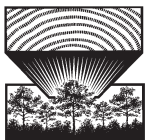
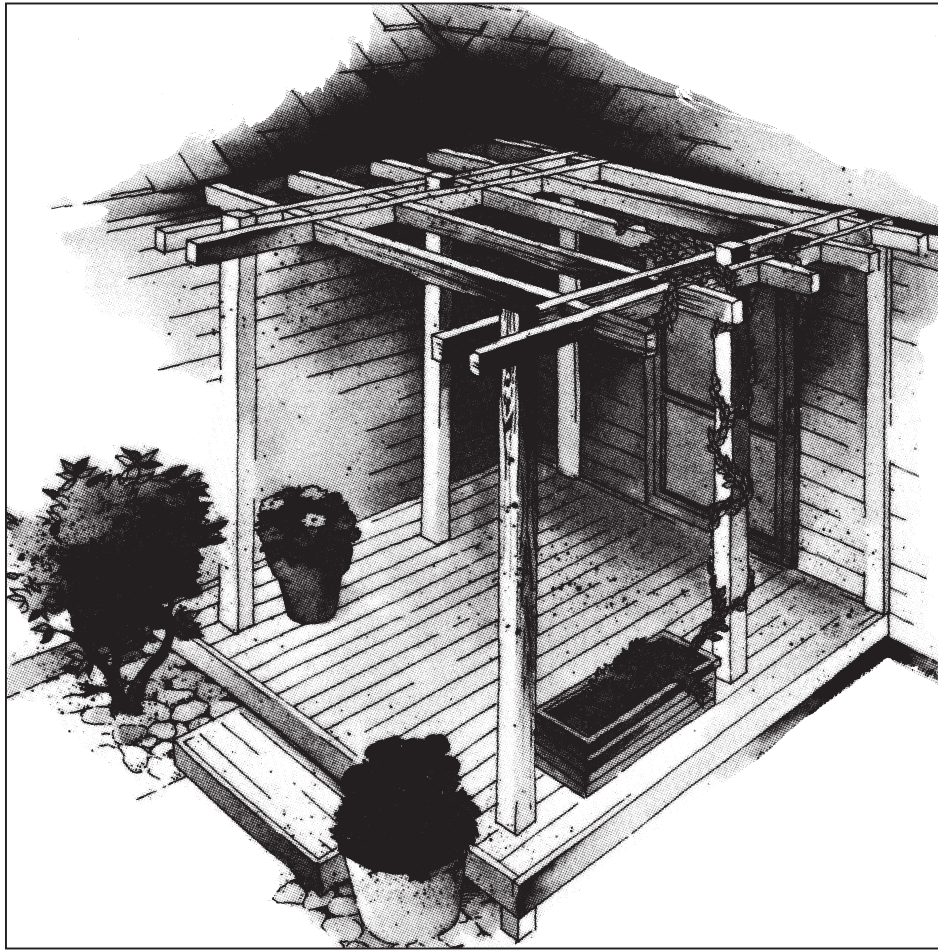


TRELLIS



**SOUTHERN
PINE
COUNCIL**

SOUTHERN FOREST PRODUCTS ASSOCIATION
SOUTHEASTERN LUMBER MANUFACTURERS ASSOCIATION

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Trellis

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A trellis can function as a unique sunscreen or can be the framework for an outdoor hanging garden. And building it with pressure-treated Southern Pine lumber adds durability to its beauty. The waterborne preservative is nonleachable and will not harm plants.

This plan will show you how to build a 14x16-foot trellis for your garden, deck, or patio. You can expand or reduce the modular dimensions of this trellis plan to suit your specific requirements. When it's finished, you can plant climbing ivy or vines, add hanging baskets of flowers, and extend your garden to an overhead display of color and fragrance.

Design Note: For structural stability of this trellis, use one of the following options:

1. Sink columns 3' into ground using concrete, gravel, or compacted soil for a free-standing trellis.
2. Incorporate the trellis with a deck, connecting columns with deck beams and/or joists.
3. Attach beams and purlins, on at least two sides of the trellis, to your house or other permanent structure using hot-dipped galvanized or stainless steel nails and/or hardware.

TOOLS REQUIRED

- Circular or crosscut saw
- Hammer
- Square
- Line, level
- Post hold digger (optional)
- Carpenter's rule or tape

MATERIALS LIST

To build this trellis, you will need the following quantities of pressure-treated Southern Pine lumber:

NUMBER OF PIECES	MATERIAL	LENGTH	SERVICE CONDITION
8	4x6	12'*	Ground Contact
16	2x4	12'*	Ground Contact
4	2x6	16'	Above Ground
4	2x4	16'	Above Ground
4	2x6	14'	Above Ground
19	1x4	6'	Above Ground
4	2x2	10'	Above Ground
22	2x2	4'	Above Ground

* Purchase 10' lengths if columns will not be sunk into the ground.

OTHER MATERIALS NEEDED

- 6d, 8d, and 16d hot-dip galvanized or stainless steel fasteners (See Fastener Advisory)
- Construction adhesive for pressure-treated lumber
- Water-repellent sealer

ADVISORY:

Fastener & Connector Performance for Treated Wood

Metal products in contact with pressure-treated wood must be corrosion resistant. Examples include flashing, termite shields, fasteners (e.g. nails, screws, and bolts), and all connecting hardware (e.g. joist hangers, straps, hinges, post anchors, and truss plates).

The International Residential Code, Section R319.3 states, "Fasteners for pressure-preservative treated wood shall be of hot-dipped galvanized steel, stainless steel, silicon bronze or copper. **Exception:** One-half inch (12.7mm) diameter or greater steel bolts."

Traditionally, the treated wood industry has recommended hot-dip galvanized or stainless steel fasteners and connectors for wood products treated with Chromated Copper Arsenate (CCA). Hot-dip galvanized or stainless steel fasteners and connectors continue to be recommended for use with alternative wood preservatives (e.g. Alkaline Copper Quat - ACQ - and Copper Azole), but additional clarification is needed to ensure adequate corrosion protection.

Type 304 or 316 stainless steel is recommended for maximum corrosion resistance in more severe exterior applications, such as swimming pools and salt-water exposure. Furthermore, stainless steel fasteners are generally required below grade for permanent wood foundations.

Hot-dip galvanized fasteners and connectors are generally acceptable for above grade applications. Hot-dip galvanized *fasteners* should meet ASTM A153 (with 2 ounces of zinc coating per square foot minimum for marine use) and hot-dip galvanized *connectors* should meet ASTM A653, Class G185 sheet with 1.85 ounces of zinc coating per square foot minimum. Fasteners and connectors used together should be of the same type (e.g. hot-dip nails with hot-dip joist hangers).

Do not use standard carbon-steel or aluminum products in direct contact with pressure-treated wood. Spacer materials or other physical barriers are recommended to prevent direct contact. In addition, electroplated galvanized metal products generally have a thinner layer of protection compared to hot-dip galvanized and are typically not accepted by the building codes for use in exterior applications.

Fasteners and connectors coated with proprietary anti-corrosion technologies (other than stainless steel or hot-dip galvanized) are also available for use with treated wood. Consult individual hardware manufacturers for specifics regarding the performance of their products with treated wood.

CONSTRUCTION STEPS

NOTE: This trellis plan uses full lengths of most materials.

CUTTING

1. From three of the 1x4s, cut 8 pieces 1'-8" long.
2. From ten of the 4' 2x2s, cut 46 pieces 9" long.
3. Cut other 2x2 trim material after columns, beams, and purlins are erected to determine exact lengths required.
4. If the columns will not be sunk 3' into the ground, cut eight 4x6 timbers and sixteen 2x4s to 9'-0" in length.

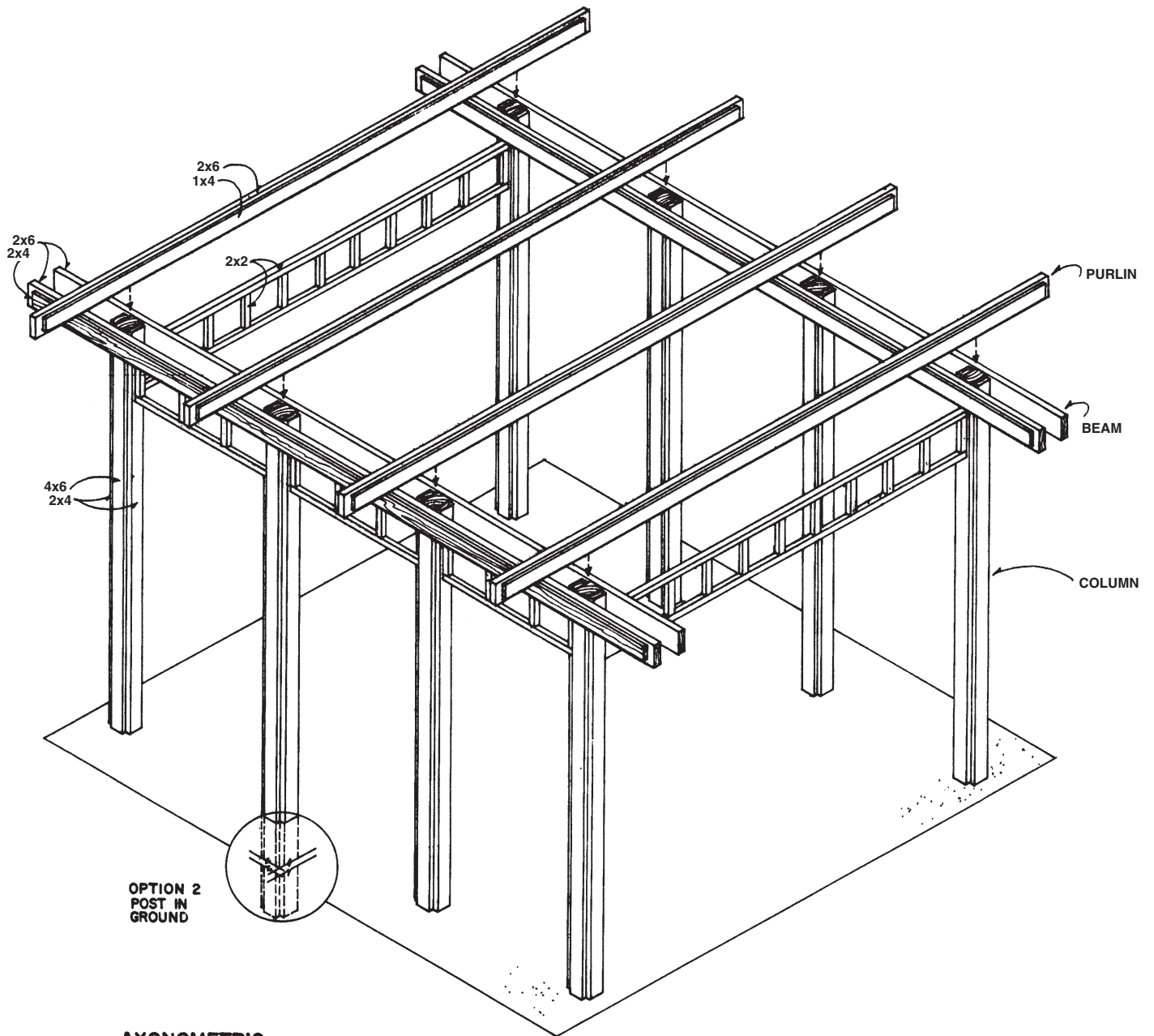
ASSEMBLY

1. Fabricate columns by centering a 12' 2x4 on the wide dimension of each 4x6 timber. Nail into place using 12d nails.
2. Fabricate purlins by centering 1x4 pieces along the four 14' 2x6s. Use two 6' 1x4s and one 1'-8" length on each side of a 2x6. Attach 1x4s using 6d nails and construction adhesive.
3. Locate and mark column location on 16' 2x6 beam members, 4'-0" on center. Attach beams to both sides of columns using 12d nails and construction adhesive. Refer to plan.
4. Center 16' 2x4s on beams. Attach using 8d nails and construction adhesive.
5. Erect column/beam assemblies, 10'-0" on center.
6. Attach purlins to center of columns, toe-nailing into columns using 16d nails. Use construction adhesive at this joint, also. Like the beam ends, the ends of the purlins should extend beyond the column centerline by two feet. Refer to plan.
7. Complete trim assemblies between columns with 2x2 material. Make exact measurements between beams. Evenly space eleven 2x2s across the two 10-foot spans; space four 2x2s across the shorter spans of approximately 3'-6". Use 8d nails and construction adhesive to fabricate trim assemblies.
8. Attach trim assemblies between beams using 8d nails and construction adhesive. Align the top edge of the assembly with the bottom edge of the beams.
9. Apply a water-repellent sealer to all exposed wood surfaces now that construction is complete. Properly dispose of treated lumber scraps.

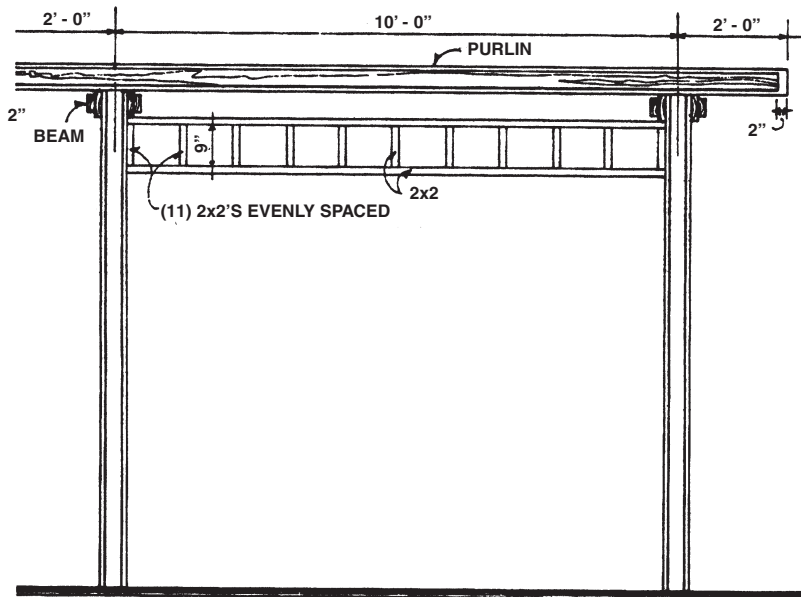


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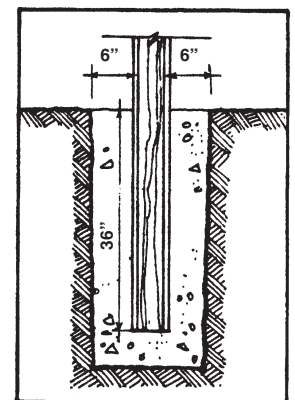
These plans and the information contained herein will help you achieve the best possible results in working with Southern Pine lumber products. The conditions under which lumber is used in construction vary widely, as does the quality of workmanship. Since neither the Southern Pine Council nor its members control the method of use or the quality of workmanship in structures built with lumber, they do not warrant lumber performance or design in completed structures.



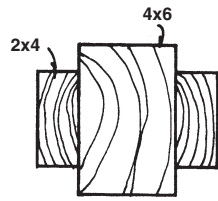
AXONOMETRIC



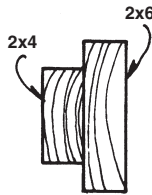
ELEVATION



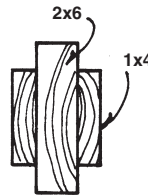
**OPTION 2 DETAIL
COLUMN SET IN CONCRETE**



COLUMNS (8)

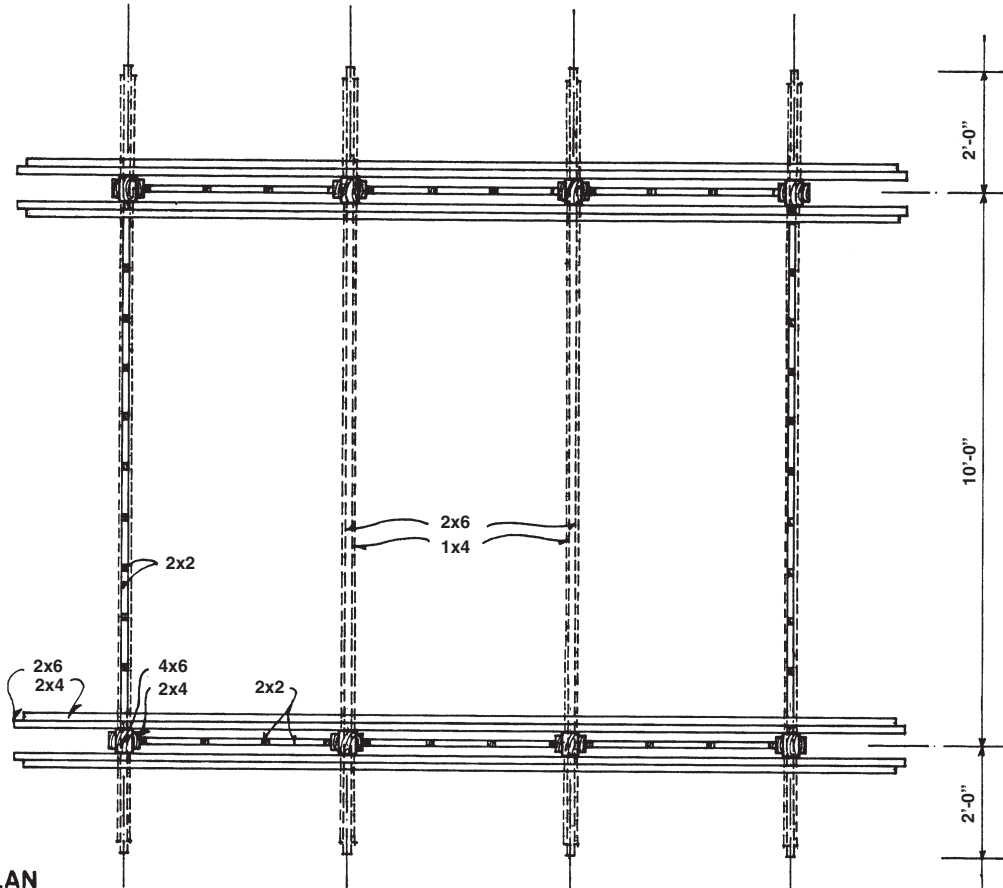


BEAMS (4)

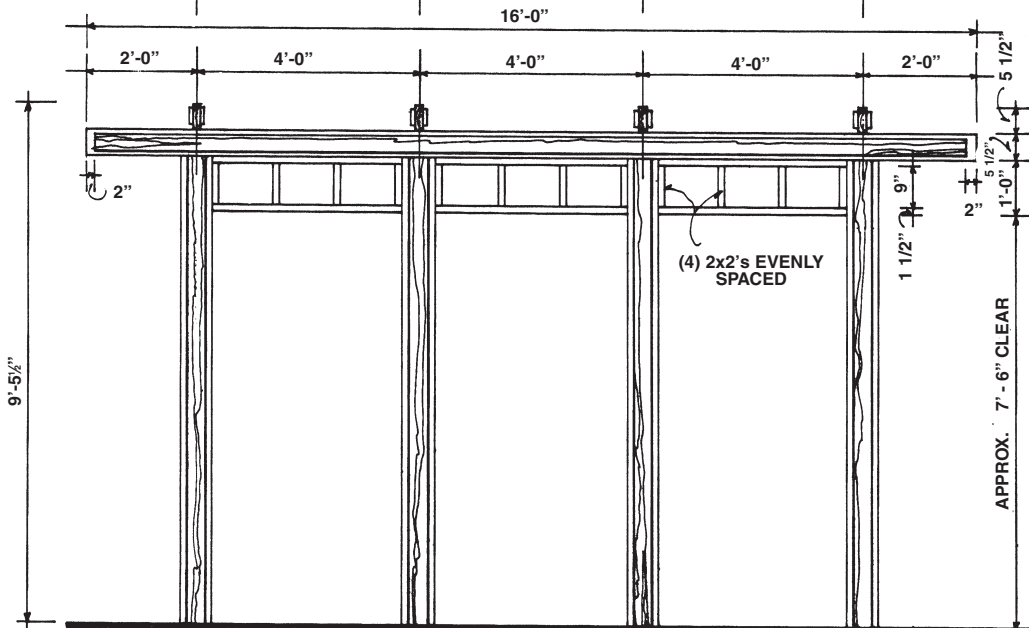


PURLINS (4)

COMPONENT CROSS SECTIONS



PLAN



ELEVATION