


# DEMILUNE TABLE





## classic Demilune Table



A timeless design and beautiful woods add up to a once-in-a-lifetime building experience.

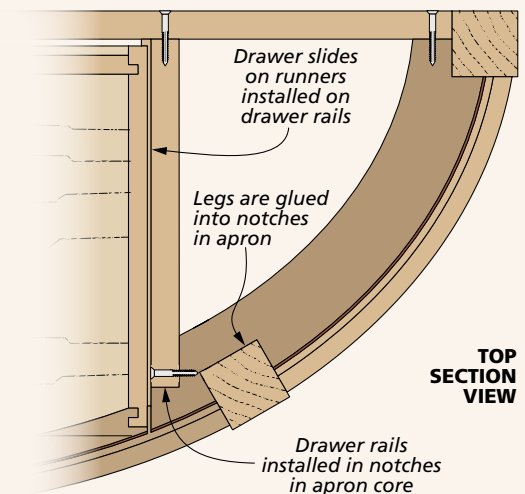
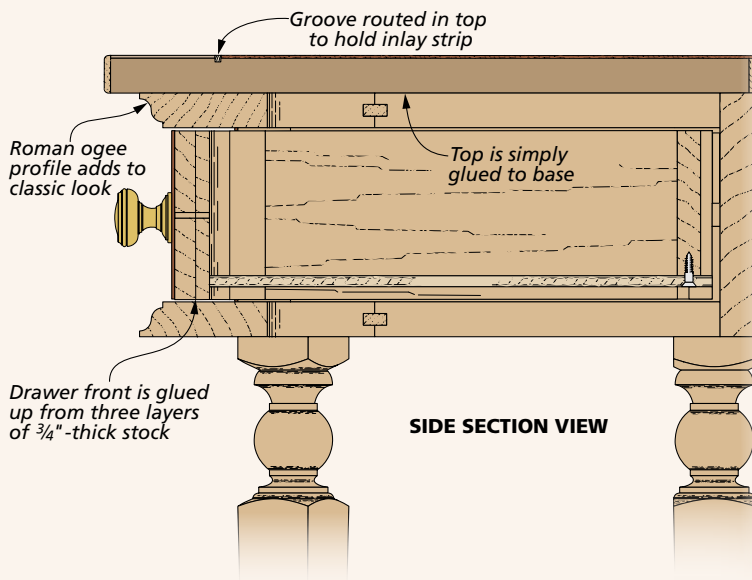
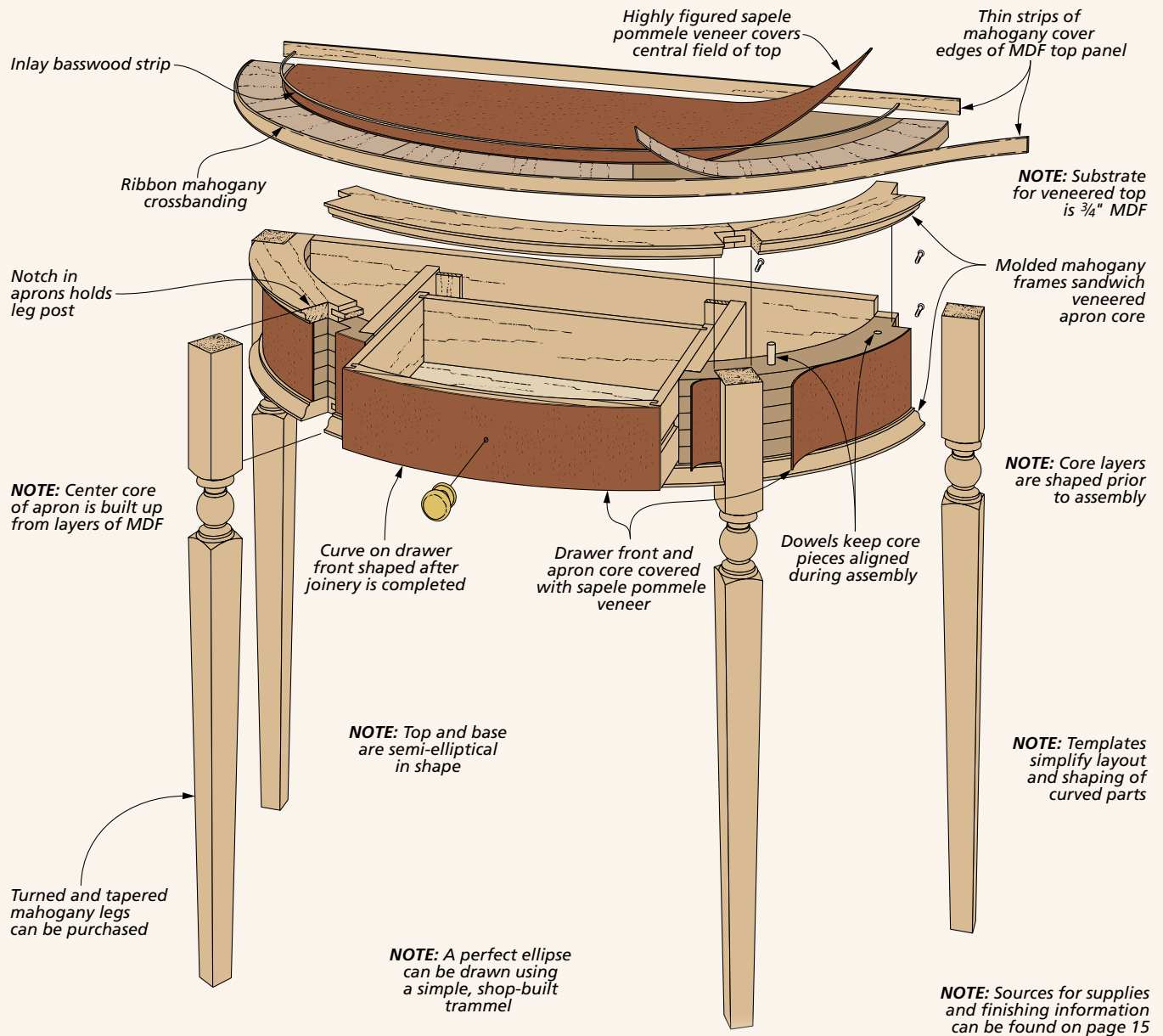
Every woodworker should have the chance to tackle a high-style classic at some point. The catch is that many of these traditional pieces can be very challenging to build — requiring advanced skills and techniques. Well if you've had this goal on your wood-working "bucket list," the beautiful demilune table shown above is a sure-fire way to cross it off.

The term demilune refers to the traditional, semi-elliptical shape of the top

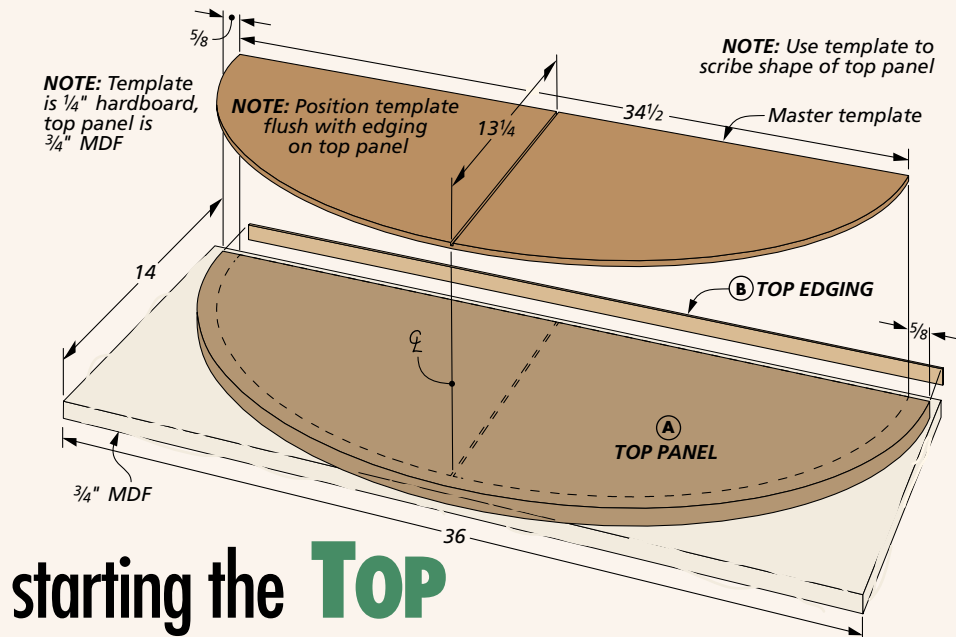
and base. You say you don't know how to form an ellipse? Don't worry, we'll show you how easy it is. The turned and tapered legs have you scared? Me too, so I purchased them off the shelf. Veneering not your cup of tea? With paper-backed veneer and contact adhesive, you'll breeze through it. In the end, you get all the bells and whistles while keeping the construction down-to-earth and easy to manage. It's definitely a winning combination.

# CONSTRUCTION DETAILS

**OVERALL DIMENSIONS: 36"W x 29<sup>3</sup>/<sub>4</sub>"H x 14"D**





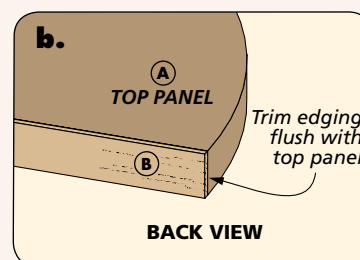
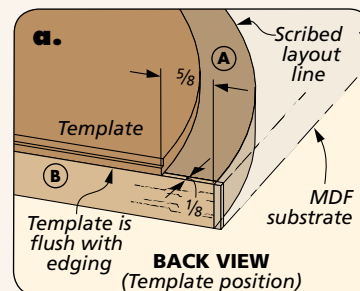


## starting the TOP

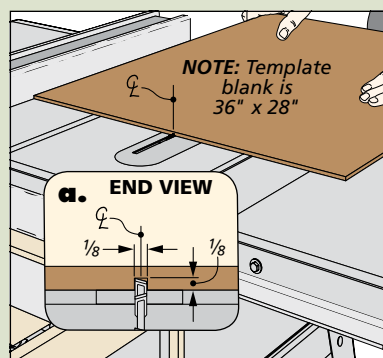
As you might expect, building the demilune table doesn't follow a typical construction routine. But the slightly "outside-the-box" procedure I used is also the key to making it go together easily.

I'll start by giving you a short explanation of what's in store.

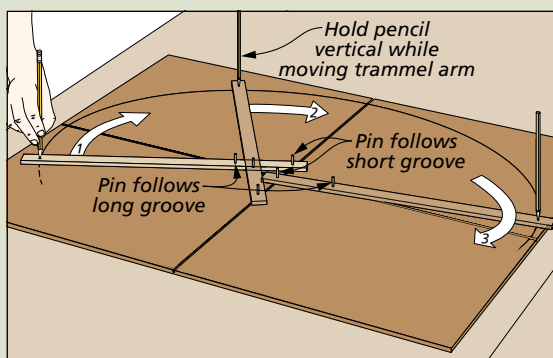
**THE TRICK.** The semi-elliptical form of the table is one of its most pleasing features. But it also presents a considerable challenge.



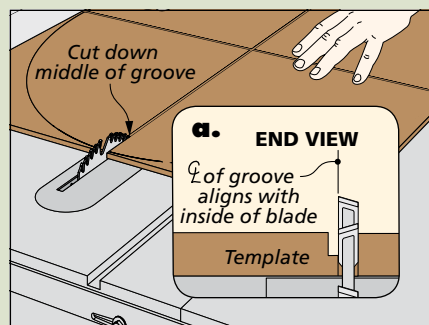
## How-To: Make the Master Template



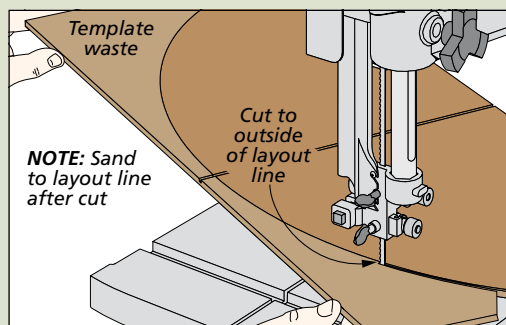
**Shallow Cuts.** To prepare the blank for drawing the ellipse, cut a pair of perpendicular, centered grooves.



**Follow the Grooves.** Keep the pin nearest to the pencil in the long groove and the end pin in the short groove as you swing the arm to draw the ellipse.



**A Half Ellipse.** The template should end up as a full half ellipse. Your cut should split the groove down the middle.



**Careful Shaping.** I took the half blank to the band saw for rough cutting. Then I carefully refined the curve with files and sandpaper.

How do you cut all the parts that form the table frame and top to accurate and consistent shape?

The secret is to use a series of templates. The templates guide you through all the layouts and also will be used to help shape some of the parts. You'll start by making a master template from hardboard. Then you'll use this template as well as others based on it to lay out and shape all the necessary parts. You'll get a better understanding of how it works as I take you through the process.

**MASTER TEMPLATE.** With this background, you're ready to begin making the semi-elliptical (half an ellipse) master template from 1/4" hardboard. There are actually three different-size ellipses used in the table — one for the top, a slightly smaller size for a pair of molded apron frames, and a third for the core section of the apron. I matched the size of the master template to the apron frames. This middle ground allowed me to scale up to lay out the top and then downsize the template after making the apron frames.

**DRAWING AN ELLIPSE.** I won't try to explain the math behind an ellipse. All you really need to know is that this unique shape is defined by its dimensions. To make the template, you'll draw an ellipse with a width of 26 1/2" and a length of 34 1/2".

**A TRAMMEL.** The box on the previous page shows how I laid out and shaped the template. I relied on a trammel to help me draw a perfect ellipse. It runs in perpendicular grooves (kerfs) cut into the blank. You'll find details on making the trammel on page 13.

When cutting the template blank in half at the table saw, make sure you end up with a complete half ellipse, as shown in the box on the previous page. And once the template is cut to rough shape, take your time smoothing the curve down to the layout line.

**TOP PANEL.** Making the veneered top is probably the most challenging aspect of the project, so I decided to tackle it first. As you can see in the box at right, the initial steps involve preparing the  $\frac{3}{4}$ " MDF top panel.

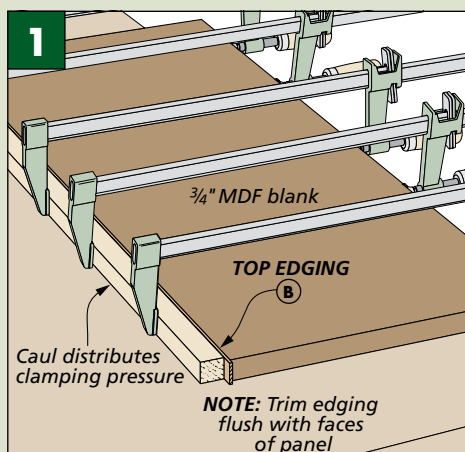
Once the panel for the top is cut to overall size, the first step is to glue a piece of  $\frac{1}{8}$ "-thick mahogany to the back edge and trim it flush with the faces. Next, you can use the template to help lay out the shape of the top on the blank. I aligned the template with the back edge of the panel and then used a compass to scribe a line  $\frac{5}{8}$ " to the outside of the template (detail 'a,' previous page). The goal here is a smooth, sharp line.

It works best to cut the top to shape in two steps. Use your first cut to remove the bulk of the waste. Follow this with a finish cut just to the outside of the layout line. Then it's simply a matter of sanding down to the line.

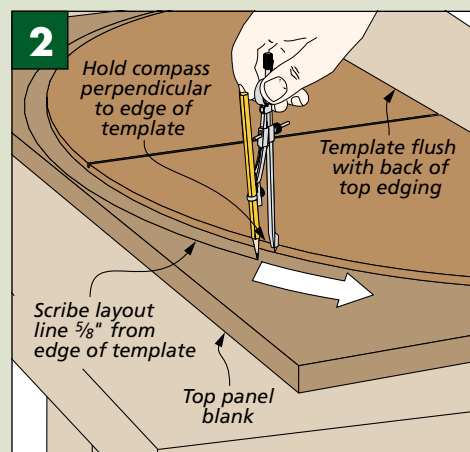
**A NEW TEMPLATE.** Now, the top panel is ready for veneer. To get started on this process, you'll need to make another template. It will help you fit the field veneer, the crossbanding, and the basswood inlay that separates them.

This template is based off of the top panel, as shown in the lower drawings at right. I started with a piece of hardboard a little smaller than the top panel. Then I used my compass to scribe a line  $2\frac{5}{16}$ " from the edge. You know the rest of the routine — cut and smooth.

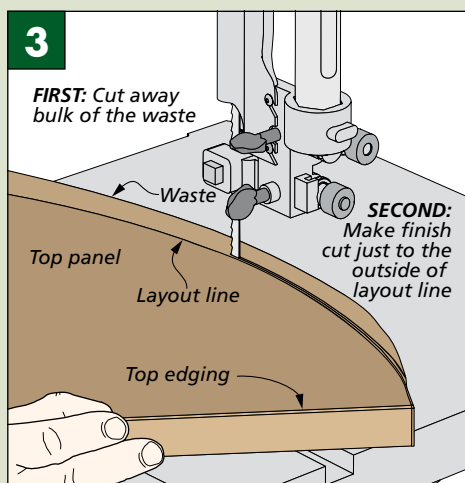
## How-To: Semi-Elliptical Top Panel



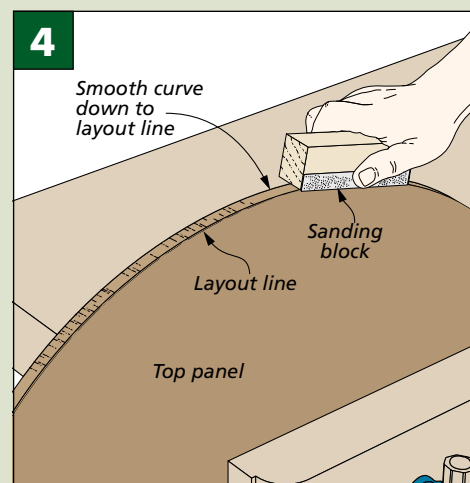
**Edging First.** It works much better to glue and clamp the back edging to the top panel before cutting it to shape.



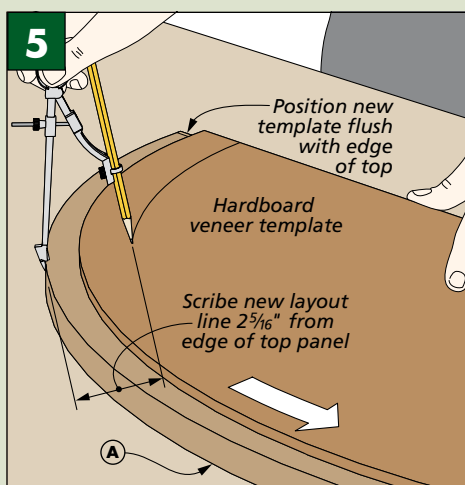
**Scribe To Size.** When using the compass to scribe the shape of the top, try to keep it perpendicular to the edge of the template.



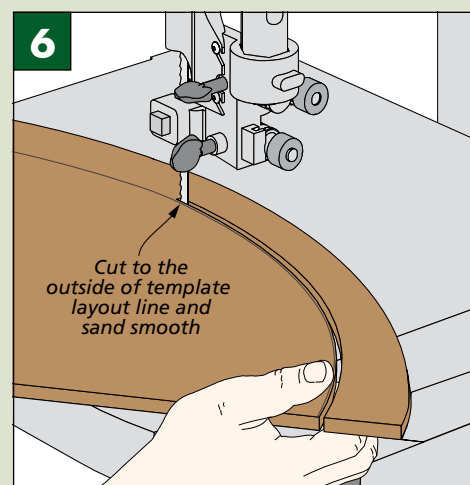
**Final Cut.** First, I removed the majority of the waste with a "wide" cut. This makes it easier to make an accurate finish cut.



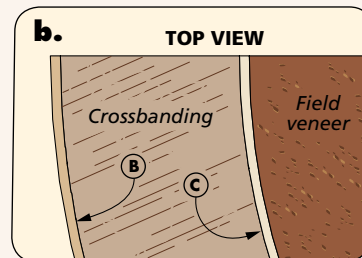
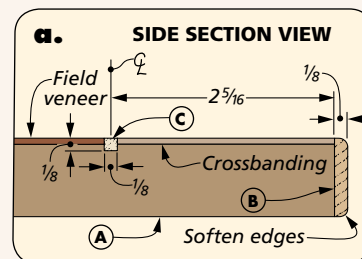
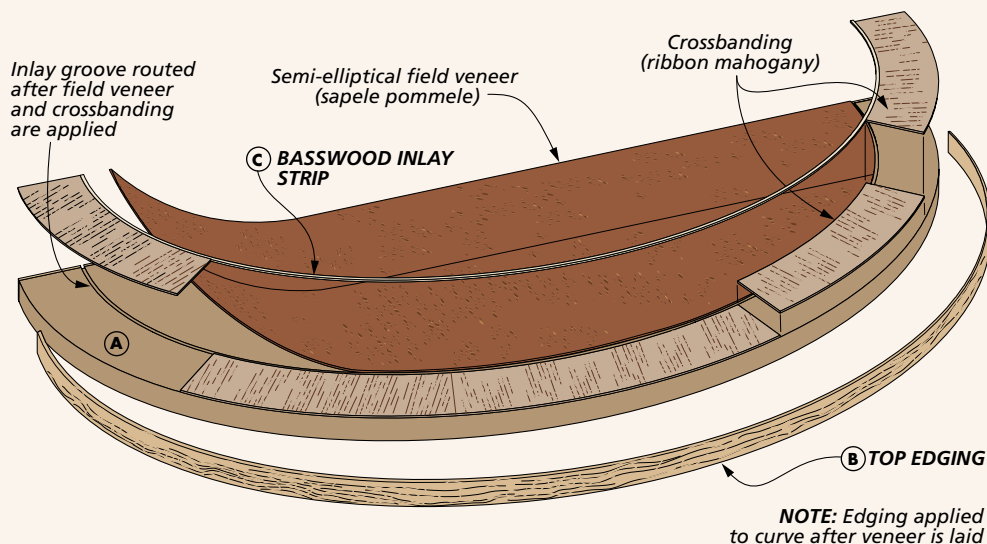
**Smooth the Edge.** I used files and a hard sanding block to work down to the layout line. Keep the edge crisp and square.



**A Veneer Template.** This template is sized so the curve is centered on the location of the basswood inlay strip you'll add later.



**Cut & Smooth.** One of many more trips to the band saw follows. But be patient when cutting and smoothing the curve.



## completing the TOP

Now, you're ready to begin laying the veneer pattern. I made this easy on myself. All the pieces that make up the pattern are glued on one at a time. This starts with a semi-elliptical piece of sapele

that fills the center field. Next, ribbon-mahogany crossbanding is added around the field. And once the field and crossbanding are in place, a thin basswood inlay is installed between them. Finally, the curved edge of the top is wrapped with mahogany edging.

**FIRST, THE FIELD.** The step-by-step process for laying the field veneer is shown in the box at left. The first task for the template is to help cut this piece to rough shape. I laid it on the veneer sheet and marked the layout. Then I cut out the piece with scissors leaving an extra  $\frac{3}{8}$ " around the curve and along the back edge (Figure 1). This excess makes laying the piece less exacting.

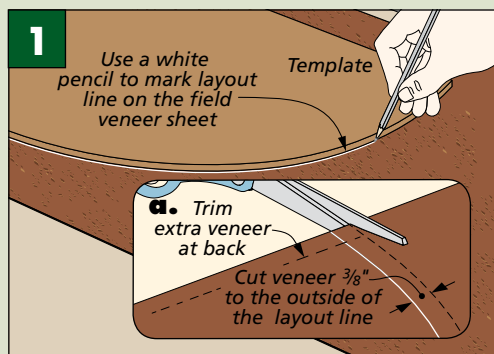
**A SIMPLE TRICK.** You're going to lay the veneer using spray contact adhesive. The trick to this is to limit the adhesive only to the area needed for each piece. So next, I used my template to mark a reference line on the top panel. And then before spraying the contact adhesive on the top and veneer, mask off the area to the outside of the line (Figure 3).

Once a coat of adhesive is applied, you can peel off the tape prior to carefully applying and rolling out the veneer. The veneer will only stick to the field area, allowing the waste to be trimmed and popped off, as shown.

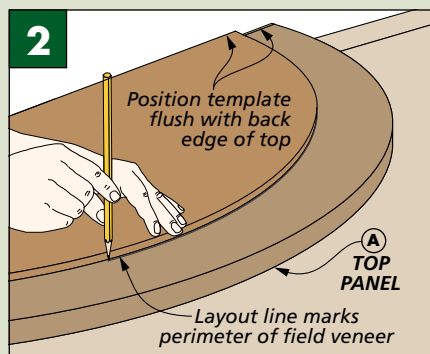
Make sure to clamp the template down while trimming the veneer. The cut falls in the groove you'll rout later for the inlay so a perfect line isn't required.

**THE CROSSBANDING.** As I mentioned, the five pieces of crossbanding are added one at a time. This makes fitting the joints easier. The drawings at right guide you through the process.

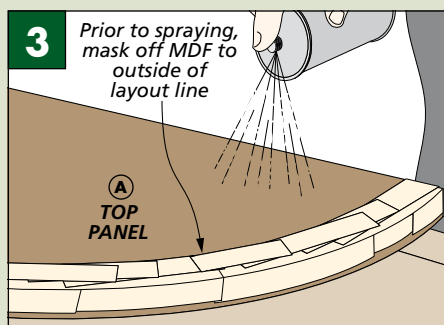
## How To: Lay the Field Veneer



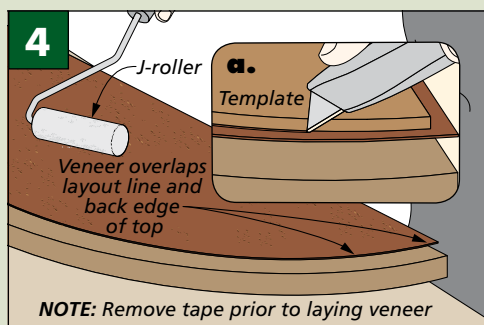
**Mark & Cut.** Choose a desirable spot on the veneer sheet, position the template, and mark around it. Cut the piece slightly oversize.



**Trim Line.** Use the template to mark a "trim" line for the field veneer. Mask off the area to the outside of the line.



**Adhesive.** With the masking tape in place, spray a full coat of contact adhesive on both the top panel and veneer.



**Lay Field Veneer** After removing the tape, carefully lay the veneer, use a roller to press it down firmly, and then trim the excess.



**LAY OUT & CUT.** First, you'll need to lay out the joint lines. The locations and angles are shown in Figure 1 at right. I used these lines to cut the pieces to size.

You'll start with the center piece and then work back along each side. I cut a rectangular blank to size and then used the template to lay out and cut the curved joint line. The angles on either end can be cut using the layout lines on the top as a guide.

This time when you install the piece, you're going to mask off the field veneer and the area to the outside of the joint lines. Just remove the tape along the joint lines before laying the piece.

The next piece is laid in the same way. I cut the curve, then fit the front joint, and finally, cut the back joint at the layout line.

**THE INLAY.** Once all the crossbanding is in place and trimmed, the basswood inlay strip can be added. To do this, you have to rout a groove along the joint line between the sapele and the mahogany. I did this with the help of the slightly modified template and a guide bushing in the router base (Figure 4).

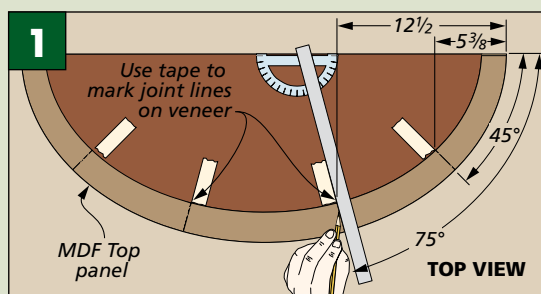
For this to work, the template has to be trimmed back to compensate for the offset created by the guide bushing, as shown in the detail in Figure 4. Here again, shoot for a smooth curve.

With the template modified, I clamped it in place and got ready to rout. I stood on the back side of the panel and moved the router from right to left. This will give you the best control.

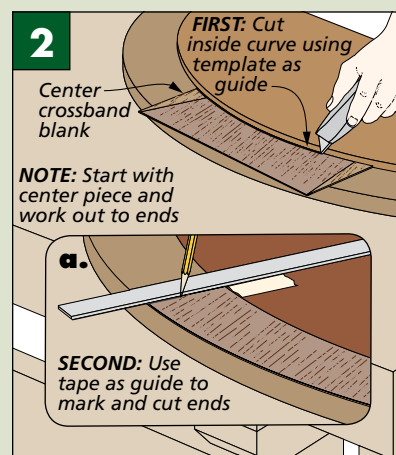
Now, all you have to do is cut a strip of basswood to fit the groove and glue it in place. You can see how I sized this strip on page 13.

**EDGING.** The last piece is the  $\frac{1}{8}$ " mahogany edging that wraps the curve. I cut a piece slightly over-width and over-length and again used spray adhesive to adhere it. After applying the piece, I clamped across the ends until I was sure it was well adhered. Finally, I sanded the entire top.

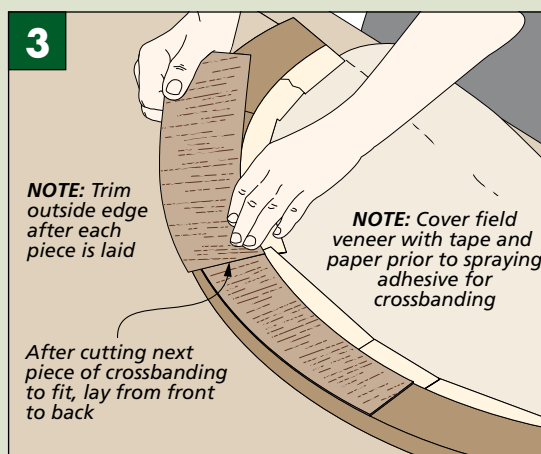
# How-To: Crossbanding & Edging



**Joint Lines.** You can use a protractor and a straight-edge to lay out the joint lines for the crossbanding. The positioning doesn't need to be perfect.



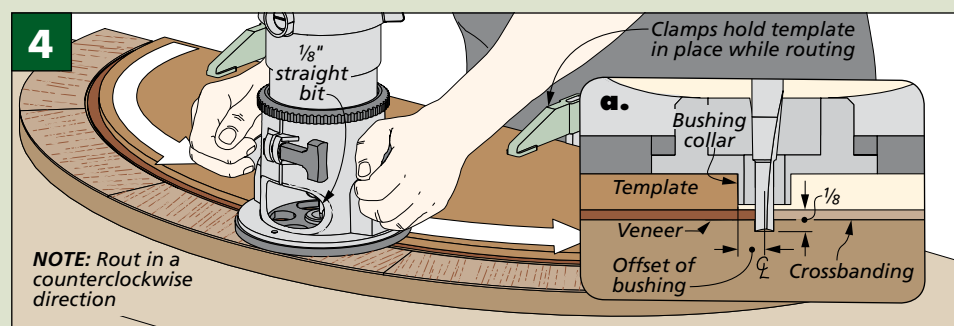
**One By One.** I cut the crossbanding to fit one joint at a time. Start with the curve, then cut the end joints.



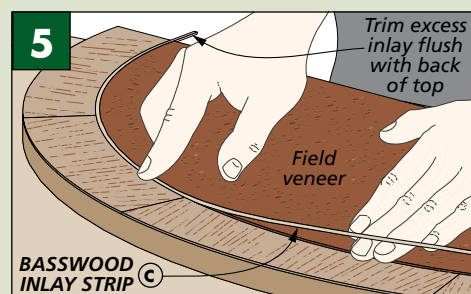
**Mask, Spray, & Lay.** With the field veneer and joint lines masked off, spray the adhesive. Remove the tape along the joint lines before laying each piece.



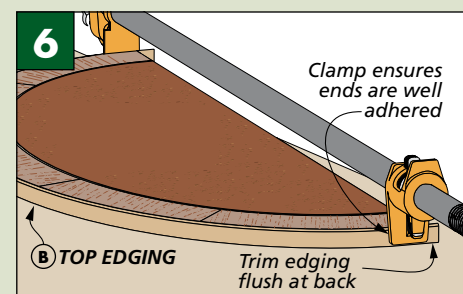
▲ The contrasting basswood inlay separating the figured veneers creates a striking effect.



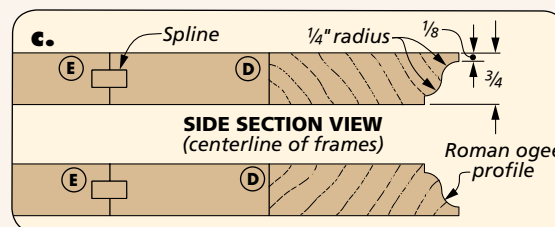
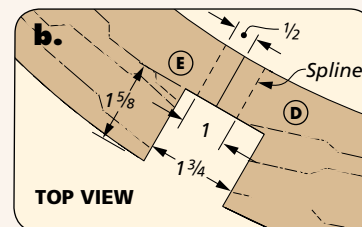
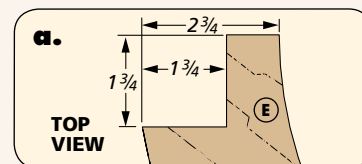
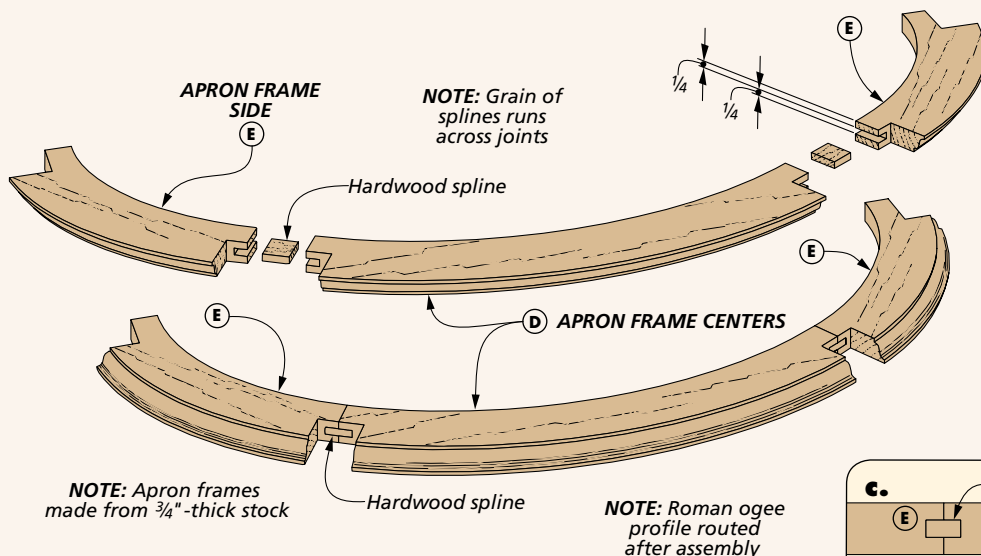
**Inlay Groove.** After trimming the template to match the offset of the bit and bushing, rout the inlay groove by moving the router counterclockwise around the template.



**Inlay.** I cut the inlay to fit the groove but left it extra wide. After gluing the strip into the groove, you can trim it flush with the veneer.



**End to End.** To adhere the edging, press one end down and then work around the curve to the opposite side.



## make the APRON FRAMES

With the top completed, you can begin work on the base that supports it. The foundation of the base consists of two hardwood apron frames that sandwich a veneered core made up of laminated MDF. This core is made in two sections to leave an opening for a drawer. The apron frames and core are notched to accept

the legs, eliminating the need for any difficult joinery. This modular approach simplifies the assembly.

**A MODIFIED TEMPLATE.** Making the two mirror-image apron frames is up first. The master template is the key to making this go smoothly and accurately. What you'll do is modify the template to match the finished shape of

the apron frames. Then once the frames are assembled, you use the new template to cut them to rough shape, and finally to flush trim them to finished shape.

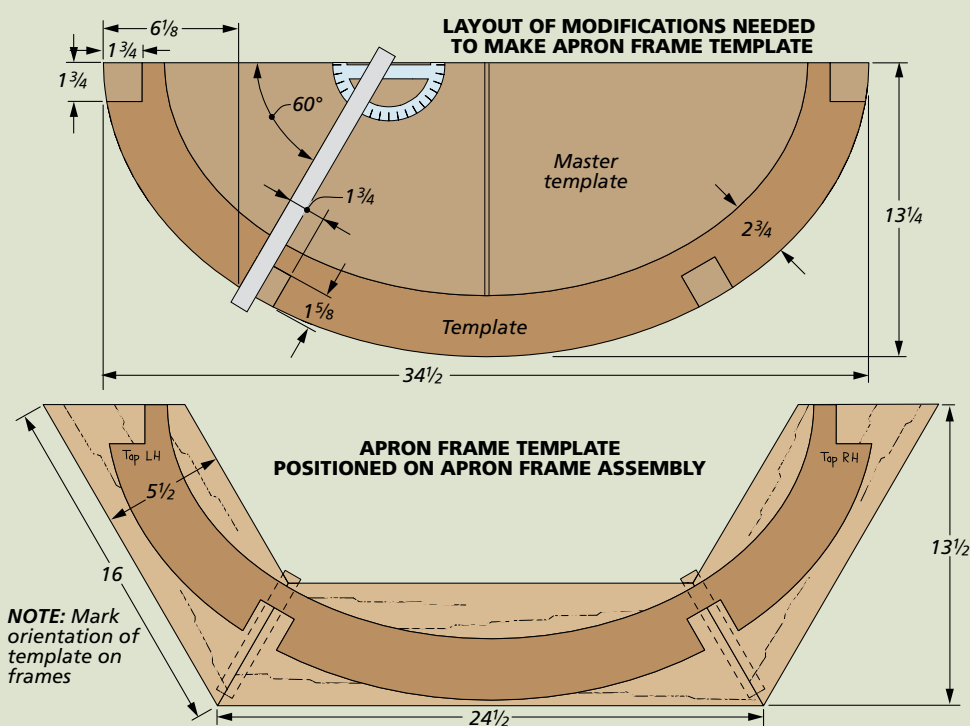
**HOW-TO.** The How-To box at left provides dimensions for reworking the template. Locating and sizing the notches for the legs accurately is your number one goal. The width of the notches should be an exact match to the thickness of the leg posts.

The notches in the back corners are simply laid out square to the back edge. However, the front notches are skewed at an angle of 60°. To mark the sides of these notches, I registered a protractor against the back edge of the template and then placed a rule along the blade to extend the line. Mark both sides of the notches, then square a line between them to mark the depth. You can use your compass to scribe the inside curve of the template.

I shaped the notches before cutting the inside curve. Rough out each notch at the band saw and then take the template back to the bench to fine-tune the size with sharp chisels. Use the legs as a guide and take your time.

**APRON FRAMES.** The two apron frames start out as three wide pieces joined with splined miters.

## How-To: Modify & Position Template





# How-To: Apron Frames

The lower drawing in the box at left shows the relationship between this initial stage and the finished frames. The drawings in the box at right take you through the process of making the frames step by step. I'll just add some helpful commentary.

Once the pieces are cut to width and rough length, your next task is to fit the miter joints (How-To box, previous page). The joints won't show, so strength is your only goal. Leave the back ends of the side pieces square for now.

**ASSEMBLE & TRIM.** You'll need to make a set of crossgrain splines before assembling the frames. As you can see in Figure 3, I glued up each frame using a beveled spacer and a band clamp. The spacer is held in place by double-sided tape placed on the ends. Once the glue is dry, take the frames to the table saw to trim the back parallel to the front.

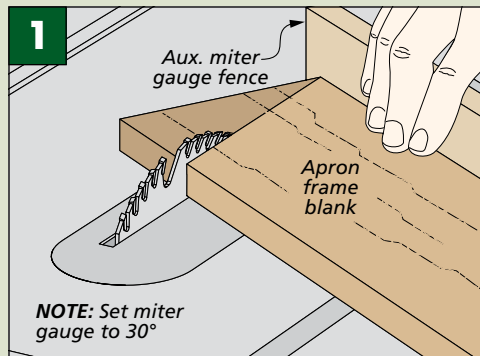
**SHAPING.** Now the frames are ready to be shaped. You'll do this one at a time. I attached the template to a frame with double-sided tape and left it in place through all the steps shown at right (Figures 5 through 8).

Before you get started, let me offer a tip. Chances are that your template is not perfectly symmetrical from side to side. So in order to make certain that the two frames align properly, I marked the template and the frames — left and right, top and bottom. This will help you keep things in the correct orientation. Also, when attaching the template, mount it on the outer face of each frame.

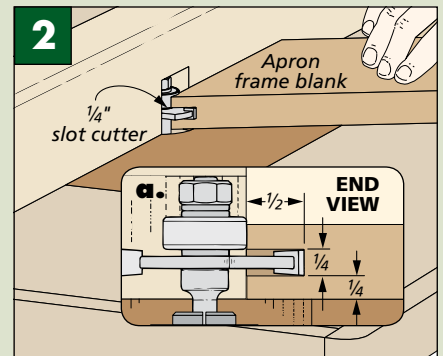
When cutting the frames to rough shape at the band saw, be sure to stay clear of the template.

The flush-trim bit won't reach into the square corners of the notches, so you'll have to clean this out by hand. The template acts as a guide for your chisel.

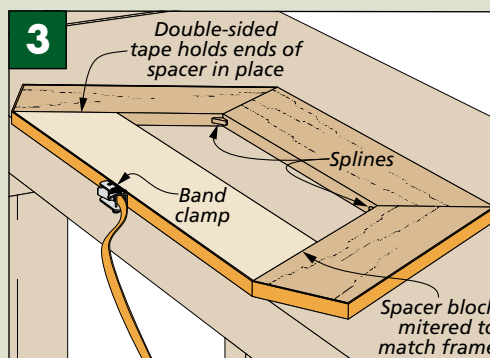
Finally, I fit MDF fillers into the notches to make routing the ogee profile easier. Multiple, shallow cuts will produce a cleaner result.



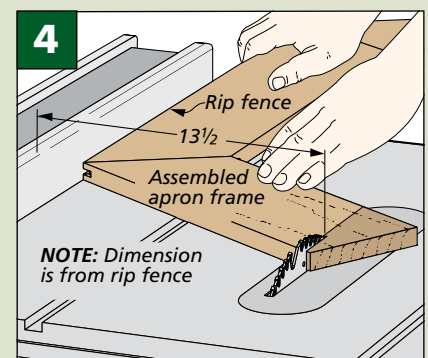
**Miter the Frame.** I mitered the center frame piece to finished length first. Then I mitered the two side pieces to match.



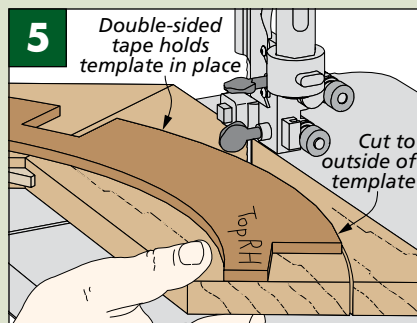
**Spline Slots.** Install a slot cutter in the router table to cut slots in the frame pieces to hold the splines.



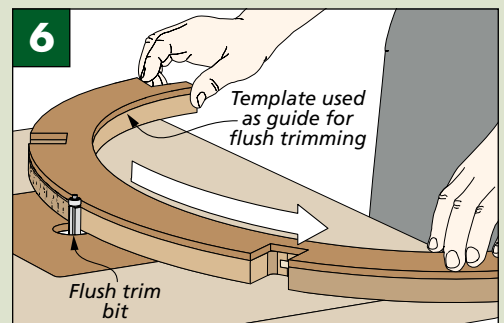
**Assemble with Spacer.** I installed a spacer across the open back of the frame assembly before applying a band clamp.



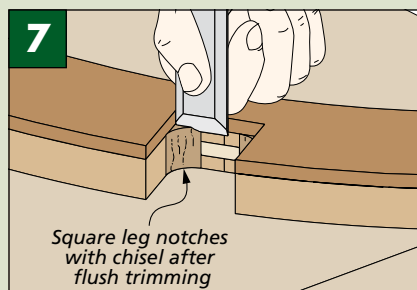
**Trim the Back.** Once the glue is dry, trim the back of the frame parallel to the front at the table saw.



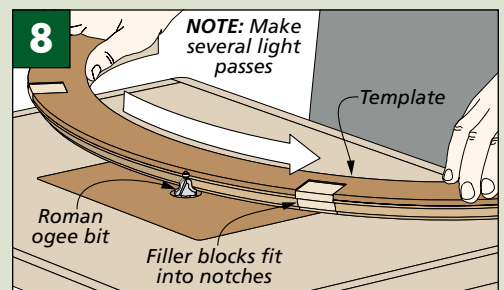
**Template on Frame.** The template attached to the frame can act as a guide when you cut it to rough shape.



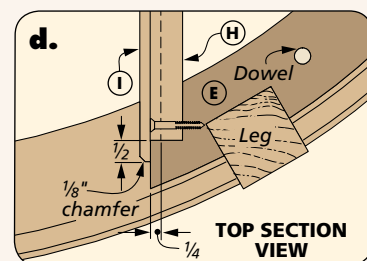
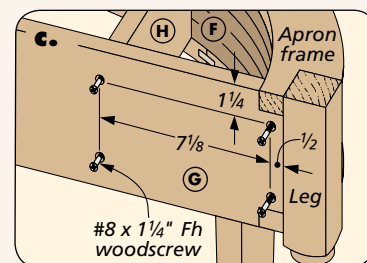
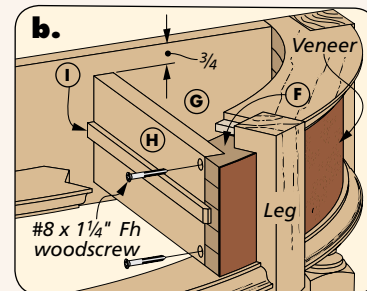
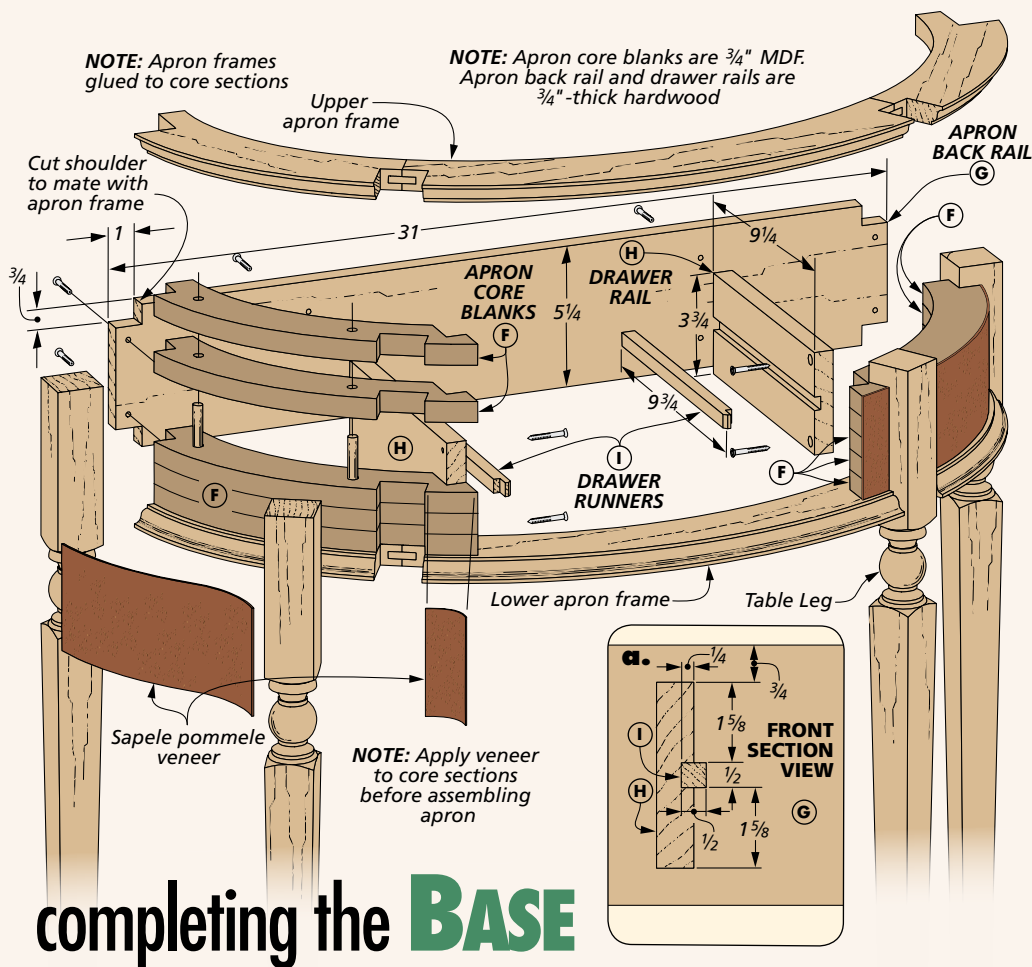
**Trim Flush.** Leave the template in place and head to the router table. Light passes with a flush trim bit will smooth the frame.



**Square the Corners.** Next, the template will be your guide when paring away the waste left in the notches.



**Edge Profile.** After taping fillers in the notches, I cut the ogee profile by gradually raising the bit between passes.



The next step in assembling the table base is making the MDF core sections. You'll use the frame template to shape the core layers — but first you have to modify it.

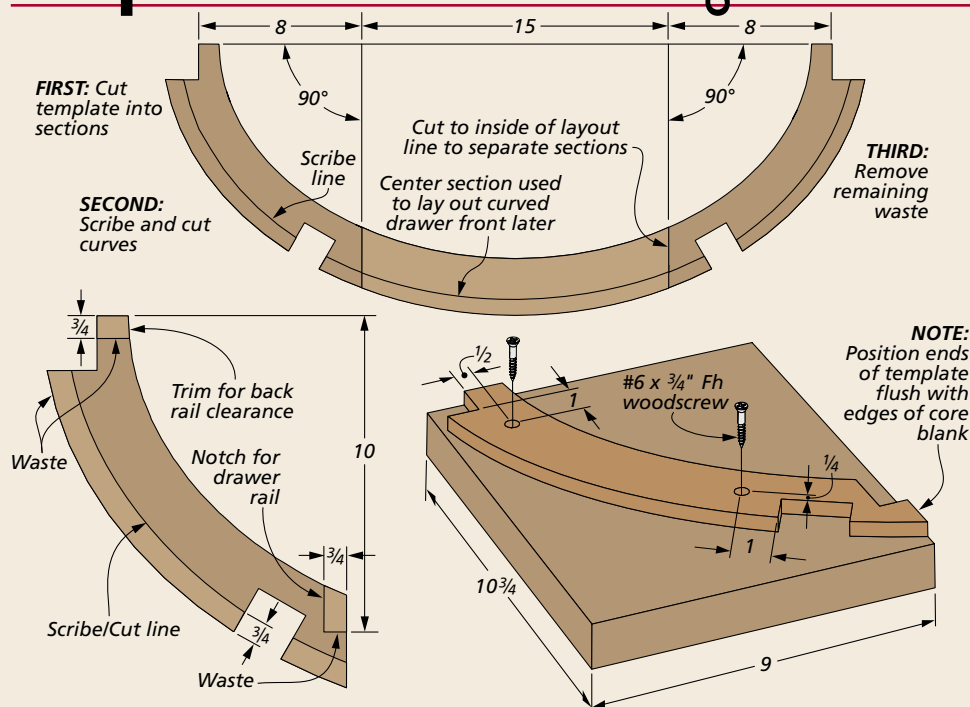
**MODIFICATIONS.** Now, the template needs to be divided into three pieces along with several other changes detailed below. When dividing the template, you want

to make the cuts perpendicular to the original back edge. To do this, I taped the template to a piece of hardboard with straight, square edges and ran it through the table saw. You'll need to use all three pieces so make each cut right on the money. And once the template is separated, be sure to mark each piece to keep the orientation straight.

**BLANKS.** The five layers of each core section are shaped first and then glued together. Like the apron frames, I used the template and a flush-trim bit in the router table to make the pieces.

I started by cutting ten blanks to size, as shown at left. Here I attached the template to the blank with a pair of screws being careful to align the edges. Now you simply follow a familiar procedure. I cut the piece to rough shape, trimmed it flush, and squared up the notches, as in Figures 1 and 2 in the box on the opposite page. Make five left side and five right side pieces. To avoid confusion, be sure to label them.

## Template Guide: More Changes



**ASSEMBLY.** The goal is to assemble the five pieces of each side in a perfectly aligned stack. To help with this, I drilled a pair of holes in each piece and then installed dowels through the stack during the glueup (Figure 3). Refer to page 13 to see how I located the dowel holes in the core pieces.

**VENEER.** When the clamps come off, clean up the squeezeout and smooth any irregularities. Then sapele veneer can be laid on the curved surfaces (Figure 4). I simply applied oversized pieces and trimmed the veneer flush with a sharp utility knife.

**APRON ASSEMBLY.** Now that the apron frames and core sections are ready to be assembled, you'll start to see quicker progress. The trick to this is to make sure the notches in the core sections and the apron frames line up.

To achieve this goal, I cut a pair of index blocks to fit the notches and screwed them into the core sections. Then I glued the frame to the core sections one at a time.

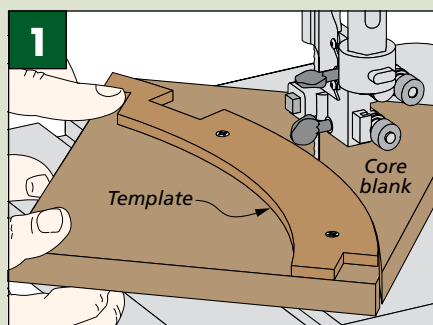
**APRON RAILS.** Adding a back rail and two drawer rails will complete the apron. As you can see, the back rail is notched to fit the gap between the apron frames (detail 'c,' opposite and Figure 6).

Once the back rail is installed with glue and screws, you can install the drawer rails, as shown in Figure 7. The important detail here is a centered groove that runs the length of each rail. These hold the runners that support the side-mounted drawer. Two passes across a narrow dado blade, flipping the piece in between, guarantees a centered groove.

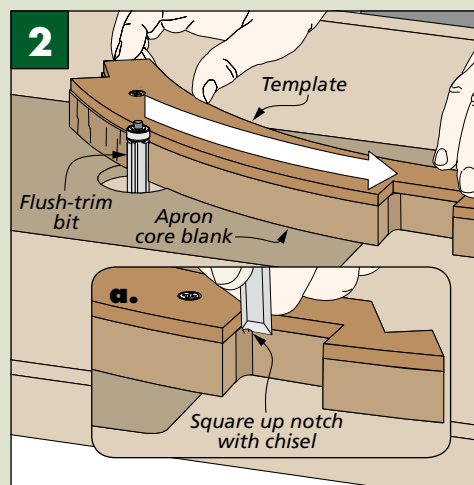
**RUNNERS.** While the assembled apron was still on the bench, I fit the drawer runners. You'll have to notch them at the front to lap over the apron core and then add a chamfer (Figure 8 and detail 'd' on the next page).

**ADD THE LEGS.** The final step is one of the easiest. All you have to do is glue the legs into their notches. Just make certain the top of each leg is flush with the apron frame.

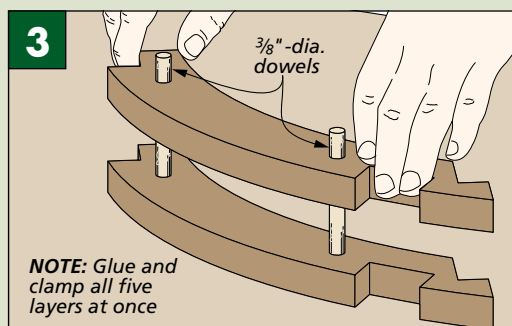
## How-To: Assemble the Base



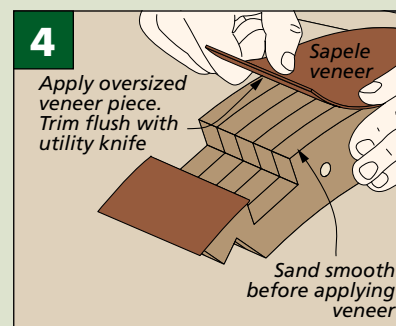
**Rough Cut.** Attach the template to a core blank with a pair of screws and then cut it to rough shape at the band saw.



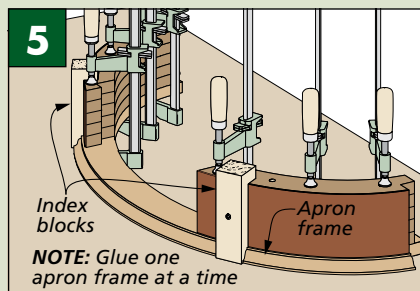
**Final Shape.** Take the roughed-out part to the router table for flush trimming. Then square up the notches with a chisel.



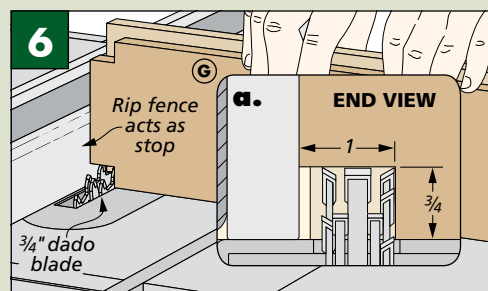
**Stack 'em Up.** After drilling a pair of indexing holes in each core layer, you can use dowels to keep the pieces aligned during the glueup.



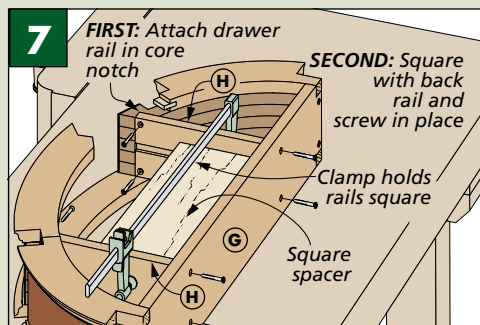
**Press & Trim.** Use spray contact adhesive to apply veneer to the curve surfaces of the core sections.



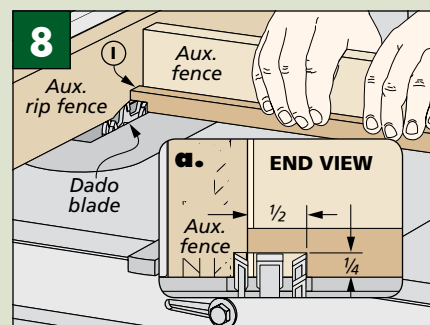
**Assembly.** Snug-fitting blocks screwed into the front notches are a key to aligning the apron frames and core sections.



**Notch Back Rail.** After cutting the back apron rail to size, install a dado blade in the table saw to cut notches in the ends.

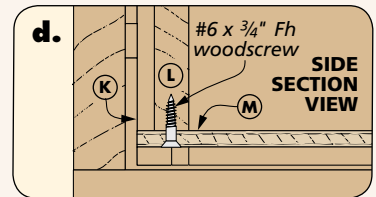
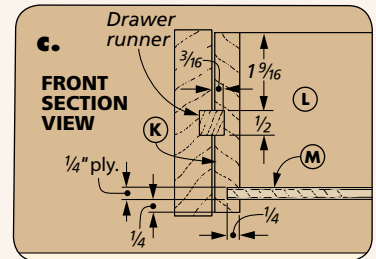
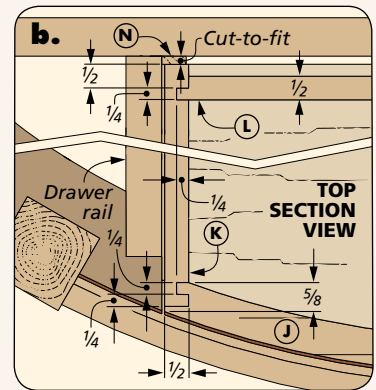
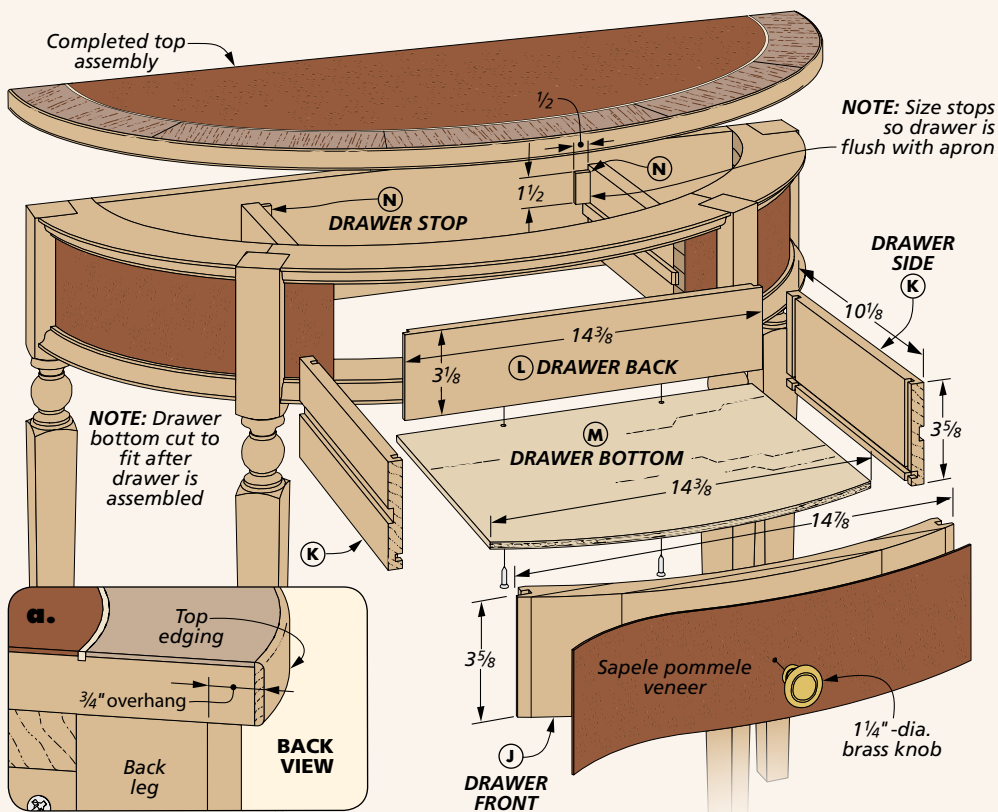


**Drawer Rails.** Cut the drawer rails to size and attach them at the front. Square them with a spacer before installing the back screws.



**Notches.** I used a dado blade buried in an auxiliary rip fence to notch the ends of the drawer runners.





## adding the DRAWER & TOP

The final item on the agenda is building the drawer. Despite its curved front, this is a lot easier than you might think. You'll start by using pretty standard joinery to make a drawer with a thick, laminated front. Then you simply shape the elliptical curve of the front before assembly.

**GETTING STARTED.** The back and sides are  $\frac{1}{2}$ "-thick maple and as I mentioned, the front is laminated from mahogany. So the first thing I did was glue up the front from three layers of  $\frac{3}{4}$ "-thick mahogany. While the glue was drying, I cut the sides and back to size. Note that the back is narrower

than the sides. This allows you to fit and install the bottom after the drawer is glued up (detail 'd').

**JOINERY.** Once the front is cut to overall size, you can start on the joinery. Other than the fact that the front is extra thick, this is run of the mill. I used locking rabbet joints at the front, and tongue

### Materials, Supplies & Cutting Diagram

<b>A</b>	Top Panel (1)	$\frac{3}{4}$ " MDF - $13\frac{3}{4}$ x $35\frac{3}{4}$
<b>B</b>	Top Edging (1)	$\frac{1}{8}$ x $\frac{13}{16}$ - 90 rgh.
<b>C</b>	Inlay Strip (1)	$\frac{1}{8}$ x $\frac{1}{8}$ - 48 rgh.
<b>D</b>	Apron Frame Centers (2)	$\frac{3}{4}$ x $5\frac{1}{2}$ - $24\frac{1}{2}$
<b>E</b>	Apron Frame Sides (4)	$\frac{3}{4}$ x $5\frac{1}{2}$ - 16 rgh.
<b>F</b>	Apron Core Blanks (10)	$\frac{3}{4}$ " MDF - 9 x $10\frac{3}{4}$
<b>G</b>	Apron Back Rail (1)	$\frac{3}{4}$ x $5\frac{1}{4}$ - 31
<b>H</b>	Drawer Rails (2)	$\frac{3}{4}$ x $3\frac{3}{4}$ - $9\frac{1}{4}$
<b>I</b>	Drawer Runners (2)	$\frac{1}{2}$ x $\frac{1}{2}$ - $9\frac{3}{4}$
<b>J</b>	Drawer Front (1)	$2\frac{1}{4}$ x $35\frac{3}{8}$ - $147\frac{7}{8}$

<b>K</b>	Drawer Sides (2)	$\frac{1}{2}$ x $35\frac{3}{8}$ - $10\frac{1}{8}$
<b>L</b>	Drawer Back (1)	$\frac{1}{2}$ x $3\frac{1}{8}$ - $14\frac{3}{8}$
<b>M</b>	Drawer Bottom (1)	$\frac{1}{4}$ ply. - $11\frac{1}{2}$ rgh. x $14\frac{3}{8}$
<b>N</b>	Drawer Stops (2)	$\frac{3}{16}$ rgh. x $\frac{1}{2}$ - $1\frac{1}{2}$
• (4) $1\frac{3}{4}$ "-sq. x 29" Table Legs		
• (1) $1\frac{1}{4}$ "-dia. Bronze Knob		
• (2) #6 x $\frac{3}{4}$ " Fh Woodscrews		
• (12) #8 x $1\frac{1}{4}$ " Fh Woodscrews		
• (1) 2' x 8' Ribbon Mahogany Veneer		
• (1) 2' x 8' Sapele Pommele Veneer		

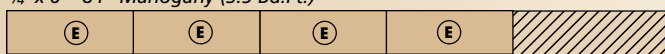
$\frac{3}{4}$ " x 6" - 84" Mahogany (3.5 Bd. Ft.)



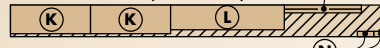
$\frac{3}{4}$ " x 6" - 84" Mahogany (3.5 Bd. Ft.)



$\frac{3}{4}$ " x 6" - 84" Mahogany (3.5 Bd. Ft.)



$\frac{1}{2}$ " x 4" - 48" Maple (1.3 Sq. Ft.)



**ALSO NEEDED:** One 48" x 48" sheet  $\frac{3}{4}$ " MDF, one 24" x 24" sheet  $\frac{1}{4}$ " Birch plywood, one  $\frac{1}{8}$ " x  $\frac{1}{4}$ " - 48" Basswood strip, one 24" x  $\frac{3}{8}$ "-dia. Maple dowel

and dado joints at the back (detail 'b,' previous page). The first two drawings in the box at right show the sequence of cuts needed for the locking rabbets. You can use a similar setup to cut the joinery at the back of the drawer.

Once the joinery was complete, I used the dado blade to cut the centered grooves in the drawer sides that mate with the runners in the frame (Figure 3). The sides should slide easily on the runners without too much play.

**SHAPE THE FRONT.** Now the front can be cut to shape. To do this, you'll need to round up the center template section you set aside. The template is a hair shorter than the length of the drawer front, but close enough to do the job.

I attached the template with double-sided tape and then took the front to the band saw to cut it to rough shape. After smoothing the outside curve, I used a compass to scribe the inside curve. Then it was back to the band saw.

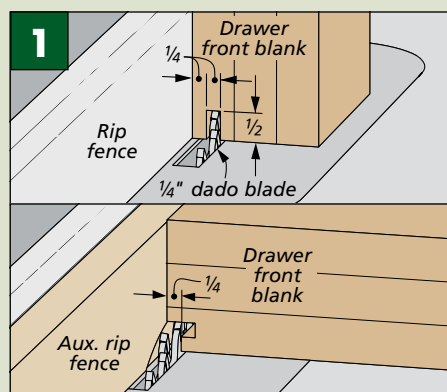
**BOTTOM GROOVES.** The curve of the front prevents you from cutting the groove for the  $\frac{1}{4}$ " plywood bottom at the table saw. But a slot-cutter in the router table will get the job done on both the front and the sides. Both operations are detailed in the drawings at right (Figures 6 and 7).

**BOTTOM.** Once the drawer is glued up, the plywood bottom can be fit. Figure 8 shows how I scribed the curve of the front onto the bottom. And after cutting it to shape, I pinned it with a couple of screws into the back.

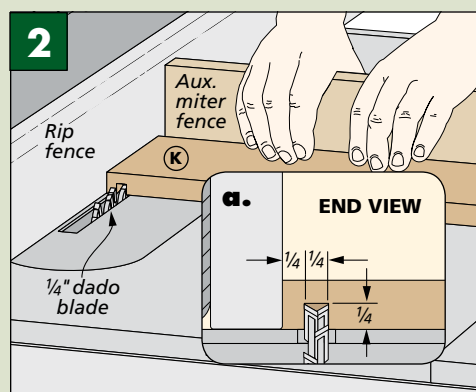
**VENEER.** Veneering the front is the only major step left. By now, you're well practiced at this technique. Finally, adding a centered knob on the front wraps up the drawer construction.

**COMPLETION.** After fitting drawer stops (detail 'b,' previous page), the table can be completed by gluing the top to the frame (detail 'a,' previous page). This guarantees that it will stay flat and your demilune table will achieve the status of a treasured heirloom.

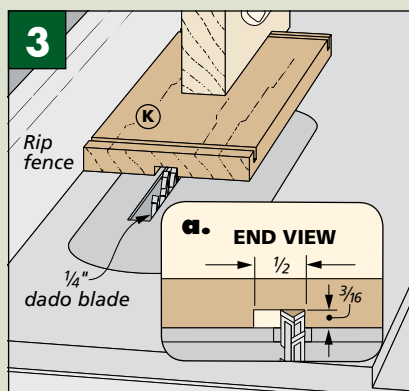
## How-To: Build the Drawer



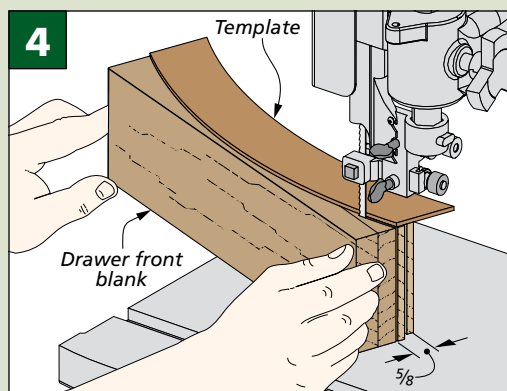
**Front Joinery.** Start the locking rabbet joint by cutting a dado across the end of the front. Next, trim the inside shoulder.



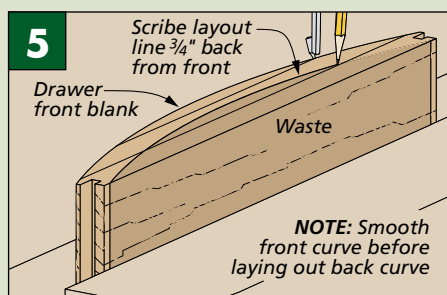
**A Mate.** Complete the joint by cutting a dado across the side that mates with the tongue you formed on the front.



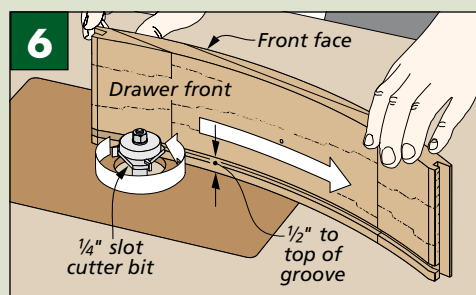
**Runner Grooves.** I cut the centered grooves in the sides by flipping them end-for-end between passes.



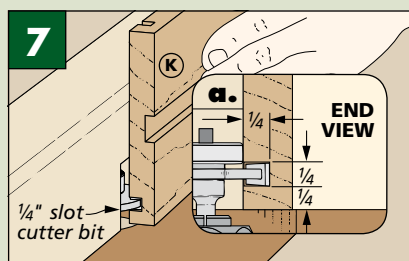
**Follow the Template.** Be sure that the template is attached symmetrically before cutting the drawer front to rough shape.



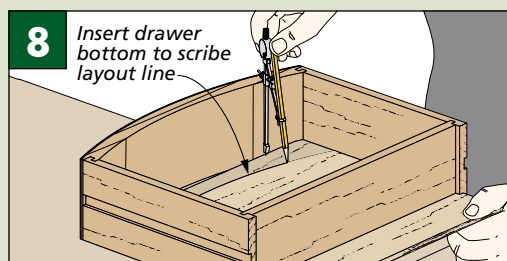
**Scribe & Cut.** After smoothing the outside curve, scribe a layout line for the inside curve and head back to the band saw.



**Front Groove.** The curve of the front provides enough stability to allow you to rout the bottom groove free-hand.



**Side Grooves.** Move the fence into position for support when routing the grooves in the drawer sides.



**Scribing to Fit.** After cutting the bottom to width, slide it into the grooves and use a compass to transfer the curve of the front.

# SHOP NOTEBOOK

## Drawing an Ellipse

You don't need to be an expert in geometry to draw the ellipse for the template used to create the demilune table. The trick is to use a simple trammel with two pivot points to guide a pencil in an elliptical path.

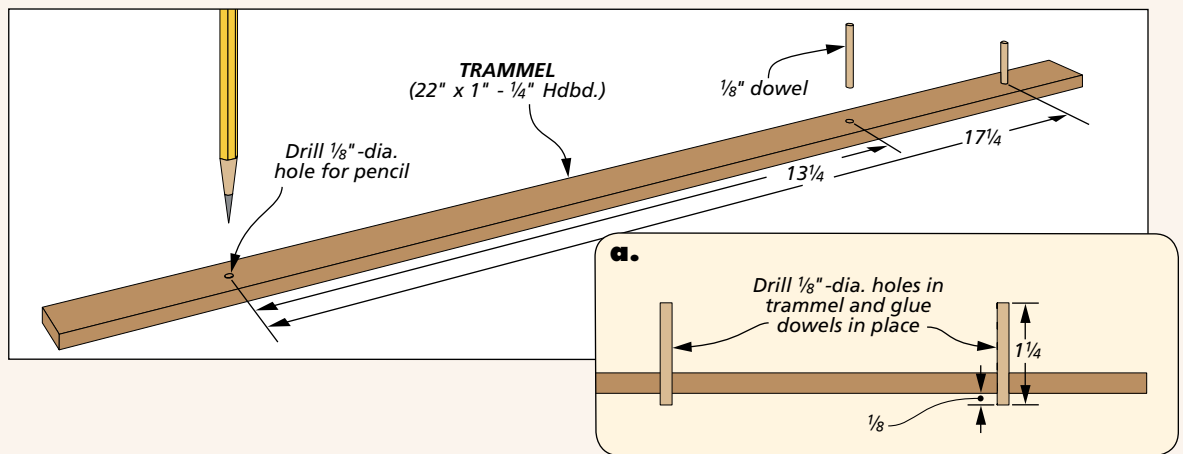
As you can see in the drawing below, the trammel is nothing more than a narrow strip of hardboard. A pair of holes is drilled at one end of the trammel to hold



a couple of  $\frac{1}{8}$ "-dia. dowel pins. At the other end, a small hole is drilled for the tip of a pencil.

**USING THE TRAMMEL.** To use the trammel, simply place it on the

template blank with the pins riding in the kerfs (see photo above). Then carefully rotate the trammel while holding onto the pencil to draw the ellipse.

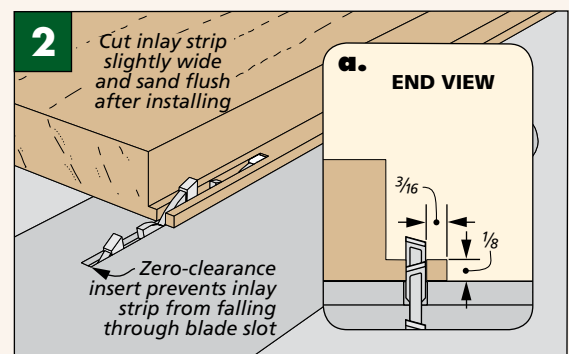
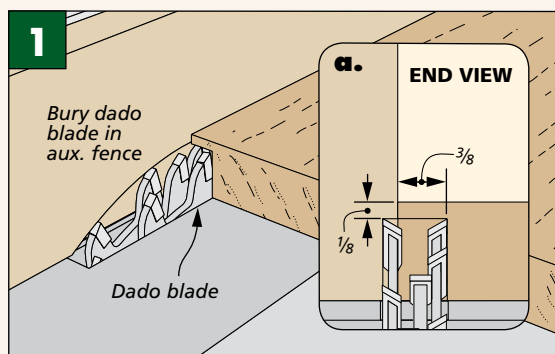


## Inlay Strips

Creating the inlay strip for the demilune table is an exercise in cutting small parts. To make the task a little easier (and safer), I cut the strip from a wide blank.

The first step is to install a dado blade and auxiliary rip fence on your table saw and cut a rabbet on the edge of the blank, leaving a wide,  $\frac{1}{8}$ "-thick tongue (Figure 1).

To complete the inlay strip, simply switch to a standard blade, flip the blank over, and reposition your rip fence to cut the strip to width (Figure 2).





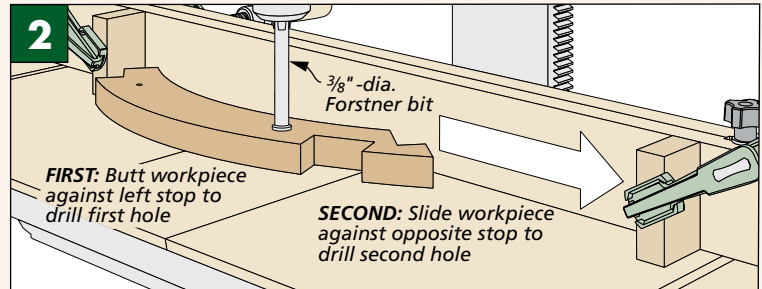
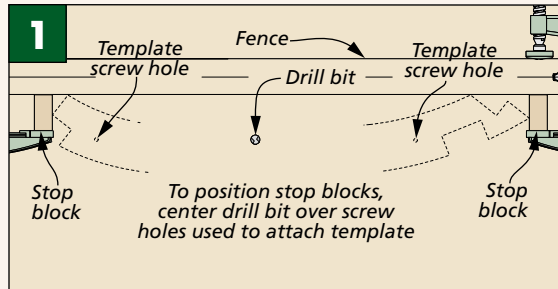
## Drill Press Stop Blocks

The apron core of the demilune table is made by gluing up several layers of MDF. To keep the layers aligned, I used  $\frac{3}{8}$ "-dia. dowels. The challenge here is to accurately position the holes for the dowels so that they line up when

it comes time for assembly. To do this, I simply used a couple of stop blocks on my drill press table.

I set up a long fence on my drill press and then clamped a stop block at each end — one for each hole (Figure 1). To position the

stop blocks, I used one of the core pieces as a guide by lining up the drill bit with the existing screw holes from attaching the template. The exact location of the holes isn't critical as long as they're in the same position on each piece.



## MAIL ORDER SOURCES

Woodsmith Store  
800-444-7527

General Finishes  
800-783-6050  
generalfinishes.  
com

Amana Tool  
amanatool.com

Classic Design by  
Matthew Burak  
800-748-3480  
tablelegs.com

GL Veneer  
800-588-5003  
glveneer.com

Lee Valley  
800-871-8158  
leevalley.com

# Project Sources

## DEMILUNE TABLE

- **Classic Designs**

*Kent Table Legs* . . . . 304E29-MG

- **Lee Valley**

*1 1/4"-dia. Knob* . . . . . 02A16.92

- **GL Veneer**

*Paper-Backed Veneers* . . . .Varies

- **Amana Tool**

*Rom. Ogee (1/4" shank)* . . . 49204

*Rom. Ogee (1/2" shank)* . . . 49206

The spray contact adhesive we used to attach the veneer is 3M's *Hi-Strength 90*. It's available at most home centers and hardware stores. To finish the table, we applied a coat of *General Finishes' Seal-a-Cell* to give the project a warm tone, followed by two coats of lacquer.