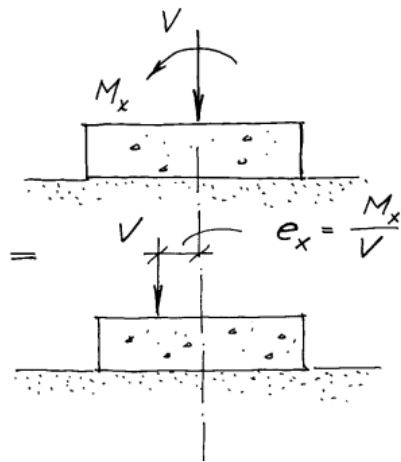


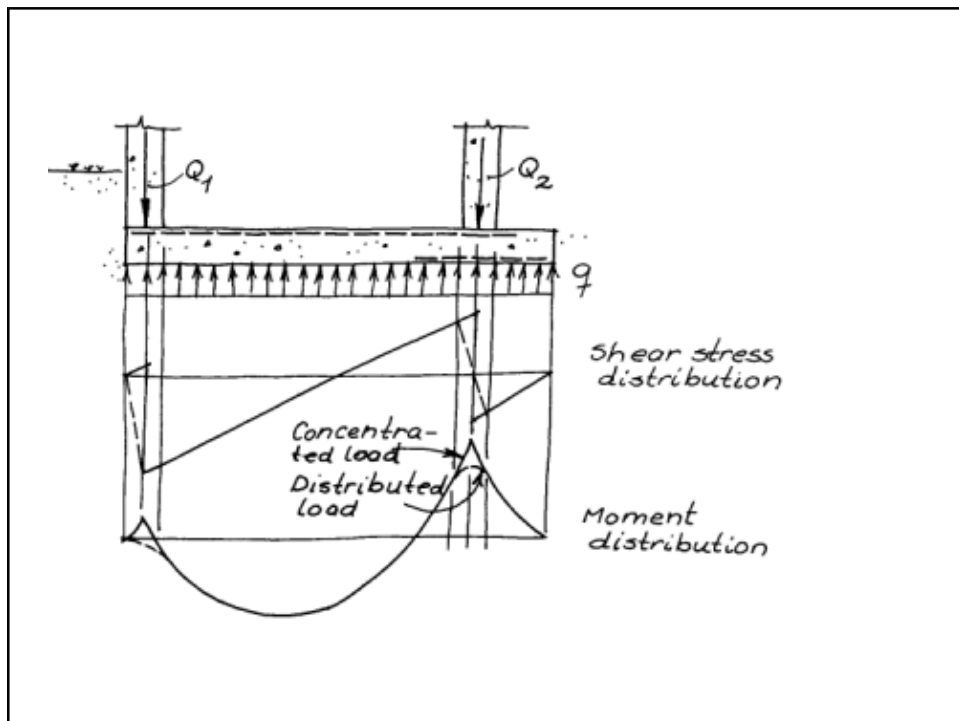
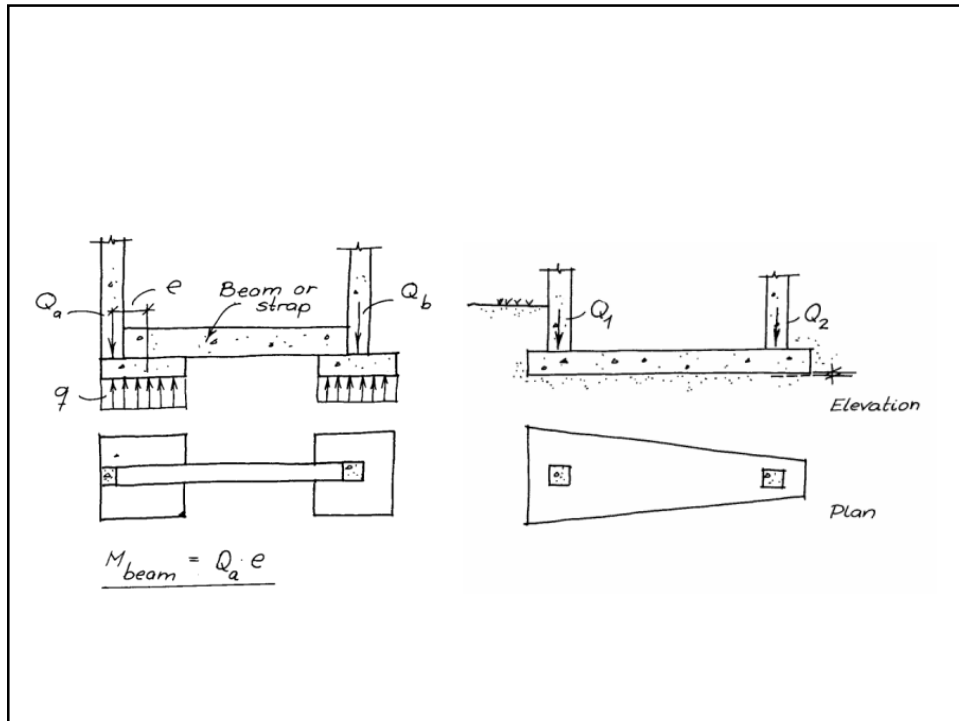
Vigas en medio elástico

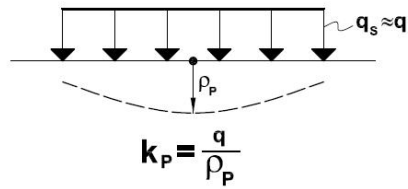
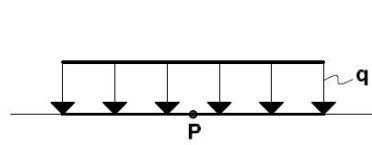
- Teoría general y desarrollo de casos básicos.
- Aplicación en diseño de fundaciones superficiales.
- Otras aplicaciones

Fundación rígida

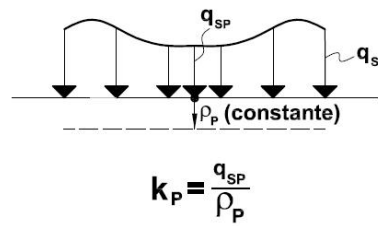
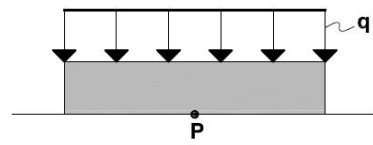


¿Cuándo la fundación es rígida?



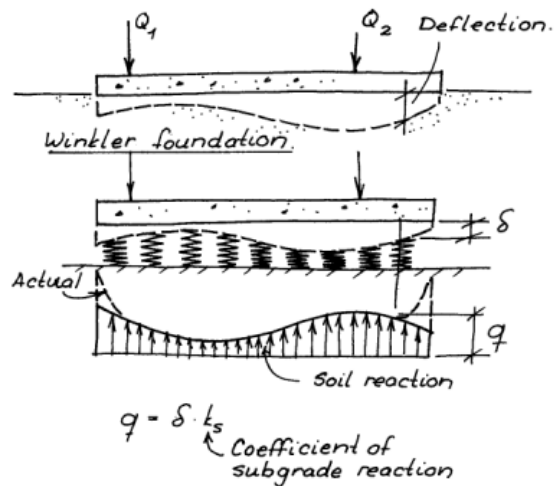


Fundación flexible

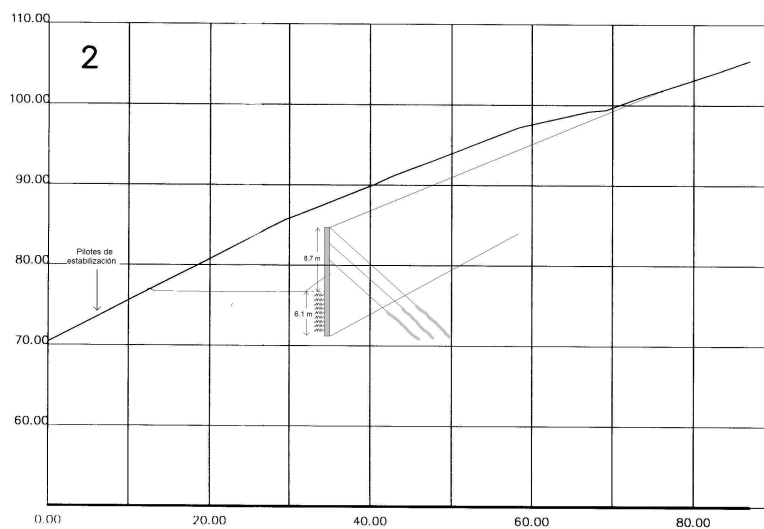
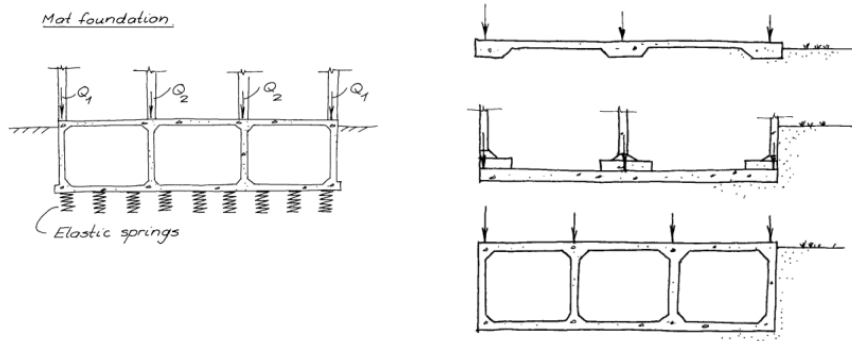


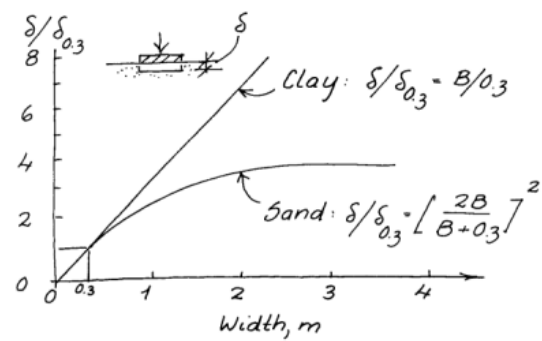
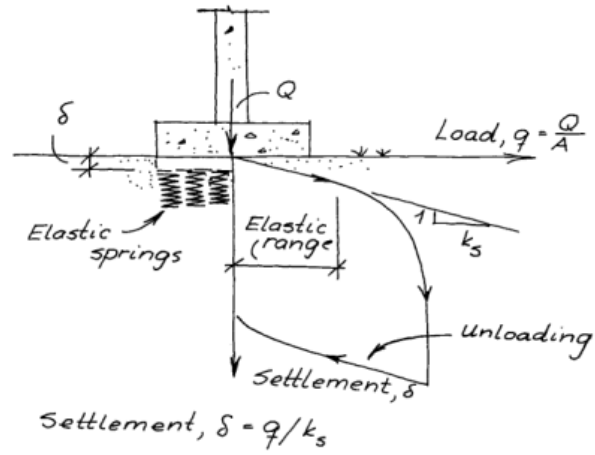
Fundación rígida

Sólo en el caso en que la fundación es flexible es válido considerar que la distribución de esfuerzos en el suelo es igual a la presión aplicada sobre la fundación.



Vigas en medio elástico





Clay: $k_s = k_{0.3} \cdot 0.3/B$ in m

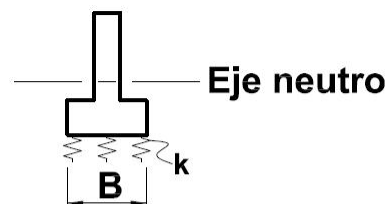
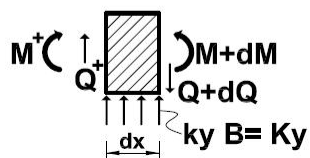
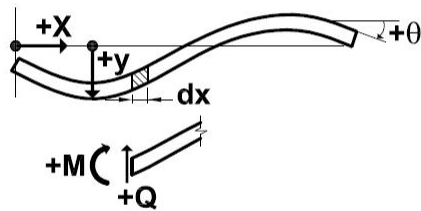
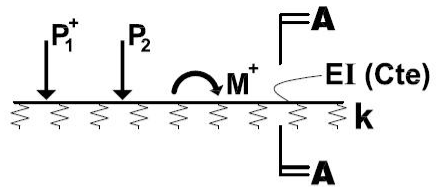
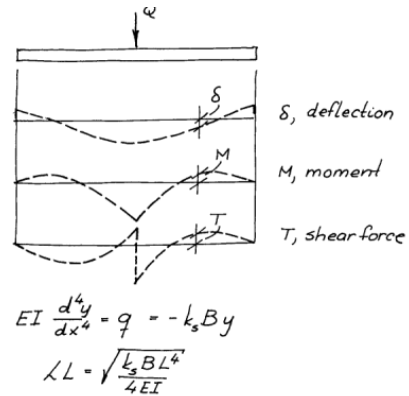
Sand: $k_s = k_{0.3} \cdot \left[\frac{B+0.3}{2B} \right]^2$

Finite difference method

$$\frac{\partial^4 \omega}{\partial x^4} + \frac{2 \partial^2 \omega}{\partial x^2 \partial y^2} + \frac{\partial^4 \omega}{\partial y^4} = \frac{q}{D} + \frac{D}{D(\gamma_x \gamma_y)}$$

Computer programs are available

Uncertainties: E_{concrete} , I_{raft} , k_s , E_s
 Coefficient of sub-grade reaction.



$$K = kB$$

SECCION A-A