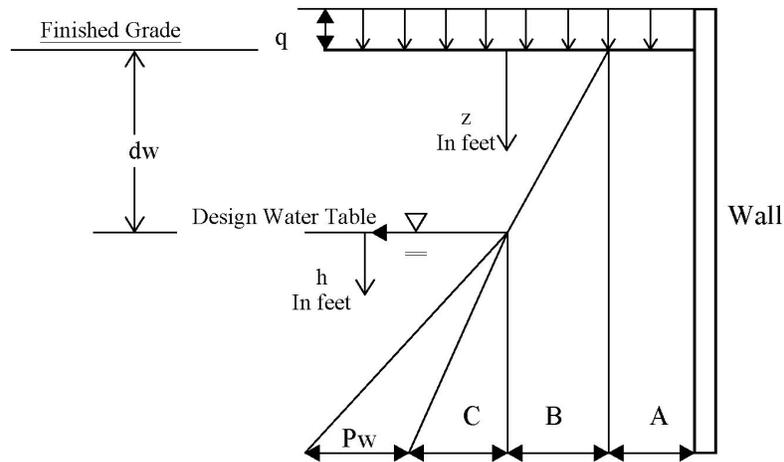


At-rest Earth Pressure on 1 foot wide vertical strip



$A = 0.81 (q)$ = Effect of uniform full coverage surface surcharge = 203 for example using surcharge of 250 psf

$B = 106.9 (z)$ = Earth pressure at rest above water table

$C = 56.4 (h)$ = Earth pressure at rest increment below water table

$P_w = 62.4 (h)$ = Hydrostatic pressure increment

$H = A + B$ = Static lateral earth pressure above water table ($z \leq dw$)

$H = 203 + 106.9 (dw) + 56.4 (z - dw) + 62.4 (h)$ = Static lateral earth pressure below water table ($z > dw$); $h = z - dw$.

Conditions on information:

- Units of pressure = lbs/ft²
- A surcharge value, q , of 250 lbs/ft² is used as an example only; actual value must be provided by designer.
- Backfill of borrow soil meeting Class I properties as defined in FSAR, 1986 compacted to 95% MDD by ASTM D698
- No heavy compaction equipment used within 5 ft. of wall
- $\gamma_s = 132 \text{ lbs/ft}^3$ = saturated unit weight of backfill above water table
- $\gamma = 69.6 \text{ lbs/ft}^3$ = submerged soil density
- $\phi_{cu} = 11 \text{ deg}$ = angle of internal friction of soil (95% Maximum dry density at 2% above optimum moisture; total stress)
- $\nu = 0.49$ = Poisson's ratio of soil based on seismic conditions
- $K_0 = 0.81$ = At-rest earth pressure coefficient of soil
- Plane strain conditions (corner adjustment factors not included)
- Dynamic soil pressure not included