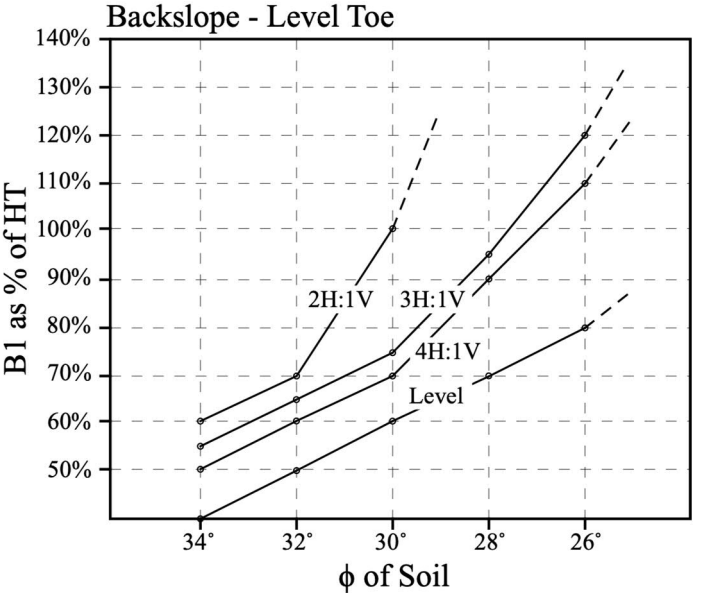
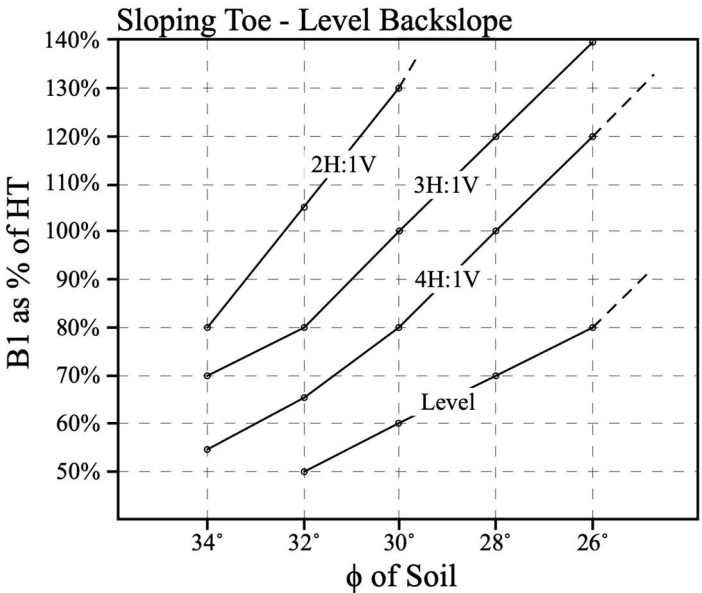
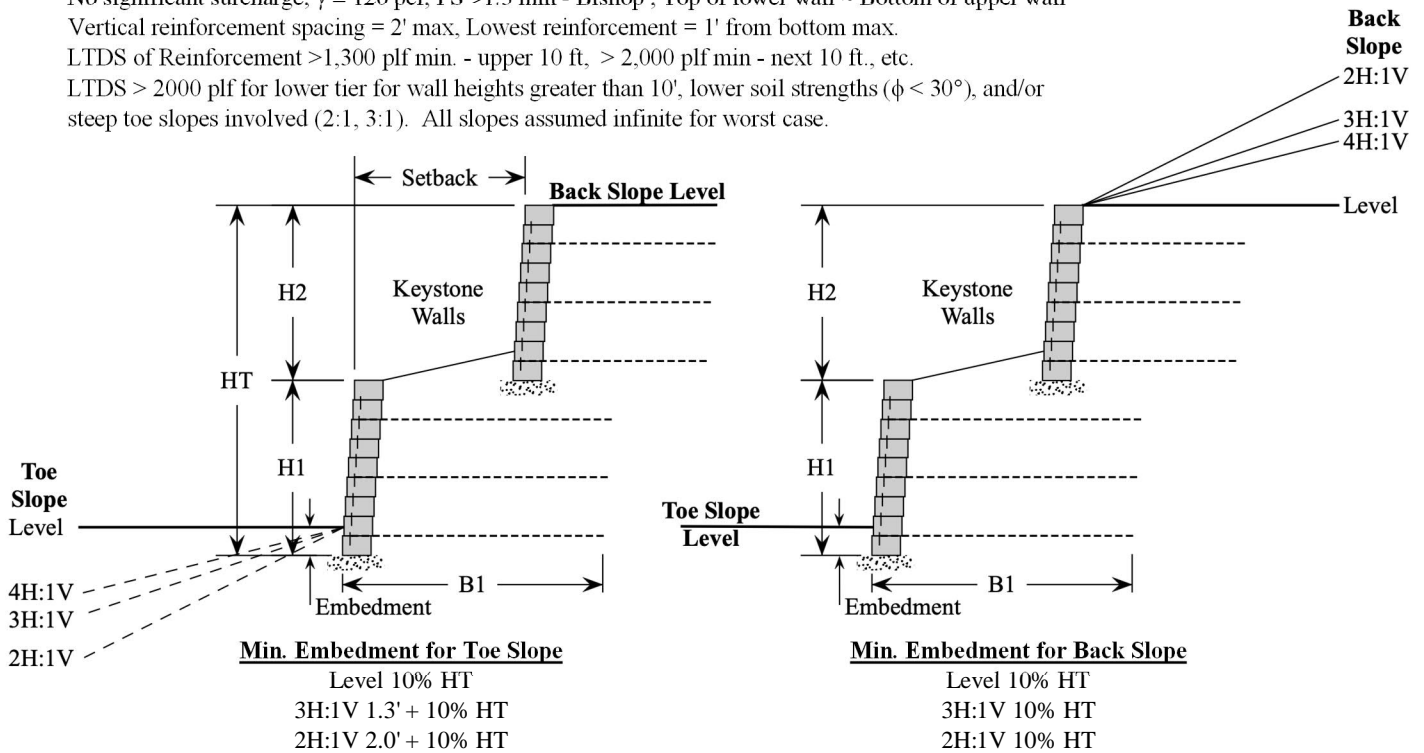


# Tiered Wall - Slope Stability Ratios

The following figures and graphs provide a guide to the relationship between tiered walls and slopes and the B1 to HT ratio required to estimate basic global stability requirements for simple  $\phi$  only soil strength criteria. Slopes 2H:1V and greater require special attention to soil design parameters. Slope Stability Ratios are not to be used for construction.

**Assumptions of Stability Analysis**

- H1 ~ H2 ~ Setback. Note: Closer wall spacing is better for global stability, worse for tensile load.
- No significant surcharge,  $\gamma = 120$  pcf, FS > 1.3 min - Bishop, Top of lower wall ~ Bottom of upper wall
- Vertical reinforcement spacing = 2' max. Lowest reinforcement = 1' from bottom max.
- LTDS of Reinforcement > 1,300 plf min. - upper 10 ft, > 2,000 plf min - next 10 ft., etc.
- LTDS > 2000 plf for lower tier for wall heights greater than 10', lower soil strengths ( $\phi < 30^\circ$ ), and/or steep toe slopes involved (2:1, 3:1). All slopes assumed infinite for worst case.



**Note: The Slope Stability Ratios are for preliminary estimation only and should not be used for construction without review by a qualified engineer.**