



Furniture Plans.com
24" x 18" inset for bottom cabinet
1/2" x 23" rip to 23-3/8" x 17-7/8"
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Woodworking Plans You Can Download Now!



Lighthouse

Here's a great way to navigate your way through the back yard on those foggy nights. Not only is this project fun to build and decorate, it also makes a great conversation piece. Just be sure to buy enough wood to build a couple of them because when your neighbor sees it, he'll want you to build him one too.

Dimensions: The Lighthouse is 18-1/2" wide x 47" tall.

Getting started:

The parts for this project can be cut with a variety of tools and machines but we all have our favorites and those of which we are most comfortable. We suggest you read through the instructions before doing any cutting and decide which tools you feel most comfortable using. The plan is designed to guide you through the steps of building the project as we have.

Shop tips:

We have a few helpful hints we would like to share with you that have made assembling projects easier for us and help you to have the same success and enjoyment.

Predrilling is always a good idea in any type of wood that you use to avoid splitting or breaking off screw heads.

You can't say enough about squaring up assemblies no matter where you are in the assembly process. Getting something a little out of skew can be a frustrating experience for any woodworker. To avoid this always keep a tape measure and square handy. Remember to square before and after you have tightened the clamps.

All of the parts in this plan have been given a part number so they can be easily identified in the assembly instructions. When cutting out parts it is helpful to mark the part number (in pencil) on that part so when it comes time for assembly you can easily identify that specific part.

A note about safety:

Woodworking can be dangerous. Safety equipment and keeping your tools in proper working order with guards in place and adjusted properly can greatly reduce your risk of injury.

Be sure to read and understand all of the safety instructions that come with your tools.

Use common sense and caution in your workshop at all times. If you are not comfortable with a procedure, don't do it. Find an alternative that feels safe for you, no matter how others may work. Safety in your workshop is your responsibility.

Thank you for trying FurniturePlans.com.

If you have specific questions or problems regarding any of our plans, you may e-mail us at:

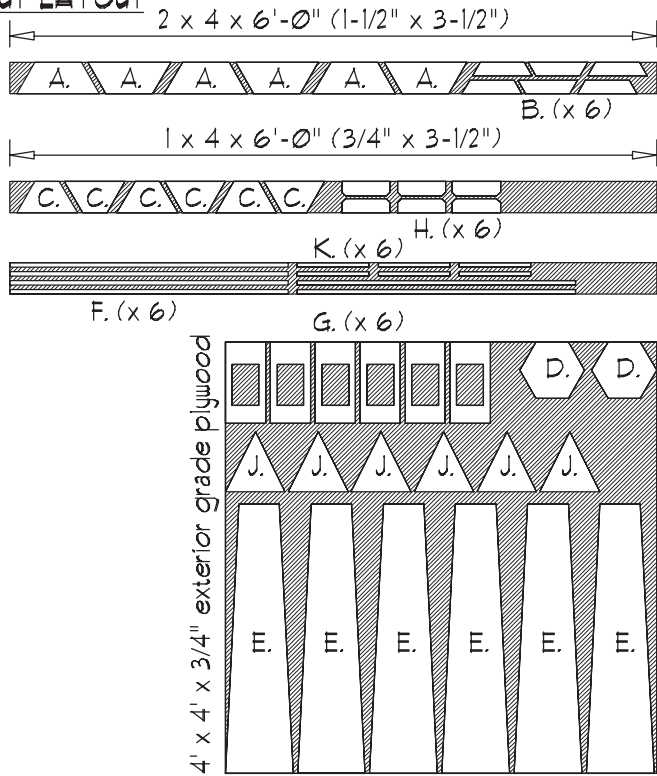
tech@furnitureplans.com

If you have any general comments or suggestions, please e-mail us at:

info@furnitureplans.com

We'll be happy to hear from you.

CUT LAYOUT



PARTS CUT LIST: (finished dimensions)

- A. (6) 3-1/2" x 9-1/4" (base pieces)
- B. (6) 1-1/2" x 6-11/16" (base cleats)
- C. (6) 3-1/2" x 6-13/16" (parapet pieces)
- D. (2) 6-1/4" x 7-3/16" (parapet cleats)
- E. (6) 30" x 7-9/16" (tower walls)
- F. (6) 1/2" x 31" (tower wall trim)
- G. (6) 9" x 4-1/2" (lantern room walls)
- H. (6) 1-5/8" x 5-3/8" (fascia trim)
- J. (6) 6-11/16" x 6-11/16" (roof panels)
- K. (6) 1/2" x 8" (roof trim)

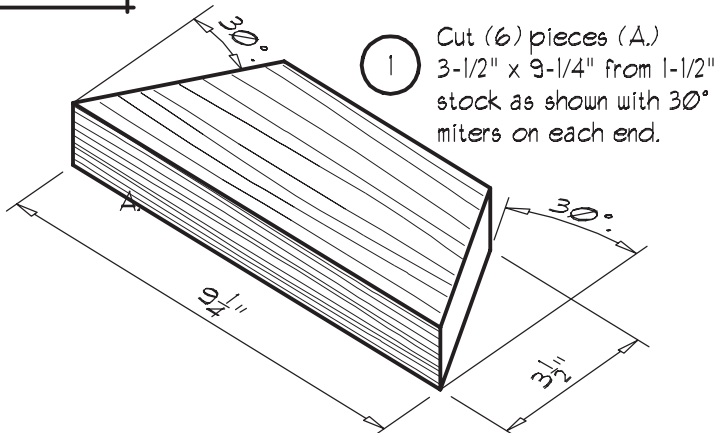
HARDWARE LIST:

- #8 x 1-1/4" wood screws
- #8 x 2" wood screws
- (6) 3-3/8" colonial pegs
- #4 galv. finish nails
- 48" of 3/16" chain

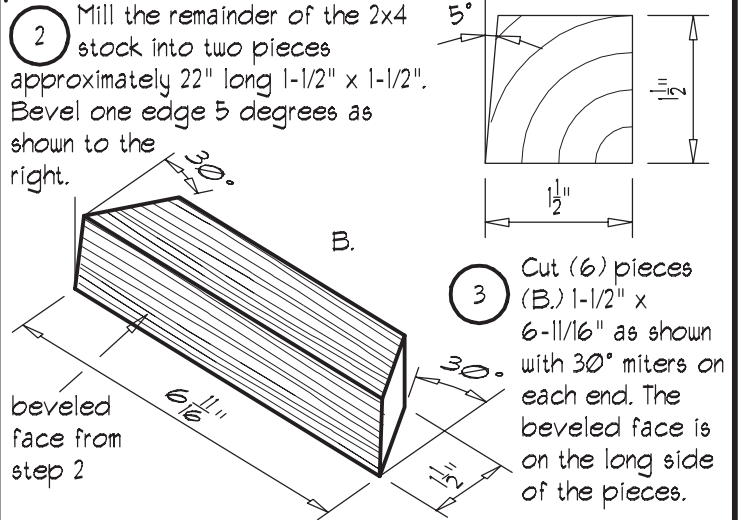
MATERIALS LIST:

- (1) 2 x 4 x 72" treated
- (2) 1 x 4 x 72" treated
- (1) 4' x 4' x 3/4" ext. plywood
- 3-1/4" tall x 1-1/2" dia. finial
- 220" of 1/4" x 1/8" craft sticks

DIAG. 1. CUT BASE PIECES (A.)

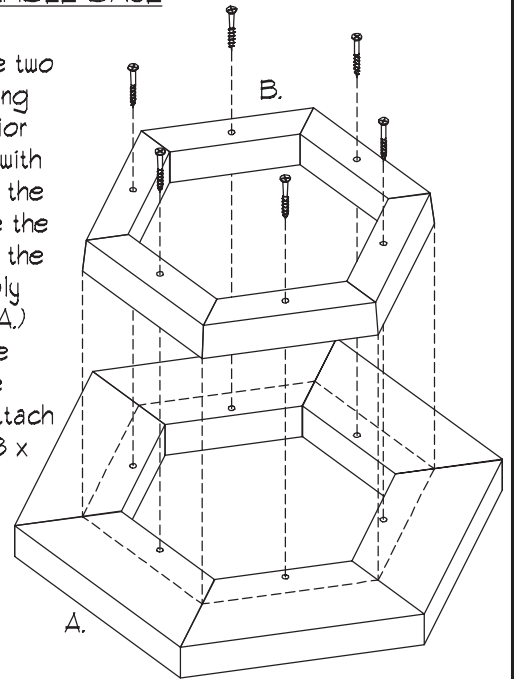


DIAG. 2. CUT BASE CLEATS (B.)

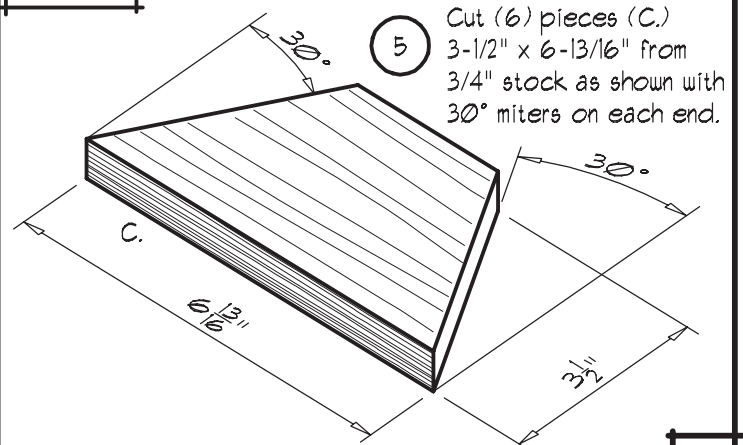


DIAG. 3. ASSEMBLE BASE

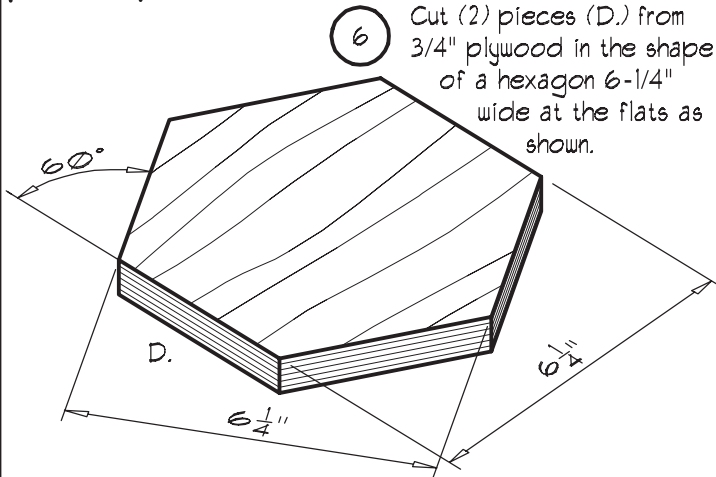
4 Assemble the two hexagons using biscuits and exterior wood glue. Clamp with a strap clamp until the glue sets up. Once the glue is dry, center the base cleat assembly (B.) being sure that the smaller side of the bevel is up and attach to base with (6) #8 x 2" wood screws.



DIAG. 4. CUT PARAPET PIECES (C.)

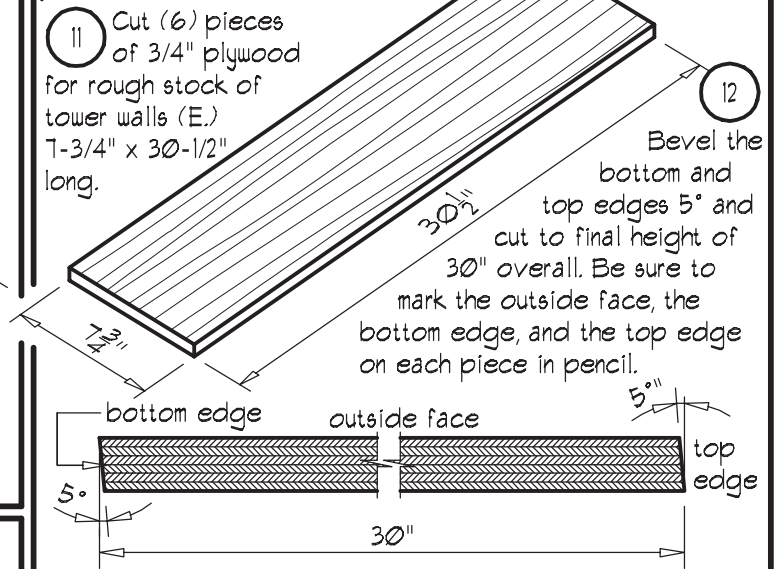


DIAG 5. MAKE PARAPET CLEATS (D.)



6 Cut (2) pieces (D.) from 3/4" plywood in the shape of a hexagon 6-1/4" wide at the flats as shown.

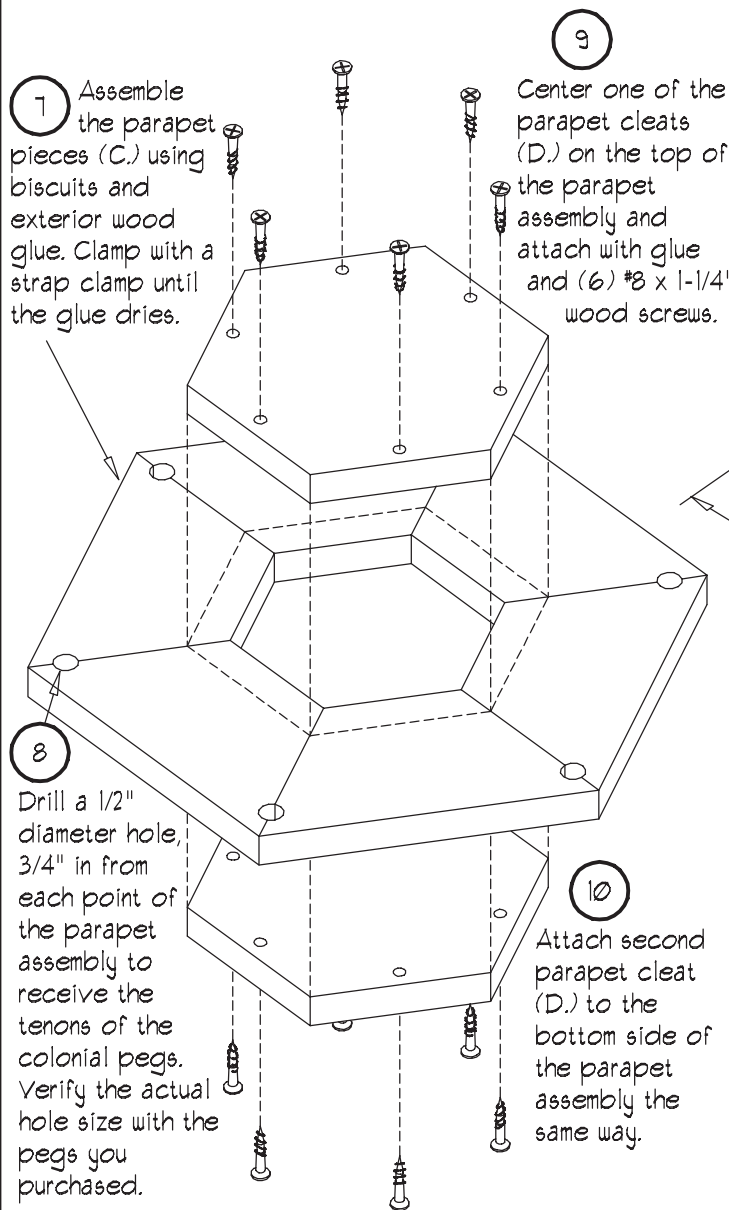
DIAG 7. TOWER WALLS (E.)



11 Cut (6) pieces of 3/4" plywood for rough stock of tower walls (E.) 7-3/4" x 30-1/2" long.

12 Bevel the bottom and top edges 5° and cut to final height of 30" overall. Be sure to mark the outside face, the bottom edge, and the top edge on each piece in pencil.

DIAG 6. ASSEMBLE PARAPET



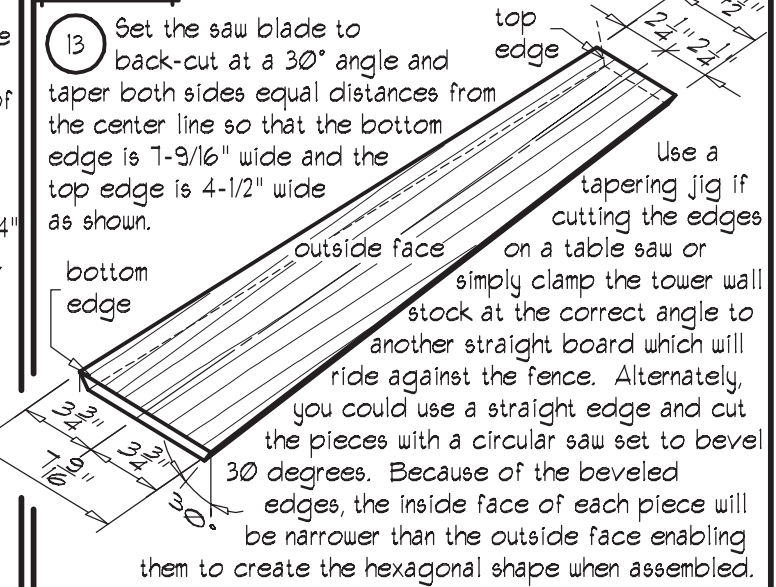
7 Assemble the parapet pieces (C.) using biscuits and exterior wood glue. Clamp with a strap clamp until the glue dries.

9 Center one of the parapet cleats (D.) on the top of the parapet assembly and attach with glue and (6) #8 x 1-1/4" wood screws.

8 Drill a 1/2" diameter hole, 3/4" in from each point of the parapet assembly to receive the tenons of the colonial pegs. Verify the actual hole size with the pegs you purchased.

10 Attach second parapet cleat (D.) to the bottom side of the parapet assembly the same way.

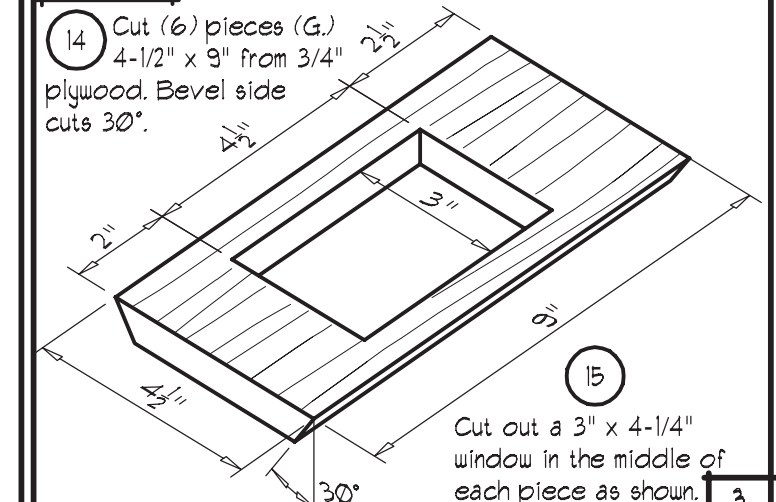
DIAG 8. TAPER TOWER WALLS (E.)



13 Set the saw blade to back-cut at a 30° angle and taper both sides equal distances from the center line so that the bottom edge is 7-9/16" wide and the top edge is 4-1/2" wide as shown.

Use a tapering jig if cutting the edges on a table saw or simply clamp the tower wall stock at the correct angle to another straight board which will ride against the fence. Alternately, you could use a straight edge and cut the pieces with a circular saw set to bevel 30 degrees. Because of the beveled edges, the inside face of each piece will be narrower than the outside face enabling them to create the hexagonal shape when assembled.

DIAG 9. CUT LANTERN ROOM WALLS (G.)



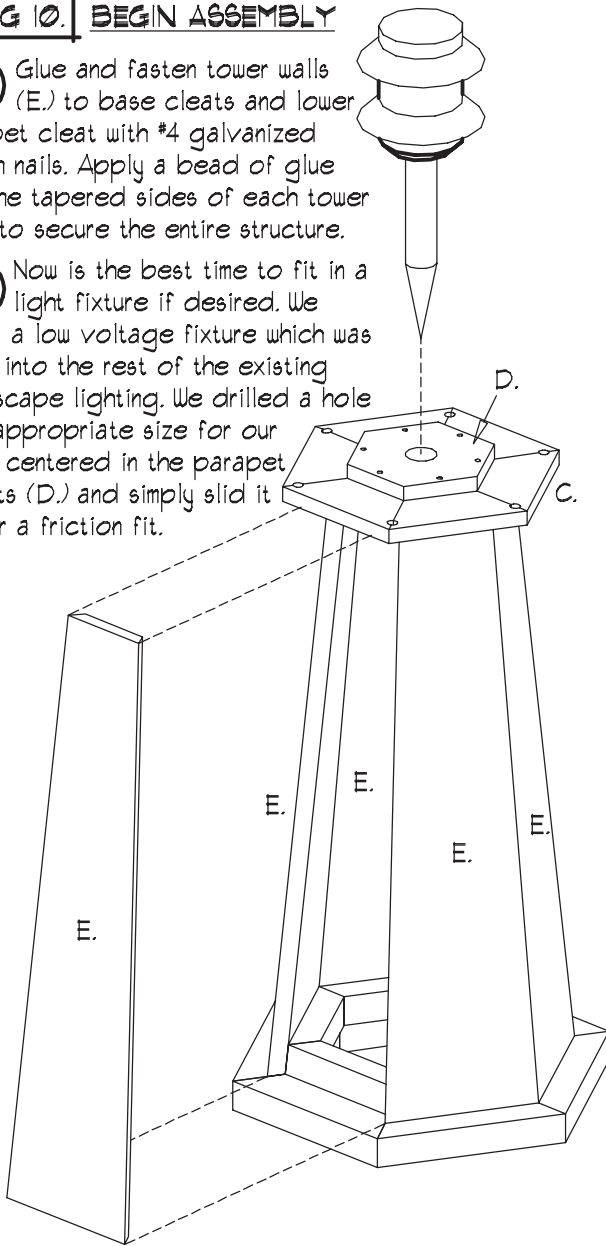
14 Cut (6) pieces (G.) 4-1/2" x 9" from 3/4" plywood. Bevel side cuts 30°.

15 Cut out a 3" x 4-1/4" window in the middle of each piece as shown.

DIAG 10. BEGIN ASSEMBLY

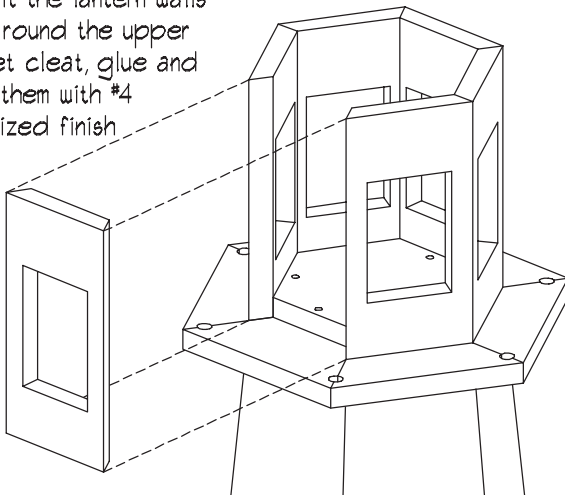
16 Glue and fasten tower walls (E.) to base cleats and lower parapet cleat with #4 galvanized finish nails. Apply a bead of glue on the tapered sides of each tower wall to secure the entire structure.

17 Now is the best time to fit in a light fixture if desired. We used a low voltage fixture which was tied into the rest of the existing landscape lighting. We drilled a hole the appropriate size for our light centered in the parapet cleats (D.) and simply slid it in for a friction fit.



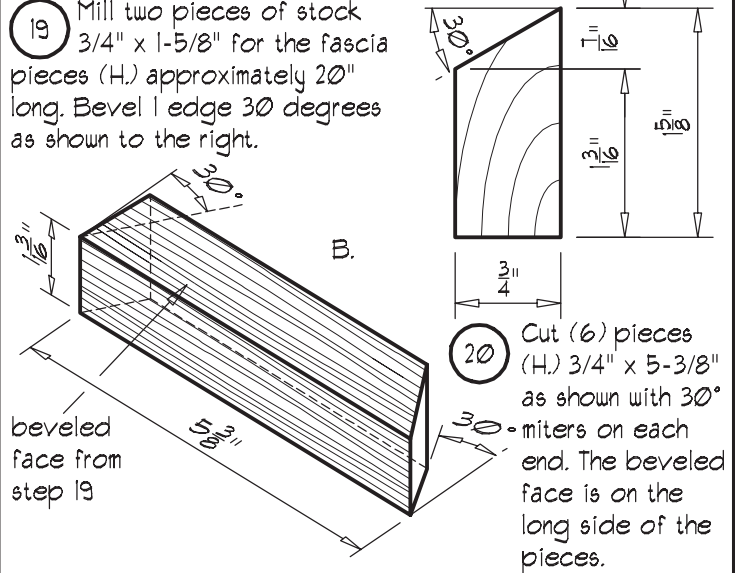
DIAG 11. ASSEMBLE LANTERN ROOM WALLS

18 Fit the lantern walls around the upper parapet cleat, glue and fasten them with #4 galvanized finish nails.



DIAG 12. MAKE FASCIA PIECES (H.)

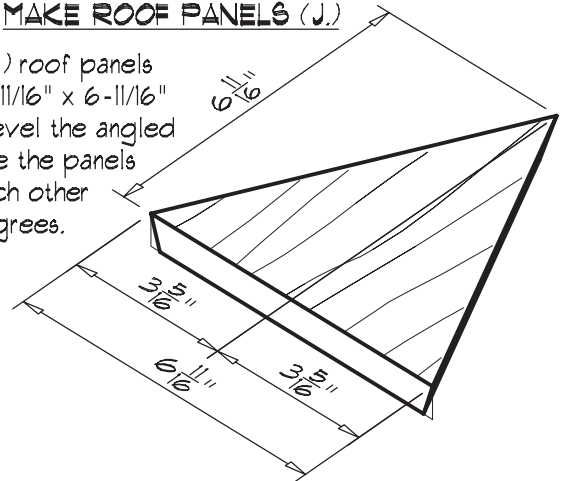
19 Mill two pieces of stock 3/4" x 1-5/8" for the fascia pieces (H.) approximately 20" long. Bevel 1 edge 30 degrees as shown to the right.



20 Cut (6) pieces (H.) 3/4" x 5-3/8" as shown with 30° miters on each end. The beveled face is on the long side of the pieces.

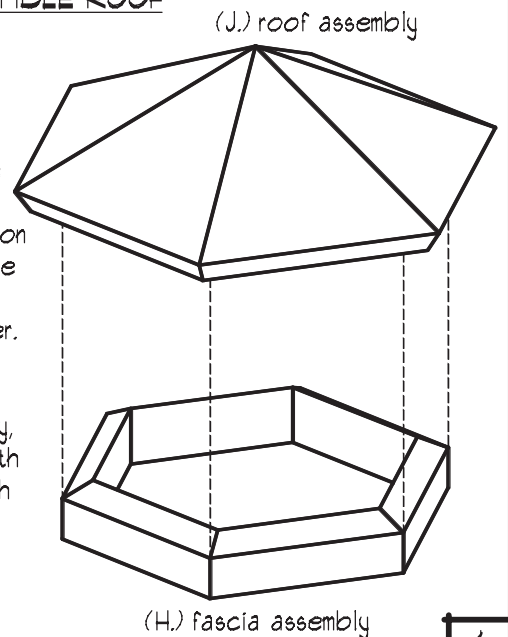
DIAG 13. MAKE ROOF PANELS (J.)

21 Cut (6) roof panels (J.) 6-11/16" x 6-11/16" as shown. Bevel the angled edges where the panels will meet each other at 14-1/2 degrees.

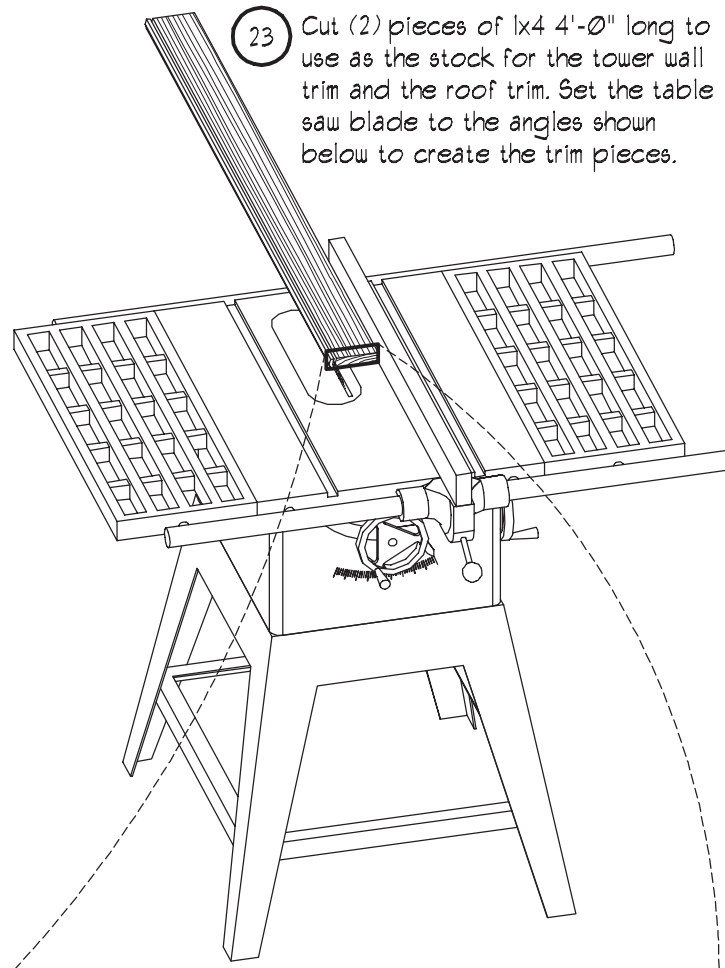


DIAG 14. ASSEMBLE ROOF

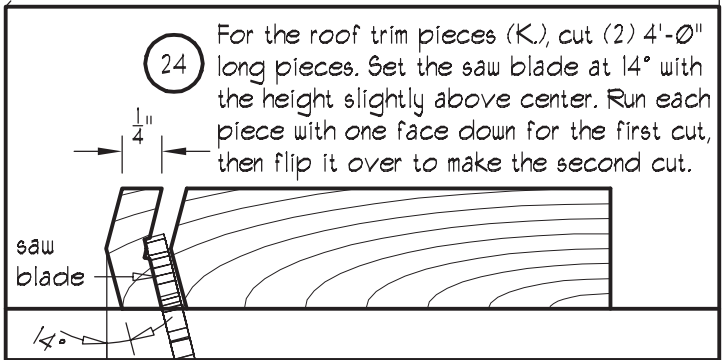
22 Assemble and glue the fascia pieces (H.) into the hexagon shape and assemble and glue the roof panels (J.) together. Center the roof panel assembly on the fascia assembly, glue and attach with #4 galvanized finish nails.



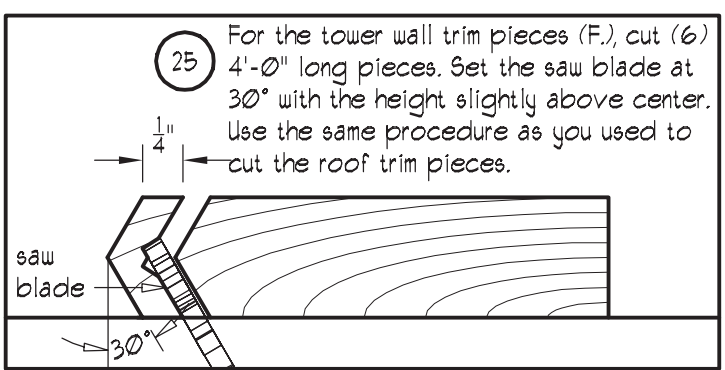
DIAG 15. MAKE ROOF & TOWER WALL TRIM



23 Cut (2) pieces of 1x4 4'-0" long to use as the stock for the tower wall trim and the roof trim. Set the table saw blade to the angles shown below to create the trim pieces.

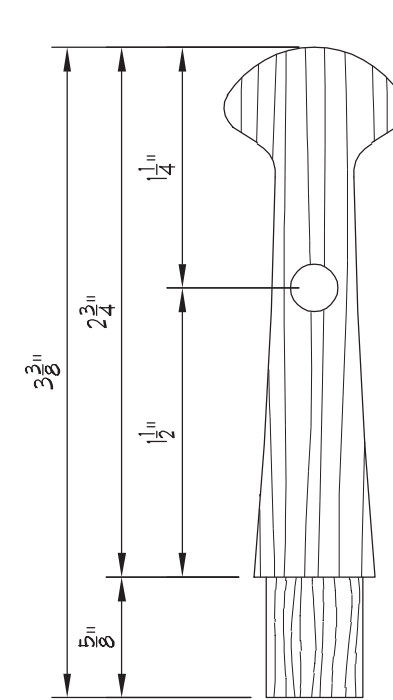


24 For the roof trim pieces (K.), cut (2) 4'-0" long pieces. Set the saw blade at 14° with the height slightly above center. Run each piece with one face down for the first cut, then flip it over to make the second cut.



25 For the tower wall trim pieces (F.), cut (6) 4'-0" long pieces. Set the saw blade at 30° with the height slightly above center. Use the same procedure as you used to cut the roof trim pieces.

DIAG 16. MAKE COLONIAL PEG "RAIL POSTS"



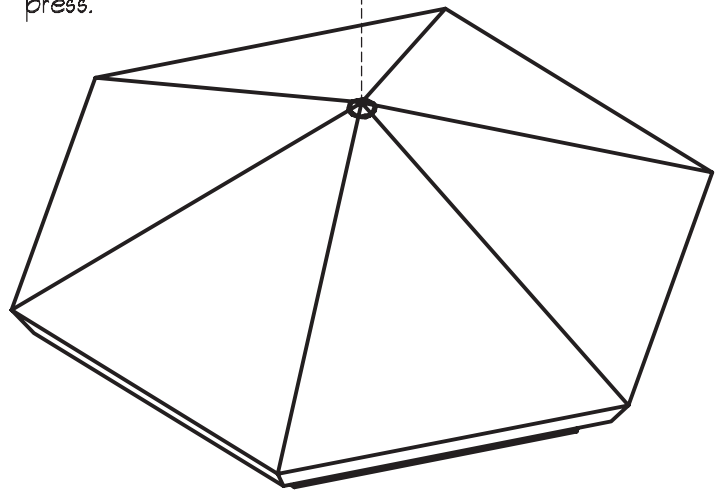
26 A 1/4" diameter hole is required in each colonial peg at the location shown to allow the chain "railing" to pass through. Securely mount the peg to a drill press table so that it is perpendicular to the bit and can't roll in place. Drill a pilot hole with a 1/16" bit all the way through first and then follow up with a 1/4" bit going half way through from each side to prevent tearout. Repeat for all 6 pegs.

DIAG 17. DRILL HOLE FOR FINIAL

27 Carefully drill a hole to receive the tenon or screw of the finial you purchased centered on the roof structure with a drill press.



Do not install the finial at this time. It will be installed after the roof trim is in place.



Now is the best time to paint all of the pieces. It will be easier to paint the trim pieces now, while they are separate from the main assembly, and then touch up any areas such as nail holes after the final assembly. Prime all the pieces first with exterior grade primer and paint as desired with exterior paint.

DIAG 18. FINAL ASSEMBLY

28

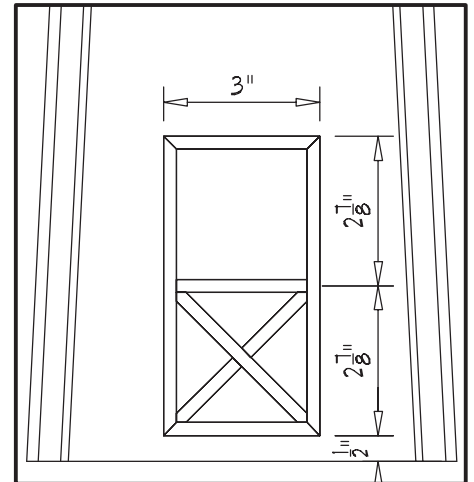
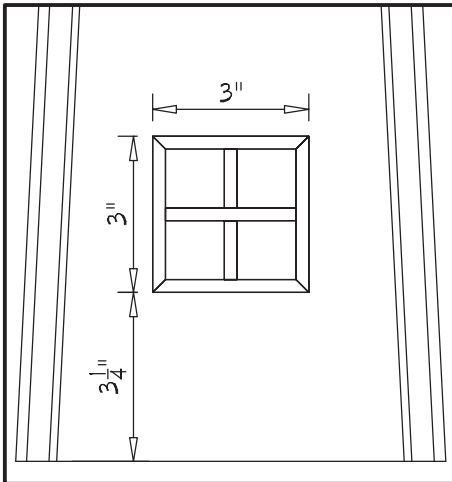
Fit roof trim pieces and glue in place with exterior wood glue. Be sure to leave room for the finial tenon to be inserted at the peak. Install finial and set roof in place.

30

Fit tower wall trim pieces and glue in place with exterior wood glue.

29

Glue and install colonial peg posts so that the holes are perpendicular to the joints between the parapet pieces. String a small chain through the post holes and let it drape to your liking. Determine where to cut the chain to length, cut a link and reattach it to the starting point.



31

Use 1/4" x 1/8" craft wood to create windows on three sides as shown. Glue in place with exterior wood glue.

32

Use 1/4" x 1/8" craft wood to create doors on the other three sides as shown. Glue in place with exterior wood glue.

33

Touch up any areas that need repainting and enjoy.

