

Fence Post Depth & Concrete Chart

How deep to set fence posts for every common fence height and frost depth, and how much concrete each hole takes. Same rules as our fence post depth calculator.

Hole depth (below grade)

Depth = the deepest of: 24 in, one third of the fence height above ground, or 6 in below your frost line. Add 6 in in sandy soil and 3 in in clay. Dig the hole a further ~6 in for a gravel drainage base.

Fence height	No frost	12" frost	24" frost	36" frost	48" frost	Post length (no frost)
3 ft	24"	24"	30"	42"	54"	5 ft
4 ft	24"	24"	30"	42"	54"	6 ft
5 ft	24"	24"	30"	42"	54"	7 ft
6 ft	24"	24"	30"	42"	54"	8 ft
7 ft	28"	28"	30"	42"	54"	10 ft
8 ft	32"	32"	32"	42"	54"	11 ft

Post length to buy = fence height + depth, rounded up to the next foot (then up to the next stock length: 8, 10 or 12 ft). Frost-line depths vary by town: ask your building department.

Hole diameter

About 3 × the post width, never less than 9 in: 12 in for a 4×4, 18 in for a 6×6. Chain-link and vinyl posts: follow the manufacturer's hole size.

Concrete per post (cu ft / 80 lb bags)

Post and hole	24" deep	30" deep	36" deep	42" deep	48" deep
4×4 in 10" hole	0.92 / 2	1.15 / 2	1.38 / 3	1.61 / 3	1.84 / 4
4×4 in 12" hole	1.40 / 3	1.75 / 3	2.10 / 4	2.45 / 5	2.80 / 5
6×6 in 18" hole	3.11 / 6	3.89 / 7	4.67 / 8	5.45 / 10	6.23 / 11

Concrete = hole cylinder – the post's own volume (3.5 in square for a 4×4, 5.5 in for a 6×6), ÷ 0.6 cu ft per 80 lb bag (÷ 0.45 for 60 lb bags), rounded up. Add a bag or two for spillage.

Jot down your numbers

Fence height (ft)	_____	Frost depth (in)	_____
Soil type	_____	Hole depth (in)	_____
Hole diameter (in)	_____	Bags per post	_____
Number of posts	_____	Total bags	_____

Call 811 (or your local one-call service) a few days before digging so buried lines are marked. Pool barriers, retaining walls and fences over the height your town allows without a permit have their own rules.