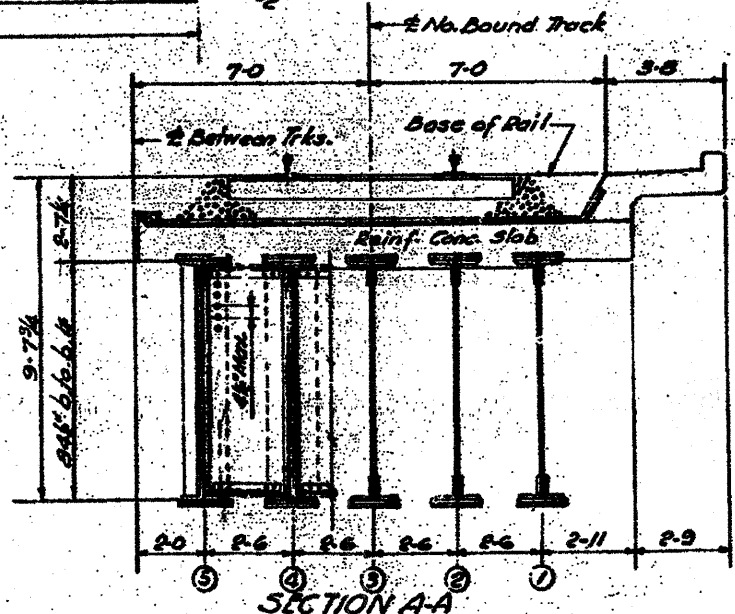
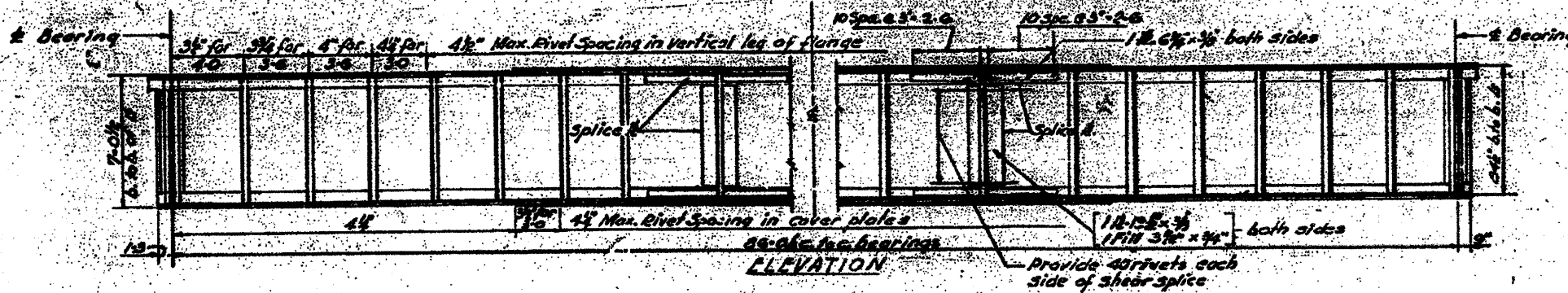


ELEVATIONS BACK OF BOTTOM FLANGE ANGLES & BEARING SHIM THICKNESS REQUIRED

Girder	@ Brg. Center Pier Elev.	Shim	@ Brg. South Pier Elev.	Shim
1	407.67	—	407.60	1/8"
2	407.67	1/8"	407.61	1/8"
3	407.67	1/8"	407.61	1/8"
4	407.67	1/8"	407.61	1/8"
5	407.65	1/8"	407.61	1/8"
6	407.65	3/16"	407.62	1/8"
7	407.65	1/8"	407.62	1/8"
8	407.65	1/8"	407.62	1/8"
9	407.65	1/8"	407.62	1/8"
10	407.65	1/8"	407.65	1/8"

Elevations are given @ the intersection of a Brg. & a Girder; Shim thickness is the total theoretical thickness req'd.

**FRAMING PLAN-SPAN 3**



**DEAD LOAD PER TRACK**

Ballast, Ties & Rail	2.75 <sup>#</sup>
DL Slob, Water, roof & Walk	3.09
<b>Total</b>	<b>5.73<sup>#</sup></b>
DL Girder No. 1	1.15 <sup>#</sup>
DL Case, Stiffeners	1.0
DL Steel	.13
<b>Total</b>	<b>2.06<sup>#</sup></b>

**IMPACT**

Vertical	60-80%	45%
Rolling	60-80%	20%
<b>Total</b>	<b>125%</b>	<b>65% Girder Load</b>

**MOMENTS & SHEAR FOR GIRDER NO. 1 \***

End Shear	Max. Moment
DL	DL
LL	LL
Imp.	Imp.
<b>Total</b>	<b>Total</b>

\*Computed for 67' span

**SECTION-ALL GIRDERS BOTH FLANGES**

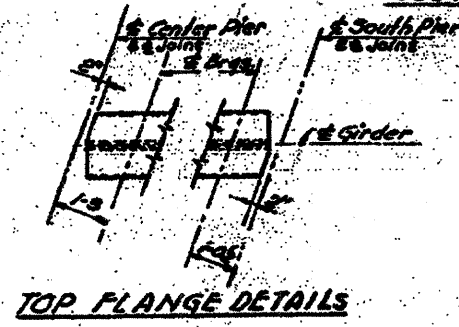
Gross	Net
8 No. 8-1 1/2"	4.60"
20 8-1 1/2"	19.50"
12 17-1/2"	10.63"
12 17-1/2"	10.63"
<b>Total</b>	<b>42.54"</b>

Gross S.M. = 17312.6 in<sup>2</sup>  
 Net S.M. = 146234 in<sup>2</sup>  
 Allow 10,000 psi  
 Unit Stress = 17312.6 / 1122 = 15.43 psi

**ADDITIONAL MATERIAL**

No. 8 24 x 7/16 = 3678"  
 End Stiff. 40 x 4 x 3/8  
 Use 16 rivets per pair (Min)  
 2 End Fills 12 x 3/8  
 Intermediate Stiff. 20 x 6 x 3/8 x 2'  
 on fills of Diaphragms.  
 20 x 6 x 3/8 on fills elsewhere.  
 Rivet diameter = 1"

End Diaphragms & Intermediate Diaphragms  
 8 Ls Top & Bottom 4 x 4 x 3/8 - 36' No. 8  
 Lateral Plates & Horizontal Gusses 76'  
 Top Lateral 60' 2 1/2" x 1/2" rivets  
 Bottom Lateral 16' 2 1/2" x 1/2" rivets  
 Web Splices at 12' points approx.  
 Max. distance c.c. rivets on outside gage line  
 of cover plates shall be 8'  
 Min pitch 3 1/2" in bottom cover plate near 6'  
 of span on account of web section



**NOTES**

1. For details of diaphragms, lateral bracing, and connections see Sheet 30.
2. For details of bearings see Sheet 31.
3. For General Notes see Sh. 1.
4. For Framing Notes see Sh. 1.

STATE OF ILLINOIS  
 DEPARTMENT OF PUBLIC WORKS & BLDGS.  
 DIVISION OF HIGHWAYS

CITY OF EAST ST. LOUIS  
**EAST ST. LOUIS EXPRESSWAY**  
 L. & N. R. OVER WEST BOUND EXPWAY, RAMP 2, EAST BOUND EXPWAY AND RAMP 7

FRAMING PLAN SPAN 3

H. W. LOCHNER, INC.  
 ENGINEERS  
 DATE JULY 1960 CHICAGO, ILLINOIS SHEET NO. 18

Designed By: L.K.  
 Drawn By: H.M.K.  
 Checked By: R.C. & P.A.E.

FOR INFORMATION ONLY