WEB MEMBER #4 Distance from End Panel = 3.04 ft.

Applicable Shear V_x = 24,950 lbs. f_y = 50,000 psi

Slope = 1.162 f_s = — psi

l = 30.0 in. f_{sc} = 13,490 psi

Reqd. Area = 2.15 sq. in. Use 2-1.14" DIA. + 2-0.75" DIA. Area = 2.92 sq. in.

WEB MEMBER #5 Distance from End Panel = 0.0 ft.

Applicable Shear V_x = 28,150 lbs. f_y = 50,000 psi

Slope = 2.20 f_s = 30,000 psi

l = — in. f_{sc} = — psi

Reqd. Area = 2.06 sq. in. Use 2-1.14" DIA. + 2-0.75" DIA. Area = 2.92 sq. in.

CHORD MEMBER #6 Consists of 4 - 2"x 1½"x 0.31" Angles

Construction Load Design Area = 4.30 sq. in.

Applicable Moment = 1,860,000 in. lbs. f_y = 50,000 psi

l = 33.375 in. f_s = — psi

r_x = 0.43 in. f_{sc} = 19,080 psi

r_z = 0.31 in. (with fillers in middle 60% of span)

$\frac{l}{r_x}$ = 77.6

$\frac{l}{2r_z}$ = 53.8 $\frac{f_a}{F_a} + \frac{f_b C_m}{F_b(1 - \frac{f_a}{F'_e})}$ = 0.859 less than 1

f_a = 15,400 psi

F_a = 19,080 psi

f_b = 770 psi

F_b = 30,000 psi

F'_e = 24,770 psi

Use 4- 2"x 1½"x 0.31" ∠'s Area = 4.30 sq. in.

CHORD MEMBER #7 Consists of 4-2"x 1½"x 0.31"∠'s + 15" 5/16" ℓ ~~Angles~~

Total Load Design Area = 8.99 (4.69 + 4.30) sq. in.