Step 1

## Check for Gas, Water, and Electric Lines before Locating Posts

Determine where to sink the pergola's six support posts after checking for gas, water, or electric lines. Drive a stake and string at the first corner. The six-by-six posts must be aligned perfectly straight and parallel to each other.

Step 2

## Align a Back Corner Stake with String and Triangle

Position a large layout triangle along a two-by-two at the pergola's front edge. Stretch string to the back corner, ensuring that the angle at the front stake is 90 degrees. Align a stake at the back corner. This pergola/arbor design is rectilinear.

Step 3

## Tie Markers along the String to Mark Pergola Post Positions

Tie markers along the string for the middle and back post positions on that side of the arbor. Equally space them with a tape measure. Repeat for three post positions on the other side. Drive a stake at each marker.

Step 4

## Mark Post Holes with Powdered Chalk and a Bottomless Bucket

Center a bottomless bucket on each of the six stakes and sprinkle powdered chalk around the outside perimeter to mark a posthole digging line. Carefully remove the stakes without disturbing the digging line for each posthole.

Step 5

## Dig Holes at Least 3-Feet Deep with a Posthole Digger

Dig six holes within the chalk lines with a posthole digger, making them slightly deeper than 3 feet. Building codes in this hurricane-prone area require that holes be at least 3-feet deep to keep the posts stable in high winds.

Step 6

## Set Posts in the Holes and Ensure They Are Plumb

Add 2-3 inches of crushed rock to holes to promote drainage and prevent wood rot. Drop six-by-six posts into holes. Ensure pergola posts are plumb with a post level. Clamp temporary braces to stakes and posts to hold them vertical.

Step 7

## Pour in Dry Concrete Mix and Add Water

Fill each posthole with dry concrete mix and add a gallon of water to each. Be careful to keep it off the exposed upper portion of the posts. We used Quickcrete, a quick drying concrete that requires no mixing.

Step 8

## Attach Temporary Supports to Bear the Weight of Two Beams

Attach temporary horizontal supports to hold up the two chamfered beams sandwiching each row of side posts. Pre-drill two holes through the side beams and posts for carriage bolts. Stagger them so they are less likely to split the posts.

Step 9

## Drive in Carriage Bolts and Secure with Nuts and Washers

Drive carriage bolts through the holes with a club hammer and secure the bolts with nuts and washers on the outside surface of the side beams. Tighten the nuts with a socket wrench until the wood begins to compress.

Step 10

## Attach Cross Beams with Hurricane Clips

Chamfer the cross beams and position them on top of the side beams, equally-spaced from the pergola's front to its back. Attach them with metal hurricane ties held temporarily with a screw until you hammer in hot-dipped galvanized bracket nails.