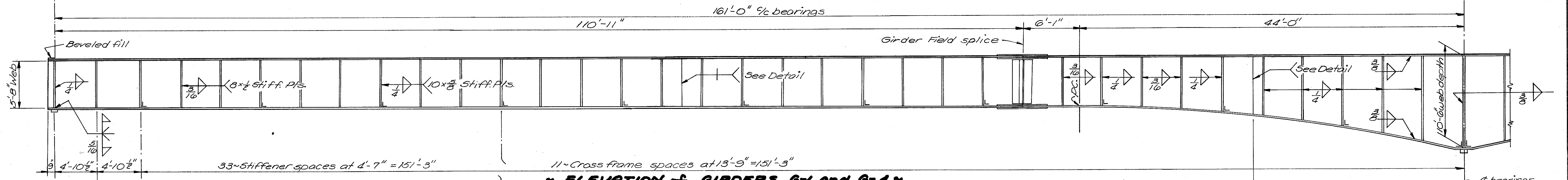
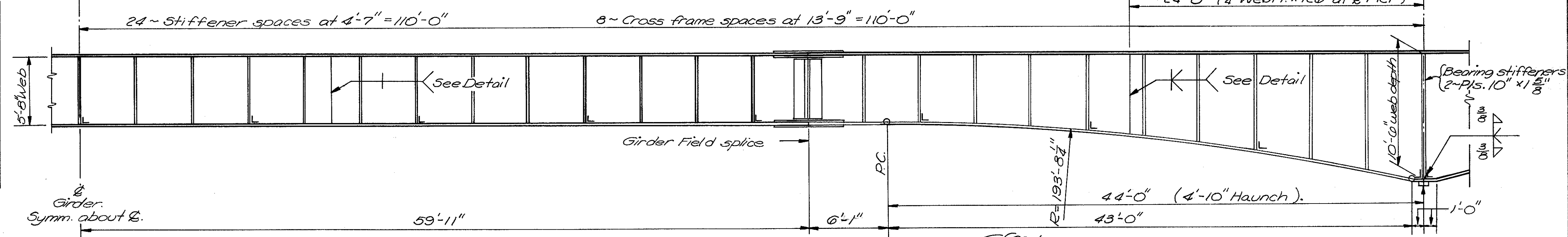


**~ HALF STRUCTURAL STEEL FRAMING PLAN ~**  
Scuppers shown for rear half (south end) of bridge only. See "GENERAL PLAN" for scupper location on entire bridge.



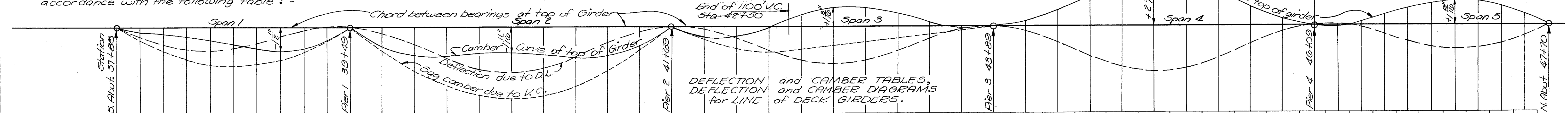
**~ ELEVATION of GIRDERS G-1 and G-4 ~**

GIRDER MATERIAL	
Material Size and Description	Girder No.
24"x2" Flange Pls.	G-1, G-2 and G-3
24"x2 1/4" Flange Pls.	G-4, G-5 and G-6
1/2" Web Pls. except as noted	All Girders
3/4" Web Pls. 48 ft. long Centered over piers as noted	All Girders
2-10"x3/8" Abutment bearing stiffener Pls.	G-1 and G-4
2-10"x1 1/2" bearing stiffeners over pier bearings	All Girders
10"x3/8" Intermediate stiff Pls. for Crossframe connections	All Girders
2-8"x1/2" Intermediate stiffener Pls. between cross frames	All Girders
Intermediate stiff. on field splices, 2x 7x4 x 1/2	All Girders



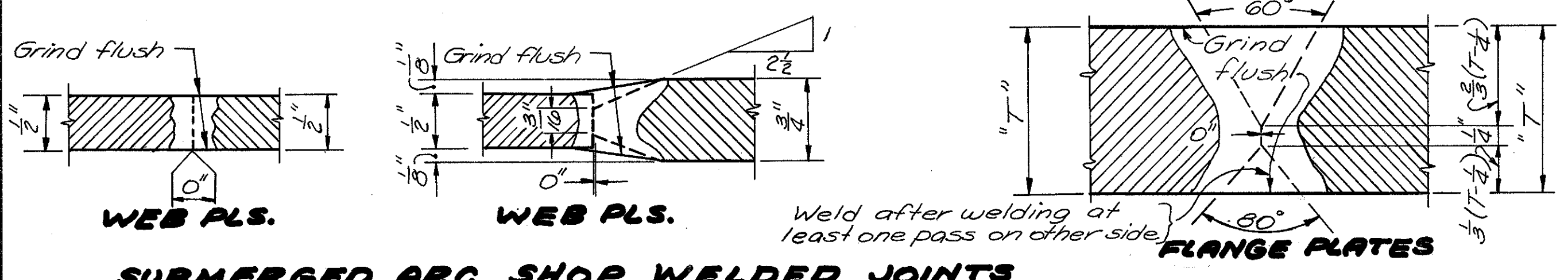
**~ HALF ELEVATION of GIRDERS G-2, G-3, G-5 and G-6 ~**

**CAMBERING** of steel girders is required in accordance with the following table :-



**DEFLECTION and CAMBER TABLES, DEFLECTION and CAMBER DIAGRAMS for LINE of DECK GIRDERS.**

Location on Span	.1	.2	.3	.4	.5	.6	.7	.8	.9	.1	.2	.3	.4	.5	.6	.7	.8	.9	.1	.2	.3	.4	.5	.6	.7	.8	.9	.1	.2	.3	.4	.5	.6	.7	.8	.9
Deflection due to steel/DL	+3/10	+7/10	+1/2	+3/10	+2/5	+3/5	+1/2	+1/10	-	+1/5	+3/10	+1/10	+1/10	+1	+3/5	+1/10	+3/10	+1/5	+1/10	+1/4	+9/10	+3/4	+3/5	+3/2	+9/10	+1/2	+1/10	+1/5	+3/10	+1/10	+1/10	+1	+15/10	+1/10	+3/10	+1/5
Defl. due to remaining DL	+7/10	+3/5	+1	+1	+2/5	+3/5	+3/5	+1/2	-	+1/4	+3/4	+1/10	+1/10	+1/10	+1/2	+1/10	+3/10	+1/5	+1/5	+1/2	+1	+1/10	+1/10	+1/10	+1	+1/2	+1/5	+3/10	+1/10	+1/4	+1/10	+1/10	+1/10	+1/10	+3/4	+1/4
Concavity due to V.C.	-1/10	-1/5	-2/5	-2/10	-2/5	-2/5	-2/5	-1/10	-1/5	-1/5	-2/5	-3/5	-4/5	-4/5	-3/5	-2/5	-1/5	-1/10	-1/10	-3/5	-1/10	-1/10	-1/10	-1/10	-1	-3/4	-1/2	-3/10	-1/10	-1/10	-2/5	-2/10	-2/10	-2/10	+2	+3/5
Sum of Defl. & Concavity	-2/10	-3/10	-3/5	-2/5	-1/5	-1/5	-1/5	-1/5	-1/5	-1/4	-1/4	-1/10	-1/10	-1/10	-1/10	-1/10	-1/4	-1/4	-1/10	-3/5	-1/10	+1/10	+1/10	+1/10	+1/4	-1/5	+3/10	+3/10	+1/10	+1/10	+2/5	+2/10	+2/10	+2	+1/5	+3/5
Required Camber	-3/10	-3/10	-3/5	-2/5	-1/5	-1/5	-1/5	-1/5	-1/5	-1/4	-1/4	-1/10	-1/10	-1/10	-1/10	-1/10	-1/4	-1/4	-1/10	-3/5	-1/10	+1/10	+1/10	+1/10	+1/4	-1/5	+3/10	+3/10	+1/10	+1/10	+2/5	+2/10	+2/10	+2	+1/5	+3/5



Note: Intermediate stiffeners shall not be welded to the flanges, but shall be fitted to the flanges in close enough contact that when the shop paint is applied it will fill and close the openings. The bearing stiffeners shall be grooved and fully butt-welded to the lower flange and fitted in close contact, without welding at the upper flange.

See Sheet 64 for Diagonal Bracing Details.  
See Sheet No. 62 for details of scuppers and Half Sections A-A and B-B.  
See Sheets 63 & 65 for details of rockers, bolsters, and field splices.

STATE OF OHIO  
DEPARTMENT OF HIGHWAYS  
DIVISION OF DESIGN AND CONSTRUCTION  
BUREAU OF BRIDGES

**HALF STEEL FRAMING PLAN GIRDER DETAILS**

BRIDGE No. LAK-528-0192  
over GRAND RIVER

LAKE COUNTY STA. 37+85.50 TO 47+72.50

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KED	KED	M.K.	H.A.	BFG	9/7-1-9-61	