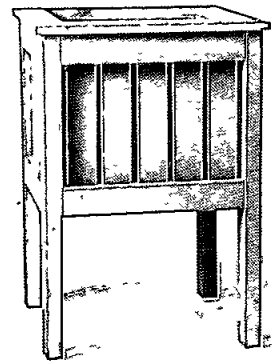


Litchfield loveseat



Galway bench/table



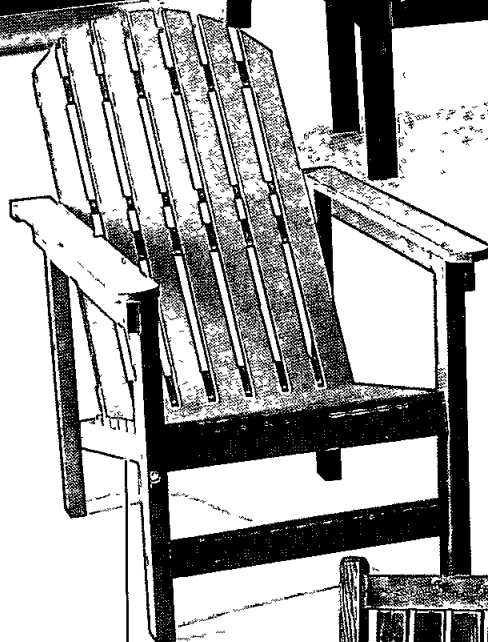
Litchfield planter box

**The Stanley gazebo: a beautiful retreat.**

**B**uild it yourself, this place to get away from it all Or for the kids to play in some rainy day Or the spot you'll enjoy for family cookouts and entertaining - day or evening And what a nice architectural accent for your yard!

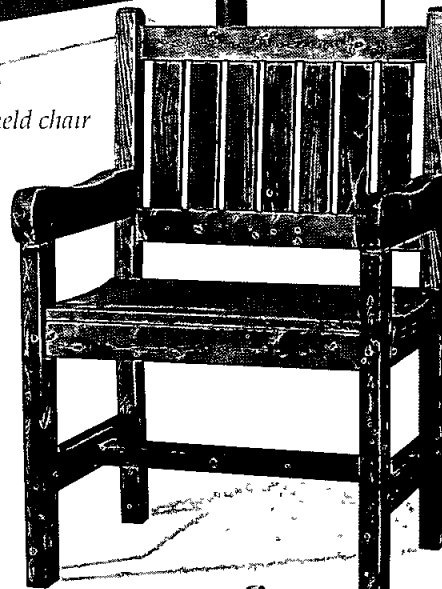
Constructing this gazebo gives you a chance to show off your skills at rough framing and finish carpentry A touch of cabinetwork, roofing and painting are also called for

Sure, the gazebo's a sizeable undertaking Besides real woodworking savvy, it calls for some extra help to assemble it But the instructions, enclosed here, do show you how to build it step by step Then all you need are tools and hardware from Stanley, The Do-It-Yourself Company



Litchfield chair

Litchfield bench/table



Galway chair

**The Litchfield and the Galway lawn furniture.**

**R**elax. This specially designed outdoor furniture is easy to build yourself Easy to look at Easy to enjoy for years

You'll find Stanley plans and drawings, tucked inside, with "how-to's" for the Litchfield furniture, which is quite easy to build And for the Galway furniture, which takes somewhat more skill to construct

One special feature of the Litchfield chair and loveseat, you'll notice, is that the backrests are removable This makes them easier to store since they take less space When the backrests are in place, of course, they offer solid "we're-not-going-anywhere" comfort

All the wood you'll need to build these projects is listed in these plans, as are the Stanley tools and Stanley hardware Go to it Have fun!



6-sided, 8-foot diameter, 70 square foot Gazebo

Galway loveseat



# Gazebo

**STANLEY**<sup>®</sup>

## Materials

### Floor Frame

6 pieces 4 x 4 by 10' (use 12' or 14' lengths if used as foundations)  
8 pieces 2 x 8 by 10' - box joists and main girder  
4 pieces 2 x 8 by 8' - joists and diagonals  
4 pieces 2 x 6 by 8' - joists  
3 pieces 2 x 6 by 10' - tension collar  
3 pieces 1 x 10 by 10' - skirting or finish board  
2 double 8" joist hangers  
4 single 8" joist hangers  
16 single 6" joist hangers  
20d, 12d and 10d box or common nails

### Steps

1 piece 2 x 8 by 10' - stringers  
3 pieces 2 x 4 by 10' - treads  
1 piece 1 x 6 by 10' - risers  
8 3/8" by 6" lag screws  
10d finishing nails

### Flooring

1 piece 2 x 8 by 7" for center piece (from scrap)  
24 pieces 2 x 4 by 10' for flooring

### Roof Frame

1 piece 2 x 8 by 4' - crown hex  
23 pieces 2 x 4 by 8' - jack rafters, headers and box rafters  
1 piece 4 x 4 by 2' - blocking  
6 pieces 1 x 6 by 8' - fascia trim  
12 3/8" by 7" hex head bolts with nuts and washers  
60 No. 8 flathead screws 3" long  
10d and 8d nails

### Roofing

40 pieces 1 x 3 by 10' nailing strips  
5 bundles of 18" long wood shingles  
10" by 50' aluminum flashing  
3d and 5d shingle nails, 8d common nails

### Cupola

1 piece 1 x 12 by 6' for base  
1 piece 1/2" half round molding 12' long  
4 x 4 sheet 3/4" exterior plywood for roof  
8d, 6d and 1" long brads

### Glue

Clear silicone caulking compound

### Lattice Wall Panels (five required)

10 pieces 2 x 4 by 10' for top and bottom frame. If miter corners are eliminated, use 2 x 3 instead of 2 x 4 stock.  
5 ready-made lattice panels 2' by 8' or make up five 24" by 52" panels out of lattice strips  
15 pieces 1 x 1 or 3/4" quarter round 10' for retainers  
10d, 8d, 6d finishing nails

### Baluster Wall Panels (five required)

5 pieces 2 x 4 by 10' for top and bottom (2 x 3 used if miter corners are not used)  
45 balusters 30" or 36" long  
10d, 8d, 6d finishing nails

### Friezes (six required)

#### Lattice

5 pieces 2 x 3 by 10' top and bottom  
3 ready-made lattice panels 2' by 8' or make your own out of lattice strips  
12 pieces 1 x 1 or 3/4" quarter round 10' long for retainers  
10d, 8d, 6d finishing nails.

#### Rail

5 pieces 2 x 3 by 10' for top and bottom  
6 pieces 2 x 2 by 8' for uprights  
10d, 8d, 6d finishing nails

### Brackets for Friezes - 12 needed

2 pieces 2 x 6 by 8' long  
8d finishing nails

### Benches - 3 needed

1 piece 4 x 4 by 8' diagonal braces and blocking  
1 piece 2 x 4 by 8' horizontal pieces and blocking  
3 pieces 2 x 4 by 10' - seats  
1 piece 2 x 8 by 12' - seats  
10d finishing nails  
36 #8 4" long wood screws

## Tools

- |                         |                             |
|-------------------------|-----------------------------|
| 1 Flexible steel rule   | 9 Hammer                    |
| 2 Framing square        | 10 Nail set                 |
| 3 Combination square    | 11 Screwdriver              |
| 4. 3' or 4' level       | 12 Adjustable wrench        |
| 5. Plumb bob and line   | 13. Brace with 3/8" bits    |
| 6 Handsaw               | 14. Push drill and bits     |
| 7 Coping saw            | 15 Block plane              |
| 8 Backsaw and miter box | 16 Metal shears (tin snips) |

**General Tips:**

- 1 Take the gazebo drawings to your municipal building department. You will probably need a building permit and there may be other local regulations you need to know about before you begin construction.
- 2 Wood members that come in direct contact with ground or masonry should be treated to prevent decay. Either coat these parts with a wood preservative or use pressure-treated lumber. Today many gazebos are built entirely of pressure-treated lumber. (See Note on working with this material).
- 3 Use only rust-resistant fasteners—nails, screws, bolts, etc. Stanley has them all available with galvanized coating.
- 4 Reduce chance of splitting wood by using box nails which are thinner than common nails. Box nails are especially good to use when nailing angle cuts such as box sills and tension collar.
- 5 The six points of a hexagon are 120 degree angles. Ends of each piece forming these angles—box joists, skirting, tension collar, crown hex, etc., should be mitered at 30 degrees. This produces a 60 degree cut along the end of the piece ( $90^\circ$  minus  $30^\circ$  equals  $60^\circ$ ) so when the two pieces are joined they will form the 120 degree angle.
- 6 Make frequent measurements as work progresses and adjust dimensions as required. Check angles with framing square before cutting.
- 7 While the gazebo can be built with just hand tools, the work is easier and goes faster with power equipment. A portable electric saw is handy but a radial or table saw will turn out more accurate cuts, especially angle cuts.

- 8 You might also consider having some of the tricky parts—pieces for the crown hex, base of cupola, even box sills and tension collar, etc.—cut to size by a lumber yard or woodworking shop that does custom cutting.

*Note on Use of Pressure-Treated Lumber*

Pressure-treated lumber should be handled with care because a common ingredient in the preservative is inorganic arsenic—harmful if consumed or ingested. Take the following precautions when working with this lumber:

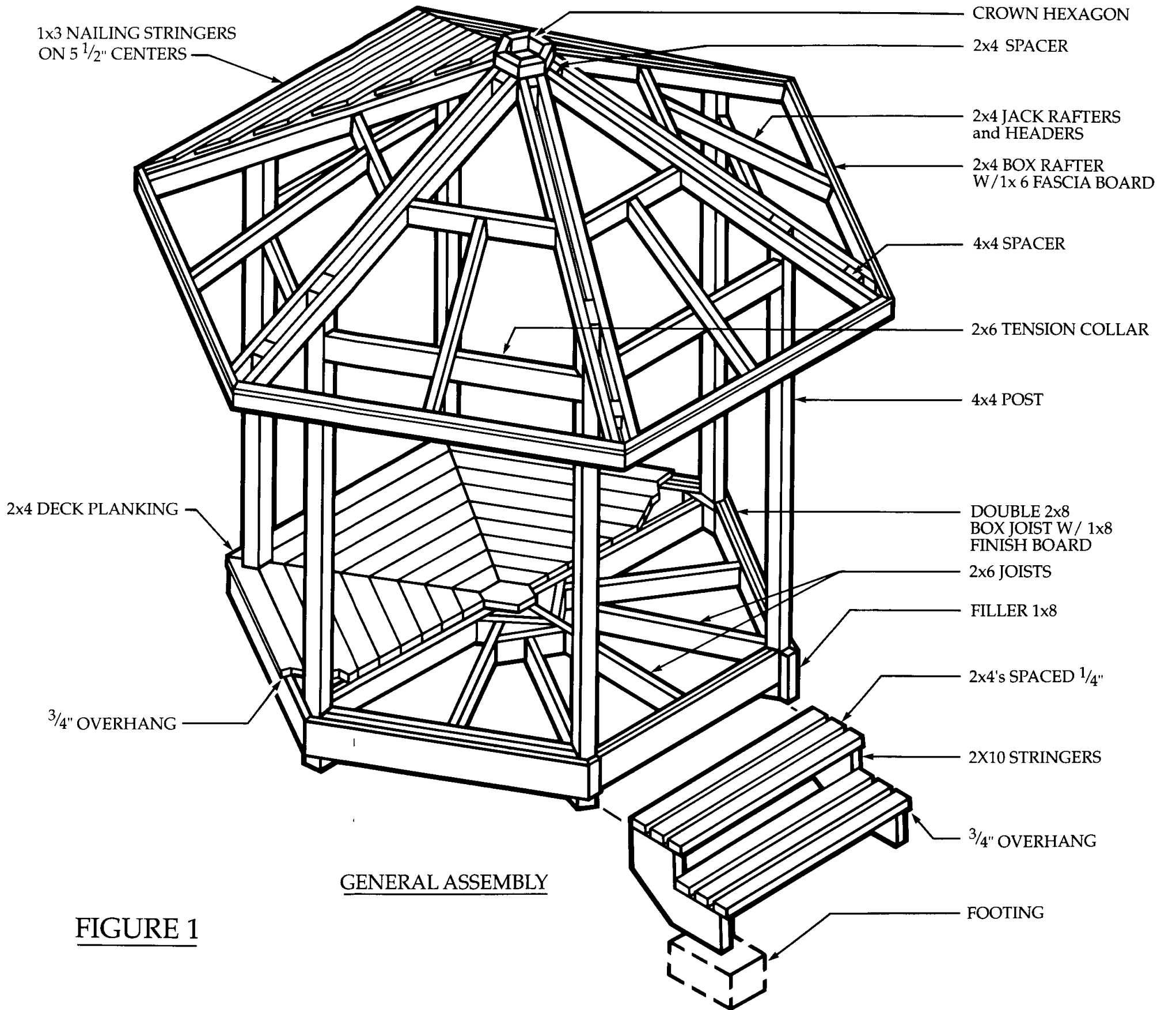
- 1 Don't work with it indoors.
- 2 Wear a dust mask when sawing or sanding.
- 3 If there is loose powder on surface, remove with a vacuum cleaner.
- 4 Wash hands and exposed body parts before eating, drinking or smoking.
- 5 Don't burn scraps in fireplace, stove or in outdoor fire. Have waste wood removed by trash collector.
- 6 Do not allow children to handle the wood.
7. Wash work clothes separately from other wash.
- 8 Do not use this kind of lumber for a dog house or other type of animal enclosure.

**Step by Step Directions.**

Study Fig 1 for general assembly of gazebo. Fig 2 shows floor frame and location of 4 x 4 posts.

*Step One Foundations* About the easiest kind of permanent foundation is where the six 4 x 4 corner posts also serve as foundation (Fig 3). A 14' long post allows up to 4' to be set in ground—below frost line in most areas.

Fig 4 shows a simple way to get exact location for the six posts. Decide where the



**FIGURE 1**

GENERAL ASSEMBLY

center of the gazebo is to be located, drive the 2 x 4 center stake in ground at this point and then with the 1 x 3 with holes 55 1/2" on center, scribe a circle on ground and then use same length of wood to measure six points along the scribed line all 55 1/2" apart

Dig holes at the six points. Place earth outside scribed line and level area around holes. Pour in footings and when hard, set posts in place. Use 55 1/2" guide to check position. Plumb posts and secure by tacking a 4' length of 2 x 4 to each side of post at ground level to hold post in place.

Make line on post 10" below where you want the gazebo floor. Use level and straightedge to make similar mark on adjacent post. Tack a 2 x 4 cleat with top edge flush with lines on posts.

Cut the six inside 2 x 8 box joists—50 3/8" long with 30 degree angle cuts at end (See Fig. 7). Set one sill in place with ends resting on cleats. Rotate post until at correct angle to end of sill. Check sill for level, then tack to post with one 20d nail. Install five other joists in same fashion. Check posts for plumb, then secure with diagonal braces. Fill in around post with concrete or gravel.

Secure inside box joists to posts with four 20d nails, then add and secure outside 52" long box joists (Fig. 6). Spike box joists together with 10d nails set every 12" or so.

Fig. 5 shows another type foundation—concrete poured into a 6" diameter tubular fiber form. Ends of posts are secured to concrete with anchor bolt and metal post anchor.

Use Fig. 4 method to get location for holes and to position forms. Use level and straightedge to insure tops of forms are all even with each other. Fill forms with concrete and then, before it is hard, insert

anchor bolts for post anchors. Use the piece of 1 x 3 with holes to check location of bolts. They must be all in same position because post anchor allows only for a small adjustment. After concrete is hard, install post anchor and then outside box joists as suggested above.

Where codes permit, gazebo can rest on ground without a permanent fixed foundation. Place concrete or patio blocks under each corner.

**Step Two Install Tension Collar** (Fig. 1 & 9). These 2 x 6s set 88" above top of box joists, tie top of posts together to provide support. These six pieces are made same length as outside box joists—52" long with 30 degree cut at end. Secure to posts with 12d nails.

**Step Three Front Steps**. If steps are needed it is easier to install them now before floor is framed (Fig. 1). Use four 2 x 8 stringers spaced equal distance apart. Secure them to box joists with 3/8" by 6" lag screws run through box joists into edge of stringers.

**Step Four Frame Floor** (Fig. 1, 2 & 7). Since main 100 3/4" girder and joists that join it at an angle serve as a guide as well as a nailing base for flooring, it is important they be positioned correctly. Center joists either on posts or exact center of box joists as indicated on drawings.

All floor framing is fixed at both ends with metal joint hangers, 8" hangers for 2 x 8 stock, 6" for 2 x 6 stock. Use size, type and number of nails to fix hangers as suggested by manufacturer.

Install the two diagonal 2 x 8 pieces that support hangers for the girder (A in Fig. 7). Fix them with 20d nails to posts and box joists

Install hangers and then girder, one piece at a time. Spike together with 10d nails.

Locate midpoint on girder—about 50 3/8" from end—and attach hangers for the two 44 3/8" 2 x 8 joists centered on this mark.

Ends of all 2 x 6 joists are fixed at centers by hangers attached to diagonals. (Fig. 7) Install the four inside 2 x 8 diagonals. Set one end of a 5' or so length of 2 x 6 in the hanger on the perimeter, then move the other end until it centers on midpoint of girder. Mark where center of joists falls on diagonal and install hanger at this point on diagonal. Repeat this for the other three joists. Install these joists in hangers, then install the 2 x 6 diagonals (B in Fig. 7) and add the remaining joists using same method to locate hangers as given above.

Finally, install 1 x 8 skirting or finish board over outside face of box joists.

**Step Five Install Flooring** (Fig. 1). Use either 2 x 4 or 2 x 6 decking. Fix flooring with 10d finishing nails with 1/4" space between each row of boards.

Make up center hex piece (Fig. 8) out of same thickness stock as flooring. Fix this piece at exact center of floor. Locate this point by snapping chalk line along center of main girder and the two short 2 x 8 joists. The point where these two lines intersect will be the center of the floor. Measure 3 1/2" from this point along chalk lines and mark. Set hex piece so edges come flush with these marks and points of hex line up with chalk lines run through center of all floor joists that go to corner posts.

Nail center hex piece in place and use as guide to measure and cut first row of flooring. These, in turn, serve as guide for next row and so on. End joints should fall along chalk lines that

run at angle from center hex. Last row of flooring should be trimmed so it extends 3/4" or so beyond skirting or fascia over box sills.

**Step Six Frame Roof** (Fig. 1, 9 & 10). These drawings give overall view of roof frame as well as details and basic dimensions. Fig. 11, 13 & 14 give additional details.

First, build jig (Fig. 12) to support crown hex and end of rafters in correct position until roof is framed. Keep it in place to provide support until roof is shingled and cupola installed.

Use a plumb bob and line to get top center of jig in exact center of floor (2 x 4 stock used for jig can be reused later on for wall panel frames).

Assemble crown hex (Fig. 11) out of 2 x 8 stock. Fix pieces with 10d nails. Rafters are attached to crown hex with 3" long screws run through 2 x 4 spacer as well as toenailed through end of rafters into crown hex. Use screws to fix rafters to spacer (Fig. 11).

There are two ways to frame the roof. If you have three or so husky helpers, an entire roof section (Fig. 13) (even including nailing strips and shingles) can be assembled on floor or ground, lifted up so it will go over tension collar and jockeyed until crown hex rests on jig. The crown hex can be attached to first unit on ground.

Adjust position of assembly so rafters are in correct position on posts, drill holes and insert bolts. Leave off nuts and washers until adjoining unit has been installed.

Another way to frame is to make up single rafter unit (Fig. 14). Leave out the 4 x 4 spacer until unit has been set through post. Fix crown hex to first unit. Slide assembly up over tension collar and then let it slide back

down so rafters go over post. Get crown hex on jig, bolt unit in place and add 4 x 4 spacer. Then add jack rafter, header and box rafter after adjacent unit is in place. Face nail these parts with 10 nails and use 8d for toenailing.

When the entire roof is framed, cut off tops of posts so ends are flush with top edge of rafters. Add 1 x 6 fascia over 2 x 4 box rafter.

**Step Seven Cupola Base** (Fig. 15). The reason to do this now is so you can make sure base will fit over crown hex before roof is shingled. The cupola will not be installed until after the shingles are on roof.

Assemble base with 8d finishing nails and waterproof glue. Install blocking on sides of crown hex. Make adjustments to insure base fits correctly over crown hex.

**Step Eight Shingle Roof** (Fig. 16). Wood shingles make the most attractive roof for the gazebo. Asphalt shingles may also be used and, while not as attractive as wood, they cost less and are faster and easier to install. But asphalt shingles must be laid over a solid plywood deck.

Wood shingles are nailed to 1 x 3 strips fixed to rafters. Nailing strips are set 5 1/2" apart. The shingles on gazebo illustrated have a 5 1/2" exposure. You can save on labor and materials by allowing a greater amount of exposure.

Fix nailing strips with 8d nails. The starter strip should come flush with outside face of 1 x 6 fascia. If there are shingles in bundles over 12" wide, set six of them aside to use on cupola roof.

The first course of shingles at eaves should be doubled and overhang fascia by 1" or so. Stagger joints between shingles on this starter row. Use fine toothed saw to cut shingles at hips

and around crown hex. Use a block plane to bevel edges of hip shingles. These should be installed over a strip of 10" wide aluminum. Tack batten strips 6" from each side of hip to insure laying hip shingles in straight line.

Also install flashing around crown hex to make tight joint with cupola when it is installed. Fasten 6" long strips of aluminum flashing to shingles at point where they join crown hex. Overlap strips to make watertight seal.

**Step Nine Complete and Install Cupola** (Fig. 17 & 18). Complete base by adding 1/2" half round molding to form panels. Assemble 3/4" exterior plywood roof sections with waterproof glue. Fix roof to base with 6d finishing nails. Trim one wood shingle to cover each segment of roof or use two shingles butted along centerline. Secure shingles with 3d nails. Seal joint along hips with clear silicone caulking, then cover with strips of wood shingles. Seal along top of shingles with caulking compound and attach metal cap formed from aluminum or copper with caulking compound. Paint cupola and when paint is dry, fix to crown hex with 8d finishing nails.

After all work on roof is completed, remove jig so lumber can be used for wall panels.

**Step Ten Install Wall Panels**. These go on five sides leaving one side open as entry (Fig. 19 & 20).

Lattice panels made of pressure-treated wood come in 2' by 8' and 4' by 8' panels. You can also assemble your own lattice using pine lattice strips fastened together with heavy duty staples. Balusters, also of pressure-treated lumber, are available in different styles and lengths at many lumber

yards. The standard package contains 12.

Fig. 12 shows detail of top frame for lattice panels and detail of miter joint at posts for both lattice and baluster panels. Fig. 21-A is detail of return on posts on each side of entry.

If you don't want to bother making miter joints, use 2 x 3 instead of 2 x 4 for top and bottom of panels. The ends can be cut at angle to butt the posts and secure them with 8d finishing nails toenailed at top and bottom.

**Step Eleven Install Frieze** (Fig. 22). These go on all six sides. Besides being decorative, the friezes provide additional support for the upper portion of the structure so they should not be omitted. Fix frame to posts in same way as given above for 2 x 3 wall panels.

Fig. 23 is grid used to layout frieze corner brace. Fig. 23-A shows how to place and install brace under each end of frieze.

**Step Twelve Install Benches** (Fig. 24). These go on three sides opposite entry. The seats are supported by braces fixed to four of the 4 x 4 posts. The 4 x 4 braces are made of 4 x 4 19" long with 45 degree angle at top and bottom. Install braces, then put a 14" length of 2 x 4 on top of 4 x 4 running to post. Nail to brace, level and then add a blocking piece of 4 x 4 to side of post to support end of horizontal 2 x 4. Fix blocking with 3" screws. Face nail horizontal piece to block with 10d nails. Also toenail into posts.

After all supports are in place, snap a chalk line through the center of the two inside supports. Use these lines as guides to cut seat boards. Correct angle where they meet at inside posts.

Seats are made with

one piece 2 x 8 and two pieces 2 x 4 with 1/4" spacing between boards. Fix them to horizontal pieces with 8d finishing nails.

**The Last Step Paints and Finishes**. If you have used non-pressure-treated lumber for all exposed portions of gazebo, the wood can be stained or left natural and given a transparent protective finish. Pressure-treated lumber, on the other hand, has a rather unattractive yellowish color so it's best to cover it with paint. A house trim paint is good for this purpose.

The gazebo illustrated in this folder was painted in a color scheme common in Victorian times when gazebos first became popular. You may wish to leave it natural, work out your own color scheme or paint your gazebo all white—crisp and clean. By the way, it is easier to paint lattice before it is installed.

A good finish for the floor is an exterior deck stain and this is best applied before the boards are installed so that all surfaces can be stained. An outside deck enamel is also good but in time will require more upkeep than the stain.

As a general rule, wood shingles don't need any protective coating but they can be treated with a wood preservative.

FIGURE 2

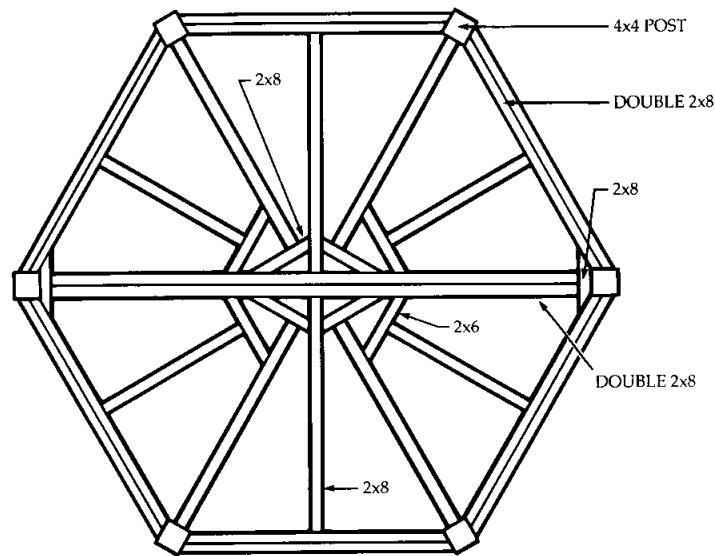


FIGURE 3

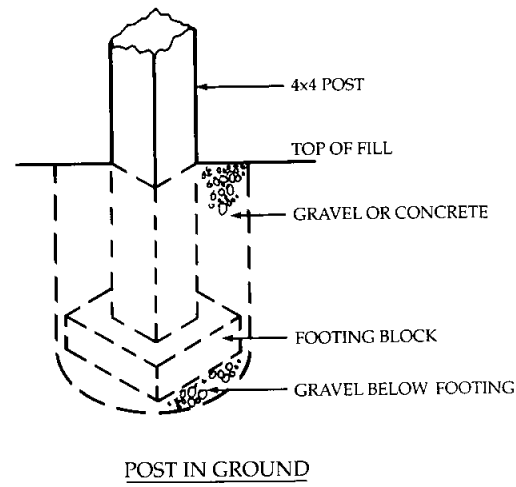
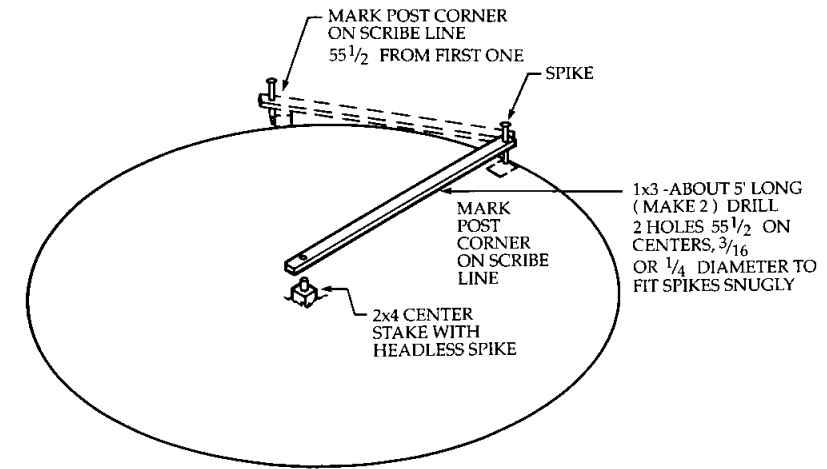
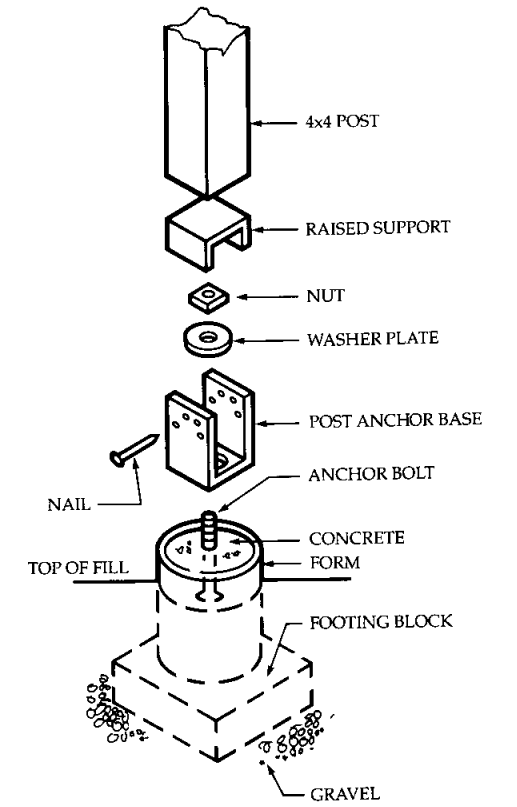


FIGURE 4



LAYOUT METHOD FOR HEX FOUNDATION

FIGURE 5



SCHEMATIC OF POST ANCHOR INSTALLATION

FIGURE 6

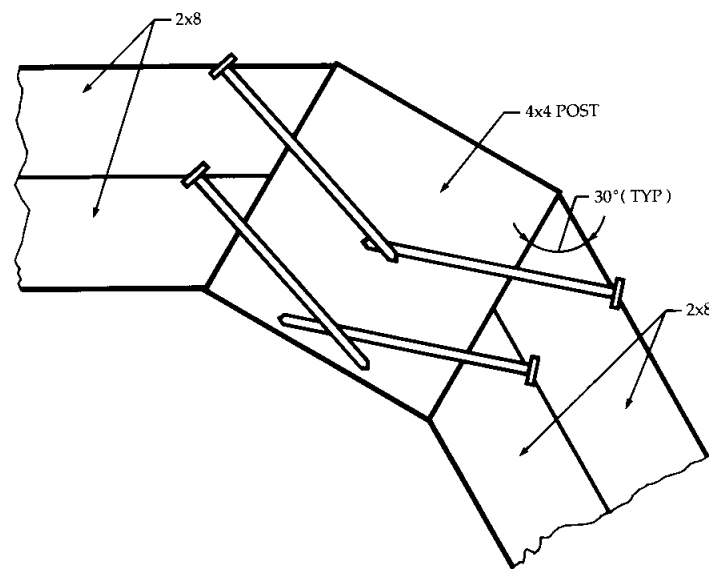


FIGURE 7

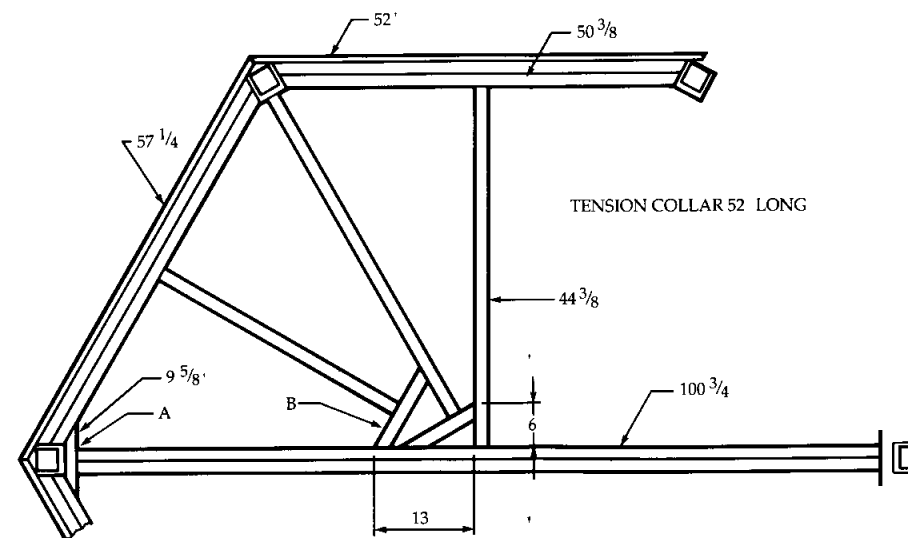
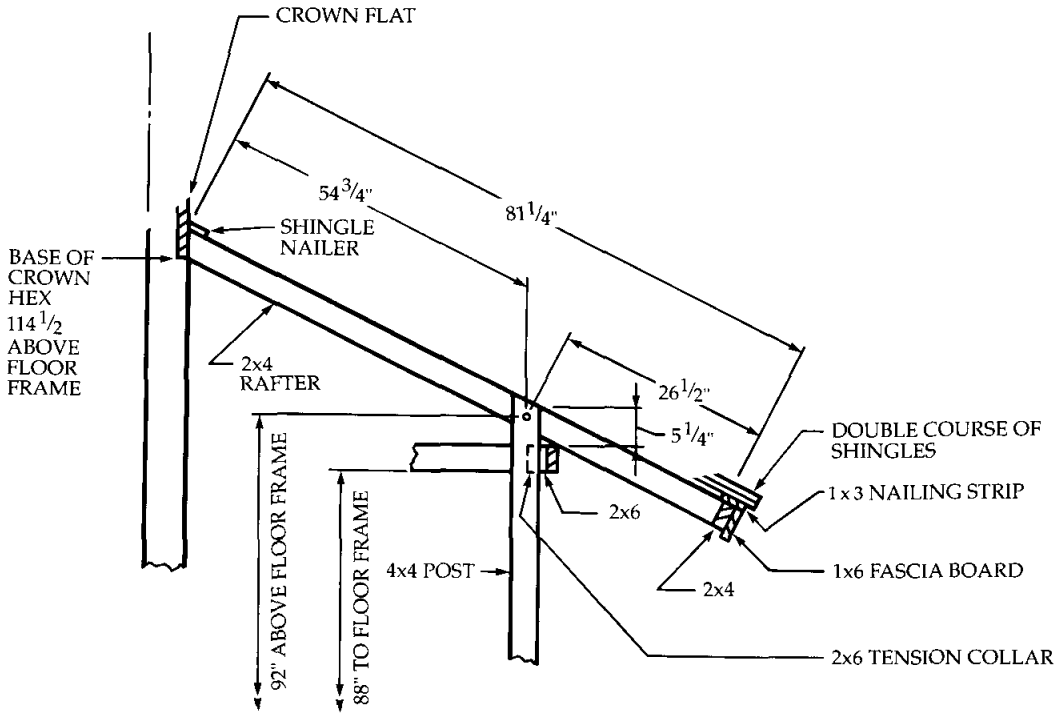


FIGURE 8



**FIGURE 9**



**FIGURE 10**

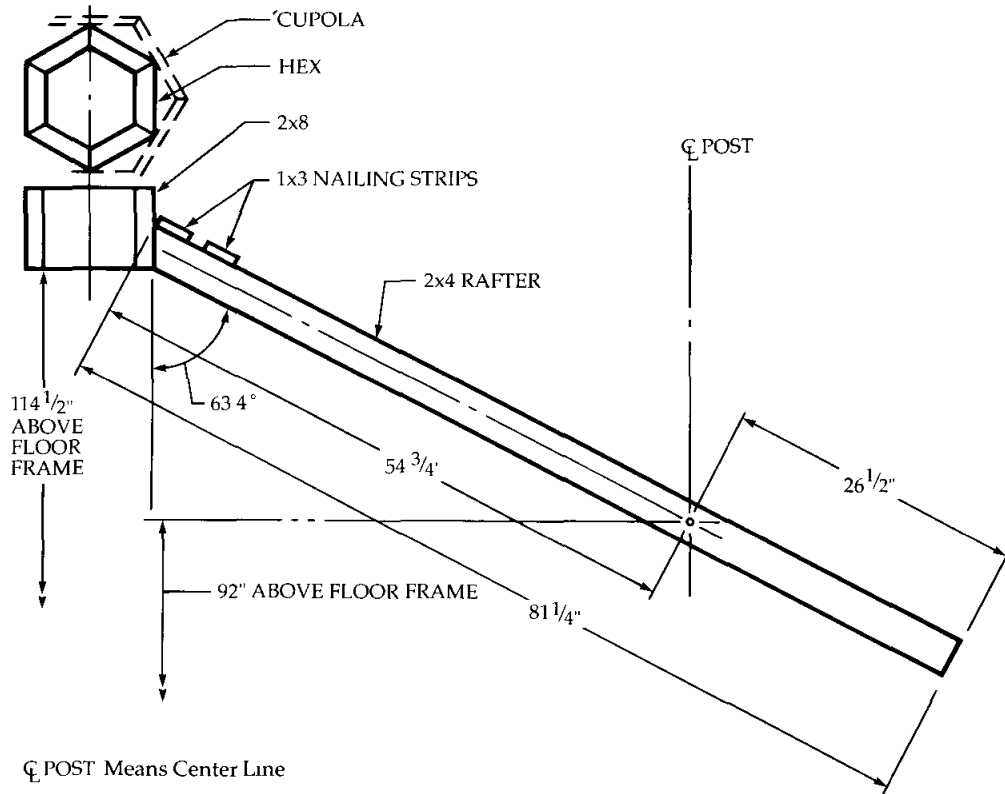


FIGURE 11

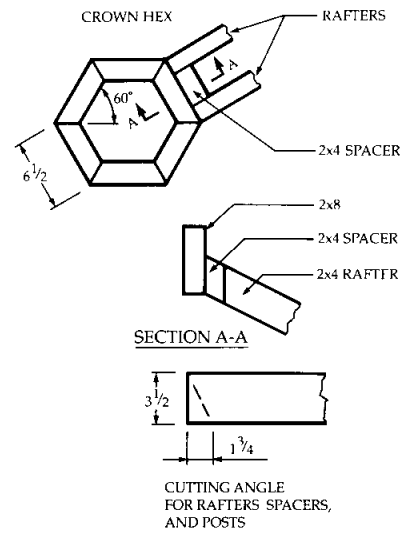


FIGURE 12

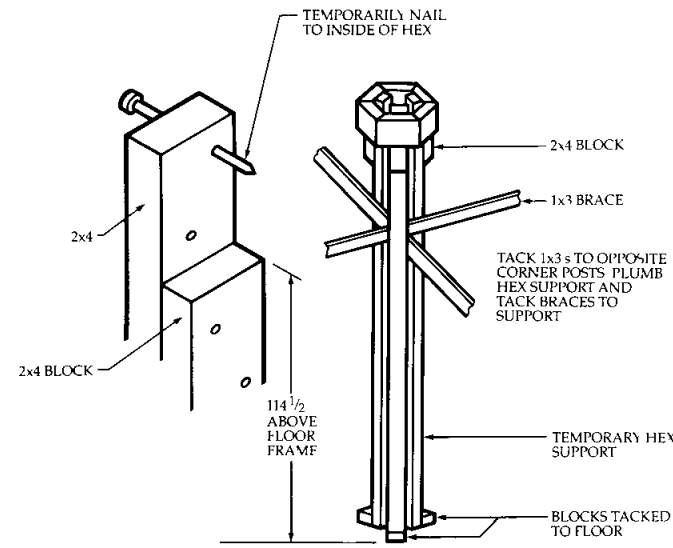


FIGURE 13

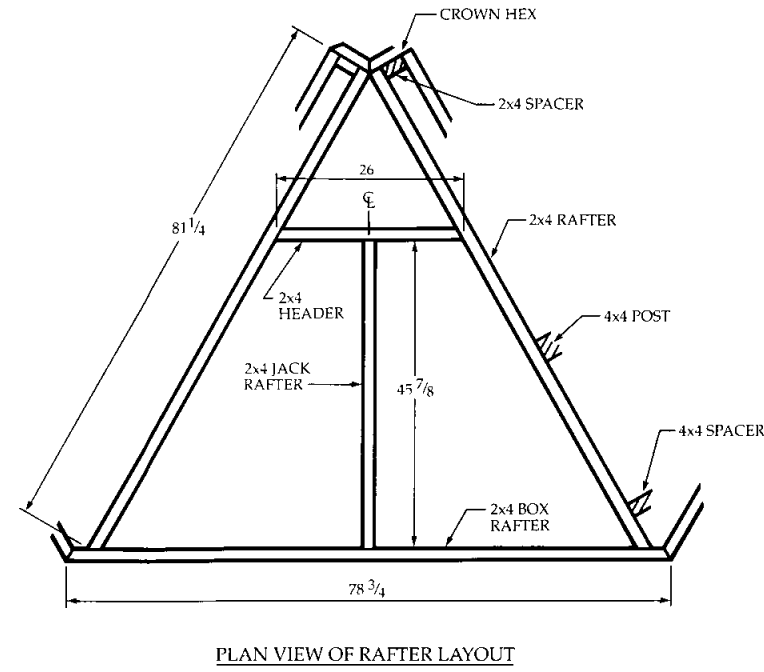


FIGURE 14

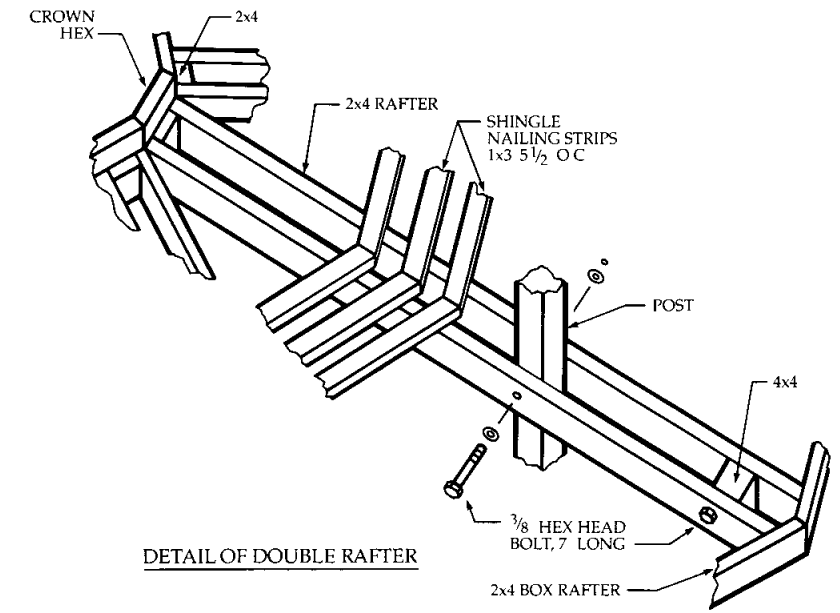


FIGURE 15

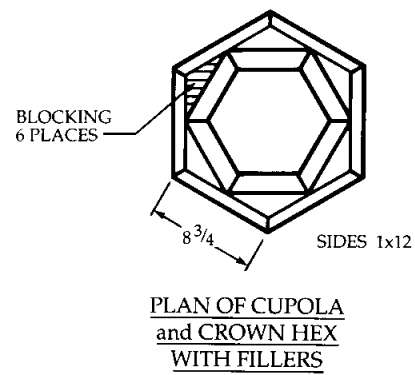
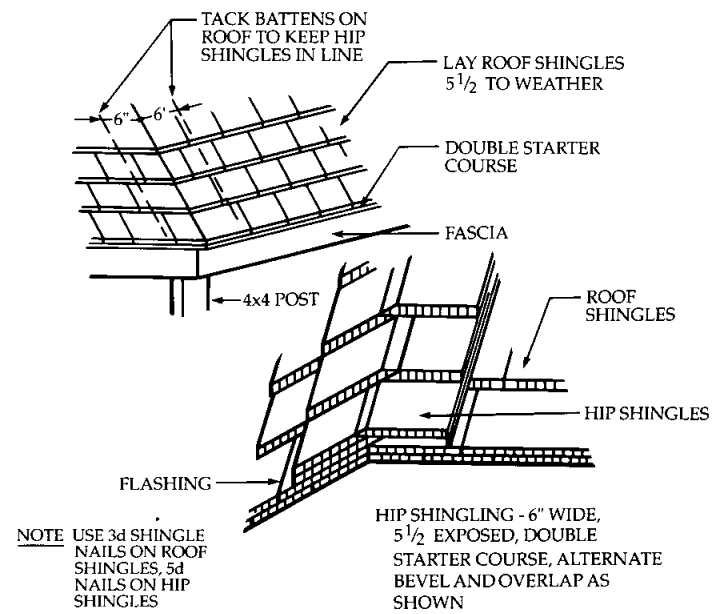


FIGURE 16



SHINGLING

FIGURE 17

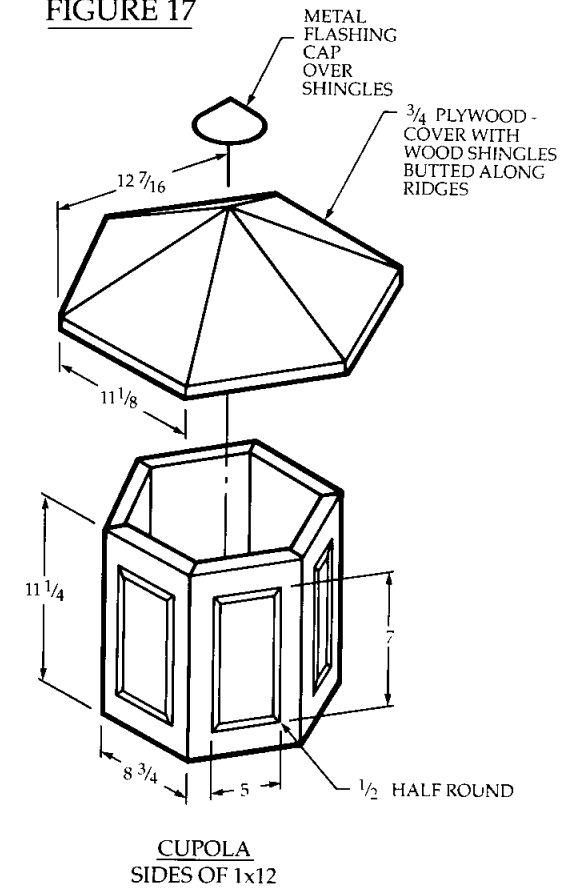


FIGURE 18

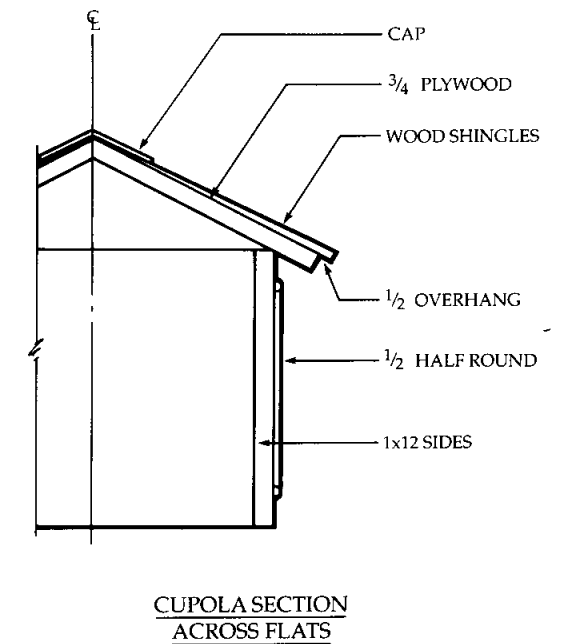


FIGURE 19

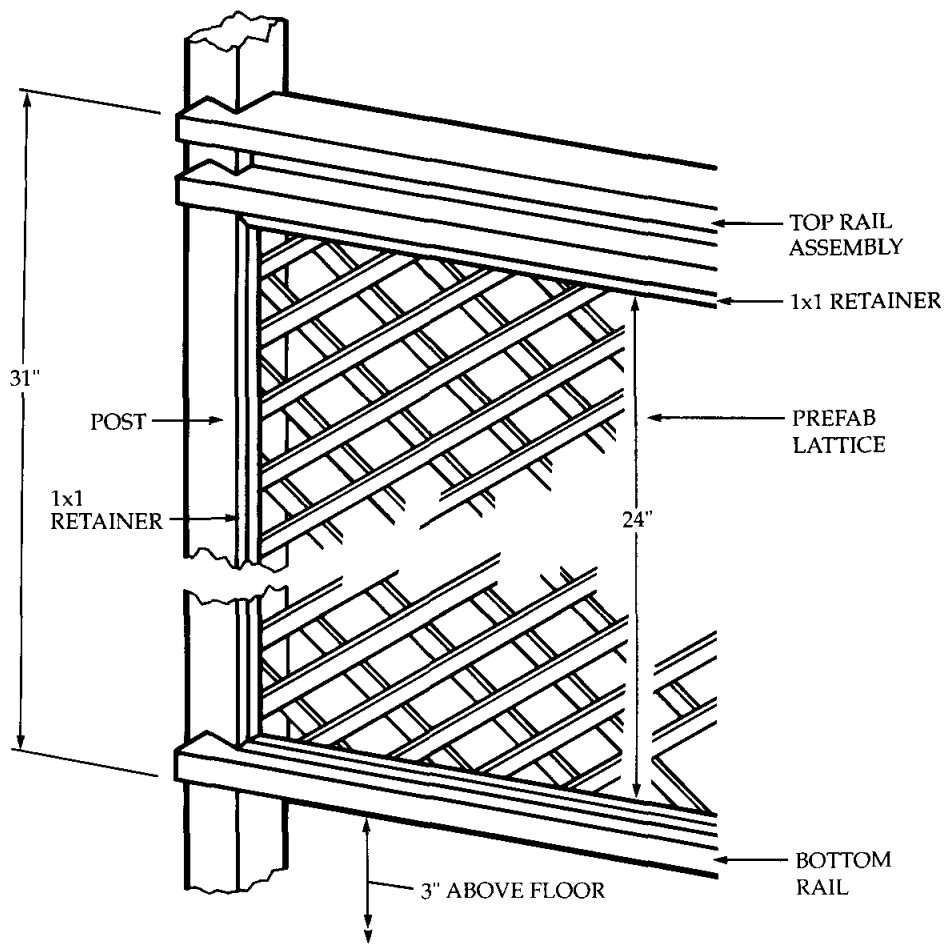
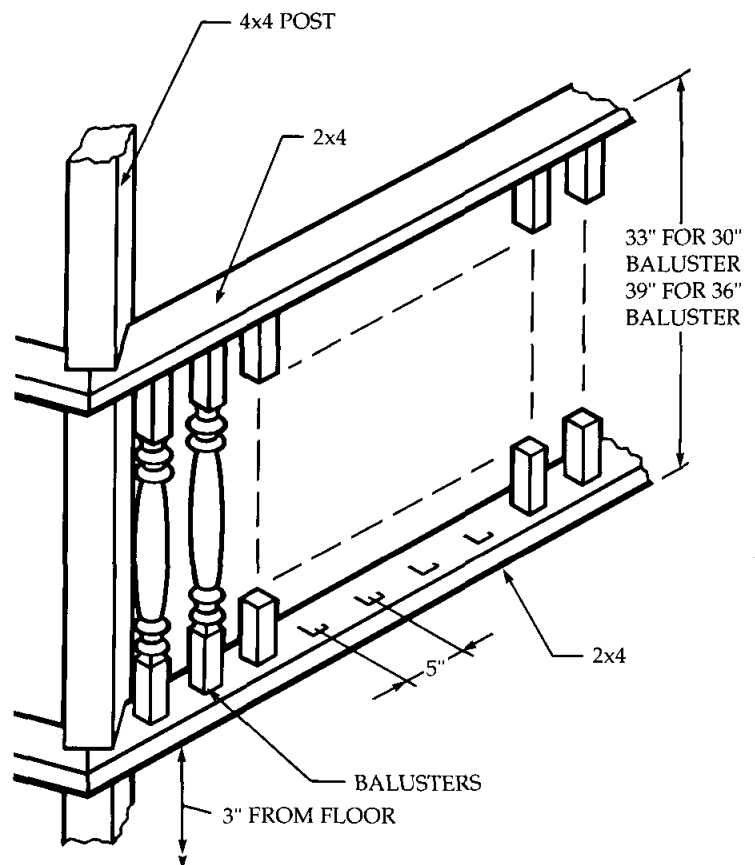


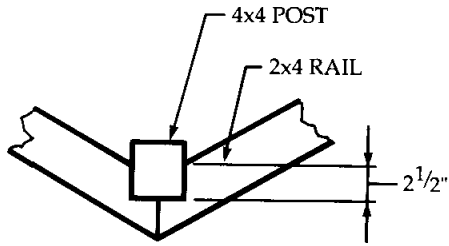
FIGURE 20



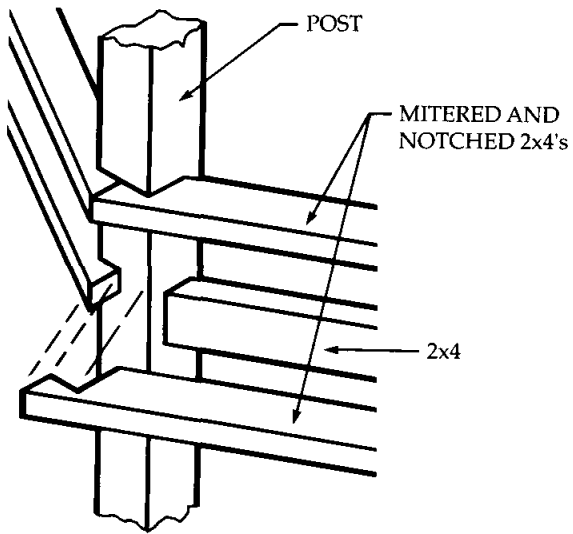
BALUSTRADE  
BALUSTERS 5" O C



FIGURE 21

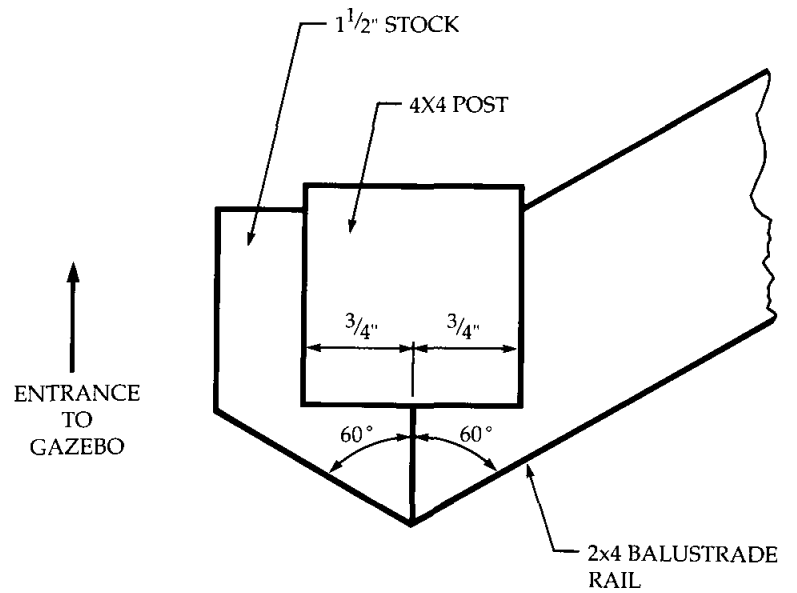


RAIL MITER and NOTCH



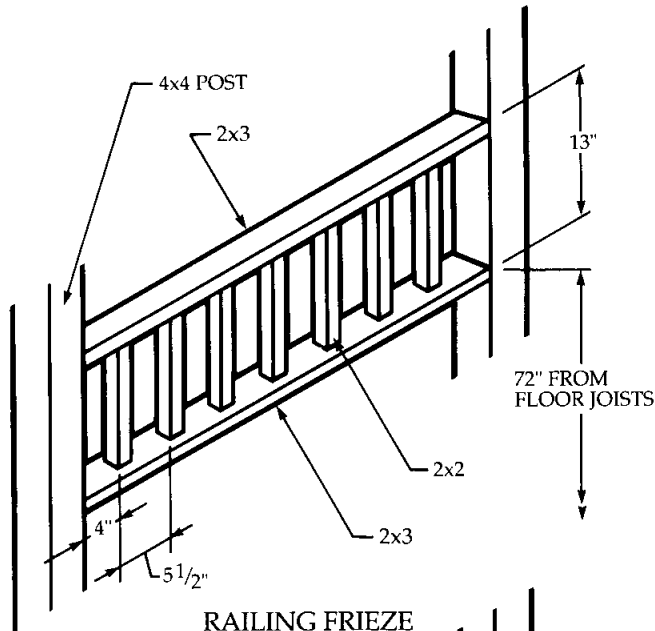
COMPOSITE TOP RAIL  
3 - 2x4's ASSEMBLED

FIGURE 21A

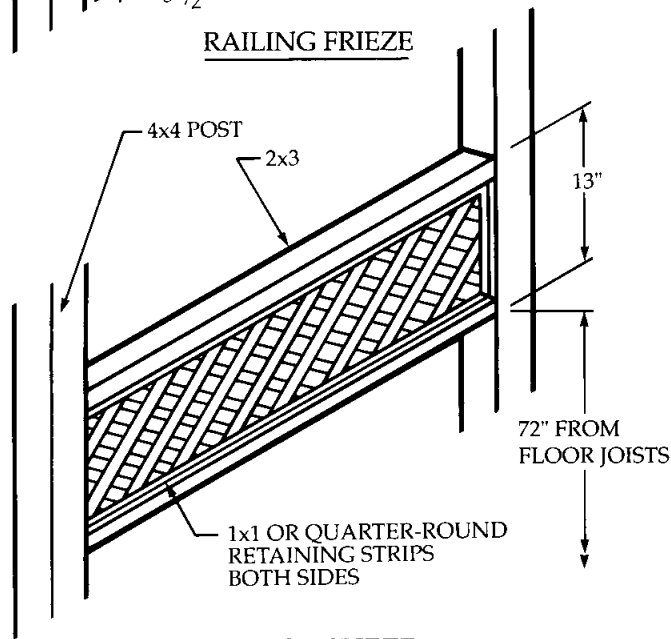


ENTRANCE  
TO  
GAZEBO

FIGURE 22

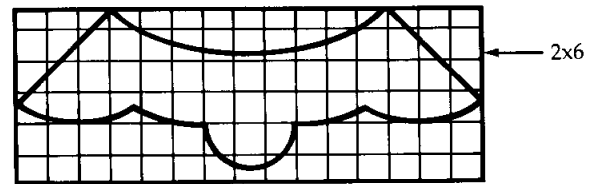


RAILING FRIEZE



LATTICE FRIEZE

FIGURE 23



PLAN FOR CONSOLE.  
1 Inch GRID

FIGURE 23A

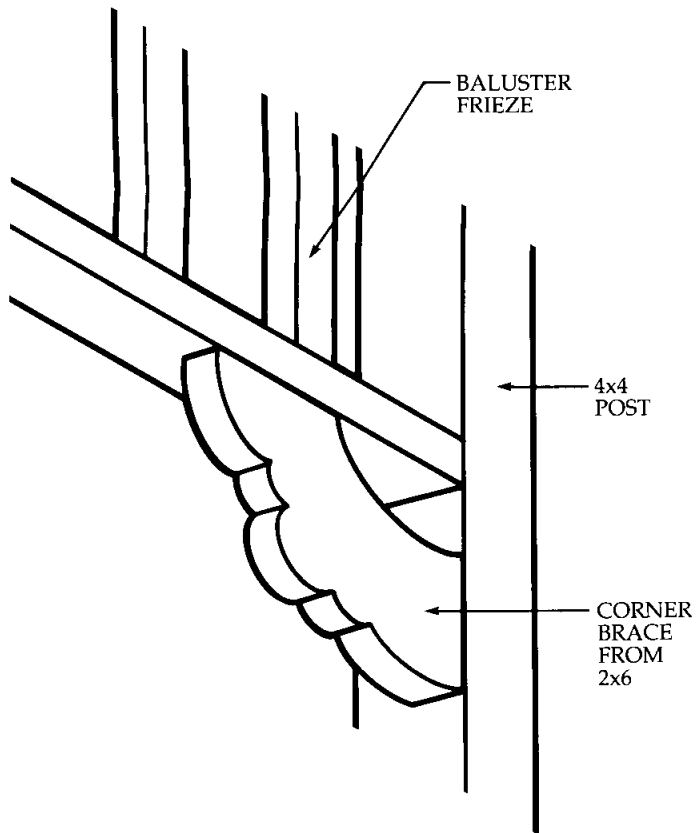


FIGURE 24

