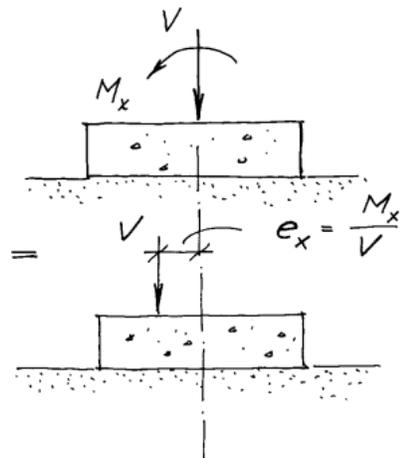


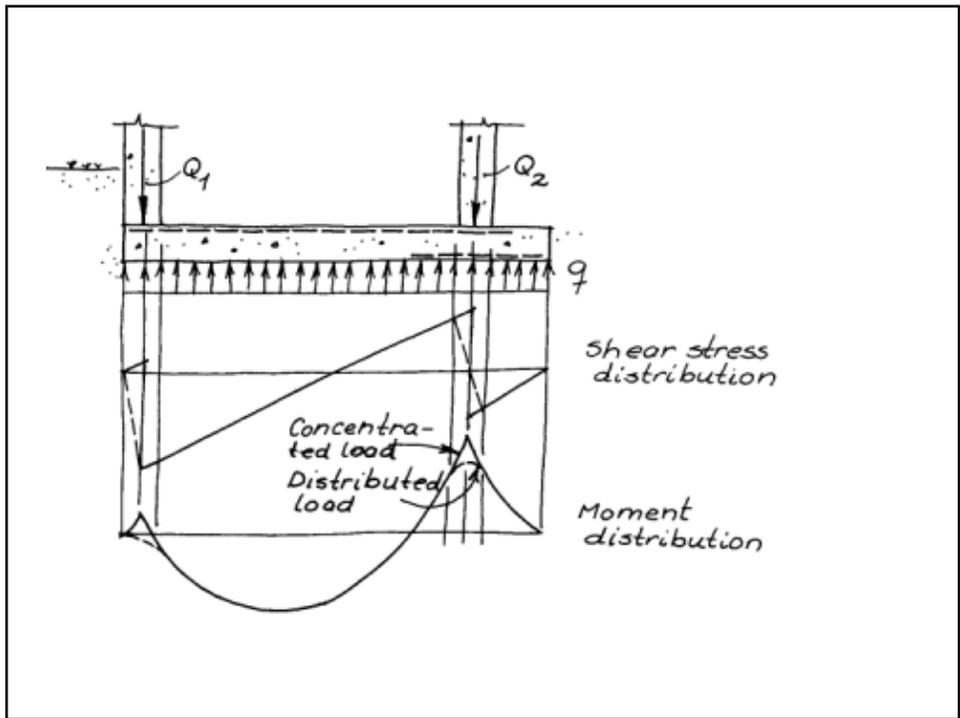
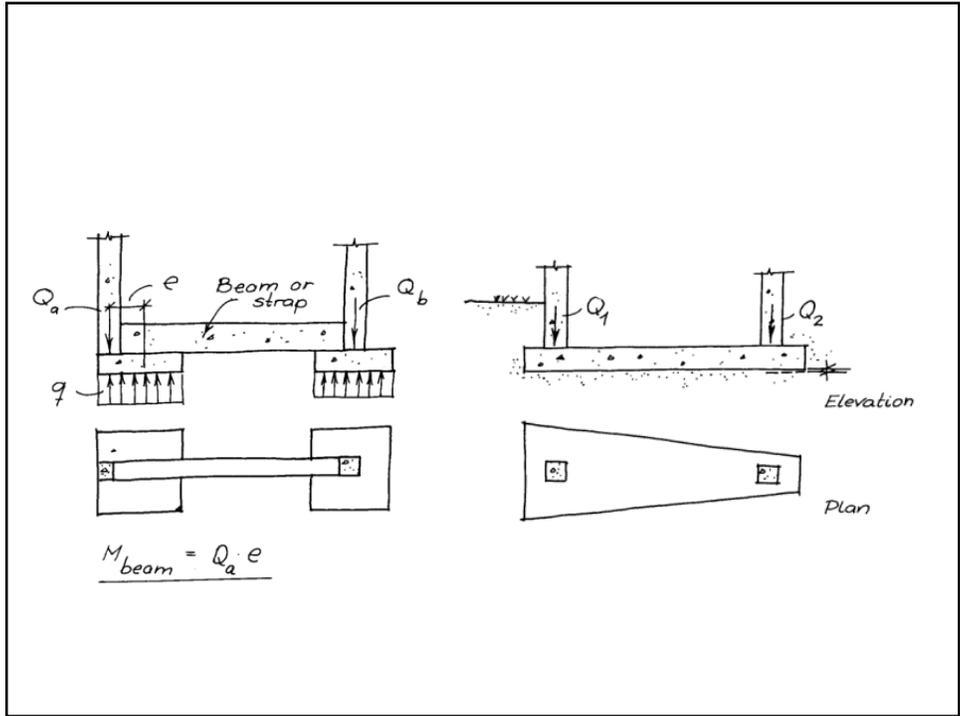
Vigas en medio elástico

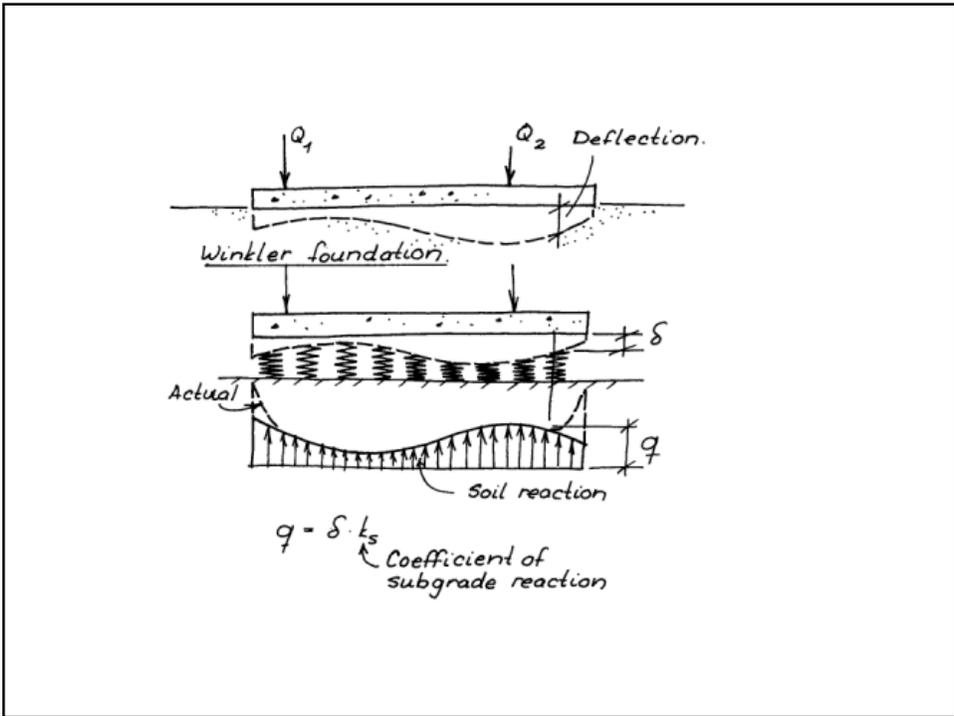
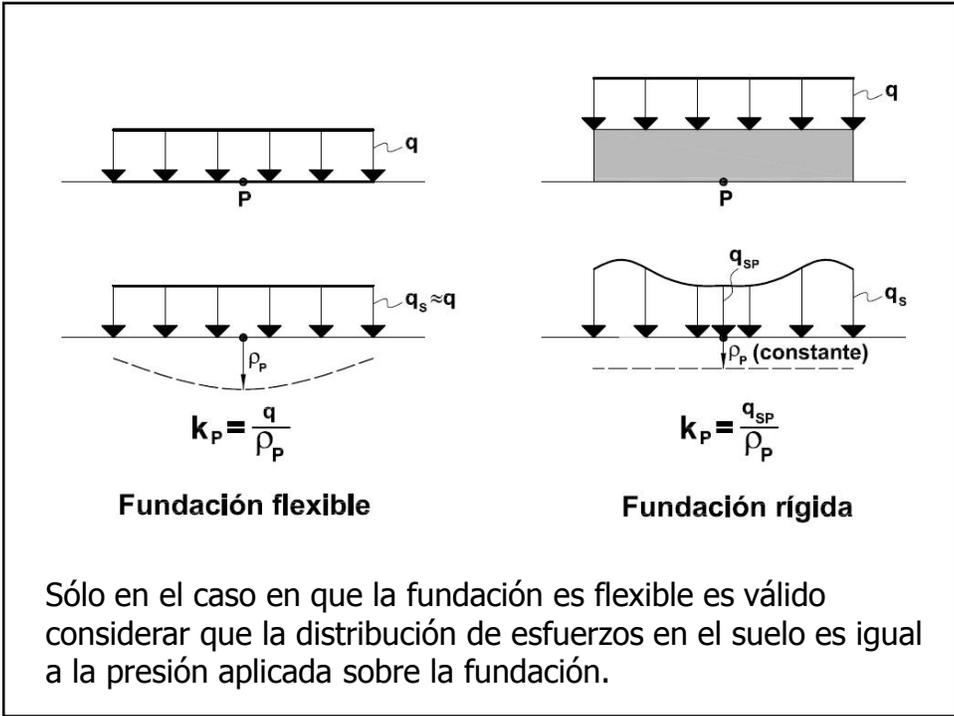
- Teoría general y desarrollo de casos básicos.
- Aplicación en diseño de fundaciones superficiales.
- Otras aplicaciones

Fundación rígida

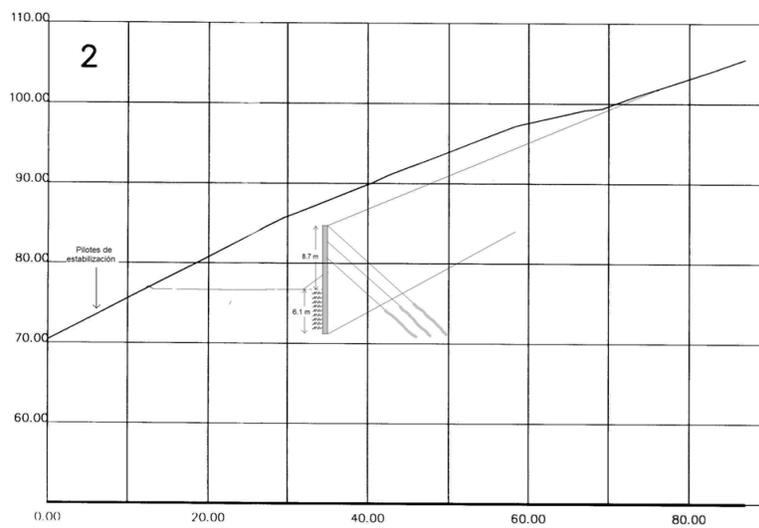
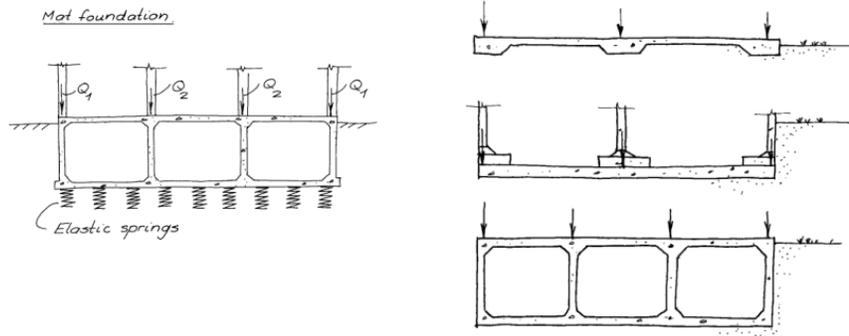


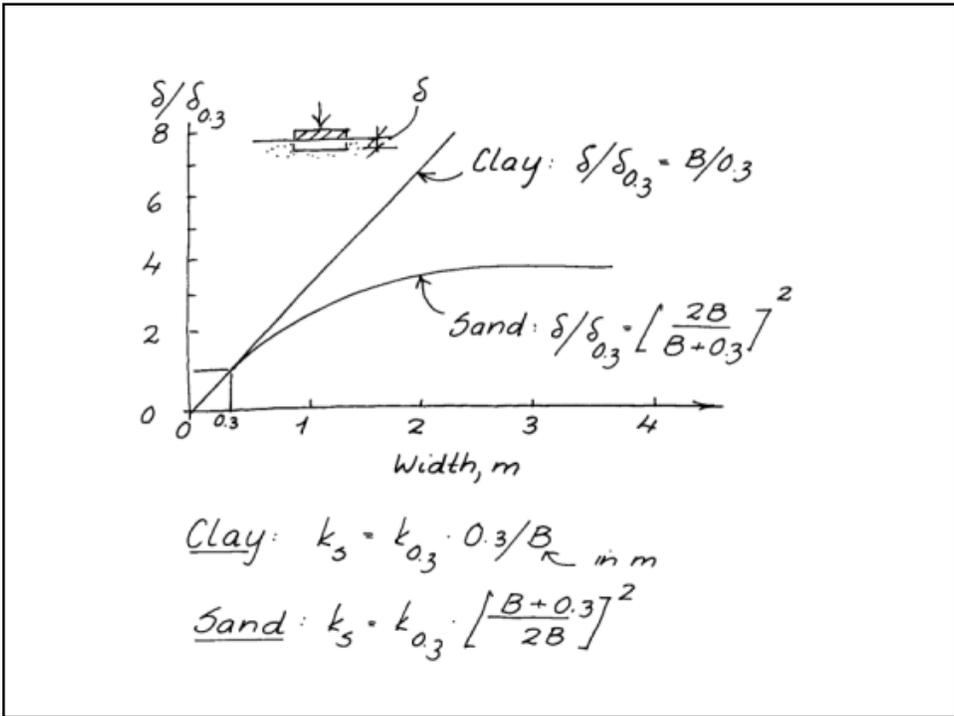
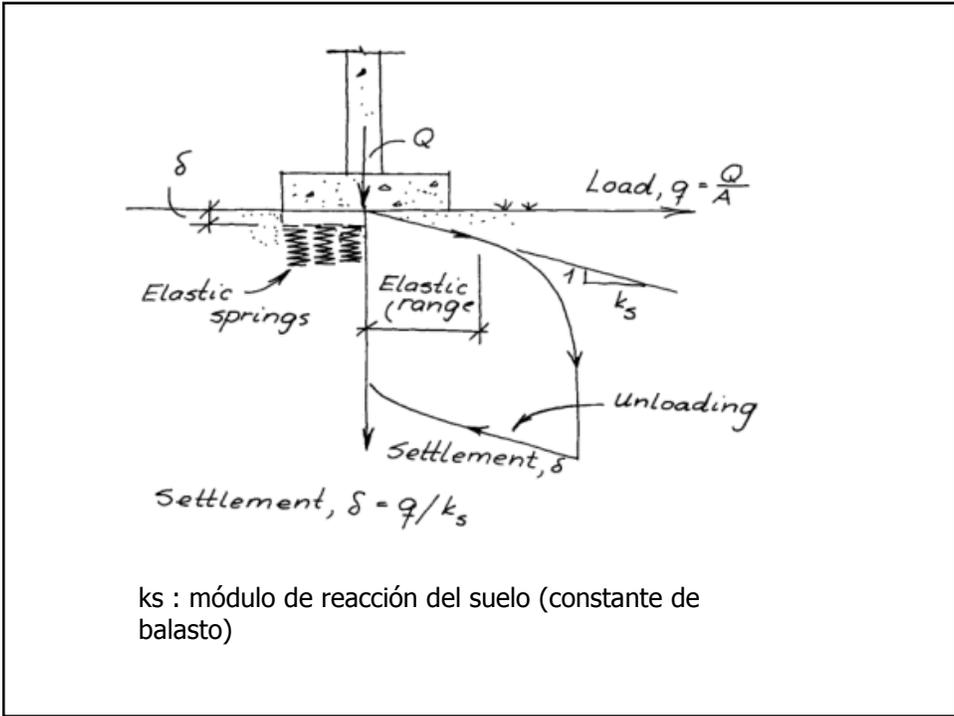
¿Cuándo la fundación es rígida?





Vigas en medio elástico





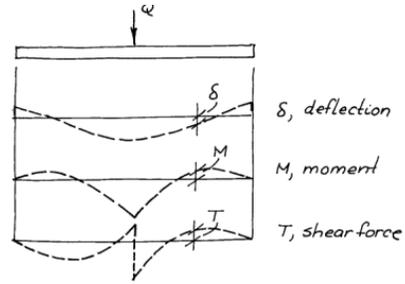
Finite difference method

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

Computer programs are available

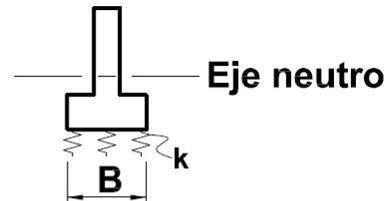
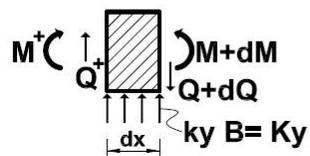
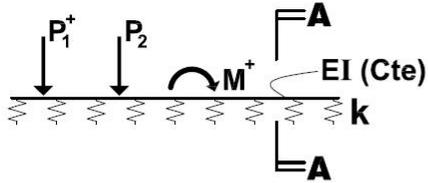
Uncertainties: $E_{\text{concrete}}, I_{\text{raft}}, k_s, E_s$

↑
Coefficient of sub-grade reaction.



$$EI \frac{d^4 y}{dx^4} = q - k_s B y$$

$$\lambda L = \sqrt{\frac{k_s B L^4}{4EI}}$$



$$K = kB$$

SECCION A-A