



OHIO DEPARTMENT OF TRANSPORTATION

PLANNING & ENGINEERING DEPARTMENT, DISTRICT 4



Project **STA-30/VAR-13.15/VAR**

Calc By **JF** Date **11/03/25**

Desc **Steel crossframes calculations**

Chk By _____ Date _____

STA-77-5.870L over Prairie College

PID/PROJ **119106**

Ex. Crossframe angles = 3x3x5/16

Weight per foot of angle = 6.10 lb/foot

Bay Width = 7'-11"

Bay Height (Depth of beam) = 27"

Strut 3S = $(7+11/12)*6.10 = 48.3$ lb

Strut 3S = $7.917*6.10 = 48.3$ lb

Diagonal 1D/2D = $[SQRT((7+11/12)^2 + (27/12)^2)*6.10]*2 = 100.4$ lb

Diagonal 1D/2D = $[SQRT(67.74)*6.10]*2$

Diagonal 1D/2D = $8.23*6.10*2 = 100.4$ lb

Total Weight = $(48.3+100.4)*3 = 446.1$ lb