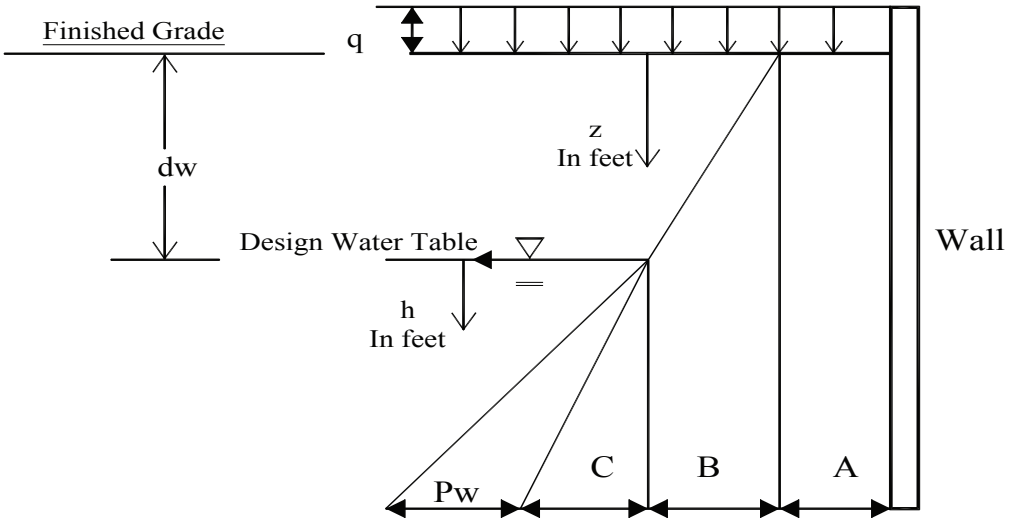

A = 0.81 (q) = Effect of uniform full coverage surface surcharge
B = 106.9 (z) =Earth pressure at rest above water table
C = 56.4 (h) = Earth pressure at rest increment below water table
Pw = 62.4 (h) = Hydrostatic pressure increment
H = A + B = Static lateral earth pressure above water table ($z \leq dw$)
H = A + 106.9 (dw) + 56.4 (z – dw) = Static lateral earth pressure below water table

(z > dw) (Pw not included)

Conditions on information:

- Units of pressure = lbs/ft²
- Backfill of borrow soil meeting Class I properties as defined for Unit 1 compacted to 95% MDD by ASTM D698 (Reference 448)
- No heavy compaction equipment used within 5 ft. of wall
- γs = 132 lbs/ft³ = saturated unit weight of backfill above water table
- γ = 69.6 lbs/ft³ = submerged soil density
- ϕcu = 11 deg = angle of internal friction of soil (95% Maximum dry density at 2% above optimum moisture; total stress)
- K0 = 0.81 = At-rest earth pressure coefficient of soil
- Plane strain conditions (corner adjustment factors not included)
- Dynamic soil pressure not included
- Design Water Table Unit 3 = Elevation 605 ft.
- Design Water Table Unit 4 = Elevation 615 ft.

FIGURE 2.5-360
Static Lateral At-Rest Pressures, on 1-Ft. Wide Vertical Strip, on Nuclear Island Below-Grade Walls