



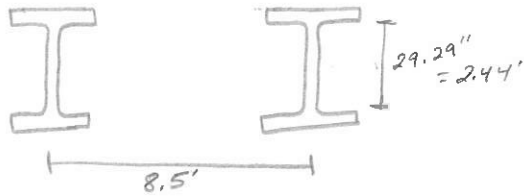
OHIO DEPARTMENT OF TRANSPORTATION  
 PLANNING & ENGINEERING DEPARTMENT, DISTRICT 4



Project MAH-680-07.37  
 Desc MAH-680-1073L+R crossframes

Calc By MA Date 7/14/03  
 Chk By \_\_\_\_\_ Date \_\_\_\_\_  
 PID/PROJ \_\_\_\_\_

Based on existing plans:



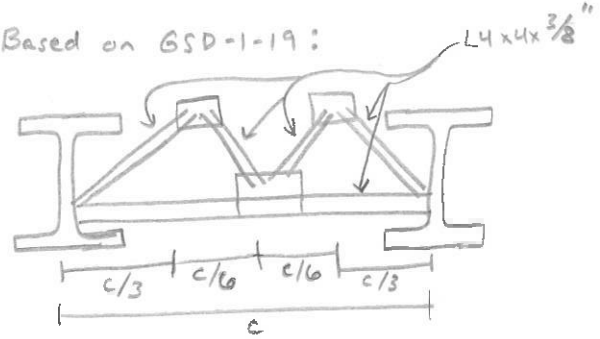
$$c = 8.5'$$

$$c/3 = 2.83'$$

$$c/6 = 1.42'$$

L4x4x3/8" unit weight = 9.8 lb/ft.

Based on GSD-1-19:



$$x = \sqrt{2.44^2 + 2.83^2} = 3.74'$$

$$y = \sqrt{1.42^2 + 2.44^2} = 2.82'$$

$$\text{Total} = [8.5' + 2(3.74') + 2(2.82')] \times \frac{9.8 \text{ lb}}{\text{ft}} \times 6 \text{ bays} \times 2 \text{ abutments}$$

$$\approx \boxed{2,543 \text{ lbs per bridge}}$$

$$\text{Fillet welding} \approx \frac{10' \text{ ft}}{\text{bay}} \times 6 \text{ bays} \times 2 \text{ abutments} = \boxed{120' \text{ per bridge}}$$