

Foundation Recommendations

NOTE:

- Never go below the minimums, but if your Foundation Engineer designs a foundation that is a greater diameter or deeper depth, please follow the Engineer's specifications. If using a Concrete Form (tube), backfill with concrete between the form and undisturbed soil. This may be performed before or after filling the tube with concrete.
- The last foot of depth may be filled with soil and compacted. Your concrete can rise above ground level a maximum of 2 feet, and still maintain our designed stability (common practice in parking lots and other areas where vehicles may impact a pole). If constructing your foundation near high vibration areas (such as next to railroad tracks), always go larger and deeper than the minimums.
- Concrete PSI Requirements
All foundations must use a minimum 5000 PSI concrete mix.
PSI (pounds per square inch) measures compressive strength—anything less compromises structural integrity, especially in wind-prone, seismic, or high-vibration environments.
Higher PSI (up to 6000–7000) may be recommended for areas with frequent vehicle impact risk, like parking lots.

Direct Bury Type Poles:

Each StrongPole Direct Bury Pole is clearly marked at the Factory for correct bury depth.

When installing a Direct Bury Pole, DO NOT back-fill with soil, as this will not be as stable as it needs to be. Pour concrete to fill the area between the pole and the undisturbed soil. The last foot of depth may be filled with soil and compacted.

If using a Concrete form, after filling the form around the pole with concrete, fill outside the form with concrete as well instead of back-filling dirt around the form. The last foot of depth outside the form may be filled with soil and compacted.

Expanding foam concrete not recommended or approved!

We have had several reports of the expanding foam concrete material shrinking back from the pole and sides of the hole. This makes for a very unstable and shaky foundation. If you insist on using this method please test the foam before installation of your pole. We have not yet found a foam that does not shrink back. If you find a product that performs well we would love to know about it. Good luck!

Mounting a Pole to a Parking Garage Deck:

This is not recommended, and your installation may not have the same rigidity or strength as a foundation that is correctly built. If you are forced to mount a StrongPole this way, make sure the concrete deck is at least 10" thick, and use anchors that are at least ½" diameter, and at least 6" long.

Mounting to a Dock or Pier:

This is not recommended at all, and could result in less stability and more shake than desired. No Pole over 12 ft should be mounted to a dock or pier.

If the dock you will be mounting to is concrete, then the minimums listed above for garage decks should be followed. Any thinner should be bolted instead of anchored, with a steel plate (at least twice as large as the base, and a minimum of ¼" thick), should be used below the deck/dock.

If the pier or dock is wood, then bolt the pole with a steel plate below the dock/deck (at least twice the diameter of the pole base, and at least ¼" thick).

Concrete Foundation Mounting – Minimum Foundation Diameters and Depths

Pole Height	Most Hard Clay Soils	Most Sandy Soils
12 ft Pole	18" Diameter 4 ft Deep	24" Diameter 5 ft Deep
16 ft Pole	18" Diameter 4 ft Deep	24" Diameter 5 ft Deep
20 ft Pole	24" Diameter 5 ft Deep	30" Diameter 6 ft Deep
25 ft Pole	30" Diameter 5 ft Deep	30" Diameter 6 ft Deep