TABLE 4-2

Bearing-capacity factors for the Terzaghi equations

Values of N_γ for ϕ of 0, 34, and 48° are original Terzaghi values and used to back-compute $K_{p\gamma}$

ϕ, deg	N_c	N_q	N_γ	$K_{p\gamma}$
0	5.7*	1.0	0.0	10.8
5	7.3	1.6	0.5	12.2
10	9.6	2.7	1.2	14.7
15	12.9	4.4	2.5	18.6
20	17.7	7.4	5.0	25.0
25	25.1	12.7	9.7	35.0
30	37.2	22.5	19.7	52.0
34	52.6	36.5	36.0	
35	57.8	41.4	42.4	82.0
40	95.7	81.3	100.4	141.0
45	172.3	173.3	297.5	298.0
48	258.3	287.9	780.1	
50	347.5	415.1	1153.2	800.0

*$N_c = 1.5\pi + 1$. [See Terzaghi (1943), p. 127.]

Reduction Factor:

$$r_\gamma = 1 - 0.25 \log\left(\frac{B}{\kappa}\right) \qquad B \geq 2 \text{ m (6 ft)}$$

where $\kappa = 2.0$ for SI and 6.0 for fps. This equation gives the following results:

B =	2	2.5	3	3.5	4	5	10	20	100 m
r_γ =	1.0	0.97	0.95	0.93	0.92	0.90	0.82	0.75	0.57

One can use this reduction factor with any of the bearing-capacity methods to give

$$0.5\gamma B N_\gamma s_\gamma d_\gamma r_\gamma$$