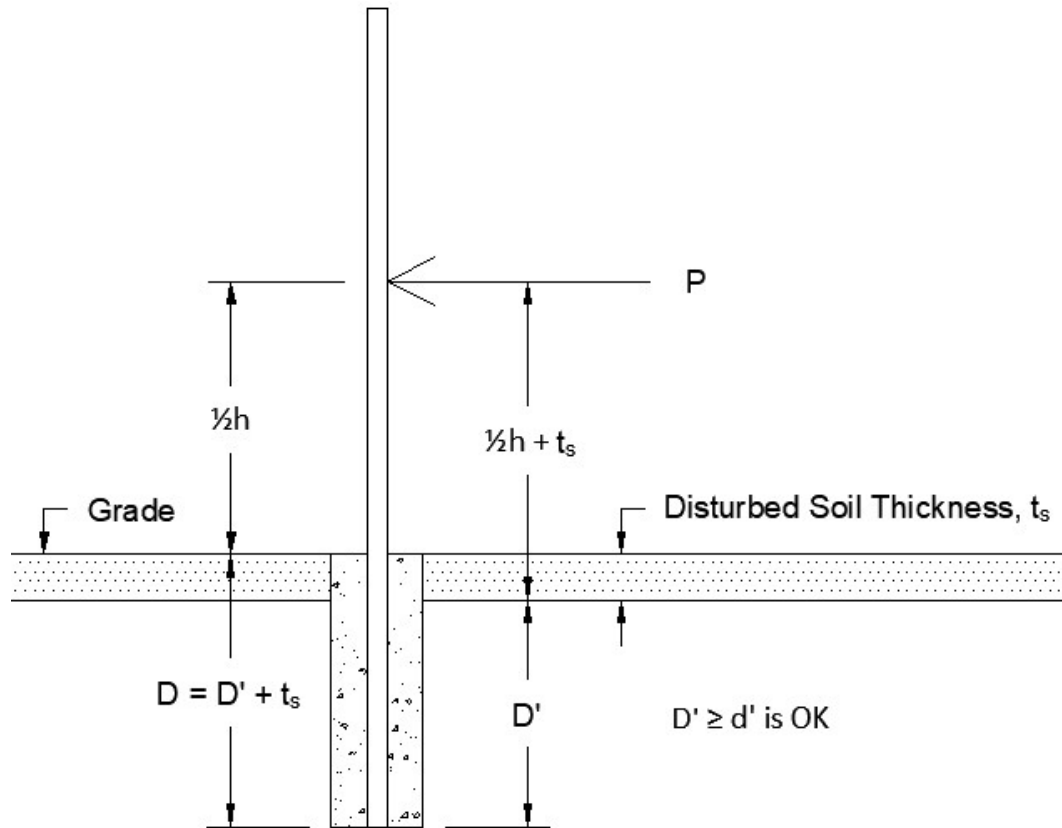


Sizing Post Footings in Disturbed Soil

The post footing depth formulas assume the soil is undisturbed. If the site has been leveled / graded, has a loosely packed / cracked upper layer, the disturbed layer of soil needs to be neglected and the additional moment arm needs to be included in the footing depth calculations.



Post Footing Formulas Adjusted for Disturbed Soil

IBC Eq. 18-1

EP486.1 §6.5.1

$$S_1' = \frac{1}{3} D' S M$$

$$A' = 2.34 P / (S_1' b)$$

$$d' = \sqrt{\frac{6P + \frac{8P(\frac{1}{2}h + t_s)}{D'}}{S M b}}$$

$$d' = \frac{1}{2} A' \left(1 + \sqrt{1 + \frac{4.36(\frac{1}{2}h + t_s)}{A'}} \right)$$