26
284

Punch 1/16 ϕ
Ream 15/16 ϕ

R - 47 x 3/8 x 6'-9 - 2 Req sy1 Ⓐ
UMR 31 x 3/8 x 85'-11 3/4 - 2 Req sy10 Ⓐ
R - 19 3/4 x 3/8 x 6'-4 3/4 - 2 Req sy13 Ⓒ

4@3 1/4 = 1'-1 | 6@3 = 1'-6 | 3 1/16 | 2 1/8 | 3 1/8 | 3 1/16 | 6@3 = 1'-6 | 4@3 1/4 = 1'-1 3 1/16 | 3

79 Spc @ 5 1/2 = 36'-2 1/2

7@3 1/8 = 1'-9 7/8 | 5 3/16 | 5 9/16 | 5 11/16 | 8@3 = 2'-0

U6 | U7

42'-10 13/16 c/c

2Ls 4 x 3 1/2 x 5/16 x 1'-3 1/2 - 12 Req sy11 Ⓒ
2 5/16 CA. O.S.L. 5/8 spr (TYP.)

Ins R 24 x 1/2 x 3'-4 - 4 Req sy8 Ⓐ
R - 23 x 1/2 x 3'-11 - 4 Req sy3 Ⓐ
R - 16 x 3/8 x 5'-6 - 4 Req sy4 Ⓐ
86 Spcs @ 5 1/2 = 39'-5
Top Ls - 4 x 4 x 3/8 x 86'-0 - 4 Req RL sy9 Ⓐ

Punch 1/16 ϕ
Ream 15/16 ϕ

3 | 3 3 1/2 | 3 1/2 | 4@3'-1'-0 | 3 1/2 | 2 7/16 | 3 1/2 | 4@3'-1'-0 | 3 1/2 | 3 1/2 | 3 | 3

Rivet F.S.

2Ls 4 x 4 x 1/2 x 1'-2 - 12 Req sy15 Ⓒ
2 5/16 CA. O.S.L. 5/8 spr (TYP.)

R - 19 3/4 x 3/8 x 2'-0 1/2 - 2 Req sy11 Ⓒ
2Ls 4 x 3 1/2 x 5/16 x 1'-3 1/2 - 4 Req sy17 Ⓒ
2 5/16 CA. O.S.L.

UMR 24 x 5/8 x 86'-1 1/4 - 4 Req sy7 Ⓐ
Bottom Ls 4 x 4 x 3/8 x 86'-1 1/4 - 4 Req RL sy8 Ⓐ

WF 24 @ 100 x 2'-1 - 4 Req E sy30 Ⓒ

R - 19 3/4 x 3/8 x 2'-0 1/2 - 2 Req sy14 Ⓒ
2Ls 4 x 3 1/2 x 5/16 x 1'-3 1/2 - 4 Req sy26 Ⓒ
2 5/16 CA. O.S.L.

4@3 3/4 = 1'-3 | 4@3 = 1'-0 | 3 1/2 | 4@3 3/4 = 1'-3 | 3 11/16

79 Spcs @ 5 1/2 = 36'-2 1/2

7@3 1/8 = 1'-9 7/8 | 4 5/8 | 6 1/8 | 2 3/4 | 2 3/4 | 6 1/8 | 5 | 8@3 = 2'-0

2'-6 1/8 | 2'-5 3/8 | 3'-3 13/16 | 2'-6 | 2'-6

Punch 11/16 ϕ
Ream 15/16 ϕ

R - 19 3/4 x 3/8 x 6'-9 3/4 - 2 Req sy14 Ⓒ
UMR - 31 x 1/2 x 85'-2 13/16 - 2 Req sy6 Ⓐ
R - 64 x 3/8 x 7'-2 - 2 Req sy5 Ⓐ
Elliptical Holes 9 x 1'-6 (TYP.)

Punch 11/16 ϕ
Ream 15/16 ϕ To M.T.

Punch 11/16 ϕ
Ream 15/16 ϕ

Fill R - 21 1/4 x 3/8 x 2'-1 1/4 2 Req sy18 Ⓒ

See Note L #1

Approved By: Howard, Needles
Tammen & Bergendoff
Consulting Engineers

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
DATE 11/19/59 BY F.C.

APPROVED BY
L.O. Carlson 11-20-59
Bridge Design Engineer

One Upper Chord as Shown - A351
One Do Do To Pair - AA351
Work with Sh. 352

GENERAL NOTES

Rivets 7/8 ϕ except as noted
Holes 15/16 ϕ except as noted
End Distance 1 3/4 unless noted
Shop Paint Red Lead (Ark. Std.)
Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivets
Drawn by AB
Checked by CWR
Revisions

Arkansas State Highway Commission
Mississippi State Highway Commission

Mississippi River Bridge (2899)
Near Helena, Arkansas
Unit No. 1

Sold To John F. Beasley Constr. Co.
Chicago, Illinois

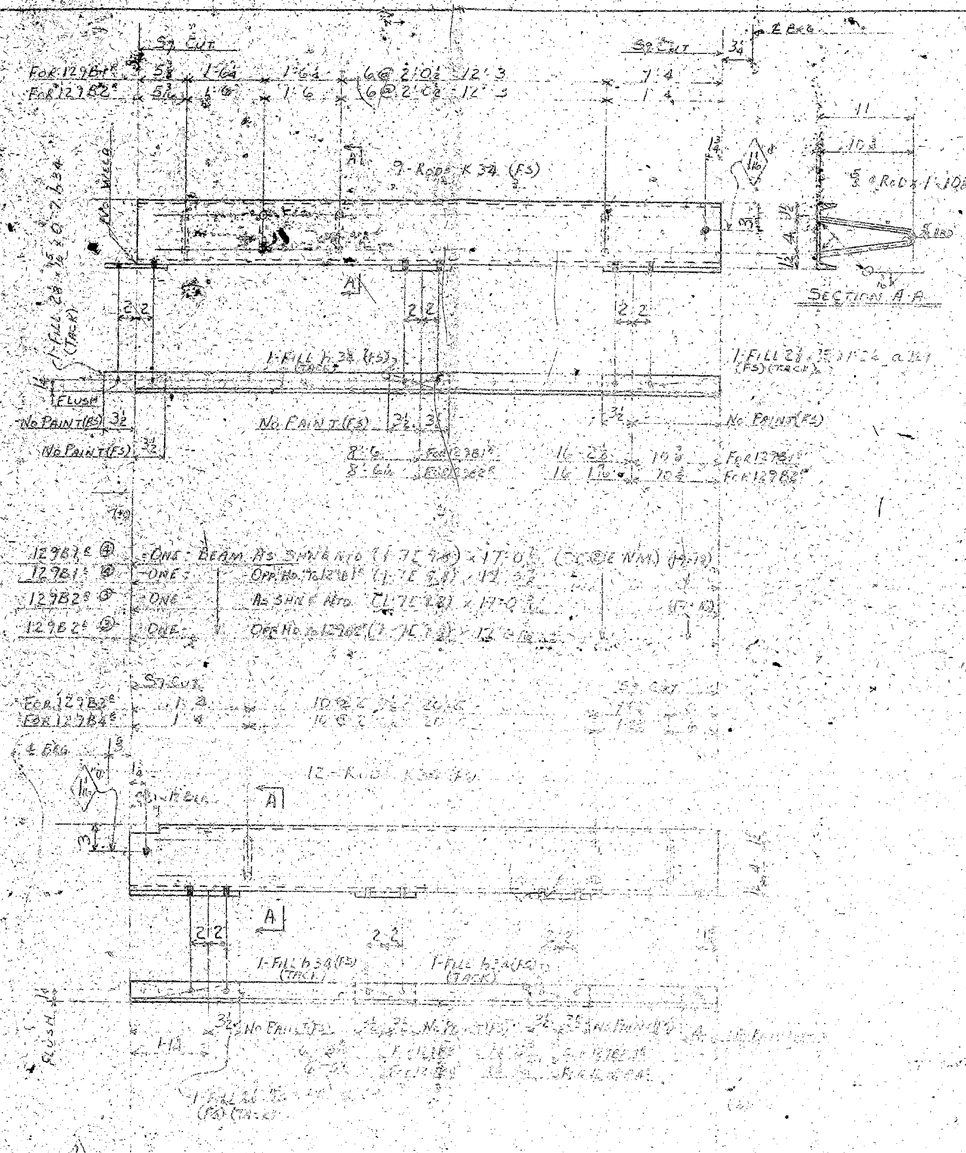
SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800 Sh. 351 of

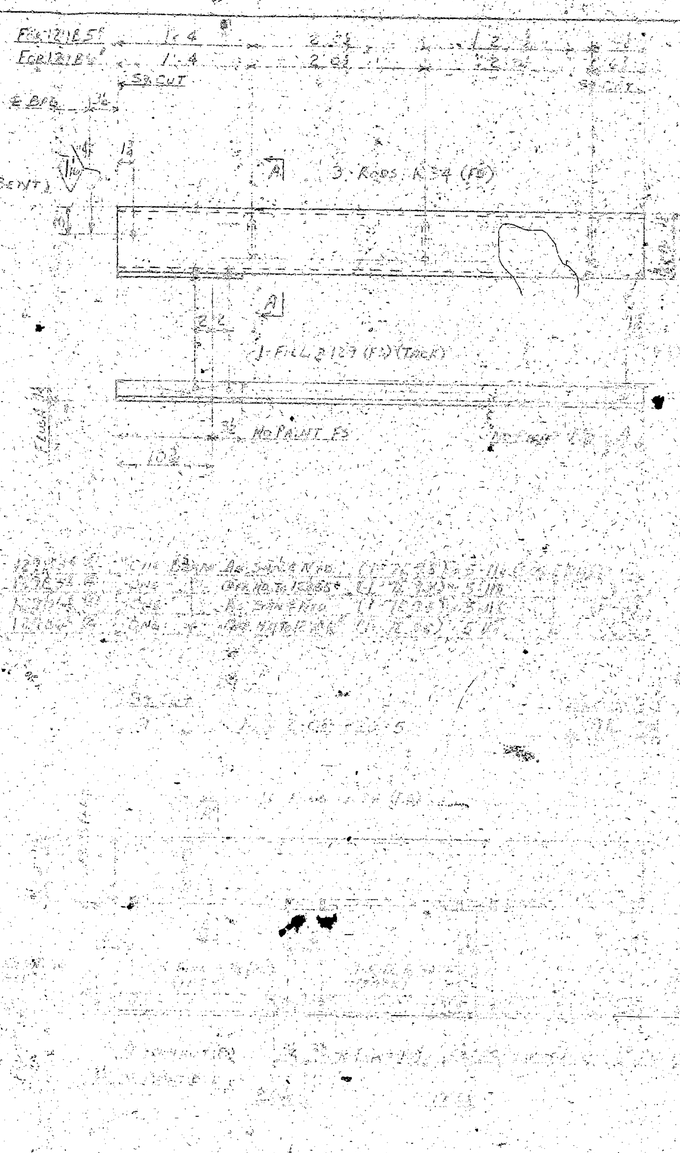
A. H. D.

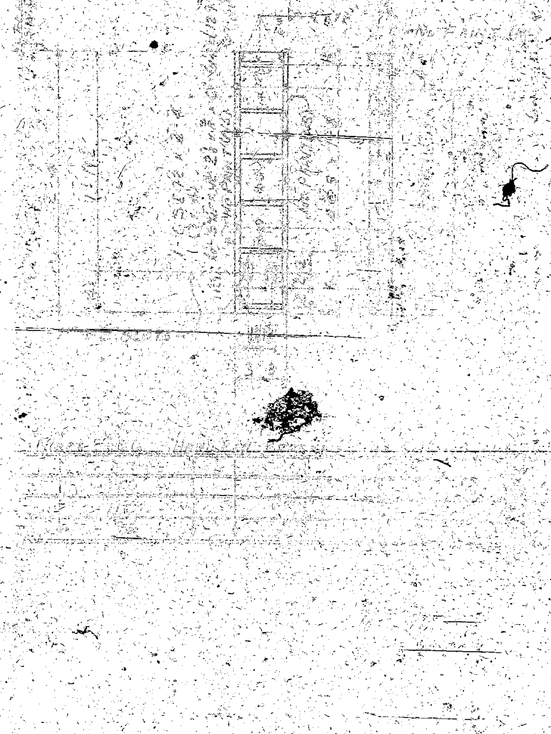
ROLL : 745

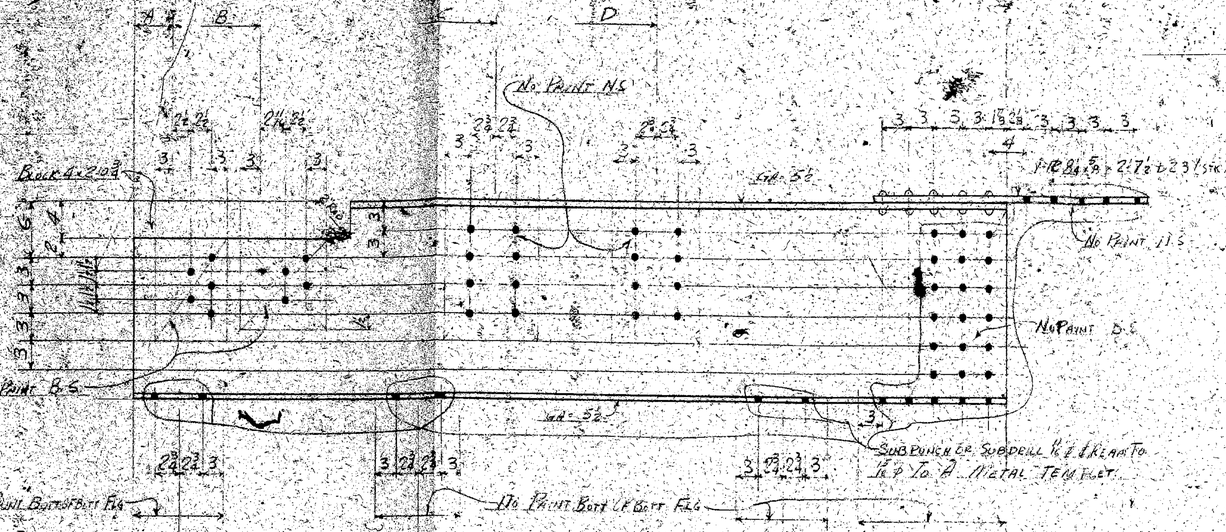
BRG. 2899

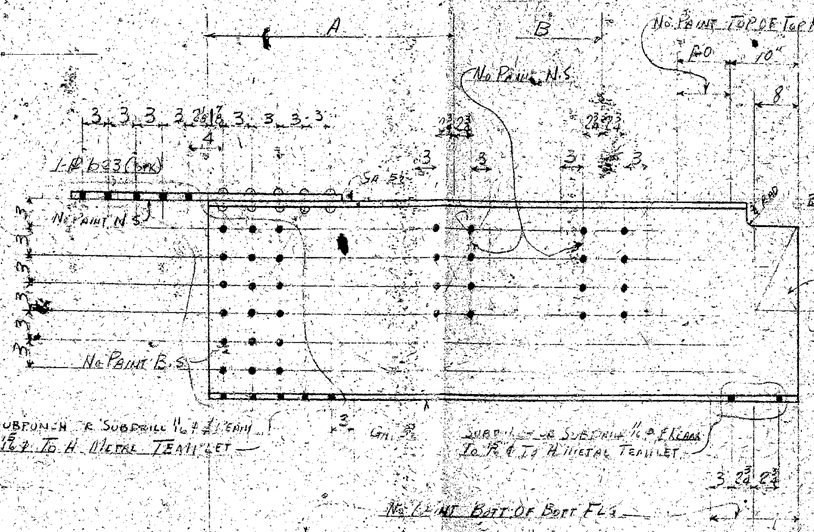
TRIM ALL PRINTS ALONG THIS LINE











			A	B	C	D	E	F	G
128B1 5	Make One Stringer Beam (1-21WF68) x 38-6½ As Shipped (Scale)	(23-10)	0-5 3/64	1-7 7/8	15 5/8	23 3/8	0-5 1/16	6 5/16	32-2 3/8
128B1 5	do One do do (1-21WF68) x 38-6½ Opp Hand (Scale)	(23-10)	0-5 3/64	1-7 7/8	15 5/8	23 3/8	0-5 1/16	6 5/16	32-2 3/8

			A	B	C
122B2 5	Make One Stringer Beam (1-21WF68) x 16-2 3/8 As Shipped (Scale)	(21-11)	8-11 1/2	10-8	15-5 1/2
122B2 5	do One do do (1-21WF68) x 16-2 3/8 Opp Hand (Scale)	(21-11)	8-11 1/2	10-8	15-5 1/2

List on Bill of Material
40-3/4 Shop Rivets

After Marker No Paint To Receive Use Linseed Oil Tinted
All Holes Shall Be Deburred With A Tool
Gen. Notes: H to Chamfer. Houston Fit
Rivets 3/4 Open Holes 12 9 Mill Reams
Paint See Sheet #4 Unless Noted

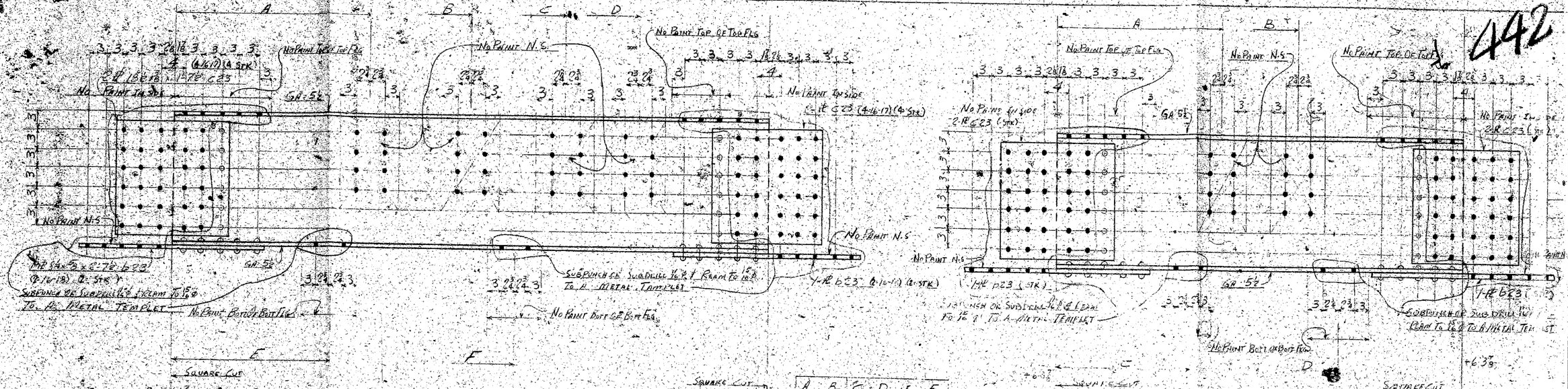
APPROVED BY
HOWARD NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date
Rev. 1 Date Rev. 2 Date
Rev. 3 Date Rev. 4 Date
Not Approved Until Dated

DESCRIPTION OF REVISION

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Appr'd 5-26-

Customer John F. Beasley Constr. Co.
Architect Arkansas & Mississippi State Highway
Building Mississippi River Bridge
Made by J.A. 5-4-59 Helena Ark.
Traced by Filing Date 1959
Checked by
Approved by
Order No. 4201 Sheet No. 128 Drawing No. 0



Mark	Pcs	Description	Square Cut	A	B	C	D	E	F
16-33/8	12781 B	3 Make One Stringer Beam (1-21WF68) × 51'0 3/8 Hs Shn & Nfd	(SC DE)	(16-13)	19'2 3/8	14'9 7/8	3'3 5/16	4'0 4'8	3'1 3/16	6'3 3/8	31'11
16-33/8	12781 L	3 do One do do (1-21WF68) × 51'0 3/8	(SC DE)	(15-13)	19'2 3/8	14'9 7/8	3'3 5/16	4'0 4'8	3'1 3/16	6'3 3/8	31'11
16-33/8	12782 R	5 do One do do (1-21WF68) × 51'0 3/8	Hs Shn & Nfd	(5 C DE)	(3-9)	19'2 3/8	14'10	3'3 5/16	4'0 4'8	3'1 3/16	6'3 3/8	31'11
16-33/8	12782 L	5 do One do do (1-21WF68) × 51'0 3/8	Cpl Hnd To 12680 L	(SC DE)	(23-9)	19'2 3/8	14'10	3'3 5/16	4'0 4'8	3'1 3/16	6'3 3/8	31'11

Mark	Pcs	Description	Square Cut	A	B	C	D
12783 C	3	Make One Stringer Beam (1-21WF68) × 38'2 13/16 Hs Shn & Nfd	(SC DE)	(16-13)	14'10 3/16	23'4 5/8	3'3 5/16	3'1 3/16
12783 L	3	do One do do (1-21WF68) × 35'2 13/16 Cpl Hnd	(SC DE)	(15-13)	14'10 3/16	23'4 5/8	3'3 5/16	3'1 3/16

Mark	Pcs	Description	Square Cut	A	B	C	D
12784 E	4	Make One Stringer Beam (1-21WF68) × 38'1 13/16 Hs Shn & Nfd	(SC DE)	(16-13)	14'11 1/16	23'3 5/8	6'5 1/16
12784 E	4	do One do do (1-21WF68) × 35'1 13/16 Cpl Hnd	(SC DE)	(15-13)	14'11 1/16	23'3 5/8	6'5 1/16

HFC 31.1153

List Hd & Sh Material (4) 5/8 Rail Posts

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date:
Rev. 1 Date: Rev. 2 Date:
Rev. 3 Date: Rev. 4 Date:
Not Approved Until Dated

High Strength No Paint Bolts Are To Be Tensioned Unless Otherwise Noted
All Holes Shall Be Reamed With A Template Furnished By Engineer, Houston Fabrication
Gen. Notes: N/A
Rivets 3/4 Open Holes 15/16 (NL Mtl.)
Paint See Sheet #4 for Mfd Drafting Pencils - 1

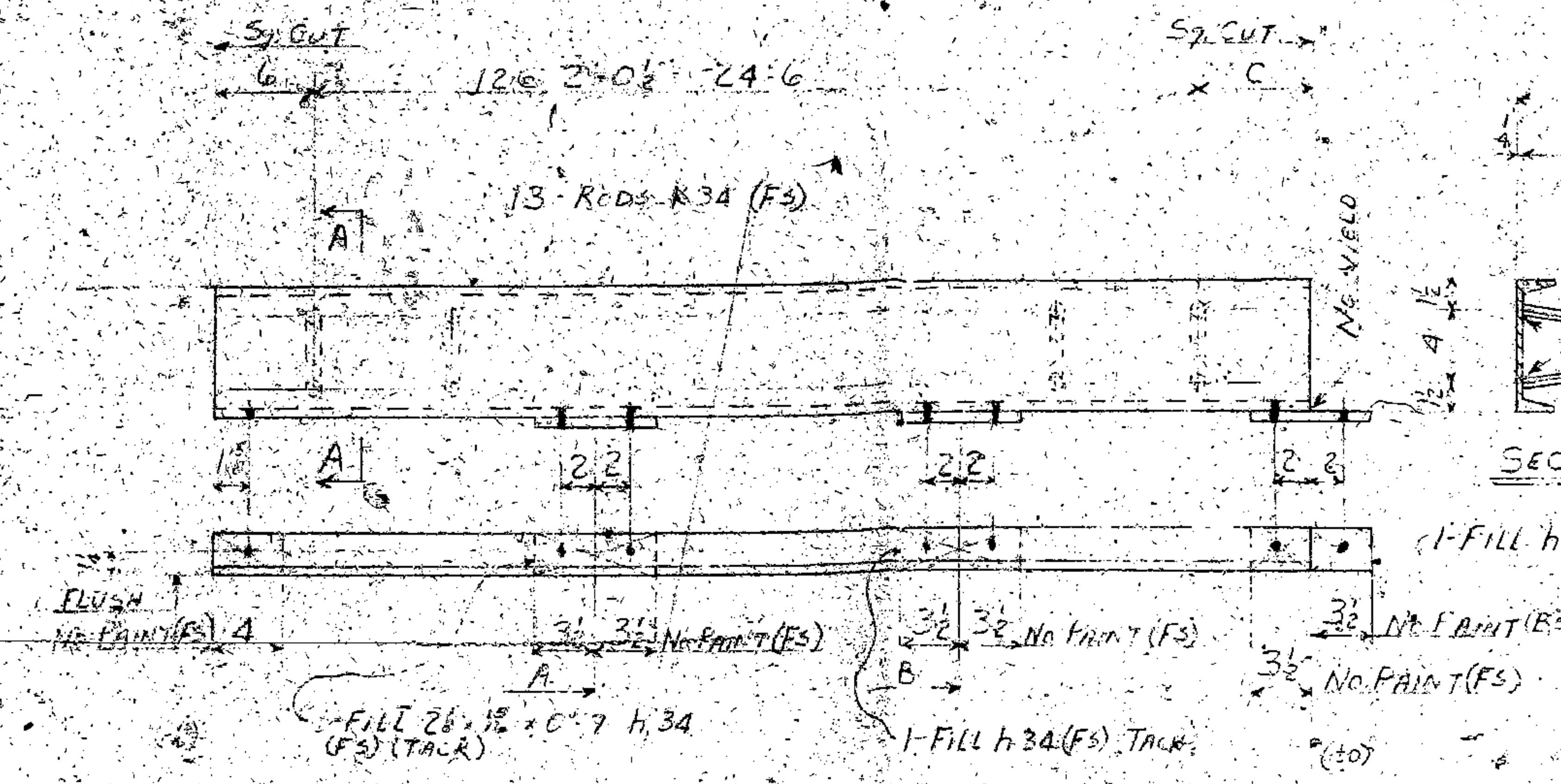
DESCRIPTION OF REVISION
DATE
CHK'D BY
DATE
MADE BY

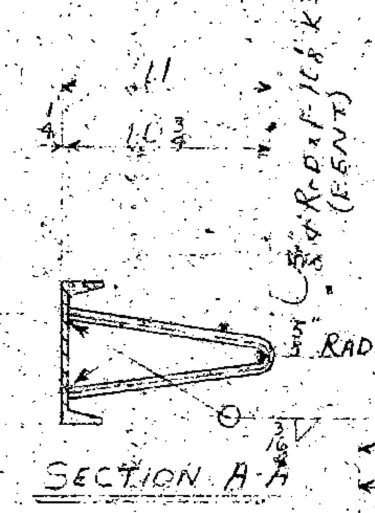
Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

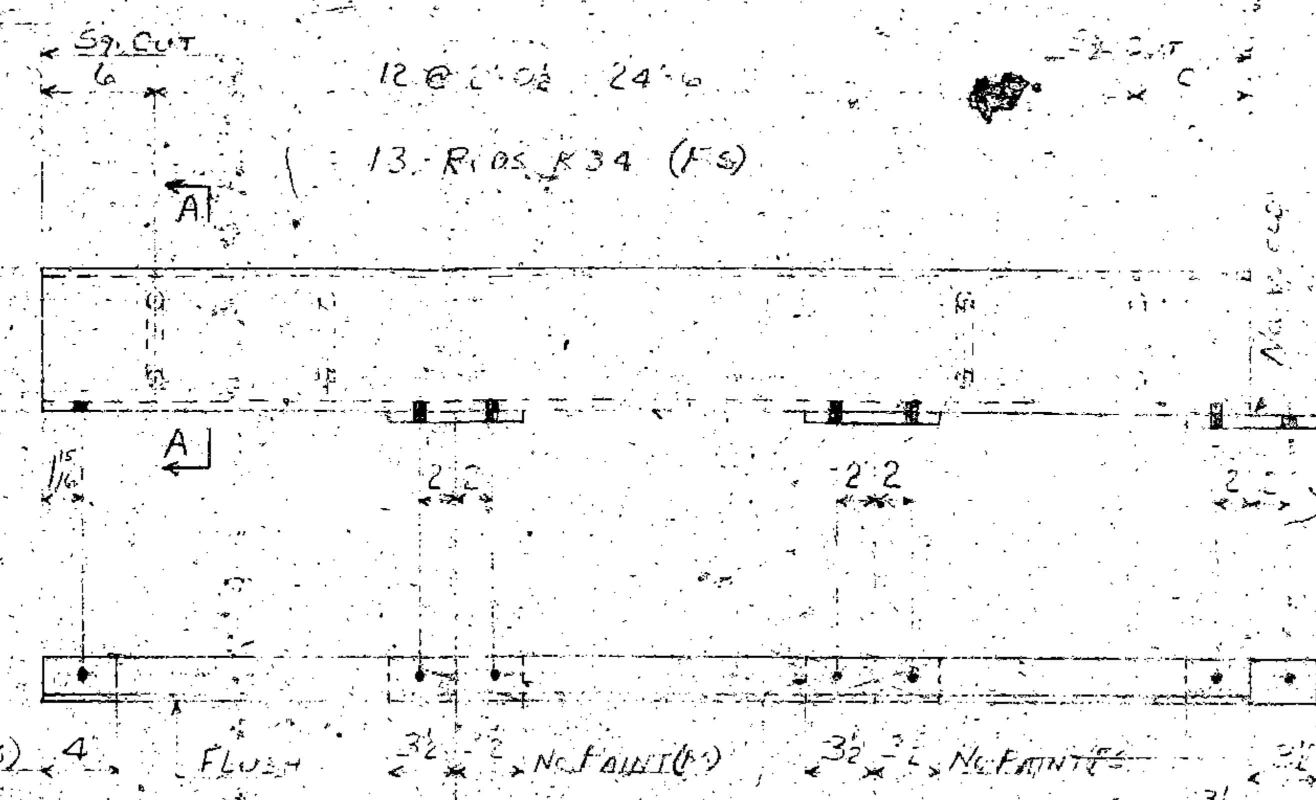
APP'D 8-16-57

Customer John F. Beasley Constr. Co.
Architect Ark.-La.-Miss. & Miss. State Highway Dept.
Building U.S. 61 Miss. River Bridge
Made by [illegible] 8-8-57 Filing Date 1957
Traced by
Checked by
Approved by
Order No. 4201 Sheet No. 127 Drawing No. O

441

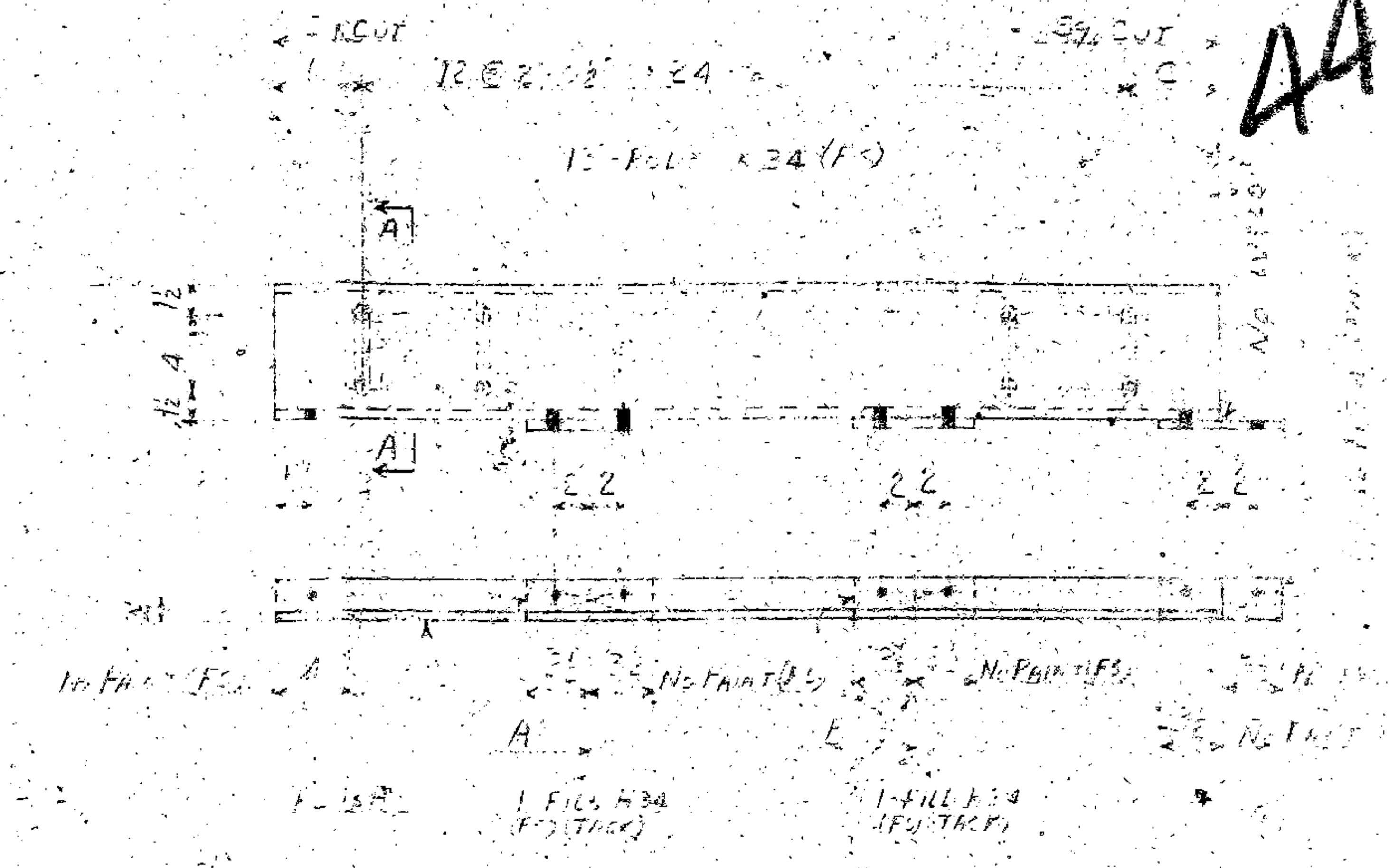






1-Fill h34 For Others (Tack)
1-Fill 26 x 1⅝ x 0-7 h34 (FS) (Tack)
For 126B2R, 126B7R, 126B13R, 126B17R, 126B20R, 126B24R, 126B27R, & 126B35R

1-Fill h34 (FS) For Others (Tack)
1-Fill h34 (FS) For 126B2R, 126B7R, 126B13R, 126B17R, 126B20R, 126B24R, 126B27R & 126B35R & 126B47R & 126B45R (Tack)



Mark	Qty		Description	Size	Length			A	B	C
126B1R ②	ONE	Beam	As Shn & Ntd	(1-7C 7.8)	25-6 7/16	(SC ② E NM)	(17-14)	8-6	17-0⅝	6 7/16
126B1R ③	ONE		do	(1-7C 7.8)	25-6 7/16			8-6	17-0⅝	6 7/16
126B1L ②	ONE		Opp Hd To 126B1R	(1-7C 7.8)	25-6 7/16			8-6	17-0⅝	6 7/16
126B1L ③	ONE		do	(1-7C 7.8)	25-6 7/16			8-6	17-0¼	6 [illegible]
126B3R ②	ONE		As Shn & Ntd	(1-7C 7.8)	25-6¼			8-6	17-0¼	6¼
126B3L ②	ONE		Opp Hd To 126B3R	(1-7C 7.8)	25-6¼			8-6	17-0¼	6¼
126B5R ②	ONE		As Shn & Ntd	(1-7C 7.8)	25-6⅛			8-6	17-0 1/16	6⅛
126B5L ②	ONE		Opp Hd To 126B5R	(1-7C 7.8)	25-6⅛			8-6	17-0 1/16	6⅛
126B6R ②	ONE		As Shn & Ntd	(1-7C 7.8)	25-5 15/16			8-5 13/16	16-11⅞	5 15/16
126B6L ②	ONE		Opp Hd To 126B6R	(1-7C 7.8)	25-5 15/16			8-5 13/16	16-11⅞	5 15/16
126B51R ③	ONE		As Shn & Ntd	(1-7C 7.8)	25-5 15/16		(17-14)	8-6	16-11⅞	5 15/16
126B51L ③	ONE		Opp Hd To 126B51R	(1-7C 7.8)	25-5 15/16		(17-14)	8-6	16-11⅞	5 15/16
				(1-7C 7.8)	25-5 15/16			8-6	16-11⅞	5 15/16
				(1-7C 7.8)	25-5 15/16			8-6	16-11⅞	5 15/16
126B[illegible] ②	ONE		As Shn & Ntd	(1-7C 7.8)	25-6 5/16		(17-14)	8-6	17-0¼	6 5/16
126B8R ②	2		do	(1-7C 7.8)	25-6 5/16			8-6	17-0¼	6 5/16
126B8L ②	ONE		Opp Hd To 126B8R	(1-7C 7.8)	25-6 5/16			8-6	17-0¼	6 5/16
126B8L ③	2		do	(1-7C 7.8)	25-6 5/16			8-6	17-0¼	6 5/16
126B7R ②	ONE		As Shn & Ntd	(1-7C 7.8)	25-6 3/16			8-6	17-0 1/16	6 3/16
			do	(1-7C 7.8)	25-6 3/16			8-6	17-0 1/16	6 3/16
126B7L ②	ONE		Opp Hd To 126B7R	(1-7C 7.8)	25-6 3/16		(17-14)	8-6	17-0 1/16	6 3/16
			do	(1-7C 7.8)	25-6 3/16			8-6	17-0 1/16	6 3/16
126B11R ②	ONE		As Shn & Ntd	(1-7C 7.8)	25-6⅛		(17-14)	8-6	17-0 1/16	6⅛
			do	(1-7C 7.8)	25-6⅛			8-6	17-0 1/16	6⅛
126B11R ③	2		do	(1-7C 7.8)	25-6⅛		(17-14)	8-6	17-0 1/16	6⅛
			do	(1-7C 7.8)	25-6⅛			8-6	17-0 1/16	6⅛
126B11L ②	ONE		Opp Hd To 126B11R	[illegible]	[illegible]		(17-14)	8-6	17-0 1/16	6⅛
			do	[illegible]	[illegible]			8-6	17-0 1/16	6⅛
126B11L ③	2		do	(1-7C 7.8)	25-6⅛		(17-14)	8-6	17-0 1/16	6⅛
			do	(1-7C 7.8)	25-6⅛			8-6	17-0 1/16	6⅛
126B12R ②	ONE		As Shn & Ntd	(1-7C 7.8)	25-5 15/16		(17-14)	8-5 13/16	16-11⅞	5 15/16
126B12L ②	ONE		Opp Hd To 126B12R	(1-7C 7.8)	25-5 15/16			8-5 13/16	16-11⅞	5 15/16
126B14R ②	ONE		As Shn & Ntd	(1-7C 7.8)	25-6⅜			8-6	17-0¼	6⅜
126B14R ③	ONE		do	(1-7C 7.8)	25-6⅜			8-6	17-0¼	6⅜
126B14L ②	ONE		Opp Hd To 126B14R	(1-7C 7.8)	25-6⅜			8-6	17-0¼	6⅜
126B14L ③	ONE		do	(1-7C 7.8)	25-6⅜			8-6	17-0¼	6⅜
126B15R ③	ONE		As Shn & Ntd	(1-7C 7.8)	25-6⅜			8-6	17-0¼	6⅜
126B15L ③	ONE		Opp Ho To 126B15R	(1-7C 7.8)	25-6⅜			8-6	17-0¼	6⅜
126B16R ②	ONE		As Shn & Ntd	(1-7C 7.8)	25-6 5/16		(17-15)	8-6⅜	17-0¼	6 5/16
126B16L ②	ONE		Opp Hd To 126B16R	(1-7C 7.8)	25-6 5/16		(17-15)	8-6⅜	17-0¼	6 5/16
126B19R ③	ONE		As Shn & Ntd	(1-7C 7.8)	25-5 15/16		(17-14)	8-5⅞	16-11⅞	5 15/16
126B19L ③	ONE		Opp Hd To 126B19R	(1-7C 7.8)	25-5 15/16			8-5⅞	16-11⅞	5 15/16
126B21R ③	ONE		As Shn & Ntd	(1-7C 7.8)	25-6¼			8-6 1/16	17-0 5/16	6¼
126B21R ⑤	2		do	(1-7C 7.8)	25-6¼		(23-11)	8-6 1/16	17-0 5/16	6¼
126B21L ③	ONE		Opp Hd To 126B21R	(1-7C 7.8)	25-6¼		(17-14)	8-6 1/16	17-0 5/16	6¼
126B21L ⑤	2		do	(1-7C 7.8)	25-6¼		(23-17)	8-6 1/16	17-0 5/16	6¼
126B23R ③	2		As Shn & Ntd	(1-7C 7.8)	25-6 1/16		(17-14)	8-5 15/16	17-0	6 1/16
126B23L ③	2		Opp Hd To 126B23R	(1-7C 7.8)	25-6 1/16			8-5 15/16	17-0	6 1/16
126B25R ③	ONE		As Shn & Ntd	(1-7C 7.8)	25-6⅛			8-6	17-0¼	6⅛
126B25L ③	ONE		Opp Hd To 126B25R	(1-7C 7.8)	25-6⅛			8-6	17-0¼	6⅛
126B28R ④	ONE		As Shn & Ntd	(1-7C 7.8)	25-6¼		(17-14)	8-6	17-0 1/16	6¼
			do	(1-7C 7.8)	25-6¼			8-6	17-0 1/16	6¼
126B28L ④	ONE		Opp Hd To 126B28R	(1-7C 7.8)	25-6¼		(17-14)	8-6	17-0 1/16	6¼
			do	(1-7C 7.8)	25-6¼			8-6	17-0 1/16	6¼
126B30R ④	ONE		As Shn & Ntd	(1-7C 7.8)	25-5 15/16		(17-14)	8-5 13/16	16-11⅞	5 15/16
126B30R ⑤	ONE		do	(1-7C 7.8)	25-5 15/16			8-5 13/16	16-11⅞	5 15/16
126B30L ④	ONE		Opp Hd To 126B30R	(1-7C 7.8)	25-5 15/16		(17-14)	8-5 13/16	16-11⅞	5 15/16
126B30L ⑤	ONE		do	(1-7C 7.8)	25-5 15/16		(23-17)	8-5 13/16	16-11⅞	5 15/16

Mark	Qty		Description	Size	Length			A	B	C
126B2R ②	ONE	Beam	As Shn & Ntd	(1-7C 7.8)	25-6¼	(SC ② E NM)	(17-14)	8-6	17-0¼	6¼
126B2L ②	ONE		Opp Hd To 126B2R	(1-7C 7.8)	25-6¼			8-6	17-0¼	6¼
126B4R ②	ONE		As Shn & Ntd	(1-7C 7.8)	25-6¼			8-6	17-0¼	6¼
126B4L ②	ONE		Opp Hd To 126B4R	(1-7C 7.8)	25-6¼			8-6	17-0¼	6¼
126B7R ②	ONE		As Shn & Ntd	(1-7C 7.8)	25-6 3/16			8-6	17-0 1/16	6 3/16
126B7L ②	ONE		Opp Hd To 126B7R	(1-7C 7.8)	25-6 3/16			8-6 1/16	17-0 1/16	6 3/16
126B10R ②	ONE		As Shn & Ntd	(1-7C 7.8)	25-6⅛			8-6 1/16	17-0 1/16	6⅛
126B10L ②	ONE		Opp Hd To 126B10R	(1-7C 7.8)	25-6⅛			8-6	17-0 1/16	6⅛
126B13R ②	ONE		As Shn & Ntd	(1-7C 7.8)	25-6⅛			8-5⅞	17-0	6⅛
126B13L ②	ONE		Opp Hd To 126B13R	(1-7C 7.8)	25-6⅛			8-5⅞	17-0	6⅛
126B17R ③	ONE		As Shn & Ntd	(1-7C 7.8)	25-6 3/16			8-6 1/16	17-0 1/16	6 3/16
126B17L ③	ONE		Opp Hd To 126B17R	(1-7C 7.8)	25-6 3/16			8-6	17-0 1/16	6 3/16
126B18R ③	ONE		As Shn & Ntd	(1-7C 7.8)	25-6 3/16			8-6	17-0 1/16	6 3/16
126B18L ③	ONE		Opp Hd To 126B18R	(1-7C 7.8)	25-6 3/16			8-6	17-0 1/16	6 3/16
126B20R ③	ONE		As Shn & Ntd	(1-7C 7.8)	25-6 1/16			8-5 15/16	17-0	6 1/16
126B20R ⑤	ONE		do	(1-7C 7.8)	25-6 1/16		(23-17)	8-5 15/16	17-0	6 1/16
126B20L ③	ONE		Opp Hd To 126B20R	(1-7C 7.8)	25-6 1/16		(17-14)	8-5 15/16	17-0	6 1/16
126B20L ⑤	ONE		do	(1-7C 7.8)	25-6 1/16		(23-17)	8-5 15/16	17-0	6 1/16
126B22R ③	ONE		As Shn & Ntd	(1-7C 7.8)	25-6 3/16		(17-14)	8-5 15/16	17-0 1/16	6 3/16
126B22L ③	ONE		Opp Hd To 126B22R	(1-7C 7.8)	25-6 3/16			8-5 15/16	17-0 1/16	6 3/16
126B24R ③	ONE		As Shn & Ntd	(1-7C 7.8)	25-6 3/16			8-6	17-0 1/16	6 3/16
126B24L ③	ONE		Opp Hd To 126B24R	(1-7C 7.8)	25-6 3/16			8-6	17-0 1/16	6 3/16
126B26R ③	ONE		As Shn & Ntd	(1-7C 7.8)	25-6⅜			8-6⅛	17-0 5/16	6⅜
126B26L ③	ONE		Opp Hd To 126B26R	(1-7C 7.8)	25-6⅜			8-6⅛	17-0 5/16	6⅜
126B27R ④	ONE		As Shn & Ntd	(1-7C 7.8)	25-6¼		(17-13)	8-6 1/16	17-0¼	6¼
126B27L ④	ONE		Opp Hd To 126B27R	(1-7C 7.8)	25-6¼			8-6	17-0¼	6¼
126B27R ④	2		As Shn & Ntd	(1-7C 7.8)	25-6 1/16			8-6 1/16	17-0¼	6 1/16
126B27L ④	2		Opp Hd To 126B27R	(1-7C 7.8)	25-6 1/16			8-6 1/16	17-0¼	6 1/16
126B32R ④	ONE		As Shn & Ntd	(1-7C 7.8)	25-6⅛			8-5 13/16	16-11⅞	6⅛
126B32L ④	ONE		Opp Hd To 126B32R	(1-7C 7.8)	25-6⅛			8-5 15/16	16-11⅞	6⅛
126B35R ④	ONE		As Shn & Ntd	(1-7C 7.8)	25-6 1/16			8-6	17-0	6 1/16
126B35R ⑤	ONE		do	(1-7C 7.8)	25-6 1/16		(23-17)	8-6	17-0	6 1/16
126B35L ④	ONE		Opp Hd To 126B35R	(1-7C 7.8)	25-6 1/16		(17-14)	8-6	17-0	6 1/16
126B35L ⑤	ONE		do	(1-7C 7.8)	25-6 1/16		(23-17)	8-6	17-0	6 1/16
126B37R ④	ONE		As Shn & Ntd	(1-7C 7.8)	25-6⅜		(17-14)	8-6	17-0¼	6⅜
126B37L ④	ONE		Opp Hd To 126B37R	(1-7C 7.8)	25-6⅜			8-6	17-0¼	6⅜
126B44R ⑤	ONE		As Shn & Ntd	(1-7C 7.8)	25-6⅜		(23-17)	8-6	17-0⅛	6⅜
126B44L ⑤	ONE		Opp Hd To 126B44R	(1-7C 7.8)	25-6⅜			8-6	17-0⅛	6⅜
126B46R ⑤	ONE		As Shn & Ntd	(1-7C 7.8)	25-6 1/16			8-6	17-0	6 1/16
126B46L ⑤	ONE		Opp Hd To 126B46R	(1-7C 7.8)	25-6 1/16			8-5 15/16	16-11⅞	6 1/16
126B47R ⑤	ONE		As Shn & Ntd	(1-7C 7.8)	25-6 1/16			[illegible]	16-11⅞	5⅞
126B47L ⑤	ONE		Opp Hd To 126B47R	(1-7C 7.8)	25-6 1/16			8-5 15/16	16-11⅞	5⅞
126B4[illegible] ④	ONE		As Shn & Ntd	(1-7C [illegible])	25-5⅞			8-5⅞	16-11⅞	5⅞
126B4[illegible] ④	ONE		Opp Hd To 126B4[illegible]	(1-7C [illegible])	25-5⅞			[illegible]	16-11⅞	[illegible]

Mark	Qty		Description	Size	Length			A	B	C
126B31R ④	ONE	Beam	As Shn & Ntd	(1-7C 7.8)	25-5 13/16	(SC ⑤ E NM)	[illegible]	[illegible]	[illegible]	[illegible]
126B31L ④	ONE		Opp Hd To 126B31R	(1-7C 7.8)	25-5 13/16			[illegible]	[illegible]	[illegible]
126B33R ④	ONE		As Shn & Ntd	(1-7C 7.8)	25-6⅛			[illegible]	[illegible]	[illegible]
126B33L ④	ONE		Opp Hd To 126B33R	(1-7C 7.8)	25-6⅛			[illegible]	[illegible]	[illegible]
126B34R ④	ONE		As Shn & Ntd	(1-7C 7.8)	25-6 1/16			[illegible]	[illegible]	[illegible]
126B34L ④	ONE		Opp Hd To 126B34R	(1-7C 7.8)	25-6 1/16			[illegible]	[illegible]	[illegible]
126B36R ④	ONE		As Shn & Ntd	(1-7C 7.8)	25-6			[illegible]	[illegible]	[illegible]
126B36L ④	ONE		Opp Hd To 126B36R	(1-7C 7.8)	25-6			[illegible]	[illegible]	[illegible]
126B38R ④	ONE		As Shn & Ntd	(1-7C 7.8)	25-6¼			[illegible]	[illegible]	[illegible]
126B38L ④	ONE		Opp Hd To 126B38R	(1-7C 7.8)	25-6¼			[illegible]	[illegible]	[illegible]
126B39R ④	ONE		As Shn & Ntd	(1-7C 7.8)	25-6			[illegible]	[illegible]	[illegible]
126B39R ⑤	ONE		do	(1-7C 7.8)	25-6			[illegible]	[illegible]	[illegible]
126B39L ④	ONE		Opp Hd To 126B39R	(1-7C 7.8)	25-6			[illegible]	[illegible]	[illegible]
126B39L ⑤	ONE		do	(1-7C 7.8)	25-6			[illegible]	[illegible]	[illegible]
126B40R ⑤	ONE		As Shn & Ntd	(1-7C 7.8)	25-6¼			[illegible]	[illegible]	[illegible]
126B40L ⑤	ONE		Opp Hd To 126B40R	(1-7C 7.8)	25-6¼			[illegible]	[illegible]	[illegible]
126B41R ⑤	ONE		As Shn & Ntd	(1-7C 7.8)	25-6¼			[illegible]	[illegible]	[illegible]
126B41L ⑤	ONE		Opp Hd To 126B41R	(1-7C 7.8)	25-6¼			[illegible]	[illegible]	[illegible]
126B42R ⑤	2		As Shn & Ntd	(1-7C 7.8)	25-6⅜			[illegible]	[illegible]	[illegible]
126B42L ⑤	2		Opp Hd To 126B42R	(1-7C 7.8)	25-6⅜			[illegible]	[illegible]	[illegible]
126B43R ⑤	ONE		As Shn & Ntd	(1-7C 7.8)	25-5⅞			[illegible]	[illegible]	[illegible]
126B43L ⑤	ONE		Opp Hd To 126B43R	(1-7C 7.8)	25-5⅞			[illegible]	[illegible]	[illegible]
126B45R ⑤	ONE		As Shn & Ntd	(1-7C 7.8)	25-5⅞			[illegible]	[illegible]	[illegible]
126B45L ⑤	ONE		Opp Hd To 126B45R	(1-7C 7.8)	25-5⅞			[illegible]	[illegible]	[illegible]
126B49R ⑤	ONE		As Shn & Ntd	(1-7C 7.8)	25-6¼			[illegible]	[illegible]	[illegible]
126B49L ⑤	ONE		Opp Hd To 126B49R	(1-7C 7.8)	25-6 1/16			[illegible]	[illegible]	[illegible]

All No Paint Areas To Receive ① Shop Coat Linseed Oil Tinted With Red Lead.

List on B/M
563 Lin. Ft. ⅜ I.W.

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date ....
Rev. ① Date .... Rev. ③ Date ....
Rev. ② Date .... Rev. ④ Date ....
Not Approved Until Dated

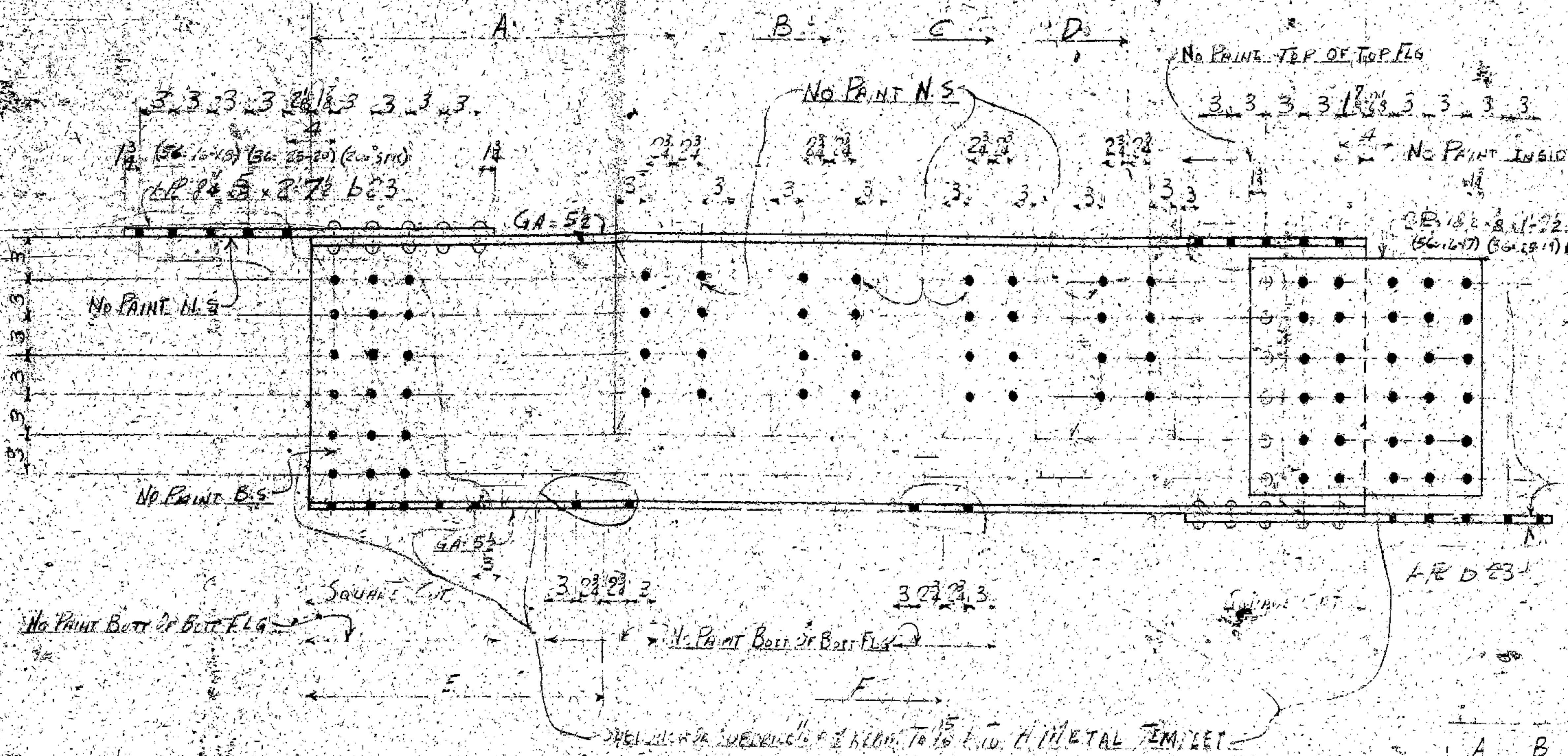
Houston Fabrication
Gen. Notes: All Holes Shall Be Deburred & Tool Marking ⅛ Chamfer
Rivets N[illegible] Open Holes [illegible]
Paint Spec. [illegible] #4 Unl. N[illegible]

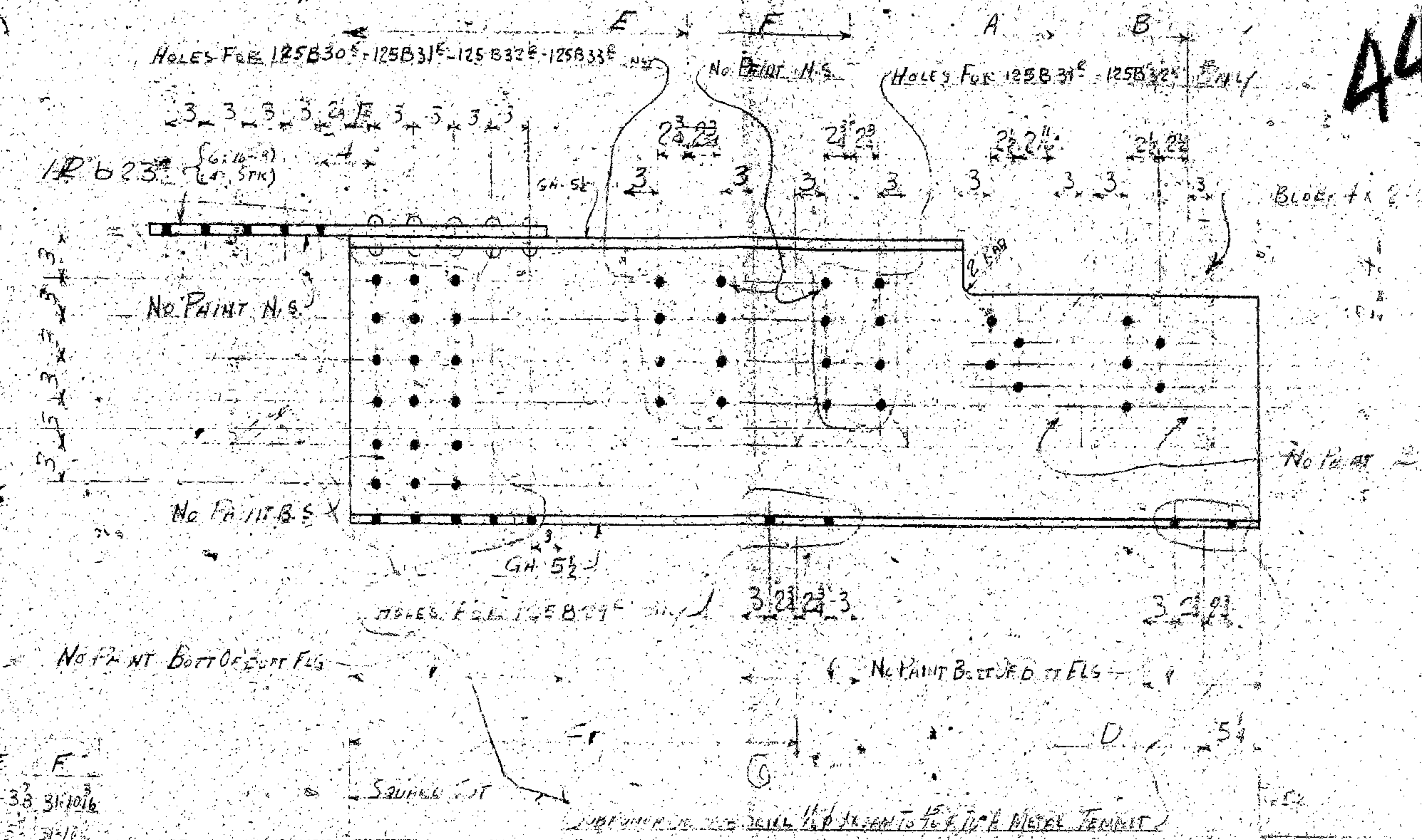
DESCRIPTION OF REVISION

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer John F. Beasley Const. Co.
Architect Ark. & Miss. State Highway
Building Mississippi River Bridge
Made by [illegible] Helena, Ark.
Traced by
Checked by
Approved by
Order No. [illegible] Sheet No. [illegible] Drawing No. 0

44.0





	Mark	Qty				Section	Length	Remarks		A	B	C	D	E	F
+6-5⅝	125B1^E	2	Make One Stringer Beam			(1-21WF 68)	x 51-0⅜	As Shown & Ntd	(16-13)	14-7	2-3-4	40-44	48-10	6-3⅜	31-10⅜
	125B1^L	2	do	One	do do	(1-21WF 68)	x 51-0⅜	Opp Hand To 125B1^E		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	31-10
	125B2^E	2	do	One	do do	(1-21WF 68)	x 50-11	As Shown & Ntd		14-7	2-3-4	40-3	48-10	6-3⅜	31-10
	125B2^L	2	do	One	do do	(1-21WF 68)	x 50-11	Opp Hand To 125B2^E		14-7	2-3-4	40-3	48-10	6-3	31-10
	125B3^E	2	do	One	do do	(1-21WF 68)	x 51-0⅜	As Shown & Ntd		14-7	2-3-4	40-4	48-10	6-3⅜	31-10
	125B3^L	2	do	One	do do	(1-21WF 68)	x 51-0⅜	Opp Hand To 125B3^E		14-7	2-3-4	40-4	48-10	6-3⅜	31-10
	125B4^E	2	do	One	do do	(1-21WF 68)	x 51-0	As Shown & Ntd		14-7	2-3-4	40-4	48-7	6-3	31-10
	125B4^L	2	do	One	do do	(1-21WF 68)	x 51-0	Opp Hand To 125B4^E		14-7	2-3-4	40-4	48-7	6-3	31-10
	125B5^E	2	do	One	do do	(1-21WF 68)	x 50-11	As Shown & Ntd		14-7	3-4	40-3	48-10	6-3	31-10
	125B5^L	2	do	One	do do	(1-21WF 68)	x 50-11	Opp Hand To 125B5^E		14-7	3-4	40-3	48-10	6-3	31-10
	125B6^E	2	do	One	do do	(1-21WF 68)	x 51-0	As Shown & Ntd		14-7	3-4	40-4	48-10	6-3	31-10
	125B6^L	2	do	One	do do	(1-21WF 68)	x 51-0	Opp Hand To 125B6^E		14-7	3-4	40-4	48-10	6-3	31-10
	125B7^E	2	do	One	do do	(1-21WF 68)	x 51-0	As Shown & Ntd		14-10	3-4	40-4	48-10	6-3	31-10
	125B7^L	2	do	One	do do	(1-21WF 68)	x 51-0	Opp Hand To 125B7^E		14-10	3-4	40-4	48-10	6-3	31-10
	125B8^E	3	do	One	do do	(1-21WF 68)	x 51-0	As Shown & Ntd		14-7	3-4	40-4	48-10	6-3	31-10
	125B8^L	3	do	One	do do	(1-21WF 68)	x 51-0	Opp Hand To 125B8^E		14-7	3-4	40-4	48-10	6-3	31-10
	125B9^E	3	do	One	do do	(1-21WF 68)	x 51-0	As Shown & Ntd		14-10	3-4	40-4	48-10	6-3	31-10
	125B9^L	3	do	One	do do	(1-21WF 68)	x 51-0	Opp Hand To 125B9^E		14-10	3-4	40-4	48-10	6-3	31-10
	125B10^E	3	do	One	do do	(1-21WF 68)	x 50-11⅞	As Shown & Ntd		14-9	2-3	40-3	48-9	6-3	31-9
	125B10^L	3	do	One	do do	(1-21WF 68)	x 50-11⅞	Opp Hand To 125B10^E		14-9	2-3	40-3	48-9	6-3	31-9
	125B11^E	3	do	One	do do	(1-21WF 68)	x 51-0	As Shown & Ntd		14-9	2-3-4	40-4	48-10	6-3	31-10
	125B11^L	3	do	One	do do	(1-21WF 68)	x 51-0	Opp Hand To 125B11^E		14-9	2-3-4	40-44	48-10	6-3	31-10
	125B12^E	3	do	One	do do	(1-21WF 68)	x 51-0	As Shown & Ntd		14-9	2-3	40-4	48-10	6-3	31-10
	125B12^L	3	do	One	do do	(1-21WF 68)	x 51-0	Opp Hand To 125B12^E		14-9	2-3	40-4	48-10	6-3	31-10
	125B13^E	3	do	One	do do	(1-21WF 68)	x 51-0	As Shown & Ntd		14-9	2-3	40-4	48-10	6-3	31-10
	125B13^L	3	do	One	do do	(1-21WF 68)	x 51-0	Opp Hand To 125B13^E		14-7	2-3	40-4	48-10	6-3	31-10
	125B14^E	3	do	One	do do	(1-21WF 68)	x 51-0	As Shown & Ntd		14-7	2-3	40-4	48-10	6-3	31-10
	125B14^L	3	do	One	do do	(1-21WF 68)	x 51-0	Opp Hand To 125B14^E		14-7	2-3	40-4	48-10	6-3	31-10
	125B15^E	5	do	One	do do	(1-21WF 68)	x 50-11	As Shown & Ntd	(23-9)	14-10	2-3	40-4	48-7	6-3	31-10
	125B15^L	5	do	One	do do	(1-21WF 68)	x 50-11	Opp Hand To 125B15^E		14-10	2-3	40-4	48-7	6-3	31-10
	125B16^E	5	do	One	do do	(1-21WF 68)	x 50-11¾	As Shown & Ntd		14-9¾	2-3	40-3	48-9	6-3	31-9¾
	125B16^L	5	do	One	do do	(1-21WF 68)	x 50-11¾	Opp Hand To 125B16^E		14-9¾	2-3	40-3	48-9	6-3	31-9¾
	125B17^E	5	do	One	do do	(1-21WF 68)	x 51-0¼	As Shown & Ntd		14-9	2-4	40-44	48-10	6-3	31-10
	125B17^L	5	do	One	do do	(1-21WF 68)	x 51-0¼	Opp Hand To 125B17^E		14-9	2-4	40-44	48-10	6-3	31-10
	125B18^E	5	do	One	do do	(1-21WF 68)	x 51-0	As Shown & Ntd		14-10	2-3-4	40-4	48-10	6-3	31-10
	125B18^L	5	do	One	do do	(1-21WF 68)	x 51-0	Opp Hand To 125B18^E		14-10	2-3-4	40-4	48-10	6-3	31-10
	125B19^E	5	do	One	do do	(1-21WF 68)	x 50-11	As Shown & Ntd		14-9	2-3	40-3	48-9	6-3	31-9
	125B19^L	5	do	One	do do	(1-21WF 68)	x 50-11	Opp Hand To 125B19^E		14-9	2-3	40-3	48-9	6-3	31-9
	125B20^E	5	do	One	do do	(1-21WF 68)	x 51-0	As Shown & Ntd		14-10	2-3	40-4	48-10	6-3	31-10
	125B20^L	5	do	One	do do	(1-21WF 68)	x 51-0	Opp Hand To 125B20^E		14-10	2-3	40-4	48-10	6-3	31-10
+19-2⅞	125B21^E	4	do	One	do do	(1-21WF 68)	x 51-0	As Shown & Ntd	(19-11)	6-3⅜	2-2	10-9	27-7	36-2	17-2
	125B21^L	4	do	One	do do	(1-21WF 68)	x 51-0	Opp Hand To 125B21^E		6-3⅜	2-2	10-9	27-7	36-2	17-2
+19-2	125B22^E	4	do	One	do do	(1-21WF 68)	x 51-0	As Shown & Ntd			2-1	10-8	27-7	36-2	17-2
	125B22^L	4	do	One	do do	(1-21WF 68)	x 51-0	Opp Hand To 125B22^E			2-1	10-8	27-7	36-2	17-2
+19-1	125B23^E	4	do	One	do do	(1-21WF 68)	x 50-11¾	As Shown & Ntd			2-1	10-7⅞	27-7	36-1	17-1
	125B23^L	4	do	One	do do	(1-21WF 68)	x 50-11¾	Opp Hand To 125B23^E			2-1	10-7⅞	27-7	36-1	17-1
+19-2	125B24^E	4	do	One	do do	(1-21WF 68)	x 51-0	As Shown & Ntd			2-1	10-7	27-7	36-2	17-2
	125B24^L	4	do	One	do do	(1-21WF 68)	x 51-0	Opp Hand To 125B24^E			2-1	10-7	27-7	36-2	17-2
+19-2	125B25^E	4	do	One	do do	(1-21WF 68)	x 51-0	As Shown & Ntd			2-2	10-8	27-7	36-2	17-2
	125B25^L	4	do	One	do do	(1-21WF 68)	x 51-0	Opp Hand To 125B25^E			2-2	10-8	27-8	36-2	17-2
+19-1⅞	125B26^E	4	do	One	do do	(1-21WF 68)	x 50-11	As Shown & Ntd			2-1	10-7	27-7	36-1	17-1
	125B26^L	4	do	One	do do	(1-21WF 68)	x 50-11	Opp Hand To 125B26^E			2-1	10-7	27-7	36-1	17-1
+19-2⅜	125B27^E	4	do	One	do do	(1-21WF 68)	x 51-0	As Shown & Ntd			2-2	10-8	27-8	36-2	17-2
	125B27^L	4	do	One	do do	(1-21WF 68)	x 51-0	Opp Hand To 125B27^E			2-2	10-8	27-8	36-2	17-2
+19-2	125B28^E	4	do	One	do do	(1-21WF 68)	x 51-0	As Shown & Ntd			2-1	10-8	27-7	36-2	17-2
	125B28^L	4	do	One	do do	(1-21WF 68)	x 51-0	Opp Hand To 125B28^E			2-1	10-8	27-7	36-2	17-2

	Mark	Qty				Section	Length	Remarks			A	B	C
+6-3⅜	125B29^E	2	Make One Stringer Beam			(1-21WF 68)	x 13-1	As Shn & Ntd	(SCDE)	(6-4)	11-6	12-5	
+6-3⅜	125B29^L	2	do	One	do do	(1-21WF 68)	x 13-1	Opp Hand To 125B29^E	(SCDE)		11-6	12-5	
+11-0	125B30^E	3	do	One	do do	(1-21WF 68)	x 11-5¼	As Shn & Ntd	(SCDE)		3-11	11-0	—
+11-0	125B30^L	3	do	One	do do	(1-21WF 68)	x 11-5¼	Opp Hand To 125B30^E	(SCDE)		3-11	11-0	—
+17-2⅞	125B31^E	3	do	One	do do	(1-21WF 68)	x 17-3⅜	As Shn & Ntd	(SCDE)		16-0	17-1	
+17-2⅞	125B31^L	3	do	One	do do	(1-21WF 68)	x 17-3⅜	Opp Hand To 125B31^E	(SCDE)		16-0	17-1	
+17-2	125B32^E	4	do	One	do do	(1-21WF 68)	x 17-7	As Shn & Ntd	(SCDE)	(19-13)	15-11	17-1	—
+17-2	125B32^L	4	do	One	do do	(1-21WF 68)	x 17-7	Opp Hand To 125B32^E	(SCDE)		15-11	17-1	—
+11	125B33^E	4	do	One	do do	(1-21WF 68)	x 11-5 15/16	As Shn & Ntd	(SCDE)	(19-13)	9-10	11-0	—
+11	125B33^L	4	do	One	do do	(1-21WF 68)	x 11-5 15/16	Opp Hand To 125B33^E	(SCDE)	(19-13)	9-10	11-0	—

List of Items of Material
156 ... Shop Rivets

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date: ....
Rev. 1 Date .... Rev. 3 Date ....
Rev. 2 Date .... Rev. 4 Date ....
Not Approved Until Dated

Area marked No Paint to receive ...
All holes shall be deburred with a ...
Gen. Notes: A 1/16 Chamfer ...
Rivets ... Open Holes ...
Paint ... See Sheet #4 ... Ntd

DESCRIPTION OF REVISION

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer: John F. Beasley Constr. Co.
Architect: Arkansas & Mississippi State Hwy...
Building: Mississippi River Bridge
Made by ... 7-1-...
Traced by ...
Filing Date ...
Checked by ...
Approved by ...
Order No. ... Sheet No. ... 5 Drawing No. O

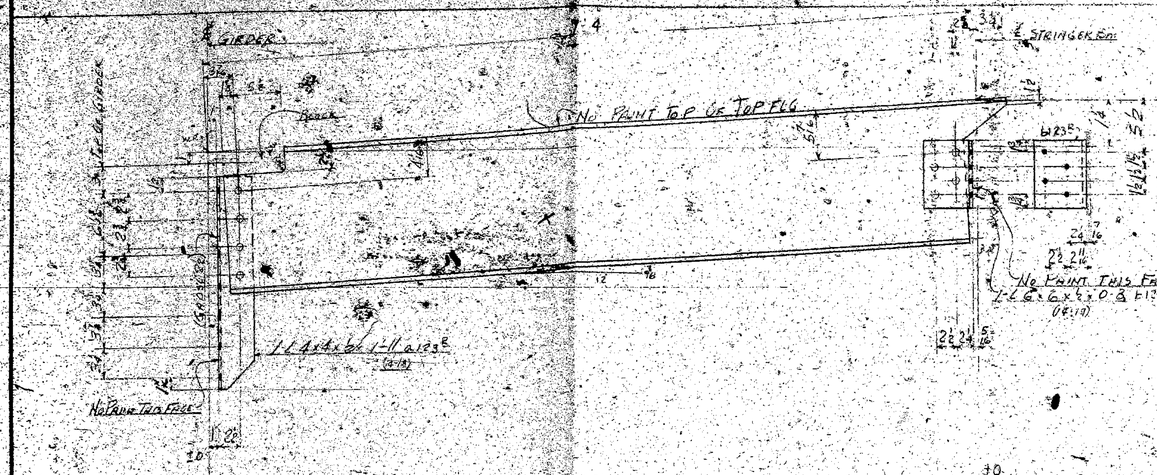
℄ GIRDER

7:4

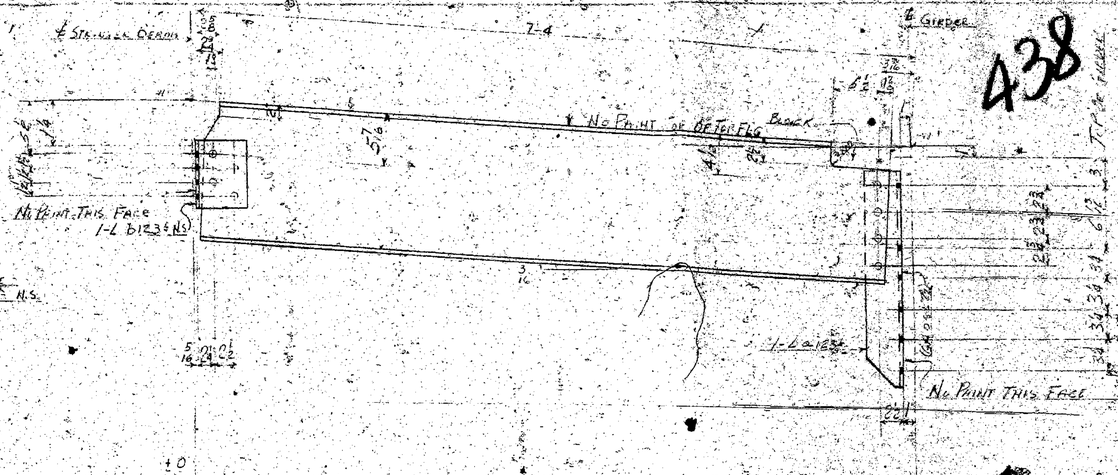
BLOCK

No Traffic Type 4 Rail

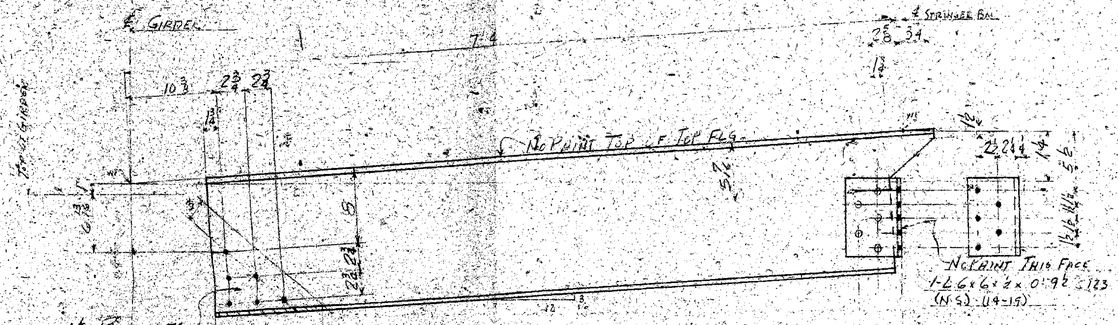
438



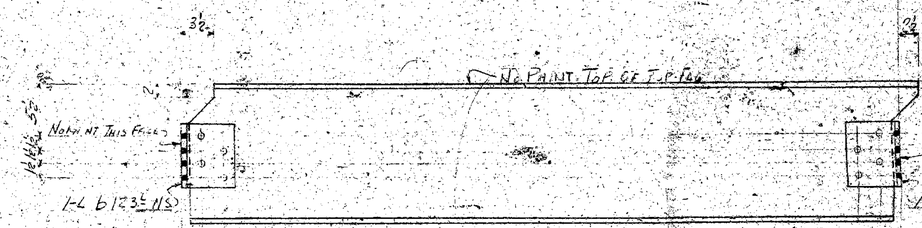
123 B1 ② MAKE ONE BEAM (1-15 I 33.9 × 7-1 5/16) × 7-4 AS SHOWN (CUT ONE END TO DETAIL) (14-11)



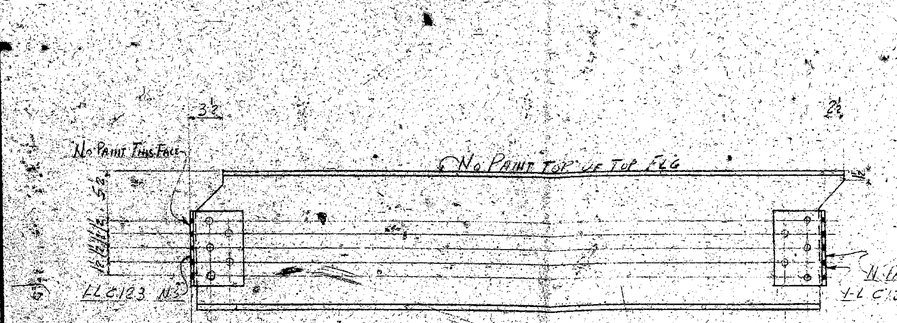
123 B2 ② MAKE ONE BEAM (1-15 I 33.9 × 7-1 9/16) × 7-4 AS SHOWN (CUT ONE END TO DETAIL) (14-11)



123 B4 ② MAKE ONE BEAM (1-16WF58 × 6-10 3/8) × 7-4 AS SHOWN (CUT ONE END TO DETAIL) (14-14)



123 B3 ② MAKE ONE BEAM (1-15 I 33.9 × 7-5 4) × 7-3 5/8 AS SHOWN (CUT ② END TO DETAIL) (14-17)



123 B5 ② MAKE ONE BEAM (1-16WF58 × 7-5 4) × 7-3 3/4 AS SHOWN (CUT ② END TO DETAIL) (14-14)

123 B6 ② MAKE ONE BEAM (1-16WF53 × 6-6 5/8) × 7-4 AS SHOWN (CUT ONE END TO DET.) (14-14)

LIST ON BILL OF MATERIAL
44 3/4 SHOT RIVETS

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date:
Rev. Date: Rev. Date:
Rev. Date: Rev. Date:
Not Approved Until Dated

ALL WELDED NO PAINT SURFACES TO RECEIVE 2 COATS LINSEED OIL TINTED AS REQ.
ALL HOLES SHALL BE DRILLED WITH A TOL
Gen. Notes: DIRECTION A TO CHAMFER HEADS OF RIVETS

Rivets 7/8 Open Holes 13/16
Paint SEE SHEET 7-4 DATED 1959
Delivery Promised

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

App'd Shop 8-10-59

Customer JOHN F. BEASLEY CONSTR. CO.
Architect ARKANSAS & MISSISSIPPI STATE HIGHWAY
Building MISSISSIPPI RIVER BRIDGE
Made by T.T. 7-27-59 SEALED BY
Traced by Filing Date 1755
Checked by
Approved by
Order No. 4-7 Sheet No. 123 Drawing No. O

DESCRIPTION OF REVISION
DATE
BY
MADE BY
Beams

437
Near Side
Subpunch or Subdrill
No Paint (FS)
No Paint (FS)
No Paint (NS)
Punch Full Size One
APPROVED BY
CONSULTING ENGINEERS
Not Approved Until Dated

PRINT

435

℄ FLOOR BEAMS UNIT "C"

COUNTER SUNK BOTH SIDES

MAKE ONE WIND SHEAR DEVICE AS SHOWN ON DWG 1203 2

℄ FLOOR BEAMS @ UNIT "B"

COUNTER SUNK BOTH SIDES

MAKE ONE WIND SHEAR DEVICE AS SHOWN ON DWG 1203

MAKE ONE WIND SHEAR DEVICE AS SHOWN ON DWG 1203A

NO PAINT F.S.

MAKE ONE WIND SHEAR DEVICE AS SHOWN ON DWG 1203

LIST ON EACH PC OF MATERIAL
203-769 SHOP RIVETS

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF,
CONSULTING ENGINEERS
Date:
Rev. 1 Date: Rev. 3 Date:
Rev. 2 Date: Rev. 4 Date:
Not Approved Until Dated

ALL NON-REV. NO PAINT EXCEPT WHERE SEC. LAPPED OR FITTED FOR LEAD
ALL HOLES SHALL BE DEBURRED WITH A TOOL MADE
Gen. Notes: ALL STEEL ON THIS SHEET A514-A7 HOUSTON FABRICATION
B 1/16 CHAMFER
Rivets 31 Open Holes 15
Paint SEE SHEET #4 UNL N.T.D.
Delivery Promised

DESCRIPTION OF REVISION

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer JOHN F BEASLEY CONSTR CO
Architect ARKANSAS & MISSISSIPPI STATE HIGHWAY
Building MISSISSIPPI RIVER BRIDGE
Made by E.H. 7-23-59 HELENA ARK
Traced by Filing Date 1959
Checked by
Approved by
Order No 6420 Sheet No. 120 Drawing No. 0

App'l Shop
10-07

APPROVED BY
HOWARD, [illegible], TAMMEN & BERGENDOFF,
CONSULTING ENGINEERS
Date
Rev. 1 Date   Rev. 2 Date
Rev. 3 Date   Rev. 4 Date
Not Approved Until Dated

Area Marked No Paint To Receive [illegible]
All Holes Shall Be Deburred With A Tool That [illegible]
A 1/16 Chamfer. Houston Fabrication

Gen. Notes: All Steel On This Sheet ASTM-A7

Rivets 3/4 A — Open Holes 15/16 — Delivery Promised

Paint: See Sheet # A 1/1 NTD

Bracing

DESCRIPTION OF REVISION

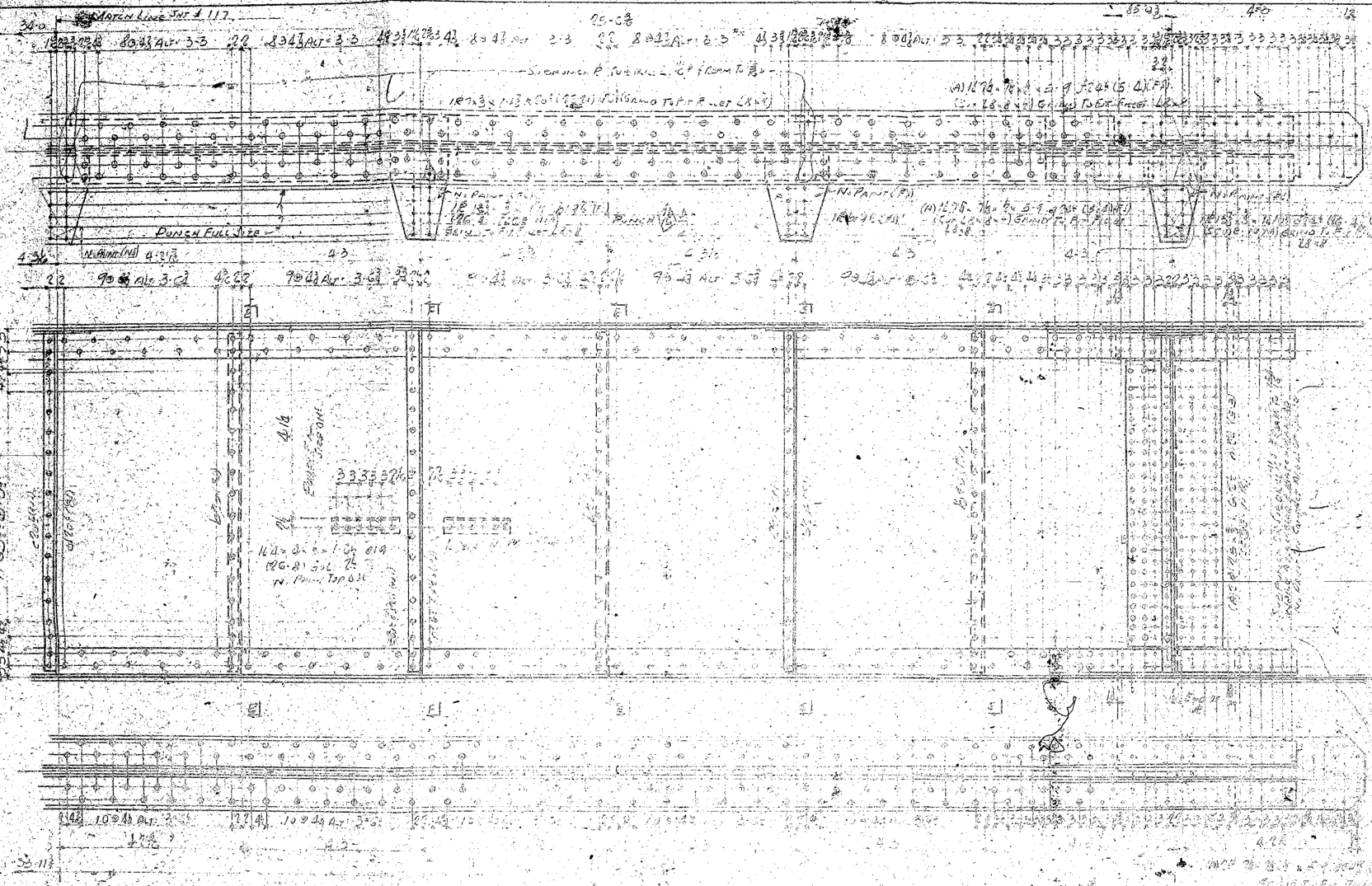
3/4/60
List On File Of Mineral
[illegible] Shop [illegible]

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer	John F. Beasley Constr. Co.
Architect	Arkansas & Mississippi State Highway
Building	Mississippi River Bridge — Helena, Ark.
Made by	J.H. 7-23-59
Traced by	
Filing Date	1959
Checked by	[illegible]
Approved by	
Order No.	6431
Sheet No.	119
Drawing No.	O

App'l — Shop

A32

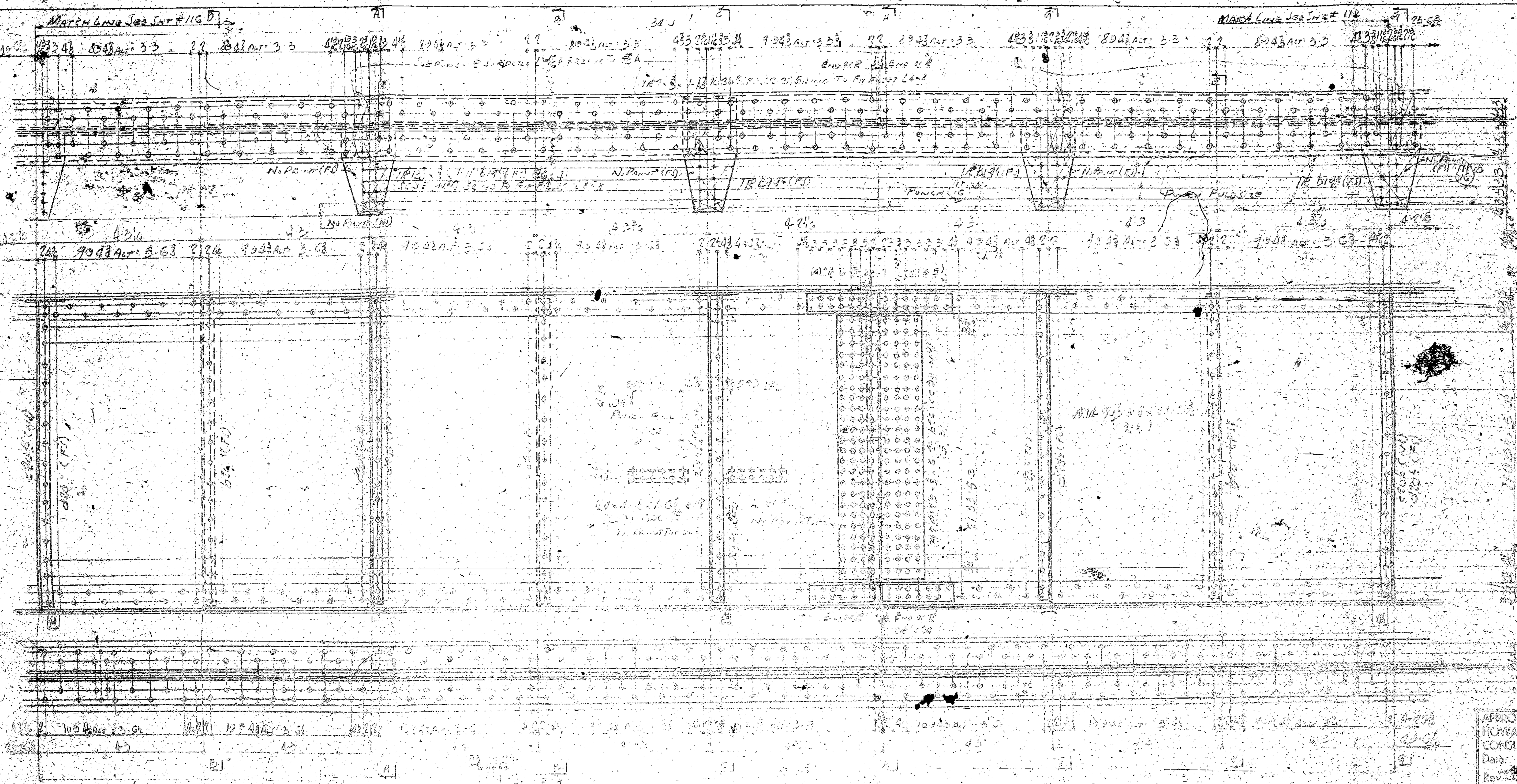


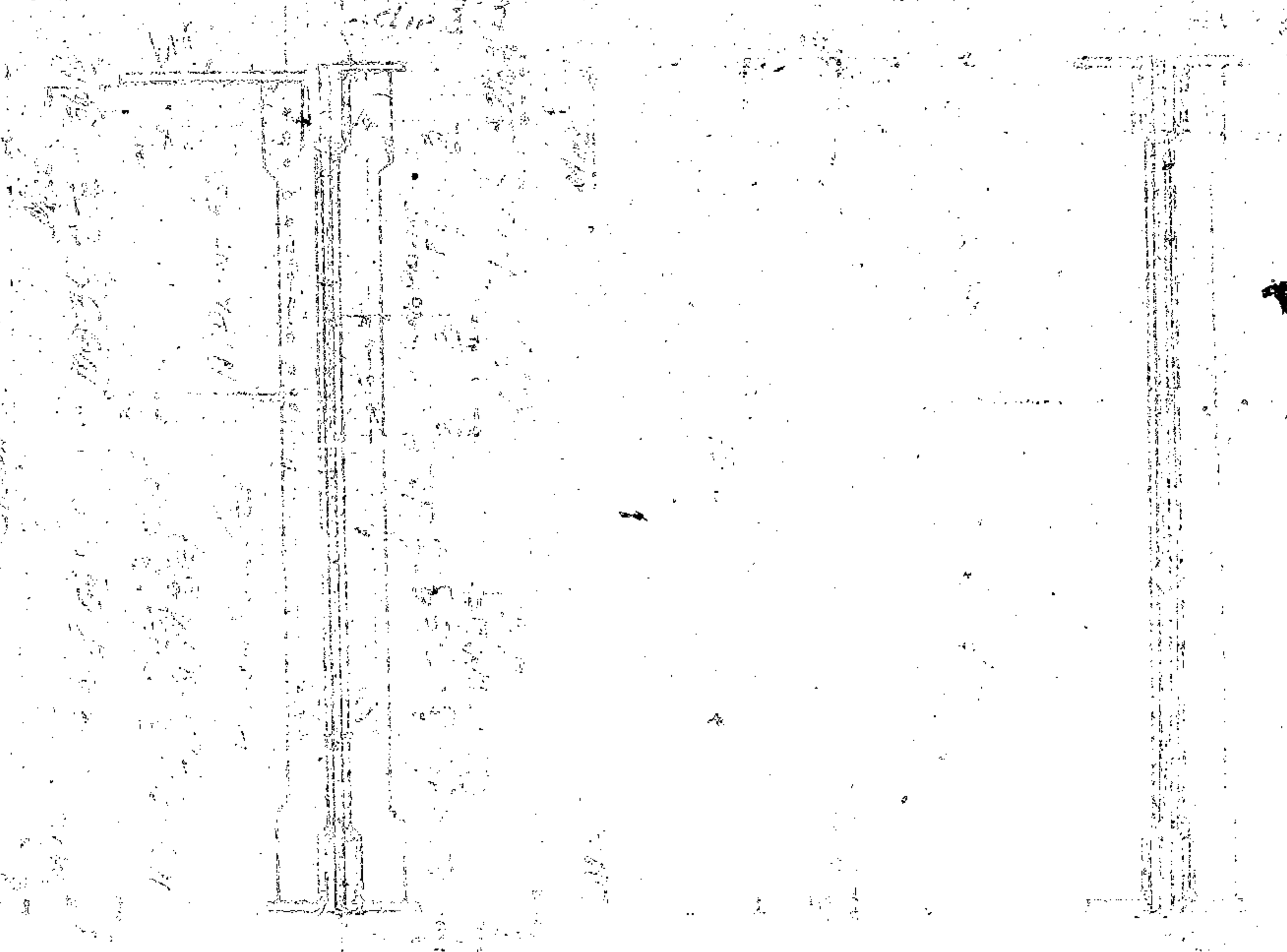
APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date:
Rev. 1 Date: Rev. 3 Date:
Rev. 2 Date: Rev. 4 Date:
Not Approved Until Dated

All steel ASTM-A7 except Members Marked (A) which are manganese steel (See Specs)
All open holes shall be subpunched or subdrilled 11/16" ø & reamed to 13/16" ø unless noted.
All holes for shop rivets shall be punched or subdrilled 11/16" ø & reamed to 13/16" ø while assembled or drilled from the solid unless noted.
Carbon steel thicker than 3/4" or low alloy steel thicker than 5/8" shall be drilled.
All holes shall be countersunk with a tool making a 3/16" diameter [illegible]

CONSTRUCTION OF CONTRACT

Masher Steel Company





For Details Near Side See Sht #94
For Camber Dims See Sht #115

432

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date:
Rev. Date: Rev. Date:
Rev. Date: Rev. Date:
Not Approved Until Dated.

All steel ASTM-A7 except Members MKD (A) which are manganese steel (See Spec.)
All open holes shall be subpunched or subdrilled 11/16" ⌀ & reamed to ... metal template unless noted.
All holes for shop rivets shall be subpunched or subdrilled 11/16" ⌀ & reamed ... while assembled or drilled from the solid while assembled.
Carbon steel thicker than 3/4" or low alloy steel thicker than 5/8" shall be drilled.
All holes shall be deburred with a tool making a 1/16" chamfer.

DESCRIPTION OF REVISION

Mosher Steel Company

Erected by: Helena, Ark.

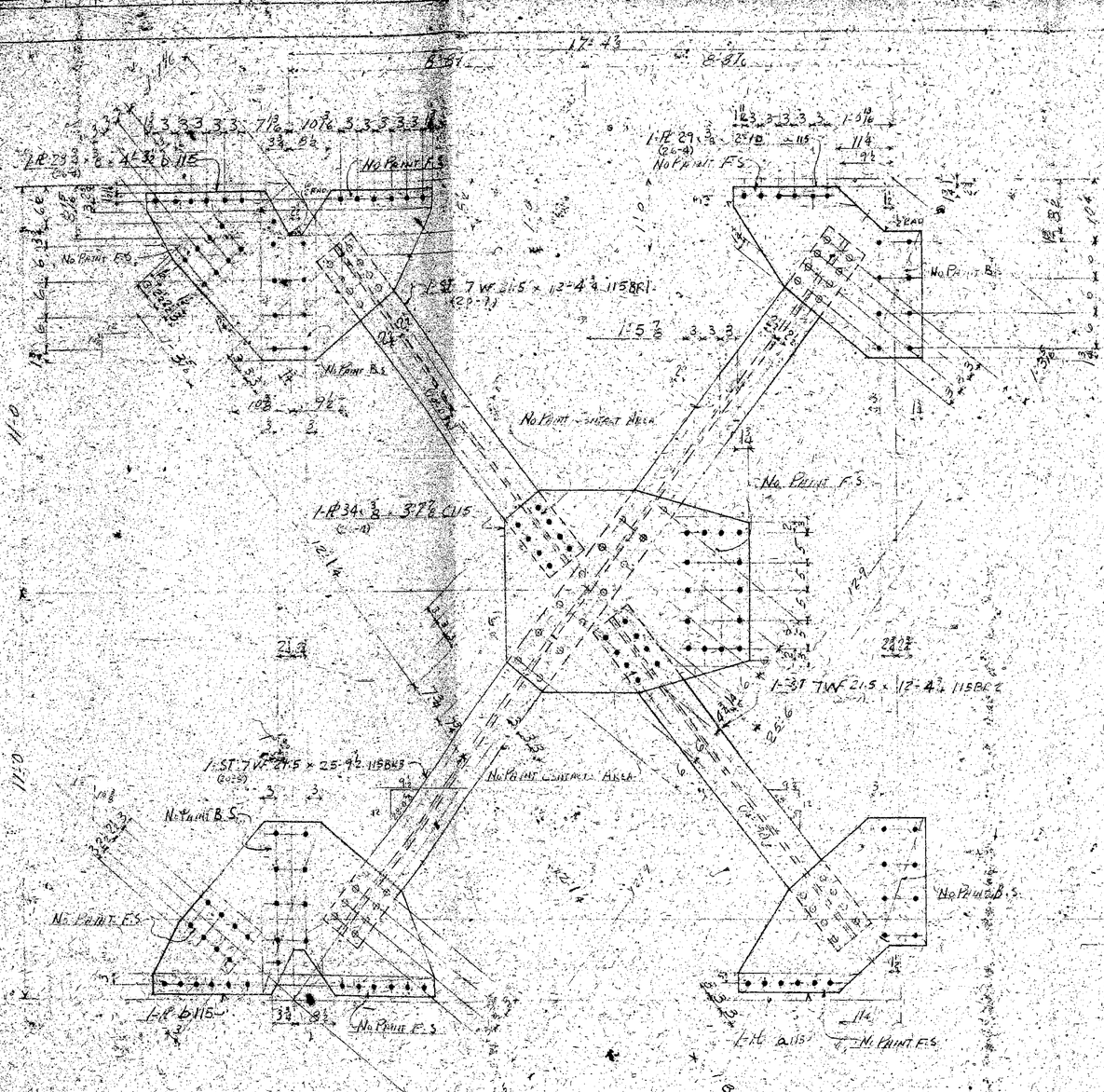
A31

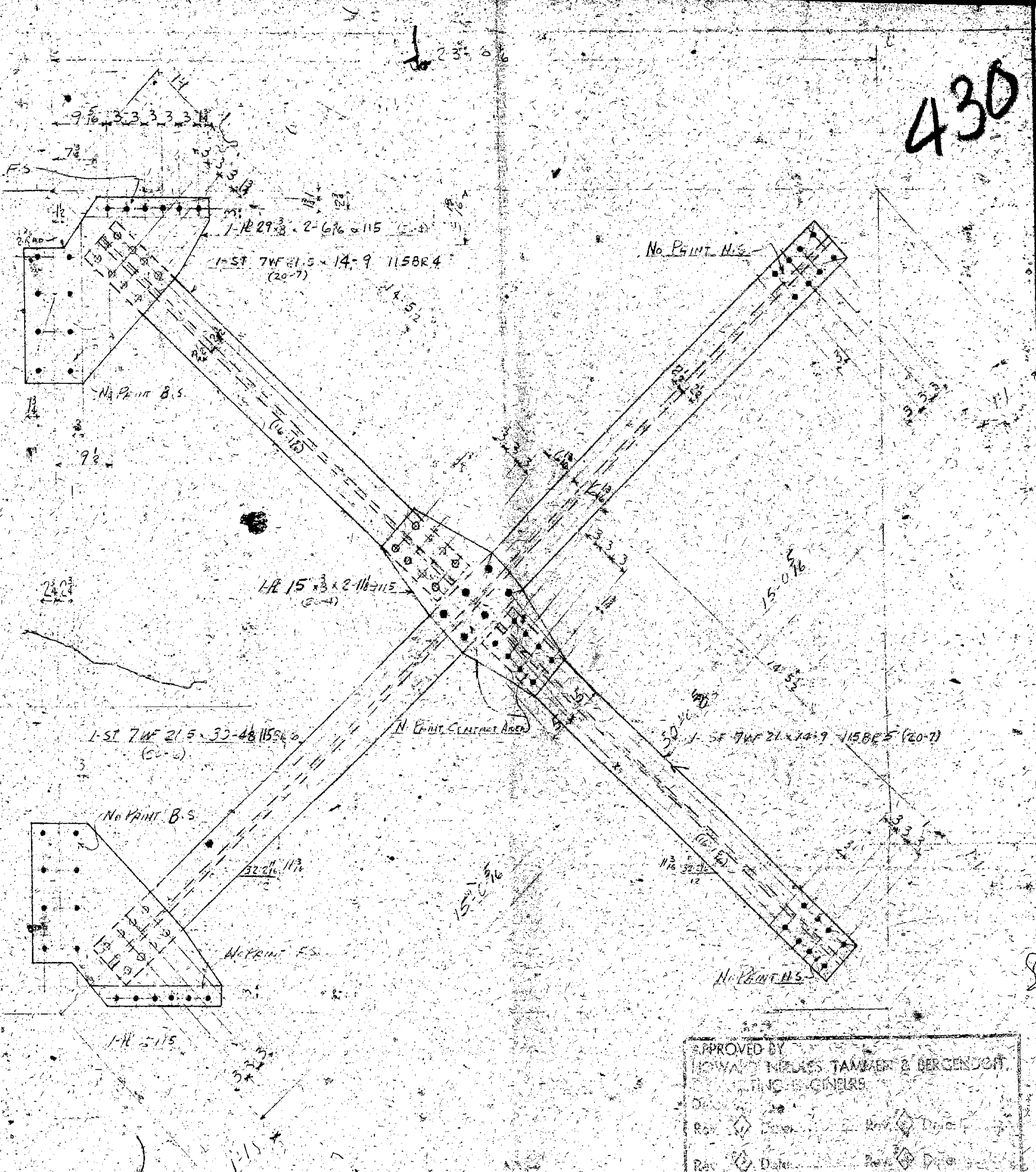
APPROVED BY:
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date

Rev. ◇ Date
Rev. ◇ Date
Rev. ◇ Date
Rev. ◇ Date
For Approval Only

Mosher Steel Company

430





APPROVED BY
HOWARD NEEDLES TAMMEN & BERGENDOFF
ENGINEERS
Date
Rev. 1 Date
Rev. 2 Date
Rev. 3 Date
Rev. 4 Date
Not Approved Until Dated

All Members Marked No Paint To Be Free Of Scale Loose Rust And Paint
All Holes Shall Be Produced With A Twist Drill
Gen. Notes: 1/16 Chamfer; Mostly Fabrication
All Sheet On This Sheet; BST Mark
Rivets: 3/4
Open Holes: 16
Paint: See Sheet #4 Unless Noted

Delivery Promised

List On This Material Is 69 1/2 Shop Sheets

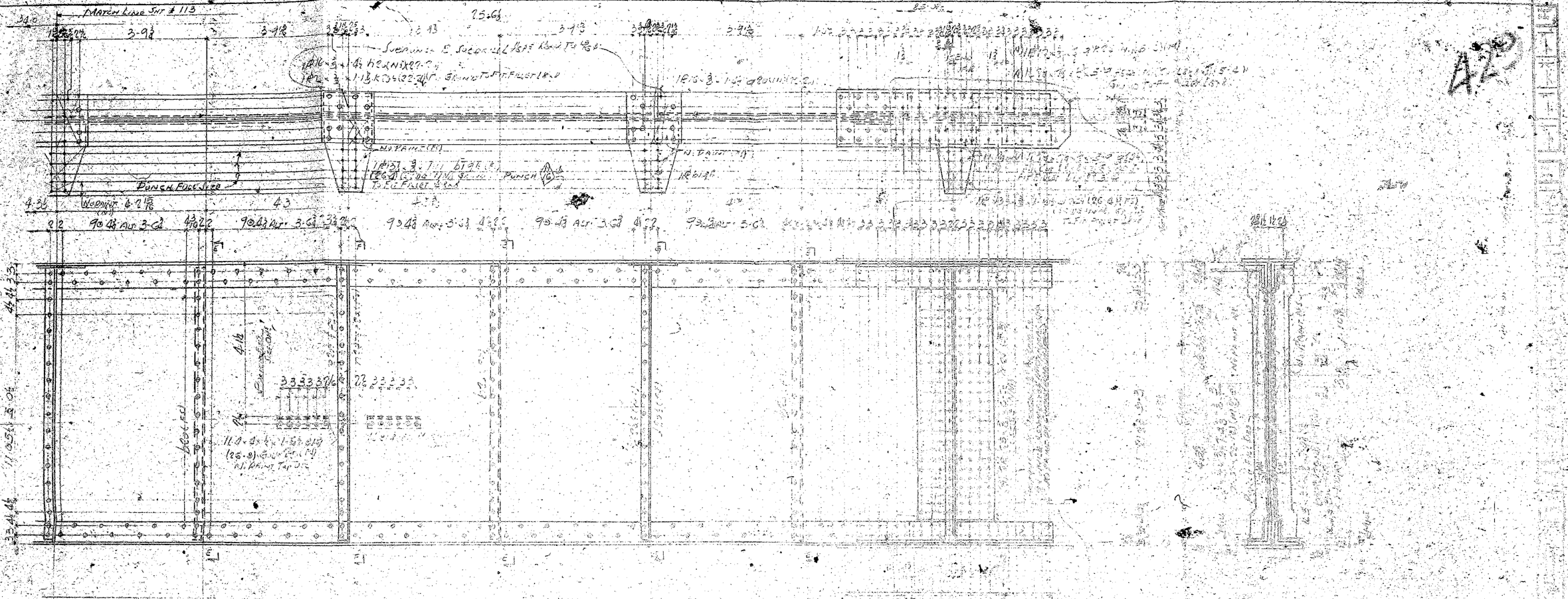
Description Of Revision	Date	Chkd By	Date	Made By	Appr'd	Shop

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer: John F. Beasley Constr Co
Architect: Arkansas & Mississippi State Highway
Building: Mississippi River Bridge
Made by: F.H. 7-22-57 Helena, Ark.
Traced by: Filing Date:
Checked by: Duplicate Check
Approved by:
Order No. 6420A Sheet No. 115 Drawing No. 0

Indicates 3/4 x 3 Welds at 6" Intervals Unless Otherwise Noted

A2


MATCH LINE SHT # 113
PUNCH FILLET SIZE
WELDING
PUNCH
N. PAINT
SEE DETAIL
Mosher Steel Company

MATCH LINE J33 SHT #112

MATCH LINE J33 SHT #112

N. POINT (TYP.)

POWER ROD

POWER ROD

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date:
Rev. (1) Date: Rev. (2) Date:
Rev. (3) Date: Rev. (4) Date:
Not Approved for Construction

All steel ASTM A7 except Mayari R (A.S.T.M. A-) which are manganese steel (Mn. Steel).
All open holes shall be punched or drilled 13/16" diameter for 3/4" rivets unless noted.
All holes for shop rivets shall be punched or drilled full size or subpunched and reamed while assembled or drilled from the solid with pneumatic tools after assembling.
Carbon steel rivets shall be heated to a light cherry red when driven.
All holes shall be countersunk where required for 7/8" diameter flat head rivets.

Mosher Steel Company

SUBJECT TO CHANGE OF REVISION

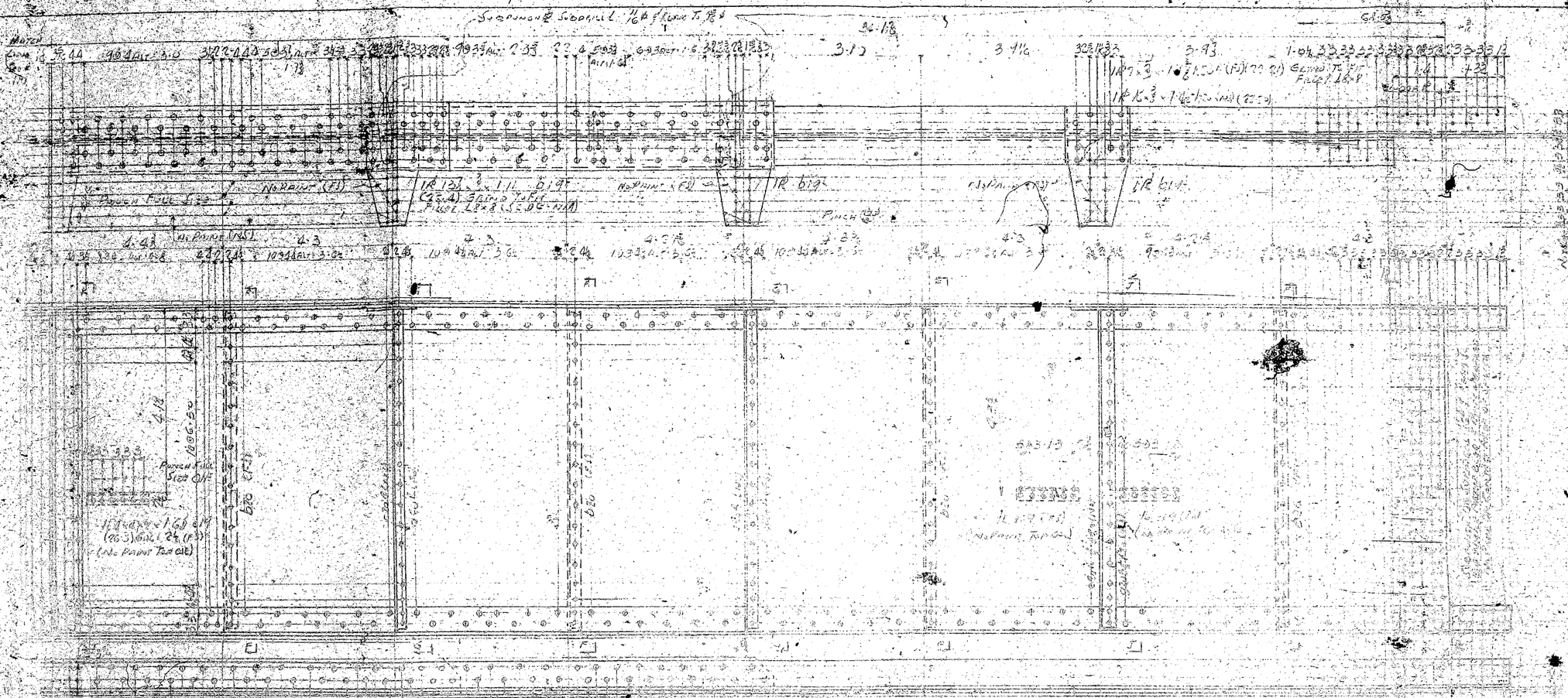
AD3

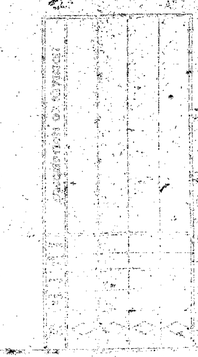
427

Mosher Steel Company

APPROVED BY:
HOWARD NEEDLES TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date:
Rev. 1 Date: Rev. 2 Date:
Rev. 3 Date: Rev. 4 Date:
Not Approved Until Dated

426

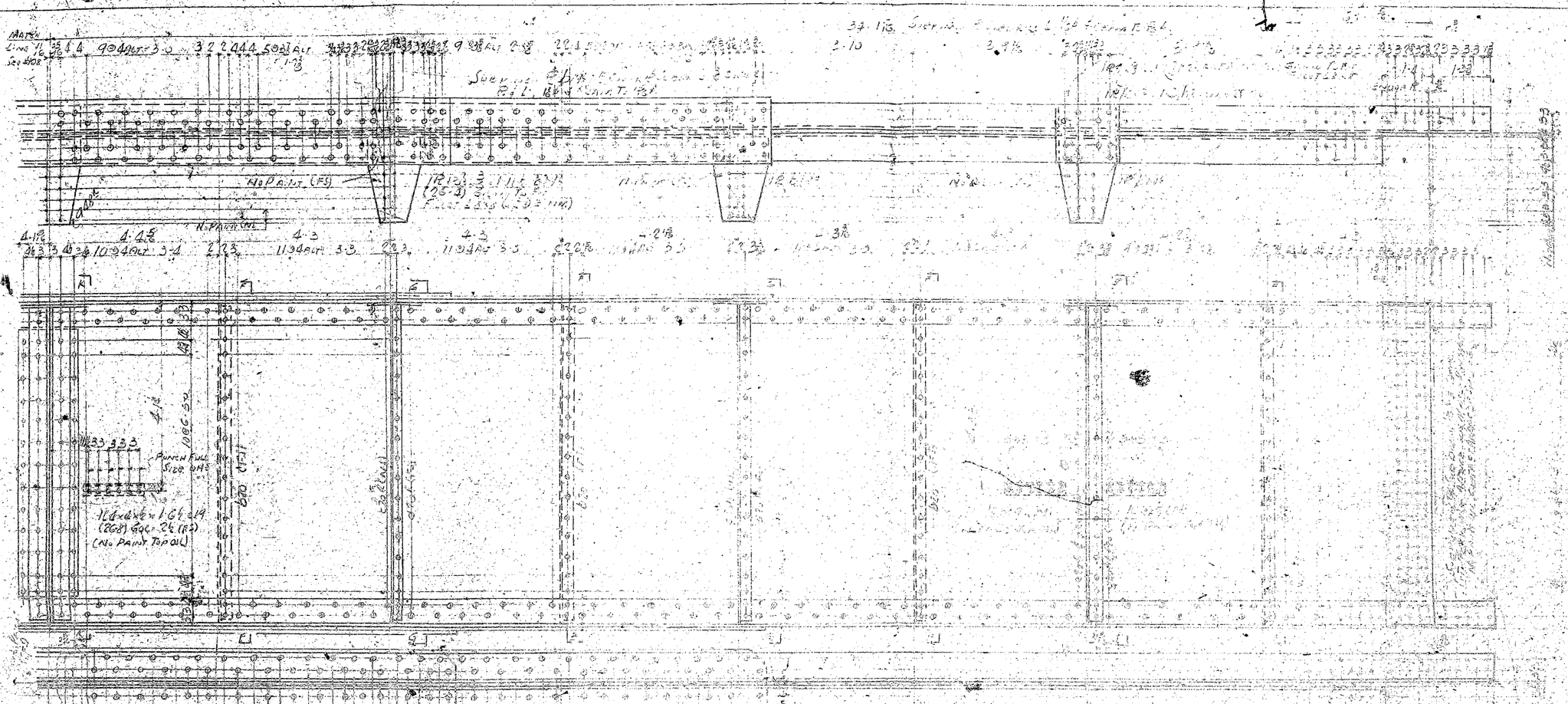


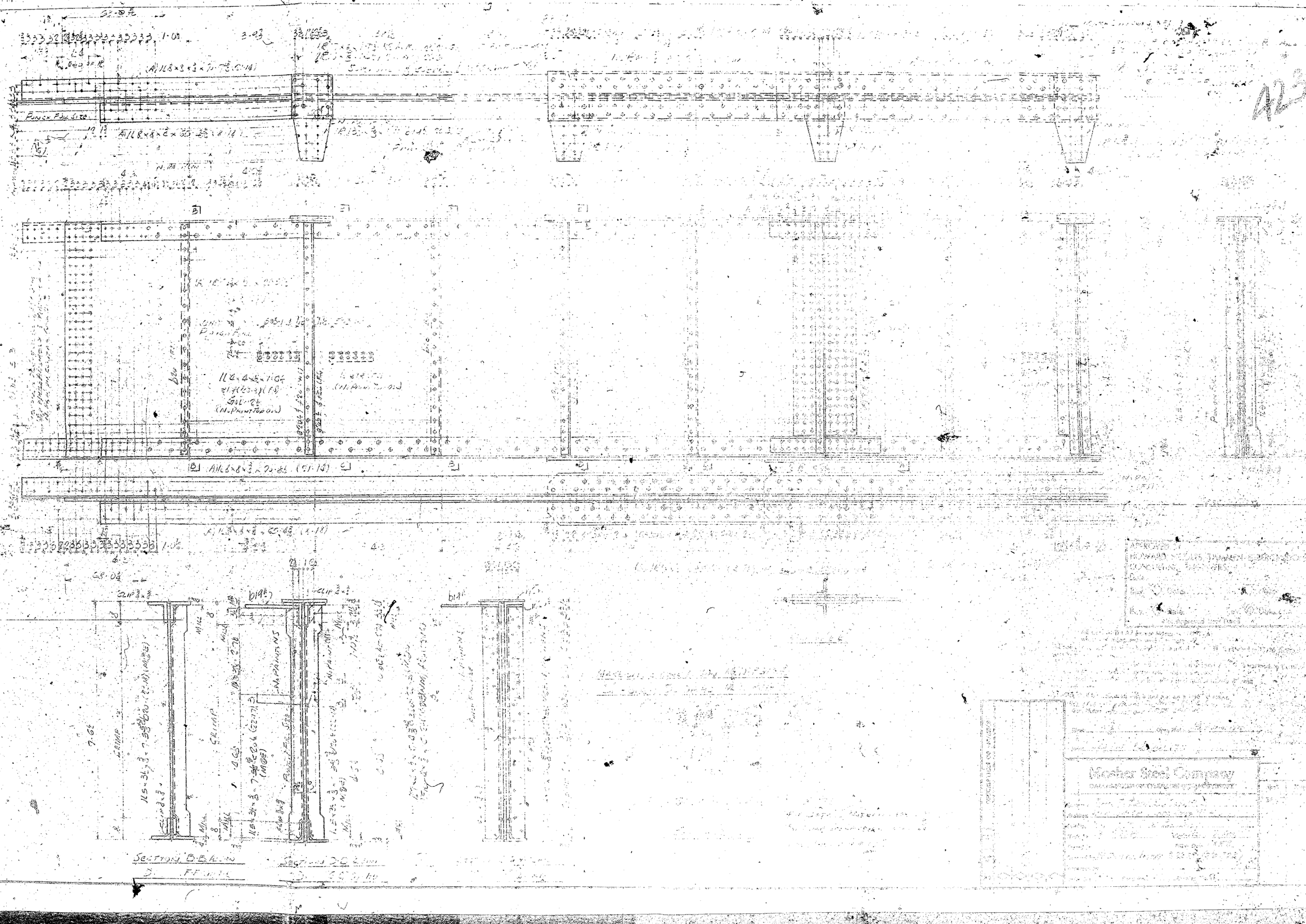


APPROVED
BOWLES TAMPERT & DEE
CONSULTING ENGINEERS
Date

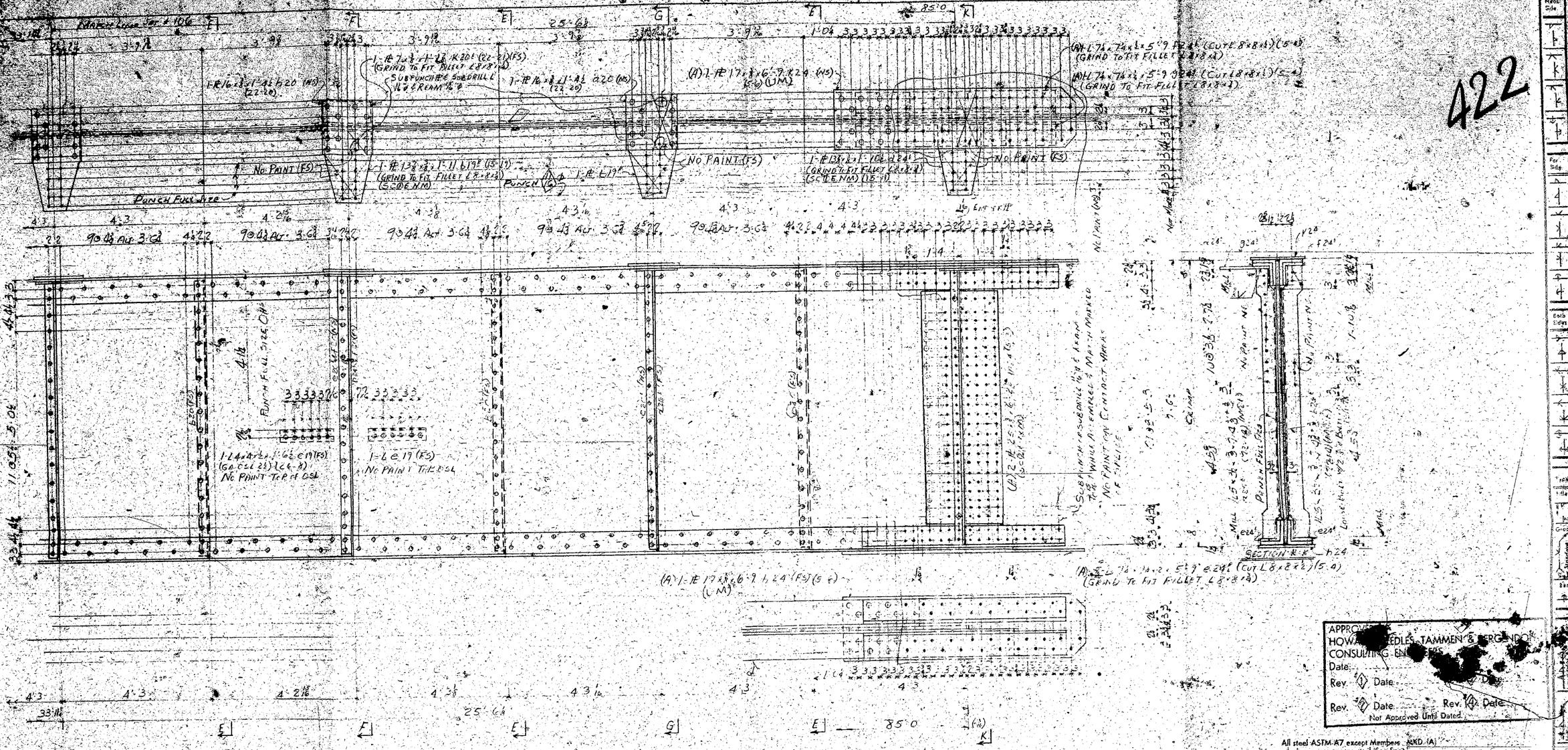
Mosher Steel Company

Morton Steel Company


No Paint (F5)
N. Paint Ins.
Punch Full Size Bolts
No Paint Top Of
Approved by
Howard, Needles, Tammen & Bergendoff
Consulting Engineers
Mosher Steel Company


Mosher Steel Company

422



HFC 9/24/59

FOR SECTIONS E-E & F-F SEE SHT #105
FOR SECTION G-G SEE SHT #106
FOR DETAILS NOT SHOWN SEE '97
FOR CAMBER DIAG SEE SHT #105
FOR COMPOSITE CAMBER DIAG SEE SHT #33
WORK THIS SHT #105 & 106
NO PAINT SURFACES TO BE CLEAN ⓓ
S/S UNDER OIL TANKS TO BE CLEANED LEAD

APPROVED
HOWARD NEEDLES TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date:
Rev. 1 Date
Rev. 2 Date
Rev. 3 Date
Rev. 4 Date
Not Approved Until Dated.

All steel ASTM-A7 except Members AKD (A) which are manganese steel (See Spec.)
All open holes shall be subpunched or subdrilled 11/16 ø & reamed to 45/16 ø metal template unless noted.
All holes for shop rivets shall be subpunched or subdrilled 11/16 ø & reamed to 15/16 ø while assembled or drilled from the solid - fully assembled.
Carbon steel thicker than 3/4" or low alloy steel thicker than 5/8" shall be drilled.
All holes shall be deburred with a tool making a 1/16" chamfer.

Gen. Notes: HOUSTON FABRICATION
Rivets 7/8 Open Holes TO BE NTD
For SEE SHT #4 UNITED

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Contractor JOHN F. BEASLEY CONST. CO.
Architects ARKANSAS & MISSISSIPPI TOLL AUTHORITY
Building MISSISSIPPI RIVER BRIDGE
Made by C.M. 1-7-59 at HELENA, ARK.
Traced by
Checked by
Approved by
Order No. 64201 Sheet No. 107 Drawing No. 6

DESCRIPTION OF REVISION
Date Received
Appd 8-26-59

DETAILED ON SHEET #105A

421

MATCH LINE Jos SHT #105

MATCH LINE Jos SHT #107

SUBPUNCH Ø 11/16 & SUBDRILL Ø 11/16 & REAM TO 15/16 Ø

1-PL 16 x 3/4 x 1'-4 1/2 A20 (NS)

1-PL 16 x 7/8 x 1'-4 1/2 A20 (NS)

1-PL 7 x 3/8 x 1'-1 1/2 K20 (22-21) (FS)
(GRIND TO FIT FILLET Ø 3/8 x 3")

1-PL 20 (NS)

1-PL 20 (NS)

1-PL 13 x 3/8 x 1'-11 1/2 L17 (NS 19)
(GRIND TO FIT FILLET Ø 3/8 x 3")

NO PRINT (FS)

NO PRINT (NS)

1-PL L 17

1-PL L 17

PUNCH (FS)

NO PRINTS

PUNCH FULL SIZE

1-PL L 17

NO PRINT (FS)

(A) 1-PL 6 x 1'-3 1/2 C 24 (FS) (GRIND TO FIT FILLET)
(A) 1-PL 6 x 1'-3 1/2 C 24 (FS) (S)

(A) 1-PL 20 x 2'-3 1/2
(7 12)

2-PL 24

ENT 1-PL 24

FOR SECTIONS B-B, C-C, & E-E
SEE SHT. 1'-5

FOR DETAILS NOT SHOWN SEE SHT #99
FOR CAMBER DIAG SEE SHT #105
FOR COMPLETE CAMBER DIAG SEE SHT #83
FOR TYP. SPLICE SEE SHT #104 & 105

D. LINDSEY TURNER PROJECT

SEE SHT #105A

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date:
Rev. 1 Date: Rev. 3 Date:
Rev. 2 Date: Rev. 4 Date:
Not Approved Until Dated

All steel ASTM-A7 except Members MKD. (A) which are manganese steel (See Spec.)
All open holes shall be subpunched or subdrilled 1/16" Ø & reamed to 15/16" Ø using metal templet unless noted.
All holes for shop rivets shall be subpunched or subdrilled 11/16" Ø & reamed to 15/16" Ø while assembled or drilled from the solid while assembled.
Carbon steel thicker than 3/4" or low alloy steel thicker than 5/8" shall be drilled.
All holes shall be deburred with a tool making a 1/16" chamfer.

Gen. Notes: HOUSTON FABRICATION
Rivets: 3/4 Open Holes: 1 1/16 Ø DRILLED
Paint: SEE SHT #1 UNL. NTD

DESCRIPTION OF REVISION

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Contractor: J. E. BRADLEY CONST. CO.
Architect: BR. REGIONAL FM Mkt. FROM HI WAY
Drawing: MILLWORK & ERECTION DIAGS
Made by: C. BELL Section: HELENA BRK
Traced by: Date: 1952
Checked by: Date:
Approved by:
Order No. 6420 Shop No. 1170 Drawing No. 0

420

Main Girder

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date
Rev. ① Date
Rev. ② Date
Not Approved Until Signed

Mosher Steel Company

MATCH MK

SUBPUNCH ℄ & SUBDRILL L & COVER ℄ REAM 3

PUNCH FULL SIZE

NO PAINT (FS)

(1) PL 3/8 x 1'-11 bl9½ (LS 1)
(GRIND TO FIT FILLET L8x8x¾)
(SCALE N.M)

SUBPUNCH ℄ & SUBDRILL L & ℄ REAM TO ℄ &

1-℄ bl9½

1-℄ 16x¾ x 1'-4½ (24 NS) (FS)
1-℄ 7 x 3/4 x 1'-1⅞ K20" (FS) (22 21)
(GRIND TO FIT FILLET L8x8x¾)

SUBPUNCH OF SUBDRILL ℄ & REAM TO ℄ & WELD ASSEMBLED TO MATCH MARK
NO PAINT ON CONTACT FACES
SPLICE

PUNCH FULL SIZE OPP

11/4 dia x 1'-6 c19
(2x3) GOL: 26 (FS)
(NO PAINT TOP OF L)

NO PAINT (FS)

DALLAS TO FURN. METAL TEMP.

419

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

Date

Mosher Steel Company

AB

AD

MATCH LINE STA. # 101

PUNCH FULL SIZE

NO PAINT (FS)

NO PAINT TOP 20"

SUBPUNCH & SUBDRILL L 2½ x ¾ REAM TO 15/16 ø

SUBPUNCH & SUBDRILL L 6 COVER PL 1½ x 6 REAM TO 15/16 ø

SUBPUNCH & SUBDRILL L 6 & REAM TO 15/16 ø FOR ¾ ø A325 BOLTS IN CONNECTIONS TO COLUMNS

SECTION K-K

APPROVED BY:
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date:
Rev. Date: Rev. Date:
Rev. Date: Rev. Date:
Not Approved Until Dated

All steel ASTM-A7 except Members (S.K.D. (A) ...
...richard manganese steel (See Spec.)
All open holes shall be subpunched or subdrilled 11/16" ø & reamed to 15/16" ø ...
...steel (open) unless noted.
All holes for shop rivets shall be subpunched or subdrilled prints ø & reamed to 15/16" ø ...
...while assembled or drilled from the solid while assembled.
Carbon steel thicker than 3/4" or low alloy steel thicker than 5/8" shall ...
...be drilled.
All holes shall be countersunk with a tool making a 1/64" chamfer.

Open Hearth Wrought Iron ...
... Open Hearth ...

Mosher Steel Company
...MANUFACTURERS OF STRUCTURAL AND SPECIAL STEEL

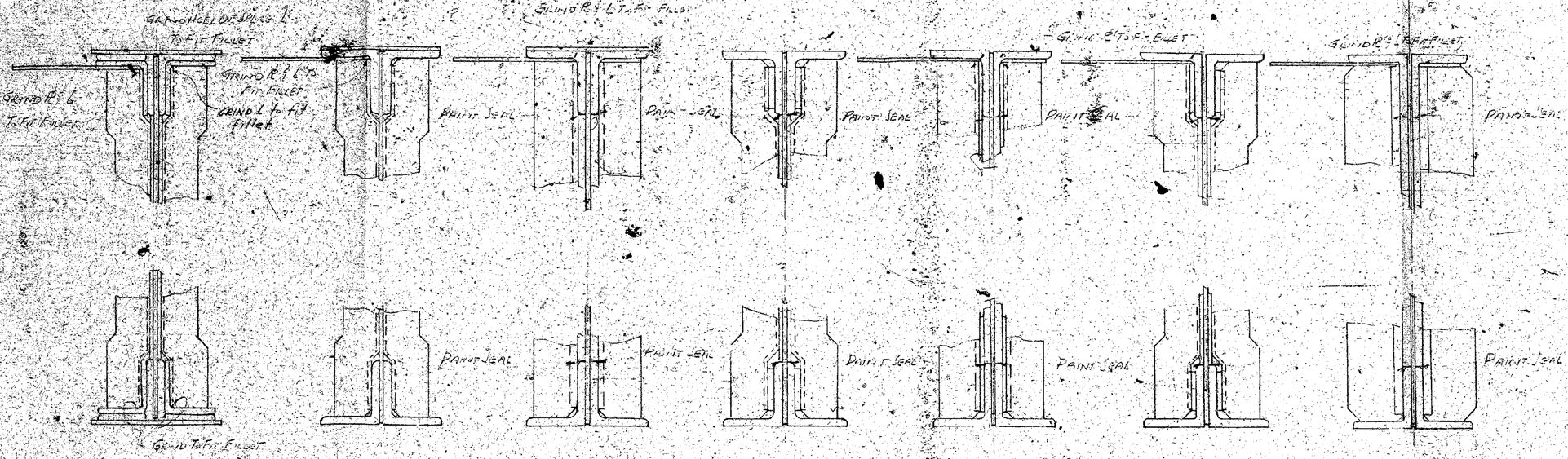
MATCH LINE SEE SHT #100 D
MATCH LINE SEE SHT #102
34'-0
NO PAINT (FS)
(GRIND TO FIT FILLET L 8x8x3/4)
(A) 2-PL 6x1/2x3'-7
416

A.H.D.

ROLL .. 746

BRG. 2899

414



CRIMPED STIFFENER @ FIELD SPLICE (2) R @ TSPL

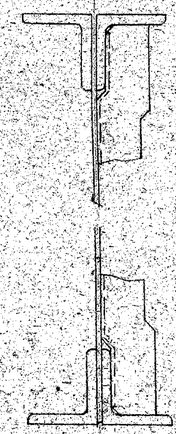
CRIMPED STIFF. BETWEEN SPLICES (3) R @ TSPL

TRANSIT STIFFENER BETWEEN SPLICES 1 R @ TSPL

CRIMPED STIFF @ WEB SPLICE 1 R @ TSPL

STRAIGHT STIFFENER @ PIN PLTS. CRIMPED STIFF @ WEB SPLICE 1 R @ TSPL

STRAIGHT STIFFS @ PIERS



CRIMPED SINGLE STIFF. BETWEEN SPLICES

9/16/59

TAMMEN & BERGENDOFF
ENGINEERS

Rev. ◇ Date Rev. ◇ Date

◇ Date Rev. ◇ Date
Not Approved Until Dated

DESCRIPTION OF REVISION

Gen. Notes:

Rivets Open Holes Delivery Promised

Paint

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

	App'l	Shop
	8-19-59	

Customer: John F. Kiewit & Son - Co.
Architect: Alexandria, Mississippi River Bridge
Building: Mississippi River Bridge
Made by: D.G. 1959 Scale: 1/2" = 1'-0"
Traced by: Filing Date: 1958
Checked by: W.T. Armstrong 8-18-59 Rte 203
Approved by:
Order No. Sheet No. 39 Drawing No. 0

Neon Side
Fab Side
Bath Side
Types Fillet Slot Groove
Size Spacing Number
Prod
Welding
Indicates ½ x 2 Welds @ 3" ctrs.
Indicates ½ x 2 Welds @ 6" alternate ctrs. (12" ctrs. staggered)

413

MATCH LINE SHT 97 SA-03

SUBPUNCH R, SUBDRILL L 11/16 ϕ FROM T. SIDE

NO PAINT (FS)

PUNCH FULL SIZE

NO PAINT (NS)

NO PAINT (FS)

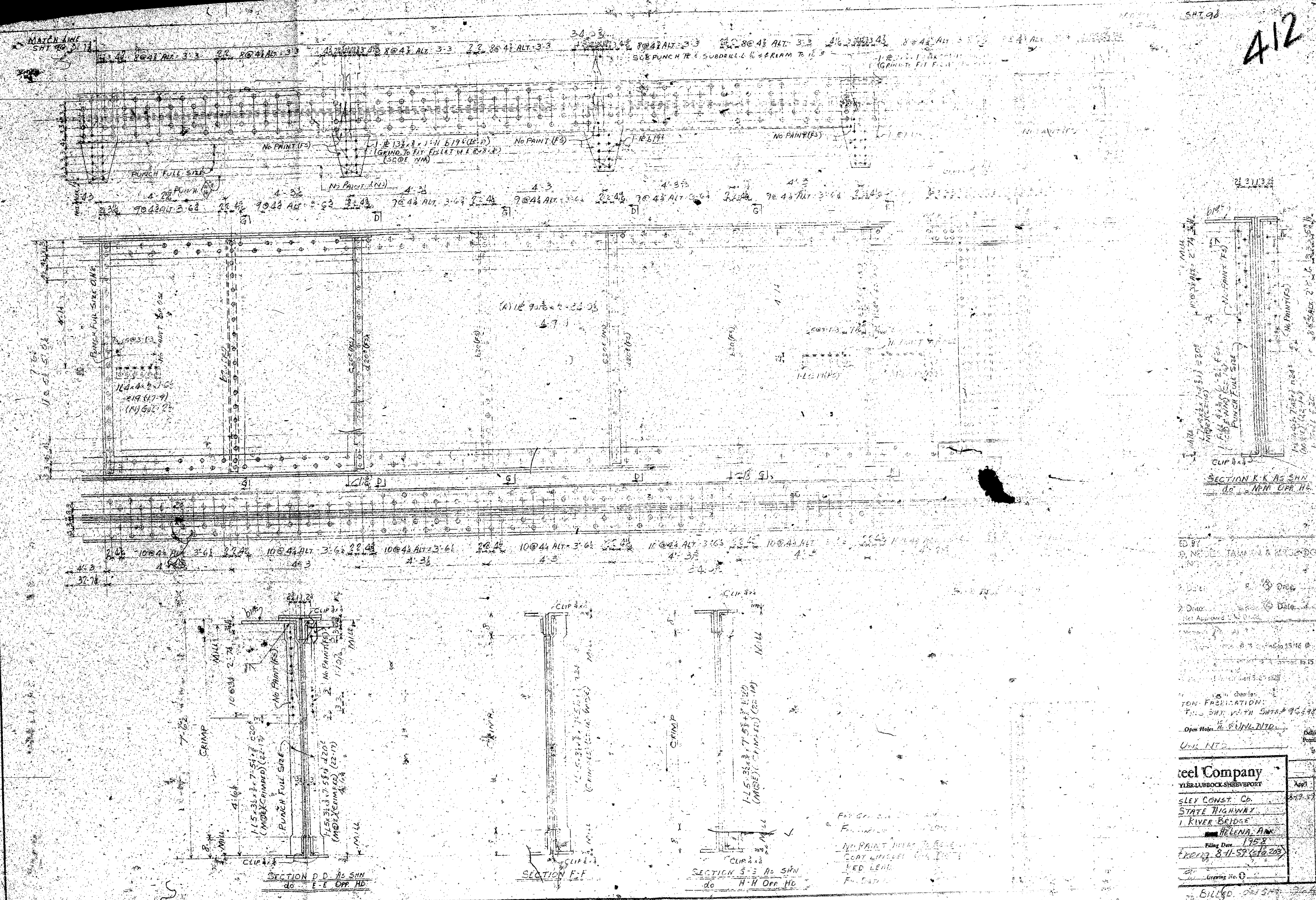
NO PAINT (NS)

NO PAINT (FS)

NO PAINT TOP DSL

SECTION N-N

Mosher Steel Company



ED BY
..., NEEDLES, TAMMEN & BERGENDOFF,

Date ... Date

Not Approved

TON FABRICATION:
THIS SHT. WITH SHTS # 96 & 98

Open Holes 15/16 Ø UNL NTD.

Delivery Promised

UNL NTD

teel Company

YLER-LUBBOCK-SHREVEPORT

	App'l	Shop
SLEY CONST. Co.	8-12-57	
STATE HIGHWAY		
RIVER BRIDGE		
HELENA, ARK.		
Filing Date 1958		
ERECT 8-11-57 (SFO 203)		
Drawing No. 0		

BILLED ON SHT ...

411
No PAINT (FS)
No PAINT (NS)
No PAINT (BS)
PUNCH FULL SIZE
SUB PUNCH & SUB DRILL
(GRIND TO FIT FILLET OF L 8×8×3/4)
No PAINT TOP OF OSL
6" RAD. NO PAINT (BS)
3-COATS PAINT (BS) EXCEPT AS NOTED
SECTION A-A
CAMBER DIAGRAM
MILL
SECTION C-C
MAKE ONE GIRDER AS SHOWN
TION B-B
& BERGENDOFF
Date
Date
Delivery Promised
Appl
Shop
8-17-57

410

MATCH LINE SHT 94

SUB PUNCH 1¼ Ø & SUBDRILL 1 11/16 Ø & REAM TO 1¾ Ø

30'-6"

1-PL 16⅝ x 1-4½ x 1'-2 (NS) (22-20)

1-PL 7⅜ x 1-1½ x 20½ (FS) (22-21) (GRIND TO FIT FILLET L 8 x 8 x ⅞)

1-PL 16⅝ x 1-4½ x 1'-2 (22-20) (NS)

1-PL 13⅜ x ⅞ x 1'-11 6.75° (15-19) (GRIND TO FIT FILLET L 8 x 8 x ⅞) (SEE NM)

1-PL 6.75° NO PAINT (FS)

NO PAINT (FS)

NO PAINT (FS)

PUNCH Ø 1¾

PUNCH FULL SIZE

NOT MILL NO PAINT (NS)

9 @ 4'-3" ALT 3'-6½ = 33'-11½

9 @ 4'-3" ALT 3'-6½ = 33'-11½

9 @ 4'-3" ALT 3'-6½ = 33'-11½

9 @ 4'-3" ALT 3'-6½ = 33'-11½

9 @ 4'-3" ALT 3'-6½ = 33'-11½

9 @ 4'-3" ALT 3'-6½ = 33'-11½

10 @ 4'-3" ALT 4'-0" = 43'-0"

1-PL 7⅞ x 1'-0 x 11 6.75° (FS) (22-21) (GRIND TO FIT FILLET L 8 x 8 x ⅞)

1-PL 6.75° NO PAINT (FS)

1-PL 13⅜ x ⅞ x 1'-11 6.75° (15-19) (GRIND TO FIT FILLET L 8 x 8 x ⅞)

NO PAINT (BS)

NO PAINT (NS)

NO PAINT (FS)

NO PAINT (FS)

PUNCH FULL SIZE CH

5E 3 1-3

NO PAINT TOP OSL

1-L 4 x 3½ x 1'-6½ E17 (FS) (26-K) (GA OSL 2E)

1-L E19 (FS)

NO PAINT TOP OSL

1-L E19 (FS)

2-FILL PL 10 x ¾ x 6'-5½ (S.C 2E N.M)

10 @ 6'-3" ALT 6'-4" = 63'-0"

NO PAINT (NS)

1-L 7 x 4 x ⅞ x 7'-4" (M BE) (22-19)

1-L 7 x 4 x ⅞ x 7'-4" (M BE) (22-19) (M @ EX) (22-19)

CLIP 4 x 4

FURNISH FULL SIZE

SECTION M-M

NO PAINT FS

DALLAS TO FURNISH TEMPLET

SECTION K-K

1-L 7 x 4 x ⅞ x 7'-4" (M BE) (22-19)

1-FILL 4 x ⅜ x 0'-2 (SC 2E W.M) (22-19)

1-L 7 x 4 x ⅞ x 7'-4" (M BE) (22-19)

1-FILL 4 x ⅜

PUNCH FULL SIZE

CLIP 4 x 4

MILL

NO PAINT (NS)

NO PAINT (NS)

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF,
CONSULTING ENGINEERS.
Date:
Rev. 1 Date: Rev. 2 Date:
Rev. 3 Date: Rev. 4 Date:
Not Approved Until Dated.

All steel ASTM-A7 except Members MKD (A) which are manganese steel (See Spec.)
All open holes shall be subpunched or subdrilled 11/16 Ø & reamed to 15/16 Ø to a tool template unless noted.
All holes for shop rivets shall be subpunched or subdrilled 11/16 Ø & reamed to 15/16 Ø while assembled or drilled from the solid where shown noted.
Carbon steel thicker than 3/4" or low alloy steel thicker than 5/8" shall be drilled.
All holes shall be deburred with a tool making a 1/16" chamfer.

HOUSTON FABRICATION:
Gen. Notes: WORK THIS SHT - WITH SHTS. 93 & 94
Rivets 7/8 Ø Open Holes 15/16 Ø UNL N.T.O.
Paint SEE SHT. #4 UNL N.T.O.

FOR SECTION C-C SEE SHT 93
FOR SECTION F-F SEE SHT 94
FOR DETAILS NOT SHN SEE SHT 11
NO PAINT SURFACES TO RECEIVE 1 COAT LINSEED OIL TINTED WITH RED LEAD.
FOR CAMBER DIAGRAM SEE SHT 93
FOR COMPLETE CAMBER DIAGRAM SEE SHT 94

DESCRIPTION OF REVISION

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer JOHN F. BEASLEY CONST. CO.
Architect ARK. & MISS. STATE HIGHWAY
Building MISSISSIPPI RIVER BRIDGE
Made by C. MECK 6-30-57 HELENA, ARK.
Traced by Filing Date 1958
Checked by
Approved by
Order No. 64201 Sheet No. 75 Drawing No. 6

Appr'l 8-26-57
Shop

BILLED ON SHEET 93A

Near Side
Far Side
Both Sides
Types
Fillet
Size
Groove
Standard
Bevel
Backing
Indicates W.S.
Indicates F.S.
Indicates Both Sides
Weld All Around
Field Weld
Indicates W.S. (Unless Otherwise Noted)
Indicates F.S. (Unless Otherwise Noted)

409

MATCH LINE SHT 93

MATCH LINE SHT 95

SUBPUNCH Ø & SUBDRILL L 7/8" Ø & REAM TO 15/16" Ø

(1-PL 1/16 x 3/8 x 1'-4½ a 20 (NS) (22-20)

1-PL 16 3/8 x 1'-4½ a 20 (NS) (22-20)

END OF PL

1-PL 7/8 x 1'-1 1/2 x 20½ (FS) (22-21) (GRIND TO FIT FILLET L 8 x 8 x 1)

END OF PL

1-PL a 22 (NS)

1-PL a 20 (NS)

PUNCH FULL SIZE NO PAINT (FS)

NO PAINT (FS)

1-PL 13 3/8 x 1'-11 L 19E (15-19) (GRIND TO FIT FILLET OF L 8 x 8 x 1) (SCIDE (N.M.)

NO PAINT (FS)

1-PL 6 19E

NO PAINT (FS)

1-PL 6 19E

NO PAINT (FS)

1-PL 6 19E

3 NO PAINT (NS)

4'-2 5/16 PUNCH

2@4½ 9@4½ ALT. 3-6½ 22@4½ 8@4½ ALT. 3-2

7@4½ ALT. 3-6½ 7@4½ ALT. 3-6½ 56@4½ ALT. 3-6½ 9@4½ ALT. 3-6½ 7@4½ ALT. 3-6½

B F E F E H C-PL C24 F C F

PUNCH FULL SIZE OH

1 L 4 x 4 x ½ x 1'-6½ @ 19 (FS) (GA OSL 22½) (26-3)

1-L 6 x 19 (FS)

(A) 2-PL 25 x ½ x 6'-2 L 24 (SEE ALSO (A) 3) (5-3)

21@3 5-9

(A) 1-WEB PL 7 7/16 x ½ x 4'-3 11/16 (2-10)

(A) 2-PL 6 x 7/16 x 3'-7 L 24 (5-5)

11@5½ 5'-5½

4'-2½ 4'-2 15/16 4'-2½ 4'-3 4'-2½ 4'-3 4'-3 1/16 4'-3 4'-3½ 4'-3 4'-3 4'-3

25'-6⅝ 33'-11¼ 30'-6 1/16

SECTION F-F AS SHN
DO G-G OPP HD

SECTION H-H

FOR DETAILS NOT SHN SEE SHT 93
FOR CAMBER DIAGRAM SEE SHT 93
FOR COMPLETE CAMBER DIAGRAM SEE SHT 94

FOR SECTIONS B-B, C-C & E-E SEE SHT 93

NO PAINT SURFACES TO RECEIVE TWO COATS LINSEED OIL TINTED WITH RED LEAD.

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF,
CONSULTING ENGINEERS.
Date
Rev. 1 Date Rev. 5 Date
Rev. 2 Date Rev. 4 Date
Not Approved Until Dated

All steel ASTM-A7 except Members, MAIN, AL which are manganese steel as noted.
All open holes shall be subpunched or subdrilled 11/16 Ø & reamed to 15/16 Ø - to a metal template unless noted.
All holes in members shall be subpunched or drilled 11/16 Ø & reamed to 15/16 Ø with assembled or drilled from the solid unless assembled.
Cover plates thicker than 3/4" or low alloy steel thicker than 5/8" shall be drilled.
All holes shall be deburred with a tool making a 1/16" chamfer.

Gen. Notes: HOUSTON FABRICATION: WORK THIS SHT WITH SHT. 93 & 95
Rivets 7/8 Ø Open Holes 15/16 Ø UNL. NTD.
Delivery
Paint SEE SHT. # 4 UNL. NTD. Painted

DESCRIPTION OF REVISION

Mark	Date	By
5		
4		
3		
2		
1		

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

App'd 8-22-59 Shec 1

Customer JOHN F. BEASLEY CONST. CO.
Architect ARK. & MISS. STATE HIGHWAY
Building MISSISSIPPI RIVER BRIDGE
Made by C. MOCK 6-25-59 HELENA, ARK.
Traced by Filing Date 1958
Checked by C.J. 8-22-59
Approved by
Order No. 64201 Sheet No. 74 Drawing No. 0

BILLED ON SHEET # 93H

Next Side | For Side | Both Sides | Types | Fillet | Slot | Groove | Bevel | Indicates 1/16 x 1/2 Weld | Indicates 5/16 x 1/2 Weld | Indicates 5/16 x 1/2 Weld @ 6" c/c | Indicates 5/16 x 1/2 Weld @ 6" alternate 1/16 x 1/2 (12" c/c staggered)

408

SUB PUNCH & SUB DRILL L 3½ & BEAM TO 5"

MATCH LINE SHT 94

(A) 1-L 7⅞ x 7⅞ x 5/8 x 92'-4" (5-4) (CUT L 8 x 8 x ½) (GRIND TO FIT FILLET L 8 x 8 x ½) (LOOSE BLT W/ 2 7/8 ø BOLTS x 0'-2") MARK "TOP" (SHT-6)

(A) 1-L 7⅞ x 7⅞ x 5/8 x 92'-8" (5-4) (CUT L 8 x 8 x ½) (GRIND TO FIT FILLET L 8 x 8 x ½) (LOOSE BLT W/ 2 7/8 ø BOLTS x 0'-2") MARK "TOP" (SHT-6)

(A) 1-L 7⅞ x 7⅞ x 5/8 x 92'-4" (5-4) (CUT L 8 x 8 x ½) (GRIND TO FIT FILLET L 8 x 8 x ½) (LOOSE BLT W/ 2 7/8 ø BOLTS x 0'-2") MARK BOTTOM" (SHT-6)

(A) 1-PL 17 x 1 x 6'-3" K24 (NS) (5-6) MARK TOP

T-PL 16 x 1 x 1'-4½" x 2'-0" (NS) (22-10)

(A) 1-L 8 x 8 x ¾ x 89'-4⅝ (21-8)

(A) 1-L 8 x 8 x ¾ x 91'-11½ (NS) (21-1)

(A) 1-L 8 x 8 x ¾ x 89'-4⅝ (FS) (21-1)

1-PL 7-3/8 x 1-1/8 K20 (FS) (22-21) (GRIND TO FIT FILLET L 8 x 8 x ½)

1-PL 16 x ¾ x 1'-4½" x 2'-0" (NS) (22-20)

(A) 1-PL 20 (NS)

(A) 1-L 8 x 8 x ¾ x 92'-0" (21-7)

1-PL 13/16 x 1'-11 5/16 (FS) (GRIND TO FIT FILLET L 8 x 8 x ½) (SEE DETAIL NM) (5-17)

1-PL 6 7/8 PUNCH FULL SIZE

(A) 1-WEB PL 70 x ½ 46'-8" (21-7)

PUNCH FULL SIZE

1-L 8 x 8 (FS)

PL 4 x 4 x ½ x 1'-6½ @ 7" (FS) (GA TOL 28) (26-8)

MARK TOP

MARK BOTTOM

MARK "WEST"

SUBPUNCH & SUBDRILL ½ & REAM TO ¾ ø WHILE ASSEMBLED & MARKED FOR MATCH No PAINT IN CONTACT AREAS OF SPLICE ALL DIRECTION & TEMPLATES MUST BE OUTSIDE

(A) 2-PL 25 x 1 x 6'-7" (SEE DETAIL NM) (5-5)

(A) 1-PL 13 x ¾ x 6'-7" (5-5)

(A) 1-PL 13 x ¾ x 6'-7" e24" (5-4) (CUT FROM L 8 x 8 x ½) GRIND TO FIT FILLET L 8 x 8 x ½) LOOSE BOLT W/ 4 - ⅞ ø BOLTS x 0'-8" (SHT-6)

(A) 1-PL 13 x ¾ x 1'-10½ x 2'-4" (GRIND TO FIT FILLET L 8 x 8 x ½) (SEE DETAIL NM) (5-17)

END OF PL 16

No PAINT (FS)

No PAINT (NS)

No PAINT TOP 054

CRIMP 1-L 5 x 3½ x ⅜ x 7'-7 7/8 @ 24" (22-13) (MBE) CRIMP 1-L 5 x 3½ x ⅜ x 7'-5 5/8 @ 20" (22-14) (MBE) (CRIMPED)

MILL 11 @ 5" = 5'-0" 7'-6"

MILL 10 @ 3" ALT 2'-7" = 34'-3"

CLIP 3x4

CLIP 3x3

KL 0"

SECTION A-A

SECTION B-B AS SHN
Do C-C OPP HD.

SECTION D-D AS SHN
Do E-E OPP HD.

MAKE: ONE - PLATE GIRDER AS SHN MARK 93PG1 ⑤
Do ONE - Do - Do OPP HD. Do 93PG1 ⑥

LIST ON B/M
2234 - ⅞ ø SHP RIVETS
9 LIN FT ¼ FILLET WELD

No PAINT AREAS TO RECEIVE A SHOP COAT OF LINSEED OIL TINTED WITH RED LEAD. FOR COMPLETE CAMBER DIAGRAM SEE SHT 74 FOR DETAILS NOT SHN SEE SHT

CAMBER DIAGRAM

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF,
CONSULTING ENGINEERS
Date
Rev. 1 Date Rev. 3 Date
Rev. 2 Date Rev. 4 Date
Not Approved Until Dated

All steel ASTM-A7 except Members MKD "A" which are manganese steel as shown

All steel to be shop assembled or subpunched & subdrilled ¾ ø & reamed to 15/16 ø to a template as required

All field connections to be subpunched & subdrilled ¾ ø & reamed to 15/16 ø while assembled as directed by the engineer or inspector

Chamfer all the way around all holes that are thicker than 5/8" shall be drilled.

All bolts to be drawn up with a wrench using a 12" chamber.

Gen. Notes: HOUSTON FABRICATION FOR SECT G-G SEE SHT 94
WORK THIS SHT WITH SHT 94 & 95

Rivets 7/8 Open Holes 15/16 ø UNL NTD

Piling SEE SHT. #4 UNL NTD.

Delivery Promised

DESCRIPTION OF REVISION

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer JOHN F. BEASLEY CONST. CO.
Architect ARK. & MISS. STATE HIGHWAY
Building MISSISSIPPI RIVER BRIDGE
Made by C. M. [illegible] 24 51 HELENA, ARK.
Traced by Filing Date 1158
Checked by 59
Approved by
Order No. 64201 Sheet No. 73 Drawing No. 0

Acpt'd 8-24-58 Shop

CLEVELAND SHEET # 93A

MATCH LINE SHT 91

PUNCH FULL SIZE

NO PAINT (FS)

NO PAINT (NS)

NO PAINT (BS)

NO PAINT BS

NO PAINT NS

NO PAINT TOP OF OSL

NO PAINT IC

NO PAINT FS

SECTION F-F

SECTION G-G

SECTION H-H

NO PAINT AREAS TO RECEIVE 1 SHOP COAT LINSEED OIL TINTED WITH RED LEAD FOR COMPLETE PAINTING SEE SHT 52 FOR DETAILS SEE SHT 99

APPROVED BY
HOWARD

DESCRIPTION OF REVISION

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer JOHN F BEASLEY CONST CO
Address ARK & MISS STATE HIGHWAY
Building MISSISSIPPI RIVER BRIDGE
Made by [illegible] Traced by [illegible]
Checked by W J Armstrong Approved by
Order No. Sheet No. Drawing No.

Types Files Size Groups Standard Detail Shop

406

PUNCH FULL SIZE

NO PAINT FS

SUB PUNCH & SUBDRILL ANGLE 11/16 & REAM TO 1" ø

NO PAINT (FS)

NO PAINT TO END OF CGL

SECTION A-A

SECTION D-D

NO PAINT (FS)

DETAILS OF STRUCTURAL STEEL

Date

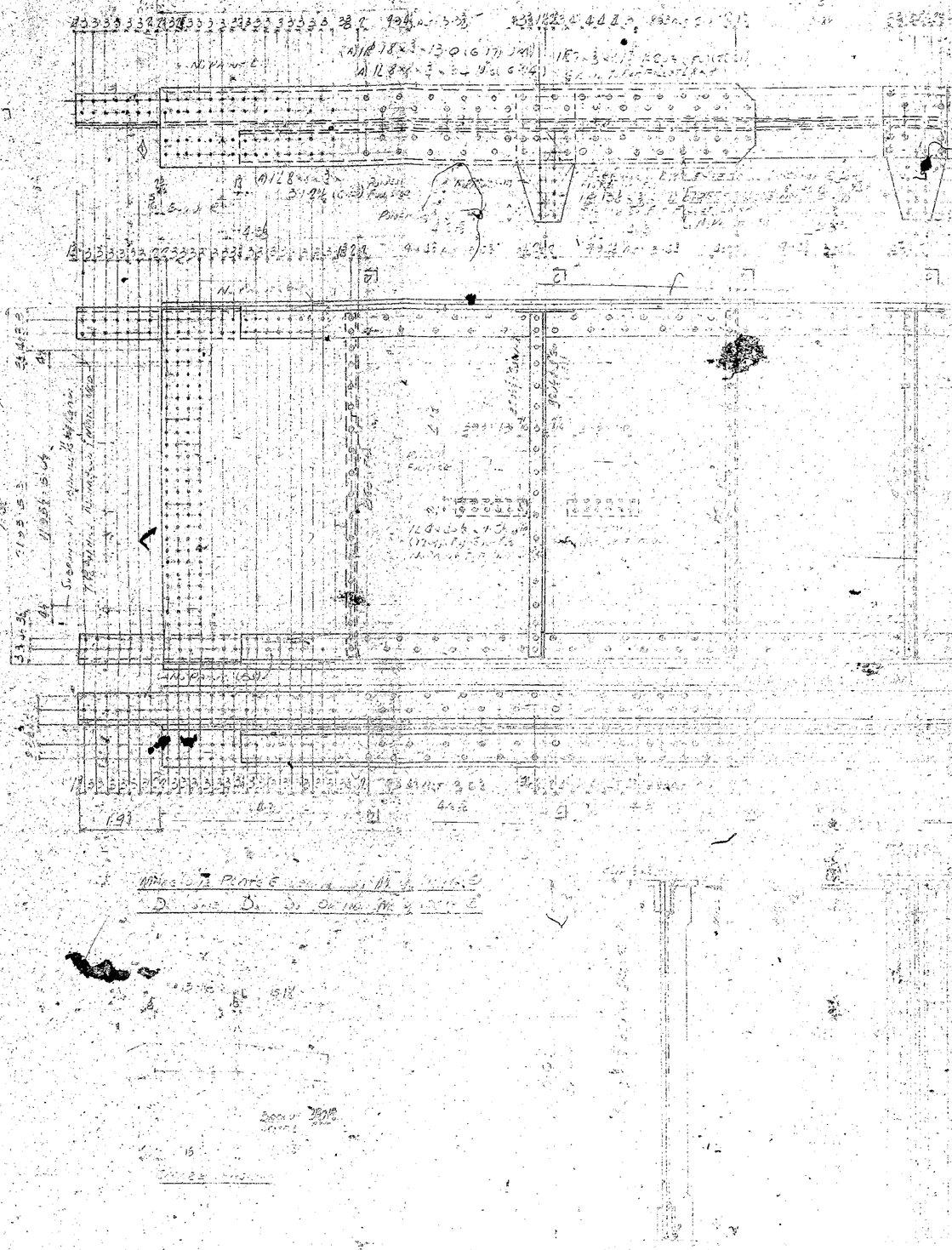
Dates

Delivery Promised

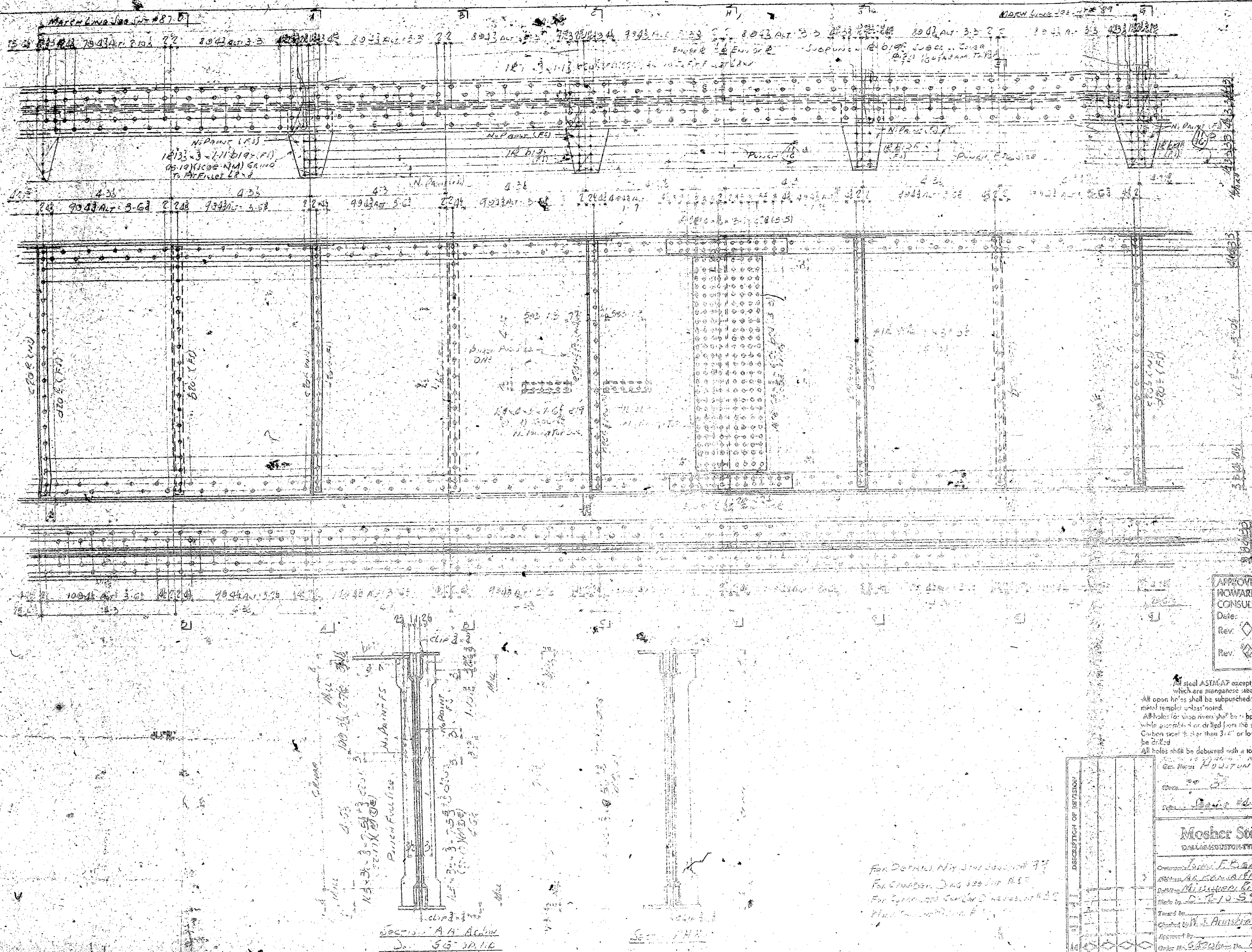
Appd.

Shop

8-7-57



403



APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date:
Rev. ◇ Date: Rev. ◇ Date:
Rev. ◇ Date: Rev. ◇ Date:
Not Approved Until Dated

All steel ASTM-A7 except Members MKD (A) which are manganese steel (See Spec)
All open holes shall be subpunched or subdrilled 11/16 Ø & reamed to 15/16 Ø to metal templet unless noted.
All holes for shop rivets shall be subpunched or subdrilled 11/16 Ø & reamed to 15/16 while assembled or drilled from the solid while assembled.
Carbon steel thicker than 3/4" or low alloy steel thicker than 5/8" shall be drilled
All holes shall be deburred with a tool making a 1/16" chamfer.

Gen. Notes: Houston Fabrication
Rivets 7/8 Open Holes 15/16 Ø Unless Noted
Paint: See Spec

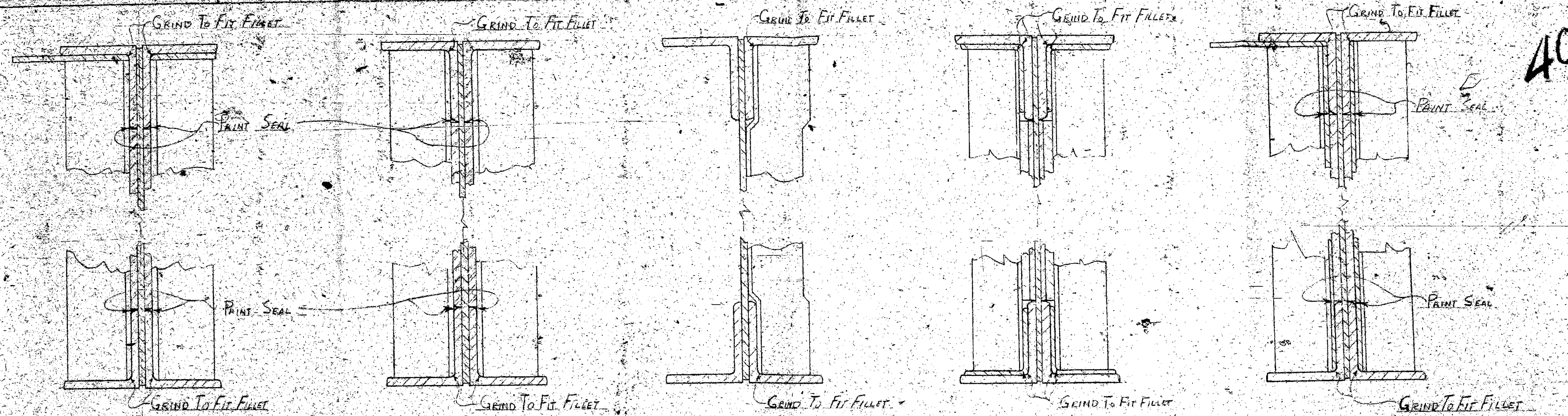
DESCRIPTION OF REVISION

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Contractor: John F. Beasley Const. Co.
Address: Arkansas & Miss. State Highway
Building: Mississippi River Bridge
Made by: D. T. 10-59 Location: Helena, Ark.
Traced by: Filing Date: 1958
Checked by: W. J. Armstrong 8-17-59
Approved by:
Order No. 6420 Sheet No. 88 Drawing No. 0

Appd 8-19-59

401



Detail Of Stiffener With Plate On Top — Detail Of Stiffener With Out Plate On Top — Detail Of Stiffener At Crimp — Detail Of Stiffener At Field Splice — Detail Of Stiffener At Pin Joint

All steel ASTM-A7 except Members marked A[illegible]

[illegible]

All holes shall be deburred with a tool making a 1/16" chamfer.

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date
Rev. 1 Date .... Rev. 3 Date ....
Rev. 2 Date .... Rev. 4 Date ....
Not Approved Until Dated

Gen. Notes:
Rivets .... Conn. ....
Paint ....

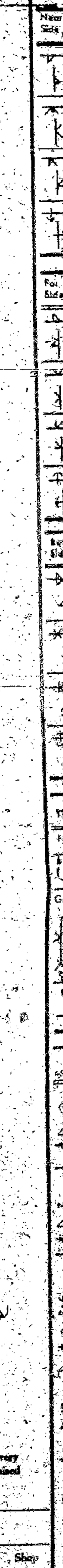
Delivery Promised

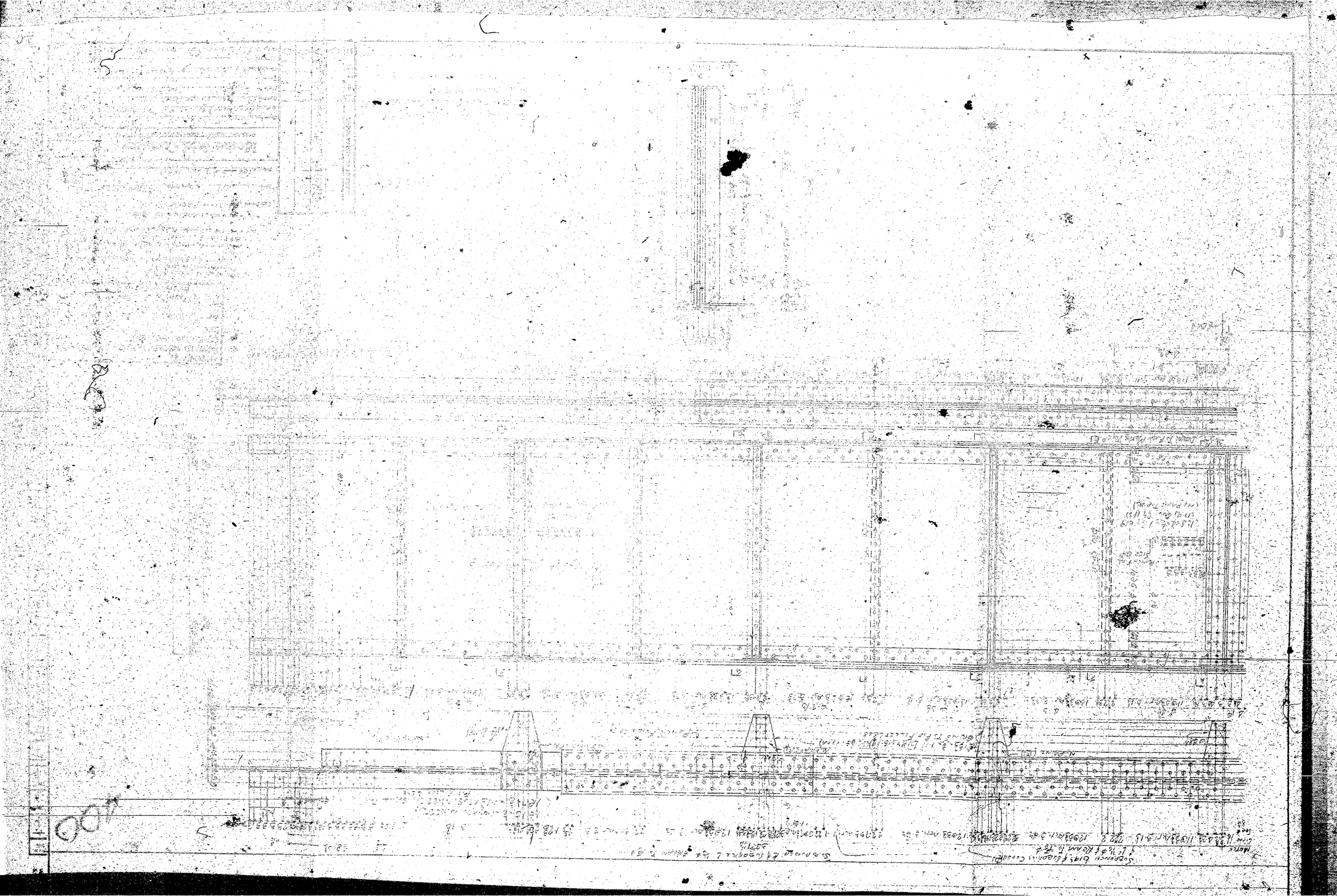
DESCRIPTION OF REVISION				
DATE				
CHK'D BY				
DATE				
MADE BY				
Rev. No.	◇	◇	◇	◇

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer JOHN F. BEASLEY CONSTR. CO.
Architect ARK. & MISS. STATE HIGHWAYS
Building MISSISSIPPI RIVER BRIDGE
Made by Z.H. 6-2-59 HELENA, ARK.
Traced by .... Filing Date 1959
Checked by W.J. Armstrong 6-23-59 ([illegible])
Approved by ....
Order No. 64201 Sheet No. 86 Drawing No. 0

App'l	Shop
8-3-59	

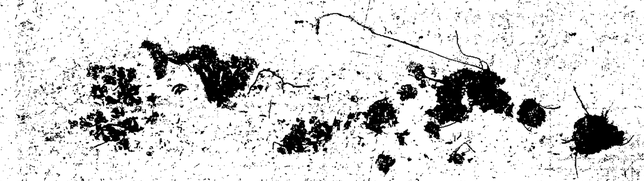




299

MATCH LINE SHT # 82
398
PUNCH FULL SIZE
N. PAINT
APPROVED BY
HOWARD, NEEDLES, TAMMEN &
CONSULTING ENGINEERS
Rev. Date
Not Approved Until Dated.
All steel ASTM A7 except
All holes shall be deburred with a tool making a 1/16" chamfer.
DESCRIPTION OF REVISION
Mosher Steel Company

Matching Section 4.1 D



395

APPROVED BY:
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date
Rev. ◇ Date:
Rev. ◇ Date: Rev.
Not Approved Until Dated

All steel ASTM-A7 except Members [illegible]
which are marked "Steel [illegible]"

All [illegible] Drawings [illegible]

All [illegible] 3/4" or more, steel [illegible]

All [illegible] be delivered with a steel [illegible] stamp

All [illegible] Gen. Notes Handbook Page [illegible]

Design [illegible] Open Hole [illegible]

Date [illegible] Sec. 44 Unit No. 2

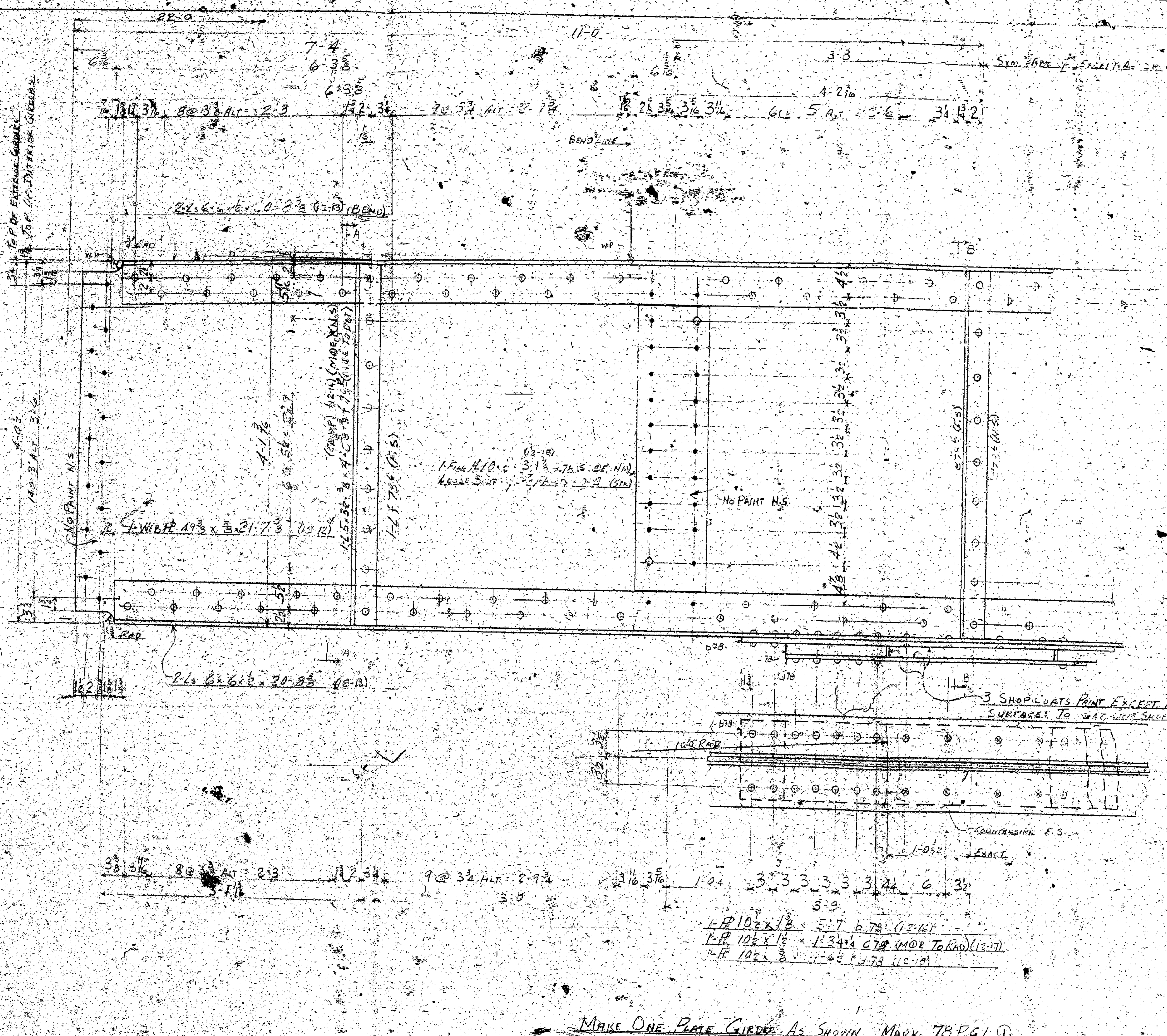
Mosher Steel Company
DALLAS-HOUSTON-TULSA-KANSAS CITY-NEW YORK

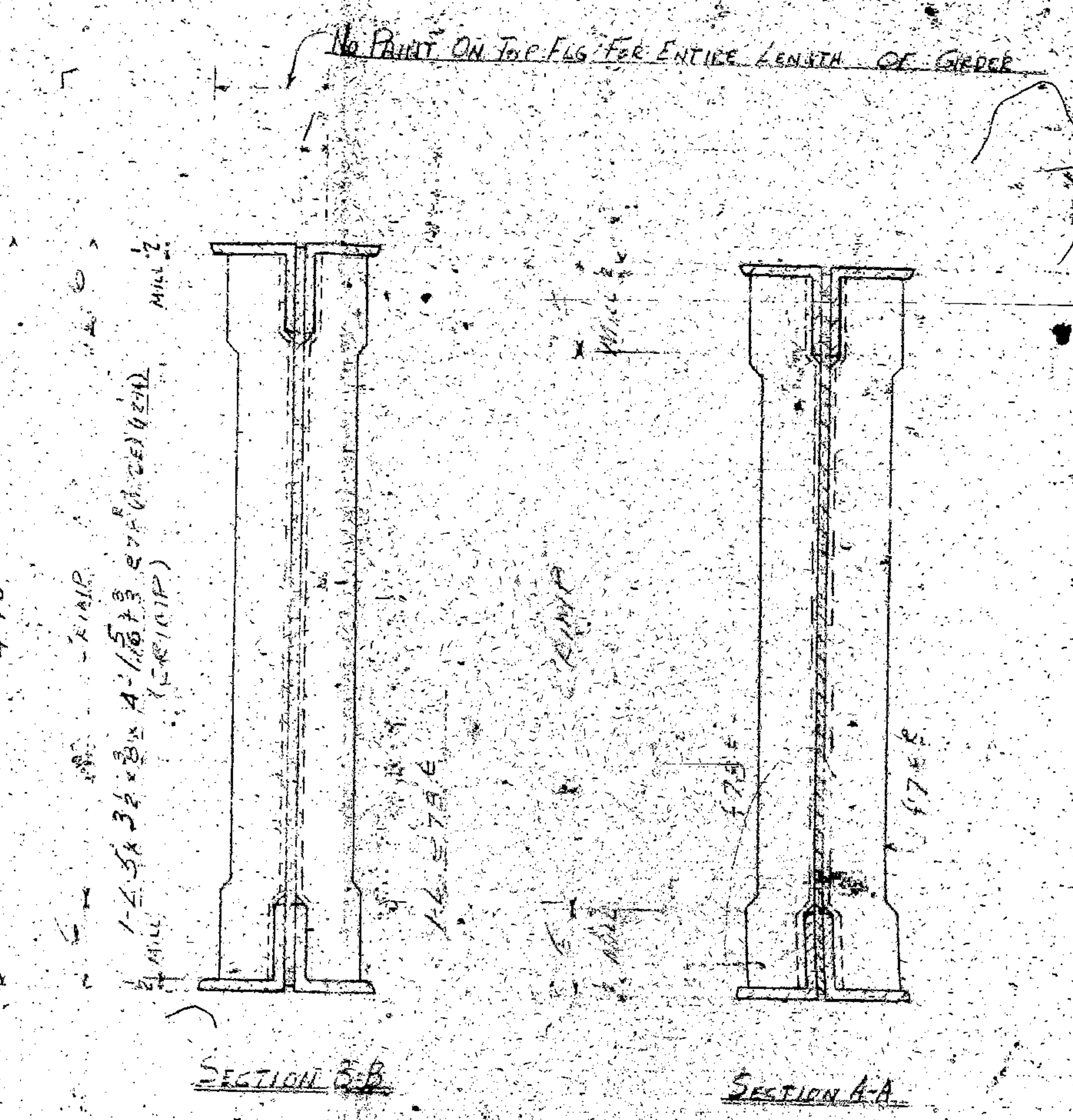
Drawing Typical Deck Section
Sections Approach & Main Spans Unit 2
Subject Main Span Deck Details
Date Oct. 1951 Shop No. [illegible]
Traced by [illegible] Filing No. 1404
Checked by W J Armitage 5-14-52 Checked
Approved by
Order No. 5250 Shop No. [illegible] Drawing No. 0

FOR DRAWING NO. [illegible]99
FOR SHOP NO. SEE [illegible] DRAWING
WORK TO BE [illegible]

Section B-B

393





All steel ASTM A7 [redacted]

All open holes shall be [illegible] reamed to 15/16 Ø to [illegible]

All holes for shop rivets shall be subpunched or subdrilled 11/16 Ø & reamed to 15/16 Ø while assembled [illegible]

Carbon steel thicker than [illegible] shall be drilled.

All holes shall be deburred with a tool making a 1/16" [illegible]

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF,
CONSULTING ENGINEERS.
Date:
Rev. ① Date: .... Rev. ③ Date: ....
Rev. ② Date: .... Rev. ④ Date: ....
Not Approved Until Dated

Area Marked No Paint To Receive 1 S.C. Linseed Oil Tinted With Red Lead. Houston Fabrication

List on Cusecy Material
167-3/4 ... Rivets
3-7/8 ... Shop Bolts (...)

Field Bolt Unit #1

DESCRIPTION OF REVISION

Gen. Notes:
Rivets 7/8 Ø Open Holes 15/16 Ø Unl Ntd
Paint See Sheet #4 Unl Ntd

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer: John F. Beasley Constr. Co.
Architect: Arkansas & Mississippi State Highway
Building: Mississippi River Bridge
Made by: T.H. 5-29-59 Helena, Ark.
Traced by: .... Filing Date: 1958
Checked by: W. J. Armstrong 6-25-59 (sta 203)
Approved by: ....
Order No. 64201 Sheet No. 78 Drawing No. 0

Delivery Required

Appr'l | Shop
8-..-9
8-...

Billed on Sheet 78A

MATCH LINE SHT 76 30°

END OF PL

NO PAINT (FS)

PUNCH FULL SIZE

PUNCH FULL SIZE

NO PAINT (FS)

NO PAINT (FS)

(A) WEB 70" x 2" x 27'-9" (8-13)

PUNCH FULL SIZE

NO PAINT FOR 0'-6"

NO PAINT (FS)

(A) WEB 70" x 2" x 27'-9" (8-13)

PUNCH FULL SIZE

NO PAINT (FS)

NO PAINT (FS)

END OF PL

SECTION N-N

SECTION OF SHAPES TO BE DRILLED AS MARKED AND TO BE WORKED ASSEMBLED AS MARKED AND NO PAINT ON CONTACT FACES OF SPLICE

FOR DETAILS NOT SHN SEE SHT 71
FOR CAMBER DIAGRAM SEE SHT 12
FOR COMPLETE CAMBER DIAGRAM SEE SHT 74

NO PAINT AREAS TO RECEIVE 1 SHOP COAT LINSEED OIL TIMBER WITH RED LEAD.

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date:
Rev. #1 Date: Rev. #3 Date:
Rev. #2 Date: Rev. #4 Date:
Not Approved Until Dated

All steel ASTM-A7 except Members MKD. (A) which are manganese steel (See Spec.)
All open holes shall be subpunched or subdrilled 11/16 ø & reamed to 15/16 ø to a metal template unless noted.
All holes for shop rivets shall be subpunched or subdrilled 11/16 ø & reamed to 15/16 ø while assembled or drilled from the solid while assembled.
Cut to steel thicker than 3/4" or low alloy steel thicker than 5/8" shall be planed.
All holes shall be deburred with a tool making a 1/16" chamfer.

Gen. Notes: HOUSTON FABRICATION: WORK THIS SHT WITH SHT. 75 & 76
Rivets: Open Holes: AS UNLESS NOTED
Paint: SEE SHT 74 UNLESS NOTED

DESCRIPTION OF REVISION

Mosher Steel Company
DALLAS-HOUSTON, TYLER, LUBBOCK, SHREVEPORT

Customer: JOHN F BEASLEY CONST. CO.
Architect: ARK & MISS STATE HIGHWAY
Building: MISSISSIPPI RIVER BRIDGE
Made by: C. MOLK 6-20-59 HELENA, ARK.
Traced by: Filing Date: 1968
Checked by:
Approved by:
Order No. 6420 Sheet No. 77 Drawing No. O

Appd. 8-24-59 | Shop

BILLED ON SHEET #75A

391

MATCH LINE SHT 75

MATCH LINE SHT 77

SUB PUNCH PL & SUBDRILL 1/16" REAM TO 15/16"

1-PL 7/8 x 1'-1 1/8 x 2'-0" (FS) (22-21) (GRIND TO FIT FILLET OF 8"x8"x1")

1-PL 1 3/8 x 1'-1 1/8 x 2'-0" (FS) (22-17) (GRIND TO FIT FILLET OF 8"x8"x1")

NO PAINT (FS)

PUNCH FULL SIZE

SECTION K-K AS SHN
do M-M OPP HD

SECTION D-D AS SHN
do E-E OPP HD

SECTION F-F AS SHN
do P-P OPP HD

SECTION G-G AS SHN
do H-H OPP HD

FOR CAMBER DIRECTION SEE SHT 75
FOR COMPLETE CAMBER DIRECTION SEE SHT 74
FOR DETAILS NOT SHOWN SEE SHT 77

NO PAINT AREAS TO RECEIVE 1 SHP COAT LINSEED OIL TINTED WITH RED LEAD.

APPROVED BY
EDWARDS NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date
Rev. 1 Date Rev. 3 Date
Rev. 2 Date Rev. 4 Date
Not Approved

All steel A36 except as noted (A)

All holes shall be punched 13/16" ø unless noted to 15/16" ø to a maximum of 1/16" larger than nominal hole.

All holes in A36 steel shall be punched 13/16" ø unless noted to 15/16" ø with exceptions as noted. Holes for high strength bolts shall be drilled from the solid. Holes in alloy steel members with 5/8" shall be drilled.

All edges shall be deburred with a tool making a 1/32" chamfer.

Gen. Notes: HOUSTON FABRICATION: WORK THIS SHT. WITH SHT. 75 & 77

Rivets 7/8 Open Holes 15/16 ø UNL. N.T.O.

Paint SEE SHT #4 UNL. N.T.O.

DESCRIPTION OF REVISION

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer JOHN F. BEASLEY CONST. CO.
Architect ARK & MISS STATE HIGHWAY
Building MISSISSIPPI RIVER BRIDGE
Made by C. MECK 8-19-57 HELENA, ARK.
Traced by Filing Date 1958
Checked by
Approved by
Order No. 6420 Sheet No. 76 Drawing No. O

Appl. No. 82

BUILT ON SHEET #75A

390

MATCH LINE SHT. 76

NO PAINT (FS)

NO PAINT (BS)

NO PAINT (NS)

PUNCH FULL SIZE

SECTION A-A

SECTION B-B

SECTION C-C

CAMBER DIAGRAM

MAKE ONE GIRDER AS SHN MARK 75FG1 (B)
NO ONE do CAR MK do 15FG1 (B)

LIST ON B/M
43 - 7/8" ø SHOP RIVETS
7 - LIN. FT. 5/16 FILLET WELD

FOR DETAILS NOT SHN SEE SHT. 74
NO PAINT AREAS TO RECEIVE A SHOP COAT LINSEED OIL TINTED WITH RED LEAD
FOR COMPLETE CAMBER DIAGRAM SEE SHT. 74

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date:
Rev. 1 Date: Rev. 2 Date:
Rev. 3 Date: Rev. 4 Date:
Not Approved Until Dated

All steel ASTM A7 except Members marked (A)
All open punch holes shall be countersunk or subdrilled thru Ø 13/16 reamed to 15/16 Ø for a metal-to-metal contact unless noted.
All holes in field connections shall be subpunched or subdrilled thru Ø 13/16 reamed to 15/16 Ø when assembled or drilled in the field when assembled.
Cut edges of plates over 3/4" thick, shapes 3/4" or more thick and universal mill plates shall be planed.
All holes shall be deburred with a tool making a 1/16" chamfer.

Gen. Notes: HOUSTON FABRICATION: WORK THIS SHT. WITH SHT. 76 & 77 FOR SECTIONS D-D & G-G SEE SHT. 76
Rivets 7/8 Ø Open Holes 13/16 Ø UNL. NTD.
Paint SEE SHT. 74 UNL. NTD.

DESCRIPTION OF REVISION

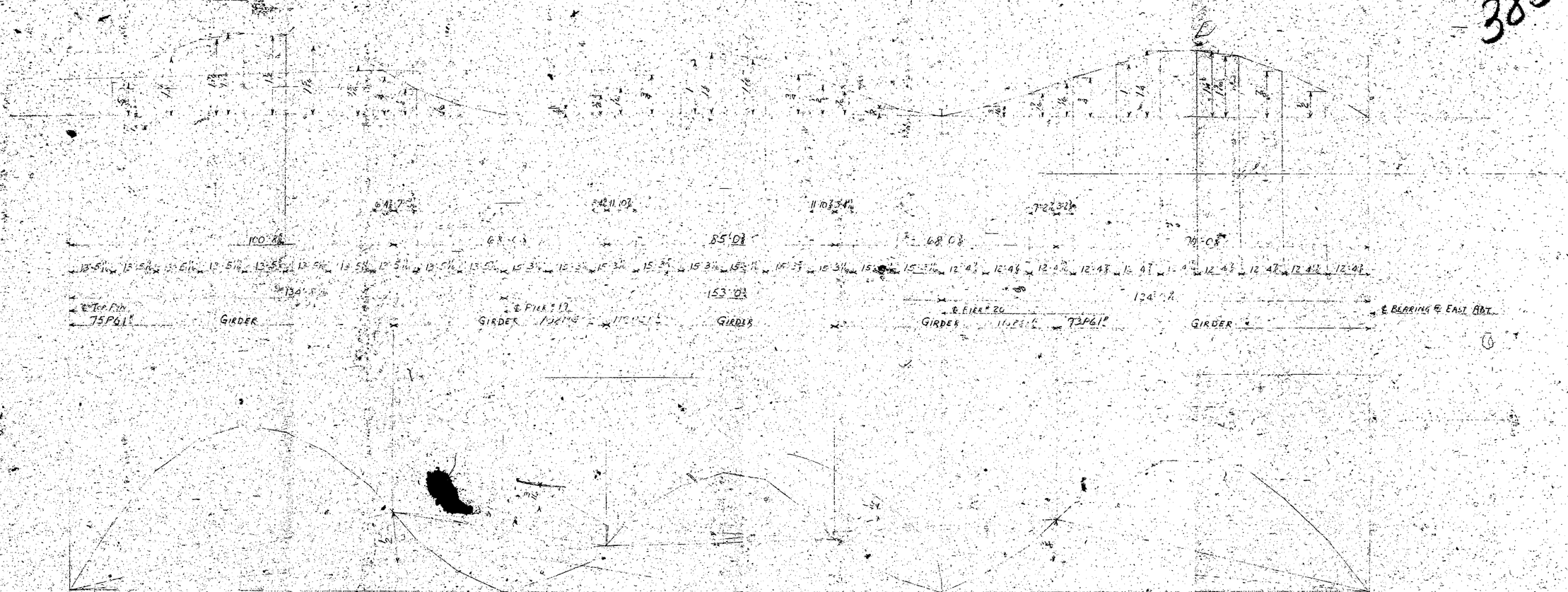
Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Appr. | Sh.
8-21

Customer JOHN F BEASLEY CONST CO
Architect ARK & MISS. STATE HIGHWAY
Building MISSISSIPPI RIVER BRIDGE
Made by C. MOCK 6-18-57 from HELENA, ARK.
Traced by Filing Date 1958
Checked by
Approved by
Order No. 6A201 Sheet No. 75 Drawing No. O

BILLED ON SHEET 75A

389



CAMBER DIAGRAM FOR UNIT # 5

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF,
CONSULTING ENGINEERS.
Date:
Rev. Date. Rev. Date.
Rev. Date. Rev. Date.
Not Approved Until Dated.

DESCRIPTION OF REVISION

Gen. Notes:

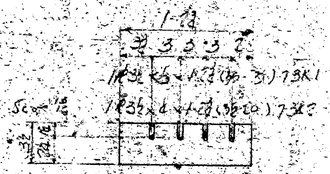
Rivets Open Holes Shop Welding Unless Indicated

Paint Other

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Appr'd 8-24-57 Sh. #

Customer JOHN F. BEASLEY CONST. CO.
Architect ARK & MISS. STATE HIGHWAY
Building MISSISSIPPI RIVER BRIDGE
Made by C. MOLK 5-27-57 Scale HELENA, ARK.
Traced by Filing Date 1958
Checked by DWG 28 (1-3) 8-24-57
Approved by
Order No. 4201 Sheet No. 74 Drawing No. 6



1½ × 6 × 1-1½ (35-3) 73K1

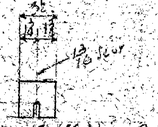
1½ × 4 × 1-1½ (35-20) 73K2

73K1 No Paint

73K2 { Top Face No Paint; Edges ② Coats; Bottom Face No Paint

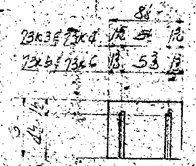
MARK 4 SHIMS NK 73K1 ⑤

Dr. 7 D. 1/2 NK 73K2 ⑤



1½ × ½ × 0-3½ (35-3) No Paint

MARK 13 SHIMS NK 73K13 ①



1½ × 4 × 0-8½ (35-6) 73K3 & 73K5

1½ × 4 × 0-8½ (35-9) 73K4 & 73K6

73K3 & 73K5 No Paint

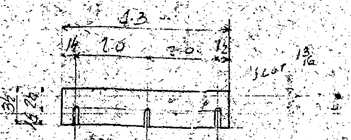
73K4 & 73K6 { Top & Bottom Faces No Paint; Edges ① Shop Coat

MARK 3 SHIM NK 73K3 ⑤

Dr. 3 D. ½ NK 73K5 ①

Dr. 4 D. ½ NK 73K6 ⑤

Dr. 4 D. ½ NK 73K6 ①



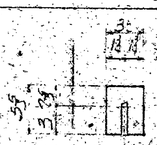
1½ × ½ × 4-3 (35-12)

Top Face ③ Coats

Bottom Face No Paint

Edges ③ Coats

MARK 3 SHIMS NK 73K16 ①



1½ × 4 × 0-5⅝ (35-3) 73K7

1½ × 4 × 0-5⅝ (35-20) 73K8

73K7 No Paint

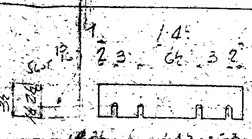
73K8 { Top Face No Paint; Bottom Face & Edges ① Shop Coat

MARK ?? SHIM NK 73K7 ①

D. ?? D. 1½ NK 73K7 ⑤

D. 11 D. NK 73K8 ①

D. 11 D. NK 73K8 ⑤



1½ × 5 × 1-4½ (35-3) 73K9

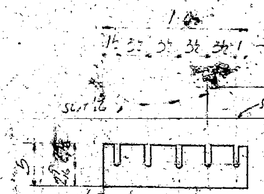
1½ × 5 × 1-4½ (35-20) 73K10

73K9 No Paint

73K10 { Top & Bottom Faces No Paint; Edges ⑤ Coats

MARK 4 SHIMS NK 73K9 ⑤

D. 7 D. NK 73K10 ⑤



1½ × 5 × 1-0½ (36-8) 73K11

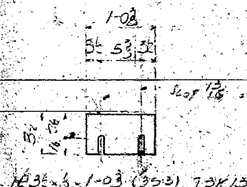
1½ × 5 × 1-0½ (36-9) 73K12

73K11 No Paint

73K12 { Top & Butt Faces No Paint; Edges ⑤ Coats

MARK 4 SHIMS NK 73K11 ⑤

D. 2 D. NK 73K12 ⑤



1½ × 5 × 1-0½ (35-3) 73K13

1½ × 5 × 1-0½ (35-20) 73K14

73K13 No Paint

73K14 { Top & Butt Faces No Paint; Edges ③ Coats

MARK 3 SHIMS NK 73K13 ⑤

D. 4 D. NK 73K14 ⑤

ALSO MARKED "NO PAINT" TO HAVE DEMARCAL CAN LINSEED OIL TINTED WITH RED LEAD

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF,
CONSULTING ENGINEERS
Date: 6-11-59
Rev. ◇ Date: Rev. ◇ Date:
Rev. ◇ Date: Rev. ◇ Date:
Not Approved Until Dated

DESCRIPTION OF REVISION

Gen. Notes: ALL STEEL ASTM A7 H.S. FABRICATION

Rivets: Oper. Holes:

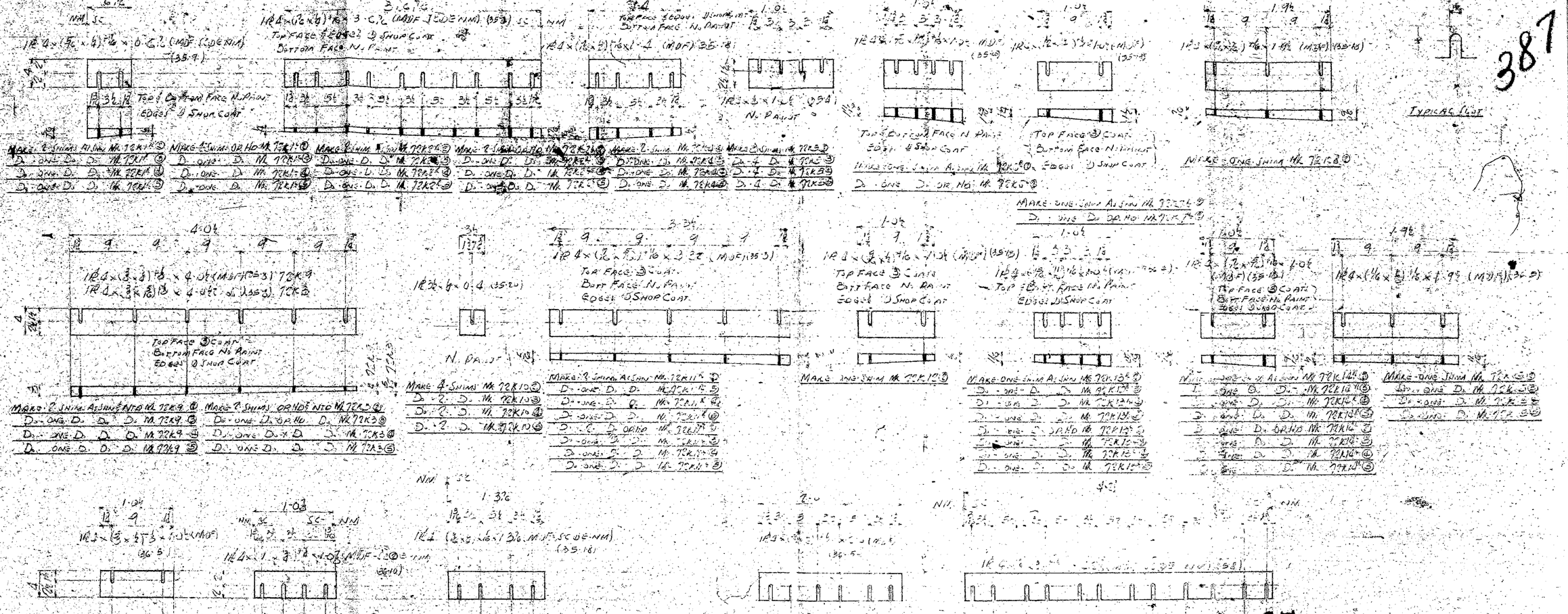
Paint: SEE INT #4 UNLESS NOTED

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

	Appl.	Shop
	5-28-59	

Customer: JOHN F. BEASLEY
Architect: ARKANSAS STATE HIGHWAY
Building: MISSISSIPPI RIVER BRIDGE
Made by: D.S. 5-25-59 Scale: HEAVY ASS'D
Traced by: Final Date: 1959
Checked by: W.J. Armstrong 5-26-59 (STAMPED)
Approved by:
Order No. 6424 Sheet No. 73 Drawing No. O

387



MARK	QTY	DESCRIPTION
①	2	ONE D.
②	2	ONE D.
③	2	ONE D.
④	2	ONE D.
⑤	2	ONE D.
⑥	2	ONE D.
⑦	2	ONE D.
⑧	2	ONE D.
⑨	2	ONE D.
⑩	2	ONE D.
⑪	2	ONE D.
⑫	2	ONE D.
⑬	2	ONE D.
⑭	2	ONE D.
⑮	2	ONE D.
⑯	2	ONE D.
⑰	2	ONE D.
⑱	2	ONE D.
⑲	2	ONE D.
⑳	2	ONE D.
㉑	2	ONE D.
㉒	2	ONE D.
㉓	2	ONE D.
㉔	2	ONE D.
㉕	2	ONE D.
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㉗	2	ONE D.
㉘	2	ONE D.
㉙	2	ONE D.
㉚	2	ONE D.
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㉟	2	ONE D.
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㊲	2	ONE D.
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㊽	2	ONE D.
㊾	2	ONE D.
㊿	2	ONE D.

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS,
Date 6-17-52
Rev. ① Date: Rev. ② Date:
Rev. ③ Date: Rev. ④ Date:
Not Approved Until Dated.

DESCRIPTION OF REVISION

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Appr. 5-28-52

Customer: Texas Eastern
Architect: Freeland & Hall, Houston
Building: Main Pass River Dock
Made by: D 5-23-52 Scale: 1/4" = 1'-0"
Filing Date: 438
Traced by:
Checked by: W.J. Armstrong 5-26-52 (5-28-52)
Approved by:
Order No. 6211 Sheet No. 22 Drawing No. 0

7K1①
L 4 × 3 × 0-7 (35-4)
(NO PAINT)
MARK-46 - SHIMS MK 7K1①
D. 92 D. MK 7K1①
D. 46 D. MK 7K1③
D. 26 D. MK 7K1④
D. 46 D. MK 7K1②

7K2
L 4 × 3 × 0-7½ (35-4)
NO PAINT
MARK-14 SHIMS MK 7K3①
D. 7 D. MK 7K7①

7K4
PL ¼ × (3½ × 3½) × 0-7 (MDF) (35-14)
TOP FACE & EDGES ① SHOP COAT
BOTT FACE NO PAINT
MARK-ONE SHIM MK 7K4①

7K5
PL ¾ × 3½ × 0-7½ (35-14)
MARK-ONE SHIM MK 7K8①

7K6
MARK-ONE SHIM MK 7K6①

7K7
L 4 × 3 × 1-2½ (SLOPE) NM (MDF) (35-6)
TOP FACE & EDGES ① SHOP COAT
BOTT FACE NO PAINT
MARK-ONE SHIM AT SHIM MK 7K7①
D. ONE D. ON HD MK 7K7①

7K8
PL ¼ × (3 × 3) × 2-9½ (SLOPE) NM (MDF) (35-9)
TOP FACE & EDGES ① SHOP COAT
BOTT FACE NO PAINT
MARK-ONE SHIM MK 7K10①

7K9
L 4 × 3 × 1-4 (35-7)
TOP FACE & EDGES ① SHOP COAT
BOTT FACE NO PAINT
MARK-ONE SHIM MK 7K9①

7K10
L 4 × 3 × 0-4 (35-3)
NO PAINT
MARK-67 - SHIMS MK 7K10①
D. 132 D. MK 7K10①
D. 66 D. MK 7K10②
D. 66 D. MK 7K10③
D. 66 D. MK 7K10④

7K11
PL ¾ × (3 × 3) × 1-1 (MDF) (35-12)
MARK-ONE SHIM MK 7K11①

7K12
L 4 × 3 × 3-9½ (MDF) (35-8)
MARK-ONE SHIM MK 7K12①

7K13
L 4 × 3 × 5-7½ × 4-3½ NM (SLOPE) NM (MDF) 7K13
TOP FACES & EDGES ① SHOP COAT
BOTTOM FACE NO PAINT
MARK-ONE SHIM MK 7K13①

7K14
L 4 × 3 × 1-4 (35-7)

7K15
L 4 × 3 × 0-5⅜ (35-4)
(SLOPE NM)
NO PAINT
MARK-12 - SHIMS MK 7K15①
D. 56 D. MK 7K15①
D. 28 D. MK 7K15②
D. 28 D. MK 7K15③
D. 28 D. MK 7K15④

7K16
L 4 × 3 × 5-7½ × 3-6½ NM (MDF) 7K16
L 4 × 3 × 5-7½ × 3-6½ (SLOPE) NM (MDF) 7K16 (35-10)
TOP FACES & EDGES ① SHOP COAT
BOTT FACE N. PAINT
MARK-ONE SHIM MK 7K16①
D. ONE D. MK 7K16①

7K17
L 4 × 3 × 1-4 (35-7)
TOP FACES ③ COAT
EDGES ① SHOP COAT
BOTTOM FACE NO PAINT
MARK-ONE SHIM MK 7K17①

7K18
L 4 × 3 × 5-7½ × 4-3½ NM (SLOPE) NM (MDF) 7K18 (35-9)
MARK-ONE SHIM MK 7K18①

7K19
L 4 × 3 × 5-7½ × 4-3½ NM (SLOPE) NM (MDF) 7K19 (35-9)
TOP FACES ③ COATS
EDGES ① SHOP COAT
BOTTOM FACE N. PAINT
MARK-ONE SHIM MK 7K19①

7K20
L 4 × 3 × 1-6 (35-7)
TOP FACE ③ COATS
EDGES ① SHOP COAT
BOTTOM FACE NO PAINT
MARK-ONE SHIM MK 7K20①

7K21
L 4 × 3 × 1-3 (35-12)
NO PAINT
MARK-ONE SHIM MK 7K21①

7K22
L 4 × 3 × 1-3 (MDF) (35-12)
TOP FACE ③ COAT
BOTT FACE NO PAINT
EDGES ① SHOP COAT
MARK-ONE SHIM MK 7K22①

7K23
L 4 × 3 × 1-3 (35-4)
MARK-ONE SHIM MK 7K23①

7K24
L 4 × 3 × 1-3 (MDF) (35-12)
TOP FACE NO PAINT
EDGES ① SHOP COAT
BOTTOM FACE N. PAINT
MARK-ONE SHIM MK 7K24①

7K25
L 4 × 3 × 1-3 (MDF) (35-12)
TOP FACE ③ COAT
BOTT FACE NO PAINT
EDGES ① SHOP COAT
MARK-ONE SHIM MK 7K25①

7K26
L 4 × 3 × 1-3 (35-4)
MARK-ONE SHIM MK 7K26①

7K27
L 4 × 3 × 2-9 (MDF) (35-8)
TOP FACE ① SHOP COAT
BOTTOM FACE NO PAINT
EDGES ① SHOP COAT
MARK-ONE SHIM MK 7K27①
D. ONE D. ON HD MK 7K27①

7K28
L 4 × 3 × 4-3½ NM (SLOPE) NM (MDF) 7K28 (35-5)
TOP FACES ① SHOP COAT
EDGES ① SHOP COAT
BOTTOM FACE NO PAINT
MARK-ONE SHIM AT SHIM MK 7K28①
D. ONE D. ON HD MK 7K28①

7K29
L 4 × 3 × 1-3 (MDF) (35-12)
TOP FACE ③ COAT
BOTT FACE NO PAINT
EDGES ① SHOP COAT
MARK-ONE SHIM MK 7K29①

7K30
L 4 × 3 × 2-9 (MDF) (35-8)
TOP FACE ① SHOP COAT
BOTTOM FACE NO PAINT
EDGES ① SHOP COAT
MARK-ONE SHIM MK 7K30①

7K31
L 4 × 3 × 3-3½ (MDF) (35-8)
TOP FACES ③ COATS
EDGES ① SHOP COAT
BOTTOM FACE N. PAINT
MARK-ONE SHIM MK 7K31①

7K32
L 4 × 3 × 1-3 (35-4)
TOP FACE ① SHOP COAT
BOTTOM FACE NO PAINT
EDGES ① SHOP COAT
MARK-ONE SHIM AT SHIM MK 7K32①
D. ONE D. ON HD MK 7K32①

7K33
L 4 × 3 × 4-3½ NM (SLOPE) NM (MDF) 7K33 (35-5)
TOP FACES ① SHOP COAT
EDGES ① SHOP COAT
BOTTOM FACE NO PAINT
MARK-ONE SHIM AT SHIM MK 7K33①
D. ONE D. ON HD MK 7K33①

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date:
Rev. ① Date: Rev. ② Date:
Rev. ③ Date: Rev. ④ Date:
Not Approved Until Dated

DESCRIPTION OF REVISION

ALL STEEL: ASTM A7 - HOUSTON FABRICATION

Gen. Notes: AREAS MARKED NO PAINT TO HAVE ONE COAT SHOP PAINT

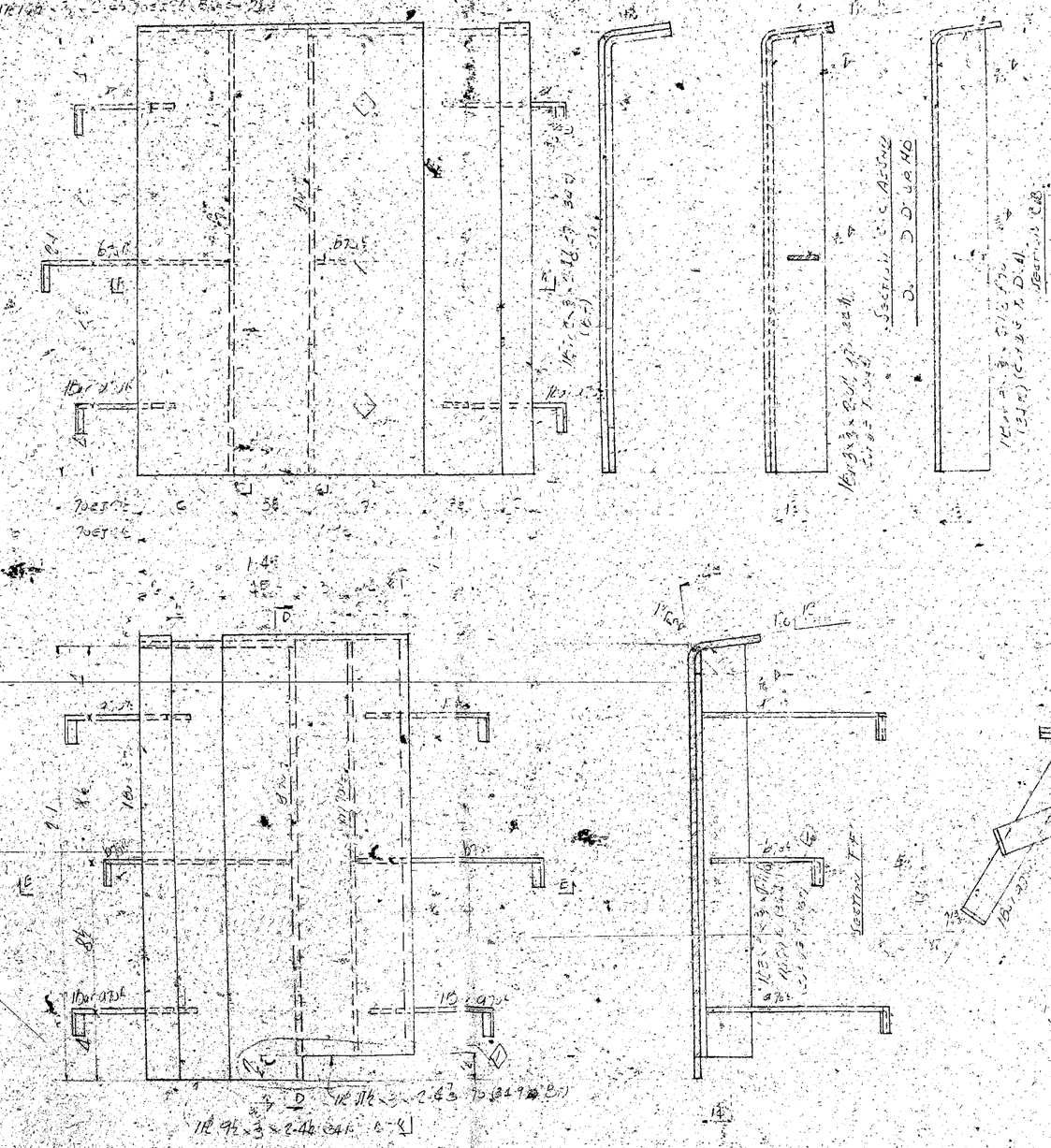
Erect. Open Hot Rivets

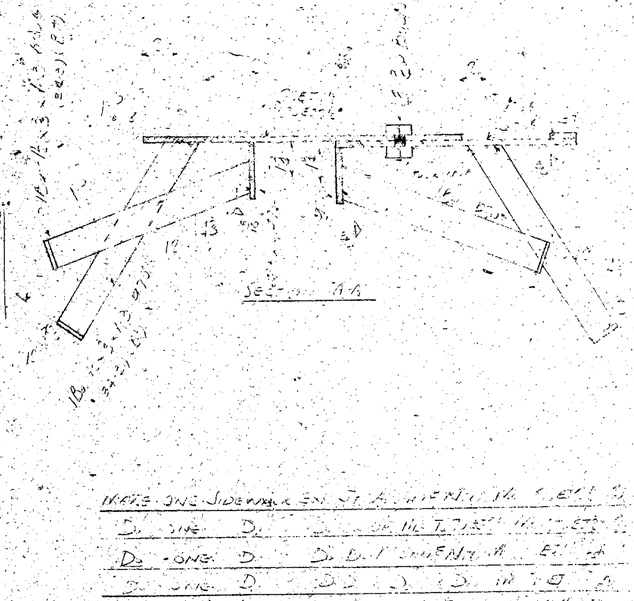
Paint See Sht #2

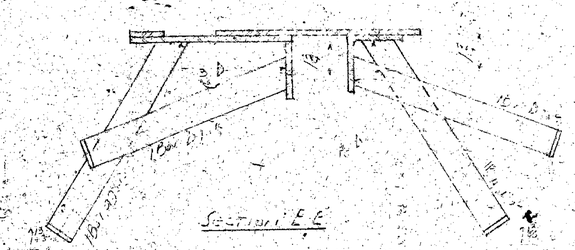
Blueprint Produced

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer Texas Electric Service Co.
Architect Arch. & Engineering Service, Inc.
Building Midland Air Terminal
Made by B.S. 12-29-59 Order Number 64
Traced by Filing Date 1-5-60
Checked by W. J. Adams Jr. 1-5-60
Approved by
Order No. 64 Sheet No. 21 Drawing No. 0







MARK ONE SIDE MARK EACH PIECE OF ASSEMBLY

D - ONE D - ONE D - ONE D - ONE

D₂ - ONE D - ONE D - ONE D - ONE

D₃ - ONE D - ONE D - ONE D - ONE

D₄ - ONE D - ONE D - ONE D - ONE

MARK ONE SIDE MARK EACH PIECE OF ASSEMBLY

D - ONE D - ONE D - ONE D - ONE

D - ONE D - ONE D - ONE D - ONE

D - ONE D - ONE D - ONE D - ONE

All Erection Material Furnished Above Base Plate Including Top Plate Shop Painted Red Primer Except Machined Surfaces Which Are Painted With Rust Preventive Oil Before Shipment

APPROVED BY
HOWARD NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date: 6-17-59
Rev. 1 Date Rev. 3 Date
Rev. 2 Date Rev. 4 Date
All Approved Until Dated

DALLAS FABRICATION

Gen. Notes: Base Steel A36 unless noted

Rivets: Open Hole

Paint: Shop coat red

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer: John F. Beasley Const. Co.
Architect: Alabama & Miss. Highway
Building: Mississippi River Br. No. 3
Made by: D. S. 11-5-57 Scale: Noted Arb.
Traced by: Filing Date: 1-15-58
Checked by: W. J. Armstrong 5-22-58 (Rev. 3)
Approved by:
Order No. 6480 Sheet No. 20 Drawing No. 0

DESCRIPTION OF REVISION

Bolted on Sheet #1

Near Side

Welds @ 0° elev.
Welds @ 90° elev.

DISCONTINUED DESIGNATION
Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT
Customer
Architect
Building
Made by
Traced by
Checked by
Approved by
Order No.
Shop No.
Drawing No.

383

Detail Thigh
End of Forms & Finish

Plan
(Deck Removed)

Section D-D

Section B-B

Section E-E Assumed No.
D. F.P. D.
D. S.G. and D.
D. M.P. D.

Mark II Long Nk G&K Co.

Mark II Long Nk G&K Co.

Section A-A

Section A-A Assumed No.
D. M.P. D.
D. N.N. and D.
D. K.P. D.

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF,
CONSULTING ENGINEERS
Date 6-12-59
Rev. 1 Date: Rev. 2 Date:
Rev. 3 Date: Rev. 4 Date:
Not Approved Until Dated.

All Galv. Stee. To Be Fitted Together Proper Fac. & Marks Mk. 0.
Ninth Int. of ... #89
Foundation C.G. (Engineering)
Dr. A. Engineering
Specifications A.S.B.M.
Gen. Notes: ASTM A7 Steel
Errors: 1/16 Open Holes: 1/16 Unl. Noted
Paint: Galv. All Ser.
Delivery Promised

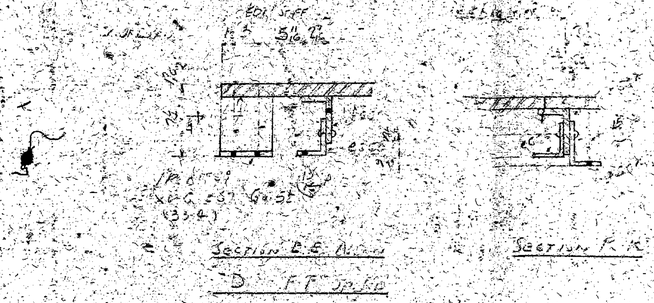
DESCRIPTION OF REVISION

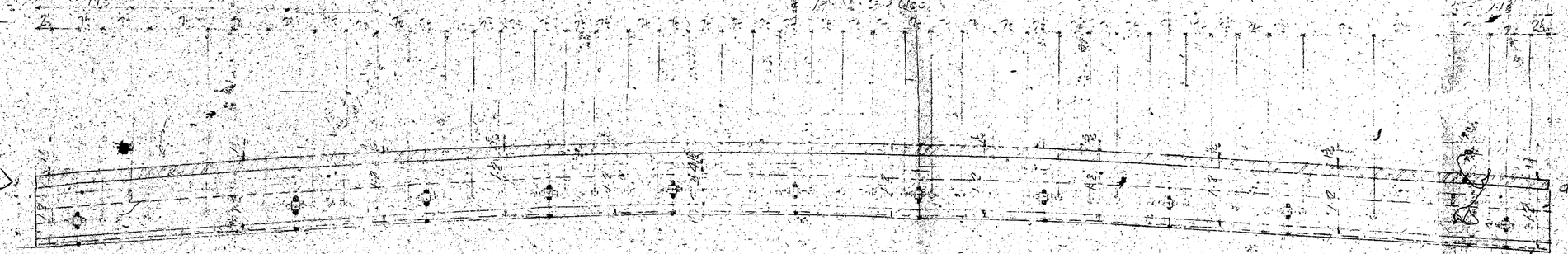
Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

	App'l	Shop
Customer John F. Beasley Const. Co.	6-29-59	
Architect Ark. Hwy. & Mis. Hwy.	7-3-59	
Building Mississippi River Bridge		
Made by D.S. 12-59 State Helena, Ark.		
Traced by ... Filing Date 1958		
Checked by W.J. Armstrong 5-19-59 (Sta. 20)		
Approved by		
Order No. 64201 Sheet No. C8 Drawing No. 0		

Near Side
Far Side
Both Sides
Type
Fillet
Size
Groove
Size
Standard Number
Bead
Backing
Indicates ⅜ x 2 Welds @ 6" ctrs.
Indicates ⅜ x 2 Welds @ 6" ctrs. (12"-ctrs. Staggered)

382





APPROVED BY
HOWARD NEEDLES, TAMMEN & BERGENDOFF,
CONSULTING ENGINEERS.
Date 6/12/57

Rev. ◇ Date ..... Rev. ◇ Date .....
Rev. ◇ Date ..... Rev. ◇ Date .....
Not Approved Until Dated

DESCRIPTION OF REVISION

Gen. Notes: DALLAS FABRICATION RIVET, A7 STEEL

Rivets ..... Open Holes ..... As Sh'n

Delivery Promised

Paint ..... Weight .....

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

	Appr'l	Shop
	5-28-59	
	7-2-59	

Customer ..... Job .....
Architect .....
Building .....
Made by ..... Date .....
Traced by ..... Filing Date .....
Checked by W. J. Armstrong 5-29-59 (Stairs)
Approved by .....
Order No. ..... Sheet No. ..... Drawing No. O

BILLED ON SHT # 66A2

3rd floor

2-4

25.00

2-4

1-2

103 BD: 15.9

103 B: 15.9

179/5: 2.5 (Ans.)

250/10: 2.10 (Ans.)

2-4

18 325 x 11 = 6 3/8 (Con Both Halves) (Marks) (Section Through Tie Beam) (Enlarged Section)

Floor Beams

38

Plan
Section A-A
View D-D
Mosher Steel Company

379

MATCH LINE SHT 64

PUNCH FULL SIZE

NO PAINT (FS)

SUB PUNCH & S-DRILL, & REAM TO

NO PAINT (BS)

NO PAINT: NS

PUNCH FULL SIZE

NO PAINT BS

NO PAINT (BS)

NO PAINT NS

NO PAINT TOP OF C.S.L.

CSK BS

NO PAINT (FS)

DALLAS TO FURN. METAL TEMP.

SECTION G-G

SECTION H-H

CAMBER DIAGRAM

NO PAINT AREAS TO RECEIVE ① SHOP COAT LINSEED OIL TINTED WITH RED LEAD

FOR COMPLETE CAMBER DIAGRAM SEE SHT 33

FOR DETAILS N.T.CHN. SEE SHT 33

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date
Rev. ① Date: Rev. ③ Date:
Rev. ② Date: Rev. ④ Date:
Not Approved Until Dated

All steel ASTM-A7 except Members (K) (A) which are manganese steel Iron Foundry.
All open holes shall be punched or subpunched & reamed to 1/16" larger than nominal size of hole unless noted.
All joint faces shall be punched or subpunched & reamed to 1/16" larger than nominal size of hole and accomplished or drilled from the solid to a size 1/16" larger than nominal size of hole.
Carbon steel thicker than 3/4" or low alloy steel thicker than 5/8" shall be drilled.
All holes shall be deburred with a tool making a 1/16" chamfer.

WORK THIS SHT. WITH SHT. 64
FOR SECT. E-E & F-F SEE SHT. L-4

Gen. Notes: HOUSTON FABRICATION

Rivets 3/4 Open Holes 15/16 UNL. NTD.

Paint SEE SHT. #4 UNL. NTD.

DESCRIPTION OF REVISION

DATE

DATE

DATE

DATE

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer JOHN F. BEASLEY CONST. CO.
Architect ARK. & MISS. STATE HIGHWAY
Building MISSISSIPPI RIVER BRIDGE
Made by C. MOCK 5-23-59 HELENA, ARK.
Traced by Filing Date 1956
Checked by
Approved by
Order No. 64201 Sheet No. 65 Drawing No. 0

Alg. 8-21-57

BILLED ON SHEET 64A

MATCH LINE SHT. 65

378

PUNCH FULL SIZE

SUB PUNCH HOLES SIDE KILL ANGLE TO 1 1/8 REAM TO 1 1/4

SURFACE OF SIDE KILL IN AREA REMOVED & KEPT TO 1/4 WHILE ASSEMBLED. MATCH MARKED. NO PAINT CONTACT AREAS OF SPLICE.

SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

FOR CAMBER DIAGRAM SEE SHT. 65

FOR COMPLETE CHORD DIAGRAM SEE SHT. 33

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

All steel ASTM-A7 except bridgers MKD-A1 which is manganese steel.

Gen. Notes: HOUSTON FABRICATION
WORK THIS SHT WITH SHT. 65

Rivets 7/8 Open Holes 15/16 UNL NTD

Paint SEE SHT #4 UNL NTD

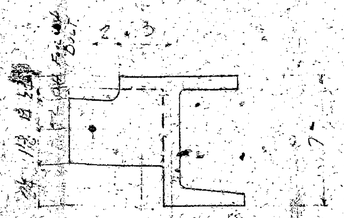
DESCRIPTION OF REVISION

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer JOHN F. BEASLEY CONST. CO.
Architect ARK. STATE HIGHWAY
Building MISSISSIPPI RIVER BRIDGE
Made by [illegible] 5-14-59 Loc. HELENA, ARK.
Traced by Filing Dept. 1958
Checked by
Approved by
Order No. 6421 Sheet No. 64 Drawing No. 0

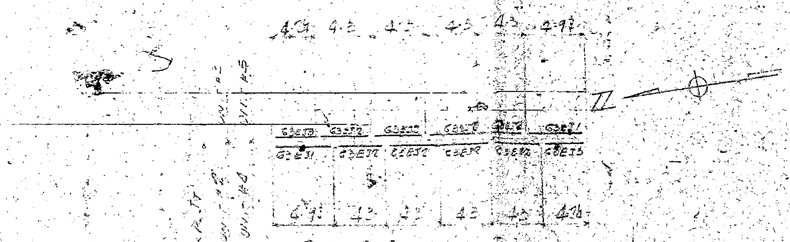
BILLED IN SHEET 64A

377

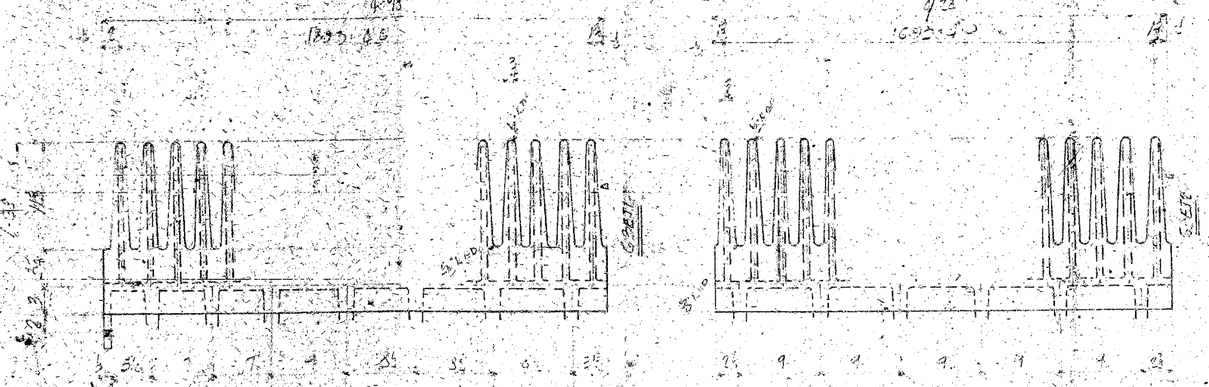


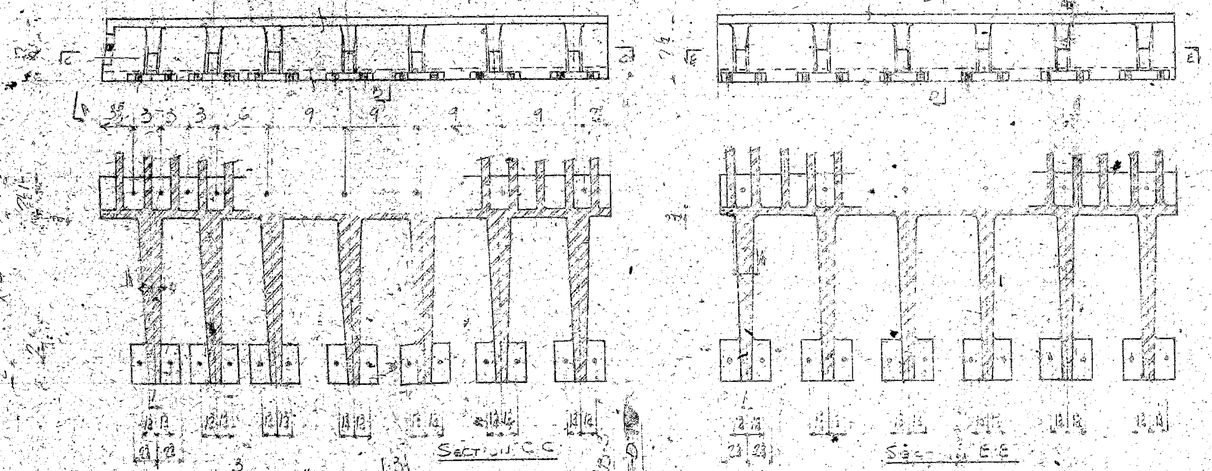
SECTION G-G ASSIN.

SECTION A-A DP. RANG



PLAN OF ENDS





SECTION C-C

SECTION E-E

SECTION F-F

SECTION B-B ASSIN INTO

(SG-12)	MARKING	Sym	Steel	Exp	ST	Unit	No.	Sheet
(d)	D						No.	Sheet
(d)	D						No.	Sheet
(d)	D						No.	Sheet
(d)	D						No.	Sheet
(d)	D						No.	Sheet
(d)	D						No.	Sheet
(d)	D						No.	Sheet
(d)	D						No.	Sheet
(d)	D						No.	Sheet

CONFORM TO ... OF ROADWAY ...
FOR FURTHER ... SEE ...

ALL STEEL CONTRACT ... TO ...
FULLY AMERICAN ... OF ...
LATEST ... SPECIFICATIONS
THEY SHALL BE MADE ... THE ...
DURING ... AND ...
THROUGH ... THE ...
ALL ... OF ...

APPROVED BY
HOWARD, NEEDLES, TAMMEN & ...
CONSULTING ENGINEERS
Date:
Rev. Date: Rev. Date:
Rev. Date: Rev. Date:
Not Approved Until Dated

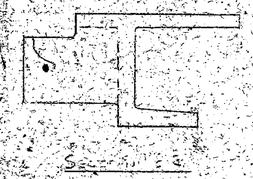
No.	DESCRIPTION OF REVISION
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	

Gen. Mgr. ... Drawn ...
Check ... Open Date ...
Date ... Shop Book ...

Mosher Steel Company
DALLAS FORT WORTH HOUSTON SAN ANTONIO

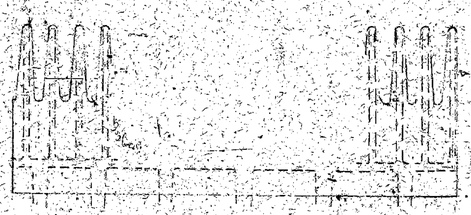
Engineer ...
Architect ...
Detailing ...
Made by ... Traced by ...
Checked by ... Filing Card ...
Approved by ...
Order No. ... Sheet No. ... Drawing No. ...

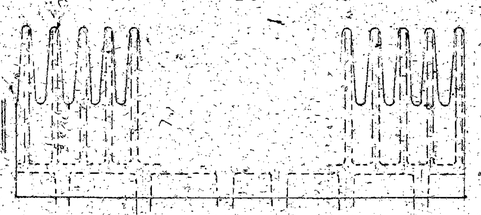
376

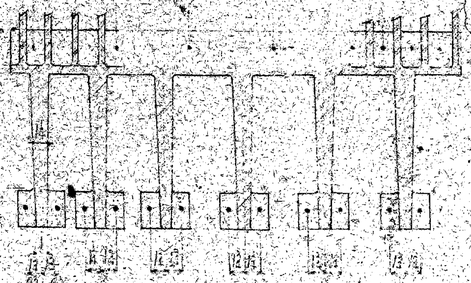


Section E-E

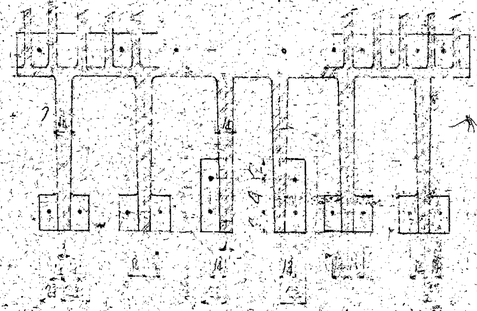
Section F-F As Shown
On G.S. Drawing



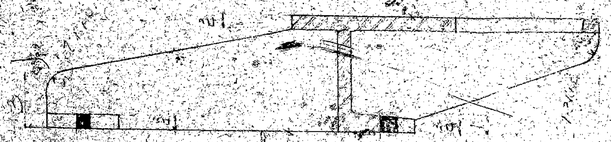




Section A-A



Section L-L



Section B-B

All Steel Continuous Beam Units To Be Fabricated
From Materials Conforming To
And Shall Be Welded
Fabrication And Erection Of Structural
Steel For Bridges
Except As Modified Herein

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date
Rev. 1 Date
Rev. 2 Date
Rev. 3 Date
Rev. 4 Date
Not Approved Until Dated

Gen. Notes: DALLAS FABRICATION

Errect Open Holes: For 3/4 Connection

Paint: SAND BLAST & GALV.

Delivery Required

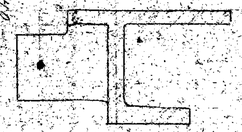
Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer: John F. Ripley
Architect: Abandoned F.M. 1960 State Hwy
Building: Mill Cr. River Bridges
Made by: D.E. 11-69 Scale: Hoosier, Iowa
Traced by: Filing Date: 1959
Checked by: W.J. Armstrong 5-14-59 (5-14-59)
Approved by:
Order No. 6460 Sheet No. 62 Drawing No. 0

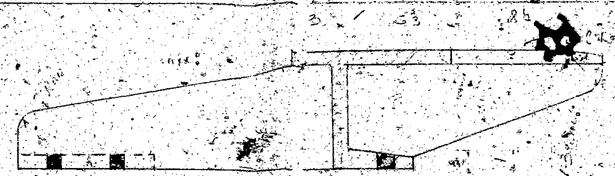
DESCRIPTION OF REVISION	DATE	CHK'D BY	DATE	BASIC W.	No.

Appr'd	Ship
5-25-59	
6-4-59	

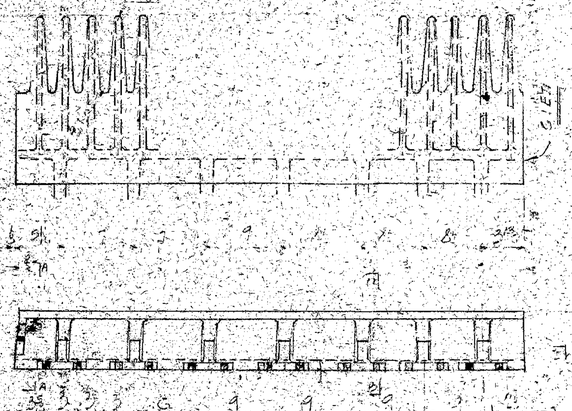
375

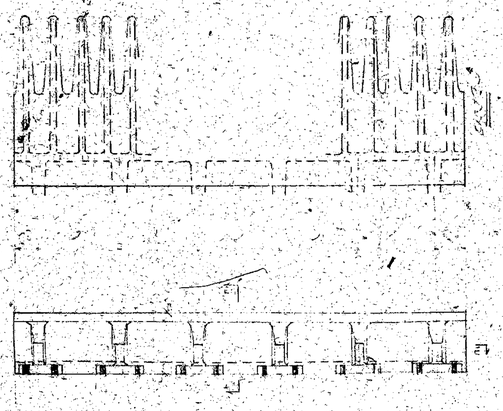


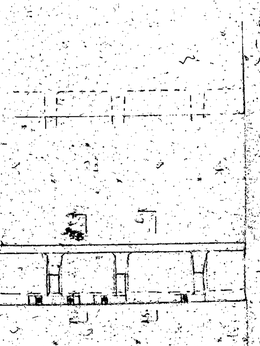
SECTION A-A

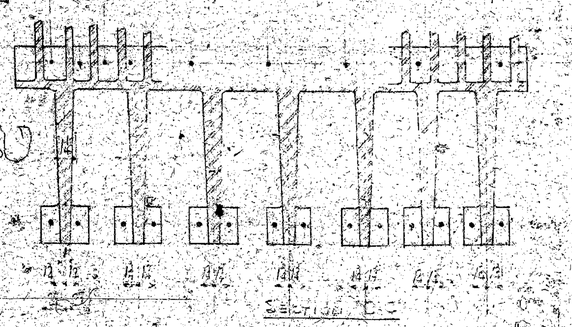


SECTION G-G

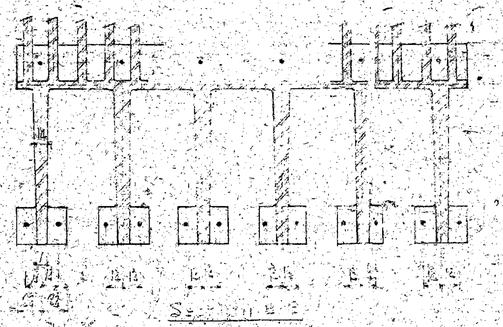




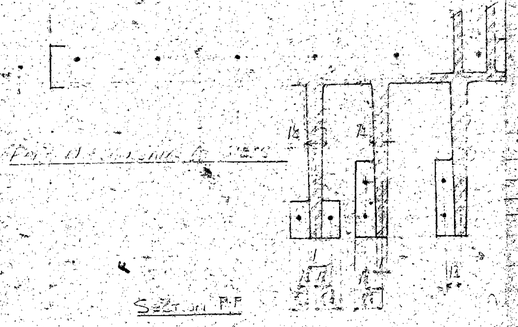




SECTION C-C



SECTION E-E



SECTION F-F

SECTION B-B

(SEE W/C DETAILS ON SHT. FOR ELEV. OF INFILL SHEET)
CASING TO BE WELDED TO PILE AT TOP OF FOOTING
FOR FINAL ELEVATIONS AND MINIMUM PENETRATION
SEE SHEET IN CASINGS

ALL STEEL CASINGS SHALL CONFORM TO A.S.T.M. A252 GRADE 2 FOR WELDED AND SEAMLESS PIPE PILES EXCEPT AS MODIFIED BY THE SPECIAL PROVISIONS. ALL STEEL CASINGS SHALL BE MARKED AS REQUIRED BY ASTM A252 BEFORE DRIVING. ALL APPROVED WELDING CONFORMS TO AWS D1.1 FOR THE SHIELDED METAL ARC PROCESS. ALL CASINGS SHALL BE SPLICED BY BUTT WELDING.

APPROVED BY
HIGHWAY ENGINEER T.A.M.M.E.N. & BERG... DEPT.
CONSULTING ENGINEERS
Date
Rev. 1 Date 3
Rev. 2 Date Rev. 4 Date
Not Approved Until Dated

DESCRIPTION OF REVISION	DATE	BY

Gen. Notes: DALLAS FABRICATION
Rivets ... Open Holes: FOR SPLICES IN UNITS
Piles: SHELL BEARING PILES
Delivery Promised

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

	App'd	Ship
	5-28-57	
	6-17-57	

Customer ... STATE OF TEXAS
Architect ARCHITECTS & STATE HIGHWAY DEPT.
Building MISSISSIPPI RIVER BRIDGE
Made by D. E. H. J. Scale HALF SIZE
Traced by ... Filing Date 12-28
Checked by W. J. Armstrong 5-14-57 (for 203)
Approved by ...
Order No. 64-21 Sheet No. 61 Drawing No. 0

Indicates 9 x 3 sheet (10" dia. max.) stacked.
Indicates 9" x 3" Welded Sheets

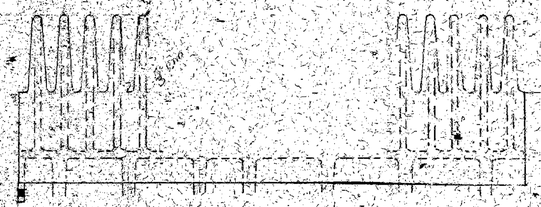
374

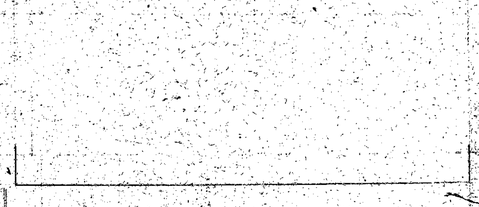
Mark	Qty.	Weight	Qty.	Weight	Total Weight
Each	Mark	Each	Mark	Each	Mark

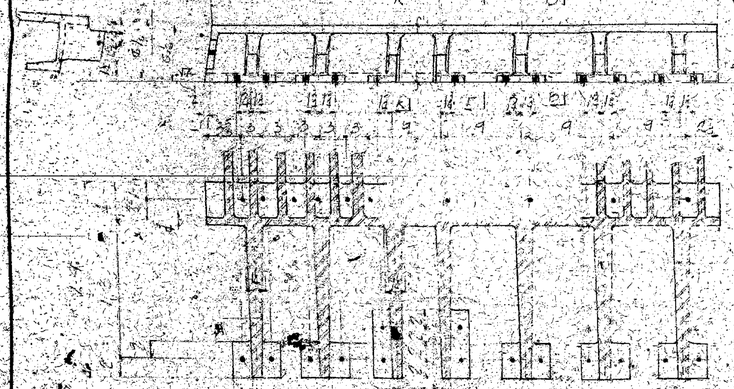
PLAN OF BEAMS ON JOINT BOTTOM

Joint = 4-98

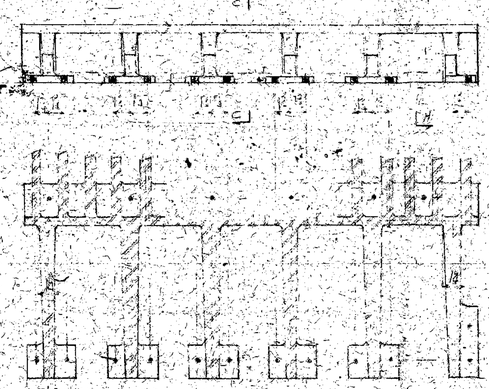
1893 #G



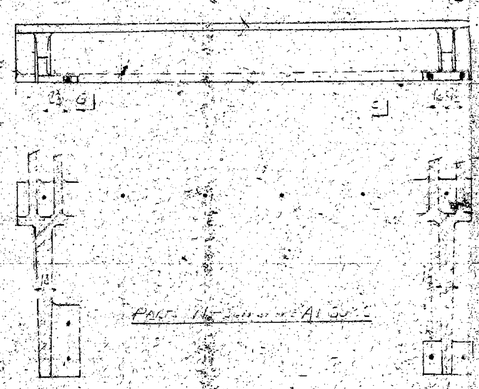




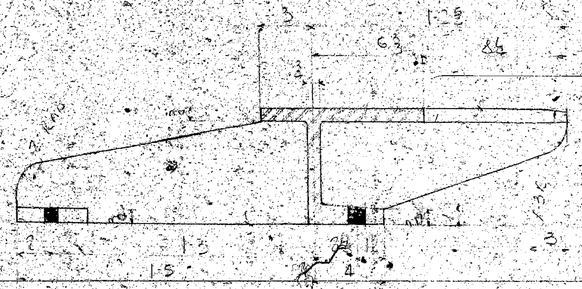
SECTION A-A



SECTION D-D



SECTION E-E



SECTION POLE ASSEMBLY

(SCH.) MARK ONE CONNECTED TO ONE MK. SHEET D

(SCH.) D ONE D D D D MK. SHEET D

(SCH.) D ONE D D D D MK. SHEET D

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date
Rev. 1 Date Rev. 2 Date
Rev. 3 Date Rev. 4 Date
Not Approved Until Dated

DESCRIPTION OF REVISION

Gen. Notes: DALLAS FABRICATION

Errors Open Holes FOR 3/4" BOLTS U.N.O.

Paint SHOP BLAST 1 COAT

Delivery Promised

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

	App'l	Shop
	5-15-59	
	6-17-59	

Customer JOHN F. KENNEDY

Architect ALBRITTON, MITCHELL & PARKER

Building NEW STEEL WAREHOUSE

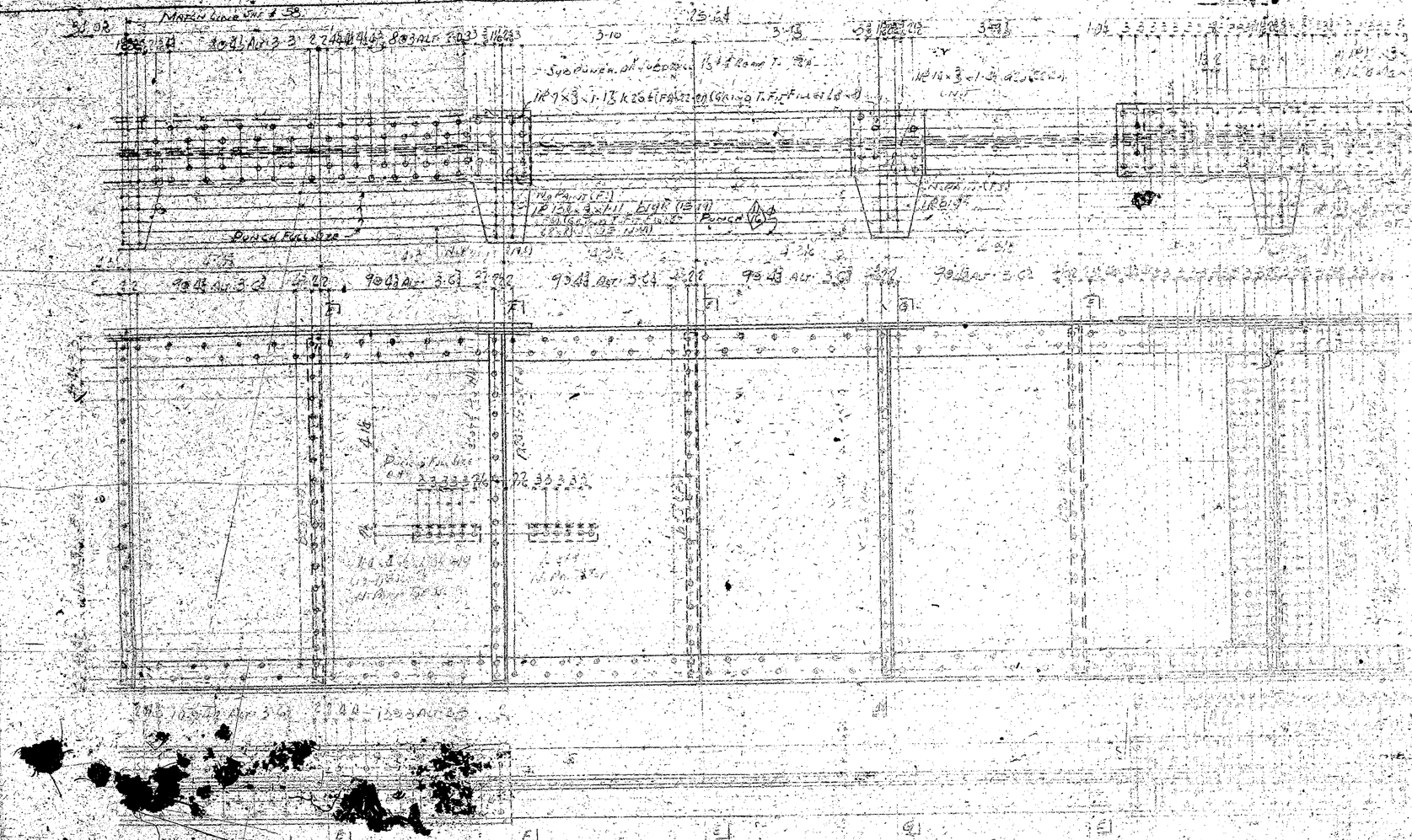
Made by D.E. 7-59 Scale 1/2" = 1'-0"

Traced by Filing Date 1959

Checked by W.J. Armstrong 5-13-59 (Sta. 203)

Approved by

Order No. 9211 Sheet No. 62 Drawing No. 0

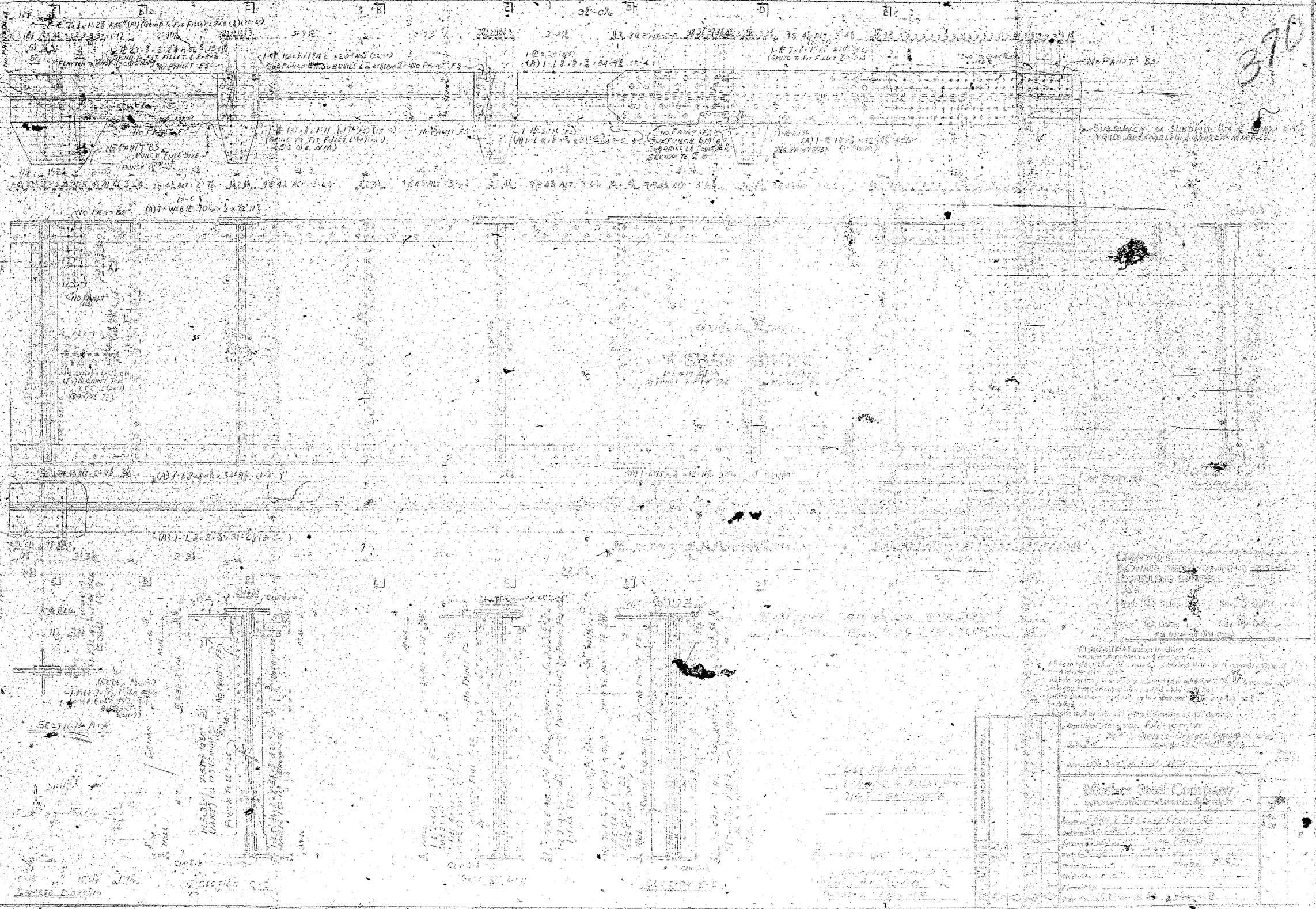


Mosser Steel Company

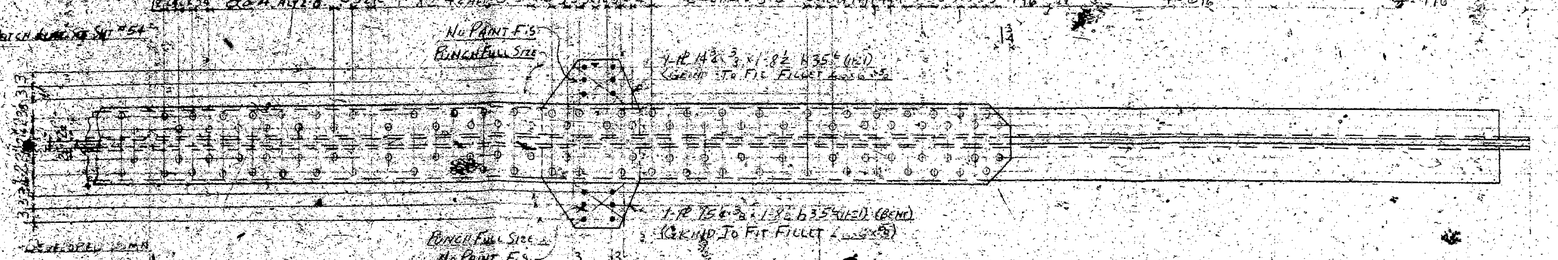
(a) K8 × 8 × $\frac{3}{4}$ = 35.4 ft (C.G.)

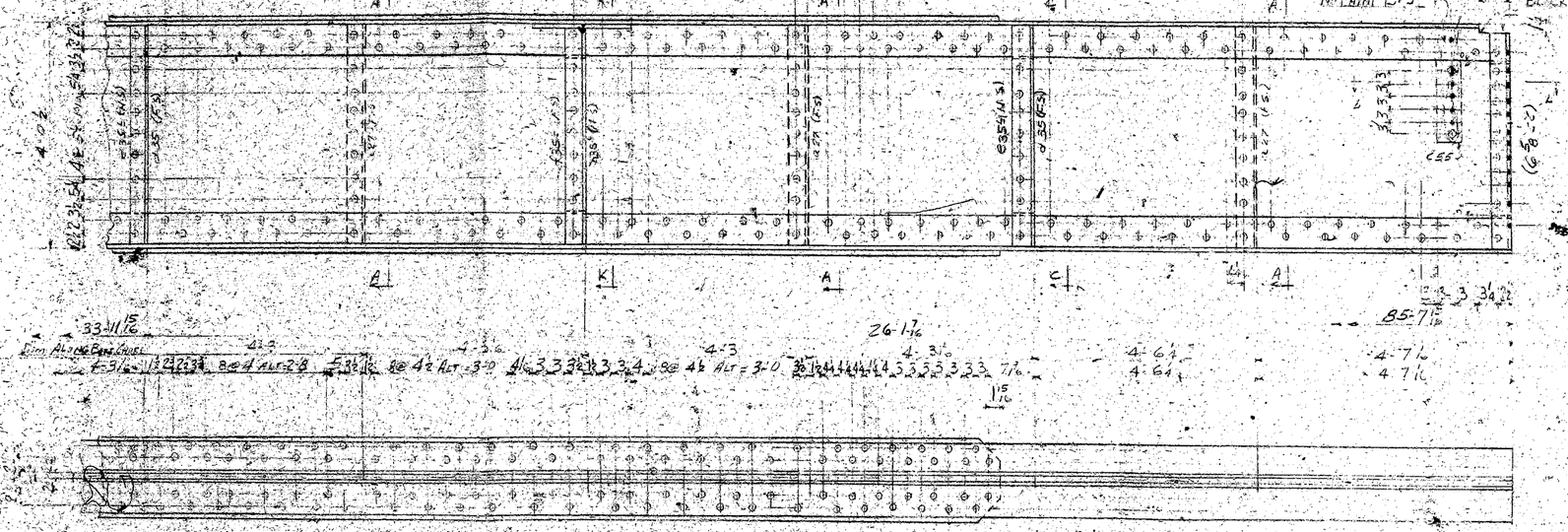
(b) L6 × 6 × $\frac{3}{4}$ = 13.94 (5 - 20) (CUM)

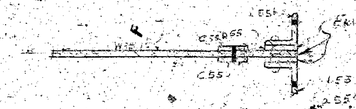
310


NO PAINT BS
PUNCH FULL SIZE
SECTION A-A
SECTION B-B
SECTION C-C
SECTION D-D
Miller Steel Company

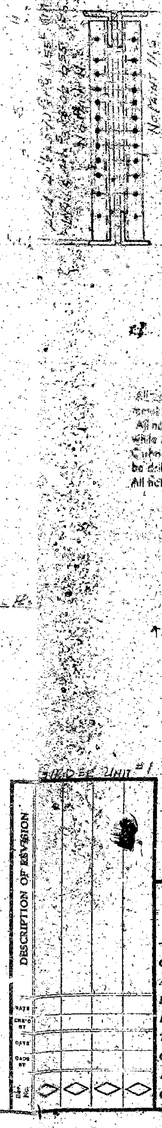
369







SECTION L-L



All steel ASTM A7 [redacted]

All material plates shall be subpunched at subdrill 11/16 ø & reamed to 15/16 ø after complete unit has been welded.
All holes in top flange shall be subpunched or subdrilled 11/16 ø & reamed to 15/16 ø while assembled or drilled from the solid while assembled.
Carbon steel thicker than 3/4" or low alloy steel thicker than 5/8" shall be drilled.
All holes shall be deburred with a tool making a 1/16" chamfer.

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date
Rev. ◇ Date Rev. ◇ Date
Rev. ◇ Date Rev. ◇ Date
Re: Quotation Dated

SEE SHEET "GEN'L TYPICAL DETAILS" FOR SECTIONS NOT SHOWN. SEE SHEET [redacted]
FOR COMPLETE ANCHOR BOLT DETAILS SEE SHEET [redacted]
AREA MARKED NO PAINT TO RECEIVE ONE COAT OF LINSEED OIL TINTED WITH RED LEAD - HOUSTON FABRICATING

Gen. Notes: WORK THIS SHEET WITH SHEET # 5315-4

Rivets 7/8 ø Open Holes 15/16 ø UNLESS NOTED Delivery Provided

Paint SEE SHEET # 4 UNLESS NOTED

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer JOHN F. BEASLEY CONSTR. CO.
Architect ARKANSAS & MISSISSIPPI STATE HIGHWAYS
Building MISSISSIPPI RIVER BRIDGE
Made by JH 5-25-59 HELENA, ARK.
Traced by [redacted] Filing Date 1-59
Checked by W.J. Mitchell 6-8-59 (6-10-59)
Approved by [redacted]
Order No. 6420 Sheet No. 55 Drawing No. 0

App'l 8-3-59

MATCH LINE SEE SHT #53

MATCH LINE SEE SHT #55

DEVELOPED DIAM

N. PAINT F.S.
PUNCH FULL SIZE

PUNCH FULL SIZE
NO PAINT F.S.

DETAIL A

DETAIL B

SECTION F-F

SECTION G-G AS SHOWN
SECTION G-G AS SHOWN

SECTION H-H

DETAIL A

DETAIL B

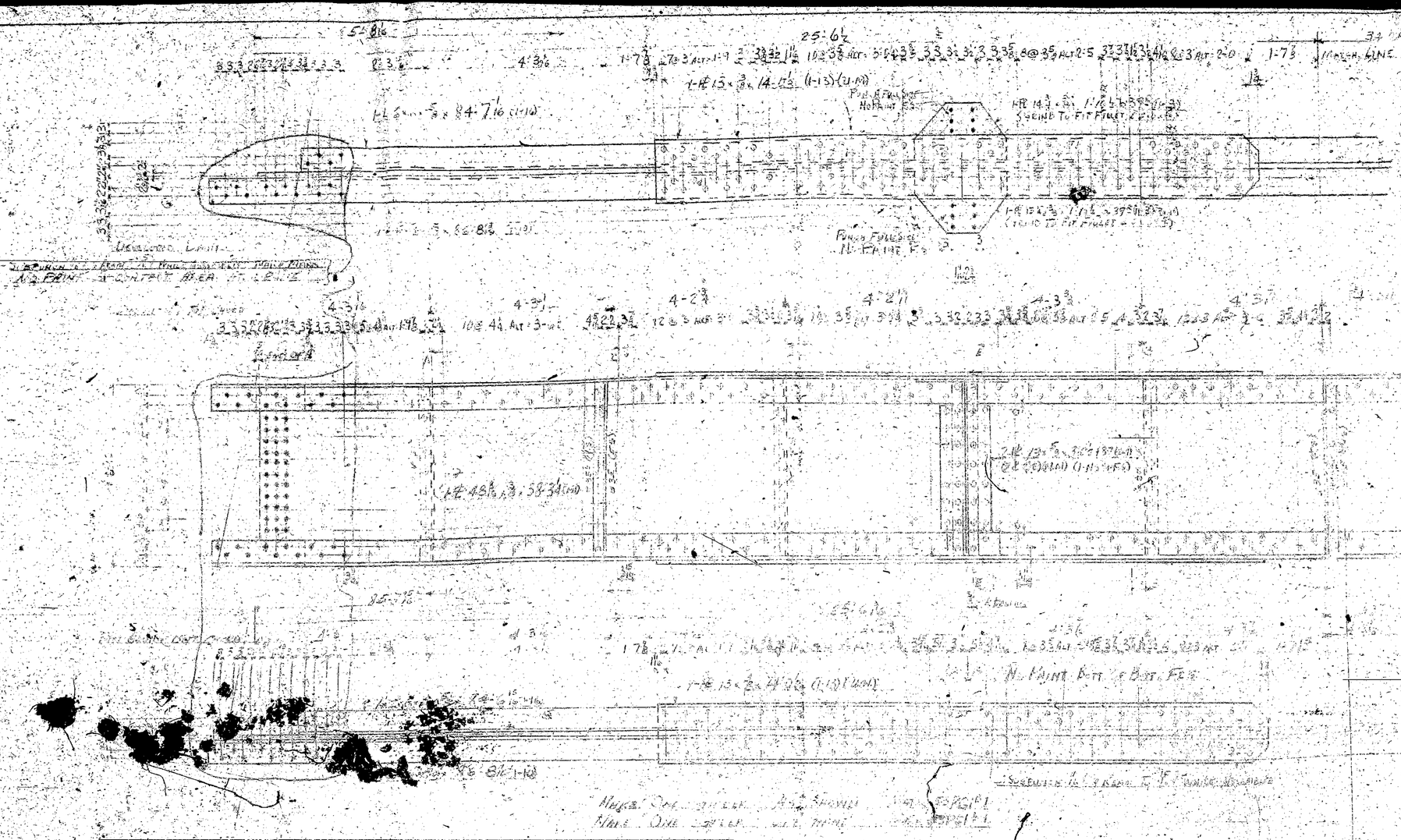
APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

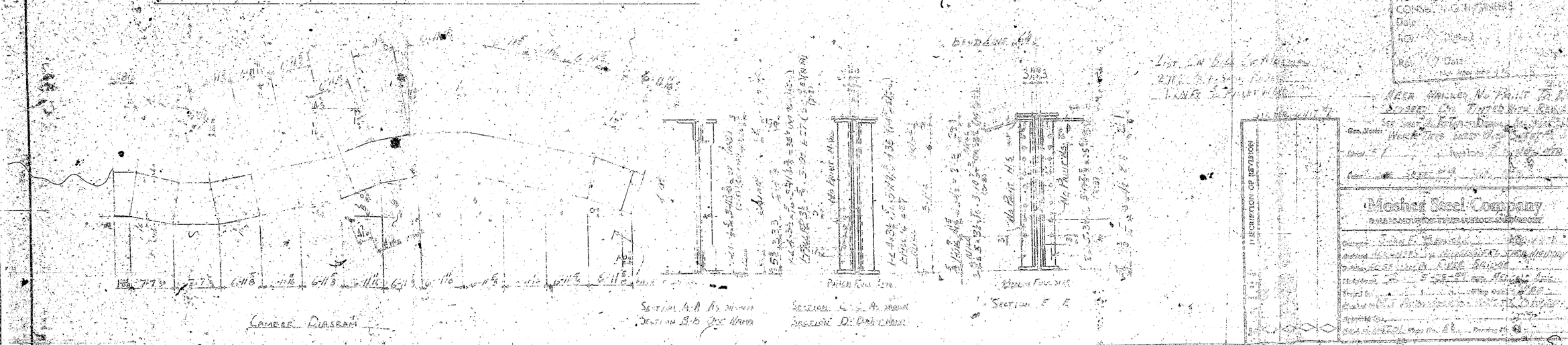
SEE SHEET B6 FOR TYPICAL DETAILS

DESCRIPTION OF REVISION

Mosher Steel Company

361





Approved by
HOWARD NEEDLES TAMMEN & BERGENDOFF
Consulting Engineers
Date
By
Approved Date
No.

Masher Steel Company

366

Match Line See Sht #3

Elevated Path

No Paint N.S

Fillet Weld

No Paint F.S

Shop Paint

Section M-M

Section N-N

Girder "Unit" 1

Fabricated by
Modjeski, Needles, Tammen & Bergendoff,
Consulting Engineers

Rev. Date

Rev. Date

Not Approved Until Dated

All steel shall be fabricated from A.S.T.M. A

All holes shall be deburred with a tool making a 1/16" chamfer.

For Typical Details See Sheet #3

For Sections Not Shown See Sheet # 50-51

For Complete Camber Diagram See Sheet #

Area Marked No Paint To Receive 1 Coat

Linseed Oil Juntee White Lead

Houston Fabricat

Gen. Notes: Work This Sheet Work Sheet # 50-51

Rivets Open Holes Work Not

Paint See Sheet #4 Work Not

Delivery Promised

Description of Revision

Date

Mosher Steel Company

Dallas-Houston-Tyler-Lubbock-Shreveport

Appr'l | Shop

Customer John F. Beasley Contr. Co.

Architect Arkansas & Mississippi State Highway

Building Mississippi River Bridge

Made by FH 5-21-57 Helena Ark.

Traced by Filing Date 1958

Checked by W. F. Apr. Issued 6-21-58 Sta 20

Approved by

Order No. 6491 Sheet No. 1-52 Drawing No. O

MATCH LINE SEE SHT #50

MATCH LINE SEE SHT #52

365

SUBFUNGER 1/2 x 1 RADIUS 12" WIDE ASSEMBLED

PUNCH FULL SIZE NO PAINT F.S.

SUBFUNGER 1/2 x 1 RADIUS 12" WIDE ASSEMBLED

GRIND TO FIT FILLET

NO PAINT N.S.

NO PAINT F.S.

DETAIL A

DETAIL B

SECTION F-F

SECTION G-G AT CH. LINE

SECTION K-K AT P.I. LINE

END DETAIL 11" x 12" END DETAIL 11"

SECTION H-H

DETAIL A

DETAIL B

All holes shall be deburred with a tool making a 1/16" chamfer.

FOR TYPICAL DETAILS SEE SHEET #84

FOR SECTIONS NOT SHOWN, SEE SHEET

FOR COMPLETE PAINT DESIGNATION SEE AREA MARKED NO PAINT TO RECEIVE LINSEED OIL TINTED WITH RED LEAD

Gen. Notes: AS TO FABRICATION, WORK THIS SHEET WITH SHEET #50 & 52

Rivets 3/4 Open Holes 15/16 dia. Nom.

Paint SEE SHEET #4 PAINT N

DESCRIPTION OF REVISION

Mosher Steel Company

DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer: HON. E. CRESSLEY COMPTR. GEN.

Architect: ADJUTANT GENERAL'S DEPT. STATE HIGHWAY

Building: MISSISSIPPI RIVER BRIDGE

Made by: H 5-12-51 Check: LEGEND A.C.

Traced by: Filing Date:

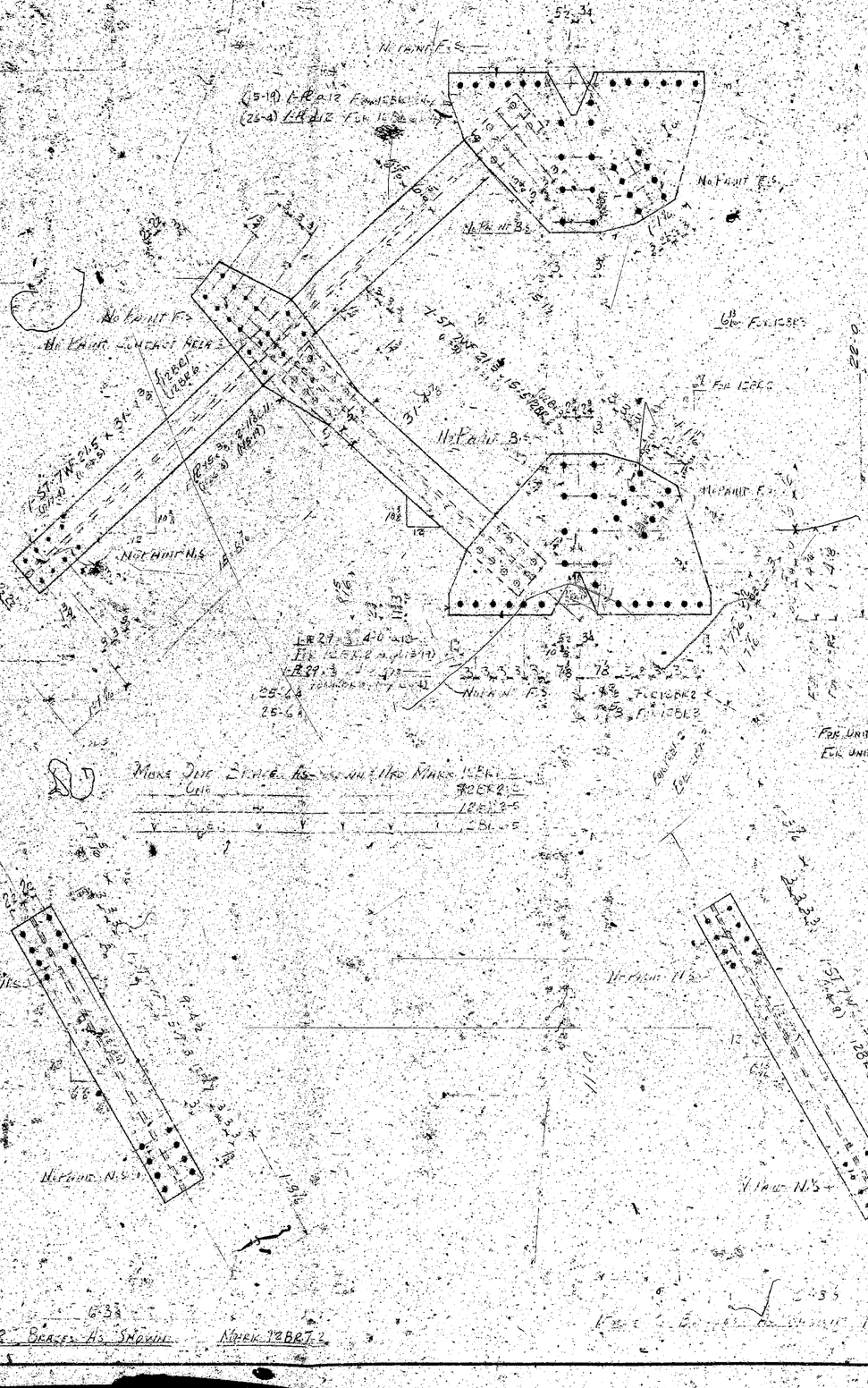
Checked by: H. H. Approved by: G. 2-6-51

Order No. 4401 Sheet No. 51 Drawing No. O

A.H.D.

ROLL .. 746

BRG. 2899



APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF,
CONSULTING ENGINEERS.
Date:
Rev. Date
Rev. Date
Rev. Date:
Rev. Date:
Not Approved Until Dated

Weld Top and N. Side To Fine Use Continuous Fillet Weld
All Holes Shall Be Reamed While Assembled
With Main Piece Fabrication
Gen. Notes: Houston Fabrication
All Steel On This Sheet ASTM-A7
Rivets: Open Holes: 15/16
Paint: See Sht = 4 Unpainted
Delivery Promised

DESCRIPTION OF REVISION

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

		App'l	Sh'p
Customer	John F. Bergsley Contr. Co.		
Architect	Arkansas State Highway		
Building	Mississippi River Bridge		
Made by		Scale	Helena Ark.
Traced by		Filing Date	12-26
Checked by		Sales	
Approved by			
Order No.	4201 Sheet No. 12	Drawing No.	O

363

MATCH LINE SEE SHT #51

SUBPUNCH 11/16 Ø HOLES IN FLANGE & WEB WHILE ASSEMBLED MARK MARK NO PAINT ON CONTACT AREA AT SPLICE

SUBPUNCH 11/16 Ø HOLES IN FLANGE WHILE ASSEMBLED

PUNCH FULL SIZE NO PAINT F.S.

NO PAINT F.S.

NO PAINT N.S.

DIM. ALONG TOP CASED

1/2 END OF M

CAMBER DIAGRAM

DIM. ALONG BOTT. CASED

SECTION A-A AS SHOWN
SECTION B-B OPP HAND

SECTION C-C AS SHOWN
SECTION D-D OPP HAND

SECTION E-E

MAKE ONE GIRDER AS SHOWN MARK 50PG1
MAKE ONE GIRDER OPP HAND MARK 50PG1L

All steel ASTM-A7 [redacted]

All holes for shop rivets shall be punched or drilled from the solid plate and not to be punched or drilled assembled or drilled from the solid while in assembled.
Cast or steel thicker than 3/4" or low alloy steel thicker than 5/8" shall be drilled.
All holes shall be deburred with a tool making a 1/16" chamfer.

APPROVED BY:
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date:
Rev. 1 Date: Rev. 3 Date:
Rev. 2 Date: Rev. 4 Date:
Not Approved Until Dated

SEE SHEET 51 FOR CAMBER SEE SHEET X10 FOR TYP DETAILS
AREA MARKED NO PAINT TO RECIEVE DSO
LINSEED OIL TINTED WITH RED LEAD
HOUSTON FABRICATION
Gen. Notes: WORK THIS SHEET WITH SHEET #51

Rivets 7/8 Open Holes 13/16 Delivery Promised
Paint SEE SHEET #51 AND NOTES

DESCRIPTION OF REVISION

1 LIN FT	V WELD
1 LIN FT	V WELD
12 LIN FT	FILLET WELD
2152 PCS	FOR ISLIVES
4 PCS	OF 2E SHOP RIVETS

GIRDER UNIT #1

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Appr'l | Shop
6-3-57

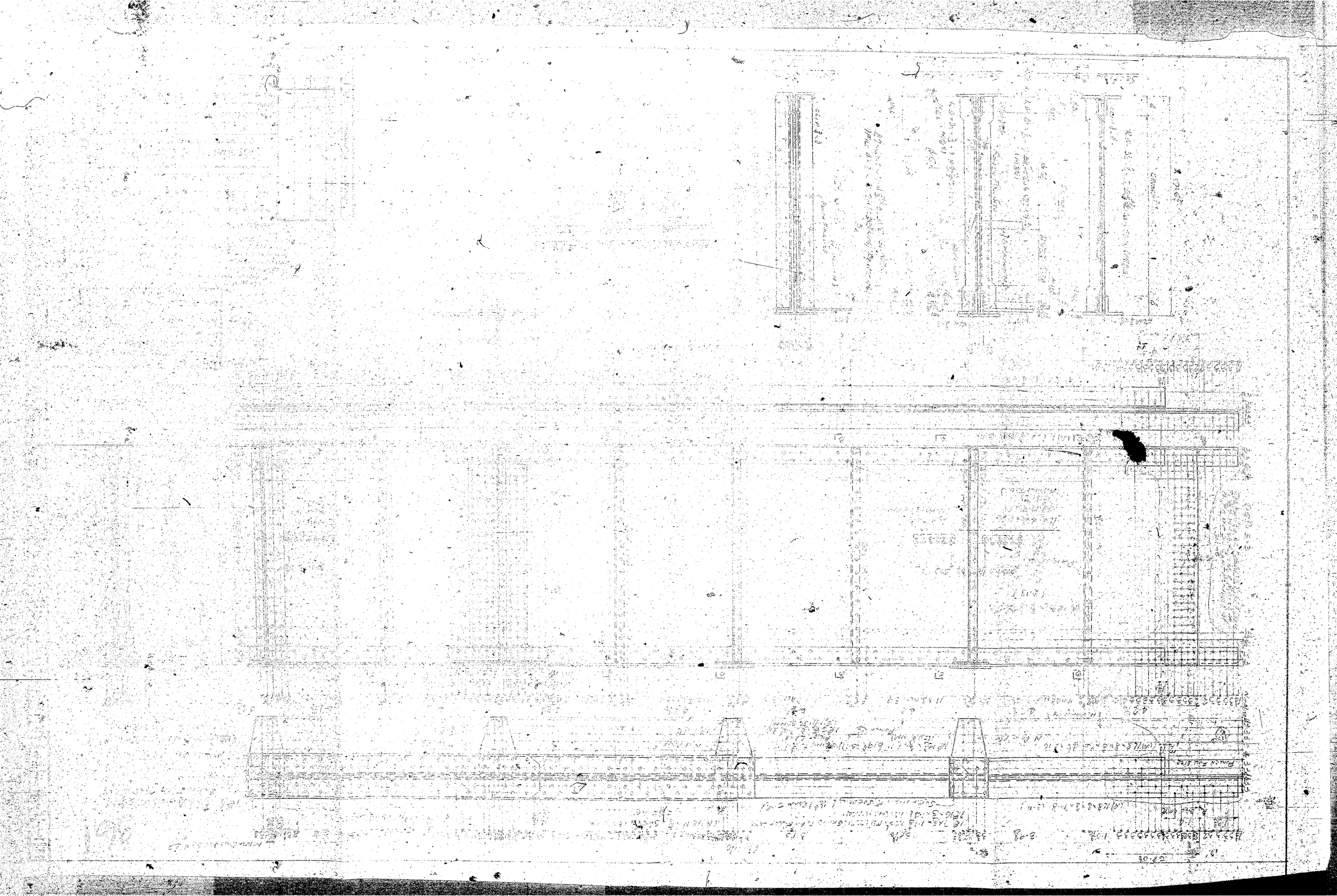
Customer JOHN F. BEASLEY CONSTR. CO.
Architects ARKANSAS & MISSISSIPPI STATE HIGHWAY
Building MISSISSIPPI RIVER BRIDGE
Made by J. H. 5-14-57 HELENA, ARK.
Traced by Filing Date
Checked by P. [illegible]
Approved by
Order No. 64201 Sheet No. 50 Drawing No. 0

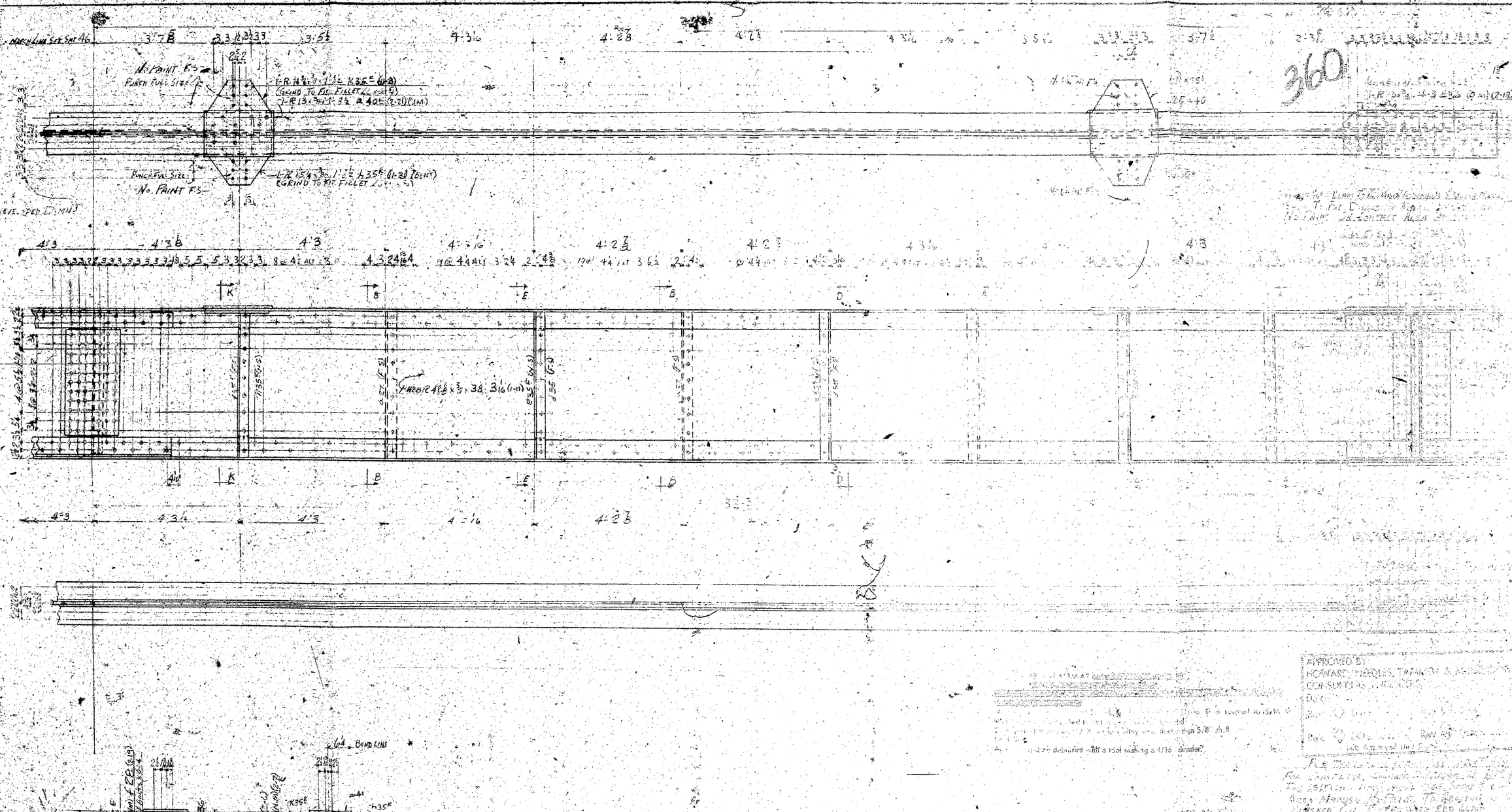
362

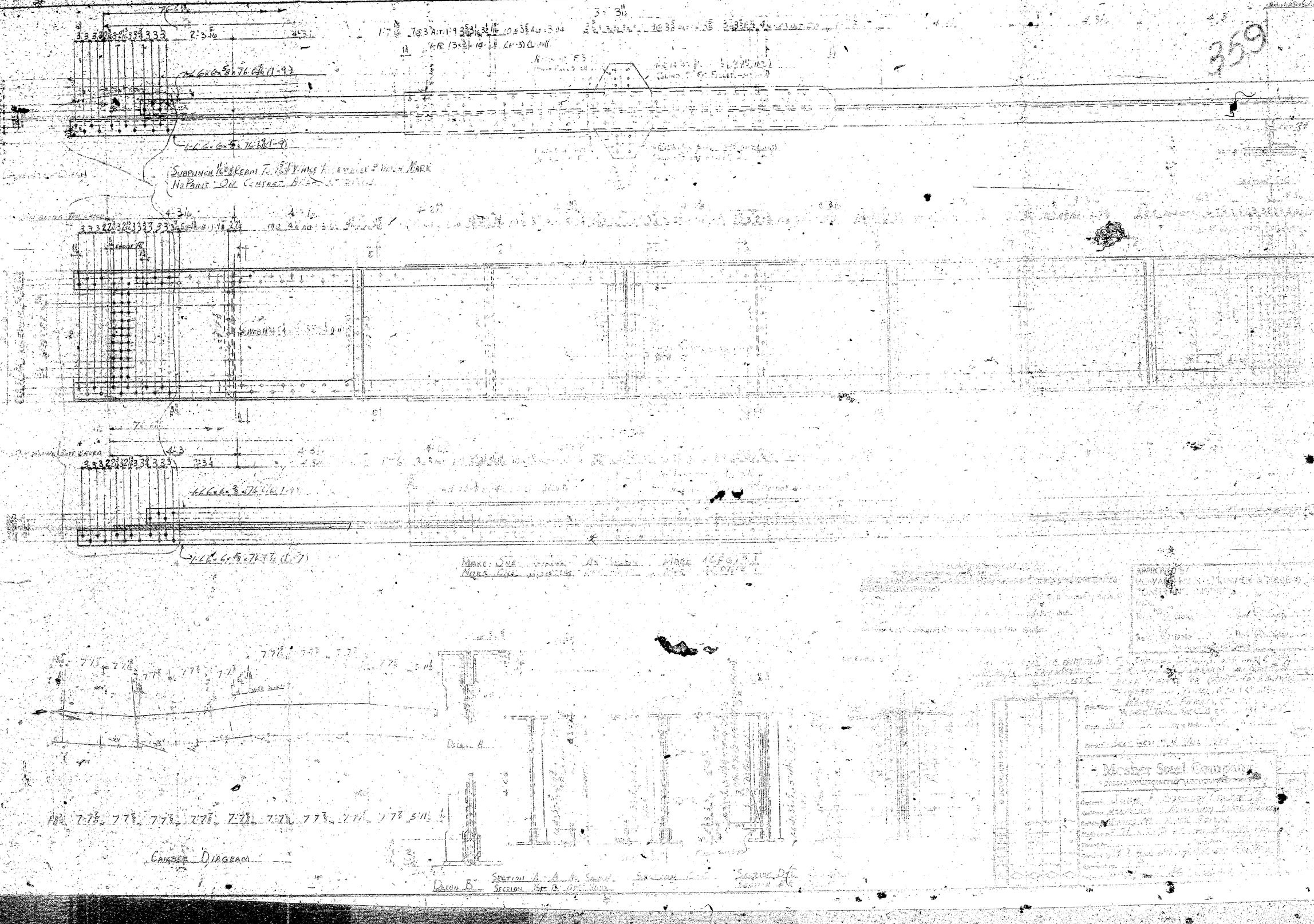
APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date
Rev. Date
Rev. Date
Not Approved Until Dated

All steel ASTM A7 except as noted otherwise [illegible]

Mosher Steel Company




SEE SHT 46
NO PAINT F.S.
PUNCH FULL SIZE
PUNCH FULL SIZE
NO PAINT F.S.
DEVELOPED LENGTH
K
B
E
B
D
K
B
E
B
D
BEND LINE
NO PAINT N.S.
PUNCH FULL SIZE
SECTION H-H
SECTION K-K AS SHOWN
SECTION L-L OPP HAND
APPROVED BY:
HOWARD NEEDLES TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
DATE
REVISIONS
DESCRIPTION OF REVISION
Missouri State Highway Department



Camber Diagram

Detail B

Section A-A

Section B-B

Section C-C

Section D-D

Member Steel Company

Marker Line Sht # 54

Punch Full Size

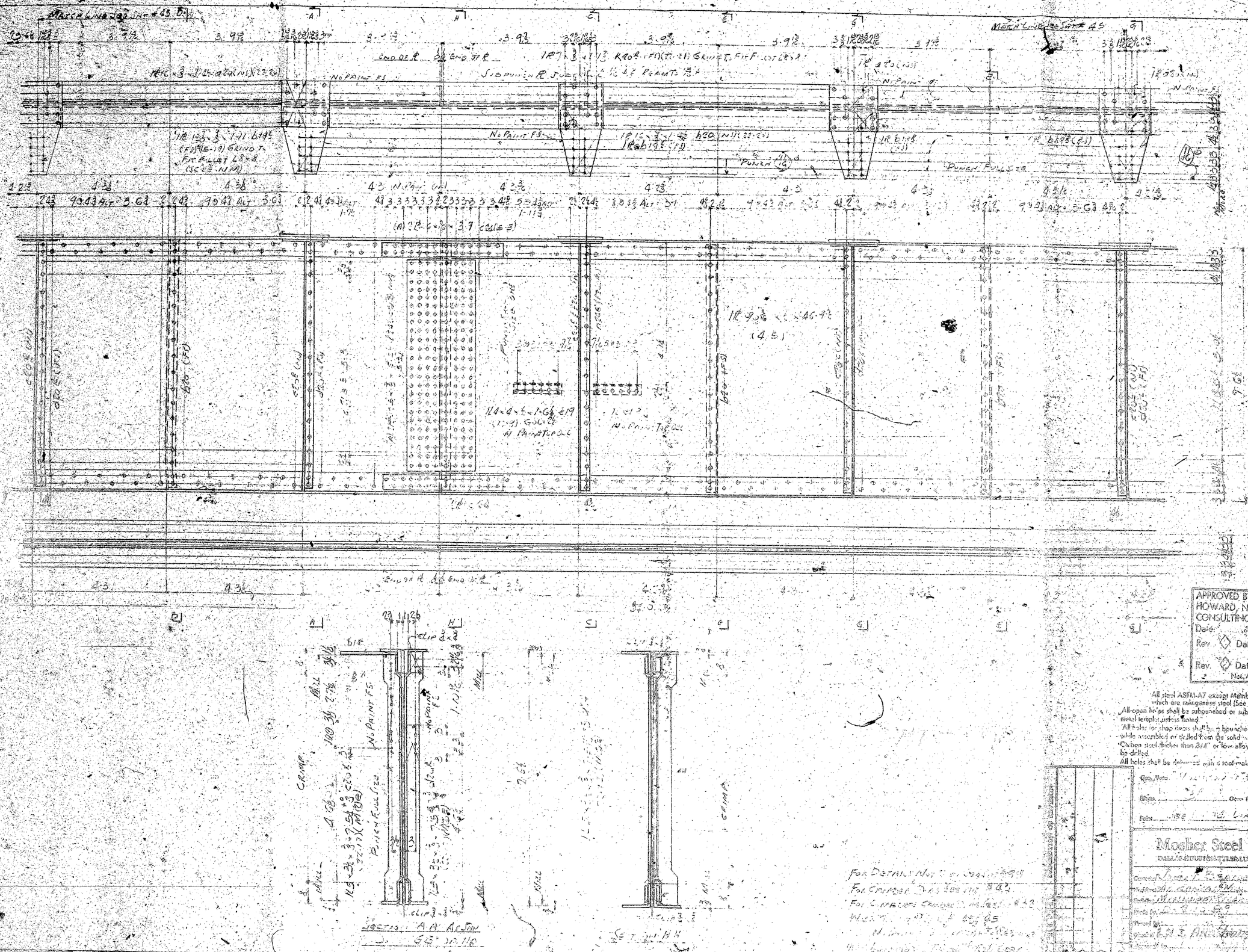
Punch Full Size

APPROVED BY
HOWARD NEEDLES TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date:
Rev. 1 Date:
Rev. 2 Date:

All steel A 514 A7 Except Members and PL
which are manufactured from A 36 steel
All punch holes shall be subpunched and reamed from the assembled
metal template
All holes for shop
while assembled
Carbon steel
be drilled
All holes shall be

Gen Mech

Mosher Steel Company


MARK LINE ON SHT #43 B
MARK LINE ON SHT #45
END OF R
END OF R
SIDE PUNCH R JOB
PUNCH FULL SIZE
NO PAINT FS
NO PAINT
PUNCH FULL SIZE
(A) PL 6 x 3/4 x 3'-7" (CURVED)
(45)
(43)
SECTION A-A AT JOIN
SECTION B-B
FOR DETAILS NOT SHOWN REFER TO
FOR CAMBER DIAGRAMS REFER TO
FOR ERECTION DIAGRAMS REFER TO
WORK POINTS
NOTE
Mocher Steel Company
APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date
Rev. Date
Rev. Date
Rev. Date
Rev. Date
Not Approved Until Dated
All steel ASTM-A7 except Members MKD "A"
which are manganese steel (See Spec.
All open holes shall be subpunched or subdrilled 11/16" Ø & reamed to 15/16" Ø
metal templet unless noted
All holes for shop rivets shall be punched or subdrilled 11/16" Ø (PUNCH FULL SIZE)
while assembled or drilled from the solid unless noted
Carbon steel thicker than 3/4" or low alloy steel thicker than 3/8" shall
be drilled
All holes shall be deburred with a tool making a 1/8" [illegible]
Mocher Steel Company

SECTION D-D

CANTILEVER DIAGRAM

353

No Paint Fs
Punch Full Size

1-R 15/16 x 1 1/16 K35 (3)
(Grind To Fit Fillet)
1-R 15/16 x 1 1/16 x 1'-0" K35 (3)

Punch Full Size
No Paint Fs

Developed Down

Punch Full Size

Section H-H

Bend Line

Punch Full Size

Section K-K As Shown
Section L-L Opp Hand

No Paint

Approved by
Howard Needles Tammen & Bergendoff
Consulting Engineers
Date
Rev
Rev Date
Final Approved Drill Dia

For Typical Details See Sheet
For Complete Railing
For Section and Note
Area Marked No Paint To Receive
Linseed Oil Tinted With
Houston Fabrication

Gen. Notes Work This Sheet With
Blocks Open Holes
Paint See Sht #4

Mosher Steel Company
Dallas-Houston-Tyler-Lubbock-Shreveport

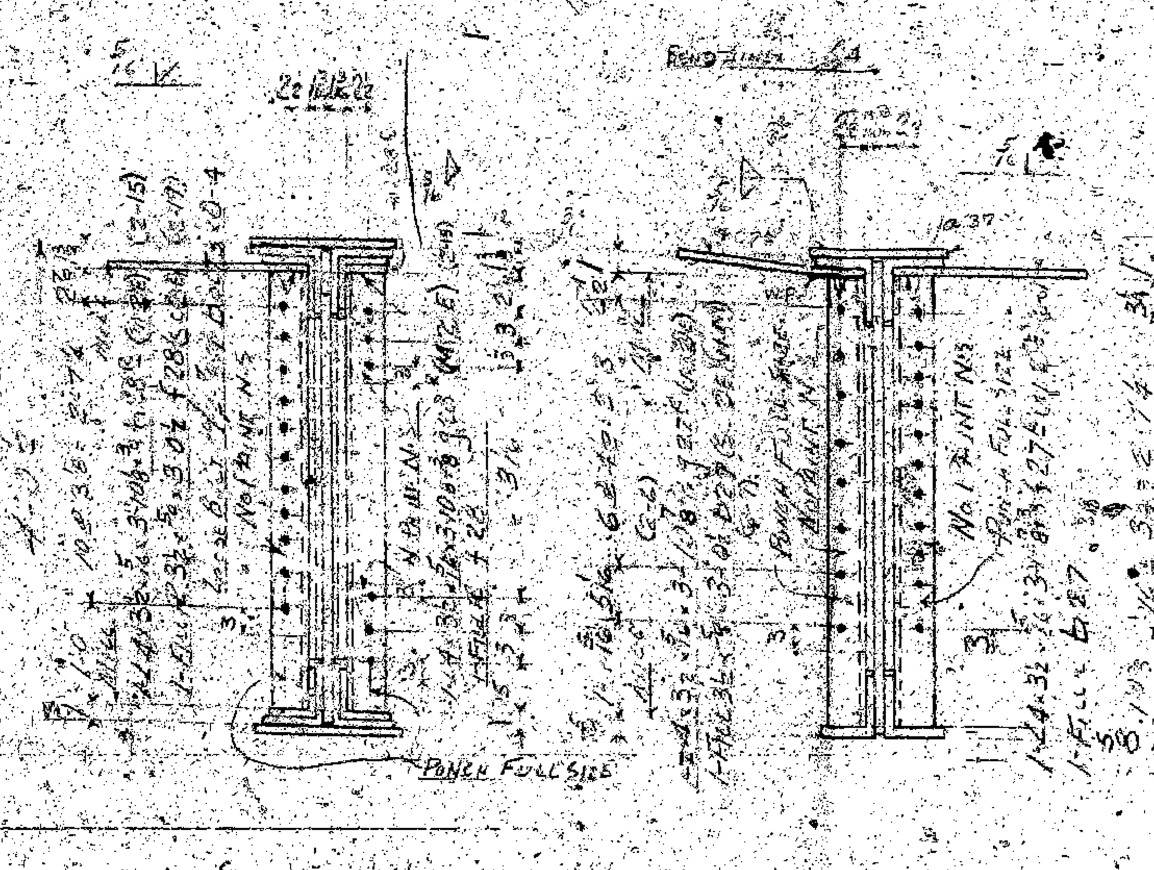
Customer Texas F Berkley
Architect
Detailed
Made by
Traced by
Checked by
Approved by
Order No. Sheet No. Drawing No. 0

Description of Revision
Date
Appd
Chkd

352

Mosher Steel Company

351



SECTION H-H

SECTION K-K AS SHOWN
SECTION L-L OPP HAND

All [illegible] ASTM-A7 [redacted]

[illegible] 16 Ø & reamed to 15/16 Ø while assembled or drilled [illegible] assembled.
Carbon steel thicker than 3/4" or low alloy steel thicker than 5/8" shall be drilled.
All holes shall be deburred with a tool making a 1/16" chamfer.

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date
Rev. Date Rev. Date
Rev. Date Rev. Date
Not Approved Until Dated

FOR TYPICAL DETAILS SEE SHEET 86(?)
FOR COMPLETE CAMBER DIAGRAM SEE SHEET [illegible]
FOR SECTIONS NOT SHOWN SEE SHEET # 37
AREA MARKED NO PAINT TO RECIEVE 1 S.C.(?)
LINSEED OIL TINTED WITH RED LEAD

Gen. Notes: HOUSTON FABRICATION
WORK THIS SHEET WITH SHEET # 37
Rivets 7/8 Open Holes 15/16 [illegible]
Paint SEE SHT #4 [illegible]
Delivery Promises

DESCRIPTION OF REVISION — GIRDER UNIT #1(?)

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer JOHN F. BEASLEY CONSTR. CO.
Architect ARKANSAS & MISSISSIPPI STATE HIGHWAY
Building MISSISSIPPI RIVER BRIDGE
Made by [illegible] 3-59 HELENA ARK
Traced by
Filing Date 1358
Checked by W. J. [illegible]
Approved by
Order No. [illegible] Sheet No. 28 Drawing No. 0

App'l 8-3-59 | Shop

350

Camber Diagram For Girder 37PG2E

Camber Diagram For Girder 37PG1E

Detail A

Detail B

Section A-A As Shown

Section B-B As Shown

Section C-C As Shown

Section E-E

Det. A

Det. B

Make One Girder As Shown Mrk Mark 37PG1E 1
Make One Girder Opp Hand To Mark Mark 37PG1E 1
Make One Girder As Shown Mrk Mark 37PG2E 1
Make One Girder Opp Hand To Mark Mark 37PG2E 1

List Of Bill Of Material
3728 3/4 Shop Rivets
25 In Ft Fillet Weld
44 Lin Ft V Weld
42 Lin Ft V Weld

All steel ASTM-A7

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF,
CONSULTING ENGINEERS
Date:
Rev. Date: Rev. Date:
Rev. Date: Rev. Date:
Not Approved Until Dated

See Sht 31 For Complete Camber Diagram For This Detail Sheet

Gen. Notes: Houston Fabrication Work This Sheet With Sheet # 38
Rivets: Shop Holes: Punched Field Holes: Reamed
Paint: See Sheet # 4 Unpainted
Delivery Promised

Mosher Steel Company
Dallas-Houston-Tyler-Lubbock-Shreveport

Customer: John F. Casey Co. Contractors
Job: Mississippi River Bridge Approach
Building: Mississippi River Bridge Approach
Made by: K.S. Shop: Helena, Ark.
Traced by: Filing Date: 1959
Checked by: W.J. Approved by: as Detailed
Order No. 6427 Sheet No. 37 Drawing No. O

Appl. Shop

349

Match Line See Sht #5

Punch Full Size

Punch Full Size

No Paint F.S.

No Paint F.S.

Detailed Dimn.

5'-0 11/16

Suspended Span

No Paint On Contact Area At Splice

Mark L Top

Mark R Top

Mark L Top

Mark R Top

Mark L Bott.

Mark R Bott.

Section A-A

All steel ASTM A7

All holes in steel to carry shall be [illegible] which are shown in detail [illegible] Carbon steel thicker than 3/4" [illegible] alloy steel thicker than 1/2" shall be drilled.
All holes shall be deburred with a tool making a 1/32" chamfer.

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date
Rev. Date Rev. Date
Rev. Date Rev. Date
No Approval Required

For Typical Details See Sheet # 86
For Complete Sheet Diagram See Sheet #
After Marked No Paint Is Recieved Linseed Oil Paint With Red Lead
Houston Fabrication

Gen. Notes Work This Sheet With Sheet # 35
Rivets B F E Open Holes F Add'l No.
Paint See Sht #4 Dwg Ned
Delivery Promised

DESCRIPTION OF REVISION

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer John F. Beasley Constr. Co.
Architect Alkon Co. & Mississippi State Highway
Building Mississippi River Bridge
Made by JAL 2-4-57 Date Houston, Tex.
Traced by Filing Date 1953
Checked by W.J. Armstrong 4-22-58 (Sht 203)
Approved by
Order No. 6421 Sheet No. 36 Drawing No. 0

Appl 8-3-57

348

No Paint (F.S.)

Punch Full Size

Match Line See Sheet # 36

Camber Diagram

All steel ASTM A7 [redacted]

All re-as shall be deburred with a tool making a 1/16" chamfer.

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date
Rev. Date Rev. Date
Rev. Date Rev. Date
Not to be used for Construction

See Sht. 36 For General Details
See Sheet 31 For Concrete & Misc. Data

Anch Marble N. D. in To Receive
Linseed Oil Tinted Red Lead
Gen. Notes: Houston Fabrication
Work This Sheet With Sheet # 36
Rivets 3/4" Open Holes F.F. Dia. Ntp
Paint See Sheet # 4 Dia. Ntp

Section A-A
Section B-B As Shown
Section E-E Off Hand
Section C-C
Section D-D As Shown
Section F-F Off Hand

List on Bill of Material
1588 lbs
9 Lin Ft 5/16 Fillet Weld

Description of Revision

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer: John F. Beasley Constr. Co.
Architect: Arkansas Mississippi State Highway
Building: Mississippi River Bridge
Made by: F.H. 2-2-59 Helena Arc.
Traced by: Filing Date: 1959
Checked by: W.J. [illegible] 2-59 (Corr.)
Approved by:
Order No. 64201 Sheet No. 35 Drawing No. 0

341

TOP OF GIRDER

1-PL 7⅞ × 4'-0½ @ 34

6-⅞ø BLANK BOLTS @ 4 (SHOP) (NO THDS)

NO PAINT NS

1-PL 2½ × 8 × 1'-10½ @ 34

1-PL 7⅞ × ¾ × 4'-11⅛ @ 22 (CENT) (2 REQ'D)

NO PAINT NS

1-PL 25½ × ⅝ × 4'-0½ @ 22

(1-PL 42½ × ⅝ × 4'-3⅜ CUTS 2) (22 REQ'D)

VIEW A-A

1-PL 7⅞ × 1'-11½ @ 34 (NO REQ'D)

NO PAINT NS

1-PL 7⅞ × 3'-11⅜ @ 34

(4-15-7)

(2-25-7)

⅝ø ROD × 1'-10½ K34 (PAINT)

⅜ KNR

FLUSH

SECTION B-B

2'-0 ℄ GIRDER

1'-11

1-PL 7⅞ × 1'-11½ @ 34 (NO REQ'D)

NO PAINT NS

TABLE GIRDER

1-PL 2½ × 8 × 1'-11½ @ 34 (4 REQ'D)

(1-PL 22½ × 8 × 2'-8 CUTS 2)

NO PAINT NS

MAKE ONE BRACKET AS SHN MARK 34BR2 ①

do ONE do OPP HD do 34BL2 ②

1-PL 2½ × 8 × 1'-10½ @ 34

TACK WELD

1-PL 2½ × 8 × 1'-2 @ 34

TACK WELD

7-RODS K34

NO WELD

NO PAINT (BS)

NO PAINT (FS)

34BL2 ② - ONE BEAM AS SHN (1-PL 9.3) × 16'-11⅞ (CUT TO ENVELOPE)

34BR2 ① - ONE do OPP HD (1-PL 9.3) × 16'-11⅞ (")

2'-0 ℄ GIRDER

1'-11

1-PL 7⅞ × 1'-10½ @ 34

(2 REQ'D)

NO PAINT (BS)

1-PL 2½ × 8 × 1'-10½ @ 30

(1-PL 22½ × 8 × 2'-7½ CUTS 2)

(2 REQ'D)

(2 REQ'D)

MAKE ONE BRACKET AS SHN MARK 34BR3 ②

ONE do OPP HD do 34BR3 ③

ONE do AS SHN do 34BR3 ④

ONE do OPP HD do 34BR3 ⑤

LIST ON B.M.

¾ø A325 BOLTS

232 LIN FT ⅛ FILLET WELD

5 do 4 do do

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF,
CONSULTING ENGINEERS.

Date

Rev. ◇ Date Rev. ◇ Date

Rev. ◇ Date Rev. ◇ Date

Not Approved Until Dated

MAKE ONE BRACKET AS SHN MARK 34BL1 ①

do ONE do OPP HD do 34BR1 ②

TEMP. J

1-PL 2½ × 10 × 1'-10½ @ 34

TACK WELD

1-PL 2½ × 10 × 2' @ 34

TACK WELD

7-RODS K34

NO WELD

NO PAINT (FS)

NO PAINT (BS)

34BL1 ① - ONE BEAM AS SHN (1-PL 9.3) × 16'-11⅞ (CUT TO ENVELOPE)

34BR1 ② - ONE do OPP HD (1-PL 9.3) × 16'-11⅞ (")

1-PL 2½ × 8 × 1'-11½ @ 34 (4 REQ'D)

(1-PL 22½ × 8 × 2'-8 CUTS 2)

NO PAINT (NS)

1-PL 7⅞ × 1'-11½ @ 22 (STK)

NO PAINT (BS)

1-PL 5½ × 8 × 2'-10½ @ 34

(FS TACK)

10 @ 3½ = 2'-7½

1-PL 35½ × ⅝ × 3'-11⅛ @ 34

(1-PL 44½ × 16 × 4'-3⅜ CUTS 2)

(4 REQ'D @ 2'-5")

MAKE ONE BRACKET AS SHN MARK 34ER4 ①

ONE do OPP HD do 34ER4 ②

ONE do AS SHN do 34ER4 ③

ONE do OPP HD do 34ER4 ④

ONE do TYP SHN do 34BR4 ⑤

ONE do OPP HD do 34BR4 ⑥

ALL PAINTING TO RECEIVE A SHOP COAT OF LINSEED OIL TINTED WITH RED LEAD.

HOUSTON FABRICATION

Gen. Notes: ALL HOLES SHALL BE DEBURRED WITH A TOOL MAKING A ⅛ CHAMFER

Rivets ¾ø Open Holes 13/16ø UNLESS NTD

Paint SEE SHT. #4 UNLESS NTD

Delivery Promised

DESCRIPTION OF REVISION	DATE	CHKD BY

Mosher Steel Company

DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Appr'l 2-10-58 Shop

Customer JOHN F. BEASLEY CONST. CO.

Architect ARK. & MISS. STATE HIGHWAY

Building MISSISSIPPI RIVER BRIDGE

Made by C. MCCA... Helena, Ark.

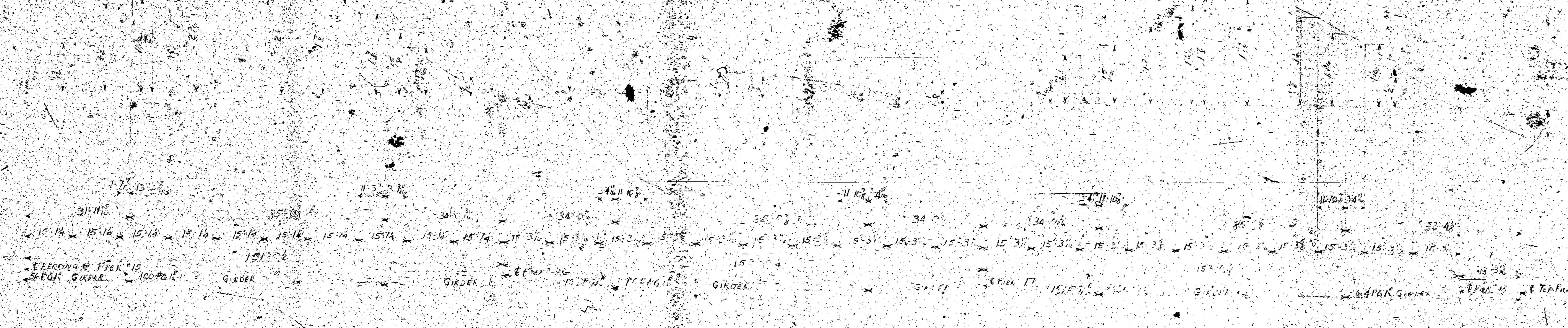
Traced by ... Filing Date 1958

Checked by ...

Approved by ...

Order No. 6232 Sheet No. 34 Drawing No. 0

346



CAMBER DIAGRAM FOR UNIT #4

APPROVED BY
HOWARD, NEEDLES, TAMMEN, & BERGENDOFF,
CONSULTING ENGINEERS
Date:
Rev. ⟨1⟩ Date: Rev. ⟨3⟩ Date:
Rev. ⟨2⟩ Date: Rev. ⟨4⟩ Date:
Not Approved Until Dated

CAMBER DIAGRAM

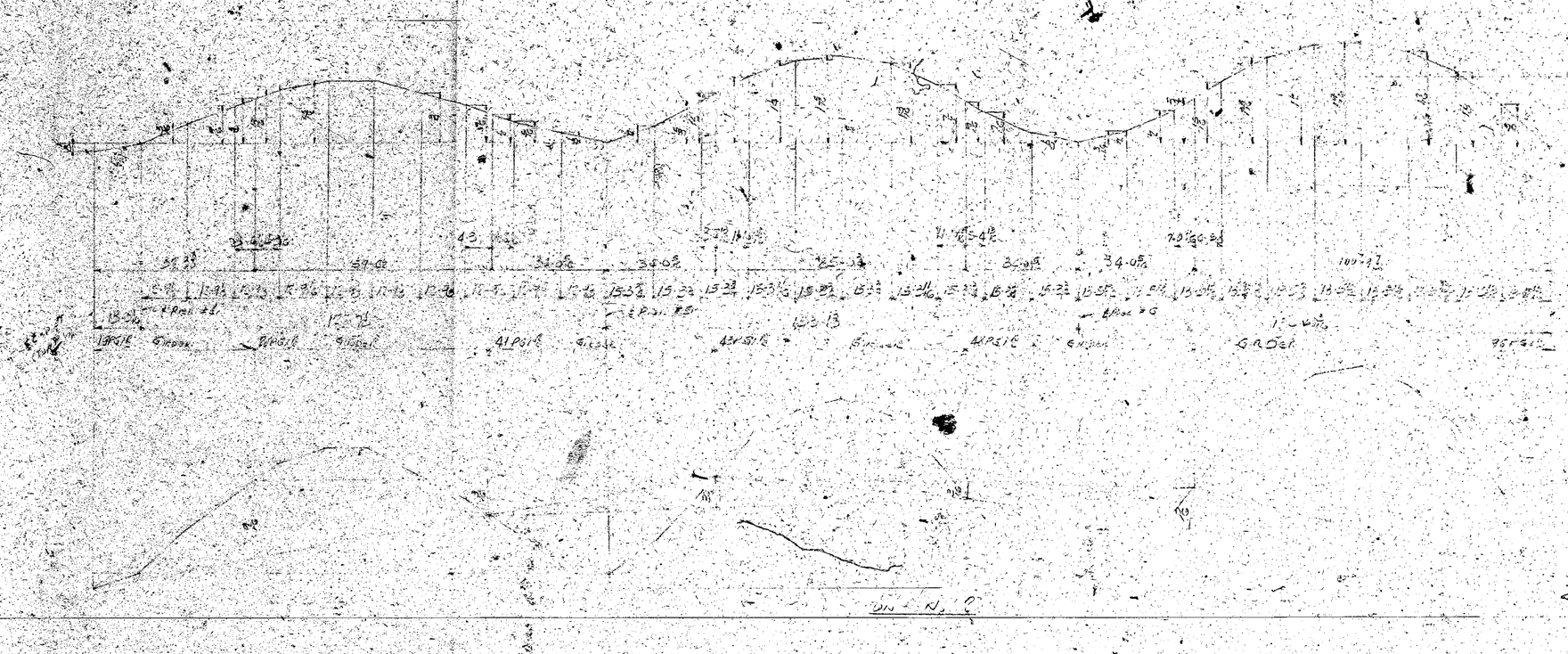
DESCRIPTION OF REVISION

Gen. Notes:
Rivets Open Holes
Paint

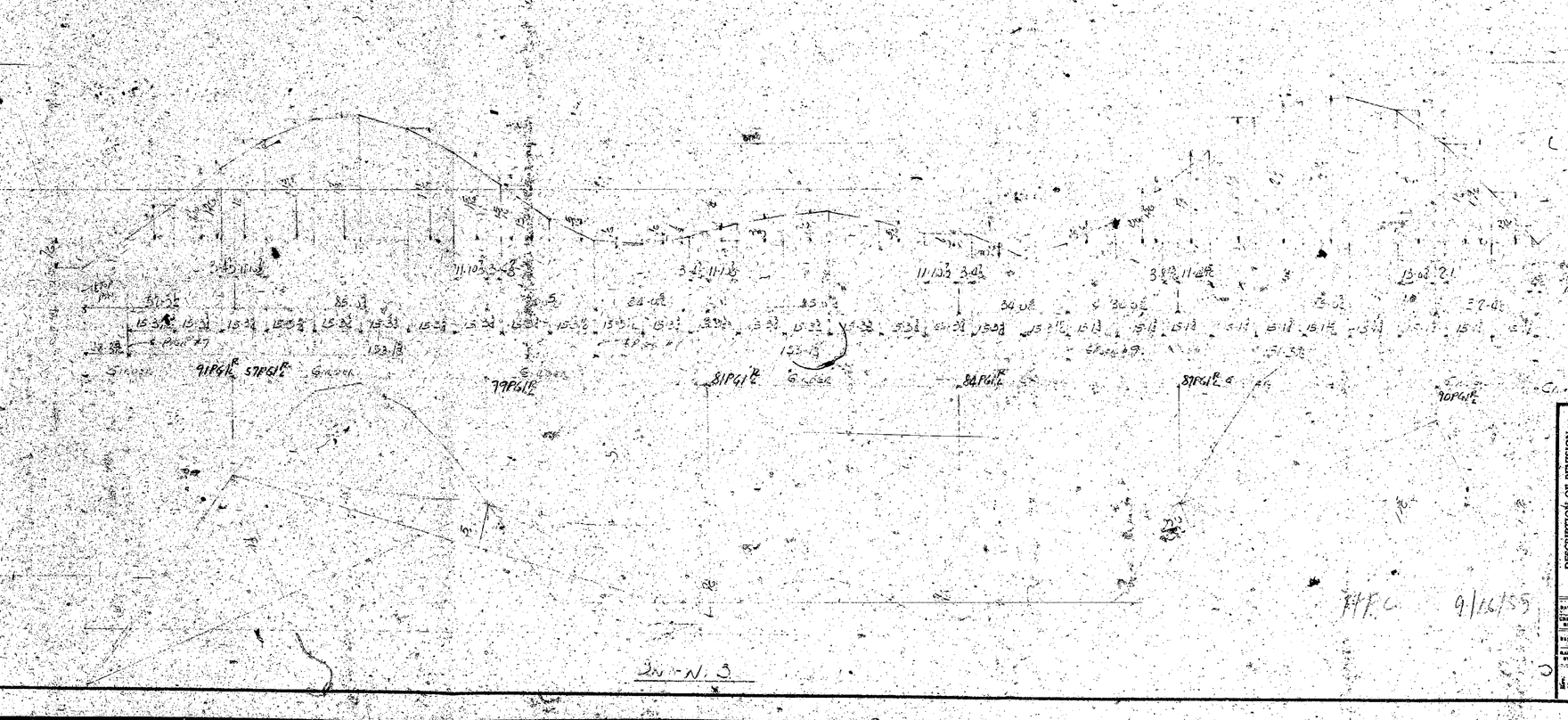
Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer: JOHN F. BEASLEY CONST. CO
Architect: ARK. & MISS. STATE HIGHWAY
Building: MISSISSIPPI RIVER BRIDGE
Made by: C. MOCK 2-12-57 HELENA, ARK.
Traced by: Filing Date: 1958
Checked by:
Approved by:
Order No. 64201 Sheet No. 33 Drawing No. 0

345



DIA - N. 2



DIA - N. 3

FFC 9/16/59

DESCRIPTION OF REVISION	DATE	BY

Gen. Notes:

Errors ____ Open Holes ____ Delivery Promise

Paint ____

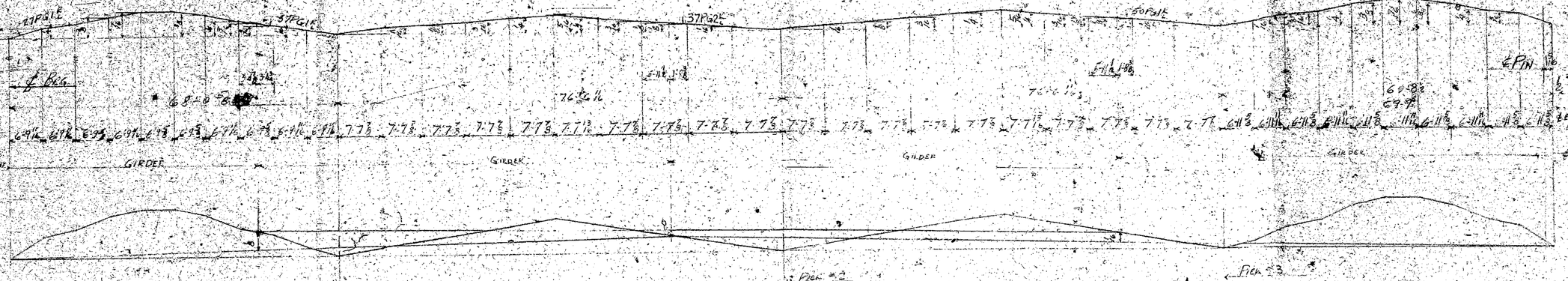
Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Mark 8 1P1

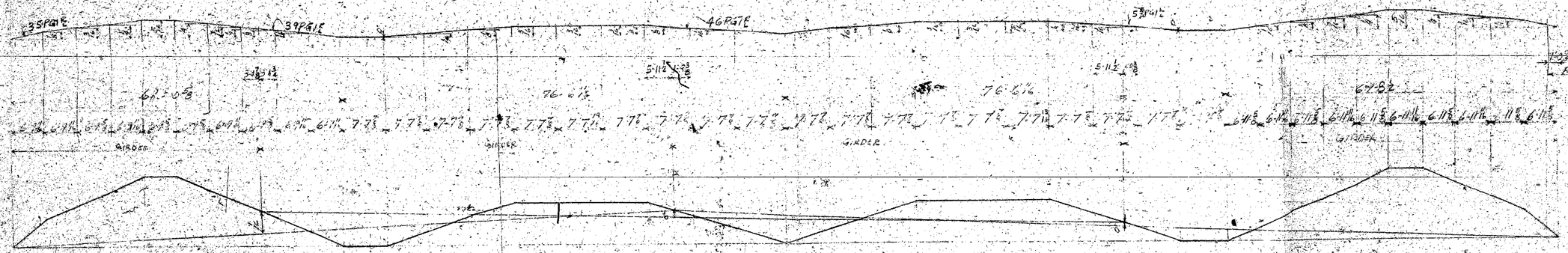
Customer Texas Portland Cement Co.
Architect Kelton & Tatum & Howard Barnes
Building Division Dr. Kiln Supports
Made by ____ Date March 1959
Traced by ____ Filing Date 1961
Checked by W. J. Armstrong 6-24-59 (Sta Co.)
Approved by ____
Order No. ____ Sheet No. 3 Drawing No. 0

APPROVED BY
HOWARD BARNES TATUM & SPICER
CONSULTING ENGINEERS
Date
Rev. 1 Date Rev. 2 Date
Rev. 3 Date Rev. 4 Date
Approved for Shop

344



CAMBER DIAGRAM EXTERIOR GIRDERS UNIT #1



CAMBER DIAGRAM INTERIOR GIRDERS UNIT #1

Camber Diagram

Gen. Notes:

Rivets ____ Open Holes ____ Drawing Number

Paint ____

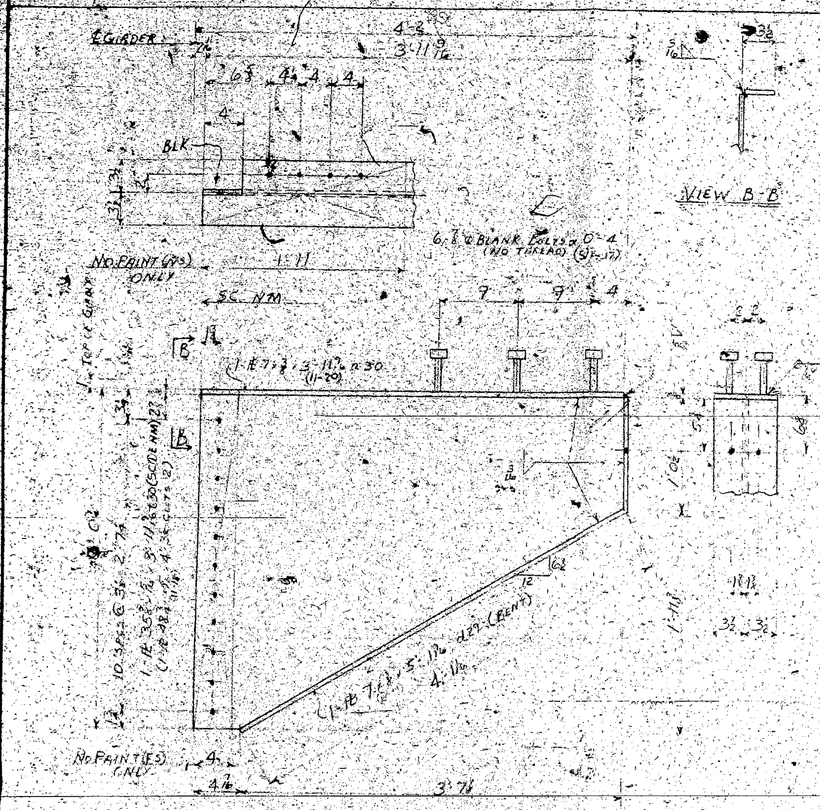
Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

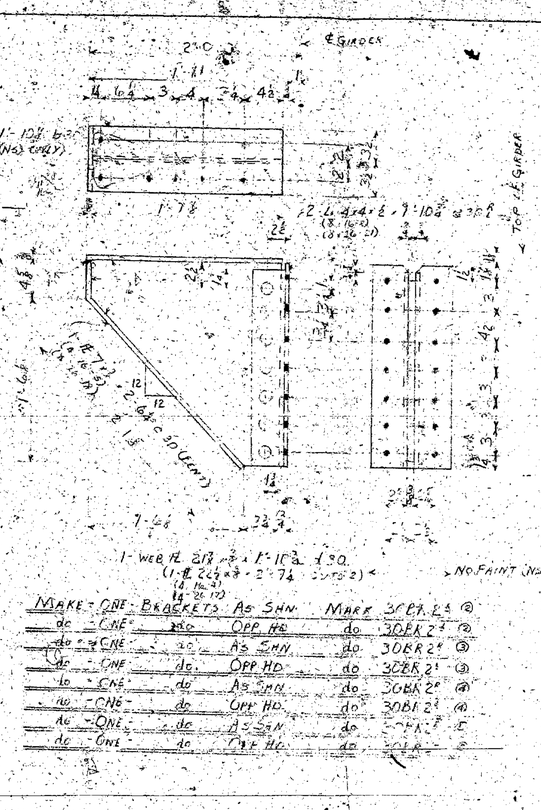
	Appr'l	Shop
	6-3-59	
	8-20-59	

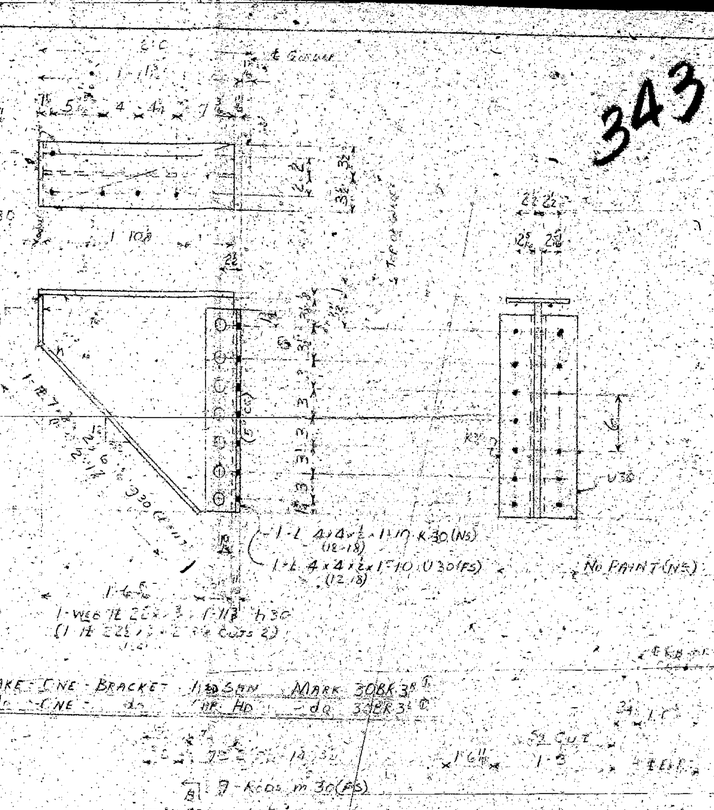
Customer Jean F. Beasley Constr. Co.
Architect Arkansas & Mississippi State Highway
Building Mississippi River Bridge
Made by C.L.P. Date 4-27-59 Scale HELENA HWY
Traced by ____ Filing Date 1959
Checked by W.S. Armstrong 5-21-59 (Shop)
Approved by ____
Order No. 4201 Sheet No. 21 Drawing No. 0

DESCRIPTION OF REVISION

DATE | CHK'D BY | DATE | CHK'D BY | Det. & Ck.

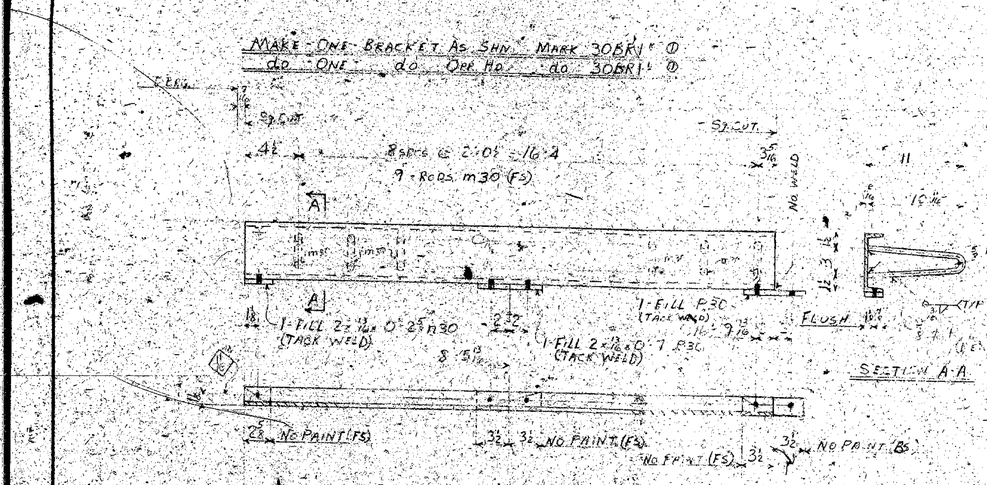


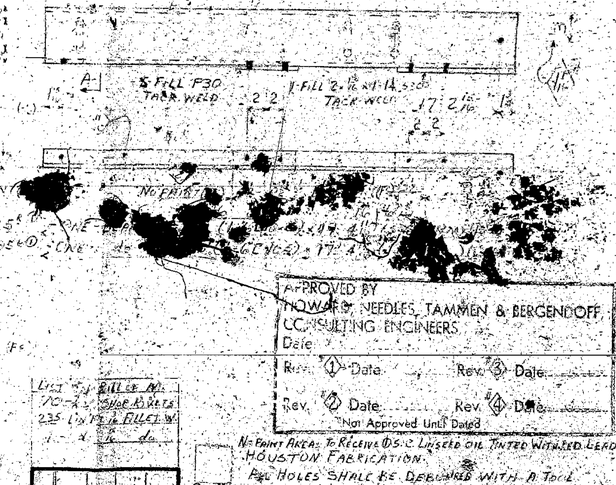




MAKE ONE BRACKET AS SHN MARK 30BK3 ①
do ONE do OPP HD do 30BK3 ①

MAKE ONE BRACKETS AS SHN MARK 30BK2 ②
do ONE do OPP HD do 30BK2 ②
do ONE do AS SHN do 30BR2 ③
do ONE do OPP HD do 30BR2 ③
do ONE do AS SHN do 30BK2 ④
do ONE do OPP HD do 30BK2 ④
do ONE do AS SHN do 30BK2 ⑤
do ONE do OPP HD do 30BK2 ⑤





30B1 ① - ONE - BEAM AS SHN (1-L 6 x 10.5) x 16'-11 13/16 (SC & EMM) (13-4)
30B1 ① - ONE - do OPP HD (1-L 6 x 10.5) x 16'-11 13/16 do (13-4)

MARK							
30B2 ①	ONE	BEAM	AS SHN & NTD	(1-L 6 x 10.5) x 25'-6 3/4	(SC & EMM) (13-5)	1'-2 3/8	25'-4 3/8
30B2 ①	ONE		OPP HD TO 30B2	(1-L 6 x 10.5) x 25'-6 3/4		1'-2 3/8	25'-4 3/8
30B3 ①	3		AS SHN & NTD	(1-L 6 x 10.5) x 25'-4 7/16		1'-2 1/16	25'-4 1/16
30B3 ①	3		OPP HD TO 30B3	(1-L 6 x 10.5) x 25'-4 7/16		1'-2 1/16	25'-4 1/16
30B4 ①	2		AS SHN & NTD	(1-L 6 x 10.5) x 25'-6 3/4		1'-2 3/8	25'-4 3/8
30B4 ①	2		OPP HD TO 30B4	(1-L 6 x 10.5) x 25'-6 3/4		1'-2 3/8	25'-4 3/8
[illegible]	2		AS SHN & NTD	(1-L 6 x 10.5) x 25'-6 3/4		1'-2 3/8	25'-4 3/8
[illegible]	2		OPP HD TO 30B5	(1-L 6 x 10.5) x 25'-6 3/4		1'-2 3/8	25'-4 3/8
[illegible]	ONE		AS SHN & NTD	(1-L 6 x 10.5) x 25'-6 3/4		1'-2 3/8	25'-4 3/8
[illegible]	ONE		OPP HD TO 30B6	(1-L 6 x 10.5) x 25'-6 3/4		1'-2 3/8	25'-4 3/8
30B7 ①	ONE		AS SHN & NTD	(1-L 6 x 10.5) x 25'-6 3/4		1'-2 3/8	25'-4 3/8
30B7 ①	ONE		OPP HD TO 30B7	(1-L 6 x 10.5) x 25'-6 3/4		1'-2 3/8	25'-4 3/8

8-6	FOR OTHERS
8-6 1/2	FOR 30B2
8-5 5/8	FOR 30B4
8-5 5/8	FOR 30B7
17'-1 1/4	FOR 30B2
17'-1 5/8	FOR 30B3
17'-0 1/16	FOR 30B4
17'-0	FOR 30B7

LIST OF BILLS OF SIDE BARS
70-3
235 (13 PCS) FILLER W

DESCRIPTION OF REVISION	DATE

Gen. Notes: MAKING 1/16 CHAMFER
Rivets 7/8 Open Holes 7/8 UNL. N'TD
Paint SEE SHT #4 UNL. N'TD
Delivery Promised

NO PAINT AREAS TO RECEIVE OSC LINSEED OIL TINTED WITH RED LEAD HOUSTON FABRICATION.
PIN HOLES SHALL BE DRILLED WITH A TOOL

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer JOHN F. BEASLEY CONST. CO.
Architect ARK. & MISS. STATE HIGHWAY
Building MISSISSIPPI RIVER BRIDGE
Made by C. MOCK 4-29-57 HELENA, ARK.
Traced by Filing Date 195
Checked by
Approved by
Order No. 64201 Sheet No. 30 Drawing No. O

	Appr'l	Shop
	54	

342

VIEW A-A

6-¾" BLANK BOLTS x 5'-4 NO THREAD (SII-17)

NO PAINT (NS) ONLY

1-PL 7"x¾"-3'-11½" (B27)

1-PL 7"x¾"-4'-0⅞" (B27)

NO WELD

10 SPCS @ 3" = 2'-6"

1-PL 35"x⅝"-4'-0⅞" (C27) & 1-PL 48"x⅝"-4'-3⅞" (C27) (11-12)

4-1⅛" Ø (BENT)

NO PAINT (FS) ONLY

1-PL 7"x¾"-3'-11½" (B27)

1-PL 7"x¾"-4'-0⅞" (B27)

NO WELD

10 SPCS @ 3" = 2'-7½"

1-PL 35"x⅝"-4'-0⅞" (C27) & 1-PL 48"x⅝"-4'-3⅞" (C27) (11-12)

4-1⅛" Ø (BENT)

NO PAINT (FS) ONLY

MAKE - 3 - BRACKETS AS SHN MARK 27BR4 (1)
do 3 do OFF HD do 39BR4 (1)

MAKE - ONE - BRACKET AS SHN MARK 27BR2 (1)
do ONE do OFF HD do 27BR2 (1)

MAKE - 27 - BRACKETS AS SHN MARK 27BK2 (1)
do 27 do OFF HD do 27BK2 (1)

MAKE - 3 - BRACKETS AS SHN MARK 27BR3 (1)
do 3 do OFF HD do 21BR3 (1)

2-FILL 5"x¾"x2'-1½" S27 (SC②E) (TACK WELD) (SIM)

1-PL 17½"x2'-1½" F27 (SIM) (SC②B) (NM)

2 NO PAINT (BS)

6-¾" BLANK BOLTS x 0'-4 (NO THREAD) (SIM)

1-PL 7"x¾"-4'-0⅞" e27

1-PL 11½"x¾"x2'-1½" n23 (SC②E) (NM) (SIM)

NO PAINT (NS) ONLY

S27 CUT

S27 CUT

NO PAINT (BS)

NO PAINT (FS) ONLY

1-PL 7"x¾"-3'-11½" g27

NO WELD

10 SPCS @ 3" = 2'-7½"

1-PL 35"x⅝"-4'-0⅞" (C27) & 1-PL 48"x⅝"-4'-3⅞" (C27) (11-12)

4-1⅛" Ø (BENT)

LIST ON BILL OF MAT'L
154½ LIN. FT. ⅜ FILLET WELD
41 d & d
NO PAINT INSP. TO RECEIVE
DASH CUT OF LINE ONLY
TINTED WITH RED PEN

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date
Rev. (1) Date Rev. (3) Date
Rev. (2) Date Rev. (4) Date
Not Approved Until Dated

HOUSTON FABRICATION:
ALL HOLES SHALL BE DEBURRED WITH A TOOL MAKING A 1/16 CHAMFER.

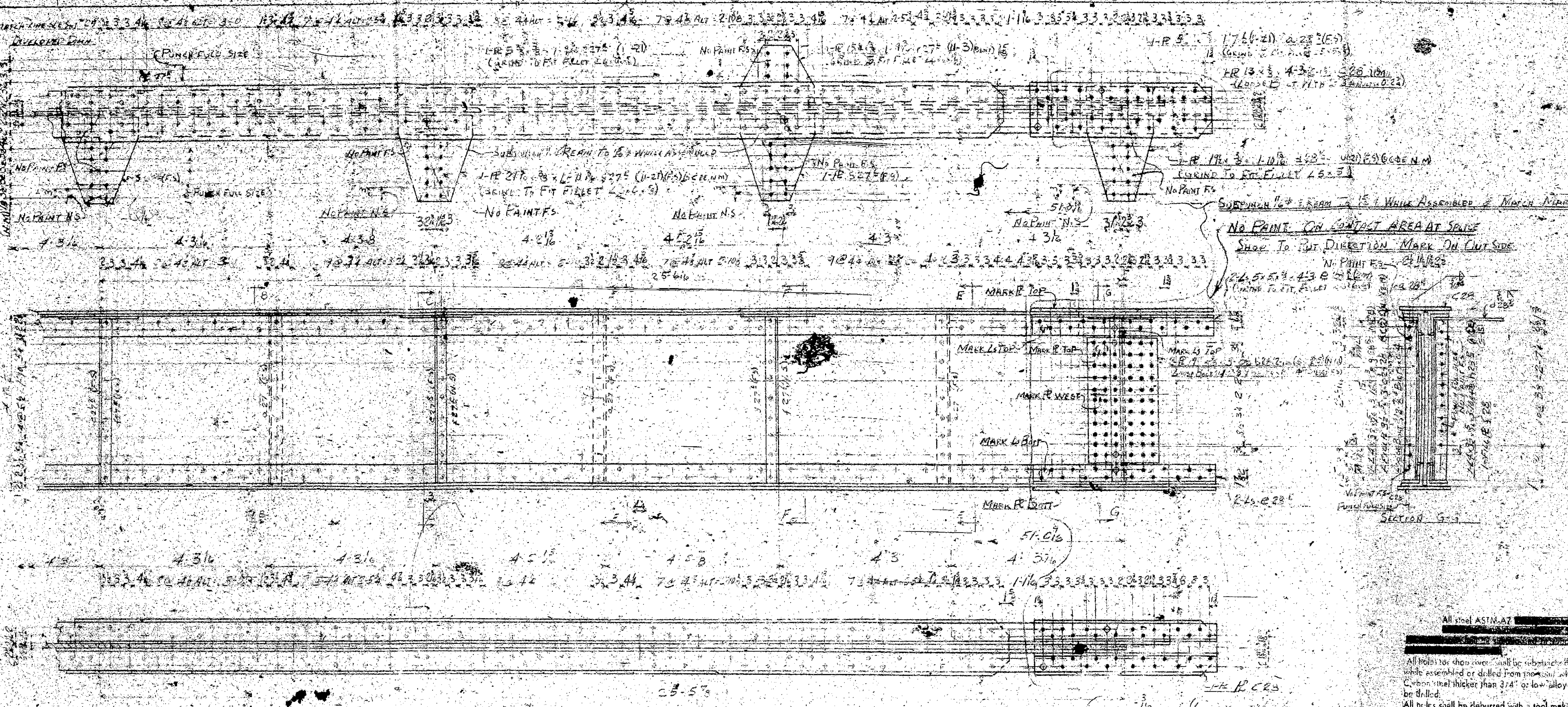
Gen. Notes:
Rivets
Open Holes 15/16 Ø UNL NTD
Paint SEE SHT #A UNL NTD
Delivery Promised

DESCRIPTION OF REVISION | DATE | BY | CHK

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer JOHN F BEASLEY CONST CO
Architect ARK & MISS STATE HIGHWAY
Building MISSISSIPPI RIVER BRIDGE
Made by C MOCK 1-27-57 HELENA, ARK
Traced by Filing Date 1958
Checked by D M S (2nd) 1-31-57
Approved by
Order No. 64201 Sheet No. 29 Drawing No. 0

Appd | Shop



All steel ASTM-A7 [redacted]

All holes for shop rivets shall be subpunched and reamed to 15/16 Ø while assembled or drilled from the solid while assembled.
Carbon steel thicker than 3/4" or low alloy steel thicker than 5/8" shall be drilled.
All holes shall be deburred with a tool making a 1/16" chamfer.

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF,
CONSULTING ENGINEERS.
Date: ....
Rev. ① Date: .... Rev. ③ Date:
Rev. ② Date: .... Rev. ④ Date:
Not Approved Until Dated

See Sheet 86 For Typical Details
For Complete Camber Diagram See Sht. # 2 7(3)
Area Marked No Paint To Receive Two Coats Boiled Oil Tinted With Red Lead
Houston Fabrication

Gen. Notes: Mark This Sheet With Sheet # 27

Rivets 7/8 Open Holes 15/16 Unl. Ntd.

Paint See Sht. 4 Unl. Ntd.

Delivery Promised

DESCRIPTION OF REVISION

DATE | CHK'D BY | DATE | SALE-BY | Rev. No.

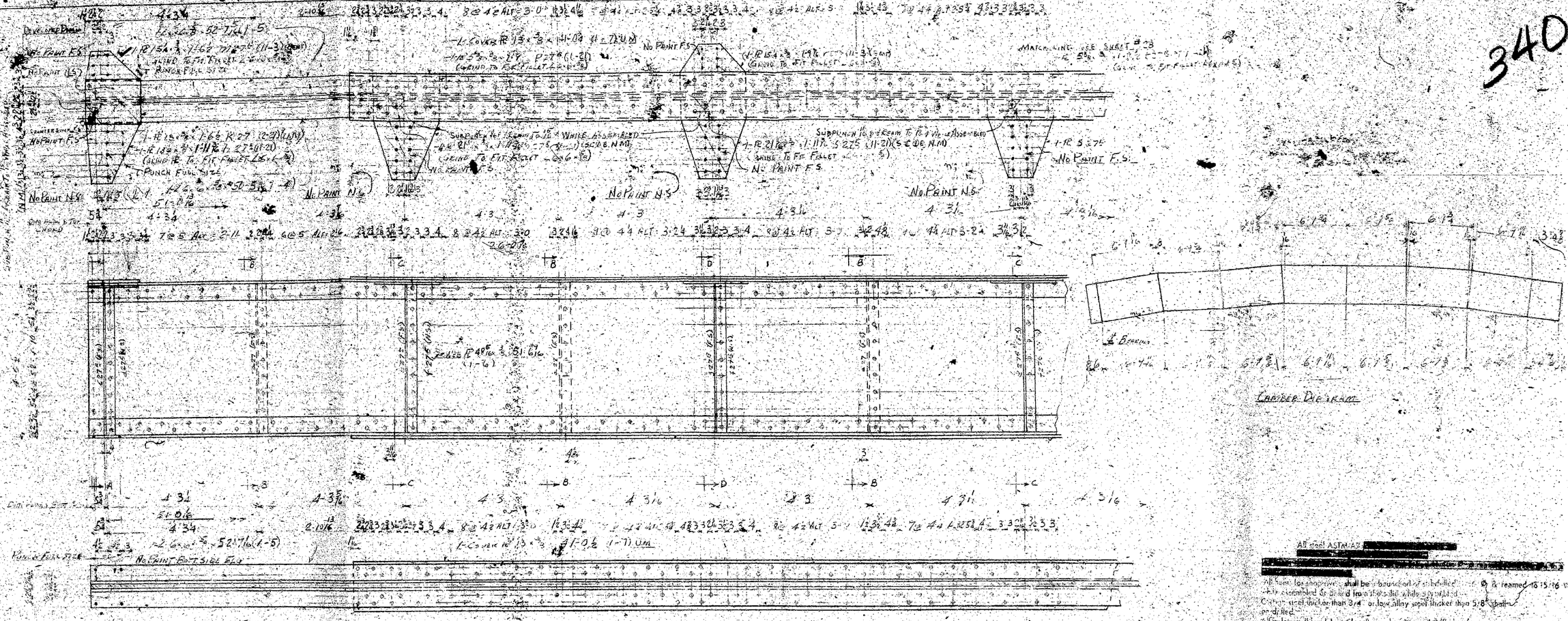
Mosher Steel Company

DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

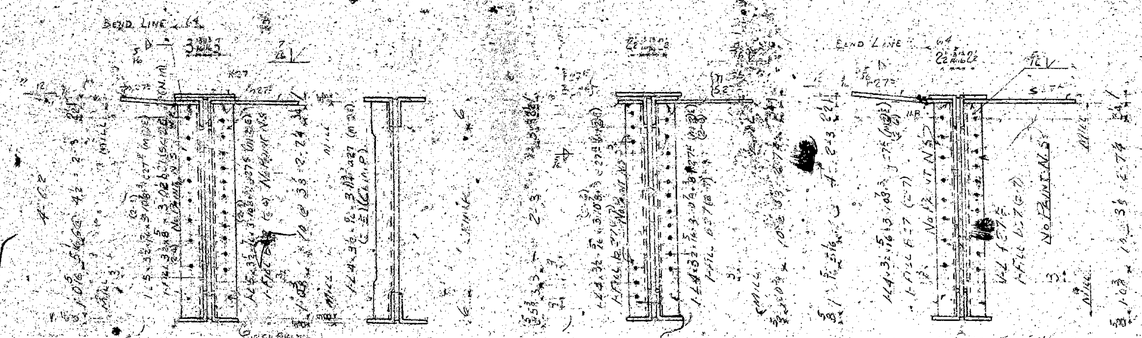
Customer John F. Beasley Constr. Co.
Architect Allen ... Mississippi State Highway ...
Building Mississippi Riv. Bridge
Made by ... 1-26-57 Scale ...
Traced by ... Filing Date ...
Checked by W. J. Armstrong 5-28-57
Approved by ...
Order No. ... Sheet No. 28 Drawing No. 0

Appr'l 8-3-59 | Shop

340



Make One Girder As Shown Mark 27PG1F ①
Make One Girder Opp Hand Mark 27PG1F ②



List On Bill Of Material
4 Lin Ft F.V Weld
10 Lin Ft Fillet Weld
16 - 3/4 Ø Shop Rivets
2 - 3/4 Ø Countersunk Rivets in Web
1 Lin Ft 1/2 V. Weld

All steel ASTM A-[redacted]

All holes for shop rivets shall be punched or drilled. ⊕ to be reamed 1/16 in assembled & drilled from solid
Carbon steel thicker than 3/4" or low alloy steel thicker than 5/8" shall be drilled.
All holes must be deburred with a tool making a 1/16" chamfer.

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date:
Rev. ◇ Date: Rev. ◇ Date:
Rev. ◇ Date: Rev. ◇ Date:
Not Approved Until Dated

See Sheet 8b For Typ Details

Area Marked No Paint To Be Style Linseed Oil Tinted Red Houston Fabrication
For Complete Camber Diagram See Sht # 31

Gen. Notes: Work This Sheet With Sheet # 28

Rivets 3/4 Ø Open Holes 7/8 Ø Unl. Ntd
Paint See Sheet #4 Unl. Ntd

Delivery Promised

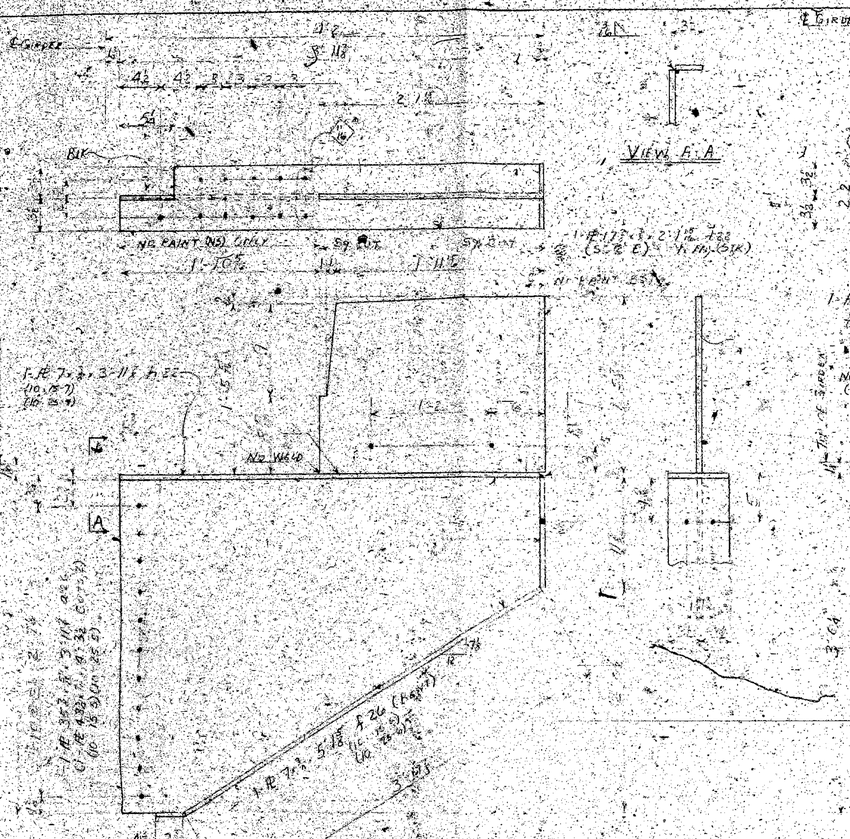
Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Appl 8-3-57 | Shop

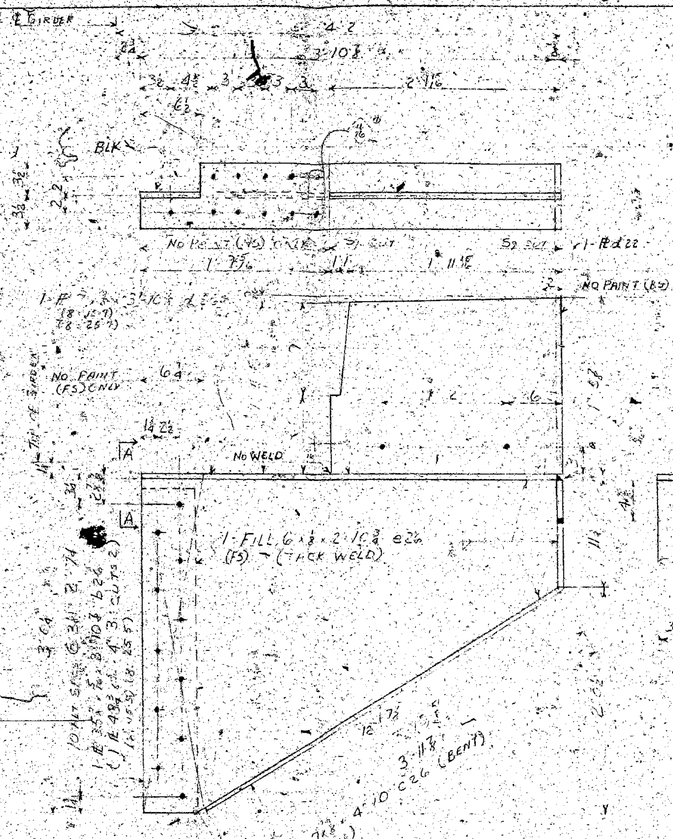
Customer John F. Beasley Const. Co.
Architect Arkansas & Mississippi State Highway
Building Mississippi River Bridge
Made by F.H. Date 7-31-57 Shop Helena, Ark.
Traced by Filing Date 1958
Checked by W.T. Almstead 8-28-57 (8-30-57)
Approved by
Order No. 64201 Sheet No. 27 Drawing No. 0

DESCRIPTION OF REVISION

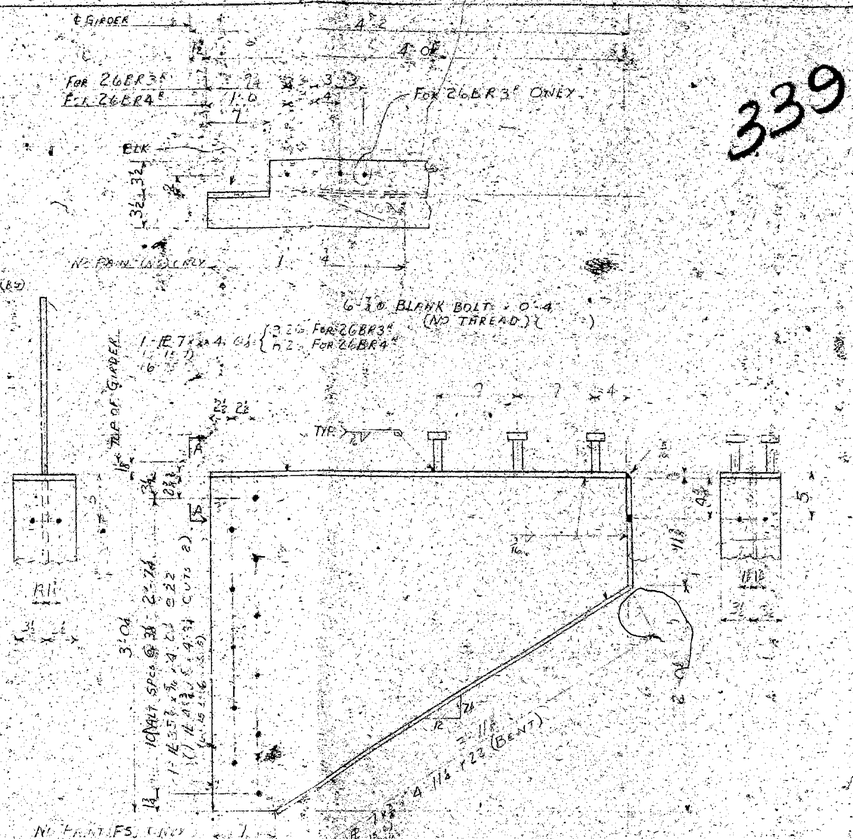
339



MARK	26ER1E		
MAKE	2	BRACKETS	AS SHN
do	2	do	OPP HD
do	3	do	AS SHN
do	3	do	OPP HD
do	3	do	AS SHN
do	3	do	OPP HD
do	2	do	AS SHN
do	2	do	OPP HD



MARK	26BR2E		
MAKE	2	BRACKETS	AS SHN
do	2	do	OPP HD
do	2	do	AS SHN
do	2	do	OPP HD
do	2	do	AS SHN
do	2	do	OPP HD
do	2	do	AS SHN
do	2	do	OPP HD



MARK	26BR3E		
MAKE	ONE	REF KEY	AS SHN & NTD
do	ONE	do	OPP HD TO 26BR3E
do	ONE	do	AS SHN & NTD
do	ONE	do	OPP HD TO 26BR3E
do	ONE	do	AS SHN & NTD
do	ONE	do	OPP HD TO 26BR4E
do	ONE	do	AS SHN & NTD
do	ONE	do	OPP HD TO 26BR4E
do	ONE	do	AS SHN & NTD
do	ONE	do	OPP HD TO 26BR4E
do	ONE	do	AS SHN & NTD
do	ONE	do	OPP HD TO 26BR4E

No. 1 Date Rev. No. 3 Date
No. 2 Date Rev. Date
Not Approved Until Dated

HOUSTON FABRICATION:
ALL HOLES SHALL BE DEBURRED WITH A TOOL MAKING A ½" CHAMFER
Gen. Notes

Rivets — Open Holes: FILL UNL NTD
Paint: SEE SHT #4 UNL NTD
Delivery Promised

NO PAINT AREAS TO RECEIVE A SHOP COAT OF LINSEED OIL TINTED WITH RED LEAD.

LIST ON BILL OF MAT'L.
10 LIN FT ½ FILLET WELD
30 " " "

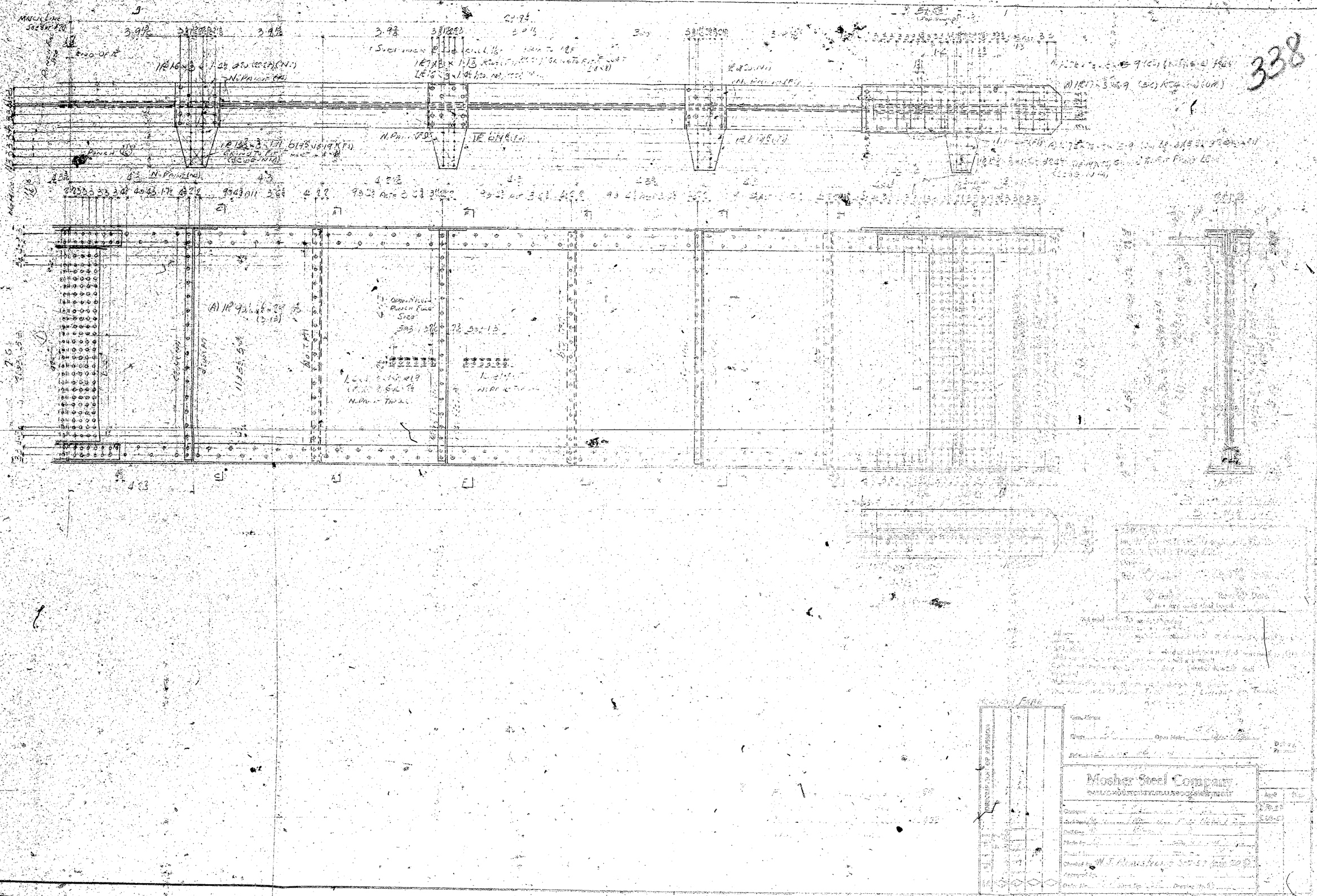
DESCRIPTION OF REVISION

Mosher Steel Company
DALLAS-HOUSTON-TYLER

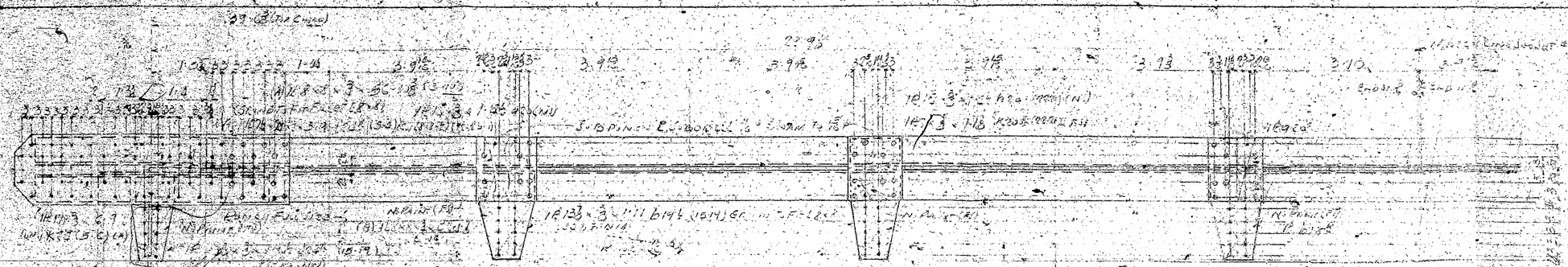
Appr'd

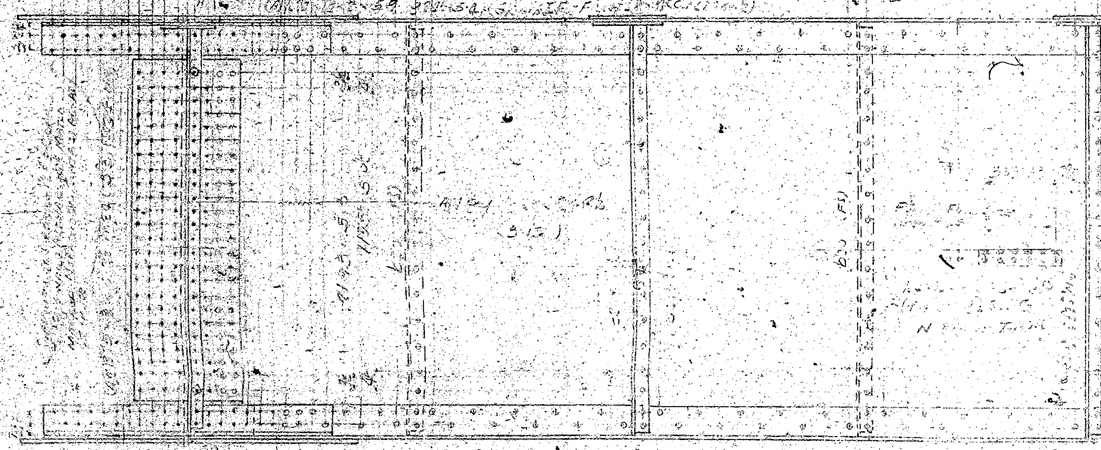
Customer: JOHN F BEASLEY CONST CO.
Architect: ARK. & MISS. STATE HIGHWAY
Building: MISSISSIPPI RIVER BRIDGE
Made by: C. MOCK 1-23-57 HELENA, ARK.
Traced by: Filing Date: 1958
Checked by:
Approved by:
Order No. 64-01 Sheet No. 26 Drawing No. O

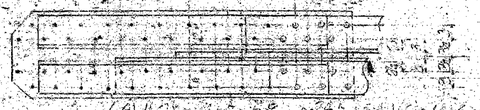
338

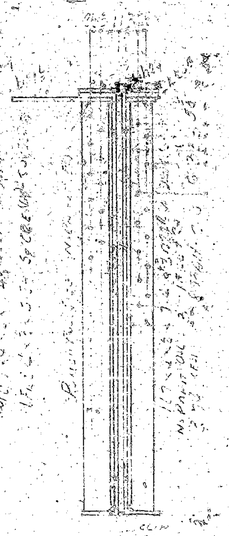


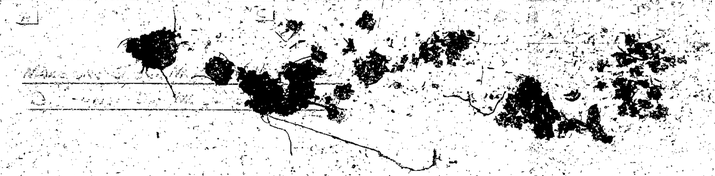
Mosher Steel Company

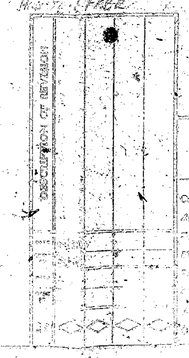












Mosher Steel Company

336

No Paint F.S.

No Paint Contact Area

Subpunch Or Subdrill ⅞ø Holes To 1" ø While Assembled
Bolt Brkt To Beam At Same End As Reamed
Loose Bolt W/ 2-⅞ø Bolts

Strip Flush F.S. Top Bott Flg Beam

Section A-A As Shown
Section B-B As Shown

23B22 Mark 2 Stringer Beams (1-21WF68) x 11'-4½ As Shown (SLOE)

Subpunch Or Subdrill ⅞ø Holes To 1" ø While Assembled To "A" Metal Template

Bolt Bkt To Beam At Same End As Reamed
Loose Bolt W/ 2-⅞ø Bolts

Square Cut

23B1 Mark One Floor Beam (1-36WF160) x 23'-7 Not Nested

4 No Paint For 3" Top Flg

Section C-C

Subpunch Shoes To Beam To 1" ø Holes While Assembled To "A" Metal Template

APPROVED BY
HOWARD NEEDLES TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date:
Rev. (1) Date: Rev. (3) Date:
Rev. (2) Date: Rev. (4) Date:
Not Approved Until Dated

All Holes For Shop Rivets Shall Be Subpunched
Subdrilled ⅞ø Holes To 1" ø While Assembled
Drilled Full Size From The Solid While
Assembled. All Holes Shall Be Deburred
With A Tool Making A ⅛" Chamfer
All Holes In Material Greater Than 1" Thick
Shall Be Drilled

Houston Fabrication

Gen. Notes: All Steel On This Sheet ASTM A
Rivets A-7 Open Holes 7/8 Unless
Paint Red Oxide Primer Unless Noted

DESCRIPTION OF REVISION

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer John F. Ellisor Houston
Architect Ford Dan & Mitchell Shreveport
Building Pleasantville State Highway
Made by [illegible] Scale 1/4" = 1'-0"
Traced by Filing Date
Checked by
Approved by
Order No. 4261 Sheet No. 3 Drawing No. 0

335

VIEW A-A

BLK

NO PAINT - NS ONLY

No WELD

No PAINT (FS) ONLY

4 - FILL 6 x 6 x 2'-10 a PCS (FS) (TACK WELD)

No PAINT (FS) ONLY

2 - PL 3 x 1/4 x 2'-1" m 22 (SC 2E) (TACK WELD)

NO PAINT - NS ONLY

No PAINT (FS) ONLY

MARK	PCS	SIZE	TYPE	A	B	C	D	E	F	G	H	J	K	WEIGHT
C1	26	22												
C2	2	22												
C3	1	22												
C4	1	22												
C5	1	22												
C6	1	22												
C7	1	22												
C8	1	22												
C9	1	22												
C10	1	22												
C11	1	22												
C12	1	22												
C13	1	22												
C14	1	22												

MARK	PCS	SIZE	TYPE	A	B	C	D	E	F	G	H	J	K	WEIGHT
C1	14	22												
C2	14	22												
C3	15	22												
C4	15	22												
C5	1	22												
C6	1	22												
C7	14	22												
C8	14	22												

MARK	PCS	SIZE	TYPE	A	B	C	D	E	F	G	H	J	K	WEIGHT
C1	6	22												
C2	6	22												
C3	6	22												
C4	6	22												
C5	4	22												
C6	4	22												
C7	4	22												

MARK	PCS	SIZE	TYPE	A	B	C	D	E	F	G	H	J	K	WEIGHT
C1	2	22												
C2	2	22												
C3	1	22												
C4	1	22												
C5	2	22												
C6	2	22												
C7	2	22												
C8	2	22												
C9	2	22												
C10	2	22												
C11	2	22												
C12	2	22												
C13	2	22												
C14	2	22												

NO PAINT AREAS TO RECEIVE A SHOP COAT OF LINSEED OIL TINTED WITH ...

DESCRIPTION OF REVISION

HOUSTON FABRICATION
ALL HOLES SHALL BE DEBURRED WITH A
Gen. Notes: MARKING CHAMFER

Rivets ..... Open Holes 5/8 DIA. NTD

Paint SEE SHT #4 UNL NTD

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer JOHN F. ... CONST. CO.
Architect ... STATE HIGHWAY
Building ... STEEL TOWER BRIDGE
Made by ... Date HEIGHTS APT
Traced by ... Filing Date ...
Checked by ...
Approved by ...
Order No. ... Sheet No. 22 Drawing No. 0

334

Section C-C

Date

Date

Gen. Notes

Rivets ..... Open Holes .....

Paint ..... Delivery Promised

DESCRIPTION OF REVISION

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

App'l | Shop

Customer

Architect

Building

Made by ..... Scale

Traced by ..... Filing Date

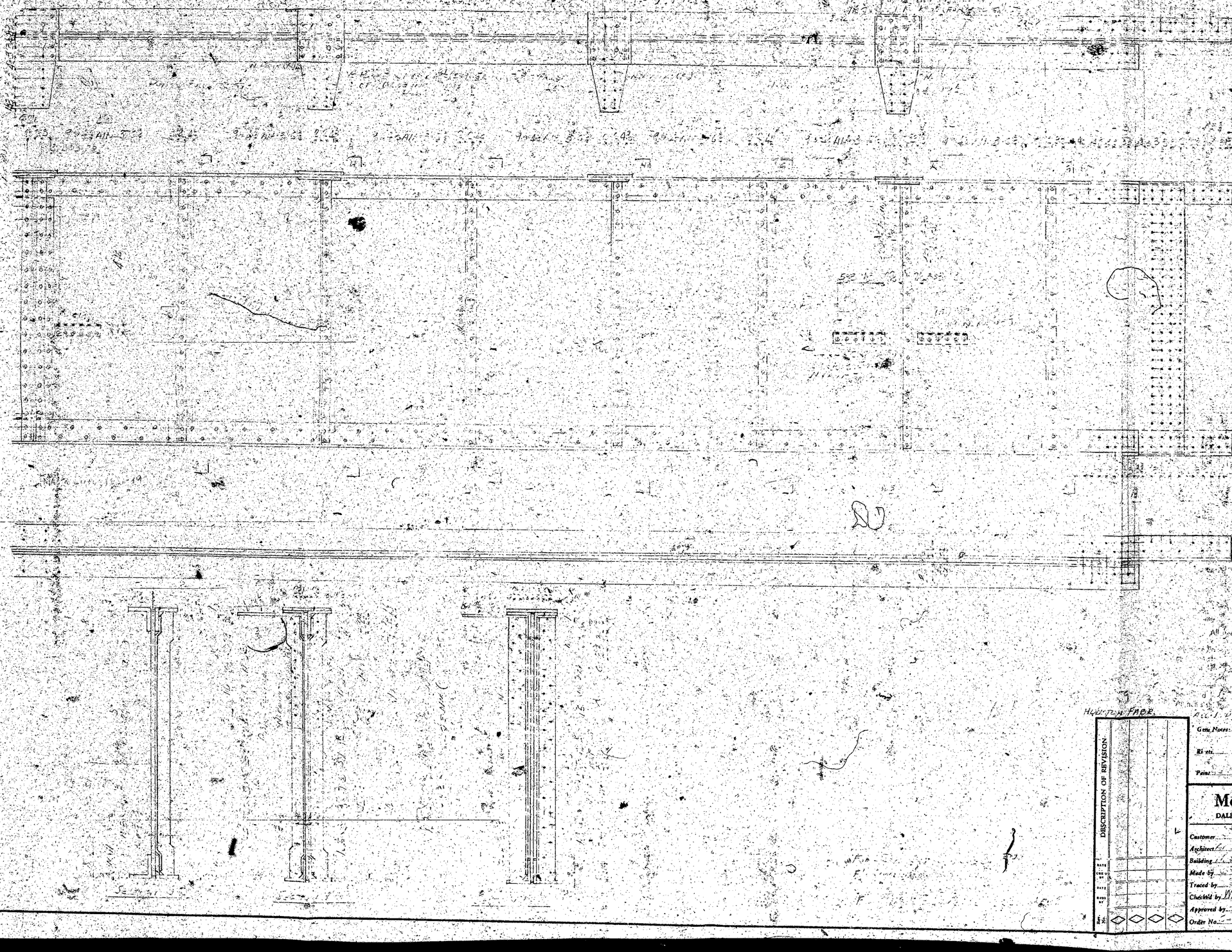
Checked by

Approved by

Order No. ..... Sheet No. ..... Drawing No. O

Blast Side | Each Side | Both Sides | Type | Fillet | Size | Groove | Standard Symbols | Field | Shop | Weld All Around | Weld Both Sides | Intermittent Welds @ ... c/c (12" min. staggered)

333



HOUSTON FAB.

DESCRIPTION OF REVISION

Rev. No.	Date

All bolts A-325 3/4" dia.

Gen. Notes:

Rivets: Gen. Notes:

Paint: PAINT

Delivery Promised

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

	Appl	Shop
Customer	8-19-59	
Architect		
Building		
Made by	Scale	
Traced by	Piling Date	
Checkid by W. J. Armstrong 8-25-59 (STAIRS)		
Approved by		
Order No. Sheet No. Drawing No. 0		

APPROVED by
CONFIRMING
Date
Rev. 1 Date
Rev. 2 Date
Not Approved Until Dated

Rev. 3 Date

KILLED IN SHT. 17A

Indicates 3 x 3 Weld @ alternate Ends (Shop welding)

Indicates 3/16 x 2 Weld @ Ends

Indicates 3/16 Weld @ Ends

Indicates Shop Weld

Indicates Field Weld

Type

Size

Grade

Standard Number

Bead

Bolts

Holes for Bolts

Holes for Rivets

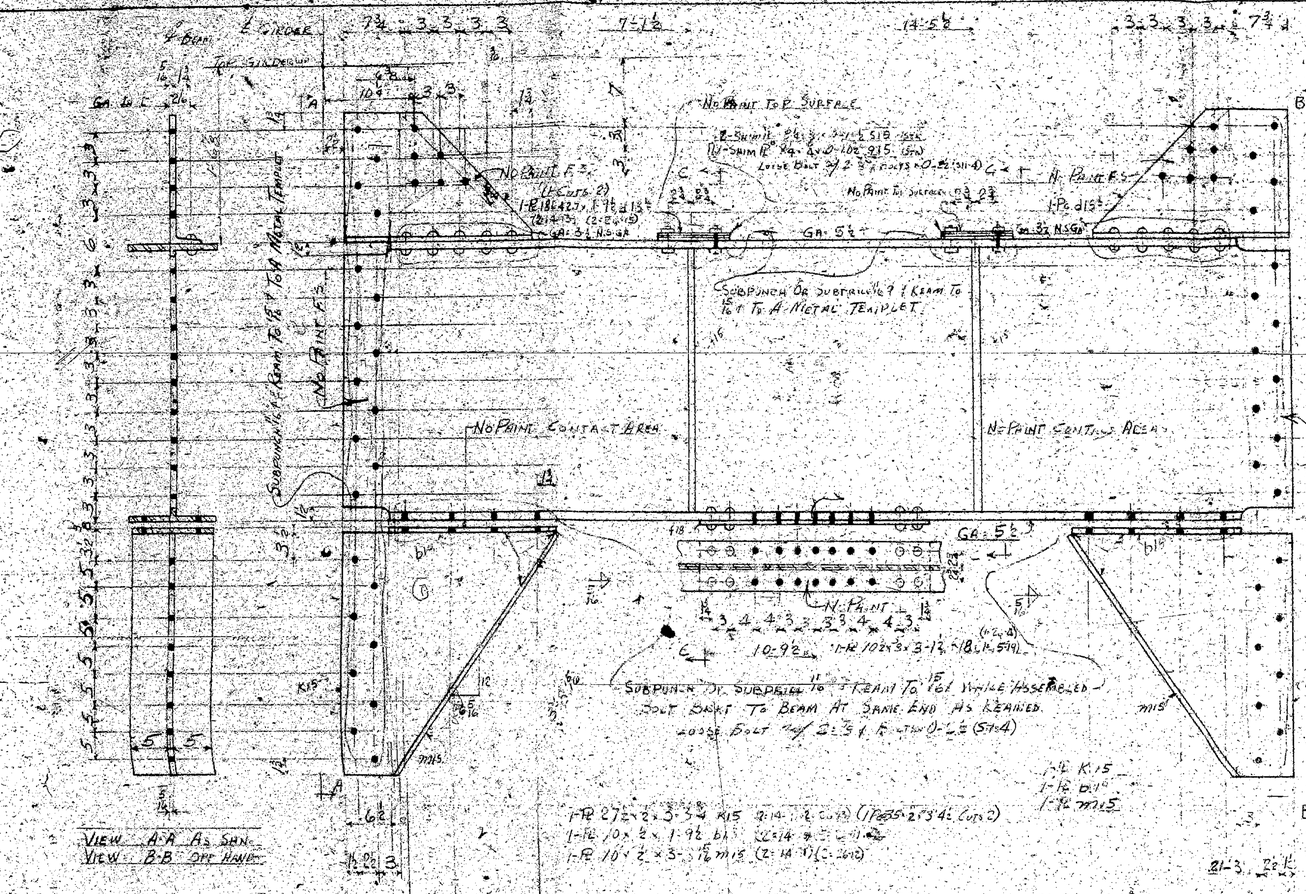
Both Sides

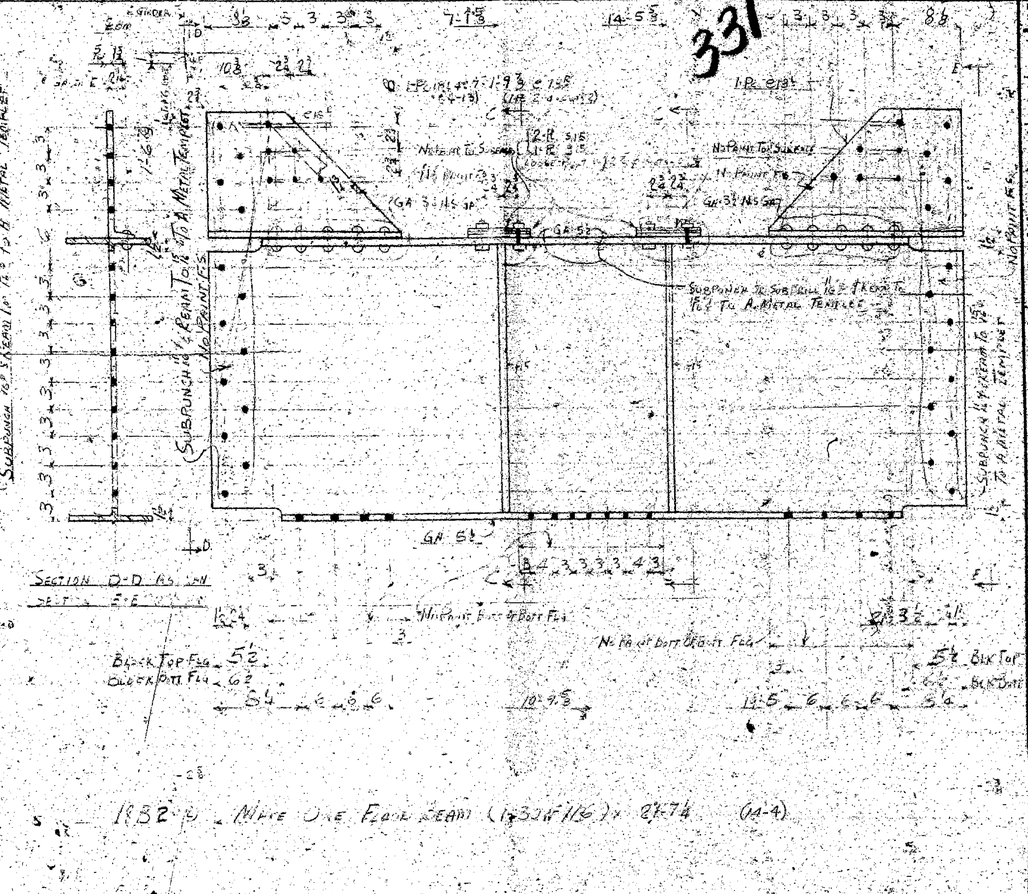
Punch

Ream

Drill

331





1B2 ⌀ Make One Floor Beam (1-30 W 116) x 21-7 (4-4)

1B1 ⌀ Make One Floor Beam (1-30 W 116) x 21-7 As Shown (4-5)

All Holes For SH ⌀ Rivets Shall Be Subpunched Or Subdrilled 13/16 ϕ Reamed To 15/16 ϕ While Assembled Or Drilled Full Size From The Solid While Assembled. All Holes Shall Be Deburred With Tool Which Will Chamfer. All Holes In Material Greater Than ¾ Thick Shall Be Drilled

Gen. Notes: Houston Fabrication. All Steel On This Sheet ASTM A7

Rivets ⅞ ϕ Open Holes 15/16 Unreamed

Paint See Sheet #1 Unless Noted

Delivery Promised

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
File:
Rev. Date Rev. Date
Rev. Date Rev. Date
Not Approved Until Dated

DESCRIPTION OF REVISION

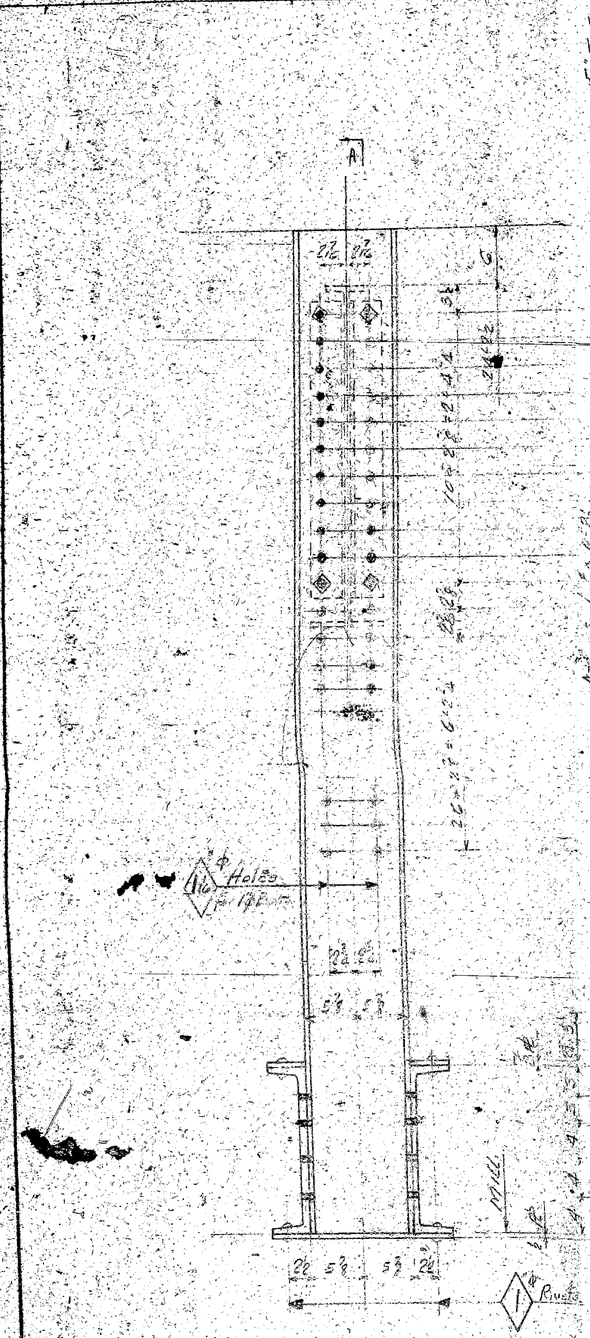
Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

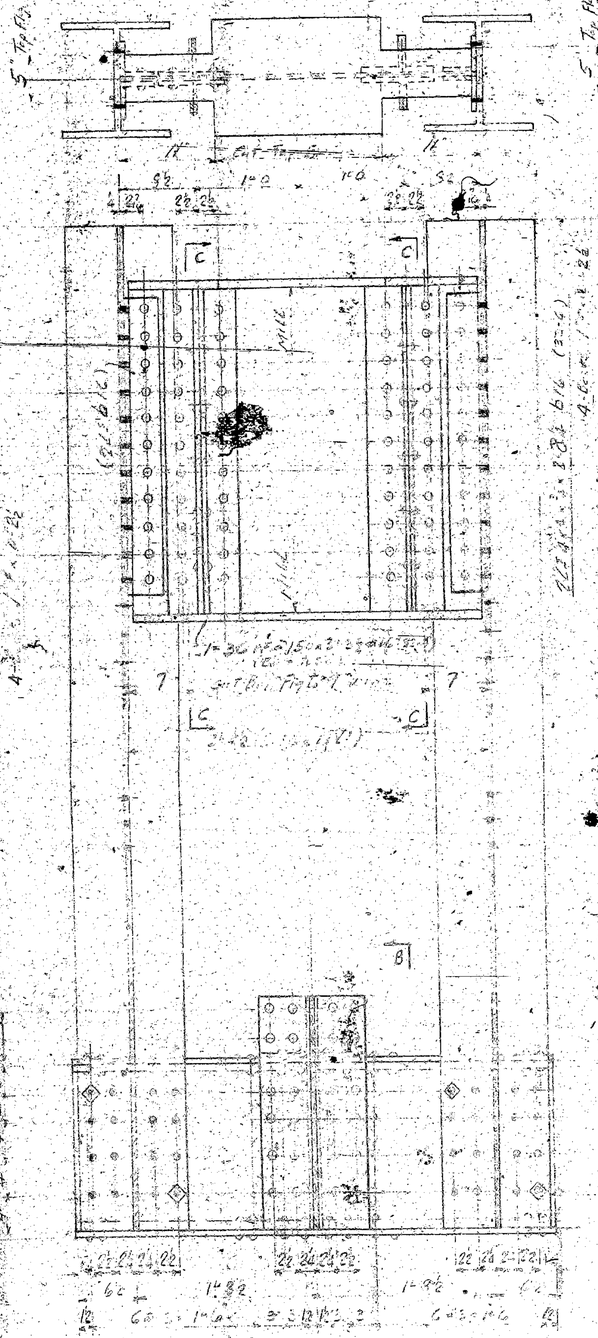
Customer John F. Beasley Const. Co.
Architect Arkansas & Mississippi State Highway
Building Mississippi River Bridge
Made by J.M. 1-17-58 Helena, Ark.
Traced by Filing Date 1958
Checked by
Approved by
Order No. 7101 Sheet No. 13 Drawing No. O

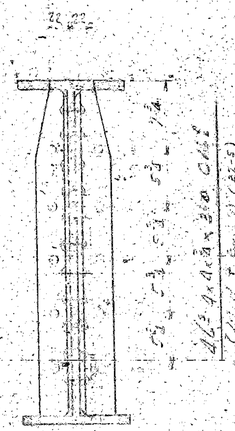
App'l | Shop

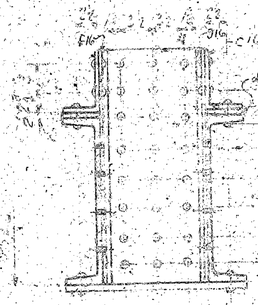
329

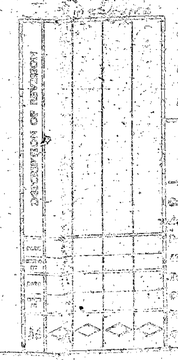
Near Side











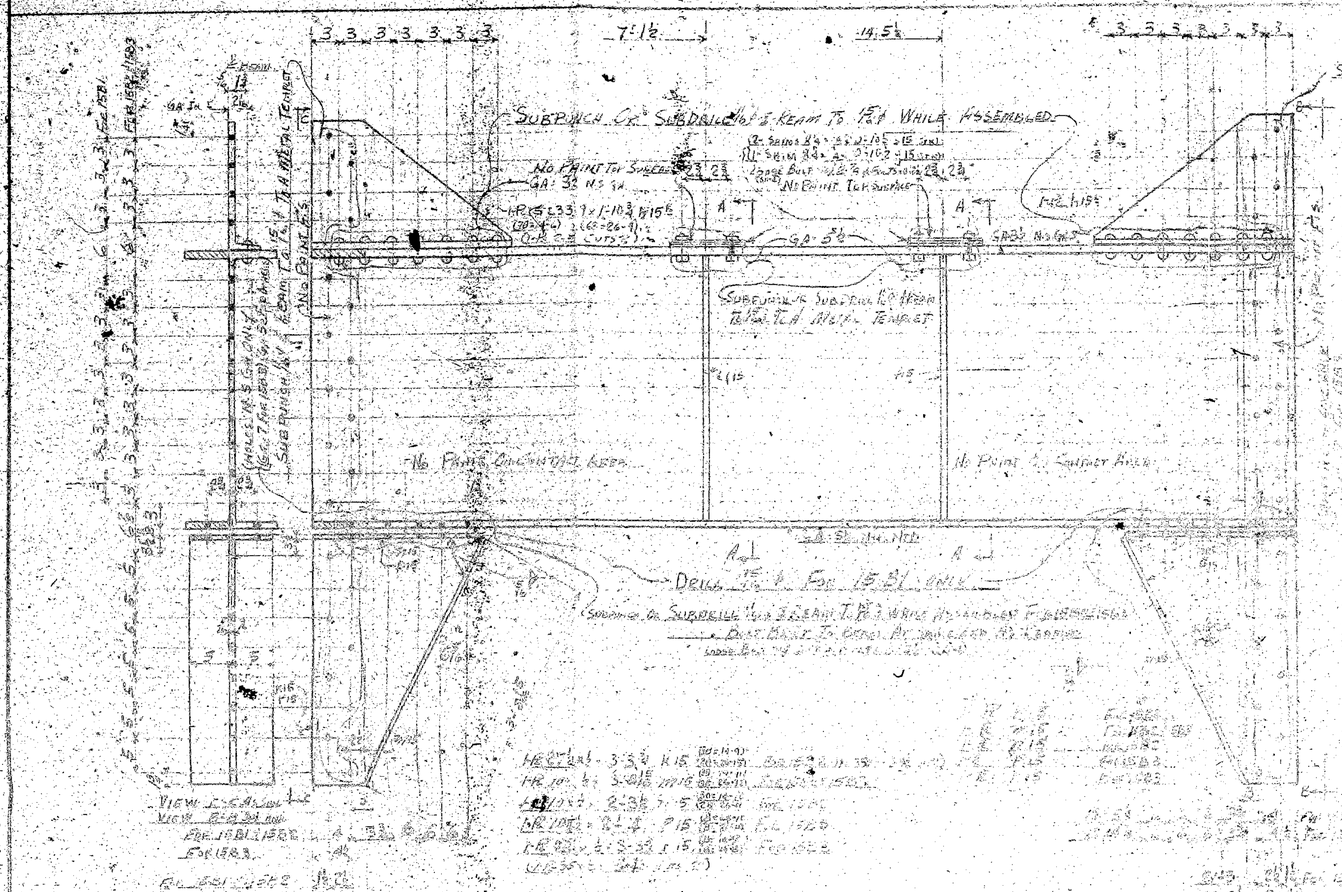
Section H-H

Make ONE Jobing Piece as shown. Mark 16K1

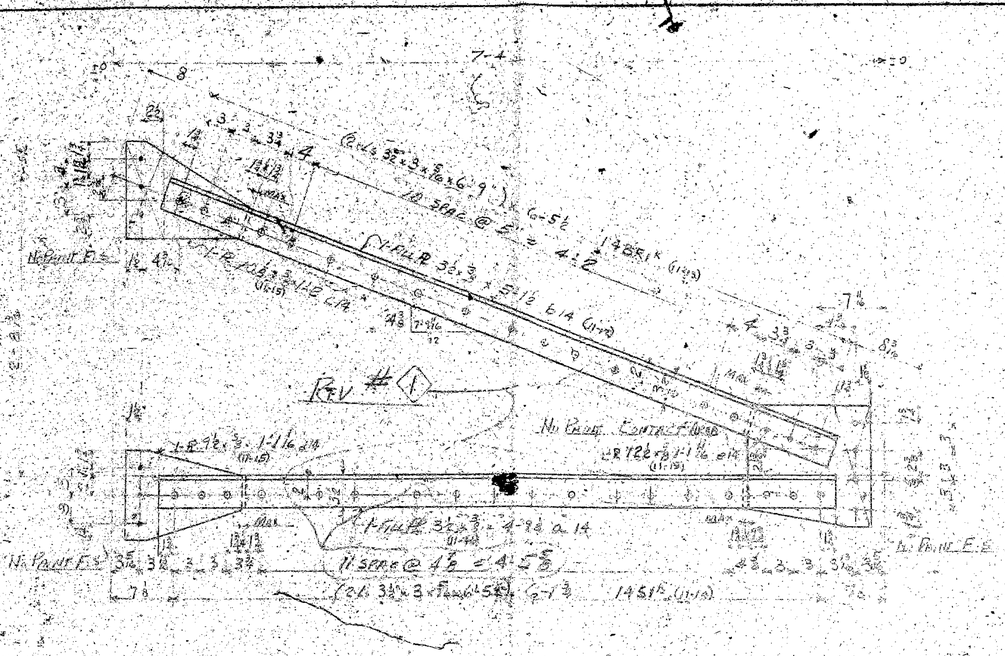
APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date:
Rev. ① Date: Rev. ② Date:
Rev. ③ Date: Rev. ④ Date:
Not Approved Until Dated

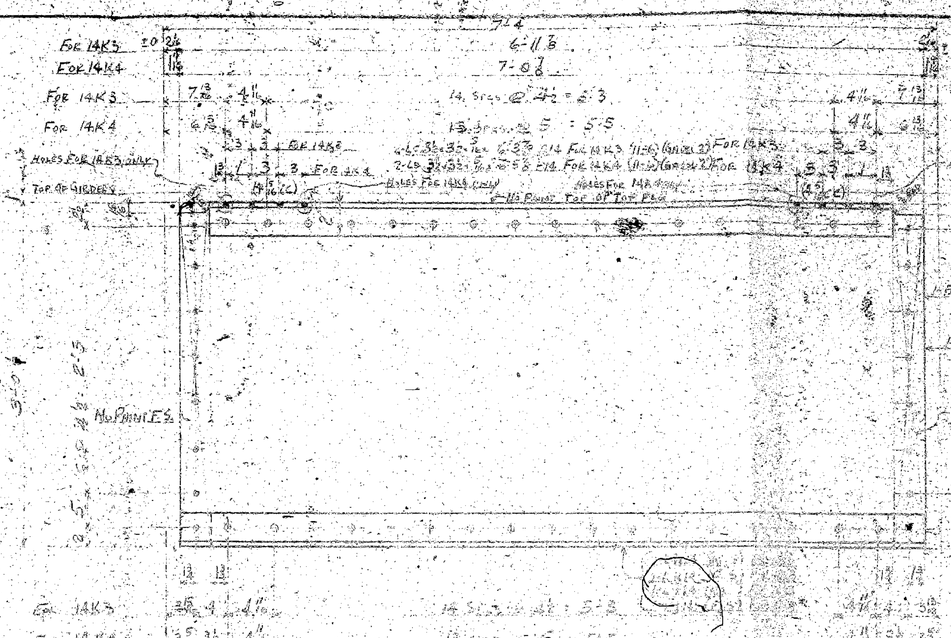
Mosher Steel Company

CUT ALONG THIS LINE

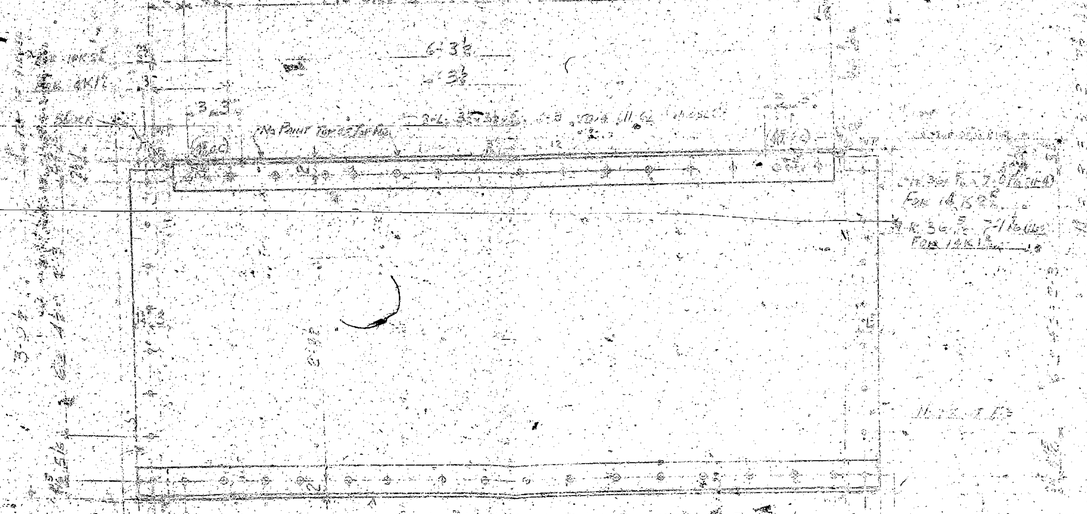


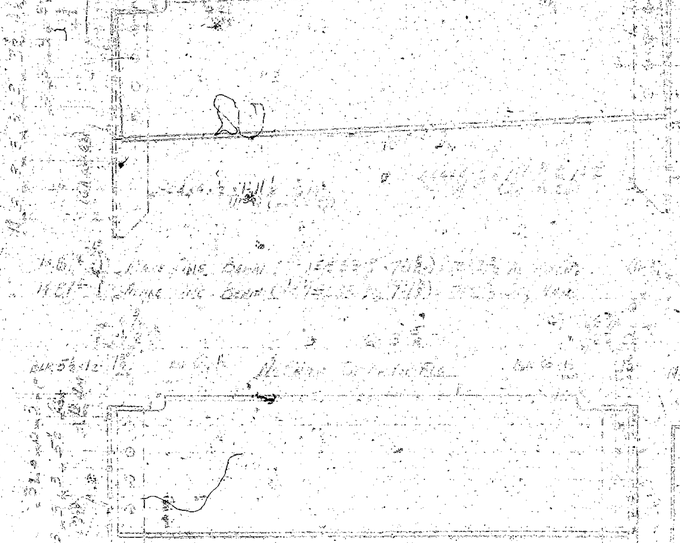
MARK	QTY	PLATE	LENGTH	WEIGHT
15B1	2			
15B2	2			
15B3	2			
15B1	1			
15B2	1			
15B3	1			
15B1	1			
15B2	1			
15B3	1			
15B1	1			
15B2	1			
15B3	1			

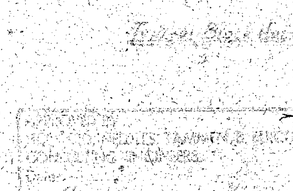




Make 12 Braces As Shown Mark 14BR1K1
Make 19 Braces Opp Hand Mark 14BR1K1
Make 19 Struts As Shown Mark 14S1K1
Make 19 Struts Opp Hand Mark 14S1K1

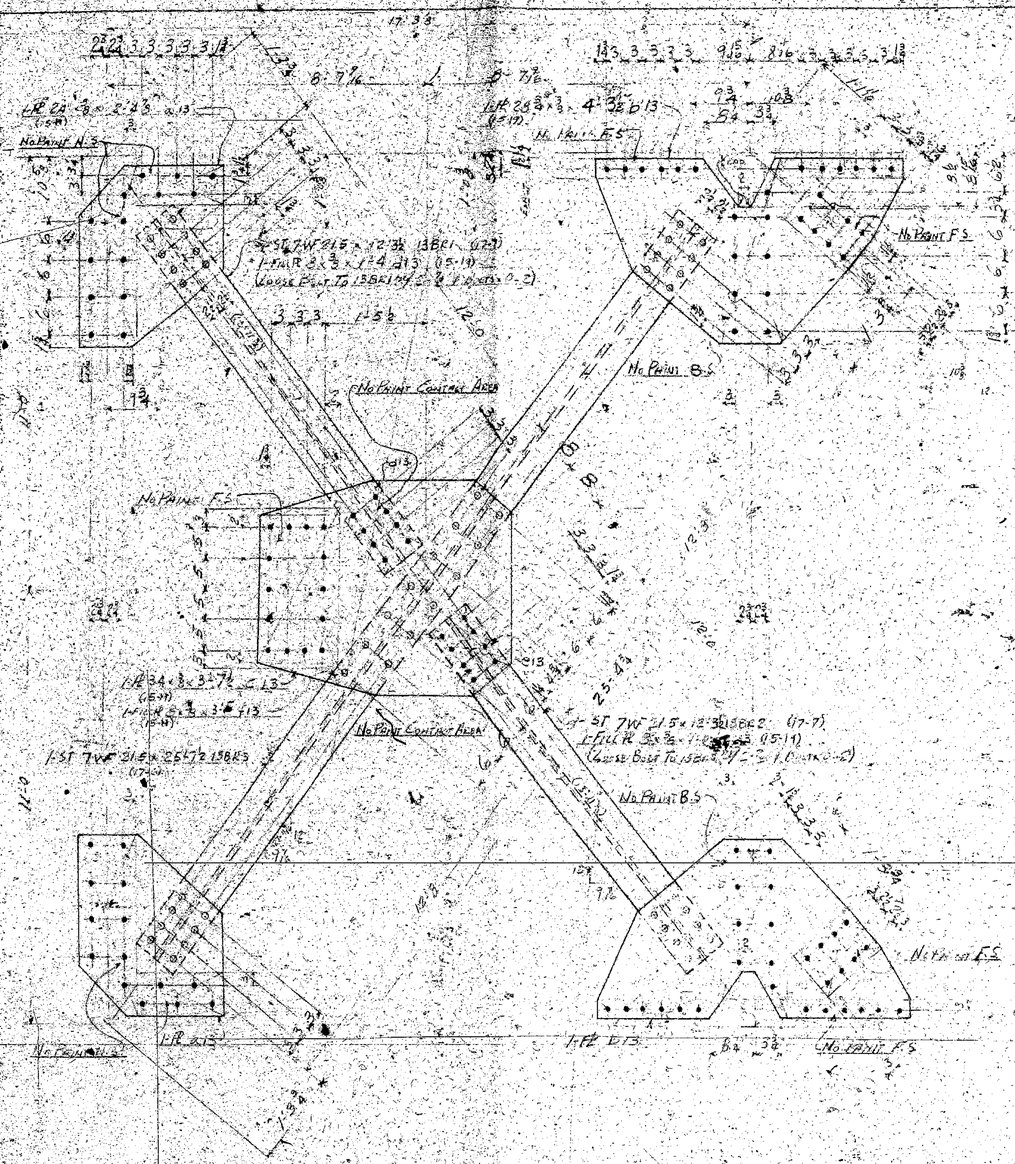


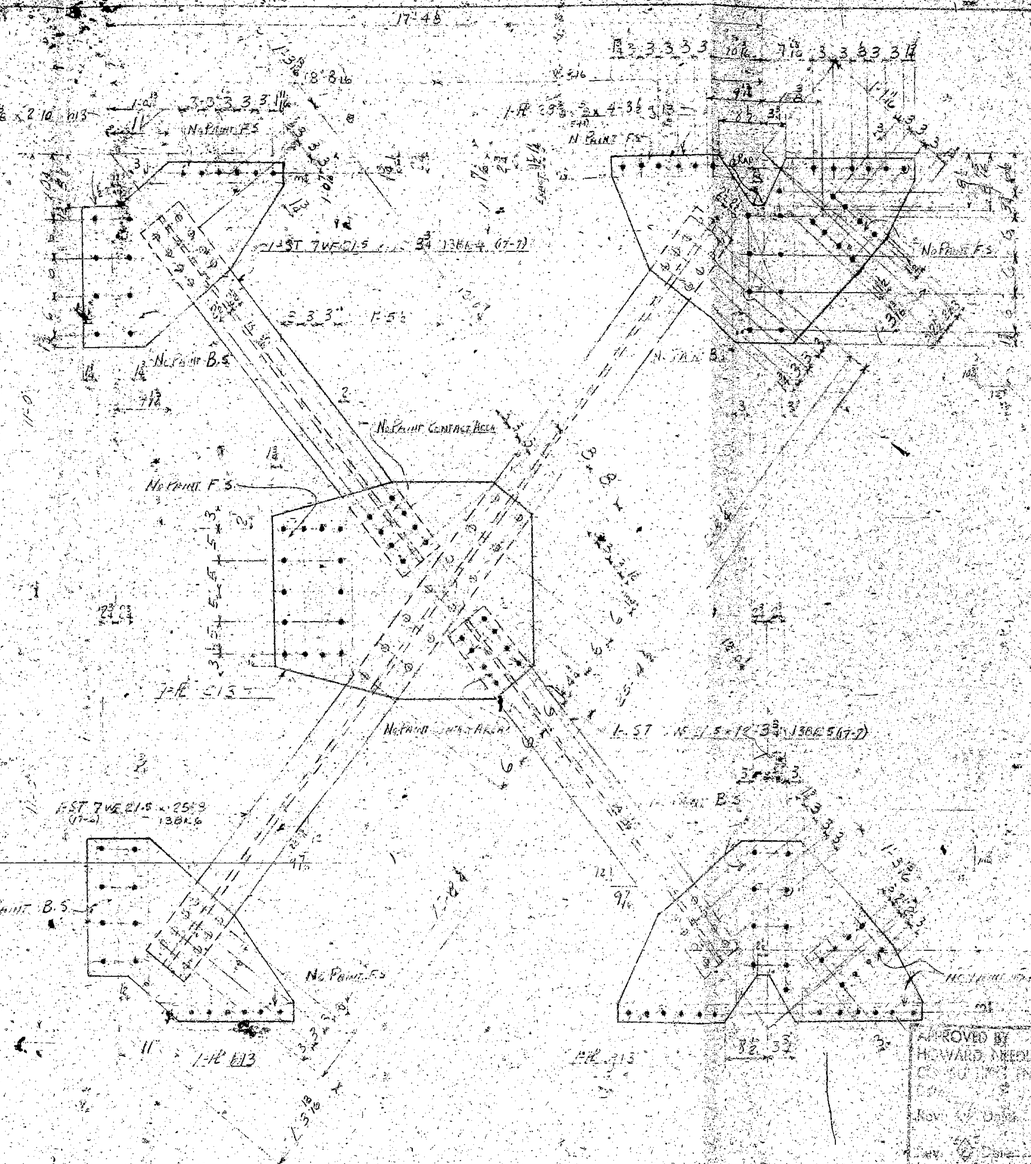




Mather Steel Company

326





Not Approved For Use

Gen. Notes: ALL STEEL ON THIS SHEET A 36 GRADE

Rivets: 7/8 Open Holes: Fab.

Paint: SEE SHEET # 4

DESCRIPTION OF REVISION

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

Customer: JOHN F. BEASLEY CONSTR. CO.
Architect: MISSISSIPPI STATE HIGHWAY
Building: MISSISSIPPI RIVER BRIDGE
Made by: F. M. P. Co. Shop Fab. No.
Traced by: Filing Date:
Checked by:
Approved by:
Order No. 6420 Sheet No. 13 Drawing No. O

325
1-ST 7WF 21.5 × 16'-4 3/4
11BR1
11BR3
11BR2
No Paint N.S.
No Paint Contact Area
No Paint E.S.
No Paint F.S.
Not Req
Make Brace As Shown Mark 11BR1
11BR2
11BR3
NOT REQ
Rev # 1
Approved by
Howard, Needles, Tammen & Bergendoff
Consulting Engineers
All Steel on This Sheet ASTM-A7
Mosher Steel Company
John F. Beasley
Arkansas & Mississippi State Highway

No Paint Inside of Top of Shoe

22'-0" w.r.t. WP

Nothing

Nothing

8240 ERE Shoe

No PAINT INSIDE
Top of Shoe
1'-8
22'-0 WP to WP
No PAINT INSIDE
22'-6 E to E Shoes

No Paint Inside Pc
Top
Weld

2'-2 (NOT MORE)

NO PAINT - ONE COAT LINSEED OIL TINTED WITH RED LEAD ON THIS FACE

CORE HOLE

1-ALLOY BAR 3½ x 1½ x 1'-11½ e3 (27-21) (DRIVE FIT) (FIN. 4 SIDES)

TOP VIEW OF LOWER CASTING

2¼" Ø HOLE IN 1" Æ DRILL & TAP CASTING FOR 2¼" Ø DEEP

1-Æ Q 3

1-Æ 5 x 1 x 1'-1½ Q3 (27-)

1-L2 (SEE DET. D)

1-STEEL CASTING C3 (SC-14)

SECTION A-A

1-ALLOY BAR 3½ x 1½ x 1'-11½ e3 (DRIVE FIT) (27-21) (FIN. 4 SIDES)

2¼" Ø FOR 2" Ø ANCHOR BOLTS

1-STEEL CASTING b3

MAKE 2 SHOES AS SHN MARK 3K1 ②

do 6 do do do do 3K1 ⑤

do 6 do do do do 3K1 ⑥

2'-2 (NOT MORE)

SECTION B-B

1½" SHOULDER

2¼" Ø HEX HD CAP SCREW (OR A L2 (FAST)

4"

DETAIL D

NO PAINT ON FINISH. COAT WITH LINSEED OIL TINTED WITH RED LEAD

2'-0

FOR 3K2

FOR 3K3

2¼" Ø FOR 2" Ø ANCHOR BOLTS

CORE HOLE

1-ALLOY BAR 3½ x 1½ x 1'-6½ e2 (DRIVE FIT) (27-20) (FIN. 4 SIDES)

1-STEEL CASTING b3 (52-19)

NO PAINT ON FINISH. COAT WITH LINSEED OIL TINTED WITH RED LEAD

TOP VIEW OF LOWER CASTING

2¼" Ø HOLE IN 1" Æ DRILL & TAP CASTING FOR 2¼" Ø DEEP

1-Æ 23

1-L2 (SEE DET. D)

SECTION E-E

SECTION F-F

MAKE 2 SHOES AS SHN & NTD MARK 3K2 ⑧

do do do do do 3K3 ⑨

1-STEEL CASTING b3 FOR 3K2 (52-19)

1-STEEL CASTING b3 FOR 3K3 (52-19)

1-ALLOY BAR 3½ x 1½ x 1'-6½ h2 (DRIVE FIT) (27-20) (FIN. 4 SIDES)

SECTION K-K

SECTION G-G

SECTION H-H

LIST OF B/M.

171 LIN FT FILLET WELD

MARK 3K2 SHOES AS SHN & NTD MARK 3K2 ⑧

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS.
Date:
Rev. 1 Date: Rev. 2 Date
Rev. 3 Date: Rev. 4 Date
Not Approved Until Dated

STEEL PLATES TO BE AS X M-42
CASTINGS TO BE MADE ROUGH WITH EXTRA STOCK FOR FINISHING AS SHOWN. MOSHER MACH SHOP TO DO FINISHING.
STEEL CASTINGS TO BE MEDIUM STRENGTH STEEL A.S.T.M. A27, GRADE 65-35. SEE SPECS.
ALLOY BARS B2, h2, d3 & E3 SHALL BE CARBON MANGANESE CARILLOY. AS MFD. BY U.S. STEEL CORP. OR EQUAL.
SPCL FACE ANCHOR BOLT H.L.B. ⑨ CASTINGS
Gen. Notes: DALLAS FABRICATION.
Blocks: Open Holes: Unfinished:
Refer: SEE SHT. # 1

DESCRIPTION OF REVISION

Mosher Steel Company
DALLAS-HOUSTON-WEYLER-LUDLOW-NEWPORT

Owner: JOHN F. KENNEDY CONST. CO.
Problem: ARK. & MISS. STATE HIGHWAYS
Building: MISSISSIPPI RIVER BRIDGE
Made by: C.M. Checked by: H.B.
Traced by: Tracing Date:
Checked by: W.T.C. Checking Date:
Approved by:
Bridge Mark: ARK-C-1 Sheet No. 2 Drawing No. 1

316

NO PAINT ON TOP-COAT WITH LINSEED OIL TINTED WITH RED LEAD

3-COATS PAINT IN INACCESSIBLE AREA

SEE DETAIL "C"

2-⌀ 4¾" x ⅜" x 0'-8" PI (27-7)

2-e1 (SEE DET. "B")

DRILL & TAP FOR ¾"⌀ CAP SCREWS
4-¾"⌀ HEX. HD CAP SCREWS x 0'-1¾" (54-7)

1-STEEL CASTING 2K1 (52-10)
1-STEEL CASTING 2K4 (52-10)
HI-STRENGTH STEEL ASTM A 148-55, GRADE 90-60.

MILL

1-⌀ 2½" (M⑩E) 1⅛ x 1'-5 15/16" +⅜ (27-8) r2

1-hl

1-PART 4"⌀ ROD x 1'-5 15/16" +⅜ n1 (M⑩E) (COLD ROLL ASTM-A108 GRADE 1016 to 1030 (27-17)

1-Hi-STRENGTH STEEL CASTING K2 ASTM A 148-55, GRADE 90-60 FOR 2K4 (52-11)

1-⌀ 2¼ x 4½ +⅛ x 2'-10 a2 (M⑩F) FOR 2K1 (27-12)

2"⌀ FOR 1½"⌀ ANCHOR BOLTS

SECTION H-H

(52-7) STEEL CASTING e1

DETAIL "B"

2-"⌀ HEX. HD CAP SCREW x 0'-3" h1 (54-5)

DRILL & TAP FOR 1¾"⌀; 2⅜" DEEP.

2¼"⌀ HOLE IN ¾" PL

SHOULDER

SECTION B-B

MAKE - 2 - SHOES AS SHN MARK 2K1②
MAKE - 2 - do do do 2K4②

NO PAINT ON TOP-COAT WITH LINSEED OIL TINTED WITH RED LEAD

NO PAINT THIS FACE - COAT WITH LINSEED OIL

1-STEEL CASTING d2 (52-14)

1-ALLOY BAR 3½ x 1½ x 1'-6½ h2 (DRIVE FIT) (27-20) (FIN. ④ SIDES)

TOP VIEW OF LOWER CASTING

1-b2 (SEE DET. 'D')

1-⌀ 5½ x 1'-0 C2 (27-10)

1-b2 (SEE DET. 'D')

FOR 2K2
FOR 2K3

2½"⌀ HOLE IN 1" PL DRILL & TAP CASTING FOR 2"⌀; 3⅜ DEEP

NO PAINT THIS FACE - COAT WITH LINSEED OIL.

MAKE - 2 - SHOES AS SHN & NTD MARK 2K2②
do - 6 - do do do do 2K2③
do - 6 - do do do do 2K3④

SECTION D-D

SECTION E-E

1-STEEL CASTING C2 FOR 2K2 (52-12)
1-STEEL CASTING F2 FOR 2K3 (52-13)

1-ALLOY BAR 3½ x 1½ x 2'-8½ h2 (DRIVE FIT) (27-20) (FIN. 4 SIDES)

SECTION C-C

¼" SHOULDER

2¼"⌀ HEX HD CAP SCREW x 0'-4" b2 (54-8)

THD

DETAIL "D"

LIST OF WELD
3-LIN FT ⅜" FILLET WELD Dc
23-LIN FT ½" Dc
112-LIN FT ⅝" Dc

APPROVED BY 9/3/59
L.P. Carlson
Bridge Design Engineer

GRIND SMOOTH

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
DETAIL BY G.F. DATE 5-31-59

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF, CONSULTING ENGINEERS.
Date: 6-17-59
Rev. ◇ Date: Rev. ◇ Date:
Rev. ◇ Date: Rev. ◇ Date:
Not Approved Until Dated.

STEEL PLATES TO BE A.S.T.M.-A7
CASTINGS TO BE MADE ROUGH WITH ALLOWANCES FOR FINISHING AS SHN. MOSHER MACH. SHOP TO FINISH CASTINGS & BARS.
STEEL CASTINGS SHALL BE MEDIUM STR. ASTM A27, GRADE 65-35 UNLESS OTHERWISE SPECIFIED.
SPOT FACE ALL BOLT HOLES IN CASTINGS
ALLOY BARS SHALL BE CHROME NICKEL CARILLOY AS MFG. BY U.S. STEEL CORP. OR EQUAL - T1"

APPROVAL PRINT
Please Approve and Return Promptly. Specs. Delay in approval may result in loss of tentative shop, causing delay.

Gen. Notes: DALLAS FABRICATION
Rivets: Open Holes:
Poles: SEE SHT. #1

(15"⌀ UNL NTD - REAM OR DRILL
BUILD SLAB TO AMBIENT TEMP.
DALLAS TO TURN HD. Delivery Shop with METAL TEMP. Prominent
TO DRILL MARKING STEEL.

REV. ⑥

DESCRIPTION OF REVISION	DATE	APPD
REV. 2K1, 2K4 AS NOTED	8-24-59	

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

	App'l	Shop
	5-26-59	7-6-59
	8-24-59	8-7-59

Customer: JOHN F. BEASLEY CONST. CO.
Architect: ARK. & MISS. STATE HIGHWAY
Pull Area: MISSISSIPPI RIVER BRIDGE
Made by: E. MORK 12-17-58 HELENA, ARK.
Traced by: Filing Date: 1758
Checked by: W. J. Armstrong 5-15-59 (Sht 203)
Approved by:
Order No. 64209 Sheet No. 2 Drawing No. O

BILLED ON SHT #2A

Near Side | For Side | Both Sides | Types Fillet | Size Groove | Standard Number | Spacing | Indicates ½ x 2 Weld | Indicates ½ x 2 Welds @ 6" ctrs. | Indicates ½ x 2 Welds @ 6" alternate | Indicates ½ x 2 Welds (12" ctrs. staggered)

315

DETAIL "A"

1 - 1¼ ϕ CAP SCREW x 10: 2½ (HEX. HD)
16 - REQUIRED (54-4)

SECTION A-A

TOP VIEW OF BOTT CASTING

MAKE - 4 - SHOES AS SHN MARK 1K1 ⓓ

MAKE - 12 - SHOES AS SHN MARK 1K2 ⓓ

MAKE - 2 - SHOES AS SHN MARK 1K3 ⓓ

DETAIL "B"

SECTION B-B

DETAIL "C"

PAINT NOTE:
PAINT ONE SHOP COAT OF RED LEAD PER SPECS.
AREAS NOTED TO HAVE 3 SHOP COATS SHALL HAVE IN ADDITION TO THE SHOP COAT - ONE INTERMEDIATE COAT OF WHITE LEAD PER SPECS & ONE FINAL COAT OF ALUMINUM PER SPECS.

LIST ON B/M.
2 GAL RED LEAD (ORD. 57-1)
½ GAL WHITE LEAD (ORD 57-3)
½ GAL ALUMINUM (ORD 57-4)

LIST ON B/M APPROVED BY
9 LIN FT. ¾" FILLET WELD
55 LIN FT. 3 Dec 57
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY GA DATE 12-13-57

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF,
CONSULTING ENGINEERS.
Date: 6-17-57
Rev. ◇ Date: Rev. ◇ Date:
Rev. ◇ Date: Rev. ◇ Date:
Not Approved Until Dated

APPROVAL PRINT
Approve and return promptly for Finishing. As shipping delay in approval may result in Finish Castings being out of sequence in shop, causing delay in shipment.

CASTINGS TO BE MADE ROUGH WITH ALLOWANCE FOR FINISHING. SEE NOTE ON SHEET 4. SEE SPECS.
STEEL CASTINGS - GRADE OF MEDIUM STRENGTH STEEL A.S.T.M. STD. A-27 IN PLATE 2-5 SS. SEE SPECS.
SPOT FACE ANCHOR BOLT HOLES IN CASTINGS.
STEEL PLATES ARE A.S.T.M. - A7.
REV. ◇
DALLAS FABRICATION:
Gen. Notes
Rivets — Open Holes
From SEE NOTE @ LEFT SIDE OF SHEET.
1⅛" LINL. NTD. - REAM OR DRILL FULL SIZE TO A METAL TEMP. OF 68° F. BEFORE LEAVING SHOP WITH METAL TEMP. TO DRILL MATCHING STEEL.
Delivery Promised

REV. 1K3 REVISED

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

	Appl	Shop
Customer JOHN F. BEASLEY CONST. CO.	5-28-57	7-1-57
Architect ARK. & MISS. STATE HIGHWAY	8-24-57	8-7-57
Bridge MISSISSIPPI RIVER BRIDGE		
Made by C. MOCK 12-12-58 From HELENA, ARK.		
Traced by Filing Date 1958		
Checked by W. J. Armstrong 5-14-57 (file 203)		
Approved by		
Order No. 6420 Sheet No. 1 Drawing No. 0		

Br. 2899

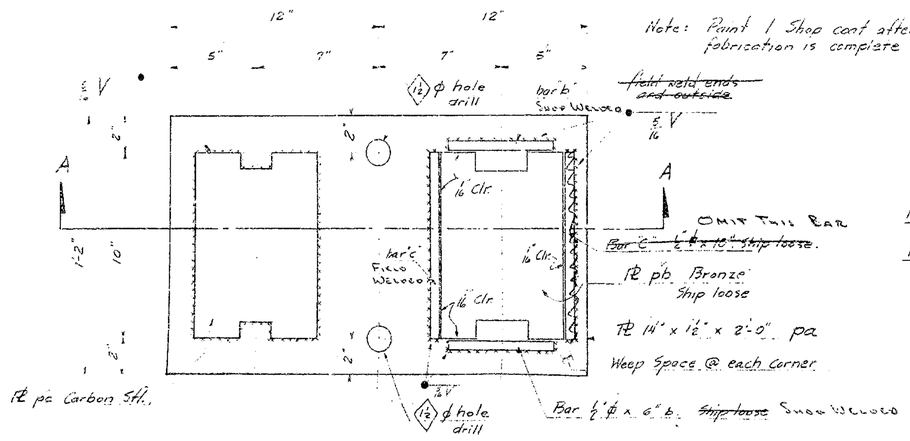
BILLED ON SHEET 1A

Near Side
Far Side
Both Sides
Type Fillet
Size
Groove
Standard Number
Bead
Staggered
Indicates V, K, J, U, Bevel, Flare V, Flare Bevel Welds
Indicates ½, ¾, 1, 1¼ Backing Welds (Specify if other than standard)

A.H.D.

ROLL : 746

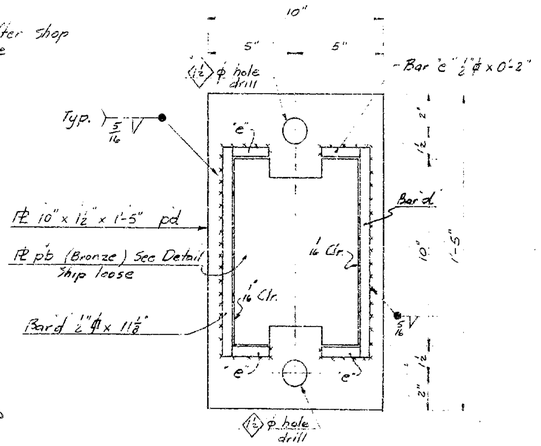
BRG. 2899



BOTTOM BEARING SHOE ASSEMBLY "FE"
FIXED END - EXPANSION END COMBINATION

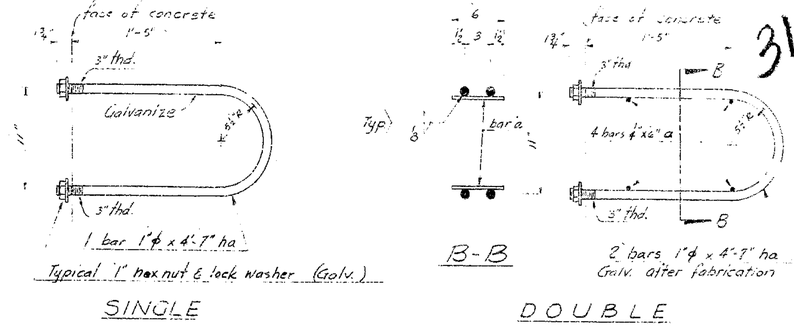
SCALE: 3" = 1'-0" REFERENCE SHEET 6.10, CONTR. 6

NOTE: THE FABRICATION OF BOTTOM BEARING SHOE ASSEMBLY "EE", WHICH IS AN EXPANSION-EXPANSION COMBINATION, IS SIMILAR IN ALL RESPECTS TO THE DRAWING ABOVE EXCEPT THAT IT WILL HAVE TWO BRONZE PLATES, MK pb, INSTEAD OF 1 MK pb AND 1 MK pc.



BOTTOM BEARING SHOE ASSEMBLY "AE", ABUTMENT EXPANSION BEARING PLATE

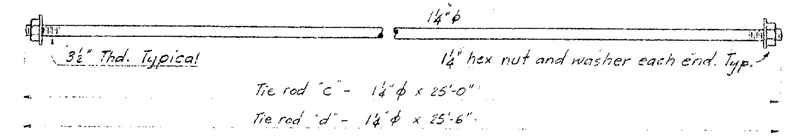
REFERENCE SHEET 6.10, CONTR. 6
SCALE: 3" = 1'-0"



HANDRAIL POST ANCHOR BOLTS

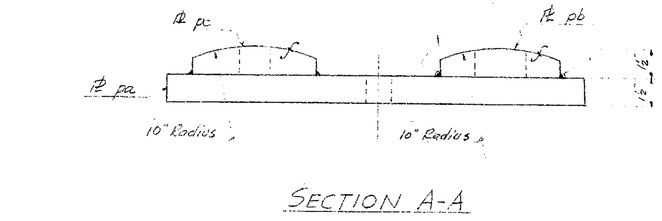
SCALE: 1½" = 1'-0" REFERENCE SHEET 6.10 CONTR. 6

Notes: ① All structural items this sheet shall be Steel, A.S.T.M. A7 and/or A373, except Plates pb, which are bronze, A.S.T.M. B-22-52, Alloy E
② Paint all items 1 shop coat according to engineers specs. except as noted.

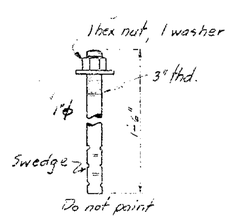


LATERAL BEAM TIE RODS

NO SCALE REFERENCE SHEET 6.09, CONTR. 6

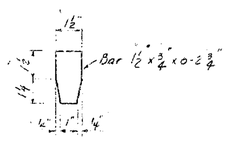


SECTION A-A



SHOE ANCHOR BOLT

REFERENCE CONTRACT 3.



TOOTH BAR

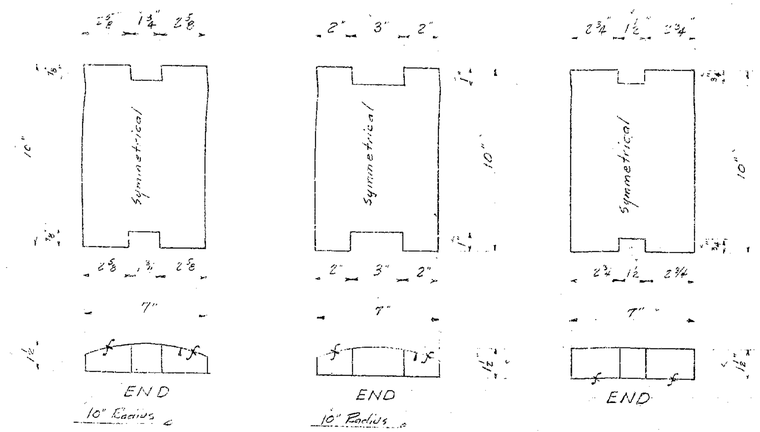


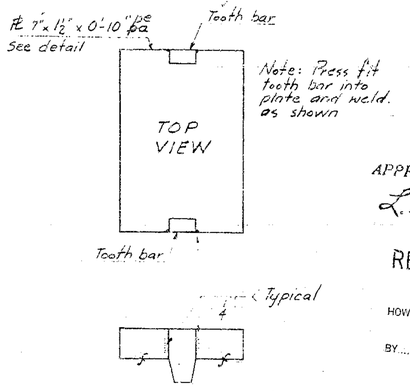
PLATE pc

PLATE pb

(BRONZE, ASTM No. B-22-52, Alloy E)
NO SHOP PAINT

PLATE pe pa

SCALE: 3" = 1'-0"

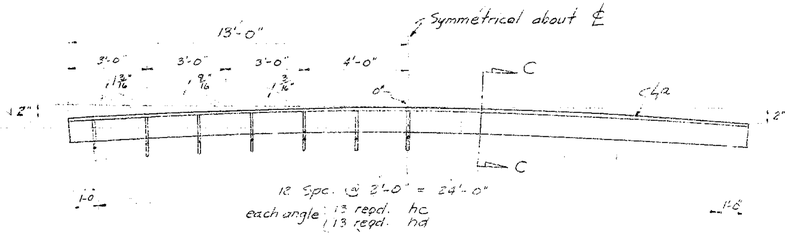


TOOTH & PLATE ASSEMBLY

APPROVED BY
L. P. Carlson 6/22/59
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ARS DATE 6-19-59

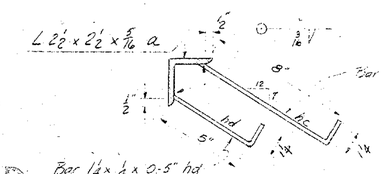
APPROVED
OR GENERAL CONFORMITY WITH PLANS AND SPECIFICATIONS (QUANTITIES REVIEWED) CONTRACTORS FULL RESPONSIBILITY IS IN NO WAY RELIEVED BY THIS APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
6-19-59



ROADWAY ANGLE

NO SCALE REFERENCE SHEET 6.09 CONTR. 6.

Note: Do not paint inside of angle a, or bars hc, hd.



SECTION C-C

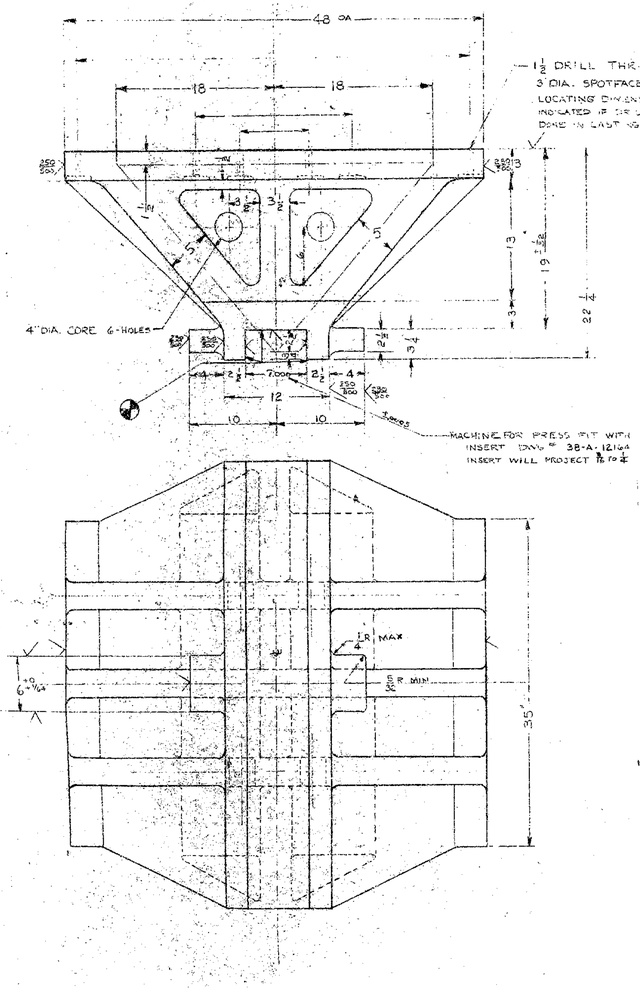
FABRICATION DETAILS
MISCELLANEOUS METAL

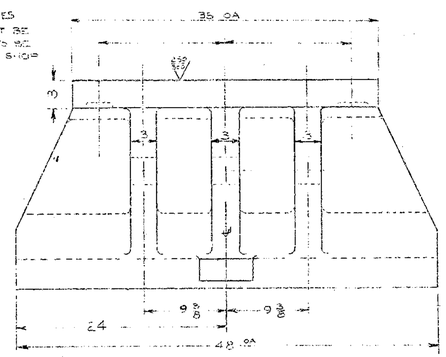
PROJECT: MISS. RIVER BRIDGE, HELENA, ARK.
ENGR: HOWARD, NEEDLES, TAMMEN, & BERGENDOFF.

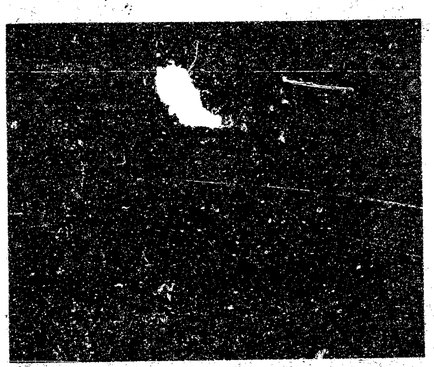
TRUMBO WELDING & FABRICATING CO.
Memphis, Tenn.
6-3-59

DATE	SYM	REVISION	AUTH	DR	CK

313







RECOMMENDED FOR
APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY JCA DATE 6-30-59

APPROVED BY 7/2/59
L.P. Carlson
Bridge Design Engineer

ASTM A-27 GR 35-65 LFM GR B

MATERIAL SPECIFICATIONS

REMARKS:

NO. REQ. 8 PATT. NO. S-12161

TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONAL ± 1/64
DECIMAL ± .010
ANGULAR ± 1/2°
DIMENSIONS ARE IN INCHES
ALL √ INDICATE 125 MICRO INCHES FINISH
MOLDING DRAFTS TO BE _____
DO NOT SCALE

THE LFM
MANUFACTURING CO., INC.
SUBSIDIARY OF
ROCKWELL MANUFACTURING CO.
ATCHISON KANSAS

UPPER SHOE

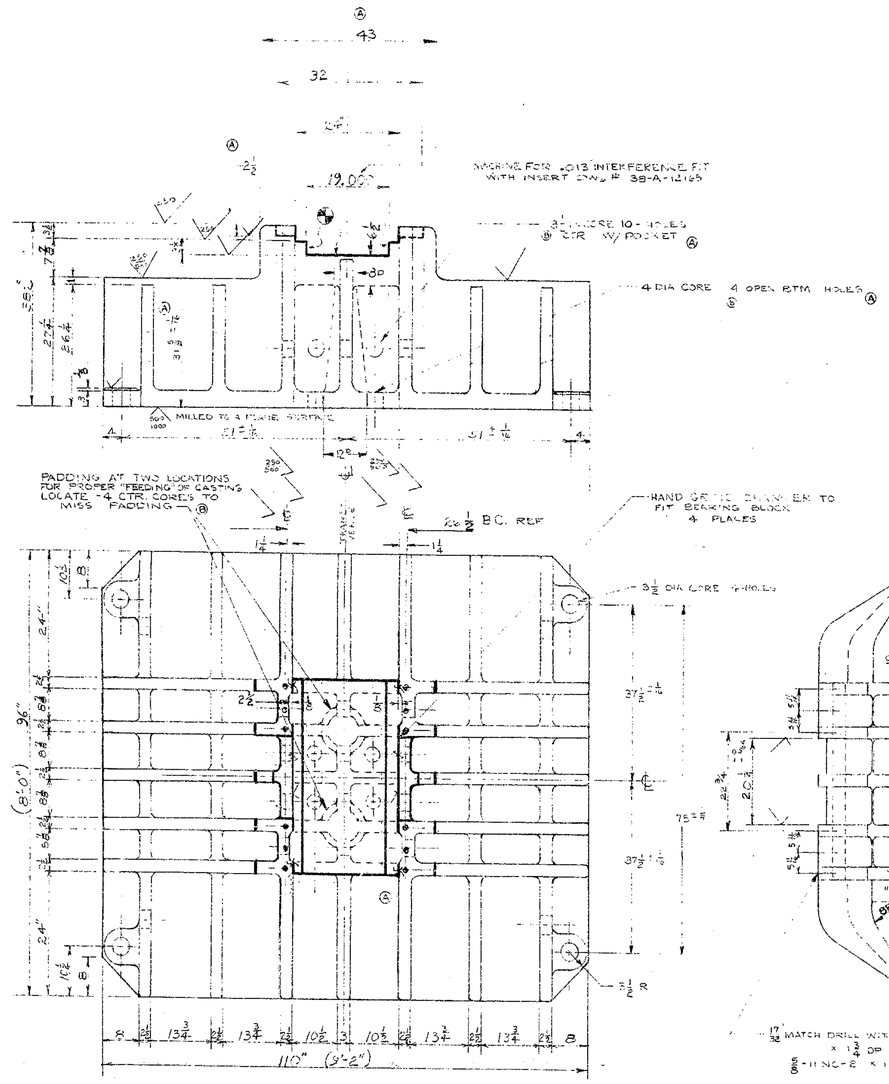
REF. DWG # 38-A, SHT. 4-14 MISSIS. RIVER BRIDGE

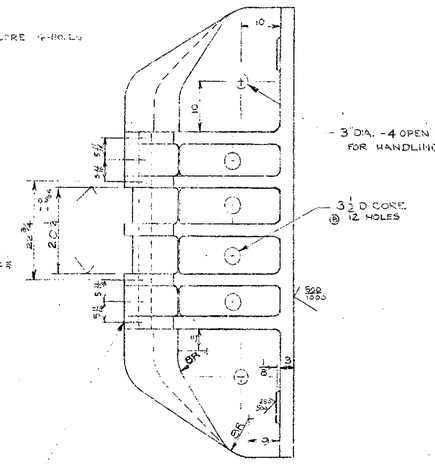
	BY	DATE	SCALE: 1/8"=1'
DRAWN	JLF	6-5-59	38-C-12161
CHECKED	[illegible]	6-23-59	
APPROVED			

312

DATE	SYM	REVISION	AUTH	DR	CK
8-14-59	A	ADD CENTER HOLES IN SIDE WALL (SEE DETAIL ADD) ADD 2 HOLES IN BOTTOM FLANGE (SEE DETAIL ADD)		JF	
9-2-59	B	NO HOLES WAS GIVEN IN 38-A-12165 REVISED WORK AS SHOWN ON THIS DWG AND (SEE STR. WORKS) ADD FAIRLEAD		JF	

[redacted]





RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY GA 9-15-59

APPROVED BY 9/11/59
L. P. Carlson
Bridge Design Engineer

ERW 30,000

ASTM A-27 GR 35-65 LFM GR "B"
MATERIAL SPECIFICATIONS

REMARKS:

NO. REQ. 8 PATT. NO. S-12162

TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONAL ± 1/64
DECIMAL ± .010
ANGULAR ± 1/2°
DIMENSIONS ARE IN INCHES
ALL √ INDICATE 125 MICROINCHES FINISH
MOLDING DRAFTS TO BE _____
DO NOT SCALE

THE LFM MANUFACTURING CO., INC.
SUBSIDIARY OF
ROCKWELL MANUFACTURING CO.
ATCHISON KANSAS

LOWER SHOE
FOR
SPANS 11-15 MISS. R. BR.
NEAR: HELENA, ARK.
REF: HOWARD N.T.&B. 984 SH-4.14

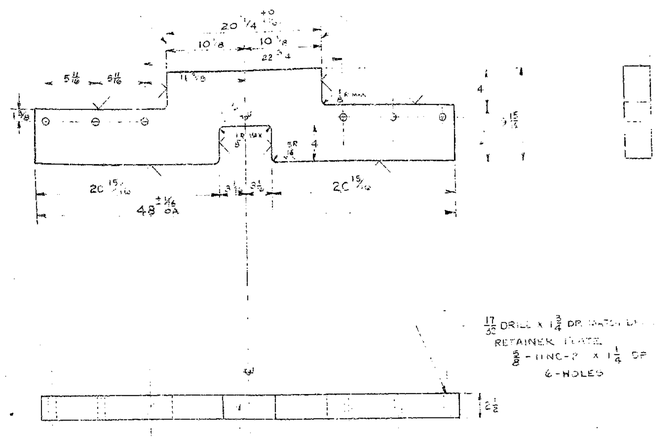
	BY	DATE	SCALE
DRAWN	[redacted]	5-19-59	38-C-12162
CHECKED	[redacted]	6-23-59	
APPROVED	L.P.C.	7-2-59	

HE ALBANENE 1960 Made in U.S.A. 68276

311

DATE	SYM	REVISION	AUTH	DR	CK

MACHINE FOR SLIDE FIT WITH DWG # 38-C-12165



RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY JPA DATE 6-26-59

APPROVED BY 7/2/59
L. P. Carlson
Bridge Design Engineer

CARBON STRUCTURAL STL. 1020-1050 HRS
ASTM A-7 33,000 YP
50,000 TS
MATERIAL SPECIFICATIONS

REMARKS: PRIME PAINT ALL OVER

NO. REQ. 16 PATT. NO.

TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONAL ± 1/64
DECIMAL ± .010
ANGULAR ± 1/2°
DIMENSIONS ARE IN INCHES
ALL √ INDICATE 125 MICROINCHES FINISH
MOLDING DRAFTS TO BE _____
DO NOT SCALE

THE L F M MANUFACTURING CO., INC.
SUBSIDIARY OF
ROCKWELL MANUFACTURING CO.
ATCHISON KANSAS

SHOE GUIDE

REF DWG # 984 SH 414 MISS. RIVER BRIDGE

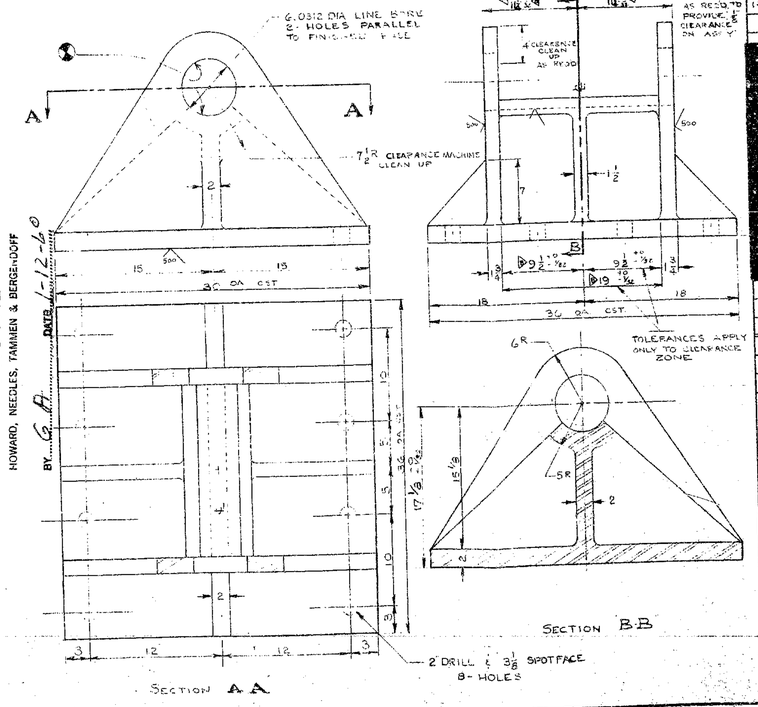
	BY	DATE	SCALE: 1/8" = 1"
DRAWN	JLF	6-15-59	38-B-12165
CHECKED	[illegible]	6-23-59	
APPROVED			

K-E ALBUQUERQUE 1961 49001

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY G.A. DATE 1-12-60



DATE	SYM	REVISION	AUTH	DR	CK
9-22-59	1	22 WAS 24 1/2 ; 11 WAS 11 1/2	LPC 10-1-59	JLF	GW
1-11-60	2	33 1/2 WAS 22 ; 11 1/4 WAS 9 1/2 WAS 9 1/4 ; 15 WAS 18 1/2		JLF	GW

ASTM A-27 GR 35-65 LFM GR "B"

MATERIAL SPECIFICATIONS

REMARKS:

NO. REQ. 4 PATT. NO. S-12167

TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONAL ± 1/64
DECIMAL ± .010
ANGULAR ± 1/2°
DIMENSIONS ARE IN INCHES
ALL √ INDICATE 125 MICROINCHES FINISH
MOLDING DRAFTS TO BE _____
DO NOT SCALE

APPROVED BY 1-13-60
L. P. Carlson
Bridge Design Engineer

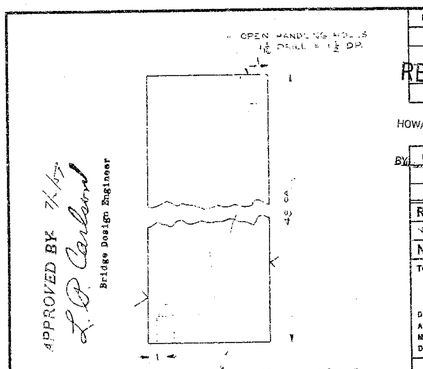
THE L F M MANUFACTURING CO., INC.
SUBSIDIARY OF
ROCKWELL MANUFACTURING CO.
ATCHISON KANSAS

LOWER EXPANSION SHOE

REF: DWG # 984-SH. 414 MISS. RIVER BRIDGE

	BY	DATE	SCALE: 1/8" = 1"
DRAWN	JLF	6-11-59	38-B-12167
CHECKED	[illegible]	6-23-59	
APPROVED	LPC	7-2-59	

K-E ALBUQUERQUE 1961 49001



RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY: VANADIUM NICKEL CARRILLOY DATE 6-23-59

BHN 250 MIN.

MATERIAL SPECIFICATIONS

REMARKS: Do NOT PAINT

NOTE: ONE COAT RUST PREVENTATIVE

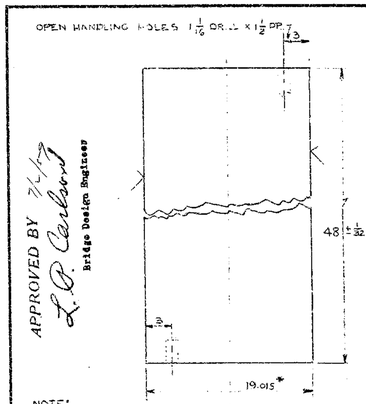
NO. REQ. 8 PATT. NO.

TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONAL ± 1/64
DECIMAL ± .010
ANGULAR ± 1/2°
DIMENSIONS ARE IN INCHES
ALL √ INDICATE 125 MICROINCHES FINISH
MOLDING DRAFTS TO BE _____
DO NOT SCALE

THE L F M MANUFACTURING CO., INC.
SUBSIDIARY OF
ROCKWELL MANUFACTURING CO.
ATCHISON KANSAS

BEARING INSERT PLATE
FOR
UPPER SHOE
REF. DWG# 934 SH-4.14 MISS. RIVER BRIDGE

	BY	DATE	SCALE: 1/4" = 1"
DRAWN	JLF	6-9-59	38-A-12164 √
CHECKED	[illegible]	6-23-59	
APPROVED			



RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BHN 250 MIN. DATE 6-23-59

BY VANADIUM NICKEL CARRILLOY

MATERIAL SPECIFICATIONS

REMARKS: Do Not Paint

Note ONE COAT RUST PREVENTATIVE

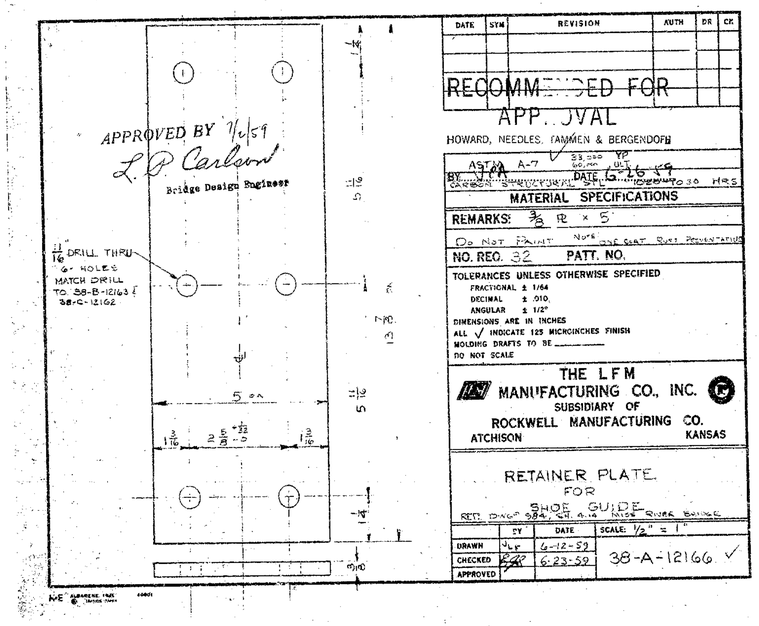
NO. REQ. 8 PATT. NO.

TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONAL ± 1/64
DECIMAL ± .010
ANGULAR ± 1/2°
DIMENSIONS ARE IN INCHES
ALL √ INDICATE 125 MICROINCHES FINISH
MOLDING DRAFTS TO BE _____
DO NOT SCALE

THE L F M MANUFACTURING CO., INC.
SUBSIDIARY OF
ROCKWELL MANUFACTURING CO.
ATCHISON KANSAS

BEARING INSERT PLATE
FOR
LOWER SHOE
REF: DWG # 934 SH 4.14 MISS RIVER BRIDGE

	BY	DATE	SCALE: 1/8" = 1"
DRAWN	JLF	6-15-59	38-A-12165 √
CHECKED	[illegible]	6-23-59	
APPROVED			



RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

ASTM A-7 33,000 PSI YP 60,000 PSI UTS

BY JLF DATE 6-16-59

CARBON STRUCTURAL STEEL NORMALIZED TO 30 HRS

MATERIAL SPECIFICATIONS

REMARKS: 3/8 R x 5

Do NOT PAINT Note ONE COAT RUST PREVENTATIVE

NO. REQ. 32 PATT. NO.

TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONAL ± 1/64
DECIMAL ± .010
ANGULAR ± 1/2°
DIMENSIONS ARE IN INCHES
ALL √ INDICATE 125 MICROINCHES FINISH
MOLDING DRAFTS TO BE _____
DO NOT SCALE

THE L F M MANUFACTURING CO., INC.
SUBSIDIARY OF
ROCKWELL MANUFACTURING CO.
ATCHISON KANSAS

RETAINER PLATE
FOR
SHOE GUIDE
REF. DWG# 934 SH 4.14 MISS RIVER BRIDGE

	BY	DATE	SCALE: 1/2" = 1"
DRAWN	JLF	6-12-59	38-A-12166 √
CHECKED	[illegible]	6-23-59	
APPROVED			

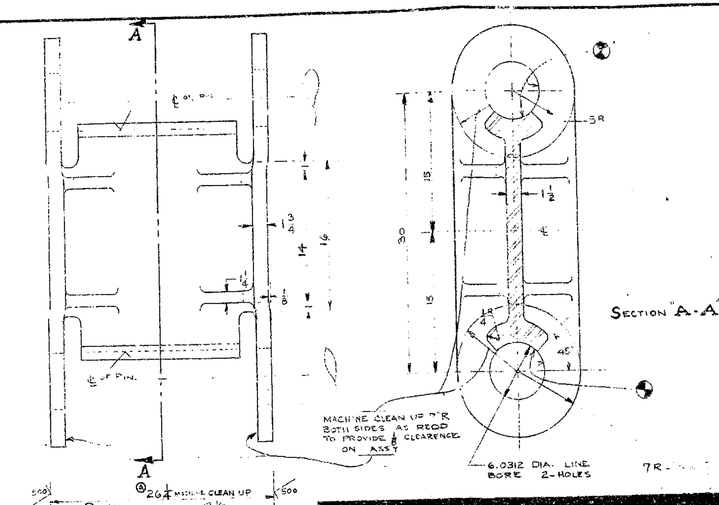
DATE	SYM	REVISION	AUTH	DR	CK
1-11-60	(A)	13/8 was 1 3/4 thick 2 5/8 wide 11 3/8 was 13 3/8 wide 13 3/8 was 15 3/8		JLF	GA

309

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY G.A. DATE 1-12-60



ASTM A-27 GR 35-65 LFM GR B

MATERIAL SPECIFICATIONS

REMARKS:

NO. REQ. 4 PATT. NO. S-12169

TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONAL ± 1/64
DECIMAL ± .010
ANGULAR ± 1/2°
DIMENSIONS ARE IN INCHES
ALL √ INDICATE 125 MICROINCHES FINISH
MOLDING DRAFTS TO BE 2 1/2°
DO NOT SCALE

APPROVED BY 1-13-60
L P Carlson
Bridge Design Engineer

THE LFM MANUFACTURING CO., INC.
SUBSIDIARY OF
ROCKWELL MANUFACTURING CO.
ATCHISON KANSAS

YOKE
FOR
EXTENSION SHOE
REF: DWG# 984-SH 4-A MISS RIVER BRIDGE

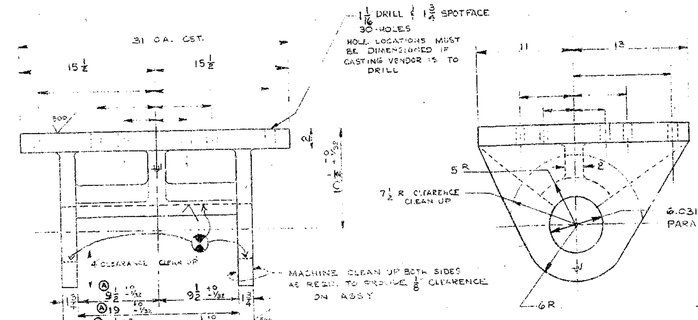
	BY	DATE	SCALE: 1/2" = 1"
DRAWN	JLF	6-10-59	38-B-12169
CHECKED	GA	6-23-59	
APPROVED	LPC	7-2-59	

DATE	SYM	REVISION	AUTH	DR	CK
1-11-60	(A)	22 5/8 was 22; 11 1/4 was 11; 18" was 18 1/2; 5 1/2 was 5 1/16		JLF	GA

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY G.A. DATE 1-12-60



ASTM A-27 GR 35-65 LFM GR B

MATERIAL SPECIFICATIONS

REMARKS:

NO. REQ. 4 PATT. NO. S-12168

TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONAL ± 1/64
DECIMAL ± .010
ANGULAR ± 1/2°
DIMENSIONS ARE IN INCHES
ALL √ INDICATE 125 MICROINCHES FINISH
MOLDING DRAFTS TO BE
DO NOT SCALE

APPROVED BY 1-13-60
L P Carlson
Bridge Design Engineer

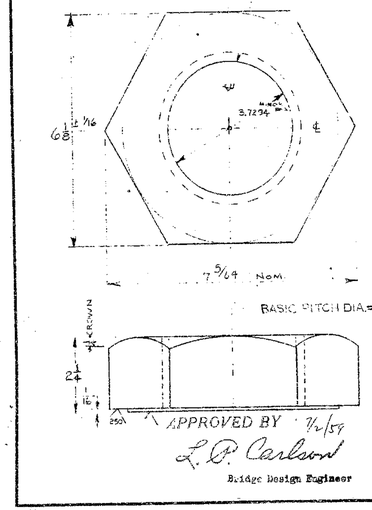
THE LFM MANUFACTURING CO., INC.
SUBSIDIARY OF
ROCKWELL MANUFACTURING CO.
ATCHISON KANSAS

UPPER EXPANSION SHOE

REF: DWG# 984-SH 4-A MISS RIVER BRIDGE

	BY	DATE	SCALE: 1/2" = 1"
DRAWN	JLF	6-9-59	38-B-12168
CHECKED	GA	6-22-59	
APPROVED	LPC	7-2-59	

308



DATE	SYM	REVISION	AUTH	DR	CK

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES TAMMEN & BERGENDOFF

BY V/A DATE 6-26-59

ALT A-7

MATERIAL SPECIFICATIONS

REMARKS: PRIMER PAINT EXTERNALLY

NO. REQ. 16 PATT. NO. S-12172 1ST STG.

TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONAL ± 1/64
DECIMAL ± .010
ANGULAR ± 1/2°
DIMENSIONS ARE IN INCHES
ALL √ INDICATE 125 MICROINCHES FINISH
MOLDING DRAFTS TO BE 2 1/2°
DO NOT SCALE

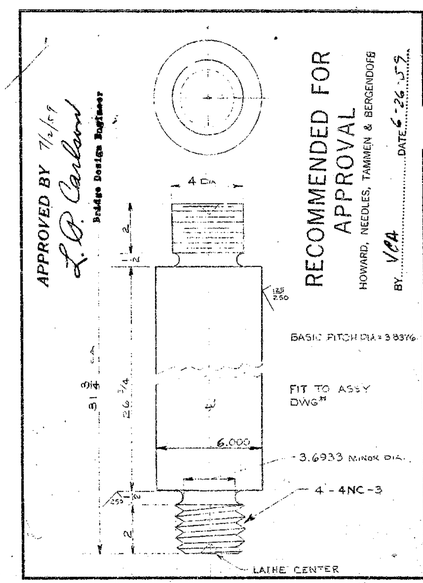
THE LFM
MANUFACTURING CO., INC.
SUBSIDIARY OF
ROCKWELL MANUFACTURING CO.
ATCHISON KANSAS

HEX. NUT
FOR 6" PIN
REF. DWG. # 384 SH 4.13 MISS. RIVER BRIDGE

	BY	DATE	SCALE: 1/2 = 1"
DRAWN	JLF	9-12-58	38-A-12172
CHECKED	[illegible]	6-23-59	
APPROVED			

M-E ALBANENE 1955 TRACING PAPER 60001

308



RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY V/A DATE 6-26-59

DATE	SYM	REVISION	AUTH	DR	CK

ASTM A-238-54T (CLASS 1) OR A 108-54T STL.
149 BHN MIN.

MATERIAL SPECIFICATIONS

REMARKS: 6 1/2 HRS

NOTE: DO NOT PAINT (ONE COAT RUST PREVENTATIVE)

NO. REQ. 8 PATT. NO.

TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONAL ± 1/64
DECIMAL ± .010
ANGULAR ± 1/2°
DIMENSIONS ARE IN INCHES
ALL √ INDICATE 125 MICROINCHES FINISH
MOLDING DRAFTS TO BE _____
DO NOT SCALE

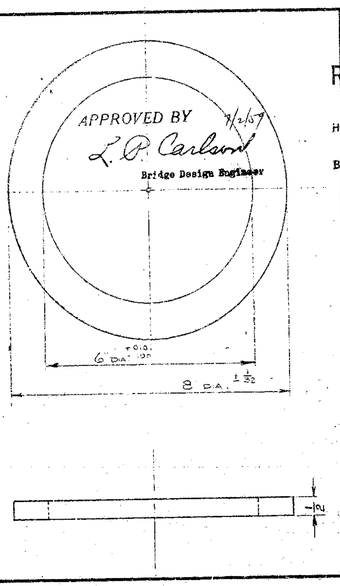
THE LFM
MANUFACTURING CO., INC.
SUBSIDIARY OF
ROCKWELL MANUFACTURING CO.
ATCHISON KANSAS

PIN
FOR
EXTENSION SHOE
REF. DWG # 384 SH 4.14 MISS. RIVER BRIDGE

	BY	DATE	SCALE: 1/4 = 1"
DRAWN	JLF	9-11-59	38-A-12170
CHECKED	[illegible]	6-23-59	
APPROVED			

M-E ALBANENE 1955 TRACING PAPER 60001

308



RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY V/A DATE 6-26-59

DATE	SYM	REVISION	AUTH	DR	CK

CARBON STRUCTURAL STL. 1020-30 HRS
ASTM A-7 33,000 YP 60,000 UT

MATERIAL SPECIFICATIONS

REMARKS: DO NOT PAINT

NOTE: ONE COAT RUST PREVENTATIVE

NO. REQ. 16 PATT. NO.

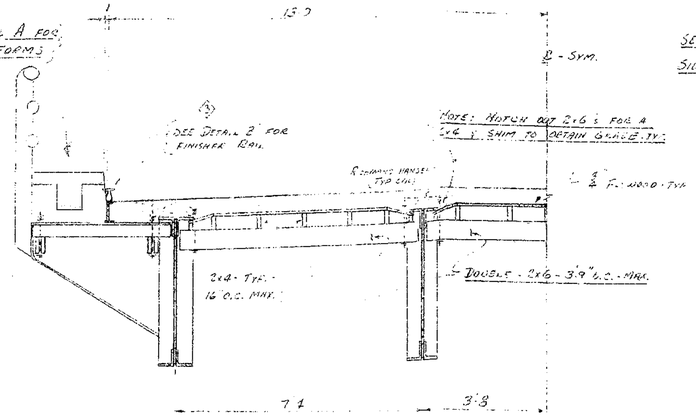
TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONAL ± 1/64
DECIMAL ± .010
ANGULAR ± 1/2°
DIMENSIONS ARE IN INCHES
ALL √ INDICATE 125 MICROINCHES FINISH
MOLDING DRAFTS TO BE _____
DO NOT SCALE

THE LFM
MANUFACTURING CO., INC.
SUBSIDIARY OF
ROCKWELL MANUFACTURING CO.
ATCHISON KANSAS

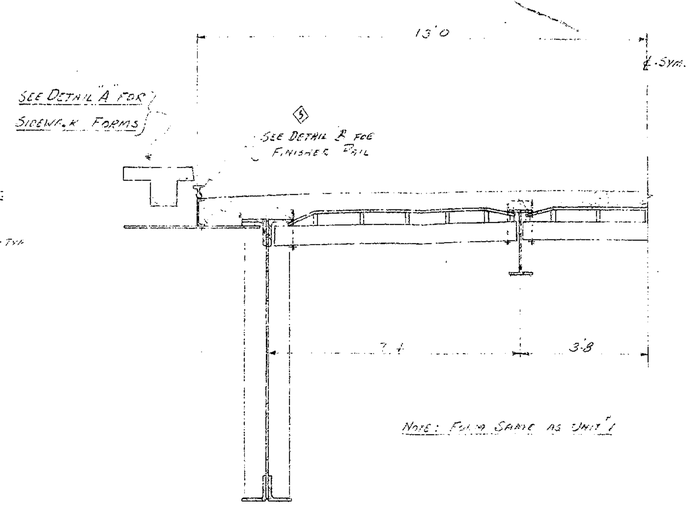
SPECIAL WASHER
FOR 6" PIN
REF. DWG # 384 SH 4.14 MISS. RIVER BRIDGE

	BY	DATE	SCALE: 1/2 = 1"
DRAWN	JLF	8-12-59	38-A-12171
CHECKED	[illegible]	6-23-59	
APPROVED			

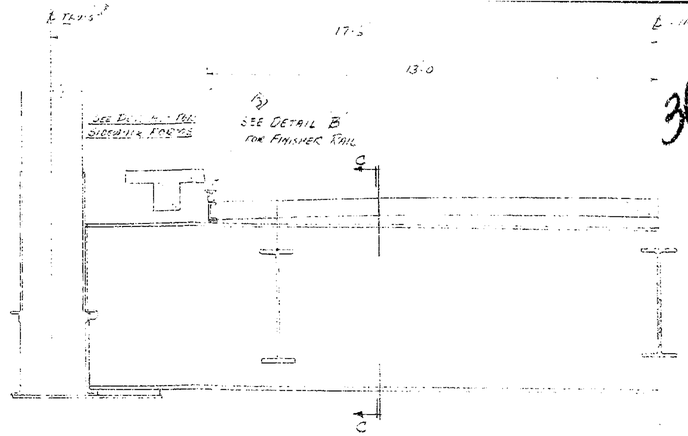
M-E ALBANENE 1955 TRACING PAPER 60001



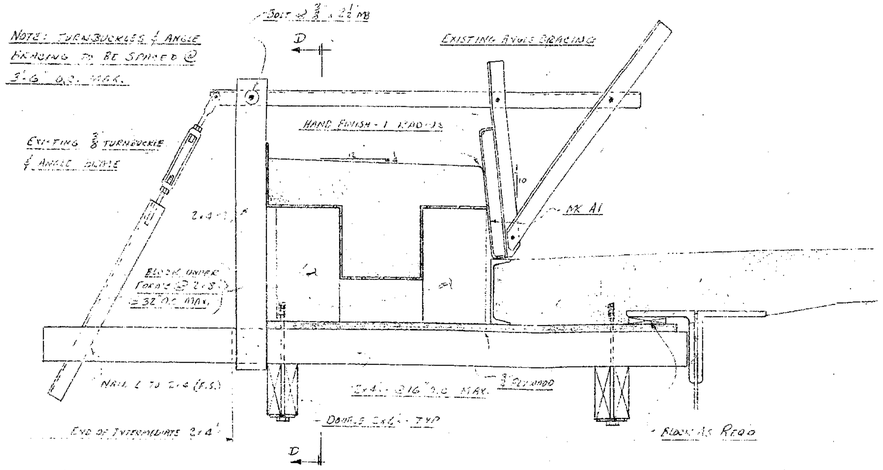
TYPICAL SECTION - APPROACH SPANS - UNIT #1
SCALE: 1/2" = 1'0



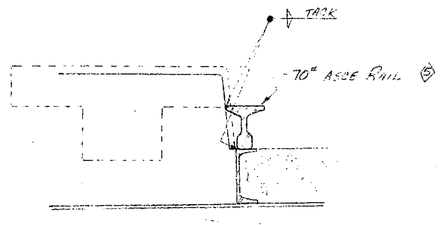
TYPICAL SECTION - APPROACH SPANS - UNITS 2-5
SCALE: 1/2" = 1'0



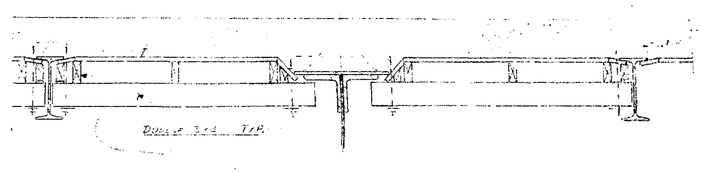
TYPICAL SECTION - TRUSS SPANS
SCALE: 1/2" = 1'0



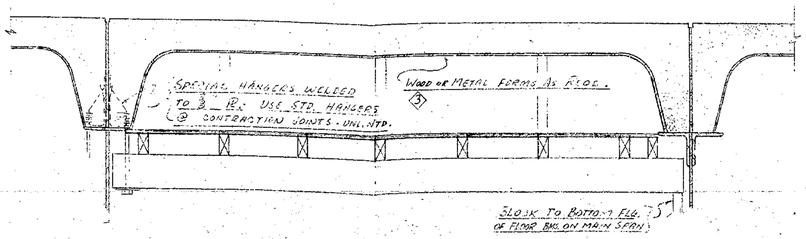
DETAIL "A" - TYPICAL SIDEWALK FORMS
SCALE: 1" = 1'0



3 DETAIL B
(TYPICAL SUPPORT RAIL FOR FINISHING MACHINE)

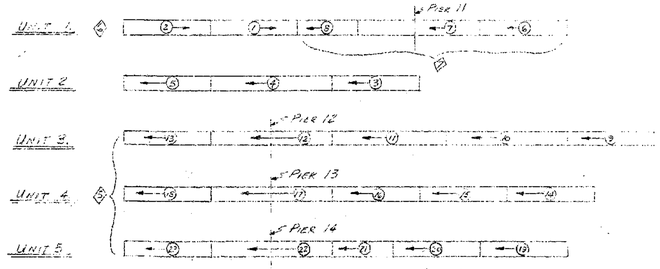


SECTION C-C - TYP FORMING FOR TRUSS SPANS
SCALE: 1" = 1'0

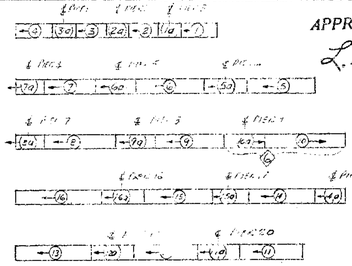


SECTION D-D

SLAB POURING SEQUENCE - MAIN SPANS

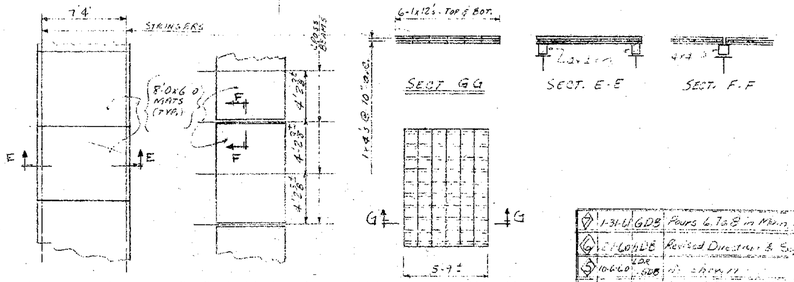


SLAB POURING SEQUENCE - APPROACH SPANS



SPECIAL NOTES:
MAKE POUR WITH SUBJOINT 'a' AFTER ALL OTHER POURS IN UNIT HAVE BEEN MADE.

NOTES:
1. ALL HANGERS TO BE 1/2" MAT. (6000#).
2. MASTER BRIDGE DECK FINISHER, MOD. BDF-1, TO BE USED FOR STRIKE-OFF, SCREED & FINISH OF DECK.
3. UNIT TO BE FURNISHED WITH POWERED BUGGIES.



APPROACH SPANS — TRUSS SPANS — TYPICAL MAT

3 RUNWAY DETAILS FOR POWERED BUGGIES

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
G.A.
DATE 2-3-61
APPROVED BY L.P. Carlson
Bridge Design Engineer
RECOMMENDED FOR APPROVAL 12-16-60 BY G.A. TAMMEN & BERGENDOFF

NO	DATE	BY	REVISION
7	1-31-61	GDS	Pours 6 To 8 in Main Spans
6	12-16-60	LDR	Revised Direction & Symbols
5	10-6-60	LDR	Add Sheet #1
4	9-26-60	GDS	Delete Main Span Pour Method Shown & Revise Pour Sequence
3	9-26-60	LDR	Revised Rail Location
2	7-18-60	LDR	Added Stiffener Rs & Details
1	6-24-60	LDR	Complete Revision

JOHN F. BEASLEY CONSTRUCTION CO.
DALLAS MUSKOGEE CHICAGO

MISSISSIPPI RIVER BRIDGE
HELENA, ARKANSAS

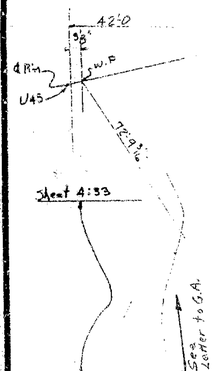
SLAB FORMING DETAILS

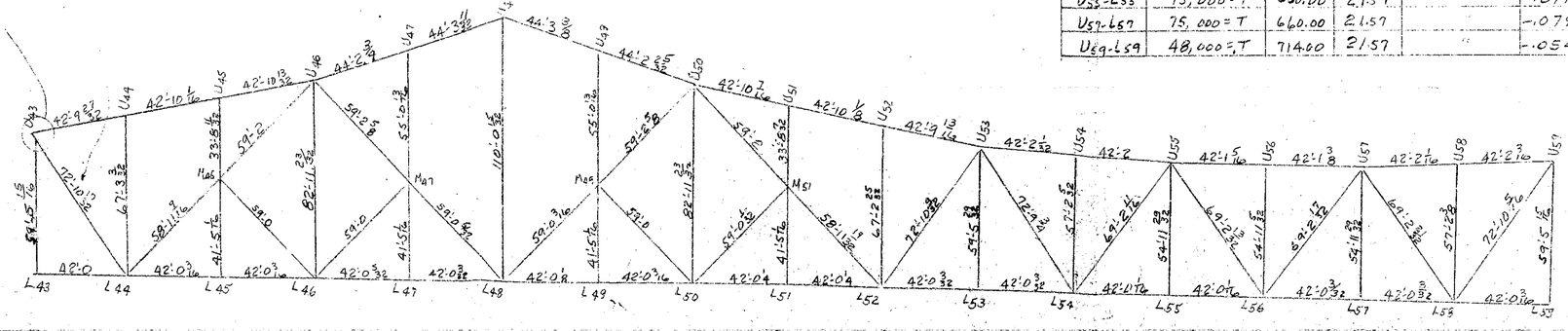
CUSTOMER

DRAWN	CHECKED	DATE	JOB	SHEET
LDR		6-24-60	21a & 21b	D-1

Member	Dead Load = S"	Length = L"	Area = A"	E	D = SL/AE "
U_{43}-U_{44}	301,000 = T	513.94	61.07	29,000,000	-.0873
U_{44}-U_{45}	301,000 = T	514.16	61.07	"	-.0874
U_{45}-U_{46}	301,000 = T	514.50	61.07	"	-.0874
U_{46}-U_{47}	1,438,000 = T	531.03	92.07	"	-.2860
U_{47}-U_{48}	1,438,000 = T	531.63	92.07	"	-.2863
U_{48}-U_{49}	1,438,000 = T	531.66	92.07	"	-.2863
U_{49}-U_{50}	1,438,000 = T	531.06	92.07	"	-.2860
U_{50}-U_{51}	437,000 = T	514.56	61.07	"	-.1270
U_{51}-U_{52}	437,000 = T	514.25	61.07	"	-.1269
U_{52}-U_{53}	437,000 = T	513.94	61.07	"	-.1268
U_{53}-U_{54}	31,000 = C	506.03	64.94	"	+.0083
U_{54}-U_{55}	31,000 = C	506.00	64.94	"	+.0083
U_{55}-U_{56}	263,000 = C	505.25	64.94	"	+.0706
U_{56}-U_{57}	263,000 = C	505.31	64.94	"	+.0706
U_{57}-U_{58}	165,000 = C	506.03	64.94	"	+.0443
U_{58}-U_{59}	165,000 = C	506.16	64.94	"	+.0443
L_{43}-L_{44}	—	—	—	"	—
L_{44}-L_{45}	838,000 = C	504.00	83.88	"	+.1736
L_{45}-L_{46}	838,000 = C	504.00	83.88	"	+.1736
L_{46}-L_{47}	822,000 = C	504.00	88.81	"	+.1609
L_{47}-L_{48}	822,000 = C	504.00	140.81	"	+.1015
L_{48}-L_{49}	875,000 = C	504.03	140.81	"	+.1080
L_{49}-L_{50}	875,000 = C	504.03	88.81	"	+.1712
L_{50}-L_{51}	891,000 = C	504.06	83.88	"	+.1846
L_{51}-L_{52}	891,000 = C	504.06	83.88	"	+.1846
L_{52}-L_{53}	191,000 = C	504.06	72.61	"	+.0457
L_{53}-L_{54}	191,000 = C	504.06	72.61	"	+.0457
L_{54}-L_{55}	188,000 = T	504.13	61.07	"	-.0535
L_{55}-L_{56}	188,000 = T	504.13	61.07	"	-.0535
L_{56}-L_{57}	257,000 = T	504.16	61.07	"	-.0732
L_{57}-L_{58}	257,000 = T	504.16	61.07	"	-.0732
L_{58}-L_{59}	—	—	—	"	—
U_{43}-L_{44}	512,000 = C	874.31	70.07	"	+.2203
L_{44}-M_{45}	762,000 = T	707.94	50.76	"	-.3665
M_{45}-U_{46}	843,000 = T	710.38	54.96	"	-.3757

Member	Dead Load = S"	Length = L"	Area = A"	E	D = SL/AE "
M_{45}-L_{46}	81,000 = C	707.94	38.81	29,000,000	+.0509
L_{46}-M_{47}	104,000 = C	707.94	38.81	"	+.0654
U_{46}-M_{47}	665,000 = C	710.38	69.43	"	+.2348
M_{47}-L_{48}	769,000 = C	707.94	85.92	"	+.2185
L_{48}-M_{49}	694,000 = C	707.94	69.38	"	+.2442
M_{49}-U_{50}	590,000 = C	710.41	69.38	"	+.2085
M_{49}-L_{50}	104,000 = C	707.94	38.81	"	+.0654
L_{50}-M_{51}	81,000 = C	707.97	38.81	"	+.0510
U_{50}-M_{51}	729,000 = T	710.41	44.76	"	-.3990
M_{51}-L_{52}	648,000 = T	707.97	40.56	"	-.3900
L_{52}-U_{53}	416,000 = C	874.00	44.76	"	+.2851
U_{52}-L_{54}	380,000 = T	874.00	43.56	"	-.2669
L_{54}-U_{55}	254,000 = C	830.50	38.81	"	+.1814
U_{55}-L_{56}	125,000 = T	830.50	36.06	"	-.0993
L_{56}-U_{57}	10,000 = T	830.53	38.81	"	-.0074
U_{57}-L_{58}	153,000 = C	830.53	38.81	"	+.1129
L_{58}-U_{59}	285,000 = T	874.53	40.56	"	-.2119
U_{44}-L_{44}	25,000 = C	807.06	26.73	"	+.0260
U_{45}-M_{45}	17,000 = C	404.34	21.57	"	+.0110
U_{47}-M_{47}	23,000 = C	660.78	21.57	"	+.0143
U_{48}-L_{48}	940,000 = C	1,320.00	92.70	"	+.4213
U_{49}-M_{49}	23,000 = C	660.78	21.57	"	+.0143
U_{51}-M_{51}	17,000 = C	404.22	21.57	"	+.0110
U_{52}-L_{52}	25,000 = C	806.75	26.73	"	+.0260
U_{54}-L_{54}	22,000 = C	686.13	21.57	"	+.0241
U_{56}-L_{56}	22,000 = C	659.13	21.57	"	+.0232
U_{58}-L_{58}	24,000 = C	686.34	21.57	"	+.0263
U_{43}-L_{43}	48,000 = T	672.91	21.57	"	-.0516
M_{45}-L_{45}	76,000 = T	497.13	21.57	"	-.0664
U_{46}-L_{46}	220,000 = T	996.00	26.73	"	-.2827
M_{47}-L_{47}	80,000 = T	497.13	21.57	"	-.0636
M_{49}-L_{49}	81,000 = T	497.13	21.57	"	-.0644
U_{50}-L_{50}	222,000 = T	996.00	26.73	"	-.2852
M_{51}-L_{51}	77,000 = T	497.13	21.57	"	-.0612
U_{53}-L_{53}	97,000 = T	714.00	21.57	"	-.0879
U_{55}-L_{55}	75,000 = T	660.00	21.57	"	-.0791
U_{57}-L_{57}	75,000 = T	660.00	21.57	"	-.0791
U_{59}-L_{59}	48,000 = T	714.60	21.57	"	-.0548





DETAILING LENGTHS

APPROVED BY 10/4/59
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
By ERS DATE 9-30-59

VINCENNES STEEL
Div. of Industrial Enterprises Inc.
Vincennes, Ind.

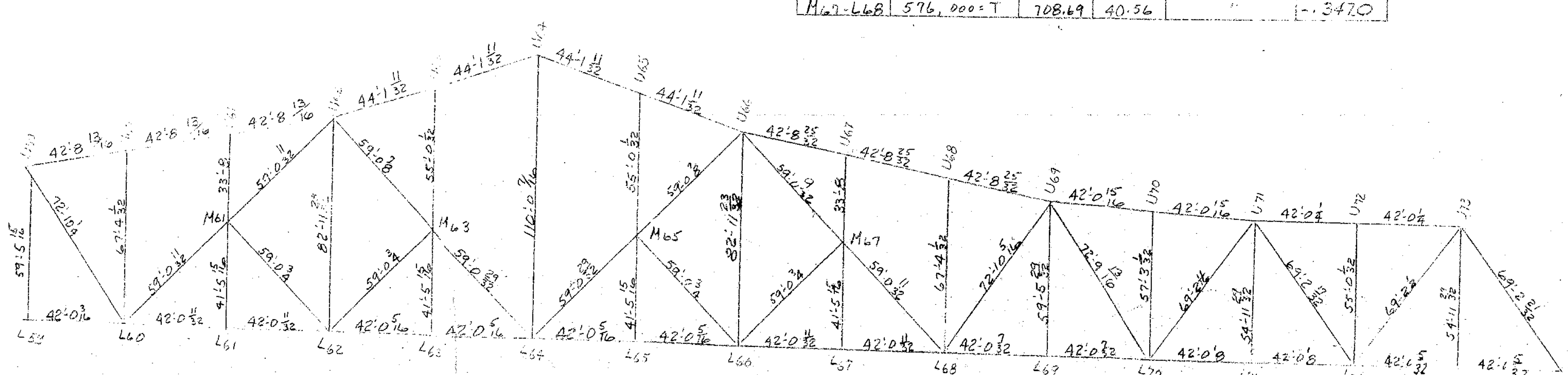
WILLIOT DIAGRAM
MISSISSIPPI RIVER, BRIDGE
NEAR HELENA, ARKANSAS.
UNIT #4.

Edge Distance—	Drawn	Checked	Approved	Revised
Contact Surfaces Shop— Field—			9/4/59	9/12/59
Paint				
Holes—				
Rivets—				

305

Member	Dead Load = S#	Length = L"	Area = A$^{\square''}$	E	$D = \frac{SL}{AE}$ "
U59-U60	237,000 = T	512.88	61.07	29,000,000	-.0686
U60-U61	237,000 = T	512.88	61.07	"	-.0686
U61-U62	237,000 = T	512.88	61.07	"	-.0686
U62-U63	1,235,000 = T	529.59	84.94	"	-.2655
U63-U64	1,235,000 = T	529.59	84.94	"	-.2655
U64-U65	1,235,000 = T	529.59	84.94	"	-.2655
U65-U66	1,235,000 = T	529.59	84.94	"	-.2655
U66-U67	310,000 = T	512.88	61.07	"	-.0578
U67-U68	310,000 = T	512.88	61.07	"	-.0578
U68-U69	310,000 = T	512.88	61.07	"	-.0578
U69-U70	72,000 = C	504.91	64.94	"	+.0193
U70-U71	72,000 = C	504.91	64.94	"	+.0193
U71-U72	200,000 = C	504.19	64.94	"	+.0535
U72-U73	200,000 = C	504.19	64.94	"	+.0535
L59-L60	—	—	—	"	—
L60-L61	684,000 = C	504.19	81.95	"	+.1451
L61-L62	684,000 = C	504.19	81.95		+.1451
L62-L63	662,000 = C	504.19	88.81	"	+.1295
L63-L64	668,000 = C	504.19	104.81	"	+.1108
L64-L65	699,000 = C	504.19	104.81	"	+.1159
L65-L66	699,000 = C	504.19	88.81	"	+.1368
L66-L67	715,000 = C	504.19	81.95	"	+.1516
L67-L68	715,000 = C	504.19	81.95	"	+.1516
L68-L69	101,000 = C	504.19	72.61	"	+.0242
L69-L70	101,000 = C	504.19	72.61	"	+.0242
L70-L71	177,000 = T	504.19	61.07	"	-.0504
L71-L72	177,000 = T	504.19	61.07	"	-.0504
L72-L73	143,000 = T	504.19	61.07	"	-.0401
L73-L74	143,000 = T	504.19	61.07	"	-.0401
U59-L60	403,000 = C	874.06	70.02	"	+.1735
L60-M61	635,000 = T	708.69	46.56	"	-.3333
M61-U62	715,000 = T	708.69	50.76	"	-.3442
M61-L62	80,000 = C	708.69	38.81	"	+.0504
L62-M63	103,000 = C	708.69	38.81	"	+.0649
U62-M63	610,000 = C	708.69	78.42	"	+.1901
M63-L64	713,000 = C	708.69	85.92	"	+.2028
L64-M65	670,000 = C	708.69	78.42	"	+.2088
M65-U66	568,000 = C	708.69	78.42	"	+.1770
M65-L66	102,000 = C	708.69	38.81	"	+.0642
L66-M67	80,000 = C	708.69	38.81	"	+.0504
U66-M67	656,000 = T	708.69	40.56	"	-.3952
M67-L68	576,000 = T	708.69	40.56	"	-.3470

Member	Dead Load = S#	Leng = L	Area = A$^{\square''}$	E	$D = \frac{SL}{AE}$
L68-U69	354,000 = C	874.06	43.56	29,000,000	+.2449
U69-L70	290,000 = T	874.06	36.06	"	-.2423
L70-U71	163,000 = C	[illegible]	38.81	"	[illegible]
U71-L72	38,000 = T	[illegible]	38.81	"	[illegible]
L72-U73	75,000 = T	[illegible]	38.81	"	[illegible]
U73-L74	235,000 = C	[illegible]	78.14	"	[illegible]
U59-L59	48,000 = T	714.00	21.57	"	-.0548
M61-L61	75,000 = T	[illegible]	21.57	"	[illegible]
M63-L63	80,000 = T	496.00	21.57	"	[illegible]
M65-L65	80,000 = T	[illegible]	21.57	"	-.0637
M67-L67	76,000 = T	[illegible]	21.57	"	[illegible]
U69-L69	75,000 = T	714.00	21.57		[illegible]
U71-L71	75,000 = T	660.00	21.57		-.0791
U73-L73	74,000 = T	660.00	21.57		-.0781
U60-L60	26,000 = C	808.00	26.73		+.0271
U61-M61	17,000 = C	404.00	21.57		+.0110
U62-L62	220,000 = T	990.00	26.73		-.2827
U63-M63	22,000 = C	660.00	21.57		+.0232
U64-L64	815,000 = C	1,330.00	86.70		[illegible]
U65-M65	22,000 = C	660.00	21.57		+.0232
U66-L66	220,000 = T	990.00	26.73		[illegible]
U67-M67	17,000 = C	404.00	21.57		+.0110
U68-L68	26,000 = C	808.00	26.73		+.0271
U70-L70	22,000 = C	687.00	21.57		+.0242
U72-L72	22,000 = C	660.00	21.57		+.0232



DETAILING LENGTHS

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
By DER Date 8-25-59

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY DER DATE 8-25-59

APPROVED BY 8/31/59
L. P. Carlson
Bridge Design Engineer

APPROVED BY
L. P. Carlson
Bridge Design Engineer

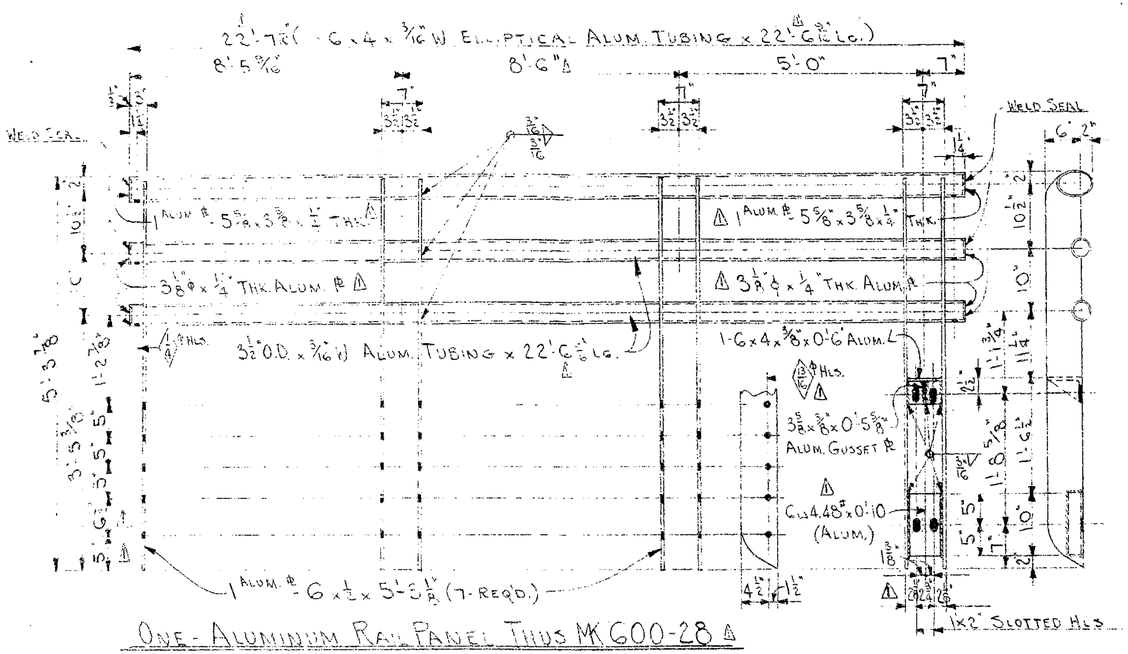
Edge Distance—	
Contact Surfaces	Shop— / Field—
Paint	
Holes—	
Rivets—	

VINCENNES STEEL
Div. of Industrial Enterprises Inc.
Vincennes, Ind.

WILLIOT DIAGRAM
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSA[S]
UNI[T]

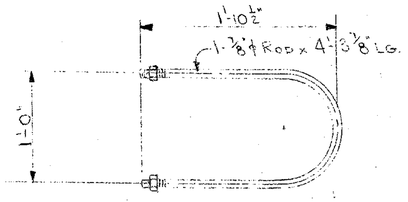
Drawn	Checked	Approved	Re[v]
			8/10

4800 ... 512

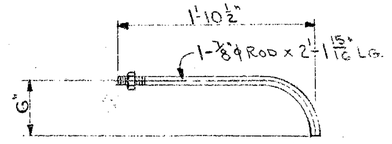


ONE - ALUMINUM RAIL PANEL THUS MK 600-28 △

ONE - DO DO DO OPP. HAND MK 600-28R △



108 - ANCHOR BOLTS THUS MKAB-1



116 - ANCHOR BOLTS THUS MKAB-2

ONE	ALUM. RAIL PANELS			600-82
ONE	DO	DO	DO	600-82R
ONE	DO	DO	DO	600-83
ONE	DO	DO	DO	600-83R
3	DO	DO	DO	600-84
3	DO	DO	DO	600-84R
2	DO	DO	DO	600-85
2	DO	DO	DO	600-85R
ONE	DO	DO	DO	600-86
ONE	DO	DO	DO	600-86R
ONE	DO	DO	DO	600-87
ONE	DO	DO	DO	600-87R
2	DO	DO	DO	600-88
2	DO	DO	DO	600-88R
ONE	DO	DO	DO	600-89
ONE	DO	DO	DO	600-89R
ONE	DO	DO	DO	600-90
ONE	DO	DO	DO	600-90R
2	DO	DO	DO	600-91
2	DO	DO	DO	600-91R

ONE	ALUM. RAIL PANELS			600-92
ONE	DO	DO	DO	600-92R
ONE	DO	DO	DO	600-93
ONE	DO	DO	DO	600-93R
ONE	DO	DO	DO	600-94
ONE	DO	DO	DO	600-94R
ONE	DO	DO	DO	600-95
2	DO	DO	DO	600-95R
ONE	DO	DO	DO	600-96
ONE	DO	DO	DO	600-96R
ONE	DO	DO	DO	600-97
ONE	DO	DO	DO	600-97R
2	DO	DO	DO	600-98
2	DO	DO	DO	600-98R
ONE	DO	DO	DO	600-99
ONE	DO	DO	DO	600-99R
ONE	DO	DO	DO	600-100
ONE	DO	DO	DO	600-100R
2	DO	DO	DO	600-101
2	DO	DO	DO	600-101R

PARTS LIST - CONT'D.

QTY.	DESCRIPTION			PC. MK.
ONE	ALUM. RAIL PANELS			600-31
ONE	DO	DO	DO	600-31R
ONE	DO	DO	DO	600-32
ONE	DO	DO	DO	600-32R
ONE	DO	DO	DO	600-33
2	DO	DO	DO	600-33R
ONE	DO	DO	DO	600-34
ONE	DO	DO	DO	600-34R
ONE	DO	DO	DO	600-35
2	DO	DO	DO	600-35R
ONE	DO	DO	DO	600-36
ONE	DO	DO	DO	600-36R
ONE	DO	DO	DO	600-37
ONE	DO	DO	DO	600-37R
2	DO	DO	DO	600-38
2	DO	DO	DO	600-38R
ONE	DO	DO	DO	600-39
ONE	DO	DO	DO	600-39R
ONE	DO	DO	DO	600-40
ONE	DO	DO	DO	600-40R
ONE	DO	DO	DO	600-41
ONE	DO	DO	DO	600-41R
ONE	DO	DO	DO	600-42
ONE	DO	DO	DO	600-42R
2	DO	DO	DO	600-43
2	DO	DO	DO	600-43R
ONE	DO	DO	DO	600-44
ONE	DO	DO	DO	600-44R
ONE	DO	DO	DO	600-45
ONE	DO	DO	DO	600-45R
2	DO	DO	DO	600-46
2	DO	DO	DO	600-46R
ONE	DO	DO	DO	600-47
ONE	DO	DO	DO	600-47R
2	DO	DO	DO	600-48
2	DO	DO	DO	600-48R
ONE	DO	DO	DO	600-49
ONE	DO	DO	DO	600-49R
ONE	DO	DO	DO	600-50
ONE	DO	DO	DO	600-50R
ONE	DO	DO	DO	600-51
ONE	DO	DO	DO	600-51R
ONE	DO	DO	DO	600-52
ONE	DO	DO	DO	600-52R
ONE	DO	DO	DO	600-53
ONE	DO	DO	DO	600-53R
2	DO	DO	DO	600-54
2	DO	DO	DO	600-54R
ONE	DO	DO	DO	600-55
ONE	DO	DO	DO	600-55R
3	DO	DO	DO	600-56
3	DO	DO	DO	600-56R
ONE	DO	DO	DO	600-57
ONE	DO	DO	DO	600-57R
ONE	DO	DO	DO	600-58
ONE	DO	DO	DO	600-58R

APPROVED BY 2/29/60
L. P. Garland
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY E.R.S. DATE 2-22-60

APPROVED BY _____ DATE _____
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

REVISION	DATE				

SOUTHWEST ORNAMENTAL IRON CO.
1722-30 TRACY AVENUE KANSAS CITY 8, MISSOURI

JOB MISSISSIPPI RIVER BRIDGE
LOCATION NEAR HELENA, ARK.
TITLE DET. ALUM. RAIL 600-28 & 28R & AB1 & AB2
FINISH ALUM. - MILL; STEEL
ARCHITECT HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONTRACTOR JOHN F. BEASLEY CONST. CO.
REFERENCE

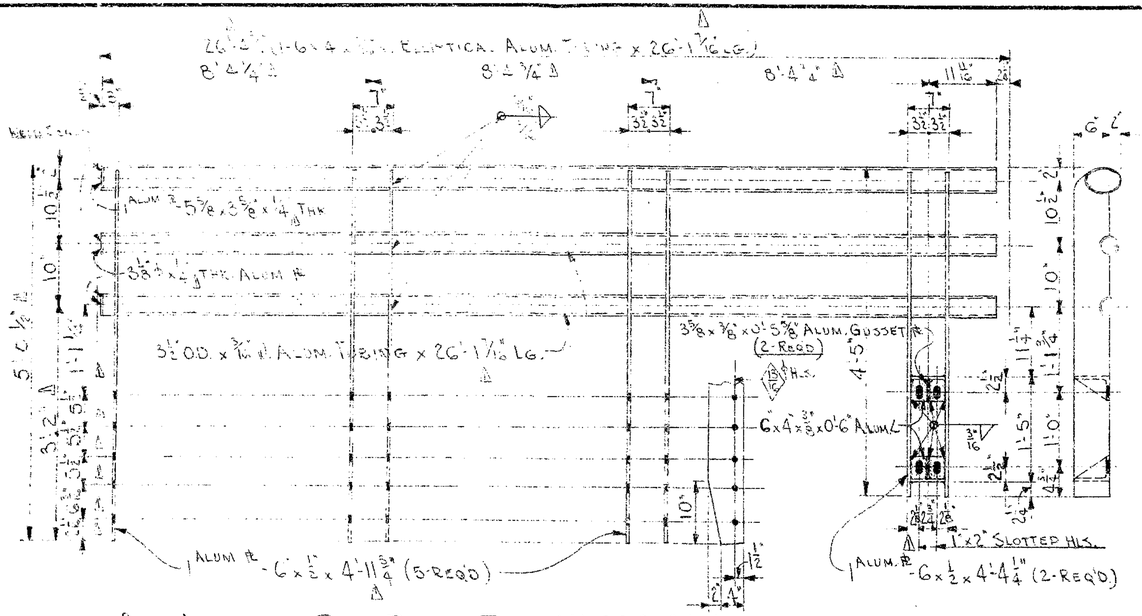
DRAWN BY	A	CHECKED BY		HOLES	UNLESS NOTED
DATE	4-20-59	DATE		BOLTS	UNLESS NOTED
ORDER NO.	600	DRAWING NO.	16	RIVETS	UNLESS NOTED

THIS JOB TO BE FURNISHED AND DELIVERED

PRINTS ISSUED					
FOR	NO.	DATE	FOR	NO.	DATE
APPR.	4	5-5-59			
APPR.	4	7-15-59			
F. APP	4	2-8-60			

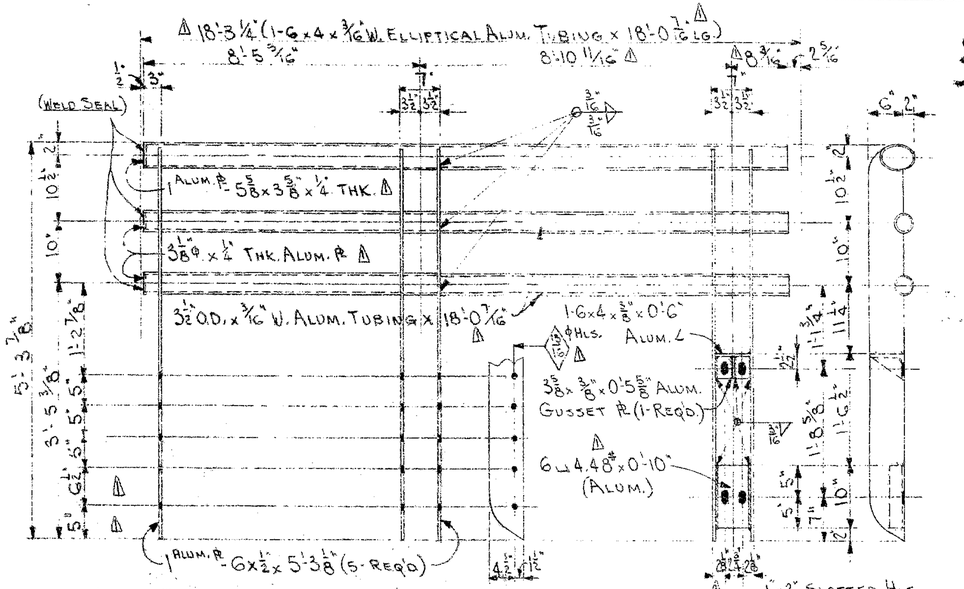
DATE MADE	REVISION	BY
12-10-59	GEN. (MISC. P) REV	A

303



ONE - ALUMINUM RAIL PANEL THUS MK 600-24 △

ONE - DO DO DO OPP HAND MK 600-24R △

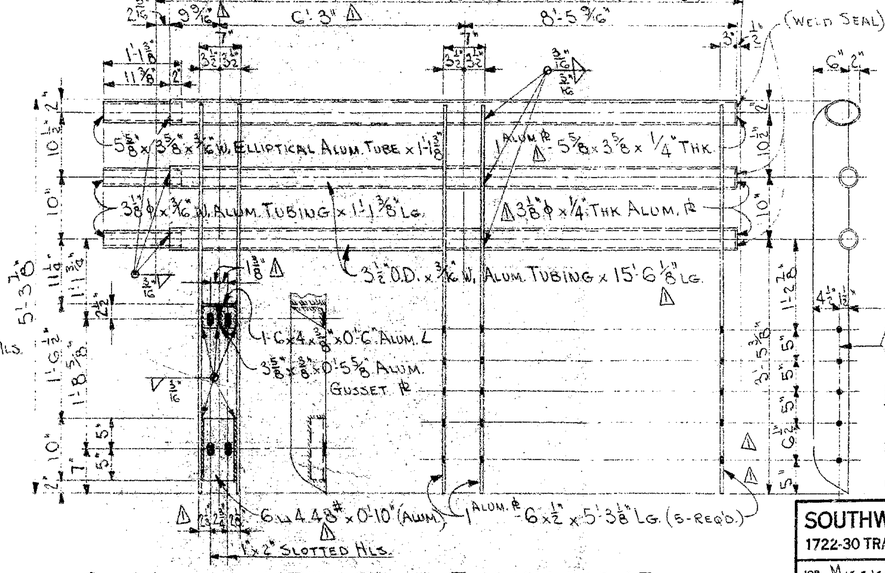


ONE - ALUMINUM RAIL PANEL THUS MK 600-26

ONE - DO DO DO OPP. HAND MK 600-26R

ONE - ALUMINUM RAIL PANEL THUS MK 600-25 △

ONE - DO DO DO OPP HAND MK 600-25R △



APPROVED BY 2/24/60
HLS L. P. Carlson
Bridge Design Engineer
RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 2-22-60

ONE - ALUMINUM RAIL PANEL THUS MK 600-27

ONE - DO DO DO OPP. HAND MK 600-27R

APPROVED BY _____ DATE _____
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

REVISION	DATE

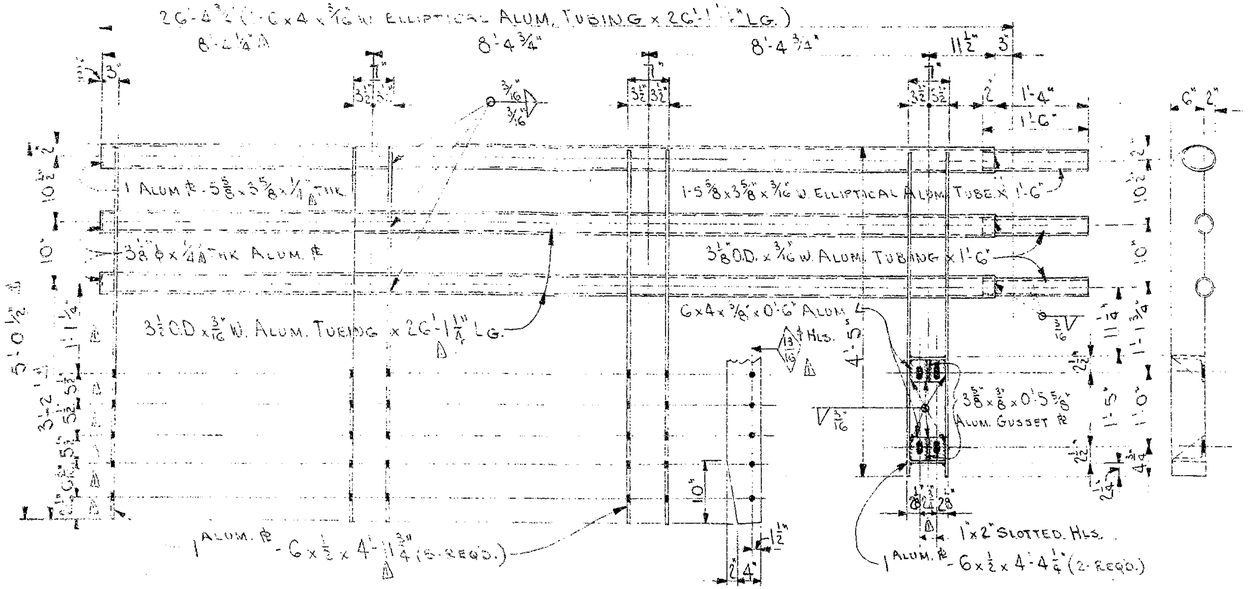
PRINTS ISSUED FOR	NO.	DATE	FOR	NO.	DATE
Appr.	4	6-24			
Appr.	4	7-21-59			
F. App	4	2-8-60			

DATE MADE	REVISION	BY
2-8-60	Gen. Rail St. Dwgs.	Æ

SOUTHWEST ORNAMENTAL IRON CO.
1722-30 TRACY AVENUE KANSAS CITY 8, MISSOURI

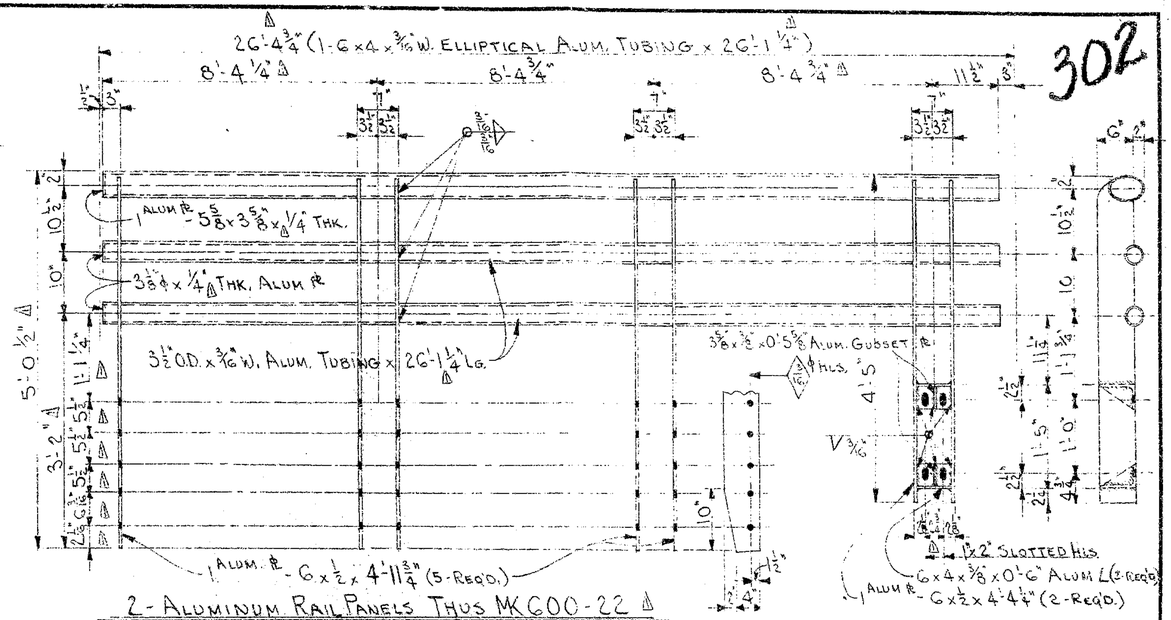
JOB Mississippi River Bridge
LOCATION Near Helena, Ark.
TITLE Det. Alum. Rails 600-24 & 24R, 25 & 25R, 26 & 26R, 27 & 27R
FINISH Mill Finish
ARCHITECT Howard, Needles, Tammen & Bergendoff
CONTRACTOR John F. Beasley Const. Co.
REFERENCE
DRAWN BY Æ — CHECKED BY — HOLES UNLESS NOTED
DATE 4-20-59 — DATE — BOLTS UNLESS NOTED
ORDER NO. 600 — DRAWING NO. 15 — RIVETS UNLESS NOTED
THIS JOB TO BE FURNISHED AND DELIVERED

(A)



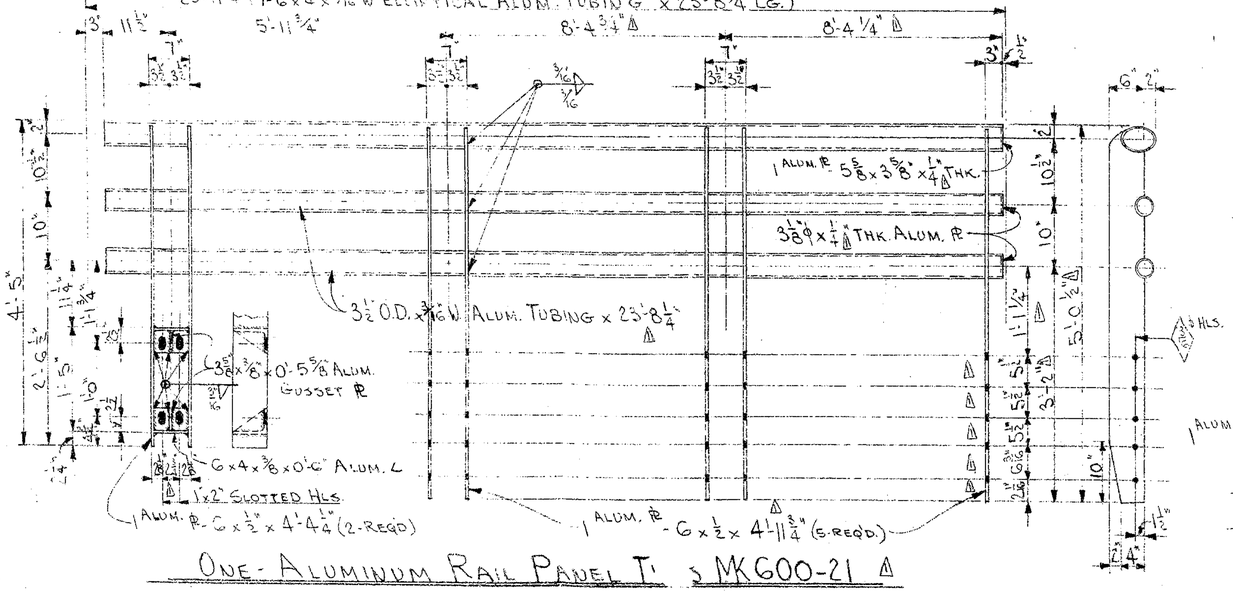
ONE - ALUMINUM RAIL PANEL THUS MK600-20 ▲

ONE - DO DO DO OPP HAND MK600-20R ▲



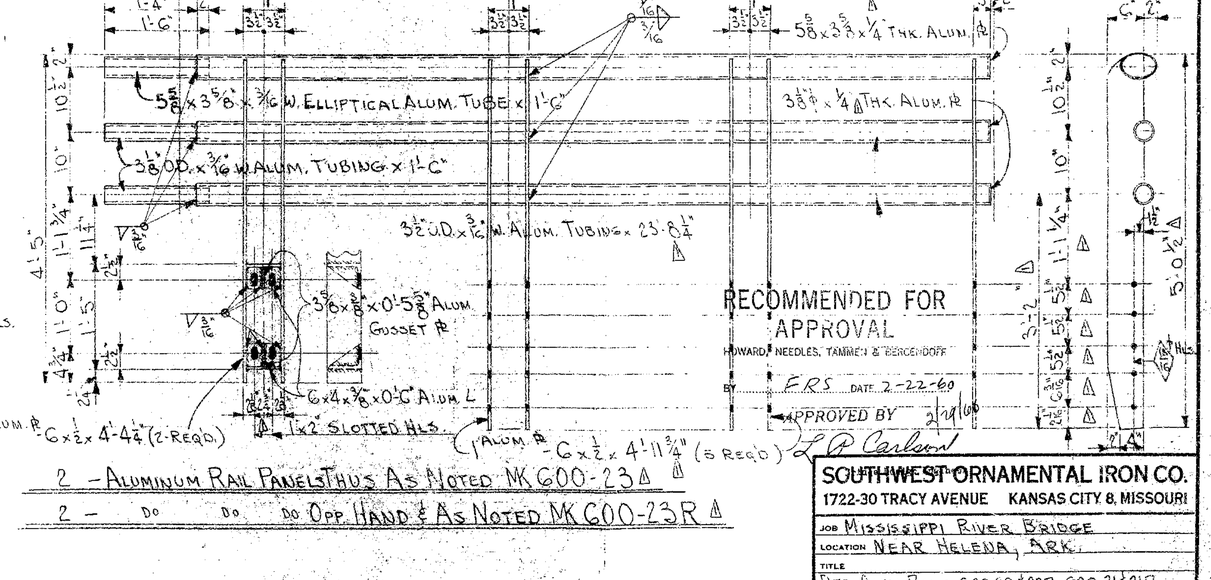
2 - ALUMINUM RAIL PANELS THUS MK600-22 ▲

2 - DO DO DO OPP HAND MK600-22R ▲



ONE - ALUMINUM RAIL PANEL THUS MK600-21 ▲

ONE - DO DO DO OPP HAND MK600-21R ▲



2 - ALUMINUM RAIL PANELS THUS AS NOTED MK600-23 ▲

2 - DO DO DO OPP. HAND & AS NOTED MK600-23R ▲

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 2-22-60
APPROVED BY 2/24/60
L P Carlson

APPROVED BY _____ DATE _____
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

REVISION	DATE

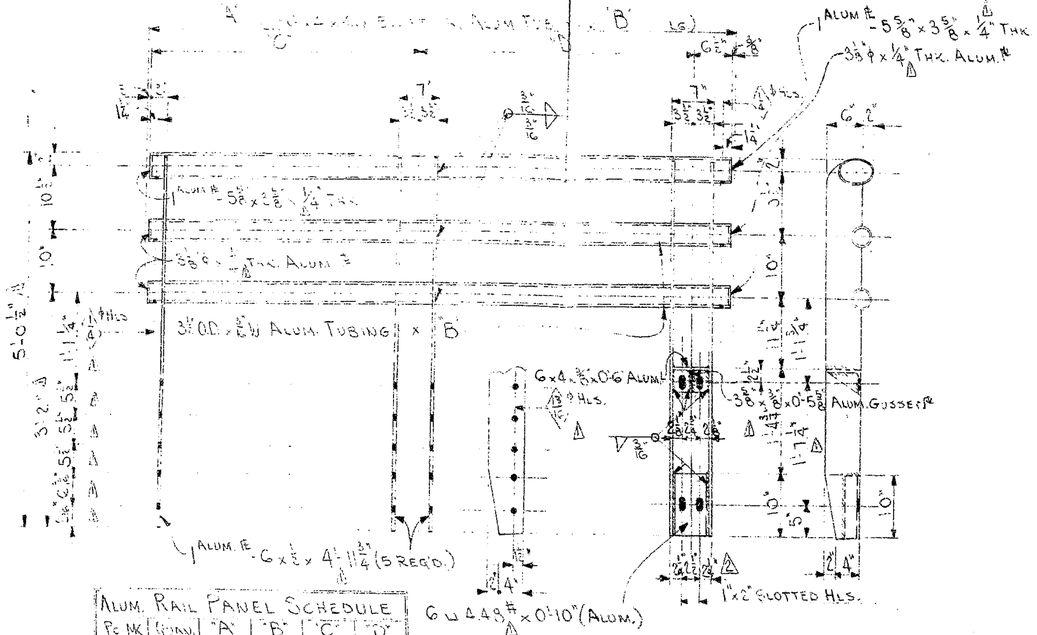
PRINTS ISSUED FOR	NO.	DATE
APPR.	4	1-19-24
APPR.	4	2-21-57
F. APP.	4	2-3-60

DATE MADE	REVISION	BY
2-4-60	GEN. REV. STEEL DWGS.	A

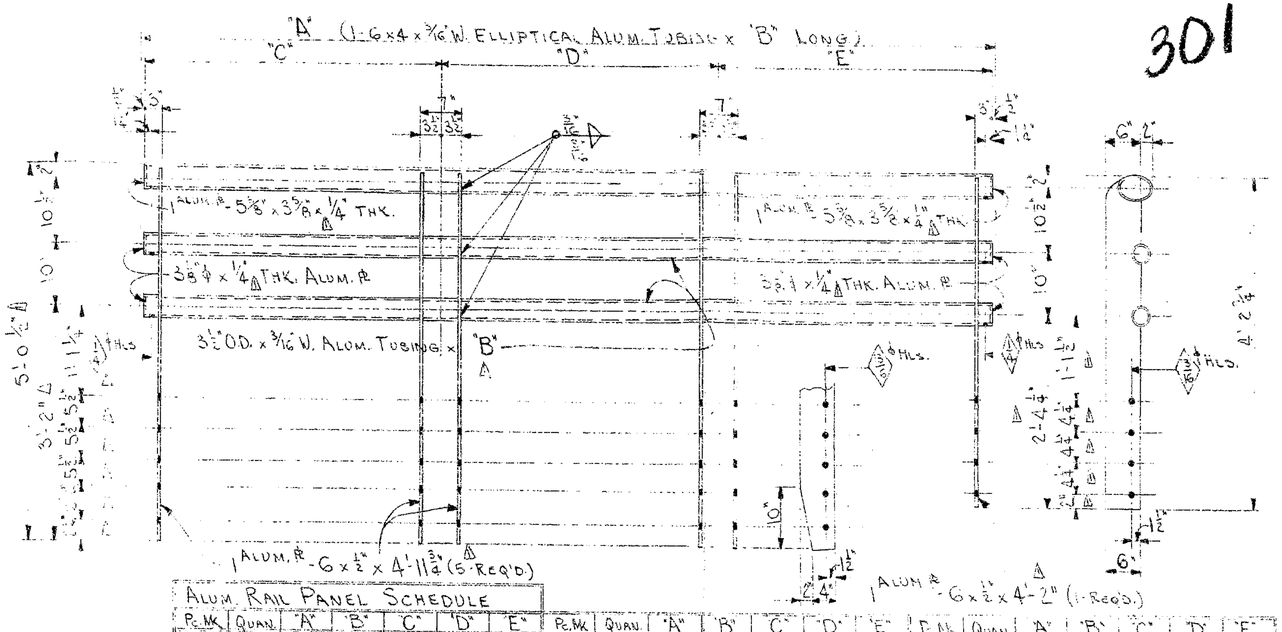
SOUTHWEST ORNAMENTAL IRON CO.
1722-30 TRACY AVENUE KANSAS CITY 8, MISSOURI

JOB	MISSISSIPPI RIVER BRIDGE
LOCATION	NEAR HELENA, ARK.
TITLE	DET. ALUM RAILS 600-20 & 20R, 600-21 & 21R, 600-22 & 22K, 600-23 & 23R, 600-31 & 31R
FINISH	MILL FINISH
ARCHITECT	HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONTRACTOR	JOHN F. BEASLEY CONST. CO.
REFERENCE	
DRAWN BY	A
CHECKED BY	
DATE	4-17-59
ORDER NO.	600
DRAWING NO.	14
HOLES	UNLESS NOTED
BOLTS	UNLESS NOTED
RIVETS	UNLESS NOTED
THIS JOB TO BE FURNISHED AND	DELIVERED

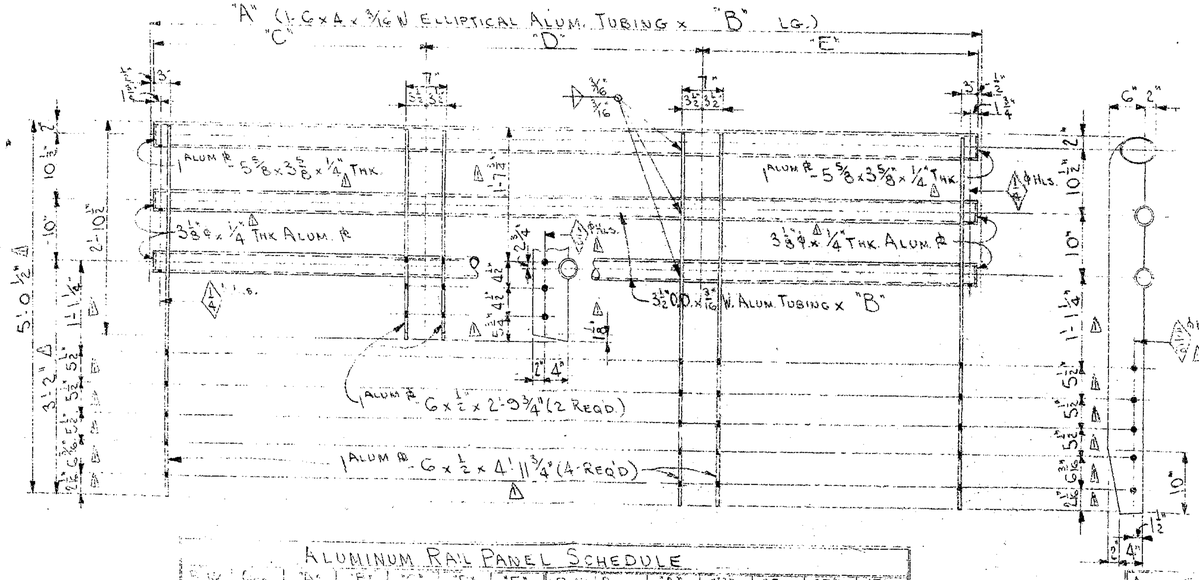
(A)



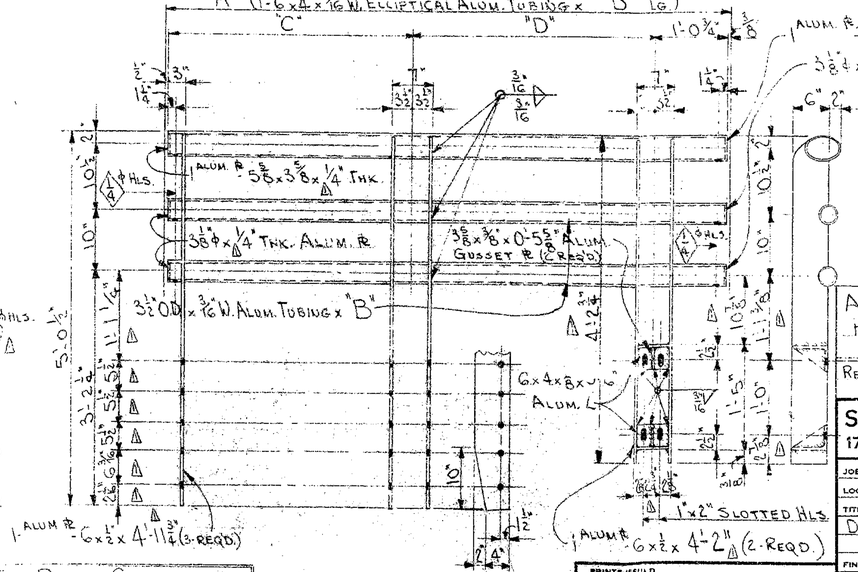
Alum. Rail Panel Schedule																													
Pc. Mk.	Quan.	"A"	"B"	"C"	"D"	Pc. Mk.	Quan.	"A"	"B"	"C"	"D"	Pc. Mk.	Quan.	"A"	"B"	"C"	"D"	"E"	Pc. Mk.	Quan.	"A"	"B"	"C"	"D"	"E"				
600-16	One	15'-8 3/8"	15'-1 7/16"	8'-4 1/4"	8'-5 5/16"	600-16R	One	15'-8 3/8"	15'-1 7/16"	8'-4 1/4"	8'-5 5/16"	600-75	One	15'-8 3/32"	15'-1 3/16"	8'-4 1/4"	8'-5 5/16"	8'-4 1/4"	600-75R	One	15'-8 3/32"	15'-1 3/16"	8'-4 1/4"	8'-5 5/16"	8'-4 1/4"				
600-35	One	15'-8 3/8"	15'-1 7/16"	8'-4 1/4"	8'-5 5/16"	600-35R	One	15'-8 3/8"	15'-1 7/16"	8'-4 1/4"	8'-5 5/16"	600-16	One	15'-8 3/32"	15'-1 3/16"	8'-4 1/4"	8'-5 5/16"	8'-4 1/4"	600-16R	One	15'-8 3/32"	15'-1 3/16"	8'-4 1/4"	8'-5 5/16"	8'-4 1/4"				
600-74	One	15'-8 3/8"	15'-1 7/16"	8'-4 1/4"	8'-5 5/16"	600-74R	One	15'-8 3/8"	15'-1 7/16"	8'-4 1/4"	8'-5 5/16"	600-84	3	25'-2 5/8"	25'-1 5/16"	8'-4 1/4"	8'-4 1/4"	8'-4 3/32"	600-84R	3	25'-2 5/8"	25'-1 5/16"	8'-4 1/4"	8'-4 1/4"	8'-4 3/32"				
600-74S	One	15'-8 3/8"	15'-1 7/16"	8'-4 1/4"	8'-5 5/16"																								



Alum. Rail Panel Schedule																													
Pc. Mk.	Quan.	"A"	"B"	"C"	"D"	"E"	Pc. Mk.	Quan.	"A"	"B"	"C"	"D"	"E"	Pc. Mk.	Quan.	"A"	"B"	"C"	"D"	"E"	Pc. Mk.	Quan.	"A"	"B"	"C"	"D"	"E"		
600-18	2	25'-2 3/32"	25'-1 5/16"	8'-4 1/2"	8'-4 3/16"	8'-4 1/2"	600-85	2	25'-2 3/32"	25'-1 5/16"	8'-4 1/2"	8'-4 3/16"	8'-4 1/2"	600-88	2	25'-2 3/32"	25'-1 5/16"	8'-4 1/2"	8'-4 3/16"	8'-4 1/2"									
600-18R	2	25'-2 3/32"	25'-1 5/16"	8'-4 1/2"	8'-4 3/16"	8'-4 1/2"	600-85R	2	25'-2 3/32"	25'-1 5/16"	8'-4 1/2"	8'-4 3/16"	8'-4 1/2"	600-88R	2	25'-2 3/32"	25'-1 5/16"	8'-4 1/2"	8'-4 3/16"	8'-4 1/2"									
600-35	One	25'-2 3/32"	25'-1 5/16"	8'-4 1/2"	8'-4 3/4"	8'-4 3/32"	600-86	One	25'-2 3/32"	25'-1 5/16"	8'-4 1/2"	8'-4 3/4"	8'-4 3/32"	600-90	One	25'-2 3/32"	25'-1 5/16"	8'-4 1/2"	8'-4 3/4"	8'-4 3/32"									
600-35R	One	25'-2 3/32"	25'-1 5/32"	8'-4 1/2"	8'-4 3/4"	8'-4 3/32"	600-86R	One	25'-2 3/32"	25'-1 5/32"	8'-4 1/2"	8'-4 3/4"	8'-4 3/32"	600-90R	One	25'-2 3/32"	25'-1 5/32"	8'-4 1/2"	8'-4 3/4"	8'-4 3/32"									
600-84	3	25'-2 3/32"	25'-1 5/32"	8'-4 1/2"	8'-4 3/4"	8'-4 3/32"	600-87	One	25'-2 3/32"	25'-1 5/16"	8'-4 1/2"	8'-4 3/4"	8'-4 3/32"	600-91	One	25'-2 3/32"	25'-1 5/16"	8'-4 1/2"	8'-4 3/4"	8'-4 3/32"									
600-84R	3	25'-2 3/32"	25'-1 5/32"	8'-4 1/2"	8'-4 3/4"	8'-4 3/32"	600-87R	One	25'-2 3/32"	25'-1 5/16"	8'-4 1/2"	8'-4 3/4"	8'-4 3/32"	600-91R	One	25'-2 3/32"	25'-1 5/16"	8'-4 1/2"	8'-4 3/4"	8'-4 3/32"									



Aluminum Rail Panel Schedule																													
Pc. Mk.	Quan.	"A"	"B"	"C"	"D"	"E"	Pc. Mk.	Quan.	"A"	"B"	"C"	"D"	"E"	Pc. Mk.	Quan.	"A"	"B"	"C"	"D"	"E"	Pc. Mk.	Quan.	"A"	"B"	"C"	"D"	"E"		
600-17	One	25'-2 1/16"	25'-1 15/16"	8'-4 1/16"	8'-5 1/16"	8'-4 1/2"	600-83	One	25'-2 1/16"	25'-1 15/16"	8'-4 1/16"	8'-5"	8'-4 1/2"	600-91	2	17'-10 1/32"	17'-10 1/32"	8'-4 1/4"	8'-5 1/32"		600-91R	2	17'-10 3/32"	17'-9 31/32"	8'-4 1/4"	8'-4 31/32"			
600-17R	One	25'-2 1/16"	25'-1 15/16"	8'-4 1/16"	8'-5 1/16"	8'-4 1/2"	600-83R	One	25'-2 1/16"	25'-1 15/16"	8'-4 1/16"	8'-5"	8'-4 1/2"	600-91R	2	17'-10 3/32"	17'-9 31/32"	8'-4 1/4"	8'-4 31/32"									
600-34	One	25'-2 1/16"	25'-1 1/16"	8'-4 3/32"	8'-4 3/32"	8'-4 1/2"	600-85	One	25'-2 1/16"	25'-1 1/16"	8'-4 3/32"	8'-5"	8'-4 1/2"																
600-34R	One	25'-2 1/16"	25'-1 1/16"	8'-4 3/32"	8'-4 3/32"	8'-4 1/2"	600-85R	One	25'-2 1/16"	25'-1 1/16"	8'-4 3/32"	8'-5"	8'-4 1/2"																



Alum. Rail Panel Schedule																													
Pc. Mk.	Quan.	"A"	"B"	"C"	"D"	"E"	Pc. Mk.	Quan.	"A"	"B"	"C"	"D"	"E"	Pc. Mk.	Quan.	"A"	"B"	"C"	"D"	"E"	Pc. Mk.	Quan.	"A"	"B"	"C"	"D"	"E"		
600-13	One	17'-10 1/32"	17'-10 1/32"	8'-4 1/4"	8'-5 1/32"		600-81	One	17'-10 1/32"	17'-10 1/32"	8'-4 1/4"	8'-5 1/32"		600-91	2	17'-10 3/32"	17'-9 31/32"	8'-4 1/4"	8'-4 31/32"		600-91R	2	17'-10 3/32"	17'-9 31/32"	8'-4 1/4"	8'-4 31/32"			
600-13R	One	17'-10 1/32"	17'-10 1/32"	8'-4 1/4"	8'-5 1/32"		600-81R	One	17'-10 1/32"	17'-10 1/32"	8'-4 1/4"	8'-5 1/32"																	
600-80	One	17'-10 3/32"	17'-10"	8'-4 1/4"	8'-5"		600-82	One	17'-10 3/32"	17'-10"	8'-4 1/4"	8'-5"																	
600-80R	One	17'-10 3/32"	17'-10"	8'-4 1/4"	8'-5"		600-82R	One	17'-10 3/32"	17'-10"	8'-4 1/4"	8'-5"																	

PRINTS ISSUED FOR	NO.	DATE	FOR	NO.	DATE
Approval	1	4-2-60			
Approval	2	2-3-60			
F. Approval	3	2-8-60			
F. Approval	4	2-11-60			

DATE MADE	REVISION	BY
4-4-60	Gen. Rev. - 5th Detail	AE
3-11-60	Rev. Dimension	AE

APPROVED BY L. P. Carlson Bridge Design Engineer 3/9/60

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 3-4-60

APPROVED BY _____ DATE _____
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

REVISION	DATE

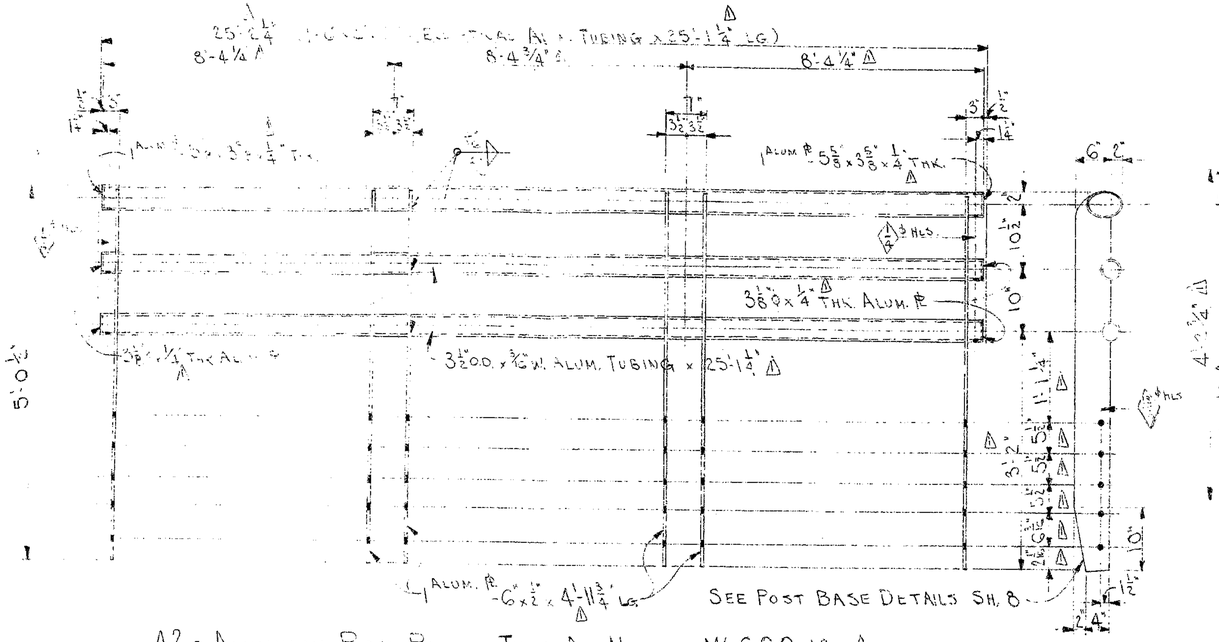
SOUTHWEST ORNAMENTAL IRON CO.
1722-30 TRACY AVENUE KANSAS CITY 8, MISSOURI

JOB Mississippi River Bridge
LOCATION Near Helena, Ark.
TITLE Det. Alum. Rails 600-16 & 16R, 17 & 17R, 18 & 18R
FINISH Mill Finish
ARCHITECT Howard, Needles, Tammen & Bergendoff
CONTRACTOR John F. Beasley Const. Co.
REFERENCE

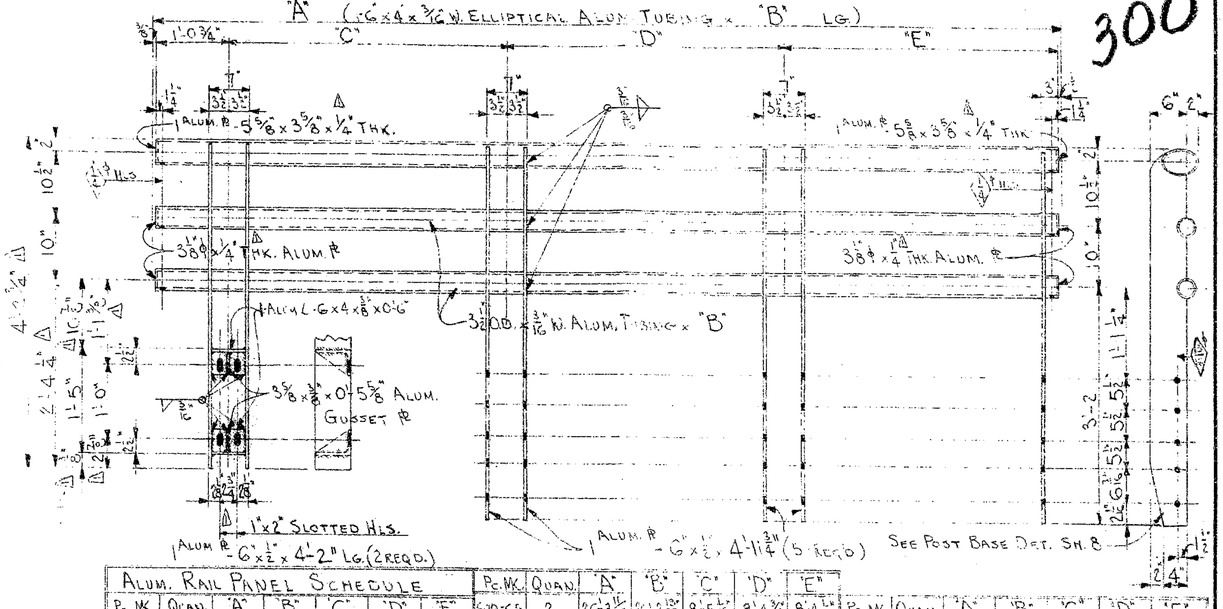
DRAWN BY	CHECKED BY	HOLES	UNLESS NOTED
AE			
DATE 4-13-59	DATE	BOLTS	UNLESS NOTED
ORDER NO. 600	DRAWING NO. 13	RIVETS	UNLESS NOTED

THIS JOB TO BE FURNISHED AND Delivered

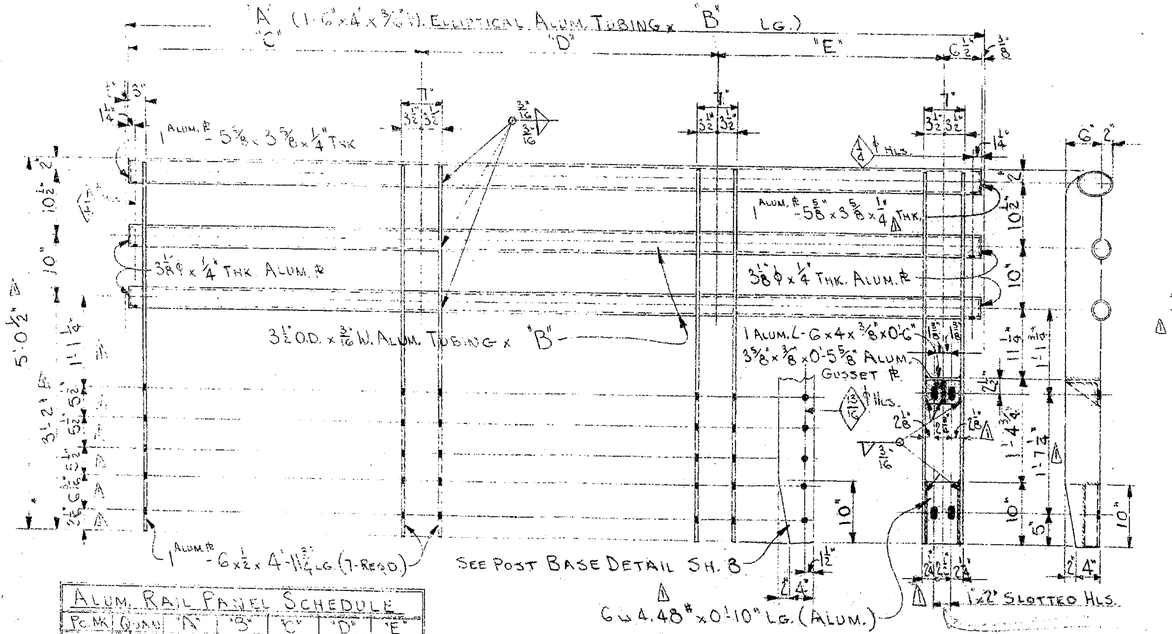
300



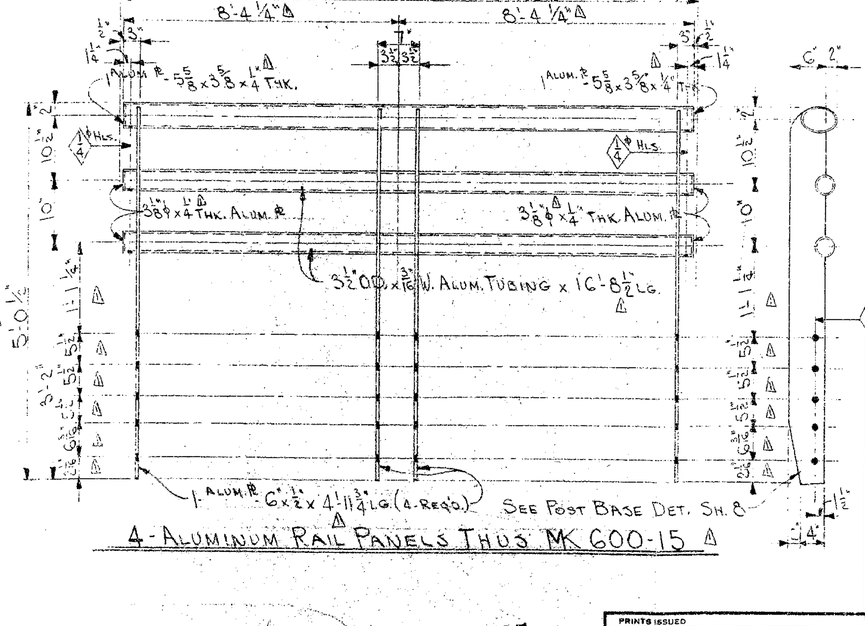
42 - ALUMINUM RAIL PANELS THUS AS NOTED MK600-12



ALUM. RAIL PANEL SCHEDULE																			
PC. MK.	QUAN.	"A"	"B"	"C"	"D"	"E"	PC. MK.	QUAN.	"A"	"B"	"C"	"D"	"E"	PC. MK	QUAN.	"A"	"B"	"C"	"D"	"E"
600-14	2	26'-3⅜"	26'-2¾"	8'-5"	8'-4¾"	8'-4½"	600-65	2	26'-3⅛"	26'-2⅝"	8'-5"	8'-4¾"	8'-4½"	600-67R	ONE	26'-3⅜"	26'-2¾"	8'-4¾"	8'-4¾"	8'-4½"
600-14R	2	26'-3⅜"	26'-2¾"	8'-5"	8'-4¾"	8'-4½"	600-66	ONE	26'-3⅜"	26'-2¾"	8'-4⅞"	8'-4¾"	8'-4½"	600-68	2	26'-3⅜"	26'-2¾"	8'-4¾"	8'-4¾"	8'-4½"
600-32	ONE	26'-3½"	26'-2⅝"	8'-4⅞"	8'-4¾"	8'-4½"	600-66R	ONE	26'-3⅜"	26'-2¾"	8'-4⅞"	8'-4¾"	8'-4½"	600-68R	2	26'-3⅜"	26'-2¾"	8'-4¾"	8'-4¾"	8'-4½"
600-32R	ONE	26'-3½"	26'-2⅝"	8'-4⅞"	8'-4¾"	8'-4½"	600-67	ONE	26'-3⅜"	26'-2⅝"	8'-4¾"	8'-4¾"	8'-4½"	600-69	ONE	26'-3⅜"	26'-2⅝"	8'-4⅞"	8'-4¾"	8'-4½"
														600-69R	ONE	26'-3⅜"	26'-2⅝"	8'-4¾"	8'-4¾"	8'-4½"
														600-70	ONE	26'-3⅜"	26'-2⅝"	8'-4⅞"	8'-4¾"	8'-4½"
														600-70R	ONE	26'-3⅜"	26'-2⅝"	8'-4⅞"	8'-4¾"	8'-4½"
														600-71	2	26'-3⅜"	26'-2⅝"	8'-4⅞"	8'-4¾"	8'-4½"
														600-71R	2	26'-3⅜"	26'-2⅝"	8'-4⅞"	8'-4¾"	8'-4½"
														600-72	ONE	26'-3⅜"	26'-2⅝"	8'-5⅜"	8'-4¾"	8'-4½"
														600-72R	ONE	26'-3⅜"	26'-2⅝"	8'-5⅜"	8'-4¾"	8'-4½"
														600-73	ONE	26'-3⅜"	26'-2⅝"	8'-4⅞"	8'-4¾"	8'-4½"
														600-73R	ONE	26'-3⅜"	26'-2⅝"	8'-4⅞"	8'-4¾"	8'-4½"



ALUM. RAIL PANEL SCHEDULE																			
PC. MK.	QUAN.	"A"	"B"	"C"	"D"	"E"	PC. MK.	QUAN.	"A"	"B"	"C"	"D"	"E"	PC. MK.	QUAN.	"A"	"B"	"C"	"D"	"E"
600-13	7	24'-1⅜"	24'-0"	8'-4½"	8'-4¾"	2'-0"														
600-13R	7	24'-1⅜"	24'-0"	8'-4½"	8'-4¾"	2'-0"	600-79	ONE	24'-1⅜"	24'-0"	8'-4½"	8'-4¾"	6'-5⅜"	600-80R	ONE	24'-1⅜"	24'-0"	8'-4½"	8'-4¾"	6'-5⅜"
600-31	ONE	24'-1⅜"	24'-0"	8'-4½"	8'-4¾"	2'-0"	600-79R	ONE	24'-1⅜"	24'-0"	8'-4½"	8'-4¾"	6'-5⅜"	600-81	ONE	24'-1⅜"	24'-0"	8'-4½"	8'-4¾"	6'-8⅝"
600-31R	ONE	24'-1⅜"	24'-0"	8'-4½"	8'-4¾"	2'-0"	600-80	2	24'-1⅜"	24'-0"	8'-4½"	8'-4¾"	6'-8⅝"	600-81R	ONE	24'-1⅜"	24'-0"	8'-4½"	8'-4¾"	6'-8⅝"
600-77	ONE	24'-1⅜"	24'-0"	8'-4½"	8'-4¾"	2'-0"	600-79R	2	24'-1⅜"	24'-0"	8'-4½"	8'-4¾"	6'-8⅝"							
600-77R	ONE	24'-1⅜"	24'-0"	8'-4½"	8'-4¾"	2'-0"	600-80	ONE	24'-1⅜"	24'-0"	8'-4½"	8'-4¾"	6'-5⅜"							



4 - ALUMINUM RAIL PANELS THUS MK 600-15

APPROVED BY 2/9/60
L. G. Carlson
Bridge Design Engineer

APPROVED BY _____ DATE _____
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

REVISION	DATE

SEE TRANSMITTAL NOTE RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 2-23-60

PRINTS ISSUED FOR	NO.	DATE	FOR	NO.	DATE
Approx	2	4-4-60			
Appr	1	2-23-60			
E. Appr	9	2-1-60			

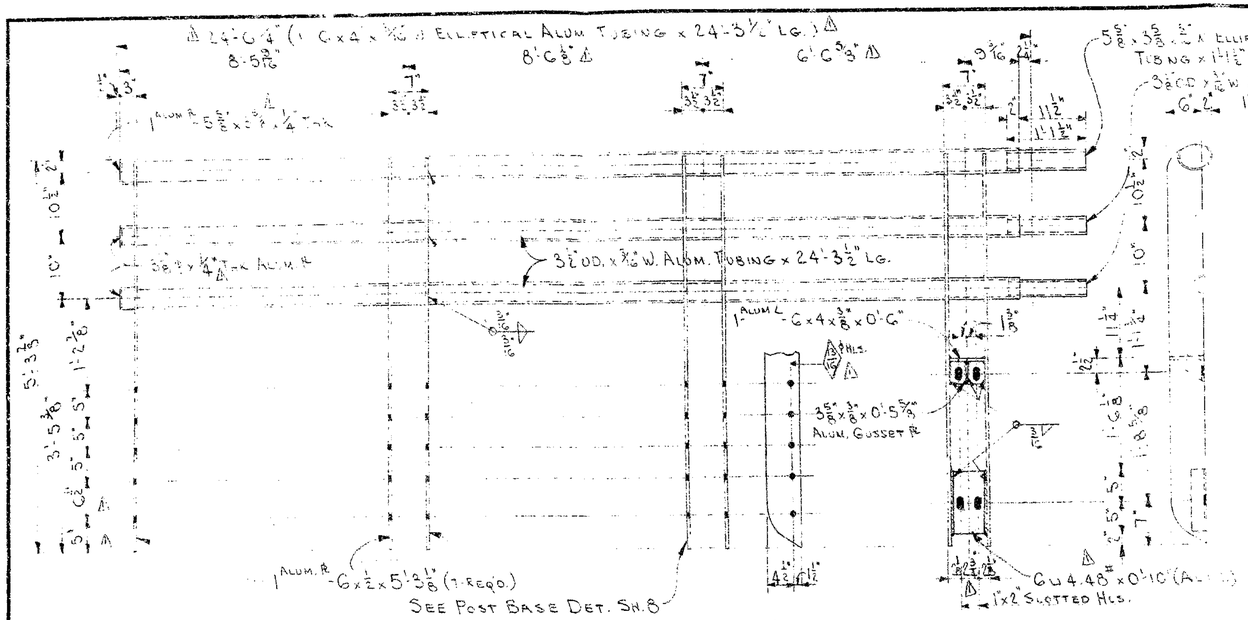
DATE MADE	REVISION	BY
2-3-60	Gen. Steel Plate	AE

SOUTHWEST ORNAMENTAL IRON CO.
1722-30 TRACY AVENUE KANSAS CITY 8, MISSOURI

JOB MISSISSIPPI RIVER BRIDGE
LOCATION NEAR HELENA, ARK.
TITLE DET. ALUM. RAILS 600-12, -13 & 13R, 14 & 14R, -15, -18, -19 & 19R, 20 & 20R
FINISH MILL
ARCHITECT HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONTRACTOR JOHN P. BEASLEY CONST. CO.
REFERENCE
DRAWN BY AE | CHECKED BY | DATE 4-2-59
ORDER NO. 600 | DRAWING NO. 12
HOLES UNLESS NOTED | BOLTS UNLESS NOTED | RIVETS UNLESS NOTED
THIS JOB TO BE FURNISHED AND DELIVERED

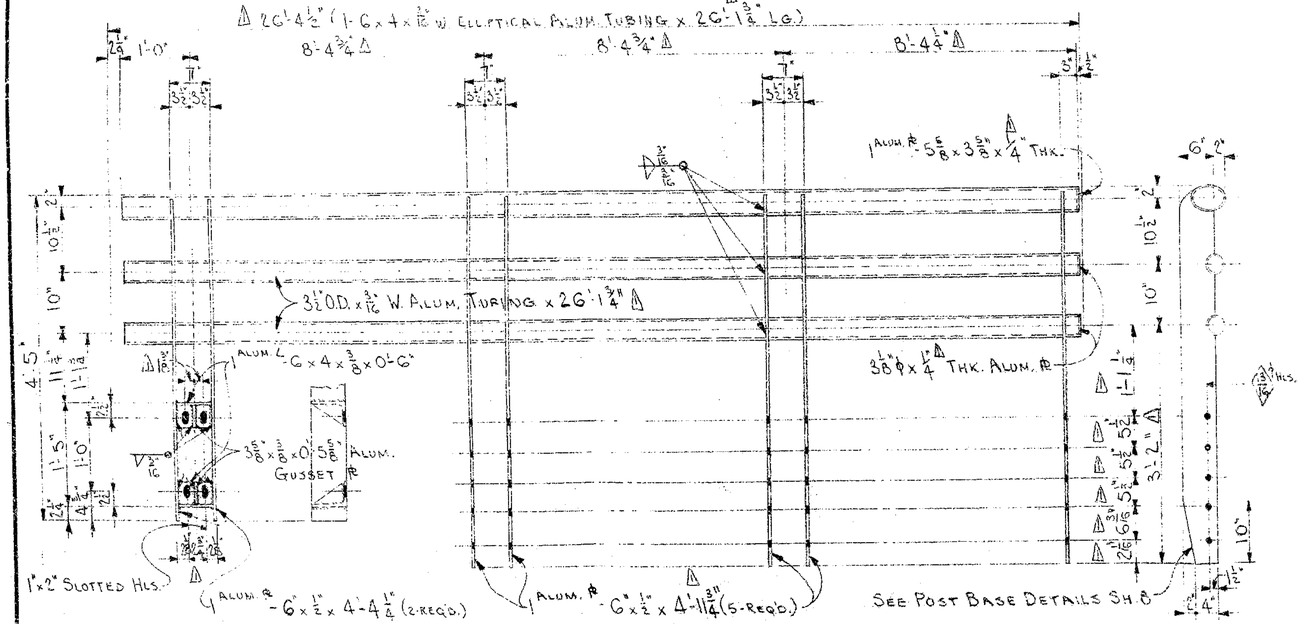
(A)

299



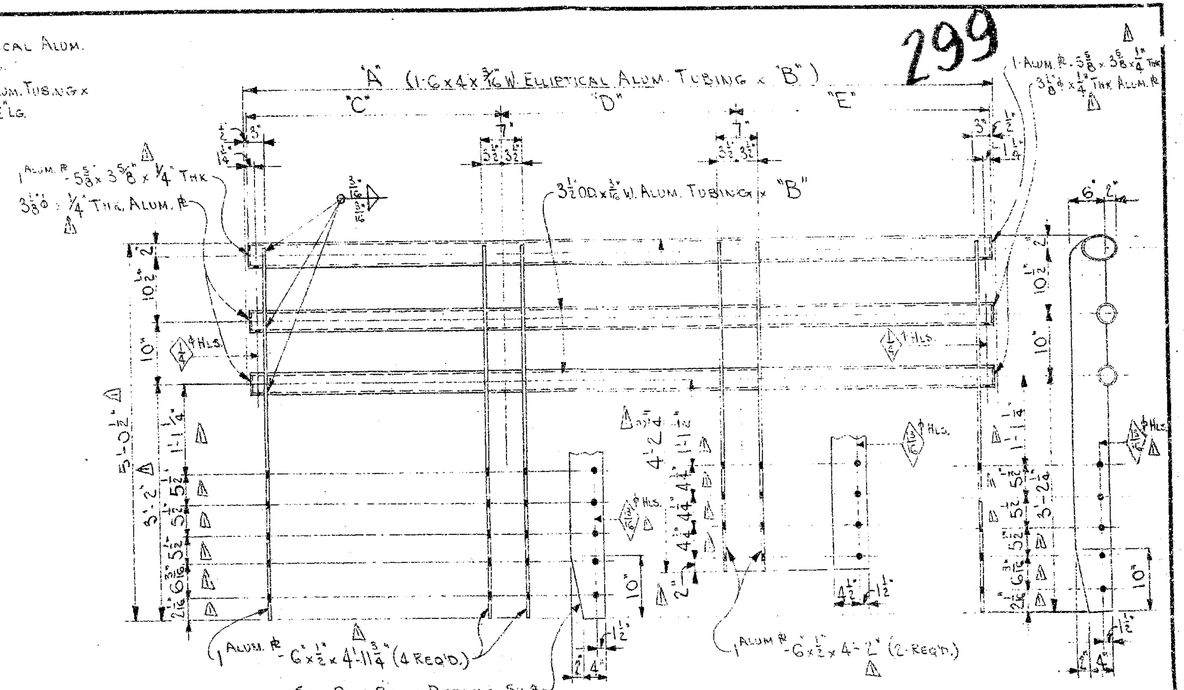
ONE - ALUMINUM RAIL PANEL THUS MK600-9 △

ONE - " " " " OPP. HAND MK600-9R △



ONE - ALUMINUM RAIL PANEL THUS MK600-10 △

ONE - " " " " OPP. HAND MK600-10R △



ALUM. RAIL PANEL SCHEDULE

Pc. Mk.	Quan.	"A"	"B"	"C"	"D"	"E"
G00-11	2	25'-2 13/32	25'-1 7/16	8'-4 1/4	8'-5 1/32	8'-4 13/32
G00-11R	2	25'-2 13/32	25'-1 7/16	8'-4 1/4	8'-5 1/32	8'-4 13/32
G00-29	One	25'-2 1/16	25'-1 1/16	8'-4 1/4	8'-5 1/32	8'-4 13/32
G00-29R	One	25'-2 1/16	25'-1 1/16	8'-4 1/4	8'-5 1/32	8'-4 13/32
G00-30	One	25'-3 3/32	25'-2 3/32	8'-4 1/4	8'-5 1/32	8'-4 3/16
G00-30R	One	25'-3 3/32	25'-2 3/32	8'-4 1/4	8'-5 1/32	8'-4 3/16
G00-37	One	25'-2 23/32	25'-1 23/32	8'-4 1/4	8'-5 1/32	8'-4 1/2
G00-37R	One	25'-2 23/32	25'-1 23/32	8'-4 1/4	8'-5 1/32	8'-4 1/2
G00-38	One	25'-2 5/8	25'-1 5/8	8'-4 1/4	8'-5 1/16	8'-4 3/16
G00-38R	One	25'-2 5/8	25'-1 5/8	8'-4 1/4	8'-5 1/16	8'-4 3/16
G00-39	2	25'-2 23/32	25'-1 23/32	8'-4 1/4	8'-4 31/32	8'-4 1/2
G00-39R	2	25'-2 23/32	25'-1 23/32	8'-4 1/4	8'-4 31/32	8'-4 1/2
G00-40	One	25'-2 13/32	25'-1 13/32	8'-4 1/4	8'-4 7/8	8'-4 13/32
G00-40R	One	25'-2 13/32	25'-1 13/32	8'-4 1/4	8'-4 7/8	8'-4 13/32
G00-41	One	25'-2 5/8	25'-1 5/8	8'-4 1/4	8'-4 7/8	8'-4 1/2
G00-41R	One	25'-2 5/8	25'-1 5/8	8'-4 1/4	8'-4 7/8	8'-4 1/2
G00-42	One	25'-2 13/32	25'-1 13/32	8'-4 1/4	8'-4 7/8	8'-4 13/32
G00-42R	One	25'-2 13/32	25'-1 13/32	8'-4 1/4	8'-4 7/8	8'-4 13/32
G00-43	2	25'-2 7/16	25'-1 7/16	8'-4 1/4	8'-4 29/32	8'-4 1/2
G00-43R	2	25'-2 7/16	25'-1 7/16	8'-4 1/4	8'-4 29/32	8'-4 1/2
G00-44	One	25'-2 3/32	25'-1 3/32	8'-4 1/4	8'-4 25/32	8'-4 1/2
G00-44R	One	25'-2 3/32	25'-1 3/32	8'-4 1/4	8'-4 25/32	8'-4 1/2
G00-45	One	25'-2 7/16	25'-1 7/16	8'-4 1/4	8'-5"	8'-4 1/2
G00-45R	One	25'-2 7/16	25'-1 7/16	8'-4 1/4	8'-5"	8'-4 1/2
G00-46	2	25'-2 7/16	25'-1 7/16	8'-4 1/4	8'-5"	8'-4 1/2
G00-46R	2	25'-2 7/16	25'-1 7/16	8'-4 1/4	8'-5"	8'-4 1/2
G00-47	One	25'-2 5/32	25'-1 5/32	8'-4 1/4	8'-4 31/32	8'-4 7/16
G00-47R	One	25'-2 5/32	25'-1 5/32	8'-4 1/4	8'-4 31/32	8'-4 7/16
G00-48	2	25'-2 7/8	25'-1 7/8	8'-4 1/4	8'-5"	8'-4 1/2
G00-48R	2	25'-2 7/8	25'-1 7/8	8'-4 1/4	8'-5"	8'-4 1/2

SCHEDULE (CONTD.)

Pc. Mk.	Quan.	"A"	"B"	"C"	"D"	"E"
G00-49	2	25'-2 25/32	25'-1 3/32	8'-4 1/4	8'-4 3/32	8'-4 1/2
G00-49R	2	25'-2 25/32	25'-1 3/32	8'-4 1/4	8'-4 3/32	8'-4 1/2
G00-50	One	25'-2 1/16	25'-1 1/16	8'-4 1/4	8'-4 29/32	8'-4 1/2
G00-50R	One	25'-2 1/16	25'-1 1/16	8'-4 1/4	8'-4 29/32	8'-4 1/2
G00-51	One	25'-2 3/32	25'-1 3/32	8'-4 1/4	8'-4 3/16	8'-4 1/2
G00-51R	One	25'-2 3/32	25'-1 3/32	8'-4 1/4	8'-4 13/16	8'-4 1/2
G00-52	One	25'-2 5/8	25'-1 5/8	8'-4 1/4	8'-4 13/16	8'-4 1/2
G00-52R	One	25'-2 5/8	25'-1 5/8	8'-4 1/4	8'-4 13/16	8'-4 1/2
G00-53	One	25'-2 7/16	25'-1 7/16	8'-4 1/4	8'-5"	8'-4 5/16
G00-53R	One	25'-2 7/16	25'-1 7/16	8'-4 1/4	8'-5"	8'-4 5/16
G00-54	2	25'-2 11/16	25'-1 11/16	8'-4 1/4	8'-4 3/32	8'-4 5/32
G00-54R	2	25'-2 11/16	25'-1 11/16	8'-4 1/4	8'-4 3/32	8'-4 5/32
G00-55	One	25'-2 13/32	25'-1 13/32	8'-4 1/4	8'-4 3/32	8'-4 5/32
G00-55R	One	25'-2 13/32	25'-1 13/32	8'-4 1/4	8'-4 3/32	8'-4 5/32
G00-56	3	25'-2 7/16	25'-1 7/16	8'-4 1/4	8'-4 29/32	8'-4 1/2
G00-56R	3	25'-2 7/16	25'-1 7/16	8'-4 1/4	8'-4 29/32	8'-4 1/2
G00-57	One	25'-2 23/32	25'-1 23/32	8'-4 1/4	8'-5 3/16	8'-4 13/32
G00-57R	One	25'-2 23/32	25'-1 23/32	8'-4 1/4	8'-5 3/16	8'-4 13/32
G00-58	One	25'-3"	25'-2"	8'-4 1/16	8'-5"	8'-4 5/16
G00-58R	One	25'-3"	25'-2"	8'-4 1/16	8'-5"	8'-4 5/16
G00-59	One	25'-2 23/32	25'-1 23/32	8'-4 1/4	8'-5 3/16	8'-4 13/32
G00-59R	One	25'-2 23/32	25'-1 23/32	8'-4 1/4	8'-5 3/16	8'-4 13/32
G00-60	One	25'-2 29/32	25'-1 29/32	8'-4 1/4	8'-5 1/32	8'-4 5/8
G00-60R	One	25'-2 29/32	25'-1 29/32	8'-4 1/4	8'-5 1/32	8'-4 5/8

SCHEDULE (CONCLUDED)

Pc. Mk.	Quan.	"A"	"B"	"C"	"D"	"E"
G00-61	One	25'-2 29/32	25'-1 23/32	8'-4 1/4	8'-5 1/32	8'-4 1/2
G00-61R	One	25'-2 29/32	25'-1 23/32	8'-4 1/4	8'-5 1/32	8'-4 9/16
G00-62	One	25'-2 1/16	25'-1 1/16	8'-4 1/4	8'-4 5/16	8'-4 1/2
G00-62R	One	25'-2 1/16	25'-1 1/16	8'-4 1/4	8'-4 5/16	8'-4 1/2
G00-63	One	25'-2 5/8	25'-1 5/8	8'-4 1/4	8'-4 5/16	8'-4 1/2
G00-63R	One	25'-2 5/8	25'-1 5/8	8'-4 1/4	8'-4 5/16	8'-4 1/2
G00-64	One	25'-2 1/16	25'-1 1/16	8'-4 1/4	8'-5 1/8	8'-4 1/2
G00-64R	One	25'-2 1/16	25'-1 1/16	8'-4 1/4	8'-5 1/32	8'-4 9/16

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY FRS DATE 2-22-60

APPROVED BY [signature] DATE 4/4/60

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING Bridge Engineers Engineer

Revision	Date

SOUTHWEST ORNAMENTAL IRON CO.
1722-30 TRACY AVENUE KANSAS CITY 8, MISSOURI

JOB MISSISSIPPI RIVER BRIDGE
LOCATION NEAR HELENA, ARK.
TITLE DET. ALUM. RAILS G00-9 & 9R, G00-10 & 10R, G00-11 & 11R, G00-17 & 17R
FINISH MILL
ARCHITECT HOWARD NEEDLES, TAMMEN & BERGENDOFF
CONTRACTOR JOHN F BEASLEY CONST. CO.
REFERENCE

DRAWN BY	CHECKED BY	HOLES	UNLESS NOTED
FL			
DATE 3-31-59	DATE	BOLTS	UNLESS NOTED
ORDER NO. 600	DRAWING NO. 11	RIVETS	UNLESS NOTED

THIS JOB TO BE FURNISHED AND DELIVERED

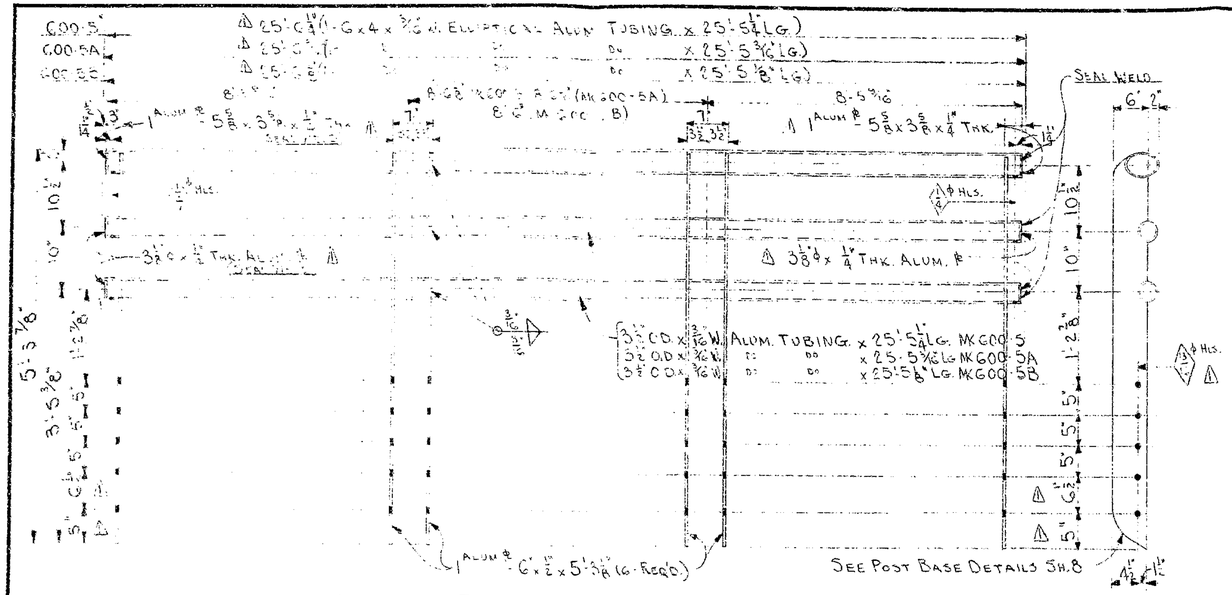
PRINTS ISSUED

FOR	NO.	DATE	FOR	NO.	DATE
Appr	9	4-2-59			
Appr	4	2-21-60			
Appr	4	2-8-60			

△ 2-8-60 General Stl. Revs. FL

DATE MADE	REVISION	BY

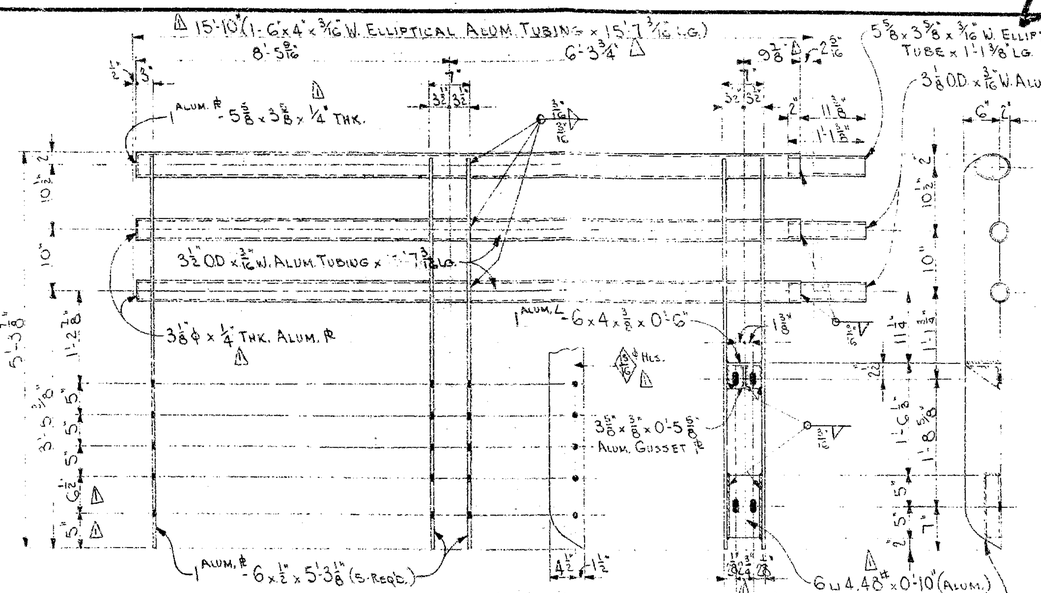
(A)



46 - Aluminum Rail Panels Thus MK600-5 △

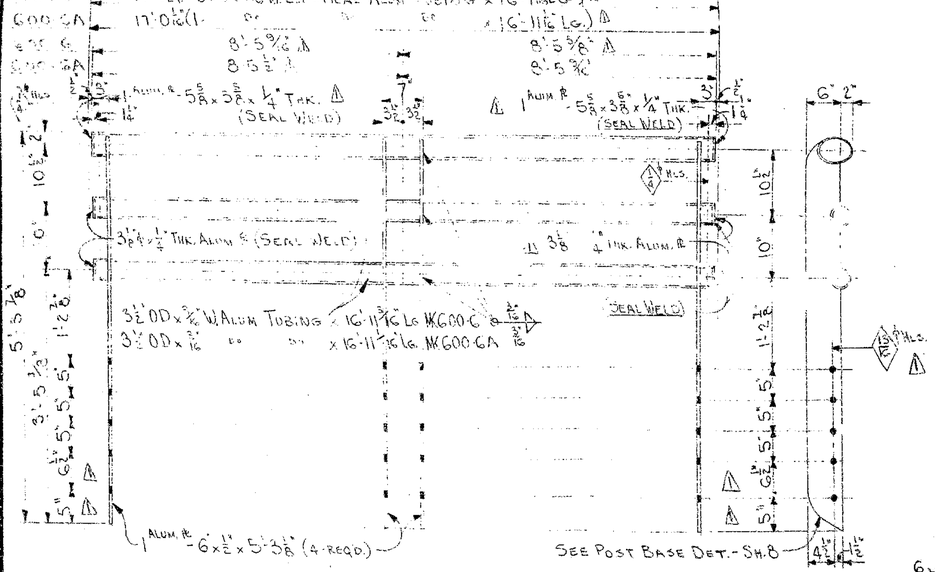
18 - " " " " MK600-5A △

62 - " " " " MK600-5B △



One - Aluminum Rail Panel Thus MK600-7 △

One - " " " " Opp. Hand MK600-7R △

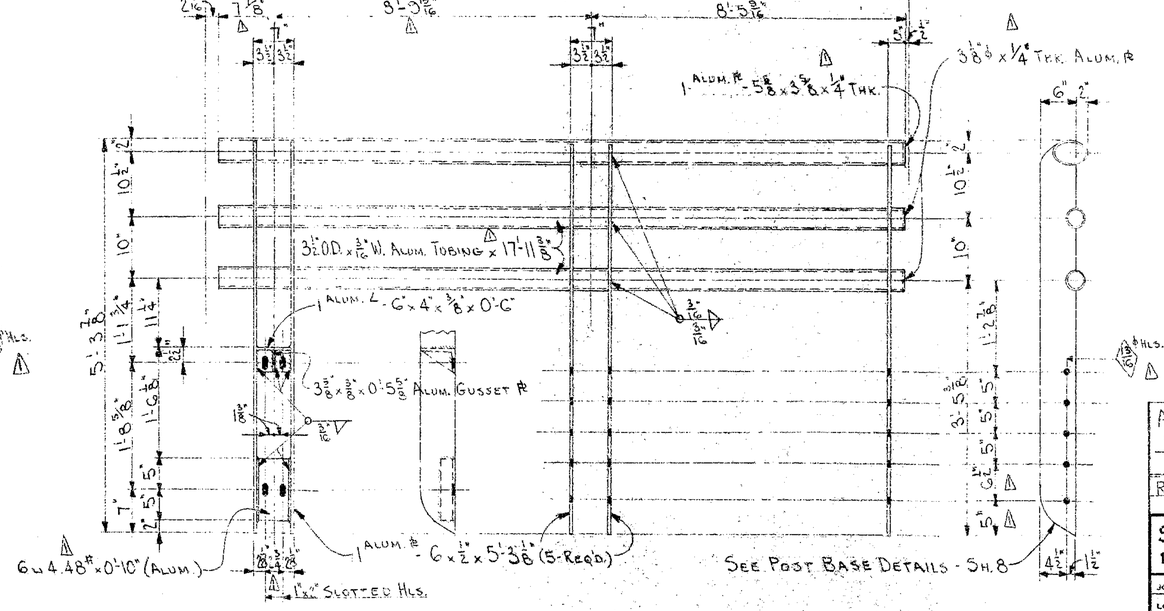


One - Aluminum Rail Panels Thus MK600-6

One - " " " " Opp Hand MK600-6R △

One - " " " " Thus As Noted MK600-6A △

One - " " " " Opp Hand " " MK600-6AR △



One - Aluminum Rail Panel Thus MK600-8 △

One - " " " " Opp. Hand MK600-8R △

APPROVED BY 2/29/60
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 2-22-60

APPROVED BY _____ DATE _____
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

REVISION	DATE

SOUTHWEST ORNAMENTAL IRON CO.
1722-30 TRACY AVENUE KANSAS CITY 8, MISSOURI

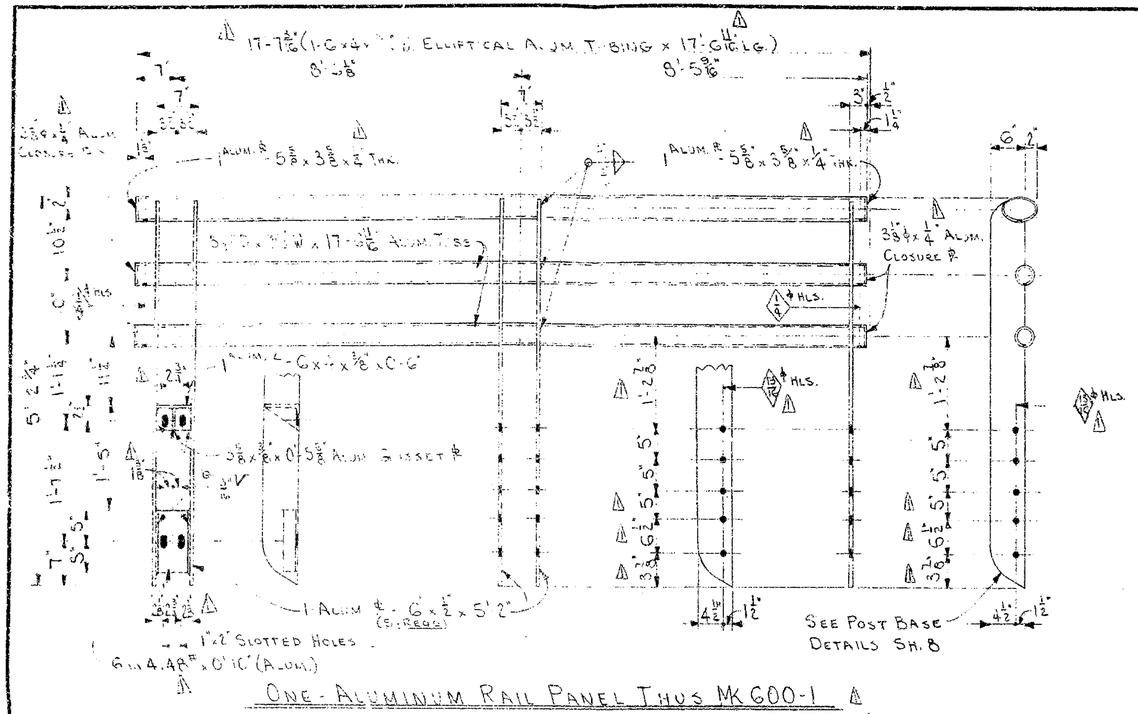
JOB Mississippi River Bridge
LOCATION Near Helena, Ark.
TITLE Det. Alum. Rails 600-5, 600-6, 600-7 & 7R, 600-8 & 8R
FINISH Mill
ARCHITECT Howard, Needles, Tammen & Bergendoff
CONTRACTOR John F. Beasley Const. Co.
REFERENCE
DRAWN BY A | CHECKED BY | DATE 3-27-59 | DATE
ORDER NO. 600 | DRAWING NO. 10
HOLES UNLESS NOTED | BOLTS UNLESS NOTED | RIVETS UNLESS NOTED
THIS JOB TO BE FURNISHED AND DELIVERED

PRINTS ISSUED

FOR	NO.	DATE	FOR	NO.	DATE
Appr.	4	4-2-59			
Appr.	4	7-31-59			
F. App.	4	2-8-60			

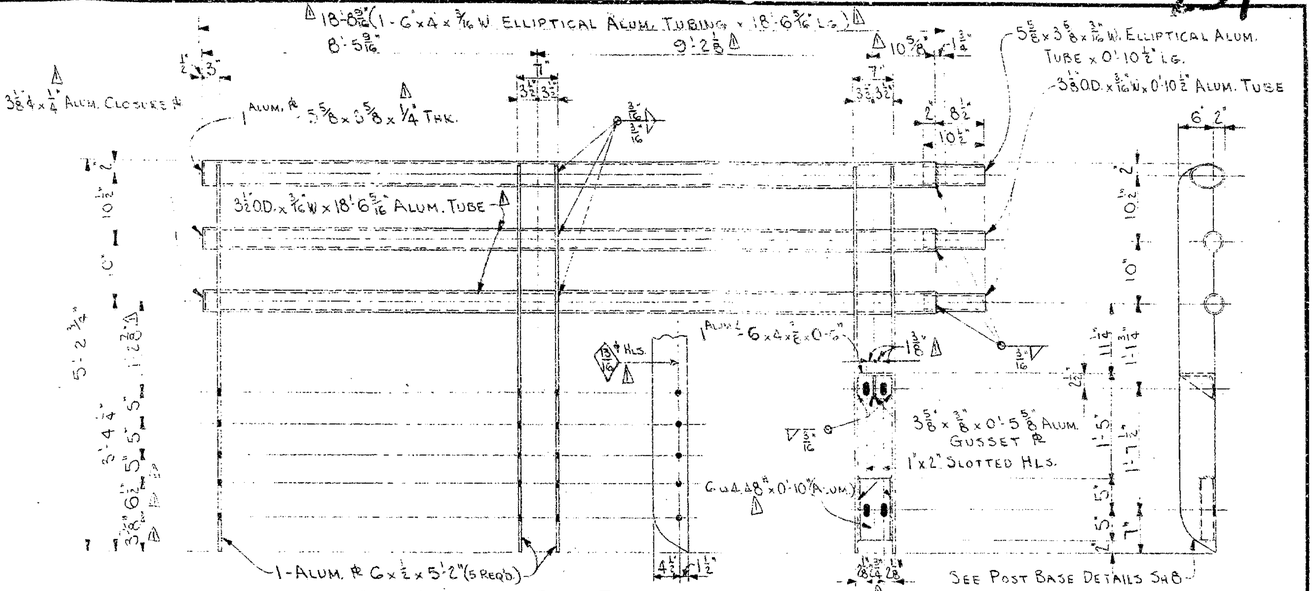
DATE MADE	REVISION	BY
2-8-60	Final Print Sent Out	E.

(A)



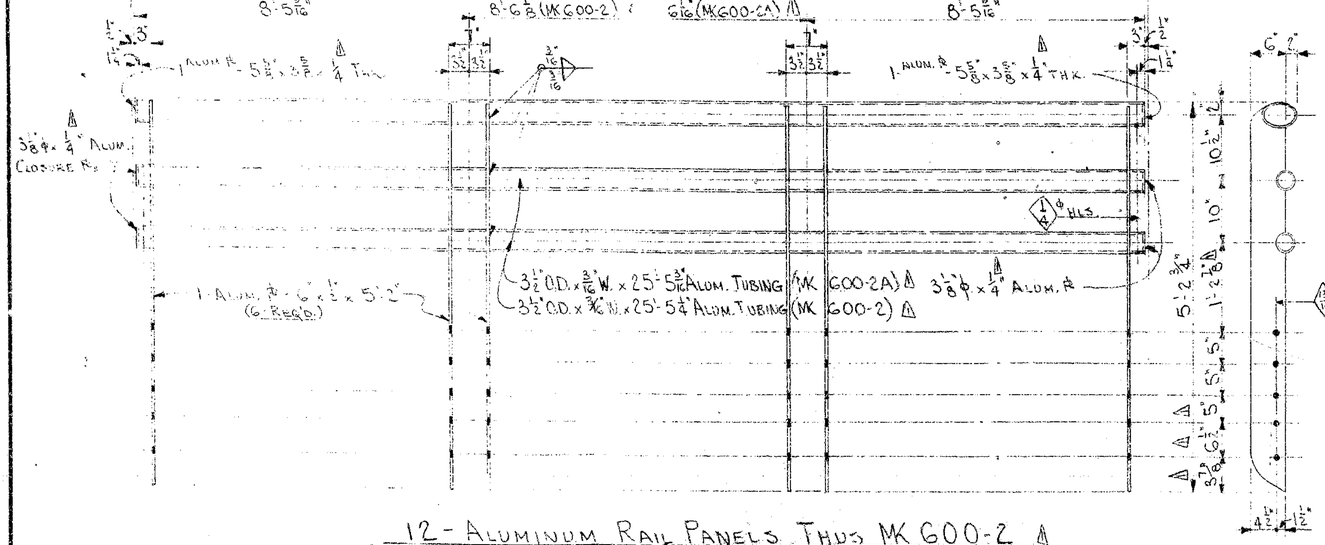
ONE - ALUMINUM RAIL PANEL THUS MK 600-1 △

ONE " " " " OPP HAND MK 600-1R △



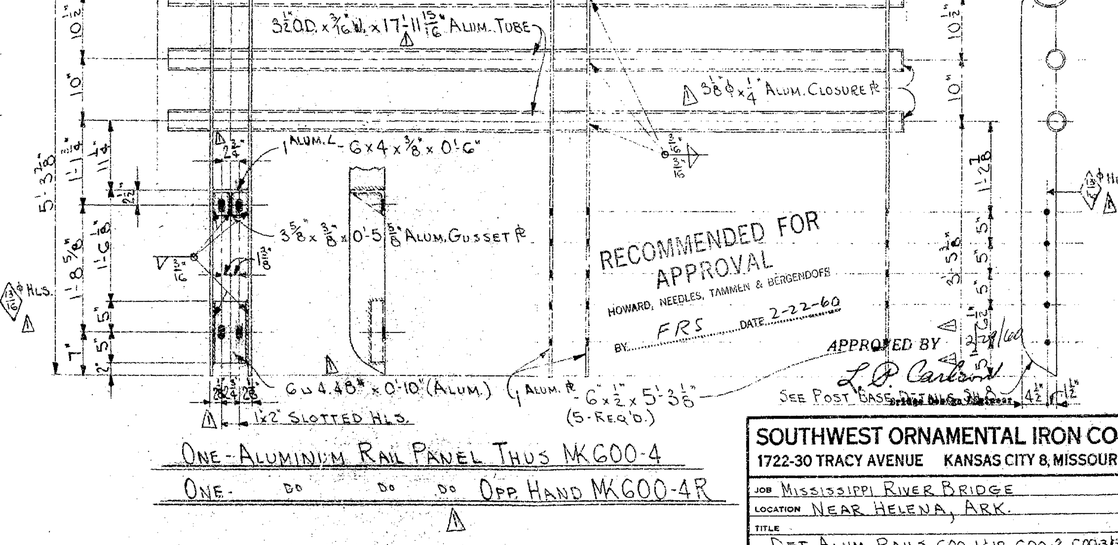
ONE - ALUMINUM RAIL PANEL THUS MK 600-3

ONE " " " " OPP HAND MK 600-3R △



12 - ALUMINUM RAIL PANELS THUS MK 600-2 △

8 - ALUMINUM RAIL PANELS THUS AS NOTED MK 600-2A △



ONE - ALUMINUM RAIL PANEL THUS MK 600-4

ONE " " " " OPP HAND MK 600-4R △

APPROVED BY _____ DATE
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

REVISION	DATE

PRINTS ISSUED

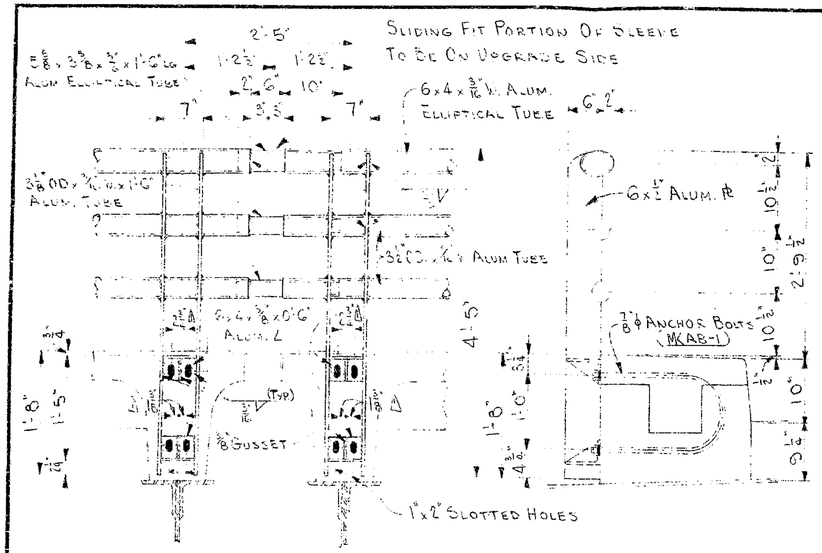
FOR	NO.	DATE	FOR	NO.	DATE
APPR	4	4-24-59			
APPR	7	12-21-59			
F.APP	9	2-9-60			

DATE MADE	REVISION	BY
2-8-60	GEN. REV. SH. PLUS	FS

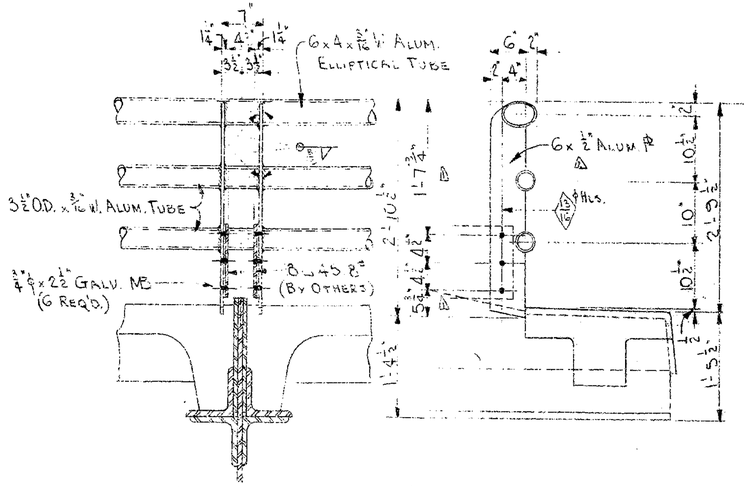
SOUTHWEST ORNAMENTAL IRON CO.
1722-30 TRACY AVENUE KANSAS CITY 8, MISSOURI

JOB MISSISSIPPI RIVER BRIDGE
LOCATION NEAR HELENA, ARK.
TITLE DET. ALUM. RAILS 600-1&1R, 600-2, 600-3&3R, 600-4&4R
FINISH MILL
ARCHITECT HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONTRACTOR JOHN F. BEASLEY CONST. CO.
REFERENCE
DRAWN BY AL | CHECKED BY | HOLES UNLESS NOTED
DATE 3-25-59 | DATE | BOLTS UNLESS NOTED
ORDER NO. 600 | DRAWING NO. 9 | RIVETS UNLESS NOTED
THIS JOB TO BE FURNISHED AND DELIVERED

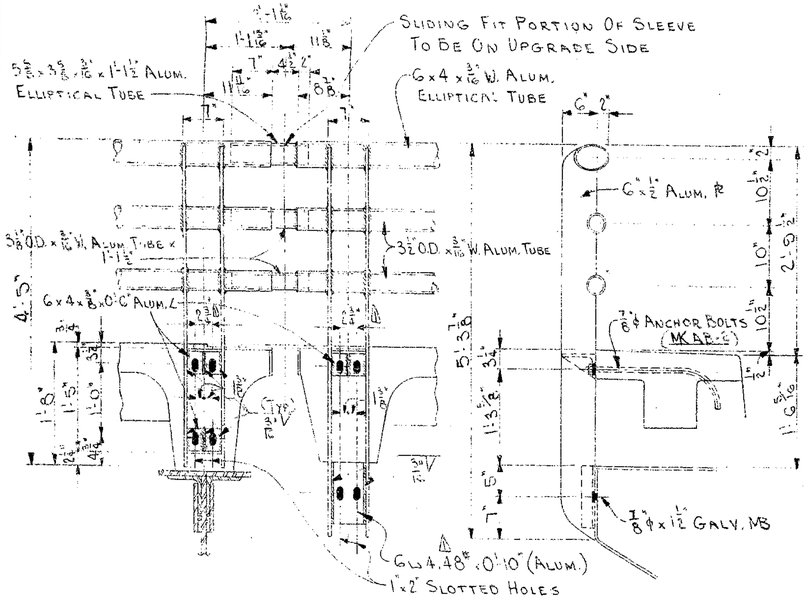
(A)



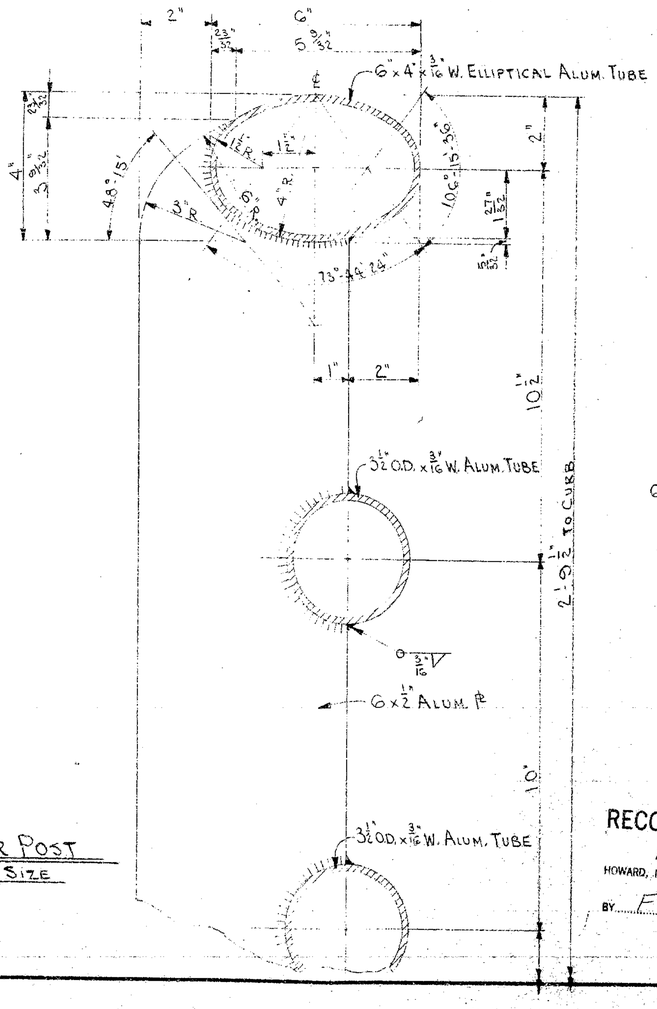
POST ELEVATION AT EXPANSION JOINTS



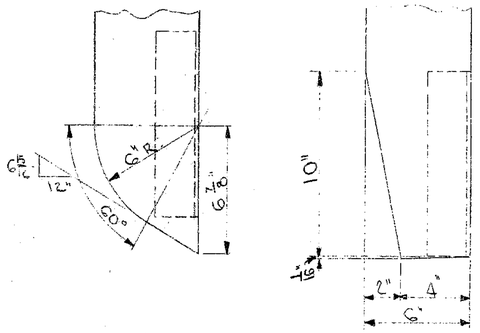
TYPICAL POST AT ℄ OF PIER



POST ELEVATION AT PIER No. 15



TYPICAL UPPER POST
ONE-HALF FULL SIZE



TYPICAL POST BASES

QUAN.	DESCRIPTION	P.M.
ONE	ALUM. RAIL PANELS	G00-24
ONE	" " "	G00-24R
ONE	" " "	G00-25
ONE	" " "	G00-25R
ONE	" " "	G00-26
ONE	" " "	G00-26R
ONE	" " "	G00-27
ONE	" " "	G00-27R
ONE	" " "	G00-28
ONE	" " "	G00-28R
ONE	" " "	G00-29
ONE	" " "	G00-29R
ONE	" " "	G00-30
ONE	" " "	G00-30R
ONE	" " "	G00-31
ONE	" " "	G00-31R
ONE	" " "	G00-32
ONE	" " "	G00-32R
ONE	" " "	G00-33
ONE	" " "	G00-33R
ONE	" " "	G00-34
ONE	" " "	G00-34R
ONE	" " "	G00-35
ONE	" " "	G00-35R
ONE	" " "	G00-36
ONE	" " "	G00-36R
	FIELD BOLTS	
11492	¾ ϕ x 1½" GALV. HEX HD. MB	
48	¾ ϕ x 2½" " " " "	
2264	⅞ ϕ x 1½" " " " "	
11656	¾ ϕ GALV. FLAT WASHERS	
2480	⅞ ϕ " " "	

SEE SH. #16 FOR BAL. OF PARTS LIST

PARTS LIST

QUAN.	DESCRIPTION	P.M.
108	ANCHOR BOLTS	AB-1
116	" "	AB-2
ONE	ALUM. RAIL PANELS	G00-1
ONE	" " "	G00-1R
12	" " "	G00-2
8	" " "	G00-2A
ONE	" " "	G00-3
ONE	" " "	G00-3R
ONE	" " "	G00-4
ONE	" " "	G00-4R
46	" " "	G00-5
18	" " "	G00-5A
62	" " "	G00-5B
ONE	" " "	G00-6
ONE	" " "	G00-6R
ONE	" " "	G00-6A
ONE	" " "	G00-6AR
ONE	" " "	G00-7
ONE	" " "	G00-7R
ONE	" " "	G00-8
ONE	" " "	G00-8R
ONE	" " "	G00-9
ONE	" " "	G00-9R
ONE	" " "	G00-10
ONE	" " "	G00-10R
ONE	" " "	G00-11
ONE	" " "	G00-11R
42	" " "	G00-12
7	" " "	G00-13
7	" " "	G00-13R
2	" " "	G00-14
2	" " "	G00-14R
4	" " "	G00-15
ONE	" " "	G00-16
ONE	" " "	G00-16R
ONE	" " "	G00-17
ONE	" " "	G00-17R
2	" " "	G00-18
2	" " "	G00-18R
ONE	" " "	G00-19
ONE	" " "	G00-19R
ONE	" " "	G00-20
ONE	" " "	G00-20R
ONE	" " "	G00-21
ONE	" " "	G00-21R
2	" " "	G00-22
2	" " "	G00-22R
2	" " "	G00-23
2	" " "	G00-23R

APPROVED BY 3/9/60
L. D. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 3-4-60

APPROVED BY _____ DATE _____
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

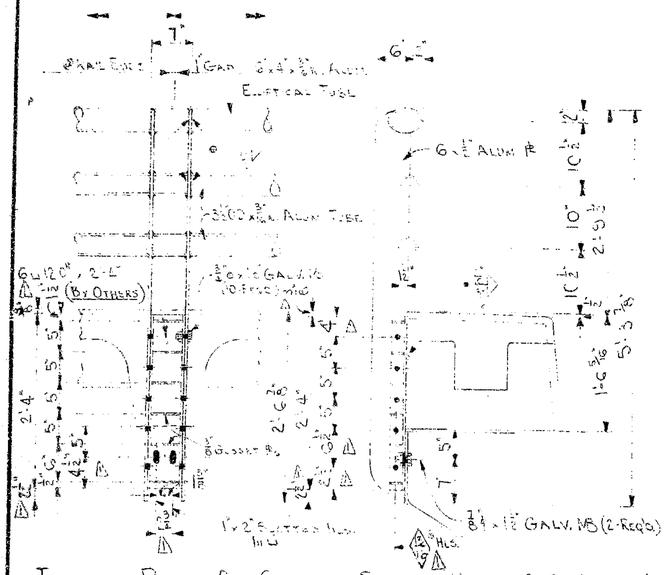
REVISIONS	DATE

PRINTS ISSUED FOR	NO.	DATE	FOR	NO.	DATE
APPR.	4	4-24-59			
APPR.	4	2-24-60			
E. APP.	4	2-9-60			
E. APPR.	4	3-1-60			

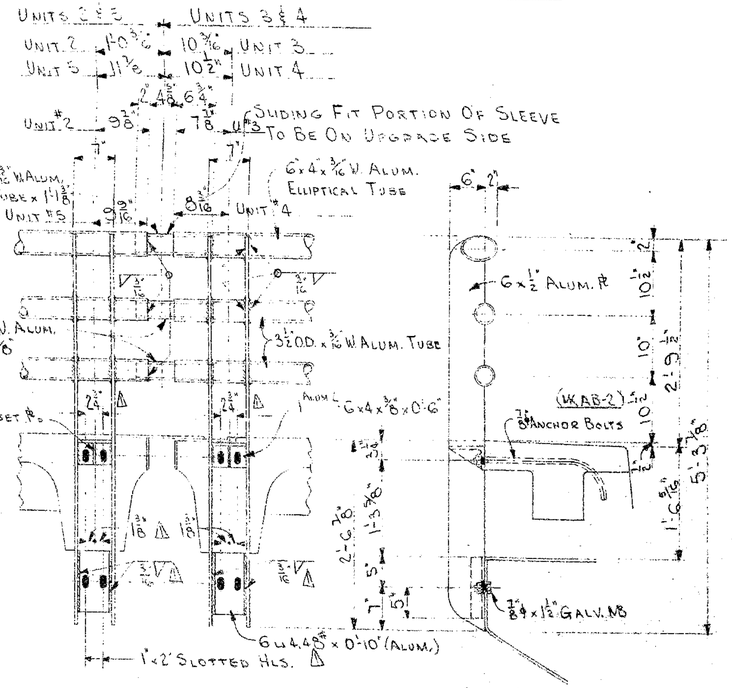
DATE MADE	REVISION	BY
2-8-60	Gen. Rail Sec. Pl. 2	AE
2-11-60	Rail Sec. Pl. 1 & 2	AE

SOUTHWEST ORNAMENTAL IRON CO.
1722-30 TRACY AVENUE KANSAS CITY 8, MISSOURI

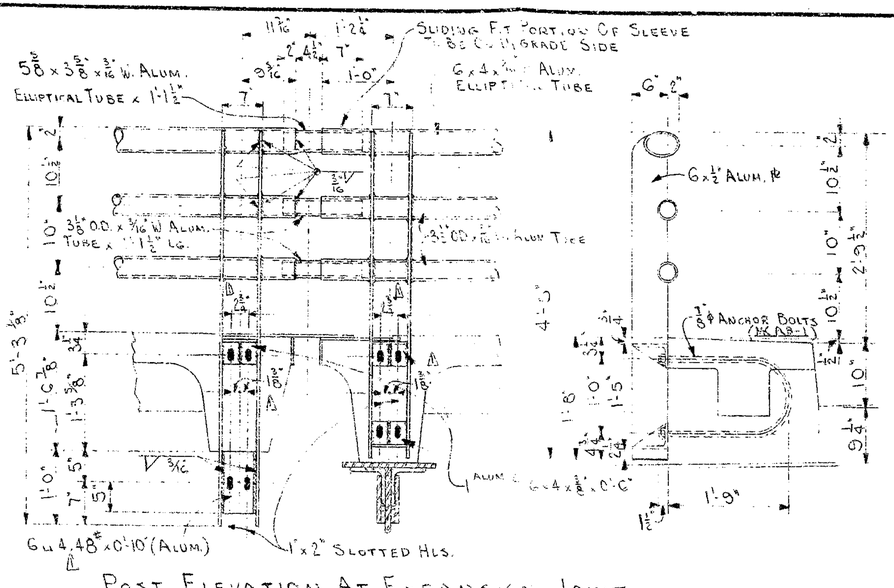
JOB Mississippi River Bridge
LOCATION Near Helena, Ark.
TITLE Det. Rail Sections
FINISH Alum. Mill Finish
ARCHITECT Howard, Needles, Tammen & Bergendoff
CONTRACTOR John F. Beasley Const. Co.
REFERENCE
DRAWN BY A | CHECKED BY | HOLES UNLESS NOTED
DATE 3-23-59 | DATE | BOLTS UNLESS NOTED
ORDER NO. G00 | DRAWING NO. 8 | RIVETS UNLESS NOTED
THIS JOB TO BE FURNISHED AND DELIVERED



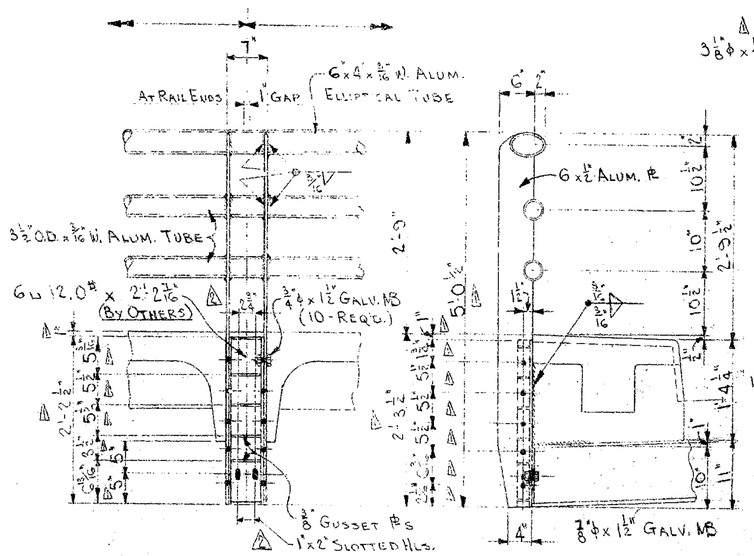
TYPICAL POST ON GIRDER SPANS - UNITS 2, 3, 4 & 5 △



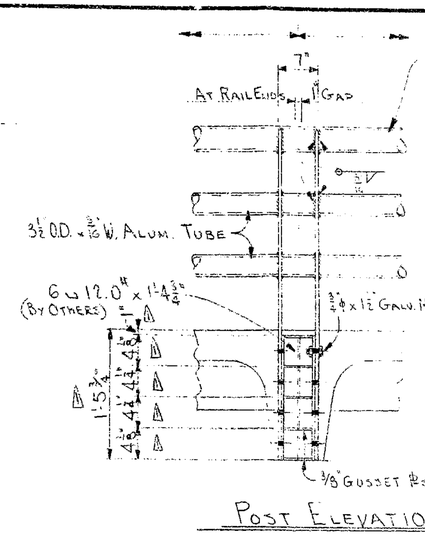
POST ELEV. @ GIRDER SPAN EXPANSION JOINTS NEAR PIERS 7 & 18



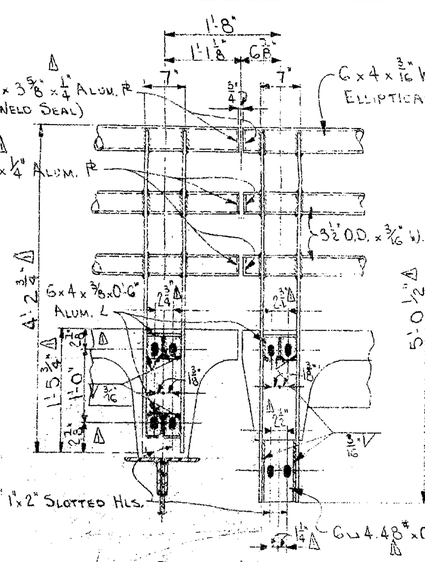
POST ELEVATION AT EXPANSION JOINT PIER 10 △



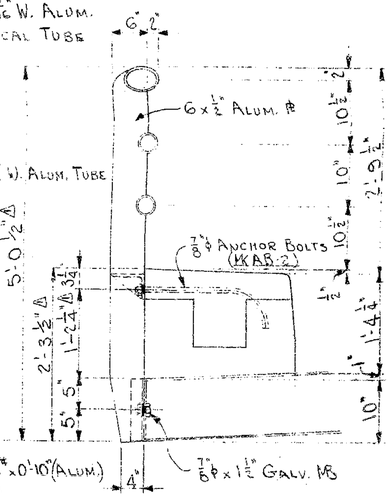
TYPICAL POST AT CROSSBEAM △



POST ELEVATION AT FLOORBEAM #1 △



NOTE! RAIL ELEVATION AT CONTRACTION JOINTS △



(INCLUDES KA29)

APPROVED BY 3/9/60
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 3-4-60

△ △

PRINTS ISSUED					
FOR	NO.	DATE	FOR	NO.	DATE
Approx	4	4-7-59			
Approx	2	7-31-59			
F. Appr	4	2-8-60			
F. Appr	4	3-1-60			

DATE MADE	REVISION	BY
2-8-60	Grd Rail, Stl. Dwgs.	AE
3-1-60	Added Slotted Hls.	AE

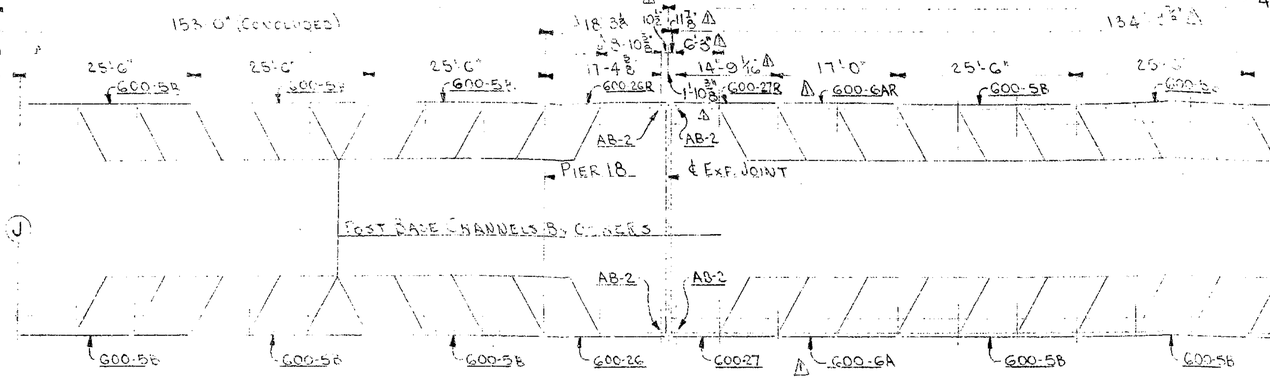
APPROVED BY ____ DATE ____
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

REVISIONS DATE

SOUTHWEST ORNAMENTAL IRON CO.
1722-30 TRACY AVENUE KANSAS CITY 8, MISSOURI

JOB Mississippi River Bridge
LOCATION Near Helena, Ark.
TITLE Det Rail Sections
FINISH Alum. Mill - Steel, Red Lead & Oil
ARCHITECT Howard, Needles, Tammen & Bergendoff
CONTRACTOR John F. Beasley Const. Co.
REFERENCE
DRAWN BY AL | CHECKED BY | HOLES UNLESS NOTED
DATE 3-17-59 | DATE | BOLTS UNLESS NOTED
ORDER NO. 600 | DRAWING NO. 7 | RIVETS UNLESS NOTED
THIS JOB TO BE FURNISHED AND Delivered

153'-0" (CONCLUDED)

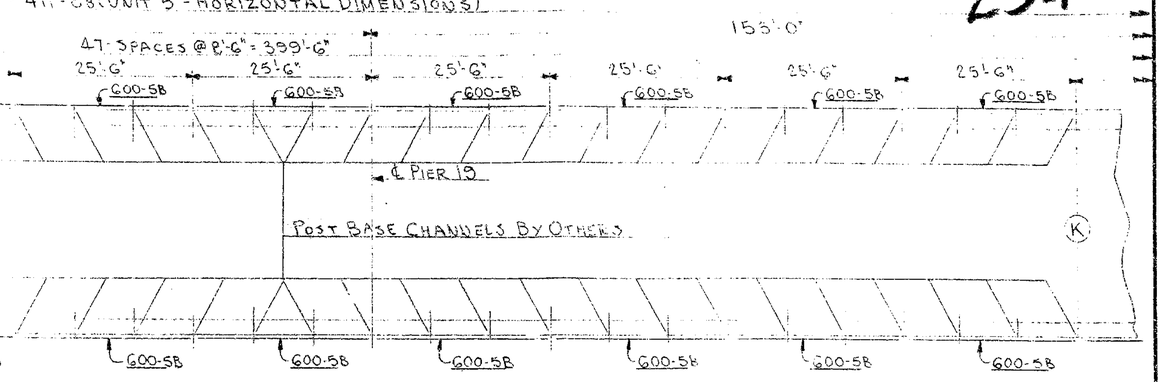


134'-7⅝"

Δ 411'-2⅝" (UNIT 5 - HORIZONTAL DIMENSIONS)

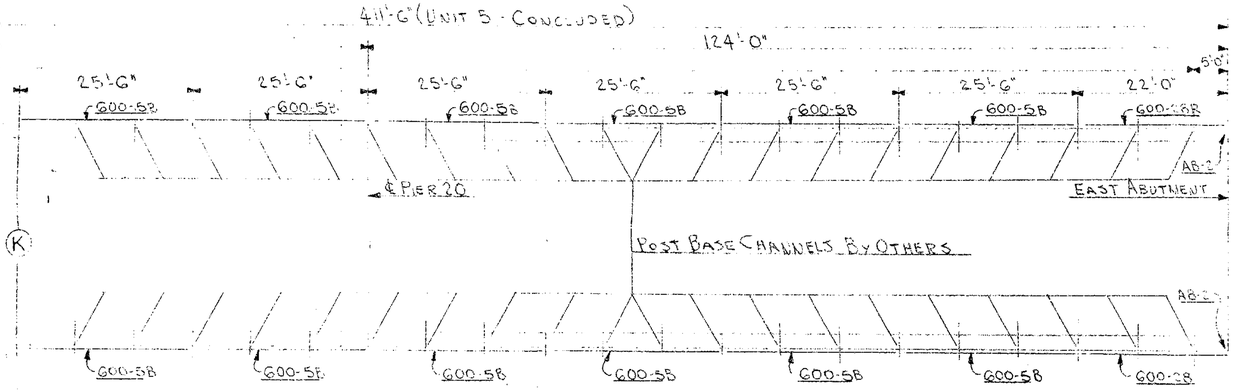
155'-0"

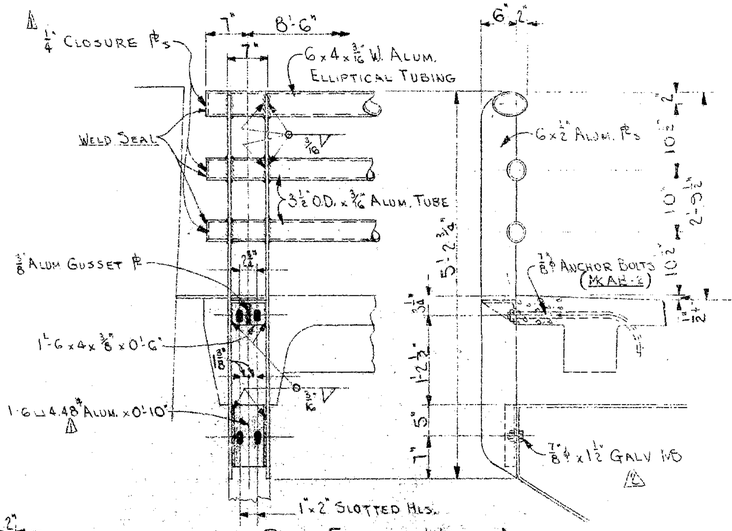
47 SPACES @ 8'-6" = 399'-6"



411'-6" (UNIT 5 - CONCLUDED)

124'-0"





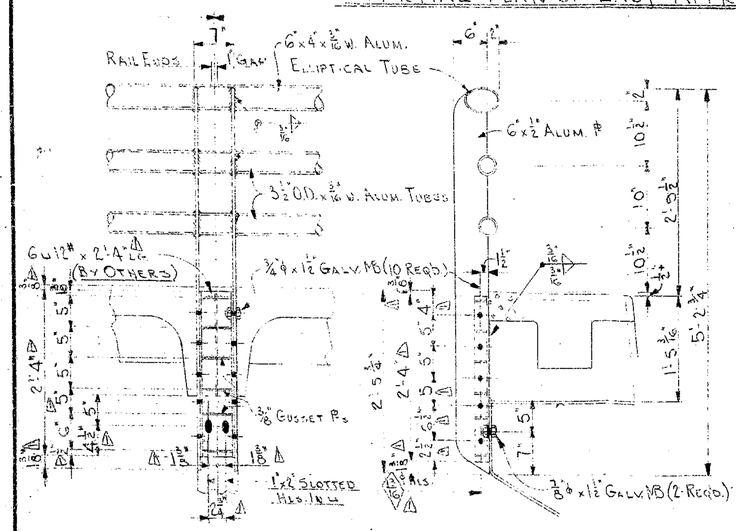
RAIL ELEV. @ WEST ABUTMENT

UNIT 1 Δ

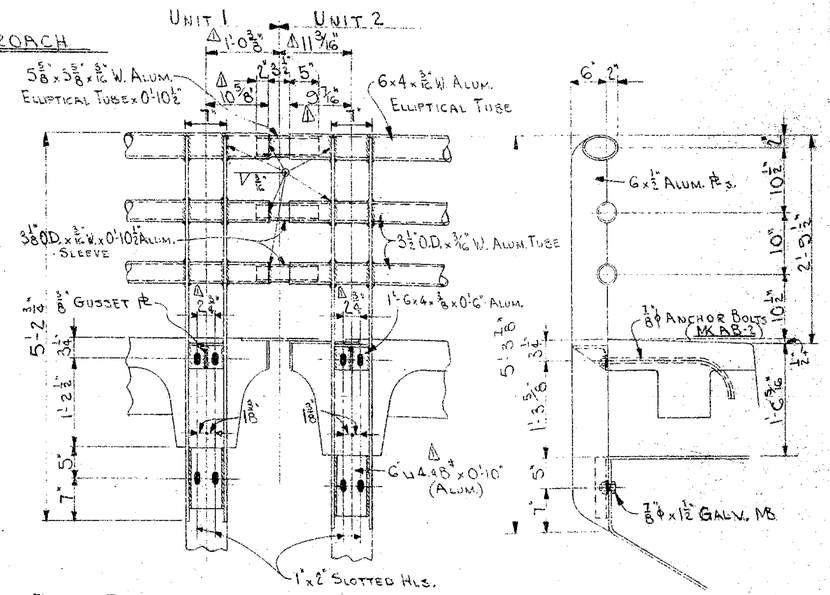
EAST ABUT. SIMILAR & OPP HAND

UNIT 5 Δ

PARTIAL PLAN OF EAST APPROACH



TYPICAL POST ON GIRDER SPANS - UNIT 1 Δ



RAIL ELEV. @ EXPANSION JOINT NEAR PIER 4

UNITS 1 & 2 Δ

APPROVED BY 3/9/60
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 3-4-60

APPROVED BY _____ DATE _____
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

REVISIONS	DATE

SOUTHWEST ORNAMENTAL IRON CO.
1722-30 TRACY AVENUE KANSAS CITY 8, MISSOURI

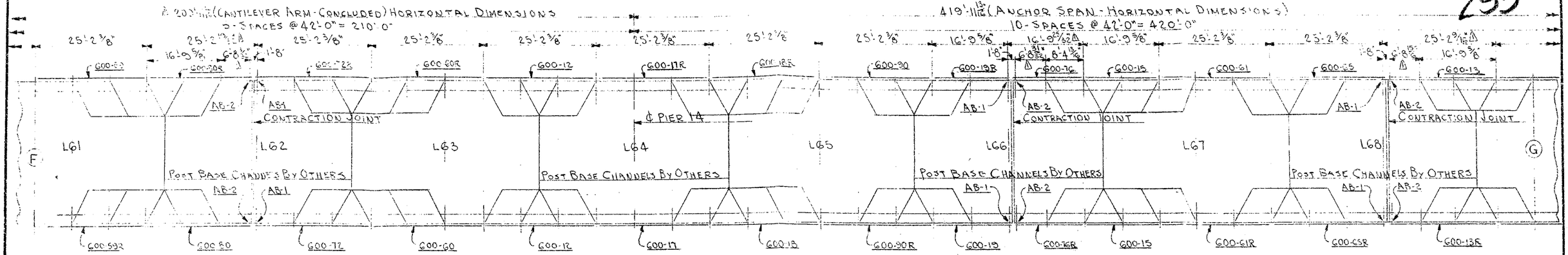
JOB MISSISSIPPI RIVER BRIDGE
LOCATION NEAR HELENA, ARK.
TITLE
LAYOUT & ELEV. ALUM. RAIL - APPROACHES & MAIN SPAN

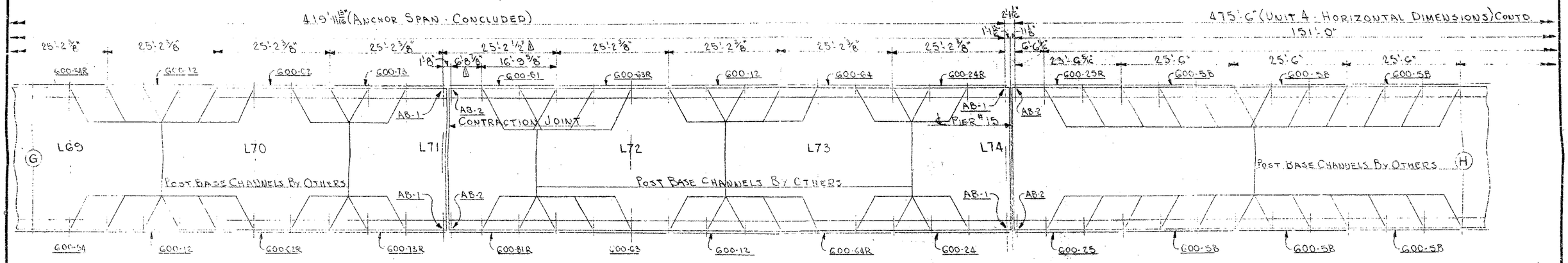
FINISH ALUM. MILL - STEEL - RED LEAD & OIL
ARCHITECT HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONTRACTOR JOHN F. BEASLEY CONST. CO.
REFERENCE
DRAWN BY AL | CHECKED BY | HOLES UNLESS NOTED
DATE 3-7-59 | DATE | BOLTS UNLESS NOTED
ORDER NO. 600 | DRAWING NO. 6 | RIVETS UNLESS NOTED
THIS JOB TO BE FURNISHED AND DELIVERED

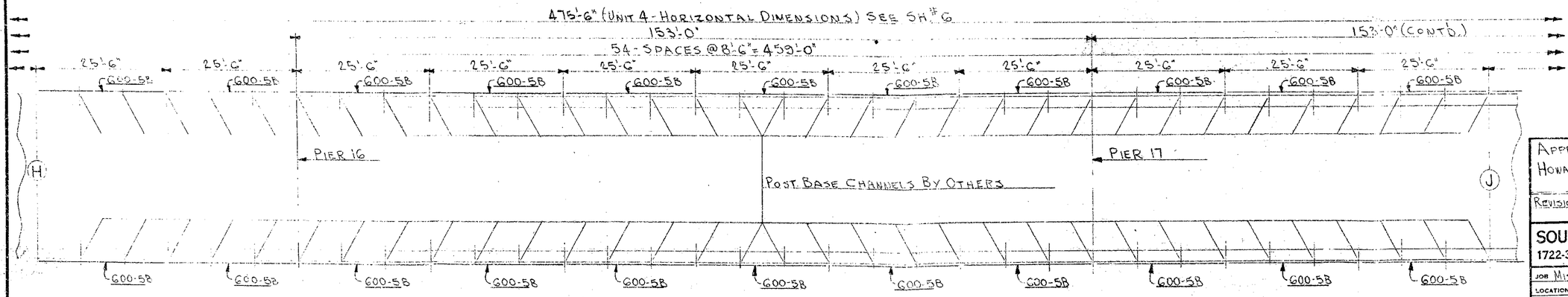
PRINTS ISSUED FOR	NO.	DATE	FOR	NO.	DATE
APPR	4	4-7-59			
APPR	4	7-31-59			
F. APP	4	2-5-60			
F. APPR	4	2-1-60			

DATE MADE	REVISION	BY
2-5-60	GEN. LEV. STA. LINES	AL
2-1-60	GALV. WASHERS	AL

293







PARTIAL PLANS OF CANTILEVER ARM, ANCHOR SPAN & EAST APPROACH

APPROVED BY 2/29/60
L. G. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 2-22-60

APPROVED BY _____ DATE _____
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

PRINTS ISSUED					
FOR	NO.	DATE	FOR	NO.	DATE
Approval	4	4-7-59			
Approval	4	7-31-59			
F. Approval	4	2-5-60			

DATE MADE	REVISION	BY
2-8-60	Gen'l. Structure	AE

REVISIONS	DATE

SOUTHWEST ORNAMENTAL IRON CO.
1722-30 TRACY AVENUE KANSAS CITY 8, MISSOURI

JOB Mississippi River Bridge
LOCATION Near Helena, Ark.
TITLE
Layout - Alum. Rail Approaches & Main Span
FINISH Mill Finish
ARCHITECT Howard, Needles, Tammen & Bergendoff
CONTRACTOR John F. Beasley Const. Co.
REFERENCE

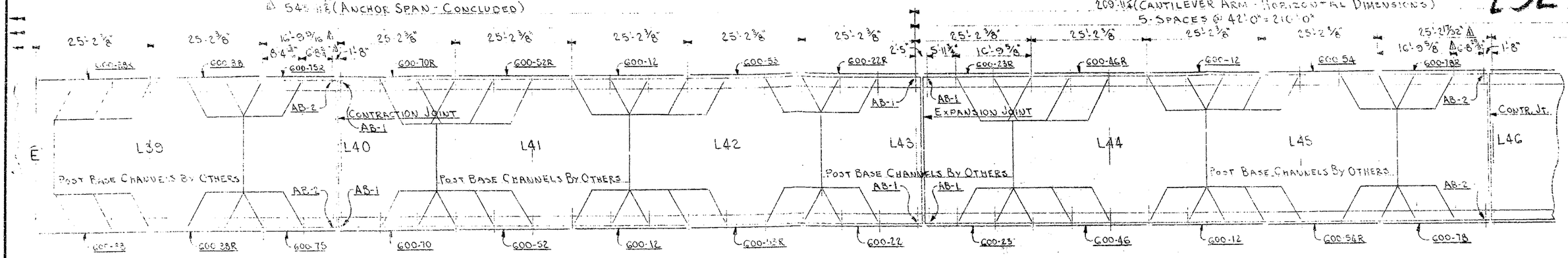
DRAWN BY	CHECKED BY	NOLES.	UNLESS NOTED
DATE 3-7-59	DATE	BOLTS	UNLESS NOTED
ORDER NO. 600	DRAWING NO. 5	RIVETS	UNLESS NOTED

THIS JOB TO BE FURNISHED AND DELIVERED

A

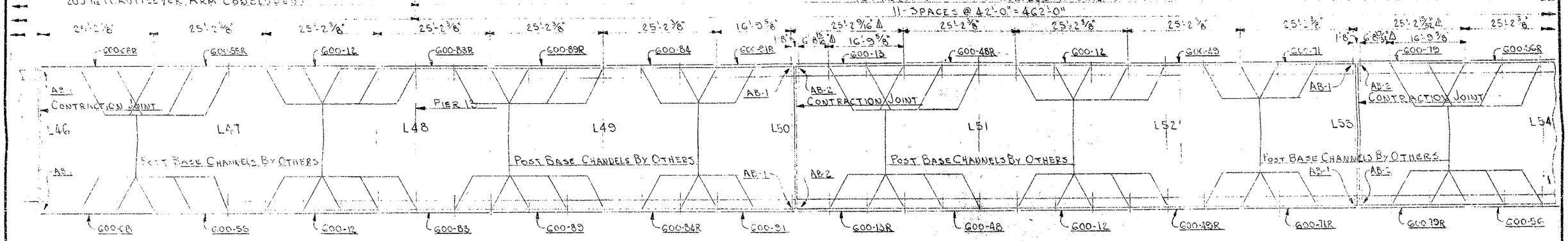
△ 54½" (ANCHOR SPAN - CONCLUDED)

209'-11¼" (CANTILEVER ARM - HORIZONTAL DIMENSIONS)
5 SPACES @ 42'-0" = 210'-0"



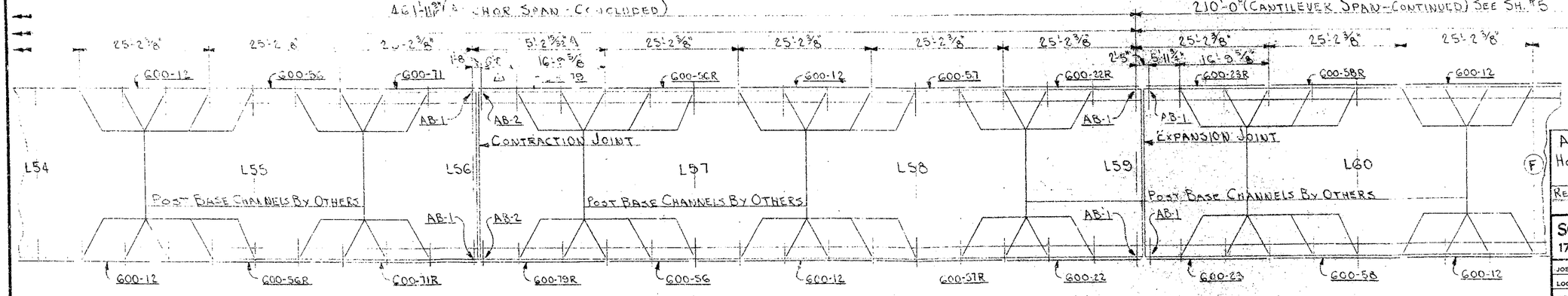
203'-3⅜" (CANTILEVER ARM CONCLUDED)

461'-11⅞" (ANCHOR SPAN - HORIZONTAL DIMENSIONS)
11 SPACES @ 42'-0" = 462'-0"



461'-11⅞" (ANCHOR SPAN - CONCLUDED)

210'-0" (CANTILEVER SPAN - CONTINUED) SEE SH. #5



PARTIAL PLAN OF ANCHOR SPANS & CANTILEVER ARMS

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 2-22-60

APPROVED BY _____ DATE 2/29/60
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

REVISIONS	DATE

SOUTHWEST ORNAMENTAL IRON CO.
1722-30 TRACY AVENUE KANSAS CITY 8, MISSOURI

JOB MISSISSIPPI RIVER BRIDGE
LOCATION NEAR HELENA, ARK
TITLE LAYOUT ALUM. RAIL - APPROACHES & MAIN SPAN
FINISH MILL FINISH
ARCHITECT HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONTRACTOR JOHN F. BEASLEY CONST. CO.
REFERENCE
DRAWN BY FE — CHECKED BY — HOLES UNLESS NOTED
DATE 3-7-60 — DATE — BOLTS UNLESS NOTED
ORDER NO. 600 — DRAWING NO. 4 — RIVETS UNLESS NOTED
THIS JOB TO BE FURNISHED AND DELIVERED

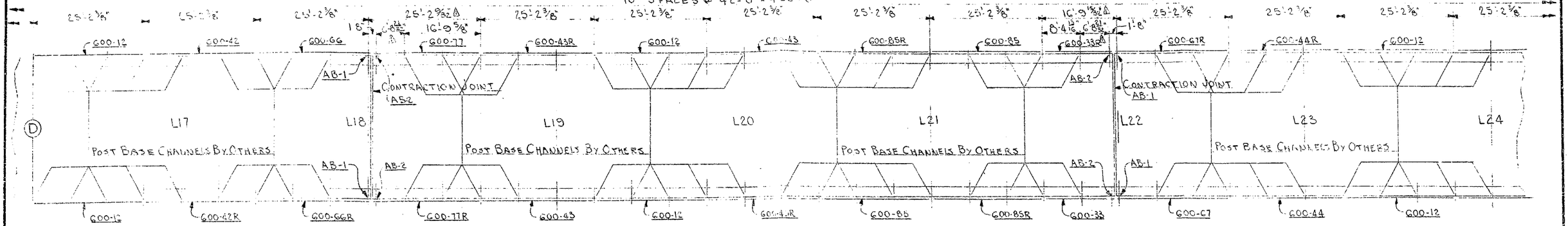
PRINTS ISSUED

FOR	NO.	DATE	FOR	NO.	DATE
APPR	1	4-27-60			
APPR	2	5-11-60			
F APP	3	6-6-60			

DATE MADE	REVISION	BY
2-28-60	C-12 & C-13 REVISED	FE

(A)

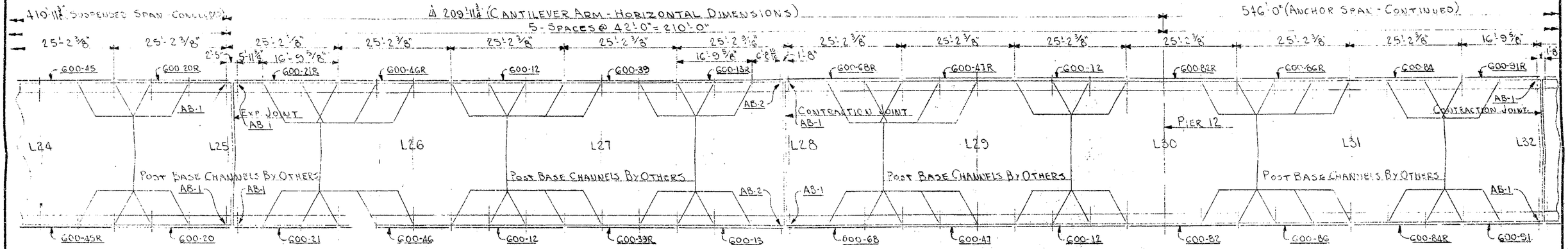
△ 419'-11 3/8" (SUSPENDED SPAN - HORIZONTAL DIMENSIONS)
10 - SPACES @ 42'-0" = 420'-0"



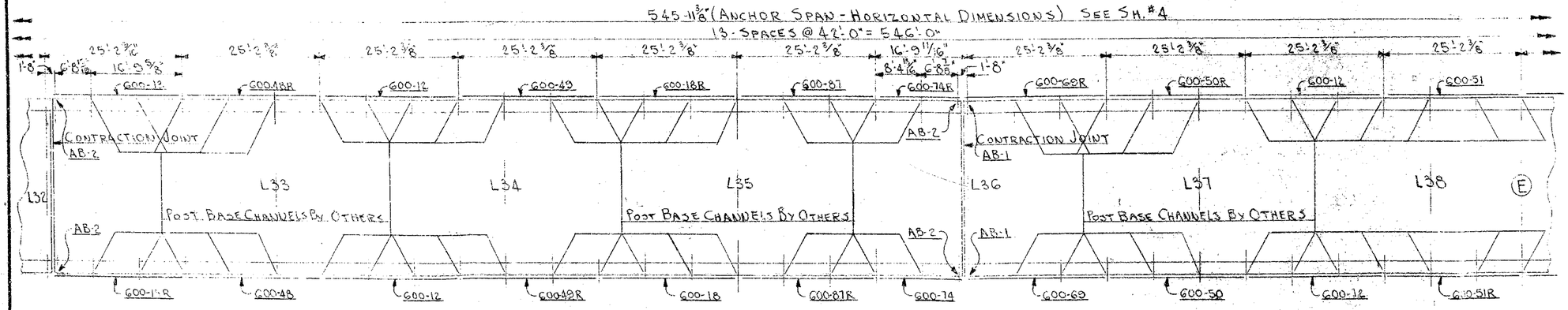
410'-11 3/8" SUSPENDED SPAN CONCLUDED

△ 209'-11 3/8" (CANTILEVER ARM - HORIZONTAL DIMENSIONS)
5 - SPACES @ 42'-0" = 210'-0"

546'-0" (ANCHOR SPAN - CONTINUED)



545-11 3/8" (ANCHOR SPAN - HORIZONTAL DIMENSIONS) SEE SH. #4
13 - SPACES @ 42'-0" = 546'-0"



PARTIAL PLAN OF SUSPENDED SPAN, CANTILEVER ARM & ANCHOR SPAN

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY F.R.S. DATE 2-22-60
APPROVED BY 2/29/60

APPROVED BY L.D. Carlson DATE
Bridge Design Engineer
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

REVISION	DATE

SOUTHWEST ORNAMENTAL IRON CO.
1722-30 TRACY AVENUE KANSAS CITY 8, MISSOURI

JOB MISSISSIPPI RIVER BRIDGE
LOCATION NEAR HELENA, ARK.
TITLE LAYOUT-ALUM. RAIL - APPROACHES & MAIN SPAN
FINISH MILL FINISH
ARCHITECT HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONTRACTOR JOHN F. BEASLEY CONST. CO.
REFERENCE
DRAWN BY FL | CHECKED BY | HOLES UNLESS NOTED
DATE 3-6-59 | DATE | BOLTS UNLESS NOTED
ORDER NO. 600 | DRAWING NO. 8 | RIVETS UNLESS NOTED
THIS JOB TO BE FURNISHED AND DELIVERED

PRINTS ISSUED FOR	NO.	DATE	FOR	NO.	DATE
APPR.	4	4-7-59			
APPR.	7	7-21-59			
F.APP	4	2-8-60			

DATE MADE	REVISION	BY
2-8-60	Sym. Key, Sta., Dims.	FL

(A)

290

475'-2½" (UNIT 3 - HORIZONTAL DIMENSIONS - CONCLUDED - SEE SH #1)

153'-0" (CONCLUDED - SEE SH #1)

54 - SPACES @ 8'-6" = 459'-0"

151'-0"

420'-0" (ANCHOR SPAN - CONTINUED)

10 - SPACES @ 42'-0" = 420'-0"

25'-2⅜"

25'-6" | 25'-6" | 25'-6" | 25'-6" | 25'-6" | 25'-6" | 25'-6" | 25'-6" | 25'-6" | 25'-6" | 23'-6" | 25'-2⅜" | 25'-2⅜" | 25'-2⅜" | 25'-2⅜"

G00-5 | G00-5 | G00-5A | G00-5 | G00-5 | G00-5A | G00-5 | G00-5 | G00-5A | G00-9R | G00-10R | G00-10R | G00-12

PIER 9

POST BASE CHANNELS BY OTHERS

AB-2 | AB-1

PIER 10

L0 | L1 | L2

POST BASE CHANNELS BY OTHERS

G00-5 | G00-5 | G00-5A | G00-5 | G00-5 | G00-5A | G00-5 | G00-5 | G00-5A | G00-9 | G00-6 | G00-30 | G00-12

420'-0" (ANCHOR SPAN - CONCLUDED) HORIZONTAL DIMENSIONS

10 - SPACES @ 42'-0" = 420'-0"

25'-2⅜" | 25'-2⅜" | 25'-2⅜" | 25'-2⅜" | 25'-2⅜" | 25'-2⅜" | 25'-2⅜" | 25'-2⅜" | 25'-2⅜" | 25'-2⅜" | 25'-2⅜" | 25'-2⅜" | 25'-2⅜" | 25'-2⅜"

G00-11 | G00-13R | G00-14R | G00-11R | G00-12 | G00-37 | G00-13R | G00-65R | G00-38R | G00-15 | G00-16R | G00-14R | G00-29R | G00-12

AB-2 | AB-1

CONTRACTION JOINT

5 - SPACES @ 8'-4½" = 42'-0" (TYPICAL)

L3 | L4 | L5 | L6 | L7 | L8 | L9 | L10

PIER 11

POST BASE CHANNELS BY OTHERS

G00-11R | G00-13 | G00-14 | G00-11 | G00-12 | G00-37R | G00-13 | G00-65 | G00-38 | G00-15 | G00-16 | G00-14 | G00-29 | G00-12

△ 209'-11⅝" (CANTILEVER SPAN - HORIZONTAL DIMENSIONS)

5 - SPACES @ 42'-0" = 209'-11⅝" △

419'-11⅜" (SUSPENDED SPAN CONTINUED - SEE SH 5)

10 - SPACES @ 42'-0" = 420'-0"

25'-2⅜" | 25'-2⅜" | 25'-2⅜" | 25'-2⅜" | 25'-2⅜" | 25'-2⅜" | 25'-2⅜" | 25'-2⅜" | 25'-2⅜" | 25'-2⅜" | 25'-2⅜" | 25'-2⅜" | 25'-2⅜" | 25'-2⅜"

G00-34R | G00-35R | G00-84 | G00-36R | G00-13 | G00-33R | G00-12 | G00-40 | G00-31R | G00-32R | G00-41R

PIER 11

AB-1 | AB-2 | AB-2 | AB-1

5 - SPACES @ 8'-4½" = 42'-0" (TYPICAL)

CONTRACTION JOINT

L10 | LH | L12 | L13 | L14 | L15 | L16

POST BASE CHANNELS BY OTHERS

G00-34 | G00-35 | G00-84R | G00-36 | G00-13R | G00-33 | G00-12 | G00-40R | G00-31 | G00-32 | G00-41

PART: PLAN OF WEST APPROACH & MAIN SPANS

APPROVED BY 3/9/60

L. P. Carlson

Bridge Design Engineer

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY ERS DATE 3-9-60

APPROVED BY _____ DATE _____

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

CONSULTING ENGINEERS

REVISION	DATE

SOUTHWEST ORNAMENTAL IRON CO.

1722-30 TRACY AVENUE KANSAS CITY 8, MISSOURI

JOB	MISSISSIPPI RIVER BRIDGE
LOCATION	NEAR HELENA, ARK.
TITLE	LAYOUT - ALW'L RAIL - APPROACHES & MAIN SPAN
FINISH	MILL FINISH
ARCHITECT	HOWARD NEEDLES, TAMMEN & BERGENDOFF
CONTRACTOR	JOHN F. BEASLEY CONST. CO.
REFERENCE	
DRAWN BY	A
CHECKED BY	
DATE	5-5-59
DATE	
ORDER NO.	600
DRAWING NO.	2
HOLES	UNLESS NOTED
BOLTS	UNLESS NOTED
RIVETS	UNLESS NOTED

THIS JOB TO BE FURNISHED AND DELIVERED

PRINTS ISSUED

FOR	NO.	DATE	FOR	NO.	DATE
APPR	4	4-25-59			
APPL	4	7-31-59			
F.APP	4	2-8-60			
FAPPR	4	3-1-60			

DATE MADE	REVISION	BY
2-8-60	ADD NEW ST. RAILS	A
3-1-60	CORRECTIONS	A

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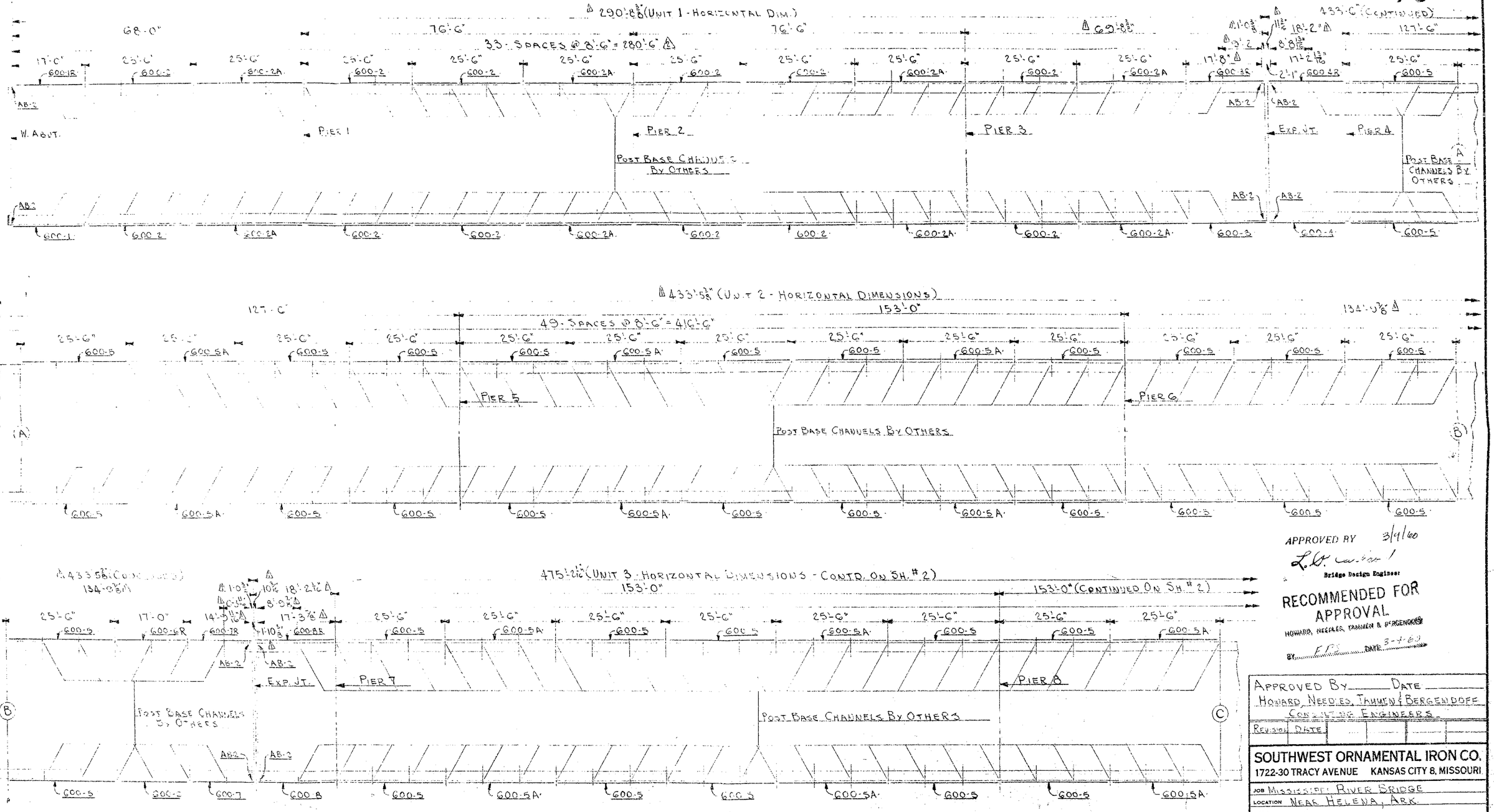


PARTIAL PLAN OF WEST APPROACH SPANS

APPROVED BY 3/9/60
L.G. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ____ DATE 3-4-60

APPROVED BY ____ DATE ____
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

REVISION	DATE				

SOUTHWEST ORNAMENTAL IRON CO.
1722-30 TRACY AVENUE KANSAS CITY 8, MISSOURI

JOB MISSISSIPPI RIVER BRIDGE
LOCATION NEAR HELENA, ARK.
TITLE LAYOUT - APPROACHES & MAIN SPAN
FINISH MILL FINISH
ARCHITECT HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONTRACTOR JOHN F. BEASLEY CONST. CO.
REFERENCE
DRAWN BY RC | CHECKED BY | HOLES UNLESS NOTED
DATE 3-15-60 | DATE | BOLTS UNLESS NOTED
ORDER NO. 600 | DRAWING NO. 1 | RIVETS UNLESS NOTED
THIS JOB TO BE FURNISHED AND ERECTED

PRINTS ISSUED					
FOR	NO.	DATE	FOR	NO.	DATE
APPR	4	4-7-59			
ADDR	4	7-31-59			
F. APP	4	6-8-60			
F. ADDR	4	8-1-60			

DATE MADE	REVISION	BY
2-8-60	SHIFTED SPL. PIER	RC
3-1-60	ADDED SPACE	RC

A.H.D.

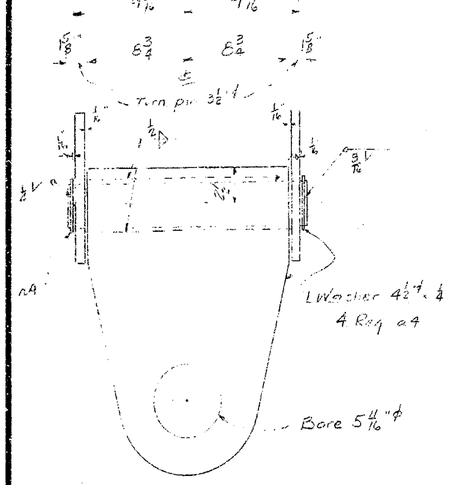
ROLL .. 746

BRG. 2899

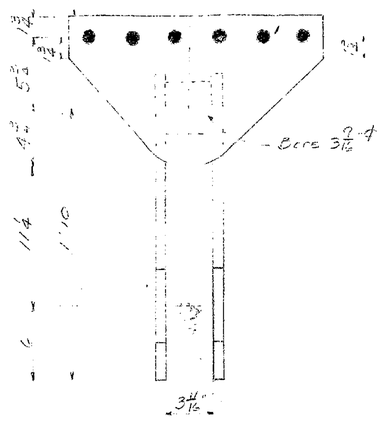
288

1 Plate 17½ × ¾ × 2'-0½ - 4 Req a1

1 Pin 3 15/16" □ × 1'-8¾ - 2 Req. a3

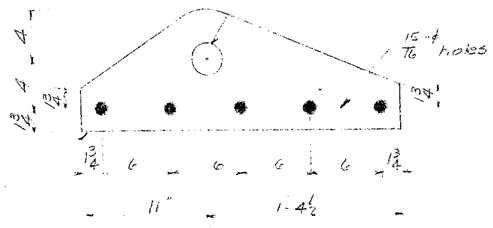


2 Pits 1'-4 × ¾ × 1'-10 - 4 Req a2



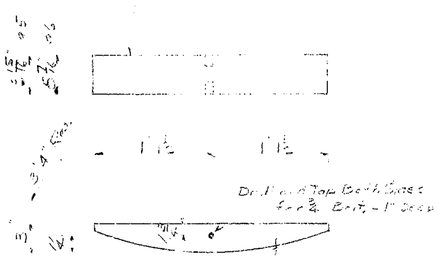
2 SHEAVE BRACKETS - A412

Bore 2" ϕ for B412
Bore 2½" ϕ for C412



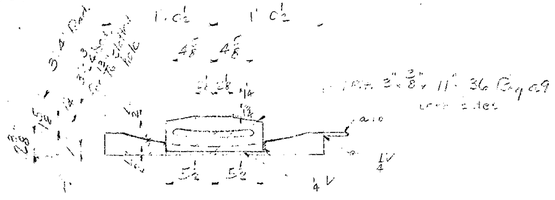
1 Pit. 7¾ × ¾ × 2'-3½ - 2 Req. - B412
1 Pit. 7¾ × ¾ × 2'-3½ - 2 Req. - C412

1 Pit. 5 11/16 × 3 × 2'-3 - 16 Req. a5 } D412
1 Pit. 8 7/16 × 3 × 2'-3 - 2 Req. a6 }



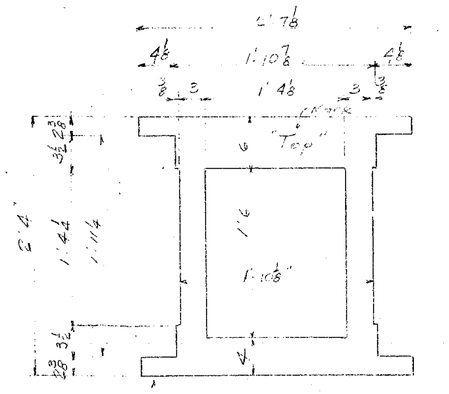
1 Pit. 4 × 2 5/8 × 2'-1 - 16 Req. a7 - D412
1 Pit. 8½ × 2 5/8 × 2'-1 - 2 Req. a8 - E412

Bar ½ × 9½ - 18 Req a10

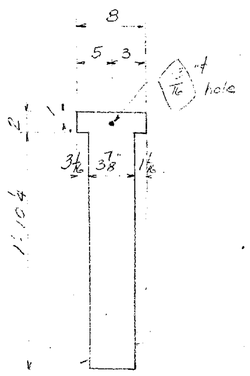


16 BEARING BLOCKS - D412
2 BEARING BLOCKS - E412

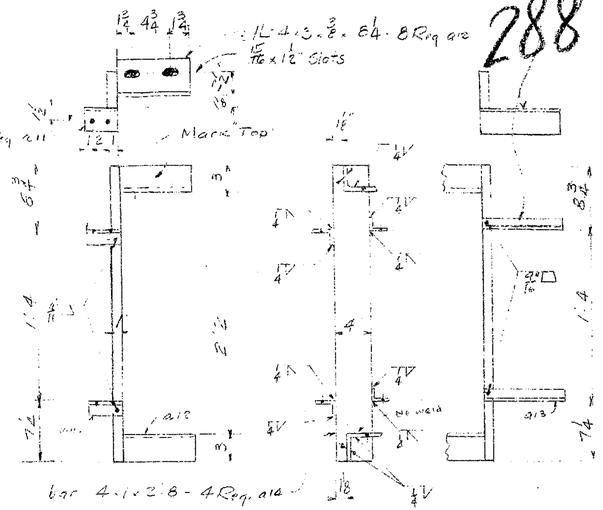
Limit Pins as req'd at 1 Pit. ¾ × 14 11/16 x A11 Bolts



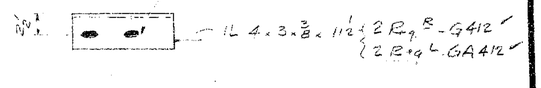
1 Pit 28 × 1½ × 2'-7⅛ - 2 Req. - K412
1 Pit. 28 × ½ × 2'-7⅛ - 6 Req. - L412
1 Lead Pit 28 × ⅜ × 2'-7⅛ - 4 Req. - M412

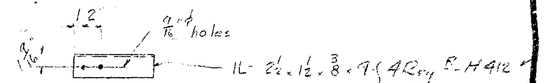


Shim Pit. 8 × ½ × 2'-0¼ - 50 Req. - N412



2 BEARING PLATES AS SHOWN - F412
2 BEARING PLATES OPP HAND - FA412





APPROVED BY 9/15/60
L.G. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD NEEDLES, TAMMEN & BERGENDOFF
BY G.A. DATE 9-9-60

Edge Distance–	—		
Contact Surfaces Shop–			
Field–			
Paint – V.S. #1			
1st coat			
2nd coat – Kustomsum			
Holes– as noted			
Rivets–	—		

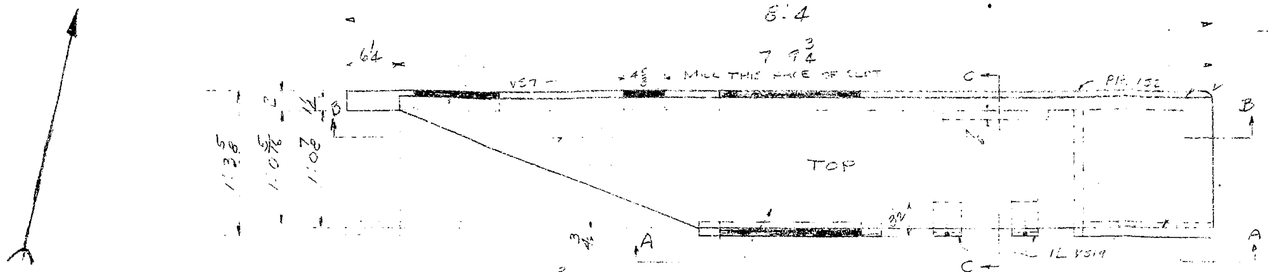
VINCENNES STEEL
Div. of Industrial Enterprises Inc.
Vincennes, Ind.

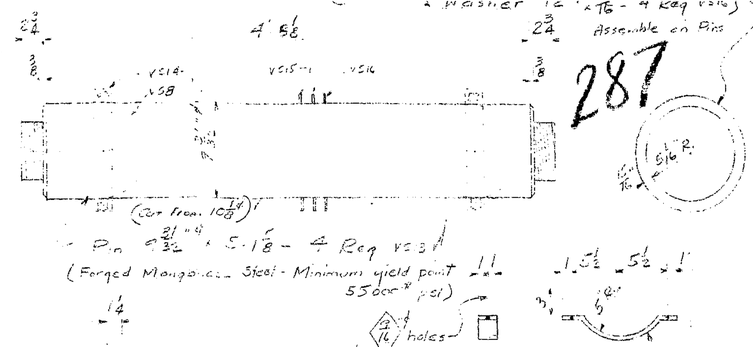
ERECTION MATERIAL
MISSISSIPPI RIVER BRIDGE
HELENA ARKANSAS
SOLD TO JOHN F. BEASLEY CONSTR. CO.

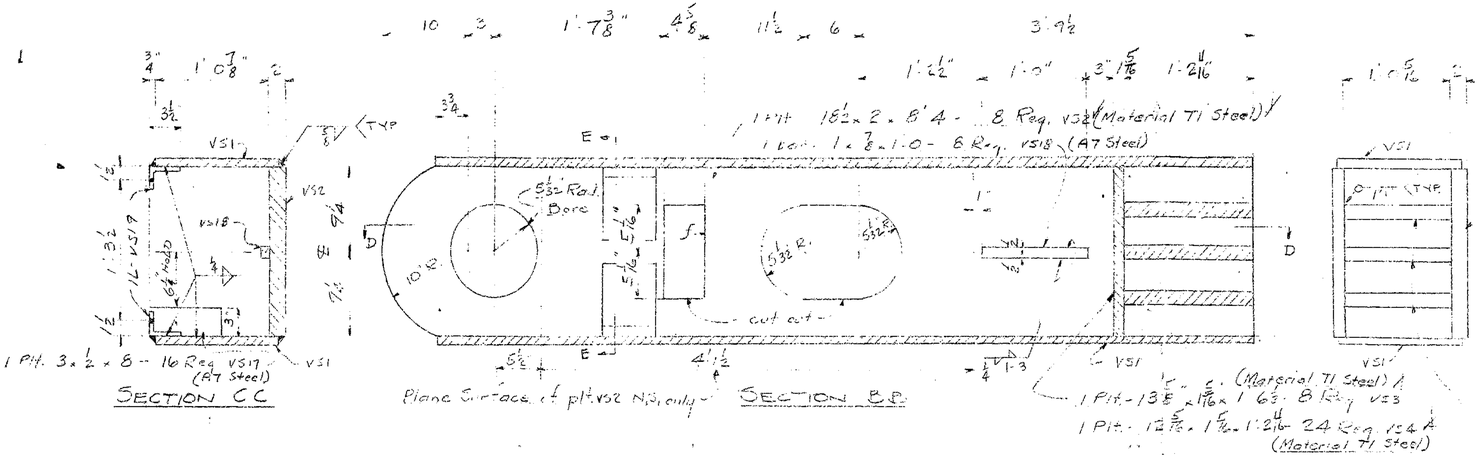
Drawn	Checked	Approved	Revised
J.W.		8-24-60	
C.B. 8-60		K.B. 8-60	

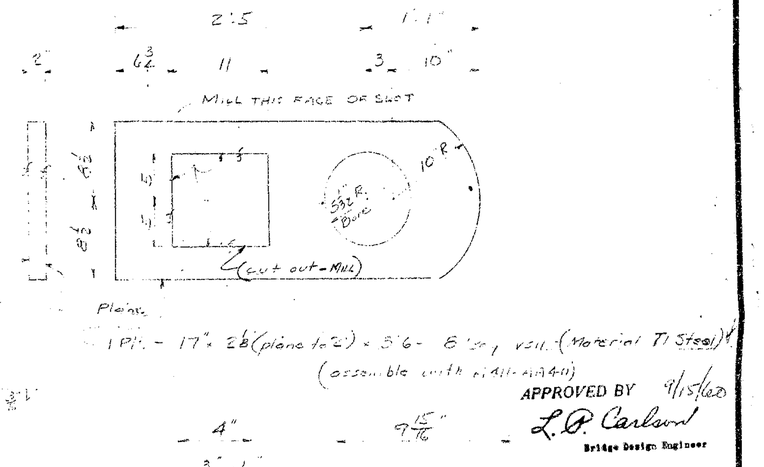
Contr. No. 4800 Sh. 412 of

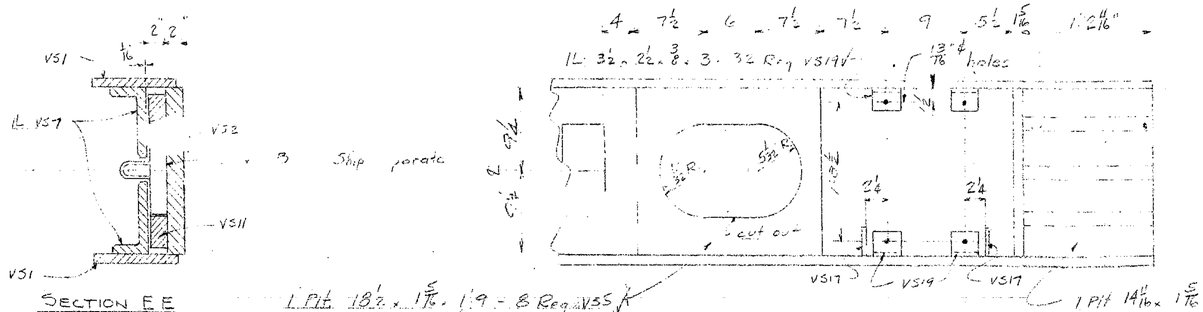
2 Drivers for 10" Pins - F411

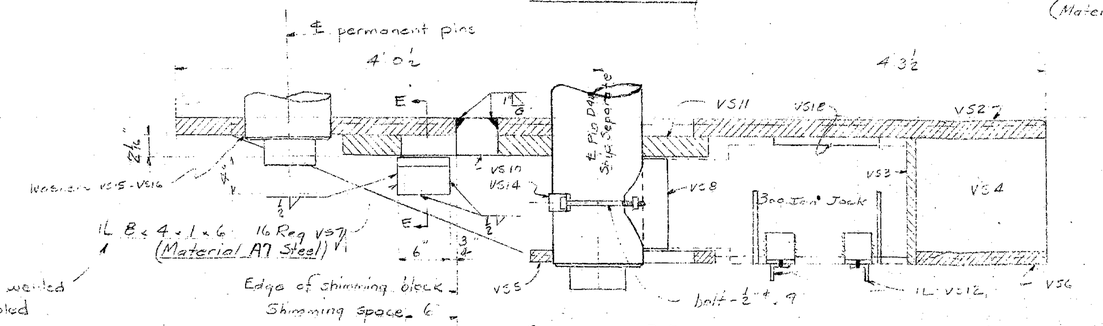


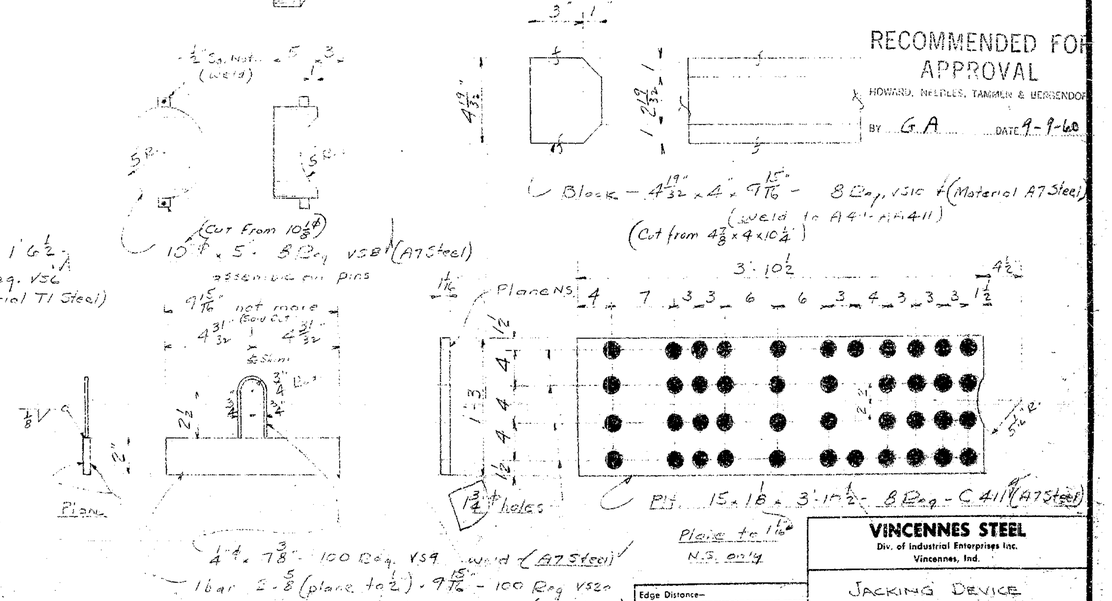












Edge Distance–			
Contact Surfaces	Shop–		
	Field–		
1st Coat Paint - V.S. # 1			
2nd Coat – Rustoleum			
Holes – as noted			
Rivets–			

VINCENNES STEEL
Div. of Industrial Enterprises Inc.
Vincennes, Ind.

JACKING DEVICE
MISSISSIPPI RIVER BRIDGE
HELENA ARKANSAS
SOLD TO JOHN E. BEASLEY CONSTR. CO.

Drawn	Checked	Approved	Revised
JW 11-11-59	Rug	GDB 2-22-60	

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY G.A. DATE 9-9-60

Contr. No. 4800-A Sh. 411 of

286

1 Plt. 10½ x 1½ x 1'-11¾ - 12 Req. vr103

— Plt. 15 x 1½ x 1'-11¾ - 12 Req. vr1

— Plt. 18" x ½" x 1'-6⅜" - 8 Req. vr2

1 Plt. 10½ x ½ x 1'-6⅜" - 4/6 Req. vr102

1 Plt. 10½ x ½ x 1'-5⅞ - 4 Req. vr107

1 Plt. vr103

— Plt. 18 x 1½ x 1'-11¾" - vr1

— Plt. 17⅞ x ½ x 1'-6' - 4 Req. vr7

1 Plt. 10½ x ½ x 1'-5⅞ - 4 Req. vr107

1 Plt. 10½ x ⅝ x 2'-1 - 24 Req. vr100

1 Plt. 10½ x ⅝ x 2'-1 - 24 Req. vr101

16 Req. vr102

1 Plt. 8⅞ x ½ x 10½

1 Plt. 8⅞ x ½ x 1'-6

16 Req. vr110

— Plt. 10 x 1½ x 2'-1½ - 12 Req. vr3

— Plt. 18 x ⅝ x 2'-1 - 24 Req. vr4

— Fill Plt. 6½ x ⅝ x 2'-1 - 24 Req. vr5

— Plt. 18 x ½ x 1'-6⅜ - 8 Req. vr6

— 1 Plt. 10" x ½" x 2'-1½ - vr3

— Plt. 17⅞ x ½ x 1'-6 - 4 Req. vr8

1 Plt. - 8⅜ x ½ x 1'-6"
8 Req. vr11

1 Plt. 8¾ x ½ x 10½
8 Req. vr106

1 Plt. 10½ x ½ x 1'-6⅜ - 8 Req. vr104

1 Plt. 10½ x ½ x 1'-5⅞ - 4 Req. vr107

1L - 3½ x 3½ x ⅜ x 10'-4 - 8 Req. R/L { 4 as shown - M410, 4 opp. hand - MA410 } ①

1L - 3½ x 3½ x ⅜ x 9'-½ - 8 Req. R/L { 4 as shown - N410, 4 opp. hand - NA410 } ①

(2-18-60 This part revised - see sheet 412

1L - 3½ x 3½ x ⅜ - 1'-1¾ - 8 Req. R/L
- 4 As Shown - K410
- 4 Opp. Hand - KA410

1L - 3½ x 3½ x ⅜ - 1'-1" - 8 Req. R/L
- 4 As Shown - L410
- 4 Opp. Hand - LA410

Shim - ⅜ x ½ x 2'-3½
80 Req. C410

8 JACKING BLOCKS - A410 ✓

Shop Rivet to Channels at L43 - L59
(B241) - (A100) - (A2)
(A3)

4 JACKING BLOCKS - B410 ✓

Shop Rivet to Channels at L43 - L59
(A217) - (A114)

4 Blocks - G410 ✓

4 Blocks - H410 ✓

4 Guides - D410 ✓

4 Guides - E410 ✓

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF

APPROVED BY 9/15/60
L P Carlson
Bridge Design Engineer

BOOK No. 3

BY G A DATE 9-9-60

VINCENNES STEEL
Div. of Industrial Enterprises Inc.
Vincennes, Ind.

JACKING DEVICE
MISSISSIPPI RIVER BRIDGE
HELENA ARKANSAS
SOLD TO JOHN F. BEASLEY CONSTR. CO.

Edge Distance–			
Contact Surfaces Shop– Field–			
Paint Red Lead (Ark Standard)			
Holes– 15/16 f			
Rivets– ⅞ f			
Drawn	Checked	Approved	Revised
11-4-59			① 11/14/60

Contr. No. 4800-T Sh. 410 of

285

64 @ 5'-4" = 28'-0"

bent plt - 44 x 3/8 x 32'-4 - 1 Req. vp1 ⓒ Top

1L - 3½ x 3½ x 5/16 x 1'-5 9/16 - 4 Req L vp6 ⓒ

10'-3 3/8"

bent plt 26 3/4 x 1/2 - 4'-11 11/16 - 2 Req L vp12 Ⓐ
(Shop Weld to Plts B409 - BA409)

Symmetrical about ℄

17'-6"

65 @ 5'-4" = 28'-5'-4"

1L 3½ x 3½ x 5/16 x 32'-4 - 2 Req vp4 ⓒ

UM Plt 22 x 5/16 x 32'-4 - 1 Req vp2 ⓒ

1L - 3½ x 3½ x 5/16 x 32'-4 - 2 Req vp5 ⓒ

1L - 3½ x 3½ x 5/16 x 1'-6½ - 2 Req L vp7 ⓒ

1L - 3½ x 3½ x 5/16 x 9'-3 - 2 Req L vp11 ⓒ

bent plt 26 3/4 x 2 - 6 7/8 - 2 Req L - CA403 - CA409 Ⓑ

65 @ 5'-4" = 28'-5'-4"

1L - 3½ x 3½ x 5/16 - 32'-4 - vp4

Top

UM Plt 25 x 5/16 x 32'-4 - 1 Req vp3 ⓒ

beat th - 14 x 1/2" x 1'-5 7/16 - 9 Req vp6 ⓒ

1 Plt - 53 x 1/2 x 4'-8 - 2 Req L vp3 Ⓐ

ONE GUSSET AS SHOWN - BA409 ⓒ
ONE GUSSET TO PAIR - BA409

1 Plt 28 x 5/16 x 2'-4 - 2 Req vp10

DIAPHRAGM DETAIL

1L vp11

Punch 11/16 Ream ℄

Pt. vp12 Shop Weld to Bar

SECT A-A

APPROVED BY HOWARD NEEDLES TAMMEN & BERGENDOFF, CONSULTING ENGINEERS 9/23/59

GENERAL NOTES

Rivets 7/8 except as noted
Holes 13/16 except as noted
End Distance 1 3/4" un ass noted
Shop Point PER LEAD (ARK. STD.)
Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivets
Drawn by gwl 7-23-59
Checked by ajy APPROVED BY L.P. Cook
Revisions 9/6/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT NO 5

SOLD TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 1-5-60

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800-Sh. 49 of

284

(115)

8 @ 3½ = 2'-4" 3¾ 3¾ 4 1'-0⅛

L. 4 × 3½ × ⅜ × 3'-7" 2 REQ'D L-VN 3 ©

1'-0

9"

ELLIPTICAL HOLES 1'-4⅛ 2'-9⅜

SECTION - AA

8 @ 3½ = 2'-4" 1'-11⅝

4 - 4 × 3½ × ⅜ × 2'-7⅛" - 2 REQ. VN 4 ©

1'-0

9"

ELLIPTICAL HOLES 2'-2⅝ 1'-9⅞

SECTION - BB

2 1'-8⅝" 666 2

VN 2

VN 2

L. V 1½ Z

2'-0¼

PL. 12 × 7/16 × 2'-3¾ - 6 REQ. VN 2 ©

L. 3½ × 3½ × ⅜ × 6'-9 7/16" - 4 REQ'D L-VN 1 ©

12" @ 10¼" C to C

MATCH L LINE

12

2 3/16

7 @ 3½ = 1'-9⅞ 3¾ 7 @ 3½ = 2'-0½ 4½ 4 4 @ 3'-1'-0 3 3 4⅝ 3

PUNCH - 11/16"
REAM - 15/16"

8 @ 3½ = 2'-4"

7 @ 3½ = 1'-9

14 @ 5¼ = 6'-1½

4½ 4½ 4½

2'-3

N.S. ONLY

ON 10½" R

PARALLEL

8 @ 3½

4 @ 3½ = 1'-2

PL. 31½ × 5/8 × 5'-11" - 2 REQ. VN 11 Ⓐ N.S.
× 5'-11" - 2 REQ. VN 12 Ⓐ F.S.

FILL - 4 × 5/8 × 9½ - 2 REQ. VN 13 © N.S. ONLY

FILL - 4 × 5/8 × 2'-0⅛ - 4 REQ. VN 10 ©

L. 4 × 4 × ½ × 6'-1⅜ - 4 REQ'D L-VN 14 ©

PL. 63¾ × 5/8 × 7'-7¼" - 2 REQ. VN 8 Ⓐ N.S.
× 7'-7¼" - 2 REQ. VN 9 Ⓐ F.S.

PL. 91¾ × ¾ × 10'-6¼" - 2 REQ. VN 6 Ⓐ N.S.
× 10'-6¼" - 2 REQ. VN 7 Ⓐ F.S.

NS PL - VN 2
FS PL - VN 1

WORK WITH SHEET #407

B1 © 4 × 3½ × ⅜ × 1'-2
2 REQ. VN 15 ©

L. 18" @ 42.7" × 2'-7 23/32" - 2 REQ. VN 5 ©

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
HFL DATE 11-20-50

SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T.
Checked by CWK
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO: 1

SOLD TO: JOHN F. BEASLEY CONSTR CO.
CHICAGO, ILLINOIS

APPROVED BY
L. P. Carlson
Bridge Design Engineer
11-9-50

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 408 of

283

72'-10 13/16 c.c.

3'-1 | 9@3=2'-3 | 5@3½,1-5½ 4 3/16 4¼ 4½ 4¾ 5 5 5½ 5¾ 6 6¼ | 29@6½=15'-8½ | 5@5=2'-1 | 8@5'=3'-4" | 49@6½=26'-6½

L14

PUNCH-11/16
REAM-15/16

UM TR - 30 x 5/8 x 63'-5 3/16" - 2 REQ. V m 2 (A)

FILL - 30 x 1/8 x 2'-6½" - 4 REQ. V m 6 (C) - Tack Weld NS & FS

Top

I-18"@70" x 63'-11 7/16" - 2 REQ. V m 4 (A)

I-18"@70" x 67'-3 3/16" - 2 REQ. V m 3 (A)

28'-10 3/16

41'-0 5/8

MATCH LINE

SR I-18"@70" x 5'-8 1/2" - 4 REQ. V m 5 (1)

9 13/16

2½ 3½ 3½

3½" 3½"

12

4@3'-1.0

5/8

1:6

1:1¼

5@3'-1.3

9'

1'-0

2'-11¼

21@3'-0½ = 63'-10½ - STAGGERED ELLIPTICAL HOLES

3'-1" | 9@3=2'-3" | 5@3½,1-5½ 4 3/16 4¼ 4½ 4¾ 5 5 5½ 5¾ 6 6¼ | 88@6½=47'-8

Bot

PUNCH-11/16
REAM-15/16

FILL V m 6

UM BR - 30 x 5/8 x 63'-5 3/16" - 2 REQ. V m 1 (A)

ONE - DIAGONAL AS SHOWN - A407
ONE - DIAGONAL TO PAIR - AA407
} WORK WITH SHEET #408

APPROVED BY
L. P. Carlson 11-20-59
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 11-20-59

APPROVED BY: HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS.

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1¼" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces No PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T.
Checked by CWK
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMM. } JOINT

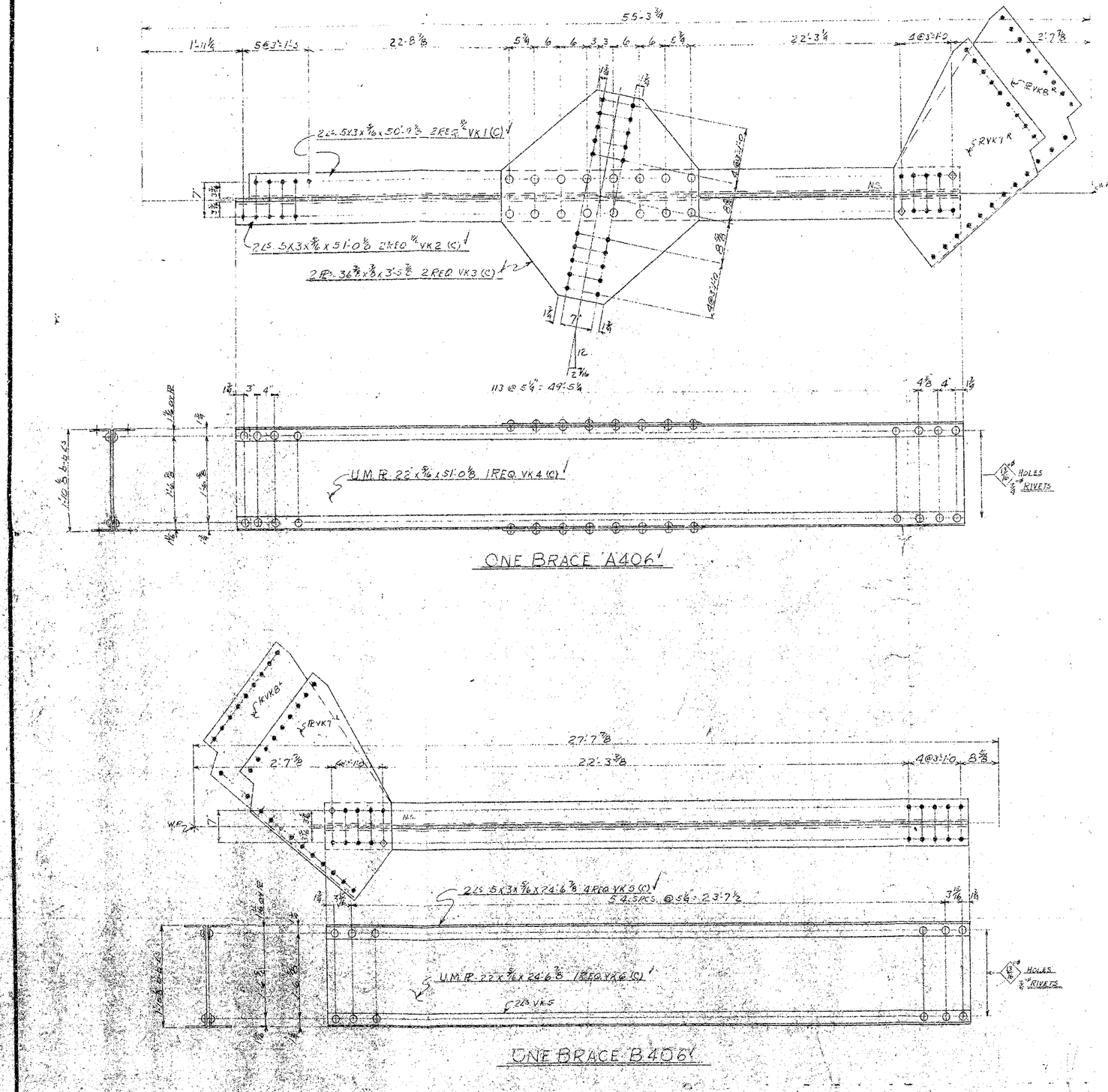
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 1

SOLD TO: JOHN T. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

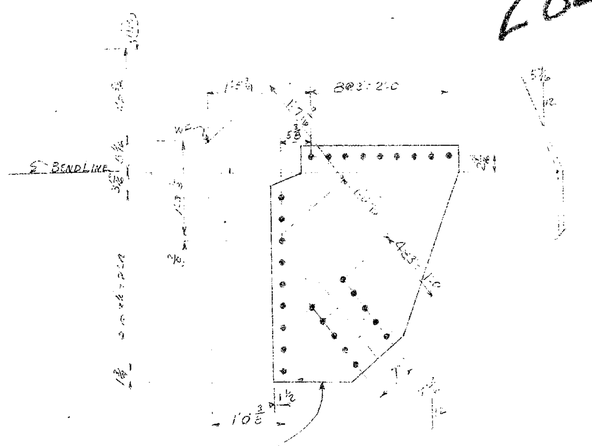
FINAL ENTERPRISES, INC. Contr. No. 4803 Sh. 407 of

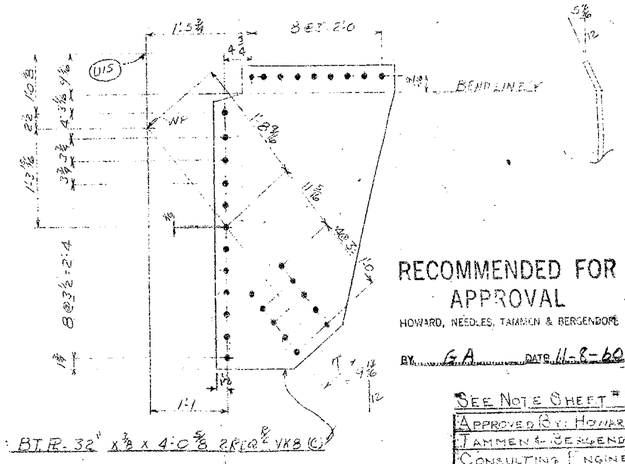
282



ONE BRACE 'A406'

ONE BRACE B406'





RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY GA DATE 11-8-60

SEE NOTE SHEET # 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS 11/25/59

GENERAL NOTES

Rivets ⅞ except as noted

Holes 15/16 except as noted

End Distance 1½ unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by APPROVED BY 11/25/59

Checked by JWK

Revision:

Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

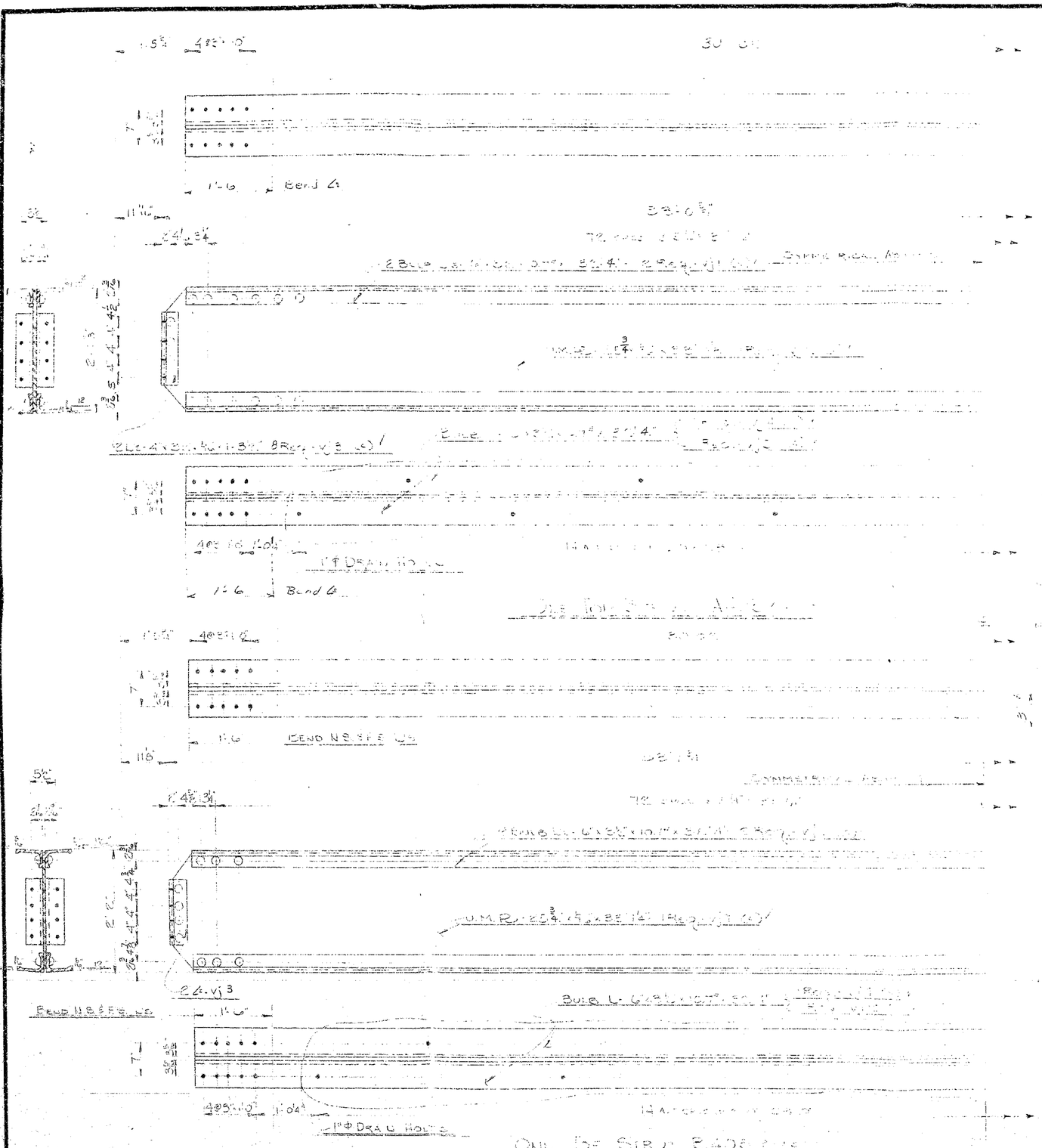
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

BOOK No. 10

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4-800 Fsh. 406 of



UNIT FIELD RIVET LIST — SHEETS 327 & 408 BOOK No. 1

Mark	Size	Kind	Req'd
705	7/8 x 2½	Conc	168
2797	7/8 x 2¼	"	2084
1445	7/8 x 2½	"	1301
3560	7/8 x 2½	"	3228
2728	7/8 x 2¾	"	2334
2966	7/8 x 2¼	"	2668
3042	7/8 x 2½	"	2777
1770	7/8 x 2¾	"	1430
1940	7/8 x 3¼	"	1748
2586	7/8 x 2½	"	2177
1972	7/8 x 3½	"	1656
2042	7/8 x 3¼	"	1911
1180	7/8 x 3½	"	1164
96	7/8 x 4	"	84
752	7/8 x 4½	"	712
267	7/8 x 2¼	"	225
220	7/8 x 4½	"	192
1164	7/8 x 4½	"	1025
132	7/8 x 4½	"	112
70	7/8 x 4½	"	616
432	1 x 2½	"	384
32	1 x 2½	"	24
32	1 x 2¾	"	24
32	1 x 2½	"	24
282	1 x 2½	"	246
30	1 x 2½	"	26
92	1 x 6¼	"	72
160	1 x 6½	"	144
5	1 x 6½	"	4
210	7/8 x 1¼	H.S. Bolts	168
120	7/8 x 3	"	96
45	7/8 x 3¼	"	36
50	7/8 x 3½	"	40
40	7/8 x 3¾	"	32
40	7/8 x 4	"	32
45	7/8 x 4¼	"	36
1100	7/8 Hardened Washers for 7/8 H.S. Bolts		
24	Turned Bolts T875		4 Lo
12	1" x 4¼	Hex. Bolts	8 Lo
16	1" x 5¼	"	
32	1" x 5½	"	
36	Shims	P173	
36	Shims	G173	
42	Shims	G175	3 Lo
84	Shims	P175	5 Lo

36	Washers	7/8" Dia.
36	"	7/8" "
64	"	7/8" "

100 % Additional Washers for 8 Bolts

Detailed

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

Checked BY G.A. DATE 10-22-59

APPROVED BY 11/2/59

L. P. Carlson

Bridge Design Engineer

Detailed by HOWARD, NEEDLES, TAMMEN & BERGENDOFF

Checked by [illegible]

DATE 11-5-59

GENERAL NOTES

Rivets 7/8" except as noted

Holes 15/16" except as noted

End Distance 1½" unless noted

Shop Paint RED LEAD (ARMCO)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVET

Drawn by KAC Jan. 59

Checked by GAH

Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 1

SOLD TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

BOOK No. 1 Detail Sheet 1

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4300-F Sh. 405 of

280

64 @ 54 = 28'0"

IL vg4

bent plt. vg2

IL vg3

bent plt 24 3/16 x 1/2 x 5'-0 1/4 - 2 Req'd L vh6 (A)

ONE - GUSSET PLATE - AS SHOWN - C404

ONE - GUSSET PLATE - TO PAIR - CA 404

Symmetrical about ℄

65 @ 54 = 28'54"

IL vg4

U.M. Plt. 22 x 5/16 x 32'4 - 1 Req. vh2 (C)

IL vg6

IL vg7

bend Line

vg9 | L vh7 | vg9 | Bottom | vg9 | vg9 | vg9

1'-5 3/4 | 6@3"=1'-6 | 2'-1 3/4 | 3@3"=9 | 2'-3 | 3@3"=9 | 2'-3 | 3@3"=9 | 2'-3 | 3@3"=9 | 2'-3 | 3 1/2

BT PL 53 1/2 x 1/2 x 5'-10 1/16 - 2 REQ'd L - vh4 (A)

Bend Line A

Top of Plate C404 & CA404 above Line "A"

6@3"=1'-6

vh6

Weld L

IL vg3

Plt. 28 x 5/16 x 2'-4 1/2

2 Req vh3 (C)

IL vg12

L 3 1/2 x 3 1/2 x 3/8 x 9 13/16 - 2 REQ'd R L vh7 (C)

DIAPHRAGM DETAIL

W.P.

℄ M11 Unit

℄ M12 Unit

Bend Line A

bent plt 26 1/4 x 1/2 x 6'-0 11/16 { 1 REQ'd R B404 (A) / 1 REQ'd L BA404 (A) }

IL-18" @ 54 7/8 = 1'-9 1/2 - 2 Req vh5 (C) bolt on

6@3"=1'-6

65 @ 54 = 28'54"

IL vg4

U.M. Plt 25 x 5/16 x 32'-4 - vg11

IL vg12

IL vg7

SECTION XX (FAR SIDE)

ONE TOP STRUT - A404 @ U12

See Notes - Sheet 1

APPROVED BY HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 12/14/59

GENERAL NOTES

Rivets 7/8 except as noted

Holes 15/16 except as noted

End Distance 1 3/4" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces No Paint

Shop Inspection by

Field Connections APPROVED BY 1/18/60

Drawn by KW 12-29-59

Checked by J. E. P. Carland

Revisions 11/25/59 Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 1-13-60

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT NO. 1

SOLD TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS.

BOOK No. 19

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800-F Sh. 404 of

279

64 @ 5¼ = 28'0

Sbent Plt 44 × ⅜ × 32'4 - 2 Req. vg2 ©

1L- 3½ × 3½ × ⅝ × 1'5⅞ - 8 Req R/L vg3 ©

10'3⅜

bent plt 26½ × ⅜ × 5'1 1/16" - 2 Req R/L vg1 ©

ONE - GUSSET PLATE AS SHOWN - B403

ONE - GUSSET PLATE TO PAIR - BA403

Symmetrical about ℄

17'6

65 @ 5¼ = 28'5¼

1L- 3½ × 3½ × ⅝ × 32'4 - 4 Req. vg4 ©

U.M. Plt 22 × 5/16 × 32'4 - 1 Req. vg5 ©

1L- 3½ × 3½ × ⅝ × 1'6½ - 4 Req R/L vg6 ©

1L- 3½ × 3½ × ⅝ - 32'4 - 4 Req. vg7 ©

bend line

vg9 vg9 "Bottom" vg9 Vg9

1'12'4 6@3'1 6" 2'1¾ 3@3'9 2'3 3@3'9 2'3 3@3'9 2'3 3@3'9 2'3 3¼

1L- 3½ × 3½ × ⅝ - 9½ - 2 Req R/L vg8 ©

Bent Plt 12 × ½ × 1'5¾" - 18 Req vg9 ©

bent plt 26½ × ⅜ × 6'2¼ - { 1 Req R C403 © / 1 Req L CA403 © }

3¼ 6@3'1 5/8

65 @ 5¼ = 28'5¼

1L vg9

Top

U.M. Plt - 25 × 5/16 - 32'4 - 2 Req vg11 ©

1L- 3½ × 3½ × ⅝ × 1'9½ - 4 Req vg12 ©

1L vg7

SECTION XX (FAR SIDE)

1-18 @ 547* - 1'10 - 2 Req vg13 ©

1-TOP STRUT - A403 / (@ 08)

BT PL - 30¼ × ⅜ × 4'5" - 2 REQ R/L vg10 ©

Porch ½ Beam ½

2 7 9/16 3 5/8 3 7 9/16 4¼

6@3'1 6

N.P.

bend line B

bend line A

1'5 3/4 6@3'1 6

TOP OF PLATES - B & C403 & BA403 ABOVE LINE "A"

weld L² 1L vg3

Plt 25 × 5/16 × 2'4½ 2 Req vg14 ©

L vg4

L vg8

L-vg12

DIAPHRAGM DETAIL

See Notes - Sheet 1.2

APPROVED BY HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 12/14/59

GENERAL NOTES

Rivets 7/8 except as noted

Holes 15/16 except as noted

End Distance 1¼ unless noted

Shop Paint Red Lead (Ark. Std.)

Contact Surfaces No Paint

Shop Inspection by

Field Connections APPROVED BY 1/18/60

Drawn by J.W.P.

Checked by J.C.P. Carlwood

Revisions 11/25/59 Bridge Design Engineer

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY FRS DATE 1-13-60

BOOK No. 10

ARKANSAS STATE HIGHWAY COMM.

MISSISSIPPI STATE HIGHWAY COMM.

MISSISSIPPI RIVER BRIDGE

NEAR HELENA ARKANSAS

UNIT NO. 1

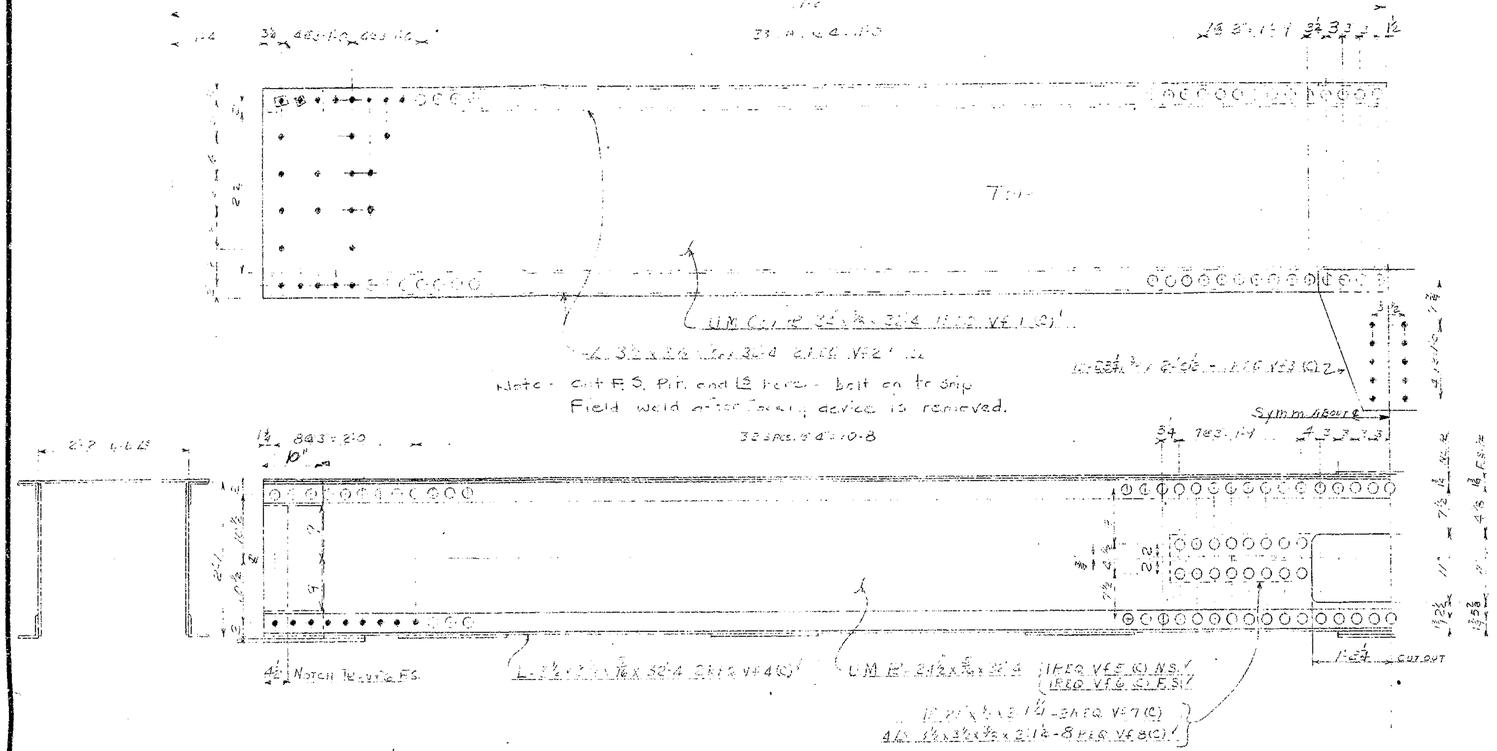
SOLD TO: JOHN F. EAGLE CONSTR. CO.

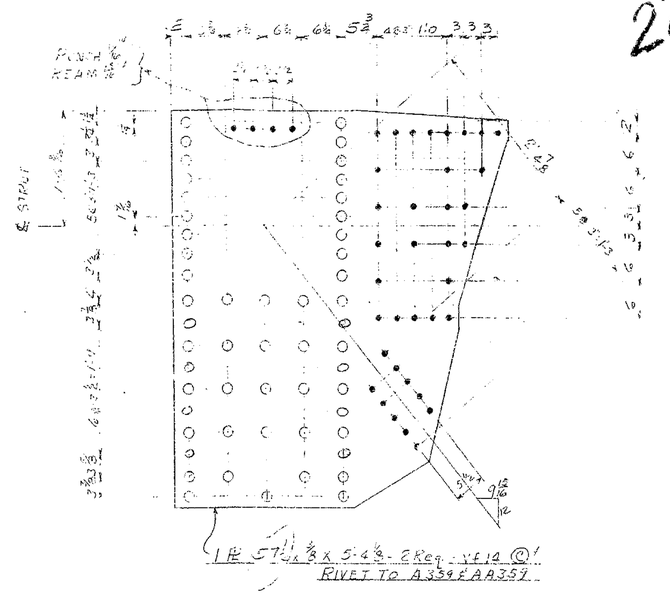
CHICAGO ILLINOIS

SHOP VINCENNES STEEL VINCENNES, IND. DIV. OF INDUSTRIAL ENTERPRISES, INC.

Contr. No. 4800-FSH 463 of

278





ONE FOR STRUT A402

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY MJ DATE 9-12-60

SEE NOTE SH "1

APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 11/25/59

GENERAL NOTES
Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces No PAINT
Shop Inspection by
Field Connections RIVETED
Drawn by L.A.M.
Checked by C.W.K.
Revisions

APPROVED BY 9/15/60
L. P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 1
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

BOOK No. 10

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES INC. VINCENNES, IND. Contr. No. 43-20-F Sh. 402 of

4800 Grade shims required for all spans (no paint)

77

CUT STOCK

7/8" - 18" ℄ 1 1/16" holes

Shim - 2 × 1/16 × 4 5/8 - 500 Req - C401
" - 2 × 1/8 × 4 5/8 - 300 Req - D401
" - 2 × 1/4 × 4 5/8 - 260 Req - E401
" - 2 × 3/8 × 4 5/8 - 200 Req - F401
for 10" & 12.4# Crossbeams

1/8" - 7/8" on 2" Shims
1/8" - 1 1/8" on 2 1/4 Shims
℄ 11/16" holes

IN SHOP 11-1-60

Shim 2 1/4 × 1/16 × 8 - 50 Req. G401
" 2 1/4 × 1/8 × 8 - 40 Req. H401
" 2 1/4 × 1/4 × 8 - 40 Req. K401
" 2 1/4 × 3/8 × 8 - 40 Req. L401
for Floor Beams

Shim 2 × 1/16 × 8 - 40 Req M401
" 2 × 1/8 × 8 - 20 Req N401
" 2 × 1/4 × 8 - 20 Req. P401
" 2 × 3/8 × 8 - 20 Req R401
for Crossbeams AB9,

SECTION A-A

SECTION B-B

ONE LATERAL AND SWAP A401

Shims (4800) No Paint

Shim 2 × 1/16 × 4 5/8 - 300 Req A1
" 2 × 1/8 × 4 5/8 - 250 Req B1
" 2 × 1/4 × 4 5/8 - 300 Req C1
" 2 × 3/8 × 4 5/8 - 250 Req D1
for 10"-12.4# crossbeams

for Floor Beams

Shim 2 1/4 × 1/16 × 8 - 50 Req E1
" 2 1/4 × 1/8 × 8 - 50 Req F1
" 2 1/4 × 4 × 8 - 50 Req G1
" 2 1/4 × 3/8 × 8 - 50 Req H1

Shim - 8 × 1/16 - 8 1/2 - 100 Req S401
Shim - 8 × 1/8 × 8 1/2 - 100 Req T401
(for [illegible] B176)

1ST 7" - 475# x (14 1/2 SPEC) - 1 - 0"

2 STD 7" B401

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY G.A. DATE 2-22-61

APPROVED BY 2/24/61
L.B. Carlson Bridge Design Engineer

SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS 11/25/59

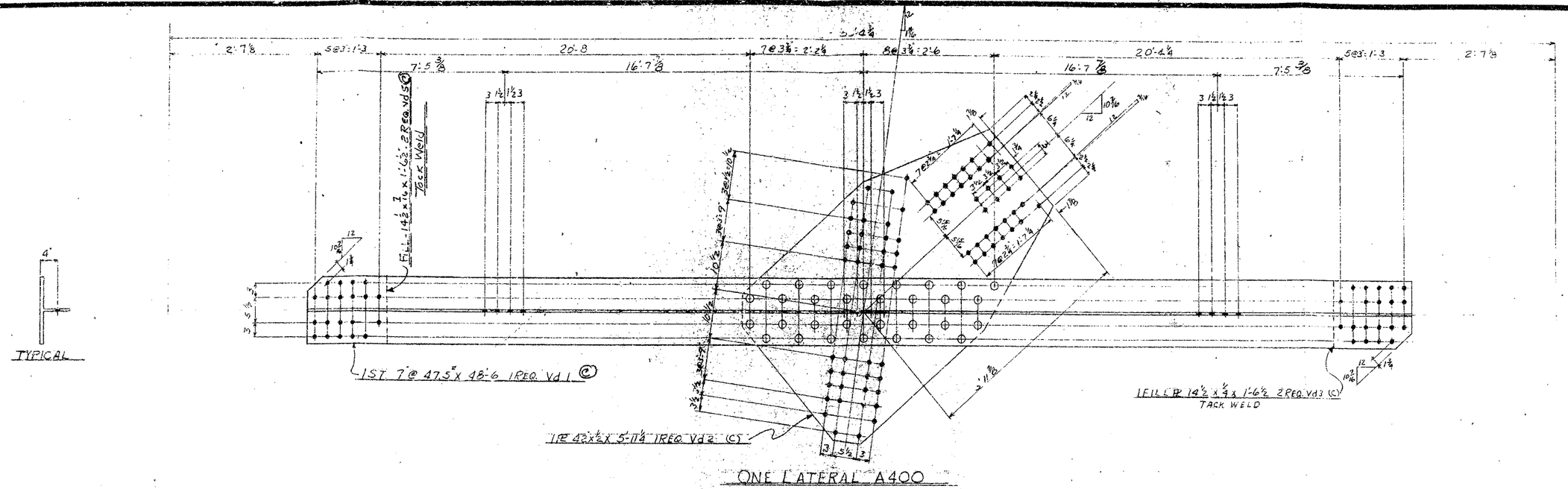
GENERAL NOTES
Rivets 7/8" ℄ except as noted
Holes 15/16" except as noted
End Distance 1 3/8" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by L.R.M. 5-27-59
Checked by C.W.R.
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NOS. 1
FOR THE JOINT ENGLEN CONSTR. CO.
CHICAGO, ILLINOIS

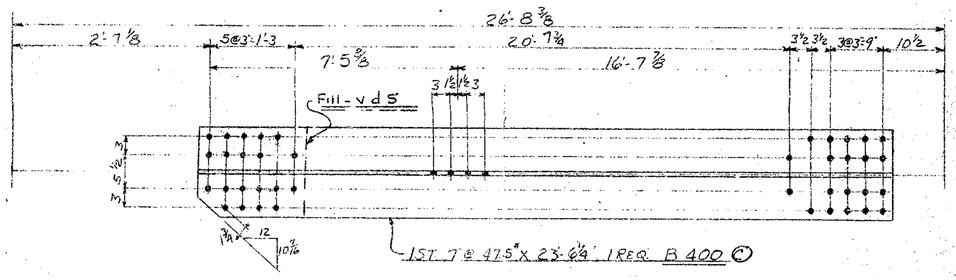
SHOP VINCENNES STEEL CORP. VINCENNES, IND.

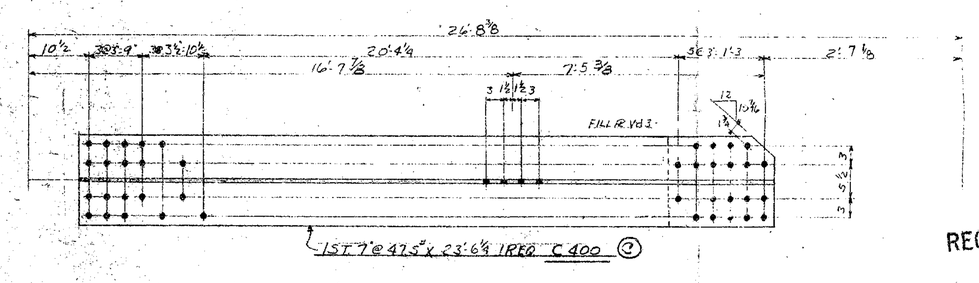
Contr. No. 4800 - Sh. 401 of

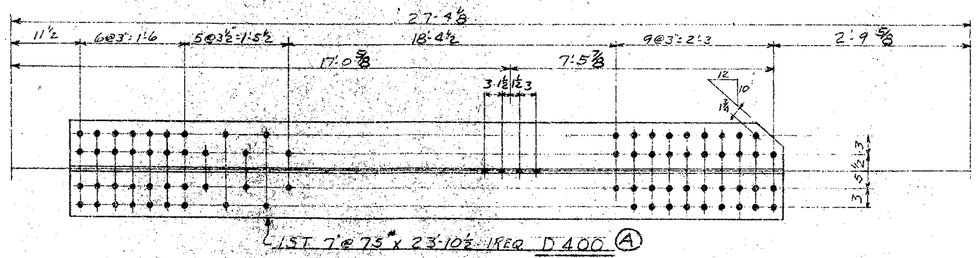
276

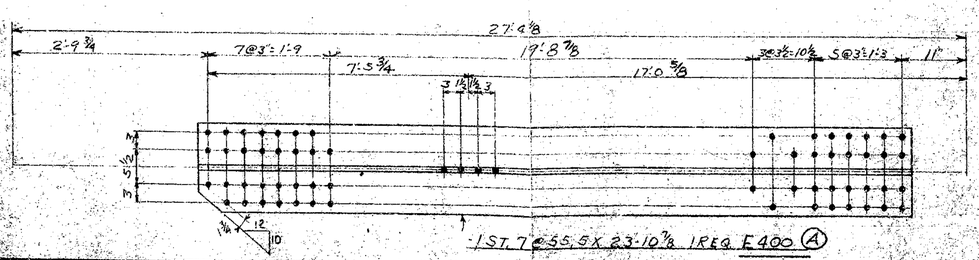


ONE LATERAL A400









RECOMMENDED FOR APPROVAL.
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 11/20/59

SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES
Rivets ⅞" ø except as noted
Holes 15/16" except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by L.A.M. 5-26-59
Checked by CWK
Revisions

APPROVED BY
L.P. Carlson
Bridge Design Engineer
11-25-59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO: 1

SOLD TO: JOHN F. CASSLEY CONSTR CO.
CHICAGO, ILLINOIS

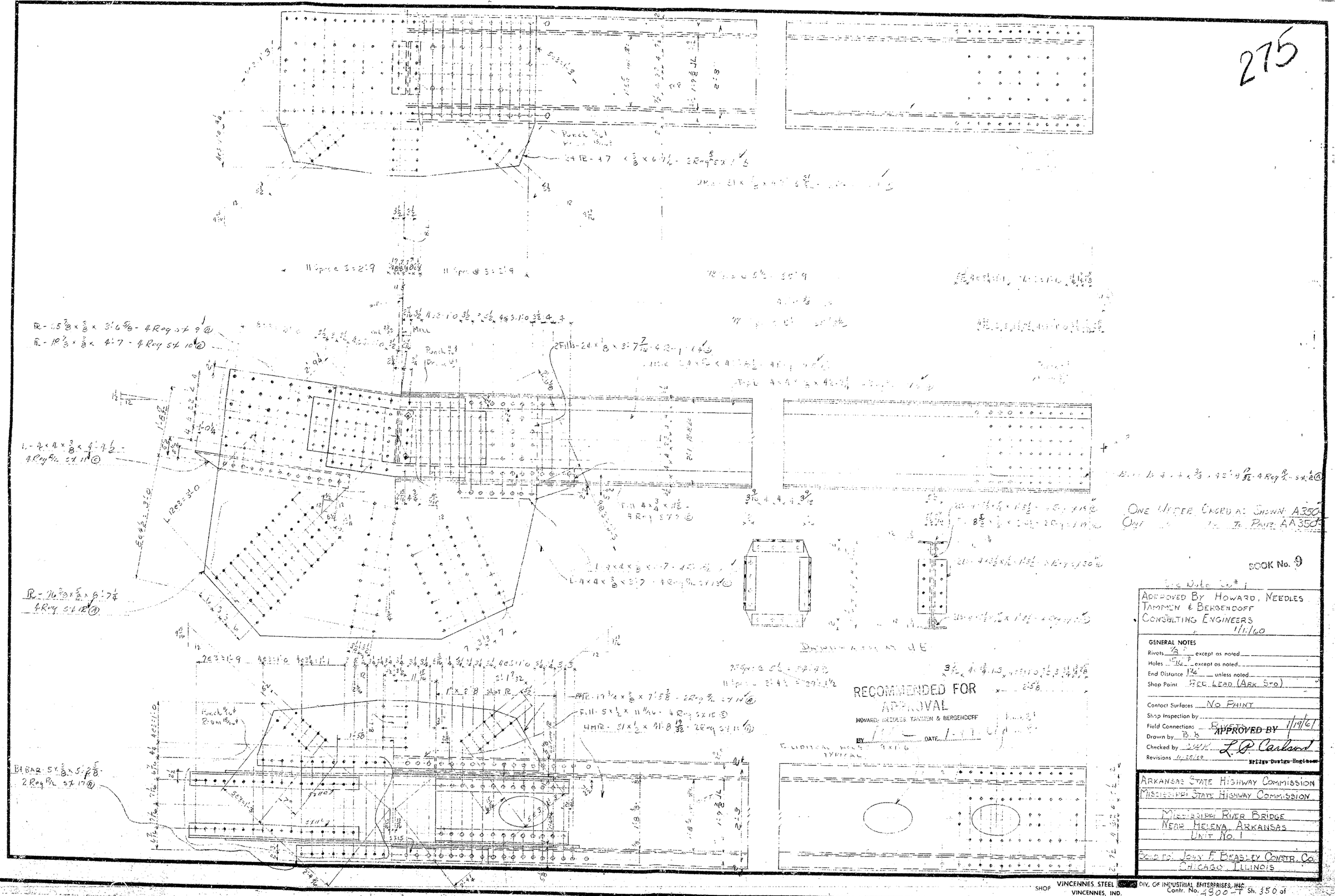
SHOP VINCENNES STEEL CORP. VINCENNES, IND. Contr. No. 4800 Sheet 400 of

A. H. D.

ROLL ... 746

BRG. 2899

275



BOOK No. 9

See Note No. 1

APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 1/1/60

GENERAL NOTES

Rivets A except as noted

Holes 15/16 P except as noted

End Distance 1 3/4 unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections

Drawn by B.K.

Checked by L.P.C.

Revisions 11-30-60

APPROVED BY 1/19/61
L. P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 1

BUILT BY JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

Contr. No. 4900-F Sh. 350 of

274

R-19 3/4 x 3/8 x 6'-1 1/2 - 2 Req sw 2 ©

Punch 1/16 ϕ
Ream 13/16 ϕ

78 Spcs @ 5 1/2 = 35'-9

42'-2 61/32 c/c

79 Spcs. @ 5 1/2 = 36'-2 1/2

8 @ 3 = 2'-0

Punch 1/16 ϕ
Ream 15/16 ϕ

Fill R- 3 x 3/16 x 1'-8 5/16 - 4 Req sw 7 ©
TACK WELD

Fill R- 3/16 x 5/16 x 2'-3 3/4 - 4 Req sw 8 ©
TACK WELD

2 Cls. 4 x 3 1/2 x 5/16 x 1'-3 1/2 - 12 Req sw 10 ©
2 3/16 Gs 0.S.L. 5 1/2 Spr. (TYP.)

Rivet F.S.

R-19 7/8 x 3/8 x 2'-0 1/2 - 2 Req sw 11 ©

2 Cls. 4 x 3 1/2 x 5/16 x 1'-3 1/2 - 4 Req sw 12 ©
2 3/16 Gs OSL 5 1/2 Spr.

Fill 4 x 5/8 x 10 - 4 Req sw 1 ©

Fill R- 3 x 3/16 x 1'-9 2/16 - 4 Req sw 9 ©
TACK WELD

WORK WITH SH 348

10 Spcs @ 3'-6 1/2 = 35'-2 1/2

72 Spcs @ 5 1/2 = 33'-0

11 Spcs @ 3 = 2'-9

R-24 1/4 x 3/8 x 6'-1 3/4 - 2 Req sw 3 ©

ELLIPTICAL HOLES 9 x 1'-6
TYPICAL

L-4 x 4 x 3/8 x 4'-6 - 4 Req R/L sw 6 ©

Punch 11/16 ϕ
Ream 15/16 ϕ

Fill R- 21/4 x 3/8 x 2'-1 3/4 - 2 Req sw 4 ©

Fill - 5 x 1/2 x 11 11/16 - 4 Req sw 5 ©
Tack Weld

See Note Sh #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFH DATE 11/19/59

APPROVED BY
L.P. Carlson
Bridge Design Engineer
11-25-59

GENERAL NOTES
Rivets 7/8 ϕ 15/16 ϕ except as noted
Holes 15/16 except as noted
End Distance 1 3/4 Unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by T B
Checked by CWK
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL [illegible] ENTERPRISES, INC.
VINCENNES, IND.

Sh. 349 of
Contr. No. 4800

273

Punch 1/16 ϕ
Ream 15/16 ϕ

Shop Rive After Assembly

Punch 7/16 ϕ
Ream 15/16 ϕ

Mill

Punch 11/16 ϕ
Ream 15/16 ϕ

Fill - 5 x 1/2 x 1'-8 9/16 - 4 Req SV19 ©

Bar - 5 x 3/8 x 4'-9 5/8 - 2 Req R/L SV15 ©

Diaphragm at ©

Typical Bridge 9 x 1'-6

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HTC DATE 1-19-61

One Upstream Chord as Shown - A348-
One " " " to Pair AA348-
Work with Sh. 349

BOOK No. 9

See Note Sh # 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 12/14/59

GENERAL NOTES
Rivets 7/8 ϕ except as noted
Holes 15/16 except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETED
Drawn by G.B.
Checked by J.W.K.
Revisions 11/25/59

APPROVED BY 1/19/61
L. P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 1

SOLE TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

VINCENNES STEEL CORP.
VINCENNES, IND.

Contr. No. 4800-T Sh. 348 of

272

R-19 3/4 x 3/8 x 6'-2- 2Req SU1 ©

Punch 11/16
Ream 13/16

78 Spcs @ 5 1/2 = 35'-9

11@ 3 = 2'-9

42'-1 31/32

81 Spcs @ 5 1/2 = 37'-1 1/2

Rivet F.S.

2Ls- 4 x 3 1/2 x 5/16 x 1'-3 1/2 - 12Req SU2 ©
2 3/16 Gs. OSL. 5 1/2 Spc. (TYP.)

2Ls- 4 x 3 1/2 x 5/16 x 1'-3 1/2 - 4Req SU6 ©

R- 19 7/8 x 3/8 x 2'-0 1/2 - 2Req SU8 ©

Fill- 4 x 5/8 x 9 1/2 - 4Req SU5 ©

Punch 11/16
Ream 13/16

Mill

76 Spcs @ 5 1/2 = 34'-10

9 Spcs @ 3'-5 = 30'-9

8 @ 3 = 2'-0

4'-4

1" x 2'-1
SLOT for 12.

R-21 1/4 x 3/8 x 2'-1 1/4 - 2Req SU9 ©

R-29 1/2 x 3/8 x 6'-2 - 2Req SU2 ©

ELLIPTICAL HOLES 9 x 11 LG (TYP)

L- 4 x 4 x 1/2 x 2'-7 1/4 - 4Req SU3 ©

Fill- 15 x 1/2 x 1'-5 5/16 - 4Req SU4 ©

2'-0

Punch 11/16
Ream 13/16

APPROVED BY 11-26-59
L. O. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 11/19/59
WORK WITH SH. 346

See Note Sh # 1
APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES
Rivets 7/8 except as noted
Holes 7/8 except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by EB
Checked by CWK
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP.
VINCENNES, IND.

DIV. OF INDUSTRIAL ENTERPRISES, INC.
Contr. No. 4800 Sh. 347 of

271

Shop Rivet After assembly

Punch 11/16 ø Ream 13/16 ø

Fill R- 31 x 1/8 x 4-1/4 - 2 Req'd sts ⓒ

UM R- 31 x 1/2 x 84-10 3/8 - 2 Req'd sts ⓒ

Tapered 5 1/2 - 34-10

(U1)

Punch 11/16 ø Ream 13/16 ø

Shop Rivet R- SS12

Tapered 4 x 4 x 1/8 x 64-9 15/16 - 4 Req'd sts ⓒ

Fill - 4 x 5/8 x 9 1/8 - 4 Req'd sts ⓒ

Conn L- 4 x 4 x 5/8 x 54 x 1/8 4 Req'd sts ⓒ

81 Spaces 5 1/2 - 37-1 1/2

UMR- 29 x 1/2 x 84-10 3/4 - 4 Req'd sts ⓒ

ONE UPPER CHORD AS SHOWN - A346
ONE " " " TO PAIR - AA346

WORKS WITH SK. 347

74 Spaces 5 1/2 = 33'-11

91 Spaces 4'-4 = 30'-0

Fill- 5 x 5/8 x 8 9/16 - 4 Req'd sts ⓒ

Fill 5 x 1/8 x 2'-4 1/2 - 2 Req'd sts ⓒ

Shop Rivet SS9 to Here

Slot R cover

Fill - 5 x 1/8 x 10 1/4 - 2 Req'd sts ⓒ

L- 4 x 4 x 3/8 x 2'-1 3/8 - 4 Req'd sts ⓒ

JMR- 31 x 1/2 x 81-8 - 2 Req'd sts ⓒ

ELLIPTICAL HOLES 9 x 1'-6 (TYP)

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY _____ DATE 1-17-61

WORK No. 9

See Note Sh # 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 11/25/59

GENERAL NOTES
Rivets 7/8 ø except as noted
Holes 15/16 ø except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by
Checked by JWK
Revisions

APPROVED BY 11/9/61
L. D. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

A DIV. OF INDUSTRIAL ENTERPRISES INC.
Contr. No. 4800-T Sh. 346 of

270

B+R - 45 x 3/8 x 8'-3 1/2 - 2 Rq 5/8 rc10 @
Bolt To A346-AA346
L 8x8x1/2 x 3'-6 1/2 - 8 Rq 5/8 - 55G @
Weld Together At Corner

B+BAR - 5 x 3/8 x 3'-1 - 2 Rq 5/8 55B @
Shop Rivet To A346-AA346

B+R 19 3/8 x 3/8 x 6'-12 2 Rq 5/8 rc1 95
Shop Rivet to A346-AA346

62 Spcs @ 6 = 31'-0

75 Spcs @ 5 1/2 = 34'-4 1/2

40 @ 3 1/8

Punch 11/16 ø
Ream 15/16 ø

Fill - 4 x 5/8 x 10 - 4 Req 55 13 @

Fill - 8 x 5/8 x 8 3/16 - 4 Req 55 15 @
Tack Weld

WORK WITH SL # 344

L 4 x 4 x 3/8 x 3'-11 1/2 - 4 Req 55 14 @

1" x 3'-5 Slot IR

Punch 11/16 ø
Ream 15/16 ø

ELLIPTICAL HOLES 9 x 1'-6

Fill - 8 1/2 x 1/2 x 1'-0 3/8 - 4 Req 55 5 @

B+R - 8 3/8 x 3/8 x 1'-4 1/2 - 4 Req 55 1 @

R - 17 5/8 x 3/8 x 2'-2 Fu - 2 Req 55 2 @

21 - 4 x 3 1/2 x 5/16 x 1'-4 1/2 - 8 Req 55 3 @

B+R - 7 1/2 x 3/8 x 1'-4 1/2 - 4 Req 55 4 @

Fill - 24 x 5/8 x 1'-3 3/4 - 4 Req 55 11 @

R - 67 x 5/8 x 7'-9 - 4 Req 55 12 @
Shop Rivet To A346-AA346

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 1-5-60

See Note Sh # 11

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections APPROVED BY
Drawn by RB
Checked by CWK L.P. Carlson
Revisions 11/25/59 1-8-60 Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP.
VINCENNES, IND.

DIV. OF INDUSTRIAL ENTERPRISES, INC.
Contr. No. 4800 Sh. 345 of

A

269

Punch 11/16" Ream 13/16"

L- 4 x 4 x 1/2 x 3'-5 3/4 - 4 Req'd/L sr1 ©

L- 4 x 4 x 1/2 x 3'-5 3/4 - 4 Req'd/L sr2 ©

1/2 x 2'-8 3/4 Slot IR

UMR - 31 x 5/8 x 66'-8 7/16 - 2 Req sr3 ©

R - 57 1/2 x 3/8 x 4'-11 - 4 Req sr4 ©

3 @ 3 Spcs @ 5 3/4 = 16'-3 1/2

5 @ 6 = 2'-6

Fill - 4 x 5/8 x 1'-3 1/2 - 4 Req sr6 ©

69'-3 21/32 c/c

28'-11 17/32

39 Spcs @ 6 = 19'-6

Punch 11/16" Ream 13/16"

R - 16 x 1/2 x 2'-1 1/2 - 2 Req sr5 ©

Tapls - 4 x 4 x 1/2 x 66'-8 9/16 - 4 Req'd/L sr8 ©

L- 4 x 4 x 1/2 x 3'-5 3/4 - 4 Req'd/L sr7 ©

L- 4 x 4 x 1/2 x 3'-9 1/4 - 4 Req'd/L sr9 ©

UMR - 24 x 5/8 x 65'-... in 12 Req sr12 ©

Botts - 4 x 4 x 1/2 x 65'-10 3/16 - 4 Req'd/L sr13 ©

Fill - 4 x 5/8 x 1'-6 1/2 - 4 Req sr15 ©

34 Spcs @ 5 3/4 = 16'-3 1/2

5 @ 6 = 2'-6

4 Spcs @ 5'-6 = 14'-0

1 1/2 x 2'-10 1/2 Slot IR

L- 4 x 4 x 1/2 x 3'-9 1/4 - 4 Req'd/L sr10 ©

R - 20 x 5/8 x 3'-4 - 10 Req sr11 © 14 Req sr11a ⓐ

Punch 11/16" Ream 15/16"

Ellipitical Holes 9 x 15/16 (typ)

UMR - 31 x 5/8 x 64'-11 3/8 - 2 Req sr14 ©

sr4

One End Post A Shown A344

One Do Do To Pair AA344

Work with Sh. 345

See Note Sh # 1

Approved By: Howard, Needles Tammen & Bergendoff Consulting Engineers:

General Notes

Rivets 7/8" ø except as noted

Holes 15/16" ø except as noted

End Distance 1 3/4" unless noted

Shop Paint Red Lead (Ark. Std.)

Contact Surfaces No Paint

Shop Inspection by

Field Connections Rivets

Drawn by BB

Checked by CWK

Revisions

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY LPC DATE 11/19/59

APPROVED BY

L.P. Carlson

Bridge Design Engineer

11-25-59

Arkansas State Highway Commission
Mississippi State Highway Commission

Mississippi River Bridge
Near Helena, Arkansas
Unit No 1.

Sold To: John F. Beasley Constr. Co.
Chicago, Illinois

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

A DIV. OF INDUSTRIAL ENTERPRISES INC. Contr. No. 4800 Sh. 344 of

268

TOP R - 31" x 1/2 x 40'-2 9/32" - 2 REQ. - SP2 (C) (U.M.)

TOP

67 SPC. @ 4 1/2" = 25'-1 1/2"

42'-0"

11/16 HOLES REAM 15/16 ϕ

FILL PL - 4 1/2 x 3/16 x 2'-9 1/2" - 4 REQ. - SP1 (A) (TACK WELD)

2 FILL PL's - 3 x 1/8 x 2'-2 1/4" - 4 REQ. - SP6 (C) (TACK WELD)

2 FILL PL's - 16 x 1/8 x 3'-0" - 4 REQ. - SP7 (C) TACK WELD

2 TOP L's - 4 x 4 x 3/8 x 40'-10 1/32" - 4 REQ. R/L - SP3 (C)

2 WEB PL's - 24 x 5/8 x 40'-10 1/32" - 4 REQ. R/L - SP4 (C) (U.M.)

2 PL's - 20" x 1/2 x 2'-0" - 4 REQ. - SP9 (C)

2 BOTT. L's - 4 x 4 x 3/8 x 40'-9 31/32" - 4 REQ. R/L - SP5 (C)

75 SPC. @ 4 1/2" = 28'-1 1/2"

2 FILL PL's - 3 x 1/8 x 2'-2 3/16" - 4 REQ. - SP8 (C) (TACK WELD)

L14

L15

ONE LOWER CHORD AS SHOWN - A343

ONE LOWER CHORD TO PAIR - AA343

FILL PL - 31 x 3/16 x 3'-4 1/2" - 2 REQ. - SP13 (C) (TACK WELD)

BOTT. PL - 31 x 1/2 x 40'-9 31/32" - 2 REQ. - SP14 (C) (U.M.)

1 PL - 28 x 1/2 x 3'-9 7/8" - 2 REQ. - SP15 (C)

BOTTOM

ELLIPTICAL HOLES

66 SPC. @ 4 1/2" = 24'-9"

2 PL's - 4 x 3 1/2 x 5/16 x 11 1/2" - 8 REQ. - SP10 (C)

1 PL - 20" x 3/8 x 2'-0" - 2 REQ. - SP11 (C)

2 L's - 4 x 3 1/2 x 5/16 x 2'-0" - 8 REQ. - SP12 (C)

2 L's - SP10

4" x 10" SLOTTED HOLE

SECTION - AA

See Note Sheet #1

Approved By: Howard, Needles, Tammen & Bergendoff
Consulting Engineers

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4" unless noted
Shop Paint Red Lead (Ark. Std.)
Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivets
Drawn by T.P.
Checked by C.W.K.
Revisions

Arkansas State Highway Commission
Mississippi State Highway Commission

Mississippi River Bridge
Near Helena, Arkansas
Unit No: 1

Sold To: John F. Beasley Constr. Co.
Chicago, Illinois

RECOMMENDED FOR APPROVAL
Howard, Needles, Tammen & Bergendoff
By H-T-C 11-2-50

APPROVED
By 11/19/50
L. P. Carlson
Bridge Design Engineer

Shop: Vincennes Steel Corp., Vincennes, Ind.

Contr. No. 4800 Sh. 343 of

267

FILL PL - 4½ x 11/16 x 5'-1½ - 4 REQ. - SM1 (A)

SPLICE PL - 5 x ½ x 10'-9" - 4 REQ. - SM2 (A)

2 PLS - 75 x ⅝ x 9'-4" - 4 REQ. - SM3 (A)

2 LS - 4 x 4 x ⅜ x 4'-8¾" - 4 REQ. - SM4 (C)

2 LS - 4 x 4 x ⅜ x 4'-2¾" - 4 REQ. - SM5 (C)

BOLT TO TOP OF A343 & AA343

2 SPLICE PLS - 16 x ⅜ x 6'-0" - 4 REQ. - SM6 (A)

2 SPLICE PLS - 23 x ½ x 4'-4½" - 4 REQ. - SM7 (A)

11/16 HOLES REAM 15/16

7/8 SHOP RIVETS FS.

LOWER CHORDS - A341 & AA341

WORK WITH SHEET 341

1 PL - 50 x ⅝ x 6'-9" - 2 REQ. - SM8 (A)

MILL CHORD SQUARE

ELLIPTICAL HOLES

SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ϕ
Holes 15/16" ϕ except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by T. P.
Checked by CWK
Revisions

RECOMMENDED FOR APPROVAL
HOWARD NEEDLES, TAMMEN & BERGENDOFF
BY
DATE 11/19/59

APPROVED
DATE 11-25-59
L. P. Carlson

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

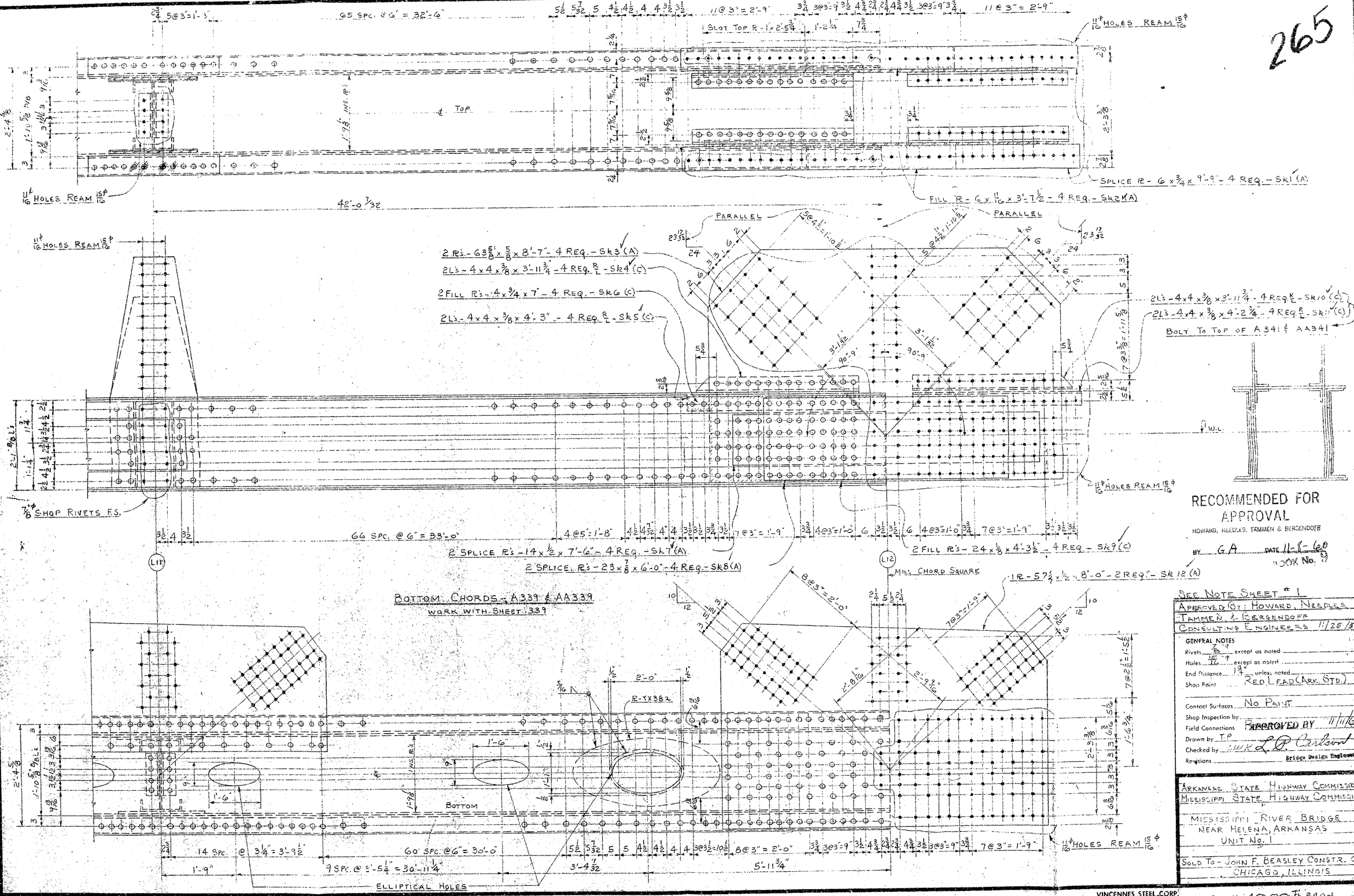
MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT NO. 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

Bridge Dept. VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
SHOP VINCENNES, IND.

Contr. No. 4800 Sh. 342 of

265



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY G.A. DATE 11-25-60
SHOP No. 9

SEE NOTE SHEET # 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS 11/25/59

GENERAL NOTES

Rivets 7/8 ϕ except as noted
Holes 15/16 ϕ except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections APPROVED BY 11/11/60
Drawn by T.P.
Checked by L.W.K. L.D. Carlson
Revisions
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 1

SOLD TO - JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800-Sh. 340 of

264

4'-3¼"

4@3"=1'-0" 6¾ 4@3"=1'-0" 3⅝ 6@3"=1'-6" 5@3½"=1'-5½" 4 4 4½ 5 5 23/32

57 SPC. @ 6" = 28'-6"

5@3"=1'-3" 2¾ 2¾ 5@3"=1'-3"

SLOT TOP PL - 1"x2'-2"

PL - 5x3/8 x 3'-3" - 4 REQ. - SJ1 (A)

L-S32

L-S31

L-S31

L-S32

TOP PL - 33"x 11/16 x 77'-9 15/16" - 2 REQ. - SJ2 (A)(U.M.)

11/16 HOLES REAM 15/16 ϕ

SLOT TOP PL 1¾" x 1'-7"

11/16 HOLES REAM 15/16 ϕ

42'-0 7/32"

26'-0"

5'-6¾" END OF WEB PL's - SJ4 & TOP & BOTT PL's SJ2 & SJ8

4'-0" END OF L's - SJ3 & SJ6 & O.S. PL - S - SJ5

11/16 HOLES REAM 15/16 ϕ

2 TOP L's - 5 x 5 x ½ x 80'-0 7/16" - 4 REQ. PL SJ3 (A)

2 WEB PL's - 24 x ¾ x 78'-5 11/16" - 4 REQ. - SJ4 (A)(U.M.)

2 - O.S. PL's - 14" x ½ x 38'-9 15/32" - 4 REQ. - SJ5 (A)(U.M.)

2 C's - SJ12

N.S. PL - SJ10

F.S. PL - SJ11

2 BOTT. L's - 5 x 5 x ½ x 80'-0 7/16" - 4 REQ PL - SJ6 (A)

2 - I.S. PL's - 24 x ¾ x 18'-10½" - 4 REQ. - SJ7 (A)(U.M.)

7/8 ϕ SHOP RIVETS F.S.

O.S. SPLICE PL's - S33

S34

S35

I.S. PL - SJ7

I.S. & I.E. PL's - S34

2'-7"

3½ 3 5½ 3 3¾ 5@3"=1'-3" 3¾ 5@3"=1'-3" 3¾ 6@3"=1'-6" 3½ 4 4½ 5 5½ 5½ 28@6"=14'-0" 3 3 3 4 4 31/32"

29 SPC. @ 6" = 14'-6"

3½ 4 3½ 3½ 4 3½

L10

L11

ONE LOWER CH. RD AS SHOWN - A339

ONE LOWER CH. RD PAIR - AA339

WORK WITH SHEET 340

1R - 36½ x ¾ x 8'-6" - 2 REQ. - SJ9 (A)

BOTT. PL - 33 x ¾ x 78'-5 11/16" - 2 REQ. - SJ8 (A)(U.M.)

11/16 HOLES REAM 15/16 ϕ

R-Y x 38 Q

ELLIPTICAL HOLES

4'-1 3/4"

12'-7"

5@3"=1'-3" 3¾ 6@3½"=1'-9" 3@5½"=10½" 31/32 3@4"=1'-0" 4½ 4½ 5 5 5½

52 SPC. @ 6" = 26'-0"

3'-5 23/32"

5@3½"=1'-5½" 7@3'-5½"= 24'-2½" 10@3"=2'-6" 1'-9" 14@3¼"=3'-9½"

9@3"=2'-3"

8@3"=2'-0"

SECTION - AA

1'-7⅞" B/B L's

2 L's - Y x 30

2 L's - Y x 34

1R - 19⅛ x ⅜ x 2'-0" 2 Req. - SJ10 (C)

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY FRS DATE 12-9-59

SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ϕ except as noted

Holes 15/16" ϕ except as noted

End Distance 1¾" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections APPROVED BY 12/14/59

Drawn by T.P.

Checked by C.W.L. L.P. Carlton

Revisions 11/25/59 Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE NEAR HELENA, ARKANSAS
UNIT NO. 1

SOLD TO: UDHAM E. WEASLEY CONSTR. CO. CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND. Contr. No. 4800 Sh. 339 of

DIAPHRAGM - SEE DET. - A

3 x 1-10 SLOT IN PL - SH10 - SH31 - SH33 - ONLY

DIAPHRAGM - SEE DET. - A

HOLES IN PL SH10 (N.S.) ON - A336-ONLY

HOLES CSK. IN SH10 & SH31 ONLY

HOLES IN PL SH10 & SH31 ON - A336-ONLY

PL - 122" x 3/4" x 14'-2 1/2" - 1 REQ. SH31 (A) (N.S.) (ON AA336-ONLY)

1 REQ. SH32 (A) (FS) (ON AA336-ONLY)

PLANE EDGES

L-5 x 5 x 1/2 x 7'-11 1/2" - 4 REQ. - SH6 (A)

1R - 5" x 11/16" x 11'-1" - 4 REQ. - SH7 (A)

L-SH6 R-SH7

L10

11/16 HOLES REAM 15/16

3'-4 1/2"

1'-3 1/4"

1'-3 1/4"

3'-4 1/2"

1R - 18" x 1/2" x 2'-7" 4 REQ. - SH17 (A)

IL-SH34

IL-SH35

IL-SH27

DRILL 1 1/2" HOLES TO M.T.

11/16 HOLES REAM 15/16

4" ϕ

4" ϕ

SECTION - AA

ALL OPEN HOLES IN THIS VIEW TO BE 11/16 ϕ REAMED 15/16 ϕ

11/16 HOLES REAM 15/16 ϕ

15-18" @ 58" x 4'-7 3/4"

2 REQ. - SH5 (A)

ELLIPTICAL HOLE

2L's - 4 x 4 x 3/4 x 3'-6 1/2" - 8 REQ. - SH4 (C)

4'-1 7/8"

12 @ 3 1/4" = 3'-3"

4'-5 5/16"

6 @ 3 1/4" = 1'-7 1/2"

4 4 1/2"

ELLIPTICAL HOLE

11/16 HOLES REAM 15/16 ϕ

WELD 3/8" NUTS N.S.

1R - 19" x 3/4" x 4'-2" - 4 REQ. - SH2 (C)

BT. PL. - 10" x 3/4" x 1'-2" - 4 REQ. - SH3 (C)

BT. PL. - 7 1/2" x 3/4" x 1'-2" - 4 REQ. - SH3 (C)

DETAIL - A

SECTION - BB

2 FILL PL's - 8" x 3/4" x 1'-6 1/2"

8 REQ. - SH26 (C)

TACK WELD

MILL ALL VERTICAL MATERIAL INCLUDING GUSSET PL's & DIAPHRAGMS

SHOP RIVET AFTER ASSEMBLY

PLANE EDGES

1R - 9 1/4" x 3/4" x 11'-1" - 2 REQ. - SH13 (A) (N.S.)

2 REQ. - SH14 (A) (FS)

2 PL's - 6" x 1/2" x 2'-1" - 8 REQ. - SH15 (A)

2 L's - 8 x 8 x 1/2 x 2'-1" - 8 REQ. PL - SH16 (A)

R/L - SH16

R/V. F.S.

2 PL's - SH15

2 L's - SH16

2 FILL PL's SH26

TACK WELD

SECTION - CC

2 PL's - 14" x 1/2" x 7'-11 1/2" - 4 REQ. - SH15 (A) (U.M.)

2 FILL PL's - 3 1/2" x 4" x 1'-0" - 4 REQ. - SH20 (C)

11/16 HOLES REAM 15/16 ϕ

2 L's - 8 x 4 x 3/4 x 7'-3 1/2" - 8 REQ. PL - SH21 (A)

WEB PL - 17" x 11/16" x 7'-3 1/2" - 2 REQ. - SH22 (A)

2 PL's - 17" x 5/8" x 4'-6 3/4" - 4 REQ. - SH23 (A)

2 PL's, L - 18" @ 45.8" x 1'-0 1/2" - 4 REQ. - SH24 (C)

2L's - 8 x 6 x 3/4 x 9'-1 1/2" - 4 REQ. - SH25 (A)

SECTION - FF

SECTION - EE

1R - 19" x 3/4" x 2'-7 5/8" - 4 REQ. - SH8 (C)

IL - 4 x 4 x 3/4 x 2'-7 5/8" - 8 REQ. - SH9 (C)

1R - 40" x 3/4" x 7'-3 1/2" - 2 REQ. - SH33 (A) (N.S.)

2 REQ. - SH33A (A) (FS)

IL-3 1/2 x 3 1/2 x 3/8 x 2'-10 3/4" 4 REQ. - SH35 (C)

IL-3 1/2 x 3 1/2 x 3/8 x 3'-0 1/2" 4 REQ. - SH36 (C)

11/16 HOLES REAM 15/16 ϕ WELD 3/8" NUTS R.S.

ELLIPTICAL HOLE

1'-7 1/2" B/B

11/16 HOLES REAM 15/16 (SHOP RIVET AFTER ASSEMBLY)

1R - 80 1/4" x 3/4" x 15'-5 1/2" - 2 REQ. - SH29 (A)

PLANE EDGES

COV. PL - 33" x 3/4" x 11'-1" - 2 REQ. - SH28 (A) U.M.

IL - 5 x 5 x 1/2 x 7'-11 1/2" - 4 REQ. - SH27 (A)

SECTION - DD

(L10) LOWER CHORDS A336 & AA336

WORK WITH SHEETS - 336 & 337

SEE NOTE SHEET # 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF

CONSULTING ENGINEERS 11/25/59

GENERAL NOTES APPROVED BY

Rivets 3/4" ϕ except as noted

Holes 15/16" ϕ exceptions noted

End Distance 1 3/4" unless noted

Bridge Design Engineer

Shop Paint RED LEAD (ARK STD)

Contact Surfaces NO PAINT

Shop Inspection RIVETS

Field Connections RIVETS

Drawn by T. P.

Checked by HOWARD, NEEDLES, TAMMEN & BERGENDOFF

Revisions

BY DATE 7-12-60

RECOMMENDED FOR APPROVAL

BOOK No. 9

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE

NEAR HELENA, ARKANSAS

UNIT No. 1

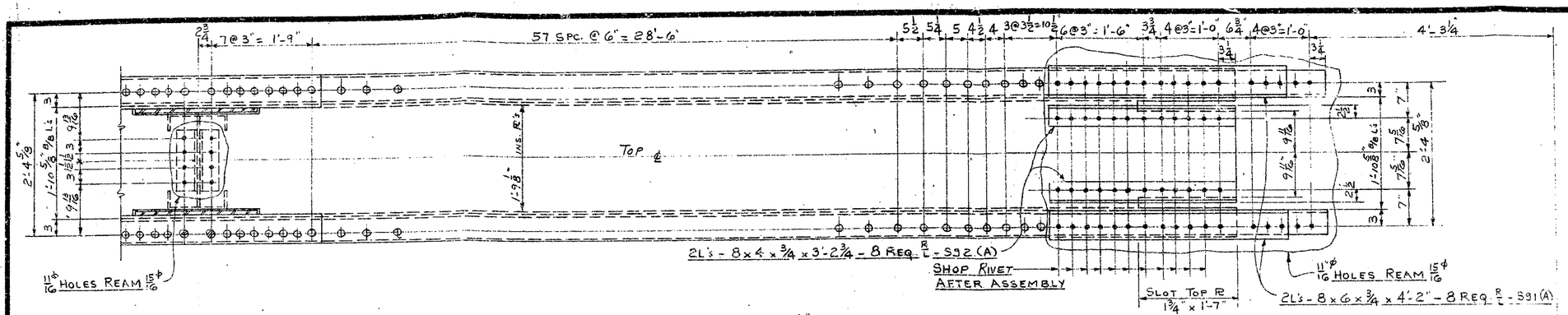
SOLD TO: JOHN F. BEASLEY CONTRACTOR

CHICAGO, ILLINOIS

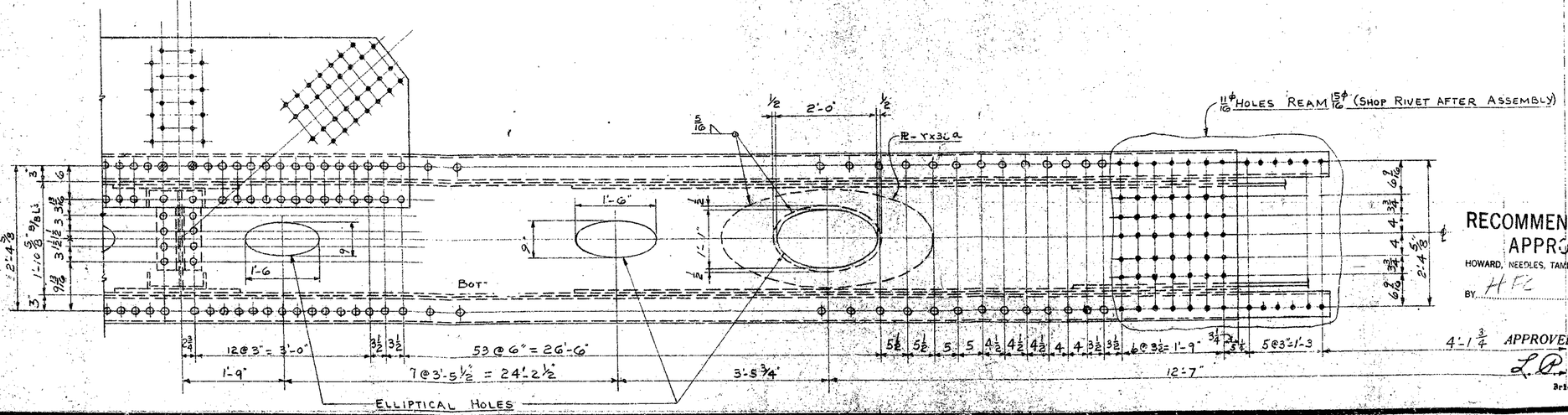
SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800 - F Sh. 338 of

262



LOWER CHORDS - A336 & AA336
WORK WITH SHEETS - 336 & 338



SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by T.P.
Checked by E.W.K.
Revisions

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY H.F.E. DATE 11/19/59

4-1¾ APPROVED BY
L. P. Carlson 11-25-59
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO: 1

SOLD TO: JOHN T. REASLEY CONSTR CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
Contr. No. 4800
Sh. 337 of

261

11 SPC. @ 3" = 2'-9" | 14 @ 3" = 3'-6" | 63 SPC. @ 6" = 31'-6" | 7 @ 3" = 1'-9" | 7 @ 3" = 1'-9"

FILL PL - 552

SLOT TOP PL - 1" x 3'-6¼"

TOP PL - 33" x 11/16 x 77'-8 17/32 - 2 REQ. - SF4(A)(U.M)

SLOT TOP PL - 1" x 2'-2"

PL - 5 x 3/8 x 4'-3" - 4 REQ. - SF5(A)

FILL PL - 6 x 11/16 x 1'-6" - 4 REQ. - SF2(A)

11/16 HOLES REAM 15/16

SPLICE PL - 6 x 3/4 x 7'-7 1/2" - 4 REQ. - SF3(A)

42'-0 9/32

PARALLEL

2 PL's - 63 5/8" x 5/8 x 8'-6 1/2" - 4 REQ. - SF6(A)

2 L's - 5 x 5 x 1/2 x 3'-9 1/2" - 4 REQ. R/L SF7(A)

2 FILL PL's - 24 x 1/4 x 4'-3 1/4" - 4 REQ. - SF8(A)

2 TOP L's - 5 x 5 x 1/2 x 80'-0 17/32" 4 REQ. R/L - SF9(A)

2 WEB PL's - 24" x 3/4" x 78'-5 25/32" - 4 REQ. - SF10(A)(U.M)

2 FILL PL's - 24 x 5/16 x 2'-1 1/2" - 4 REQ. - SF17(C)

2 BOTT. L's - 5 x 5 x 1/2 x 80'-0 17/32" 4 REQ. R/L - SF11(A)

2 O.S. PL's - 14 x 1/2 x 38'-9 1/2" - 4 REQ. - SF12(A)(U.M.)

11 SPC. @ 3" = 2'-9" | 69 SPC. @ 6" = 34'-6"

2 PL's - 14" x 1/2 x 3'-10 1/2" - 4 REQ. - SF13(A)

1 PL - 55 1/2 x 5/8 x 8'-1 1/2" - 2 REQ. - SF14(A)

1 PL - 33 x 1/2 x 7'-11" - 2 REQ. - SF16(A)

ONE LOWER CHORD AS SHOWN - A336

ONE LOWER CHORD TO PAIR - AA336

CONTINUED ON SHEETS - 337 & 338

BOTT. PL - 33" x 3/4 x 78'-5 25/32" - 2 REQ. - SF15(A)(U.M.)

PL - YX38a

BOTTOM

ELLIPTICAL HOLES

12 @ 3" = 3'-0" | 59 SPC. @ 6" = 29'-6" | 12 @ 3" = 3'-0"

PL - 19 x 3/4 x 3'-1 1/2" - 2 REQ. SF18(A)

SECTION - AA

DIAPHRAGM AT L9

PL - 18 1/2 x 3/8 x 2'-0" - 2 - REQ. - SF1(C)

7/8 SHOP RIVETS FS.

2 L's - SF12

2 L's - YX30

2 L's - YX34

NOTE

SEE NOTES ON SHEET 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ϕ except as noted

Holes 15/16" ϕ except as noted

End Distance 1¾" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by T.P.

Checked by C.W.K

Revisions

APPROVED BY L.P. Carlson Bridge Design Engineer 11-25-55

RECOMMENDED FOR APPROVAL HOWARD, NEEDLES, TAMMEN & BERGENDOFF BY FC DATE 11/19/55

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE NEAR HELENA, ARKANSAS UNIT NO. 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO. CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800 Sh. 336 of

260

64 SPC. @ 6" = 32'-0"

14 @ 3" = 3'-6"

SLOT TOP PL - 1" x 3'-6¼"

TOP

11/16 HOLES REAM 15/16 ϕ

42'-0 3/8"

MILL

2 L's - 5 x 5 x ½ x 3'-9½ - 4 REQ. PL - SEC 1 (A)

2 FILL PL's - 14 x ¼ x 2'-2 5/16 - 4 REQ. - SEC 2 (A)

TACK WELD

FILL - 4 x ¼ x 5 5/16 - 2 REQ. - SEC 4 (A) - NS ONLY

TACK WELD

W.P.

FILL 4 x ¼ x 5 5/16 - 2 REQ. - SEC 3 (A) NS ONLY

TACK WELD

7/8 SHOP RIVETS F.S.

69 SPC. @ 6" = 34'-6"

11 @ 3" = 2'-9"

L7

L8

LOWER CHORDS - A334 & AA334

WORK WITH SHEET 334

BOTTOM

11 SPC. @ 3 3/4" = 3'-5¼"

1'-9"

60 SPC. @ 6" = 30'-0"

9 SPC. @ 3'-5¼" = 30'-11¼"

ELLIPTICAL HOLES

PL - ¼ x 38

5'-11"

3'-5 7/16"

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY NOTE FRS DATE 12-9-59

SEE NOTES ON SHEET 1

APPROVED BY: HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ϕ except as noted

Holes 15/16" ϕ except as noted

End Distance 1¾" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by RIVETS

Field Connections APPROVED BY 12/14/59

Drawn by T.P.

Checked by CWK L.P. Carlson

Revisions Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE NEAR HELENA, ARKANSAS UNIT 4 / 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO. CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

Contr. No. 4800 Sh. 335 of

A

259

64 SPC. @ 6" = 32'-0"

SLOT TOP PL - 1'x 2'-2"

1PL-SD1

1PL - 5 x 3/8 x 3'-3" - 4 REQ. - SD1(A)

11/16 HOLES REAM 15/16

TOP PL - 33" x 11/16 x 82'-7 7/8" - 2 REQ. - SD2(A)(U.M)

42'-0 3/8"

2 LS - SC4

2 PLS - SC5

2 LS - 4 x 4 x 3/8 x 5'-11 3/4" - 4 REQ. PL - SD3(C)

2 LS - 4 x 4 x 3/8 x 5'-11 3/4" - 4 REQ. PL - SD4(C)

2 FILL PLS - 3" x 3/4" x 10 1/2" - 4 REQ. - SD5(C)

2 TOP LS - 5 x 5 x 1/2 x 84'-0 1/8" - 4 REQ. PL - SD6(A)

2 WEB PLS - 24 x 3/4 x 84'-0 1/8" - 4 REQ. - SD7(A)(U.M)

2 PLS - SC9

2 PLS - SC8

2 LS - 5 x 5 x 1/2 x 84'-0 5/8" - 4 REQ. PL - SD9(A)

2 FILL PLS - 24 x 1/8 x 5'-9 1/16" - 4 REQ. - SD8(C)

66 SPC. @ 6" = 33'-0"

7/8" SHOP RIVETS F.S.

N.S. PL - 25 1/2 x 5/8 x 5'-3 5/8" - 6 REQ. - SD10(C)

F.S. PL - 25 1/2 x 5/8 x 4'-4 5/8" - 6 REQ. - SD11(C)

2 LS - 12" @ 25" x 2'-0" - 12 - REQ. - SD12(C)

1 FILL PL - 14 x 1/2 x 1'-6 1/2" - 2 REQ. - SD13(C)

1PL - 18 5/8 x 3/8 x 2'-0" - 2 REQ. - SD14(C)

SECTION - AA

DIAPHRAGM AT L7

NOTE
SEE NOTES ON SHEET 1

ONE LOWER CHORD AS SHOWN - A334
ONE LOWER CHORD TO FAIR - AA334
WORK WITH SHEET 335

1PL - 33 x 1/2 x 7-7 1/2" - 2 REQ. - SD16(C)

PL-SC12

PL-TX38Q

BOTT. PL - 33" x 1" x 84'-0 5/8" - 2 REQ. - SD15(A)(U.M)

ELLIPTICAL HOLES

60 SPC. @ 6" = 30'-0"

9 SPC. @ 3'-4 7/8" = 30'-7/8"

11 @ 3 3/4" = 3'-5 1/4"

11 SPC. @ 3 3/4" = 1'-9"

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 1/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by T.P.
Checked by CWK
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT # 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HC DATE 11/19/59

APPROVED BY L.D. Erickson 11-25-59
Bridge Design Engineer

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

Contr. No. 4800 Sh. 334 of

258

7 SPC. @ 4½" = 32'-7½"

SLOT TOP R - 1"x1¼"

ON FILL R

SC3

FILL R - 6"x11/16"x6'-1½" - 4 REQ. - SC1 (A)

SPLICE R - 6"x½"x10'-3" - 4 REQ. - SC2 (A)

SPLICE R - SC2

FILL R - SC1

FILL R - 4½"x1/16"x2'-0½" - 4 REQ. - SC3 (C)

11/16" HOLES REAM 15/16"

PARALLEL

2 Ls - 3½"x3½"x⅜"x2'-11" 4 REQ. - SC4 (C)

2 Rs - 76"x⅝"x9'-9" - 4 REQ. - SC5 (A)

SHOP RIVET TO A334 & AA334

2 Ls - 4"x4"x⅜"x4'-2¾" - 4 REQ. R/L - SC6 (C)

2 Ls - 4"x4"x⅜"x4'-2¾" - 4 REQ. R/L - SC7 (C)

⅞" SHOP RIVETS F.S.

92 SPC. @ 4½" = 34'-6"

42'-0 9/32"

L5

L6

MILL CHORD SQUARE

2 FILL R's - 14"x⅛"x2'-8¼" - 4 REQ. - SC10 (C)

2 FILL R's - 3"x¼"x1'-11¼" - 8 REQ. SC11 (C)

TACK WELD

2 R's - 14"x½"x5'-4½" - 4 REQ. - SC8 (A)

2 R's - 23"x⅜"x3'-10½" - 4 REQ. - SC9 (A)

SHOP RIVET TO A334 & AA334

1 R - 55"x11/16"x7'-11¼" - 2 REQ. - SC12 (A)

SHOP RIVET TO A334 & AA334

LOWER CHORDS - A332 & AA332

WORK WITH SHEET 12

R-Yx38

9 SPC. @ 3'-6" = 31'-6"

83 SPC. @ 4½" = 31'-1½"

ELLIPTICAL HOLES

11/16" HOLES REAM 15/16"

NOTE
SEE NOTES ON SHEET 1

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 12-4-59

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES
Rivets ⅞" Φ except as noted
Holes 15/16" Φ except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections
Drawn by T.P
Checked by CWK
Revisions 11/25/59

APPROVED BY 12/14/59
L. P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT # 1

SOLD TO: JOHN F. BRASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL INTERNATIONAL INC.
VINCENNES, IND.
Contr. No. 4800 Sh. 333 of

257

16 SPC. @ 3" = 4'-0"

SLOT TOP PL - 1"x3"-5¼"

6@3½" = 1'-9"

87@4½" = 32'-7½"

5@3" = 1'-3"

S. OT TOP PL 1"x2'-2"

R-SB1

TOP

TOP PL - 31"x⅝"x82'-10⅝" - 2 REQ. - SB2 (C)(U.M)

11/16 HOLES REAM 15/16

1PL - 5"x⅜"x3'-3" - 4 REQ. - SB1 (C)

¼"

6"

SECTION - A A

MILL

2PL's - SA4

2L's - SA5

2 TOP L's - 4"x4"x⅜"x84'-0⅝" - 4 REQ. PL - SB3(C)

2 WEB PL's - 24"x¾"x84'-0⅝" - 4 REQ. - SB4 (C)(U.M)

11/16 HOLES REAM 15/16

R-TX28 (N.S.)

R-TX29 (F.S.)

1PL - TX33 (N.S.)

2L's - TX30

1C - TX32

2PL's - SA6

2PL's - SA7

2L's - 4x4x⅞ 4'-0½" - 4 REQ. PL - SB5(C)

⅞ SHOP RIVETS F.S.

PL - TX31

2L's - TX34

11/16 HOLES REAM 15/16

13@3" = 3'-3"

92 SPC. @ 4½" = 34'-6"

42'-0 9/32"

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 9-8-60

NOTE
SEE NOTES ON SHEET 1

DIAPHRAGM AT L5

BOOK No. 9

ONE LOWER CHORD AS SHOWN - A332
ONE LOWER CHORD TO PAIR - AA332
WORK WITH SHEET 333

L4

L5

R-SA11

5/16

½

2'-0"

R-TX38

BOTT. PL - 31"x11/16"x84'-0½" - 2 REQ. - SB6 (C)(U.M)

1PL - 27 5/16"x½"x6'-5½" - 2 REQ. - SB7 (C)

BOTTOM

1'-6"

9"

10@3" = 2'-6"

5@3½" = 1'-5½"

4@4½" = 1'-5

4@4¼" = 1'-5

83 SPC. @ 4½" = 31'-1½"

9 SPC. @ 3'-6" = 31'-6"

7@3½" = 2'-0½"

1'-9"

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
11/25/59

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1½" unless noted.
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by 9/12/60
Field Connection APPROVED BY
Drawn by T.P.
Checked by C.L.K. L.P. Carlson
Revisions Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT "I"

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 332 of

256

SPLICE PL - 5" x 1/2" x 3'-4 1/2" - 4 REQ. - SA1 (C)

FILL PL - SA2

FILL PL - SA3

FILL PL - 5" x 1/8" x 1'-0 1/2" - 4 REQ. - SA3 (C)

FILL PL - 5" x 5/8" x 1'-3" - 4 REQ. - SA2 (C)

11/16" Φ HOLES REAM 15/16" Φ

PARALLEL

2 PL's - 7.5" x 5/8" x 7'-10 1/2" - 4 REQ. - SA4 (C)

2 L's - 4" x 4" x 3/8" x 4'-5" - 4 REQ. - SA5 (C)

SHOP RIVET TO A332 & AA332

2 L's - 4" x 4" x 3/8" x 4'-2" - 4 REQ. - SA8 (C)

7/8" Φ SHOP RIVETS FS

TACK WELD

2 FILL PL's - 16" x 3/16" x 2'-0 3/4" - 4 REQ. - SA9 (C)

2 FILL PL's - 3" x 3/16" x 1'-9 3/4" - 8 REQ. - SA10 (C)

2 PL's - 16" x 3/8" x 4'-1 1/2" - 4 REQ. - SA6 (C)

2 PL's - 23" x 3/8" x 3'-7 1/2" - 4 REQ. - SA7 (C)

SHOP RIVET TO A332 & AA332

MILL CHORD SQUARE

L3

L4

LOWER CHORDS - A330 & AA330

WORK WITH SHEET 330

1 PL - 49" x 1/2" x 6'-10 1/2" - 2 REQ. - SA11 (C)

SHOP RIVET TO A332 & AA332

TACK WELD

FILL PL - 31" x 3/16" x 3'-5 1/4" - 2 REQ. - SA12 (C)

R - Y x 38

BOTTOM

ELLIPTICAL HOLES

SHOP RIVET AFTER ASSEMBLY

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY HFL DATE 9-8-60

NOTE

SEE NOTES ON SHEET 1

BOOK No. 9

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 11/25/59

GENERAL NOTES

Rivets 7/8" Φ except as noted

Holes 11/16" Φ except as noted

End Distance 1 1/2" unless noted

Sho. Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections APPROVED BY

Drawn by T.P.

Checked by C.P. Carlson

Revisions

Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE

NEAR HELENA, ARKANSAS

UNIT "1"

SOLD TO: JOHN E. BEARDLY CONSTR. CO.

CHICAGO, ILLINOIS

SHOP: VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

Contr. No. 2800-T Sh. 331 of

255

86 SPC. @ 4½" = 32'-3"

SLOT TOP PL - 1" x 2'-11½"

SLOT TOP PL - 1" x 2'-2"

11/16 HOLES REAM 15/16

TOP PL - 31" x ½" x 84'-9⅛" - 2 REQ. - YZ1 (C)(U.M.)

SPLICE PL - YX2

42'-0 1/32

MILL

2 PL's - YY5

2 L's - YY4

2 TOP L's - 4 x 4 x ⅝ x 84'-0⅝" - 4 REQ. PL - YZ2 (C)

2 WEB PL's - 24" x 9/16" x 84'-0⅝" - 4 REQ. - YZ3 (C)(U.M.)

2 PL's - YY6

2 L's - 4 x 4 x ⅜ x 84'-0½" - 4 REQ. PL YZ4 (C)

92 SPC. @ 4½" = 34'-6"

PL - YX28 (N.S.)

PL - YX29 (F.S.)

PL - YX33 (N.S.)

7/8 SHOP RIVETS F.S.

SECTION - AA

2 L's - YX30

PL - YX32

PL - YX31

2 L's - YX34

DIAPHRAGM AT L3

NOTE

SEE NOTES ON SHEET 1

ONE LOWER CHORD AS SHOWN - A330

ONE LOWER CHORD TO PAIR - AA330

WORK WITH SHEET 331

PL - YY8

PL - 27½" x ½" x 6'-6" - 2 REQ. - YZ6 (C)

BOTT. PL - 31" x ½" x 84'-0½" - 2 REQ. - YZ5 (C)(U.M.)

PL - YX38

BOTTOM ℄

ELLIPTICAL HOLES

83 SPC. @ 4½" = 31'-1½"

7 SPC. @ 5'-6¼" = 31'-6¼"

HOLES REAM 15/16

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS.

APPROVED BY L. P. Carlson 11-25-57
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFL DATE 11/19/57

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by T.P.
Checked by CWK
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.

Contr. No. 4800 Sh. 330 of

254

7@3"=1'-9"

77 Spc. @ 5½" = 35'-3½"

12@3"=3'-0"

12@3"=3'-0"

Slot Top PL - 1"x2'-11½"

Fill PL-TY3

Fill PL-TY2

11/16 Holes Ream 15/16

Top ℄

Fill PL-5x⅛x1'-0½" - 4 Req. - TY3 (C)

Splice PL-5x⅜x3'-4½" - 4 Req. - TY1 (C)

Fill PL-5"x½"x1'-3" - 4 Req. - TY2 (C)

PARALLEL

PARALLEL

11/16 Holes Ream 15/16

11/16 Holes Ream 15/16

2 L's - 4x4x⅜x3'-3½" - 4 Req. R/L - TY4 (C)

Rivet To A330 & AA330

2 L's - 4x4x⅜x3'-3½" - 4 Req. R/L - TY7 (C)

W.L.

7/8 Shop Rivets F.S.

2 PL's - 64 ⅜x⅝x7'-2¾" - 4 Req. - TY5 (C)

2 Splice PL's - 16x⅜x2'-7½" - 4 Req. - TY6 (C)

Rivet To A330 & AA330

81 Spc. @ 5½" = 37'-1½"

42'-0 11/32"

11@3"=2'-9"

11@3"=2'-9"

L1

L2

Lower Chords - A328 & AA328

Work with Sheet 328

1 PL - 49½"x½"x6'-5½" - 2 Req. - TY8 (C)

Rivet To A330 & AA330

Mill Chord Square

Bottom

R-TX38

Elliptical Holes

77 Spc. @ 5½" = 35'-3½"

9 Spc. @ 3'-6¾" = 31'-8¼"

8@3"=2'-0"

8@3"=2'-0"

5'-1"

11/16 Holes Ream 15/16

RECOMMENDED FOR APPROVAL

By HTC Date 11/19/59

Howard, Needles, Tammen & Bergendoff

Note

See Notes On Sheet 1

Approved By: Howard, Needles Tammen & Bergendoff Consulting Engineers.

GENERAL NOTES

Rivets 7/8" ϕ except as noted

Holes 15/16" ϕ except as noted

End Distance 1¾" unless noted

Shop Paint Red Lead (Ark. Std.)

Contact Surfaces No Paint

Shop Inspection by

Field Connections Rivets

Drawn by T.F.

Checked by C.W.K.

Revisions

Approved By

L. P. Carlson

Bridge Design Engineer

11-25-59

Arkansas State Highway Commission
Mississippi State Highway Commission

Mississippi River Bridge
Near Helena Arkansas
Unit No. 1

Sold To: John F. Beasley Constr. Co.
Chicago Illinois

Shop Vincennes Steel Corp. Div. of Industrial Enterprises, Inc.
Vincennes, Ind.

Contr. No. 4800 Sh. 329 of

253

PL - 13 3/4 x 3/8 x 2'-7" - 2 REQ. - YX5 (C)

PL - 5 x 3/8 x 4'-3" - 8 REQ. - YX2 (C)

SLOT TOP PL - 1" x 2'-2"

TOP PL - 31 x 3/8 x 79'-7 1/16" - 2 REQ. - YX1 (C) (U.M)

1L - YX4

1L - 4 x 4 x 7/16 x 2'-9 1/2" - 4 REQ. PL - YX3 (C)

1L - 5 x 5 x 7/16 x 2'-9 1/2" - 4 REQ. PL - YX4 (C)

SLOT TOP PL - 1" x 2'-0 3/4"

72 SPC. @ 5 1/2" = 33'-0"

7 @ 3" = 1'-9"

SECTION - AA

1 FILL PL - 7 7/8 x 1/4 x 8 - 2 REQ. (C) ONE SIDE ONLY TACK WELD TO PLATE REAM 15/16"

2 L's - 8 x 6 x 5/8 x 1'-4 1/2" - 4 REQ. - YX6 (C)

2 FILL PL's 2 3/4 x 5/8 x 11 1/4 - 4 REQ. - YX7 (C)

2 PL's - 8 x 5/8 x 3'-2 1/2" - 4 REQ. - YX8 (C)

(2 FILL PLs - 8 x 1/4 x 1'-6 - 4 REQ. - YX80 (C))

11/16 HOLES REAM 15/16 TO M.T.

11/16 HOLES REAM 15/16

7/8 SHOP RIV. F.S.

SLOT N.S. & F.S. 1 1/8 x 8 1/2 IN PL GRIND FILLET

2 FILL PL's - 2 3/4 x 7/8 x 8" - 4 REQ. - YX9 (C) TACK WELD

2 L's - 8 x 8 x 5/8 x 5'-5" - 4 REQ. PL - YX10 (C)

2 FILL PL's 2 3/4 x 5/8 x 1'-6 1/4" - 4 REQ. - YX11 (C)

TYP

PL - 7 x 3/8 x 11" - 24 REQ. YX12 (C) N.S. & F.S.

2 L's - 8 x 8 x 1 x 1'-5 3/4" - 4 REQ. - YX13 (C)

2 BARS - 4 x 1 x 1'-5 3/4" - 4 REQ. - YX14 (C) WELD TO L YX13 TO FORM 12" x 8" L

1 PL - 19 x 5/8 x 5'-5" - 2 REQ. - YX15 (C)

2 L's - 8 x 8 x 5/8 x 5'-5" - 4 REQ. PL - YX16 (C)

MILL GUSSET PLS & DIAPHRAGM TO BEAR AGAINST MAIN MEMBER FLANGE

N.S. PL - 77 x 5/8 x 6'-10 7/8" - 2 REQ. - YX17 (C)

F.S. PL - 77 x 5/8 x 6'-10 7/8" - 2 REQ. - YX18 (C)

N.S. PL - 65 x 5/8 x 4'-10 1/8" - 2 REQ. - YX19 (C)

F.S. PL - 65 x 5/8 x 4'-10 1/8" - 2 REQ. - YX20 (C)

2 FILL PL's - 4" x 5/8 x 9" - 4 REQ. - YX21 (C) (WELD)

2 PL's - 16 x 1/2 x 1'-7 1/4" - 4 REQ. - YX22 (C)

2 TOP L's - 4 x 4 x 3/8 x 83'-3 7/16" - 4 REQ. PL - YX23 (C)

2 WEB PL's - 24 x 3/16 x 80'-3 5/16" - 4 REQ. - YX25 (C) (U.M.)

2 BOTT. L's - 4 x 4 x 3/8 x 83'-3 7/16" - 4 REQ. PL - YX26 (C)

2 FILL PL's - 24 x 1/16 x 2'-0 1/2" - 4 REQ. - YX27 (C)

76 SPC @ 5 1/2" = 34'-10"

42'-0 11/32"

END OF WEB PL YX25

2 L's - 8 x 4 1/2" x 1/8 x 1'-6" - 4 REQ. - YX24 (C) CUT FROM 8 x 8 x 1/8 L

DRILL 1 1/8" HOLES TO M.T.

8 @ 3 1/4" = 2'-2"

1'-1"

6'-11 11/32"

3'-4"

9 SPC @ 3'-4" = 30'-0"

ELLIPTICAL HOLES

1'-9"

SHOP RIVET AFTER ASSEMBLY

ELLIPTICAL HOLE

ELLIPTICAL PL - 20 x 5/8 x 3'-4" - 16 - REQ. - YX38 (C)

16 - REQ. - YX38A (A)

ONE LOWER CHORD AS SHOWN - A328

ONE LOWER CHORD TO PAIR - AA328

CONTINUED ON SHEET 329

PL - 51 3/4 x 3/4 x 4'-7" - 2 REQ. - YX35 (C)

BOTT. PL - 31 x 1/2 x 85'-1 11/16" - 2 REQ. - YX36 (C) (U.M.)

PL - YX38

11/16 HOLES REAM 15/16

N.S. PL - 25 1/2 x 5/8 x 5'-3 5/8" - 8 REQ. - YX28 (C)

F.S. PL - 25 1/2 x 5/8 x 4'-4 5/8" - 8 REQ. - YX29 (C)

2 L's - 4 x 4 x 3/8 x 1'-0 1/2" - 28 REQ. - YX30 (C)

PL - 18 3/8 x 3/8 x 2'-0" - 6 - REQ. - YX31 (C)

2 L's - 12" @ 25" x 2'-0" - 16 - REQ. - YX32 (C)

1 FILL PL - 16 x 3/8 x 1'-6 1/2" - 8 - REQ. - YX33 (C) N.S.

2 L's - 4 x 4 x 3/8 x 1'-0 1/2" - 28 REQ. - YX34 (C)

7/8 SHOP RIVETS F.S.

DIAPHRAGM AT L1

1 PL - 27 1/2 x 1/2 x 6'-6" - 2 REQ. - YX37 (C)

NOTE

SEE NOTES ON SHEET 1

BOOK No. 9

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF, CONSULTING ENGINEERS 11/25/59

APPROVED BY: 9/21/60

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

GENERAL NOTES

Rivets 7/8 except as noted

Holes 11/16 except as noted

End Distance 1 1/4 unless noted

Shop Paint RED (1 Coat Red Lead & Linseed Oil)

Contact Surfaces

Shop Inspection by

Field Connections

Drawn by T.P.

Checked by C.M.T.C. DATE 9-8-60

Revisions

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE NEAR HELENA, ARKANSAS UNIT No. 1

SOLE TO: JOHN F. BEASLEY, CONSTR. CO. CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

CONT. No. 4800-T Sh. 328 of

UNIT #1 SHIPPING LIST

No.	MARK	MEMBER
1	A328	LOWER CHORD L0 - L2
1	AA328	" " "
1	A330	" " L2 - L4
1	AA330	" " "
1	A332	" " L4 - L6
1	AA332	" " "
1	A334	" " L6 - L8
1	AA334	" " "
1	A336	" " L8 - L10
1	AA336	" " "
1	A339	" " L10 - L12
1	AA339	" " "
1	A341	" " L12 - L14
1	AA341	" " "
1	A343	" " L14 - L15
1	AA343	" " "
1	A344	END POST L0 - U1
1	AA344	" " "
1	A346	TOP CHORD U1 - U3
1	AA346	" " "
1	A348	" " U3 - U5
1	AA348	" " "
1	A350	" " U5 - U6
1	AA350	" " "
1	A351	" " U6 - U8
1	AA351	" " "
1	A353	" " U8 - U10
1	AA353	" " "
1	A355	" " U10 - U12
1	AA355	" " "
1	A357	" " U12 - U14
1	AA357	" " "
1	A359	" " U14 - U15
1	AA359	" " "
2	A371	VERTICALS U1 - L1
2	B371	" U2 - L2
2	C371	" U3 - L3
1	A373	" U4 - L4
1	AA373	" U4 - L4
2	B372	" U5 - L5
1	A373	" U6 - L6
1	AA373	" U6 - L6
2	A374	" U7 - M7
2	B373	" M7 - L7
2	B374	" U8 - L8
2	A375	" U9 - M9
2	C374	" M9 - L9

No.	MARK	MEMBER
1	B240	VERTICALS U10 - L10
1	BA240	" "
2	B375	" U11 - M11
2	A376	" M11 - L11
2	C239	" U12 - L12
2	B376	" U13 - M13
2	C376	" M13 - L13
1	A377	" U14 - L14
1	AA377	" "
2	A380	DIAGONALS U1 - L2
2	B380	" U3 - L2
2	A381	" U3 - L4
2	B381	" U5 - L4
2	A382	" U5 - L6
2	A383	" U8 - L6
2	B382	" M7 - L8
1	A384	" U8 - L10
1	AA384	" "
2	A390	" M9 - L8
1	A387	" U12 - L10
1	AA387	" "
2	B390	" M11 - L12
2	A391	" U12 - L14
2	A392	" M13 - L12
1	A407	" U15 - L14
1	AA407	" "
1	A379	TOP STRUTS @ U1
1	A52	" " @ U2
1	B405	" " @
1	A378	" " @ U
1	A405	" " @ U5
1	C378	" " @ U6
1	B378	" " @ U7
1	A403	" " @ U8
1	A277	" " @ U9
1	D140	" " @ U10
1	A277	" " @ U11
1	A404	" " @ U12
1	A60	" " @ U13
1	B60	" " @ U14
1	A402	" " @ U15
2	A162	TOP LATERALS
4	B162	"
2	A399	"
4	B399	"
3	A394	"
6	B394	"

No.	MARK	MEMBER
2	A395	TOP LATERALS
2	B395	"
2	C395	"
2	A396	"
2	B396	"
2	C396	"
1	A393	"
1	B393	"
1	C393	"
1	D393	TOP BRACE @ U15
6	A72	LOWER LATERALS
12	B72	" "
2	A398	" "
4	B398	" "
1	C398	" "
2	D398	" "
1	A399	" "
1	C399	" "
1	E400	" "
1	B399	" "
1	D399	" "
1	D400	" "
1	A258	" "
2	B258	" "
1	A73	" "
1	B73	" "
1	A75	" "
1	B74	" "
1	A440	" "
1	B400	" "
1	C400	" "
1	A401	WIND SHEAR STRUT @ U16
1	E52	SWAY BRACES @ U2
1	E52	" " @ U4
1	B52	" " @ U2
1	C52	" " @ U2
1	D52	" " @ U2
1	B53	" " @ U4
1	C53	" " @ U4
1	D53	" " @ U4
2	D54	" " @ U6
3	C54	" " @ U6
3	C54	" " @ U4
1	B55	" " @ U6
1	B55	" " @ U4
1	C55	" " @ U6

No.	MARK	MEMBER
1	C55	SWAY BRACES @ U14
1	D55	" " @ U6
1	D55	" " @ U14
2	E54	" " @ U14
1	A90	PORTAL STRUTS @ U1
2	B90	" " @ U1
1	C90	" " @ U1
1	A406	" " @ U15
1	B406	" " @ U15
1	B96	" " @ U15
1	B97	" " @ U15
1	A93	" " @ U8
1	D93	" " @ U12
1	B93	" " @ U8
1	B93	" " @ U12
2	C93	" " @ U8
2	C93	" " @ U12
1	A92	" " @ U8
1	C92	" " @ U12
1	B92	" " @ U8
1	B92	" " @ U12
1	B91	" " @ U8
1	B91	" " @ U12
1	B64	" " @ U8
1	A91	" " @ U12
1	1143	" " @ U10
1	E143	" " @ U10
1	B59	" " @ U10
1	C60	" " @ U10
1	C59	" " @ U10
1	A59	" " @ U10
1	D60	" " @ U10
1	A06	FLOOR BEAMS @ L0
1	A360	" " @ L1
1	C272	" " @ L2
1	EA274	" " @ L3
1	A361	" " @ L4
1	B360	" " @ L5
1	BA274	" " @ L6
1	B361	" " @ L7
1	BA274	" " @ L8
1	C361	" " @ L9
1	B86	" " @ L10
1	A362	" " @ L11
1	BA273	" " @ L12
1	B362	" " @ L13
1	A270	" " @ L14

No.	MARK	MEMBER
2	B401	STRUTS @ L15
1	A363	STRINGERS
1	AA363	"
1	B363	"
1	A364	"
1	AA364	"
1	D364	"
1	A366	"
1	AA366	"
1	D366	"
1	A367	"
1	AA367	"
1	D367	"
1	B364	"
1	BA364	"
1	E364	"
1	B366	"
1	BA366	"
1	E366	"
1	C367	"
1	CA367	"
1	F367	"
1	C366	"
1	CA366	"
1	F366	"
1	B367	"
1	BA367	"
1	E367	"
2	A365	"
2	AA365	"
1	B365	"
1	C365	"
1	A369	"
1	AA369	"
1	B369	"
1	A368	"
1	AA368	"
1	C368	"
1	C364	"
1	CA364	"
1	F364	"
1	B368	"
1	BA368	"
1	A370	"
1	D178	LADDER @ L10
2	C178	LADDERS @ L0

No.	MARK	MEMBER
30	C190	CONTRACTION LINKS
30	E191	" PILLS
60	E191	" RING FILL
4	A176	" JOINT E
5	B176	" "
9	N175	" " "
9	NA175	" " "
1	B83	CROSS BEAMS
75	C76	"
60	D76	"
5	A84	" "
1	B370	CURB E
1	BA370	"
2	D370	"
3	M370	"
3	MA370	"
2	G370	"
2	GA370	"
4	C370	"
1	J370	"
1	JA370	"
1	K370	"
1	KA370	"
2	E370	"
2	EA370	"
1	F370	"
1	FA370	"
1	N370	"
1	NA370	"
1	B404	PLATE @ U12
1	BA404	" @ U12
1	C404	" @ U12
1	CA404	" @ U12
1	H175	CURB PLATES
1	HA175	" "
1	J175	" "
1	JA175	" "
1	A177	PLATFORM @ L10
1	B177	CAGE DOOR @ L10
1	A178	LADDER SECTION @ U4-L10
1	B178	" "
1	A179	" "
1	B179	" "
1	C179	" "

No	MARK	MEMBER
1	C373	BRACKET @ U6
1	CA373	" @ U6
1	B377	" @ U14
1	BA377	" @ U14
2	B140	PLATES @ U10
4	C140	" @ U10
1	A174	EXPANSION CASTINGS @ L0
4	B174	" " "
1	C174	" " "
1	D174	" " "
4	E174	" " "
1	F174	" " "
1	D173	Shims @ L0
1	E173	" @ "
2	F173	" @ "
4	G173	" @ "
4	H173	" @ "
8	J173	" @ "
1	K173	" @ "
1	M173	" @ "
2	N173	" @ "
1	A175	" @ "
2	B175	" @ "
4	C175	" @ "
8	D175	" @ "
1	E175	" @ "
2	F175	" @ "
2	E178	HANDRAIL
2	B61	Diaphragms
1	B403	PLATE @ U8
1	BA403	" @ U8
1	C403	" @ U8
1	CA403	" @ U8

SEE NOTE SHEET #1

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY _____ DATE 11/19/59

APPROVED BY: HOWARD, NEEDLES, TAMMEN, & BERGENDOFF CONSULTING ENGINEERS

APPROVED BY
L P Carlson
Bridge Design Engineer
11-25-59

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by R.B.
Checked by CWK
Revisions

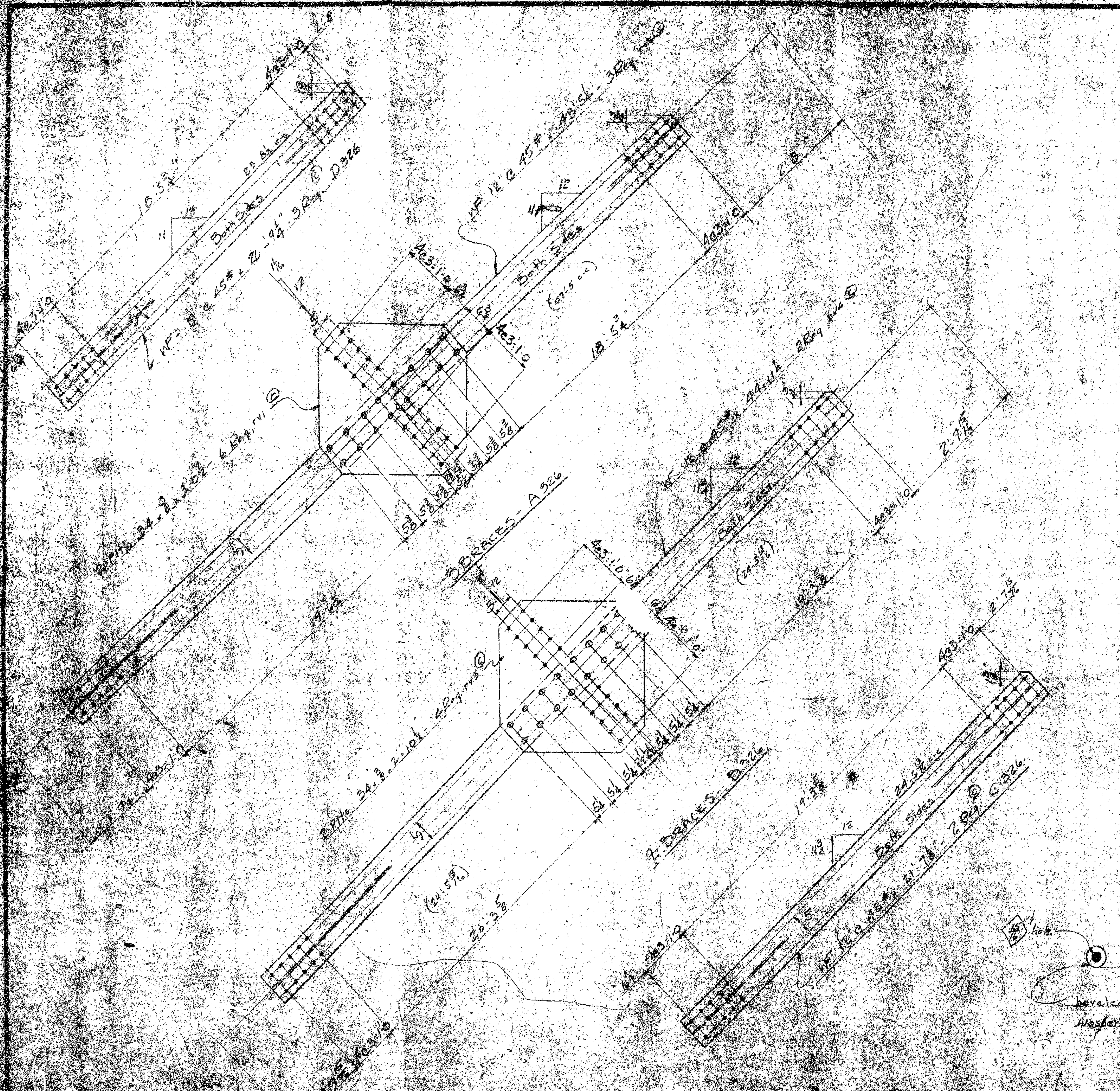
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

VINCENNES STEEL SHOP
VINCENNES, IND.

DIV. OF INDUSTRIAL ENTERPRISES, INC.
Contr. No. 4800 Sh. 32 of



4800
UNIT 2 — FIELD RIVET LIST — SHEETS 291 to 326 - SHEET 189

251

Send	Size	Kind	Req'd
120	7/8 x 2 1/8	RIVETS	164
1965	7/8 x 2 1/4	"	1780
265	7/8 x 2 3/8	"	233
2530	7/8 x 2 1/2	"	2384
1960	7/8 x 2 5/8	"	1776
1545	7/8 x 2 3/4	"	1397
2115	7/8 x 2 7/8	"	1917
615	7/8 x 3 1/8	"	554
1455	7/8 x 3 1/4	"	1314
1765	7/8 x 3 1/2	"	1599
410	7/8 x 3 5/8	"	364
2615	7/8 x 3 3/4	"	2372
230	7/8 x 3 7/8	"	204
360	7/8 x 4	"	320
340	7/8 x 4 1/8	"	300
65	7/8 x 4 1/4	"	52
105	7/8 x 4 3/8	"	87
505	7/8 x 4 1/2	"	452
385	7/8 x 4 7/8	"	344
195	7/8 x 5	"	168
10	7/8 x 5 1/4	"	8
		CTRSK. HEAD	
15	7/8 x 2 7/8	RIVETS	13
35	7/8 x 4 3/8	"	26
420	3/4 x 3	Rivets	372
215	3/4 x 3 1/8	"	186
145	7/8 x 2 1/2	Hex Bolts Self locking Nuts	136 — Expansion Joints
76	7/8 x 3	"	72
40	7/8 x 3 1/4	"	36 — Galvanized
180	7/8 x 3 1/2	"	168
40	7/8 x 4	"	36
40	7/8 x 4 1/2	"	36
950	Galvanized wrt washers for 7/8" bolts		
36	Beveled washers A for 7/8" bolts		
390	5/8 x 1 3/4	Hex bolts	372 6 Curb E
45	5/8 x 3	Hex bolts	40 " "
36	Shims P173		
36	Shims Q173		

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 10-5-59

APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES
Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 1/2" unless noted
Shop Paint Red Lead (Ark Std.)
Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivets
Drawn by J.W.
Checked by Gay 7/30/59
Revisions 9/24/59 Riv. Spc. Revi.

15/16" hole

beveled washer - 3" ϕ x 1/4 - 36 Req. © (ship with bolts) "A"
Washers to be galvanized

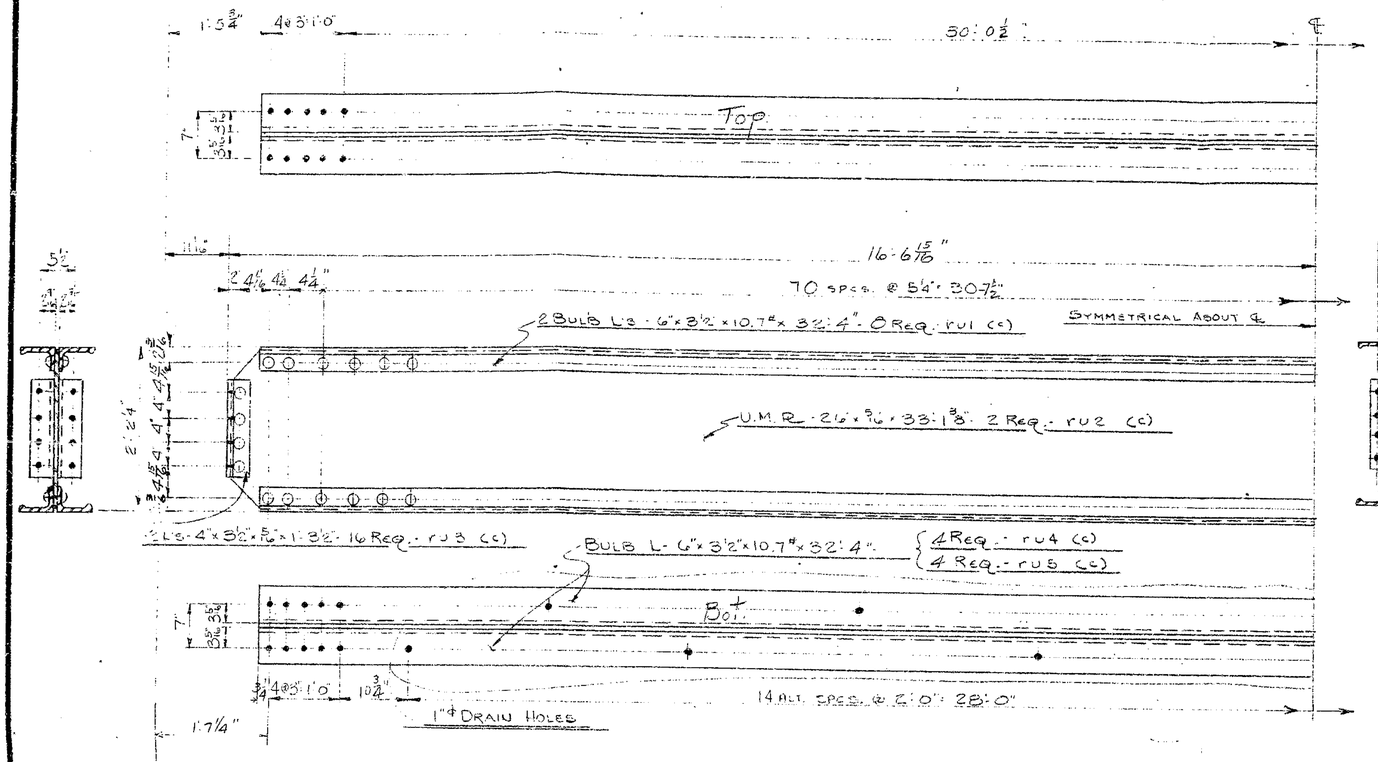
APPROVED BY 10/12/59
L. P. Carlson
Bridge Design Engineer

See notes - sheet 1

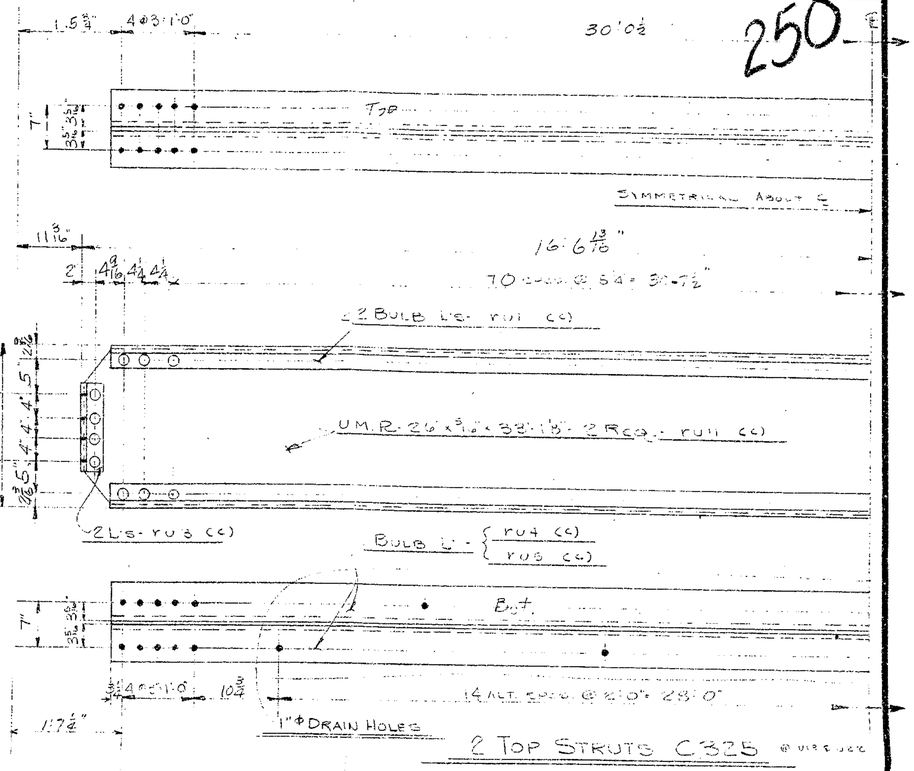
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 2
SOLD TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND. Contr. No. 4800 Sh. 326 of

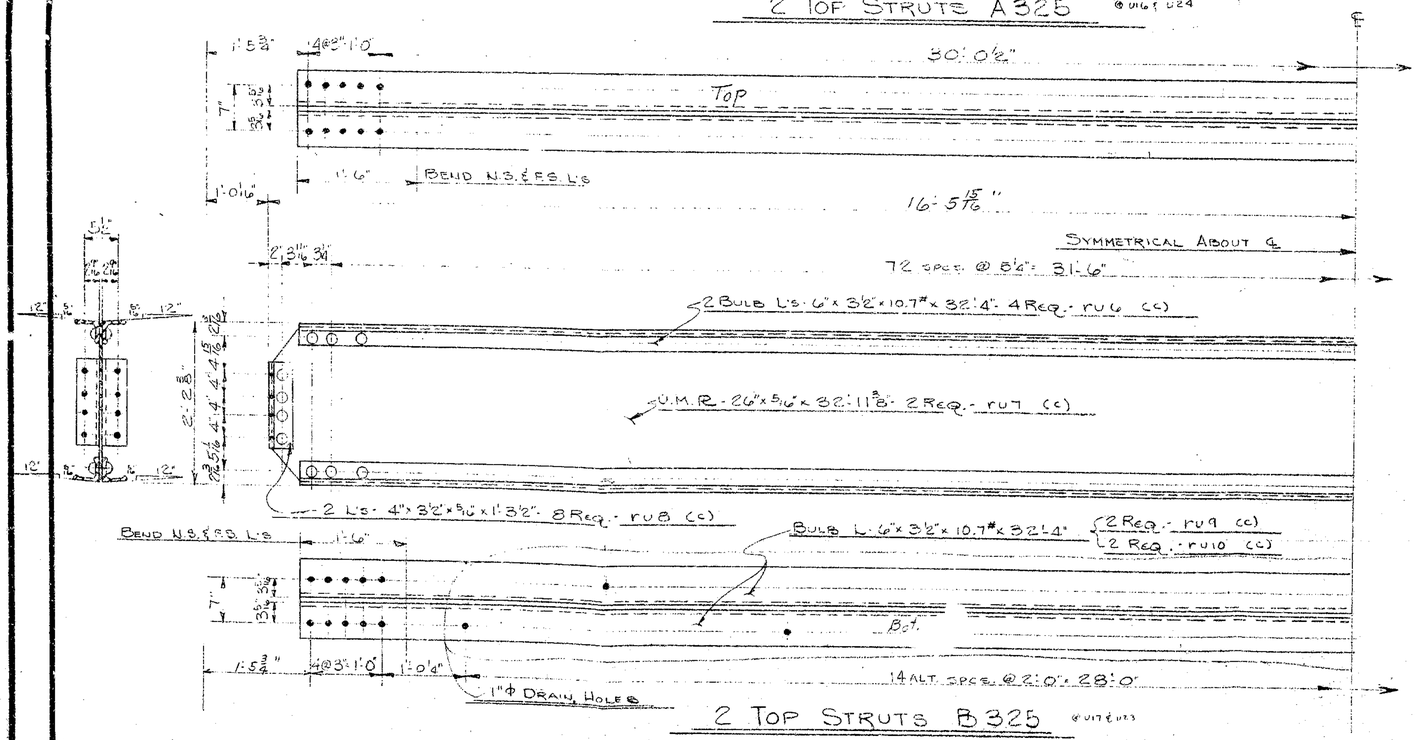
250



2 TOP STRUTS A325 @ U16 & U24



2 TOP STRUTS C325 @ U16 & U24



2 TOP STRUTS B325 @ U17 & U23

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 10-5-59
SEE NOTE SHEET #1

APPROVED BY HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES
Rivets B ϕ except as noted
Holes 15/16 ϕ except as noted
End Distance 1¼ unless noted
Shop Paint RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by KVC 5-15-59
Checked by [illegible] 7/31/59
Revisions

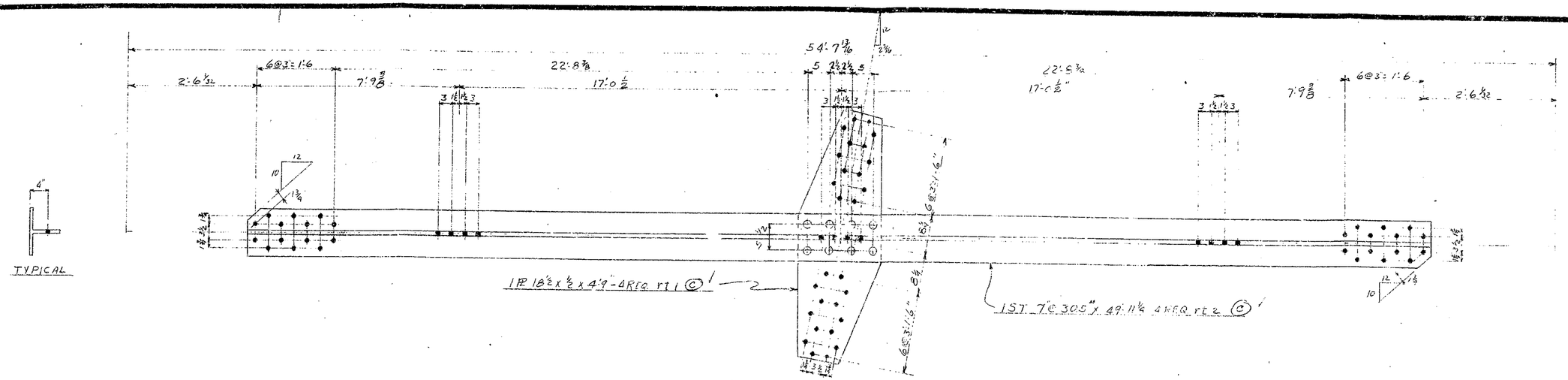
APPROVED BY 10/19/59
L. P. Carlson
Bridge Design Engineer

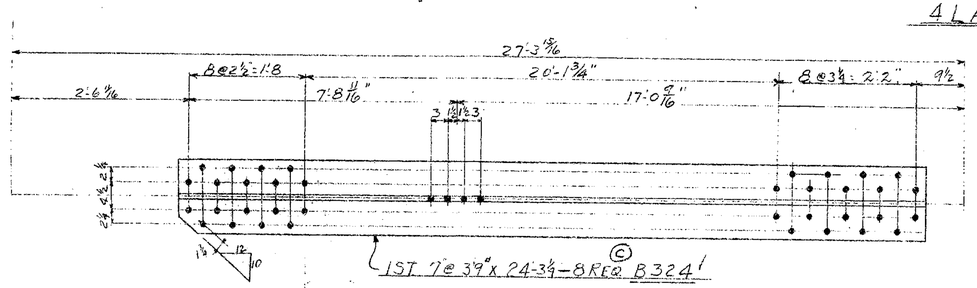
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

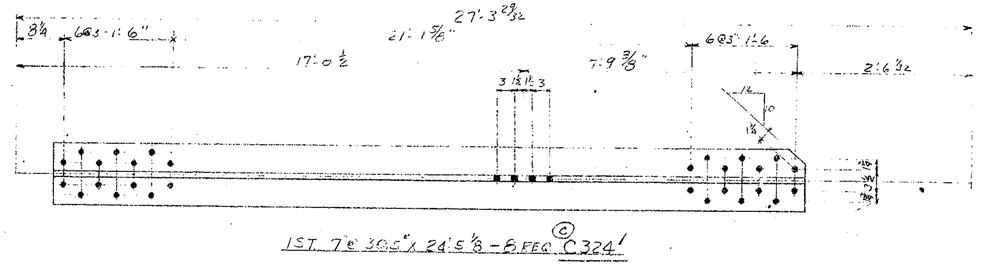
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT #2

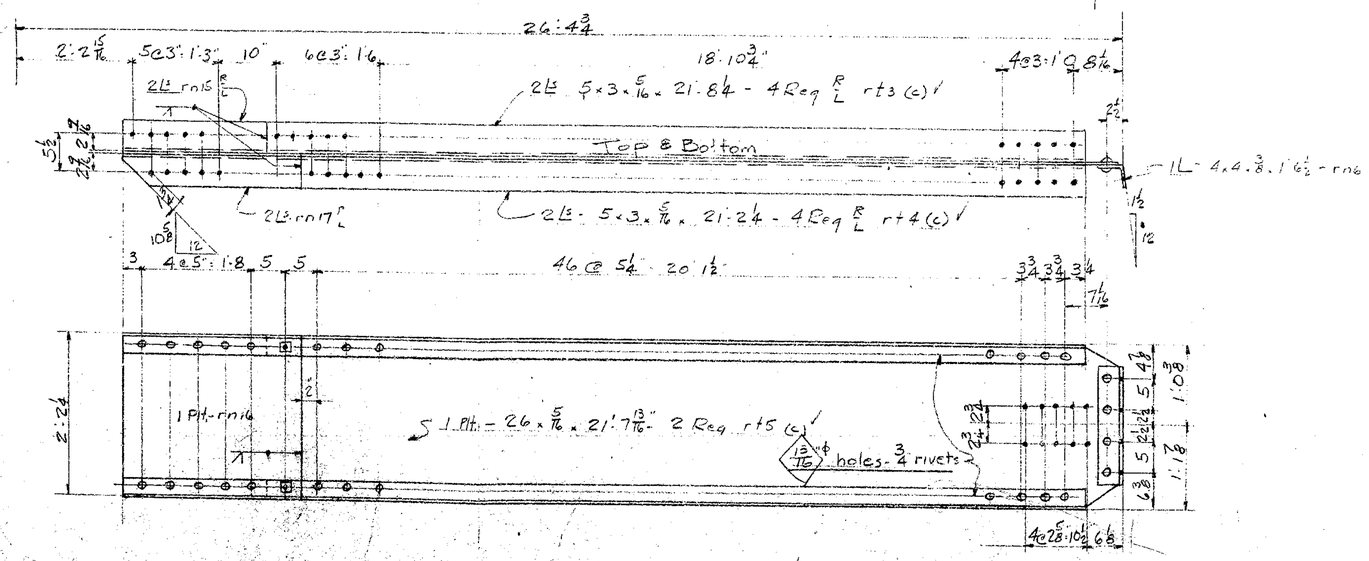
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND. Contr. No. 4800 Sh. 325 of (A)









SEE NOTE SH. #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 9/28/59

GENERAL NOTES

Rivets 7/8" ø except as noted
holes 15/16" ø except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK STO)
Contact Surfs. NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by L.A.M.S. 14.59
Checked by A.W. 7/30/59
Revisions

APPROVED BY 9/14/60
L. C. Nelson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY [illegible] DATE 9-12-60

BOOK No. 8

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

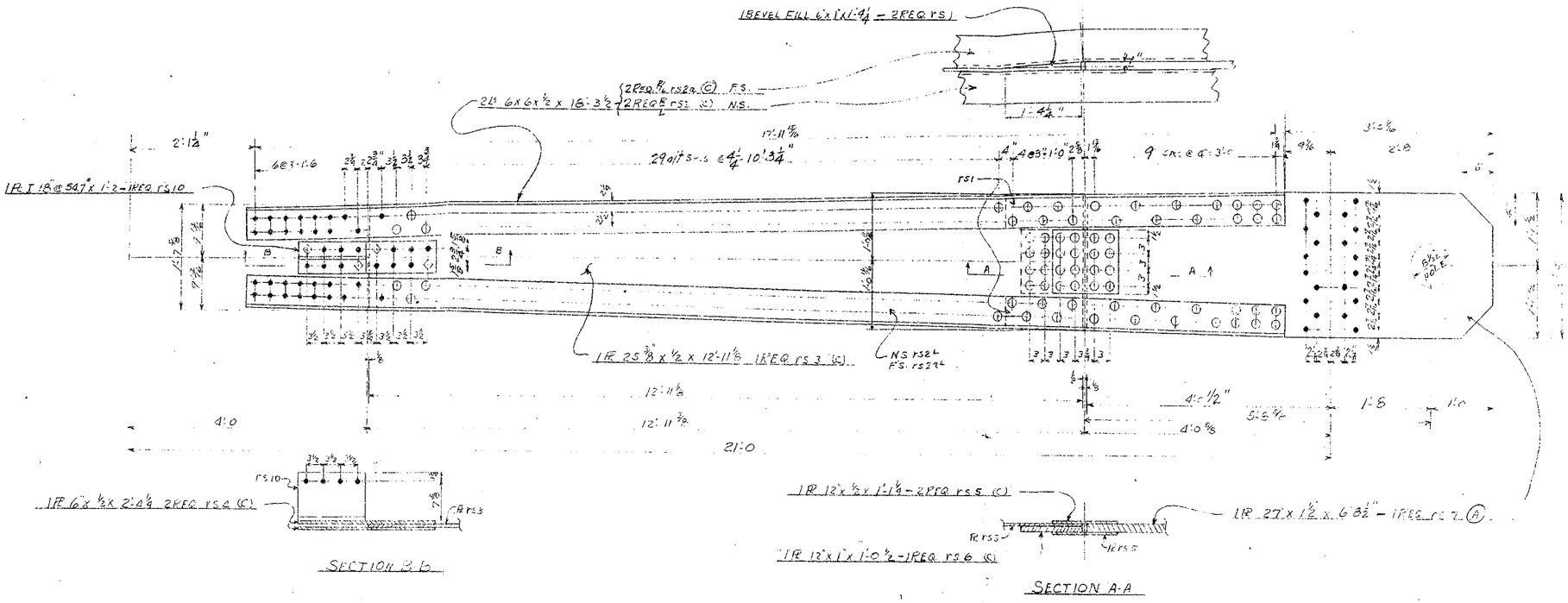
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 2

SOLD TO: JOHN T. BLEASEY CONSTR. CO.
CHICAGO, ILLINOIS

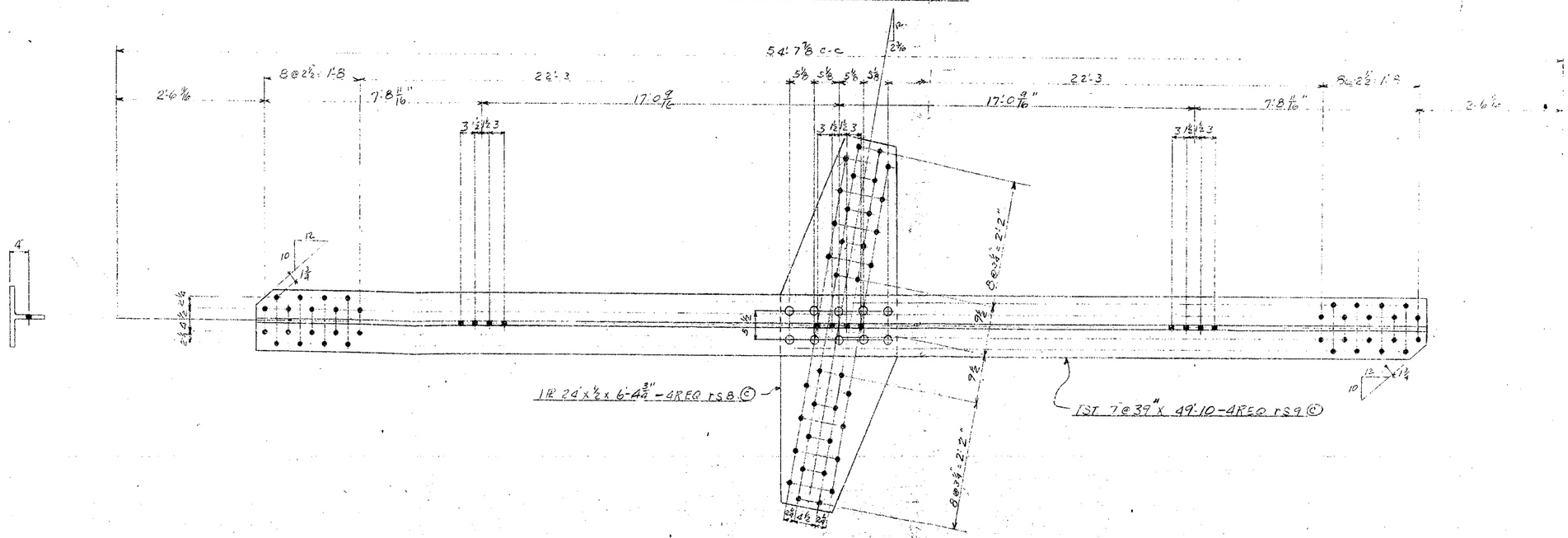
SHOP: VINCENNES STEEL CORP., DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.

Contr. No. 4800-F Sh. 324 of

248



ONE WIND SHEAR A323 @ L15



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 10-5-59

SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF: CONSULTING ENGINEERS

GENERAL NOTES

Rivets ⅞ ø except as noted
Holes 15/16 ø except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by L.A.M. 5-19-59
Checked by ALY 7/20/59
Revisions 9/24/59 Rev. Spc. A323

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

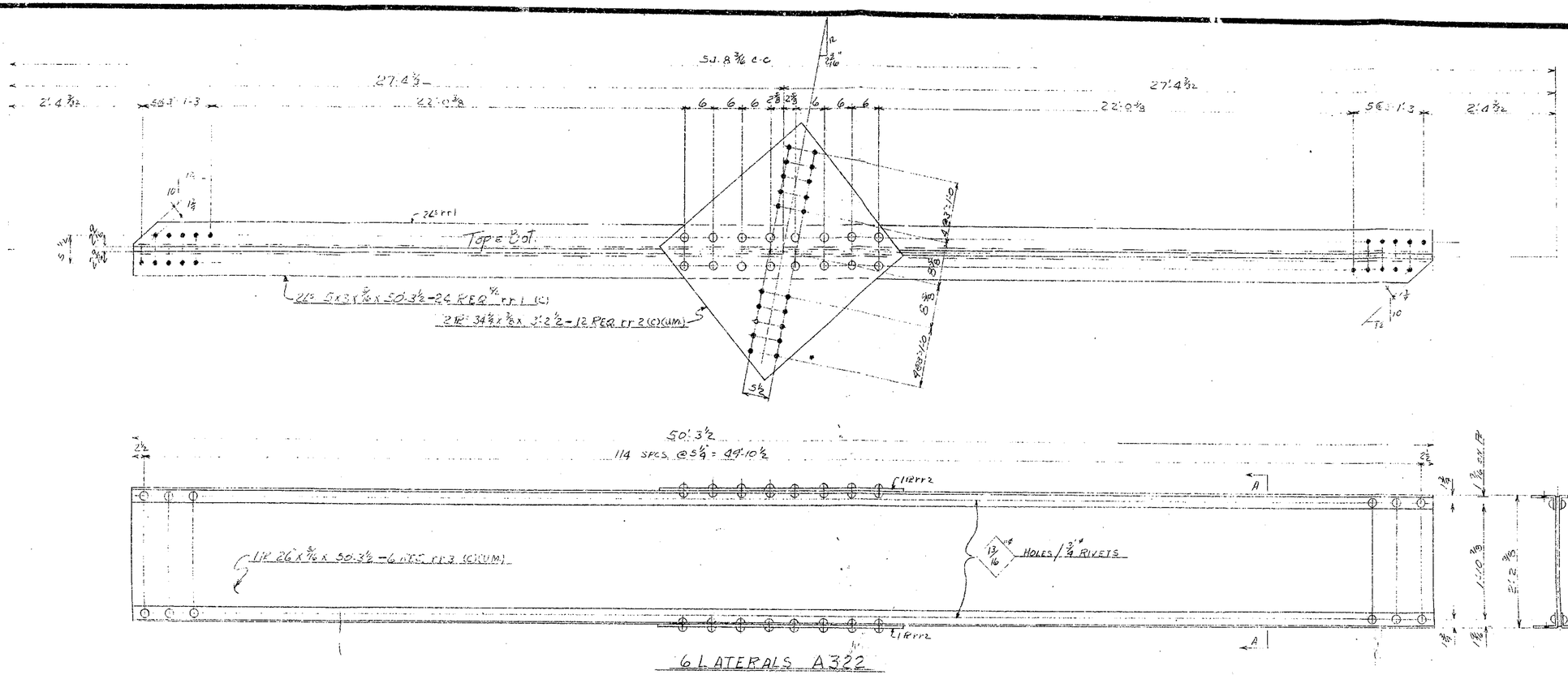
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO: 2

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

APPROVED BY 10/12/59
L. P. Carlson
Bridge Design Engineer

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4803 Sh. 323 of (A)

247



SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF; CONSULTING ENGINEERS

GENERAL NOTES

Rivets 3/4" ø except as noted
Holes 13/16" ø except as noted
End Distance 1 3/8" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by L.A.M. 5-12-59
Checked by ALF 7/30/59
Revisions

APPROVED BY L.P. Carlson 9/24/59
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 9/24/59

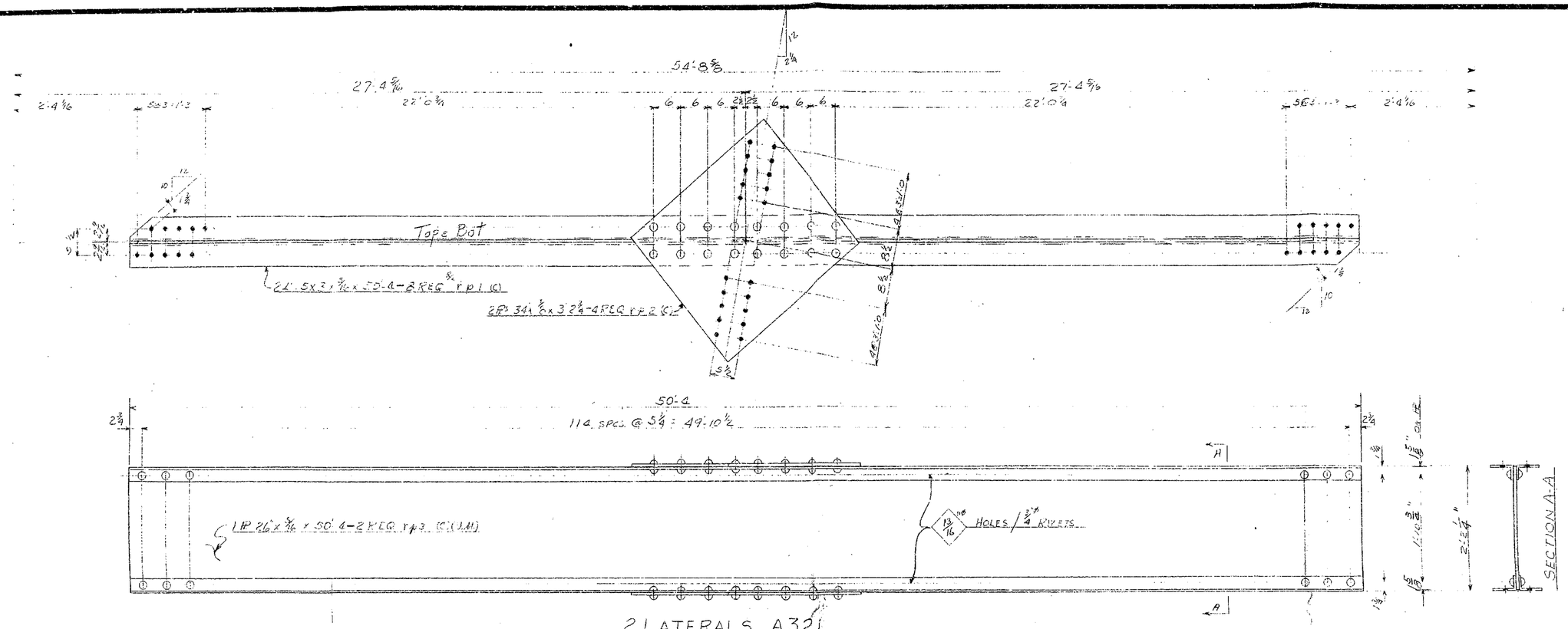
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

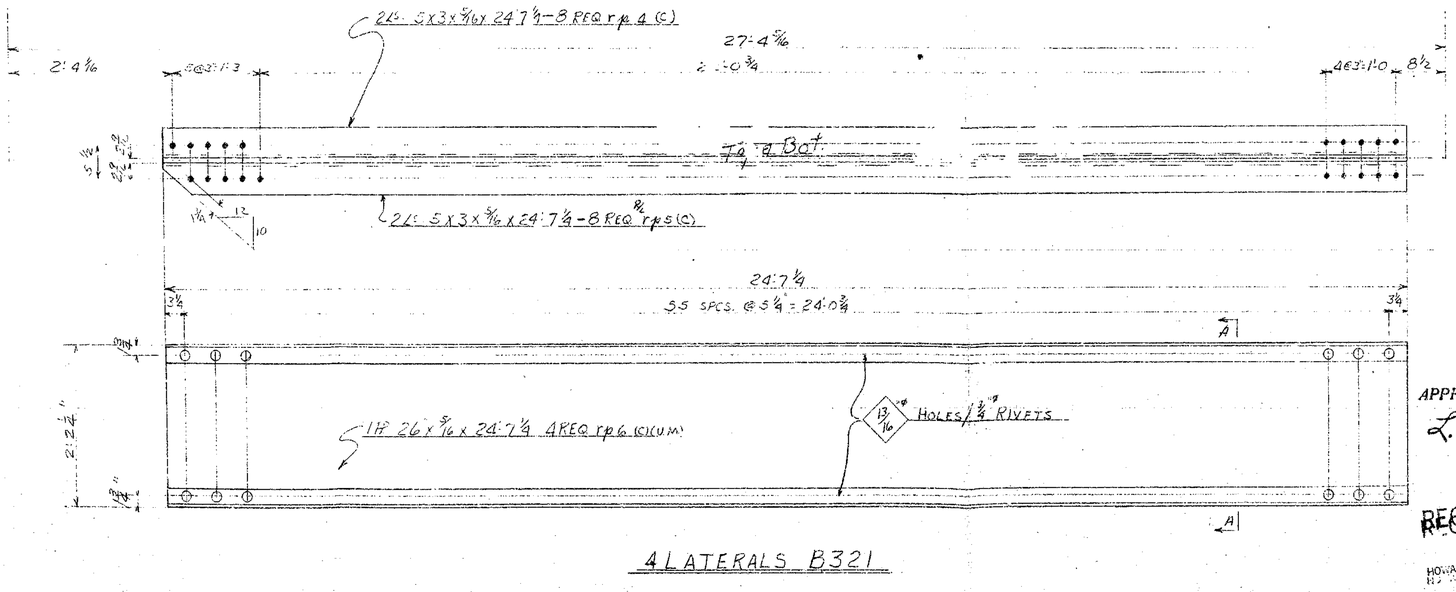
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 2

SOLD TO: JOHN F. ISELEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND. DIV. OF INDUSTRIAL ENTERPRISES, INC. CONTRACT NO. 4800 Sh. 322 of

246





SEE NOTE SH #1

APPROVED BY: HOWARD NEEDLES
TAMMEN & BERGENDUFF
CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by RIVETS
Field Connections
Drawn by L.A.M. 5-12-59
Checked by auy 7-30-59
Revisions

APPROVED BY 9/28/59
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDUFF
BY HFC DATE 9/24/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 2

SOLD TO: JOHN F. BEASLEY CONSTR CO
CHICAGO ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND. Contr. No. 4800 Sh 321 of

245

U24 U25 U16 U15

2 LS 5x3x5/16 x 46'-6 1/2 - 4 Req R L rn14 (c)

2 LS 5x3x5/16 x 46'-0 1/2 - 4 REQ R L rn1 (c)

2 PL 34 1/2 x 5/8 x 3'-1 1/2 - 4 REQ rn2 (c)

2 LS 5x3x5/16 x 2'-1 - 8 Req R L R L rn15 (c)

2 LS 5x3x5/16 x 2'-7 - 8 Req R L R L rn17 (c)

MARK TOP

1 PL 26 x 5/16 x 46'-0 1/2 - 2 REQ rn3 - (c) (U.M.)

107 SPCS @ 5" = 45'-8 1/2"

@ W.L. TC

HOLES / 13/16" RIVETS

1 PL 26 x 5/16 x 2'-7 - 4 Req rn16 (c)

SECTION A-A

2 LATERALS A320

2 LS 5x3x5/16 x 23'-9 1/4 - 4 REQ rn4 (c)

2 LS 5x3x5/16 x 23'-9 1/4 - 4 REQ rn5 (c)

1 BTL 4x4x3/8 x 1'-6 1/2 - 4 REQ rn6 (c)

MARK TOP

1 PL 26 x 5/16 x 24'-2 7/16 - 2 REQ rn7 (c) (U.M.)

HOLES / 13/16" RIVETS

2 LATERALS AS SHOWN AND NOTED "B320"

2 LS 8x5x1/2 x 10' 4 REQ rn9 (c)

SEE NOTE SH "1"

23'-11 7/16 on D320

23'-9 7/8 on E320

19'-5 7/16

4'-2 7/8 on D320

4'-0 1/4" on E320

FILL WITH WELD

WF 27" @ 94" x { 23'-7 7/8 - 1 REQ. rn21 (c) on D320 / 23'-5 1/4 - 1 REQ rn11 (c) on E320 }

2 LS 4x4x3/8 x 1'-1 1/2 - 8 REQ rn12 (c)

2 LS 8x8x1/2 x 1'-10 3/4 - 4 REQ rn10 (c)

2 PL 12" x 1/2 x 2'-0 - 4 REQ rn13 (c)

Mill flanges to bear

ONE WIND SHEAR D320 V @ U25

ONE WIND SHEAR - E320 V @ U15

APPROVED BY: HOWARD NEEDLES TAMMEN & BERGENDOFF - CONSULTING ENGINEERS 9/28/59

APPROVED BY: RECOMMENDED FOR APPROVAL L.A.M. AS 12-14-59

Bridge Design Engineer

BY [illegible] DATE 9-11-59

GENERAL NOTES

Rivets 7/8" except as noted

Holes 13/16" except as noted

End Distance 1 1/2" unless noted

Shop Paint RED LEAD (ARK STD)

Contact Surfaces NO PAINT

Shop Inspection by RIVETS

Field Connections [illegible]

Detailed by [illegible]

Checked by [illegible] NEEDLES, TAMMEN & BERGENDOFF

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE

NEAR HELENA, ARKANSAS

UNIT No 2

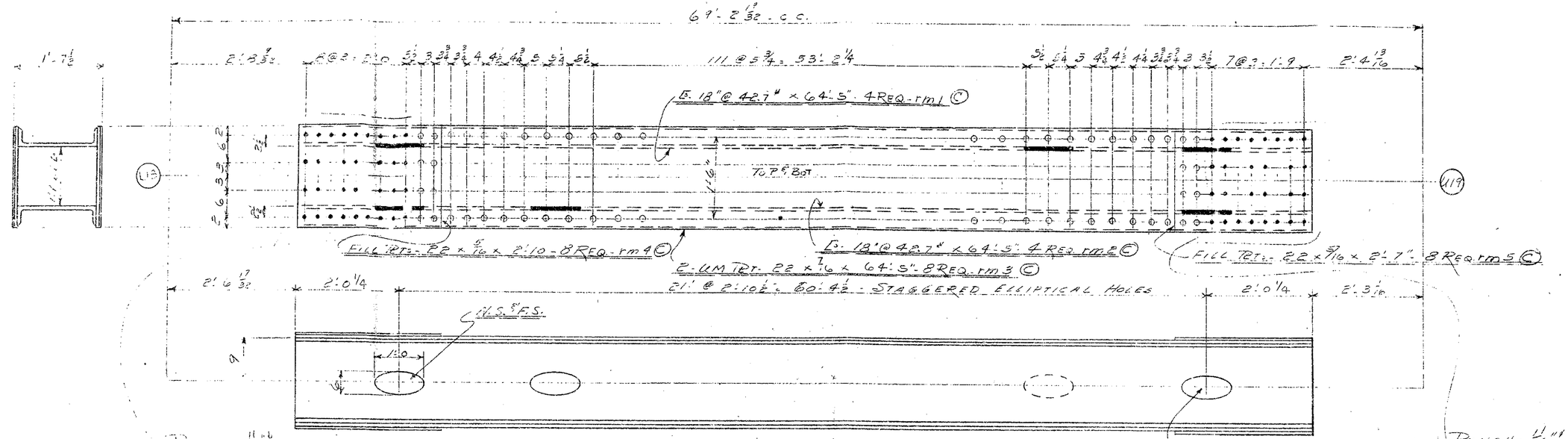
SOLD TO: JOHN F. BEASLEY CONSTR. CO.

CHICAGO, ILLINOIS

BOOK No. 8

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

Contr. No. 4800-F Sh. 320 of



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 9-29-59
SEE NOTE SHEET

APPROVED BY: HOWARD, NEEDLES, TAMMEN, & BERGENDOFF: CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T.
Checked by alj 7/30/59
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWY COMMISSION

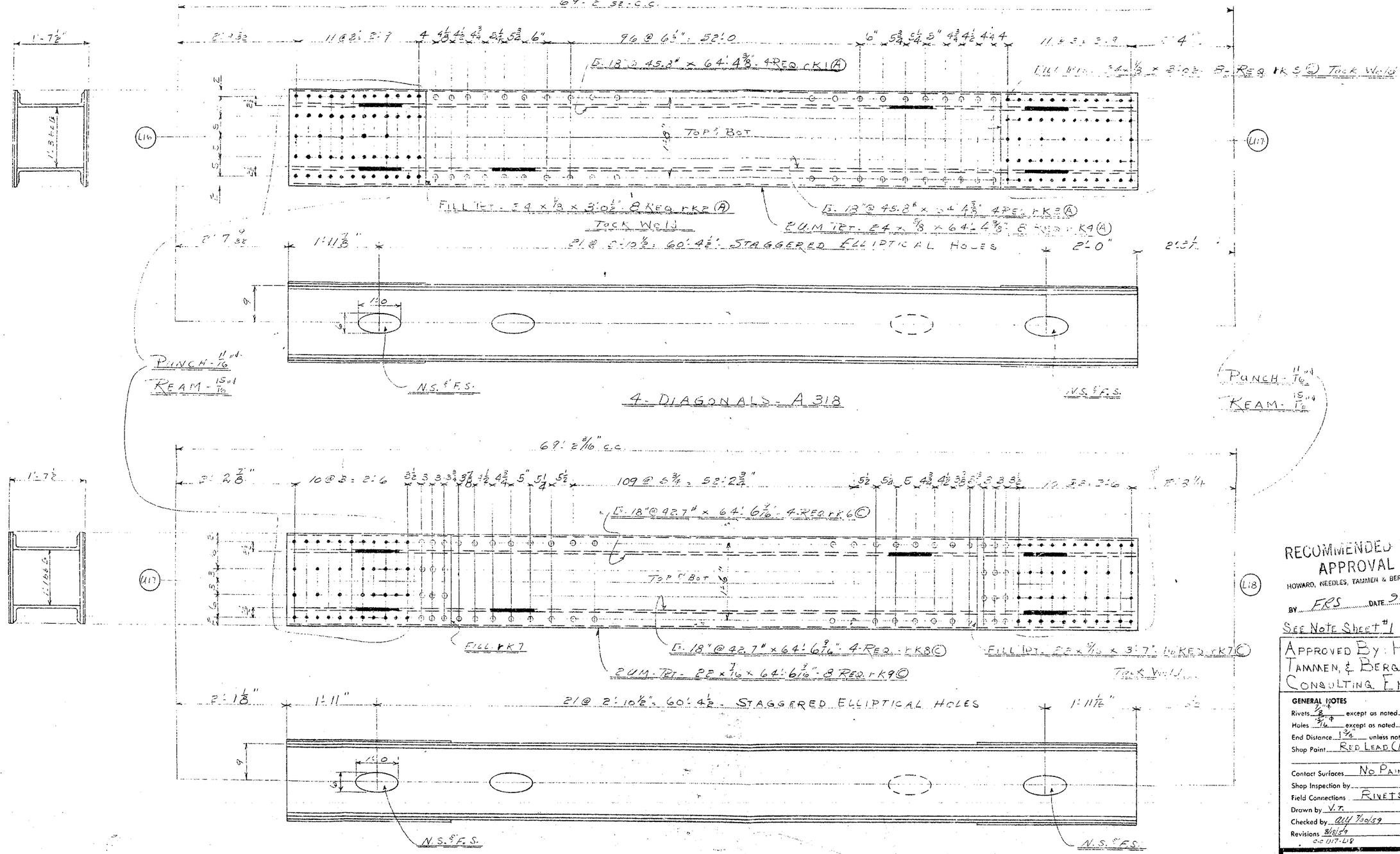
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No: 2

SOLD TO JOHN F. FOEASLEY CONSTR CO.
CHICAGO, ILLINOIS

APPROVED BY 10/1/59
L.P. Carlson
Bridge Design Engineer

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 319 of

243



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 9-29-59.

SEE NOTE SHEET #1

APPROVED BY: HOWARD NEEDLES TAMMEN & BERGENDOFF; CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8 except as noted
Holes 15/16 except as noted
End Distance 1 3/4 unless noted.
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T.
Checked by ALY 7/30/59
Revisions 8/8/59 O-S U17-L18

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

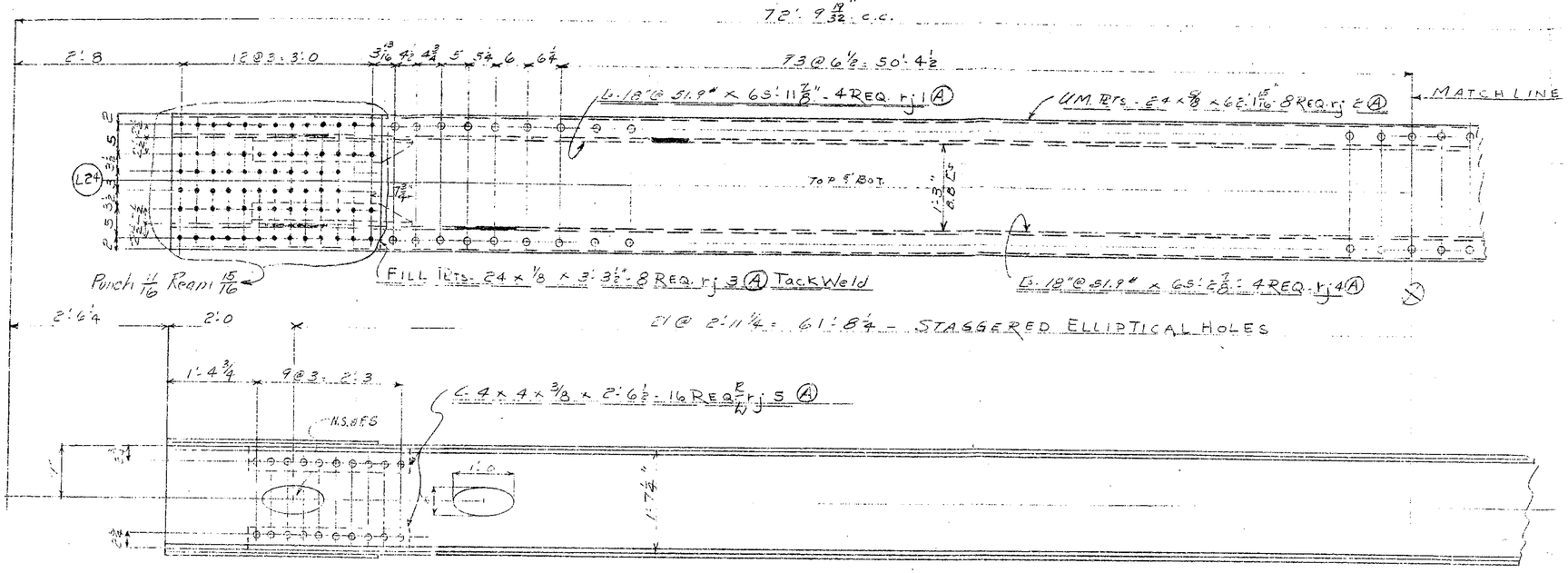
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO: 2

SOLD TO: JOHN F. BEASLEY CONSTR CO.
CHICAGO, ILLINOIS

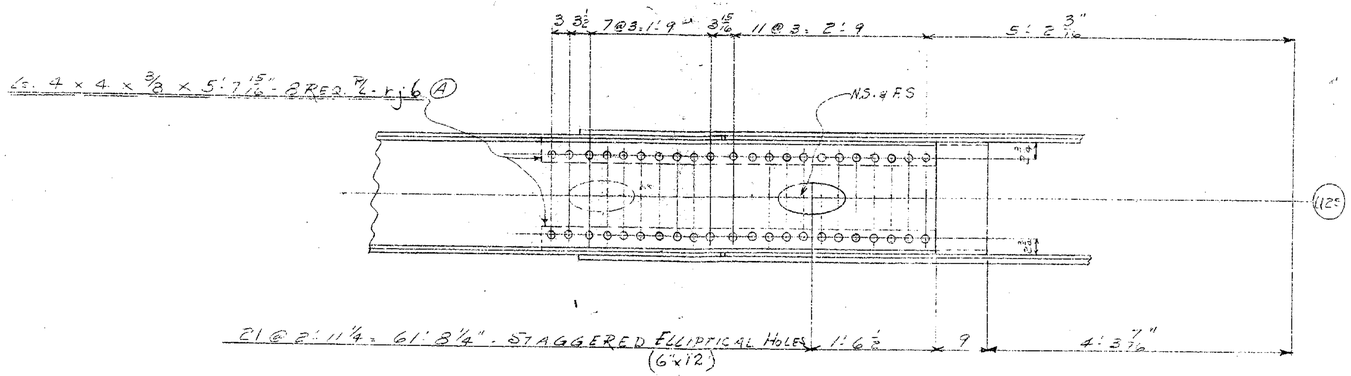
APPROVED BY 10/1/59
L.P. Carlson
Bridge Design Engineer

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800 Sh. 318 of

242



WORK WITH SHEET # 316



SECTION - DD - SHEET # 316

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY ERS DATE 9-22-59

SEE NOTE SHEET # 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF; CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ø except as noted.
Holes 15/16" except as noted.
End Distance 1 3/4" unless noted.
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T.
Checked by ALF 7-30-59
Revisions 8/26/59 CC. 15-116 L.S. 624

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT No: 2

SOLD TO: JOHN F. KENNEDY CONSTR. CO.
CHICAGO, ILLINOIS.

APPROVED BY 10/1/59
L. P. Carlson
Bridge Design Engineer

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 317 of

AUG. 21

SECTION-BB

SECTION-CC

SECTION AA

2 - DIAGONALS-AS SHOWN - A316

2 - DIAGONALS-TO PAIR - AA316

WORK WITH SHEET #317

SEE NOTE SHEET #1

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY 9" G.A. DATE 10-14-60

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 10/19/59

GENERAL NOTES
Rivets 7/8" ø except as noted.
Holes 15/16" except as noted.
End Distance 1 3/4 unless noted.
Shop Paint. RED LEAD (ARK. STD.)
Contact Surfaces No PAINT
Shop Inspection by
Field Connections APPROVED BY 10/17/60
Drawn by V.T.
Checked by 7/27/60 L.P. Carlson
Revisions 8/5/59 10-1-59 Bridge Design Engineer
CORRECTED AS PER B.M. and

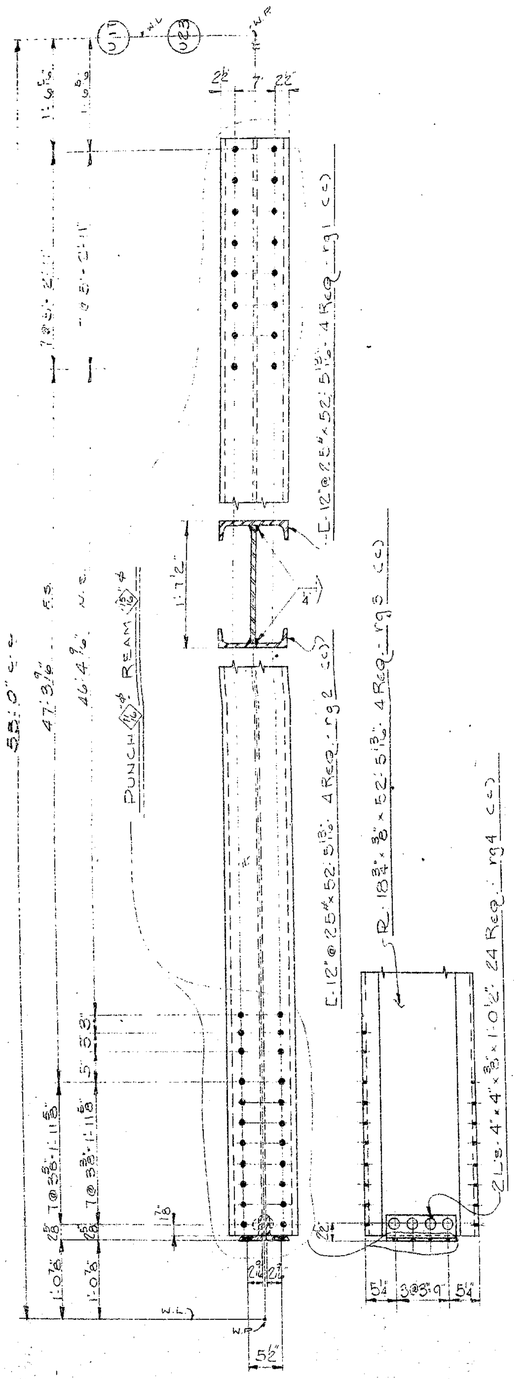
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

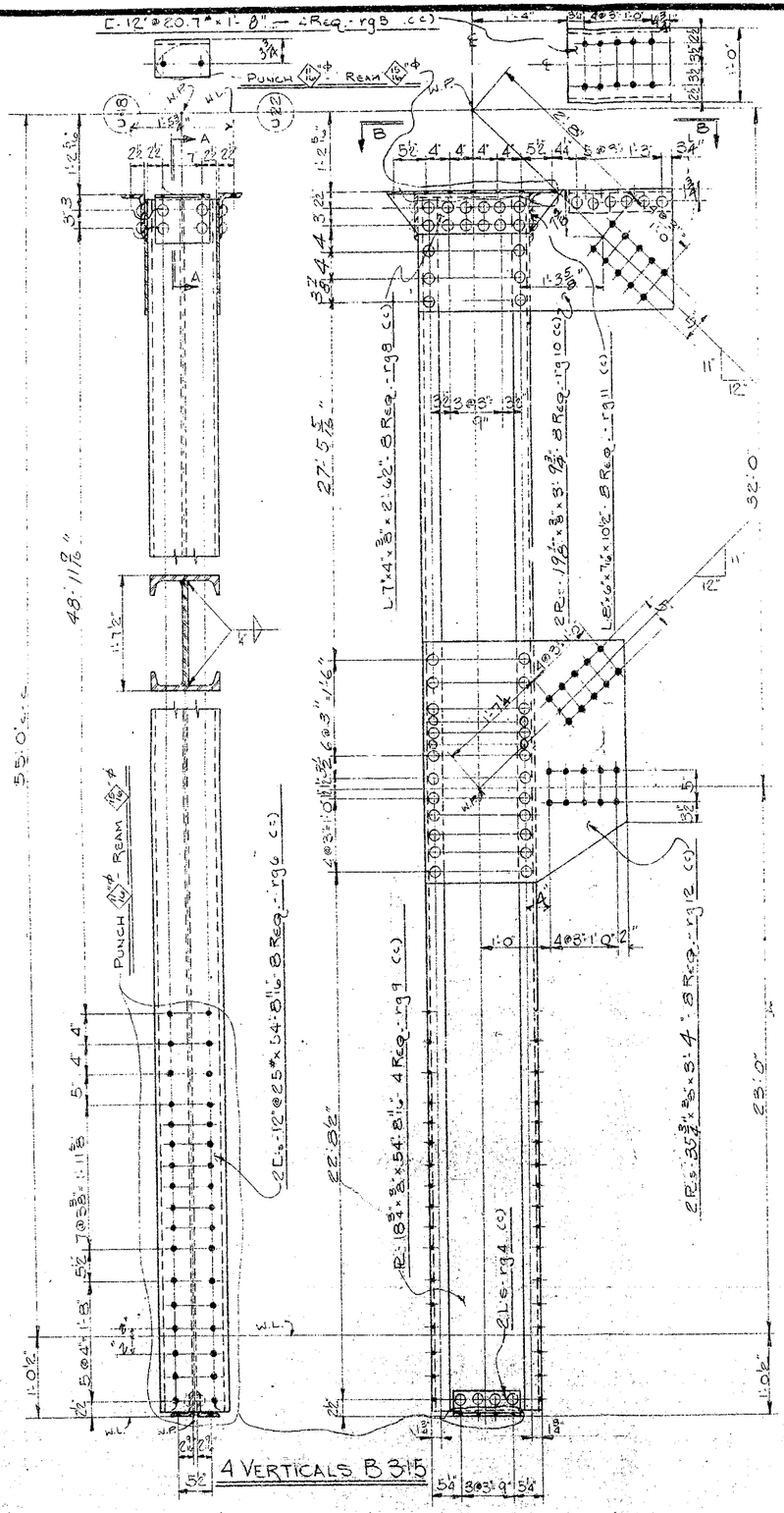
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT, No 2

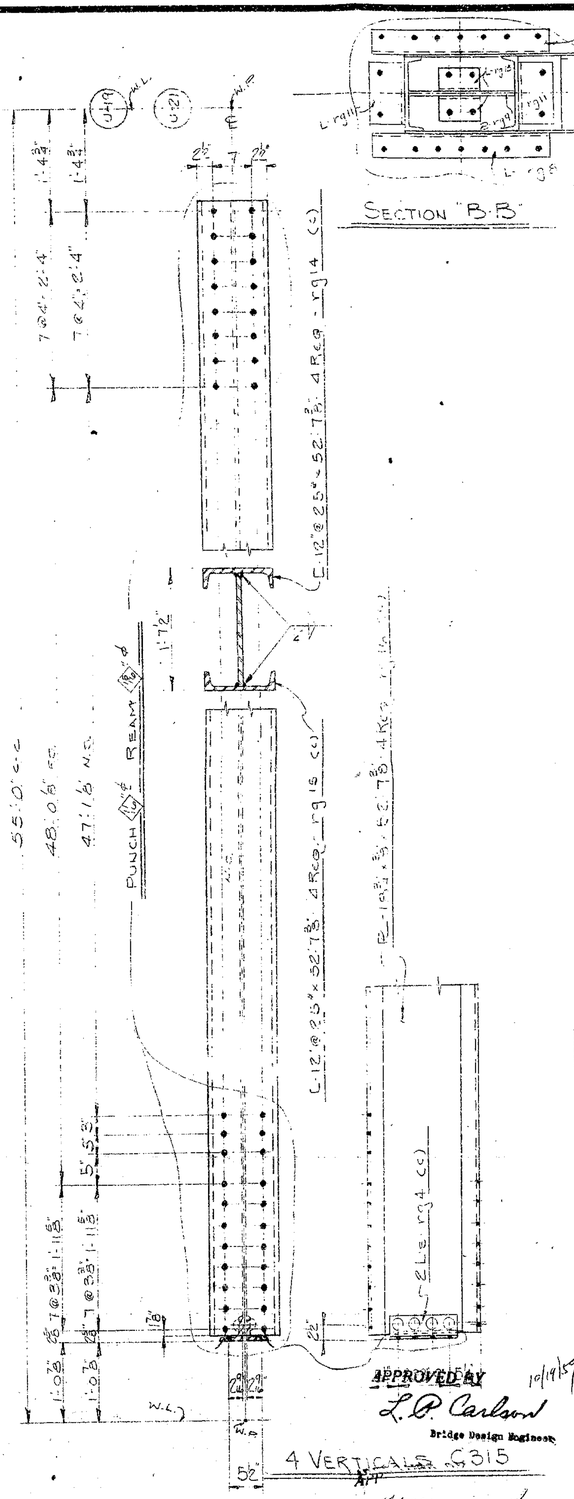
SOLD TO: JOHN E. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

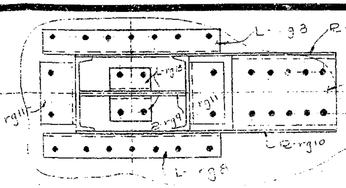
SHOP VINCENNES STEEL CORP. VINCENNES, IND.

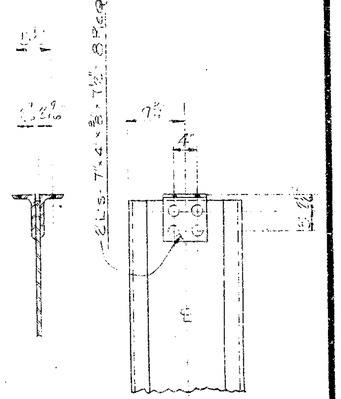
Contr. No. 4800 Sh. 316 of











RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 10-12-59

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4" unless noted.
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by KW 5-15-59
Checked by CWF 7/29-59
Revisions 10/1/59

APPROVED BY L.P. Carlson Bridge Design Engineer 10/19/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 2

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800 Sh. 315 of

A

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SECTION "A-A"

SECTION "B-B"

SECTION "C-C"

ONE VERTICAL AS SHOWN, AS NOTED A314 & VID
ONE VERTICAL TO PAIR AA314 & U5

2 VERTICALS AS SHOWN C314
2 VERTICALS TO PAIR CA314

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY: DATE: 9-8-59
APPROVED BY 9/15/59 BOOK No. 7
L. P. Carlson
Bridge Design Engineer

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 9-29-59

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by KW 5-12-59
Checked by ALH 7/21/59
Revisions 9/24/59 F.O. Sht. A-314

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE NEAR HELENA, ARKANSAS
UNIT No. 2
SOLD TO: JOHN F. BEASLEY CONSTR. CO. CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES INC. VINCENNES, IND.
CONTR. NO. 4809
Sh. 314 of

238

Punch $\frac{11}{16}\phi$
Ream $\frac{15}{16}\phi$

UMR - 31 x $\frac{11}{16}$ x 84'-0 $\frac{7}{16}$ - 2 Req'd Rel ⑧

R - 19$\frac{3}{4}$ x $\frac{3}{8}$ x 6'-1$\frac{3}{4}$ - 2 Req'd Rel ⑨

88 Spcs @ 4$\frac{1}{2}$ = 33'-0

L 4 x 4 x $\frac{5}{8}$ x 3'-3 - 8 Req'd Rel ⑧ Tack weld

Fill - 5 x $\frac{11}{16}$ x 16 - 8 Req'd Rel ⑧

Punch $\frac{11}{16}\phi$
Ream $\frac{15}{16}\phi$

1" x 2'-4$\frac{1}{2}$" SLOT IR

42'-0 $\frac{7}{32}$ c/c

94 Spcs @ 4$\frac{1}{2}$ = 35'-3

Fill - 4 x $\frac{5}{8}$ x 10$\frac{3}{4}$ - 8 Req'd Rel ⑤

Tapls - 4 x 4 x $\frac{3}{8}$ x 84'-0 $\frac{7}{16}$ - 4 Req'd Rel ③

UMR - 24 x $\frac{3}{8}$ x 84'-0 $\frac{7}{16}$ - 4 Req'd Rel ④

Bott L - 4 x 4 x $\frac{3}{8}$ x 84'-0 $\frac{7}{16}$ - 4 Req'd Rel ⑥

2 UPPER CHORDS - A 313-

86 Spcs @ 4$\frac{1}{2}$ = 32'-3

9 Spcs @ 3'-4 = 30'-0

ELLIPTICAL HOLES 9 x 1'-6

UMR - 31 x $\frac{11}{16}$ x 82'-3$\frac{7}{16}$ - 2 Req'd ⑦

IR - 21$\frac{1}{4}$ x $\frac{3}{8}$ x 6'-1$\frac{3}{4}$ - 2 Req'd Rel ⑨

IR - 21$\frac{1}{4}$ x $\frac{3}{8}$ x 2'-1 - 2 Req'd Rel ⑩

2 Lgs - 4 x 3$\frac{1}{2}$ x $\frac{5}{16}$ x 11'-3$\frac{1}{2}$ - 12 Req'd Rel ⑫
2 Inc Gs - 0'-1$\frac{1}{2}$ - 5$\frac{1}{2}$ Spcs (TYP)

IR - 20$\frac{7}{8}$ x $\frac{3}{8}$ x 2'-0$\frac{1}{2}$ - 2 Req'd Rel ⑬

2 Lgs - 4 x 3$\frac{1}{2}$ x $\frac{5}{16}$ x 1'-3$\frac{1}{2}$ - 4 Req'd Rel ⑭

RIVET F.S.

APPROVED BY 9/15/60
L. P. Carlson
Bridge Design Engineer

BOOK No. 7

See Note Sh #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 9-29-59

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY Punch $\frac{11}{16}\phi$ Ream $\frac{15}{16}\phi$ DATE 4-8-60

GENERAL NOTES
Rivets $\frac{7}{8}$" ∅ except as noted.
Holes $\frac{15}{16}$" ∅ except as noted.
End Distance 1$\frac{3}{4}$" unless noted.
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by B B
Checked by ALL 7/29/59
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No 2

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
A DIV. OF INDUSTRIAL ENTERPRISES, INC.
Contr. No. 4800 Sh. 313 of

237

Work with SH-311

Mill

Ellipitical Holes 9 x 1 1/16

Punch 11/16 Ream 15/16

Fill. 4 x 5/8 x 8 1/8 - 5 Req'd rd 13

L 4 x 4 x 5/8 x 3'-2" - 2 Req'd rd 12

Bar - 5 x 1/2 x 5'-1 4 Req'd rd 11

1" x 2'-5 5/8 Slot 12

PL 1/2 x 11/16 x 10 1/4 Slots rd 10

Bar - 5 x 1/2 x 2'-10 - 5 Req'd rd 4

PL 1/2 x 3 1/2 x 2'-10 - 4 Req'd rd 3

PL 1/2 x 3 1/2 x 1'-6 1/2 - 5 Req'd rd 2

PL 1/2 x 3 1/2 x 1'-6 1/2 - 8 Req'd rd 1

Bolts 1/8 A313

Stock No. 7

See Note 16 #1

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY GA DATE 10-14-60

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 9-29-59

APPROVED BY L.P. Carlson Bridge Design Engineer 10-7-60

GENERAL NOTES

Holes 7/8 except as noted

15/16 except as noted

End Distance 1 3/4 unless noted.

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by BJG

Checked by [illegible]

Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

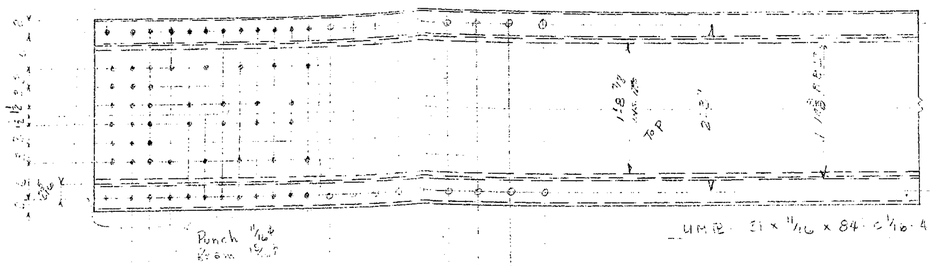
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 2

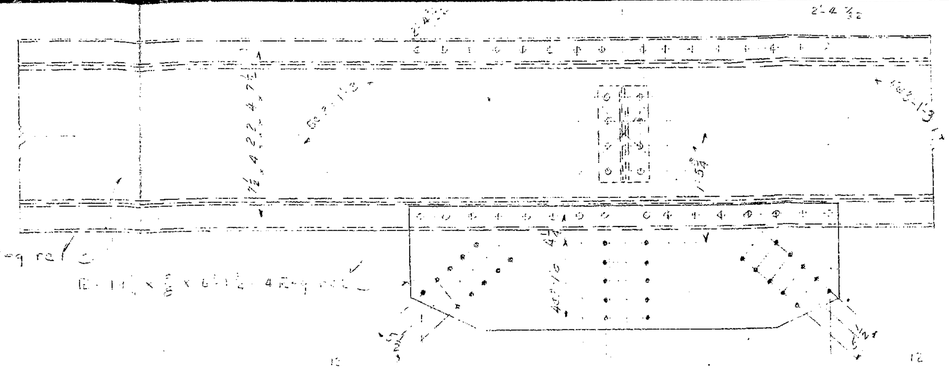
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

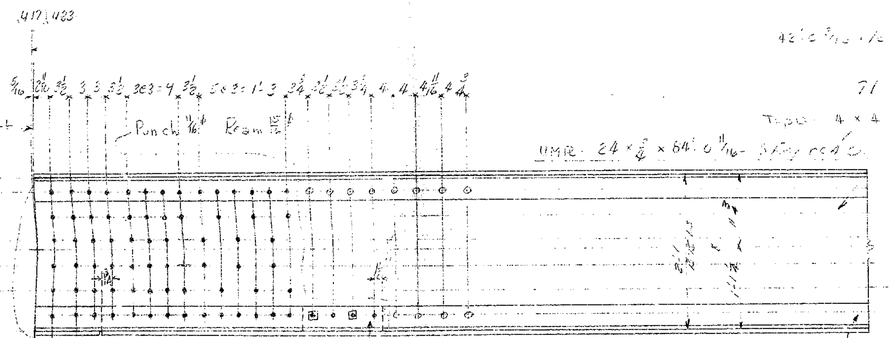
SHOP VINCENNES STEEL CORP. VINCENNES, IND. DIV. OF INDUSTRIAL ENTERPRISES, INC.

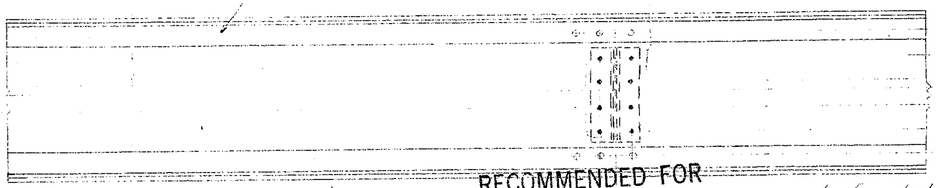
Contr. No. 4800 Sh. 312 of

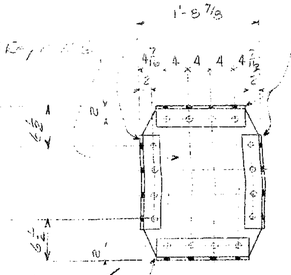
236

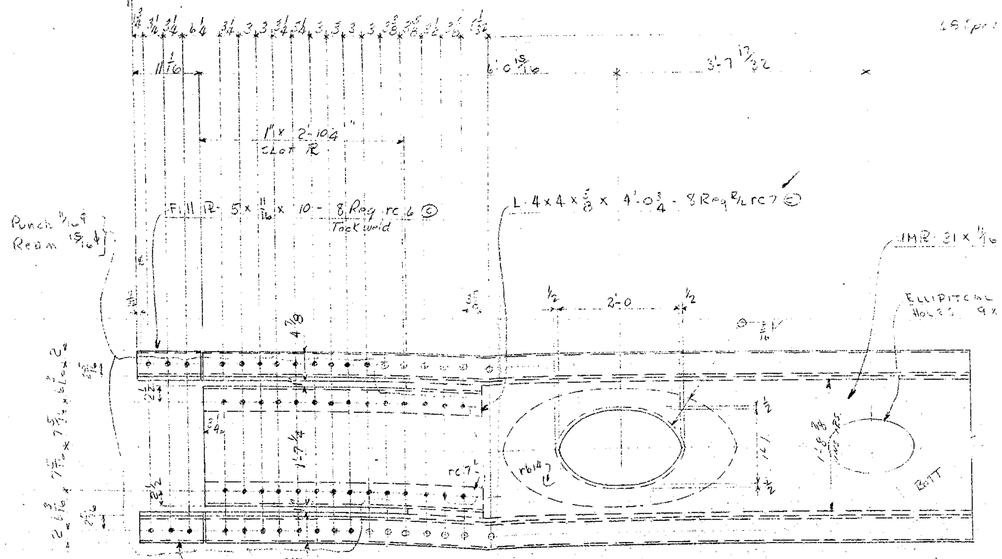


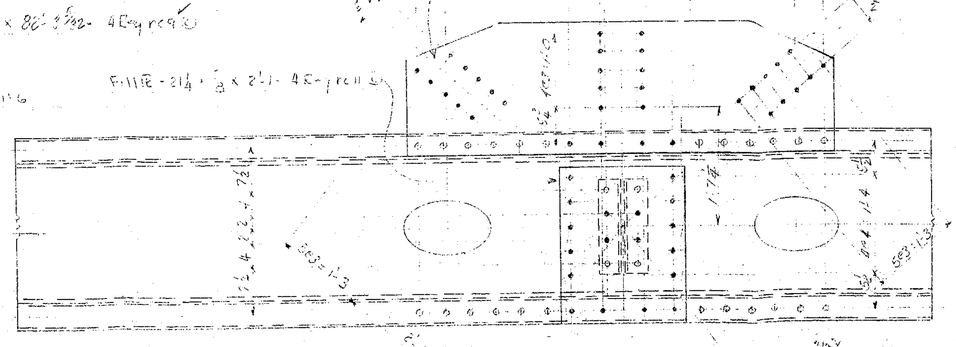












RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY GA DATE 10-14-59

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 9-29-59

APPROVED BY 10/17/59
L.P. Carlson
Bridge Design Engineer

GENERAL NOTES
Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint. RED LEAD (ARK. STD.)
Contact Surfaces No PAINT
Shop Inspection by
Field Connections
Drawn by GB
Checked by
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 2
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
DIV. OF INDUSTRIAL ENTERPRISES INC.
Contr. No. 4505
Sh. 311 of

235

Fill Bar - 46 1/2 x 1/2 x 6'-5" - 4 Req'd rb1 ©

Fill Bar - 19 x 3/8 x 1'-10 - 4 Req'd rb2 ©

44 spaces @ 4 1/2" = 55'-3"

Fill Bar 3 x 1/4 x 1'-2 - 8 Req'd rb6 ©

Fill Bar - 16 x 1/8 x 2'-2 15/16 - 3 Req'd rb7 ©

42'-0 13/16 c to c

44 spaces @ 4 1/2" = 55'-3"

Fill Bar 4 x 5/8 x 1'-2 1/4 - 8 Req'd rb9 ©

Fill Bar - 3 x 1/4 x 1'-2 9/16 - 8 Req'd rb8 ©

Angle - 4 x 3 1/2 x 5/16 x 1'-6 1/2 - 8 Req'd rb15 ©

WORK WITH SH. 309

PL - 20 3/4 x 3/8 x 2'-0 - 4 Req'd rb16 ©

2 L's - 4 x 3 1/2 x 1/2 x 1'-3 1/2 - 1 Req'd rb17

2 L's - 4 x 3 1/2 x 5/16 x 1'-3 1/2 - 8 Req'd rb18 ©

DIAPHRAGM AT U17-U23

PL - 19 3/4 x 3/8 x 6'-10 - 4 Req'd rb10 ©

L - 4 x 4 x 3/8 x 4'-10 3/4 - 8 Req'd PL rb13 ©

PL - 20 x 5/8 x 3'-4 - 16 Req'd rb14 ©

91 Spaces @ 4 1/2 = 34'-1 1/2

ELLIPTICAL HOLES 9 x 1 1/2

Fill Bar 5 x 1/4 x 1'-10 - 8 Req'd rb11 ©

Fill Bar - 5 x 1/4 x 2'-10 - 8 Req'd rb12 ©

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 9-25-59

Sh. U.L. Sh. #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" except as noted
End Distance 1 1/2" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections
Drawn by GB
Checked by AHH 9/29/59
Revisions 9/18/59 ACCEPTED

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 2

SOLD TO: JOHN T. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

APPROVED BY L. P. Carlson 9/24/59
Bridge Design Engineer

SHOP VINCENNES STEEL CORP. A DIV. OF INDUSTRIAL ENTERPRISES INC. VINCENNES, IND.
CONTR. NO. 4800
Sh. 310 of
USE THIS SHEET

234

Punch 11/16 ϕ
Ream 15/16 ϕ

L-4 x 4 x 3/8 x 6'-1 15/16" - 8 Req'd rail ©
Bolt to ship

UMR - 31 x 5/8 x 82'-1 13/16 - 4 Req'd rail ©

R - 19 3/4 x 3/8 x 6'-1 3/4 - 4 Req'd rail ©

1 Plt 3 7/8 x 3/8 x 5'-6 7/16
4 Req'd rail (c)

80 Spcs @ 4 1/2 = 30'-0

42'-0 3/16 c/c

U45 U425

84 Spcs @ 4 1/2 = 31'-6"

Top L - 4 x 4 x 5/8 x 82'-1 1/2 - 8 Req'd rail ©

U46 U424

2 L 4 x 3 1/2 x 5/16 x 1'-3 1/2 - 24 Req'd rail ©

Rivet F.S.

Punch 11/16 ϕ
Ream 15/16 ϕ

Fill R - 4 x 3/4 x 9 1/2 - 8 Req'd rail ©

Fill R - 4 x 5/8 x 2'-4 1/2 - 4 Req'd rail ©

UMR - 24 x 5/8 x 79'-3 1/4 - 8 Req'd rail ©

Bott L - 4 x 4 x 5/8 x 82'-8 - 8 Req'd rail ©

12 - 8 3/8 x 5/8 x 2'-6 1/2 - 4 Req'd rail ©

26 - 4 x 3 1/2 x 5/16 x 1'-3 1/2 - 6 Req'd rail ©

2 Upper Chords - Shown A309
To Rule Am 30.7

Work with : 10

See Note 3 x /

BOOK No. 7.

APPROVED BY: HOWARD, NEEDLES
TAMMEN & BERGENDOFF CONSULTING
ENGINEERS: 9-25-59

APPROVED BY
9/14/60
Bridge Design Engineer

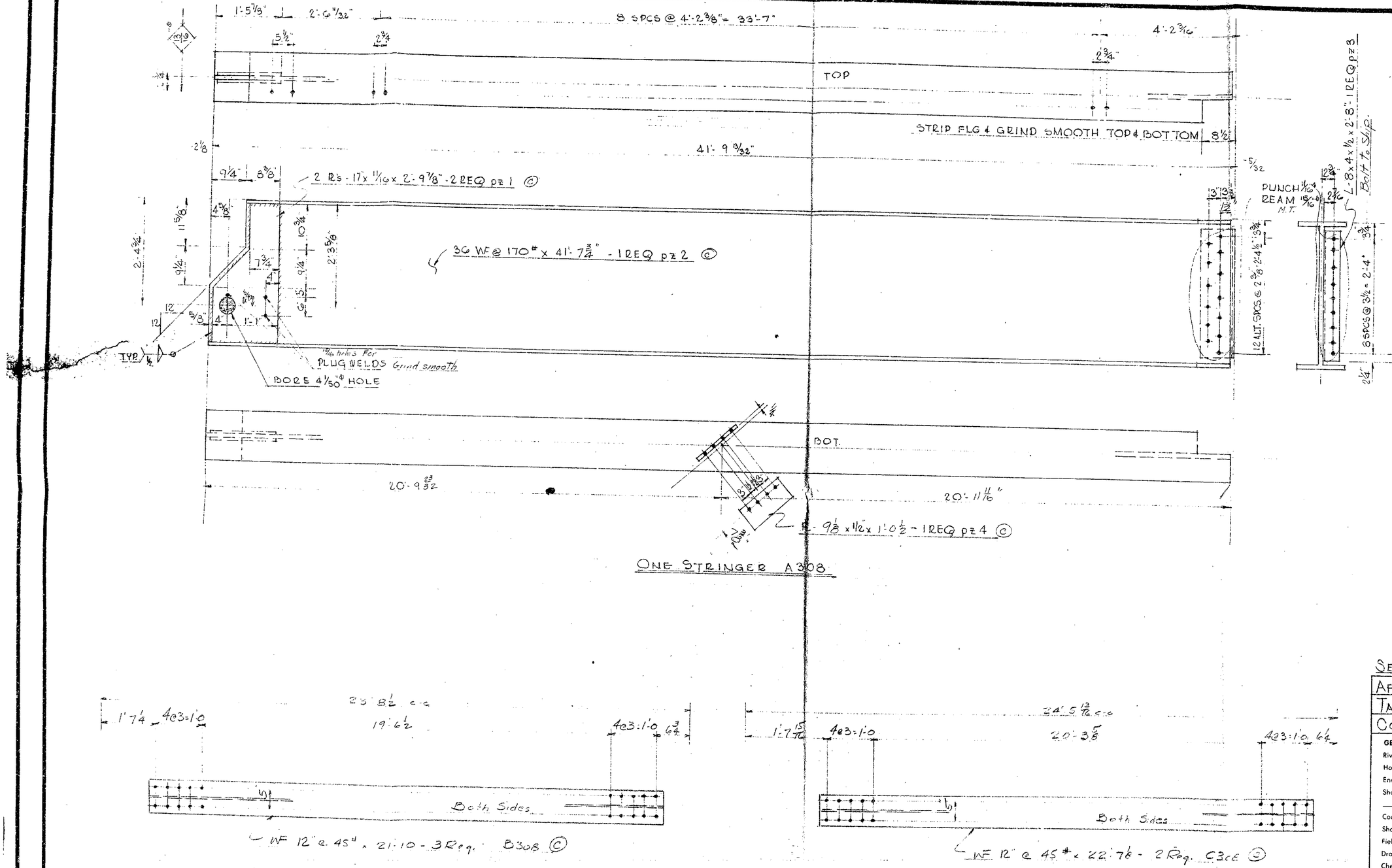
GENERAL NOTES
Rivets 7/8 except as noted
Holes 15/16 except as noted
End Distance 1 3/4 unless noted
Shop Paint RED
Contact Surfaces NO PAINT
Shop Inspection RECOMMENDED FOR
Field Connections APPROVAL
Drawn by CB
Checked by CHECKED BY NEEDLES, TAMMEN & BERGENDOFF
Revisions
BY DATE 9-12-60

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 2

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CO. VINCENNES, IND.
DIV. OF INDUSTRIAL ENTERPRISES, INC.
Contr. No. 4802 Sh. 309 of



ONE STRINGER A308

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 9-25-59

APPROVED BY 9/29/59
L.P. Carlson
Bridge Design Engineer

SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by C.A.B.
Checked by DLH 7/28/59
Revisions

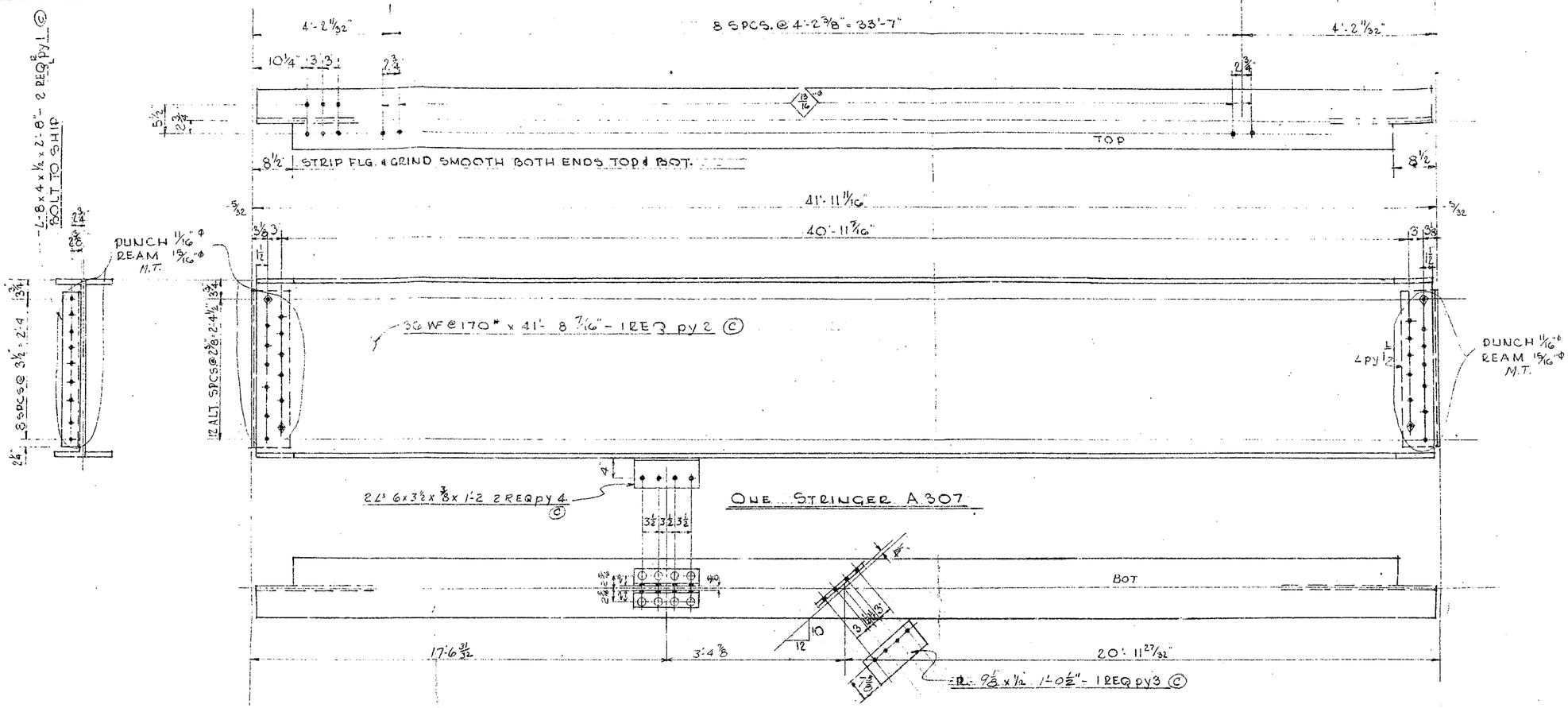
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

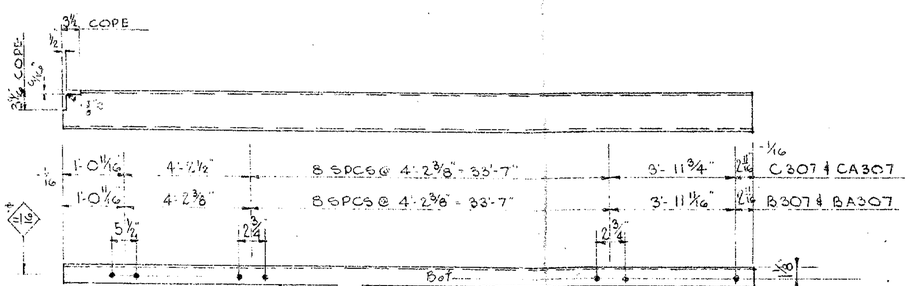
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO: 2

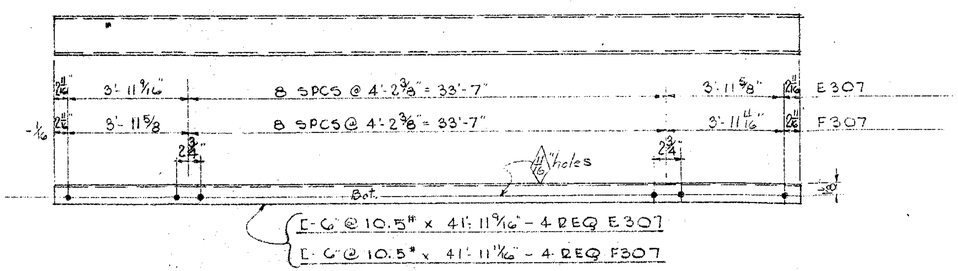
SOLD TO JOHN F. BERGLEY CONSTR. CO.
CHICAGO, ILLINOIS

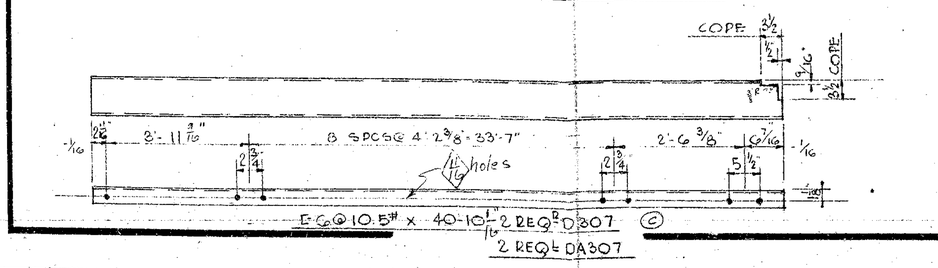
SHOP. VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 308 of

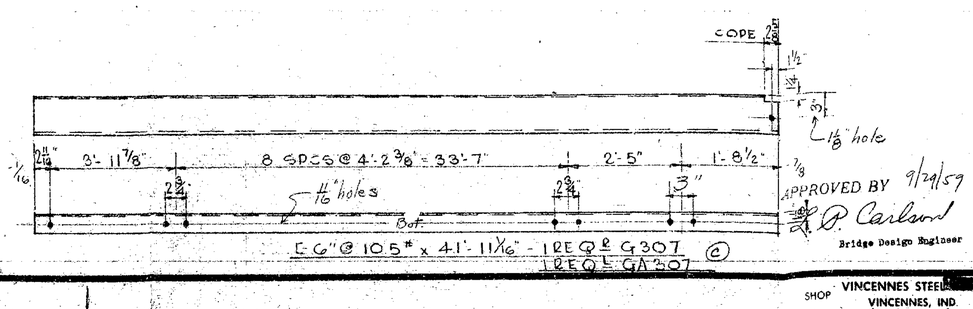
232











RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 9-25-59

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS.

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16 except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by C.A.B. APR. 30, 1959
Checked by auf 7-28-59
Revisions

APPROVED BY 9/29/59
P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT # 2

SOLD TO: JOHN F. BEASLEY CONSTR.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL [redacted] DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.
Contr. No. 4800 Sh. 307 of

231

L-6 x 6 x 7/16 x 5/16 - 3'-2 1/8 - 1 Req - p# 1 (C)

Cov PL - 16 x 1/2 x 26'-0 - 1 Req - p# 3 (C) (U.M.)

33'-3 1/8

11/16" ø Holes Ream 15/16" In Field

L-6 x 6 x 5/8 x 33'-2 1/8 - 1 Req - p# 2 (C)

Stud 7/8" ø x 4" - 12 Req - p# 4 - Ordered - S.H. Blank Bolts
Weld To Top Of Beam

Section EE
Showing Complete Beam
Symm Abt ℄ Except As Shown

33'-3 1/8 b-b Lts (Exact)

13'-0 Parabola

2 Lts 8 x 6 x 3/4 x 2'-0
4 Req 3/4 - p# 7 (C)

11/16" ø Holes - Ream 15/16" To M.T.

North

Conn

2 Lts 12 x 5/8 x 3'-2 7/8 - 4 Req - p# 5 (C)

L-7"x4"x3/4"x1'-11 1/2
2 Req - p# 8 (C)
(Tack weld F.S.)

11/16" ø Holes - Ream 15/16" To M.T.

Web PL - 54 x 5/16 x 33'-2 1/8 - 1 Req - p# 6 (C)

2 Lts - 4 x 3 1/2 x 5/16 x 4'-6 1/8 - 4 Req R/L - p# 12 (C) (Sect BB)
2 Lts - 4 x 3 1/2 x 5/16 x 4'-5 5/8 - 4 Req R/L - p# 13 (C) (Sect CC)
2 Lts - 4 x 3 1/2 x 5/16 x 4'-4 3/8 - 4 Req R/L - p# 14 (C) (Sect DD)

11/16" ø Holes - Ream 15/16" To M.T.

L-7 x 4 x 1/2 x 4'-5 1/4 - 1 Req - p# 11 (C)
Mill To Bear @ Bottom

L-7 x 4 x 1/2 x 4'-3 13/16 - 2 Req R/L - p# 17 (C)
Mill To Bear @ Bottom

Section AA

Section BB
Section CC
Section DD

All Stiff ends not marked milled to fit to exclude water after being painted.

2 Lts - 6 x 6 x 5/8 x 33'-0 1/8 - 2 Req R/L - p# 18 (C)

Cov PL - 16 x 1/2 x 26'-0 - 1 Req - p# 19 (C) (U.M.)

Holes omitted

One Floor Beam - A 306 (125)

See Notes On Sheet #1

APPROVED BY 9/15/60
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ____ DATE 9-8-60

Book No. 8

Approved By: Howard, Needles, Tammen & Bergendoff Consulting Engineers: 9-29-59

General Notes

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4" unless noted
Shop Paint Red Lead (Ark. Std.)
Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivets
Drawn by CWK 4-23-59
Checked by CLY 7/28-59
Revisions 9/24/60 (End Connection Spacing)

Arkansas State Highway Commission
Mississippi State Highway Commission

Mississippi River Bridge
Near Helena, Arkansas
Unit No. 2

Sold To: John F. Beasley Constr. Co.
Chicago, Illinois

Shop Vincennes Steel Corp. Vincennes, Ind.

Contr. No. 4800-F Sh. 306 of

230

BAR 2 1/4 x 3/4 x 8 - 6 Req - pw 3 (C)
TACK WELD

Cov. PL 16 x 1/2 x 26'-0 - 3 Req - pw 1 (C) (U.M.)

2 Ls - 6 x 6 x 5/8 x 33'-2 1/8 - 6 Req - pw 8 (C)

PL 9 7/8 x 3/8 x 1'-3 1/8 - 9 Req - pw 14 (C)

STUDS 7/8" x 4" - 36 Req - pw 4
WELD TO Ls

1'-10 1/16 | 9 @ 1'-5 7/8 | 1'-6 15/16 | 5 Spc @ 1'-6 13/16 = 7'-10 1/16 | 1'-6 13/16

Symm. ABT. & EXCEPT AS SHOWN

33'-3 1/8 b-b Lks (EXACT)

13'-0

2 Ls 8 x 6 x 3/4 x 2'-2 5/8
2 Req'd - pw 5 (C)
4 Req'd - pws 5 (C) on BA305 only

3 3 3 1/2 8 @ 2 5/8 = 1'-9 | 2 5/16 3 3 1/2 8 @ 2 3/8 = 1'-7 | 3 3/8 3 1/4 5 7/16 2 15/16 8 @ 4 = 2'-8 | 3 7/16 11 @ 3 5/8 = 3'-9 7/8 | 4 | 11 @ 3 3/8 = 3'-1 1/8 | 3 7/16 3 2 1/2 2 3/4 3

10'-11 13/16

PL WF 30 @ 210# x 2'-3 1/4" - 6 Req R/L - pw 10 (C)

PL WF 30 @ 210# x 2'-1 13/16 - 3 Req - pw 13 (C)

11/16" HOLES: REAM 15/16" TO M.T.

SOUTH

PL FR 15 1/8 x 1/2 x 1'-10 3/4
4 Req - pw 9 (C)

FILL FR 15 1/8 x 5/8 x 1'-10 3/4
4 Req - pw 9 (C)

2 - 2 Ls pw 22 Crimped

WEB R - 54 x 5/16 x 33'-2 1/8
1 Req - pw 11 (C) (AA 305)
2 Req - pw 12 (C) - (B 305 / BA 305)

{2 Ls pw 22 crimped}

FILL FR 15 1/8 x 5/8 x 1'-10 3/4
3 Req - pw 15 (C)

6 @ 4 3/4 = 2'-4 1/2 | 6 @ 4 3/4 = 2'-4 1/2 | 4 @ 3 3/8 = 1'-1 1/2 | 6 @ 4 1/2

PL FR 7/16 x 5/8 x 2'-0 7/16 - 6 Req - pw 19 (C)

BORE 4 1/50" HOLE

L - 7 x 4 x 1/2 x 4'-2 3/8 - 3 Req 1/2 - pw 20 (C)
MILL TO BEAR @ BOTTOM

FILL PL 4 x 5/8 x 3'-6 - 3 Req - pw 21 (C)

4'-6 1/2 b-b Lks
To exclude water after being painted

2 Ls - 4 x 3 1/2 x 5/16 x 4'-6 1/4 (ABT.) - 3 Req 1/2 - pw 22 (C)

2 Ls 7 x 4 x 3/4" x 1'-11 1/2
12 Req'd: R/L pw 6 (C)

AA 305
B 305
BA 305

Cope 5 1/2

2 @ 2 3/8 = 4'-9 | 8 spcs @ 2 5/8 = 1'-9 | 2 5/16 3 | 3 1/2 | 8 @ 2 3/8 = 1'-11 | 3 1/16 | 10 @ 3 5/8 = 3'-0 1/4 | 2 15/16 3 3/4 | 11 @ 3 5/8 = 3'-3 7/8 | 4 | 10 @ 3 5/8 = 3'-0 1/4 | 3 7/8 3 7/8 2 3/4

10'-10 3/4

33'-0 1/4" b-b Lks For AA 305
33'-0 5/8 b-b Lks For B 305 - BA 305

On AA 305 5 7/8"
On B 305 BA 305 5 15/16"

1 13/16 on AA 305
1 3/4 on B 305 - BA 305

7 @ 2 = 1'-2 | 2'-0

6 @ 3 = 1'-6 2 11/16 | 10 @ 3 5/8 = 3'-0 1/4 | 2 15/16 3 3/4 | 11 @ 3 5/8 = 3'-3 7/8 | 4 | 7 @ 4 = 2'-4

L - 6 x 6 x 5/8 x 32'-11 3/4" - 1 Req - pw 17 (C) (AA 305)
x 32'-11 3/8 - 2 Req - pw 18 (C) - (B 305 - BA 305)

L - 6 x 6 x 5/8 x 32'-11 3/8" - 2 Req R/L - pw 27 (C) - B 305 - BA 305
x 32'-11 1/4" - 1 Req L - pw 28 (C) - AA 305

ONE FLOOR BEAM TO PAIR NOTED - AA 305 (L15)
ONE FLOOR BEAM AS SHOWN & NOTED - B 305 (L18)
ONE FLOOR BEAM TO PAIR & NOTED - BA 305 (L22)

OPEN HOLES IN AA 305

BORE 4 1/50" HOLE

2 PL 7 7/16 x 5/8 x 2'-2 - 12 Req - pw 23 (C)

L - 7 x 4 x 1/2 x 4'-2 3/8 - 6 Req 1/2 - pw 25 (C)
MILL TO BEAR @ BOTTOM

FILL PL 4 x 5/8 x 3'-6 - 6 Req - pw 24 (C)

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 9-25-59
SECTION BB

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by CWK 4-21-59
Checked by AJH 7-28-59
Revisions

APPROVED BY 9/29/59
SECTION A. A. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 2

SOLD TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.
Contr. No. 4800 Sh. 305 of

228
229

Cov PL - 16 x 1/2 x 26'-0 - 7 Req - pv 1 (C) (U.M.)

2 Ls - 6 x 6 x 5/8 x 33'-2 1/8 - 14 Req - pv 2 (C)

PL - 16 3/4 x 5/8 x 2'-2 - 14 Req - pv 7 (C)

Symm Abt ℄ Except As Shown

33'-3 1/8 b.b.ls (Exact)

13'-0

10'-11 13/16

2 Ls 8 x 6 x 1/4 x 2'-2 5/8 - 28 Req'd - pv 3 (C)

2 Ls 7"x4"x3/4" x 1'-11 1/2" - 28 Req'd - pv 4 (C)

South

Core A304 B304

2 PL 12 x 5/8 x 3'-6" - 12 Req - pv 5 (C) A304 - 16 Req - pv 6 © B304

11/16" ϕ Holes - Ream 15/16" ϕ To M.T.

Web PL - 54 x 5/16 x 33'-2 1/8 - 3 Req - pv 8 (C) A304 - 4 Req - pv 9 © B304

2 Ls pv 21 R/L Crimp

Cov PL - 16 x 1/2 x 26'-0 - 7 Req - pv 12 (C) (U.M.)

2 Ls - 6 x 6 x 5/8 x 32'-11 3/8 - 6 Req R/L - pv 13 (C) - A304
x 33'-0 1/2 - 8 Req R/L - pv 14 (C) - B304

33'-0 3/8 b.b.ls For A304
33'-1 1/8 b.b.ls For B304

Ship L-6 @ 12# x 1'-4 3/4 - 14 Req - pv 10 (C)

Stiff PL - 2 1/8 x 3/8 x 5 1/4 - 70 Req - pv 11 (C) Weld

On A304
On B304

Section CC

3 Floor Beams As Noted - A304 (216-220-224)

4 Floor Beams As Noted B304 (217-219-221-223)

Section AA

Section BB

2 Ls - 7 x 4 x 1/2 x 4'-5 1/4 - 14 Req R/L - pv 17 (C)
Mill To Bear @ Bottom

2 Ls - 7 x 4 x 1/2 x 4'-5 1/4 - 28 Req R/L - pv 19 (C)
Mill To Bear @ Bottom
All other ends to exclude water after being painted.

Full PL 4 x 5/8 x 3'-6 - 28 Req - pv 20 (C)

2 Ls - 4 x 3 1/2 x 7/16 x 4'-6 1/4 (Abt) - 84 Req R/L - pv 21 (C) (Crimp)

Shim - 2 1/4 x 3/4 x 8" - 14 Req - pv 16 (C)
Tack Weld To Top Cov PL

See Notes Sh #1

Approved By: Howard, Needles Tammen & Bergendoff Consulting Engineers:

General Notes

Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4 unless noted
Shop Paint Red Lead (Ark. Std.)
Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivets
Drawn by CWK 4-21-59
Checked by AWF 7-28-59
Revisions

Recommended for Approval
Howard, Needles, Tammen & Bergendoff
By ERS Date 9-25-59
Approved By 9/24/59
L.P. Carlson
Bridge Design Engineer

Arkansas State Highway Commission
Mississippi State Highway Commission

Mississippi River Bridge
Near Helena, Arkansas
Unit No 2

Sold To: John F. Beasley Constr. Co.
Chicago, Illinois

Shop Vincennes Steel Div. of Industrial Enterprises, Inc.
Vincennes, Ind.
Contr. No. 4800 Sh. 304 of

228

8 SPCS @ 4'-2 3/8" = 33'-7"

8 SPCS @ 4'-2 3/8" = 33'-1"

4'-2 11/32"

4'-2 7/32"

HOLES IN C303 B303, BA303 A303, AA303 ONLY

10¼" 3" 3" 2¾"

5½"

8½"

STRIP FLG & GRIND SMOOTH BOTH ENDS TOP & BOT.

4'-2 11/32"

4'-2¼"

B303 & BA303

A303 & AA303 & C303 & D303

HOLES IN D303 ONLY

Top

SECTION A-A

(41'-11 15/32" ON A303 & AA303) (41'-11 11/16" ON B303 & BA303)

(40'-11 7/32" ON A303 & AA303) (40'-11 7/16" ON B303 & BA303)

2 WF @ 150# x 41'-8 1/4" - 4 REQ'D C pu3 FOR A303 & AA303

2 WF @ 150# x 41'-8 7/16" - 2 REQ'D C pu4 FOR B303 & BA303

L - 8 x 4 x ½ x 2'-8" - 12 REQ'D pu 2 ©

BOLT TO SHIP

PUNCH 1 1/16" ⌀ REAM 15/16" ⌀ M.T.

L 6 SPCS @ 4¾" - 2 4½" 3¾"

PL - 3½ x 3/8 x 1'-2 - 9 REQ pu 1

10 ALT SPCS @ 2⅜" - 2 4½" 13¾"

PC 16 WF 58# x 1'-4 3/8" - 6 REQ pu 6

PUNCH 1 1/16" ⌀ REAM 15/16" ⌀ M.T.

4 pu 2

PL - ⅜ x ½ x 10½" - 12 REQ pu 5 ©

SECT. B-B AS SHOWN

SECT. C-C TO PAIR

2 STRINGERS AS SHOWN & NOTED A303

2 STRINGERS TO PAIR AS NOTED AA303

ONE STRINGER AS SHOWN & NOTED B303

ONE STRINGER TO PAIR AS NOTED BA303

¼ V (TYP) BOT.

7'-5 19/32"

7'-5 21/32"

26'-2 9/32"

26'-2 3/8"

7'-10 19/32"

7'-10 21/32"

A303 & AA303

B303 & BA303

7" STRIP FLG.

3 BRACKETS AS SHOWN FOR A303 & B303

3 BRACKETS TO PAIR FOR AA303 & BA303

(BOLT TO SHIP)

PUNCH 1 1/16" ⌀ REAM 15/16" ⌀ M.T.

8 SPCS @ 3½" - 2'-4"

12 ALT SPCS @ 2⅜" - 2'-4½" 13¾"

L - 8 x 4 x ½ x 2'-8" - 4 REQ'D pu 7 ©

BOLT TO SHIP

41'-11 15/32"

40'-11 7/32"

℄ Top View. See Sect "AA" Above

36 = 170# x 41'-8 1/4" - 2 REQ pu 8 ©

PUNCH 1 1/16" ⌀ REAM 15/16" ⌀ M.T.

4 pu 1

20'-11¾"

20'-11 23/32"

Bot.

R - 9 1/8" x ½ x 1'-0½" - 2 REQ pu 9 ©

ONE STRINGER AS NOTED C303

ONE STRINGER AS NOTED D303

APPROVED BY 9/29/59

L P Carlson

Bridge Design Engineer

2 RECOMMENDED FOR C303 & A307

ONE BRACKET TO PAIR FOR D303

(BOLT TO SHIP)

APPROVAL

HOWARD NEEDLES, TAMMEN & BERGENDOFF

BY FRS DATE 5-59

APPROVED BY: HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8 ⌀ except as noted

Holes 15/16 ⌀ except as noted

End Distance 1¼" unless noted

Shop Paint. RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by C.A.B. APR. 29, 1959

Checked by WHF 7/28/59

Revisions

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE NEAR HELENA, ARKANSAS. UNIT No.

SOLD TO: JOHN F. BEASLEY CONSTR. CO. CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

DIV. OF INDUSTRIAL ENTERPRISES, INC.

Contr. No. 4800

Sh. 303 of

227

SECTION A-A

8½" STRIP FLG & GRIND SMOOTH TOP & BOT

41'-9 13/32"

8 SPCS @ 4'-2 3/8" = 33'-7"

2 STRINGERS AS SHOWN & NOTED A302
2 STRINGERS TO PAIR AS NOTED AA302

W 36 @ 150# x 41'-7 3/4" — 4 REQ'D pt 3 ©

2 PL's - 17 x 11/16 x 2'-10 - 8 REQ pt 2 ©

PL 36 x 1/2 x 1'-0 1/2 - 8 REQ pt 8 ©

4 - 8 x 4 x 1/2 x 2'-8" - 4 REQ'D pt 1 © BOLT TO SHIP.

4 - 6 x 4 x 1/2 x 2'-8" - 1 REQ pt 6 © BOLT TO SHIP

PUNCH 11/16 Φ - 5/32 REAM 15/16 Φ M.T.

6 SPCS @ 1 3/4" = 2'-4 1/2" - 3 3/4"

10 ALT. SPCS @ 2 3/16 = 2'-4 1/2" - 3 3/4"

8 SPCS @ 3 1/2" = 2'-4"

12 ALT. SPCS @ 2 3/8" = 2'-4 1/2" - 3 3/4"

PLUG WELDS Grind Smooth

BORE 4 1/32 HOLE

TYP

Bot.

7'-10 1/2"

26'-2 3/8"

7'-8 5/32"

20'-11 11/16"

20'-9 23/32"

R 9/16 x 1/2 x 1'-0 1/2" - 1 REQ pt 7 ©

ONE STRINGER B302

TOP VIEW. SEE SECT A-A ABOVE

36 WF @ 170# x 41'-7 3/4" — 1 REQ pt 5 ©

2 PL's - 17 x 11/16 x 2'-9 7/8" - 2 REQ pt 4 ©

SECT. B-B AS SHOWN
SECT. ' TO PAIR

SEE NOTE SH. "1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8 except as noted
Holes 13/16 except as noted
End Distance 1¼ unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by C.A.B. APR. 26, 1959
Checked by OLH 7/28/59
Revisions

APPROVED BY 10/14/59
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 10-5-59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 2

SOLD TO JOHN F BEASLEY CONSTR CO
CHICAGO ILLINOIS

SHOP VINCENNES STEEL DIV OF INDUSTRIAL ENTERPRISES INC VINCENNES, IND.

Contr. No. 4800 Sh. 302 of (A)

226

8 SPCS @ 4'-2 3/8" = 33'-7"
8 SPCS @ 4'-2 3/8" = 33'-7"

4'-2 3/16" A301 & C301
4'-2 1/4" B301 & D301

Top

8 1/2" STRIP FLG. & GRIND SMOOTH TYP BOTH ENDS T & B

SECTION A-A

(41'-11 3/8" ON A301) (41'-11 15/32" ON B301)
(40'-11 1/8" ON A301) (40'-11 7/32" ON B301)

6 SPCS @ 4 1/2" = 2'-4 1/2", 3 3/4"
10 ALT SPCS @ 2 1/2" = 2'-0 1/2"
2 1/8"
PUNCH 11/16" ϕ
REAM 15/16" ϕ
M.T.
4 PS 1
PUNCH 11/16" ϕ
REAM 15/16" ϕ
M.T.
4 PS 2
1 - 8 3/8" x 4" x 1/2" x 2'-8" - 1 REQ PS 1
BOLT TO SHIP
1 - 8" x 4" x 1/2" x 2'-8" - 1 REQ PS 4
BOLT TO SHIP
1 - PL 8 3/8" x 1/2" x 1'-10 1/2" - 1 REQ PS 4

TC B1

4 STRINGERS AS SHOWN & NOTED A301
4 STRINGERS AS SHOWN & NOTED B301

36 WF @ 150# x 41'-8 1/8" - 4 REQ PS 2 FOR A301
36 WF @ 150# x 41'-8 1/4" - 4 REQ PS 3 FOR B301

1C B1
1/4" TYP. 3/4" TYP.
BOT.
12 10
3 3/16" 3 3/16"

7'-10 1/2" 26'-2 3/8" 7'-10 1/2" A301
7'-10 19/32" 26'-2 9/32" 7'-10 19/32" B301

SECT. B-B AS SHOWN
SECT C-C TO PAIR

(41'-11 3/8" ON C301) (41'-11 15/32" ON D301)
(40'-11 1/8" ON C301) (40'-11 7/32" ON D301)

8 SPCS @ 3 1/2" = 2'-4 3/4"
12 ALT SPCS @ 2 3/8" = 2'-4 1/2"
2 1/8"
PUNCH 11/16" ϕ
REAM 15/16" ϕ
M.T.
4 PS 5
PUNCH 11/16" ϕ
REAM 15/16" ϕ
M.T.
4 PS 6
1 - 8 3/8" x 4" x 1/2" x 2'-8" - 1 REQ PS 5
BOLT TO SHIP

TOP VIEW. SEE SECT AA

36 WF @ 170# x 41'-8 1/8" - 2 REQ PS 5 FOR C301
36 WF @ 170# x 41'-8 1/4" - 2 REQ PS 6 FOR D301

20'-11 3/4" 20'-11 23/32" D301
20'-11 11/16" 20'-11 11/16" C301

1 - PL 9 3/8" x 1/2" x 1'-0 1/2" - 4 REQ PS 7

2 STRINGERS AS NOTED C301
2 STRINGERS AS NOTED D301

APPROVED BY 9/24/59
L P Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 9-23-59

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 1/2" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by C.A.B. APR. 28, 1959
Checked by GH 7/28/59
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT 2

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 301 of

A.H.D.

ROLL .. 746

BRG. 2899

225

59'-0 5/32" C.C.

20 @ 7" = 11'-8

PUNCH 11/16"ø
REAM 15/16"ø
∠ 3½ × 3½ × ⅜ × 4'-2¼" - 4 REQ fv50

PUNCH 7/8"ø
REAM 15/16"ø
SHOP RIVET
M41

SEE SH# 151

PET - 16 × ½ × 2'-1" - 4 REQ. - fv2 (A)

PET - 77 9/16 × 5/8 × 6'-6 5/8" - 4 REQ. - fv1 (A)

∠ 3½ × 3½ × ⅜ × 2'-4" 4 REQ. fv4 (C)

fu2 R

fu1

PET-full

MATCH LINE

PUNCH - 11/16"ø
REAM - 15/16"ø

5/16 TYP

25'-4⅜

PETs - fv9

PET-14 × ½ × 2'-1" - 4 REQ. fv3 (A)

N.S. & F.S.

2'-9⅞

15 @ 3'-4¾" = 50'-11¼" - STAGGERED ELLIPTICAL HOLES

SHOP RIVET — MILL

PUNCH - 11/16"ø
REAM - 15/16"ø

20 @ 7" = 11'-8

∠ fv4

PET-fv2

fu1

SHOP RIVET

PET-fv12

∠ fv5

fu2 R

WORK WITH SH#149 & 151

APPROVED BY
Pet R.D. Carlson
Bridges Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 9-15-59

SEE NOTE - SHEET #1

APPROVED HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8"ø except as noted
Holes 15/16"ø except as noted
End Distance 1¼" unless noted
Shop Paint RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T. 4-10-59
Checked by C.W.K.
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT 4

SOLD TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.
Contr. No. 4800 Sh. 150 of

224

59'-0 5/32" C.C.

4@3'-1'-0 | 3½ | 20@3'-5'-0 | 20@3'-5'-0 | 28@7'=16'-4 | 3¾ | 6@3⅜"=1'-11¼ | 4 | 6@3'-1'-6 | 4 | 6@3'-1'-6 | 4 | 10@3'-2'-6 | 3'-6 25/32

fu2 R

fu1 | TRT-fu8 | TRT-fu7

PUNCH-11/16" ϕ
REAM-15/16" ϕ

UM-TRT-30 × ¾ × 32'-0" - 2 REQ. - fu10 Ⓐ
UM-TRT-30 × ¾ × 55'-7⅛" - 2 REQ fu11 Ⓐ

25'-4⅜ | 33'-7 25/32 | 7'-11⅜

MATCH LINE

3 3¾ 3 3 3 3 3¾ 3 | 4½ | 8@5 15/16"=3'-11½

6 - 4 × 4 × ½ × 4'-3 - 4 REQ. fu6 Ⓒ

8@3'-2'-0 | 1'-0 | 2'-4½"

PL WF-33"@130# × 10'-3½" - 4 REQ. fu5 Ⓒ

TRT-15 × ⅝ × 2'-6 - 142 REQ. - fu9 Ⓐ

2'-6 | ½ | 1'-0 | ½ | 4 | 1'-11"

15 @ 3'-4¾ = 50'-11¼ - STAGGERED ELLIPTICAL HOLES

N.S. & F.S. TYP

1'-10"

3 3 3 3 3 4½ 5 6 | 43@7=25'-1

I-18"@70# × 55'-7⅛" - 2 REQ. fu1 Ⓐ

I-18"@70# × 55'-7⅛" - 2 REQ. fu2 Ⓐ

3¾ | 6@3⅜=1'-11¼ | 4 | 6@3'-1'-6 | 4 | 6@3'-1'-6 | 4 | 10@3'-2'-6

PUNCH-11/16" ϕ
REAM-15/16" ϕ

UM-TRT-30 × ¾ × 32'-0" - 2 REQ fu3 Ⓐ
UM-TRT-30 × ¾ × 55'-7⅛ - 2 REQ fu4 Ⓐ

SPLICE PL-30 × ¾ × 3'-7½ - 4 REQ. fu7 Ⓐ

BOLT FOR SHIPMENT

TRT-16 × ½ × 8'-8¾" - 4 REQ. fu8 Ⓐ

ONE-DIAGONAL-AS SHOWN-A149
ONE-DIAGONAL-TO PAIR-AA149
} WORK WITH SH# 150-151

SEE NOTE-SHEET #1

APPROVED BY 9/23/59
L.B. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
3' BY 2⅜" FRS DATE 9-15-59

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 13/16" ϕ except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T. - 4-9-59
Checked by C.W.K
Revisions 9-12-59 E Hole @ Log

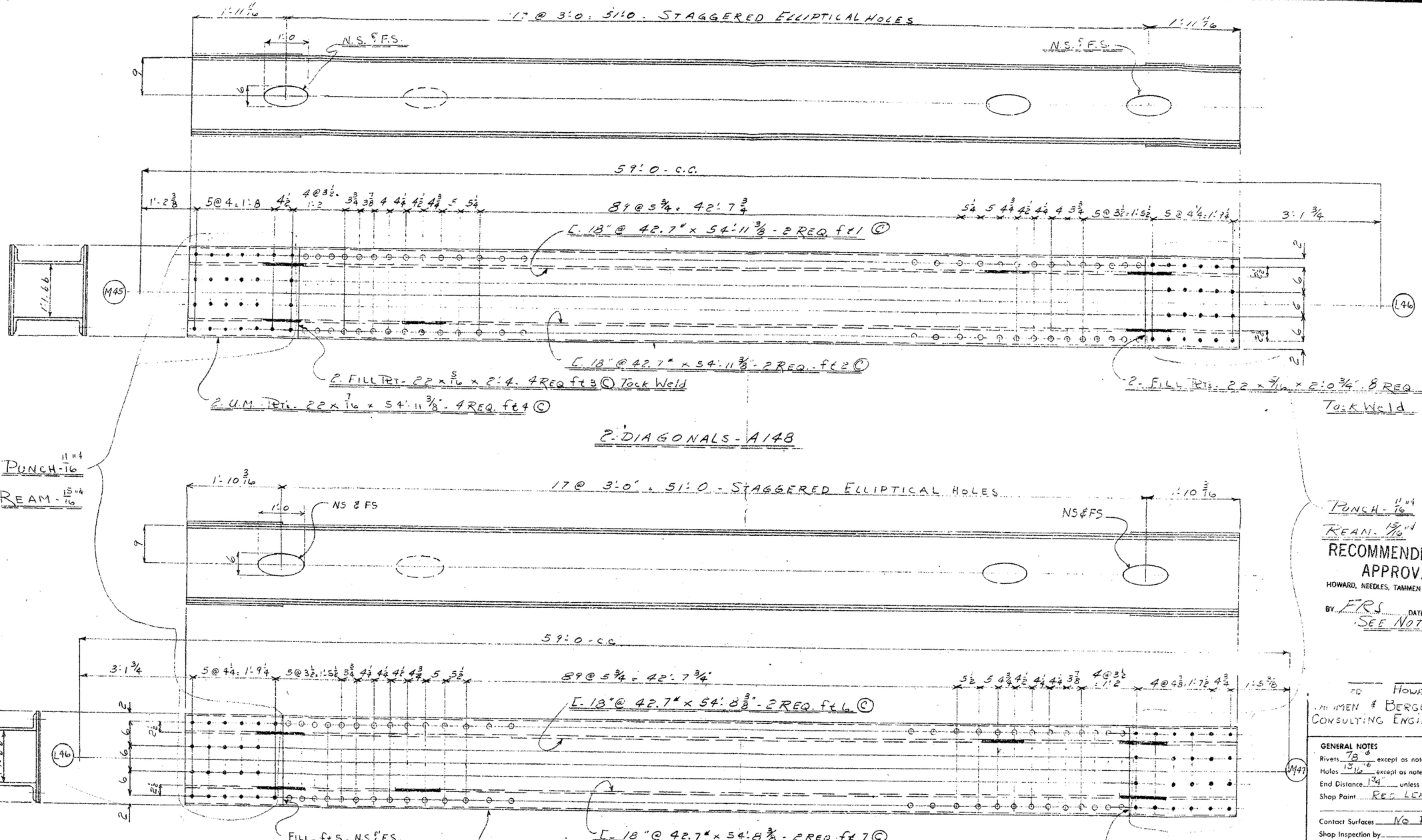
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

DIVISION OF CONTINENTAL ENTERPRISES INC.
Contr. No. 4800 Sh. 149 of



PUNCH - 11/16
REAM - 15/16

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY EFRS DATE 9-15-59
SEE NOTE - SHEET #1

TO HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T. - 3-8-59
Checked by C.W.K
Revisions

APPROVED BY 9/23/59
L. P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARK.
UNIT 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILL.

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES INC.
VINCENNES, IND.
Contr. No. 4800 Sh. 148 of

222

2'-5 — 17 @ 3:0½ = 51:8½ — STAGGERED ELLIPTICAL HOLES — 1:5½

6@3:1:6 2 1¾ 6@3:1:6

N.S. & F.S.

N.S. & F.S.

4" 3½ 4.3½

9

1:0.

Splice Plt - 15 × 11/16 × 3:7¼" - 4 Req. fs 9 (A)

PUNCH 11/16 11"
REAM 15/16 15"
SHOP RIVET

59:2" c.c.

4 5@3½=1:5½ 5@3:1:3 1⅞ 7/16 5@3:1:3 3½ 6@2⅞=1:5¼ 3½ 4 4¼ 4½ 5¼ 5½ 6 6½ — 74 @ 6¾ = 41:7½ — 6½ 6 5½ 5¼ 4¾ 4½ 4¼ 4 — 16 @ 3' = 4:0 — 3:8⅝

26 - 3½ × 3½ × ⅜ × 3:8¾ 4 Req. - fs1 (C)

2 U.M. Plt - 24 × 11/16 × 55'-7" 4 Req. fs2 (A)

L - 18" @ 51.9# × 55'-7" 2 Req. fs3 (A)

PUNCH 11/16 15"
REAM 15/16 15"

10@4⅛=3:5¼ 10⅛ 4@3:1:0 5½ 7 5½

2'-1¼ 1'-2⅞ 3 13/16 12 9 3 10 6 2'-1¼

M45

8@3:2:0 12 12 1:13/16

5@4=1:4½ 6@4½=2:3 6¼ 6¼

6 6 6 2

L - 18" @ 51.9# × 55'-7" - 2 Req. fs4 (A)

2 Splice Plts - 14 × ⅝ × 3:1¼" - 4 Req. fs5 (A)

Fill Plt 24 × ⅛ × 3-3¼" 2 Req. fs6 (C) N.S. only

26 - 3½ × 3½ × ⅜ × 2:6½ - 4 Req. - fs7 (C)

2 - Plts - 72 9/16 × ⅝ × 6'-7½" 4 Req. fs8 (A)

PUNCH 11/16 15"
REAM 15/16 15"

2'-4½" 2½ 3 3½ 4 3½ 3 2½ 2'-4½"

L46

1:3.66

2 - U.M. Plts - 24 × ⅝ × 55'-10⅝ - 4 Req. - fs14 (A)

2 - Fill Plts - 24 × ⅛ × 4:3½" - 2 Req. fs10 (C) N.S. only

Tack Weld

2 - Diagonals - A147

PUNCH - 11/16 11"
REAM - 15/16 15"
SHOP RIVET

RECOMMENDED FOR SHEET "1" APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 9-14-59

1:9⅛ — 17 @ 3:0½ = 51:8½ STAGGERED ELLIPTICAL HOLES — 2'-5

1'-0 N.S. & F.S.

3 SIDES ¼

N.S. & F.S.

6@3:1'6 1¾

9 10 4 3¾ 3½ 4

PUNCH - 11/16 11"
REAM - 15/16 15"

58:11 9/16" c.c.

3:2 9/16" — 12 @ 3. 3:0 — 3½ 3 4 4½ 5 5½ 5¾ 6 6¼ — 79 @ 6½ = 42:9½ — 6¼ 6 5¾ 5½ 5¼ 4¾ 4½ 4 5@3½=1:5½ 5@3:1:3 1⅞

L - 18" @ 45.8# × 55:10⅝" - 2 Req. fs11 (A)

2 2½ 3 3½ 3½ 3 2½ 2

L44

1:3.66

L - 4 × 4 × ⅜ × 1'-4.8 Req'd fs12 (A)

2 - Fill Plts - 24 × ⅛ × 3'-3½" - 4 Req. fs13 (C) Tack Weld

L - 18" @ 45.8# × 55:10⅝" - 2 Req. fs15 (A)

2 - U.M. Plts - 24 × ⅝ × 55'-10⅝ - 4 Req. - fs14 (A)

2 - Fill Plts - 24 × ⅛ × 4:3½" - 4 Req. fs16 (C) Tack Weld

M45

APPROVED BY 9/14/59
L. R. Carlson
Bridge Design Engineer

Approved by: Howard, Needles Tammen & Bergendoff
Consulting Engineers

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1¾" unless noted
Shop Paint Red Lead (Ark. Std.)
Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivets
Drawn by V.T. - 4-8-59
Checked by C.W.K.
Revisions 9/14/59
C-12 - M45
C-12 - L46

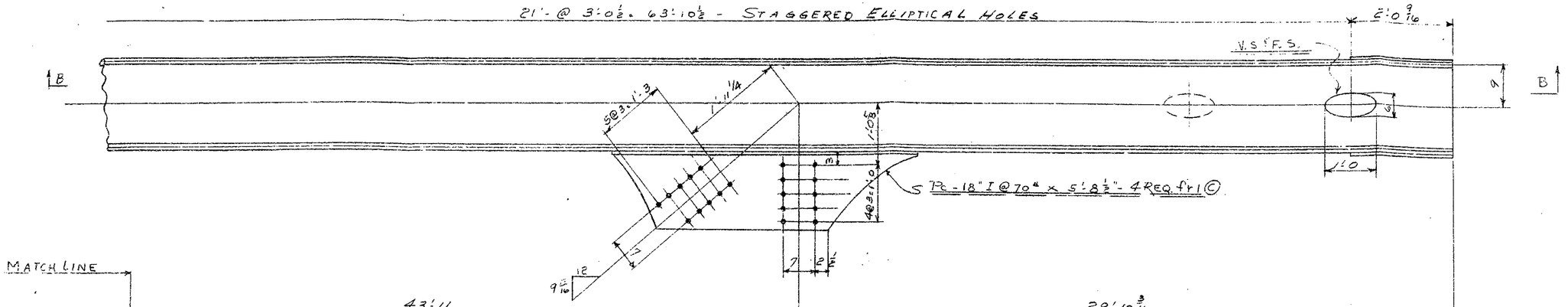
Arkansas State Highway Commission
Mississippi State Highway Commission

Mississippi River Bridge
Near Helena, Ark.
Unit 4

Sold to: John F. Beasley Constr. Co.
Chicago, Illinois

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 147 of

21'-@ 3:0½. 63:10½ - STAGGERED ELLIPTICAL HOLES

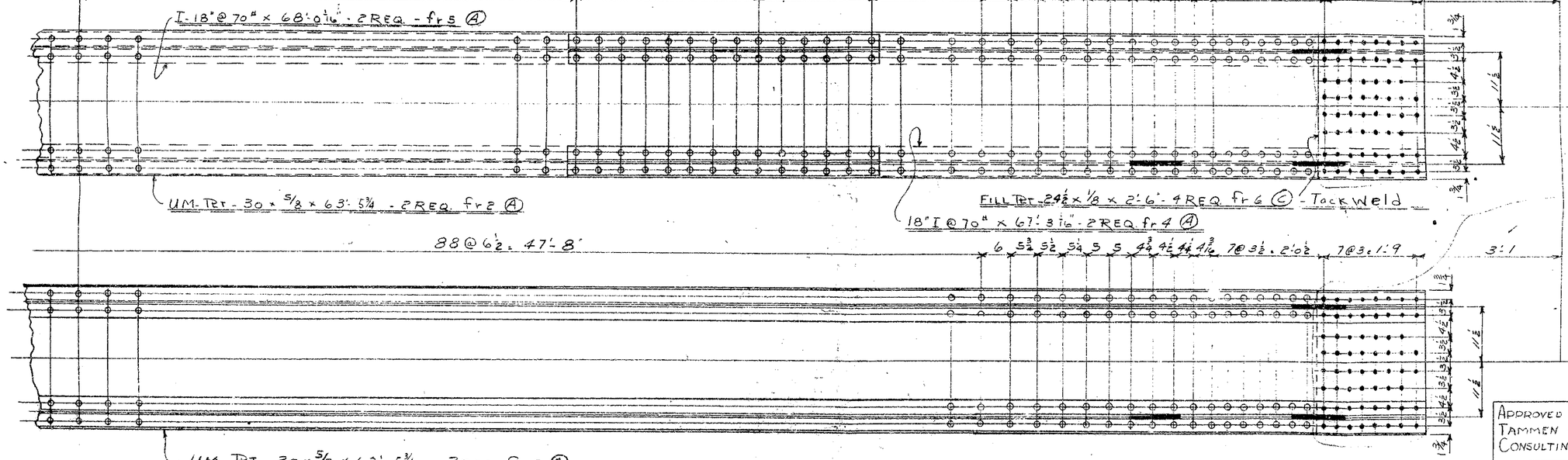


MATCH LINE

43:11

28:10 3/16

72:9 3/16 - w.p. ℄ L 44



SEE NOTE-SHEET #1

SECTION - BB

WORK WITH SH.# 145

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY E.I.S DATE 9-30-59

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1¼" unless noted
Shop Paint Red Lead (Ark Std)
Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivets
Drawn by V.T - 4.6.59
Checked by C.W.K
Revisions

APPROVED BY 10.1.59
L. P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARK.
UNIT 4
SOLD TO: JOHN F BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 146 of

PUNCH - 1'-4 7/16
REAM - 1'-3 9/16

(143)

MAX. Clearance between C.L. Bridge & edge of fascia - 10'

L 4 x 3 1/2 x 3/8 x 2'-3 1/2" - 2 REQ. ff 14 ©

L 4 x 3 1/2 x 3/8 x 1'-2" - 2 REQ. ff 13 ©

L 18" I x 42.7# x 9'-3" - 2 REQ. ff 3 ©

2 L 4 x 3 1/2 x 3/8 x 2'-3

PLT. 34 x 5/8 x 6'-10 3/4 - 4 REQ. ff 4 Ⓐ

FILL PLT. 4 x 5/8 x 10 1/4" - 2 REQ. ff 6 ©

FILL PLT. 14 1/4 x 5/8 x 3'-3 5/8" - 4 REQ. ff 7 ©

BT L 4 x 4 x 1/2 x 7'-8 1/8" ABT - 4 REQ. L. ff 8 ©

PLT. 65 1/2 x 5/8 x 7'-7 3/4 - 4 REQ. ff 9 Ⓐ

PLT. 91 1/4 x 3/4 x 11'-0 - 4 REQ. ff 11 Ⓐ

PUNCH 1 1/16
REAM 7/8

2'-1 7/8

MATCH LINE

I - ff 4

I - ff 5

PLT. ff 2 - N.S.

PLT. ff 3 - F.S.

ONE - DIAGONAL AS SHOWN - A145'

ONE DIAGONAL - TO PAIR - AA145'

WORK WITH SHEET #146

ff 2

ff 1

PLT. 12 x 7/16 x 2'-3 3/4" - 6 REQ. ff 2 ©

L - 3 1/2 x 3 1/2 x 3/8 x 6'-4 3/8" - 4 REQ. L. ff 1 ©

72'-9 3/16 - C.C.

1'-11 7/8" — 8 @ 3" = 2'-0" — L 4 x 3 1/2 x 3/8 x 2'-3 1/2" - 2 REQ. ff 14 ©

220

1'-0

18" I ff 15

1'-9 7/8" — 2'-1 — 3'-0 1/2" — ELLIPTICAL HOLES

21 STAGGERED @ 3'-0 1/2" = 63'-10 1/2"

SECTION - A A

72'-9 3/16 - C.C.

1'-0 1/8" — 4 @ 3 3/4" — 3 @ 3 3/4" — 8 @ 3" = 2'-0" — L 4 x 3 1/2 x 3/8 x 3'-3" - 2 REQ. L. ff 15 ©

1'-0

18" I ff 14

2'-6 7/8" — 1'-4 — 6'-1 — ELLIPTICAL HOLES

SECTION - B B

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 9-12-60

SEE - NOTE - SHEET #1

APPROVED BY 9/15/60
L. P. Carlson
Bridge Design Engineer

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS. 9/23/59

GENERAL NOTES
Rivets 7/8" Ø except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T.
Checked by C.W.K.
Revisions 9/11/59
Remarks

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

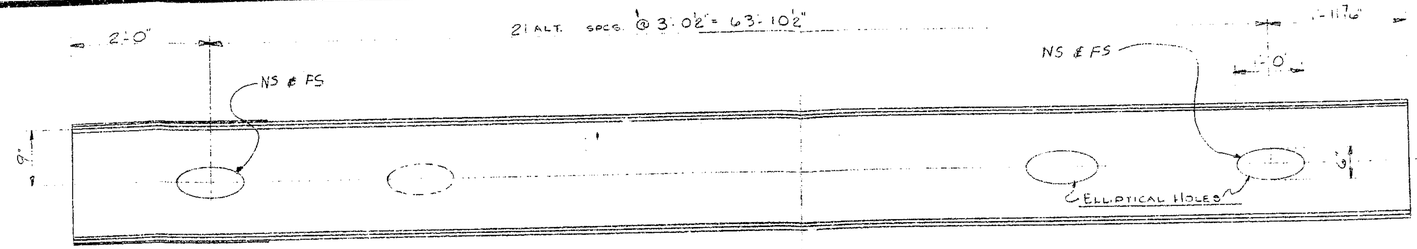
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 4

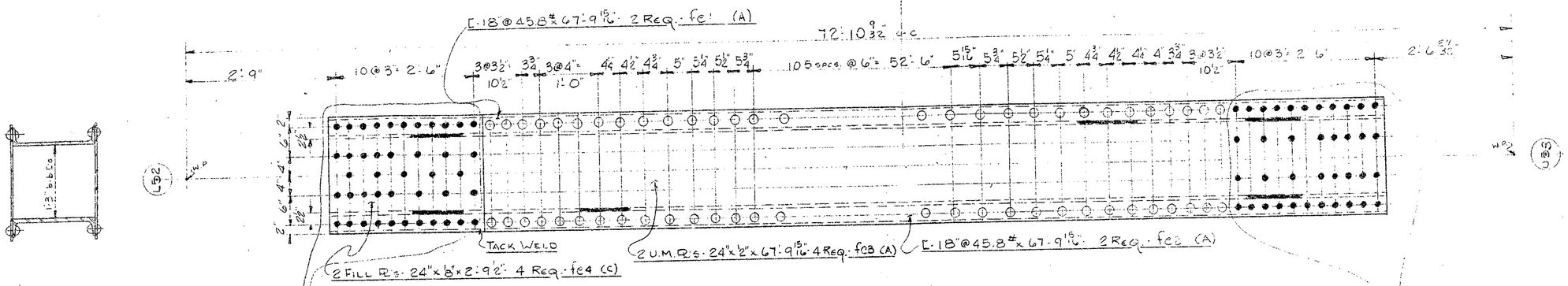
SOLD TO: JOHN T. BLASLEY CONSTR. CO.
CHICAGO, ILLINOIS

BOOK 3

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4860-T Sh. 145 of

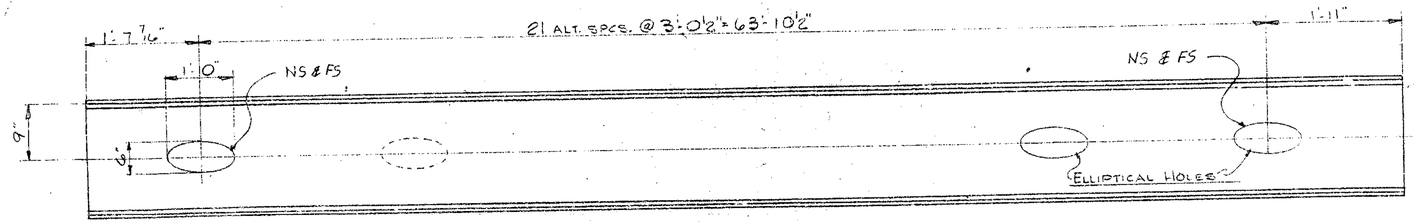
219

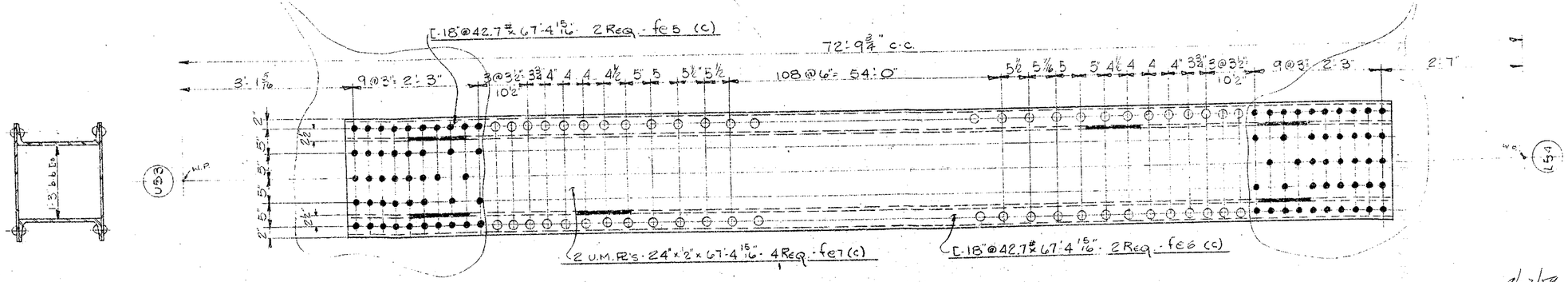




2 DIAGONALS A144

PUNCH 15/16" ⌀ REAM 15/16" ⌀





2 DIAGONALS B144

PUNCH 15/16" ⌀ REAM 15/16" ⌀

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 9-15-59

SEE NOTES SH"1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF - CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" ⌀ except as noted
Holes 15/16" except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by KW 4-16-59
Checked by CWK
Revisions 8/14/59 CC 53-254

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

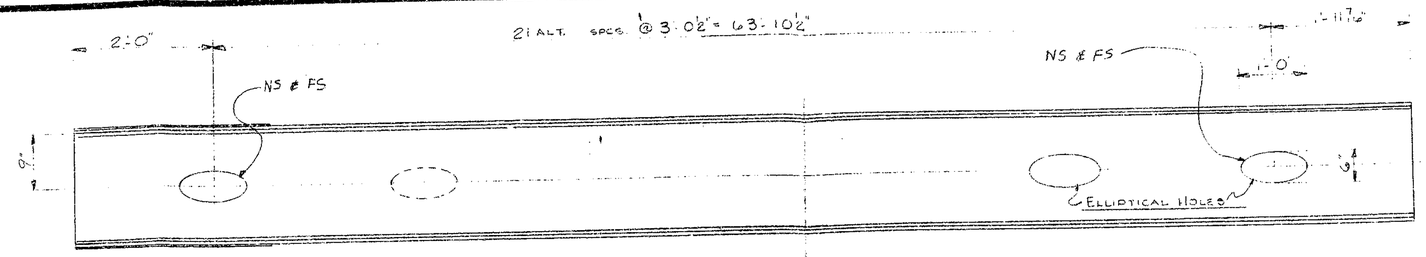
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 4

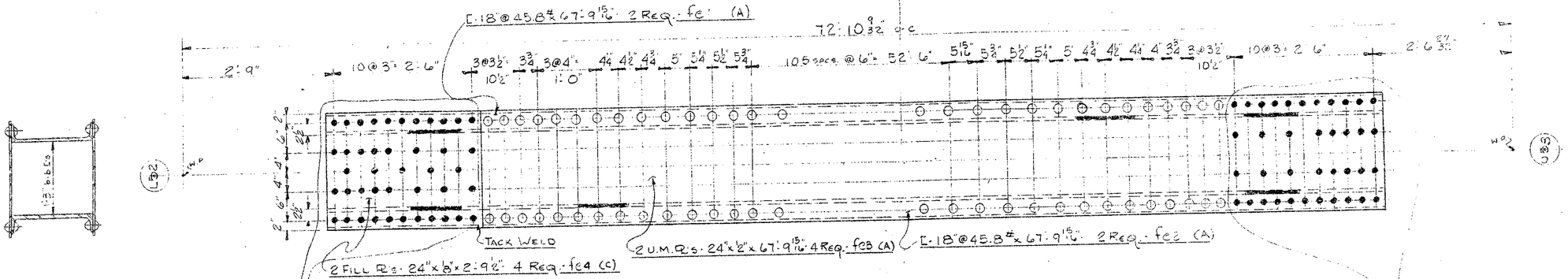
SOLD TO: JOHN F BEASLEY CONSTR CO
CHICAGO, ILLINOIS

APPROVED BY 9/23/59
L.P. Carlson
Bridge Design Engineer

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4900 Sh. 144 of

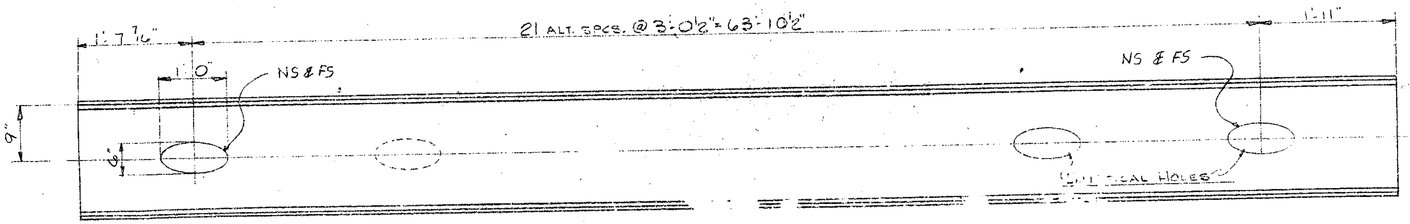
219

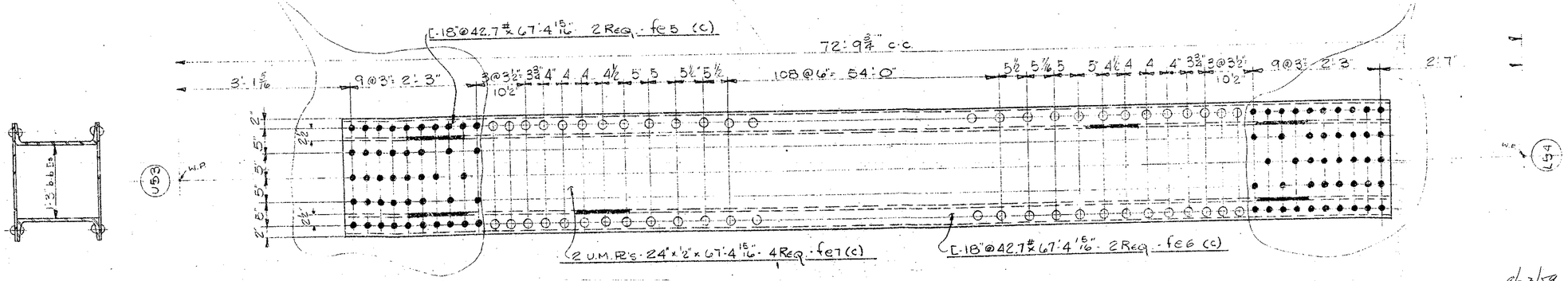




2 DIAGONALS A144

PUNCH 11/16" Ø REAM 13/16" Ø





2 DIAGONALS B144

PUNCH 11/16" Ø REAM 13/16" Ø

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 9-15-59

APPROVED BY 9/23/59
L.P. Carlson
Bridge Design Engineer

SEE NOTES SH"1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF - CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" Ø except as noted
Holes 15/16" except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by KW 4-16-59
Checked by C.W.K. 9/14/59
Revisions CC U53-L54

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 4

SOLD TO: JOHN F BEASLEY CONSTR CO
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND. Contr. No. 4800 Sh. 144 of

HORIZONTAL LINK (BAR) - 20"x2⅝"x5'-5" - 4 REQ. (FOR U15) - C143 (A)
(STEEL FORGING A)

HORIZONTAL LINK (BAR) - 20"x2⅝"x5'-9⅝" - 4 REQ. (FOR U25) - D143 (A)
(STEEL FORGING A)

HORIZONTAL LINK (BAR) - 20"x2⅝"x5'-8" 4 REQ. (FOR U43) - E143 (A)
(STEEL FORGING A)

VERTICAL LINK (BAR) - 20"x3½"x9'-5½" 8 REQ. G143 (C)
(4 @ U15) (4 @ U25)
(STEEL FORGING C)

VERTICAL LINK (BAR) - 20"x3½"x9'-5½" 8 REQ. J143 (C)
(4 @ U45) (4 @ U59)
(STEEL FORGING C)

NOTE:
SUSPENDED SPAN TO HANG 1" LOW AT NORMAL TEMPERATURE.

HORIZONTAL LINK (BAR) - 20"x2⅝"x5'-7½" - 4 REQ. (FOR U59) - F143 (A)
(STEEL FORGING A)

BEND LINE

2 PLS 24⅜" x ½" x 2'-2½" 8 REQ. FP10 (C)
2 RS 24⅜" x ½" x 2'-2½" 4 REQ. FP11 (C)
(BOLT ON)

1 L 5"x3½"x⅜"x1'-1¼" 12 REQ. FP2 (C)

SUMR 28"x⅝"x5'-1⅜" 3 REQ. FP3 (C)

1 L 5"x3½"x⅝"x5'-1⅜" 6 REQ. FP4 (C)

2 R 37"x⅜"x3'-6½" 6 REQ. FP11 (C)

1 L 5"x3½"x⅝"x5'-1⅜" 6 REQ. FP6 (C)

2 LS 5"x3"x⅝"x24'-9⅜" 12 REQ. FP7 (C)

UMR 28"x⅝"x24'-9⅜" 3 REQ. FP8 (C)

1 L FP2

2 ES FP1R on B143
2 R FP1CR on L143
} N.S. & F.S.

56 @ 5¼" = 24'-6"

⅝" ϕ HOLES ~ ⅞" ϕ RIVETS

ONE BRACE - B143 ℄ @ U4A
2 BRACES - L143 ℄ @ U10-U30

SECTION @ A143 & B143 ℄

ONE BRACE - A143 ℄ @ U4B
2 BRACES - K143 ℄ @ U10-U30

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 9-12-60

SEE NOTE SH" 1
APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF - CONSULTING ENGINEERS 9-29-59

GENERAL NOTES
Rivets ⅞ except as noted
Holes 15/16 except as noted
End Distance 1½ unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by KW 4-19-59
Checked by C W K
Revisions 9/16/59 MORE LINKS

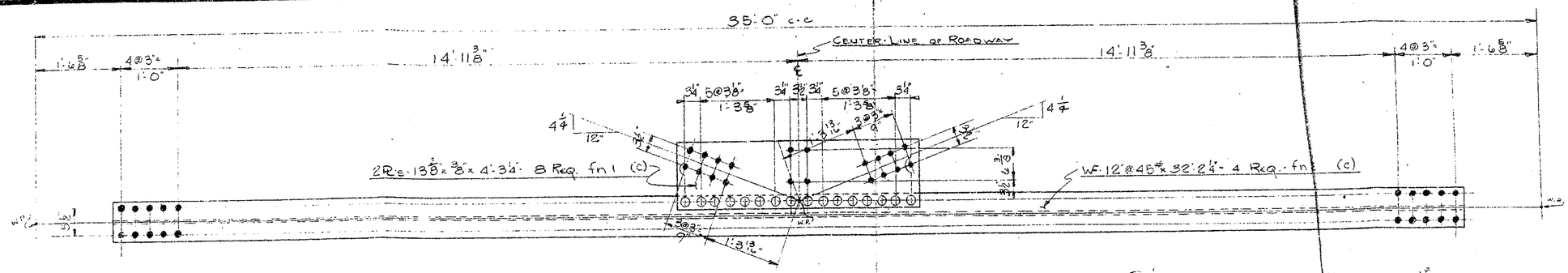
APPROVED BY 9/15/60
L. P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No.
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

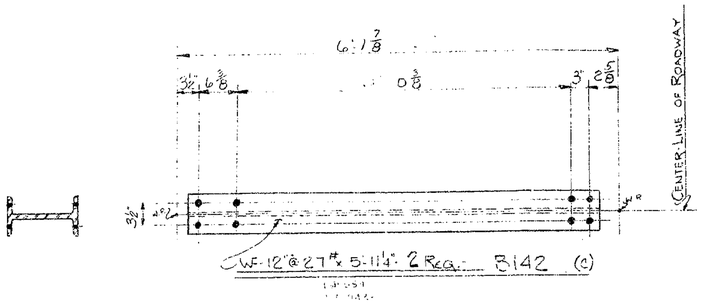
BOOK No. 4

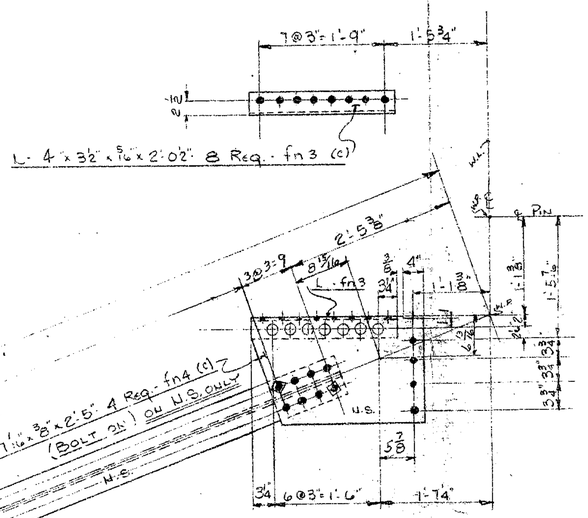
BRIDGE PLANS, INC.
No. 4800-F Sh. 143 of

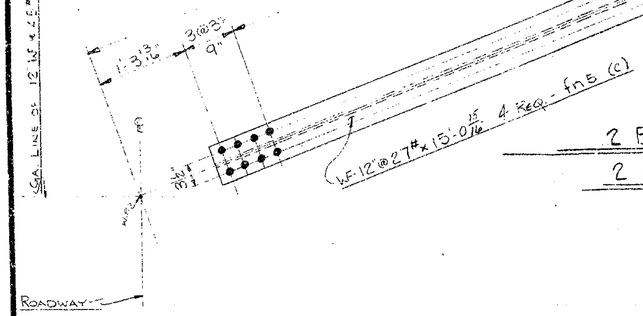
217



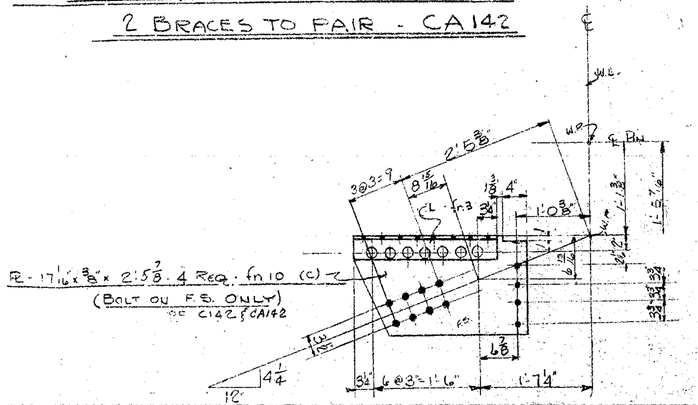
4 BRACES A142

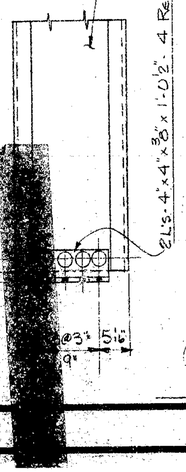


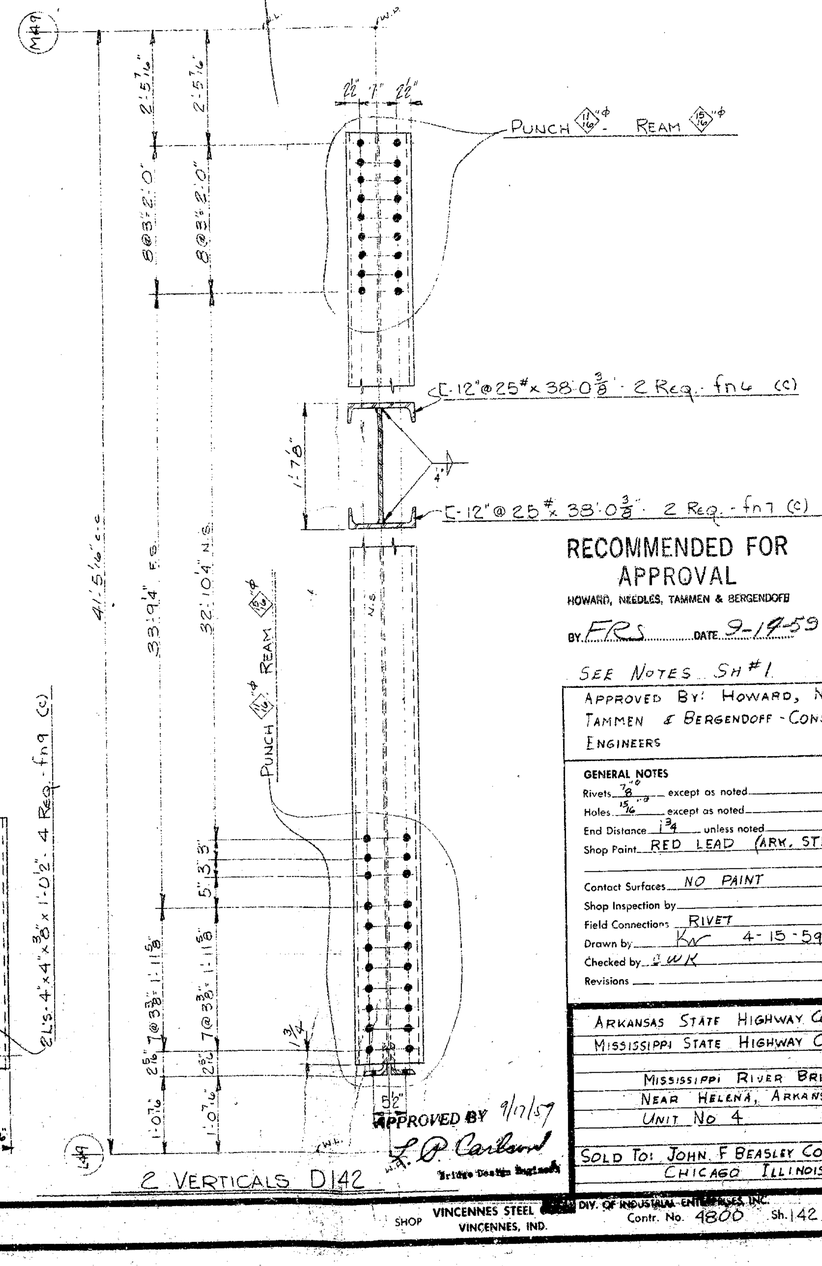




2 BRACES AS SHOWN - C142
2 BRACES TO PAIR - CA142







RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 9-19-59
SEE NOTES SH #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF - CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 1/4" unless noted
Shop Paint RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by KW 4-15-59
Checked by WK
Revisions

APPROVED BY 9/17/57
L. P. Carlson
Bridge Design Engineer

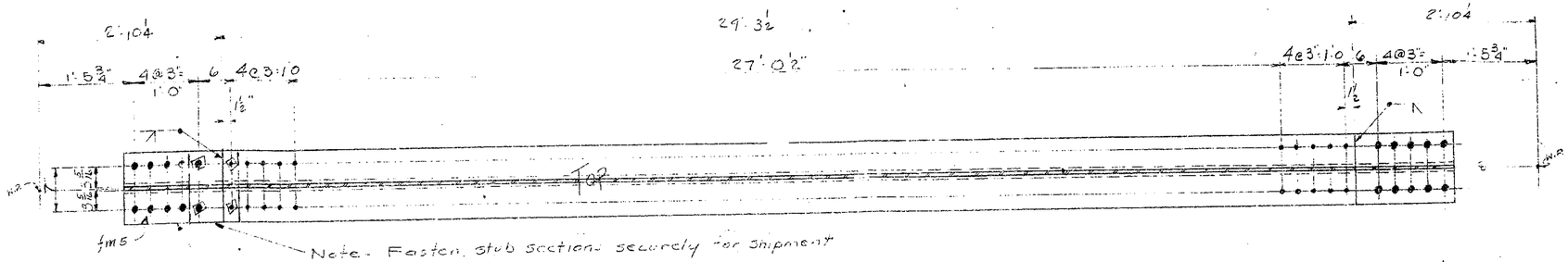
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

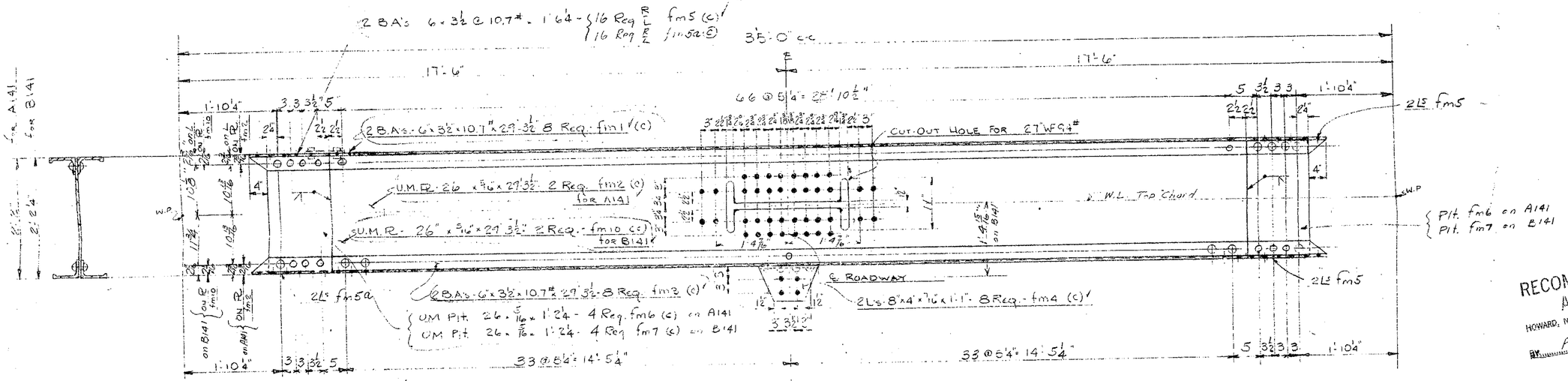
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO 4

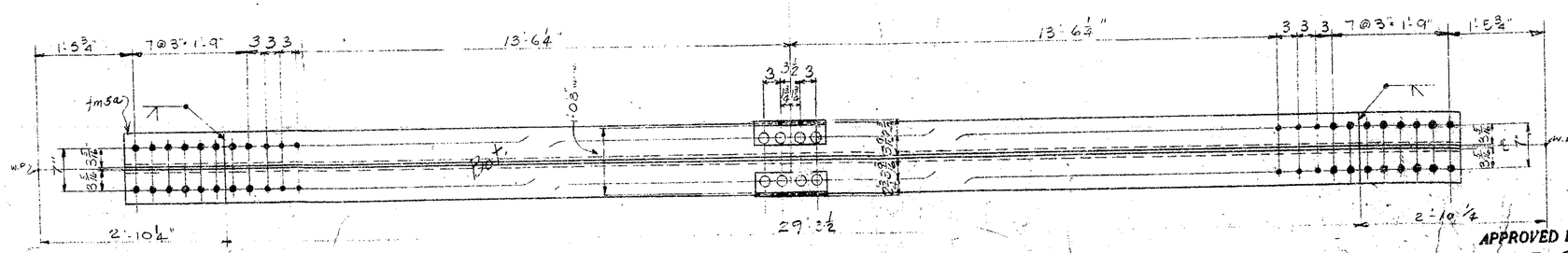
SOLD TO: JOHN F BEASLEY CONSTR. CO
CHICAGO ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.
Contr. No. 4800 Sh. 142 of

216







2 TOP STRUTS AS SHOWN & NOTED A141 ✓ 1 out 1 reqd

2 TOP STRUTS AS SHOWN & NOTED B141 ✓ 1 out 1 reqd } UNIT 2

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 9-9-60

APPROVED BY
L. P. Carlson
Bridge Design Engineer
9/15/60

BOOK No. 4

SEE NOTES SH #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN, & BERGENDOFF - CONSULTING ENGINEERS 9/17/59

GENERAL NOTES
Rivets 7/8 except as noted
Holes 15/16 except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by KW 4-14-59
Checked by CWK
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No.

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL VINCENNES, IND.

Contr. No. 4800-F Sh. 141 of

215

64 @ 5¼" = 28'-0"

10'-3⅜"

Bt. R. 23⅜" x 3½" x 5/16" x 14'-0" - 6 Req'd. @ B140

Porch W. Room #6

7'-0

Diaphragm

L. FK1

Bend Line

Top View

Belt Cov. R. 57" x ⅜" x 32'-2" - 3 Req. - FK6 (C)

Symm. About ℄

(32'-11⅜" on A) (32'-11⅛" on D)

68 @ 5¼" = 28'-5¼"

2 L.s - 3½" x 3½" x 5/16" x 32'-2" - 6 Req. - FK6 (C)

U.M.R. 25¾" x 5/16" x 32'-11⅜" - 6 Req. - FK8 (C)

2 L.s - 3½" x 3½" x 5/16" x 32'-2" - 6 Req. - FK7 (C)

Side View

1 L. 3½" x 3½" x 5/16" x 1'-10¼" - 12 Req'd. - FK9 (C)

1 R. 23 3/16" x ⅜" x 4'-11½" - 12 Req'd. C140

Bt. R. 18" x ⅜" x 3'-1⅝" - 2 Req. - FK11 (C)

R. FK11

℄ Bottom

Bottom View

L. FK3

ONE Top Struts As Shown & Noted - A140 @ U48 -

2 Top Struts As Shown & Noted D140 @ U104 U30

L. 3½" x 3½" x 5/16" x 1'-11⅝" - 12 Req'd. - FK1 (C)

R. 31 5/8" x 5/16" x 8'-9⅜" - 6 Req. - FK2 (C)

L. 3½" x 5½" x 5/16" x 2'-5½" - 6 Req. - FK3 (C)

Diaphragm Detail

Weld L's

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY E.R.S. DATE 9-12-60

See Notes Sh #1

Approved By: Howard, Needles, Tammen, & Bergendoff - Consulting Engineers 9/17/59

APPROVED BY 9/15/60

L.P. Carlson

Bridge Design Engineer

GENERAL NOTES

Rivets 7/8" except as noted

Holes 15/16" except as noted

End Distance 1¼ unless noted

Shop Paint RED LEAD (ARK. STD)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVET

Drawn by Kr 4-13-59

Checked by C.W.K.

Revisions

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE NEAR HELENA, ARKANSAS

UNIT No. 4

SOLD TO JOHN F. BEASLEY CONSTR. CO. CHICAGO, ILLINOIS

BOOK No. 4

SHOP VINCENNES STEEL VINCENNES, IND.

BY GP INDUSTRIAL ENTERPRISES, INC. Cont. No. 4800-F Sh. 140 of

214

PUNCH 11/16 - REAM 15/16

C-12"@25"x 52-1/16 2 Req - fj 20 (c)

C-12"@25"x 52-1/16 - 2 Req - fj 21 (c)

FILL PL 12 x 3/8 x 2'-11 1/2" - 2 Req - fj 23 (c)

PL 18 1/2 x 3/8 x 52-1/16 - 2 Req - fj 22 (c)

FILL PL 12 x 3/8 x 2'-5 1/2" - 2 Req - fj 24 (c)

TACK WELD

Punch 11/16 - Ream 15/16

2 VERTICALS AS SHOWN A139

PUNCH 11/16 - REAM 15/16

1L fc8 N.S.

18'-10" to end of CL

8 PL 9"x 3/8"x 1'-7" - 16 Req - fj 18 (c)

R-9"x 3/8"x 1'-7" - 16 Req - fj 18 (c)

R-204"x 3/8"x 4'-7 1/2" - 4 Req - fj 11 (c)

L-8 1/2"x 3 1/2"x 3/8"x 1'-8 1/2" - fc14

R-17"x 7/8"x 3/8"x 5'-2 1/2" - 2 Req - fc 14

L-4"x 3 1/2"x 5/16"x 1'-4 1/2" - fc11

UM. P.H. 18"x 3/8" x 67'-0 3/16" - 4 Req - fj 18 (c)

R-20 1/4"x 3/8"x 3'-7 1/2" - 2 Req - fj 16 (c)

L-12"@25"x 4'-7 1/2" - fc14

L-12"@25"x 3'-7 1/2" - fc22

L 3 1/2"x 3 1/2"x 5/16"x 67'-0 3/16" - 4 Req - fj 18 (c)

ONE VERTICAL AS SHOWN B139

ONE VERTICAL AS SHOWN B139

1L fc8 N.S.

1L-fc9 N.S.

2 PL 17 1/2"x 3/8"x 3'-3 1/2" - 2 Req - fc6

1 PL 17 1/2"x 3/8"x 3'-3 1/2" - 2 Req - fc6

1L- 3 1/2"x 3/8"x 15 1/2" - fc6

2 ANG. BRACKET AS SHOWN - C132

ONE TO PAIR - C4133

SAME AS OTHER SIDE

L-fc9 (N.S.)

L-fc10 (F.S.)

L-fc10

1L-fc9 N.S.

SEE XX

RECOMMENDED FOR APPROVED BY APPROVAL 9/15/60

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

L. P. Carlson
Bridge Design Engineer

BY FRS DATE 9-9-60

See Notes - Sheet 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF - CONSULTING ENGINEERS 9/11/59

GENERAL NOTES

Rivets 7/8 except as noted

Holes 15/16 except as noted

End Distance 1 3/4 unless noted

Shop Paint RED LEAD (ARK STD)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by KWC 4-10-59

Checked by CWR

Revisions 8/14/59 CC U13-613

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT No 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

BOOK No. 3

SHOP

213

Bt. PL - 11 3/8" x 3" x 2'-6 1/2" - 2 Req. - fh4 (c)

5½" 4" 4" 4" 4" 5½"

2 3/4"

H.S. FIELD BOLTS

PUNCH 1 1/16" Φ REAM 1 5/16" Φ TO M.T.

L - 8" x 6" x 7/16" x 1'-0" - 4 Req. - fh5 (c)

3 3/4"

12"

2 3/4"

5½" 4" 4" 4" 4" 5½"

Bt. PL - 10 3/8" x 3/8" x 2'-6 1/2" 2 Req. - fh7 (c)

U46

U45

U43

U39

WL

W.P.

C

C

1'-2 3/32"

3/4"

3/8"

4 @ 3" = 1'-0"

PL 1/4" x 8" x 1'-7 1/2" 2 Req. - fh6 (c)

3½" 3@3" 3½"

9"

4" 7" 4"

PUNCH 1 1/16" Φ REAM 1 5/16" Φ

1'-7 1/2"

4"

2 Req. - fh2 (c) U.M.

82 1/2 3/32 c-c

2'-1 1/32"

12 @ 3'-3"

7'-9 5/16"

PUNCH 1 1/16" Φ REAM 1 5/16" Φ

2 Req. - fh1 (c)

2 Cs. 15" @ 33.9# x 8'-1 15/16" - 4 Req. - fh1 (c)

1'-1 1/4"

5 @ 4" = 1'-8"

5½" 7 @ 3 3/8" = 1'-11 5/8" 5½"

22½"

2 3/16" 5½" 2 3/16"

2 Req. - fh3 (c)

C-R - 18 5/8" x 3/8" x 8'-1 15/16" 2 Req.

2 Ls - 4" x 4" x 5/8" x 1'-0½" 16 Req. - fh3 (c)

22½"

5½" 3@3" 5½"

9"

2 VERTICALS A138

33'-8 1/32" c-c

28'-10 3/4"

PUNCH 1 1/16" Φ REAM 1 5/16" Φ

4 @ 3" = 1'-0"

2 Cs. 1" @ 25.4# x 30'-7 5/8" - 4 Req. - fh14 (c)

2'-1 1/4"

22½" 7" 22½"

2 VERTICALS AS SHOWN B138

PUNCH 1 1/16" Φ REAM 1 5/16" Φ

PL 18 3/8" x 3/8" x 30'-6 3/8" 2 Req. - fh8 (c) U.M.

PL 15 3/8" x 3/8" x 1'-7 1/2" - 2 Req. - fh15 (c)

4 @ 3" = 1'-0"

32" 3@3" 32"

9"

SECTION "C-C"

Bt. PL - 7/8" x 3/8" x 10 3/4" 2 Req. - fh20 (c) U.M.

Bt. PL - 7/8" x 3/8" x 10 3/8" 2 Req. - fh21 (c) U.M.

9 3/4"

W.P.

N.S.

1'-1 19/32"

3 1/2"

12" 2 1/2" 12"

3 1/2"

SECTION "B-B"

9'-0 3/8"

9'-0 3/8"

5'-3 3/8" 9 @ 3'-2'-3"

3'-3 3/8"

9 @ 3'-2'-3"

44'-5 7/16" E.S.

48'-2 7/16" N.S.

1'-2 4 @ 2'-5" = 9'-11"

6'-1 3/8"

1'-2 4 @ 2'-5" = 9'-11"

2 Fill Pl - 12" x 1/4" x 3'-4" 4 Req. - fh9 (c) (On C138 (U43) - Unit # 3 Only)

2 Fill Pl - 12" x 1/4" x 3'-4" 4 Req. - fh9 (c) (On C138 (U59) - Unit # 4 Only)

2½" 7" 2½"

PUNCH 1 1/16" Φ REAM 1 5/16" Φ

E - 12" @ 25" x 49'-6 7/16" 4 Req. - fh10 (c)

E - 12" @ 25" x 49'-6 7/16" 4 Req. - fh11 (c)

A

A

W.L.

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY ERS DATE 9-9-60

2 VERTICALS AS SHOWN "NOTED" C138 @ U.M. #4

2 VERTICALS AS SHOWN "NOTED" D138 @ U.M. #3

49'-4 3/4"

1'-2 3/4"

24"

W.L.

4 1 3 2 3 4

PL 18 1/4" x 8" x 49'-6 7/16" 2 Req. - fh12 (c) U.M.

Punch 1 1/16" Ream 1 5/16"

SECTION "A-A"

APPROVED BY 9/15/60

L. P. Carlson

Bridge Design Engineer

SEE NOTES SH # 1.

APPROVED BY HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS 9/11/59

GENERAL NOTES

Rivets 7/8" Φ except as noted

Holes 1 1/16" Φ except as noted

End Distance 1 1/4" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVET

Drawn by KAC 4-8-59

Checked by CWK

Revisions 8/14/59 D.C. 1061-1-16

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE NEAR HELENA, ARKANSAS UNIT # 4

SOLE TO: JOHN F. BEASLEY CONSTR. CO. CHICAGO, ILL.

DIV. OF INDUSTRIAL ENTERPRISES, INC.

Contr. No. 4830-F-4

SHOP VINCENNES STEEL VINCENNES, IND.

BOOK No. 3

138 of

212

L-8"x6"x7/16"x1'-1 1/16" - 8 Req - fg 17 (C)

2 VERTICALS AS SHOWN & NOTED A137 (FOR UNIT 4 (U47))

2 VERTICALS AS SHOWN & NOTED B137 UNIT 4 (U47)

2 VERTICALS AS SHOWN & NOTED E137 UNIT 3

SECTION "A-A"

2 VERTICALS, C137

SECTION "B-B"

SECTION "C-C"

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY ERS DATE 1-12-60

SEE NOTES SH #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS 9-29-59

APPROVED BY 9/15/59 L.D. Carlson Bridge Design Engineer

GENERAL NOTES

Rivets 7/8" ϕ except as noted

Holes 15/16" ϕ except as noted

End Distance 1 3/4" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces No PAINT

Shop Inspection by

Field Connections RIVET

Drawn by KW 4-7-59

Checked by C.W.K

Revisions 9/14/59 Revised U137

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT "4"

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILL.

BOOK No. 3

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES INC. Sh. 137 of
VINCENNES, IND. Contr. No. 4802-F

2 VERTICALS A136

2 VERTICALS AS SHOWN B136

SECTION "C-C"

SECTION "D-D"

SECTION "E-E"

SECTION "F-F"

2 VERTICALS AS SHOWN C136

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 9-12-60

SEE NOTES SH. # 1.

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS 9/17/59

GENERAL NOTES
Rivets 7/8" Φ except as noted
Holes 15/16" Φ except as noted
End Distance 1 1/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by KAC 4-6-59
Checked by CWK
Revisions

APPROVED BY L. P. Carlson 9/15/60
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT # 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILL.

BOOK No. 3

SHOP VINCENNES STEEL CORP. OF INDUSTRIAL ENTERPRISES INC. VINCENNES, IND.

Contr. No. 4800-T sh. 136 of.

210

PUNCH 1/16" REAM 15/16"

SECTION "A-A"

2 VERTICALS A135

ONE BRACKET AS SHOWN - C135
ONE do TO PAIR - CA135

ONE VERTICAL AS SHOWN B135
ONE VERTICAL TO PAIR BA135

bent PIT 19 x 3/8 x 2'-8 3/4"
2 Req L fc5 C

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 9-12-60

SECT. XX

See notes - sheet 1

APPROVED BY: HOWARD, NEEDLES
TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
9-29-59

APPROVED BY 9/15/60
J. O. Carlson
Bridge Design Engineer

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 1/2" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces
Shop Inspection by
Field Connections RIVET
Drawn by KW 4-8-59
Checked by CWK
Revisions 9/10/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT "4

SOLD TO JOHN F. BEASLEY, CONSTR. CO.
CHICAGO, ILL

BOOK No. 3

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC
VINCENNES, IND.

Contr. No. 4800-7 Sh. 135 of

209

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 9-12-60

2 VERTICALS A134

SECTION "C-C"

SECTION "D-D"

ONE VERTICAL AS SHOWN B134

ONE VERTICAL TO PAIR BA134

SECTION "B-B"

SECTION "A-A"

SECTION "E-E"

SEE NOTES SH # 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
9/29/59

APPROVED BY
L.P. Carlson
Bridge Design Engineer
9/15/59

GENERAL NOTES
Rivets B" Φ except as noted
Holes 15/16" Φ except as noted
End Distance 1 1/2" unless noted
Shop Point RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by KW 4-2-59
Checked by C W K
Revisions 9/21/59 B134; 9/11/59 B134

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT # 4

SOLD TO JOHN E. BEASLEY CONSTR. CO.
CHICAGO, ILL.

BOOK No. 3

SHOP VINCENNES STEEL CORP. A DIV. OF KIMTHAN, INC. VINCENNES, IND.

ESTIMATE 4600-T Sh. 134 of

208

Bt PL. 17½ x ⅜ x 1'-6½ - 2 Req. fa 20(c)

Bt L. 7"x4"x⅜"x 2'-6½" 2 Req. fa 2 (c)

R 20 ⅜ x ⅜ x 3'-8" 2 Req. fa 21 (c)

L 8"x6"x⅞"x 10'-2" 4 Req. fa 1 (c)

Bt L. 7"x4"x⅜"x 2'-6½" 2 Req. fa 3 (c)

R 20 ⅜ x ⅜ x 3'-8" 2 Req. fa 5 (c)

Bt L. 7"x4"x⅜"x 2'-6½" 2 Req. fa 22 (c)

UM R 18 ½ x ⅜ x 57'-0¾" 2 Req. fa 22 (c)

Bt L. 7"x4"x⅜"x 57'-1½" 4 Req. fa 4 (c)

2 Pls. 12"@ 25# x 57'-1½" 4 Req. fa 4 (c)

2 Pls. 358 x ⅜ x 5'-5" 4 Req. fa 6 (c) N3-F3

2 Pls. 4"x4"x⅜"x 1'-0½" 12 Req. fa 7 (c)

ONE VERTICAL AS SHOWN A133

ONE VERTICAL TO PAIR AA133

Punch 1⅛ Ø Ream 1¼ Ø

U57

U55

Punch 1⅛ Ø Ream 1¼ Ø

L 12"@ 25# x 52'-7⅛" 4 Req. fa 19 (c) for B133 (U57) for C133 (U56)

2 VERTICALS B133

2 VERTICALS C133

Bt L. 7"x4"x⅜"x 7'-2" 2 Req. fa 16 (c)

Bt L. 7"x4"x⅜"x 7'-2" 2 Req. fa 16 (c)

R. fa 22

SECTION "B-B"

fa 20

SECTION "A-A"

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY: FRS DATE: 2-18-59

Punch 1⅛ Ø Ream 1¼ Ø

SECTION "C-C"

2 Pls. 4"x4"x⅜"x 52'-7⅛" 4 Req. fa 18 (c)

2 Pls. 18½ x ⅝ x 52'-7⅛" 4 Req. fa 17 (c)

Punch 1⅛ Ø Ream 1¼ Ø

2 Ls. fa 7

5 @ 3" = 1'-3"

APPROVED BY 9/11/59

L. V. Carlson

Bridge Design Engineer

SEE NOTES SH #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets ⅞ Ø except as noted

Holes 1⅛ Ø except as noted

End Distance 1½ unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVET

Drawn by KVC 4-1-59

Checked by CWK

Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT #4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILL.

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

Contr. No. 4800 Sh. 133 of

207

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY E.R.S. DATE 9-9-60

APPROVED BY 9/15/60
L.D. Carlson
Bridge Design Engineer

SEE NOTE: SH. # 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 9/11/59

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces No PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by L.A.M. 4-24-59
Checked by C.W.K.
Revisions 7/10/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4
SPUR TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

BOOK No. 3

SHOP VINCENNES STEEL CORP. VINCENNES, IND. A DIV. OF INTERNATIONAL
CONT. No. 4600 SHEET No. 32 of

206

PL 31"x½ x 82'-4 3/32 2 REQ. ey 19 (C) (U.M.)

1 BT. PL 46¾ x ⅝ x 6'-7 2 REQ. ey 1 (C)

2 PL 23⅞ x ⅜ x 2'-11½ 4 REQ. ey 2 (C)
2 PL 17 7/16 x ⅜ x 3'-6 4 REQ. ey 3 (C)
2 PL 63⅞ x ⅜ x 6'-8½ 4 REQ. ey 4 (C)

2 L 4 x 3½ x 5/16 x 1'-3½ 4 REQ. ey 6 (C)

2 L 4 x 3½ x 5/16 x 1'-3½ 4 REQ. ey 7 (C)
1 PL 19⅜ x ⅜ x 2'-0½ 2 REQ. ey 8 (C)
2 L 4 x 3½ x 5/16 x 1'-3½ 8 REQ. ey 9 (C)

DIAPHRAGM AT U57

93 SPCS @ 4½ = 34'-10½

L 4 x 4 x ⅜ x 82'-4 3/32 2 REQ. ey 17 (C)

L 4 x 4 x ⅜ x 82'-4 3/32 2 REQ. ey 18 (C) N.S.

L 4 x 4 x ⅜ x 82'-4 3/32 2 REQ. ey 19 (C) F.S.

2 FILL PL 24⅛ x 3'-3½ 4 REQ. ey 5 (C)

2 FILL PLS 4 x ⅜ x 10¼ - 4 REQ. ey 25 (C)

2 PLS 24 x 7/16 x 79'-5⅝ 4 REQ. ey 15 (C) (U.M.)

ONE UPPER CHORD AS SHOWN A131
ONE DO DO TO PAIR AA131
WORK WITH SH. 132

1 BT PL 19⅜ x ⅜ x 7'-5⅝ 2 REQ. ey 10 (C)

1 PL 5 x ⅜ x 4'-4⅜ 2 REQ. ey 11 (C)

FILL PL 5 x ½ x 10¾ 4 REQ. ey 26 (C)

2 L 4 x 4 x ⅜ x 3'-3 4 REQ. ey 13 (C)

83 SPCS @ 4½ = 31'-1½
95 SPCS. @ 3'-4 = 30'-0

1 PL 31 x ½ x 78'-6 3/32 2 REQ. ey 14 (C) (U.M.)

APPROVED BY
L. P. Charbeau
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY GA DATE 8-27-59

SEE NOTE: SH" 1

APPROVED BY: HOWARD, NEEDLES TAMMEN, & BERGENDOFF - CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by LAM 4-21-59
Checked by CWK
Revisions 8/14/59 Shop Rev. @ U57

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

SHOP VINCENNES STEEL & CONSTR. CO., INC. VINCENNES, IND.
Contr. No. 4800 Sh. 131 of

205

TOP

See sheet 131

PUNCH 11/16 ø
REAM 15/16 ø

42'-1 3/8 c/c

97 Spcs @ 4 3/8 = 35' 4 3/8

456

457

PUNCH 11/16 ø
REAM 15/16 ø

2 FILL PL - 3 x 1/4 x 1'-4 15/16 - 4 Req. ex 4 (c)
TACK WELD

FILL PL 16 x 1/4" x 1'-9" - 4 Req ex 6 (c)
Tack weld.

2 FILL PL - 3 x 1/2 x 1'-5 9/16 - 4 Req - ex 5 (c)
TACK WELD

MILL

WORK WITH SH. 129

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY GA DATE 8-27-59

SEE NOTE SH. #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by BB
Checked by CWK
Revisions 8/14/59
Shop Rev. ⓒ 457

FILL PL - 4 x 5/8 x 10'-4 - 4 Req ex 3 (c)

FILL PL - 5 x 1/2 x 10'-10 - 4 Req ex 1 (c)

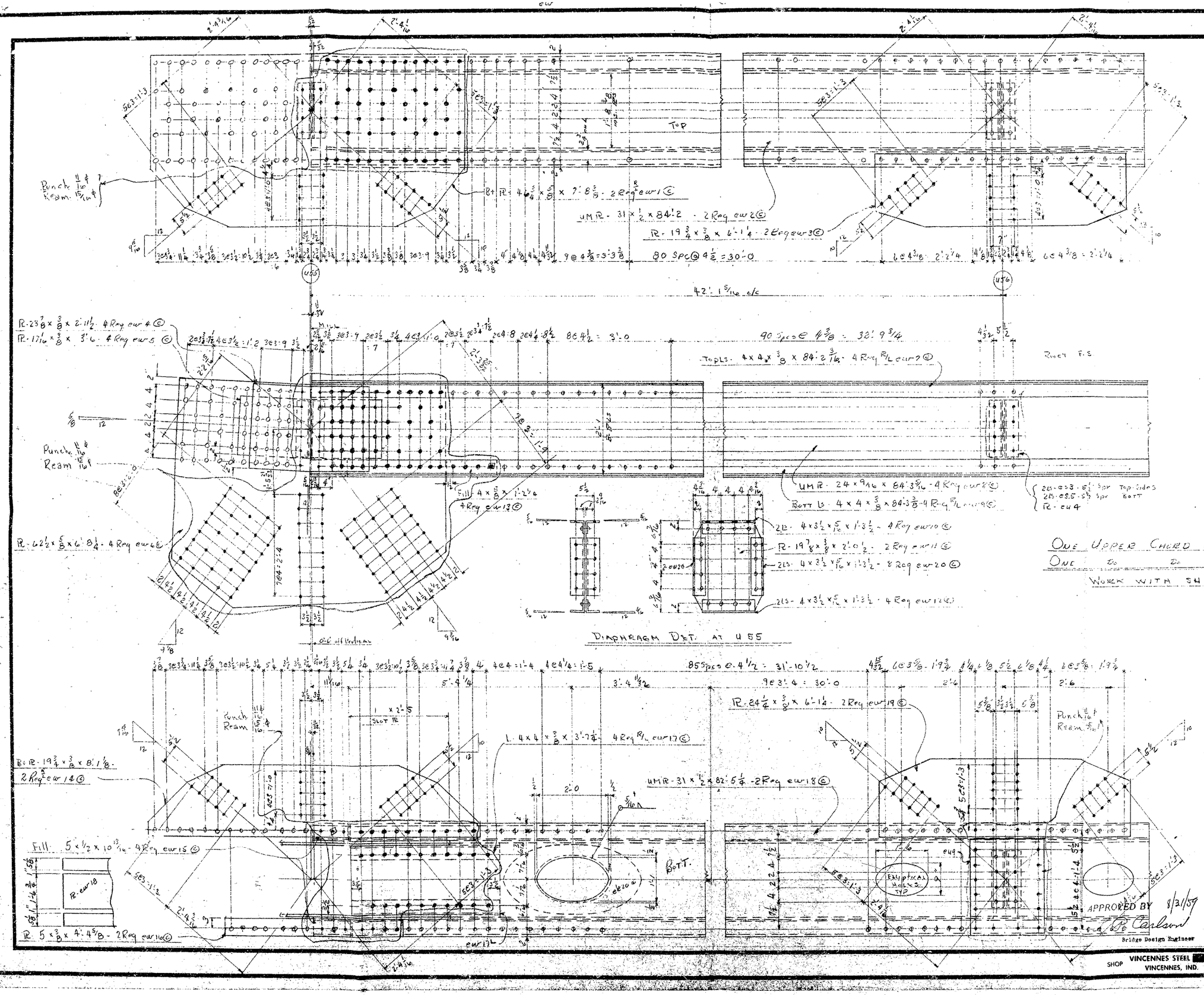
L 4 x 4 x 3/8 x 3'-3 - 4 Req ex 2 (c)

APPROVED BY
L.P. Carlson 8/21/59
Engr. Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 1
SOLD TO: JOHN F. BEASLEY CONSTR. CO
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.
Contr. No. 4800 Sh. 130 of

204



ONE UPPER CHORD AS SHOWN A129-
ONE DO DO TO PAIR AA129
WORK WITH SH. 130

SEE NOTE SH. #1

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY GA DATE 8-27-59

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8 ϕ unless noted
Holes 15/16 ϕ except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by BB
Checked by C W K
Revisions 8/10/59 B/N's 9 cc U55-L56 Shop Rivet @ U55

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 4
SOLD TO: JOHN E. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800 Sh. 129 of

203

Top

Punch 11/16" Ø Rivet Holes

See Sheet 124

U54

U55

42'-2 c/c

Mill

Punch 11/16" Ø Rivet Holes

Fill-R - 4 x 5/8 x 1'-3 - 4 Req'd ⓒ

See Sheet 129

Work with Sheet 127

Bott

Elliptical Holes Typ

L 4 x 4 x 3/8 x 3'-7 1/4 - 4 Req'd ⓒ

Fill-R - 5 x 1/2 x 10 13/16 - 4 Req'd ⓒ

1 x 2 1/16 Slot Tr

Approved By 8/31/59
L.P. Carlson
Bridge Design Engineer

See Note Sheet #1

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY GA DATE 8-22-59

Approved By: Howard, Needles Tammen & Bergendoff Consulting Engineers:

GENERAL NOTES

Rivets 7/8" Ø except as noted
Holes 15/16" Ø except as noted
End Distance 1 3/4" unless noted
Shop Paint Red Lead (Ark. Std.)
Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivets
Drawn by BE
Checked by C.W.K.
Revisions 8/14/59 Shop Rev. @ U55

Arkansas State Highway Commission
Mississippi State Highway Commission

Mississippi River Bridge
Near Helena, Arkansas
Unit No. 4

Sold To: John T. Bradley Constr. Co.
Chicago, Illinois

SHOP Vincennes Steel Div. of Industrial Enterprises, Inc.
Vincennes, Ind.
Contr. No. 4800 Sh. 128 of

202

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY GA DATE 8-27-59

PUNCH 11/16" REAM 13/16"

BOT R - 46 3/4 x 3/8 x 6'-2 3/4 - 2 Req'd eu3 (A)

U.M.R. - 31 1/2 x 84'-2 25/32 2 Req eu1 (C)

R - 19 5/8 x 3/8 x 6'-2 3/4 - 2 Req eu2 (C)

R - 24 1/16 x 3/8 x 3'-1 4 Req eu16 (A)

Fill R - 3 x 1/8 x 1'-4 3/4 - 4 Req eu17 (C)

R - 17 5/8 x 3/8 x 4'-2 1/8 - 4 Req eu18 (A)

R - 76 1/2 x 5/8 x 7'-10 - 4 Req eu19 (A)

42'-2 1/32" c/c

Top L - 4 x 4 x 3/8 x 84'-3 3/16 - 4 Req'd eu10 (C)

U.M.R. - 24 x 9/16 x 84'-4 15/16 - 4 Req eu11 (C)

RIVET S.S.

R - 19 7/8 x 3/8 x 2'-0 1/2 - 4 Req eu4 (C)

2-es8 5 1/2" spr.

2-es5 5 1/2" spr.

L - 4 x 4 x 3/8 x 3'-3 3/4 - 4 Req'd eu21 (C)

L - 4 x 4 x 3/8 x 3'-0 3/4 - 4 Req'd eu13 (C)

Fill R - 16 x 1/8 x 2'-1 - 4 Req eu14 (C)

Fill R - 3 x 1/8 x 1'-0 - 4 Req eu15 (C)

2 Ls - 4 x 3 1/2 x 5/16 x 1'-3 1/2 - 4 Req eu20 (C)

2 3/16 Gs. 5 1/2" spr. O.S.L.

DIAPHRAGM DETAIL AT - U53 -

2 L - 4 x 3 1/2 x 5/16 x 1'-3 1/2 - 4 Req eu5 (C)

R - 19 7/8 x 3/8 x 2'-0 1/2 - 2 Req eu6 (C)

2 Ls - eu20 5 1/2" spr.

2 Ls - 4 x 3 1/2 x 5/16 x 1'-3 1/2 - 4 Req eu7 (C)

BOTT L - 4 x 4 x 3/8 x 84'-5 - 4 Req'd eu12 (C)

ONE UPPER CHORD AS SHOWN - A127-

ONE "D" TO PAIR AA127-

WORK WITH SHEET 128

SEE NOTE SHEET #1

L 3 1/2 x 3 1/2 x 3/8 x 2'-1 1/2 - 4 Req eu22 (C)

R - 19 3/4 x 3/8 x 6'-7 1/4 - 2 Req'd eu30 (A)

PUNCH 11/16" REAM 13/16"

2'-8 c/c of R

5 x 3/8 x 6'-1 - 2 Req eu23 (C)

F.11 - 5 x 1/2 x 1'-7 1/2 - 4 Req eu22 (C)

U.M.R. - 31 x 1/2 x 81'-10 7/32 - 2 Req eu24 (C)

R - 24 1/4 x 3/8 x 6'-3 - 2 Req eu8 (C)

F.11 - R - 21 1/4 x 3/8 x 2'-2 3/4 4 Req eu9 (C)

APPROVED BY: 8/21/59
L P Carlson
Bridge Design Engineer

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" except as noted
End Distance 1 1/4" unless noted
Shop Paint RED LEAD (ARK STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by BP
Checked by C W K
Revisions 8/10/59 Rivets
BC 053:122
Shop Rivet 053

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES STEEL SHOP
VINCENNES, IND.
Contr. No. 4800
Sh. 127 of

201

UMR - 31 x 3/8 x 42'-6 7/32 - 2 Req et 1 (A)

R - 46 3/4 x 3/8 x 6'-9 1/2 - 2 Req et 2 (A)

See Sheet 127

FillR - 1 x 1/8 x 3'-1 7/8 - 2 Req et 22 (A)

75 Spcs @ 5 1/2 = 34'-4 1/2

4 @ 4'-2 = 1'-6

42'-9 15/16" c-c

2 Ls - 4 x 3 1/2 x 5/16 x 1'-3 1/2 - 16 Req et 9 (C)
(2 5/16" GA o.s.l. 5 1/2 spr.)

76 Spcs @ 5 1/2 = 34'-10

UMR - 24 x 9/16 x 42'-7 25/32 - 4 Req et 7 (A)

Tapls - 4 x 4 x 3/8 x 42'-6 5/32 - 4 Req Pc et 6 (A)

Punch 11/16
Ream 15/16

UMR - 14 x 3/8 x 5'-10 - 4 Req et 13 (A)

UMR - 23 x 3/4 x 4'-3 - 4 Req et 4 (A)

Pc WF 24 @ 100 x 8'-0 - 4 Req Pc et 30 (C)

Bott Ls - 4 x 4 x 3/8 x 42'-7 25/32 - 4 Req Pc et 8 (A)

See Sheet 127

FillR - 24 x 1/8 x 3'-4 13/16 - 4 Req et 12 (C)

80 Spcs - 5 1/4 = 35'-0

3 Spcs @ 3'-5 3/8 = 31'-0 3/4

3'-5 15/32

R - 20 3/4 x 3/8 x 2'-6 1/2 - 2 Req et 3 (A)

R - 65 3/4 x 1/2 x 6'-9 1/2 - 2 Req et 5 (A)

11/16" holes REAM 15/16"

Bott UMR - 31 x 1/2 x 4'-1 31/32 - 2 Req et 11 (A)

L - 4 x 4 x 3/8 x 3'-3 11/16 - 4 Req Pc et 21 (C)

FillR - 4 x 3/4 x 7/16 - 4 Req et 20 (C)

FillR - 5 x 1/2 x 8 1/2 - 4 Req et 25 (C)

2'-6 1/4 x 1 Stem R

See Sheet 127 et 21

APPROVED BY 8/21/59
L B Carlson
Bridge Engineer

Punch 11/16
Ream 15/16

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY GA DATE 8-27-59

ONE UPPER CHORD AS SHOWN A126-
ONE DO DO TO PAIR AA126-

See Note Sh #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by BJS
Checked by GWK 8/14/59
Revisions ZZ U52-U53 Shop Rev. @ U52, U53

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP: VINCENNES STEEL & IRON CO. VINCENNES, IND.
DIV. OF INDUSTRIAL ENTERPRISES, INC.
Contr. No. 4800 Sh. 126 of

200

R - 19 3/4 x 3/8 x 6'-9 - 2 Req es1 ©

78 Spcs @ 5 1/2 = 35'-9

PUNCH 21/16
REAM 15/16

SEE SHEET 126

42'-10 1/8" c/c

84 Spcs @ 5 1/2 = 38'-6

RIVET F.S.

2 Ls - 4 x 3 1/2 x 5/16 x 1'-3 1/2 - 36 Req es3 ©
(2 3/16 GA. O.S.L. 5 1/2 Spr.)

R - 20 1/8 x 3/8 x 2'-0 1/2 - 2 Req es4 ©

WORK WITH SHEET - 124 -

78 Spcs @ 5 1/2 = 35'-9

10 Spcs @ 3'-5 1/2 = 34'-7

PUNCH 11/16 - REAM 15/16 TO MT.

FILL R - 21 1/4 x 3/8 x 2'-2 1/2 - 2 Req es4 ©

R - 19 1/4 x 3/8 x 6'-9 - 2 Req es2 ©

PUNCH 11/16
REAM 15/16

SEE SHEET 126

ROTT.

ELLIPTICAL HOLES TYP.

APPROVED BY 8/21/59
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY GA DATE 8-27-59
See Note Sh # 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES
Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted 1
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by B.B.
Checked by C.W.K. 8/14/59
Revisions 8/26/59 CCEC-USE2 Shop Fir. OUE2

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4

SOLD TO: JOHN A. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. of INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh: 125 of

199

Top

FILL R - 8 x ¾ x 2'-3½ - 4 Req'd er23 (A) ✓

Punch for Round Hole

FILL R - 5 x ¾ x 2'-9 - 4 Req'd er22 (A) ✓

Rm FS

Mill

NS ONLY

Sect. C-B

Sect. A-A

H.S. Field Bolts NS.

FILL R - 5 x ¾ x 1'-2 - 4 Req'd er15 (A) ✓
Tack weld

Top L 4 x 4 x ⅜ x 85'-10 7/16" - 4 Req'd R/L er21 (A) ✓

UM R - 24 x ⅞ x 85'-11 11/16" 4 Req'd er22 (A) ✓

Bott L 4 x 4 x ⅜ x 85'-11¾" - 4 Req'd R/L er24 (A) ✓

FILL 5 x ¾ x 3'-6 - 4 Req'd er14 (A) ✓
Tack weld

L - 15½ x ⅝ x 3'-11 - 4 Req'd er11 (A) ✓

FILL R - 14 x ⅞ x 1'-9⅞ - 4 Req'd er12 (A) ✓

R - 26¼ x ¾ x 6'-0¾ - 4 Req'd er3 (A) ✓

L - 40½ x ⅝ x 11'-7 - 2 Req'd er9 (A) NS ✓
2 Req'd er12 (A) FS ✓

ONE UPPER CHORD AS SHOWN - A124 ✓
ONE " " DO " REVERSE A A124 ✓
WORK WITH SHEET 125

L - 3½ x 3½ x ⅜ x 3'-3½ - 4 Req'd er10 (C) ✓

L - 3½ x 3½ x ⅜ x 2'-3½ - 4 Req'd er8 (C) ✓

L - 5 x 5 x ⅝ x 5'-6 3/16 - 4 Req'd R/L - er29 (A) ✓

UM R - 31 x ½ x 85'-1 15/16 - 2 Req'd er25 (A) ✓

Bottom

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ____ DATE 9-12-60
BOOK No. 3

See Note Sh #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 8/31/59

GENERAL NOTES
Rivets 7/8 except as noted
Holes 15/16 except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces No PAINT
Shop Inspection APPROVED BY
Field Connections RIVETS 9/14/60
Drawn by D.B.K.
Checked by C.W.K.
Revisions 8/10/59 8/14/59 Bridge Design Engineer
8/20/59 8/26/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILL.

SHOP VINCENNES STEEL [redacted] DIV. OF INDUSTRIAL ENGINEERS, INC.
VINCENNES, IND.
Contr. No. 4800-T Sh. 124 of

198

Riv. after assembly

Top

Fill R - 8 x 1/2 x 3'-11 3/4 - 4 R-q eq pl (A)

See Sheet 124

19 Spcs @ 5 1/2 = 36'-2 1/2

Notch R & L

44 - 2 25/32 c.c

77 Spcs @ 5 1/2 = 35'-3 1/2

Rivets F.S

Fill R - 8 x 3/4 x 10 1/2 - 4 R-q eq 2 (A)

Fill R - 24 x 1/8 x 4'-9 3/4 - 4 R-q eq 3 (A)

Fill R - 5 x 3/4 x 1'-2 - 4 Req eq 4 (A)
Tack Weld

Mill

Work with Sheet 122

See Note - Sh # 1

79 Spcs @ 5 1/2 = 36'-2 1/2

9 Spcs @ 3'-4 = 30'-0

Elliptical holes TYP

Batt

See Sheet 124

4'-1 x 1" Slot R

Punch 11/16
Ream 15/16 ϕ

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES TAMMEN & BERGENDOFF
BY ERS DATE 1-5-60

BOOK No. 3

Approved By: Howard, Needles, Tammen & Bergendoff Consulting Engineers: 8/31/59

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4 unless noted
Shop Paint Red Lead (Ark Std.)
Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivets
Drawn by BB
Checked by C W K
Revisions 8/14/59 Add U49 U50 Skip Rv @ U50

APPROVED BY
L. P. Carlson
Bridge Design Engineer

Arkansas State Highway Commission
Mississippi State Highway Commission

Mississippi River Bridge
Near Helena, Arkansas
Unit No. 4

Sold To: John F. Beasley Constr. Co.
Chicago, Illinois

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENGINEERING INC.
VINCENNES, IND.
Contr. No. 4800-T Sh. 123 of

197

FILLR - 6 x 5/8 x 3'-7 9/16 - 4 Req en5 @ L

FILLR - 6 x 3/8 x 6'-11 13/16 - 2 Req en6 @ L

L-5x5x3/8 x 2'-9 1/2 - 4 Req R/L en6 (A) FS

FILLR 5 x 3/8 x 2'-9 1/4 - 4 Req en7 (A)

Top

Punch 11/16
Ream 15/16

UMR - 35 x 5/8 x 35'-1 7/16 - 2 Req en15 (A)

Rivet after assembly

Rivets F.S.

Top L - 5 x 5 x 5/8 x R/L en16 (A) NS
2 Req R/L en164 (A) FS

UMR - 14 x 3/8 x 3'-4 - 4 Req en20 (A)

FILLR - 6 x 3/8 x 3'-4 - 2 Req en8 (F.S.) (A)

Bott L - 5 x 5 x 5/8 x 88-4 1/2" - 4 Req R/L en17 (A)

UMR - 24 x 5/8 x 88'-10 3/4 - 4 Req en18 (A)

PL WF e4 @ 100 x 2'-0 3/8 - 4 Req R/L - en40 (C)

ONE UPPER CHORD AS SHOWN - A122

ONE Do Do TO PAIR - AA122

WORK WITH DWG. ET 123

L-A-6 x 1/2 x 6' - 2 Req en33 (A)
ON STREAMSIDE A122 only

L-5x5x3/8 x 7'-1 3/4 - 8 Req R/L en4 (A)
(weld together @ CENTER)

L-5x5x3/8 x 7'-3/4 - 8 Req R/L en3 (A)
cut from 6x6x3/8 (weld together @ CENTER)

L-6x4x1/2 x 3'-4 - 8 Req R/L en1 (A)

RIVET F.S.

Rivets F.S.

Punch 11/16
Ream 15/16

L-5x5x3/8 x 2'-9 1/2 - 4 Req en31 (A)

UMR - 33 x 3/4 x 84'-5 5/8 - 2 Req en19 (A)

FILLR - 24 3/8 x 3/8 x 2'-4 7/16 - 2 Req en30 (C)

R - 30 x 1/2 x 4'-4 - 4 Req en10 (A)

R - FILL 14 x 5/8 x 3'-2 5/16 - 4 Req en11 (A)

R - 49 x 5/8 x 7'-2 1/2 - {2 Req en12 (A) / 2 Req en128}

R - 77 x 3/4 x 12'-6 3/4 - {2 Req en13 (A) / 1 Req en138 (A)}

R - 49 x 5/8 x 7'-2 1/2 - 1 Req en36 (A) FS

R - 77 x 3/4 x 12'-6 3/4 - 1 Req en37 (A) NS A122

R - 20 3/16 x 3/8 x 5'-1 3/8 - 2 Req en22 (C)

R - 20 3/16 x 5/8 x 5'-0 7/8 - 2 Req en21 (C)

2 Spc @ 3 1/2 = 7'-0

10 @ 3 = 2'-6

24 Spcs @ 5 1/2 = 33'-11

8 @ 3 7/8 = 2'-7

Spcs @ 5 1/2 = 36'-8

44'-3 3/8 c/c

Sect A-A

Sect B-B

Sym about ℄

Sym abt ℄

Sym about ℄

Band Line

J Line

TB

Type for Top & Bott 12s

Elliptical Holes TYP

Bottom

Punch 11/16
Ream 15/16

12s - em7 - 5 1/2" Spc. (Side)
21s - em9 - 5 1/2" Spc. (Top)
12 - em8
12s - em12 - 5 1/2" Spc. (Bott)

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 9-12-60

BOOK No. 3

See Note Sh #1

APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 9/4/59

APPROVED BY 9/15/60
L. P. Garland
Bridge Design Engineer

GENERAL NOTES
Rivets 7/8" ⊕ except as noted
Holes 15/16 except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by BB
Checked by C W K 8/14/59
Revisions 9/16/59 C-E 12/23/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4
CONTRACTOR JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF PACIFIC STEEL CORPORATION, INC. VINCENNES, IND.

Spec. No. 1800-T Sh 122 of

196

Rivet after assembly

- R - 20 1/16 x 5/8 x 5'-0 1/8 - 2 Req em 1 (C)
Fill R - 3 x 1/8 x 2'-9 1/4 - 4 Req em 2 (A)
L-5 x 5 x 3/4 x 2'-9 1/2 - 4 Req 'K' em 15 (A)
2 Lgs. 4 x 3 1/2 x 5/16 x 1'-2 1/2 - 8 Req em 9 (C)
2 3/16" Gas. Holes 5 1/2 Spa. 5 Spa.
2 Lgs. 4 x 3 1/2 x 5/16 x 1'-2 1/2 - 16 Req em 7 (C)
2 3/16" Gas. Holes 5 1/2 Spa.
R - 20 3/16 x 3/8 x 2'-0 1/2 - 4 Req em 8 (C)
2 Lgs. 4 x 3 1/2 x 5/16 x 1'-4 1/2 - 8 Req em 12 (C)
Punch 11/16 - Ream 15/16 To MT.
Fill-22 3/16 - 3/8 x 2'-3 9/16 - 2 Req em 4 (C)
R - 20 3/16 x 3/8 x 5'-4 7/8 - 2 Req em 3 (C)
Fill R - 6 x 3/8 x 6'-11 3/16 - 2 Req em 10 (A)
Fill R - 6 = 1/4 x 3'-7 9/16 - 4 Req em 11 (A)
Punch 11/16
Ream 15/16
Slot Cut R 2'-9 3/4 x 1 1/2
L-5 x 5 x 3/4 x 2'-9 1/2 - 4 Req em 16 (A)
Fill R - 14 x 5/8 x 3'-2 5/16 - 4 Req em 21 (A)
Tack Weld
Fill R - 14 x 3/8 x 3'-8 - 4 Req em 5 (A)
Fill-6 x 3/8 x 5'-4 - 2 Req em 20 (A)
Mill
Same for Top Flg.
Elliptical Holes Typ.
Bottom

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 9-12-60

APPROVED BY 9/15/60
L. P. Carlson
Bridge Design Engineer

WORK WITH SHEET -120-

BOOK No. 3

See Note Sh. #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 9/4/59

GENERAL NOTES
Rivets 7/8" R except as noted
Holes 15/16" R except as noted
End Distance 1 3/4" unless noted
Shop Paint. RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by BB
Checked by CWK
Revisions 8/6/59 9/4/59
C-0047-048

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800-T Sh. 121 of

195

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY G.A DATE 9-20-60
BOOK No. 7

ONE UNIT OF GRADE AT [illegible] AT 0+
ONE INCH CHORD TO PAIR AT 20+
[illegible]

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 9/4/59

GENERAL NOTES
Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 1/2" unless noted
Shop Point RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by APPROVED BY 9-3-60
Field Connections
Drawn by L.P.
Checked by L.P. Carlson
Revisions Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4

SOLO TO: JOHN T. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.
Contr. No. 4806-T Sh. 120 of

194

Riv. filler assembly

Top

F.H.R. 8½ x 2'-5" - 4 Req'd ejl

Punch 11/16 ϕ
Ream 15/16 ϕ

77 spcs @ 5½ = 35'-5½

42'-10½" c to c

U45

U46

Punch 11/16 ϕ
Ream 15/16 ϕ

Mill

48 Spcs @ 5½ = 31'-2

28'-0

2'-6

3'-3

Elliptical holes thru

Bot

Slot PL - 1" x 5'-5 3/4

Fill PL - 4 x ½ x 1'-0½ - 2 Req'd ejl

Tack Weld

5'-5 3/4 Slot PL

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY ERS DATE 9-12-60

APPROVED BY 9/15/60
L.P. Carlson
Bridge Design Engineer

WORK WITH SHEET 118

BOOK No. 3

See Note Sh #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS 9/4/59

GENERAL NOTES

Rivets 7/8 ϕ except as noted
Holes 15/16 ϕ except as noted
End Distance 1¼ unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by BB
Checked by CWK
Revisions 8-6-59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT No. 4

SOLD TO: JOHNNY BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL [illegible] VINCENNES, IND.

[illegible] OF INDUSTRIAL ENGINEERS, INC.

Contr. No. 4850 F Sh. 119 of

193

Top

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 9-12-60

APPROVED BY 9/15/60
L.O. Carlson
Bridge Design Engineer

BOOK No. 3

ONE UPPER CHORD AS SHOWN - A118 ✓
ONE DO TO PAIR - AA118 ✓
WORK WITH SHEET 179.

See Note Sh #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 9/4/59

GENERAL NOTES
Rivets 7/8 except as noted
Holes 15/16 except as noted
End Distance 1¼ unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by BD
Checked by C W K
Revisions 9/16/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4
SOLD TO: JOHN F. SEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL & [illegible] DIV. OF [illegible]
VINCENNES, IND.
Contr. No. 4886-T Sh. 118 of

192

Top

Punch 11/16 ϕ
Ream 15/16 ϕ

Shop Rivet guis here
guis

60 Spcs @ 5'-4 = 35'-0

UMR - 31 x 3/8 x 43'-7 21/32 - 2 Reqd (A)

Punch 11/16 ϕ
Ream 15/16 ϕ

42 Spcs @ 5'-4 = 31'-11 1/4

L 4 x 4 x 3/8 x 43'-3 1/8 - 4 Reqd Legs (A)

Punch 11/16 ϕ
Ream 15/16 ϕ

Fill Bar - 4 x 3/4 x 9 1/2 - 4 Reqd egs (B)
Fill Bar - 4 x 5/8 x 3'-0 5/8 - 4 Reqd egs (C)

L 4 x 4 x 3/8 x 43'-10 3/8 - 4 Reqd Legs (B)

UMR 24 x 9/16 x 4'-11 15/16 - 4 Reqd egs (C)

73 Spcs @ 5'-4 = 31'-11 1/4

10 Spcs @ 3'-6 = 35'-0

L 4 x 4 x 3/8 x 5'-0 5/8 - 4 Reqd Legs (D)

UMR - 31 x 1/2 x 40'-6 3/4 - 2 Reqd egs (D)

Punch 11/16 ϕ
Ream 15/16 ϕ

Elliptical Holes

Bot.

ONE UPPER CHORD AS SHOWN - A117V
ONE " DO DO TO PAIR A117V

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 9-9-60

APPROVED BY 9/15/60
Bridge Design Engineer

See Note Sh* 1

BOOK No. 3

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 9/4/59

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by BR
Checked by CWR
Revisions 9/26/57

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4
SOLD TO JOHN T. BRADLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

DEPT. OF HIGHWAYS, ENGINEERING DIV.
Order No. 4800-T Sh. 117 of

191

13@3"=3'-3" | 15@3"=3'-9" | 7@3½"=2'-0½" | 72 SPC. @4½"=27'-0" | 12@4"=4'-0" | 10@3½"=2'-11"

FILL R-ef3

SLOT TOP R 1"x3'-5¼"

11/16 Φ HOLES REAM 15/16 Φ

PARALLEL

FILL R-5x½x1'-6-4 REQ.-ef3(c)

1R-5x½x9'-1½-4 REQ.-ef2(c)(U.M.)

TOP R-31x½x42'-2 7/16-2 REQ.-ef11(c)(U.M.)

1L: 4x4x⅜x1'-2-2 Req. ef18(c)

2 R's-75½x⅝x7'-10½-4 REQ.-ef4(c)

2 L's-4x4x⅜x4'-2"-4 REQ. R/L-ef5(c)
Bolt To A116 & AA116

N.S. R-22¼x⅝x4-9½-2 REQ.-ef8(c)

F.S. R-22¼x⅝x4'-1½-2 REQ.-ef9(c)

N.S.L: 7x4x¾x1'-11-2 Req. R/L ef19(c)

2 TOP L's-4x4x⅜x42'-10 3/16"-4 REQ. R/L-ef6(c)

2 WEB R's-24x 9/16 x42'-10 3/16"-4 REQ.-ef7(c)(U.M.)

2 BOTT. L's-4x4x⅜x42'-10 3/16"-4 REQ. R/L-ef10(c)

JACKING BLOCK B410

FILL R-16x⅜x1'-6¾-2 REQ.-ef11(c)(N.S.)

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 9-9-60

Bldg. Rivets F.S. 8@2⅝=1'-9"

11@3"=2'-9" | 6 | 13@3"=3'-3" | 6@3½"=1'-9" | 4 | 80@4½"=30'-0" | 7@4"=2'-4" | 8@3½"=2'-4" | 10"

L58 | L59

2 L's-4x4x⅜x3'-8"-4 REQ. R/L-ef14(c)
Bolt To Top of A114-AA114 To Ship.

MILL BOTT. CHORD SQUARE

2 SPLICE PL's-16x⅜x3'-4½-4 REQ.-ef12(c)(U.M.)

42'-0 3/16" c-c

2 SPLICE PL's-23x⅜x2'-10½-4 REQ.-ef13(c)(U.M.)

ONE LOWER CHORD AS SHOWN-A116

ONE LOWER CHORD TO PAIR-AA116

1R-32"x½x4'-6⅓-2 REQ.-ef17(c)

1R-53½x⅜x7'-0-2 REQ.-ef15(c)

Bott. R-31x½x42'-10 3/16"-2 REQ.-ef16(c)(U.M.)

ELLIPTICAL HOLES

R-dm12

11/16 Φ HOLES REAM 15/16 Φ

9@3"=2'-3" | 4@4 | 4@3½"=2'-7½" | 9@3½"=2'-7½" | 12@4"=4'-0" | 4 3/16 | 71 SPC. @4½"=26'-7½" | 12@4"=4'-0" | 12@3½"=3'-6" | 10"

5'-6½" | 3'-6 5/16 | 7@3'-5"=23'-11" | 3'-6⅜" | 5'-6

NOT TO SCALE

NOTE
SEE NOTES ON SHEET 1

BOOK No. 3

APPROVED BY 9/15/60
L.P. Carlson
Bridge Design Engineer

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 9/12/59

GENERAL NOTES
Rivets ⅞" Φ except as noted
Holes 15/16 except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by T.P
Checked by L.W.K.
Revisions 9/14/59 9/21/59
SHOP REV. @ SPL. Holes added for Lat.

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4

SOLD TO: JOHN E. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP: VINCENNES STEEL CORP. VINCENNES, IND. DIV. OF INDUSTRIAL ENTERPRISES, INC.
Contr. No. 4800 Sh. 116 of

190

7 @ 3" = 1'-9" 4" 4" 4 11/32

76 SPC. @ 5 1/2" = 34'-10"

13 @ 3" = 3'-3"

3 3/4 4 1/2 2 3/4

SLOT TOP R - 1" x 2'-11 1/4"

1 1/2 7 1/4

11/16 HOLES REAM 15/16 ϕ

2 1/4

6 3/8 7/16 7/16 6 3/8

See Sheet # 116

3 1/4

9 3/16 9 3/16

2 1/4

T 2 1/2

2'-2 1/2"

1'-9 1/2" B/B L's

8 3/4 3 1/2 3 8 3/4

2 1/2 8 3/4

1'-8 3/8" INS. R's

11/16 HOLES REAM 15/16 ϕ

FILL R - 5 x 1/8 x 3'-6 1/2" - 4 REQ. - EE1

TACK WELD

42'-0 3/32" c-c

11/16 HOLES REAM 15/16 ϕ

MILL

1/32

11/16 HOLES REAM 15/16 ϕ

2'-1" B/B L's

1'-1 1/4"

3 1/4 1 1/4

2 1/2 4 4 2 3/4 4 4 2 1/2

W.L.

7/8 SHOP RIVETS F.S.

3 1/2 4 3 1/2 5 3/32 3 1/2

81 SPC @ 5 1/2" = 37'-1 1/2"

11 @ 3" = 2'-9" 6 3 1/2

1/32

(L67)

(L58)

LOWER CHORDS - A114 & AA114

WORK WITH SHEET 114

SEE SHEET # 116

2'-2 1/2"

1'-9 1/2" B/B L's

8 3/4 3 1/2 3 3/4 8 3/4

2 1/2

1'-8 3/8" INS.

BOTTOM

1'-6"

5/16

1/2 2'-0 1/2

R-dm12

11/16 HOLES REAM 15/16 ϕ

10 @ 3" = 2'-6"

4 1/4

1'-9"

76 SPC. @ 5 1/2" = 34'-10"

9 SPC. @ 3'-6 1/8" = 31'-7 1/8"

3'-5 31/32

9 @ 3" = 2'-3"

3 3/32 3 3/4 3 9/16

4 1/4 4 2 3/4

5'-2"

ELLIPTICAL HOLES

APPROVED BY 9/10/59

L. P. Carlson

Bridge Design Engineer

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY FRS DATE 9-2-59

NOTE

SEE NOTES ON SHEET 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF - CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8 ϕ except as noted

Holes 15/16 ϕ except as noted

End Distance 1 3/4 unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVET

Drawn by T. P.

Checked by E W K

Revisions 8/4/59 — Shop Rivets @ SPL 8/27/59 — Add holes for C.B.

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No 4

SOLD TO: JOHN F. BEASLEY CONSTR CO
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND. Contr. No. 4800 Sh. 115 of

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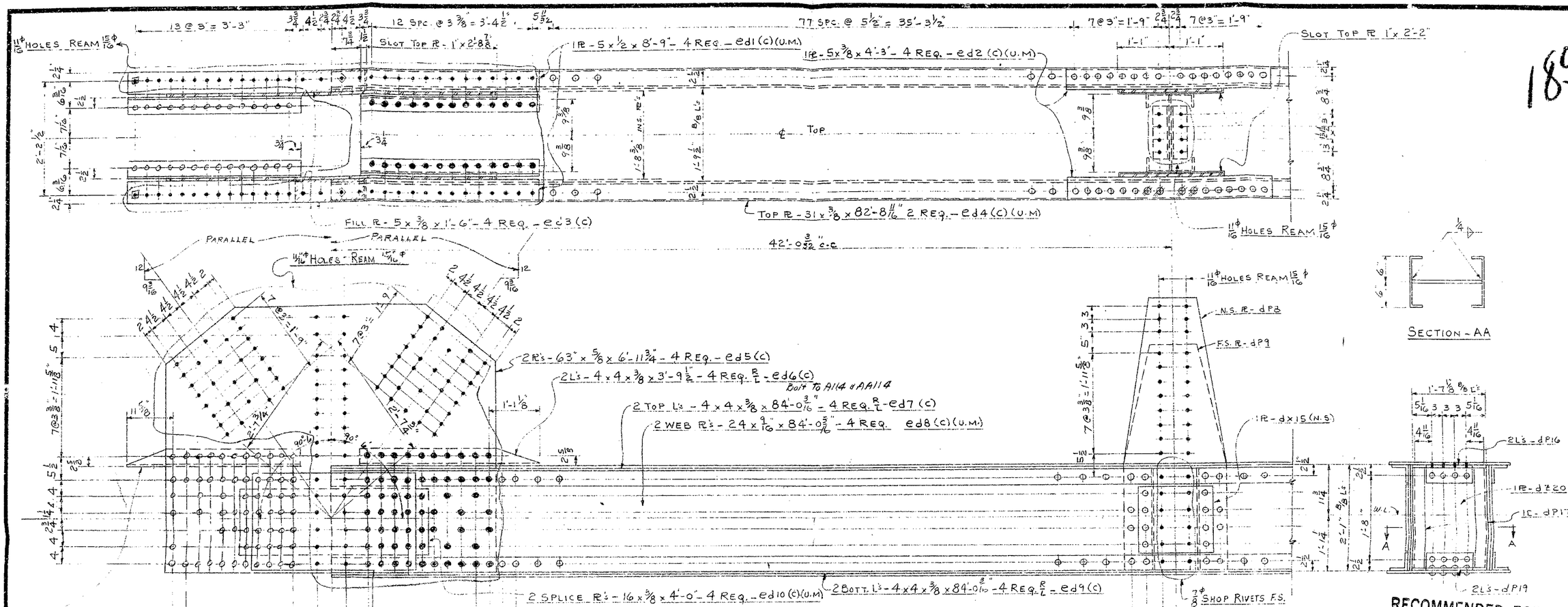


RECOMMENDED FOR APPROVAL L 57
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 9-2-59
SEE NOTES ON SHT. 1.

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF - CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" except as noted.
Holes 15/16" except as noted.
End Distance 1 3/4" unless noted.
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by T.P.
Checked by W.W.K.
Revisions 8/14/59 eb7164
Shop PL & SPL add hole's Ld. Pt's

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

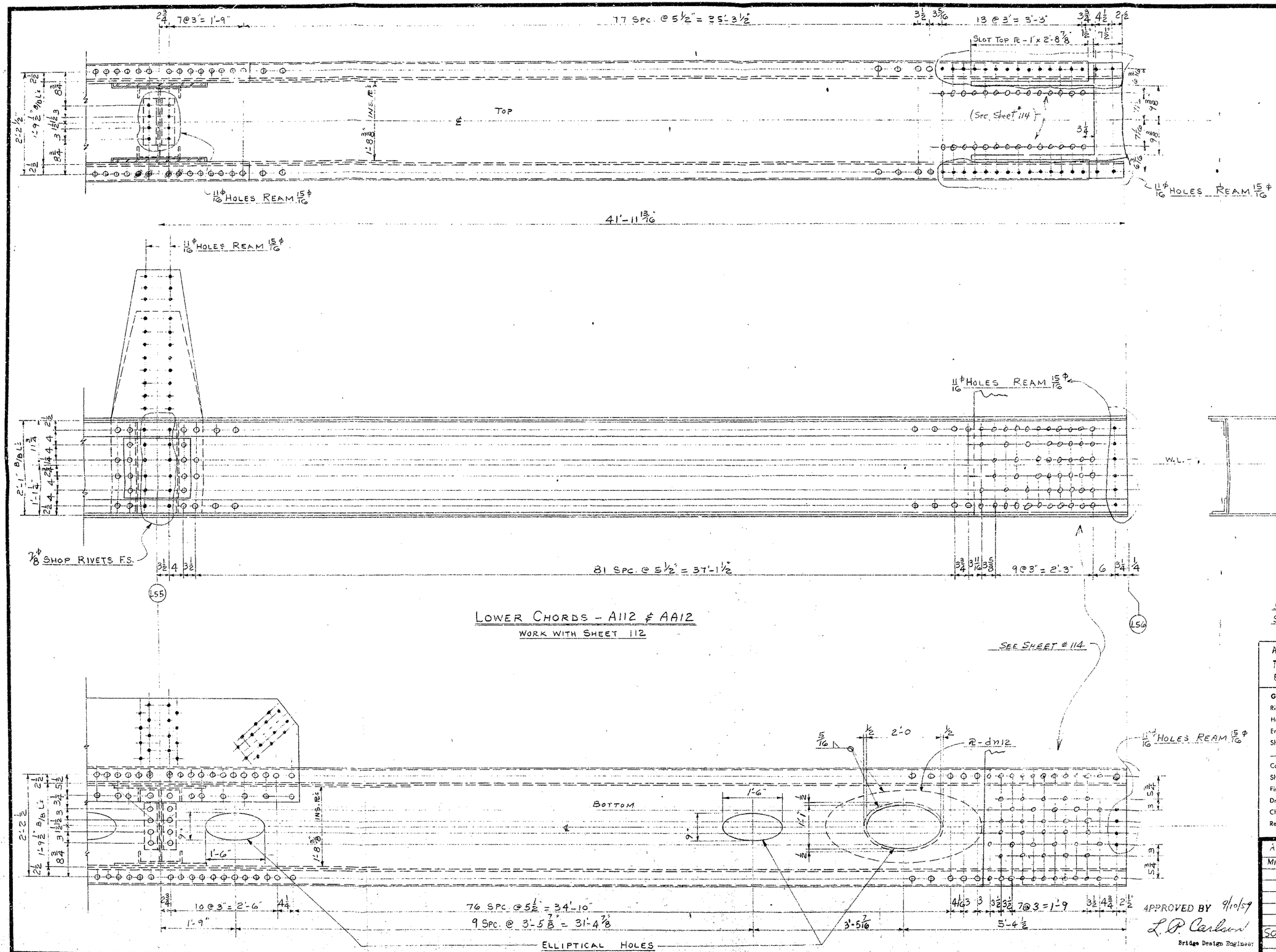
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

APPROVED BY 9/10/59
L.P. Carlson
Bridge Design Engineer

SHOP VINCENNES STEEL & INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800 Sh. 114 of

188



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY NOTE FRS DATE 9-2-59
SEE NOTES ON SHEET 1

APPROVED BY: HOWARD, NEEDLES TAMMEN, & BERGENDOFF - CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by T.P.
Checked by
Revisions 6/24/59 Stairs and Shop Rev. @ Spl. 8/28

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO 4

SOLD TO: JOHN F. BEASLEY CONSTR CO
CHICAGO, ILLINOIS

APPROVED BY 9/10/59
L. P. Carlson
Bridge Design Engineer

SHOP VINCENNES STEEL [illegible] ENGINEERING INC
VINCENNES, IND.
Contr. No. 4800 Sh. 113 of

187

11/16" HOLES REAM 15/16"

16 @ 3" = 4'-0"

R-eb3

FILL R-eb3

16 @ 3" = 4'-0"

SLOT TOP PL 1" x 3'-2 1/4"

FILL PL-eb4 Tack weld

TOP PL - 31" x 3/8" x 82'-8 5/8" - 2 REQ. - eb1(c)(U.M)

76 SPC. @ 5 1/2" = 34'-10"

7@3"=1'-9"

7@3"=1'-9"

SLOT TOP PL - 1" x 2'-2"

1'-1"

1'-1"

1R - 5" x 1/2" x 9'-10 1/2" - 4 REQ. - eb3(c)(U.M.)

PARALLEL

PARALLEL

42'-0 1/16"

PL - 5" x 3/8" x 4'-3" - 4 REQ. - eb2(c)(U.M)

FILL PL - 5" x 3/16" x 4'-3 1/2" - 4 REQ. - eb4(c) Tack weld

FILL PL - 5" x 1/16" x 1'-3" - 4 REQ. - eb5(c)

11/16" HOLES REAM 15/16"

2 PL's - 69" x 5/8" x 7'-10 1/2" - 4 REQ. - eb6

2 L's - 4 x 4 x 3/8 x 4'-3 1/2" - 4 REQ. PL - eb1(c) Bolt to A112 & AA112

2 SPLICE PL's - 16" x 3/8" x 4'-7 1/2" - 4 REQ. - eb8(c)(U.M.)

2 FILL PL's - 16" x 3/16" x 2'-3 3/4" - 4 REQ. - eb9(c) - Tack weld

2 TOP L's - 4 x 4 x 3/8 x 83'-11 7/8" - 4 REQ. PL - eb10(c)

2 WEB PL's - 24" x 9/16" x 83'-11 7/8" - 4 REQ. - eb11(c)(U.M)

1'-0 1/4"

1'-3 1/4"

11/16" HOLES REAM 15/16"

2 L's - 4 x 4 x 3/8 x 83'-11 7/8" - 4 REQ. PL - eb12(c)

13 @ 3" = 3'-3"

12 @ 3" = 3'-0"

81 SPC. @ 5 1/2" = 37'-1 1/2"

7/8" SHOP RIVETS F.S.

(154)

(155)

2 L's - 4 x 4 x 3/8 x 4'-3 1/2" - 4 REQ. PL - eb15(c)

2 SPLICE PL's - 23" x 3/8" x 3'-1 1/2" - 4 REQ. - eb13(c)(U.M)

2 FILL PL's - 3" x 3/16" x 1'-6 3/4" - 8 REQ. - eb14(c) Tack weld

MILL BOTT CHORD SQ

1R - 49" x 5/8" x 6'-1" - 2 REQ. - eb16(c)

ONE LOWER CHORD AS SHOWN - A112

ONE LOWER CHORD TO PAIR - AA112

CONTINUED ON SHEET 113

FILL PL - 31" x 1/8" x 3'-5 1/2" - 2 REQ. - eb17(c) Tack weld

BOTT. PL - 31" x 1/2" x 83'-11 7/8" - 2 REQ. - eb18(c)(U.M)

PL - d M12

1R - 27 1/2" x 1/8" x 6'-5 1/2" - 4 REQ. - eb19(c)

11/16" HOLES - REAM 15/16"

10 @ 3" = 2'-6"

5'-3 3/4"

3'-5 5/16"

76 SPC. @ 3'-6" = 31'-6"

1'-9"

ELLIPTICAL HOLES

11/16" HOLES REAM 15/16"

N.S. PL - d P8

F.S. PL - d P9

1R - d x 15 (N.S)

SECTION AA

1-7 1/8" 8/8 CS

2 L's - d P16

2 L's - d P17

1R - d Z 20

2 L's - d P19

DIAPHRAGM AT L5S

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

NOTE

GA SEE SH 9 OF 15-5-59 SHEET 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF - CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ϕ except as noted

Holes 11/16" ϕ except as noted

End Distance 1 3/4" unless noted

Shop Paint RED LEAD (ARK STD)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVET

Drawn by T.P.

Checked by C.W.K.

Revisions 9/4/59 Shop Rx @ Sp.

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE NEAR HELENA, ARKANSAS UNIT No 4

SOLD TO: JOHN F BEASLEY CONSTR. CO CHICAGO, ILLINOIS

APPROVED BY 9/17/59

L P Carlson

Bridge Design Engineer

SHOP VINCENNES STEEL [redacted] OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

Contr. No. 4800 Sh. 112 of

186

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 9-12-60

2 FILL PL's - 24 x 1/8 x 4'-0 3/4 - 4 REQ. - EACH (C)

LOWER CHORDS - A110 & AA110
WORK WITH SHEET 110

NOTE
SEE NOTES ON SHEET 1

BOOK No. 3

APPROVED BY: HOWARD, NEEDLES TAMMEN, & BERGENDOFF - CONSULTING ENGINEERS; 9/3/59

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by T.P.
Checked by C.W.K.
Revisions 9/14/59 9/27/60

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 4
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

APPROVED BY L.P. Carlson 9/15/60

SHOP VINCENNES STEEL & IRON ENTERPRISES, INC. VINCENNES, IND.
CONTR. NO. E-4 PROJECT NO. 7[illegible] Sh. 111 of

185

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 9-12-60

1R- 5"x 3/8 x 3'-3" - 4 REQ - dZ22 (C) (U.M)

SECTION "AA"

DIAPHRAGM AT L53

NOTE
SEE NOTE ON SHEET 1

ONE LOWER CHORD AS SHOWN - A110
ONE LOWER CHORD TO PAIR - AA110
CONTINUED ON SHEET 111

ELLIPTICAL HOLES

APPROVED BY: HOWARD NEEDLES TAMMEN & BERGENDOFF - CONSULTING ENGINEERS: 9/3/59

GENERAL NOTES
Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. 570)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by T.P.
Checked by C.W.K.
Revisions 8/4/59 8/27/59
Shop R's & Sh's Dimens. @ L&2 NS1 Corr. R

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO 4

SOLD TO: JOHN F. BEASLEY CONSTR CO
CHICAGO, ILLINOIS

APPROVED BY 9/15/59
L.P. Carlson
Bridge Design Engineer

SHOP VINCENNES STEEL VINCENNES, IND.

DIV. OF INDUSTRIES Contr. No. [illegible] Sh. 110 of

BOOK No. 3

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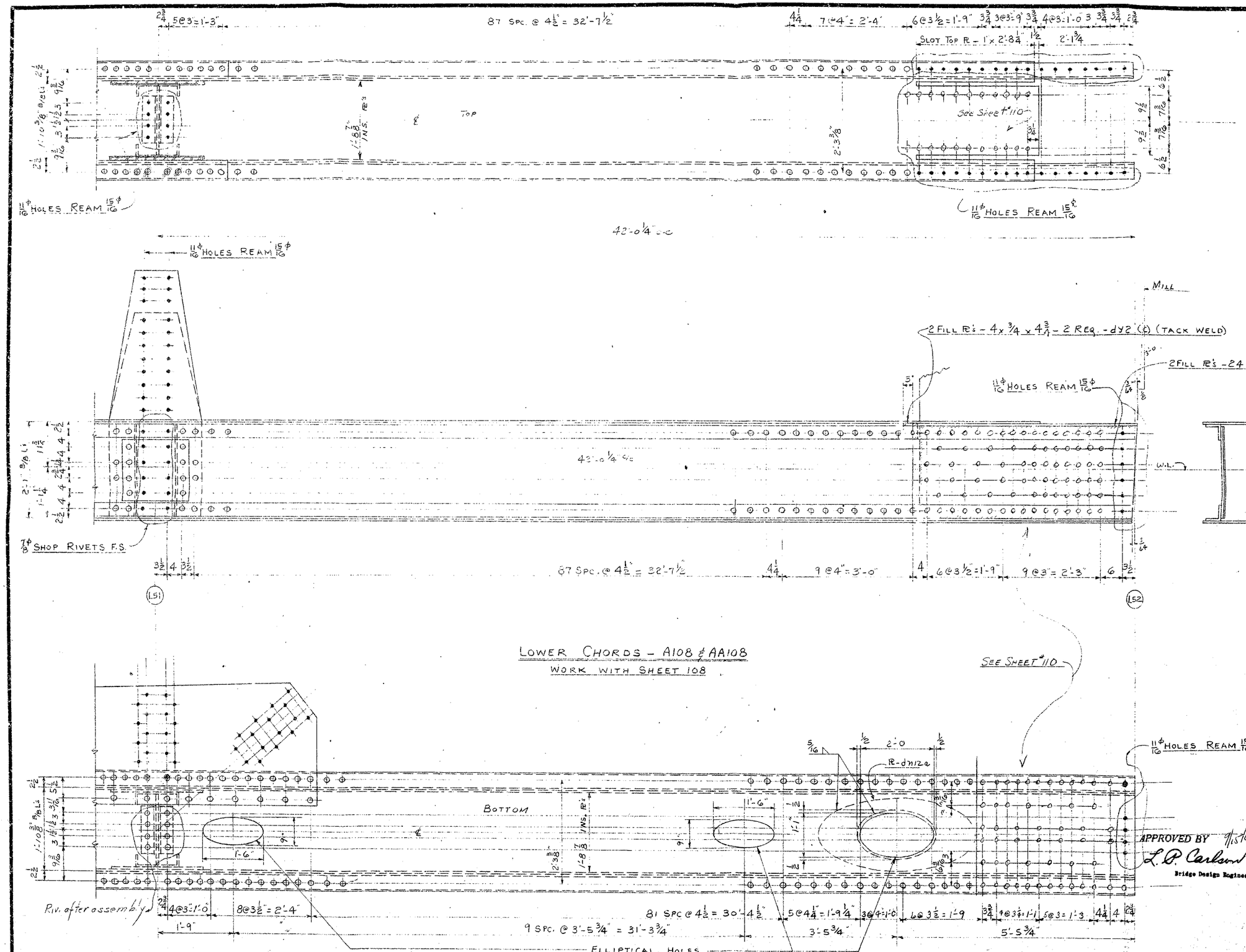

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 9-12-60

NOTE
See Note on Sheet 1

BOOK No. 3

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF - CONSULTING ENGINEERS: 9/3/59

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by T.P.
Checked by C.W.K.
Revisions 9/14/59 Shop Rv. & Sh.

APPROVED BY
L. P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

SHOP VINCENNES STEEL DBA OF INDUSTRIAL ENTERPRISES INC.
VINCENNES, IND.
Contr. No. 800-7 Sh. 109 of

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RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 9-12-60

14 @ 3" = 3'-0" | 14 @ 3" = 3'-6" | 87 SPC. @ 4½" = 32'-7½" | 5 @ 3" = 1'-3" | 5 @ 3" = 1'-3"

R - dx3 | FILL R - dx4 | SLOT TOP R - 1" x 3'-3¾" | SLOT TOP R 1" x 2'-2"

1R - 5 x ⅜ x 3'-3" - 4 REQ. - dx1 (A) (U.M.)

TOP ℄

FILL R - 5 x 11/16 x 1'-9" - 4 REQ. - dx4 (A)

11/16 ϕ HOLES REAM 15/16 ϕ

1R - 5 x ¾ x 8'-1½ - 4 REQ. - dx3 (A) (U.M.)

TOP R - 31 x 11/16 = 81'-0" - 2 REQ. - dx2 (A) (U.M.)

11/16 ϕ HOLES REAM 15/16 ϕ

2 R's - 6 3/8 x 5/8 x 8'-4½ - 4 REQ. - dx5 (A)

42'-0¼"

PARALLEL | PARALLEL

SECTION "AA"

11/16 ϕ HOLES REAM 15/16 ϕ

N.S.R - dP8

FS. R - dP9

2 L's - 5 x 5 x ½ x 3'-11 - 4 REQ. R/L - dx6 (A)
E.O. - 7c A108 & AA108

2 TOP L's - 4 x 4 x ⅜ x 84'-0 1/16 - 4 REQ. R/L - dx7 (A)

2 WEB R's - 24 x ¾ x 64'-0 1/16 - 4 REQ. - dx8 (A) (U.M.)

2 FILL R's - 24 x ¼ x 2'-1½ - 4 REQ. - dx14 (C)

1 FILL R - 16 x ⅜ x 1'-6½" - 8 REQ. - dx15 (C) (N.S.)

1'-7⅞ B/B ℄'s

2 L's - dP16

℄ - dP17

42'-0 1/4 c/c

2 L's - dP19

11/16 ϕ HOLES REAM 15/16 ϕ
13 @ 3" = 3'-3"

dx12

2 BOTT. L's - 4 x 4 x ⅜ x 84'-0½ - 4 REQ. R/L - dx9 (A)

7/8 ϕ SHOP RIVETS F.S.

dx14

1R - 18⅜ x ⅜ x 2'-0 - 2 REQ. - dx16 (C)

92 SPC @ 4½" = 34'-6"

DIAPHRAGM AT L51

2 L's - 5 x 5 x ½ x 3'-11 - 4 REQ. R/L dx10 (A)

2 FILL R's - 3 x ¼ x 5¼ - 8 REQ. - dx13 (A)

TACK WELD

L50

MILL BOTT. CHORD ⅝

2 SPLICE R's - 16 x ½ x 3'-10½ - 4 REQ. - dx11 (A) (U.M.)

2 FILL R's - 16 x ⅛ x 1'-11¼ - 4 REQ. - dx12 (C) Tack weld

ONE LOWER CHORD AS SHOWN - A108

ONE LOWER CHORD TO PAIR - AA108

CONTINUED ON SHEET 109

L51

No. 3 OF 10 SHEETS ON SHEET 1

1R - 54 x ⅝ x 8'-1½" - 2 REQ. - dx17 (A)

1R - 32 x ½ x 7'-7" - 2 REQ. - dx18 (C)

BOTT. R - 31 x 11/16 x 84'-0½ - 2 REQ. - dx19 (A) (U.M.)

R - dx12a

BOTTOM ℄

INS. R's

Rivet after assembly

12 @ 3" = 3'-0" | 12 @ 3" = 3'-0" | 3 @ 3½" = 10½" | 3 @ 4" = 1'-0" | 6 @ 4½" = 2'-1½" | 81 SPC. @ 4½" = 30'-4½" | 6 @ 3½" = 1'-9" | 7 @ 3" = 1'-9" | 2¾ 2¾ 2¾ 4 @ 3" = 1'-0" | 8 @ 3½" = 2'-4"

11/16 ϕ HOLES REAM 15/16 ϕ

SPLICE R - 19 x ¾ x 3'-1½ - 2 REQ. - dx20 (A) (U.M.)

ELLIPTICAL HOLES

APPROVED BY 9/15/60
L. P. Carlson
Bridge Design Engineer

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF - CONSULTING ENGINEERS: 9/3/59

GENERAL NOTES
Rivets 7/8 ϕ except as noted
Holes 15/16 except as noted
End Distance 1¼ unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by T.P.
Checked by C.W.K.
Revisions 8/24/59 Shop Rev. dept.

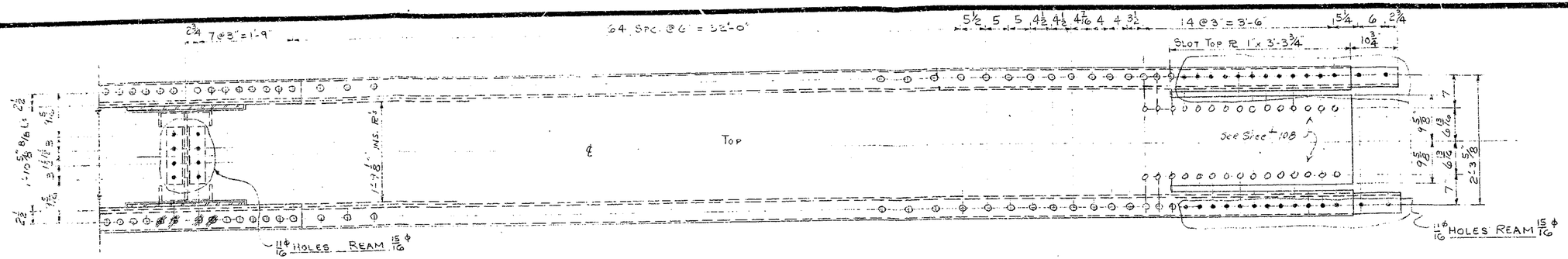
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

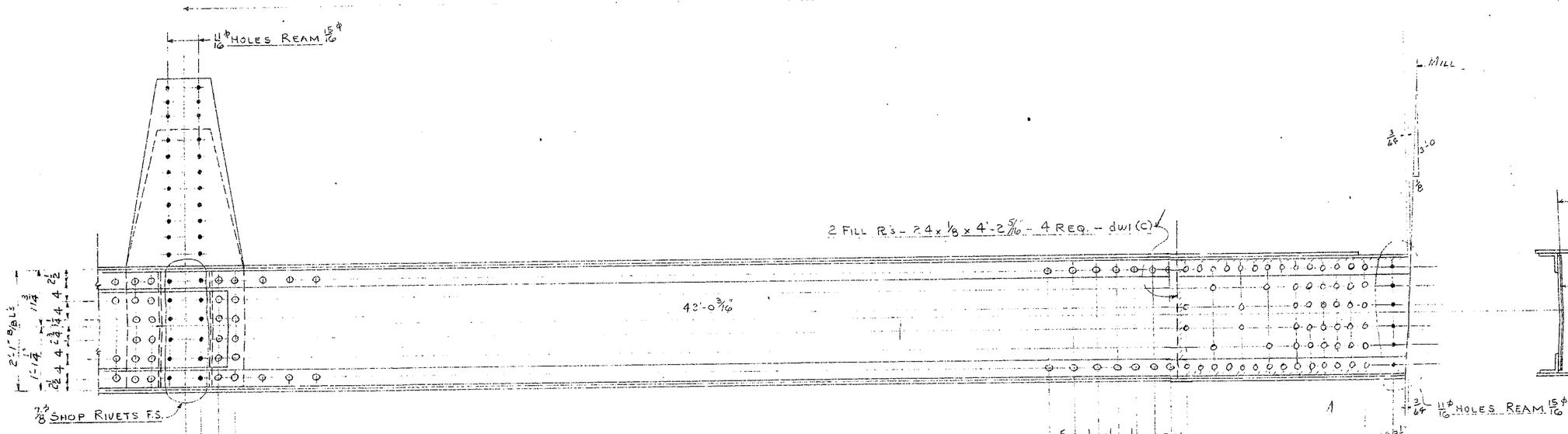
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO 4

SOLD TO: JOHN F BEASLEY CONSTR CO
CHICAGO ILLINOIS

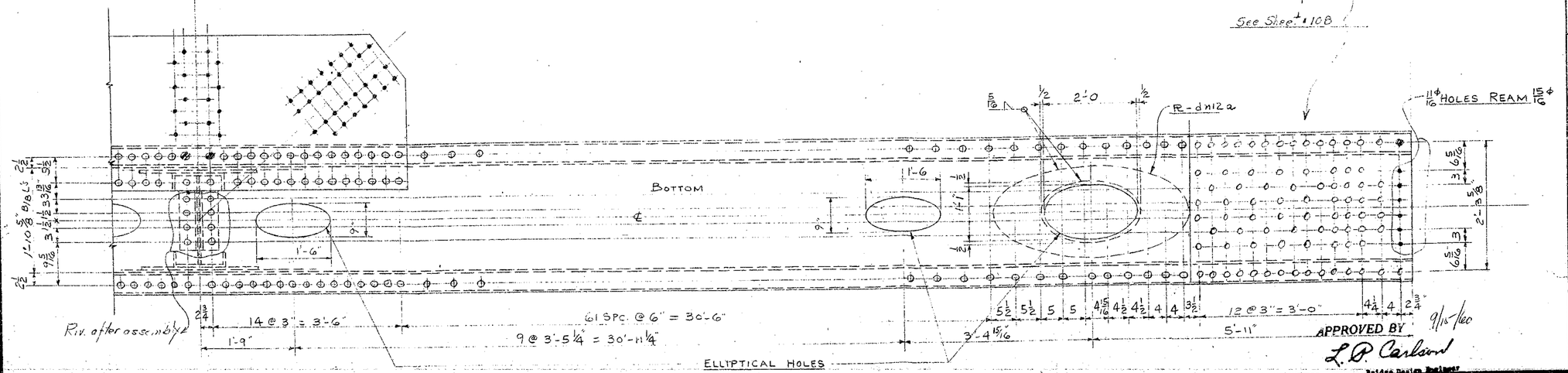
SHOP VINCENNES STEEL DIV. OF MATERIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4900-T Sh. 108 of

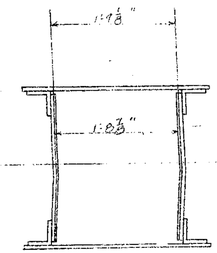
182





LOWER CHORDS - A105 & AA105
WORK WITH SHEET 105 & 106





RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 9-12-60

BOOK No. 3

NOTE
SEE NOTE ON SHEET 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF - CONSULTING ENGINEERS: 9/3/59

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16 except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by T.R
Checked by CWK
Revisions 9/14/59 Shop Rivets

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

APPROVED BY
L.P. Carlson
Bridge Design Engineer
9/15/60

SHOP VINCENNES STEEL [illegible] VINCENNES, IND.
Contr. No. 4200-7 Sh. 107 of

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RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 9-12-69

4'-3¼" | 4@3"=1'-0" 6¾" 4@3"=1'-0 3¾" 6@3"=1'-6" 3@3½"=10½" 4 4½" 5 5⅛" 5½" | 57 SPC. @ 6" = 28'-6" | 7@3"=1'-9" 2¾" 2¾" 7@3"=1'-9"

SLOT TOP PL - 1" x 2'-2"

TOP PL - 31" x 11/16" x 77'-6 15/16" - 2 REQ. - dV1 (A) (U.M.)

PL - 4 x ½ x 4'-3" - 4 REQ. - dV2 (A) (U.M.)

11/16 HOLES REAM 15/16 ϕ

11/16" ϕ HOLES REAM 15/16" SHOP RIVET AFTER ASSEMBLY

SLOT TOP PL 1¾ x 1'-7

11/16 ϕ HOLES REAM 15/16 ϕ

42'-0⅛"

16'-0"

7'-1½" END OF I.S. PL dV5

8-10½

N.S. PL - 25½ x ⅝ x 5'-3⅝ - 2 - REQ. - dV3(C)

F.S. PL - 25½ x ⅝ x 4'-4⅝ - 2 REQ. - dV4 (C)

11/16 ϕ HOLES REAM 15/16 ϕ

SECTION - AA

5'-6¾" END OF PL's - dV8 - dV1 & dV11

4'-0" END OF L's - dV6 & dV10 & O.S. PL - dV7

2 TOP L's - 4 x 4 x ½ x 41'-0 3/16 - 4 REQ. PL/L - dV6 (A)

2 O.S. PL's - 16" x ½ x 38'-9 3/8" - 4 REQ. - dV7 (A) (U.M.)

2 WEB PL's - 24" x ¾ x 78-5 5/8" - 4 REQ. - dV8 (A) (U.M.)

2 FILL PL's - 24¼ x 5/16 x 2'-1½" - 4 REQ. - dV9 (C)

2 I.S. PL's - 24" x ¾ x 8'-10½" - 4 REQ. - dV5 (A) (U.M.)

2 O.S. SPLICE PL's - dt5

2 I.S. SPLICE PL's - dt6

42'-0⅛" C/L

W.L.

7/8 ϕ SHOP RIVETS F.S.

1'-7¼ 8/8 C's

5⅛ 3 3 3 5⅛

4¾ 4¾

2 L's - dP16

C - dP17

2 L's - dP19

dt1 dt2 dt5 dt6 dP16 dP17 dP19 dV13

11/16 ϕ HOLES REAM 15/16 ϕ SHOP RIVET AFTER ASSEMBLY

dt6

dt5

2'-7

2 BOTT. L's - 4 x 4 x ½ x 80'-0 5/16 - 4 REQ. - PL/L - dV10 (A)

1 PL - 18½ x ⅜ - 2'-0" - 2 REQ. - dV13 (C)

3½ 3 5½ 3 3¾ 5@3"=1'-3" ¾ 5@3"=1'-3" ¾ 6@3"=1'-6" 3@3½"=10½" 4 4½ 5 5 4@6"=2'-0" 5" 5" 4 4 4@5½"=1'-2" 6" 48 SPC. @ 6" = 24'-0" 4½ 4⅜ 3½ 4 3½ 3½ 4 5½

DIAPHRAGM AT L49

NOTE
SEE NOTE ON SHEET 1

L48

LOWER CHORD AS SHOWN - A105

LOWER CHORD TO PAIR - AA105

CONTINUED FROM SHEET 105

CONTINUED ON SHEET 107

1 PL - 32" x ½ x 7'-9" - 2 REQ. - dV12 (A)

BOTT. PL - 31 x ¾ x 78'-5½" - 2 REQ. - dV11 (A) (U.M.)

11/16 ϕ HOLES REAM 15/16 ϕ SHOP RIVET AFTER ASSEMBLY

PL - dV12 a

½" 2'-0 ½" 5/16

1'-6"

BOTTOM

ELLIPTICAL HOLES

L49

7@3"=1'-9"

2¼ 5½ 2¼

2'-8 1/16"

2'-8 1/16"

rivet after assembly

4'-1¾" | 5@3"=1'-3" ¾ 6@3½"=1'-9" 3@3½"=10½" 3@4"=1'-0" 4 1/16 3@4½"=1'-1½" 5 5¼"

12'-8¾"

53 @ 6" = 26'-6"

3'-5⅝"

14 @ 3" = 3'-6"

7@3'-5¼" = 24'-0¾"

1'-7

¾ ¾

APPROVED BY 9/15/60
L. D. Parkin
Bridge Design Engineer

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF - CONSULTING ENGINEERS 9/3/59

GENERAL NOTES
Rivets 7/8 except as noted
Holes 15/16 except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by T.P.
Checked by C.W.K
Revisions 8/24/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO 4

SOLD TO: JOHN F. BEASLEY CONSTR CO.
CHICAGO ILLINOIS

BOOK No. 3

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800-T Sh. 106 of

SECTION - BB

2 FILL PL - 8" x 3/4 x 1'-6 1/2" - 8 REQ. - du16 (A) TACK WELD

MILL ALL VERTICAL MATERIAL INCLUDING GUSSET PL'S & DIAPHRAGMS

PL - 17 1/4" x 3/8 x 11'-1" - 2 REQ. - du13 (A) N.S. 2 REQ. - du14 (A) F.S. PLANE EDGES

2 PL'S - 6" x 1/2 x 3'-1" - 8 REQ. - du15 (A)

2 L'S - 8 x 8 x 1/2 x 2'-1" - 8 REQ. PL - du16 (A)

DIAPHRAGM - SEE DET. A

5/8 x 1 1/8 SLOT IN R - du33

HOLES IN R - du10 (F.S. ON AA105 - ONLY)

HOLES IN R - du10 (N.S. ON AA105 - ONLY)

PLANE EDGES

R - 12 3/4 x 3/4 x 14'-2 1/2" - 1 REQ. - du31 (A) N.S. (ON AA105 - ONLY)

1 REQ. - du32 (A) F.S. (ON AA105 - ONLY)

L - 4 x 4 x 1/2 x 7'-11 1/2" - 4 REQ. - du6 (A)

PL - 4" x 11/16 x 11'-1" - 4 REQ. - du7 (A) (U.M.)

SECTION - AA

ALL OPEN HOLES IN THIS VIEW TO BE 11/16 REAMED 15/16 ϕ

11/16 HOLES REAM 15/16 ϕ

PL - 18 @ 45.8# x 4'-7 3/4" - 2 REQ. - du45 (A)

ELLIPTICAL HOLE

2 L'S - 4 x 4 x 3/4 x 3'-6 1/2" - 8 REQ. - du4 (C)

SECTION - CC

2 FILL PL'S - 16 x 1/2 x 7'-11 1/2" - 4 REQ. - du19 (A) (U.M.)

11/16 ϕ HOLES

2 FILL PL'S - 3 1/2 x 1/4 x 1'-0 1/2" - 4 REQ. - du20 (C)

2 L'S - 8 x 4 x 3/4 x 7'-3 1/2" - 8 REQ. PL - du21 (A)

WEB PL - 17 x 11/16 x 7'-3 1/2" - 2 REQ. - du22 (A)

2 PL'S - 17" x 5/8 x 4'-6 3/4" - 4 REQ. - du23 (A)

2 PL'S E - 18" @ 45.8# x 1'-0 1/2" - 4 REQ. - du24 (C)

NOTE - SEE NOTE ON SHEET 1

PL - 18 @ 45.8# x 4'-7 3/4" - 2 REQ. - du45 (A)

ELLIPTICAL HOLE

2 L'S - 4 x 4 x 3/4 x 3'-6 1/2" - 8 REQ. - du4 (C)

11/16 HOLES REAM 15/16 ϕ

12 @ 3 1/4" = 3'-9"

6 @ 3 1/4" = 1'-7 1/2"

4'-5 7/16"

4'-0 3/4"

WELD 8 NUTS N.S.

BL PL - 19 x 3/4 x 4'-2" - 4 REQ. - du1 (C)

BL PL - 10 1/2 x 3/4 x 1'-2" - 4 REQ. - du3 (C)

BL PL - 7 x 3/4 x 1'-2" - 4 REQ. - du2 (C)

DETAIL - A

SECTION - EE

PL - 19" x 3/4 x 2'-7 5/8" - 4 REQ. - du8 (C)

IL - 4 x 4 x 3/4 x 2'-7 5/8" - 8 REQ. - du9 (C)

11/16 HOLES REAM 15/16 ϕ WELD 1/8 NOTS. F.S.

DRILL 1/2 ϕ HOLES 1/16 M.T.

FOR 1 15/32 T.B.

ELLIPTICAL HOLE

SECTION - FF

11/16 HOLES REAM 15/16 ϕ SHOP RIVET AFTER ASSEMBLY

IL - 3 1/2 x 3 1/2 x 3/8 x 2'-9 1/2" - 4 REQ. - du34 (C)

IL - 3 1/2 x 3 1/2 x 3/8 x 2'-11 1/2" - 4 REQ. - du35 (C)

IL - du34

IL - du35

IL - du27

FILL PL - 2 3/16 x 1/2 x 4'-0" - 4 REQ. - du30 (A) (WELD)

PL - 18 x 1/2 x 2'-1" - 4 REQ. - du17 (A)

Built 4 ϕ Drain Hole

Built 4" Drain Hole

PL - 80 1/4 x 3/4 x 15'-5 1/2" - 2 REQ. - du29 (A) PLANE EDGES

COV. PL - 35" x 3/4 x 11'-1" - 2 REQ. - du28 (A) (PLANE EDGES)

L's - 8 x 6 x 3/4 x 9'-9 1/2" - 4 REQ. - du25 (A)

SECTION - DD

ONE LOWER CHORD AS SHOWN - A105

ONE LOWER CHORD TO PAIR - AA105

IL - 4 x 4 x 1/2 x 7'-11 1/2" - 4 REQ. - du27 (A)

CONTINUED ON SH # 106 & 107

CONTINUED ON SH # 106 & 107

BOOK No. 3

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF - CONSULTING ENGINEERS 9/3/59

APPROVED BY 7/15/60
L. P. Carlson
Bridge Design Engineer

GENERAL NOTES

Rivets 7/8 except as noted

Holes 15/16 except as noted

End Distance 1 3/4 unless noted

Shop Paint RED LEAD (ARK. STD)

Contact Surfaces NO PAINT

Shop Inspection by RIVET

Field Connections RIVET

Drawn by T.P.

Checked by C.J.M.

Revisions 9/24/62 BY D.E.P. DATE 9-12-60

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

DWG. [illegible] ENTERPRISES, INC.
CONTR. No. 4860-F Sh. 105 of

SHOP VINCENNES STEEL VINCENNES, IND.

179

55 SPC. @ 6" = 27'-6"

TOP

11/16 HOLES REAM 15/16

1L - 8 x 4 x 3/4 x 3'-2 3/4 - 8 - R'EQ. R/L - dt1 (A)

L-dt2R

SLOT TOP PL 1 3/4 x 1'-7"

L-dt2L

42'-0 3/32

24'-0"

2L's - 8 x 4 x 3/4 x 4'-2" - 8 REQ. R/L - dt2 (A)

5'-6 3/4" END OF WEB PL's - dS8 & TOP & BOTT. PL's - dS3 & dS16

4'-0" END OF L's - dS7 & dS13 & PL - dt3

20 O.S. PL's - 16 x 1/2 x 38'-9 11/32 - 4 REQ. - dt3 (A) (U.M.)

42'-0 3/32 C/C

W.L.

2 I.S. PL's - 24 x 3/4 x 16'-10 1/2 - 4 REQ. - dt4 (A) (U.M.)

7/8 SHOP RIVETS F.S.

I.S. PL - dt4

dt6

dt5

20 O.S. SPLICE PL's - 23 x 9/16 x 6'-5 3/4" - 8 REQ. - dt5 (A) (U.M.)

33 SPC. @ 6" = 16'-6"

24 @ 6" = 12'-0"

6 @ 3" = 1'-6"

5 @ 3" = 1'-3"

2'-7"

2 I.S. SPLICE PL's - 24 x 1/2 x 5'-11 3/4" - 8 REQ. - dt6 (A) (U.M.)

L47

L48

LOWER CHORDS - A103 & AA103

WORK WITH SHEET 103

BOTTOM

PL - dt12a

11/16 HOLES REAM 15/16

1'-6"

9"

ELLIPTICAL HOLES

Riv. after assembly

12 @ 3" = 3'-0"

7 @ 3'-5 1/4" = 24'-0 3/4"

52 SPC. @ 6" = 26'-0"

3'-5 19/32"

12'-8 3/4"

4'-1 9/32"

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY ERS DATE 7-12-60

1.98"

NOTE

SEE NOTES ON SHEET 1

BOOK No. 3

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 9/3/59

APPROVED BY 9/15/60

L. P. Carlson

Bridge Design Engineer

GENERAL NOTES

Rivets 7/8" ϕ

Holes 15/16" ϕ except as noted

End Distance 1 3/4 unless noted

Shop Paint RED LEAD (ARK STD)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by T.P.

Checked by C.W.K.

Revisions 9/4/59

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE NEAR HELENA, ARK. UNIT 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO. CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CO. VINCENNES, IND.

DIV. OF HIGHWAYS

Contr. No. 4300 Sh. 104 of

178

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 7-12-60

SPLICE PL-dS2 | FILL PL-dS1 | SLOT TOP PL-1"x2'-2"

FILL PL - 4½ x 11/16 x 4'-1½" - 4 REQ. - dS1 (A)

SPLICE PL - 5 x ½ x 3'-9" - 4 REQ. - dS2 (A) (U.M.)

TOP PL - 31 x 11/16 x 77-9¾ - 2 REQ. - dS3 (A) (U.M.)

1 PL - 5 x ⅜ x 4'-3" - 4 REQ. - dS4 (A) (U.M.)

11/16 HOLES - REAM 15/16

42'-0 5/32 c-c

SECTION - AA

2 PL's - 6 3⅝ x ⅝ x 8'-6" - 4 REQ. - dS5 (A)

2 L's - 4 x 4 x ⅜ x 4'-2¾" - 4 REQ. - dS6 (C)

2 TOP L's - 4 x 4 x ½ x 80'-0¼" - 4 REQ. - dS7 (A)

2 WEB PL's - 24 x ¾ x 78'-5½" - 4 REQ. - dS8 (A) (U.M.)

N.S. PL - dP8

F.S. PL - dP9

7/8 SHOP RIVETS F.S.

2 L's - dP16

1C - dP17

2 L's - dP19

2 BOTT. L's - 4 x 4 x ½ x 80'-0¼" - 4 REQ. - dS13 (A)

1 PL - 19⅛ x ⅜ x 2'-0" - 2 REQ. - dS17 (C)

DIAPHRAGM AT L47

BOOK No. 3

FILL PL - dS10

2 FILL PL's - 24 x ⅛ x 4'-3" - 4 REQ. - dS10 (C)

2 SPLICE PL's - 16 x ½ x 6'-6" - 4 REQ. - dS11 (A) (U.M.)

2 SPLICE PL's - 23 x ⅝ x 5'-0" - 4 REQ. - dS12 (A) (U.M.)

69 SPC. @ 6" = 34'-6"

2 L's - 4 x 4 x ⅜ x 4'-2¾" - 4 REQ. - dS19 (C)

BOLT TO TOP OF A101 & AA101 TO SHIP

MILL BOTT CHORD SQUARE

ONE LOWER CHORD AS SHOWN - A103

ONE LOWER CHORD TO PAIR - AA103

CONTINUED ON SHEET 103

1 PL - 56¾ x ⅝ x 8'-0" - 2 REQ. - dS14 (A)

PL - 37 x ½ x 8'-3½" - 2 REQ. - dS15 (A)

BOTT. PL 31 x ¾ x 78'-5½" - 2 REQ. - dS16 (A) (U.M.)

R-1 AFTER ASSEMBLY

BOTTOM

60 SPC. @ 6" = 30'-0" | 4 @ 3½" = 1'-2" | 10 @ 3" = 2'-6" | 12 @ 3" = 3'-0"

9 SPC. @ 3'-5⅛" = 30'-10⅛"

ELLIPTICAL HOLES

NOTE
SEE NOTE ON SHEET 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 9/3/59

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by T.P
Checked by CWK
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4

SOLD TO: JOHN E. HALEY CONSTR. CO.
CHICAGO, ILLINOIS

APPROVED BY 9/15/60
L P Carlson
Bridge Design Engineer

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL STEEL & WIRE CO. VINCENNES, IND.

Contr. No. 4100 Sh. 103 of

177

86 SPC. @ 4½" = 32'-3"

7@3" = 1'-9"

5@4¼" = 1'-9" 4@3¾" = 1'-3" 10@3" = 2'-6" 3@3¾" = 1'-0" 4@3" = 1'-0"

SLOT TOP PL - 1"x2'-2¾"

1'-5¼"

℄ TOP

INS. PL

11/16ϕ HOLES REAM 15/16ϕ

11/16ϕ HOLES REAM 15/16ϕ

42'-0 3/16"

11/16ϕ HOLES REAM 15/16ϕ

MILL

2 FILL PL's - 16x⅛x3'-3" - 4 REQ. - dr2 (c) (TACK WELD)

2 FILL PL's - 3x¼x2'-6" - 8 REQ. - dr1 (c) (TACK WELD)

1'-0⅞"

42'-0 3/16 c/c

7/8ϕ SHOP RIVETS F.S.

92 SPC. @ 4½" = 34'-6"

4@4" = 1'-5" 4@3½" = 1'-2" 5@3½" = 1'-5½" 8@3" = 2'-0" 3@3½" = 1'-0½" 6@3" = 1'-6" 4@3" = 1'-0"

L45

L46

11/16ϕ HOLES REAM 15/16ϕ

LOWER CHORD - A101 & AA101

WORK WITH SHEET 101

BOTTOM

INS. PL

1'-6"

9"

1'-6"

9"

1/2 2'-0 1/2

R-dr12a

5/16

1½"

1½"

11/16ϕ HOLES REAM 15/16ϕ

RIV. AFTER ASSEMBLY

8@4½" = 3'-0"

1'-9"

81 SPC. @ 4½" = 30'-4½"

9 SPC. @ 3'-5½" = 31'-1½"

ELLIPTICAL HOLES

3'-4 15/16"

5'-8¾"

APPROVED BY 9/15/60

L. P. Carlson

Bridge Design Engineer

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY FRS DATE 9-12-60

BOOK No. 3

NOTE

SEE NOTE C EST

APPROVED BY: HOWARD, TAMMEN & BERGENDOFF CONSULTING ENGINEERS 9/3/59

GENERAL NOTES

Rivets 7/8ϕ except as noted

Holes 15/16ϕ except as noted

End Distance 1¾ unless noted

Shop Paint RED OXIDE (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by T.P.

Checked by C.W.K

Revisions

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE NEAR HELENA, ARKANSAS UNIT No. 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO. CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

Contr. No. 4800-T Sh. 102 of

176

SPLICE PL-dP4 — 10@3"=2'-6 — 3@3"=9 — FILL PL dP3 — 7@3"=1'-9" — 10@3"=2'-6" — 86 SPC. @ 4½" = 32'-3" — 7@3"=1'-9" — SLOT TOP PL-1"x2'-2"

11/16 HOLES REAM 15/16 ϕ

SLOT TOP PL-1"x2'-5¼"

℄ TOP

1PL-5x⅜x4'-3" - 4 REQ. - dP1-Ⓐ (U.M.)

FILL PL-4½x11/16x4'-7½ - 4 REQ. - dP3 Ⓐ

SPLICE PL-5x½x10'-3" - 4 REQ. - dP4 Ⓐ (U.M.)

2Ls-3½x3½x⅜x2'-7½" - 4 REQ. - dP5 (C)

TOP PL-31"x11/16x82'-8⅞"-2 REQ. - dP2 Ⓐ (U.M.)

2 3/16 GA. ON L's

N.S. PL-25½x⅝x5'-3⅝ - 12 - REQ. - dP8 (C)

F.S. PL-25½x⅝x4'-4⅝ - 12 - REQ. - dP9 (C)

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 9-12-60

SECTION - AA

2PLs-74"x⅝x9'-3" - 4 REQ. - dP6 Ⓐ

2Ls-4x4x⅜x4'-11¾" - 4 REQ. R/L dP7 (C)

2 SPLICE PLs-23"x⅝x4'-11¼" - 4 REQ. - dP10 Ⓐ (U.M.)

2 SPLICE PLs-16"x⅜x6'-0" - 4 REQ. - dP11 Ⓐ (U.M.)

2 TOP PL's-4x4x⅜x84'-0 7/16 - 4 REQ. R/L - dP12 Ⓐ

2 WEB PLs-24"x¾x84'-0 7/16 - 4 REQ. - dP13 Ⓐ (U.M.)

N.S. FILL PL-16"x⅜x1'-6½" - 2 - REQ. - dP15 (C)

2Ls-4x4x⅜x1'-0½" - 28 REQ. - dP16 (C)

2Ls-12"@25#x2'-0" - 28 REQ. - dP17 (C)

1PL-18⅞"x⅜x2'-0" - 2 REQ. - dP18 (C)

42'-0 3/16 c/c

2 BOTT. L's - 4x4x⅜x84'-0 7/16 - 4 REQ R/L - dP21 Ⓐ

⅞ϕ SHOP RIVETS F.S.

11/16 HOLES REAM 15/16 ϕ

2Ls-4x4x⅜x1'-0½" - 28 REQ. - dP19 (C)

dP3 dP8 dP15 dP16 dP17 dP18 dP19

8@3"=2'-0 — 3@3"=9 — 6 — 7@3"=1'-9" — 9@3"=2'-3" — 4' — 92 SPC. @ 4½" = 34'-6" — 8@4½"=3'-0 — 1'-9"

2Ls-4x4x⅜x3'-11¾" - 4 REQ. R/L - dP14 (C)
BOLT TO TOP OF A100 & AA100

(L44) — MILL BOTT. CHORD SQUARE — (L45)

ONE LOWER CHORD AS SHOWN - A101
ONE LOWER CHORD TO PAIR - AA101

CONTINUED ON SHEET 102

DIAPHRAGM AT L45

1PL-32"x½x7'-2¾" - 2 REQ. - dP20 Ⓐ

NOTE
SEE NOTE ON SHEET 1

1PL-5/8x6'-9" - 2 REQ. - dP23 Ⓐ

BOTT. PL-31"x11/16x84'-0 5/16" - 2 REQ. - dP22 Ⓐ (U.M.)

R-dM12a

BOTTOM ℄

R/R AFTER ASSEMBLY

5@3"=1'-3" — 3@3"=9 — 7@3"=1'-9" — 6@4"=2'-0" — 82 SPC. @ 4½" = 30'-9" — 7@4½"=2'-7½" — 8@4½"=3'-0 — 1'-9"

5'-2¾" — 3'-6 7/16" — 9@3'-6" = 31'-6" — ELLIPTICAL HOLES

11/16 HOLES REAM 15/16 ϕ

APPROVED BY 9/16/60
L. P. Carlson
Bridge Design Engineer

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 9/9/59

GENERAL NOTES

Rivets 7/8 ϕ 11/16 except as noted
Holes 15/16 ϕ except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO. PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by T.R.
Checked by C.W.K.
Revisions 9/16/60 L44, L45

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES INC. VINCENNES, IND.
Contr. No. 42-60-C Sh. 101 of

BOOK No. 3

A.H.D.

ROLL .. 746

BRG. 2899

175

9@3"=2'-3" 6@3"=1'-6" 15@3"=3'-9"

R-P33 FILL R-P32 SLOT TOP PL - 1"x3'-6¾"

16SPC @ 5½" = 34'-10"

TOP PL - 1½ - 40'-2¼ - 2 REQ. PRT (C) U.M.

15/16" HOLES REAM 15/16"

R-P35 FILL R-P32

L 4 x 4 x ⅜ x 1'-2 2 REQ. PRT (C)

1'-1¼

10"

15/16" HOLES REAM 15/16"

11/16" HOLES REAM 15/16"

N.S PL - 22¼ x ⅝ x 5'-0½" - 2 REQ. - PRT (C)

F.S. PL - 22¼ x ⅝ x 4'-6½" - 2 REQ. - PRT (C)

N.S PL - 16" x ⅜ x 1'-6¾" - 2 REQ. - PRT (C)

11/16" HOLES REAM 15/16"

13SPC @ 5" = 2'-4"

12@3" = 3'-0"

2 PL-P310

1'-1¾

2 L's - P311 R/L

2 L's - P312 R/L BUILT TO TOP OF A298 & AA298

4@5" = 1'-8"

7@3⅜" = 1'-11⅝"

2 TOP L's - 4 x 4 x ⅜ x 42'-10 - 4 REQ. R/L PRT (C)

2 WEB PL's - 24 x 1/16 x 42'-10 - 4 REQ. PRT (C) U.M.

2 SPLICE PL's P313

2 SPLICE PL's P314

3@3½"=10½" 10@3"=2'-6" 14½ 3½ 3½ 4½ 10@3"=2'-6" 3@3½"=10½"

2 BOTT L's - 4 x 4 x ⅜ x 42'-10 4 REQ. R/L PRT (C) U.M.

77 SPC. @ 5½" = 35'-3½"

JACKING BLOCK A416

4 3⅜ 3½ 3½ 3½ 3½ 3½ 3½ 3½ 3½ 3½ 3½ 3¾ 1¾

SHOP PLT'S F.S.

L 7 x 4 x ¾ x 1'-1½ - 2 REQ. R/L PRT (C)

42'-0" c-c

MILL

ONE LOWER CHORD AS SHOWN - A300

ONE LOWER CHORD TO PAIR - AA300

L24

L25

10 12

18@2¼" = 1'-6"

5@3" = 1'-3"

2'-6 11/16"

1 PL - P318

Lat. Plt. 28½ x ½ x 4'-1¾" 2 REQ. PRT (C) - 3 U.M.

Batt. Plt. 31 x ½ x 42'-10 - 2 REQ. PRT (C) U.M.

2'-0" R-P317 ELLIPTICAL HOLES R-P317 2'-0"

1'-6" 1'-6"

BOTTOM

11/16" HOLES REAM 15/16"

4@5" = 1'-8" 5½ 5½ 3⅜ 3 ¾ 2⅜ 11@3¼" = 2'-11¾"

5'-2½"

7 SPC. @ 5½" = 35'-3½"

7 SPC. @ 3'-6⅛" = 24'-6⅞"

3'-6 5/16"

3'-6 5/16"

5/16 R TYP.

½ 4@2⅝" = 10½ 7@3½" = 2'-0⅝" 5'-2" 10"

P31 2
P32 4 4
P33 4
P38 4 4
P39 4 4
P312 4 4
P311 4 4
P313 4 4
P314 4 4
P315 2
P316 2
P317 2 2
P318 2

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY G.A. DATE 10-14-60

NOTE
SEE NOTES ON SHEET 1

BRIDGE No. 7

APPROVED BY HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 9/25/59

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1¼" unless noted
Shop Paint RED LEAD (ASC STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections FIELD
Drawn by T.P. APPROVED BY 10/7/60
Checked by GLY L.D. Carlson
Revisions
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISCELLANEOUS STATE HIGHWAY COMMISSION

WHITE RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 2

SOLD TO JOHN F. BEASLEY CONSTR. CO.
HELENA, ARKANSAS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. A300 Sh. 300 of

174

7@3"=1'-9" 2¾ 2¾ 7@3"=1'-9"

76 SPC. @ 5½" = 34'-10"

15@3"=3'-9" 3¾ 3 2¾

SLOT TOP PL - 1"x 3'-0¼"

TOP

11/16" HOLES REAM 15/16"

41'-11 23/32 c-c

11/16" HOLES REAM 15/16"

MILL

11/16" HOLES REAM 15/16"

W.L.

7/8" SHOP RIVETS FS.

81 SPC. @ 5½" = 37'-1½"

9@3" = 2'-3"

L21

L22

LOWER CHORDS – A298 & AA298

WORK WITH SHEET 298

6@3"=1'-6" 2¼ 5½ 2¼ 6@3"=1'-6"

BOTTOM

PL PJ8

11/16" HOLES REAM 15/16"

PL-P317a

5@3½"=1'-5½" 6@3"=1'-6" 2¾ 2¾ 6@3"=1'-6" 5@3½"=1'-5½"

1'-9"

76 SPC. @ 5½" = 34'-10"

9 SPC. @ 3'-5¾" = 31'-3¾"

ELLIPTICAL HOLES

11 @ 3" = 2'-9"

5'-6½"

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY E.A. DATE 10-14-60 NOTE

SEE NOTES ON SHEET 1

BOOK No. 7

P317

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF, CONSULTING ENGINEERS 9/25-59

GENERAL NOTES

Rivets 7/8" ϕ except as noted

Holes 15/16" ϕ except as noted

End Distance 1¾" unless noted

Shop Paint. RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by T.P. APPROVED BY 10/7/60

Checked by A.H.J. 7/28 L.P. Carlson

Revisions 8/18/60

c-c L21-L22

Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE NEAR HELENA, ARKANSAS UNIT NO. 2

SOLD TO: JOHN F. BEASLEY, CONSTR. CO. CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

Contr. No. 4806

Sh. 299 of

173

15@3"=3'-9"

76 SPC. @ 5½" = 34'-10"

SLOT TOP PL - 1'x3'-0¾"

TOP PL - 31 x ⅜ x 82'-7 15/16" - 2 REQ. - PH1 (A) (U.M.)

7@3"=1'-9"

SLOT TOP PL - 1 x 2'-2"

PL - PH2

11/16ϕ HOLES REAM 15/16ϕ

41'-11 3/32" C C

SPH.11

SECTION - "AA"

MILL

11/16ϕ HOLES REAM 15/16ϕ

2 L's - 4 x 4 x ⅜ x 83'-11 7/16" - 4 REQ. R/L - PH12 (A)

2 PL's - 24" x ⅝ x 83'-11 7/16" - 4 REQ. - PH3 (A) (U.M.)

N.S. PL - PH4

F.S. PL - PH5

PL - PH10 (N.S.)

W.L.

1'-7 5/8" 8/8 SPC.

2 L's - PH7

PL - PH6

PL - PH8

2 L's - PH9

2 BOTT. L's - 4 x 4 x ⅜ x 83'-11 7/16" - 4 REQ. R/L - PH14 (A)

⅞ϕ SHOP RIVETS F.S.

81 SPC. @ 5½" = 37'-1½"

ONE LOWER CHORD AS SHOWN - AA298

ONE LOWER CHORD TO PAIR - AA298

CONTINUED ON SHEET 299

12 PH19

11/16ϕ HOLES REAM 15/16ϕ

PL - PH17a

BOTT. PL - 31 x ½ x 83'-11 7/16" - 2 REQ. - PH5 (A) (U.M.)

BOTTOM

11@3"=2'-9"

5'-6½"

3'-6 23/32"

75 SPC. @ 5½" = 34'-4½"

9 SPC. @ 3'-5½" = 31'-1½"

ELLIPTICAL HOLES

PL - PH6

6@3"=1'-6

1'-9"

5@3½"=1'-5½"

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY G.A. DATE 10-14-60

DIAPHRAGM AT L21

BOOK No. 7

SEE NOTES ON SHEET 1

APPROVED FOR HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

10-12-59

GENERAL NOTES

Rivets 7/8ϕ except as noted

Holes 15/16ϕ except as noted

End Distance 1¾" unless noted

Shop Paint RED LEAD (ARK STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by T.P.

Checked by GAH 7/27/60

Revisions 8/8/59 cc L20-21

APPROVED BY 10/17/60 L.P. Carlson Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 2

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES-STEEL DIV. OF VINCENNES, IND. Contr. No. 4800 Sh. 298 of

PH4 2
PH5 2
PH6 4
PH7 4
PH8 2
PH9 4
PH10 2
PH17 2
PH2 4
PH6 2

172

76 SPC. @ 5½" = 34'-10"

15 @ 3" = 3'-1"

15 @ 3" = 3'-3"

SLOT TOP R - 1 x 3-0¾"

SPLICE PL - 5 x ½ x 9'-4½" - 4 REQ. - Pm2 (A)

11/16 HOLES REAM 15/16

41'-11 23/32" C-C

FILL PL - 5 x ⅜ x 1'-3" - 4 REQ. - Pm1 (A)

PL - 8½ x ¼ x 1'-½" - 2 REQ. - Pm3 (C)

2 L's - 4 x 4 x ⅜ x 4'-0½" - 4 REQ. PL - Pm4 (C)

BOLT TO TOP OF A298 & AA298

2 PL's - 64½" x ⅝ x 7'-4½" - 4 REQ. - Pm5 (A)

2 L's - 4 x 4 x ⅜ x 4'-0½" - 4 REQ. PL - Pm6 (C)

7/8 SHOP RIVETS F.S.

81 SPC. @ 5½" = 37'-1½"

LOWER CHORDS - A 296 & AA 296

WORK WITH SHEET 296

PL - 49½" x ⅝ x 7'-4½" - 2 REQ. - Pm9 (A)

PL - P9172

BOTTOM

ELLIPTICAL HOLES

75 SPC. @ 5½" = 34'-4½"

9 SPC. @ 3'-5½" = 31'-1½"

11 @ 3" = 2'-9"

11 @ 3" = 2'-9"

SPLICE PL - 16 x ⅜ x 5'-1½" - 4 REQ. - Pm7 (A) (U.M.) Bolt to Ship

SPLICE PL - 23 x ⅜ x 3'-1½" - 4 REQ. - Pm8 (A) (U.M.) Bolt to Ship

NOTE SEE NOTES ON SHEET 1

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY G.A. DATE 10-14-60

SECTION AA

BOOK No. 7

APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 9/25/59

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETED
Drawn by T.P.
Checked by ALL 7/28/59
Revisions 8/18/59
c.c. L19-L20

APPROVED BY 10/1/60
L. R. Larson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO 2
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CO. DIV. OF INDUSTRIAL ENTERPRISES INC. VINCENNES, IND.
Contr. No. 4800. Sh. 297 of

171

15@3'=3'-9"

76 SPC. @ 5½" = 34'-10"

SLOT. TOP PL - 1" x 3'-0¼"

TOP PL - 31 x ⅜ x 83'-7 15/16" - 2 REQ. - PK1 (A) (U.M.)

1-8 7/8" INS. PLs

℄ TOP

11/16ϕ HOLES REAM 15/16ϕ

41'-11 23/32" c c

7@3"=1'-9" 2 3/4 2 3/4 7@3"=1'-9"

1'-1" 1'-1"

SLOT TOP PL - 1" x 2'-2"

1PL - 5 x ⅜ x 4'-3" - 8-REQ. - PK2 (A)

11/16ϕ HOLES REAM 15/16ϕ

SECTION - AA

11/16ϕ HOLES REAM 15/16ϕ

N.S. PL - P.4

F.S. PL - Ph5

7@3 3/8" = 1'-11 5/8"

FILL PL - PK10 (N.S)

W.L. 1

1-7 5/8" B/PL's

2 PLs - PK7

PL - Ph8

L - Ph6

2 PLs - PK9

MILL

11/16ϕ HOLES REAM 15/16ϕ

2 PLs - 4" x 4" x ⅜ x 83'-11 7/16" - 4 REQ. PL - PK3 (A)

2 WEB PLs - 24 x ⅝ x 83'-11 7/16" - 4 REQ. - PK4 (A) (U.M.)

2 BOTT. LS - 4 x 4 x ⅜ x 83'-11 7/16" - 4 REQ. PL - PK5 (A)

7/8ϕ SHOP RIVETS F.S

9 @ 3" = 2'-3"

81 SPC. @ 5½" = 37'-1½"

L18

L19

ONE LOWER CHORD AS SHOWN - A296

ONE LOWER CHORD TO PAIR - AA296

CONTINUED ON SHEET 297

PL - P9 (7)

11/16ϕ HOLES REAM 15/16ϕ

2'-0" 1/2 5/16 R

PL - P9 (7)

BOTT. PL - 31 x ½ x 83'-11 7/16" - 2 REQ. - PK7 (A) (U.M.)

1'-6"

BOTTOM ℄

11@3"=2'-9"

5'-6½"

3'-4 15/32"

76 SPC. @ 5½" = 34'-10"

9 SPC. @ 3'-5¾" = 31'-3¾"

ELLIPTICAL HOLES

PL - 27" x ½ x 6'-8" - 4-REQ. - PK6 (A)

6@3"=1'-6" 6@3"=1'-6"

5@3½"=1'-5½" 6@3"=1'-6" 6@3"=1'-6" 5@3½"=1'-5½"

1'-9"

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY G.A. DATE 10-14-60

DIAPHRAGM AT L19

BOOK No. 7

NOTE

SEE NOTES ON SHEET 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 9/25/59

GENERAL NOTES

Rivets 7/8ϕ except as noted

Holes 15/16ϕ except as noted

End Distance 1¾" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections ~~APPROVED BY~~ 10/17/60

Drawn by T.P.

Checked by A.W.J. 7/7

Revisions 8/15/60 CC-U.S. L. P. Carlson Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE NEAR HELENA, ARKANSAS UNIT No. 2

SOLD TO: JOHN F. BEASLEY CONSTR. CO. CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND. DIV.

Contr. No. 4800 Sh. 296 of

Ph4 Ph5 Ph6 Ph7 Ph8 Ph9 Ph10

PL17 Ph2 PK6

170

7@3" = 1'-9"

76 SPC. @ 5½" = 34'-10"

15 @ 3" = 3'-9"

15 @ 3" = 3'-9"

SLOT TOP PL - 1" x 3'-1¾"

SPLICE PL - 5" x ½ x 9'-4½" - 8 REQ. - PJ2 (A)

11/16 HOLES REAM 15/16

FILL PL - 5" x ⅜ x 1'-3" - 8 REQ. - PJ1 (A)

41'-11 13/16" c-c

2PL's - 69" x 5/8 x 7'-7" - 8 REQ. - PJ3 (A)

2L's - 4 x 4 x ⅜ x 4'-0½" - 8 REQ. PL - PJ4 (C)

2L's - 4 x 4 x ⅜ x 4'-0½" - 8 REQ. PL - PJ5 (C)
BOLT TO TOP OF A 296 & AA 296

A

7/8 SHOP RIVETS F.S.

80 SPC. @ 5½" = 36'-8"

L17

L23

L18

L22

LOWER CHORDS - A 294 & AM 294
WORK WITH SHEET 294

PL - 5½" x ½ x 7'-4½" - 4 REQ. - PJ8 (A)

R - PJ17

BOTTOM

ELLIPTICAL HOLES

13 @ 3" = 3'-3"

75 SPC. @ 5½" = 34'-4½"

9 SPC. @ 3'-5½" = 31'-1½"

11 @ 3" = 2'-9"

11 @ 3" = 2'-9"

2SPLICE PL's - 16 x ⅜ x 4'-1½" - 8 REQ. - PJ6 (A) (U.M.)

2SPLICE PL's - 23 x ⅜ x 2'-1½" - 8 REQ. - PJ7 (A) (U.M.)

SECTION - AA

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY GA DATE 10-14-60

BOOK No. 7

NOTE
SEE NOTES ON SHEET 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS:
10-12-59

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections
Drawn by T. P.
Checked by AW 7/28/59
Revisions 8/12/59 9/25/59 APPROVED BY 10/17/60
C-C L17-L18 R. GOULD
L. P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT No. 2

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INTERNATIONAL ENTERPRISES, INC.
VINCENNES, IND.

Contr. No. 4800 Sh. 295 of

169

17 @ 3" = 4'-3"

75 Spc. @ 5½" = 34'-4½"

7 @ 3" = 1'-9"

Slot Top PL - 1" x 2'-2"

Top PL - 31 x ⅜ x 82'-8¼" - 4 Req. - Ph1 (C) (U.M.)

1 PL - 5 x ⅜ x 4'-3" - 8 Req. - Ph2 (C)

11/16 Holes Ream 15/16 ϕ

Fill PL - 5 x ⅛ x 1'-6½" - 8 Req. - Ph3 (C) (Tack Weld)

41'-11 13/16" c c

SECTION - AA

N.S. PL - 25½ x ⅝ x 5'-3 5/8" - 8 Req. - Ph4 (C)

F.S. PL - 25½ x ⅝ x 4'-4 5/8" - 8 Req. - Ph5 (C)

2 Ls - 4 x 4 x ⅜ x 1'-0½" - 16 Req. - Ph7 (C)

1 PL - 18 7/8" x ⅜ x 2'-0" - 8 Req. - Ph8 (C)

Mill

2 Ls - 4 x 4 x ⅜ x 83'-11⅝" - 8 Req. R/L - Ph11 (C)

2 PLs - 24" x ⅝" x 83'-11⅝" - 8 Req. - Ph12 (C) (U.M.)

N.S. Fill PL - 16 x ⅜ x 1'-6½" - 8 - Req. - Ph10 (C)

2 Bott. Ls - 4 x 4 x ⅜ x 83'-11⅝" - 8 Req. R/L - Ph13 (C)

⅞ϕ Shop Rivets F.S.

2 Ls - 4 x 4 x ⅜ x 1'-0½" - 16 Req.

2 9/16 Ga. O.S.L.

80 Spc. @ 5½" = 36'-8"

2 - Lower Chords As Shown - A294

2 - Lower Chords To Pair - AA294

Continued on Sheet 295

PL - 29½" x ½ x 7'-3" - 4 Req. - Ph15 (C)

Bott. PL - 31 x ½ x 83'-11⅝" - 4 Req. - Ph14 (C) (U.M.)

PL - PS17

Bottom

Elliptical Holes

75 Spc. @ 5½" = 34'-4½"

9 Spc. @ 3'-6" = 31'-6"

13 @ 3" = 3'-3"

5'-4½"

3'-4 5/16"

1'-9"

L16 L24 L17 L23

RECOMMENDED FOR APPROVAL 17

Howard, Needles, Tammen & Bergendoff

Note By ERS Date 9-23-59

See Notes on Sheet 1

Approved By: Howard, Needles Tammen & Bergendoff Consulting Engineers

General Notes

Rivets ⅞" ϕ except as noted

Holes 15/16" ϕ except as noted

End Distance 1¼" unless noted

Shop Paint Red Lead (Ark. Std.)

Contact Surfaces No Paint

Shop Inspection by

Field Connections Rivets

Drawn by T.P.

Checked by CWF 7/28/59

Revisions 8/13/59 c c L16-17

Approved 9/25/59

R. D. Carlson

Bridge Design Engineer

Arkansas State Highway Commission
Mississippi State Highway Commission

Mississippi River Bridge
Near Helena, Arkansas
Unit No. 2

Sold To: John F. Beasley Constr. Co.
Chicago, Illinois

Ph 4
Ph 5
Ph 6
Ph 7
Ph 8
Ph 9
Ph 10

P317

Shop Vincennes Steel Corp. Vincennes, Ind.

Contr. No. 4900

Sh. 294 of

168

79 SPC. @ 5½" = 36'-2½"

15@3" = 3'-9"

6@3"=1'-6"

9@3" = 2'-3"

SLOT TOP R - 1"x 3'-6¾"

SPLICE R - 5"x ⅜"x 3'-10½" - 8 REQ. - P93 (C)

℄ TOP

INS. R

11/16ϕ HOLES REAM 15/16ϕ

TOP R - 31"x ½"x 42'-2¼" - 2 REQ. - P91 (C) (U.M.)

2 R's - 75"x ⅝"x 8'-4½" - 8 REQ. - P910 (A)

2 L's - 4"x 4"x ⅜"x 4'-0½" - 8 REQ. R/L - P911 (C)

FILL R - 5"x ½"x 1'-3" - 8 REQ P92 (C)

11/16ϕ HOLES REAM 15/16ϕ

N.S. R - 22¼"x ⅝"x 5'-0⅝" - 2 REQ. - P94 (C)

F.S. R - 22¼"x ⅝"x 4'-4⅝" - 2 REQ. - P95 (C)

2 R's - 23"x ½"x 3'-10¼" - 4 REQ. P96 (C) (U.M.)

2 R's - 16"x ⅜"x 3'-10¼" - 4 REQ. R/L P97 (C) (U.M.)

2 TOP L's - 4"x 4"x ⅜"x 42'-10" - 4 REQ R/L - P98 (C)

2 WEB R's - 24"x 7/16"x 42'-10" - 4 REQ. - P99 (C) (U.M.)

FILL R 16"x ⅛"x 1'-10½" - 4 Req. P940

11/16ϕ HOLES REAM 15/16ϕ

2 L's - 4"x 4"x ⅜"x 4'-6½" - 8 REQ. R/L - P912 (C)

BOLT TO TOP OF A294 & AA294

2 BOTT. L's - 4"x 4"x ⅜"x 42'-10" - 4 REQ. R/L - P915 (C)

FILL R 3"x ⅛"x 1'-10½" - 8 Req. P941

4"x 6" SLOTTED HOLE

80 SPC. @ 5½" = 36'-8"

42'-0" c.c

3@3½"=10½" 10 @ 3" = 2'-6" 10@3" = 2'-6" 3@3½"=10½"

2 SPLICE R's - 16"x ⅜"x 3'-1½" - 8 REQ. - P913 (C) (U.M.)

2 SPLICE R's - 23"x ⅜"x 2'-7½" - 8 REQ. - P914 (C) (U.M.)

MILL

NOTE
SEE NOTE ON SHEET #1

SECTION - AA

ONE LOWER CHORD AS SHOWN - A293

ONE LOWER CHORD TO PAIR - AA293

L15

L16

1R - 28"x ½"x 4'-1⅝" - 2 REQ. - P916 (C)

ELLIPTICAL R - 20"x ⅝"x 3'-4-3/16 - REQ. - P917 (C) (ON A293 & AA293)

8 - REQ. - P917a (A)

1R - 52"x ½"x 6'-10½" - 4 REQ. - P918 (C)

BOTT. R - 31"x ½"x 42'-10" - 2 REQ. - P919 (C) (U.M.)

ELLIPTICAL HOLES

R-P917

BOTTOM

11/16ϕ HOLES REAM 15/16ϕ

11/16ϕ HOLES REAM 15/16ϕ

77 SPC. @ 5½" = 35'-3½"

7@3'-6⅝"=24'-6⅝"

3'-6 5/16

3'-6 5/16

5'-2"

5'-2½"

TYP

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ____ DATE 9-15-60

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS
10-12-59

APPROVED BY 9/15/60
Bridge Design Engineer

GENERAL NOTES
Rivets ¾ ϕ except as noted
Holes 15/16 ϕ except as noted.
End Distance 1 ½ unless noted.
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by T.P.
Checked by ALH 7/20/59
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 2

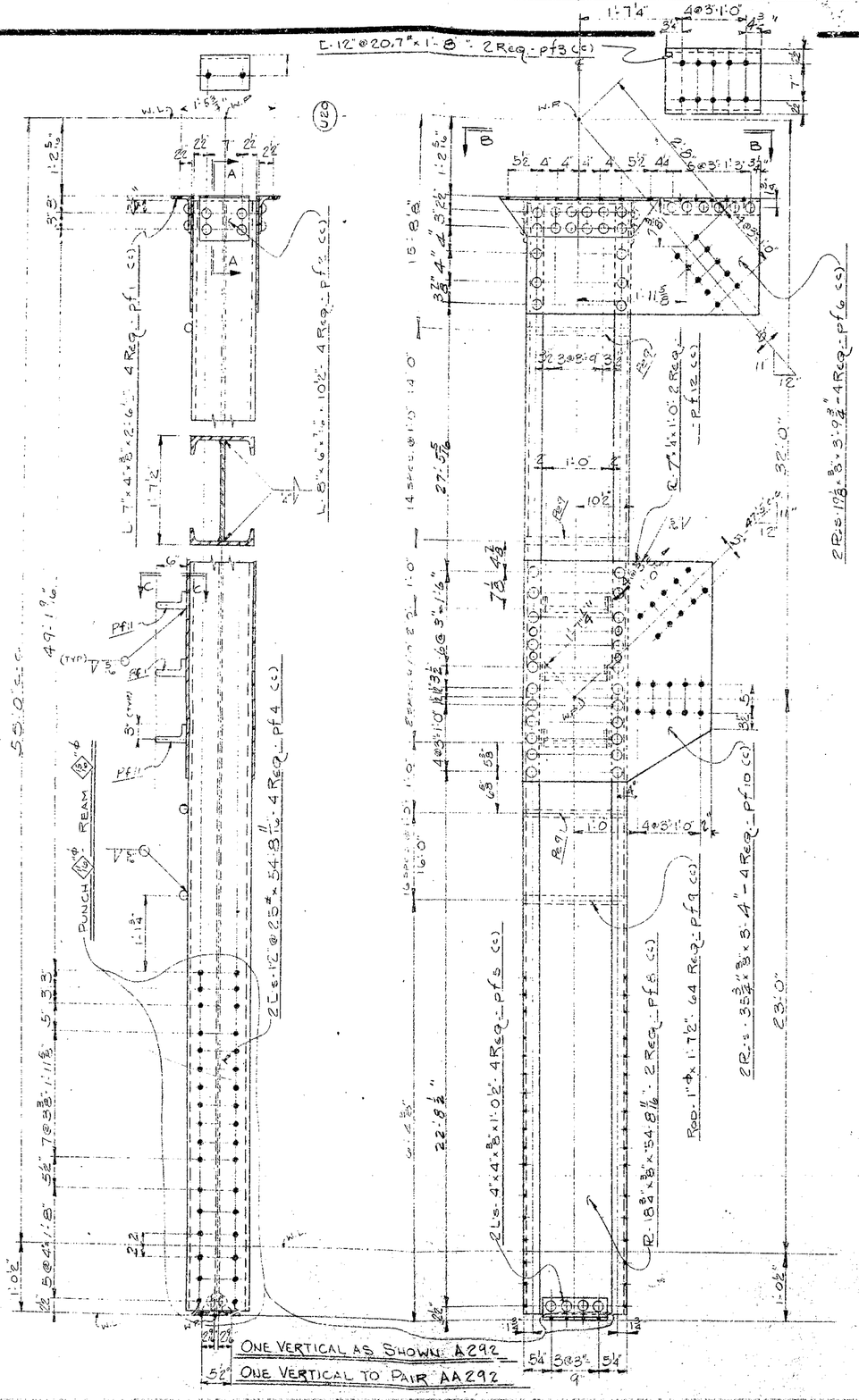
JOHN BEARSLEY CO. GEN. CONTRACTORS
QUINCY, ILLINOIS

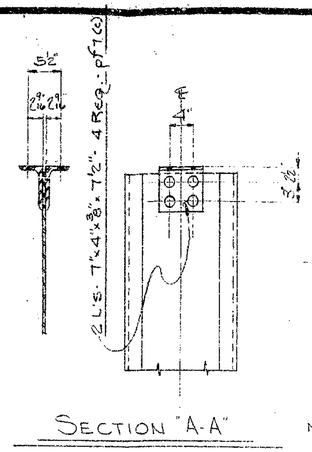
SHOP VINCENNES STEEL DIV. OF INDIANA NEW PRODUCTS, INC. VINCENNES, IND.

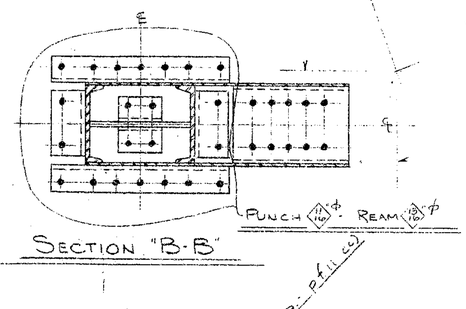
BOOK No. 7

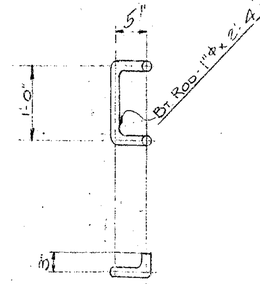
Sh. 2 of 2 Sh. No. 168

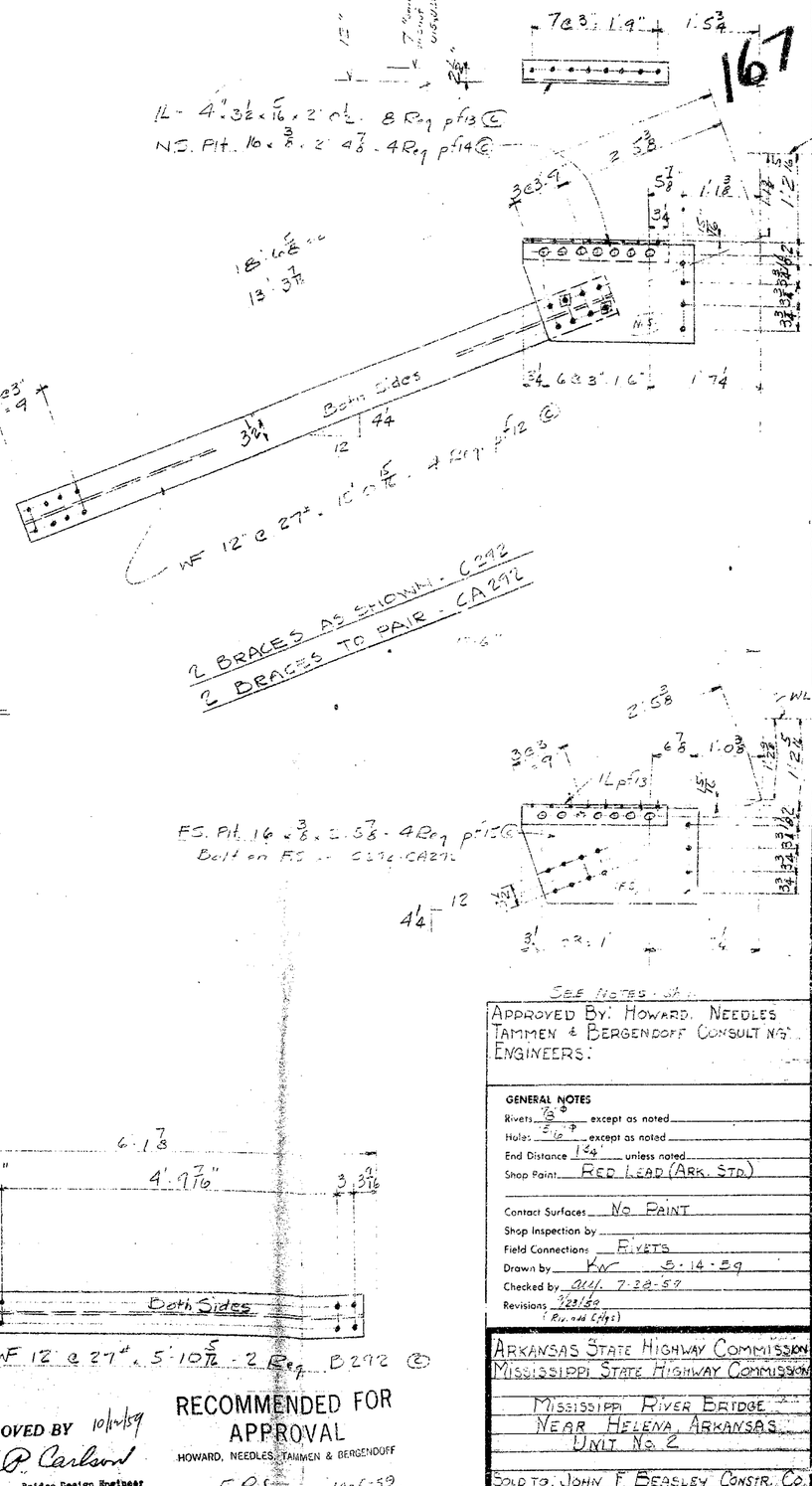
P91
P92
P93
P98
P99
P910
P911
P912
P913
P914
P915
P916
P917











APPROVED BY 10/11/59
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 10-5-59

See Notes - Sh.

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets ⅞" except as noted
Holes 15/16" except as noted
End Distance 1¼" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by KW 5-14-59
Checked by ALL 7-22-59
Revisions 9/29/60
(Rivets added (Typ.))

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 2

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
DIV. OF INTERNATIONAL ENTERPRISES, INC.
Contr. No. 4800 Sh. 292 of

UNIT 2 SHIPPING LIST

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No	Mark	Member		
1	A293	Lower Chords	L1S L16	
1	AA293	" "	"	
2	A294	" "	L16L18	
2	AA294	" "	"	
1	A296	" "	L18L20	
1	AA296	" "	"	
1	A298	" "	L20L18	
1	AA298	" "	"	
1	A300	" "	L24L25	
1	AA300	" "	"	
2	A309	Top Chords	U1SU17	
2	AA309	" "	"	
2	A311	" "	U17U19	
2	AA311	" "	"	
2	A313	" "	U19U21	
1	A314	Verticals	U1SL1S	
1	AA314	" "	"	
1	B314	" "	U25L25	
1	BA314	" "	"	
2	C314	" "	U1L1L U24L24	
2	CA314	" "	"	
4	A315	" "	U1S L1S U25L25	
4	B315	" "	U1 L1S U25 L25	
4	C315	" "	U1 L1S U21 L21	
1	A292	" "	U21L24	
1	AA292	" "	"	
2	A316	Diagonals	U1S L16 L16U25	
2	AA316	" "	"	
2	A318	" "	L16U17	
2	A318	" "	U25L24	
2	B318	" "	U17L18	
2	B318	" "	L22U23	
2	A319	" "	L18U19	
2	A319	" "	U21L22	
2	B319	" "	U19L20	
2	B319	" "	L20U21	

No	Mark	Member	
1	B141	Top Struts	U1S
1	B141	" "	U25
2	A325	" "	U16-U24
2	B325	" "	U17-U23
2	C325	" "	U18-U22
2	A189	" "	U19-U21
1	B189	" "	U20
5	E52	Sway Braces	
3	A326	" "	
3	D326	" "	
3	B308	" "	
2	B326	" "	
2	C326	" "	
2	C308	" "	
2	A142	" "	
2	B292	" "	
2	C292	" "	
2	CA292	" "	
2	A320	Top Laterals	
2	B320	" "	
2	C320	" "	
2	A321	" "	
4	B321	" "	
6	A322	" "	
12	B322	" "	
1	D320	Wind Shear struts @ U25	
1	E320	" " "	U1S
2	E259	Lower Laterals	
2	D260	" "	
2	E260	" "	
4	B323	" "	
8	B324	" "	
4	A324	" "	
8	C324	" "	
1	A323	Wind Shear struts @ L1S	
1	C260	" " " @ L25	

No	Mark	Member
3	A304	Floor Beams
4	B304	" "
1	AA305	" "
1	B305	" "
1	BA305	" "
1	A306	" "
4	A301	Stringers
4	B301	"
2	C301	"
2	D301	"
2	A302	"
2	AA302	"
1	B302	"
1	A308	"
2	A303	"
2	AA303	"
1	D303	"
1	B303	"
1	BA303	"
1	A307	"
1	A268	"
1	AA268	"
1	B268	"
1	C303	"
2	A89	Cross Beams
1	C83	" "
50	C76	" "
40	D76	" "
2	B307	6"Curb IS
2	BA307	" "
1	C307	" "
1	CA307	" "
2	D307	" "
2	DA307	" "
4	E307	" "
4	F307	" "
1	G307	" "
1	GA307	" "

No	Mark	Member	
3	A176	Contraction Joints	
2	B176	" "	
5	N175	" "	
5	NA175	" "	
12	C190	Contraction Links	
12	F191	" Pins	
24	E191	" Fills	
2	A173	Expansion Castings @ L25	
8	B173	" " "	
2	C173	" " "	
2	D173	Shims "	
2	E173	" "	
4	F173	" "	
8	G173	" "	
8	H173	" "	
16	J173	" "	
2	K173	" "	
2	M173	" "	
4	N173	" "	
1	M175	Expansion Plates "	
1	MA175	" " "	
1	K175	" " "	
1	KA175	" " "	
4	C143	Horizontal Links @ U1S	
4	D143	" " @ U25	
4	G143	Vertical Links @ U1S	
4	G143	" " @ U25	
2	K197	Pins @ L1S	
1	L197	8"ϕ Pin @ L1S	
2	C197	10"ϕ Pins @ U1S	
2	C197	do @ U25	
2	F197	do @ U1S	
2	F197	do @ U25	
2	G197	do @ U1S	
2	G197	do @ U25	

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 9-23-59

APPROVED BY 9/25/59
L.P. Carlson
Bridge Design Engineer

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

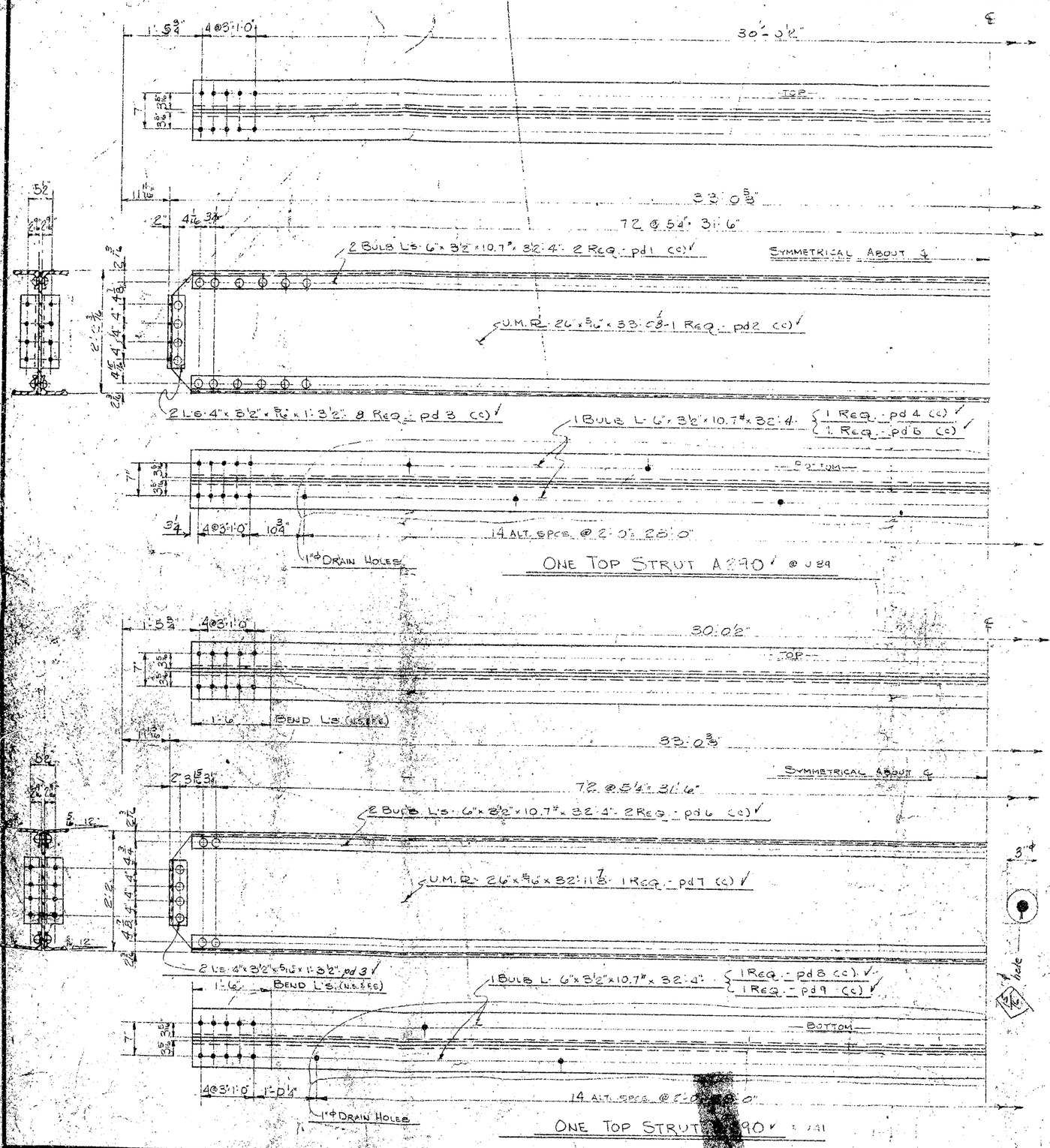
GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by JLW
Checked by GWF
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 2

SOLD TO: JOHN T. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND. DIV. OF INDUSTRIAL ENTERPRISES, INC.
Contr. No. 4800 Sh. 291 of



UNIT No. 3 - FIELD RIVET LIST SHEETS 198 to 290 BOOK No. 11

165

Send	Size	Kind	Req'd	Location	Grip
750	⅞ x 2⅜	Rivets	668		⅝
3838	⅞ x 2¼	"	3480		¾
1745	⅞ x 2⅜	"	1576		⅞
43716	⅞ x 2½	"	3974		1
2640	⅞ x 2⅝	"	2392		1⅛
3268	⅞ x 2¾	"	2962		1¼
4022	⅞ x 2⅞	"	3648		1⅜
2495	⅞ x 3⅛	"	2258		1½
2795	⅞ x 3¼	"	2580		1⅝
2680	⅞ x 3½	"	2427		1¾
1495	⅞ x 3⅝	"	1354		1⅞
3660	⅞ x 3¾	"	3340		2
1378	⅞ x 3⅞	"	1244		2⅛
835	⅞ x 4	"	748		2¼
805	⅞ x 4⅛	"	724		2⅜
625	⅞ x 4¼	"	560		2½
7[illegible]	⅞ x 4⅜	"	620		2⅝
[illegible]	⅞ x 4½	"	182		2¾
590	⅞ x 4⅝	"	528		2⅞
430	⅞ x 4⅞	"	380		3
600	⅞ x 5	"	536		3⅛
130	⅞ x 5⅛	"	108	— ℄ 72 beveled washers "A" for ⅞ bolts	3¼
100	⅞ x 5¼	"	80	1550 flat wt. washers for ⅞ bolts	3⅜
595	⅞ x 5⅜	"	532	— 72 Shims P173	3½
120	⅞ x 5½	"	100	— 72 Shims Q173	3⅝
35	⅞ x 5⅝	"	20		3¾
80	⅞ x 5¾	"	64		3⅞
35	⅞ x 6	"	24		4
95	⅞ x 6⅛	"	76		4⅛
20	⅞ x 6¼	"	4		4¼
35	⅞ x 6½	"	24		4⅜
745	¾ x 3	"	668		1½
380	¾ x 3⅛	"	334		1⅝
36	⅞ x 2½	H.S. Bolts	32		1
240	⅞ x 2¾	" "	226		1⅛
135	⅞ x 3	" "	126		1¼
28	⅞ x 3¼	" "	24		1⅜
72	⅞ x 3½	" "	66		1½
44	⅞ x 3⅝	" "	40		1⅝
32	⅞ x 4	" "	28		1¾
55	⅞ x 4¼	" "	48		1⅞
10	⅞ x 4½	" "	8		2
1304	⅞ hardened washers for ⅞" H.S. Bolts				
680	⅞ x 1¾	Hex Bolts	660	6 over ℄	
68	⅝ x 3	" "	64	"	
10	⅝ x 3¼	" "	8		
- 24	" Turned Bolts (T.B.)			℄ 132 " (See detail sht)	
60	⅞ x 1½	Hex Bolts	54	Ladders	
75	¾ x 2¼	" "	72	"	
280	⅞ x 2½	Hex Bolts Self Locking Nuts	272	Expansion Joints	
150	⅞ x 3	" " " "	144	"	
50	⅞ x 3¼	" " " "	48	"	
230	⅞ x 3½	" " " "	224	"	
50	⅞ x 4	" " " "	48	"	
75	⅞ x 4½	" " " "	72	"	

See Notes Sheet 1

APPROVED BY: 9/15/60
L. D. Carlson
Bridge Design Engineer

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 11/18/59

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
DATE 9-12-60

GENERAL NOTES
Rivets ⅞" ø except as noted
Holes 15/16" except as noted
End Distance 1¼ unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by KW 5-11-59
Checked by JK 9-59
Revisions

ARKANSAS STATE HIGHWAY COM
MISSISSIPPI STATE HIGHWAY C.
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 3
JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

BOOK No. 6 SHOP VINCENNES STEEL & BRIDGE DIV. VINCENNES, IND. ENTERPRISES, INC. Sh. 290 of 4905 - F

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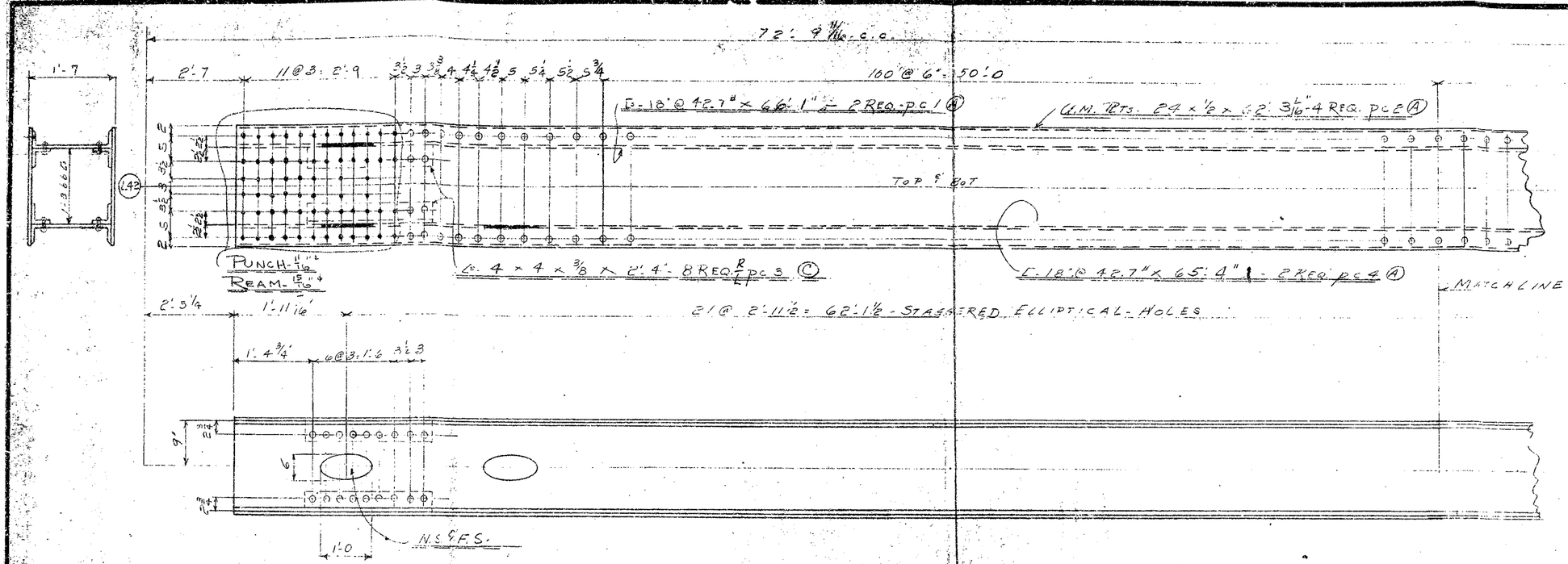
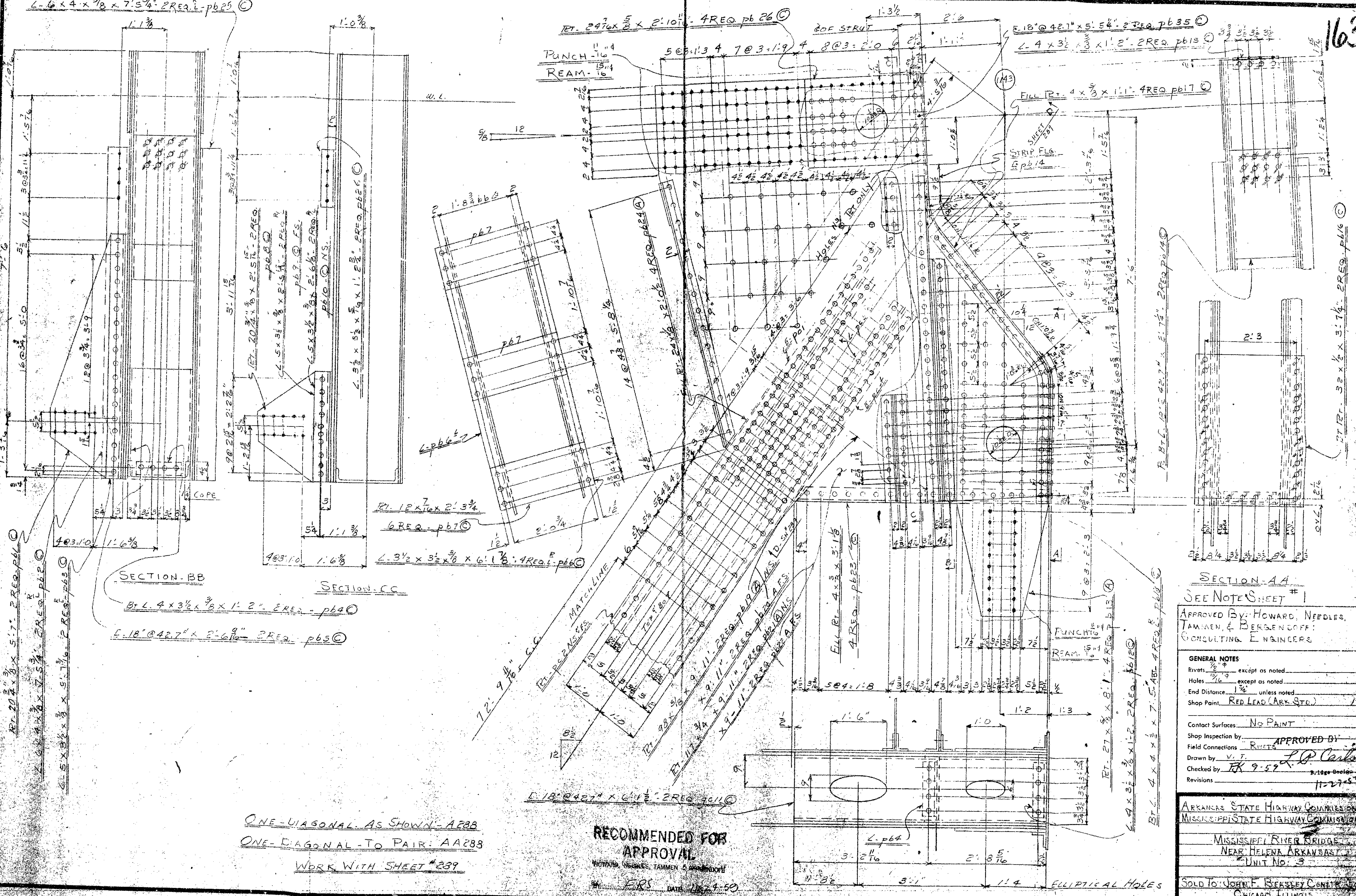

72'-9 11/16" c.c.
1'-7
2'-7
11@3'-2'-9
100'@6"=50'-0
L-18"@42.7"×66'-1" = 2 REQ. PC 1 (K)
G.M. RTS. 24×1/2×(2'-3 15/16"-4 REQ. PC 2 (A)
TOP & BOT
PUNCH-1 1/16"
REAM-15/16"
L 4×4×3/8×2'-4"-8 REQ PC 3 (C)
L-18"@42.7"×65'-4" = 2 REQ. PC 4 (A)
MATCHLINE
2'-5 1/4
1'-11 1/16"
21@2'-11 1/2" = 62'-1 1/2" - STAGGERED ELLIPTICAL HOLES
1'-4 3/4"
6@3'-1'-6
9"
1'-0
N.S. & F.S.
L 4×4×1/2×5'-7 15/16" 8 REQ. PC 5 (A)
3 3 1/2 7@3'-1'-7 3 15/16 11@3'-2'-9 5'-2 3/16
9"
1'-3 6 1/4 D
(L43)
21@2'-11 1/2" = 62'-1 1/2" STAGGERED ELLIPTICAL HOLES
1'-3
9"
4'-3 7/16
26'-4 3/4
2'-2 15/16 5@3'-1'-3 10" 6@3'-1'-6 18'-10 3/4" 4@3'-1'-0 8 1/4"
2L-MS15 R L
2L 5×3×5/16×21'-8 1/4"-2 Req R L PC 7 (C)
2L-MS16 R L
2L 5×3×5/16×21'-2 1/4"-2 Req R L PC 6 (C)
10 5/8
12
3 4@3'-1'-8 5 5
46@5 1/4"=20'-1 1/2"
3 3 3 3 3 3 1/2
7 11/16"
1 PL MS17
1 PL 26'-5/16×21'-7 13/16"-1 Req. PC 8 (C)
13/16" holes-3/4" rivets
1'-10"
1 1/2"
11-L 4×4×3/8×1'-6 1/2"-MS8
1/2
12
SECTION-DD-SHEET #288
WORK WITH SHEET #288
SEE NOTE SHEET #1
APPROVED BY: HOWARD, NEEDLES, TAMMEN, & BERGENDOFF: CONSULTING ENGINEERS.
GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by APPROVED BY
Field Connections RIVET
Drawn by V.T.
Checked by F.K. 9-59
Revisions 11/9/59 11-27-59
Bridge Design Engineer
RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY E.R.S. DATE 11-24-59
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3
SOLE TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS
ONE LATERAL - A.7.89
SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 289 of
A



APPROVED BY: HOWARD, NEEDLES, TAMMEN, & BERGENDOFF: CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" φ except as noted
Holes 15/16" φ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V. T.
Checked by RK 9-59
Revisions

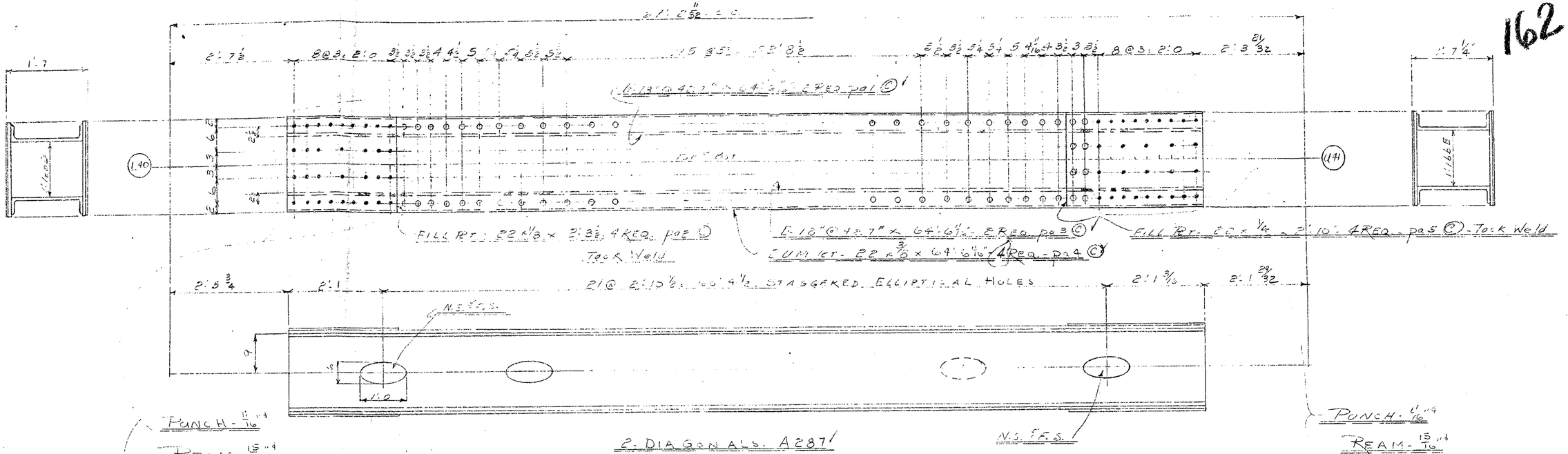
APPROVED BY L. P. Carlson
Bridge Design Engineer
11-27-59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT NO: 3

SOLD TO: JOHN F. BEASLEY CONST. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL [redacted] DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.
Contr. No. 4800 Sh. 288 of



SEE NOTE - SHEET 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 11/18/59

GENERAL NOTES

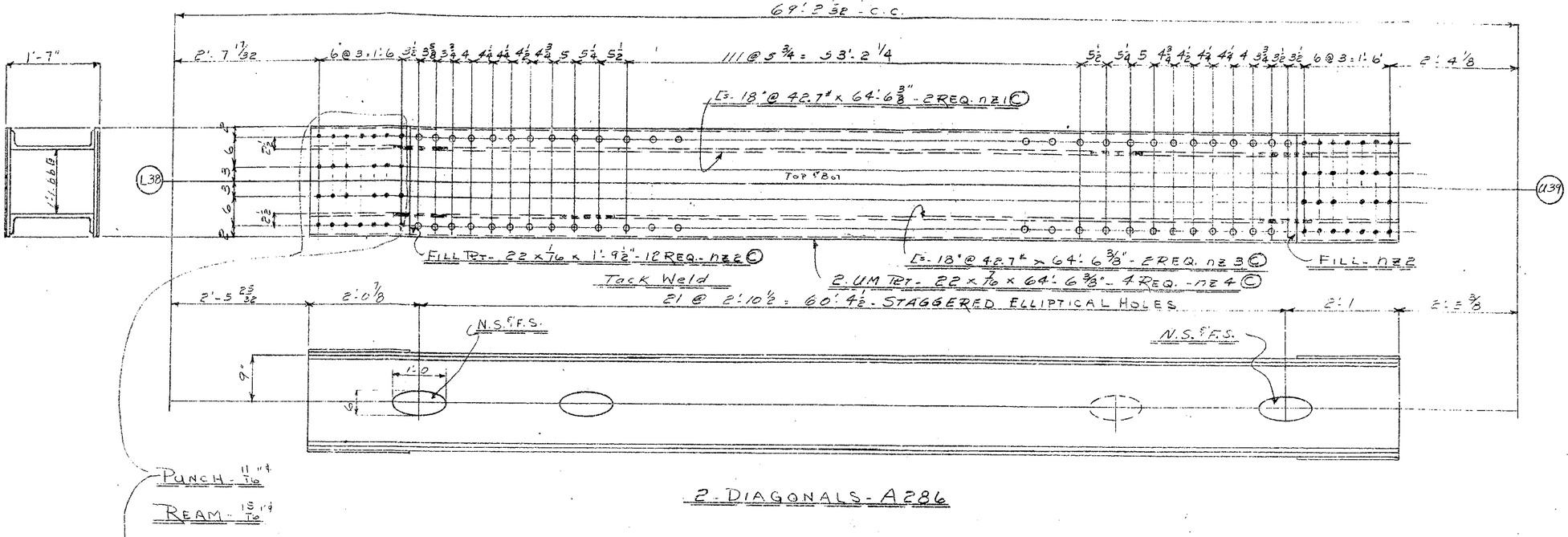
Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T.
Checked by FJK 9-59
Revisions

APPROVED BY 9/15/60
V. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY PJJ DATE 9-12-60
BOOK No. 5

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 3
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF VINCENNES INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
CONTR. No. 4800-7 Sh. 287 of



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 11-13-59

SEE NOTE - SHEET #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 1/4" unless noted
Shop Paint. RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V. T.
Checked by TK
Revisions

APPROVED BY 11/18/59
L. D. Carlson
Bridge Design Engineer

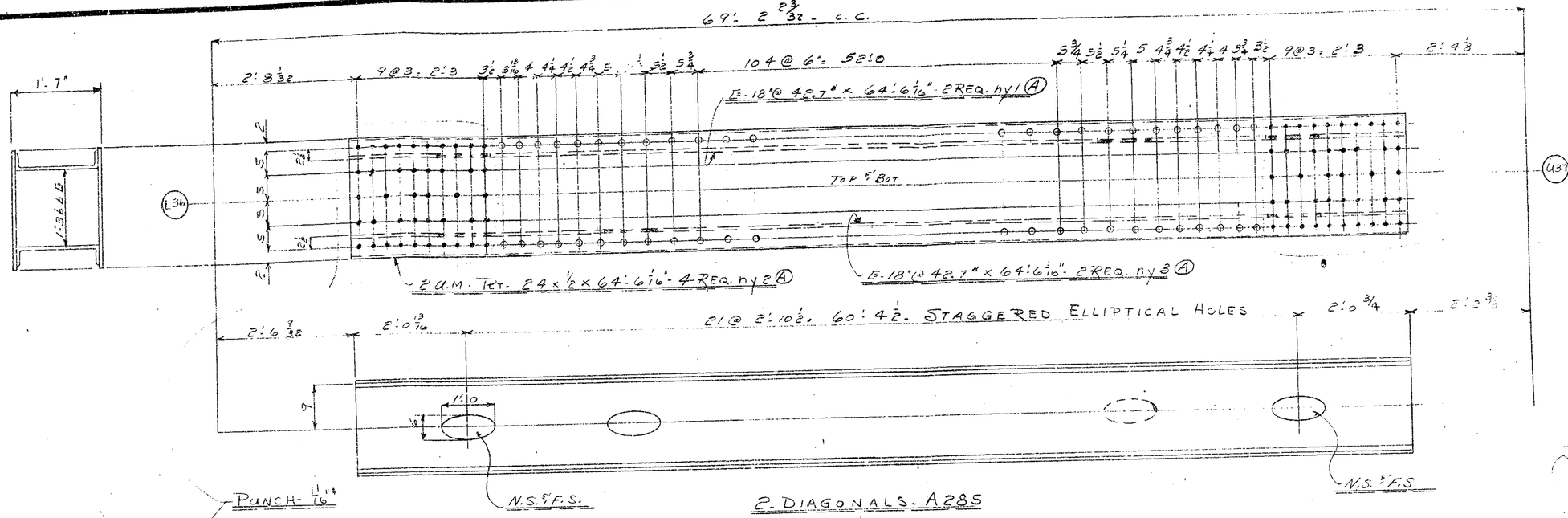
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND. DIV. OF INDUSTRIAL ENTERPRISES INC. Contr. No. 4800 Sh. 286 of

160



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 11-12-59

SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

APPROVED BY 11/10/59
L. P. Carlson
Bridge Design Engineer

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Point RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T.
Checked by FRS 9-59
Revisions

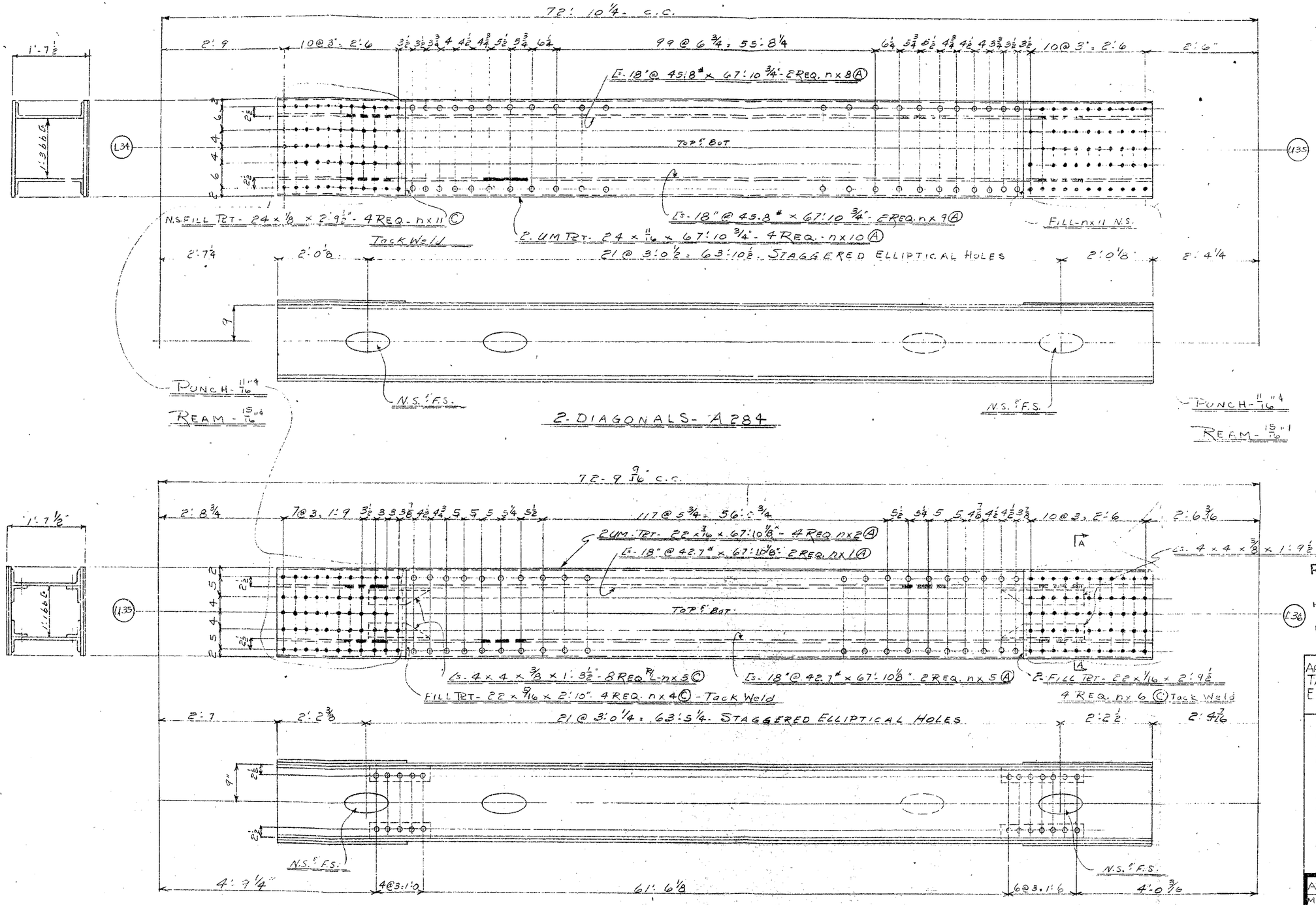
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. A DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800 Sh. 285 of (A)

159



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY F.R.S. DATE 11-12-59
SEE NOTE - SHEET # 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

APPROVED BY 11/16/59
L.P. Carlson
Bridge Design Engineer

GENERAL NOTES

Rivets 7/8 except as noted
Holes 15/16 except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS.
Drawn by W.T.
Checked by FK 9-59
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 3

SOLD TO - JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND. Contr. No. 4800 Sh. 284 of (A)

158

59'-0 3/8" c.c.

2'-1 | 11@3'-2'-9 | 3½ 4@3'-1'-0 3½ 3 3½ 4½ 5½ 6 6½ | 78@6¾ = 43'-10½ | 6½ 6 5½ 5¼ 5 4 13/16 4½ 4 3 7/16 3 7/16 3 7/16 3 7/16 3½ | 5@3'-1'-3 | 7/8 1½ | 5@3'-1'-3 | 3½ | 5@3'-1'-3 | 3 9/16 | 59'-0 5/32" c.c.

1'-1½

(U32)

(M33)

(L34)

6-18"@45.8" x 56'-0 1/16" - 2 REQ. NW1 (A)

6-18"@45.8" x 57'-0 3/4" - 2 REQ. NW2 (A)

6-3½ x 3½ x 3/8 x 1'-10" - 4 REQ. NW3 (C)

2-U.M. PLT. - 24 x 11/16 x 57'-0 3/4 - 4 REQ. NW4 (A)

2-FILL PLT. - 24 x 7/16 x 4'-4 - 4 REQ. NW 35 (C)
Tack Weld

PLT. - 14 x 5/8 x 3'-1¼" - 4 REQ. NW6 (A)

PUNCH - 11/16"
REAM - 15/16"

PLT. - 71 7/16 x 5/8 x 6'-0 1/16 - 4 REQ. NW5 (A)

1'-11¼"

2'-4

17@3'-1" = 52'-5" - STAGGERED ELLIPTICAL HOLES

2'-3¾"

4@3'-1'-0 1⅞ 1½ 4@3'-1'-0

N.S. 5 F.S.

2-DIAGONALS - A283

PLT. - 15 x ½ x 2'-7¼ - 4 REQ. NW7 (A)

SEE NOTE - SHEET #1

59'-0 5/32" c.c.

59'-0 8" c.c.

1'-7½"

¼ V. GUIDES

11'-3 5/8"

7 1/8 5@3'-1'-3 5½ 5@3'-1'-3 5½ 3½ 3 7/16 3¾ 4 4¼ 4½ 4⅝ 5 5½ 6 | 71@6½" = 42'-1⅛" | 6 5½ 5¼ 4¾ 4½ 4 7/16 4 3 7/16 = 3½ | 20@1½" = 2'-6 | 3'-2 1/32"

5-18"@45.8" x 55'-11¾" - 2 REQ. NW8 (A)

5-18"@45.8" x 55'-11¾" - 2 REQ. NW10 (A)

L. 3½ x 3½ x ½ x 2'-4" - 8 REQ. NW11 (A)

FILL PLT. - 24 x 1/8 x 2'-9½" - 4 REQ. NW12 (C)
Tack Weld

PUNCH - 11/16"
REAM - 15/16"

SECTION - AA

2-FILL PLT. - 24 x 7/16 x 3'-4 7/16" - 4 REQ. NW 36 (C)

17@3'-1" = 51'-8½" - STAGGERED ELLIPTICAL HOLES

4-U.M. PLT. - 24 x ⅜ x 55'-11¾" - 4 REQ. NW 9 (A)

3'-0 1/32"

2'-2

N.S. 5 F.S.

2-DIAGONALS - B283

APPROVED BY
L. P. Carlson
Bridge Design Engineer
9/15/60

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
DATE 9-12-60
BY

BOOK No. 5

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 11/23/59

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARKANSAS STD)

Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T.
Checked by ~~TK~~ 9-59
Revisions 11/12/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT No 3

SOLD TO: JOHN F BEASLEY CONSTR CO
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL
VINCENNES, IND.

DIV. OF INDUSTRIAL ENTERPRISES, INC.
Contr. No. 4800-T Sh. 283 of

59'-0 19/32" C.C.

1'-5 3/8" | 10 @ 3 1/2" = 2'-11" | 89 @ 5 3/4" = 42'-7 3/4" | 5@3'-1 1/2" | 5@3'-0" | 3'-2 7/32"

3 3/4 3 15/16 4 4 1/2 4 3/4 5 5 1/4 5 1/2 ... 5 1/2 5 1/4 5 4 3/4 4 1/2 4 1/4 4 3 3/4

PL. 18" @ 42.7" x 54'-8 3/16" - 2 REQ. NV1 ©

Top & Bot

M31 — L32

FILLET - 21 x 1/16 x 1'-10" - 4 REQ. NV2 - Tack Weld ©

PL. 18" @ 42.7" x 54'-8 3/16" - 2 REQ. NV3 ©

2 UM PLTS. 22 x 7/16 x 54'-8 3/16" - 4 REQ. NV4 ©

2 - FILLET - 18 1/2 x 1/4 x 1'-10" - 8 REQ. NV5 © Tack Weld

9"

1'-0" | 6"

N.S. & F.S. | N.S. & F.S.

1'-3 5/8" | 2'-0 1/4" | 17 @ 2'-11 3/4" = 50'-7 3/4" - STAGGERED ELLIPTICAL HOLES | 2'-0 3/16" | 5'-0 29/32"

PUNCH - 11/16"ø
REAM - 15/16"ø

2 DIAGONALS - A282

1'-7 5/8"

L 6 x 6 x 5/8

PUNCH - 11/16"ø
REAM - 15/16"ø

59'-0 19/32" C.C.

3'-1 1/32" | 5@3'-1 3/32" | 5@3'-1 5/32" | 90 @ 5 3/4" = 43'-1 1/2" | 4@4'-1 7/32" | 1'-2 3/8"

3 3/4 4 4 4 1/8 4 1/4 4 1/2 4 3/4 5 5 1/4 5 1/2 ... 5 1/2 5 1/4 4 3/4 4 1/2 4 1/4 4 4 3/4 3 5/8 3 1/2

PL. 18" @ 42.7" x 55'-0 11/16" - 2 REQ. NV6 ©

Top & Bot

L32 — M33

2 - FILLET - NV5

2 UM PLT. 22 x 7/16 x 55'-0 11/16" - 4 REQ. NV7 ©

PL. 18" @ 42.7" x 55'-0 11/16" - 2 REQ. NV8 ©

2 - FILLET - 22 x 3/16 x 2'-3 7/16" 4 REQ. NV9 © Tack Weld

9"

1'-0" | 6"

2'-11 9/32" | 2'-0 3/8" | 17 @ 3'-0" = 51'-0" - STAGGERED ELLIPTICAL HOLES | 2'-0 5/16" | 1'-0 5/8"

N.S. & F.S. | N.S. & F.S.

2 DIAGONALS - B282

1'-7 1/4"

L 6 x 6 x 5/8

M33

SEE NOTE SHEET # 1

APPROVED BY: HOWARD NEEDLE, TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ø 15/16" ø except as noted
Holes except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by V.T.
Checked by FK 9-59
Revisions

APPROVED BY 11/10/59
L.R. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 11-12-59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No 3

SOLD TO: JOHN F BEASLEY CONSTR CO
CHICAGO ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800 Sh. 282 of (A)

156

59'-0 3/4" C.C. (M31)

59'-0 23/32" C.C.

54@6 2/2 = 29'-3

14@3'-3"=6

14@3'-3"=6

11@6 5/8 = 5'-11 1/2

6@3'-1'-6

2'-0 9/32

UM RT. 30 x 5/8 x 57'-2 3/16" - 2 REQ. nu-1 (A)

I-18"@70# x 56'-11" - 2 REQ nu-2 (A)

I-18"@70# x 57'-2 3/16" - 2 REQ. nu-3 (A)

FILL RT 30 x 1/8 x 3'-7 - 4 REQ - nu 35 (C)

TACK WELD

16'-9 7/32

42'-3 1/2

PUNCH - 11/16"

REAM - 15/16"

PUNCH: 11/16 REAM 15/16

MILL

MILL

WF - mh 7

2'-6

3/4 3 3 3

1/2 1'-0 1/2

5/16 TYP.

TCTS. mh 9

TCTS. mh 9

9"

2'-4 1/2

N.S. 5 F.S.

15 @ 3'-6 = 52'-6 - STAGGERED ELLIPTICAL HOLES

N.S. 3 F.S.

2'-3 11/16

1'-10 17/32

4@3'-1'-0

5@3 1/2 - 1'-3 5/8

77@6 1/2 = 41'-8 1/2

6@3'-1'-6

6@3'-1'-6

2'-0 3/32

B.T.

UM-RT- 30 x 5/8 x 57'-2 3/16 - 2 REQ nu 4 - (A)

FILL - nu 35

PUNCH 11/16"

REAM - 15/16"

ONE DIAGONAL AS SHOWN - A281

ONE DIAGONAL TO PAIR - A A281

APPROVED BY 9/15/60

L. P. Carlson

Bridge Design Engineer

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY DLP DATE 9-12-60

BOOK No. 5

SEE NOTE SHEET # 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF

CONSULTING ENGINEERS 11/5/59

GENERAL NOTES

Rivets 3/4" except as noted

Holes 13/16" except as noted

End Distance 1 3/4" unless noted

Shop Paint RED LEAD (ARK. STD)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by V.T.

Checked by FK 9-59

Revisions

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE

NEAR HELENA, ARKANSAS

UNIT No: 3

SOLD TO: JOHN F. BEAGLEY CONSTR. CO.

CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

Contr. No. 4800-T Sh. 281 of

155

54'-0 3/4" C.C.

18 @ 6 1/2 = 9'-9"

M31

59'-0 23/32 C.C.

6 1/4 6 1/4 5 3/4 5 1/2 5 1/4 5 1/4 5 4 3/4 4 23/32 3 1/16 6@3 1/2 = 1'-9 3 1/2 4@3'-1 0 3/4 1 3/4 4@3' 3 1/2 5@3 1/2 = 1'-3 5/8 2'-

PUNCH - 11/16"ϕ
REAM - 15/16"ϕ

PL 16 x 1/2 x 2'-7" - 4 REQ - nt 3 (A)

TOP

UM.PL - 30 x 5/8 x 18'-8 9/32 - 4 REQ - nt 1 (A)

PL - 77 11/16 x 5/8 x 6'-6 5/16" - 4 REQ - nt 2 (A)

MATCH LINE

25'-6 9/32

16'-9 7/32

PUNCH - 11/16"ϕ
REAM - 15/16"ϕ

8@3' 2'-0

MILL

3@3'-7 1 3/4 3@3'-7

PLTS - mhg

PL - 14 x 1/2 x 2'-1"
8 REQ. nt 4

N.S. & F.S.

MILL

2'-6 3/4

15 @ 3'-3 = 51'-3 - STAGGERED ELLIPTICAL HOLES

18@ 6 1/2 = 9'-9"

6 1/4 6 1/4 5 3/4 5 1/2 5 1/4 5 1/4 5 4 3/4 4 23/32 3 1/16 6@3 1/2 = 1'-9 3 1/2 4@3'-1 0 1 3/4

PL - nt 3

PL - nt 1

BOT

PL - nt 2

WORK WITH SHEET 253 & 281

SEE NOTE SHEET # 1

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 11-2-59

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF - CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4" unless noted
Shop Point RED LEAD
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T. 11/5/59
Checked by ~~FK~~ 9-59
Revisions

APPROVED BY
L.P. Carlson

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

SOLD TO: JOHN F BEASLEY CONSTR CO
CHICAGO ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND. Contr. No. 4800 Sh. 280 of

154

1 L- 3½"×3½"×⅝"×32'-4" nr7 (c)

U.M. Bent R-44"×⅜"×32'-4" nr4 (c)

1 L- 3½"×3½"×5/16"×1'-5 5/16" nr6 (c)

TOP

10'-3⅜"

1 L- 3½"×3½"×⅜"×2'-2 11/16" nr1 (c)

I-18"@54.7#×1'-9½" 2 Req.- ns1 (c)

Bent R-25½"×½"×5'-0 7/16" 2 Req. R/L ns2 (A)

ONE GUSSET PLATE AS SHOWN B279

ONE GUSSET PLATE T.O. PAIR BA279

SYMMETRICAL ABOUT ℄

17'-6"

65@5¼"=28'-5¼"

1 L- nr7 (c)

2 L- nr9

U.M. R-22"×5/16"×32'-4" nr8 (c)

1 L- nr10

Bt. R- nr12

Bt. R- nr13

BOTTOM

1 L- 3½"×3½"×5/16"×9⅞" nr11 (c)

Bent R-25⅜"×½"×6'-3¾" 2 Req. R/L- 1C279 / 1CA279 ©

Bt. R- 12"×½"×1'-5 15/16" nr13 (c)

U.M. R- 25"×5/16"×32'-4" nr14 (c)

1 L- 3½"×3½"×5/16"×2'-1¼" nr15 (c)

1 L- nr7 (c)

℄ L- nr10

SECTION "X-X" (FAR SIDE)

ONE TOP STRUT A279 @ U28

1 Bt R 5 3×½×5'-10 11/16" - 2 Req. R/L ns35 (A)

PUNCH 11/16 REAM 15/16

BEND LINE "A"

W.P.

R-ns2

TOP OF PLATE ABOVE LINE "A"

R-28"×5/16"×2'-4½" nr16 (c)

WELD L's

STRIP OSL

SEE NOTE SHEET #1

DIAPHRAGM DETAIL

PUNCH 4/16 REAM 15/16

I-18"@54.7#×1'-9½" 2 Req.- ns4 (c)

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY ERS DATE 1-5-60

APPROVED FOR SHOP DWG.

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 11/16/59

GENERAL NOTES

Rivets 7/8" ℄ except as noted

Holes 15/16" ℄ except as noted

End Distance 1¾" unless noted

Shop Paint- Red Lead (Ark. Std.)

Contact Surfaces- No Paint

Shop Inspection by

Field Connections- Rivets

Drawn by KW 5-8-59

Checked by TK 9-59

Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

BOOK No. 6

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800-F Sh. 279 of

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(A)

153

1 BT R - 53 x ½ x 6'-6 - 2 R req. R/L nr 35 (A)

64 @ 5¼ = 28'-0"

1L - nr 7 (c)

U.M. Bent R - 44" x ⅜" x 32'-4" 2 Req'd - nr 4 (c)

TOP

10'-5⅜"

1L - 3½" x 3½" x ⅝" x 1'-5 5/16" - 8 Req'd R/L - nr 6 (c)

1L - 3½" x 3½" x ⅝" x 2'-2 11/16" 4 Req'd R/L - nr 1 (c)

I - 18" @ 54.7# x 1'-3½" - 2 Req'd - nr 2 (c)

Bent R - 25 7/16" x ½ x 5'-0 3/16" 2 Req'd R/L - nr 5 (A)

ONE Gusset Plate As Shown B278

ONE Gusset Plate to Pair BA278

SYMMETRICAL ABOUT ℄

17'-6"

65 @ 5¼ = 28'-5¼"

1L - 3½" x 3½" x ⅝" x 32'-4" 4 Req'd - nr 7 (c)

U.M.R. - 22" x 5/16" x 32'-4" 2 Req'd - nr 8 (c)

1L - 3½" x 3½" x ⅝" x 1'-9⅞" - 4 Req'd R/L - nr 9 (c)

1L - 3½" x 3½" x ⅝" x 32'-4" 4 Req'd - nr 10 (c)

Bent R - 25¾" x ½" x 6'-0⅛" 2 Req'd R/L (A) - 1-C 278 - 1-CA 278

1L - 3½" x 3½" x ⅝" x 9⅞" - 4 Req'd R/L - nr 11 (c)

Bent R - 16" x ⅜" x 1'-5 15/16" - 18 Req'd - nr 13 (c)

I - 18" @ 54.7# x 1'-9½" 2 Req'd - nr 3 (c)

65 @ 5¼" = 28'-5¼"

1L - nr 7 (c)

U.M.R. - 28" x 5/16" x 32'-4" 2 Req'd - nr 14 (c)

1L - 3½" x 3½" x ⅝" x 2'-1¼" 4 Req'd R/L - nr 15 (c)

1L - nr 10

SECTION "X-X" (FAR SIDE)

ONE TOP STRUT A278 @ U32

DIAPHRAGM DETAIL

SEE NOTE SHEET #1

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY ERS DATE 1-5-60

APPROVED BY: HOWARD NEEDLES TAMMEN & BERGENDORFF CONSULTING ENGINEERS 11/16/59

APPROVED BY R. Canada Bridge Engineer

GENERAL NOTES

Rivets 7/8 # except as noted

Holes 15/16 except as noted

End Distance 1¾ unless noted

Shop Paint RED LEAD (ARK. STD)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by KW 5-7

Checked by FK 9-59

Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

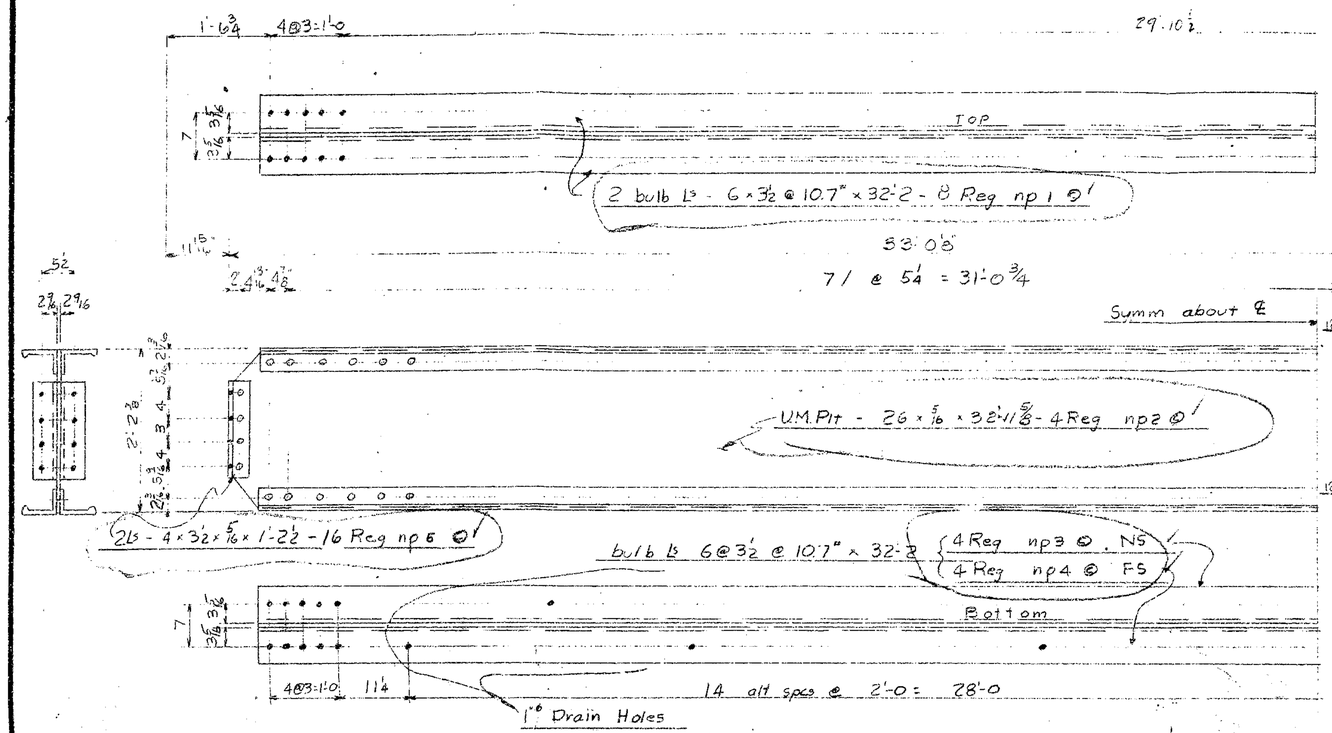
BOOK No. 8

SHOP VINCENNES STEEL CORP. VINCENNES, IND. DIV. OF INDUSTRIAL ENTERPRISES INC

Contr. No. 4800-F Sh. 278 of

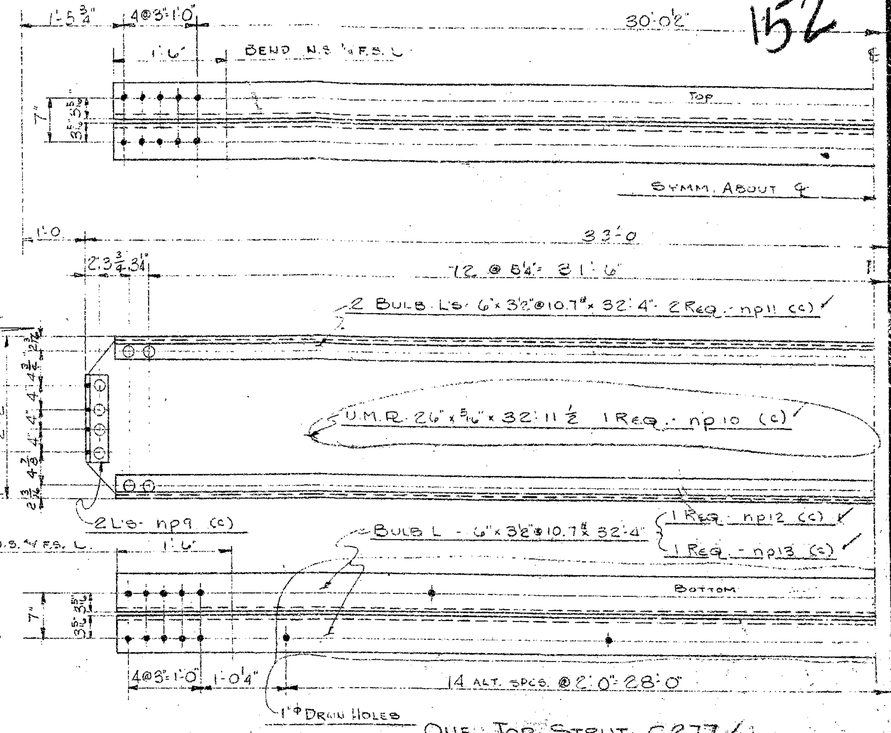
(A)

152



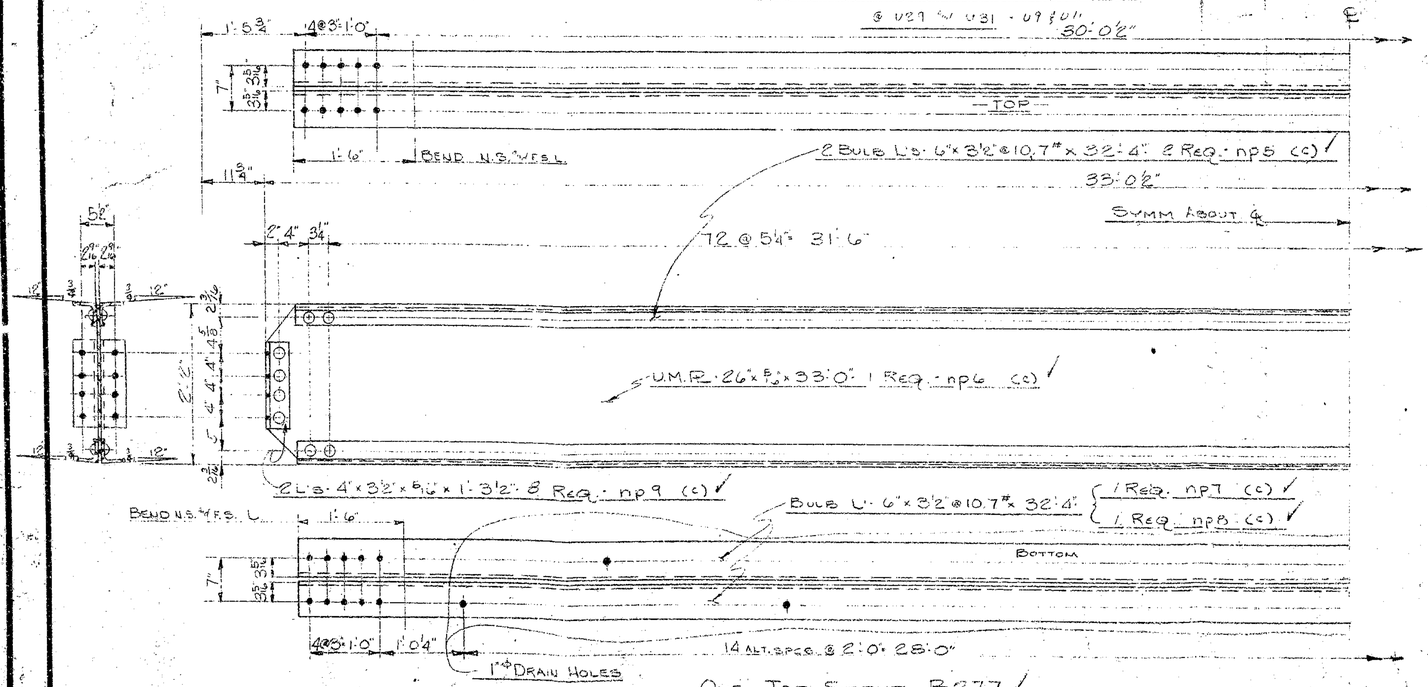
4 TOP STRUTS A277 / 2

@ U27 & U31 - U9 & U11



ONE TOP STRUT C277 / 1

1 @ U37



ONE TOP STRUT B277 / 1

1 @ U35

See Notes. Sheet 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF - CONSULTING ENGINEERS 11/16/59

GENERAL NOTES

Rivets ⅞ except as noted
Holes 15/16 except as noted
End Distance 1¾ unless noted
Shop Print RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by RH "/" KW 8-6-59
Checked by FK 9-59
Revisions

APPROVED BY 9/15/60
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY [illegible] DATE 9-12-60

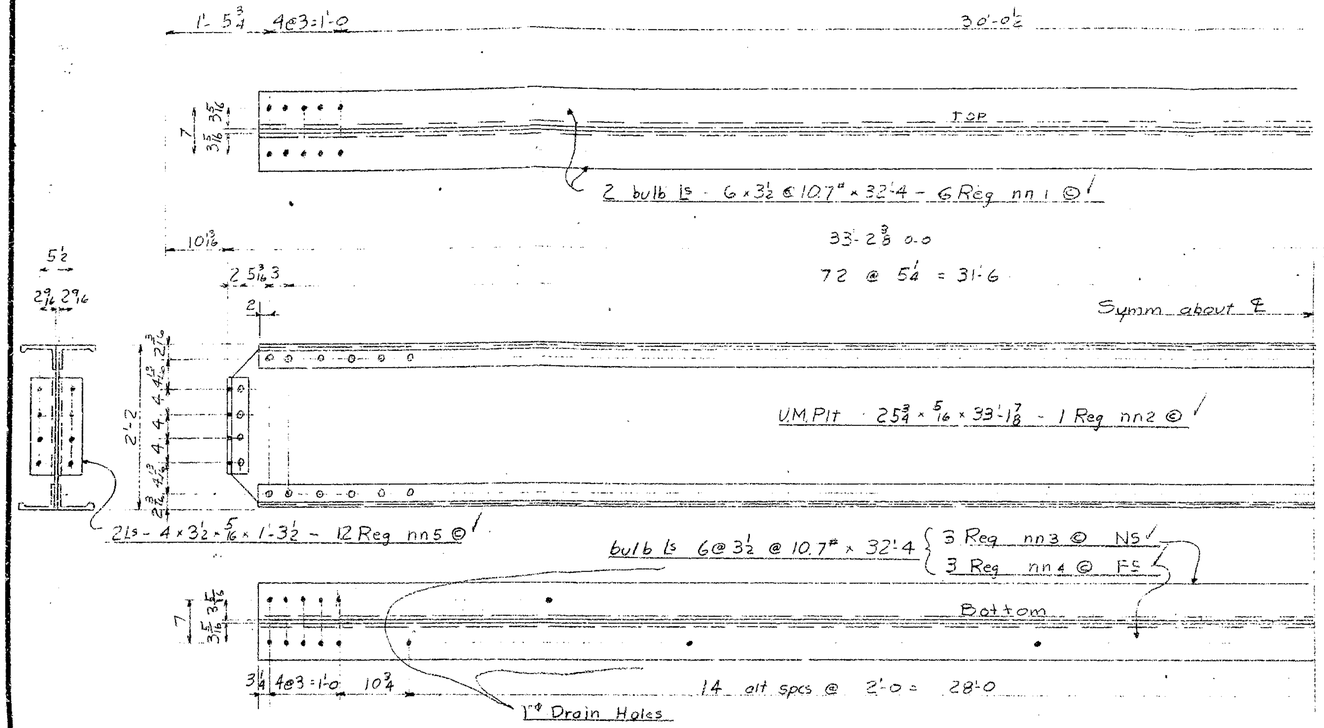
BOOK No. 6

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT No. 3

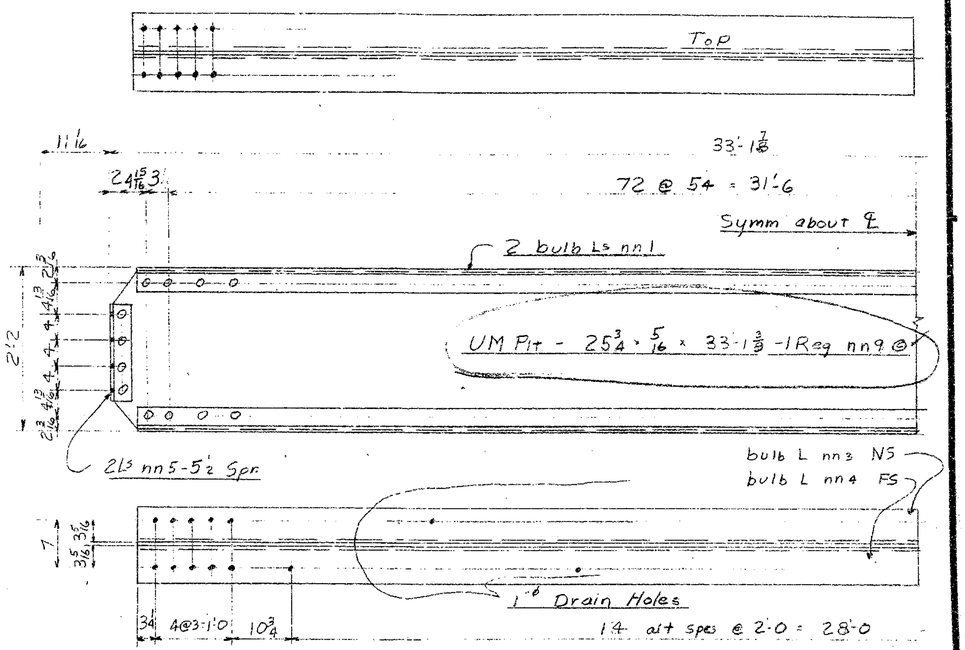
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND. Contr. No. 4800-F Sh. 277 of



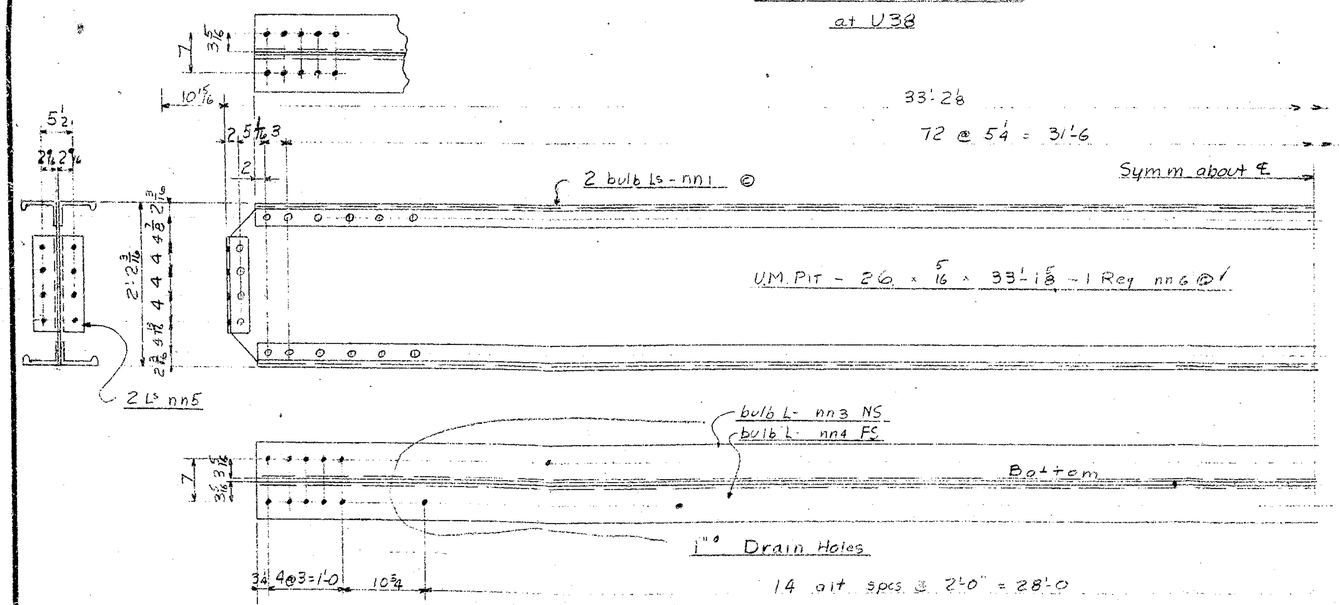
ONE TOP STRUT - A276

at U38



ONE TOP STRUT C 276

at U 42



ONE TOP STRUT - B276

at U40

See Notes - Sheet 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF - CONSULTING ENGINEERS 11/16/59

GENERAL NOTES

Rivets 7/8 except as noted

Holes 13/16 except as noted

End Distance 1 3/4 unless noted

Shop Paint RED LEAD (ARK STD)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by RBH 4-30-59

Checked by TCK 9-59

Revisions

APPROVED BY 9/15/60
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ... DATE 9-12-60

BOOK No. 6

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

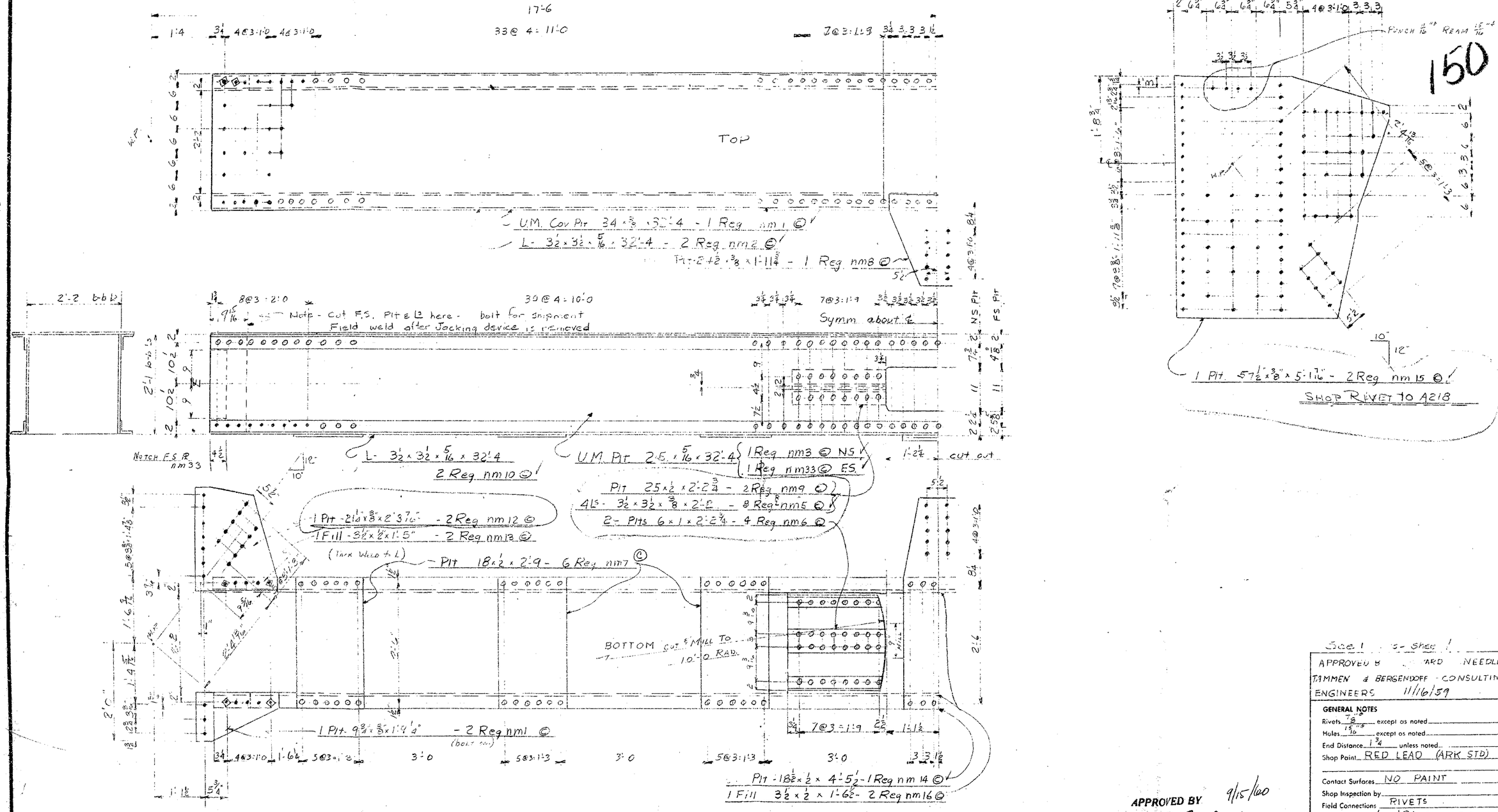
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO 3

SOLD TO: JOHN E. REASLEY CONSTR CO
CHICAGO ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.

Contr. No. 800-F Sh. 276 of

150



ONE TOP STRUT A275-1 at U25

See 1 of Sheet 1

APPROVED BY HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS 11/16/59

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by KW & RH 5-6-59
Checked by ~~TK~~ 9-59
Revisions

APPROVED BY 9/15/60
L.P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY DATE 9-12-60

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

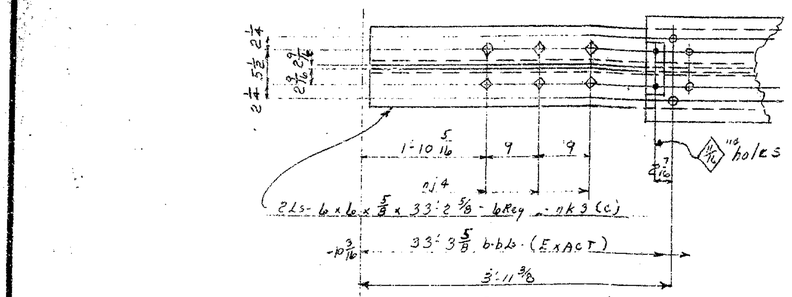
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

SOLD TO: JOHN F. BEASLEY CONSTR CO
CHICAGO, ILLINOIS

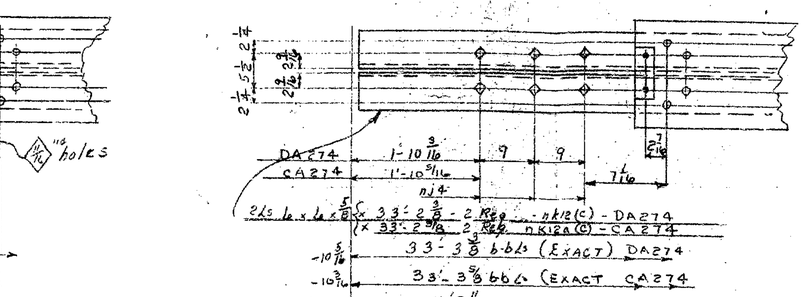
BOOK No. 6

SHOP: VINCENNES STEEL CORP. VINCENNES, IND.

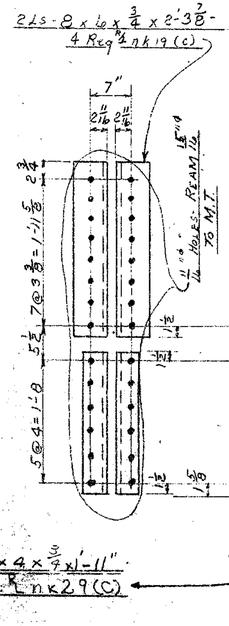
Contr. No. 4800-F Sh. 275 of



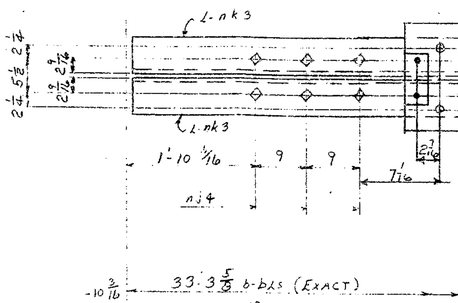
ONE FLOOR BEAM AS NOTED - AA274 (L3L)
ONE FLOOR BEAM AS NOTED - BA274 (L3R)
PART NOT SHOWN TO PAIR A273



ONE FLOOR BEAM AS NOTED - CA274 (L6)
ONE FLOOR BEAM AS NOTED - DA274 (L8)
PART NOT SHOWN TO PAIR A273



ONE FLOOR BEAM AS NOTED - EA274 (L3)
PART NOT SHOWN TO PAIR A273



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 11-9-59

SEE NOTE SH #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by APPROVED BY 11-28-59
Field Connections RIVETED BY
Drawn by CWR
Checked by L.P. Carlson
Revisions
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 1-3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND. DIV. OF INDUSTRIAL ENTERPRISES INC. CONT. NO. 4800. Sh. 274 of

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BAR 2 1/4 x 3/8 x 8'-16 Req - nj 3 (c)
TACK WELD

Cov PL - 16 x 1/2 x 26'-0 - 8 Req - nj 1 (c) (U.M.)

21s - 6 x 6 x 5/8 x 33'-2 1/8 - 6 Req - nj 2 (c)

PL - 9 7/8 x 3/8 x 1'-3 1/8 - 24 Req - nj 18 (c)
GRIND TO FIT 1/2 G FILLET

STUDS: 7/8" ø x 4'-96 Req - nj 4
WELD TO LS

1'-10 1/16 | 9 @ 3 1/2 = 2'-7 1/2 | 9 @ 3 1/2 = 2'-7 1/2 | 1'-5 7/8 | 1'-6 15/16 | 5 SP. @ 1'-6 13/16 = 7'-10 1/16 | 1'-6 13/16

PL nj 18

Symm. About ℄ Except As Shown

33'-3 1/8 b-b LS (Exact)

13'-0

3'-7 9/16

3 @ 3 1/2 = 8 @ 2 5/8 = 1'-9 | 2 5/16 | 3 @ 3 1/2 = 8 @ 2 7/8 = 1'-7 | 3 1/16 | 5 7/16 | 2 15/16 | 8 @ 4 = 2'-8 | 3 7/16 | 11 @ 3 5/8 = 3'-3 7/8 | 4 | 11 @ 3 7/8 = 3'-1 1/8 | 3 7/8 | 3 2 3/4 C 3

10'-11 13/16

PL WF - 30 @ 210" x - 3 3/8 - 16 Req nj 20 (c)

PL WF - 30 @ 210" x 2'-1 13/16 - 8 Req - nj 19 (c)

2 1/4 ON ℄

2 1/4 ON ℄

2" | 2" | 5"

11/16" Holes - Ream 15/16" to M.T.

24 - 8 x 6 x 3/4 x 2'-3 1/4
28 Req - nj 5 (c)

7 @ 3 3/8 = 1'-11 5/8 | 2 3/4

11/16" ø Holes - Ream 15/16" to M.T.

4 @ 3 3/4 = 1'-3

Notch Tet

SOUTH

2 PL 12 x 5/8 x 3'-6
8 Req - nj 21 (c)

Full PL 15 3/8 x 5/8 x 1'-9 7/16
16 Req - nj 21 (c)

WL Channel

2 1/4 ON ℄

Cope

2 PL 7/8 x 3'-6
4 Req - nj 18 (c) - B273

2 1/4 nj 15 8/L

WEB PL - 54 x 5/16 x 33'-2 1/8
2 Req - nj 9 (c) - A273-AA273
1 Req - nj 10 (c) - B273

2 1/4 nj 15 8/L

Full PL 15 3/8 x 5/8 x 1'-9 7/16
8 Req - nj 22 (c)

2 PL 7/16 x 5/8 x 2'-10 7/16 - 14 Req - nj 23 (c)
GRIND TO FIT FILLET

2 PL 7/8 x 5/8 x 2'-2 - 32 Req - nj 24 (c)
GRIND TO FIT FILLET

2 1/4 ON ℄

Cope

A273-AA273 2" | 2 3/16 | 2 5/8" | 7 @ 2 5/8 = 1'-8 5/8" | 2 5/8

B273 2" | 2 5/8 | 3 1/16 | 2 5/8" | 7 @ 2 7/8 = 1'-8 5/8" | 2 5/8

2 @ 2 7/8 = 1'-11 | 3 11/16

A

10 @ 3 5/8 = 3'-0 1/4 | 2 15/16 | 3 3/4 | 11 @ 3 5/8 = 3'-3 7/8 | 4 | 10 @ 3 5/8 = 3'-0 1/4 | 3 7/8 | 3 7/8 | 2 3/4

B

10'-10 3/4

2 1/4 ON ℄

2 L - 7 x 4 x 3/4 x 1'-11"
12 Req'd - nj 6 (c)

32'-10 5/8 b-b Ls FOR A273-AA273
32'-11 1/8 b-b Ls FOR B273

ON A273-AA273 6 1/16
ON B273 6 5/16

Cov PL - 16 x 1/2 x 26'-0 - 8 Req - nj 11 (c) (U.M.)

24 - 6 x 6 x 5/8 x 32'-9 5/8 - 4 Req - nj 12 (c) - A273-AA273
x 32'-10 5/8 - 2 Req - nj 13 (c) - B273

7 @ 2 1/2 = 1'-5 1/2 | 1'-1 2 | 6 @ 3 = 1'-6 | 2 11/16 | 10 @ 3 5/8 = 3'-0 1/4 | 2 15/16 | 3 3/4 | 11 @ 3 5/8 = 3'-3 7/8 | 4 | 10 @ 3 5/8 = 3'-0 1/4 | 3 7/8 | 3 7/8 | 2 3/4

1 3/16

1 3/16

2 1/4 ON ℄

FILL PL - 13 x 1" x 1'-9 1/16 - 6 Req - nj 14 (c)
TACK WELD

ONE FLOOR BEAM AS SHOWN & NOTED - A273 (L12)

ONE FLOOR BEAM TO PAIR & NOTED - AA273 (L28)

ONE FLOOR BEAM AS SHOWN & NOTED B273 (L32)

BORE 4 1/50" HOLE

6 3/4

3 7/8 | 5 5/32 | 3 1/4 | 4 1/16 | 6 3/4

2 PL 7/16 x 5/8 x 2'-10 7/16 - 14 Req - nj 23 (c)
GRIND TO FIT FILLET

11 3/4

10 3/4

7 3/4

2 PL 7/8 x 2'-3 - 8 Req - nj 22 (c)

2 @ 2 3/8 = 2'-4 1/2 | 1 3/4

11/16" Holes - Ream 15/16" to M.T.

12 @ 2 3/8 = 2'-4 1/2

11/16" ø Holes - Ream 15/16" to M.T.

1/2 x 4'-2 3/8 - 8 Req 2 Bk - nj 16 (c)
Mill To Bear @ Bottom

L - 7 x 4 x 1/2 x 3'-6 - 8 Req - nj 17 (c)

Full PL 4 x 1/8 x 3'-6 - 16 Req - nj 26 (c)

1'-3 1/4

4'-6 1/2 6-6 LS

2 PL 5/8 x 4'-6 1/4 (Abt) - 96 Req 2 Bk - nj 15 (c)

4'-6 1/2 6-6 LS

4" | 4"

2 LS - 4 x 3 1/2 x 5/16 x 4'-6 1/4 (Abt)

BORE 4 1/50" HOLE

6 3/4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

3 7/8 | 5 5/32 | 3 1/4 | 4 1/16 | 6 3/4

2 PL 7/16 x 5/8 x 2'-2 - 32 Req - nj 24 (c)
GRIND TO FIT FILLET

4'-6 1/2 6-6 LS

3'-5 5/16

1'-1 3/16

1'-0 3/16

6 7/16

8 1/2

12 | 12

1/2

9 3/16

1'-2 3/8

17 x 4 x 1/2 x 4'-2 3/8 - 16 Req 2 Bk - nj 25 (c)
Mill To Bear @ Bottom

11/16" Holes - Ream 15/16" to M.T.

10 @ 2 13/16 = 2'-4 1/8

FULL PL - 4 x 5/8 x 3'-6 - 16 Req - nj 26 (c)

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY: FRS
DATE: 11-9-59

SECTION BB
SEE NOTE SH #1

SECTION AA

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETED 11/17/59
Drawn by
Checked by
Revisions

APPROVED 11-20-59
F.R.S. Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 1-3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 273 of

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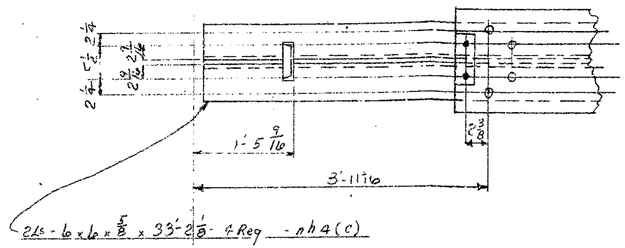


2½ - 6 x 6 x 5/8 x 33'-2 1/8 - 4 Req - nh4(C)

33'-3 1/8 b-b Lls (EXACT)

16'-7 9/16

-10 7/16

WEB PL - 54 x 5/16 x 33'-2 1/8 - 1 Req - nh5(C)(A272)
1 Req - nh6(C)(B272)

3 3 3 3 1/2 @ 2 5/8 - 1'-9 2 15/16 3

21½ - nf53 PL

7"

2 11/16 2 11/16

11/16" ø HOLES - REAM 15/16" TO MT

5'-2½ 7 @ 3 3/8 = 1'-11 5/8 2½

5 @ 4 = 1'-8

ON PL

2½

4 3/4

E nf42

R nf22

SOUTH

5'-4½

5'-5½

4 @ 3 3/4 = 1'-2

NOTCH TOP

2½ 3½ 2½ 2½

W. CHORD

10 3/4

1'-0 1/4

2 PLS 12 x 5/8 x 3'-6
4 Req - nh13(C)(A272)
4 Req - nh14(C)(B272)

21½ - nf20 PL

COPE

5½

1½

2½

2½

2½

2½

A272	1½	2½	3	1½	1½	2	1½	2½	3	2½	2½	7 @ 2 1/8	1'-8 1/8	2½	3
B272	1½	2½	3	2½	2½	2	1½	2½	3	2½	2½	7 @ 2 1/8	1'-8 1/8	2½	3

26 - 7 x 4 x 3/4 x 1'-11"
32 REQ'D PL nH 2.5(C)

33'-0 1/8 b-b Lls ON A272
33'-1 1/8 b-b Lls ON B272

2½

2½

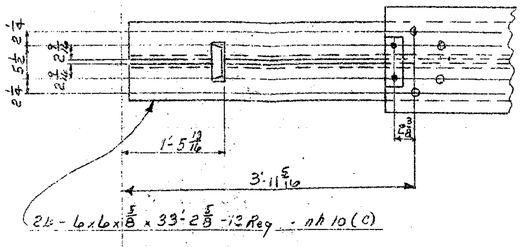
2½

2½

FOR A272	5 13/16	7 @ 2 1/8 = 1'-5 1/8	1'-8 1/8
FOR B272	6 5/16	7 @ 2 1/8 = 1'-5 1/8	1'-8 1/8

FILL PL 13 x 1 x 1'-9 1/16 - 2 Req - nh2(C) - (A272)
FILL PL 13 x 7/8 x 1'-9 1/16 - 2 Req - nh8(C) - (B272)
TACK WELD
21½ - 6 x 6 x 5/8 x 32'-11 1/8 - 2 Req 9/16 - nh3(C)(A272)
x 33'-0 1/8 - 2 Req 9/16 - nh9(C)(B272)

ONE FLOOR BEAM AS NOTED - A272 (L34)
ONE FLOOR BEAM AS NOTED - B272 (L35)
PART NOT SHOWN SAME AS A270



2½ - 6 x 6 x 5/8 x 33'-2 5/8 - 12 Req - nh10(C)

33'-3 5/8 b-b Lls (EXACT)

16'-7 13/16

-10 3/16

WEB PL - 54 x 5/16 x 33'-2 5/8 - 3 Req - nh11(C)(C272)
1 Req - nh12(C)(D272)

3 3 3 3 1/2 @ 2 11/16 = 1'-9 1/2 2 11/16 3

21½ - nf53 PL

7"

2 11/16 2 11/16

11/16" ø HOLES - REAM 15/16" TO MT

5'-2½ 7 @ 3 3/8 = 1'-11 5/8 2½

5 @ 4 = 1'-8

ON PL

2½

4 3/4

E nf42

R nf22

SOUTH

5'-4½

5'-5½

4 @ 3 3/4 = 1'-2

NOTCH TOP

2½ 3½ 2½ 2½

W. CHORD

10 3/4

1'-0 1/4

2 PLS 12 x 5/8 x 3'-6
4 Req - nh13(C)(C272)
4 Req - nh14(C)(D272)

21½ - nf20 PL

COPE

5½

1½

2½

2½

2½

2½

C272	1 15/16	2½	3	1½	1½	2	1½	2½	3	2½	2½	7 @ 2 1/8	1'-8 1/8	2½	3
D272	1 15/16	2½	3	2½	2½	2	1½	2½	3	2½	2½	7 @ 2 1/8	1'-8 1/8	2½	3

26 - nh - 25 PL

33'-1 3/4 b-b Lls ON C272
33'-0 7/8 b-b Lls ON D272

2½

2½

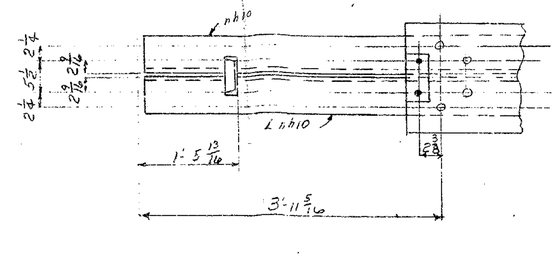
2½

2½

ON C272 6 3/8
ON D272 6 3/16
7 @ 2 = 1'-2
2'-0

FILL PL 13 x 3/8 x 1'-5 7/16 - 8 Req - nh15(C)
TACK WELD
21½ - 6 x 6 x 3/8 x 35'-0 3/4 - 4 Req - nh16(C)(C272)
x 32'-11 1/2 - 2 Req - nh17(C)(D272)

3 FLOOR BEAMS AS NOTED C272 (L2-L37-L41)
ONE FLOOR BEAM AS NOTED D272 (L38)
PART NOT SHOWN SAME AS A270



33'-3 5/8 b-b Lls (EXACT)

16'-7 13/16

-10 3/16

WEB PL - 54 x 5/16 x 33'-2 5/8 - 1 Req - nf18(C)(F272)
1 Req - nf19(C)(F272)

3 3 3 3 1/2 @ 2 11/16 = 1'-9 1/2 2 11/16 3

21½ - nf53 PL

7"

2 11/16 2 11/16

11/16" ø HOLES - REAM 15/16" TO MT

5'-2½ 7 @ 3 3/8 = 1'-11 5/8 2½

5 @ 4 = 1'-8

ON PL

2½

4 3/4

E nf42

R nf22

SOUTH

5'-4½

5'-5½

4 @ 3 3/4 = 1'-2

NOTCH TOP

2½ 3½ 2½ 2½

W. CHORD

10 3/4

1'-0 1/4

2 PLS 12 x 5/8 x 3'-6
4 Req - nh22(C)(E272)
4 Req - nh21(C)(E272)

21½ - nf20 PL

COPE

5½

1½

2½

2½

2½

2½

E272	1 15/16	2½	3	1½	1½	2	1½	2½	3	2½	2½	7 @ 2 1/8	1'-8 1/8	2½	3
F272	1 15/16	2½	3	2½	2½	2	1½	2½	3	2½	2½	7 @ 2 1/8	1'-8 1/8	2½	3

26 - nh25 PL

33'-1 5/8 b-b Lls E272
33'-1 b-b Lls F272

2½

2½

2½

2½

ON E272 6 9/16
ON F272 6 1/4
7 @ 2 = 1'-2
2'-0

FILL PL 13 x 3/4 x 1'-5 7/16 - 4 Req nh22(C)
TACK WELD
21½ - 6 x 6 x 5/8 x 33'-0 5/8 - 2 Req - nh23(C)(E272)
x 33'-0 - 2 Req - nh24(C)(F272)

ONE FLOOR BEAM AS NOTED - E272 (L39)
ONE FLOOR BEAM AS NOTED - F272 (L42)
PART NOT SHOWN SAME AS A270

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY E R S DATE 11-9-59

SEE NOTE SH. #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES
Rivets 13/16" ø except as noted
Holes 15/16" except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by CWR PROJECTED BY 11-12-59
Checked by FK L.E.P. Carlson
Revisions
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 1 & 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 272 of

A

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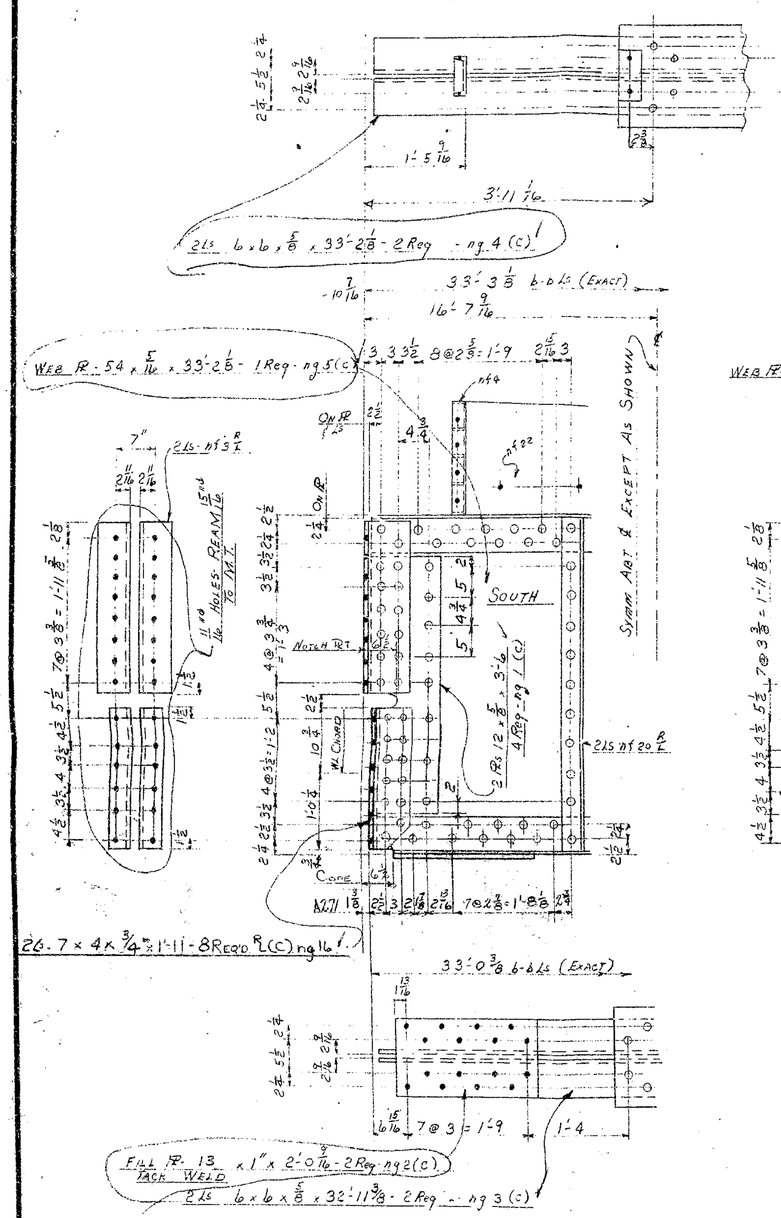
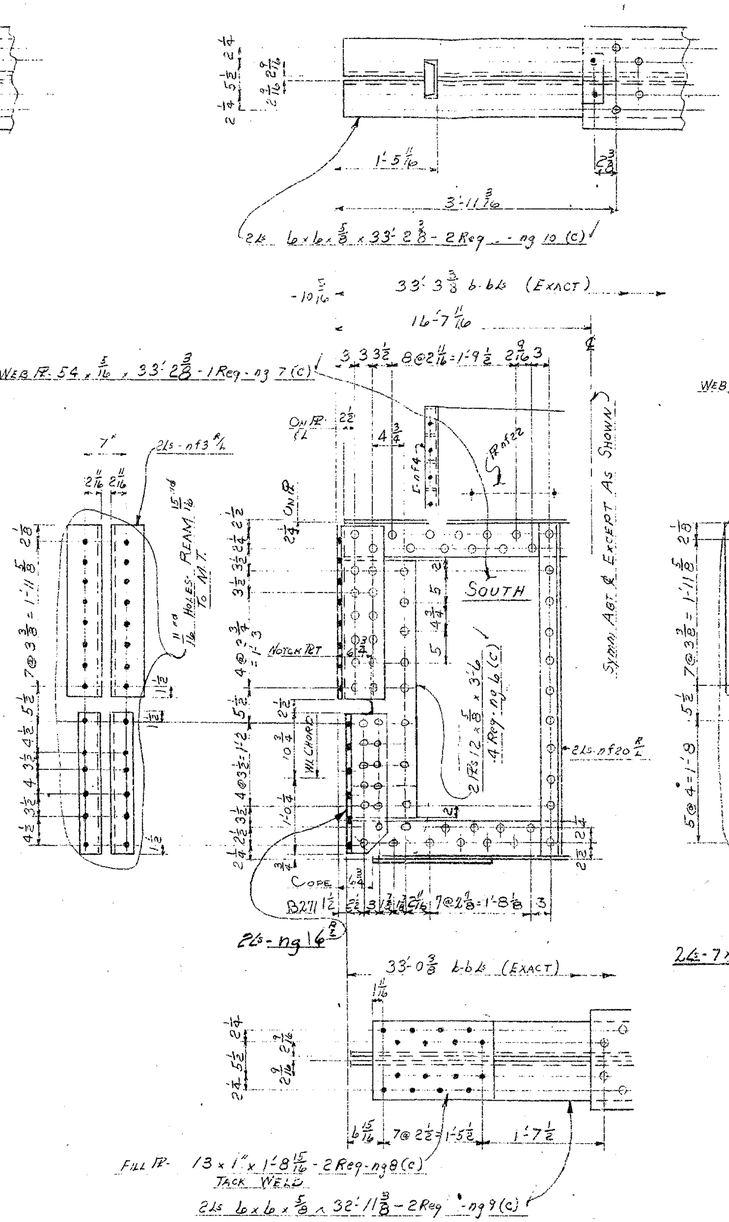


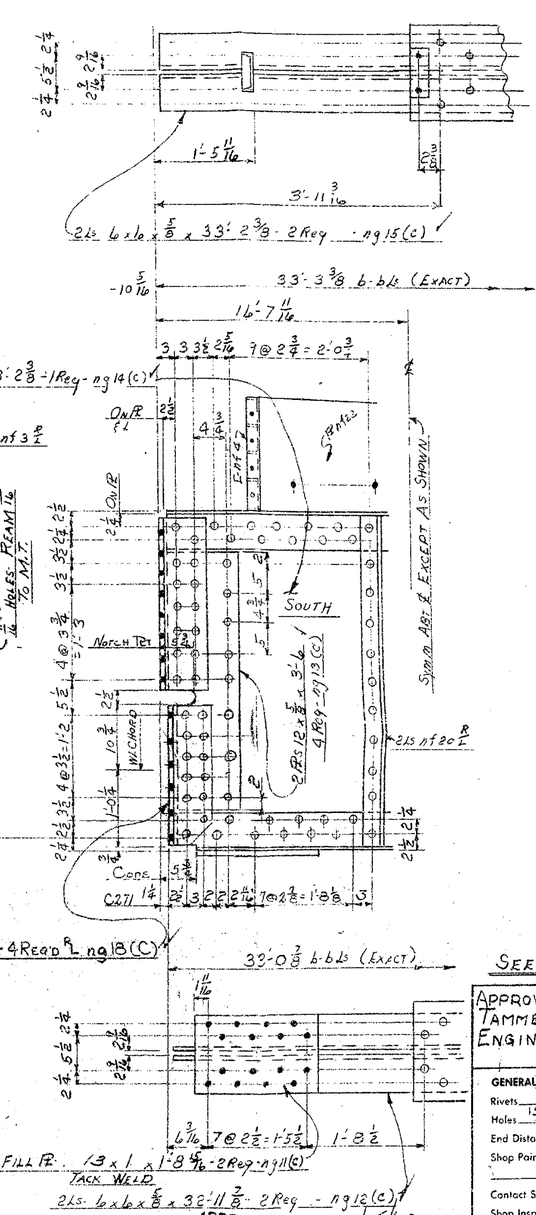
ONE FLOOR BEAM AS NOTED A271 (L29)

PART NOT SHOWN SAME AS A270



ONE FLOOR BEAM AS NOTED B271 (L31)

PART NOT SHOWN SAME AS A270



ONE FLOOR BEAM AS NOTED C271 (L33)

PART NOT SHOWN SAME AS A270

SEE NOTE SH. #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 11/12/59

GENERAL NOTES

Rivets 7/8" ø except as noted

Holes 15/16" except as noted

End Distance 1 3/4" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by CWK 4-16-59

Checked by FJK 9-59

Revisions

APPROVED BY

L. P. Carlson

Bridge Design Engineer 9/15/60

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY ... DATE 9-12-60

BOOK No. 6

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE

NEAR HELENA, ARKANSAS

UNIT No. 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.

CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800-F Sh. 271 of

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Cov PL- 16 x ½ x 26'-0 - 14 Req - nf 5 (c) (U.M.)

2 Ls 8 x 6 x ¾ x 2'-3¼ 56 Req'd nf 3 (c)

2 Ls - 6 x 6 x ⅝ x 33'-2⅛ - 6 Req - nf 9 (c)

PL - 16 ¾ x ⅜ x 2'-2 - 28 Req - nf 22 (c)

Symm ABT ℄ EXCEPT AS SHOWN

33'-3⅛ b.b Ls (EXACT)

13'-0

10'-11 13/16

11/16" ø HOLES - REAM 15/16" ø TO M.T.

SOUTH

NOTCH TOP

WEB PL - 54 x 5/16 x 33'-2⅛ - 2 Req - nf 14 (c) - (A270) 1 Req - nf 15 (c) - (B270)

24 nf 20 8/L

2 PLS 12 x ⅜ x 3'-6 8 Req - nf 6 (c) A270 4 Req - nf 7 (c) B270

Cope A270 5½ B270 12

PL - 7 x 4 x ¾ x 1'-11 - 8 Req'd nf 1 (c) A270

24 - 7 x 4 x ¾ x 1'-11 4 Req'd nf 21 (c) B270

2 PLS - 7 x 4 x ½ x 4'-5¼ - 28 Req'd nf 16 (c) MILL TO BEAR @ BOTTOM

2 PLS - 7 x 4 x ½ x 4'-5¼ - 56 Req'd nf 18 (c) MILL TO BEAR @ BOTTOM

FILL PL - 4 x 5/8 x 3'-6 - 56 Req - nf 19 (c)

FILL PL - 4 x 5/8 x 4'-6 ¼ (ABT) - 168 Req 8/L nf 20 (c)

24 - 4 x 3½ x 4'-6 ¼ (ABT) - 168 Req 8/L nf 20 (c)

SECTION AA

SECTION BB

SEE NOTES ON SHEET #1

SHIP - 6 @ 12" x 1'-4 ¾ - 28 Req - nf 4 (c)

STIFF PL - 2⅞ x ⅜ x 5¼ - 140 Req - nf 21 (c) WELD

ON A270 5 11/16

ON B270 6 3/16

32'-11 7/8 b.b Ls FOR A270

33'-0 7/8 b.b Ls FOR B270

Cov PL - 16 x ½ x 26'-0 - 14 Req - nf 12 (c) (U.M.)

2 Ls - 6 x 6 x ⅝ x 32'-10 7/8 - 4 Req - nf 10 (c) - A270

x 32'-11 1/16 - 2 Req - nf 11 (c) - B270

SHIM - 2¼ x ¾ x 8" - 28 Req - nf 8 (c) TACK WELD TO TOP Cov PL

SECTION CC

FILL PL - 13 x 15/16 x 1'-5 9/16 - 6 Req - nf 13 (c) TACK WELD

2 FLOOR BEAMS AS NOTED - A270 (126-214)

ONE FLOOR BEAM AS NOTED - B270 (127)

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY: FRS DATE: 11-9-59

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8" ø except as noted

Holes 15/16" ø except as noted

End Distance 1¾" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by APPROVED BY 5-59 11-17-59

Checked by F.R.S. Carlson

Revisions

Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE

NEAR HELENA ARKANSAS

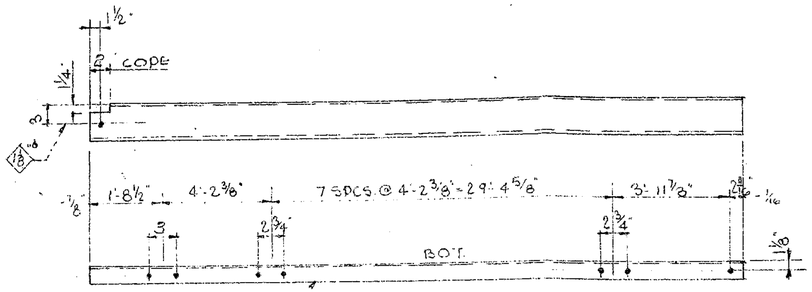
UNIT NO. 3-1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.

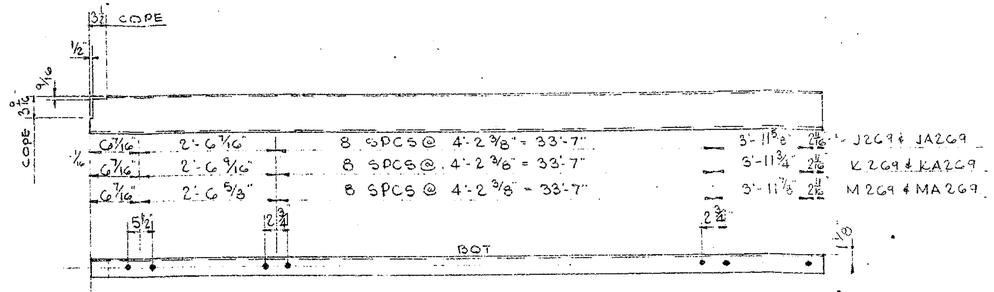
CHICAGO, ILL.

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

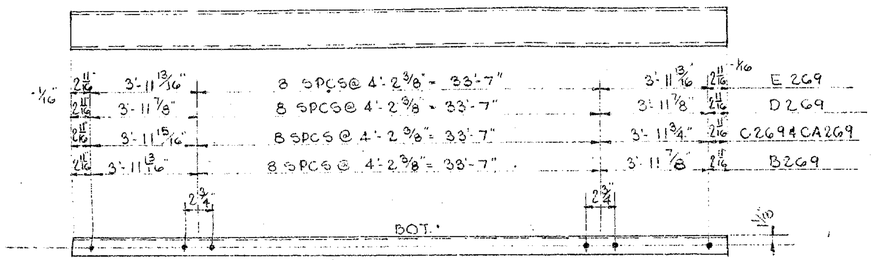
Contr. No. 4800 Sh. 270 of



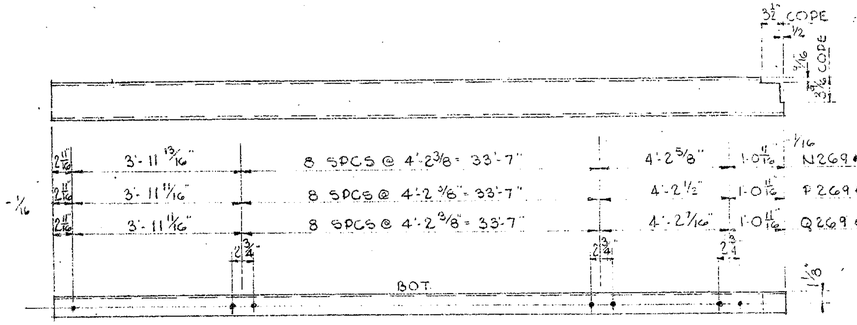
E-G" @ 10.5# x 39'-6 1/16" - 1 REQ R A269 ©
1 REQ L AA269 ©



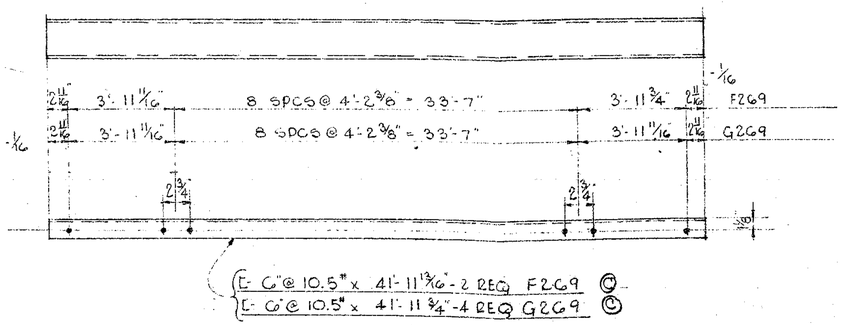
E-G" @ 10.5# x 40'-10 3/16" - 1 REQ R J269 ©
1 REQ L JA269 ©
E-G" @ 10.5# x 40'-10 7/16" - 1 REQ R K269 ©
1 REQ L KA269 ©
E-G" @ 10.5# x 40'-10 5/8" - 2 REQ R M269 ©
2 REQ L MA269 ©



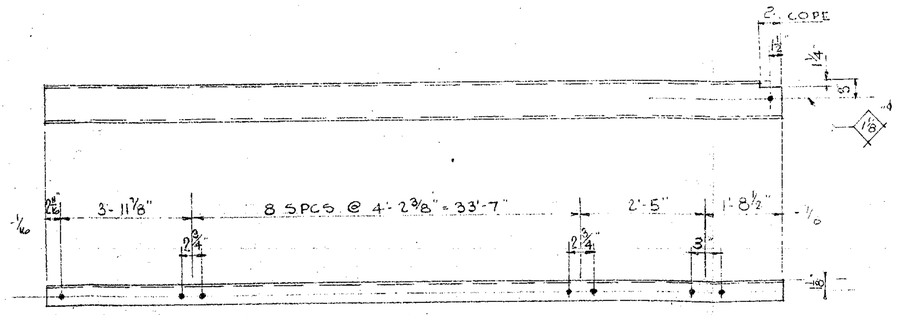
E-G" @ 10.5# x 42'-0 1/16" - 2 REQ B269 ©
E-G" @ 10.5# x 42'-0 1/16" - 3 REQ R C269 ©
2 REQ L CA269 ©
E-G" @ 10.5# x 42'-0⅛" - 2 REQ D269 ©
E-G" @ 10.5# x 42'-0" - 2 REQ E269 ©



E-G" @ 10.5# x 43'-0 13/16" - 2 REQ R N269 ©
2 REQ L NA269 ©
E-G" @ 10.5# x 43'-0 3/16" - 1 REQ R P269 ©
1 REQ L PA269 ©
E-G" @ 10.5# x 43'-0½" - 1 REQ R Q269 ©
1 REQ L QA269 ©



E-G" @ 10.5# x 41'-11 13/16" - 2 REQ F269 ©
E-G" @ 10.5# x 41'-11¾" - 4 REQ G269 ©



E-G" @ 10.5# x 41'-11 11/16" - 1 REQ R R269 ©
1 REQ L RA269 ©

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY E.R.P. DATE 11-9-59

SCALE: 1/2" = 1'-0"
APPROVED: HOWARD NEEDLES TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES
Rivets ⅞" ø except as noted
Holes 1⅛" ø except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (A. & S. STD)
Contact Surfaces NO PAINT
Shop Inspection by [illegible] 11-17-59
Field Connections APPROVED BY [illegible] & BOLT
Drawn by C.A.B. Apr 27, 1959
Checked by E.R.P. Carlson
Revisions Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARK.
UNIT 3
SOLD TO: JOHN F. BEASLEY CONSTR. CO
CHICAGO ILL.

SHOP VINCENNES STEEL [illegible] DIV. OF INDUSTRIAL [illegible]
VINCENNES, IND.
Contr. No. 4800 Sh. 269 of (A)

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8 SPCS @ 4'-2 3/8" = 33'-7"

SECTION A-A

8½" STRIP FLG. & GRIND SMOOTH TYP. BOTH ENDS I. & B.

41'-11 7/16"

40'-11 7/16"

PUNCH 11/16"ϕ REAM 15/16"ϕ M.T.

PUNCH 11/16"ϕ REAM 15/16"ϕ MT

ONE STRINGER AS SHOWN A268 ✓
ONE STRINGER TO PAIR AA268 ✓
ONE STRINGER AS SHOWN - C268 ✓
ONE STRINGER TO PAIR - CA268 ✓

AS NOTED

36 WF @ 150# X 41'-8 7/16" - 4 REQ'D nd 2 ©

BOT.

7'-10 19/32"

26'-2½"

7'-10 19/32"

NOTE: C268 & CA268 - 1 REQ UNIT #3
A268 & AA268 - 1 REQ UNIT #2

PL - 8 1/16 x ½ x 1'-0 2/32" - 4 REQ'D nd 6 © - A268
PL - 8 13/16 x ½ x 1'-0 2/32 - 4 REQ. nd 12 © - C268

ON A268 - AA268
ON C268 - CA268

SECT. B-B AS SHOWN
SECT. C-C TO PAIR

L - 8 x 4 x ½ x 2'-8" - 4 REQ'D nd 3 ©
BOLT TO STRG.

L - 8 x 4 x ½ x 2'-8" - 4 REQ'D nd 1 ©
BOLT TO STRG.

18 SPCS @ 3½" = 5'-0"
12 ALT. SPCS @ 2 3/8" = 2'-4½"

18 SPCS @ 3½" = 5'-0"
12 ALT. SPCS @ 2 3/8" = 2'-4½"

41'-11 7/16"

40'-11 7/16"

Top View - SEE SECT. A-A Above

PUNCH 11/16"ϕ REAM 15/16"ϕ MT

PUNCH 11/16"ϕ REAM 15/16"ϕ MT

1 Lnd 3 L/2

36 WF @ 170# x 41'-8 7/16" - 2 REQ. nd 4 ©

2 - 10 I @ 25.4# x 1'-2" - 2 REQ. nd 10 ©

20'-11 27/32"

20'-11 27/32"

17'-6 31/32"

BOT.

PL - 9 2/8 x ½ x 1'-0½" - 1 REQ'D nd 13 © - D268
PL - 9 2/8 x ½ x 1'-0 1/2" - 1 REQ'D nd 5 © - B268

ONE STRINGER B268 ✓
ONE STRINGER D268 ✓

D268 1 REQ UNIT #3 ✓
B268 1 REQ UNIT #2 ✓

- see notes - sheet 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 9/25/59 11/12/59

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by C.A.B. APR. 21, 1959
Checked by ALF 7-28-59
Revisions

APPROVED BY 9/15/60
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY DATE 9-12-60

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 2-3

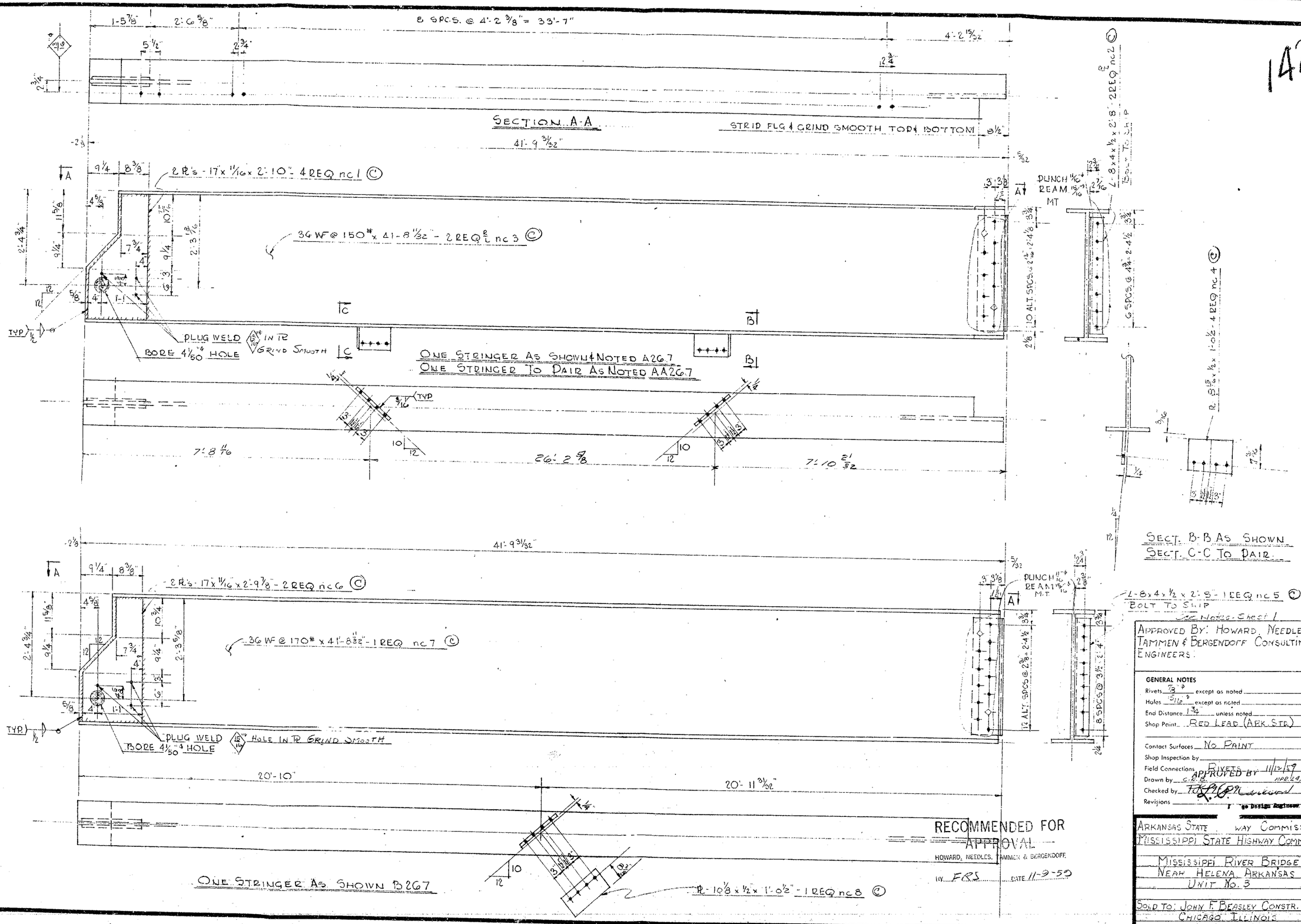
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

BOOK No. 8

SHOP VINCENNES STEEL VINCENNES, IND.

DIV. OF INDUSTRIAL ENTERPRISES, INC. Contr. No. 4800-F Sh. 268 of

142



APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS.

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by C.E.E. APPROVED BY 11/12/59 APR 24 1959
Checked by T.R.P. [illegible]
Revisions
For Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 11-9-59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800 Sh. 267 of (A)

4'-2 7/16"
4'-2 3/32"
4'-2 3/8"

8 SPCS @ 4'-2 3/8" = 33'-7"
8 SPCS @ 4'-2 3/8" = 33'-7"
8 SPCS @ 4'-2 3/8" = 33'-7"

2'-6 5/8" — 1'-5 7/8" — E2G6
2'-6 9/16" — 1'-5 7/8" — A2G6 & AA2G6 & C2G6
2'-6 9/16" — 1'-5 7/8" — B2G6 & BA2G6 & D2G6

8 1/2" STRIP FLG. & GRIND SMOOTH TOP & BOT.

SECTION A-A

(41'-9 1/32" ON A2G6 & AA2G6) (41'-9 3/16 ON B2G6 & BA2G6)

4-8 x 4 x 1/2 x 2'-8" - 4 REQ nb2 BOLT TO SHIP

PUNCH & REAM M.T.

6 SPCS @ 4 1/2" = 2'-4 1/2"

10 ALT. SPCS @ 2 3/8" = 2'-4 1/8"

2 PL's - 17 x 11/16 x 2'-10" - 8 REQ nb1

WF 36 @ 150# x 41'-7 31/32" - 2 REQ nb3 FOR A2G6 & AA2G6
WF 36 @ 150# x 41'-8 3/16" - 2 REQ nb4 FOR B2G6 & BA2G6

ONE STRINGER AS SHOWN & NOTED A2G6
ONE STRINGER TO PAIR AS NOTED AA2G6
ONE STRINGER AS SHOWN & NOTED B2G6
ONE STRINGER TO PAIR AS NOTED BA2G6

BOT.

15/16" PLUG WELD — GRIND SMOOTH
BORE 4 1/16" ⌀ HOLE

7'-10 1/2"
7'-10 19/32"

26'-2 17/32"
26'-2 19/32"

7'-8 9/16" — A2G6 & AA2G6
7'-8 5/8" — B2G6 & BA2G6

PL. 8 1/16 x 1/2 x 1'-10 1/2" - 4 REQ. nb5 FOR A2G6 & AA2G6
PL. 8 5/16 x 1/2 x 1'-10 1/2" - 4 REQ. nb6 FOR B2G6 & BA2G6

SECT. B-B AS SHOWN
SECT. C-C TO PAIR

4-8 x 4 x 1/2 x 2'-8" - 3 REQ nb7 BOLT TO SHIP

PUNCH & REAM M.T.

35 SPCS @ 3 1/4" = 2'-4"

12 ALT. SPCS @ 2 3/8" = 2'-4 1/8"

(41'-9 1/32" ON C2G6) (41'-9 13/16" ON D2G6) (41'-9 15/16" ON E2G6)

2 PL's - 17 x 11/16" x 2'-9 7/8" - 6 REQ nb8

36 WF @ 170# x 41'-7 31/32" - 1 REQ nb9 FOR C2G6
36 WF @ 170# x 41'-8 3/16" - 1 REQ nb10 FOR D2G6
36 WF @ 170# x 41'-8 5/16" - 1 REQ nb11 FOR E2G6

C2G6 — 20'-11 25/32"
D2G6 — 20'-11 1/8"
E2G6 — 20'-11 15/16"

20'-9 13/16"
20'-9 15/16"
20'-10"

15/16" PLUG WELD — GRIND SMOOTH
BORE 4 1/16" ⌀ HOLE

BOT.

PL. 9 7/8 x 1/2 x 1'-0 1/2" - 1 REQ nb12 FOR C2G6
PL. 10 x 1/2 x 1'-0 1/2" - 1 REQ nb13 FOR D2G6
PL. 10 1/16 x 1/2 x 1'-0 1/2" - 1 REQ nb14 FOR E2G6

ONE STRINGER AS NOTED C2G6
ONE STRINGER AS NOTED D2G6
ONE STRINGER AS NOTED E2G6

SEE NOTE SHT. #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 11/12/59

GENERAL NOTES

Rivets 7/8" ⌀ except as noted
Holes 15/16" ⌀ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ABK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by C.A.B. APR. 23, 1959
Checked by FJK 9-59
Revisions

APPROVED BY
L. P. Carlson
Bridge Design Engineer
9/15/60

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY [illegible] DATE 9-12-60

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

SOLD TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

BOOK No. 6

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800-F Sh. 266 of

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NOTE: HOLES IN A2G5, AA2G5, B2G5, BA2G5, C2G5, CA2G5 D2G5, E2G5, G2G5

8 SPCS @ 4'-2 3/8" = 33'-7"

4'-2 7/16" A2G5 & AA2G5, D2G5 & E2G5
4'-2 5/16" B2G5 & BA2G5 & F2G5
4'-2 9/32" C2G5 & CA2G5 & G2G5

NOTE: HOLES IN E2G5 ONLY

8½" STRIP FLG & GRIND SMOOTH BOTH ENDS TOP & BOTTOM

SECTION A-A

(41'-11 7/8" ON A2G5 & AA2G5) (41'-11 5/8" ON B2G5 & BA2G5) (41'-11 9/16" ON C2G5 & CA2G5)
(40'-11 5/8" ON A2G5 & AA2G5) (40'-11 3/8" ON B2G5 & BA2G5) (40'-11 5/16" ON C2G5 & CA2G5)

36WF@150# x 41'-8 5/8" - 4 REQ'D PL na 2 FOR A2G5 & AA2G5 ©
36WF@150# x 41'-8 3/8" - 2 REQ'D PL na 3 FOR B2G5 & BA2G5 ©
36WF@150# x 41'-8 5/16" - 2 REQ'D PL na 4 FOR C2G5 & CA2G5 ©

2 STRINGERS AS SHOWN & NOTED A2G5
2 STRINGERS TO PAIR AS NOTED AA2G5
ONE STRINGER AS SHOWN & NOTED B2G5
ONE STRINGER TO PAIR AS NOTED BA2G5
ONE STRINGER AS SHOWN & NOTED C2G5
ONE STRINGER TO PAIR AS NOTED CA2G5

PC. 16WF@58# x 1'-4 3/8" - 8 REQ'D PL na 15 ©

PC. 16WF@58# x 1'-4 3/8" - 4 REQ'D PL na 7 ©

7'-10 19/32" A2G5 & AA2G5
7'-10 19/32" B2G5 & BA2G5
7'-10 19/32" C2G5 & CA2G5

26'-2 11/16"
26'-2 7/16"
26'-2 3/8"

4 BRACKETS AS SHOWN FOR A2G5, B2G5, C2G5
4 BRACKETS TO PAIR FOR AA2G5, BA2G5, CA2G5
BOLT TO SHIP

3 BRACKETS FOR D2G5, F2G5 & G2G5
ONE BRACKET TO PAIR FOR E2G5
BOLT TO SHIP

(41'-11 7/8" ON D2G5 & E2G5) (41'-11 5/8" ON F2G5) (41'-11 9/16" ON G2G5)
(40'-11 5/8" ON D2G5 & E2G5) (40'-11 3/8" ON F2G5) (40'-11 5/16" ON G2G5)

36WF@170# x 41'-8 5/8" - 2 REQ'D PL na 9 FOR D2G5 & E2G5 ©
36WF@170# x 41'-8 3/8" - 1 REQ'D PL na 10 FOR F2G5 ©
36WF@170# x 41'-8 5/16" - 1 REQ'D PL na 11 FOR G2G5 ©

20'-11 13/16"
20'-11 13/16"
20'-11 25/32"

D2G5 & E2G5
F2G5
G2G5

ONE STRINGER AS NOTED D2G5
ONE STRINGER AS NOTED E2G5
ONE STRINGER AS NOTED F2G5
ONE STRINGER AS NOTED G2G5

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS
DATE 11-9-59

See Notes - sheet 1

APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connection APPROVED BY 11/17/59
Drawn by C.B.M. APR. 22, 1959
Checked by R.S.G. Garland
Revisions
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE NEAR HELENA, ARKANSAS
UNIT NO. 3
SOLD TO: JOHN F. BEASLEY CONSTR. CO. CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES INC. VINCENNES, IND. Contr. No. 4800 Sh. 265 of (A)

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8 SPCS @ 4'-2 3/8" = 33'-7"
8 SPCS @ 4'-2 3/8" = 33'-7"
4'-2 15/32"
4'-2 3/8"
4'-2 15/32" A2G4
4'-2 13/32" B2G4
2 3/4"
8 1/2" STRIP FLG & GRIND SMOOTH TYP BOTH ENDS T & B.
SECT. A-A
(41'-11 15/16" ON A2G4) (41'-11 25/32" ON B2G4)
(40'-11 11/16" ON A2G4) (40'-11 17/32" ON B2G4)
L 8 x 4 x 1/2 x 2'-8" REQ mz 1 BOLT TO SHIP
PUNCH 11/16" ϕ REAM 15/16" ϕ MT
6 SPCS @ 4 3/4" = 2'-4 1/2"
10 ALT. SPCS @ 2 3/8" = 2'-4 1/2"
L mz 1
2 STRINGERS AS SHOWN & NOTED A2G4
2 STRINGERS AS SHOWN & NOTED B2G4
WF 36 @ 150# x 41'-8 1/16" - 2 REQ mz 4 FOR A2G4 ©
WF 36 @ 150# x 41'-8 1/32" - 2 REQ mz 5 FOR B2G4 ©
BOT.
TYP
7'-10 21/32"
7'-10 19/32"
26'-2 5/8"
26'-2 19/32"
SECT. B-B AS SHOWN
SECT. C-C TO PAIR
R - 8 15/16 x 1/2 x 1'-0 1/2" - 4 REQ mz 2 FOR A2G4
R - 8 3/16 x 1/2 x 1'-0 1/2" - 4 REQ mz 3 FOR B2G4
7 3/16" ON A2G4
7 1/16" ON B2G4

L 8 x 4 x 1/2 x 2'-8" REQ mz 2 BOLT TO SHIP
PUNCH 11/16" ϕ REAM 15/16" ϕ MT
8 SPCS @ 3 1/2" = 2'-4"
12 ALT. SPCS @ 2 3/8" = 2'-4 1/2"
(41'-11 15/16" ON C2G4) (41'-11 25/32" ON D2G4)
(40'-11 11/16" ON C2G4) (40'-11 17/32" ON D2G4)
WF 36 @ 170# x 41'-8 11/16" - 1 REQ mz 8 FOR C2G4 ©
WF 36 @ 170# x 41'-8 1/32" - 1 REQ mz 9 FOR D2G4 ©
20'-11 31/32"
20'-11 23/32"
20'-11 7/8"
C2G4
D2G4
TYP
BOT.
R - 10 3/8 x 1/2 x 1'-0 1/2" - 1 REQ mz 6 FOR C2G4 ©
R - 10 x 1/2 x 1'-0 1/2" - 1 REQ mz 7 FOR D2G4 ©
ONE STRINGER AS SHOWN & NOTED C2G4
ONE STRINGER AS SHOWN & NOTED D2G4

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 11-3-59

See Notes - Sheet 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by C.A.P. APPROVED BY 11/12/59
Checked by ERS 11-3-59 Bridge Design Engineer
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800 Sh. 264 of (A)

138

6 SPCS @ 4'-2 3/8" = 33'-7"
8 SPCS @ 4'-2 3/8" = 33'-7"

4'-2 9/32"
4'-2 5/16"

A263 & C263
B263 & D263

STRIP FLG & GRIND SMOOTH TYP. BOTH ENDS T & B.

SECTION A-A

(41'-11 9/16" ON A263) (41'-11 5/8" ON B263)
(40'-11 5/16" ON A263) (40'-11 3/8" ON B263)

6 SPCS @ 4 3/4" = 2'-4 1/2"
10 ALT. SPCS @ 2'-4 1/8"

PUNCH 11/16" ϕ
REAM 15/16" ϕ
MT

4 my 1

36 WF @ 150# x 41'-8 5/16" - 4 REQ my 2 FOR A263 ©
36 WF @ 150# x 41'-8 3/8" - 2 REQ my 3 FOR B263 ©

4 STRINGERS AS SHOWN & NOTED A263
2 STRINGERS AS SHOWN & NOTED B263

BOT.

7'-10 1/2"
7'-10 17/32"

26'-2 9/16"
26'-2 9/16"

7'-10 1/2"
7'-10 17/32"

A263
B263

2 - 8" x 4" x 1/2" x 2'-8" - 6 REQ my 4 © Bolt To Ship

(41'-11 9/16" ON C263) (41'-11 5/8" ON D263)
(40'-11 5/16" ON C263) (40'-11 3/8" ON D263)

8 SPCS @ 3 3/4" = 2'-4"
12 ALT. SPCS @ 2 3/8" = 2'-4 1/8"

36 WF 170# x 41'-8 5/16" - 2 REQ my 5 FOR C263 ©
36 WF 170# x 41'-8 3/8" - 1 REQ my 6 FOR D263 ©

20'-11 25/32"
20'-11 13/16"

20'-11 25/32"
20'-11 13/16"

C263
D263

BOT.

2 STRINGERS AS SHOWN & NOTED C263
ONE STRINGER AS SHOWN & NOTED D263

R - 9 7/8" x 1/2" x 1'-0 1/2" - 3 REQ my 7 ©

R - 8 1/16" x 1/2" x 1'-0 1/2" - 12 REQ my 8 ©

SECT. B-B AS SHOWN
SECT. C-C TO PAIR

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY [illegible] DATE 11-2-59

See Note

APPROVED BY: HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections APPROVED BY 11/10/59
Drawn by C.A.B. APR. 24 1959
Checked by [illegible] Carlson
Revisions
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT NO. 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNE STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800
Sh. 263 of
(A)

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SECTION A-A

8 SPCS @ 4'-2 3/8" = 33'-7"

4'-2 11/32"

8 1/2" STRIP FLG & GRIND SMOOTH TYP BOTH ENDS T. & B.

41'-11 11/16"

40'-11 11/16"

PUNCH 15/16" ϕ REAM 15/16" ϕ M.T.

2-8 x 4 x 1/2 x 2'-8" BOLT TO SHIP 8 REQ mx1 ℄

WF36 @ 150# x 41'-8 7/16" - 4 REQ mx3 ℄

7'-10 1/2"

26'-2 1/2"

7'-10 11/16"

TYP

BOT.

2 STRINGERS - AS SHOWN - A262

2 STRINGERS - TO PAIR - AA262

PUNCH 1 1/16" ϕ REAM 15/16" ϕ M.T

L mx1

12-8 1/2 x 1/2 x 1'-0 1/2" - 8 REQ mx6 ℄

SECT. B-B AS SHOWN
SECT. C-C TO PAIR

2-8 x 4 x 1/2 x 2'-8" BOLT TO SHIP 2 REQ mx2 ℄

L-mx2"-ON B262

L-mx7"-ON C262

WF36 @ 170# x 41'-8 7/16" - 2 REQ mx4 FOR B262 & C262 ℄

PUNCH 7/16" ϕ
REAM 15/16" ϕ
M.T.
L-mx2-ON C262
L-mx7-ON B262

5/16 x 8 x 4 x 1/2 x 2'-8" - 2 REQ mx7 ℄

20'-11 3/4"
20'-11 15/16"

20'-11 15/16"
20'-1 3/4"

5/32 ON C262
1 11/32 ON B262

PL 16 1/8 x 1/2 x 1'-0 1/2" - 2 REQ mx5 ℄

ONE STRINGER AS SHOWN & NOTED B262
ONE STRINGER AS SHOWN & NOTED C262

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 11-5-59

See Notes - Sheet 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF - CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections
Drawn by C.N.B.
Checked by FOX & L.D.C.
Revisions

APPROVED BY 11/10/59
APR 20 1959
L. D. Carlson
Bridge Design Engineer

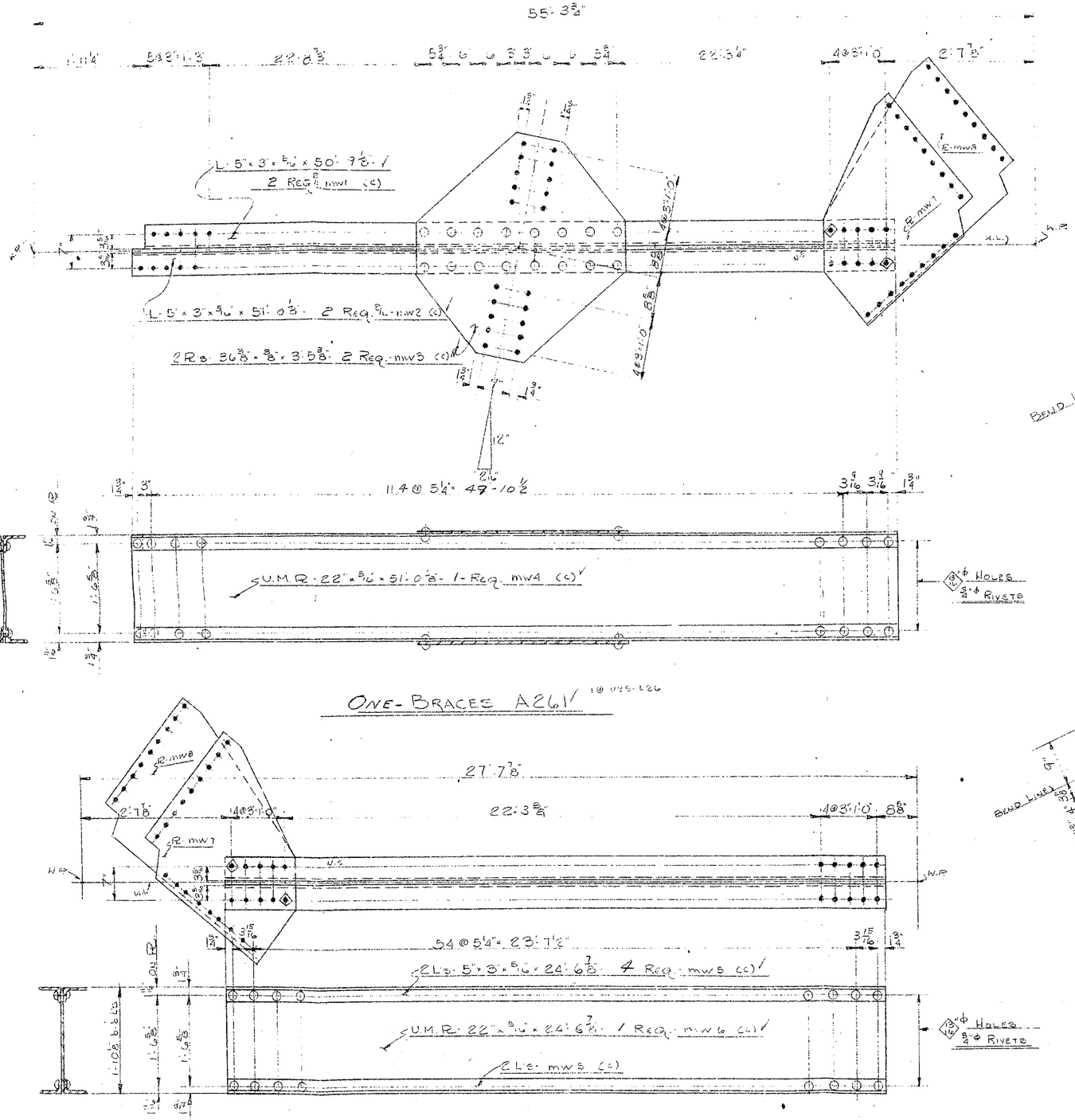
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT NO. 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND. DIV. OF INDUSTRIAL ENTERPRISES INC. Contr. No. 4800 Sh. 262 of (A)

136



SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF
CONSULTING ENGINEERS 11/10/59

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by KW 5-5-59
Checked by FK 9-59
Revisions

APPROVED BY 9/15/60
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ... DATE 9-12-60
BOOK No. 6

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800-F Sh. 261 of

135

TYPICAL

1ST 7"ø 47.5" X 24'-0½" 3 REQ. MV9 (C)

1 FILL PL 14½ x ½ x 1'-7½" 2 REQ. MV 11 (C) (ON D 260 ONLY) TACK WELD

ONE LATERAL AS SHOWN AND NOTED A 260

2 LATERALS AS SHOWN AND NOTED D 260 1 BEVEL FILL 6"x(x)1'-4¾" - 4 REQ. MV 1

1ST 7"ø 47.5" X 24'-0½" 3 REQ. MV 12 (C)

1 FILL PL 14½ x ½ x 1'-11¼" - 2 REQ. MV 12 (C) (ON E 260 ONLY) TACK WELD

ONE LATERAL AS SHOWN AND NOTED E 260

2 LATERALS AS SHOWN AND NOTED E 260

4 R20 B/E MV15 (C) FS

2 L5 6x6x½ X 18'-3½" 4 FIG B MV2 (C) N.S

31 SPCS @ 4" = 10'-4"

1 FILL MV 1

1 R 25⅜ x ½ x 12'-11⅛ 2 REQ MV 3 (C) (N.S MV2 L, F.S MV15 L)

12'-11⅛

12'-11⅛

21'-0

4'-0

7'-3½"

4'-0⅛

3'-3

1 R 6x1⅜x 1'-2-2 FES MV 4 (C)

1 R 6x½x 2'-1⅛ - 1 REQ MV 5 (C)

SECTION B-B

1 R 12"x½"x 1'-1½ - 4 REQ MV 6 (C)

1 R 12"x 1"x 1'-0½ - 2 REQ MV 7 (C)

1 R 2½" x 1½" x 7'-3½" - 4 REQ MV 8 (A)

SECTION A-A

2 WIND SHEARS C 260 1- UNIT 3, 1- UNIT 2 - @ L 25

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY ERS DATE 11-16-59

SEE NOTE SH "1"

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF - CONSULTING ENGINEERS 9/25/59

GENERAL NOTES

Rivets ⅞ ø except as noted

Holes 15/16 except as noted

End Distance ¾ unless noted.

Shop Paint RED LEAD (ARK STD)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS 11/R/59

Drawn by L.A.M. 9-9-59

Checked by ALL 9/21/59

Revisions

APPROVED BY L.P. Carlson Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION

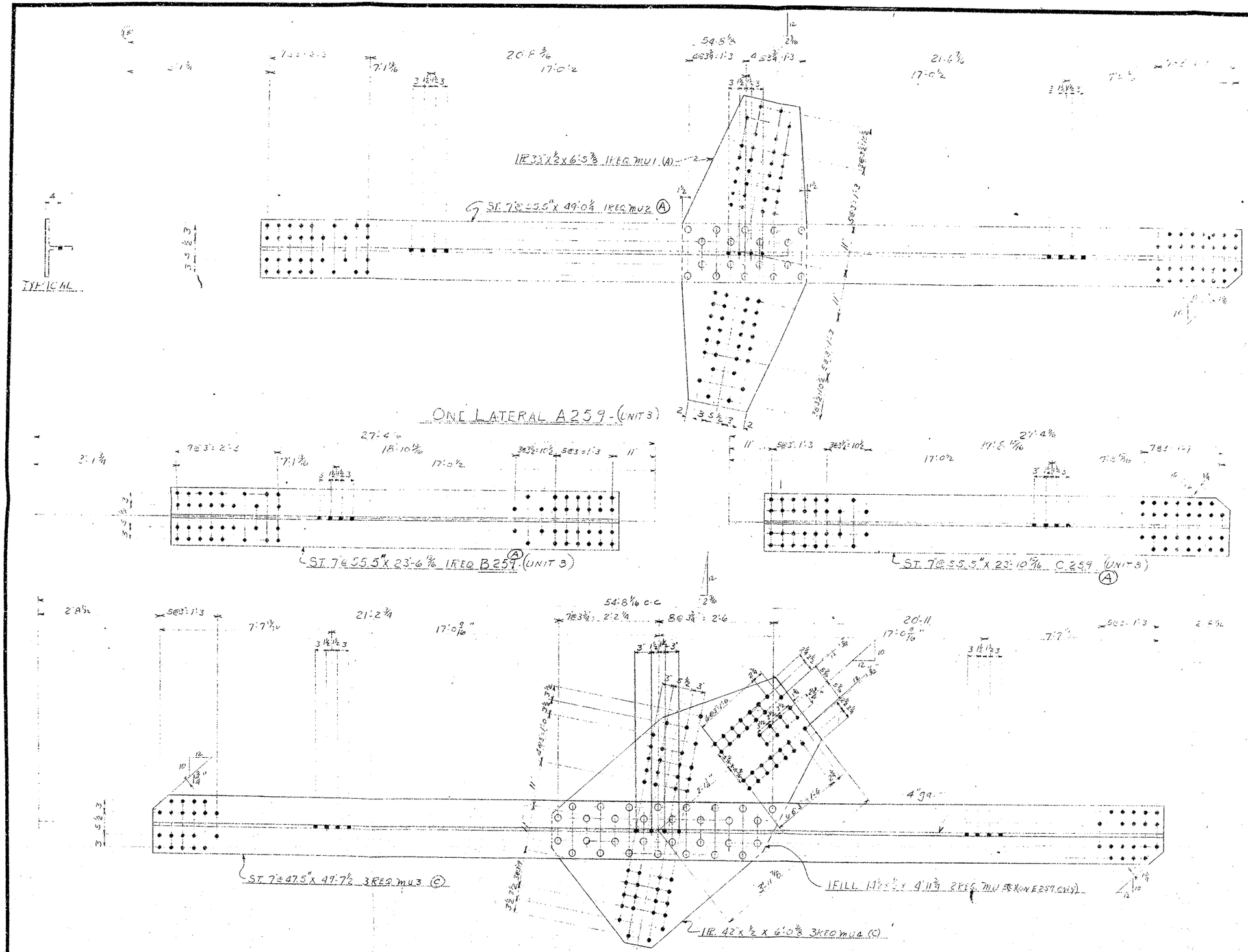
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE NEAR HELENA ARKANSAS UNIT NO 2-3

SOLD TO: JOHN F BEASLEY CONSTR CO CHICAGO ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800 Sh. 260 of (A)

134



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 11-16-59

SEE NOTE SH #1

APPROVED BY HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 10-12-59

GENERAL NOTES

Rivets ⅞ except as noted
Holes 15/16 except as noted
End Distance 1¼ unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by
Checked by
Revisions

APPROVED BY 11/18/59
L.P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT NO. 2-3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800 Sh. 259 of

A

133

1R 36x½ x 7'-0-3REQ mt 1 (A)

1ST 7'@635"x 49'-4½-3REQ mt 2 (A)

TYPICAL

ST 7'@635"x 23'-10⅜-6REQ B258 (A)

3-LATERALS A258

ST 7'@75"x 23'-6⅝ 1REQ E258 (A)

1R 42"x½x 8'-2¾ 1REQ mt 3 (A)

5 LATERALS C258 7'@75"x 49'-0¼ 1REQ mt 4 (A)

ST 7'@75"x 23'-10⅞ 1REQ D258 (A)

ONE LATERAL C258

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 11-5-59
NOTE: SEE SH #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections APPROVED BY 11/10/59
Drawn by L.W.D. 11-3-59
Checked by F.K.L. 11-4-59 Carlson
Revisions Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800 Sh. 258 of (A)

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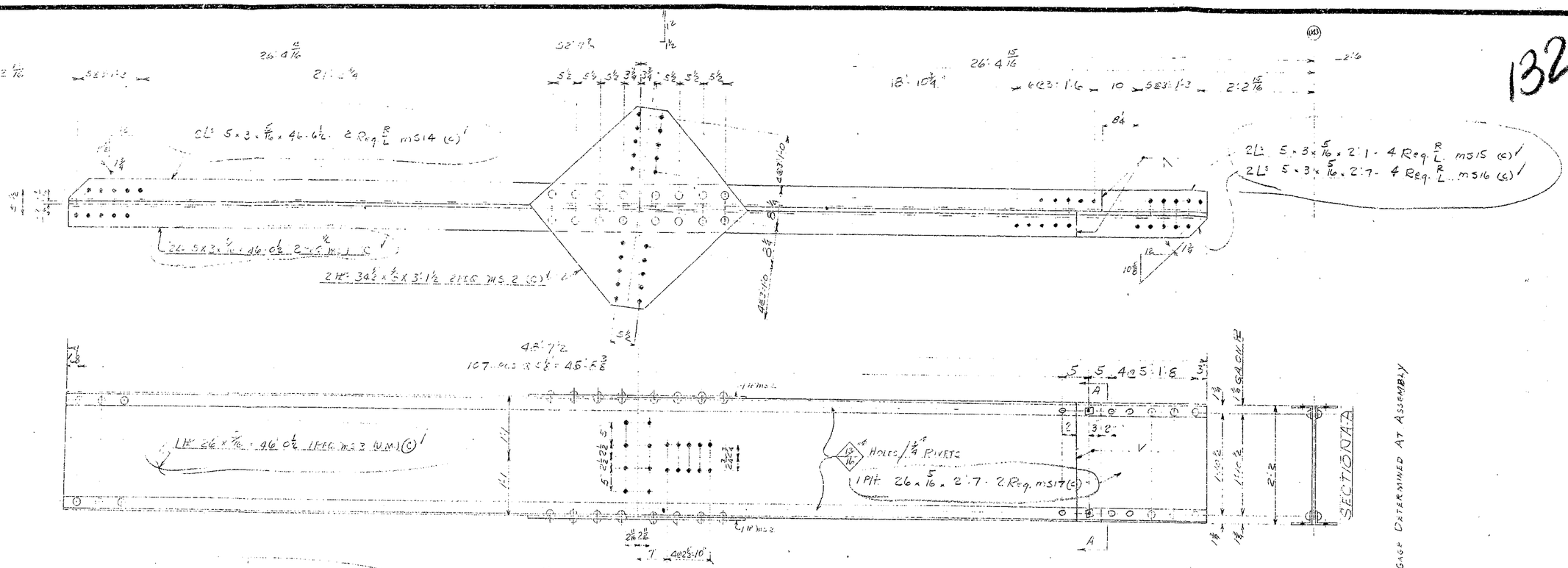


RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ____ DATE 1-9-60 BOOK No. 6

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
APPROVED BY 10159 9/15/59
Except as noted Resident Engineer

GENERAL NOTES
Rivets 7/8" Ø
Holes 15/16" Ø except as noted
End Distance 1 1/2" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by L.A.M. 4-29-59
Checked by FK 9-59
Revisions

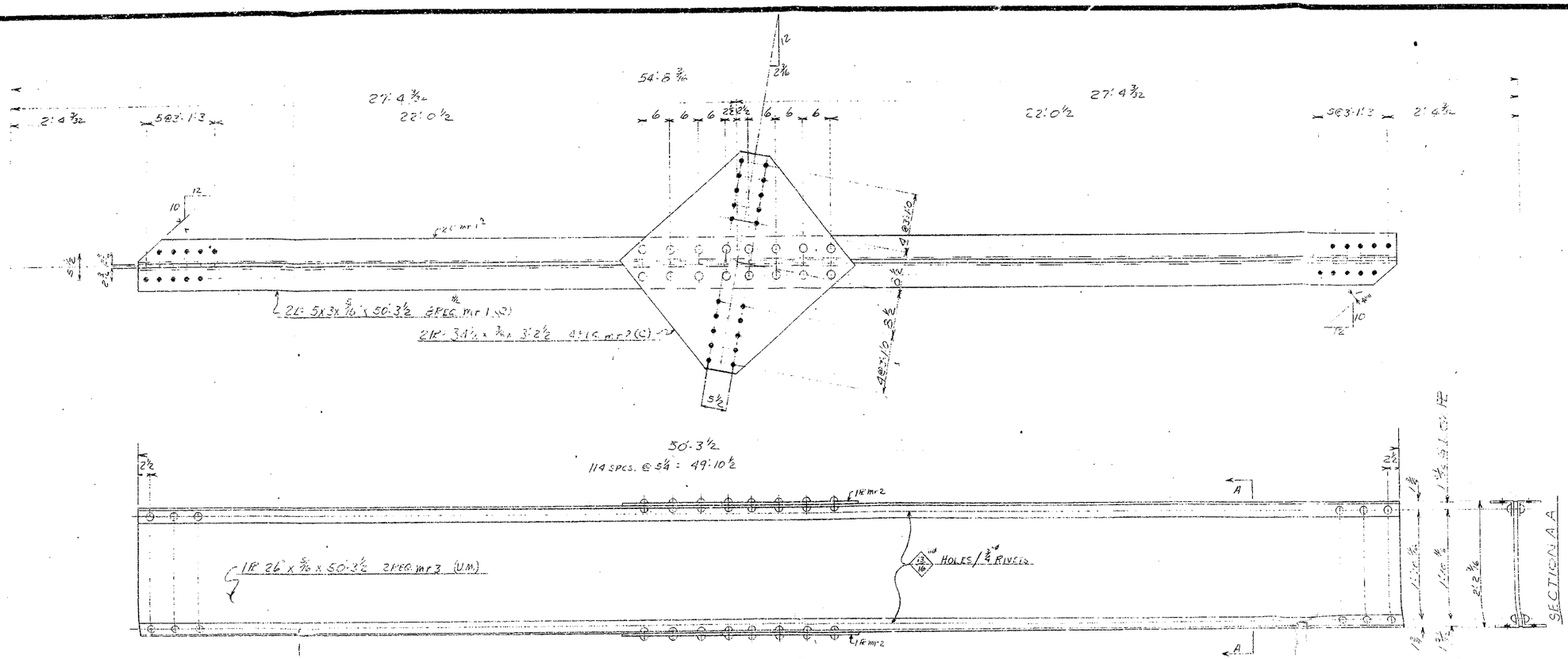
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4480-F Sh. 257 of

131



RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY ERS DATE 11-5-59

SEE NOTE SH #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8 ϕ except as noted

Holes 15/16 ϕ except as noted

End Distance 1 3/4 unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections APPROVED BY 11/10/59

Drawn by L.P.M. 10-29-59

Checked by T.H.C. 10-29-59 E. Carlson

Revisions Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

SOLD BY: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INTERNATIONAL ... VINCENNES, IND.

Contr. No. 4800 Sh. 256 of

A

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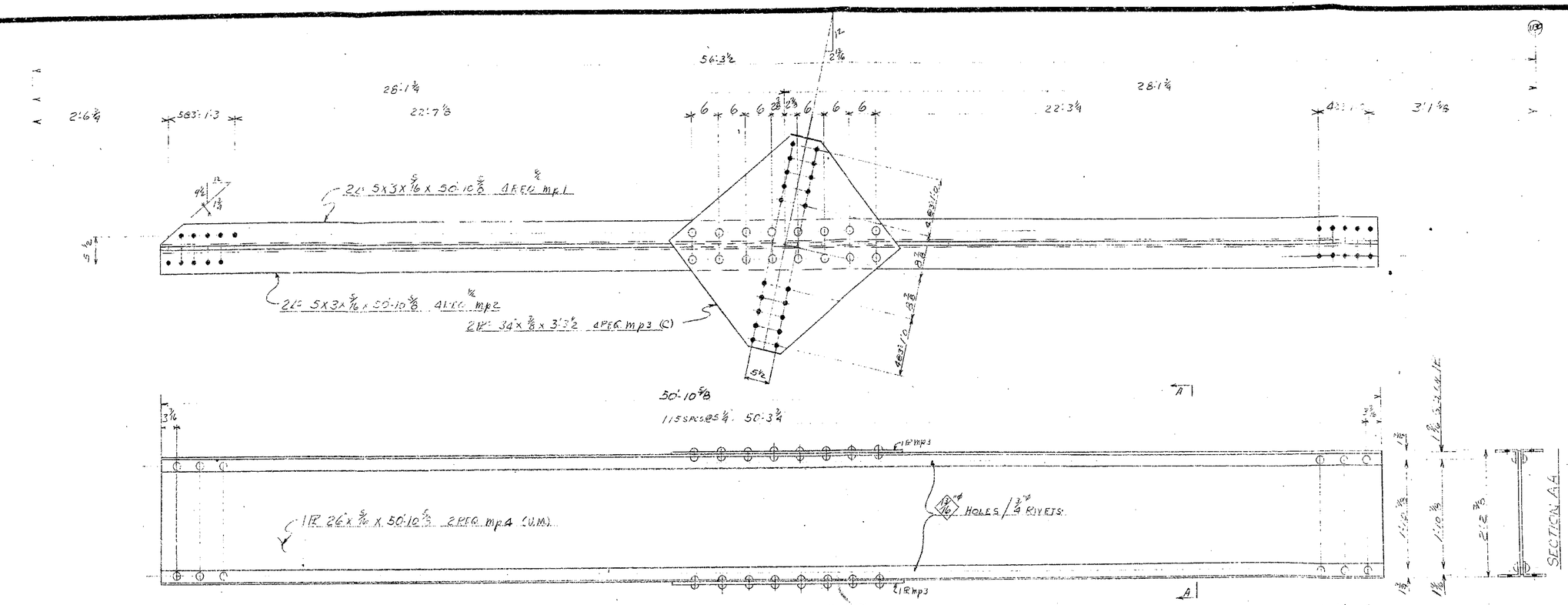

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY F.R.S. DATE 1-5-59
SEE NOTE SH "1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections APPROVED BY 11/10/57
Drawn by L.A.H. 12-27
Checked by F.K.S. 12-28 Carlson
Revisions
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF VINCENNES INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800 Sh. 255 of

A

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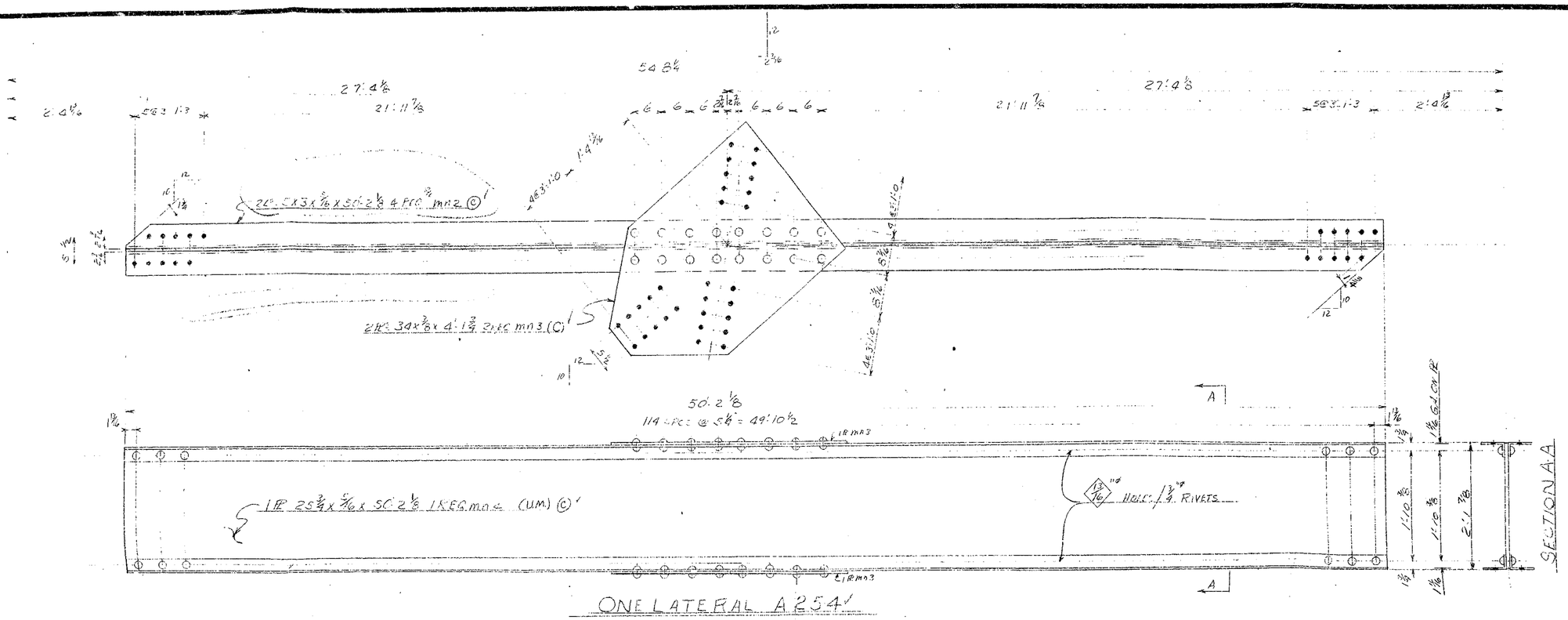

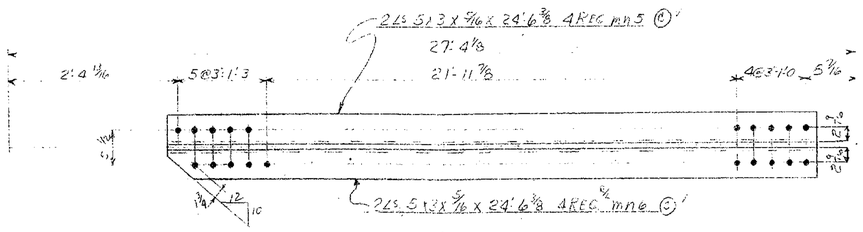

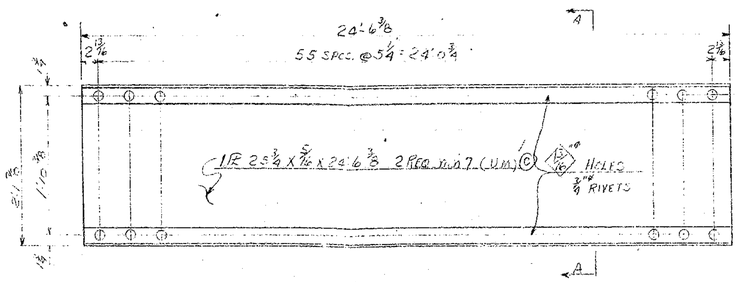

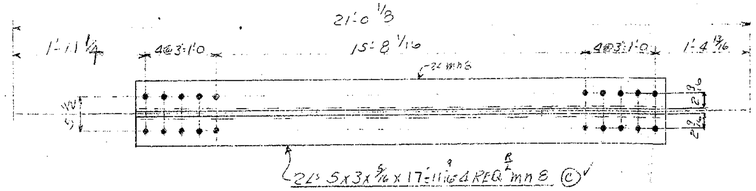

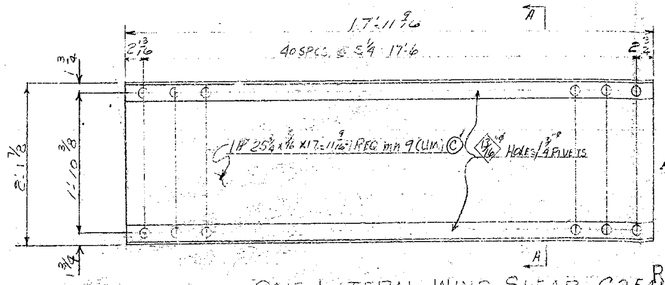

APPROVED BY 9/15/60
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ____ DATE 9-12-60

BOOK No. 6

SEE NOTE SH. 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 11/10/59

GENERAL NOTES

Rivets 7/8 - 0 except as noted
Holes 15/16 - 0 except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by L.A.M. 9.27.59
Checked by TJK 9-59
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800-F Sh. 254 of

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59'-0 3/4" c.c.

3'-6 3/4 | 10@3=2'-6 | 4 | 6@3=1'-6 | 4 | 7@3=1'-0 3/32 | 3 3/8 | 3 3/8 | 3 23/32 | 4 1/2 | 5 | 5 | 5 1/2 | 33@6=16'-6 | 20@3=5'-0 | 20@3=5'-0 | 4 3/4 | 5 1/2 | 4@3'-1 0 3/32 | 4@3'-1 0 5/32 | 4 5/8 | 3'-1 5/32 | 3 1/2

I-18"@70" x 55'-7 3/4" - 2 REQ'D - mm3 (A)

PLT-16 x 1/2 x 2'-7" - 4 REQ - mm9 (A)

FILL PLT-17 x 1/8 x 2'-6" - 4 REQ - mm10 (A)

L30

TOP

FILL PLT-22 x 1/8 x 2'-6" - 4 REQ - mm5 (A)

END-30 x 1/2 PLT

I-18"@70" x 55'-7 3/4" - 2 REQ - mm4 (A)

PLT-30 x 3/4 x 36'-11 15/32" - 2 REQ - mm7 (A)

PLT-30 x 1/2 x 33'-10 5/32" - 4 REQ - mm8 (A)

PLT-30 x 1/2 x 3'-1 1/2" - 4 REQ - mm6 (A)

END-30 x 3/4 PLT

END-30 x 5/8 PLT

END-30 x 1/2 PLT

33'-6 15/32"

20'-6 7/32"

PUNCH-11/16"

REAM-15/16"

7'-11 13/32"

4 - 4 x 4 x 1/2 x 4'-2 1/2" - 4 REQ - mm2 (C)

8@5 7/8"=3'-11"

12

END

4'-8"

4'-9"

5 FL WF-23"@130" x 10'-3 1/2" - 4 REQ - mm1 (C)

MATCH LINE

1'-11"

SECTION-A-A

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY E.R.S. DATE 11-2-59

SEE NOTE SHEET #1

PLT-mm9

PLT-mm6

N.S.C.F.S.

A

A

15@3'-5"=51'-3" - STAGGERED ELLIPTICAL HOLES

53@6"=26'-6"

3'-6 3/4 | 3'-6" | 1 | 6@3'-1 6 | 4 | 4@3'-1 0 | 3 1/2 | 3 3/8 | 3 23/32 | 4 1/2 | 5 | 5 | 5 1/2

BOT

FILL-mm5

SPLICE PLT-mm6

PUNCH-11/16"

REAM-15/16"

PLT-30 x 3/4 x 36'-11 15/32" - 2 REQ - mm12 (A)

END-30 x 1/2 PLT

PLT-30 x 1/2 x 33'-10 15/32" - 2 REQ - mm11 (A)

4 3/4 | 5 1/2 | 4@3'-1 0 3/32 | 4@3'-1 0 5/32 | 3 1/2

PLT-mm9

FILL-mm10

END-30 x 3/4 PLT

END-30 x 5/8 PLT

EL-30 x 1/2 PLT

ONE-DIAGONAL-AS SHOWN-A253

ONE-DIAGONAL-TO PAIR-AA253

WORK WITH SHEET # 280 & 281

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" except as noted

Holes 15/16" except as noted

End Distance 1 3/4" unless noted

Shop Paint RED LEAD (ARK STD)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by V.T. APPROVED BY 11/5/59

Checked by E.K. 9-59 L.D. Carlson

Revisions

Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE

NEAR HELENA, ARKANSAS

UNIT No 3

SOLD TO: JOHN F. BEASLEY CONSTR CO

CHICAGO ILLINOIS

SHOP VINCENNES STEEL [redacted] DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

Contr. No. 4800 Sh. 253 of

(A)

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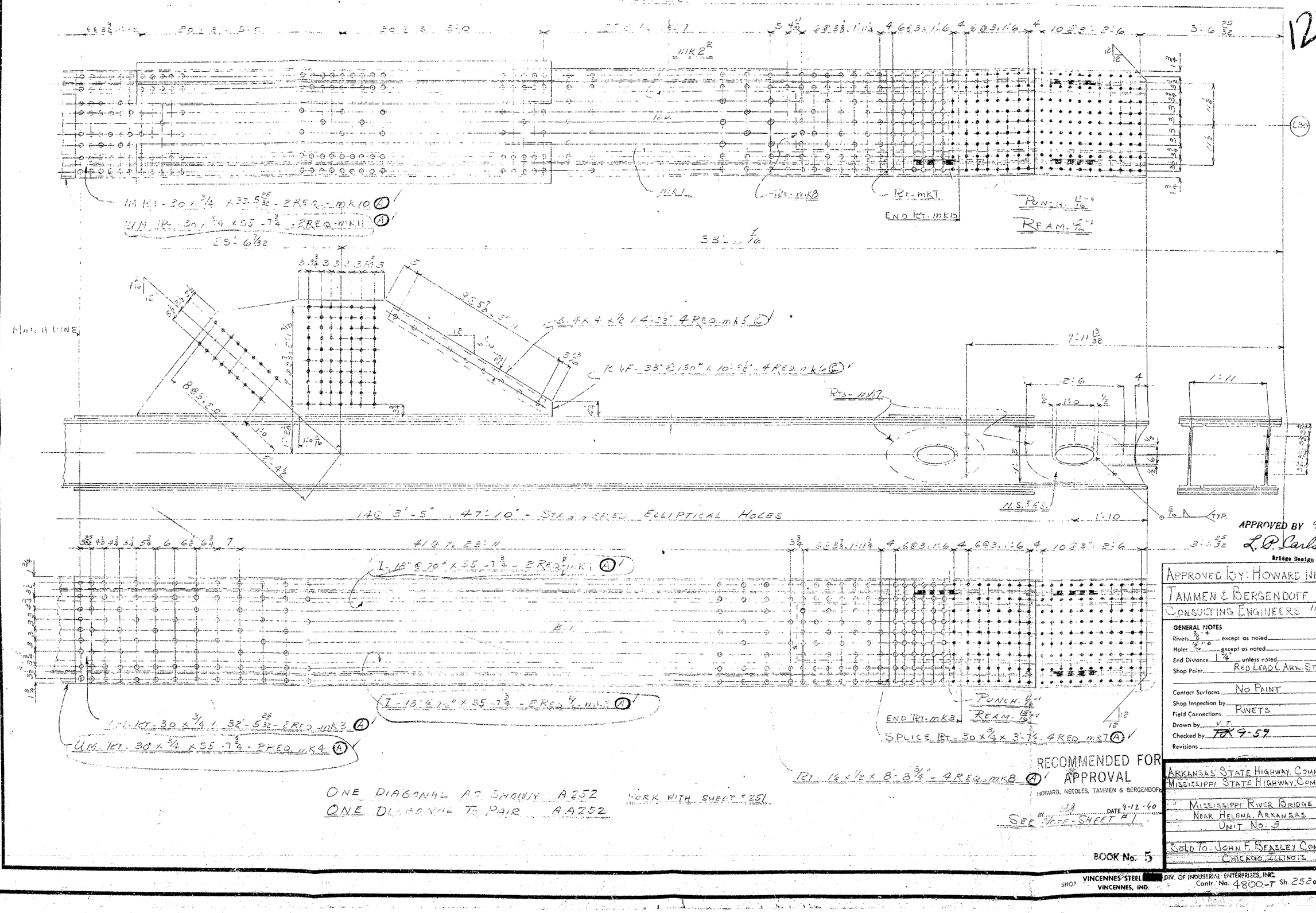

APPROVED BY 9/15/60
L. P. Larson
Bridge Design Engineer

APPROVED BY: HOWARD NEEDLES
TAMMEN & BERGENDOFF
CONSULTING ENGINEERS 11/5/59

GENERAL NOTES

Rivets 3/4 except as noted
Holes 13/16 except as noted
End Distance 1 1/4 unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T.
Checked by FJK 9-59
Revisions

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY [illegible] DATE 9-12-60
SEE NOTE - SHEET # 1

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 3
SOLD TO JOHN F. BEASLEY CONSTR CO.
CHICAGO, ILLINOIS

BOOK No. 5

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800-T Sh. 252 of

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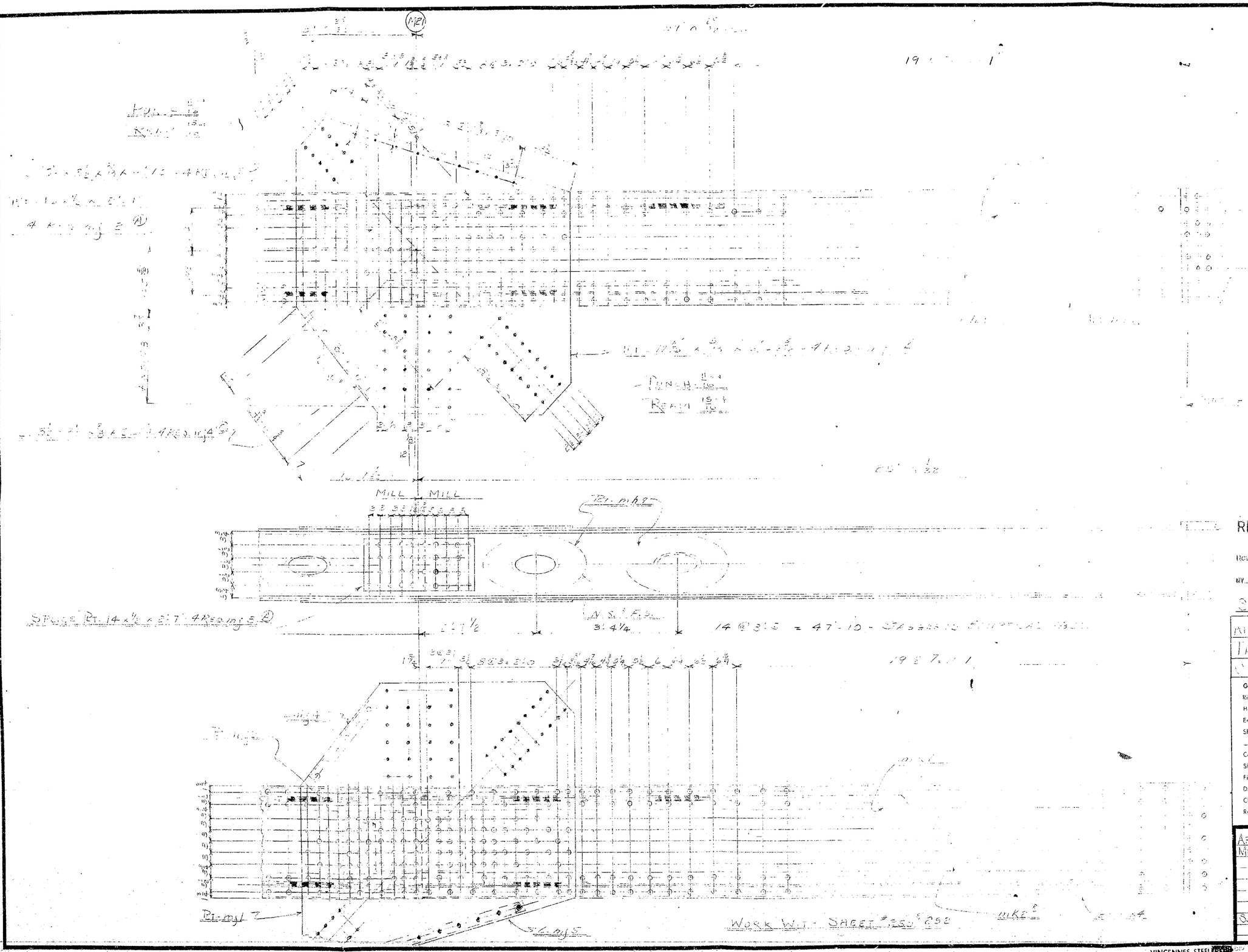


RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FKS DATE 11-16-59

OFF NOTE SHEET # 1

ARKANSAS HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

GENERAL NOTES
Rivets ⅞" except as noted
Holes 15/16" except as noted
End Distance 1½" unless noted
Shop Paint SHOP COAT
Contact Surfaces N PAINT
Shop Inspection by
Field Connections APPROVED BY 11/18/59
Drawn by
Checked by F.K. Carlson
Revisions Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

SOLO BY JOHN F. BEASLEY CONSTR. CO.
CAIRO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
Contr. No. 4500 Sh. 231 of

DIV. OF INDUSTRIAL STRUCTURES, INC.

A.H.D.

ROLL .. 746

BRG. 2899

125

SPLICE R-Jb4 — FILL R-Jb3 — 10@3"=2'-6" — 5@3"=1'-3" — 7@3"=1'-9" — 8'-2¼" — SLOT TOP R-1"x2'-3" — 10@3"=2'-6" — 7@3"=1'-9" — SLOT TOP R-1"x2'-2"

86 SPC. @ 4½" = 32'-3"

11/16ϕ HOLES REAM 15/16ϕ

1R-5x⅜ x 4'-3" - 4 REQ. - Jb1 - (A)

FILL R-4½ x 1/16 x 5'-1½" - 4 REQ. - Jb3 (A)

SPLICE R-5x½x10'-9" - 4 REQ. - Jb4 (A)

TOP R-31 x 11/16 x 82-8 15/16 - 2 REQ. - Jb2 (A) (U.M.)

2 7/16 GA. ON L's

N.S. R-25½ x ⅝ x 5'-3 5/8" - 12 - REQ. - Jb8 (C)

FS. R-25½ x ⅝ x 4'-4 5/8 - 12 - REQ. - Jb9 (C)

SECTION - AA

2 PRs - 75 x 5/16 x 1'-3¾ - 4 REQ. - Jb6 (A)

2 Ls - 4x4x⅜ x 4'-8¾" - 4 REQ. R/L - Jb7 (C)

2 SPLICE PRs - 23 x ½ x 4'-4½" - 4 REQ. - Jb10 (A)

2 SPLICE PRs - 16 x ⅜ x 6'-0" - 4 REQ. - Jb11 (A)

2 TOP Ls - 4 x 4 x ⅜ x 84'-0 7/16" - 4 REQ. R/L - Jb12 (A)

2 WEB PRs - 24 x ¾ x 84'-0 7/16" - 4 REQ. - Jb13 (A) (U.M.)

1FILL R-16 x ⅜ x 1'-6½" - 12 - REQ. - Jb15 (C) (N.S.)

2 Ls - 4x4x⅜x1'-0½" - 32 REQ. - Jb16 (C)

2 Ls - 12"@25" x 2'-0" - 24 - REQ. - Jb17 (C)

1R-18 7/8 x ⅜ x 2'-0" - 2 - REQ - Jb18 (C)

2 BOTT. Ls - 4 x 4 x ⅜ x 84'-0 7/16" - 4 REQ. R/L - Jb21 (A)

7/8ϕ SHOP RIVETS F.S.

11/16ϕ HOLES REAM 15/16ϕ

2 Ls - 4 x 4 x ⅜ x 1'-0½" - 32 - REQ. - Jb19 (C)

92 SPC. @ 4½" = 34'-6"

2 Ls - 4 x 4 x ⅜ x 4'-2¾" - 4 REQ R/L - Jb14 (C)

BOLT TO TOP OF A199 & AA199

(L26) (L27)

DIAPHRAGM AT L27

42'-0 7/32

MILL

ONE LOWER CHORD AS SHOWN - A200

ONE LOWER CHORD TO PAIR - AA200

CONTINUED ON SHEET 201

1R-50½ x ½ x 6'-9" - 2 REQ. - Jb23 (A)

R-Ja12a

BOTT. R-31 x 11/16 x 84'-0 7/16" - 2 REQ. - Jb22 (A) (U.M.)

BOTTOM

RIVET AFTER ASSEMBLY

1R-32" x ½ x 7'-2 7/8" - 2 REQ. - Jb20 (A)

NOTE
SEE NOTE ON SHEET 1

11/16ϕ HOLES REAM 15/16ϕ

3@3"=9" — 5@3"=1'-3" — 6" — 7@3"=1'-9" — 6@3½"=1'-9" — 6@4=2'-0" — 3'-6 15/32" — 5'-2¾"

82 SPC. @ 4½" = 30'-9"

9 @ 3'-6" = 31'-6"

7@4½" = 2'-7½" — 8@4½" = 3'-0"

ELLIPTICAL HOLES

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY _____ DATE 9-12-60

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS
APPROVED BY L P Carlson Bridge Design Engineer 9/15/60

GENERAL NOTES
Rivets 7/8ϕ except as noted 15/16ϕ
Holes 15/16 except as noted
End Distance 1¾" unless noted
Shop Point RED LEAD (ARK STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by T.P.
Checked by FK 7-59
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

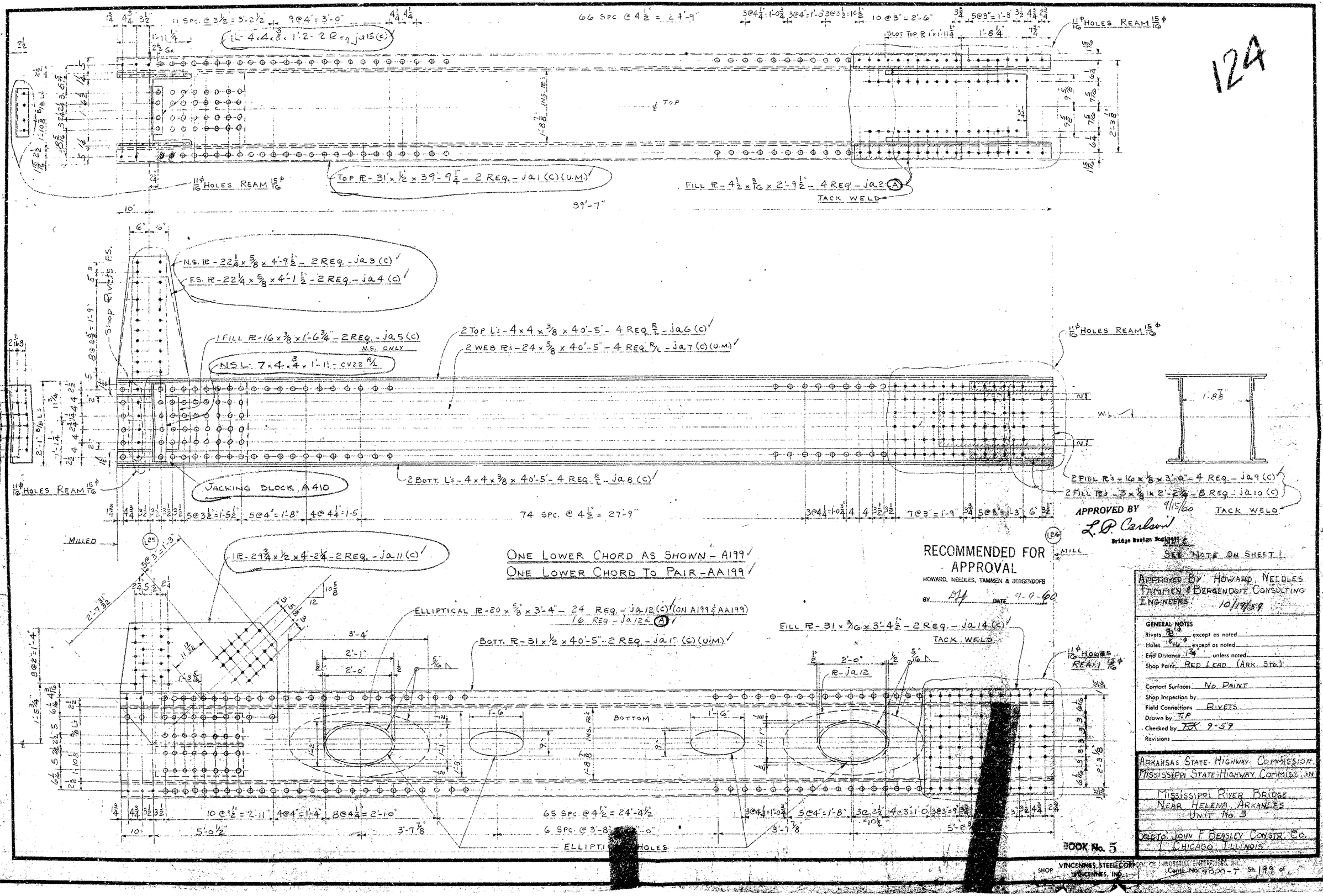
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

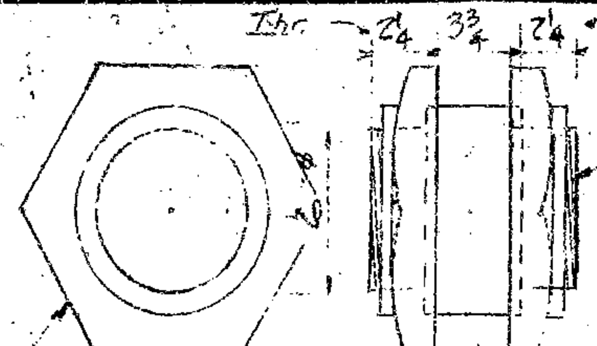
BOOK No. 5

SHOP VINCENNES STEEL CORP. VINCENNES, IND. — A DIV. OF INDUSTRIAL ENTERPRISES, INC.
Contr. No. 4800-T Sh. 200 of

124

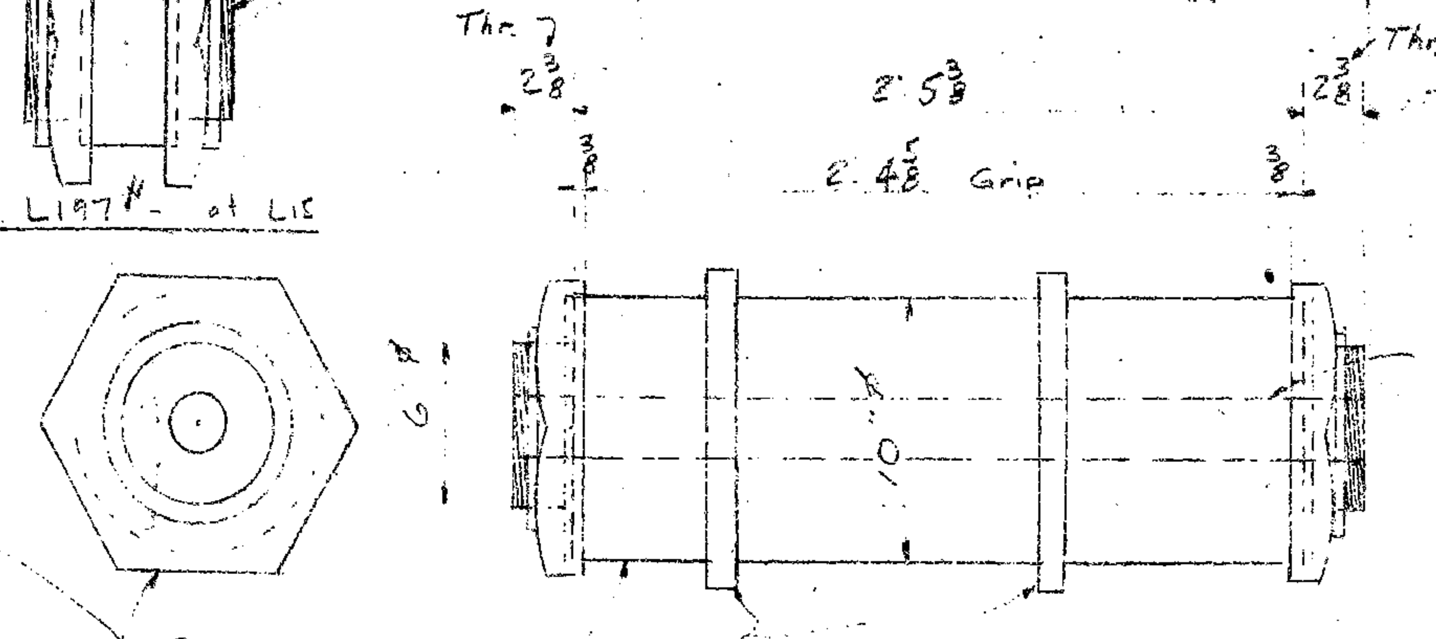

1L - 4 x 4 x 3/8 x 1'-2 - 2 Req. ja15(c)
66 Spc. @ 4 1/2" = 24'-9"
Slot Top R 1"x1-1/4"
11/16 Holes Ream 15/16
Top R - 31" x 1/2 x 39'-9 1/4" - 2 Req. - ja1 (C) (U.M.)
Fill R - 4 1/2 x 3/16 x 2'-9 1/2" - 4 Req. - ja2 (A)
Tack Weld
39'-7"
N.S. R - 22 1/4 x 5/8 x 4'-9 1/2" - 2 Req. - ja3 (C)
F.S. R - 22 1/4 x 5/8 x 4'-1 1/2" - 2 Req. - ja4 (C)
Shop Rivets F.S.
1 Fill R - 16 x 3/8 x 1'-6 3/4" - 2 Req. - ja5 (C)
N.S. Only
NSL 7 x 4 x 3/4 x 1'-11 - CV22 R/L
2 Top L's - 4 x 4 x 3/8 x 40'-5" - 4 Req. R/L - ja6 (C)
2 Web R's - 24 x 5/8 x 40'-5" - 4 Req. R/L - ja7 (C) (U.M.)
Jacking Block A410
2 Bott. L's - 4 x 4 x 3/8 x 40'-5" - 4 Req. R/L - ja8 (C)
74 Spc. @ 4 1/2" = 27'-9"
2 Fill R's - 16 x 3/8 x 3'-0" - 4 Req. - ja9 (C)
2 Fill R's - 2 x 3/8 x 2'-2 1/2" - 8 Req. - ja10 (C)
Tack Weld
Approved By
9/15/60
Bridge Design Engineer
See Note On Sheet 1
Milled
1R - 29 3/4 x 1/2 x 4'-2 1/4" - 2 Req. - ja11 (C)
One Lower Chord As Shown - A199
One Lower Chord To Pair - AA199
Elliptical R - 20 x 5/8 x 3'-4" - 24 Req. - ja12 (C) (On A199 & AA199)
16 Req. - ja12a (A)
Bott. R - 31 x 1/2 x 40'-5" - 2 Req. - ja13 (C) (U.M.)
Fill R - 31 x 3/16 x 3'-4 1/2" - 2 Req. - ja14 (C)
Tack Weld
Bottom
65 Spc. @ 4 1/2" = 24'-4 1/2"
6 Spc. @ 3'-8"
Elliptical Holes
Mill
RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY PH DATE 9-9-60
Approved By: Howard, Needles Tammen & Bergendoff Consulting Engineers 10/19/59
GENERAL NOTES
Rivets 7/8 ϕ except as noted
Holes 15/16 ϕ except as noted
End Distance 1 3/4" unless noted.
Shop Paint Red Lead (Ark. Std.)
Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivets
Drawn by TP
Checked by FK 9-59
Revisions
Arkansas State Highway Commission
Mississippi State Highway Commission
Mississippi River Bridge
Near Helena, Arkansas
Unit No. 3
John F. Beasley Constr. Co.
Chicago, Illinois
Book No. 5
Shop Vincennes Steel Corp. Of Industrial Enterprises, Inc.
Vincennes, Ind.
Cont. No. 8900-7 Sh. 199 of

Grip 3"



Pin 8"φ x 8¼ - 1 Req (Manganese Steel Forging) Finish all over

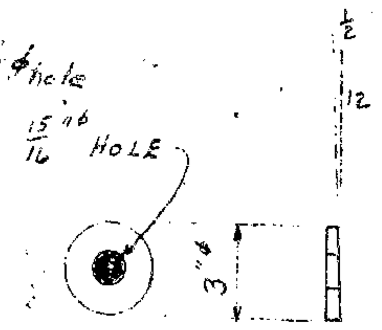
ONE PIN L197 - at L15



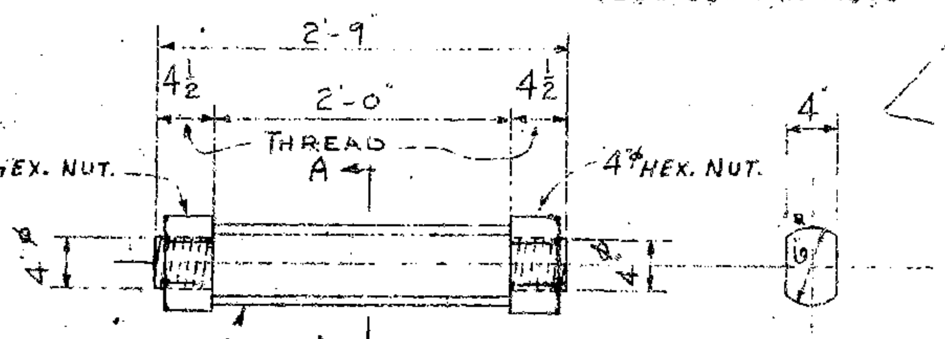
{ Ring Fill "A" on B197
{ Ring Fill "B" on C197

Pin 10"φ x 2'-10⅛ - 8 Req. (Manganese Steel Forging) Finish Pins all over

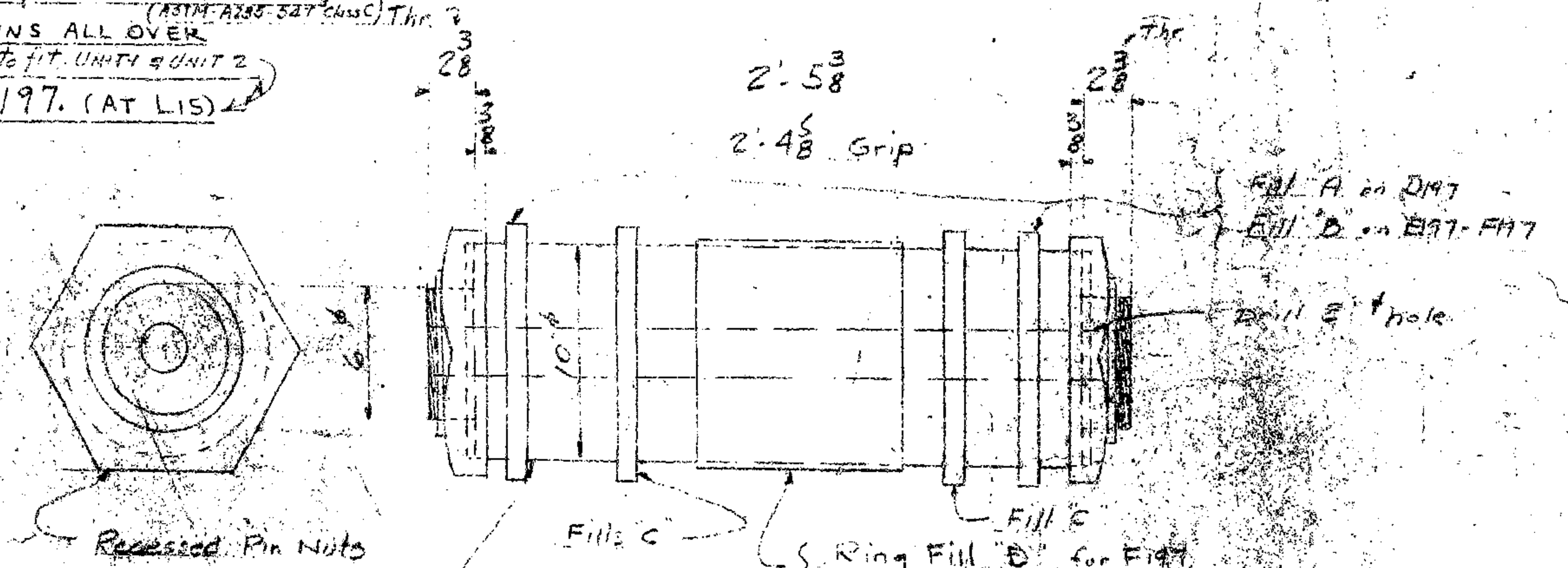
2 PINS - B197 - at U59
6 PINS - C197 - at U15 U25 U43



BEVELED WASHERS 3"φ x ¼ - 72 REQ "A"
SHIP WITH BOLTS
FOR EXPANSION CASTINGS TO BE GALVANIZED



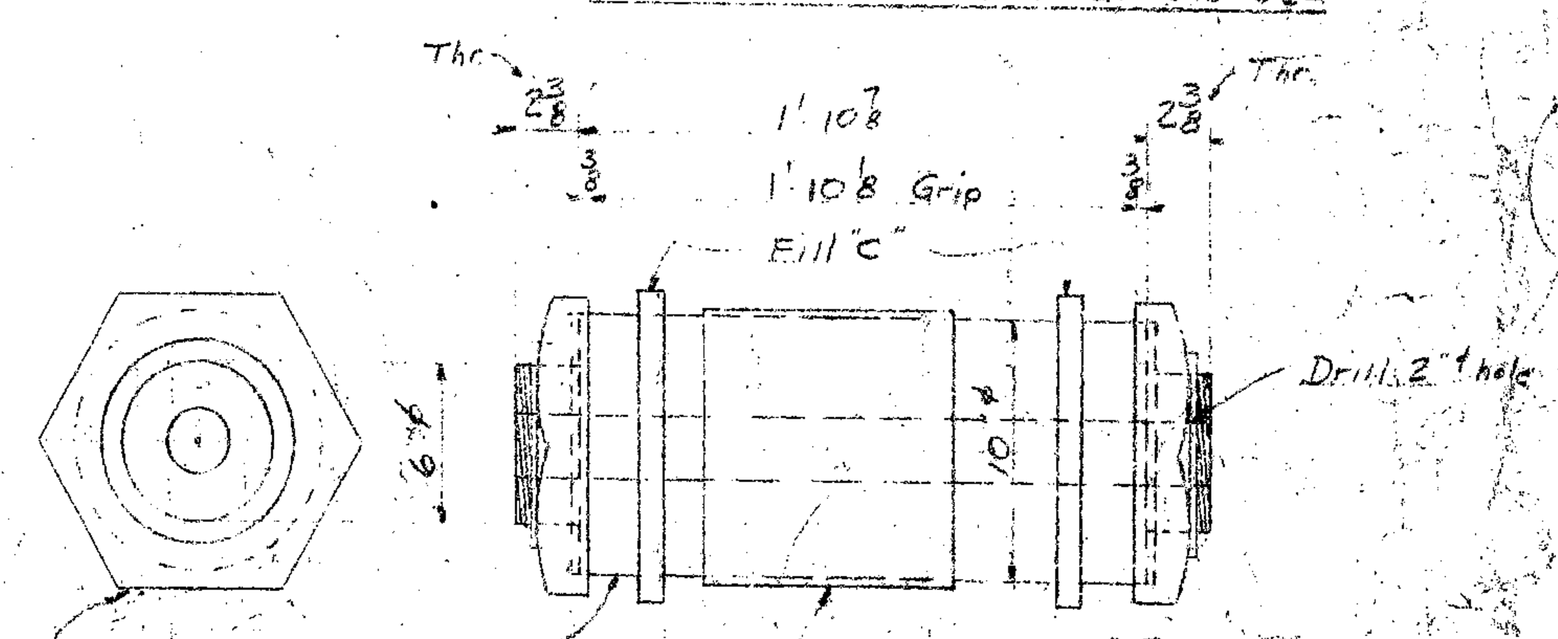
PIN - 6"φ x 2'-9" - 2 REQ (COLD ROLLED STEEL) (ASTM A235 547 class C)
FINISH PINS ALL OVER
Assemble to fit Unit 4 & Unit 2
2 PINS - K197 (AT L15)



{ Ring Fill "D" for F197
{ Ring Fill "E" for D197 & E197

Pin 10"φ x 2'-10⅛ - 8 Req (Manganese Steel Forging) Finish Pins all over

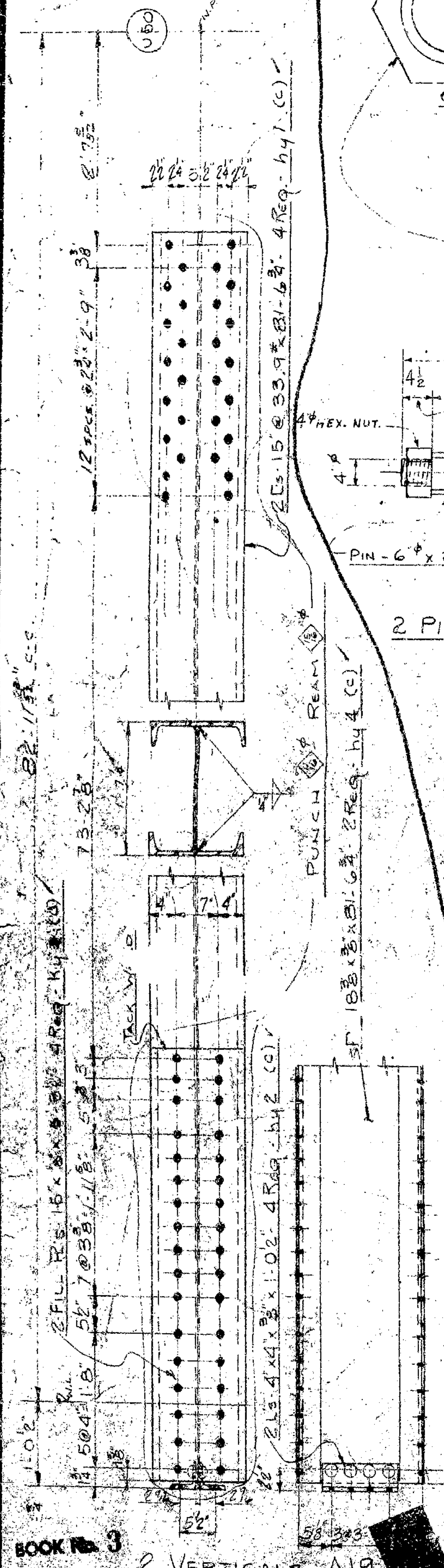
2 PINS D197 at U59
2 PINS E197 at U43
4 PINS F197 at U15 - U25



{ Ring Fill "D" for
{ Ring Fill "E" for

Pin 10"φ x 2'-3⅝ - 8 Req ... anganese Steel Forging ... inish Pins all over)

4 PINS - G197 at U15
4 PINS - H197 at U3



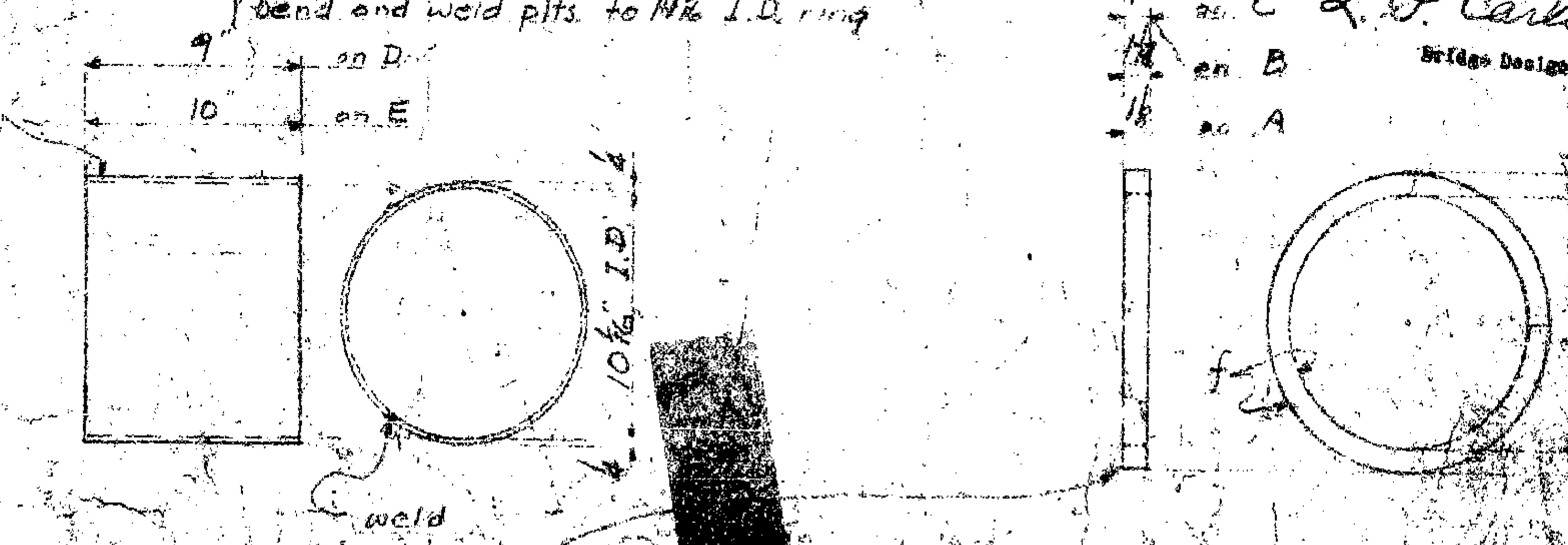
BOOK No. 3

2 VERTICALS A19 ... UNIT 4

IN SHOP 11/59

#4900-T

{ Plt. 9 x ¼ x 2'-8⅜ - 8 Req "D" ©
{ Plt. 10 x ¼ x 2'-8⅜ - 8 Req "E" ©
{ Assemble on Pins
bend and weld plts. to 10 1/16" I.D. ring



{ bar ... x 2'-10⅜ - 8 Req "A" ©
{ bar ... x 2'-10⅜ - 24 Req "B" ©
{ bar ... x 2'-10⅜ - 32 Req "C" ©

BOOK No. 4

UNIT 4 - FIELD RIVET LIST - SHEETS 99 to 197   BOOK No. 11

Send	Size	Kind	Req'd	Location
315	7/8 x 2 1/8	RIVETS	308	
3055	7/8 x 2 1/4	"	2618	
2135	7/8 x 2 3/8	"	1728	
4160	7/8 x 2 1/2	"	3772	
3600	7/8 x 2 5/8	"	3262	
3390	7/8 x 2 3/4	"	3074	
3400	7/8 x 2 7/8	"	3082	
2070	7/8 x 3 1/8	"	1624	
1865	7/8 x 3 1/4	"	1680	
2170	7/8 x 3 1/2	"	2635	
1840	7/8 x 3 5/8	"	1664	
2250	7/8 x 3 3/4	"	2022	
1160	7/8 x 3 7/8	"	1546	
965	7/8 x 4	"	858	
945	7/8 x 4 1/8	"	832	
305	7/8 x 4 1/4	"	260	
1165	7/8 x 4 3/8	"	1024	
1160	7/8 x 4 1/2	"	1036	
415	7/8 x 4 5/8	"	356	
820	7/8 x 4 7/8	"	738	
1070	7/8 x 5	"	916	
60	7/8 x 5 1/8	"	24	
360	7/8 x 5 1/4	"	318	
115	7/8 x 5 3/8	"	98	
90	7/8 x 5 1/2	"	70	
205	7/8 x 5 3/4	"	174	
80	7/8 x 6 1/4	"	60	
60	7/8 x 6 1/2	"	48	
665	3/4 x 3	"	572	
340	3/4 x 3 1/8	"	276	
55	5/8 x 1 1/2	HEX BOLTS	52	CAGE
590	5/8 x 1 3/4	"	562	6" CURB I
60	5/8 x 3 1/4	"	56	6" "
75	3/4 x 2 1/4	"	72	LADDER
265	7/8 x 2 1/2	HEX HD BOLT & SELF LOCKING NUT	272	EXPANSION JOINTS
150	7/8 x 3	"	144	"
50	7/8 x 3 1/4	"	48	"
235	7/8 x 3 1/2	"	224	"
50	7/8 x 4	"	48	"
75	7/8 x 4 1/2	"	72	"
5	1 x 2 1/4	"	4	"

GALVANIZED OR CORROSION RESISTANT (265 through 5)

123

Send	Size	Kind	Req
170	7/8 x 2 3/4	HIGH TENSILE	166
122	7/8 x 3	do	118
10	7/8 x 3 1/4	do	8
42	7/8 x 3 1/2	do	40
42	7/8 x 3 3/4	do	40
46	7/8 x 4 1/4	do	44
864	HARDENED WASHERS FOR 7/8" BOLTS		

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY F.R.S. DATE 9-12-60

72 SHIMS P173 (AT L59)
72 SHIMS Q173 (AT L59)

24 TURN BOLTS TB98 (AT L18) See Sh. #98

{ 72 WASHERS "A" FOR 3/4" BOLTS
{ 1574 WRT. WASHERS FOR 7/8" BOLTS
GALV. OR CORROSION RESISTANT

(See Notes sheet 1)

APPROVED BY 9/15/60 L. P. Carlson
Bridge Design Engineer

APPROVED BY: HOWARD NEEDLES TAMMEN & BERGENDOFF - CONSULTING ENGINEERS 9/17/59

GENERAL NOTES
Rivets 7/8"φ except as noted
Holes 15/16"φ except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by Kr ... 4 22 59
Checked by CWK
Revisions 8/14/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4
SUB BY JOHN F. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

122

SECTION EE
SHOWING COMPLETE BEAM
Symm Abt ℄ Except As Shown

33'-3⅝ b-b Lts (Exact)
13'-0 Parabola

STUD ⅞ dia x 4" - 24 Req - hx 8 ✓
Weld To Top Of Beam

L-6 x 6 x ⅝ x 33'-2⅝ - 2 Req - hx 9 (c) ✓

Cov PL - 16 x ½ x 2'-6'-0 - 2 Req - hx 11 (c) (U.M.) ✓

5 @ 9" = 3'-9 Holes Ream 15/16" In Field

L-6 x 6 x ⅝ x 33'-2⅝ - 2 Req - hx 10 (c) ✓

2 Lts 8 x 6 x ¾ x 2'-0⅝
8 Req ⅞ - hx 5 (c)

2 Lts 8 x 6 x ¾ x 1'-9
8 Req ⅞ - hx 5 (c)

11/16" Holes - Ream 15/16" To M.T.

On PL 5/16

NORTH

2 Lts 6 x 1⅛ CRIMPED

11/16" Holes - Ream 15/16" To M.T.

2 Lts 6 x 1⅛ CRIMPED

2 PL - 4 x 3½ x ⅝ x 4'-6⅝ - 8 Req ⅞ - hx 13 (c) (Sect BB) ✓
2 PL - 4 x 3½ x 7/16 x 4'-5⅝ - 8 Req ⅞ - hx 12 (c) (Sect CC) ✓
2 PL - 4 - 3½ x 7/16 x 4'-4½ - 8 Req ⅞ - hx 20 (c) (Sect DD) ✓

11/16" Holes Ream 15/16" To M.T.

Sect BB
Sect CC
Sect DD

L-7 x 4 x ½ x 4'-3 13/16 - 4 Req R L - hx 15 (c) ✓
Mill To Bear @ Bottom
Section AA

Section BB
Section CC
Section DD

L-7 x 4 x ½ x 4'-3⅛ - 2 Req - hx 14 (c) ✓
Mill To Bear @ Bottom

All Stiffener Ends Not Marked, Milled To Fit And Be Tight Against Web After Beams Painted

See Notes On Sheet #1

1½ - 7 x 4 x ¾ x 1'-11 ✓
4 Req ⅞ - hx 4 (c)
Tack Weld FS

2 PL - 12 x ⅝ x 3'-2¾ - 8 Req - hx 6 (c) ✓

33'-1¾ b-b Lts

Web PL - 54 x 7/16 x 33'-2⅝ - 2 Req - hx 7 (c) ✓

Fill PL - 13 x ¾ x 1'-7 7/16 - 4 Req - hx 3 (c)
Tack Weld

2 PL - 6 x 6 x ⅝ x 33'-0¾ - 4 Req ⅞ - hx 2 (c) ✓

Cov PL 16 x ½ x 26'-0 - 2 Req - hx 1 (c) (U.M.) ✓

2 Floor Beams - A196 ✓ (L59-L43)
Anchor Span Unit 3 ✓
Anchor Span Unit 4 ✓
FBB Drwg 4.06

Approved By: Howard, Needles Tammen & Bergendoff Consulting Engineers: 9/25/59

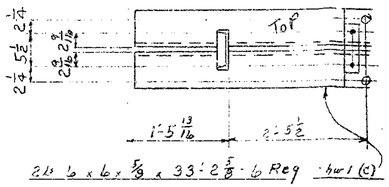
GENERAL NOTES
Rivets 7/8" ⊕ except as noted
Holes 15/16" except as noted
End Distance 1¾" unless noted
Shop Paint Red Lead (Ark. Std.)
Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivets
Drawn by C.W.K. 4-14-59
Checked by I.P.C.
Revisions

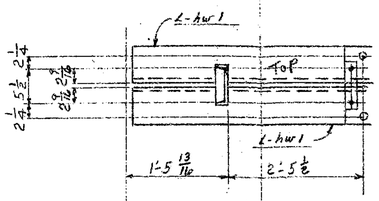
APPROVED BY
L. P. Carlson
Bridge Design Engineer
12-30-60
RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY GA DATE 12-26-60

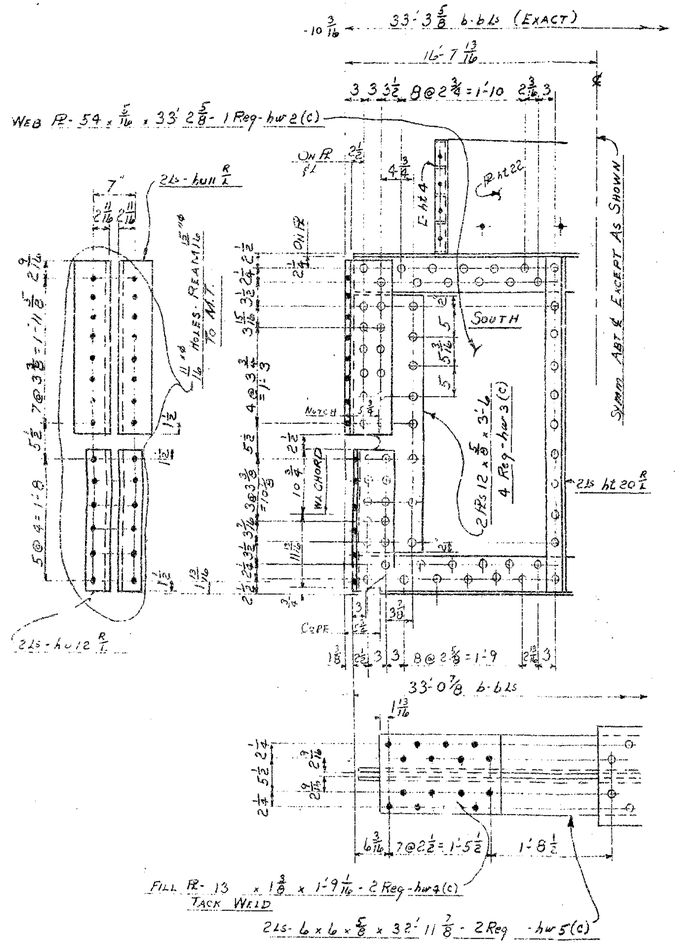
BOOK No. 3

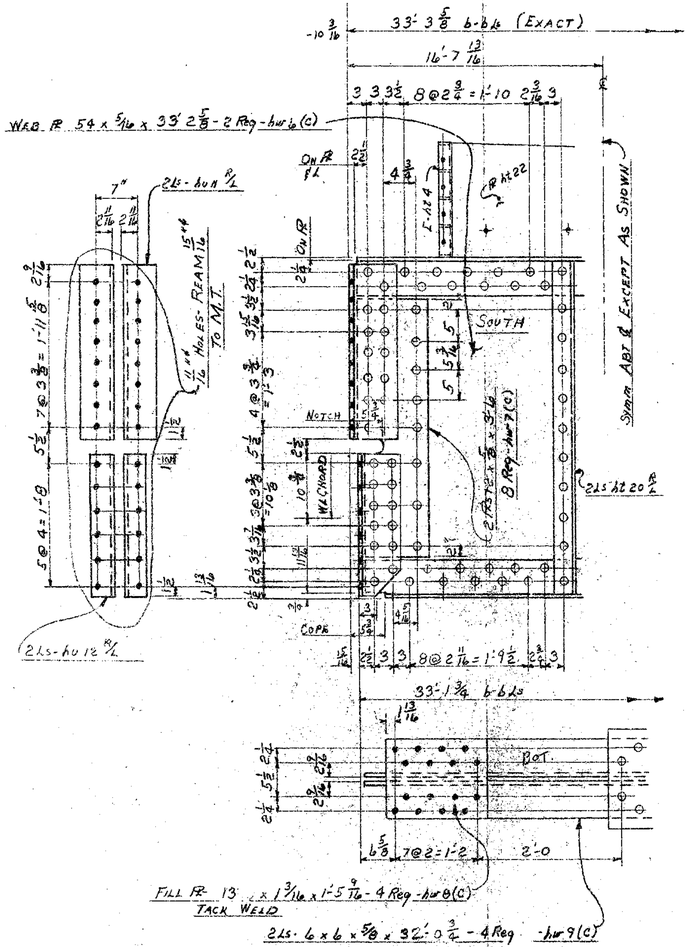
Arkansas State Highway Commission
Mississippi State Highway Commission
Mississippi River Bridge
Near Helena, Arkansas
Unit No. 3 & 4
Sold To: John F. Beasley Constr. Co.
Chicago, Illinois

SHOP VINCENNES STEEL CO. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800-F Sh. 196 of









ONE FLOOR BEAM AS NOTED - A195 - (L51)
PART NOT SHOWN SAME AS A192

2 FLOOR BEAMS AS NOTED - B195 (L55-L56)
PART NOT SHOWN SAME AS A192

SEE NOTES ON SHEET #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8 ø H.R. except as noted
Holes 15/16 ø except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by CWK 4-14-59
Checked by RC
Revisions

APPROVED BY 9/17/59
L.P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ALG DATE 9-15-59

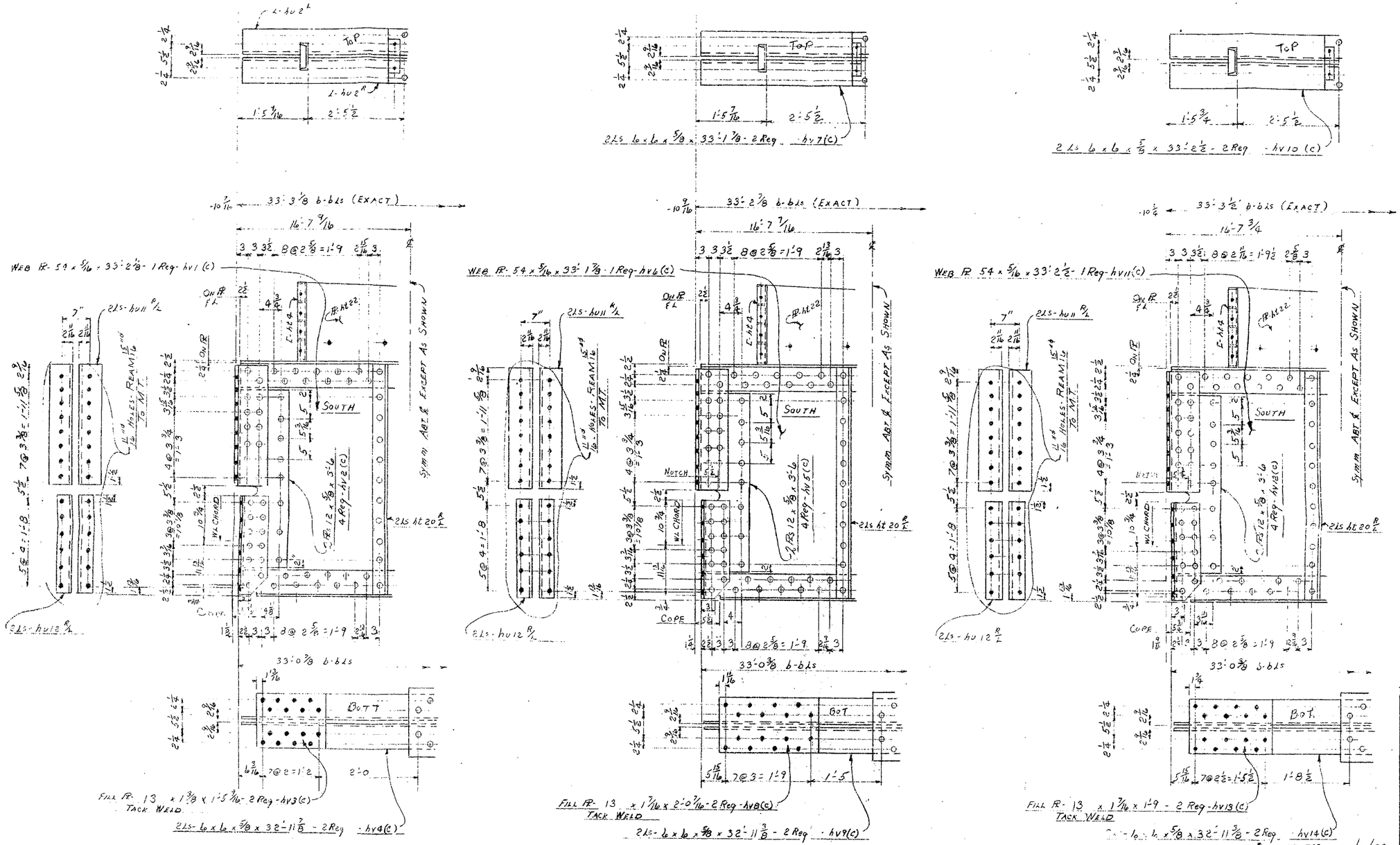
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILL.

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 195 of

120



ONE FLOOR BEAM AS NOTED - A194 (445)
PART NOT SHOWN SAME AS A192

ONE FLOOR BEAM AS NOTED - B194 (497)
PART NOT SHOWN SAME AS A192

ONE FLOOR BEAM AS NOTED - C194 (499)
PART NOT SHOWN SAME AS A192

SEE NOTES ON SHEET #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

APPROVED BY 9/17/59
L.P. Carlson
Bridge Design Engineer

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by C.W.K. 4-14-59
Checked by R.C.
Revisions

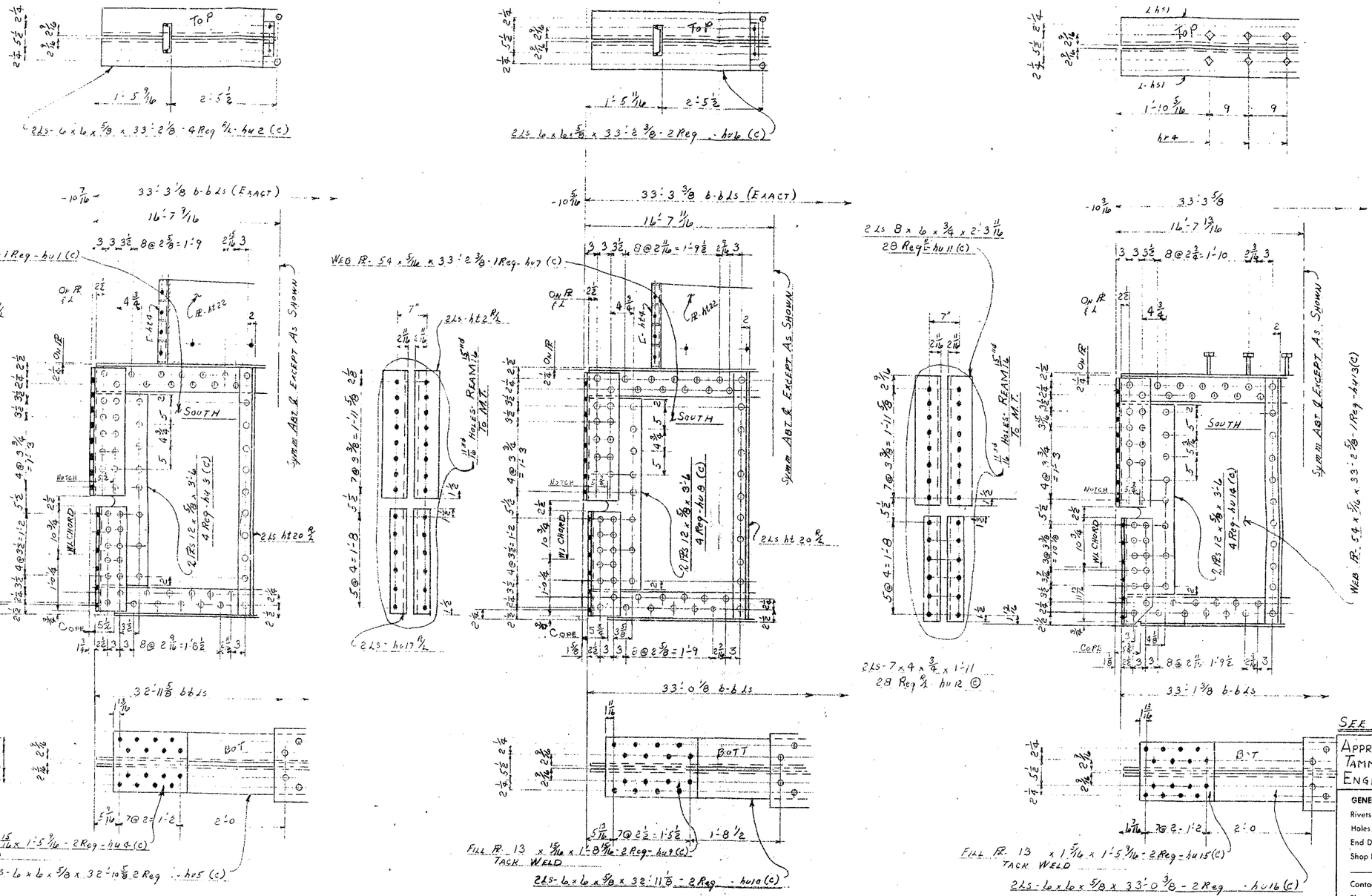
RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY A.L.F. DATE 9-15-59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT NO. 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILL.

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 194 of



APPROVED BY
L. P. Carlson
Bridge Design Engineer
9/17/59

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY AEG DATE 9-15-59

SEE NOTES ON SHEET #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop inspection by
Field Connections RIVETS
Drawn by CWK 4-13-59
Checked by RC
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILL.

SHOP VINCENNES STEEL CORP. VINCENNES, IND. DIV. OF INDUSTRIAL ENTERPRISES, INC.
CONTR. NO. 4800 Sh. 193 of

118

Cov PL - 16 x 1/2 x 26'-0 - 10 Req - ht 5 (c) (U.M)

2 Ls - 6 x 6 x 5/8 x 33'-2 5/8 - 4 Req - ht 9 (c)

Fx - 16 3/4 x 3/8 x 2'-2 - 20 Req - ht 22 (c)

Symm About ℄ Except As Shown

33'-3 5/8 b-b Ls (Exact)

13'-0

10'-11 13/16

2 Ls 8 x 6 x 3/4 x 2'-3 1/4 16 Req'd - ht 2 (c)

11/16 Holes - Ream 15/16 To M.T.

South

2 PLs 12 x 5/8 x 3'-6 — 4 Req - ht 6 (c) - A192; 4 Req - ht 7 (c) - B192

2 Ls ht 20 1/2

11/16 Holes - Ream 15/16 To M.T.

Web PL - 54 x 5/16 x 33'-2 5/8 — 1 Req - ht 14 (c) - (A192); 1 Req - ht 15 (c) - (B192)

2 Ls ht 20 1/2

11/16 Holes - Ream 15/16 To M.T.

Fill PL - 4 x 5/8 x 3'-6 - 20 Req - ht 17 (c)

Fill 4 x 5/8 x 3'-6 - 40 Req - ht 19 (c)

2 Ls - 7 x 4 x 1/2 x 4'-5 1/4 - 20 Req 3/4 ht 16 (c) — Mill To Bear @ Bottom

2 Ls - 7 x 4 x 1/2 x 4'-5 1/4 - 40 Req 3/4 ht 18 (c) — Mill To Bear @ Bottom

Others To Exclude Water After Being Painted

Section AA

Section BB

See Notes On Sheet #1

2 Ls - 4 x 3 1/2 x 7/16 x 4'-6 1/4 (Abt) - 120 Req'd - ht 20 (c) Crimped

Shim PL - 6 @ 12" x 1'-4 3/4 - 20 Req - ht 4 (c)

Stiff PL - 2 1/8 x 3/8 x 5 1/4 - 100 Req - ht 21 (c) Weld

13/16 Holes

On A192

On B192

Section CC

33'-0 5/8 b-b Ls For A192

33'-1 b-b Ls For B192

Cov PL - 16 x 1/2 x 24'-0 - 10 Req - ht 12 (c) (U.M)

2 Ls - 6 x 6 x 5/8 x 32'-11 5/8 - 2 Req - ht 10 (c) - A192

x 32'-0 - 2 Req - ht 11 (c) - B192

Fill PL - 13 x 7/8 x 1'-5 9/16 - 2 Req - ht 13 (c) - (A192)

Fill PL - 13 x 3/4 x 1'-5 9/16 - 2 Req - ht 3 (c) - (B192)

Tack Weld

One Floor Beam As Noted - A192 (1 Ea)

One Floor Beam As Noted - B192 (1 Ea)

11/16 Holes

Shim 2 1/4 x 3/4 x 8" - 20 Req - ht 8 (c)

Tack Weld To Top Fl

9/17/59

APPROVED BY

L. P. Carlson

Bridge Design Engineer

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY ALC Date 7-16-59

Approved by: Howard, Needles, Tammen & Bergendoff, Consulting Engineers

GENERAL NOTES

Rivets 7/8" ϕ except as noted

Holes 15/16" ϕ except as noted

End Distance 1.5d unless noted

Shop Paint Red Lead (Ark Std)

Contact Surfaces No Paint

Shop Inspection by

Field Connections Rivets

Drawn by CWK 4-13-59

Checked by RC

Revisions

Arkansas State Highway Commission

Mississippi State Highway Commission

Mississippi River Bridge

Near Helena Ark.

Unit # 4

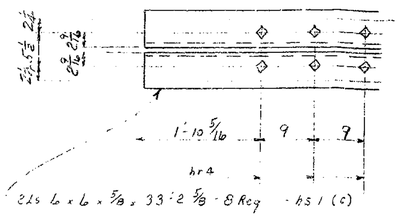
Sold To John F Beasley Constr. Co.

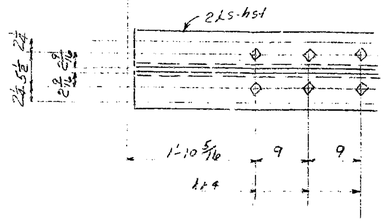
Chicago, Illinois

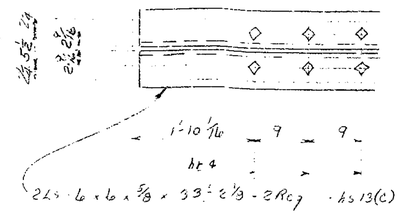
SHOP VINCENNES STEEL [illegible] VINCENNES, IND.

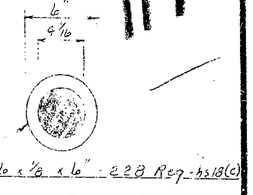
Contr. No. 4800 Sh. 192 of

117

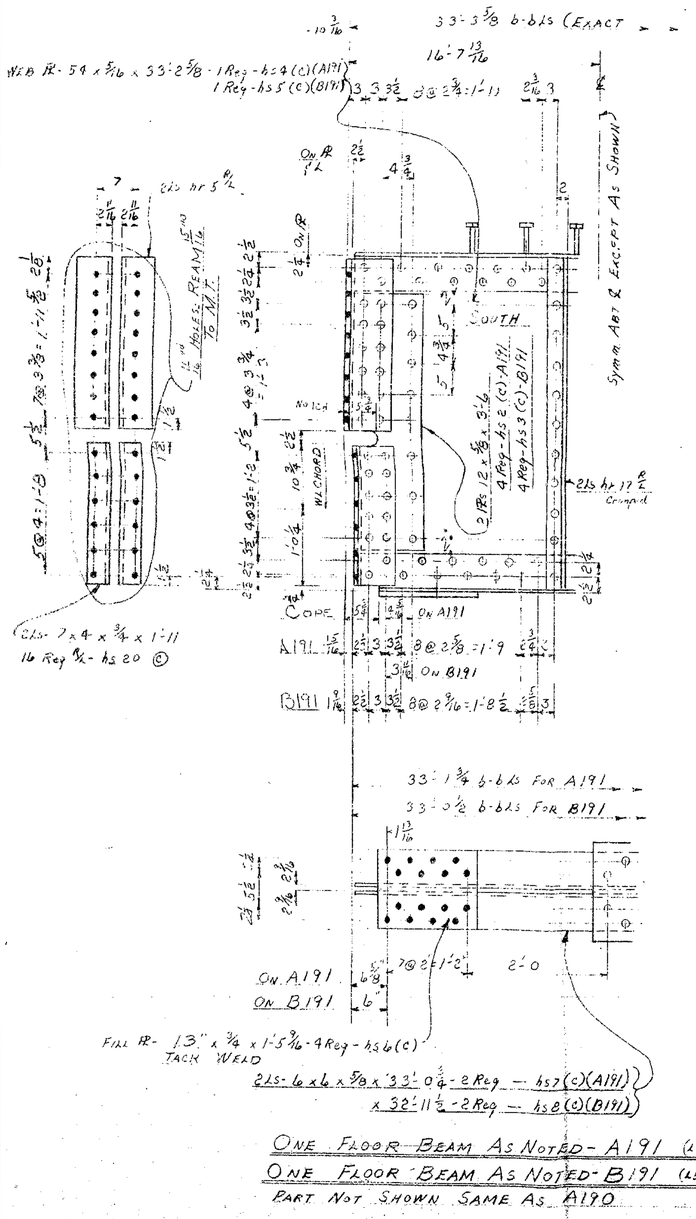




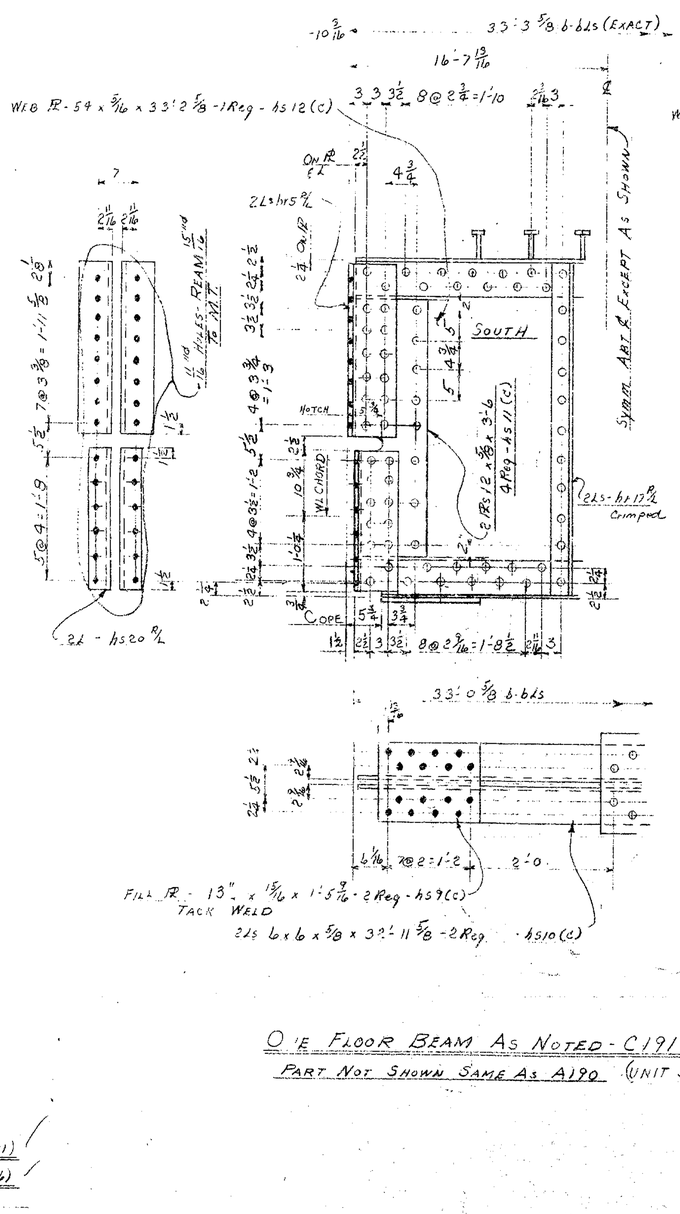




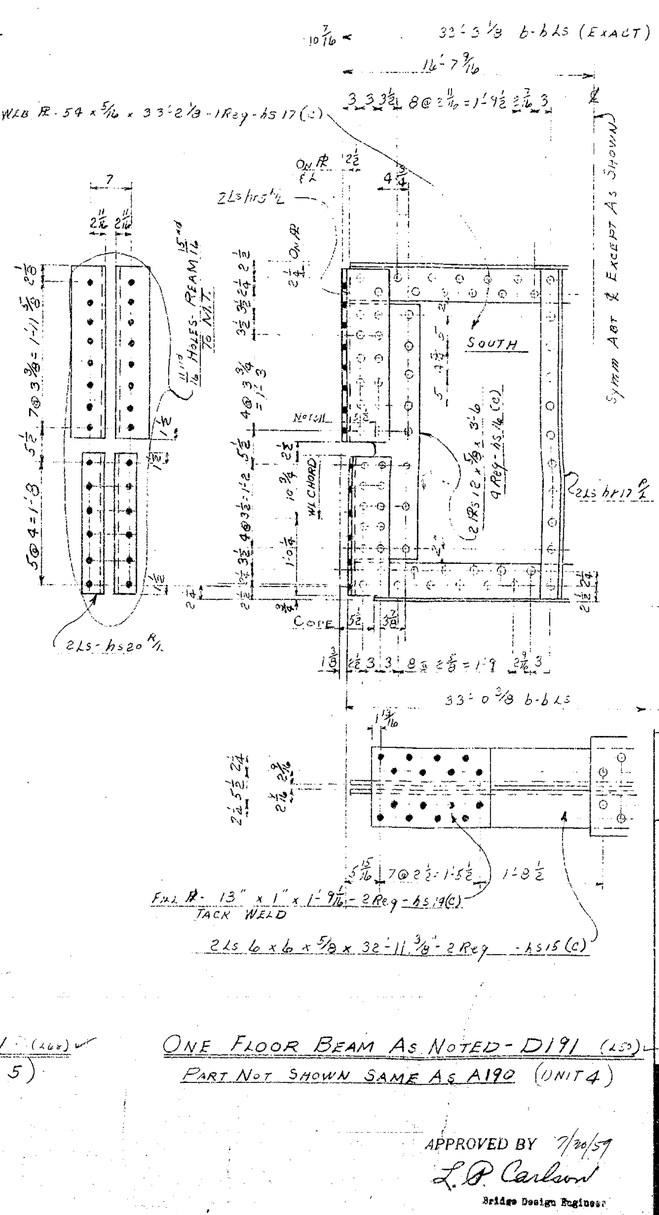
228 RING FILLS - F191
FOR CONTRACTION JOINTS



ONE FLOOR BEAM AS NOTED - A191 (42)
ONE FLOOR BEAM AS NOTED - B191 (45)
PART NOT SHOWN SAME AS A190

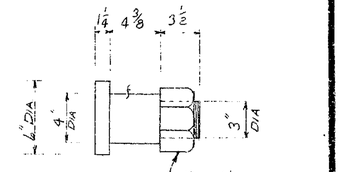


ONE FLOOR BEAM AS NOTED - C191 (46)
PART NOT SHOWN SAME AS A190 (UNIT 5)



ONE FLOOR BEAM AS NOTED - D191 (45)
PART NOT SHOWN SAME AS A190 (UNIT 4)

APPROVED BY 7/20/59
L P Carlson
Bridge Design Engineer



MADE FROM A235-54T (CLASS 1) OR A108-54T STEEL

1/4 CONTRACTION PINS - F191
24 Req - UNIT 1
18 Req - UNIT 2
24 Req - UNIT 3
24 Req - UNIT 4
24 Req - UNIT 5

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HWL DATE 7-27-59
SEE NOTES SH #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

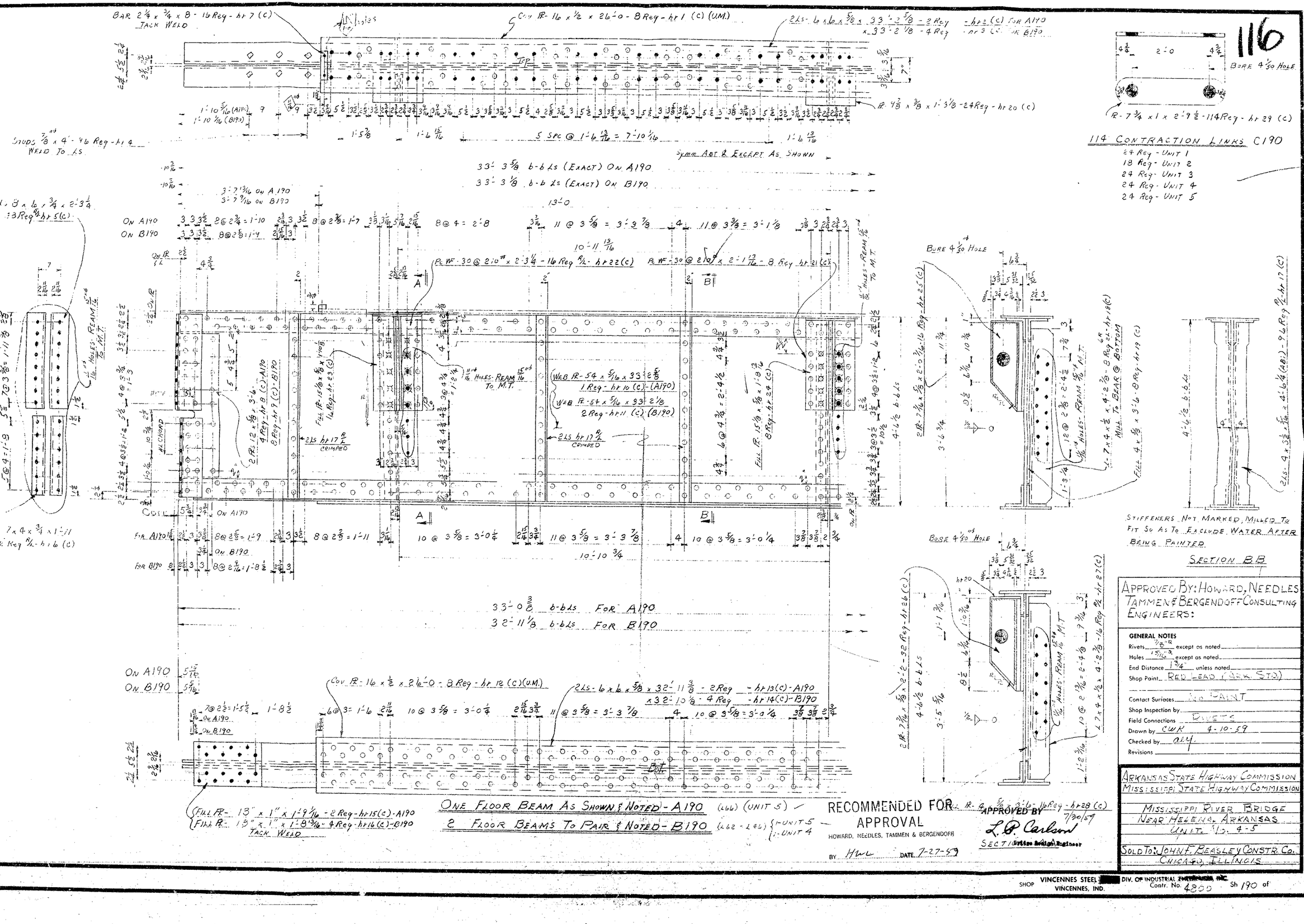
GENERAL NOTES
Rivets 7/8" S. except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Point RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by CWK 4-10-59
Checked by AU
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4-5

SOLD TO: JOHN F. BEASLEY CONSTR CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL [redacted] DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 191 of



114 CONTRACTION LINKS C190

24 Req - UNIT 1
18 Req - UNIT 2
24 Req - UNIT 3
24 Req - UNIT 4
24 Req - UNIT 5

SYMM ABT ℄ EXCEPT AS SHOWN

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (FED. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by CWR 4-10-59
Checked by ASY
Revisions

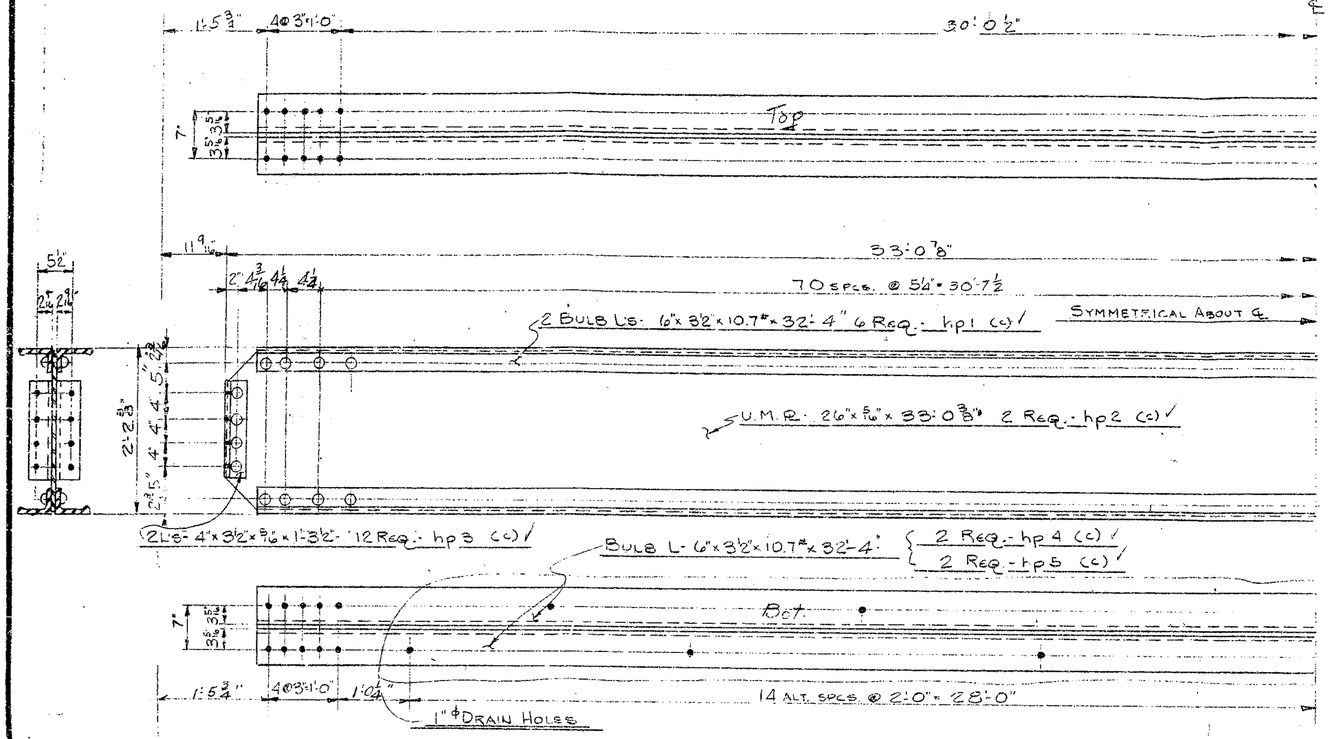
RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HWL DATE 7-27-59

APPROVED BY
L. P. Carlson
7/30/59
STATE BRIDGE ENGINEER

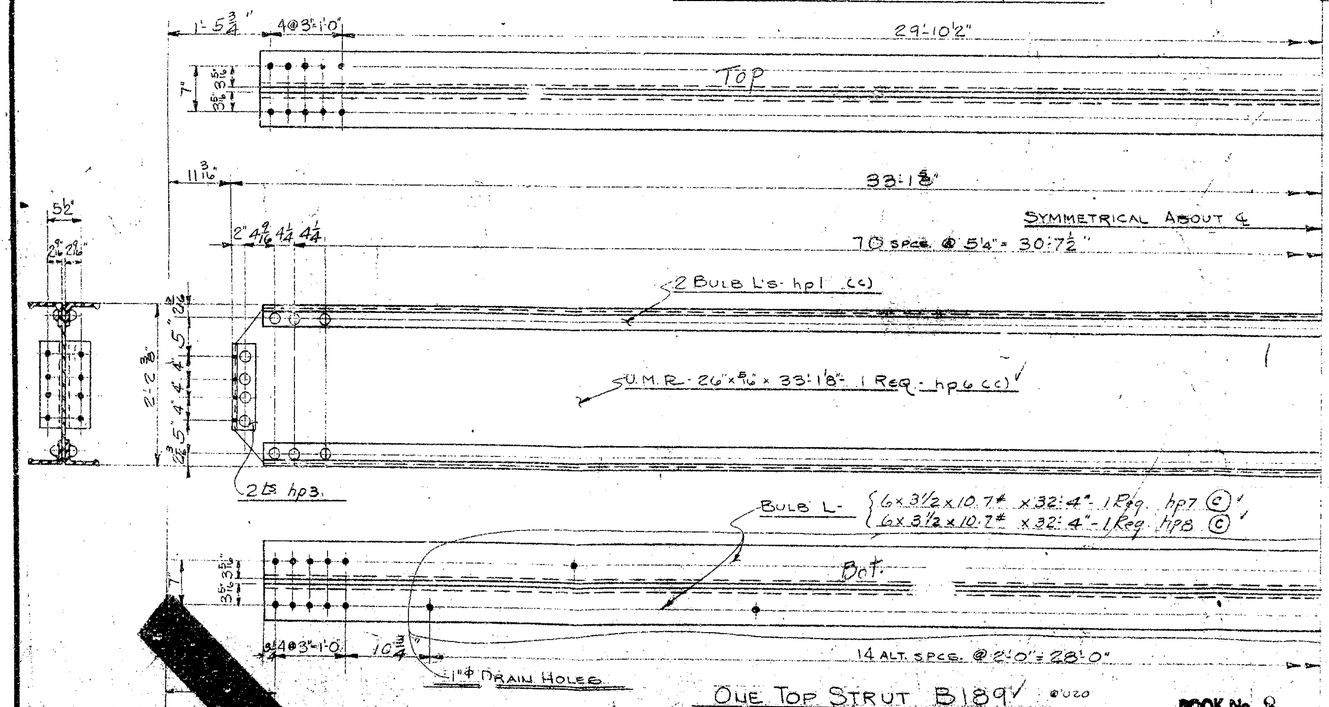
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT 1, 2, 4-5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

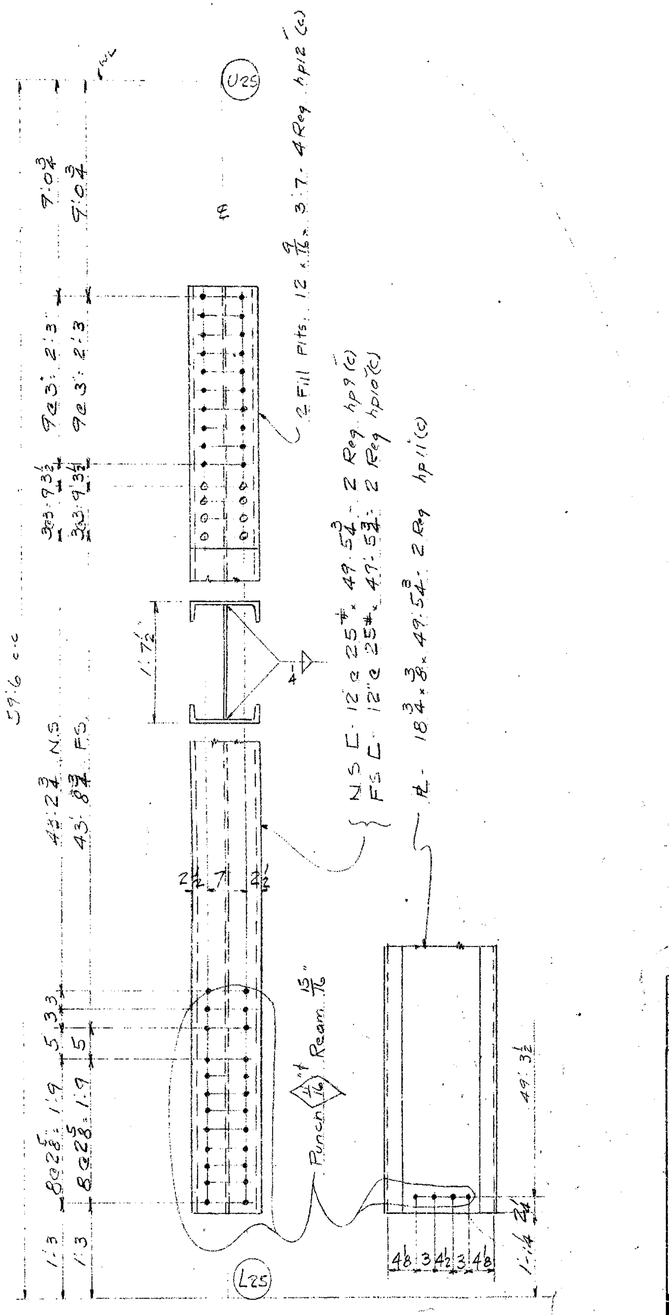


2 TOP STRUTS A189 ✓ @ U19 & U21



ONE TOP STRUT B189 ✓ @ U20

BOOK No. 8
4800-F



2 VERTICALS - C189 ✓

4800-T

BOOK No. 7

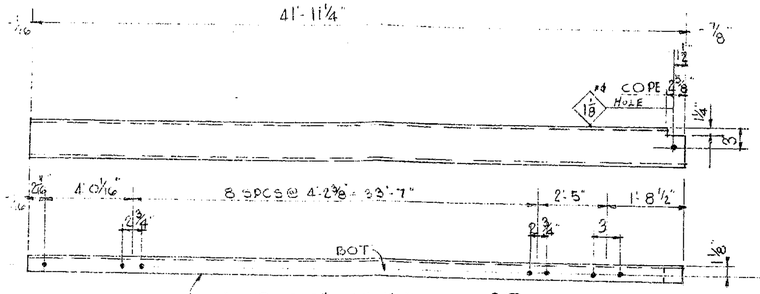
RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ____ DATE 9-12-60
SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS
8/31/59

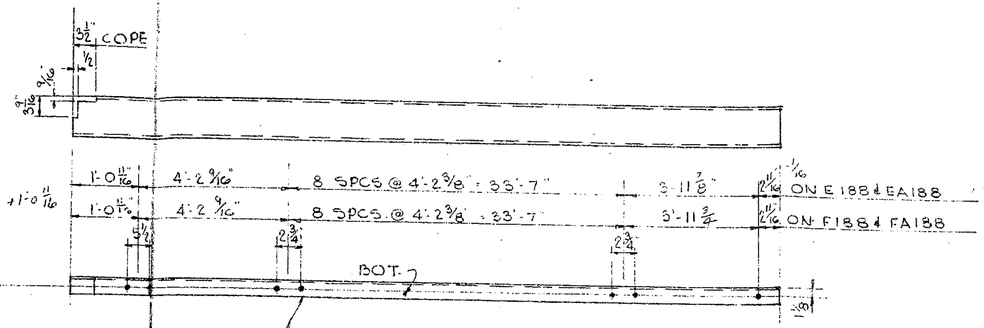
GENERAL NOTES
Rivets 7/8 ϕ except as noted
Holes 15/16 ϕ except as noted
End Distance 1 1/4 unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by APPROVED BY 9/14/60
Field Connections
Drawn by KWW
Checked by AW 7-28-5
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT # 2
SOLD TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

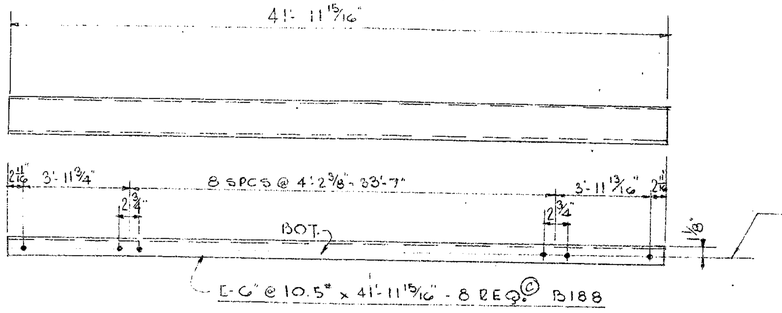
SHOP VINCENNES STEEL CORP. VINCENNES, IND.
BY DEVELOPMENTAL ENTERPRISES, INC.
Contr. No. 4800 Sh. 189 of



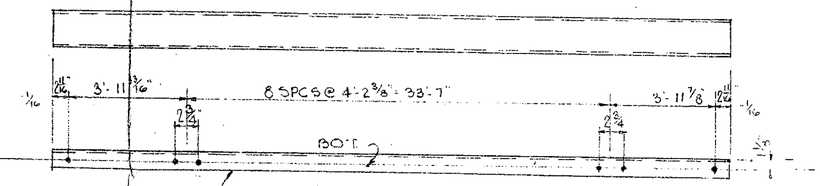
E-G @ 10.5# x 41'-11¼" - 1 REQ'D © A188
1 REQ'D L © AA188



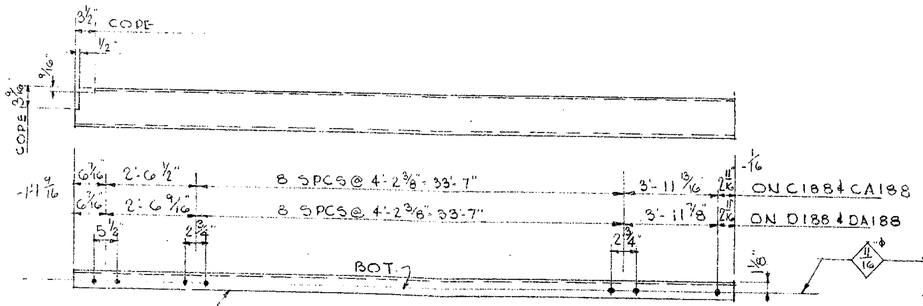
E-G @ 10.5# x 43'-0 13/16" - 2 REQ'D © E188
2 REQ'D L © EA188
E-G @ 10.5# x 43'-0 11/16" - 2 REQ'D © F188
2 REQ'D L © FA188



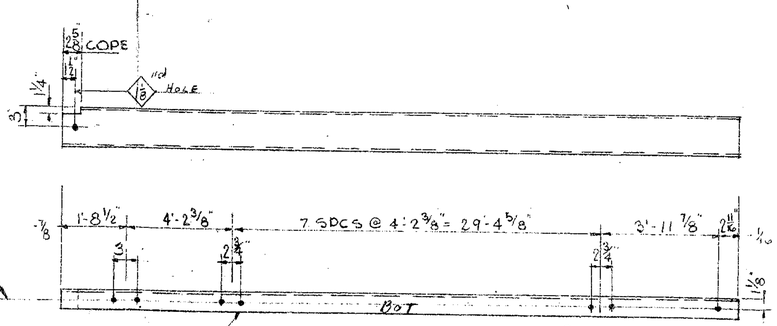
E-G @ 10.5# x 41'-11 15/16" - 8 REQ'D © B188



E-G @ 10.5# x 42'-0 1/16" - 4 REQ'D © G188



6"E @ 10.5# x 40'-10 7/16" - 2 REQ'D © C188
2 REQ'D L © CA188
6"E @ 10.5# x 40'-10 9/16" - 2 REQ'D © D188
2 REQ'D L © DA188



E-G @ 10.5# x 39'-6 1/16" - 1 REQ'D © J188
1 REQ'D L © JA188

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 8-26-59
SEE NOTE SHT "1

APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

APPROVED BY 8/31/59
L. P. Carlson
Bridge Design Engineer

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD
Contact Surfaces NO PAINT
Shop Inspection
Field Connections RIVETS
Drawn by C.A.B APR 17, 1959
Checked by C.W.K
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARK
UNIT 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILL.

SHOP VINCENNES STEEL [redacted] DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.
Contr. No. 4800 Sh. 188 of

113

4'-2 21/32"

8 SPCS @ 4'-2 3/8" = 33'-7"

2'-5"

1'-9 7/32"

2 3/4"

5 1/2"

2 3/4"

8 1/2" STRIP FLG. & GRIND SMOOTH TYP. BOTH ENDS T. & B.

SECTION A-A

8 1/2"

41'-11 7/8"

40'-11 5/8"

5/32

3 3/8"

1/2

A

PUNCH 11/16" ϕ
REAM 15/16" ϕ
To M.T.

4 hm 2

L- 8 x 4 x 1/2 x 2'-8" - 4 REQ hm 2
BOLT TO SHIP

6 SPCS @ 4 3/4" = 2'-4 1/2"

10 ALT. SPCS @ 2 13/16" = 2'-4 1/8"

2'-8"

T C

B T

ONE STRINGER AS SHOWN A187
ONE STRINGER TO PAIR AA187

36WF@150# x 41'-8 5/8" 2 REQ B.L. hm 1

3/16 TYP

1/4"

BOT

3" 12 3"

12 10

7'-10 3/4"

26'-2 3/8"

7'-10 3/4"

L- 8 x 4 x 1/2 x 2'-8" - 2 REQ hm 3
BOLT TO SHIP

PUNCH 11/16" ϕ
REAM 15/16" ϕ
To M.T.

8 SPCS @ 3 1/2" = 2'-4"

12 ALT. SPCS @ 2 3/8" = 2'-4 1/8"

2'-8"

41'-11 7/8"

40'-11 5/8"

5/32

3 3/8"

1/2

A

4 hm 3

PUNCH 11/16" ϕ
REAM 15/16" ϕ
To M.T.

36WF@170# x 41'-8 5/8" - 1 REQ hm 4

1-10@25.4" x 1:2 - 1 REQ - hm 7

3@3 1/2" = 10 1/2"

15'-11 7/16"

4'-1 7/8"

20'-11 15/16"

1/4"

TYP

3/16"

3/16"

10

12

R-9 7/16" x 1/2" x 1'-0 1/2" - 1 REQ hm 6

ONE STRINGER B187

R-7 5/8" x 1/2" x 1'-0 1/2" - 4 REQ hm 5

3/16"

1/4"

3" 12 3"

SECT. B-B AS SHOWN
SECT. C-C TO PAIR

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 8-20-59

APPROVED BY 8/31/59
L.P. Carlson
Bridge Design Engineer

SEE NOTE SHT. #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by C.A.B. APR. 15, 59
Checked by C.W.K.
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARK.
UNIT 2

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILL.

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.

Contr. No. 4800 Sh. 187 of

112

HOLES IN G186

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

8 SPCS @ 4'-2 3/8" = 33'-7"

8 SPCS @ 4'-2 3/8" = 33'-7"

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

A186, AA186, B186 & BA186, D186 & E186
C186 & CA186, F186 & G186

HOLES IN:
A186, AA186, B186
BA186, C186, CA186
D186, E186, F186

8½" STRIP FLG. & GRIND SMOOTH TYP. BOTH ENDS T.& B.

SECTION A-A

(41'-11¾" ON A186, AA186, B186 & BA186) (41'-11⅞" ON C186 & CA186)

(40'-11½" ON A186, AA186, B186 & BA186) (40'-11⅞" ON C186 & CA186)

PUNCH 1 1/16" REAM TO 1 15/16" M.T.

4 - 8 x 4 x ½ x 2'-8" BOLT TO SHIP

16 SPCS @ 4" = 2'-4½"

10 ALT. SPCS @ 2⅜" = 2'-4⅛"

36 WF @ 150# x 41'-8½" - 4 REQ'D PL © hk 7 FOR A186, AA186, B186 & BA186

36 WF @ 150# x 41'-8⅛" - 4 REQ'D PL © hk 8 FOR C186 & CA186

ONE STRINGER AS SHOWN & NOTED A186
ONE STRINGER TO PAIR AS NOTED AA186
ONE STRINGER AS SHOWN & NOTED B186
ONE STRINGER TO PAIR AS NOTED BA186
2 STRINGERS AS SHOWN & NOTED C 186
2 STRINGERS TO PAIR AS NOTED CA186

PL 3⅛ x ⅝ x 1'-2" - 12 REQ'D hk 2 ©

PL 16 WF 58# x 1'-4⅜" - 8 REQ'D hk 3 ©

BOT.

7'-10¾ / 7'-10¾ | 26'-2¼ / 26'-2⅞ | 7'-10¾ / 7'-10¾

A186, AA186, B186 & BA186
C186 & CA186

PUNCH 1 1/16" REAM TO 1 15/16" M.T.

PL 8⅛ x ½ x 1'-0½ - 2 REQ'D hk 13 SECT. B-B A186 & AA186
PL 9¾ x ½ x 1'-0½ - 2 REQ'D hk 14 SECT. C-C A186 & AA186
PL 9⅞ x ½ x 1'-0½ - 2 REQ'D hk 15 SECT. B-B B186 & BA186
PL 9¾ x ½ x 1'-0½ - 2 REQ'D hk 16 SECT. C-C B186 & BA186
PL 9⅞ x ½ x 1'-0½ - 4 REQ'D hk 17 SECT. B-B C186 & CA186
PL 9¾ x ½ x 1'-0½ - 4 REQ'D hk 18 SECT. C-C C186 & CA186

SECT. B-B ON A186 & AA186
SECT. C-C ON A186 & AA186
SECT. B-B ON B186 & BA186
SECT. C-C ON B186 & BA186
SECT. B-B ON C186 & CA186
SECT. C-C ON C186 & CA186

SECT. B-B AS SHOWN & NOTED
SECT C-C TO PAIR AS NOTED

8 21/32" 3" 3" 1¾" — 7" STRIP FLG.

PC. 16 WF 58# x 1'-4⅜" - 4 REQ'D hk 9 ©

4 BRACKETS AS SHOWN FOR AA186, BA186, CA186,
4 BRACKETS TO PAIR FOR A186, B186, C186
BOLT TO SHIP

4 BRACKETS FOR D186, E186, F186 & G186
BOLT TO SHIP

(41'-11¾" ON D186 & E186) (41'-11⅞" ON F186 & G186)

(40'-11½" ON D186 & E186) (40'-11⅞" ON F186 & G186)

PUNCH 1 1/16" REAM TO 1 15/16" M.T.

8 SPCS @ 3½" = 2'-4"

12 ALT. SPCS @ 2⅜" = 2'-4½"

36 WF @ 170# x 41'-8½" - 2 REQ'D © hk 5 FOR D186 & E186

36 WF @ 170# x 41'-8⅛" - 1 REQ'D © hk 6 FOR F186

36 WF @ 170# x 41'-8⅞" - 1 REQ'D © hk 25 FOR G186

L 8 x 4 x ½ x 2'-8" - 8 REQ'D hk 4 ©
BOLT TO SHIP

20'-11⅞" / 20'-11 15/16" | 20'-11⅞" / 20'-11 15/16" | D186 & E186 / F186 & G186

PL 10⅛ x ½ x 1'-0½ - 1 REQ'D hk 10 FOR D186 ©
PL 10¼ x ½ x 1'-0½ - 1 REQ'D hk 11 FOR E186 ©
PL 10⅞ x ½ x 1'-0½ - 2 REQ'D hk 12 FOR F186 & G186 ©

ONE STRINGER AS SHOWN & NOTED D186
ONE STRINGER AS SHOWN & NOTED E186
ONE STRINGER AS SHOWN & NOTED F186
ONE STRINGER AS SHOWN & NOTED G186

SEE NOTE SHT 1

APPROVED BY: HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HRS DATE 9-2-59

APPROVED BY 9/10/59
L. P. Carlson
Bridge Design Engineer

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1¾ unless noted
Shop Point RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by C.A.B. APR. 15, 1959
Checked by J.W.K.
Revisions 8/28/59 (ADD'D PL'S & DEL'D BEAM)

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARK.
UNIT 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL [illegible]
VINCENNES, IND.

Contr. No. 4801 Sh. 186 of

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SECTION A-A

STRIP FLG. & GRIND SMOOTH TOP & BOT.

8 SPCS @ 4'-2 3/8" = 33'-7"

41'-9 29/32"

2 PL's 17" x 1 1/16" x 2'-10" - 4 REQ'D hj 2

36 WF @ 150# x 41'-8 5/16 - 2 REQ'D hj 3

1 1/16" holes in R for Projected Grind Smooth PLUG WELD

BORE 4 1/16" HOLE

ONE STRINGER AS SHOWN A185
ONE STRINGER TO PAIR AA185

BOT.

7'-10 3/4

26'-2 3/8

7'-8 17/32

4'-0 7/16"

8 SPCS @ 4'-2 3/8" = 33'-7"

2'-0 19/32"

1'-5 7/8"

4'-8 x 4 x 1/2 x 2'-8" - 2 REQ'D hj 1
BOLT TO SHIP

PUNCH 11/16" REAM 15/16" TO M.T.

8 SPCS @ 4 1/8" = 2'-4 1/2"

12 ALT SPCS @ 2 7/8" = 2'-4 1/8"

2 1/2" EQUAL SPCS @ 19" = 2'-4 1/8"

8 1/2"

41'-9 29/32"

2 1/8"

2 PL's 17" x 1 1/16" x 2'-9 7/8" - 2 REQ'D hj 6

36 WF @ 170# x 41'-8 5/16 - 1 REQ'D hj 5

1 5/16" holes in R for Plug Weld Grind Smooth - PLUG WELD

BORE 4 1/16" HOLE

20'-11 15/16"

20'-9 31/32"

BOT.

R - 10 5/16 x 1/2 x 1'-0 1/2" - 1 REQ'D hj 4

ONE STRINGER B 185

R - 9 7/8 x 1/2 x 1'-0 1/2" - 2 REQ'D hj 8 @ SECT. C-C
R - 9 7/8 x 1/2 x 1'-0 1/2" - 2 REQ'D hj 7 @ SECT. B-B

7 1/2" SECT. C-C ON A185 & AA185

7 1/4" SECT. B-B ON A185 & AA185

SECT. B-B AS SHOWN & NOTED
SECT. C-C TO PAIR AS NOTED

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY F.C.T. DATE 8-26-59

SEE NOTE SHT. "1"

APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by C.A.B. APR. 14, 59
Checked by C.W.K.
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARK.
UNIT 4

SOLD TO JOHN T. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

APPROVED BY 8/31/59
L.O. Carlson
Bridge Design Engineer

SHOP VINCENNES STEEL [redacted] OF INDUSTRIAL [redacted]
VINCENNES, IND.

Contr. No. 4800 Sh. 185 of

110

8 SPCS @ 4'-2 3/8" = 33'-7"

8 SPCS @ 4'-2 3/8" = 33'-7"

4'-2 3/8" FOR A184, AA184, B184 & BA184

4'-2 15/32" FOR C184 & CA184

SECTION A-A

STRIP FLG & GRIND SMOOTH TOP & BOTTOM.

(41'-9 25/32" ON A183 & AA184 & B184 & BA184) (41'-9 31/32" ON C184 & CA184)

2 PLS-17" x 11/16" x 2'-10"-12 REQ hh3 ©

36 WF @ 150# x 41'-8 3/16 - 4 REQ hh1 FOR A184, AA184, B184, BA184

36 WF @ 150# x 41'-8 3/8 - 2 REQ hh2 FOR C184 & CA184

3/8" hole for Pipe weld in PL Grind Smooth PLUG WELD

BORE 4 1/8" HOLE

ONE STRINGER AS SHOWN & NOTED A184
ONE STRINGER TO PAIR AS NOTED AA184
ONE STRINGER AS SHOWN & NOTED B184
ONE STRINGER TO PAIR AS NOTED BA184
ONE STRINGER AS SHOWN & NOTED C184
ONE STRINGER TO PAIR AS NOTED CA184

BOT.

26'-2 1/4"
26'-2 3/8"

7'-10 3/4"
7'-10 21/32"

A184, AA184, B184 & BA184
C184 & CA184

L-8 x 4 x 1/2 x 2'-8" - 4 REQ hh4 ©
BOLT To SHIP

10 ALT SPCS @ 2 3/8" = 24 1/4"

6 SPCS @ 4 3/4" = 24 1/2"

PUNCH 1 1/16" REAM 15/16" To M.T.

PL 9 7/8" x 1/2" x 1'-0 1/2" - 2 REQ hh7 FOR SECT B-B ON A184 & AA184 ©
PL 8 7/8" x 1/2" x 1'-0 1/2" - 2 REQ hh8 FOR SECT C-C ON A184 & AA184 ©
PL 8 7/8" x 1/16" x 1'-0 1/2" - 2 REQ hh9 FOR SECT B-B ON B184 & BA184 ©
PL 9 1/4" x 1/16" x 1'-0 1/2" - 2 REQ hh10 FOR SECT C-C ON B184 & BA184 ©
PL 9 1/8" x 1/2" x 1'-0 1/2" - 2 REQ hh11 FOR SECT B-B ON C184 & CA184 ©
PL 9 1/8" x 1/2" x 1'-0 1/2" - 2 REQ hh12 FOR SECT C-C ON C184 & CA184 ©

PL 9 7/8" x 1/2" FOR SECT B-B A184 & AA184
PL 8 7/8" x 1/2" FOR SECT C-C A184 & AA184
PL 8 7/8" x 1/16" FOR SECT B-B B184 & BA184
PL 9 1/4" x 1/16" FOR SECT C-C B184 & BA184
PL 9 1/8" x 1/2" FOR SECT B-B C184 & CA184
PL 9 1/8" x 1/2" FOR SECT C-C C184 & CA184

SECT. B-B AS SHOWN & NOTED
SECT. C-C TO PAIR AS NOTED

(41'-9 25/32" ON D184 & E184) (41'-9 31/32" ON F184)

2 PLS-17" x 11/16" x 2'-9 7/8" - 6 REQ hh6 ©

3 GW F @ 170# x 41'-8 3/16 - 2 REQ hh16 FOR D184 & E184 ©
3 GW F @ 170# x 41'-8 3/8 - 1 REQ hh17 FOR F184 ©

3/8" hole for Pipe weld PLUG WELD Grind smooth

BORE 4 1/8" HOLE

20'-9 23/32
20'-10"

20'-11 7/8"
20'-11 31/32"

D184 & E184
E184

BOT.

ONE STRINGER AS SHOWN & NOTED D184
ONE STRINGER AS SHOWN & NOTED E184
ONE STRINGER AS SHOWN & NOTED F184

PL 10 1/8" x 1/2" x 1'-0 1/2" - 1 REQ hh13 FOR D184 ©
PL 10 1/4" x 1/2" x 1'-0 1/2" - 1 REQ hh14 FOR E184 ©
PL 10 3/8" x 1/2" x 1'-0 1/2" - 1 REQ hh15 FOR F184 ©

L-8 x 4 x 1/2 x 2'-8" - 2 REQ hh5 ©
BOLT To SHIP
SEE NOTE SHT. "1"

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 8-26-59

APPROVED BY 8/31/59
L. P. Carlson
Bridge Design Engineer

APPROVED by: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by C.A.B. APR. 13, 1959
Checked by C.W.K
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARK.
UNIT 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL [redacted] DIV. OF INDUSTRIAL [redacted] INC.
VINCENNES, IND.
Contr. No. 4800 Sh. 184 of

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8 SPCS. @ 4'-2 3/8" = 33'-7"
8 SPCS. @ 4'-2 3/8" = 33'-7"

4'-2 3/8"
4'-2 15/32" ON A183-AA183 B183-BA183 & C183-D183

4'-2 3/8" B183 & BA183
4'-2 15/32" A183 & AA183

ON E183 ONLY

8½ STRIP FLG & GRIND SMOOTH TYP BOTH ENDS 7 & 8.

SECTION A-A

(41'-11 15/16" ON A183 & AA183) (41'-11¾" ON B183 & BA183)
(40'-11 1/16" ON A183 & AA183) (40'-11½" ON B183 & BA183)

L-8 x 4 x ½ x 2'-8" - 1 REQ hg 1 © BOLT TO SHIP

6 SPCS @ 4½" = 2'-4½"
10 ALT. SPCS @ 2⅜" = 2'-4⅞"

PUNCH 11/16" REAM 15/16" TO M.T.

hg 1 ©

ONE STRINGER AS SHOWN & NOTED A183
ONE STRINGER TO PAIR AS NOTED AA183
2 STRINGERS AS SHOWN & NOTED B183
2 STRINGERS TO PAIR AS NOTED BA183

WF 36 @ 150# x 41'-8 1/16 - 2 REQ hg 2 FOR A183 & AA183 ©
WF 36 @ 150# x 41'-8½ - 4 REQ hg 3 FOR B183 & BA183 ©

TOP
BOT.

7'-10 25/32"
7'-10¾"
26'-2 3/8"
26'-2¼"
7'-10 25/32" ON A183 & AA183
7'-10¾" ON B183 & BA183

L-8 x 4 x ½ x 2'-8" - 6 REQ hg 6 © BOLT TO SHIP

6 SPCS @ 4½" = 2'-4"
12 ALT. SPCS @ 2⅜" = 2'-4⅛"

(41'-11 15/16" ON C183) (41'-11¾" ON D183 & E183)
(40'-11 1/16" ON C183) (40'-11½" ON D183 & E183)

WF 36 @ 170# x 41'-8 1/16 - 1 REQ hg 5 FOR C183 ©
WF 36 @ 170# x 41'-8½ - 2 REQ hg 4 FOR D183-E183 ©

20'-11 31/32"
20'-11 7/8"
20'-11 31/32" C183
20'-11 7/8" D183 & E183

R 10 7/16 x ½ x 1'-0½ - 1 REQ hg 7 FOR C183 ©
R 10⅛ x ½ x 1'-0½ - 2 REQ hg 8 FOR D183-E183 ©

ONE STRINGER AS SHOWN & NOTED C183
ONE STRINGER AS SHOWN & NOTED D183
ONE STRINGER AS SHOWN & NOTED E183

R 9⅞ x ½ x 1'-0½ - 2 REQ hg 9 ON SECT. C-C A183 & AA183
R 9⅞ x ½ x 1'-0½ - 2 REQ hg 10 ON SECT. B-B A183 & AA183
R 8⅞ x ½ x 1'-0½ - 4 REQ hg 11 ON SECT. B-B B183 & BA183
R 9¾ x ½ x 1'-0½ - 4 REQ hg 12 ON SECT. C-C B183 & BA183

SECT. C-C A183 & AA183
SECT. B-B A183 & AA183
SECT. C-C B183 & BA183
SECT. B-B B183 & BA183

SECT. B-B AS SHOWN & NOTED
SECT. C-C TO PAIR AS NOTED

APPROVED BY 8/31/59
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 8-26-59

SEE NOTE SHT. #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by C.A.B. APR. 10, 1959
Checked by C.W.K.
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARK.
UNIT 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILL.

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
Contr. No. 4800 Sh. 183 of

108

8 SPCS @ 4'-2⅜" = 33'-7"

4'-2 7/32"

4'-2 13/32"

8 SPCS @ 4'-2⅜" = 33'-7"

4'-2 7/32"

C182 ONLY

A182 - AA182 - B182

FOR A182 AA182 B182

FOR C182

8½" STRIP FLG & GRIND SMOOTH TYP. BOTH ENDS T&B.

8½"

SECTION A-A

41'-11⅝"

40'-11⅜"

PUNCH 11/16" ⌀ REAM 15/16" ⌀ TO M.T.

PUNCH 11/16" ⌀ REAM 15/16" ⌀ TO M.T.

L-8"x4"x½" x 2'-8" - 8 REQ'D hf1 © BOLT TO SHIP

6 SPCS @ 4⅜" = 24½"

10 ALT. SPCS @ 2⅜" = 24½"

36WF@150# x 41'-8⅜" - 4 REQ'D hf2 © ✓

2 STRINGERS AS SHOWN A182 ✓

2 STRINGERS TO PAIR AA182 ✓

BOT.

7'-10 25/32"

26'-2¼"

7'-10 19/32"

L-8"x4"x½" x 2'-8" - 8 REQ'D hf1 © TYP. exc. C182 & B182

L-8"x4"x½" x 2'-8" - 2 REQ'D hf15 © TYP. exc. B182

L-8"x4"x½" x 2'-8" - 8 REQ'D hf1 © BOLT TO SHIP

8 SPCS @ 3⅜" = 2'-4⅞"

8 SPCS @ 3½" = 2'-4"

12 ALT. SPCS @ 2⅜" = 2'-4½"

36WF@170# x 41'-8⅜" — 2 REQ'D hf6 © ✓

41'-11⅜"

40'-11⅜"

20'-11¾"

20'-11⅞"

20'-11⅞"

20'-11¾"

5/32" FOR C182

1/32" FOR B182

BOT.

ONE STRINGER AS SHOWN & NOTED B182 ✓

ONE STRINGER AS SHOWN & NOTED C182 ✓

PL 10⅜" x ½" x 1'-0½" - 2 REQ'D hf7 ©

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY FES DATE 9-12-60

PL 9 7/16" x ½" x 1'-0½" - 4 REQ'D hf3 SECT. C-C

PL 9⅜" x ½" x 1'-0½" - 4 REQ'D hf4 SECT. B-B

SECT B-B AS SHOWN & NOTED

SECT. C-C TO PAIR AS NOTED

APPROVED BY 9/15/60

L.P. Carlson

Bridge Design Engineer

SEE NOTE SHT #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 8/31/59

GENERAL NOTES

Rivets 7/8" ⌀ except as noted

Holes 15/16" ⌀ except as noted

End Distance 1¼" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by C.N.B. APR. 9, 1959

Checked by E.W.K.

Revisions

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE

NEAR HELENA, ARK.

UNIT 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.

CHICAGO, ILLINOIS

BOOK No. 4

SHOP VINCENNES STEEL VINCENNES, IND.

DIV. OF INDUSTRIAL [illegible]

Contr. No. 4800-F Sh. 182 of

107

8 SPCS @ 4'-2 3/8" = 33'-7"

4'-2 7/16"

A181 & AA181 & C181

TOP

STRIP FLG & GRIND SMOOTH TYP BOTH ENDS T&B.

SECTION A-A

41'-11 7/8"

40'-11 5/8"

PUNCH REAM To MT

ONE STRINGER AS SHOWN & NOTED A181
ONE STRINGER TO PAIR AS NOTED AA181

36 WF @ 150# x 41'-8 5/8" - 2 REQ hc 1 C

BOT.

7'-10 3/4

26'-2 3/8

PUNCH 11/16 REAM 15/16 To MT.

2 - 9/16 x 1/2 x 1'-0 1/2" - 2 REQ hc 9 C SECT. B-B
2 - 9/16 x 1/2 x 1'-0 1/2" - 2 REQ hc 10 SECT. C-C

SECT. B-B AS SHOWN & NOTED
SECT C-C TO PAIR AS NOTED

L-8 x 4 x 1/2 x 2'-8" - 2 REQ hc 3 C
BOLT TO SHIP

8 SPCS @ 3 1/2 = 2'-4"
12 ALT SPCS @ 2 3/8" = 2'-4 1/2"

36 WF @ 170# x 41'-8 5/8" - 1 REQ hc 5 C

20'-11 15/16"

R - 10 5/16 x 1/2 x 1'-0 1/2" - 1 REQ hc 7 C

ONE STRINGER AS SHOWN C181

L-8 x 4 x 1/2 x 2'-8" - 2 REQ hc 4

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 8-26-59

SEE NOTE SHT #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

APPROVED BY 8/31/59
L.P. Carlson
Bridge Design Engineer

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 1/4" unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by C.A.B. APR. 8, 1959
Checked by C.W.K.
Revisions

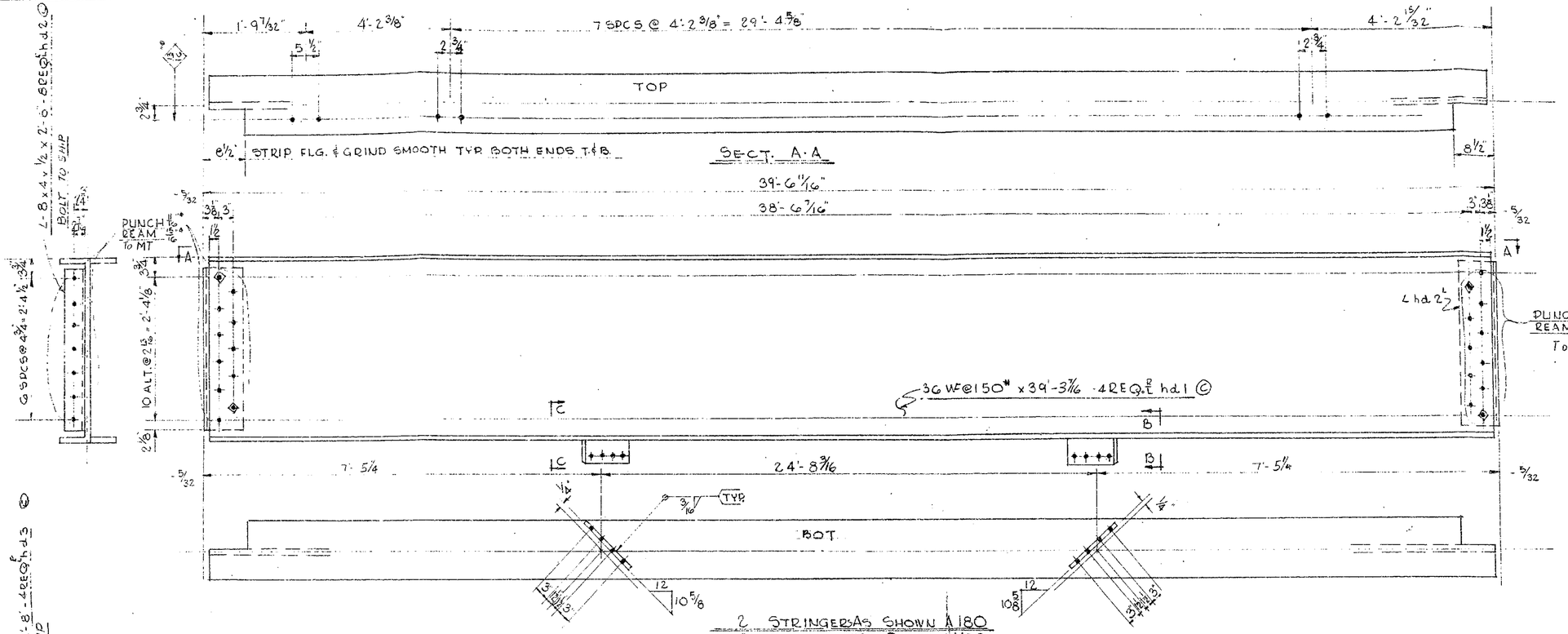
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

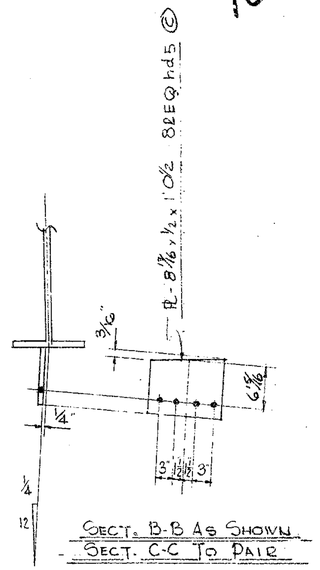
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARK.
UNIT 4

SOLD TO JOHN F. BEASLEY CONSTR CO
CHICAGO, ILL.

SHOP VINCENNES STEEL [redacted] Contr. No. 4800 Sh. 181 of
VINCENNES, IND.

106





RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 8-26-59

SEE NOTE SHT #1

APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" Φ except as noted
Holes 15/16" Φ except as noted
End Distance 1 3/4" unless noted
Shop Point RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by C.A.B. APR 7, 1959
Checked by C W K
Revisions

APPROVED BY 8/31/59
L. P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARK.
UNIT 3 & 4

SOLD TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILL.

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND. Contr. No. 4800 Sh. 180 of

105

BAR 2 x 5/16 x 5'-4 - 88 REQ - hc5 (c)

SECTION BB

BAR 2 x 5/16 x 8 3/4" 4 B REQ - hc4 (c)

4 LADDER SECTIONS - A179

4 LADDER SECTIONS - B179

4 LADDER SECTIONS - C179

L 3 x 2 x 7/16 x 1'-3 3/8" - 12 REQ - hc13 (c)

C 6 @ 13" x 1'-6 - 12 REQ - hc11 (c)

KERRIGAN GRATING - 15 5/8" x 2" x 1'-7 3/4" - 12 REQ hc15 (c)
3/16 x 3/4 BARS - END BUTH ENDS (K200)

SECTION AA

PL 7 x 5/16 x 7 5/16" - 24 REQ - hc12 (c)

PL 2 x 5/16 x 1'-1 1/4" - 12 REQ - hc14 (c)

BUTT HINGE - 4 x 4 - 24 REQ - hc13 c
CUT ONE SIDE TO 3/4

SECTION BB

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 8-26-59

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF - CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 1/4" unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by CWK 5-7-59
Checked by ALF.
Revisions

APPROVED BY 8/21/59
L. P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

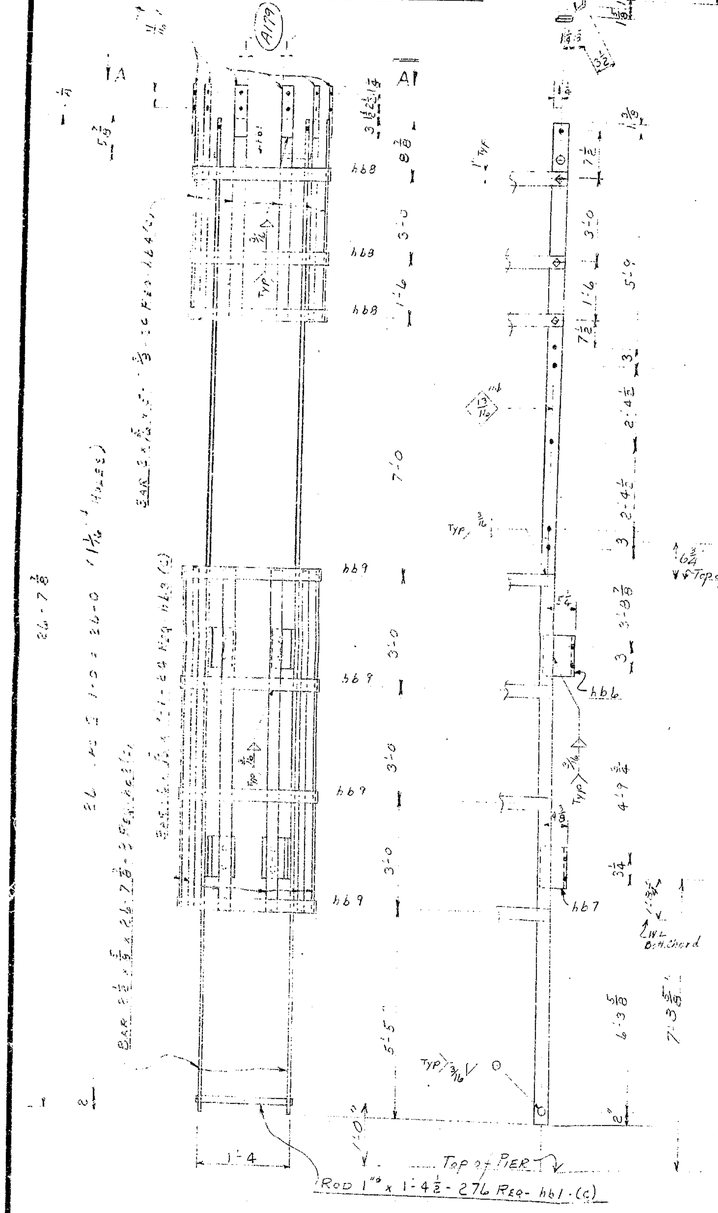
SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND. Contr. No. 4800 Sh. 179 of

104

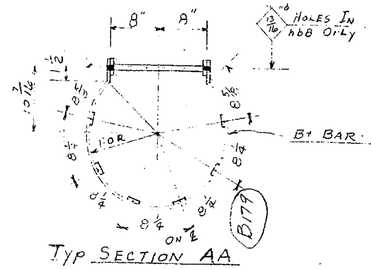
L-6 x 4 x 1/2 x 6'-8 REQ-hb4(c)

Bt R-6 x 1/2 x 7" - 8 REQ - hb7 (C)

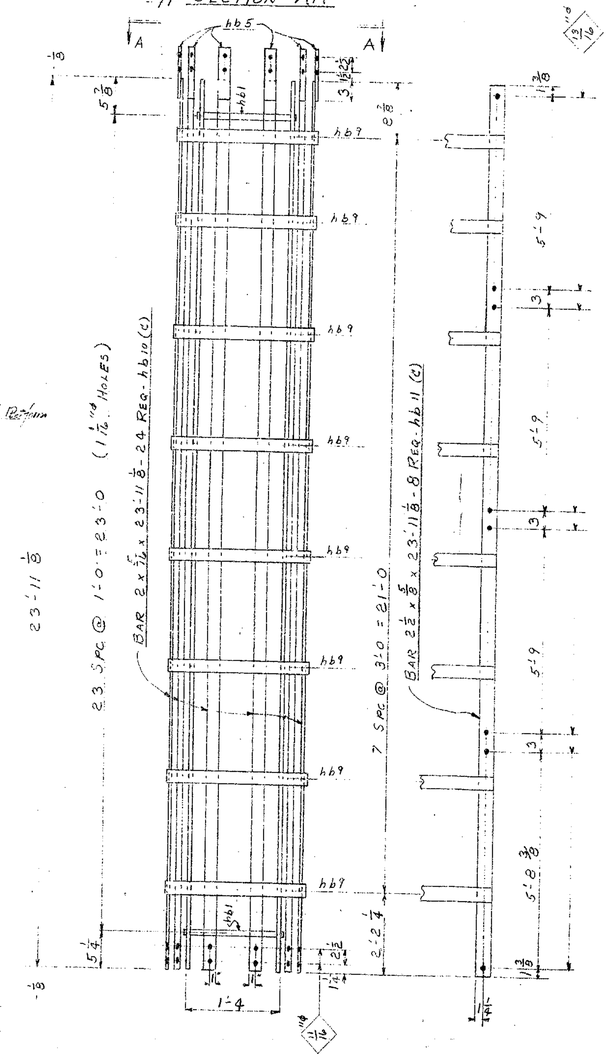
BAR 2 x 5/16 x 8 1/4 - 48 REQ hb5(C)



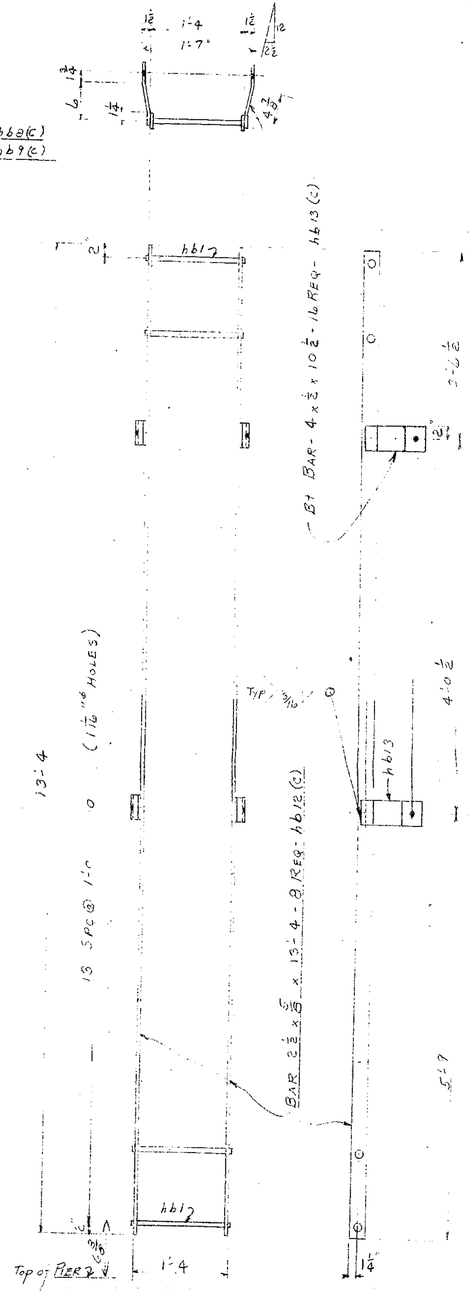
4 LADDER SECTIONS - A178



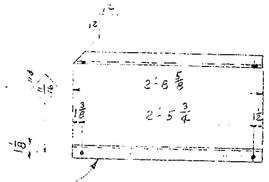
Typ SECTION AA

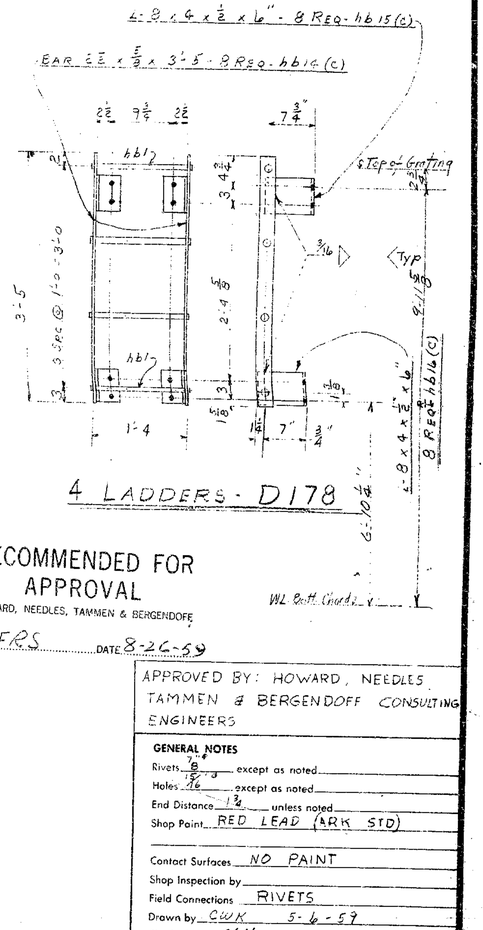


4 LADDER SECTIONS - B178



4 LADDERS C178





4 LADDERS - D178

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 8-26-57

W.L. Scott, Chief Engr.

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" except as noted
Holes 13/16 except as noted
End Distance 1 1/4 unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by CWK 5-6-57
Checked by alg.
Revisions

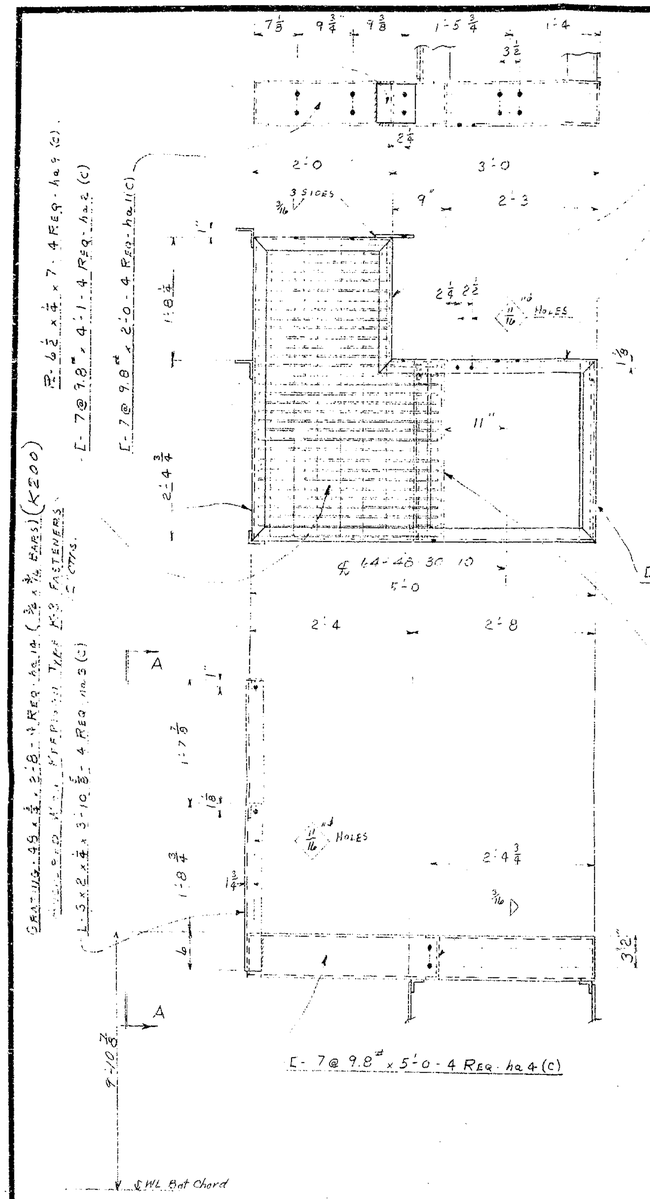
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

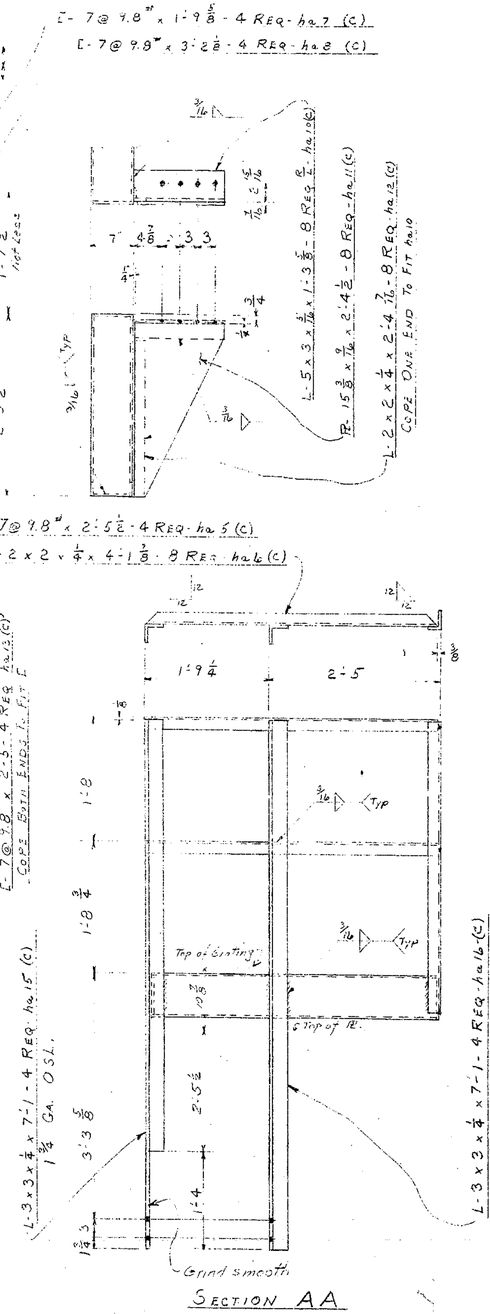
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS

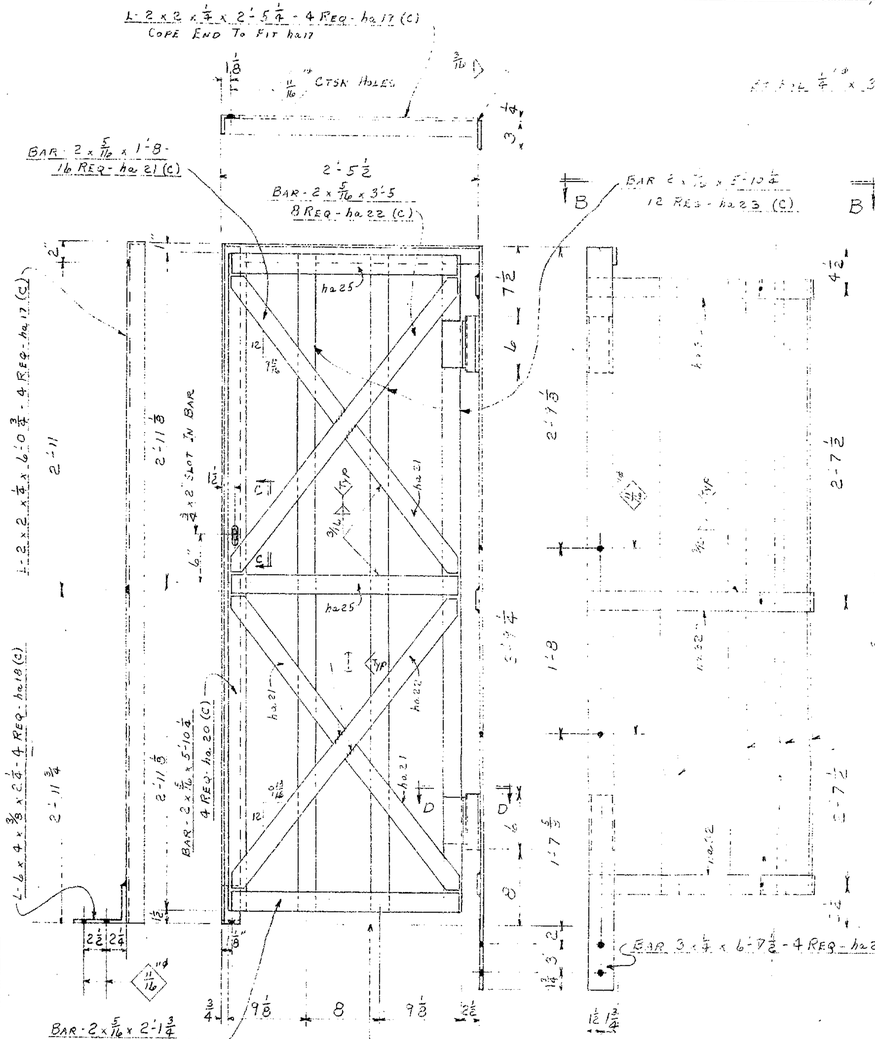
SOLD TO: JOHN F. BEASLY CONSTR CO
CHICAGO ILLINOIS

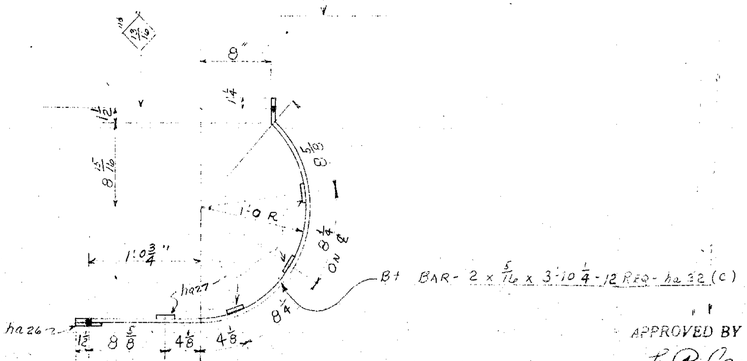
APPROVED BY 8/31/57
L.P. Carlson
Bridge Design Engineer

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND. Contr. No. 4800 Sh. 178 of









RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 9-2-59

SEE NOTE SHEET # 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES

Rivets 13/16" ϕ except as noted
Holes 15/16" except as noted
End Distance 1 3/16" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by EWK 5-5-59
Checked by Orig.
Revisions 9/2/1959 1

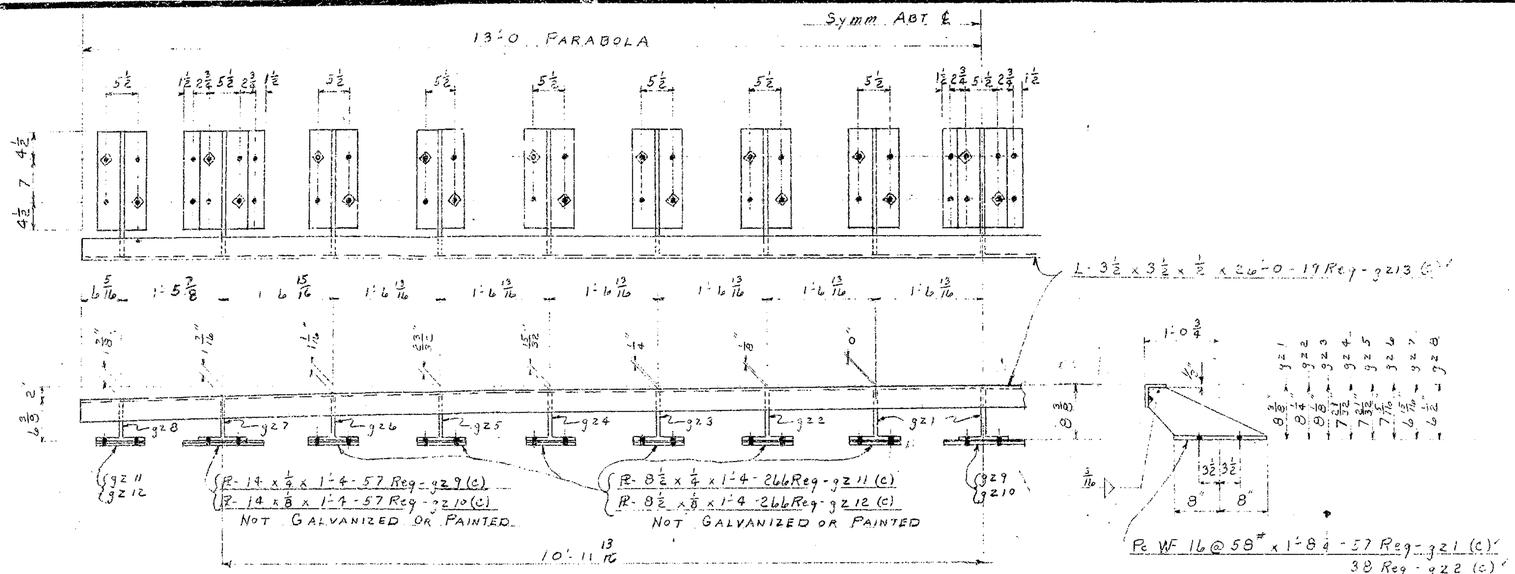
APPROVED BY 9/10/59
L. P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

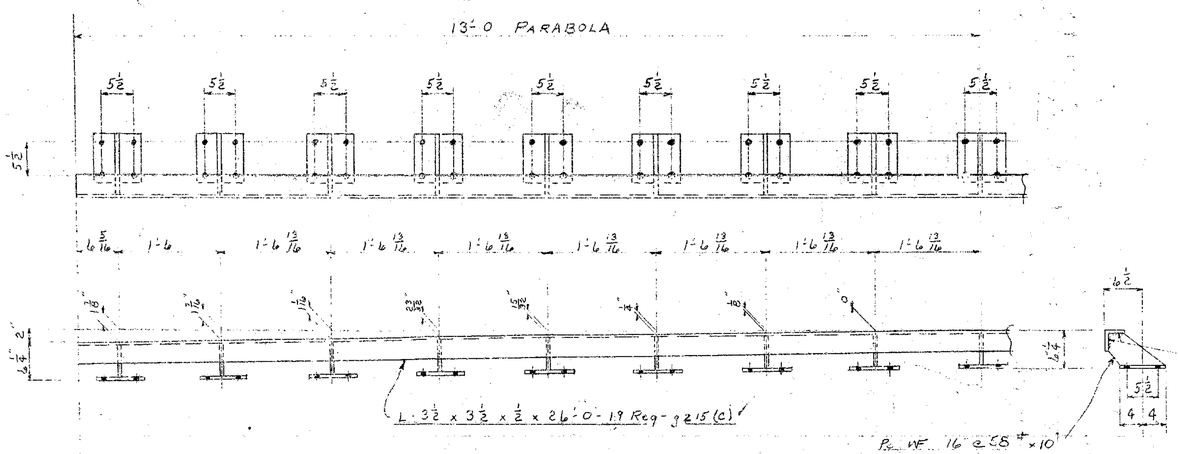
SHOP VINCENNES STEEL [redacted] DIV. OF INDUSTRIAL ENTERPRISES INC.
VINCENNES, IND.
Contr. No. 4800 Sh. 177 of



19 CONTRACTION JOINT ANGLES - A176

GALVANIZED AS NOTED

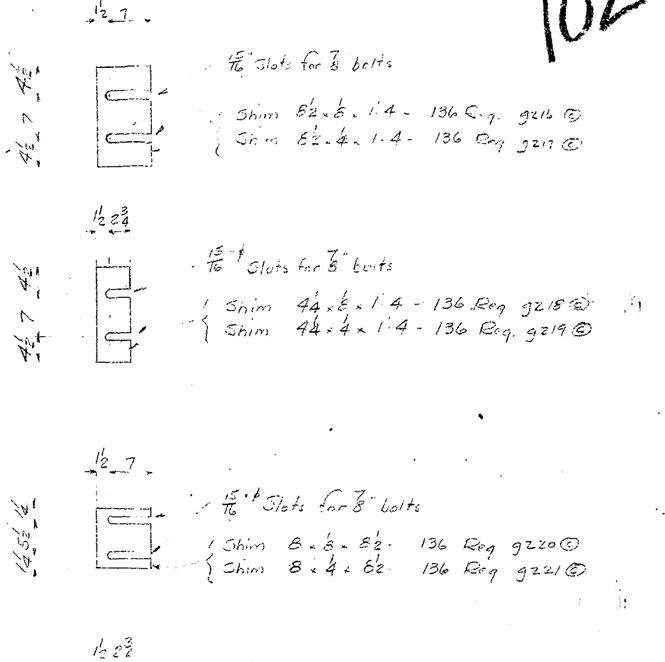
4 REQ - UNIT 5
4 REQ - UNIT 4
4 REQ - UNIT 3
3 REQ - UNIT 2
4 REQ - UNIT 1



19 CONTRACTION JOINT ANGLES - B176

GALVANIZED

4 REQ - UNIT 5
4 REQ - UNIT 4
4 REQ - UNIT 3
2 REQ - UNIT 2
5 REQ - UNIT 1



RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY G.A. DATE 7/30/59

Bridge Design Engineer

SEE NOTE SHEET

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF

CONSULTING ENGINEERS: 7/30/59

GENERAL NOTES

Rivets ⅞" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field-Connections RIVETS
Drawn by CWK 5-1-59
Checked by AWJ
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

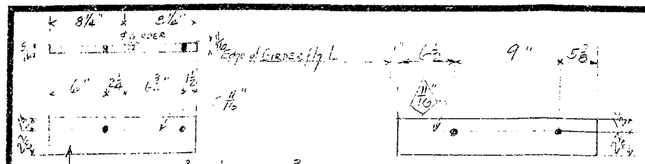
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS

SOLD TO JOHN F. BEASLEY CONTR. CO.
CHICAGO, ILLINOIS

SHOP No. 4

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

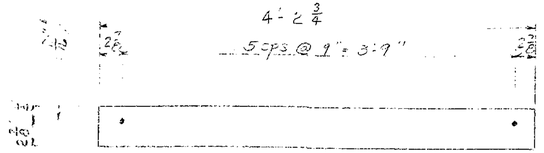
Contr. No. 4800-F Sh. 176 of



R- 4 3/8 x 1/4 x 1'-9 3/8" - 2 Req. A175 (c) } No Paint
R- 4 3/8 x 3/8 x 1'-9 3/8" - 4 Req. B175 (c) }

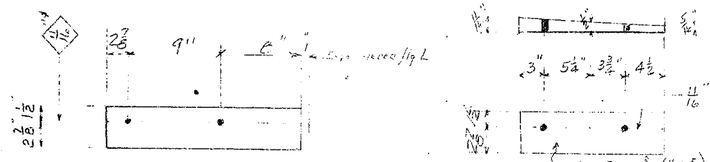
Bet. Fill 4 3/8 x (11/16 + 5/16) x 1'-4 1/2" 2 Req. R175 (c)

(GIRDERS)



R- 4 3/8 x 1/4 x 4'-2 3/4" - 8 Req. C175 (c) } No Paint
R- 4 3/8 x 3/8 x 4'-2 3/4" - 16 Req. D175 (c) }

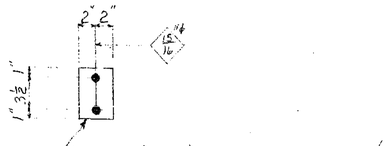
(GIRDERS)



R- 4 3/8 x 1/4 x 1'-7 7/8" - 2 Req. E175 (c) } No Paint
R- 4 3/8 x 3/8 x 1'-7 7/8" - 4 Req. F175 (c) }

Bet. Fill 4 3/8 x (11/16 + 5/16) x 1'-4 1/2" 2 Req. V175 (c)

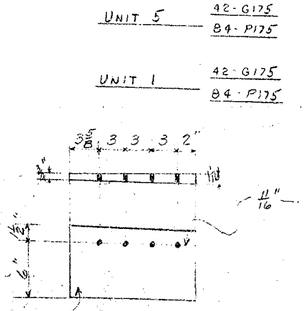
(GIRDERS)

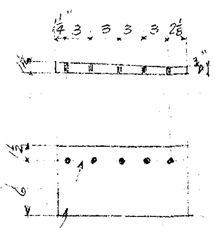


R- 4 x 1/4 x 5 1/2 - 84 Req. G175 (c)
R- 4 x 3/8 x 5 1/2 - 168 Req. H175 (c)
Ship with bolts

No Paint

Unit 5	42 - G175	84 - H175
Unit 1	42 - G175	84 - H175



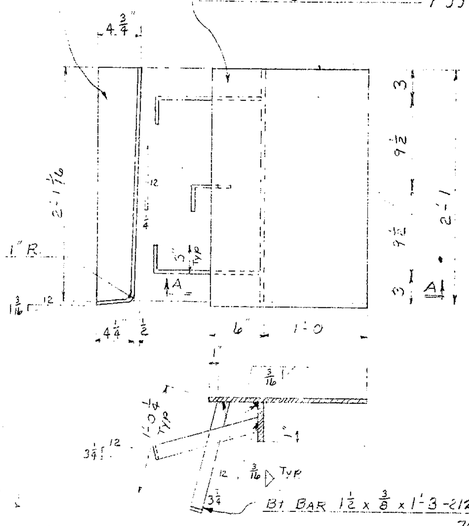


Bev. Fill 7½ x (1 1/16 to 3/4) x 1'-3 3/8" - 2 Req. (T175 (c)

Bev. Fill 7½ x (1 1/16 to 3/4) x 1'-2 5/8" - 2 Req. (S175 (c)

R- 4 3/8 x 3/8 x 2'-1 11/16 - 10 Req. gy 3 (c)

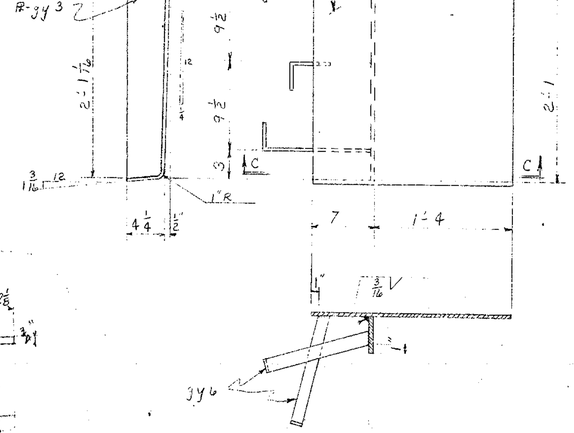
Bt R- 18 x 3/8 x 2'-4 1/2 - 4 Req. gy 4 (c)



SECTION AA

2 Curb Plates As Shown - H175 }
2 Curb Plates To Pair - HA175 } Galvanized or Metallized After Assembly
One Each For Units 1 & 5

Bt R- 23 x 3/8 x 2'-4 1/2 - 6 Req. gy 10 (c)



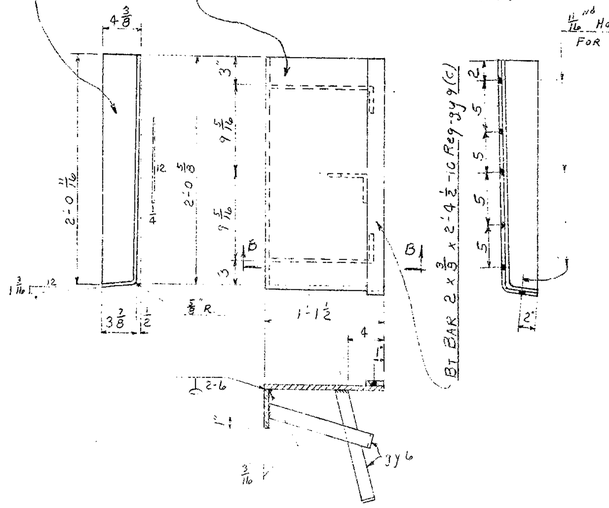
SECTION CC

3 Curb Plates As Shown - K175 }
3 Curb Plates To Pair - KA175 } Galvanized or Metallized After Assembly
One Each For Units 2-3-4

R- 4 3/8 x 3/8 x 2'-0 11/16 - 10 Req. gy 7 (c)

Bt R- 13½ x 3/8 x 2'-3 3/4 - 4 Req. gy 8 (c)

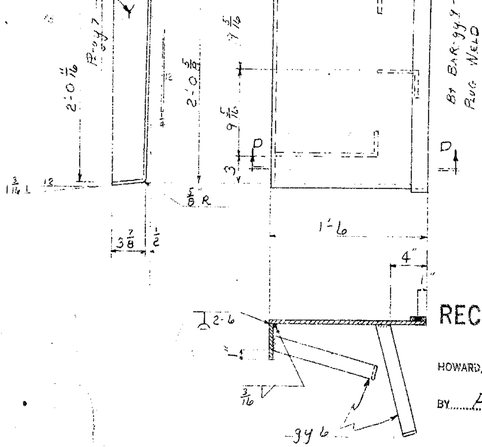
11/16 Holes In gy 9 For Plug Weld



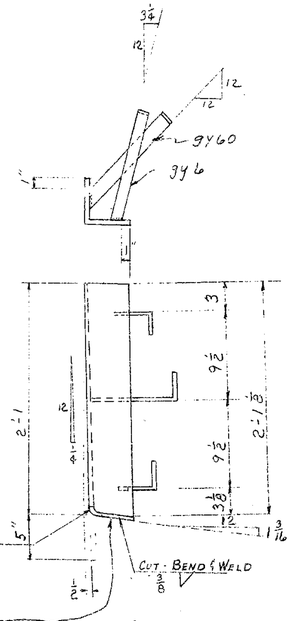
SECTION BB

2 Curb Plates As Shown - J175 }
2 Curb Plates To Pair - JA175 } Galvanized or Metallized After Assembly
One Each For Units 1 & 5

Bt R- 18 x 3/8 x 2'-3 3/4 - 6 Req. gy 11 (c)



SECTION CC



L 5 x 5 x 3/8 x 2'-7 (Adj.) 7/16 Req. R/2 - gy 12

38 Angles As Shown - N175
38 Angles To Pair - NA175

Galvanized or Metallized After Assembly

8 Each For Units 5	5 Each For Unit 2
8 Each For Unit 4	9 Each For Unit 1
8 Each For Unit 3	

See Note Sheet #1

APPROVED BY
L. H. Larson
Bridge Design Engineer
9/15/60

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 9-12-60

Approved By: Howard, Needles, Tammen & Bergendoff Consulting Engineers	Approved 7/20/59

GENERAL NOTES

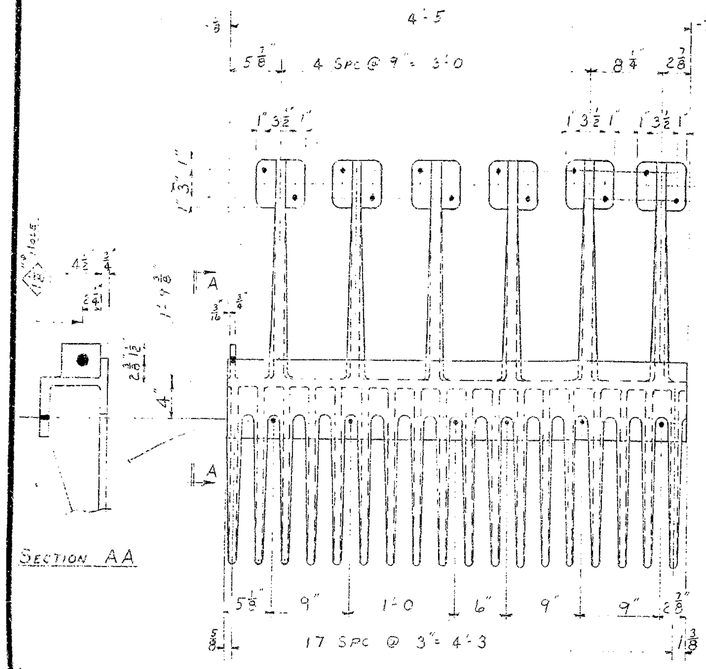
Rivets 7/8" ϕ except as noted
Holes 15/16" except as noted
End Distance 1 3/16 unless noted
Shop Paint
Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivets
Drawn by CWK 4-30-59
Checked by ALH
Revisions 7-9-59 (Garber Fills)

Arkansas State Highway Commission
Mississippi State Highway Commission
Mississippi River Bridge
Near Helena, Arkansas

Sold To John F. Beasley Constr. Co.
Chicago, Illinois

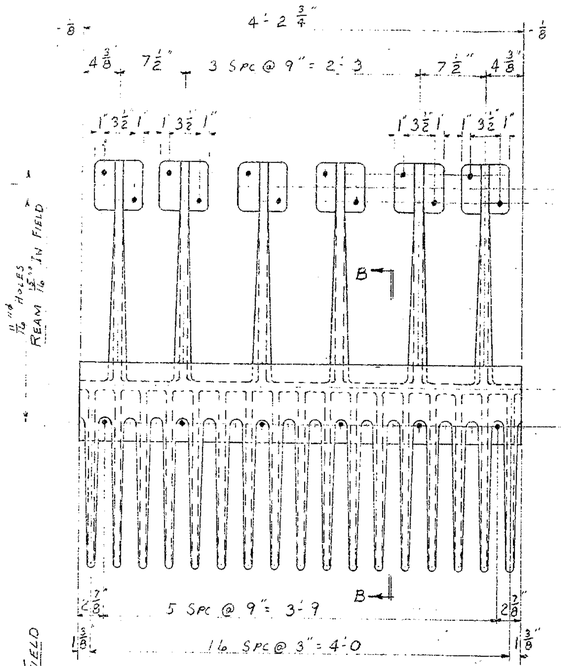
BOOK No. 4

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800-F Sh. 175 of



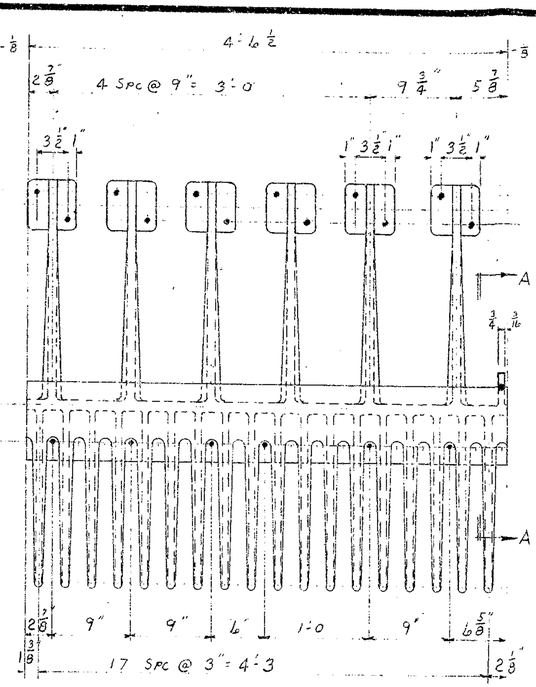
6 Castings A173

Galvanized or Metallized



24 Castings B173

Galvanized or Metallized



6 Castings C173

Galvanized or Metallized

Casting Notes:

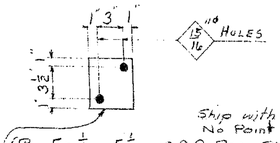
Castings Shall Be Of High Strength Steel, And Shall Conform To A.S.T.M. Standard A 148 - Grade 90-60, Fully Annealed And Physically Tested.

The Contractor Shall Submit For Approval The Characteristics Of The Steel He Proposes To Use To Meet The Physical Requirements And Shall Make An Analysis Of Each Melt To Determine The Percentages Of All Elements Present In The Steel.

The Sections For Both Sides Of Each Joint For The Full Width Of The Roadway Shall Be Shop Assembled In Proper Position So That Meshing Projections Are In Fully Closed Position And So That Required Clearences 1/16" Between Sides Of Mating Projections Are Obtained. All Parts Of Roadway Joints So Assembled Shall Be Matchmarked.

Castings Shall Be Machined To A Smooth Finish On All Surfaces In Contact With Metal And Shall Have At Least One Machine Cutting Over The Tops Of All Extended Fingers.

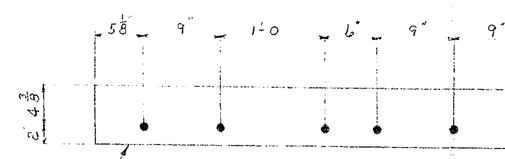
Castings Shall Be Galvanized Or Metallized.



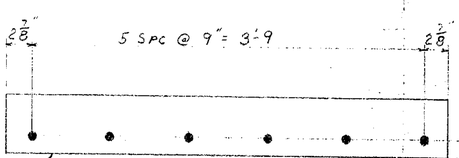
Ship with bolts No Point

PR- 5 x 1/4 x 5 1/2 - 288 Req - P173 (c)
PR- 5 x 3/8 x 5 1/2 - 288 Req - Q173 (c)

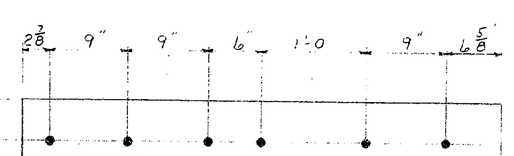
72 Each For Unit 5
72 Each For Unit 4
72 Each For Unit 3
36 Each For Unit 2
36 Each For Unit 1



PR- 6 3/8 x 1/2 x 4'-5 - 8 Req - D173 (c)
PR- 6 3/8 x 1/4 x 4'-5 - 8 Req - E173 (c)
PR- 6 3/8 x 1/8 x 4'-5 - 16 Req - F173 (c)

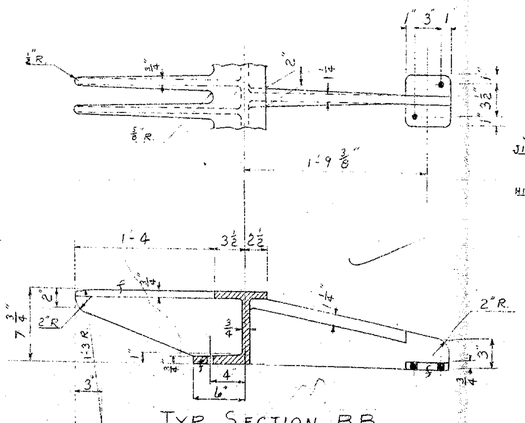


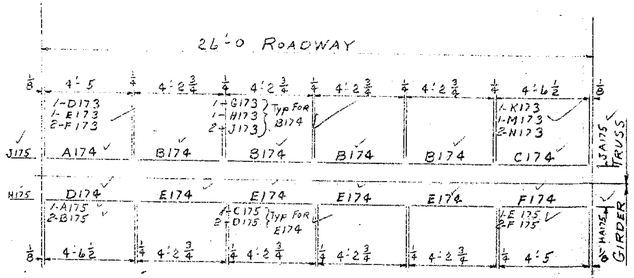
PR- 6 3/8 x 1/2 x 4'-2 3/4 - 32 Req - G173 (c)
PR- 6 3/8 x 1/4 x 4'-2 3/4 - 32 Req - H173 (c)
PR- 6 3/8 x 1/8 x 4'-2 3/4 - 64 Req - J173 (c)



PR- 6 3/8 x 1/2 x 4'-6 1/2 - 8 Req - K173 (c)
PR- 6 3/8 x 1/4 x 4'-6 1/2 - 8 Req - M173 (c)
PR- 6 3/8 x 1/8 x 4'-6 1/2 - 16 Req - N173 (c)

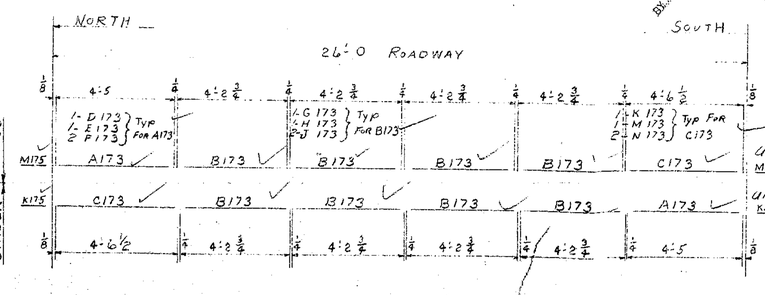
Recommended For Approval
Howard, Needles, Tammen & Bergendoff
By ... Date 6-30-59





Assembly For Expansion Joints At Piers 10 And 15

Shims For Rear Arms - P173 & G175 & P175 (c) 59



Assembly For Expansion Joints At Spans 12, 13 And 14

Shims For Rear Arms - P173 - Q173

Approved By 11/20/59
L. R. Carlson
Bridge Design Engineer

See Notes Sh # 1

Approved By: Howard, Needles, Tammen & Bergendoff
Consulting Engineers

General Notes

Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 1/2" unless noted
Shop Paint No Paint

Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivet
Drawn by CWK 4-29-59
Checked by ajf.
Revisions

Arkansas State Highway Commission
Mississippi State Highway Commission

Mississippi River Bridge
Near Helena, Arkansas

Sold To: John F. Beasley Constr. Co.
Chicago, Illinois

98

Punch 4 Room 15

Punch 4 Room 16

Punch 4 Room 17

Punch 4 Room 18

Bend Line A

Bend Line B

bend line

WP

Symmetrical about ℄

65 @ 5¼ = 28'-5¼

64 @ 5¼ = 28'-0

17'-6

10'-3⅜

10'8

1 @ 3 = 1'-9

6 @ 3 = 1'-6

5 @ 3 = 1'-3

4 @ 3 = 1'-0

3 @ 9 = 2'-3

2 @ 1'-3¾

2 @ 2'-3

3 @ 9 = 2'-3

gv6 gv6 gv6 Bottom gv6 gv6

TOP OF PLATES C172 & D172 ABOVE LINE "A"

Weld ls

Pl't 28 × 5/16 × 2'-4½ 4 Reg gv7 ©

Lgv9

IL gv8

IL gv11

IL gv10

IL gv5

DIAPHRAGM DETAIL

See Notes sheet 1

IL- 3½ × 3½ × 5/16 × 32'-4 - 4 Reg gv5 ©

IL- 3½ × 3½ × 5/16 × 1'-9¾ - 4 Reg R gv9

IL- 3½ × 3½ × 5/16 × 9½ - 4 Reg gv11 ©

IL- 3½ × 3½ × 5/16 × 2'-1- 4 Reg L gv10

IL- 3½ × 3½ × 5/16 × 1'-5 9/16 - 8 Reg R gv8 ©

IL- 3½ × 3½ × 5/16 × 32'-4 - gv4

Top

IL- 3½ × 3½ × 5/16 × 32'-4. 4 Reg gv4 ©

IL- gv1 ©

Top

UM bent Plt 49 × 3/8 × 32'-4 - 2 Reg gv1 ©

UM Plt 22 × 5/16 × 32'-4 - 2 Reg gv2 ©

U.M. Plt 25 × 5/16 × 32'-4 - 2 Reg gv3 ©

IL- 3½ × 3½ × 5/16 × 32'-4 - gv4

Top

IL- 3½ × 3½ × 5/16 × 32'-4 - 4 Reg gv5 ©

Pl't 2 × 5/8 × 5 7/16 - 9 Reg gv6 ©

bent plt 53½ × 3/8 × 8'-8 1/16 - 1 Reg R C172 © 1 Reg L CA172 © U50

8'-7 5/16 - 1 Reg R D172 Ⓐ 1 Reg L DA172 Ⓐ U46

bent plt 53½ × 3/8 × 8'-8 1/16 - 1 Reg R C172 © 1 Reg L CA172 © U50

8'-7 5/16 - 1 Reg R D172 Ⓐ 1 Reg L DA172 Ⓐ U46

bent plt. 26 1/4 × 3/8 × 6'-2 5/16 1 - Reg R E172 © 1 - Reg L EA172 © U50

6'-1¾ 1 - Reg R E172 © 1 - Reg L FA172 © U46

IL- 3½ × 3½ × ⅜ × 1'-5 5/16 4 Reg R gv16 ©

18 I- 54.7" × 1-3½ 2 Reg gv14 © 2 Reg gv14a © on D172

I-18 @ 54.7" × 1'-10 2 Reg gv15a © bolt on F172 2 Reg gv15 © bolt on E172

ONE TOP STRUT - A172 at U50

ONE TOP STRUT - B172 at U46

SECTION XX (FAR SIDE)

RECOMMENDED FOR APPROVAL

DATE 1-5-60

BOOK No. 4

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF - CONSULTING ENGINEERS 10/26/59

GENERAL NOTES

Rivets 7/8" except as noted

Holes 15/16" except as noted

End Distance 1¾ unless noted

Shop Paint RED LEAD (ARK STD)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVET

Drawn by J.W. 4-23-59 APPROVED BY

Checked by C.W.K. L.P. Carlson

Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

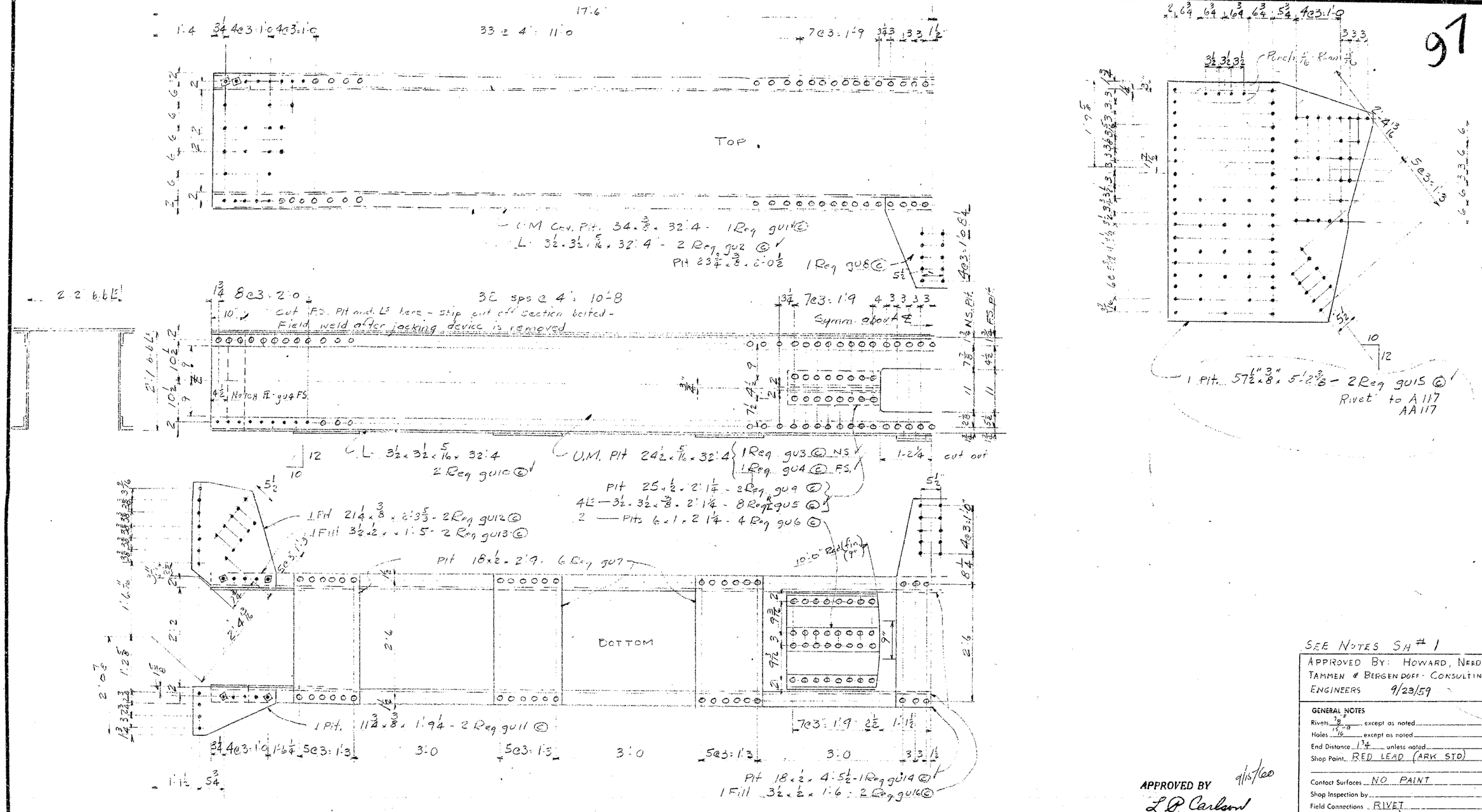
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

Contr. No. 4800-F Sh. 172 of

A



ONE TOP STRUT - A171 of U43

SEE NOTES SH # 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF · CONSULTING ENGINEERS 9/23/59

GENERAL NOTES

Rivets 7/8 except as noted
Holes 15/16 except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by J.W. 4-22-59
Checked by CWK
Revisions

APPROVED BY 9/15/1960
L.P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY DJ DATE 9-12-60

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

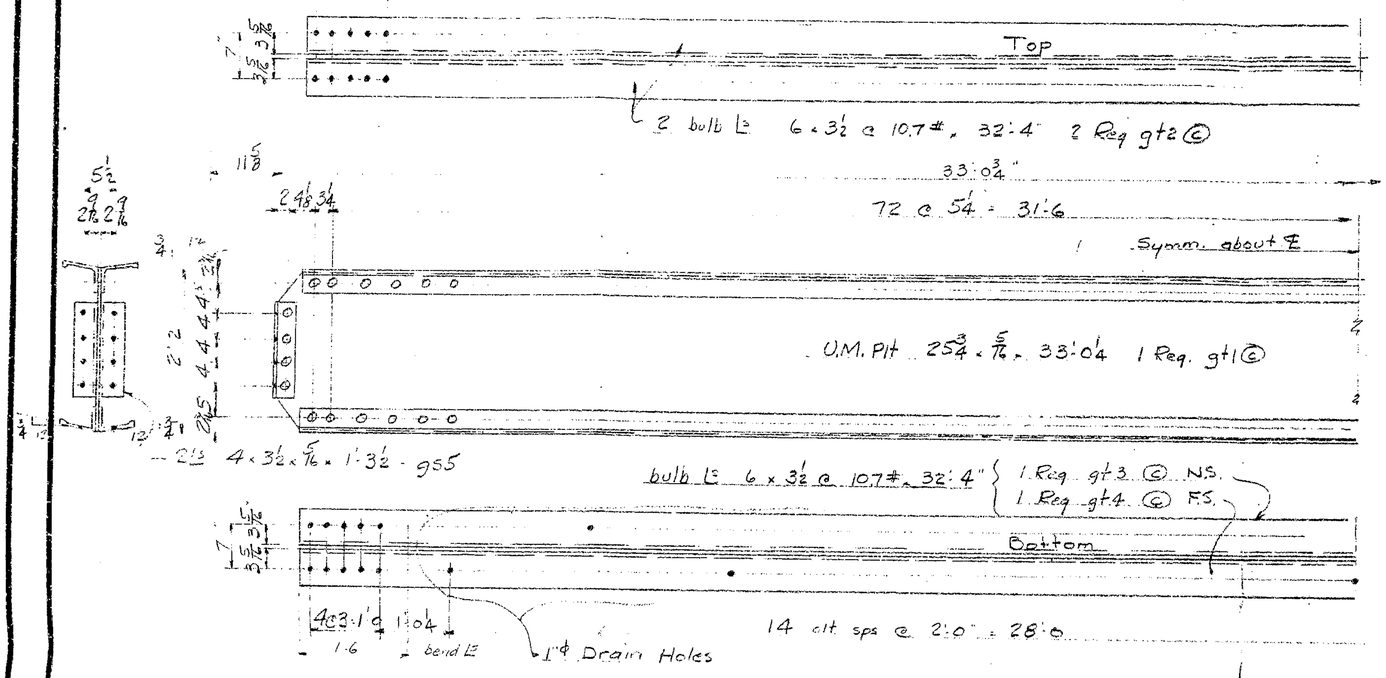
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4

SOLD TO: JOHN F. BEASLEY - CONSTR. CO.
CHICAGO ILLINOIS

BOOK No. 4

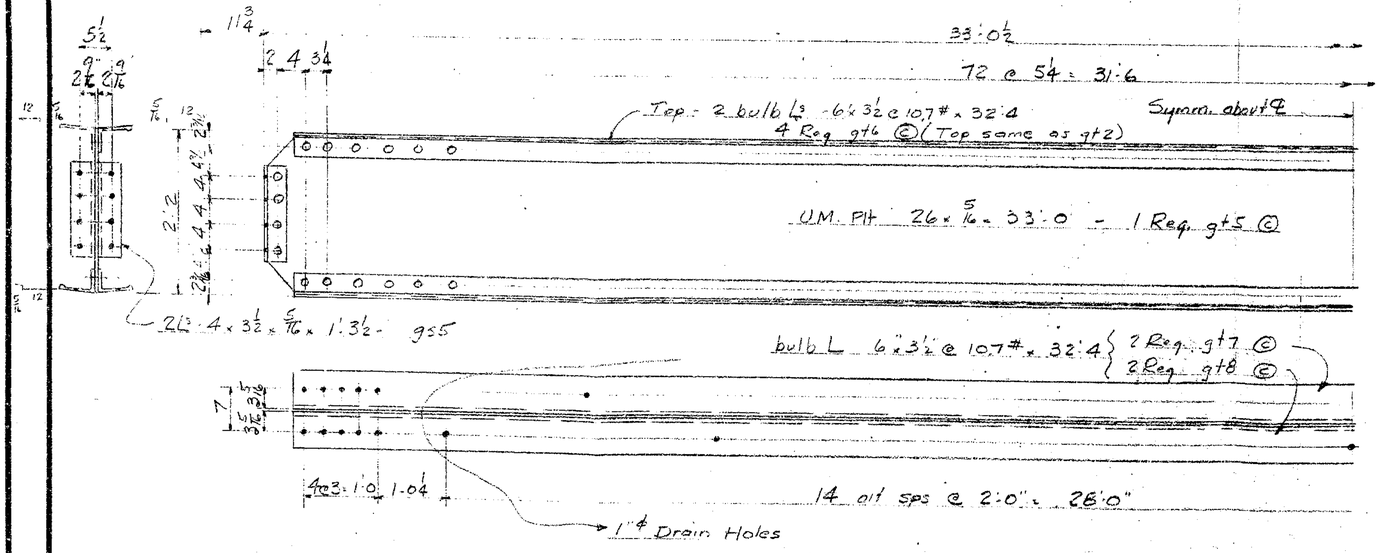
SHOP: VINCENNES STEEL CO. DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.

Contr. No. 4800-F Sh. 171 of



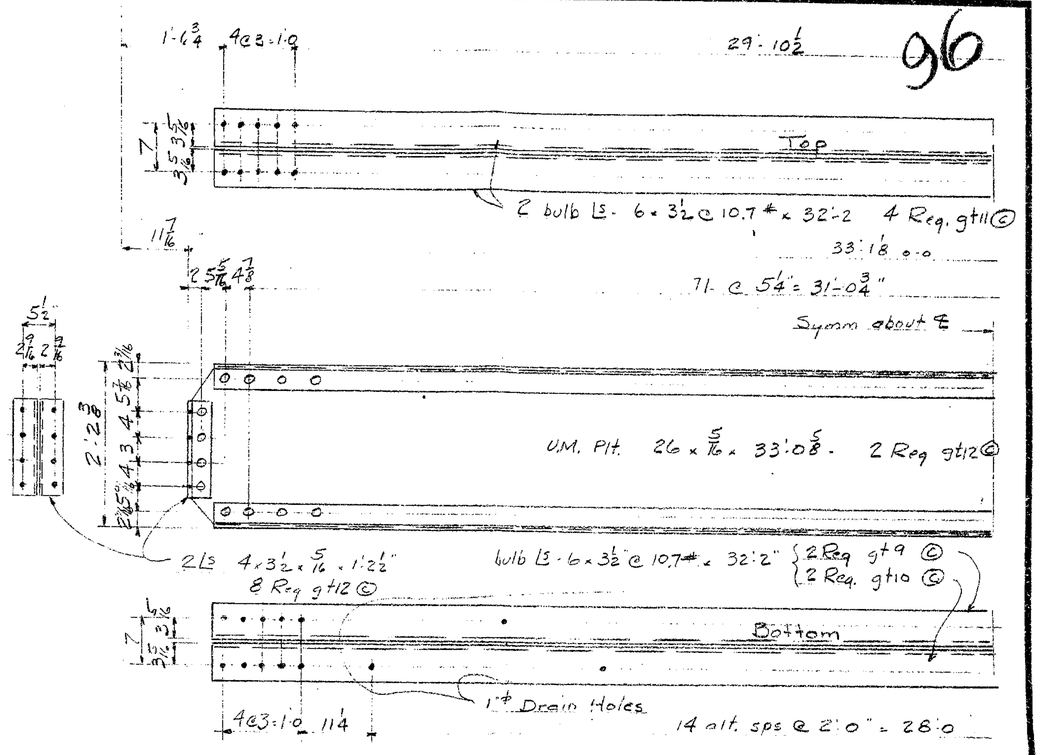
ONE TOP STRUT - A170

1 @ U53



ONE TOP STRUT - C170

1 @ U57



2 TOP STRUTS - B170

1 at U47 - U49

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY FRC DATE 8-21-59

SEE NOTES SH" 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF - CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8 except as noted

Holes 15/16 except as noted

End Distance 1 3/4 unless noted

Shop Paint RED LEAD (ARK STD)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVET

Drawn by J.W. 4-21-59

Checked by C.W.K.

Revisions

APPROVED BY 9/22/59

L.P. Carlson

Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE

NEAR HELENA, ARKANSAS

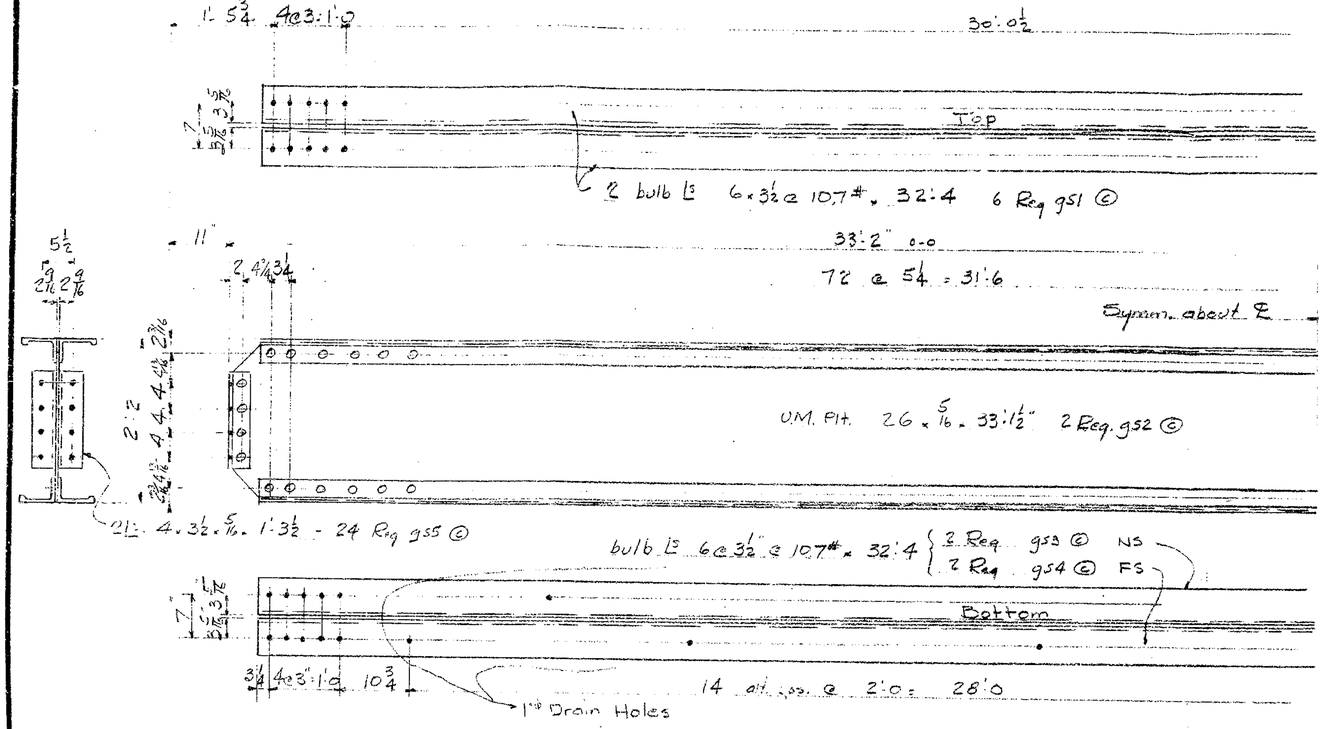
UNIT No. 4

SOLD TO: JOHN F BEASLEY CONSTR CO

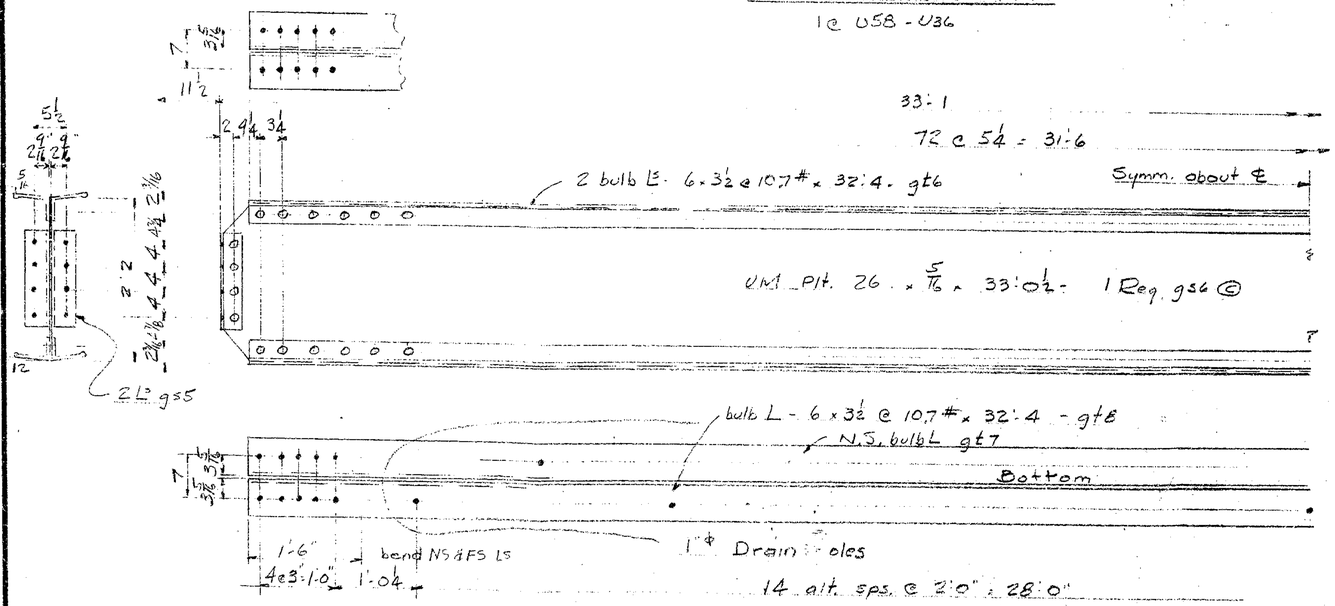
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENGINEERING INC. VINCENNES, IND.

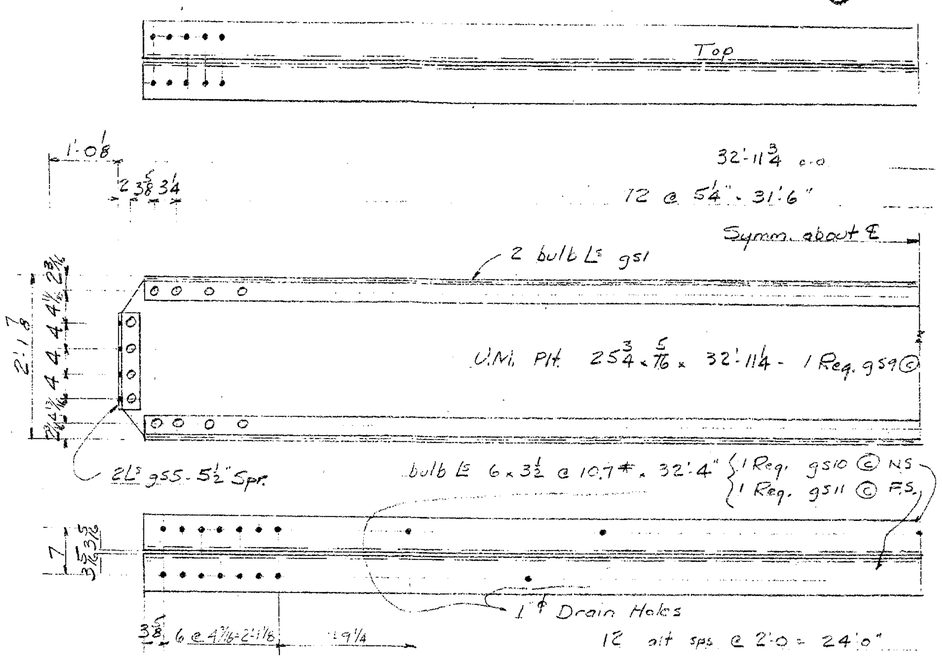
Contr. No. 4800 Sh. 170 of



2 TOP STRUTS - A169
1 @ U58 - U36



ONE TOP STRUT - B169
at U55 -



ONE TOP STRUT - C169
at U44

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY F R S DATE 6-21-59

SEE NOTES SH"1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF - CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8 except as noted
Holes 15/16 except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by J W 4-20-59
Checked by J C W K
Revisions

APPROVED BY 9/23/59
L. P. Carlson
Bridge Design Engineer

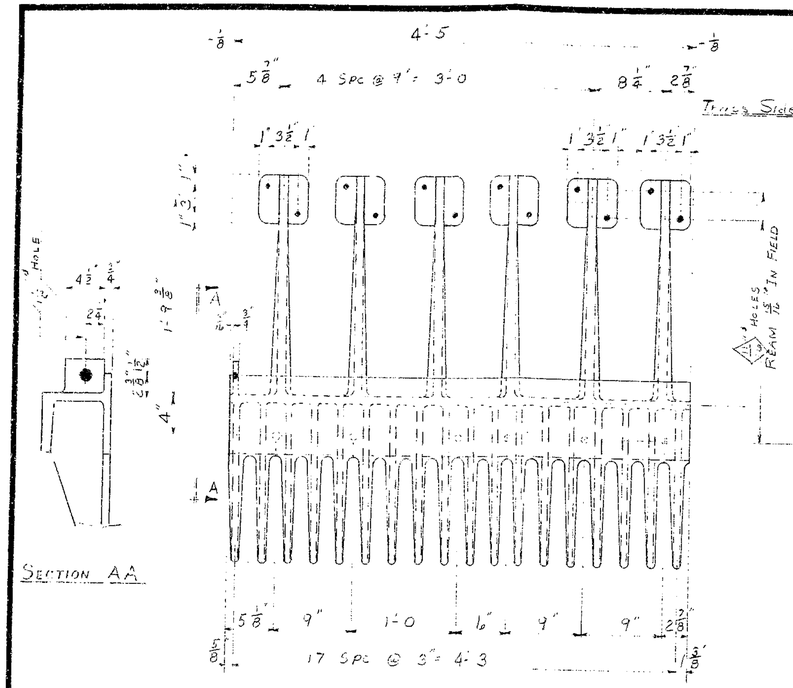
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No 4

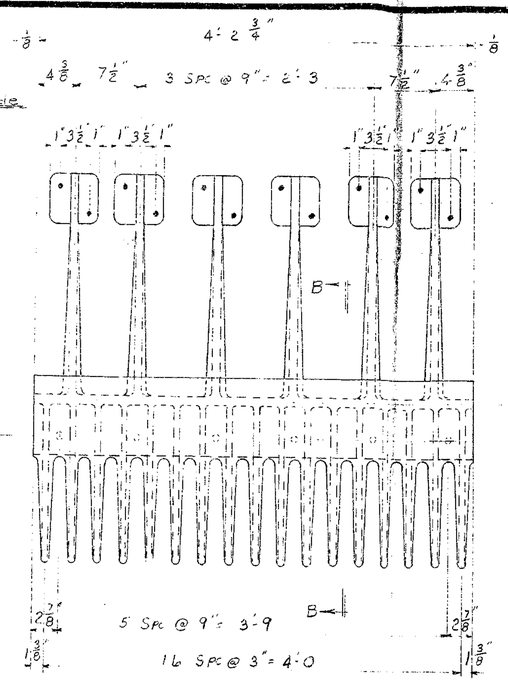
SOLD TO: JOHN F BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL [redacted] DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND. Contr. No. 4800 Sh. 169 of

100



2 CASTINGS A174
GALVANIZED OR METALLIZED



8 CASTINGS B174
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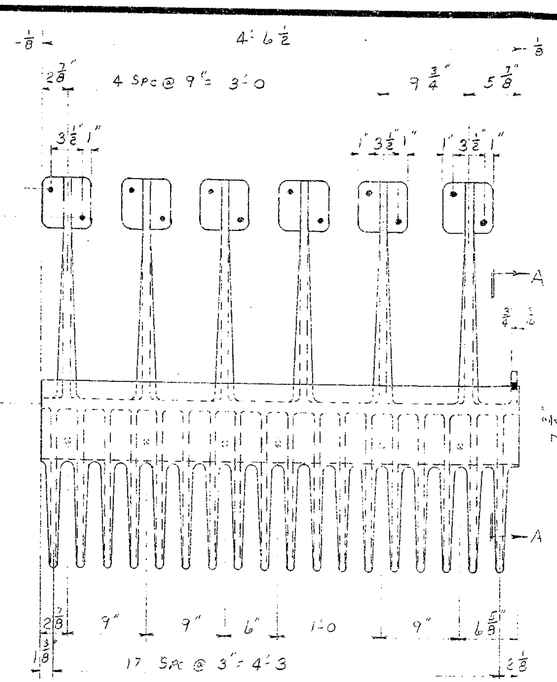

2 CASTINGS C174
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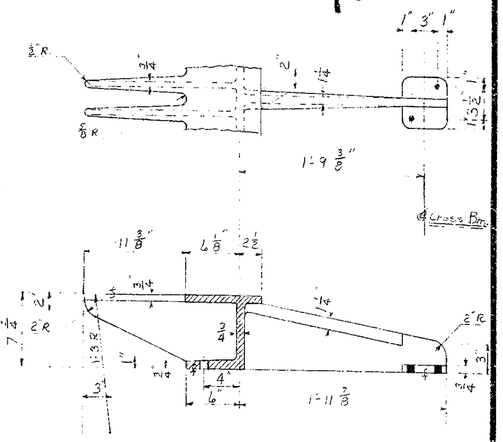
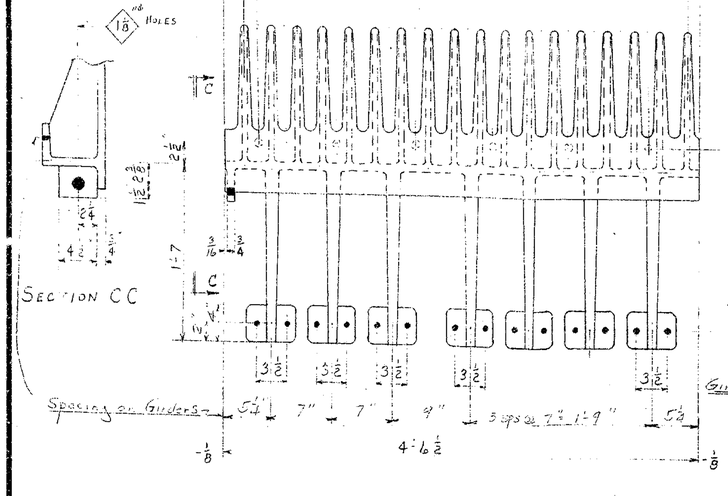




2 CASTINGS D174
GALVANIZED OR METALLIZED

8 CASTINGS E174
GALVANIZED OR METALLIZED

2 CASTINGS F174
GALVANIZED OR METALLIZED

SEE NOTE SHEET # 1 & 173

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF, CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint: NO PAINT.
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by CWK 4-30-59
Checked by AHJ
Revisions

APPROVED BY 7/6/59
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY JAH DATE 7-7-59

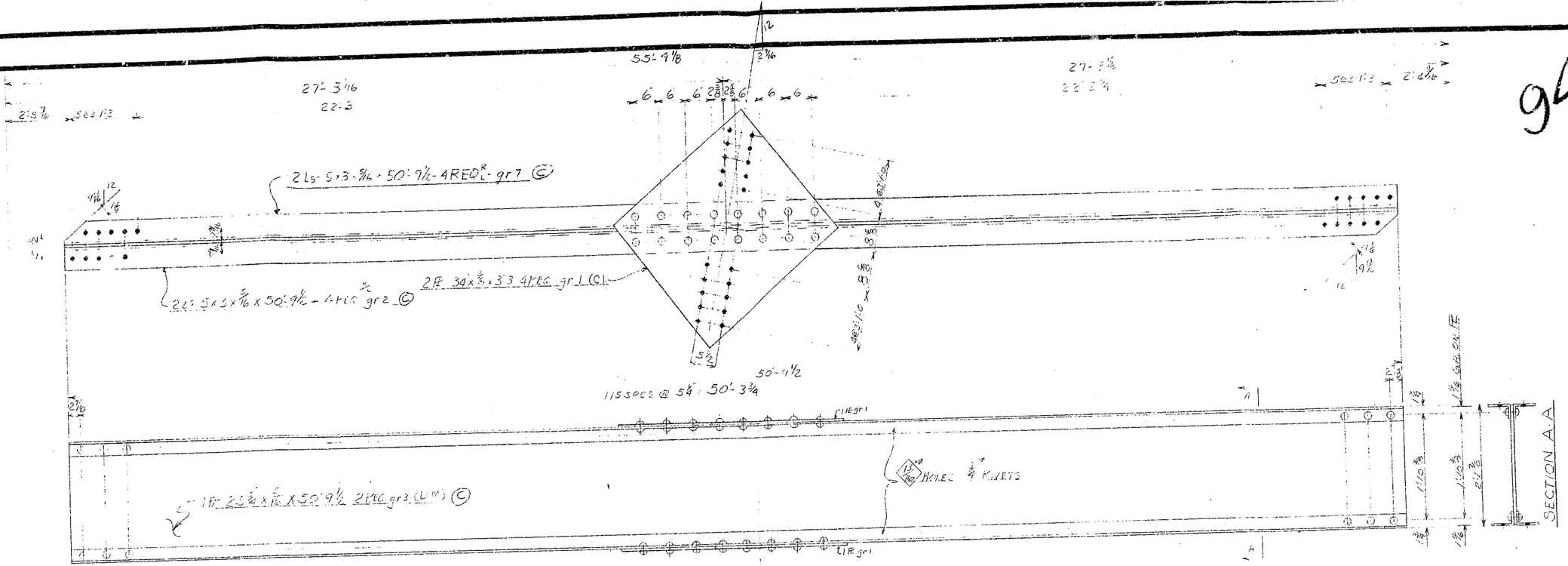
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS

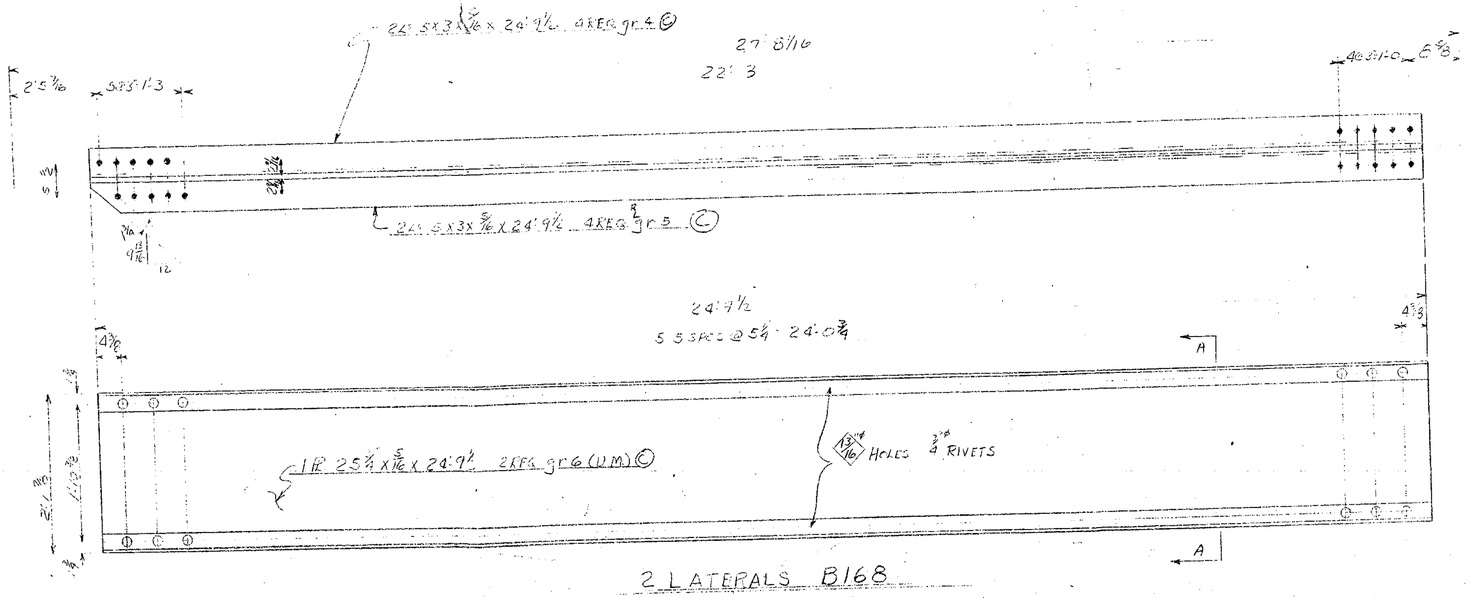
SOLD TO: JOHN F. BEASLEY CONSTR. CO
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 174 of

94



2 LATERALS A168



2 LATERALS B168

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 9-19-59

SEE NOTES SH° 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES
Rivets ⅞ except as noted
Holes 15/16 except as noted
End Distance 1¾ unless noted
Shop Paint. RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by LAM 4-14-59
Checked by C W K
Revisions 8/4/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

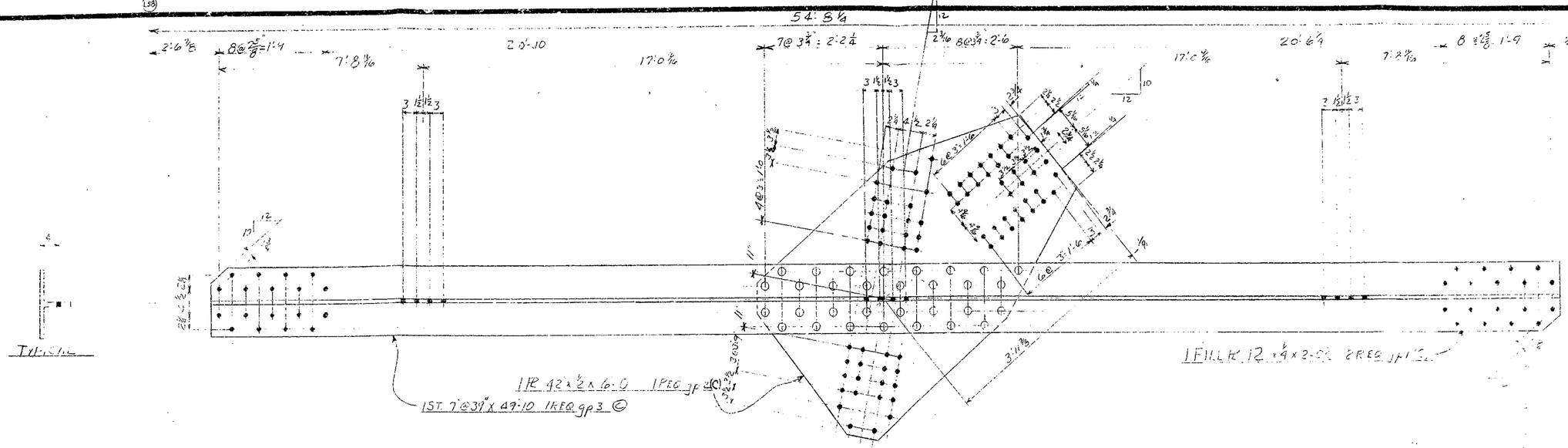
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 4

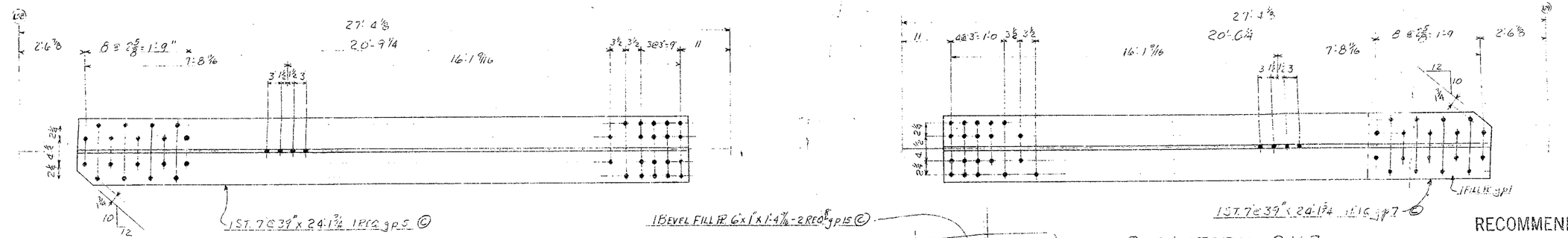
SOLD TO: JOHN F. BEASLEY CONSTR CO
CHICAGO ILLINOIS

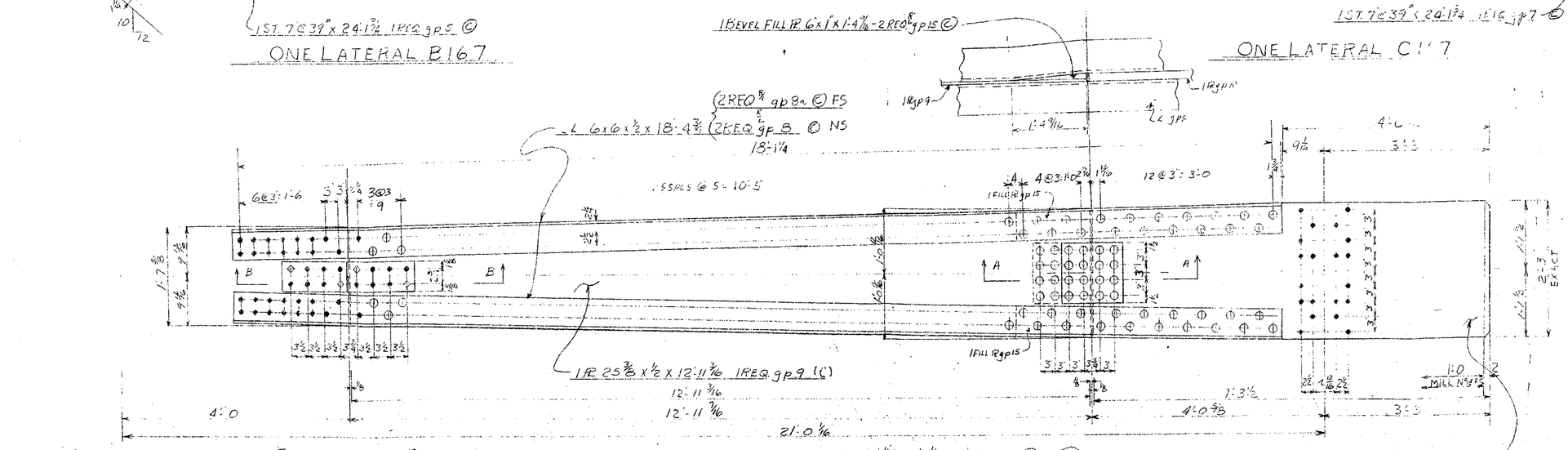
APPROVED BY 9/17/59
L. P. Carlson
Bridge Design Engineer

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800 Sh. 168 of

93







RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
FKS 9-2-59
SEEN & 54E7

APPROVED: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8 except as noted
Holes 15/16 except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by L.A.M. 4-10-59
Checked by C.W.K.
Revisions 9/27/54 end holes laterals

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

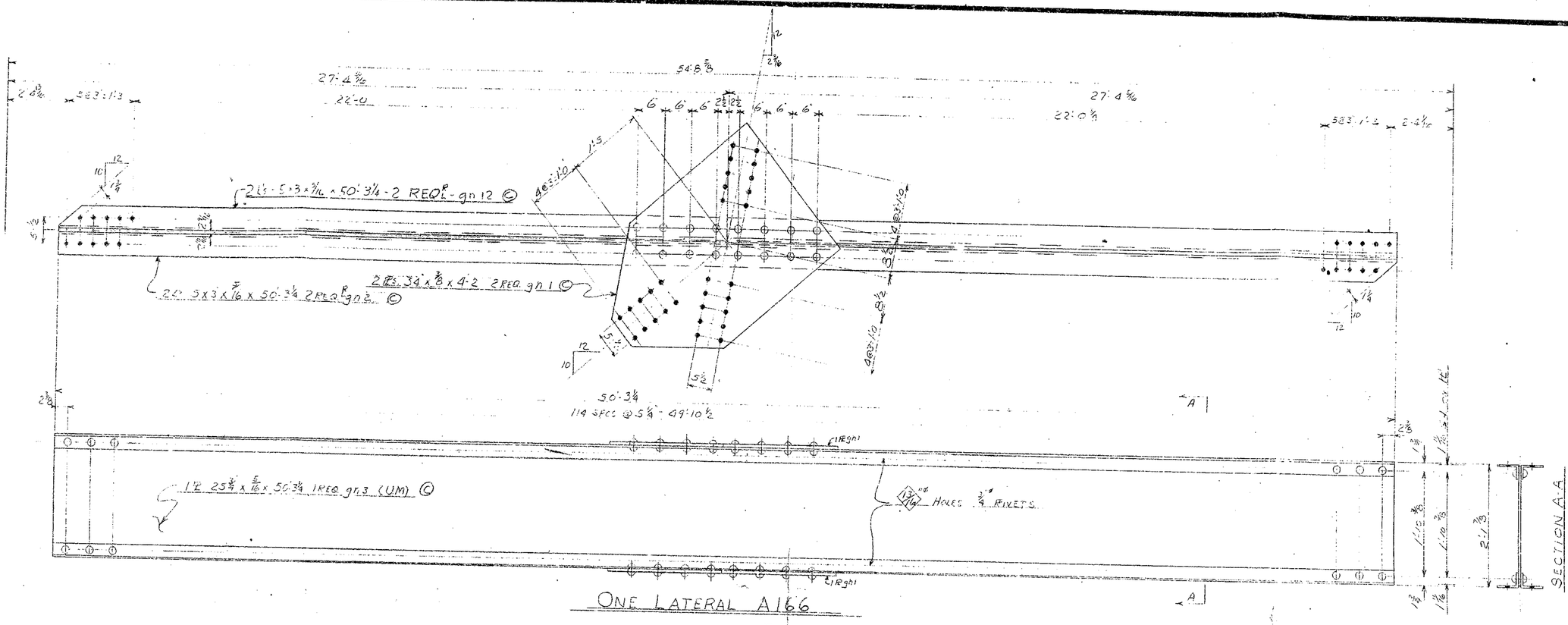
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

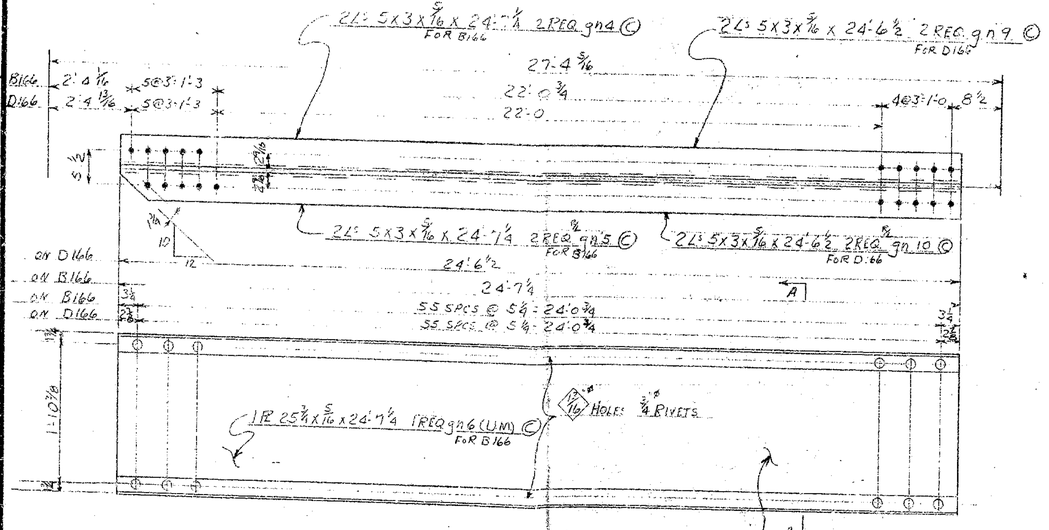
APPROVED BY 9/10/59
L.P. Carlson
Bridge Design Engineer

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
Contr. No. 4800 Sh. 167 of

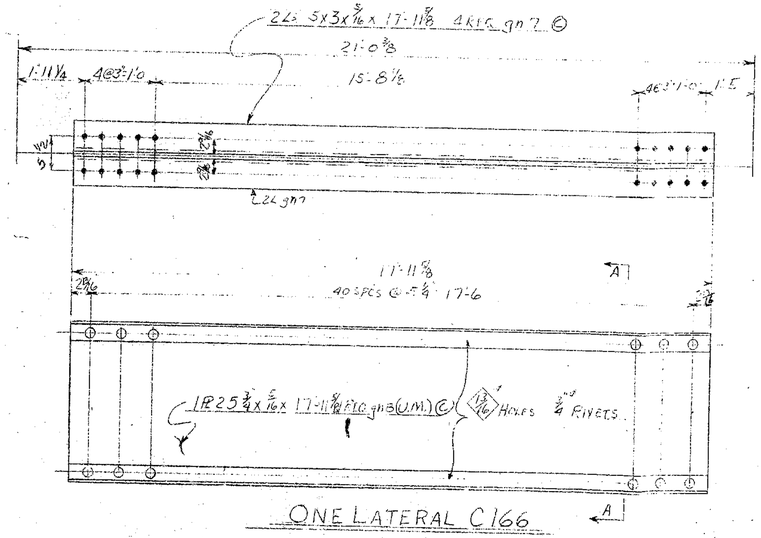
92



ONE LATERAL A166



ONE LATERAL B166
ONE LATERAL D166



ONE LATERAL C166

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY F.R.S. DATE 10-22-59

SEE NOTES SH# 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES
Rivets ⅞" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT.
Shop Inspection by
Field Connections RIVETED
Drawn by L.A.M. 9-6-59
Checked by E.W.R.
Revisions

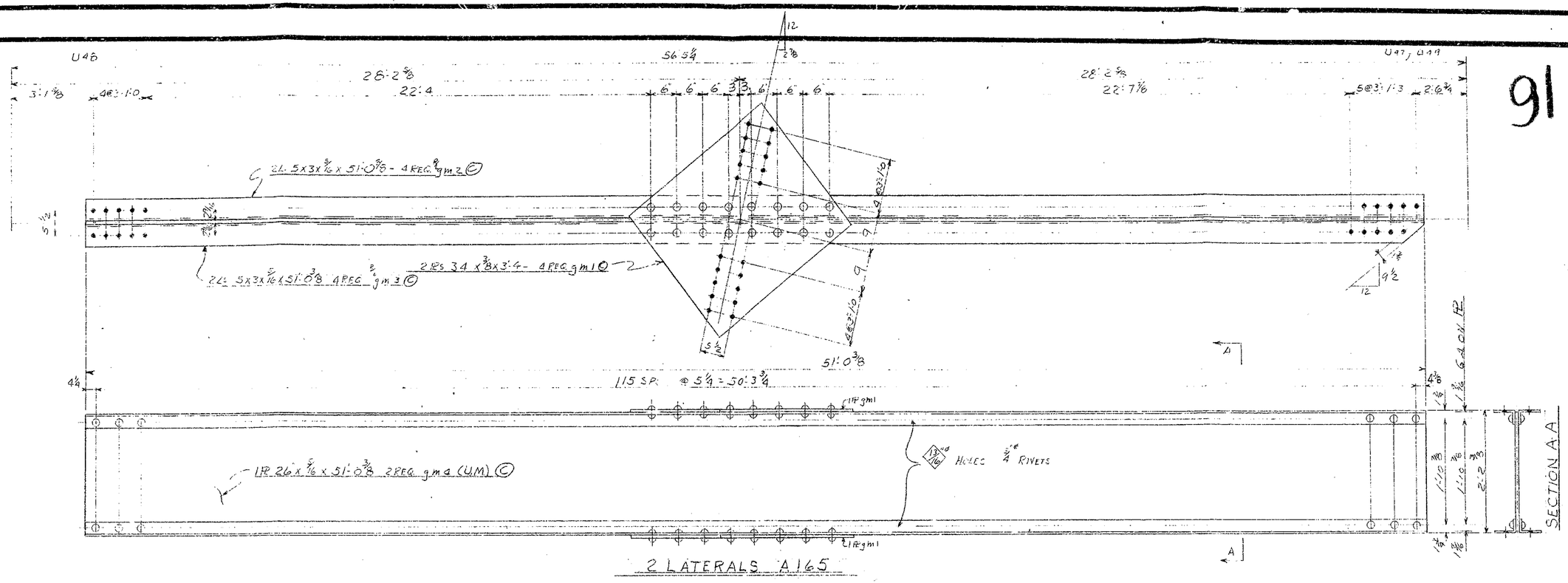
APPROVED BY 10/26/59
L.P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

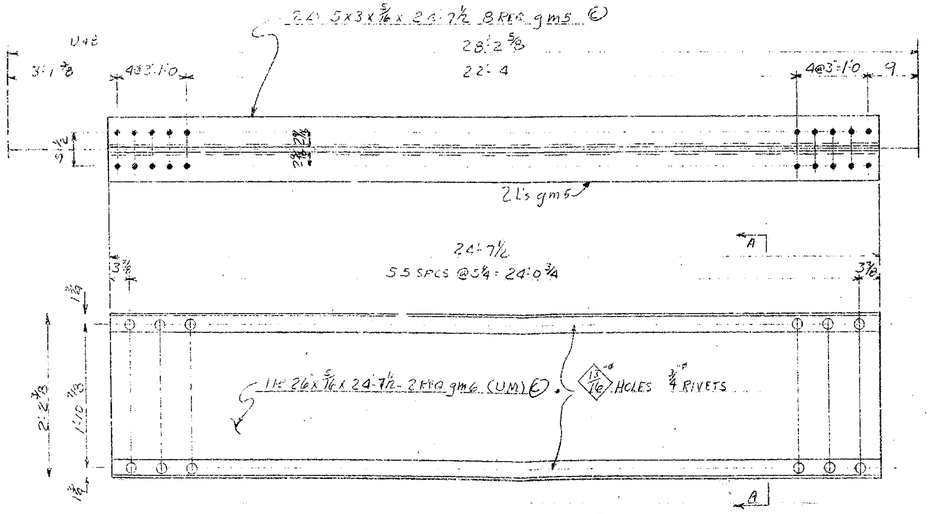
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

SHOP: VINCENNES STEEL CORP. DIV. OF INDUSTRIAL TIMBER SER. INC. VINCENNES, IND.
Contr. No. 4800 Sh. 166 of



2 LATERALS A165



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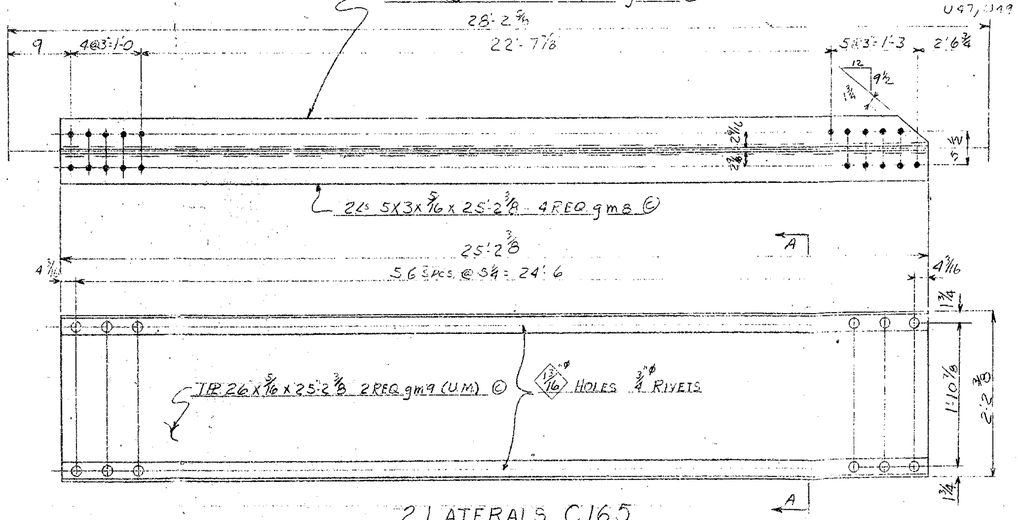


2 LATERALS C165

APPROVED BY 9/23/59
F D Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY F R S DATE 8-21-59

SEE NOTES SH" 1
APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF, CONSULTING ENGINEERS:

GENERAL NOTES
Rivets ¾" ø except as noted
Holes 13/16" ø except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by L.A.M. 4-3-59
Checked by C.W.K.
Revisions

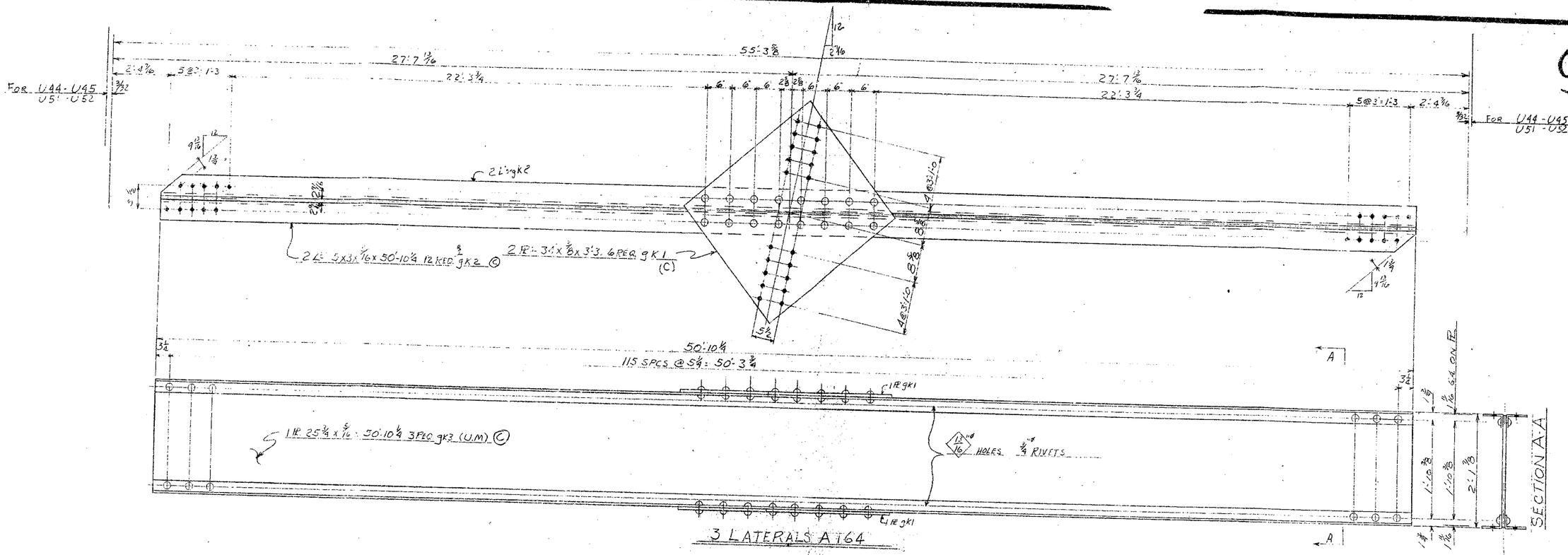
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

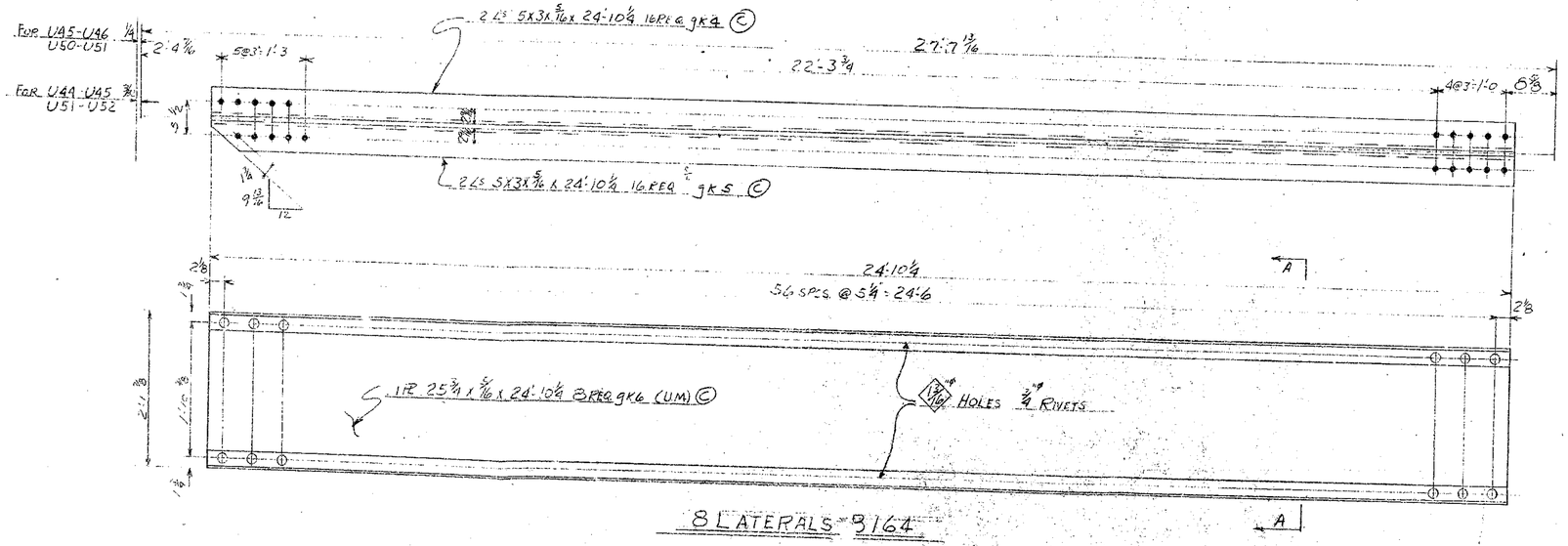
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 165 of

90





SEE NOTES SH°1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 3/4" ø except as noted
Holes 13/16" ø except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by LAM 4-3-59
Checked by CWK
Revisions

APPROVED BY 9/23/59
L.P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES TAMMEN & BERGENDOFF
BY F.R. DATE 8-21-59

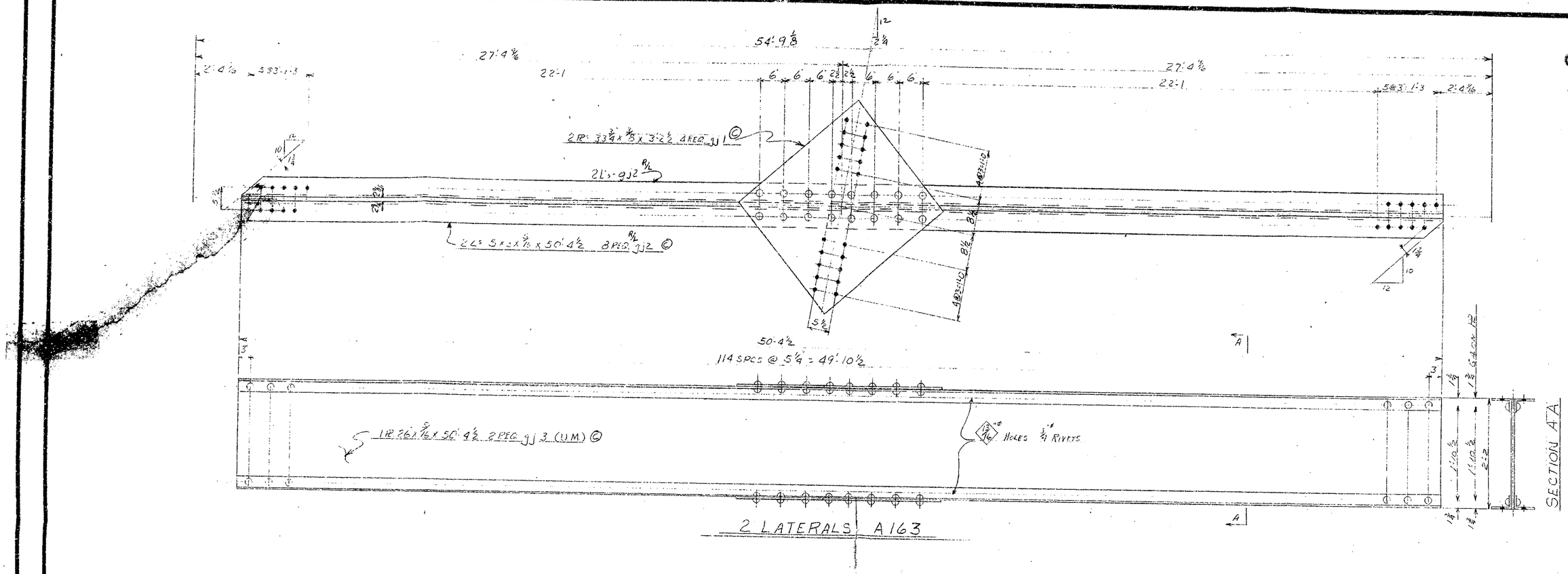
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

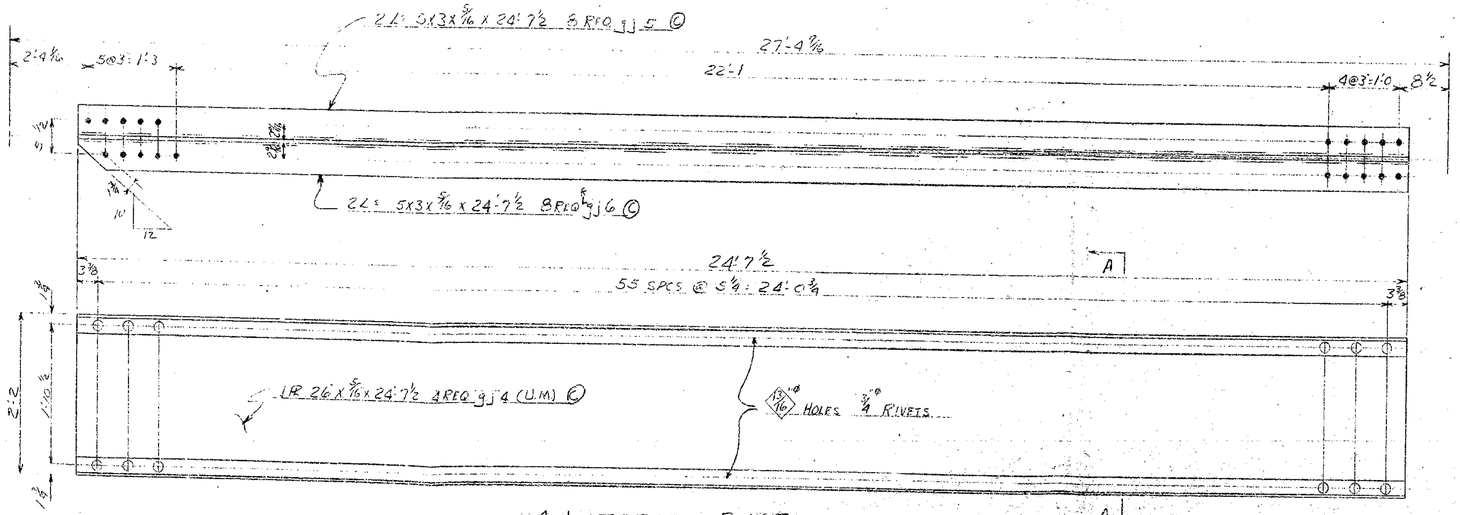
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 164 of

89





SEE NOTES SH°1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by L.A.M. 4.2.59
Checked by C.W.K.
Revisions

APPROVED BY 9/23/59
L.P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY F.R. DATE 8-21-59

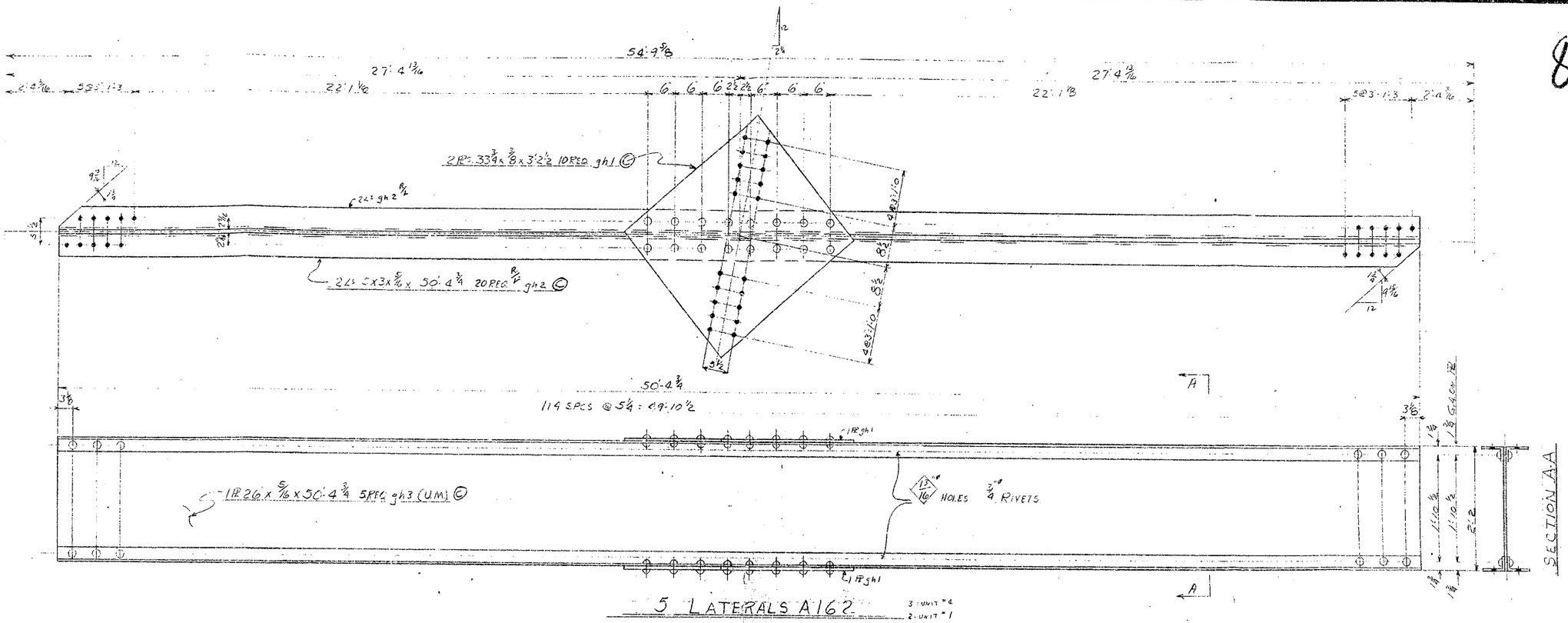
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

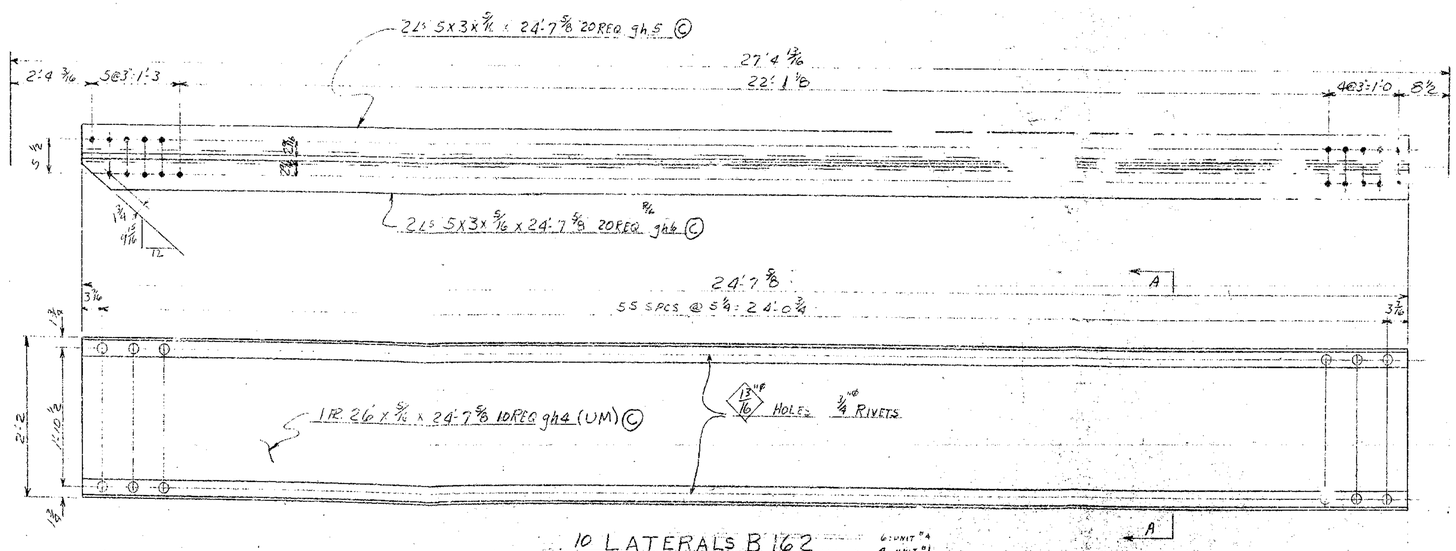
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT. No. 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CO. DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.
Contr. No. 4800 Sh. 163 of

88





SEE NOTES SH "1"

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by L.A.M. 4-2-59
Checked by C.W.K.
Revisions

APPROVED BY 9/23/59
L. P. Carlson
Bridge Design Engineer

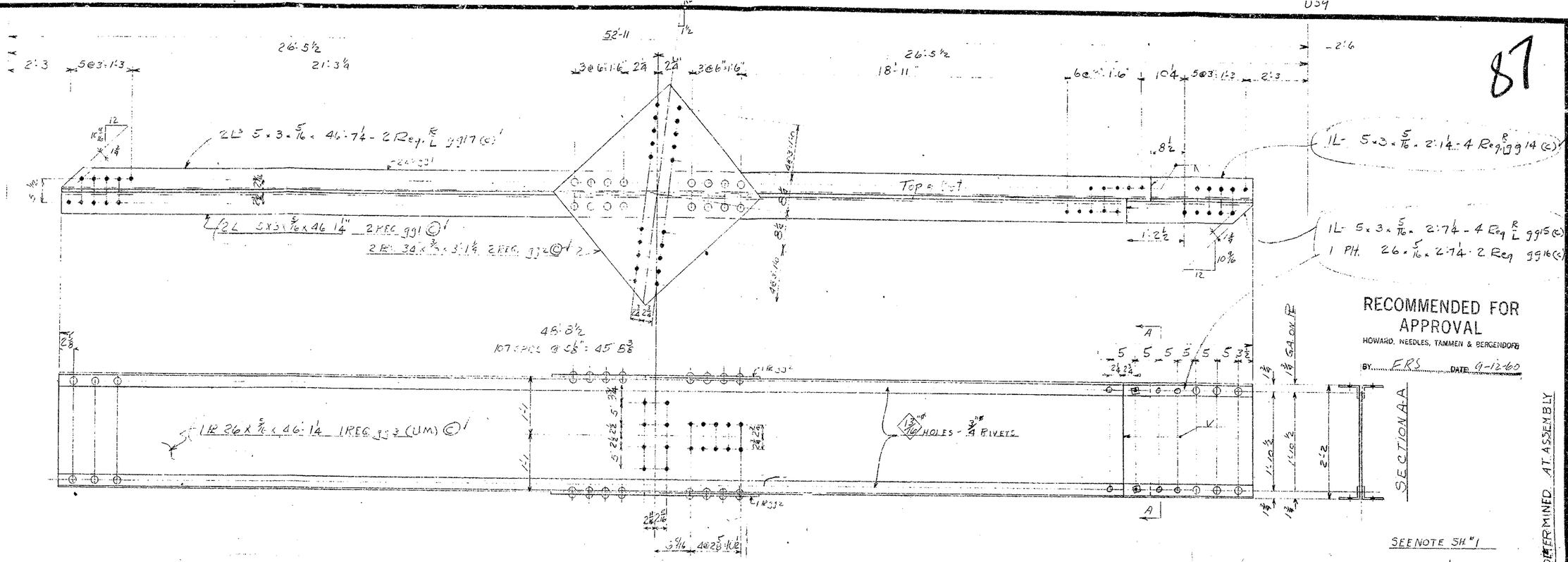
RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY F.P.S. DATE 8-21-59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.
Contr. No. 4800 Sh. 162 of



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 9-12-60

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 9/23/59

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by L.A.M. 4-14-59
Checked by C.W.K.
Revisions

APPROVED BY 9/15/60
L.P. Carlson
Bridge Design Engineer

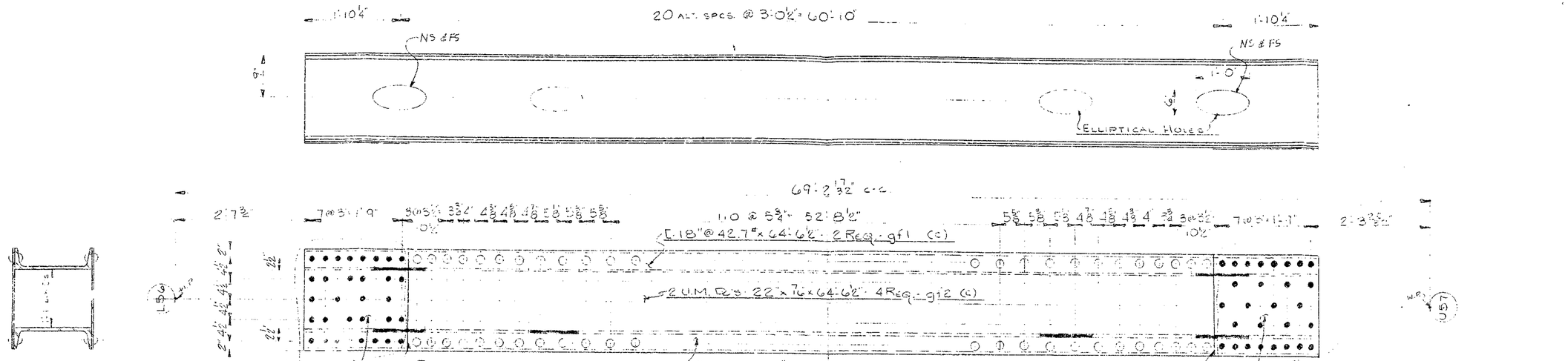
BOOK No. 4

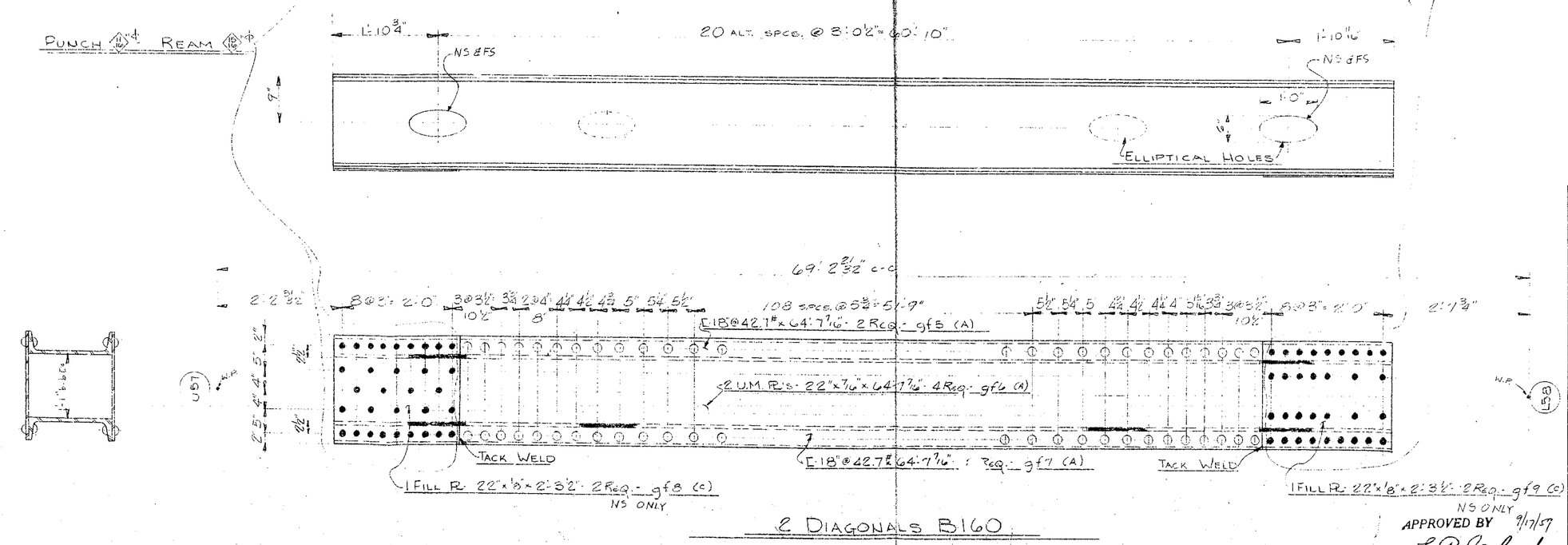
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4
SOLD TO: JOHN E. BEASLEY CONTR. CO.
CHICAGO, ILLINOIS

SHOP: VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

BOOK E Sh. 161 of

86





RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 9-19-57

APPROVED BY 9/17/57
L. P. Carlson
Bridge Design Engineer

SEE NOTES SH"1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF - CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8 - 9 / 15/16 - 6 except as noted
Holes 1/16 except as noted
End Distance 1¾ unless noted
Shop Point RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by KW 4-20-59
Checked by C.W.K.
Revisions 5/21/59

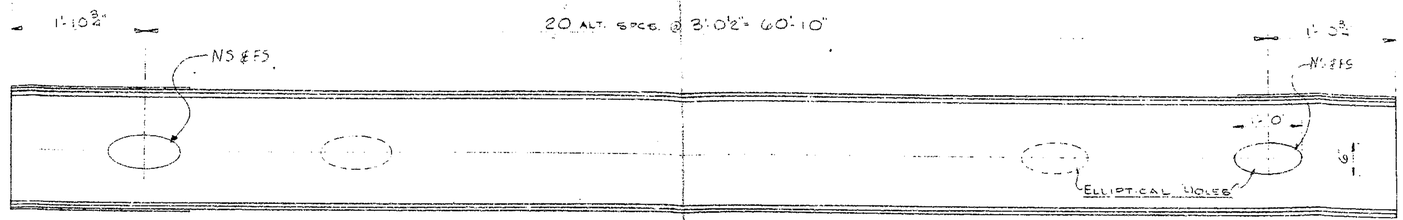
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

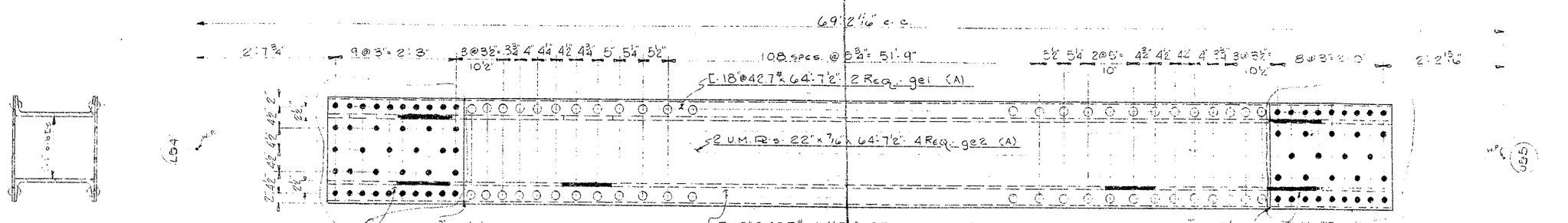
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 4

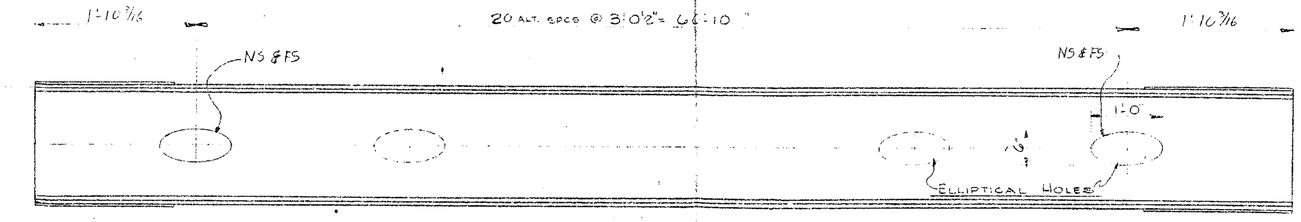
SOLD TO: JOHN F BEASLEY CONSTR CO
CHICAGO, ILLINOIS

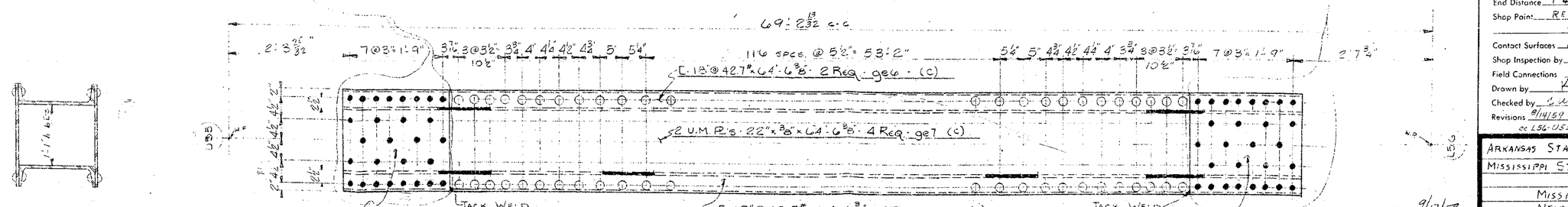
SHOP VINCENNES STEEL DIV. OF INDUSTRIAL [redacted]
VINCENNES, IND. Contr. No. 4866 Sh. 760 of

85









PUNCH 1/16" Ø REAM 13/16" Ø

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY E.R.S. DATE 8-19-59

SEE NOTES SH"1

APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK STD)

Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by BW 4-17-59
Checked by J.W.R.
Revisions 8/14/59 11/24/59
cc L56-055

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

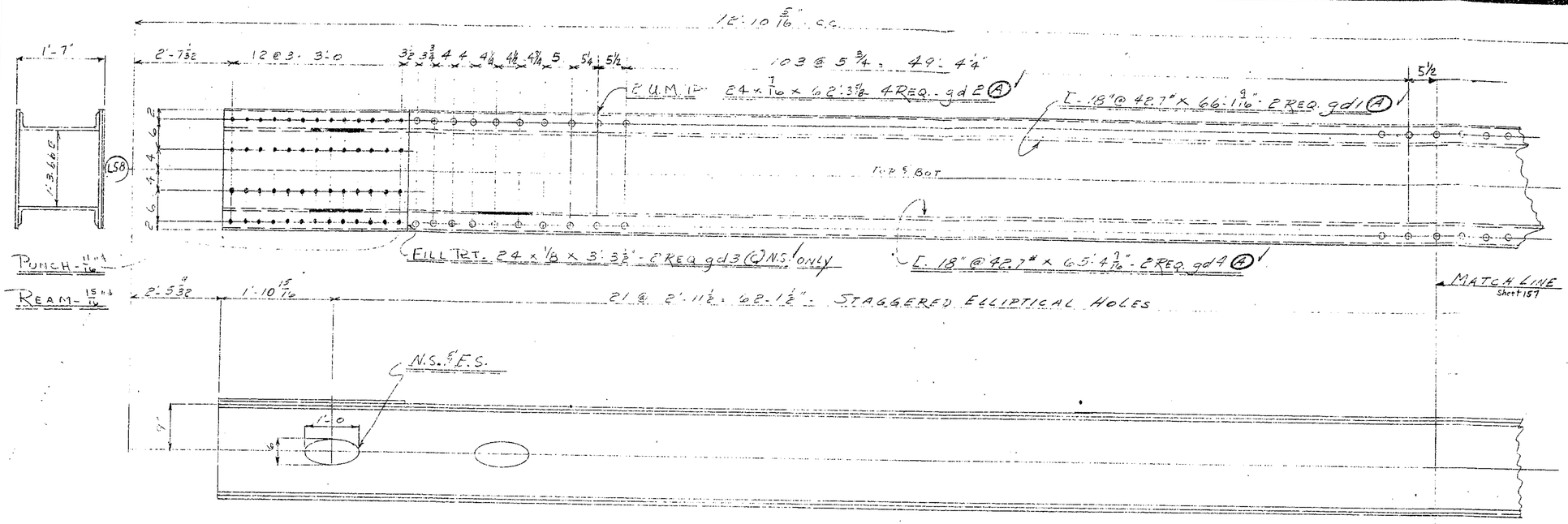
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO 4

SOLD TO JOHN F. BEASLEY CONSTR CO
CHICAGO ILLINOIS

APPROVED BY 9/17/59
L. P. Carlson
Bridge Design Engineer

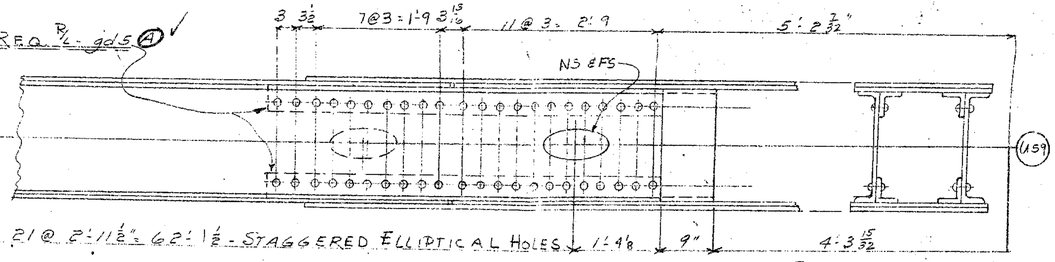
SHOP VINCENNES STEEL [redacted] DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND. Contr. No. 4800 Sh. 159 of

84

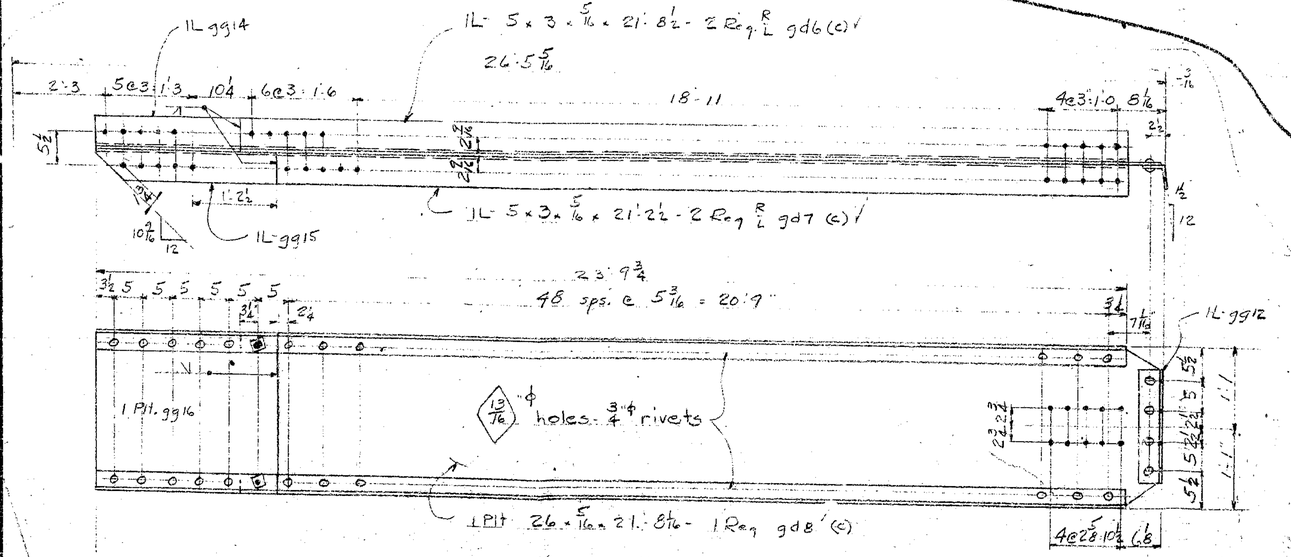


WORK WITH SHEET #157

L 4 x 4 x 7/8 x 5'-1 15/16" 2 REQ R/L gd5 (A)



SEE NOTE - SHEET #1



ONE LATERAL - A158

SECTION - DD - SHEET #157

#1800-7

IN SHEET 11/59

BOOK No. 3

BOOK No. 4

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 9-12-60

APPROVED BY 9/15/60
L. P. Carlson
Bridge Design Engineer

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 9-30-59

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T.
Checked by C.W.K.
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800-F Sh. 158 of

L. 6 × 4 × 3/8 × 7'-5 3/4 - 2 REQ. R. gc26 Ⓒ

PL. 24 3/16 × 9/16 × 2'-10 11/16 - 1 REQ. gc25 Ⓐ

PUNCH 11/16 Ø
REAM 15/16 Ø

3 @ 3'-1 3 4 7 @ 3'-1 9 4 8 @ 3'-2 0 6

MAXIMUM CLEARANCE BETWEEN TOP COVER PL. & EDGE OF GUSSET PL.

6" OF STRUT

2'-6

1'-11 1/2

L. 4 × 3 1/2 × 3/8 × 1'-2 - 2 REQ. gc15 Ⓒ

FILL PL. 4 × 5/8 × 1'-0 3/4 - 4 REQ. gc17 Ⓒ

SHEET D-158

STRIP FLG. L gc14

TANGENT OF CURVE

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY LRS DATE 9-23-59

SECTION - AA

SECTION. BB

SECTION. CC

Br L. 4 × 3 1/2 × 3/8 × 1'-2" - 2 REQ. - gc4 Ⓒ

L-18" @ 42.7# × 2'-6 9/16 - 2 REQ. - gc5 Ⓒ

PL. 12 × 1/16 × 2'-3 3/4 - 6 REQ. - gc1 Ⓒ

L. 3 1/2 × 3 1/2 × 3/8 × 6'-2 9/16 - 4 REQ. R. gc6 Ⓒ

PL. 20 3/4 × 3/8 × 5'-1 7/16 - 2 REQ. gc3 Ⓒ

L. 6 × 4 × 3/8 × 7'-5 3/4 - 2 REQ. R. gc26 Ⓒ

L. 5 × 3 1/2 × 3/8 × 5'-1 9/16 - 2 REQ. gc3 Ⓒ

PL. 27 × 5/8 × 8'-6 1/2 - 4 REQ. gc12 Ⓒ

Br L. 4 × 3 1/2 × 1/2 × 3'-1 7/16 - 2 REQ. gc16 Ⓒ

ELL PL. 4 × 5/8 × 3'-1 7/16 - 4 REQ. - gc23 Ⓐ

PUNCH 11/16 Ø
REAM 15/16 Ø

L-18" @ 42.7# × 6'-1 5/16 - 2 REQ. gc11 Ⓒ

L. gc9

ELLIPTICAL HOLES

APPROVED BY 10/2/59
L P Carlson
Bridge Design Engineer

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" Ø except as noted
Holes 15/16" Ø except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T.
Checked by C.W.K.
Revisions 8/14/59 9/24/59 (CONT'D) 9/14/59 Pin Hole Ø 4.59
cc 1159-1158

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

ONE-DIAGONAL AS SHOWN - A157
ONE-DIAGONAL-TO PAIR - AA157
WORK WITH SHEET #158
SEE NOTE SHEET #1

SHOP: VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 157 of

82

59'-2" c.c.

3'-8 3/16" | 11@3'-2:9 | 3@3" = 9" | 37@6"=43'-6" | 8@3'-2'-0 | 11@3'-2:9

1'-7"

1/8 | 1/8

1'-3.66"

W50

1/4 V 3@6 TYP

PUNCH 11/16" REAM 15/16"

L- 18" @ 45.8# × 55'-7 7/16" - 2 REQ. g61 (A)

TOP & BOT

L- 18" @ 45.8# × 55'-7 7/16" - 2 REQ. g62 (A)

L- 3 1/2 × 3 1/2 × 3/8 × 1'-0 1/2" - 8 REQ. g63 (C)

2-UM-PRT- 24 × 1/2 × 55'-7 7/16" - 4 REQ g64 (A)

2 FILLS- 24 × 1/8 × 3'-7 - 4 REQ g614 (C)

L- 3 1/2 × 3 1/2 × 3/8 × 1'-0 1/2" - 8 REQ. g63 (C)

L- 3 1/2 × 3 1/2 × 3/8 × 2'-0 1/2" - 4 REQ. g65 (C)

L- 3 1/2 × 3 1/2 × 3/8 × 4'-6" - 4 REQ g66 (C)

PUNCH 11/16" REAM 15/16" SHOP RIVET

8@3'-2'-0

M51

PUNCH 11/16" REAM 15/16"

PUNCH- 11/16" REAM- 15/16"

PRT- 11 13/16" × 5/8 × 6'-0 7/16" - 4 REQ g613 (A)

3'-6 3/4

1'-10 9/16

17@3'-0 1/2" = 51'-8 1/2" STAGGERED ELLIPTICAL HOLES

2'-0

4@3'-1'-0

1'-0

N.S. & F.S.

PRT- 15 × 1/2 × 2'-7 1/4" - 4 REQ g67 (A)

PUNCH- 11/16" REAM- 15/16" SHOP RIVET

SEE NOTE - SHEET #1

2-DIAGONALS - A156

58'-11 19/32"

2 FILL PL - 24 × 1/16 × 3'-4 - 4 REQ g615 (C)

TACK WELD

1'-7 1/4

1/4 V 3@6 TYP

11@3'-2'-4 | 90@5 3/4" = 43'-1 1/2" | 10@3'-2'-6 | 3'-3 3/32"

L- 18" @ 42.7# × 55'-10 3/8" - 2 REQ. g68 (A)

TOP & BOT

M51

L52

2-U.M.-PRT- 24 × 7/16 × 55'-10 1/2" - 4 REQ g69 (A)

L- 18" @ 42.7# × 55'-10 3/8" - 2 REQ. g610 (A)

L- 3 1/2 × 3 1/2 × 3/8 × 2'-4" - 8 REQ g611 (A)

FILL PRT- 24 × 3/16 × 2'-9 1/2" - 4 REQ - g612 (C)

TACK WELD

SECTION-AA

2'-2 5/8

17@3'-0 1/2" 51'-8 1/2" STAGGERED ELLIPTICAL HOLES

1'-11 | 3'-1 1/4

4@3'-1'-0

N.S. & F.S.

N.S. & F.S.

9"

1'-0

APPROVED BY 9/22/59

L. P. Carlson

Bridge Design Engineer

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY F.R.S. DATE 9-15-59

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ϕ except as noted

Holes 15/16" ϕ except as noted

End Distance 1 3/4" unless noted

Shop Paint RED LEAD (ABK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by V.T. - 7-16-59

Checked by C.W.K.

Revisions 9/14/59

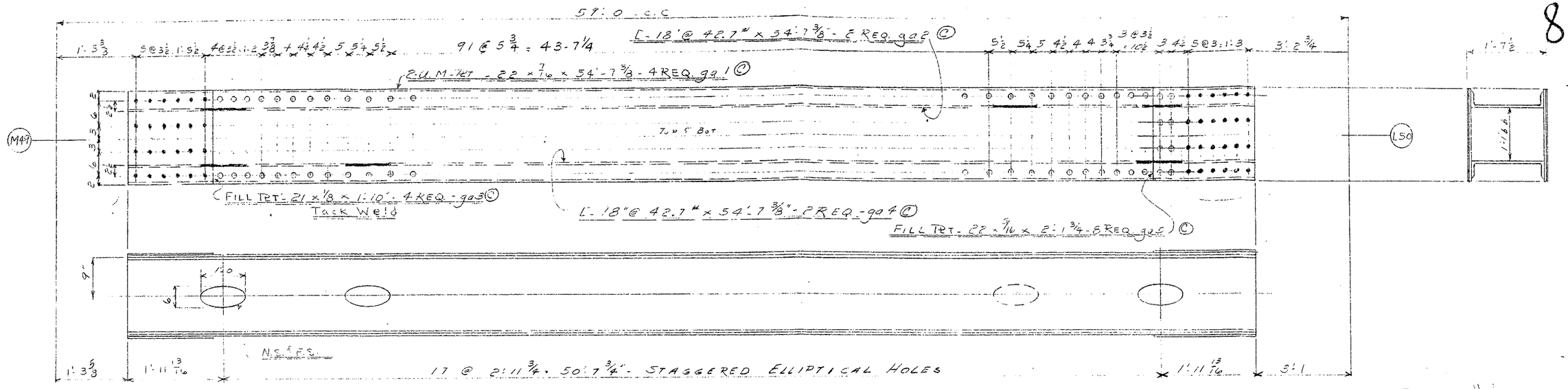
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

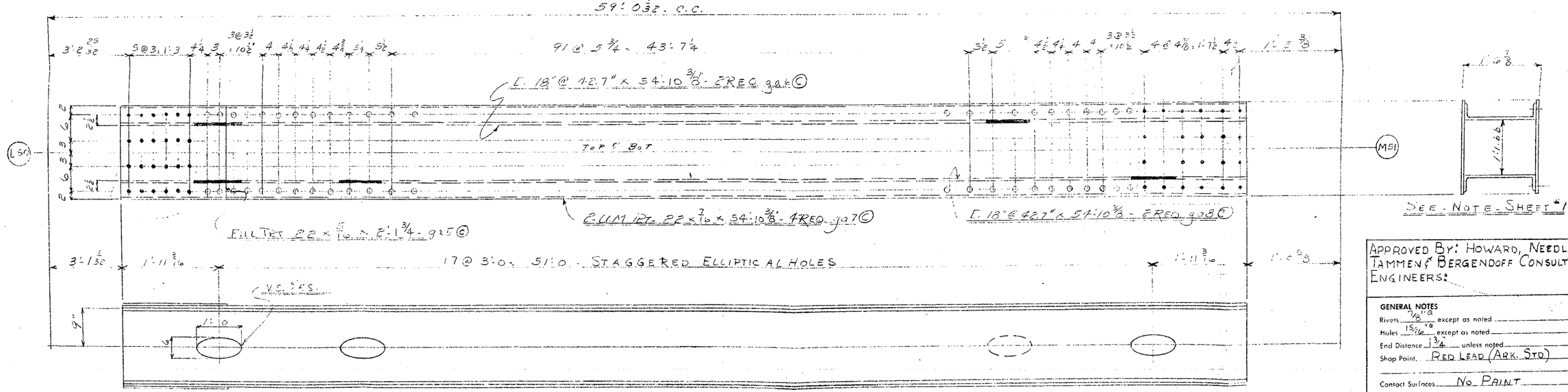
Contr. No. 4800 Sh. 156 of



PUNCH 11/16"
REAM. 13/16"

2-DIAGONALS-A155

PUNCH 11/16"
REAM. 13/16"



2-DIAGONALS-B155

APPROVED BY 9/17/59
L.P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY E.R.S. DATE 9-14-59

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

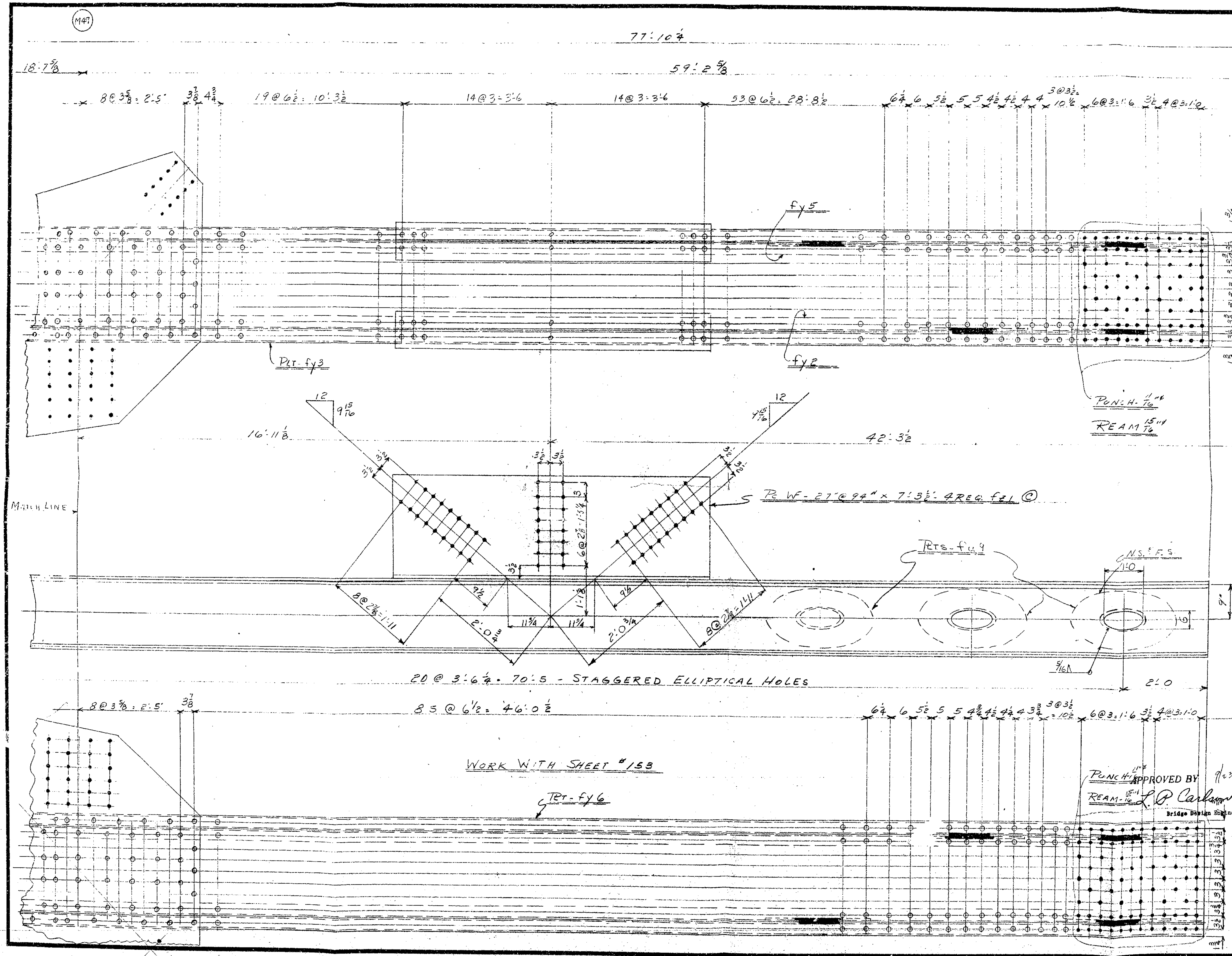
Rivets 7/8" @ except as noted
Holes 15/16" @ except as noted
End Distance 1 3/4" unless noted
Shop Point. RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T. 4-15-59
Checked by J.W.K.
Revisions 8-24-59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND. Contr. No. 4800 Sh. 155 of



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 8-18-59

SEE NOTE. SHEET #1

APPROVED BY L. P. Carlson 9/23/59
Bridge Design Engineer

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES
Rivets 7/8"⌀ except as noted
Holes 15/16"⌀ except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T. - 4-15-59
Checked by CWK
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND. Contr. No. 4800 Sh. 154 of

77'-10 1/4"

18'-7 5/8

59'-2 5/8

M147

1 3/4 | 4@3"=1'-0 | 3 1/2 | 8@3 1/2 = 2'-4 | 3 13/16 | 4 | 4 | 4 1/4 | 4 1/4 | 4 1/2 | 4 3/4 | 5 1/4 | 5 1/2 | 5 3/4 | 14@6 1/2 = 7'-7" | 4 3/16 | 11@3 3/8 = 3'-1 1/8 | 8@3 5/8 = 2'-5" | 3 7/8

I-18"@54.7#×75'-3 3/4"-2 REQ fy5 (A)

I-18"@54.7#×75'-3 3/4"-2 REQ.-fy2 (A)

UM-TRI-30×5/8×75'-3 3/4"-2 REQ.-fy3 (A)

FILL TRI-19×1/8×2'-6"-4 REQ.-fy4 (A)
Tack Weld

PUNCH-11/16"ϕ
REAM-15/16"ϕ

PUNCH-11/16"ϕ
REAM-15/16"ϕ

4@3"=1'-0

2'-5 7/16

2'-5 7/16

8@3"=2'-0

5 TRI-77 11/16×5/8×6'-6 5/8"-4 REQ.-fy1 (C)

MILL

2'-10 3/4

N.S.F.S.

20@3'-6 1/4"=70'-5" STAGGERED ELLIPTICAL HOLES

2 FILL PLTS-15×1/2×1'-6 1/2"-8 REQ.-fy7 (C)-Tack Weld

SLOT-fy9

1'-0

FILL-fy4

UM PLT-30×5/8×75-3 3/4"-2 REQ fy6 (A)

SLOT-fy1

ONE-DIAGONAL-AS SHOWN-A153
ONE-DIAGONAL-TO PAIR-AA153

WORK WITH SHEET #154

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 8-18-59

SEE NOTE SHEET #1

APPROVED BY 9/23/59
L.R. Carlson
Bridge Design Engineer

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces No PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T. 4-14-59
Checked by C.W.K.
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4

SOLD TO: JOHN E. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 153 of

78

40'-4 9/16

3'-6 3/4 | 10@3'-2 6/16 | 4 | 6@3'-1 6/16 | 4 | 4@3'-1'-0 | 3 1/2 | 3 | 3@4'-1'-0 | 4 9/16 | 35@6 = 17'-6' | 20@3'-5'-0 | 20@3 = 5'-0 | 3 1/2 | 3 1/2 | 4@3'-1'-0 | 3/4 | 1 3/4 | 4@3'-1'-0 | 3 1/2

(443)

PUNCH - 11/16" ϕ
REAM - 15/16" ϕ

SPLICE PRT - Fм12

S FILL - Fм1

S SPLICE PRT - Fм6

33'-7 3/16"

6'-8 3/4

U.M. - PRT - 30 × 1/2 × 33'-10 3/16" - 2 REQ. Fм11 Ⓐ

U.M. - PRT - 30 × 3/4 × 36'-11 3/16" - 2 REQ. - Fм13 Ⓐ

4" × 4" × 1/2 × 4'-3 - 4 REQ. - Fм10 Ⓒ

MILL

PL WF - 33" @ 130# × 10'-3 1/2 - 4 REQ. Fм9 Ⓒ

7'-11 3/8"

4'-6 3/8"

2'-6

1'-11

9"

N.S. & F.S.

1/2 | 1'-0 | 1/2

8 @ 5 9/16" = 3'-11 1/2

12

6 5/8

PUNCH - 11/16" ϕ
REAM - 15/16" ϕ

5@3.1'-3 | 5@3.1'-3

8@3'-2'-0

PRT - Fм9

PRT - Fм9

N.S. & F.S.

2'-10 9/16

2 - PRTS - 15 × 1/2 × 3'-1"
8 - REQ. Fм8 Ⓐ

3'-5

4

1'-6"

9 @ 3'-7 = 32'-3 - STAGGERED ELLIPTICAL HOLES

3'-6 3/4 | 10@3'-2 6/16 | 4 | 6@3'-1 6/16 | 4 | 4@3'-1'-0 | 3 1/2 | 3 | 5@3 1/2'-1'-5 1/2 | 43 @ 6" = 21'-6 | 5 3/4 | 5 1/2 | 5 1/4 | 5 | 4 3/4 | 4 1/2 | 4 1/4 | 4 | 9@3 1/2' = 2'-7 1/2' | 3 1/2 | 4@3'-1'-0 | 3/4 | 1 3/4 | 4@3'-1'-0 | 3 1/2

I - 18" @ 70# × 36'-11 3/16" - 2 REQ. Fм7 Ⓐ

FILL PRT - 22 × 1/4 × 2'-6" - 4 REQ. - Fм1 Ⓐ

SPLICE PRT - 30 × 1/2 × 3'-1 1/2" - 4 REQ. - Fм2 Ⓐ BOLT FOR SHIPMENT

U.M. PRT - 30 × 1/2 × 33'-10 3/16" - 2 REQ. - Fм3 Ⓐ

U.M. PRT - 30 × 3/4 × 36'-11 3/16" - 2 REQ. - Fм4 Ⓐ

I - 18" @ 70# × 36'-11 3/16" - 2 REQ. P/L - Fм5 Ⓐ

I.S. - SPLICE PRT - 16 × 1/2 × 2'-7" - 4 REQ. Fм6 Ⓐ

PUNCH - 11/16" ϕ
REAM - 15/16" ϕ

12 | 12

ONE - DIAGONAL - AS SHOWN - A152
ONE - DIAGONAL - TO PAIR - AA152

SEE NOTE - SHEET "1"

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8 except as noted
Holes 15/16 except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T. - 4-14-59
Checked by CWK
Revisions

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY F.R.S. DATE 8-18-59

APPROVED BY 9/2/59
L.P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

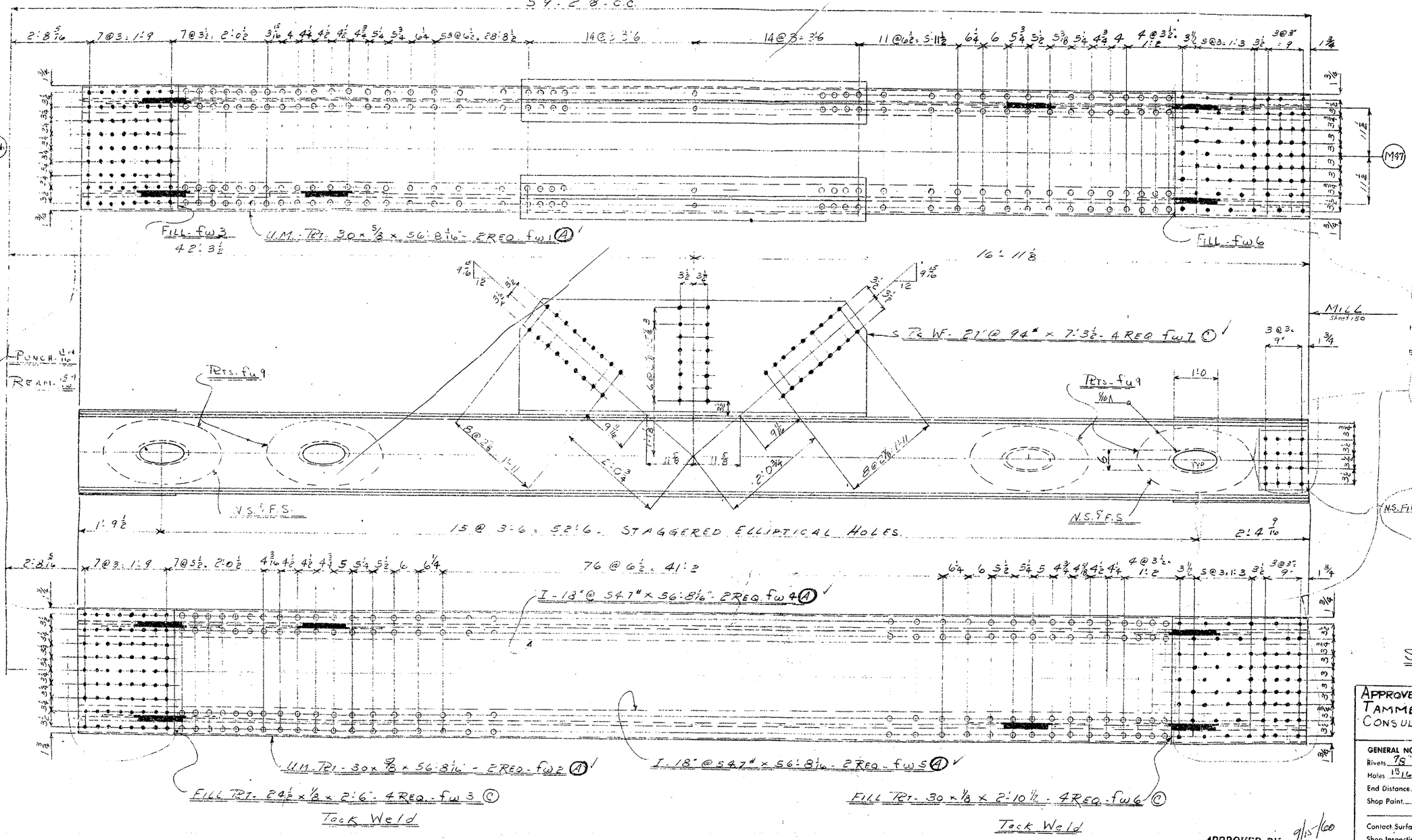
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4

SOLD TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND. Contr. No. 4800 Sh. 152 of

77

59'-2⅛" c.c.



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 9-12-60

PUNCH-11/16
REAM-15/16

SEE NOTE, SHEET #1

APPROVED: HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 9/17/59

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 13/16" ϕ except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces 4 NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T. 4-13-59
Checked by C.W.K.
Revisions 9/21/59

APPROVED BY 9/15/60
L. P. Carlson
Bridge Design Engineer

2 DIAGONALS - A151

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4

SOLD TO: JOHN F. BEASLEY CONSTRUCTION CO.
CHICAGO, ILL.

BOOK No. 3

SHOP VINCENNES STEEL VINCENNES, IND.

DIV. OF INDUSTRIAL ENGINEERING
Contr. No. 4800-F

A.H.D.

ROLL .. 746

BRG. 2899

57

11 SPC. @ 3½" = 3'-2½" 7@4" = 2'-4" 68 SPC. @ 4½" = 25'-6 5@4¼" = 1'-9¼" 3@4" = 1'-0" 3½" 10@3" = 2'-6" 3¾" 3@3" = 9" 3½" 4⅜" 2¾"

1L 4-4x⅜x1'-2" - 2 Req. dn15(c)

Slot Top PL - 1" x 2'-2¼" 1'-2¼" 7¾"

11/16 ϕ Holes Ream 15/16 ϕ

Top

2'-3"

Top PL - 31 x ½ x 39'-9¼" - 2 Req. - dn1 (c) (U.M.)

Fill PL - 4½ x ⅜ x 2'-9½" - 4 Req. - dn2 (c) (Tack Weld)

39'-7"

Punch 11/16 ϕ Ream 15/16 ϕ

N.S PL - 22¼ x ⅝ x 5'-0½" - 2 Req - dn3 (c)

F.S. PL - 22¼ x ⅝ x 4'-6½" - 2 Req. - dn4 (c)

NSL - 7-4 x ¾ - 1'-11" - CV17 (on end) (E)

N.S. Fill PL - 16 x ⅜ x 1'-6¾" - 2 Req. - dn5 (c)

2 Top L's - 4 x 4 x ⅜ x 40'-5" - 4 Req. PL - dn6 (c)

2 Web PL's - 24 x 9/16 x 40'-5" - 4 Req. - dn7 (c) (U.M.)

39'-7" c/c

2 PL's - dn10 (Tack Weld)

11/16 ϕ Holes Ream 15/16 ϕ

Mill

Jacking Block: A410

Mill Shop Rivets F.S.

2 Bott L's - 4 x 4 x ⅜ x 40'-5" - 4 Req. PL - dn8 (c)

74 Spc. @ 4½" = 27'-9"

3@4½"=1'-0¾" 4@4½"=1'-5" 3@5½"=1'-2" 8@3"=2'-0" 3¾" 3@3"=9" 6" 5½"

2 Fill PL's - 16 x 3/16 x 3'-0" - 4 Req. - dn9 (c) (Tack Weld)

2 Fill PL's - 3 x 3/16 x 2'-6" - 8 Req. - dn10 (c) (Tack Weld)

L43 L44

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 9-9-59

1'-8 7/8"

One Lower Chord As Shown - A100

One Lower Chord To Pair - AA100

1R - 29¼ x ½ x 4'-1¾" - 2 Req. - dn11 (c)

Elliptical PL - 20 x ⅝ x 3'-4" - 16 - Req. - dn12a (A) - 20 - Req. - dn12 (c) - A100 - AA100

Botts. PL - 31 x ½ x 40'-5" - 2 Req. - dn13 (c) (U.M.)

Elliptical PL - dn12

Fill PL - 31 x 3/16 x 3'-4½" - 2 Req. - dn14 (c) (Tack Weld)

11/16 ϕ Holes Ream 15/16 ϕ

Bottom

65 Spc. @ 4½" = 29'-4½"

6 Spc. @ 3'-3" = 1'-6"

Elliptical Holes

10@3½" = 2'-11" 6@4" = 2'-0" 6@4¼" = 2'-1½" 10" 5'-2" 2'-7 1/8" 3'-7 1/8" 5'-¾"

Approved By: Howard, Needles, Tammen & Bergendoff Consulting Engineers: 9/3/59

APPROVED BY 9/15/60
L. P. Carlson
Bridge Design Engineer

Note
See Note on Sheet 1

BOOK No. 3

General Notes

Rivets 7/8 except as noted
Holes 15/16 except as noted
End Distance 1¾" unless noted
Shop Paint Red Lead (Ark. Std.)
Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivets
Drawn by T.P.
Checked by CWK
Revisions

Arkansas State Highway Commission
Mississippi State Highway Commission

Mississippi River Bridge
Near Helena, Arkansas
Unit No 4

Sold To: John E. Reasley Constr. Co.
Chicago, Illinois

Shop Vincennes Steel Corp. Vincennes, Ind.

Contr. No. 4800-T Sh. 100 of

UNIT 4 - SHIPPING LIST

No	Mark	Member		No	Mark	Member	
1	A177	Platform	@ L48				
1	B177	Cap & Door	do	1	A133	Verticals	U58L58
1	C178	Ladder Section	U48L48	1	AA133	"	U58L58
1	B178	" "	do	2	B133	"	U57L57
1	A179	" "	do	2	C133	"	U55L55
1	B179	" "	do	2	A134	"	U56L56
1	C179	" "	do	1	B134	"	U54L54
1	E178	HANDRAIL Ladder	do	1	BA134	"	U54L54
1	A100	Lower Chord	L43L44	2	A135	"	U53L53
1	AA100	" "	"	1	B135	"	U52L52
1	A101	" "	L44L46	1	BA135	"	U52L52
1	AA101	" "	"	2	A136	"	M51L51
1	A103	" "	L46L48	2	B136	"	U51M51
1	AA103	" "	"	2	C136	"	U49-M49
1	A105	" "	L48-L50	1	B37	"	U48 L48
1	AA105	" "	"	1	BA37	"	U48 L48
				2	A137	"	M47L47
				2	B137	"	U47M47
1	A108	" "	L50L52				
1	AA108	" "	"	2	C137	"	M45L45
1	A110	" "	L52L54	2	A138	"	U46L46
1	AA110	" "	"	2	B138	"	U45M45
1	A112	" "	L54L56	1	C138	"	U57 x59
1	AA112	" "	"	1	CA138	"	U59L59
1	A114	" "	L56L58	1	A139	"	U43L43
1	AA114	" "	"	1	B139	"	U44L44
1	A116	" "	L58L59	1	BA139	"	U44L44
1	AA116	" "	"	2	A197	"	U50L50
1	A117	Top Chord	U43U44	2	D142	"	M49L49
1	AA117	" "	"	1	AA139	"	U43L43
1	A118	" "	U44U46	2	A144	Diagonals	L52U53
1	AA118	" "	"	2	B144	"	U53L54
1	A120	" "	U46U48	1	A145	"	U43L44
1	AA120	" "	"	1	AA145	"	U43L44
1	A122	" "	U48U50	2	A147	"	L44U46
1	AA122	" "	"				
1	A124	" "	U50U52	2	A148	"	M45L46
1	AA124	" "	"	2	B148	"	L46M47
1	A126	" "	U52U53	1	A149	"	U46 L48
1	AA126	" "	"	1	AA149	"	U46 L48
1	A127	" "	U53U55				
1	AA127	" "	"	1	A152	"	L48M49
1	A129	" "	U55U57	1	AA152	"	L48M49
1	AA129	" "	"	1	A153	"	M49U50
1	A131	" "	U57U59	1	AA153	"	M49U50
1	AA131	" "	"	2	A155	"	M49L50
				2	B155	"	L50M51

No	Mark	Member		
2	A156	Diagonals	- U50L52	
2	A159	"	- L54U55	
2	B159	"	- U55L56	
2	A160	"	- L56U57	
2	B160	"	- U57-L58	
1	A157	"	- L58U59	
1	AA157	"	- L58U59	
2	A52	Top Struts	- U51-U52	
1	B54	"	- U51	
1	A55	"	- U52	
1	A60	"	- U45	
1	A169	"	- U58	
1	B169	"	- U55	
1	C169	"	- U44	
1	A170	"	- U53	
2	B170	"	- U47-U49	
1	C170	"	- U57	
1	A171	"	- U43	
1	A172	"	- U50	
1	B172	"	- U46	
1	A140	"	- U48	
1	A141	"	- U59	
1	E52	Sway Braces	- U54	
1	E52	"	- U54	
1	E52	"	- U58	
1	B52	"	- U56	
1	C52	"	- U56	
1	D52	"	- U56	
2	B53	"	- U54-U58	
2	C53	"	- U54-U58	
2	D53	"	- U54-U58	
2	D54	"	- U52	
2	E54	"	- U44	
2	B55	"	- U44-U52	
6	C54	"	- U44-U52	
2	C55	"	- U44-U52	
2	D55	"	- U44-U52	
1	C60	"	- U48	
1	D60	"	- U48	
1	A59	"	- U48	
2	B59	"	- U48	
1	C59	"	- U48	
1	A134	"	- U48	
1	B134	"	- U48	

No	Mark	Member		
1	C135	BRACKET		U52
1	CA135	"		U52
1	C139	"		U44
1	CA139	"		U44
1	B142	Sway Braces		U59
1	C172			
1	CA142	"	"	U59
1	A142	"	"	U59
1	B64	Portal Struts		U50
1	B92	"	"	U50
1	B91	"	"	U50
1	A92	"	"	U50
1	A93	"	"	U50
1	B93	"	"	U50
2	C93	"	"	U50
1	A91	"	"	U46
1	B92	"	"	U46
1	B91	"	"	U46
1	A92	"	"	U46
1	A93	"	"	U46
1	B93	"	"	U46
2	C93	"	"	U46
1	B96	"	"	U43
1	C96	"	"	U43
1	B97	"	"	U43
1	E97	"	"	U43
1	A161	Top Laterals		
1	B161	"	"	
1	C161	"	"	
1	D161	Wind Shear Struts		U59
3	A162	Top Laterals		
6	B162	"	"	
2	A163	"	"	
4	B163	"	"	
3	A164	"	"	
8	B164	"	"	
2	A165	"	"	
2	B165	"	"	
2	C165	"	"	
1	A166	"	"	
1	B166	"	"	
1	C166	"	"	
1	D166	"	"	
2	A168	"	"	
2	B168	"	"	
5	A72	Lower Laterals		
10	B72	"	"	

No	Mark	Member		
2	B140	PLATE		U48
4	C140	"		U48
1	C172	"		U50
1	CA172	"		U50
1	D172	"		
1	DA172	"		U46
1	E172	"		U50
1	EA172	"		U50
1	F172	"		U46
1	FA172	"		U46
2	C72	Lower Laterals		
4	D72	"	"	
3	A73	"	"	
7	B73	"	"	
1	C73	"	"	
1	D73	"	"	
1	A74	"	"	
1	B74	"	"	
1	C74	"	"	
1	D74	"	"	
2	E74	"	"	
1	A75	"	"	
2	B75	"	"	
1	C75	"	"	
1	D75	"	"	
1	B76	"	"	
1	A76	Wind Shear strut	at L43	
1	D167	" "	at L59	
1	A167	Lower Laterals		
1	B167	"	"	
1	C167	"	"	
1	A84	Floor Beam	L43	
1	A193	"	L44	
1	A194	"	L45	
1	B190	"	L46	
1	B194	"	L47	
1	A86	"	L48	
1	C194	"	L49	
1	D191	"	L50	
1	A195	"	L51	
1	B193	"	L52	
1	C193	"	L53	
1	A192	"	L54	
1	B195	"	L55	
1	B191	"	L56	
1	B195	"	L57	
1	B192	"	L58	
1	A196	"	L59	
1	A180	Stringers		
1	AA180	"		
1	B180	"		

No	Mark	Member	
2	K173	Shims	@ L59
2	M173	"	"
4	N173	"	"
1	K175	Curb Plates	"
1	KA175	" "	"
1	M175	" "	"
1	MA175	" "	"
1	A181	Stringers	
1	AA181	"	
1	C181	"	
1	A185	"	
1	AA185	"	
1	B185	"	
2	C186	"	
2	CA186	"	
1	G186	"	
2	A182	"	
2	AA182	"	
1	B182	"	
1	C182	"	
1	F186	"	
1	C184	"	
1	CA184	"	
1	F184	"	
1	A183	"	
1	AA183	"	
1	C183	"	
1	B186	"	
1	BA186	"	
1	E186	"	
1	B184	"	
1	BA184	"	
1	E184	"	
2	B183	"	
2	BA183	"	
1	D183	"	
1	E183	"	
1	A186	"	
1	AA186	"	
1	D186	"	
1	A184	"	
1	AA184	"	
1	D184	"	
1	A187	"	
1	AA187	"	
1	B187	"	
8	N175	Contraction Joints	
8	NA175	" "	
24	F190	Contraction Links	
	F191	" Pins	
48	E191	" Ring Fills	
1	B83	Cross	
1	C83	"	

No.	Mark	Member	
2	A173	Expansion Castings	@ L59
8	B173	"	"
2	C173	"	"
2	D173	Shims	"
2	E173	"	"
4	F173	"	"
8	G173	"	"
8	H173	"	"
16	J173	"	"
79	C176	Cross Beams	
64	D176	" "	
4	A89	" "	
1	A188	Curb [	
1	AA188	" "	
8	B188	" "	
2	C188	" "	
2	CA188	" "	
2	D188	" "	
2	DA188	" "	
2	E188	" "	
2	EA188	" "	
2	F188	" "	
2	FA188	" "	
4	G188	" "	
1	J188	" "	
1	JA188	" "	
4	F193	Horizontal Links	at U59
4	J143	Vertical "	at U59
2	B197	10" Pins	at U59
2	D197	10" "	at U59
2	H197	10" "	at U59
4	A176	Contraction Joints	
4	B176	" "	

56

APPROVED BY: HOWARD NEEDLES TAMMEN & BERGENDOFF - CONSULTING ENGINEERS

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY E.R.S. DATE 9-25-59

APPROVED BY 9/25/59
Cross L. P. Carlson
Bridge Design Engineer

GENERAL NOTES
Rivets 7/8" except as noted
Holes 15/16 except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD)

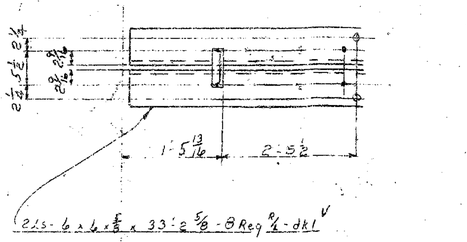
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by
Checked by C.W.K
Revisions

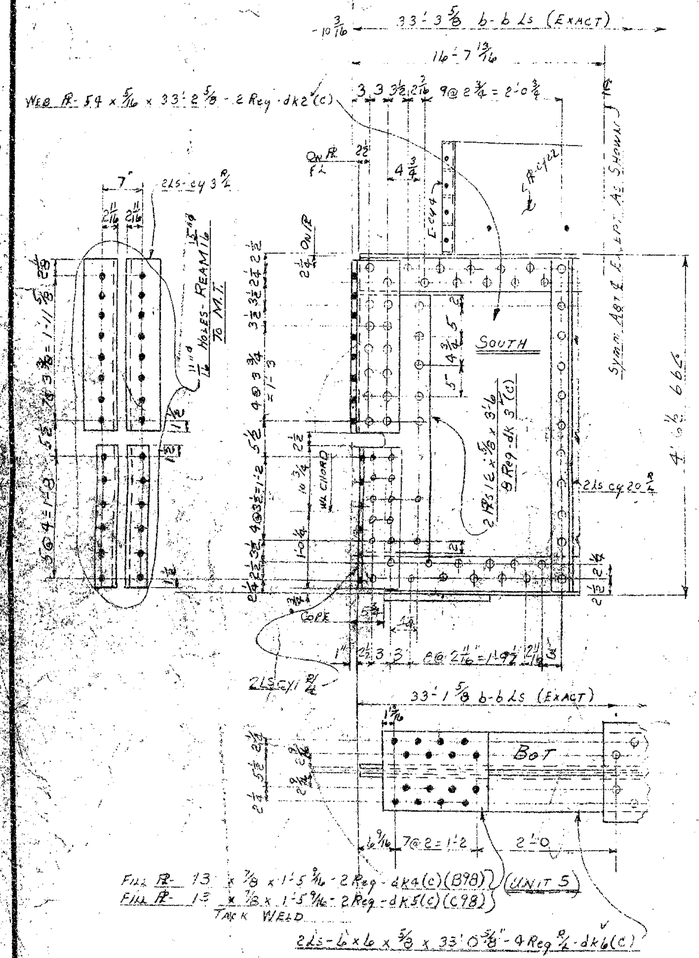
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

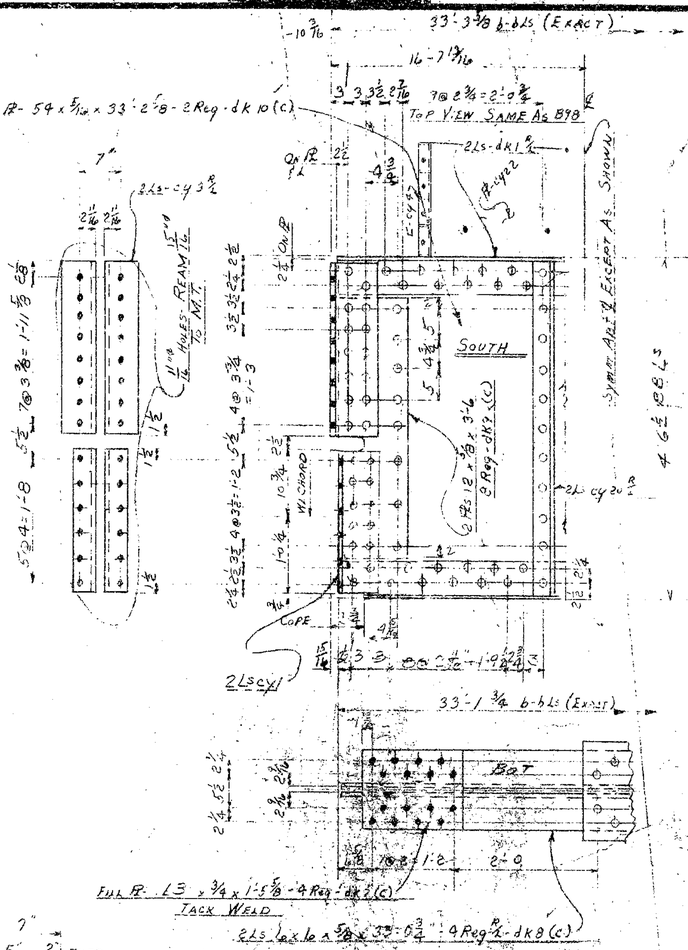
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No 4

SOLD TO: JOHN F. BEASLEY CONSTR CO
CHICAGO, ILLINOIS

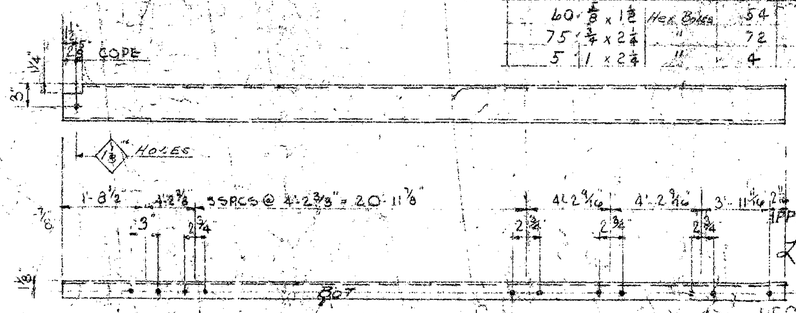
SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 99 of





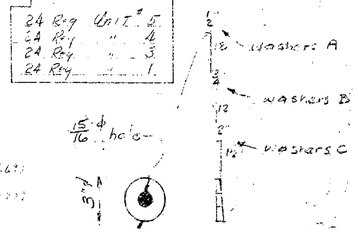


2 Floor Beams As Noted - D98
Part Not Shown Same As A87
(Units 5)
L72 - L73



-96 - Turn Bolts - TB98-
Shop Th Bolt List for Unit 5 A 341

24 Req	Unit	5
24 Req	"	4
24 Req	"	3
24 Req	"	1



One Floor Beam As Noted - E73
One Floor Beam As Noted - C98
Part Not Shown Same As A87

Beveled washers 3" ϕ - 4 - 72 For A
3" ϕ - 4 - 56 B
3" ϕ - 4 - 64 C
Washers to be galvanized - ship with bolts

UNIT 5 - FIELD RIVET LIST - 800 (SHEETS 1 TO 48) BOOK No. 11

55

Bend	Size	Kind	Req'd		Location
395	7/8 x 2 1/2	Rivets	352	+209	
2978	7/8 x 2 4	"	2794	+332	
1885	7/8 x 2 8	"	1765	+320	
3525	7/8 x 3 1/2	"	3276	+49	
2670	7/8 x 2 8	"	241	+271	
2400	7/8 x 2 8	"	3080	+50	8 HS Bolts 7/8 x 2 3/4
2245	7/8 x 2 8	"	2320	+51	10 HS " 7/8 x 3
1620	7/8 x 3 8	"	140	+72	45 HS " 7/8 x 3 1/2
2210	7/8 x 3 4	"	2200	+424	56 HS " 7/8 x 3 1/2
2420	7/8 x 3 1/2	"	2243	+465	48 HS " 7/8 x 3 3/4
144	7/8 x 3 5/8	"	1302	-78	40 HS " 7/8 x 4
2376	7/8 x 3 3/4	"	2146	+132	45 HS " 7/8 x 4 1/2
1005	7/8 x 3 7/8	"	904	+69	1100 7/8" hardened washers for 7/8" HS Bolts
1540	7/8 x 4	"	1392	+264	
675	7/8 x 4 1/2	"	624	+104	24" Turn - Bolts - TB98 (At L 67)
2310	7/8 x 4 4	"	209		
4410	7/8 x 4 3/8	"	392	+36	
4900	7/8 x 4 1/2	"	420	+45	
5355	7/8 x 4 5/8	"	476	+119	
825	7/8 x 4 1/8	"	740		
480	7/8 x 5	"	426	+132	12 1" x 4 4 Hex Bolts Grip 3 1/2 4 1/2 (At L 74)
405	7/8 x 5 8	"	32		16 1" x 5 4 " 4 1/2
1090	7/8 x 5 1/4	"	984		32 1" x 5 1/2 " 4 5/8
1305	7/8 x 5 1/8	"	112	-8	
70	7/8 x 5 1/2	"	54	+36	
405	7/8 x 5 3/4	"	30		72 Shims P 173
3900	7/8 x 5 4	"	348	+60	72 " Q 173
201	7/8 x 6	"	12		42 " S 175 (At L 74)
75	7/8 x 6 4	"	60		84 " P 175 " (At L 74)
35	7/8 x 6 3/4	"	24		
625	7/8 x 8	"	504		
3320	7/8 x 3 5/8	"	288		
568	5/8 x 12	Hex Bolts	53		℄ Cycle D
60	5/8 x 3	Not Ring Turned	44		Compression Joints 72 Washers A for 7/8" Bolts
280	7/8 x 2 1/2	See Comp Mat	272		" 36 " B " 1" "
150	5/8 x 3	"	146		Galvanized 24 " C " 1 1/8" "
120	5/8 x 3 1/8	"	112		1100 Galvanized Washers for 7/8" Bolts
270	7/8 x 3 1/2	"	240		
70	7/8 x 4	"	64		
75	7/8 x 4 1/2	"	72		
60	5/8 x 1 1/2	Hex Bolts	54		
75	7/8 x 2 1/4	"	72		
5	1 x 2 1/4	"	4		

Approved By: Howard, Needles, Tammen & Bergendoff Consulting Engineers: 7/30/59

GENERAL NOTES
Rivets 7/8 except as noted
Holes 15/16 except as noted
End Distance 1 3/4" unless noted
Shop Paint Red Lead (Ark. Std.)
Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivets
Drawn by C.A.B. Apr. 6, 1959
Checked by DHH
Revisions

Approved 9/8/60
L. P. Carlson
Bridge Design Engineer

Recommended for Unit 5 Approval
Howard, Needles, Tammen & Bergendoff
H.T.Z. 9-7-60
Date

Arkansas State Highway Commission
Mississippi State Highway Commission
Mississippi River Bridge
Near Helena, Arkansas
Unit No. 5
Modern Bridge Co.
Chicago, Illinois

See Notes

54

R. dj 10½ N.S. BOLT FOR SHIPMENT (FOR E97 ONLY)

Tpr. dh 8½ - FS. 2 BOLT FOR SHIPMENT (FOR A97 ONLY)

Tpr. dh 7½ N.S. 2 BOLT FOR SHIPMENT (FOR A97 ONLY)

R. dj 7½ N.S. BOLT FOR SHIPMENT (ON E97 ONLY)

27'-7⅞

2'-7⅞ 4@3'-1'-0 22'-3⅜ 4@3'-1'-0 8⅝

54 @ 5¼ = 23'-7½

℄ 2½ - 5 x 3 x 5/16 x 24'-6⅞ - 8 REQ. dj 1' Ⓒ

℄ 5 UM. TPT. 22 x 5/16 x 24'-6⅞ - 2 REQ dj 2' Ⓒ

13/16 HOLES

¾" RIVETS

26. dj 1

ONE - BRACE - A97 @ U51

ONE - BRACE - E97' @ U43

35'-0

1'-0⅝ 4@3'-1'-0 30'-10¾ 4@3'-1'-0 1'-0⅝

74 @ 5¼ = 32'-4½

℄ 2 - Bulb L - 6 x 3½ @ 10.7# x 33'-2¼" - 12 REQ dj 3' Ⓒ

dj 3 - N.S.

UM. TPT. 22 x 5/16 x 33'-2¼" - 4 REQ dj 4' Ⓒ

Bulb L - 6 x 3½ @ 10.7# x 33'-2¼" - 4 REQ dj 5' Ⓒ FS

1" DRAIN HOLES abt. 2'-0 c.c. - dj 5 ONLY

4 - STRUTS - B97' @ U50 - U43 - U15 - U25

8@3'-2'-0

BEND LINE

NOTE: BT. R. dj 6 GO ON C96 & E97 (SEE SHEET "96")

Bt. R. 32 5/8 x 3/8 x 3'-10 7/8" 2 Req'd. dj 6 Ⓒ

8@3'-2'-0

BEND LINE

Bt. R. 32 x 3/8 x 3'-0 5/16 2 - Req'd. dj 7 Ⓒ

SEE NOTE - SH. "1"

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 8/31/59

GENERAL NOTES

Rivets 7/8" Ø except as noted

Holes 15/16" Ø except as noted

End Distance 1¾" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by V. I. - 3-30-59

Checked by ary

Revisions

APPROVED BY 9/8/60
P P Carlson
Bridge Design Engineer

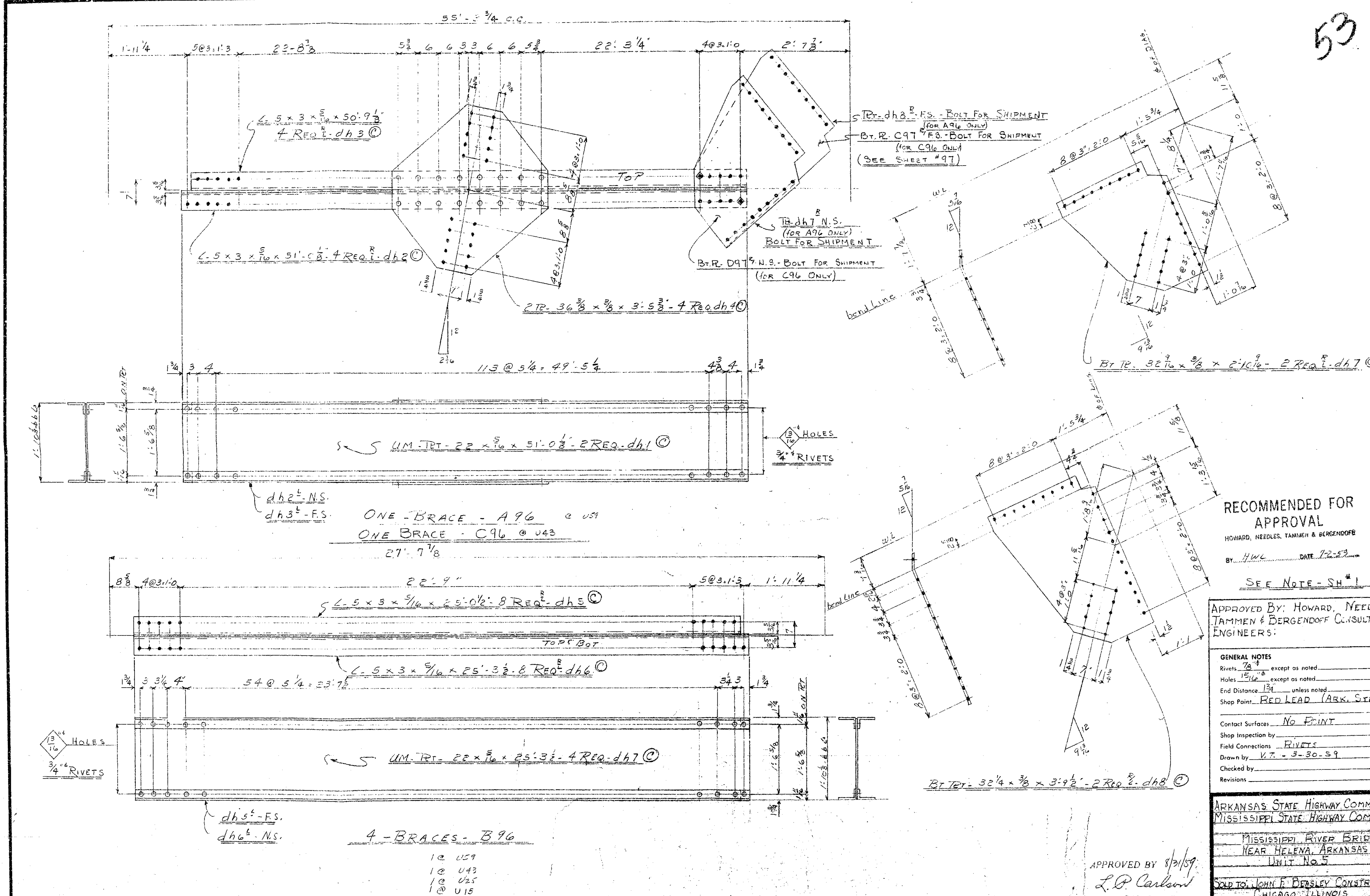
RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 9-7-60

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800-F Sh. 97 of



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY HWL DATE 7-2-59

SEE NOTE - SH. #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8" φ except as noted
Holes 15/16" φ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T. - 3-30-59
Checked by
Revisions

APPROVED BY 8/31/59
L. P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES INC.
VINCENNES, IND.
Contr. No. 4800 Sh. 96 of

NOTE:
RIVET dg13 TO A23 & AA23
RIVET dg14 TO A21 & AA21

495

WF 24" @ 100# - 2'-7 3/8" { 4 Req R & L dg13 @ ✓ / 4 Req R & L dg14 @ ✓ B95#

bent Plt 6 x 3/8 - 1'-0 - 4 Req dg11 @

bent Plt. 6 x 3/8 x 1'-0 - 4 Req dg12 @

Punch 1/16" ⌀ Ream 15/16"

Punch 11/16" Ream 15/16"

8 Req R & L dg6 @ ✓ for A95
2 Req dg7 @ ✓ for A95
2 Req dg8 @ ✓ for B95

2 VERTICALS AS SHOWN & NOTED - A95 @ ✓

2 VERTICALS AS SHOWN & NOTED - B95 @ ✓

SEE NOTE - SH #1

APPROVED BY 9/6/60
L P Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
H F C DATE 9-7-60

APPROVED BY HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS 8/31/59

GENERAL NOTES
Rivets 7/8 ⌀ except as noted
Holes 15/16 ⌀ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by BB
Checked by ALY
Revisions 7/22/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 9

SOLD TO JOHN F BEASLEY CONSTR CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND. DIV. OF INDUSTRIAL ENTERPRISES, INC.
Contr. No. 4800-T Sh. 45 of

51

L 8 x 8 x 1 1/2 x 6' 7 15/16 - 4 Req'd 1/2 Rivets df 10 ©
Ends Welded Together

R - 46 1/2 x 1/2 x 8' 8 1/2 - 2 Req'd df 9 ©

R - 46 1/2 x 1/2 x 8' 7 1/2 - 4 Req'd df 8 ©

Punch 15/16 Holes on 3" Gage

Punch 15/16 Holes on 3" Gage

L 4 x 4 x 1/2 x 9' 3 1/2 - 4 Req'd df 1 ©

L 4 x 4 x 1/2 x 3' 8 1/2 - 4 Req'd df 11 ©

All Elliptical Holes 7/16 x 1 Unless Otherwise Noted

Match Line

Match Line

Top

Side

Field Bolts N.S.

Fill 4 x 5/8 x 10 - 4 Req'd df 18 ©

L 4 x 4 x 1/2 x 66' 8 9/16 - 4 Req'd R/L df 16 ©

UMR 24 x 5/8 x 65' 4 9/16 - 4 Req'd df 13 ©

L 4 x 4 x 1/2 x 65' 10 3/16 - 4 Req'd R/L df 17 ©

R - 57 1/2 x 3/8 x 4' 10 3/4 - 4 Req'd df 12 ©

UMR 31 x 5/8 x 66' 8 3/8 - 2 Req'd df 14 ©

UMR 31 x 5/8 x 64' 4 3/8 - 2 Req'd df 15 ©

L 4 x 4 x 1/2 x 5' 1 - 2 Req'd df 4 ©

L - 10 3/4 x 5/8 x 4' 3 1/2 - 4 Req'd df 7 ©

Shop Rivet To A30 - AA30

L 4 x 4 x 1/2 x 4' 1 - 2 Req'd df 6 ©

Shop Rivet To A30 - AA30

R 8 x 5/8 x 2' 1 - 2 Req'd df 3 ©

One End Post as Shown - 1 Req'd

One End Post 3° Batter - 1 Req'd

One End Post Same as Shown Except Drilled for 5 Rail

R - 8 1/2 x 3/8 x 1' 4 1/2 - 4 Req'd df 1 ©

R - 17 5/8 x 3/8 x 2' 2 1/16 - 2 Req'd df 2 ©

Punch 15/16 Holes on 3" Gage

L 4 x 4 x 1/2 x 1' 5 - 8 Req'd df 5 ©
Ends Cut to 9' 6" Long
Ends Spaced

R 12 - 7 1/2 x 3/8 x 1' 4 1/2 - 4 Req'd df 4 ©

Fill R - 8 1/2 x 1/2 x 1' 0 1/2 - 4 Req'd df 10 ©
Tack Weld

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY VCH DATE 8-27-59

SEE NOTE SH. #1

APPROVED BY 8/31/59
L. P. Carlson
Bridge Design Engineer

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by LE
Checked by AJH
Revisions 7/21/59

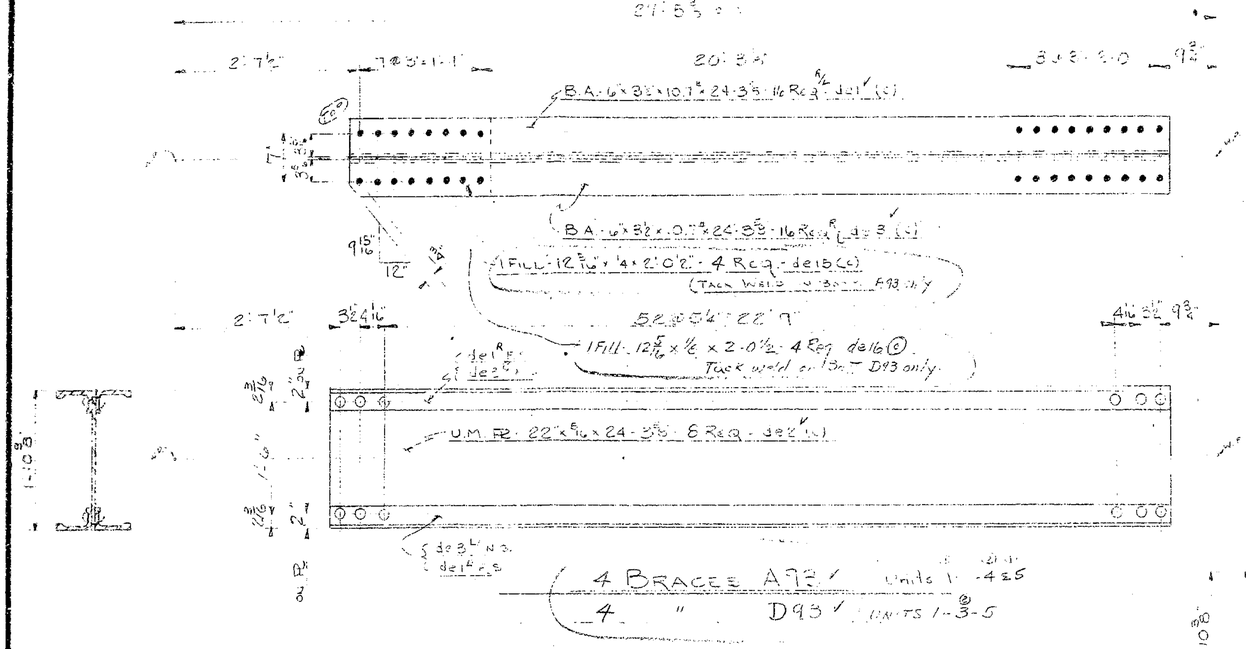
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

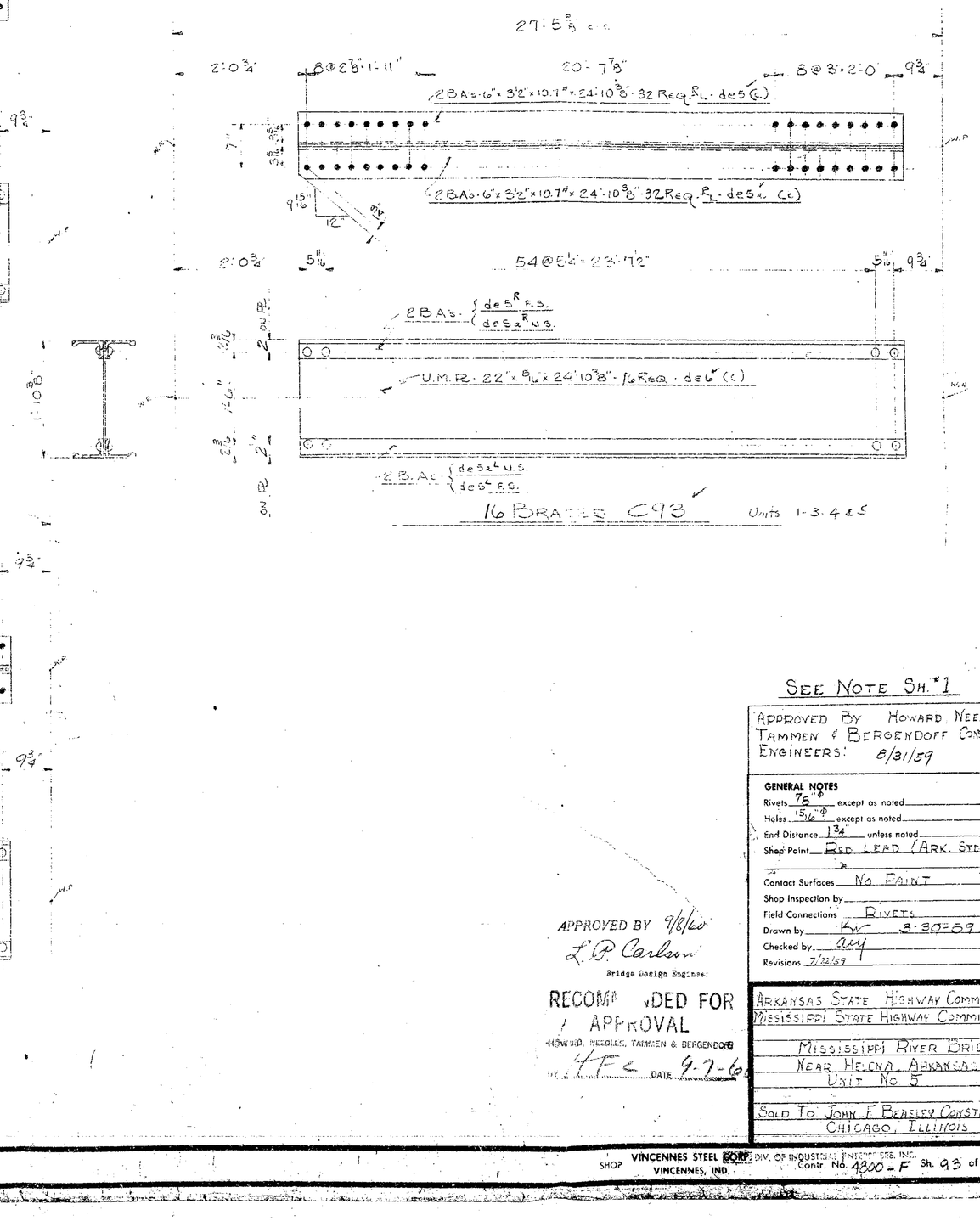
MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT NO. 5

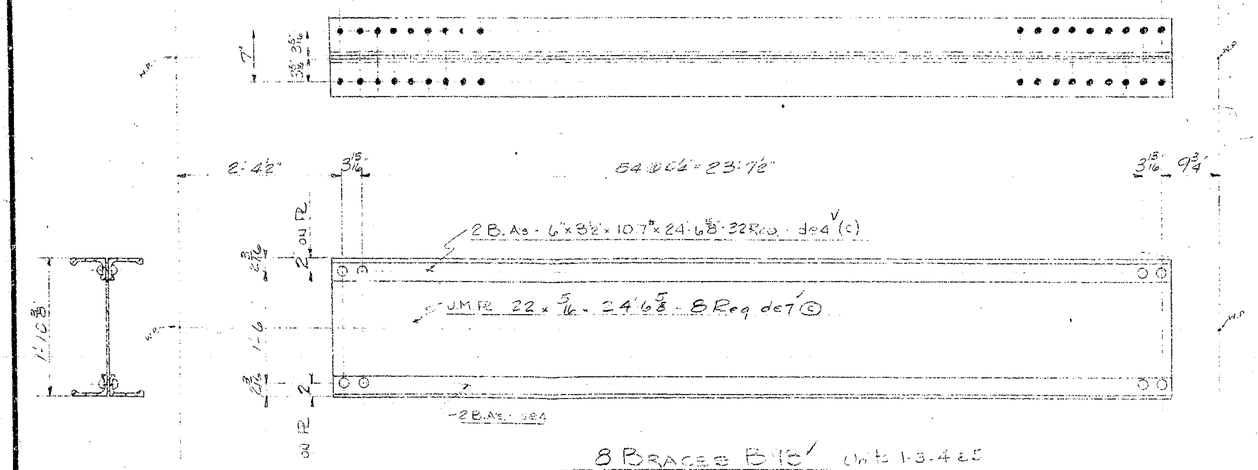
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800 Sh. 94 of







SEE NOTE SH. #1

APPROVED BY HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 8/31/59

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STE.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by KW 3-30-59
Checked by AWH
Revisions 7/22/59

APPROVED BY 9/8/60
L. P. Carlson
Bridge Design Engineer

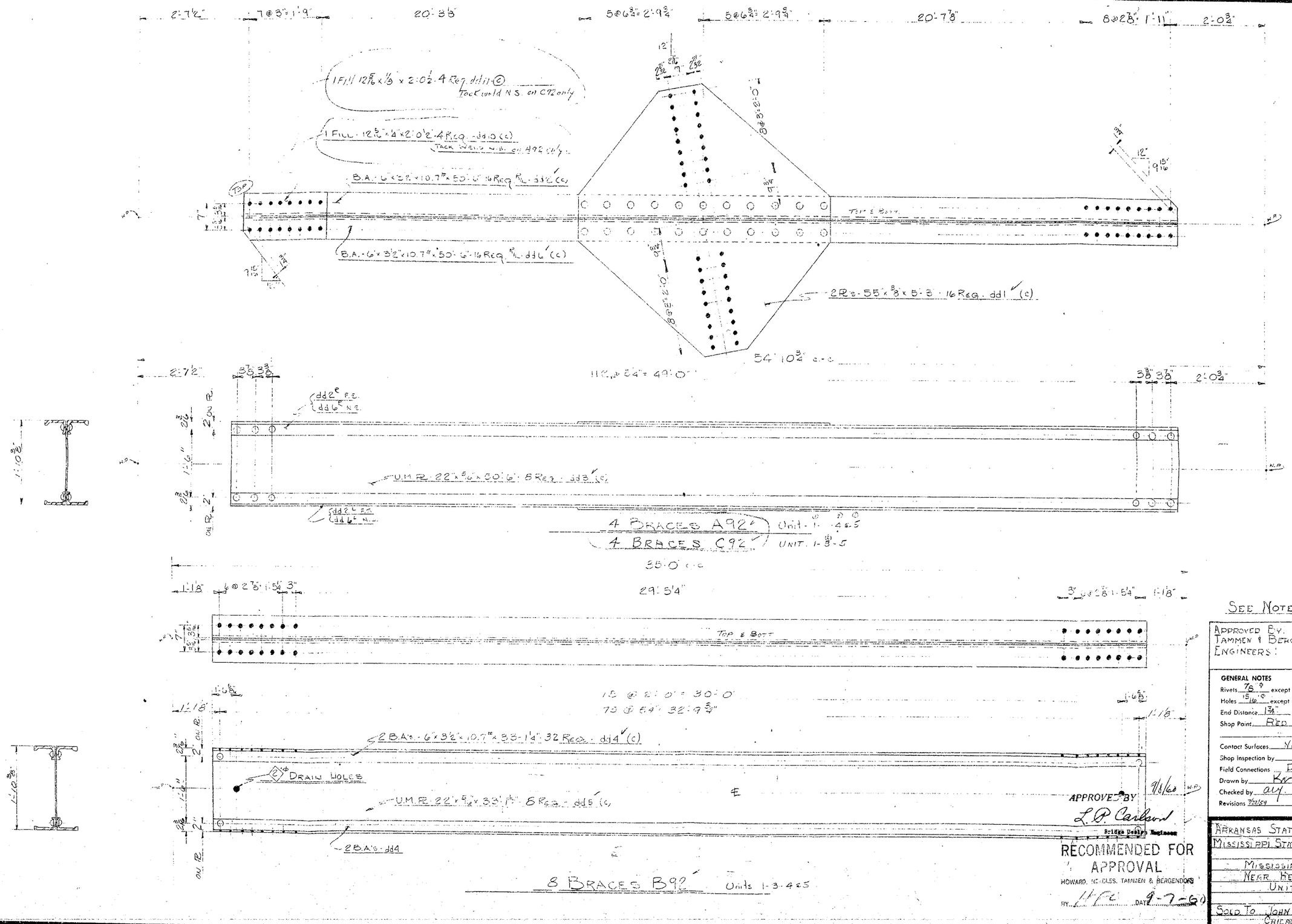
RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 9-7-60

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO 5

SOLD TO JOHN F BEASLEY CONSTR. CO
CHICAGO, ILLINOIS

49



APPROVED BY
L. P. Carlson
Bridge Design Engineer
9/8/60

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ____ DATE 9-7-60

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 5/31/59

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by KR 3-30-59
Checked by alf
Revisions 7/22/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 5

SOLD TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800-F Sh. 92 of

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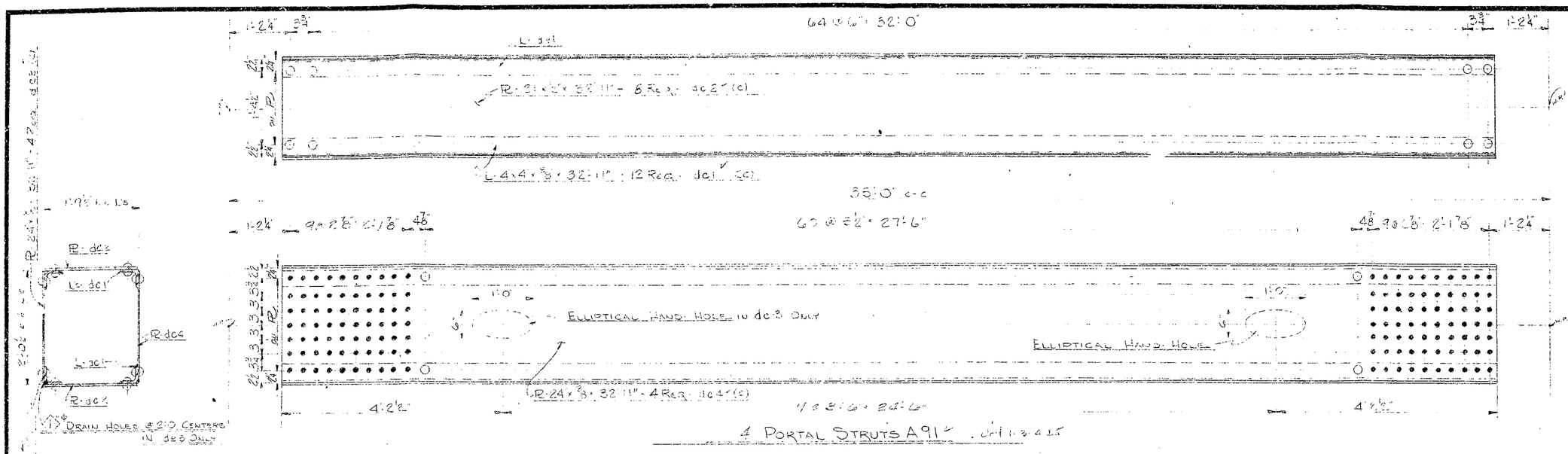
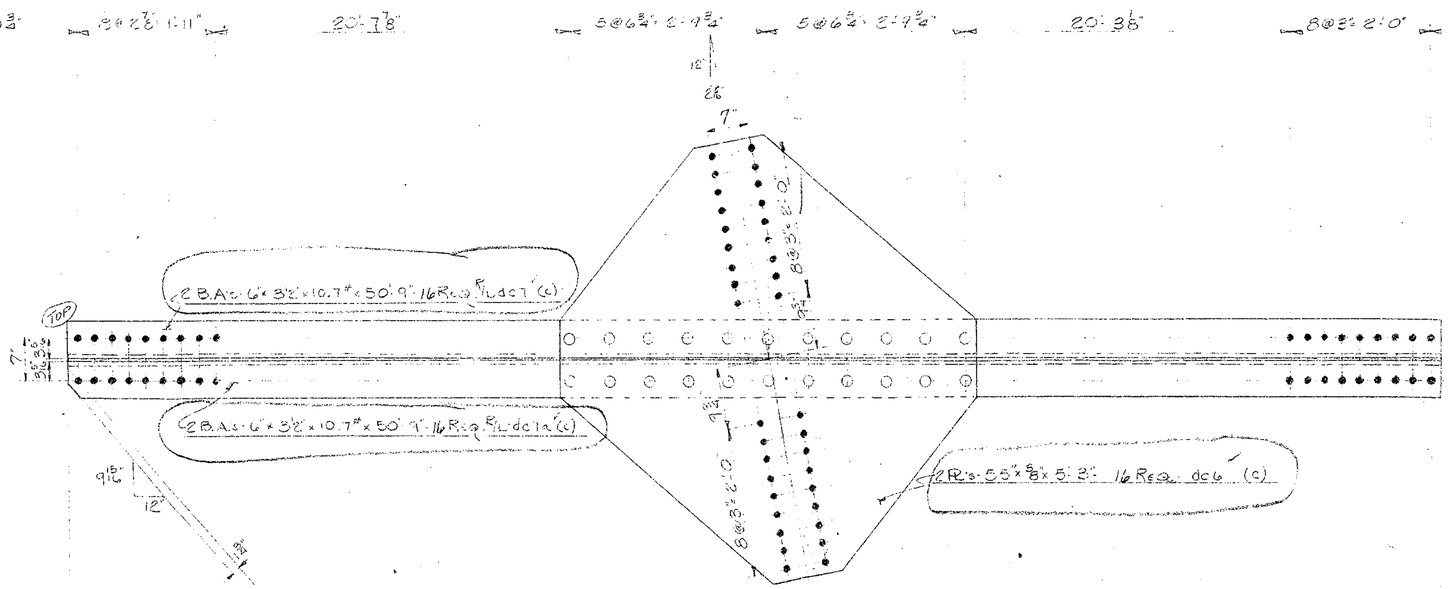
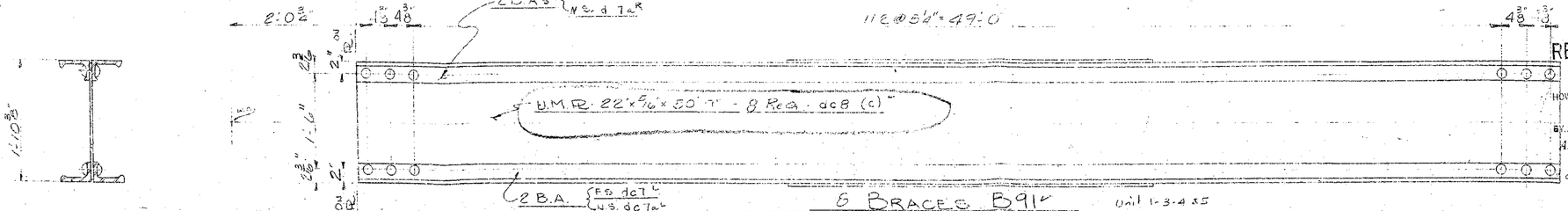






SEE NOTE SH. #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
8/31/59

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1¾" unless noted
Shop Paint: RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections: RIVET
Drawn by KW 3-27-59
Checked by AY
Revisions

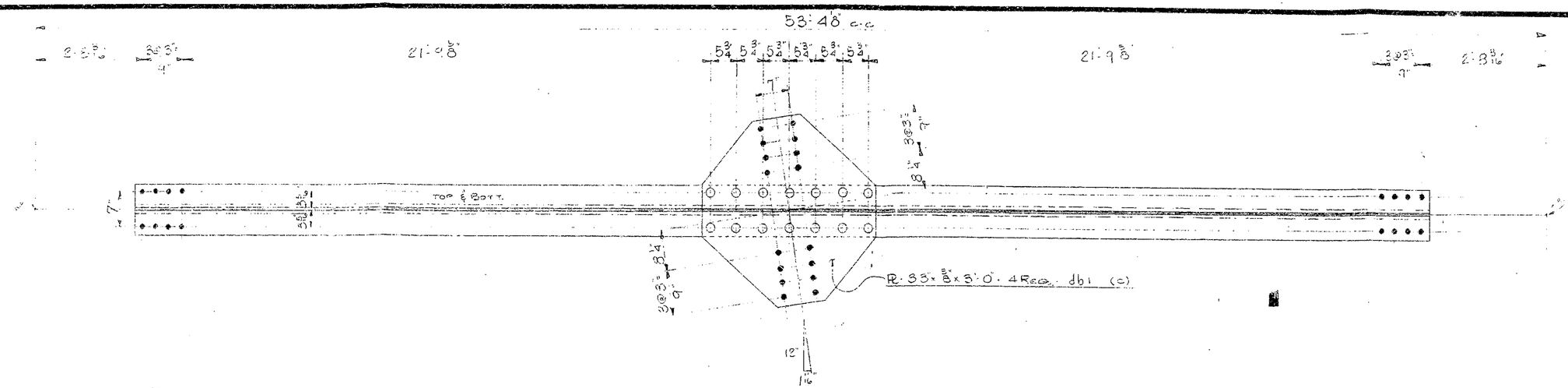
RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 9-7-59

APPROVED BY 9/8/60
L. P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT 4-5
SOLD TO: JOHN F. BEASLEY CONSTR CO
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800-F Sh. 91 of

47



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY H.W.L. DATE 3-27-59

SEE NOTE SH. #1

APPROVED BY HOWARD, NEEDLES
TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16 except as noted
End Distance 1 3/4" unless noted
Shop Paint... RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by BK 3-26-59
Checked by AWL
Revisions 7/22/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

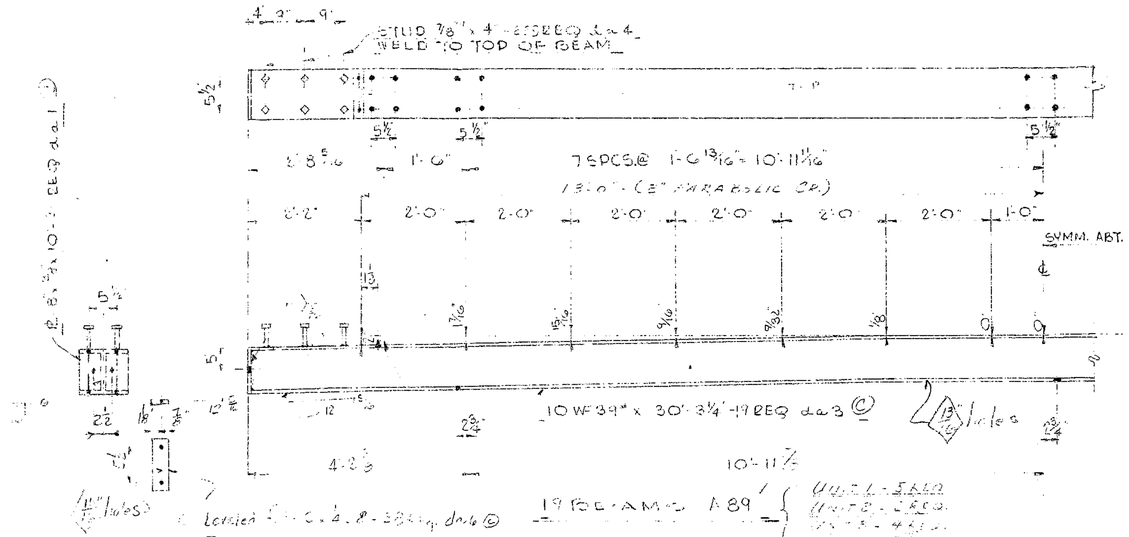
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT # 5

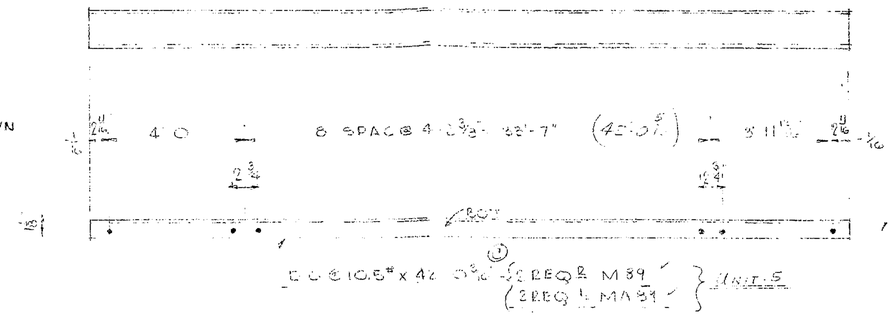
SOLD TO: JOHN F BEASLEY CONSTR CO
CHICAGO ILLINOIS

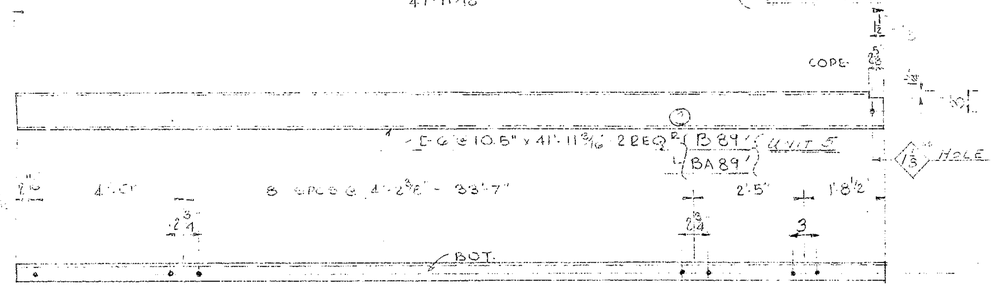
APPROVED BY L.D. Clarkson 6/31/59
Bridge Design Engineer

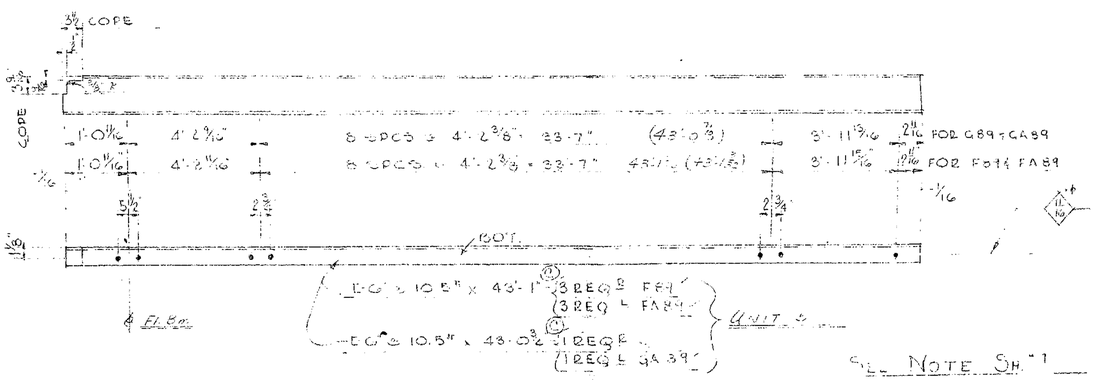
SHOP VINCENNES STEEL CORP. VINCENNES, IND. Contr. No. 4800 Sh. 90 of

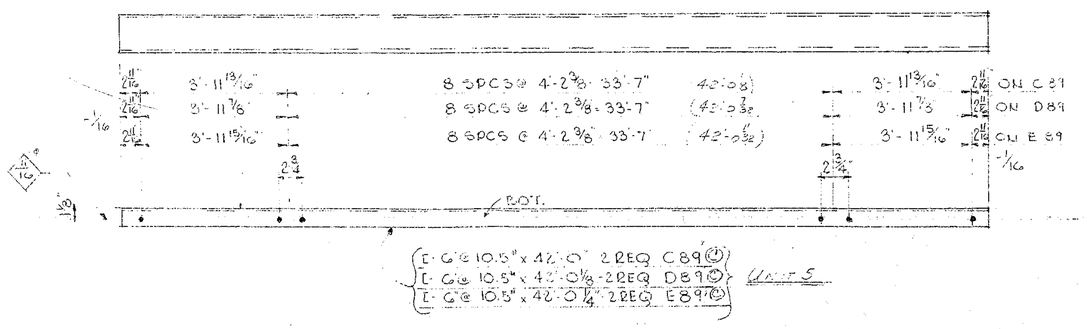
46

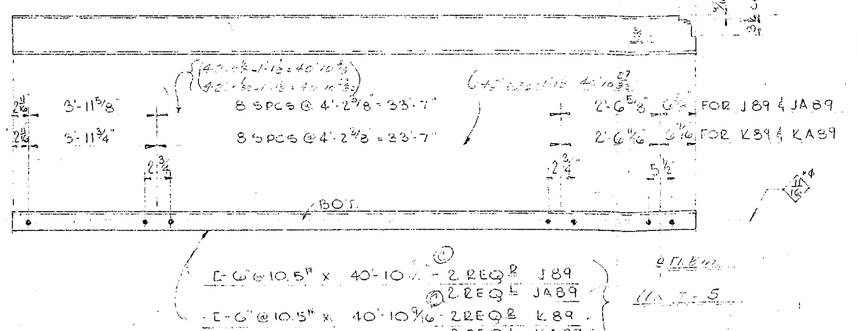












RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 2-23-60

SEE NOTE SH. 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS 8/31/59

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" except as noted
End Distance 1 1/2" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop inspection by
Field Connections
Drawn by
Checked by
Revisions 2-22-60

APPROVED BY
Paul L. P. Carlson
Bridge Design Engineer

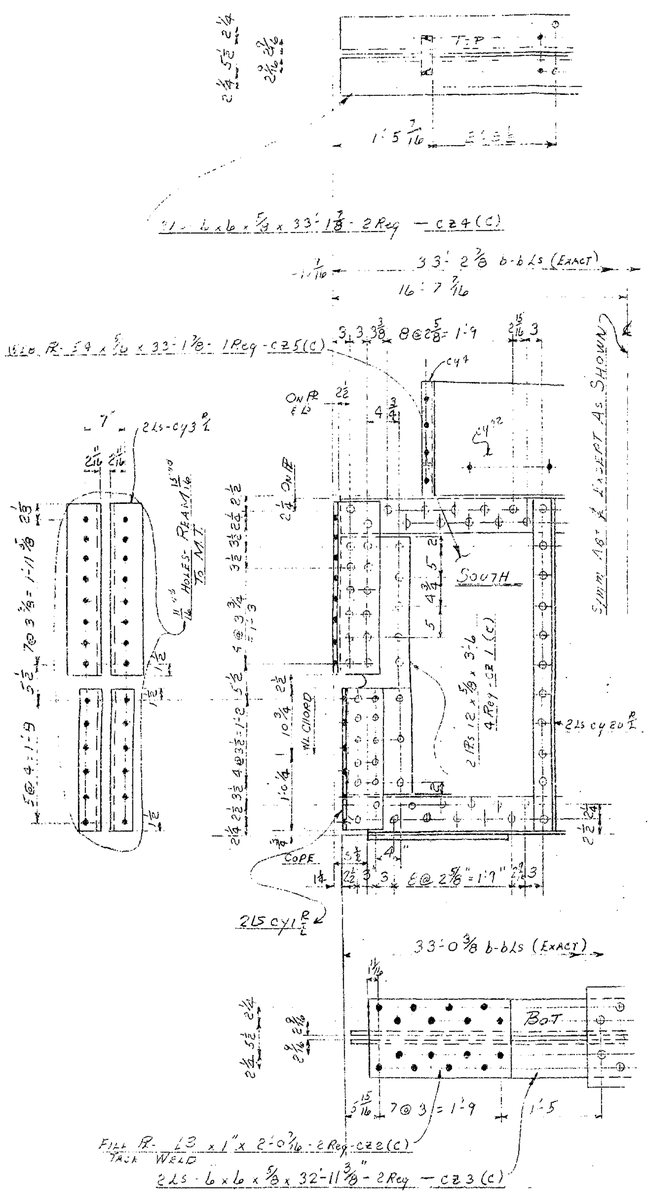
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT

SOLE TO: JOHN F. ECKLER CONSTR. CO.
CHICAGO, ILLINOIS

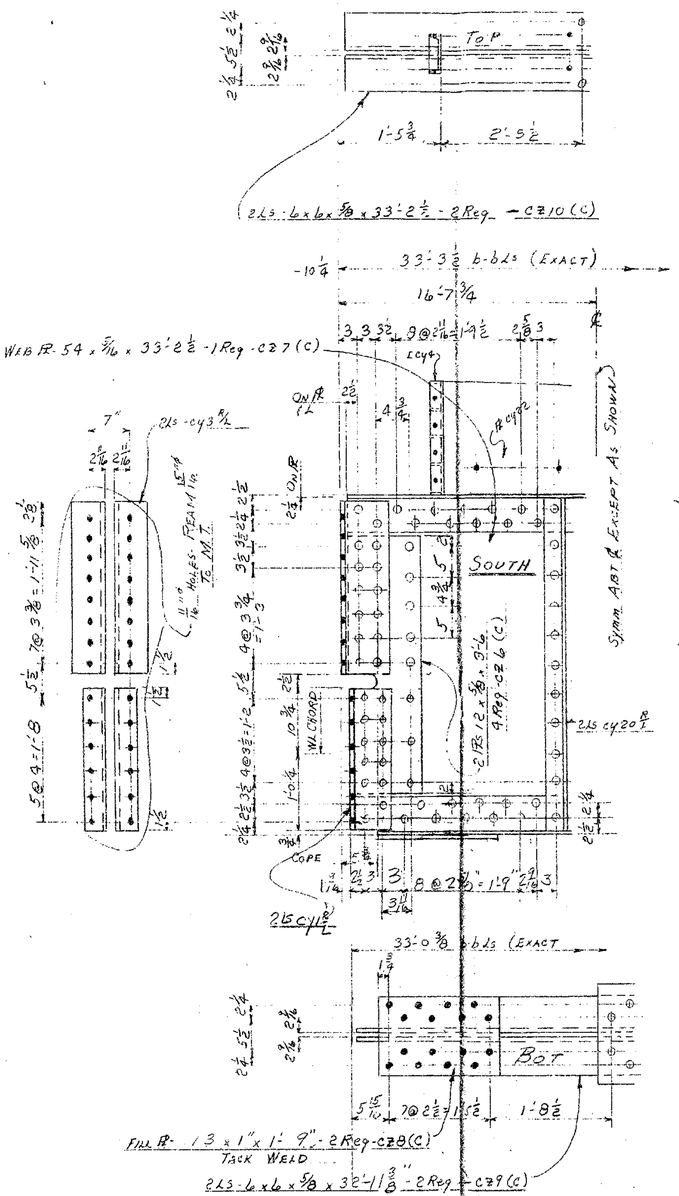
SHOP VINCENNES STEEL CORP. VINCENNES, IND.
Contr. No. 4806-F Sh. 89 of
A

45



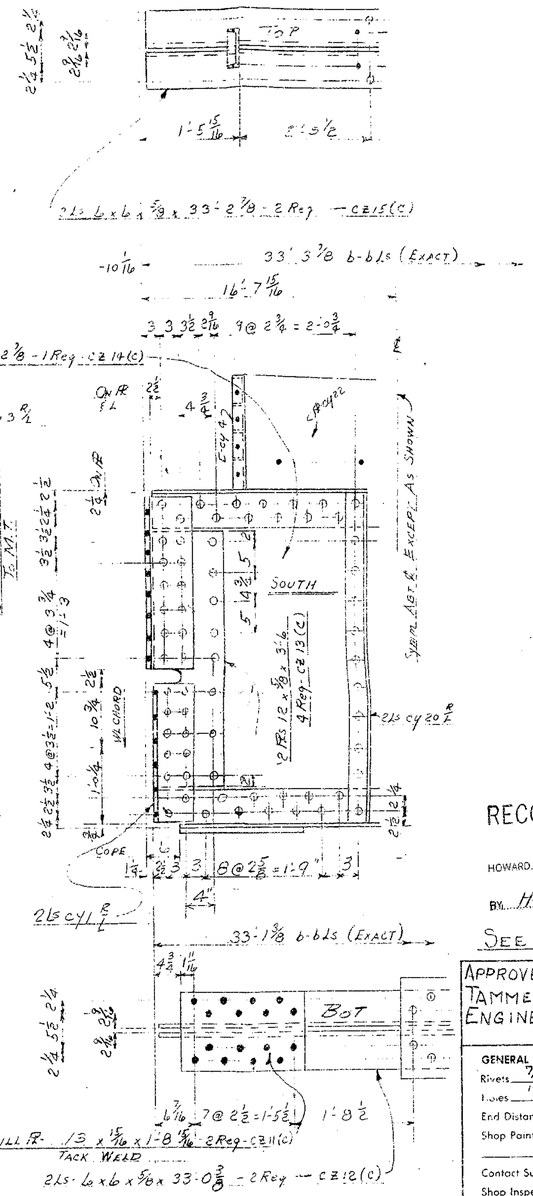
ONE FLOOR BEAM AS NOTED A88 (463)

PART NOT SHOWN SAME AS A87



ONE FLOOR BEAM AS NOTED B88 (465)

PART NOT SHOWN SAME AS A87



ONE FLOOR BEAM AS NOTED C88 (467)

PART NOT SHOWN SAME AS A87

APPROVED BY 7/30/59

L.B. Carlson

Bridge Design Engineer

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY HWL DATE 7-27-59

SEE NOTE SH. #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS.

GENERAL NOTES

Rivets 7/8" ø except as noted

Holes 13/16" ø except as noted

End Distance 1 3/4" unless noted.

Shop Paint. RED LEAD (ARK. STD.)

Contact Surfaces No PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by CWK 4-8-59

Checked by AWJ

Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND. Contr. No. 4800 Sh. 88 of

44

Cov PL - 1/16 x 2' - 26'-0 - 9 Req - cy5 (c) (UM)

2 Ls - 6 x 6 x 5/8 x 33'-2 1/8 - 4 Req - cy7 (C)

PL - 1/16 3/4 x 3/8 x 2'-2 - 18 Req - cy22 (c)

SYMM ABT ℄ EXCEPT AS SHOWN

33'-3 1/8 6-6 Ls (EXACT)

13'-0

10'-11 13/16

1 - PL - 9 x 6 x 3/4 x 2'-3 1/4 - 34 Req - cy3 (C)

11/16" HOLES - REAM 15/16" TO M.T.

SOUTH

2 PL - 12 x 3/8 x 4'-3 1/2 - 4 Req - cy4 (c) - A87
4 Req - cy4 (c) - B87

2 Ls cy20 0/1

WEB PL - 54 x 5/16 x 33'-2 1/8 -
1 Req - cy14 (c) A87
1 Req - cy15 (c) B87

2 Ls cy20 0/2

FOR A87

FOR B87

2 Ls - 7 x 4 x 1/2 x 4'-5 1/4 - 18 Req - cy16 (c)
MILL TO BEAR @ BOTTOM

2 Ls - 7 x 4 x 1/2 x 4'-5 1/4 - 18 Req - cy18 (c)
MILL TO BEAR @ BOTTOM
(Paint to be applied after being painted)

SECTION AA

SECTION BB

2 Ls - 7 x 4 x 5/16 x 4'-6 1/4 (MST) - 108 Req - cy20 (C)
(CRIMPED)

2 Ls - 15" x 4 x 3/4 x 1'-11" - 54 Req - cy1 (C)

STIFF PL - 2 1/8 x 3/8 x 5'-4 - 90 Req - cy21 (c)
WELD

STIFF PL - 6 x 12" x 1-4 3/4 - 18 Req - cy4 (c)

SECTION CC

ON B87
ON A87

Cov PL - 1/16 x 2'-0 - 4 Req - cy12 (C) (UM)

2 Ls - 6 x 6 x 5/8 x 32'-10 7/8" - 2 Req - cy10 (C) - on A87
32'-11 7/8 - 2 Req - cy11 (C) - on B87

FILL PL - 13 x 15/16 x 1'-5 9/16 - 4 Req - cy13 (c)
TACK WELD

32'-11 3/8 b-b Ls FOR A87

33'-0 3/8 b-b Ls FOR B87

SYMM - 2 1/4 x 3/4 x 8" - 18 Req - cy9 (C)
TACK WELD TO TOP CL. PL

ONE FLOOR BEAM AS NOTED - A87 (LH)

ONE FLOOR BEAM AS NOTED - B87 (RH)

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

APPROVED
L. P. Carland
Bridge Design Engineer

APPROVED BY 7/30/59
L. P. Carland
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD NEEDLES, TAMMEN & BERGENDOFF
BY ____ DATE 1-27-59

SEE NOTE SH. #1

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16 except as noted
End Distance 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by CWR 4-7-59
Checked by AHF
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL [illegible] DIV. OF INDUSTRIAL [illegible]
VINCENNES, IND.
Contr. No. 4900 Sh. 87 of

43

12 @ 3 = 3'-0

C x 10 [A]

2 1/16" HOLES

FILL 2 1/4 x 1 1/4 x 8" - 8 REQ. C x 26 © TACK WELD

15'-10 7/8"

TOP

4 1/2 2 4 1/2

1'-6 1'-0 6 5 11/16

2 Ls 8 x 8 x 7/8 x 3'-5 11/16 16 Req'd C x 10 (A)

STUDS 7/8" x 4" - 48 Req C x 8 WELD TO Ls

2 Ls - 8 x 8 x 3/8 x 33'-0 3/8 - 8 Req C x 4 (A)

℄ TRUSS

Shop assemble to A7 -- UNIT 5
A 105 -- UNIT 4
A 204 -- UNIT 3
A 336 -- UNIT 1

2 PLS - 19 3/4 x 5/8 x 5'-1 1/2
16 Req'd - C x 9 V (A)

16'-6 11/16

33'-1 3/8 b-b Ls (EXACT)

6 @ 3'-1'-6 10 @ 3 1/2 = 2'-11 11 @ 3 5/16 = 3'-3 7/8 10 @ 3 5/8 = 3'-0 1/4

Symm ABT ℄ EXCEPT AS SHOWN

2 PLS 19 1/2 x 1/2 x 3'-2 - 16 Req - C x 7 (A)

11/16" HOLES - REAM 15/16" TO MT

SOUTH

2 PLS 14 1/2 x 3'-2 1/16 C x 3 (A)

11/16" HOLES - REAM 15/16" TO MT

WEB PL - 59 x 11/16 x 3'-0 1/2
4 Req - C x 1 (A)

20 - C x 12 1/2

11/16" HOLES - REAM 15/16" TO MT

2 @ 4 3/4 = 2'-1 1/2

2 PLS - 8 x 8 x 7/8 x 4'-6 1/2 LS - 4 Req - C x 14 (C)

FULL 4 x 7/8 x 3'-2 - 8 Req'd - C x 15 (C)

2 PLS 7 x 4 x 1/2 x 4'-4 3/4 MILL TO BEAR @ BOTTOM

11/16" HOLES - REAM 15/16" TO MT

2 PLS - 4 x 3 1/2 x 5/16 x 4'-5 3/4 - 32 Req'd C x 12 (C)

(ABUT.)

2 PLS 8 x 8 x 7/8 x 2'-2 3/4" - 16 Req E C x 25 (A)

2 PLS 8 x 8 x 7/8 x 1'-11 - 8 Req'd C x 3 (A) A 86
8 Req'd C x 3 (A) B 86

WEB PL - 41 11/16 x 11/16 x 6'-2 1/2 - 8 Requ. C x 2 (A)

Cut this leg back 3/4

SCOPE

10 11/16 13 @ 3 = 3'-3

33'-0 3/8 b-b Ls

12'-5

BOTTOM

FILL 16 3/4" x 1" x 3'-8 11/16 - 8 Req - C x 6 (A) TACK WELD

2 PLS 8 x 8 x 7/8 x 32'-11 3/8" - 8 Req - C x 5 (A)

1'-10"

℄ TRUSS

2 FLOOR BEAMS - A 86 UNITS 4-5 SEE NOTE SH. # 1

2 FLOOR BEAMS - B 86 UNIT 1-3

SECTION AA

SECTION BB

2 PLS - 9 x 3 1/2 x 5/16 x 4'-5 3/4
16 Req'd - C x 11 V (C)
CRIMPED

C x 11 1/2

4'-6 1/2 6-6 Ls

SECTION CC

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 9-7-60

APPROVED BY 9/8/60
L.P. Carlson
Bridge Design Engineer

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
8/31/59

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces: NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by CWK 4-6-57
Checked by
Revisions 7/23/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL VINCENNES, IND.

DIV. OF INDUSTRIAL ENTERPRISES, INC.
Contr. No. 4800 - FSh. 86

A2

SECTION EE SHOWING COMPLETE BEAM

SECTION AA

SECTION BB

SECTION CC

SECTION FF

2 FLOOR BEAMS - A85 -
UNITS 1-5

SEE NOTE SH. #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY E.R.S. DATE 8-7-59

SECT. APPROVED BY 8/31/59
L.P. Carlson
Bridge Design Engineer

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by CWK 4-2-59
Checked by ALL
Revisions 7/27/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS

SOLD TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
Cont. No. 4800 Sh. 85 of.

41

L- 6 x 6 x 5/8 x 33'-2 1/8 - 3 Req - CV19 (C)

Cov PL 16 x 1/2 x 26'-0 - 3 Req - CV18 (U.M) (C)

33'-3 1/8

3'-7 3/16 | 1'-10 1/16 | 9 | 9 | 3 1/2 | 6 3/4 | 9 | 1'-0 | 6 | 9 | 9 | 6 | 5 @ 9" = 3'-9 | 6" | 11/16" Ø Holes REAM 15/16" IN FIELD | 6" | 5 @ 9" = 3'-9 | 6" | 5 @ 9" = 3'-9 | 6" | 9 | 9 | 6 | 1'-0 | 9 | 5 1/4 | 3 1/2 | 9 | 9 | 1'-10 1/16 | 3'-7 3/16

CV22

3'-7 7/16

L- 6 x 6 x 5/8 x 33'-2 1/8 - 3 Req - CV20 (C)

STUD 7/8" Ø x 4" - 34 Req - CV22 WELD TO TOP OF BEAM

SECTION EE
SHOWING COMPLETE REAM
Symm about ℄ except as shown.

10 7/16

3'-7 9/16"

33'-3 1/8 b-b (EXACT)

13'-0 parabola

PL 8 x 6 x 3/4 x 2'-0 5/8 (C)
12 Reg 7/8" - CV16

3 3 3 1/2 | 8 SPC @ 2 5/8 = 1'-7 7/16" | 3 | 3 1/2 | 7 SPC @ 2 3/8 = 1'-7 1/4 | 2 7/16 | 3 1/2 | 10 SPC @ 3 5/8 = 3'-0 1/4 | 3 7/16 | 11 SPC @ 3 1/2 = 3'-2 1/2 | 4 | 10 SPC @ 3 5/8 = 3'-0 1/4 | 3 5/8 | 3 1/2 | 2 1/2

2'-0 | 2'-0 | 2'-0 | 2'-0 | 2'-0 | 1'-0

PUNCH 11/16" REAM 15/16" TO M.T.

ON PL 2 1/2 FLS

5 SPC @ 4 1/2 = 1'-10 1/2

4'-3 3/8 | 6 L.S.

5 SPC @ 4 1/2 = 1'-10 1/2

8 SPC @ 4 1/2 = 3'-0

5 SPC @ 4 1/2 = 1'-10 1/2

4'-3 3/8 | 6 L.S.

PUNCH 11/16" REAM 15/16" TO M.T.

5 EA - C16 (CRIMPED)

2" - CV5 (CRIMPED)

8 SPC @ 4 1/2 = 3'-0

PUNCH 11/16" REAM 15/16" TO M.T.

8 SPC @ 4 1/2 = 3'-0

8 @ 3 1/2 = 2'-4

4 1/2 | 6 L.S.

Cope ON B84 ℄

Cope ON A84 ℄ EXACT

PL 1-7 x 4 x 3/8 x 1'-11" (C)
1 Reg 7/8" - CV17 (A84)
4 Reg 7/8" - CV22 (B84)
Tack Weld on

11 SPC @ 3 11/16 = 3'-4 9/16 | 3 3/4 | 8 SPC @ 2 3/8 = 1'-11 | 3 1/2 | 4 | 4 @ 2 11/16" = 3'-0 3/4 | 2 3/8 | 3 3/8

33'-1 1/8 b-b LS FOR B84

11 SPC @ 3 1/2 = 3'-2 1/2 | 4"

33'-1 1/4 b-b LS FOR A84

10'-10 3/4

10 SPC @ 3 5/8 = 3'-0 1/4 | 7/8 | 3/8 | 3 1/2 | 2 1/2

WEB PL - 54" x 5/16 x 35'-2 1/8 - 3 Reg - CV14 (C)

2 PL - 18 x 5/8 x 3'-2 7/8" - 12 Reg - CV15 (C)

PL 2 LS - 6 x 6 x 5/8 x 33'-0 1/8" - 6 Reg - CV2 (C)

FILL PL - 13" x 3/4 x 1'-7 9/16 - 6 Reg CV21 (C)
TACK WELDS

Cov PL - 20" x 1/2" x 26'-0" - 3 Reg - CV1 (U.M) (C)

on A84 6 3/8 | 8 @ 2 = 1'-4 | 1'-8 1/4 | 6 @ 2 3/8 = 1'-2 7/16 | 3 1/16 | 11 SPC @ 3 11/16 = 3'-4 9/16 | 3 3/4 | 11 SPC @ 3 1/2 = 3'-2 1/2 | 4 | 4 @ 3 3/8 = 1'-2 1/2 | 3 1/2 | 4 @ 3'-0" | 1/2 | 4 | 4" | 2 1/4

on B84 6 5/16

4'-0"

3'-0"

2 FLOOR BEAMS - A84 UNIT-4-5
ONE FLOOR BEAM - B84 UNIT-3

2 PL - 4 x 3 1/2 x 5/16 x 4'-6 1/8 - 12 Reg 7/8" - CV5 (C) (SECT BB)
2 PL - 4 x 3 1/2 x 5/16 x 4'-5 5/8 - 12 Reg 7/8" - CV6 (C) (SECT CC)
2 PL - 4 x 3 1/2 x 5/16 x 4'-6 1/16 - 12 Reg 7/8" - CV7 (C) (SECT DD)

PUNCH 11/16" REAM 15/16" TO M.T.

32 1/2

2 PLS - 4 x 5/8 x 3'-4 - 4 Reg - CV8 (C)
1 - 7 x 4 x 1/2 - 4 Reg - CV9 (C)
MILL TO BEAR @ BOTTOM

10 Arr. SPC @ 2 23/32 = 2'-4 3/16

10 3/4

1'-2 3/16

2 PLS - 4 x 5/8 x 3'-4 - 4 Reg - CV11 (C)
1 - 7 x 4 x 1/2 - 4 Reg - CV12 (C)
MILL TO BEAR @ BOTTOM

1 - 7 x 4 x 1/2 x 4'-3 9/16 - 6 Reg 7/8" - CV10 (C)
MILL TO BEAR @ BOTTOM

SECTION AA

SECT BB
SECT CC
SECT DD

SECTION BB
SECTION CC
SECTION DD

SEE NOTE SH. 1

1 - 7 x 4 x 1/2 x 4'-5 1/2 3 Req - CV13 (C)
MILL TO BEAR @ BOTTOM

PL - 61 x 1/2 x 5'-1 - 3 Req - CV4 (C)

All Stiffener ends not marked Milled-to fit to exclude water after being painted

PL 1 - 7 x 4 x 3/8 x 1'-11" (C)

3 @ 3'-9 | 1 1/2

R = 2 1/2

1'-7 7/16

1'-1 17/32

MILL 4 x 1 5/8

12 SPC @ 3 1/2 = 3'-0

2'-9 7/16

4'-2 3/8

3 1/2

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ____ DATE 9-7-60

APPROVED BY 9/8/60
L.P. Carlson
Bridge Design Engineer

SLAB 20 x 1 5/8 x 1'-4 31/32 - 6 Reg - CV3 (C)
MILLED ONE END

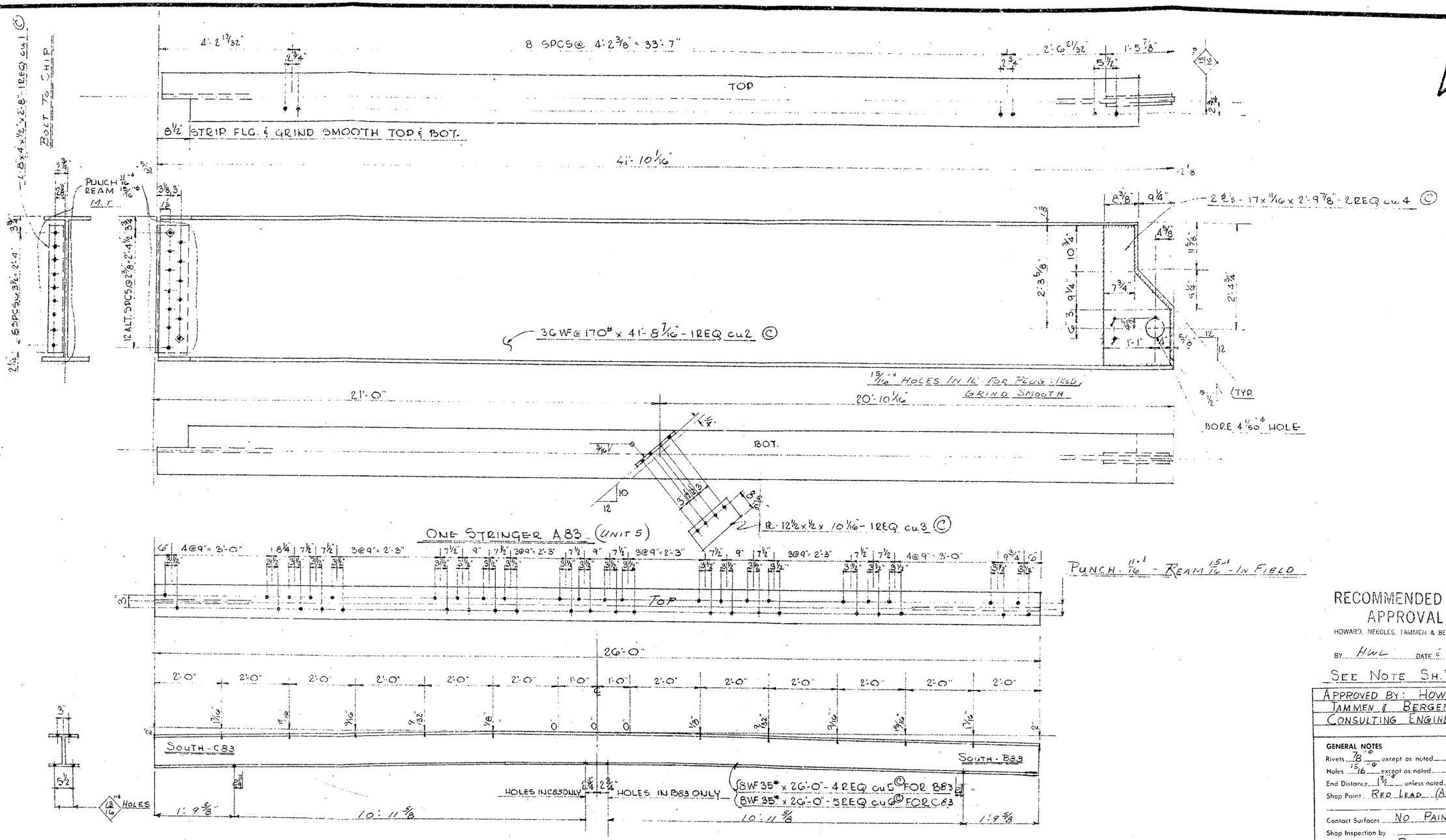
APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 8/31/59

GENERAL NOTES
Rivets 7/8" Ø except as noted
Holes 15/16 except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces No PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by CWK 5-31-59
Checked by ALY
Revisions 7/20/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
LOAD 70 JOHN F. BEARD JR. CONSTR. CO.
CHICAGO, ILLINOIS

SHOP: VIRGINIA BRIDGE & STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC.
CENTRAL, VA.
Contr. No. 480-F Sh. 84

40



4 BEAMS - AS SHOWN & NOTED - B83 (1-UNIT 5)

5 BEAMS - AS SHOWN & NOTED - C83 (1-UNIT 5)

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY HWL DATE

SEE NOTE SH.# 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ø except as noted

Holes 15/16" ø except as noted

End Distance 1 1/2" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVET

Drawn by C.A.B. MAR. 30, 59

Checked by

Revisions

APPROVED BY 8/21/59

L. P. Carlson

Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISION

MISSISSIPPI STATE HIGHWAY COMMISION

MISSISSIPPI RIVER BRIDGE NEAR HELENA, ARKANSAS UNIT "

SOLD TO: JOHN F BEASLEY CONSTR. CO. CHICAGO ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL [illegible] VINCENNES, IND. Cont. No. 4800 Sh: 83 of

39

4-2 19/32"

8 SPCS @ 4'-2 3/8" = 33'-7"

2'-5"

1'-9 1/16"

TOP

8 1/2" STRIP FLG. & GRIND SMOOTH TYP. BOTH ENDS T & B.

SECTION A-A

41'-11 21/32"

40'-11 13/32"

8 1/2"

PUNCH 11/16" REAM 15/16" M.T.

L 8 x 4 x 1/2 x 2'-8" 4 REQ cf 1 ©

PUNCH REAM M.T.

18 SPCS @ 2 1/4" = 2'-4 1/2"

12 ALT SPCS @ 2 3/8" = 2'-4 1/8"

Rcf 3

ONE STRINGER AS SHOWN A82
ONE STRINGER TO PAIR AA82
} UNIT 5

36 WF @ 150# x 41'-8 3/8" - 2 REQ cf 2 ©

BOT

7'-10 21/32"

26'-2 1/2

7'-10 1/2"

L 9 x 4 x 1/2 x 2'-8" - 1 REQ cf 2 ©

PUNCH 11/16" REAM 15/16" M.T.

18 SPCS @ 2'-4 1/2" = 2'-4"

12 ALT SPCS @ 2'-4 1/8" = 2'-4"

See Top View Above

36 WF @ 170# x 41'-5 7/8" - 1 REQ cf 3 ©

20'-11 29/32"

20'-11 3/4"

BOT

R-12 1/2 x 1/2 x 9 7/8" - 12 EQ cf 4 ©

ONE STRINGER B 82 (UNIT 5)

PUNCH 11/16" REAM 15/16" M.T.

L cf 1

R-12 1/2 x 1/2 x 6 3/8" - 4 REQ cf 3 ©

SECT. B-B AS SHOWN
SECT. C-C TO PAIR

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 8-7-59

SEE NOTE SH. "1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by C.A.B MAR. 30, 1959
Checked by CHF
Revisions 7-29-59

APPROVED BY 8/31/59
L.P. Carlson
Bridge Design Engineer

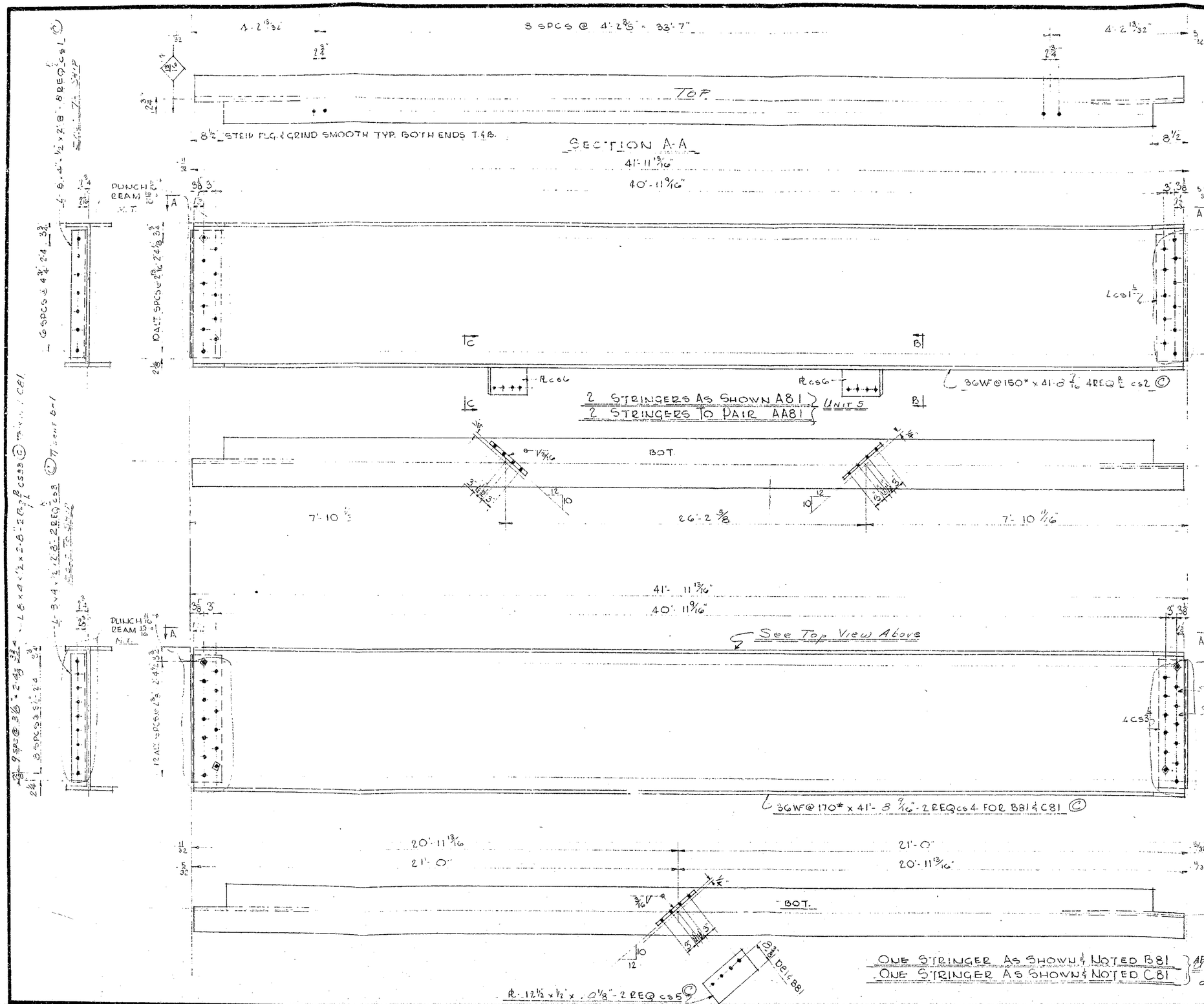
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

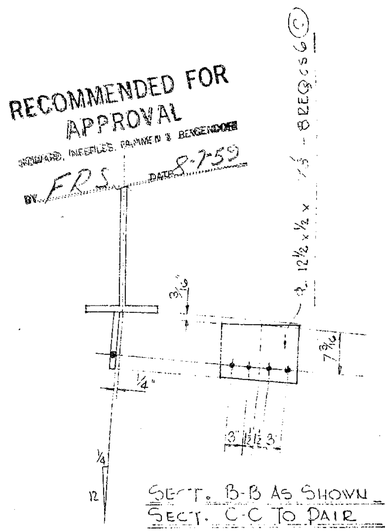
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT # 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 SH. "82" of

38





RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 8-7-59

SEE NOTE SH. "1

APPROVED BY HOWARD, NEEDLES TAMMEN, BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint. RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by C.A.B. 3/27/59
Checked by O.K.J.
Revisions 7/27/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 5

SUB TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

APPROVED BY 8/31/59
L.B. Carlson
Bridge Design Engineer

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800 Sh. 61 of

8 SPCS @ 4'-2 3/8" = 33'-7"
8 SPCS @ 4'-2 3/8" = 33'-7
8 SPCS @ 4'-2 3/8" = 33'-7

4'-2 19/32" FOR A80 & AA80 & D80
4'-2 7/16" FOR B80 & BA80 & E80
4'-2 13/32" FOR C80 & CA80 & F80

TOP

SECTION A-A

STRIP FLG & GRIND SMOOTH TOP & BOTTOM

(41'-10 1/16" FOR A80 & AA80) (41'-9 15/16" FOR B80 & BA80) (41'-9 27/32" FOR C80 & CA80)

2 Rs 17 x 1/16 x 2'-10" - 2 REQ cr 5 ©

36WF @ 150# x 41'-8 7/16" - 4 REQ cr 2 FOR A80 & AA80 ©
36WF @ 150# x 41'-8 5/16" - 4 REQ cr 3 FOR B80 & BA80 ©
36WF @ 150# x 41'-8 1/32" - 2 REQ cr 4 FOR C80 & CA80 ©

2 STRINGERS AS SHOWN & NOTED A80 } UNIT 5
2 STRINGERS TO PAIR AS NOTED AA80 }
2 STRINGER AS SHOWN & NOTED B80 } U-ON UNIT 5 } ON UNIT 3
2 STRINGER TO PAIR AS NOTED BA80 (1-ON UNIT 5 } ON UNIT 3)
ONE STRINGER AS SHOWN & NOTED C80 } UNIT 5
ONE STRINGER TO PAIR AS NOTED CA80 }

BORE 4 1/50 HOLE

15/16" IN 12" FOR PLUG WELDS

GRIND SMOOTH

BOT.

7'-8 23/32" FOR A80 & AA80
7'-8 21/32" FOR B80 & BA80
7'-8 23/32" FOR C80 & CA80

26'-2 5/16"
26'-2 1/2"
26'-2 7/16"

7'-10 23/32" FOR A80 & AA80
7'-10 19/32" FOR B80 & BA80
7'-10 11/16" FOR C80 & CA80

L-8 x 4 x 1/2 x 2'-8 1/2" - 102 REQ cr 1 © BOLT TO SHIP

6 SPCS @ 4 3/4" = 2'-4 1/2"

12 ALT. SPCS @ 2 3/8" = 2'-4 1/2"

PUNCH 11/16" REAM 15/16" M.T.

8 - 8 REQ cr 14 A80 & AA80
8 - 8 REQ cr 15 B80 & BA80
4 - 8 REQ cr 16 C80 & CA80

12 1/2 x 1/2 x 9 5/8" }
12 1/2 x 1/2 x 9 1/16" } - 4 REQ cr 16
12 1/2 x 1/2 x 8 5/8" }

A80 & AA80
B80 & BA80
C80 & CA80

SECT. B-B AS SHOWN
SECT C-C TO PAIR

(41'-10 1/16" FOR D80) (41'-9 15/16" FOR E80) (41'-9 27/32" FOR F80)

See Top View Above

2 Rs 17 x 1/16 x 2'-9 7/8" - 6 REQ cr 9 ©

36WF @ 170# x 41'-8 7/16" - 1 REQ cr 6 FOR D80 ©
36WF @ 170# x 41'-8 5/16" - 1 REQ cr 7 FOR E80 ©
36WF @ 170# x 41'-8 1/32" - 1 REQ cr 8 FOR F80 ©

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HNL DATE 6-6-59

L-8 x 4 x 1/2 x 2'-8" - 3 REQ cr 10 © BOLT TO SHIP

SEE NOTE SH "1

BORE 4 1/50 HOLE

15/16" IN 12" FOR PLUG WELDS - GRIND SMOOTH

20'-10 1/16" FOR D80
20'-10" FOR E80
20'-9 15/16" FOR F80

21'-0" FOR D80
20'-11 15/16" FOR E80
20'-11 3/32" FOR F80

BOT

ONE STRINGER AS SHOWN & NOTED D80
ONE STRINGER AS SHOWN & NOTED E80
ONE STRINGER AS SHOWN & NOTED F80
UNIT 5

R 12 1/2" x 1/2 x 10 1/16" - 1 REQ cr 11 FOR D80 ©
R 12 1/2" x 1/2 x 10" - 1 REQ cr 12 FOR E80 ©
R 12 1/2" x 1/2 x 9 7/8" - 1 REQ cr 13 FOR F80 ©

APPROVED BY 6/31/59
L. P. Carlson
Bridge Design Engineer

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS.

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 1/2" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by C.H.B. 3/26/59
Checked by
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP: VINCENNES STEEL CORP. DIV. OF INDUSTRIES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 80 of

NOTE: HOLES IN
D79
A79 & AA79
C79 & CA79
B79 & BA79

8SPCS @ 4'-2 3/8" = 33'-7"
8SPCS @ 4'-2 3/8" = 33'-7"
8SPCS @ 4'-2 3/8" = 33'-7"

4'-2 13/32"
4'-2 17/32"
4'-2 1/2"

FOR C79 & CA79 & E79
FOR B79 & BA79 & E79
FOR A79 & AA79 & D79 & G79

NOTE: HOLES IN
E79
F79
G79

TOP

8 1/2 STRIP FLG. & GRIND SMOOTH TYP BOTH ENDS T. & B.

SECTION A-A

(42'-0" ON A79 & AA79) (42'-0 1/32" ON B79 & BA79) (41'-11 13/16" ON C79 & CA79)

(40'-11 3/4" ON A79 & AA79) (40'-11 25/32" ON B79 & BA79) (40'-11 9/16" ON C79 & CA79)

L 8 x 4 x 1/2 x 2'-8" - 16 REQ cp 4

PUNCH 11/16" REAM 15/16" M.T.

6 SPCS @ 4 3/8" = 2'-4 1/2"

PL 32 x 3/8 x 1'-2" - 12 REQ cp 12

10 ALT SPCS @ 3/8" = 2'-4 1/16"

PC 16 WF 58# x 1'-4 3/8" - 8 REQ cp 13

7" STRIP FLG.

BOT

2 STRINGERS AS SHOWN & NOTED A79
2 STRINGERS TO PAIR AS NOTED AA79
ONE STRINGER AS SHOWN & NOTED B79
ONE STRINGER TO PAIR AS NOTED BA79
ONE STRINGER AS SHOWN & NOTED C79
ONE STRINGER TO PAIR AS NOTED CA79

UNIT 5

36 WF @ 150# x 41'-8 3/4" - 4 REQ cp 1 FOR A79 & AA79
36 WF @ 150# x 41'-8 3/4" - 2 REQ cp 2 FOR B79 & BA79
36 WF @ 150# x 41'-8 7/16" - 2 REQ cp 3 FOR C79 & CA79

7'-10 11/32"
7'-10 11/16"
7'-10 11/16"

26 - 2 1/2"
26 - 2 21/32"
26 - 2 5/8"

7'-10 11/32"
7'-10 11/16"
7'-10 11/16"

FOR C79 & CA79
FOR B79 & BA79
FOR A79 & AA79

SECT. B-B AS SHOWN
SECT. C-C TO PAIR

12 1/2" x 1/2" x 9 7/8" - 8 REQ cp 9 A79 & AA79
12 1/2" x 1/2" x 9 7/8" - 4 REQ cp 10 B79 & BA79
12 1/2" x 1/2" x 9 7/8" - 4 REQ cp 11 C79 & CA79

7 7/16" - A79 & AA79
7 7/8" - B79 & BA79
6 5/8" - C79 & CA79

1 BRACKETS AS SHOWN FOR A79, B79, C79
1 BRACKETS TO PAIR FOR AA79, BA79, CA79 (BOLT TO SHIP)

(42'-0" ON D79 & G79) (42'-0 1/32" ON E79) (41'-11 13/16" ON F79)
(40'-11 3/4" ON D79 & G79) (40'-11 25/32" ON E79) (40'-11 9/16" ON F79)

See Top View Above

PUNCH 11/16" REAM 15/16" M.T.

8 SPCS @ 3 1/2" = 2'-4"

12 ALT SPCS @ 3 1/2" = 2'-4 1/2"

36 WF @ 170# x 41'-8 3/4" - 2 REQ cp 5 FOR D79 & G79
36 WF @ 170# x 41'-8 3/4" - 1 REQ cp 6 FOR E79
36 WF @ 170# x 41'-8 9/16" - 1 REQ cp 7 FOR F79

L 8 x 4 x 1/2 x 2'-8" - 8 REQ cp 8
BOLT TO SHIP

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY EPS DATE 8-7-59

20'-11 29/32"
21'-0"
21'-0"

20'-11 29/32"
21'-0 1/32"
21'-0"

FOR F79
FOR E79
FOR D79 - G79

APPROVED BY 8/31/59
L. W. Carlson
Bridge Design Engineer

UNIT-5
ONE STRINGER AS SHOWN & NOTED D79
ONE STRINGER AS SHOWN & NOTED E79
ONE STRINGER AS SHOWN & NOTED F79
ONE STRINGER AS SHOWN & NOTED G79

12 TOP VIEW
SECT. AA

PL 12 1/2 x 1/2 x 10 1/8" - 2 REQ cp 15 FOR D79 & G79
PL 12 1/2 x 1/2 x 10 1/16" - 1 REQ cp 16 FOR E79
PL 12 1/2 x 1/2 x 9 7/8" - 1 REQ cp 17 FOR F79

4 BRACKETS FOR D79, E79 & F79 & G79
(BOLT TO SHIP) SEE NOTE SH. #1

APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8 except as noted
Holes 15/16 except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by C.A.B. 3/24/59
Checked by G.W.
Revisions 7/31/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT NO. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND. Contr. No. 4800 Sh. 79 of

35

8 SPCS. @ 4'-2 3/8" = 33'-7"
8 SPCS. @ 4'-2 3/8" = 33'-7"
8 SPCS. @ 4'-2 3/8" = 33'-7"

4'-2 29/32"
4'-2 7/16"
4'-2 17/32"

4'-2 13/32" ON C78 F78
4'-2 5/32" ON B78 E78
4'-2 1/2" ON A78 D78

TOP

STRIP FLG & GRIND SMOOTH TYP BOTH ENDS T & B.

SECTION A-A

(42'-0 1/32" ON A78) (41'-11 29/32" ON B78) (41'-11 13/16" ON C78)
(40'-11 25/32" ON A78) (40'-11 21/32" ON B78) (40'-11 9/16" ON C78)

L 8 x 4 x 1/2 x 2'-8" REQ cn 4 Rolled To Ship

8 SPCS @ 4 3/4" = 2'-4"

PUNCH 1 1/16" REAM 15/16" M.T.

12 ALT SPCS @ 2 3/8" = 2'-4 1/2"

L cn 4

PUNCH 1 1/16" REAM 15/16"

L cn 14

(UNITS) 2 STRINGER AS SHOWN & NOTED A78
(2-UNITS) (2-UNITS) 4 STRINGER AS SHOWN & NOTED B78
(UNITS) 2 STRINGER AS SHOWN & NOTED C78

WF 36 @ 150# x 41'-8 3/8" - 2 REQ cn 1 FOR A78
WF 36 @ 150# x 41'-8 5/8" - 4 REQ cn 2 FOR B78
WF 36 @ 150# x 41'-8 7/8" - 2 REQ cn 3 FOR C78

BOT.

7'-10 3/16"
7'-10 1/16"
7'-10 3/4"

26'-2 1/2"
26'-2 13/32"
26'-2 17/32"

7'-10 13/16" ON C78
7'-10 11/16" ON B78
7'-10 3/4" ON A78

R-12 1/2" x 1/2" x 9 7/8" - 4 REQ cn 11 @ A78
R-12 5/8" x 1/2" x 9 3/4" - 4 REQ cn 12 @ B78
R-12 1/2" x 1/2" x 9 7/8" - 4 REQ cn 13 @ C78

SECT. B-B AS SHOWN
SECT. C-C TO PAIR

(42'-0 1/32" ON D78) (41'-11 29/32" ON E78) (41'-11 13/16" ON F78)
(40'-11 25/32" ON D78) (40'-11 21/32" ON E78) (40'-11 9/16" ON F78)

See Top View Above

L cn 4

L cn 14

PUNCH 1 1/16" REAM 15/16" M.T.

WF 36 @ 170# x 41'-8 3/4" - 1 REQ @ cn 5 FOR D78
WF 36 @ 170# x 41'-8 5/8" - 2 REQ @ cn 6 FOR E78
WF 36 @ 170# x 41'-8 7/8" - 1 REQ @ cn 7 FOR F78

20'-11 29/32"
20'-11 15/16"
21'-0"

20'-11 29/32"
20'-11 31/32"
21'-0 1/32"

FOR F78
FOR E78
FOR D78

BOT.

R-12 1/2" x 1/2" x 9 7/8" - 1 REQ cn 8 @ F78
R-12 1/2" x 1/2" x 10" - 2 REQ cn 9 @ E78
R-12 1/2" x 1/2" x 10 1/16" - 1 REQ cn 10 @ D78

ONE STRINGER AS SHOWN & NOTED F78 - UNIT 5
2 STRINGER AS SHOWN & NOTED E78 - (1-UNIT 5)(1-UNIT 5)
ONE STRINGER AS SHOWN & NOTED D78 - UNIT 5

Top View See Sect A-A

SEE NOTE "1"

RECOMMENDED FOR APPROVAL
HOWARD NEEDLES, TAMMEN & BERGENDOFF
F.C. DATE 9-7-60

APPROVED BY
L.P. Carlson
Bridge Design Engineer
9/8/60

APPROVED BY: H. C. NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS 8/31/59

GENERAL NOTES
Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by C.A.B. 3/23/59
Checked by ALY
Revisions

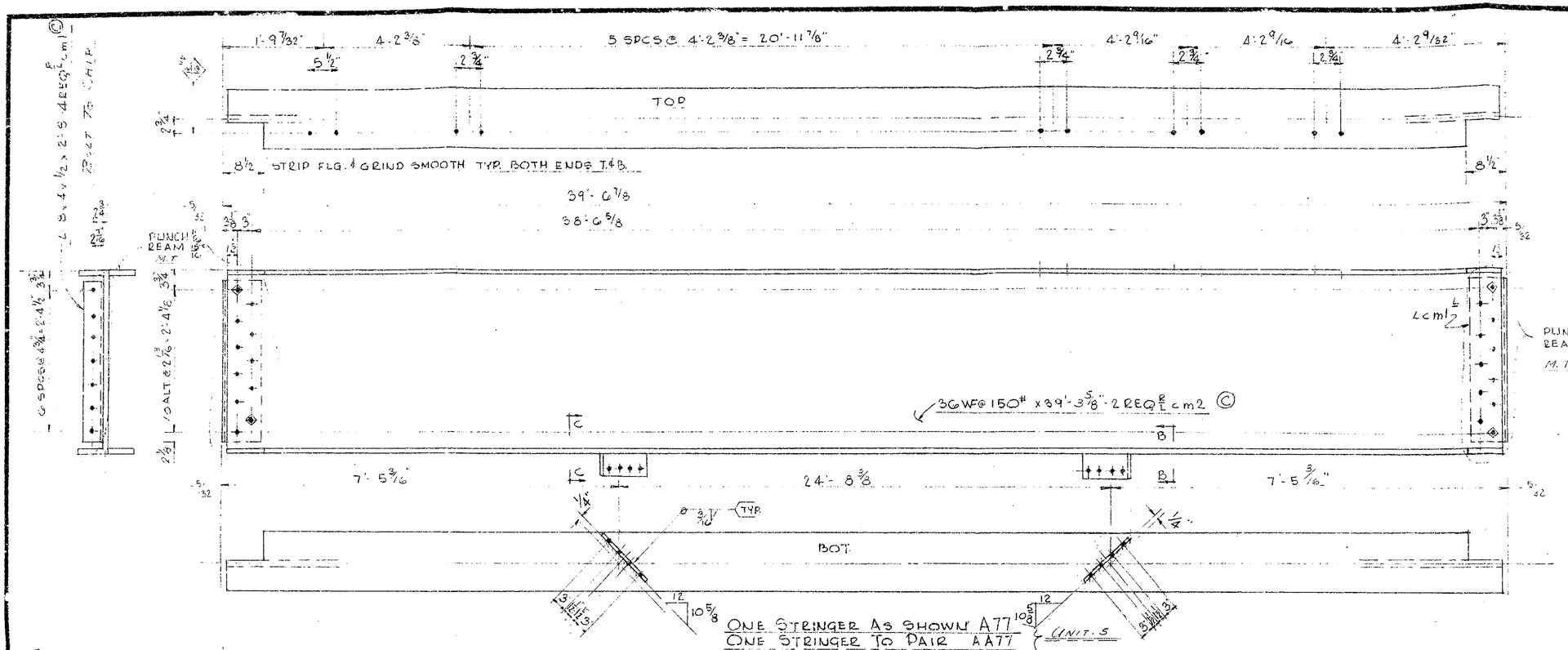
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

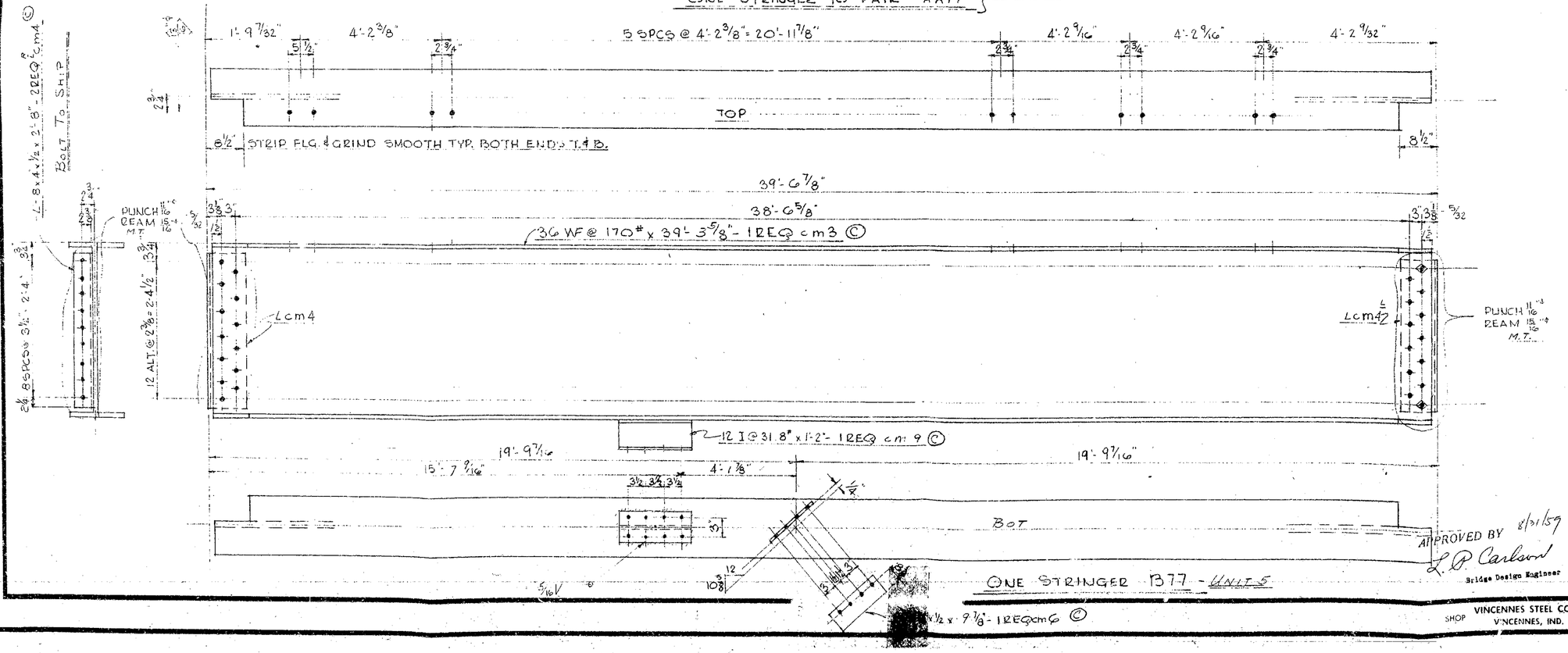
MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT NO. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800-F Sh. 78 of

34





RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 8-7-59

SEE NOTE SH. "1"

APPROVED BY HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8 ⏀ except as noted
Holes 15/16 ⌀ except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by C.A.B. 8/19/59
Checked by CLC
Revisions 7/20/59

APPROVED BY 8/21/59
L. P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT 5

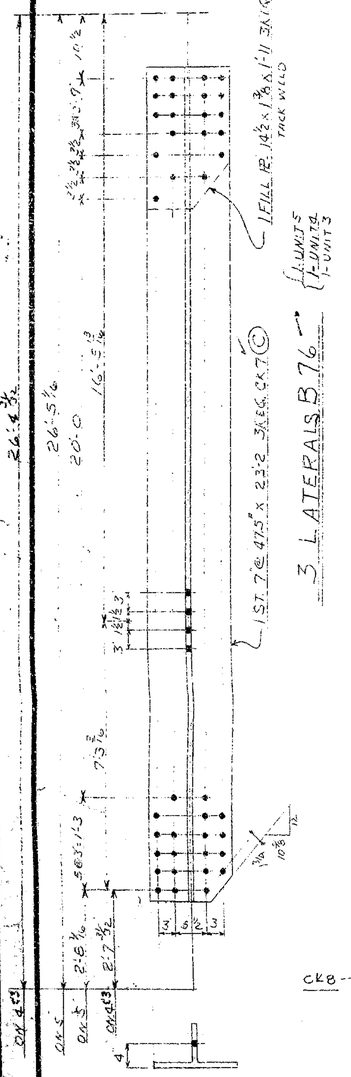
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

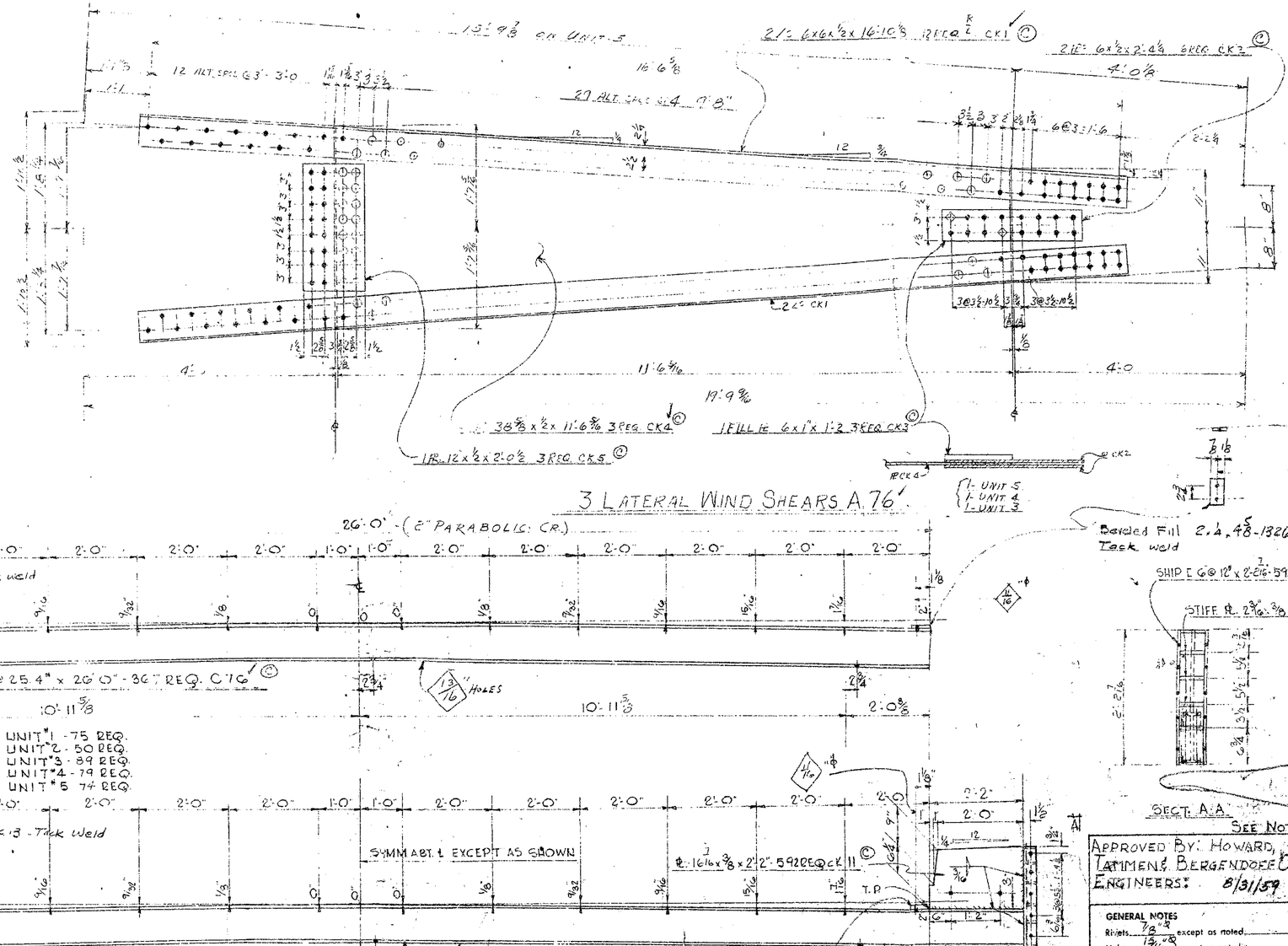
SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800 Sh. 77 of

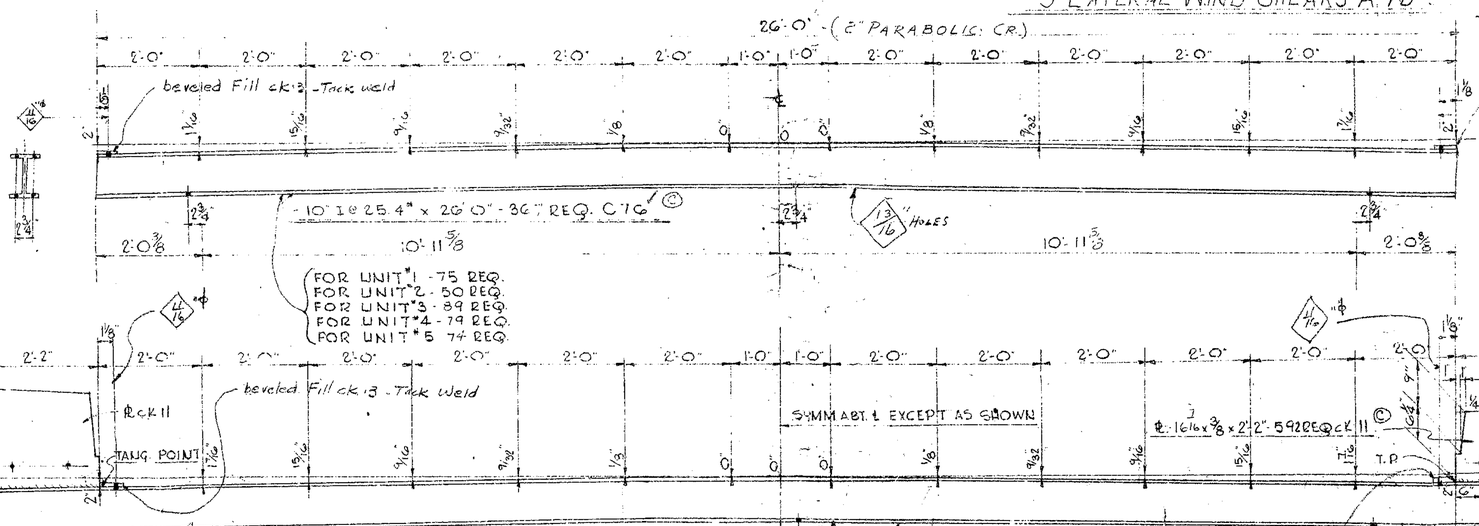
33

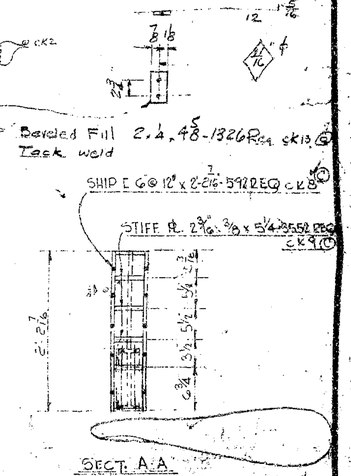
3 LATERALS B 76'





3 LATERAL WIND SHEARS A 76'





APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 8/31/59

GENERAL NOTES

Rivets 7/8" ⌀ except as noted.
Holes 15/16" ⌀ except as noted.
End Distance 1¼" unless noted.
Shop Point RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by L.A.M. & C.A.B.
Checked by alf
Revisions 7/22/59 1

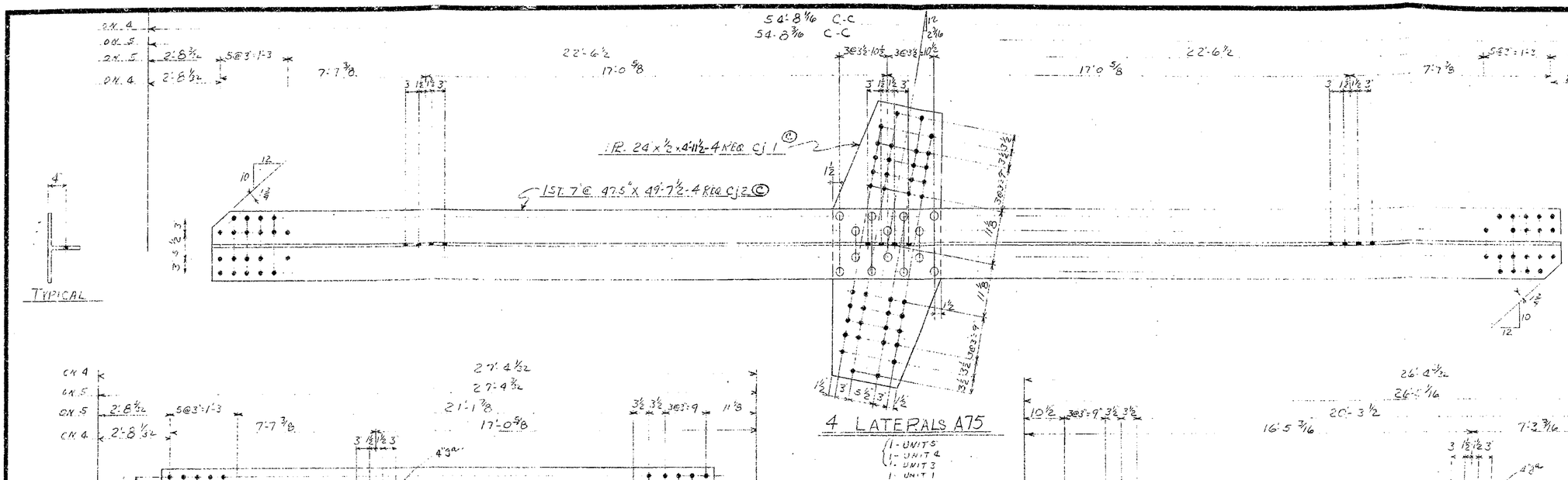
RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY H. C. DATE 9-7-60
APPROVED BY 9/8/60
L. P. Carlson
Bridge Design Engineer

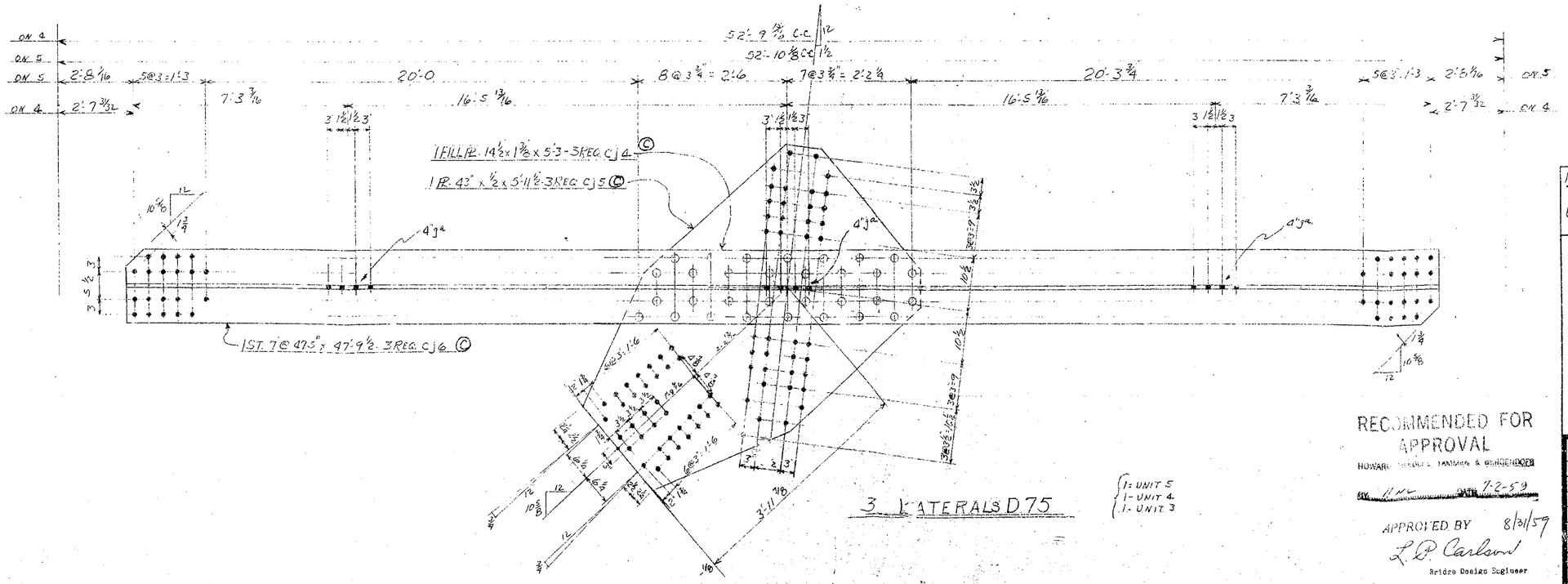
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND. Contr. No. 4800-F Sh 76 of





SEE NOTE SH. "1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by L.A.M. 3-31-59
Checked by
Revisions

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY [illegible] DATE 7-2-59

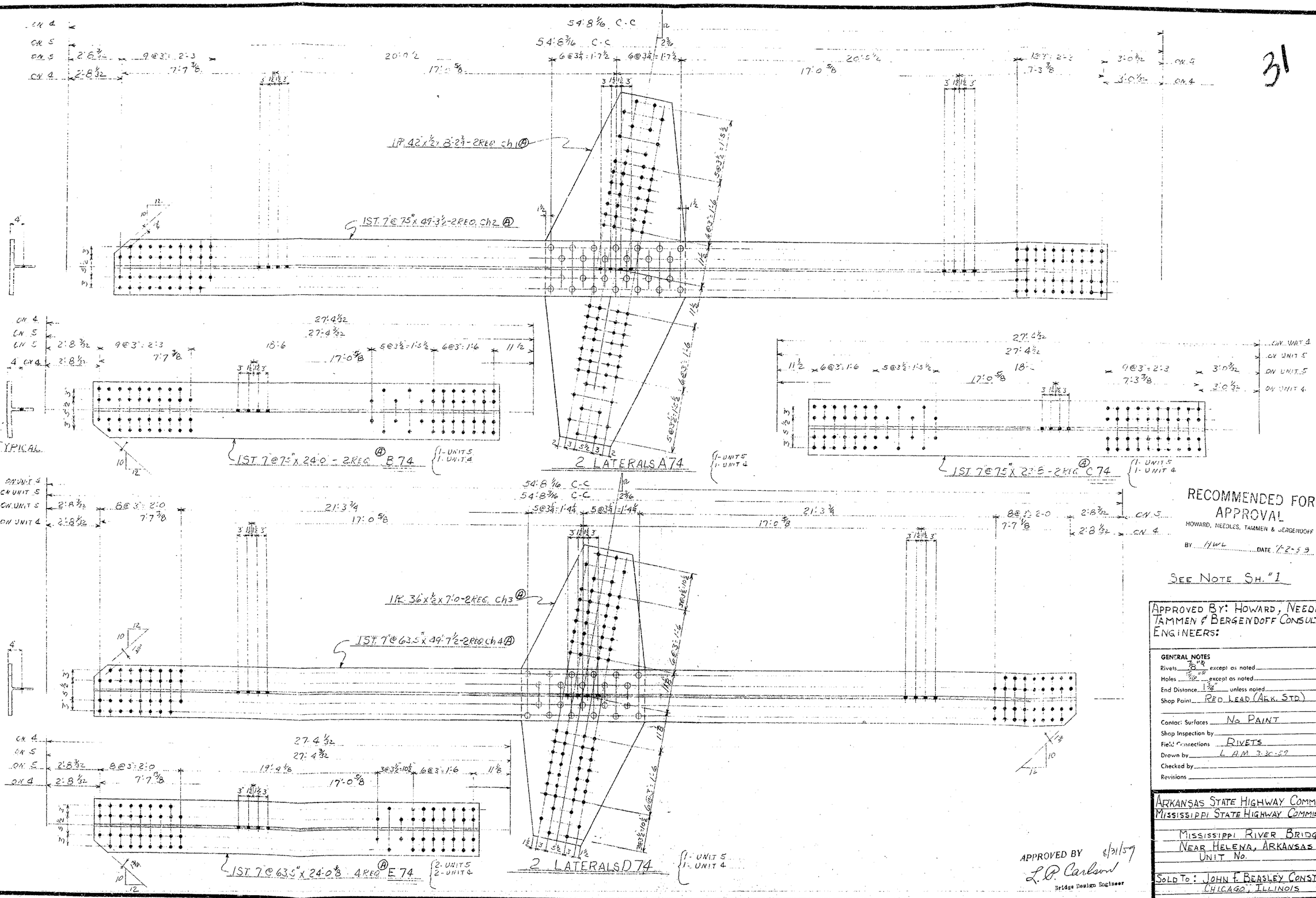
APPROVED BY 8/31/59
L. P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.
Contr. No. 4800 Sh. 75 of



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ..... DATE 7-2-59

SEE NOTE SH. "1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 1/4" unless noted
Shop Paint RED LEAD (ARK. STD)
Contac: Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by L.A.M. 3-30-59
Checked by
Revisions

APPROVED BY 8/31/59
L. P. Carlson
Bridge Design Engineer

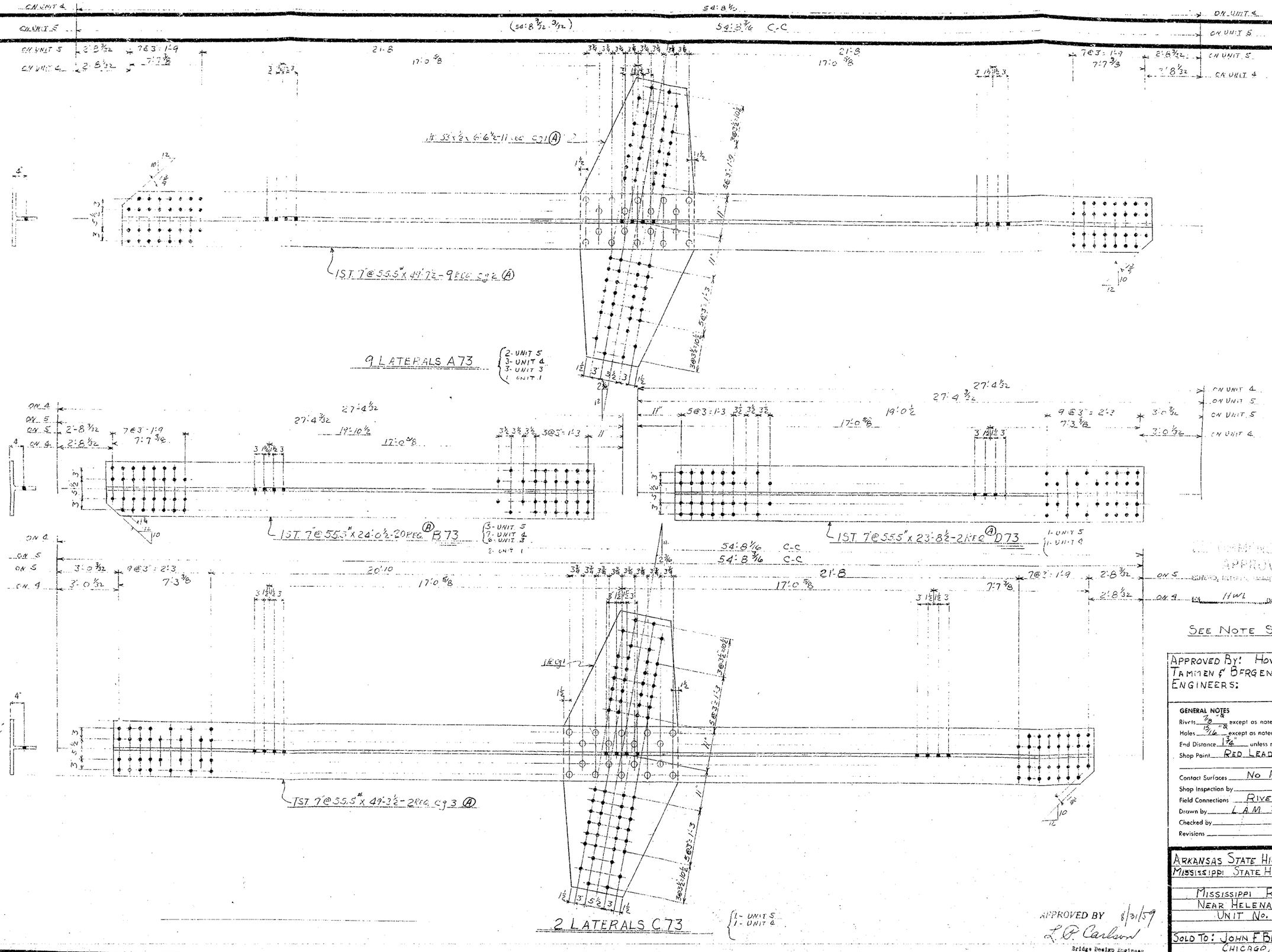
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No.

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800 Sh. 74 of

30



SEE NOTE SH. "1

APPROVED BY: HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8" & 1" except as noted
Holes 15/16" except as noted
End Distance 1¼" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by L.A.M. 3-27-59
Checked by
Revisions

APPROVED BY 8/31/59
L.P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No.

SOLD TO: JOHN F BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

RECOMMENDED FOR APPROVAL
ENGINEER, RESIDENT ENGINEER & SUPERVISOR
DATE 7-2-59

(A72) ON UNIT 1-3-5 — 2'-6 3/16" — 5@3"=1'-3 — 7'-9 1/4

(A72A) ON UNIT 3-4 — 2'-6 3/16" — 6@2 1/2"=1'-3"

22'-11 3/8" — 17'-0 5/8 — 22'-11 3/8"

54'-8 1/8 C-C

1/2" x 18" x 4'-3" - 17 REQ. CF12 © ON C72 only
PL 1/2" x 18" x 4'-3" - 6 REQ. CF11 © ON C72A only

6 LATERALS - A72A (UNIT 4 - 5) (UNIT 3 - 1)

17 LATERALS A72

1ST 7@30.5" x 49-11 1/4 { 17 REQ. CF12 © (UNITS 1-3-5) A72
6 REQ. CF10 © (UNIT 4-3) A72A

6 - UNIT 5
5 - UNIT 3
6 - UNIT 1

(B72) ON UNITS 1-3-5 — 2'-6 3/16" — 5@3"=1'-3 — 7'-9 1/4

B72A ON UNIT 3-4 "B72A"

(B72A) ON UNIT 3-4 — 2'-6 3/16" — 6@2 1/2"=1'-3"

27'-4 7/16 — 21'-7 5/8 — 17'-0 5/8 — 21'-7 5/8

1ST 7@30.5" x 24'-5 5/8 { 34 REQ. © B72
12 REQ. © B72A { 10 - UNIT 4 / 2 - UNIT 3

10 - UNIT 5
10 - UNIT 3
12 - UNIT 1

27'-4 1/8 — 20'-0 — 17'-0 5/8 — 21'-0

9 1/2 — 7@2'-3 27/32"=1'-10 3/4" — on D72A 9 1/2 — 8@2 27/32"=1'-10 3/4"

7'-8 5/8 — 7@3"=1'-9 — 2'-6 7/8 — 2'-6 13/16"

ON UNIT 5 / ON UNIT 5 / D72 / ON UNIT 3-4 / 2'-6 13/16" / on Unit 3 (B72A) / ON UNIT 4

1ST 7@39" x 24'-3 1/4 { 10 REQ. © D72 { 4 - UNIT 5 / 4 - UNIT 4 / 2 - UNIT 3
2 REQ. © D72A in unit 3

27'-4 1/16

54'-8 1/8 C-C

(54'-8 11/32 C-C - 3/32") 54'-8 1/4

ON UNIT 4 & 3
ON UNIT 5
C72 ON UNIT 5 — 2'-6 7/8" — 7@3"=1'-9 — 7'-8 5/8
(C72) ON UNIT 4 & 3 — 2'-6 13/16"
(C72A) on Unit 3 — 2'-6 13/16" — 8@2 5/8"=1'-9

UNIT 4 / UNIT 5 / UNIT 5 / UNIT 4 & 3

22'-2 — 17'-0 5/8 — 22'-2 on C72A — 7'-8 5/8 — 7@3"=1'-9 — 2'-6 7/8" — 2'-6 13/16" — 8@2 5/8"=1'-9 — 2'-6 13/16" — Unit 3

1/2" x 24" x 2 1/2 x 5'-10 1/2" - { 5 REQ. CF3 © on C72
1 REQ. CF1L © on C72A

1ST 7@39" x 49-10 { 5 REQ. CF9 © on C72
1 REQ. CF1T © on C72A

5 LATERALS C72
ONE LATERAL C72A (1-UNIT 3)

2 - UNIT 5
2 - UNIT 4
1 - UNIT 3

NOTE SH. 1

APPROVED BY: H. ... NICOLES
TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 9/2/59

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by L.A.M. 3-25-59
Checked by
Revisions 7/20/60 6/27/59
Cut A72A C72A

RECOMMENDED FOR APPROVAL
HOWARD, NICHOLES, TAMMEN & BERGENDOFF
BY HFC DATE 9-7-60

APPROVED BY: 9/8/60
L.D. Carlson
Bridge Design Engineer

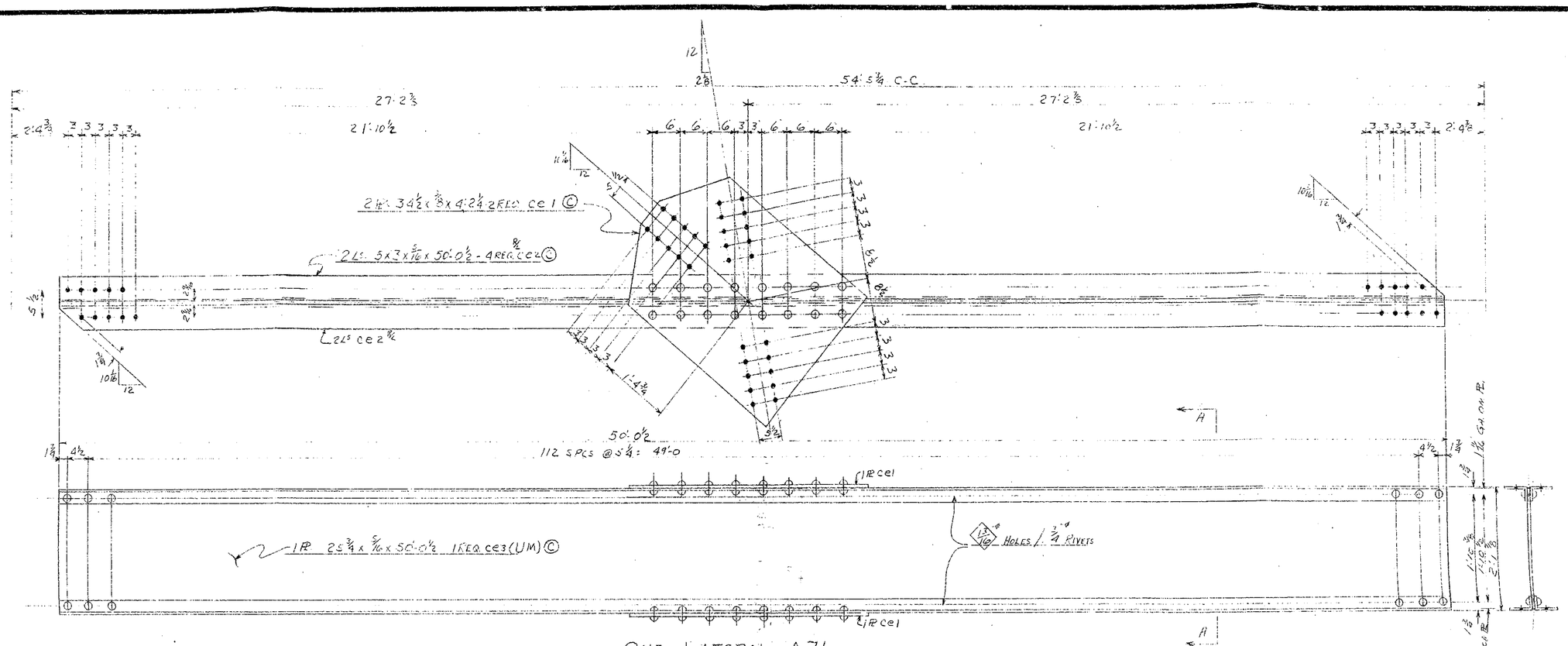
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No.

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4802 F Sh. 72 of

28



RECOMMENDED FOR APPROVAL
BY HWK DATE 7-6-59
SEE NOTE SH. "1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8 Ø except as noted
Holes 15/16 Ø except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by L.A.M. 3-24-59
Checked by
Revisions

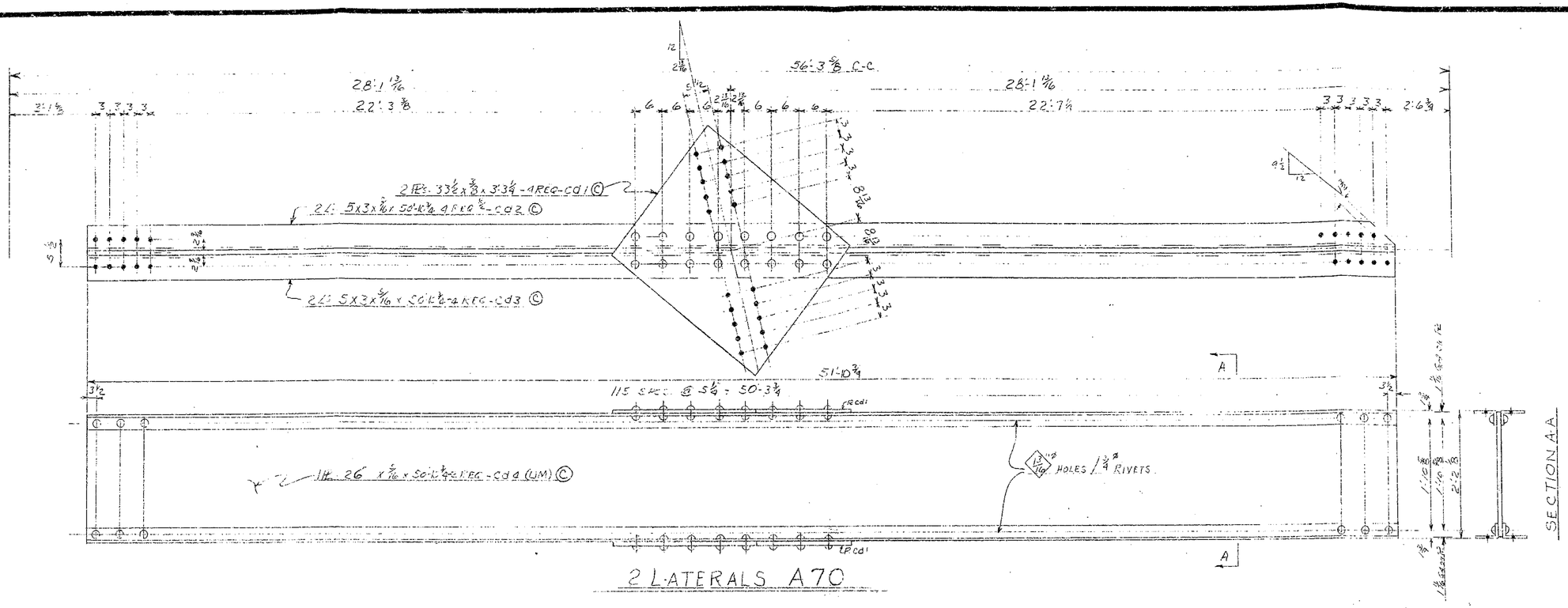
APPROVED BY 8/31/59
L P Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL [redacted] DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.
Contr. No. 4800 Sh. 71 of



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ILW DATE 7-C-59

SEE NOTE SH "1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8" except as noted
Holes 13/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by L.A.M. 3-23-59
Checked by
Revisions

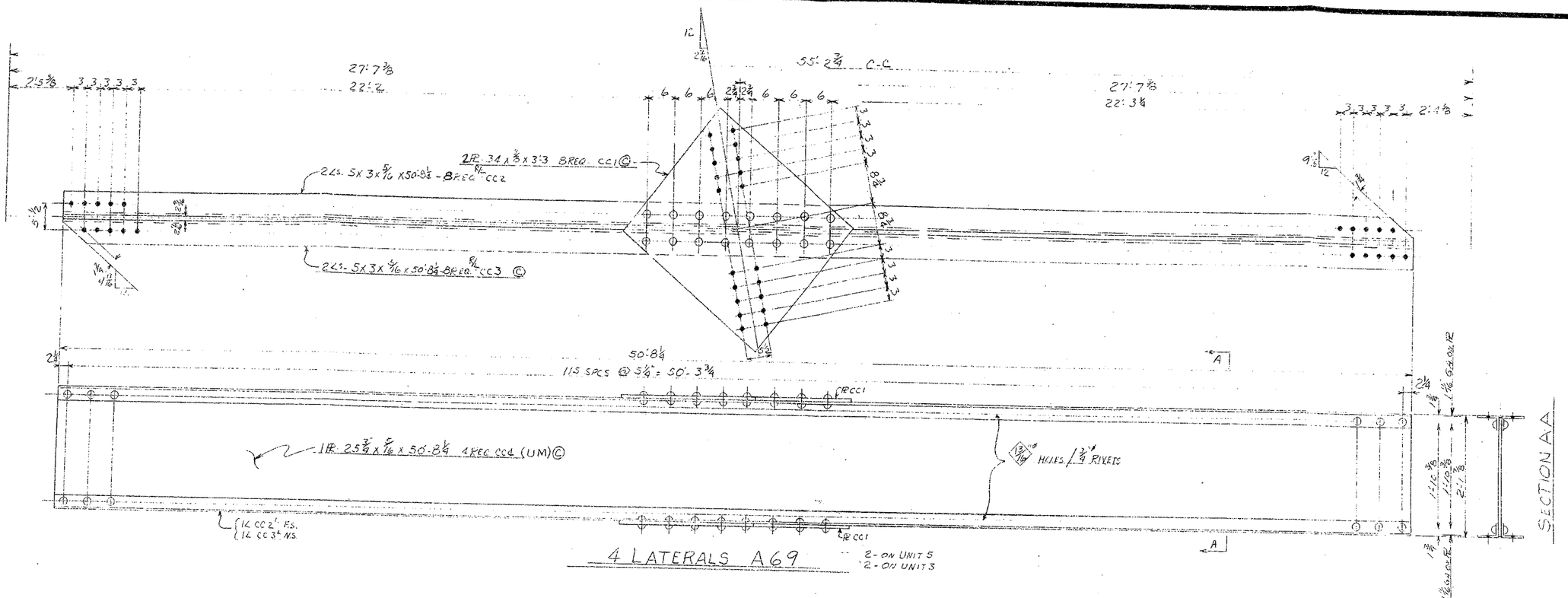
APPROVED BY 8/31/59
L. P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 5

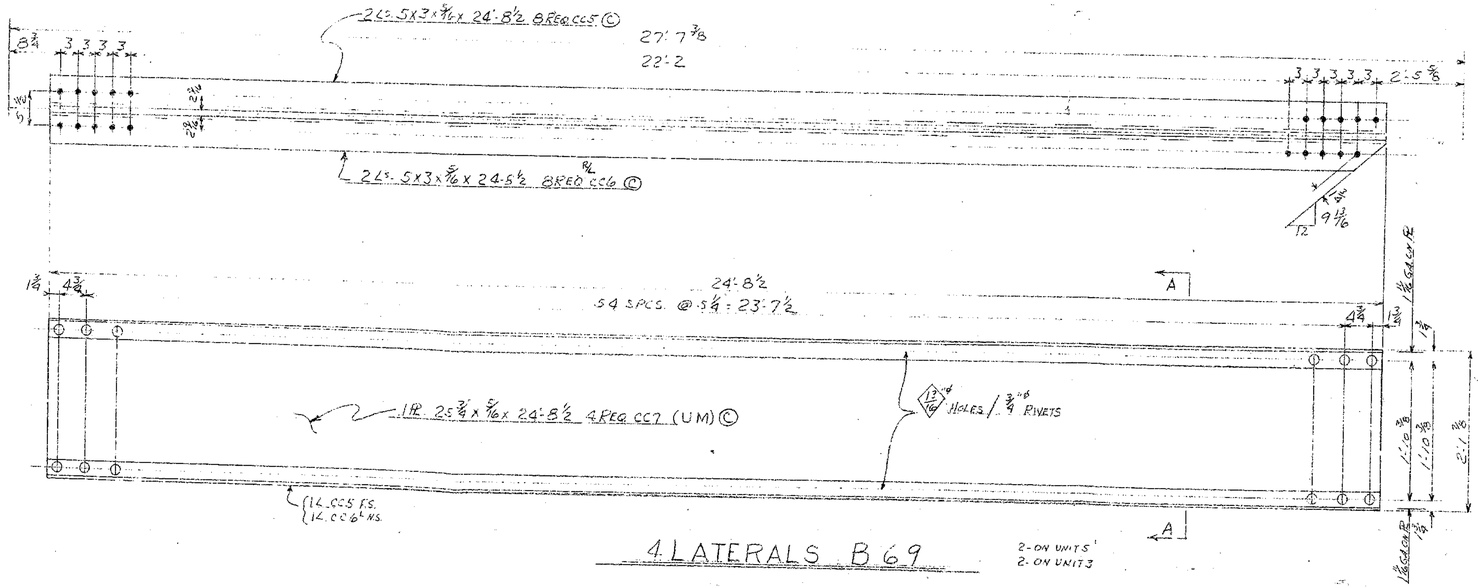
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL VINCENNES, IND. DIV. OF INDUSTRIAL ENTERPRISES, INC. Contr. No. 4800 Sh. 70 of



4 LATERALS A69

2 - ON UNIT 5
2 - ON UNIT 3



4 LATERALS B69

2 - ON UNITS
2 - ON UNIT 3

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY WWL DATE 7-2-59

SEE NOTE SH. #1

APPROVED BY: HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

APPROVED BY 8/31/59
L. O. Carlson
Bridge Design Engineer

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 13/16" ø except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by L.A.M. 3-20-59
Checked by
Revisions

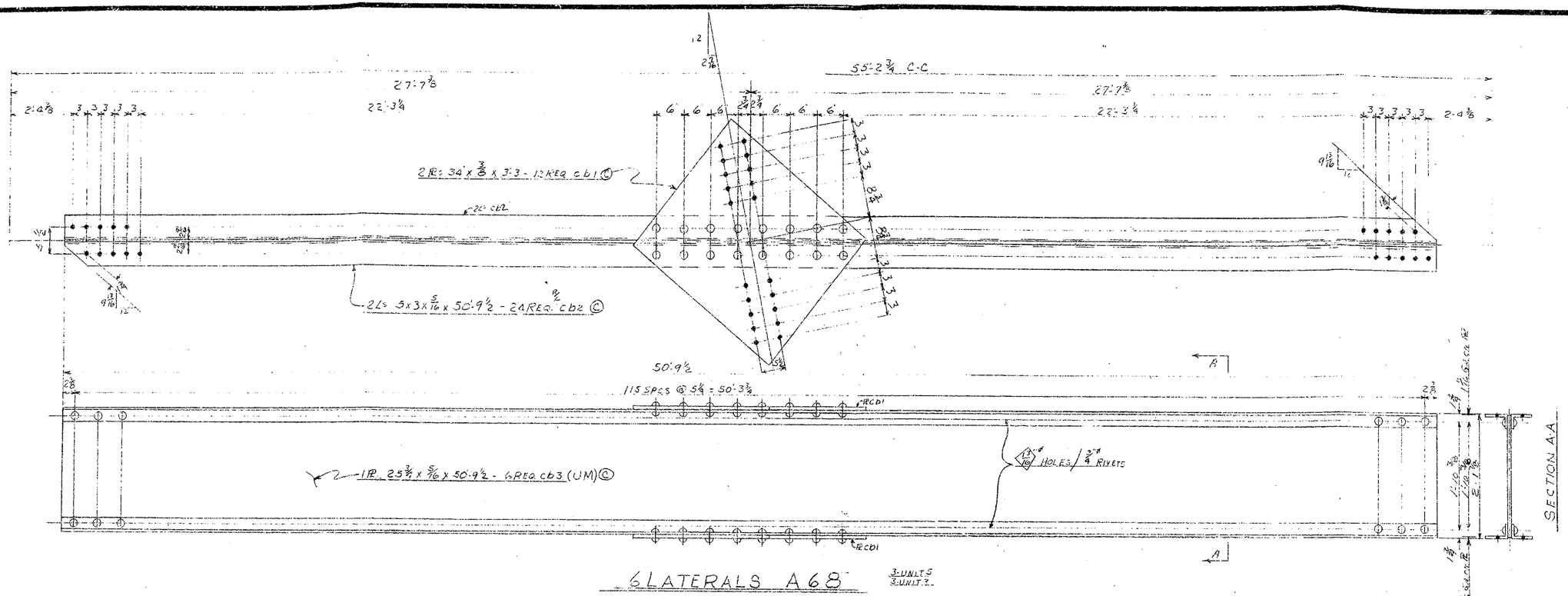
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.

Contr. No. 4800 Sh. 69 of



RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY HWL DATE 7-2-59

SEE NOTE SH #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8" ø except as noted

Holes 15/16" ø except as noted

End Distance 1 3/4" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by L.A.M. 3-19-59

Checked by

Revisions

APPROVED BY 8/31/59

L. P. Carlson

Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE

NEAR HELENA, ARKANSAS

UNIT NO. 5

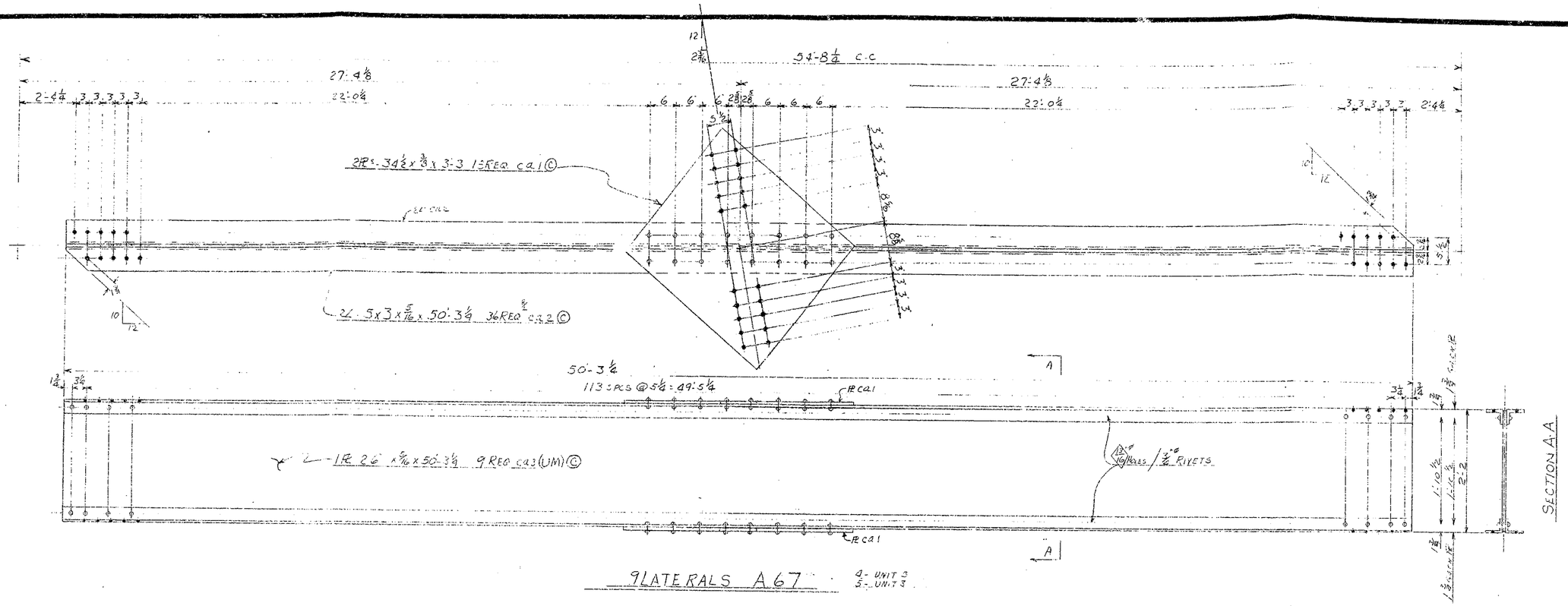
SOLD TO: JOHN F. BEASLEY CONSTR. CO.

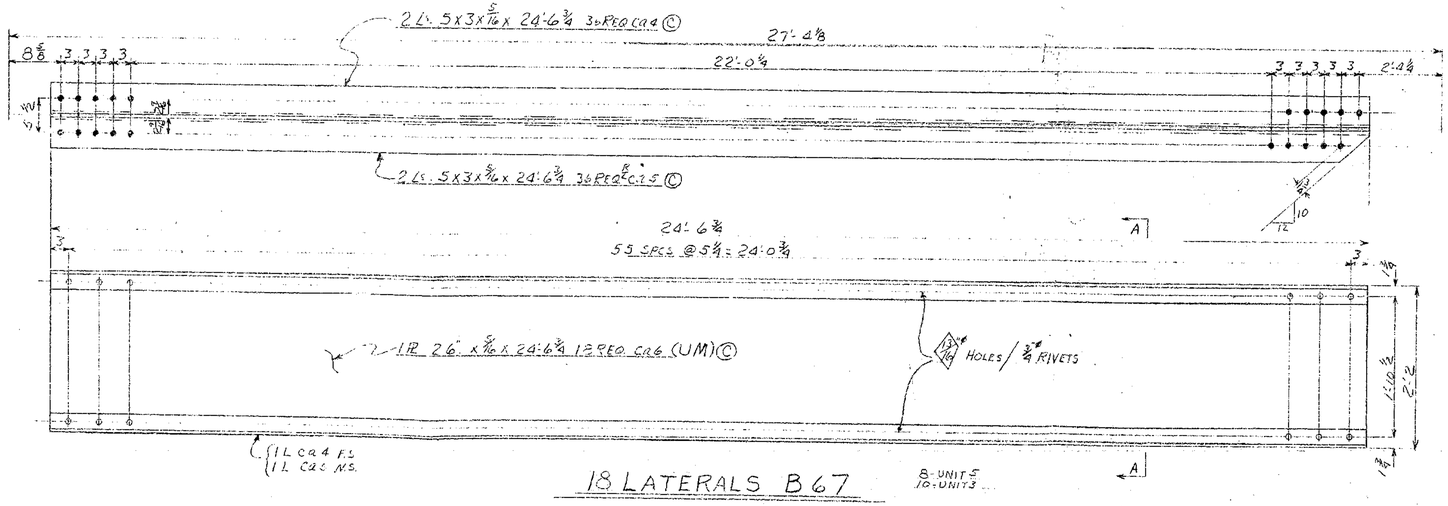
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL VINCENNES, IND. DIV. OF INDUSTRIAL ENTERPRISES, INC.

Contr. No. 4800 Sh. 68 of

24





9 LATERALS A67 — 4 - UNIT 3, 5 - UNIT 3

18 LATERALS B67 — 8 - UNIT 5, 10 - UNIT 3

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY L.M.L. DATE 7-2-59

SEE NOTE SH. "1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8" DIA except as noted
Holes 13/16" except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by L.A.M. 3-19-59
Checked by
Revisions

APPROVED BY 8/31/59
L. P. Carlson
Bridge Design Engineer

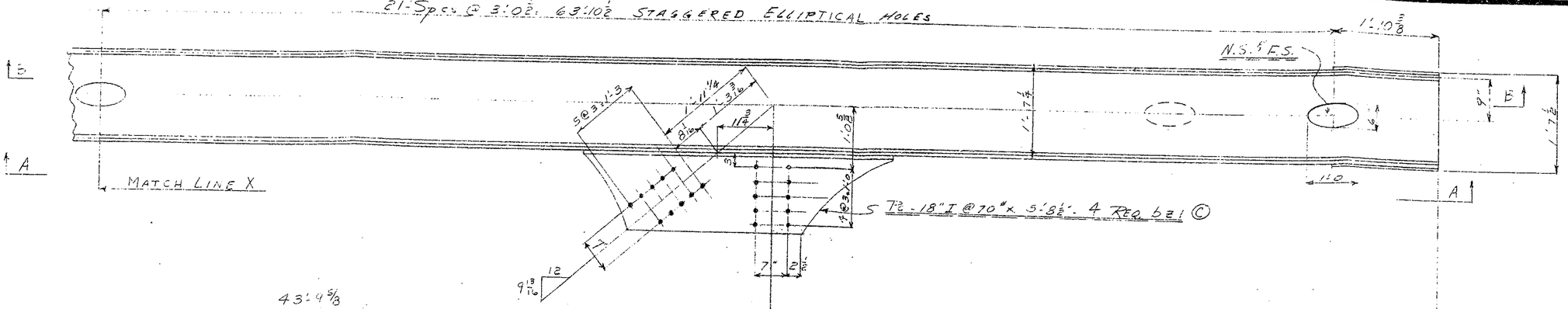
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 67 of

21-Spcs @ 3'-0½" & 63'-10½" STAGGERED ELLIPTICAL HOLES



WORK WITH SH "65

APPROVED BY 9-1-59
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 8-27-59

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS.

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T. - 3-27-59
Checked by alf
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

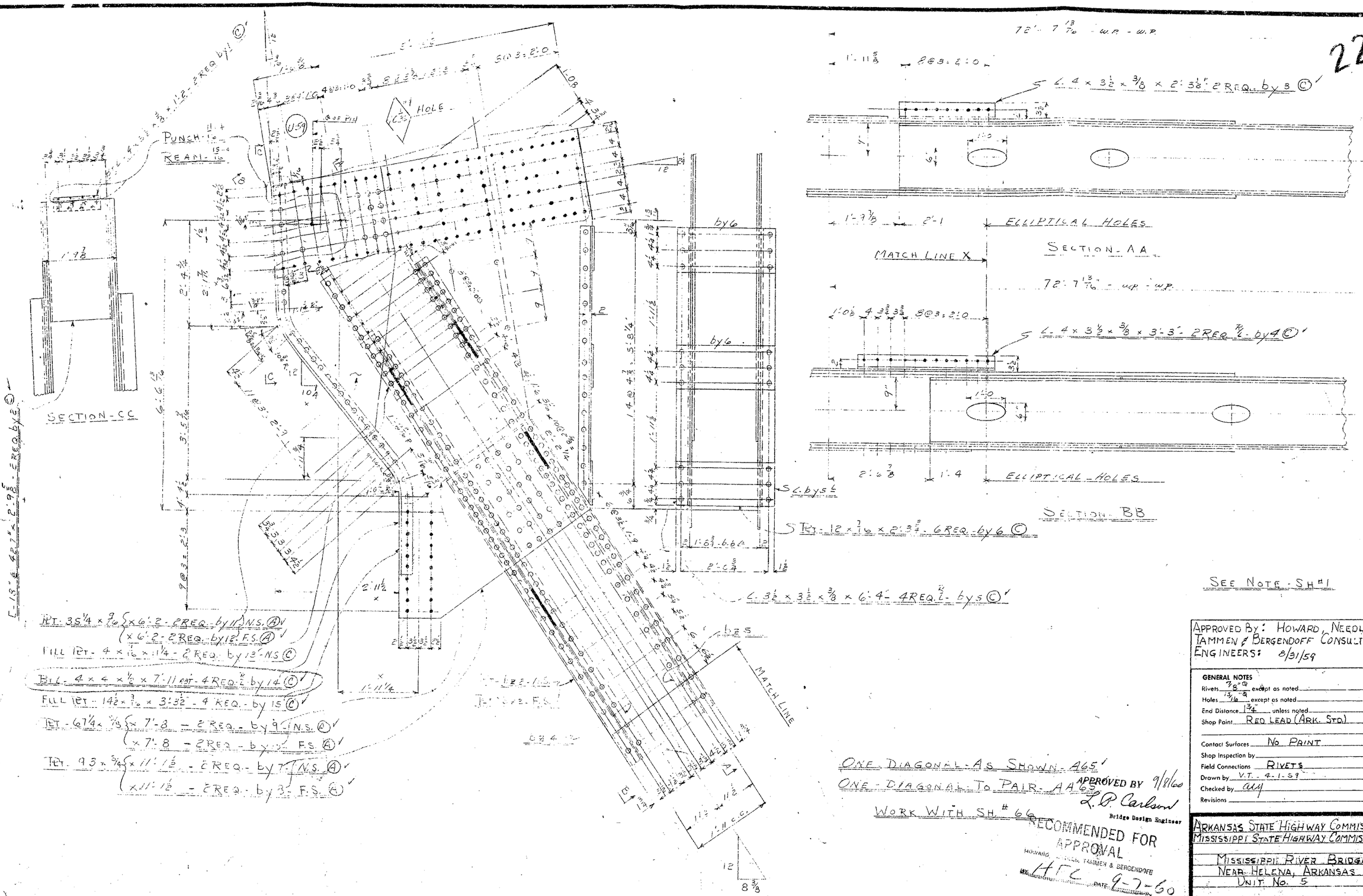
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

CONTR. ENTERPRISES INC. Sh. 66 of 4800

22



PLT. 35¼ × 9/16 × 6'-2 - 2 REQ. - by 11 N.S. Ⓐ ✓
(× 6'-2 - 2 REQ. by 12 F.S. Ⓐ ✓)

FILL PLT - 4 × 15/16 × 1¼ - 2 REQ. by 13 - N.S. Ⓒ

BLT. - 4 × 4 × ½ × 7'-11 ea. - 4 REQ. ℄ by 14 Ⓒ ✓

FILL PLT - 14½ × 7/16 × 3'-3½" - 4 REQ. - by 15 Ⓒ ✓

PLT. - 6 7/16 × 5/16 × 7'-8 - 2 REQ. - by 9 - N.S. Ⓐ ✓
(× 7'-8 - 2 REQ. - by 12 F.S. Ⓐ ✓)

PLT. 9 3 × 5/16 × 11'-1½ - 2 REQ. - by 7 - N.S. Ⓐ ✓
(× 11'-1½ - 2 REQ. - by 3 - F.S. Ⓐ ✓)

PLT - 12 × 7/16 × 2'-3¾" - 6 REQ. - by 6 Ⓒ

∠ 4 × 3½ × 3/8 × 2'-3½" 2 REQ. by 5 Ⓒ'

∠ 4 × 3½ × 3/8 × 3'-3" 2 REQ. ℄ by 4 Ⓒ'

∠ 3½ × 3½ × 3/8 × 6'-4" 4 REQ. ℄ by 5 Ⓒ'

ONE - DIAGONAL - AS SHOWN - A65'

ONE - DIAGONAL - TO PAIR - AA65'

WORK WITH SH. # 66

APPROVED BY 9/8/60
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY [illegible] DATE 9-7-60

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 8/31/59

GENERAL NOTES

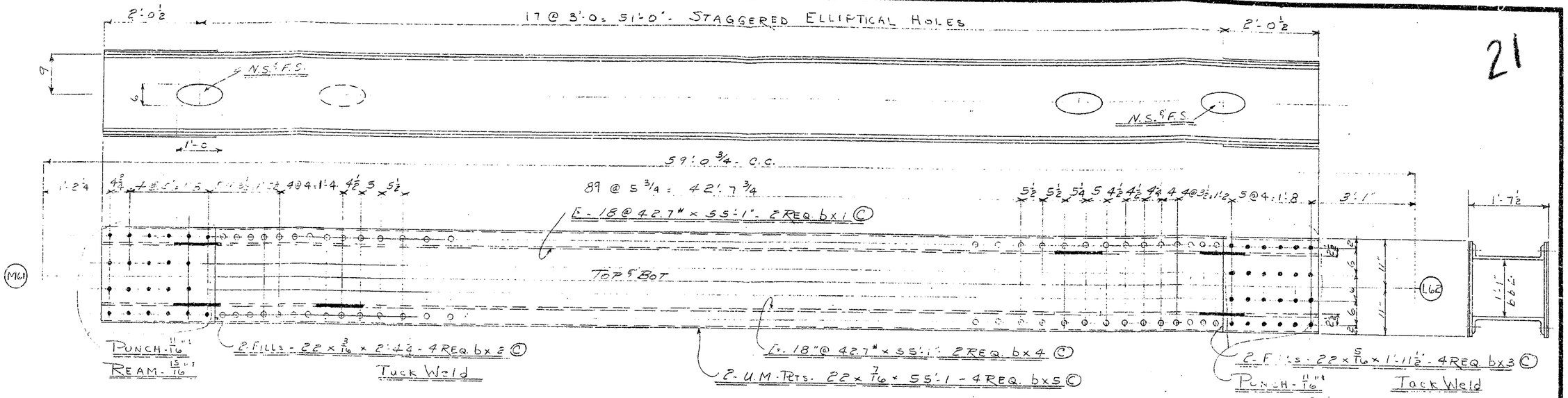
Rivets 7/8" ⌀ except as noted
Holes 13/16" ⌀ except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T. - 4-1-59
Checked by [illegible]
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

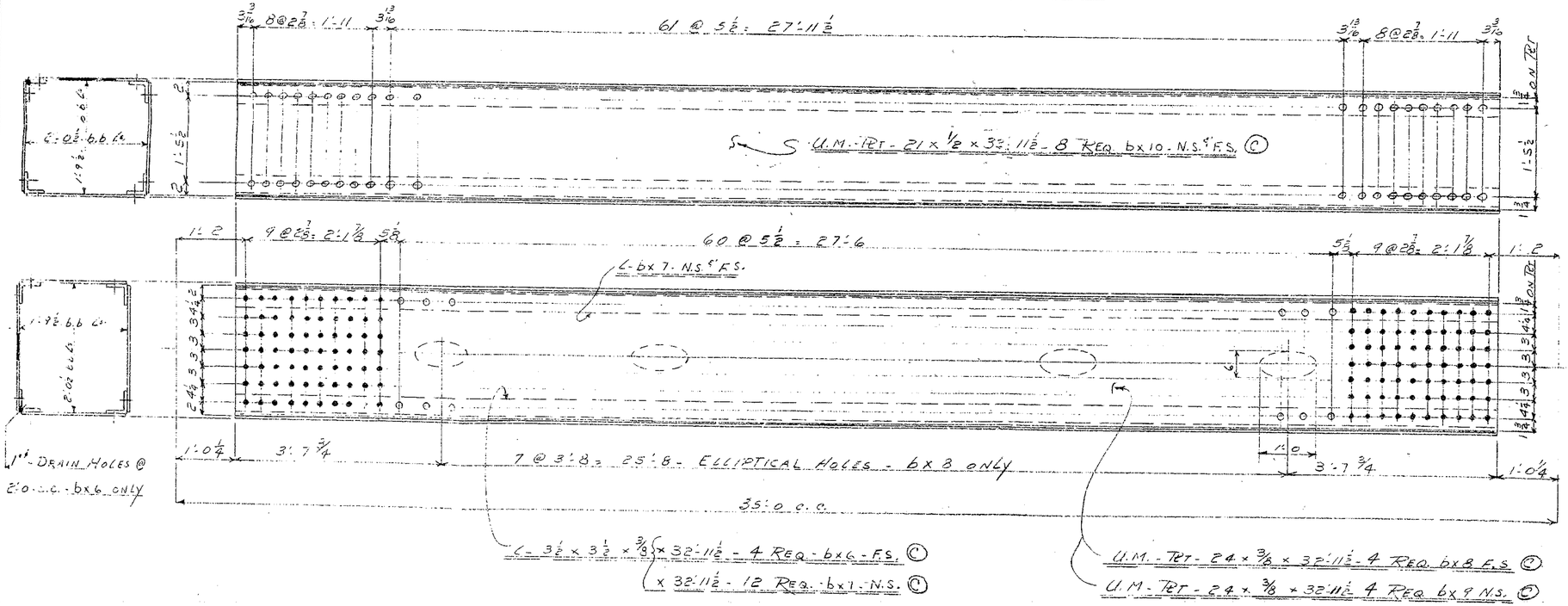
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND. DIV. OF INDUSTRIAL ENTERPRISES, INC.
Contr. No. 4800-T Sh. 65 of



2 - DIAGONALS - A64



4 - PORTAL STRUTS - B64 - @ L64 - U66 @ L48 - U50 @ L30 - U32 @ L10 - U8

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY VEA DATE 8-26-59
SEE NOTE - SH # 1

APPROVED BY 8/31/59
L. P. Carlson
Bridge Design Engineer

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES
Rivets 13/16"ø except as noted
Holes 15/16"ø except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T. - 3-23-59
Checked by amy
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND. DIV. OF INDUSTRIAL ENTERPRISES, INC.
Contr. No. 4800 Sh. 64 of

20

PLTS. 15 x 5/8 x 3'-1 1/4" - 4 REQ. bw8 (A)

17 @ 3'-1 1/2" = 53'-1" - STAGGERED ELLIPTICAL HOLES

2'-1 5/8"

2'-0 3/4"

N.S. 5 F.S.

59'-0 3/32" c.c.

59' c 11/32" - c.c.

PUNCH - 11/16"
REAM - 15/16"

8 @ 5'-4" = 3'-6"

31 @ 6'-2" = 43'-10 1/2"

18 @ 3" = 4'-6"

1'-10 3/32"

PL. 3 1/2 x 3 1/2 x 3/8 x 3'-7 1/8" - 4 REQ. bw4 (C)

PL. 3 1/2 x 3 1/2 x 3/8 x 2'-0" - 4 REQ. bw9 (C)

E - 18" @ 45.3" x 55'-11" - 2 REQ. bw2 (A)

E - U.M. PLT. 24 x 5/8 x 57'-3 3/8" - 4 REQ. bw1 (A)

PL. 3 1/2 x 3 1/2 x 3/8 x 2'-5" - 4 REQ. bw5 (C)

E - 18" @ 45.8" x 57'-3 3/8" - 2 REQ. bw3 (A)

2 PLT - 14 x 5/8 x 3'-1 1/4 - 4 REQ. bw6 (A)

2 PLT - 7 2 1/16 x 5/8 x 6'-1" - 4 REQ. bw7 (A)

FILL - 24 x 1/8 x 4'-9 1/2" - 4 REQ. bw19 (C)

Tack Weld

2 - DIAGONALS - A63

PUNCH - 11/16"
REAM - 15/16"

SEE NOTE SH #1

17 @ 3'-0 3/4" = 52'-0 3/4" - STAGGERED ELLIPTICAL HOLES

2'-1 5/8"

N.S. 5 F.S.

59'-0 3/32" c.c.

59' c 11/32" - c.c.

83 @ 6'-4" = 43'-2 3/4"

PL. 3 1/2 x 3 1/2 x 3/8 x 1'-4 1/2" - 8 REQ. bw14 (C)

E - 18" @ 42.1" x 55'-11 3/8" - 2 REQ. bw10 (A)

2 - FILL PLT - 24 x 3/16 x 3'-0 5/8" - 4 REQ. bw13 (C)

E - 18" @ 42.7" x 55'-11 3/8" - 2 REQ. bw11 (A)

2 - U.M. - PLT - 24 x 1/16 x 55'-11 3/8" - 4 REQ. bw12 (A)

Tack Weld

2 - DIAGONALS - B63

APPROVED BY HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS 8/31/59

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T. 3.20-59
Checked by Ally
Revisions 8/6/59 ec

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

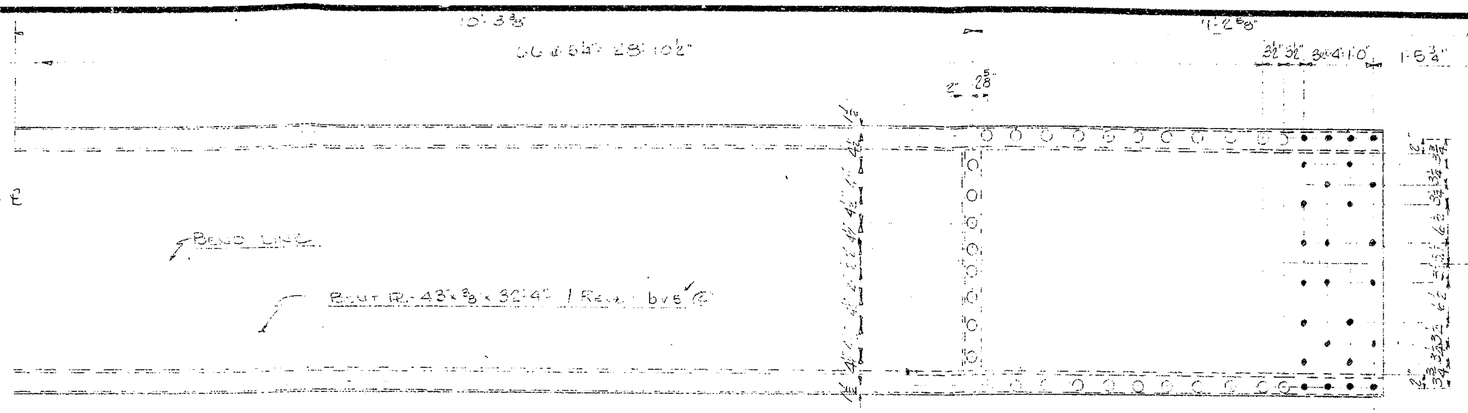
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 3

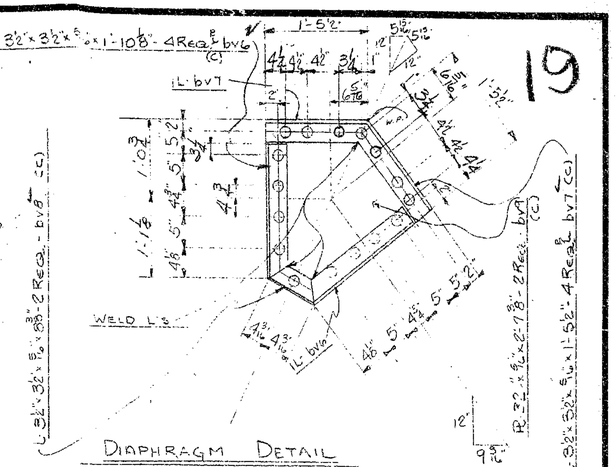
SOLD TO: JOHN E. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY [illegible] DATE 9-7-60

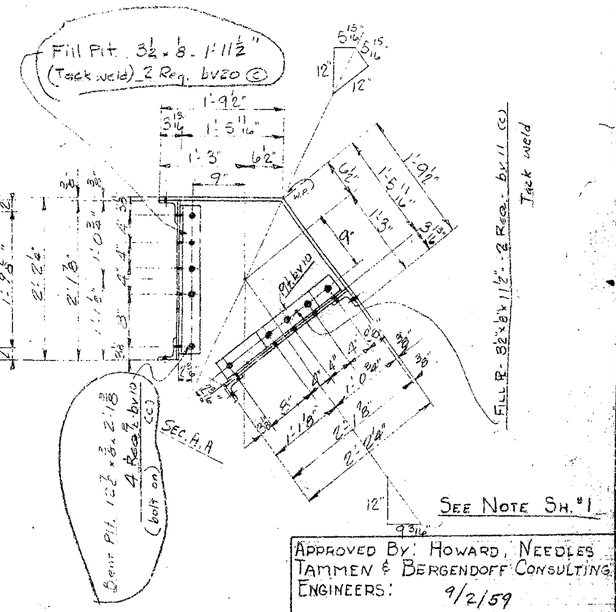
APPROVED BY
L.P. Carlson
Bridge Design Engineer
9/8/60

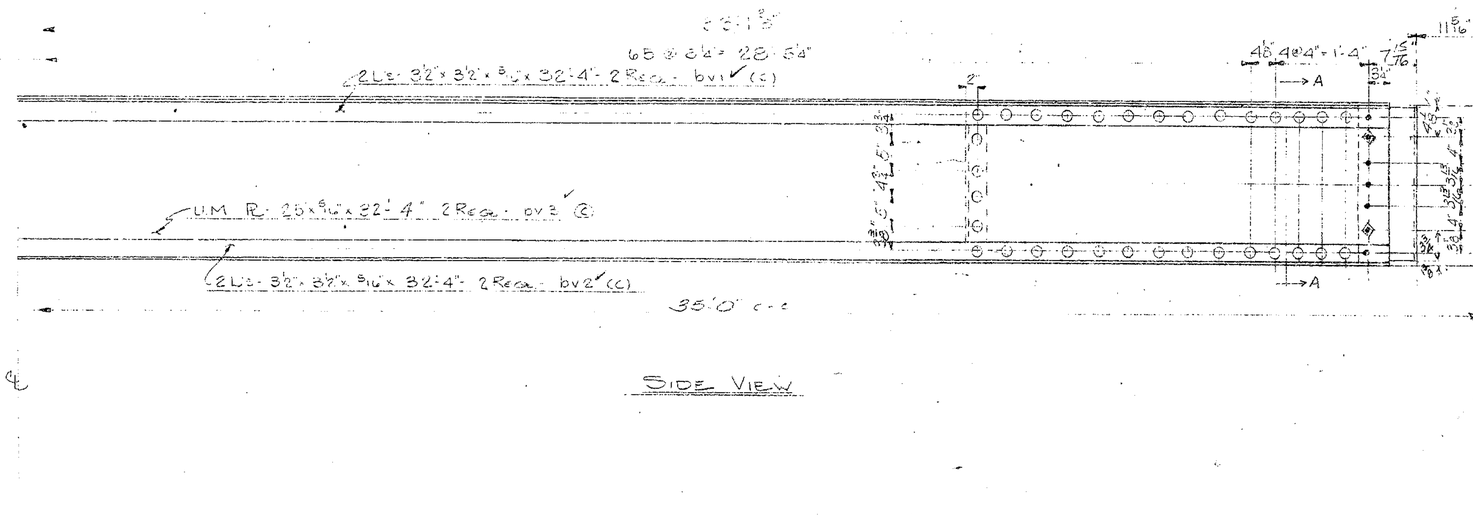
SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL [illegible] INC. VINCENNES, IND.
Contr. No. 4800-T Sh. 63 of





DIAPHRAGM DETAIL





ONE TOP STRUT A62

APPROVED BY 9/2/60
BY L. P. Cattern
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY H.E. DATE 9-7-60

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 9/2/59

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1¼" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by KW 3-26-59
Checked by alg
Revisions 7/22/59

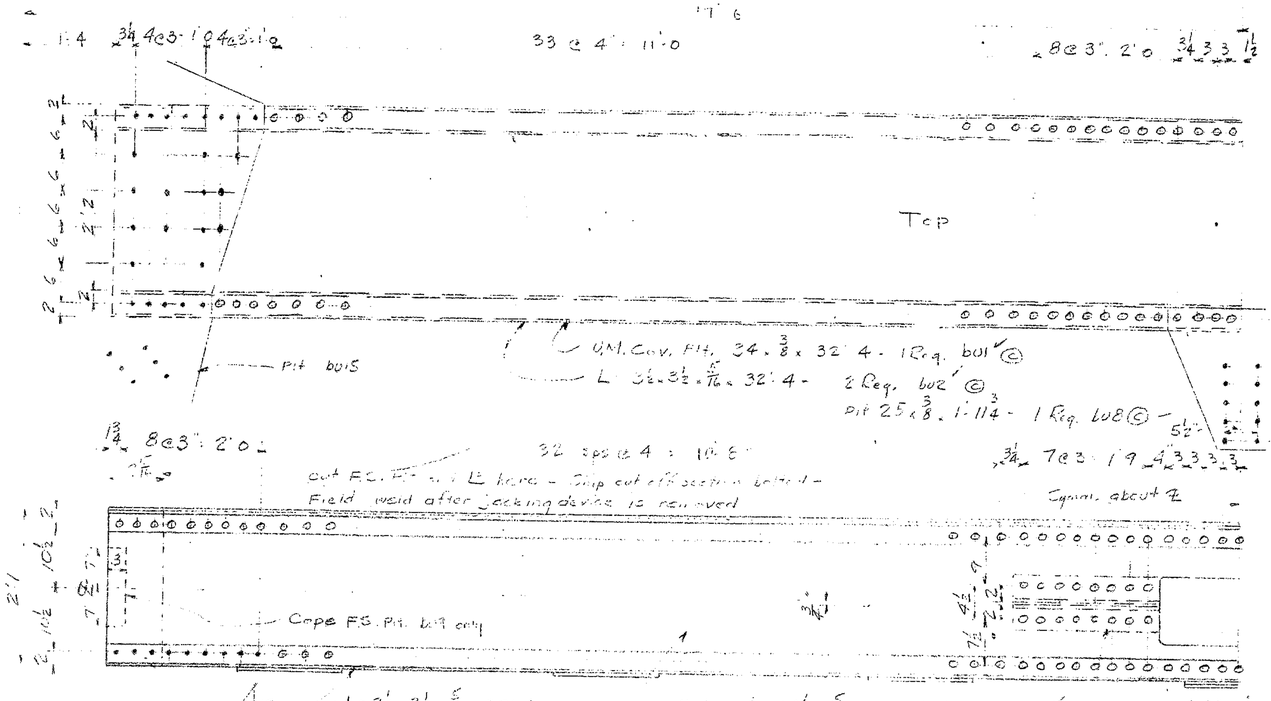
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

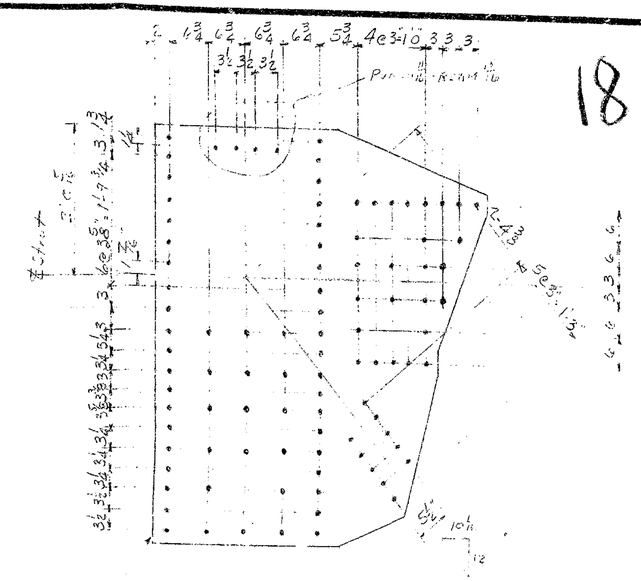
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 5

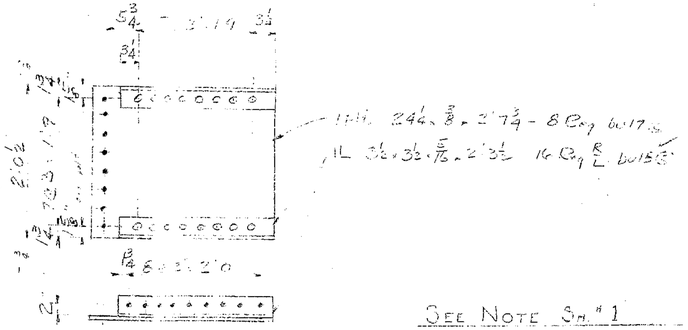
CONTR. JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES INC. VINCENNES, IND.

Contr. No. 6990-F Sh. 62 of







ONE TOP STRUT - A61

8 DIAPHRAMS - B61

SEE NOTE SH. # 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS 9/2/59 - 9/25/59

APPROVED BY
L. P. Carlson
Bridge Design Engineer
9/15/60

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ____ DATE 11-12-60

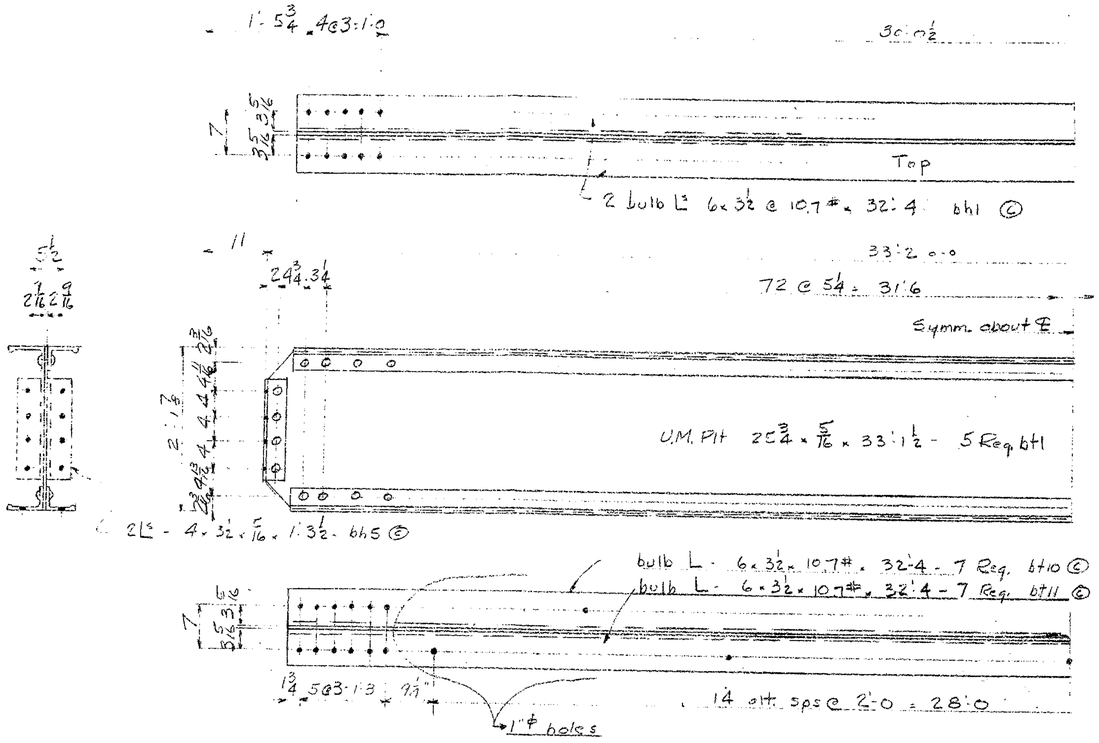
GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1¼" unless noted
Shop Paint F.E.D. LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by DW
Checked by
Revisions 7/22/59 - 9/25/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

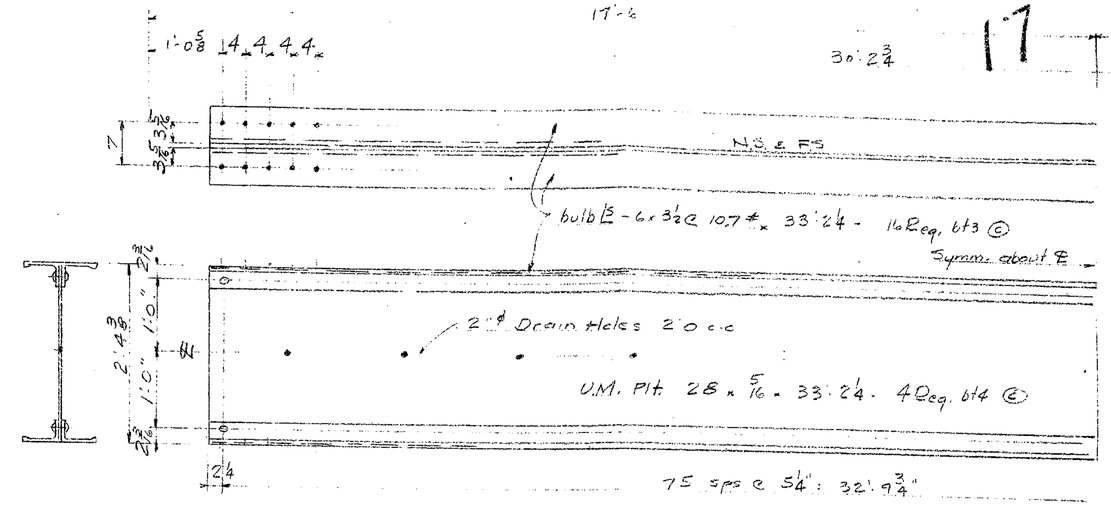
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS



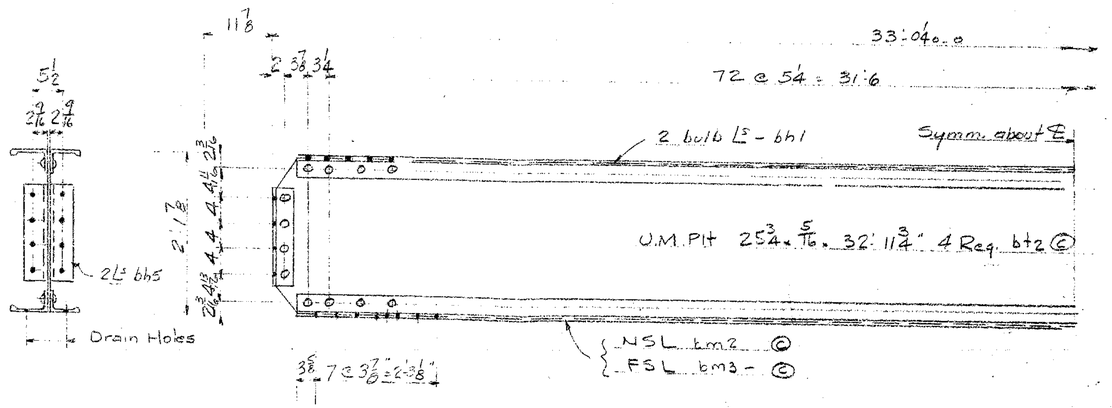
5 TOP STRUTS A60

at U61 - U45 - U13 - U27 - U33



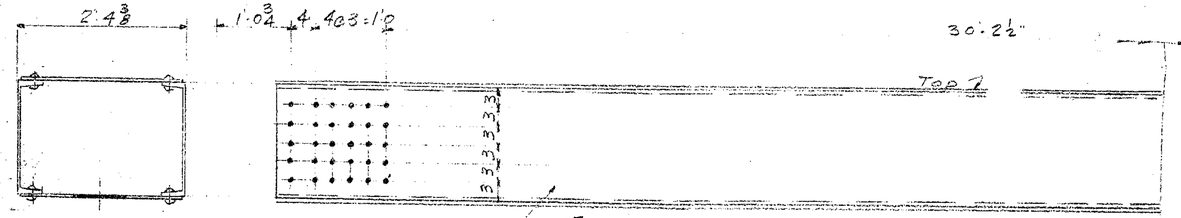
4 STRUTS - C60

at U16 - U31 - U48 - U64



4 TOP STRUTS - B60

at U60 - U14 - U26 - U34



SEE NOTES SH. #1

APPROVED BY
L. P. Carlson
Bridge Design Engineer

4 STRUTS

at U10 - U30 - U48 - U64

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FR DATE 8-27-59

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

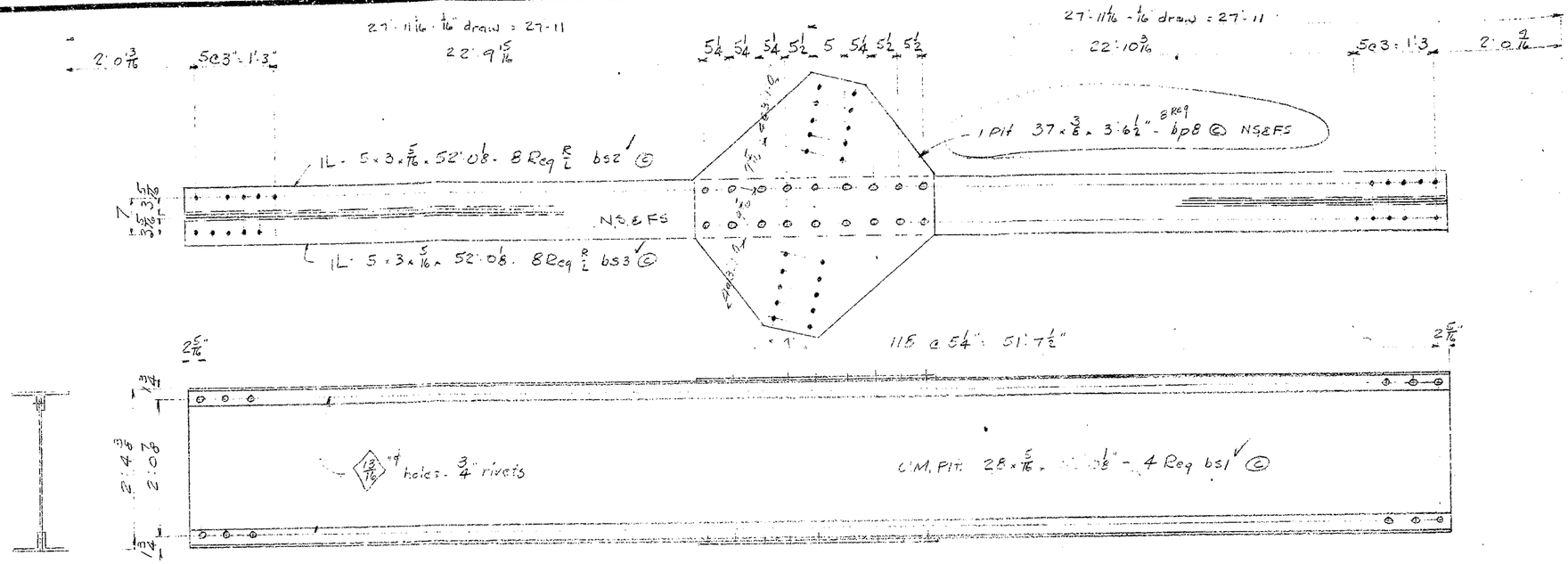
Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by J.W. 3-23-59
Checked by Jay.
Revisions 9/23/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 5

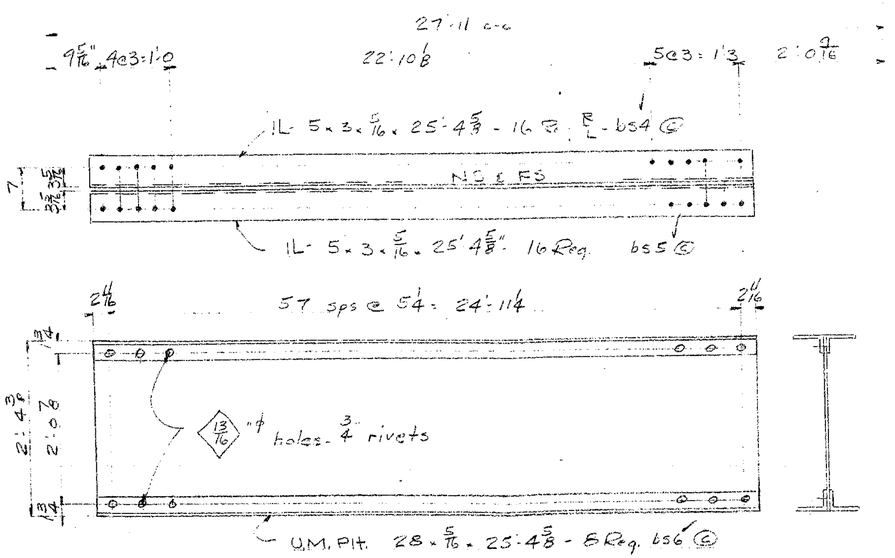
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND. Contr. No. 4800 Sh. 60 of



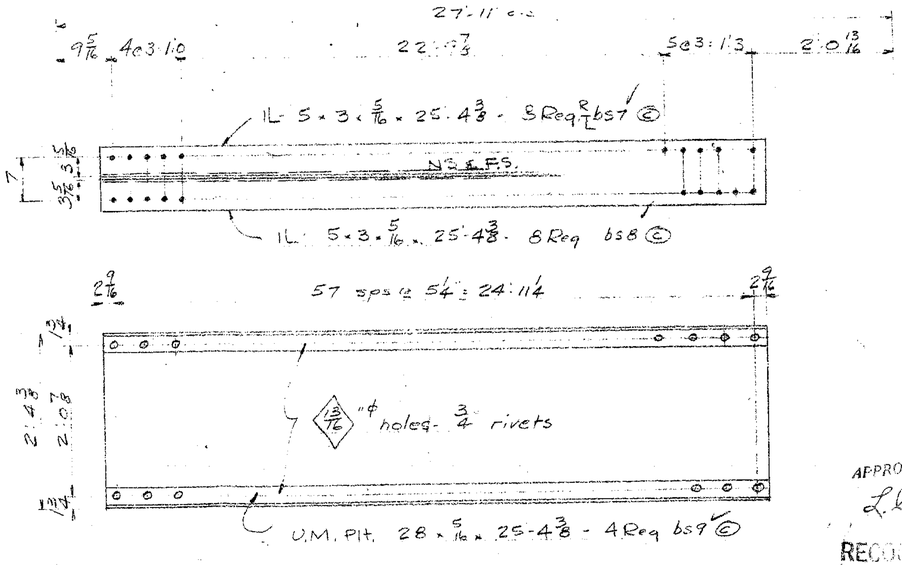
4 BRACES - A59

at U10 - U30 - U48 - U64



8 BRACES - B59

at U10 - U30 - U48 - U64



4 BRACES - C59

at U10 - U30 - U48 - U64

SEE NOTE SH# 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS 9/2/59

GENERAL NOTES

Rivets 7/8" ϕ except as noted

Holes 15/16" ϕ except as noted

End Distance 1 3/4 unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by DW

Checked by Davy

Revisions 7/21/59

APPROVED BY 9/8/60

L. P. Carlson

Bridge Design Engineer

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

DATE 9-7-60

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE

NEAR HELENA, ARKANSAS

UNIT NO. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.

CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

Contr. No. 4800-F Sh. 59 of

15

64 @ 5'-4" = 28'-0"

Diaphragm

bent Line

Top View

bent Pit. $23\frac{3}{16} \times \frac{3}{8} \times 14'0"$
2 Req. br10 (B58)

bent Cap Pit. $57 \times \frac{3}{8} \times 32'2$ 1 Req. br1

Symm. about ℄

65 @ 5'-4" = 28'-5 1/4"

32'-11 5/8" c-c

2L⁵ - $3\frac{1}{2} \times 3\frac{1}{2} \times \frac{5}{16} \times 32'2$ - 2 Req. br3

IL - $4 \times 3\frac{1}{2} \times \frac{5}{16} \times 1'10\frac{1}{2}$ - 4 Req. br6

UM. Pit. $25\frac{1}{2} \times \frac{5}{16} \times 32'10\frac{1}{8}$ - 2 Req. br2

SIDE VIEW

2L⁵ - $3\frac{1}{2} \times 3\frac{1}{2} \times \frac{5}{16} \times 32'2"$ 2 Req. br4

IL - $3\frac{1}{2} \times 3\frac{1}{2} \times \frac{5}{16} \times 1'10"$ - 4 Req. R/L - br8

I Pit $23\frac{3}{16} \times \frac{3}{8} \times 4'11\frac{1}{2}"$
4 Req. br11 (C59)

UM. Bent Plt. $18" \times \frac{5}{8} \times 3'1\frac{5}{8}"$ 8 Req. br5

Bottom View

ONE TOP STRUT - A58
at U64

IL $3\frac{1}{2} \times 3\frac{1}{2} \times \frac{5}{16} \times 1'11\frac{7}{16}$
4 Req R/L br7

IPt $20\frac{1}{2} \times \frac{5}{16} \times 3'9$
2 Req. br6

IL-br7 — weld L⁵

IL $3\frac{1}{2} \times 3\frac{1}{2} \times \frac{5}{16} \times 2'5\frac{1}{2}$
2 Req br9

DIAPHRAGM DETAIL

See notes - Sheet 1

APPROVED BY 9/8/60
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
DATE 9-7-60

APPROVED BY: HOWARD, NEEDLES, TAMMEN, & BERGENDOFF CONSULTING ENGINEERS: 8/31/59

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4" unless noted
Shop Paint: RED LEAD (ARK STD.)
Contact Surfaces: NO PAINT
Shop Inspection by:
Fit Connections: RIVETS
Drawn by: DW
Checked by: Davy
Revisions:

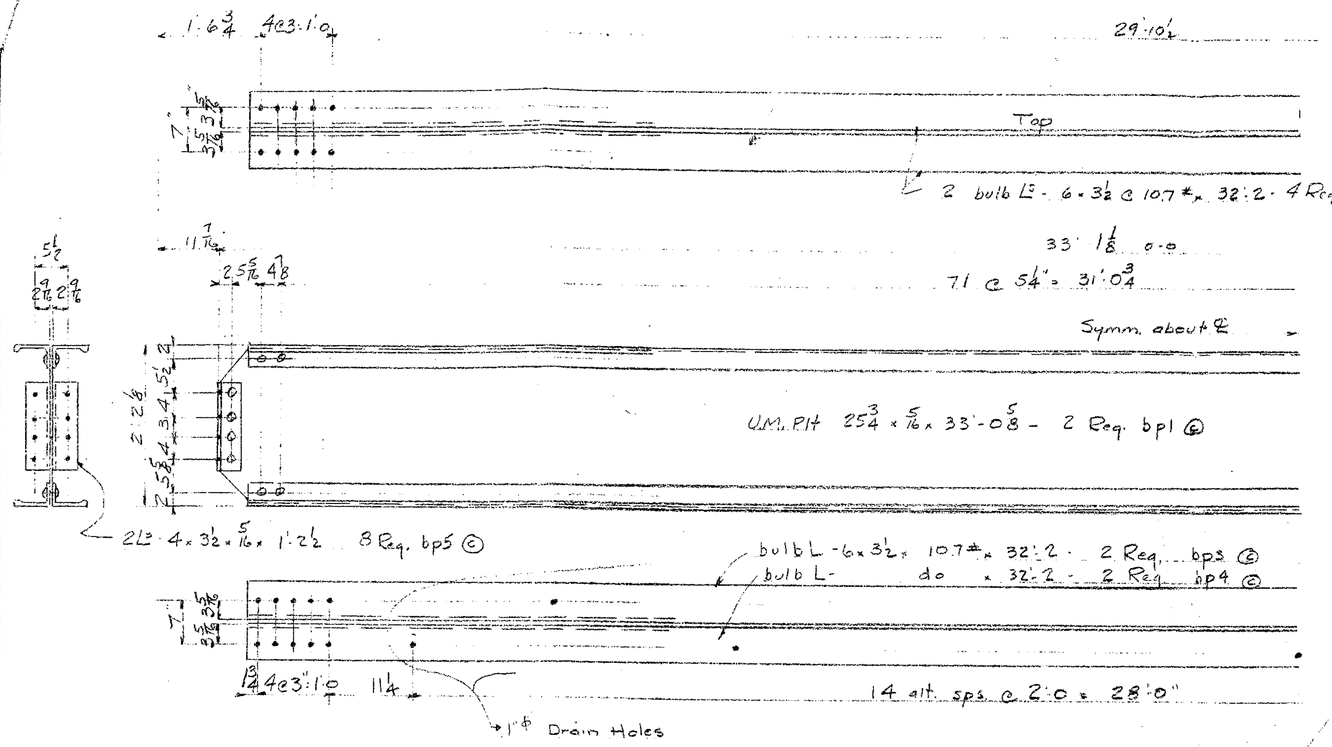
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 5

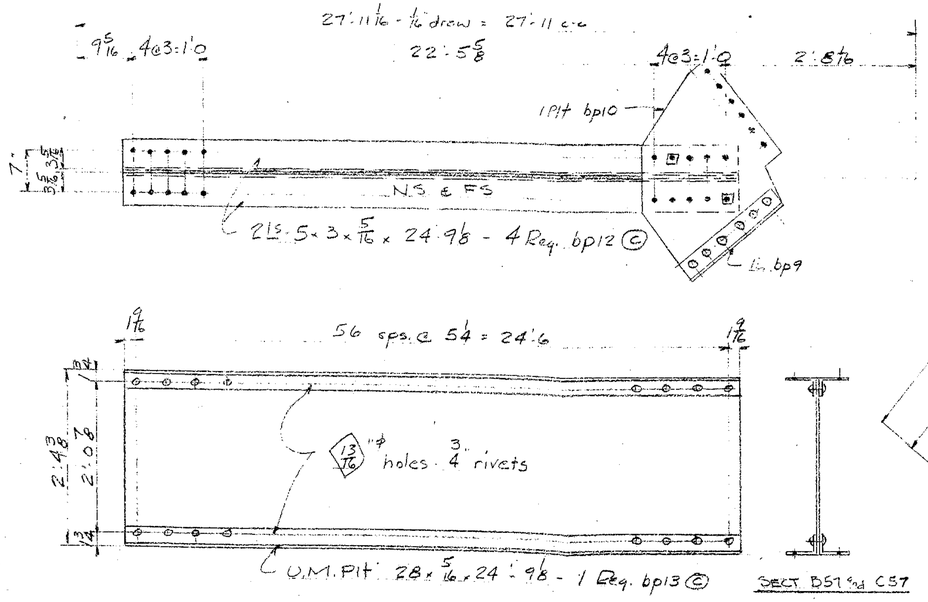
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIVISION OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.

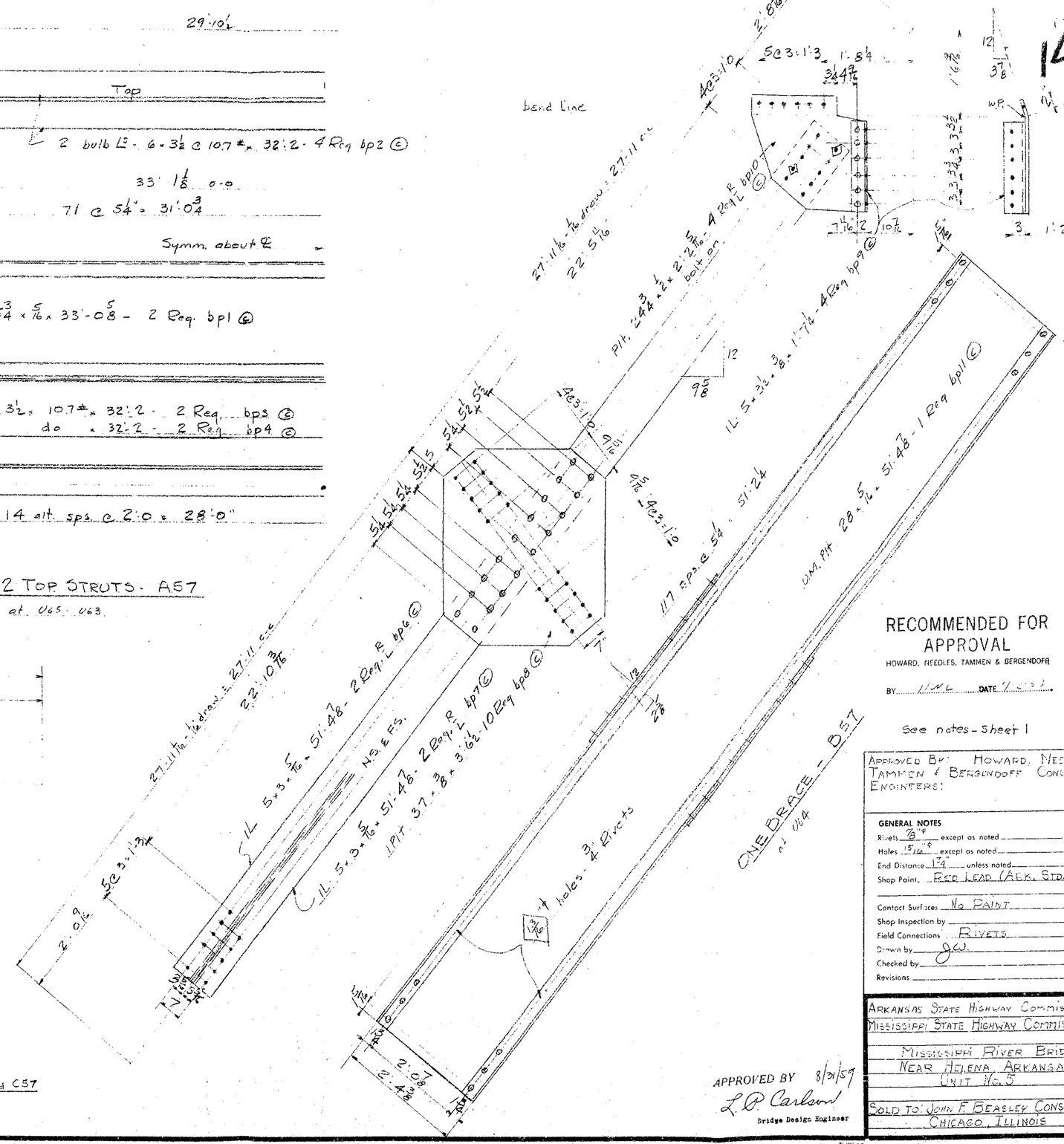
Contr. No. 4800-F Sh. 58 of



2 TOP STRUTS - A57
at U65 - U63



ONE BRACE - C57
at U64



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ____ DATE ____

See notes - Sheet 1

APPROVED BY 8/21/57
L. P. Carlson
Bridge Design Engineer

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ALK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by J.C.J.
Checked by
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 5
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
Contr. No. 4800 Sh. 57 of

13

64 @ 5¼ = 28'-0"

1 Pt. 5" × ⅜ × 4'-2¼" - 5 Req'd R L bn30 Ⓒ

1L bn4

bent Plt 44 × ⅜ × 32'-4" - 1 Req. bn1 Ⓒ
Top

10'-3⅜"

1L 3½ × 3½ × 5/16 × 1'-5 9/16" - 4 Req'd R L bn8 Ⓒ

bent Plt 25 9/16" × 4'-11¾" - 2 Req'd R L bn12 Ⓒ - weld on B56-BA56

Symmetrical about ℄

17'-6"

65 @ 5¼ = 28'-5¼

1L 3½ × 3½ × 5/16 × 32'-4" - 2 Req. bn4 Ⓒ

U.M. Plt 22 × 5/16 × 32'-4" - 1 Req. bn2 Ⓒ

1L 3½ × 3½ × 5/16 × 1'-9¾" - 2 Req'd R L bn9

1L 3½ × 3½ × 5/16 × 32'-4" - 2 Req. bn5 Ⓒ

1L 3½ × 3½ × 5/16 × 9'-1 13/16" - 2 Req'd R L bn11 Ⓒ

U.M. Bent Plt 12 × ⅜ × 1'-5 7/16"
9 Req. bn6 Ⓒ

bent plt 26¼ × ⅜ × 6'-1¾" - 2 Req'd R L Ⓒ - C56 CA56

65 @ 5¼ = 28'-5¼

1L 3½ × 3½ × 5/16 × 32'-4" - bn4
Top

U.M. Plt 25 × 5/16 × 32'-4" - 1 Req. bn3 Ⓒ

1L bn5

SECTION XX (FAR SIDE)

ONE TOP STRUT - A56 (@ 966)

1-18 C 54 7# × 1'-10" - 2 Req. bn15 Ⓒ

1L 3½ × 3½ × 5/16 × 32'-4" - 2 Req. bn6 Ⓒ

1L 3½ × 3½ × 5/16 × 1'-5 7/16" - 4 Req'd R L bn8 Ⓒ

1L 3½ × 3½ × 5/16 × 2'-1" - 2 Req. bn16

1L bn14

1L bn13

1L bn12

1L bn11

1L bn10

1L bn9

1L bn8

1L bn6

1L bn5

1L bn4

1L bn3

1L bn2

1L bn1

Pit bn12

Pit 28 × 5/16 × 2'-4½"
2 Req. bn7 Ⓒ

ONE GUSSET AS SHOWN - B56
ONE GUSSET TO PAIR - BA56

DIAPHRAGM DETAIL

APPROVED BY
L.P. Carlson
Bridge Design Engineer

See Notes - Sheet 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 9/2/59

GENERAL NOTES

Rivets 7/8" ⌀ except as noted
Holes 15/16" ⌀ except as noted
End Distance 1¾" unless noted (1½" on Members)
Shop Paint RED LEAD (ARK STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by JWS
Checked by Jacy
Revisions JWS 7-23-59 (Strut at U62 removed to Template)

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ER: DATE 1-5-60

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

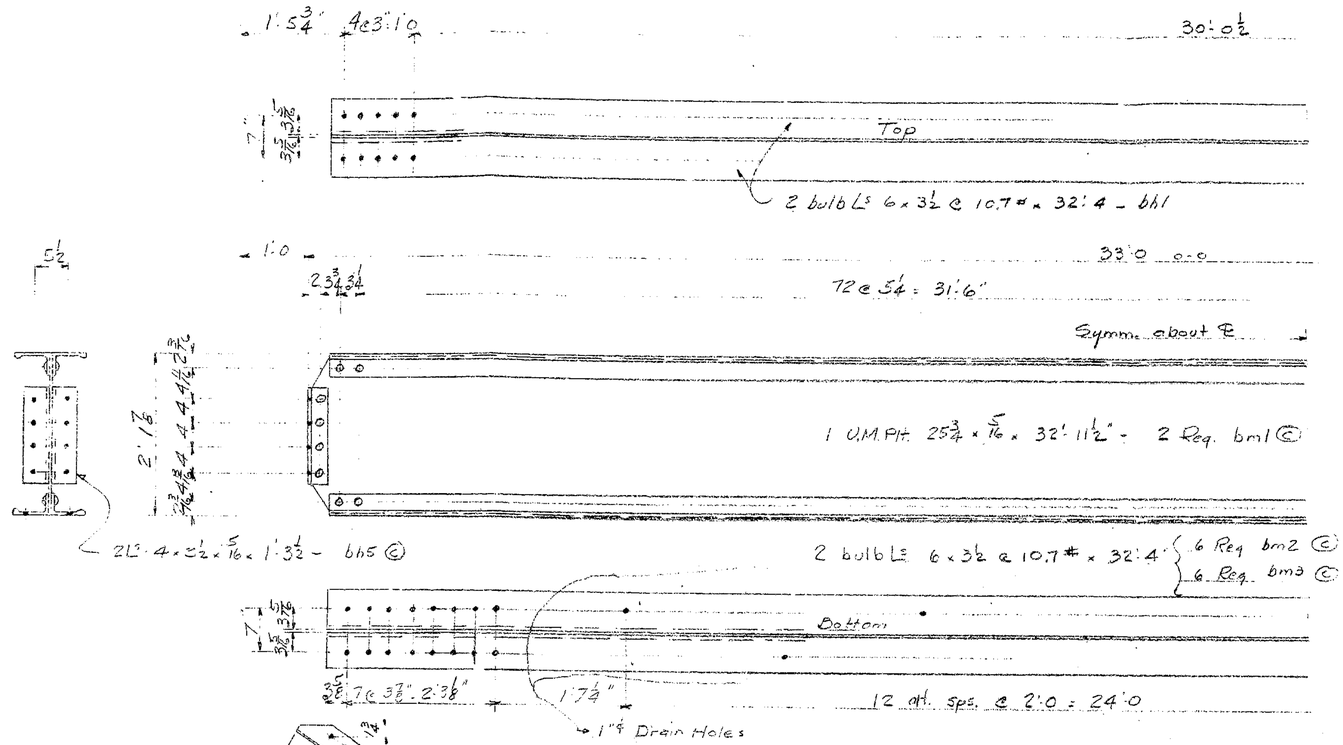
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 5

SOLE TO: JOHN E. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800 - F Sh. 56 of

A



See notes - sheet 1

APPROVED BY HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS.

APPROVED 9/1/59
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 8-27-59

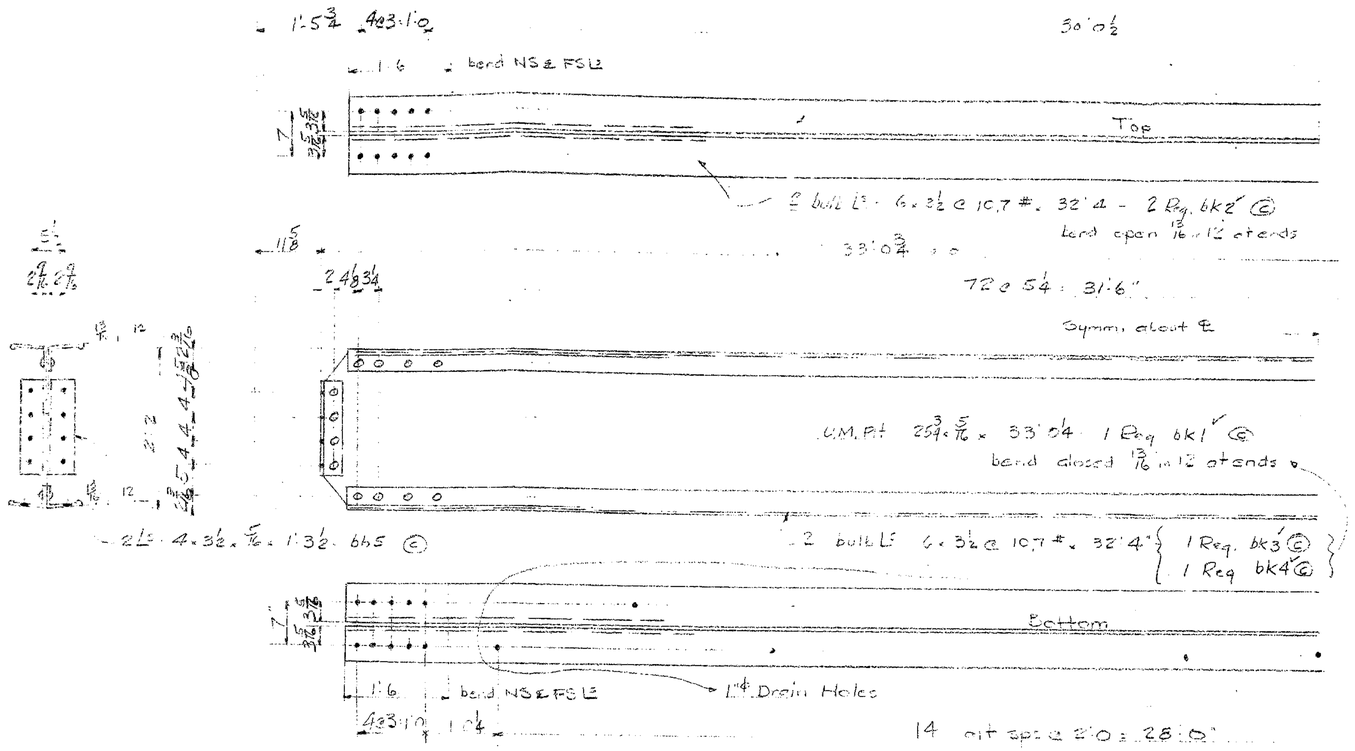
GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" except as noted
End Distance 1¾" unless noted
Shop Point RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by JW
Checked by JAY
Revisions 7/22/59

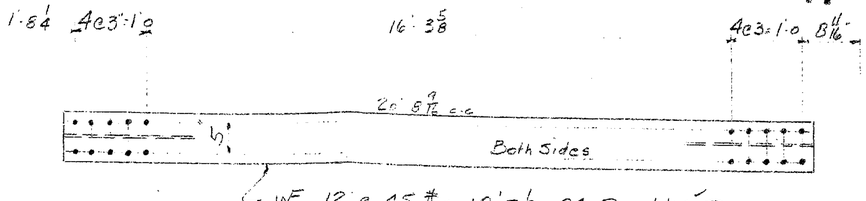
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 5

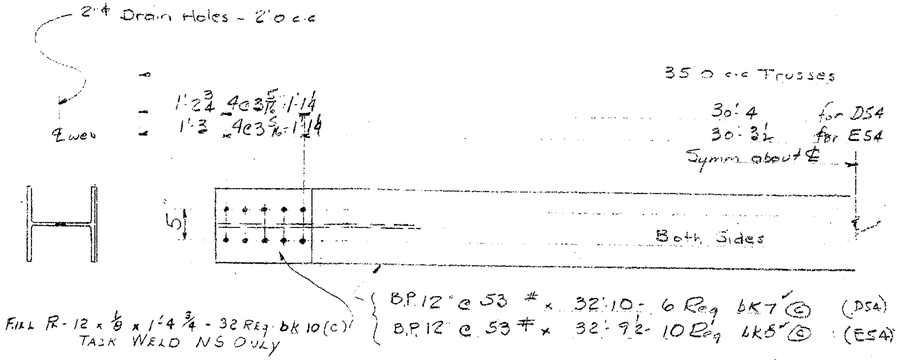
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS



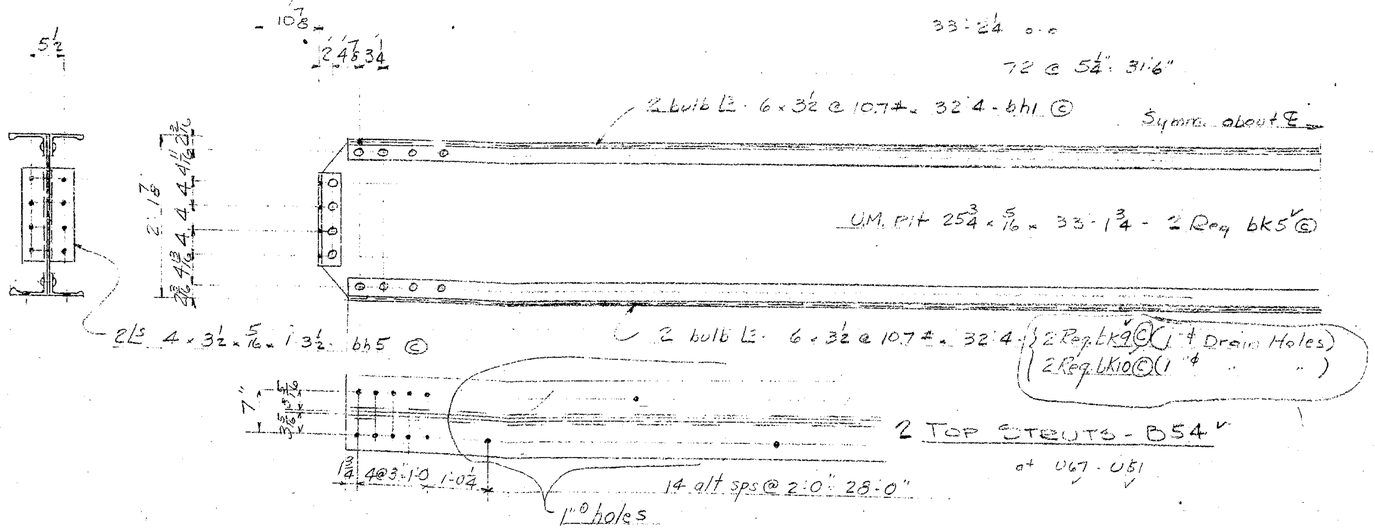
ONE TOP STRUT - A54
at U67



24 BRACES - C54
at U68 - U66 - U6 - U14 - U26 - U34 - U44 - U52



6 BRACES - D54 at U68 - U6 - U52
10 BRACES - E54 at U6 - U14 - U26 - U34 - C



2 TOP STRUTS - B54
at U67 - U51

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
DATE 9-7-60

APPROVED BY 9/6/60
L. P. Carlson
Bridge Design Engineer

See notes - Sheet 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 8/31/59

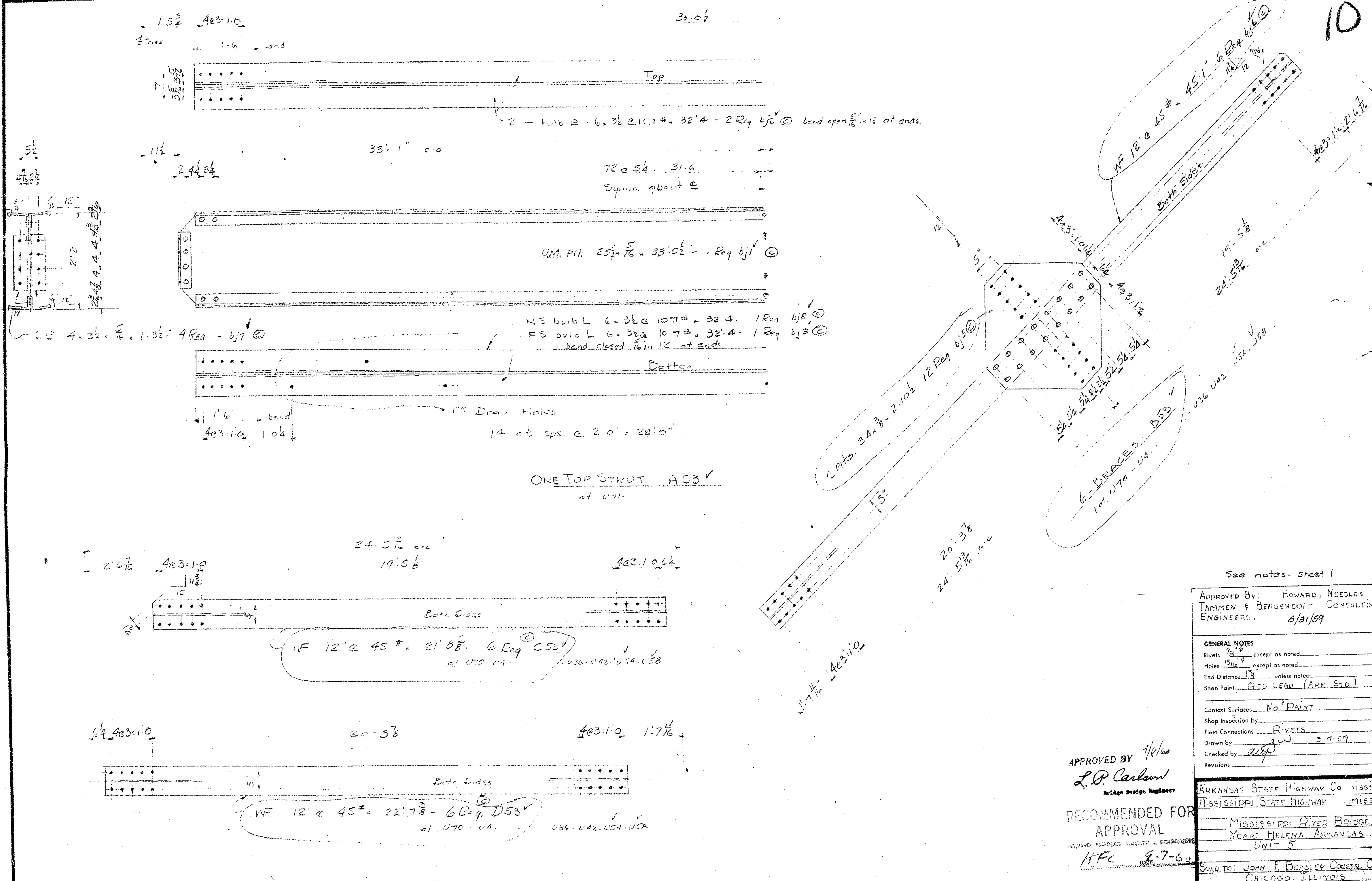
GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by JW
Checked by Dany.
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 5

SOLD TO: JOHN J. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS



APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 8/31/59

GENERAL NOTES

Rivets 7/8" φ except as noted

Holes 15/16" φ except as noted

End Distance 1¾" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by gw 3-7-59

Checked by aep

Revisions

APPROVED BY 9/8/60
L. P. Carlson
Bridge Design Engineer

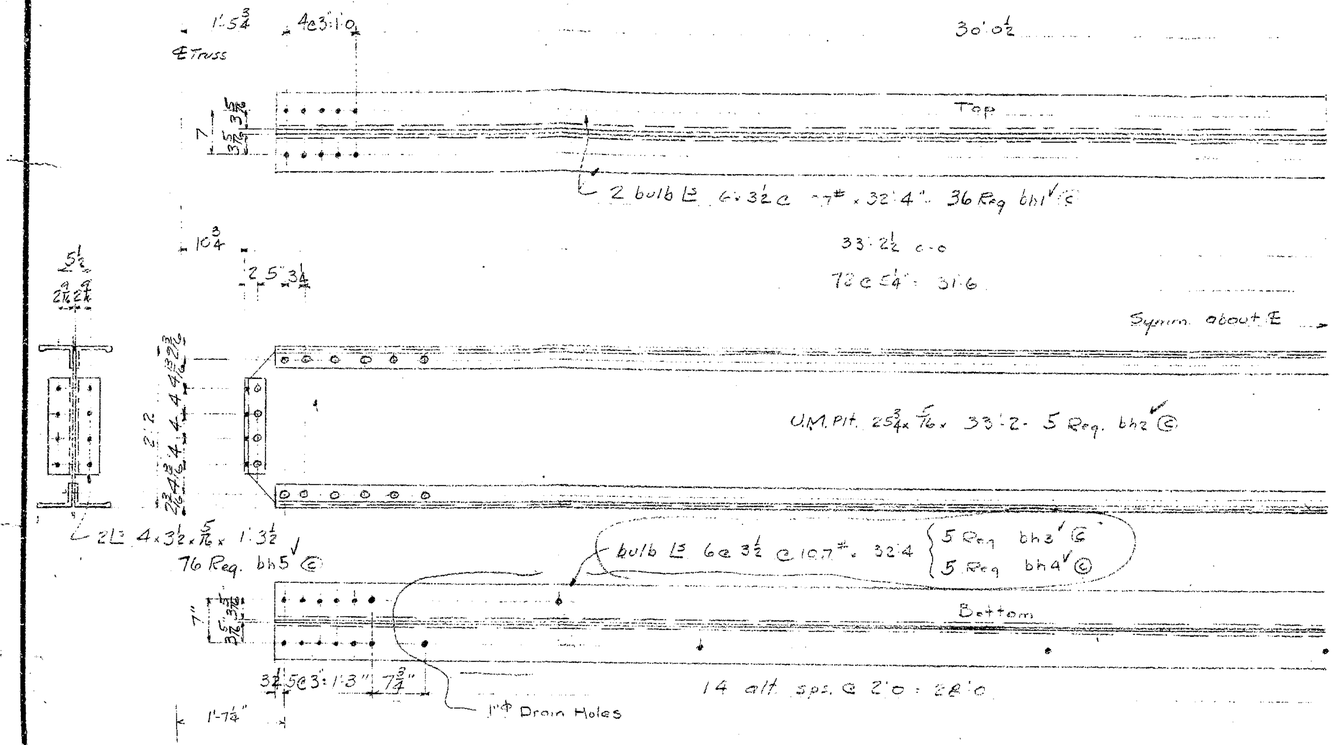
RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
HFC 9-7-60

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

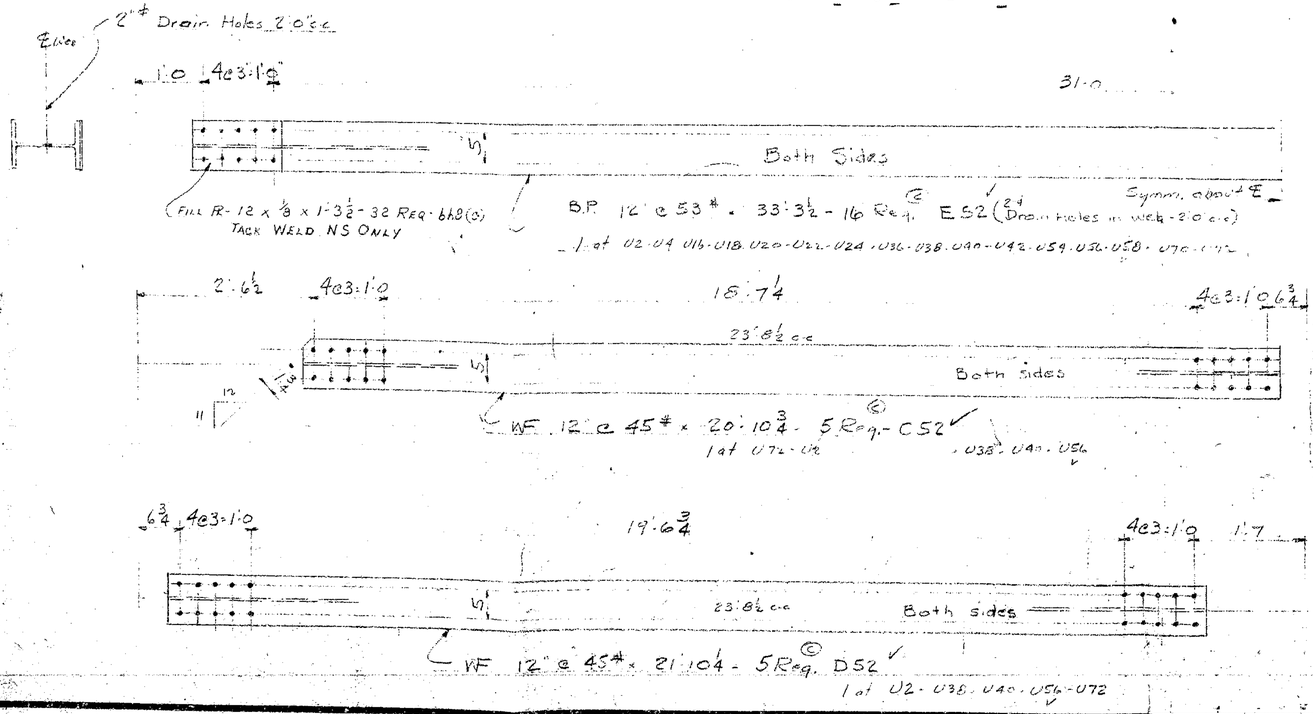
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT 5

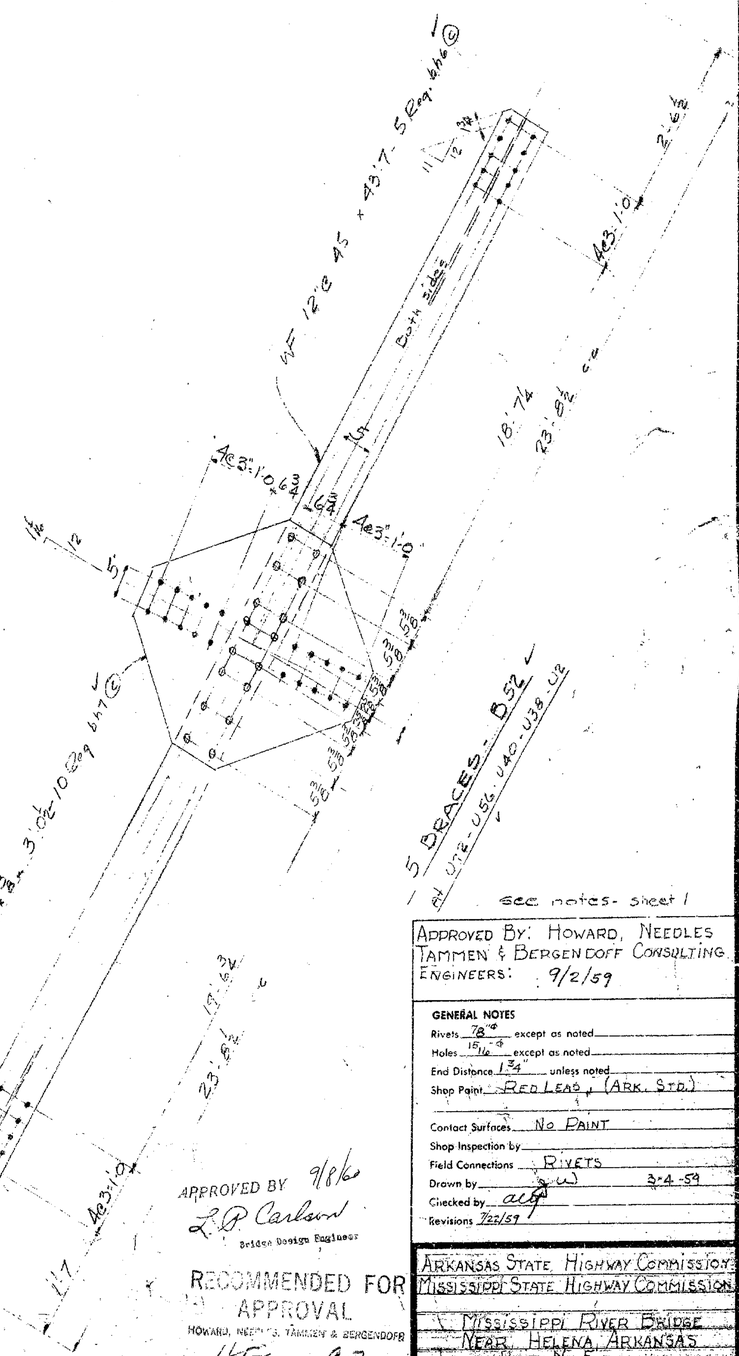
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800-F Sh. 53 of



5 TOP STRUTS - A52
at U72 - U56 - U2 - U70 - U54.





APPROVED BY 9/8/60
L.P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 9-7-60

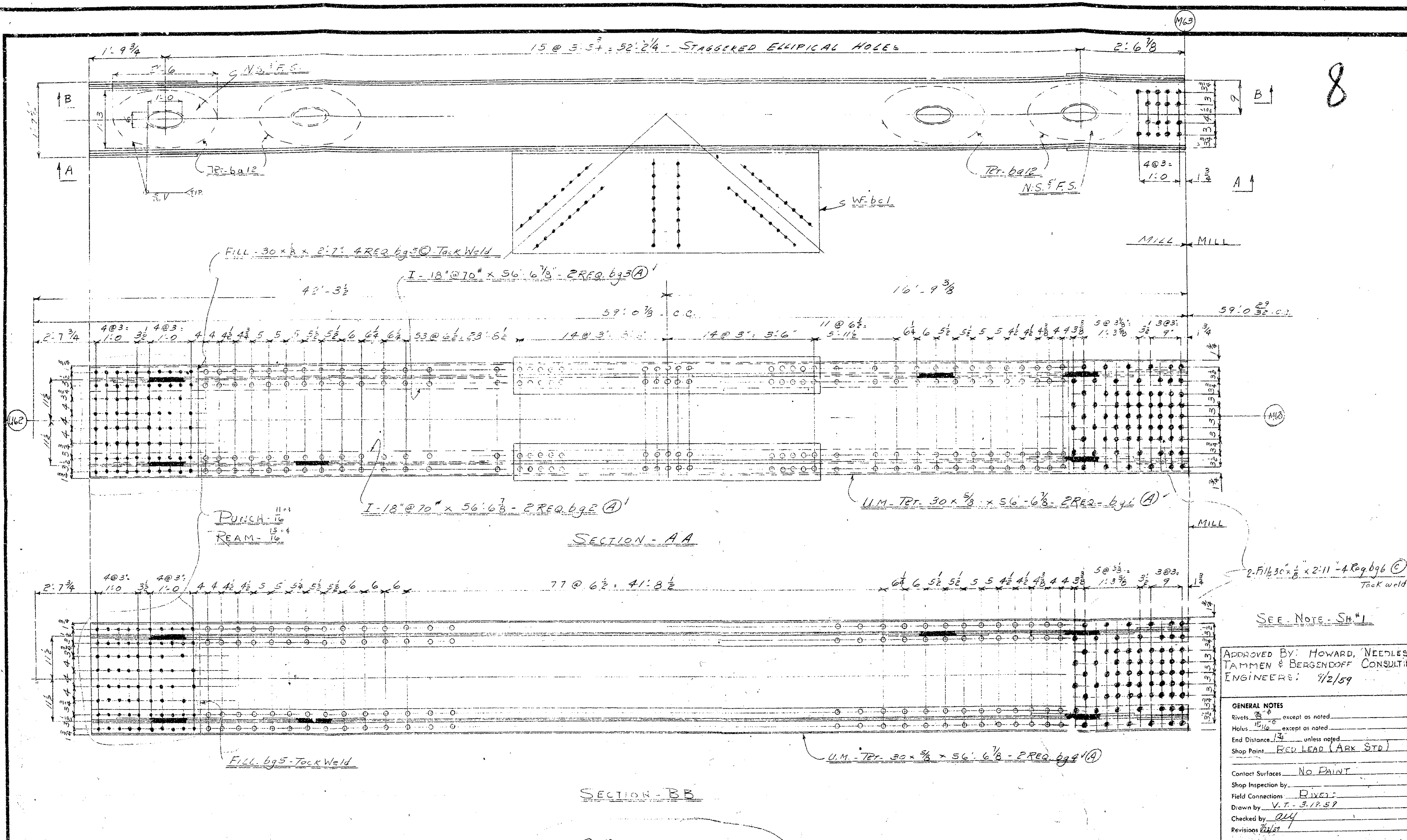
APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 9/2/59

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD, (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by [illegible] 3-4-59
Checked by alf
Revisions 7/22/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 5
SOLD TO JOHN E. REASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4802-F Sh. 52 of



SEE NOTE - SH. #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 9/2/59

GENERAL NOTES

Rivets 7/8" φ except as noted
Holes 15/16" φ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T. - 3.19.59
Checked by aly
Revisions 7/22/59

RECOMMENDED FOR APPROVAL
HOWARD NEEDLES TAMMEN & BERGENDOFF
BY H.C.C. DATE 9-7-60

APPROVED BY 9/8/60
L. P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP: VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800-T Sh. 51 of

A.H.D.

ROLL 746

BRG. 2899

448

M29

48

54'-6 3/8"

59'-0 5/32"

1 3/4

4@3'-1 1/2

11@6'-5 1/2

FILL mh10

I.M. PET. 30 x 5/8 x 57'-1 1/4" - 4 REQ. mh10 (A)

16'-9 3/32

ES-6 1/32

4'-5 1/2

FILL PL- 30 x 3/8 x 3'-3 1/2 - 4 Req - mh10 (C)

TACK WELD

PUNCH 11/16

REAM 15/16

9 15/16

PLT W - 27 @ 14" x 7'-3 1/2 - 8 REQ. mh7 (C)

Punch 11/16 Ream 15/16

4@3'-1 1/2

1 3/4

2'-6

PLT 15 x 5/8 x 2'-6" - 144 REQ. mh7 (A)

1'-0

1/2

1/2

9 11/16

8 @ 6"

11 5/8

11 5/8

2 @ 5 1/2"

PLT mh7

NS FES

NS FES

MILL

MILL

1'-11 3/4

15 @ 3'-0" = 52'-0" STAGGERED ELLIPTICAL HOLES

2'-1 1/2

2'-1 3/32

12 @ 3'-5"

4@5'-1 1/2

6 @ 5 1/2

7 @ 5 1/2 = 41'-0"

6 @ 5 1/2

4@3 1/2"-1'-2

3@5'-1 1/2

3@3"

I-18"@ 70# x 57'-1 1/4" - 2 REQ. mh4 (A)

I-18"@ 70# x 57'-1 1/4" - 2 REQ. mh5 (A)

U.M. PET. 30 x 5/8 x 57'-1 1/4" - 2 REQ. mh6 (A)

FILL PET. 30 x 1/2 x 2'-10 5/8 - 4 REQ. mh6 (C)

PUNCH 11/16

REAM 15/16

FILL PL mh10

TACK WELD

2 DIAGONALS A250

NOTE SHEET #1

APPROVED BY: L. M. TULEN,

TAMMEN & BERGENDOFF

CONSULTING ENGINEERS 11/18/59

GENERAL NOTES

Rivet 7/8 ϕ except as noted

Holes 15/16 except as noted

End Distance 1 3/4 unless noted

Shop Point RED LEAD (ARK. STD)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by V. T.

Checked by FK 9-59

Revisions 11-2-59

APPROVED BY 9/15/60

L. P. Carlson

Bridge Design Engineer

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY [illegible] DATE 9-12-60

BOOK No. 5

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE

NEAR HELENA, ARKANSAS

UNIT No. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.

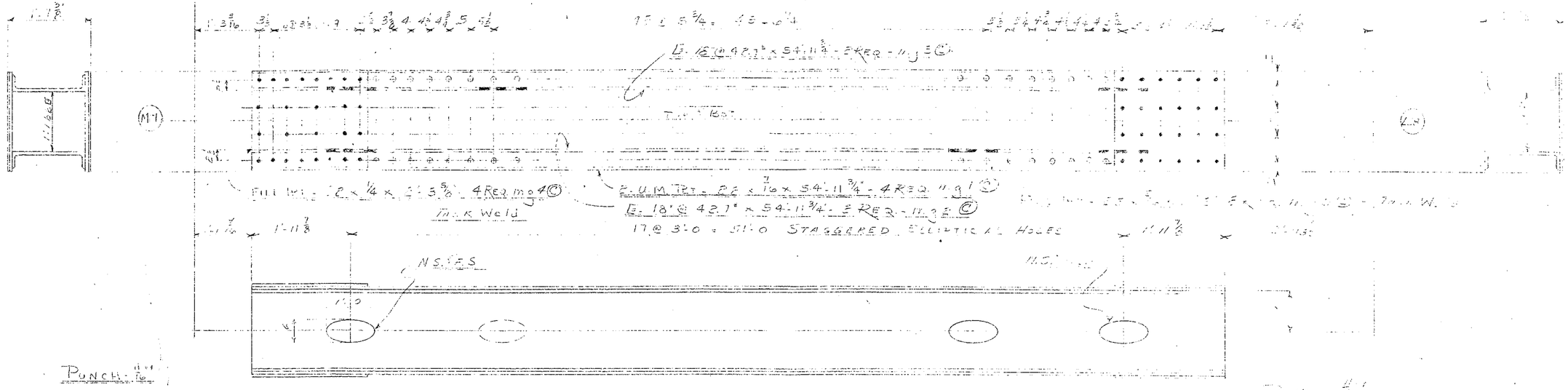
CHICAGO, ILLINOIS

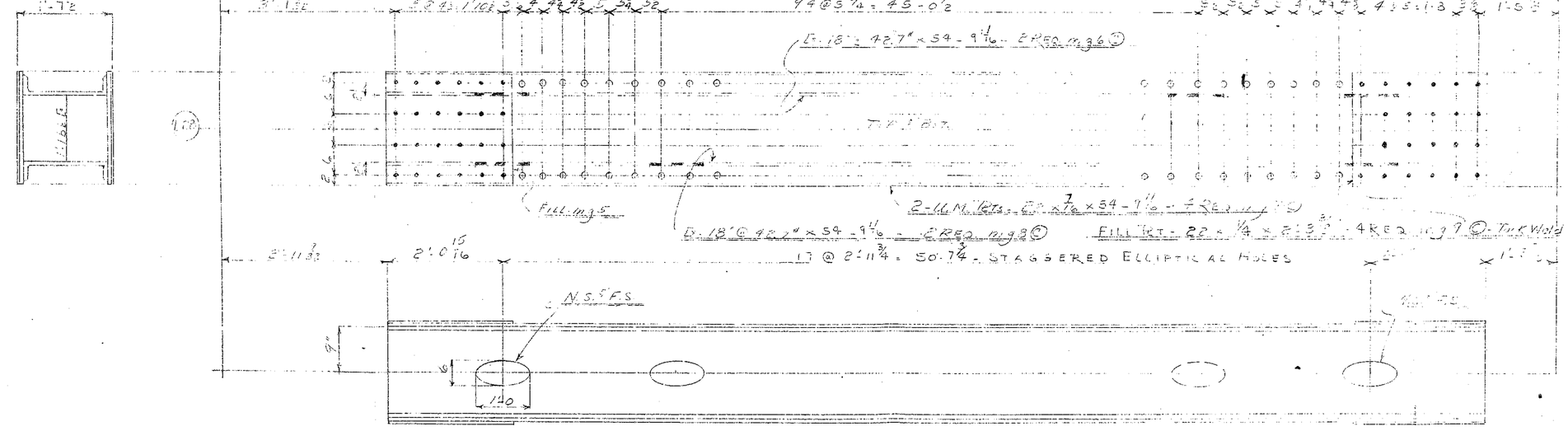
SHOP: VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.

VINCENNES, IND.

Contr. No. 4800-T Sh. 250 of

447





RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 11-16-59

APPROVED FOR HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 1/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections
Drawn by
Checked by
Revisions 11/24/59

APPROVED BY 11/16/59
L. P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

SOLD TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.
Contr. No. 4800
Sh. 249 of
A

446

59'-0 1/8" C.C.

75 Sp. @ 7"-4 3/8"

PUNCH 11/16"
REAM 15/16"

2 PLS 16 x 5/8 x 2'-7 1/2" - 4 REQ. mf15 (A)

L 18"@ 5 1/2" x 55'-10 3/8" - 2 REQ. mf5 (A)

TOP & BOT

2 CUM-PLT - 26 x 3/4 x 57'-3 3/4" - 4 REQ. mf3 (A)

L 10"@ 5'8" x 57'-3 3/4" - 2 REQ. mf4 (A)

2 PLT - 7 3/8" x 5/8" x 6'-5 5/8" - 4 REQ. mf1 (A)

PUNCH 11/16"
REAM 15/16"

18 @ 3'-11" = 59'-10 1/2" STAGGERED ELLIPTICAL HOLES

SPLICE PLT - 15 x 1/16 x 3'-7 1/4"
4 REQ. mf13 (A)

59'-0 5/32" C.C.

74 @ 7'-4 3/32"

2 ANGS 4 x 4 x 1/2 x 1'-7" - 4 REQ. mf11 (A)

L 18"@ 5'-11 5/8" x 56'-2 1/8" - 2 REQ. mf9 (A)

TOP & BOT

2 ANGS 4 x 4 x 1/2 x 1'-10" - 4 REQ. mf10 (A)

U.M. PLTS - 26 x 3/4 x 56'-2 5/16" - 4 REQ. mf12 (A)

17 @ 3'-0" = 51'-0" - STAGGERED ELLIPTICAL HOLES

2 DIAGONALS - A248

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 11-16-59
SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" ø except as noted
Hole 15/16" ø except as noted
End Distance 1 3/4" unless noted.
Shop Point RED LEDGE (Ref. Sta.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections
Drawn by V.T.
Checked by F.K. 9-28-59 E.P. Carlson
Revisions 11-2-59
Bridge Design Engineer

APPROVED BY 11/18/59

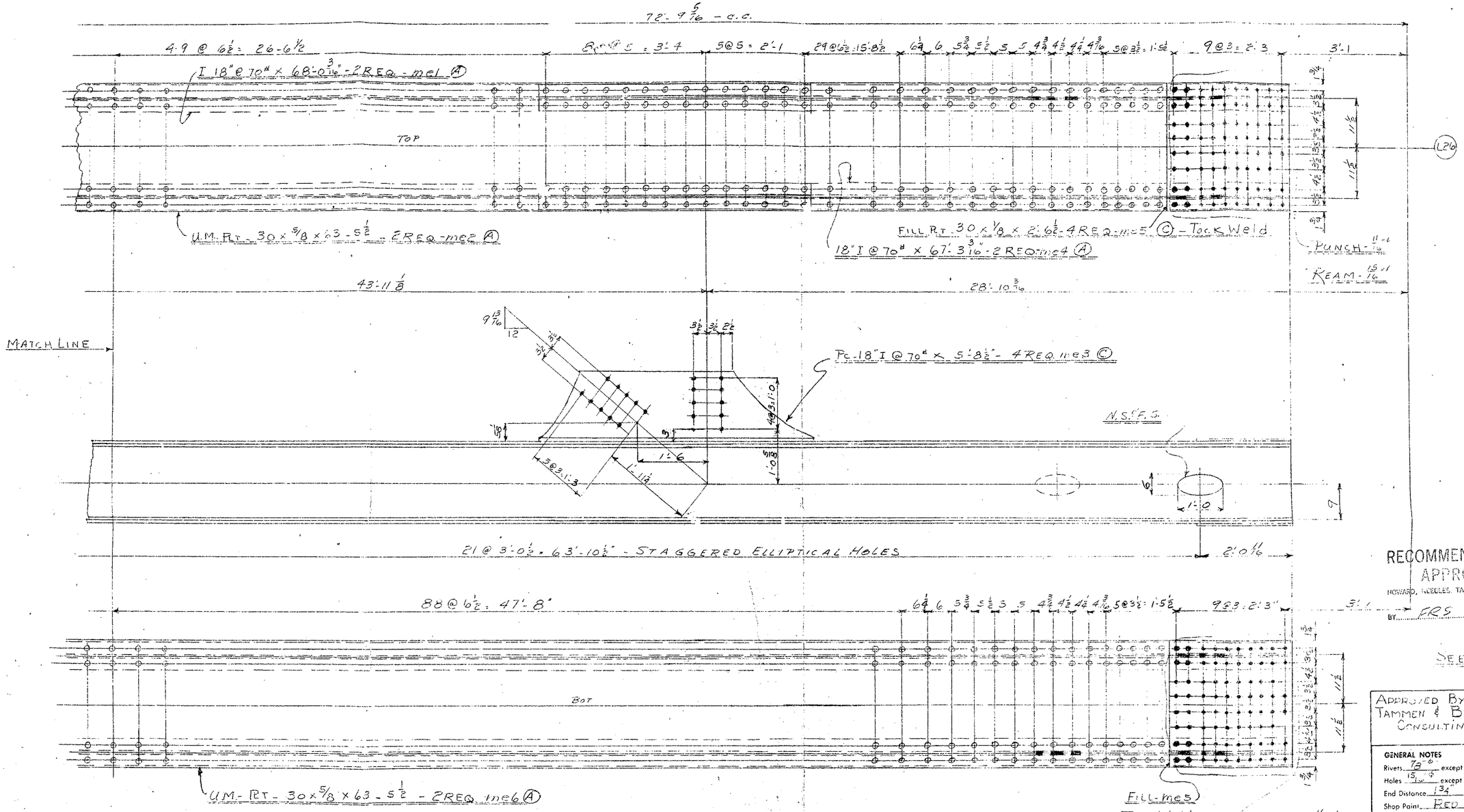
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMM.

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

SOLD TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
Contr. No. 4800 Sh. 248 of (A)

445



WORK WITH SHEET # 246

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 11-2-59

SEE NOTE - SHEET #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections APPROVED BY 11-5-59
Drawn by V.T.
Checked by H.W. Carlson
Revisions Bridge Design Approved

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 247 of (A)

444

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY _____ DATE _____

PUNCH-11-4 REAM-15/16

PUNCH-11/16 REAM-15/16

TPT-3 3/4 x 5/8 x 6'-0 - 4 REQ - md3 (A)

FILL TPT - 4 x 5/8 x 9 1/2' - 2 REQ - md5 (C)

FILL TPT - 14 x 5/8 x 3'-3 1/2 - 4 REQ - md6 (C)

BT L - 4 x 4 x 1/2 x 7'-7 5/8 - 4 REQ RL - md7 (C)

TPT - 64 1/4 x 5/8 x 7'-7 5/8 - 4 REQ - md8 (A)

TPT - 9 3/4 x 3/4 x 10'-3 3/4 - 4 REQ - md10 (A)

TPT-md2 N.S.
RT-md6ES

md1

md2

md4

md5

MATCH LINE

ONE - DIAGONAL - AS SHOWN - A246
ONE - DIAGONAL - TO PAIR - AA246

WORK WITH SHEET 247

7'-2 9/16 C.C.

1'-11 3/8 8@3'-2'-0

L 4 x 3 1/2 x 3/8 x 2'-3 1/2 - 2 REQ md4 (C)

1'-9 7/8 2'-1

ELLIPTICAL HOLES

SECTION AA

7'-2 5/16 C.C.

1'-0 3/8 4@3'-3 3/8 8@3'-2'-0

L 4 x 3 1/2 x 3/8 x 3'-3" - 2 REQ RL - md15 (C)

2'-6 7/8 1'-4

SECTION BB

TPT 12 x 7/16 x 2'-3 3/4 - 6 REQ md2 (C)

L 3 1/2 x 3 1/2 x 3/8 x 6'-4 5/8 - 4 REQ RL - md1 (C)

SEE NOTE SHEET - B 1

APPROVED BY 9/15/59
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY BJJ DATE 9-9-59

BOOK No. 5

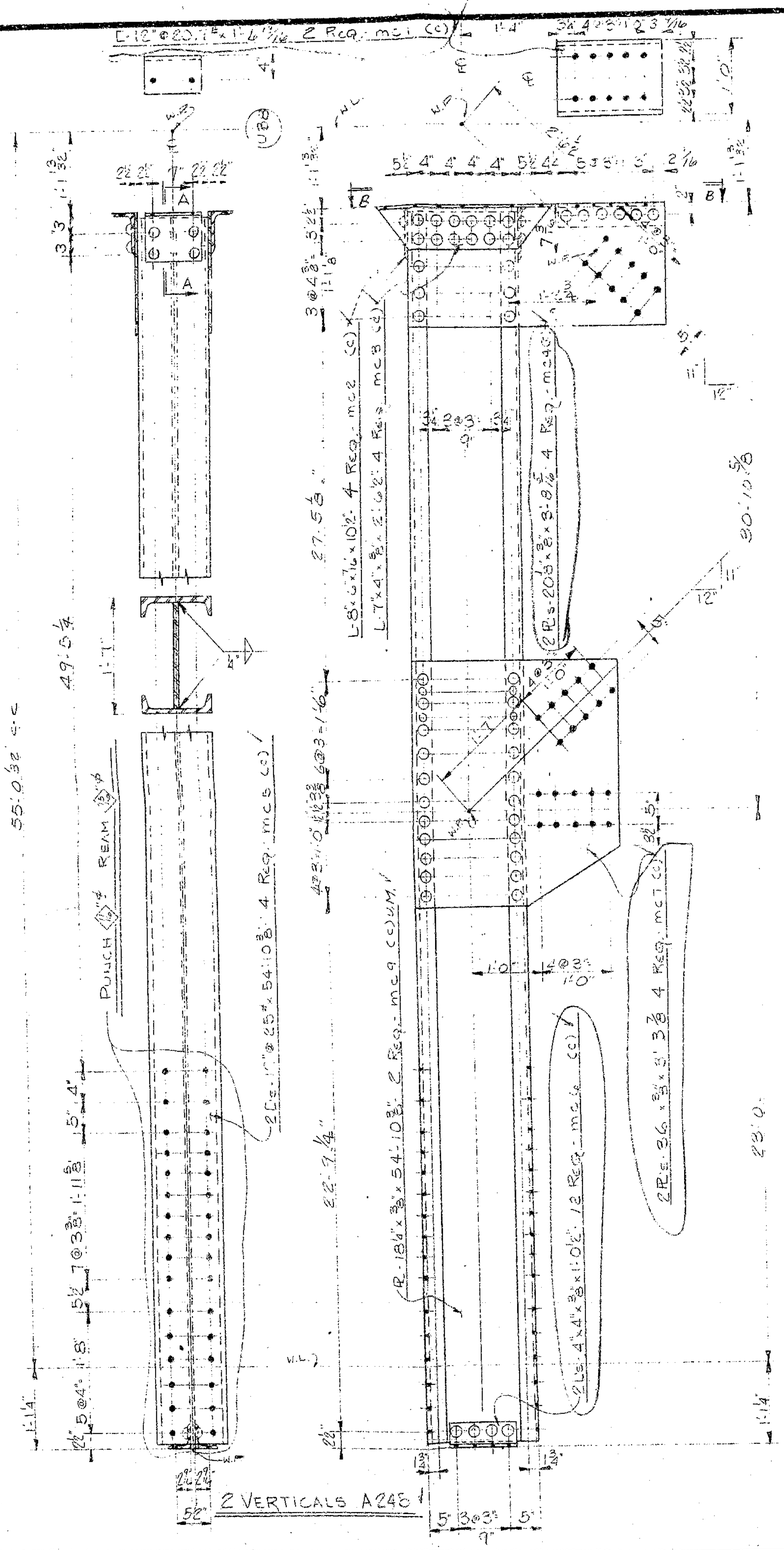
APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
11/5/59

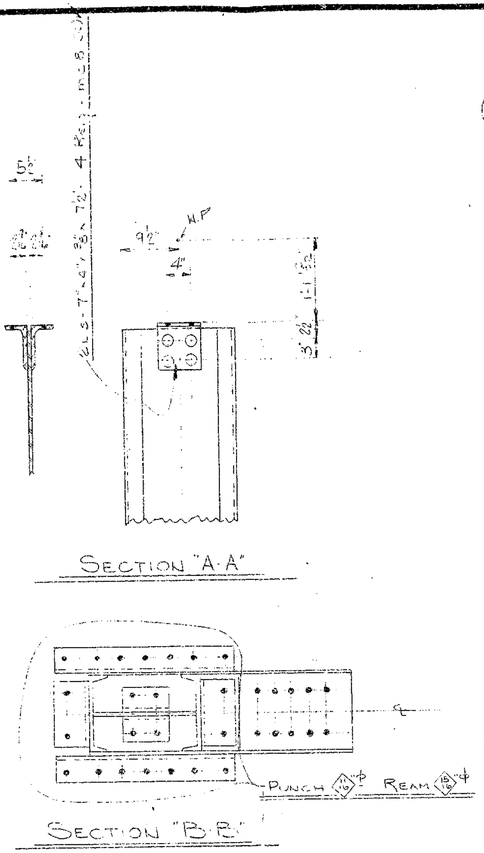
GENERAL NOTES
Rivets 7/8 except as noted
Holes 15/16 except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T.
Checked by FK 9-59
Revisions

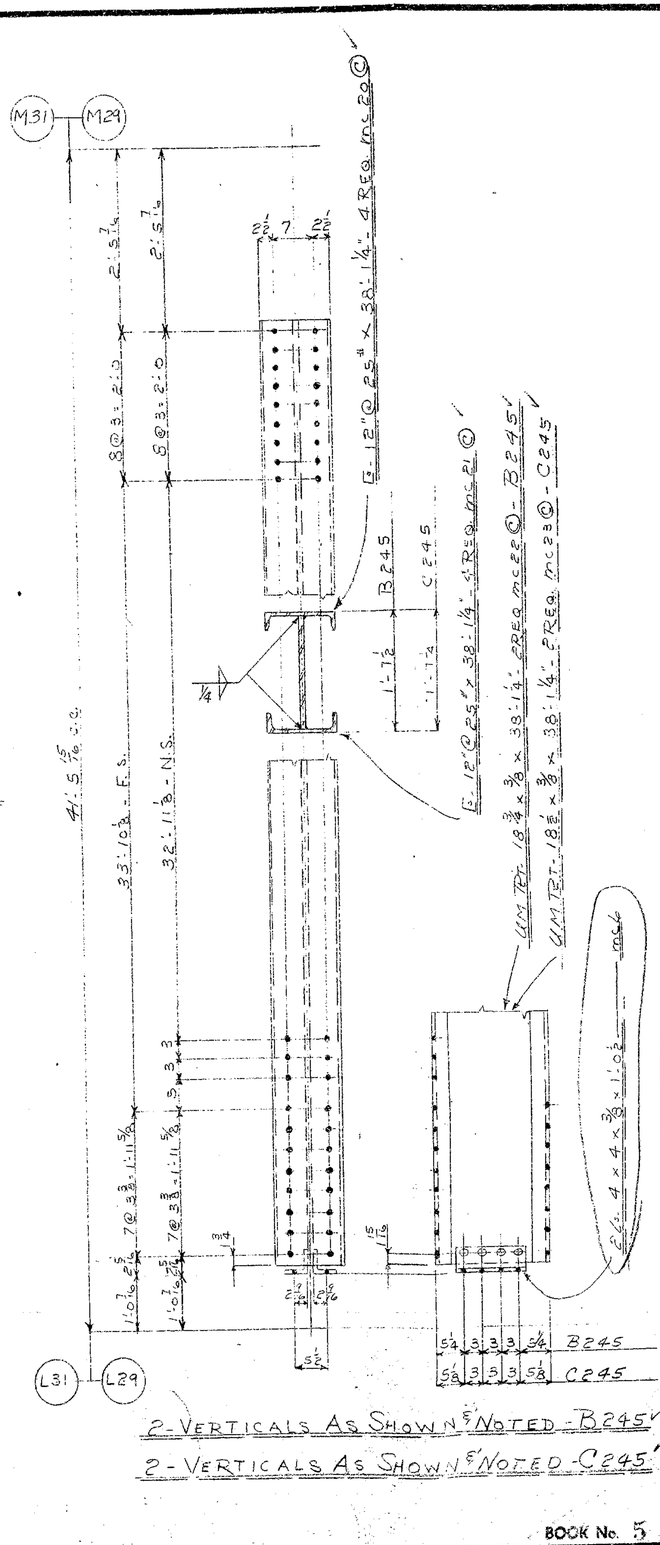
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 3
SOLD TO JOHN F. BEASLEY CONSTR CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.
Contr. No. 4800-T Sh. 246 of

443







APPROVED BY 9/15/60
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ... DATE 9-12-60

See Notes - sheet 1

APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 11/13/59

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by KWC 5-5-59
Checked by TEK 9-59
Revisions 10/30/59

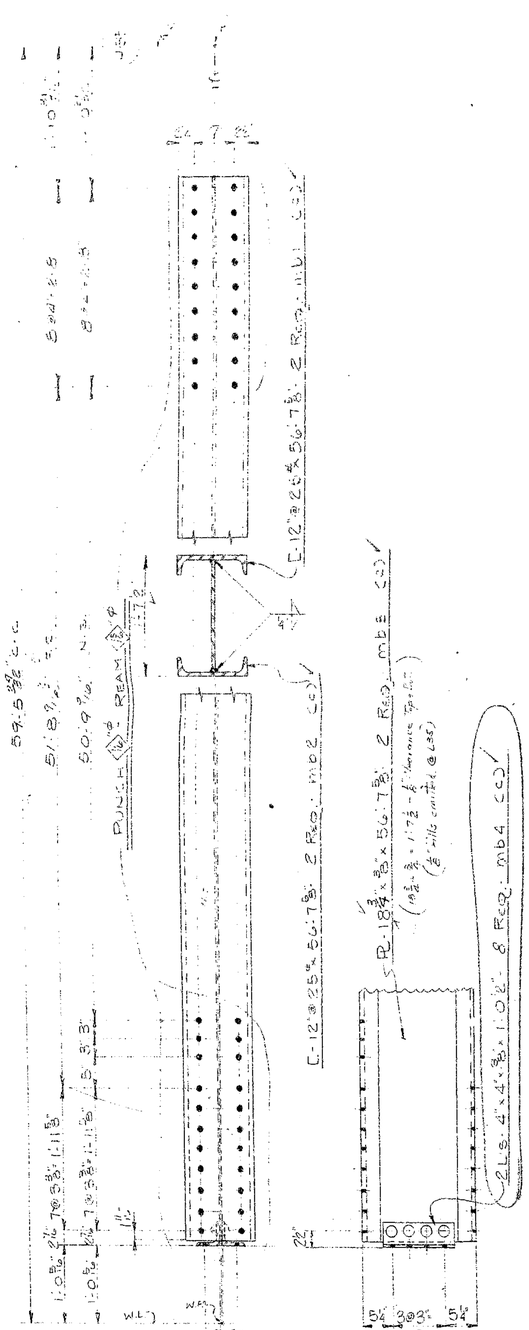
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

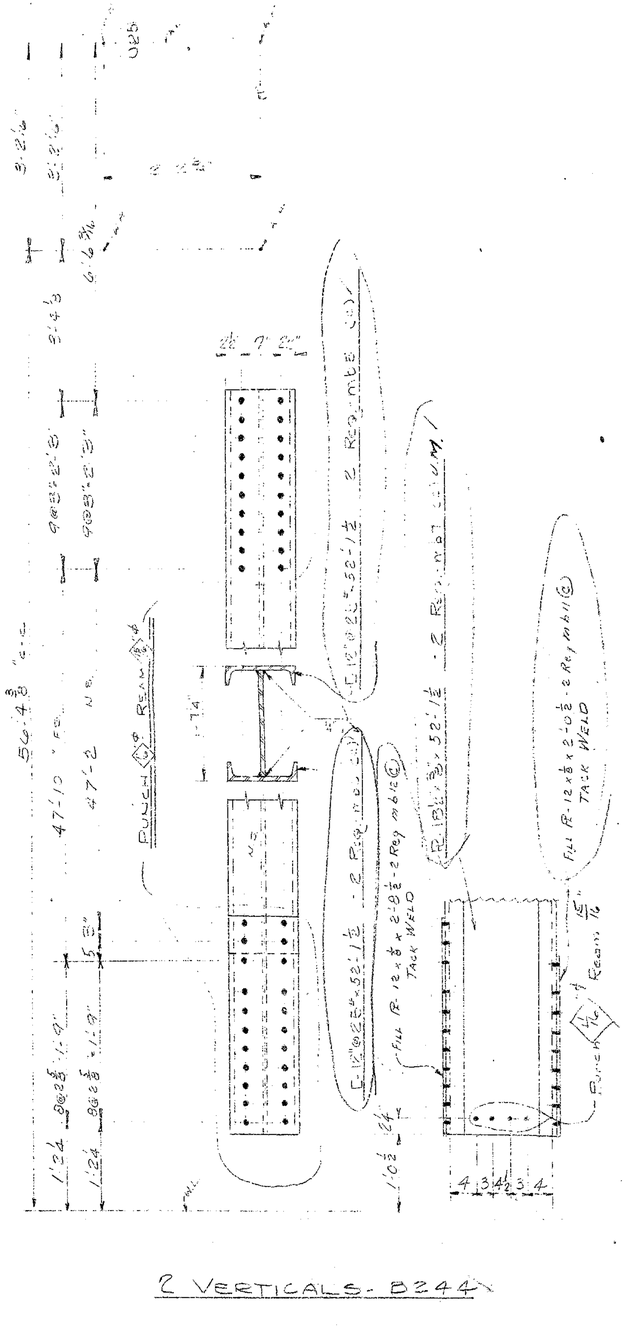
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 3

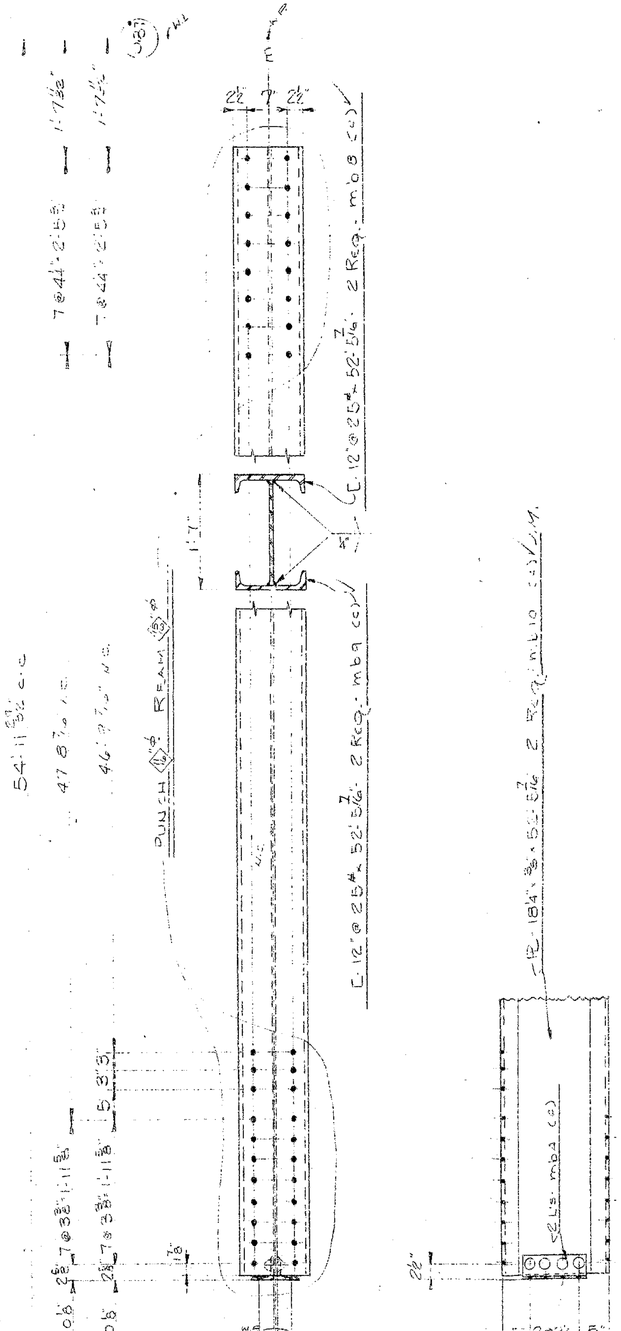
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

BOOK No. 5
SHOP VINCENNES STEEL CORP. VINCENNES, IND.
DIV. OF INDUSTRIAL ENTERPRISES INC.
Contr. No. 4800-T Sh. 245 of

442







RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF

APPROVED BY 11/15/59
L. P. Carlson
Bridge Design Engineer

BY ... DATE 9-9-6

Sx notes-sheet 1

APPROVED BY: HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 11/18/59

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1¼ unless noted.
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by KW 5-4-59
Checked by RK 9-59
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

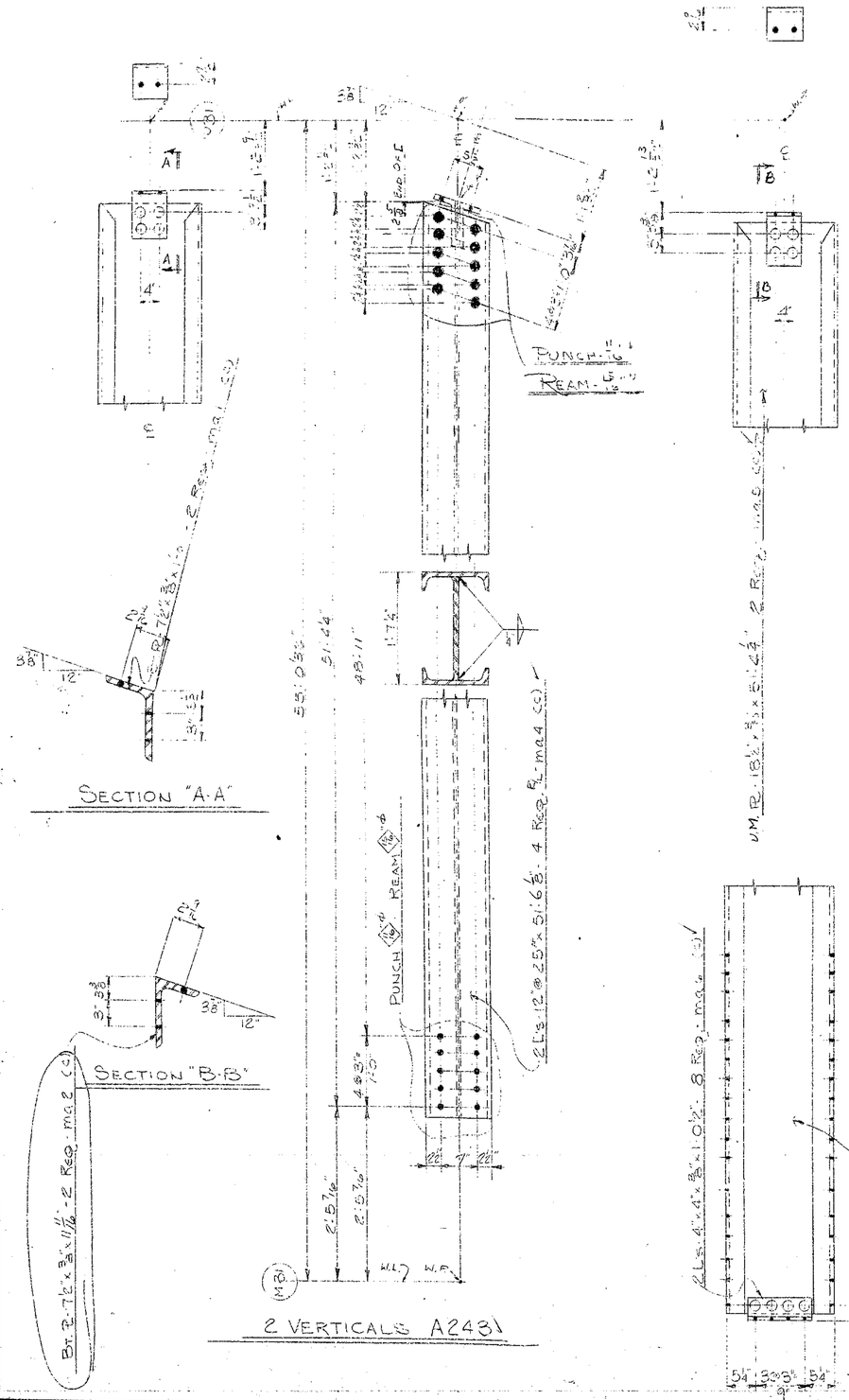
MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT NO. 3

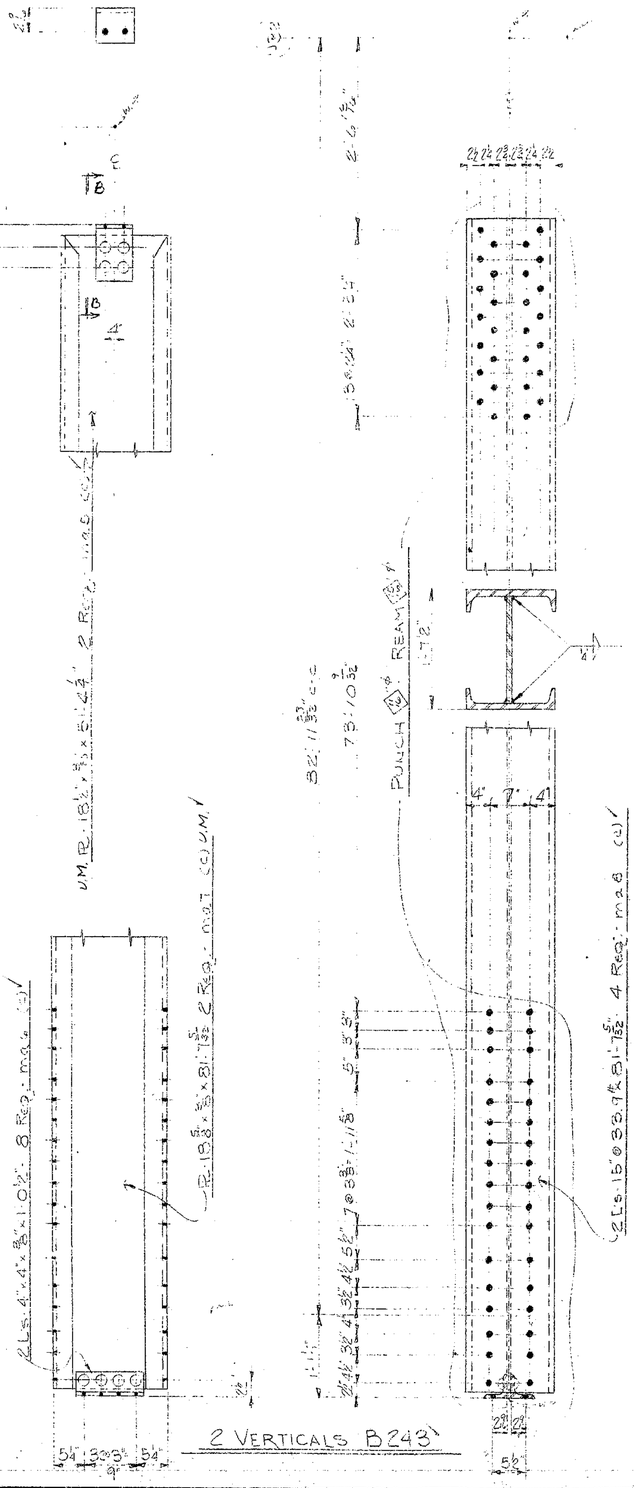
SOLD TO JOHN F. BEASLEY CONSTR. CO
CHICAGO ILLINOIS

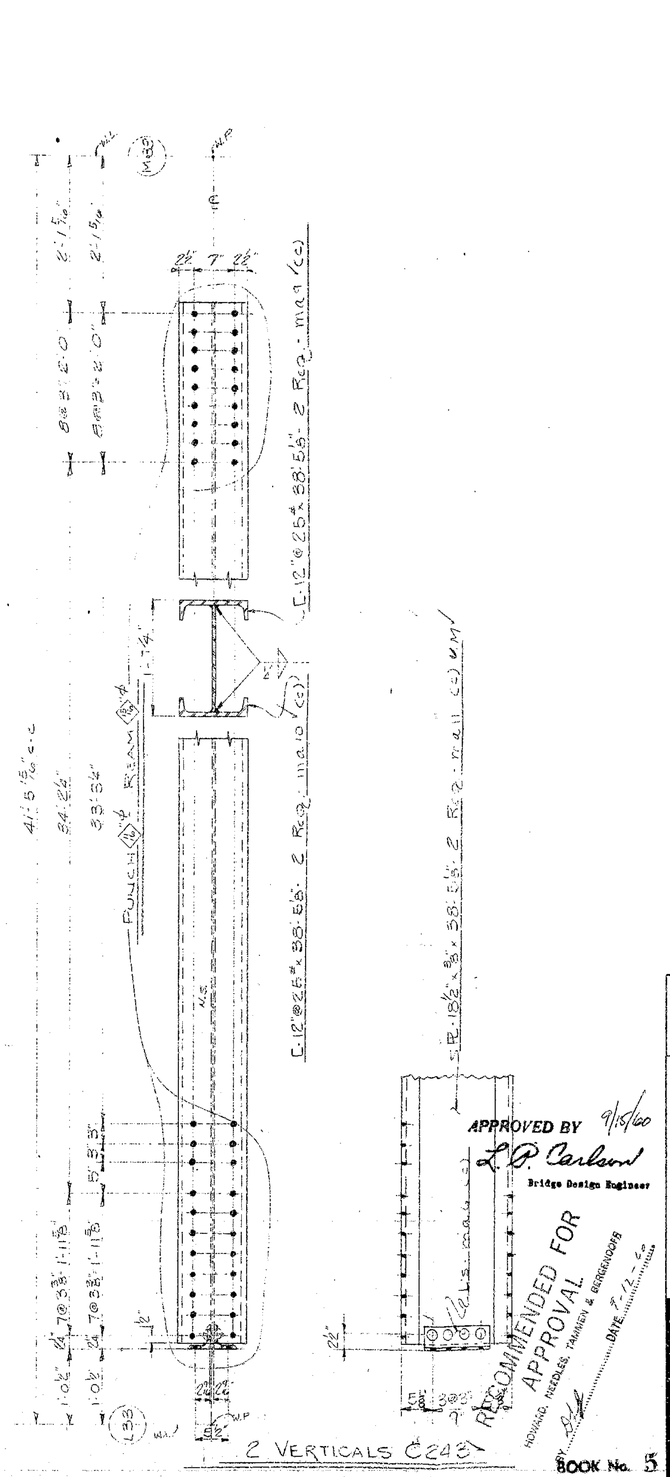
BOOK No. 5

SHOP VINCENNES STEEL CORP. VINCENNES IND. Contr. No. Nitram, Inc. 4800-7 Sh. 244 of

441







See Notes - Sheet 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 11/5/59

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1¾ unless noted.
Shop Paint RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by KW 4-30-54
Checked by FK 9-59
Revisions

APPROVED BY 9/5/60
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY
DATE 5-12-60

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

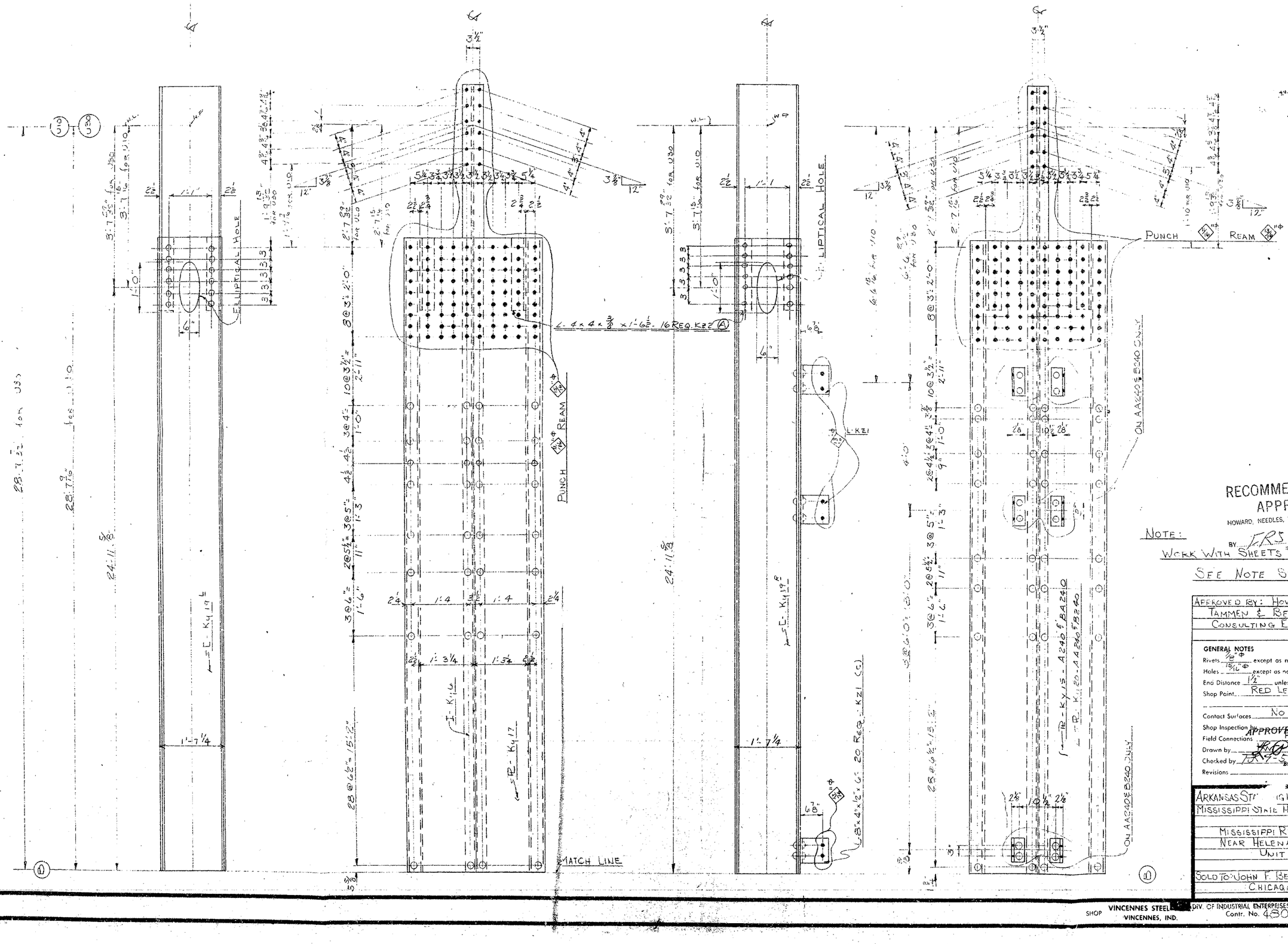
SOLD TO: JOHN F BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

BOOK No. 5

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL BUILDINGS, INC. VINCENNES, IND.

Contr. No. 4800-T Sh. 243 of

440



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF

NOTE:
BY FRS DATE 10-30-59
WORK WITH SHEETS # 240 & 241
SEE NOTE SH. #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES
Rivets 13/16" Φ except as noted
Holes 15/16" Φ except as noted
End Distance 1 1/2" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection APPROVED BY RIVET 11/5/59
Field Connections
Drawn by
Checked by 11-5-59 Bridge Design Engineer
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT # 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 242 of

439

H.S FIELD BOLTS

MATCH LINE

SECTION-AA

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 11-16-59

NOTE:
WORK WITH SHEETS #240 & 242
SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ASA STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections
Drawn by KJK
Checked by PJK
Revisions 10/30/59

APPROVED BY 11/2/59
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3 & 7
SOLD TO JOHN F. BEASLEY CONST. CO
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
FIELD
Contr. No. 4800 Sh. 241 of.

438

MATCH LINE

H.S. FIELD BOLTS

SECTION "A-A"

ELLIPTICAL HOLES

PUNCH ⌀ 1" REAM ⌀ 1 1/16"

OPEN HOLES ON AA240 ONLY

OPEN HOLES ON B240 ONLY

ON AA240 & B240 ONLY

ON AA240 & OPEN HOLES

ELLIPTICAL HOLE 6 x 12

"C" LOWER CHORD

C.L. WP

NOTE

WORK WITH SHEETS 241-242

SEE NOTE SH. #1

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY [illegible] DATE 10-31-59

ONE VERTICAL AS SHOWN & NOTED A240

ONE VERTICAL TO PAIR AS NOTED A240 (UNITS)

ONE VERTICAL AS SHOWN & NOTED B240

ONE VERTICAL TO PAIR AS NOTED BA240 (UNITS)

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ⌀ except as noted

Holes 15/16" except as noted

End Distance 1 3/4" unless noted

Shop Paint RED LEAD (ARK. STD)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections APPROVED BY [illegible] 11/5/59

Drawn by [illegible] 11/28/59

Checked by P. R. Carlson

Revisions

Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT #3-1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND. Contr. No. 45300 Sh. 240 of

L 8"x6"x7/16"x1'-10" 4 Req'd - Kw1 (c) on A239
4 Req'd - Kw35 (c) on D239

PL 18½"x⅜"x3'-4⅜" - 2 Req. Kw38 (c) on D239
PL 13½"x⅜"x3'-0 6/8" - 2 Req. Kw2 (c) (c) on A239
PL 15½"x⅜"x1'-7½" - 2 Req. Kw3 (c) (c) on A239
PL 15½"x⅜"x1'-7¼" - 2 Req. Kw33 (c) on D239
on A239
on D239

B+L 7"x4"x⅜"x2'-6¼" 2 Req. Kw6 (c) on A239
2 Req. Kw36 on D239

PL 16¼"x⅜"x1'-7½" - 2 Req kw40 (c) - A239
x1'-7¼" - 2 Req kw41 (c) - D239

PL 15½"x⅜"x2'-6¼" 2 Req. Kw7 (c) on A239
2 Req. Kw37 (c) on D239
PL 11⅜"x⅜"x2'-6¼" 2 Req. Kw8 (c) on A239
2 Req. Kw38 (c) on D239

on A239
on D239

L 7"x4"x⅝"x7½" 4 Req. Kw4 (c)
L 7"x4"x⅝"x7½" 4 Req. Kw5 (c)

SECTION "A-A"

on A239
on D239
PUNCH ⅞" REAM 1"
2 Cls. 12" @ 25" = 8'-0" c/c 4 Req'd Bolts 1¼" Kw38 (c) on A239
4 Req'd Bolts 1¼" Kw8 (c) on D239
2 Cls. 12" @ 25" = 8'-0" c/c 4 Req'd Bolts 1¼" Kw38 (c) on A239
4 Req'd Bolts 1¼" Kw8 (c) on D239

2 VERTICALS AS SHOWN & NOTED. A239
2 VERTICALS AS SHOWN & NOTED - D239

PUNCH ⅞" REAM 1"
2 Cls. 15" @ 28'-9" = 81'-6" - 6 Req. Kw9 (c) (c)

PL 18⅜"x⅜"x2'-1 1/8" - 4 Req. Kw11 (c) (c) M.

PUNCH 1⅛" - REAM 1⅜" TO M.T.

SECTION "B-B"

2 Cls. 4"x4"x⅜"x1'-0½" 8 Req. Kw10 (c)

2 VERTICALS B239
2 VERTICALS C239

APPROVED BY 9/15/60
L.P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY
DATE 9-12-60

See Notes, sheet 1

APPROVED BY: HOWARD, NEEDLES
TAMMEN & BERGENDOFF
CONSULTING ENGINEERS 11/5/59

GENERAL NOTES
Rivets ⅞ except as noted
Holes 15/16 except as noted
End Distance 1¾" unless noted
Shop Paint. Red Lead (Ark. Std.)
Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivets
Drawn by KW 4-28-59
Checked by FK 9-59
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 3
SOLD TO: JOHN F. BEASLEY, CONSTR. CO.
CHICAGO, ILLINOIS

BOOK No. 5

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
Contr. No. 4500 Sh. 239 of

436

PUNCH - 11/16"
REAM - 13/16"

SECTION "A-A"

SECTION "B-B"

SECTION "E-E"

SECT. F-F

SECTION "C-C"

ONE VERTICAL AS SHOWN A238'

ONE VERTICAL TO PAIR AA238'

ONE VERTICAL AS SHOWN & NOTED C238'

ONE VERTICAL TO PAIR & NOTED CA238'

2 VERTICALS B238

4 - BRACKETS AS SHOWN - D238

2 - BRACKETS TO PAIR - DA238

See Note on Sheet 1

DESIGNED BY HOWARD, NEEDLES, TAMMEN & BERGENDOFF - CONSULTING ENGINEERS

APPROVED BY 9/15/60
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ... DATE ...

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by RIVET
Field Connections
Drawn by KWC - 4-27-59
Checked by FFK 9-59
Revisions 10/20/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

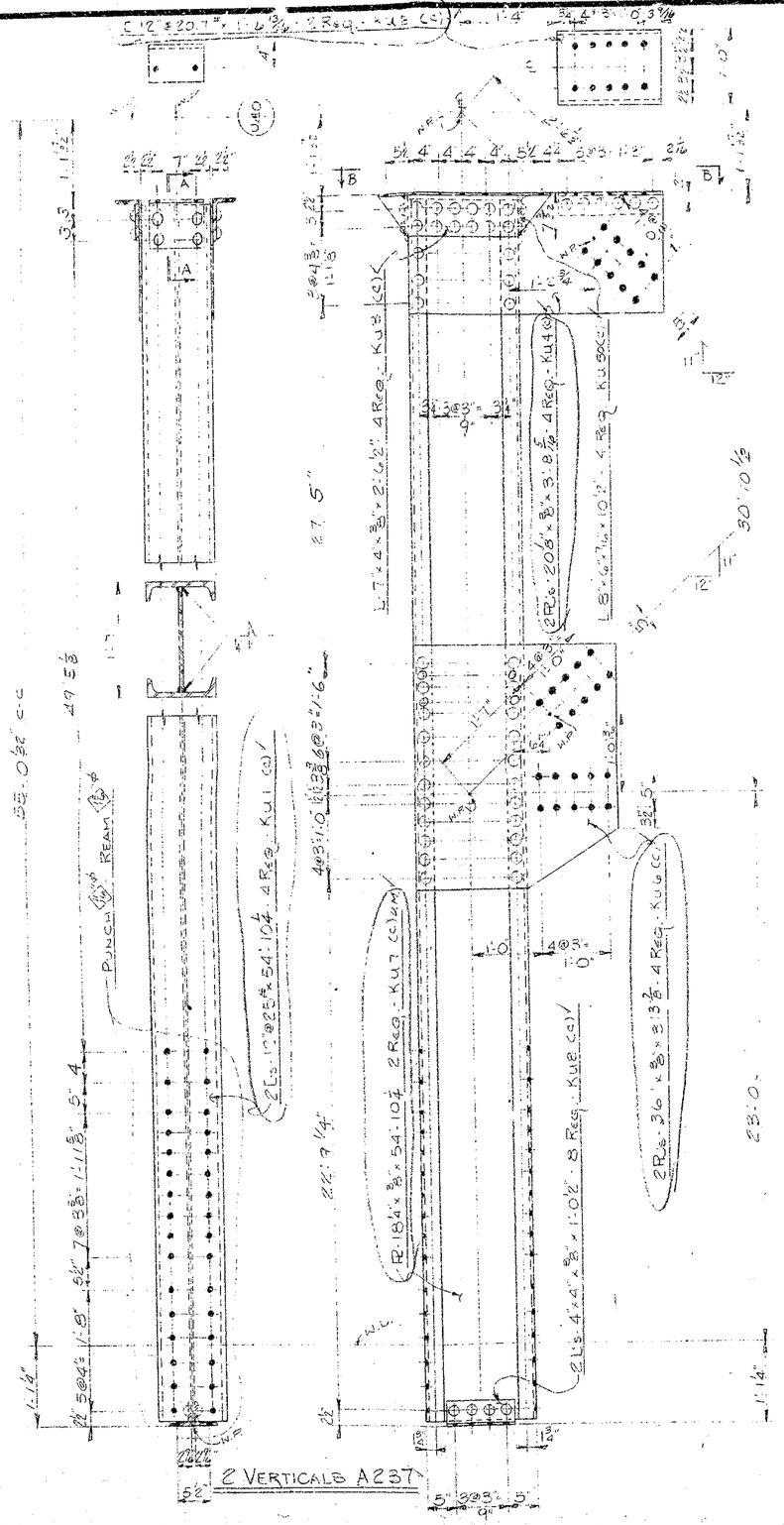
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 5

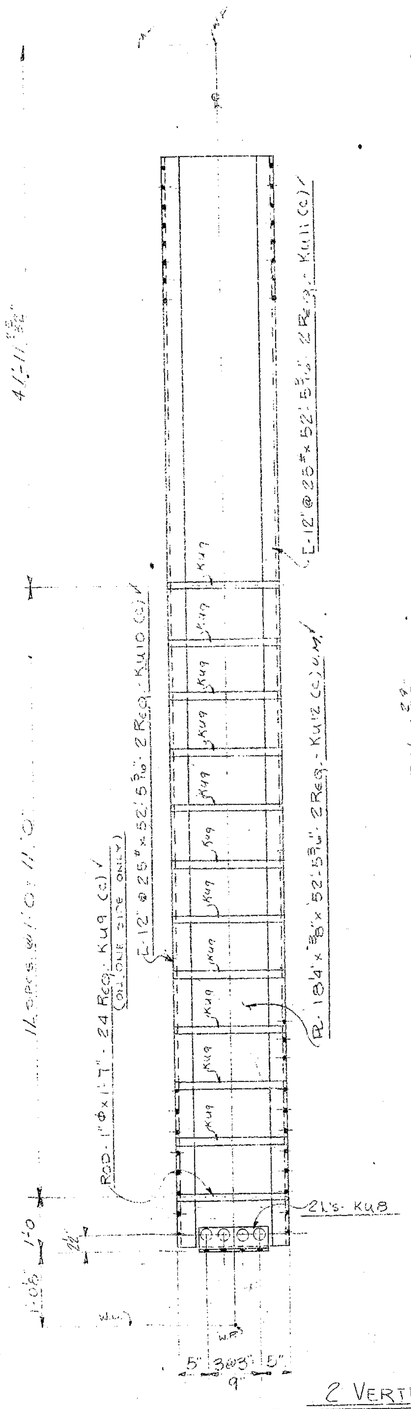
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

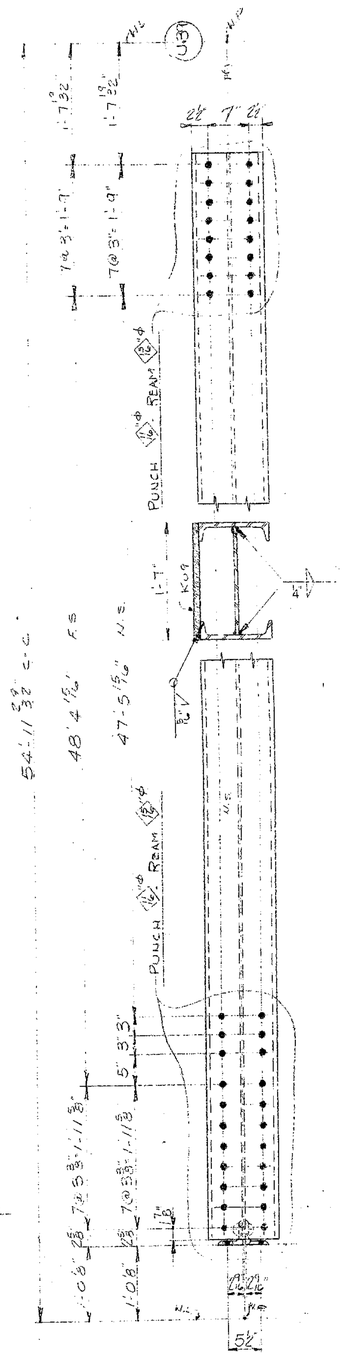
BOOK No. 5

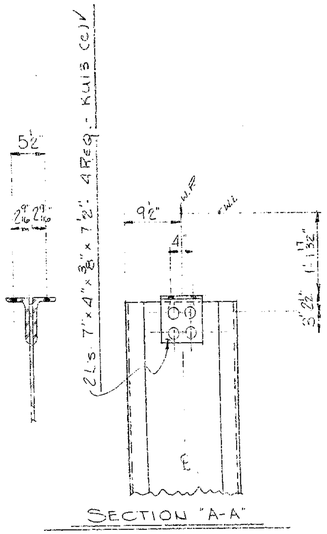
SHOP VINCENNES STEEL ... VINCENNES, IND.
DIV. OF INDUSTRIAL ENTERPRISES, INC.
Contr. No. 48007 Sh. 238 of

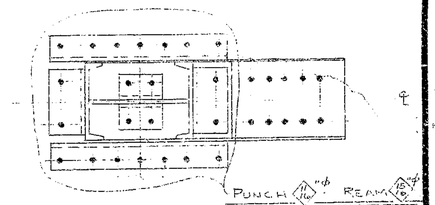
435











APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF - CONSULTING ENGINEERS 11/18/59

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by KWC 4-23-59
Checked by FFK 9-59
Revisions 10/29/59

APPROVED BY 9/15/60
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY DATE 9-12-60
See Notes - sheet 1

BOOK No. 5

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

SOLD TO: JOHN F. BEASLEY CONSTR CO
CHICAGO ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800-T Sh. 237 of

435
434

SECTION "A-A"

SECTION "B-B"

SECTION "C-C"

2 VERTICALS B236

ONE VERTICAL AS SHOWN & NOTED A236
ONE VERTICAL TO PAIR & NOTED AA236
ONE VERTICAL AS SHOWN & NOTED C236
ONE VERTICAL TO PAIR & NOTED CA236

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ... DATE 9-12-60
See Notes, Sheet 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF - CONSULTING ENGINEERS 11/5/59

APPROVED BY 9/15/60
L P Carlson
Bridge Design

GENERAL NOTES
Rivets 7/8 except as noted
Holes 15/16 except as noted
End Distance 1 1/4 unless noted
Shop Point RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by KW 4-22-59
Checked by EJK 9-59
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT NO. 3

SOLD TO: JOHN F. BEASLEY CONSTR CO
CHICAGO, ILLINOIS

BOOK No. 5

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES INC. VINCENNES, IND.
Contr. No. 4800-F Sh. 236 of

433

SHOP MARK

FILLER

PUNCH - 11/16
REAM - 15/16

1 PLT, 37 3/4 x 3/8 x 5:5 3/16 - 2 REQ KS 3 (C)

FILLER 4 x 3/8 x 1' 6 1/2 OPER. - 6 (C) - Tack Weld to C: KS 2

PUNCH - 11/16
REAM - 15/16

FILLER 4 x 3/8 x 10 1/2 OPER. KS 7 (C)

FILLER 4 x 3/8 x 2'-5 OPER. KS 8 (C)

FILLER 6 x 1/2 x 3:6 3/4 REQ KS 9 (C)

PL 20 3/8 x 3/4 x 12'-0 1/2 LONG KS 4 (C)

PL 4 x 5/8 x 3/8 x 11'-4 16 REQ KS 5 (C)

PL 37 3/4 x 3/8 x 5' 4 - 2 REQ KS 11 (C)

PUNCH - 11/16
REAM - 15/16

PUNCH 11/16
REAM 15/16

FILLER 21 1/4 x 3/8 x 2'-1-2 REQ KS 12 (C)

PL 4 x 1/2 x 5' 4 REQ KS 11 (C)

PUNCH - 11/16
REAM - 15/16

R - 21 1/4 x 3/8 x 5:11 7/8 - 2 REQ KS 10 (C)

SEE NOTE SH #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF - CONSULTING ENGINEERS 9/15/60

L P Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ..... DATE 9-9-60

GENERAL NOTES
Rivets 7/8 except as noted
Holes 15/16 except as noted
End Distance 1 3/4 unless noted
Shop Point RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by L.A.M. 5-59
Checked by FK 9-59
Revisions 10/29/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No 3

SOLD TO: JOHN F BEASLEY CONSTR CO
CHICAGO, ILLINOIS

BOOK No. 5

VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
SHOP VINCENNES, IND.
Contr. No. 4800-T Sh. 235 of

A32

ONE UPPER CHORD AS SHOWN A234
ONE DO DC TO PAIR AA234
WORK WITH SH 235

DIAPHRAGM AT U41

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ____ DATE 9-12-60

SEE NOTE SH #1

APPROVED BY: HOWARD NEEDLES TAMMEN & BERGENDOFF - CONSULTING ENGINEERS 11/19/59

APPROVED BY 9/15/60
Bridge Design Engineer

GENERAL NOTES
Rivets 7/8 except as noted
Holes 15/16 6 except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by J.A.H. 5-2-59
Checked by F.K. 9-59
Revisions 10/29/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

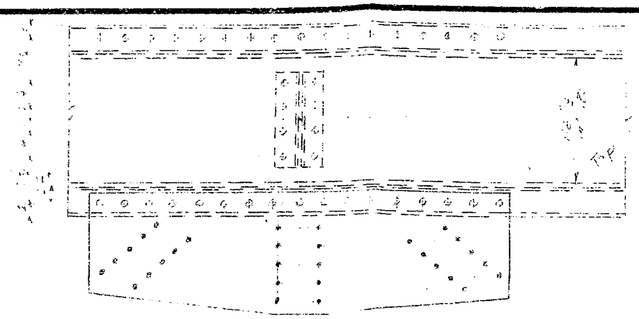
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO 3

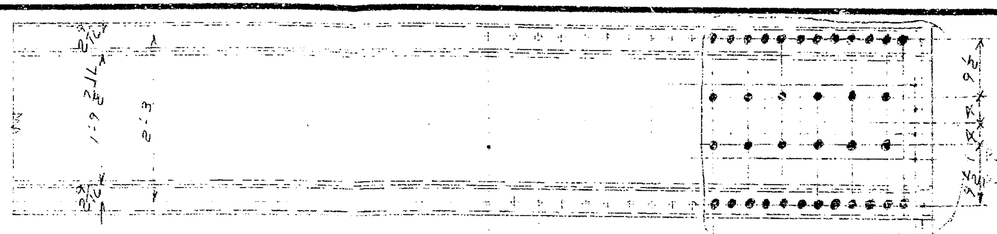
SOLD TO: JOHN F BEASLEY CONSTR CO
CHICAGO, ILLINOIS

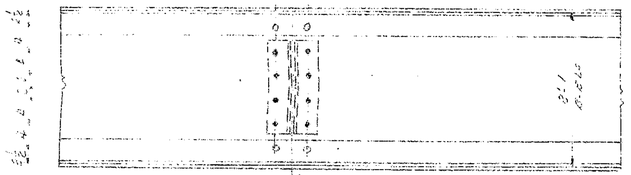
BOOK No. 5

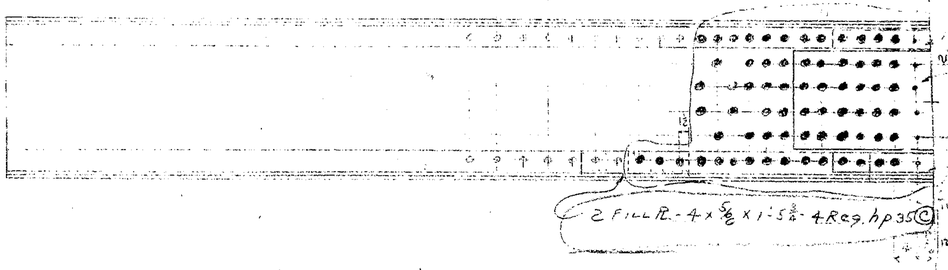
SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.
Contr. No. 4800-T Sh. 234 of

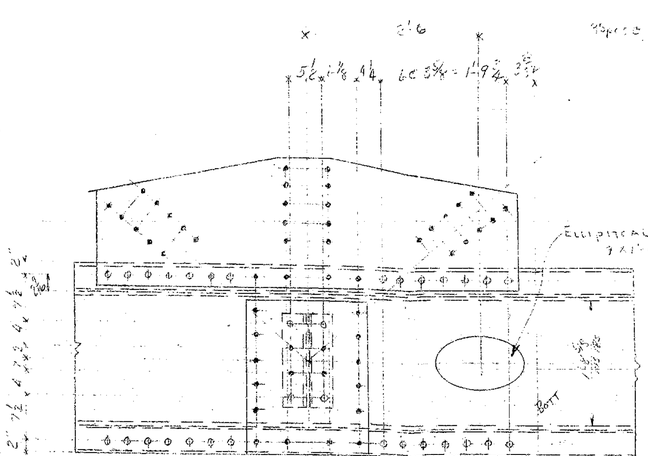
431

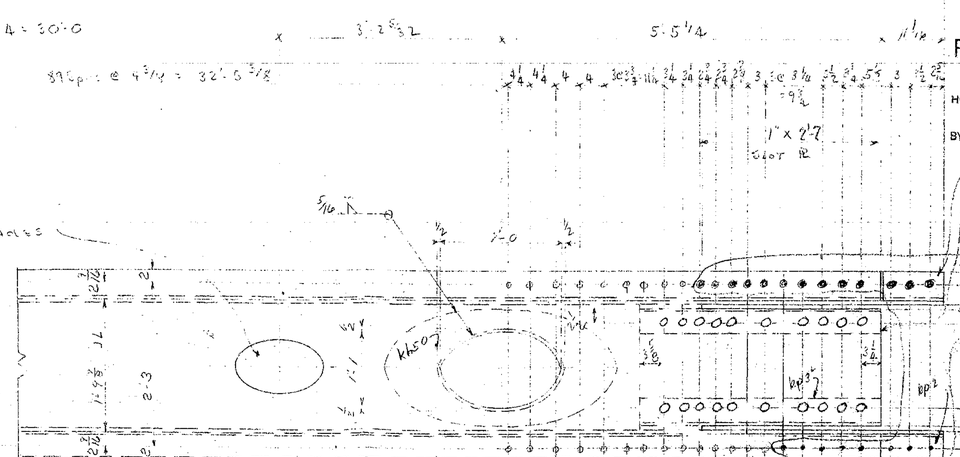












Mill

Fill PL 2 x 1/2 x 1'-5 1/2 - 4 Req'd hp 4 (A) Tack Weld

Fill PL 1 x 1/2 x 1'-11 31/32 - 4 Req'd hp 1 (B) Tack Weld

PL 1 x 5/8 Ream 15/16 ϕ

Fill PL 2 x 1 1/8 x 1'-5 5/8 - 4 Req'd hp 5 (C) Tack Weld

Work with Sh. 232

See Note Sh. # 1

APPROVED BY 9/15/60
L. P. Carlson
Bridge Design Engineer
RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ..... DATE 9-12-60

Fill PL - 5 x 5/8 x 10 5/16 - 4 Req'd kp 2 (D) Tack Weld

L - 4 x 4 x 3/8 x 3'-5 1/4 - 4 Req'd PL/L kp 3 (E)

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDORFF CONSULTING ENGINEERS: 10/29-59

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16 except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ASH. SID.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by BR
Checked by TK 9-59
Revisions

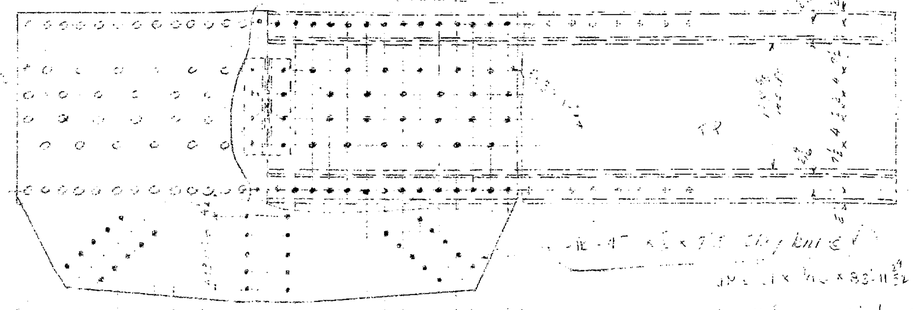
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 3
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

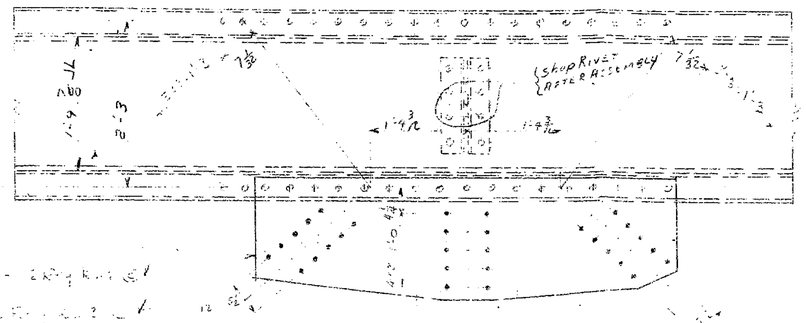
BOOK No. 5

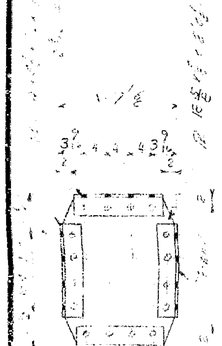
SHOP VINCENNES STEEL CORP. VINCENNES, IND.

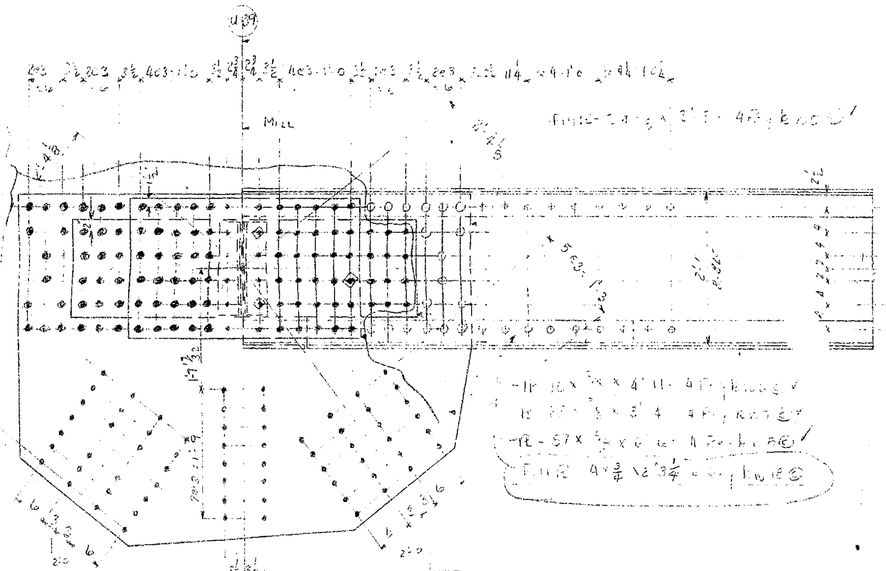
DIV. OF INDUSTRIAL ENTERPRISES, INC.
Contr. No. 4800-T Sh. 233 of

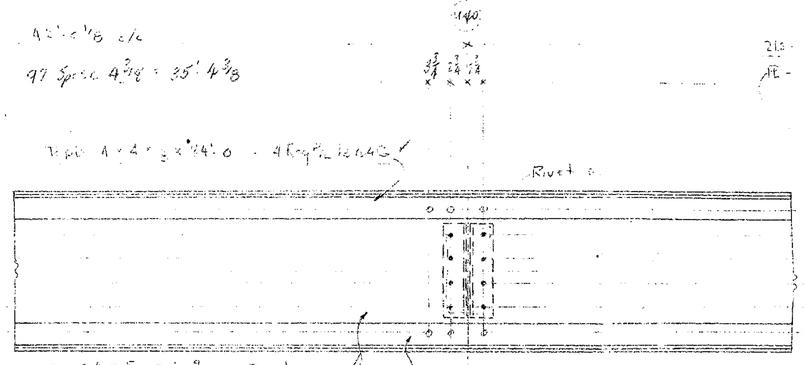
430

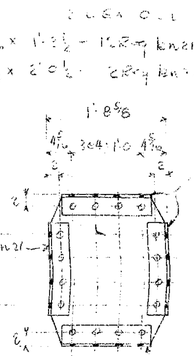


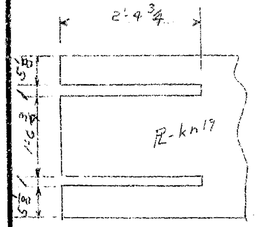


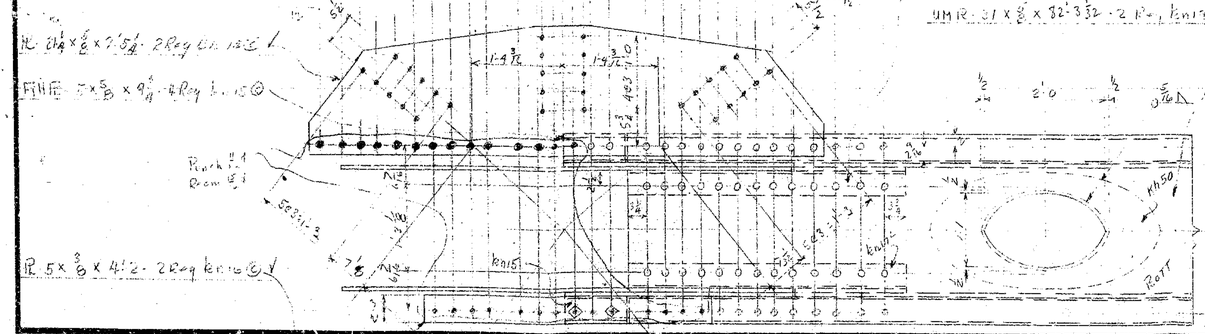


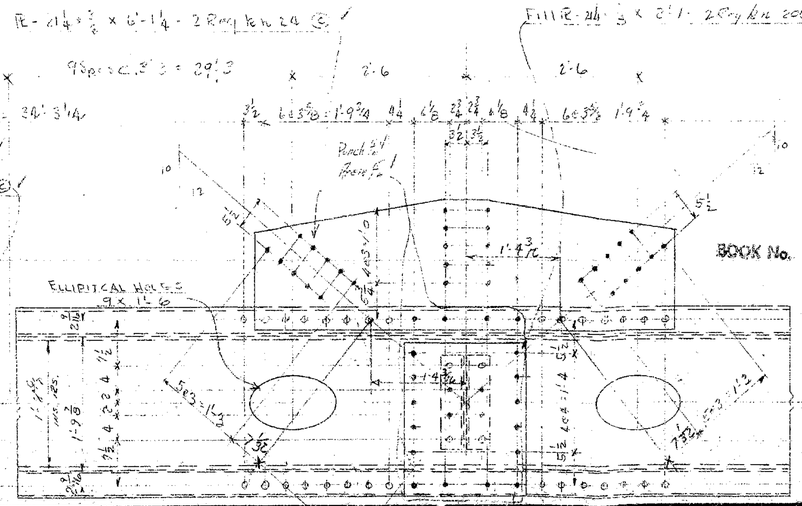


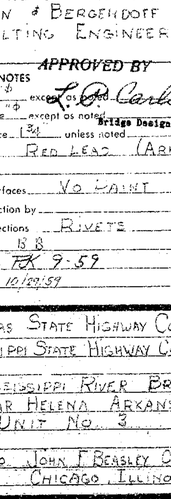












RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY _____ DATE 4-12-60 See Note 1 & 1

APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 11/19/59

APPROVED BY 9/15/60
Bridge Design Engineer

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by JB
Checked by FK 9-59
Revisions 10/20/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT NO 3

SOLD TO JOHN F BEASLEY CONSTR CO
CHICAGO ILLINOIS

BOOK No. 5

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
DIV. OF INDUSTRIAL ENTERPRISES, INC.
Contr. No. 4800-T Sh. 232

429

APPROVED BY
L. K. Larkwood
Bridge Design Engineer
11-27-59

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY E.R.S. DATE 11-24-59
See Notes Sheet 1

APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by BB
Checked by EK 9-59
Revisions 10/20/59

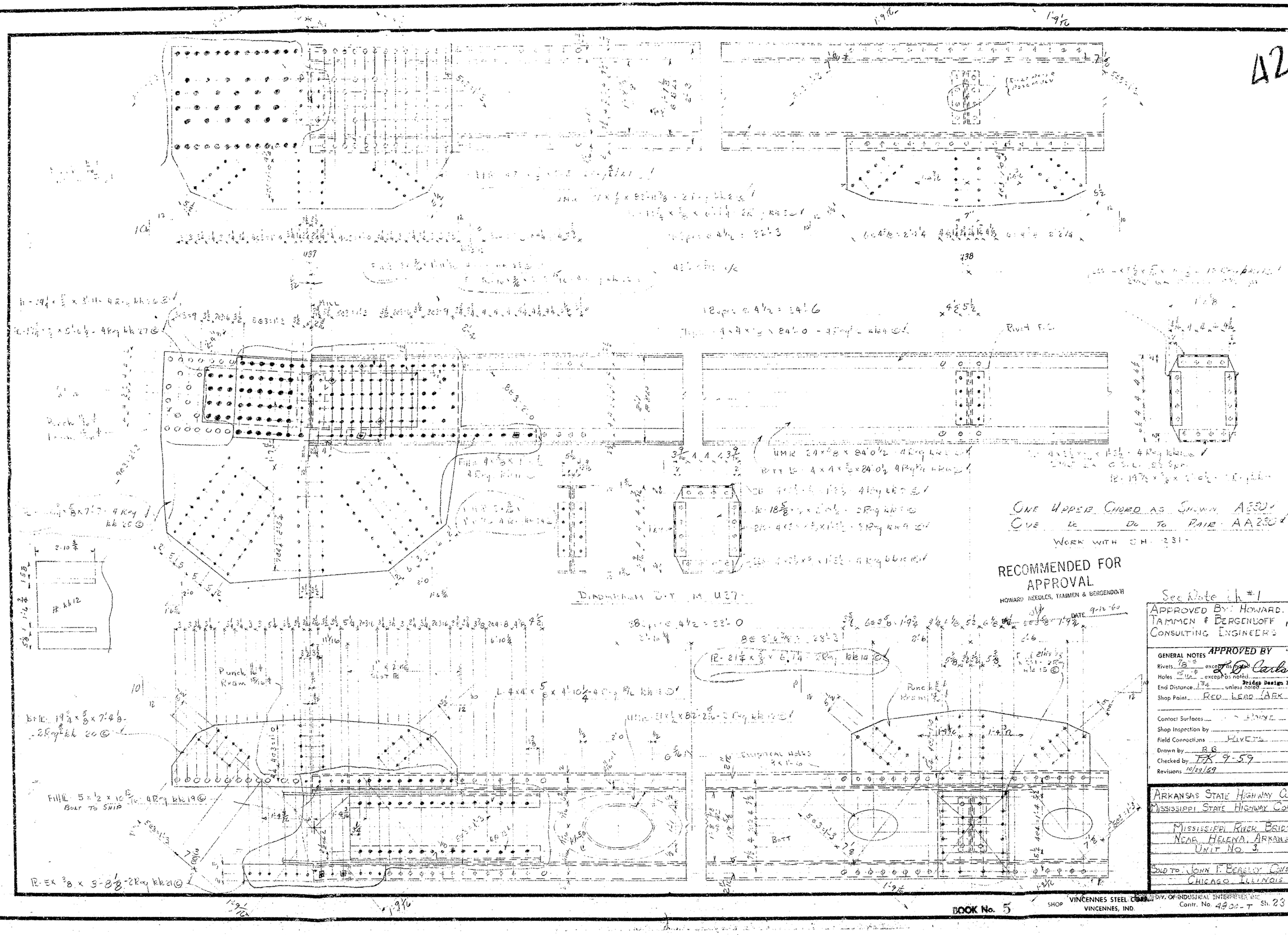
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Cont. No. 4800 Sh. 231 of

428



DIAPHRAGM U37 TO U38

ONE UPPER CHORD AS SHOWN A230
ONE LC DO TO PAIR AA230
WORK WITH CH. 231

RECOMMENDED FOR APPROVAL
HOWARD NEEDLES, TAMMEN & BERGENDOFF
DATE 9-12-60

See Note 1 ch #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 11/19/59

APPROVED BY 11/15/60
Bridge Design Engineer

GENERAL NOTES
Rivets 7/8 exceptas noted
Holes 15/16 exceptas noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD ARK. STD.
Contact Surfaces ... PAINT
Shop Inspection by ...
Field Connections RIVETS
Drawn by RB
Checked by FK 9-59
Revisions 10/20/59

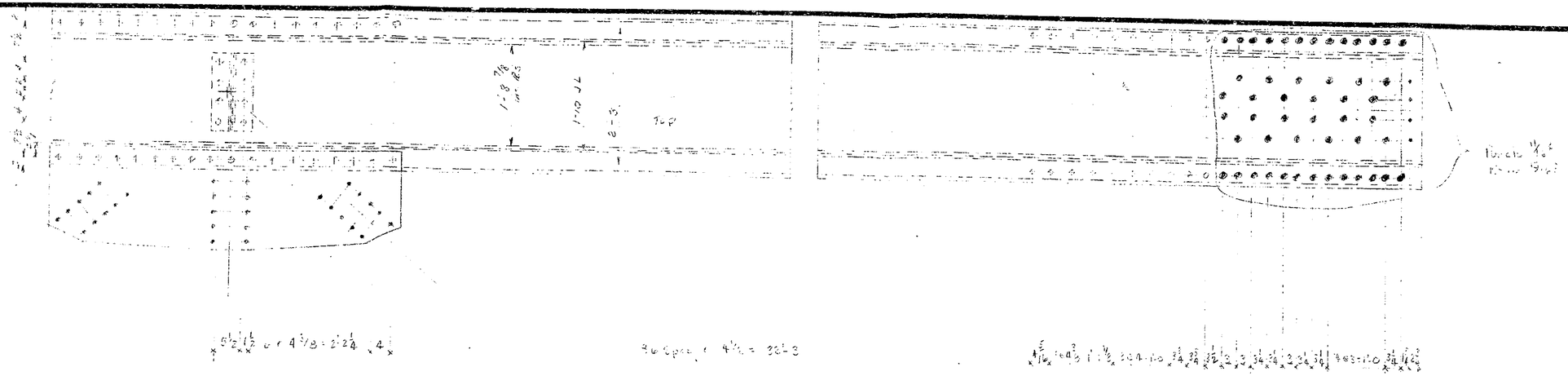
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

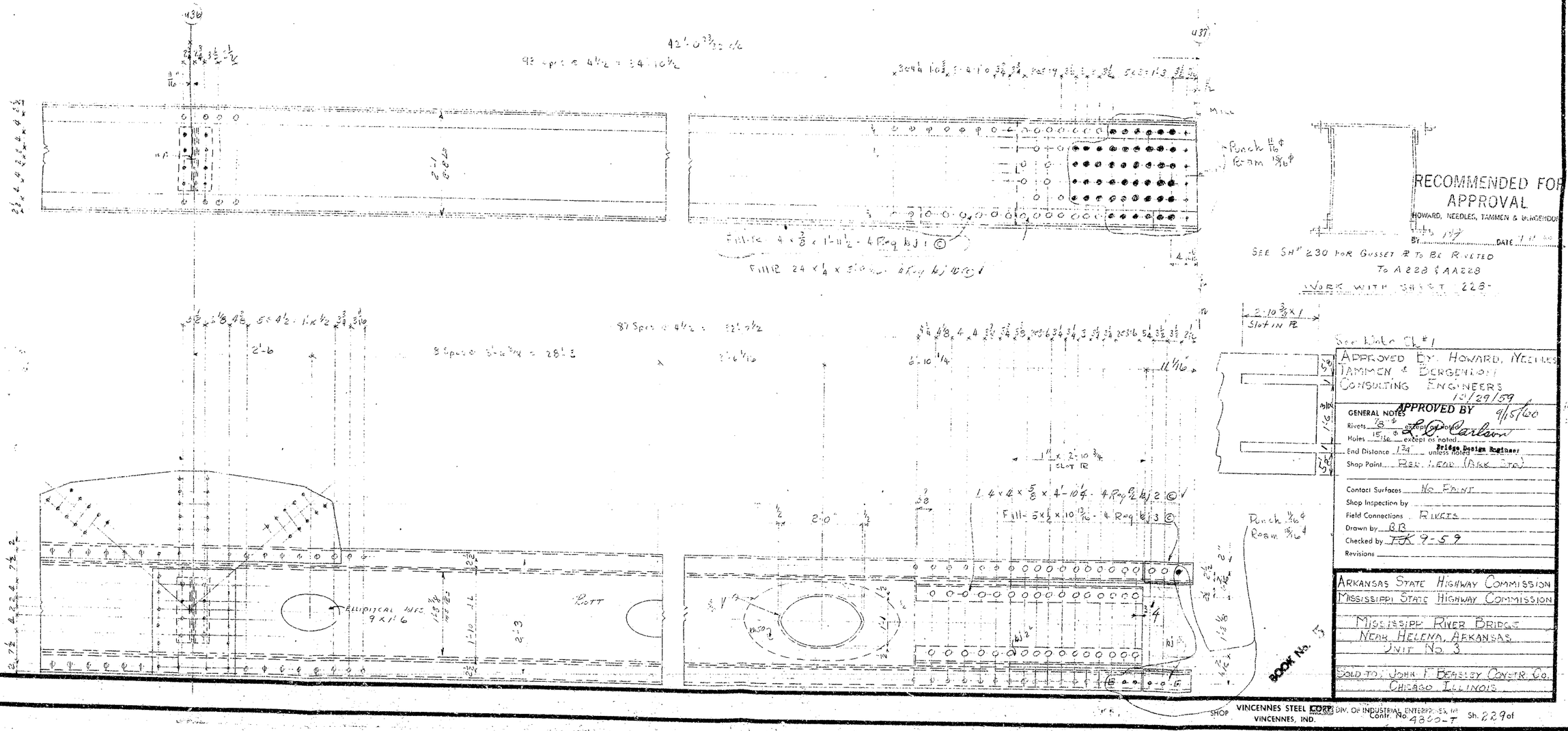
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

SOLD TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

BOOK No. 5 SHOP VINCENNES STEEL CORP. VINCENNES, IND. DIV. OF INDUSTRIAL ENTERPRISES, INC. Contr. No. 4930-T Sh. 230 of

421





RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ... DATE 1-17-60

SEE SH" 230 FOR GUSSET PL TO BE RIVETED TO A228 & AA228
WORK WITH SHEET 228-

APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 12/29/59

APPROVED BY 9/5/60
L.P. Carlan
Bridge Design Engineer

GENERAL NOTES
Rivets 7/8 ø except as noted.
Holes 15/16 except as noted.
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (MAK 570)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by BB
Checked by JK 9-59
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO 3

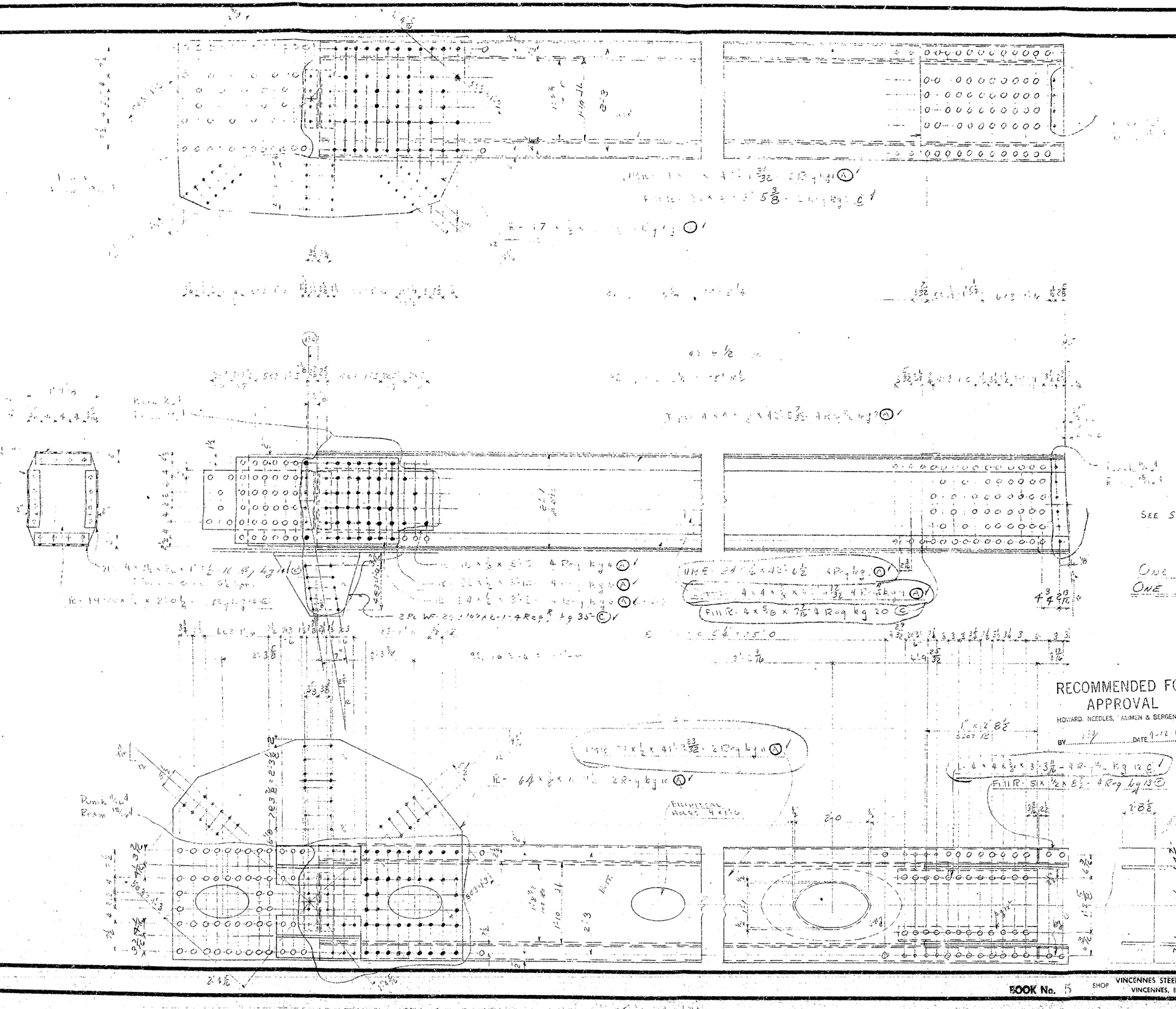
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

BOOK No. 5

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800-F Sh. 229 of

426
BENT LINE
RIVET AFTER ASSEMBLY
UMIR 31 x 1/2 x 84'-5/32 2 Req kh 1 ©
PL - 26 x 1/16 x 7'-9 - 4 Req kh 6 Ⓐ
45 Sp @ 4 1/2 = 35'-7 1/2
Bott L 4 x 4 x 3/8 x 84'-0 1/16 4 Req R/L kh 7 ©
UMIR 24 x 5/16 x 84'-2 3/8 - 4 Req kh 5 ©
RIVET F.S.
PL - 20 3/8 x 5/8 x 2'-0 1/2 - 2 Req kh 12 ©
2Ls - 4 x 5 1/2 x 5/16 x 1'-3 1/2 - 12 Req kh 13 ©
2 - kh 13 5 1/2 Spr.
L 4 x 4 x 3/8 x 3'-3 11/16 4 Req R/L kh 10 ©
L - 4 x 4 x 3/8 x 3'-0 3/4 - 4 Req R/L kh 9
2Ls - 4 x 3 1/2 x 5/16 x 1'-3 1/2 - 4 Req kh 14 ©
2 9/16 GA. O.SL. 5 1/2 Spr.
2Ls 4 x 3 1/2 x 5/16 x 1'-3 1/2 - 4 Req kh 15 ©
PL - 19 1/8 x 5/8 x 2'-0 1/2 - 2 Req kh 16 ©
2Ls - kh 18
2Ls - 4 x 3 1/2 x 5/16 x 1'-3 1/2 - 4 Req kh 17 ©
2Ls - 4 x 3 1/2 x 5/16 x 1'-3 1/2 - 8 Req kh 18 ©
ONE UPPER CHORD AS SHOWN - A228
ONE DO DO TO PAIR - AA228
WORK WITH SH. 229
Bott L 4 x 4 x 3/8 x 84'-2 7/16 - 4 Req R/L kh 19 ©
DIAPHRAGM DETAIL AT U35
L 3 1/2 x 3 1/2 x 3/8 x 1'-11 1/2 - 4 Req kh 11 ©
Punch 11/16 Ream 15/16
PL - 21 1/4 x 5/8 x 6'-7 1/2 - 2 Req kh 20 ©
Fill PL 21 1/4 x 5/8 x 2'-1 - 2 Req kh 21 ©
BEND LINE
1 PL 19 3/4 x 5/8 x 6'-7 1/4 - 2 Req R/L kh 35 Ⓐ
Fill PL 5 x 1/2 x 1'-7 1/2 - 4 Req kh 33 ©
UMIR 31 x 1/2 x 81'-7 19/32 - 2 Req kh 22 ©
66 Sp @ 4 1/2 = 32'-3
9 Sp @ 3'-4 = 30'-0
Bar - 5 x 3/8 x 6'-1 - 2 Req R/L kh 24 Ⓐ
SLOT R
ELLIPTICAL Holes 9 x 1'-6
BOTTOM
1 PL - 20 x 5/8 x 3'-4 - 16 Req kh 50 ©
RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
See Note Sh. #1 DATE 9-12-60
APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 11/19/59
APPROVED BY 9/15/60 L. P. Carlson Bridge Design Engineer
GENERAL NOTES
Rivets 7/8" Φ except as noted
Holes 15/16" Φ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by BB
Checked by TCK 9-57
Revisions 10/26/59 Riv. added Out @ U35
BOOK No. 5
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT No. 3
SOLD TO: JOHN F. BEASLEY CONSTR CO.
CHICAGO ILLINOIS
VINCENNES STEEL CORP. VINCENNES, IND.
Contr. No. 4800-T Sh. 228 of

425



SEE SH# 228 FOR GUSSET PL TO BE RIVETED TO A227 & AA227

ONE UPPER CHORD AS SHOWN A227
ONE DO DO TO PAIR AA227

See Note Sh# 1

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ____ DATE 9-12-46

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 11/19/59
APPROVED BY 9/15/60
Bridge Design Engineer

GENERAL NOTES
Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces: NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by HB
Checked by RK 9-59
Revisions 10/22/59

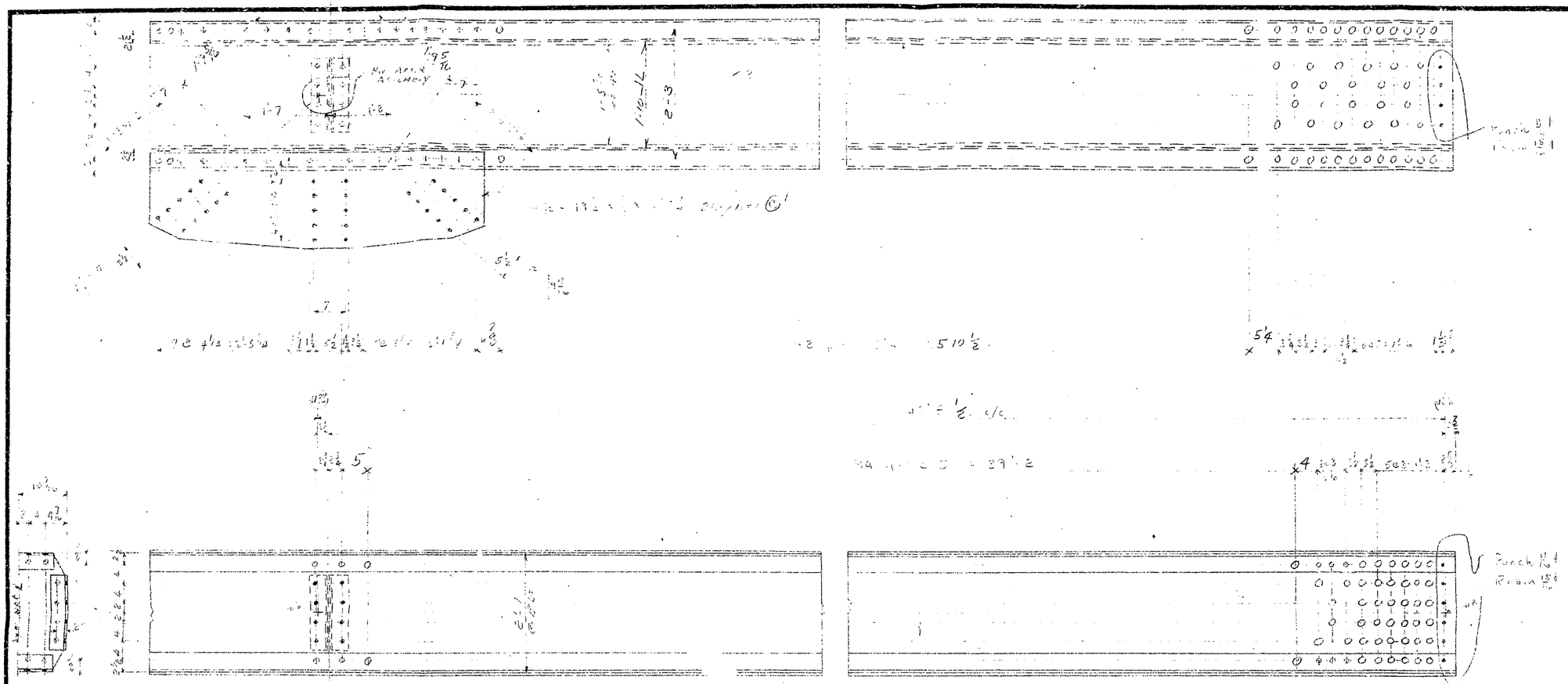
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

BOOK No. 5 SHOP VINCENNES STEEL CORP. OF DELAWARE, INC. VINCENNES, IND. Sh. 227 of 4800-T

424



WORK WITH SH. 225

SEE SH^T 227 FOR GUSSET PLS TO BE RIVETED ON A225

See Note Sh^T 1

APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 10/26/59

APPROVED BY 9/15/60
Bridge Design Engr.

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
DATE 9-12-60
BY

GENERAL NOTES

Rivets 7/8 ϕ except as noted
Holes 15/16 ϕ except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by BB
Checked by TK 9-59
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO 3

SOLD TO: JOHN T. BRADLEY CONSTR. CO.
CHICAGO, ILLINOIS

BOOK No. 5

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800-T Sh. 82 of

423

DIAPHRAGM @ U33

ONE UPPER CHORD AS SHOWN ALL25
ONE ... TO PIER AA125
WORK WITH SN 726

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ... DATE 9-12-60

See Note Sh #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 11/19/59

APPROVED BY 9/15/60

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4 unless otherwise shown
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by BB
Checked by FK 9-59
Revisions 10/26/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

SOLD TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

422

Shop Rivet Arrer Assembly

Top

6 x cope

U31

U32

Rivet ES

Fill R-3 x ⅜ x 4 15/16 - 4 Req-kd4 ©
Tack Weld Ns Only

Fill R- 4 x ⅝ x 5 - 4 Req kd5 ©

Punch Mark Near Web

Work with 54. 223

See Sh #225 for Gussets R5 to Be Riveted to A223 @ U32

See Detail Sh #1

Punch 11/16 - Ream 15/16 ⌀

Elliptical Holes Typ.

Bottom

Top

2'-4½

1'-10⅛

2'-0

5'-1⅝ x 1" Steg R2

L-5 x 3½ x ½ x 5'-4 11/16 - 4 Req R2 kd3 © ✓

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 1-5-60

APPROVED BY
DISTRICT ENGINEER

Approved By: Howard Needles Tammen & Bergendoff
Consulting Engineer 11/19/59

GENERAL NOTES
Rivets ⅞" ⌀ except as noted
Holes 15/16" ⌀ except as noted
End Distance 1¾" unless noted
Shop Paint Fed. Lead (Ark. Std.)
Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivets
Drawn by EB
Checked by ERS 9-59
Revisions 10/26/59

Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT NO. 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

BOOK No. 5 SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERP. VINCENNES, IND.
Contr. No. 4800-T Sh. 224 of

(A)

421

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY (Asst) DATE

See Note Sh #1

APPROVED BY: HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 11/19/59

APPROVED BY [illegible] 9/15/60
Bridge Design Engr.

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4" unless noted
Shop Paint Red Lead (Ark. Std.)
Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivets
Drawn by EB
Checked by FK 9-59
Revisions 10/26/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 3
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

DEPT. OF INDUSTRIAL ENTERPRISES (HPC)
Contr. No. 4800-7 Sh. 223 of

BOOK No. 5

SHOP VINCENNES STEEL CORP.
VINCENNES, IND.

420

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY [illegible] DATE 10-21-59

APPROVED BY 10/26/59
Bridge Design Engineer

GENERAL NOTES
Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 3/32" unless noted
Shop Paint RED LEAD (ABK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections
Drawn by BB
Checked by FK
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3
SOLD TO: JOHN F. KENNEDY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
CONTR. OF INDIANA & UNITED STATES
Contr. No. 4800 Sh. 222 of (A)

419

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 1-5-60

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 11/19/59

SEE NOTE - SHEET 1

GENERAL NOTES
Rivets 7/8 except as noted
Holes 15/16 except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces No PAINT
Shop Inspection by
Field Connections APPROVED BY
Drawn by BB
Checked by FK
Revisions 10/24/59

Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

ONE UPPER CHORD AS SHOWN - A221
ONE Do Do TO REIR - AA221-V
WORK WITH SH 222

418

TOP

WORK WITH CH 219

Punch 11/16 Ream 15/16 to MT

R - 20 x 5/8 x 3'-4 - 30 Req J41 (A)

SLOT R 1" x 5 9/16

APPROVED BY
L.P. Carlson
Bridge Design Engineer
11-19-59

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY F.R.S. DATE 11-17-59
See Data Sh. # 1

APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by BB
Checked by FJK 9-59
Revisions 10/26/59

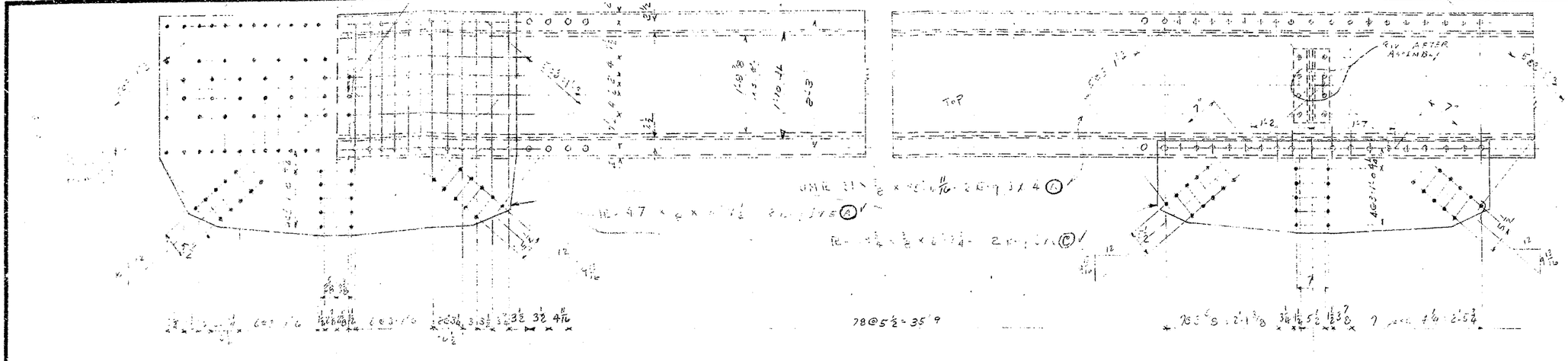
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

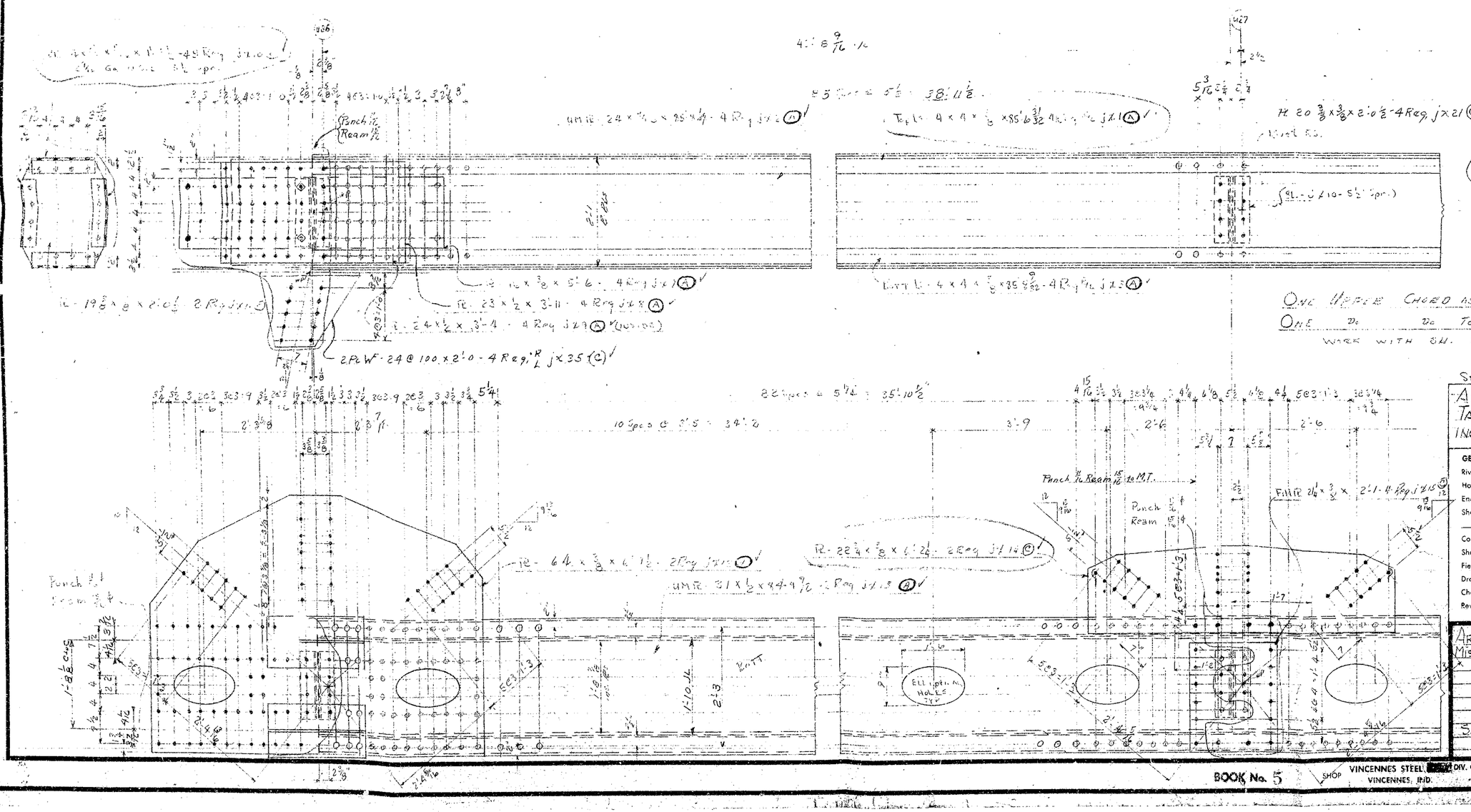
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP DIV. OF IN. CONSTR. CO. VINCENNES, IND. Contr. No. 4800 Sh. 220 of (A)

417





RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ____ DATE 11-12-59

ONE UPPER CHORD AS SHOWN A219
ONE " " " TO PAIR - AA219
WORK WITH DWG. 220

See Note Sh. #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 10/26/59

APPROVED BY 9/15/60 Bridge Design Engineer

GENERAL NOTES
Rivets 7/8 except as noted
Holes 15/16 except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by BB
Checked by FK 9-59
Revisions

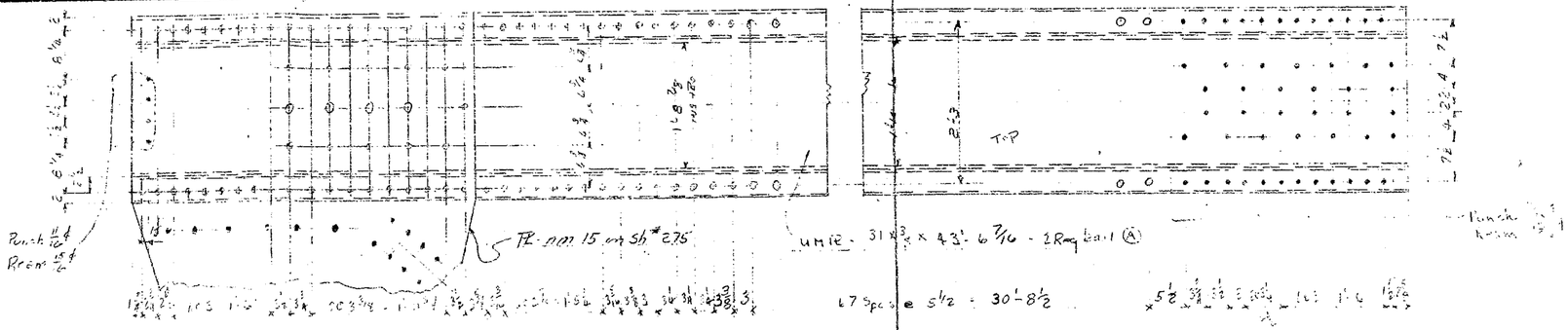
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

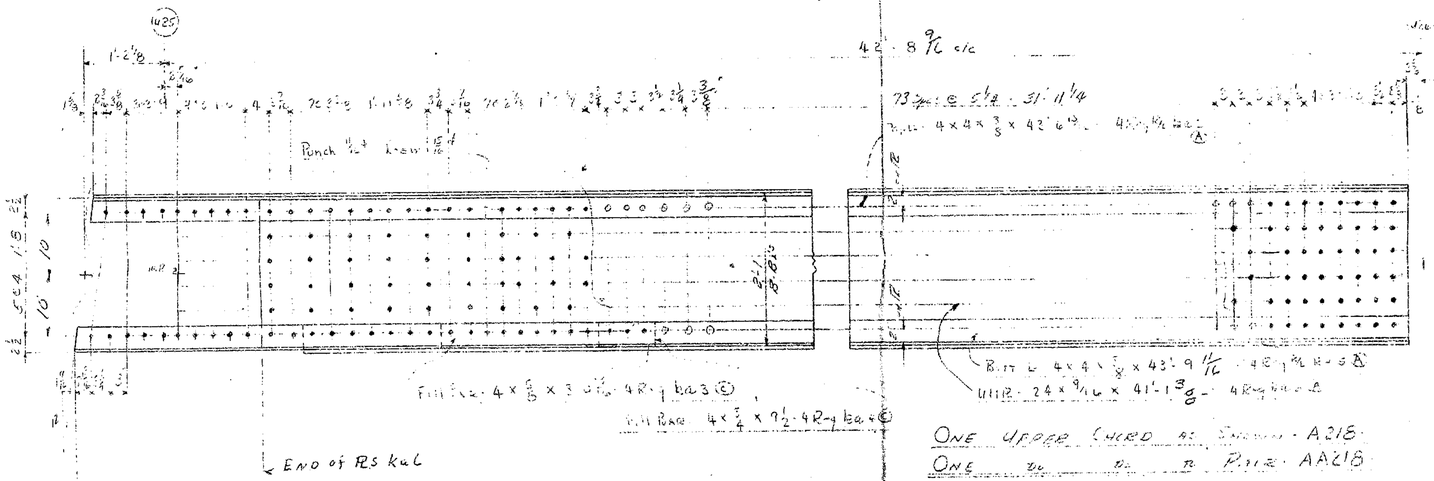
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No 3

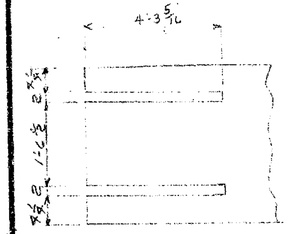
SOLD TO: JOHN T. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

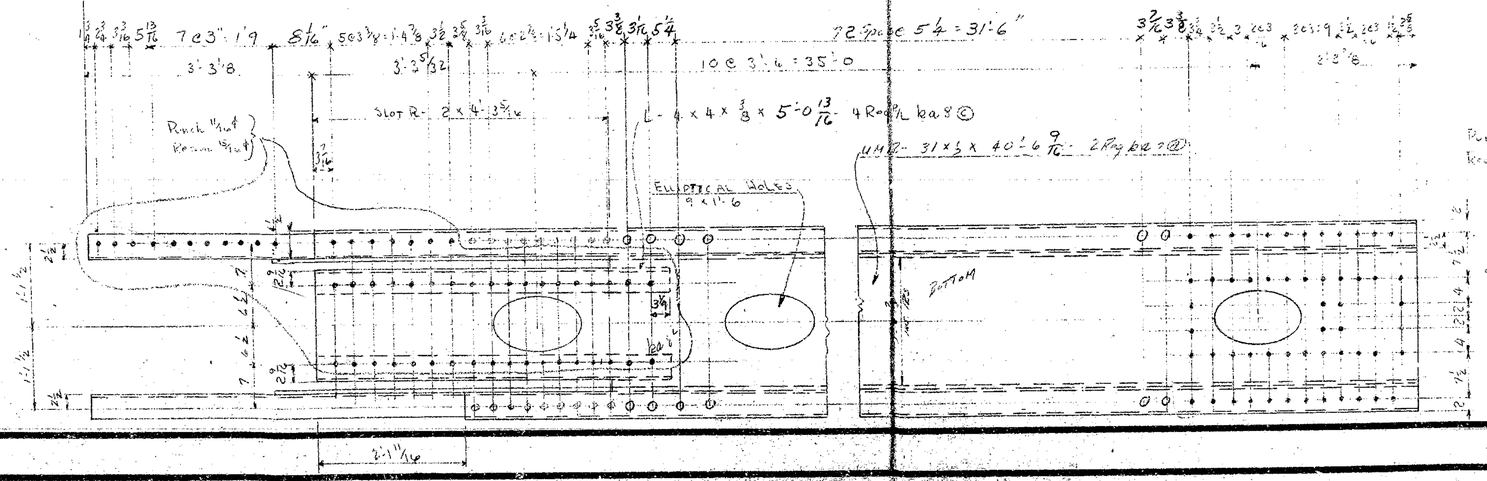
SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800-T Sh. 219 of

416









RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY E.R.S. DATE 10-21-59

See Plate Sh #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES
Rivets 7/8" except as noted
Holes 13/16 except as noted
End Distance 1 3/4 unless noted
Shop Point - RED LEAD (ARK. STD.)
Contact Surfaces - NO PAINT
Shop Inspection by
Field Connections - RIVETS
Drawn by C.C. APPROVED BY 10/26/59
Checked by F.F.K. 9-59 L. O. Carlson
Revisions
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

SOLD TO: JOHN H. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.
Contr. No. 480 Sh. 218 of (A)

415

FILL PL - 5x½x1'-3" - 4 REQ. - JW3(C)

SPLICE PL - 5x½x3'-10½" - 4 REQ. - JW2 (C)

TOP PL - 31"x½ x 42'-3¼" - 2 REQ - JW1 (C)(U.M.)

2 PL's - 73½ x ⅝ x 8'-3¾" - 4 REQ. - JW4 (C)

2 Ls - 4x4x⅜ x 3'-9½" - 4 REQ. R/L - JW5 (C)

N.S. PL - 22¼ x ⅝ x 4'-7½" - 2 REQ. - JW8 (C)

F.S. PL - 22¼ x ⅝ x 4'-1½" - 2 REQ. - JW9 (C)

N.S. L 7x4x¾ x 1'-11 - 2 Req. R/L JW19 (C)

2 TOP Ls - 4x4x⅜ x 42'-10" - 4 REQ. R/L - JW6 (C)

2 WEB PL's - 24" x 9/16" x 42'-10" - 4 REQ. - JW7 (C) (U.M.)

2 BOTT. Ls - 4x4x⅜ x 42'-10" - 4 REQ. R/L JW10 (C)

JACKING BLOCK B410

FILL PL - 16 x ⅜ x 1'-6¾ - 2 REQ. - JW11 (C)(N.S.)

2 Ls - 4x4x⅜ x 4'-0" - 4 REQ. R/L - JW14 (C)

BOLT TO A215 & AA215

2 SPLICE PL's - 16" x ⅜ x 3'-7½" - 4 REQ. - JW12 (C)

2 SPLICE PL's - 23" x ⅜ x 2'-7½" - 4 REQ. - JW13 (C)

1 PL - 29¾ x ½ x 4'-5¾" - 2 REQ. - JW17 (C)

ONE LOWER CHORD AS SHOWN - A217

ONE LOWER CHORD TO PAIR - AA217

1 PL - 49⅞ x ½ x 7'-2¾" - 2 REQ. - JW15 (C)

BOTT. PL - 31"x½ x 42'-10" - 2 REQ. - JW16 (C)(U.M.)

R - Ja12

ELLIPTICAL HOLES

11/16 HOLES REAM 15/16

SHOP RIVETS F.S.

MILL

NOTE
SEE NOTES ON SHEET I

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY _____ DATE 9-9-60

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 10/26/59

APPROVED BY 11/15/60
Bridge Design Engineer

GENERAL NOTES
Rivets 7/8" except noted
Holes 11/16" except noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by T.P.
Checked by FJK 9-59
Revisions CWK 10-14-59
Con Rivet Size and Tentative Edge Distance Changed to Conform to AASHO

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 3

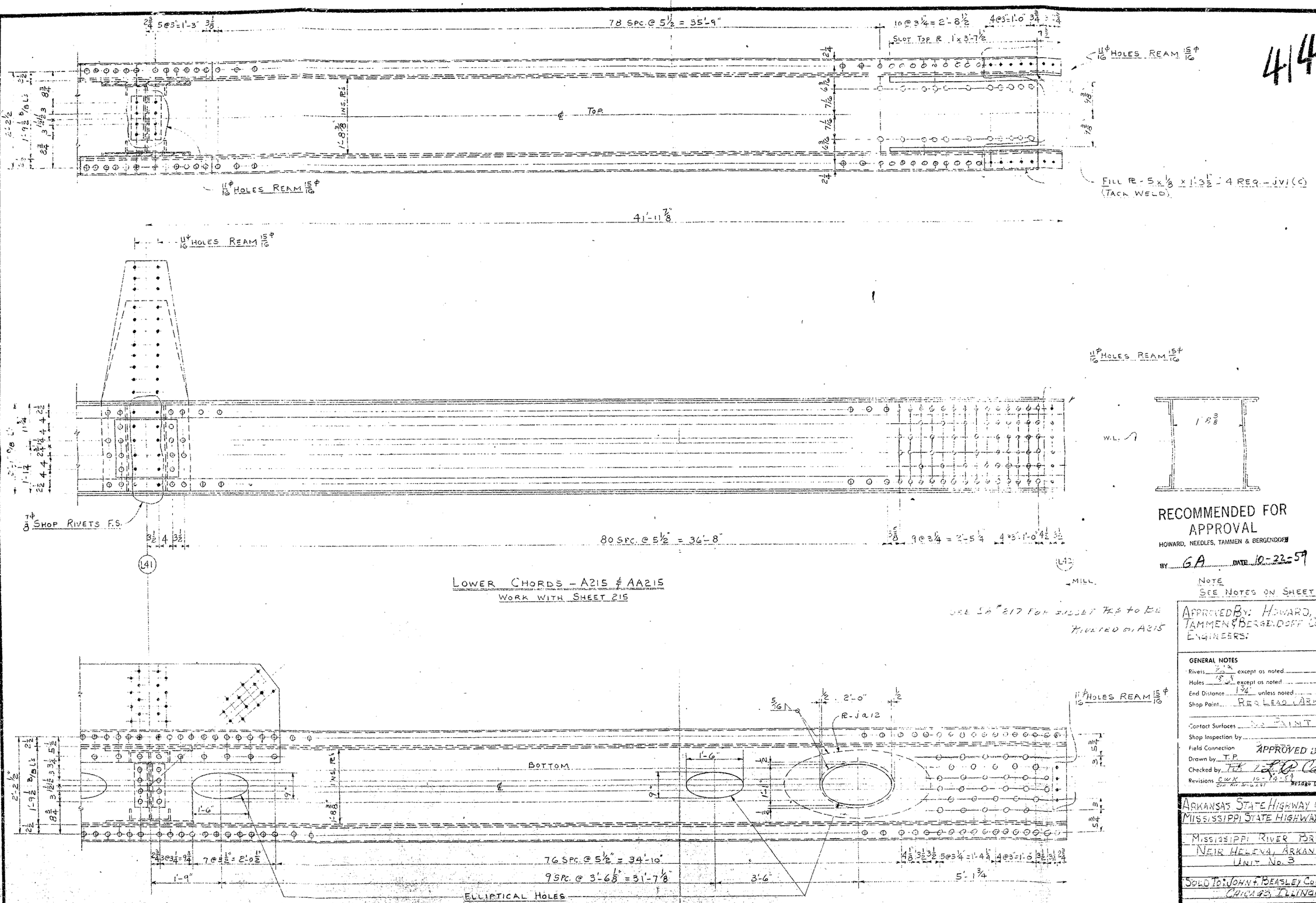
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

BOOK No. 5

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800-T Sh. 217 of

414



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY GA DATE 10-22-59

NOTE
SEE NOTES ON SHEET 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8 in except as noted
Holes 15/16 in except as noted
End Distance 1¼" unless noted
Shop Paint RED LEAD (ARK. STD.
Contact Surfaces NO PAINT
Shop Inspection by
Field Connection
Drawn by T.P.
Checked by T.K. L.P.C.
Revisions C.W.K. 10-16-59 APPROVED BY 10/16/59
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 3
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL CONTRACTORS INC. VINCENNES, IND.
CONTRACT 4800
Sh. 216 of

413

13 @ 3" = 3'-3" 14 @ 3" = 3'-6" 79 SPC. @ 5½" = 35'-3½" 5@3"=1'-3" 5@3"=1'-3"

11/16ϕ HOLES REAM 15/16ϕ

SLOT TOP R - 1" x 3'-0"

1R - 5" x ½" x 8'-7½" - 4 REQ. - JU1 (C) (U.M)

1R - 5" x ⅜" x 3'-3" - 4 REQ. - JU2 (C) (U.M)

SLOT TOP R - 1" x 2'-2"

FILL R - 5" x ⅜" x 1'-3" - 4 REQ. - JU3 (C)

TOP R - 31" x ⅜" x 82'-8¼" - 2 REQ. - JU4 (C, U.M.)

41'-11⅞"

11/16ϕ HOLES REAM 15/16ϕ

2 RS - 6" x ¾" x ⅝" x 6'-11½" - 4 REQ. - JU5 (C)

2 LS - 4" x 4" x ⅜" x 3'-9½" - 4 REQ. R/L - JU6 (C)

2 TOP L's - 4" x 4" x ⅜" x 83'-11¾" - 4 REQ. R/L - JU7 (C)

2 WEB R's - 24" x 9/16" x 83'-11¾" - 4 REQ. - JU8 (C) (U.M.)

2 BOTT. L's - 4" x 4" x ⅜" x 83'-11¾" - 4 REQ. R/L - JU9 (C)

2 SPLICE R's - JS10

2 SPLICE R - JS12

9@3"=2'-3" 10@3"=2'-6" 79 SPC. @ 5½" = 36'-2½" 3@3"=9" 7@3½"=2'-0½"

(L40) (L41)

2 L's - 4 x 4 x ... - 4½ 4 REQ. ... - JU11 (C)

PL - ... x 6'-5¼" - 2 REQ. - JU13 (C)

1R - 27½" x ½" x 6'-5½" - 2 REQ. - JU14 (C) (U.M.)

ONE LOWER CHORD AS SHOWN - A215

ONE LOWER CHORD TO PAIR - AA215

CONTINUED ON SHEET 215

BOTT. R - 31" x ½" x 83'-11¾" - 2 REQ. - JU14 (C) (U.M.)

R - JA12

ELLIPTICAL HOLES

76 SPC. @ 5½" = 34'-10"

9 SPC. @ 3'-6¼" = 31'-8¼"

5'-0½" 3'-6⅛" 1'-9"

11/16ϕ HOLES REAM 15/16ϕ

N.S. R - JB8

F.S. R - JB1

FILL R - JB15 (N.S.)

7/8ϕ SHOP RIVETS F.S.

SECTION - AA

1'-7⅛" B/B C's

2 L's - JB16

1R - JP20

1C - JB17

2 L's - JB19

DIAPHRAGM AT L41

NOTE

SEE NOTES ON SHEET 1

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY JU.14(C) DATE 10-22-59

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

JB8	2
JB9	2
JB15	2
JB16	4
JB17	4
JB19	4
JP20	2
JA12	2
JS10	4
JS12	4

GENERAL NOTES

Rivets 7/8" ϕ
Holes 15/16" ϕ except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections APPROVED BY 10/16/59
Drawn by T.P.
Checked by T.P. L.P. Carlson
Revisions 12-14-59 T.P. Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

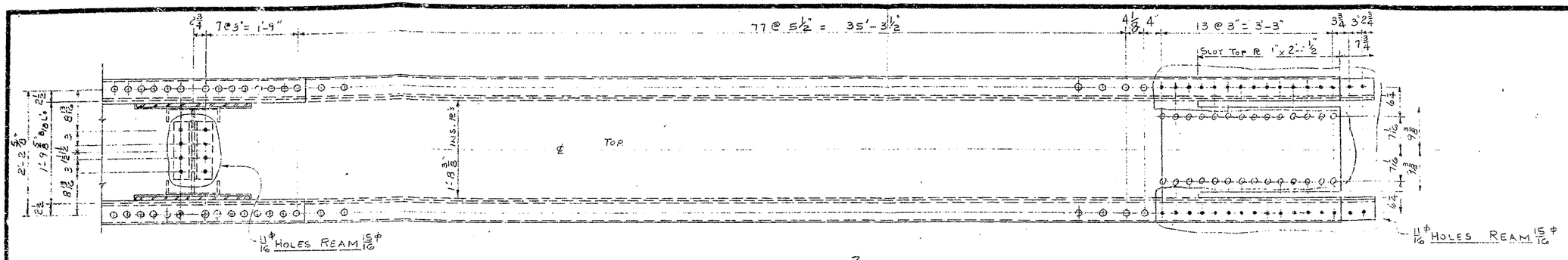
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

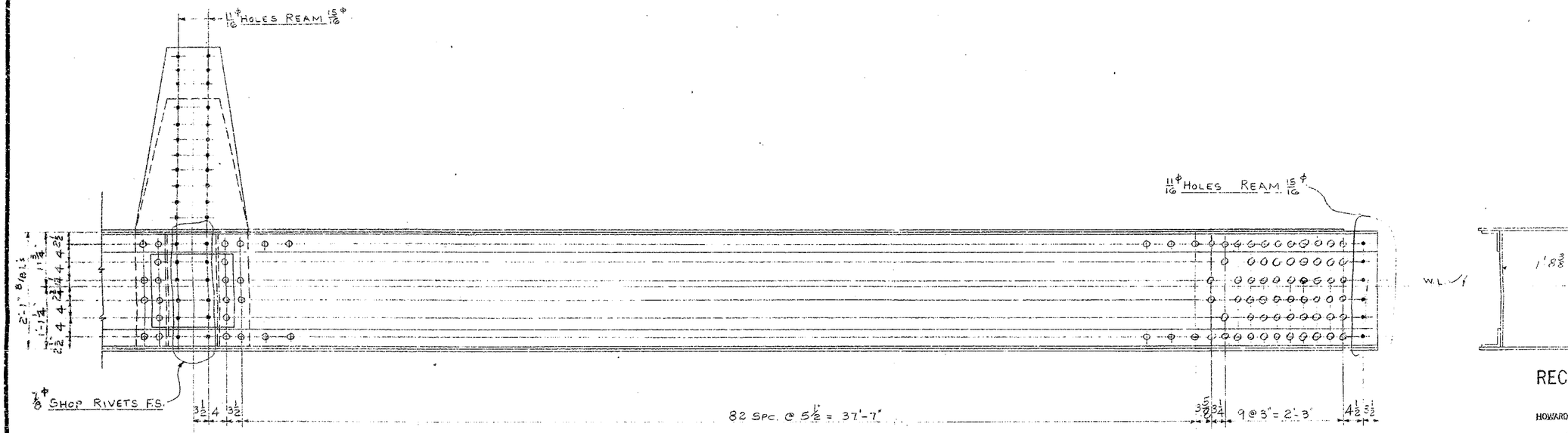
SOLD TO: JOHN A. ... CONSTR. CO.
CHICAGO, ILLINOIS

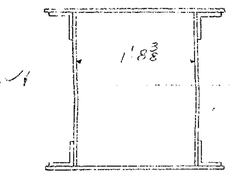
SHOP VINCENNES STEEL CORP., VINCENNES, IND.

Contr. No. 2532 Sh. 215 of

412







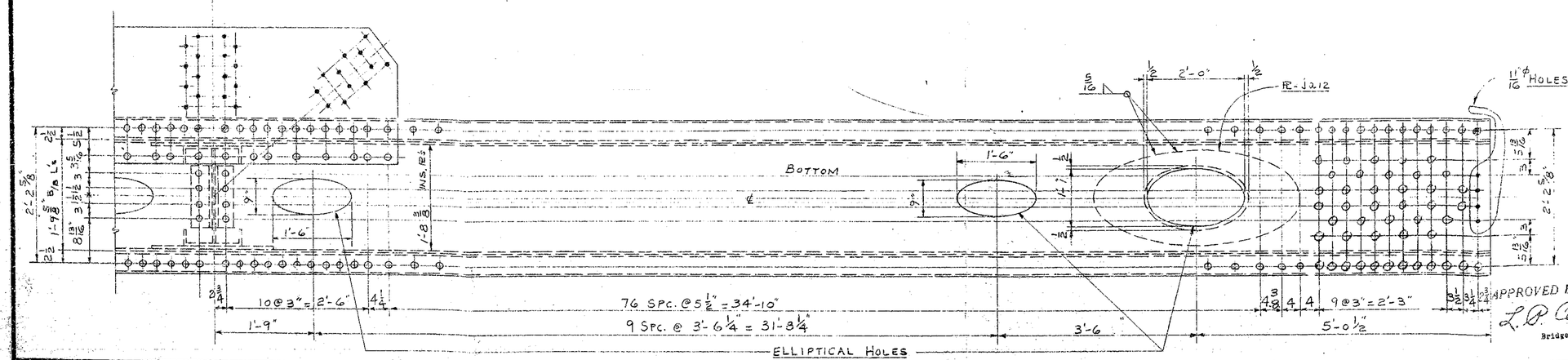
L39 L40

MILL

LOWER CHORDS - A213 & AA213

WORK WITH SHEET 213

SEE SA# 215 FOR ALL GUSSET PLATES TO BE RIVETED TO A213@L40



RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY FES DATE 10-17-59

NOTE

SEE NOTES ON SHEET 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS.

APPROVED 10/19/59
L. P. Carlson
Bridge Design Engineer

J&12 2

GENERAL NOTES

Rivets 7/8 Φ except as noted

Holes 15/16 except as noted

End Distance 1¼" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by T.P.

Checked by T.F.K. 7-59

Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

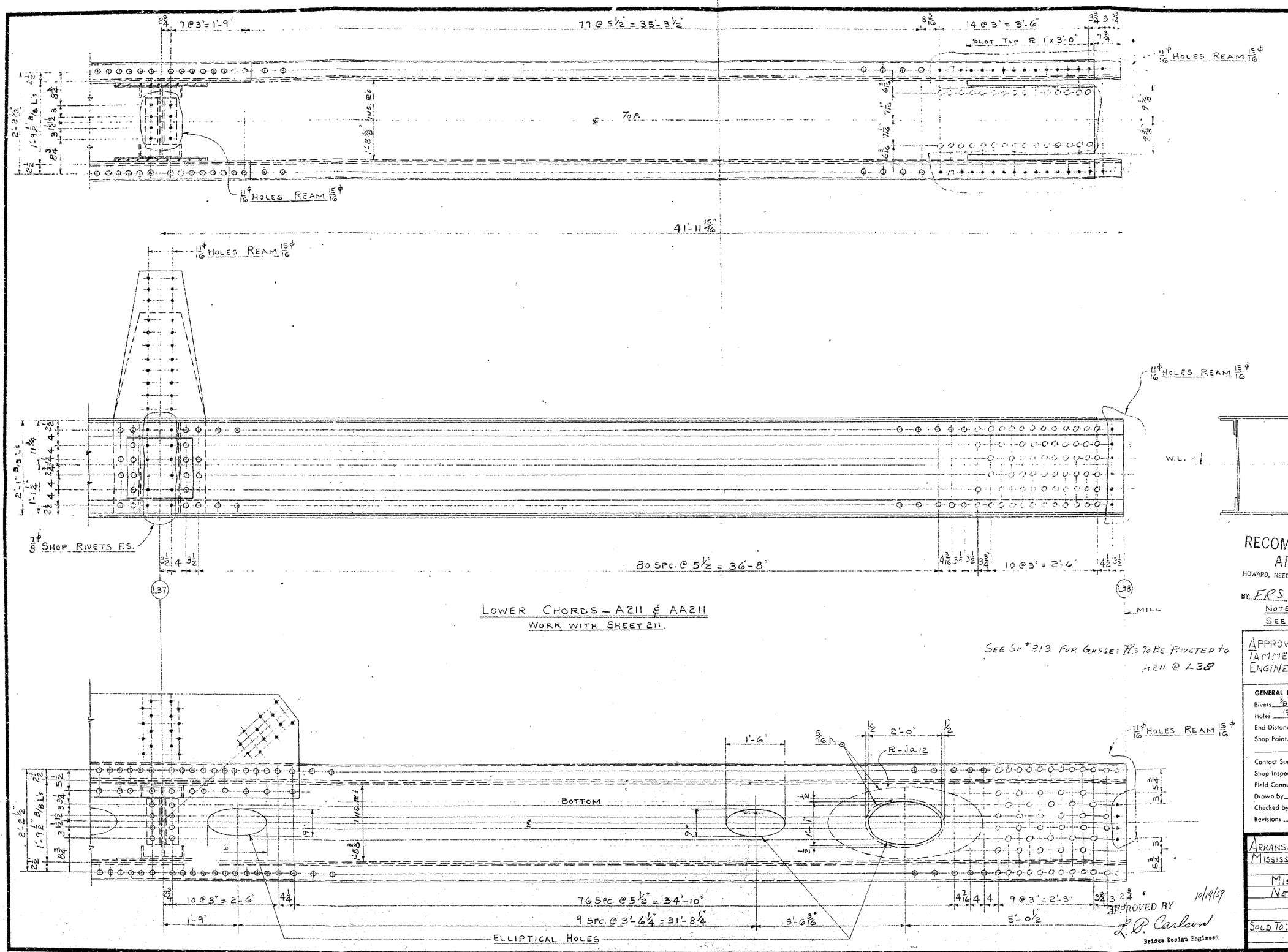
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4823 Sh. 214 of (A)

410



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 10-19-53
NOTE
SEE NOTES ON SHEET 1

Ja12

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8 ϕ except as noted.
Holes 15/16 except as noted.
End Distance 1¾" unless noted.
Shop Point RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by T.P.
Checked by FK 9-59
Revisions

APPROVED BY
L.D. Carlson
Bridge Design Engineer
10/19/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. A SUB. OF INDUSTRIAL ENTERPRISES INC. VINCENNES, IND.
Contr. No. 4800
Sh. 212 of

411

11/16 Holes Ream 15/16

14 @ 3" = 3'-6"

Slot Top PL - 1" x 2'-8 1/2"

PL - 5 x 1/2 x 8'-7 1/2" - 4 Req. - JS1(C)

7 @ 5'-5 1/2" = 35'-3 1/2"

PL - 5 x 3/8 x 4'-3" - 4 Req. - JS2(C)

7 @ 1'-9" = 12'-3"

Slot Top PL - 1" x 2'-2"

Top PL - 31 x 3/8 x 22'-8 1/4" - 2 Req. - JS4(C)(U.M.)

Fill PL - 5 x 3/8 x 1'-3" - 4 Req. - JS3(C)

41'-11 1/2"

11/16 Holes Ream 15/16

2 Lgs - 6 3/4 x 5/8 x 6'-11 1/2" - 4 Req. - JS5(C)

2 Lgs - 4 x 4 x 3/8 x 5'-6 1/2" - 4 Req. P/L - JS6(C)

2 Top Ls - 4 x 4 x 3/8 x 83'-11 3/4" - 4 Req. P/L - JS7(C)

2 Web PLs - 24" x 5/8 x 83'-11 3/4" - 4 Req. - JS8(C)(U.M.)

7 @ 3 3/8" = 1'-11 5/8"

11/16 Holes Ream 15/16

N.S. PL - JB8

F.S. PL JB9

Fill PL - JB15 (N.S.)

Section - AA

2 Lgs - JB16

PL - JP20

PL - JB17

2 Lgs - JB19

7/8" Shop Rivets. F.S.

Fill PL - 3 x 1/2 x 1'-9 1/2" - 8 Req. - JS16(C)

Fill PL - 3 x 1/2 x 2'-1 1/2" - 4 Req. - JS17(C)

2 Splice PLs - 16 x 3/8 x 5'-1 1/2" - 8 Req. - JS10(C)

2 Bott. Ls - 4 x 4 x 3/8 x 83'-11 3/4" - 4 Req. P/L - JS9(C)

10 @ 3" = 2'-6"

9 @ 3" = 2'-3"

81 Spc. @ 5 1/2" = 37'-1 1/2"

2 Splice PLs - 23 x 3/8 x 3'-7 1/2" - 8 Req. - JS12(C)

2 Ls - 4 x 4 x 3/8 x 3'-9 1/2" - 4 Req. P/L - JS11(C)

(38)

Mill

PL - 49" x 5/8 x 6'-5 1/4" - 2 Req. - JS13(C)

(L39)

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

DATE 9-12-60

One Lower Chord As Shown - A213

One Lower Chord To Pair - AA213

Continued on Sheet 214

Bott. PL - 31 x 1/2 x 83'-11 3/4" - 2 Req. - JS14(C)(U.M.)

PL - JA12

Bottom

Elliptical Holes

11/16 Holes Ream 15/16

9 @ 3" = 2'-3"

5'-0"

3'-6 1/16"

76 Spc. @ 5 1/2" = 34'-10"

9 Spc. @ 3'-6 1/4" = 31'-8 1/4"

1 PL - 27 7/16 x 1/2 x 6'-5 1/2" - 2 Req. - JS15(C)

10 @ 3" = 2'-6"

1'-9"

10 @ 3" = 2'-6"

Riv After Assembly

Note

See Notes on Sheet 1

Approved By: Howard, Needles Tammen & Bergendoff Consulting Engineers: 10/19/59

Approved By: [signature] Bridge Design Engineer 11/15/60

GENERAL NOTES

Rivets 7/8 except as noted

Holes 13/16 except as noted

End Distance 1 3/4 unless noted

Shop Paint Red Lead (Ark. Std.)

Contact Surfaces No Paint

Shop Inspection by

Field Connections Rivets

Drawn by T.P.

Checked by HK 9-59

Revisions

Arkansas State Highway Commission
Mississippi State Highway Commission

Mississippi River Bridge
Near Helena, Arkansas
Unit No. 3

Sold To: John F. Beasley Constr. Co.
Chicago, Illinois

JB6	2
JB9	2
JB15	2
JB16	4
JB17	4
JB19	4
JP20	2
JS12	4
JS10	4
JA12	2

Book No. 5

Shop Vincennes Steel Corp. Vincennes, Ind.

Div. of Industrial Enterprises, Inc.

Contr. No. 4800-T

Sh. 213 of

409

11/16 Ø HOLES REAM 15/16 Ø

16 @ 3" = 4'-0"

R-JP3

FILL R-JP5

6 @ 3" = 4'-0"

SLOT TOP R 1" x 3'-3"

FILL R-JP4

TOP R - 31" x 3/8 x 82'-3 3/8" - 2 REQ. - JP1 (C) (U.M)

76 SPC @ 5 1/2" = 34'-10"

7 @ 3" = 1'-9"

SLOT TOP R - 1" x 2'-2"

TOP

1R - 5 x 1/2 x 9'-10 1/2" - 4 REQ. - JP3 (C) (U.M.)

41'-11 15/16" R - 5 x 3/8 x 4'-3" - 4 REQ. - JP2 (C) (U.M.)

FILL R - 5 x 3/16 x 4'-3 1/2" - 4 REQ. - JP4 (C)

FILL R - 5 x 9/16 x 1'-3" - 4 REQ. - JP5 (C)

11/16 Ø HOLES REAM 15/16 Ø

2 R's - 68 3/4 x 5/8 x 7'-11 1/4 - 4 REQ. - JP6 (C)

2 L's - 4 x 4 x 3/8 x 4'-3 1/2" - 4 REQ. R/L - JP7 (C)

2 SPLICE R's - 16 x 3/8 x 4'-7 1/2" - 4 REQ. - JP8 (C) (U.M)

2 FILL R's - 16 x 5/16 x 2'-3 3/4" - 4 REQ. - JP9 (C) TACK WELD

2 TOP L's - 4 x 4 x 3/8 x 83'-11 7/8" - 4 REQ. R/L - JP10 (C)

2 WEB R's - 24 x 7/16 x 83'-11 7/8" - 4 REQ. - JP11 (C) (U.M)

N.S. R - J68

F.S. R - J69

FILL R - JD15 (N.S)

1'-7 1/8" 8/8 E²

2 L's - J616

E-J617

2 L's - J619

2 L's - 4 x 4 x 3/8 x 83'-11 7/8" - 4 REQ. R/L - JP12 (C)

7/8 Ø SHOP RIVETS F.S.

1R - 18 3/8 x 3/8 x 2'-0" - 6 - REQ. - JP20 (C)

DIAPHRAGM AT L37

SECTION - AA

NOTE

SEE SHOP NOTES SHEET 1.

2 L's - 4 x 4 x 3/8 x 4'-3 1/2" - 4 REQ. R/L - JP15 (C)

BOLT TO A209 & AA209

2 SPLICE R's - 23 x 3/8 x 3'-1 1/2" - 4 REQ. - JP13 (C) (U.M)

2 FILL R's - 3 x 5/16 x 1'-6 3/4" - 8 REQ. - JP14 (C) - TACK WELL

1R - 54 x 5/8 x 7'-1 1/2" - 2 REQ. - JP16 (C)

MILL

ONE LOWER CHORD AS SHOWN - A211

ONE LOWER CHORD TO PAIR - AA211

CONTINUED ON SHEET 212

FILL R - 31 x 1/8 x 3'-5 1/2" - 2 REQ. - JP17 (C)

BOTT. R - 31 x 1/2 x 83'-11 7/8" - 2 REQ. - JP18 (C) (U.M)

R-ja12

1R - 27 1/2" x 1/2" x 6'-5 1/2" - 2 REQ. - JP19 (C)

11/16 Ø HOLES REAM 15/16 Ø

10 @ 3 1/4" = 2'-8 1/2"

10 @ 3" = 2'-6"

5'-3 3/4"

76 SPC. @ 5 1/2" = 34'-10"

9 SPC. @ 3'-6" = 31'-6"

3'-5 3/16"

ELLIPTICAL HOLES

80 SPC. @ 5 1/2" = 36'-8"

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

DATE 10-19-59

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

APPROVED 10/19/59

L. P. Carlson

Bridge Design Engineer

GENERAL NOTES

Rivets 7/8" Ø except as noted

Holes 15/16" except as noted

End Distance 1 3/4" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by T.F.

Checked by T.K. 9-59

Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
- UNIT No. 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

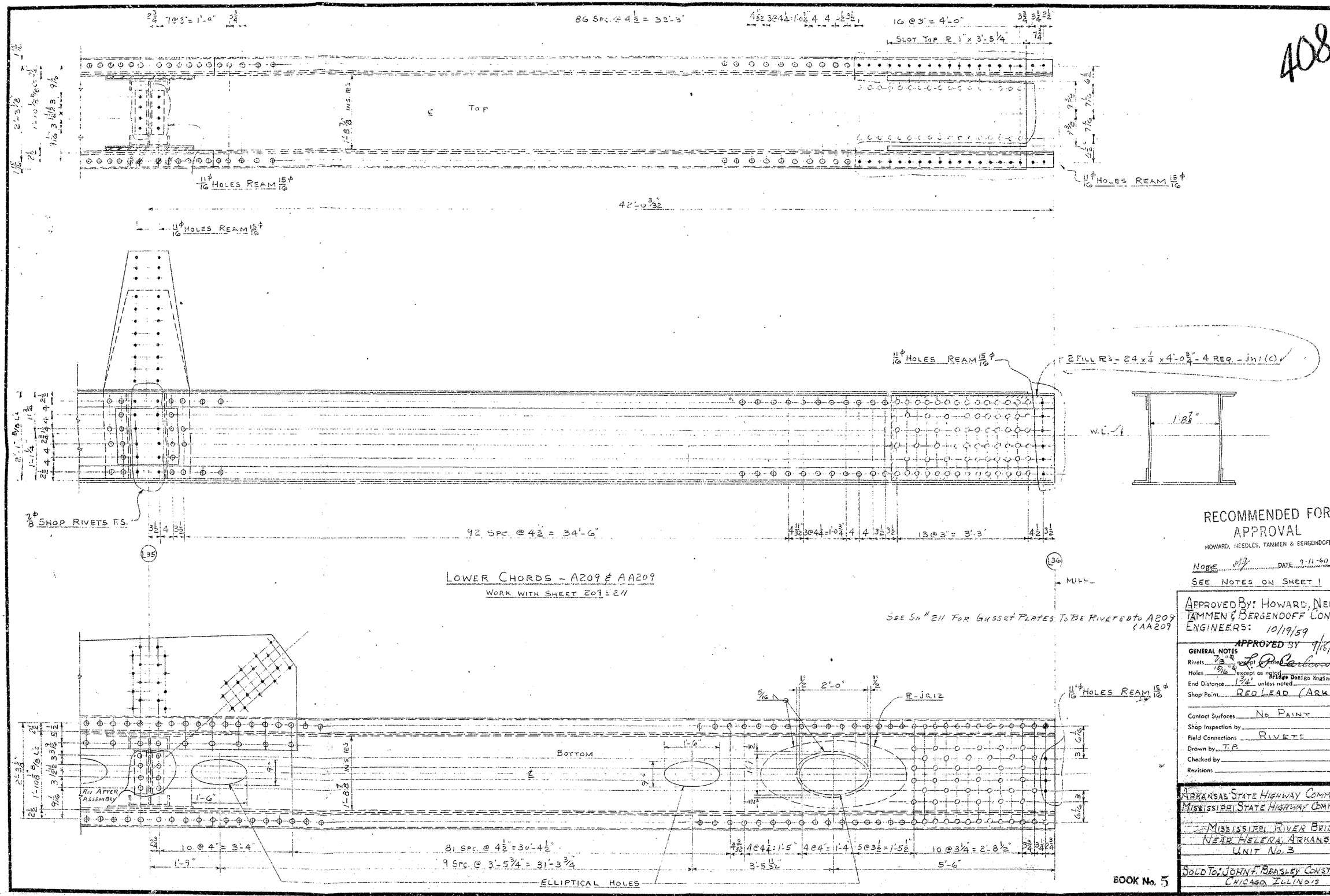
SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800

Sh. 211 of

(A)

408



Lower Chords - A209 & AA209

Work with Sheet 209 & 211

See Sh# 211 For Gusset Plates To Be Riveted to A209 & AA209

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
NOTE ... DATE 9-12-60
See Notes on Sheet 1

Approved By: Howard, Needles Tammen & Bergendoff Consulting Engineers: 10/19/59
APPROVED BY 9/18/60
L. P. Barbour
Bridge Design Engineer

General Notes
Rivets 7/8" ϕ except as noted
Holes 15/16 except as noted
End Distance 1 3/4" unless noted
Shop Paint Red Lead (Ark Std.)
Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivets
Drawn by T.P.
Checked by
Revisions

Arkansas State Highway Commission
Mississippi State Highway Commission
Mississippi River Bridge
Near Helena, Arkansas
Unit No. 3
Sold To: John F. Brasley Constr. Co.
Chicago, Illinois

BOOK No. 5

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800-T Sh. 210 of

407

87 Spc. @ 4½" = 32'-7½"

Top R-31 x 9/16 x 8'-2 11/16 - 2 REQ - JM11(C)(UM)

Slot Top R-1"x2'-2"

1R - 5 x ½ x 8'-7 - 4 REQ - JM3(A)

Fill R - 5 x 3/16 x 3'-5¾ - 4 REQ - JM4(C) TACK WELD

Fill R - 5 x ¾ x 3'-6¾ - 4 REQ - JM5(C)

2 R's - 13½ x ⅝ x 8'-9½ - 4 REQ - JM6(A)

2 Ls - 4 x 4 x ⅜ x 3'-6¼ - 4 REQ. R/L - JM8(C)

2 Ls - 4 x 4 x ⅜ x 3'-6¼ - 4 REQ R/L - JM9(C)

2 Top Ls - 4 x 4 x ⅜ x 84'-0 3/16 - 4 REQ R/L - JM11(C)

2 WEB R's - 24 x ⅝ x 84'-0 3/16 - 4 REQ - JM12(C)(UM)

2 Bott. Ls - 4 x 4 x ⅜ x 84'-0 3/16 - 4 REQ R/L - JM19(C)

⅞" Ship Rivets F.S.

2 Fill R's - 4 x ⅝ x 8'-4 - 4 REQ - JM17(C) TACK WELD

92 Spc. @ 4½" = 34'-6"

2 Fill R's - 16 x ⅛ x 2'-5¾ - 4 REQ - JM16(C) TACK WELD

2 Fill R's - 3 x ⅛ x 1'-11¼ - 8 REQ - JM17(C) TACK WELD

2 Splice R's - 23 x ⅜ x 3'-10½ - 4 REQ - JM18(A)

1R - 13½ x ⅜ x 3'-0 - 2 REQ - JM20(C)

1R - 32 x ½ x 6'-8 - 2 REQ - JM22(A)

Fill - 31 x 6 x 3'-9½ - 2 Req - JM21(C) TACK WELD

Botts. R - 31 x ⅝ x 84'-0 3/16 - 2 REQ - JM21(C)(UM)

42'-0 3/32

One Lower Chord As Shown - A209

One Lower Chord To Pair - AA209

Continued on Sheet 210

Fill R - JB15(N.S)

Fill R - JB16

Fill R - JB17

Section A-A

Splice Ls - 16 x ⅜ x 4'-11 - 4 Req - JM15(A)

Fill - 4 x 4 x ⅜ x 3'-7 - 4 Req - JM14(C)

Fill - 4 x 4 x ⅜ x 3'-3¾ - 4 Req - JM13(C)

Mill

Elliptical Holes

11/16 Holes Ream 15/16 ϕ

Recommended for Approval — Diaphragm at L35

Howard, Needles, Tammen & Bergendoff

Date 10-30-59

Note: See Note on Sheet 1

Approved by: Howard Needles Tammen & Bergendoff Consulting Engineers

General Notes

Rivets 7/8 ϕ except as noted

Holes 15/16 ϕ except as noted

End Distance 1¾ unless noted

Shop Point Reg. Dia. (See Sht)

Contact Surfaces N.C. Fin. (C)

Shop Inspection by APPROVED BY 10/27/59

Field Connections

Drawn by T.P.

Checked by T.C.

Revisions S.W.K. 12-13-59

L. P. Carlson Bridge Design Engineer

Arkansas State Highway Commission
Mississippi State Highway Commission

Mississippi River Bridge
Near Helena, Arkansas
Unit No. 3

Sold to: John E. Beasley Constr. Co.
Chicago, Illinois

Shop Vincennes Steel Corp., Vincennes, Ind.

Contr. No. 4800 Sh. 209 of

406

86 SPC. @ 4½" = 32'-3"

SLOT TOP PL. 1" x 2'-6½"

TOP

11/16" HOLES REAM 15/16"

42'-0¼"

11/16" HOLES REAM 15/16"

2 FILL PL's - 4" x 5/8" x 7¼" - 4 REQ - JOB 1 (1)

1¼" SHOP RIVETS F.S.

91 SPC. @ 4½" = 34'-1½"

11 @ 3" = 2'-9"

11/16" HOLES REAM 15/16"

MILL

LOWER CHORDS - A207 & AA207

WORK WITH SHEET 207

SEE SH# 207 FOR GUSSET PL TO BE RIVETED TO A207 & AA207

BOTTOM

ELLIPTICAL HOLES

81 SPC. @ 4½" = 30'-4½"

9 SPC. @ 3'-5½" = 31'-1½"

11/16" HOLES REAM 15/16"

PE-3A12.0.

5'-8½"

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY G.A. DATE 12-20-59

NOTE

SEE NOTES ON SHEET 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8" ø except as noted

Holes 15/16" except as noted

End Distance 1¼" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection APPROVED BY RIVETS 10/22/59

Field Connections

Drawn by T.P.

Checked by L.O. 12-59

Revisions 1 2 3 4 12-13-61

Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

CONTRACTORS INDUSTRIAL ENTERPRISES, INC.

Contr. No. 4800

Sh. 208 of

405

R-JJ13 — FILL R-JJ14 — SLOT. TOP R-1"x2'-10" — SLOT. TOP R-1"x2'-2"

1R-5"x3/8"x4'-3"-4 REQ.-JJ1(A)(U.M)

FILL R-6"x11/16"x2'-5 3/4"-4 REQ.-JJ4(A)

11/16" HOLES REAM 15/16"

1R-6"x1/2"x7'-8 3/4"-4 REQ.-JJ3(A)(U.M)

2 FILL R's-6 3/8"x3/8"x7'-9"-4 REQ.-JJ5(A)

TOP R-31"x3/4"x81'-0"-2 REQ.-JJ2(A)(U.M)

11/16" HOLES REAM 15/16"

42'-0 1/4"

SECTION-AA

2L's-4"x4"x1/2"x3'-4"-4 REQ. R/L-JJ6(C)

2L's-4"x4"x1/2"x3'-6 1/2"-4 REQ. R/L-JJ22(C)

2 FILL R's 4"x3/8"x7'-4 REQ.-JJ30(C)-TACK WELD

2 TOP L's-4"x4"x3/8"x84'-0 1/2"-4 REQ. R/L-JJ7(A)

2 WEB R's-24"x3/4"x84'-0 1/2"-4 REQ.-JJ8(A)(U.M)

2 FILL R's-24"x1/8"x2'-1 1/2"-4 REQ.-JJ14(C)

2 BOTT. L's-4"x4"x3/8"x84'-0 1/2"-4 REQ R/L-JJ9(A)

7/8" SHOP RIVETS F.S.

1 FILL R-JB15(N.S.)

2L's-JB16

L-JB17

2L's-JB17

11/16" HOLES REAM 15/16"

BOLT TO A204 & AA204

2L's-5"x5"x1/2"x3'-7 1/4"-4 REQ R/L-JJ21(C)

2L's-5"x5"x1/2"x3'-4 3/4"-4 REQ.-R/L-JJ10(C)

2 SPLICE R's-23"x5/8"x5'-0 1/2"-4 REQ.-JJ13(A)(U.M)

12 SPC. @ 4 1/2" = 34'-6"

2 SPLICE R's-14"x1/2"x6'-1 1/2"-4 REQ.-JJ15(A)(U.M)

2 FILL R's-14"x1/8"x3'-0 1/4"-4 REQ.-JJ11(C) TACKWELD

2 FILL R's-3"x1/4"x2'-5 3/4"-8 REQ.-JJ12(C) TACKWELD

1R-18 5/8"x3/8"x2'-0"-2 REQ.-JJ16(C)

DIAPHRAGM AT L33

ONE LOWER CHORD AS SHOWN-A207

ONE LOWER CHORD TO PAIR-AA207

CONTINUED ON SHEET 208

1R-57"x5/8"x8'-0"-2 REQ.-JJ17(A)

1R-32"x1/2"x7'-9"-2 REQ.-JJ18(A)

BOTT R-31"x3/4"x84'-0 1/2"-2 REQ-JJ19(A)(U.M)

BOTTOM

79 SPC. @ 4 1/2" = 29'-7 1/2"

9 SPC. @ 9'-5 1/2" = 31'-1 1/2"

ELLIPTICAL HOLES

11/16" HOLES REAM 15/16"

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY EKS DATE 10-13-59

APPROVED BY L.P. Carlson 10/19/59

Bridge Design Engineer

NOTE

SEE NOTE ON SHEET 1

APPROVED BY HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" except as noted

Holes 15/16" except as noted

End Distance 1 3/4" unless noted

Shop Paint RED OXIDE (SEE SPEC.)

Contact Surfaces NO PAINT

Shop inspection by

Field Connections RIVETS

Drawn by T.P.

Checked by JAK 7-5-59

Revisions

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE

NEAR HELENA, ARKANSAS

UNIT NO. 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.

CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

A SUBSIDIARY OF INDUSTRIAL ENTERPRISES, INC.

Contr. No. 4800

Sh. 207 of

(A)

404

64 SPC. @ 6" = 32'-0"

11 @ 3¼ = 2'-11¾"

SLOT TOP PL - 1" x 2'-10¾

TOP

11/16" HOLES REAM 15/16 ϕ

41'-0 7/32"

2 FILL PL - 4" x ¾" x 7" - 4 REQ'D IN L2(1)

2 FILL PL - 24" x ⅜" x 3'-11" - 4 REQ'D IN L2(1)

7/8" ϕ SHOP RIVETS EXC.

69 SPC. @ 6" = 34'-6"

11/16" HOLES REAM 15/16 ϕ

(L31)

(L32)

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

NOTE BY ____ DATE ____

SEE NOTE ON SHEET 1

LOWER CHORDS - A204 & AA204

WORK WITH SHEET 204 & 205

MILL

SEE SHEET # 204 FOR GUSSET PLS TO BE RIVETED ON A & AA 204 @ POINT # L32

APPROVED BY: HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 10/19/59

APPROVED BY L. P. Carlson Bridge Design Engineer

GENERAL NOTES

Rivets 7/8" ϕ except as noted

Holes 15/16" except as noted

End Distance 1¾" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces No Paint

Shop Inspection by

Field Connections RIVET

Drawn by T.P.

Checked by FFK 7-59

Revisions

BOTTOM

℄

RIV. AFTER ASSEMBLY

ELLIPTICAL HOLES

14 SPC. @ 3¼ = 3'-9½"

60 SPC. @ 6" = 30'-0"

9 @ 3'-5¼" = 30'-11¼"

1'-9"

1'-6

3'-3 31/32"

6'-0"

5/16

½

2'-0"

½

PL - 1212 a

11/16" HOLES REAM 15/16 ϕ

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE

NEAR HELENA, ARKANSAS

UNIT NO 3

SOLD TO: JOHN T. EDWARDS CONSTR. CO.

CHICAGO, ILLINOIS

BOOK No. 5

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

DIV. OF INDUSTRIAL METAL PRODUCTS, INC. Sh. 206 of

Contr. No. 4838-F

403

Top PL - 33" x 11/16 x 77'-6 21/32" - 2 REQ. - J91 (A) (U.M.)

PL - 5 x 3/8 x 4'-3" - 4 REQ. - J32 (A) (U.M.)

11/16" HOLES REAM 15/16" SHOP RIVET AFTER ASSEMBLY

SLOT TOP PL 1/8 x 1'-1"

42'-0 3/16"

17'-0"

9'-10 1/2"

7'-1 1/2" END OF LS & J37

5'-6 3/4" END OF PLs - J35 - J91 & J34

4'-0" END OF Ls - J33 & J38 & O.S. PL - J94

2 Top Ls - 5 x 5 x 1/2 x 80'-0 13/32" - 4 REQ. L/L - J93 (A)

2 O.S. PLs - 14 x 1/2 x 38'-9 7/16" - 4 REQ. - J94 (A) (U.M.)

2 WEB PLs - 24 x 3/4 x 78'-5 21/32" - 4 REQ. - J95 (A) (U.M.)

2 FILL PLs - 24 1/4 x 1/4 x 2'-1 1/2" - 4 REQ. - J96 (C)

2 I.S. PLs - 24 x 3/4 x 9'-10 1/2" - 4 REQ. - J97 (A) (U.M.)

11/16" HOLES REAM 15/16" SHOP RIVET AFTER ASSEMBLY

2 O.S. SPLICE PLs - J85

2 I.S. SPLICE PL - J86

7/8" SHOP RIVETS E.S.

PL - 18 5/8 x 5/8 x 2'-0" - 2 REQ. - J311 (C)

2 BOTT. Ls - 5 x 5 x 1/2 x 80'-0 13/32" - 4 REQ. L/L - J98 (A)

LOWER CHORDS - A204 & AA204

WORK WITH SHEETS 204 & 206 & 207

Bott. PL - 33" x 3/4 x 78'-5 21/32" - 2 REQ. - J99 (A) (U.M.)

PL - J91 2a

1R - 35 x 1/2 x 8'-1 1/2" - 2 REQ. - J310 (A)

ELLIPTICAL HOLES

DIAPHRAGM AT L31

SECTION A-A

RECOMMENDED FOR APPROVAL
HOWARD NEEDLES TAMMEN & BERGENDOFF
BY E.R.S. DATE 10-13-59

NOTE
SEE NOTE ON SHEET 1

APPROVED BY HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" except as noted
Holes 11/16" except as noted
End Distance 1" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by T.P.
Checked by FJK 9-59
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT #5

SOLD TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

APPROVED BY L.P. Carlson
Bridge Design Engineer
10/19/59

SHOP VINCENNES STEEL CORP. VINCENNES, IND. BY INDUSTRIAL ENTERPRISES INC. Contr. No: 4480 Sh. 205 of

A

402

SECTION - BB

SECTION - CC

SECTION - DD

SECTION - EE

SECTION - FF

SECTION - AA

DETAIL - A

ONE LOWER CHORD AS SHOWN A204

ONE LOWER CHORD TO PAIR AA204

CONTINUED ON SHEET 205 & 206

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS; 10/22/59 APPROVED BY L P Carlson Bridge Design Engineer

GENERAL NOTES
Rivets 7/8 ϕ except as noted
Holes 15/16 except as noted
End Distance 1 3/4 unless noted
Shop Point RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by RECOMMENDED FOR APPROVAL
Field Connections RIVETS
Drawn by T.P.
Checked by T.P. HOWARD, NEEDLES, TAMMEN & BERGENDOFF
Revisions C.W.K. 10-13-59
BY [illegible] DATE 9-12-60

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO
CHICAGO, ILLINOIS

BOOK No. 5

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800-T Sh. 204 of

401

11 HOLES REAM 15/16

1L - 8 x 4 x 3/4 x 3'-2 3/4" - 8 REQ. PL - je1(A)

SLOT TOP PL 1 3/4 x 1'-7"

11/16 HOLES REAM 15/16

42'-0 3/16"

26'-0"

2L - 3 x 3 x 3/4 x 4'-2" - 8 REQ. PL - je2 (A)

L 5"-3 3/4" END OF WEB PLS - Je1 & Top & Bott. PL - Je3 & Je23

4'-0 END OF L's - Jd11 & Jd18 & PL - Je17

11/16 HOLES REAM 15/16

W.L. ℄

1/8 SHOP RIVETS F.S.

2 I.S. R's - 24 x 3/4 x 18'-10 1/2" - 4 REQ. - je4 (A) (U.M.)

I.S. R - je4

Je2
Je5

2 I.S. SPLICE PL's - 24 x 1/16 x 6'-5 3/4 - 2 REQ. - Je5A (U.M.)

29 SPC. @ 6" = 14'-6"

28 @ 6" = 14'-0"

Note
SEE NOTES ON SHEET 1

(L29)

LOWER CHORDS - A202 & AA202

WORK WITH SHEET 202

(L30)

2 I.S. SPLICE PL's - 24 x 1/2 x 5'-11 3/4 - 8 REQ. - Je6 (A) (U.M.)

R - ja12a

BOTTOM

11/16 HOLES REAM 15/16

52 SPC. @ 6" = 26'-0"

7 @ 3'-5 1/2" = 24'-2 1/2"

3'-5 11/16"

ELLIPTICAL HOLES

12'-7"

APPROVED BY
L. P. Carlson
Bridge Design Engineer
10/14/59

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY TPS DATE 10-13-59

Je1	4
Je2	4
Je5	4

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8 ϕ except as noted
Holes 15/16 ϕ except as noted
End Distance 1 1/2" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by JF
Checked by TK 9-59
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT "B"

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4480 Sh. 203 of (A)

400

SPLICE PL - Jd4

FILL PL - Jd3

SLOT TOP PL - 1 x 2'-5½

TOP PL - 33 x 11/16 x 77'-9 7/8" 2 REQ. - Jd2 (A) (U.M.)

65 SPC. @ 6" = 32'-6"

SLOT TOP PL - 1 x 2'-8"

PL - 5 x 3/8 x 3'-8 - 4 REQ. - Jd1 (A)

FILL PL - 6 x 11/16 x 3'-7½" - 4 REQ. - Jd3 (A)

11/16 HOLES REAM 15/16

SPLICE PL - 6 x 3/4 x 9'-9" - 4 REQ. - Jd4 (A)

42'-0 3/16"

11/16 HOLES REAM 5/8

N.S. PL - 25½ x 5/8 x 5'-3 5/8" - 4 - REQ. - Jd13 (C)

E.S. PL - 25½ x 5/8 x 4'-4 5/8" - 4 - REQ. - Jd14 (C)

11/16 HOLES REAM 5/8

SECTION - AA

2 PL's - 63/8 x 5/8 x 8'-6" - 4 REQ. - Jd5 (A)

2 L's - 4 x 4 x 3/8 x 3'-11¾" - 4 REQ. R/L - Jd6 (C)

2 SPLICE PL's - 23 x 7/8 x 6'-0" - 4 REQ. Jd7 (A)

2 SPLICE PL's - 14 x 1/2 x 7'-6" - 4 REQ. - Jd8 (A)

2 L's - 4 x 4 x 3/8 x 4'-2½" - 4 REQ. R/L - Jd9 - (C)

2 FILL PL's - 24 x 1/8 x 4'-3" - 4 REQ. - Jd10 (C)

2 TOP PL's - 5 x 5 x 1/2 x 80'-0 3/8" - 4 REQ. R/L - Jd11 (A)

2 WEB PL's - 24 x 3/4 x 78'-5 5/8" - 4 REQ. - Jd12 (A) (U.M.)

2 FILL PL - 24 x 1/8 x 2'-1½" - 4 REQ. - Jd3 - (C)

2 L's - 12" @ 15.3 x 2'-0" - 8 REQ. - Jd15 (C)

1 PL - 1'-8 x 3/8 x 2'-0" - 2 - REQ. - Jd16 (C)

2 L's - Jd17

2 SIDE PL's - 14 x 1/2 x 38'-7 1/16" - 4 REQ. - Jd17 (A)

2 BOTT. L's - 5 x 5 x 1/2 x 80'-0 3/8" - 4 REQ. R/L - Jd18 (A)

66 SPC. @ 6" = 33'-0"

2 L's - 4 x 4 x 3/8 x 2'-1¼" - 4 REQ. R/L - Jd19 (C)

2 L's - 4 x 4 x 3/8 x 3'-11¾" - 4 REQ. R/L - Jd20 (C)

BOLT TO TOP OF A... AA200

MILL

1 PL - 57¼ x ½ x 8'-0" - 2 REQ. - Jd21 (A)

1 PL - 36½ x ¾ x 8'-6" - 2 REQ. - Jd22 (A)

ONE LOWER CHORD AS SHOWN - A202

ONE LOWER CHORD TO PAIR - AA202

CONTINUED ON SHEET 203

BOTT. PL - 33 x ¾ x 78'-5 5/8" - 2 REQ. - Jd23 (A) (U.M.)

R - Jd12a

BOTTOM

ELLIPTICAL HOLES

11/16 HOLES REAM 15/16

5'-11¾"

3'-4 3/16"

60 SPC. @ 6" = 30'-0"

95 PC. @ 3'-5¼" = 30'-11¼"

14 @ 3¼" = 3'-9½"

1'-9"

10 @ 3" = 2'-6"

5 @ 3½" = 1'-5½"

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY [signature] DATE 10-20-59

SEE NOTE

ADDROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS.

GENERAL NOTES

Rivets 7/8" except as noted

Holes 13/16" except as noted

End Distance 1¼" unless noted

Shop Paint RED LEAD (ALK. SOLV.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connect APPROVED BY 10/22/59

Drawn by T.P.

Checked by L.D. Carlson

Revisions [illegible] 10-19 Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE

NEAR HELENA, ARKANSAS

UNIT NO. 3

SOLD TO: JOHN F. BEASLEY CONSTR. CO.

CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

CONTR. No. 4308 Sh. 202 of

399

LOWER CHORD - A200 & AA200
WORK WITH SHEET 200

BOTTOM

ELLIPTICAL HOLES

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARCH. SPEC.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections FRICTION
Drawn by T.P.
Checked by TPK 9-59
Revisions

APPROVED BY 10-1-59
L P Carlson
Bridge Design Engineer

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
Contr. No. 4202 Sh. 201 of

A.H.D.

ROLL : 745

BRG. 2899

398

15 Spcs @ 3'-5" = 51'-3" - STAGGERED ELLIPTICAL HOLES

PLTS. 14 × ½ × 2'-7" - 4 REQ. b f 3 (A)

L 3½ × 3½ × 3/8 × 4'-3½" - 4 REQ. b f 2 (C)

PUNCH 11/16"ø
REAM 15/16"ø

PL ½ × 2'-1" - 4 REQ b f 4 (A)

L 3½ × 3½ × 3/8 × 2'-3½" - 4 REQ - b f 2 (C)

PUNCH 11/16"ø
REAM 15/16"ø

PL. 7 8/16 × 5/8 × 6'-8¾" - 4 REQ. b f 1 (A)

L - b f 2

PL. b f 3

PL. b f 4

PL. b f 6

PL. b f 1

L. b f 3

SECTION - AA - WORK WITH SH "49 & 51

SECTION - BB - WORK WITH SH "49 & 51

MATCH LINE

SEE NOTE - SH "1

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY VEA DATE 8-26-59

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF - CONSULTING ENGINEERS:

APPROVED 8/31/59
L. P. Carlson
Bridge Design Engineer

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by: V.T. - 3-18-59
Checked by: dly
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

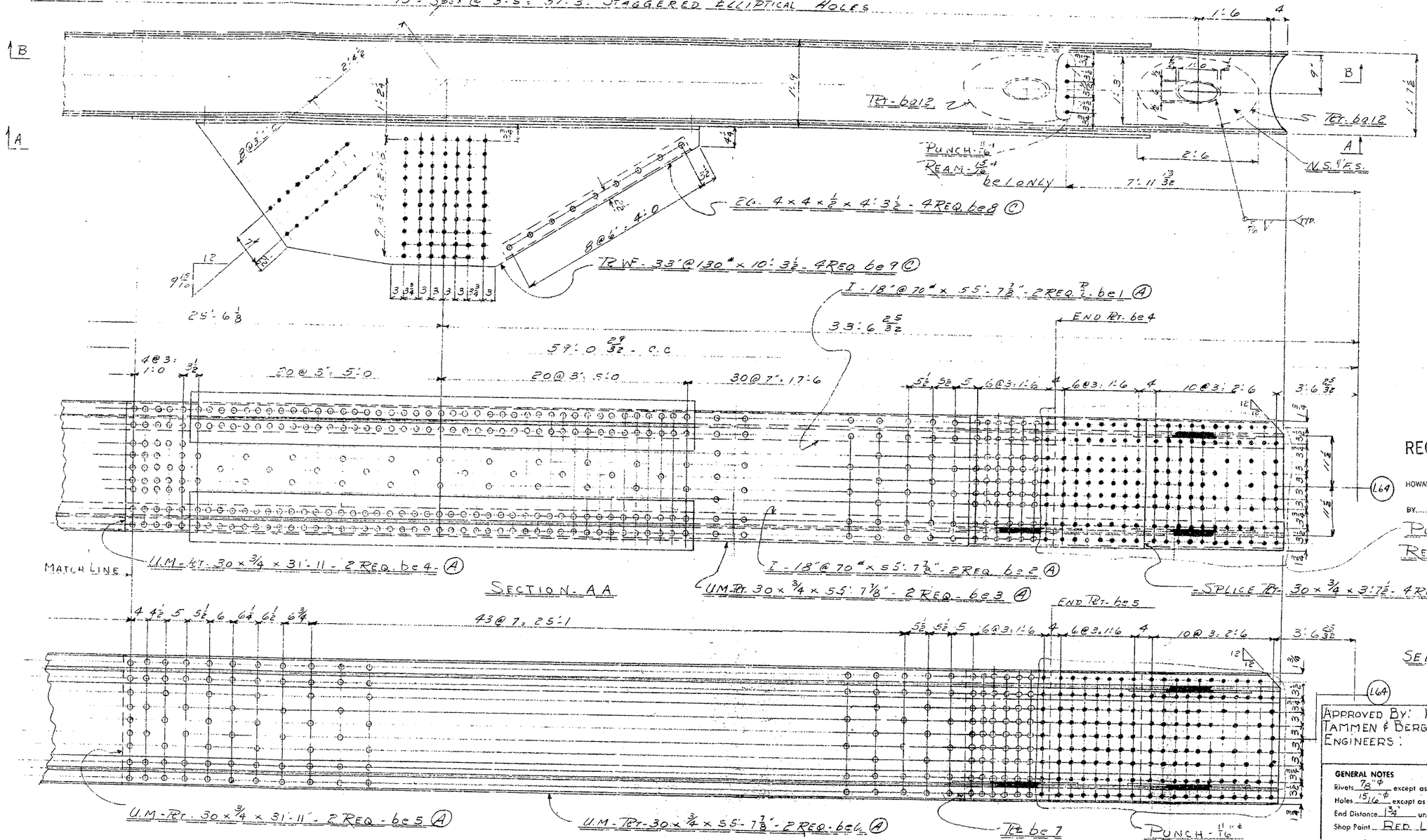
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.
Contr. No. 4800
Sh. 50 of

397

15 - Spcs @ 3'-5" = 51'-3" STAGGERED ELLIPTICAL HOLES



SECTION - A A

SECTION - B B

ONE - DIAGONAL AS SHOWN - A49
ONE - DIAGONAL - TO PAIR - AA49

CONTINUED ON SH. #50

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY V.E.A. DATE 8-21-59

APPROVED BY 8/31/59
L. P. Carlson
Bridge Design Engineer

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS.

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T. - 3-17-59
Checked by
Revisions

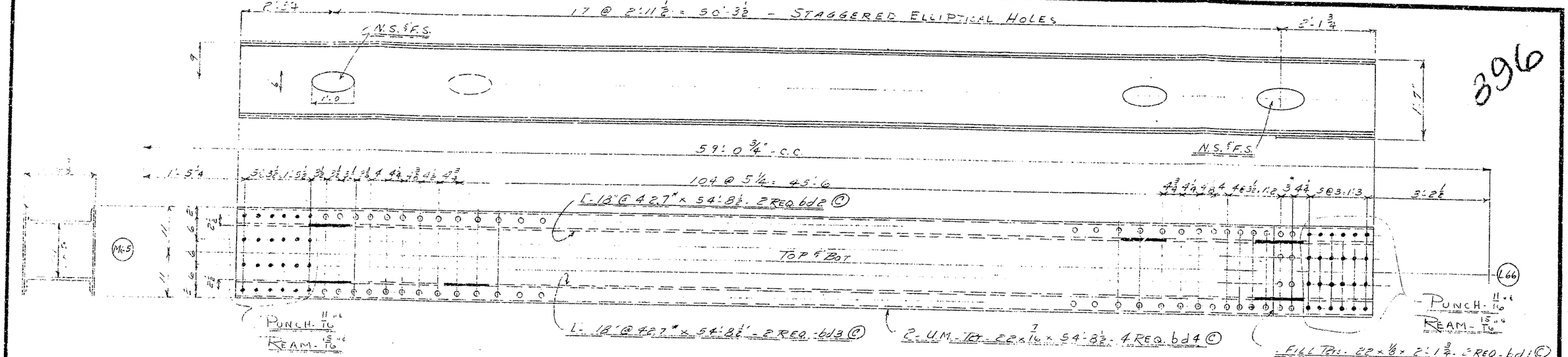
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

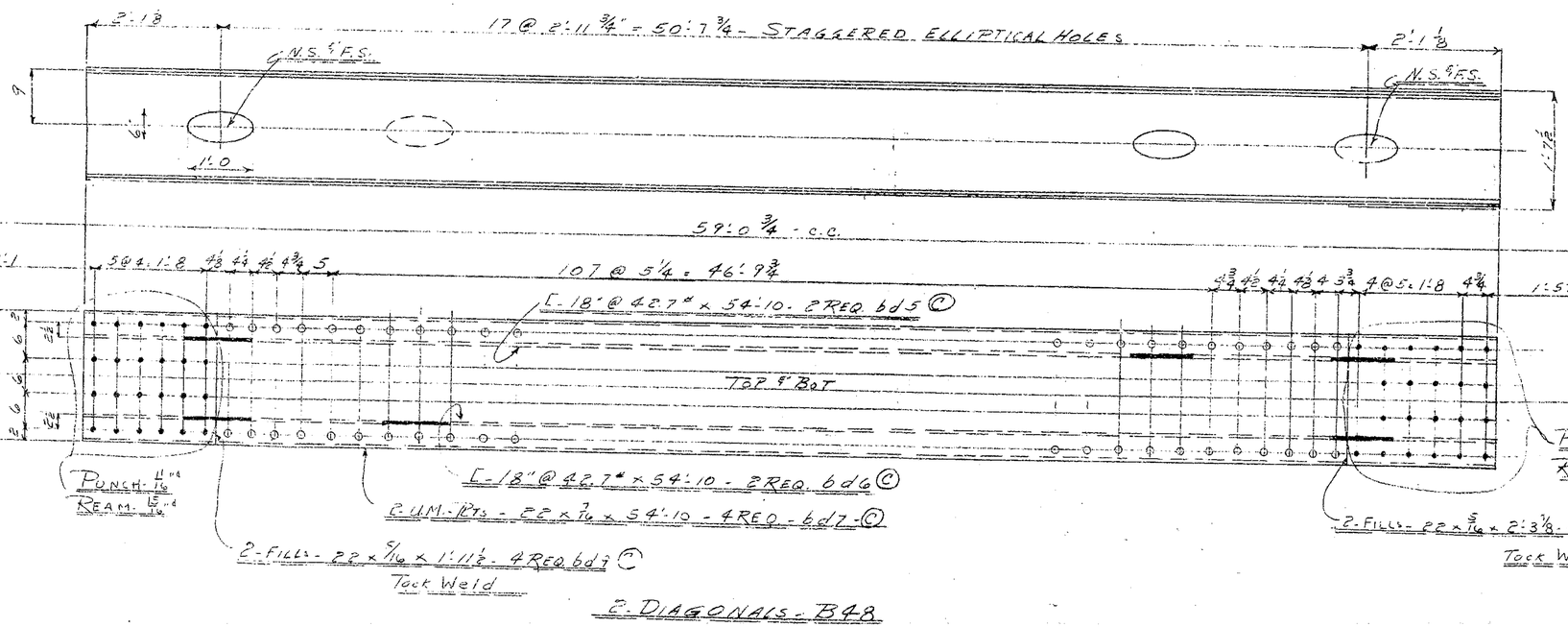
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENGINEERS, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 49 of

396





RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY VEA DATE 8-26-59

SEE NOTE - Sh. 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T. - 3-16-59
Checked by amy
Revisions

APPROVED BY 8/21/59
L.P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 48 of

395

15 @ 3'-6 = 52'-6 - STAGGERED ELLIPTICAL HOLES

NS & FS

Punch 11/16"
Ream 15/16

PL WF 21" @ 94" x 7'-3½" - 6 REQ. bc1 Ⓒ 1'

I-18" @ 70" x 56' 6⅞" - 2 REQ. bc4 Ⓐ 1'

UM-PL - 30 x ⅝ x 56'-6⅞" - 2 REQ. bc2 1' Ⓐ

I-18 @ 70" x 56'-6⅞" - 2 REQ. bc3 Ⓐ 1'

SECTION - AA

UM-PL - 30 x ⅝ x 56'-6⅞" - 2 REQ. bc5 - Ⓐ 1'

SECTION - BB

2 DIAGONALS — A47

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 9-7-60
APPROVED BY 9/8/60
L.P. Carlson
Bridge Design Engineer

APPROVED HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 8/31/59

GENERAL NOTES
Rivets 7/8"ϕ except as noted
Holes 15/16 ϕ except as noted
End Distance 1¾" unless noted
Shop Point RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T. - 3-13-59
Checked by alh
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE NEAR HELENA, ARKANSAS UNIT-No. 5
SOLD TO: JOHN T. BEASLEY CONSTR. CO. CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800-T Sh. 47 of

15 Spcs @ 3'-5¼" = 51'-6¾" STAGGERED ELLIPTICAL HOLES

2'-3⅛" (M165)

2 PLTS. - 14 × ½ × 2'-1" - 8 REQ. 664 (A)

394

PL. 60 12

N.S. & F.S.

C.S. 6⅛

59'-0 9/32 - C.C.

MILL MILL

59'-0 7/32 C.C.

18 Spcs @ 6½" = 9'-9"

6 6¼ 5½ 5½ 5¼ 5 5/16 5 4¾ 4½ 3 7/16 6@3½" = 1'-9 3½ 4@3 1/16" = 1'-0 1½ 1¾ 4@3" = 1'-0 3½ 3 4@3¼" = 1'-1¼

12

11⅞

PUNCH - 11/16"

REAM - 15/16"

PL. 16 × ½ × 2'-7" - 4 REQ. - 663 (A)

UNIT PL. - 30 × ⅝ × 18'-5½" - 4 REQ. - 661 (A)

PL. 78 7/16 × ⅝ × 6'-1 1/16" - 4 REQ. - 662 (A)

SECTION - AA - WORK WITH SH. #45 & 47

MATCH LINE

18 Spcs @ 6½" = 9'-9"

6 6¼ 5¾ 5½ 5¼ 5 5/16 5 4¾ 4½ 3 7/16 6@3½" = 1'-9 3½ 4@3 1/16" = 1'-0 1¾ MILL

PL-661

PL-662

PL-663

SECTION - BB - WORK WITH SH. #45 & 47

APPROVED BY 8/31/57

L. B. Carlson

Bridge Design Engineer

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY VEA DATE 8-26-57

SEE NOTE - SH. 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS;

GENERAL NOTES

Rivets 7/8" ϕ except as noted

Holes 15/16" ϕ except as noted

End Distance 1¾" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by V.T. - 3-13-59

Checked by ALL

Revisions

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE NEAR HELENA, ARKANSAS UNIT NO. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO. CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES INC. VINCENNES, IND.

Contr. No. 4800 Sh. 46 of

393

15 Spcs @ 3'-5¼" = 51'-6¾" STAGGERED ELLIPTICAL HOLES

PL 15 x ⅜ x 2'-6" - 144 REQ'D - ba12 (A)

2 @ 5¾" = 2'-10"

PL 4 x 4 x ½ x 4'-1⅜" - 4 REQ'D - ba11 (C)

2 @ 3" = 2'-10"

5 PL W - 33'-5 13/16" x 10'-3½" - 4 REQ'D - ba10 (C)

33'-0 15/32"

59'-0 29/32" C.C.

25'-6⅜" c to c Spans

20 @ 3" = 5'-0

31 @ 6" = 15'-6

20 @ 3" = 5'-0

MATCH LINE

I-18" @ 70" x 55-7⅞" - 2 REQ'D - ba8 (A)

UM-PL 30 x ¾ x 36'-11¾" - 2 REQ'D - ba1 (A)

UM-PL 30 x ½ x 33'-10¾" - 2 REQ'D - ba2 (A)

FILL PL 22 x ¼ x 2'-6" - 4 REQ'D - ba3 (A)

INSIDE SPLICE PL 16 x ½ x 2'-7" - 4 REQ'D - ba7 (A)

END - 30 x ½ T

END - 30 x ¾ PL

END - 30 x ⅝ PL

SECTION - A A

SPLICE PL - 30 x ½ x 3'-1⅝" - 4 REQ'D - ba4 (A)

MILL PLTS MILL

SEE - NOTE - SH. #1

PL - ba9

UM-PL 30 x ¾ x 36'-11¾" - 2 REQ'D - ba5 (A)

FILL - ba3

UM-PL 30 x ½ x 33'-10¾" - 2 REQ'D - ba6 (A)

PL - ba7

FILL - ba13

PUNCH ¹¹/₁₆"
REAM 15/16"

SECTION - BB

ONE - DIAGONAL AS SHOWN - A45
ONE - DIAGONAL TO PAIR - AA45

} CONTINUED IN SH'S 46 & 47

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
VEA 5-24-57

I-18" @ 70" x 55-7⅞" - 2 REQ'D - ba8 (A)

FILL PL 19 x ⅛ x 2'-6" - 4 REQ'D - ba15 (A)

APPROVED BY 8/21/57
L P Carlson
Bridge Design Engineer

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS.

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1¼" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T. - 3-11-57
Checked by
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800 · Sh. 45 of

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 8/31/59

GENERAL NOTES

Rivets 7/8"φ except as noted
Holes 15/16"φ except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T. - 3.6.59
Checked by AU.
Revisions 9/16/59

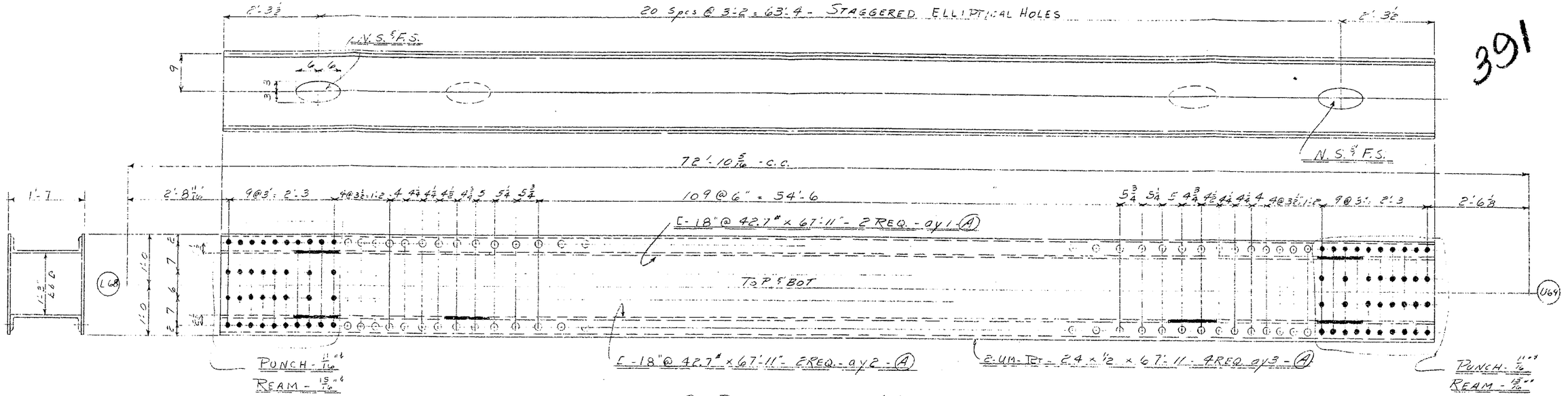
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 5

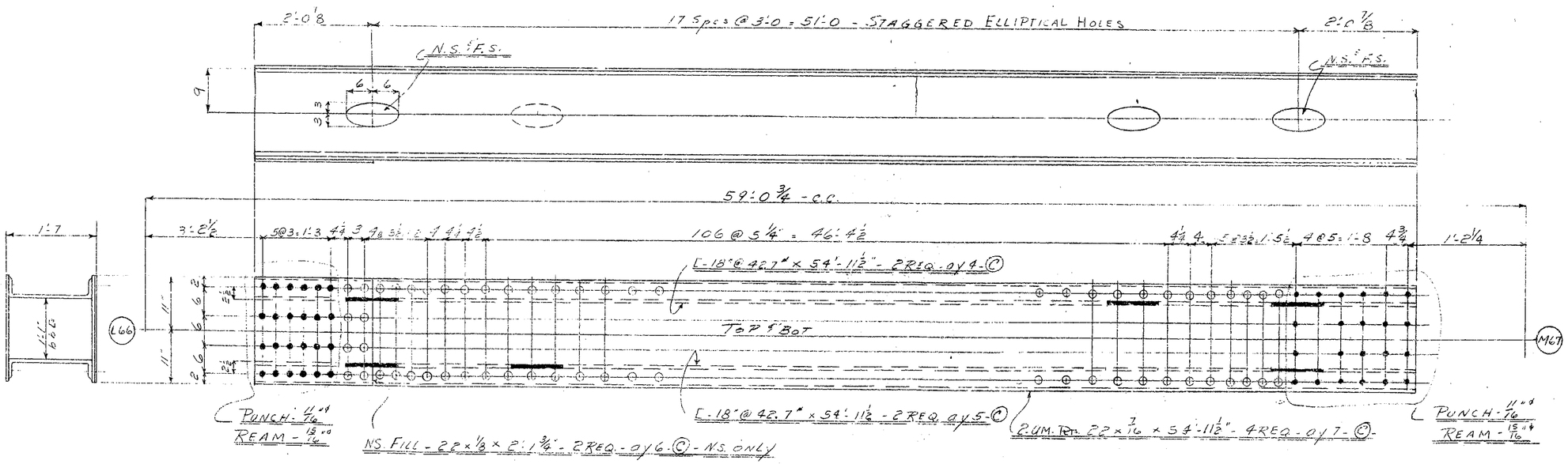
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND. Contr. No. 4800-T Sh. 44 of

391



2 - DIAGONALS - A43



2 - DIAGONALS - B43

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY VEA DATE 8-26-57
SEE NOTE - SH. #1

APPROVED BY 8/21/57
L.P. Carlson
Bridge Design Engineer

APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS.

GENERAL NOTES

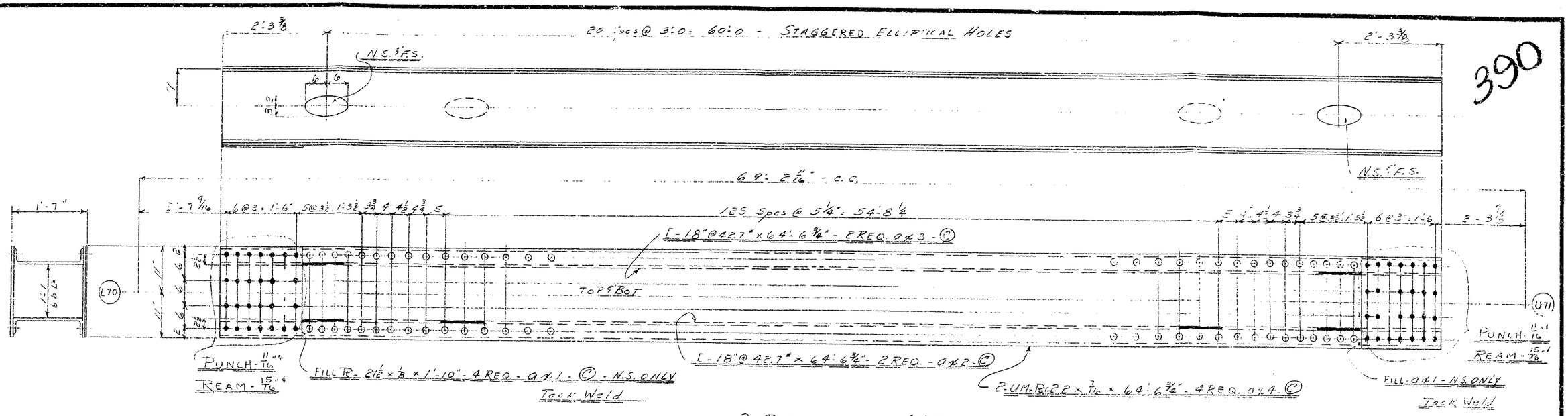
Rivets 7/8"ø except as noted.
Holes 15/16"ø except as noted.
End Distance 1¾" unless noted.
Shop Paint: RED LEAD (ARK. STD.)
Contact Surfaces No PAINT.
Shop Inspection by
Field Connections RIVETS
Drawn by V.T - 3-5-57
Checked by alf.
Revisions

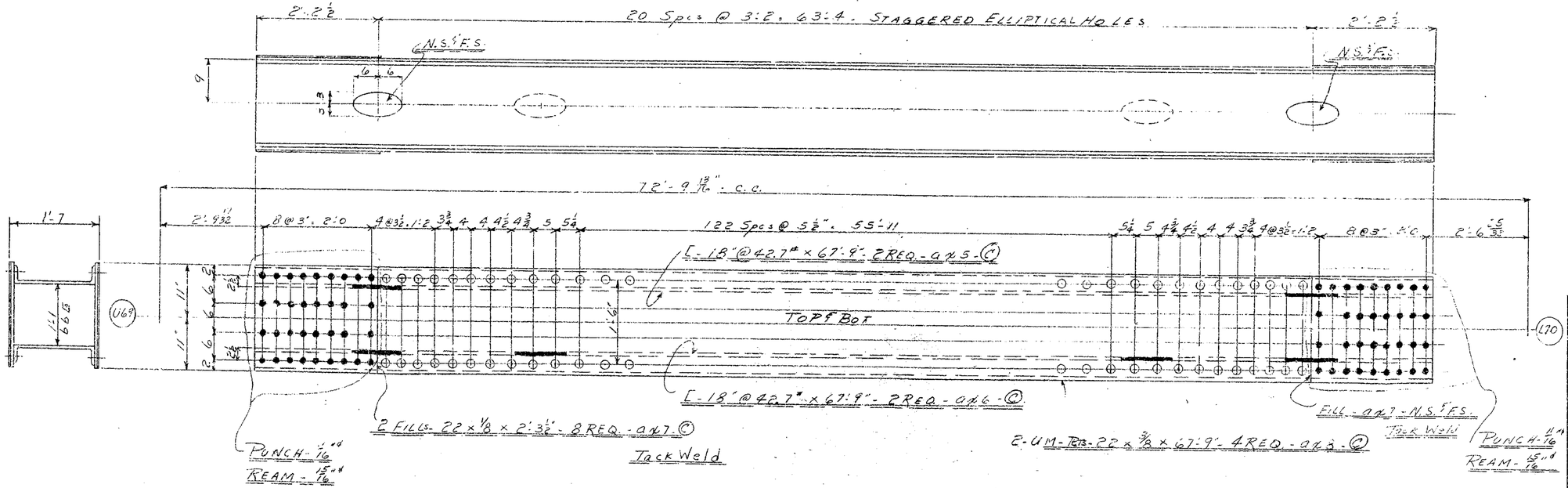
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.
Contr. No. 4800 Sh. 43 of





RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY H.F.C. DATE 8-25-59

SEE NOTE - SH" 1

APPROVED BY 8/31/59
L. V. Carlson
Bridge Design Engineer

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

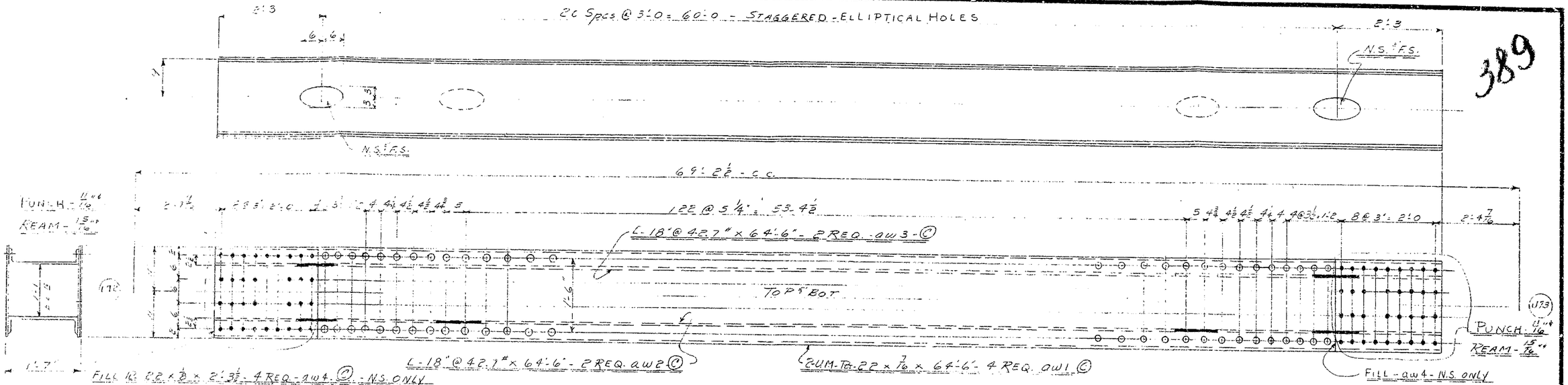
Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T. - 3-4-59
Checked by ALL
Revisions 8/31/59 - B42

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

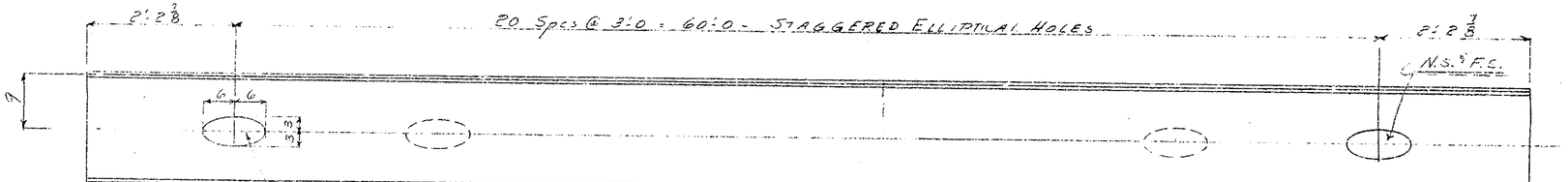
MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT No. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

389



2 - DIAGONALS - A41



2 - DIAGONALS - B41

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY VEA DATE 8-24-59

SEE NOTE: SH# 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T. - 3-3-59
Checked by VEA
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT No. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

APPROVED BY 8/31/59
L.P. Carlson
Bridge Design Engineer

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

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Contr. No. 4800 Sh. 41 of

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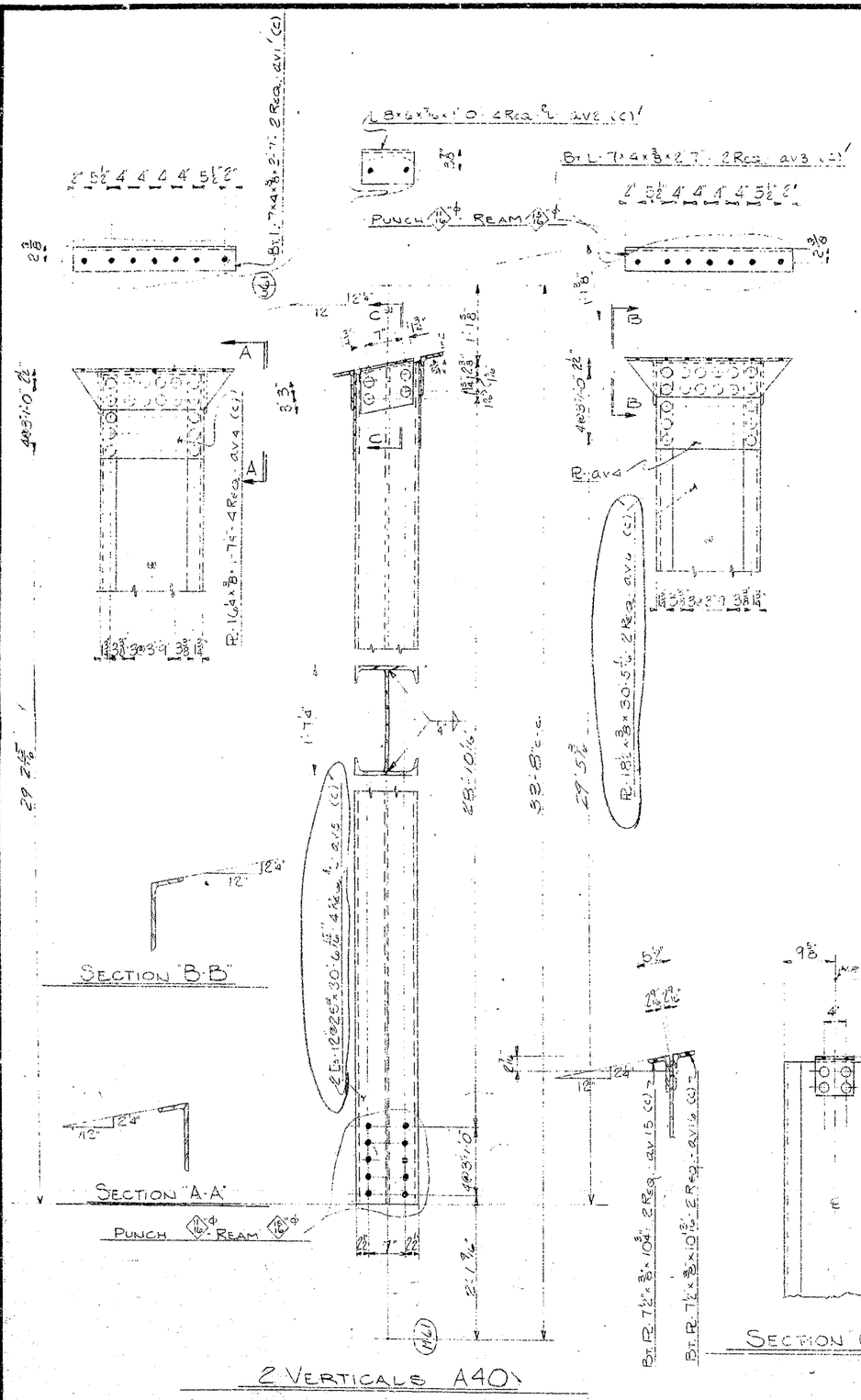
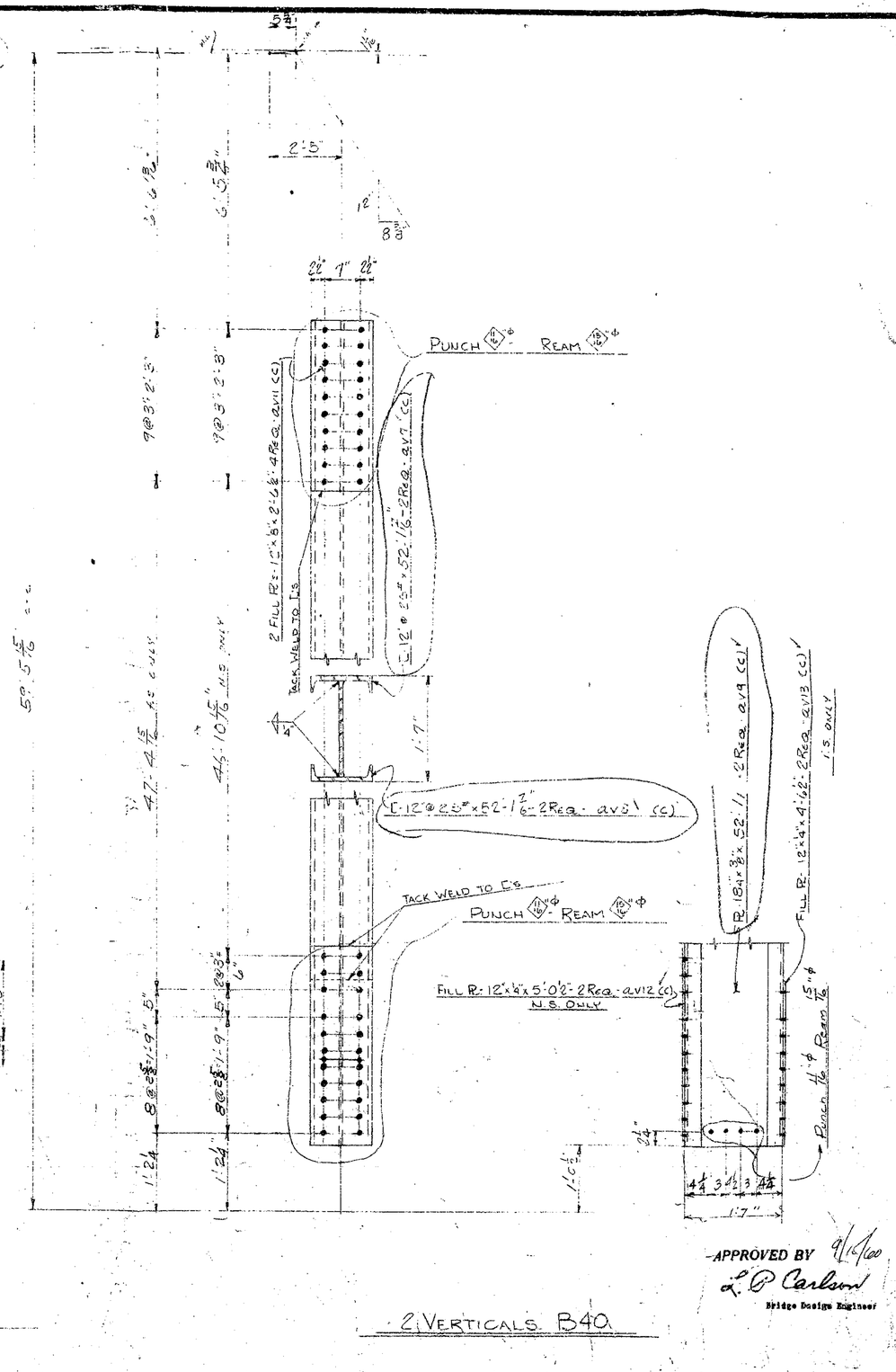




APPROVED BY 9/16/60
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY RGC DATE 9-9-60

SEE NOTE: SH #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
8/31/59

GENERAL NOTES

Rivets 3/4" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 1/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by KWC 5-24-59
Checked by AWG.
Revisions

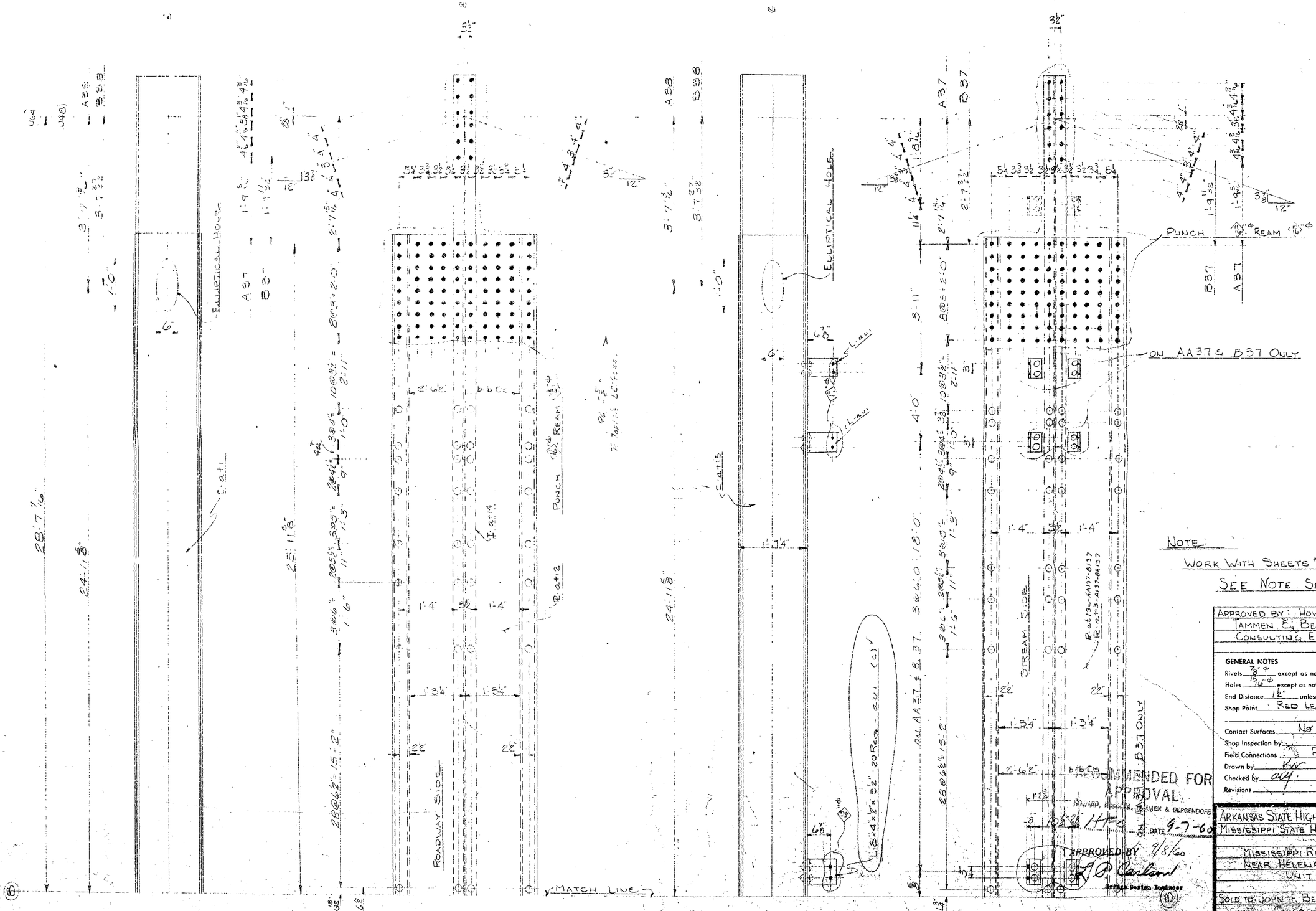
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT #5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CO. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800-T Sh. 40 of

387



NOTE:

WORK WITH SHEETS #37 & #38

SEE NOTE SH. #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
8/31/59

GENERAL NOTES

Rivets 7/8" ϕ except as noted /
Holes 15/16" ϕ except as noted
End Distance 1/2" unless noted
Shop Point RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by KW 3-23-59
Checked by AM
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT # 5 14

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

AMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
DATE 9-7-60

APPROVED BY 9/8/60
L. P. Garland
Bridge Design Engineer

SHOP: VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.

Contr. No. 4866-T Sh. 39 of

386

SECTION "A-A"

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY F.R.S. DATE 10-22-59

NOTE:
WORK WITH SHEETS # 37 & 39.
SEE NOTE SH. "1"

APPROVED BY: HOWARD, NEEDLES
TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

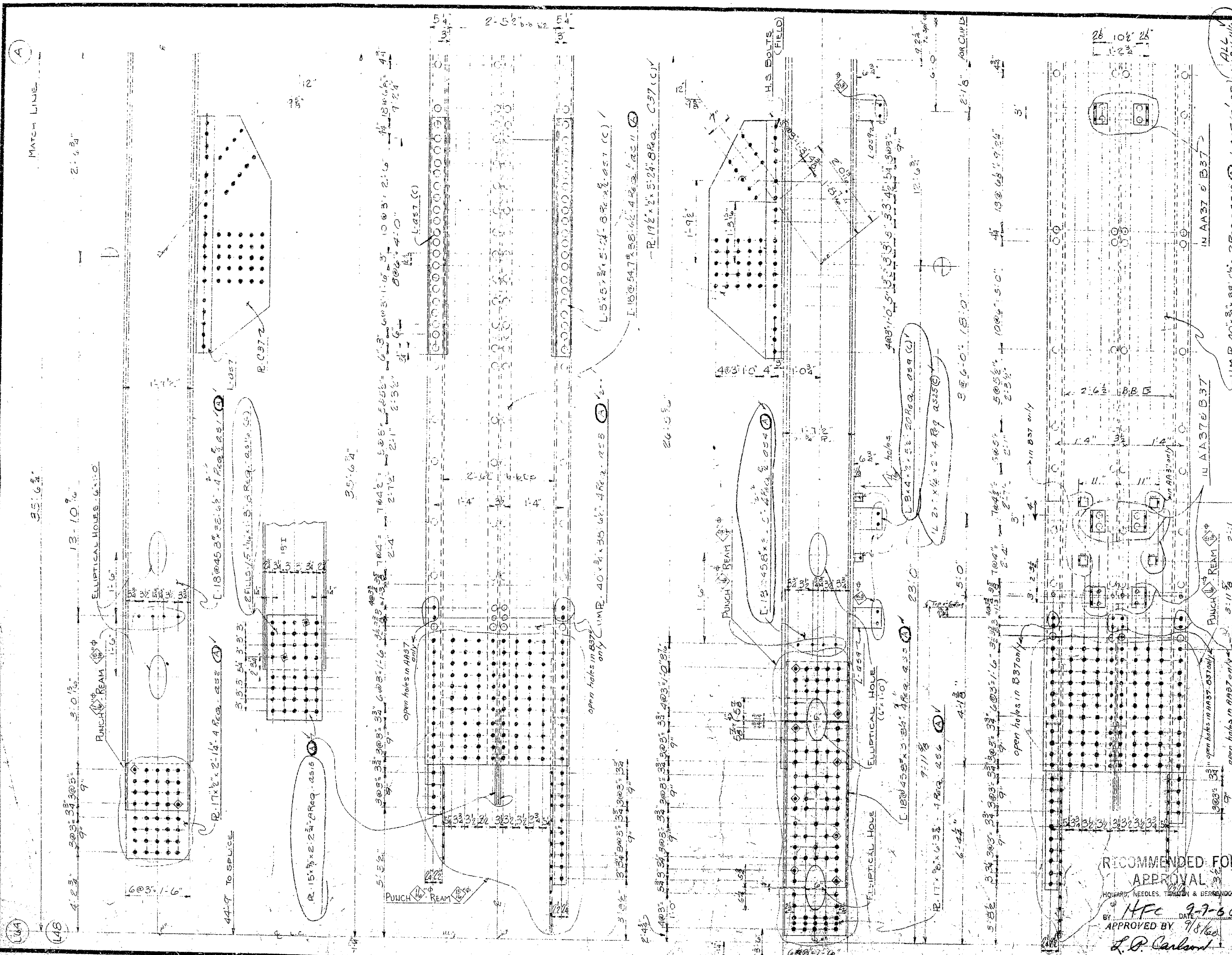
GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 1/2" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by RIVET
Field Connections APPROVED BY 10/26/59
Drawn by FW 3-28-59
Checked by [illegible]
Revisions 7/28/59 Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT # 5 & 4

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIVISION OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND. Contr. No. 4800-T Sh. 38 of



385

ONE VERTICAL AS SHOWN A37 } (FOR UNIT # 5)
ONE VERTICAL TO PAIR and AS NOTED AA37

ONE VERTICAL AS SHOWN B37 } (FOR UNIT # 4)
ONE VERTICAL TO PAIR and AS NOTED BA37

NOTE:

WORK WITH SHEETS #38 & 39

SEE NOTE SH #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS 8/31/59

GENERAL NOTES

Rivets 7/8"φ except as noted
Holes 15/16"φ except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by KW 3-18-59
Checked by ALY.
Revisions

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 9-7-60
APPROVED BY 9/8/60
L. P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT #4-5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4820-T Sh. 37 of

384

MAKE 2 BRACKETS AS SHOWN B36

bent Plt. 19 x 3/8 x 2'-6 3/4" - on1

PUNCH 1/4" - REAM 13/16"

SECT. AA

ONE VERTICAL AS SHOWN - A36

ONE VERTICAL OPPOSITE HAND - AA36

2 VERTICALS C36

APPROVED BY 8/31/59

L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 8-25-59

SEE NOTE SH. "1

APPROVED BY: HOWARD, NEEDLES
TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" except as noted
End Distance 1 1/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by KW 3-13-59
Checked by ALL
Revisions 7/22/59 8/19/59

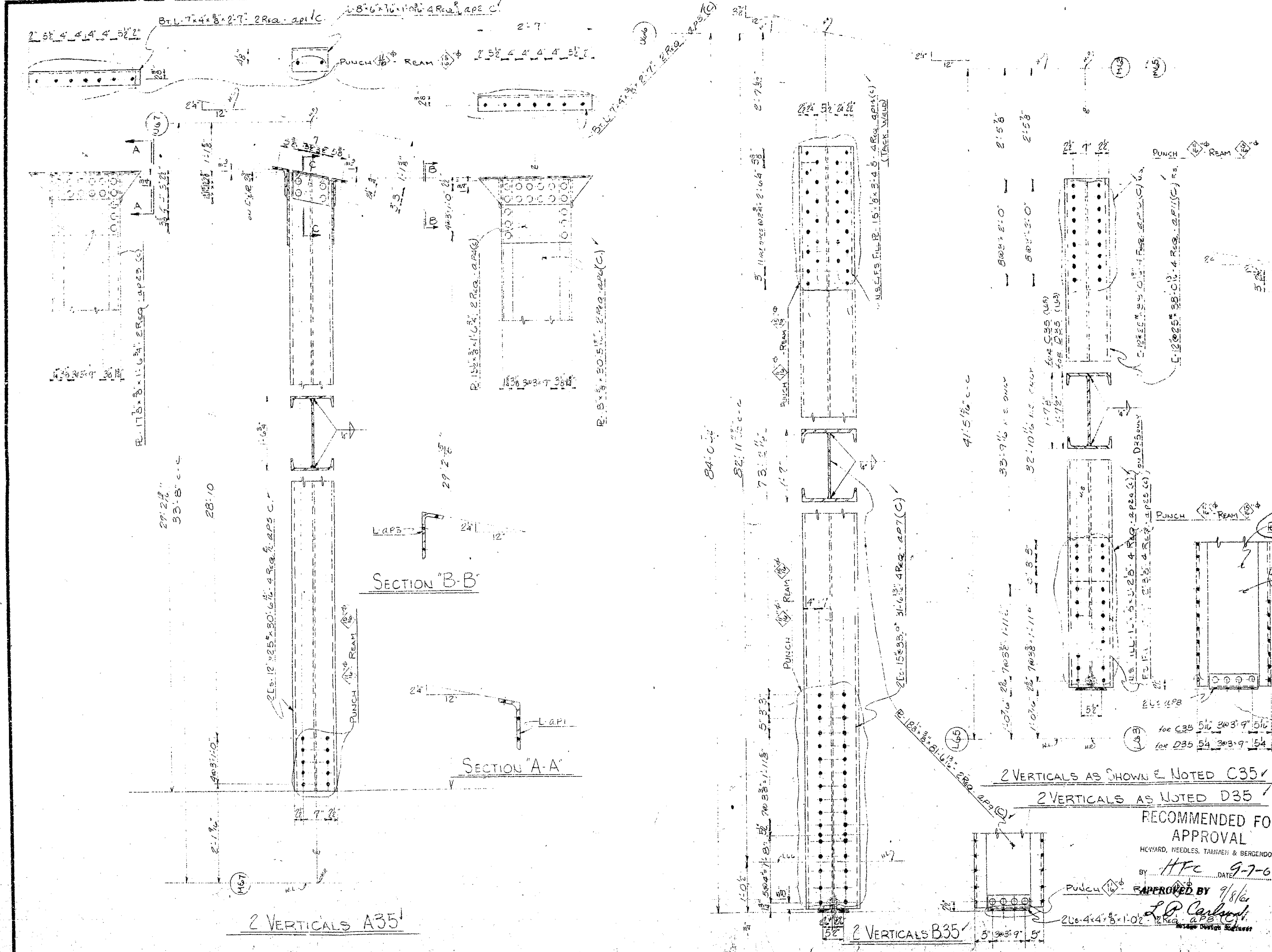
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT # 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.

Contr. No. 4800 Sh. 36 of



Approved by: Howard, Needles, Tammen & Bergendoff
Consulting Engineers
8/31/59

GENERAL NOTES

Rivets 7/8"φ except as noted
Holes 15/16"φ except as noted
End Distance 1 3/4" unless noted
Shop Paint Red Lead (Ark. Std)

Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivet
Drawn by KW 3-13-59
Checked by AW
Revisions

Arkansas State Highway Commission
Mississippi State Highway Commission

Mississippi River Bridge
Near Helena, Arkansas
Unit #5

Sold to: John F. Beasley Constr. Co.
Chicago Illinois

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800-T Sh. 35 of

382

SECTION "A-A"

SECTION "B-B"

SECTION "C-C"

SECT. EE

ONE VERTICAL AS SHOWN A34
ONE VERTICAL TO PAIR AA34

2 VERTICALS B34
2 VERTICALS C34

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY F.R.S. DATE 10-22-59
SEE NOTE SH. "1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES
Rivets 3/4" ϕ except as noted
Hole 15/16" ϕ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections APPROVED BY 10/26/59
Drawn by KAC 8-12-59
Checked by [illegible] L.R. Carlson
Revisions 9/23/59 Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT # 5
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800-T Sh. 34 of

381

SECTION "A-A"

SECTION "D-D"

SECTION "B-B"

SECTION "C-C"

ONE VERTICAL AS SHOWN AA38

ONE VERTICAL TO PAIR AA38

2 VERTICALS B38

SEE NOTE SH "1

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY F.R.S. DATE 10-22-57

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8 ϕ except as noted
Holes 15/16 ϕ except as noted
End Distance 1 1/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by KW APPROVED BY 10/24/57
Checked by AWL L.P. Carlson
Revisions 3/1/58
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT "5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800-7 Sh. 38 of

380

2 VERTICALS A32

2 VERTICALS B32

2 VERTICALS C32

SECTION "A-A"

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 8-27-59

SEE NOTE SH. "1

APPROVED BY: HOWARD, NEEDLES
TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 1/4" unless noted
Shop Point RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by KW 3-5-59
Checked by GWJ
Revisions 7/27/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

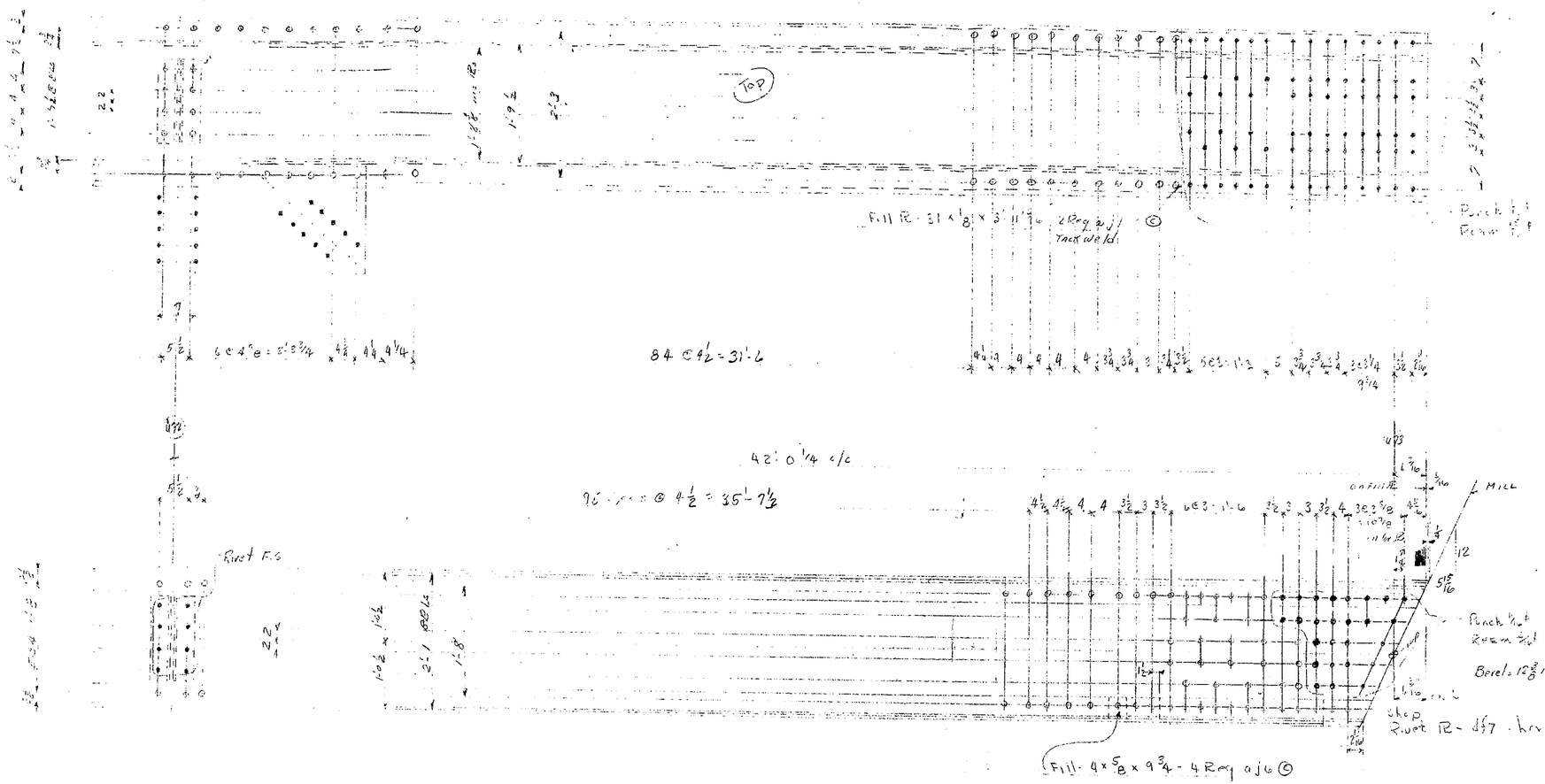
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT #5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

APPROVED BY 8/31/59
L. P. Carlson
Bridge Design Engineer

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES INC.
VINCENNES, IND.
Contr. No. 4800 Sh. 32 of

379



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 5-22-57

Work with Dr. 50

APPROVED BY 8/31/57
L. P. Carlson
Bridge Design Engineer

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8 ϕ except as noted
Holes 15/16 ϕ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by BB
Checked by ALL
Revisions 2

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

SHOP: VINCENNES STEEL CORP., DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800 Sh. 31 of

378

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY F.R.S. DATE 7-23-59

One Upper Chord to Shown A30
One Do Do to Paint A270
Work with Chart "A"

APPROVED BY 8/21/59
L. O. Carlson
Bridge Design Engineer

Approved By: Howard, Needles
Tammen & Bergendoff
Consulting Engineers

GENERAL NOTES

Rivets 7/8 " except as noted
Holes 15/16 " except as noted
End Distance 1 3/4 " unless noted
Shop Paint Red Lead (Ark Std)
Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivets
Drawn by SG
Checked by AW
Revisions

Arkansas State Highway Commission
Mississippi State Highway Commission

Mississippi River Bridge
Near Helena Arkansas
Unit No. 5

Sold to: John F. Beasley Constr. Co.
Chicago, Illinois

SHOP VINCENNES STEEL CORP. Div. of Industrial Enterprises, Inc.
VINCENNES, IND. Contr. No. 4800 Sh. 30 of

377

Work with SH. 28

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY F.R.S. DATE 8-27-59

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES

Rivets ⅞ except as noted
Holes 1⅛ except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD

Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by E.B.
Checked by A.W.J.
Revisions 8-27-59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

APPROVED BY: L.P. Carland 8/31/59
L.P. Carland
Bridge Design Engineer

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.
Contr. No. 4800 Sh. 39 of

376

RIVET AFTER ASSEMBLY

Punch 11/16"ϕ
Ream 15/16"ϕ

Punch 11/16"ϕ
Ream 15/16"ϕ

ELLIPTICAL HOLES

Punch 11/16"ϕ
Ream 15/16"ϕ

ONE UPPER CHORD AS SHOWN - A28-Y
ONE " " " TO PAIR - AA28-Y
WORK WITH DW. 29.

APPROVED BY: HOWARD, NEEDLES
TAMMEN & BERGENDOFF
CONSULTING ENGINEERS 8/31/59

GENERAL NOTES

Rivets 7/8" ϕ except as noted.
Holes 15/16" ϕ except as noted.
End Distance 1 1/4 unless noted.
Shop Paint RED LEAD (ARK SIDE)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by R.B.
Checked by AWF
Revisions

RECOMMENDED FOR APPROVAL
HOWARD NEEDLES, TAMMEN & BERGENDOFF
BY H.F.C. DATE 9-7-60

APPROVED BY 9/8/60
L. P. Harrison
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 5

SOLD TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800-T Sh. 28 of

375

Sect. A-A

One Upper Chord as shown A27-1
One do do to pair A27-1

Approved By: Howard, Needles
Tammen & Bergendoff
Consulting Engineers 8/31/59

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint Red Lead (Ark Std.)
Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivets
Drawn by A.B.
Checked by CLH
Revisions 11/3/59 SC 842

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
By [illegible] Date 9-7-60

APPROVED BY 9/8/60
[illegible] Bridge Design Engineer

Arkansas State Highway Commission
Mississippi State Highway Commission
Mississippi River Bridge
Near Helena, Arkansas
— Unit No 5
Sold To: John F. Beasley Constr. Co.
Chicago, Illinois

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

U.S. Industrial Enterprises, Inc.
Contr. No. 4800-T Sh. 27 of

374

TOP

R - 46 3/4 x 3/8 x 6'-9 - 2 Req'd adj (A)

79 Spcs @ 5 1/2 = 36'-2 1/2

42'-8 25/32 c/c

85 Spcs @ 5 1/2 = 38'-11 1/2

Punch H'd from F'd

WORK WITH SH. 25

DRAWN C 1168

R - 64 x 1/2 x 6'-10 - 2 Req'd adj (A)

ALL FRICTIONAL HOLES 9 x 1-6

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ERS DATE 6-22-59

APPROVED BY HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces No
Shop Inspection by
Field Connections RIVETS
Drawn by GB
Checked by ALY
Revisions 7/27/59

APPROVED BY 8/31/59
L. P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO 5

SOLD TO JOHN F BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

DIV. OF INDUSTRIAL RESEARCH, INC.
Contr. No. 4800 Sh. 26 of

373

Sub Punch 11/16 Ream 15/16

Fill R - 8 x 1/2 x 2'-4 - 4 Req acc (A)

U.M.R 31 x 1/2 x 85'-7 7/16 - 2 Req acc (A)

R - 19 3/8 x 3/8 x 6'-4 7/8 - 4 3 (C)

77 Space 5 1/2 = 35'-3 1/2

42'-9 25/32 c/c

78 Spaces @ 5 1/2 = 35'-9

Top P. 4 x 4 x 5/8 x 85'-7 7/16 - 4 Req 9/2 acc (A)

Fill R - 14 1/2 x 3/16 x 1'-9 7/16 - 4 Req acc (A)
TACK Weld

U.M.R - 24 x 9/16 x 85'-8 3/4 - 4 Req acc 2

Bott P. 4 x 4 x 5/8 x 85'-8 1/4 - 4 Req 9/2 acc 3 (A)

75 Spaces 5 1/2" = 34'-4 1/2

Sub Punch 11/16 Ream 15/16

5'-8 3/4 Clear R

U.M.R - 31 x 1/2 x 84'-10 5/16 - 2 Req acc 8 (A)

ALL ELLIPTICAL HOLES 9 x 1'-6 except as Noted

Bott

R - 21 1/4 x 3/8 x 2'-1 1/4 - 2 Req acc 20 (C)

R - 73 2

Rivet F.C.

2 LS - 7/11

12 - acc 2

2 LS - 7/10

R 20 1/8 x 3/4 x 2'-0 1/2 - 2 R

2 LS 7/10 5 1/2 spc.

Diagram of U67

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY VEA DATE 8-26-57

One Upper Chord As Shown A25
One " " " To Plate A425

Work with SN: 26:

APPROVED BY 8/31/57
L. P. Carlson
Bridge Design Engineer

Approved By: Howard, Needles Tammen & Bergendoff
Consulting Engineers

GENERAL NOTES
Rivets 7/8 except as noted
Holes 15/16 except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by R B
Checked by CWF
Revisions

Arkansas State Highway Commission
Missouri State Highway Commission

Missi-Sippi River Bridge
Near Helena, Arkansas
Unit No. 5

Sold To: John F. Beasley Constr. Co.
Chicago, Illinois

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
Contr. No. 4800 Sh. 25 of

372

L-8×8×¾×5'-8¾ - 4 Req'd abt (A) } weld together
L-8×8×¾×3'-3⅜ - 4 Req'd ab3 (A) }

PL-17×½×3'-11½ - 2 Req'd ab1 (A)
PL-8×½×3'-11½ - 4 Req'd ab2 (A)

Sym abt ℄

79 Spcs @ 6½ = 36'-2½

Copes 6"

Sym abt ℄

44'-1 11/32 c/c

78 Spcs @ 6½ = 35'-9

PL-11¼×⅝×3'-10 15/16 - 4 Req'd ab4 (A)

RIVET F.S.

PL-8×1½×11½ - 4 Req'd ab5 (A)

PL 28¼×¾×5'-11½ - 4 Req'd ab7 (A)

Fill PL-8×¾×1'-7½ - 4 Req'd ab16 (A)

Fill PL-24×⅜×4'-9¾ - 4 Req'd ab8 (A)

L-6×6×½×4'-1½ - 4 Req'd ab9 (A)

L-3½×3½×⅜×6'-5 - 4 Req'd ab10 (A)

Fill PL-8×¾×6½ - 4 Req'd ab6 (A) NS.
PL-37×⅝×11'-6 - 2 Req'd ab6a (A) F.S.

Sub-Punch 15/16 Ream 15/16

Mill 8 Surf.

Work with Sh. - 23

H.S. Field Bolts N.S.

N.S. Pths. only

L-5×5×¾×5'-10¾ - 4 Req'd ab11 (A)
Weld together

L-5×5×¾×5'-5 7/16 - 4 Req'd ab12 (A)

Fill PL-5×¾×2'-8½ - 4 Req'd ab17 (A)
Fill PL-5×½×1'-0½ - 4 Req'd ab18 (A)

L-5×5×¾×5'-5 7/16 - 4 Req'd ab12 (C)

4 @ 5½ = 1'-10

Fill PL-5×¾×3'-9¾ - 4 Req'd ab16 (C)

L-½×3½×⅜×3'-5 - 4 Req'd ab13 (C)

b @ 4 = 3'-0

PL-4×2½×1'-10½ - 2 Req'd ab21 (C)
PL-4×2½×1'-7½ - 2 Req'd ab22 (C)
PL-4×2½×1'-4½ - 2 Req'd ab23 (C)

14 @ 3

Sect. A-A

Fill PL-8 3/8×¾×10½ - 4 Req'd ab35 (C) Tack Weld

Elliptical Holes Both

All Holes same except as shown

79 Spcs @ 6½ = 36'-2½

95 Spcs @ 3'-4 = 30'-0

Slot PL-1×4¾

See Note Sh. #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 8/31/59

GENERAL NOTES

Rivets 7/8 except as noted
Holes 15/16 except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by BB
Checked by AW
Revisions 8/31/59 C-E 466-457

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

APPROVED BY 9/8/60
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD NEEDLES, TAMMEN & BERGENDOFF
BY [illegible] DATE 9-7-60

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4520-F Sh. 24 of

371

Fill R - 6 x 1/2 x 3'-7 3/4 - 6 Req aa 32 (A)

Fill R - 6 x 1/2 x 7'-0" - 2 Req aa 31 (A)

L 5 x 5 x 5/8 x 2'-9 1/2 - 4 R. R/L aa 6 (A)

Fill R - 6 x 3/8 x 2'-9 1/4 - 4 Req aa 23 (A)

L 6 x 4 x 7/8 x 5'-1 - 4 Req R/L aa 1 (A)

Fill R - 8 x 5/16 x 5'-5" - 2 Req aa 41 (A)

L 5 x 5 x 1/2 x 3'-9" - 2 Req R/L aa 2 (A) weld top + H/V at ends

Fill R - 14 x 5/16 x 2'-5 1/2 - 4 R. aa 5 (A)

L 5 x 5 x 5/8 x 2'-9 1/2 - 4 Req R/L aa 7 (A)

L 6 x 6 x 7/8 x 7'-1 3/4 - 6 Req R/L aa 3 (A) Weld top + H/V at Ends

Fill R - 6 x 3/8 x 3'-4 - 4 Req aa 14 (A)

L 5 x 5 x 5/8 x 2'-9 1/2 - 4 Req R/L aa 36 (A)

L 3 1/2 x 3 1/2 x 3/8 x 5'-4 1/2 - 8 Req aa 8 (C)

R - 78 x 3/4 x 12'-6 3/4 { 2 Req aa 10 (A) NS; 1 Req aa 10c (A); 1 Req aa 10b (A) } FS

R - 49 x 5/8 x 7'-2 1/2 { 2 Req aa 11 (A) NS; 1 Req aa 11a (A); 1 Req aa 11b (A) } FS

L 8 x 4 x 1/2 - 2 Req aa 35 (A)

Fill R - 6 x 3/8 x 3'-4 - 4 Req aa 14 (A)

L 5 x 5 x 5/8 x 88'-6 7/32 - 4 Req R/L aa 15 (A)

U.M.R. 24 x 5/8 x 88'-7 5/16 - 4 Req aa 16 (A)

L 5 x 5 x 5/8 x 88'-1 1/32 - 4 Req R/L aa 18 (A)

U.M.R. 33 x 1/2 x 89'-10 3/32 - 2 Req aa 17 (A)

U.M.R. 33 x 8 x 84'-4 1/2 - 4 Req aa 19 (A)

One Upper Chord as Shown A23

One Do Do to Pair AA23

Work with Sh. 24

See Note Sh. #1.

Approved By: Howard, Needles, Tammen & Bergendoff Consulting Engineers: 8/31/59

General Notes

Rivets 7/8 ø except as noted

Holes 15/16 ø except as noted

End Distance 1 3/4 unless noted

Shop Paint Red Lead (Ark. Std)

Contact Surfaces No Paint

Shop Inspection by

Field Connections Rivets

Drawn by EB

Checked by CW

Revisions 9/10/59 o-c

Arkansas State Highway Commission
Mississippi State Highway Commission

Mississippi River Bridge
Near Helena, Arkansas
Unit No. 5

Sverdrup & Parcel and John F. Beasley Construction Co.
Chicago, Illinois

Recommended for Approval
Howard, Needles, Tammen & Bergendoff
Date 8/31/59

Approved By: [illegible] 11/8/59
Bridge Design Engineer

Vincennes Steel Corp. Div. of Industrial Enterprises, Inc.
Vincennes, Ind.

Shop Dwg. No. 4806 - F Sh. 23 of [illegible]

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RIVET AFTER ASSEMBLY

TOP

Fill R 6 × ½ × 7'-0½ - 2 Req z11 (A) TACK Weld

Fill R 6 × ½ × 3'-7¾ - 4 Req z10 (A) TACK Weld

Sub Punch 11/16 Ream 15/16

Fill R 5 × ⅝ × 2'-4¼ - 4 Req z7 (B)

L 5 × 5 × ¾ × 2'-9½ - 4 Req B_L z15 (A)

Slot R 1½ × 2'-9¾

24 Spaces @ 5½ = 33'-11"

44'-1 11/32 c/c

Fill R 14 × ⅝ × 3'-2⅝ - 4 Req z16 (A) TACK Weld

Sub Punch 11/16 Ream 15/16

24 Spaces @ 5½ = 33'-11

Slot R 1½ × 2'-9¾

L 5 × 5 × ¾ × 2'-9½ - 4 Req z22 (A)

Sub Punch 11/16 Ream 15/16

2 L 4 × 3½ × 7/16 × 1'-4½ - 5 Req z4 (C)

8 Req z8a (C)

Rivet F.S.

2 L 4 × 3½ × 7/16 × 1'-2½ - 24 Req z5 (C)

R - 20⅜ × ⅜ × 2'-0½ 4 Req z6 (C)

Sub Punch 11/16 Ream 15/16

R - 20 × ⅝ × 2'-4 - 2 Req z1 (C)

R - 20⅜ × ⅜ × 5'-2⅜ 8 Req z3 (C)

R - 24 1/16 × ⅜ × 2'-7⅞ 4 Req z8 (C) TACK Weld

Elliptical Holes

10 Spaces @ 3'-0 = 30'-0

WORK WITH SH. 21 - A21 AA21

SEE NOTE SH. #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 8/31/59

GENERAL NOTES

Rivets 7/8" Ø except as noted

Holes 15/16" except as noted

End Distance 1¼" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by LLA

Checked by ALH

Revisions 7/21/59 8/10/59 CC

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY [illegible] DATE 9-7-60

APPROVED BY 9/8/60
L. D. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 5

SOLD TO: JOHN F. FRASLEY CONTRACTING CO.
CHICAGO, ILLINOIS

SHOP: VINCENNES STEEL CORP. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.

Contr. No. 49 [illegible] Sh. 22 of

369

Top

U.M.R. 19 x 5/8 x 5'-5 1/2" - 1 Req'd 4 (A)

F.H.R. 8 x 5/8 x 10 1/2" - 4 Req'd 415 (C)

U.M.R. 33 x 1/2 x 84'-9 31/32 - 2 Req'd 42 (A)

80 Spcs @ 5 1/2 = 36'-8

44'-1 3/32" c/c

11 Spcs @ 5 1/2 = 35'-3 1/2

Sub Punch 11/16" Ream 15/16"

Rivet F.S.

R - 17 1/2 x 5/8 x 4'-4 - 4 Req'd 46 (A)

L 8 x 8 x 5/8 x 4'-2 7/8" - 4 Req'd B/L 412 (A)

L 8 x 8 x 5/8 x 4'-1 - 4 Req'd B/L 413 (A)

Weld Together

L 5 x 5 x 5/8 x 88'-6 7/32 - 4 Req'd B/L 422 (A)

U.M.R. 24 x 5/8 x 88'-7 9/32 - 4 Req'd 424 (A)

L 5 x 5 x 5/8 x 88'-1 3/32 - 4 Req'd B/L 423 (A)

U.M.R. 14 x 3/8 x 3'-10 1/2" - 8 Req'd 41 (A)

MILL

HS Field Bolts N.S.

R 82 x 5/8 x 12'-4 - 4 Req'd 45 (A)

L 3 1/2 x 3 1/2 x 3/8 x 2'-10 3/4" - 4 Req'd B/L 44 (C)

5 Spcs @ 2'-2 1/4" = 10'-10 1/2"

11 Spcs @ 3'-2 1/2" = 34'-10

2 Lg - 4 x 3 1/2 x 5/16 - 4 Req'd 417 (C)

12 - 17 7/8 x 3/8 x 1'-10 1/2" - 2 Req'd 418 (C)

2 Lg - 6 x 4 x 1/2 x 5'-3 1/4" - 4 Req'd B/L 48 (C)

4 Req'd B/L 420 (C) Back to Back

L 3 1/2 x 3 1/2 x 3/8 x 2'-3 1/2" - 4 Req'd (C)

2 Lg - 4 x 3 1/2 x 5/16 x 1'-2 1/8" - 4 Req'd 419 (C)

Diaph. @ U62

Sect. A-A

U.M.R. 33 x 5/8 x 83'-9 11/32" - 2 Req'd 411 (A)

L 5 x 5 x 5/16 x 4'-0 7/8" - 4 Req'd 49 (A)

L 5 x 5 x 5/8 x 3'-8 1/4" - 4 Req'd B/L 410 (A)

Weld Together

Sub Punch 11/16" Ream 15/16"

Punch 11/16" Ream 15/16"

Elliptical holes except as noted

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY HFC DATE 8-25-59

ONE UPPER CHORD AS SHOWN A21-
ONE DO " TO PAIR A A21-
WORK WITH SH. 22.

SEE NOTE SH. "1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

APPROVED BY 8/31/59
L. P. Carlson
Bridge Design Engineer

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by RB
Checked by ALY
Revisions 7/22/59 8/19/59 c-c

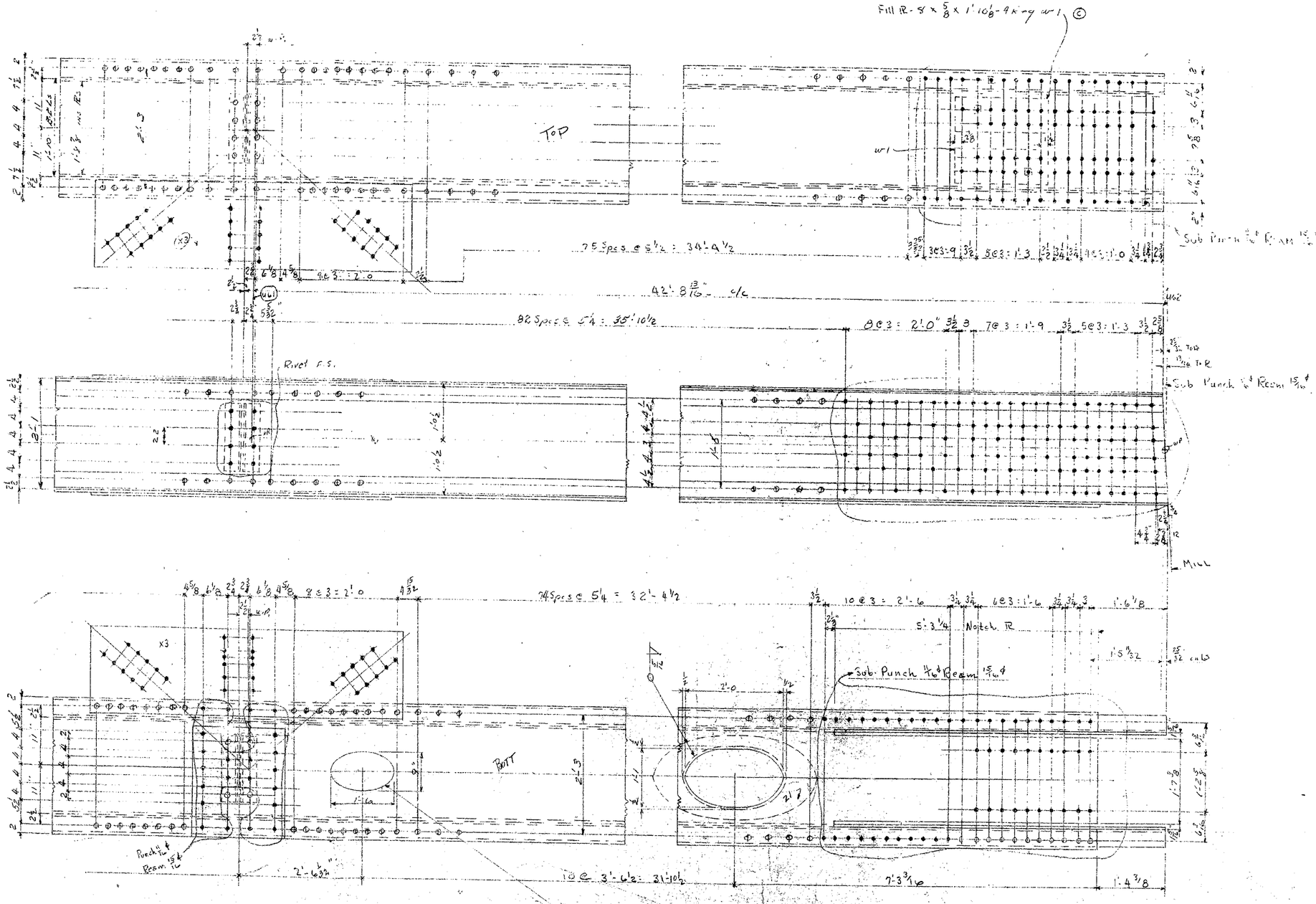
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 5

SOLDTO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND. Contr. No. 4800 Sh. 21 of

368



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 8-27-59

SEE NOTE SH. "1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS.

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by AB
Checked by AHF.
Revisions 7/22/59 8/31/59 C-C

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

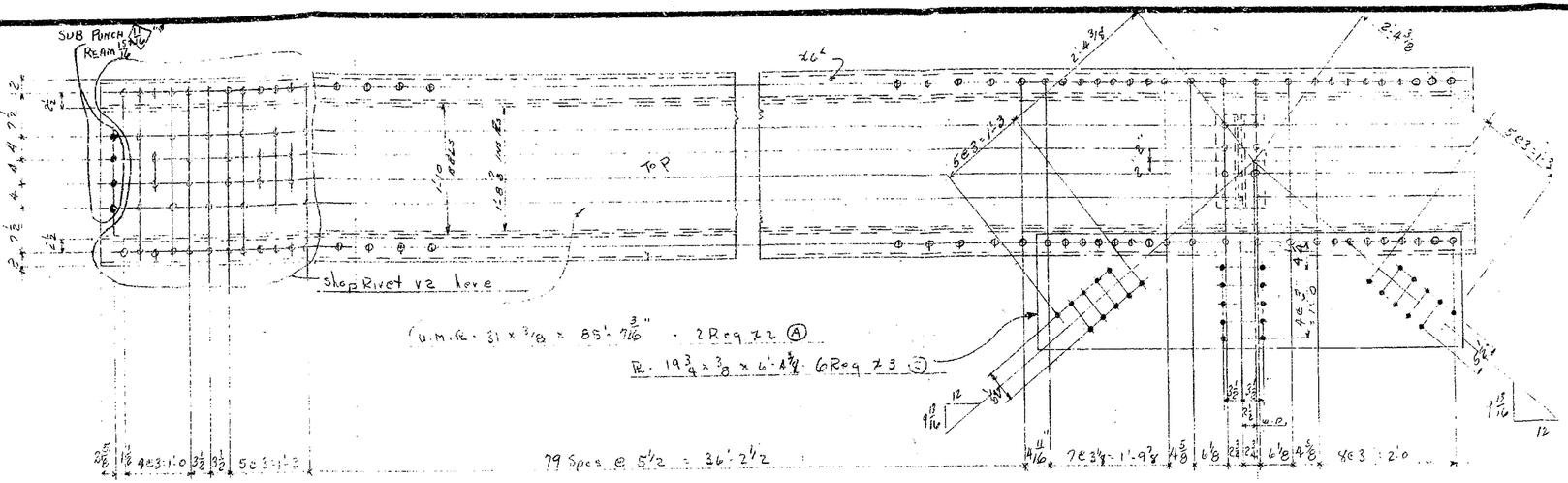
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO 5

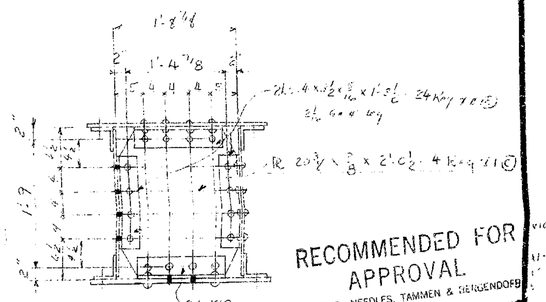
SOLD TO: JOHN E. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

APPROVED BY 8/31/59
L. P. Carlson
Bridge Design Engineer

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4802 Sh. 20 of





RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
HFC Date 8-25-59

DRWN. AT - U61 - BY

SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by PA
Checked by AM
Revisions 9/22/59 9/16/59 C.O.

ONE UPPER CHORD AS SHOWN -A19-
ONE DO DO TO PAIR -AA19-

APPROVED BY 8/21/59
L. P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
Contr. No. 4800
Sh. 19 of

366

Shop Rivet R. bolts here

L.U.M.C. 31 x 3/8 x 43'-6 11/16" - 2 Reqd V1 (A)

Top

645pcs @ 5 1/2" = 31'-7 1/2

43'-6 11/16"

42'-8 13/16" c-c

40'-10 5/16"

20 Spcs @ 5 1/2" = 32'-1"

L 4 x 4 x 3/8 x 43'-7 3/16" - 4 Reqd V3 (A)

L.U.M.R. - 24 - 9/16 x 40'-10 5/16" - 4 Reqd V4 (A)

L 4 x 4 x 3/8 x 43'-9 15/16" - 2 Reqd V5 (A) N.S. - 2 Reqd V15 (A) F.S.

Fill - 4 x 3/4 x 10 1/2" - 4 Reqd V6 (C)

Fill - 4 x 5/8 x 3'-2 1/4" - 4 Reqd V7 (C)

69 Spcs @ 5 1/2" = 31'-7 1/2"

9 Spcs @ 3"-6" = 31'-6"

L.U.M.R. - 3/8 x 2 x 89-15/16" - 2 Reqd V8 (A)

L 4 x 4 x 3/8 x 4 1/2" - 4 Reqd V9 (C)

Slot Cut @ 3'-9"

Punch 13/16" Ø Ream 15/16" Ø

Sub Punch 13/16" Ø Ream 15/16" Ø

Punch 13/16" Ø Ream 15/16" Ø

Sub Punch 13/16" Ø Ream 15/16" Ø

R - 49 3/4 x 3/8 x 6'-8" - 2 Reqd V2 (A) Shop Rivet To A19-AA19

R - 17 5/8 x 3/8 x 2'-6" - 2 Reqd V10 (C)

L 4 x 4 x 5/16 x 1'-6 1/2" - 24 Reqd V10 (C)

Diaph @ U16

U.M.R. - 16 x 3/8 x 5'-5" - 4 Reqd V12 (A)

U.M.R. - 22 x 1/2 x 5'-10" - 4 Reqd V13 (A)

U.M.R. - 24 x 1/2 x 5'-3" - 4 Reqd V14 (A)

} Shop Rivet To A19-AA19

ONE UPPER CHORD AS SHOWN A18
ONE " " " TO PAIR AA18

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 8-25-59

SEE NOTE SH. "1"

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS.

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by WR
Checked by DWH
Revisions 7/31/59 9/1/59 etc

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT NO. 5

SOLD TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

APPROVED BY 8/31/59
L.P. Carlson
Bridge Design Engineer

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

DIV. OF [illegible] ENGINEERS, INC.

Contr. No. 4800 Sh. 18 of

365

71 SPC. @ 5½" = 32'-6½"

11 Φ HOLES REAM 15/16 Φ

L-4 x 4 x 7/16 x 2'-9½" - 4 REQ. R/L - U1 (C)

L-5 x 5 x 7/16 x 2'-9½" - 4 REQ. R/L - U2 (C)

42'-0 5/32" C/C

N.S. PL - 77" x 5/8" x 6'-10 7/8" - 2 REQ. - U3 (C)

F.S. PL - 77" x 5/8" x 6'-10 7/8" - 2 REQ. - U4 (C)

N.S. PL - 65" x 5/8" x 4'-10 1/8" - 2 REQ. - U5 (C)

F.S. PL - 65" x 5/8" x 4'-10 1/8" - 2 REQ. - U6 (C)

FILL PL - 4" x 5/8" x 9" - 4 REQ. - U7 (C) (WELD)

2 PL's - 16" x 1½" x 2'-1¼" - 4 REQ. - U8 (C) (U.M.)

2 FILL PL's - 23½" x 1/16 x 2'-0½" - 4 REQ. - U30 (C)

7 SPC. @ 3" = 1'-9"

3 SPC. @ 3'-9" = 11'-3"

6 @ 3 3/8" = 1'-8 1/4"

2 FILL PL's - 3" x 5/8" x 8" - 4 REQ. - U14 (C) TACK WELD

2 L's - 8" x 8" x 5'-5" - 4 REQ. R/L - U15 (C)

2 FILL PL's - 3" x 5/8" x 1'-6¼" - 4 REQ. - U16 (C)

2 L's - 8" x 4½" x 1/8" x 1'-6" - 4 REQ. - U9 (C)

CUT FROM 8" x 8" x 1 1/8" L

1 PL - 7" x 3/8" x 11" - 24 REQ. - U17 (C) N.S. & F.S.

2 L's - 8" x 8" x 1" x 1'-5¾" - 4 REQ. - U18 (C)

2 BARS - 4" x 1" x 1'-5¾" - 4 REQ. - U19 (C)

WELD TO L-U18 TO FORM 12" x 8" L

1 PL - 19" x 5/8" x 5'-5" 2 REQ. - U21 (C) (U.M.)

1 PL - 13 7/8" x 3/8" x 2'-7" - 2 REQ. - U10 (C)

2 L's - 8" x 6" x 5/8" x 1'-4½" - 4 REQ. - U11 (C)

2 FILL PL's - 3" x 5/8" x 1¼" - 4 REQ. - U12 (C)

2 PL's - 8" x 5/8" x 3'-2½" - 4 REQ. - U13 (C) (U.M.) BOLT TO SHIP

11 Φ HOLES REAM 15/16 Φ SHOP RIV. F.S.

SLOT N.S. PL - 7/8" x 8½" F.S. PL - 1 1/8" x 8½"

11 Φ HOLES REAM 15/16 Φ TO MT.

5 @ 9" = 1'-3"

1 PL - 8" x 8" x 5'-5" 4 REQ. - U20 (C)

1 PL - 7" x 3/8" x 11" - 24 REQ. - U17 (C) N.S. & F.S.

1 PL - 19" x 5/8" x 5'-5" 2 REQ. - U21 (C) (U.M.)

SEE NOTE SH. "1"

L-73 LOW 10" DS - A16 & AA16 - JRK. 11TH SHEET 16

11 Φ HOLES REAM 15/16 Φ

1½" SHOP RIVETS F.S.

76 SPC. @ 5½" = 34'-10"

9 SPC. @ 3'-4" = 30'-0"

11 @ 3 3/8" = 2'-10 3/8"

1'-9"

ELLIPTICAL HOLES

1 PL - 51¾" x ¾" x 4'-7" - 2 REQ. - U22 (C)

END OF WEB PL t3

5 @ 3" = 1'-3"

R-C22

8 @ 3¼" = 2'-2"

6'-11 5/32"

APPROVED BY 8/31/59

Bridge Design Engineer

(F) 1½ HOLES TO M.T.

(F) 1½ HOLES IN CASTING

APPROVED: HOWARD, NEEDLES, TAMMEN & BERGENDOFF

HFC 6-25-59

RECOMMENDED FOR APPROVAL

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8" Φ except as noted

Holes 15/16" Φ except as noted

End Distance 1¼" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by T.P.

Checked by alf.

Revisions 7/22/59 8/10/59 cc

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

Contr. No. 4800 Sh. 17 of

364

78 Spc. @ 5½" = 35'-9"

Slot Cov. PL 1"x 3'-0¼"

Slot Cov. PL 1"x 2'-2"

1R-T1

℄ Top

Cov. PL - 31 x ⅜ x 79'-7 3/16 - 2 REQ. - t1 (C)(U.M)

11/16 ϕ Holes Ream 15/16 ϕ

42'-0 5/32" c/c

2 Top L's - 4 x 4 x ⅜ x 83'-2 15/16" 4 REQ. R & T - t2 (C)

2 Web PL's - 24 x 9/16 x 80'-2 11/16" - 2 REQ. - t3 (C) (U.M.)

2 Bott. L's - 4 x 4 x ⅜ x 83'-2 15/16" - 4 REQ. R & T - t4 (C)

⅞ ϕ Shop Rivets F.S.

80 Spc. @ 5½" = 36'-8"

1R-C12 (N.S.)

1R-C13 (F.S.)

1R-C14 (N.S.)

W.L.

Section - AA

2L's - C15

L-C17

1R-Y3

2L's - C24

Diaphragm at L73

See Note Sh. #1

L72

One Lower Chord As Shown - A1G

One Lower Chord To Pair - AA1G

Continued on Sheet 17

L73

1R - 27½" x ½ x 6'-5¾" - 2 REQ. - t6 (C)

Cov. PL - 31 x ½ x 85'-1/16" - 2 REQ. - t5 (C)(U.M.)

R-C22

Bottom ℄

Elliptical Holes

77 Spc. @ 5½" = 35'-3½"

9 Spc. @ 3'-6" = 31'-6"

11 @ 3⅛" = 2'-10⅜"

11 @ 3⅛" = 2'-10⅜"

Approved by L. P. Carlson, Bridge Design Engineer, 8/31/59

Recommended for Approval
Howard, Needles, Tammen & Bergendoff
By HFC 8-25-59

Approved By: Howard, Needles, Tammen & Bergendoff Consulting Engineers:

General Notes

Rivets ⅞" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1¼" unless noted
Shop Paint Red Lead (Ark. Std.)
Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivets
Drawn by T.P.
Checked by AM
Revisions 7/22/59 8/10/59 C.C.

Arkansas State Highway Commission
Mississippi State Highway Commission

Mississippi River Bridge
Near Helena, Arkansas
Unit. No. 5

Sold To: John F. Beasley Constr. Co.
Chicago, Illinois

C12 2
C13 2
C14 2
C15 4
C17 1
C24 1
C22 2
Y1 4
T3 2

Shop Vincennes Steel Corp. Div. of Industrial Enterprises, Vincennes, Ind.
Contr. No. 4800 Sh. 16 of

363

1R - 5 x 3/8 x 7'-1 1/4" - 4 REQ. - S1 (C) (U.M)

11/16 ϕ HOLES REAM 15/16 ϕ

1R - 5 x 3/8 x 1'-3" - 4 REQ. - S2 (C)

2R's - 6 1/4" x 5/8 x 7'-1 1/2" - 4 REQ. - S4 (C)

2L's - 4 x 4 x 3/8 x 3'-6 1/2" - 4 REQ. R/L - S6 (C)

2L's - 4 x 4 x 3/8 x 3'-5 1/4" - 4 REQ. R/L - S3 (C)
BOLT TO TOP OF AIG LANG

2R's - 16 x 3/8 x 2'-7 1/2" - 4 REQ. - S5 (C) (U.M)

2 7/8 ϕ SHOP RIVETS F.S.

LOWER CHORDS - A14 & AA14
WORK WITH SHEET 14

1R - 49" x 1/2 x 6'-6" - 2 REQ. - S7 (C)

ELLIPTICAL HOLES

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY GA DATE 8/31/59

SEE NOTE SH. #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

APPROVED BY 8/31/59
Bridge Design Engineer

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by T.P.
Checked by ALL
Revisions 7/22/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES INC. VINCENNES, IND.
Contr. No. 4800 Sh. 15 of

362

77 SPC. @ 5½" = 35'-3½"

7@3"=1'-9" 2@4½"=2¾" 7@3"=1'-9"

Slot Cov. PL 1" x 2'-2¾"

PL-5 x ⅜ x 4'-3" - 8 REQ. - F1 (C) (U.M.)

Slot Cov. PL - 1" x 2'-2

Top

Cov. PL - 31" x ⅜ x 83" - 4½ - 2 REQ. - F2 (C) (U.M.)

11/16 Holes Ream 15/16

Fill PL - 5 x 3/16 x 3'-11¼ - 4 REQ - F10 (C)

42'-0⅛"

11/16 Holes Ream 15/16

1 PL - C12 (N.S.)

1 PL - C13 (F.S.)

1 PL - C14 (N.S.)

11/16 Holes Ream 15/16

2 Web PL's - 24 x ½ x 84'-0¼ - 4 REQ. - F4 (C) (U.M.)

2 Top L's - 4 x 4 x ⅜ x 84'-0¼ - 4 REQ. R/L F15 (C)

42'-0⅛" ℄

2 Bott. L's - 4 x 4 x ⅜ x 84'-0¼" - 4 REQ. R/L F16 (C)

81 SPC. @ 5½" = 37'-1½"

⅞ϕ Shop Rivets F.S.

1 PL - 18⅜" x ⅜ x 2'-0" - 4 REQ. - F3 (C)

Diaphragm At L71

L70

L71

Mill

One Lower Chord As Shown - A14

One Lower Chord To Pair - AA14

Continued on Sheet 15

1 PL - 27½ x ½ x 6'-5¾" - 2 REQ. - F8 (C)

See Note Sh. #1

Section - AA

2 L's - C15

℄ - C17

2 L's - C24

Fill PL - 31 x ⅛ x 3'-5¼ - 2 REQ. - F9 (C) (Tack Weld)

11/16 Holes Ream 15/16

R-C22

Cov. PL - 31 x ½ x 84'-0¼ - 2 REQ. - F7 (C) (U.M.)

Bottom

Elliptical Holes

17 SPC. @ 5½" = 35'-3½"

9 SPC. @ 3'-6" = 31'-6"

11 @ 3⅛" = 2'-10⅜"

Riv After Assembly

Approved By: Howard Needles Tammen & Bergendoff Consulting Engineers: 8/31/59

Recommended For Approval

Approved By 9/8/60

L P Cardwell

Bridge Design Engineer

By: F C Date 9-7-60

General Notes

Rivets ⅞ϕ except as noted

Holes 15/16 except as noted

End Distance 1¾ unless noted

Shop Paint Red Lead (Ark. Std.)

Contact Surfaces No Paint

Shop inspection by

Field Connections Rivets

Drawn by T.P.

Checked by auf.

Revisions

Arkansas State Highway Commission
Mississippi State Highway Commission

Mississippi River Bridge
Near Helena, Arkansas
Unit No. 5

Solo's: John F. Beasley Constr. Co.
Chicago, Illinois

Shop: Vincennes Steel Corp. Div. of Industrial Enterprises, Inc.
Vincennes, Ind.

Contr. No. 4800-T Sh. 14 of

361

87 SPC @ 4½" = 32'-7½"

3@4¼=1'-0¾" 4@4"=1'-4" 3²³/₃₂ 4@3½=1'-2" 13@3"=3'-3"

12@3"=3'-0"

11/16 HOLES REAM 15/16

6 SLOT COV - 1"x3'-0¾" G.I.

TOP

42'-0 7/32 C/C

1R-5"x½"x8'-1½" - 4 REQ. - P1 (C) (U.M)

11/16 HOLES REAM 15/16

2R's - 6.5"x⅜"x6'-10½" - 4 REQ. - P2 (C)

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY P.T.F. DATE 8-25-59

2L's - 4"x4"x⅜"x3'-8" - 4 REQ. K/L - P5 (C)

42'-0 7/32 C/C

2L's - 4"x4"x⅜"x3'-5" - 4 REQ. K/L - P3 (C)

BOLT TO TOP OF A14 & AA14

1'-8⅜"

2 SPLICE PL.'s - 16"x⅜"x2'-7½" - 4 REQ. - P4 (C)

92 SPC. @ 4½" = 34'-6"

3@4¼=1'-0¾" 4" 4" 4@3½=1'-2" 15/32" 11@3"=2'-9"

4½ 3½ 3½ 4½ 10@3"=2'-6"

(L69)

(L70)

SEE NOTE SH. "1"

LOWER CHORDS - A12 & AA12

WORK WITH SHEET 12

MILL

1R-4.9"x⅜"x6'-10½" - 2 REQ. - P6 (C)

BOTTOM

R-C22

10@3½"=2'-11" 83 SPC @ 4½"=31'-1½"

1'-9" 9 SPC. @ 3'-6"=31'-6"

4¼ 4⅞ 6@4"=2'-0" 6@3½"=1'-9" 10@3"=2'-6"

3-5 23/32" 5'-3½"

10@3"=2'-6"

11/16 HOLES REAM 15/16

APPROVED BY 8/31/59

Bridge Design Engineer

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS.

GENERAL NOTES

Rivets 7/8 Ø except as noted

Holes 15/16 except as noted

End Distance 1¾" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by T.P.

Checked by ALL

Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.

Contr. No. 4800 Sh. 13 of

360

Slot Cov. PL - 1" x 5'-3 3/4"

14 @ 3" = 3'-6

5 @ 3 1/2" = 1'-5 1/2" 3 31/32 3 @ 4" = 1'-0" 4 1/4 4 1/4

87 @ 4 1/2" = 32'-1 1/2"

5 @ 3'-1 3/8" 2 3/4 5 @ 3'-1 3/8"

Slot Cov. PL 1 x 2'-2"

1R-N1

1'-1" 1'-1"

Top

11/16 Holes Ream 15/16

Cov. PL - 31 x 9/16 x 84'-0 7/16" - 2 Req - N3 (C) (U.M)

42'-0 7/32

11/16 Holes Ream 15/16

1R - 5 x 3/8 x 3'-3" - 4 Req. - N1 (C) (U.M)

11/16 Holes Ream 15/16

PL-C12 (N.S.)

PL-C13 (F.S.)

7 @ 3" = 1'-9"

1R-C14 (N.S.)

Section - AA

1'-8 3/8"

1-7/8 5/8 Ctrs

2Ls - C15

1R-C17

2Ls - C24

2 PL's - 3 x 1/8 x 1'-11 1/4" - 8 Req. - N4 (C)

2 PL's - 16 x 1/8 x 2'-11 1/4" - 4 Req. - N5 (C)

} Tack Weld

2 Top Ls - 4 x 4 x 3/8 x 84'-0 7/16" - 4 Req. PL - N6 (C)

2 Web PLs - 24 x 5/8 x 84'-0 7/16" - 4 Req - N7 (C) (U.M)

42'-0 31/32 c/c

2Ls - 4 x 4 x 3/8 x 84'-0 7/16" - 4 Req. PL N8 (C)

7/8 ϕ Shop Rivets F.S.

1R - 18 3/8 x 3/8 x 2'-0" - 2 Req. - N2 (C)

2 PL's - N14

12 @ 3" = 3'-0"

5 @ 3 1/2" = 1'-5 1/2" 3 31/32 4 4 4 1/4

92 Spc. @ 4 1/2" = 34'-6"

11/16 Holes Ream 15/16

(L68)

(L69)

Mill

Diaphragm At L69

1R - 27 7/16 x 1/2 x 6'-7" - 2 Req. - N9 (C)

See Note Sh # 1

One Lower Chord As Shown - A12

One Lower Chord To Pair - AA12

Work With Sheet 13

11/16 Holes Ream 15/16

1/2 2'-0" 1/2

5/16

R-C22

Cov. PL - 31 x 5/8 x 84'-0 7/16" - 2 Req. - N8 (C) (U.M.)

Bottom

1'-6"

9"

10 @ 3" = 2'-6" 3 @ 3 1/2" = 10 1/2" 4 @ 4" = 1'-4" 4 3/32" 5 @ 4 1/4" = 1'-9 1/4"

5'-5"

3'-6 15/32"

83 Spc. @ 4 1/2" = 31'-1 1/2"

9 Spc. @ 3'-5 3/4" = 31'-3 3/4"

10 @ 3 1/2" = 2'-11"

1'-9"

2 3/4 2 3/4 10 @ 3 1/2" = 2'-11"

Elliptical Holes

10/12

5 @ 3" = 1'-3"

2'-6 1/2"

7 @ 2" = 1'-2"

5'-3"

1'-5 3/4"

Approved By: Howard, Needles, Tammen & Bergendoff Consulting Engineers:

Approved 8/31/59

L. P. Carlson

Bridge Design Engineer

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

PTF 8-25-59

GENERAL NOTES

Rivets 7/8" ϕ except as noted

Holes 15/16" except as noted

End Distance 1 3/4" unless noted

Shop Paint Red Lead (Ark. Std.)

Contact Surfaces No Paint

Shop Inspection by

Field Connections Rivets

Drawn by T.P.

Checked by

Revisions

Arkansas State Highway Commission
Mississippi State Highway Commission

Mississippi River Bridge
Near Helena, Arkansas
Unit No. 5

Sold To: John F. Beasley Constr. Co.
Chicago, Illinois

SHOP VINCENNES-STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

Contr. No. 4800 Sh. 12 of

359

85 SPC. @ 4½ = 31'-10½

13 @ 3½ = 3'-9½

14 @ 5 = 3'-6"

SLOT COV. PL 1 x 4'-9¼"

11/16 HOLES REAM 15/16 ϕ

CUT OUT COV. PL

1 PL - 5 x ½ x 10'-8¼" - 4 REQ. - m1 (A) (U.M.)

℄ TOP

42'-0 11/32 C/C

2 L's - 3½ x 3½ x ⅜ x 2'-9½ - 4 REQ. - m2 (A)

2 PL's - 77 x ⅝ x 9'-4" - 4 REQ. - m3 (A)

2 L's - 4 x 4 x ⅜ x 3'-11" - 4 REQ L/L - m4 (A)

BOLT TO TOP OF A12 & AA12

2 L's - 4 x 4 x ⅜ x 5'-5¾" - 4 REQ L/L m5 (A)

42'-0 11/32 C/C

11/16 HOLES REAM 15/16 ϕ

2 SPLICE PL's - 16 x ⅜ x 6'-0" - 4 REQ. - m6 (A) (U.M.)

2 SPLICE PL's - 23 x ⅜ x 3'-10½" - 4 REQ. - m7 (A) (U.M.)

92 SPC. @ 4½ = 34'-6"

SEE NOTE SH. # 1

L67

L68

MILL

1 PL - 54 x ⅝ x 7'-7¾" - 2 REQ. - m8 (A)

1 PL - C22a

BOTTOM

81 SPC. @ 4½ = 30'-4½"

9 SPC @ 3'-5¼" = 30'-11¼"

ELLIPTICAL HOLES

APPROVED BY 8/31/59

Bridge Design Engineer

LOWER CHORDS - A10 & AA10

WORK WITH SHEET 10

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY HFC 8-25-59

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets 7/8" ϕ except as noted

Holes 15/16" ϕ except as noted

End Distance 1¾" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by T.P.

Checked by

Revisions 11/24/59 1/4/60

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

Contr. No. 4390 Sh. 11 of

358

Top

Cov. PL - 31" x 5/8 x 83'-1 15/16" - 2 REQ. - k1 (A)(U.M)

42'-0 11/32" c/c

Slot Cov. PL - 1" x 3'-3 3/4"

Slot Cov. PL - 1 x 2'-2"

1 PL - 5 x 3/8 x 3'-3" - 4 REQ. - k2 (A)(U.M)

11/16 Holes Ream 15/16

Section - AA

Mill

2 Top L's - 4 x 4 x 3/8 x 84'-0 11/16" - 4 REQ. PL - k5 (A)

2 Web PL's - 24" x 3/4 x 84'-0 11/16" - 4 REQ. - k6 (A)(U.M)

2 Fill PL's - 16 x 3/8 x 1'-11 1/4" - 4 REQ. - k7 (C) (Tack Weld)

PL - C12 (N.S.)

PL - C13 (F.S.)

1 PL - C14 (N.S.)

2 Fill PL's - 23 1/2 x 3/8 x 2'-1 1/2" - 4 REQ. - k3 (C)

2 L's - C15

1 L - C17

2 L's - C24

1 PL - 18 1/8" x 3/8 x 2'-0" - 2 REQ. - k4 (C)

2 Bott L's - 4 x 4 x 3/8 x 84'-0 11/16" - 4 REQ. PL - k8 (A)

7/8" ø Shop Riv. F.S.

L66

L67

One Lower Chord As Shown - A10

One Lower Chord To Pair - AA10

Continued on Sheet 11

1 PL - 32" x 1/2 x 7'-6" - 2 REQ. - k10 (C)

R - C22a

1 Conc. PL - 31" x 11/16 x 84'-0 11/16" - 2 REQ. - k9 (A)(U.M)

Bottom

Elliptical Holes

42 Spc. @ 4 1/2" = 32'-7 1/2"

92 Spc. @ 4 1/2" = 34'-6"

81 Spc. @ 4 1/2" = 30'-4 1/2"

9 Spc. @ 3'-5 1/4 = 30'-11 1/4"

See Note Sh. # 1

Recommended for Diaphragm at L67

Approval

Howard, Needles, Tammen & Bergendoff

By: G.A. Date: 8-27-59

Approved By: Howard, Needles Tammen & Bergendoff Consulting Engineers:

General Notes

Rivets 7/8" ø except as noted

Holes 15/16" ø except as noted

End Distance 1 3/4" unless noted

Shop Paint Red Lead (Ark. Std.)

Contact Surfaces No Paint

Shop Inspection by

Field Connections Rivets

Drawn by T.P.

Checked by Alf.

Revisions 7/2/59

Arkansas State Highway Commission
Mississippi State Highway Commission

Mississippi River Bridge
Near Helena Arkansas
Unit No. 5

Sold To: John F. Beasley Constr. Co.
Chicago, Illinois

Approved by 8/31/59
L. P. Carlson
Bridge Design Engineer

Shop Vincennes Steel Corp. Div. of Industrial Enterprises, Inc.
Vincennes, Ind.

Contr. No. 4800 Sh. 10 of

351

54 SPC @ 6" = 32'-0"

68 SPC. @ 6" = 34'-0"

42'-0 11/32" c/c

42'-0 5/32" c/c

Slot Top PL - 1"x3'-3 3/4"

R-J2

R-J1

11/16 Φ Holes Ream 15/16 Φ

Splice PL - 5 x 3/4 x 8'-1 1/2" - 4 Req. - J1 (A) (U.M.)

Fill PL - 5 x 11/16 x 1'-9" - 4 Req. - J2 (A)

2 PL's - 6 3/8 x 5/8 x 8'-4 1/2" - 4 Req. - J3 (A)

2 Ls - 5 x 5 x 1/2 x 3'-11" - 4 Req. PL - J4 (A)

2 Fill PL's - 23 1/2 x 3/8 x 4'-11 1/4" - 4 Req. - J5 (A)

11/16 Cov. PL

3/4" Cov. PL

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY ERS DATE 9-2-59

2 Ls - 5 x 5 x 1/2 x 3'-11 - 4 Req. PL - J6 (A)

Bolt To Top of A10 & AA10

2 Splice PL's - 16 x 1/2 x 3'-10 1/2" - 4 Req. - J7 (A) (U.M.)

See Note Sh. #1

Mill

Lower Chords - A7 & AA7

Work with Sheet 7 & 8

1R - 54" x 5/8 x 8'-1 1/2" - 2 Req. - J8 (A)

Splice PL - 19 x 3/4 x 3'-1 1/2" - 2 Req. - J9 (A) (U.M.)

R-C22a

Bottom

Elliptical Holes

14 @ 3" = 3'-6"

9 @ 3'-5 1/4" = 30'-11 1/4"

60 SPC. @ 6" = 30'-0"

12 @ 3" = 3'-0"

11/16 Holes

APPROVED BY 9/10/59

L. R. Carlson

Bridge Design Engineer

Approved By: Howard, Needles Tammen & Bergendoff Consulting Engineers:

GENERAL NOTES

Rivets 7/8" except as noted

Holes 15/16" except as noted

End Distance 1 3/4" unless noted

Shop Paint Red Lead (Ark. Std.)

Contact Surfaces No Paint

Shop Inspection by

Field Connections Rivets

Drawn by T.P.

Checked by

Revisions 9/28/59 cc to 42'-0 5/32" & 42'-0 11/32" c/c

Arkansas State Highway Commission
Mississippi State Highway Commission

Mississippi River Bridge
Near Helena, Arkansas
Unit No. 5

Sold To: John F. Beasley Constr. Co.
Chicago, Illinois

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

Contr. No. 4800 Sh. 9 of

356

57 Spc. @ 6" = 28'-6"

Top

Slot Top PL - 1" x 2'-2"

11/16 Holes Ream 15/16 ϕ

Shop Rivet After Assembly

Slot Top PL 1/4 x 1'-7

Cov. PL - 31" x 11/16 x 77'-7 1/8" - 2 Req. - h1 (A) (U.M)

PL - 4" x 1/2 x 4'-3" - 4 Req. - h2 (A) (U.M)

42'-0 5/16"

12'-0"

7'-1 1/2" End of L5 PL h5

5'-6 3/4" End of PL - L8 - h1 1/8 h11

4'-0 End of L5 h6 & h10

2 @ 5 PL - h7

N.S. PL - 25 1/2" x 5/8 x 5'-5 13/16" - 2 Req. - h3 (c)

F.S. PL - 25 1/2" x 5/8 x 4'-4 9/16" - 2 Req. - h4 (c)

11/16 Holes Ream 15/16 ϕ

Section A-A

2 L.S. PL's - 24" x 3/4 x 4'-10 1/2" - 4 Req. - h5 (A) (U.M)

2 Top L's - 4" x 4" x 1/2 x 82'-0 5/8" - 4 Req. PL - h6 (A)

2 O.S. PL's - 16" x 1/2" x 38'-1 7/16" - 4 Req. - h7 (A) (U.M)

2 Web PL's - 24" x 3/4" x 78'-5 7/8" - 4 Req. - h8 (A) (U.M)

2 Fill PL's - 24" x 5/16" x 2'-1 1/2" - 4 Req. - h9 (c)

7@3"=1'-9"

7@3"=1'-9"

2 1/4 2 3/4 2 3/4

Fill h9

9 7/16"

9 5/16" - 3 1/2 1/2 3 3/8"

7@3"=1'-9"

7@3"=1'-9"

1'-1"

1'-1"

L5 Splice PL - L5

2 L5 Splice PL - L6

4'-2 5/16" c/c

11/16 Holes Ream 15/16 ϕ

Shop Riv. After Assembly

2'-7"

3 1/2 8 - 5 1/2" 3 3 3/4" 5@3"=1'-3" 3 3/4" 5@3"=1'-3" 3 3/4" 6@3"=1'-6" 8@3 1/2"=2'-4" 3 3 3

55 Spc. @ 6" = 27'-6"

2 Bott L's - 4" x 4" x 1/2 x 80'-0 5/8" - 4 Req. PL - h10 (A)

1/8 ϕ Shop Rivets F.S.

End of PL-h7

3@6"=1'-6" 3 1/16 3 1/2 4 3 1/2 3 1/2 4 3 1/2

PL - 12 1/2" x 3/8 x 2'-0" - 2 Req. - h13 (c)

W.L.

2'-8"

2 1/2"

2 L5 - C15

E - C17

C15 4
C17 4

C22 2
C29 9

A

A

(L64)

Lower Chords A7 & AA7

Work With Sheets - 7 & 7

PL - 31" x 3/4 x 78'-5 7/8" - 2 Req. - h11 (A) (U.M)

PL - 52" x 1/2 x 7'-9" - 2 Req. - h12 (A)

11/16 Holes Ream 15/16 ϕ

Shop Rivet After Assembly

PL-C22a

1/2 2'-0" 1/2

5/16

h5

h8 Bottom

1'-6

9"

4'-1 3/4"

15@3"=1'-3"

6@3 1/2"=1'-9"

3@3 1/2"=10 1/2"

3@4"=1'-0"

4 1/16

3@4 1/2"=1'-1 1/2"

5

5 1/2"

12'-8 3/4"

3'-5 13/16"

33@6"=16'-6"

7@3'-5 1/4"=24'-0 3/4"

14@3"=3'-6"

14@3'=3'-6"

1'-9"

Elliptical Holes

(L65)

12

10

3

5 1/2"

7@3"=1'-9"

2 1/4 2 3/4 2 3/4

5 1/2"

3

7 0 2 1/2" = 1'-5 1/2"

1'-5 3/4"

9 5/16" - 3 1/2 3 3/16 5 1/2"

2'-8 3/16"

2'-8 3/16"

9"

1'-6

Diaphragm at L65

See Note Sh. #1

Recommended for Approval

Howard, Needles, Tammen & Bergendoff

By GA Date 6-27-57

Approved By: Howard, Needles Tammen & Bergendoff Consulting Engineers

Approved By 8/31/57

L. P. Carlson

Bridge Design Engineer

General Notes

Rivets 7/8" ϕ except as noted

Holes 15/16" ϕ except as noted

End Distance 1 3/4" unless noted

Shop Paint Red Lead Ark. Std.

Contact Surfaces No Paint

Shop Inspection by

Field Connections Rivets

Drawn by T.P.

Checked by GAA

Revisions 7/22/57 8/31/57

Arkansas State Highway Commission
Mississippi State Highway Commission

Mississippi River Bridge
Near Helena Arkansas
Unit No. 5

Sold To: John F. Beasley Constr. Co.
Chicago, Illinois

Shop Vincennes Steel Corp.
Vincennes, Ind.

Contr. No. 4800 Sh. 8 of

355

DIAPHRAGM - SEE DET. A

HOLES IN R-931 & 932 ON - AA7 - ONLY

HOLES C'SK. IN 931 & 932 - N.S. - ONLY

DIAPHRAGM - SEE DET. A

3" x 1'-10" SLOT IN R-931 & 932 N.S. - ONLY

R-122 x 3/4 x 14'-2 1/2 - 1 REQ. - 310 (A) N.S. (ON AA7 - ONLY)
1 REQ. - 311 (A) F.S. (ON AA7 - ONLY)
PLANE EDGES

HOLES IN R-931 (N.S.) ON AA7 - ONLY

L - 4 x 4 x 1/2 x 7'-11 1/2" - 4 REQ. - 36 (A)

1R - 4" x 11/16 x 11'-1" - 4 REQ. - 37 (A)

SECTION - AA

ALL OPEN HOLES IN THIS VIEW TO BE 11/16 REAMED 15/16

1L - 18 @ 4'-5.8" x 4" x 7 3/4"
2 REQ. - 35 (A)

SECTION - BB

2 FILL PL - 8 x 3/4 x 1'-6 1/2" - 8 REQ. - 326 (A)
TACK WELD

MILL ALL VERTICAL MATERIAL INCLUDING END DIAPHRAGMS

SECTION - CC

2 PL - 16 x 1/2 x 7'-11 1/2" - 4 REQ. - 316 (A)

SHOP RIVET AFTER ASSEMBLY

2 FILL PL - 3 1/2 x 1/4 x 1'-02" - 4 REQ. - 324 (C)

1R - 9 3/4 x 3/4 x 11'-1" - 2 REQ. - 315 (A) N.S.
2 REQ. - 314 (A) F.S.

2 PL - 6 x 1/2 x 8'-1" - 8 REQ. - 915 (A)

2 L's - 8 x 8 x 1/2 x 2'-1" - 8 REQ. R/L - 916 (A)

2 PL - 40 x 3/4 x 7'-3 1/2" - 2 REQ. - 333 (A) (N.S.)
2 REQ. - 333a (A) (F.S.)

IL - 3 1/2 x 3 1/2 x 3/8 x 2'-9 1/2" - 4 REQ. - 935 (C)

IL - 4 x 4 x 3/4 x 2'-7 5/8" - 8 REQ. - 39 (C)

SECTION - EE

1R - 19 x 3/4 x 2'-7 5/8" - 4 REQ. - 38 (C)

ONE LOWER CHORD AS SHOWN - A7

ONE LOWER CHORD TO PAIR - AA7

SECTION - FF

2 PL - 8 x 6 x 3/4 x 9 3/4" - 4 REQ. - 325 (C)

1R - 80 4 x 3/4 x 15'-5 1/2" - 2 REQ. - 329 (A)
PLANE EDGES

1 CV. PL - 35" x 3/4 x 11'-1" - 2 REQ. - 328 (A) (PLANE EDGES)

IL - 4 x 4 x 1/2 x 7'-11 1/2" - 4 REQ. R/L - 937 (A)

DETAIL 'A'

1R - 19 x 3/4 x 3/4 x 1'-2" - 4 REQ. - 91 (C)
WELD 1/8 NUTS N.S.
BT. R - 10 1/2" x 3/4 x 1'-2" - 4 REQ. - 32 (C)
BT. R - 7" x 3/4 x 1'-2" - 4 REQ. - 33 (C)

2 L's - 8 x 4 x 3/4 x 7'-3 1/2" - 8 REQ. R/L - 921 (A)
1 WEB R - 17" x 11/16 x 7'-3 1/2" - 2 REQ. - 922 (A)
2 PL's - 17" x 5/8 x 4'-6 3/4" - 4 REQ. - 923 (A)
2 PL's L - 18" @ 45.8" x 1'-0 1/2" - 4 REQ. - 324 (C)

SEE NOTE SH. #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS. 8/31/59

APPROVED BY [illegible] Carlson
Bridge Design Engineer

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 1/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection
Field Connections
Drawn by TP
Checked by HOWARD, NEEDLES, TAMMEN & BERGENDOFF
Revisions 7/24/59 8/31/59
BY
DATE 7-12-60

RECOMMENDED FOR APPROVAL

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT, No. 3

SOLE TO JOHN F BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

WORK WITH SHEETS 8 & 9

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800 FT. Sh. 7 of

354

57 SPC. @ 6" = 28'-6"

TOP

11L - 8 x 4 x 3/4 x 3'-2 3/4" - 8 REQ. PL - F1 (A)

42'-0 5/16"

21'-0"

SLOT COV. E 1 3/4 x 1'-7"

11/16 HOLES REAM 15/16

21L3 - 8 x 4 x 3/4 x 4'-2" - 8 REQ. PL - F2 (A)

5'-6 3/4" END OF WEB W - E12 & TOP & BOTT PL'S E & E18

4'-0" END OF LS - E11 & E12 & PL - F2

20 I.S. PLS - 16 x 1/2 x 38'-9 9/16" - 4 REQ. - F3 (A) (UM)

42'-0 5/16" O/C

21 I.S. PLS - 24 x 3/4 x 13'-10 1/2" - 4 REQ. - F4 (A) (U.M.)

I.S. PL - F4

40 SPC. @ 6" = 20'-0"

18 @ 6" = 9'-0"

21 I.S. SPLICE PLS - 24 x 1/2 x 5'-11 3/4" - 8 REQ. - F6 (A) (U.M.)

LONG. SPLICE PLS - 23 x 9/16 x 6'-5 3/4" 8 REQ. - F5 (A) (U.M.)

7/8 SHOP RIVETS F5

F6

F5

W.L.

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY G.A. DATE 8-27-59

SEE NOTE SH. 1

LOWER CHORDS - A5 & AA5

WORK WITH SHEET 5

R-C22a

BOTTOM

ELLIPTICAL HOLES

52 SPC. @ 6" = 26'-0"

7 @ 3'-5 4/16" = 24'-0 3/4"

3'-5 13/16"

12'-8 3/4"

4'-1 3/4"

APPROVED BY 8/31/59

L. P. Carlson

Bridge Design Engineer

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ϕ except as noted

Holes 15/16" ϕ except as noted

End Distance 1 3/4" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by T. P.

Checked by AHF

Revisions 7-29-59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

Contr. No. 4800 SH. 6 of

353

65 SPC. @ 6" = 32'-6"

SLOT COV. PL 1" x 2'-2¼"

SLOT TOP PL - 1" x 2'-2"

TOP ℄

PUNCH 11/16ϕ REAM 15/16ϕ

COV. PL - 31 x 11/16 x 77'-10 1/2 2 REQ. - E5 (A) (U.M

PUNCH 11/16ϕ REAM 15/16ϕ

1L - 4 x 4 x 3/8 x 4'-2 1/2" - 4 REQ. R/L E3 (A)

BOLT TO TOP OF A3 & AA3

SPLICE PL - 6 x 1/2 x 9'-9" - 4 REQ. - E1 (A) (U.M)

FILL PL - 6 x 11/16 x 4'-1 1/2" - 4 REQ. - E2 (A)

1PL - 5 x 3/8 x 3'-6" - 4 REQ. - E6 (A) (U.M)

2Ls - 4 x 4 x 3/8 x 4'-1 1/2" - 4 REQ. R/L E4 (C)

BOLT TO TOP OF A3 & AA3

42'-0 5/16"

2 PL's - 63 5/8 x 5/8 x 8'-6" - 4 REQ. - E7 (A)

PUNCH 11/16ϕ REAM 15/16ϕ

1 PL - C12 (M.S.)
1 PL - C13 (F.S.)

SECTION - AA

2Ls - 4 x 4 x 3/8 x 4'-1 3/4 - 4 REQ. R/L - E8 (C)

2Ls - 4 x 4 x 3/8 x 4'-1 3/4 - 4 REQ. R/L - E9 (C)

2 FILL PL's - 24 x 1/8 x 4'-3" - 4 REQ. - E10 (C)

2 FILL PL's - 4 x 5/8 x 6 1/2 - 4 REQ. - E30 (C)

2 SIDE PL's - 24 x 3/4 x 78'-5 7/8" - 4 REQ. - E12 (A) (U.M)

2 TOP Ls - 4 x 4 x 1/2 x 80'-0 5/8" - 4 REQ. R/L - E11 (A)

1 PL - 19 x 3/8 x 2'-0" - 2 REQ. - E16 (C)

1'-7 7/8" B/B Ls

2Ls - C15

42'-0 5/16" c/c

2 BOTT Ls - 4 x 4 x 1/2 x 80'-0 5/8" - 4 REQ. R/L - E13 (A)

7/8ϕ SHOP RIVETS F.S.

2Ls - C24

69 SPC @ 6" = 34'-6"

2 SPLICE PLs - 23" x 5/8 x 5'-0" - 4 REQ. - E14 (A) (U.M)

2 SPLICE PLs - 14 x 1/2 x 6'-0" - 4 REQ. - E15 (A) (U.M)

1 PL - 36" x 3/4 x 8'-3 3/4" - 2 REQ. - E19 (A)

ONE LOWER CHORD AS SHOWN - A5

ONE LOWER CHORD TO PAIR - AA5

CONTINUED ON SHEET 6

1 PL - 55 3/4 x 1/2 x 8'-0" - 2 REQ. - E17 (A)

COV. PL - 31 x 3/4 x 78'-5 7/8" - 2 REQ. - E18 (A) (U.M)

R-C22a

BOTTOM ℄

ELLIPTICAL HOLES

60 SPC @ 6" = 30'-0"

9 @ 3'-5 1/4" = 30'-11 1/4"

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

G.A. DATE 5-27-59

DIAPHRAGM AT L63

SEE NOTE SH. "1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8ϕ except as noted

Holes 15/16ϕ except as noted

End Distance 1 3/4" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVET

Drawn by T.P.

Checked by ALY

Revisions 7/23/59

APPROVED BY L. P. Carlson 8/31/59 Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

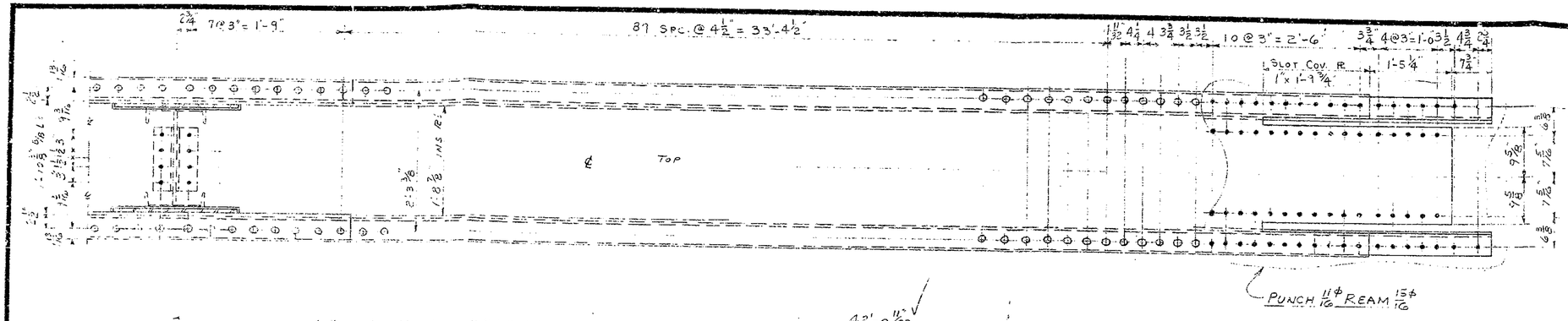
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT #5

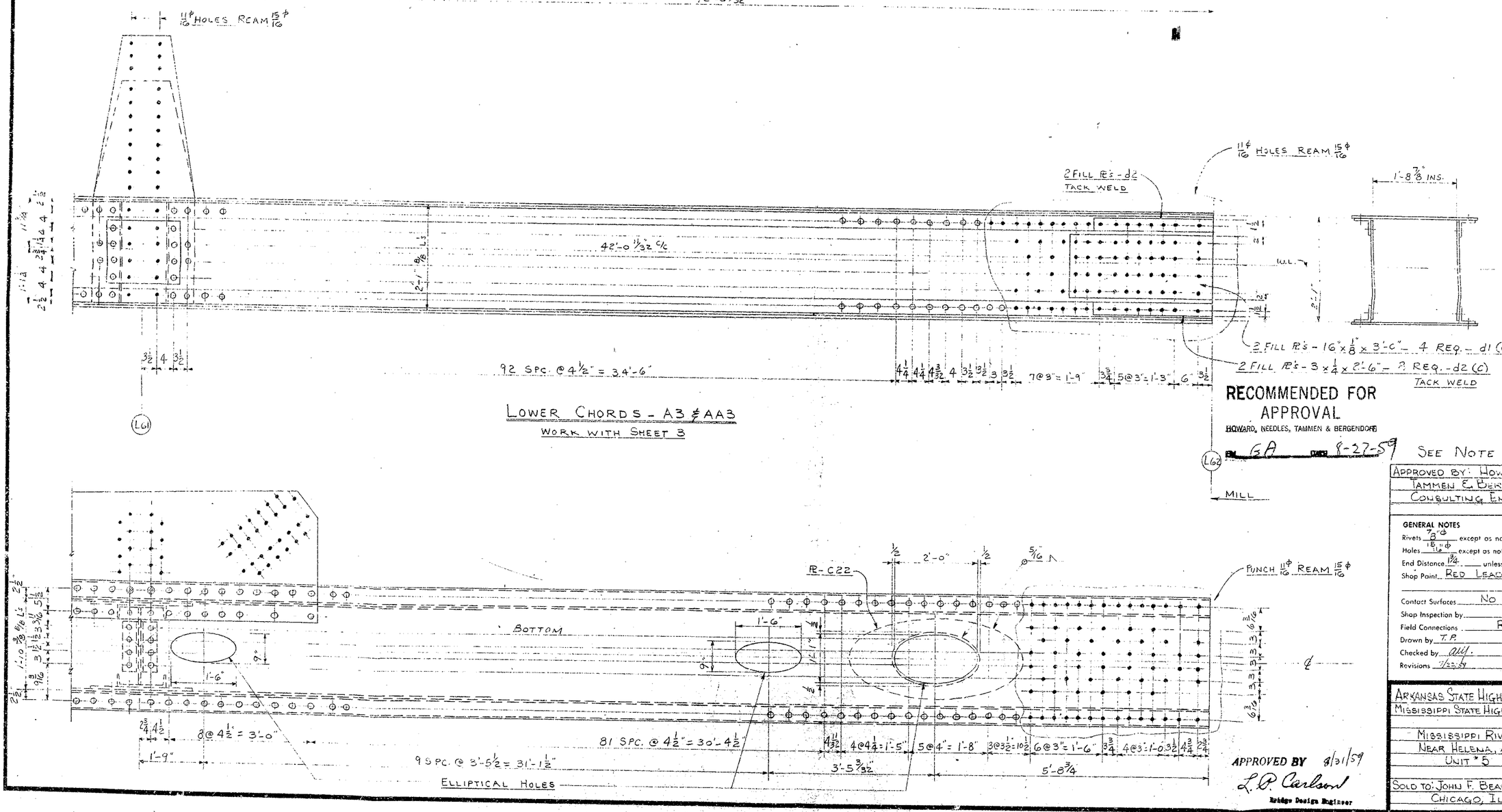
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

Contr. No. 4800 Sh. 5 of

352





LOWER CHORDS - A3 & AA3

WORK WITH SHEET 3

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY GA DATE 8-27-59

SEE NOTE SH. #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ϕ except as noted

Holes 15/16" ϕ except as noted

End Distance 1¼ unless noted

Shop Paint RED LEAD (ARK. STD)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVET

Drawn by T.P.

Checked by ALL.

Revisions 7/23/59

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE

NEAR HELENA, ARKANSAS

UNIT 5

SOLD TO: JOHN F. BEASELY CONSTR. CO.

CHICAGO, ILLINOIS

APPROVED BY 8/31/59

L. P. Carlson

Bridge Design Engineer

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

Contr. No. 4800 Sh. 4 of

351

FILL PL - C1
SPLICE PL - C2
SLOT COV. PL 1 x 1'-8¼
1PL - C5
SLOT COV. PL 1 x 2'-2
11/16 HOLES REAM 15/16 ϕ
TOP ℄
FILL PL - 4½ x 5/8 x 5'-1½ - 4 REQ. - C1 (A)
SPLICE PL - 5 x ½ x 3'-9 - 4 REQ. - C2 (A)(U.M)
1PL - 5 x 3/8 x 4'-3" - 4 REQ. - C3 (A)(U.M)
11/16 HOLES REAM 15/16 ϕ
2Ls - 3½ x 3½ x 3/8 x 2'-5¾ - 4 REQ. - C3 (C)
COV. PL - 31 x 5/8 x 82'-9 3/16" - 2 REQ. - C4 (C)(U.M)
5 @ 5¼ = 2'-2¼"
N.S. PL - 25½ x 5/8 x 5'-3 5/8" - 12 - REQ. - C12 (C)
F.S. PL - 25½ x 5/8 x 4'-4 5/8" - 12 - REQ. - C13 (C)
11/16 HOLES REAM 15/16 ϕ
11/16 HOLES REAM 15/16 ϕ
2 PLs - 71 3/8" x 5/8 x 9'-0" - 4 REQ. - C6 (A)
2Ls - 4 x 4 x 3/8 x 4'-11¾" - 4 REQ. PL - C8 (C)
2 TOP Ls - 4 x 4 x 3/8 x 84'-0 11/16" - 4 REQ. PL - C9 (C)
2 SIDE PLs - 24 x ¾ x 84'-0 11/16" - 4 REQ. - C10 (C)(U.M)
42'-0 11/32" ℄
2 BOTT Ls - 4 x 4 x 3/8 x 84'-0 11/16" - 4 REQ. PL - C11 (C)
7/8 ϕ SHOP RIVETS F.S.
2Ls - 4 x 4 x 3/8 x 1'-0½" - 28 REQ. - C15 (C)
1PL - 18 7/8" x 3/8 x 2'-0" - 2 REQ. - C16 (C)
L - 12" ϕ 35" x 2'-0" - 28 REQ. - C17 (C)
1PL - 16 x 3/8 x 1'-6½" - 10 REQ. - C14 (N.S.)(C)
2Ls - 4 x 4 x 3/8 x 1'-0½" - 28 REQ. - C29 (C)
90 SPC. @ 4½" = 33'-9"
2Ls - 4 x 4 x 3/8 x 3'-11¾" - 4 REQ. PL - C7 (C)
BOLT TO TOP OF A2 & AA2
MILL
2 PLs - 16 x 3/8 x 4'-4½" - 4 REQ. - C18 (A)(U.M)
2 PLs - 23" x ½ x 3'-10½" - 4 REQ. - C19 (A)(U.M)
1PL - 49½ x ½ x 6'-8¼" - 2 REQ. - C20 (A)
L60
L61
DIAPHRAGM AT L61
SEE NOTE SH. #1
ONE LOWER CHORD AS SHOWN - A3
ONE LOWER CHORD TO PAIR - AA3
CONTINUED ON SHEET 4
ELLIPTICAL PL - 20 x 5/8 x 3'-4" - 20 - REQ. - C22 (C) (ON A3 & AA3)
12 - REQ. - C22a (A)
COV. PL - 31 x 11/16 x 84'-0 11/16" - 2 REQ. - C21 (C) (U.M)
BOTTOM ℄
1PL - 31 x ½ x 7'-1½" - 2 REQ. - C23 (A)
11/16 HOLES REAM 15/16 ϕ
ELLIPTICAL HOLES
82 SPC. @ 4½" = 30'-9"
95 PC. @ 3'-6" = 31'-6"
7 @ 4½" = 2'-7½"
8 @ 4½" = 3'-0"
APPROVED BY 8/31/59
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY H F C DATE 8-25-59

C12 2
C13 2
C14 2
C15 4
C17 4
C24 1
C22 2

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1¼" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by T. P
Checked by AHF
Revisions 11/23/59 | 12/11/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 5

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.
Contr. No. 4800 Sh. 3 of

350

1L - 4 x 4 x 3/8 x 1'-2" - 2 Req. b13(c)

COV. PL - 31" x 1/2 x 39'-4 7/16" - 2 REQ. - b1 (c)(U.M)

PL - 6 1/2 x 1/2 x 1'-8 1/4" - 2 REQ. - b2

TACK WELD

SLOT TOP PL 1" x 1'-8 1/4"

PUNCH 11/16" REAM 15/16" ϕ

PUNCH 11/16" REAM 15/16" ϕ

TOP

PL - 4 1/2 x 1/8 x 1'-6 1/2" - 4 REQ. - b2 (c)

TACK WELD

MILL

34'-7 3/16"

N.S. PL - 22 1/4 x 5/8 x 5'-0 1/2" - 2 REQ. - b3 (c)

F.S. PL - 22 1/4 x 5/8 x 4'-6 1/2" - 2 REQ. - b4 (c)

IR - 16 x 3/8 x 1'-6 3/4" - 2 REQ. - b5 (c)

N.S. ONLY

N.S.L 7 x 4 x 3/4 x 1'-11" - CV17 (C)

Shop Rivets F.S.

2 TOP L's - 4 x 4 x 3/8 x 40'-5 3/16" - 4 REQ. 8/L - b6 (c)

2 SIDE PL's - 24 x 1/16 x 40'-5 3/16" - 4 REQ. - b7 (c)(U.M)

2 FILL PL's - 3 x 3/16 x 1'-11 1/4" - 8 REQ. - b10 (c)

2 FILL PL's - 16 x 3/16 x 2'-2 1/4" - 4 REQ. - b9 (c)

TACK WELD

TACK WELD

JACKING BLOCK A410

PUNCH 11/16" REAM 15/16" ϕ

2 BOTT. L's - 4 x 4 x 3/8 x 40'-5 3/16" - 4 REQ. PL - b8 (c)

PUNCH 11/16" REAM 15/16" ϕ

39'-7 3/16"

1'-8 3/8" INS.

1/2 PL

ONE LOWER CHORD AS SHOWN - A2

ONE LOWER CHORD TO PAIR - AA2

1R - 2 3/4 x 1/2 x 4'-2 1/4" - 2 REQ. - b11 (c)

ELLIPTICAL PL - C22

COV. PL - 31" x 1/2 x 40'-5 3/16" - 2 REQ. - b12 (c)(U.M)

FILL PL 31 x 3/16 x 3'-4 1/2" 2 Req. - b25 (c)

Tack to rivet

ELLIPTICAL HOLE

ELLIPTICAL PL - C22

PUNCH 11/16" REAM 15/16" ϕ

BOTTOM

APPROVED BY 9/15/60

L.G. Carlson

Bridge Design Engineer

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY R.G.C. DATE 9-9-60

SEE NOTE SH. 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS. 8/31/59

GENERAL NOTES

Rivets 7/8" ϕ except as noted

Holes 15/16" ϕ except as noted

End Distance 1 1/4 unless noted

Shop Paint: RED LEAD (ARK. STD.) (ARTICLE 807.29 PARAGRAPH a-c-d

Contact Surfaces NO PAINT.

Shop Inspection by

Field Connections RIVETS

Drawn by T.P.

Checked by alf

Revisions

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE NEAR HELENA, ARKANSAS

PROJECT NO. 2

SHOP NOTE - GENERALLY ALL HOLES FOR SHOP RIVETS SHALL BE PUNCHED. ALL HOLES FOR MAIN TRUSS FIELD CONNECTIONS SHALL BE REAMED TO $\frac{15}{16}$" WHILE THE TRUSSES ARE ASSEMBLED TO PROPER CAMBER. TRUSS MEMBERS SHALL BE MATCHMARKED AFTER REAMING.
ALL HOLES IN LOW ALLOY STEEL THICKER THAN $\frac{5}{8}$" AND IN CARBON STEEL THICKER THAN $\frac{3}{4}$" SHALL BE DRILLED AND REAMED.
ALL FLOOR BEAM AND STRINGER CONNECTION HOLES SHALL BE SUBPUNCHED $\frac{1}{16}$" AND REAMED TO $\frac{15}{16}$"ϕ THROUGH A METAL TEMPLATE.
HOLES FOR CAST STEEL SHOES SHALL BE DRILLED THROUGH A METAL TEMPLATE. HOLES $1\frac{1}{16}$"ϕ AT L0 and L74. HOLES $1\frac{1}{2}$"ϕ AT L1C-L30-L46 and L64.
ALL FLAME CUT EDGES OF PLATES AND SHAPES OVER $\frac{5}{8}$" IN THICKNESS SHALL BE PLANED TO A DEPTH OF $\frac{1}{4}$" OR SHALL BE POST HEATED
CONTACT SURFACES OF METAL IN FIELD CONNECTIONS SHALL BE GIVEN A COAT OF LINSEED OIL TINTED WITH RED LEAD.
MACHINED SURFACES SHALL BE GIVEN A COAT OF LINSEED OIL TINTED WITH RED LEAD.
REINTRANT CUTS SHALL BE FILLETED WITH $\frac{1}{2}$" MINIMUM RADIUS
MATERIAL BILLED AS (C) IS STRUCTURAL CARBON STEEL. MATERIAL BILLED AS (A) IS LOW ALLOY STEEL

349

No	Mark	Member	
1	A175	Shims	@ L74
2	B175	"	@ "
4	C175	"	@ "
8	D175	"	@ "
1	E175	"	@ "
2	F175	"	@ "

No	Mark	Member	
1	A174	Expansion Castings	@ L74
4	B174	"	"
1	C174	"	"
1	D174	"	"
4	E174	"	"
1	F174	"	"
1	Shims - B173	4 Shims C173 - 1 Shim K173	@ L74
1	" - E173	4 " H173 - 1 " M173	@ L74
2	" F173	8 " J173 2 " N173	@ L74

No	Mark	Member	
1	A177	Platform	@ L64
1	B177	Cage Door	@ L61
1	A178	Ladder Section	U64-L64
1	B178	"	"
1	A179	"	"
1	B179	"	"
1	C179	"	"
1	D178	Ladder	@ L64
2	C178	Ladders	@ L74
2	A179	Stringers	"

UNIT 5 - SHIPPING LIST

No	Mark	Member	
1	A2	Lower Chord	L59-L60
1	AA2	" "	"
1	A3	" "	L60-L62
1	AA3	" "	"
1	A5	" "	L62 to L64
1	AA5	" "	"
1	A7	" "	L64 to L66
1	AA7	" "	"
		" "	
1	A10	" "	L66 to L68
1	AA10	" "	"
1	A12	" "	L68 to L70
1	AA12	" "	"
1	A14	" "	L70 to L72
1	AA14	" "	"
1	A16	" "	L72 to L74
1	AA16	" "	"
1	A18	Top Chord	L59 - U60
1	AA18	"	"
1	A19	"	U60 - 62
1	AA19	"	"
1	A21	"	U62 to U64
1	AA21	" "	"
1	A23	" "	U64 to U66
1	AA23	" "	"
1	A25	" "	U66 to U68
1	AA25	" "	"
1	A27	" "	U68 to U69
1	AA27	" "	"
1	A28	" "	U69 to U71
1	AA28	" "	"
1	A30	" "	U71 to U73
1	AA30	" "	"
2	A32	Verticals	U73 to L73
2	B32	"	U72 to L72
2	C32	"	U71 to L71
1	A33	"	U70 to L70
1	AA33	"	U70 to L70
2	B33	"	U69 to L69

No	Mark	Member	
1	A36	Verticals	U68 to L68
1	AA36	"	U68 to L68
1	A34	"	U66 to L66
1	AA34	"	U66 to L66
2	B34	"	L67 to M67
2	C34	"	L61 to M61
2	A35	"	U67 to M67
2	B35	"	L66 to U66
2	C35	"	L65 to M65
2	D35	"	L63 to M63
2	A95	"	U65 to M65
2	B95	"	U63 to M63
2	C36	"	U62 to L62
1	A37	"	L64 to L64
1	AA37	"	L64 to U64
2	A40	"	U61 to M61
2	B40	"	U59 to L59
2	A41	Diagonals	U73 to L72
2	B41	"	U71 to L72
2	A42	"	L70 to U71
2	B42	"	U69 to L70
2	A43	"	L68 to U69
2	B43	"	L66 to M67
2	A44	"	U66 to L68
1	A45	"	L64 to U66
1	AA45	"	L64 to U66
2	A48	"	M65 to L64
2	B48	"	L62 to M63
1	A49	"	U65 to L64
1	AA49	"	U62 to L64
2	A63	"	L60 to U61
2	A64	"	M61 to L61

No	Mark	Member	
1	A65	Diagonal -	U59 to L60
1	AA65	" -	U59 to L60
1	A94	End Post -	U73 to L74
1	AA94	"	U73 to L74
1	H175	- 1 H175 Curb Pits	@ L74
1	J175	- 1 JA175 "	@ L74
2	E178	Hanger U	
2	A52	Top Struts -	@ U70-U72
1	A53	" -	@ U71
1	A54	" -	@ U69
1	A55	" -	@ U68
1	A56	" -	@ U66
1	B56	" -	@ U62
1	A57	" -	@ U65
1	A57	" -	@ U63
1	A58	" -	@ U64
1	A60	" -	@ U61
1	B60	" -	@ U60
1	A61	" -	@ U59
1	A62	" -	@ U73
1	B54	" -	@ U67
2	D34	Sway Brace Bumpers	@ U60
2	B36	" " "	@ U68
1	E52	Sway Braces -	@ U72
1	E52	" -	@ U70
1	B52	" -	@ U72
1	C52	" -	@ U72
1	D52	" -	@ U72
1	B53	" -	@ U70
1	C53	" -	@ U70
1	D53	" -	@ U70
2	D54	" -	@ U68
2	E54	" -	@ U60
1	B55	" -	@ U68
1	B55	" -	@ U60
1	C55	" -	@ U66
1	C55	" -	@ U64
3	C54	" -	@ U68
3	C54	" -	@ U60
1	D55	" -	@ U68
1	D55	" -	@ U60

No	Mark	Member	
1	C60	Sway Braces	@ U64
1	D60	"	@ U64
1	B57	"	@ U64
1	C57	"	@ U64
1	A59	"	@ U64
2	B59	"	@ U64
1	C59	"	@ U64
1	B64	Partal Struts	@ U66
1	C90	"	@ U73
1	A90	"	@ U72
2	B90	"	@ U73
1	A91	"	@ U62
1	B91	"	@ U62
1	B91	"	@ U66
1	A92	"	@ U66
1	C92	"	@ U62
1	B92	"	@ U66
1	B92	"	@ U62
1	A93	"	@ U66
1	D93	"	@ U62
1	B93	"	@ U66
1	B93	"	@ U62
2	C93	"	@ U66
2	C93	"	@ U62
1	A96	"	@ U59
1	B96	"	@ U59
1	A97	"	@ U59
1	B97	"	@ U59
8	N175	Contraction Joints	
8	NA175	" "	
4	A67	Top Laterals	
8	B67	"	
3	A68	"	
8	B68	"	
2	A69	"	
2	B69	"	
2	A70	"	
2	B70	"	
2	C70	"	
2	C71	Top Braces	@ U59

No	Mark	Member	
1	A71	Top Lateral	
2	B71	" "	
6	A72	Lower Laterals	
12	B72	"	
2	C72	"	
4	D72	"	
2	A73	"	
5	B73	"	
1	C73	"	
1	D73	"	
1	A74	"	
1	B74	"	
1	C74	"	
1	D74	"	
2	E74	"	
1	A75	"	
2	B75	"	
1	C75	"	
1	D75	"	
1	D76	"	
1	A76	Wind Shear strut	@ L59
4	A176	Contraction Joints	
4	B176	" "	
1	A80	Floor Beam	@ L59
1	A87	" "	@ L66
1	B37	" "	@ L61
1	B190	" "	@ L62
1	A88	" "	@ L63
1	A86	" "	@ L64
1	B88	" "	@ L65
1	A190	" "	@ L66
1	C88	" "	@ L67
1	C191	" "	@ L68
1	B98	" "	@ L69
1	C98	" "	@ L70
1	A191	" "	@ L71
2	D98	" "	@ L72-L73
1	A85	" "	@ L74

No	Mark	Member	
1	B83	Cross Beams	
1	C83	" "	
74	C76	"	
60	D76	"	
4	A89	"	
1	B89	Curb E	
1	BA89	"	
2	C89	"	
2	D89	"	
2	E89	"	
2	M89	"	
2	MA89	"	
3	F89	"	
3	FA89	"	
1	G89	"	
1	GA89	"	
2	J89	"	
2	JA89	"	
2	K89	"	
2	KA89	"	
2	A98-AA98	"	

No	Mark	Member	
1	A81		
2	AA81		
1	B81		
1	C81		
1	A82		
1	AA82		
1	B82		
1	A83		
1	A77		
1	AA77		
1	B77		
2	A78		
2	B78		
2	C78		
1	D78		
24	C190	Contraction Links	
24	F191	" Pins	
48	E191	" Ring Fills	

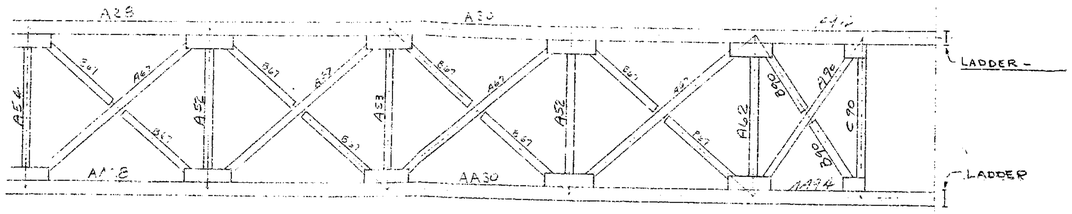
APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF, CONSULTING ENGINEERS:-

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY [signature] A
DATE 8-28-59

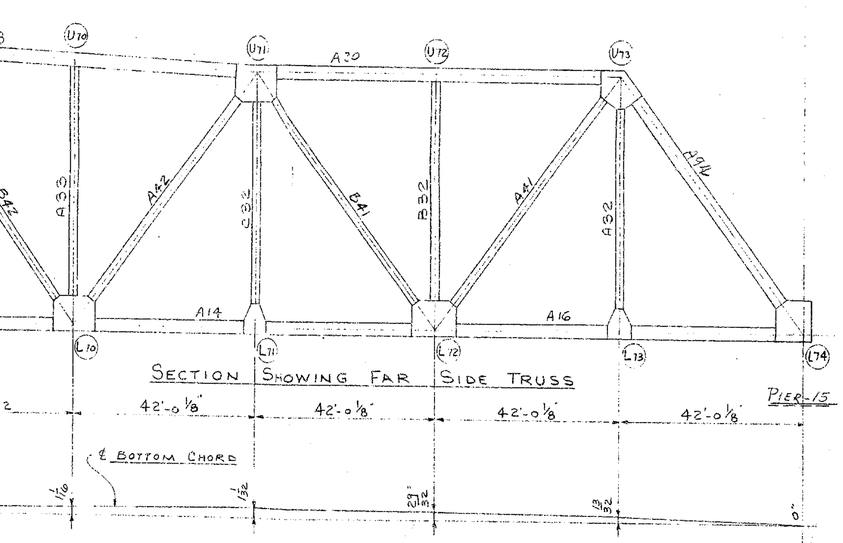
APPROVED BY 9/1/59
L.P. Carlson
Bridge Design Engineer

GENERAL NOTES
Rivets ____ except as noted ____
Holes ____ except as noted ____
End Distance ____ unless noted ____
Shop Paint Red Lead (Fed. Std.)
Contact Surfaces No Paint
Shop Inspection by ____
Field Connections Rivets
Drawn by GW 3-2-59
Checked by Davy
Revisions 7/23/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT NO 5
SOLD TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

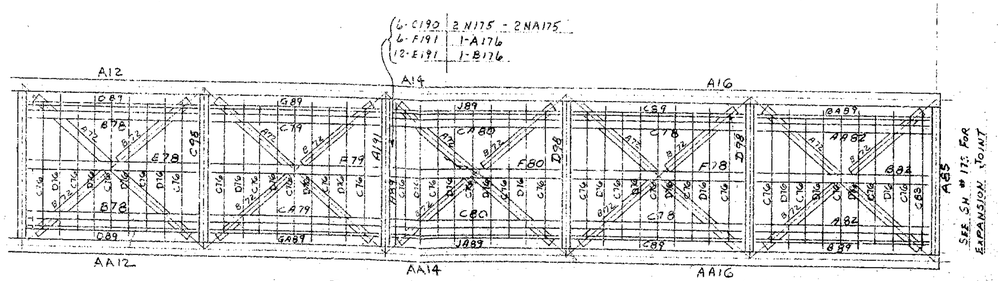


TOP BRACEING PLAN

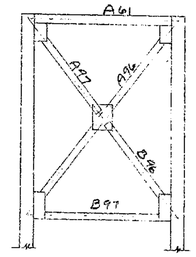


SECTION SHOWING FAR SIDE TRUSS

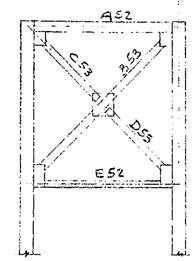
CAMBER DIAGRAM



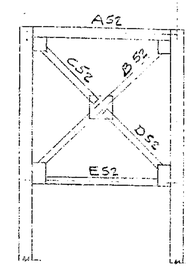
FLOOR FRAMING PLAN



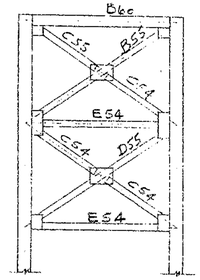
PORTAL U59-L60



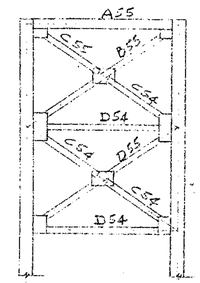
SWAY FRAME U70-L70



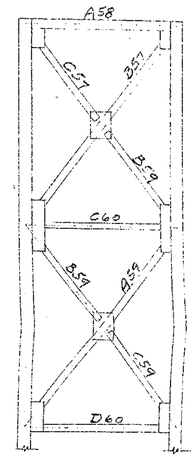
SWAY FRAME U72-L72



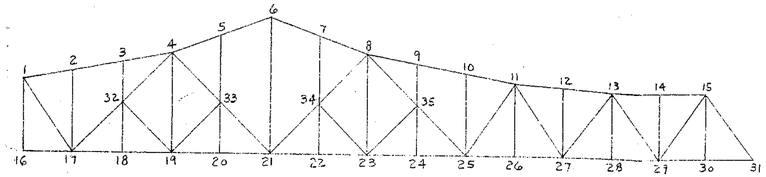
SWAY FRAME U60-L60



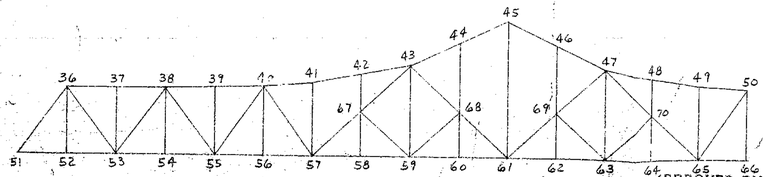
SWAY FRAME U68-L68



PORTAL U64-L64



MATCH-MARKS - NORTH TRUSS (ROADWAY VIEW)



MATCH-MARKS - SOUTH TRUSS (ROADWAY VIEW)

348

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY VEA DATE 8-26-59

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:
APPROVED 8/31/59
L.W.P. Carlson
Bridge Design Engineer

GENERAL NOTES

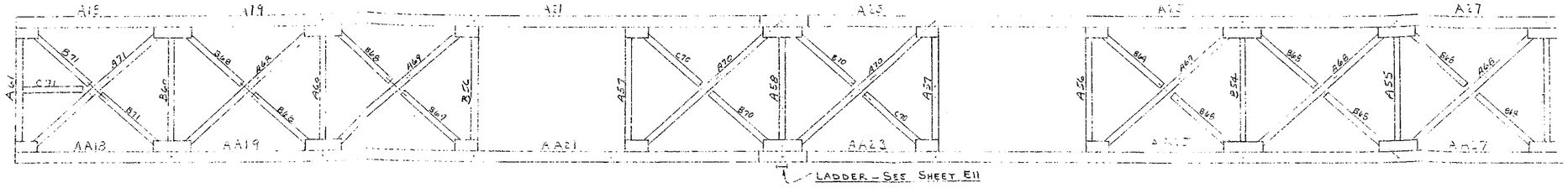
Rivets _____ except as noted _____
Holes _____ except as noted _____
End Distance _____ unless noted _____
Shop Paint _____
_____
Contact Surfaces _____
Shop Inspection by _____
Field Connections _____
Drawn by T.P. 3-2-59
Checked by ALY
Revisions _____

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

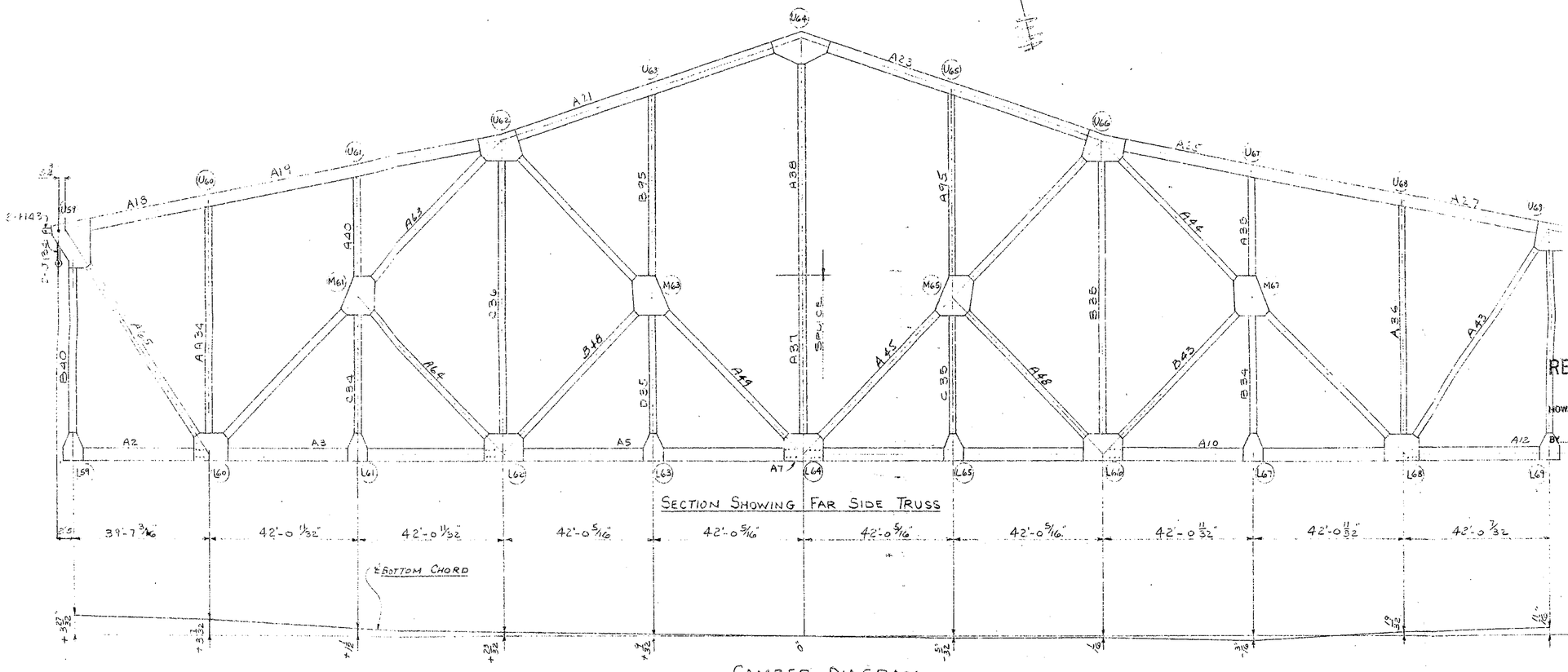
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 5

SOLD TO - JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC VINCENNES, IND. Contr. No. 4800 Sh. E10 of.

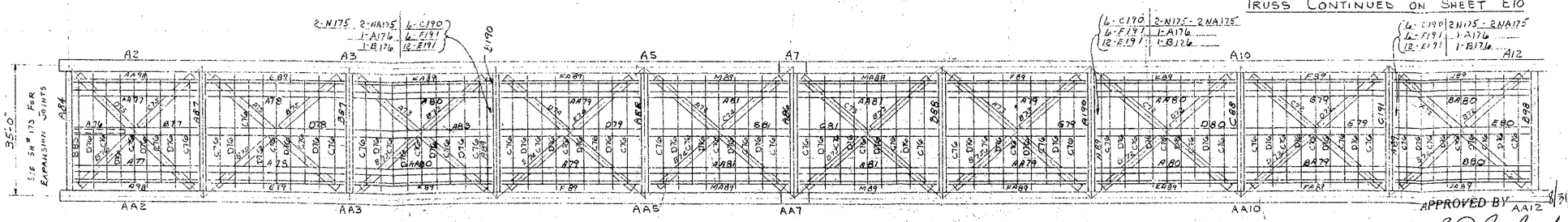


TOP BRACING PLAN



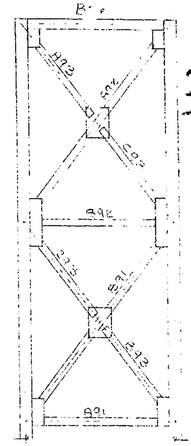
SECTION SHOWING FAR SIDE TRUSS

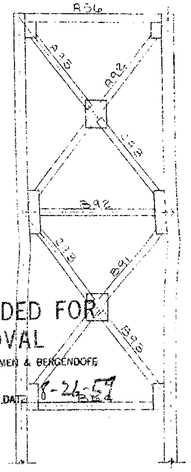
CAMBER DIAGRAM



TRUSS CONTINUED ON SHEET E10

FLOOR FRAMING PLAN





RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY VEA DATE 8-24-59

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets _____ except as noted
Holes _____ except as noted
End Distance _____ unless noted
Shop Point _____
Contact Surfaces _____
Shop Inspection by _____
Field Connections _____
Drawn by T.P 3-2-59
Checked by _____
Revisions _____

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

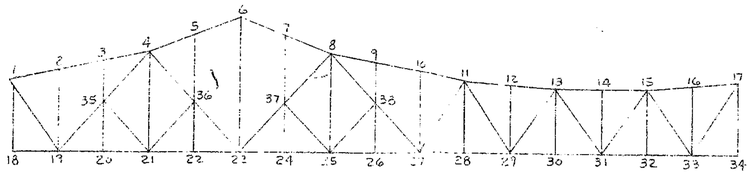
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 5

SOLD TO - JOHN F. BEASLEY CONSTR CO.
CHICAGO, ILLINOIS

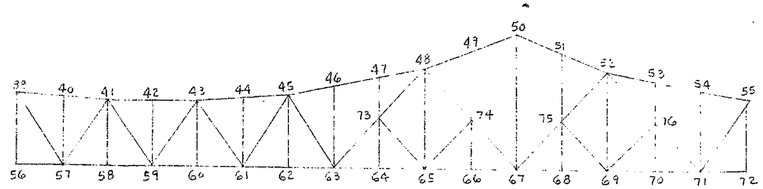
APPROVED BY _____ 8/31/59
L. P. Carlson
Bridge Design Engineer

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.

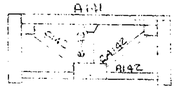
Contr. No. 4800 Sh. E9 of



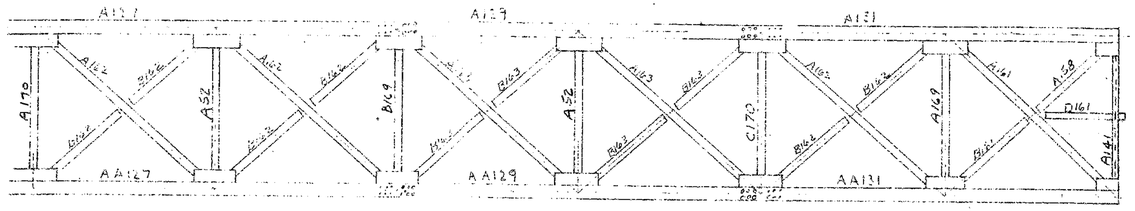
MATCH-MARKS - NORTH TRUSS (ROADWAY VIEW)



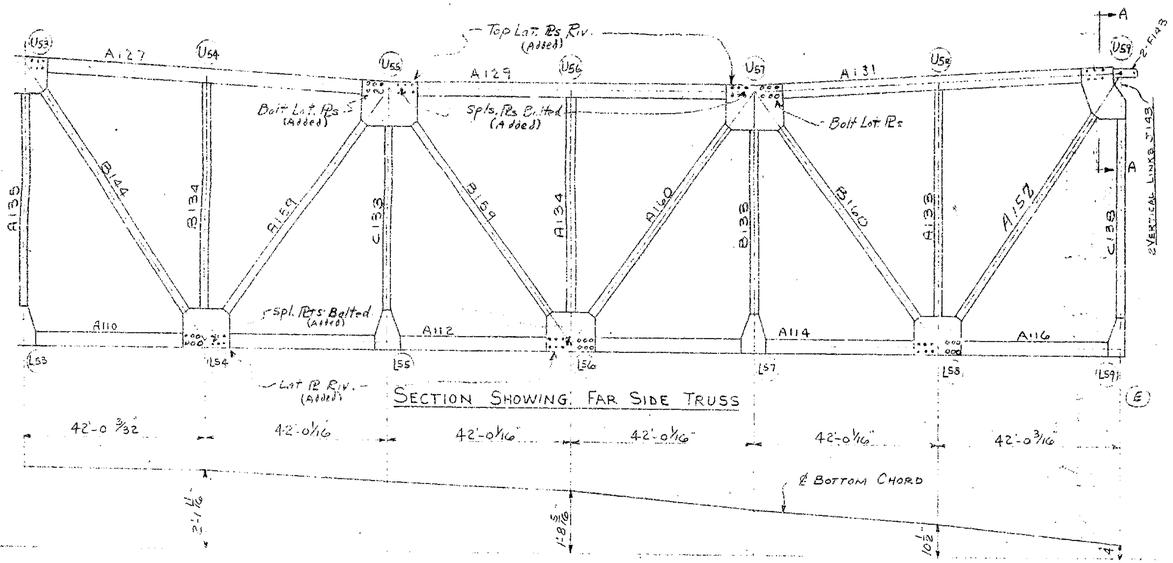
MATCH-MARKS - SOUTH TRUSS (ROADWAY VIEW)



SECTION A-A

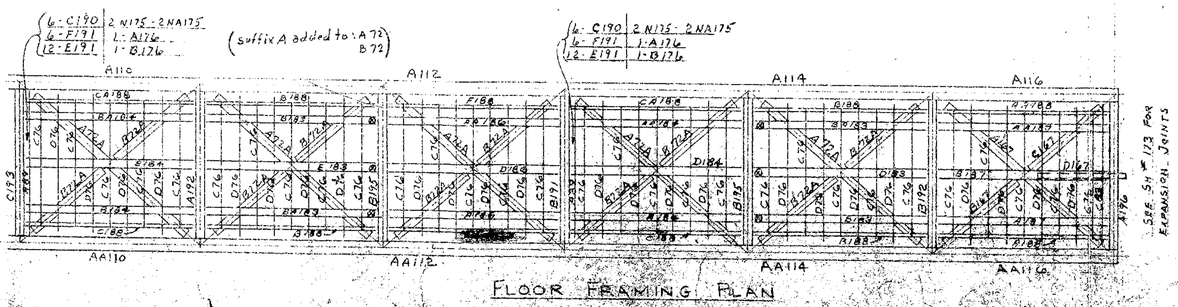


TOP BRACING PLAN

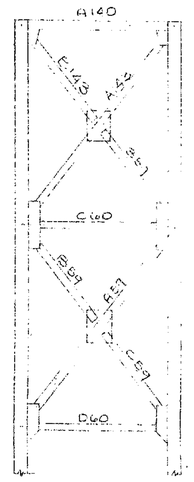


SECTION SHOWING FAR SIDE TRUSS

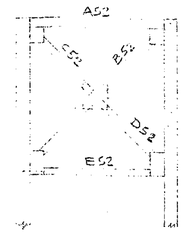
CAMBER DIAGRAM



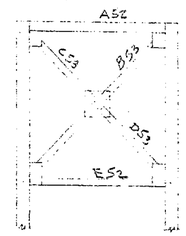
FLOOR FRAMING PLAN



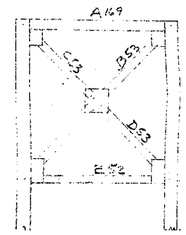
PORTAL U48-L48



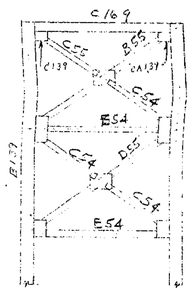
SWAY FRAME U56-L56



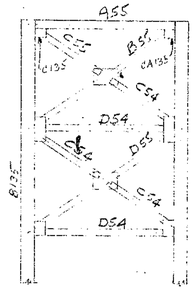
SWAY FRAME U54-L54



SWAY FRAME U58-L58



SWAY FRAME U44-L44



SWAY FRAME U52-L52

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 12-9-59

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES
Rivets ____ except as noted ____
Holes ____ except as noted ____
End Distance ____ unless noted ____
Shop Point ____
Contact Surfaces ____
Shop Inspection by ____
Field Connections APPROVED FOR 12/14/59
Drawn by TAP APPROVED - 59
Checked by CWK L.G. Carlson
Revisions ____
Pc. date Dec 12/5/59 & 12/9/59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 4
SOLD TO - JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES INC. VINCENNES, IND.
Contr. No. 4860 Sh. 28 of

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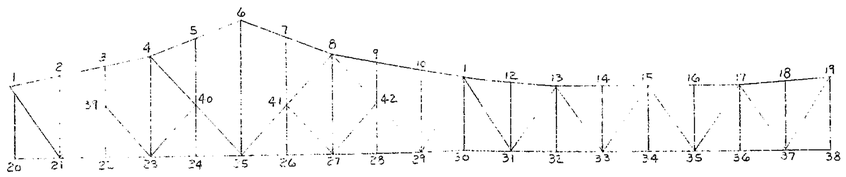
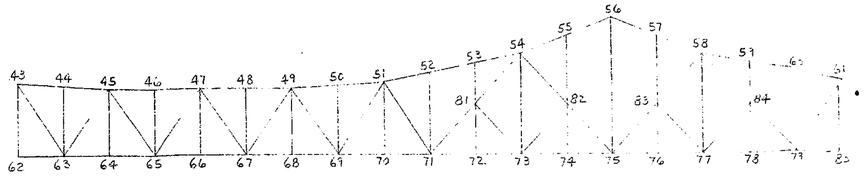
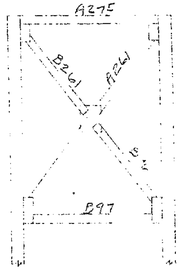


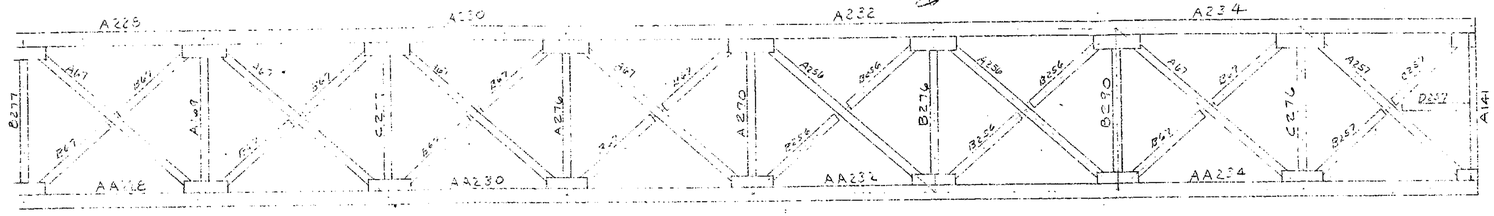
MATCH-MARKS - NORTH TRUSS (ROADWAY VIEW)



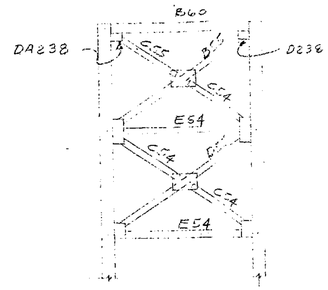
MATCH-MARKS - SOUTH TRUSS (ROADWAY VIEW)



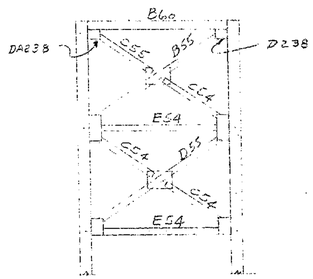
PORTAL U25-L26



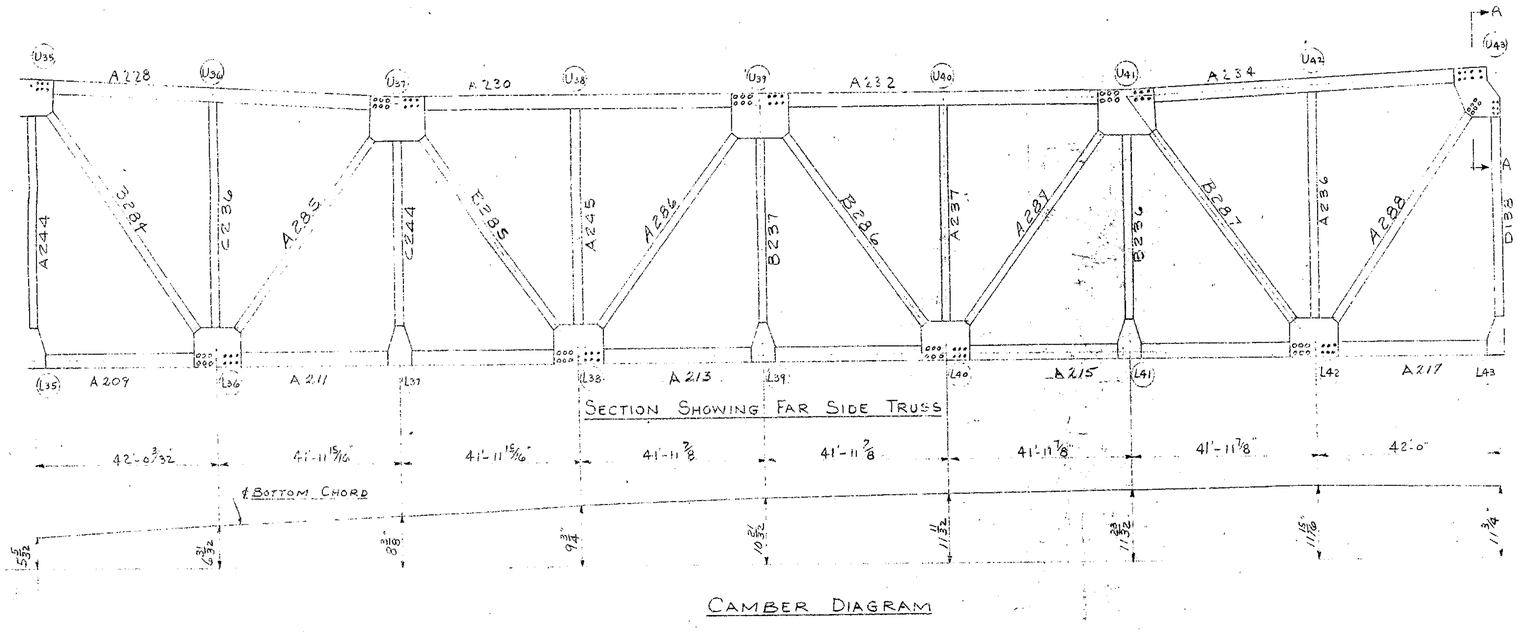
TOP BRACING PLAN



SWAY FRAME U26-L26

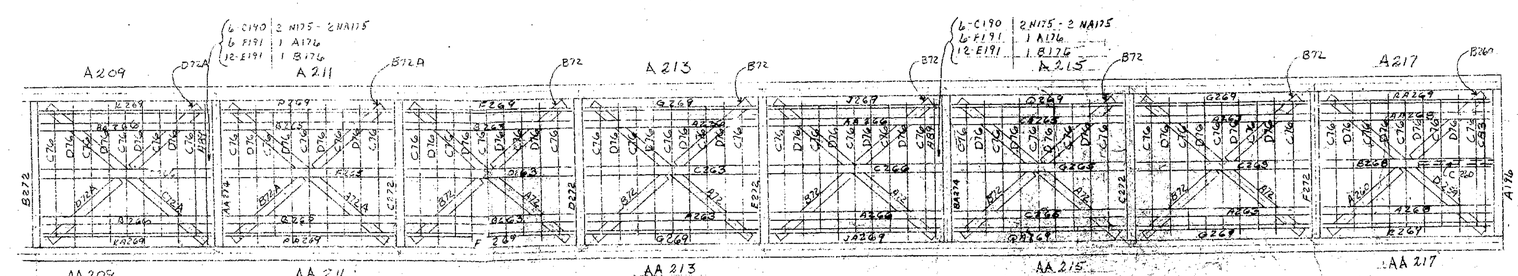


SWAY FRAME U34-L34

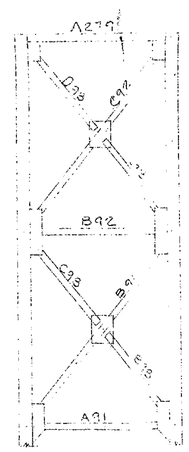


SECTION SHOWING FAR SIDE TRUSS

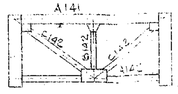
CAMBER DIAGRAM



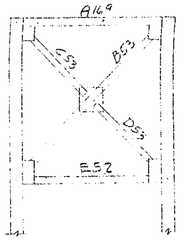
FLOOR FRAMING PLAN



PORTAL U28-L30



SECTION-AA



SWAY FRAME U36-L36

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets ____ except as noted ____
Holes ____ except as noted ____
End Distance ____ unless noted ____
Shop Point ____
Contact Surfaces ____
Shop Inspection by ____
Field Connections ____
Drawn by T.P. 2-26-59
Checked by FK 9-59
Revisions ____

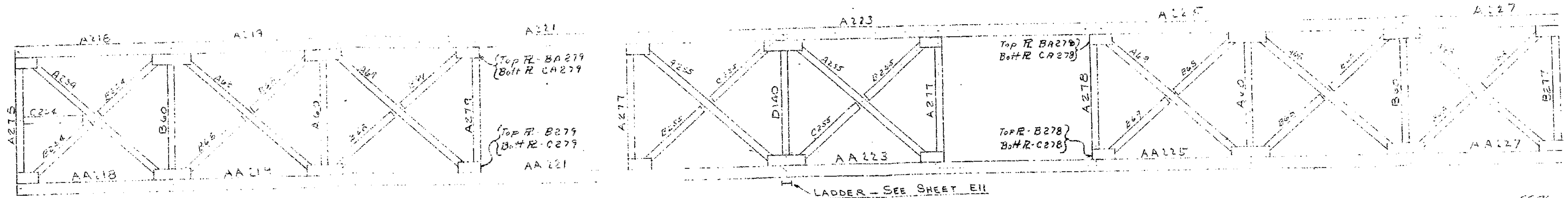
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 3

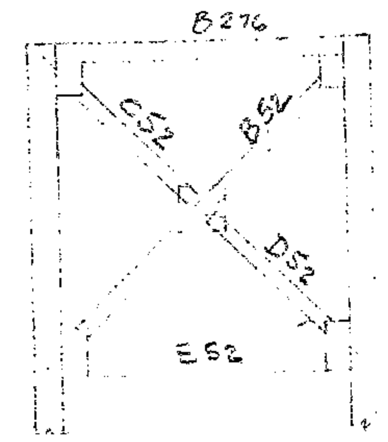
SOLD TO - JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. DIV. OF INDUSTRIAL ENTERPRISES INC. VINCENNES, IND.
Contr. No. 4800 Sh. E6 of

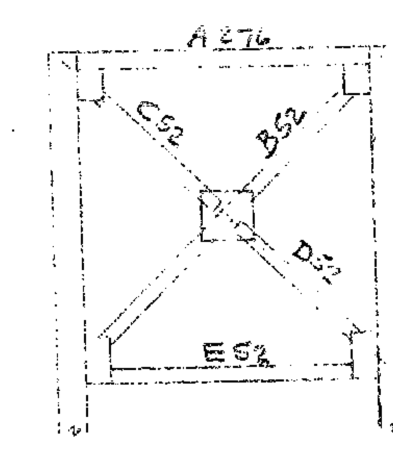
344



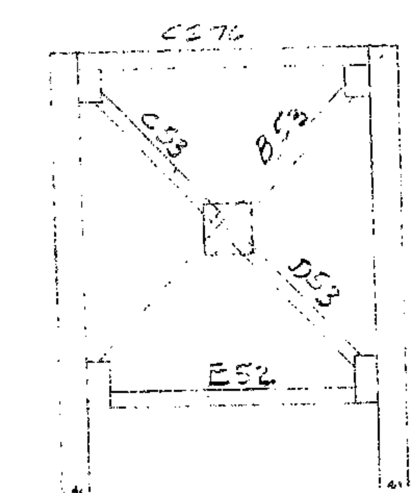
TOP BRACING PLAN



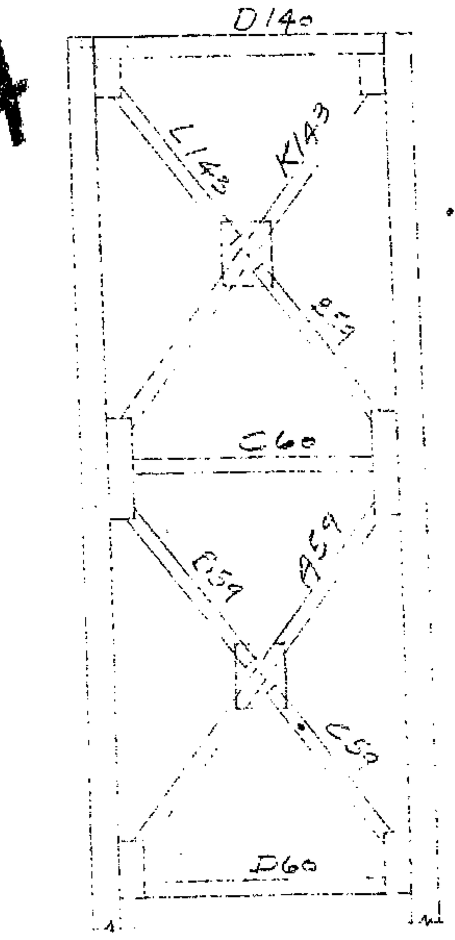
SWAY FRAME U40-L40



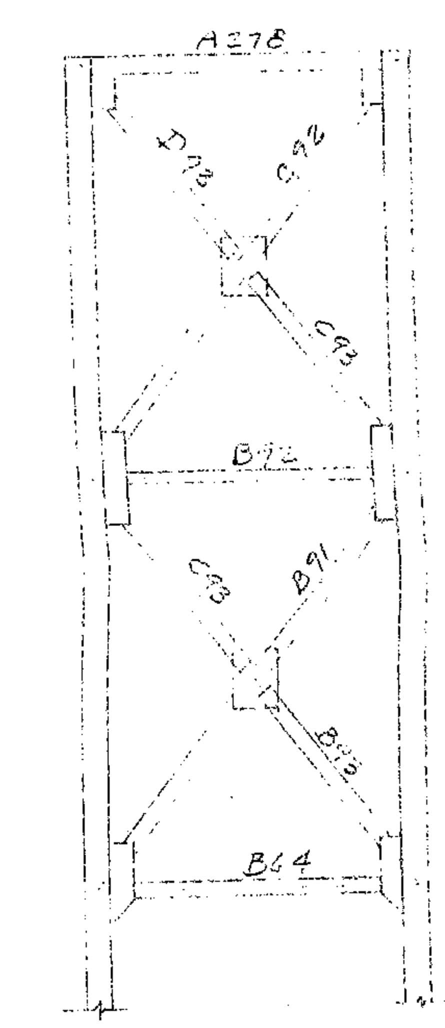
SWAY FRAME U38-L38



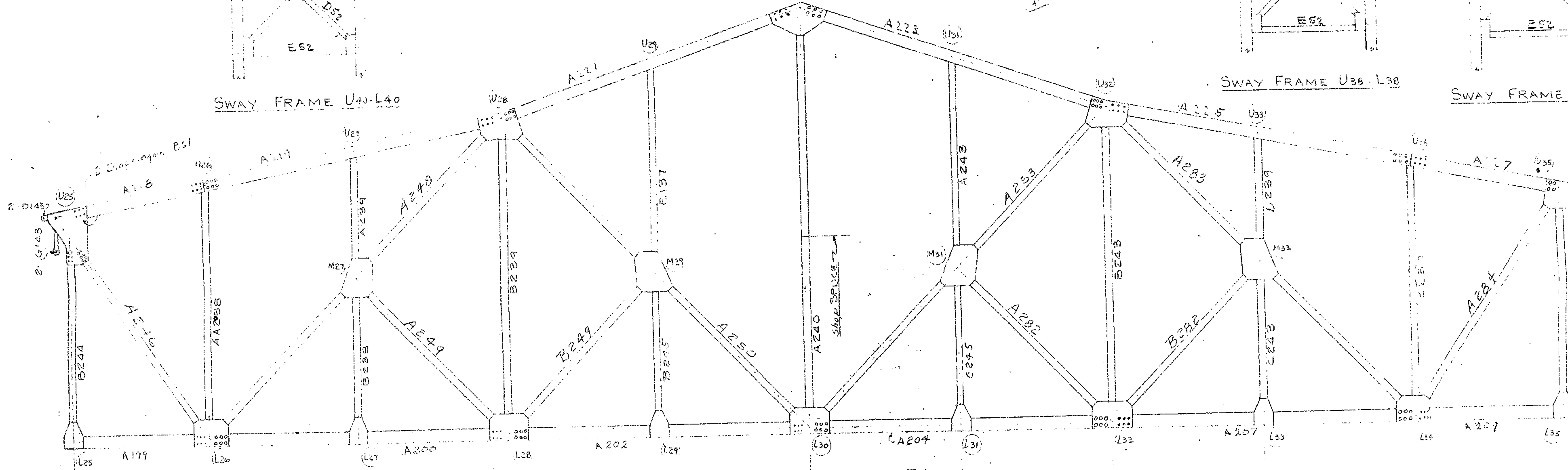
SWAY FRAME U42-L42



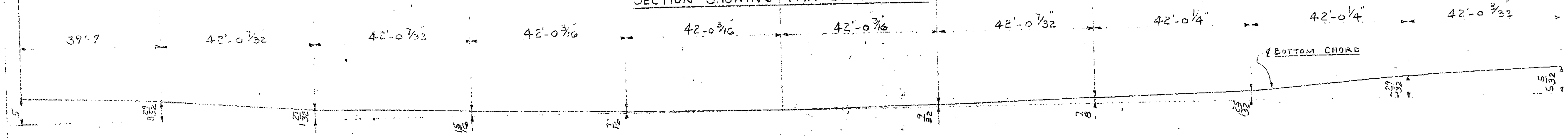
PORTAL U30-L30



PORTAL L30-U32

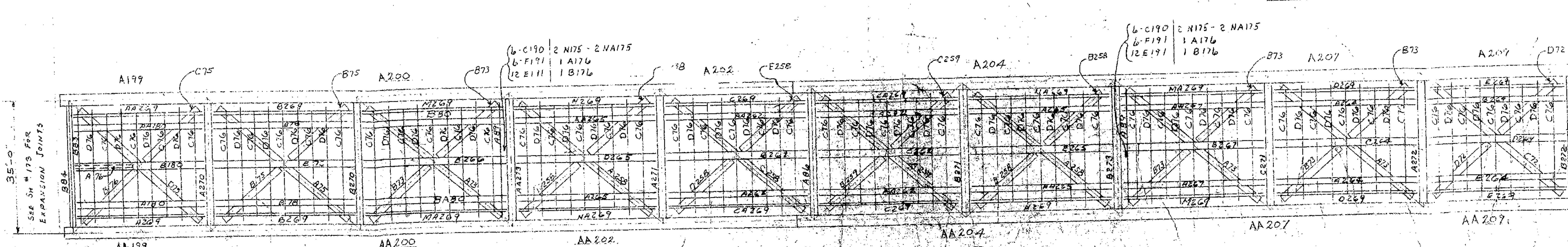


SECTION SHOWING FAR SIDE TRUSS



CAMBER DIAGRAM

TRUSS CONTINUED ON SHEET E6



FLOOR FRAMING PLAN

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

Rivets________ except as noted________

Holes ________ except as noted________

End Distance________ unless noted________

Shop Paint________

Contact Surfaces________

Shop Inspection by________

Field Connections________

Drawn by T.P. 2-25-59

Checked by TK 9-59

Revisions________

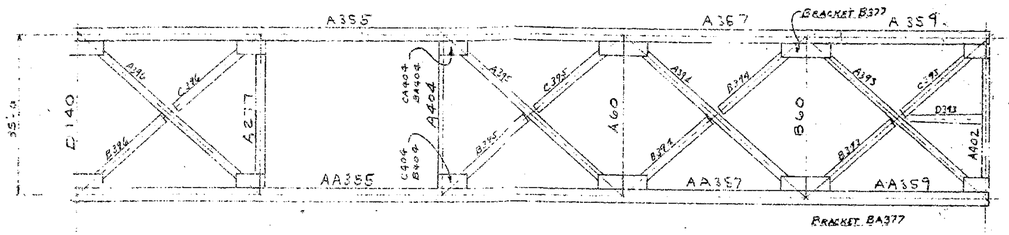
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 3

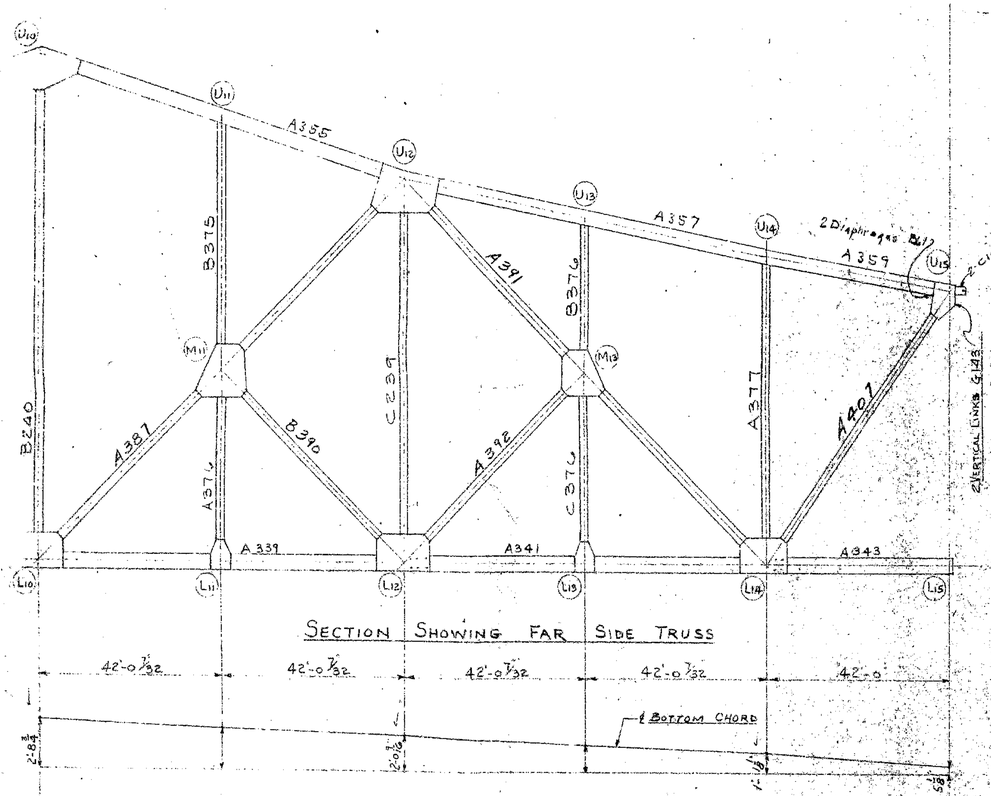
SOLD TO - JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCEN 'S, IND. Contr. No. 4800 Sh. E5 of

343

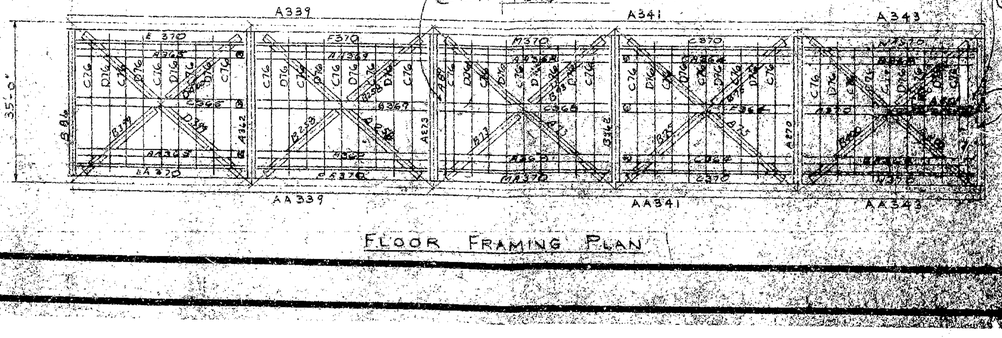


TOP BRACING PLAN

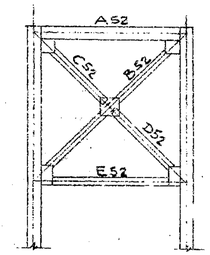


SECTION SHOWING FAR SIDE TRUSS

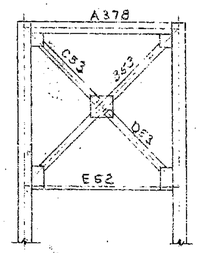
CAMBER DIAGRAM



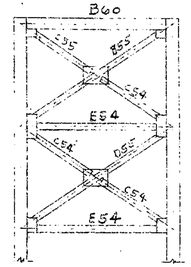
FLOOR FRAMING PLAN



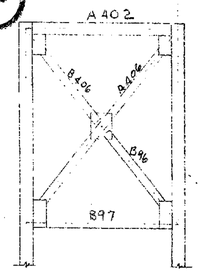
SWAY FRAME U2-L2



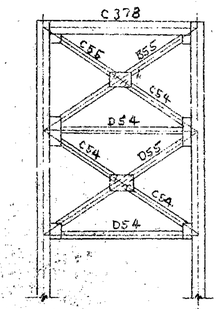
SWAY FRAME U4-L4



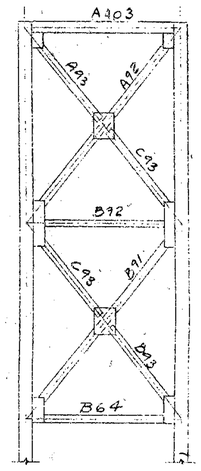
SWAY FRAME U14-L14



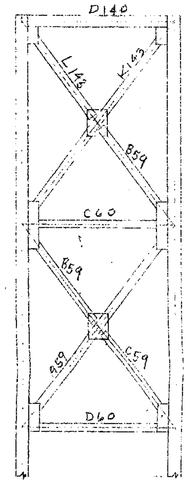
PORTAL L14-U15



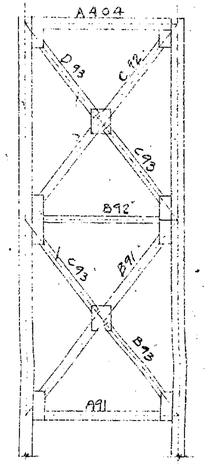
SWAY FRAME U6-L6

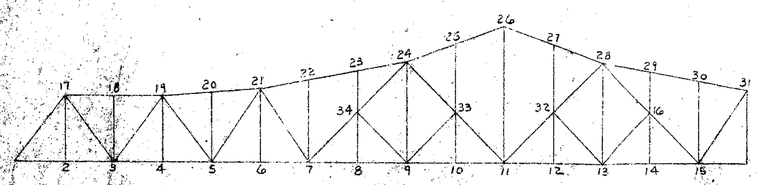


PORTAL U8-L10

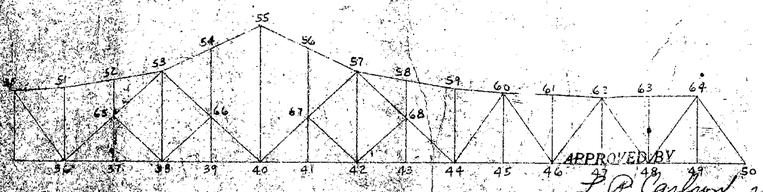


PORTAL - L10-U10





MATCH-MARKS - NORTH TRUSS (ROADWAY VIEW)



MATCH-MARKS - SOUTH TRUSS (ROADWAY VIEW)

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HT DATE 11/19/59

APPROVED BY
L. P. Carlson 11-25-59
Bridge Design Engineer

APPROVED BY: HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

GENERAL NOTES

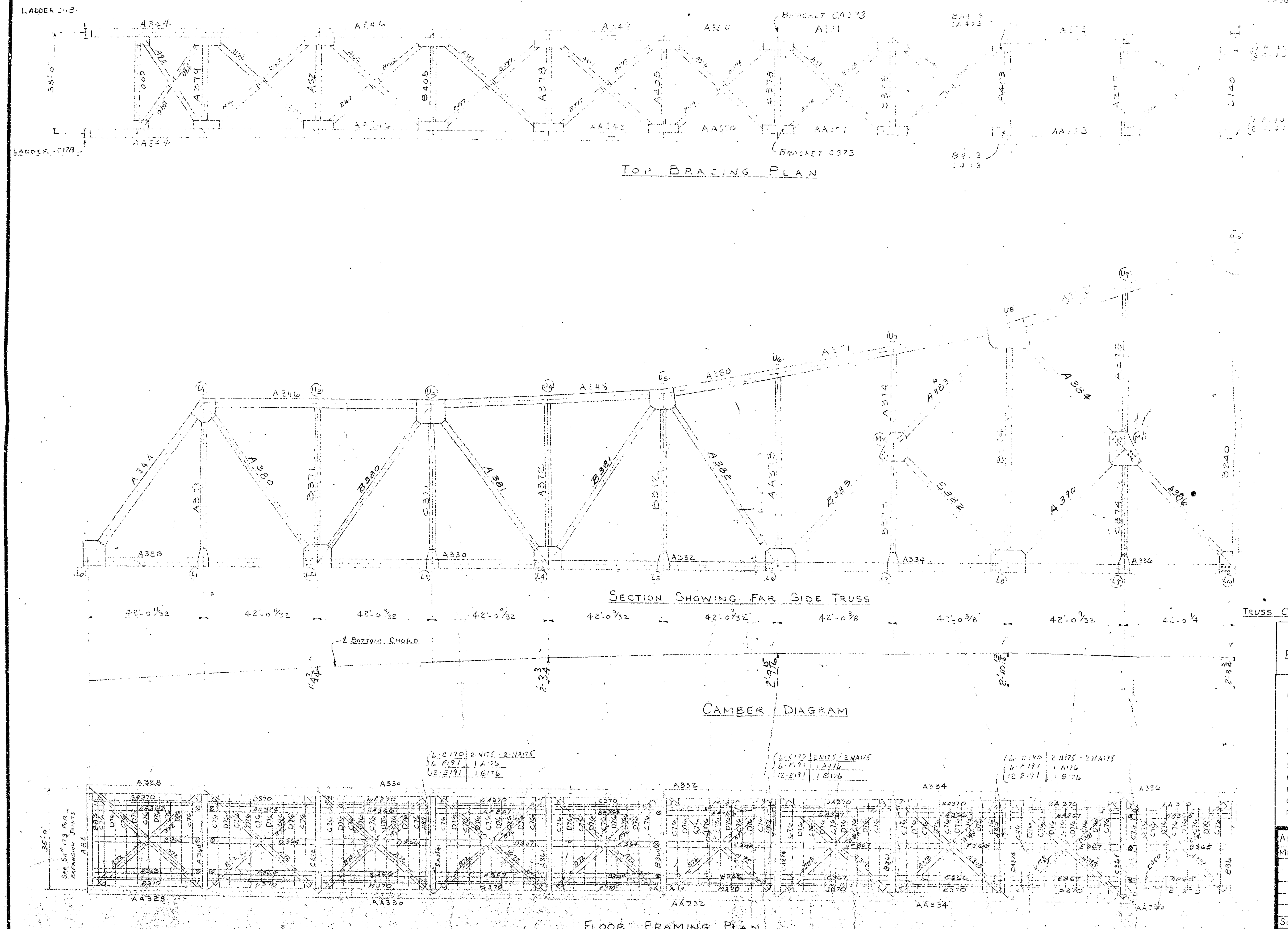
Rivets ____ except as noted
Holes ____ except as noted
End Distance ____ unless noted
Shop Point
Contact Surfaces
Shop Inspection by
Field Connections
Drawn by T.P. - 2-24-59
Checked by CWK
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 1

SOLD TO - JOHN F BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CO. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800 Sh. E3 of



TOP BRACING PLAN

SECTION SHOWING FAR SIDE TRUSS

CAMBER DIAGRAM

FLOOR FRAMING PLAN

342

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY GA DATE 11-14-60

TRUSS CONTINUED ON SHEET - E3

APPROVE BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS: 11/25/59

GENERAL NOTES

Rivets ____ except as noted ____
Holes ____ except as noted ____
End Distance ____ unless noted ____
Shop Paint ____ APPROVED BY 11/16/60
Contact Surfaces ____ L.P. Carlson
Shop Inspection by ____ Bridge Design Engineer
Field Connections ____
Drawn by T.R. -2-23-59
Checked by ____
Revisions ____

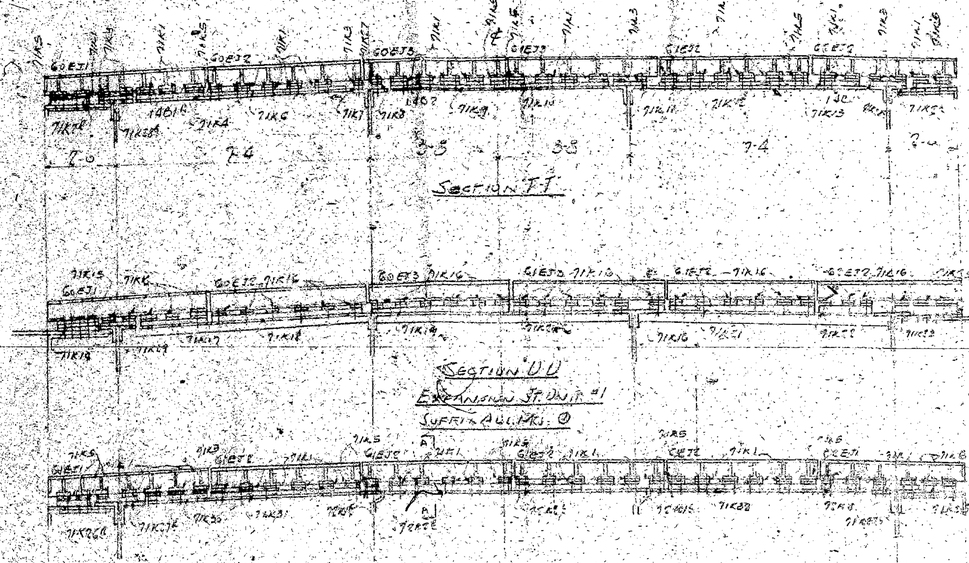
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 1

SOLD TO - JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

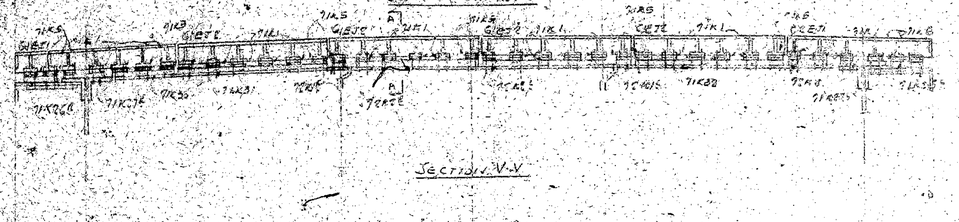
SHOP VINCENNES STEEL CORP. VINCENNES, IND. Contr. No. 4800 Sh. E2

340



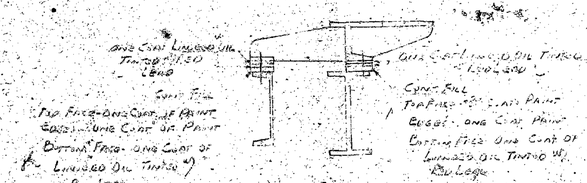
SECTION F-F

SECTION U-U
EXPANSION ST. UNIT #1
SUFFIX ALL MKS. ②

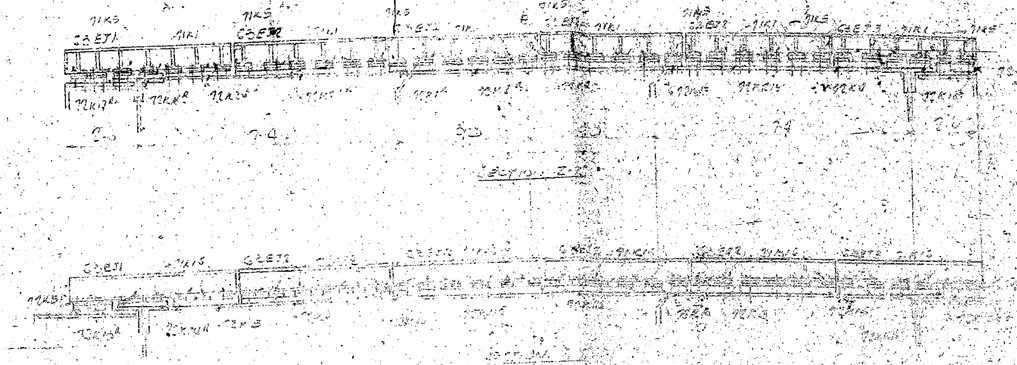


SECTION V-V

SECTION W-W
EXPANSION ST. UNIT #2
SUFFIX ALL MK. ②



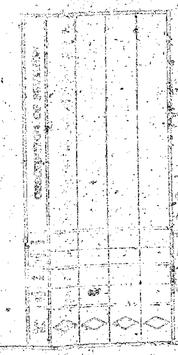
SECTION A-A
(TYPICAL FOR PAINTING)



SECTION T-T

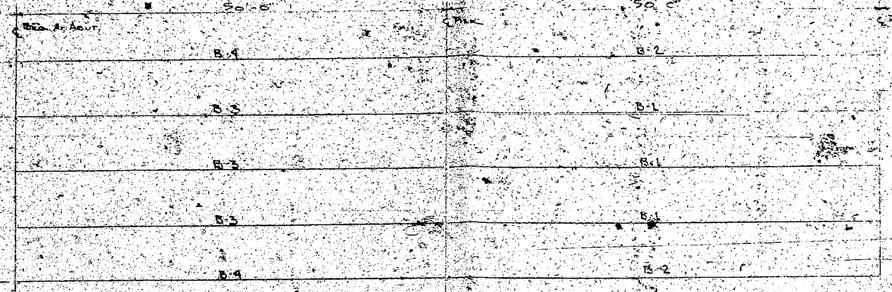
SECTION S-S

EXPANSION ST. UNIT #2



PRODUCTS
NOMINAL THICKNESS
CONSUMABLE ELECTRODE
INC.
Rev. ①
Rev. ②

Mosher Steel Company

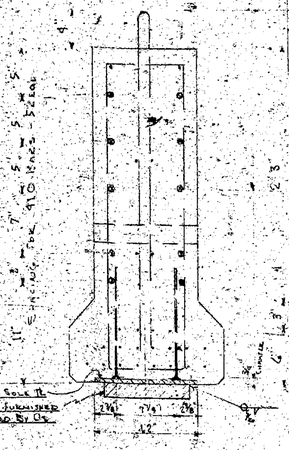


Typical End Span
4 Spans Thus

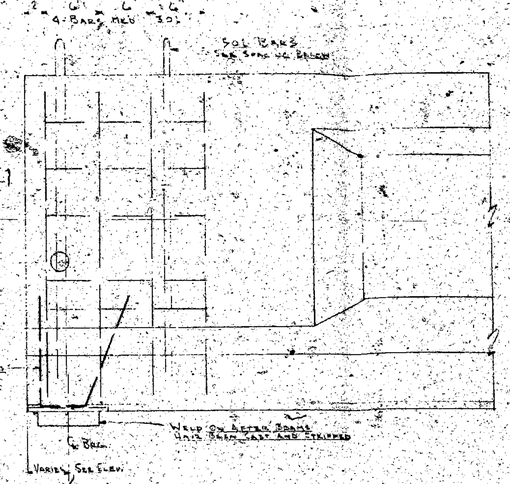
Typical Intermediate Span
36 Spans Thus

108 Beams Marked B-1 Read
72 B-2 "
12 B-3 "
8 B-4 "
200 Beams in All

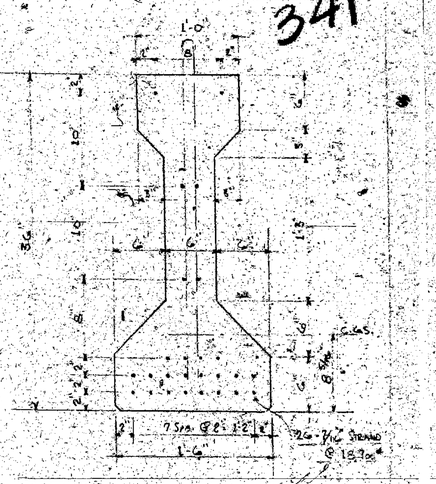
Framing Plan
Scale: 1/8" = 1'-0"



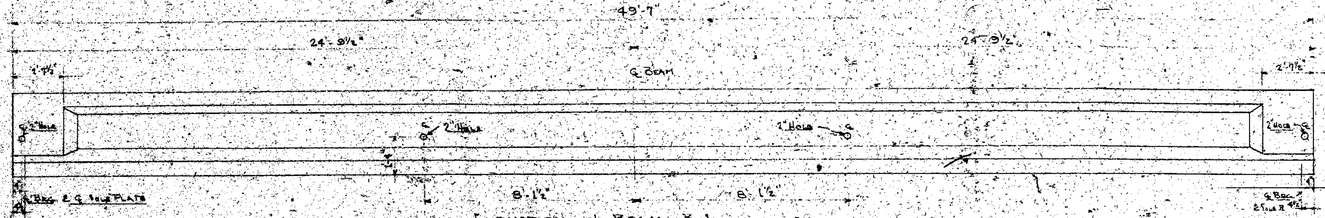
Section at End Block



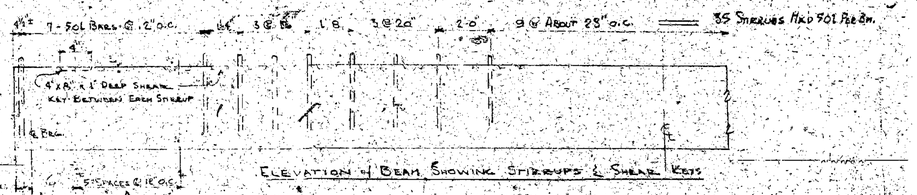
Elevation at End Block
Scale 1½" = 1'-0"



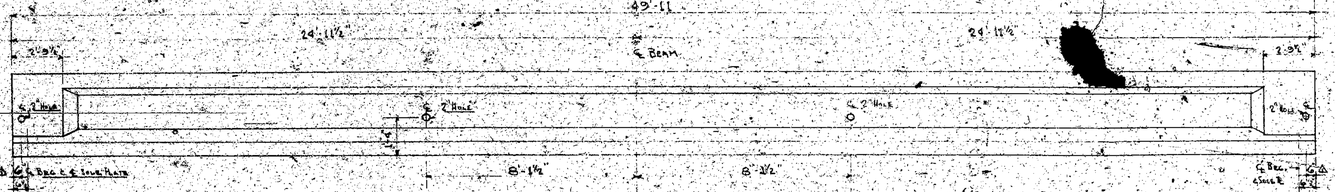
Section at ℄ Beam



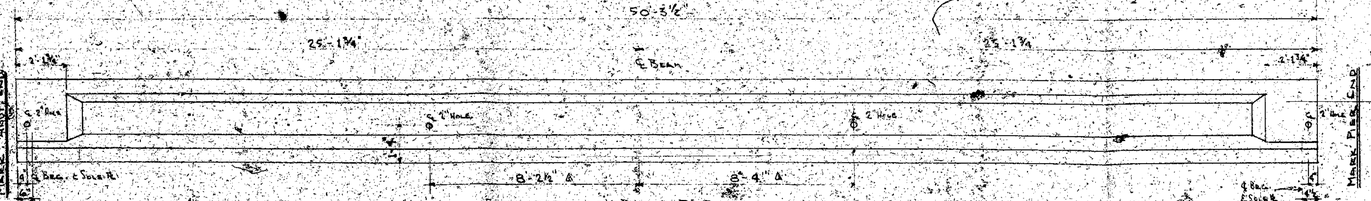
Elevation of Beam B-1
108 Req'd



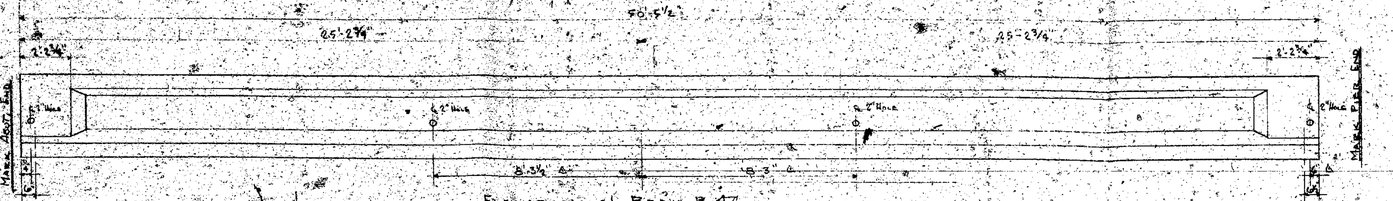
Elevation of Beam Showing Stirrups & Shear Keys



Elevation of Beam B-2
72 Req'd

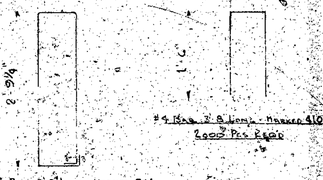


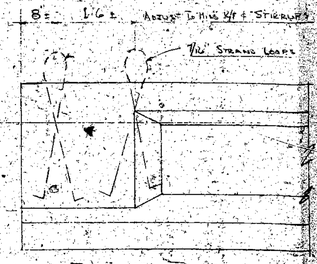
Elevation of Beam B-3
12 Req'd.



Elevation of Beam B-4
8 Req'd

Minimum Camber ℄ t. = ¼ for All Beams





Pick Up Points

MID-SOUTH CONCRETE PIPE DIVISION of AMERICAN-MARIETTA CO. INC. of MEMPHIS, TENN.

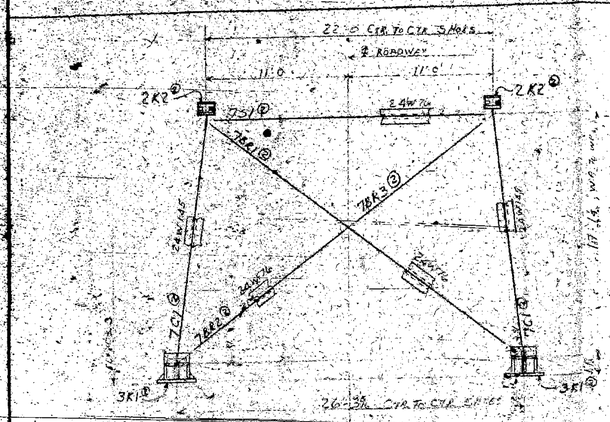
Shop Details of Prestressed Concrete Beams for Contract No. 6 of Relief Structures Mississippi River Bridge Near Helena, Ark.

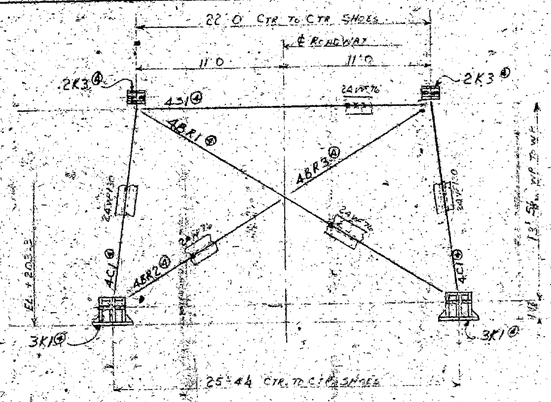
Howard, Needles, Tammen & Bergendoff — Consulting Engr.
Peter Kiewit Sons' — General Contractors

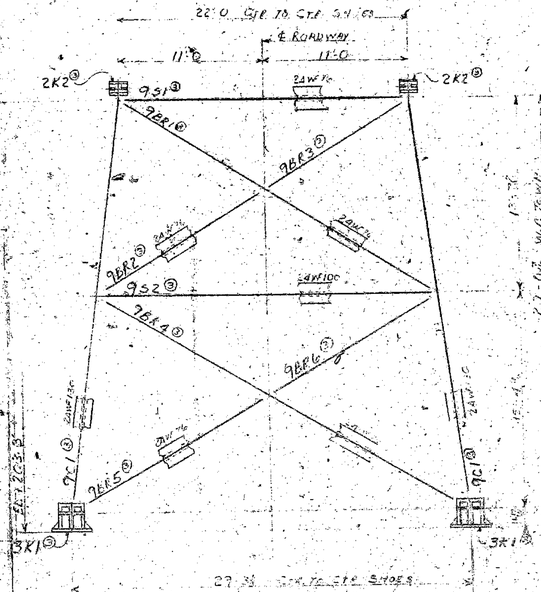
Drawn: 1-27-55 G.T.B.
Revisions: 4-2-55, 5-18-55

Job No. 55-

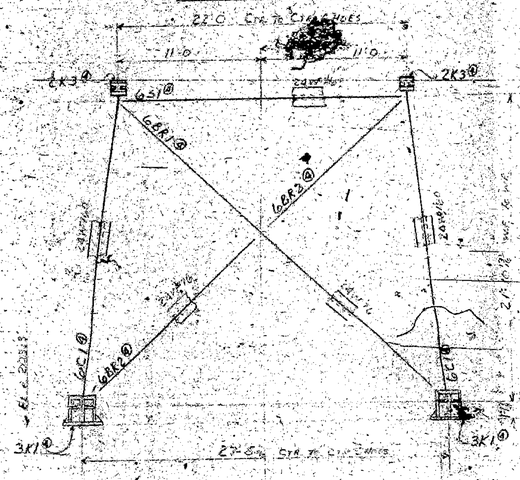
339







BENT @ PIER # 6



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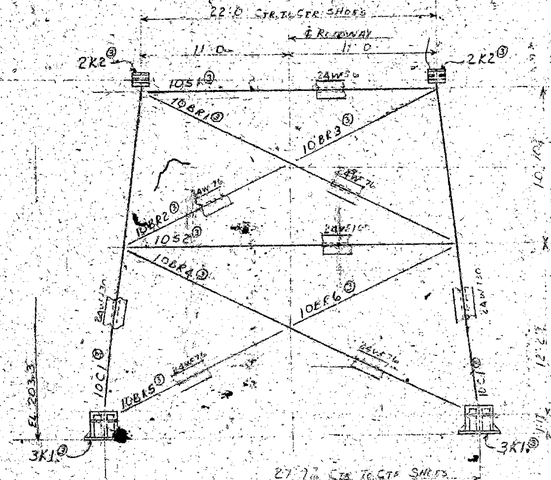

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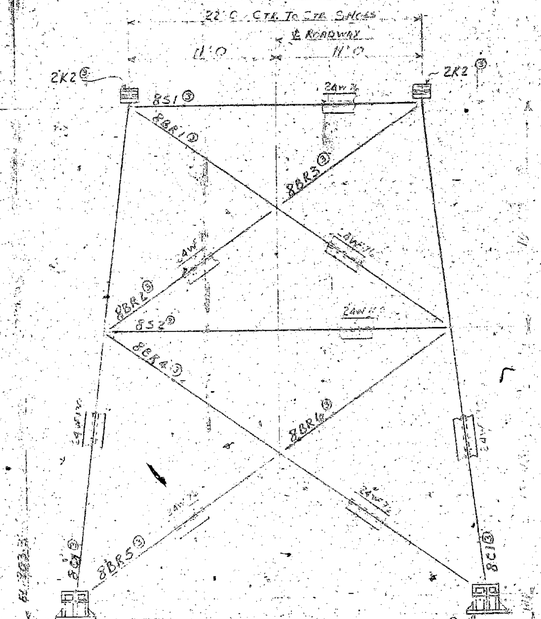
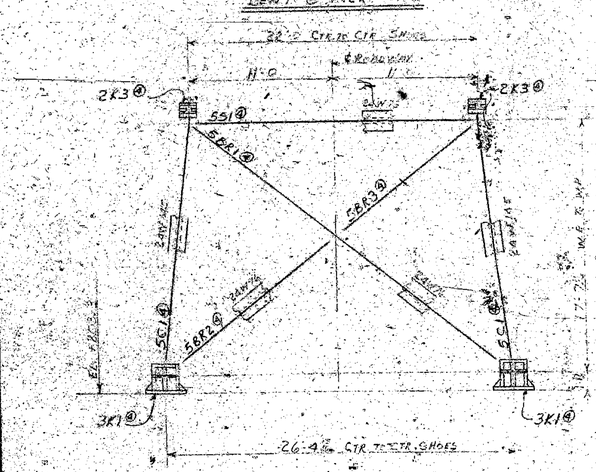


BENT @ PIER # 16



BENT @ PIER # 17

BENT @ PIER # 9

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date: 6/1/59
Rev. 1 Date: Rev. 2 Date:
Rev. 3 Date: Rev. 4 Date:
Not Approved Until Dated

NOTE: JACKING DEVICE AT PD. 16 AT
Con. Notice SEE SHT E1

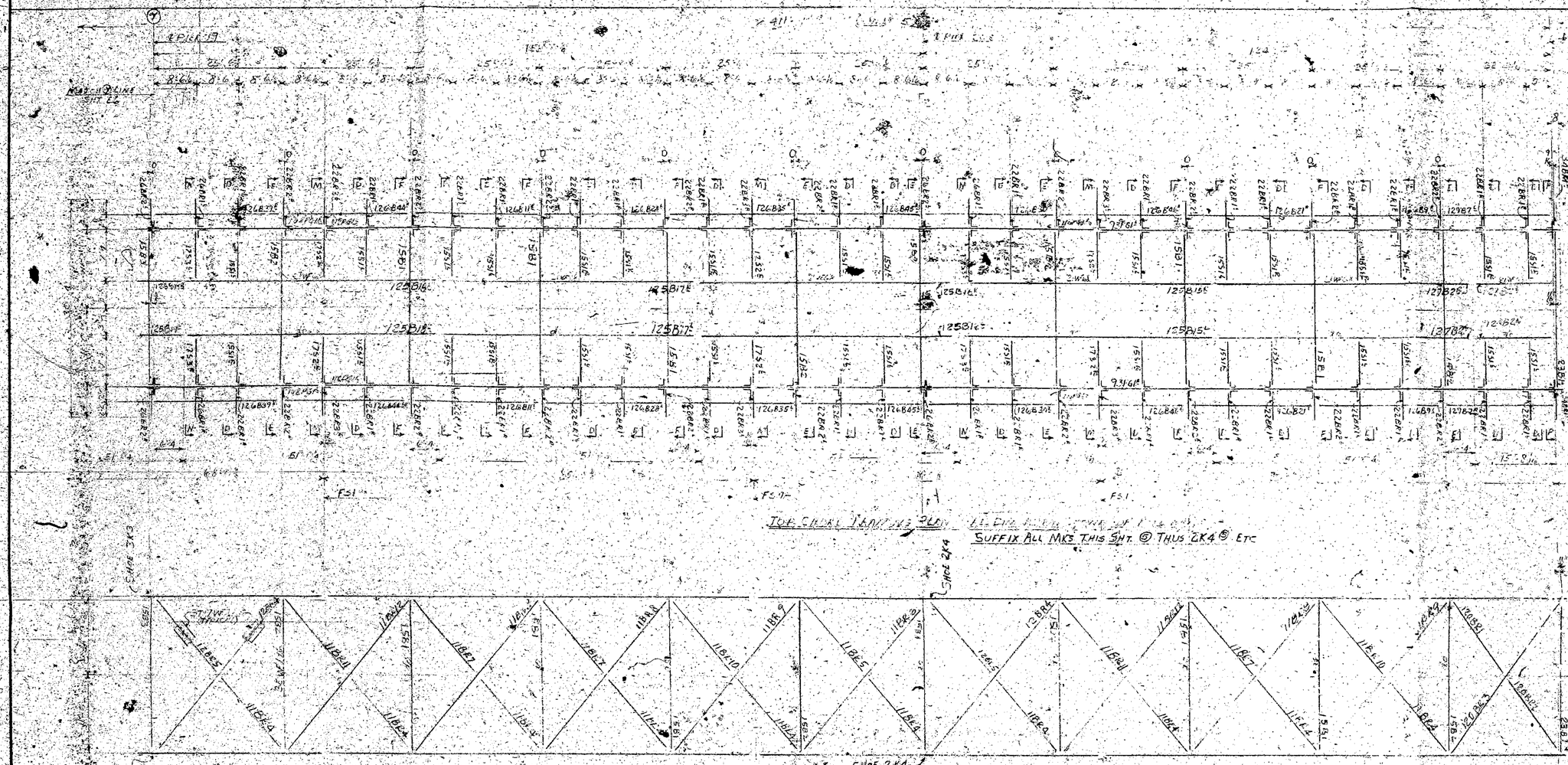
Mosher Steel Company
DALLAS-HOUSTON-FT. WORTH-LITTLE ROCK-SHREVEPORT

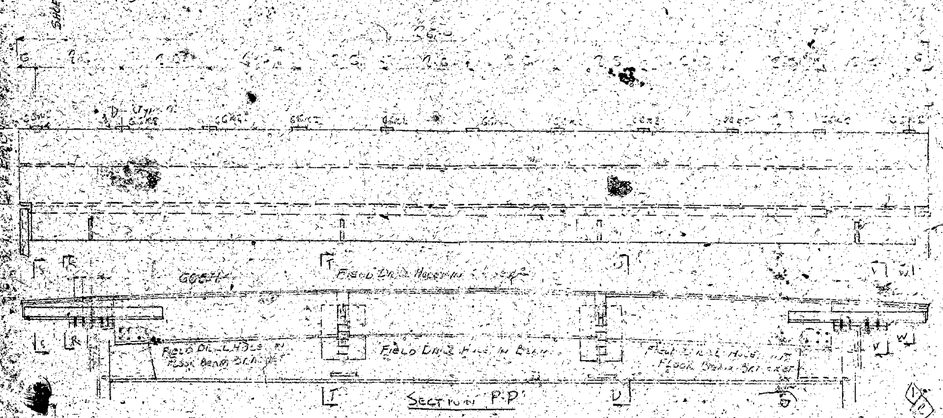
Customer JOHN F. BEASLEY CONST. CO.
Location Rte. 6 MISS. STATE HIGHWAY
Facility MISSISSIPPI RIVER BRIDGE
Date type M No. 1-12-59 Type HELICAL PILES
Traced by Filing Date
Checked by W. J. Armstrong 1-22-59 Date 1-22-59
Approved by
Order No. 64201 Sheet No. 58 Drawing No. 1

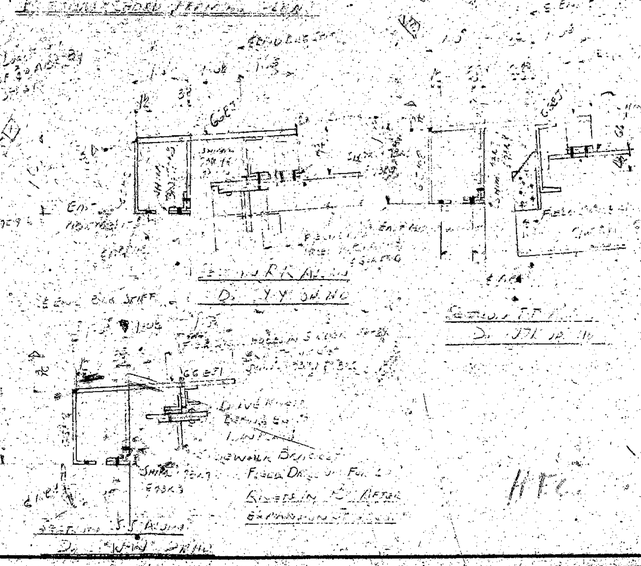
DESCRIPTION OF REVISION

338

Z-







APPROVED BY
R. L. WARD, NEEDLES, TAMPLEN & BERGENDOFF,
CONSULTING ENGINEERS
Date 6/11/59
Rev. 1 Date
Rev. 2 Date
Rev. 3 Date
Rev. 4 Date
Not Approved Until Dated

WORK THIS SHT. WITH ELEC. EQ
FOR SECT. I-I, M-M & N-N SEE SHT. E3
FOR SECT. E-E & F-F SEE SHT. E2
Grs. Notes: SEE SHT. E1
Rivets: Open Hole:
Paint:

Delivery Promised

DESCRIPTION OF REVISION

	Date	By
1		
2		
3		
4		

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

	App'd.	Ship
	2-25-59	
	7-1-59	
	7-15-59	
	7-29-59	

Customer: JOHN F. BEASLEY CONST. CO.
Architect: ARK. & MISS. STATE HIGHWAY
Building: MISSISSIPPI RIVER BRIDGE
Made by: C.MIKK 11-2-59 Scale: 1/8" & 1/4"
Traced by: Filing Date:
Checked by: W. J. Armstrong 5-25-59 (SM 60)
Approved by:
Order No. 24201 Sheet No. E2 Drawing No. 0

337

MATCH MK LINE SHT E5

MATCH MK LINE SHT E7

ERECTION UNIT 4

ERECTION UNIT 5

ERECTION UNIT 6

FOR MKS. OF PINS, LINK BARS & WASHERS, SEE SHT. E5

TOP CHORD FRAMING PLAN (ALL ELEVATIONS)

SUFFIX ALL MKS. ④

SUFFIX ALL MKS. ⑤

SHOE SKS

WIND SHEAR DEVICE

FOR SECT'S FRAMING PLAN

SECTION P-P

SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

SECTION E-E

SECTION F-F

SECTION G-G

SECTION H-H

SECTION J-J

SECTION K-K

SECTION L-L

SECTION M-M

SECTION N-N

SECTION Q-Q

SECTION R-R

SECTION S-S

SECTION T-T

SECTION U-U

SECTION V-V

SECTION W-W

SECTION X-X

SECTION Y-Y

SECTION Z-Z

SECTION AA-AA

SECTION BB-BB

SECTION CC-CC

SECTION DD-DD

SECTION EE-EE

SECTION FF-FF

SECTION GG-GG

SECTION HH-HH

SECTION JJ-JJ

SECTION KK-KK

SECTION LL-LL

SECTION MM-MM

SECTION NN-NN

SECTION PP-PP

SECTION QQ-QQ

SECTION RR-RR

SECTION SS-SS

SECTION TT-TT

SECTION UU-UU

SECTION VV-VV

SECTION WW-WW

SECTION XX-XX

SECTION YY-YY

SECTION ZZ-ZZ

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date: 6-7-57
Rev. 1 Date
Rev. 2 Date
Rev. 3 Date
Rev. 4 Date
Rev. 5 Date
Not Approved Unless Dated

WORK THIS SHT WITH SHTS E1 & E3

FOR SECT D DIAPHRAGM, SEE SHT E4

FOR SECT E & E FF & GG SEE SHT E3

Gen. Notes: SEE SHT E1

For Sect Z-Z & YY SEE SHT E4

Rivets ..... Open Holes .....

Paint .....

Delivery Promised

DESCRIPTION OF REVISION

ALTER PIECE 18

DATE			
CHK'D BY			
DATE			
CHK'D BY			
APP'D BY			

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

	Appl	Shop
	5-28-57	
	7-1-57	
	7-2-57	
	7-11-57	

Customer: [illegible]
Architect: [illegible]
Building: [illegible]
Made by: [illegible] Scale: 1/8" & 1/4" Date:
Traced by: [illegible] Filing Date: 1-58
Checked by: [illegible]
Approved by:
Order No. 6421-01 Sheet No. E6 Drawing No. 0

Rear Side
For Side
Both Sides (alternate)
Trans Slot
Chords
Standard Notches
Purlins
Sag Rods (when spec'd)
Sidewalk Brackets
Purlins 1½ x 3 Vertical & Alternate (1½ x 3 Purlins 3000 lbs)

TRIM ALL EXPOSED ENDS AND EDGES

(UNIT 2)

END OF GIRDER

SEE SHEET

100 PLF

FS 2

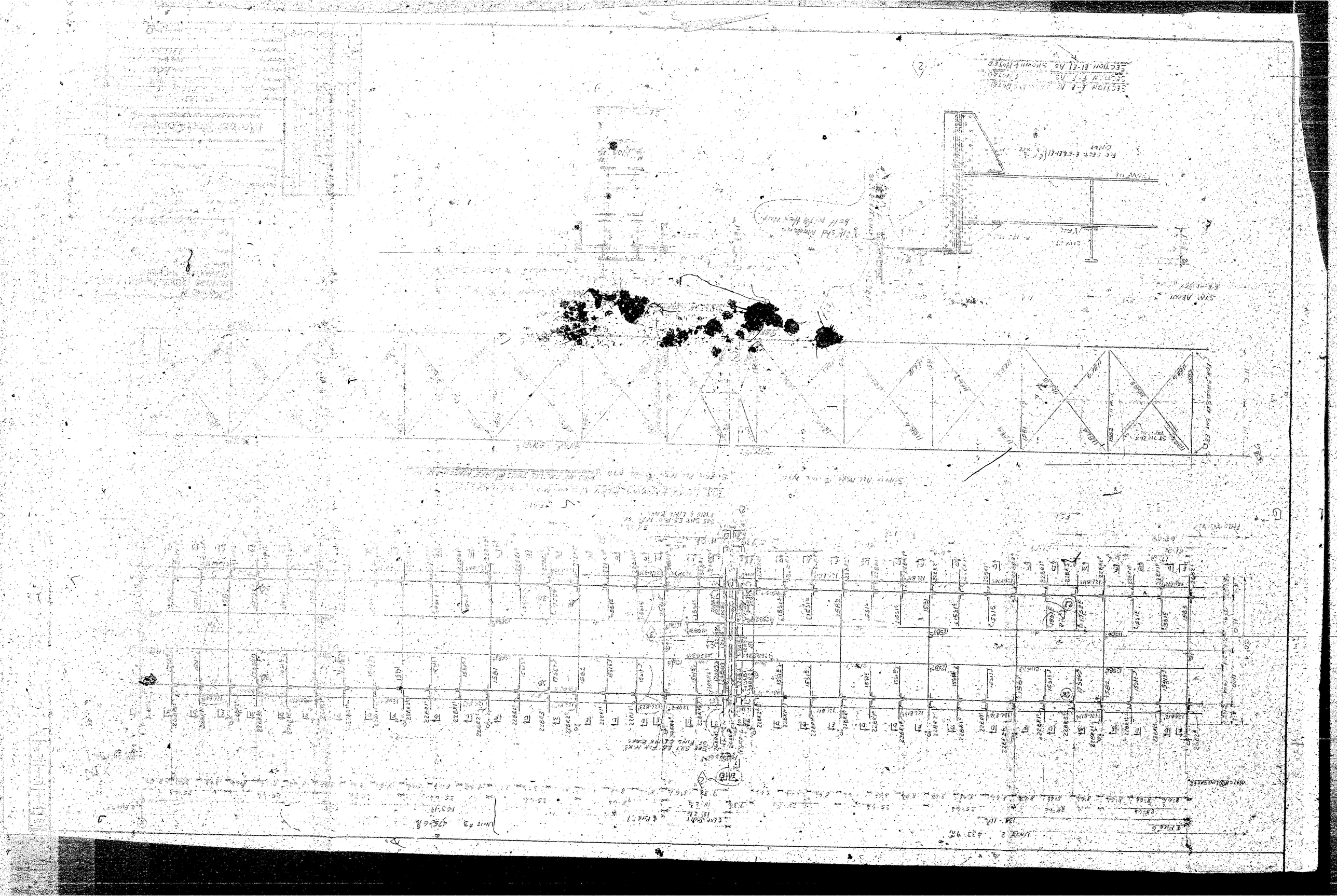
SEE SHEET

100 PLF

TYP. ONE SIDE

TYP. BOTH SIDES

100 PLF



UNIT #2 483.9#

TOP CHORD FRAMING PLAN (ALL OTHER ASPECTS AS PER PLAN)
SUFFIX ALL MARKS THIS SHT. ②

BOTTOM CHORD FRAMING PLAN

SECTION D-D AT END

SECTION N-N AT END

SECTION M-M

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
Date: 5-11-57
Rev. 1 Date: Rev. 3 Date:
Rev. 2 Date: Rev. 4 Date:
Not Approved Until Dated

FOR WORK THIS SHT. WITH SHTS. E1, E3
FOR SECTIONS E5 & F5 SEE SHT. E3
FOR DETAILS S5, S7 & C6 SEE SHT. E1

Gen. Notes: SEE SHT. E1
FOR SECTIONS E4 & F4 SEE SHT. E3
Rivets: Open Holes:
Paint:

Delivery Promised

DESCRIPTION OF REVISION

DATE	CHK'D BY	DATE	CHK'D BY

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

	Appr.	Shop
	5-28-57	5
	8-10-57	

Customer: JOHN F. BEASLEY CONST. CO.
Architect: ARK. STATE HIGHWAY
Building: MISSISSIPPI RIVER BRIDGE
Made by: C. MOSS 12-31-57 Shop: HELENA, ARK.
Traced by: Filing Date: 1-58
Checked by: W.J. Armstrong 5-31-57 Sta. 20
Approved by:
Order No. 6422-L Sheet No. E2 Drawing No. 0

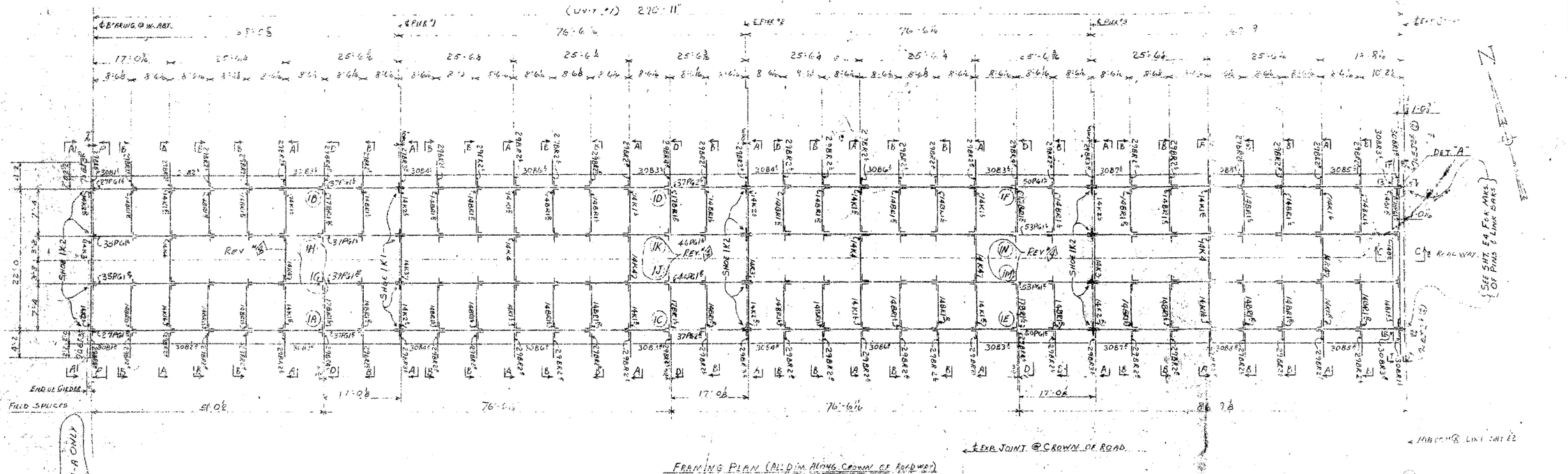
Indicates W x 3 Welds @ 6" alternate Weld 1'-6" min. (opposite)
Indicates W x 2 Welds @ 6" min.
Indicates W x 3 Welds @ 6" min.

Types: Fillet, Slot, Groove, Standard Arrow, Bead, Backing, Flare Bevel, Flare V, Bevel, V, J, U, Plug or Slot, Spot or Projection, Seam, Back or Backing, Surfacing, Weld All Around, Field Weld, Melt-Thru, Consumable Insert, Edge, Corner, Flange, Stud

W.E.L.D.S.

333

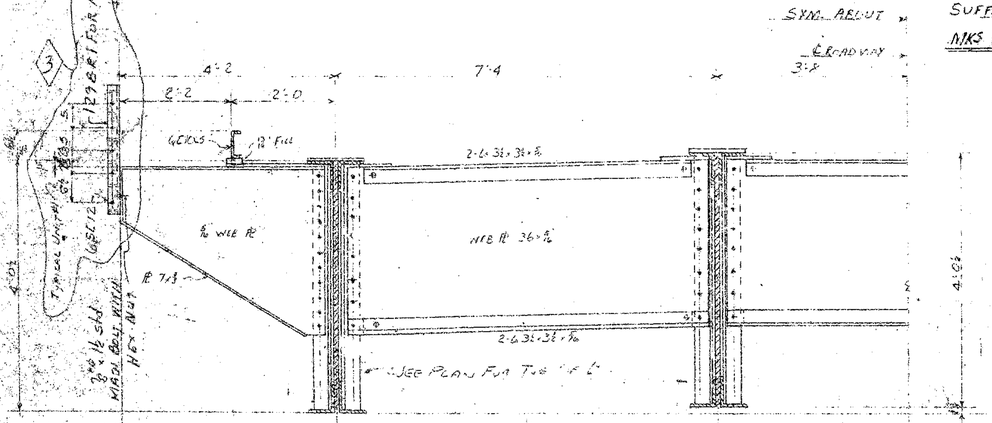
TRIM ALONG THIS LINE

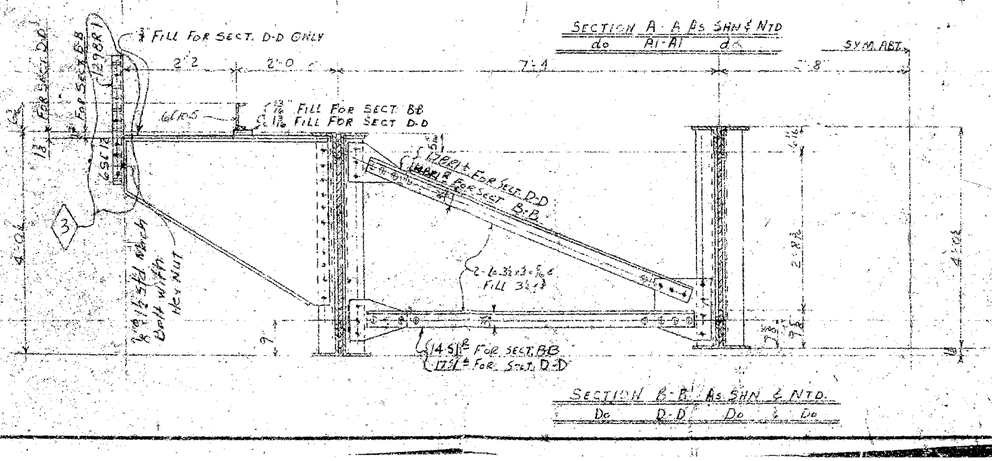


FRAMING PLAN (ALL DIM. ALONG CROWN OF ROADWAY)

SUFFIX ALL MKS. ① THUS 1K2 ① UNL. NTD.

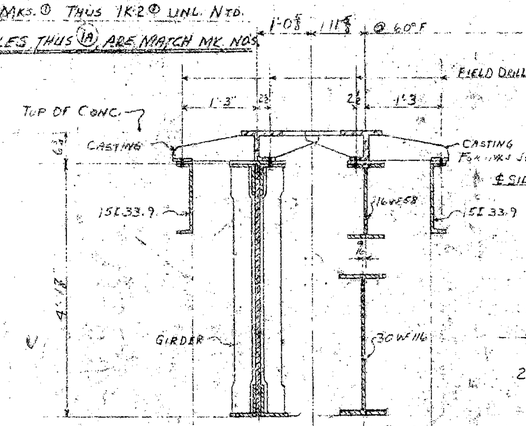
MKS IN CIRCLES THUS (1A) ARE MATCH MK. NOS.





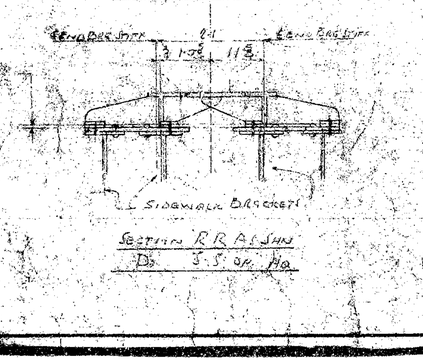
SECTION A-A As Shn & Ntd
Do A1-A1 Do

SECTION B-B As Shn & Ntd.
Do D-D Do Do



SECTION C-C

DETAIL "A"



SECTION R-R As Shn
Do S-S or Ho

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY C. J. DATE 11-24-59

APPROVED BY
L. P. Carlson
Bridge Design Engineer

APPROVED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS.
Date: 5-12-59
Rev. ① Date: 8-28-59 Rev. ③ Date:
Rev. ② Date: 9-9-59 Rev. ④ Date:
Not Approved Until Dated.

GENERAL NOTES: ERECTION BY OTHERS
ERECT ALL STEEL WITH MARKS IN POSITION AS SHOWN ON PL
For Sections M-M Sht. # E6
For Sections T-T & UU Sht. #E7
FIELD CONN. TO BE RIVETED EXCEPT EXPANSION JOINTS WHICH ARE TO BE FIELD BOLTED WITH STD. MACH. BOLTS UNL NTD.
THE BOLTS FASTENING THE EXP JOINTS TO THE SIDEWALK BRACKETS SHALL HAVE AUTOMATIC NUT CO. SEEF LOCKING NUTS.
Rev. ⑤
Gen. Notes:
Rivets Open Holes
Paint
Delivery Promised

DESCRIPTION OF REVISION
ADDED MARKS AND DIMENSIONS
ADDED MARKS AND DIMENSIONS

Mosher Steel Company
DALLAS-HOUSTON-TYLER-LUBBOCK-SHREVEPORT

	Appr'l	Shop
	5-20-59	
	5-20-59	
	8-10-59	

Customer JOHN F. BEASLEY CONST CO.
Architect ARK & MISS. STATE HIGHWAY
Bridge MISSISSIPPI RIVER BRIDGE
Made by MOCK 12-23-58 Helena, Ark.
Traced by Filing Date 1958
Checked by W.J. Armstrong 5-20-59 (Sta. Co.)
Approved by
Order No. 6401 Sheet No. E1 Drawing No. 0

2899

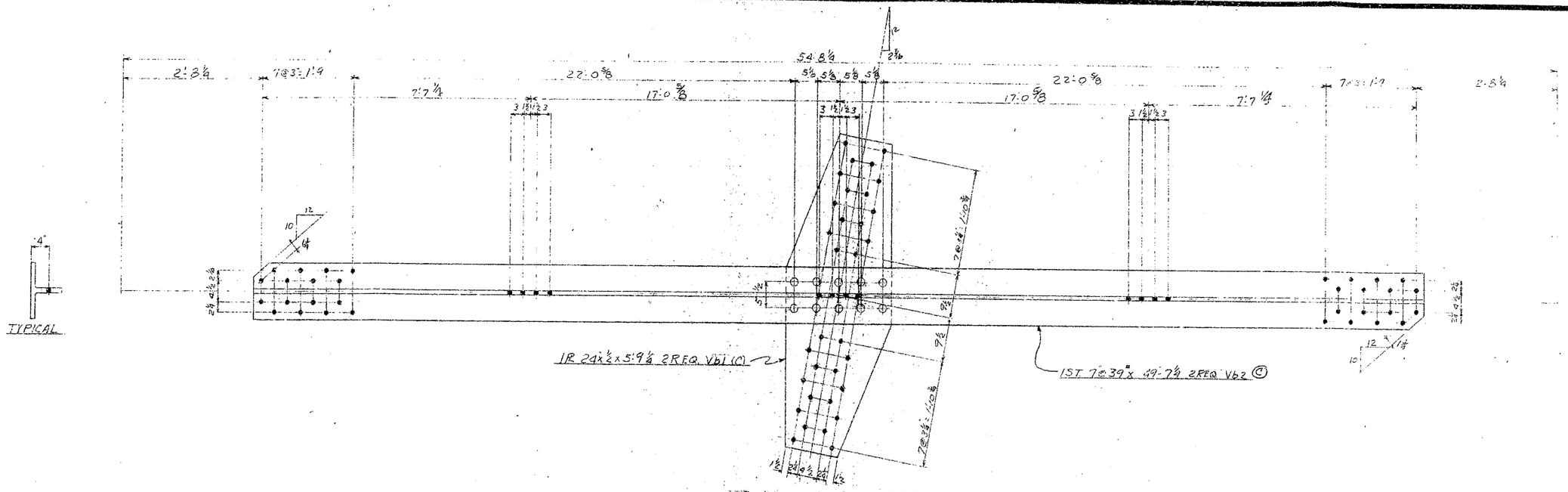
WELDING SYMBOLS
Near Side
Far Side
Both Sides
Types
Fillet
Size
Groove
Standard Number
Bead
Spacing
Intermittent Welds
Indicates ½" x 2" Welds @ 6" ctrs.
Indicates ½ x 3 Welds @ 6" ctrs. alternate Ends (10" ctrs. staggered)

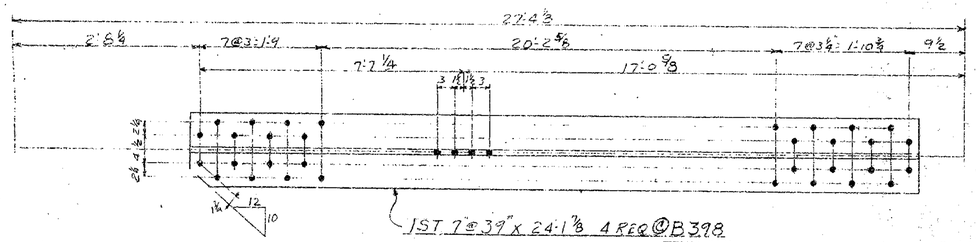
A.H.D.

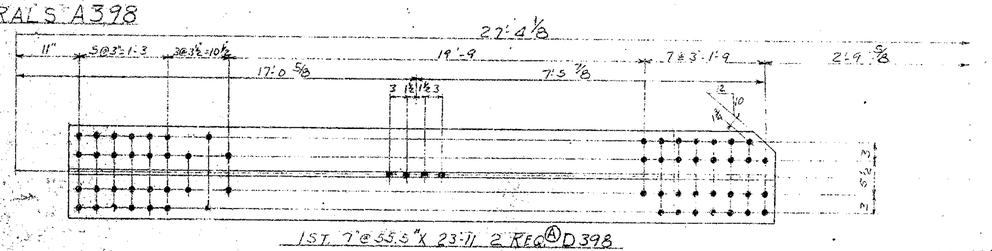
ROLL : 745

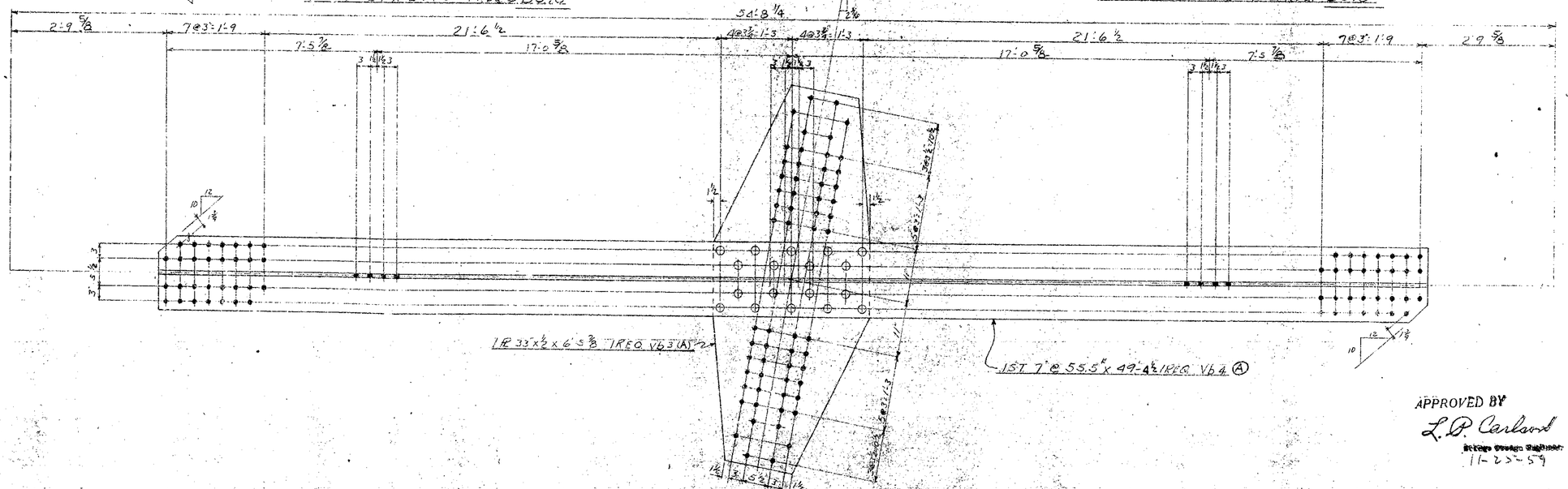
BRG. 2899

332









RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 11/20/59
SEE NOTE SHEET 21

APPROVED BY
L. P. Carlson
Bridge Design Engineer
11-25-59

APPROVED BY: HOWARD, NEEDLES, TAMMEN, & BERGENDOFF: CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by L.A.M. 5-21-59
Checked by C.W.K.
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT NO. 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4200 Sh. 398 of

331

TYPICAL

1R 33"x½"x 6'-5⅜" IREQ VC 1 (A)

1ST 7"x 5½"x 49'-¼" IREQ VC 2 (A)

ONE LATERAL A399

1ST 7"x 7½"x 23'-6⅜" IREQ B399 (A)

1ST 7"x5½"x 23'-6⅜" IREQ C 399 (A)

1R 42"x½"x 8'-2¾" IREQ VC 3 (A)

1ST 7"x 7½"x 49'-0 ⅜"-1 REQ VC 4 (A)

ONE LATERAL D399

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 12-9-59

SEE NOTE SHEET # 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES
Rivets ⅞ except as noted
Holes 1⅛ except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections APPROVED BY 12/11/59
Drawn by L.A.M. 8-22-59
Checked by C.W.K. L.P. Carlson
Revisions 11/25/59 Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

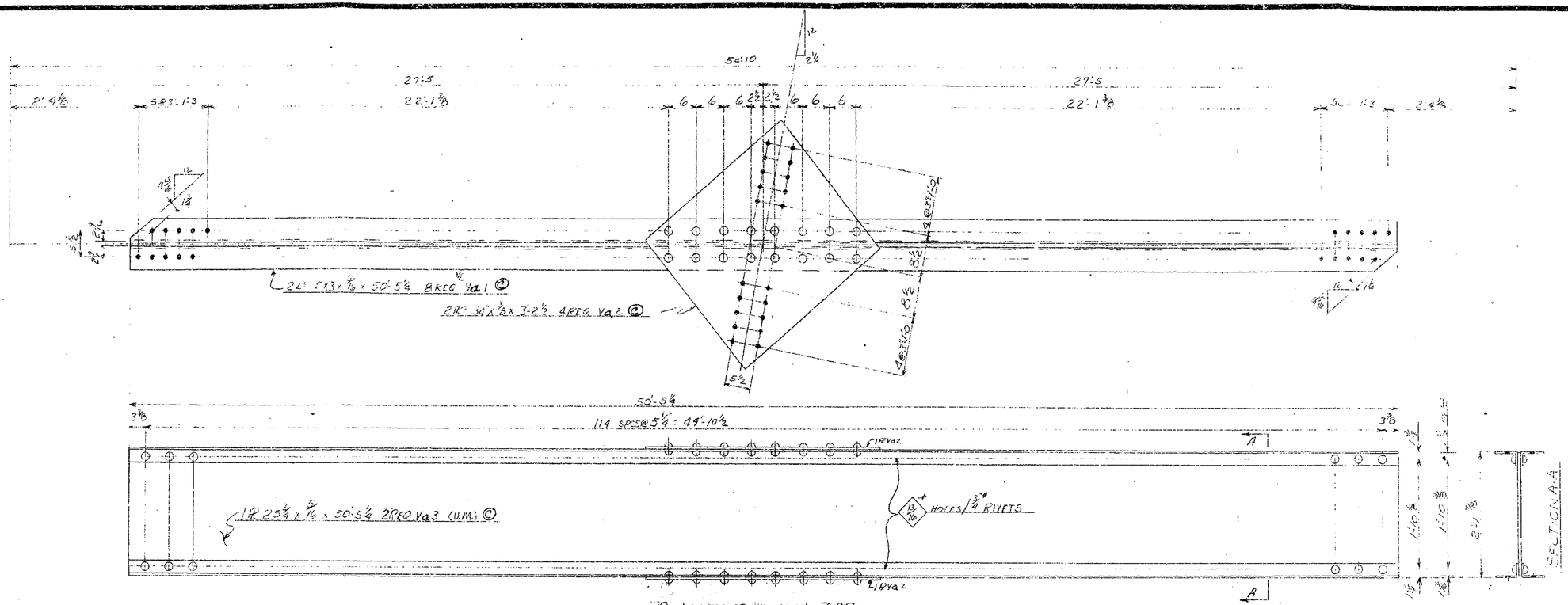
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO: 1

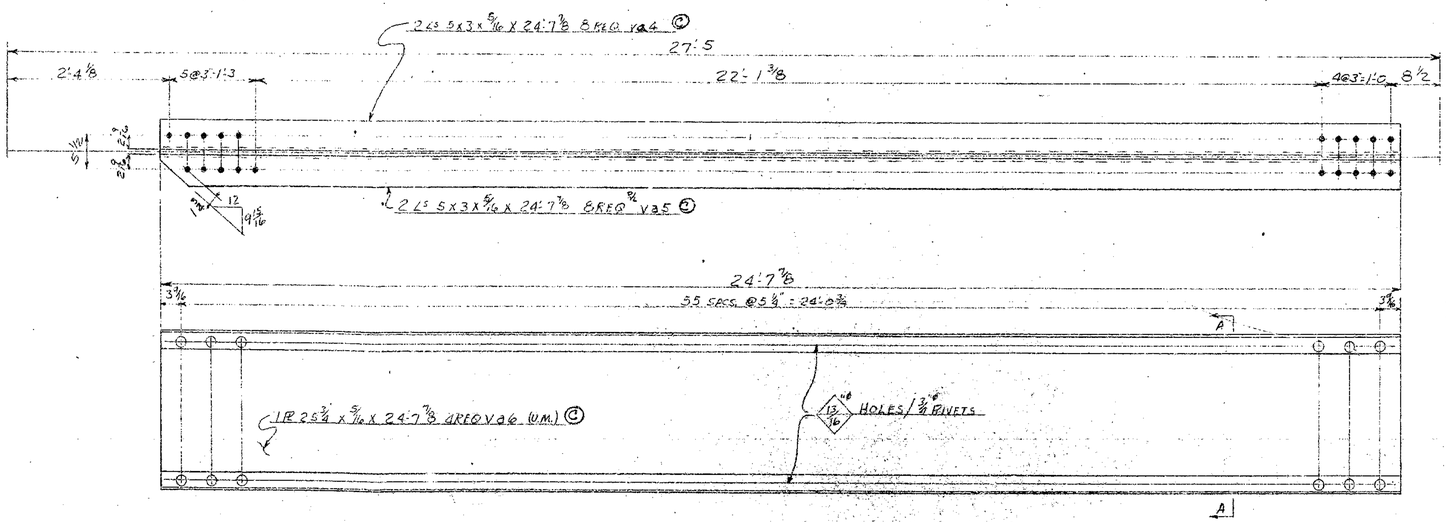
SOLD TO: JOHN F. BEASLEY CONSTR CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800 Sh. 399 of (A)

330





RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFL DATE 11/20/59

SEE NOTE SHEET #1

APPROVED BY
L.P. Carlson
Bridge Design Engineer
11-25-59

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" ⌀ except as noted
Holes 15/16" ⌀ except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by LAH 5-19-59
Checked by CWK
Revisions

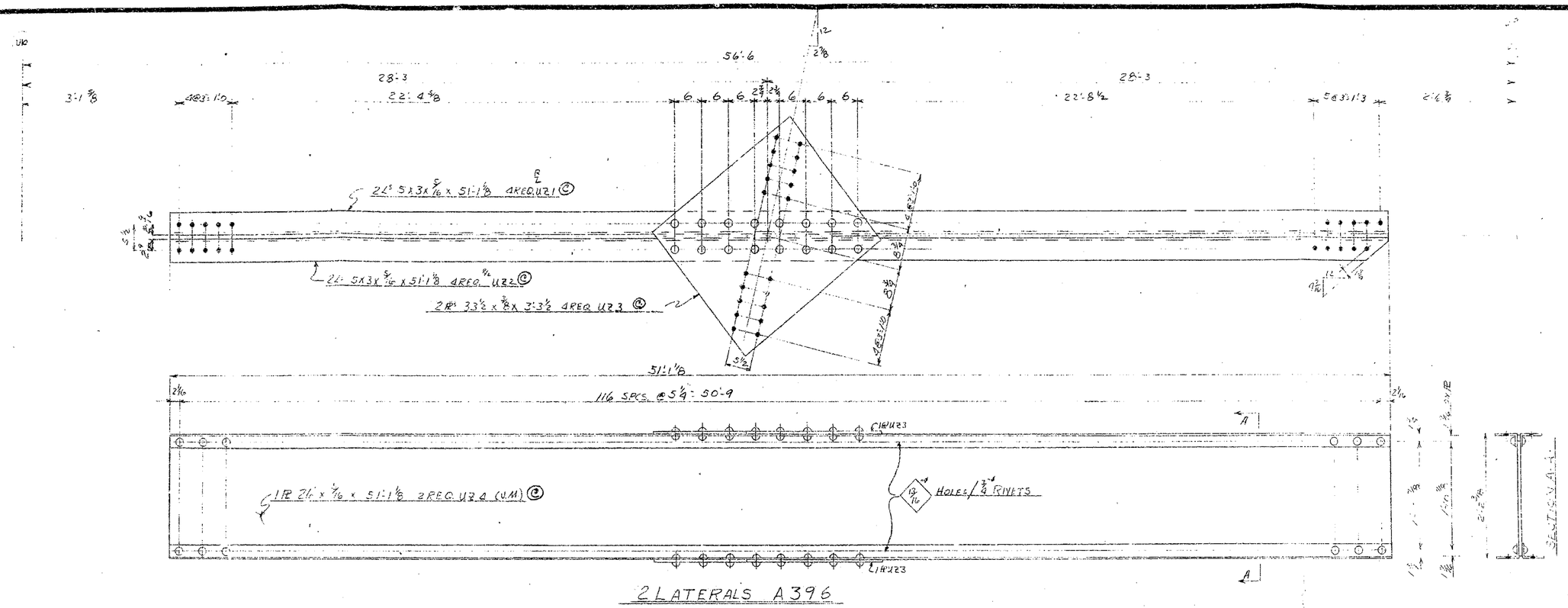
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO: 1

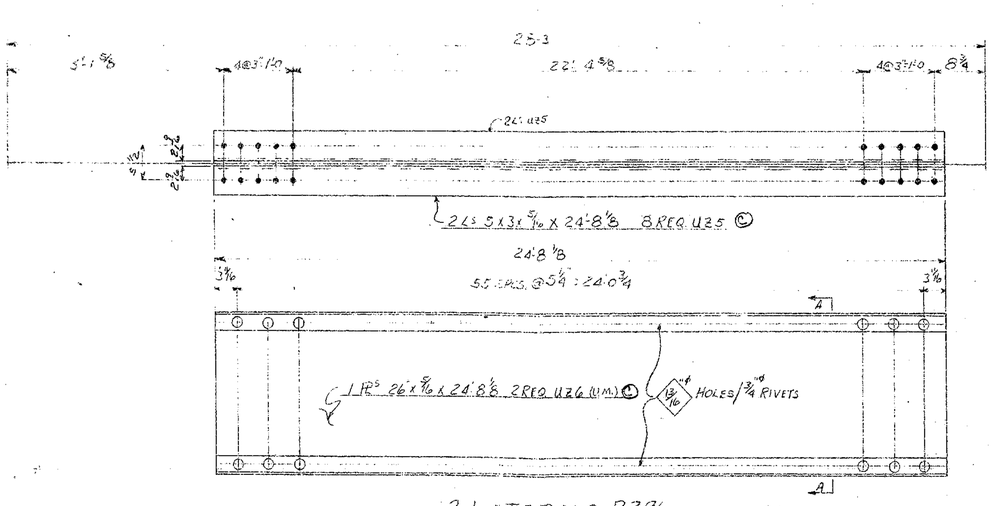
SOLD TO: JOHN F. BEASLEY CONSTR CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
Contr. No. 4500 Sh. 397 of

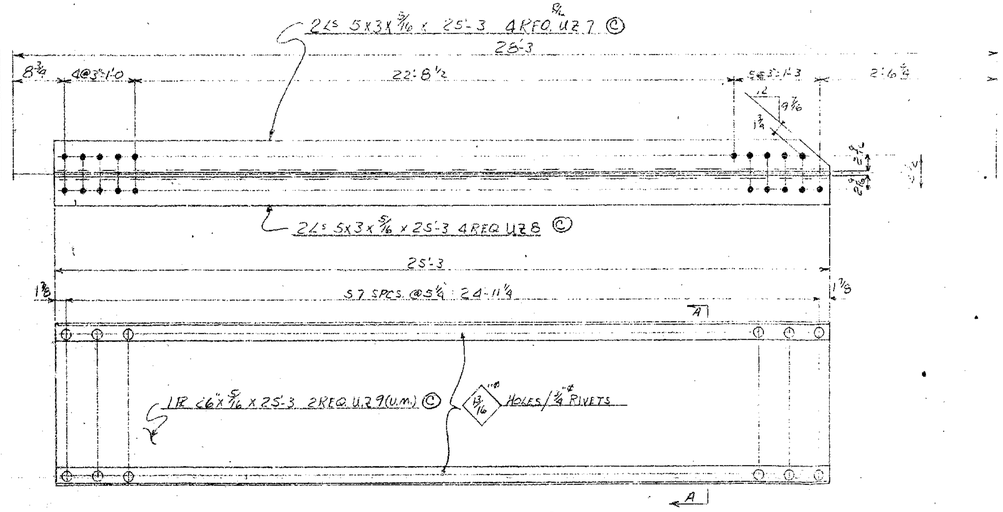
329



2 LATERALS A396



2 LATERALS B396



2 LATERALS C396

APPROVED BY
L. P. Carland
Bridge Design Engineer
11-25-59

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 11/24/59

See Note Sheet No. 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES
Rivets 3/4" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by LAM 5-18-59
Checked by CWK
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

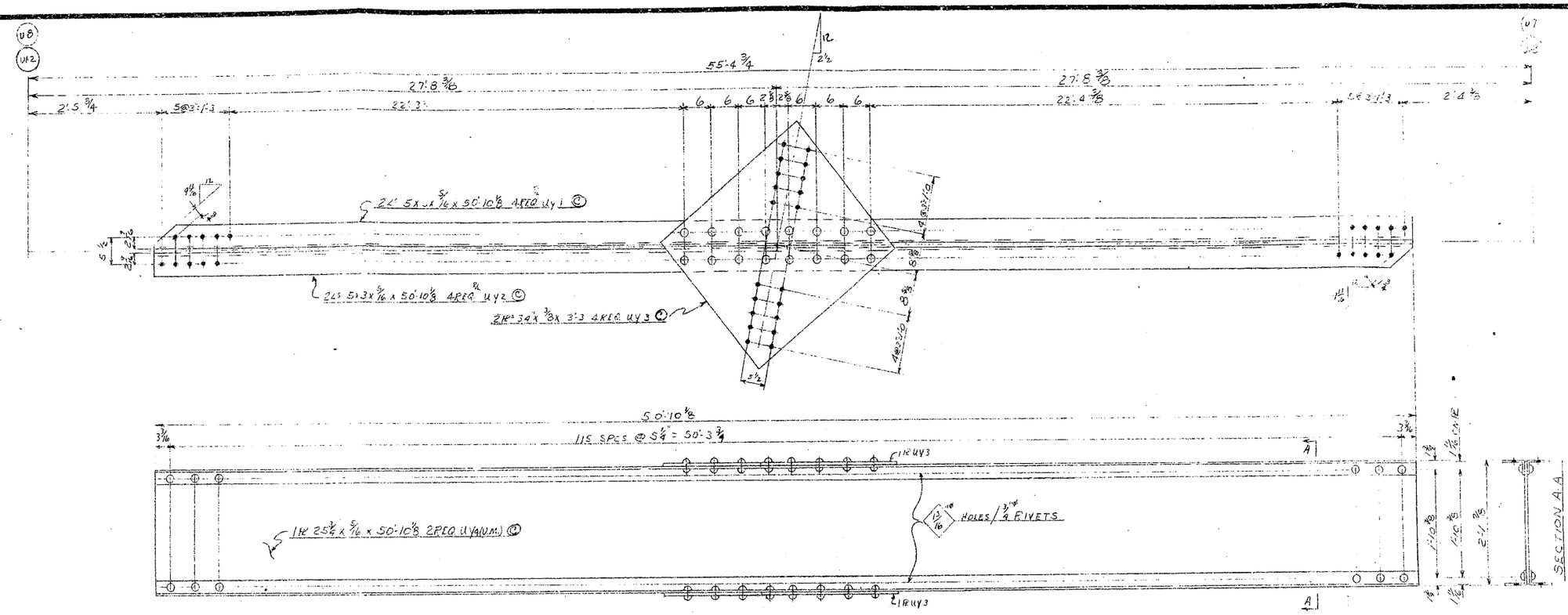
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

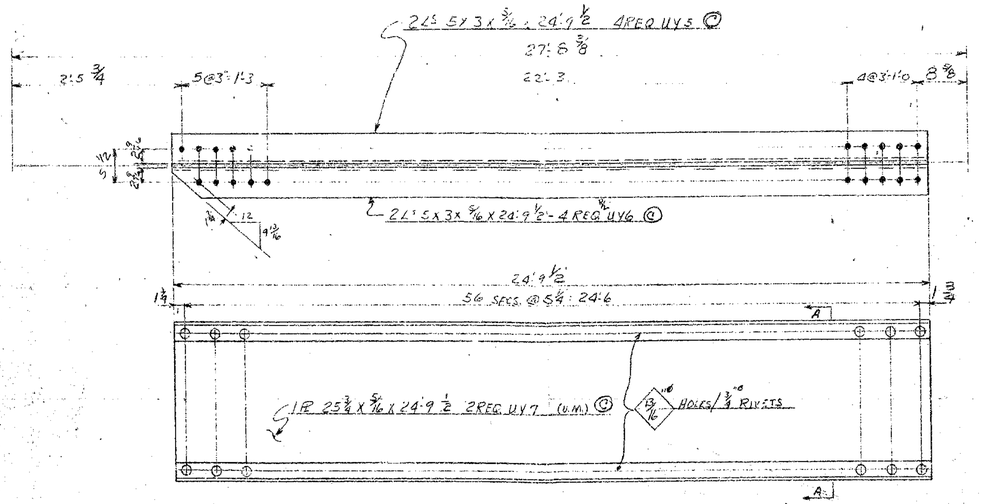
SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800 Sh. 396 of

328



2 LATERALS A395



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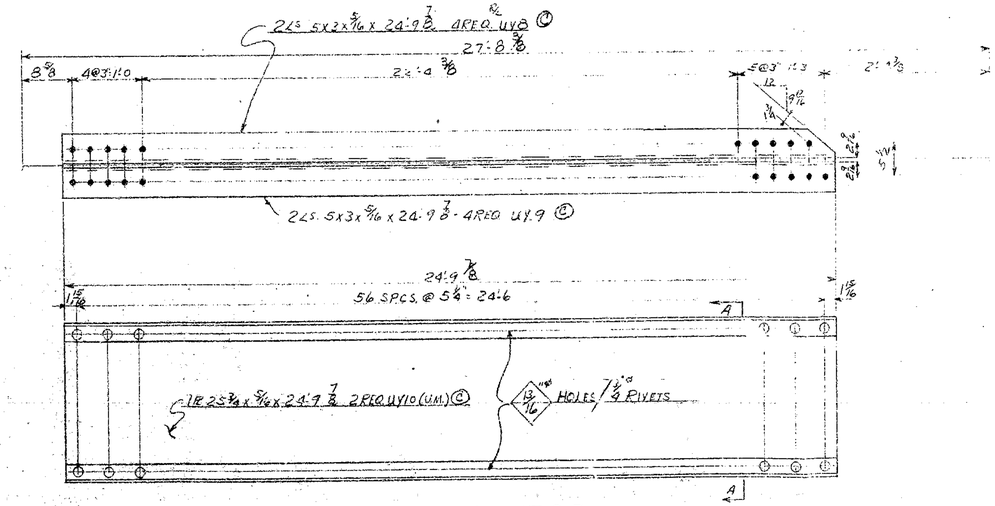


2 LATERALS C395

APPROVED BY
L. P. Carlson
Bridge Design Engineer
11-27-59

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFL DATE 11/27/59
SEE NOTE SHEET 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES
Rivets 3/4" ø except as noted
Holes 13/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by L.A.M. 5-18-59
Checked by C.W.K.
Revisions

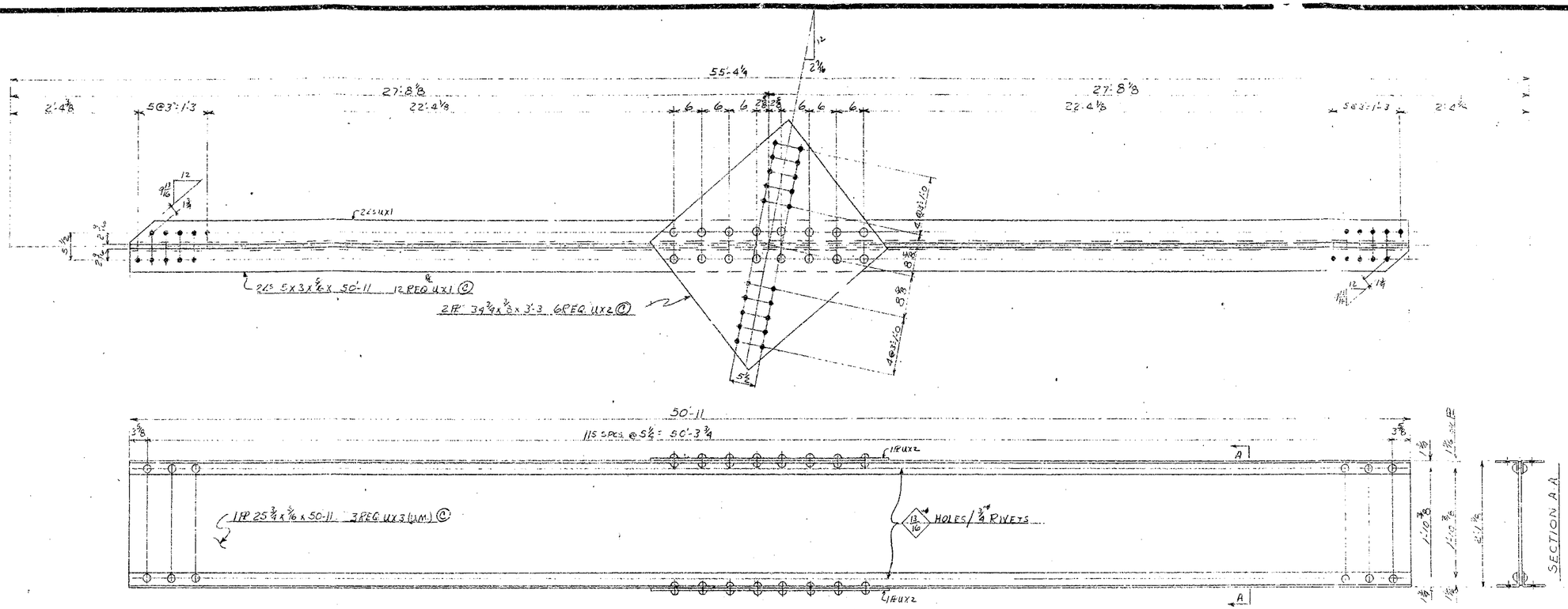
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO: 1

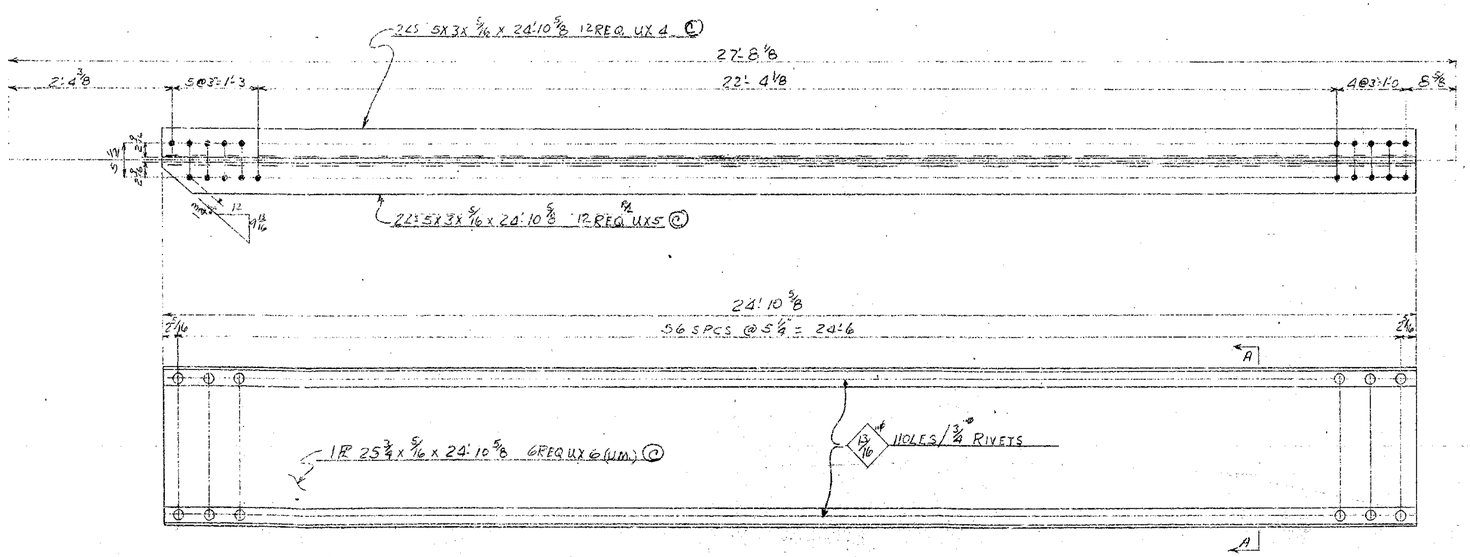
SOLD TO: JOHN F. CASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND. — Contr. No. 4800 Sh. 395 of

327



3 LATERALS A394



6 LATERALS B394

RECOMMENDED FOR APPROVAL.
HOWARD, NEEDLES, TAMMEN & BERGENDOFF.
BY HFC DATE 11/20/59

SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES
Rivets ¾" ⌀ except as noted
Holes 13/16" ⌀ except as noted
End Distance 1¼" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by L.A.M. 5-15-59
Checked by C.W.K.
Revisions

APPROVED BY
L. P. Carlson
Bridge Design Engineer
11-25-59

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO: 1

SOLD TO: JOHN F. CASLEY CONSTR CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
Contr. No. 4800
Sh. 394 of

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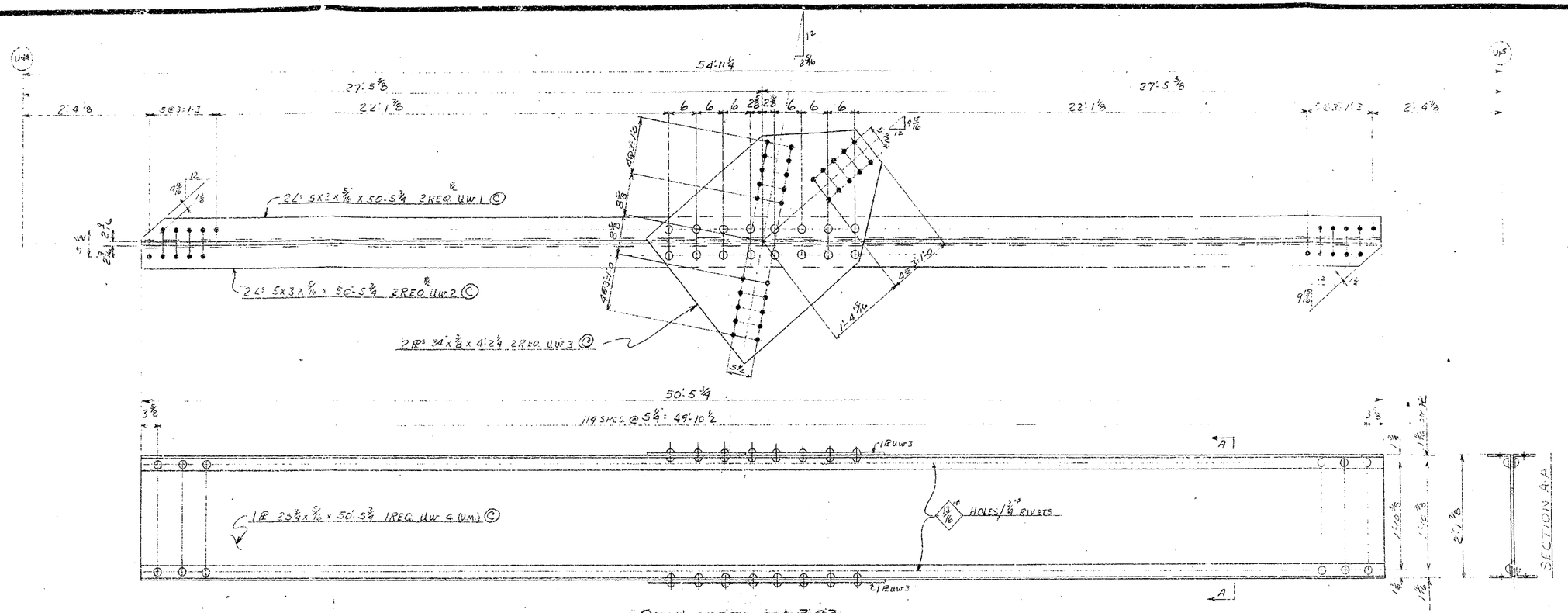
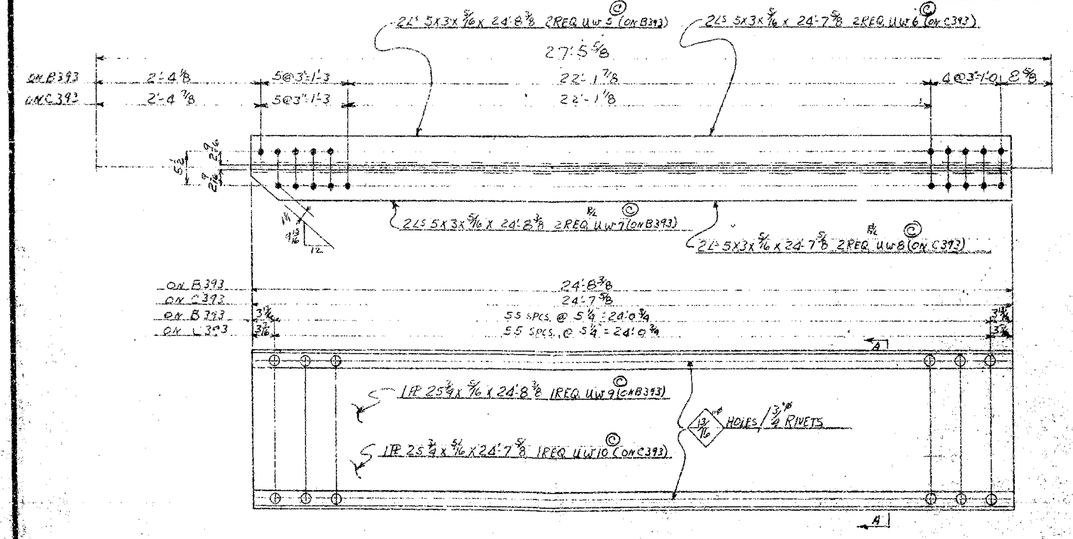
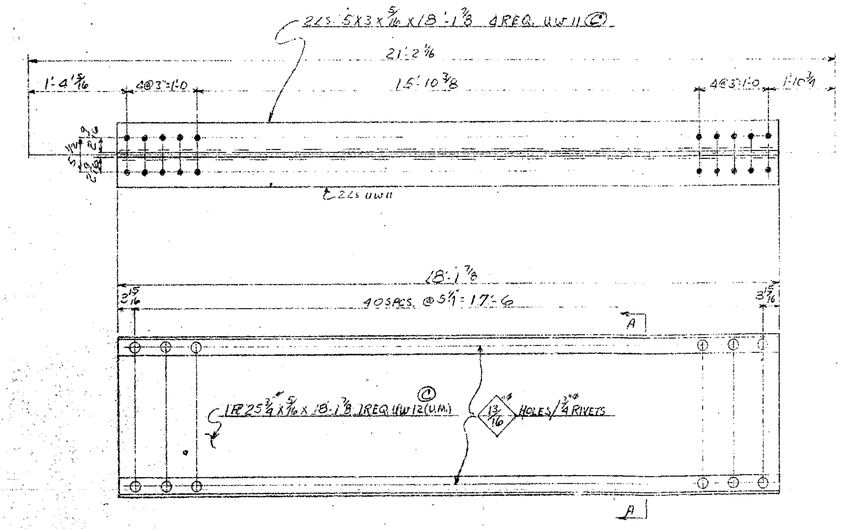


ONE LATERAL A393



ONE LATERAL B393
ONE LATERAL C393



ONE LATERAL D393

APPROVED BY
L.P. Carlson
Bridge Design Engineer
11-25-59

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFL DATE 11/20/59

SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES
Rivets ⅞" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by LAM 5-15-59
Checked by RWK
Revisions

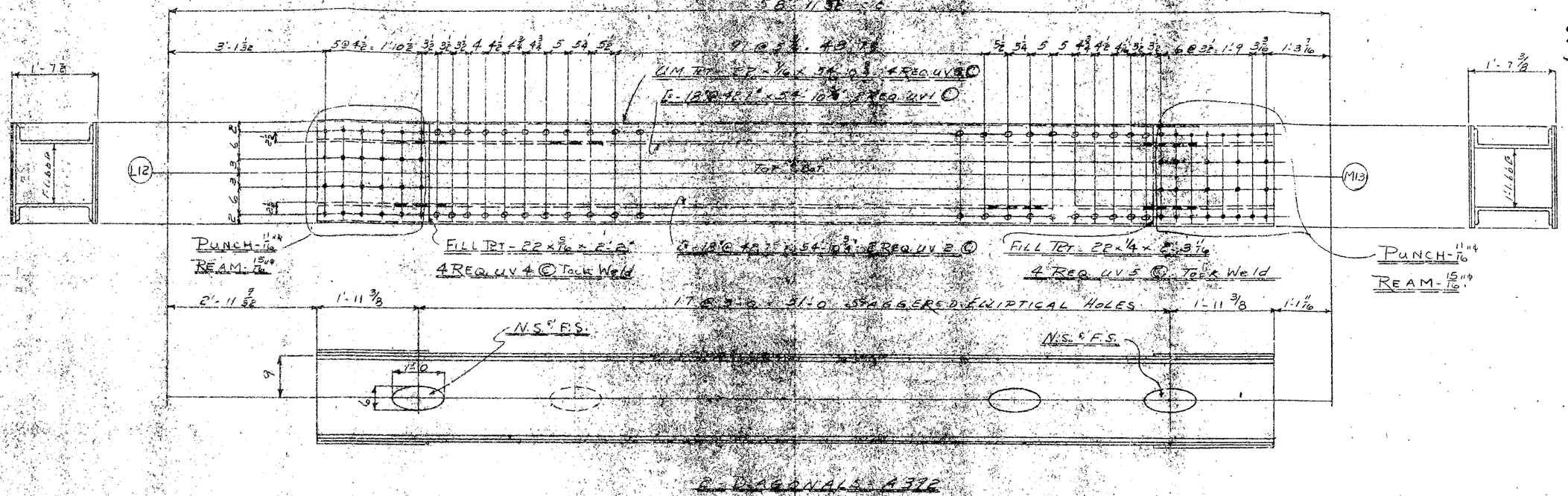
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO: 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
Contr. No. 4800 Sh. 393 of

325



E - DIAGONALS - A 372

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFL DATE 11/20/59

SEE NOTE SHEET #1

APPROVED BY
L. P. Carlson
Bridge Design Engineer
11-25-59

APPROVED BY - HOWARD-NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T.
Checked by CWK
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 1

SOLD TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800 Sh. 392 of

324

59'-2 1/8" c.c.

52'-11 3/32" c.c.

(M13)

1'-10 | 21 @ 3'-5'-3" | 3½ 3 4 4½ | 42 @ 6½" = 44'-5"

6 - 4 x 4 x 3/8 x 2'-4" - 4 REQ. UU14 (C)

6 - 18" @ 52" x 5'-1 1/8" - 5 REQ. UU1 (A)

PUNCH 11/16 REAM 15/16

PUNCH - 11/16 REAM - 15/16

6 - 18" @ 98" x 57'-6 1/2" - 2 REQ. UU2 (A)

UM PLT. 26 x 3/4 x 57'-6 1/2" - 4 REQ. UU3 (A)

PLT. 16 x 5/8 x 2'-1 1/4" - 4 REQ. UU8 (A)

6 - 3 1/2 x 3 1/2 x 5/8 x 2'-7 1/2" - 4 REQ. UU5 (C)

PLT. 7 5/16 x 5/8 x 6'-9 1/2" - 4 REQ. UU4 (A)

4 - 3 1/2 x 3 1/2 x 3/8 x 3'-11 1/4" - 4 REQ. UU7 (C)

PUNCH - 11/16 REAM - 15/16

17 @ 3'-0" = 51'-0" STAGGERED ELLIPTICAL HOLES

1'-8 1/4 | 2'-8 | 2'-4 5/8

N.S. & F.S.

3'-1 7/16" | 2'-5 5/16" | 6 @ 3'-1 6" | 3½ | 3 | ILLUMINOLY

2 - DIAGONALS - A 391

SPLICE PLT. 15 x 11/16 x 3'-7 1/4" - 4 REQ. UU6 (A)

BOOK No. 9

SEE NOTE SHEET # 1

59'-2 7/8" c.c.

58'-11 9/32" c.c.

(M13)

Punch 11/16 Ream 15/16

7/8 4 @ 3'-1'-0 | 3½ | 6 @ 3'-1'-6 3/4 | 3½ | 4 | 4½ | 5 | 5¼ | 5½ | 5¾ 6"

80 @ 6½" = 43'-4"

UM PLT. 26 x 3/4 x 56'-2 3/8" - 4 REQ. UU9 (A)

6 - 18" @ 51.9" x 56'-2 3/8" - 2 REQ. UU10 (A)

6 - 18" @ 51.9" x 56'-2 3/8" - 2 REQ. UU11 (A)

6 - 4 x 4 x 1/2 x 1'-10 - 4 REQ. UU12 (A)

6" | 5½ | 5¼ | 5 | 4¾ | 4½ | 3¾ | 3 | 3½ | 12 @ 3'-3'-0 = 2'-10 25/32

6 - 4 x 4 x 5/8 x 1'-7" - 4 REQ. UU13 (A)

(L14)

PUNCH - 11/16 REAM - 15/16

17 @ 3'-0½" = 51'-8½" STAGGERED ELLIPTICAL HOLES

2'-4 5/8 | 1'-6 | N.S. & F.S.

2'-1 3/8 | 3 3½ @ 3'-1'-0 | 2'-1 3/4 | 2'-9 3/8

N.S. & F.S.

2 - DIAGONALS - B 391

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY H.F.C. DATE 12-6-59

APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 12/4/59

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connection APPROVED BY
Drawn by V.T.
Checked by C.S.P. Carlson
Revisions 11/25/59 Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

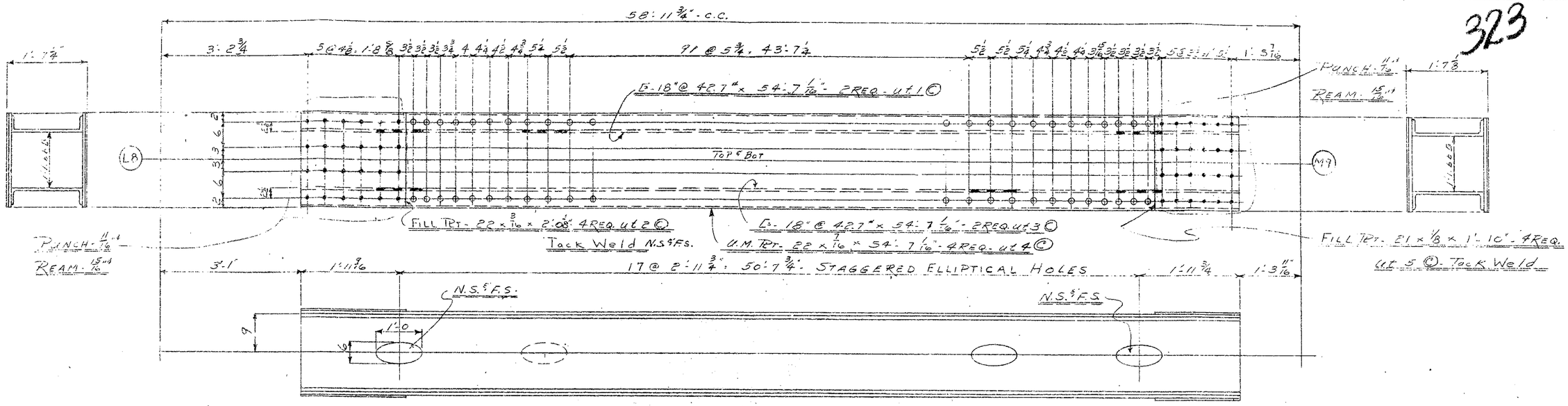
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 1

SOLD TO - JOHN F BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

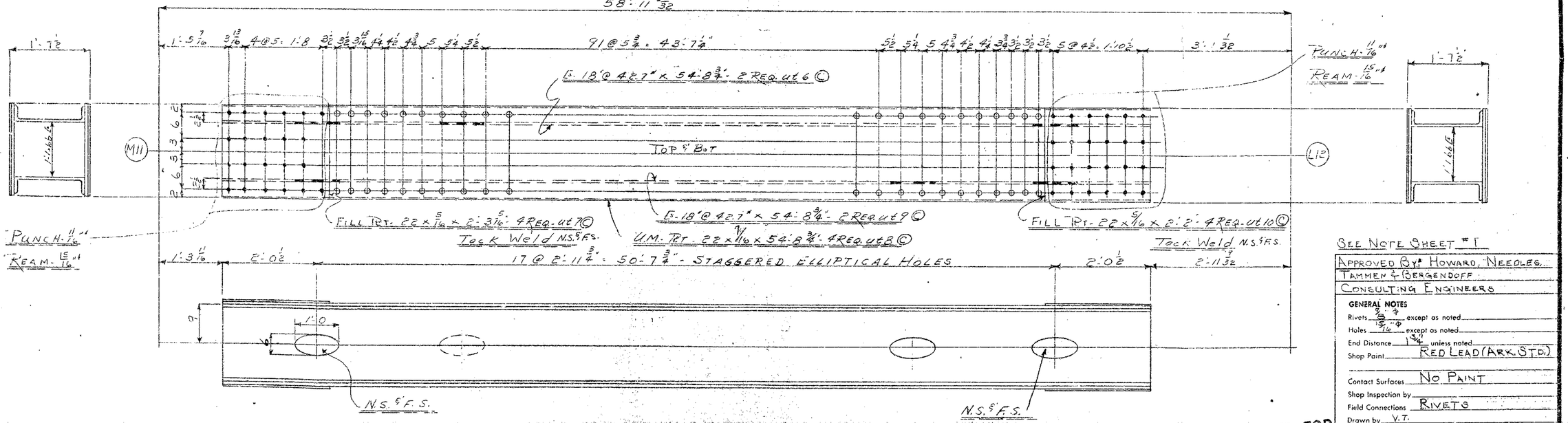
SHOP VINCENNES STEEL CO. DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

Contr. No. 4800-T Sh. 39 of

323



2 - DIAGONALS - A 390



2 - DIAGONALS - B 390

SEE NOTE SHEET # 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 1/4" unless noted
Shop Paint RED LEAD (ARK. ST. D.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T.
Checked by CWK
Revisions

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY [illegible] DATE 11/26/57

APPROVED BY
L. P. Carlson
Bridge Design Engineer
11-25-57

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO: 1

SOLD TO: JOHN F. BEARLEY CONST. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
CONTR. NO. 4800

322

FILL PLT. 30 × 1/8 × 2'-10 1/2" - 4 REQ. USS Ⓒ

17'-0 1/32"

4 Punch 11/16 Ream 16/16

MILL

2'-6"

5/16 D.O.

1/2

1'-0

1/2

JETS. U.K.S.

N.S. F.S.

2'-7 1/2"

FILL PLT. 30 × 1/8 × 3 - 3 1/2 - 4 REQ. US40 Ⓒ

PUNCH - 11/16

REAM - 16/16

S.F. U.K.I.

C.R.D. 2 1/2"

N.S. F.S.

15 @ 3'-6" = 52'-6" - STAGGERED ELIPTICAL HOLES

77 @ 6 1/2" - 41'-0 1/2"

2'-2 13/32"

1'-11 1/2"

2'-1 1/4"

I - 18" @ 70" × 57'-9 1/32" 2 REQ. USS Ⓐ

Bot.

PUNCH - 11/16

REAM - 15/16

FILL PLT - US2

U.M. PLT. 30 × 5/8 × 57'-4 3/32" - 2 REQ. USS Ⓐ

I - 18" @ 70" × 57'-9 1/32" - 2 REQ. USS Ⓐ

FILL US40

2-DIAGONALS - A389

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY HTC DATE 9-8-60

BOOK No.

SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF

CONSULTING ENGINEERS 11/25/59

GENERAL NOTES

Rivets 7/8" ø except as noted

Holes 15/16" ø except as noted

End Distance 1 3/4" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections APPROVED BY 9/21/60

Drawn by V.T.

Checked by W.P. Carlson

Revisions Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE

NEAR HELENA, ARKANSAS

UNIT NO. 1

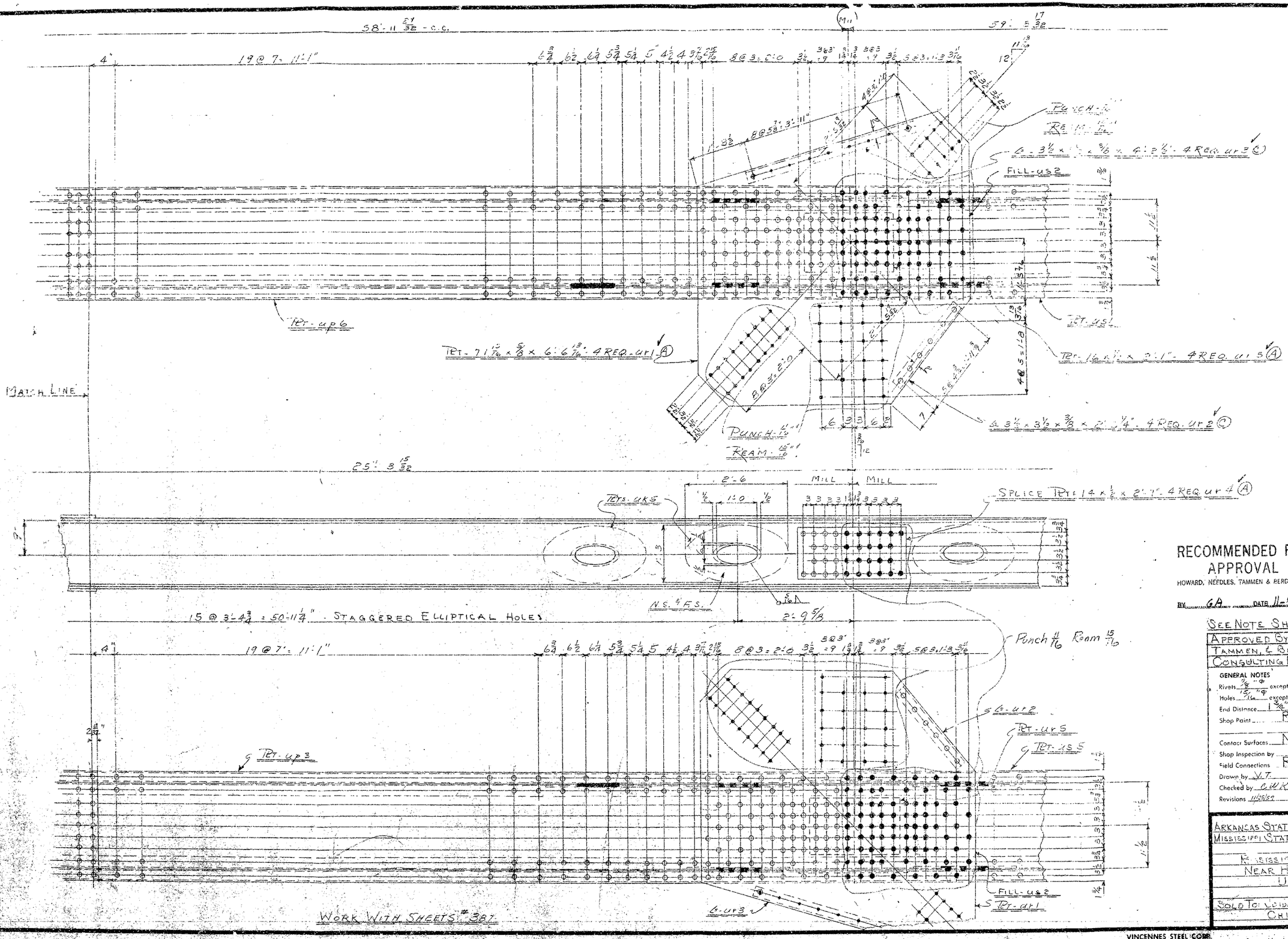
SOLD TO JOHN F. BEASLEY CONST. CO.

CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800-T Sh. 389 of

321



Work With Sheets #387

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY GA DATE 11-5-62 BOOK No. 9

See Note Sheet #1

Approved By: Howard, Needles, Tammen, & Bergendoff 12/14/59
Consulting Engineers

GENERAL NOTES

Rivets 7/8" ϕ except as noted

Holes 15/16" ϕ except as noted

End Distance 1 3/4" unless noted

Shop Paint Red Lead (Ark. Std.)

Contact Surfaces No Paint

Shop Inspection by

Field Connections Rivets APPROVED BY 11/14/62

Drawn by V.T.

Checked by C.W.K. L.P. Garbarini

Revisions 11/5/62 Bridge Design Engineer

Arkansas State Highway Commission
Mississippi State Highway Commission

Mississippi River Bridge
Near Helena, Arkansas
Unit No: 1

Sold To: Leon F. Beasley Constr. Co.
Chicago, Illinois

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800-T Sh. 388 of

320

58'-11 27/32" C.C.

3'-6 25/32 | 10@2'-2'-6 | 4 6@3'-1 1/6" | 4 6@3'-1 1/6" | 4 6@3 7/32"=1'-11 1/4" | 3 3/4" | 20@7'-16'-4" | 20@3'-5'-0 | 20@3"=5'-0 | 3 1/2" | 5@3'-1'-3

(L10)

PUNCH-11/16"
REAM-15/16"

END PRT-up 5

SPLICE PRT-up 8

PRT-up 7

U.M. PRT- 30 x 3/4 x 55'-6 7/8" - 2 REQ. up 6 (A)

5# STRUT

U.M PRT- 30 x 3/4 x 32'-3 21/32" - 2 REQ.- up 5 (A)

33'-8 1/16"
33'-7 25/32" rad.

25'-5 23/32"

7'-11 5/8"

SECTION-AA

PUNCH-11/16"
REAM-15/16"

PRTS. U.K.S.

2'-6

N.S. F.S.

L-4 x 4 x 1/2 x 4'-2 1/2" - 4 REQ. up 9 (C)

PCWF-33'@130# x 10'-3 1/2" - 4 REQ. up 10 (C)

8@5 3/8"=2'-11

3 3/4 3 x 3 3 3 3/4 3

MATCH LINE

A@3'-2'-0

1'-0 7/16"

15 @ 3'-4 3/4" - 50'-11 1/4" STAGGERED ELLIPTICAL HOLES

3'-5 23/32" | 4 | 1'-6 | 10@2'-2'-6 | 4 6@3'-1'-6 | 4 6@3'-1'-6 | 4 6@3 7/32"=1'-11 1/4" | 3 3/4"

43@7'-25'-1"

I-18"@70# x 55'-6 7/8" - 2 REQ. R/L up 1 (A)

6 | 5" | 4 1/2 | 3 | 3 | 3 | 3 | 3" | 2 25/32"

PUNCH-11/16"
REAM-15/16"

END PRT-up 4

I-18"@70# x 55'-6 7/8" - 2 REQ. R/L - up 2 (A)

SPLICE PRT- 30 x 3/4 x 3'-7 1/2" - 4 REQ. up 8 (A)

U.M PRT- 30 x 3/4 x 55'-6 7/8" - 2 REQ. up 3 (A)

PRT- 16 x 1/2 x 8'-8 3/4" - 4 REQ. up 7 (A)

U.M PRT- 30 x 3/4 x 32'-3 21/32" - 2 REQ. up 4 (A)

ONE-DIAGONAL-AS SHOWN-A387
ONE-DIAGONAL-TO PAIR-AA387
} WORK WITH SHEET 388 & 389

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY GA DATE 11-2-59

BOOK No. 9

SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS 11/25/59

GENERAL NOTES
Rivets 7/8" ϕ
Holes 15/16" ϕ except as noted
End Distance 1 3/4" unless noted.
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T.
Checked by CWK
Revisions

APPROVED BY 11/11/59
L P Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800-T Sh. 387 of

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58'-11 7/8" c.c.

3½ 4@3'-1'-0 3½ 4@3'-1'-0 3½ 4¾ | 20@3'-5'-0" | 20@3'-5'-0 | 33@6"=16'-6" | 5¾ 5½ 5¼ 4½ 4¼ 3 21/32 3 3½ 4@3'-1'-0 4 | 6@3'-1'-6 | 4 | 10@3'-2'-6" | 3'-6¾

REI-UNIT 11

I-18"@70" x 55'-6 7/8" - 2 REQ. B UNIT 7 (A)

PUNCH- 11/16" T6
REAM- 15/16" T6

TOP

FILL-UNIT 9 | MILL | U.M. PRT - 30 x ½ x 34'-0 11/32" - 2 REQ. UNIT 8 (A) | I-18"@70" x 56'-6 7/8" - 2 REQ. - UNIT 6 (A) | FILL PRT - 22 x ¼ x 2'-6" - 4 REQ. UNIT 5 (A) | END 30 x ½ PRT | U.M. PRT - 30 x ¾ x 37'-1 5/32" - 2 REQ. UNIT 12 (A)

END 30 x 5/8 PRT | END - 30 x ¾ PRT

25'-8 11/32" | 33'-8 11/32" | SPLICE PRT - 30 x ½ x 3'-1½" - 4 REQ. UNIT 10 (A)

END 30 x ½ PRT

PL. WF. 33" @ 130" x 10'-3½" - 4 REQ. UNIT 1 (C)

8@5 7/8" = 3'-11"

L 4 x 4 x ½ x 4'-2½" - 4 REQ. UNIT 2 (C)

8@3'-2"-0

1'-0"

2'-4 1/2"

7'-11 3/8"

PRTS-UNIT 5

N.S. & F.S.

1'-11"

15 @ 3'-5" = 51'-3" STAGGERED ELLIPTICAL HOLES

53@6" = 26'-6"

3½ 4@3'-1'-0 3½ 4@3'-1'-0 = 47'-4

5¾ 5½ 5¼ 4½ 4¼ 3 21/32 3 3½ 4@3'-1'-0 4 | 6@3'-1'-6 | 4 | 10@3'-2'-6 | 3'-6¾

BOT

MILL | PRT - 16 x ½ x 2'-7" - 4 REQ. UNIT 11 (A)

END 30 x 5/8 PRT | END - 30 x ¾ PRT

END 30 x ½ PRT

FILL PRT - 19 x ⅛ x 2'-6" - 4 REQ. UNIT 9 (A)

FILL-UNIT 5 | END 30 x ½ PRT | SPLICE PRT - UNIT 10 | PUNCH- 11/16" | REAM- 15/16"

U.M. PRT - 30 x ½ x 34'-0 11/32" - 2 REQ. UNIT 3 (A)

U.M. PRT - 30 x ¾ x 37'-1 5/32" - 2 REQ. UNIT 12 (A)

APPROVED BY
1-25-59
L.P. Carland
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 11/20/59

WORK WITH SHEET #384 & 385

SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T.
Checked by CWK
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

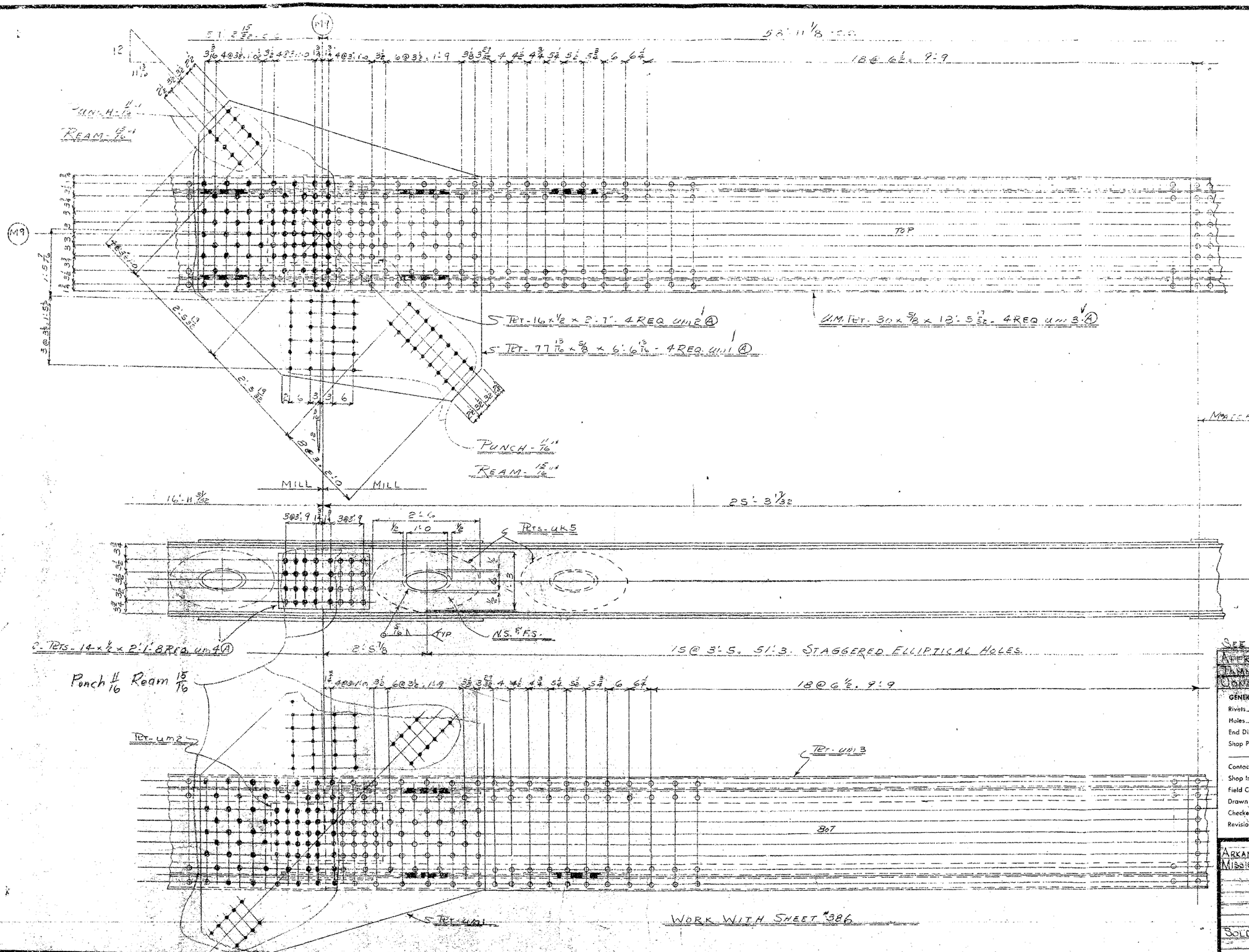
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO: 1

SOLD TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800 Sh. 386 of

318



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY GA DATE 11-8-60
BOOK No. 79

SEE NOTE SHEET # 1
APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS 11/25/60

GENERAL NOTES
Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 3/4" unless noted
Shop Point RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T.
Checked by G.W.
Revisions
APPROVED BY 11/6/60
C.P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO: 7

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
Contr. No. 4800-T Sh. 385 of

317

(11E)

59'-3 15/32

58'-11 7/8 c.c.

42'-3 1/2

16'-11 3/32

15'-3 17/32

(M9)

MILL MILL

PUNCH - 11/16"
REAM - 15/16"

U.M. PLT. 30 x 5/8 x 56'-9 3/16" - 2 REQ. U.K. 2 (A)

PLT. - 15 x 5/8 x 2'-6" - 144 REQ'D - U.K.S (A)

S PLWF - 27" @ 24" x 7'-3 5/8" - 2 REQ. U.K. (C)

PLT. - U.K.S

15 @ 3'-6" = 52'-6" STAGGERED ELLIPTICAL HOLES.

I - 18" @ 70" x 56'-9 3/16" - 2 REQ. U.K. 15 (A)

U.M. PLT. 30 x 5/8 x 56'-9 3/16" - 2 REQ. U.K. 3 (A)

I - 18" @ 70" x 56'-9 3/16" - 2 REQ. U.K. 4 (A)

2 - DIAGONALS - A384

RECOMMENDED FOR APPROVAL
Punch 11/16 HOWARD, NEEDLES, TAMMEN & BERGENDOFF
Ream 15/16 BY. HFC DATE 9-8-60

BOOK No. 9

SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN, & BERGENDOFF: CONSULTING ENGINEERS
11/25/59

GENERAL NOTES
Rivets 7/8 ϕ except as noted
Holes 15/16 ϕ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections APPROVED BY
Drawn by V.L.
Checked by C.W.L. & P. Carlson
Revisions Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4200-F Sh. 384 of

316

PUNCH 11/16"
REAM 15/16"
MILL
N.S. & F.S.
2 DIAGONALS - A383
2 DIAGONALS - B383
STAGGERED ELLIPTICAL HOLES
TOP & BOT
U8
L6
M7

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HTC DATE 9-8-60

BOOK No. 9

SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS 11/25/59

GENERAL NOTES
Rivets 7/8 / 15/16" except as noted
Holes 13/16 except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections
Drawn by V.T.
Checked by
Revisions

APPROVED BY
L. P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO 1

SOLD TO: JOHN J. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL & IRON ENTERPRISES, INC.
VINCENNES, IND.

CONTR. No. 4800-7 Sh. 383 of

315

72'-10 5/16"

1:7

2'-6 1/8" | 9@3'-2:3 | 4@3 1/2 = 1:2 | 3 3/4 4 4 1/4 4 1/2 4 3/4 5 5 1/2 | 111@6 = 55'-6" | 5 1/2 5 4 3/4 4 1/2 4 1/4 4 3 5/8 | 4@3 1/2 = 1:2 | 9@3'-2:3 | 2'-3 11/16"

1:36 1/2

L5

L6

E-18"@42.7# × 67'-11" 2 REQ. Uh1 (A)

Top & Bot

U.M. PLTS. - 24 × 1/2 × 67'-11" - 4 REQ. Uh3 (A)

E-18"@42.7# × 67'-11" 2 REQ. Uh2 (A)

2'-4 3/8" | 2'-0 1/4" | 21@3'-0 1/2" = 63'-10 1/2" - STAGGERED ELLIPTICAL HOLES | 2'-0 1/4" | 2'-6 15/16"

9"

1'-0"

PUNCH - 11/16" ø
REAM - 15/16" ø

N.S. & F.S.

N.S. & F.S.

PUNCH - 11/16" ø
REAM - 15/16" ø

2 - DIAGONALS - A 382

58'-11 25/32" c.c.

1'-1 7/8"

1'-2 7/16" | 5@4 3/4 = 1'-11 3/4" | 4@3 1/2 = 1:2 | 3 3/4 4 4 1/4 4 1/2 4 3/4 5 5 1/2 5 1/2 | 91@5 3/4 = 43'-7 1/4" | 5 1/2 5 1/2 5 1/4 5 4 3/4 4 4 3/8 3 7/8 3 1/2 | 5@4 1/2 = 1'-8 5/8" | 3'-2 23/32"

1:7 1/4

E-18"@42.7# × 54'-10 1/2" - 2 REQ. Uh4 (C)

Top & Bot

M7

L8

1'-11 5/8"

1'-11 5/8"

FILL - 22 × 1/8 × 2'-3 1/4" - 4 REQ. Uh8 (C)

Tack Weld - N.S. & F.S.

E-18"@42.7# × 54'-10 1/2" - 2 REQ. Uh5 (C)

U.M. PLTS. - 22 × 7/16 × 54'-10 1/2" - 4 REQ. Uh6 (C)

FILL PLTS. - 22 × 3/16 × 2'-0 3/8" - 4 REQ. Uh7 Tack Weld

1'-0 11/16" | 1'-11 1/16" | 17@3'-0 = 51'-0 - STAGGERED ELLIPTICAL HOLES | 1'-11 1/16" | 3'-0 31/32"

9"

1'-0"

N.S. & F.S.

N.S. & F.S.

2 - DIAGONALS - B 382

SEE NOTE SHEET #1

APPROVED BY: HOWARD NEEDLES TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4" unless noted
Shop Point RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T.
Checked by L.W.R.
Revisions

APPROVED BY 11-25-59
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 11/20/59

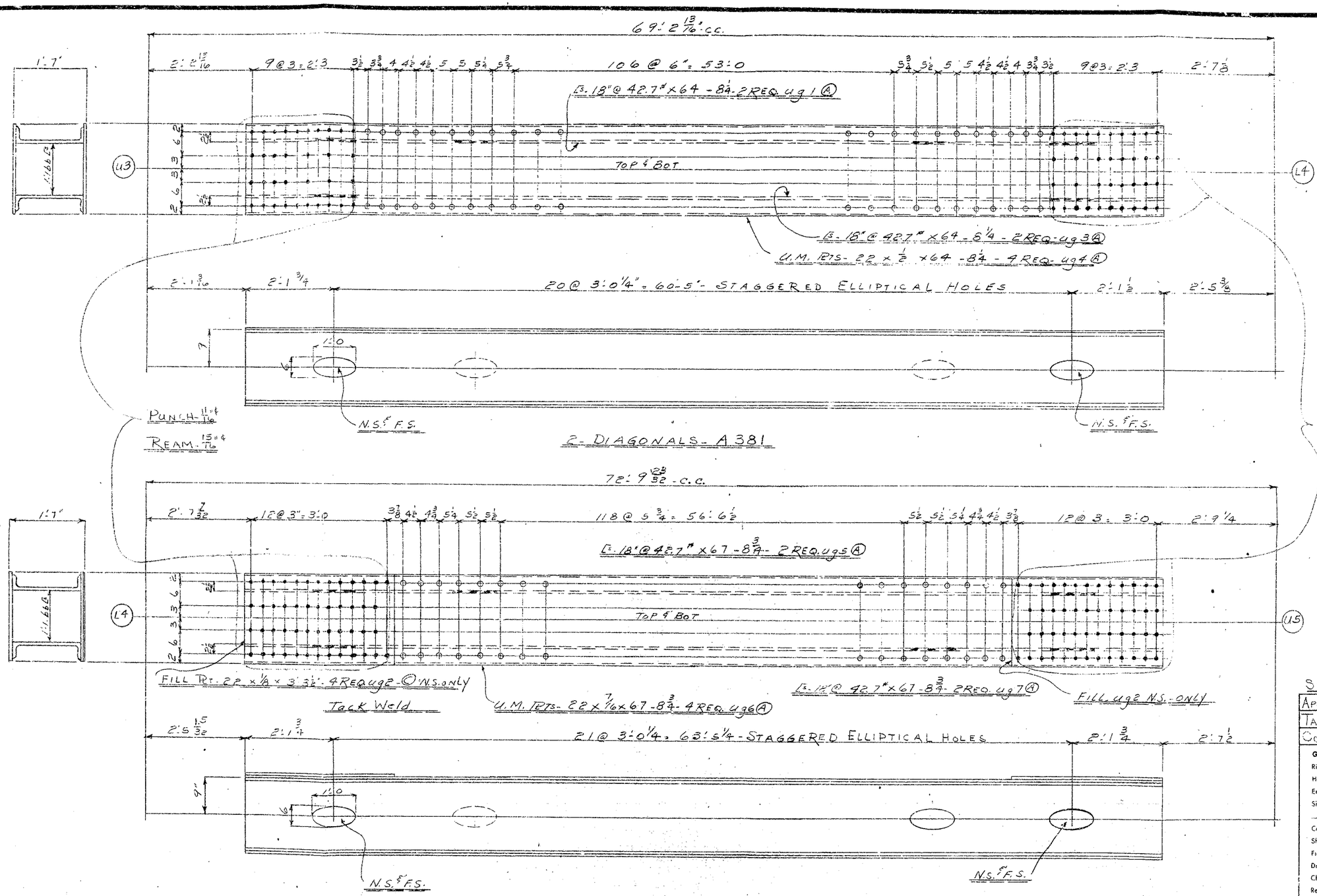
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND. — CONT. NO. 4800 — Sh. 382 of

314



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY WFC DATE 11/24/59

SEE NOTE SHEET # 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1¼" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V.T.
Checked by CWK
Revisions

APPROVED BY 11-25-59
L. P. Cartwright
Bridge Design Engineer

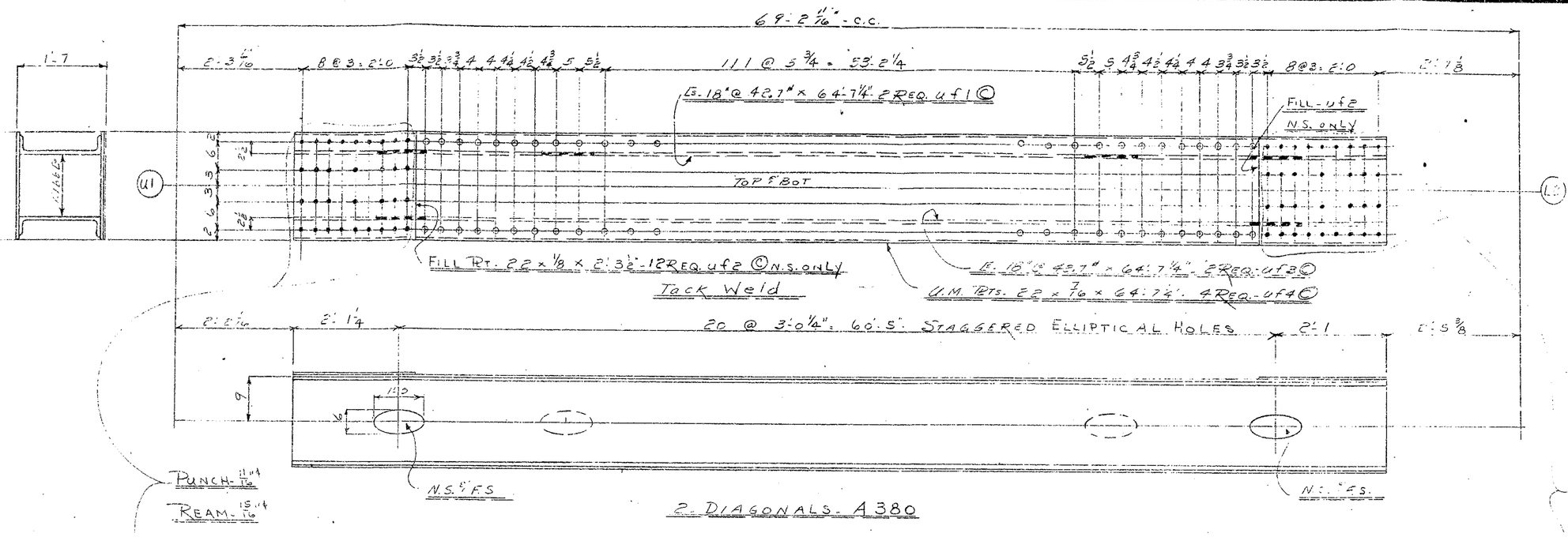
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND. Contr. No. 4800 Sh. 38 1 of

313



See Note Sheet #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by V. T
Checked by CWK
Revisions

APPROVED BY
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HT DATE 11/20/56

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO: 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
STR. ENTER Contr. No. 4800 Sh. 380 of

312

10'-5 3/8"
66 @ 5 1/4" = 28'-10 1/2"

BEND LINE

BENT R-43" x 3/8" x 30'-4" - 1 Req'd - ue1 (c)

—TOP VIEW—

SYMM. ABOUT ℄

7'-2 3/8"
5 1/2" 5 1/2" 3 @ 4" = 1'-5 3/4"

L-3 1/2" x 3 1/2" x 5/16" x 1'-10 3/8" - 4 Req'd (L ue6 (c))

1L ue9 (c)

1L ue6 (c)

WELD L'S

1L ue6 (c)

DIAPHRAGM DETAIL

R-27 3/8" x 3 1/2" x 2'-5 1/4" - 2 Req'd - ue8 (c)

L-3 1/2" x 3 1/2" x 5/16" x 1'-5 1/2" - 4 Req'd (L ue9 (c))

33'-1 3/8"
65 @ 5 1/4" = 28'-5 1/4"

4 @ 4" = 1'-4"

FILL R-3 1/2" x 9" x 1'-11 1/2" - 2 Req'd - ue11 (c)
(TACK WELD)

FILL R-3 1/2" x 8" x 1'-9 1/2" - 2 Req'd - ue10 (c)
(TACK WELD)

2L ue1 - 3 1/2" x 3 1/2" x 5/16" x 32'-4" - 2 Req'd - ue2 (c)

SUM. R-25" x 5/16" x 32'-4" - 2 Req'd - ue3 (c)

2L ue5 - 3 1/2" x 8 1/2" x 5/16" x 32'-4" - 2 Req'd - ue4 (c)

35'-0" c-c

—SIDE VIEW—

1'-6" N.T.S.
1'-1 1/2" N.T.S.

3'-0" 3'-0" 3'-0" 3'-0" 5'-0" 4'-0"

3@3 1/2" 9" 2'-3" 3@3 1/2" 9" 2'-3" 3@3 1/2" 9" 2'-3" 3@3 1/2" 9" 2'-3" 3@3 1/2" 9" 1'-1 3/4" 5@4 1/2" 1'-0" 1'-5 3/4"

(Bt.R-ue5 (c)) (Bt.R-ue5 (c)) (Bt.R-ue5 (c)) (Bt.R-ue5 (c))

BENT R-12" x 3/8" x 1'-4" - 10 Req'd - ue6 (c)

—BOTTOM VIEW—

Bt.R-12 3/8" x 3/8" x 2'-1 3/8" - 4 Req'd (L ue12 (c))

BEND LINES

Bt.R-ue5 (c)

ONE TOP STRUT A379 @ 01

SEE NOTE SH. #1

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY FRS DATE 1-5-60

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES

Rivets A.S.T.M. except as noted
Holes 15/16 except as noted
End Distance 1 1/2 unless noted
Shop Paint RED LEAD (ARK STD.)

Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by KW 5-28-59
Checked by RWH APPROVED BY
Revisions 11-5-59 L. P. Carlson
Bridge Engineer

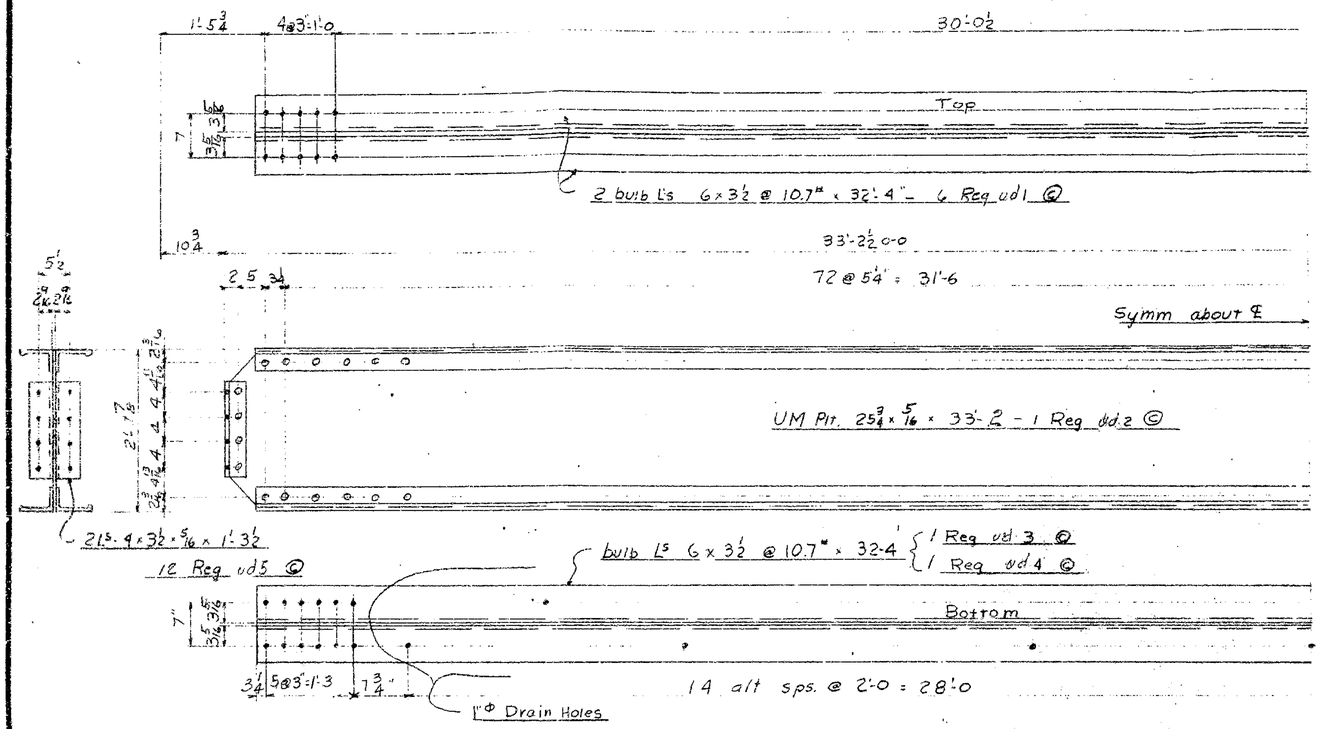
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT #1

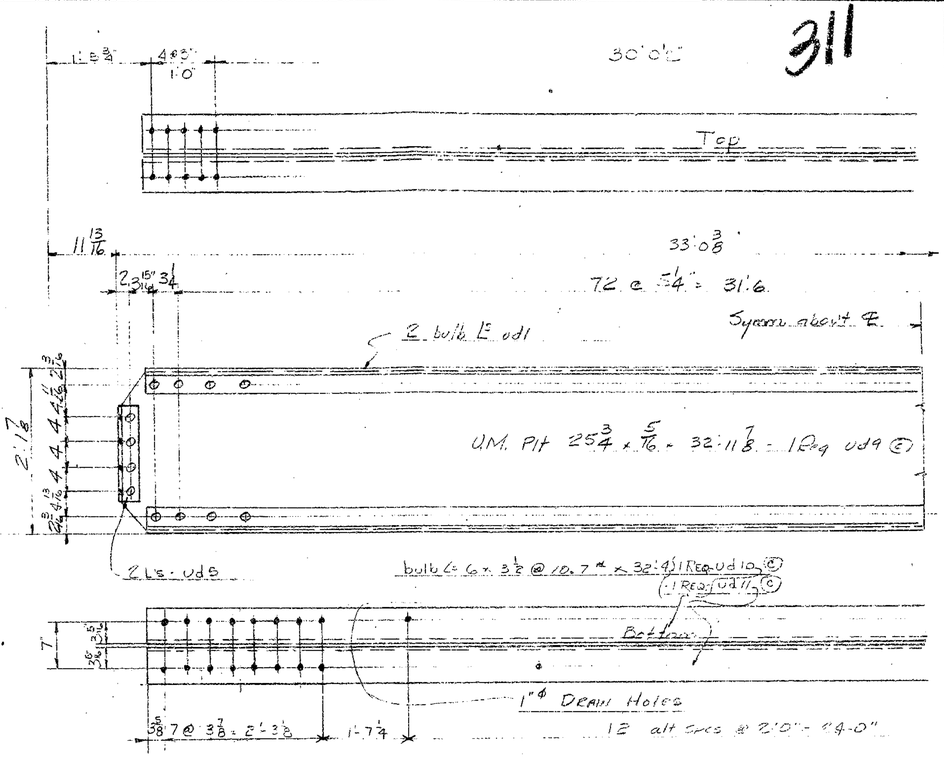
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. (A DIV. OF INDUSTRIES, INC.) VINCENNES, IND. Contr. No. 4800 Sh. 379 of (A)

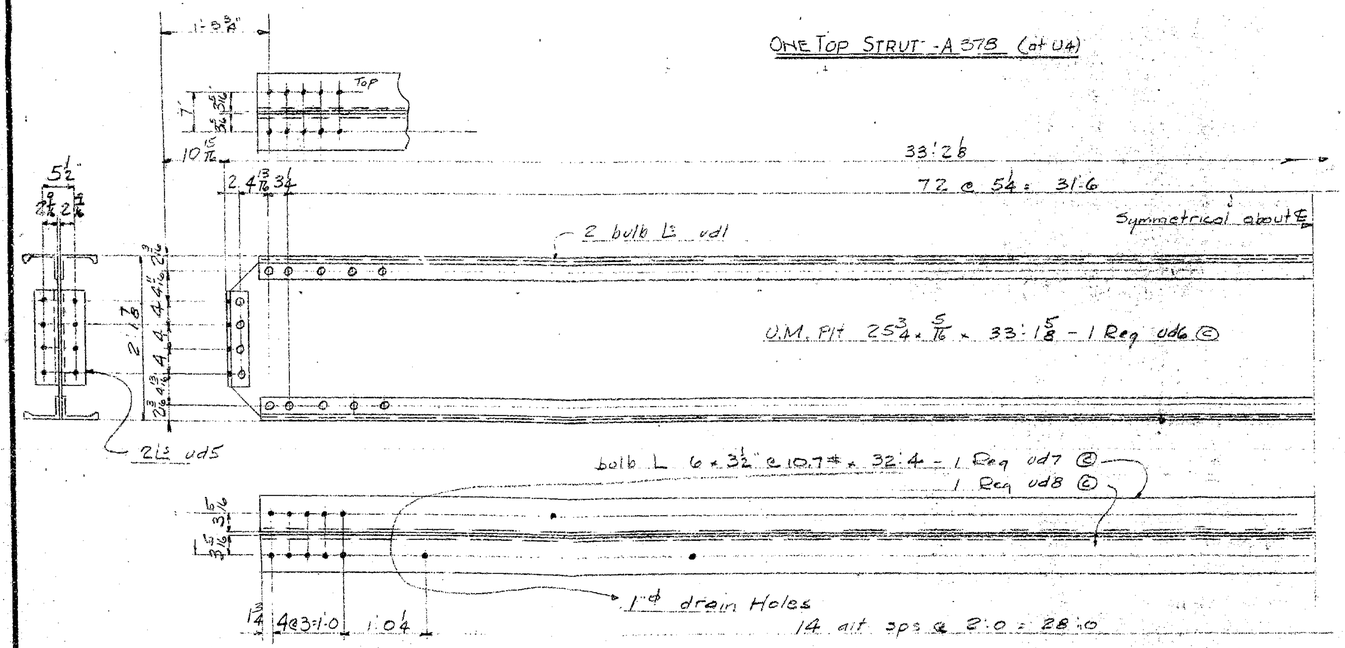
311



ONE TOP STRUT - A378 (of U4)



ONE TOP STRUT C378 @ U6



ONE TOP STRUT - B378 (of U7)

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 11/20/59

see notes- sheet 1

APPROVED BY
L.P. Carlson
Bridge Design Engineer
11-25-59

APPROVED BY: HOWARD; NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" except as noted
End Distance 1¼ unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by RBH Jm KW 5-28-59
Checked by CWK
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO 1

SOLD TO: JOHN F BEASLEY CONSTR CO
CHICAGO ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND. Contr. No. 4800 Sh. 378 of

ONE ELEVATION AS SHOWN B377
ONE " " TO PAIR - BA377

SECTION "A-A"

SECTION "B-B"

SECTION "C-C"

SECTION "D-D"

SECTION "E-E"

ONE VERTICAL AS SHOWN A377

ONE VERTICAL TO PAIR AA377

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY G.A. DATE 11-9-60

BOOK No. ...

SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 11/25/59

GENERAL NOTES
Rivets 7/8 except as noted
Holes 15/16 except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by APPROVED BY 11/11/60
Checked by CWK & P Carlson
Revisions

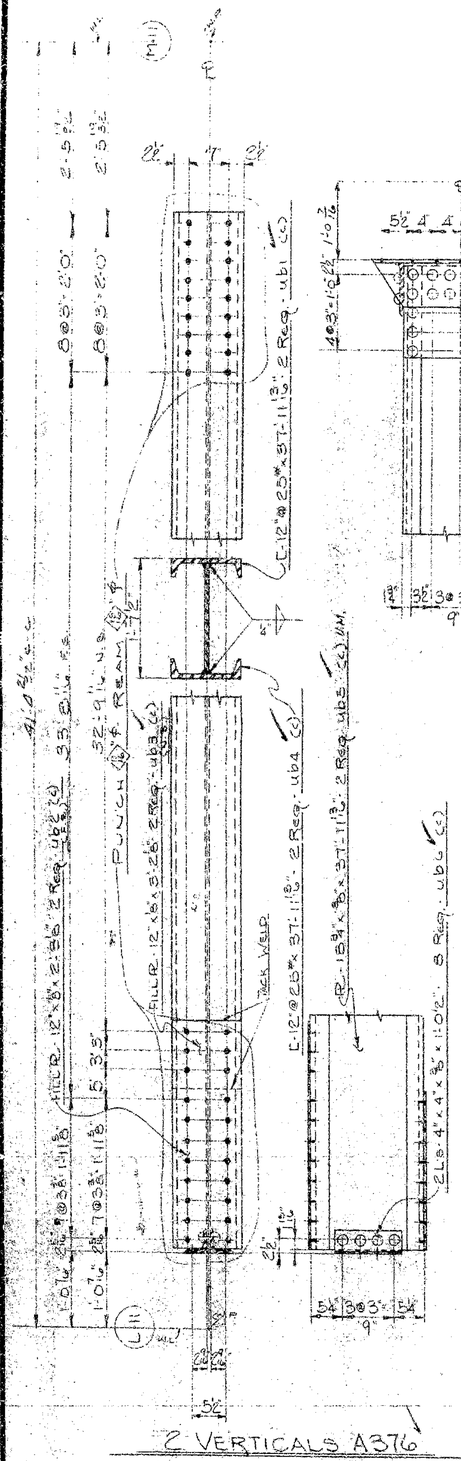
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

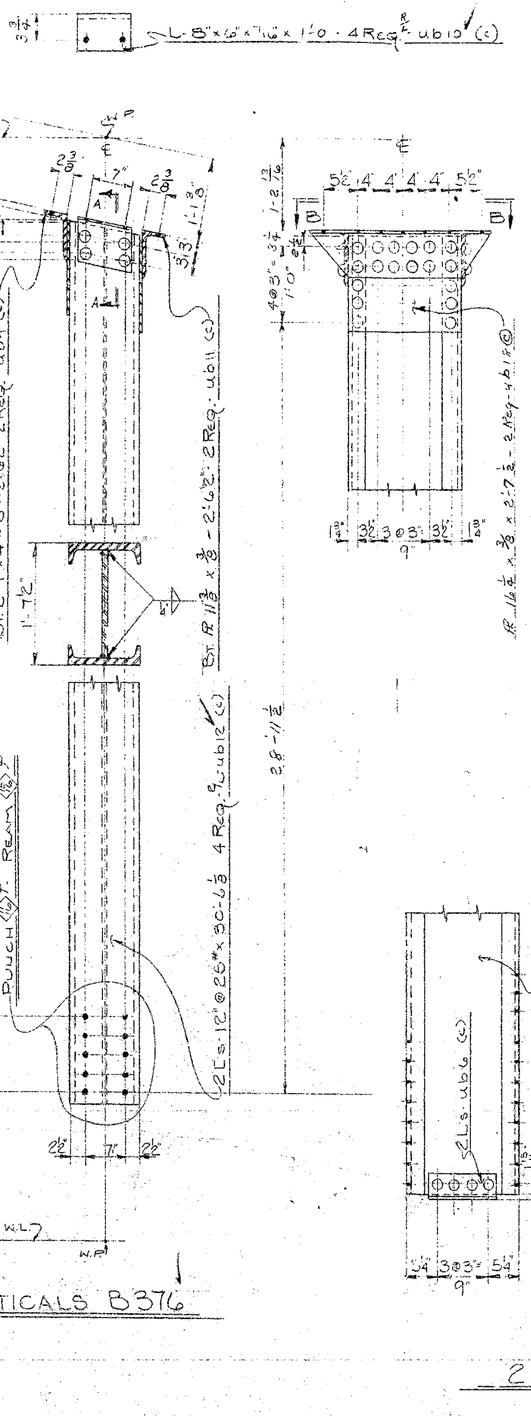
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT #1

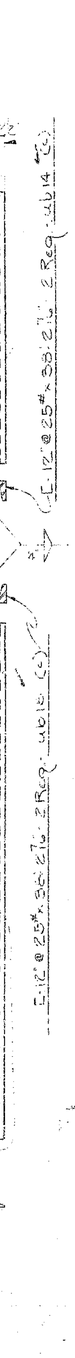
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

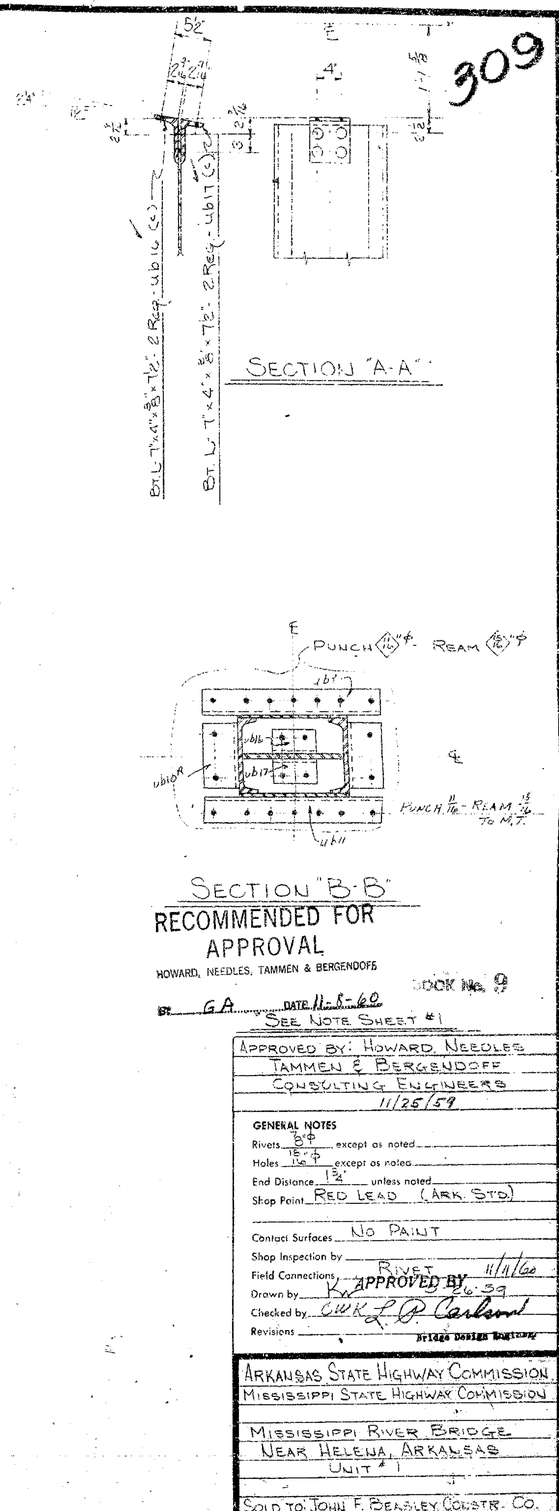
SHOP VINCENNES STEEL CORP. VINCENNES, IND. Contr. No. 43007 Sh. 377 of

309









RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY GA DATE 11-8-60

STOCK No. 9

SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
11/25/59

GENERAL NOTES

Rivets 3/4 ϕ
Holes 13/16 ϕ except as noted
End Distance 1 1/4" unless noted
Shop Point RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by RIVET
Field Connections 11/11/60
Drawn by KW APPROVED BY 11-26-59
Checked by CWK L P Carlson
Revisions
Bridge Design Engineer

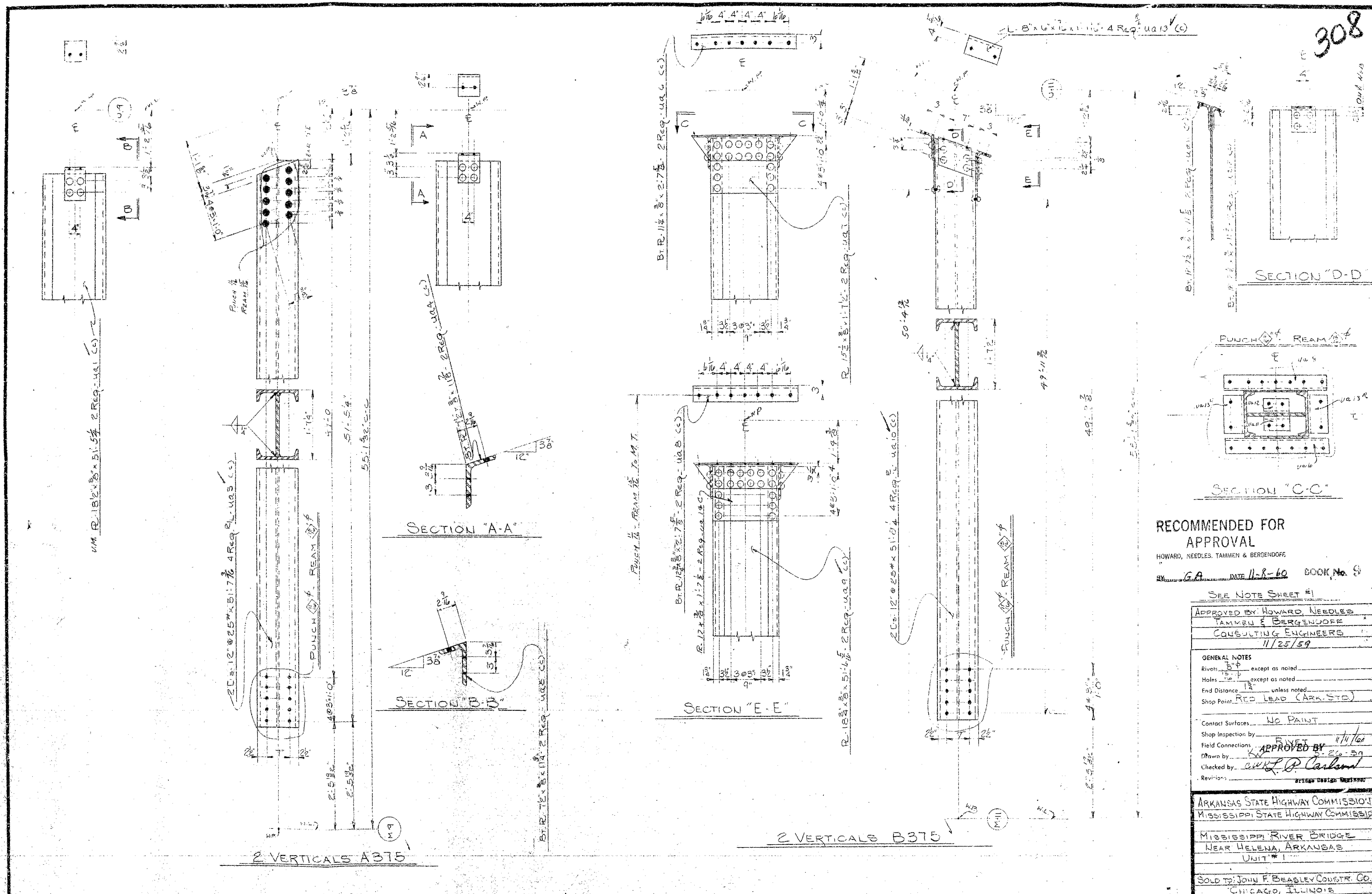
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT # 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800-T Sh. 376 of



RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY G.A. DATE 11-8-60 BOOK No. 9

SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES
TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
11/25/59

GENERAL NOTES
Rivets 7/8"φ except as noted
Holes 15/16"φ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by KW 5-26-59
Checked by CWK
Revisions

APPROVED BY L. P. Carlson 11/11/60
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT #1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800-T Sh. 375 of

307

PUNCH 11/16" ϕ REAM 13/16" ϕ

PUNCH 11/16 REAM 3/16 TO M.T.

1-8"x6"x7/16"x1'-0" - 4 Req'd (B or A) - tz 3 (c)

5½" 4" 4" 4" 4" 5½"

B- R 11⅜" x ⅜" x 2'-6½" 2 Req - tz 22 (c)

B- R 11⅜" x ⅜" x 1'-7¼" 2 Req - tz 1 (c)

B- L 7"x4"x⅜"x 2'-6½" 2 Req - tz 27 (c)

B- R 18⅜" x ⅜" x 30'-6½" 2 Req - tz 26 (c)

B- R 15½" x ⅜" x 1'-2⅝" - 2 Req - tz 25 (c)

3@3"=9"

28'-10 11/16"

32'-9 5/16"

29'-1¾" U.M.

B- L 7"x4"x⅜"x 7'-2" - 2 Req - tz 4 (c)

B- L 7"x4"x⅜"x 7'-2" - 2 Req - tz 5 (c)

SECTION "A-A"

2 VERTICALS A374

B- R 18⅜" x ⅜" x 81'-6 15/16" - 2 Req - tz 9 (c)

2 L 5"x4"x⅜"x 1'-0½" 8 Req - tz 9 (c)

2 VERTICALS B374

B- R 18⅜" x ⅜" x 81'-6 15/16" - 4 Req - tz 11 (c)

2 Cs - 15" @ 53.9# x 81'-6 15/16" - 4 Req - tz 11 (c)

82'-11 53/64"

73'-2 11/16"

11 @ 2'-4" = 2'-6 4"

PUNCH 11/16 ϕ REAM 13/16 ϕ

2 VERTICALS B374

APPROVED BY

L.P. Carlson 11-25-59

Bridge Design Engineer

B- R 18⅜" x ⅜" x 37'-11 13/16" - 2 Req - tz 14 (c)

2 L 5"x3½"x⅜" - tz 29 (c)

C- 12" @ 25# x 37'-11 13/16" 2 Req - tz 18 (c)

2 L 12"x 25# x 37'-11 13/16" 2 Req - tz 12 (c)

8@3"=2'-0"

2'-5 9/32"

41'-4 3/16" c-c

33'-8 11/16"

32'-9 11/16"

PUNCH 11/16 ϕ REAM 13/16 ϕ

2 VERTICALS C374

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY 4Tc DATE 11/20/59

SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8 ϕ / 15/16 ϕ except as noted

Holes 1 1/16 except as noted

End Distance 1½ unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVET

Drawn by KW 5-25-59

Checked by CWK

Revisions

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE NEAR HELENA, ARKANSAS

UNIT # 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO. CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

U.S. NAT. ENTERPRISES Contr. No. 4800 Sh. 374 of

306

ONE BRACKET AS SHOWN C373
ONE do TO PAIR CA373

SECTION "C-C"

SECTION "A-A"

SECTION "B-B"

SECTION "E-E"

SECTION "F-F"

ONE VERTICAL AS SHOWN A373
ONE VERTICAL TO PAIR AA373

2 VERTICALS B373

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 11/20/57

APPROVED BY
L.P. Carlson 11/25/57

SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8 ϕ except as noted
Holes 15/16 ϕ except as noted
End Distance 1 1/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by BW 5-22-57
Checked by [illegible]
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT # 1

SOLD TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
INDUSTRIAL ENTERPRISES
Contr. No. 4800 Sh. 373 of

305

SECTION "A-A"

SECTION "B-B"

SECTION "C-C"

ONE VERTICAL AS SHOWN A372

ONE VERTICAL TO PAIR AA372

2 VERTICALS B372

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 11/20/59

SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8 ϕ
Holes 15/16 ϕ except as noted
End Distance 1 1/2" unless noted
Shop Point RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by KW 5-21-59
Checked by CWK
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT # 1

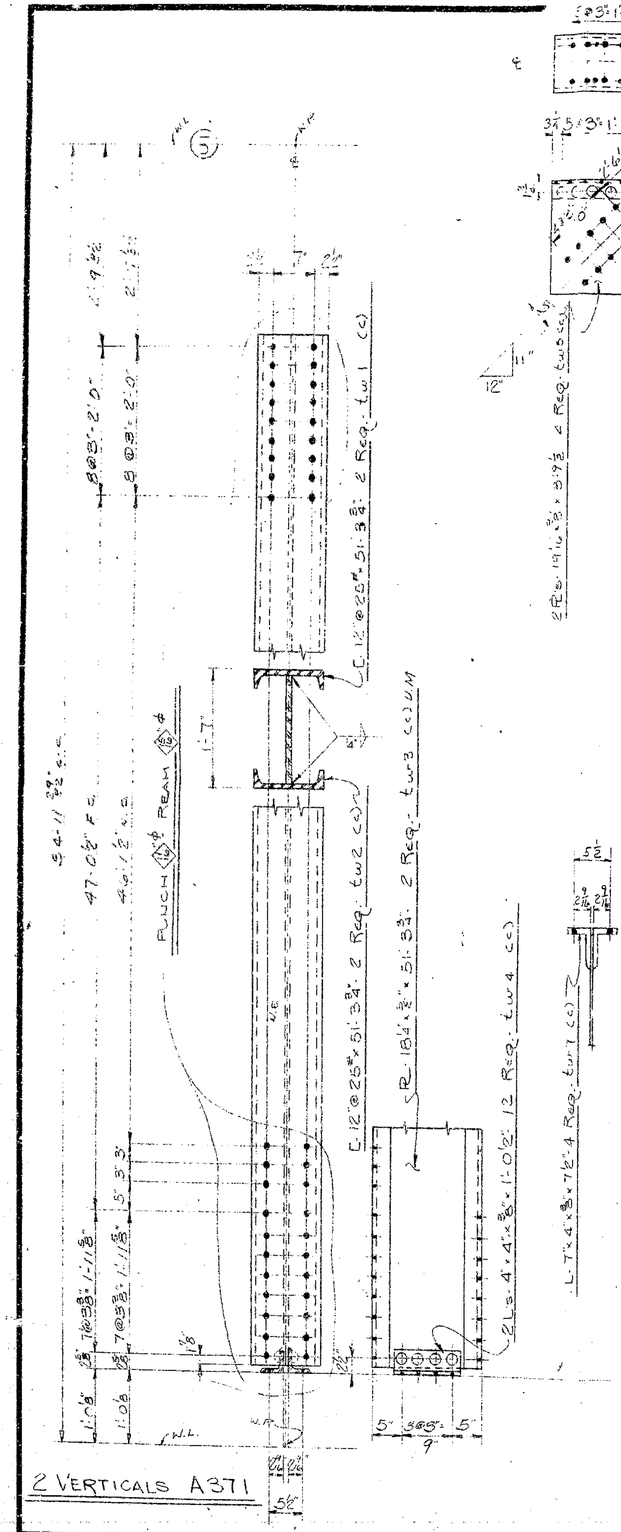
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

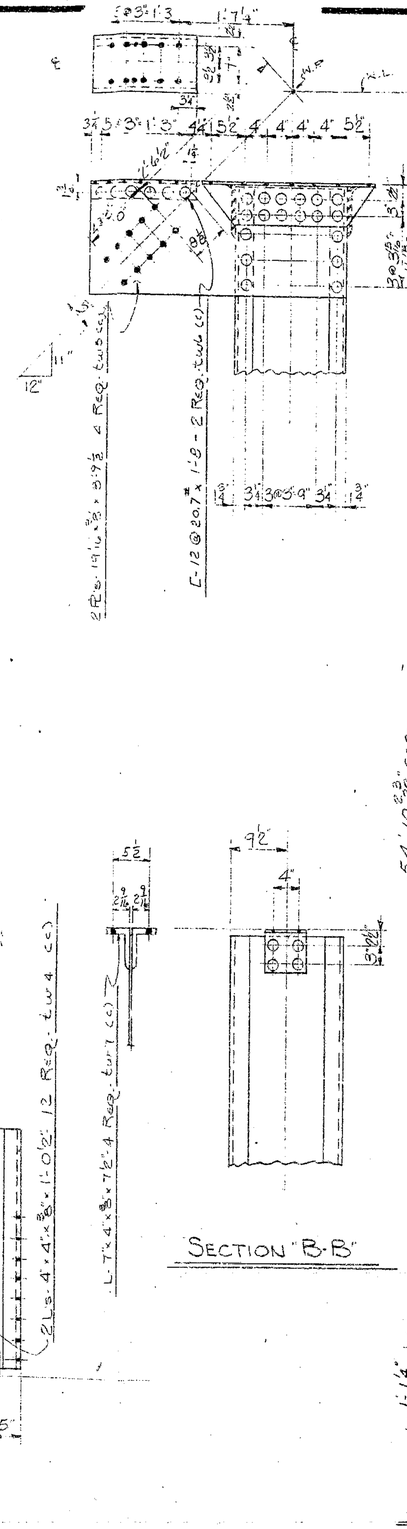
APPROVED BY 12-2-59
L.P. Carland
Bridge Design Engineer

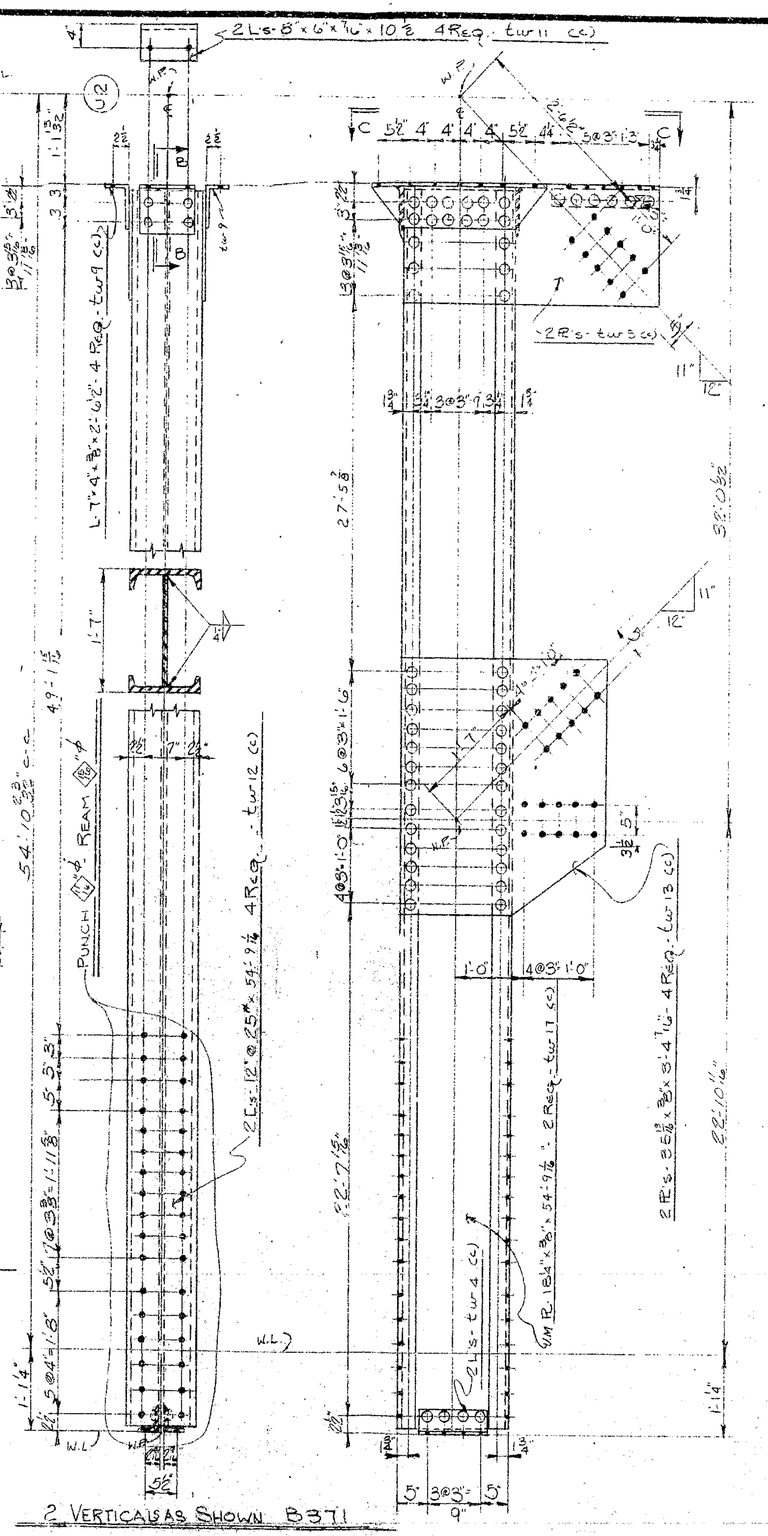
SHOP VINCENNES STEEL CORP. VINCENNES, IND.

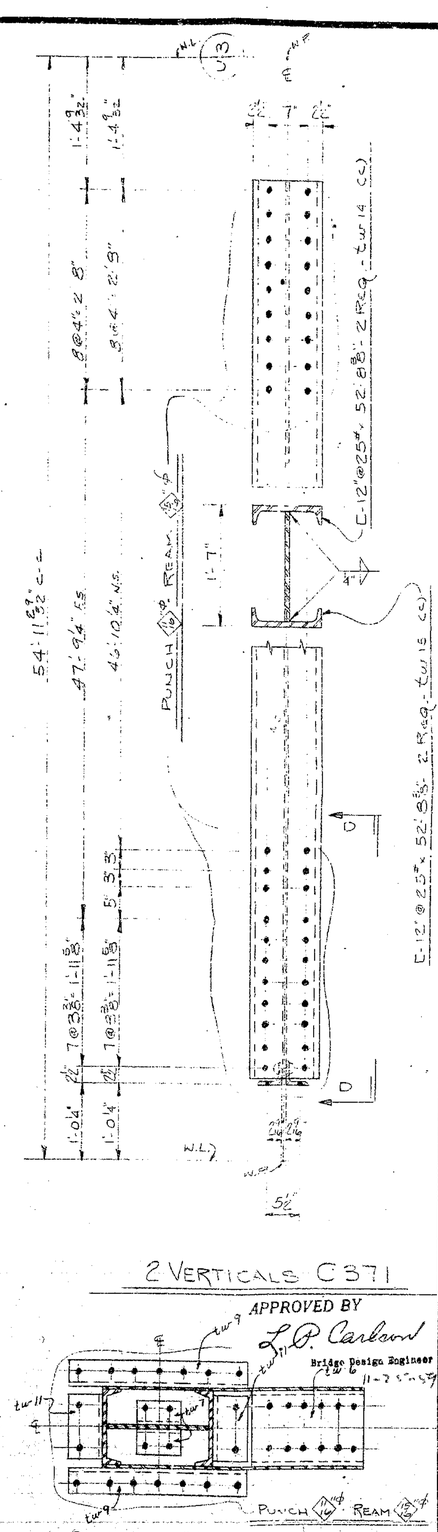
Contr. No. 4800 Sh. 372 of

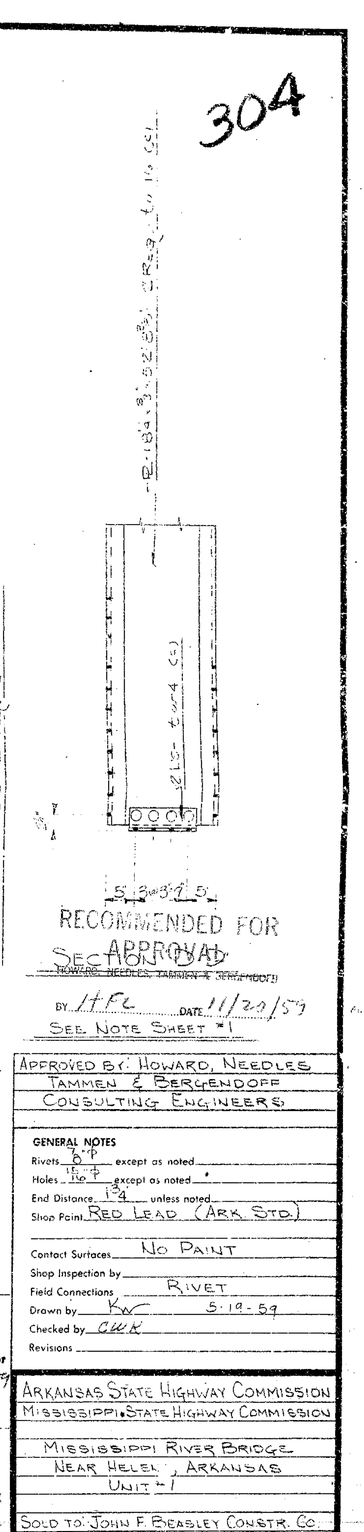
304











APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVET
Drawn by KW 5-19-59
Checked by CWK
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

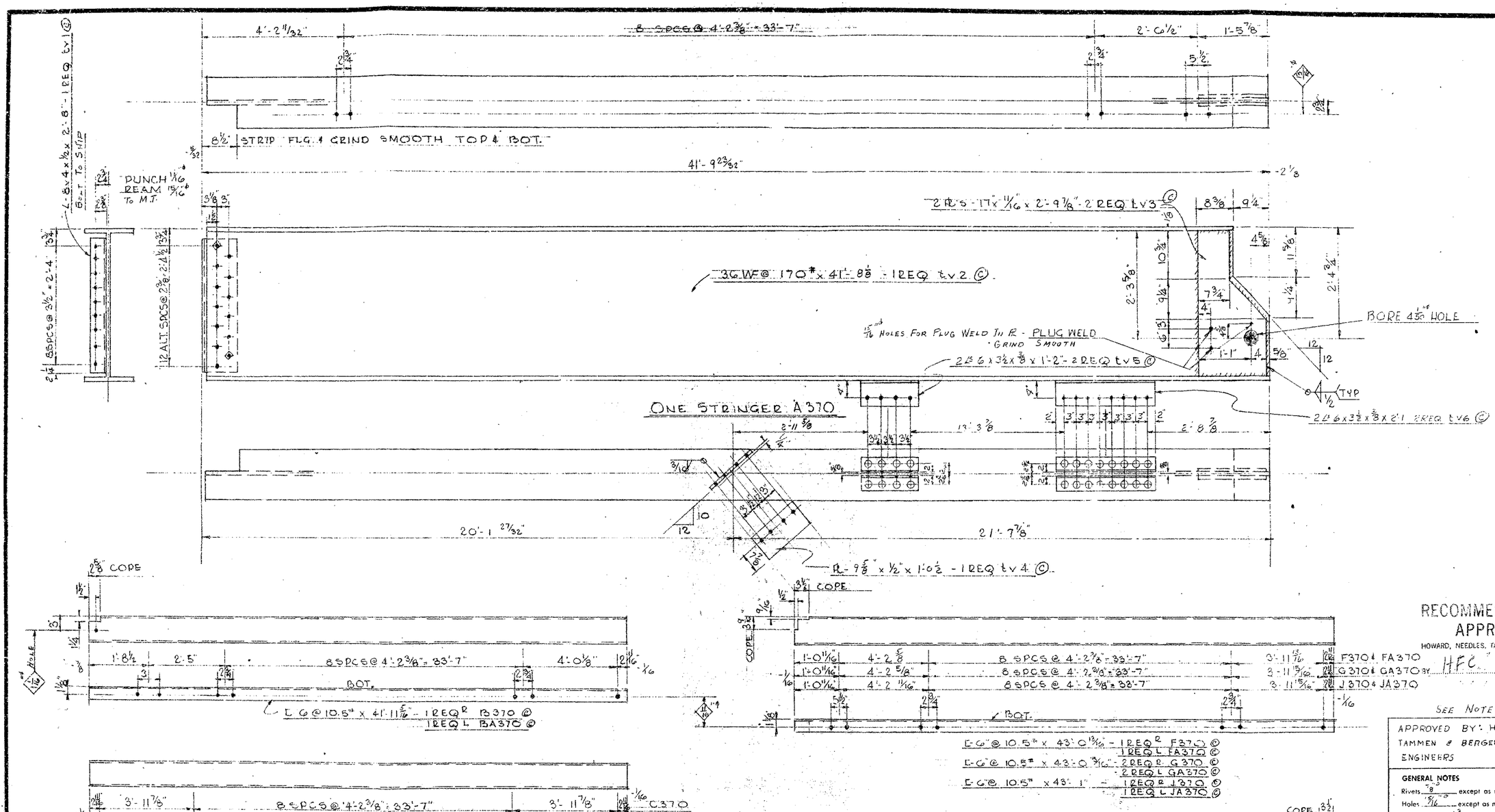
MISSISSIPPI RIVER BRIDGE
NEAR HELEN, ARKANSAS
UNIT-1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800 Sh. 371 of

303



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 1/10/59

SEE NOTE SH# 1

APPROVED BY: HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" except as noted
Holes 5/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by C.A.B. MAY 8, 1959
Checked by CWK
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO 1

SOLD TO: JOHN F BEASLEY CONSTR. CO
CHICAGO, ILLINOIS

APPROVED BY 11-25-58
L.O. Carlson
Bridge Design Engineer

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800 Sh. 370 of

302

4'-2 7/16" | 8 SPCS @ 4'-2 3/8" = 33'-7" | 4'-2 15/32"

2 3/4" | 3" 3" 10 1/4" | 2 3/4"

8 1/2" STRIP FLG & GRIND SMOOTH TYP. BOTH ENDS T & B.

SECTION A-A

41'-11 29/32"

40'-11 21/32"

5/32

3 3/8" | 3 3/8"

PUNCH 1 1/16" ϕ REAM 15/16" ϕ To M.T.

4-8x4x1/2x2'-8" BOLT TO SHIP

6 SPCS @ 4 1/2" = 2'-4 1/2"

2-3 1/2 x 3/8 x 1'-2" - 3 REQ'D tw 8 ©

10 ALT. SPCS @ 2'-8" = 24'-8"

2 1/8"

PUNCH 1 1/16" ϕ REAM 15/16" ϕ To M.T.

℄ tw 1

PC. 16 WF 58# x 1'-4 3/8" - 2 REQ'D tw 9 ©

ONE STRINGER AS SHOWN & NOTED A369
ONE STRINGER TO PAIR AS NOTED AA369

36 WF @ 150# x 41'-8 11/16" - 2 REQ'D tw 3 ©

1/4" BOT.

7'-10 11/16" | 26'-2 12/32" | 7'-10 11/16"

R = 9 3/16 x 1/4 x 1'-0 1/2" - 2 REQ'D tw 6 © SECT. B-B
R = 9 3/16 x 1/4 x 1'-0 1/2" - 2 REQ'D tw 7 © SECT. C-C

SECT. B-B AS SHOWN & NOTED
SECT. C-C TO PAIR AS NOTED

PC. 16 WF 59# x 1'-4 3/8" - 1 REQ'D tw 10 ©

ONE BRACKET AS SHOWN FOR AA369
ONE BRACKET TO PAIR FOR A369
BOLT TO SHIP

ONE BRACKET FOR B369
BOLT TO SHIP SEE NOTE SHT #1

41'-11 29/32"

40'-11 21/32"

36 WF @ 170# x 41'-8 11/16" - 1 REQ'D tw 5 ©

8 SPCS @ 4 1/2" = 2'-4"

12 ALT. SPCS @ 2'-8" = 24'-8"

PUNCH 1 1/16" ϕ REAM 15/16" ϕ To M.T.

℄ tw 2

L 8x4x1/2x2'-8" - 2 REQ'D tw 2 ©
BOLT TO SHIP

20'-11 31/32" | 20'-11 15/16"

ONE STRINGER B369

R = 10 7/16 x 1/4 x 1'-0 1/2" - 1 REQ'D tw 4

APPROVED BY: HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by C.A.B. MAY 8, 1959
Checked by J.W.K.
Revisions

RECOMMENDED FOR APPROVAL
HOWARD NEEDLES TAMMEN & BERGENDOFF
BY HFL DATE 11/10/59
APPROVED BY 11-25-59
L.R. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND. Contr. No. 4800 Sh. 369 of

301

8 SPCS @ 4'-2 3/8" = 33'-7"
8 SPCS @ 4'-2 3/8" = 33'-7"
4'-2 7/16" FOR A36B & AA36B - C36B
4'-2 11/32" FOR B36B & BA36B

SECTION A-A

(41'-9 15/16" ON A36B & AA36B) (41'-9 23/32" ON B36B & BA36B)

STRIP FLG & GRIND SMOOTH TOP & BOTTOM

2 PL's - 17 x 1 1/16 x 2'-10' - 8 REQ tt 1 ©

36 WF @ 150# x 41'-8 5/16 - 2 REQ tt 3 FOR A36B & AA36B ©
36 WF @ 150# x 41'-8 1/8 " - 2 REQ tt 4 FOR B36B & BA36B ©

11/16" HOLES FOR PLUG WELD IN PL
PLUG WELD - GRIND SMOOTH

BORE 4 1/50" HOLE ON B36B & BA36B (ONLY)

ONE STRINGER AS SHOWN & NOTED A36B
ONE STRINGER TO PAIR AS NOTED AA36B
ONE STRINGER AS SHOWN & NOTED B36B
ONE STRINGER TO PAIR AS NOTED BA36B

10 7/16 ON B36B & BA36B (ONLY)

PUNCH 1 1/16 REAM 15/16 To M.T.

L-8 x 4 x 1/2 x 2'-8" - 4 REQ tt 2

10 ALT SPCS @ 1 1/2 = 24 1/2

6 SPCS @ 3 3/4" = 22 1/2

2 PL's 1/2 x 1'-0" - 2 REQ tt 9 SECT. B-B A36B & AA36B
2 PL's 1/2 x 1'-0" - 2 REQ tt 10 SECT. C-C A36B & AA36B
2 PL's 1/2 x 1'-0" - 4 REQ tt 11 B36B & BA36B

SECT. B-B A36B & AA36B
SECT. C-C A36B & AA36B
SECT. B-B B36B & BA36B
SECT. C-C B36B & BA36B

7'-8 3/32
9'-0 15/16
26'-2 17/32
25'-1 3/8
7'-10 11/16
7'-6 23/32
A36B & AA36B
B36B & BA36B

SECT. B-B AS SHOWN & NOTED
SECT. C-C TO PAIR AS NOTED

41'-9 15/16"

2 PL's - 17 x 1 1/16 x 2'-9 7/8" - 2 REQ tt 5 ©

36 WF @ 170# x 41'-8 5/16 - 1 REQ tt 6 ©

5/16" HOLES FOR PLUG WELD IN PL
PLUG WELD - GRIND SMOOTH

BORE 4 1/50" HOLE

L-8 x 4 x 1/2 x 2'-8" - 2 REQ tt 7
Cut To Ship

12 ALT SPCS @ 2'-0" = 24'-0"

8 SPCS @ 2'-9 1/2" = 22'-0"

20'-10"
20'-11 15/16"

ONE STRINGER C36B

PL 10 3/8 x 1/2 x 1'-0 1/2 - 1 REQ tt 8 ©

APPROVED BY
11-25-58
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ..... DATE .....

APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint Red Lead (Ark Std)
Contact Surfaces No Paint
Shop Inspection by
Field Connections Rivets
Drawn by C.A.B. MAY 3 1959
Checked by BWK
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Cont. No. 4800 Sh. 36 8of

300

SECTION A-A

(41'-11 3/32" ON A367 & AA367, B367 & BA367) (42'-0 1/16" ON C367 & CA367)

(40'-11 23/32" ON A367 & AA367, B367 & BA367) (40'-11 13/16" ON C367 & CA367)

W F 36 @ 150# x 41'-8 3/4" 4 REQ'D t s 5 FOR A367, AA367, B367 & BA367 ©

W F 36 @ 150# x 41'-8 13/16" 2 REQ'D t s 6 FOR C367 & CA367 ©

ONE STRINGER AS SHOWN & NOTED A367

ONE STRINGER TO PAIR AS NOTED AA367

ONE STRINGER AS SHOWN & NOTED B367

ONE STRINGER TO PAIR AS NOTED BA367

ONE STRINGER AS SHOWN & NOTED C367

ONE STRINGER TO PAIR AS NOTED CA367

3 BRACKETS AS SHOWN FOR A367, B367, C367

3 BRACKETS TO PAIR FOR AA367, BA367, CA367

BOLT TO SHIP

L - 8 x 4 x 1/2 x 2'-8" - 6 REQ'D t s 1 © BOLT TO SHIP

L - 8 x 4 x 1/2 x 2'-8" - 6 REQ'D t s 3 © BOLT TO SHIP

PL. 16 WF 58# x 1'-4 3/8" - 6 REQ'D t s 4 ©

PL. 16 WF 58# x 1'-4 3/8" - 3 REQ'D t s 12.

SECT. B-B AS SHOWN & NOTED

SECT. C-C TO PAIR AS NOTED

SECT. B-B ON A367 & AA367

SECT. C-C ON A367 & AA367

SECT. B-B ON B367 & BA367

SECT. C-C ON B367 & BA367

SECT. B-B ON C367 & CA367

SECT. C-C ON C367 & CA367

2 REQ'D t s 13 SECT. B-B A367 & AA367

2 REQ'D t s 14 SECT. C-C A367 & AA367

2 REQ'D t s 15 SECT. B-B B367 & BA367

2 REQ'D t s 16 SECT. C-C B367 & BA367

2 REQ'D t s 17 SECT. B-B C367 & CA367

2 REQ'D t s 18 SECT. C-C C367 & CA367

PUNCH 11/16" Ø REAM 15/16" Ø TO M.T.

PUNCH 11/16" Ø REAM 15/16" Ø To M.T.

STRIP FLG. & GRIND SMOOTH TYP. BOTH ENDS T & B.

A367 & AA367, B367 & BA367, D367 & E367

C367 & CA367, F367

A367, AA367, B367 & BA367

C367 & CA367

(41'-11 3/32" ON D367 & E367) (42'-0 1/16" ON F367)

40'-11 23/32" ON D367 & E367) (40'-11 13/16" ON F367)

W F 36 @ 170# x 41'-8 3/4" 2 REQ'D t s 7 FOR D367 & E367 ©

W F 36 @ 170# x 41'-8 13/16" 1 REQ'D t s 8 FOR F367 ©

D367 & E367

F367

1/2 - 10 7/16 x 1/2" x 1'-0 1/2" - 1 REQ'D t s 9 FOR D367

1/2 - 10 7/16 x 1/2" x 1'-0 1/2" - 1 REQ'D t s 10 FOR E367

1/2 - 10 3/8 x 1/2" x 1'-0 1/2" - 1 REQ'D t s 11 FOR F367

ONE STRINGER AS NOTED D367

ONE STRINGER AS NOTED E367

ONE STRINGER AS NOTED F367

SEE NOTE SHT. #1

APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

APPROVED BY L.P. Carlson 11-25-59

Bridge Design Engineer

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY H F C DATE 11/24/59

GENERAL NOTES

Rivets 7/8" except as noted

Holes 15/16" Ø except as noted

End Distance 1 3/4" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by C.H.B. MAY 7, 1959

Checked by

Revisions

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE

NEAR HELENA, ARKANSAS

UNIT NO. 1

SOLD TO JOHN F. BEASLEY CONSTR. CO.

CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800

Sh. 367 of

299

4'-2½"
4'-2 11/32"

8 SPCS @ 4'-2 3/8" = 33'-7"
8 SPCS @ 4'-2 3/8" = 33'-7"

2'-6 5/8"
2'-6 1/16"

1'-5 7/8" A36C, AA36G, B36G & BA36G & D36G, E36G
1'-5 7/8" C36G & CA36G & F36G

2 REQ tr 11 SECT. B-B A36G & AA36G
2 REQ tr 12 SECT. C-C A36G & AA36G
2 REQ tr 13 SECT. B-B B36G & BA36G
2 REQ tr 14 SECT. C-C B36G & BA36G
2 REQ tr 15 SECT. B-B C36G & CA36G
2 REQ tr 16 SECT. C-C C36G & CA36G

PL. 7/8" x 1'-0 1/2" SECT. B-B ON A36G & AA36G
PL. 2 1/2" x 1'-0 1/2" SECT. C-C ON A36G & AA36G
PL. 9/16" x 1'-0 1/2" SECT. B-B ON B36G & BA36G
PL. 9/16" x 1'-0 1/2" SECT. C-C ON B36G & BA36G
PL. 9/16" x 1'-0 1/2" SECT. B-B ON C36G & CA36G
PL. 9/16" x 1'-0 1/2" SECT. C-C C36G & CA36G

SECTION A-A

(41'-10" A36G & AA36G, B36G & BA36G) (41'-10 3/32" ON C36G & CA36G)

6½" STRIP FLG. & GRIND SMOOTH TOP & BOT.

L 8x4 x 1/2 x 2'-8" GREQ tr 1
BOLT TO SHIP

PUNCH 1 1/16" REAM 15/16" TO M.T.

6 SPCS @ 3¾" = 2'-4½"
10 ALT. SPCS @ 2⅜" = 2'-4⅛"

2 PL's - 17" x 1 1/16" x 2'-10" - 12 REQ tr 2

36 WF @ 150" x 4'-8 3/8" - 4 REQ tr 3 FOR A36G, AA36G, B36G & BA36G
36 WF @ 150" x 4'-8 3/8" - 2 REQ tr 4 FOR C36G & CA36G

ONE STRINGER AS SHOWN & NOTED A36G
ONE STRINGER TO PAIR AS NOTED AA36G
ONE STRINGER AS SHOWN & NOTED B36G
ONE STRINGER TO PAIR AS NOTED BA36G
ONE STRINGER AS SHOWN & NOTED C36G
ONE STRINGER TO PAIR AS NOTED CA36G

13/16" HOLES FOR PLUG WELD TO BE GRIND SMOOTH PLUG WELD
BORE 4 1/60" HOLE

TYP.

BOT.

7'-10 23/32
7'-10 23/32

26'-2 17/32"
26'-2 5/8"

7'-8 3/4
7'-8 3/4

A36G, AA36G, B36G & BA36G
C36G & CA36G

SECT. B-B AS SHOWN & NOTE
SECT. C-C TO PAIR AS NOTE

L 8x4 x ½ x 2'-8" - 3 REQ tr 5
BOLT TO SHIP

PUNCH 1 1/16" REAM 15/16" TO M.T.

8 SPCS @ 3¾" = 2'-4"
12 ALT. SPCS @ 2⅜" = 2'-4½"

(41'-10" ON D36G & E36G) (41'-10 3/32" ON F36G)

2 PL's - 17" x 1 1/16" x 2'-9 7/8" - 6 REQ tr 6

36 WF @ 170# x 4'-8 3/8" - 2 REQ tr 7 FOR D36G & E36G
36 WF @ 170# x 4'-8 1/2" - 1 REQ tr 8 FOR F36G

13/16" HOLES FOR PLUG WELD TO BE GRIND SMOOTH PLUG WELD
BORE 4 1/60" HOLE

TYP.

21'-0"
21'-0 1/32"

20'-10"
20'-10 1/16"

D36G & E36G
F36G

BOT.

PL. 10 3/8" x ½" x 1'-0 ½" - 1 REQ tr 9 FOR D36G
PL. 10 3/8" x ½" x 1'-0 ½" - 2 REQ tr 10 FOR E36G, F36G

ONE STRINGER AS NOTED D36G
ONE STRINGER AS NOTED E36G
ONE STRINGER AS NOTED F36G

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY F.R.S. DATE 12-9-59

SEE NOTE SHEET # 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 14 except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop inspection by
Field Connections RIVETED
Drawn by C.A.B.
Checked by C.E.K.
Revisions 11/25/59

APPROVED BY [illegible] 12/9/59
APPROVED [illegible] 12/9/59
College Station Print

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 1

SOLD TO: JOHN F. BEASLEY, CONSTR.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES INC. VINCENNES, IND.
Contr. No. 4800 Sh. 36 6 of

298

8 SPCS @ 4'-2 3/8" = 33'-7"

4'-2 3/8"

MARK ON A365-AA365-B365

MARK END ON C365

STRIP FLG. & GRIND SMOOTH 12 BOTH ENDS T&B.

SECTION A-A

41'-11 3/4"

40'-11 1/2"

PUNCH 1 1/16" ϕ
REAM 15/16" ϕ
TO M.T.

2 STRINGERS AS SHOWN A365
2 STRINGERS TO DATE AA365

BOT.

36WF@150# x 41'-8 1/2" - 4 REQ tp3 ©

41'-11 3/4"
40'-11 1/2"

PUNCH 1 1/16" ϕ
REAM 15/16" ϕ
TO M.T.

tp3 R ON C365
tp2 R ON B365

tp8 L ON B365
tp2 L ON C365

36 WF @ 170# x 41'-8 1/2" - 2 REQ tp4 FOR B365 & C365 ©

20'-11 25/32" FOR C365
20'-11 31/32"

20'-11 31/32"
20'-11 25/32" FOR B365

BOT.

ONE STRINGER AS NOTED B365
ONE STRINGER AS NOTED C365

APPROVED BY
L.P. Carlson
Bridge Design Engineer
11-25-59

SECT B-B AS SHOWN UNLESS NOTED
SECT C-C AS SHOWN UNLESS NOTED

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 11/20/59

SEE NOTE SHEET #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF: CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4" unless noted
Shop Point RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by C.A.B. MAY 5, 1959
Checked by C.W.P.
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO: 1

SOLD TO: JOHN F. BEASLEY CONSTR CO.,
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND.
Contr. No. 4800 Sh. 365 of

297

8 SPCS @ 4'-2 3/8" = 33'-7"
8 SPCS @ 4'-2 3/8" = 33'-7"
8 SPCS @ 4'-2 3/8" = 33'-7"

4'-2 17/32"
4'-2 1/2"
4'-2 19/32"

4'-2 1/2"
4'-2 19/32"
4'-2 7/16"

A3G4 & AA3G4 D3G4
B3G4 & BA3G4 E3G4
C3G4 & CA3G4 F3G4

MARK A3G4 & AA3G4 C3G4 & CA3G4 D3G4 & F3G4

MARK B3G4 & BA3G4 E3G4

8 1/2" STRIP FLG. & GRIND SMOOTH TYP. BOTH ENDS T & B.

SECTION A-A

(42'-0 1/32" ON A3G4 & AA3G4) (41'-11 31/32" ON B3G4 & BA3G4) (41'-11 29/32" ON C3G4 & CA3G4)

(40'-11 25/32" ON A3G4 & AA3G4) (40'-11 23/32" ON B3G4 & BA3G4) (40'-11 21/32" ON C3G4 & CA3G4)

4 - 8"x4"x1/2"x2'-8" - 12 BOLT TO SHIP

PUNCH 1 1/16" ø REAM 15/16" ø To M.T.

16 SPCS @ 4 3/4" = 2'-4 1/2"

10 ALT. SPCS @ 2 3/8" = 2'-0"

ONE STRINGER AS SHOWN & NOTED A3G4
ONE STRINGER TO PAIR AS NOTED AA3G4
ONE STRINGER AS SHOWN & NOTED B3G4
ONE STRINGER TO PAIR AS NOTED BA3G4
ONE STRINGER AS SHOWN & NOTED C3G4
ONE STRINGER TO PAIR AS NOTED CA3G4

36WF @ 150# x 41'-8 3/16" - 2 REQ tn 2 FOR A3G4 & AA3G4 ©
36WF @ 150# x 41'-8 3/16" - 2 REQ tn 3 FOR B3G4 & BA3G4 ©
36WF @ 150# x 41'-8 3/16" - 2 REQ tn 4 FOR C3G4 & CA3G4 ©

BOT.

7'-10 23/32"
7'-10 11/16"
7'-10 11/16"

26'-2 19/32"
26'-2 19/32"
26'-2 19/32"

7'-10 23/32"
7'-10 11/16"
7'-10 11/16"

A3G4 & AA3G4
B3G4 & BA3G4
C3G4 & CA3G4

PL 8 5/8" x 1/2" x 1'-0 1/2" - 2 REQ tn 1 FOR A3G4 & AA3G4 ©
PL 9 1/8" x 1/2" x 1'-0" - 2 REQ tn 2 FOR B3G4 & BA3G4 ©
PL 9 3/8" x 1/2" x 1'-0" - 2 REQ tn 3 FOR C3G4 & CA3G4 ©

SECT. B-B A3G4 & AA3G4
SECT. C-C A3G4 & AA3G4
SECT. B-B B3G4 & BA3G4
SECT. C-C B3G4 & BA3G4
SECT. B-B C3G4 & CA3G4
SECT. C-C C3G4 & CA3G4

SECT. B-B AS SHOWN & NOTED
SECT. C-C TO PAIR AS NOTED

(42'-0 1/32" ON D3G4) (41'-11 31/32" ON E3G4) (41'-11 29/32" ON F3G4)

(40'-11 25/32" ON D3G4) (40'-11 23/32" ON E3G4) (40'-11 21/32" ON F3G4)

4 - 8"x4"x1/2"x2'-8" - 12 BOLT TO SHIP

PUNCH 1 1/16" ø REAM 15/16" ø To M.T.

8 SPCS @ 3 1/2" = 2'-4"

12 ALT. SPCS @ 2 3/8" = 2'-4"

36WF @ 170# x 41'-8 3/16" - 1 REQ tn 6 FOR D3G4 ©
36WF @ 170# x 41'-8 3/16" - 1 REQ tn 7 FOR E3G4 ©
36WF @ 170# x 41'-8 3/16" - 1 REQ tn 8 FOR F3G4 ©

21'-0"
20'-11 31/32"
20'-11 15/16"

21'-0 1/32"
21'-0"
20'-11 29/32"

D3G4
E3G4
F3G4

BOT.

PL 10 3/16" x 1/2" x 1'-0 1/2" - 1 REQ tn 9 FOR D3G4 ©
PL 8 5/8" x 1/2" x 1'-0 1/2" - 1 REQ tn 10 FOR E3G4 & F3G4 ©

ONE STRINGER AS NOTED D3G4
ONE STRINGER AS NOTED E3G4
ONE STRINGER AS NOTED F3G4

11-25-59
APPROVED BY
L. P. Carlson
Bridge Design Engineer

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFu DATE 11/20/59

SEE NOTE SHEET # 1

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS

GENERAL NOTES
Rivets 7/8" ø except as noted
Holes 15/16" ø except as noted
End Distance 1 3/4" unless noted
Shop Point RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by C.A.B. MAY 9, 59
Checked by GWK
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO: 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND. Contr. No. 4800 Sh. 304 of

296

8 SPCS @ 4'-2 3/8" = 33'-7"

4'-2 13/16"

TOP

8 1/2 STRIP FLG. & GRIND SMOOTH TYP BOTH ENDS T & B.

41'-11 3/8

40'-11 5/8

2-8 x 4 x 1/2 x 2'-8" - 4 REQ'D tm1 BOLT TO SHIP

PUNCH 11/16" DIA REAM 15/16" DIA TO M.T.

6 SPCS @ 3" = 2'-4 1/2"

10 ALT @ 2 3/8" = 2'-4 1/8"

2-8 x 4 x 1/2 x 2'-8" - 1 REQ'D tm1

36 WF @ 150# x 41'-8 5/8" 2 REQ'D tm2 ©

C B

7'-10 13/16

26'-2 5/8

7'-10 15/16

3/16" TYP.

BOT.

12 10

ONE STRINGER AS SHOWN & NOTED A363

ONE STRINGER TO PAIR AS NOTED AA363

2-8 x 4 x 1/2 x 2'-8" - 1 REQ'D tm3 FOR SECT. B-B

2-8 x 4 x 1/2 x 1'-0 1/2" - 2 REQ'D tm4 FOR SECT. C-C

FOR SECT. B-B

FOR SECT. C-C

SECT. B-B AS SHOWN & NOTED

SECT. C-C TO PAIR AS NOTED

2-8 x 4 x 1/2 x 2'-8" - 1 REQ'D tm5 BOLT TO SHIP

8 SPCS @ 4'-2 3/8" = 33'-7"

4'-2 13/16"

TOP

8 1/2 STRIP FLG. & GRIND SMOOTH BOTH ENDS AS SHOWN T & B.

41'-11 3/8

40'-11 5/8

2-8 x 4 x 1/2 x 2'-8" - 1 REQ'D tm8 ©

PUNCH 11/16" DIA REAM 15/16" DIA TO M.T.

9 SPCS @ 3" = 2'-4 1/2"

12 ALT @ 2 3/8" = 2'-4 1/8"

36 WF @ 170# x 41'-8 5/8" 1 REQ'D tm7 ©

8 SPC @ 3" = 2'-4"

20'-11 3/8

21'-0

BOT.

R. 10 7/16 x 1/2 x 1'-0 1/2" - 1 REQ'D tm6

ONE STRINGER B363

SEE NOTE SHEET #1

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY HFL DATE 11/20/59

APPROVED BY

L. P. Carlson

Bridge Design Engineer

11-25-59

APPROVED BY: HOWARD, NEEDLES, TAMMEN & BERGENDOFF

CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ϕ except as noted

Holes 15/16" ϕ except as noted

End Distance 1 3/4" unless noted

Shop Paint RED LEAD (ARK. STD)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by C.A.B. MAY 1, 1959

Checked by CWK

Revisions

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE

NEAR HELENA, ARKANSAS

UNIT NO: 1

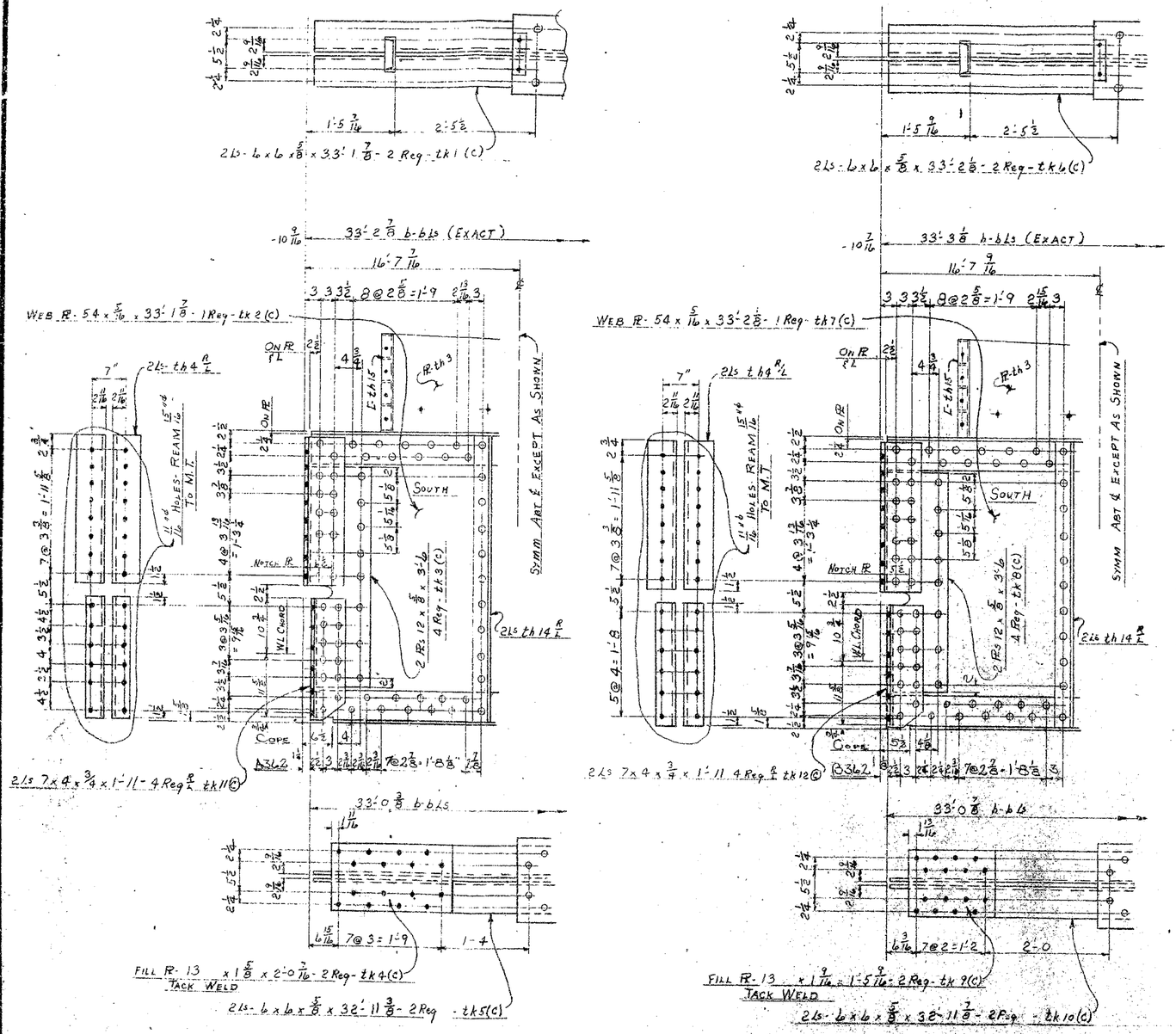
SOLD TO: NOWELL-SEASLEY CONTR. CO.

CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

Contr. No. 4800 Sh. 363 of

295



ONE FLOOR BEAM AS NOTED - A 362 (L1)
PART NOT SHOWN SAME AS A 360

ONE FLOOR BEAM AS NOTED - B 362 (L13)
PART NOT SHOWN SAME AS A 360

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY H F C DATE 11/20/59

APPROVED BY
L. P. Carlson
Bridge Design Engineer
11-23-59

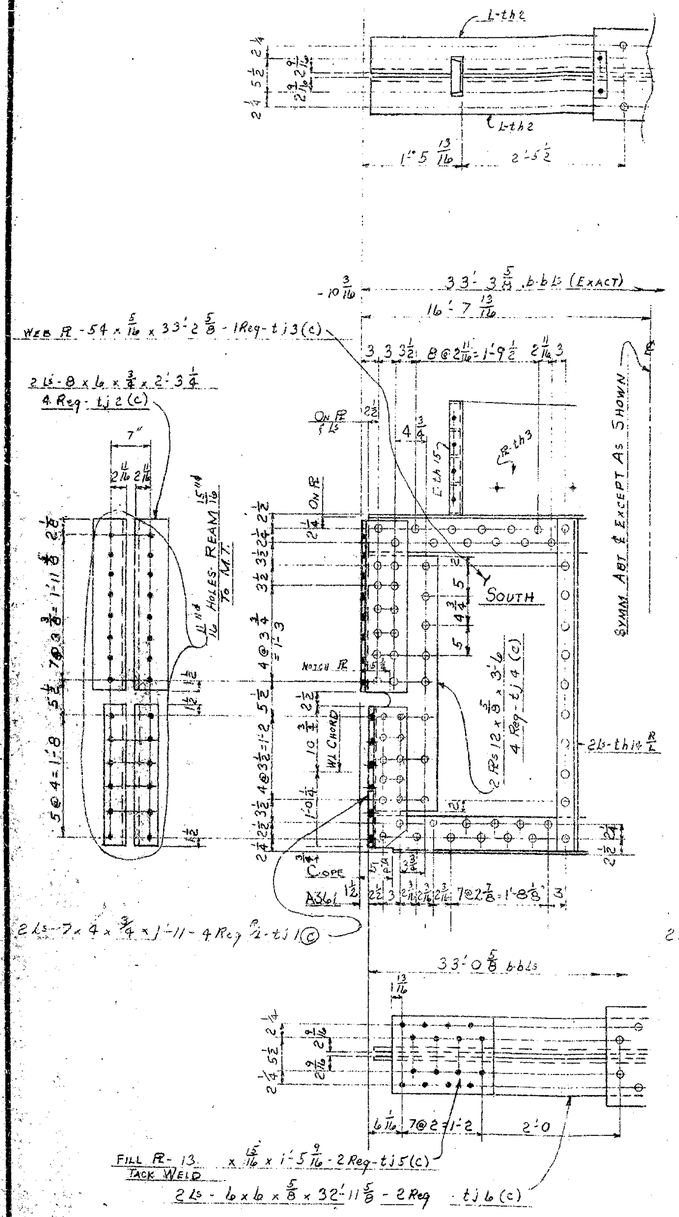
SEE NOTE SH #1

APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

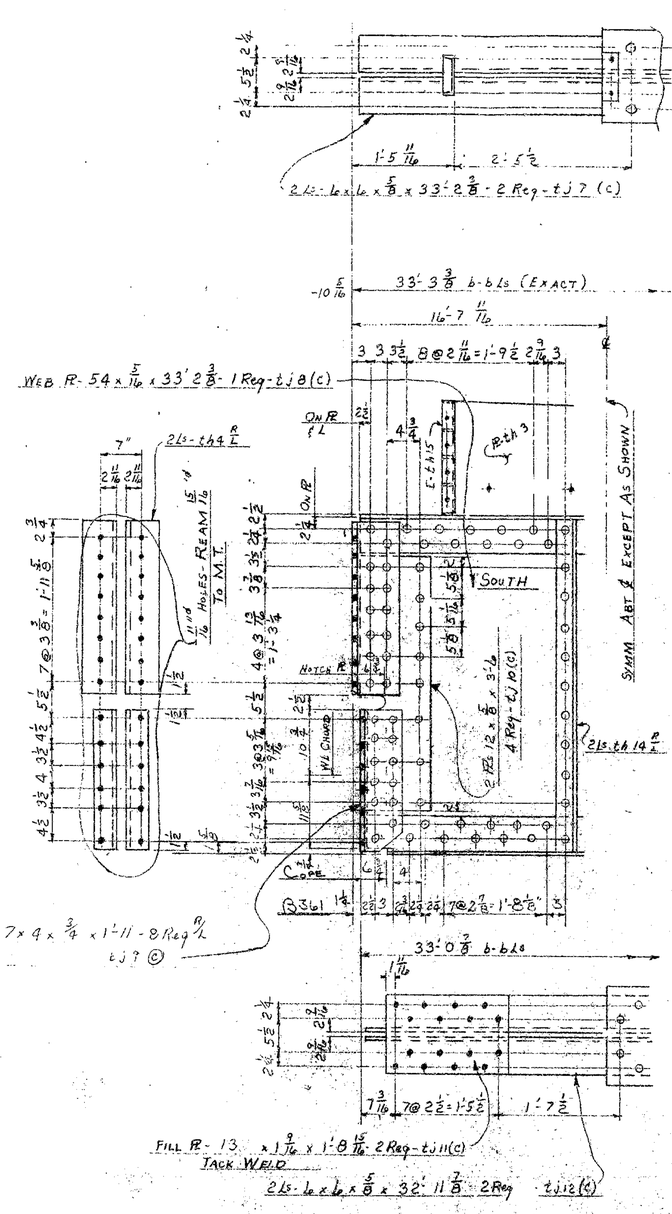
GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by:
Field Connections RIVETS
Drawn by CWK 4-22-59
Checked by RC
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA ARKANSAS
UNIT No. 1
SOLD TO JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

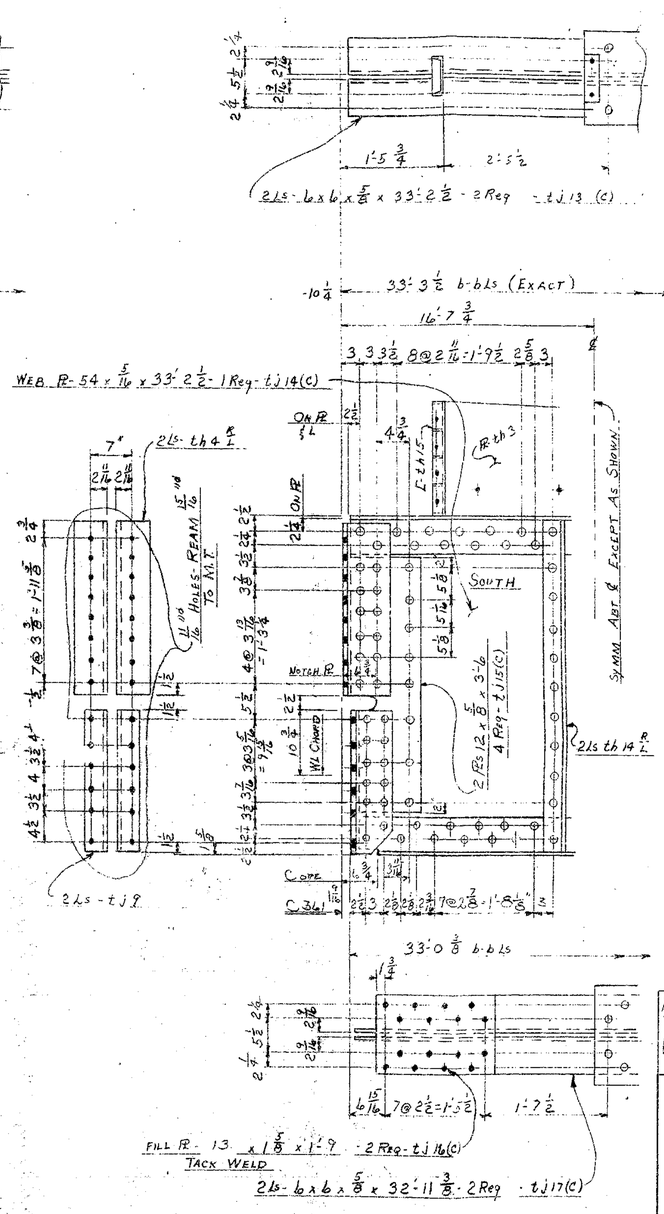
294



ONE FLOOR BEAM AS NOTED - A361 (L4)
PART NOT SHOWN SAME AS A360



ONE FLOOR BEAM AS NOTED - B361 (L7)
PART NOT SHOWN SAME AS A360



ONE FLOOR BEAM AS NOTED - C361 (L9)
PART NOT SHOWN SAME AS A360

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY ..... DATE .....

SEE NOTE SH #1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS:

APPROVED BY,
L. P. Carlson
Bridge-Design Engineer

GENERAL NOTES

Rivets 7/8 except as noted
Holes 15/16 except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by CWX 4-24-59
Checked by PC
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT. No. 1

SOLD TO: JOHN T. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL [redacted] DIV. OF INDUSTRIAL ENTERPRISES, INC.
VINCENNES, IND. Contr. No. 4800 Sh. 361 of

293

Cov PL - 1/16 x 1/2 x 26'-0 - 7 Req - th 1 (C)(U.M.)

22 @ 3 5/8 = 6'-7 3/4

10 @ 3 5/8 = 3'-0 1/4

2 Ls - 6 x 6 x 5/8 x 33'-2 5/8 - 1/6 Req - th 2 (C)

PL - 1/16 3/4 x 3/8 x 2'-2 - 14 Req - th 3 (C)

SYMM ABT ℄ EXCEPT AS SHOWN

33'-3 5/8 b-b Ls (EXACT)

13'-0

11 @ 3 5/8 = 3'-3 7/8

10'-11 13/16

10'-10 3/4

2 Ls - 8 x 6 x 3/4 x 2'-3 7/8 - 24 Req - th 4 (C)

11/16 HOLES - REAM 15/16 TO M.T.

SOUTH

2 PLS 12 x 5/8 x 3'-6 - 4 Req - th 5 (C) A360 - 4 Req - th 6 (C) - B360

2 Ls - th 14 PL

WEB PL - 54 x 1/2 x 33'-2 5/8 - 1 Req - th 8 (C)(A360) - 1 Req - th 9 (C)(B360)

11/16 HOLES - REAM 15/16 TO M.T.

2 Ls - th 14 PL

NOTCH PL

W. CHORD

COPE A360 5 1/2 ON A360 - 4 1/8 ON B360

COPE B360 5 1/2 ON A360 - 4 1/8 ON B360

2 Ls 7 x 4 x 3/4 x 1'-11 - 8 Req - th 9 @

8 @ 2 7/8 = 1'-11

10 @ 3 5/8 = 3'-0 1/4

11 @ 3 5/8 = 3'-3 7/8

10'-10 3/4

SECTION AA

11/16 HOLES - REAM 15/16 TO M.T.

FILL PL - 4 x 5/8 x 3'-6 - 14 Req - th 10 (C)

2 Ls - 7 x 4 x 1/2 x 4'-5 1/4 - 14 Req PL - th 11 (C)

MILL TO BEAR @ BOTTOM

These Stiffeners To Fit So As To Exclude Water After Being Painted

11/16 HOLES - REAM 15/16 TO M.T.

FILL PL - 4 x 5/8 x 3'-6 - 28 Req - th 12 (C)

2 Ls - 7 x 4 x 1/2 x 4'-5 1/4 - 28 Req PL - th 13 (C)

MILL TO BEAR @ BOTTOM

SECTION BB

SHIP PL - 6 @ 12" x 1'-4 3/4 - 14 Req - th 15 (C)

STIFF PL - 2 1/2 x 3/8 x 5 1/4 - 70 Req - th 16 (C)

WELD

13/16 HOLES

ON A360 6 5/8

ON B360 6 7/16

33'-1 3/4 b-b Ls FOR A360

33'-1 3/8 b-b Ls FOR B360

Cov PL - 1/16 x 1/2 x 26'-0 - 7 Req - th 17 (C)(U.M.)

2 Ls - 6 x 6 x 5/8 x 33'-0 3/4 - 2 Req - th 18 (C) - (A360)

x 33'-0 3/8 - 2 Req - th 19 (C) - (B360)

SHIM - 2 1/4 x 3/4 x 8" - 14 Req - th 22 (C)

TACK WELD TO TOP COV PL

SECTION CC

FILL PL - 13 x 1 3/8 x 1'-5 9/16 - 2 Req - th 20 (C) (A360)

FILL PL - 13 x 1 3/16 x 1'-5 9/16 - 2 Req - th 21 (C) (B360)

TACK WELD

ONE FLOOR BEAM AS NOTED - A360 (LS)

ONE FLOOR BEAM AS NOTED - B360 (LS)

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 13/16" except as noted

Holes 15/16" except as noted

End Distance 1 3/4" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections RIVETS

Drawn by CWK 4-24-59

Checked by RC

Revisions

APPROVED BY 11-25-59

L. P. Carter

Bridge Design Engineer

SEE NOTES ON SH #1

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY HFE DATE 11-17-59

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE NEAR HELENA, ARKANSAS UNIT NO 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO. CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4800 Sh. 360 of

292

UM IR - 31 x 3/8 x 43'-8 1/8 - 2 Req tg 1 (A)

Punch 11/16 ϕ
Ream 13/16 ϕ

6 @ 3 = 1'-6 | 2 @ 1 1/2 = 3 | 76 Spaces 5 1/2 = 34'-10

Shop Weld

Fill - 4 1/2 x 1/2 x 6 1/2 - 2 Req tg 9 (C)

42'-10 1/4 c/c

71 Spaces 5 1/2 = 32'-6 1/2

Top Ls - 4 x 4 x 3/8 x 43'-8 5/8 - 4 Req R/L tg 2 (B)

UM IR - 24 x 9/16 x 41'-5 3/8 - 4 Req tg 3 (A)

Bott Ls - 4 x 4 x 3/8 x 43'-11 3/8 - { 2 Req tg 4 1/2 (A) N.S. / 2 Req tg 4c (A) F.S.

Fill - 4 x 3/4 x 10 - 4 Req tg 5 (C)

Fill - 4 x 5/8 x 3'-3 9/16 - 4 Req tg 6 (C)

ONE UPPER CHORD AS SHOWN - A359-
ONE DO DO TO PAIR - AA359-

70 Spaces 5 1/2 = 32'-1

38 Spaces 3'-6 = 27'-4

UM IR - 31 x 1/2 x 40'-2 3/4 - 2 Req tg 7 (A)

L - 4 x 4 x 3/8 x 4'-9 7/16 - 4 Req R/L tg 8 (C)

UFill FR - 31 x 1/2 x 3'-6 - 2 Req tg 10 (C)

Elliptical Holes 9 x 1'-6 (TYP)

Fill - 4 1/2 x 1/2 x 6 1/2 - 2 Req tg 9 (C)

2 x 3'-11 1/16 Slot IR

Punch 11/16 ϕ
Ream 13/16 ϕ

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY GA DATE 11-25-59 BOOK No. 9

See Note 21, #1

APPROVED BY: HOWARD, NEEDLES
TAMMEN & BERGENDOFF
CONSULTING ENGINEERS - 11/25/59

GENERAL NOTES
Rivets 7/8 ϕ except as noted
Holes 15/16 except as noted
End Distance 1 3/4 unless noted
Shop Paint RED LEAD (APX. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections APPROVED BY
Drawn by RJR
Checked by C.W.L. C.P. Carlson
Revisions Bridge Design Software

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO 1
CONTR. JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.
DIV. OF INDUSTRIAL ENTERP.
Contr. No. 4800-T Sh. 359 of

291

R - 19¾ x ⅜ x 6'-2½ - 2 Req tf1 ©

Shop Rivet After Assembly

R - 47 x ⅝ x 6'-9½ 2 Req tf1 Ⓐ

Punch 11/16
Ream 15/16

7 Spcs @ 4¼ = 2'-5¾

79 Spcs @ 5½ = 36'-2½

42'-0 3/4 c/c

91 Spcs @ 5¼ = 39'-9¾

2 Ls - 4 x 3½ x 5/16 x 1'-3½ - 12 Req tf10 ©

2 Ls - 4 x 3½ x 5/16 x 1'-3½ - 4 Req tf11 ©

5/16 Gu. O.S.L. 5½ Spcs (TYP)

R - 20⅜ x ⅜ x 7'-0½ - 2 Req tf12 ©

Rivets

2 Ls - 4 x 3½ x 5/16 x 1'-3½ - 16 Req tf6 ©

2 9/16 Gu. O.S.L. 5½ Spcs

R - 16 x ⅜ x 5'-6 - 4 Req tf5 Ⓐ

R - 23 x ½ x 3'-11 - 4 Req tf9 Ⓐ

INS R - 24 x ½ x 3'-4 - 4 Req tf5 Ⓐ

R - 19⅛ x ⅜ x 2'-0½ - 2 Req tf7 ©

WORK WITH SH. 357

R WF 24 @ 100 x 2'-0 - 4 Req ⅝ - tf4 ©

Punch 11/16
Ream 15/16

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY GA DATE 11-8-60

BOOK No. 1

See Note Sh. 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 11/25/59

GENERAL NOTES

Rivets 7/8" ⌀ except as noted
Holes 15/16" ⌀ except as noted
End Distance 1¾ unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by EB
Checked by CWK
Revisions

APPROVED BY
L. P. Carbone
Bridge Design Engineer 11/14/60

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 1

SOLD TO: JOHN E. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

Punch 11/16 - Ream 15/16 To M.T.

Punch 11/16
Ream 15/16

R - 22¾ x ⅜ x 6'-2¼ - 2 Req tf9 ©

Fill R - 21¼ x ⅜ x 2'-1 2 Req tf8 ©

ELLIPTICAL HOLES 9 x 1'-6 (TYP)

83 Spcs @ 5¼ = 36'-3¾

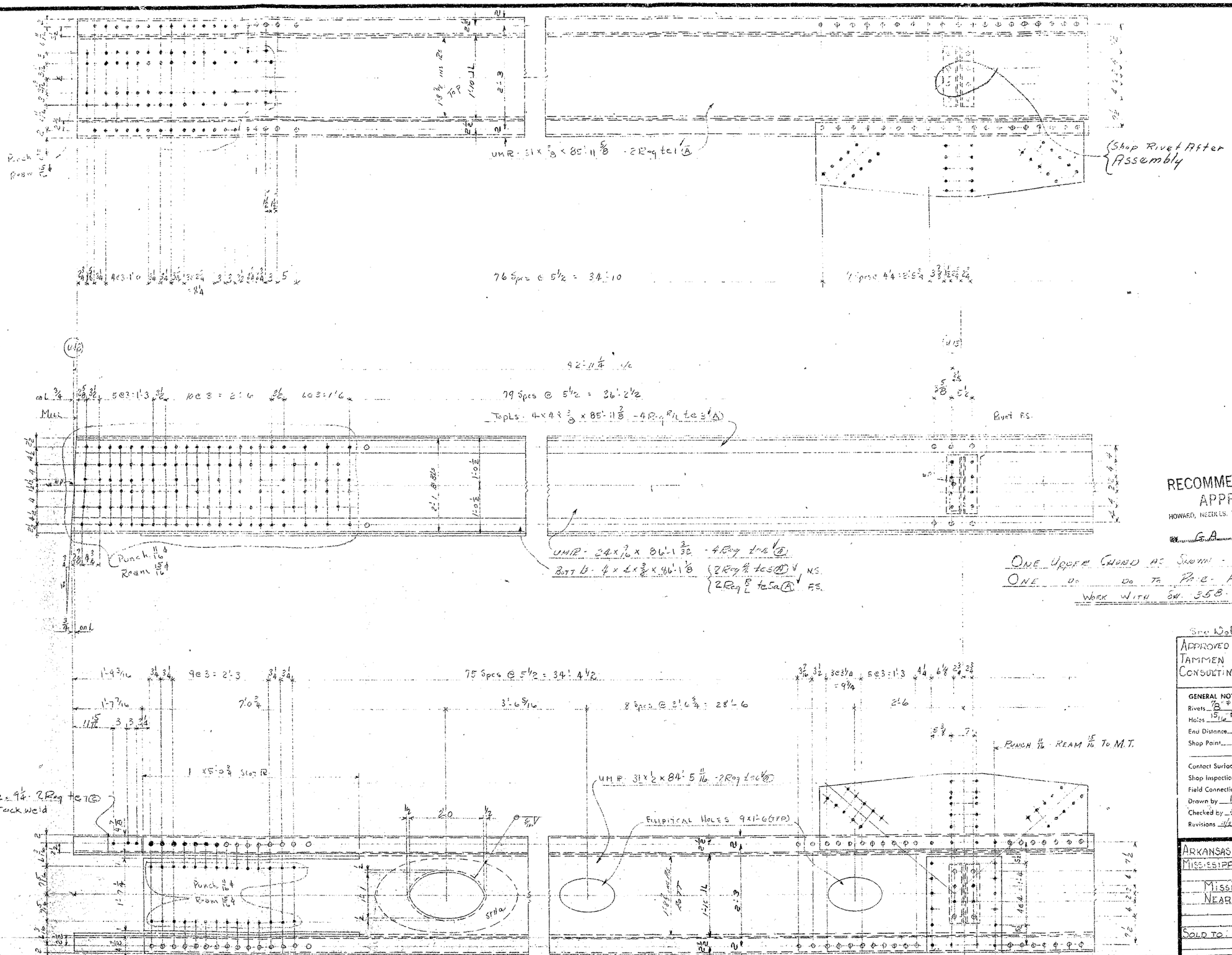
10 Spcs @ 3'-5 = 34'-2

R - 64 x ⅜ x 7'-1 - 2 Req - tf13 Ⓐ

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800-T Sh. 358 of

290



RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
By G.A. DATE 11-8-60

ONE UPPER CHORD AS SHOWN - A357-
ONE DO DO TO MATE - AA357-
WORK WITH SK. 358.

BOOK No. [illegible]

See Note Sh # 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 12/14/59

GENERAL NOTES
Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections APPROVED BY 11/11/60
Drawn by RJR
Checked by C.W.K. L.P. Carlson
Revisions 4/25/59 Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No 1

SOLD TO: JOHN E. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL CORP. VINCENNES, IND.

Contr. No. 4800 Sh. 357 of

289

Shop Rivet After Assembly

Fillr - 8 x 5/8 x 2'-5 15/16 - 4 Req'd td1 ©

L - 8 x 8 x 3/4 x 0'-2 5/16 - 4 Req'd P/L td2 ⓑ

L - 8 x 8 x 3/4 x 4'-8 15/16 - 4 R 7/8 td3 Ⓐ

Notch for L's NS Only

Fillr 5 x 5/8 x 6'-11 1/2 - 4 Req'd td4 ©

Fillr 12 x 5/8 x 5'-11 1/2 - 2 Req'd td5 ⓑ

5 1/2 3 3/4 3@3'-9

44'-3 17/32 c/c

17 Spcs @ 5 1/2 = 35'-3 1/2

4 1/2 4 27/32 5 1/2 3 3/4 3@3'-9 3 3/4 7@3'-11 5 1/2 5 1/2 3 3/4 4 1/4 4 1/2

4 1/2

5 1/2 5@4'-11 3/4

Rivet F.S.

Fill 3 1/2 x 1/8 x 5 15/16 - 4 Req'd td6 © NS Only Tack Weld

Rivet F.S.

Front Mill

Fill Pl 5 x 3/8 x 8 3/8 - 4 Req'd td99 ©

L - 7 x 4 x 1/2 x 4'-1 1/4 - 4 Req'd P/L td7 ⓓ

Weld Together { L - 5 x 5 x 3/4 x 6'-0 - 4 Req'd P/L td8 Ⓐ
L - 5 x 5 x 3/4 x 5'-2 15/16 - 4 Req'd P/L td9 Ⓜ

L - 5 1/2 x 3 1/2 x 3/8 x 2'-4 1/2 - 4 Req'd td10 ⓔ

R - 9 1/2 x 5/8 x 10'-5 - 4 Req'd td11 Ⓐ

2 Ls - 4 x 3 1/2 x 5/16 x 1'-2 1/2 - 8 Req'd td' 17/16

Fillr - 8 3/8 x 3/4 x 10 1/2 - 4 Req'd td14 ©

Diaphragm for U12

2 Ls - 4 x 3 1/2 x 5/16 x 1'-5 5/8 - 4 Req'd td12 ©

R - 11 5/8 x 3/8 x 1'-11 3/8 - 2 Req'd td13 ©

6 15/16 5 1/2 6 15/16 3 3/16 3@3'-9

Punch 15/16 Ream 15/16 To M.T.

2'-6

17 Spcs @ 5 1/2 = 35'-3 1/2

9@3'-3 = 29'-3

3'-8 13/32

Elliptical Holes 9 x 1'-6 (Typ)

NS Field Bolts NS Only

5@3'-1 3 3/4 5@3'-1 3 3/4 5@3'-1 11 1/4

7'-9

1 x 4 x 3 1/2 Cut 12

9 1/2

9@3'-2 3 3/4 3 3/4

Punch 15/16 Ream 15/16

Work with Sh. 355

BOOK No. 9

See Note No. 1

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 12/14/59

GENERAL NOTES

Rivets 7/8" except as noted

Holes 15/16" except as noted

End Distance 1 3/4" unless noted

Shop Paint RED LEAD (ARK. STD.)

Contact Surfaces NO PAINT

Shop Inspection by

Field Connections

Drawn by E.H.

Checked by J.W.K.

Revisions 11/25/59

APPROVED BY 1/19/61

L. P. Carlson

Bridge Design Engineer

RECOMMENDED FOR APPROVAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF

BY H.T.C. DATE 1-17-61

ARKANSAS STATE HIGHWAY COMMISSION

MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE

NEAR HELENA, ARKANSAS

UNIT No. 1

SOLD TO: JOHN F. BEASLEY, CONSTR. CO.

CHICAGO, ILLINOIS

SHOP VINCENNES STEEL VINCENNES, IND.

DIV. OF INDUSTRIAL ENTERPRISES, INC.

Contr. No. 4800-T Sh. 356 of

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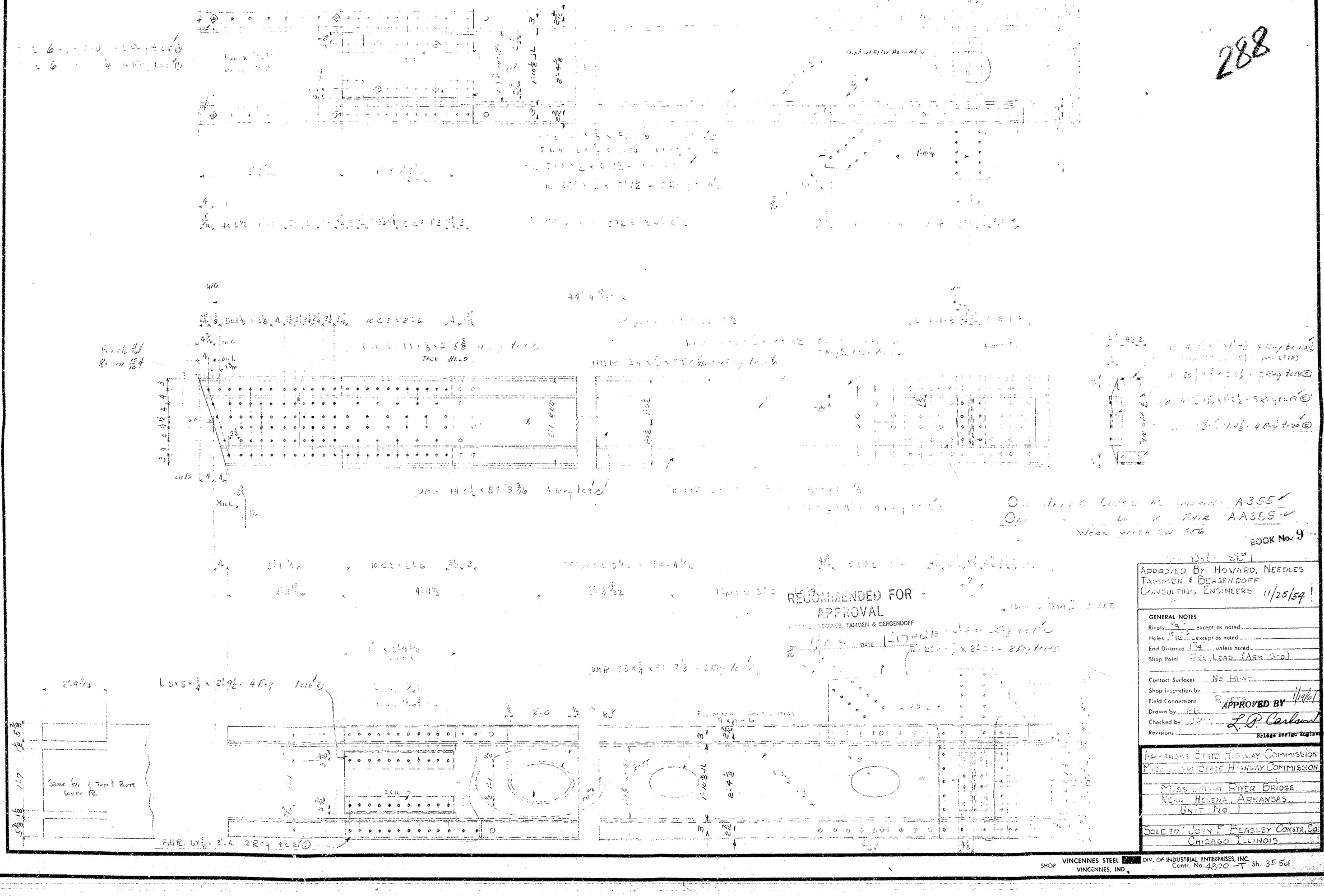


BOOK No. 9

APPROVED BY HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 11/25/59

GENERAL NOTES

Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD.)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETED
Drawn by P.L.C.
Checked by J.W.S.
Revisions

APPROVED BY 1/9/61
L. P. Carlson
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND. Contr. No. 4830 — T Sh. 35 Sht

287

Shop Rivet After Assembly

DIAPHRAGM AT U9

Rivet F.S.

Punch 11/16 ϕ
Ream 13/16 ϕ

ELLIPTICAL HOLES 9 x 1 1/16

Punch 11/16 ϕ
Ream 15/16 ϕ

Two for Top & Bott Cover Pls

SECT B-B

WORK WITH C.N. 353

See Note Sh # 1

DOCK No. 3

APPROVED BY: HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS 11/25/59

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY G.A. DATE 11-8-60

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections APPROVED BY 11/4/60
Drawn by B.B.
Checked by J.W.K. L.P. Carlson
Revisions
Bridge Design Engineer

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISS

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT No. 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

SHOP VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.
Contr. No. 4800-T Sh. 384 of

286

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY GA DATE 11-6-59

BOOK No. 3

Approved By: Howard, Needles Tammen & Bergendoff
Consulting Engineers 11/25/59

GENERAL NOTES
Rivets 7/8" except as noted
Holes 15/16" except as noted
End Distance 1 3/4" unless noted
Shop Paint Red Lead (Ark. Std.)
Contact Surfaces No Paint
Shop Inspection by
Field Connections Bolted
Drawn by R.B.
Checked by E.W.K. L.P. Carlson
Revisions 11/25/59 Bridge Design Engr. Dept.

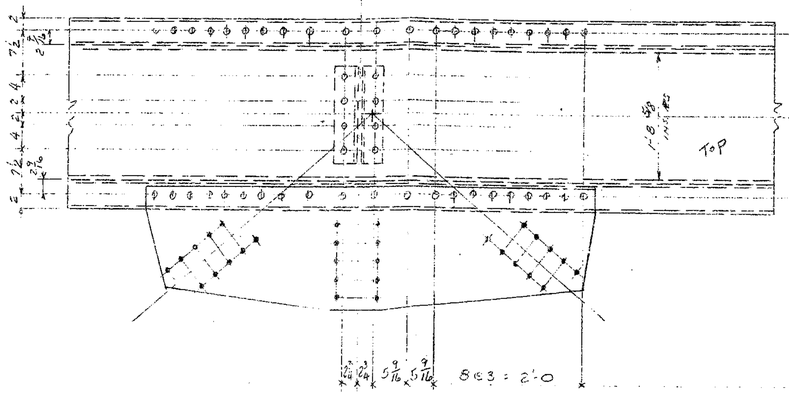
ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

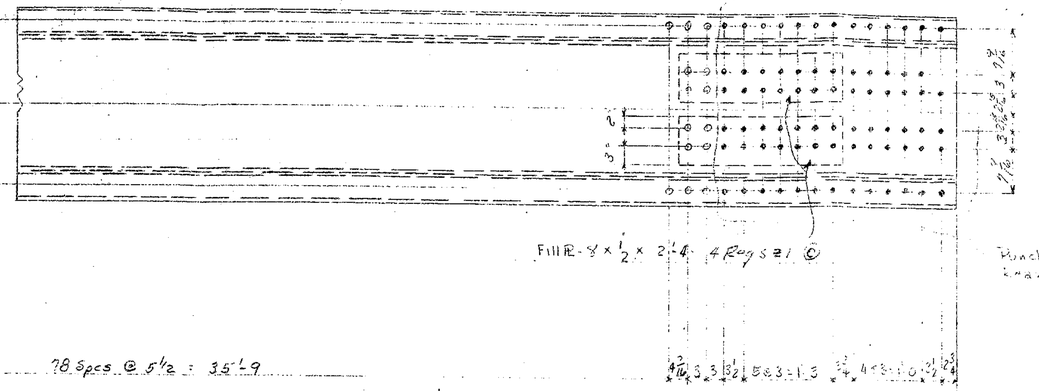
MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO. 1

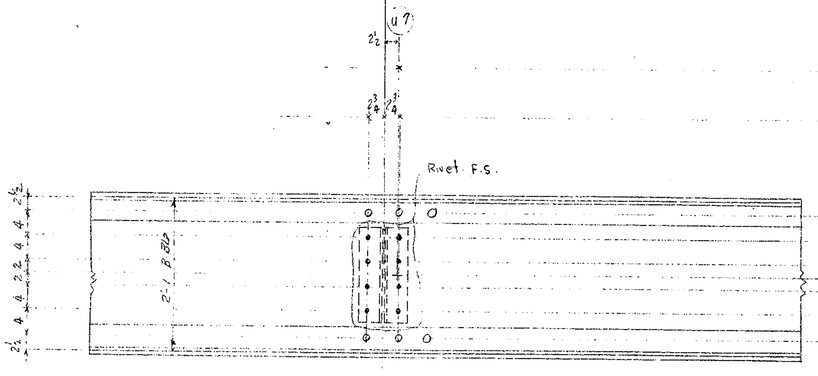
SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO ILLINOIS

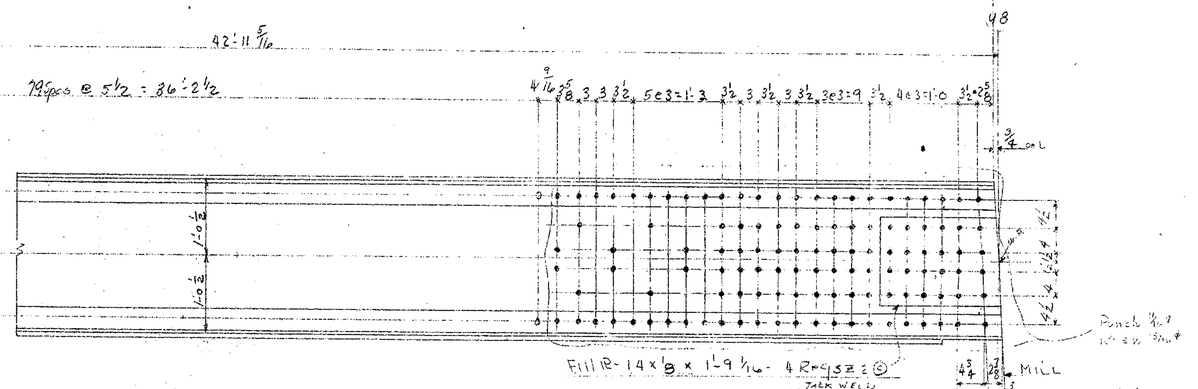
SHOP VINCENNES STEEL VINCENNES, IND.
DIV. OF INDUSTRIAL ENTERPRISES, INC.
Contr. No. 4800-T Sh. 35 3 of

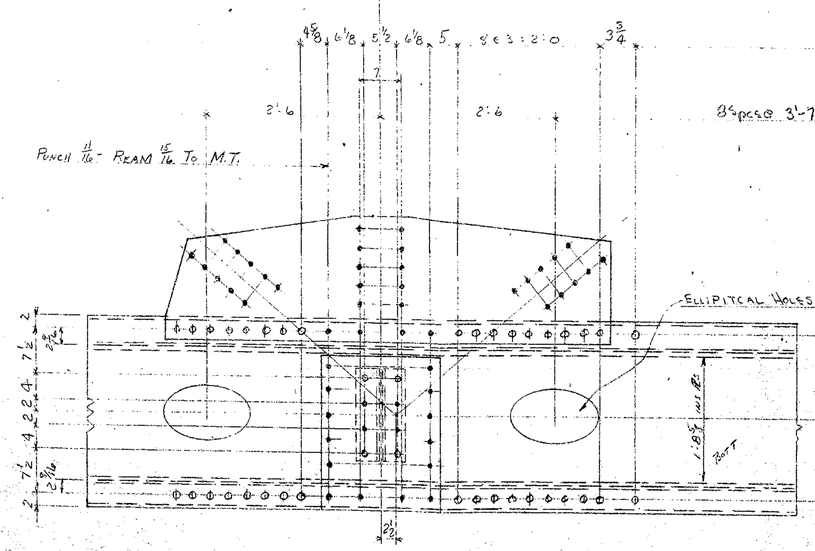
285











Work with Sh. 351

Cpl Note Sh #1

APPROVED BY: HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS

GENERAL NOTES

Rivets 7/8" ϕ except as noted
Holes 15/16" ϕ except as noted
End Distance 1¾" unless noted
Shop Paint RED LEAD (ARK. STD)
Contact Surfaces NO PAINT
Shop Inspection by
Field Connections RIVETS
Drawn by RB
Checked by CWK
Revisions

ARKANSAS STATE HIGHWAY COMMISSION
MISSISSIPPI STATE HIGHWAY COMMISSION

MISSISSIPPI RIVER BRIDGE
NEAR HELENA, ARKANSAS
UNIT NO 1

SOLD TO: JOHN F. BEASLEY CONSTR. CO.
CHICAGO, ILLINOIS

RECOMMENDED FOR APPROVAL
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
BY HFC DATE 11/19/57

APPROVED BY 11-25-57

L. P. Carlson SHOP

VINCENNES STEEL DIV. OF INDUSTRIAL ENTERPRISES, INC. VINCENNES, IND.

Contr. No. 4800 Sh. 352 of