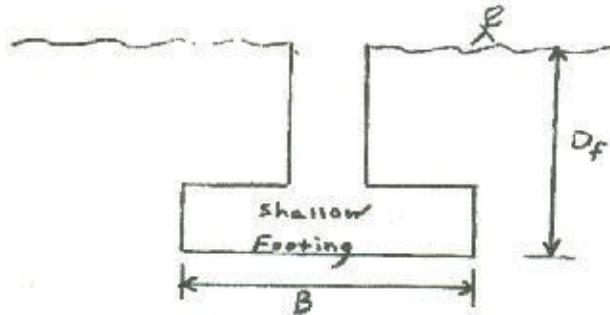


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Shallow Foundations: Considerations



When $D_f \leq B$ It is a shallow Foundation

Bearing strength of soils (q_{ult}): Based on Equations developed by Terzaghi (1943), Meyerhof (1963) and Hansen (1970).

$$q_{ult} = c N_c d_c s_c i_c \quad \text{Clay Portion } (\phi = 0^\circ)$$

$$+ \bar{q} N_q d_q s_q i_q \quad \text{Embedment Depth Portion}$$

$$+ \frac{\gamma B}{2} N_\gamma d_\gamma s_\gamma i_\gamma \quad \text{Sand Portion } (c = 0)$$

For Jackson, Ms area presume γ_{200} Clay or Soft, undrained clayey conditions where q_{ult} is 500 to 1000 psf. This will be the worst case scenario. This resembles Table 4-8; U.S. Navy 1982. Loading must be concentric or top steel will be needed.