floor Beam 11-15-30

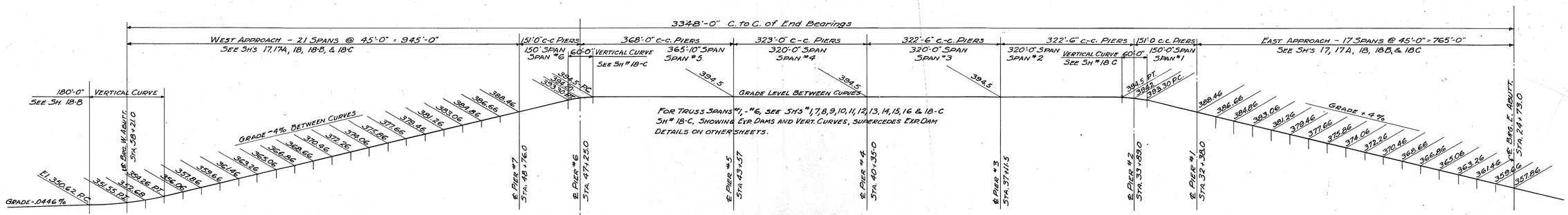
For Vertical Curve 1-5-31 Engstrom

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF STATE ROADS AND HIGHWAYS
FRANKFORT
RIVETED STEEL TRESTLE
CONCRETE SLAB FLOOR 20'-0" ROADWAY
MARSHALL AND TRIGG COUNTIES
GENERAL DETAILS
1929-30.

SUBMITTED BY J. M. Johnson CONSULTING ENGINEER
RECOMMENDED FOR APPROVAL BRIDGE ENGINEER
RECOMMENDED FOR APPROVAL CHIEF ENGINEER
APPROVED-KENTUCKY STATE HIGHWAY COMMISSION
BY CHAIRMAN
DATE BOOK NO PAGE
SHEET 16 OF 16 CUMB. RIV. 18 OF 18 TENN. RIV.

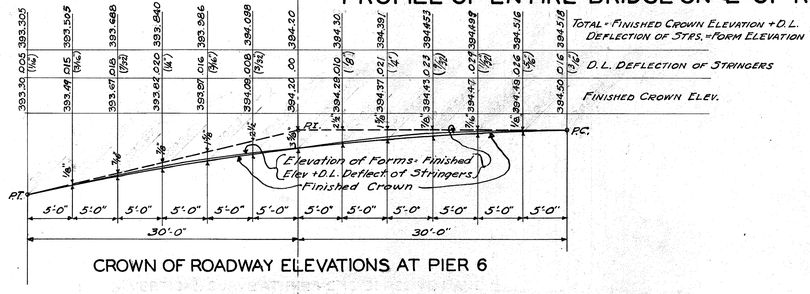
Sh 7

Fed. Road Dist. No.	State	Fed. Aid Proj. No.	Fiscal Year	Sheet No.	Total Sheets
7	Ky.				

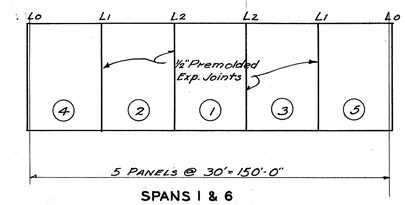


For Truss Spans "1, -"6, see Sh's "1, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 & 18-C Sh "18-C, Showing Exp. Dams and Vert. Curves, supercedes Exp. Dam Details on other sheets.

PROFILE OF ENTIRE BRIDGE ON ℄ OF ROADWAY

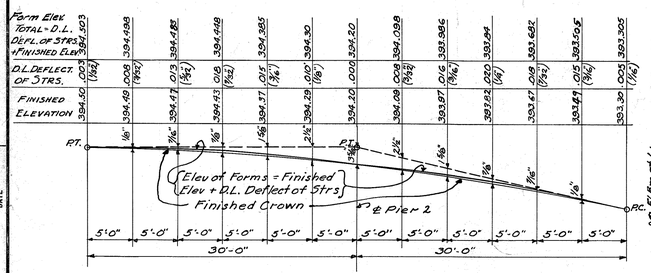


CROWN OF ROADWAY ELEVATIONS AT PIER 6

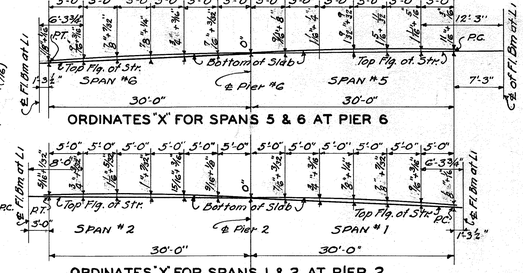


SPANS 1 & 6

Dwg # 4504

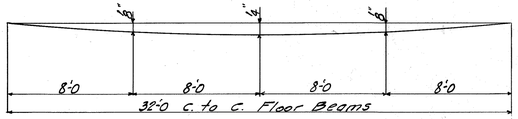


CROWN OF ROADWAY ELEVATIONS AT PIER 2

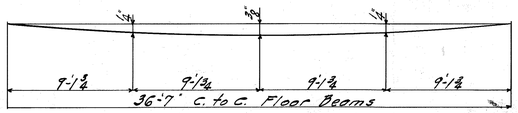


ORDINATES "X" FOR SPANS 5 & 6 AT PIER 6

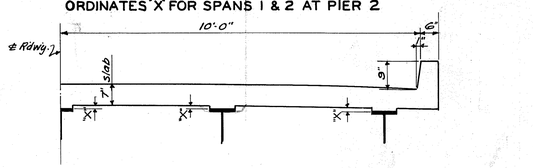
ORDINATES "X" FOR SPANS 1 & 2 AT PIER 2



D.L. DEFLECTION DIAGRAM FOR PANELS OF 320'-0" SPANS, NOT ON VERTICAL CURVE, SHOWING AMMOUNT TO THICKEN SLAB TO PREVENT SAG.

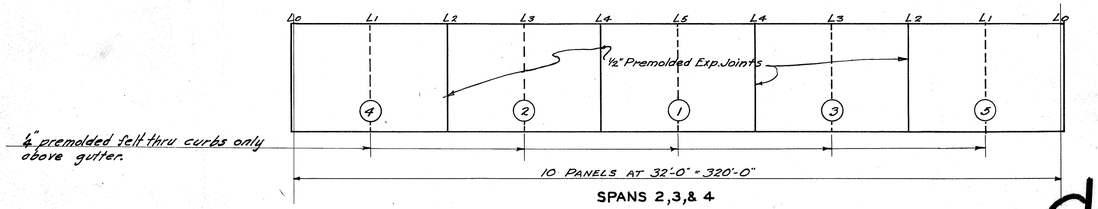


D.L. DEFLECTION DIAGRAM FOR PANELS OF 365'-10" SPAN, NOT ON VERT. CURVE SHOWING AMOUNT TO THICKEN SLAB TO PREVENT SAG.



STRINGER HAUNCHES FOR VERTICAL CURVES, PIERS 6 & 2

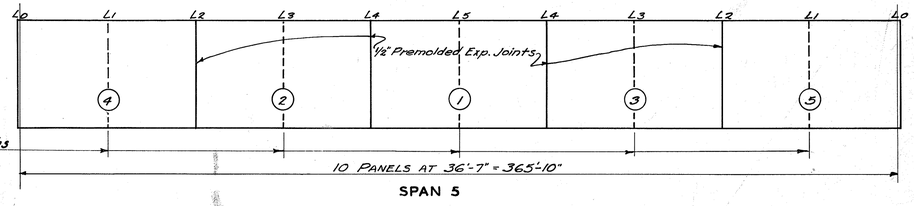
Distance "X" varies along stringer as shown in diagram above, to keep 7" slab. Note differences between 365'-10" and 320'-0" spans at Piers 6 & 2.
Diagrams show "X" dist. + Stringer deflection.



SPANS 2, 3, & 4

4" premolded felt thru curbs only above gutter.

Sh 18



SPAN 5

4" premolded felt through curbs only, above gutter.

PLAN VIEWS OF FLOOR SLABS OF SPANS 1 - 6 SHOWING LOCATION OF EXP. JOINTS & ORDER OF POURING

Pour sections of slab in order shown, (1) to (3), or, section (3) may be poured before section (2), and sect. (5) before sect (4).
Premolded Exp. Joints to extend entirely through slab and curb.
C.I. Drains to be put in curb at ℄ of all panels, both sides of Roadway.
For details of reinforcing and reinf. steel bill, see Shop Details.

SHEET 18-D of 18

GENERAL NOTE: All Elevations given are based on Construction Base Elevation, and no allowance has been made for camber in trusses. For setting slab form-work, if elevations are used, establish a base elevation on a floor beam near curve and run preliminary levels to correct for Camber. Either ordinates or elevations given may be used for setting form-work.

SPECIAL DETAIL SHEET

		DATE	REVISED	DATE	REVISED	DATE
Drawn	E. L. Fisher					
Submitted by						
Traced by	L. Cammack			DATE 6/9/52		
Checked by	Mory			DATE 6/9/52		

COMMONWEALTH OF KENTUCKY
STATE HIGHWAY DEPARTMENT
FRANKFORT
COUNTY OF
MARSHALL & TRIGG
TENNESSEE RIVER BRIDGE

SUBMITTED BY ..... BRIDGE ENGR.
APPROVED BY ..... STATE HIGHWAY ENGR.

DRAWING No. 4504.

INDEX

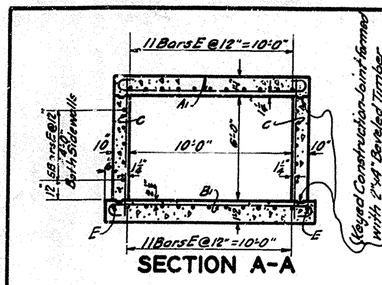
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				

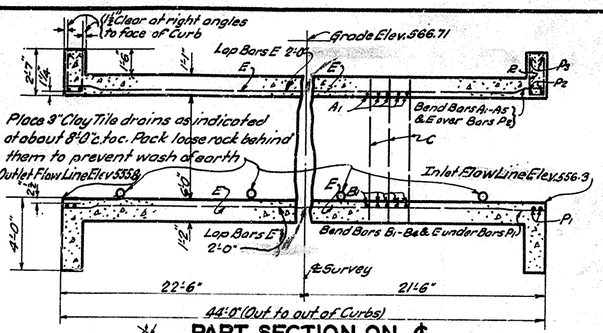
BILL OF STRAIGHT REINFORCEMENT

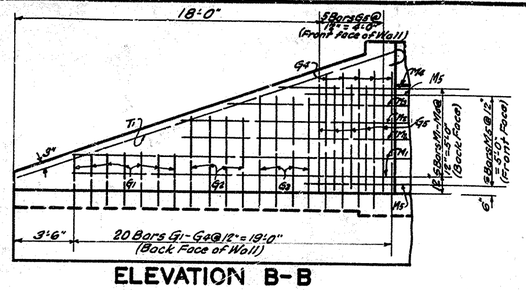
MARK.	No.	SIZE	LENGTH FT.	LENGTH IN.	LOCATION
A5	4	#8	4	1	Top Slab
B4	4	"	4	7	Bottom Slab
C	76	#4	7	11	Side Walls
E	68	#8	22	10	Barrel
G5	10	"	6	6	Front Face of Walls, Wings W, & W2
G8	6	"	6	0	" " " " W3 & W4
H	44	#11	3	9	Wing Footings
K1	3	#8	24	6	Footings, Wing W1
K2	10	"	7	0	" " W2 & W4
K3	5	"	13	6	" " W3
P3	4	"	12	0	Top of Curb

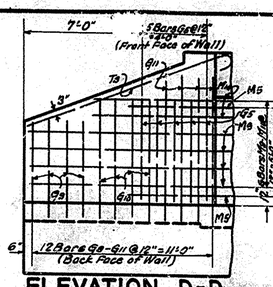
BILL AND TYPES OF BENT REINFORCEMENT

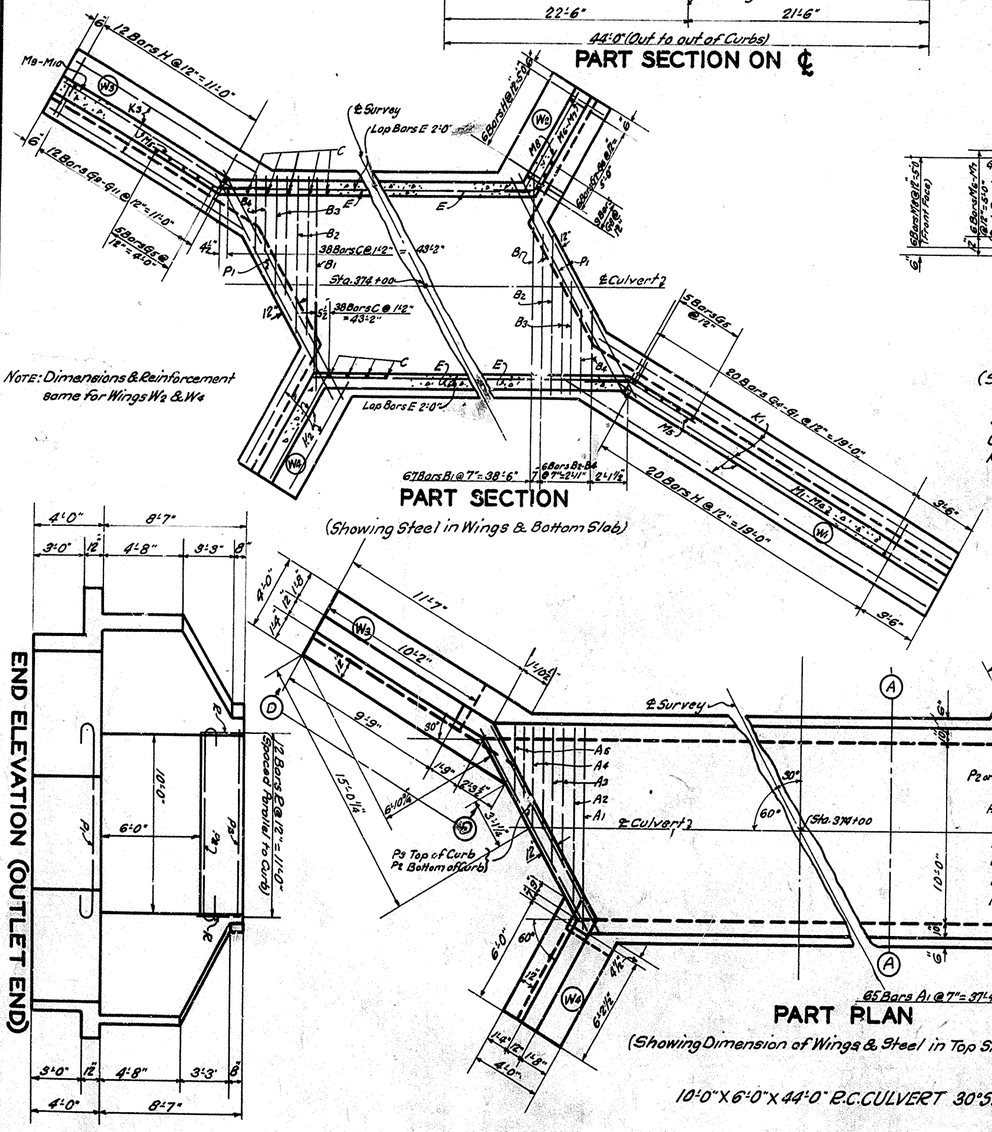
MARK	TYPE	No.	SIZE	LENGTH FT.	LENGTH IN.	LOCATION	a FT.	a IN.	b FT.	b IN.	c FT.	c IN.
A1	(1)	65	#8	13	3	Top Slab	10	7	11	3⅝	-	-
A2	"	2	"	12	1	" "	9	5	10	1¾	-	-
A3	"	4	"	10	1	" "	7	3	8	1¾	-	-
A4	"	4	"	8	1	" "	5	1	6	1¾	-	-
B1	"	67	"	14	3	Bottom Slab.	11	7	12	3¼	-	-
B2	"	4	"	10	7	" "	7	11	8	7¾	-	-
B3	"	4	"	6	7	" "	5	11	6	7¾	-	-
G1	(2)	7	#10	4	9	Wing W1	2	9	-	-	-	-
G2	"	4	"	7	1	" W1	5	1	-	-	-	-
G3	"	4	"	8	5	" W1	6	5	-	-	-	-
G4	"	5	"	9	9	" W1	7	9	-	-	-	-
G5	"	6	"	7	6	" W2 & W4	5	6	-	-	-	-
G6	"	6	"	9	1	" W2 & W4	7	1	-	-	-	-
G7	"	4	"	7	5	" W3	5	5	-	-	-	-
G8	"	4	"	8	9	" W3	6	9	-	-	-	-
G9	"	4	"	10	1	" W3	8	1	-	-	-	-
H1	(3)	2	#11	22	0	" W1	20	0	1	9	1	0
H2	"	2	"	15	9	" W1	13	9	1	9	1	0
H3	"	1	"	12	3	" W1	10	9	1	9	1	0
H4	"	1	"	9	3	" W1	7	9	1	9	1	0
H5	"	12	"	8	0	" W1 & W3	6	0	1	9	1	0
H6	"	8	"	8	7	" W2 & W4	6	7	1	0	1	9
H7	"	4	"	5	10	" W2 & W4	3	10	1	0	1	9
H8	"	12	"	6	0	" W2 & W4	4	0	1	0	1	9
H9	"	4	"	14	3	" W3	12	3	1	9	1	8
H10	"	2	"	3	9	" W3	7	9	1	9	1	8
P1	(1)	4	#8	16	0	Top of Apron	13	4	14	0¾	-	-
P2	"	4	"	15	0	Bottom of Curb	12	4	13	0¾	-	-
P3	(4)	24	#4	5	9	Curb	-	-	-	-	-	-
T1	(5)	2	#8	24	6	Top of Wing W1	23	2	23	6¾	-	-
T2	"	4	"	8	4	" " " W2 & W4	7	0	7	4¾	-	-
T3	"	2	"	13	11	" " " W3	12	7	12	11¾	-	-

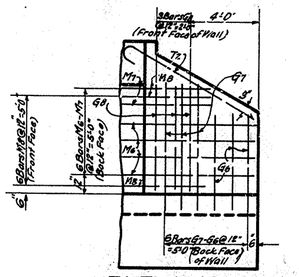


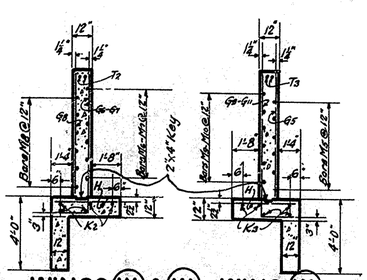


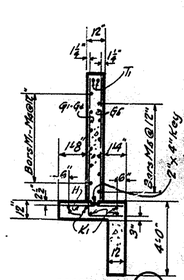








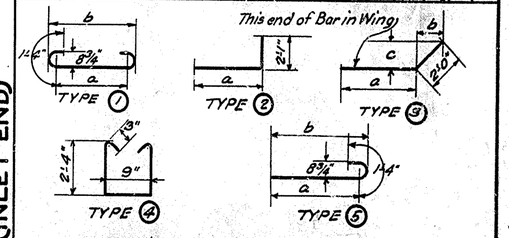




TYPICAL SECTIONS

GENERAL NOTE

Specifications — State Highway Department, Kentucky, 1930
Concrete — Class A concrete to be used thruout.
Reinforcement — Dimension from face of concrete to steel is the clear distance; precast mortar or concrete blocks supporting reinforcement shall be spaced not farther apart than 50 diameter of the supported bar.



ESTIMATE OF QUANTITIES

Concrete, Class A	867 cu yds
Reinforcement,	72860 lbs.
Structure Excavation	150 cu yds
Excavation, Channel Change	See Road Plans

Final Check: Heckrotte 4-28-31
Drawn By: L.G.N. DATE 4-24-31 REVISED
Traced By: G. Gibbs DATE 4-24-31 REVISED
Checked By: H.A. Walker DATE 4-27-31 REVISED

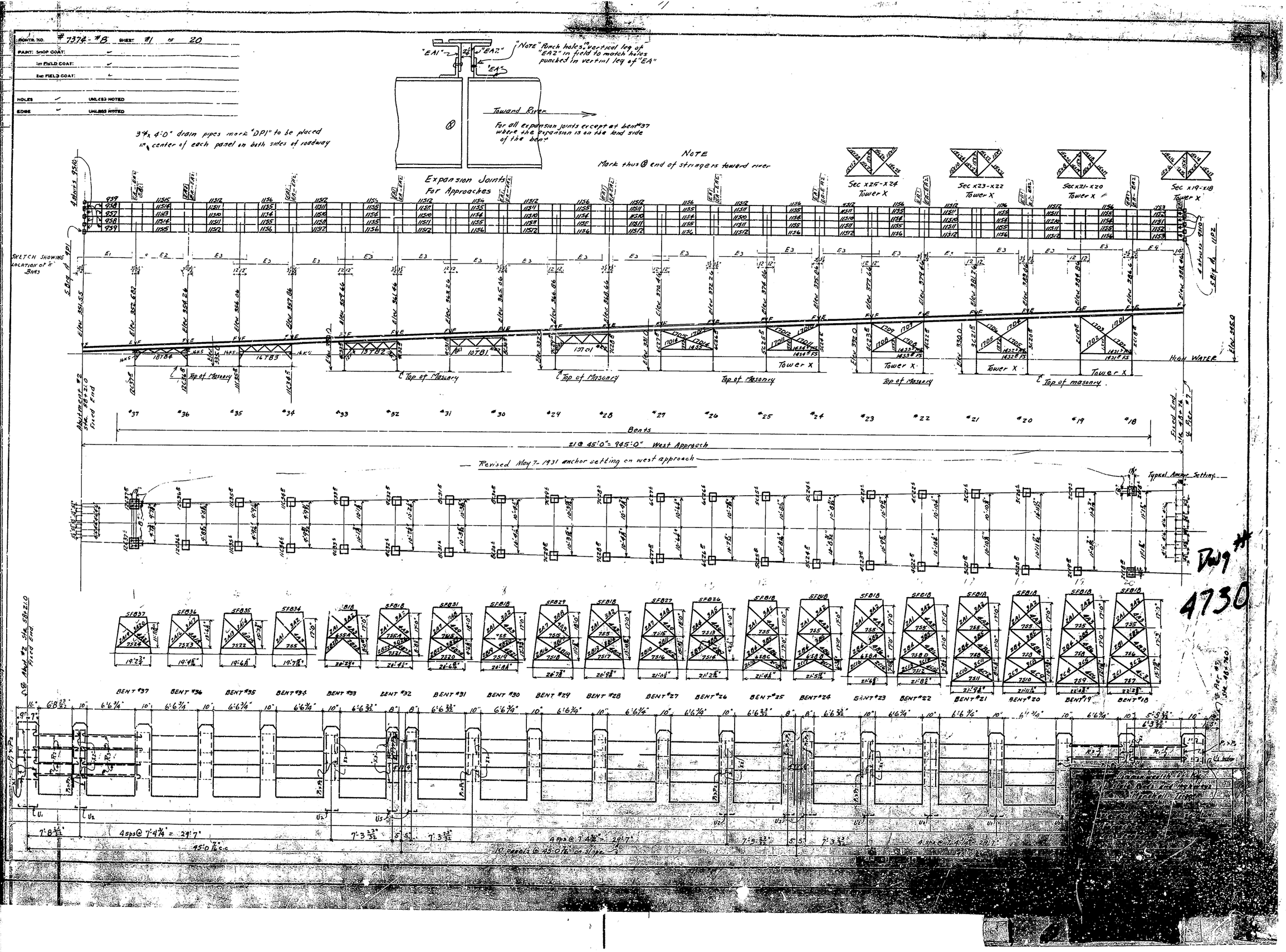
COMMONWEALTH OF KENTUCKY

STATE HIGHWAY DEPARTMENT
FRANKFORT
COUNTY OF
MARSHALL
MAYFIELD-BREWERS-EGGNERS FERRY ROAD

STATION 374+00.0 PROJECT NO.

SUBMITTED BY _____ BRIDGE ENGR. DRAWING No. 4730
APPROVED BY _____ STATE HIGHWAY ENGR.

BRIDGE



CONTR. NO. #7374-#8 SHEET #1 OF 20
PAINT: SHOP COAT:
1st FIELD COAT:
2nd FIELD COAT:
HOLES UNLESS NOTED
EDGE UNLESS NOTED
"NOTE" Punch holes in vertical leg of "EA2" in field to match holes punched in vertical leg of "EA"
Toward River
For all expansion joints except at bent #37 where the expansion is on the land side of the bent
3¾ x 4'-0" drain pipes mark "DP1" to be placed in center of each panel on both sides of roadway
NOTE
Mark thus ⊗ end of stringers toward river
Expansion Joints For Approaches
Sec x25-x24 Tower X
Sec x23-x22 Tower X
Sec x21-x20 Tower X
Sec x19-x18 Tower X
SKETCH SHOWING LOCATION OF 6" BARS
Top of Masonry
Tower X
HIGH WATER
Bents
21@ 45'-0" = 945'-0" West Approach
Revised May 7-1931 anchor setting on west approach
Typical Anchor Setting
BENT #37
BENT #36
BENT #35
BENT #34
BENT #33
BENT #32
BENT #31
BENT #30
BENT #29
BENT #28
BENT #27
BENT #26
BENT #25
BENT #24
BENT #23
BENT #22
BENT #21
BENT #20
BENT #19
BENT #18
4 sps @ 7'-4¾" = 29'-7"
45'-0 7/16" c.c.
Dwg # 4730

CONTR. NO. #7374-118 ✓ SHEET #3 OF 20

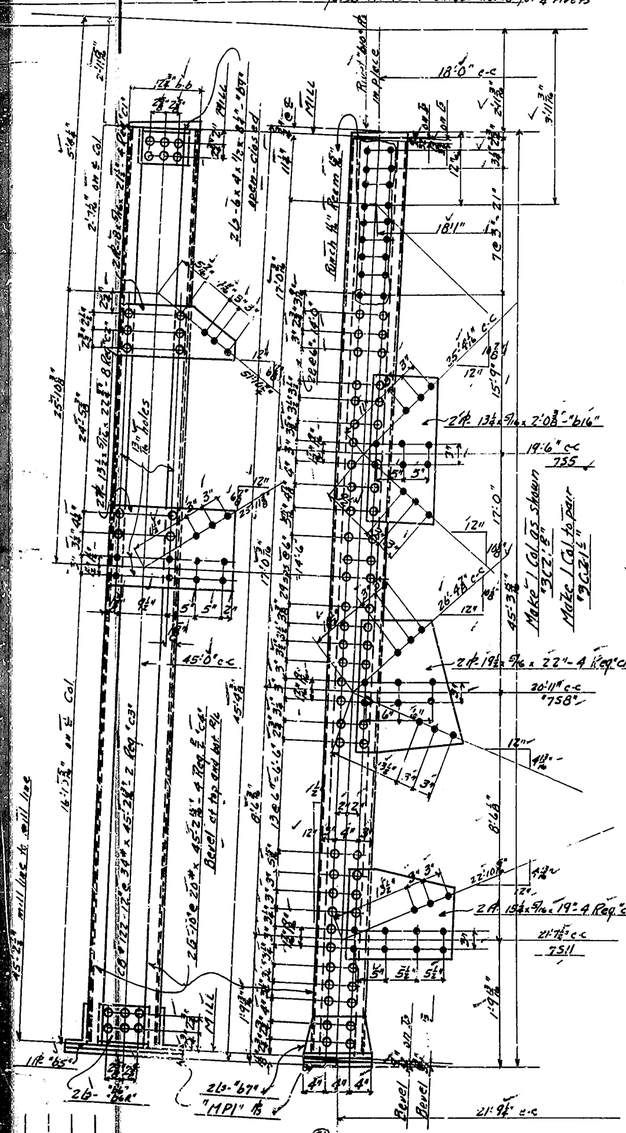
PAINT: SHOP COAT: } See Sh #2
1st FIELD COAT:
2nd FIELD COAT:

use templates from #7374-117 ✓

Ream M bm connections to metal templet or assemble

HOLES 15/16" ϕ ✓ UNLESS NOTED 8¾"10" & flgs = 13/16" holes

EDGE 1½" ✓ UNLESS NOTED for ⅞" rivets - 1¼" unless noted for ¾" rivets


18'-0" c-c
Mark "A" on web
Mark "B" on web
Mark "C" on web
Mark "A" on web
Mark "B" on web
Mark "C" on web
Mark "A" on web
Mark "B" on web
Mark "C" on web

CONTR. NO. #7379 SHEET #2 OF 20

PAINT: SHOP COAT: Red lead (Key. Std)

1st FIELD COAT: White lead (Key. Std)

2nd FIELD COAT:

Ream Pl bro reb across to metal templet or assembled (Use templets from #7374)

HOLES 13/16" ϕ punched except in flanges 8"x .5" & 6" which will be 7/8"

EDGE 1½" UNLESS NOTED: for ¾" rivets - 1¼" for ⅞" rivets unless noted

"NOTE" Mark side of bracket to be on site with mast

Mill to bear

1⅛" holes for 1" bolts

Drift holes square with column and rivet in place to ship

"WATCH POSITION OF HIGH SIDE OF BEVELED PLATE"

All odd numbers Col. 19.21 ck. All even numbers 18.26 ck. on opposite side to gussets

Make 1 Col as shown - "2C18.2" & 1 "" as pair - "2C18.1"

Mill to bear

at bent #37 Mill

at bent #36 Mill

Mill

Ream 8" Mill

Mill

Mill

CONTR. NO. #7374-#8 SHEET 4 OF 20

PAINT: SHOP COAT:

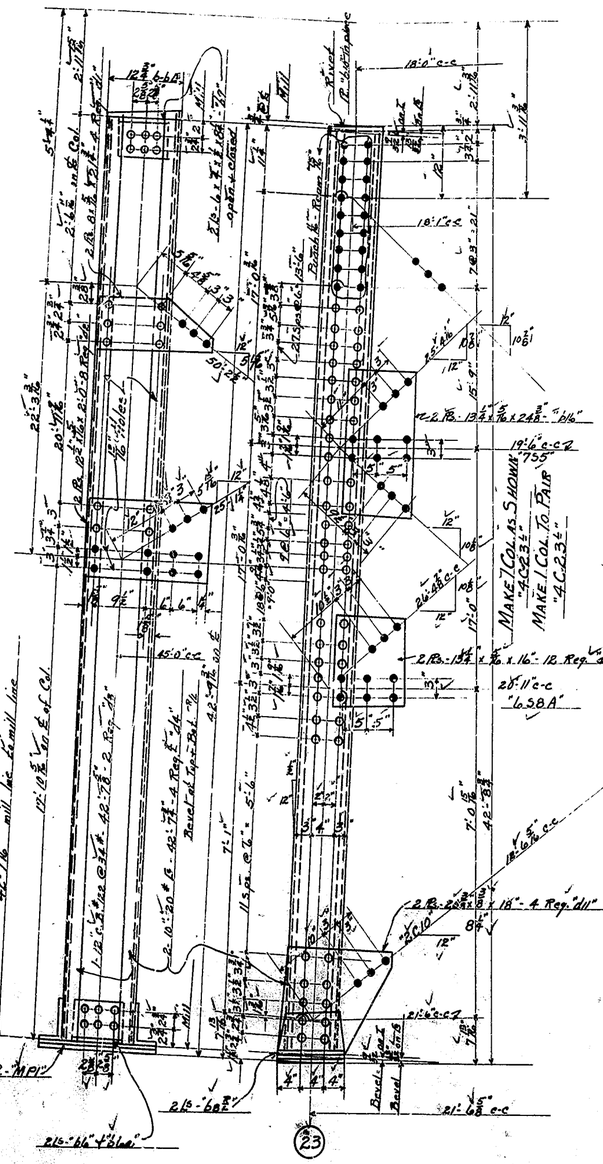
1st FIELD COAT: } See Sheet #2

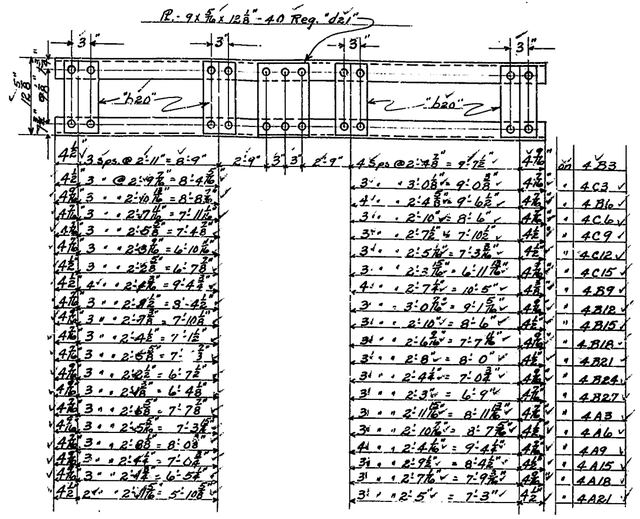
2nd FIELD COAT:

Ream Fl. Beam Connct. To Metal Templet Or Assembled (Use Templets From #7374-7)

HOLES 11/16" UNLESS NOTED For 8"&10"I & Flanges = 13/16"

EDGE 1 1/2" UNLESS NOTED For 7/8" Rivets-1 1/4" unless noted for 3/4" rivets

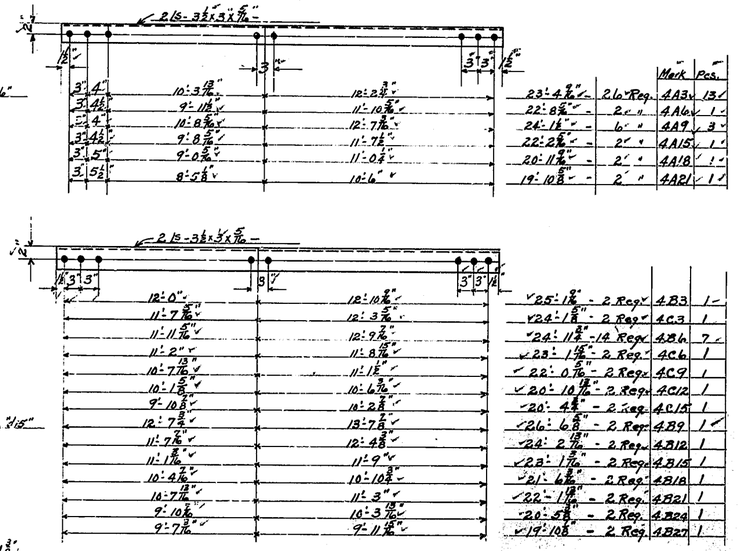




48"	3 spc. @ 2'-11" = 8'-9"	2'-9"	3"	3"	2'-9"
48"	3 " @ 2'-9 7/8" = 8'-4 5/8"				
48"	3 " @ 2'-10 1/8" = 8'-8 3/8"				
48"	3 " @ 2'-4 7/8" = 7'-11 5/8"				
48"	3 " @ 2'-5 3/8" = 7'-4 3/8"				
48"	3 " @ 2'-3 5/8" = 6'-10 7/8"				
48"	3 " @ 2'-2 3/8" = 6'-7 1/8"				
48"	4 " @ 2'-4 3/8" = 9'-4 1/2"				
48"	3 " @ 2'-8 1/8" = 8'-4 3/8"				
48"	3 " @ 2'-9 3/8" = 7'-10 1/8"				
48"	3 " @ 2'-4 3/8" = 7'-1 5/8"				
48"	3 " @ 2'-5 3/8" = 7'-3 7/8"				
48"	3 " @ 2'-2 3/8" = 6'-7 1/8"				
48"	3 " @ 2'-1 3/8" = 6'-4 1/8"				
48"	3 " @ 2'-5 3/8" = 7'-3 7/8"				
48"	3 " @ 2'-6 3/8" = 8'-0 3/8"				
48"	3 " @ 2'-4 3/8" = 7'-1 5/8"				
48"	3 " @ 2'-3 3/8" = 6'-10 1/8"				
48"	2 " @ 2'-11 7/8" = 5'-10 3/4"				

48"	4 5 spc. @ 2'-4 3/8" = 9'-7 1/2"				
48"	3 " @ 3'-0 5/8" = 9'-0 7/8"				
48"	4 " @ 2'-4 5/8" = 9'-6 1/2"				
48"	3 " @ 2'-10 1/8" = 8'-6"				
48"	3 " @ 2'-7 5/8" = 7'-10 1/2"				
48"	3 " @ 2'-5 1/2" = 7'-3 1/2"				
48"	3 " @ 2'-3 5/8" = 6'-11 7/8"				
48"	4 " @ 2'-7 1/2" = 10'-5"				
48"	3 " @ 3'-0 1/8" = 9'-1 5/8"				
48"	3 " @ 2'-10" = 8'-6"				
48"	3 " @ 2'-6 3/8" = 7'-7 1/8"				
48"	3 " @ 2'-8" = 8'-0"				
48"	3 " @ 2'-4 1/2" = 7'-0 1/2"				
48"	3 " @ 2'-3" = 6'-9"				
48"	3 " @ 2'-11 5/8" = 8'-11 7/8"				
48"	3 " @ 2'-10 3/8" = 8'-7 1/8"				
48"	4 " @ 2'-4 1/2" = 9'-4"				
48"	3 " @ 2'-9 1/2" = 8'-4 5/8"				
48"	3 " @ 2'-7 1/8" = 7'-9 3/8"				
48"	3 " @ 2'-5" = 7'-3"				

Mark	Pcs.
4B3	1
4C3	1
4B16	7
4C6	1
4C9	1
4C12	1
4C15	1
4B9	1
4B12	1
4B15	1
4B18	1
4B21	1
4B24	1
4B27	1
4A3	13
4A6	1
4A9	3
4A15	1
4A18	1
4A21	1



3"	4	10'-3 1/16"	10'-2 3/8"	23'-4 7/16"	2 Lg. Reg.
3"	4 1/2	9'-11"	11'-10 3/16"	22'-8 3/16"	2 "
3"	4	10'-8 3/16"	12'-7 1/16"	24'-1 1/2"	6 "
3"	4 1/2	9'-8 5/16"	11'-7 1/2"	22'-2 1/8"	2 "
3"	5	9'-0 3/16"	11'-0 1/4"	20'-11 7/16"	2 "
3"	5 1/2	8'-5 1/16"	10'-6"	19'-10 3/8"	2 "

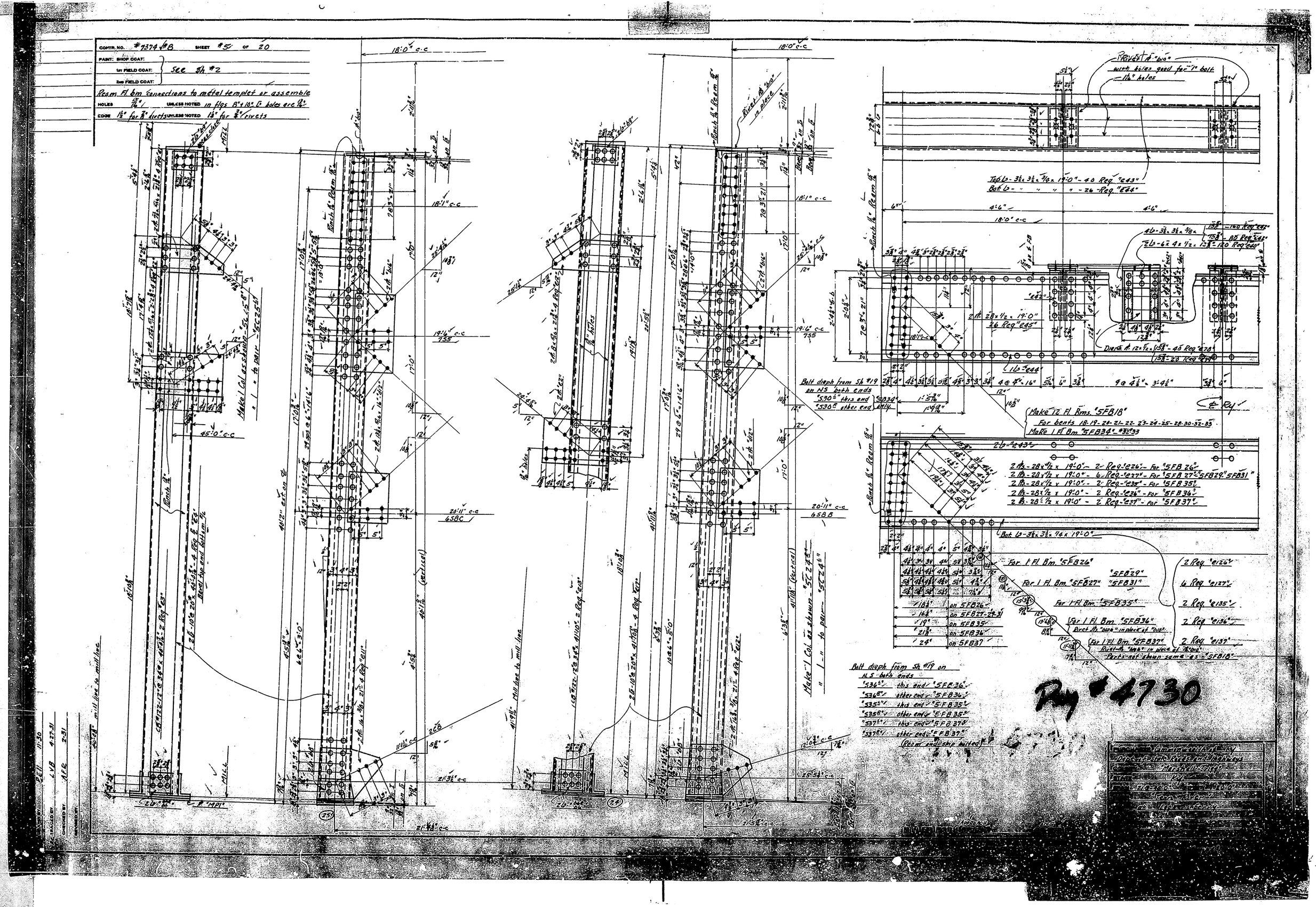
12'-0"		12'-10 3/8"		25'-1 3/8"	2 Reg.
11'-7 7/16"		12'-3 7/16"		24'-1 5/8"	2 Reg.
11'-11 5/16"		12'-9 1/2"		24'-11 3/8"	14 Reg.
11'-2"		11'-8 1/16"		23'-1 1/2"	2 Reg.
10'-7 7/16"		11'-1 5/8"		22'-0 7/16"	2 Reg.
10'-1 5/16"		10'-6 3/4"		20'-11 7/16"	2 Reg.
9'-10 3/8"		10'-2 7/8"		20'-4 1/4"	2 Reg.
12'-7 1/2"		13'-7 1/8"		26'-6 3/8"	2 Reg.
11'-7 7/16"		12'-4 3/8"		24'-2 15/16"	2 Reg.
11'-7 7/16"		11'-9"		23'-1 7/16"	2 Reg.
10'-4 7/16"		10'-10 3/8"		21'-6 3/4"	2 Reg.
10'-7 7/16"		11'-3"		22'-1 7/16"	2 Reg.
9'-10 1/2"		10'-3 15/16"		20'-5 7/16"	2 Reg.
9'-7 3/16"		9'-11 5/16"		19'-10 3/8"	2 Reg.

Dwg #4730

PURCHASER Commonwealth of Kentucky
Dept. of State Roads & Highways
COUNTY Marshall & Tenn.
STATE Kentucky
Approved for Fabrication
Approved for Erection

BILLED FOR: 1 Pair Cols.

DRAWN BY: E.E.H. 11-30
CHECKED BY: J.V.B. 4-31-31
CHECKED BY: A.F.R. 5-31



CONTR. NO. #7374 #8 SHEET #5 OF 20
PAINT: SHOP COAT:
1st FIELD COAT: See Sh #2
2nd FIELD COAT:
Ream Fl. Bm connections to metal templet or assemble
HOLES 15/16" UNLESS NOTED in flgs 8" & 10" L holes are 13/16"
EDGE 1 1/2" for 7/8" rivets UNLESS NOTED 1 1/2" for 3/4" rivets
Make 1 Col as shown - "5C25"
Make 1 Col as shown - "5C24"
Make 12 Fl. Bms. "5FB18"
For bents 18-19-20-21-22-23-24-25-28-30-32-33
Make 1 Fl. Bm. "5FB34" #32-33
Bolt diaph from Sh #19 on NS both ends
Bolt diaph from Sh #19 on N.S. both ends
Ray #4730

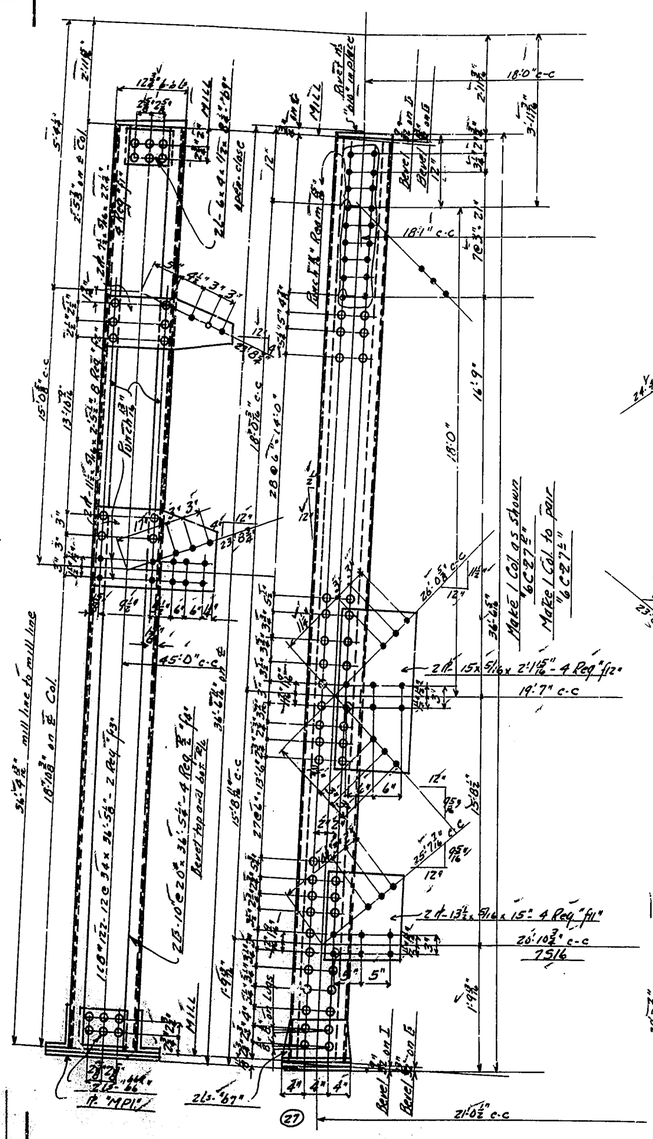
CONTR. NO. #7374#8 SHEET #6 OF 20

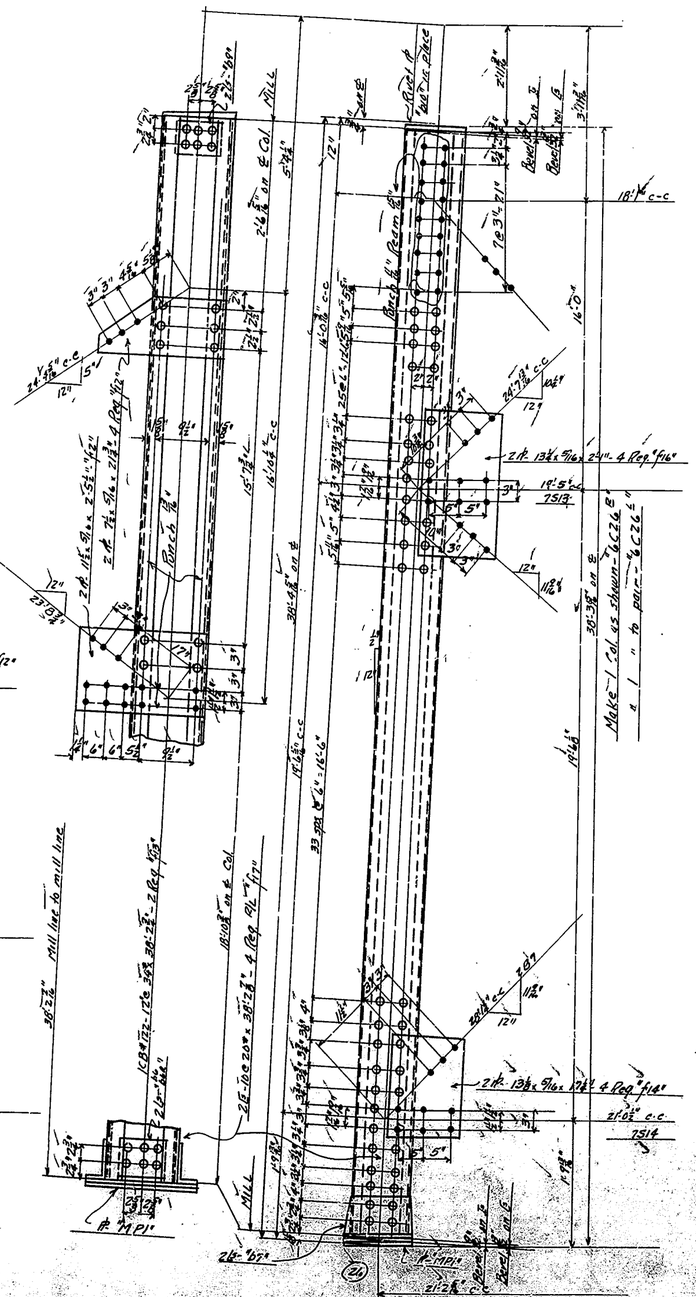
PAINT: SHOP COAT:
1st FIELD COAT: See Sh #2.
2nd FIELD COAT:

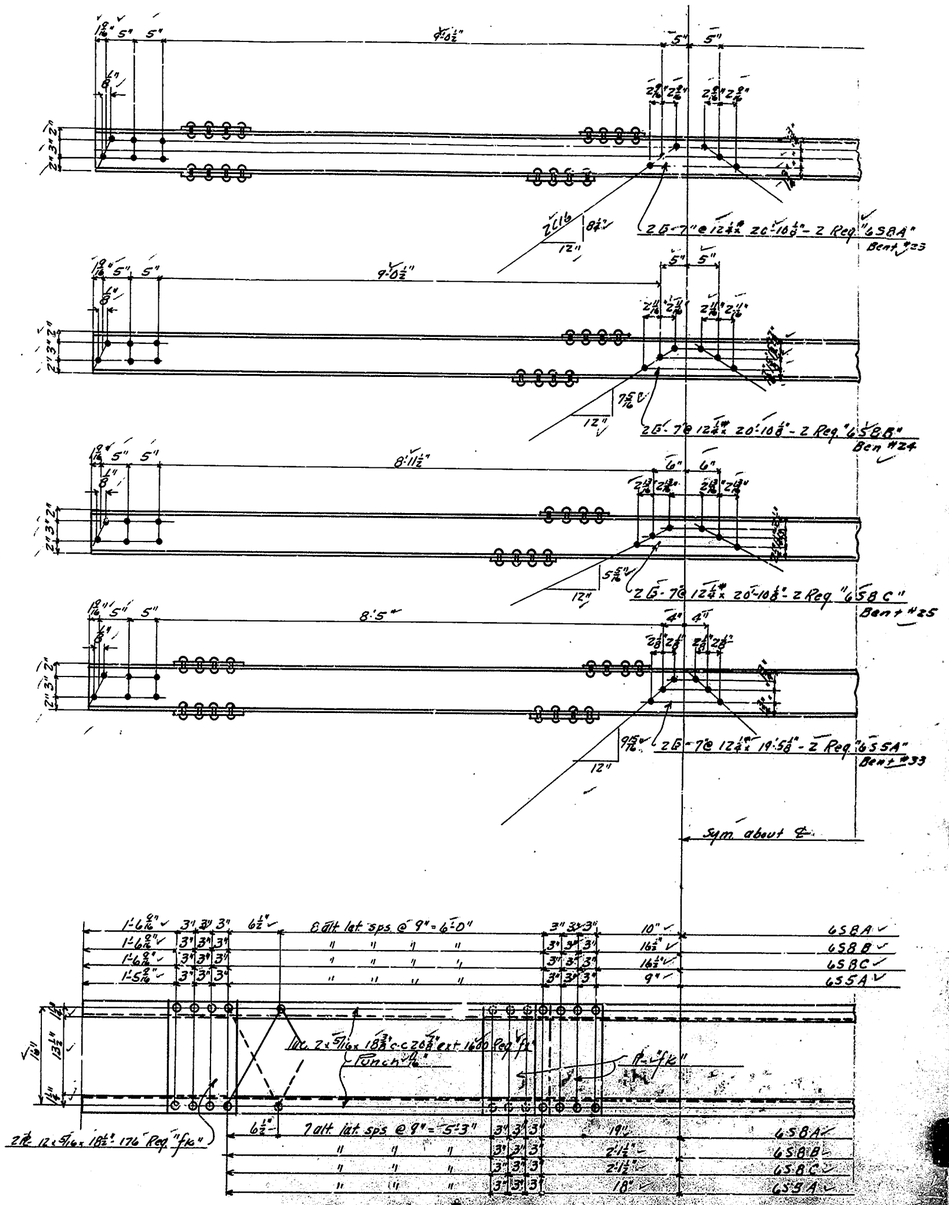
Ream M. bm. connections to metal templet or assemble

HOLES 15/16"ϕ UNLESS NOTED except in flgs 8"-10" [which will be 13/16"ϕ

EDGE 1½" UNLESS NOTED for 7/8"ϕ rivets - 1¼" for ¾" rivets







Req. #4730

Commonwealth of Ky.
Dept. of State Roads & Highways
Marshall Trigg
Ky.
Tenn. Rice
Eggers Ferry

CONTR. NO. #7374-B SHEET #7 OF 20

PAINT: SHOP COAT:

1st FIELD COAT: See Sh. #2

2nd FIELD COAT:

Use templets from #7374-#7

HOLES 15/16" / UNLESS NOTED except for 11/16 7"-8"-10"-G as noted

EDGE 1/2" / UNLESS NOTED for 3/4 inch - 1 1/2" for 7/8 rivets

c-c	Length	Req	Rev	Mark	Finished No.
19'-1 1/2"	19'-5 3/8"	2	1	7558A	
19'-6"	19'-5 3/8"	22	11	7555	
20'-11 1/2"	20'-10 3/8"	2	1	7556	
21'-0 3/8"	22'-0"	2	1	7557	
20'-11"	20'-10 3/8"	6	3	7558	
21'-11 3/8"	21'-10 3/8"	2	1	7559	
21'-9 1/2"	21'-8 3/8"	2	1	7510	
21'-7 1/2"	21'-6 3/8"	2	1	7511	
21'-6 3/8"	21'-5 3/8"	2	1	7512	
19'-5"	19'-4 5/8"	2	1	7513	
21'-0 1/2"	20'-11 5/8"	2	1	7514	
19'-7"	19'-6 1/4"	6	3	7515	
20'-10 1/2"	20'-9 3/8"	2	1	7516	
20'-7 7/8"	20'-7 1/4"	2	1	7517	
20'-6 3/8"	20'-5 1/4"	2	1	7518	
20'-6 1/2"	20'-5 1/4"	2	1	7519	
20'-4 1/2"	20'-3 3/8"	2	1	75201	
20'-2 3/8"	20'-1 3/8"	2	1	7521	
19'-4 1/2"	19'-3 3/8"	2	1	7522	
19'-2 1/2"	19'-1 3/8"	2	1	7523	
19'-1"	19'-0 3/8"	2	1	7524	
20'-11"	20'-10 3/8"	2	1	7580	

Mark Top

Punch 11/16"

Lacing 3/8" x 2 1/2" x 1'-2 1/2" laced alt top & bot

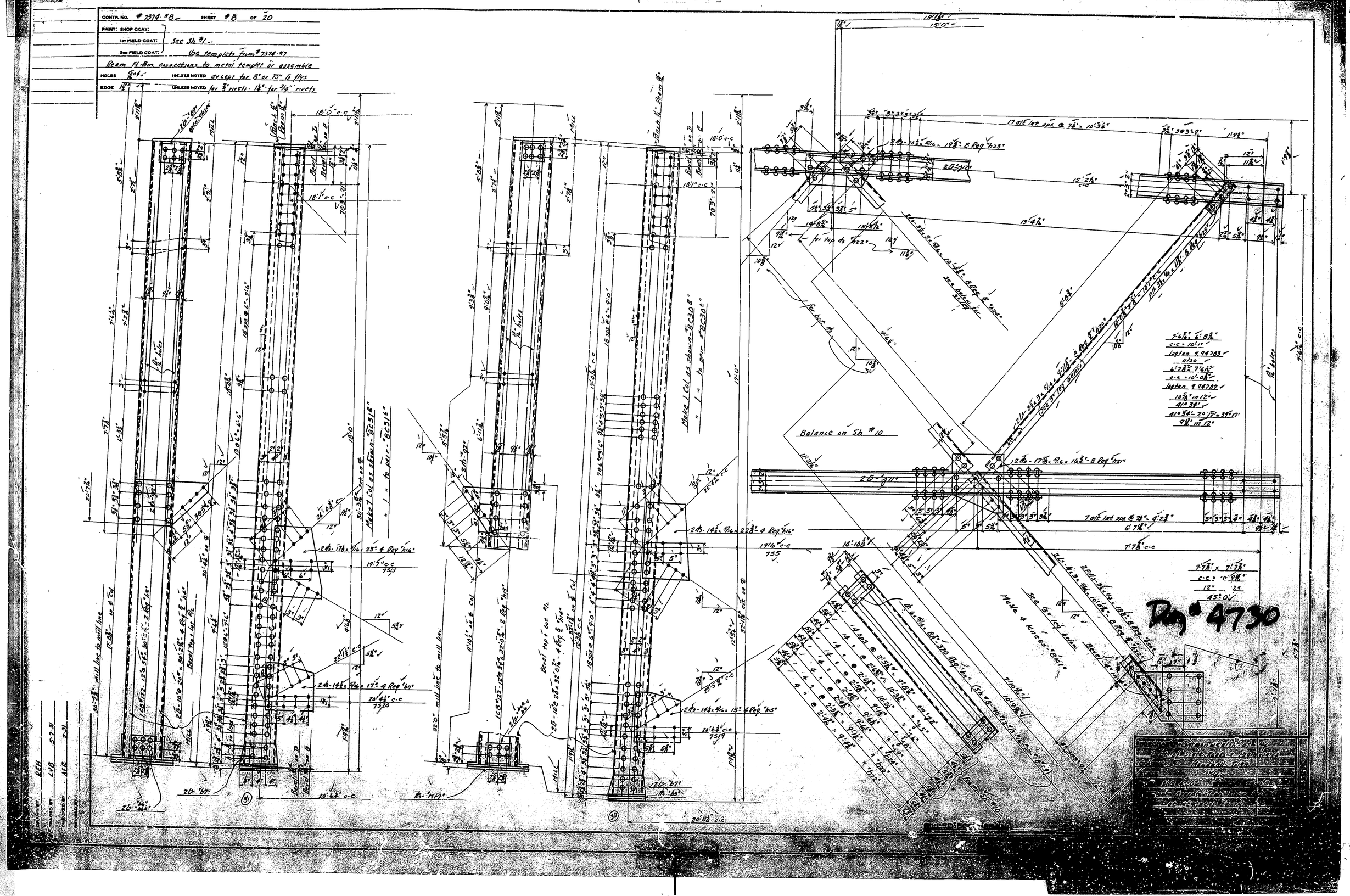
7558A	1'-1 3/16"	5"	3"	5"	19 alt lat spa. @ 9" = 14'-3"	5"	3"	1'-11"
7555	1'-5 3/8"	"	"	"	20 " " " @ 9" = 15'-0"	"	"	1'-5"
7556	1'-5 3/8"	"	"	"	22 " " " @ 9" = 16'-6"	"	"	1'-5"
7557	1'-7 1/2"	"	"	"	23 " " " @ 9" = 17'-3"	"	"	1'-7"
7558	1'-11 3/8"	"	"	"	21 " " " @ 9" = 15'-9"	"	"	1'-11"
7559	1'-11 3/8"	"	"	"	23 " " " @ 9" = 17'-3"	"	"	1'-11"
7510	1'-11"	"	"	"	22 " " " @ 9" = 16'-6"	"	"	1'-11"
7511	1'-9 5/8"	"	"	"	22 " " " @ 9" = 16'-6"	"	"	1'-9"
7512	1'-11 3/8"	"	"	3 3/16"	21 " " " @ 9" = 15'-9"	3 3/16"	"	1'-11"
7513	1'-5 3/8"	"	"	"	20 " " " @ 9" = 15'-0"	"	"	1'-5"
7514	1'-5 3/8"	"	"	"	22 " " " @ 9" = 16'-6"	"	"	1'-5"
7515	1'-6 1/8"	"	"	"	20 " " " @ 9" = 15'-0"	"	"	1'-6"
7516	1'-6"	"	"	3 3/16"	21 " " " @ 9" = 15'-9"	3 3/16"	"	1'-6"
7517	1'-6 1/8"	"	"	"	21 " " " @ 9" = 15'-9"	"	"	1'-6"
7518	1'-7 1/4"	"	"	"	21 " " " @ 9" = 15'-9"	"	"	1'-7"
7519	1'-7 1/8"	"	"	"	21 " " " @ 9" = 15'-9"	"	"	1'-7"
7520	1'-6 1/8"	"	"	"	20 " " " @ 9" = 15'-0"	"	"	1'-6"
7521	1'-9 1/8"	"	"	"	20 " " " @ 9" = 15'-0"	"	"	1'-9"
7522	1'-6 1/8"	"	"	"	20 " " " @ 9" = 15'-0"	"	"	1'-6"
7523	1'-5"	"	"	3 3/16"	19 " " " @ 9" = 14'-3"	3 3/16"	"	1'-5"
7524	1'-7 1/8"	"	"	"	19 " " " @ 9" = 14'-3"	"	"	1'-7"
7580	1'-9 1/8"	"	"	"	21 " " " @ 9" = 15'-9"	"	"	1'-9"

Rev. #4730

DESIGNED BY	LHS	5-6-31
CHECKED BY	AEA	2-31
REVISED BY		

BY [illegible] APPROVED

BY [illegible] ENGINEER


CONTR. NO. #7374-#8
SHEET #8 OF 20
PAINT: SHOP COAT:
1st FIELD COAT:
2nd FIELD COAT:
See Sh. #1
Use templets from #7374-#7
Ream Fl-Bm connections to metal templet or assemble
HOLES
UNLESS NOTED except for 8" or 15" ⊏ flys.
EDGE
UNLESS NOTED for 7/8" rivets - 1 1/4" for 3/4" rivets
Balance on Sh. #10
Make 1 Col. as shown - "8C30 8"
" 1 " to pair - "8C30 5"
Make 4 knees - "8K1"
Reg # 4730

CONTR. NO. #1374 #8 SHEET #9 OF 20

PAINT: SHOP COAT:
1st FIELD COAT: See Sh #2
2nd FIELD COAT: Use templets from #1374-7

Ream Fl. bm connections to metal templet

HOLES 15/16" ø UNLESS NOTED
EDGE 1 1/4" UNLESS NOTED

Bent 8 Pier 18

Ream 1 1/4" ø

19'-0" c-c

Bevel 12 on ℄

Bevel 12 on ℄

18'-1" c-c

Make 1 Col as shown - "96338"
" 1 " to pair - "96339"

Bevel 12 on ℄

Ream 1 1/4" ø

18'-0" c-c

18'-1" c-c

Make 1 Col as shown - "96328"
" 1 " to pair - "96329"

Sta. 384+21
Abut #2

44'-11 7/8" on slope

"TSP"

5/8" ø Holes for Exp Device

3'-0"

Ream 1 1/4" ø for 1 1/2" dowel 2'-10" c-c (Bent 12 to Abut Bm with cor. plate)

1'-5 1/8"

13'-9"

13'-9"

13'-9"

ICB #271-27 1/2" @ 9 5/8" x 45'-5 3/8" (1 Req "957"
2 Req "958"
2 Req "959"

Concrete Top level See Sh #5 of Gen Plans

1 1/16" x 2" slots for 1" bolt

"Bor."

Ream 1 1/8" for 1 1/4" Swedged Anchors

44'-6 3/8"

Bent #2 - 12" (12'-8") x 12" - 5 Req 1 Bdl. "9919"

Sta. 384+21
Abut #2

4'-5 1/2" c-c Exp Dev

15-12" @ 2'-0 7/8" x 4'-5" - 336 Req "4120"

18-9" x 5/16" x 21" - 67 2/3 Req "4122"
112-3 1/2" x 3" x 5/16" x 21" - 67 2/3" Req "4120"

MARC 336 - Struts - "9910"

Dwg #4730

Make 1 Col as shown - "96328"
" 1 " to pair - "96329"

Bevel 12 on ℄

Bevel 12 on ℄

Bent 8 Pier 18

Ream 1 1/4" ø

19'-0" c-c

18'-1" c-c

Bevel 12 on ℄

Bevel 12 on ℄

Ream 1 1/4" ø

18'-0" c-c

18'-1" c-c

19'-1/4" c-c 7358A

19'-1/4" c-c 7358A

23'-1/4" c-c 7321

26'-2 1/2" c-c 7321

Bent 8 Pier 18

Bent #2

Abut #2

Bent 8 Pier 18

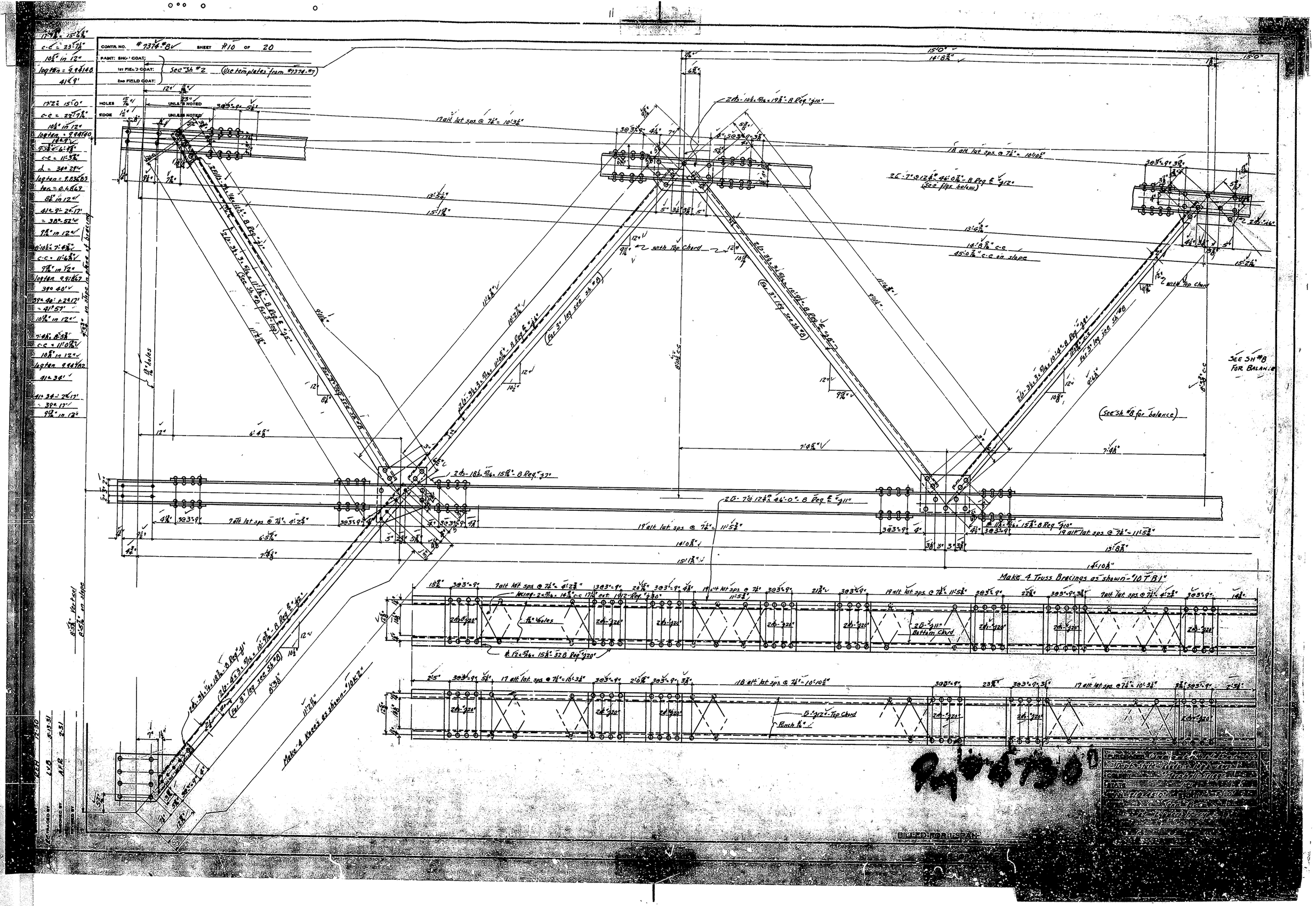
Bent #2

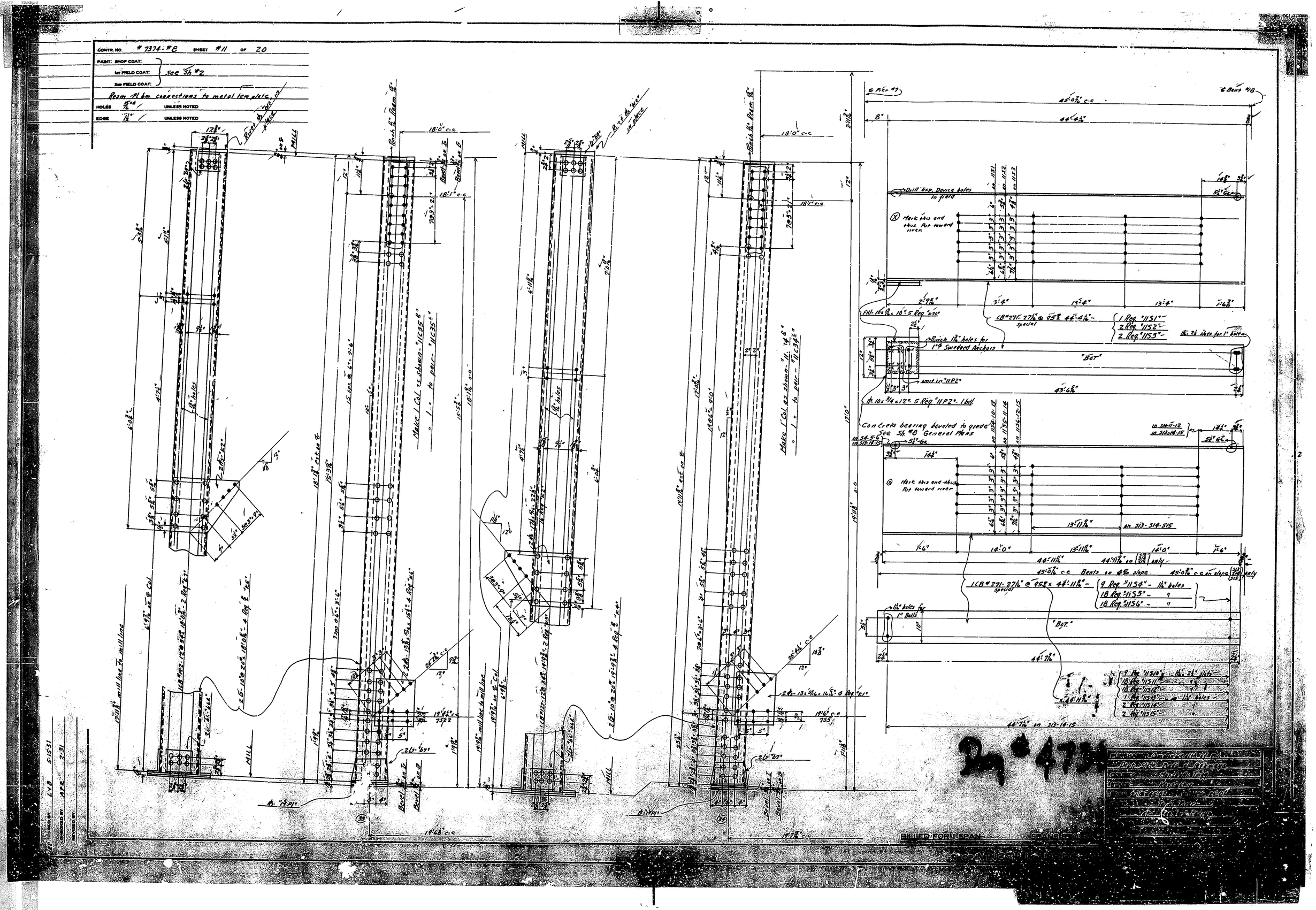
Abut #2

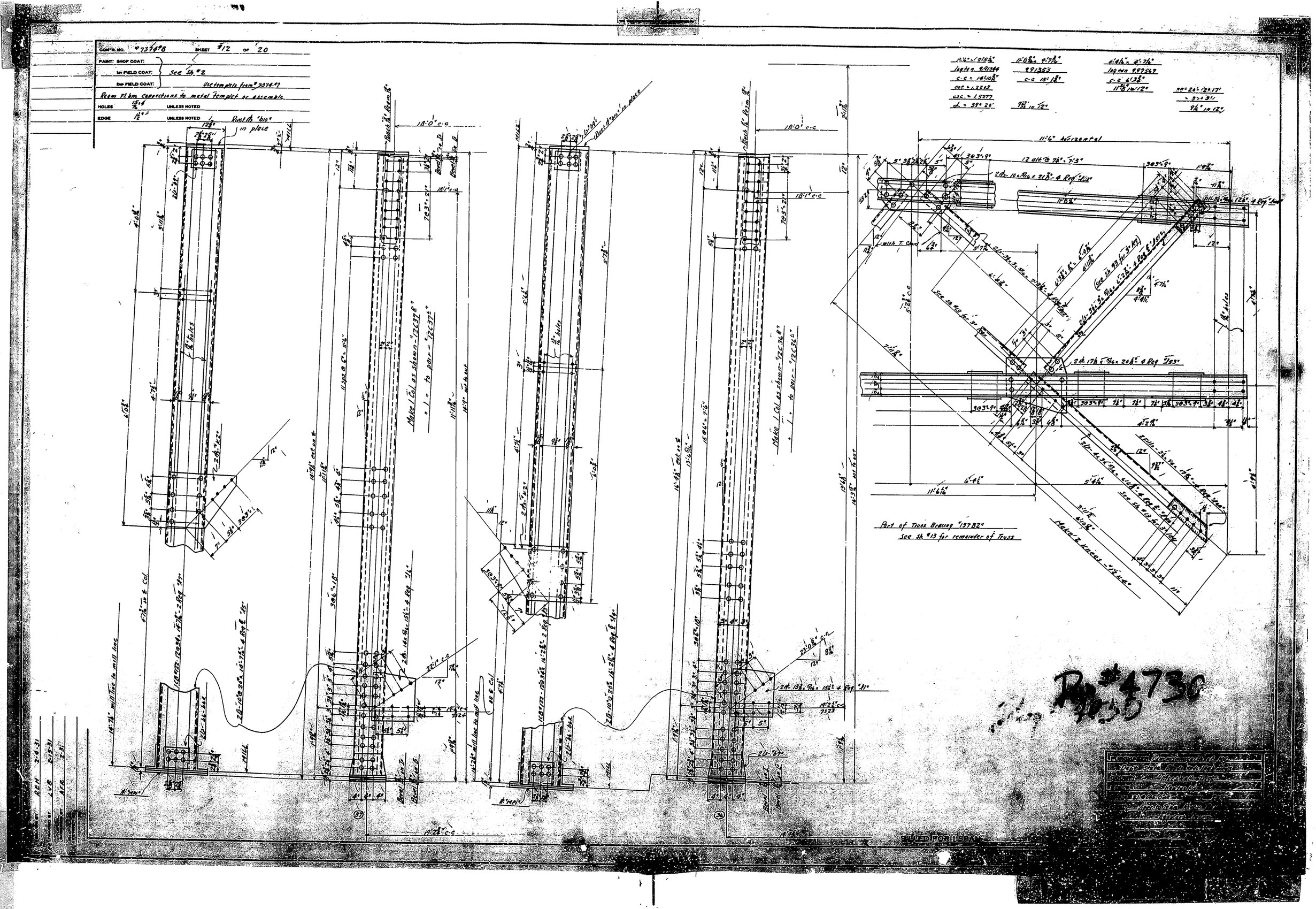
BILLED FOR 1 SPAN

SPANDREL

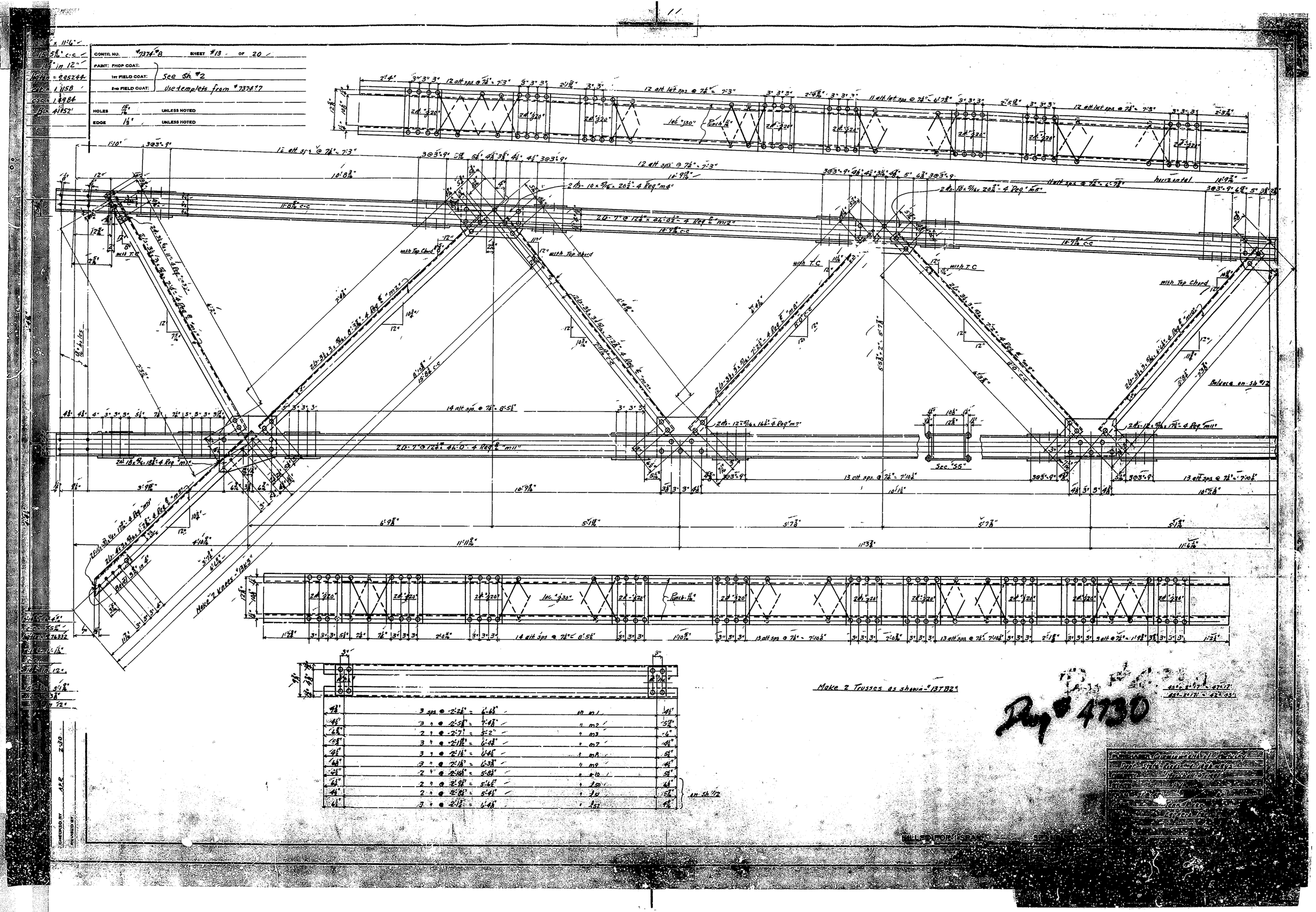
Sht. #1


CONTR. NO. #7374-#8
SHEET #10 OF 20
PAINT: SHOP COAT:
1ST FIELD COAT:
2ND FIELD COAT:
See Sh #2
(Use templates from #7374-#7)
HOLES
EDGE
UNLESS NOTED
17 alt lat sps @ 7½" = 10'-3½"
18 alt lat sps @ 7½" = 10'-10½"
with Top Chord
(See flgs below)
(See Sh #8 for balance)
SEE SH #8 FOR BALANCE
Make 4 Truss Bracings as shown-"10TB1"
Make 4 Knees as shown-"10K2"
Bottom Chord
Top Chord
BILLED FOR 1 SPAN


CONTR. NO. #7374-#8 SHEET #11 OF 20
PAINT: SHOP COAT:
1st FIELD COAT:
2nd FIELD COAT:
see Sh #2
Ream #1 bm connections to metal template
HOLES 15/16 UNLESS NOTED
EDGE 1 1/2 UNLESS NOTED
Make 1 Col. as shown - "11C35"
" 1 " to pair - "11C35"
Make 1 Col. as shown - "11C34"
" 1 " to pair - "11C34"
Drill Exp. Device holes in field
Mark this end thus Put toward river
Concrete bearing beveled to grade See Sh. #8 General Plans
Bents on 4% slope
BILLED FOR 1 SPAN
SHOP VINCENT



CONT'R. NO. #7374-8
SHEET #12 OF 20
PAINT: SHOP COAT:
1st FIELD COAT:
2nd FIELD COAT:
See Sh. #2
Use templets from #7374-7
Ream Fl. bm. connections to metal templet or assemble
HOLES 15/16 UNLESS NOTED
EDGE 1 1/2" UNLESS NOTED
Rivet Pls. "b10" in place
18'-0" c-c
Make 1 Col. as shown - "12C37B"
" 1 " to pair - "12C37E"
Make 1 Col. as shown - "12C36B"
" 1 " to pair - "12C36E"
11'-6" horizontal
Part of Truss Bracing "13782"
See Sh. #13 for remainder of Truss
Make 2 knees - "1 1/2 x 4"
Rep. #4730

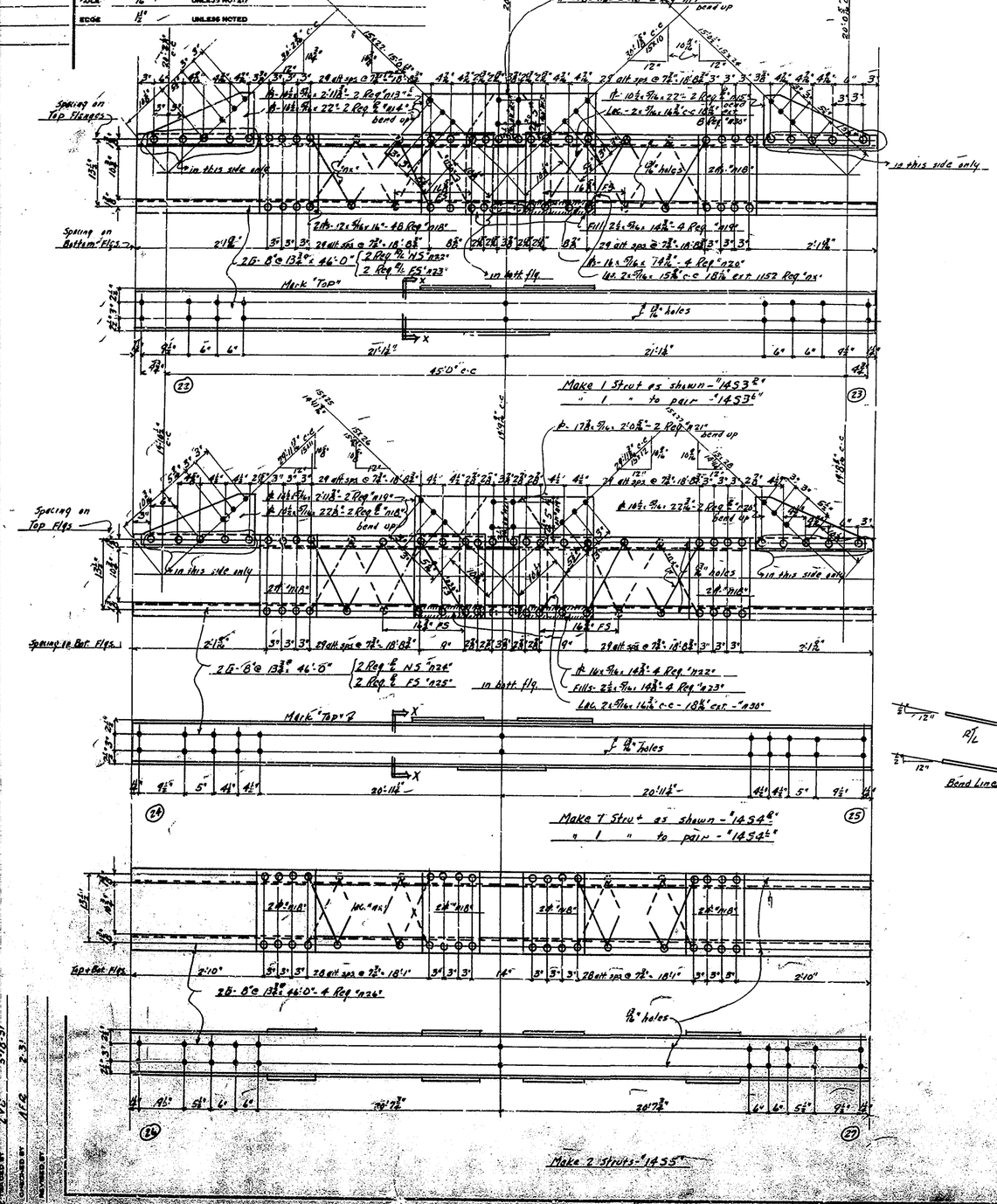

CONTR. NO. #7374-#8
SHEET #13 OF 20
PAINT: SHOP COAT:
1st FIELD COAT: See Sh. #2
2nd FIELD COAT: Use templets from #7374-#7
HOLES 15/16" UNLESS NOTED
EDGE 1½" UNLESS NOTED
Make 2 Trusses as shown - "13TB2"
Make 2 Knees - "13K3"
Balance on Sh. #12
Sec. "S5"
Dwg # 4730

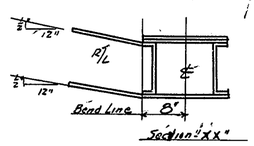
CONTR. NO. #7374#8 SHEET #14 OF 20

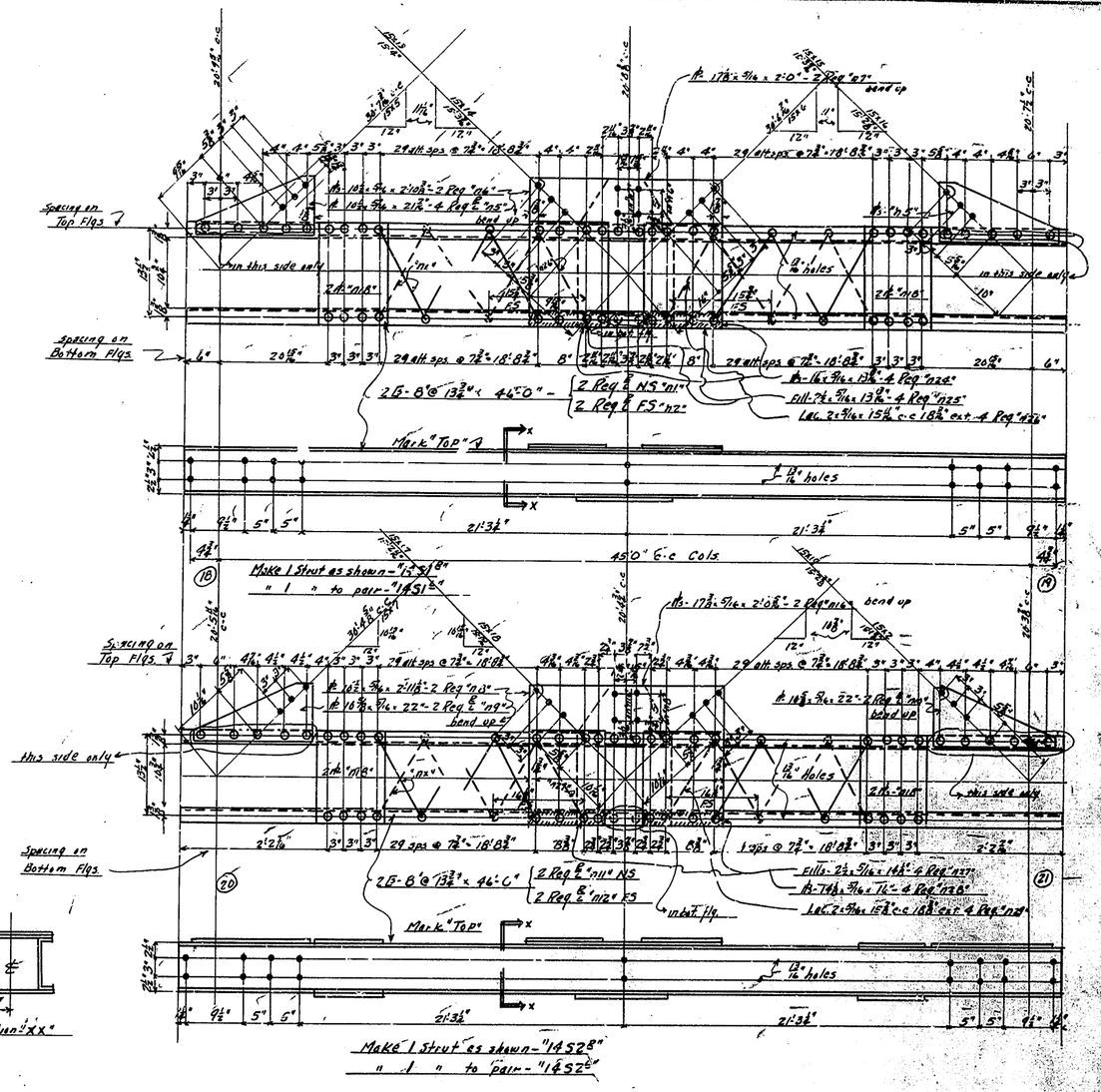
PAINT: SHOP COAT:
1st FIELD COAT: See sh. #2
2nd FIELD COAT:

Use templets from #7374#7

HOLE: 15/16" UNLESS NOTED
EDGE: 1 1/2" UNLESS NOTED







Dwg #4730

Dwg #5110

CONTR. NO. # 7374#8 / SHEET # 15 OF 20

PAINT: SHOP COAT:

1st FIELD COAT: } See Sh #2

2nd FIELD COAT:

HOLES 15/16" / UNLESS NOTED

EDGE 1½" / UNLESS NOTED for ⅞" rivets- 1⅛" for ¾" rivets

Between	(19)(18)	X1 /	20'-0⅜" /
"	(21)(20)	X2 /	20'-4⅜" /
"	(23)(22)	X3 /	20'-8⅝" /
"	(25)(24)	X4	19'-5⅞"

At top of struts

2 Pl- 3 x 3 x 9/16

19'-0⅜" - 2 Req "06" /
19'-0⅜" - 2 " "07" /
18'-9⅝" - 2 " "08" /
18'-5⅞" - 2 " "09" /

18'-3⅞" /
17'-11⅜" /
17'-8⅝" /
17'-4⅞" /

26- 4½ x 5 9/16 x 8'-16 Req "01"

Pl- 6 x 5/16 x

19'-0⅜" - 1 Req "02" - For X1
19'-0⅜" - 1 Req "03" - For X2
18'-9⅝" - 1 Req "04" - For X3
18'-5⅞" - 1 Req "05" - For X4

Hatten BS /

Mark "Top"

42	@ 5" = 17'-6" /	Make 1 Strut -	"15X1" /
41	@ 5" = 17'-1" /	" 1 "	"15X2"
41	@ 5" = 17'-1" /	" 1 "	"15X3"
40	@ 5" = 16'-8" /	" 1 "	"15X4"

13'-6⅜" /
13'-6⅛" /
13'-5" /
13'-4⅝" /
13'-3⅞" /
13'-3⅛" /
13'-2⅜" /
13'-1⅝" /

13'-5⅜" /
13'-5⅛" /
13'-4⅞" /
13'-4⅛" /
13'-3⅜" /
13'-2⅝" /
13'-1⅞" /
13'-1⅛" /

16- 4 x 3 x 5/16 x

-28'-3⅜" - 1 Req 15X5-
-28'-2⅜" - 1 " 15X6
-28'-1⅜" - 1 " 15X7
-27'-11⅜" - 1 " 15X8
-27'-9⅜" - 1 " 15X9
-27'-7⅜" - 1 " 15X10
-27'-5⅜" - 1 " 15X11
-27'-3⅜" - 1 " 15X12

Mark this end thus put towards river

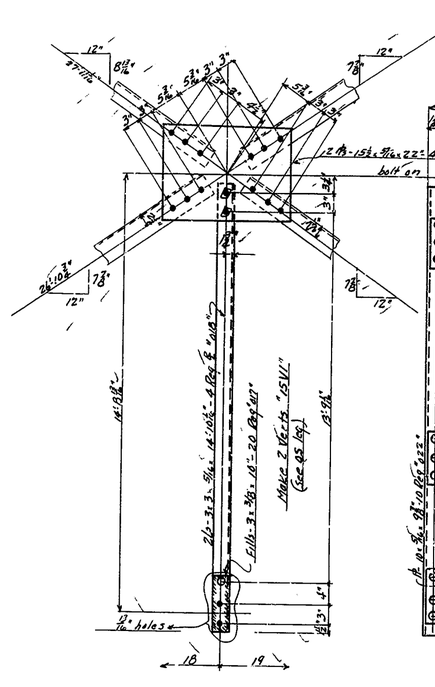
15'-3⅜" + 15'-3⅜"	30'-7⅛" on 15X5
15'-5⅜" + 15'-2⅜"	30'-7⅝" on 15X6
15'-2⅝" + 15'-1⅛"	30'-3⅝" on 15X7
15'-2⅛" + 15'-1⅛"	30'-3⅛" on 15X8
15'-1⅛" + 15'-0⅛"	30'-2⅛" on 15X9
15'-1⅛" + 15'-0⅛"	30'-1⅛" on 15X10
15'-0⅛" + 14'-11⅝"	29'-11⅝" on 15X11
14'-11⅝" + 14'-11⅝"	29'-11⅝" on 15X12

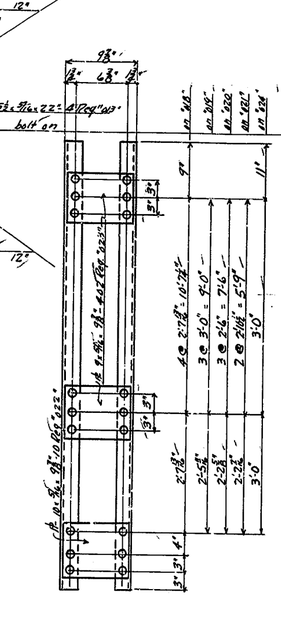
Pl 7 x 3/8 x 1'-11" - 2 Req "10" on 15X5-15X6
Pl 7 x 3/8 x 1'-11" - 4 Req "11" on 15X7-8-9-10
Pl 7 x 3/8 x 1'-11" - 2 Req "12" on 15X11-15X12

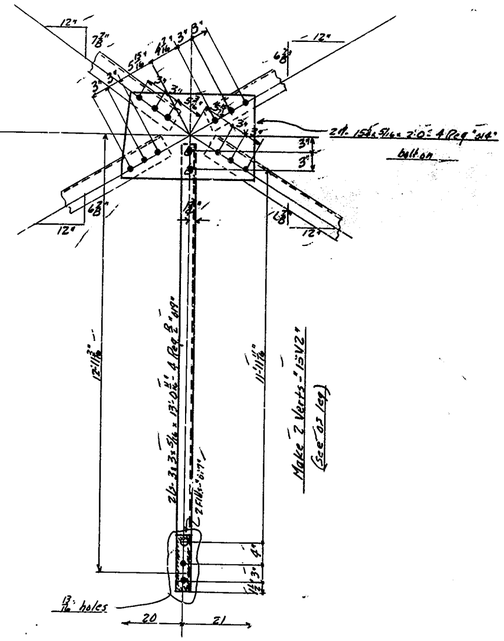
12'-8⅜" /
12'-7½" /
12'-6⅝" /
12'-5⅞" /
12'-7" /
12'-6¼" /
12'-5⅝" /
12'-4⅞" /
12'-4⅛" /
12'-3⅜" /
12'-2⅝" /
12'-1⅞" /

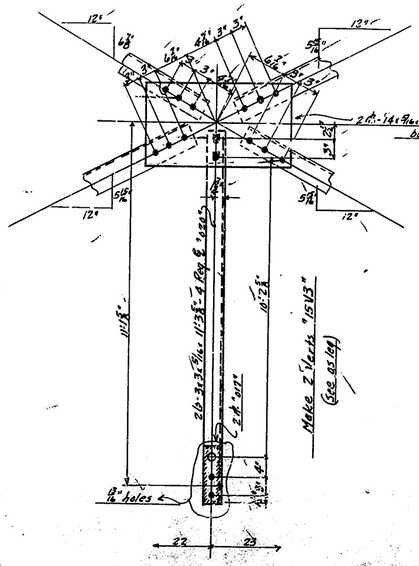
15- 4 x 3 x 5/16 x

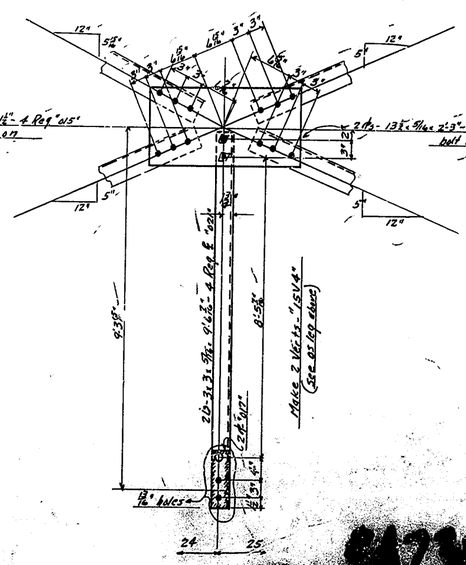
13'-11⅝" / 1 Req 15X13
13'-10⅞" / " 15X14
13'-10⅛" / " 15X15
13'-9⅜" / " 15X16
13'-8⅝" / " 15X17
13'-7⅞" / " 15X18
13'-7⅛" / " 15X19
13'-6⅜" / " 15X20
13'-5⅝" / " 15X21
13'-4⅞" / " 15X22
13'-4⅛" / " 15X23
13'-3⅜" / " 15X24
13'-2½" / " 15X25
13'-1⅝" / " 15X26
13'-0⅞" / " 15X27
12'-12⅜" / " 15X28

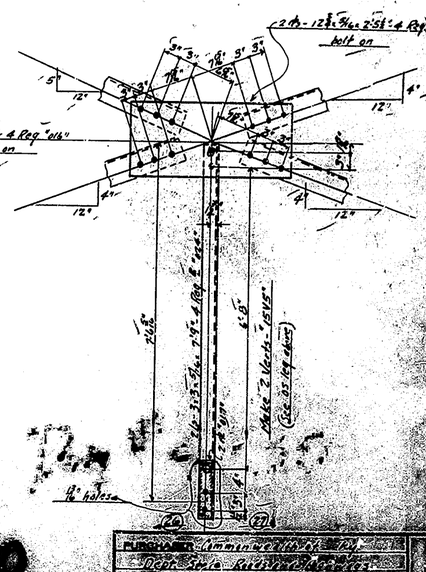








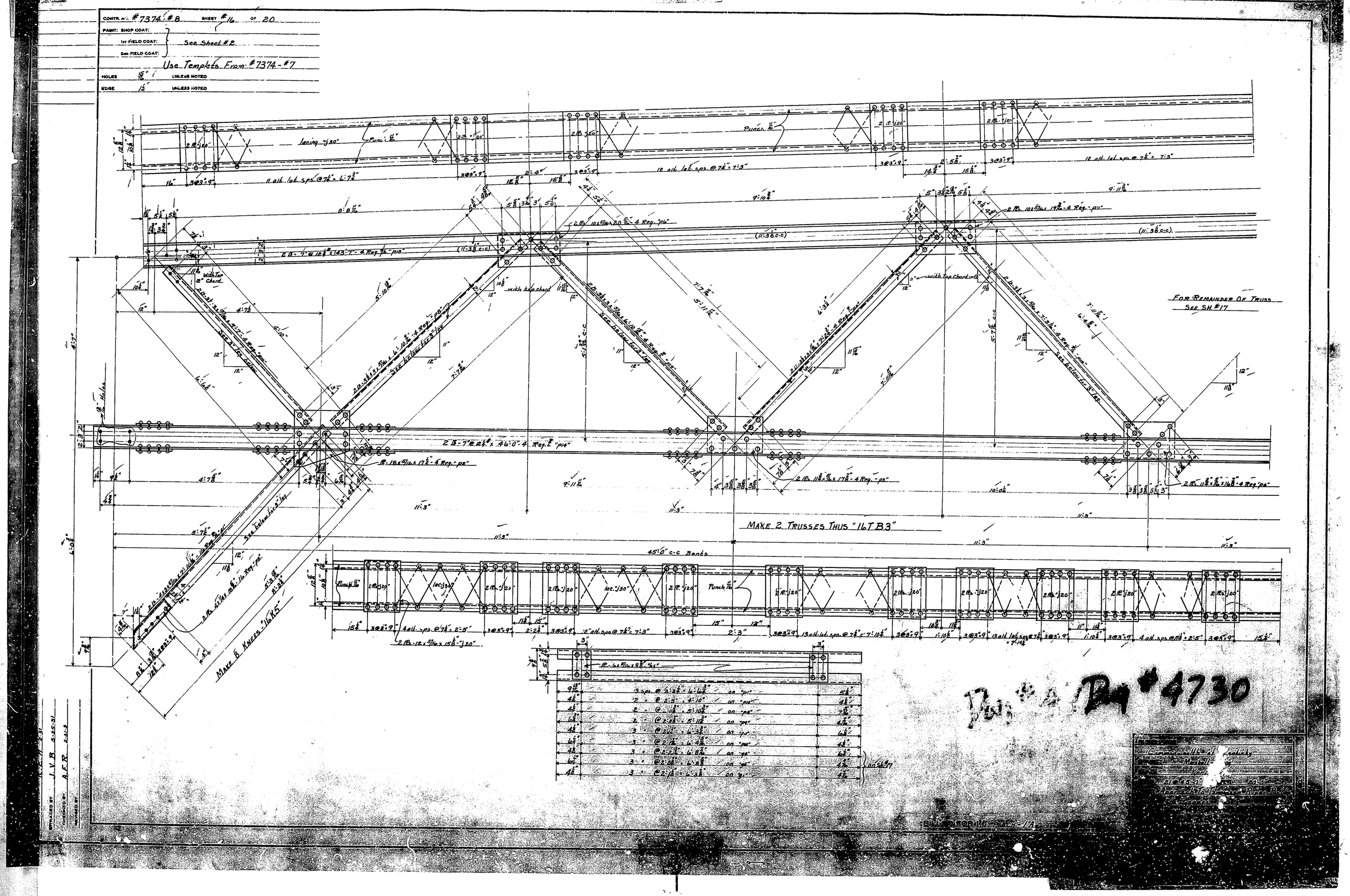




Approved for Construction
Dept. Sub Resident Engineer
Contractor
Foreman
Date Erected
Erection Foreman

FM 64720

ERECTED BY R.I. SPAN:


CONTR. NO. #7374-#8 SHEET #16 OF 20
PAINT: SHOP COAT:
1st FIELD COAT:
2nd FIELD COAT:
See Sheet #2
Use Templets From #7374-#7
HOLES 15/16" UNLESS NOTED
EDGE 1/2" UNLESS NOTED
For Remainder Of Truss See SH. #17
Make 2 Trusses Thus "16TB3"
Make 8 Knees "16K5"
45'-0" c-c Bents
Pg #4730

CONTR. NO. #7374-B SHEET #17 OF 20

PAINT: SHOP COAT:

1st FIELD COAT: See Sh #2

2nd FIELD COAT:

Use templets from #7374-B7

HOLES 13/16" UNLESS NOTED 6 c centers Flgs. 7" - 8" G

EDGE 1 1/2" UNLESS NOTED for 7/8" rivets - 1 1/4" for 3/4" rivets

center to center distances are shown, without drgs. The 1/16" drag was taken out of the distance from the first hole to the wip on the plates on the verticals similar to the way you corrected the "East Approach"

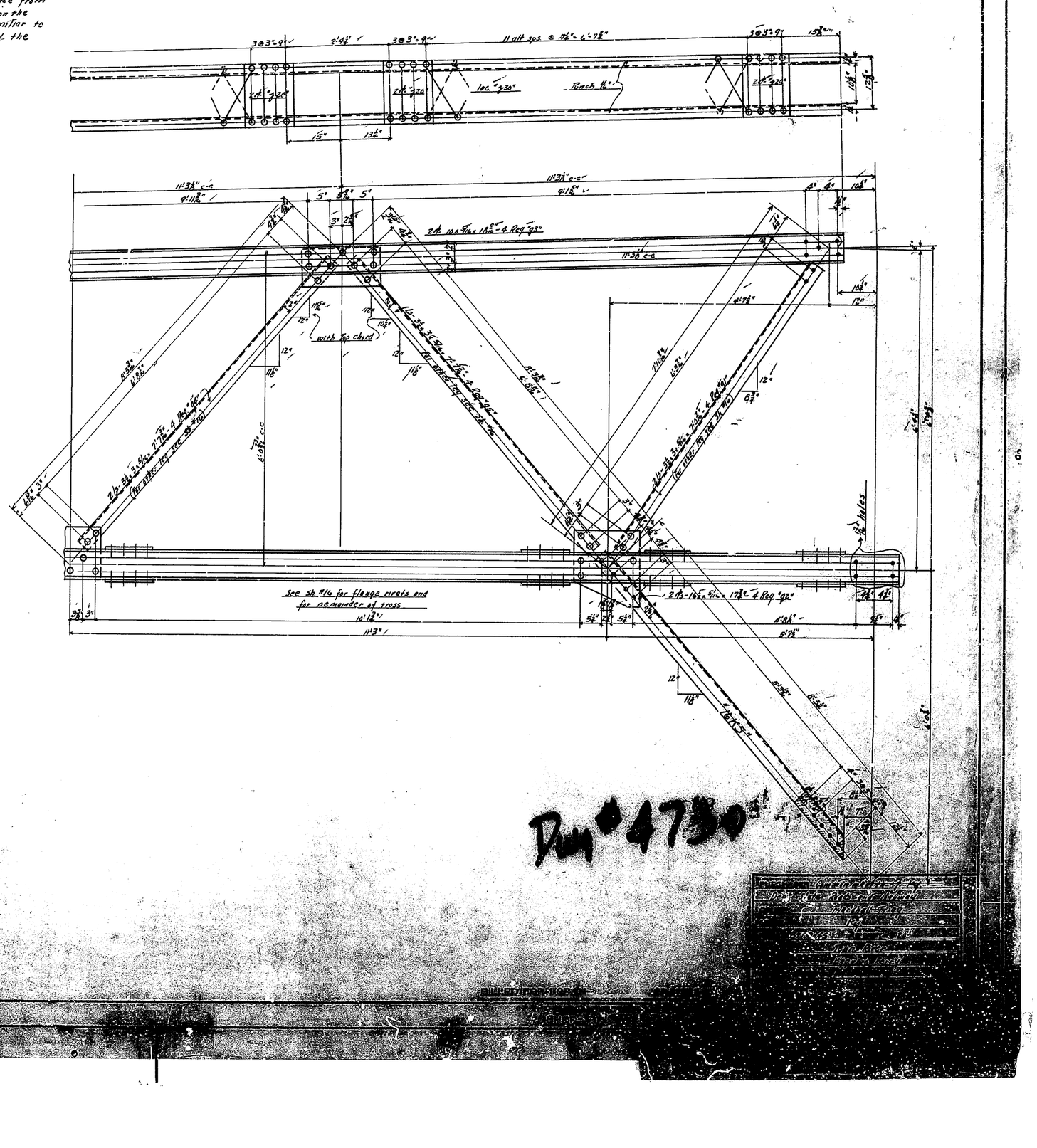
"Diagonal" c-c

25'-7 7/8"	17D1	10 3/8"	27'-11 1/4"	4 1/2"
24'-6"	17D2	11 1/16"	26'-10 3/8"	5 3/8"
24'-7"	17D3	5 1/8"	26'-10 3/8"	10 1/2"
24'-7"	17D4	10 1/2"	26'-10 3/8"	5 1/8"
23'-5 7/8"	17D5	11 1/2"	25'-11 3/8"	5 3/8"
23'-8 3/8"	17D6	4 7/16"	25'-11 3/8"	10 1/4"
23'-6 3/8"	17D7	10 5/16"	25'-11 3/8"	4 1/2"
22'-6 3/8"	17D8	12"	25'-11 3/8"	6 3/8"
22'-10 3/8"	17D9	4 3/8"	25'-11 3/8"	9 7/8"
22'-9"	17D10	9 3/8"	25'-11 3/8"	6 3/8"
21'-7 1/4"	17D11	14 1/16"	24'-11 5/8"	6 3/8"
21'-11 3/8"	17D12	6 3/8"	24'-11 5/8"	9 3/8"
21'-11 3/8"	17D13	9 3/8"	24'-11 5/8"	6 3/8"
20'-7 3/8"	17D14	17"	23'-6 3/8"	7 1/2"
21'-3 1/4"	17D15	3" 3" 11 1/4" 7 3/8"	23'-6 3/8"	9 1/2"

2 l's - 9 x 3 x 9/16 x

26'-10 3/8"	4 Reg	8	17D1	(2 Pieces)
25'-9"	8 "	"	17D2	(4 ")
25'-10"	4 "	"	17D3	(2 ")
25'-10"	4 "	"	17D4	(2 ")
24'-8 3/8"	8 "	"	17D5	(4 ")
24'-11 3/8"	4 "	"	17D6	(2 ")
24'-11 3/8"	4 "	"	17D7	(2 ")
23'-9 3/8"	8 "	"	17D8	(4 ")
24'-1 3/8"	4 "	"	17D9	(2 ")
24'-0"	4 "	"	17D10	(2 ")
22'-10 3/8"	8 "	"	17D11	(4 ")
23'-2 3/8"	4 "	"	17D12	(2 ")
23'-2 3/8"	4 "	"	17D13	(2 ")
21'-10 3/8"	8 "	"	17D14	(4 ")
22'-6 3/8"	4 "	"	17D15	(2 ")

8 Spc @ 2'-10 3/8" =	23'-0"	2'-10 3/8"	6" on 17D1
8 " " 2'-9" =	22'-0"	2'-9"	" 17D2
8 " " 2'-9" =	22'-0"	2'-10"	" 17D3
8 " " 2'-9" =	22'-0"	2'-10"	" 17D4
7 " " 3'-0" =	21'-0"	2'-8 3/8"	" 17D5
7 " " 3'-0" =	21'-0"	2'-11 3/8"	" 17D6
7 " " 3'-0" =	21'-0"	2'-11 3/8"	" 17D7
7 " " 2'-11" =	20'-5"	2'-9 3/8"	" 17D8
7 " " 3'-0" =	21'-0"	2'-11 3/8"	" 17D9
7 " " 3'-0" =	21'-0"	2'-0"	" 17D10
7 " " 2'-9" =	19'-3"	2'-7 3/8"	" 17D11
7 " " 3'-0" =	21'-0"	1'-2 3/8"	" 17D12
7 " " 3'-0" =	21'-0"	1'-2 3/8"	" 17D13
6 " " 3'-0" =	18'-0"	2'-10 3/8"	" 17D14
7 " " 2'-6" =	18'-6"	2'-6 3/8"	" 17D15



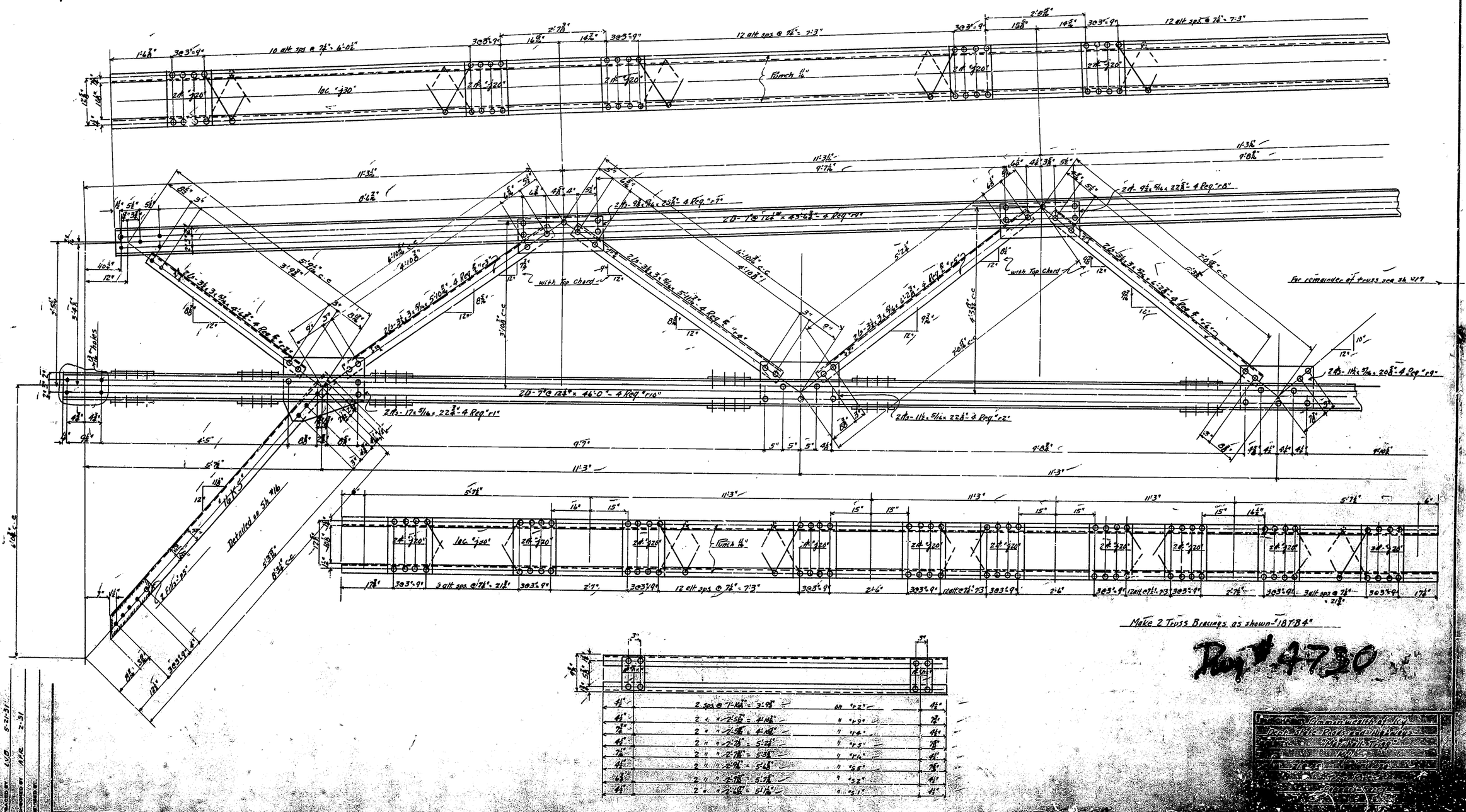
CONTR. NO. #7374-#8 SHEET #18 OF 20

PAINT: SHOP COAT:
1ST FIELD COAT: See Sh #2
2ND FIELD COAT:

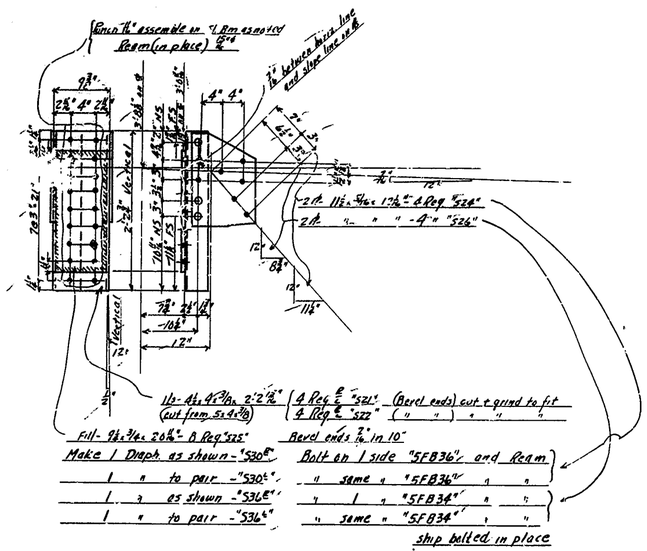
Use templets from #7374-#7

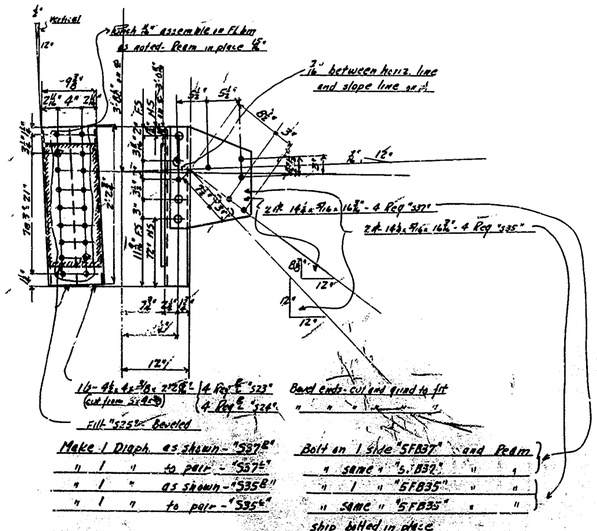
HOLES 15/16" UNLESS NOTED except in flys 7'-8" E

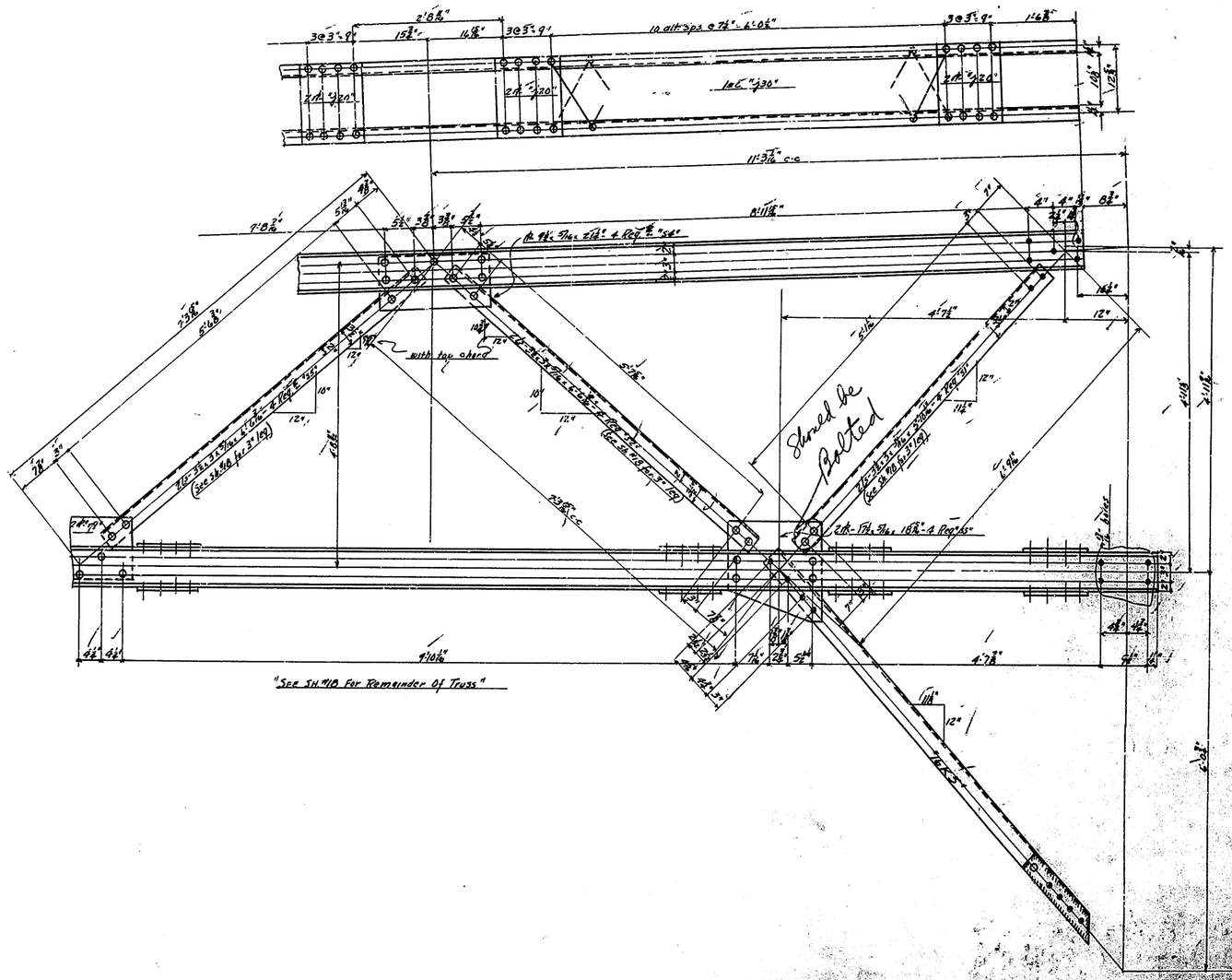
EDGE 1 1/2" UNLESS NOTED For 7/8" rivets - 1 1/4 for 3/4" rivets



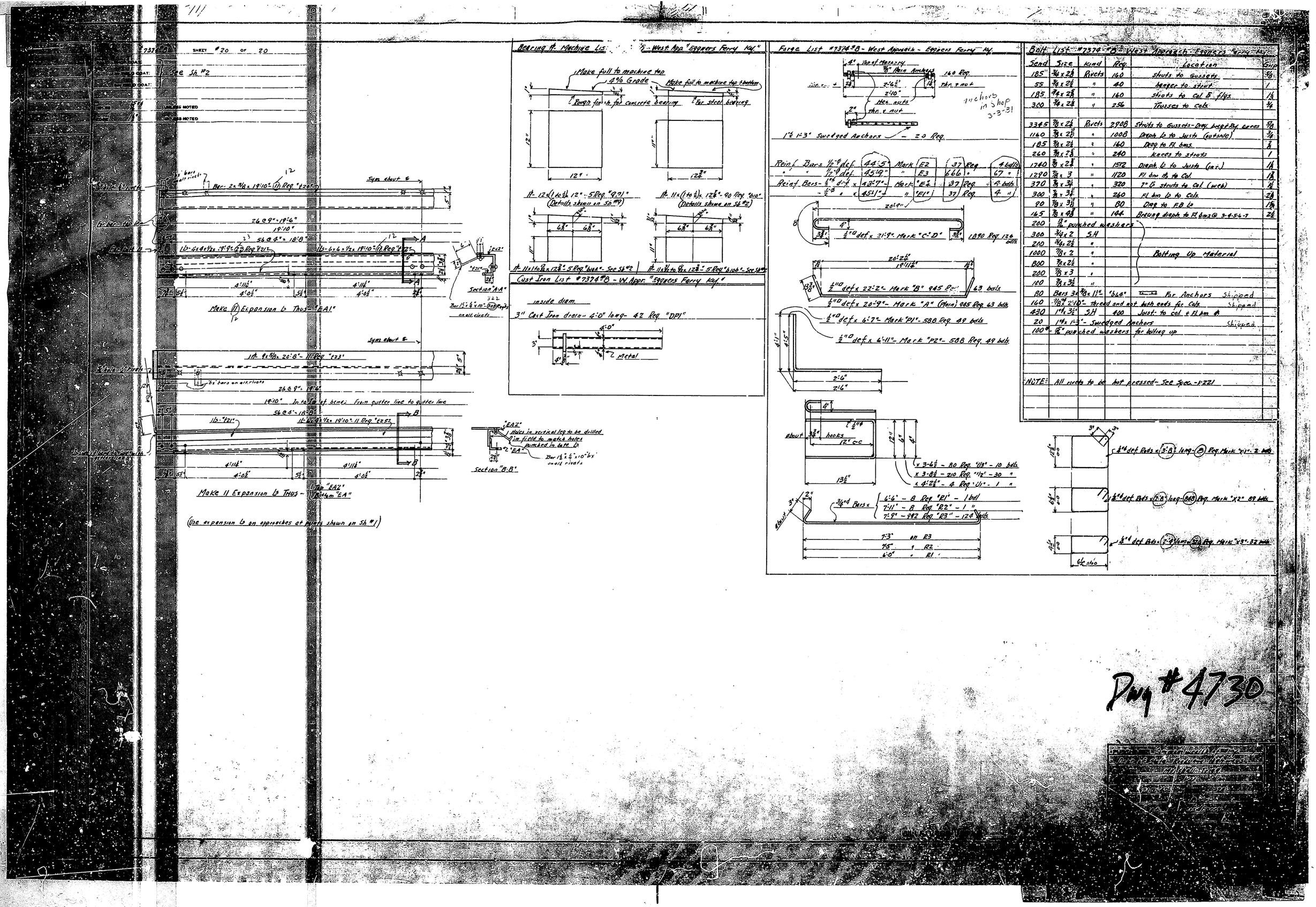
CONTR. NO.	#7374 #B	SHEET #19	OF 20
PAINT: SHOP COAT:			
1st FIELD COAT:	See Sh. #2		
2nd FIELD COAT:			
	Use templets from #7374 #7		
HOLES	15/16" ϕ	UNLESS NOTED	except in flgs. 7" B" [
EDGE	1½"	UNLESS NOTED	For 7/8" rivets - 1¼" for ¾" rivets







Req #4730



#7374-B SHEET #20 OF 20
See Sh. #2
Make 11 Expansion Ls Thus - "EA1"
Make 11 Expansion Ls Thus - Top "EA2" Bottom "EA"
(Use expansion Ls on approaches at points shown on Sh. #1)
Section "A-A"
Section "B-B"
Bearing Pl. Machine List - West App. "Eggners Ferry Ky."
Make full to machine top
4% Grade
Rough finish for concrete bearing
For steel bearing
Cast Iron List #7374-B - W. Appr. "Eggners Ferry Ky."
inside diam.
3" Cast Iron drain - 4'-0" long - 42 Req. "DP1"
Metal
Forge List #7374-B - West Approach - Eggners Ferry Ky.
Top of Masonry
Hex. nuts
Anchors in Shop 3-3-31
1" x 1'-3" Swedged Anchors - 20 Req.
Reinf. Bars 1/2" ϕ def. 44'-5" Mark E2 37 Req. 4 bdls
Reinf. Bars - 1/2" ϕ def. 43'-7" Mark "E4" 37 Req. 4 bdls
1/2" ϕ def. x 21'-9" Mark "C"-"D" 1890 Req. 126 bdls
1/2" ϕ def. x 22'-2" - Mark "B" 945 Req. 63 bdls
1/2" ϕ def. x 20'-9" - Mark "A" (Plain) 945 Req. 63 bdls
1/2" ϕ def. x 6'-7" - Mark "P1" - 588 Req. 49 bdls
1/2" ϕ def. x 6'-11" - Mark "P2" - 588 Req. 49 bdls
about 3 3/4" hooks
3/4" ϕ Bars x 6'-6" - 8 Req. "R1" - 1 bdl
7'-11" - 8 Req. "R2" - 1 "
7'-9" - 992 Req. "R3" - 124 bdls
7'-3" on R3
7'-5" " R2
6'-0" " R1
Bolt List #7374-B - West Approach - Eggners Ferry Ky.
Send | Size | Kind | Req. | Location | Grip
185 | 3/4 x 2 1/8 | Rivets | 160 | Struts to Gussets | 5/8
55 | 3/4 x 2 1/2 | " | 40 | hanger to strut | 1
185 | 3/4 x 2 5/8 | " | 160 | Struts to Col. & flgs. | 1 1/8
300 | 3/4 x 2 1/4 | " | 256 | Trusses to Cols. | 3/4
3345 | 7/8 x 2 1/4 | Rivets | 2908 | Struts to Gussets - Diag. brgs & Pg. knees | 5/8
1160 | 7/8 x 2 1/8 | " | 1008 | Diaph. Ls to Joists (outside) | 3/4
185 | 7/8 x 2 1/2 | " | 160 | Diag. to Fl. bms. | 7/8
260 | 7/8 x 2 5/8 | " | 240 | knees to struts | 1
1740 | 7/8 x 2 3/4 | " | 1512 | Diaph. Ls to Joists (int.) | 1 1/8
1290 | 7/8 x 3 | " | 1120 | Fl. bm. Ls to Col. | 1 3/8
370 | 7/8 x 3 1/4 | " | 320 | 7" Ls struts to Col. (web) | 1 1/2
300 | 7/8 x 3 1/4 | " | 260 | Fl. bm. Ls to Cols. | 2 1/8
90 | 7/8 x 3 1/2 | " | 80 | Diag. to F.B. Ls | 1 5/8
165 | 7/8 x 4 3/8 | " | 144 | Bracing diaph. to Fl. bms @ 3-4-5-6-7 | 2 1/2
200 | 13/16" punched washers
300 | 3/4 x 2 | S.H.
200 | 3/4 x 2 1/2 | "
1000 | 7/8 x 2 | "
800 | 7/8 x 2 1/2 | "
200 | 7/8 x 3 | "
100 | 7/8 x 3 1/2 | "
Bolting Up Material
80 | Bars 3 x 3/8 x 11" - "b64" | For Anchors | Shipped
160 | 7/8" x 2'-10" - thread and not both ends for Cols. | Shipped
430 | 1" ϕ x 3 1/2" | S.H. | 400 | Joist - to col. & Fl. bm. | Shipped
20 | 1" ϕ x 1'-3" - Swedged Anchors
100 | 5/16" punched washers for bolting up
NOTE: All rivets to be hot pressed - See Spec. - P.221
1/4" ϕ def. Rods x 3'-8" long - 8 Req. Mark "X1" - 2 bdls
1/4" ϕ def. Rods x 2'-8" long - 848 Req. Mark "X2" - 89 bdls
1/4" ϕ def. Rods x 2'-4" long - 320 Req. Mark "X3" - 32 bdls

Dwg #4730

CONTR. NO. 47374-42-03-44 SHEET 41 OF 15

PAINT: SHOP COAT: ✓

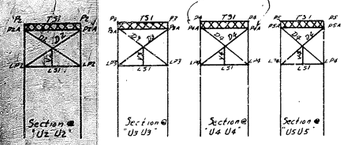
1st FIELD COAT: ✓

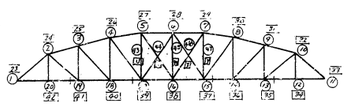
2nd FIELD COAT: ✓

HOLES ✓ UNLESS NOTED

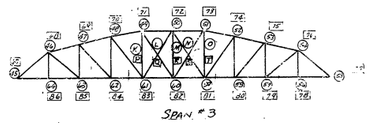
EDGE ✓ UNLESS NOTED

Erector: Remove vertical bearings from "P8A" to rivet for fit to "T5I"





SPAN #4



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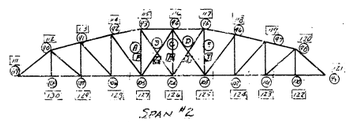
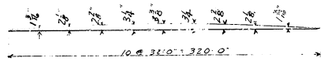


SPAN #2

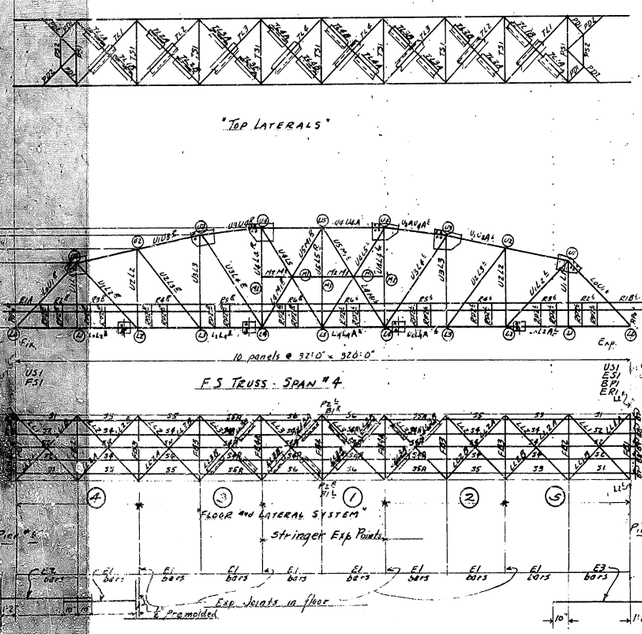
"MATCH MARKING DIAGRAM"

Figures in Circles for N.S. Truss

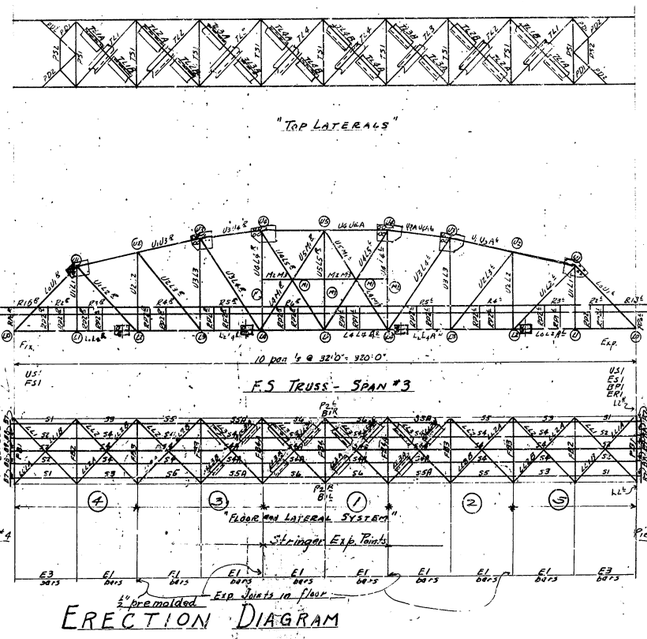
Figures in Squares for F.S. Truss



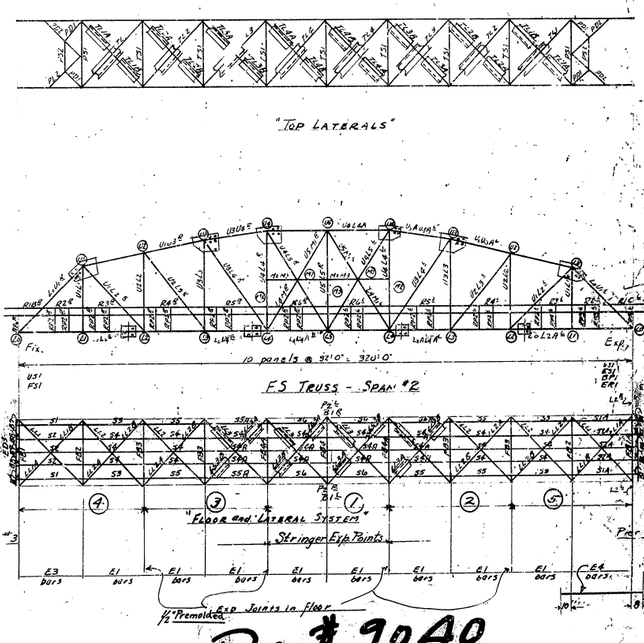
"Camber Blocking Diagram"



"TOP LATERALS"



"TOP LATERALS"



"TOP LATERALS"

ERECTION DIAGRAM

FOR

320' SPANS

Paving note - Cover top flg of FI Bms with light tar paper at panel point "L4" to prevent bond of slab to flange. Pour slab Sections in order shown ① to ⑥

Dwg # 9040

PURCHASER	Commonwealth Of Kentucky
COUNTY	Marshall and Trigg
STATE	Kentucky
SPANS	320'-0" ROWY 20'-0"
OVER	Tennessee River
NEAR	Eggners Ferry
STA. NO.	
PROJ.	SEC.

BILLED FOR 1 SPAN MEANS REQ.

CHAS. "VINCENT" KING BRIDGE CO. CONTRACT NO.

CONTR. NO. # 7374 "2-3-4" SHEET 2 OF 15

PAINT: SHOP COAT: Red Lead (Ky. Std.)

1st FIELD COAT: White

2nd FIELD COAT: "

HOLES 15/16" ø UNLESS NOTED

EDGE 1/2" UNLESS NOTED

Permanent Field Bolts See Sht 6

1 HIP CAP - 7/8" x 23" - 4 Req. "a1" (bolt on)

Cov. PL - 23 x 4 1/2 x 42' - 88 - 4 Req. "a1"

LL - 4 1/2 x 4 1/2 x 4'-4 1/4" - 8 Req. "a20"

LL - 4 1/2 x 4 1/2 x 12'-4 3/4" - 8 Req. "a19"

Bend Line on Cover PL's

43 : 10 3/32 c-c

Fill - 4 1/8 x 3 1/2" - 4 Req. "a16"

Fill - 4 1/8 x 2'-5 1/2" - 4 Req. "a20"

2 Fills - 4 1/2 x 9 1/2" - 8 Req. "a19" spot weld to hold in place.

Punch 11/16" Ream 13/16"

W. Mill

11 alt @ 1'-2 1/2" = 21'0"

2 Fills 4 1/2 x 1'-9" - 8 Req. "a20"

Punch 11/16" Ream 13/16"

2 Pls. - 20 x 1/2 x 43 - 3/16 - 8 Req. "a4"

2 L's - 4 x 4 x 1/2 x 42 - 11/16 - 8 Req. "a13"

2 L's - 6 x 6 x 3/4 x 41 - 11/16 - 4 Req. "a15" N.S. / 4 Req. "a16" F.S.

2 Spl. Pls. - 28 1/2 x 3/16 x 5'-6 3/4" - 8 Req. "a20"

2 Guss. Pls. - 52 x 3/16 x 5'-4 3/4" - 8 Req. "a21" - Bolt on

Ship Drafts 2 1/2 x 6" Bolted here from Sht #3

1 PL - 21 x 7/16 x 2'-10 3/4" - 4 Req. "a15"

Use 5/8" Ring Fills When Necessary 4 @ 3" c-c

15/16" ø Holes

2 L's - 6 x 3 1/2 x 3/8 x 2'-5 3/8" - 8 Req. "a11"

1 PL - 10 1/2 x 7/16 x 2'-5 7/16" - 4 Req. "a12" Bolt

Lacing - 3 1/2 x 2'-9 15/16" c-c - 3'-0 15/16" o-o - 112 Req. "a17"

Lacing - 3 x 3 x 5/16 x 1'-6" - 4 Req. "a18"

1 PL - 21 x 7/16 x 2'-2 3/4" - 213

1 PL - 6 x 5/16 x 2'-0 3/4" - 4 Req. "a22" (Bolt on)

MAKE 2 BATTER POSTS THUS - "L0U1R"

MAKE 2 BATTER POSTS TO PAIR "L0U1L"

4 L's - 3 x 3 x 5/16 x 12" - 208 Req. "a26"

1 PL - 13 x 5/16 x 12" - 52 Req. "a27"

2 Pls - 10 x 5/8 x 40'-9 31/32" - 8 Req. "X12" (not included in pay weight) see Sh #2A for complete detail of this pl't & Cv's.

2 L's - 6 x 3 1/2 x 7/16 x 1'-3 3/4" - 8 Req. "a28" (5/8 sq. in. 7 leg)

Typical spacing between diagls.

Chip 1" in 1"

Bevel both Ends

Strip flange 1/4" to 1 1/2" for clear Web & 3/8" Gusset

2 Pls - 12" @ 30" - 40 - 9 31/32" - 8 Req. "a25"

MAKE 2 DIAGS. THUS - "U1L2R"

MAKE 2 DIAGS. TO PAIR "U1L2L"

All main field connections to be sub-punched, reamed and match marked while assembled.

Dwg # 7140

MAKE 2 HIP VERTICALS THUS - "U1L1R"

" 2 " " TO PAIR "U1L1L"

PURCHASER: COMMONWEALTH OF KENTUCKY

COUNTY: MARSHALL and TRIGG

STATE: KENTUCKY

SPAN: 320'-0" R'DWY: 20'-0"

OVER: TENNESSEE RIVER & EMBANKMENT

ON:

STA. NO.:

BILLED FOR 1 SPAN: Three SPANS REQ.

DESIGNED UNDER SPECIFICATIONS OF 1944

CONTR NO. #7374-#2-#3-#4 SHEET # 3 OF 15

PAINT: SHOP COAT:
1st FIELD COAT: SEE SH #2
2nd FIELD COAT:

HOLES 13/16" UNLESS NOTED
EDGE 1/2" UNLESS NOTED

COV PL 23 x 1/2 x 65'-11 1/2" - 4 Req'd "b1"

Fill. 9 3/8 x 22 1/2" - 4 Req'd "b2"

Fill. 9 3/8 x 4'-0" - 4 Req'd "b3"

Fill 9 3/8 x 11 1/2" - 16 Req'd "b4"

Mill on this end

2L - 4 x 4 x 7/16 x 2'-10 1/2" - 8 Req'd E "b5"

32'-9 7/8" c-c

92'-4 5/8" c-c

Punch 11/16 Ream 15/16

16 @ 3" = 4'-0"
3 1/2" 9" 4" 4 5/8"
50 @ 6" = 25'-0"
4 1/2" 52 @ 3" = 15" 4 1/2" 3" 52 @ 3" = 15" 3" 4 1/2"
52 @ 6" = 26'-0"
5" 4" 4" 3 1/2" 3 1/2"
10 @ 3" = 2'-6"
3" 3 1/2" 4"

16 alt @ 1 1/2" = 2'-0"
8 @ 3" = 2'-0"
3 @ 4" = 12" 5 5/8"
52 @ 6" = 26'-0"
9" 3" 4 1/2"
5 @ 3"
5"
54 @ 6" = 27'-0"
3 @ 4" = 12" 3 1/2"
8 @ 3" = 2'-0"
6 alt @ 1 1/2" = 9" 4 1/2" 2"

U1 U2 U3

2 Web Plts - 10" x 3/8" x 31'-0 1/2" - 8 Req'd - "X14a"
(not included in pay weight)

25ph Plt - 10" x 3/8" x 1'-9 1/2" - 8 Req'd - "X14a"

Mill 10" x 3/8" Plts.

26 - 4 x 4 x 7/16 x 65'-10 1/2" - 8 Req'd E "b6"

2 Web Plts - 10" x 3/8" x 32'-8 3/8" - 8 Req'd - "X14b"
(not included in pay weight)

Z.R. 20 5/16 x 65'-10 1/2" - 8 Req'd "b7"

3" 14 alt @ 1 1/2" = 21" 5 alt @ 3" = 15" 46 alt @ 4 1/2" = 25'-6" 3"

70 alt @ 4 1/2" = 26'-3"

3 1/2" 7 alt @ 3" = 21" 14 alt @ 1 1/2" = 21" 3"

2 Plts - 20 1/2 x 1/2 x 3'-0 1/2" - 8 Req'd "b10"

2L - 6 x 3 1/2 x 7/16 x 2'-4 1/2" - 8 Req'd E "b11"
4 x 10 x 7/16 x 2'-4 1/2" - 4 Req'd "b12"
Bolt to ship
Between Gussets @ U1 sh #2.

MAKE 1 TOP CHORDS THUS - "U1 U3 E"
" 1 " " TO PAIR - "U1 U3 E"
" 1 " " THUS - "U1 U3A E"
" 1 " " TO PAIR - "U1 U3A L"

26 - 6 x 6 x 3/4 x 65'-4 3/8" - 4 Req'd E "b8" NS
4 Req'd E "b9" FS

Note: Bolt Gussets and Splice Plates here on U1 U3 A L Feb Span 2 & 3
Bolt Gussets and splice Plts here on U1 U3 Ext Span 4

use 4" ring fills where necessary

Lacing - 3 x 4 x 1/2 x 2'-9 3/8" c-c 3'-0 7/8" - 384 Req'd "b13"

Punch 11/16 Ream 15/16

8 @ 3" = 2'-0"
3"
2 1/2" 5 alt @ 3" = 15"
2 1/2" 3" 5 alt @ 3" = 15" 3" 7 1/2"
2 1/2" 3" 2 1/2" 2 1/2"
6" 7 alt @ 3" = 21" 3"

1 Ht "a13"

5 1/2" 3 alt @ 3" = 9"
22 1/2"
6 alt @ 3" = 18"
5 1/2"
12 @ 23 3/8" = 23'-9"
4 1/2"
6 alt @ 3" = 18"
2 1/2"
2'-0"
7 1/2"
18"
3 alt @ 3" = 9"

49'-1 1/2" c-c

14 1/2" 4 @ 3" = 12" 14 1/2"
14 @ 3'-0" = 42'-0"
8 1/2" 4 @ 3" = 12" 20 1/2"

4 L's - 3 x 3 x 5/16 x 10'-3 1/2" Req'd "b15"
1 Pl - 13 x 5/16 x 10'-4 1/2" Req'd "b15"

clip ears
15/16" holes NS

2 G - 10" @ 20" x 9'-4 5/8" - 8 Req'd E "b14"

MAKE 2 DIAGS THUS - "U2 L3 E"
" 2 " TO PAIR - "U2 L3 L"

16 - 7 x 3 1/2 x 7/16 x 8 1/2" - 8 Req'd E "b17"
(3 holes in 7" leg)

5'-9 7/8"

2'-8 11/16"
7'-0 3/4"

54'-9 1/2" c-c

19" 4 @ 3" = 12" 14 1/2"
15 @ 3'-0" = 45'-0"
2'-11"
6 1/2" 4 @ 3" = 12" 18 1/2"

4 L's - 3 x 3 x 5/16 x 9'-3" Req'd "b20"
1 Pl - 13 x 5/16 x 9'-3" Req'd "b21"

15/16" holes NS

4 L's - b20
1 Pl - b21

clip flange both sides

2 E - 9" @ 15" x 52'-0" - 8 Req'd E "b19"

MAKE 2 DIAGS THUS - "U3 L4 R"
" 2 " TO PAIR - "U3 L4 L"

16 - 7 x 3 1/2 x 7/16 x 6 1/2" - 8 Req'd E "b18"
(5 holes in 7" leg)

5'-6 3/8"

2'-6 3/8"
7'-2 1/2"

All main field connections punched & reamed 15/16" and match-marked while assembled.

PURCHASER
Commonwealth Of Kentucky
COUNTY Marshall 44 To 199
STATE Kentucky
SPANS 320' ROWD 30'0"
OVER Tennessee River
ON AT Eggners Ferry
SKEW
CURVE RAD.

BILLED FOR 1 SPAN 3 SPANS REQ.

SHOP - VINCENNES BRIDGE

Dwg #9040

CONTR. NO. #7376 - #2.#3-#4 SHEET #4 OF 15

PAINT: SHOP COAT:
1st FIELD COAT: SEE SH # 2
2nd FIELD COAT:

HOLES 13/16" UNLESS NOTED
EDGE 1" UNLESS NOTED

Cov Pl 23"x 1/2" x 32'-3 1/2" - 4 Req "C9"

13 Spl Pls-11"x 3/8" x 2'-6 5/8" - 4 Req "C11"
1 Pl - 23" x 3/8" x 2'-6 5/8" - 4 Req "C12"
Bolt

Fill "B4"

11@ 3"= 2'-9"

2 Web Plts - 10"x 5/8" x 32'-3" - 8 Req - x14" (not included in pay weight)

Punch 11/16" Ream 15/16"

MILL - 15/16" in 20½"

32'-2 7/8" c-c

10 @ 3"= 2'-6"

8 @ 3"= 2'-0"

3@4"=12" 4½"

45 alt @ 6"= 22'-6"

2 L - 4"x 6"x 7/16" x 32'-3 1/2" - 8 Req "C13"

2 Fills - 4½" x 5/16" x 32'-3½" - 8 Req "C14"
spot weld to hold in place

10 alt @ 1½"=15"

2 Pl - 26½" x 1/2" x 32'-3½" - 8 Req "C15"

2 Fills - 3½" x 5/8" x 23½" - 8 Req "X16"

2 Spl Pls - 11½" x 3/16" x 2'-6 5/8" - 8 Req "C10" bolted on

2 Guss Pls - 37" x 7/16" x 3'-3½" - 8 Req "C18" bolted on

2 Fills - 4½" x 5/16" x 32'-3½" - 8 Req "C17" spot weld to hold in place

Note:- Leave Gussets and Splice Plts off on U3AU4AE on span L&3
Leave Gussets and splice plts off on U3U4E on Span 4

Note Erector
Drive these before putting on web plate

2 Pl - 40"x 7/16" x 3'-3½" - 8 Req "C22" bolt on

2 L - 6"x 6"x 3/4" x 32'-1½" - 8 Req "C23" bolt on

4 Req "C14" FS
4 Req "C15" NS

2 Pl - 17 3/8" x 7/16" x 2'-1" - 8 Req "C23" bolt on

Punch 11/16" Ream 15/16"

1 Pl 6"x 3/4" x 2'-1½" - 4 Req "C20" Bolt to ship

Make 1 Top Chord Thus & As Noted "U3U4E"
" " To Pair " " " - U3U4"
" 1 " Thus → ← - U3AU4AE"
" " To Pair " " " - U3AU4A"

Lacing "B13"

1 Pl - 6"x 7/16" x 2'-1½" - 4 Req "C21" Bolt to ship

Cov Pl 23"x 1/2" x 64'-1½" - 2 Req "C1"

Fill - 11"x 3/8" x 2'-0 5/8" - 4 Req "C3" (Underneath Cov Pl)

1½" on Cov Pl

11@ 3"= 2'-9"

51@ 6"= 25'-6"

Fill - 4"x 3/8" x 4'-3" - 2 Req "C2"

32'-0 5/8" c-c

2 Web Plts - 10"x 5/8" x 32'-0 15/16" - 8 Req - x18"
(not included in pay weight)

2 Spl Pls - 10"x 5/8" x 2'-1" - 4 Req "x18" a
(not included in pay weight)

2 L - 4"x 4"x 7/16" x 64'-1 5/8" - 4 Req "C4"

2 Pl - 26"x 1/2" x 64'-1½" - 4 Req "C5"

70 alt @ 4½"= 26'-3"

2 Pl - 31 3/8" x 7/16" x 2'-9" - 4 Req "C8"

Note:- Bolt Gussets and Splice Plts on this end only on Span 2&3
Bolt Gussets and Splice Plts on other end on span 4

2 L - 6"x 6"x 3/4" x 63'-11 5/8" - 2 Req "C6" NS
2 Req "C7" FS

Mill - 16" x 5/8" Web Plts

2 Fills - 3½" x 5/8" x 2'-1 5/8" - 8 Req - x17"

Punch 11/16" Ream 15/16"

1 Pl 6"x 3/4" x 2'-1½" - 4 Req "C19" Bolt to ship

Lacing "B13"

MAKE 2 TOP CHORDS THUS - "U4 U4A"

Dwg # 9040

57'-0" c-c

8 @ 2'-10"= 22'-8"

4 L - 3"x 3"x 7/16" x 9'- "B20"
1 Pl - 13"x 7/16" x 9'- "B21"

2 B - 7/8" x 15" x 54'-10" - 8 Req "C22"

MAKE 2 DIAGS THUS - "U4L5"
" 2 " TO PAIR - "U4L5"

2 Pl - 22½" x 9/16" x 2'-7 5/8" - 8 Req "C21"

11 - 7/8" x 7/16" x 1'-6" - 8 Req "C20" (58 per in 7" leg)

28'-10½" c-c

4 L - 3"x 3"x 7/16" x 8" - 288 Req "C25"
1 Pl - 13"x 7/16" x 8" - 72 Req "C24"

4½" holes in NS of L4M1

clip 1"x 1½"

13½"

4'-7 3/8"

2'-3 13/16"

2'-5 5/8"

7'-0½"

15 - 7/8" x 7/16" x 6 1/16" - 8 Req "C22"
(5 3/8" pr in 7" leg)

MAKE 2 DIAGS THUS - "L4M1"
" 2 " TO PAIR - "L4M1"
" 2 " THUS - "U5M1"
" 2 " TO PAIR - "U5M1"

26 - 6"@ 13½" = 27'-1½"

8 Req "C23" on "L4M1"
8 Req "C24" on "U5M1"

Punch 11/16" Ream 15/16"

Note:- All main connections punched 11/16" reamed 15/16", matchmarked while assembled.

PURCHASER	
	Commonwealth Of Kentucky
COUNTY	Marshall and Trigg
STATE	Kentucky
SPANS	320' RDWY 20'
OVER	Tennessee River
AT	Eggners Ferry
STA. NO	
PROJ.	SECT.

BILLED FOR 1 SPAN 3 SPANS REQ.

ENGINEERS BRIDGE

CONTR. № #7374-#2-#3-#4 SHEET #5 OF 15

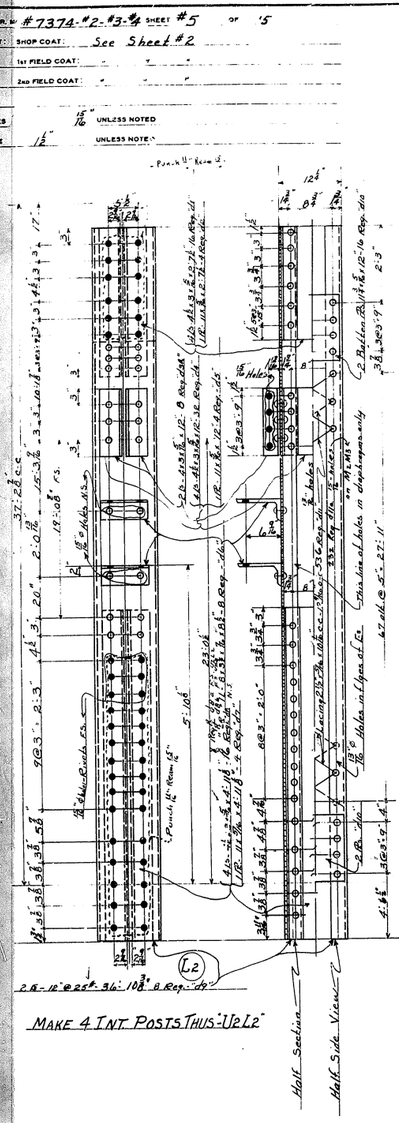
PAINT: SHOP COAT: See Sheet #2

1st FIELD COAT: " " "

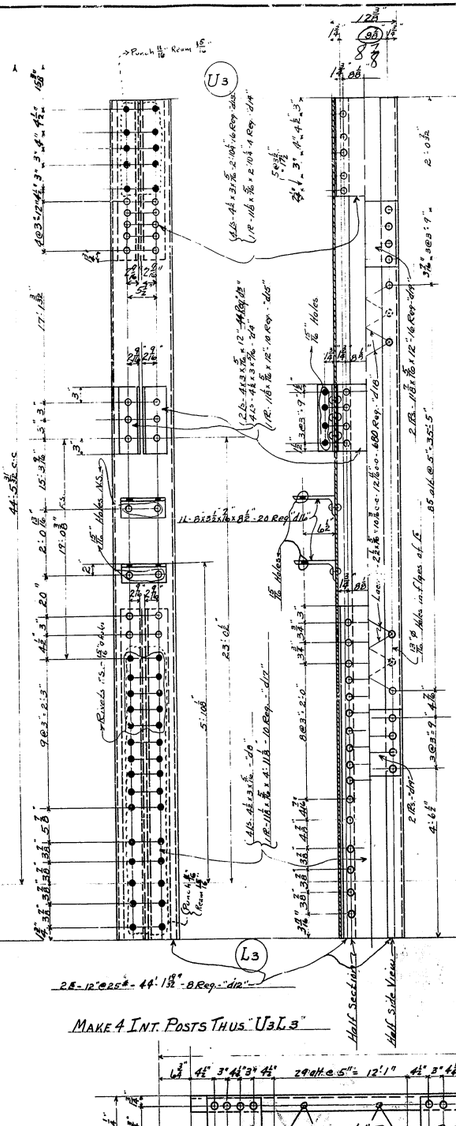
2nd FIELD COAT: " " "

HOLES 1/16" UNLESS NOTED

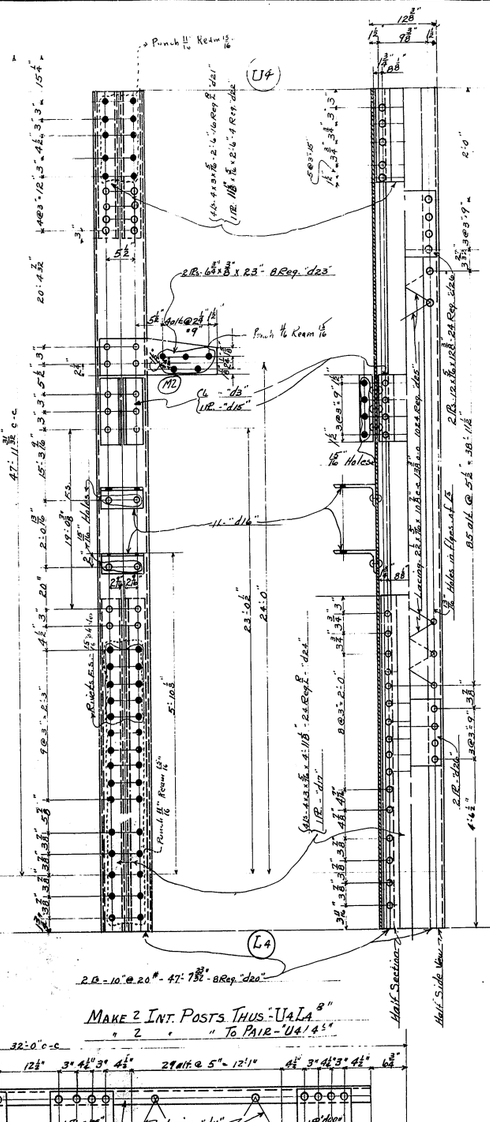
EDGE 1/2" UNLESS NOTED



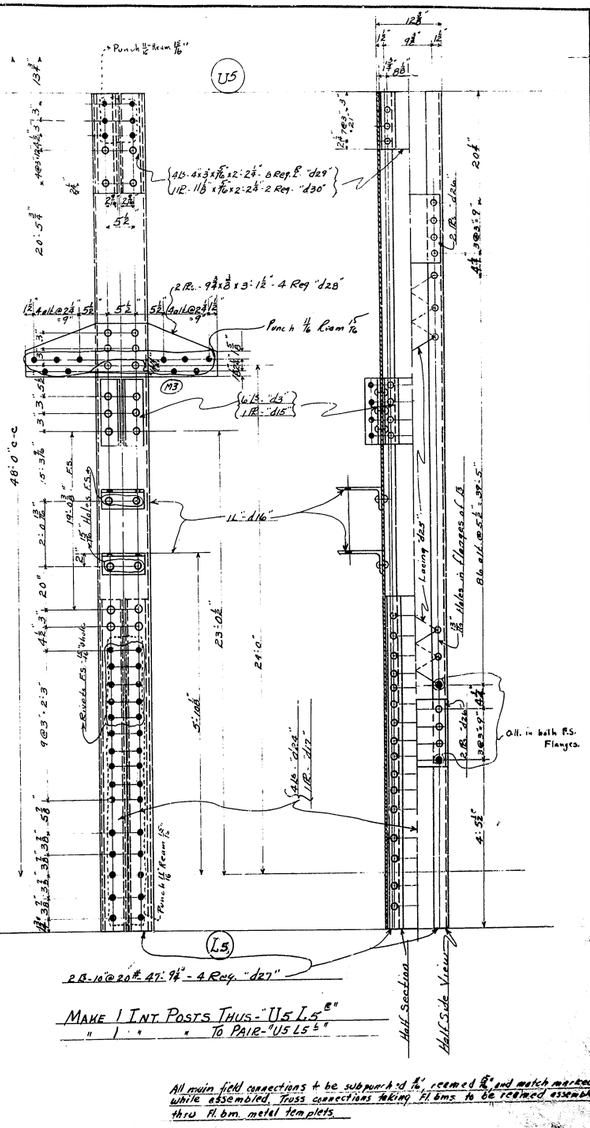
MAKE 4 INT. POSTS THUS-"U2L2"



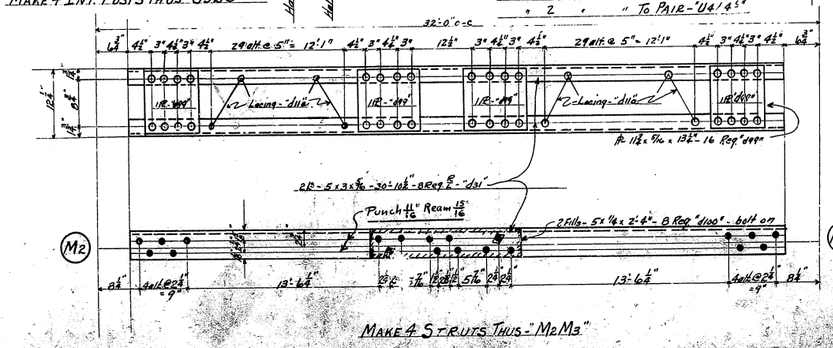
MAKE 4 INT. POSTS THUS "U3L3"



MAKE 2 INT. POSTS THUS-"U4L4" 8"
" 2 " " TO PAIR-"U4L4" 4"



MAKE 1 INT. POSTS THUS-"U5L5" 8"
" 1 " " TO PAIR-"U5L5" 4"



MAKE 4 STRUTS THUS-"M2M3"

All main field connections to be subpunched 11/16" reamed 15/16" and match marked while assembled. Truss connections taking Fl. bms. to be reamed assembled thru Fl. bm. metal templets.

Dwg # 9040

PURCHASER	COMMONWEALTH OF KENTUCKY
COUNTY	MARSHALL and TRIGG
STATE	KENTUCKY
SPAN	320'-0" R'DWY 20'-0"
OVER	Tennessee River & Eggners Ferry Road
ON	
STA. NO.	
PROJ.	SECT.

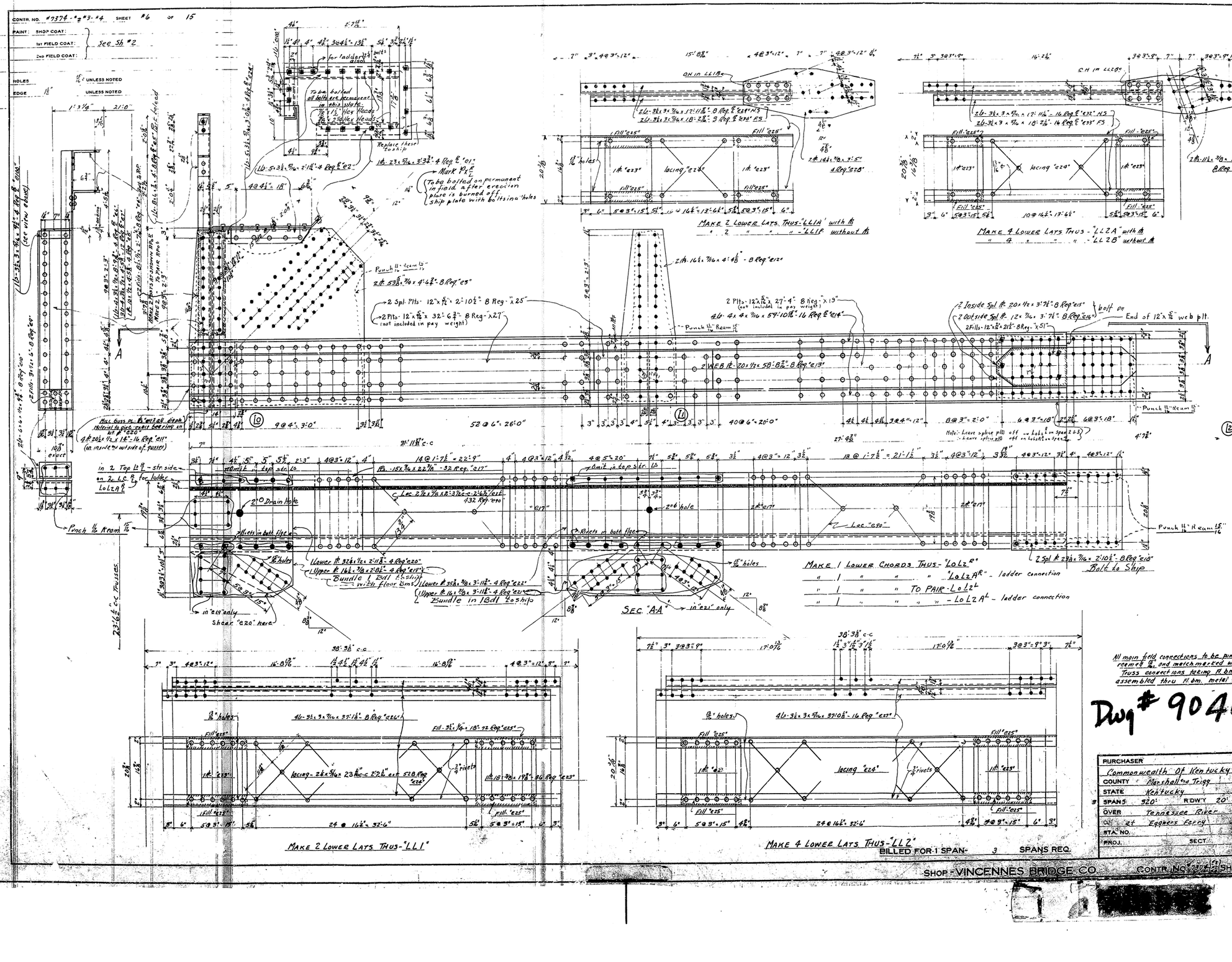
BILLED FOR 1 SPAN: 3 SPANS REQ.

SHOP-VINCENNES

CONTR. NO. #7376 - "2 #3 - #4 SHEET #6 OF 15

PAINT: SHOP COAT: } See Sh #2
1st FIELD COAT:
2nd FIELD COAT:

HOLES 13/16" UNLESS NOTED
EDGE 1" UNLESS NOTED



Lb - 5-3 1/2"x 5/16" x 2'-11 1/2" - 4 Req'd "E21"
Lb - 23"x 5/16" x 3'-3 3/8" - 4 Req'd "E19"
Mark Pl "L"
(To be bolted on permanent in field after erection plate is burned off ship plate with bolts in 1" holes

MAKE 1 LOWER CHORD3 THUS - "LoL2E"
" 1 " " " "LoL2AR" - ladder connection
" 1 " " TO PAIR - LoL2L
" 1 " " " " - LoL2AL - ladder connection

All main field connections to be punched 13/16" reamed 15/16" and match marked while assembled Truss connections facing FI bms to be reamed assembled thru FI bm. metal templet

Dwg # 9040

PURCHASER	Commonwealth Of Kentucky
COUNTY	Marshall and Trigg
STATE	Kentucky
SPANS	920' R'DW'Y 20'
OVER	Tennessee River
STA. NO.	at Eggners Ferry
PROJ.	SECT.

BILLED FOR 1 SPAN - 3 SPANS REQ.

SHOP - VINCENNES BRIDGE CO. CONTR. NO. 7376 SH. 6 OF

DESIGNED BY A.R.H. 10-30
DRAWN BY J.H. 11-30
TRACED BY J.W. 1-31
CHECKED BY A.R.H. 2-31
REVISED BY A.R.H. 9-31 - Mill Pln.

CONTR. NO. #7324 - #-3-4 SHEET #7 OF 15

PAINT: SHOP COAT:
1st FIELD COAT: } SEE SH #2
2nd FIELD COAT:

HOLES 13/16" UNLESS NOTED
EDGE 1/2" UNLESS NOTED

NS Pl. 37½"x 7/16" x 4'-4⅝" - 4 Req'd "f17"
FS Pl. 37½" x 7/16" x 3'-1⅛" - 4 Req'd "f18"

NS Pl. 36½" x 7/16" x 4'-4⅝" - 2 Req'd "f19"
FS Pl. 36½" x 7/16" x 3'-1⅛" 2 Req'd "f20"

2 Web Pls - 20" x 1/2" x 73'-10⅜" - 4 Req'd "f22"
2 WEB PL - 20" x 1/2" x 70'-7⅜" - 4 Req'd "f23"
2 Web Pls - 12" x 5/8" x 36'-11" - 8 Req'd "X20" (not included in pay weight)

2 Spl Pls 12" x 5/8" x 3'-10½" 4 Req'd "X21"

end of back web Pl.

Bolt Splice Pls on this end on Span 2&3
Bolt Splice Pls on other end on Span 4

Punch 11/16" Ream 15/16"

4 @ 3'-12"

2'-1⅝"

4'-11¼"

5@3'-15" = 15'-3"

6 @ 3'-3" = 18'-0"

4 @ 4" = 1'-4"

2½" 4½" 3½"

2'-5½"

5@6'-= 29'-0"

31'-11⅝" c-c

8@3'-0" = 24'-0"

Bar Flg.

Sym. about ℄ except as noted.

2 hole

Punch 11/16" Ream 15/16"

omit in top sta. 6

omit in top sta. 4

"f9" bottom

Top "f25"

Rivets in Bar Flgs.

Bat Pl 32⅝" x ⅜" x 3'-3" - 4 Req'd "f24"
Top Pl 12½" x ⅜" x 3'-3" - 4 Req'd "f25" bolt on
Bundle in Bdl

in "f25" only

"Top Flg."

3@4½"=14½"

3½"

6@3'-12" = 18'-0"

2'-2"

2'-6"

4@3'-0"=12'-0"

22½"

7½" 4½" 4½" 6" 3½"

MAKE 1 LOWER CHORDS THUS "L4L4A8"
" 1 " " TO PAIR-L4L4A8

SECTION "B-B"

Bottom Pl 32⅝" x ⅜" x 3'-3" - 2 Req'd "f10"
Top Pl - 12½" x ⅜" x 3'-3" - 2 Req'd "f11"
Bundle in Bdl

Top Stem Angle this side only

NS Pl. 42" x ½" x 4'-4⅝" - 4 Req'd "f2"
FS Pl. 42" x ½" x 3'-7⅞" - 4 Req'd "f3"

2 Bdls - 12" x ⅞" x 22'-8 Req'd "X30"
Note:- Bolt Splice Pls. here on L4L4A8 on Span 3
Bolt Spl Pls here on L4L4A8 on Span 4

End of 12" x ⅝" pl.

end of front web Pl.

4 @ 3'-21"

4L-4½ x 4" x 7/16 x 63'-7⅞" - 4 Req'd 2 "f16" bottom
2 WEB Pl - 20" x 9/16" x 64'-2⅛" - 8 Req'd "f15" (back web plate)
(2 WEB Pl - 20" x 7/16" x 61'-8⅛" - 8 Req'd "f14" (front web plate next to angle)
2 Web Pls - 12" x ⅝" x 36'-7" - 8 Req'd - "X20a" (not included in pay weight)

2 Spl Pls - 12" x ⅝" x 3'-5¾" - 8 Req'd "X26"
2 Web Pls - 12" x ⅝" x 2'-7'-0" - 8 Req'd "X24" (not included in pay weight)

NS Pl. 33½" x 7/16" x 4'-4⅝" - 4 Req'd "f4"
FS Pl. 33½" x 7/16" x 3'-1⅛" - 4 Req'd "f5"

end of front web Pl. end of back web Pl.

All main field connections to be punched & reamed 15/16" and match marked while assembled. Truss connections taking FL bms. connections to be reamed assembled thru FL bm. templet.

2 Inside Pl. 20" x 1/2" x 5'-0" - 8 Req'd "f7"
2 Outside Pl. 12" x 1/2" x 5'-0" - 8 Req'd "f8" bolt on

Punch 11/16" Ream 15/16"

2 Spl Pl. 23½" x 7/16" x 2'-10½" - 8 Req'd "f6" bolt on

Dwg # 9040

2 hole

Rivets in Bot. Flgs.

"f3" bottom

"f25" Top

Bat Pl 32⅝" x ⅜" x 3'-3" - 4 Req'd "f24"
Top Pl 15½" x ⅜" x 3'-9" - 4 Req'd "f11" (Bundle in Bdl To ship with Floor System)
Pl 15" x 7/16" x 23⅜" - 20 Req'd "f25"

"Top Flg."

in "f11" only

in "f3" only

3@4½"=17½"

11⅜"

6@3'-12" = 18'-0"

2'-3"

2'-7"

5@3'-0"=15'-0"

3½"

4@4½"=17½"

7½"

3@4½"=14½"

18"

33"

2'-9"

6@3'-0"=18'-0"

SECTION "A-A"

MAKE 1 LOWER CHORDS THUS "L2L4B"
" 1 " " TO PAIR "L2L4B"
" 1 " " THUS "L2L4A8"
" 1 " " TO PAIR "L2L4A8"

BILLED FOR 1 SPAN - 3 SPANS REQ.

PURCHASER	
	Commonwealth Of Kentucky
COUNTY	Marshall and Trigg
STATE	Kentucky
SPANS	320: R'DW'Y 20'
OVER	Tennessee River
	at Eggners Ferry RD
STA. NO.	
PROJ.	SECT.

SHOP - VINCENNES BRIDGE CO. CONTR. NO. #7324 - #-3-4 SH. 7 OF 15

CONTR. NO. #7374-42-83-41 SHEET 8 OF 15

PAINT: SHOP COAT: See Sheet #2

1st FIELD COAT: " " "

2nd FIELD COAT: " " "

HOLES 15/16" UNLESS NOTED

EDGE 1/2" UNLESS NOTED

MAKE 7 TOP STRUTS THUS "TS1"

MAKE 7 LOWER STRUTS THUS "LS1"

MAKE 2 VERTICAL STRUTS THUS "V2"
(In cross bracing at U2U2)

MAKE 2 VERTICAL STRUTS - "V3"
(In Cross-bracing at U3U3)

MAKE 3 VERTICAL STRUTS THUS "V4"
(In Cross bracing at U4U4 & U5U5)

Dwg # 9040

DRAWN BY A.F.E. 11-30

TRACED BY J.V.B. 11-30

CHECKED BY J.L.W. 2-31

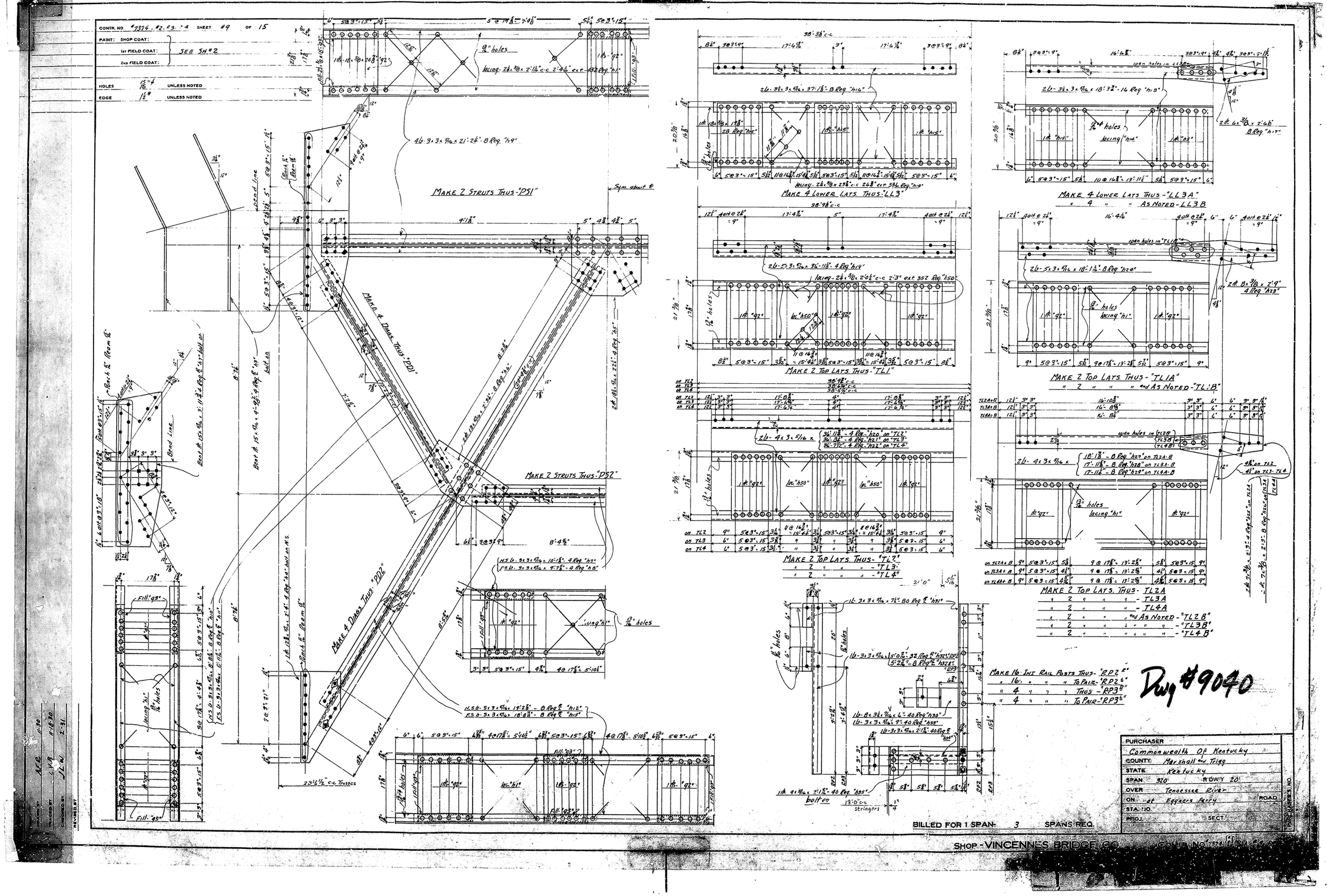
REVISED BY

PURCHASER	Commonwealth of Kentucky
COUNTY	Marshall and Trigg
STATE	Kentucky
SPAN	320'-0" RDWY 20'-0"
OVER	Tennessee River & Eggners Ferry
ON	ROAD
STA. NO.	
PROJ.	SECT.

PURCHASER'S NO.

BILLED FOR 1 SPAN: 3 SPANS REQ.

SHOP - VINCENNES BRIDGE CO.


CONTR. NO. #7374 - #2 - #3 - #4 SHEET #9 OF 15
PAINT: SHOP COAT:
1st FIELD COAT:
2nd FIELD COAT:
SEE SH #2
HOLES 15/16" UNLESS NOTED
EDGE 1 1/2" UNLESS NOTED
MAKE 2 STRUTS THUS "PS1"
MAKE 4 DIAGS. THUS "PD1"
MAKE 2 STRUTS THUS "PS2"
MAKE 4 DIAGS. THUS "PD2"
MAKE 4 LOWER LATS. THUS "LL3"
MAKE 4 LOWER LATS. THUS "LL3A"
" 4 " " AS NOTED - "LL3B"
MAKE 2 TOP LATS. THUS "TL1"
MAKE 2 TOP LATS. THUS - "TL1A"
" 2 " " " and AS NOTED - "TL1B"
MAKE 2 TOP LATS. THUS - "TL2"
" 2 " " " - "TL3"
" 2 " " " - "TL4"
MAKE 2 TOP LATS. THUS - TL2A
" 2 " " " - TL3A
" 2 " " " - TL4A
" 2 " " " and AS NOTED - "TL2B"
" 2 " " " " " - "TL3B"
" 2 " " " " " - "TL4B"
MAKE 16 INT RAIL POSTS THUS - "RP2"
" 16 " " " TO PAIR - "RP2"
" 4 " " " THUS - "RP3"
" 4 " " " TO PAIR - "RP3"
Dwg #9040
PURCHASER
Commonwealth Of Kentucky
COUNTY: Marshall and Trigg
STATE: Kentucky
SPAN 320' R'DWY 20'
OVER Tennessee River
ON at Eggners Ferry ROAD
STA. NO.
PROJ. SECT.
BILLED FOR 1 SPAN 3 SPANS REQ.
SHOP - VINCENNES BRIDGE CO.

CONTR. NO. #7374-12-13-84 SHEET 10 OF 15

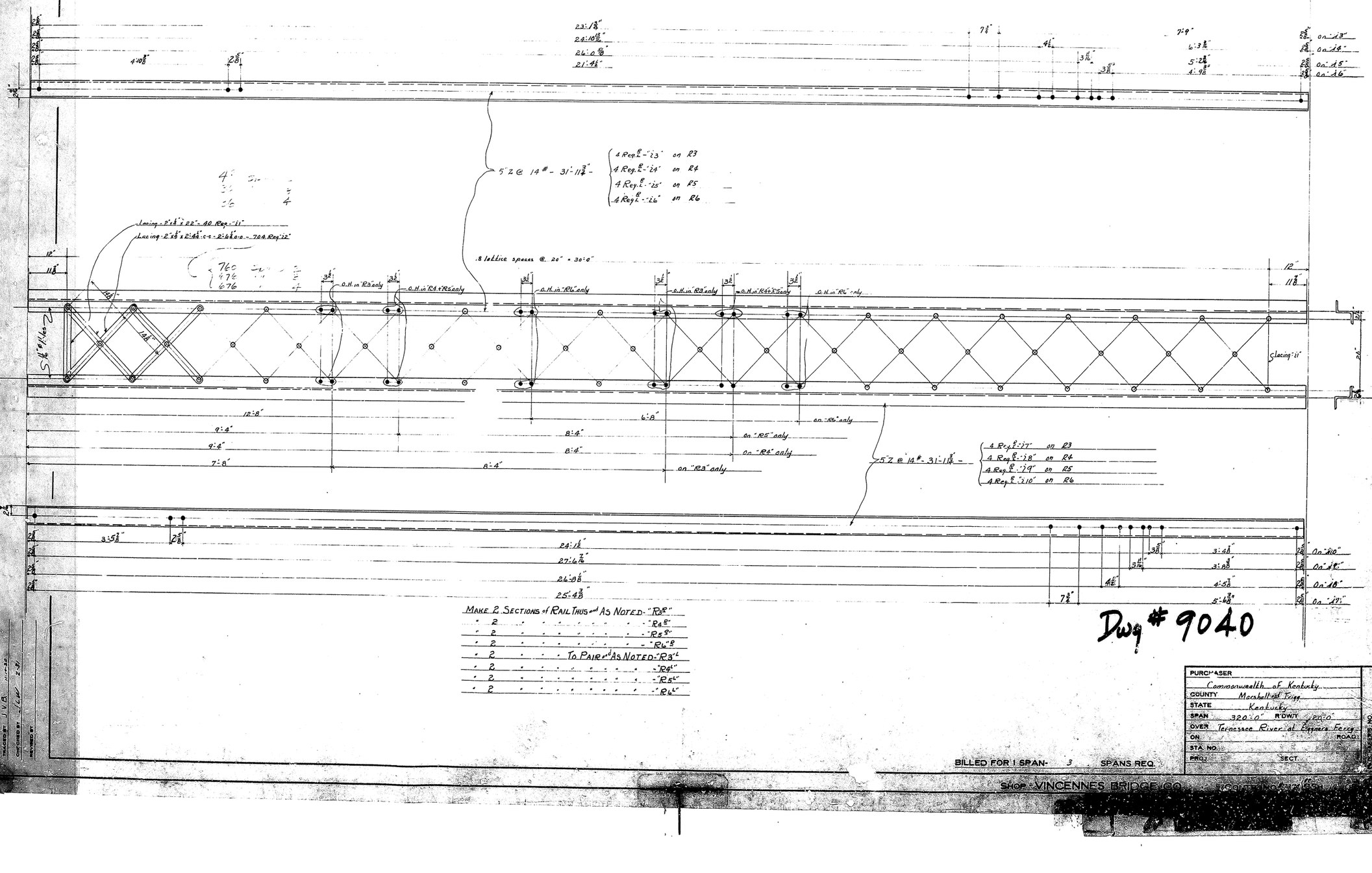
PAINT: SHOP COAT: See Sheet # 2

1st FIELD COAT: " " "

2nd FIELD COAT: " " "

HOLES 15/16" UNLESS NOTED

EDGE 1½" UNLESS NOTED



MAKE 2 SECTIONS of RAIL THUS and AS NOTED - "R3"
" 2 " " " " " " " "R4"
" 2 " " " " " " " "R5"
" 2 " " " " " " " "R6"
" 2 " " TO PAIR and AS NOTED - "R3"
" 2 " " " " " " "R4"
" 2 " " " " " " "R5"
" 2 " " " " " " "R6"

Dwg # 9040

DRAWN AER 11-30
TRACED JVB 11-30
CHECKED JVB 12-30
REVISED

PURCHASER	Commonwealth of Kentucky
COUNTY	Marshall and Trigg
STATE	Kentucky
SPAN	320'-0" R'DWY 24'-0"
OVER	Tennessee River at Eggners Ferry
ON	ROAD
STA. NO.	
PROJ.	SECT.

BILLED FOR 1 SPAN - 3 SPANS REQ.

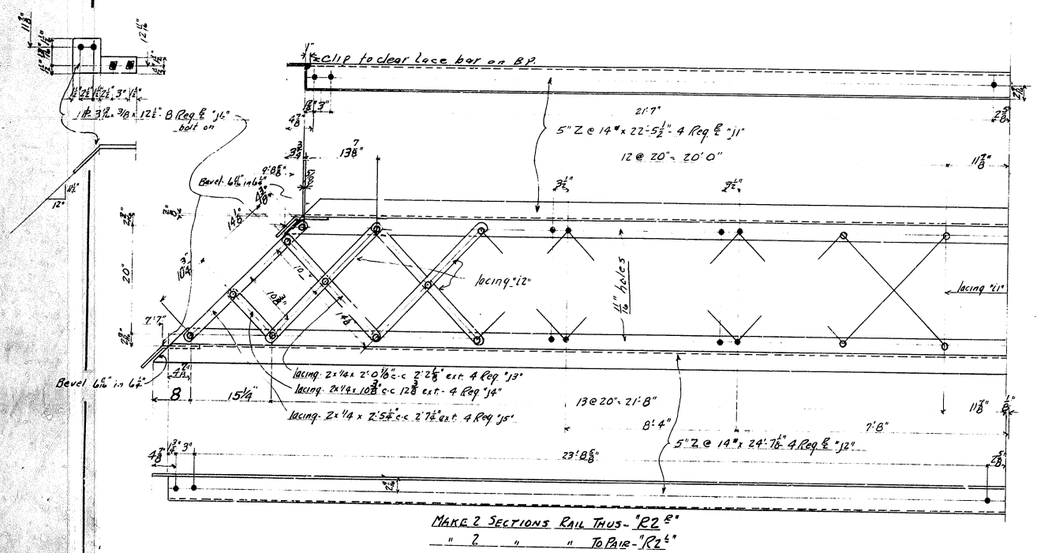
SHOP - VINCENNES BRIDGE CO.

CONTR. NO. #7374 - #2 - #3 - #4 SHEET #11 OF 15

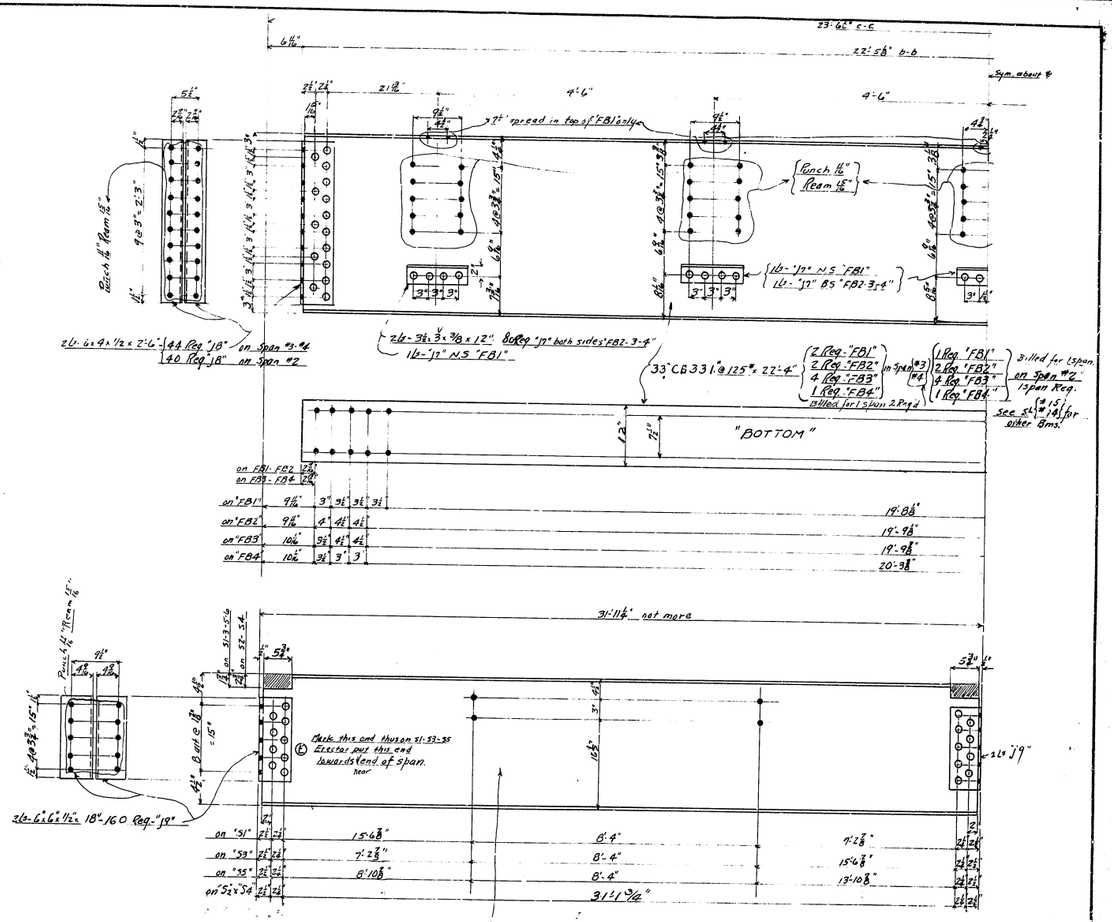
PAINT: SHOP COAT: } SEE SH #2
1st FIELD COAT:
2nd FIELD COAT

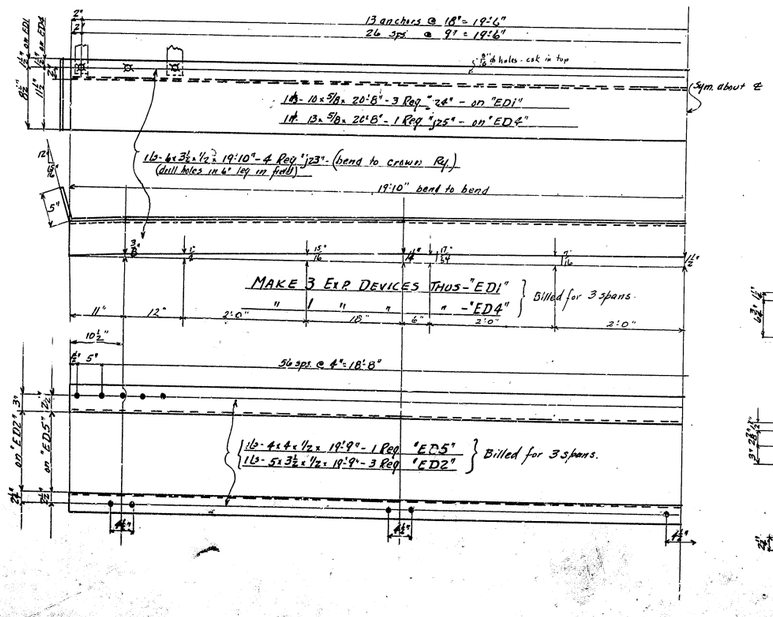
HOLES 15/16" UNLESS NOTED
EDGE 1½" UNLESS NOTED

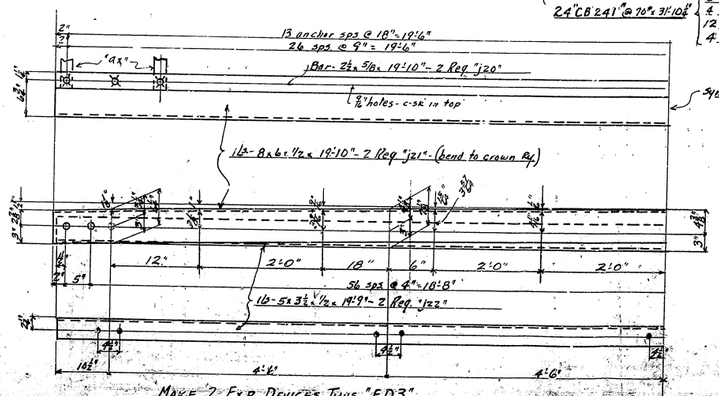
Assemble rail sections, to check fit. or Better Not



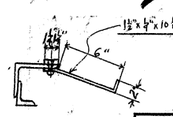
MAKE 2 SECTIONS RAIL THUS - "R2 E"
" 2 " " TO PAIR - "R2 ½"







MAKE 2 EXP DEVICES THUS - "ED3"
Billed for 3 spans.



BILLED FOR 1 SPAN 3 SPANS REQ.

PURCHASER	
COUNTY	Commonwealth Of Kentucky Marshall and Trigg
STATE	Kentucky
SPANS	320' R'DWY 20'
OVER	Tennessee River
ON	Eggners Ferry ROAD
STA. NO.	
PROJ.	SECT.

Dwg # 9040

ST. LOUIS, MO.

CONTR. NO. 7379 SHEET 12 OF 15

PAINT: SHOP COAT:

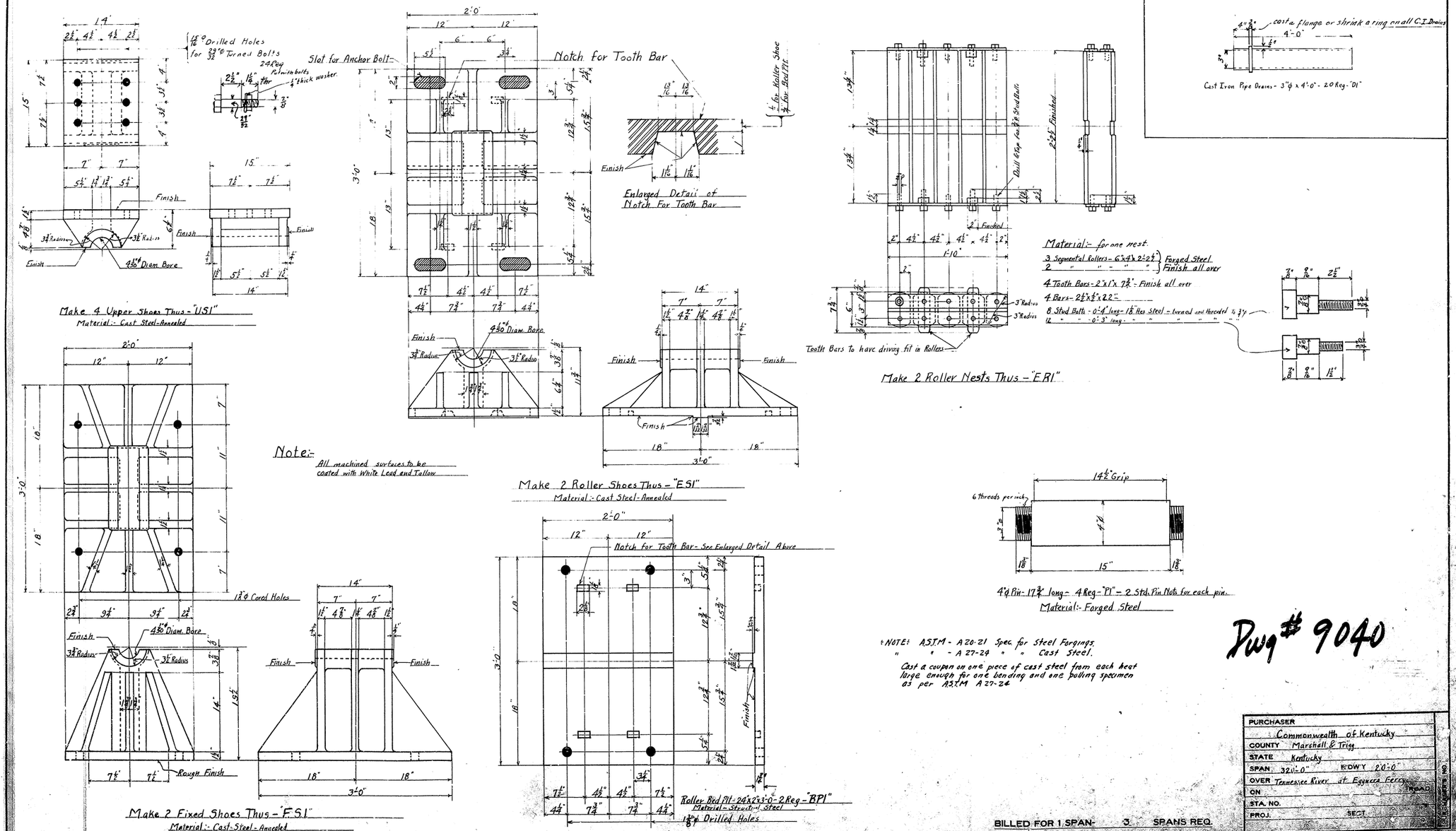
1st FIELD COAT:

2nd FIELD COAT:

HOLES UNLESS NOTED

EDGE UNLESS NOTED

FLOOR DRAINS # 7374 EGGNERS FERRY BRIDGE



NOTE: A.S.T.M - A 20-21 Spec. for Steel Forgings.
" " - A 27-24 " " Cast Steel.

Cast a coupon on one piece of cast steel from each heat large enough for one bending and one pulling specimen as per A.S.T.M A 27-24

Dwg # 9040

PURCHASER	Commonwealth of Kentucky
COUNTY	Marshall & Trigg
STATE	Kentucky
SPAN	32'-0" R.DWY 20'-0"
OVER	Tennessee River at Eggners Ferry
ON	TROAD
STA. NO.	
PROJ.	SECT.

BILLED FOR 1 SPAN - 3 SPANS REQ.

SHOP - VINCENNES BRIDGE CO. CONTR. NO. 7379 SH. 12

CONTR. NO. # 7374 - #2 - #3 #4 SHEET 13 OF 15

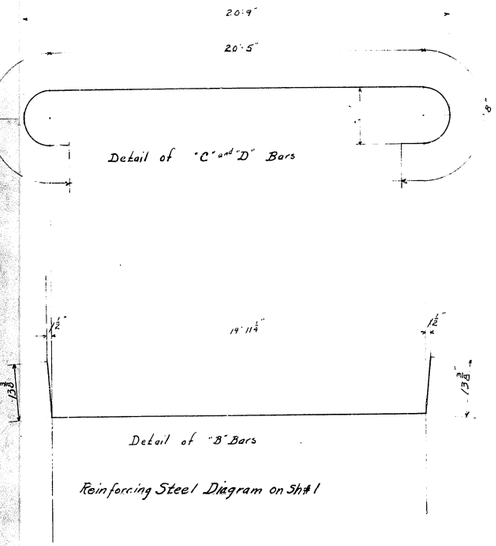
PAINT: SHOP COAT: See # 2

1st FIELD COAT:

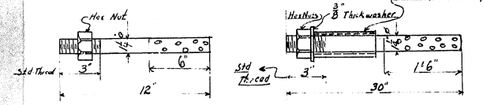
2nd FIELD COAT:

HOLES UNLESS NOTED

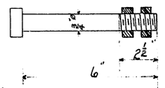
EDGE UNLESS NOTED



Reinforcing Steel Diagram on Sht #1



Detail of Fixed Anchor Bolt "A1" Detail of Exp. Anchor Bolt "A2"



¾" ø Bolts For Int Rail Posts Mark "RB1"

For Span #4

- ⅞" ø def Rein Bars - 20'-9" - 322 Req. Mark "A" - 30 Bdls. - Straight
- ⅞" ø " " - 22'-2" - 323 Req. Mark "B" - 30 Bdls. - Bent (See Detail)
- ⅞" ø " " - 21'-9" - 322 Req. Mark "C" - 30 Bdls. - " "
- ⅞" ø " " - 21'-9" - 323 Req. Mark "D" - 30 Bdls. - " "
- ⅞" ø " " - 32'-9" - 312 Req. Mark "E1" - 40 Bdls. - Straight
- ⅞" ø " " - 34'-0" - 32 Req. Mark "E2" - 5 Bdls. -
- ⅞" ø " " - 33'-11" - 39 Req. Mark "E3" - 5 Bdls.

8 Anchors - 1¼" ø x 12" - Mark "A1" (See detail)
8 " - 1¼" ø x 30" - " "A2" " "
40 - ¾" ø x 6" Bolts - Mark "RB1" " "

For Span #3

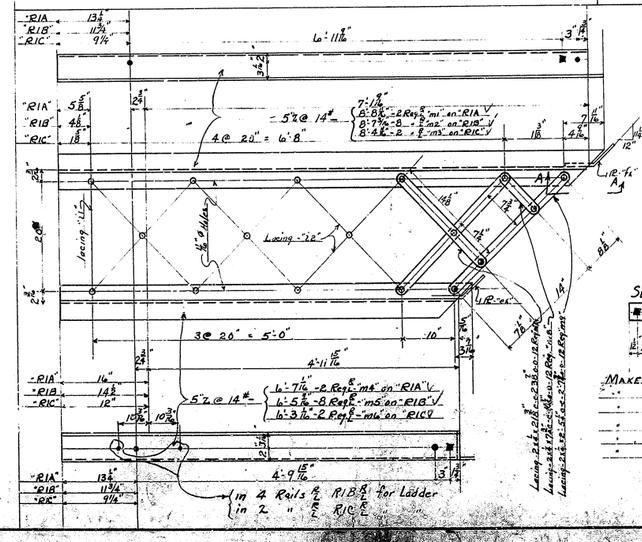
- ⅞" ø def Rein Bars - 20'-9" - 322 Req. - Mark "A" - 30 Bdls. - Straight
- ⅞" ø " " - 22'-2" - 324 " - " "B" - 30 " - Bent (See detail)
- ⅞" ø " " - 21'-9" - 322 " - " "C" - 30 " - " " "
- ⅞" ø " " - 21'-9" - 324 " - " "D" - 30 " - " " "
- ⅞" ø " " - 32'-9" - 312 " - " "E1" - 40 " - Straight
- ⅞" ø " " - 33'-11" - 78 " - " "E3 - 10 " - "

8 Anchors - 1¼" ø x 12" - Mark "A1" (See detail)
8 " - 1¼" ø x 30" - Mark "A2" " "
40 - ¾" ø x 6" Bolts - Mark "RB1" " "

For Span #2

- ⅞" ø def Rein. Bars - 20'-9" - 322 Req. - Mark "A" - 30 Bdls. - Straight
- ⅞" ø " " - 22'-2" - 324 " - " "B" - 30 " - Bent (See detail)
- ⅞" ø " " - 21'-9" - 322 " - " "C" - 30 " - " " "
- ⅞" ø " " - 21'-9" - 324 " - " "D" - 30 " - " " "
- ⅞" ø " " - 32'-9" - 312 " - " "E1" - 40 " - Straight
- ⅞" ø " " - 33'-11" - 39 " - " "E3" - 5 " - " "
- ⅞" ø " " - 33'-6" - 39 " - " "E4" - 5 " - " "

8 Anchors 1¼" ø x 12" Mark "A1" (See detail)
8 " 1¼" ø x 30" " "A2" " "
40 - ¾" ø x 6" Bolts - Mark "RB1" " "

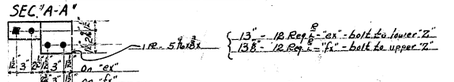


Bolt List # 7374 - Marshall & Trigg Co. - Kentucky - 320'-0 Span - Billed For 1 Span - 3 Spans Req'd.

Send	Size	Kind	Req'd	Location	Grip
1508	⅞" ø x 2¼"	Rivets	1368	Top Strut To Top Lat. Bs - Cross Bracing Diagonals - Portal - L1 & L3 - Toes of Lats	5/16
1275	" x 2⅛"	"	1100	Rail Posts - Bolts to L.C. - Hangs - U1 to U2 - U3 to M1 - L4 to M1	3/4"
1050	" x 2½"	"	905	Splice - Top Chord Spl. - T3 to Lower Lat. - L.C. Sp. to Sway Lat. Bs. to Lower Chord - Cross Brg Vert	7/8"
470	" x 2⅝"	"	375	Diag's Brcg - H.C. - U1 to L1 - F.P. lugs to B.P. - Brcg to T.P. to L.C.	1"
860	" x 2⅞"	"	824	Spl. Spl. - Exp't - P.P. to B.P. to T.C. - T3 pl's to Back of T.C. Angle Spl. - Diaph to Lat.	1"
1150	" x 2⅞"	"	988	Spl. on U3 - F.B. to L.P. - T. Spl on U1 - F.B. to L1 - T.C. Spl U3 U3 U4 Exp't + Jts. - T.C. Splice @ U3 + U4 - U1 L2	1¼"
700	" x 3"	"	586	Side @ L2 - Spl on U1 - Spl on U2 - U3 - U4 - Jts to F.B.	1⅜"
680	" x 3½"	"	570	T.P.'s Brcg to U3 - Brcg - Jt's to F.B. & F.B. - L.C. @ L2	1⅝"
910	" x 3⅝"	"	768	L.C. @ L2 + P.P. to B.P. to T.C. - P.P. to T.C. - T Brcg to T.C. - T's to U3 - F.B. to L.C. L2 - K's @ L3 - @ L4 - @ L5 -	1⅞"
350	" x 3⅞"	"	296	T.C. Spl @ U1 - U4	2¼"
220	" x 3¾"	"	186	U1 on Sht #3 - Spl on Rec't's - L.C. @ L1	1⅞"
175	" x 3⅞"	"	144	T.C. Spl @ U3 x U4 - L.C. @ L2	2"
560	" x 4"	"	480	Side Spl @ U1 - T.C. Spl @ U1 - L.C. Spl @ L2 - L.C. Spl @ L2	2⅜"
600	" x 4⅛"	"	512	U1 Sht #3 - F.B. to L2 - L.C. Spl @ L4	2⅝"
900	" x 4¼"	"	792	L2 - T.C. Spl @ U3 x U4 - L.C. @ L2 - L.C. @ L4	2⅞"
305	" x 4⅜"	"	256	U1 Sht #3 - L2 - L4 - L3 - L5	2⅝"
160	" x 4½"	"	136	B.P. @ U1 - L.C. @ L3 - L.C. @ L5	2⅞"
90	⅞" x 2¼"	Hex Hd. Bolts	80	Rail posts to rail	1¼"
160	" x 4¾"	Rivets	136	B.P. @ U1	2⅝"
200	⅞" x 2¾"	Hex Hd. Bolt	168	Rail To Lugs	⅜"
84	⅞" x 3½"	Turned Bolts	24	Shoes To L.C. @ L0	2¼"
90	⅞" x 1¾"	Hex Hd. Bolts	80	Rail Posts to Rail	⅜"
1200	⅞" x 1⅜"	Sq Head Bolts			
700	" x 2"	"			
600	" x 2½"	"			
1300	" x 3"	"		Erection Material For 1 span only	
1000	" x 3½"	"			
300	" x 4"	"			
2 Kegs	⅞" Cut Washers				
200#	6d Nails				
80#	4d Nails				

4 Pins - 4" ø x 19⅞" - 2 Std. Pin Nuts Each
180 lock washers for ⅞" bolts.
8 Anchors - 1¼" ø x 12" - Mark "A1"
8 Anchors - 1¼" ø x 30" - Mark "A2" (with 1¾" ø Washer with 1¼" ø Pipe 7⅛" long on each)
40 Bolts - ¾" ø x 6" - Mark "RB1" ✓
230 - ⅞" lock washers for rail bolts. (All Rivets to be hot pressed)
30 - ⅞" x 2¾ Hex Hd + nuts 16 Rail lugs to under side of B.P.'s
30 - ⅞" x 2¾ " " " 16 " " " Top Cov. pl on B.P.
20 Cast Iron Pipe Drains - 3" ø x 4'-0" Long - D1"
Rivet Out Fit For ⅞" Riv's - Fuel Oil Etc. See Office

SEC "A-A"



Make 1 Section Of Rail This Mk As Noted - R1A (1 on span #2)
" 1 " " To Pair " " " R1A (2 " " ")
" 4 " " This " " " R1B (1 on span #2 - 2 on span #3 - 1 on span #4)
" 4 " " To Pair " " " R1B (1 " " #2 " 2 " " #3 - 1 " " #4)
" 1 " " This " " " R1C (1 " " #2) ✓
" 1 " " To Pair " " " R1C (1 " ") ✓

Dwg # 9040

BILLED FOR 1 SPAN - 3 SPANS REQ.

SHOP: VINCENNES

PURCHASER	Commonwealth of Kentucky
COUNTY	Marshall & Trigg
STATE	Kentucky
SPAN	320'-0" RDWY 20'-0"
OVER	Tennessee River at Eggners Ferry
ON	ROAD
STA. NO.	
PROJ.	SECT.

PURCHASER'S NO.

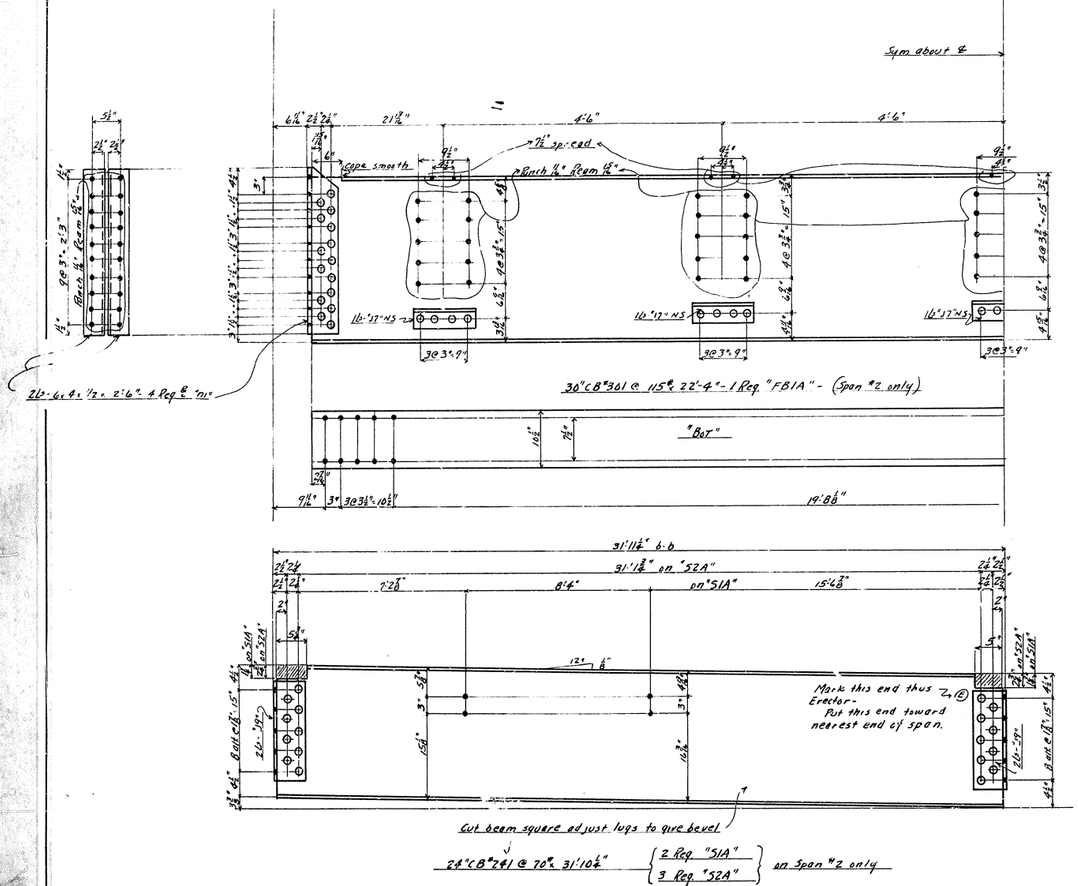
CONTR. NO. #7374 {#2 #3 #4} SHEET #14 OF 15

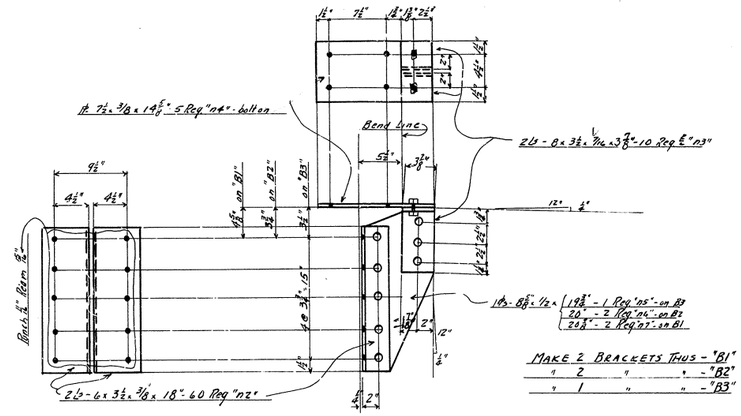
PAINT: SHOP COAT:
1ST FIELD COAT: } See Sh #2
2ND FIELD COAT:

HOLES 15/16 x 6 UNLESS NOTED

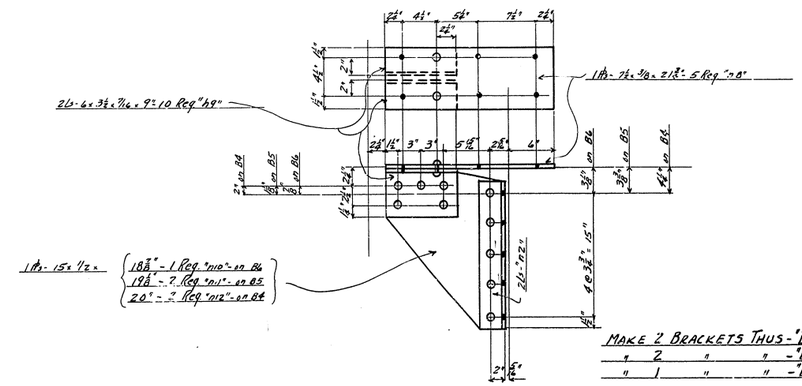
EDGE 1 1/2" UNLESS NOTED

Fl. Bm ⌀ Stringer field Connects to be punched 11/16" & reamed to 15/16" thru 1" metal templet

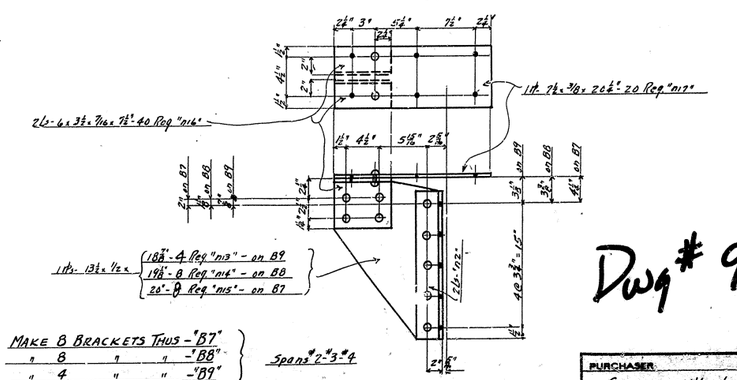




MAKE 2 BRACKETS THUS - "B1"
" 2 " " - "B2"
" 1 " " - "B3"
} Span #2



MAKE 2 BRACKETS THUS - "B4"
" 2 " " - "B5"
" 1 " " - "B6"
} Span #4



MAKE 8 BRACKETS THUS - "B7"
" 8 " " - "B8"
" 4 " " - "B9"
} Spans #2-#3-#4

Dwg # 9040

PURCHASER	Commonwealth of Kentucky
COUNTY	"Marshall-Trigg"
STATE	Ky.
SPANS	320'-0" R'DW'Y 20'-0"
OVER	Tennessee River
ON	at "Eggners Ferry"
STA. NO.	
PROJ.	VICT.

BILLED FOR 3 SPANS 3 SPANS REQ.

SHOP - VINCENNES BRIDGE CO. CONTR. NO. 7374 (#2) SHEET #14

DRAWN BY A.F.R. 5-31
TRACED BY L.V.B. 5-8-31
CHECKED BY R.E.H.
REVISED BY

CONTR. NO. 7374-#2 #3 #4 SHEET # 15 OF 15

PAINT: SHOP COAT:

1st FIELD COAT: } See Sh #2

2nd FIELD COAT:

Save Items in for 3 Spans

HOLES 15/16" UNLESS NOTED

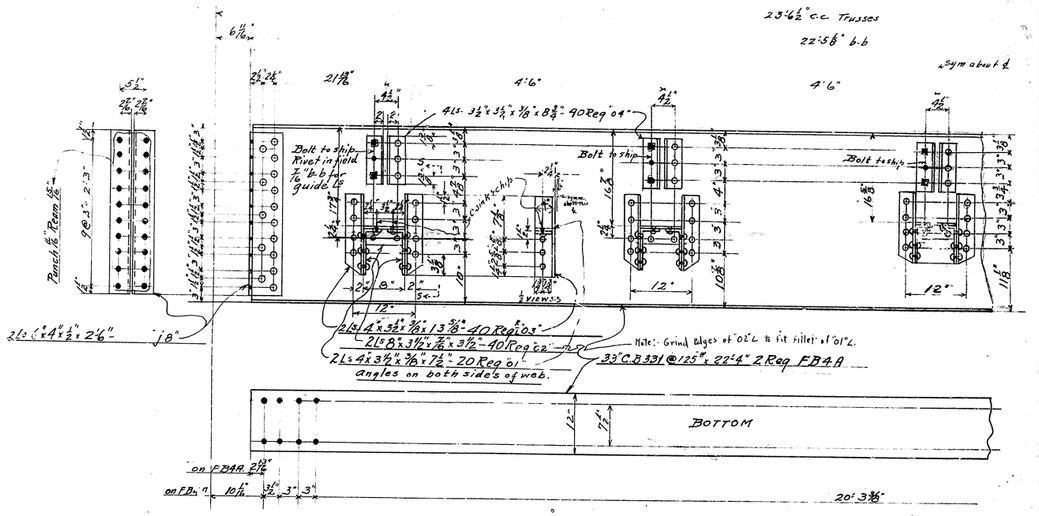
EDGE 1 1/2" UNLESS NOTED

DRAWN BY R.E.H. June 3, 31

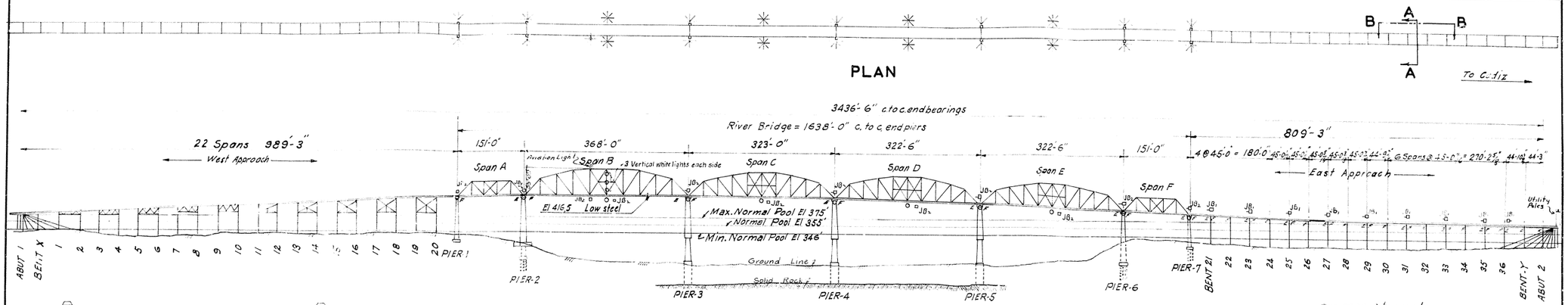
TRACED BY R.E.H.

CHECKED BY O.E.B. 6/31

REVISED BY


23'-6½" c.c. Trusses
22'-5⅞" b.b
Sym about ℄
6⅞"
5"
2½" 2½"
21⅞"
4'-6"
4'-6"
4½"
Bolt to ship. Rivet in field. ⅞" b.b for guide pin
4 Ls 3½ x 3½ x 5/16 x 8'-8½" - 40 Req'd 04
Bolt to ship
Bolt to ship
Punch ⅞" Ream 15/16"
9 @ 3" = 2'-3"
3 @ 3" = 9"
3 @ 3" = 9"
3 @ 3" = 9

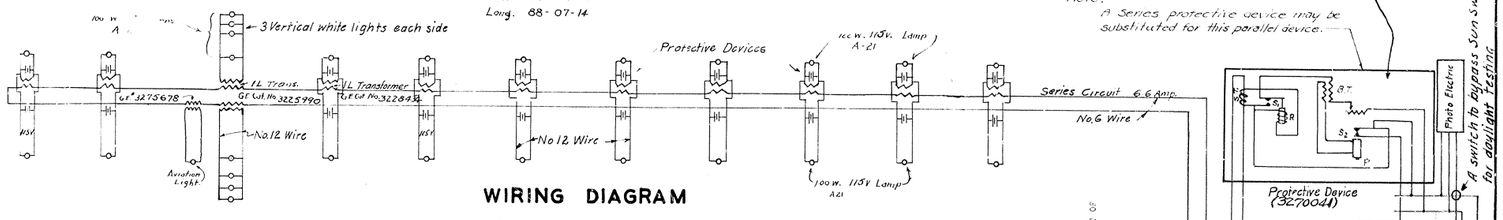
REG. PROJ. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



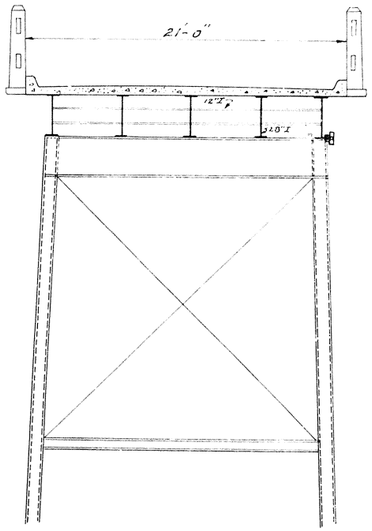
PLAN

ELEVATION

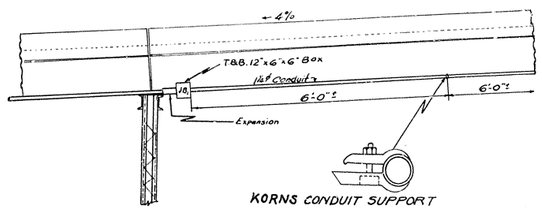
Lat. 36-46-21
Long. 88-07-14



WIRING DIAGRAM



SECTION A-A



ELEVATION B-B

INDEX

Sheet # 1 - Layout, Wiring diagram, General Note.
" # 2 - Piers # 1, 2, 3, 4, 5, 6.
" # 3 - Pier # 7 & Junction Box 2.
" # 4 - Span B, Total Bill of Materials
" # 5 - Main Channel Lights Span B - Swivel s,
" # 6 - Span C, D, E, - Swivel Detail Sz
" # 7 Aviation Lights on Uts 365' Span.

Sheet 1 of 3

DESIGNED BY E.L.M. CHECKED BY DATE
DETAILED BY CHECKED BY DATE
TRACED BY CHECKED BY DATE
REVISED DATE
REVISED DATE
REVISED DATE

RECOMMENDED FOR APPROVAL E. D. Smith 8-29-49 BRIDGE ENGINEER

APPROVED 9/30/49 D. H. Bruce STATE HIGHWAY ENGINEER

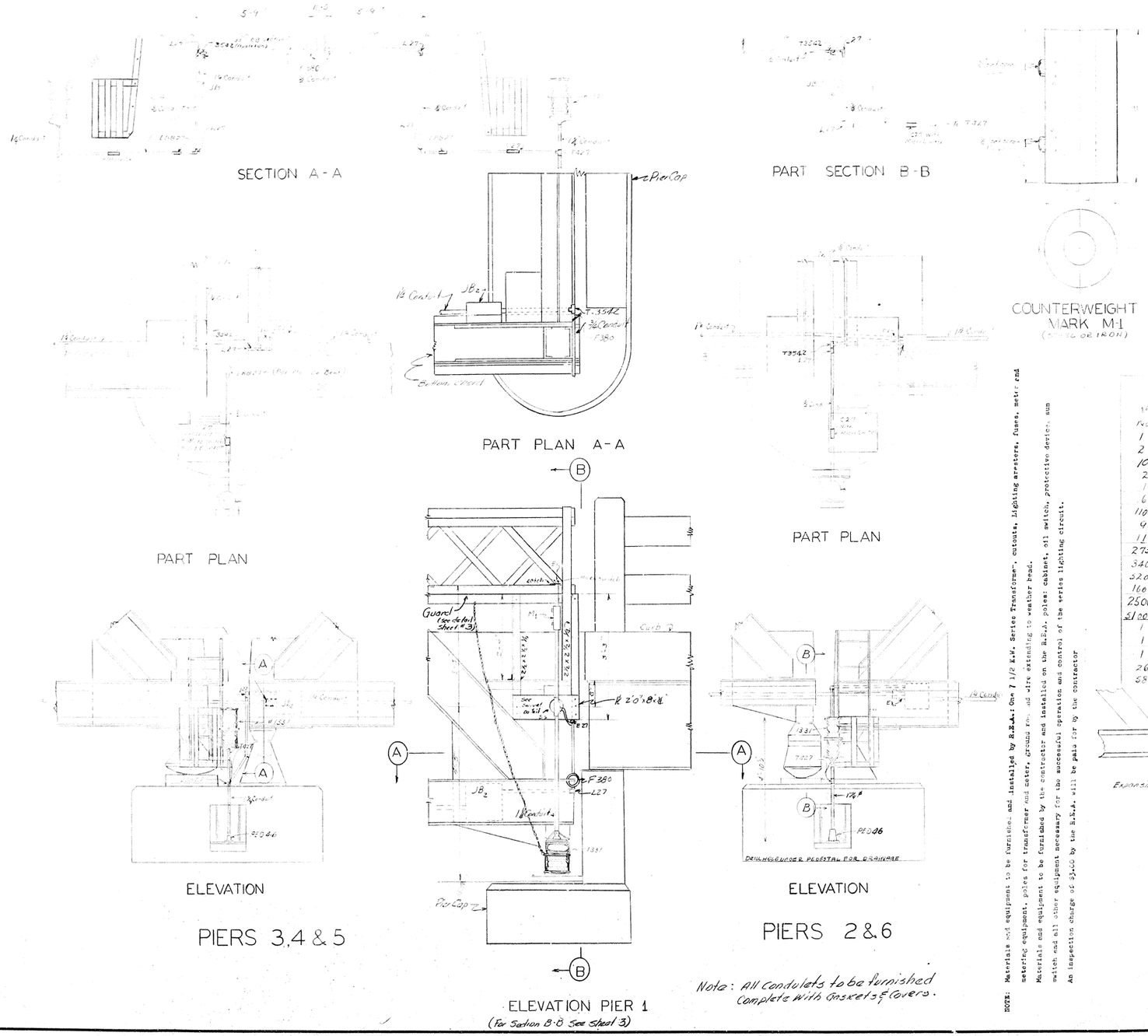
APPROVED 9/30/49 John A. Gilb COMMISSIONER OF HIGHWAYS

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MARSHALL - TRIGG
EGGNERS FERRY BRIDGE
ROAD
STATION PROJECT NO.
BRIDGE NUMBER 79-93-12 DRAWING NO 9040 INDEX

Navigation Lights Tennessee River Bridge at Eggners Ferry

BRIDGE

FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.			2	6



Note: All Condulets to be furnished Complete With Gaskets & Covers.

APPROXIMATE BILL OF MATERIAL

ONE PIER MARKER & STAND (Piers 2,3,4,5,&6) 10 REQUIRED

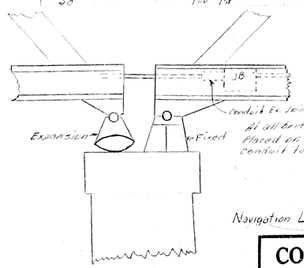
No.	Description
1	PED 46 Pedestal Conduit
1	T 427 Tee W/ Gasket & Cover
1	[illegible] Rod Pier Marker 180° (Allaka Electric)
2[illegible]	19[illegible] G.E. Std. Galv. or Spec. Conduit
4[illegible]	Wire #12 Conduit Type SO Neoprene 2 Conductor

ONE CROSS OVER 5 Required

2	Micro switches
2	Efficiency Clamps F380
1	T 3542 Tee Conduit W/ Gasket & Cover
2	C 27
4	L 27 Elbow
2	LB827
2	1 Hole Pipe Straps 3/4 Conduit
40'0"	#12 600 Volt Type SO Neoprene 2 Conductor Wire
40'0"	3/4" Galv or Shea Conduit

APPROXIMATE BILL OF MATERIAL

No.	Line Conduit, Transformers etc. Description
1	#3275725 Type ROC Novalux C.C. Transformer 7½ K W
2	#9LA10A2 Pellet Lightning Arresters
10	#3228434 1L Transformers Form A6 with Protective Devices #15785846 (GEA-4901)
2	#3225990 A6
1	#3270041 Novalux Protector
6	EL 49 Elbow Condulets
110	Korns Conduit Support
9	Junction Boxes 10 x 6 x 4 Mark JB1
11	" 12 x 16 x 8 " JB2
275'0"	#310 Grabler Extension Bars Size 6
340	X151 Efficiency Insulator Supports
520	3/8" x 1" Machine Bolts
160	#1279 1¼" Iron Pipe Straps (One hole)
2500'	1¼" Galvanized or Sheradized Conduit
5100'	Wire #6 3000 volt 16 strand Versatol Geoprene
1	Sunswitch Model 8239 Torrington Conn.
1	BE42 Entrance Conduit
1	24 x 24 x 12 Columbia Steel Cabinet with Lock
26	Jamb Nuts for 1¼" Pipe
58	" " for 1¼" "



At all bridge expansions the junction boxes are to be placed on the fixed end of the truss and cross conduit to pier lights run on this fixed end.

Sheet #2 of 8

Navigation Lights Tennessee River Bridge at Eggners Ferry

NOTE: Materials and equipment to be furnished and installed by R.E.A.: One 7 1/2 K.W. Series Transformer, cutouts, Lighting arresters, fuses, meter and metering equipment, poles for transformer and meter, ground rod and wire extending to weather head.

Materials and equipment to be furnished by the contractor and installed on the R.E.A. poles: cabinet, oil switch, protective devices, sun switch and all other equipment necessary for the successful operation and control of the series lighting circuit.

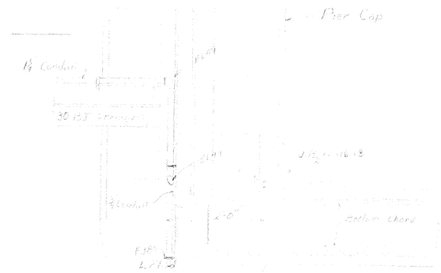
An inspection charge of $3.00 by the R.E.A. will be paid for by the contractor

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MARSHALL - TRIGG
EGGNERS FERRY BRIDGE
ROAD
STATION **PROJECT NO.**
BRIDGE NUMBER 79-93-12 **DRAWING NO.** 9040 **INDEX**

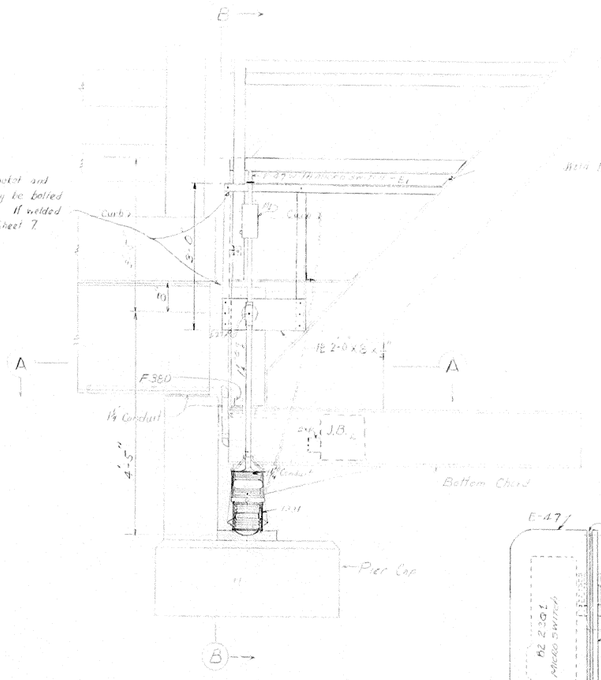
DESIGNED BY D.L. Balch 7-4 CHECKED BY DATE
DETAILED BY CHECKED BY DATE
TRACED BY CHECKED BY DATE
REVISED DATE
REVISED DATE
REVISED DATE

BRIDGE

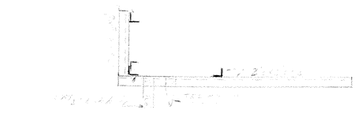
FED ROAD DIST	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY			3	6

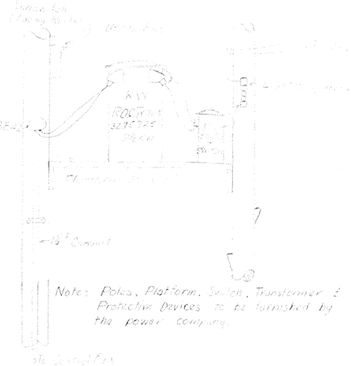


PART PLAN A-A

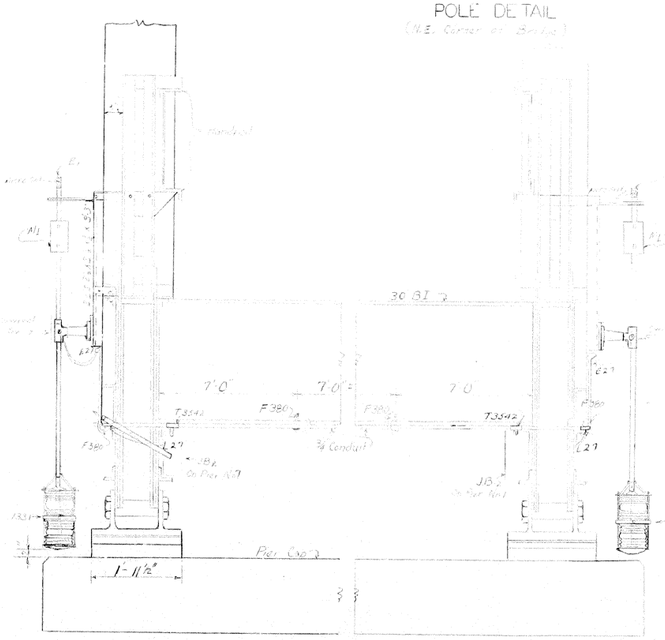


ELEVATION
PIER 7
(LOOKING UP STREAM).





POLE DETAIL
(N.E. Corner of Bents)

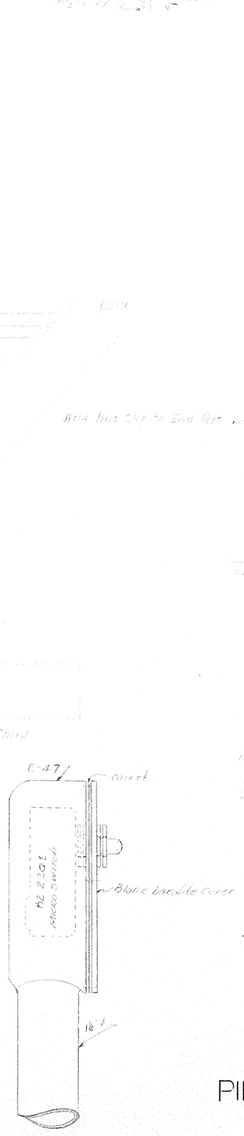


PIER 7
(UP STREAM TRUSS).



PIER 1
(END OF MAIN CONDUIT NO EXPANSION REQUIRED).

SECTION B-B



DETAIL MICRO SWITCH
INSTALLATION - Mark E,

PIER 7

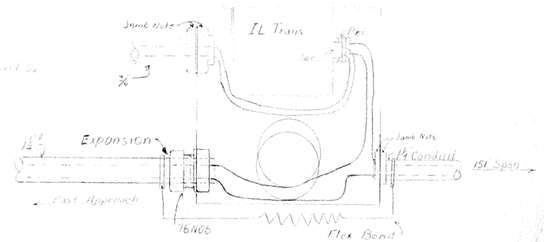
APPROXIMATE BILL OF MATERIAL

ONE PIER MARKER & Cage (Pers 147) 4 PER.

No.	Description
1	L 2½ x 2½ x ⅜ x 5'-0"
1	L 2½ x 2½ x ⅜ x 1'-3"
2	L 2½ x 2½ x ⅜ x 3"
1	L 2½ x 2½ x ¼ x 4"
1	L 2½ x 2½ x ¼ x 6"
8	L Clips 2½ x 2½ x ⅜ x 2½
1	PL 2'-0 x 8" x ½
1	Latch (Mark C.M.L.) Furnished by Bridge Dept.
1	10" Tee Hinge
1	Swivel Complete (Mark S2)
12'-0	#12 - 600 Volt Type S.O. Neoprene 2 Conductor Wire
1	#1331 Red Pier Marker Hoffake Elec.
5'-0	¾" Conduit Galv or Sher.
8'-0	Weldless Coil Chain Hot Galvanized.
12	1 x ⅝" Machine Bolts.
1	E47 Condulet w/Basket & Cover
1	Receptacle # 82-2R61
1	Counterweight Mark M,
1	Flasher Relay

ONE CROSSOVER COMPLETE (Pers 147) 2 Req.

4	F 380 Efficiency Clamps
2	L27 Elbow Condulet
2	E27 Entrance "
1	T3542 Tee "
30'-0	¾" Conduit Galv or Sher.
30'-0	#12 - 600 Volt Type S.O. Neoprene 2 Conductor Wire



JUNCTION BOX 2
(12 x 16 x 8)

Sheet No. 3 of 8

Navigation Lights Tennessee River Bridge at Eggners Ferry

DESIGNED BY: DWC DATE: 7-78
DETAILED BY: DWC DATE: 7-78
TRACED BY: DWC DATE: 7-78
CHECKED BY: [illegible] DATE: [illegible]
CHECKED BY: [illegible] DATE: [illegible]
CHECKED BY: [illegible] DATE: [illegible]
REVISED DATE
REVISED DATE
REVISED DATE

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF

MARSHALL - TRIGG

EGGNERS FERRY BRIDGE

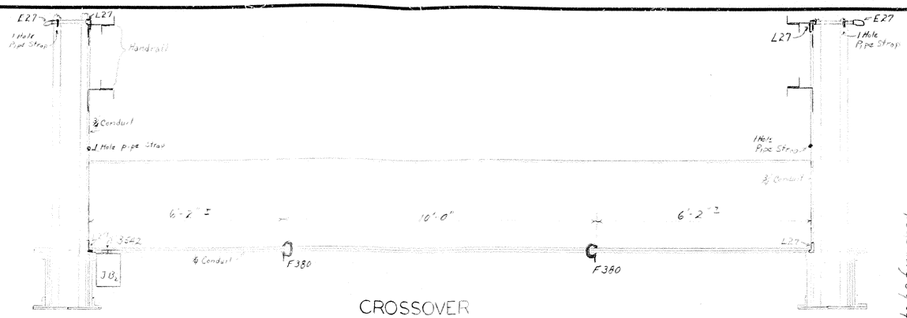
ROAD

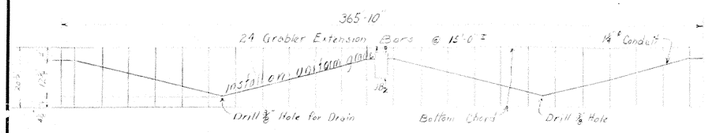
STATION **PROJECT NO.**

BRIDGE NUMBER	DRAWING NO.	INDEX
79-93-12	9040	

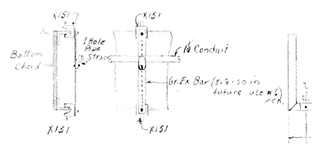
BRIDGE

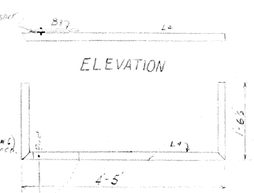
FY	ROAD DIST	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO	TOTAL SHEETS
	7	KY.			4	6

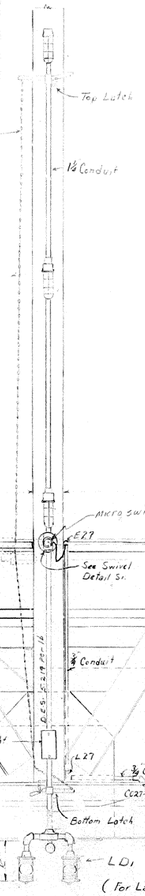


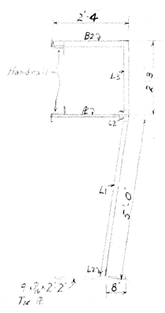


Note: Alternate method of conduit support. In place of X151 & Grabler Extension Bar, a 1/2 x ¾ Steel bar may be welded to Bottom Chord. If welded see note Sheet 7.



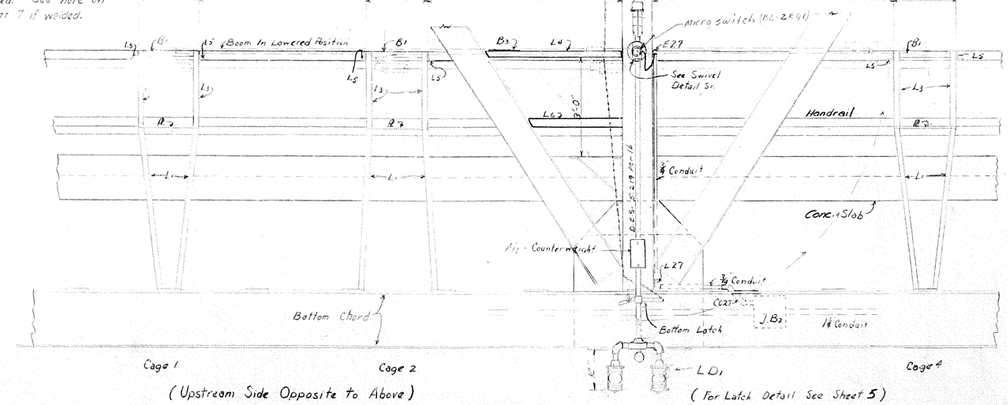






SECTION CAGES 1 2 & 4

Note: Cages may be bolted or welded. See note on Sheet 7 if welded.



SPAN B

These items to be furnished by the Power Co. I. Ref. 25/1.5 KVA

To be furnished by Bridge Office.

APPROXIMATE TOTAL BILL OF MATERIAL

No.	Description
2550	Lbs Steel Cages etc.
1	# 3275725 R.C.C. Transformer 7½ K.W.
2	9LA1A2 Pellat Lightning Arresters
10	3229335 Form A6 I.L. Transformers (2 L.A.)
2	3225990 " A6 "
1	3270041 G.E. Nevalax Protector Switch
1	8239 Ripley Co. Sunswitch Torrington, Conn.
1	24 x 24 x 12 Columbia Steel Cabinet With Lock
9	10 x 6 x 4 Cast Iron Junction Boxes (JB1) (Type B)
11	12 x 10 x 8 " " " (JB2)
2650'-0"	1½" Galvanized or Sherardized Conduit
475'-0"	¾" " " "
20'-0"	1¼" Double Extra Strong Pipe (Wt. 5.214 #/Ft.)
5100'-0"	#6 3000 Volt 19 Strand Copper Neoprene Wire
360'-0"	#12 600 Volt Type SO Neoprene 2 Conductor Wire
16	5910-360 x 6 Western Railroads Supply Co. Green Channel Marker
10	[illegible] Lamps Type [illegible] Mfrs. Part #[illegible]
12	Counter Weights Mark W1 See Sheet 2
23	Micro Switches # BZ-2RQ1 (Eff. Elec. Co. Equip.)
6	V2759 With Guard " " White Lamp
155'-6"	Weldless Coil Chain Hot Galvanized
10	# 701 T&B Hangers With # 734 Supports
110	1½ Korns Conduit Supports
26	F380 Efficiency Clamps
275'-6"	Grabler Extension Bar
360	X151 Efficiency Insulator Supports
46	L27 Elbow Conduilets W/Covers & Gaskets
13	E27 Entrance " W/27N.S. Cover & Gaskets
11	T3542 Tee " W/Gaskets & Covers
20	PED 46 " Cast Bronze
10	TA47 Tee " W/Cover & Gasket
14	T427 " " "
4	C027 " " "
18	L 47 EH " " "
10	L8827 " " "
1	BE42 Entrance " " "
2	BX4 Cross " " "
6	X47 " " "
10	E47 Entrance " " "
10	C27 " " "
6	EL49 Elbow " For Main Line Conduit
10	CGB498 Conduilet W/Gasket (Swivel S2)
90	⅜" x 1" Machine Bolts " "
4	Latches (2 top & 2 bottom) See Sheet 5
10	Latches (Mark CM1.) "
2	Swivels (Mark S) See Sheet 5
10	Tee Hinges 10" "
26	Jamb Nuts for ¾" Pipe "
58	" " " 1½" " "
15	7606 Reducer See Sheet 3
1	PED 223 Pedestal Conduilet "
21	Flexible Bonds See Sheet 3
72	½" x 1" Machine Bolts "
23	Transfer Relay "
8	GS 320 Conduilet W/Cover & Gasket
6	¾" Close Nipples "
14	1 Hole Pipe Straps for ¾" Pipe
170	1 " " " 1½" "
6'-8"	1½" Steel Pipe (Sa Axle)
16	# 200 Winkler Grease Cups (Swivel S2)
16	½" thk. Steel Washer "
10	2" # 16 Cotter Pin "
30	1¼" Close Nipples (LD1)
20	1¼" Short "
1	GSX 320 Conduilet with Gasket & Cover
1	3275673 I.L. Transformer (for Aviation Light)

APPROXIMATE BILL OF MATERIAL

ONE CHANNEL MARKER & CAGES (SPAN B) 2 REQUIRED

No	Mark	Description
3	PL	Checkered Plate 24 x 5/16 x 28"
6	L1	L 2 x 2 x ¼ x 5'-0"
18	L2	L Clips 2 x 2 x ¼ x 2"
6	L3	L 2 x 2 x ¼ x 2'-3"
1	L4	L 2 x 2 x ¼ x 7'-6" Bent as shown
6	L5	L 2 x 2 x ¼ x 4½"
3	B1	Bars 2 x ⅛ x 1'-11½"
6	B2	" 2 x ⅛ x 2'-6"
1	B3	" 2 x ⅛ x 1'-6"
1	LG	L 2½ x 2½ x ¼ x 5'-10"
3	L47	Elbow Conduilet W/Gasket & Cover
1	GS320	" " " "
2	T427	Tee Conduilet "
1	BX4	Cross " & Microswitch BZ-2RQ1
1	CF241	Cover " "
3	V2759	Clear " Light W/Guard
3	¾"	Close Nipples "
5'-6"	1¼"	Double Extra Strong Conduit
21'-0"	1½"	G.E. Std. Conduit
70'-0"	#12	600 Volt Type SO Neoprene 2 Conductor Wire
1	Swivel Base (See Detail S1)	To be furnished by
1	Steel Rod 1½" x 13¾"	Bridge Office
1	Transfer Relay in Conduilet G.S. 320	
30'-0"	Weldless Coil Chain	
2	#2906-360X6	Green Channel Markers (Western R.R.)
3	1¼"	Close Nipples "
2	1¼"	Short "

ONE CROSSOVER ONE REQUIRED

2	E27	Outlet Conduilet
4	L27	Elbow "
1	T3542	" "
41'-6"	¾"	Galv. or Sher. Conduit
45'-0"	#12	600 Volt Type SO Neoprene 2 Conductor Wire
2	F380	Efficiency Clamps
4	1 Hole Pipe Straps	¾" Conduit
1	C027	Conduilet

NOTE:
Latches marked C.M.1. on sheet 6, Also latches and swivels for lighting fixtures on sheets 4 and 5 are to be furnished by Bridge Office and installed by the Contractor.

Sheet No. 4 of 8

Navigation Lights Tennessee River Bridge at Eggners Ferry

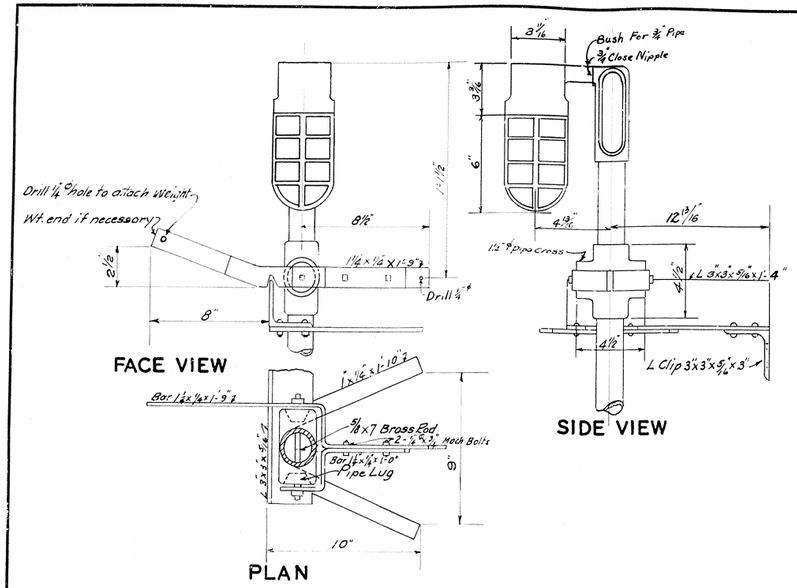
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MARSHALL - TRIGG
EGGNERS FERRY BRIDGE
ROAD
STATION **PROJECT NO.**

BRIDGE NUMBER	DRAWING NO.	INDEX
79-93-12	9040	

DESIGNED BY D.L.B.L. 8/48 DATE 11/48
DETAILED BY DATE 11/48
TRACED BY DATE
CHECKED BY DATE
CHECKED BY DATE
CHECKED BY DATE
REVISED DATE
REVISED DATE
REVISED DATE

BRIDGE

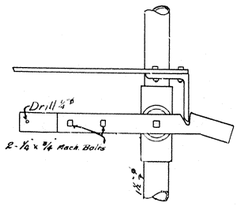
FED. ROAD DIST.	STATE	FED. AID PRO. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.			5	6

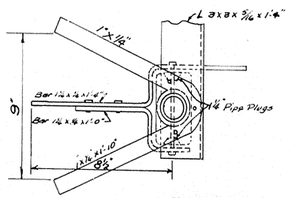


TOP LATCH

Mark C.M 2

To be furnished by Bridge Office

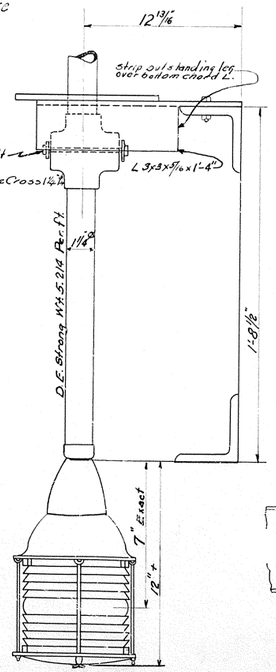


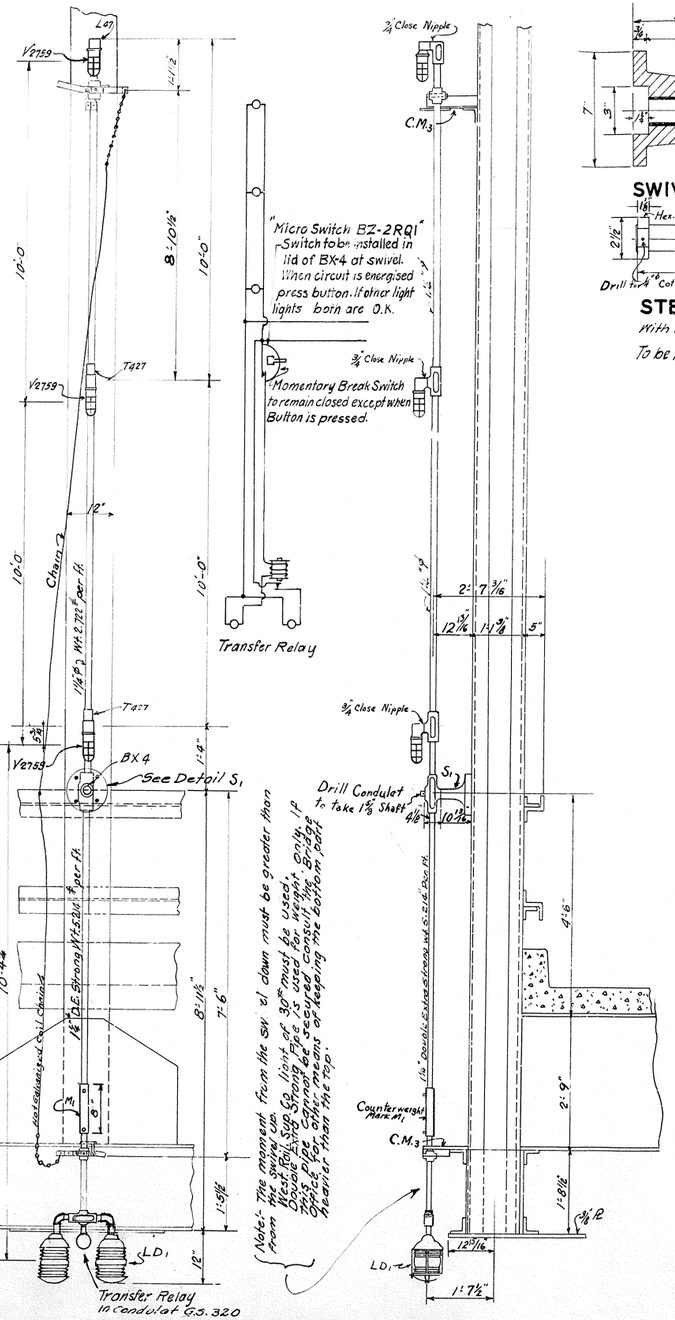


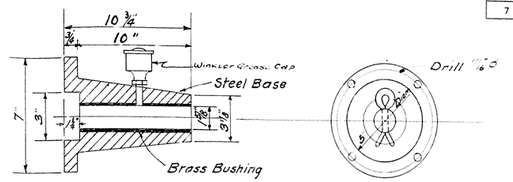
BOTTOM LATCH

Mark C.M.3

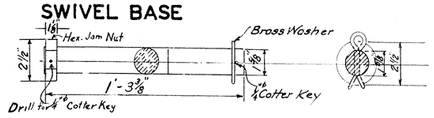
To be furnished by Bridge Office







SWIVEL BASE



STEEL PIVOT ROD

Mark S1

With 1-2 1/2 Brass Washer

To be furnished by Bridge Office

BILL OF MATERIAL FOR LATCHES

C.M2 TOP LATCH (Make Two 1-R+1-L)
1-1 1/2" Pipe Cross-Galvanized
1-3/8" x 7" Brass Bolt Or Rod
2-1 1/4" Pipe Plugs
1-Angle 3"x3"x5/16" x 1'-4"
1-Angle Clip 3"x3"x5/16" x 3"
1-Bar 1 1/2" x 1/4" x 1'-9"
1-Bar 1 1/4" x 1/4" x 1'-0"
2-1/4" Φ x 3/4" Machine Bolts
1-Bar 1"x1/4" x 1'-10"
1-1/4" Φ x 2" Stop
1-16'-0" Weldless Coil Chain - Hot Galvanized

C.M.3 BOTTOM LATCH (Make Two 1R+1-L)
1-1 1/4" Pipe Cross - Galvanized
1-5/8" x 7" Brass Bolt or Rod
1-Bar 1 1/4" x 1/4" x 1'-4"
1-Bar 1 1/4" x 1/4" x 1'-0"
1-Bar 1"x 1/4" x 1'-10"
1-Angle 3"x3"x 5/16" x 1'-4"
2-1/4" x 3/4" Machine Bolts
2-1 1/4" Pipe Plugs
1-10'-0" Weldless Coil Chain - Hot Galvanized

Note:- Weldless, hot galvanized coil chain to be furnished by the Contractor. The remainder of the above bill to be furnished by Bridge Office

DESIGNED BY _____ DATE _____ REVISED _____ DATE _____
DETAILED BY _____ CHECKED BY _____ DATE _____ REVISED _____ DATE _____
TRACED BY Gibbs 3/27/56 CHECKED BY _____ DATE _____ REVISED _____ DATE _____

MAIN CHANNEL LIGHTS

Sheet No. 5 of 8

Navigation Lights Tennessee River Bridge at Eggners Ferry

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MARSHALL — TRIGG
EGGNER'S FERRY BRIDGE
ROAD
STATION PROJECT NO.
BRIDGE NUMBER 79 93 12
DRAWING NO. 9040
INDEX

BRIDGE

FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.			6	6

APPROXIMATE BILL OF MATERIAL

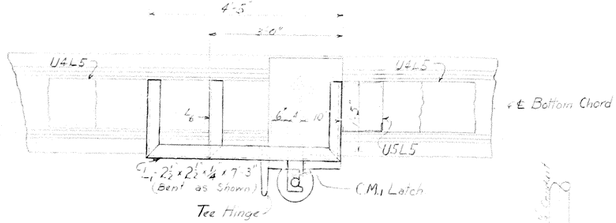
One Channel Marker And Cage (Spans C,D,&E) 6 Required

No	Description	
1	L 2½ x 2½ x ¼ x 7'-3"	Mark L1
2	⊥ 2½ x 2½ x ¼ x 4'-1"	" L2
4	L Clips 2½ x 2½ x ¼ x 9"	" L3
1	PP 6 x 1'-3½ x ¼	
1	Tee Hinge	
1	[illegible]	
2	47 Conduits W/gasket & Cover	
1	X47	
1	9S32E	3 Transfer Relay
6	4" Dia. x 24"Lg. Green Channel Markers (Western R.R.)	
6	⅞" Nipples 2 Close 2 Short	
1	Swivel Pipe S2	
1	Latch Mark (CM1)	
14'-0	Wire #12 600 Volt Type SO Neoprene 2 Conductor	
6'-0	Weldless Coil Chain	
6'-0	1¼" Standard Conduit (Galvanized or Sherardized)	
1	E47 Outlet W/gasket Cover & B2-2RD MICRO SWITCH	
1	One Crossover Complete 3 Required	
1	T356 Efficiency Stamp	
3	E27 Entrance Conduits W/gasket & Cover	
4	L27 Elbow "	
1	CO27 " "	
1	T3542 Tee "	
54'-0	¾" Galvanized or Sherardized Conduit	
36'-0	Wire #12 600 Volt Type SO Neoprene 2 Conductor	

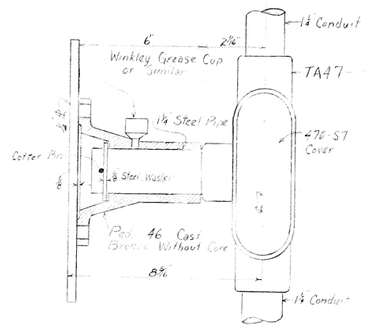
SWIVEL - BILL OF MATERIAL

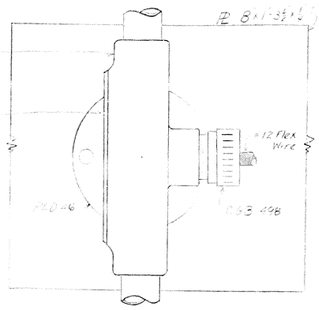
12 Required Mark S2

No.	Description (for each Swivel)
1	PED 46 Pedestal Conduiet
1	TA47 With 470-S7 Cover
8"	1¼" ø Steel Pipe (Axle)
1	Winkley Grease Cup or Similar
1	⅛ Thk Steel Washer
1	2" Min Cotter Pin
1	CGB 496 Connector
4	1" x ½" Machine Bolts
1	Counter Weight Mark M-1 (See detail Sht # 2)

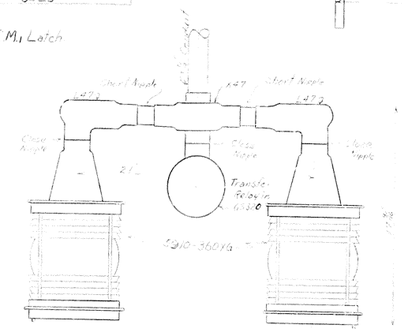


PLAN



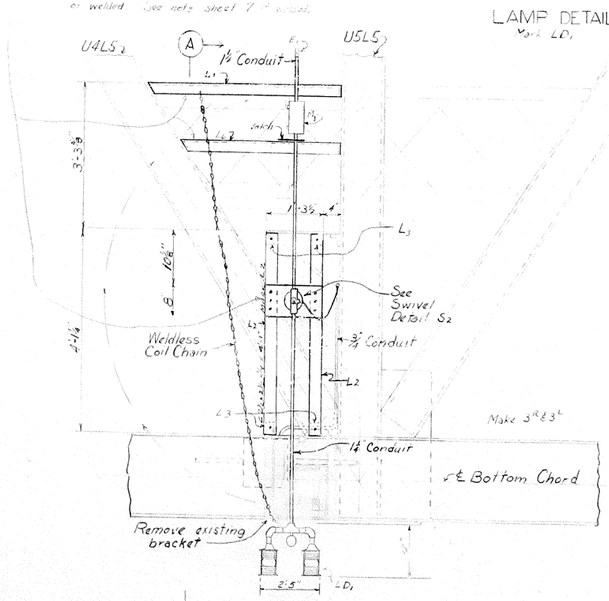


SWIVEL DETAIL
Mark S_2

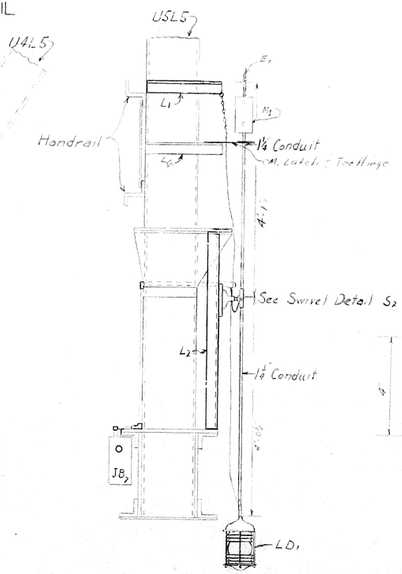


LAMP DETAIL
Mark LD1

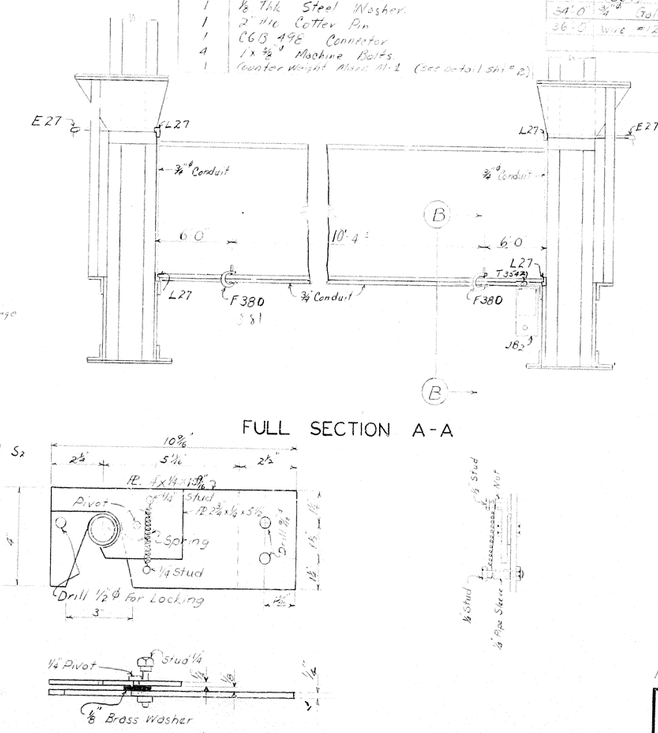
Note: Handrail & Swivel Bracket may be bolted or welded. See note Sheet 7 if welded.



ELEVATION

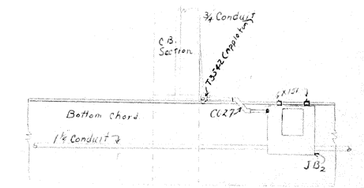


PART SECTION A-A



FULL SECTION A-A

LATCH DETAIL
MARK CM1
Furnished by Bridge office



SECTION B-B

SPANS C D&E

Sheet 6 of 8

Navigation Lights, Tennessee River Bridge at Eggners Fy.

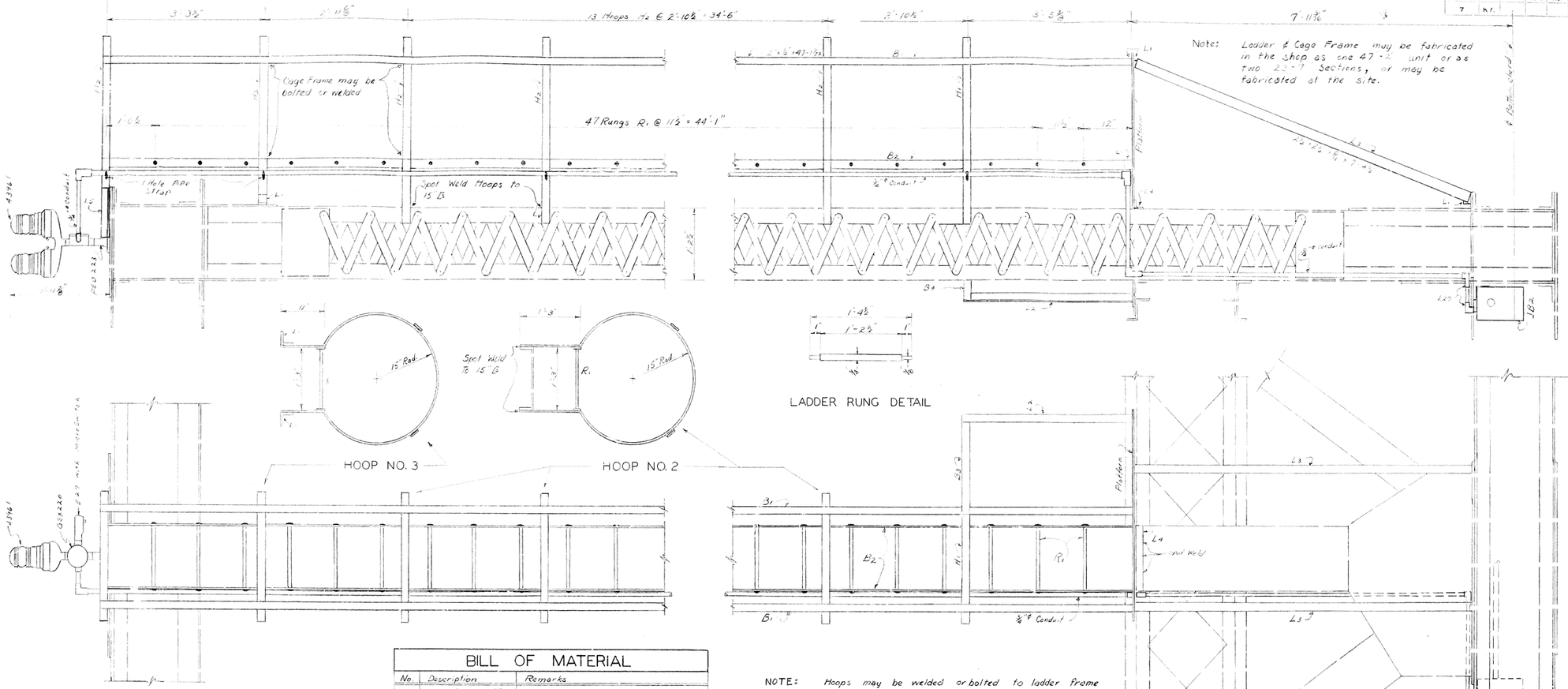
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MARSHALL - TRIGG
EGGNERS FERRY BRIDGE
ROAD

STATION	PROJECT NO.	
BRIDGE NUMBER 79-93-12	DRAWING NO. 9040	INDEX

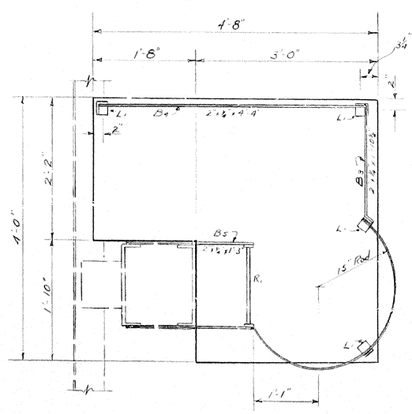
DESIGNED BY: D.L. Baker 8-24-60 DATE
DETAILED BY: D.L.B. CHECKED BY: D.L.B. DATE
TRACED BY: CHECKED BY: DATE
REVISED DATE REVISED DATE REVISED DATE

BRIDGE

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



Note: Ladder & Cage Frame may be fabricated in the shop as one 47'-2" unit or as two 23'-7" Sections, or may be fabricated at the site.

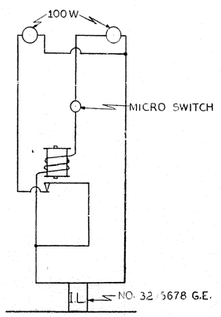


PLATFORM & HOOP NO. 1

BILL OF MATERIAL

No.	Description	Remarks
1	PL 4'-8"x4'-0"x¼"	Platform. Cut as shown.
2	Bars 2"x¼"x47'-2"	Cage Upright. Mark B1
2	" 2"x¼"x47'-2"	Ladder Frame " B2
1	" 2"x¼"x1'-10½"	Handrail " B3
1	" 2"x¼"x4'-4"	" B4
1	" 2"x¼"x1'-3"	Ladder Support " B5
1	" 2"x¼"x4'-7¼"	Cage Hoop " H1
14	" 2"x¼"x9'-0½"	" " H2
1	" 2"x¼"x8'-4½"	" " H3
12	L Clips 2"x¼"x2"	" L1
2	L3 2"x¼"x2"x3'-6⅛"	Handrail Supports " L2
2	L3 2½"x2½"x5/16"x7'-4½"	Platform " " L3
1	L3 2½"x2½"x5/16"x1'-3"	" " " L4
2	L3 2"x¼"x2"x1'-0"	Top Cage Support " L5
49	Rods ¾"ø x1'-4½"	Ladder Rungs " R1
60 ft	¾"ø Conduit	Galv. or Sheet.
65 ft	Wire #12 600V	Type SO Neoprene 2 Conductor
1	Transfer Relay	
1	GSX220 Condulet	Relay housing with Gasket & Cover
6	L27 "	Elbows
1	43961 "	Double Obstruction Light with Red Globes
1	3275678 G.E.	1L Transformer
9	1 Hole Pipe Straps	For ¾"ø Conduit
1	E27 Condulet	Micro switch Housing
1	B2-2RQ1	Microswitch.
1	Junction Box J.B.2.	
1	PED 223 Condulet	Pedestal

NOTE: Hoops may be welded or bolted to ladder frame & cage uprights. If welded, welder must submit sample welds for test in accordance with Kentucky Department of Highways 1945 Standard (with amendments) Section 5.2.3-A-9 in order to qualify



WIRING DIAGRAM

CAGE DETAILS FOR AVIATION LIGHT

Sheet 7 of 8

Aviation Light on U4L4 365' Span

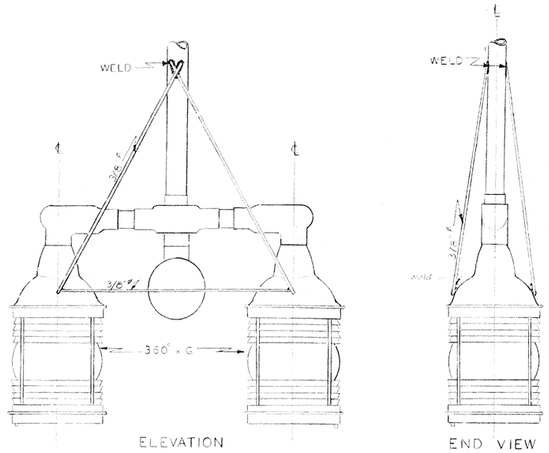
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MARSHALL - TRIGG
EGGNERS FERRY BRIDGE
ROAD

STATION	PROJECT NO.		
BRIDGE NUMBER	79-93-12	DRAWING NO. 9040	INDEX

DESIGNED BY R.B. 749 CHECKED BY DATE REVISED DATE
DETAILED BY CHECKED BY DATE REVISED DATE
TRACED BY CHECKED BY DATE REVISED DATE

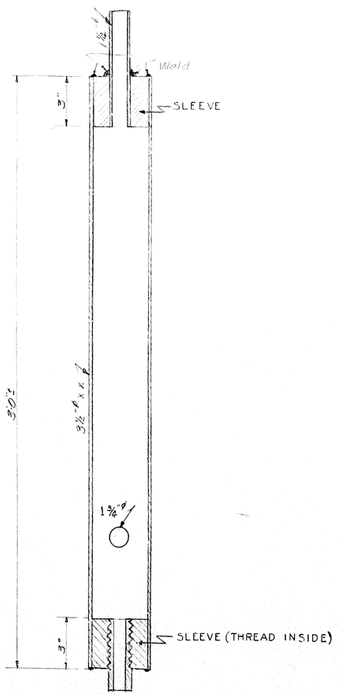
BRIDGE

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

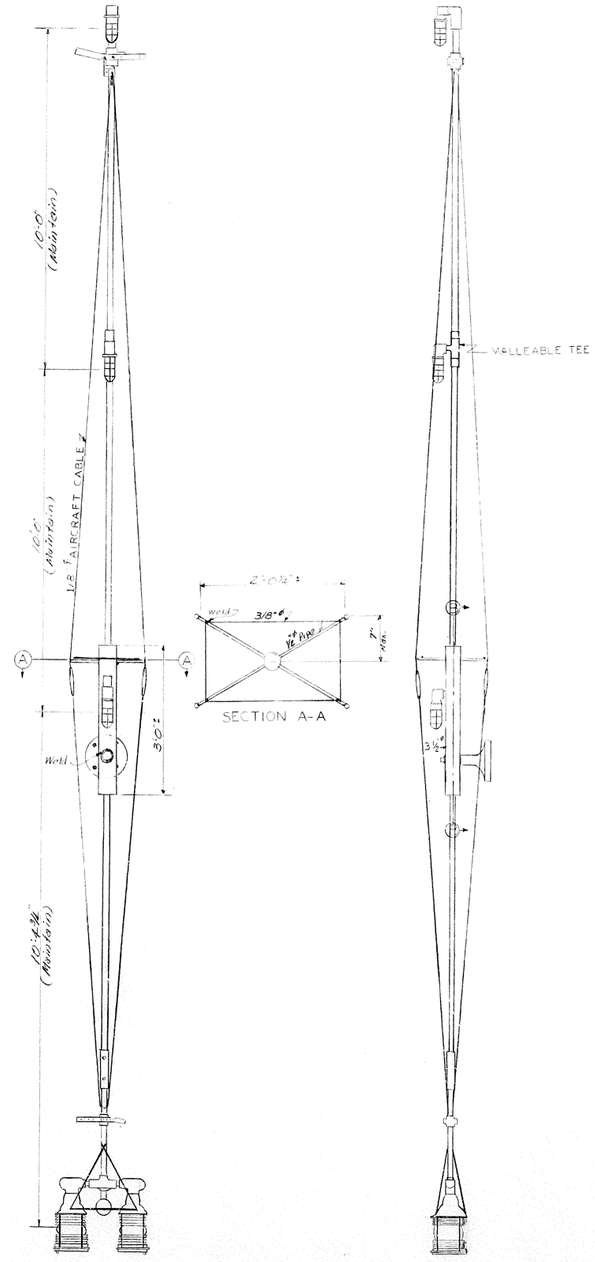


SPANS B-C-D-E (BOTH SIDES)

LAMP DETAIL



SECTION B-B ON ℄



MAIN CHANNEL LIGHTS

ESTIMATE OF QUANTITIES

NO.	DESCRIPTION
200'	1/8"φ AIRCRAFT CABLE
12'	1/2"φ PIPE
120'	3/8"φ STEEL BAR
6'	3½"φ x x PIPE
2	1¼" MALLEABLE TEES
2	SLEEVES
8	TURNBUCKLES

SHEET 8

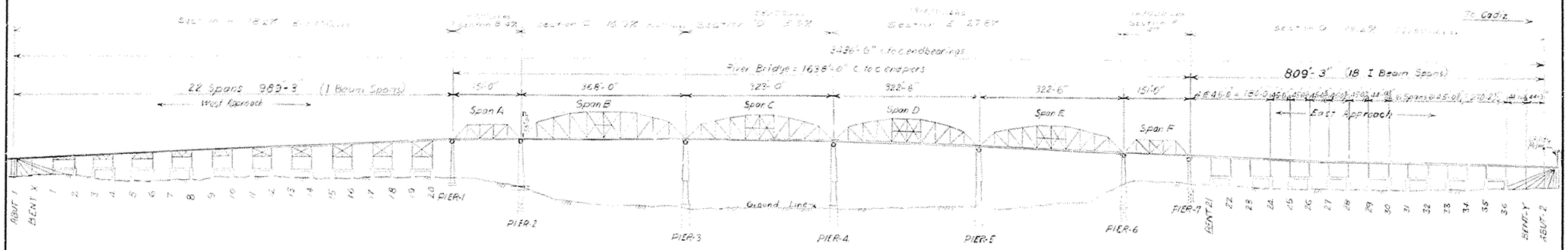
NAVIGATION LIGHTS TENNESSEE RIVER BRIDGE AT EGGNER'S FERRY

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
MARSHALL - TRIGG
EGGNER'S FERRY BRIDGE
ROAD
STATION **PROJECT NO.**
BRIDGE NUMBER 79-93-12 **DRAWING NO.** 9040 **INDEX**

DESIGNED BY ___ CHECKED BY ___ DATE ___ REVISED ___
DETAILED BY ___ CHECKED BY F.C.M. DATE 3-25-50 REVISED ___
TRACED BY ___ CHECKED BY ___ DATE ___ REVISED ___

BRIDGE

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



ELEVATION

Steel Beam Approach Spans and Steel Truss Main Spans

Estimated Weight of Structual Steel = 4,733,800. Lbs.

ESTIMATE OF QUANTITIES

Cleaning and Painting Lump Sum

Paint Note "E" applies to painting this bridge. See Std. Dwg. PN-2. Partial Payment on the monthly estimates per section will be made on the following basis:

40% of the section amount for cleaning and applying the 1st primer coat of paint. 40% of the section amount for the 2nd finish coat of paint with the provision that 10% of each payment will be retained until the final payment is made.

PN-2

Paint Plans for Tennessee River Bridge at Eggners Ferry

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF

MARSHALL

BENTON - EGGNERS FERRY

ROAD

STATION PROJECT NO.

BRIDGE NUMBER 79-93-12

DRAWING NO. 14540

INDEX

DESIGNED BY ... CHECKED BY ... DATE ...
DETAILED BY J.S. Davis CHECKED BY ... DATE ...
TRACED BY J.S. Davis CHECKED BY ... DATE ...
REVISED ... DATE ...
REVISED ... DATE ...
REVISED ... DATE ...

BRIDGE

Existing Bridge 3348'-0" c to c end bearings

West approach — 21 spans @ 45'-0" = 945'-0" | 151'-0" | 368'-0" | 323'-0" | 322'-6" | 322'-6" | 151'-0" | East approach — 17 spans @ 45'-0" = 765'-0"

℄ abut bearing Sta 41+79.00

℄ abut bearing Sta 75+27.00

Span A | Span B | Span C | Span D | Span E | Span F

Low steel El 354.4

Flood of record (1937) El 351

Pool level El 320

ABUT 1 BENT 1 BENT 2 BENT 3 BENT 4 BENT 5 BENT 6 BENT 7 BENT 8 BENT 9 BENT 10 BENT 11 BENT 12 BENT 13 BENT 14 BENT 15 BENT 16 BENT 17 BENT 18 BENT 19 BENT 20 PIER 1 PIER 2 PIER 3 PIER 4 PIER 5 PIER 6 PIER 7 BENT 21 BENT 22 BENT 23 BENT 24 BENT 25 BENT 26 BENT 27 BENT 28 BENT 29 BENT 30 BENT 31 BENT 32 BENT 33 BENT 34 BENT 35 BENT 36 ABUT 2

ELEVATION
EXISTING BRIDGE

RIVER Flow

PART SECTIONAL PLAN

TENN

PART PLAN

PROPOSED BRIDGE

To Murray

To Cadiz

ELEV. 472.34 | ELEV. 468.80 | ELEV. 459.71 | ELEV. 450.97

Proposed Bridge 3436'-6" c to c end bearings

River Bridge = 1638'-0" c to c end piers

New Span

44°-5" 44°-11" 45°-0" 45°-0" 45°-0"

12 spans @ 45°-0" = 810'-0"

West Approach

151'-0" | 368'-0" | 323'-0" | 322'-6" | 322'-6" | 151'-0"

4 @ 45°-0" = 180'-0" 45°-0" 45°-0" 45°-0" 44°-3" 6 spans @ 45°-0" = 270'-0" 44°-3"

East Approach

New Span

℄ abut bearing Sta 41+34.75

℄ abut bearing Sta 75+71.25

Span A | Span B | Span C | Span D | Span E | Span F

El 416.5 Low steel

Max Normal Pool El 375

Normal Pool El 359

Min. Normal Pool El 346

El 363.00 (m)

ABUT 1 BENT X BENT 1 BENT 2 BENT 3 BENT 4 BENT 5 BENT 6 BENT 7 BENT 8 BENT 9 BENT 10 BENT 11 BENT 12 BENT 13 BENT 14 BENT 15 BENT 16 BENT 17 BENT 18 BENT 19 BENT 20 PIER 1 PIER 2 PIER 3 PIER 4 PIER 5 PIER 6 PIER 7 BENT 21 BENT 22 BENT 23 BENT 24 BENT 25 BENT 26 BENT 27 BENT 28 BENT 29 BENT 30 BENT 31 BENT 32 BENT 33 BENT 34 BENT 35 BENT 36 BENT Y ABUT 2

ELEVATION
PROPOSED BRIDGE

Note:
The spacing of bents as indicated for the East Approach and West Approach applies to the steel bents only.
All new concrete bents are centered on existing pedestals.
For stationing of steel bents, see 1080H402 and 1080H403.
For stationing of concrete bents, see 1080H414, 415, and 416.

Sta 41+34.75 El 382.75

Sta 41+79.00 El 382.50

Sta 42+19.50 - P.T.V.C. El 382.50

Sta 43+59.00 - P.T.V.C. El 388.75

Sta 51+24.00 - P.I.V.C. El 418.68

Sta 52+75.00 - P.I.V.C. El 421.70

Sta 56+43.00 - P.I.V.C. El 421.70

Sta 59+46.50 - P.I.V.C. El 418.07

Sta 62+89.50 - P.I.V.C. El 410.78

Sta 66+41.00 - P.I.V.C. El 399.80

Sta 67+62.00 El 393.78

Sta 69+42.00 - P.C.V.C. El 396.55

Sta 71+34.50 - P.T.V.C. El 382.50

Sta 75+71.25 El 382.50

2.77 V.C.

+2.00% | 0.00% | -1.124% | -2.36% | -3.39% | 22'-6"

10' V.C. | 60' V.C. | 10' V.C. | 10' V.C. | 10' V.C. | 60' V.C. | 202.50' V.C.

Sta 52+75.00 - P.I.V.C. El 399.66

Proposed grade

Existing grade

+4.00% | +4.00% | 0.00% | 0.00% | 4.00% | -4.00%

26.07

Sta 42+69 - P.T.V.C. El 359.41 ±

Sta 51+24.00 El 399.61 ±

Sta 56+43.00 El 399.61 ±

Sta 59+65.00 El 399.57 ±

Sta 62+89.50 El 399.71 ±

Sta 70+43.25 - P.V.C. El 382.50

0.000%

PROFILE OF FINISHED ROADWAY
Vert Scale 1"=20'

Scale: Horiz; 1"=100'
Vert; 1"=100', except as noted

REV NO	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECD
DSGN	—			SUPV	R.L.G.		
DRWN	S.S.			INSP	Init.		
CHKD	G.H.F.			ENGINEER	G.W. Tallman		
SUPV	✓						
ENGR	R.D. Mike						
MC	AA Mike						

2 6-15-62 RJM TRC RLA RLG WSG KLH Signed as constructed
1 Research Chemical Laboratory KLH
Original Revision

WSA

PROJECT 8-1080 Sheet 1 of 39

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

EGGNERS FERRY BRIDGE ACROSS TENNESSEE RIVER

GENERAL DRAWING

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

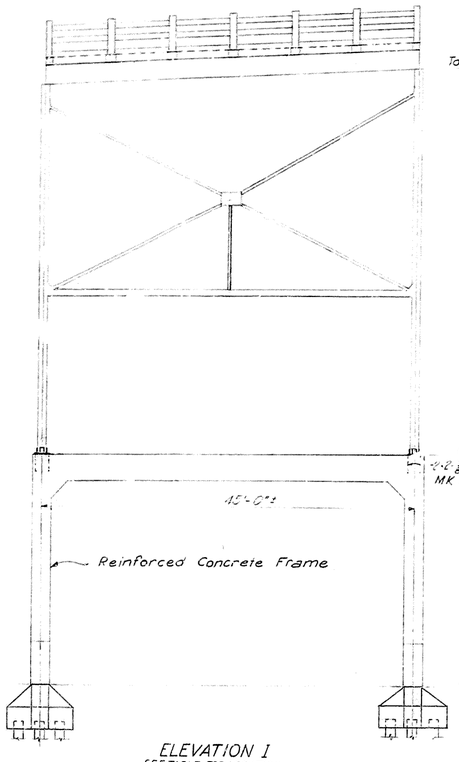
SUBMITTED	RECOMMENDED	APPROVED
J.E. Jennison	C.H. Nesbitt	Jerry A. Reid

KNOXVILLE 8-13-62 8 HR 5 1080M401 B2

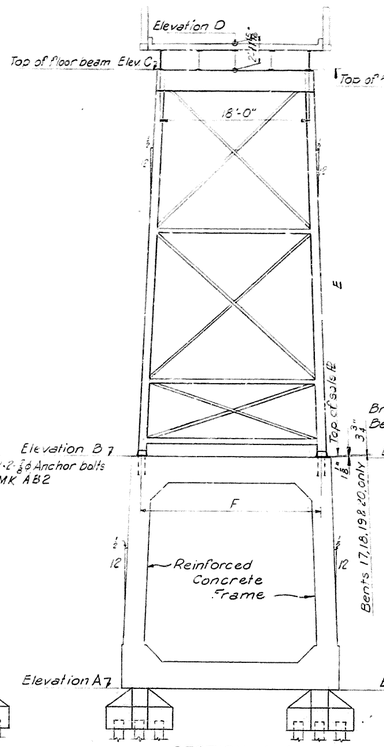
RECORD DRAWING AS CONSTRUCTED
Frank D. Webb 7-1-64

ER 8-13-62	①	②	③	④	⑤	⑥

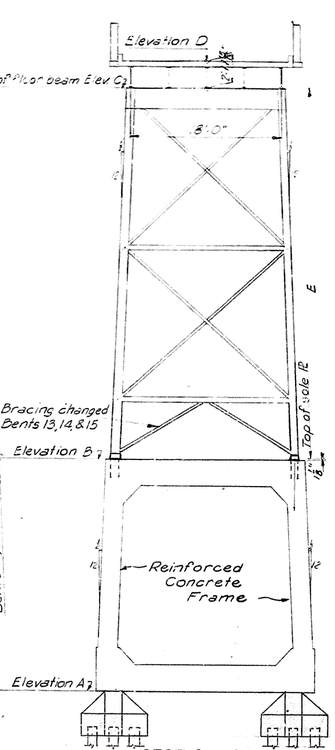
BRIDGE



ELEVATION I
SEE TABLE FOR LOCATION



SECTION A-A



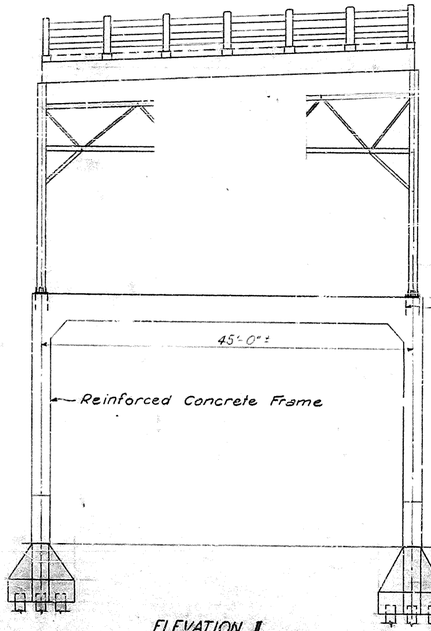
SECTION B-B

Bent No.	Station	Elevation	Section	A	B	C	D	Length of existing column	E	Length cut-off columns	F
1	42+23.96	III	E-E	340.13±	366.31	1.8.00	383.59	14'-7½"	14'-7½"	0	9'-3"
2	42+68.98		E-E	340.15±	365.50	382.07	385.06	16'-2½"	16'-2½"	0	15'-4 5/16"
3	43+14.00		E-E	340.13±	365.22	383.29*	386.43	17'-11⅞"	17'-11⅞"	0	15'-6¼"
4	43+59.00		E-E	340.14±	365.22	385.09	388.08	19'-9⅛"	19'-9⅛"	0	15'-7 15/16"
5	44+04.00	II	D-D	335.15±	363.00	386.59	389.85	26'-7⅛"	23'-9⅜"	2'-9⅞"	20'-0"
6	44+49.00		C-C	335.17±	363.00	388.69	391.68	28'-8⅜"	25'-7⅞"	2'-9⅞"	20'-1 2"
7	44+94.00		C-C	335.17±	363.00	390.49	393.48	30'-2⅛"	27'-5"	2'-9⅞"	20'-3½"
8	45+39.00	II	C-C	335.18±	363.00	392.29	395.28	32'-0"	29'-2⅛"	2'-9⅞"	20'-5⅜"
9	45+84.00		C-C	337.16±	363.00	394.09	397.08	33'-9⅞"	31'-0½"	0'-9⅞"	20'-7⅛"
10	46+29.00	II	C-C	337.16±	363.00	395.89	398.88	35'-7⅛"	32'-9⅞"	0'-9⅞"	20'-9"
11	46+74.00	I	C-C	336.15±	363.00	397.69	400.68	36'-4⅝"	34'-7⅛"	1'-9⅜"	20'-10⅜"
12	47+19.00		C-C	336.15±	363.00	399.49	402.48	38'-2⅜"	36'-5⅛"	1'-9⅜"	21'-0⅜"
13	47+64.00		B-B	336.13±	363.00	401.29	404.28	40'-0⅛"	38'-2⅜"	1'-9⅜"	21'-2⅜"
14	48+09.00	I	B-B	336.15±	363.00	403.09	406.08	41'-9 11/16"	40'-0 5/16"	1'-9⅜"	21'-4 13/16"
15	48+54.00	I	B-B	337.11±	363.00	404.89	407.88	42'-7⅞"	41'-9 13/16"	0'-9⅜"	21'-5⅜"
16	48+99.00		A-A	337.14±	363.00	406.69	409.68	44'-4⅝"	43'-7⅛"	0'-9⅜"	21'-7⅜"
17	49+44.00	I	A-A	338.13±	363.00	408.49	411.48	45'-2⅜"	45'-2½"	2⅜" shims	21'-9¼"
18	49+89.00		A-A	338.15±	363.00	410.29	413.28	47'-0⅛"	47'-0 1/16"	"	21'-11 1/16"
19	50+34.00	I	A-A	338.11±	363.00	412.09	415.08	48'-5¼"	48'-9⅜"	"	22'-0⅜"
20	50+79.00		A-A	338.15±	363.00	413.89	416.88	50'-7⅛"	50'-7 7/16"	"	22'-2⅝"

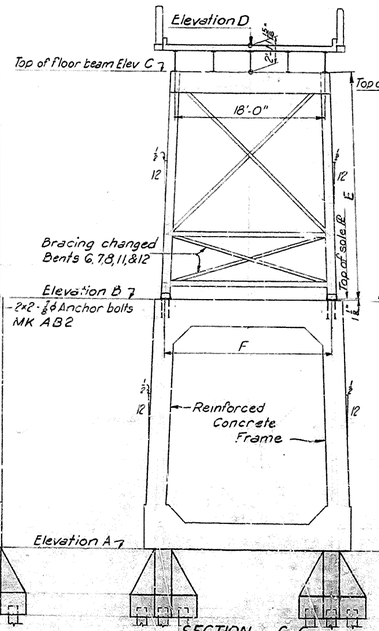
* Use 1⅜" fill PLs under bearing area of each stringer at Bent 3

NOTES:
Shaded areas indicate existing material.
Unshaded areas indicate new material.
The stationing of bents as listed applies to the steel bents only.
All new concrete bents are centered on existing pedestals.
Before raising approach spans, the roadway expansion plates are to be removed by removing existing rivets. After the spans are in their final position, the expansion plates are to be replaced and plug welded at the rivet holes. See Drawing No 1080H424.
Remove existing paint on portion of columns or other members to be encased. Portion of columns immediately above and below encasement to be given 2 coats of Thermastic Enamel.
Field Paint See TVA Specifications 3054

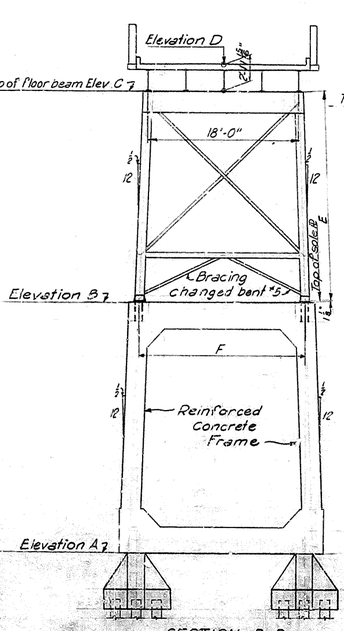
REFERENCE DRAWINGS:
1080H401.....GENERAL DRAWING
1080H404.....ANCHOR BOLT PLAN
1080H414.....BENTS 1 TO 20-CONCRETE EXTENSIONS
1080H421.....BENT REVISIONS-WEST APPROACH
1080H424.....STRINGER REVISIONS-SPANS 1, 31 & 38



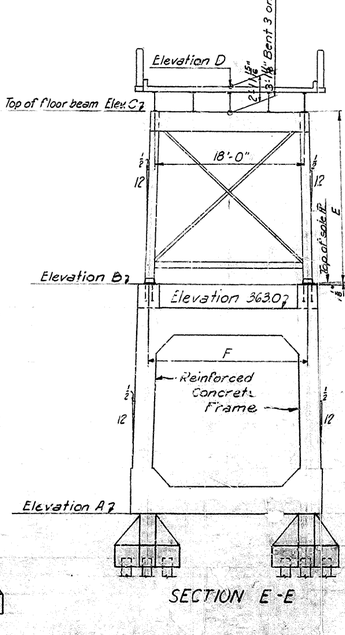
ELEVATION II



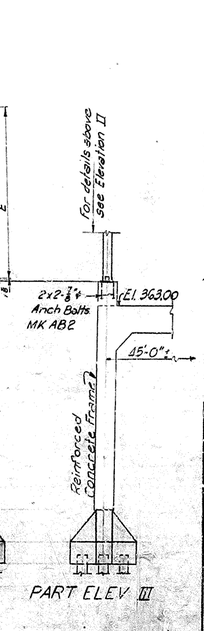
SECTION C-C



SECTION D-D



SECTION E-E



PART ELEV III

Scale: ⅛" = 1'-0"

PROJECT 8=1080 Sheet 2

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

EGGNERS FERRY BRIDGE "ACROSS TENNESSEE RIVER WEST APPROACH - TYPICAL SECTIONS

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

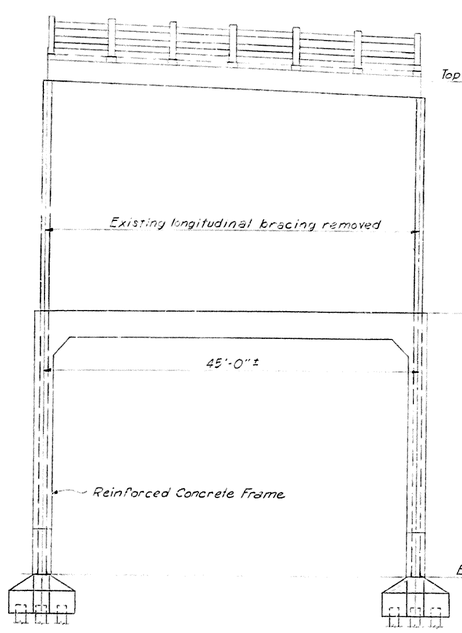
SUBMITTED	RECOMMENDED	APPROVED
J. E. Lewis	C. H. Swift	Virgil Reed

KNOXVILLE 8-13-42 8 HR-5 1080H402 R2

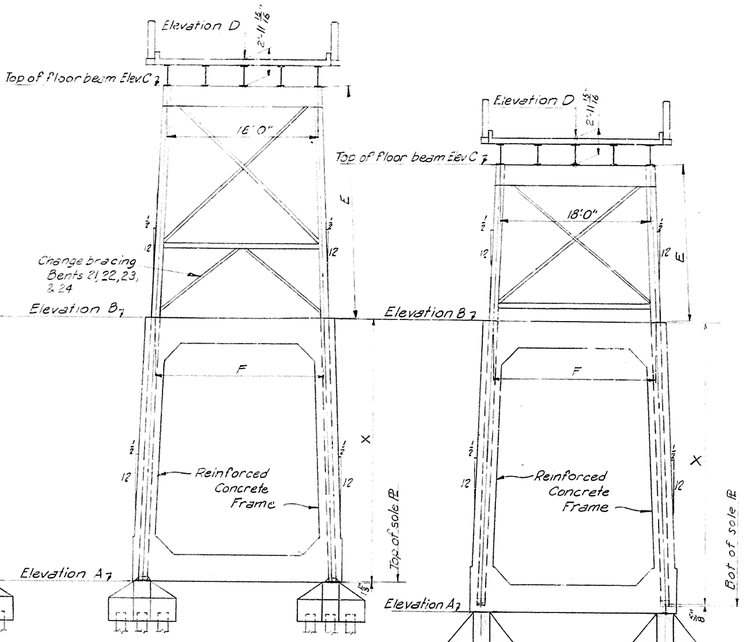
RECORD DRAWING AS CONSTRUCTED
Frank W. Mabe 7-1-44

REV NO.	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECM
DSGN. REG		SUPT. R.L.G.					
DRWN REG		MAP DIST. Watkins					
CKD G.H.J.		ENGINEER R.W. Mabe					
TRCD V.							
COMP.							
HC	AAM						

Revised Notes



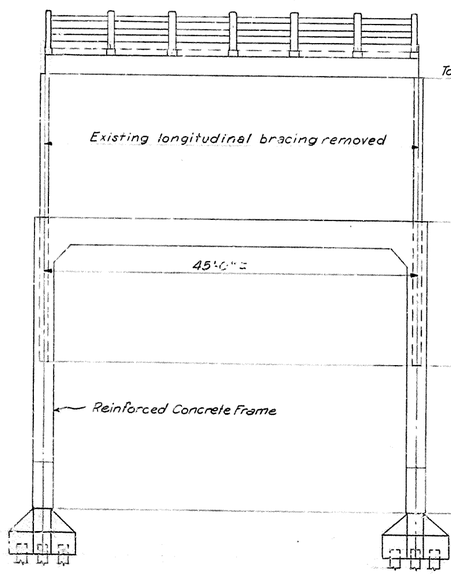
ELEVATION I
SEE TABLE FOR LOCATION



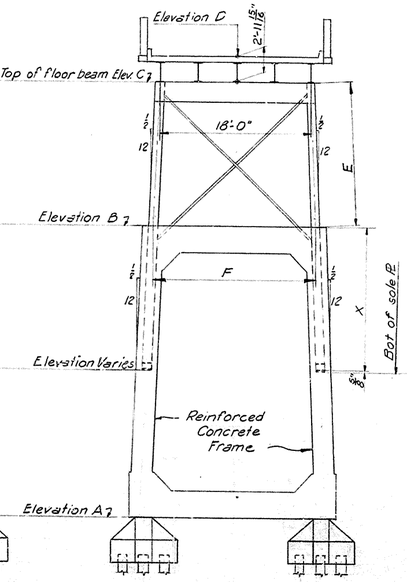
SECTION A-A

SECTION B-B

Bent	Station	Elevation	Section	A	B	C	D	Length cut off Column	Length of existing Column	E	Depth of Encasement (X)	F
21	68+07.00	I	A-A	333.78±	363.00	388.95±	391.94±	0	55'-1⅝"	25'-11⅜"	29'-1½"	20'-2"
22	68+52.00		A-A	333.80±	363.00	387.17±	390.16±	0	53'-3⅞"	24'-2⅝"	29'-1¼"	20'-0⅝"
23	68+97.00	I	A-A	331.79±	363.00	385.36±	388.35±	0	53'-6¾"	22'-4⅝"	31'-1⅜"	19'-10⅛"
24	69+42.00		A-A	331.79±	363.00	383.56±	386.55±	0	51'-8⅝"	20'-6⅜"	31'-1⅛"	19'-8⅜"
25	69+87.01	II	B-E	330.79±	363.00	381.96	384.95	0	50'-11"	18'-11⅜"	31'-10⅛"	19'-7"
26	70+32.03		C-C	330.82±	363.00	380.75	383.74	0	49'-1⅞"	17'-9⅜"	31'-3⅛"	19'-5 13/16"
27	70+77.06	II	C-C	330.81±	363.00	379.96	382.95	0	47'-3⅞"	16'-11⅜"	30'-3⅛"	19'-5"
28	71+22.09		C-C	330.79±	363.00	379.56	382.55	0	45'-6⅝"	16'-6⅜"	28'-11"	19'-4⅞"
29	71+67.13	II	C-C	330.80±	363.00	379.51	382.50	0	43'-8⅜"	16'-6¼"	27'-2"	19'-4½"
30	72+11.91		C-C	330.79±	363.00	379.51	382.50	0	41'-10⅛"	16'-6¼"	25'-4⅞"	19'-4½"
31	72+56.95	II	C-C	330.80±	363.00	379.51	382.50	0	40'-1⅝"	16'-6¼"	23'-6⅜"	19'-4½"
32	73+01.98		C-C	330.82±	363.00	379.51	382.50	0	38'-3⅜"	16'-6¼"	21'-9⅛"	19'-4½"
33	73+47.02	II	C-C	332.80±	363.00	379.51	382.50	0	34'-6⅝"	16'-6¼"	17'-11⅜"	19'-4½"
34	73+92.06		C-C	332.81±	363.00	379.51	382.50	0	32'-8⅜"	16'-6¼"	16'-2"	19'-4½"
35	74+37.09	II	C-C	333.79±	363.00	379.51	382.50	0	29'-10⅞"	16'-6¼"	13'-4⅜"	19'-4½"
36	74+82.13		C-C	333.78±	363.00	379.51	382.50	0	28'-1⅛"	16'-6¼"	11'-6⅜"	19'-4½"



ELEVATION II



SECTION C-C

NOTES:
Shaded areas indicate existing material.
Unshaded areas indicate new material.
The stationing of bents as listed applies to the steel bents only.
All new concrete bents are centered on existing pedestals.
Before raising approach spans, the roadway expansion plates are to be removed by removing existing rivets. After the spans are in their final position, the expansion plates are to be replaced and plug welded at the rivet holes. See Drawing No. 1080H424.
Remove existing paint on portion of columns or other members to be encased. Portion of columns immediately above and below encasement to be given 2 coats of Hermastic Enamel.
Field Paint: See TVA Specifications 3054.

REFERENCE DRAWINGS:
1080H401.....GENERAL DRAWING
1080H415.....BENTS 21 TO 24-CONCRETE ENCASEMENTS
1080H416.....BENTS 25 TO 36-CONCRETE EXTENSIONS
1080H422.....BENT REVISIONS-EAST APPROACH
1080H424.....STRINGER REVISIONS-SPANS 1, 31 & 38
1080H452.....ALTERATIONS TO SLAB & RLG. E. APPROACH

Scale: ⅜"=1'-0"

PROJECT 8-1080 Sheet 3

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

EGGNERS FERRY BRIDGE ACROSS TENNESSEE RIVER EAST APPROACH - TYPICAL SECTIONS

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

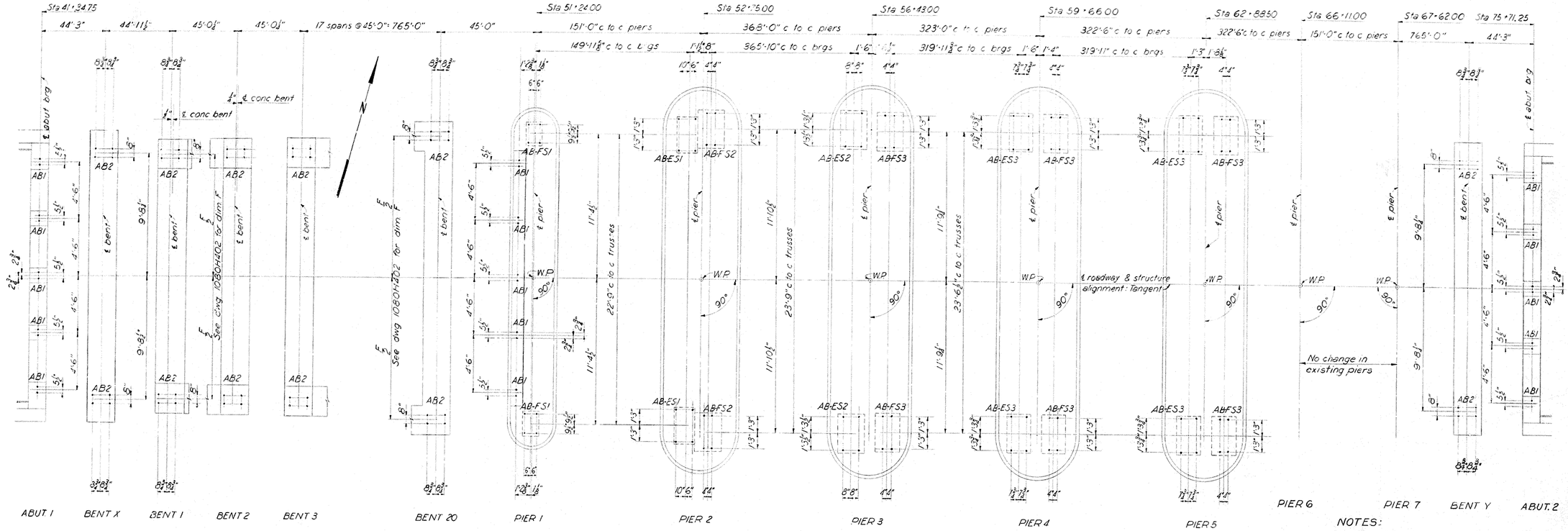
SUBMITTED	RECOMMENDED	APPROVED
F. E. Junior	C. H. Babcock	Gwright Reid
KNOXVILLE	8-13-42	8 HR 5 1080H403 R2

RECORD DRAWING AS CONSTRUCTED
Frank W. Webb 7-1-44

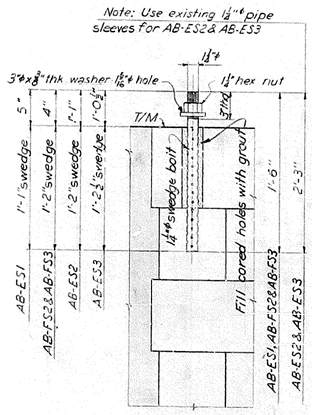
E 8/5-6-42 JM TRC RLG
Signed as constructed
1 11-24-43 RLG
Revised Notes

REV NO	DATE	MADE	CHKD	SUPV	INSP	SUBM'D	PC'S M
DSGN	REG			SUPV	R. L. G.		
DRWN	REG			Insp. Dept.			
CHKD	G. H. F.				W. Fahrman		
TRCD	✓						
COMP					R. W. Mabe		
NO	AAM'S						28a

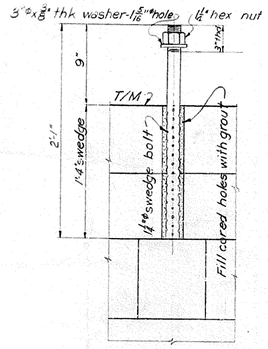
BRIDGE



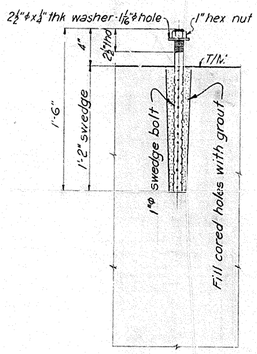
PLAN



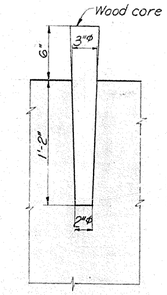
ANCHOR BOLTS
8 REQD · MK AB-ES1
8 REQD · MK AB-FS2
24 REQD · MK AB-FS3
8 REQD · MK AB-ES2
16 REQD · MK AB-ES3
Scale 1½" = 1'-0"



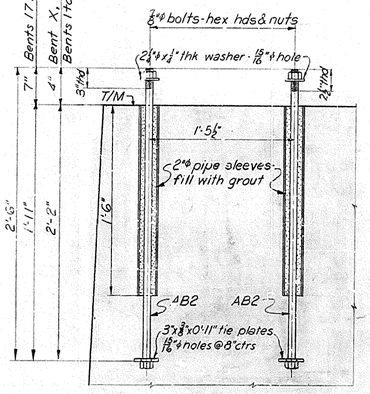
ANCHOR BOLT
8 REQD · MK AB-FS1
Scale 1½" = 1'-0"



ANCHOR BOLT
30 REQD · MK AB1
Scale 1½" = 1'-0"



DETAIL OF CORED HOLES FOR ANCHOR BOLTS AB1
Scale 1½" = 1'-0"



Material for one column bearing:
4-⅞" ø bolts x 2'-6"-3" thd-hex hds & nuts
4-2¼" ø x ¼" thk washers-1⅝" ø hole
4-2½" ø x 1'-6" pipe sleeves
2-pcs 3"x⅜"x0'-11"-1⅝" ø holes @ 8" ctrs

ANCHOR BOLTS
176 REQD · MK AB2
Scale 1½" = 1'-0"

NOTES:
Material: Structural steel shall conform to ASTM, A7-39. Anchor bolts, nuts and washers shall conform to ASTM, A107-39, Grade 21 or 22, or A7-39. Pipe sleeves shall be standard weight black steel pipe conforming to ASTM, A120-40.
Shop Paint: None.
Field Paint: All exposed surfaces after erection of spans in accordance with TVA Specs. 3054.

REFERENCE DRAWINGS:

1080H401	GENERAL DRAWING
1080H402	WEST APPROACH-TYPICAL SECTIONS
1080H411	ABUTS. 1 & 2: WALLS, GIRDERS & SLAB
1080H413	BENTS X & Y-CONCRETE EXTENSIONS
1080H414	BENTS 1 TO 20-CONCRETE EXTENSIONS
1080H421	BENT REVISIONS-WEST APPROACH
1080H423	BENTS X & Y-SPANS X & Y
1080H433	PIER 1-SHEET 2
1080H435	PIER 2-SHEET 2
1080H437	PIER 3-EXTENSION
1080H436	PIERS 4 & 5-EXTENSIONS
1080H441	TRUSS REVISIONS
1080H442	EXPANSION DEVICES & BEARINGS
1080H462	JACKING METHOD-PIER 1
1080H463	JACKING METHOD-PIER 2
1080H464	JACKING METHOD-PIER 3
1080H465	JACKING METHOD-PIER 4
1080H66	JACKING METHOD-PIER 5

Scale 1" = 1'-0"
Except as noted

PROJECT 8-1080 Sheet 4

REV. NO.	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECM
1	10-22-42	CHF	R.L.G.	W.H.F.			
2	1-8-43	WLB	CHF	R.L.G.	W.H.F.		

3/16/43 ADDITIONAL TITLE TRIAL 6-5-43 WCH
Signed as constructed
2. Weight of BOLT Revised W.H.F.
Revised Notes
1. Revised CHF R.L.G. W.H.F.
General Revision

DSGN. —
DRWN. AFM
CHKD. E.K.A.
TRCD.
COMP.
INSP. date
SUPV. R.L.G.
APPVD. R.W.M.
HC AAM 8-13-42

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

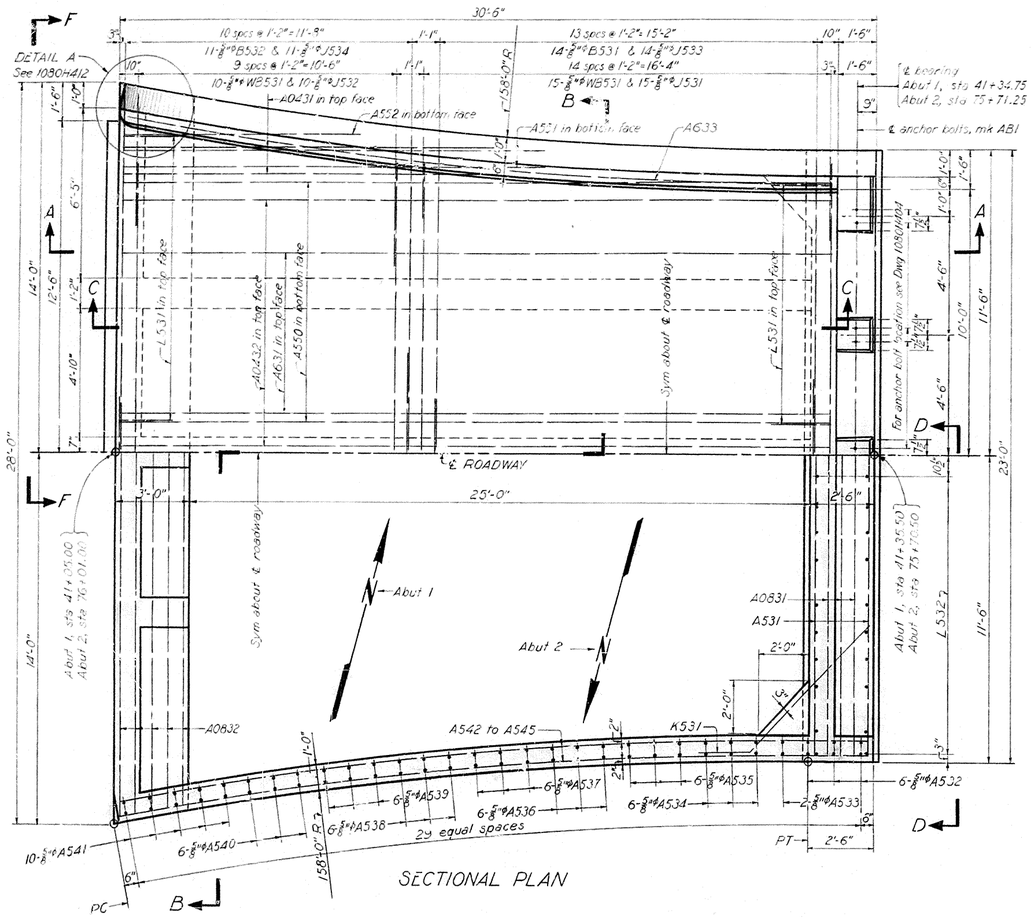
EGGNERS FERRY BRIDGE ACROSS TENNESSEE RIVER
ANCHOR BOLT PLAN

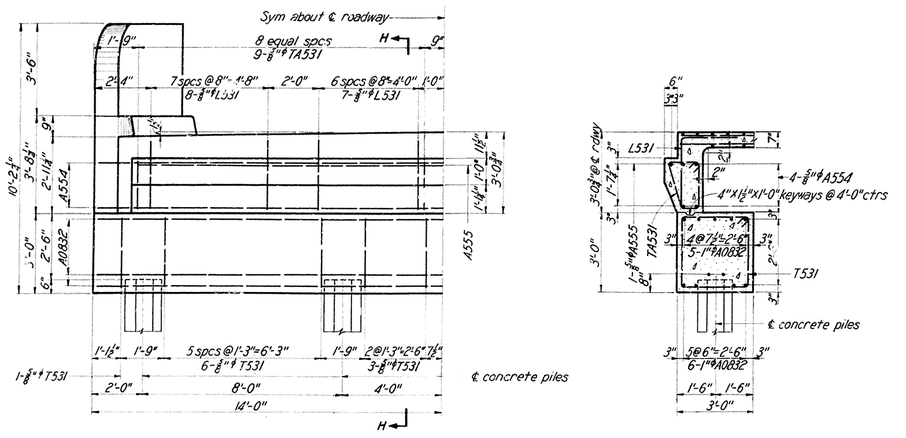
KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED	RECOMMENDED	APPROVED
F. E. Kennon	R. L. Gaskins	Aubrey H. Rice
KNOXVILLE	8-13-42	8 HR 5 1080H404 R3

RECORD DRAWING AS CONSTRUCTED
Paul D. Wold

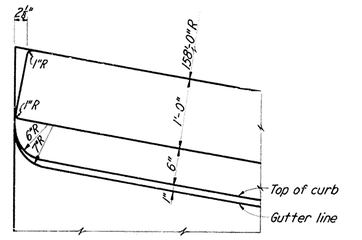
8-13-42 | 1 HC | 2 HC | 3 | 4 | 5 | 6


DETAIL A
See 1080H412
30'-6"
10 spcs @ 1'-2" = 11'-9"
11-⅞"ϕB532 & 11-⅞"ϕJ534
9 spcs @ 1'-2" = 10'-6"
10-⅞"ϕWB531 & 10-⅞"ϕJ532
13 spcs @ 1'-2" = 15'-2"
14-⅞"ϕB531 & 14-⅞"ϕJ533
14 spcs @ 1'-2" = 16'-4"
15-⅞"ϕWB531 & 15-⅞"ϕJ531
A0431 in top face
A552 in bottom face
A551 in bottom face
A633
℄ bearing
Abut 1, sta 41+34.75
Abut 2, sta 75+71.25
9"
℄ anchor bolts, mk AB1
158'-0" R
B
A
C
D
F
28'-0"
14'-0"
12'-6"
4'-10"
6'-3"
L531 in top face
A0431 in top face
A631 in top face
A550 in bottom face
Sym about ℄ roadway
for anchor bolt location see Dwg 1080H404
℄ ROADWAY
25'-0"
3'-0"
2'-6"
Abut 1
Abut 2
A0831
A531
2'-0"
A542 to A545
K531
A0832
10-⅞"ϕA541
6-⅞"ϕA540
6-⅞"ϕA538
6-⅞"ϕA539
6-⅞"ϕA537
6-⅞"ϕA536
6-⅞"ϕA535
6-⅞"ϕA534
2-⅞"ϕA533
6-⅞"ϕA532
2y equal spaces
PT
PC
Abut 1, sta 41+35.50
Abut 2, sta 75+70.50
L532
23'-0"
11'-6"
4'-6"
10'-0"
1'-0"
1'-6"
7½"
SECTIONAL PLAN
2½"
8"
2"
1"R
2-¾"ϕA632
Varies
Sym about ℄ roadway
½" parabolic crown
3-¾"ϕA633
3-¾"ϕA631
3 spcs @ 1'-0" = 3'-0"
1'-3"
3½"
7-⅞"ϕA0432
A0432
A631
A633
A549
A634
W8531
P0431
B531
B532
7½"
6 spcs @ 7½" = 3'-7½"
6-⅝"ϕA550
7-⅝"ϕA550
A550
3-1⅛"ϕH931
2-1"ϕD831
1-1"ϕD832
2-1"ϕD831
3-1⅛"ϕH931
1-1"ϕD832
H931
D831
D832
1-⅞"ϕA552
2-⅞"ϕA551
3-1"ϕK931
K831
4'-10"
7"
1'-2"
No concrete above this constr jt shall be poured until structural steel in adjoining span has been completely erected.
SECTION B-B
Scale ½" = 1'-0"
29'-0"
Elevations ℄ rdwy
Abut 1, El 382.55
Abut 2, El 382.50
3 spcs @ 1'-0" = 3'-0"
1'-6"
5 spcs @ 1'-6" = 7'-6"
2'-0"
4-⅝"ϕP0431
6-⅝"ϕP0431
3'-0¾" ℄ rdwy
1'-4½"
1'-0"
D832
H931
D831
6¾"
15'-0"
3'-0"
2'-0"
5'-0"
SECTIONAL ELEVATION C-C
2'-6"
1'-0"
9"
7½"
Abut 1 - Fin brg elevations
℄ stringer, El 379.75
Int stringer, El 379.73
Ext stringer, El 379.66
Abut 2 - Fin brg elevations
℄ stringer, El 379.53
Int stringer, El 379.51
Ext stringer, El 379.44
Pour brg areas ¼" high and grind down to correct brg elevations
℄ brg
SECTION G-G
Scale ¾" = 1'-0"
Wrap ends of rails with two layers of tar paper
10'-0"
9'-11"
E
Sym about ℄ roadway
5 @ 8¾" = 3'-4"
6 @ 8" = 4'-0"
6-⅝"ϕL531
7-⅝"ϕL531
3'-6"
15'-2¼"
A0831
A531
6'-0"
2'-0"
G
10-⅝"ϕL532, e.f.
3'
11"
1'-9"
4'-9"
℄ conc piles
ELEVATION D-D
L531
4"x1½"x1'-0" keyways @ 4'-0" ctrs.
A553
3-⅞"ϕA553
2'-3¾"
3'-0"
10½"
3-1"ϕA0831
9"
℄ anchor bolts AB1, for details see dwg 1080H404
L532
10"x2"x2'-0" keyways @ 4'-0" ctrs.
4-1"ϕA0831
1'-6"
SECTION E-E
28-⅝"ϕA546, e.f., spaced with A532-A541
A632
A549
A548
1¾"ϕL631, e.f.
1-⅝"ϕA547, e.f.
1'-6"
1-⅜"ϕL632, e.f.
4"x1½"x1'-0" keyways @ 4'-0" ctrs
Abut 1, El 386.68
Abut 2, El 386.63
Abut 1, El 383.18
Abut 2, El 383.13
Constr jt
Abut 1, El 379.49
Abut 2, El 379.44
Abut 1, El 376.49
Abut 2, El 376.44
Abut 1, El 386.54
Abut 2, El 386.63
Abut 1, El 383.34
Abut 2, El 383.13
Abut 1, El 379.66
Abut 2, El 379.44
3'-6"
10'-2½"
3'-8½"
3'-0"
2'-4"
A541
A540
A539
A538
K631
A537
A536
A535
A534
A533
A532
3-⅝"ϕA545, e.f.
1-⅝"ϕA544, e.f.
1-⅝"ϕA543, e.f.
1-⅝"ϕA542, e.f.
6 spcs @ 1'-5" = 8'-6"
6-⅞"ϕK531
Abut 1, El 373.66
Abut 2, El 373.44
Abut 1, El 371.66
Abut 2, El 371.44
15'-2¼"
6'-0"
SECTIONAL ELEVATION A-A
SHOWING REINFORCEMENT IN SIDE WALL
NOTES:
FORM 3: forms for all vertical exposed surfaces of abutments shall be lined with plywood or similar material, having a minimum of joints.
REINFORCING STEEL For schedule and bending diagrams see 1080H417.
For additional notes see 1080H413.
Scale ⅜" = 1'-0"
Except as noted
PROJECT 8-1080
Sheet 5
EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68
ABUTMENTS 1 AND 2
WALLS, GIRDERS, AND SLAB
KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT
SUBMITTED
RECOMMENDED
APPROVED
KNOXVILLE
10-15-42
8
4R
5
1080H411R1
RECORD DRAWING AS CONSTRUCTED
7-1-44
COMPANION DRAWING: 1080H412
Signed as constructed
REV NO.
DATE
MADE
CHKD
SUPV
INSP
SUBM
RECM
DSGN W.B.R. 7-7-42
DRWN HH
CHKD G.L.M.
TRCD
COMP
ENGINEER
AAM
HC
2152
BRIDGE

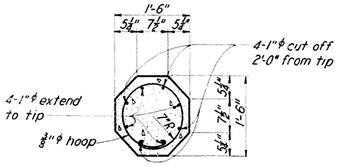


ELEVATION F-F
See 1080H411

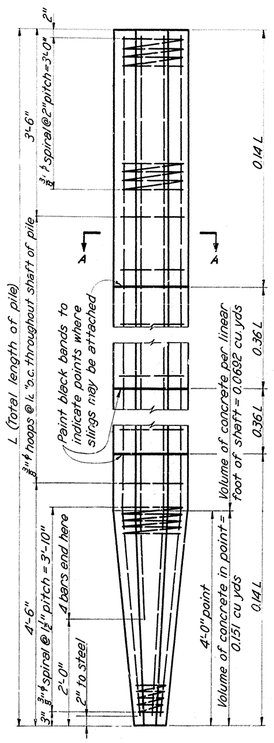
SECTION H-H

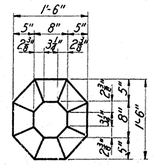


DETAIL A
Scale 1"=1'-0"



SECTION A-A





18" PRECAST CONCRETE PILE
Scale ¾"=1'-0"

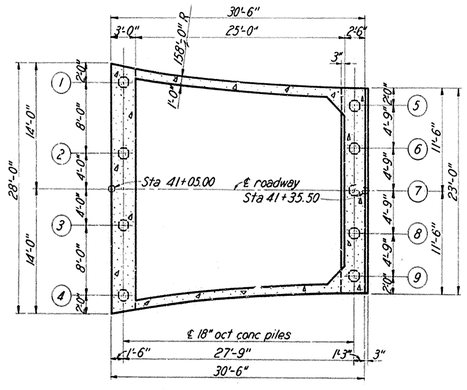
PILE RECORD					
Pile No	Elevation Cut-off	Tip	Length in place	Calc brg (tons)
ABUTMENT 1					
1	376.99	328.3	48.8'	92.3
2	"	326.9	50.1'	100.0
3	"	328.2	48.8'	75.0
4	"	325.8	51.2'	85.3
5	372.16	322.3	49.9'	85.3
6	"	321.3	50.9'	54.0
7	"	321.9	50.3'	50.0
8	"	322.1	50.1'	92.3
9	"	321.5	50.7'	92.3
ABUTMENT 2					
1	371.94	306.2	65.7'	85.7
2	"	305.9	66.0'	85.7
3	"	305.6	66.3'	80.0
4	"	306.0	65.9'	100.0
5	"	307.0	64.9'	85.7
6	376.94	311.09	65.9'	46.1
7	"	307.79	69.2	75.0
8	"	307.82	69.1	75.0
9	"	310.07	66.9	60.0

NOTES:

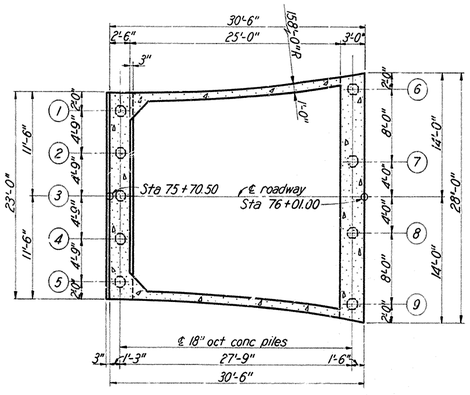
PRECAST CONCRETE PILES:
CONCRETE: Precast concrete piles shall be class S concrete made with type I or II portland cement. Maximum size of coarse aggregate shall be size 5. Top and bottom edges shall be chamfered ½".
Handling: Slings shall be attached to piles at positions indicated. In handling, the entire weight of the pile shall be supported by the slings at all times when the longitudinal axis of the pile makes an angle of 70° or less with the horizontal.
REINFORCING STEEL: See specifications.
CAST IN PLACE PILES:
As an alternate to precast concrete piles, 16 "ϕ cast-in-place piles may be used. The steel shell shall be type YN16 or UN16 of the Union Metal Mfg. Company, or approved equal. Filling for the piles shall be class S concrete made with type I or II portland cement. Maximum size coarse aggregate shall be size 4. All shells for each group of piles shall be driven to the designated bearing before any concrete filling is placed in that group.
DRIVING:
Piles shall be driven to the hard stratum at El 300± using a jet where necessary. Minimum bearing value of piles shall be 40 tons.
Roadway embankment shall be placed at least to the cut-off elevation before any piles are driven. After all piles for one abutment are driven, concrete filling shall be placed and piles allowed to stand for two to three weeks before constructing abutments.

For additional notes see 1080H403.

ABUTMENTS 1&2



ABUTMENT 1



ABUTMENT 2

PILING PLAN
Scale ⅛"=1'-0"

Scale ⅛"=1'-0"
Except as noted

PROJECT 8-1080 Sheet 6

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

ABUTMENTS 1 AND 2 PILING PLAN, PILE RECORD AND MISCELLANEOUS DETAILS

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

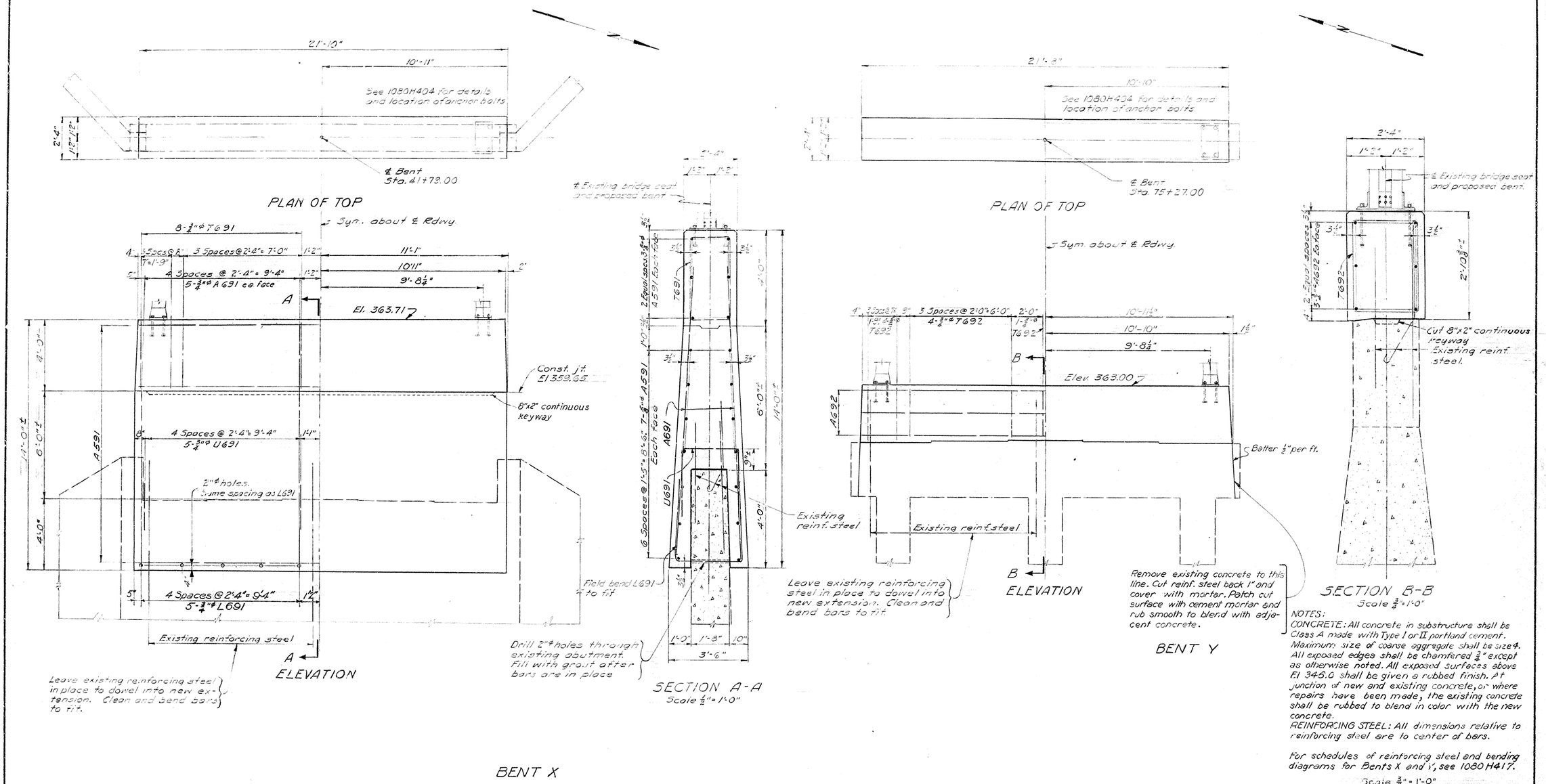
SUBMITTED	RECOMMENDED	APPROVED
F. G. Jenson	M. C. Schutt	George Rich
KNOXVILLE	10-15-42	8 HR 5 1080H412 R2

RECORD DRAWING AS CONSTRUCTED
Fred D. Holt 7-1-44

COMPANION DRAWING: 1080H411

2 Bldg drawing								
Final Field Revisions								
1 1-14-43 V.L.H. GF								
Pile substitutions								
REV NO	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECM	
DSGN H.E.R. C.T.H.	SUPV OF 10-15-42							
DRWN J.H.R. J.M.L.	INSP UNK							
CHKD G.L.M.								
TRCD W.E.M. 10-16-42	ENGINEER							
CON G.L.M. 10-14-42								
APVD								
HC								DBA

BRIDGE



NOTES:
CONCRETE: All concrete in substructure shall be Class A made with Type I or II portland cement. Maximum size of coarse aggregate shall be size 4. All exposed edges shall be chamfered 3/4" except as otherwise noted. All exposed surfaces above El 345.0 shall be given a rubbed finish. At junction of new and existing concrete, or where repairs have been made, the existing concrete shall be rubbed to blend in color with the new concrete.
REINFORCING STEEL: All dimensions relative to reinforcing steel are to center of bars.

For schedules of reinforcing steel and bending diagrams for Bents X and Y, see 1080H417.

Scale 3/8" = 1'-0"
Except as noted.

LEGEND:
- Existing material
- New material
- Existing concrete in section
- New concrete in section

PROJECT 8-1080 Sheet 7

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

BENTS X AND Y
CONCRETE EXTENSIONS

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED	RECOMMENDED	APPROVED
F. E. Junior	C. C. Hobbett	Gwyn Rich

KNOXVILLE 10-15-42 8 HR 5 1080H413 R1

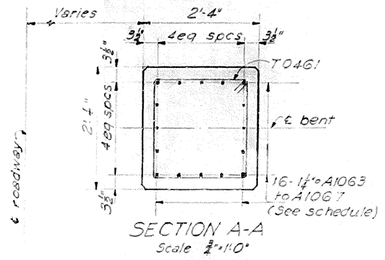
RECORD DRAWING AS CONSTRUCTED
Frank W. Webster 2-1-44

NO.	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECM
1	6-15-44	KJM	TRE	ALM	[illegible]	[illegible]	[illegible]

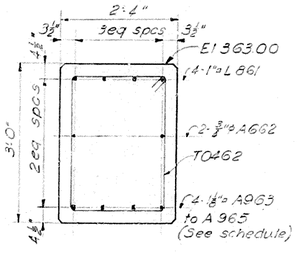
Signed as constructed

DCN W.B.R. ETH SUPV G.F. 8-15-42
DRWN J.H.H. INSP [illegible]
CHKD ETH
PRCD ENGINEER
COMP [illegible] Scroggie
AAM
HC 2-1-44

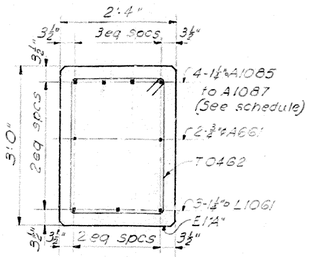
[illegible] 8-15-42



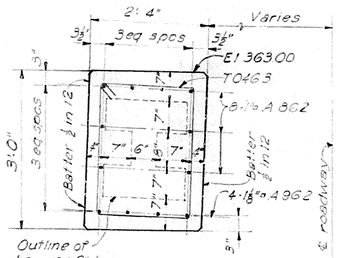
SECTION A-A
Scale ⅜"=1'0"



SECTION B-B
Scale ⅜"=1'0"



SECTION C-C
Scale ⅜"=1'0"



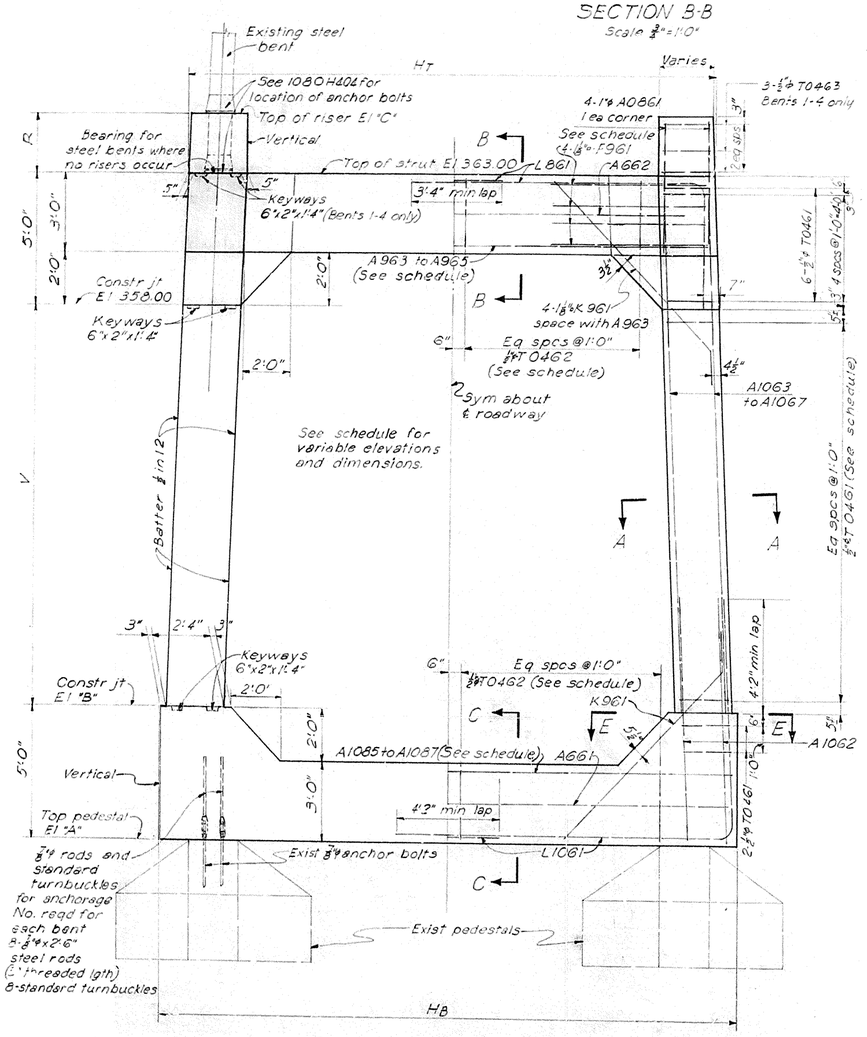
SECTION D-D
Scale ⅜"=1'0"

SCHEDULE OF BENTS								
Bent No	Sta	Elevations A	B	C	Variable dimensions H_B	H_T	V	R
1	42+2400	340.13±	345.13±	366.31	23'10"	21'10"	12'-10½"	3'-3½"
2	42+6900	340.15±	345.15±	365.80	23'-11"	21'-11"	12'-10½"	2'-9½"
3	43+1400	340.13±	345.13±	365.22	24'-0⅛"	22'-0⅛"	12'-10½"	2'-2½"
4	43+5900	340.14±	345.14±	365.22	24'-2"	22'-2⅛"	12'-10½"	2'-2½"
5	44+0400	335.15±	340.15±		24'-6⅜"	22'-4"	17'-10½"	
6	44+4900	335.17±	340.17±		24'-10⅝"	22'-5⅝"	17'-10½"	
7	44+9400	335.17±	340.17±		25'-0⅛"	22'-7⅛"	17'-10½"	
8	45+3900	335.18±	340.18±		25'-2⅛"	22'-9⅛"	17'-10½"	
9	45+8400	337.16±	342.16±		25'-2"	22'-11"	15'-10½"	
10	46+2900	337.16±	342.16±		25'-3⅜"	23'-1"	15'-10½"	
11	46+7400	336.15±	341.15±		25'-6⅛"	23'-3⅛"	16'-10½"	
12	47+1900	336.15±	341.15±		25'-8⅛"	23'-4⅛"	16'-10½"	
13	47+6400	336.13±	341.13±		25'-10⅜"	23'-6⅜"	16'-10½"	
14	48+0900	336.15±	341.15±		26'-0"	23'-8⅛"	16'-10½"	
15	48+5400	337.11±	342.11±		26'-0⅜"	23'-9⅛"	15'-10½"	
16	48+9900	337.14±	342.14±		26'-2''	23'-11⅛"	15'-10½"	
17	49+4400	338.13±	343.13±		26'-3"	24'-1⅛"	14'-10½"	
18	49+8900	338.15±	343.15±		26'-5"	24'-3"	14'-10½"	
19	50+3400	338.11±	343.11±		26'-6⅜"	24'-4⅜"	14'-10½"	
20	50+7900	338.15±	343.15±		26'-8⅛"	24'-6⅛"	14'-10½"	

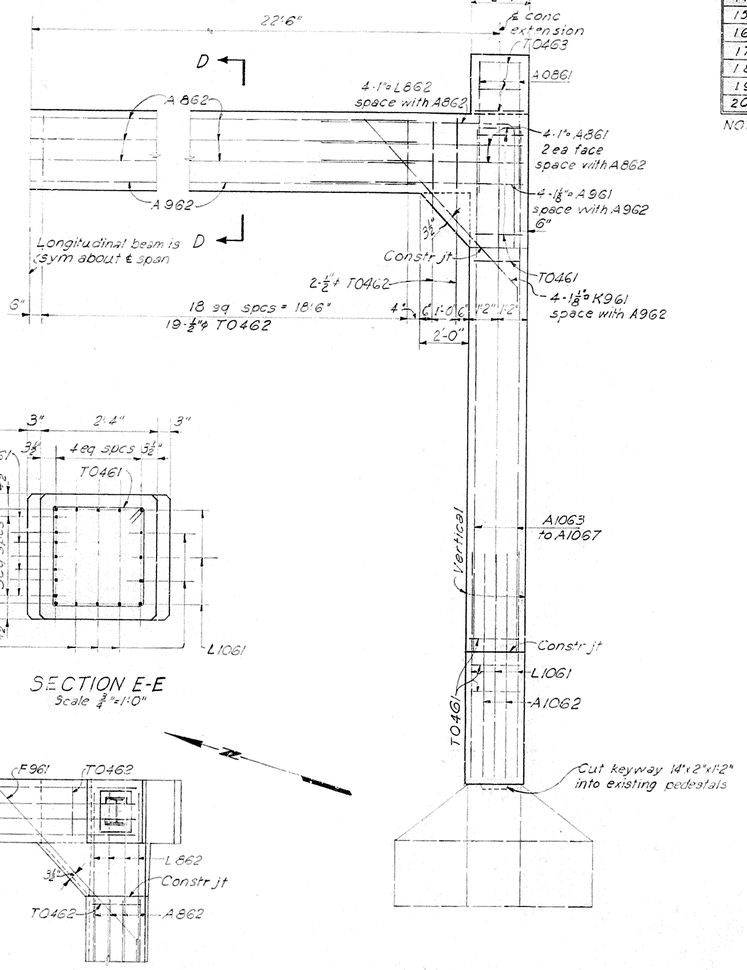
NOTE: Risers occur only where El "C" and dimension "R" are given

SCHEDULE OF REINFORCEMENT							
Bent No.	Mark-Horiz bars Bot strut	Top strut	No. T0461 reqd ea col	Mark-Vert bars Cols	Risers	No. T0462 reqd Bot strut	Top strut
1	A1085	A963	13	A1063	A0861	16	16
2	A1085	A963	13	A1063	A0861	16	16
3	A1085	A963	13	A1063	A0861	18	16
4	A1085	A963	13	A1063	A0861	18	16
5	A1086	A963	18	A1064		18	16
6	A1086	A963	18	A1064		18	16
7	A1086	A963	18	A1064		18	16
8	A1086	A964	18	A1064		18	16
9	A1086	A964	16	A1065		18	16
10	A1086	A964	16	A1065		18	16
11	A1086	A964	17	A1066		18	18
12	A1087	A964	17	A1066		18	18
13	A1087	A964	17	A1066		18	18
14	A1087	A965	17	A1066		20	18
15	A1087	A965	16	A1065		20	18
16	A1087	A965	16	A1065		20	18
17	A1087	A965	15	A1067		20	18
18	A1087	A965	15	A1067		20	18
19	A1087	A965	15	A1067		20	18
20	A1087	A965	15	A1067		20	18

NOTES:
Computed dead load deflection for longitudinal beam = $\frac{5}{16}$"
For schedule of reinforcing steel and bending diagrams see 1080H417
For additional notes and legend see 1080H413



SECTIONAL ELEVATION



PART SIDE ELEVATION

SECTION E-E
Scale ¾"=1'0"

PART PLAN

Scale ⅜"=1'0" Except as noted

PROJECT 8-1080 Sheet 8

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

BENTS 1 TO 20
CONCRETE EXTENSIONS

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

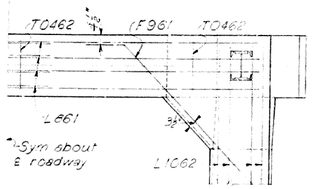
SUBMITTED	RECOMMENDED	APPROVED
T. E. Jennison	H. C. Abbott	Gerald Rich
KNOXVILLE	10-15-42	8 HR 5 1080H414 R2

RECORD DRAWING AS CONSTRUCTED
Frank W. Webster 7-1-44

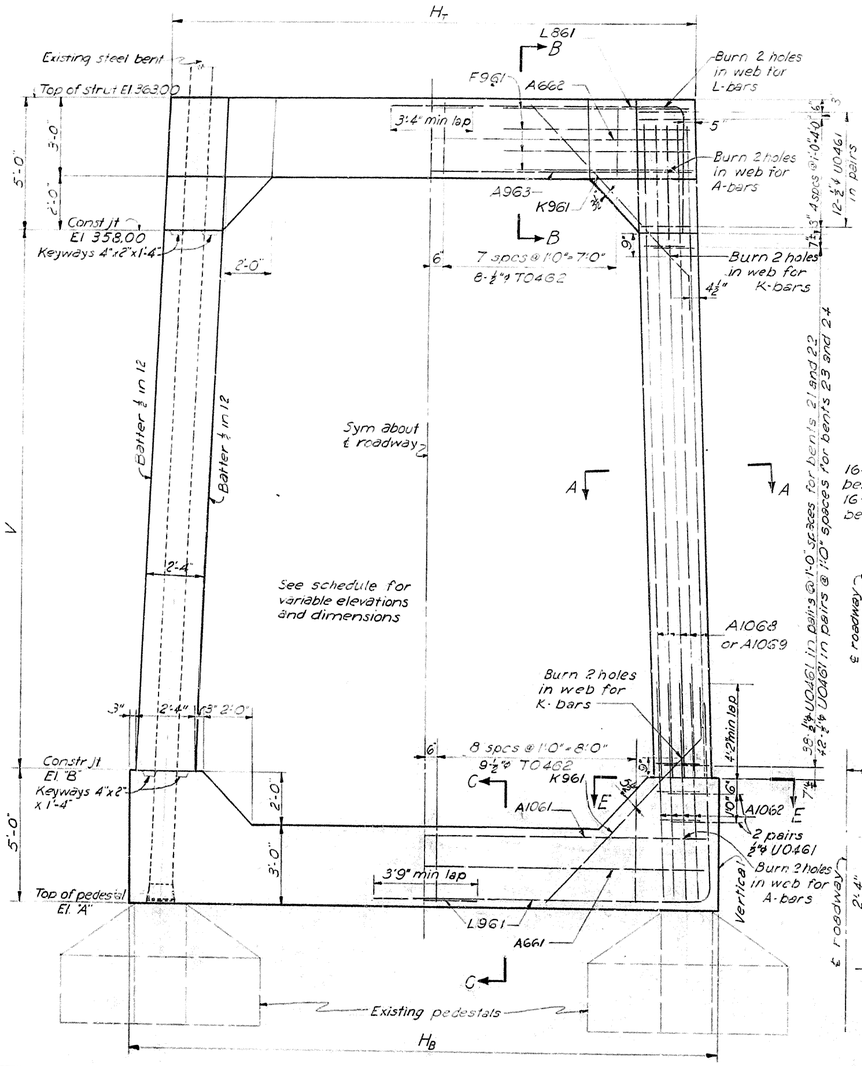
REV NO	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECM
DESIGN ETH. GLM				SUPV GF 8-15-42			
DRAWN JML				INSP [illegible]			
CHKD ETH				ENGINEER			
TRCD				Edwin N Gregg Jr			
CORP							

2 8-15-42 JML ETH GLM GF 8-15-42 Final Field Revisions
1 8-9-43 VMC M.G.F. GF 8-9-43 No. of tie bars TO461 TO462 TO463

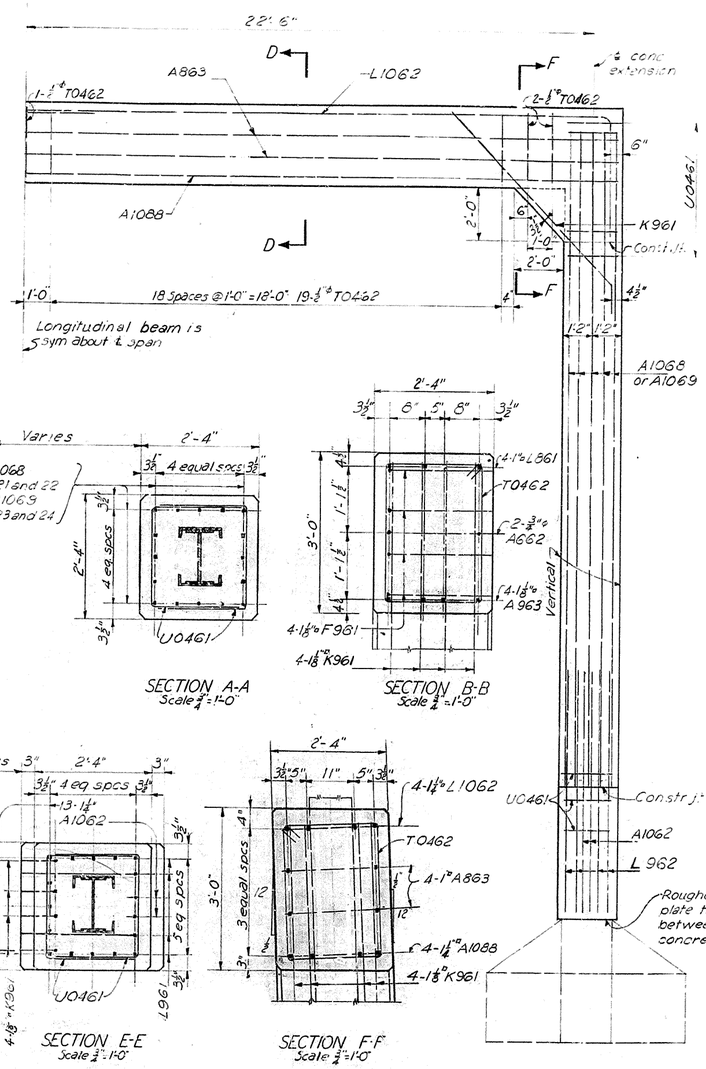
SCHEDULE OF BENTS						
Bent No.	Sta.	Elevations A	Elevations B	Variable Dimensions H_B	Variable Dimensions H_T	Variable Dimensions V
21	68+07.00	333.76	336.76	25'-0"	22'-6"	19'-2 3/8"
22	68+12.00	333.80	333.80	24'-10 1/4"	22'-4 1/2"	19'-2 3/8"
23	68+17.00	331.79	336.79	24'-10 1/4"	22'-6"	21'-2 1/8"
24	68+22.00	331.79	336.79	24'-8 1/4"	22'-0 1/8"	21'-2 1/8"



PART PLAN



SECTIONAL ELEVATION



HALF SIDE ELEVATION

NOTES:
Computed dead load deflection for longitudinal beam = ⅝"
For schedule of reinforcing steel and bending diagrams see 1080H417

For additional notes and legend see 1080H413

Scale ¾"=1'-0"
Except as noted

REV NO.	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECM
2	5-1-44	KJM	ATE	ALA	Revised as constructed		
1	12-23-43	CH	GF	GF	S. Revised No. of the pcs T0462, U0461		

DSGN ETH GLM SUPV G.F. 8-15-42
DRWN KRP+JBL INSP OAK.
CHKD ETH
TRCD ENGINEER
COMP

PROJECT 8-1080 Sheet 9

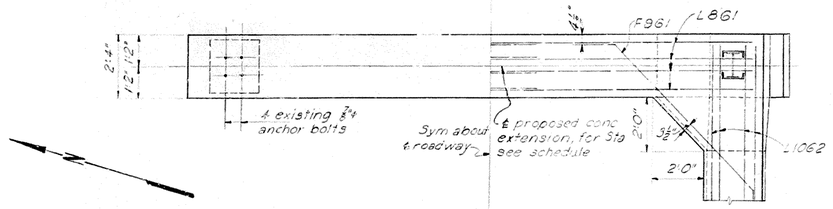
EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

BENTS 21 TO 24
CONCRETE ENCASEMENTS

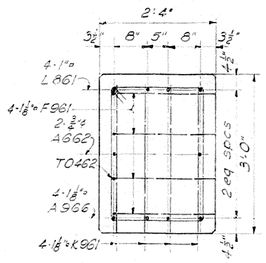
KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED	RECOMMENDED	APPROVED
G. F. Jennison	H. C. Bechtel	Gregory Palmer
KNOXVILLE	10-15-42	8 HR 5 1080H415 R2

RECORD DRAWING AS CONSTRUCTED
Frank L. Whistler 7-1-44

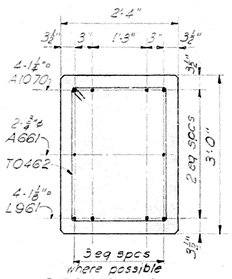


SECTIONAL PLAN A-A



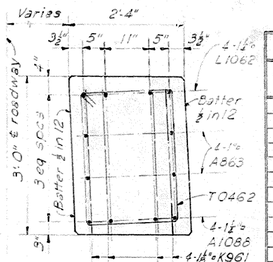
SECTION B-B

Scale 3/4"=1'0"



SECTION C-C

Scale 3/4"=1'0"

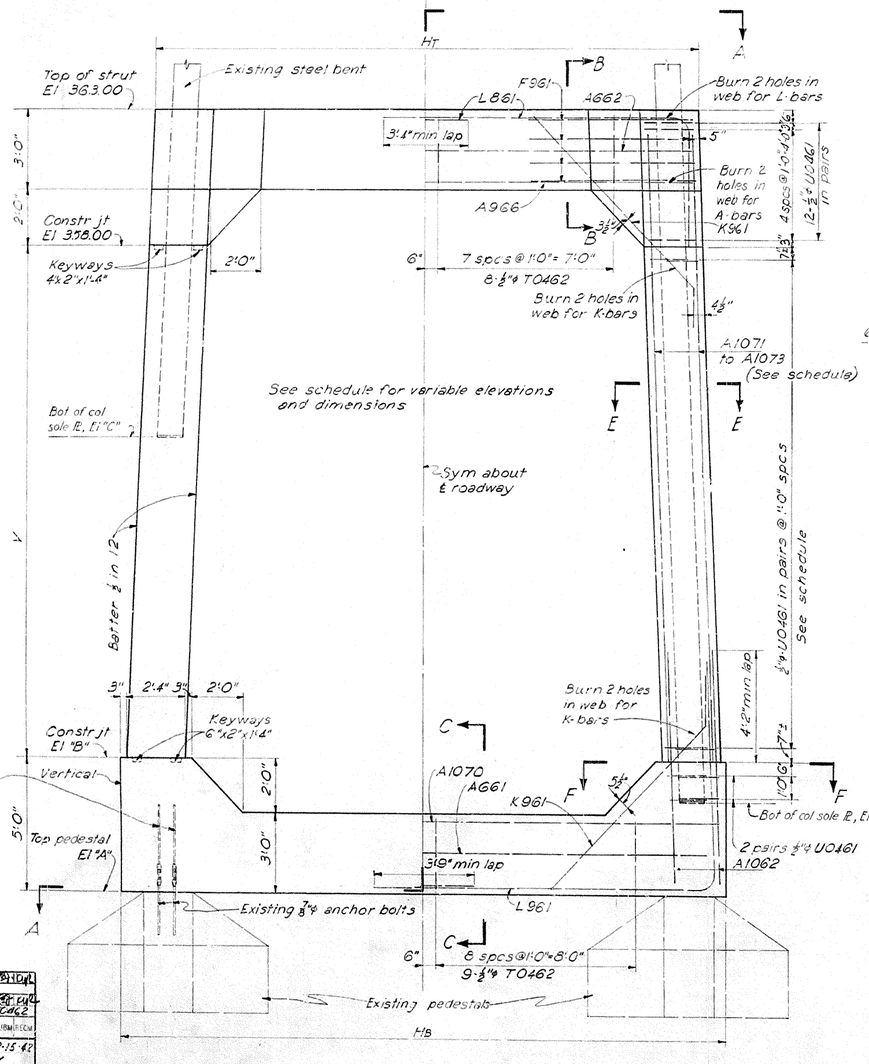


SECTION D-D

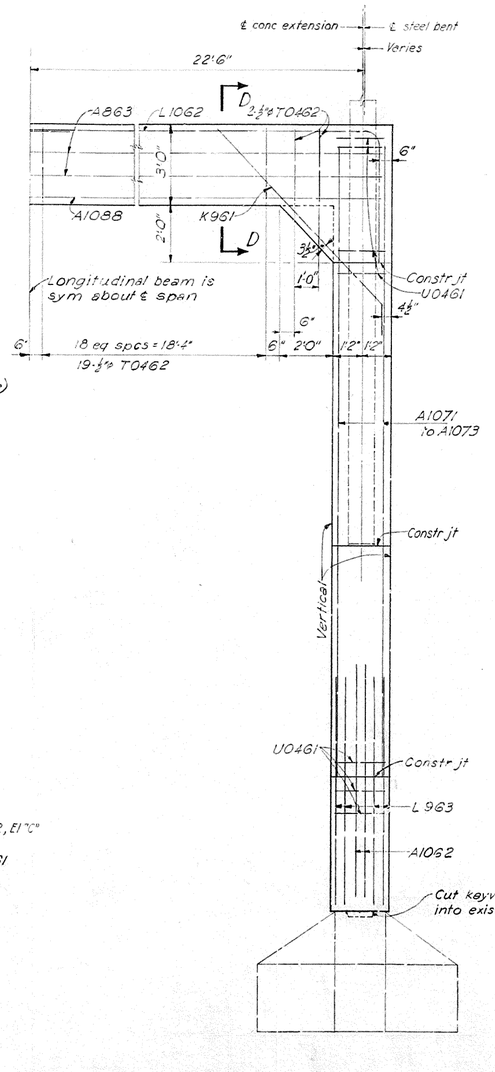
Scale 3/4"=1'0"

SCHEDULE OF BENTS & REINFORCEMENT

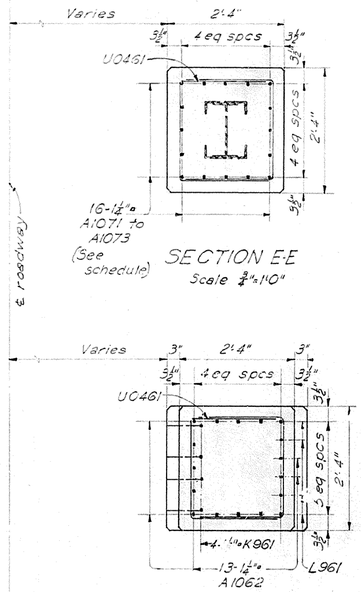
Bent No.	Sta	Variable elevations A	B	C	Variable dimensions Hb	Ht	V	Variable reinforcement Mark No. U0461 in bents	in col
25	69+87.00	330.79±	335.79±	331.04	24'-8½"	21'-11"	22'-2½"	A1071	44
26	70+32.00	330.82±	335.82±	331.63	24'-7"	21'-10⅝"	22'-2"	A1071	44
27	70+77.00	330.81±	335.81±	332.64	24'-6"	21'-9"	22'-2"	A1071	44
28	71+22.00	330.79±	335.79±	334.03	24'-5½"	21'-8½"	22'-2"	A1071	44
29	71+57.00	330.80±	335.80±	333.76	24'-5"	21'-8"	22'-2"	A1071	44
30	72+12.00	330.79±	335.79±	333.76	24'-5"	21'-8"	22'-2"	A1071	44
31	77+57.00	330.80±	335.80±	333.99	24'-5"	21'-8"	22'-2"	A1071	44
32	3+02.00	330.83±	335.82±	334.18	24'-5"	21'-8"	22'-2"	A1071	44
33	79+47.00	332.80±	337.80±	341.98	24'-3½"	21'-6½"	20'-2"	A1072	40
34	73+92.00	332.81±	337.81±	341.78	24'-3½"	21'-6½"	20'-2"	A1072	40
35	74+37.00	333.79±	338.79±	341.38	24'-2½"	21'-5½"	19'-2½"	A1073	38
36	74+82.00	333.78±	338.78±	341.39	24'-2½"	21'-5½"	19'-2½"	A1073	38



SECTIONAL ELEVATION



PART SIDE ELEVATION



SECTION E-E

Scale 3/4"=1'0"

SECTION F-F

Scale 3/4"=1'0"

NOTES:
Computed dead load deflection for longitudinal beam = 1/2"
For schedule of reinforcing steel and bending diagrams see 1080H417
For additional notes and legend see 1080H413

Scale 3/8"=1'0" Except as noted

PROJECT 8-1080 Sheet 10

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

BENTS 25 TO 36
CONCRETE EXTENSIONS

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED	RECOMMENDED	APPROVED
F. E. Kennon	C. E. Schutt	Geo. H. Rich

KNOXVILLE 10-15-42 | E HR 5 | 1080H416R2

RECORD DRAWING AS CONSTRUCTED Frank D. Wells 7-1-44

2 8-14-43 WD TRACING 1080H416R1
Final Field Revisions
1 8-9-43 VCM GF 8-15-43 CYL
No of ¾ bars U0461 T0462

NO	DATE	MADE	CHKD	SUPV	INSP	SUBMITTED
DSGN	ETH GLM	SUPV	GF 8-15-43			
DRWN	JML	INSP	OAK			
CHKD	ETH					
TRCD		ENGINEER				
COMP						

AAM HC DTBR

Quan 2-15-44 (1) 1080H416R2 HC

BRIDGE

EGGNERS FERRY BRIDGE — 8-1080 — 7

BENTS X & Y

BENT X											
	A591	20	5/8"ϕ	28-7							450
	A691	20	3/4"ϕ	12-2							365
	L691	10	3/4"ϕ	8-4	2-6	42°	5-5½		3"	2-9	125
	T691	16	3/4"ϕ	11-9	6"	3-6½	1-10½		1½"		282
	U591	10	3/4"ϕ	8-11	3-2½	42°	1-9		3"	2-3	134
BENT Y											
	A592	6	3/4"ϕ	21-5							193
	T692	17	3/4"ϕ	9-6	6"	2-5	1-10½		1½"		243

1,792

EGGNERS FERRY BRIDGE — 8-1080 — 7

BENTS 1-20

Bottom Strut	A661	40	3/4"ϕ	23-3							1397
Top Strut	A662	40	3/4"ϕ	21-3							1277
Risers	A0861	32	1"ϕ	6-6							555
Long beam	A861	160	1"□	7-7							6125
" "	A862	160	1"□	38-6							20944
" "	A961	160	1 1/8"□	8-0							5508
" "	A962	80	1 1/8"□	38-6							13253
Top strut	A963	28	1 1/8"□	21-6							2,590
" "	A964	24	1 1/8"□	22-4							2,306
" "	A965	28	1 1/8"□	23-4							2,811
Col. dowels	A1062	520	1 1/4"□	8-10							24,403
Columns	A1063	128	1 1/4"□	17-2							11,675
"	A1064	128	1 1/4"□	22-2							15,075
"	A1065	128	1 1/4"□	20-2							13,715
"	A1066	128	1 1/4"□	21-2							14,355
"	A1067	128	1 1/4"□	19-2							13,035
Bottom strut	A1085	16	1 1/4"□	23-4							1,983
" "	A1086	28	1 1/4"□	24-4							3,620
" "	A1087	36	1 1/4"□	25-4							4,845
Long haunches	F961	160	1 1/8"□	11-3	1-9	7-9	1-3	1-3		10-3	7,745
Haunches	K961	480	1 1/8"□	10-5	1-5	9-0	1-0	1-0		10-0	21,516
Top strut	L861	160	1"□	17-11	4-3½	6"	13-1½		4"	4-7½	9,747
Long beam	L862	160	1"□	11-11	4-4½	6"	7-0½		4"	4-8½	6,483
Bottom strut	L1061	120	1 1/4"□	23-10	8-5½	8"	14-8½		5"	8-10½	15,195
Columns	T0461	992	1/2"ϕ	8-1	3"	1-11	1-11		1"		5,194
Struts	T0462	1550	1/2"ϕ	9-5	3"	1-11	2-7		1"		9,260
Risers	T0463	24	1/2"ϕ	7-9	3"	1-10	1-10		1"		124

293,286

EGGNERS FERRY BRIDGE — 8-1080 — 7

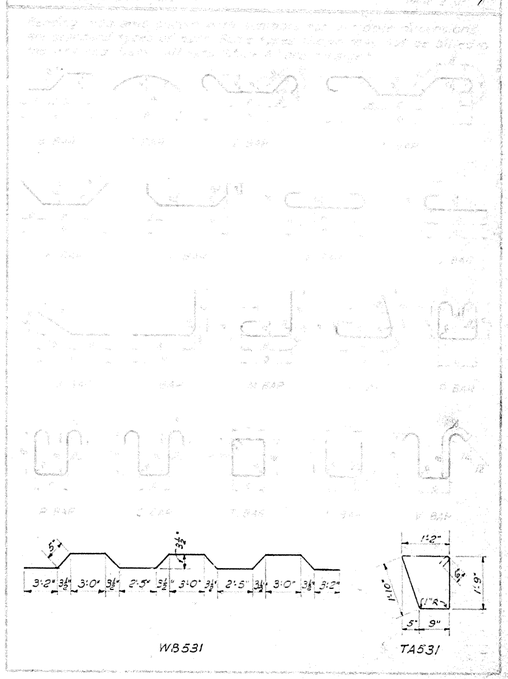
ABUTMENTS 1 & 2

Note: One half of the total number of bars of each mark is required in each abutment.

Slabs	A0431	8	1/2"ϕ	15'-10"	85
"	A0422	28	1/2"ϕ	28'-6"	533
Front Walls	A531	28	5/8"ϕ	22'-6"	657
Ext. beams	A532	24	5/8"ϕ	7'-10"	196
"	A533	8	5/8"ϕ	7'-9"	65
"	A534	24	5/8"ϕ	7'-4"	184
"	A535	24	5/8"ϕ	7'-0"	175
"	A536	24	5/8"ϕ	6'-7"	165
"	A537	24	5/8"ϕ	6'-3"	156
"	A538	24	5/8"ϕ	5'-10"	146
"	A539	24	5/8"ϕ	5'-6"	138
"	A540	24	5/8"ϕ	5'-1"	127
"	A541	40	5/8"ϕ	4'-10"	202
"	A542	8	5/8"ϕ	10'-0"	83
"	A543	8	5/8"ϕ	17'-10"	149
"	A544	8	5/8"ϕ	25'-6"	211
"	A545	24	5/8"ϕ	30'-0"	751
"	A546	220	5/8"ϕ	6'-11"	1616
"	A547	8	5/8"ϕ	6'-8"	56
"	A548	40	5/8"ϕ	30'-0"	1252
Railing	A549	8	5/8"ϕ	29'-7"	247
Slabs	A550	52	5/8"ϕ	28'-6"	1546
"	A551	8	5/8"ϕ	17'-0"	142
"	A552	4	5/8"ϕ	9'-6"	40
Front diaphragm	A553	6	5/8"ϕ	22'-6"	141
Back "	A554	8	5/8"ϕ	27'-0"	225
" "	A555	2	5/8"ϕ	26'-6"	51
Slabs	A631	12	3/4"ϕ	28'-6"	514
Railings	A632	8	3/4"ϕ	27'-10"	334
Curbs	A633	4	3/4"ϕ	28'-3"	170
Front walls	A0831	14	1"ϕ	22'-6"	841
Back struts	A0832	22	1"ϕ	26'-6"	1557

12,755

EGGNERS FERRY BRIDGE — 8-1080 — 7



EGGNERS FERRY BRIDGE — 8-1080 — 7

BENTS 21-36

Bottom Strut	A561	32	3/4"ϕ	23-3							1,117
Top Strut	D562	32	3/4"ϕ	21-3							1,021
Long. beam	A863	64	1"□	46-9							10,173
Top strut	A963	16	1 1/8"□	21-6							1,480
" "	A966	48	1 1/8"□	21-0							4,337
Bottom strut	A1061	16	1 1/4"□	23-8							2,012
Col. dowels	A1062	416	1 1/4"□	8-10							19,523
Columns	A1068	64	1 1/4"□	23-7							8,019
"	A1069	64	1 1/4"□	25-7							8,699
Bottom strut	A1070	48	1 1/4"□	23-9							6,057
Columns	A1071	256	1 1/4"□	25-7							36,156
"	A1072	64	1 1/4"□	24-7							8,359
"	A1073	64	1 1/4"□	23-7							8,019
long. beam	A1088	64	1 1/4"□	46-9							15,896
Long haunches	F861	128	1 1/8"□	11-3	1-9	7-9	1-3	1-3		10-3	5,196
Haunches	K961	384	1 1/8"□	10-5	1-5	9-0	1-0	1-0		10-0	17,213
Top strut	L861	128	1"□	17-11	4-3½	6"	13-1½		4"	4-7½	7,797
Bottom strut	L961	128	1 1/8"□	22-3	8-1	7"	13-7		6½"	8-5½	12,255
Long beam	L1062	128	1 1/4"□	29-10	4-3½	8"	24-10½		5"	4-8½	20,288
Struts	T0462	1220	1/2"ϕ	9-5	3"	1-11	2-7		1"		7,622
Columns	U0461	1888	1/2"ϕ	5-6	1-9	1½"	1-9		1"	1-11	6,883

TOTAL WEIGHT THIS PAGE 29,154

EGGNERS FERRY BRIDGE — 8-1080 — 7

ABUTMENTS 1 & 2

Note: One half of the total number of bars of each mark is required in each abutment.

Slabs	B531	56	5/8"ϕ	14'-2"	12'-0"	1'-0"	1'-2"	1½"	1'-0"		13'-3½	827
"	B532	44	5/8"ϕ	15'-10"	13'-8"	1'-0"	1'-2"	1½"	1'-0"		14-11½	727
Int girders	D831	12	1"□	26-8	1-4	2-6	19-0	8"	1-10½	1-9	23-8	1088
"	D832	6	1"□	22-8	1-4	2-6	15-0	8"	1-10½	1-9	19-8	452
"	H931	18	1 1/8"□	30-9	1-6	27-9		9"			28-6	2382
Slabs	J531	60	5/8"ϕ	3-10	10"	3-0		5"			3-2½	240
"	J532	40	5/8"ϕ	5-5	10"	4-8		5"			4-10½	229
"	J583	56	5/8"ϕ	13-10	10"	13-0		5"			13-2½	808
"	J534	44	5/8"ϕ	15-5	10"	14-8		5"			14-10½	711
Front walls	K531	24	5/8"ϕ	8-7	2-1	6-6	1-5½	1-5½			7-11½	215
Ext. beams	K831	12	1"□	30-3	2-6	27-9	2½"	2-6			30-3	123
Diaphragms	L531	112	5/8"ϕ	6-7	2-4	4"	3-11			2½"	2-6½	759
Front walls	L532	80	5/8"ϕ	9-7	7-3	4"	2-0			2½"	7-5½	800
Ext. beams	L831	8	3/4"ϕ	9-7	6-8	5"	2-6			3"	6-11	115
"	L832	8	3/4"ϕ	10-8	4-8	3-6	2-6			2-3	8-11	128
Int. beams	P0931	120	1/2"ϕ	6-0	8"	1-11	10"	4"		1"	2-1	481
Back Struts	T531	40	5/8"ϕ	11-8	6"	2-8	2-8			1"		487
Back diaphragm	TA531	36	5/8"ϕ	6-6		(See diagram)						244
Slabs	WB531	50	5/8"ϕ	22-8		(See diagram)						1182

TOTAL WEIGHT THIS PAGE 12,018

NOTES

MATERIAL

BENDING & FABRICATION: Bars and stirrups shall be bent cold to shapes shown. No bar shall be field bent unless shown otherwise. Bars must fabricated straight and sound. There shall be no cracked bars. No bar, except those with hooks may have a greater variation than ± 1" from the length shown otherwise in bars and assemblies.

PROJECT 8-1080 Sheet 11

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

ABUTMENTS & BENTS
REINFORCING STEEL

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED: P E Kennison — RECOMMENDED: R C Whitsett — APPROVED: Joseph Rich
KNOXVILLE 10-15-42 — 8 DRAWINGS — 1080H417R2

RECORD DRAWING AS CONSTRUCTED
Frank L. Webb 7-1-44

2 Mitchell Freeman & Jackson Signed as constructed. 1 bench or ck 15 #9 No of tie bars-bents 1-36.

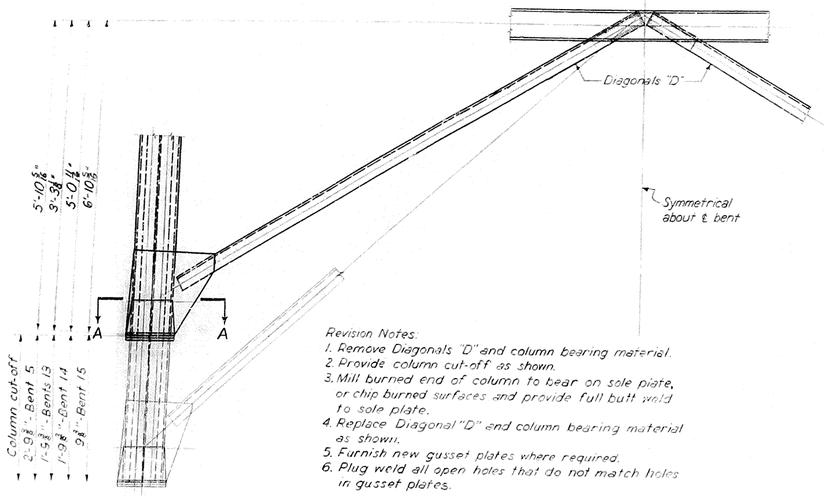
GLM SEE ETH — GE ank

JML AAN — Emma Jernigan — ema

YC

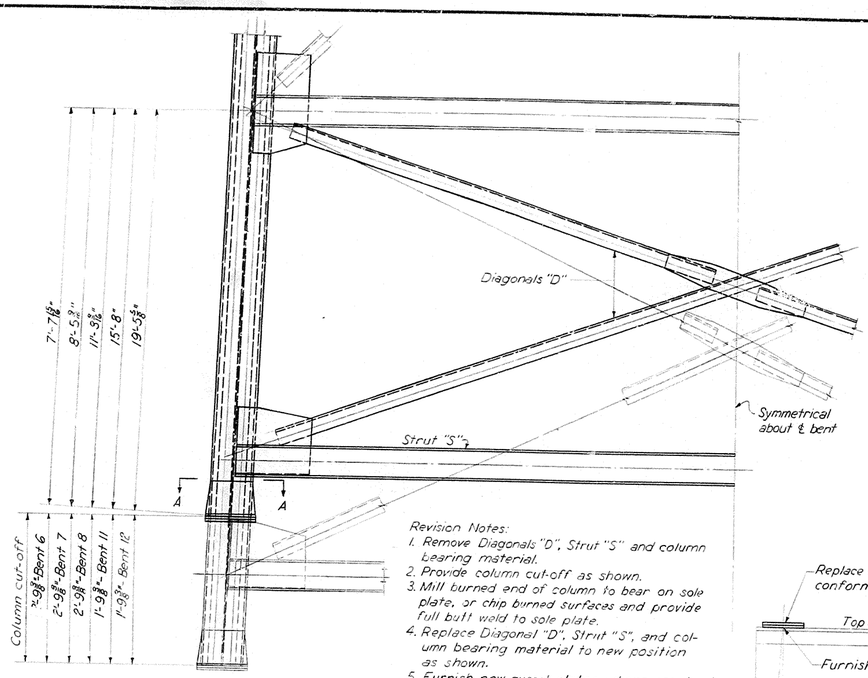
TOTAL WEIGHT THIS PAGE

BRIDGE



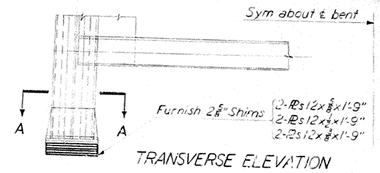
Revision Notes:
1. Remove Diagonals "D" and column bearing material.
2. Provide column cut-off as shown.
3. Mill burned end of column to bear on sole plate, or chip burned surfaces and provide full butt weld to sole plate.
4. Replace Diagonal "D" and column bearing material as shown.
5. Furnish new gusset plates where required.
6. Plug weld all open holes that do not match holes in gusset plates.

TRANSVERSE ELEVATION
BENTS 5,13,14 & 15

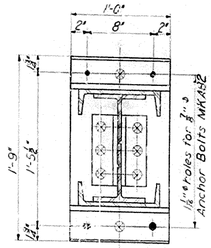


Revision Notes:
1. Remove Diagonals "D", Strut "S" and column bearing material.
2. Provide column cut-off as shown.
3. Mill burned end of column to bear on sole plate, or chip burned surfaces and provide full butt weld to sole plate.
4. Replace Diagonal "D", Strut "S", and column bearing material to new position as shown.
5. Furnish new gusset plates where required.
6. Plug weld all open holes that do not match holes in gusset plates.

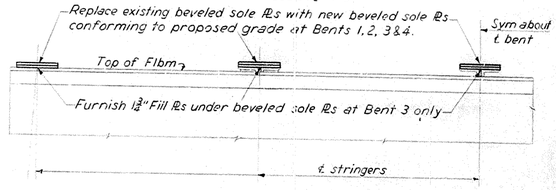
TRANSVERSE ELEVATION
BENTS 6,7,8,11&12



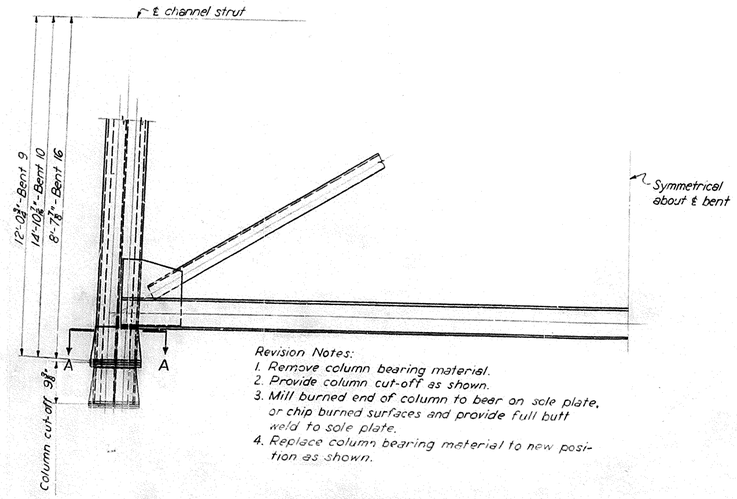
TRANSVERSE ELEVATION
BENTS 17, 18, 19, & 20



TYPICAL SECTION A-A
Scale 1½"=1'-0"

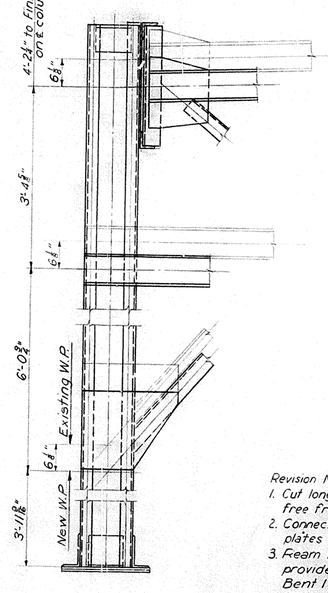


TRANSVERSE ELEVATION
BENTS 1, 2, 3 & 4



Revision Notes:
1. Remove column bearing material.
2. Provide column cut-off as shown.
3. Mill burned end of column to bear on sole plate, or chip burned surfaces and provide full butt weld to sole plate.
4. Replace column bearing material to new position as shown.

TRANSVERSE ELEVATION
BENTS 9, 10 & 17



Revision Notes:
1. Cut longitudinal bracing and gusset plates free from column.
2. Connect longitudinal bracing and gusset plates to column in new position as shown.
3. Ream holes in bracing if necessary to provide for increased spacing between Bent 1 and Bent 2.

LONGITUDINAL ELEVATION
BENT 1

NOTES:
For list see drawings 1080H402 & 423
Plug weld all open holes above El 363.00 (top of masonry)
Field Paint: See TVA Specifications 3054.

REFERENCE DRAWINGS:
1080H402..... WEST APPROACH-TYPICAL SECTIONS
1080H404..... ANCHOR BOLT PLAN
1080H414..... BENTS 1 TO 20-CONCRETE EXTENSIONS

Scale ¾"=1'-0"
Except as noted

PROJECT 8-1080 Sheet 12

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

EGGNERS FERRY BRIDGE ACROSS TENNESSEE RIVER
BENT REVISIONS - WEST APPROACH

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

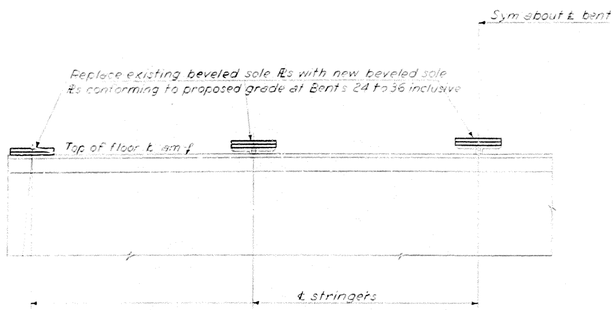
SUBMITTED	RECOMMENDED	APPROVED
F. E. Skinner	R. C. Barkett	Jerry G. Rich
KNOXVILLE	8-13-42	8 HR 5 1080H421 R2

RECORD DRAWING AS CONSTRUCTED
Grant W. Wolfe 7-1-44

2 SHEETS ADDITIONAL MATERIAL 1951-KR
Issued as constructed
1 SHEET ADDITIONAL 5/15/52 BB/WH
Revised Notes

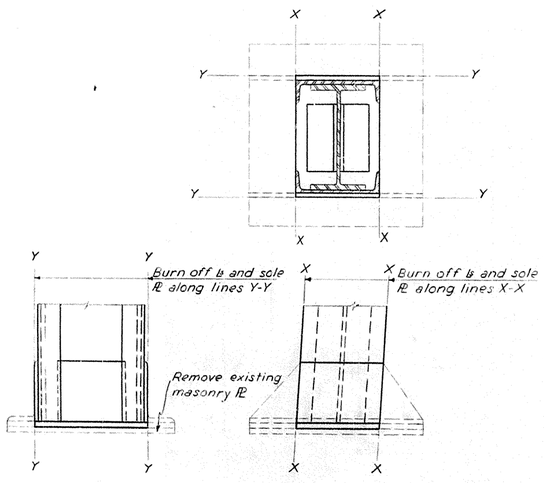
REV. NO.	DATE	MADE	CHKD	SUPV	IN SP	SUBM	RECM
DSGN. C.H.F.				SUPV. R.L.G.			
DRWN. E.F.D.				DSGR. WHK			
CHKD. E.W.F.				PROJECT ENGR. G.W. Wolfe			
TRCD.							
COMP.				DIVISION ENGR. R.W. Mohr			
AAM 5/52							2082

EH 8-15-42 HC



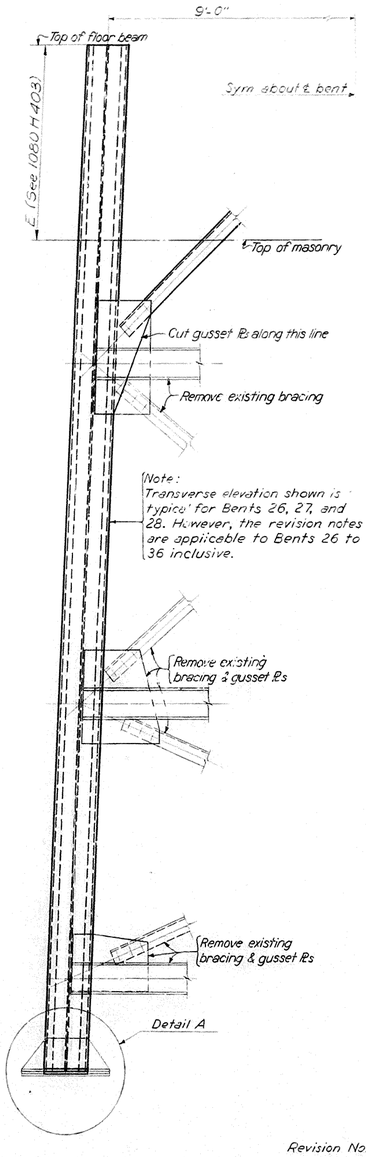
TRANSVERSE ELEVATION

BENTS 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35 & 36



DETAIL A

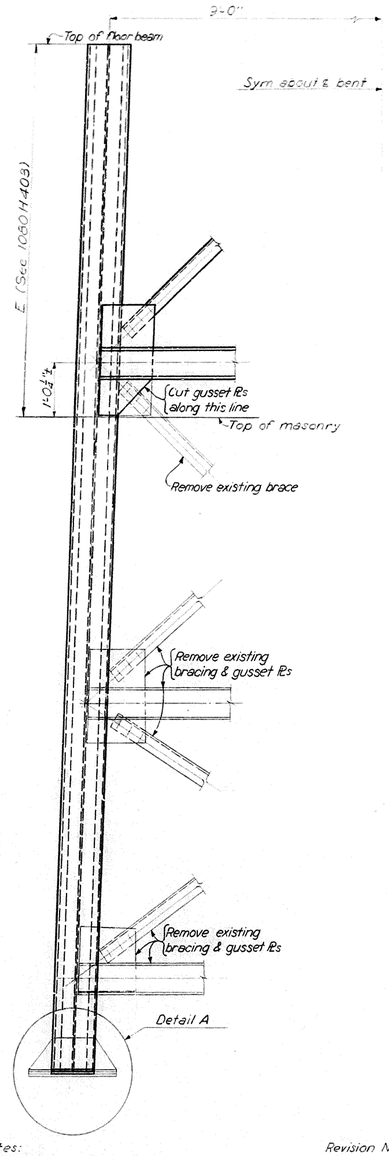
Scale: 1½"=1'-0"



Revision Notes:
1. Remove all longitudinal bracing and connections.
2. Remove transverse bracing and connections as noted.
3. Revise column bearing material as shown in Detail A.

TRANSVERSE ELEVATION

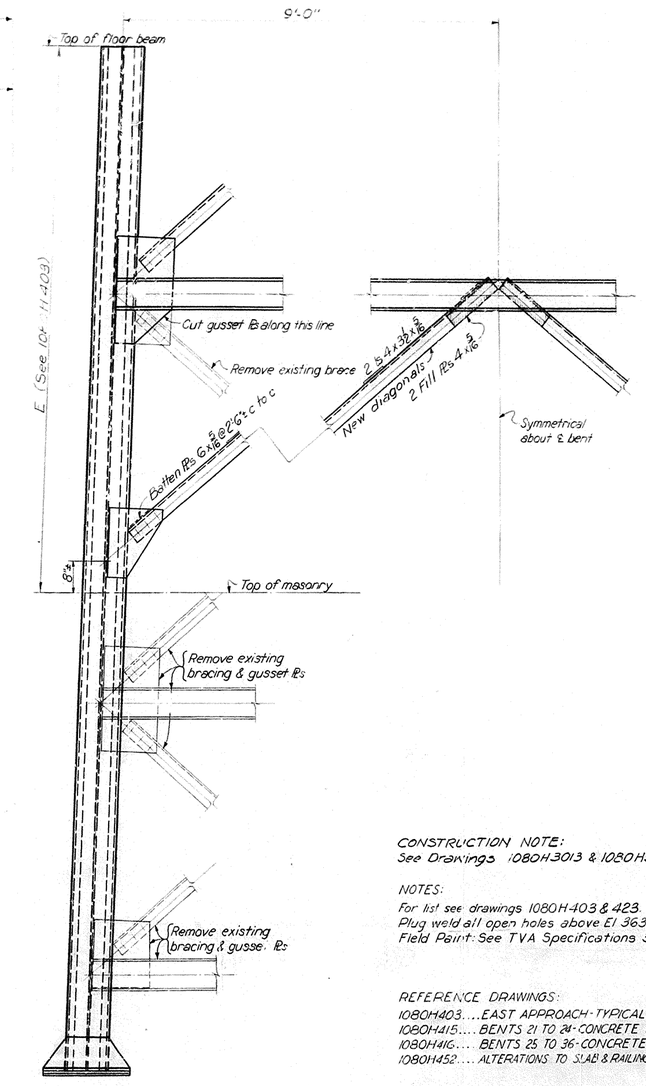
BENTS 26, 27, 28, 29, 30, 31, 32, 33, 34, 35 & 36



Revision Notes:
1. Remove all longitudinal bracing and connections.
2. Remove transverse bracing and connections as noted.
3. Revise column bearing material as shown in Detail A.

TRANSVERSE ELEVATION

BENT 25



Revision Notes:
1. Remove all longitudinal bracing and connections.
2. Remove transverse bracing and connections as noted.
3. Provide new diagonals as shown.

TRANSVERSE ELEVATION

BENTS 21, 22, 23 & 24

CONSTRUCTION NOTE:
See Drawings 1080H3013 & 1080H3014

NOTES:
For list see drawings 1080H403 & 423.
Plug weld all open holes above El 363.00 (top of masonry)
Field Paint: See TVA Specifications 3054.

REFERENCE DRAWINGS:
1080H403.... EAST APPROACH - TYPICAL SECTIONS
1080H415.... BENTS 21 TO 24 - CONCRETE ENCASEMENTS
1080H416.... BENTS 25 TO 36 - CONCRETE EXTENSIONS
1080H1452.... ALTERATIONS TO SLAB & RAILINGS - E APPROACH

Scale: ¾"=1'-0"
Except as noted

PROJECT 8-1080 Sheet 13

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

EGGNERS FERRY BRIDGE ACROSS TENNESSEE RIVER

BENT REVISIONS - EAST APPROACH

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED	RECOMMENDED	APPROVED
F. E. Junior	C. E. Barkett	Joseph L. Rich

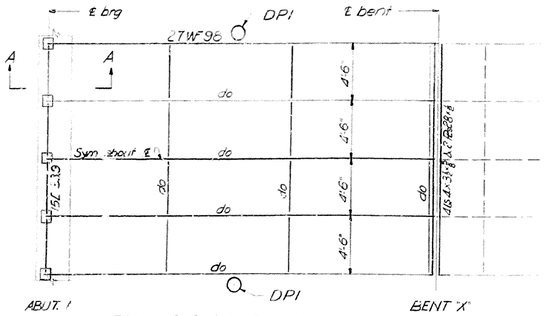
KNOXVILLE	8-13-42	8	HR	5	1080H422	RE

RECORD DRAWING AS CONSTRUCTED
Frank W. Webb 7-1-44

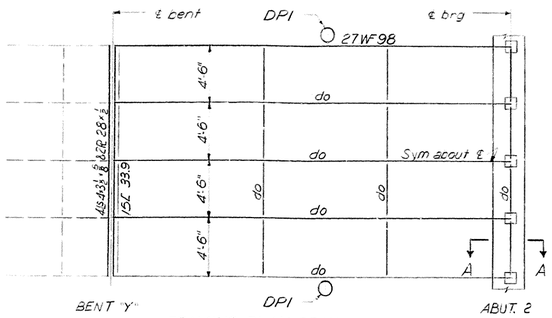
2/5/46 KCM TRE RLA SB 1899 12-12
Final Field Revision
1/24/45 KCM TRE RLA SB 1899 1-24-45
Revised Notes

NO.	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECM
DSGN CHF				SUPV R. L. G.			
DRWN J.E.D.				DEP CHF SW Bahnson			
CHKD G. H. F.				CHIEF C. W. Mahr			
FRCD ✓							
COMP							
HC	AAMc						2130

EH 8-17-42



FRAMING PLAN-SPAN X
Not to scale



FRAMING PLAN-SPAN Y
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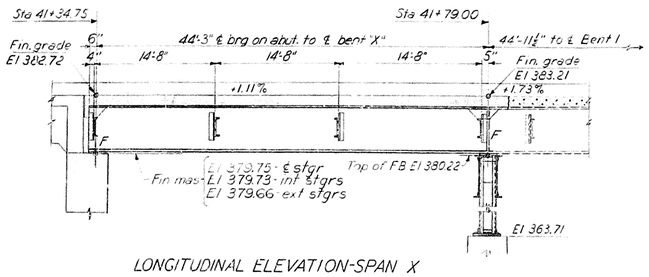

LONGITUDINAL ELEVATION-SPAN X
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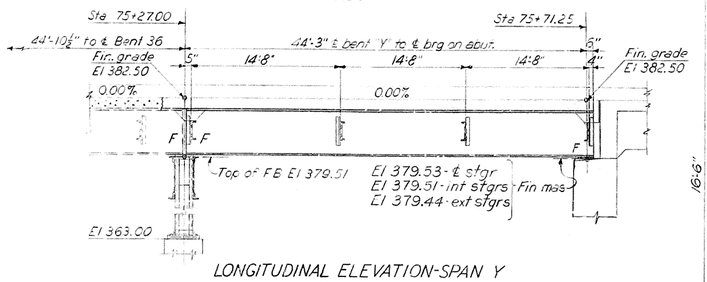
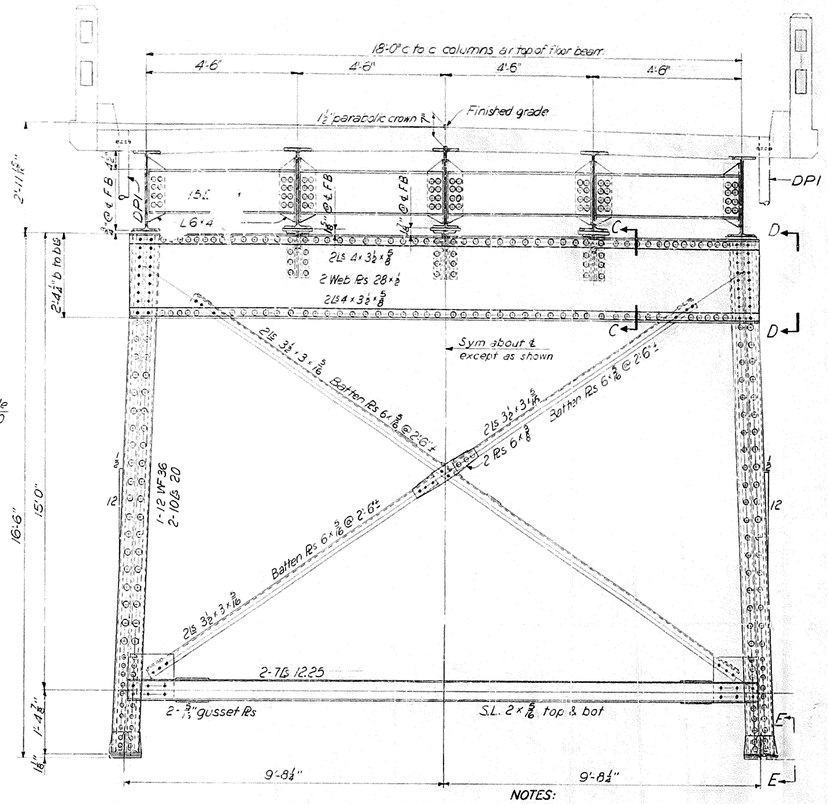
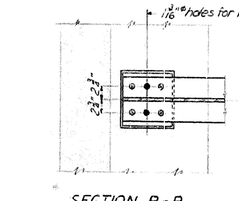


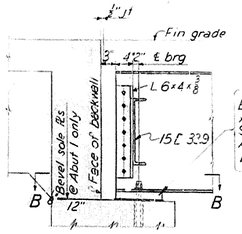
LONGITUDINAL ELEVATION-SPAN Y
Not to scale



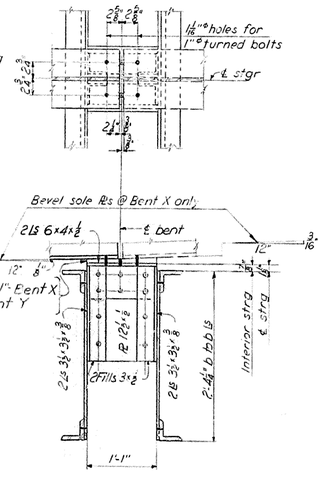
BENT X
BENT Y
Scale: ½"=1'-0"



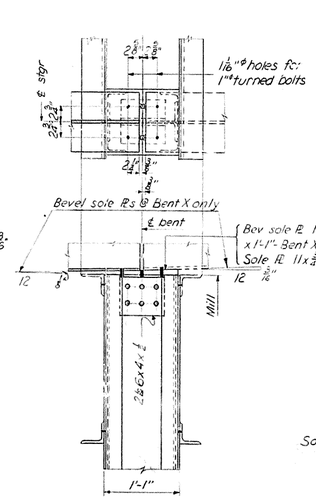
SECTION B-B
Scale ¾"=1'-0"



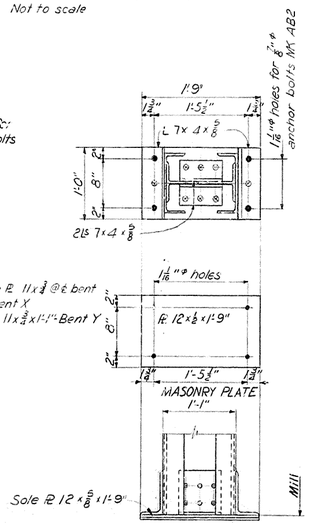
SECTION A-A
Scale ¾"=1'-0"



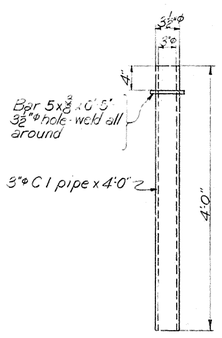
SECTION C-C



SECTIONAL ELEVATION D-D



SECTIONAL ELEVATION E-E



DRAIN PIPE
4 REQD-MK DPI
Not to scale

NOTES:

Specifications: TVA Specifications No. 3054.
Design Loading: H15 in accordance with the AASHO Specifications, 3rd. Edition, 1941.
Material: Structural steel shall conform to ASTM, A7-39. Rivet steel shall conform to ASTM, A141-39. Cast steel shall conform to ASTM, A27-39, Grade B. Lead plates shall conform to Fed Specifications QQ-L-201, Grade B. Cast iron drain pipe shall conform to ASTM, A48-36, Class 20
Connections: Riveted, unless noted.
Welding: Electric arc method in accordance with specifications for "Design, Construction, Alteration, and Repair of Hwy and Railway Bridges by Fusion Welding" of the American Welding Society, 1941.
Rivets: ⅞" ø
Open Holes: 1⅛" ø except as noted
Shop Paint: TVA Specifications No. 3054.
Field Paint: TVA Specifications No. 3054.
REFERENCE DRAWINGS:

1080H401 ... GENERAL DRAWING
1080H404 ... ANCHOR BOLT PLAN
1080H411 ... ABUTS 1 & 2 - WALLS, GIRDERS & SLAB
1080H413 ... BENTS X & Y - CONCRETE EXTENSIONS
1080H451 ... SPANS X & Y - SLAB & RAILINGS

Scale 1"=1'-0"
Except as noted

PROJECT 8-1080 Sheet 19

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

EGGNERS FERRY BRIDGE OVER TENNESSEE RIVER
BENTS X & Y - SPANS X & Y

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED	RECOMMENDED	APPROVED
J. E. Kinnon	A. Clebsch	Joseph Reid
KNOXVILLE	8-13-42	8 HR S 1080H423 R2

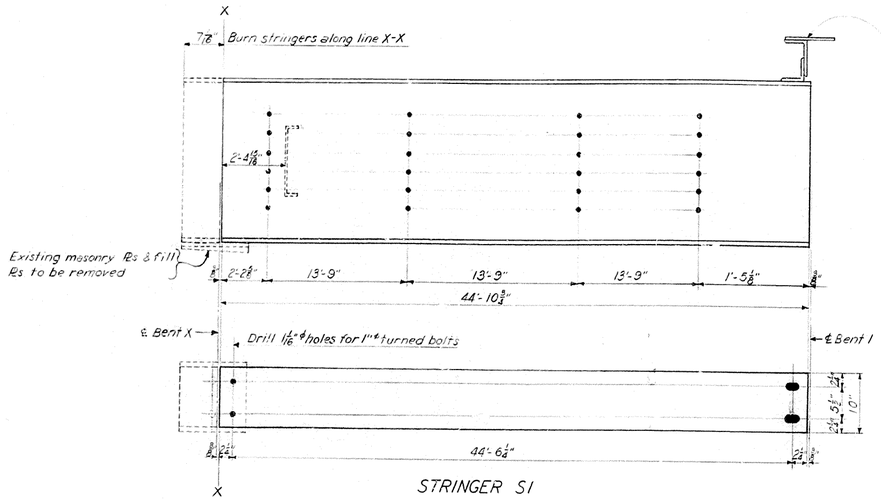
RECORD DRAWING AS CONSTRUCTED
Frank W. Wright 7-1-44

Signed as constructed
1 | 42 | 43 | RLG | 45 | | | |
Revised Notes

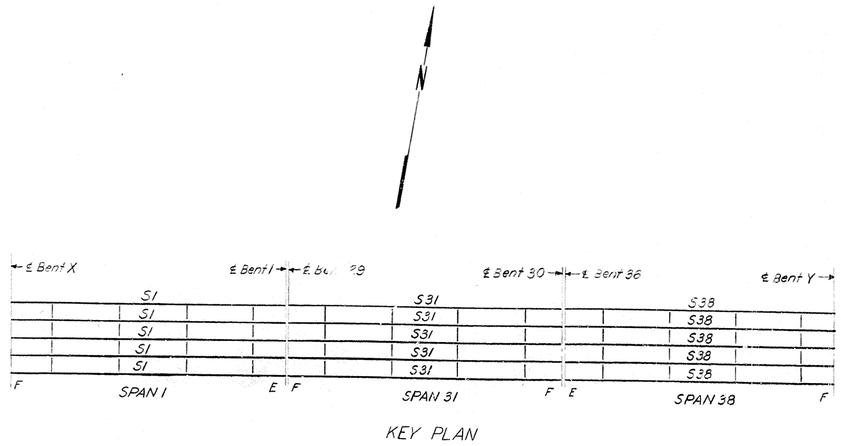
REV NO	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECM

DSGN BHN SUPV R. L. G.
DRWN B.H.N. G.104 INSP Unk
CHKD C.H.T. SUPT C. W. Watkins
TRCD ✓ ENGR R. W. Mabe
COMP
INC AAM

BRIDGE

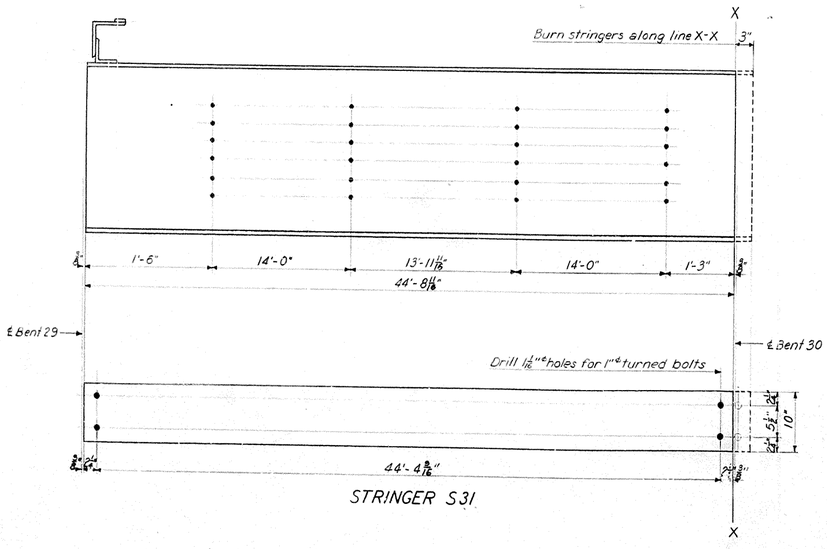


STRINGER S1

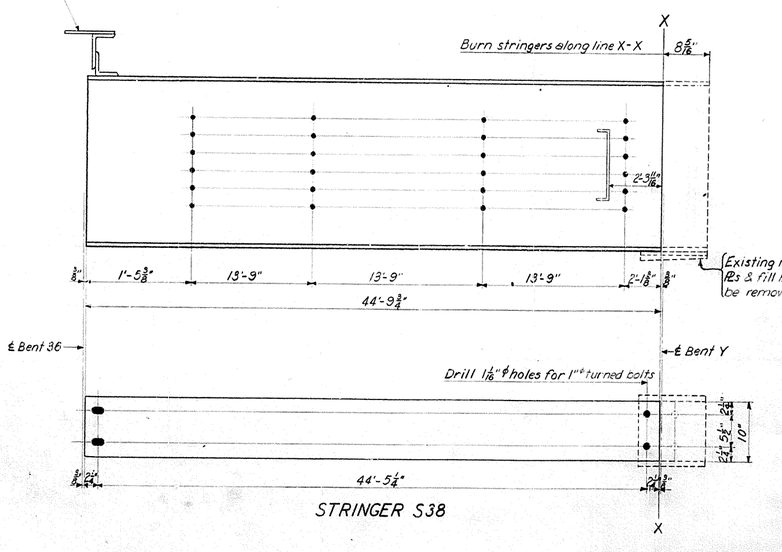


KEY PLAN

Before raising approach spans, the roadway expansion plates are to be removed by removing existing rivets. After the spans are in their final position, the expansion plates are to be replaced and plug welded at the rivet holes.



STRINGER S31



STRINGER S38

NOTES:
Field Paint: See TVA Specifications 3054.

REFERENCE DRAWINGS:
1080H401... GENERAL DRAWING
1080H402... WEST APPROACH - TYPICAL SECTIONS
1080H403... EAST APPROACH - TYPICAL SECTIONS

Not to scale

PROJECT 8-1080 Sheet 15

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

EGGNERS FERRY BRIDGE ACROSS TENNESSEE RIVER STRINGER REVISIONS SPANS 1, 31 & 38

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED	RECOMMENDED	APPROVED
F. E. Kennon	C. H. Arbuckle	Gwright Reid

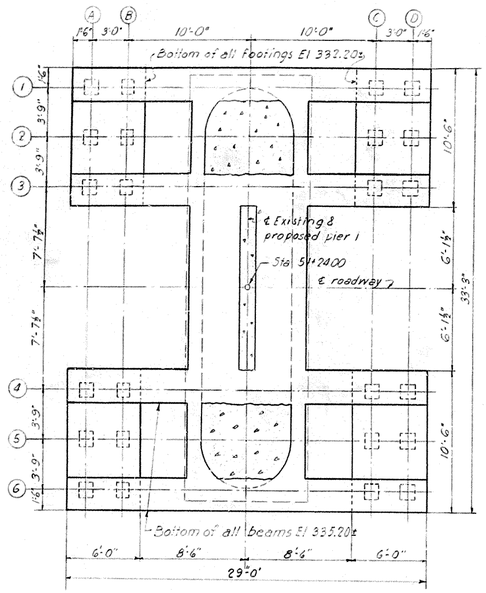
KNOXVILLE 8-13-42 8 HR 5 1080H424 RE

RECORD DRAWING AS CONSTRUCTED
Frank L. D. White 7-1-44

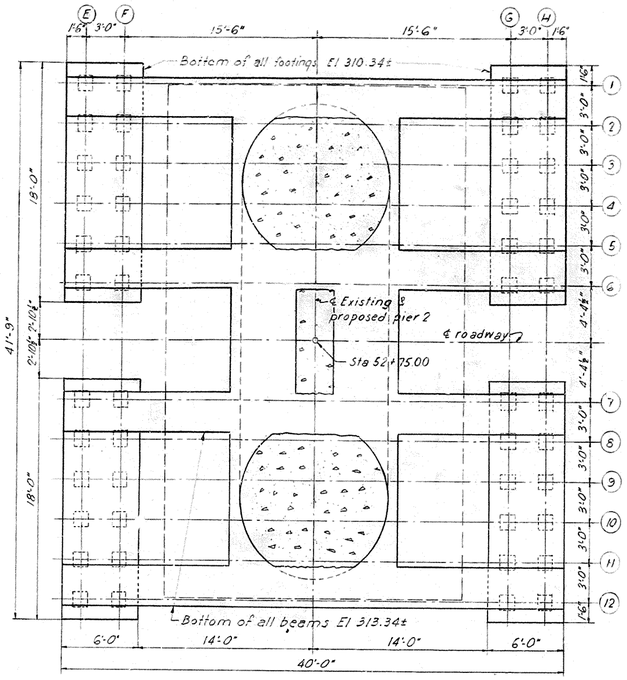
28-W-44 TRACED BY ICT 1ST REVISED
DRAWING AS CONSTRUCTED
1-11-46 REVISED TO SHOW 1ST REVISED Revised Notes

REV NO	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECM
DSGN	C.H.F.	SUPV	R.L.G.				
DRWN	L.B.S.	INSP					
CHKD	E.H.F.	SUBM	E.H. Salmon				
TRCD		ENGINEER	R.W. Mabe				
COMP							
HC	AAMc						

2732



PIER 1

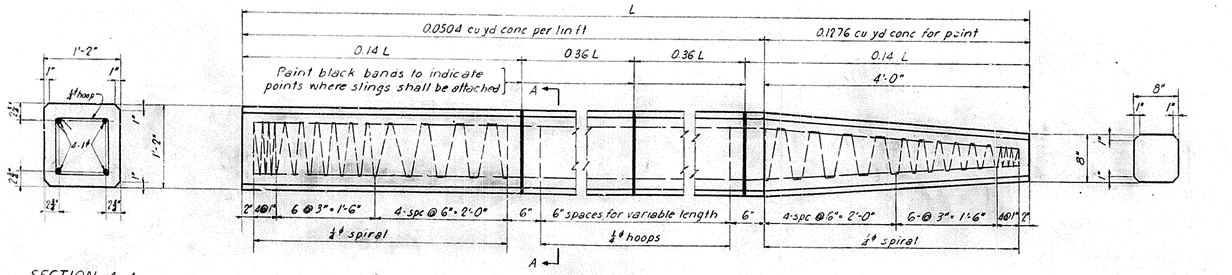


PIER 2

PILING PLAN

PILE RECORD

Pile no.	Elevations Cut-off	Elevations Tip	Length in-place	Calculated bearing (Tons)	Pile no.	Elevations Cut-off	Elevations Tip	Length in-place	Calculated bearing (Tons)
		PIER 1							
A1	332.64	297.97	34.67	52	C1	332.64	295.34	37.30	57
A2	"	298.14	34.50	58	C2	"	295.89	36.75	71
A3	"	298.26	34.38	63	C3	"	297.21	35.43	66
A4	"	298.67	33.97	75	C4	"	295.78	36.86	75
A5	"	298.56	34.08	71	C5	"	294.65	37.99	75
A6	"	298.12	34.52	69	C6	"	294.65	37.99	85
B1	"	296.82	35.82	54	D1	"	295.65	36.99	69
B2	"	298.47	34.17	60	D2	"	295.47	37.17	67
B3	"	298.45	34.19	75	D3	"	297.84	34.80	65
B4	"	298.41	34.23	75	D4	"	295.82	36.82	75
B5	"	298.59	34.05	75	D5	"	296.07	36.57	63
B6	"	297.94	34.70	67	D6	"	294.87	37.77	71
		PIER 2							
E1	310.84	275.24	35.60	70	G1	310.84	277.71	33.13	60
E2	"	277.64	33.20	70	G2	"	277.26	33.58	67
E3	"	277.91	32.93	65	G3	"	279.18	31.67	70
E4	"	278.00	32.84	69	G4	"	279.95	30.89	70
E5	"	277.03	33.81	65	G5	"	279.55	32.29	70
E6	"	276.60	34.24	63	G6	"	278.10	32.74	65
E7	"	278.69	32.15	71	G7	"	279.17	31.67	60
E8	"	279.29	31.55	75	G8	"	278.96	31.88	60
E9	"	279.01	32.83	71	G9	"	278.61	32.23	57
E10	"	277.49	33.35	75	G10	"	276.37	34.47	60
E11	"	277.29	33.55	71	G11	"	278.70	32.14	55
E12	"	276.92	33.92	69	G12	"	277.28	33.56	53
F1	"	277.15	33.69	70	H1	"	275.83	35.01	51
F2	"	277.82	33.02	70	H2	"	276.39	34.45	65
F3	"	278.37	32.47	70	H3	"	276.79	34.05	57
F4	"	277.36	33.48	65	H4	"	277.01	33.83	51
F5	"	276.98	33.86	67	H5	"	276.91	33.93	59
F6	"	276.89	33.96	51	H6	"	276.92	33.92	59
F7	"	279.05	31.79	71	H7	"	276.48	34.36	50
F8	"	277.88	32.96	75	H8	"	275.24	34.60	43
F9	"	278.59	32.25	75	H9	"	278.87	31.97	61
F10	"	277.36	33.48	75	H10	"	276.16	34.68	57
F11	"	277.34	33.50	71	H11	"	276.05	34.79	57
F12	"	277.43	33.41	67	H12	"	273.59	37.25	53



SECTION A-A

PLAN

END ELEVATION

14" SQ PRECAST CONCRETE PILE
Scale 1"=1'-0"

NOTES:
ALTERNATE PILE TYPE:
Cast in place concrete piles with steel shell, type JN14 or VN14 of the Union Metal Mfg Company or approved equal. Piles shall be provided with 4-1# dowels, which extend a minimum of 40 diameters into piles below cut-off and project 40 diameters into footings. For concrete filling see 1080H412. For details of piers 1 and 2, see 1080H432 to 1080H435.
DRIVING:
Piles shall be driven to the hard stratum at El 1[illegible] 288± pier 1, and El 269± pier 2, using a jet where necessary. Minimum bearing value of [illegible] piles shall be 40 tons.

For additional notes, see 1080H412.

Scale ½"=1'-0"
Except as noted

PROJECT 8-1080 Sheet 16

REVI NO.	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECM
2	5-14-43	WHD	TRE	ALW	GF		
Final Field Revisions							
1	1-14-43	LH	LG	F	GF		
Pile substitutions							

DSGN J.R.G. SUPV G.F. 10-9-42
DRWN J.R.G. INSP [illegible]
CHKD E.T.H. 10-8-42 TRCD ENGINEER [illegible]
COMP

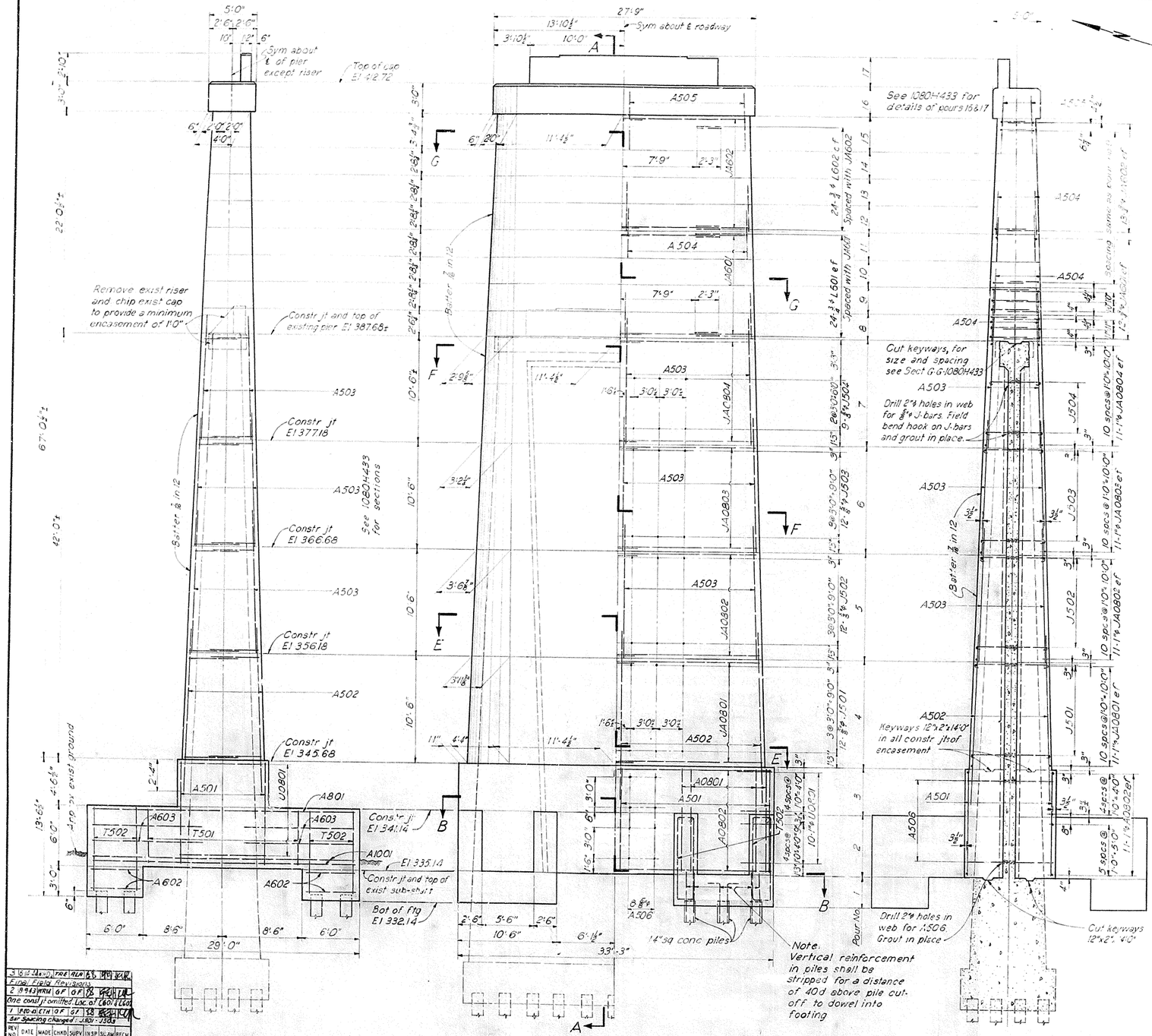
EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

PIERS 1 AND 2
PILING

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED	RECOMMENDED	APPROVED
J. E. Gunion	A. R. Hackett	George D. Tuck
KNOXVILLE	10-15-42	B HR 5 1080H431R2

RECORD DRAWING AS CONSTRUCTED
Harold R. Hackett 7-1-44



NOTES:
For schedule of reinforcing steel and bending diagrams see 1080H439
For piling see 1080H431
For details and location of anchor bolts see 1080H404
For jacking method see 1080H462

For additional notes and legend see 1080H413

Scale ⅛" = 1'0"
Except as noted

PROJECT 8-1080 Sheet 17

REV NO	DATE	MADE	CHKD	SUPV	INSP	SL&M	RECM
1	10-21-42	GLM	RTH	GT	RB		
2	11-3-42	GLM	RTH	GT	RB		

Final Field Revisions
One const jt omitted Loc at EL 401.14
Bar Spacing Changed in JA601 - JA603

DSGN RAC GLM SUPV GT 10-14-42
DRWN JML 10-9-42 INSP RB
CHKD RTH 10-10-42
TRCD
COMP ENGINEER

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

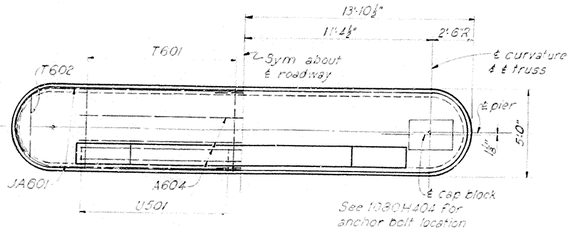
PIER 1
SHEET 1

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

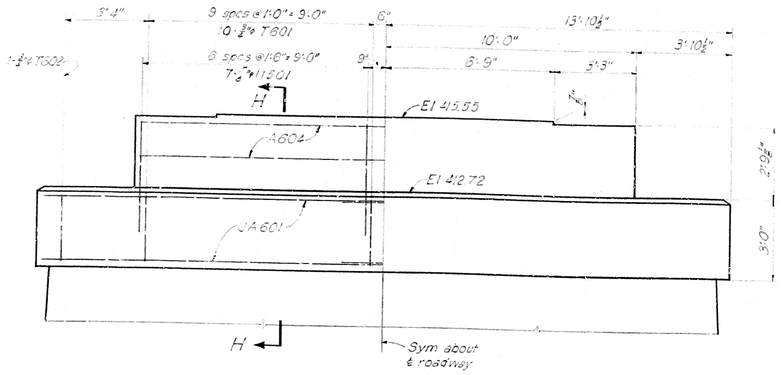
SUBMITTED	RECOMMENDED	APPROVED
D.E. Jennison	A.R. Ashcraft	George D. Tuck
KNOXVILLE	10-15-42	0 HR 5 1080H432 R3

RECORD DRAWING AS CONSTRUCTED
Frank D. Webb 7-1-44

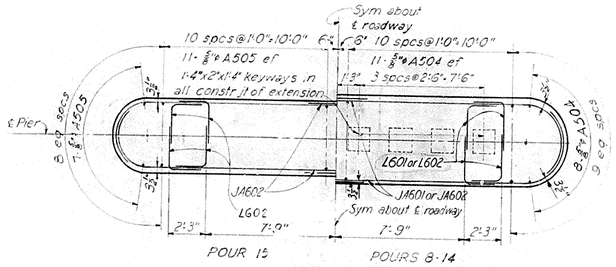
COMPANION DRAWING: 1080H433



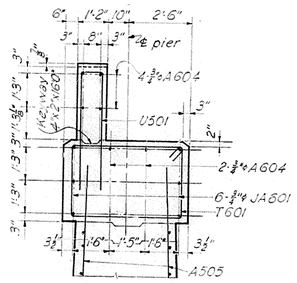
PLAN OF CAP



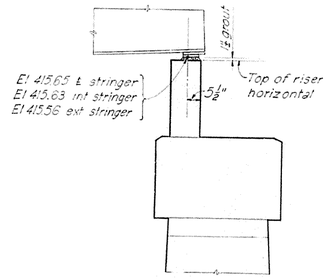
ELEVATION OF CAP
Scale ⅜"=1'-0"



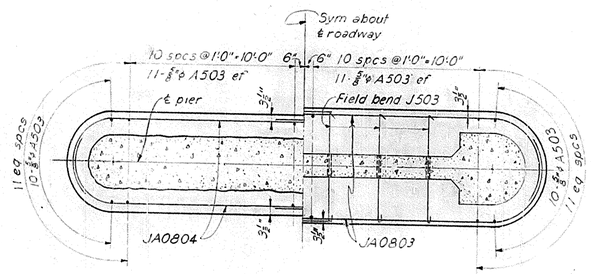
SECTION G-G



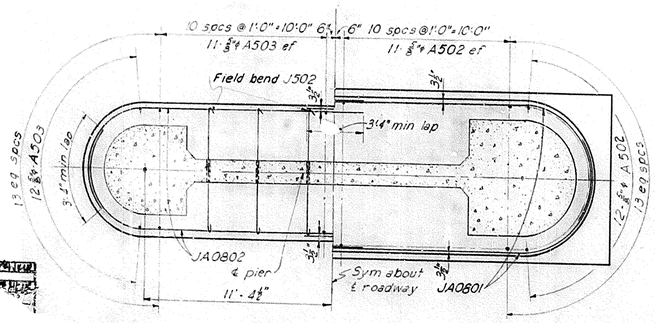
SECTION H-H
Scale ⅜"=1'-0"



DETAIL OF BEARING
Scale ⅜"=1'-0"



SECTION F-F



SECTION E-E

NOTES:
For schedule of reinforcing steel and bending diagrams see 1080H439.
For piling see 1080H431.
For details and location of anchor bolts see 1080H404
For jacking method see 1080H462

For additional notes and legend see 1080H413

COMPANION DRAWING: 1080H432

Scale ½" = 1'-0"
Except as noted

PROJECT 8-1080 Sheet 18

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

PIER 1
SHEET 2

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

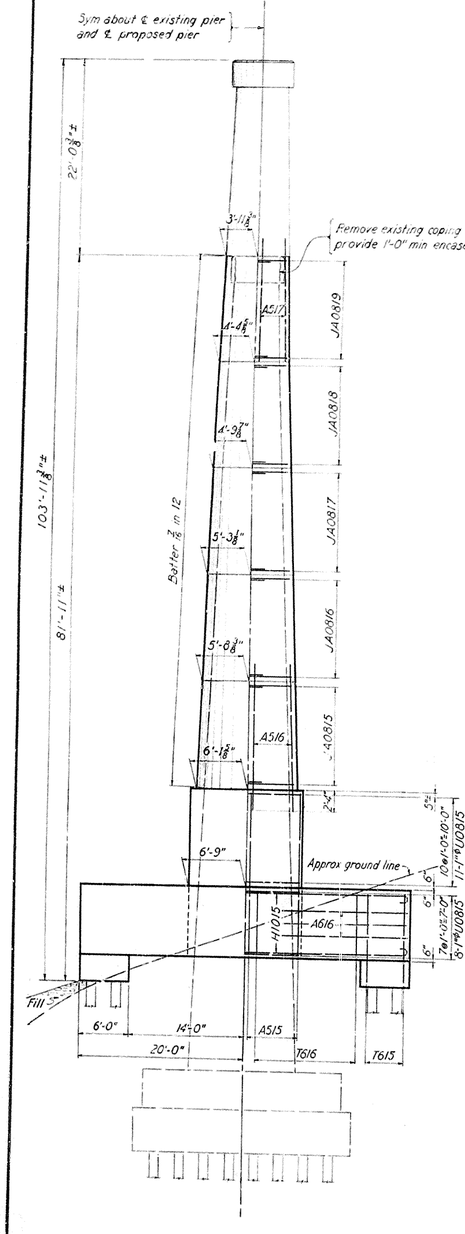
SUBMITTED	RECOMMENDED	APPROVED
P E Harmon	H H Abbott	George L Rich
KNOXVILLE	10-15-42	8 HR 5 1080H433 R2

RECORD DRAWING AS CONSTRUCTED
Frank W Lehr 7-1-46

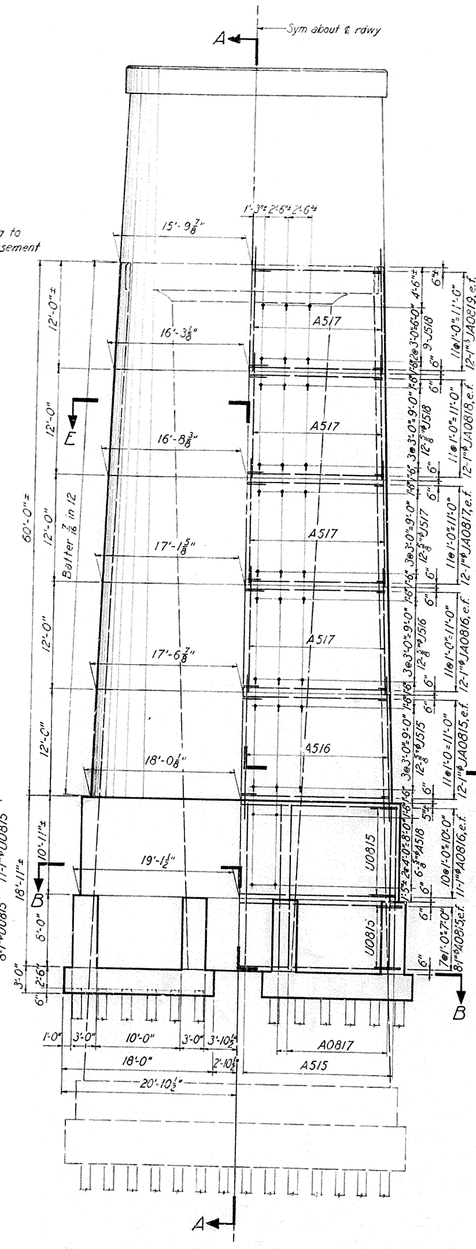
Revised as noted on 1-19-43 GF GF TA
Location of bars L601

REV NO	DATE	MADE	CHKD	SUPV	IN

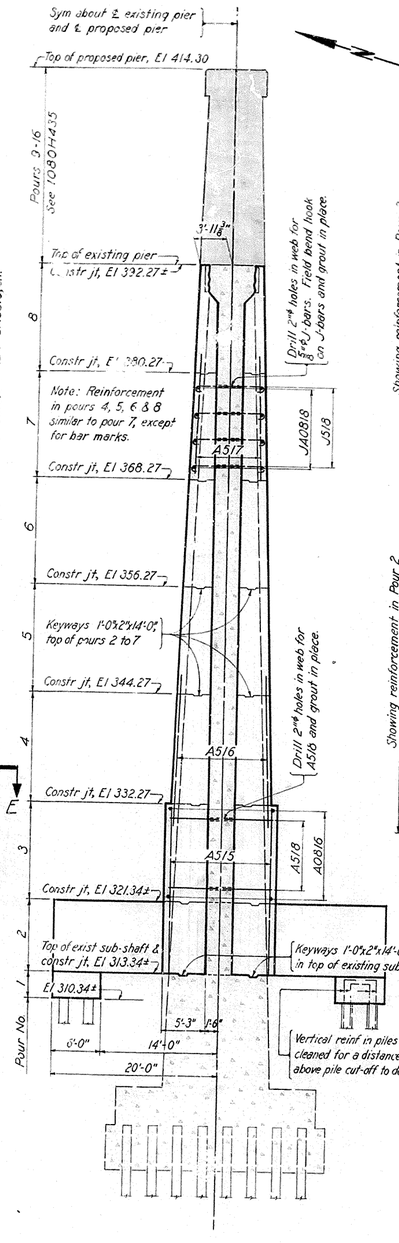
DSGN RAG GLM SUPV GF
DRWN JML 12-10-42 INSP
CHKD ETH 10-14-42
TRCD
COMP
ENGINEER
AAM
HC
2nd



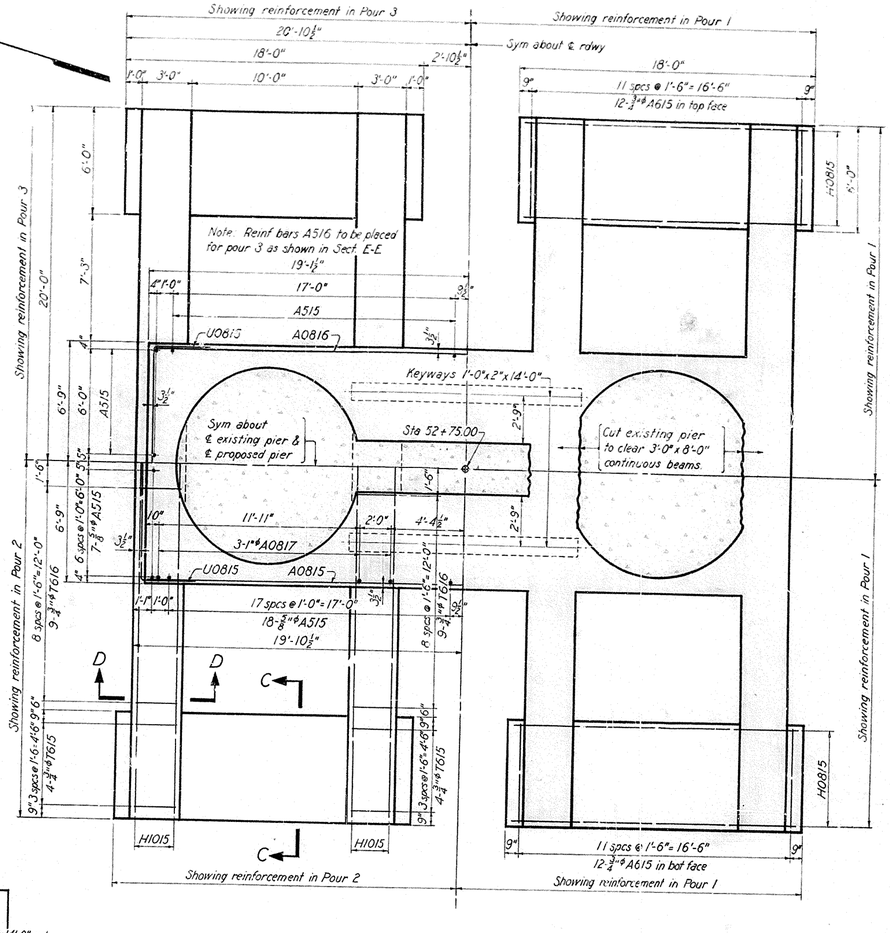
N. END ELEVATION



W. ELEVATION

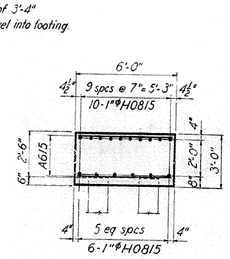


SECTIONAL ELEVATION A-A



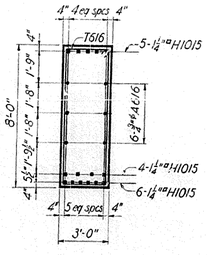
SECTIONAL PLAN B-B

Scale 1/4" = 1'-0"



SECTION C-C

Scale 1/4" = 1'-0"



SECTION D-D

Scale 1/4" = 1'-0"

NOTES:
For schedule of reinforcing steel and bending diagrams see 1080H439.
For piling see 1080H431.

For additional notes and legend see 1080H413.

Scale 1/8" = 1'-0"
Except as noted

PROJECT 8-1080 Sheet 19

COMPANION DRAWING: 1080H435

1	10-15-42	KHM	TRE	RLA	WBR	ETH		
Signed as constructed								
REV NO.	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECM	

DESIGN WBR ETH SUPV GF 10-15-42
DRAWN HK 10-12-42 INSP Clerk
CHKD ETH 10-13-42
TRCD ENGINEER Gustav N. Cragg Jr.
COMP

HC AAM 10-15-42

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

PIER 2
SHEET 1

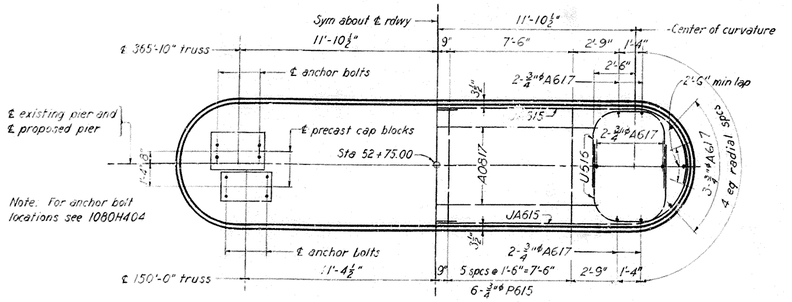
KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED	RECOMMENDED	APPROVED
G E Glenn	C C Schutt	George D Rich

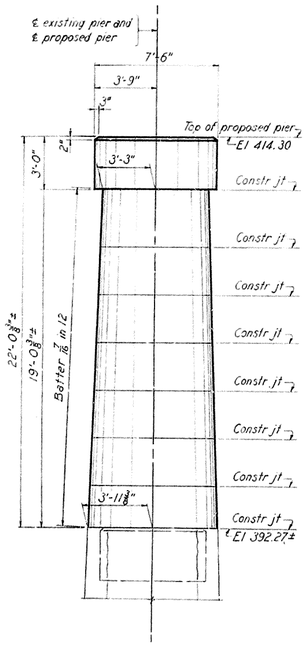
KNOXVILLE | 10-15-42 | 8 HR 5 | 1080H434R1

RECORD DRAWING AS CONSTRUCTED
Frank D. Echols 7-1-44

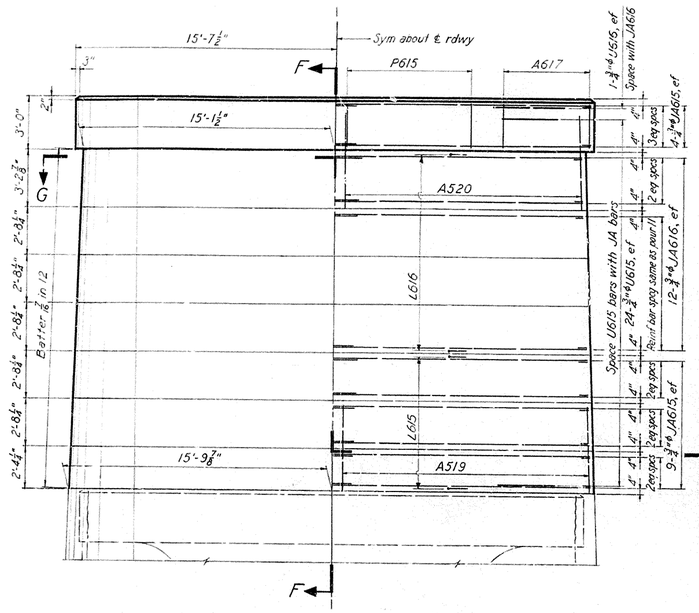
EWB



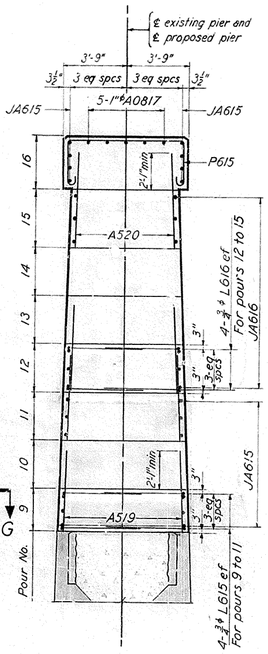
PLAN OF CAP



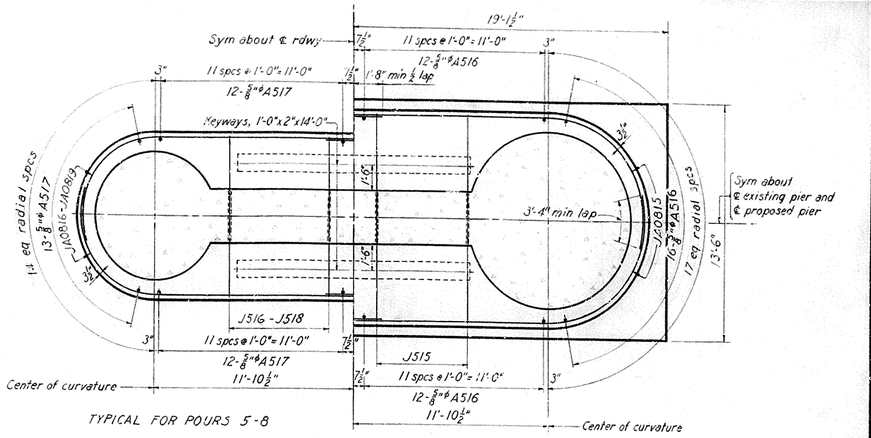
END ELEVATION



ELEVATION OF EXTENSION

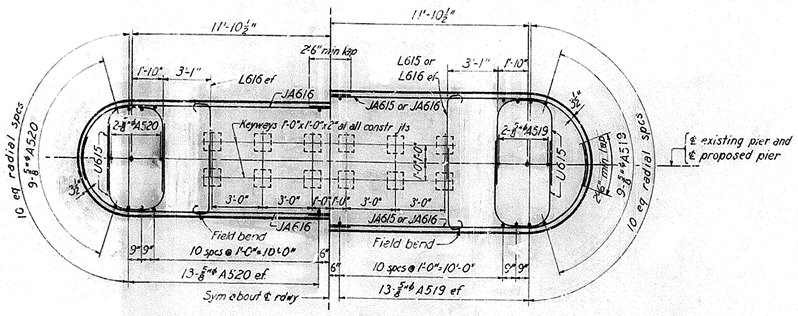


SECTION F-F



TYPICAL FOR POURS 5-8

SECTION E-E
SEE 1080H434



TYPICAL FOR POURS 9-14

SECTION G-G

NOTES:
For schedule of reinforcing steel and bending diagrams see 1080H439.
For details and location of anchor bolts see 1080H404.
For jacking method see 1080H453.

For additional notes and legend see 1080H413.

Scale ¼" = 1'-0"

COMPANION DRAWING: 1080H434

2	10-14-42	JM	TRB	RLA	LS	[illegible]	[illegible]
Signed as constructed							
1	10-13-42	WBR	GF	GLM	LS	[illegible]	[illegible]
Location of bars L615 and L616							
REV NO.	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECD

DSGN WBR ETH SUPV GF 10-15-42
DRWN JW 10-10-42 INSP [illegible]
CKKD GLM 10-13-42
TRCD ENGINEER [illegible]
COMP.

HC | AAN₀ | | | 2082

PROJECT 8-1080 Sheet 20

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

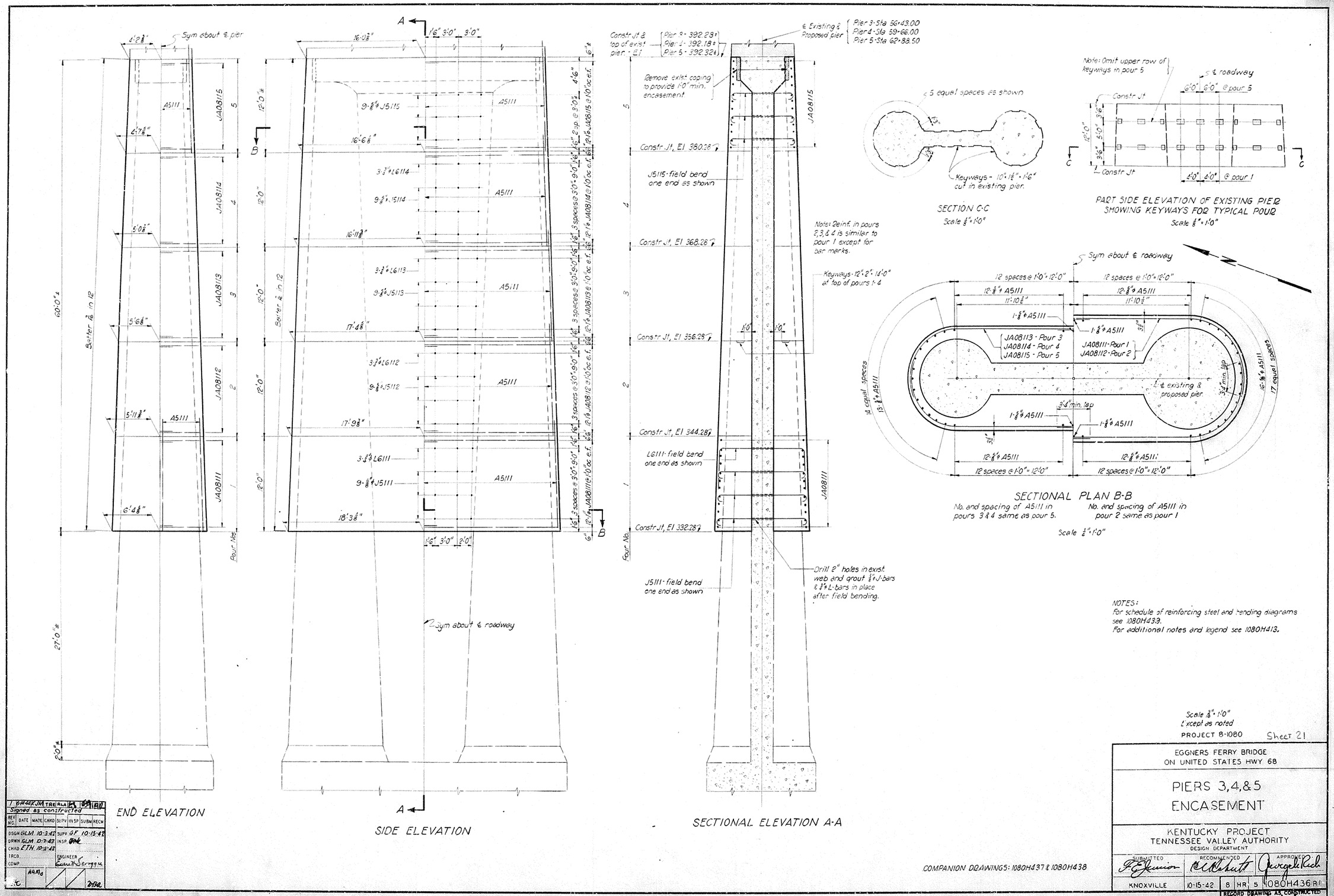
PIER 2
SHEET 2

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED	RECOMMENDED	APPROVED
[signature]	[signature]	[signature]
KNOXVILLE	10-15-42	8 HRI 5 1080H435 R2

RECORD DRAWING AS CONSTRUCTED
[signature] 7-1-43

SWB ① 2 Nov 43



END ELEVATION

SIDE ELEVATION

SECTIONAL ELEVATION A-A

SECTION C-C
Scale 1/8" = 1'-0"

PART SIDE ELEVATION OF EXISTING PIER SHOWING KEYWAYS FOR TYPICAL POUR
Scale 1/8" = 1'-0"

SECTIONAL PLAN B-B
No. and spacing of A5111 in pours 3 & 4 same as pour 5.
No. and spacing of A5111 in pour 2 same as pour 1
Scale 1/4" = 1'-0"

NOTES:
For schedule of reinforcing steel and bending diagrams see 1080H439.
For additional notes and legend see 1080H413.

Scale 1/8" = 1'-0"
Except as noted

PROJECT 8-1080 Sheet 21

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

PIERS 3,4,&5
ENCASEMENT

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED	RECOMMENDED	APPROVED
F. E. Jennison	C. C. Schutt	George L. Rich

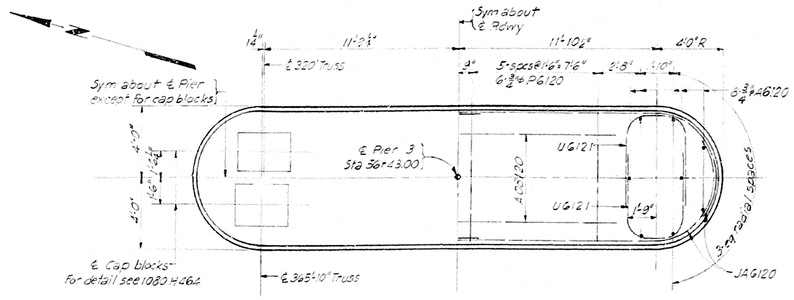
KNOXVILLE 10-15-42 8 HR 5 1080H436 R1

RECORD DRAWING AS CONSTRUCTED
Frank W. Webster 7-1-44

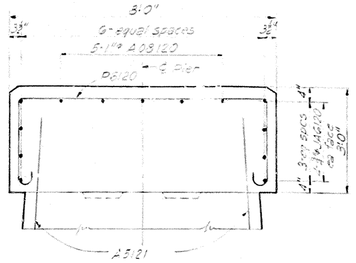
COMPANION DRAWINGS: 1080H437 & 1080H438

Signed as constructed

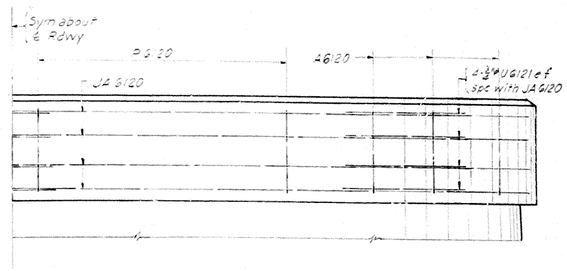
REV NO.	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECM
DSGN GLM 10-3-42				SUPV GF 10-15-42			
DRWN GLM 10-7-42				INSP			
CHKD ETH 10-9-42							
TRCD				ENGINEER			
COMP							



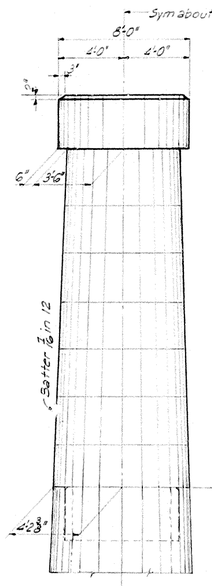
PLAN OF CAP



SECTION A-A
Scale ½"=1'-0"



HALF ELEVATION OF CAP
Scale ½"=1'-0"



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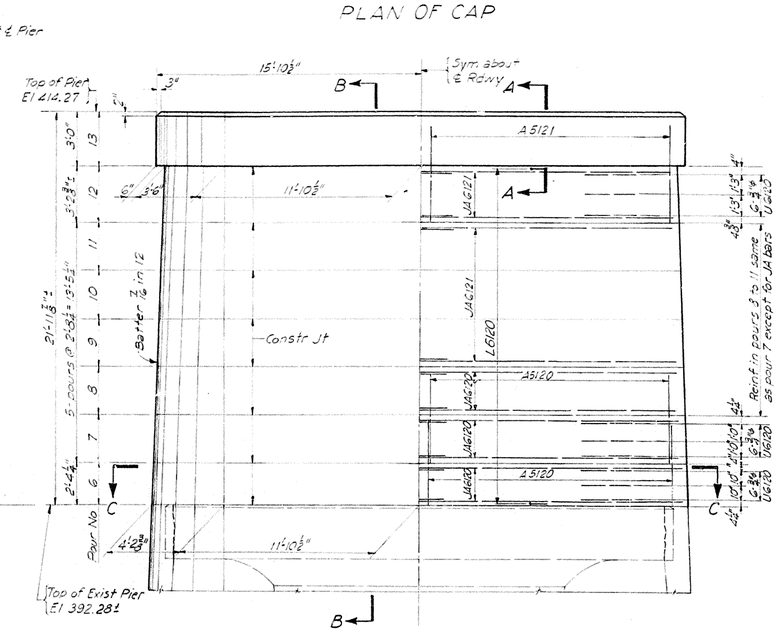
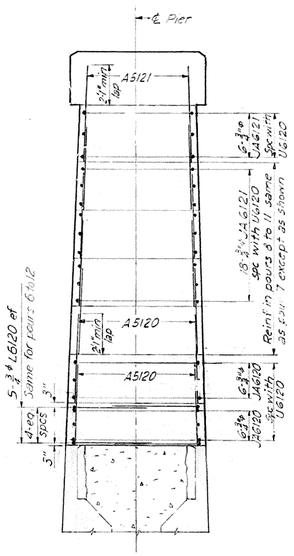
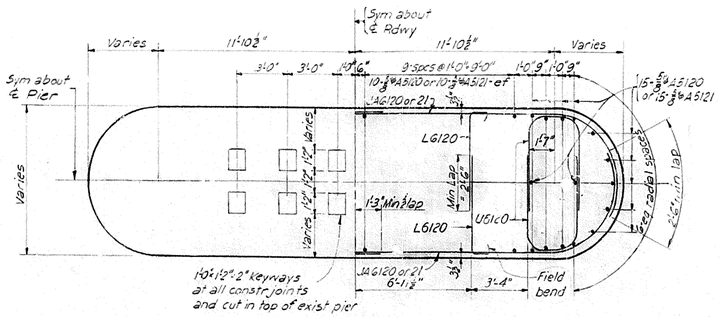


ELEVATION



SECTION B-B



SECTION C-C
TYPICAL FOR POURS 6-12

NOTES:
For schedule of reinforcing steel and bending diagrams see 1080H439.
For details and location of anchor bolts see 1080H404.
For jacking method see 1080H464.

For additional notes and legend see 1080H413.

Scale ½"=1'-0"
Except as noted

PROJECT 8-1080 Sheet 22

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

PIER 3
EXTENSION

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED	RECOMMENDED	APPROVED
KNOXVILLE	10-15-47	8 HR 5

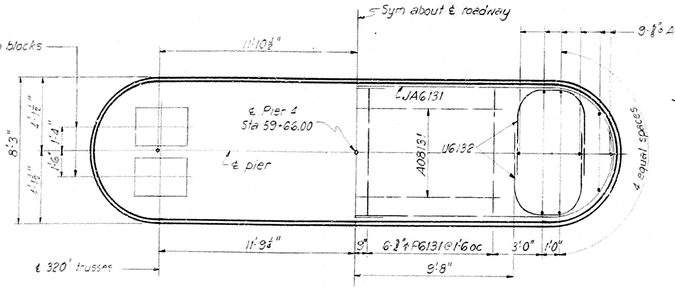
1080H437R2

RECORD DRAWING AS CONSTRUCTED 7-1-48

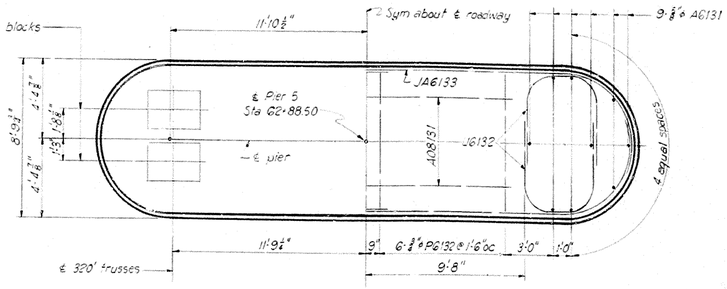
COMPANION DRAWING 1080H436

2 BM 4 GRUM TRE RLA E.S. Signed as constructed
1 B.S. Changed GF VS Location of bars L6120

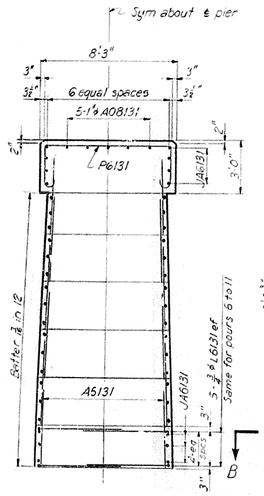
NO.	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECM
DSGN. GLM				SUPV. G.F. 10-12-42			
DRWN. RAG 11-6-42				INSP. Cook			
CHKD. ETH 11-9-42							
TRCD.				ENGINEER Samuel Scruggs			
COMP.							
HC	AAM 10						DBC



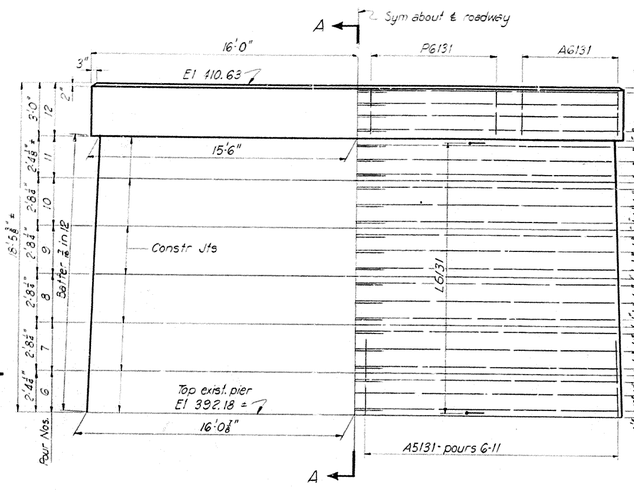
PLAN OF CAP



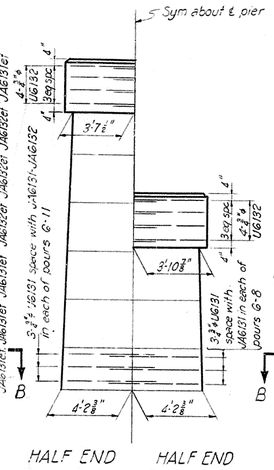
PLAN OF CAP



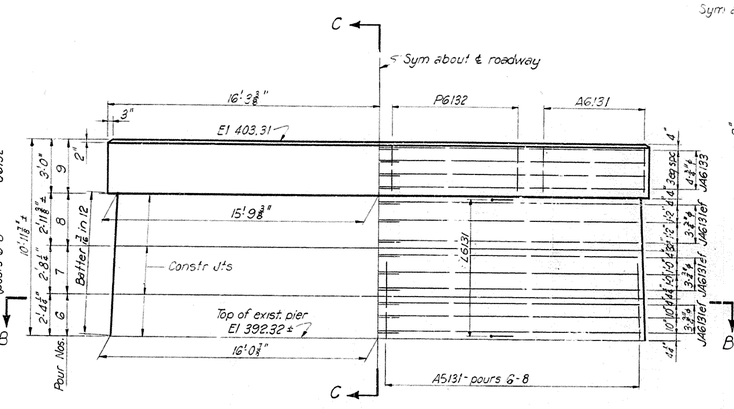
SECTION A-A



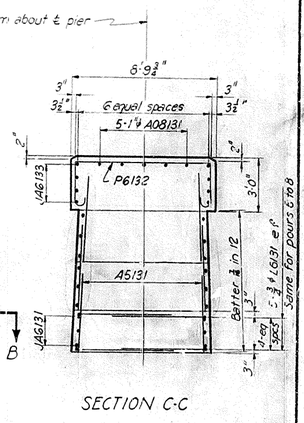
SIDE ELEVATION



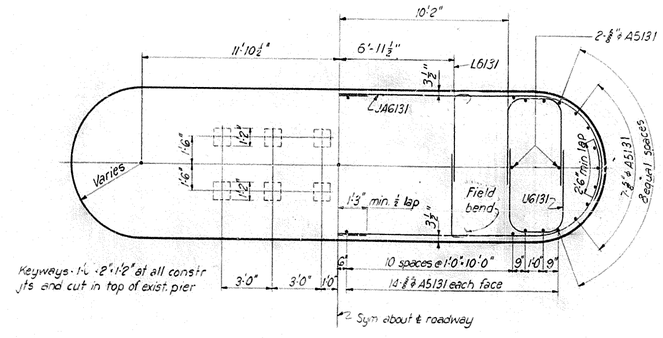
HALF END ELEV. PIER 4 HALF END ELEV. PIER 5



SIDE ELEVATION



SECTION C-C



SECTION B-B

Note: Section B-B is typical for pours 6-11 for Pier 4, and pours 6-8 for Pier 5.

PIER 4

Note: For Section B-B see Pier 4, this drawing.

PIER 5

COMPANION DRAWING: 1080H436

NOTES:
For schedule of reinforcing steel and bending diagrams see 1080H439.
For details and location of anchor bolts see 1080H404.
For jacking methods see 1080H465 & 1080H466.

For additional notes and legend see 1080H413.

Scale ¼"=1'-0"

PROJECT 8-1080 Sheet 23

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

PIERS 4 & 5
EXTEN...S

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED	RECOMMENDED	APPROVED
G. E. Jennison	O. C. Schutt	George D. Rich
KNOXVILLE	10-15-42	8 HR 5 1080H438 R3

RECORD DRAWING AS CONSTRUCTED
Frank W. Schutt 7-1-44

3 6-13-44 K/MITRE BLATE'S Signed as constructed
2 9-2-43 DWN GF 1 GF 1 Location of Dwr L6131
1 12-16-42 ETH GF 1 GF 1 Added: Vert & horiz bars in sect. A-A & C-C

REV NO	DATE	MADE	CHKD	SUPV	INSP	SUBM	REM
DSGN ETH GLM				SUPV GF 10-12-42			
DRWN GLM 10-12-42				INSP Appd:			
CHK STH 10-10-42							
TRCD				ENGINEER Edwin Berry			
COMP							

AAM D 2-44

EGGNERS FERRY BRIDGE — ITEM: PIER 4 — PROJECT 8-1080 — PAGE 7 OF 8

Location	Mark	No.	Size	Length Ft-In	A	B	C	D	E	H	O	Weight
ENCASEMENT												
Shaft	A5111	392	5/8"φ	14-1								5758
"	J5111	18	5/8"φ	13-6	10"	12-8		5"			12-10½	253
"	J5112	18	5/8"φ	12-7	10"	11-9		5"			11-11½	235
"	J5113	18	5/8"φ	11-9	10"	10-11		5"			11-1½	221
"	J5114	18	5/8"φ	11-0	10"	10-2		5"			10-4½	207
"	J5115	13	5/8"φ	10-0	10"	9-2		5"			9-4½	188
"	JA08111	48	1"φ	24-9	13-7	11-2				6-1	19-8	3172
"	JA08112	48	1"φ	24-1	13-7	10-6				5-7⅞	19-2⅞	3087
"	JA08113	48	1"φ	23-5	13-7	9-10				5-2½	18-9½	3001
"	JA08114	48	1"φ	22-9	13-7	9-2				4-9¼	18-4¼	2916
"	JA08115	48	1"φ	22-0	13-7	8-5				4-4	17-11	2820
"	L6111	6	3/4"φ	16-6	13-10	2½"	2-5½			1½"	13-11½	149
"	L6112	6	3/4"φ	15-6	12-10	2½"	2-5½			1½"	12-11½	140
"	L6113	6	3/4"φ	14-9	12-1	2½"	2-5½			1½"	12-2½	133
"	L6114	6	3/4"φ	13-9	11-1	2½"	2-5½			1½"	11-2½	124
EXTENSION												
Shaft	A5131	444	5/8"φ	4-9								2200
Shaft & Cap	JA6131	52	3/4"φ	20-6	13-1½	7-4½				3-9½	16-11	1601
Shaft	JA6132	36	3/4"φ	19-11	13-1½	6-9½				3-6	16-7½	1077
"	L6131	120	3/4"φ	6-8	5-0½	2½"	1-5			1½"	5-2	1202
"	U6131	72	3/4"φ	12-4	3-10½	1-11½	8"			1-3	3-2	1334
Cap	A6131	18	3/4"φ	2-6								68
"	A08131	5	1"φ	19-6								260
"	P6131	12	3/4"φ	14-9	1-0½	2-5	7-10	3"		1½"	2-6½	266
"	U6132	16	3/4"φ	12-10	3-4	2-9	8"			1-9	4-2	308
											TOTAL WEIGHT THIS PAGE	30,721

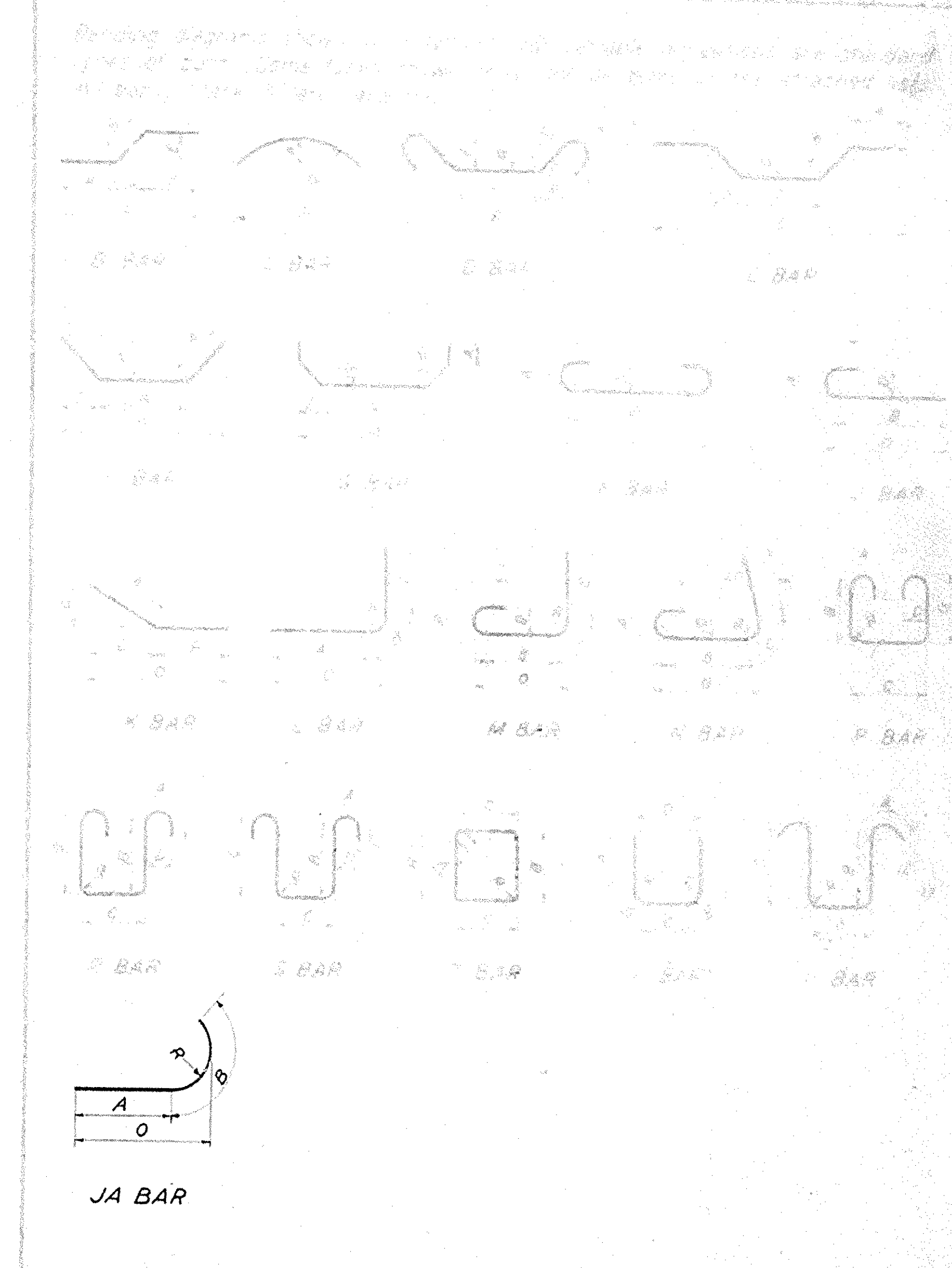
EGGNERS FERRY BRIDGE — ITEM: — PROJECT 8-1080 — PAGE 5 OF 8

Location	Mark	No.	Size	Length Ft-In	A	B	C	D	E	H	O	Weight
											TOTAL WEIGHT THIS PAGE	

EGGNERS FERRY BRIDGE — ITEM: PIER 1 — PROJECT 8-1080 — PAGE 3 OF 8

Location	Mark	No.	Size	Length Ft-In	A	B	C	D	E	H	O	Weight
ENCASEMENT												
Footings	A601	24	3/4"φ	10-0								360
"	A602	80	3/4"φ	5-6								661
"	A0801	60	1"φ	10-0								1602
" - Beams	T502	32	5/8"φ	20-9	3"	8-2	2-0			1½"		693
Sub-shaft	A501	84	5/8"φ	10-0								876
" "	A506	16	5/8"φ	9-0								150
Beams	A603	32	3/4"φ	12-3								589
Sub-shaft	A0802	22	1"φ	32-6								1909
Beams	A801	16	1"φ	28-6								1550
"	A1001	36	1¼"φ	28-6								5451
"	T501	72	5/8"φ	15-5	3"	5-6	2-0			1½"		1158
Sub-shaft	U0801	20	1"φ	16-0	3-4	6	8-4			4"	9-0	854
Shaft	A502	68	5/8"φ	15-0								1064
"	A503	196	5/8"φ	12-7								2572
"	J501	24	5/8"φ	9-3	10"	8-5		5"			8-7½	232
"	J502	24	5/8"φ	8-6	10"	7-8		5"			7-10½	213
"	J503	24	5/8"φ	7-9	10"	6-11		5"			7-1½	194
"	J504	18	5/8"φ	7-0	10"	6-2		5"			6-4½	131
"	JA0801	44	1"φ	21-3	13-3	8-0				3-11	17-2	2496
"	JA0802	44	1"φ	20-9	13-3	7-6				3-6	16-9	2438
"	JA0803	44	1"φ	20-0	13-3	6-9				3-1	16-4	2350
"	JA0804	44	1"φ	19-6	13-3	6-3				2-8	15-11	2291
EXTENSION												
Shaft	A504	420	5/8"φ	4-9								2081
"	A505	58	5/8"φ	5-6								333
Cap	A604	6	3/4"φ	19-6								176
Shaft	JA601	60	3/4"φ	18-0	12-10	5-2				2-3	15-1	1622
"	JA602	52	3/4"φ	17-6	12-10	4-8				2-0	14-10	1367
"	L601	96	3/4"φ	5-9	1-11	4½"	3-5½			3"	2-2	829
"	L602	96	3/4"φ	5-3	1-11	4½"	2-11½			3"	2-2	757
Cap	T601	20	3/4"φ	14-7	3"	2-7	4-6			1½"		438
"	T602	2	3/4"φ	10-7	3"	2-7	2-6			1½"		32
"	U501	14	5/8"φ	10-0	4-6½	2¼"	6"			1½"	9"	146
											TOTAL WEIGHT THIS PAGE	37,615

EGGNERS FERRY BRIDGE — ITEM: BENDING DIAGRAMS — PROJECT 8-1080 — PAGE 2 OF 8



EGGNERS FERRY BRIDGE — ITEM: PIER 5 — PROJECT 8-1080 — PAGE 6 OF 8

Location	Mark	No.	Size	Length Ft-In	A	B	C	D	E	H	O	Weight
ENCASEMENT												
Shaft	A5111	392	5/8"φ	14-1								5758
"	J5111	18	5/8"φ	13-6	10"	12-8		5"			12-10½	253
"	J5112	18	5/8"φ	12-7	10"	11-9		5"			11-11½	236
"	J5113	18	5/8"φ	11-9	10"	10-11		5"			11-1½	221
"	J5114	18	5/8"φ	11-0	10"	10-2		5"			10-4½	207
"	J5115	18	5/8"φ	10-0	10"	9-2		5"			9-4½	188
"	JA08111	48	1"φ	24-9	13-7	11-2				6-1	19-8	3172
"	JA08112	48	1"φ	24-1	13-7	10-6				5-7⅞	19-2⅞	3087
"	JA08113	48	1"φ	23-5	13-7	9-10				5-2½	18-9½	3001
"	JA08114	48	1"φ	22-9	13-7	9-2				4-9¼	18-4¼	2916
"	JA08115	48	1"φ	22-0	13-7	8-5				4-4	17-11	2820
"	L6111	6	3/4"φ	16-6	13-10	2½"	2-5½			1½"	13-11½	149
"	L6112	6	3/4"φ	15-6	12-10	2½"	2-5½			1½"	12-11½	140
"	L6113	6	3/4"φ	14-9	12-1	2½"	2-5½			1½"	12-2½	133
"	L6114	6	3/4"φ	13-9	11-1	2½"	2-5½			1½"	11-2½	124
EXTENSION												
Shaft	A5131	222	5/8"φ	4-9								1100
"	JA6131	36	3/4"φ	20-6	13-1½	7-4½				3-9½	16-11	1108
"	L6131	60	3/4"φ	6-8	5-0½	2½"	1-5			1½"	5-2	601
"	U6131	36	3/4"φ	12-4	3-10½	1-11½	8"			1-3	3-2	667
Cap	A6131	18	3/4"φ	2-6								68
"	A08131	5	1"φ	19-6								260
"	JA6133	16	3/4"φ	20-11	13-1½	7-9½				4-1½	17-3	503
"	P6132	12	3/4"φ	15-8	1-0½	2-6	8-5	3"		1½"	2-6½	276
"	U6132	16	3/4"φ	12-10	3-4	2-9	8"			1-9	4-2	308
											TOTAL WEIGHT THIS PAGE	27,296

EGGNERS FERRY BRIDGE — ITEM: PIER 3 — PROJECT 8-1080 — PAGE 8 OF 8

Location	Mark	No.	Size	Length Ft-In	A	B	C	D	E	H	O	Weight
ENCASEMENT												
Shaft	A5111	392	5/8"φ	14-1								5758
"	J5111	18	5/8"φ	13-6	10"	12-8		5"			12-10½	253
"	J5112	18	5/8"φ	12-7	10"	11-9		5"			11-11½	236
"	J5113	18	5/8"φ	11-9	10"	10-11		5"			11-1½	221
"	J5114	18	5/8"φ	11-0	10"	10-2		5"			10-4½	207
"	J5115	18	5/8"φ	10-0	10"	9-2		5"			9-4½	188
"	JA08111	48	1"φ	24-9	13-7	11-2				6-1	19-8	3172
"	JA08112	48	1"φ	24-1	13-7	10-6				5-7⅞	19-2⅞	3087
"	JA08113	48	1"φ	23-5	13-7	9-10				5-2½	18-9½	3001
"	JA08114	48	1"φ	22-9	13-7	9-2				4-9¼	18-4¼	2916
"	JA08115	48	1"φ	22-0	13-7	8-5				4-4	17-11	2820
"	L6111	6	3/4"φ	16-6	13-10	2½"	2-5½			1½"	13-11½	149
"	L6112	6	3/4"φ	15-6	12-10	2½"	2-5½			1½"	12-11½	140
"	L6113	6	3/4"φ	14-9	12-1	2½"	2-5½			1½"	12-2½	133
"	L6114	6	3/4"φ	13-9	11-1	2½"	2-5½			1½"	11-2½	124
EXTENSION												
Shaft	A5120	420	5/8"φ	4-9								2081
"	A5121	70	5/8"φ	6-4								339
"	JA6121	48	3/4"φ	20-0	13-1½	6-10½				3-7⅞	16-9¾	1442
"	L6120	140	3/4"φ	6-8	5-0½	2½"	1-5			1½"	5-2	1402
"	U6120	84	3/4"φ	12-9	4-3½	1-4	1-6			10"	3-2	1609
" & Cap	JA6120	52	3/4"φ	20-6	13-1½	7-8½				3-10⅞	17-0¼	1601
Cap	A6120	16	3/4"φ	2-6								60
"	A08120	5	1"φ	19-6								260
"	P6120	12	3/4"φ	14-6	1-0½	2-5	7-7	3"		1½"	2-6½	261
"	U6121	16	3/4"φ	12-6	3-11	1-7	1-6			1-0	3-3	300
											TOTAL WEIGHT THIS PAGE	31,810

EGGNERS FERRY BRIDGE — ITEM: PIER 2 — PROJECT 8-1080 — PAGE 4 OF 8

Location	Mark	No.	Size	Length Ft-In	A	B	C	D	E	H	O	Weight
ENCASEMENT												
Footings	A615	96	3/4"φ	5-5								781
"	T615	32	3/4"φ	26-6	6"	10-2	2-6			1½"		1274
"	H0815	64	1"φ	19-5	1-4	16-9		8"			17-5	3318
Beams	A616	48	3/4"φ	15-6								1117
"	H1015	60	1¼"φ	41-10	1-8	33-6		10			39-4	13336
Beams & Sub-shaft	T616	72	3/4"φ	21-2	6"	7-6	-6			1½"		2289
Sub-shaft	A515	100	5/8"φ	18-5								1921
"	A516	80	5/8"φ	16-5								1370
"	A518	12	5/8"φ	13-0								163
"	A0815	16	1"φ	39-2								1673
"	A0816	22	1"φ	37-8								2213
"	A0817	12	1"φ	18-5								590
"	U0815	38	1"φ	19-5	3-0	6½"	12-4			4"	13-0	1970
Shaft	A517	296	5/8"φ	14-1								4348
"	J515	24	5/8"φ	13-0	10"	12-2		5"			12-4½	325
"	J516	24	5/8"φ	12-1	10"	11-3		5"			11-5½	302
"	J517	24	5/8"φ	11-3	10"	10-5		5"			10-7½	292
"	J518	42	5/8"φ	10-5	10"	9-7		5"			9-9½	456
"	JA0815	48	1"φ	24-5	13-7	10-10				5-7½	19-2½	3129
"	JA0816	48	1"φ	23-9	13-7	10-2				5-2	18-9	3044
"	JA0817	48	1"φ	23-0	13-7	9-5				4-9	18-4	2948
"	JA0818	48	1"φ	22-5	13-7	8-10				4-4	17-11	2873
"	JA0819	48	1"φ	21-8	13-7	8-1				3-10½	17-5½	2777
EXTENSION												
Shaft	A519	444	5/8"φ	4-9								2200
"	A520	74	5/8"φ	5-4								412
"	JA616	48	3/4"φ	19-9	13-2	6-7				3-2½	16-4½	1424
"	L615	48	3/4"φ	6-4	4-9	5"	1-2			3"	5-0	457
"	L616	64	3/4"φ	6-0	4-5	5"	1-2			3"	4-8	577
"	U615	96	3/4"φ	12-3	3-10	1-10	11"			1-2	3-3	1766
Cap & Shaft	JA615	52	3/4"φ	20-2	13-2	7-0				3-5½	16-7½	1575
Cap	A617	13	3/4"φ	2-6								68
"	P615	12	3/4"φ	13-7	1-0	2-3	7-1	6"		1½"	2-6	245
"	U616	4	3/4"φ	12-7	3-3	2-4½	1-4			1-6	4-4	76
"	A0817	5	1"φ	19-6								260
											TOTAL WEIGHT THIS PAGE	61,559

PAGE 1 OF 8

NOTES:

MATERIAL. See specifications.

BENDING. All dimensions are to centers of bars. All bends shall be made cold and minimum radius shall be four times bar size, unless dimensioned otherwise. Maximum tolerance in dimensions shown shall be ±½", except that ends of hooks may have a greater variation. Unless dimensioned otherwise, all bars are symmetrical.

REFERENCE DRAWINGS:
1080H432....PIER 1 - SHEET 1
1080H433....PIER 1 - SHEET 2
1080H434....PIER 2 - SHEET 1
1080H435....PIER 2 - SHEET 2
1080H436....PIERS 3,4,5 - ENCASEMENT
1080H437....PIER 3 - EXTENSION
1080H438....PIERS 4&5 - EXTENSION

PROJECT 8-1080 Sheet 24

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

PIERS 1-5

REINFORCING STEEL

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED: F. E. Jenior — RECOMMENDED: C. E. Blee (signature) — APPROVED: George R. Rich

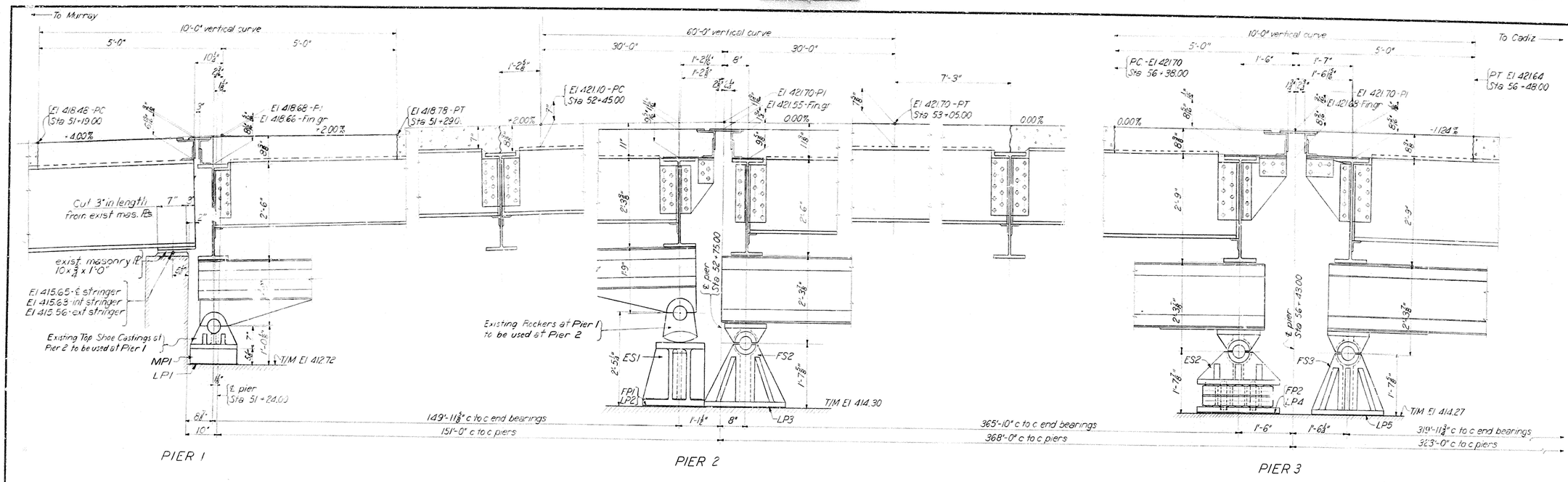
1 Signed as constructed — RLA, CE, GF, KUR

GF 10-15-42
JML 10-15-42
ETH 10-15-42
WBM
JW 10-15-42
HC
AAM
VBA

KNOXVILLE 10-15-42 8 1080H439R1

RECORD DRAWING AS CONSTRUCTED
Frank W. Webster 7-1-44

BRIDGE



Note: No revisions required for bearings on Pier 6.

REFERENCE DRAWINGS:
1080H404 ..... ANCHOR BOLT PLAN
1080H442 ..... EXPANSION DEVICES & BEARINGS
1080H453 ..... RDWY SLAB ALTERATIONS AT PIERS 1&2
1080H454 ..... RDWY SLAB ALTERATIONS AT PIERS 3,4,5&6

Scale 3/4" = 1'-0"

PROJECT 8-1080 Sheet 25

2 YRS LONGITUDINAL TRUSS ADJ Signed as constructed
1 BEARINGS CHANGED Truss Rev
General Revision

REV NO.	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECM
DSGN CHF				SUPV R.L.G.			
DRWN R.C.D.				INSP GW Belmont			
CHKD R.H.J.				APPROVED R.W. Mabe			
TR							
COMP							
MC AAM							

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

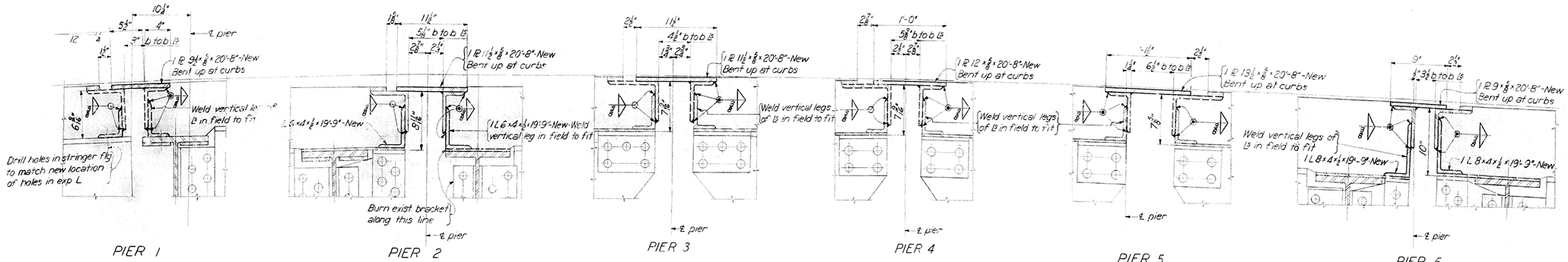
EGGNERS FERRY BRIDGE ACROSS TENNESSEE RIVER TRUSS REVISIONS

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED	RECOMMENDED	APPROVED
F.E. Jennison	W.E. Babbitt	Dwight Reid
KNOXVILLE	8-13-42	8 HR 5 1080H441 R2

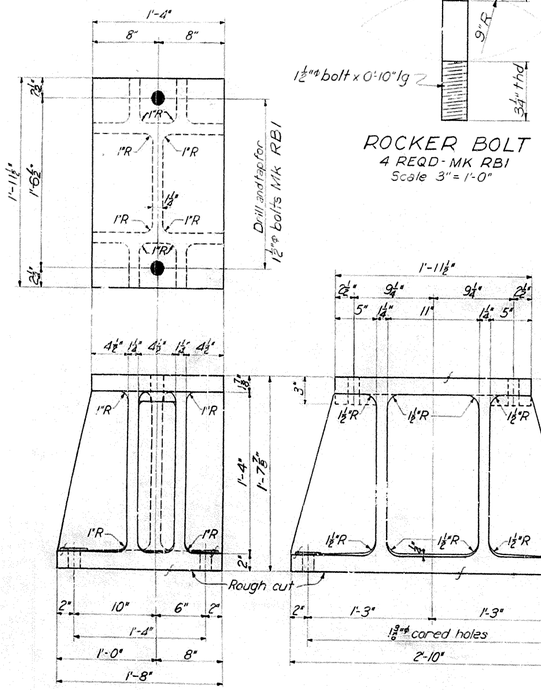
RECORD DRAWING AS CONSTRUCTED
F.E. Jennison 7-1-44

E.M. 6-13-42 | MC | 1 | 2 | 3 | 4 | 5 | 6



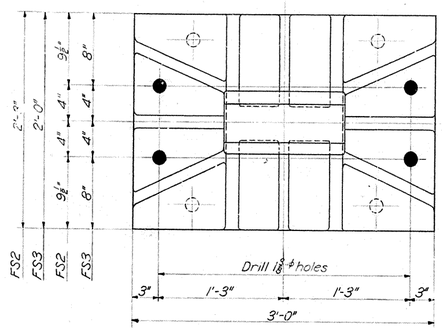
Note: Plug weld all open holes resulting from the removal of rivets in adjusting the expansion devices to the revised positions.

EXPANSION DEVICES

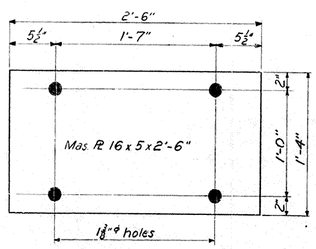


EXPANSION SHOE ES1
2 REQD-CAST STEEL-Mk ES

ROCKER BOLT
4 REQD-MK RB1
Scale 3"=1'-0"

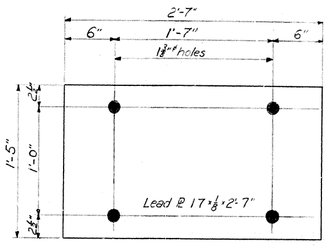


FIXED SHOE FS2 & FS3
SHOWING NEW LOCATION FOR ANCHOR BOLT HOLES

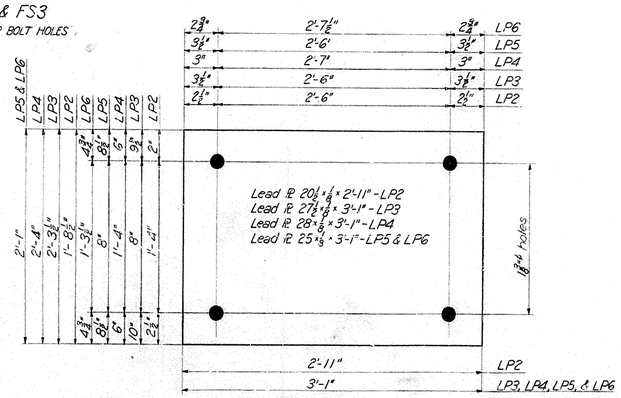


MASONRY PLATE
2 REQD-MK MP1

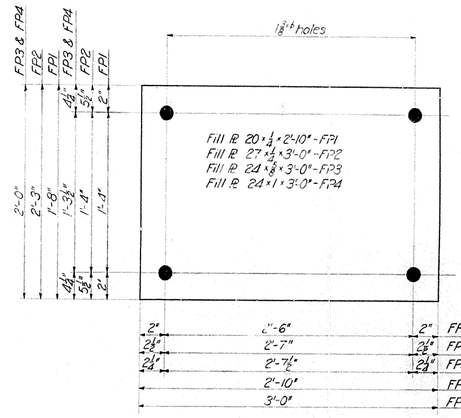
Note: Use existing masonry Ps under fixed shoes at Pier 2 if material can be salvaged. Perform revisions necessary to conform to details shown above.



LEAD PLATE
2 REQD-Mk LP1



LEAD PLATES
2 REQD-Mk LP2
2 REQD-Mk LP3
2 REQD-Mk LP4
6 REQD-Mk LP5
4 REQD-Mk LP6



FILL PLATES
2 REQD-Mk FP1
2 REQD-Mk FP2
2 REQD-Mk FP3
2 REQD-Mk FP4

NOTES:
For list see drawing 1080H423

REFERENCE DRAWINGS:
1080H404.....ANCHOR BOLT PLAN
1080H441.....TRUSS REVISIONS
1080H453.....RDWY SLAB ALTERATIONS AT PIERS 1&2
1080H454.....RDWY SLAB ALTERATIONS AT PIERS 3,4,5&6

Scale 1½"=1'-0"
Except as noted

PROJECT 8-1080 Sheet 26

NO.	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECM
3	10-24-42	CHF	RLG				
2	12-14-43	GFD	GHJ	RLG			
1	10-24-46	CHF	RLG				

Shown as constructed
Weld chg used at Piers 5 & 6
Geometry Revised

DESIGN C.H.F
DRWN G.F.D.
CHKD G.H.J.
TRCD
COMP
SUPV R.L.G.
INSP
SUBMITTED R.W. Mabe

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

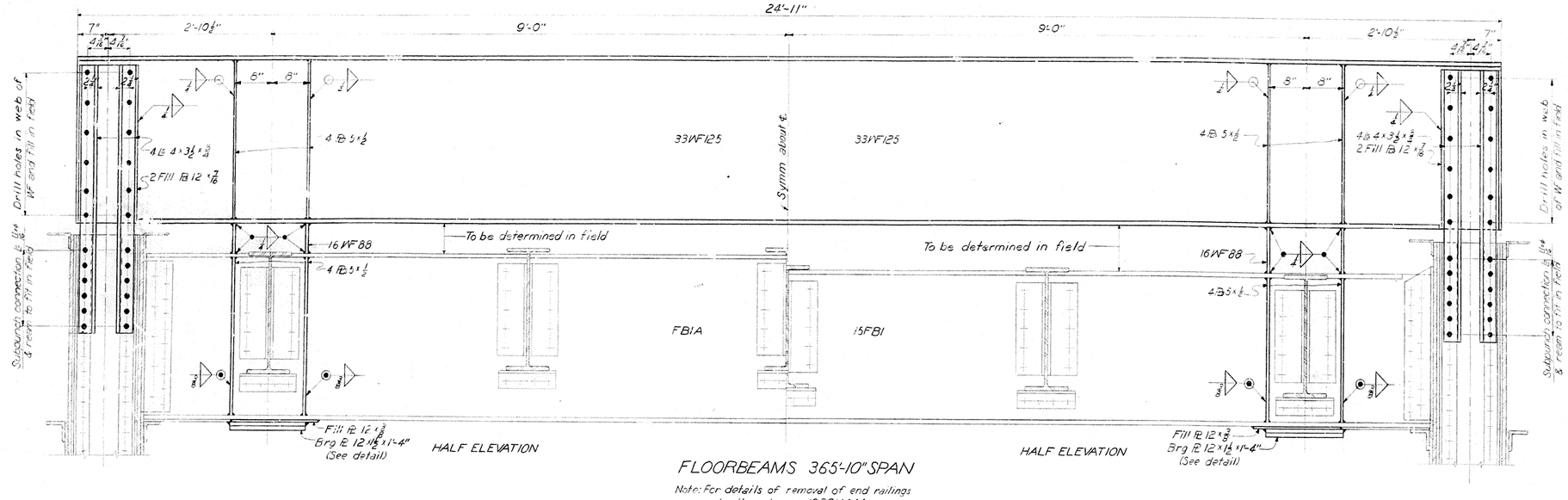
EGGNERS FERRY BRIDGE ACROSS TENNESSEE RIVER EXPANSION DEVICES & BEARINGS

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED	RECOMMENDED	APPROVED
C. F. Johnson	R. L. Abbott	George D. Reid
KNOXVILLE	8-13-42	8 HR 5 1080H442 R3

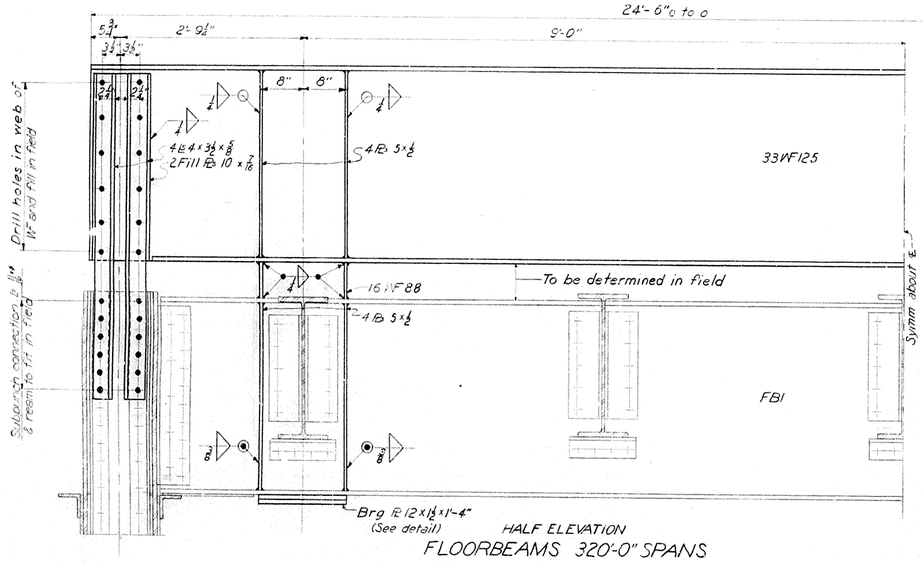
RECORD DRAWING AS CONSTRUCTED
Frank W. Mabe 7-1-46

SW 8-13-42 | ① HC | ② WHC | ③ | ④ | ⑤ | ⑥



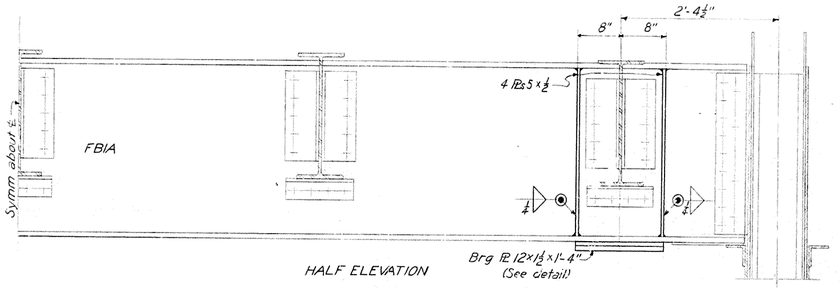
FLOORBEAMS 365'-10" SPAN

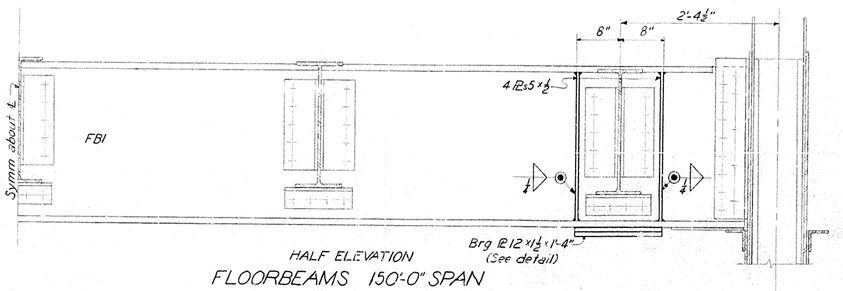
Note: For details of removal of end railings and rail posts see 1080H444



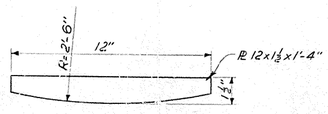
FLOORBEAMS 320'-0" SPANS

Note: For details of removal of end railings and rail posts see 1080H444



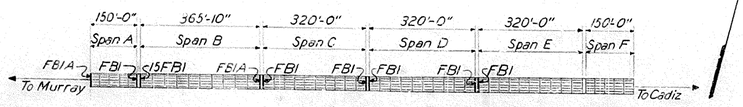


FLOORBEAMS 150'-0" SPAN



BEARING PLATE

Scale: 3"=1'-0"



KEY PLAN

Not to scale

NOTES:
For list see drawing 1080H423

CONSTRUCTION NOTE:
See Drawing 1080H3018

REFERENCE DRAWINGS:

1080H444	MISCELLANEOUS REVISIONS
1080H462	JACKING METHOD - PIER 1
1080H463	JACKING METHOD - PIER 2
1080H464	JACKING METHOD - PIER 3
1080H465	JACKING METHOD - PIER 4
1080H466	JACKING METHOD - PIER 5

Scale: 1"=1'-0"
Except as noted

PROJECT 8-1080 Sheet 27

NO	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECM
1	6/13/41	METRE	RIALS				
Final Field Revision							
DSGN. KCS				SUPV. R.L.G.			
DRWN. HCS 7-21-42				INSP. S.W. Belmon			
CHKD. G.H.F.				ENGINEER R.W. Mabe			
CDMP.							
HC	AAH						7/25/42

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

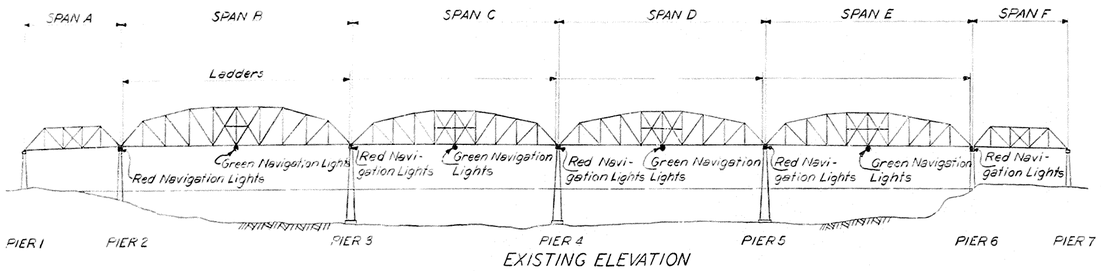
EGGNERS FERRY BRIDGE
ACROSS TENNESSEE RIVER
REVISIONS TO TRUSS FLOORBEAMS

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED	RECOMMENDED	APPROVED
F. E. Johnson	O. L. Schutt	Geo. D. Rich
KNOXVILLE	8-13-42	8 HR 5 1080H443 A

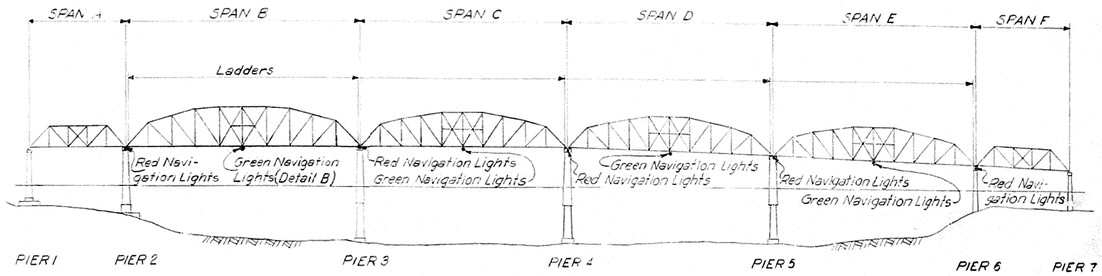
RECORD DRAWING, AS CONSTRUCTED
Frank W. Webb

EH
8-13-42



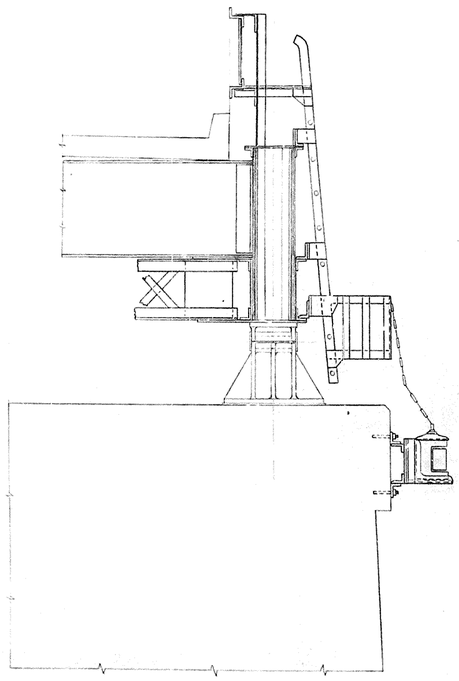
EXISTING ELEVATION

Scale 1" = 100'

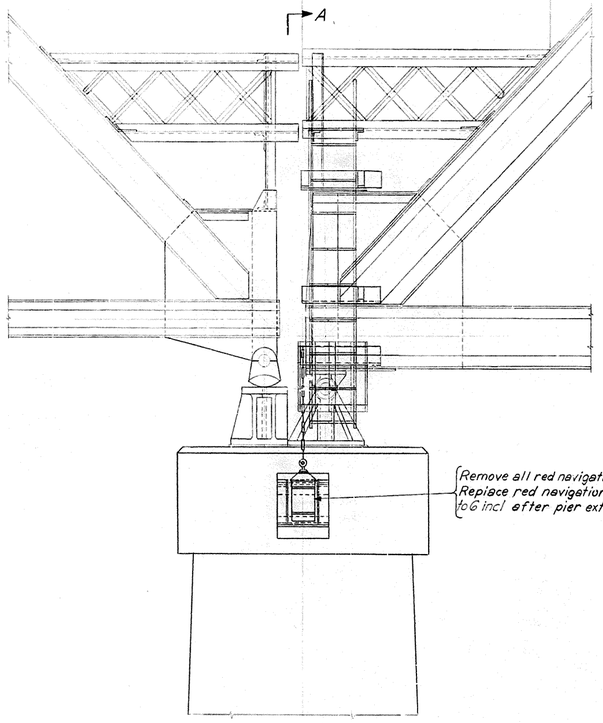


PROPOSED ELEVATION

Scale 1" = 100'

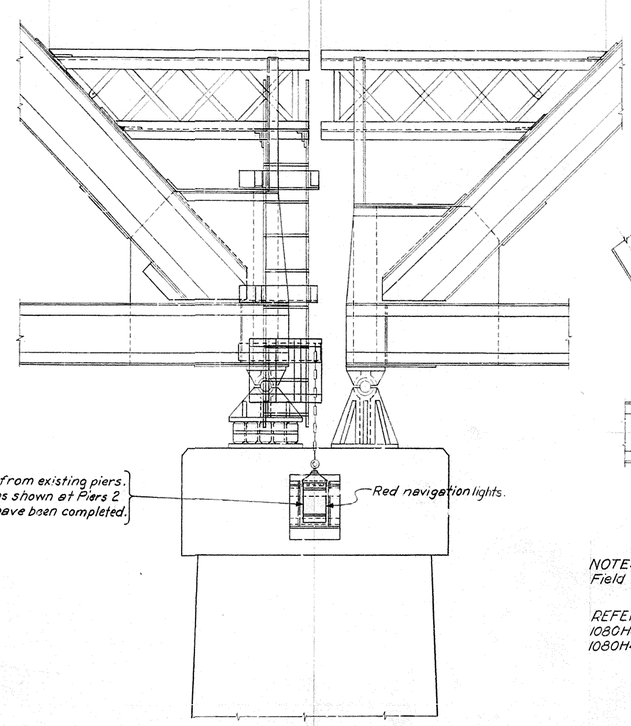


SECTION A-A

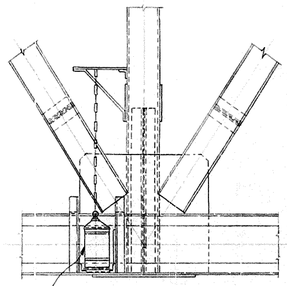


A

PIER 2



PIERS 3, 4, & 5



DETAIL B

NOTES:
Field Paint: See TVA Specifications 3054.

REFERENCE DRAWINGS:
1080H401..... GENERAL DRAWING
1080H443..... REVISIONS TO TRUSS FLOORBEAMS

Scale 3/8" = 1'-0"
Except as noted

PROJECT 8-1080 Sheet 2.8

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

EGGNERS FERRY BRIDGE ACROSS TENNESSEE RIVER MISCELLANEOUS REVISIONS

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED	RECOMMENDED	APPROVED
F. E. Turner	C. H. Schutt	George L. Rich
KNOXVILLE	8-13-42	8 HR 5 W1080H444 R4

RECORD DRAWING AS CONSTRUCTED
Frank D. Diehl 7-1-44

No.	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECM
4	8-13-42	ETH	GT	GR	SS	PBS	WCM
Navigation Lights Revised							
3	11-24-41	RLG	KWH			PBS	WCM
Revised Notes							
2	10-3-41	MDB	CHF	RLG	WCM	PBS	WCM
General Revision							

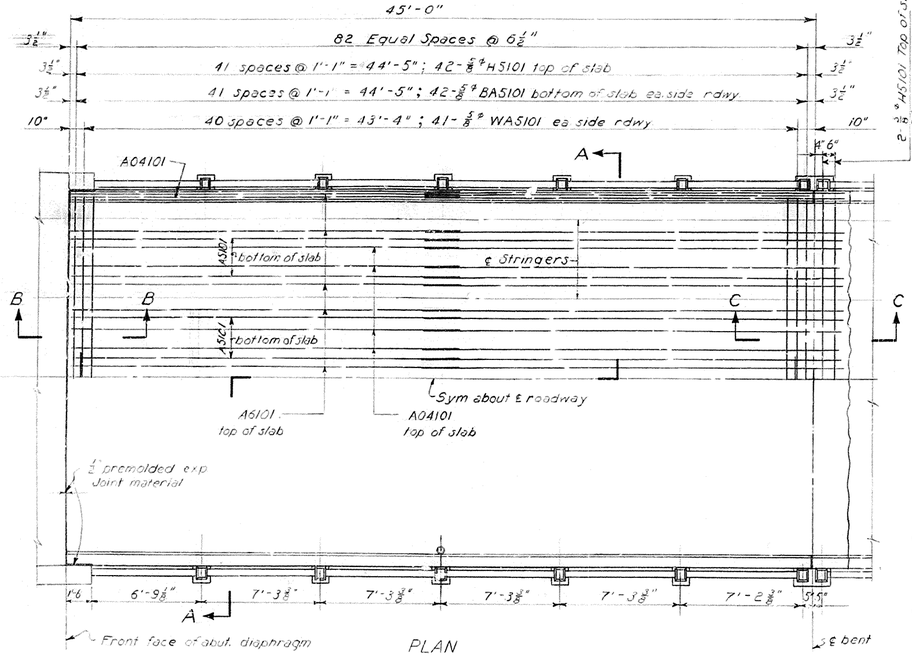
DESIGN CHE
DRAWN L.B.S. G.H.T.
CHKD -
TRCD -
COMP -

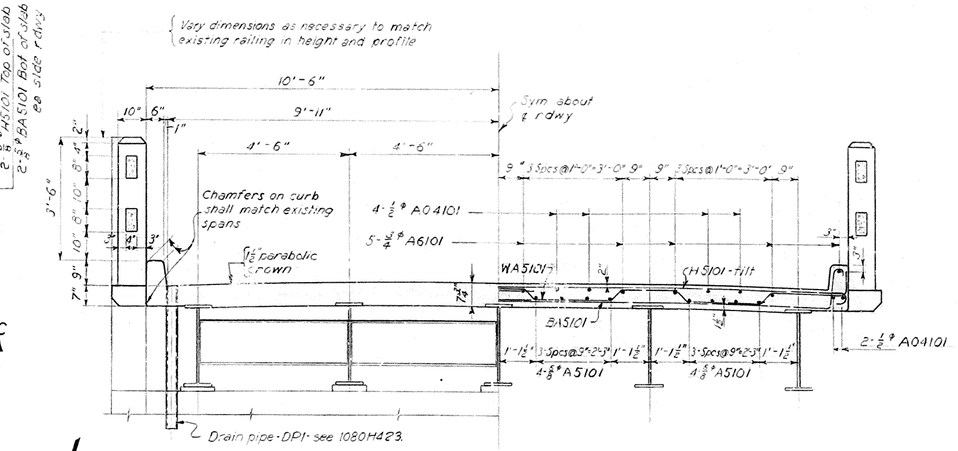
SUPV. R.L.G.
INSP. Clerk S.W. Fahrman
SUBMITTED G.W. Mabe

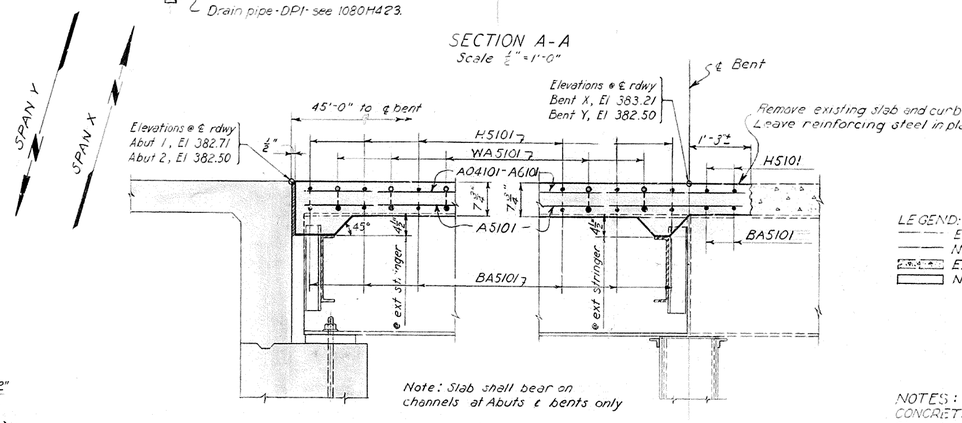
HC | A.M.M. | 1/32a

Signed as constructed
PBS WCM

BF 8-13-42 | ① HC | ② HC | ③ | ④ | ⑤ | ⑥



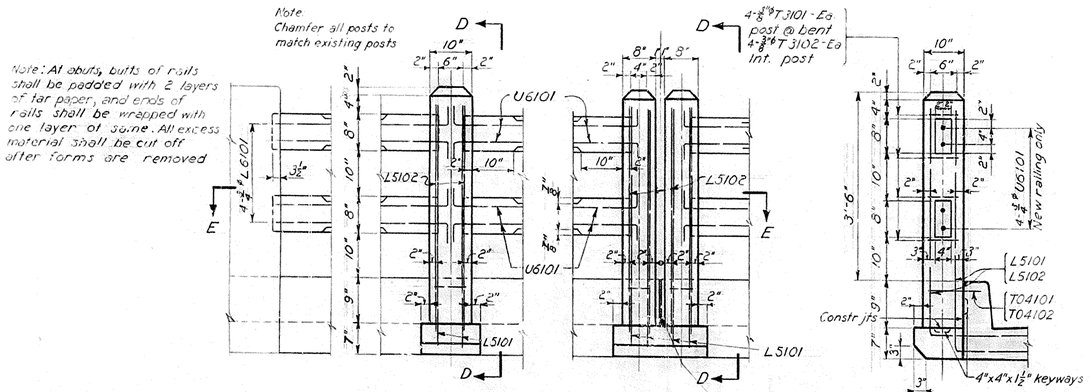




SPAN Y

SPAN X

LEGEND:
- Existing material
- New material
- Existing concrete in section
- New concrete in section

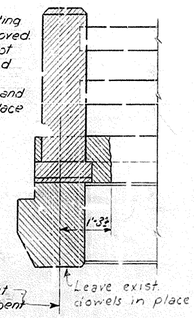


TYPICAL RAILING DETAILS
Scale ¾"=1'-0"

SECTION B-B
Scale ¾"=1'-0"

SECTION C-C
Scale ¾"=1'-0"

Shaded portions of existing concrete shall be removed. Care shall be taken not to damage railings and stringers. Horizontal reinforcement in slab and curbs shall be left in place



ALTERATIONS TO SPANS 1 & 38 AT BENTS X & Y
Scale ½"=1'-0"

NOTES:
CONCRETE: Concrete in top and curbs shall be Class A made with Type I or II portland cement. Maximum size of coarse aggregate shall be size 4. All exposed surfaces shall be given a rubbed finish.
Concrete in railings shall be Class S made with type I or II portland cement. Maximum size of coarse aggregate shall be size 5. All exposed surfaces shall be given a rubbed finish. Rail bars shall be precast, see specifications. New railings shall match existing railings.
FORMS: Forms for curbs and post supports shall be lined with plywood or similar material, leaving a minimum of joints.
REINFORCING STEEL: All dimensions relative to reinforcing steel are to centers of bars.
For structural steel details, see 1080H423.
For schedule of reinforcing steel and bending diagrams, see 1080H455.

Scale ¼"=1'-0"
Except as noted

PROJECT 8-1080 Sheet 29

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

SPANS X AND Y
SLAB AND RAILINGS

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

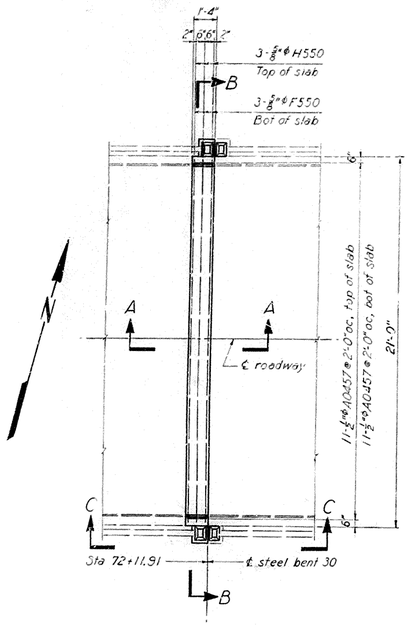
SUBMITTED	RECOMMENDED	APPROVED
F. E. Kenison	A. E. Schutt	George D. Rich
KNOXVILLE	10-15-42	8 HK 5 1080H451 R:

RECORD DRAWING AS CONSTRUCTED
Frank D. Dale 1-1-44

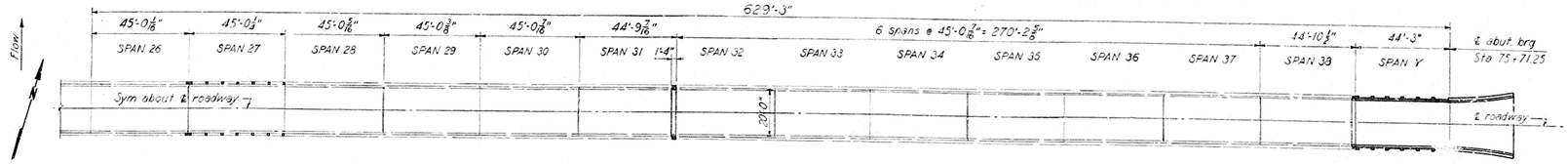
615 LKJM TRE RIA 6-5 W-24-(11)
Signed as constructed

ITEM	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECM
DSGN	GLM-BTH			SUP	GF 8-15-42		
DRWN	JIG			INSP	HME		
CHKD	GLM			ENGINEER			
TRCD							
COMP							

BRIDGE

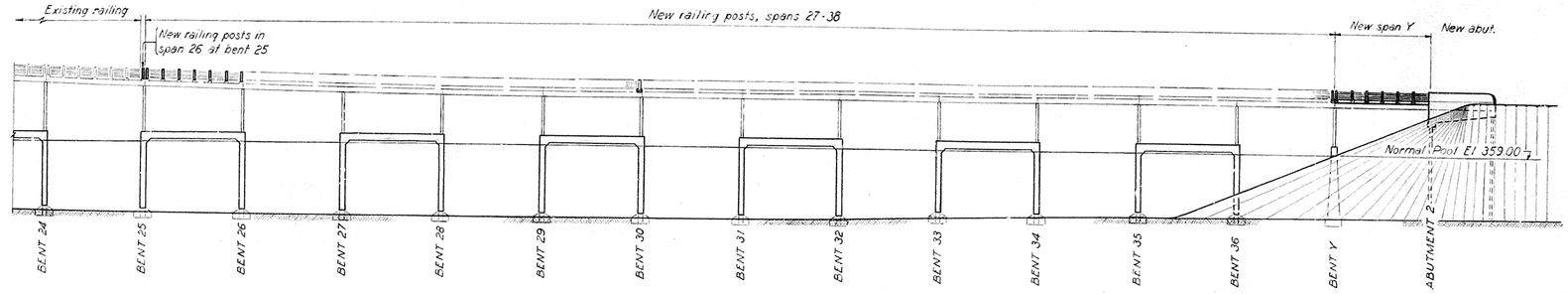


PLAN AT BENT 30



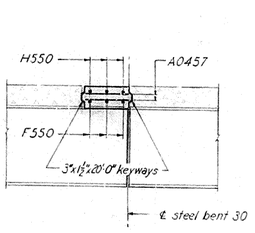
PLAN

Scale 1"= 30'-0"



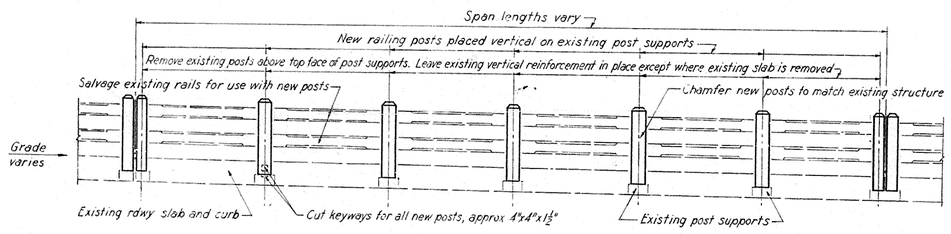
ELEVATION

Scale 1"= 30'-0"



SECTION A-A

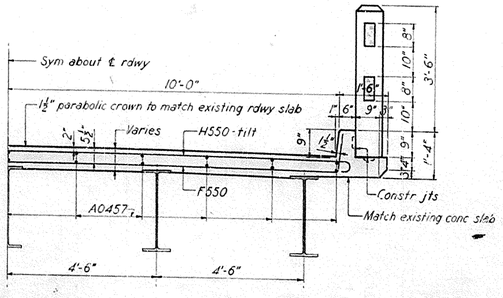
Scale ½"= 1'-0"



ELEVATION OF RAILING

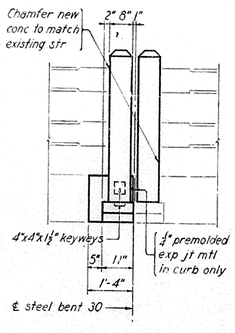
TYPICAL FOR SPANS 27-38

Note:
For new reinforcement in railing posts see 1080H451



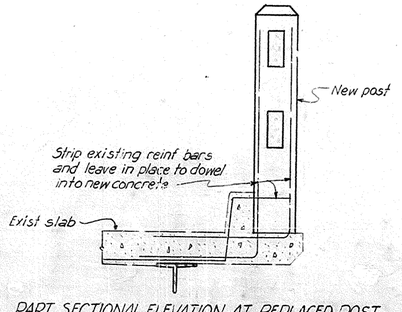
HALF SECTION B-B

Scale ½"= 1'-0"



ELEVATION C-C

Scale ½"= 1'-0"



PART SECTIONAL ELEVATION AT REPLACED POST
SHOWING REINFORCEMENT CONNECTING NEW POST TO SLAB

Scale: ¾"= 1'-0"

NOTES.
For schedule of reinforcing steel and bending diagrams see 1080H455.

For additional notes and legend see 1080H451

Scale ¼"= 1'-0"
Except as noted

PROJECT 8-1080 Sheet 30

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

ALTERATIONS TO SLAB AND RAILING EAST APPROACH

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

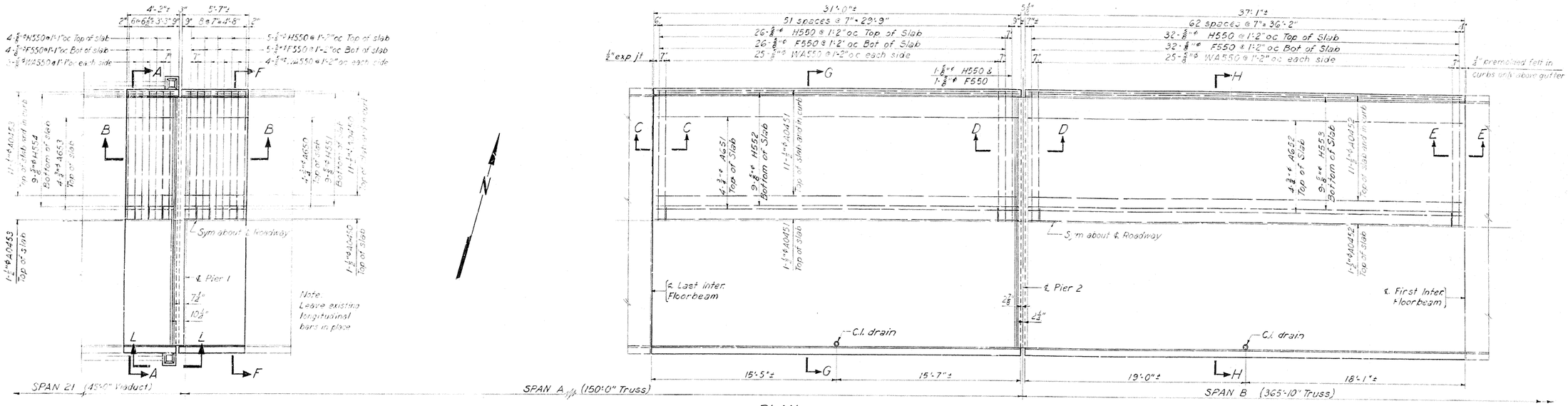
SUBMITTED	RECOMMENDED	APPROVED
F. E. Gannon	M. A. Schmidt	Gerald Rich

KNOXVILLE 10-15-42 | 8 | HR | 5 | 1080H452 R2

RECORD DRAWING AS CONSTRUCTED
Frank D. Webster 7-1-44

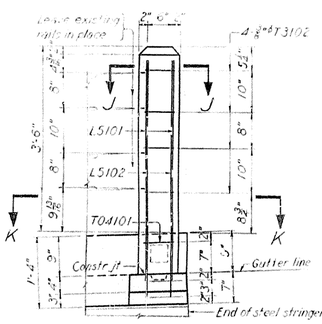
2-1615-44K/M/TRE/RLA/GB 4-21-43
SIGNED AS CONSTRUCTED
1 11-20-43 ETH GT [illegible] 4-21-44
Added PART SECT SUMMARY REPLACED POST

REV NO.	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECV
DSGN GLM				SUPV GF 8-15-42			
DRWN JW				INSP [illegible]			
CHKD ETH							
TRCD				ENGINEER			
COMP				[illegible] 1944			
HC	AAM 0						DBE



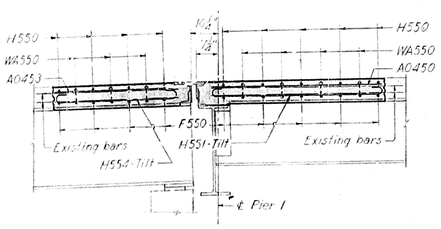
PLAN

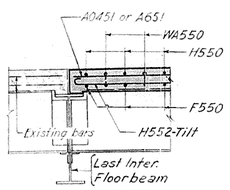
Scale $\frac{1}{4}$" = 1'-0"

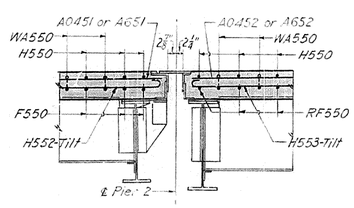


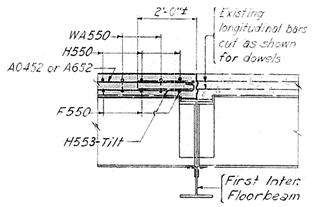
ELEVATION L-L

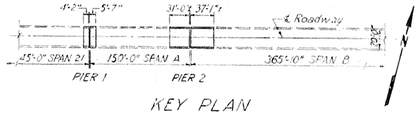
Scale $\frac{3}{4}$" = 1'-0"

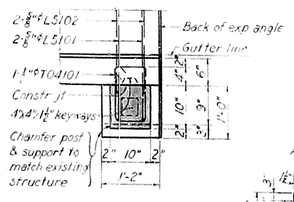


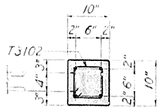


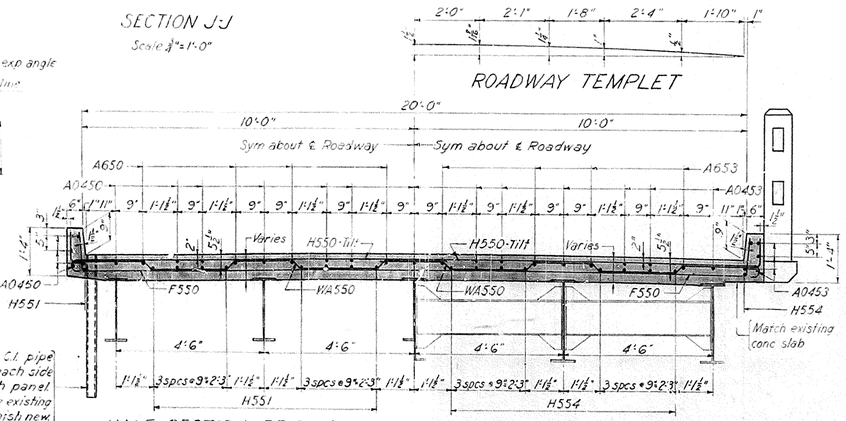




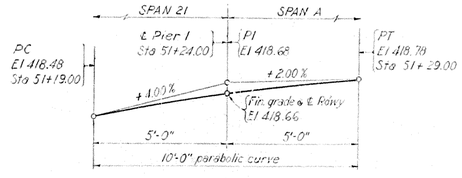






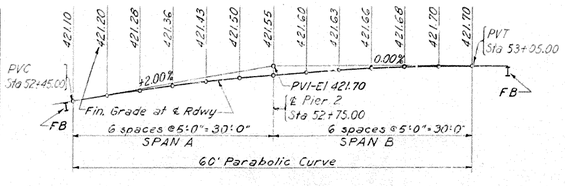


LONGITUDINAL STEEL		
SECT F-F	SECT G-G	SECT H-H
A0450	A0451	A0452
A650	A651	A652
H551	H552	H553



FINISHED GRADE PROFILE AT PIER 1

Not to scale



FINISHED GRADE PROFILE AT PIER 2

Not to scale

NOTES:
For schedule of reinforcing steel and bending diagrams see 1080H455
For details of expansion devices see 1080H442

For additional notes and legend see 1080H451

Scale $\frac{1}{4}$" = 1'-0"
Except as noted

PROJECT 8-1080 Sheet 31

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

ROADWAY SLAB ALTERATIONS AT PIERS 1 AND 2

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED	RECOMMENDED	APPROVED
G. E. Junior	C. E. Schmitt	George D. Rich
KNOXVILLE	10-15-42	8 HR 5 1080H451 TU

RECORD DRAWING AS CONSTRUCTED
Frank W. Webster 7-1-44

1 | 7/24/44 | KLM | TRF | KLA | E.E. | KWH | KWH

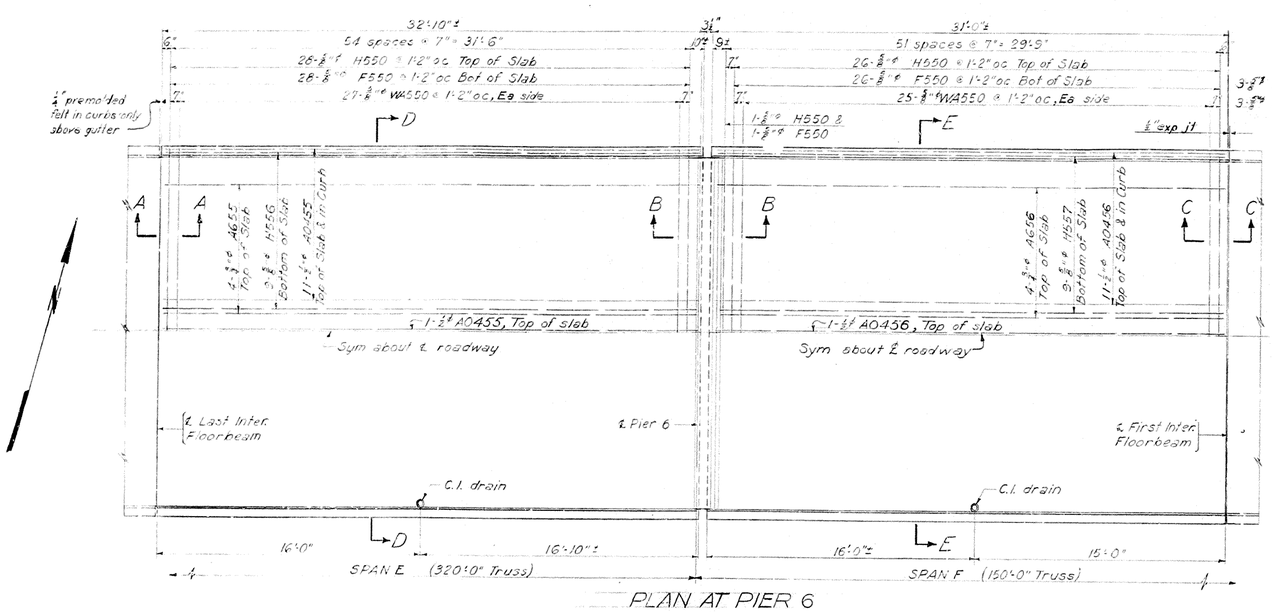
Signed as constructed

NO.	DATE	MADE	CHKD	CORR.	INSP.	SUBM.	RECM.

DESIGN G.L.M. | SUPV. G.F. 8-15-42
DRAWN O.H.R. & J.H.V. | INSP. Unk
CHKD E.T.A.
RECD. | ENGINEER
COMP. | Earnest G. Groppe

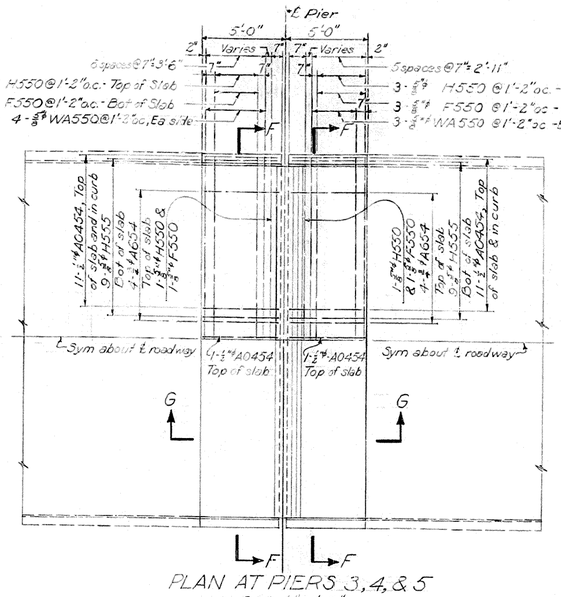
TRC | AGM | | 2782

BRIDGE



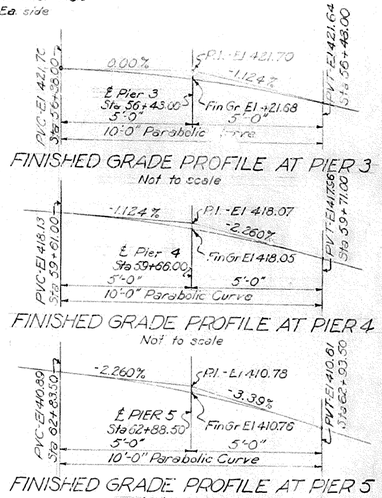
PLAN AT PIER 6

Scale ¼" = 1'-0"



PLAN AT PIERS 3, 4, & 5

Scale ¼" = 1'-0"



FINISHED GRADE PROFILE AT PIER 3

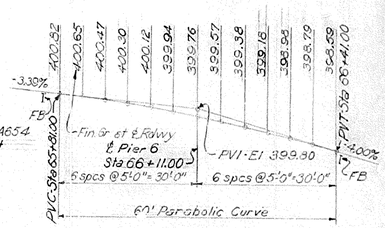
Not to scale

FINISHED GRADE PROFILE AT PIER 4

Not to scale

FINISHED GRADE PROFILE AT PIER 5

Not to scale



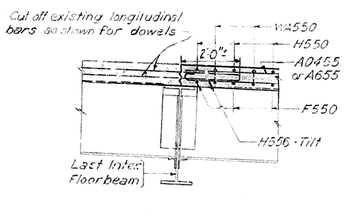
FINISHED GRADE PROFILE AT PIER 6

Not to scale

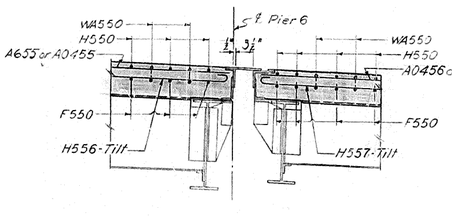
Existing elevations and grades are approx and subject to field check, see 1080H401.

NOTES:
For schedule of reinforcing steel and bending diagrams, see 1080H455.

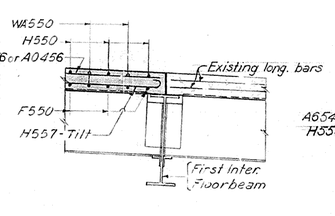
For additional notes and legend, see 1080H451.



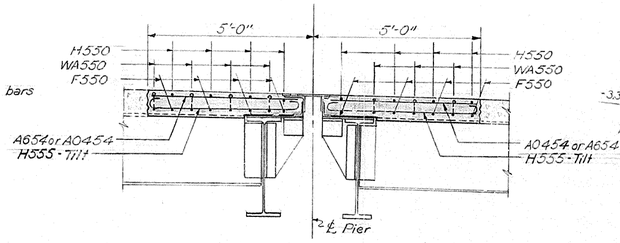
SECTION A-A



SECTION B-B



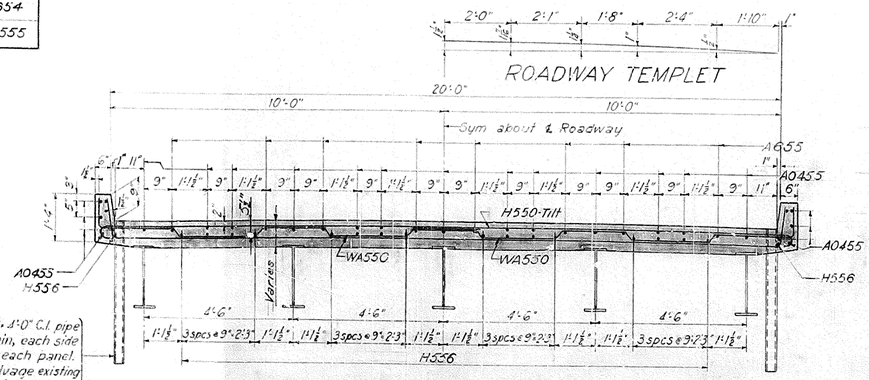
SECTION C-C



SECTION G-G

Existing longitudinal bars are not to be removed

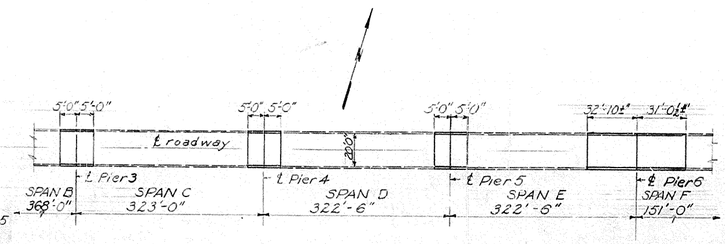
LONGITUDINAL STEEL		
SECTION D-D	SECTION E-E	SECTION F-F
A0455	A0456	A0454
A655	A656	A654
H556	H557	H555



3"ø, 4'-0" C.I. pipe drain, each side of each panel. Salvage existing or furnish new. Sections D-D and E-E only.

SECTIONS D-D, E-E & F-F

SECTION D-D AS SHOWN, SECTIONS E-E & F-F IDENTICAL EXCEPT LONGITUDINAL STEEL. SEE TABLE.



KEY PLAN

Not to scale

Scale ½" = 1'-0"
Except as noted

PROJECT 8-1080 Sheet 32

EGGNERS FERRY BRIDGE
ON UNITED STATES HIGHWAY 68

ROADWAY SLAB ALTERATIONS AT PIERS 3,4,5&6

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED	RECOMMENDED	APPROVED
F.C. Junior	C.E. Rhett	Geo. H. Rich
KNOXVILLE	10-15-42	8 HR S 1080H454R1

RECORD DRAWING AS CONSTRUCTED
Thos. L. Wilkie 7-1-44

SIG	AS constructed					
ADD NO.	DATE	CHKD.	SUPV.	INSP.	CORR.	RECM.
DSGN. G.F.			SUPV. GF 8-16-42			
DRWN. OMH		CF	INSP. Cont.			
CHKD. ETD						
TRCD.			ENGINEER			
COMP.						
MC	Date 0					1080

ITEM _____ PROJECT _____ PAGE 2 OF _____

LOCATION	MARK	NO	SIZE	LENGTH	BENDING DIMENSIONS A	B	C	D	E	F	G	WEIGHT
TOTAL WEIGHT THIS PAGE												

EGGNERS FERRY BRIDGE PROJECT 8-1080
ITEM ROADWAY SLAB- SPANS X, Y, 1, & 38 PAGE 5 OF 6

LOCATION	MARK	NO	SIZE	LENGTH	BENDING DIMENSIONS A	B	C	D	E	F	G	WEIGHT
	SPANS X&Y											
Note: One half of the total number of bars of each mark is required in each span.												
Slab	A0S101	48	1/2"ϕ	23-9								762
"	A5101	64	5/8"ϕ	23-11								1,597
"	A6101	40	3/4"ϕ	23-2								1,452
"	BA5101	168	5/8"ϕ	13-0	(See diagram)							2,278
"	H5101	84	5/8"ϕ	21-9	10°	20-1	5°				20-5	1,906
"	WA5101	184	5/8"ϕ	12-7	(See diagram)							2,152
	SPANS 1&38											
One half of the total number of bars of each mark is required in each span.												
Slab	BA5101	8	5/8"ϕ	13-0	(See diagram)							108
"	H5101	4	5/8"ϕ	21-9	10°	20-1	5°				20-5	91

TOTAL WEIGHT THIS PAGE 10,346

EGGNERS FERRY BRIDGE PROJECT 8-1080
ITEM ROADWAY SLAB - SPANS 21 TO F & SPAN 31 PAGE 3 OF 6

LOCATION	MARK	NO	SIZE	LENGTH	BENDING DIMENSIONS A	B	C	D	E	F	G	WEIGHT
	SPAN 21											
Slab & curbs	A0N53	23	1/2"ϕ	3-8								58
Slab	A653	8	3/4"ϕ	3-8								44
"	F550	4	5/8"ϕ	22-2	1-1	20-0	1-1	1½"			20-3	92
"	H550	4	5/8"ϕ	21-11	10°	20-3		5°			20-8	91
"	H554	18	5/8"ϕ	4-11	10°	3-3		5°			3-8	92
"	WA550	6	5/8"ϕ	12-8		(See Diagram)						79
	SPAN A -											
Slab & curbs	A0N50	23	1/2"ϕ	5-1								78
" "	A0N51	23	1/2"ϕ	30-6								489
Slab	A650	8	3/4"ϕ	5-1								61
"	A651	8	3/4"ϕ	30-6								366
"	F550	32	5/8"ϕ	22-2	1-1	20-0	1-1	1½"			20-3	740
"	H550	32	5/8"ϕ	21-11	10°	20-3		5°			20-8	732
"	H551	18	5/8"ϕ	6-4	10°	4-8		5°			5-1	119
"	H552	18	5/8"ϕ	31-8	10°	30-1		5°			30-6	596
"	WA550	53	5/8"ϕ	12-8		(See diagram)						766
	SPAN B											
Slab & curbs	A0B52	23	1/2"ϕ	36-7								562
" "	A0N54	23	1/2"ϕ	4-0½								62
Slab	A652	8	3/4"ϕ	36-7								440
"	A654	8	3/4"ϕ	4-0½								49
"	F550	36	5/8"ϕ	22-2	1-1	20-0	1-1	1½"			20-3	832
"	H550	36	5/8"ϕ	21-11	10°	20-3		5°			20-8	823
"	H553	18	5/8"ϕ	37-10	10°	36-2		5°			36-7	710
Slab & curbs	H555	18	5/8"ϕ	5-3½	10°	3-7½		5°			4-0½	99
Slab	WA550	58	5/8"ϕ	12-8		(See diagram)						765
	SPAN C											
Slab & curbs	A0N54	46	1/2"ϕ	4-0½								124
Slab	A654	16	3/4"ϕ	4-0½								97
"	F550	8	5/8"ϕ	22-2	1-1	20-0	1-1	1½"			20-3	185
"	H550	8	5/8"ϕ	21-11	10°	20-3		5°			20-8	183

TOTAL WEIGHT THIS PAGE 9,313

EGGNERS FERRY BRIDGE PROJECT 8-1080
ITEM BENDING DIAGRAMS PAGE 5 OF 6

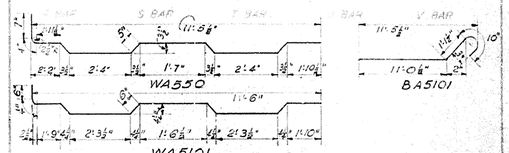
Bending diagrams shown with dimensions for various bar shapes. Bars are bent cold to the shapes and dimensions shown on the bending lists and diagrams. Fabrication and placement of reinforcement shall be in accordance with the current standard specifications of the Kentucky Department of Highways.

A BAR B BAR C BAR D BAR E BAR

F BAR G BAR H BAR J BAR

K BAR L BAR M BAR N BAR P BAR

S BAR T BAR U BAR V BAR



EGGNERS FERRY BRIDGE PROJECT 8-1080
ITEM RAILING - SPANS X, 1, 21, 27 TO 38, & Y PAGE 6 OF 6

LOCATION	MARK	NO	SIZE	LENGTH	BENDING DIMENSIONS A	B	C	D	E	F	G	WEIGHT
	SPANS X & Y											
One half of the total number of bars of each mark is required in each span.												
Posts	L5101	48	5/8"ϕ	6-8	4-4	3"	2-1			2"	4-6	334
"	L5102	48	5/8"ϕ	6-11	4-0	3"	2-8			2"	4-2	348
Rails	L6101	16	3/4"ϕ	7-0	6-7	3"	2"			2"	6-9	168
Posts	T3101	16	3/8"ϕ	2-6	3"	5"	7"			1"		15
"	T3102	80	3/8"ϕ	2-10	3"	7"	7"			1"		85
"	T04101	20	1/2"ϕ	3-10	3"	7"	4-1			1"		51
"	T04102	4	1/2"ϕ	3-6	3"	5"	1-1			1"		9
Rails	U6101	80	3/4"ϕ	7-7	2"	3"	6-9			2"	7-1	911
	SPANS 1 & 21											
One half of the total number of bars of each mark is required in each span.												
Posts	L5101	8	5/8"ϕ	6-8	4-4	3"	2-1			2"	4-6	56
"	L5102	8	5/8"ϕ	6-11	4-0	3"	2-8			2"	4-2	58
"	T3101	16	3/8"ϕ	2-6	3"	5"	7"			1"		15
"	T04102	4	1/2"ϕ	3-6	3"	5"	1-1			1"		9
	SPANS 28 TO 38											
One twelfth of the total number of bars of each mark is required in each of spans 27 to 38.												
Posts	T3101	192	3/8"ϕ	2-6	3"	5"	7"			1"		180
"	T3102	480	3/8"ϕ	2-10	3"	7"	7"			1"		511
In addition to the above one-half the total number of the following bars is required in each of spans 31 and 38.												
Posts	L5101	8	5/8"ϕ	6-8	4-4	3"	2-1			2"	4-6	56
"	L5102	8	5/8"ϕ	6-11	4-0	3"	2-8			2"	4-2	58
The following bars are required in span 28.												
Posts	T3101	8	3/8"ϕ	2-6	3"	5"	7"			1"		8

TOTAL WEIGHT THIS PAGE 2,870

EGGNERS FERRY BRIDGE PROJECT 8-1080
ITEM ROADWAY SLAB - SPANS 21 TO F & SPAN 31 PAGE 4 OF 6

LOCATION	MARK	NO	SIZE	LENGTH	BENDING DIMENSIONS A	B	C	D	E	F	G	WEIGHT
	SPAN C(Cont)											
Slab & curbs	H555	36	5/8"ϕ	5-3½	10°	3-7½		5°			4-0½	199
Slab	WA550	7	5/8"ϕ	12-8		(See diagram)						92
	SPAN D											
Slab & curbs	A0N54	46	1/2"ϕ	4-0½								124
Slab	A654	16	3/4"ϕ	4-0½								97
"	F550	8	5/8"ϕ	22-2	1-1	20-0	1-1	1½"			20-3	185
"	H550	8	5/8"ϕ	21-11	10°	20-3		5°			20-8	183
Slab & curbs	H555	36	5/8"ϕ	5-3½	10°	3-7½		5°			4-0½	199
Slab	WA550	7	5/8"ϕ	12-8		(See diagram)						92
	SPAN E											
Slab & curbs	A0N54	23	1/2"ϕ	4-0½								62
" "	A0N55	23	1/2"ϕ	32-4								497
Slab	A654	8	3/4"ϕ	4-0½								49
"	A655	8	3/4"ϕ	32-4								389
"	F550	32	5/8"ϕ	21-11	1-1	20-0	1-1	1½"			20-3	732
"	H550	32	5/8"ϕ	21-11	10°	20-3		5°			20-8	732
Slab & curbs	H555	18	5/8"ϕ	5-3½	10°	3-7½		5°			4-0½	99
" "	H556	18	5/8"ϕ	33-7	10°	31-11		5°			32-4	630
Slab	WA550	30	5/8"ϕ	12-8		(See diagram)						398
	SPAN F											
Slab & curbs	A0N56	23	1/2"ϕ	30-6								469
Slab	A656	8	3/4"ϕ	30-6								366
"	F550	27	5/8"ϕ	22-2	1-1	20-0	1-1	1½"			20-3	624
"	H550	27	5/8"ϕ	21-11	10°	20-3		5°			20-8	617
Slab & curbs	H557	18	5/8"ϕ	31-9	10°	30-1		5°			30-6	596
Slab	WA550	25	5/8"ϕ	12-8		(See diagram)						330
	SPAN 31											
Slab	A0N57	22	1/2"ϕ	1-2								17
"	F550	3	5/8"ϕ	22-2	1-1	20-0	1-1	1½"			20-3	69
"	H550	3	5/8"ϕ	21-11	10°	20-3		5°			20-8	69

TOTAL WEIGHT THIS PAGE 7,016

PAGE 1 OF 6

NOTES:
MATERIAL See specifications

Bending All dimensions are to centers of bars. All curves shall be made cold and minimum radius shall be four times bar size, unless dimensioned otherwise. Maximum tolerance in dimensions shown shall be ½", except that ends of hooks may have a greater over-run. Unless dimensioned otherwise, all bars are symmetrical.

PROJECT 8-1080 Sheet 33

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

SUPERSTRUCTURE

REINFORCING STEEL

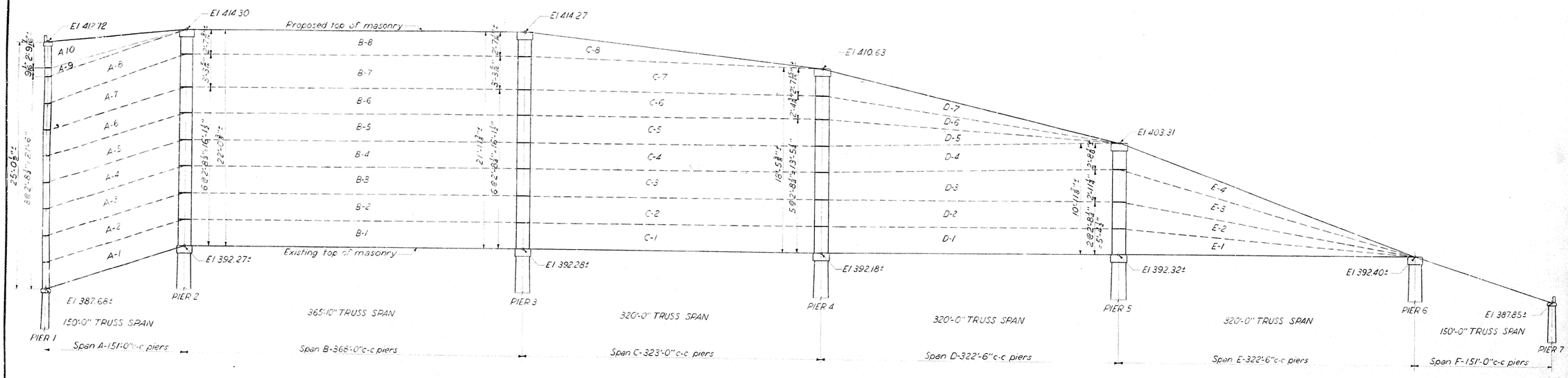
I hereby certify that this is a true and correct copy of the plans as Signed as constructed

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

ETH	GF		
SEE	Amk		
GLM			
JML	Examined	SUBMITTED	RECOMMENDED APPROVED
AML		F.E. Johnson	A.H. Smith George D. Rich
HC	DSR	KNOXVILLE, TENN. 10-15-42	8 1080H455R1

RECORD DRAWING AS CONSTRUCTED Frank D. Webster 7-1-44

BRIDGE



Note:
Lifting dimensions shown correspond to elevations at top of permanent concrete block cribbing.
Dashed lines between piers represent grade of truss upon completion of each lifting operation.

REFERENCE DRAWINGS:
1080H462.....JACKING METHOD-PIER 1
1080H463.....JACKING METHOD-PIER 2
1080H464.....JACKING METHOD-PIER 3
1080H465.....JACKING METHOD-PIER 4
1080H466.....JACKING METHOD-PIER 5

Scale Horiz: 1"=50'
Vert: 1"=5'
PROJECT 8-1080 Sheet 34

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

EGGNERS FERRY BRIDGE
ACROSS TENNESSEE RIVER
LIFTING STAGES-PIERS

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED	RECOMMENDED	APPROVED
F. E. Jennison	C. E. Rehnlett	Dwight Reid

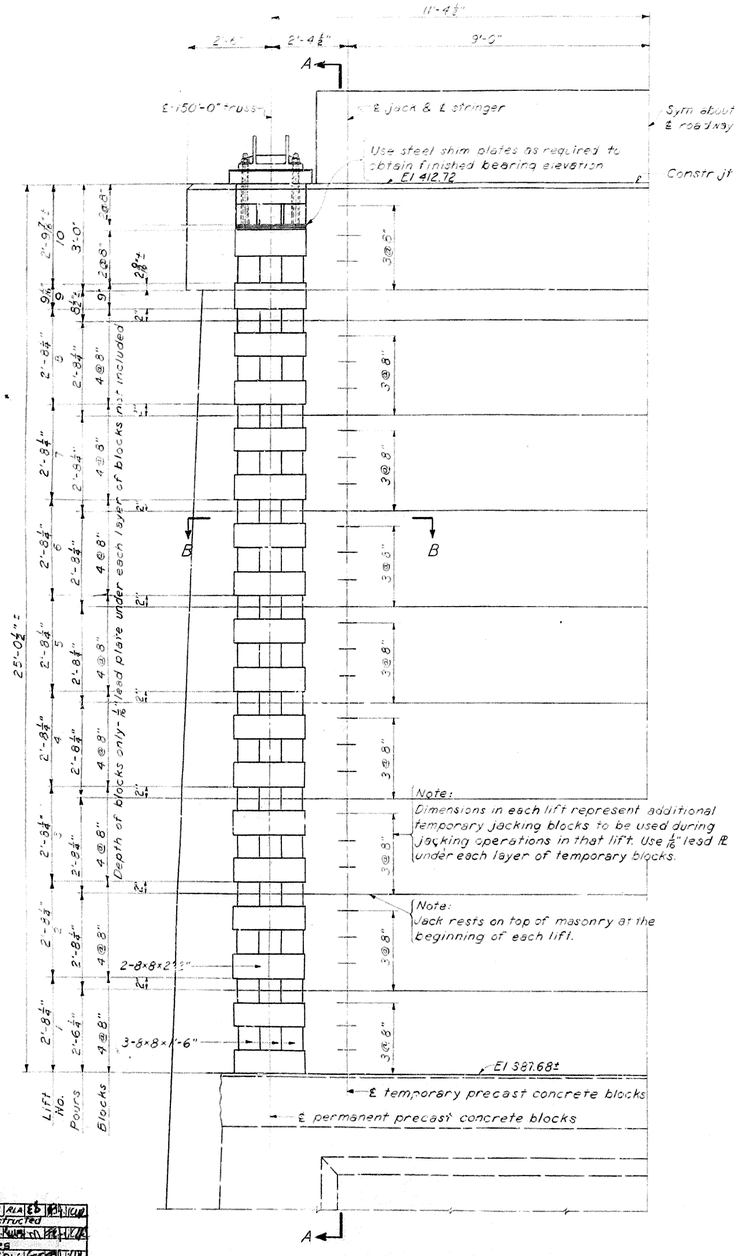
KNOXVILLE | 8-13-42 | 8 | HR | 5 | 1080H461 | R2

RECORD DRAWING AS CONSTRUCTED
Frank W. Mahr 7-1-44

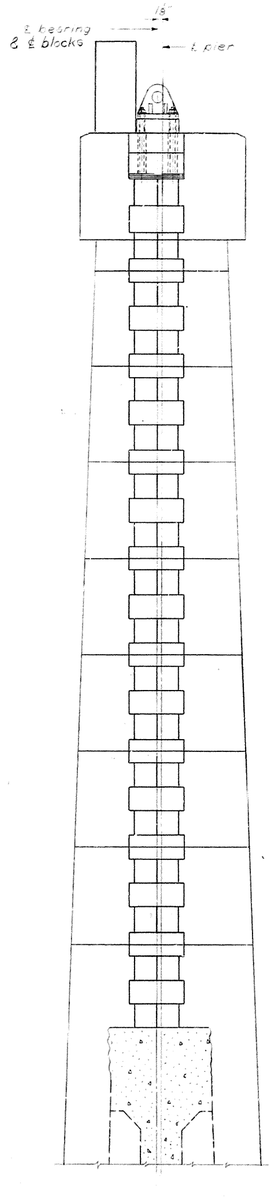
2 6-11-44 GM Inc. Tx. & B's to Hor. Signed as constructed
1 10-3-42 CHF Ch'd. L.G. Gussett Fill
General Revision

REV NO.	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECM
DSGN		CHF		SUPV	R.L.G.		
DRWN		A.B.L.		INSP	Sid Belmont		
CHKD		G.W.J.		TRCD			
TRCD				CONST	R.W. Mahr		
HC		A.A.H.				2032	

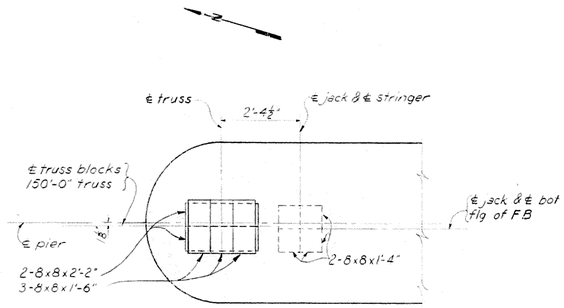
8-12-42	① HC	②	③	④	⑤	⑥



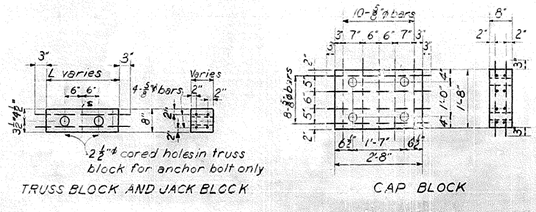
HALF SIDE ELEVATION



SECTIONAL ELEVATION A-A



SECTION B-B
TYPICAL EXCEPT FOR DEPTH OF BLOCKS



TRUSS BLOCK AND JACK BLOCK

CAP BLOCK

PRECAST CONCRETE BLOCKS

NOTES:
Precast concrete blocks: Class "S" minimum 3000# concrete.
Reinforcing steel: See TVA Specifications 3054.

REFERENCE DRAWINGS:
1080H404 ..... ANCHOR BOLT PLAN
1080H432 ..... PIER I-SHEET 1
1080H433 ..... PIER I-SHEET 2

Scale ½"=1'-0"

PROJECT 8-1080 Sheet 35

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

EGGNERS FERRY BRIDGE ACROSS TENNESSEE RIVER JACKING METHOD-PIER I

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED	RECOMMENDED	APPROVED
F. E. Junior	R. L. Schuett	George L. Reid
KNOXVILLE	8-13-42	8 HR 5

1080H462 R3

RECORD DRAWING AS CONSTRUCTED
Frank D. Bell 7-1-44

REV NO.	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECM
3	9/24	JCM	TPG	JRM	EB	BH	ICW
Signed as constructed							
2	10-8-42	JCM	QHF	DLG	EB	BH	ICW
Revised Notes							
1	10-5-42	EDHF	DLG	LG	EB	BH	ICW
General Revision							

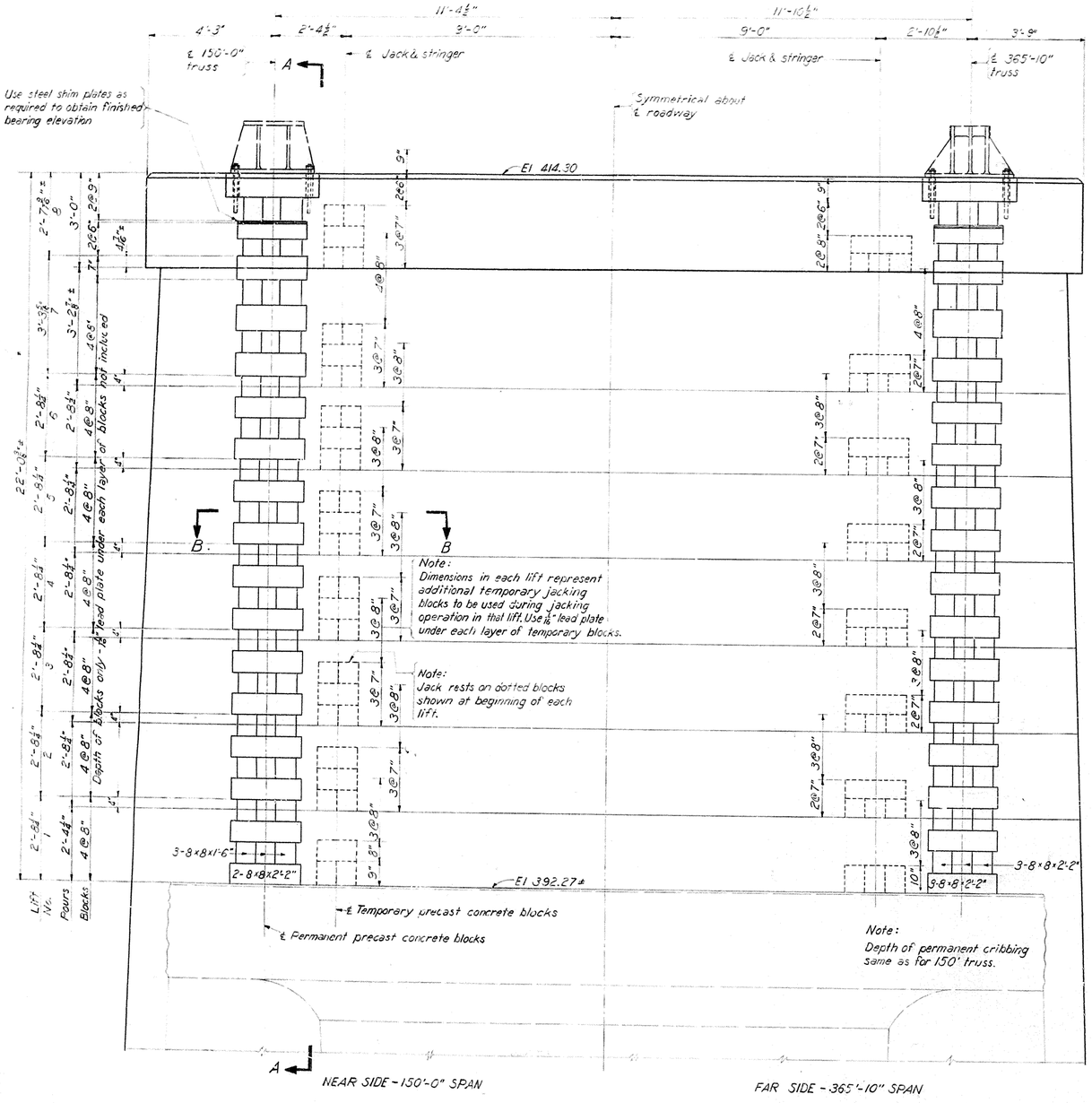
DSGN Bell
DRWN J.R.M.
CHKD Q.H.F.
TRCD -
COMP
SUPV R.L.G.
INSP Gilbert Salmon
SUBMITTED R.W. Mabe

HC AAMc

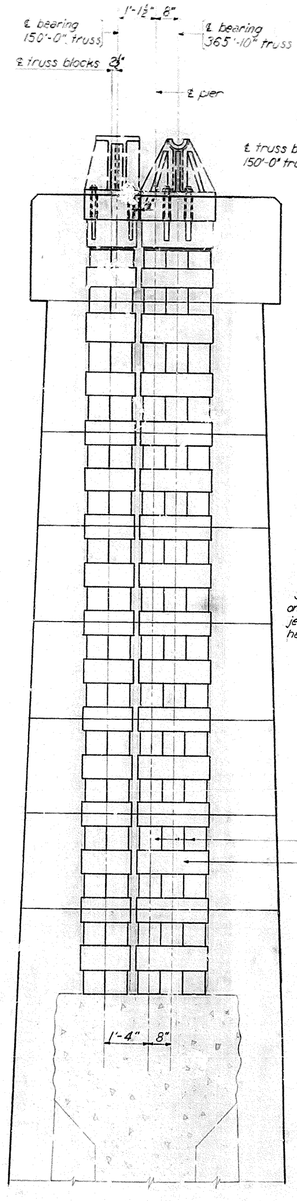
NH30

Ent 8-13-42

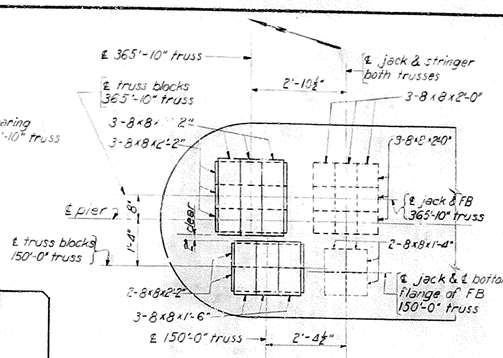
BRIDGE



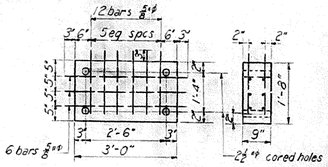
SIDE ELEVATION



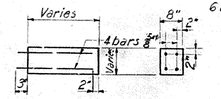
SECTIONAL ELEVATION A-A



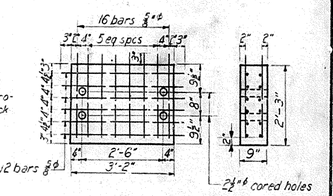
SECTION B-B
TYPICAL EXCEPT FOR DEPTH OF BLOCKS

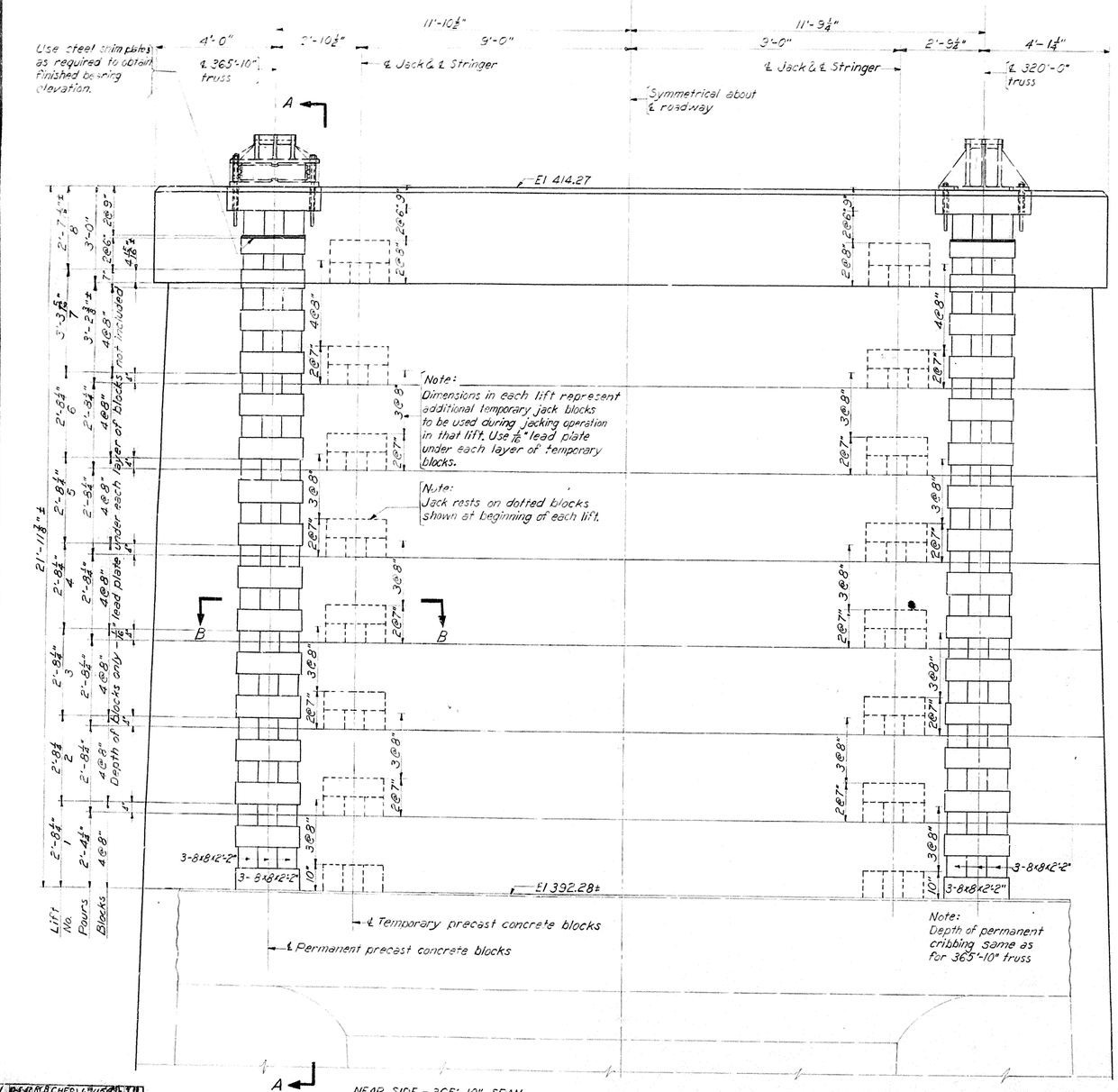


CAP BLOCK - 150'-0" SPAN

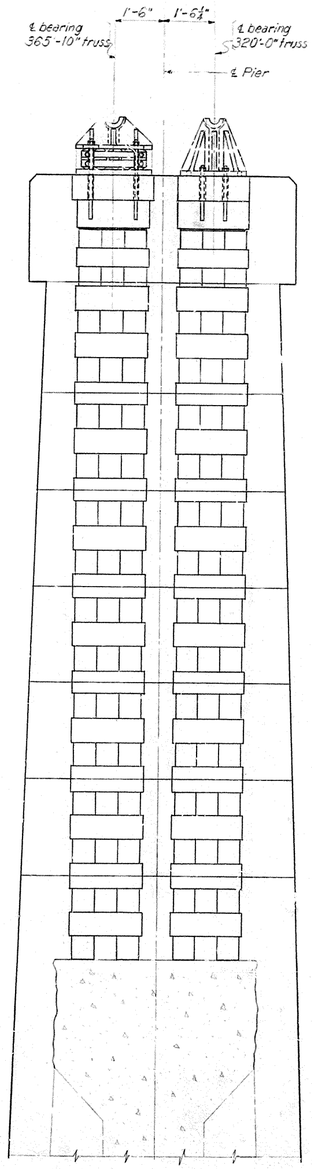


TRUSS BLOCK & JACK BLOCK
Jack block has steel projecting one end only. Longitudinal truss block has steel projecting one end only. Transverse truss block has steel projecting both ends.

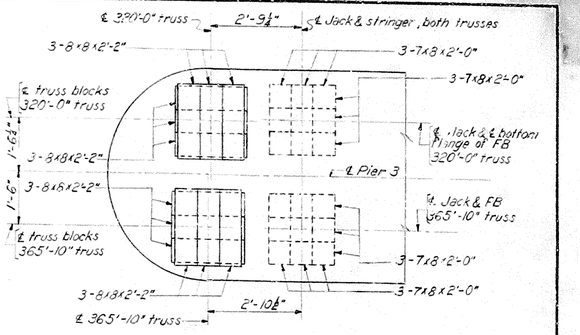

16 bars ⅝" ℄
3"
5 eq. spcs @ 4"
3"
2"
2"
2



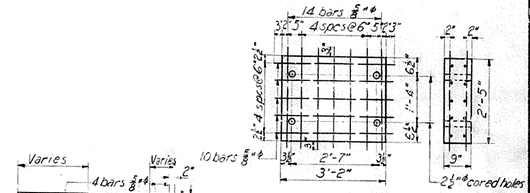
SIDE ELEVATION



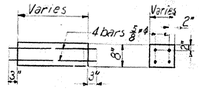
SECTIONAL ELEVATION A-A



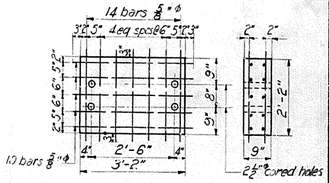
SECTION B-B
TYPICAL EXCEPT FOR DEPTH OF BLOCKS



CAP BLOCK - 365'-10" SPAN



TRUSS BLOCKS & JACK BLOCKS



CAP BLOCK - 320'-0" SPAN

PRECAST CONCRETE BLOCKS

NOTES:
For list see drawing 1080H462

REFERENCE DRAWINGS:
1080H404.....ANCHOR BOLT PLAN
1080H437.....PIER 3-EXTENSION

Scale ½" = 1'-0"

PROJECT 8-1080 Sheet 37

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

EGGNERS FERRY BRIDGE
ACROSS TENNESSEE RIVER
JACKING METHOD - PIER 3

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED	RECOMMENDED	APPROVED
T. E. Vernon	C. C. Barnett	Joseph H. Reed

KNOXVILLE | 8-13-42 | 8 HR 5 | 1080H464 R2

RECORD DRAWING AS CONSTRUCTED
Frank W. Webb 7-1-44

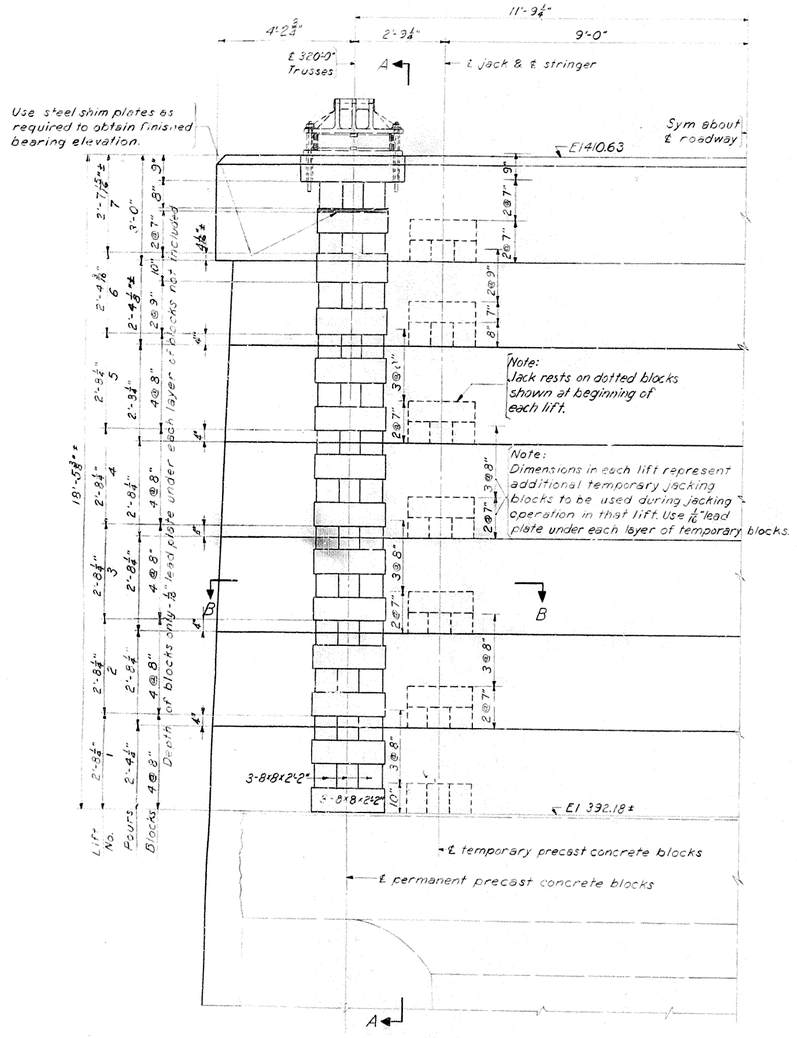
	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECM
1	8-5-42	R.B.C.	H.F.R.	L.B.S.	A.A.M.		
General Revision							

DESIGN B.H.N.
DRAWN E.C.D.
CHKD C.H.F.
TRACED
CHKD
SUPV R.L.G.
UNDER DIR. C.C. Barnett
SUBMITTED R.L.G.
RECOMMENDED R.L.G.
APPROVED

HC AAM 2 8-5-42 WJM THE R.L.G. R.L.G. WBA Signed as constructed

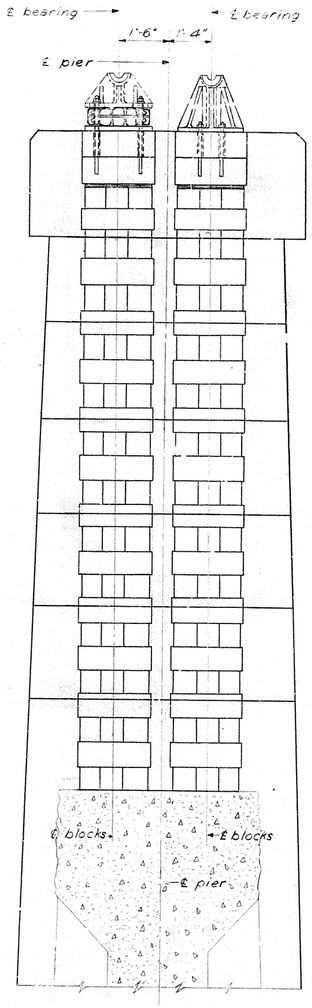
EB 8-12-42

1 HC 2 3 4 5 6

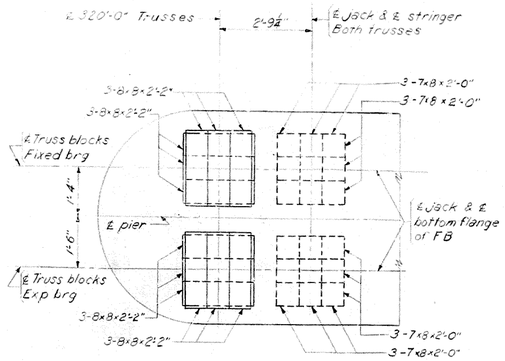


HALF SIDE ELEVATION

Blocking identical under all four bearings on pier

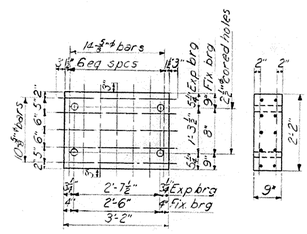


SECTIONAL ELEVATION A-A

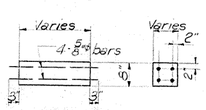


SECTION B-B

TYPICAL EXCEPT FOR DEPTH OF BLOCKS



CAP BLOCK



TRUSS BLOCKS AND JACK BLOCKS

PRECAST CONCRETE BLOCKS

NOTES:
For list see drawing 1080H462

REFERENCE DRAWINGS:
1080H404 ..... ANCHOR BOLT PLAN
1080H438 ..... PIERS 4 & 5 - EXTENSIONS

Scale 1/2"=1'-0"

PROJECT 8-1080 Sheet 38

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

EGGNERS FERRY BRIDGE
ACROSS TENNESSEE RIVER
JACKING METHOD-PIER 4

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED	RECOMMENDED	APPROVED
F. J. Lennon	A. L. Robertson	Gwynn Reid

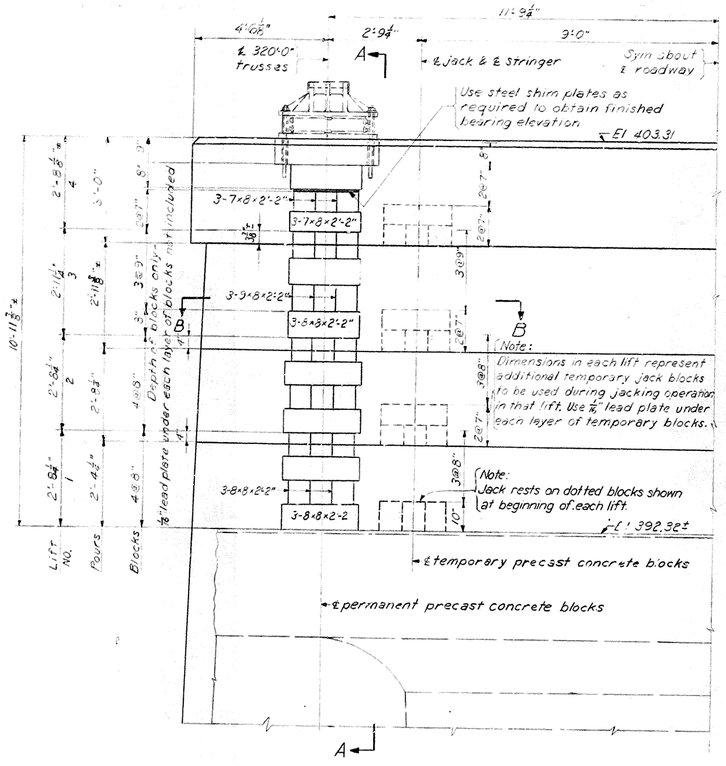
KNOXVILLE	8-13-42	8	HR	5	1080H465	R2

RECORD DRAWING AS CONSTRUCTED
Frank W. Mabe 7-1-44

R 10-13-44 - Notes revised to read "Signed as constructed"
1 10-5-42 HDB CHF Rev. Issued for General Revision

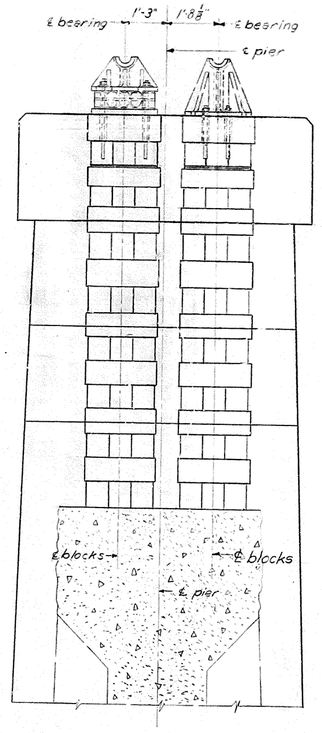
REV NO	DATE	MADE	CHKD	SUPV	INSP	SUBM RECM
DSGN BHN				SUPV R.L.G.		
DRAWN J.W.B. C.H.J.				DES Asst G.W. Fahrman		
TRACED				CHF G.W. Mabe		
CHKD HC	A.A.Mc					2/13a

8-17-42 | ① JWC | ② | ③ | ④ | ⑤ | ⑥

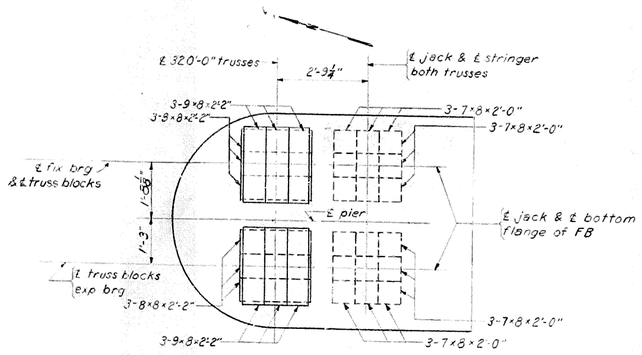


HALF SIDE ELEVATION

Blocking identical under all four bearings on Pier 5

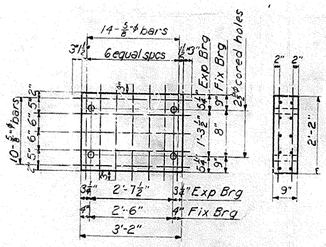


SECTIONAL ELEVATION A-A

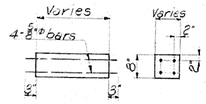


SECTION B-B

TYPICAL EXCEPT FOR DEPTH OF BLOCKS



CAP BLOCK



TRUSS BLOCKS AND JACK BLOCKS

PRECAST CONCRETE BLOCKS

NOTES:
For list see drawing 1080H462

REFERENCE DRAWINGS:
1080H404.....ANCHOR BOLT PLAN
1080H438.....PIERS 4 & 5-EXTENSIONS

Scale: ⅛"=1'-0"

PROJECT 9-1080 Sheet 39

EGGNERS FERRY BRIDGE
ON UNITED STATES HWY 68

EGGNERS FERRY BRIDGE
ACROSS TENNESSEE RIVER
JACKING METHOD-PIER 5

KENTUCKY PROJECT
TENNESSEE VALLEY AUTHORITY
DESIGN DEPARTMENT

SUBMITTED	RECOMMENDED	APPROVED
J. E. Junior	A. R. Smith	Joseph Ruth

KNOXVILLE	8-13-42	8	HR	5	1080H466

RECORD DRAWING AS CONSTRUCTED
Paul W. Webb 7-1-44

REV NO	DATE	MADE	CHKD	SUPV	INSP	SUBM	RECM
1	10-5-42	MCB	CHF DLL				
General Revision							

DSGN BHN SUPV R.L.G.
DRAWN MCB DIR
CHKD E.H.J. W. Solomon
TRACED
CHIEF R.W. Mabe

Signed as constructed
1 10-5-42 MCB CHF DLL
General Revision

MC 2AM 7-1-44

2 7-8-42 JWM TPRS IN 4 E.S. RES. 11-6-42

EP 8-13-42

1 JHJ