Loft Bed

This loft bed / desk combination makes a great space saver in the kid's room or dorm room. Solid wood construction from 1-1/2" stock make this unit rock solid. Note that the drawer bases under the desk were created with the 3-drawer night stand plan available separately on FurniturePlans.com. This gives you the option of substituting different types of bases (such as file cabinets) if desired.

Loft Bed Dimensions:
44" Wide x 80" Long x 69-1/4" High

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.

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.

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.

Do not cut every piece at once. Especially on large, complex projects, cut and fit as you go through the procedures. Small dimensional discrepancies in one part such as slightly shallower dados or slightly longer tenons than what's called for can affect the dimensions of subsequent parts. Build complex projects as a series of components. These plans are designed to walk you through the procedures in a logical order and it is important to go through the steps and verify the dimensions given with what's already been built.

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

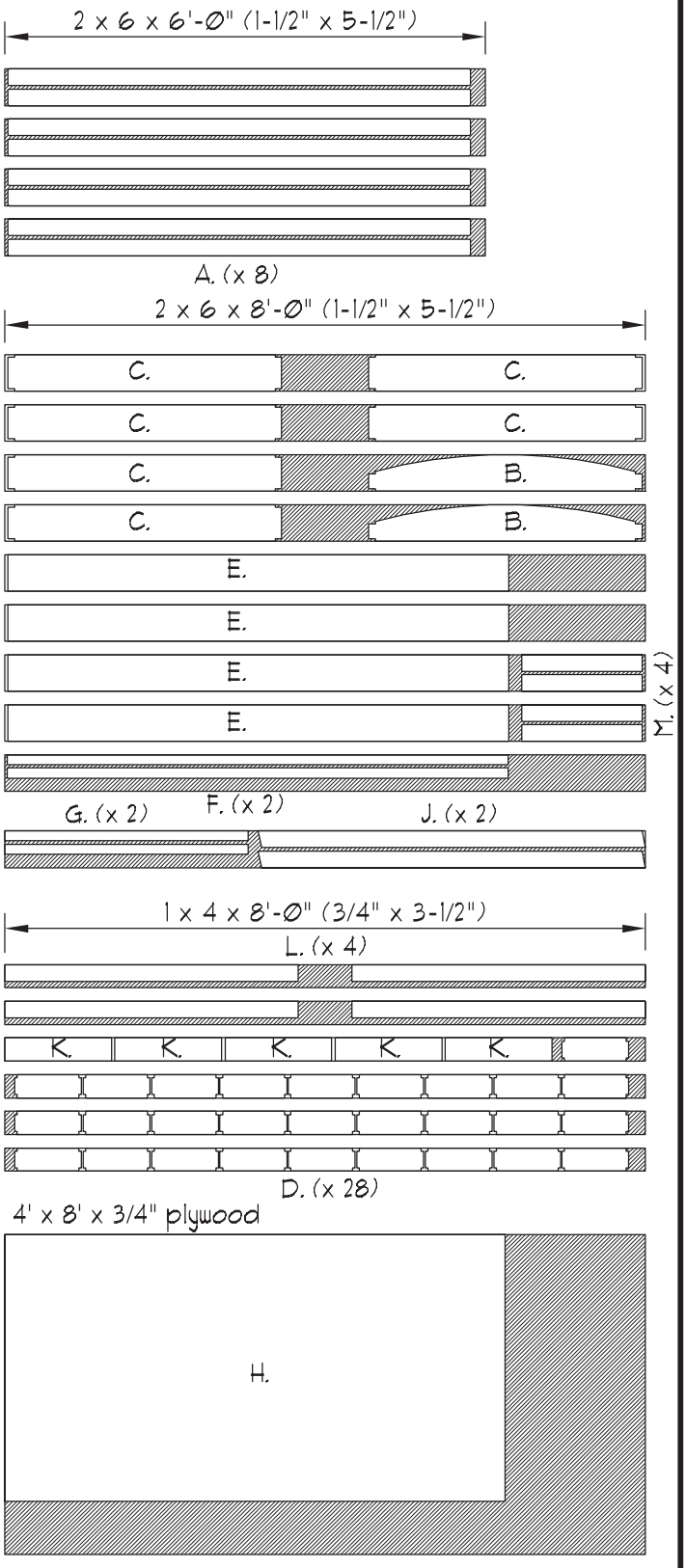
You can't say enough about squaring up assemblies no matter where you are in the assembly process. Getting something a little out of skew can be a frustrating experience for any woodworker. To avoid this always keep a tape measure and square handy. Remember to square before and after you have tightened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

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 for future plans, please e-mail us at:
info@furnitureplans.com

CUT LAYOUT:



This set of plans utilizes the 3-drawer nightstand plans (which can be downloaded separately) as the drawer bases for the desk unit. No attempt was made in these plans to duplicate the drawer base construction. This will provide you with the flexibility of using different drawer bases or 'store bought' filing cabinets.

PARTS CUT LIST: (finished dimensions)

- ☐ A. (8) 2-1/2" x 69-1/4" (leg stock)
- ☐ B. (2) 5-1/2" x 41" (upper end rails)
- ☐ C. (6) 5-1/2" x 41" (lower end rails)
- ☐ D. (28) 3-1/2" x 10" (headboard slats)
- ☐ E. (4) 5-1/2" x 75" (side rails)
- ☐ F. (2) 1-1/2" x 75" (long support cleats)
- ☐ G. (2) 1-1/2" x 36-1/2" (short support cleats)
- ☐ H. (1) 40" x 75" (mattress support)
- ☐ J. (2) 2-1/2" x 58-1/16" (ladder legs)
- ☐ K. (5) 3-1/2" x 16" (ladder treads)
- ☐ L. (4) 2-1/2" x 44" (guard rails)
- ☐ M. (4) 2-1/2" x 18" (guard rail supports)

MATERIALS LIST:

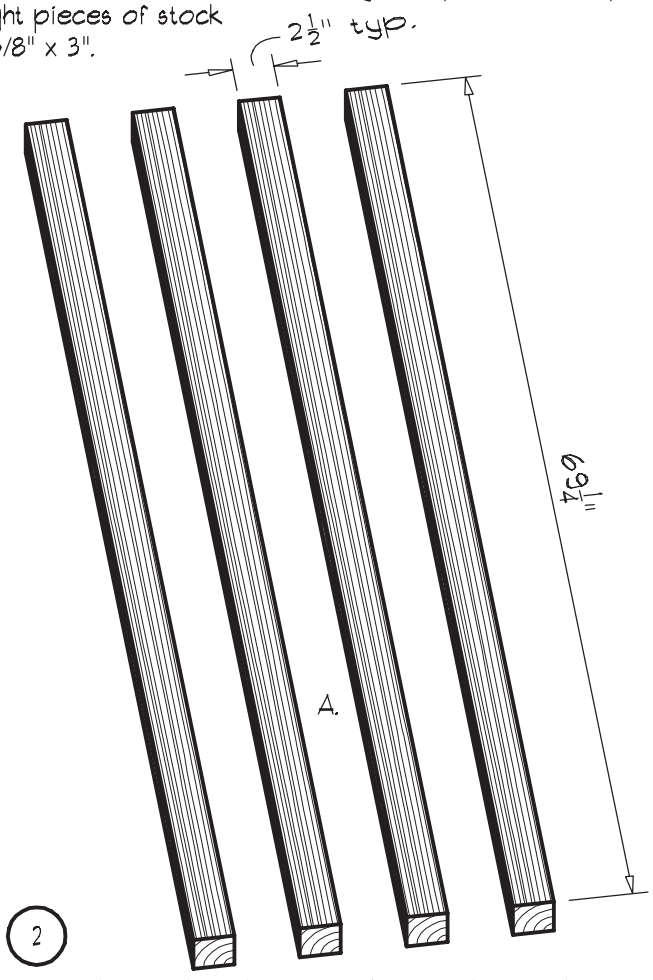
- ☐ (4) 2 x 6 x 72"
- ☐ (10) 2 x 6 x 96"
- ☐ (6) 1 x 4 x 96"
- ☐ (1) 4' x 8' x 3/4" plywood
- ☐ (1) 74-1/2" lam. countertop

HARDWARE LIST:

- ☐ (16) 5/16 x 6" long lag bolts
- ☐ #8 x 2-1/2" wood screws
- ☐ #8 x 2" wood screws
- ☐ #8 x 1-5/8" wood screws
- ☐ (16) 3/4" dia. wood plugs

DIAG 1. MAKE LEGS

1 Begin by cutting (8) pieces (A.) 2-5/8" x 72" long from 1-1/2" stock. Plane and face glue in pairs to end up with eight pieces of stock 2-5/8" x 3".



Square up the stock and surface plane so that you have four leg blanks 2-1/2" x 2-1/2" square. Square up one end and cut the legs (A.) to final length of 69-1/4".

DIAG 2. MORTISE LEGS (A.)

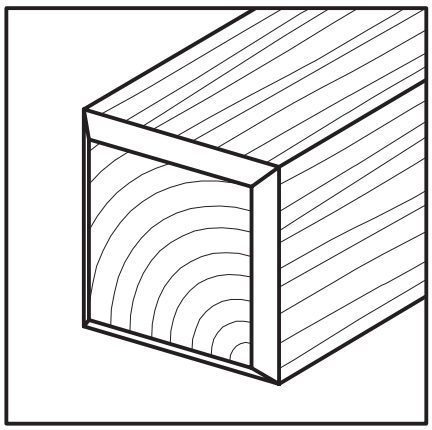
3

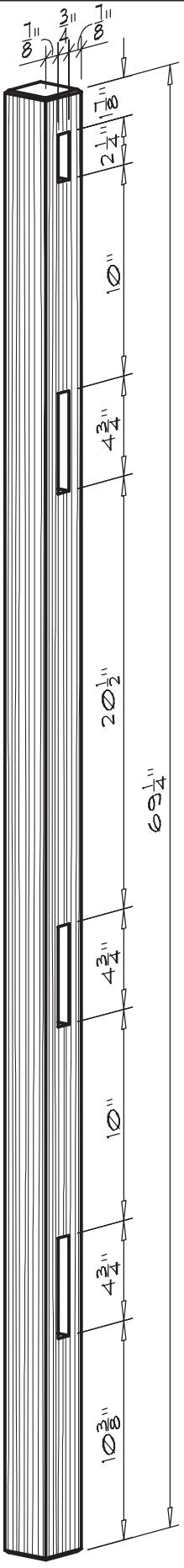
Lay out and cut (3) 4-3/4" x 3/4" mortises and (1) 2-1/4" x 3/4" mortise on the legs (A.) as shown. Mortises are 1" deep.

A note on mortising:
Mortising can be accomplished in a variety of ways with a variety of tools. Select a way that you are most comfortable with. If you choose to mortise with a hand chisel, it is a good idea to remove a majority of the material with a drill press equipped with a forstener bit first. It is also helpful to clamp a scrap piece of wood along the layout lines to help you keep the chisel perpendicular to the work surface. Make the cuts across the grain before making the cuts parallel to the grain to avoid splitting. Whichever method of mortising you use, work on a sturdy table at a comfortable height and keep the work piece clamped securely to the work surface.

4

Chamfer both the tops and the bottoms of the legs approximately 1/8" all around. This will help prevent the wood from chipping at the corners.

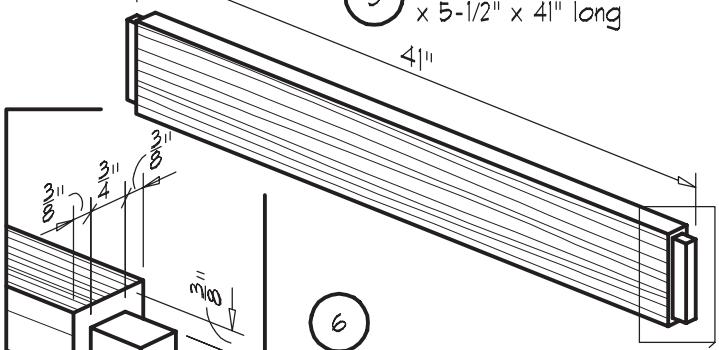


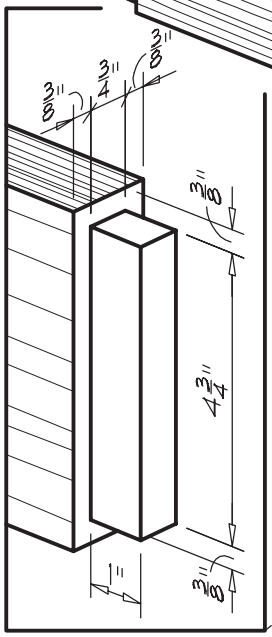


DIAG 3. MAKE LOWER END RAILS (C.)

5

Cut (6) pieces (C.) 1-1/2" x 5-1/2" x 41" long





6

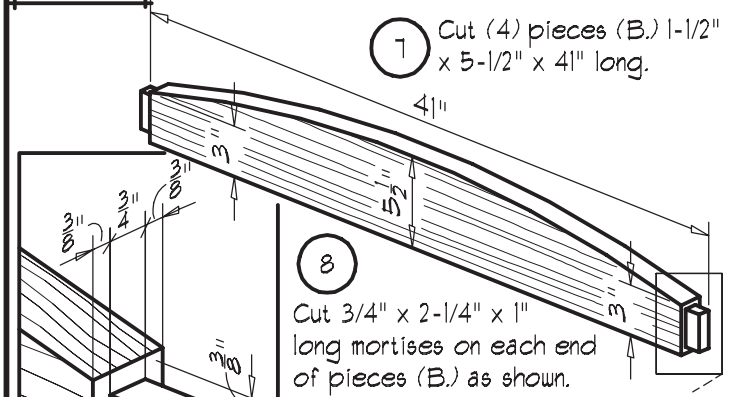
Cut 3/4" x 4-3/4" x 1" long mortises on each end of pieces (C.) as shown.

Test fit in mortises in legs and fine tune with a hand file as necessary.

DIAG 4. MAKE UPPER END RAILS (B.)

7

Cut (4) pieces (B.) 1-1/2" x 5-1/2" x 41" long.

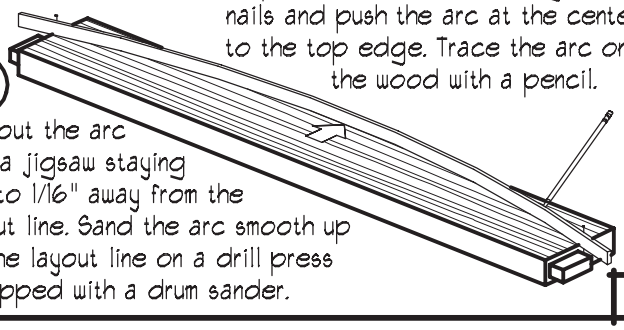


8

Cut 3/4" x 2-1/4" x 1" long mortises on each end of pieces (B.) as shown. Test fit in mortises in legs and fine tune with a hand file as necessary.

9

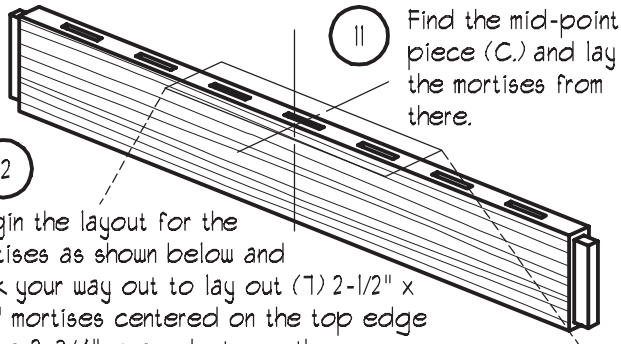
To lay out the arc, space two nails at the end of (B.) in a scrap piece of wood 2-1/2" down from the top edge. Use a flexible strip (such as hardboard) against the nails and push the arc at the center to the top edge. Trace the arc onto the wood with a pencil.



10

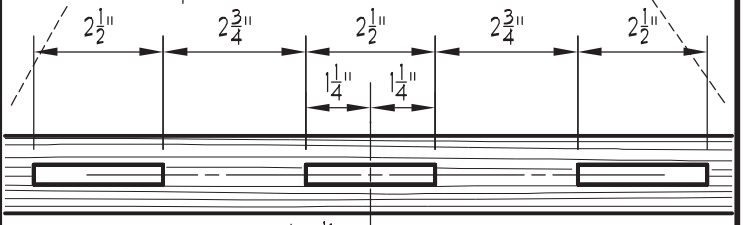
Cut out the arc with a jigsaw staying 1/8" to 1/16" away from the layout line. Sand the arc smooth up to the layout line on a drill press equipped with a drum sander.

DIAG 5. LAY OUT MORTISES FOR SLATS



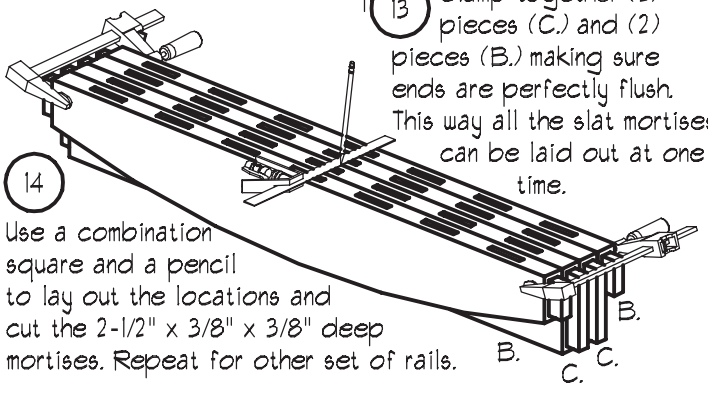
11 Find the mid-point of piece (C.) and lay out the mortises from there.

12 Begin the layout for the mortises as shown below and work your way out to lay out (7) 2-1/2" x 3/8" mortises centered on the top edge with a 2-3/4" space between them



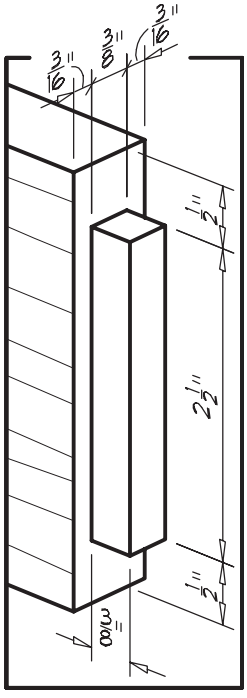
centerline

13 Clamp together (2) pieces (C.) and (2) pieces (B.) making sure ends are perfectly flush. This way all the slat mortises can be laid out at one time.

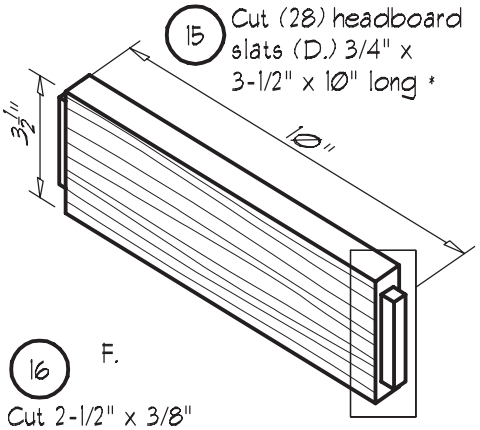


14 Use a combination square and a pencil to lay out the locations and cut the 2-1/2" x 3/8" x 3/8" deep mortises. Repeat for other set of rails.

DIAG 6. CUT SLATS (D.)



15 Cut (28) headboard slats (D.) 3/4" x 3-1/2" x 10" long *

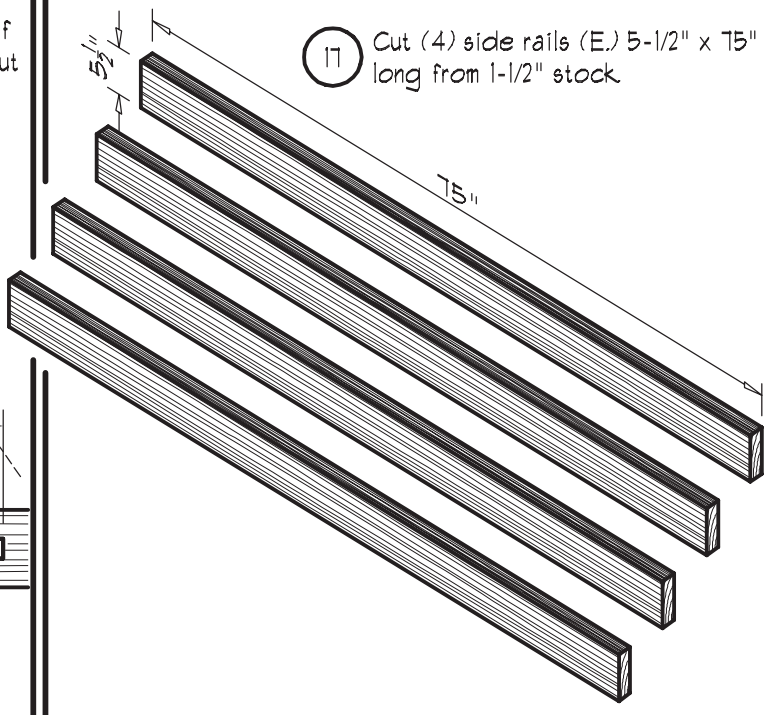


16 Cut 2-1/2" x 3/8" x 3/8" long tenons on each end as shown. Tenons are centered on end.

F.

* Because of the repetitive nature of these cuts and the accuracy required, it's a good idea to perform these cuts on a miter saw or a miter box with a stop block positioned the correct distance away from the saw blade.

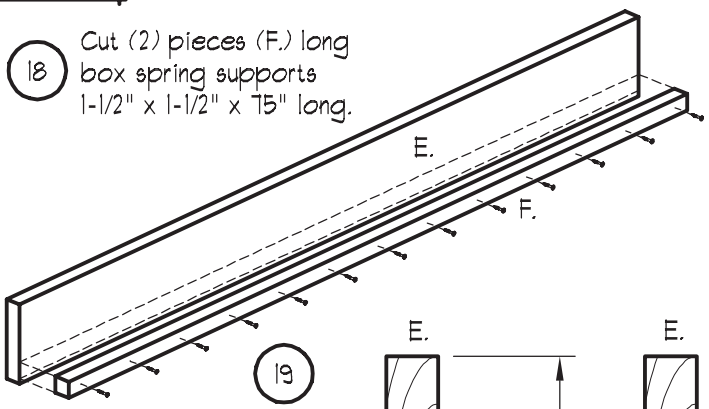
DIAG 7. MAKE SIDE RAILS (E.)



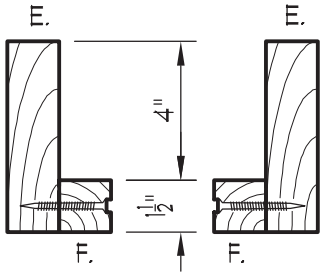
17 Cut (4) side rails (E.) 5-1/2" x 75" long from 1-1/2" stock.

DIAG 8. CUT LONG SUPPORT CLEATS (F.)

18 Cut (2) pieces (F.) long box spring supports 1-1/2" x 1-1/2" x 75" long.



19 Attach box spring supports (F.) to inside face of two of the side rails (E.) with #8 x 2-1/2" wood screws at 6" on center. Bottom of support (F.) to be flush with bottom of side rail (E.)



Prepare for assembly:

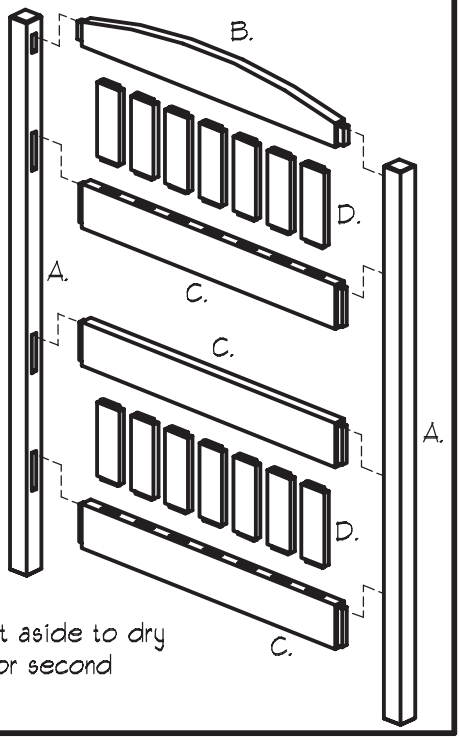
Now is the best time to give all the pieces a final sanding and prepare for final assembly.

Start with 150 grit sandpaper to remove all the tool marks and work your way through to 220 grit until the surface is smooth.

If you plan to use water based stain to finish the bed, it is a good idea to lightly wet the wood surface with a damp cloth before the final sanding with 220 grit paper. This will raise any grain that would otherwise raise when a water based finish is applied.

DIAG 9. ASSEMBLE HEADBOARDS

20 Assemble the two headboards as shown. Because of the number of pieces to assemble at this point, it would be a good idea to have help. Place a small drop of glue at the end of each tenon on the slats (D.) and assemble them into the mortises provided on the rails (B. & C.). You just want a small amount of glue to keep the slats in place and to prevent them from rattling, but not so much that you'll have to wipe off a lot of excess during the assembly.

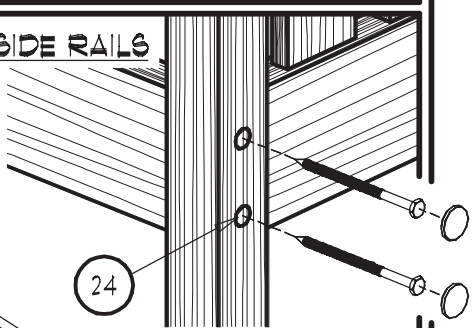


21 Once the slats and rails are assembled, glue them into the mortises on the legs (A.).

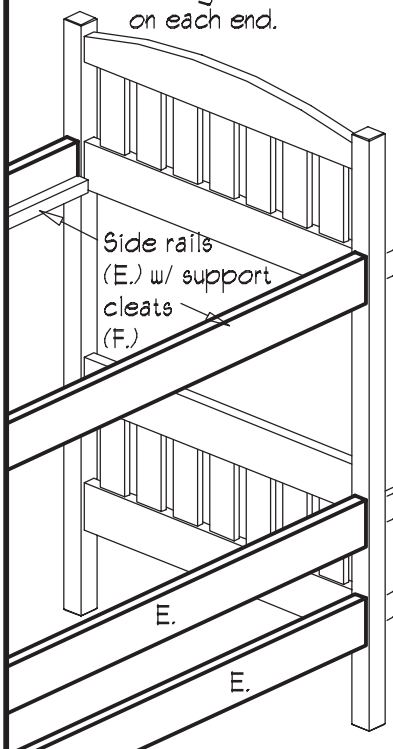
22 Clamp and set aside to dry and repeat for second headboard.

DIAG 10. ASSEMBLE SIDE RAILS

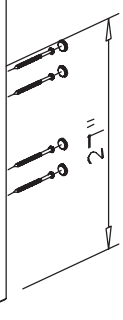
23 Center the side rails (E.) on the legs (A.) and attach as shown with (2) 5/16" x 6" lag screws on each end.



24 Predrill and countersink 3/4" diameter x 3/4" deep to receive 3/4" wood plugs.

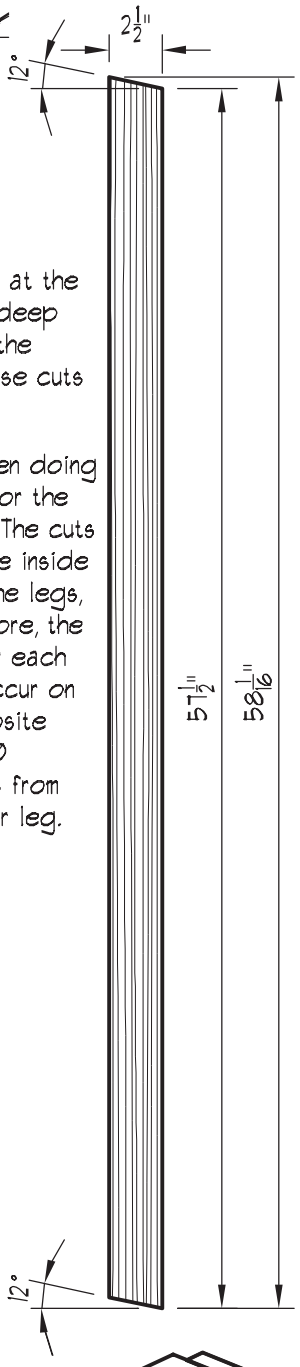


Note that we will be using the 3-drawer nightstand (without the top) for the drawer bases of the desk. They have a height of 27" and match the height of the middle side rail. If you use another type of cabinet under the desk, verify the height so that the top edge of the middle side rail matches it.



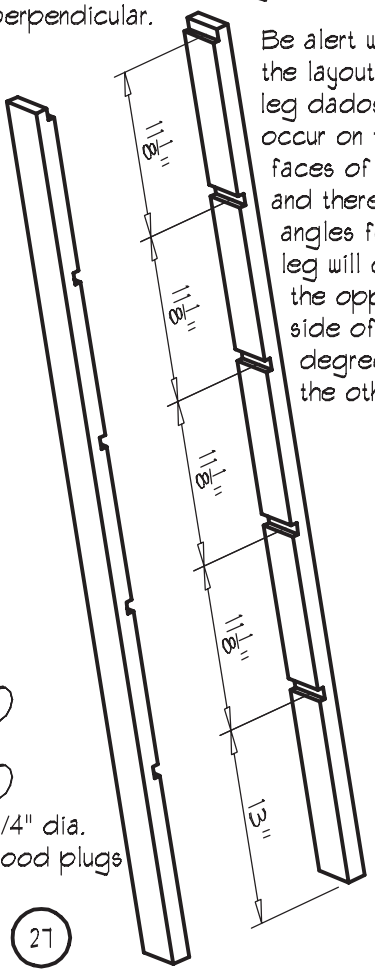
DIAG 11. LADDER ASSEMBLY

25 Cut (2) pieces (J.) ladder legs 1-1/2" x 2-1/2" x 57-1/2" long with 12 degree angle cuts at each end as shown.



26 Cut a 3/4" wide x 1/2" deep rabbet at the top edge and (4) 3/4" wide x 1/2" deep dados spaced as shown below on the inside face of the ladder legs. These cuts are also made at 12 degrees from perpendicular.

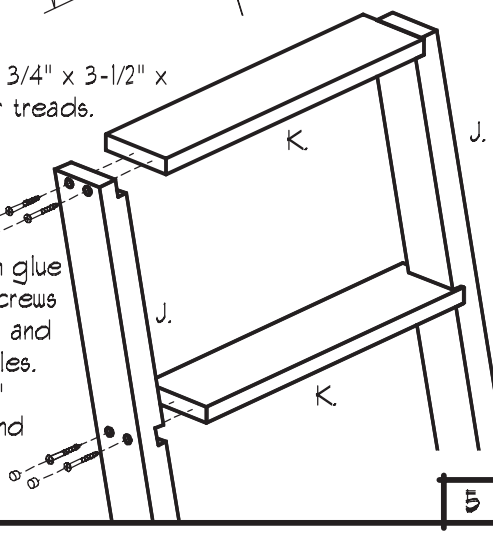
Be alert when doing the layout for the leg dados. The cuts occur on the inside faces of the legs, and therefore, the angles for each leg will occur on the opposite side of Ø degrees from the other leg.



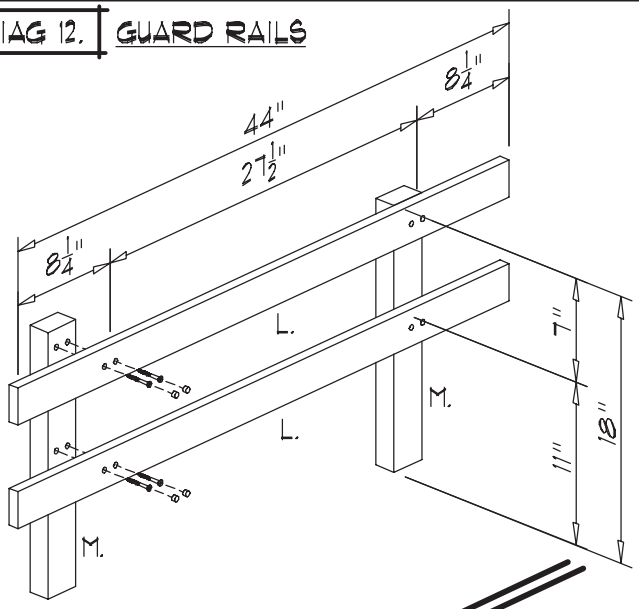
3/4" dia. wood plugs

27 Cut (5) pieces (K.) 3/4" x 3-1/2" x 16" long for ladder treads.

28 Attach treads (K.) to legs (J.) with glue and #8 x 2" wood screws through pre-drilled and 3/8" countersunk holes. Plug holes with 3/8" wood plugs and sand flush.



DIAG 12. GUARD RAILS



29

Cut (4) pieces (L.) guard rails 3/4" x 2-1/2" x 44" long and (4) pieces (M.) guard rail supports 1-1/2" x 2-1/2" x 18" long. Sand and round over sharp edges on all the pieces and assemble as shown with glue and #8 x 1-5/8" wood screws through pre-drilled holes with a 3/8" diameter countersink. Plug holes with 3/8" wood plugs and sand them flush with the surface of the wood.

Repeat for second guard rail.

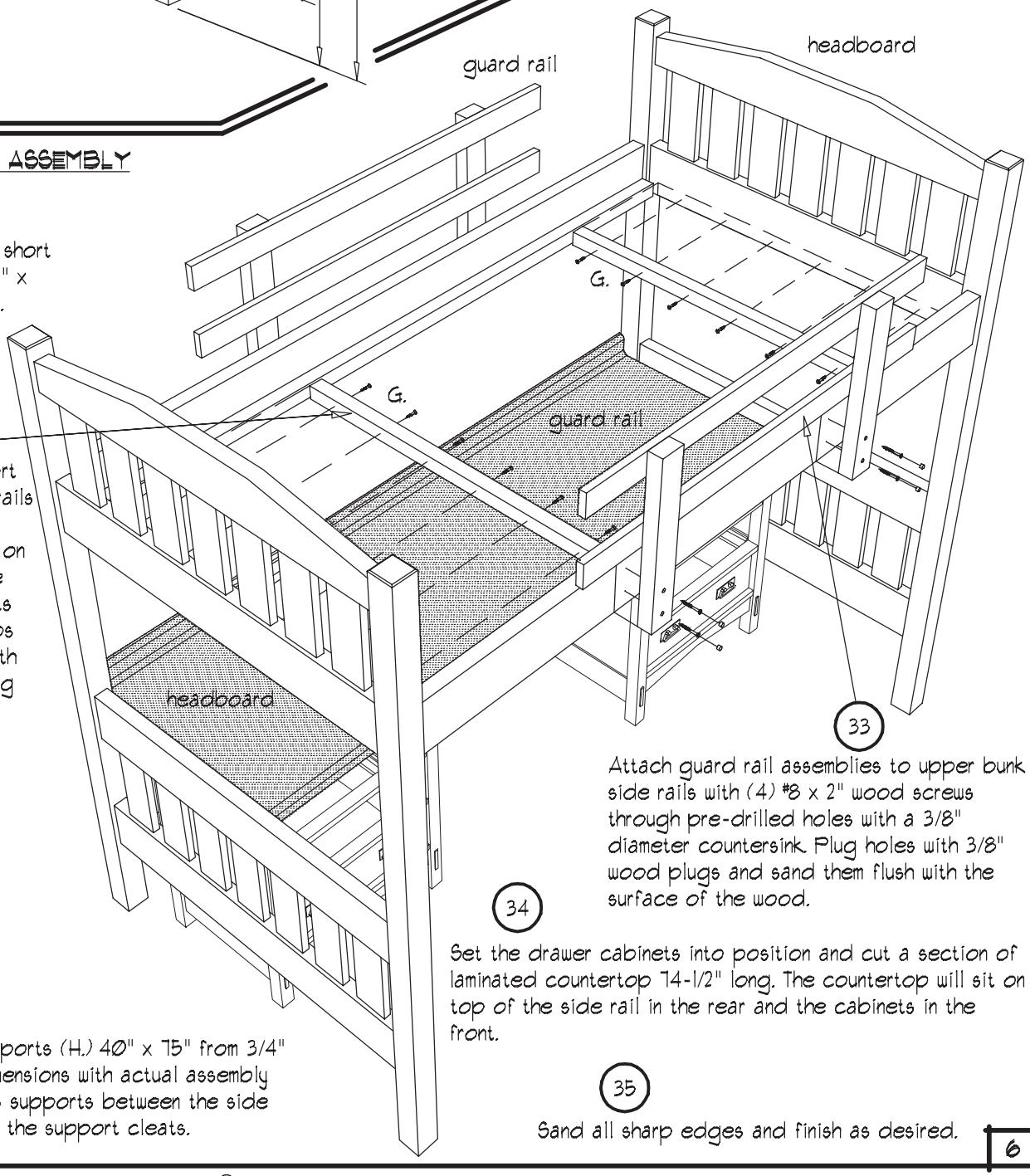
DIAG 13. FINAL ASSEMBLY

30

Cut (4) pieces (G.) short support cleats 1-1/2" x 1-1/2" x 36-1/2" long.

31

Attach short support cleats (G.) to end rails (C.) with #8 x 2-1/2" wood screws at 6" on center. Position the short support cleats (G.) so that the tops of them are flush with the tops of the long support cleats.



33

Attach guard rail assemblies to upper bunk side rails with (4) #8 x 2" wood screws through pre-drilled holes with a 3/8" diameter countersink. Plug holes with 3/8" wood plugs and sand them flush with the surface of the wood.

34

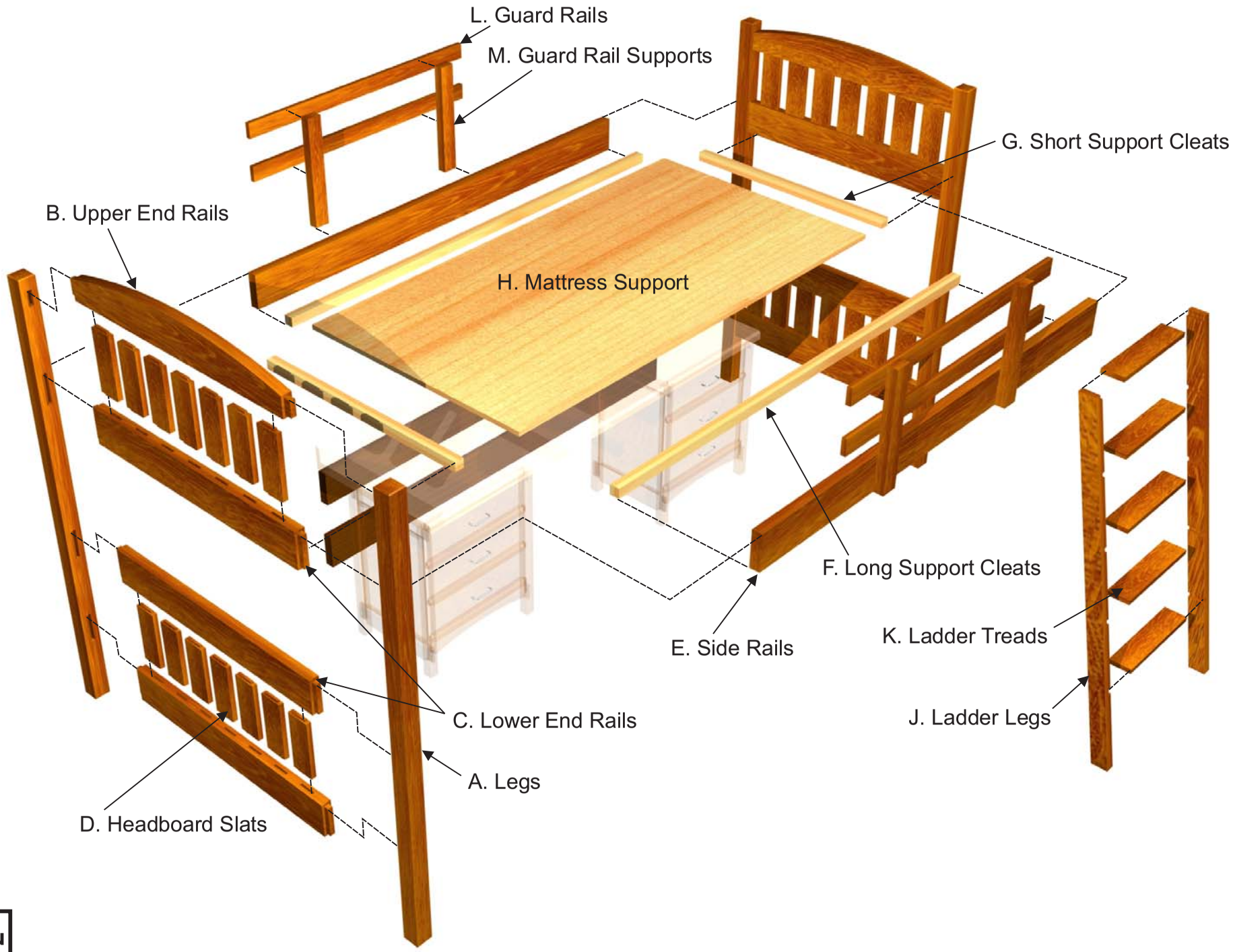
Set the drawer cabinets into position and cut a section of laminated countertop 74-1/2" long. The countertop will sit on top of the side rail in the rear and the cabinets in the front.

32

Cut (1) mattress supports (H.) 40" x 75" from 3/4" plywood. Verify dimensions with actual assembly and fit the mattress supports between the side rails and on top of the support cleats.

35

Sand all sharp edges and finish as desired.


L. Guard Rails
M. Guard Rail Supports
G. Short Support Cleats
B. Upper End Rails
H. Mattress Support
F. Long Support Cleats
E. Side Rails
K. Ladder Treads
C. Lower End Rails
J. Ladder Legs
A. Legs
D. Headboard Slats