

How to Build a Movable Canopy



Step One: Preparing the Site and Setting the Corner Stones

Parker says the most important design principle is the overall architectural style of the arbor, which should complement the style of the house; using matching building materials often helps achieve this goal. Parker also points out that the proportions of the arbor must be pleasing to the eye; the structure should be built with larger, heavier pieces along the base, with smaller, lighter pieces in the upper portions. If the site features a particularly attractive view--as this one does--the arbor can actually be built to "frame" the scenery.

As the project gets underway, the crew has already constructed a terra cotta tile patio and a seat wall that encloses the area. They have also installed a tile fountain to add a sense of coolness to the sunny patio.



Figure A

The posts for this arbor have been custom-milled to match the Spanish / Mediterranean style of the house. (However, Parker explains that plain posts will also work here, and will save some expense.) To anchor the posts, the crew has poured solid concrete footings that are fitted with square steel sleeves (**figure A**) set to protect the bottom of the posts from contact with the ground.

Next, the crew uses a sander to take off just enough width along the bottom of the posts to enable them to fit snugly into the steel sleeves. Then, they slide the posts into the sleeves and use a level to make sure they're plumb. Once the posts are in place, the crew cuts 2"x10"s to lengths of 16 feet for the lower beams.



Figure B

Step Two: Laying the Crosspieces and Adding the Plants

To give the overhead beams decorative detail, landscape contractor Amador Banuelos uses a radius, or half-moon, cut on the ends. First, he measures the 45-degree angle on the end of the board and marks it. Then, he locates the center of the line by measuring the angle. To create the radius cut, he ties a pencil on a string which he holds in place at the corner, drawing a perfect arc just above the angle (**figure B**). Finally, he cuts out a half moon along the pencil markings and sands the half-moon for a finished look.



Figure C

Once the ends of the beams have been cut, the crew secures them to the posts with a long 5/8" drill bit (**figure C**) and 5/8" hex bolts (**figure D**).



Figure E

Between the beams, leftover lengths from the 6"x6" posts are secured in place at even intervals (**figure E**), which completes the arbor frame.



Figure F

Since the goal is an arbor with an open, airy feel, the structure is built as a basic frame for the retractable canopy. For the crosspieces, Parker uses 15-foot -long 2"x8"s with the same radius cuts as the beams (**figure F**).



Figure G

Next, he sandwiches those 2"x 8"s on both sides of the 2"x 6"s using galvanized screws to attach them. He sets the crosspieces four feet apart to achieve the open look that's desired (**figure G**), which completes the structure (it will be painted later to match the house).



Figure H

With the structural work complete, it's time to add the canopy. The custom-made canopy, which has been crafted from sturdy, mildew-resistant acrylic, accounts for the most expensive element of the project. Here, the canopy is installed by an awning shop, but could also be installed by a detail-oriented do-it-yourselfer. The process of hooking snap hooks to a steel cable that runs down each side of the arbor inside the frame can be rather tedious (**figure H**), but Parker estimates that with the help of a friend , a homeowner could probably complete the job in about two hours.

Parker says he wants to plant a Mediterranean garden to complement the house and arbor and also to create a natural look and feel. Most of the varieties are drought-tolerant and feature vibrant colors. Parker recommends using plants that are hardy and can drape over walls or be used as a ground cover. He chooses long-blooming plants with lacy foliage that can be grown in almost any climate.

Featured plants include:

- Lamb's Ear (*Stachys byzantia*), Zones 4-8
- Bluebeard (*Caryopteris incanna*) 'Blue Mist', Zones 6-9
- Moonbeam (*Coreopsis incanna*), Zones 3-8

- Lavender (*Lavandula*), Zones 3-8
- Black-Eyed Susan (*Rudbeckia fulgida*), Zones 4-9

Step Three: Creating Stone Islands and Adding Plants

Landscape contractor Jim Grove creates a beautiful and unique look for the patio using interlocking concrete pavers. According to Grove, these are more durable and more flexible and will not expand. He also points out that they are about three times stronger than concrete if properly installed. Grove installs the pavers on a path he has built near the house. The first step is to excavate the site by digging a bed about six to seven inches deep. Then, Grove lays down about four inches of road base rock, the same material used in constructing roads (available in most building supply stores).



Figure I

Grove uses a vibratory clay compactor to compact the road base (**figure I**).



Figure J

Next, the crew lays and levels two steel pipes to create a form (**figure J**).



Figure K

Then, they pour in a one-inch layer of sand and level it with a piece of wood (**figure K**).



Figure L

Finally, they tap down the sand (**figure L**) to remove any air pockets and remove the steel pipes. Now, the level bed is ready for the pavers.



Figure M

The pavers have spacing ribs on the sides so that when they are being placed they should be set against each other and put down vertically in place so they are tight (**figure M**); the sand will help hold them in place. The pavers Grove uses come in different sizes, which allow for curved lines; he recommends mixing the sizes for visual interest.



Figure N

Grove explains that an edge is needed to hold the pavers in place. He uses plastic snap edges that come in sections (**figure N**). These are snapped along the edges of the path and held in place with metal stakes (the grass will eventually grow in and hid the plastic edges). Grove compacts the pavers using the vibratory compactor, then sweeps sand over them to fill in between the crevices. Once complete, the path has a beautiful, visually interesting surface that looks like it's been in place for years.

Step Four: The Finished Arbor

When the project began, homeowners Rick and Leah Willson had a lovely site with a citrus orchard and a beautiful view; however, the site had no escape from the almost constant sun exposure and needed a focal point. Now, the finished arbor and the movable canopy add a great structural element to the space and, with the Mediterranean-style patio, provide a stylish haven from the sun (**figure O**).