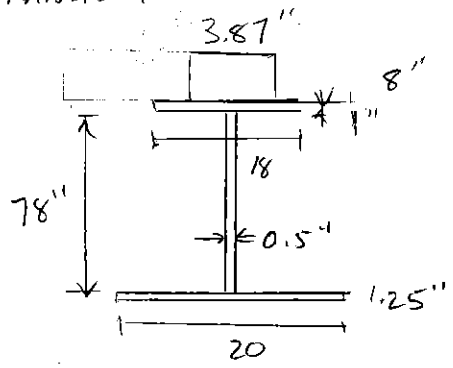
Job Name_____

CASE 1:
TRANSFORM WIDTH

$3n = 24$

SLAB WIDTH = 92.813"
SLAB T = 8"

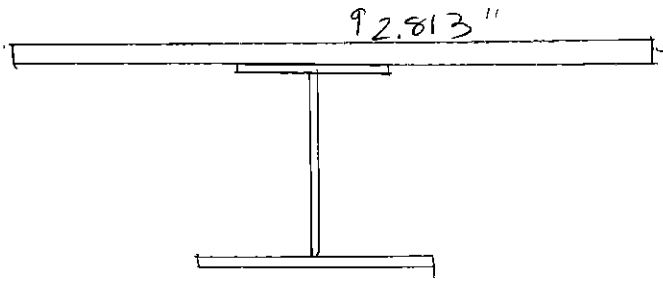


$$J = \frac{1}{3}\left(18" \times 1^3 + 20 \times 1.25^3 + 78" \times 0.5^3 + 8" \times 3.87^3\right)$$

$$= 174 \text{ in.}^4$$ ~ avg. flange thickness

$$C_w = \frac{t_f h^2}{12} \times \frac{(b_1^3)(b_2^3)}{(b_1^3 + b_2^3)}$$

CASE 2:
OR Transform thickness



$8"/24 = 0.33"$

$$J = \frac{1}{3}\left(18 \times 1^3 + 20 \times 1.25^3 + 78 \times .5^3 + 92.813 \times (0.33)^3\right)$$

$$= 23.4 \text{ in.}^4 \quad ?$$

$$J_{eq} = J\left[1 - \frac{\sinh(pL_b)}{pL_b} + \frac{\left[\cosh(pL_b) - 1\right]^2}{pL_b \sinh(pL_b)}\right]^{-1}$$

where $p = \sqrt{\frac{GJ}{EC_w}}$