31 63 Bored Piles

31 63 26 – Drilled Caissons

	31 63 26.13 Fixed End Caisson Piles	Crew	Daily Output	Labor-Hours	Unit	2022 Bare Costs Material	Labor	Equipment	Total	Total Incl O&P
4300	For other than 50 lb. reinf. per C.Y., add or deduct				Lb.	1.26			1.26	1.3
4400	For steel I-beam cores, add	B-49	8.30	10.602	Ton	2,625	570	400	3,595	4,175
4500	Load and haul excess excavation, 2 miles	B-34B	178	.045	L.C.Y.		2.38	4.31	6.69	8.3
4600	For mobilization, 50 mile radius, rig to 36"	B-43	2	24	Ea.		1,200	395	1,595	2,225
4650	Rig to 84"	B-48	1.75	32			1,650	700	2,350	3,225
4700	For low headroom, add								50%	50%
4750	For difficult access, add								25%	25%
5000	Bottom inspection	1 Skwk	1.20	6.667	↓		395		395	590
	31 63 26.16 Concrete Caissons for Marine Construction									
0010	**CONCRETE CAISSONS FOR MARINE CONSTRUCTION**									
0100	Caissons, incl. mobilization and demobilization, up to 50 miles									
0200	Uncased shafts, 30 to 80 tons cap., 17" diam., 10' depth	B-44	88	.727	V.L.F.	32	42.50	24	98.50	126
0300	25' depth	B-44	165	.388	V.L.F.	23	22.50	12.90	58.40	73.5
0400	80 to 150 ton capacity, 22" diameter, 10' depth		80	.800		40	46.50	26.50	113	145
0500	20' depth		130	.492		32	28.50	16.35	76.85	96.5
0700	Cased shafts, 10 to 30 ton capacity, 10-5/8" diam., 20' depth		175	.366		23	21.50	12.15	56.65	71
0800	30' depth		240	.267		21.50	15.50	8.85	45.85	57
0850	30 to 60 ton capacity, 12" diameter, 20' depth		160	.400		32	23.50	13.30	68.80	85
0900	40' depth		230	.278		24.50	16.20	9.25	49.95	61.5
1000	80 to 100 ton capacity, 16" diameter, 20' depth		160	.400		45.50	23.50	13.30	82.30	100
1100	40' depth		230	.278		42.50	16.20	9.25	67.95	81.5
1200	110 to 140 ton capacity, 17-5/8" diameter, 20' depth		160	.400		49	23.50	13.30	85.80	104
1300	40' depth		230	.278		45.50	16.20	9.25	70.95	84.5
1400	140 to 175 ton capacity, 19" diameter, 20' depth		130	.492		53	28.50	16.35	97.85	120
1500	40' depth	↓	210	.305	↓	49	17.75	10.15	76.90	92
1700	Over 30' long, L.F. cost tends to be lower									
1900	Maximum depth is about 90'									

31 63 29 – Drilled Concrete Piers and Shafts

31 63 29.13 Uncased Drilled Concrete Piers

0010	**UNCASED DRILLED CONCRETE PIERS**									
0020	Unless specified otherwise, not incl. pile caps or mobilization									
0050	Cast in place augered piles, no casing or reinforcing									
0060	8" diameter	B-43	540	.089	V.L.F.	4.10	4.47	1.46	10.03	12.7
0065	10" diameter		480	.100		6.50	5.05	1.64	13.19	16.4
0070	12" diameter		420	.114		9.20	5.75	1.87	16.82	20.5
0075	14" diameter		360	.133		12.40	6.70	2.18	21.28	26
0080	16" diameter		300	.160		16.70	8.05	2.62	27.37	33
0085	18" diameter	↓	240	.200	↓	20.50	10.05	3.27	33.82	41
0100	Cast in place, thin wall shell pile, straight sided,									
0110	not incl. reinforcing, 8" diam., 16 ga., 5.8 lb./L.F.	B-19	700	.091	V.L.F.	9.25	5.40	3	17.65	21.5
0200	10" diameter, 16 ga. corrugated, 7.3 lb./L.F.		650	.098		12.10	5.85	3.24	21.19	26
0300	12" diameter, 16 ga. corrugated, 8.7 lb./L.F.		600	.107		15.70	6.30	3.51	25.51	31
0400	14" diameter, 16 ga. corrugated, 10.0 lb./L.F.		550	.116		18.45	6.90	3.82	29.17	35
0500	16" diameter, 16 ga. corrugated, 11.6 lb./L.F.	↓	500	.128	↓	22.50	7.60	4.21	34.31	41
0800	Cast in place friction pile, 50' long, fluted,									
0810	tapered steel, 4,000 psi concrete, no reinforcing									
0900	12" diameter, 7 ga.	B-19	600	.107	V.L.F.	28.50	6.30	3.51	38.31	44.5
1000	14" diameter, 7 ga.	"	560	.114	"	31	6.75	3.76	41.51	48.5
1100	16" diameter, 7 ga.	B-19	520	.123	V.L.F.	36.50	7.30	4.04	47.84	55.5
1200	18" diameter, 7 ga.	"	480	.133	"	42.50	7.90	4.38	54.78	64
1300	End bearing, fluted, constant diameter,									
1320	4,000 psi concrete, no reinforcing									