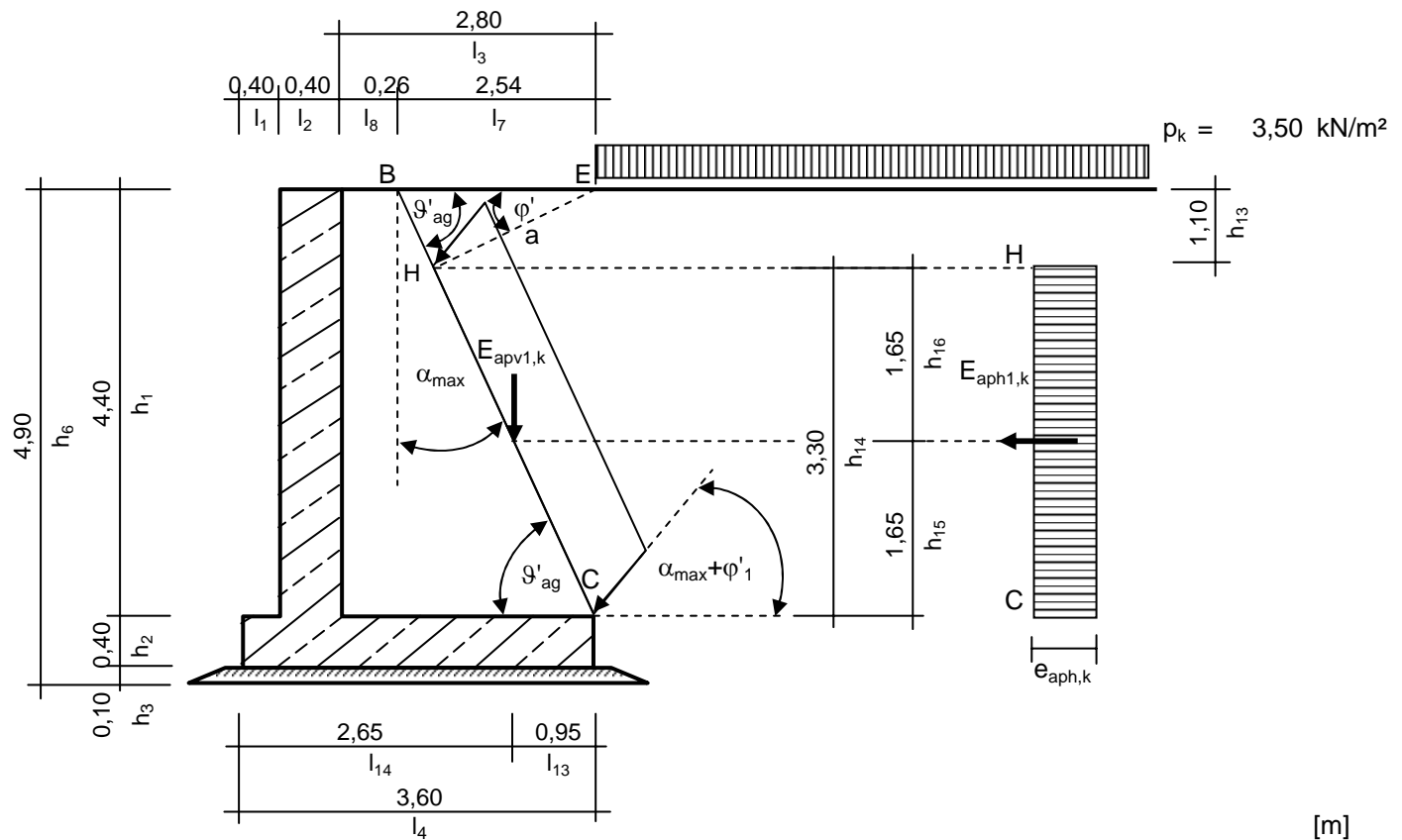


- LF 2b : Aktiver Erddruck auf den Schenkel aus großflächiger Auflast
 Laststellung 3, p_k ab Punkt "E"

(ständig, für: $\alpha = \alpha_{\max}$, $\delta_a = \varphi_1'$)



[m]

$$\begin{aligned}
 a &= \frac{l_7}{\sin(180 - \vartheta'_{ag} - \varphi')} \cdot \sin \vartheta'_{ag} = \frac{2,54}{\sin(180,0 - 60,00 - 30,00)} \cdot \sin 60,00 = 2,20 \text{ m} \\
 h_{13} &= a \cdot \sin(\varphi') = 2,20 \cdot \sin 30,00 = 1,10 \text{ m} \\
 h_{14} &= h_1 - h_{13} = 4,40 - 1,10 = 3,30 \text{ m} \\
 h_{15} = h_{16} &= h_{14} / 2 = 3,30 / 2 = 1,65 \text{ m} \\
 l_{13} &= h_{15} / \tan \vartheta'_{ag} = 1,65 / \tan 60,00 = 0,95 \text{ m} \\
 l_{14} &= l_4 - l_{13} = 3,60 - 0,95 = 2,65 \text{ m}
 \end{aligned}$$

$$\begin{aligned}
 k_{agh} &= \left[\frac{\cos(\varphi_1' - \alpha)}{\cos \alpha \cdot \left[1 + \sqrt{\frac{\sin(\varphi_1' + \delta_a) \cdot \sin(\varphi_1' - \beta)}{\cos(\alpha - \beta) \cdot \cos(\alpha + \delta_a)}} \right]} \right]^2 \\
 k_{agh} &= \left[\frac{\cos(30,00 - 30,00)}{\cos 30,00 \cdot \left[1 + \sqrt{\frac{\sin(30,00 + 30,00) \cdot \sin(30,00 - 0,00)}{\cos(30,00 - 0,00) \cdot \cos(30,00 + 30,00)}} \right]} \right]^2 \\
 k_{agh} &= \left[\frac{1,000}{0,866 \cdot \left[1 + \sqrt{\frac{0,866 \cdot 0,500}{0,866 \cdot 0,500}} \right]} \right]^2 = 0,333 -
 \end{aligned}$$

$$k_{aph} = \frac{\cos \alpha \cdot \cos \beta}{\cos(\alpha - \beta)} \cdot k_{agh} = \frac{\cos 30,00 \cdot \cos 0,00}{\cos(30,00 - 0,00)} \cdot 0,333 = 0,333 -$$

$$e_{aph,k} = p_k \cdot k_{aph} = 3,50 \cdot 0,333 = 1,17 \text{ kN/m}^2$$

$$E_{aph1,k} = e_{aph,k} \cdot h_{14} = 1,17 \cdot 3,30 = 3,85 \text{ kN/m}$$

$$E_{apv1,k} = E_{aph1,k} \cdot \tan(\alpha_{\max} + \varphi_1') = 3,85 \cdot \tan(30,00 + 30,00) = 6,67 \text{ kN/m}$$