

31 41 Shoring

31 41 16 – Sheet Piling

31 41 16.10 Sheet Piling Systems

5000 For treated lumber add cost of treatment to lumber

Crew	Daily Output	Labor Hours	Unit	Material	2022 Bare Costs Labor	Equipment	Total	Total Incl O&P
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31 43 Concrete Raising

31 43 13 – Pressure Grouting

31 43 13.13 Concrete Pressure Grouting

0010 CONCRETE PRESSURE GROUTING

0020	Grouting, pressure, cement & sand, 1:1 mix, minimum	B-61	124	.323	Bag	24	15.55	2.59	42.14	52.5
0100	Maximum		51	.784	"	24	38	6.30	68.30	90
0200	Cement and sand, 1:1 mix, minimum		250	.160	C.F.	48	7.70	1.29	56.99	66
0300	Maximum		100	.400		72.50	19.30	3.22	95.02	112
0400	Epoxy cement grout, minimum		137	.292		935	14.10	2.35	951.45	1,050
0500	Maximum	↓	57	.702	↓	935	34	5.65	974.65	1,075
0700	Alternate pricing method: (Add for materials)									
0710	5 person crew and equipment	B-61	1	40	Day		1,925	320	2,245	3,225

31 45 Vibroflotation and Densification

31 45 13 – Vibroflotation

31 45 13.10 Vibroflotation Densification

0010	VIBROFLOTATION DENSIFICATION	R314513-90								
0900	Vibroflotation compacted sand cylinder, minimum	B-60	750	.075	V.L.F.		3.95	3.27	7.22	9.5
0950	Maximum		325	.172			9.10	7.55	16.65	22
1100	Vibro replacement compacted stone cylinder, minimum		500	.112			5.90	4.91	10.81	14.2
1150	Maximum		250	.224	↓		11.85	9.80	21.65	28.5
1300	Mobilization and demobilization, minimum		.47	.119	Total		6,300	5,225	11,525	15,100
1400	Maximum	↓	.14	.400	"		21,200	17,500	38,700	51,000

31 46 Needle Beams

31 46 13 – Cantilever Needle Beams

31 46 13.10 Needle Beams

0010 NEEDLE BEAMS

0011	Incl. wood shoring 10' x 10' opening									
0400	Block, concrete, 8" thick	B-9	7.10	5.634	Ea.	67	259	47	373	51
0420	12" thick		6.70	5.970		84	275	49.50	408.50	55
0800	Brick, 4" thick with 8" backup block		5.70	7.018		84	325	58.50	467.50	63
1000	Brick, solid, 8" thick		6.20	6.452		67	297	53.50	417.50	57
1040	12" thick		4.90	8.163		84	375	68	527	72
1080	16" thick	↓	4.50	8.889		117	410	74	601	82
2000	Add for additional floors of shoring	B-1	6	4	↓	67	185		252	35