

$$\phi P_c = 0.85 \times 2.67 \sqrt{3500} (22) \left( 0 + 2 \times \frac{3}{8} \right) / 1.00 = 79.0^k$$

For S.F. = 4:1

$$SWL = 79.0 / 4 = 19.75^k > 15.86^k, \text{OK}$$

FOR ROTATION ABOUT BOTTOM EDGE

SPPW IS APPROX 11' AND BENDING STRAINS OK BY INSPECTION.

$$\sqrt{\text{LIFTED CTW}} = 31.72 / 4 = 7.93^k$$

MV BASED ON MECHANICAL STRENGTH IS 16.0<sup>k</sup> > 7.93<sup>k</sup>, OK  
(SEE PRODUCT LITERATURE)

$\phi V_c$  BASED ON CONCRETE STRENGTH  
ASSUME SIMILAR TO STUD AND USE

PCI FC 0.15.8 ATTACHED

$$\phi V_c = \phi V'_c C_w C_e C_c$$

$$\phi V'_c = \phi 12.5 d_c^{1.5} \sqrt{f'_c}$$

$$= 0.85 \times 12.5 \times 11^{1.5} \sqrt{5000} / 1000 = 27.4^k$$

$$C_w = 1.0$$

$$C_e = 1.0$$

$$C_c = 0.4 + 0.7 \frac{24}{11} = 1.93 \text{ BUT } < 1.0$$

$$\therefore \phi V_c = 27.4 \times 1.0 \times 1.0 \times 1.0 = 27.4^k$$

FOR S.F. 4:1

$$SWL = 27.4 / 4 = 6.85^k < 7.93^k \text{ + S.F.} = \frac{6.85 \times 4}{7.93} = 3.46$$