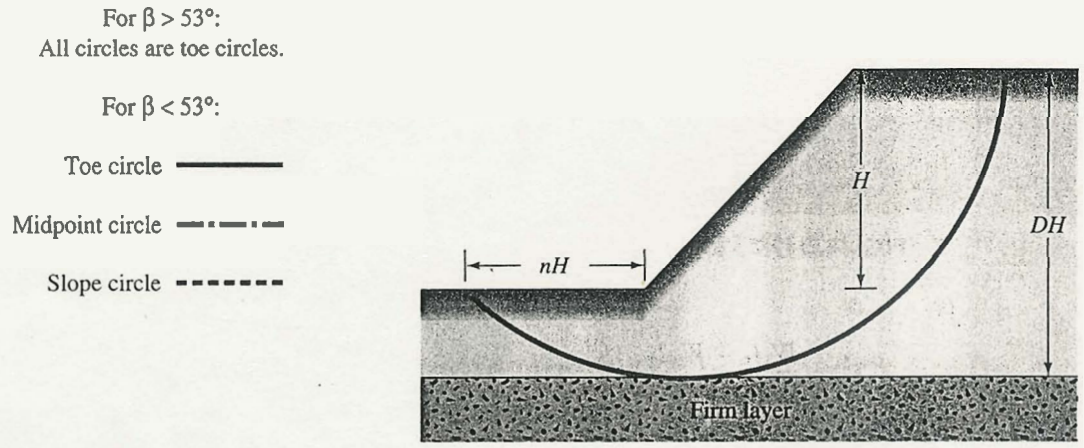
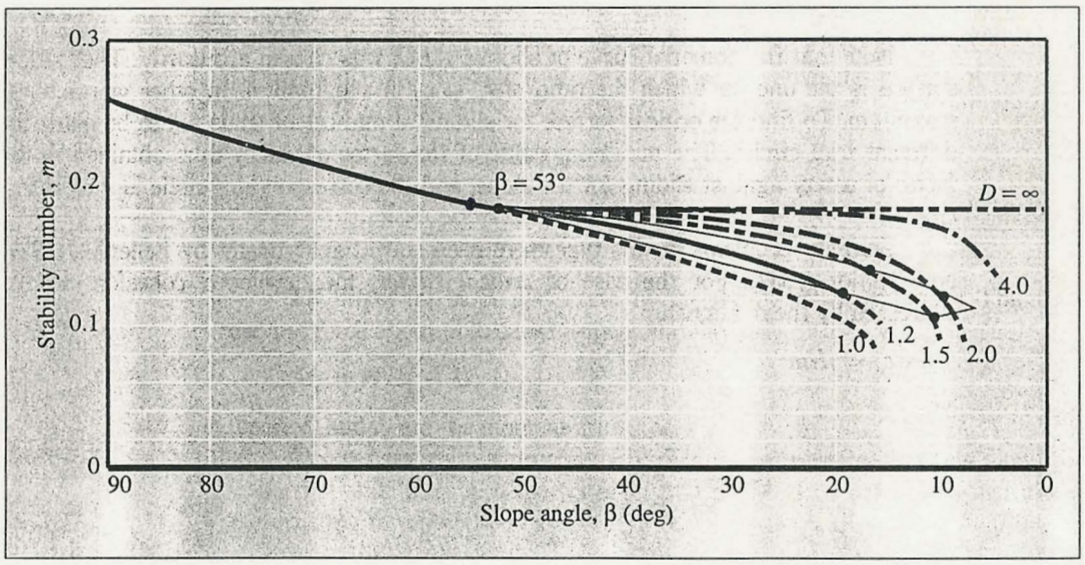
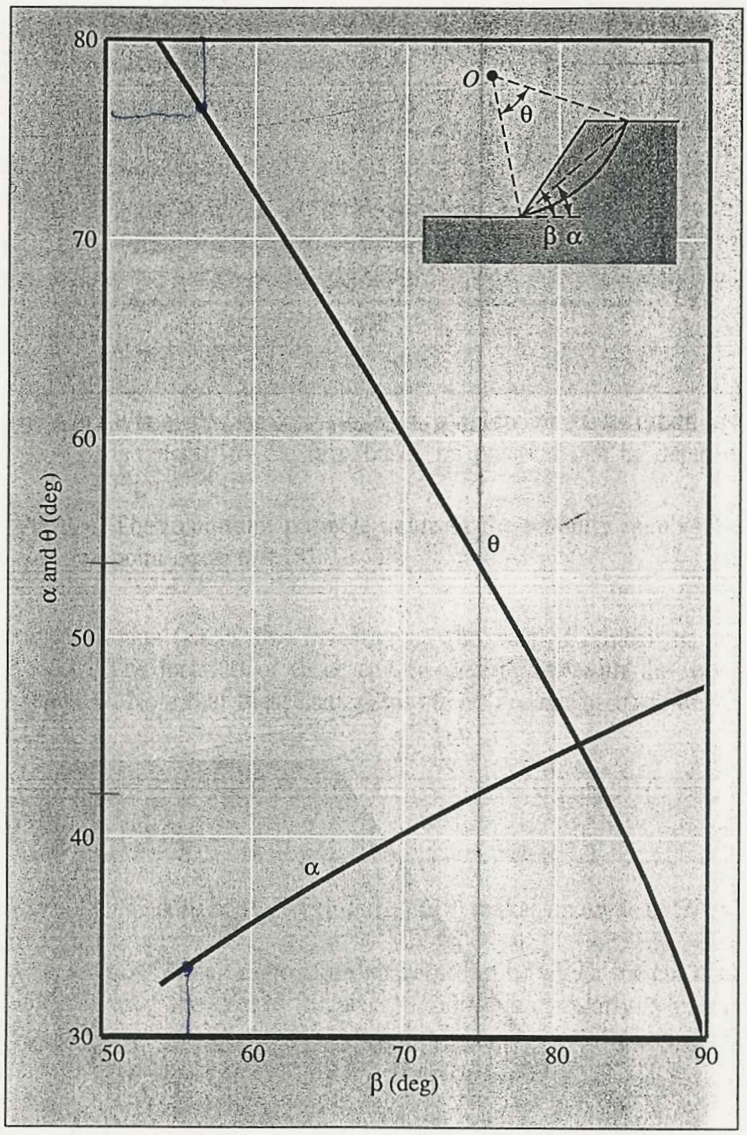


(a)

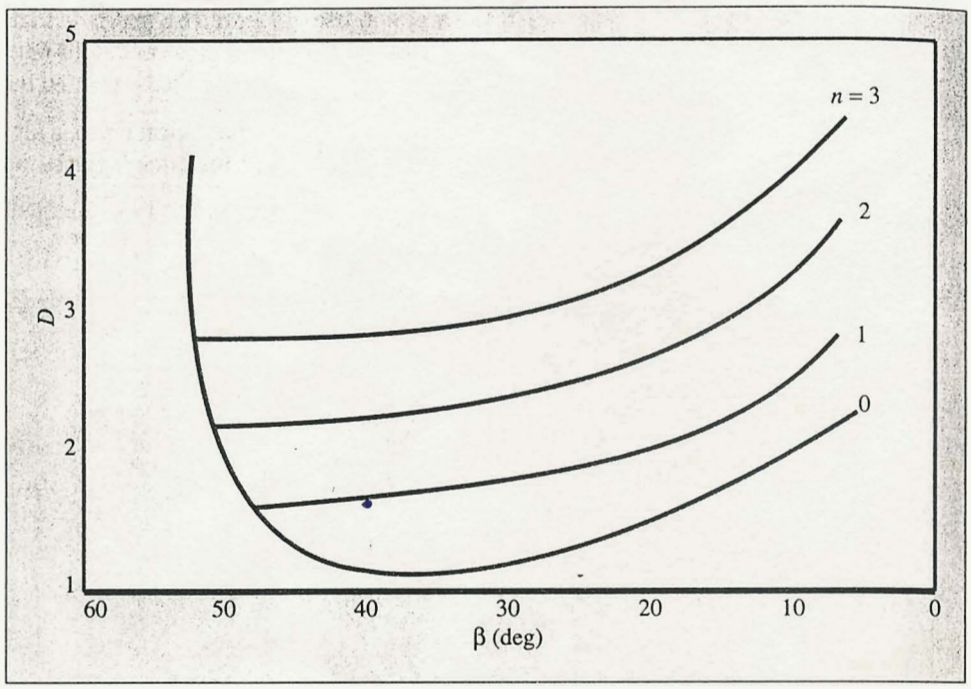


(b)

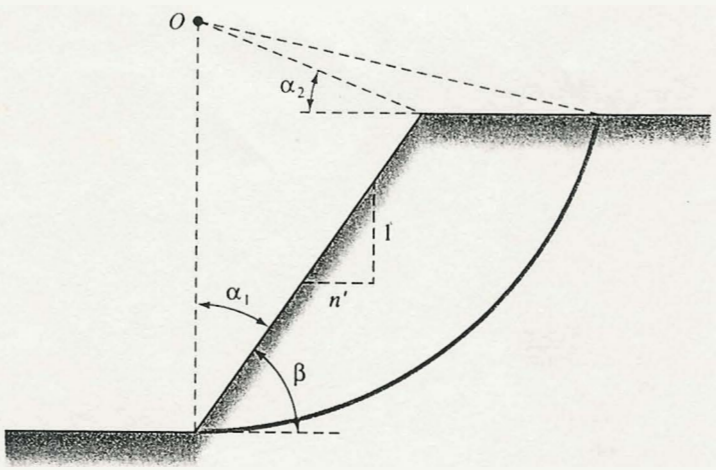
▼ **FIGURE 12.8** (a) Definition of parameters for midpoint circle-type failure; (b) plot of stability number against slope angle (redrawn from Terzaghi and Peck, 1967)



▼ **FIGURE 12.9** Location of the center of critical circles for $\beta > 53°$



▼ **FIGURE 12.10** Location of midpoint circles (after Terzaghi and Peck, 1967)



▼ **FIGURE 12.11** Location of the center of critical toe circles for $\beta < 53°$

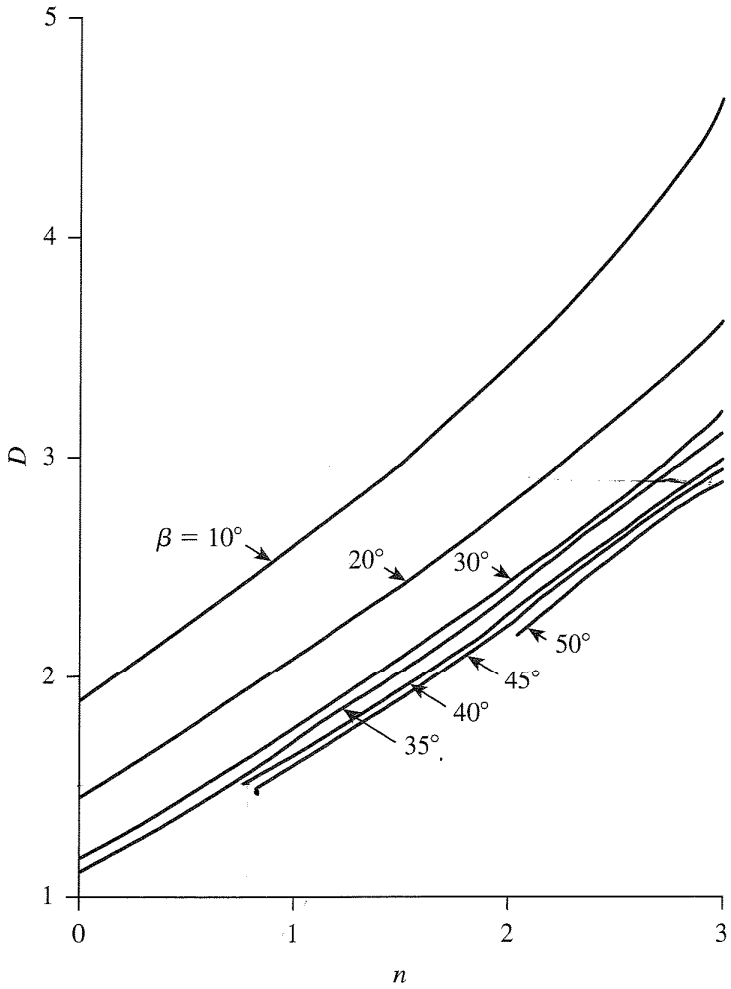


Figure 14.11 Location of midpoint circle

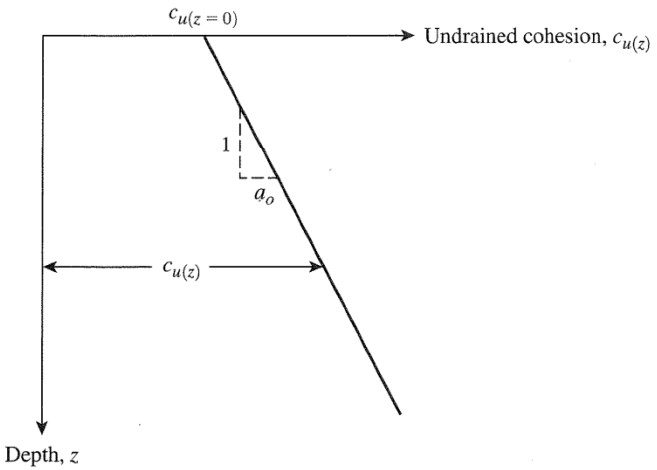


Figure 14.12 Increase of undrained cohesion with depth [Eq. (14.50)]

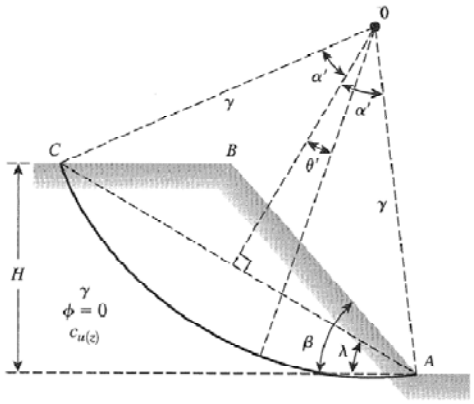


Figure 14.13 Analysis of slope in clay soil ($\phi = 0$ concept) with increasing undrained shear strength

where m = stability number, which is also a function of

$$c_R = \frac{a_0 H}{c_{u(z=0)}} \tag{14.56}$$

Table 14.1 gives the values of m for various values of c_R and β, which are slightly different from those expressed by Koppula (1984).

Table 14.1 Variation of m, c_R, and β [Eqs. (14.55) and (14.56)]

	m					
c_R	1H:1V $\beta = 45°$	1.5H:1V $\beta = 33.69°$	2H:1V $\beta = 26.57°$	3H:1V $\beta = 18.43°$	4H:1V $\beta = 14.04°$	5H:1V $\beta 11.31°$
0.1	0.158	0.146	0.139	0.130	0.125	0.121
0.2	0.148	0.135	0.127	0.117	0.111	0.105
0.3	0.139	0.126	0.118	0.107	0.0995	0.0937
0.4	0.131	0.118	0.110	0.0983	0.0907	0.0848
0.5	0.124	0.111	0.103	0.0912	0.0834	0.0775
1.0	0.0984	0.086	0.0778	0.0672	0.0600	0.0546
2.0	0.0697	0.0596	0.0529	0.0443	0.0388	0.0347
3.0	0.0541	0.0457	0.0402	0.0331	0.0288	0.0255
4.0	0.0442	0.0371	0.0325	0.0266	0.0229	0.0202
5.0	0.0374	0.0312	0.0272	0.0222	0.0190	0.0167
10.0	0.0211	0.0175	0.0151	0.0121	0.0103	0.0090