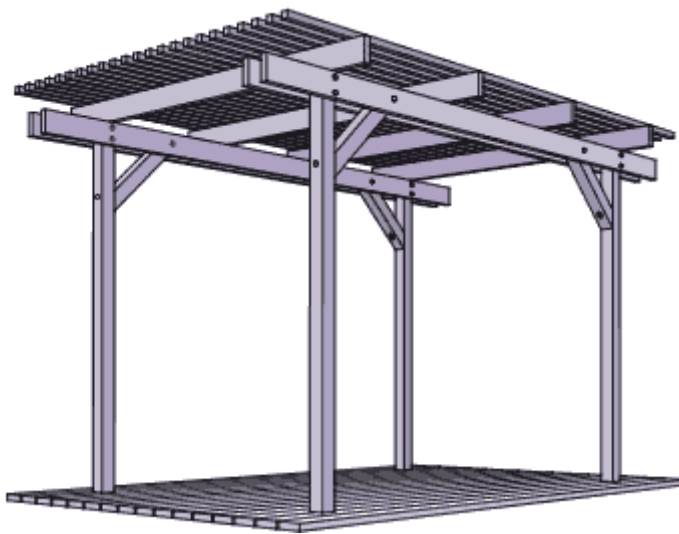


Build the Windsorshade shelter

This handsome, freestanding redwood shade shelter will provide a cool place to relax in the garden or yard. The shelter can also be built next to your home where it will keep the whole house cooler by shielding windows, walls and glass doors from the sun.

Redwood grades especially suited for this and other outdoor garden projects are Construction Common and Deck Common. Use the all-heartwood grades, Construction Heart or Deck Heart, where a greater degree of decay resistance is needed.

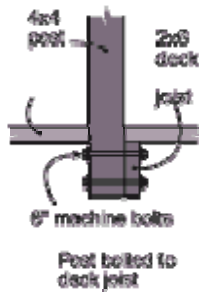


A simple weekend project, this shelter will shade an area of approximately 8 feet by 12 feet or 96 square feet. The basic plan can be modified by adding more posts, longer beams and additional louvers. If you decide to enlarge this project, keep in mind that the rafters should span no more than 6 feet.

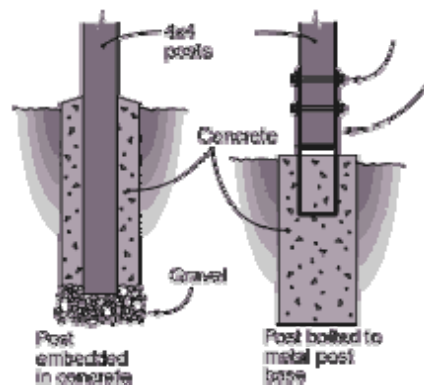
Before beginning any home remodelling project, check with your local building department to learn if a permit is required and to discover any special building codes for your locality. Use only non-corrosive hardware and fasteners to prevent staining. If you plan to paint your shelter, it will be easier if you prime all edges, ends and sides before constructing the shelter.

The first step is to place and prepare the footings...

Prepare the footings

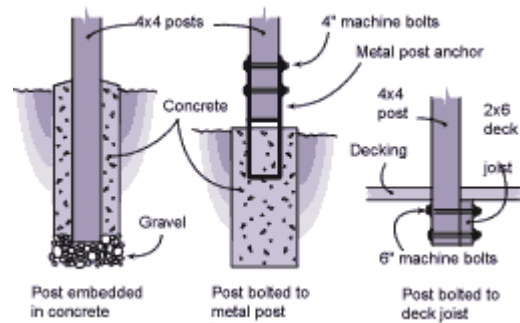


Prepare footings for the 4x4 posts that are spaced 6 feet o.c. and 9 feet o.c. The type of footing for posts will vary depending on the deck, patio or type of bare ground the shelter covers. In all cases, the posts should be heartwood grade redwood. Check local building codes for footing requirements in your area. Use quick-setting concrete that hardens in about an hour.

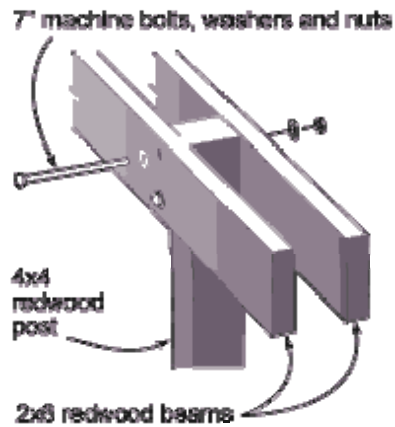


Attach the posts

Install or attach a 10- to 12-foot-long 4x4 post in each footing. Use a carpenter's level and temporary cross bracing—from the ground to the post—to keep the post plumb. Trim posts to final height if necessary. Posts should measure 8 feet high from the surface of the ground, patio or deck. Remove the temporary bracing once the beams and rafters are installed.

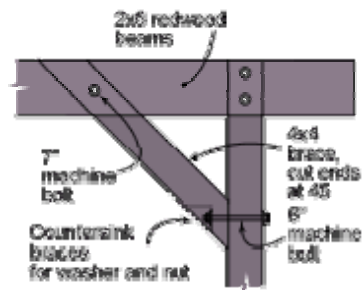


Install the beams



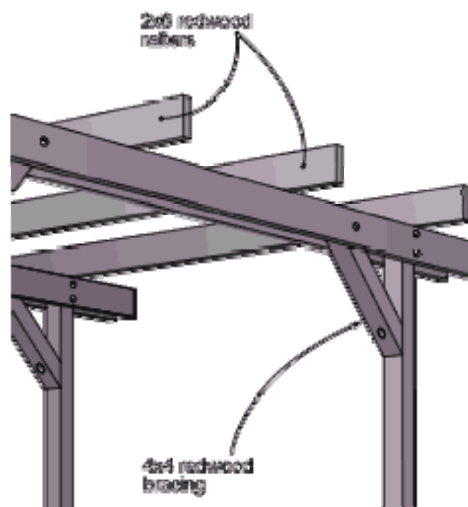
Two 12-foot-long 2x6 beams are attached to each set of posts, one on each side and extending 18 inches outward from the centre line of the posts. Nail or screw the beams to position them even with the tops of the posts. Drill two 1 1/2" diameter holes through the double beams and posts. Secure with two 7-inch machine bolts.

Cut and attach the braces



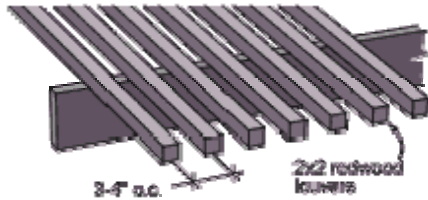
Cut the remaining 4x4s into four pieces, each 30 inches long and with a 45-degree angle on each end. Fasten the bottom of each brace with a 6-inch machine bolt and countersink the washer and nut. The top of the brace is sandwiched between the double beams and secured with a 7-inch machine bolt.

Install the rafters

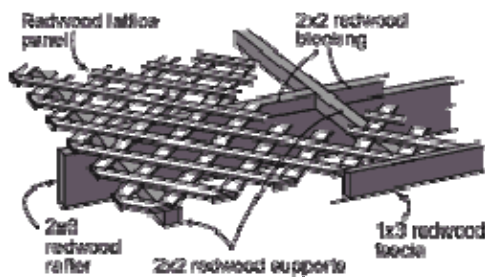


The 8-foot 2x6 rafters start over the posts and are spaced 18 inches o.c. Toenail each rafter with 8d nails on top of the beams extending 12 inches outward front and rear. Secure the rafters with two nails driven through each side of the rafters and into each of the double beams. Screws may also be used. In either case, Predrill to prevent splitting. Remove post bracing.

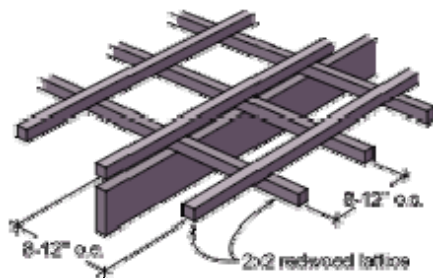
Attach the louvers



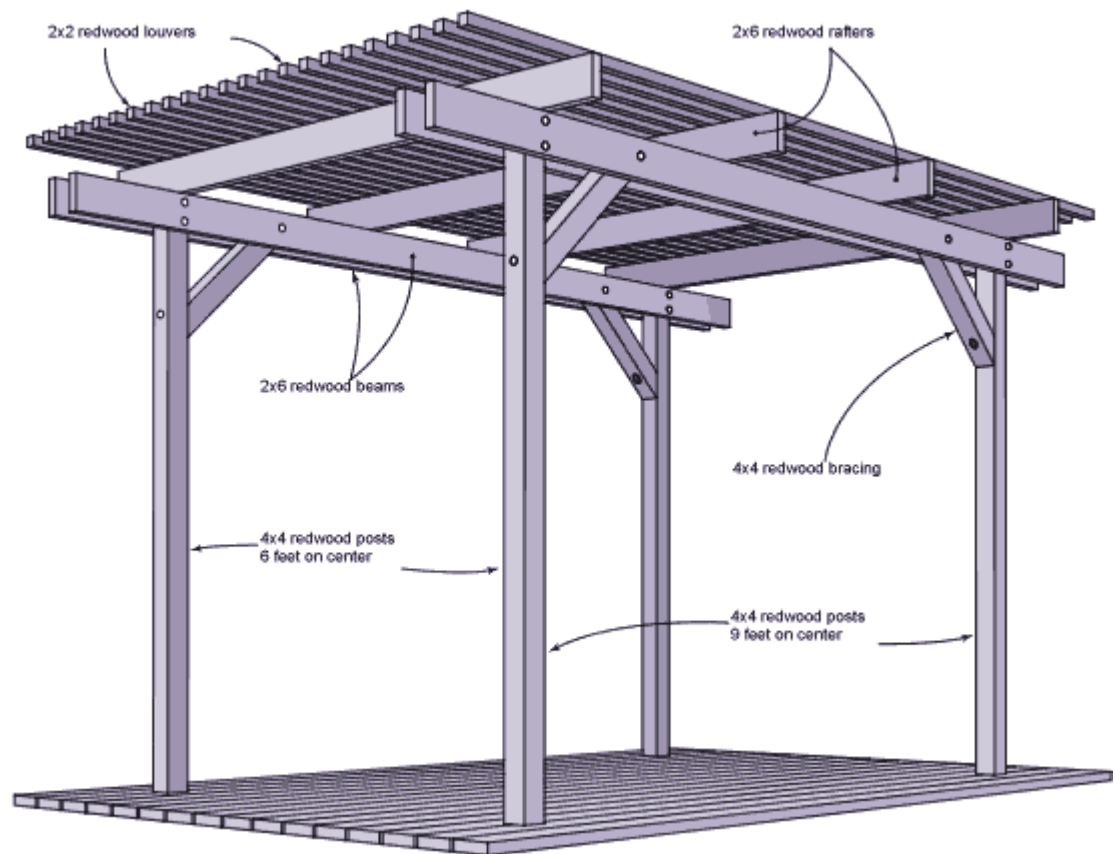
Attach the louvers on top of the rafters with an over-hang of 18 inches. Each louver is fastened from above with 8d nails or 2 1/2-inch screws, through predrilled holes, into the rafters below. Check rafter spacing with a ruler and mark each louver for drilling on the ground before installing. Louver spacing determines the amount of shade the shelter will provide. For moderate filtered sunlight, space louvers 4 inches o.c. If more shade is desired, space louvers 3 inches o.c.—you will require an additional 8 louvers for this spacing.



Ready-made lattice As an alternative to louvers, consider using ready-made redwood lattice that will provide moderate filtered sunlight in an interesting pattern. Use 2x2 redwood as supports and blocking. Attach the preassembled 4x8 lattice panels to the 2x2s with 1-inch, non-corrosive fasteners. For a more finished look, frame the lattice all around with 1x3 redwood fascia.



Custom lattice You can design and build your own lattice pattern to meet your shade requirements. Layout the 2x2s for the custom lattice and assemble with non-corrosive fasteners before securing to the rafters.



Materials for Shade Shelter

	Quantity	Size	Length
Posts	4	4x4	10-12 feet*
Beams	4	2x6	12 feet
Rafters	4	2x6	8 feet
Louvers	23	2x2	12 feet
Braces	4	4x4	3 feet
Machine bolts, washers and nuts	12 sets 4-12 sets	1/2x7 inches 1/2x6 inches	
Deck screws	2 pounds	2-1/2 inches	
Nails	2 pounds 8d		
Concrete and gravel	As needed		

* Depends on the type of footing
used