01 - SOIL PRESSURE UNDER ECCENTRIC FOOTING

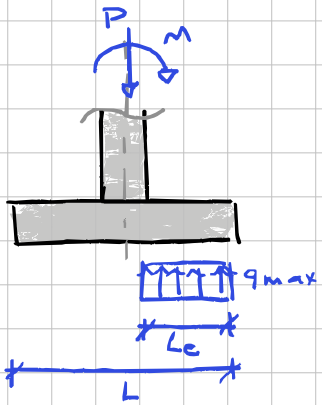
HYPOTHESIS.

$e = M/P$, B: Footing width

PLASTIC DISTRIBUTION

$$q_{max} = \frac{P}{L_e B}$$

$$L_e = L - 2e$$



ELASTIC DISTRIBUTION

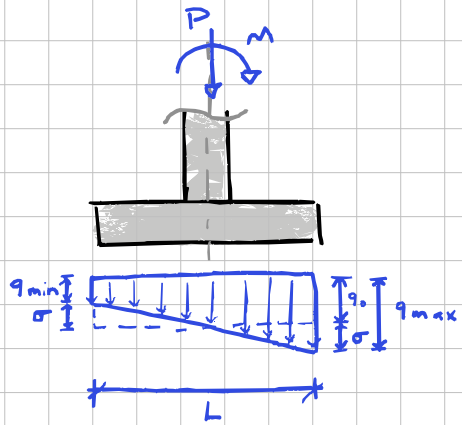
- No Lift. ($e \leq L/6$)

$$q_{max} = q_0 \pm \Delta = \frac{P}{BL}\left(1 \pm \frac{6e}{L}\right)$$

$$q_0 = P/BL$$

$$\sigma = M/S = 6Pe/BL^2$$

$$S = BL^2/6$$



- With Lift ($e > L/6$)

$$q_{max} = \frac{2P}{BL_e} = \frac{4P}{3B(L-2e)}$$

$$L_e = 3(L/2 - e)$$