



FORCE ON WALL

$$300 \text{ PSF} \times 11.5 \text{ ft} = 3,450 \text{ lbs}$$

$$\frac{518 \text{ PSF} \times 11.5 \text{ ft}}{2} = 3,000 \text{ lbs}$$

$$\underline{6,450 \text{ lbs}}$$

CONSERVATIVE ASSUME ACTS AT WALL
MID-HEIGHT

$$M_{\text{MAX}} = \frac{PL}{2} = \frac{(6,450 \text{ lbs})(11.5 \text{ ft})}{2} = 37,088 \text{ ft} \cdot \text{lbs} \times \frac{12 \text{ in}}{1 \text{ ft}} = 445,050 \text{ in} \cdot \text{lbs}$$

Preliminary check: $A_s = \frac{M}{f_s J d}$

$$A_s = \frac{445,050 \text{ in} \cdot \text{lbs}}{(24,000)(1.889)(15 \text{ in})} = 1.39 \text{ in}^2 / \text{ft of wall}$$