

Static Pile Capacity

Unit Length Concrete Piles

Clay					Silt					Sand				
N	English Units		Metric Units		N	English Units		Metric Units		N	English Units		Metric Units	
	Fs (TSF)	Qb (TSF)	Fs (kPa)	Qb(kPa)		Fs (TSF)	Qb (TSF)	Fs (kPa)	Qb(kPa)		Fs (TSF)	Qb (TSF)	Fs (kPa)	Qb(kPa)
1	0.06	0	6	0	1	0.04	0	4	0	1	0.01	0	1	0
2	0.11	0	11	0	2	0.08	0	8	0	2	0.03	0	3	0
3	0.16	0	15	0	3	0.12	0	11	0	3	0.05	0	5	0
4	0.20	0	19	0	4	0.17	0	16	0	4	0.07	0	7	0
5	0.25	2	24	192	5	0.22	5	21	479	5	0.09	11	9	1053
6	0.30	3	29	287	6	0.26	7	25	670	6	0.11	13	11	1245
7	0.35	3	34	287	7	0.30	8	29	766	7	0.13	15	12	1436
8	0.40	4	38	383	8	0.33	9	32	862	8	0.14	17	13	1628
9	0.45	4	43	383	9	0.36	10	34	958	9	0.16	19	15	1819
10	0.50	5	48	479	10	0.40	11	38	1053	10	0.18	22	17	2107
11	0.54	5	52	479	11	0.44	12	42	1149	11	0.20	24	19	2298
12	0.58	6	56	575	12	0.48	13	46	1245	12	0.22	26	21	2490
13	0.62	6	59	575	13	0.51	14	49	1341	13	0.24	28	23	2681
14	0.66	7	63	670	14	0.54	15	52	1436	14	0.26	30	25	2873
15	0.70	7	67	670	15	0.58	16	56	1532	15	0.28	32	27	3064
16	0.74	7	71	670	16	0.62	17	59	1628	16	0.30	35	29	3352
17	0.78	8	75	766	17	0.66	19	63	1819	17	0.32	37	31	3543
18	0.82	8	79	766	18	0.70	20	67	1915	18	0.34	39	33	3735
19	0.86	9	82	862	19	0.74	21	71	2011	19	0.36	41	34	3926
20	0.90	9	86	862	20	0.77	22	74	2107	20	0.38	43	36	4118
21	0.93	10	89	958	21	0.80	23	77	2202	21	0.40	45	38	4309
22	0.96	10	92	958	22	0.84	24	80	2298	22	0.42	48	40	4596
23	1.00	11	96	1053	23	0.87	25	83	2394	23	0.44	50	42	4786
24	1.04	11	100	1053	24	0.90	26	86	2490	24	0.46	52	44	4980
25	1.08	12	103	1149	25	0.93	27	89	2586	25	0.48	54	46	5171
26	1.10	12	105	1149	26	0.95	28	91	2681	26	0.50	56	48	5363
27	1.13	13	108	1245	27	0.97	29	93	2777	27	0.52	58	50	5554
28	1.16	13	111	1245	28	1.00	31	96	2969	28	0.54	61	52	5841
29	1.20	14	115	1341	29	1.03	32	99	3064	29	0.56	63	54	6033
30	1.24	14	119	1341	30	1.06	33	102	3160	30	0.58	65	56	6224

English Units	Metric Units
End Area of a 14" square Pile = 1.36 ft ²	End Area of a .356 m square Pile = .1265 m ²
Surface Area of a one foot length of Pile = 4.67 ft ²	Surface Area of a 1 m length of Pile= 1.422 m ²
A bearing of 100 Tons is required when piles end in sand (70' min. depth for liquef.)	A bearing of 890kN is required when piles end in sand (21.5 m min. depth for liquef.)
A bearing of 125 tons is required when piles end in clay	A bearing of 1100 kN is required when piles end in clay
Friction = 4.67*Depth*Fs (T)	Friction = 1.422*Depth*Fs (kN)
End Bearing = 1.36*Qb (T)	End Bearing = .1265*Qb (kN)