CHORD MEMBER #7 (CONTD.)

Applicable Moment = 1,920,000 in lbs. $f_y$ = 36,000 psi

$f_s$ = 22,000 psi

$f_{sc}$ = — psi

$D_t$ = 33.00 in.

$B_{eff}$ = 64.00 in.

$t$ = 4.00 in.

$y_1$ = 2.00 in. $d_2$ = 3.46 in.

$y_2$ = 4.44 in. $d_3$ = 25.66 in.

$y_3$ = 32.56 in. $c_1$ = 6.90 in.

$d_1$ = 4.90 in. $c_2$ = 26.10 in.

$$I_s = \sum [(I_c + A_c d_1^2) + (I_{TCA} + A_{TCA} d_2^2) + I_{BCA} + A_{BCA} d_3]$$

$$\bar{y} = \frac{\sum (A_c y_1 + A_{TCA} y_2 + A_{BCA} y_3)}{\sum (A_c + A_{TCA} + A_{BCA})}$$

$\bar{y}$ = 6.90 in.

$I_s$ = 2826 in.$^4$ ( 2C32T5 )

Resisting Moment = $f_s \times \frac{I_s}{c_2}$ = 2,380,000 in. lbs.

Use 4 - 2" x 1½" x 0.25" L's Area = 3.60 sq. in.

Composite Design Top Chord Check

Total Load Design $f_c$ = 3,000 psi

Applicable Moment = 1,920,000 in. lbs. $f'_c$ = 1,350 psi

$f'_{cc} = \frac{M c_1}{15 I_s}$ = 312 psi

CHORD MEMBER #8 Consists of 4 - 2" x 1½" x 0.25" Angles

Area = 3.60 sq. in.

(SAME AS MEMBER 6)