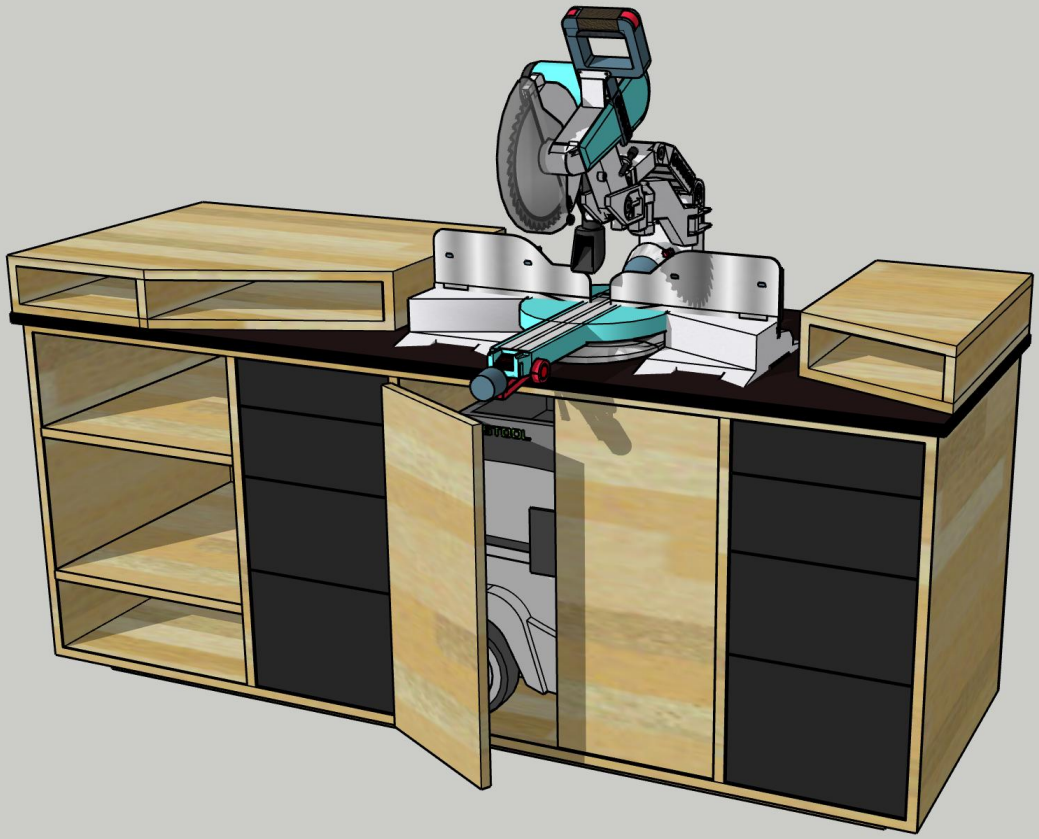
Miter Saw Station



Plan Features:

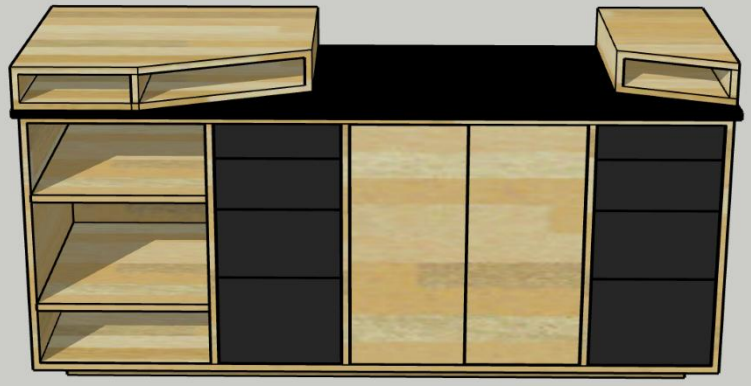
- Material List
- Cut List
- Detail Views
- Step by Step Assembly

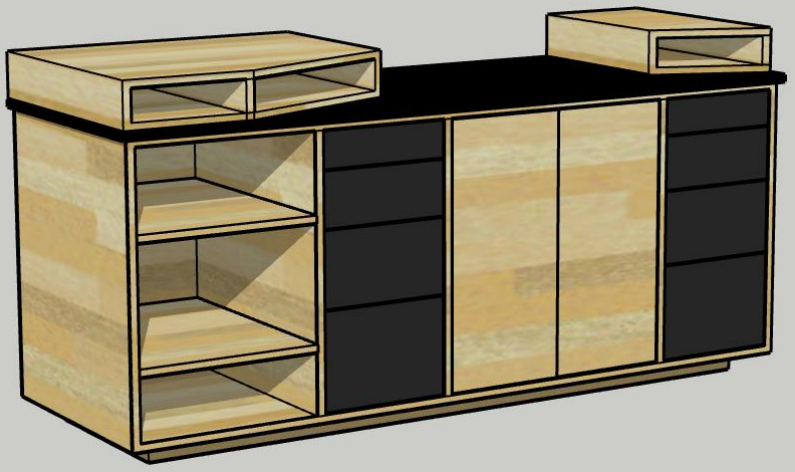
BONUS LINKS:

- **Build Videos**
- **SketchUp File**

Miter Saw Station

PLAN OVERVIEW



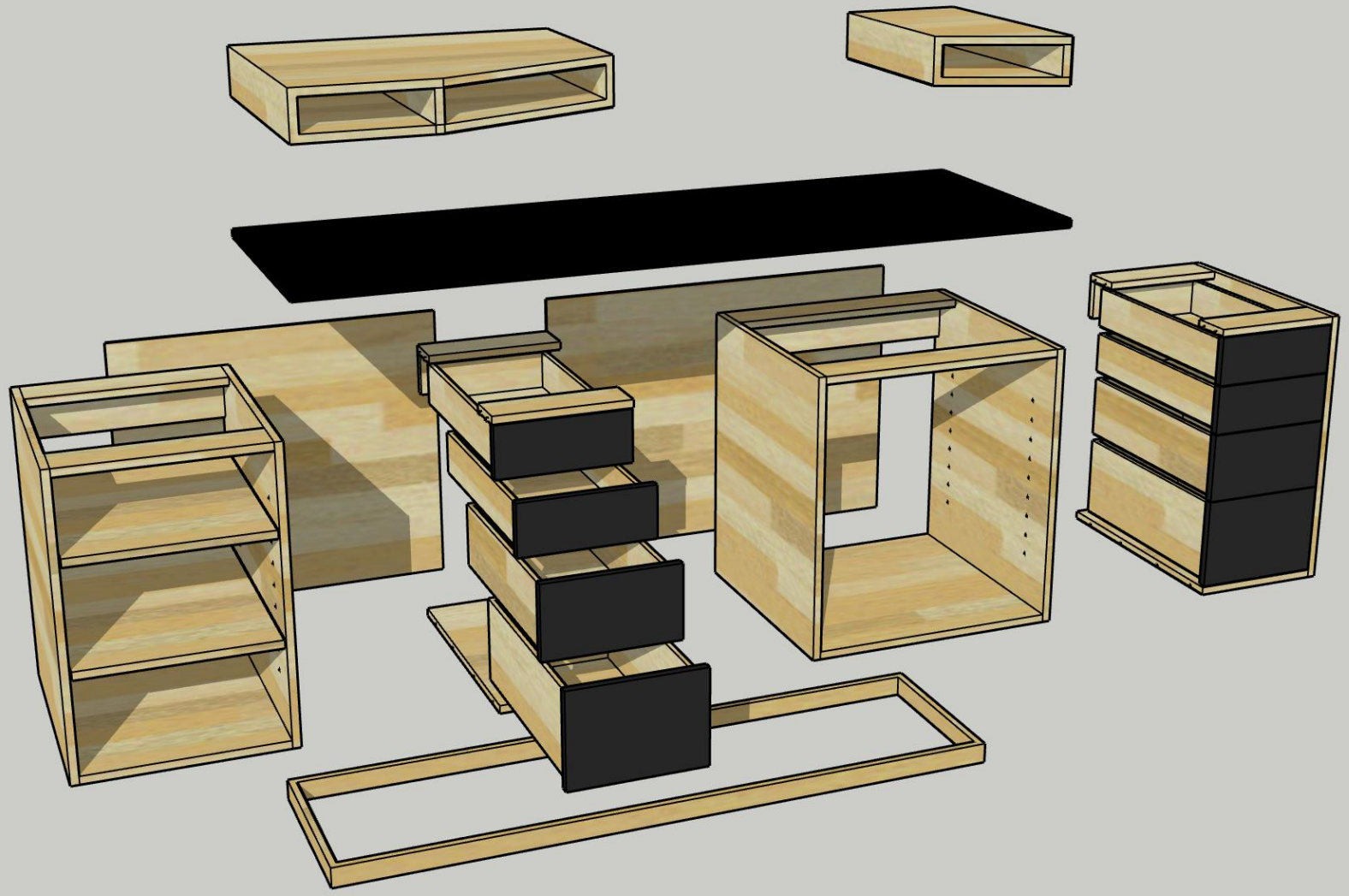


This plan guides you through building a practical and efficient miter saw station. This modular design uses fewer materials and has a smaller footprint, making it an ideal fit for shops of all sizes. It's designed to be easily customizable, allowing you to tailor it to your specific saws while still providing a dedicated space for precise cuts and ample storage.

- For the best outcome, ensure you are working on a flat, stable surface clear of any obstacles.
- Before starting, please read through the entire plan to familiarize yourself with each step.
- Follow along with the build video, where each step is broken down and explained in detail.
- You can also view the SketchUp file and use measuring tools if you'd like a 3D perspective of the station layout.
- Detailed views are included for various sections, highlighting specific components and assembly techniques to make the building process as straightforward as possible.

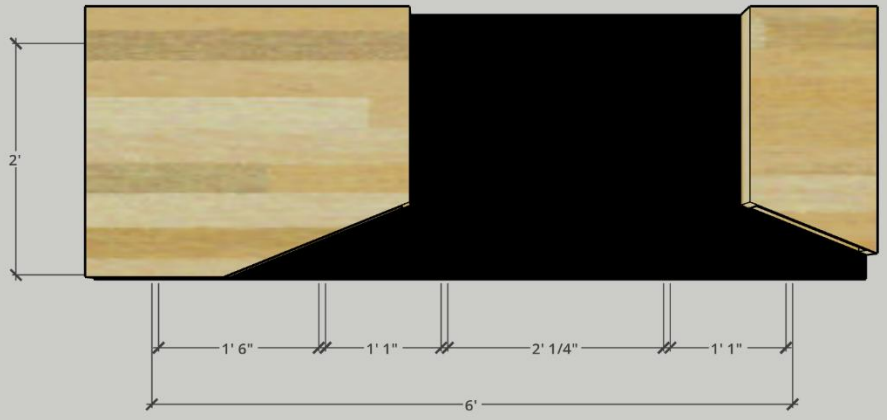
Miter Saw Station

PLAN OVERVIEW



Miter Saw Station

DIMENSIONS

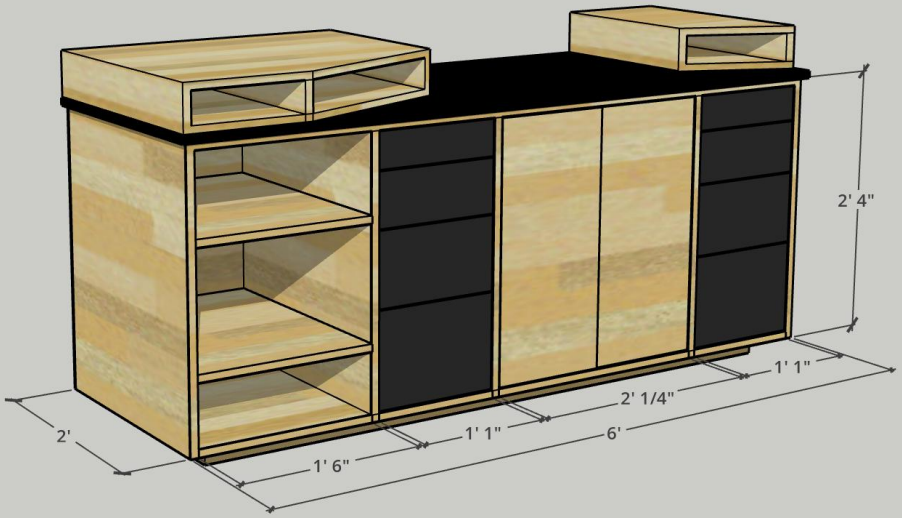


Overall Dimensions: The entire workstation measures 6' wide, 2' deep, and 2' 4" tall (not including base).

The open shelving section on the left measures 1' 6" wide by 2' deep.

The central section with cabinet doors spans 2' 1/4" wide.

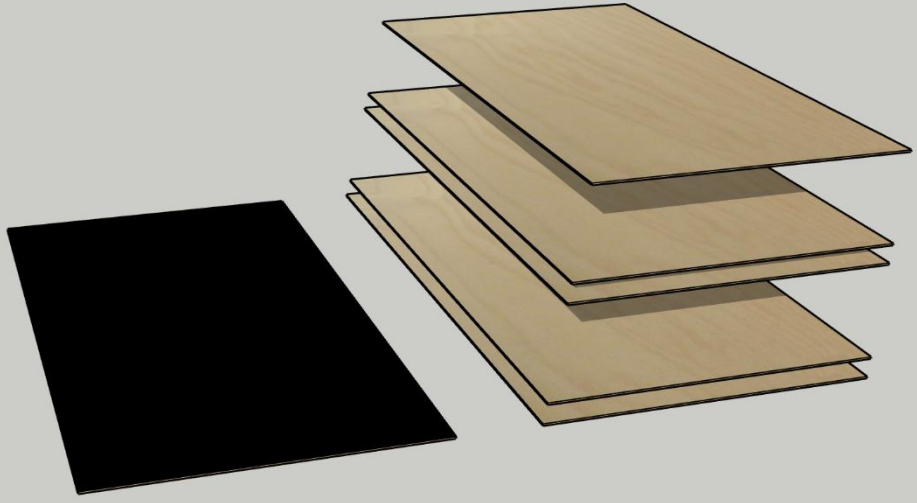
The drawer sections on the left and right are 1' 1" wide and 2' deep.



By choosing top compartments instead of lowering the middle section, the workstation allows flexibility for future modifications, ensuring that different saw heights or tool configurations can be accommodated over time. The top compartments provide organized storage, help maintain a stable, continuous work surface, and keep the main area clear for handling large materials. This setup ensures the station can adapt to changing needs without compromising functionality.

Miter Saw Station

MATERIAL LIST



Plywood:

- **3/4" 4’x8’ Melamine Panel (Black)** - 1 sheet
- **3/4" 4’x8’ Birch Plywood (VC)** - 2 sheets
- **1/2" 4’x8’ Birch Plywood (VC)** - 2 sheets
- **1/4" 4’x8’ MDF Panel (Maple)** - 1 sheet

Hardware:

- **Leveling Feet** - 6 pieces
- **Pocket Hole Screws #8 x 1"**
- **Pocket Hole Screws #8 x 1 1/4"**
- **1/4" Shelf Pegs**
- **Soft-Close Drawer Slides (22 inches)** – 8 pair
- **Tabletop Fasteners with Screws**

Edge Banding:

- **Maple Edge Banding Tape, 3/4" x 250' (Iron-On)**
- **Black Melamine Edge Banding Tape, 3/4" x 100' (Iron-On)**

Note: Links to the specific hardware used can be found below the build plans.

Tools Required:

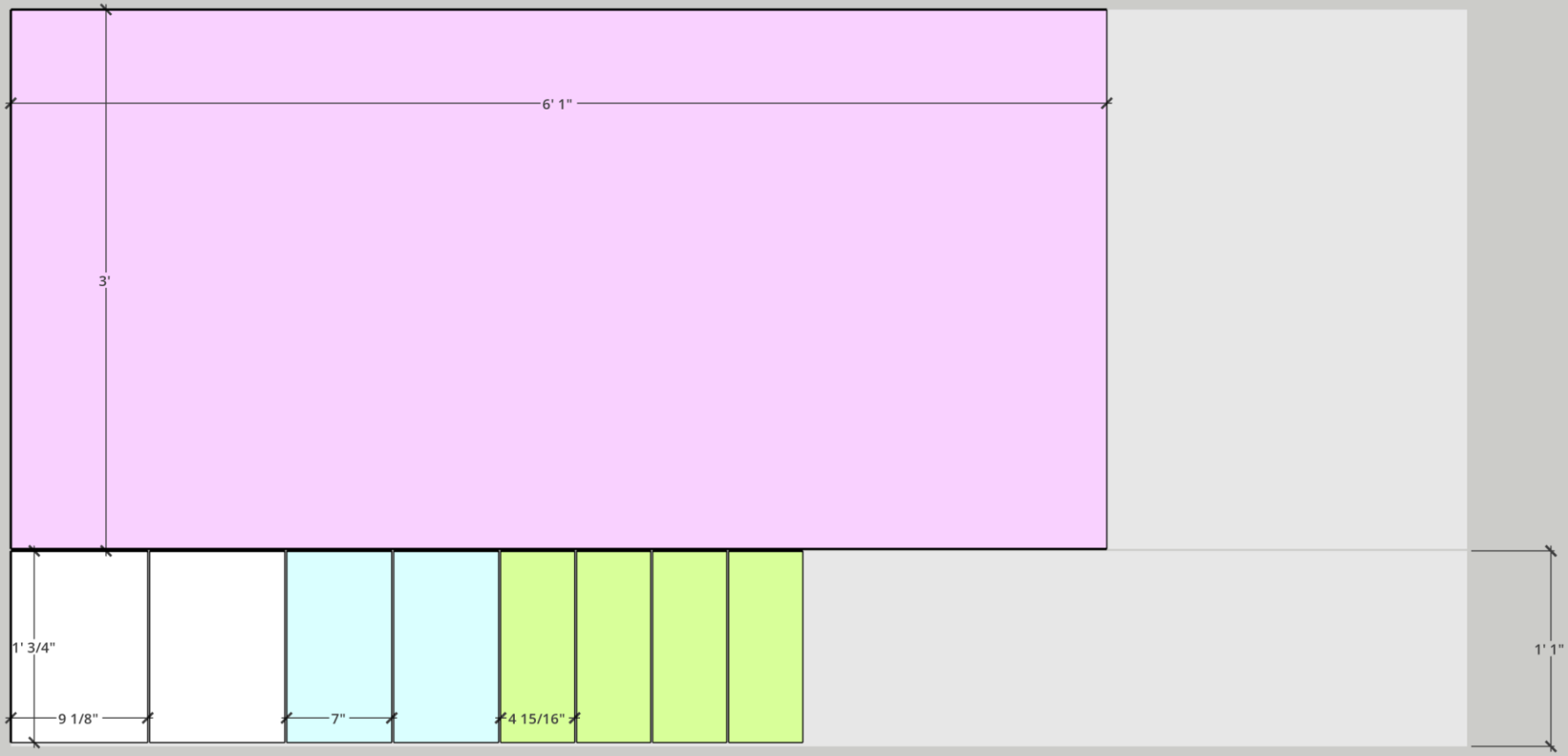
- Table Saw
- Miter Saw
- Pocket Hole Jig
- 4 - Bar Clamps
- Drill

Other:

- Wood glue

Miter Saw Station

CUT LIST – ¾ MELAMINE



Purple
- 6’1” x 3’ - 1

White
- 1' 3/4" x 9 1/8” - 2

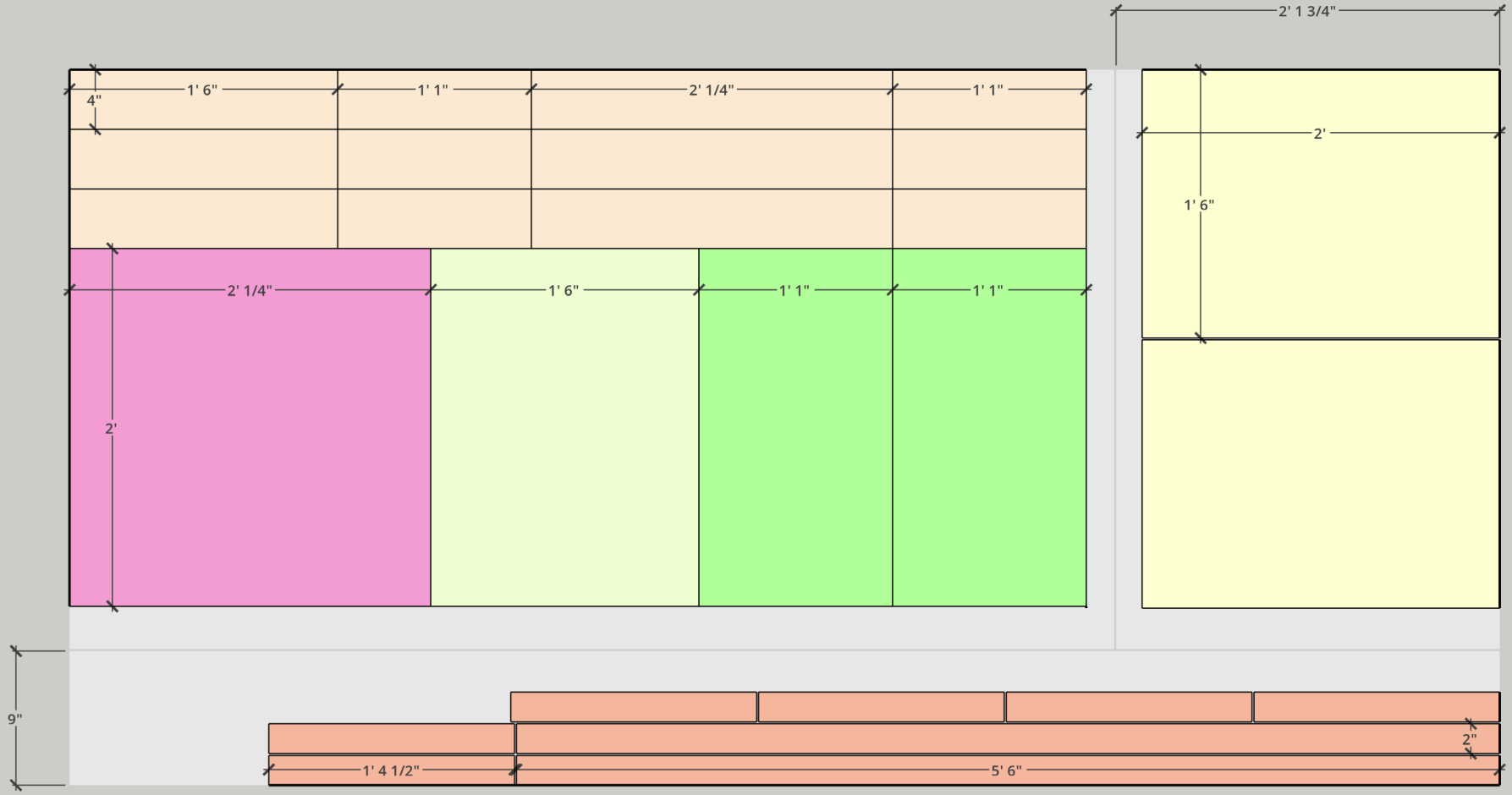
Blue
- 1' 3/4" x 7” - 2

Green
- 1' 3/4" x 4 15/16” - 4

Miter Saw Station

CUT LIST – ¾ PLYWOOD SHEET 1

SECOND CUT



Light Brown
- 1’6" x 4” - 3
- 1'1” x 4” - 6
- 2’ 1/4” x 4” - 3

Dark Pink
- 2' 1/4" x 2' - 1

Green
- 1' 6" x 2’ - 1

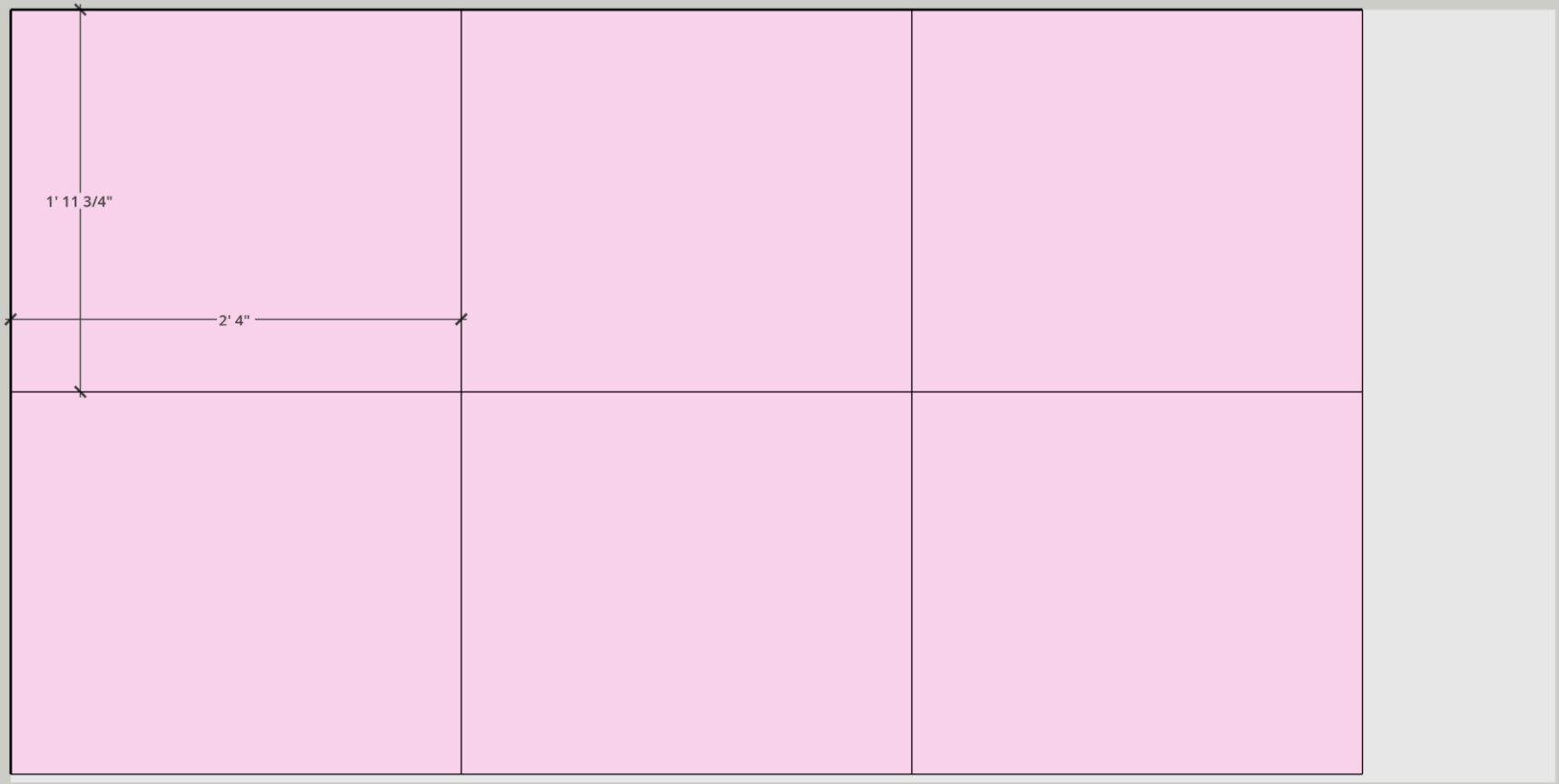
Dark Green
- 1' 1" x 2’ - 2

Yellow
- 2' x 1' 6" - 2

Orange
- 1' 4 1/2" x 2" - 6
- 5' 6" x 2” - 1

Miter Saw Station

CUT LIST – ¾ PLYWOOD SHEET 2

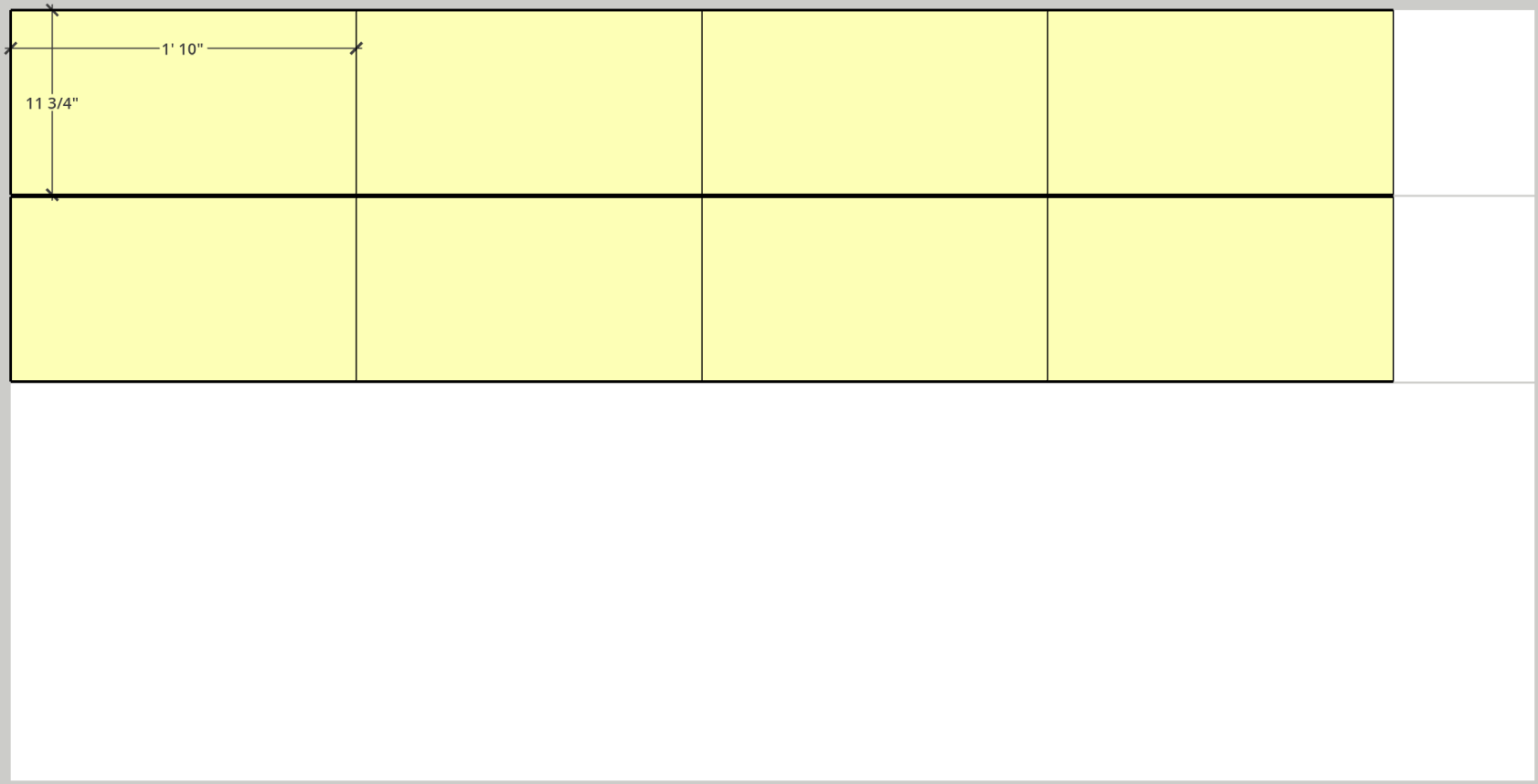


Light Pink

- 1’11 3/4” x 2’4” - 6

Miter Saw Station

CUT LIST – ½ PLYWOOD SHEET 1

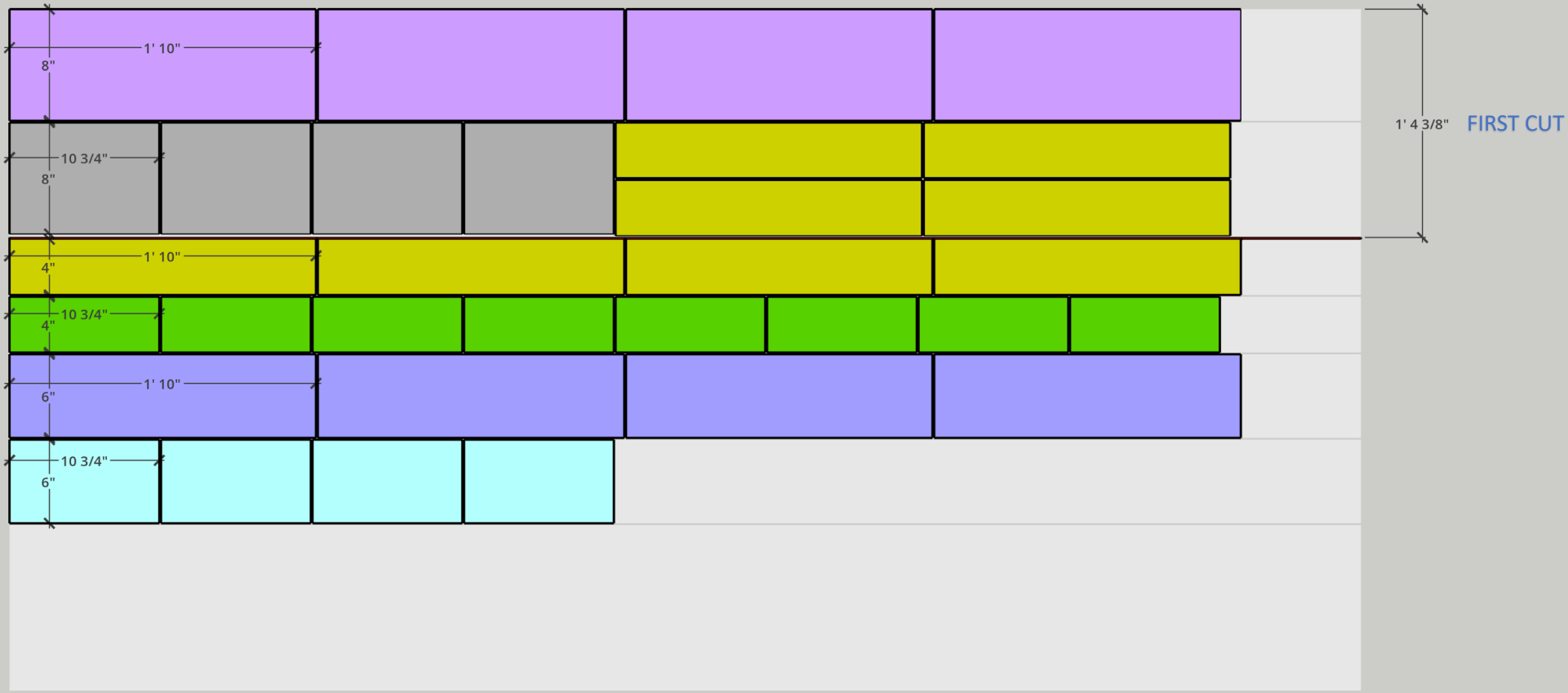


Yellow

- 1’10” x 11 3/4" - 8

Miter Saw Station

CUT LIST – ½ PLYWOOD SHEET 2



Light Purple
- 1’10" x 8” - 4

Gray
- 10 3/4" x 8” - 4

Yellow
- 1' 6" x 4” - 8

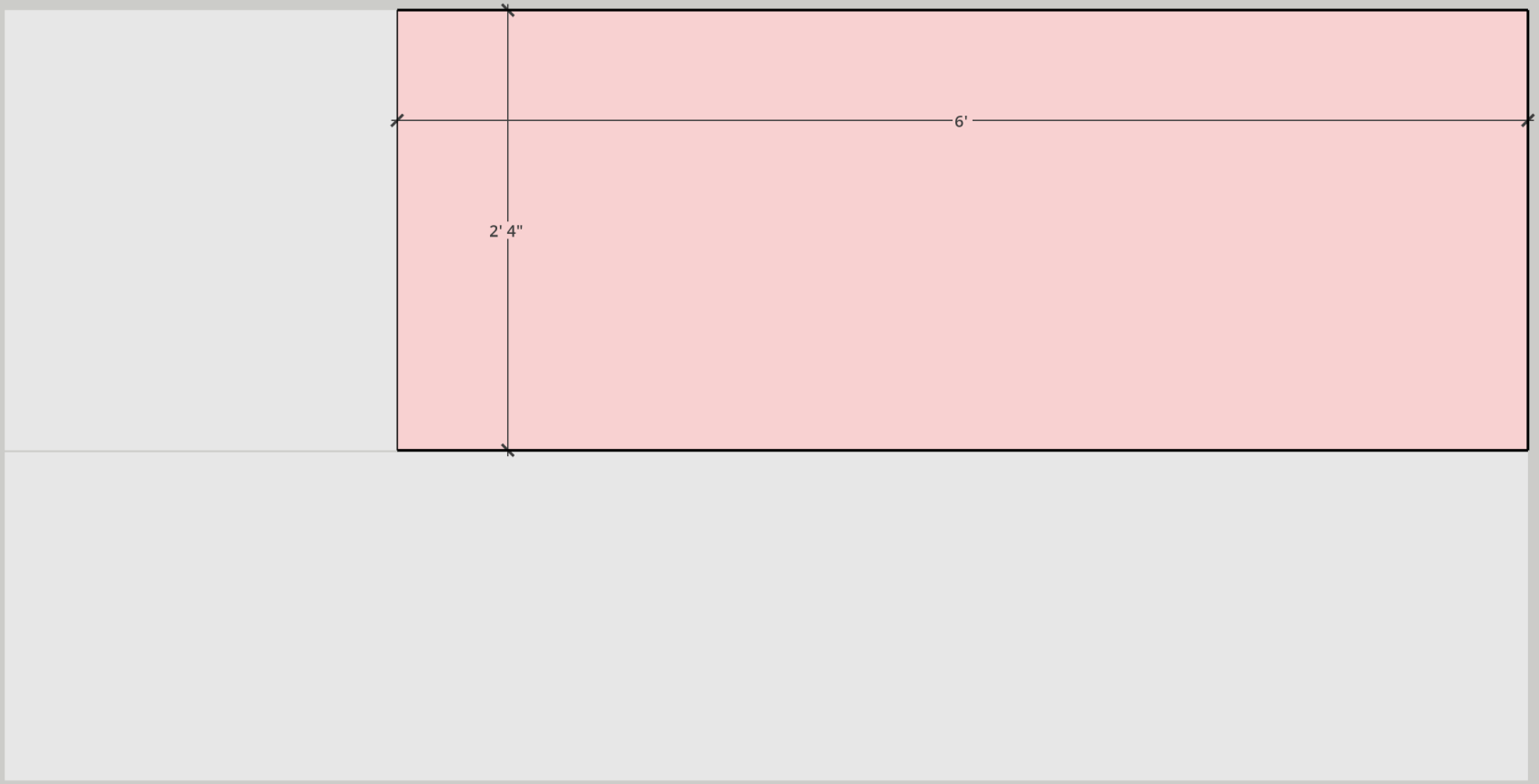
Green
- 10 3/4" x 4” - 8

Purple
- 1' 10 x 6” - 4

Teal
- 1' 10" x 6" - 4

Miter Saw Station

CUT LIST – ¼ PLYWOOD



Light Pink

- 2’ 4” x 6’ - 1

Miter Saw Station

STEP BY STEP - OVERVIEW

Before diving into the step-by-step build plans for the miter saw station, here's an outline of the project structure and additional resources to guide you through each phase of the build. This project will be broken down into six main sections, followed by a final stage dedicated to constructing the drawers. Each section has been carefully planned to make the process organized and manageable.

To help visualize the entire design and get precise measurements, refer to the **SketchUp 3d Model** linked below. This model allows you to:

- View the design from all angles
- Take accurate measurements of each component

3D Model: Miter Saw Station Model

For further guidance, a **detailed, private video** is available on YouTube, which covers each section of the build in depth. This video is organized with time stamps corresponding to each stage of the build plans, making it easy to follow along at your own pace.

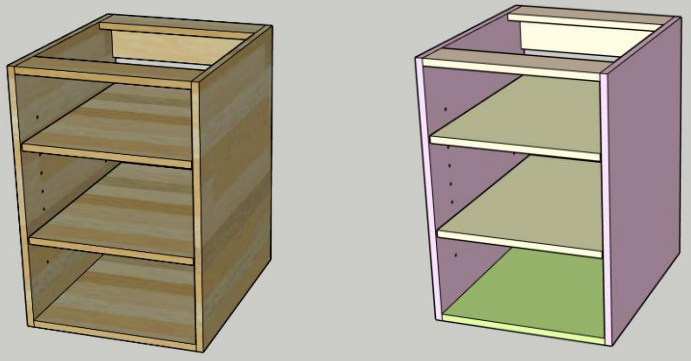
YouTube Video: Step-by-Step Miter Saw Station Build

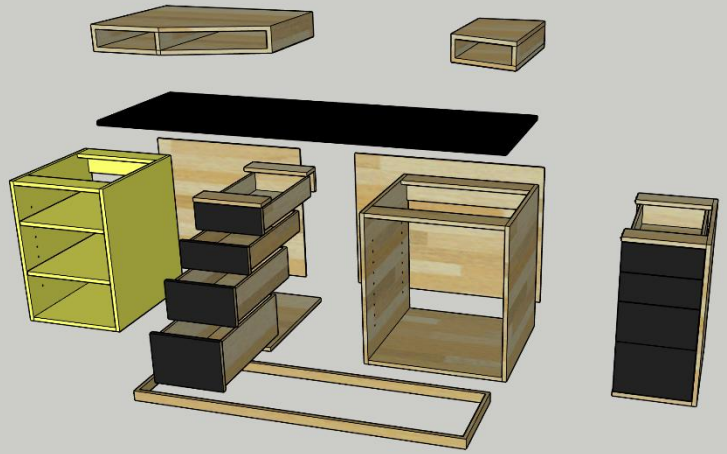
Ensure you have all tools and materials on hand before beginning each section to streamline the building process.

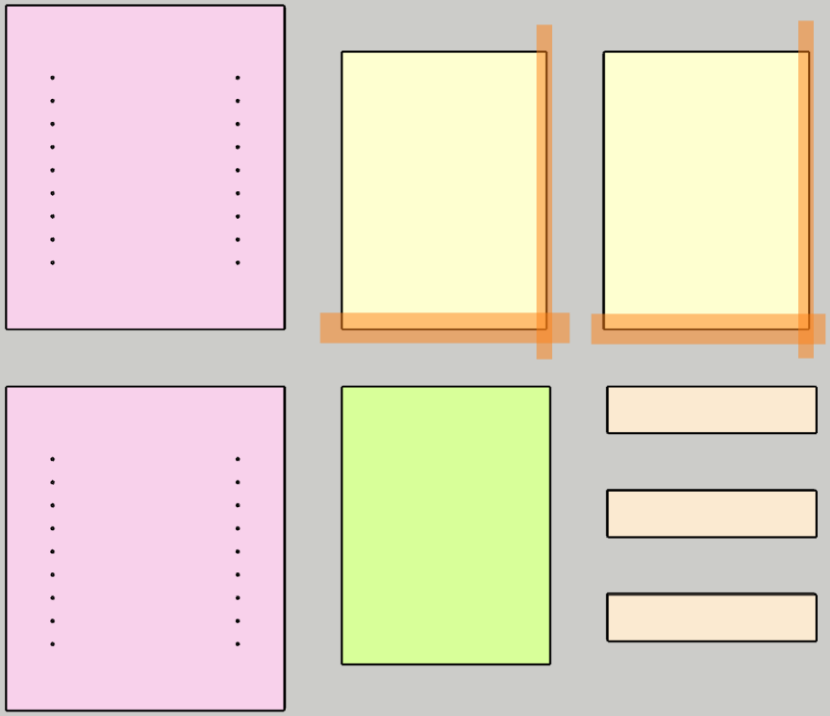
> ***Note:*** *As you review the design, you'll notice that some pieces can be batched together to speed up the cabinet assembly process. If you'd like to batch parts, make note of these opportunities as you go through each section, even though I've outlined each step individually for clarity.*

Miter Saw Station

STEP BY STEP - SECTION 1







In this first section, we'll start by assembling with eight pieces cut from the 3/4" sheets 1 AND 2.

- 1' 11 3/4" x 2' 4" - 2
- 1' 6" x 2' - 3
- 1'6" x 4" - 3

Each piece is color-coded to correspond with the cut list, making it easy to identify and follow along with each stage of the build. Be sure to reference the color codes as you work to ensure accurate assembly.

Note: *Take two of the 1' 6" x 2' panels and trim them down by just an 1/8" ON EACH SIDE so they will slide into the cabinet without getting pinched.*

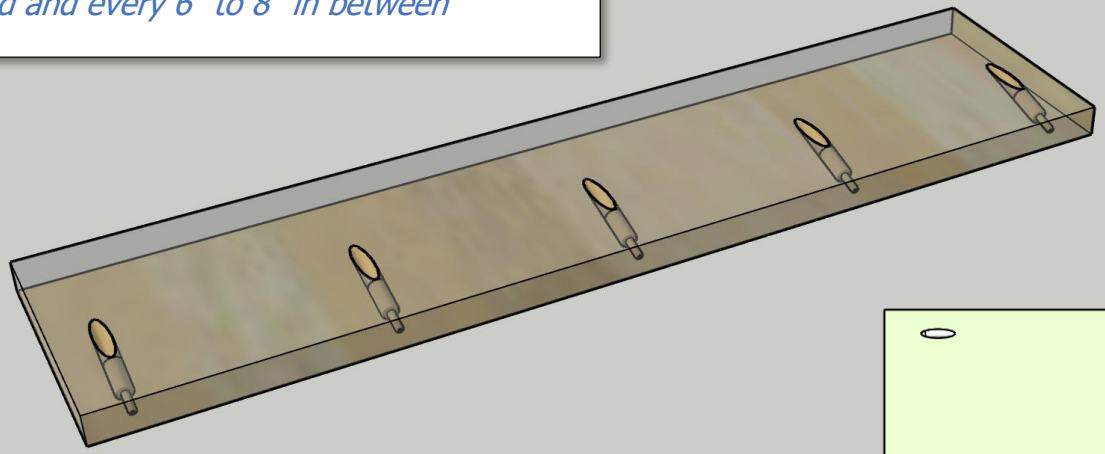
Miter Saw Station

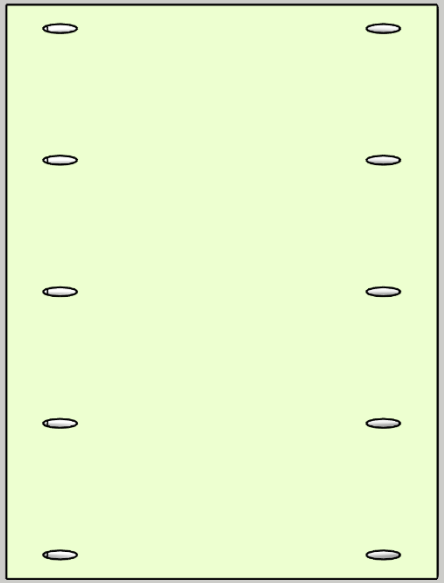
STEP BY STEP - SECTION 1

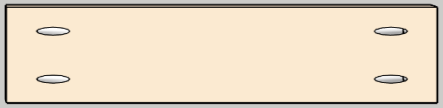
Note: *For long boards, panels, and plywood use any of the drill-guide holes to position holes starting about 1" from each end and every 6" to 8" in between*

We will begin by drilling pocket holes in the pieces shown below.

Here are some alternatives to pocket holes:
Dominos, Biscuits, Screws, Dowels, Brad nails

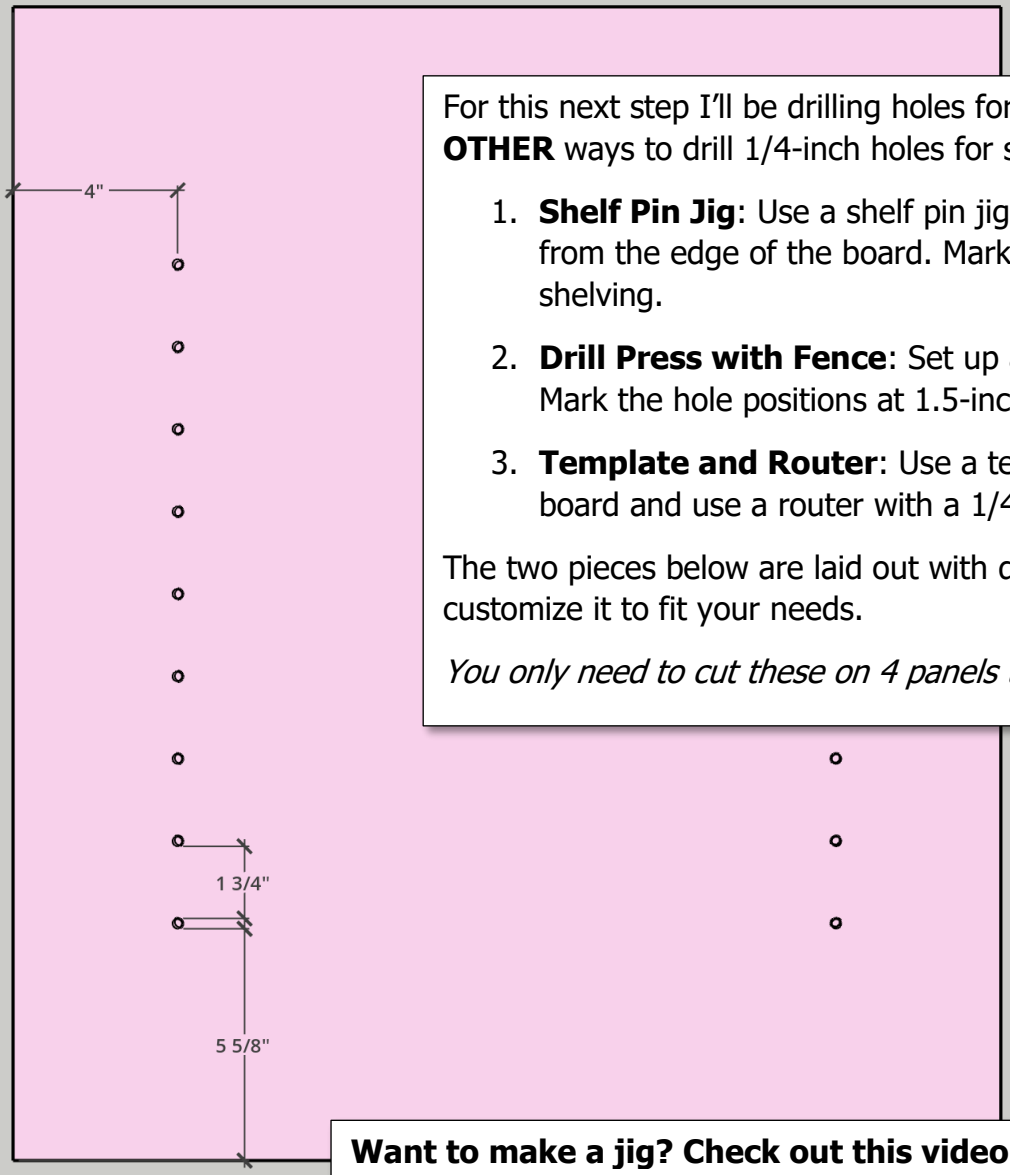






We'll be using #8 1-1/4" Kreg Pocket Screws for all ¾" plywood.

For more information on pocket hole spacing and techniques, check out this link: Pocket Hole Spacing.



For this next step I'll be drilling holes for shelf pins on our two side panels. Here are three **OTHER** ways to drill 1/4-inch holes for shelf pins with proper spacing if you don't have a CNC

1. **Shelf Pin Jig**: Use a shelf pin jig for consistent alignment, placing it 1 to 1.5 inches from the edge of the board. Mark holes every 1.5 inches vertically for adjustable shelving.
2. **Drill Press with Fence**: Set up a drill press with a fence to keep the board steady. Mark the hole positions at 1.5-inch intervals beforehand for accurate spacing.
3. **Template and Router**: Use a template with pre-drilled 1/4-inch holes. Clamp it to the board and use a router with a 1/4-inch bit to cut each hole along the marked intervals.

The two pieces below are laid out with dimensions and spacing that I did, but you can customize it to fit your needs.

You only need to cut these on 4 panels that will house the shelves.

Want to make a jig? Check out this video link: Jig for Drilling Shelf Pin Holes / Shelf Pin Jig.

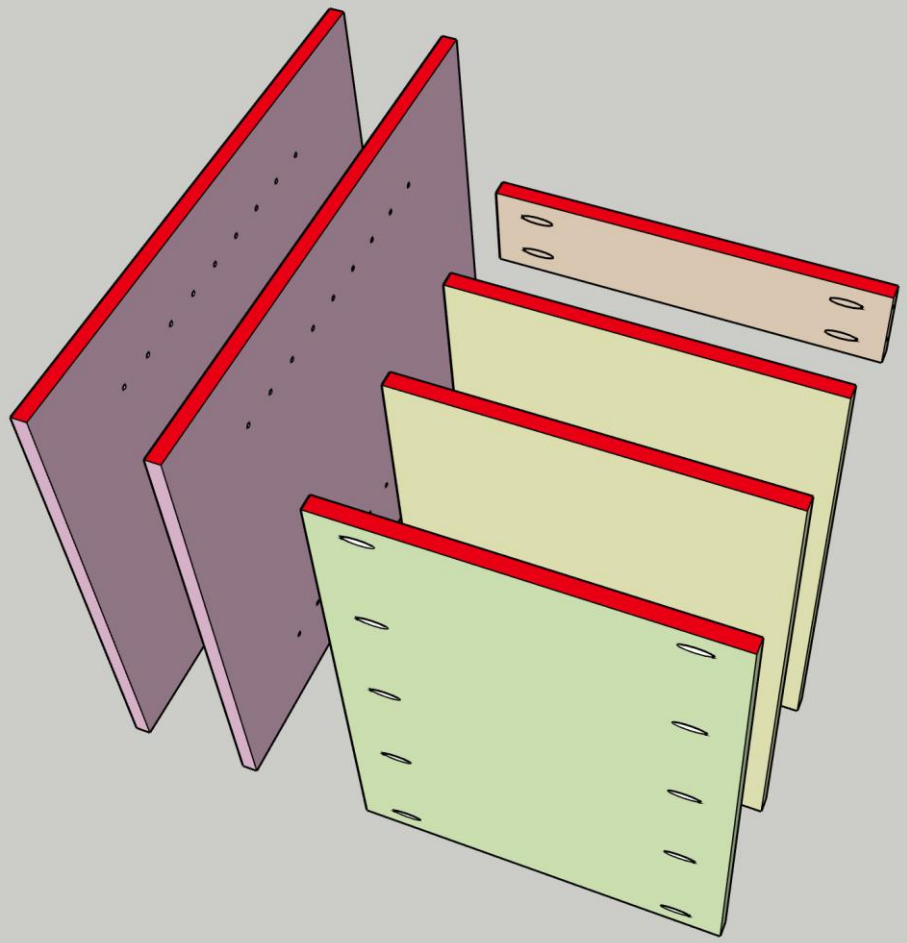
Miter Saw Station

STEP BY STEP - SECTION 1

Before assembly, we'll apply edge banding to each exposed edge of the plywood using an iron to adhere it.

Once applied, use an edge banding trimmer or a razor blade to trim off any excess for a clean finish.

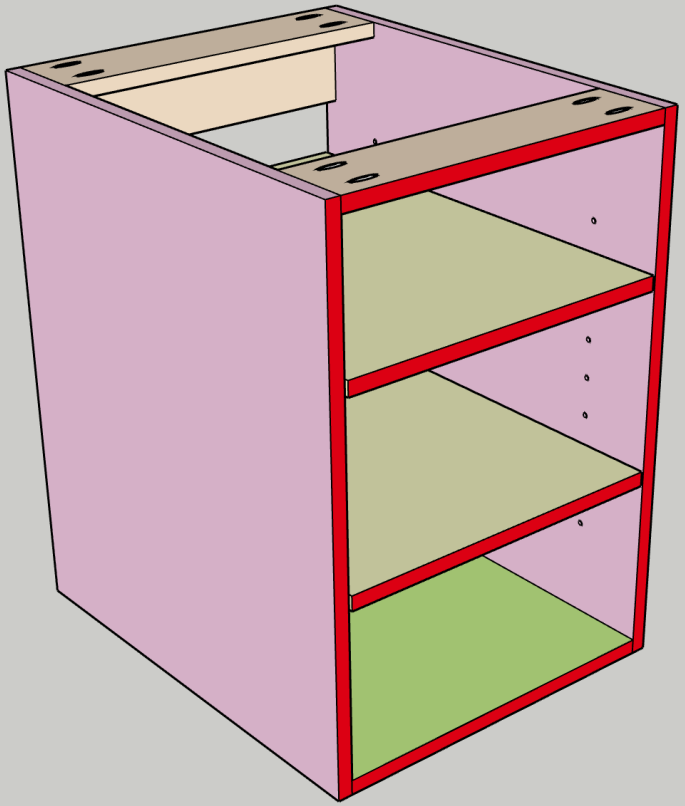
Each side needing edge banding is marked in RED.



Note: *Another option instead of iron-on edge banding is to make your own by using hardwood strips. To do this, cut thin hardwood strips to the same width as the plywood edges, apply wood glue, and clamp the strips in place until the glue sets. This method gives a durable, solid wood edge that can be sanded flush with the plywood for a seamless finish.*

Miter Saw Station

STEP BY STEP - SECTION 1



For the assembly, I'm using two BESSEY K Body REVO Parallel Clamps to firmly hold each piece in position while fastening the pocket hole screws.

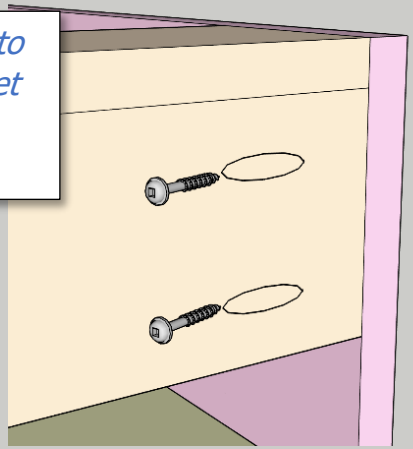
To reinforce the joints, I'm also applying Boss Dog Wood Glue. It is important that all the pocket holes face towards the top as they will be hidden by the MDF top panel.

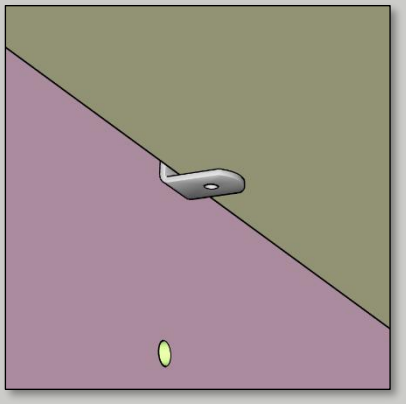
Additionally, I've added an extra cabinet brace at the back to allow for secure wall-mounting if needed and to provide a more robust area for attaching the back panel.

With the cabinet frame fully assembled, I can install the shelf pins and easily slide the shelves into place.

BOSSDOG Glue Company™

NOTE: *Be sure to use 1 1/4" Pocket hole Screws for 3/4" materials.*

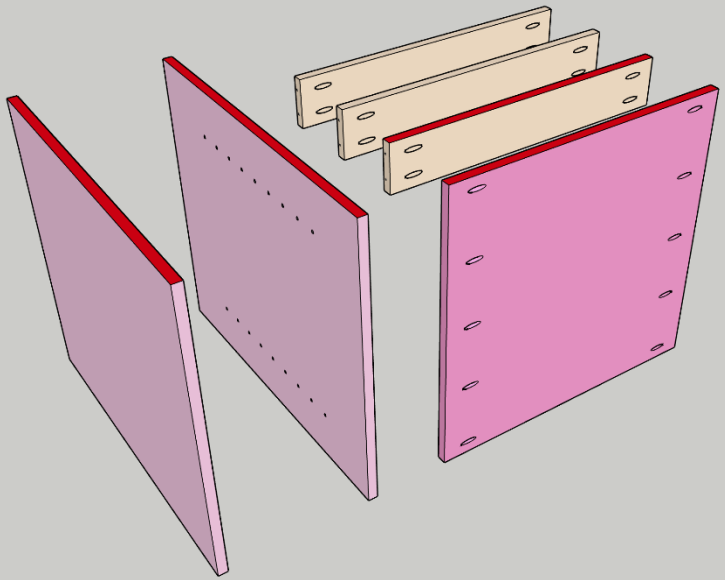


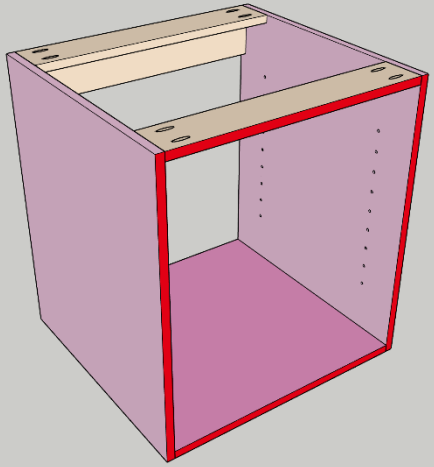


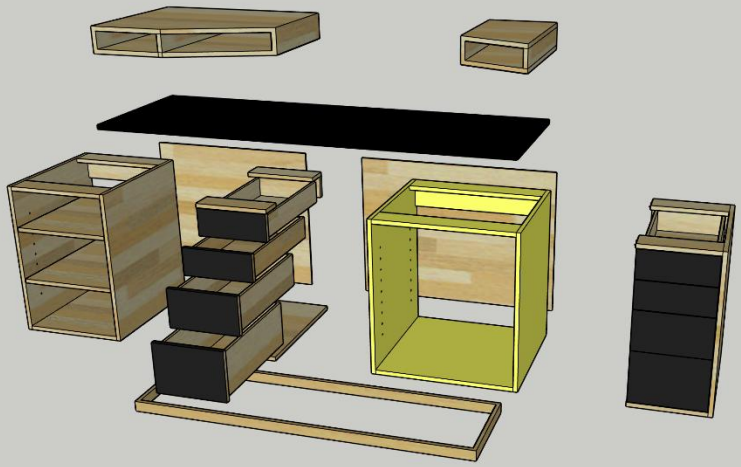
Miter Saw Station

STEP BY STEP - SECTION 2

NOTE: *Not all braces need edge banding.*







In this second section, we'll start by assembling with six pieces cut from the 3/4" sheets 1 AND 2.

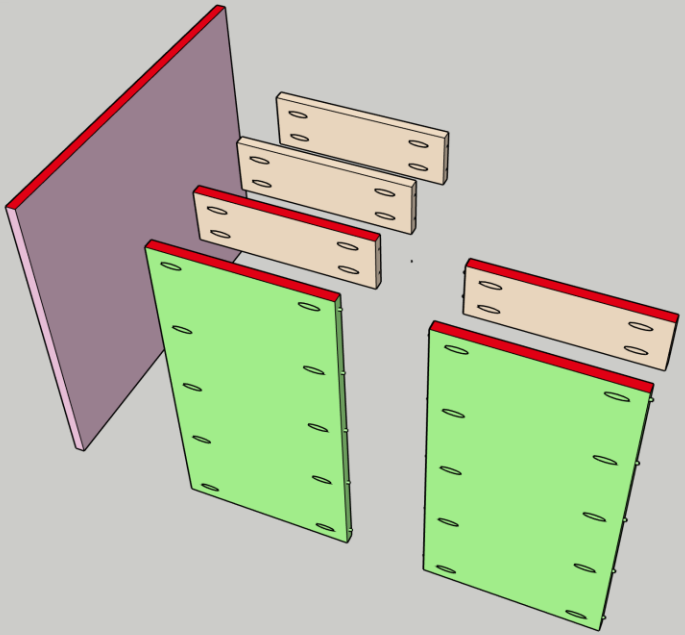
- 1' 11 3/4" x 2' 4" - 2
- 2' 1/4" x 2' - 1
- 2' 1/4" x 4" - 3

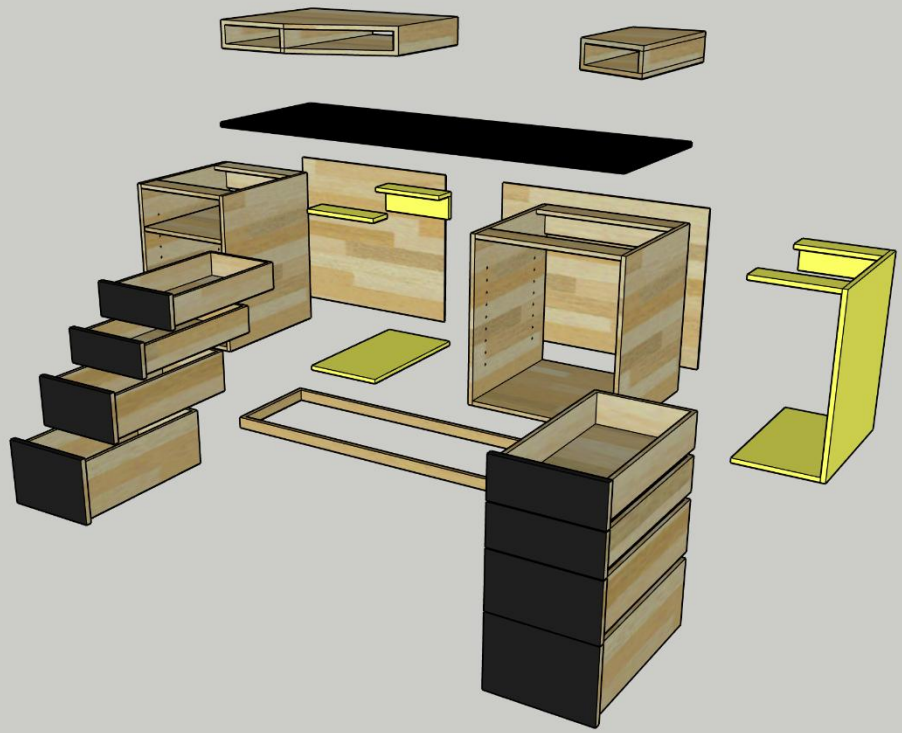
This section is a wider replica of Section 1. Although this cabinet is designed to house a vacuum and will not include shelves initially, I've included shelf pin holes to allow for future adjustments if needed.

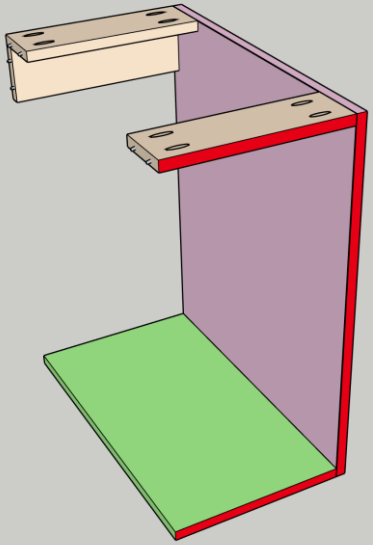
To begin, locate the pieces for Section 4 (color-coded to match the cut list) and follow the preparation steps on pages 14–16. Once all pieces are prepped, proceed with the assembly steps outlined on page 17.

Miter Saw Station

STEP BY STEP - SECTION 3 & 4







In this third and fourth sections, we'll connect section 1 and 2 using the pieces below.

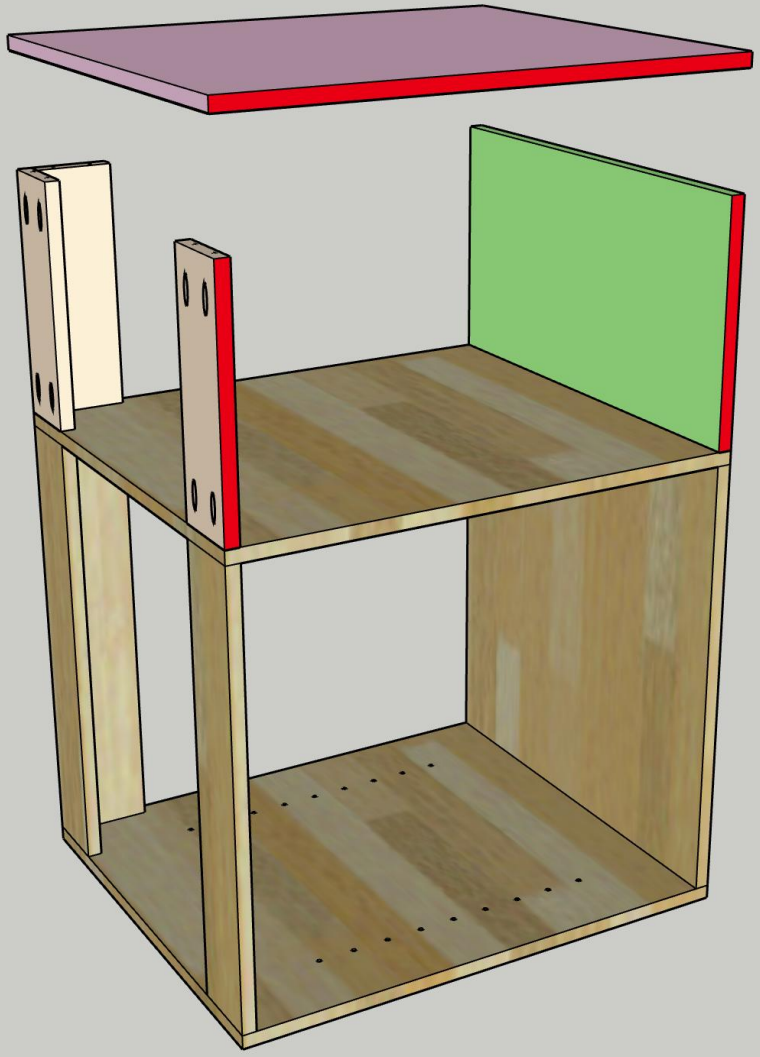
- 1' 11 3/4" x 2' 4" - 1
- 1' 1" x 2' - 2
- 1' 1" x 4" – 6

This cabinet is like sections 1 and 2, but this cabinet is designed to house drawers. Rather than building a separate cabinet, we'll use braces to connect Section 3 to Section 2, as shown above. For this section, there will be no shelf pin holes; however, you will still pre-drill pocket holes on the bottom panels and on the 4" braces. Once the pocket holes are drilled, attach the edge banding (see more on page 16).

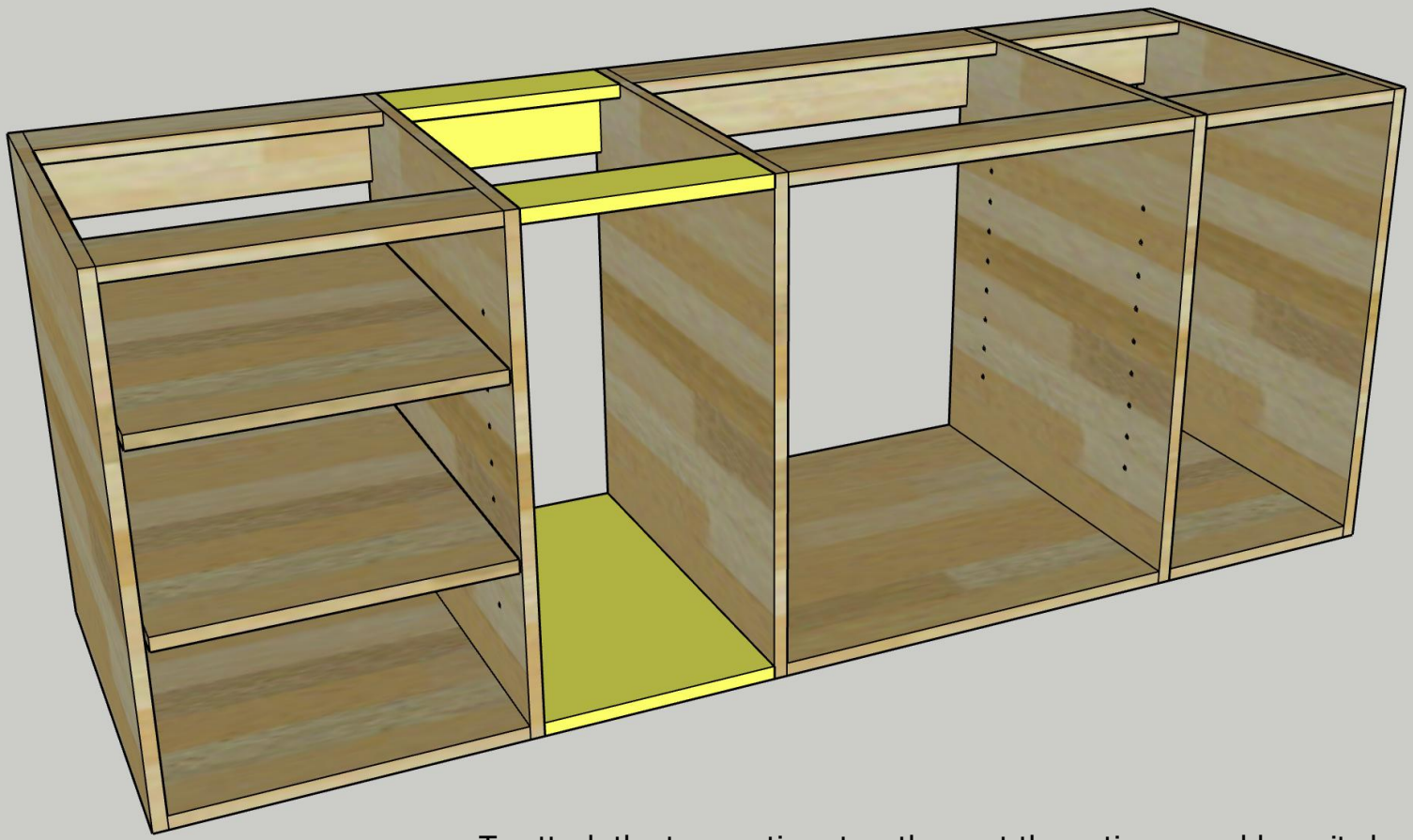
To connect the middle cabinet to the adjacent section, I positioned the braces flush with the cabinet edges for a seamless, stable connection. I applied a thin, even layer of wood glue along each brace where it met the cabinet surface to add extra bonding strength.

To make this easier, I flipped the cabinet on its side. This allowed me to attach the braces more comfortably using pocket hole screws. Once the braces were secure, I attached the side panel, creating a sturdy, unified structure that's ready for drawers or other components.

After attaching all braces and the side panel, I allowed the glue to cure fully. This final step ensures a durable and stable cabinet assembly.



If desired, you could make these sections their own separate cabinets and simply butt them against the other cabinets, like a traditional cabinet setup. This approach provides flexibility, allowing you to build each cabinet independently and then align them side by side to create a cohesive unit.



To attach the two sections together, set the entire assembly on its back on a flat, level surface to ensure alignment. Position each brace at the top and bottom, making sure they're flush with the front edges of the compartments. Apply a small amount of wood glue along the edges of each brace where they'll meet the side panels for added stability.

Using the pre-drilled pocket holes, secure each brace to the side panels with pocket hole screws. Tighten the screws until the braces are firmly in place, taking care not to overtighten. Finally, check that the frame is square, confirming that all corners are at right angles before the glue sets.

Miter Saw Station

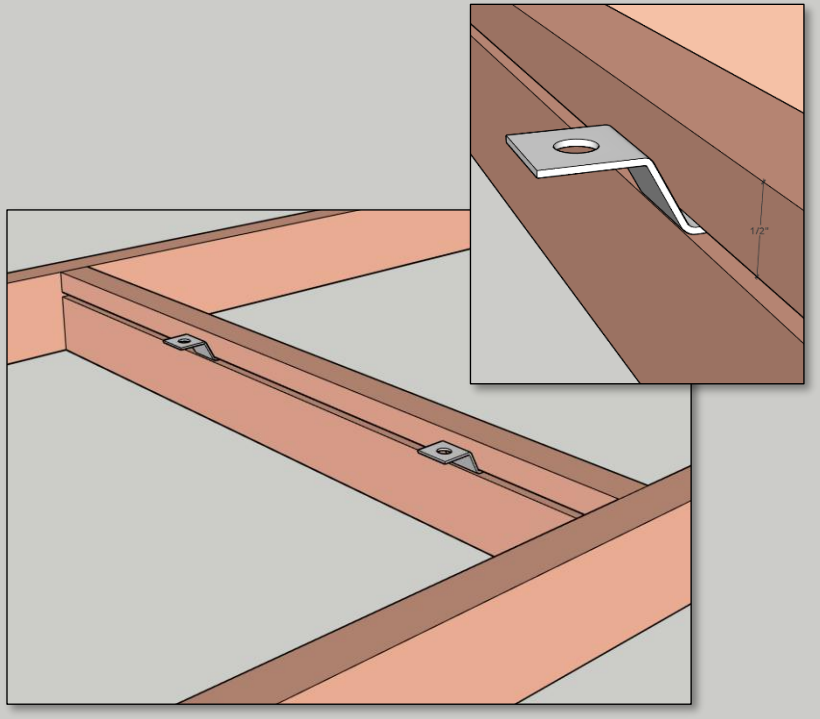
STEP BY STEP - BASE

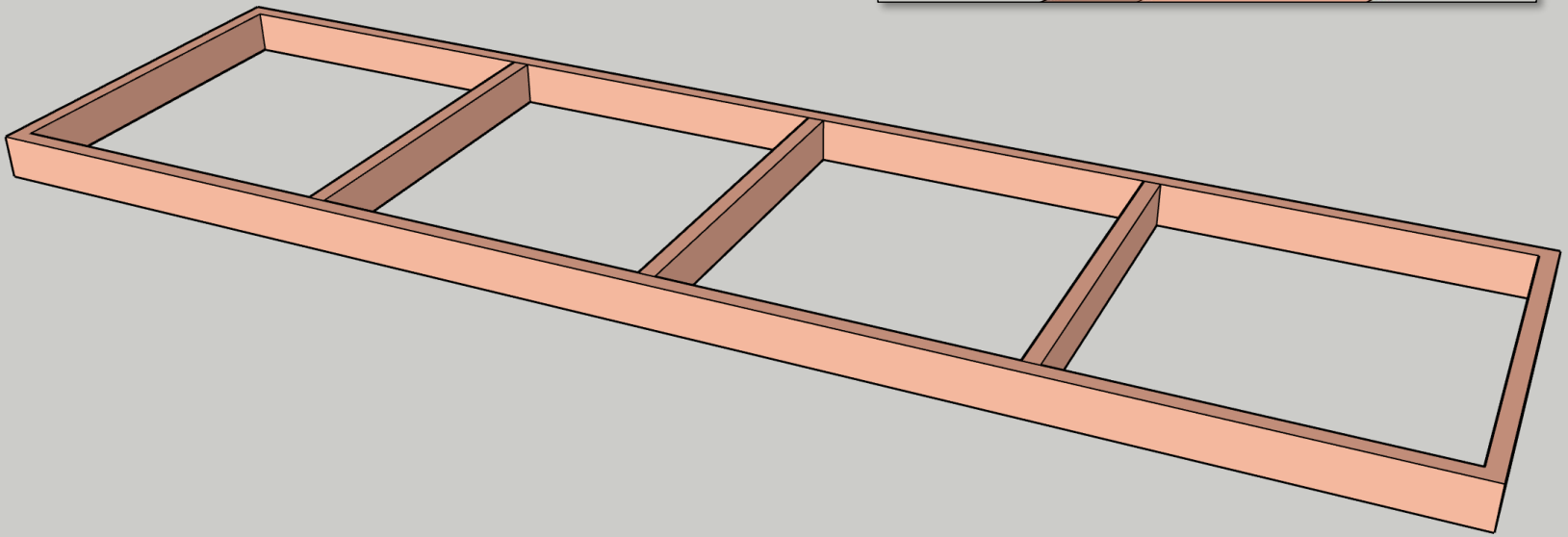
This design uses a simple rectangular base that is 2 inches tall, but if you need your station to be taller to suit your preferences or saw height, now is the perfect time to adjust the base height.

For uneven floors, consider adding leveling feet to ensure the station stays stable and level during use. These can easily be attached to the bottom of the base.

To construct the base, I used pocket hole joinery to attach braces spaced evenly along the length of the frame.

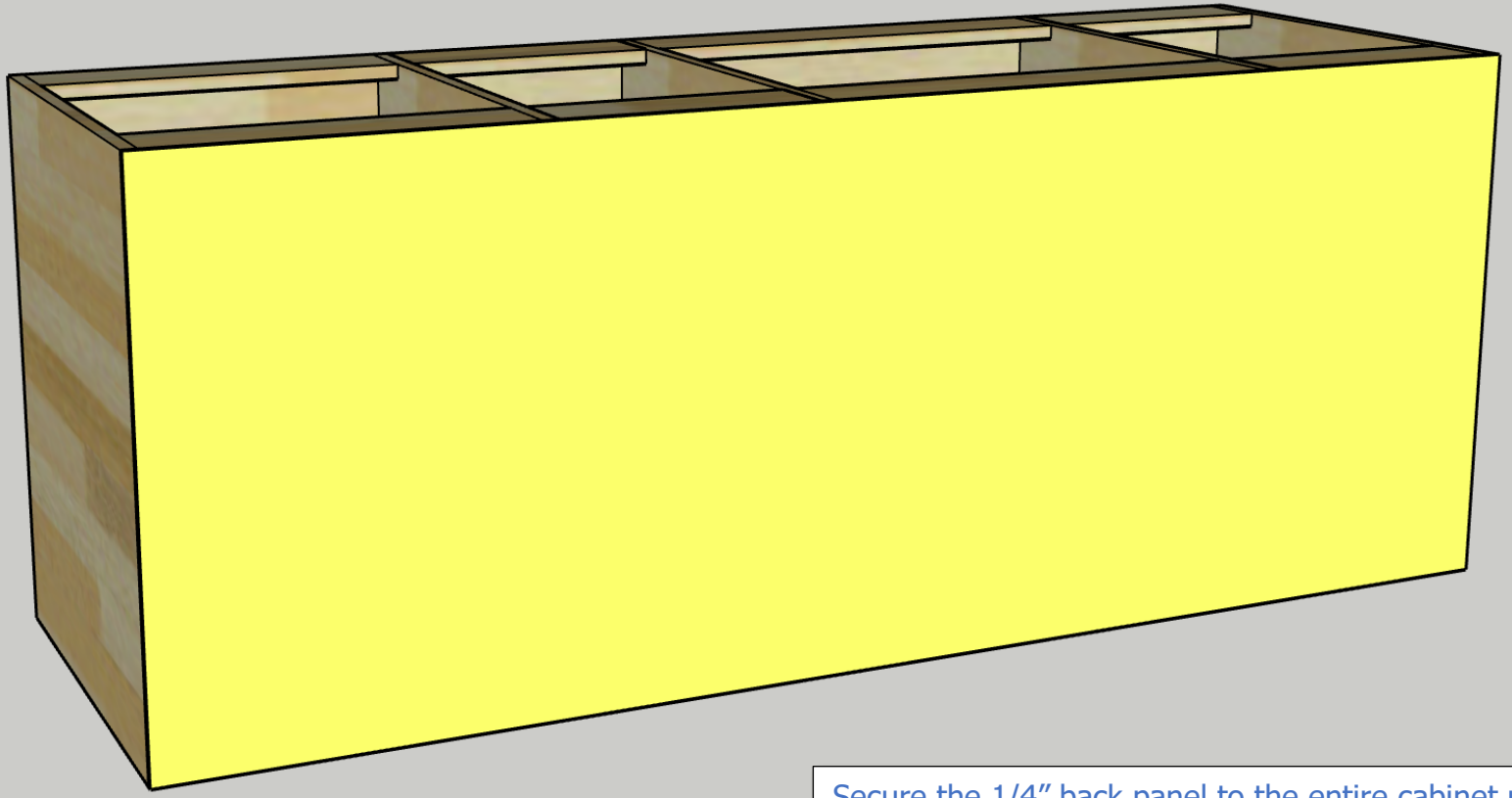
To attach the base to the cabinet, I cut an 1/8 dado ½" from the top and used tabletop fasteners to hold it in place.



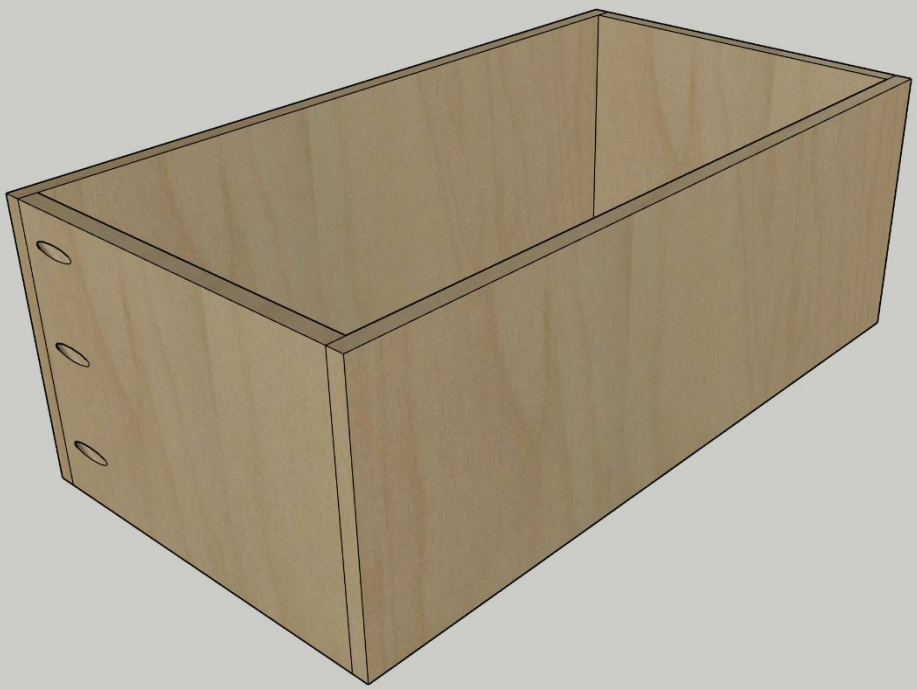


Miter Saw Station

STEP BY STEP - BACK PANEL



Secure the 1/4” back panel to the entire cabinet using wood glue and brad nails. Also, during this step, check and make sure everything is square and flush.



The drawers are made entirely from 1/2-inch plywood and assembled using 1-inch pocket hole screws.

To give the drawers a polished look, I edge-banded all exposed plywood edges. This not only improves the appearance but also adds protection to the plywood edges.

Refer to **Page 10** for the detailed cut list, which includes all the dimensions needed for the drawer components.

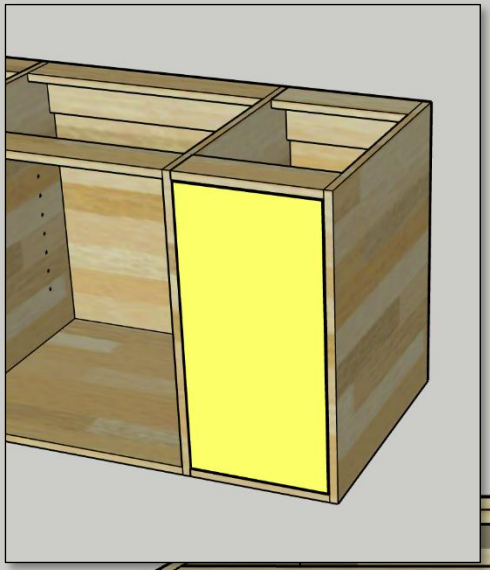
When assembling the boxes, ensure all edges are flush and square for smooth operation once installed. Test fit each drawer in its slot before finalizing the assembly to confirm proper fit.

There are many ways to assembly drawer boxes so feel free to use another process.

NOTE: *Before driving in the screws, I used a brad nailer to tack each piece in place. The brad nails will be hidden, and this method eliminates the need for clamps during assembly, saving time and effort.*

Miter Saw Station

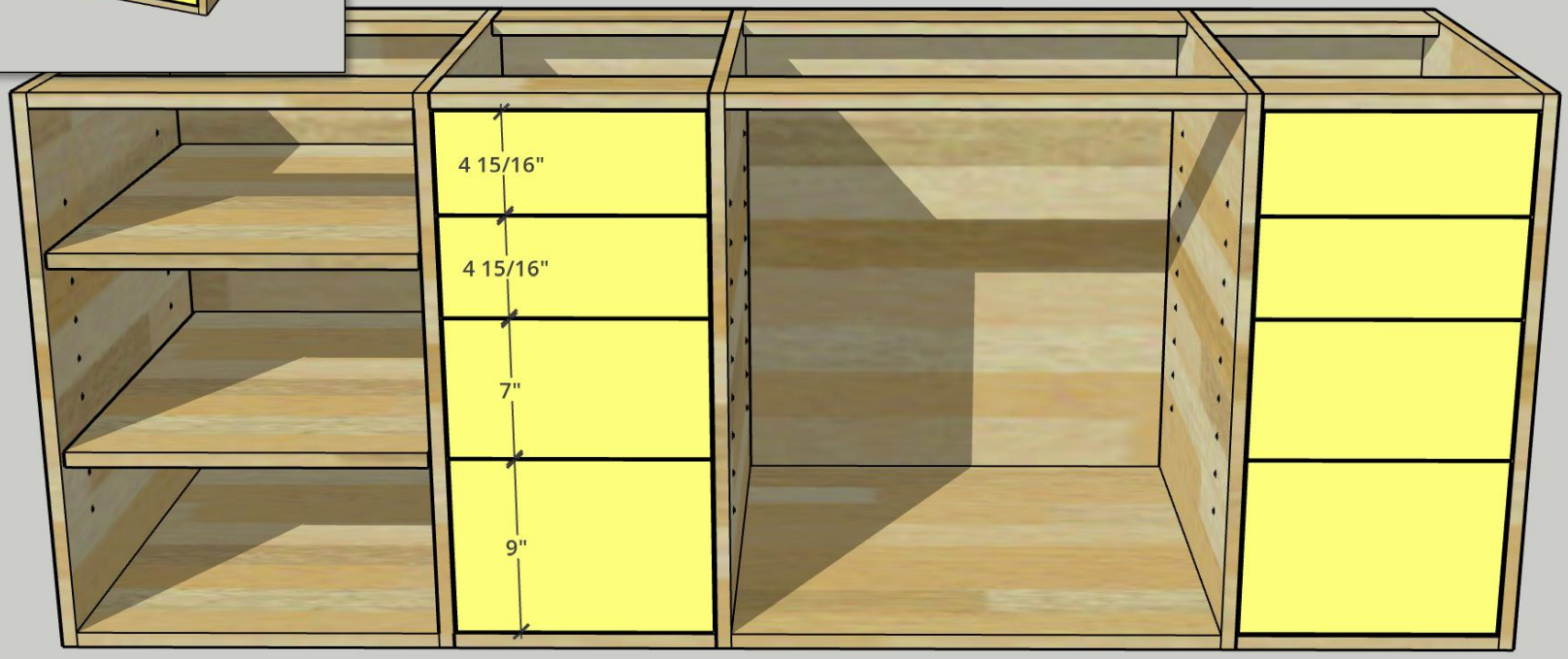
STEP BY STEP – INSTALLING THE TOP



The drawer fronts are cut from 3/4-inch melamine to ensure a clean and durable finish. I started by cutting a larger piece to match the overall dimensions of the cabinet opening, working from the top down.

From there, I cut each individual drawer front, ensuring a consistent 1/8-inch gap between each piece for smooth operation and a professional look.

Refer to the measurements listed below for each drawer front but be sure to double-check all dimensions against your cabinet to ensure a precise fit. Every cabinet can vary slightly, so custom adjustments may be necessary for the best results.



There are many ways to create integrated handles for your drawer fronts, so feel free to customize them to match your style and needs.

For this project, I used a CNC to carve out a clean and modern handle design directly into the drawer fronts. However, you can achieve similar results using other methods:

- Drill holes and install hardware for a classic look.
- Use a router with specialized bits to carve out recessed or finger pull handles.

Experiment with different styles to create a look that works best for your shop and workflow. The design of the handles is entirely up to you!

I also had to edge band all the edges of the drawer fronts which was easy to do with the iron on edge banding.

NOTE: *Watch this video to see how I cut these drawer fronts using my Next Wave Shark CNC*

Cutting Drawer Fronts for the Miter Saw Station

Miter Saw Station

STEP BY STEP – INSTALLING THE TOP

Now you can go ahead and install the 3/4” melamine top using cabinet screws and secure it through the braces. I did not glue the top on as I figure in the future this may be something that can be replaced.

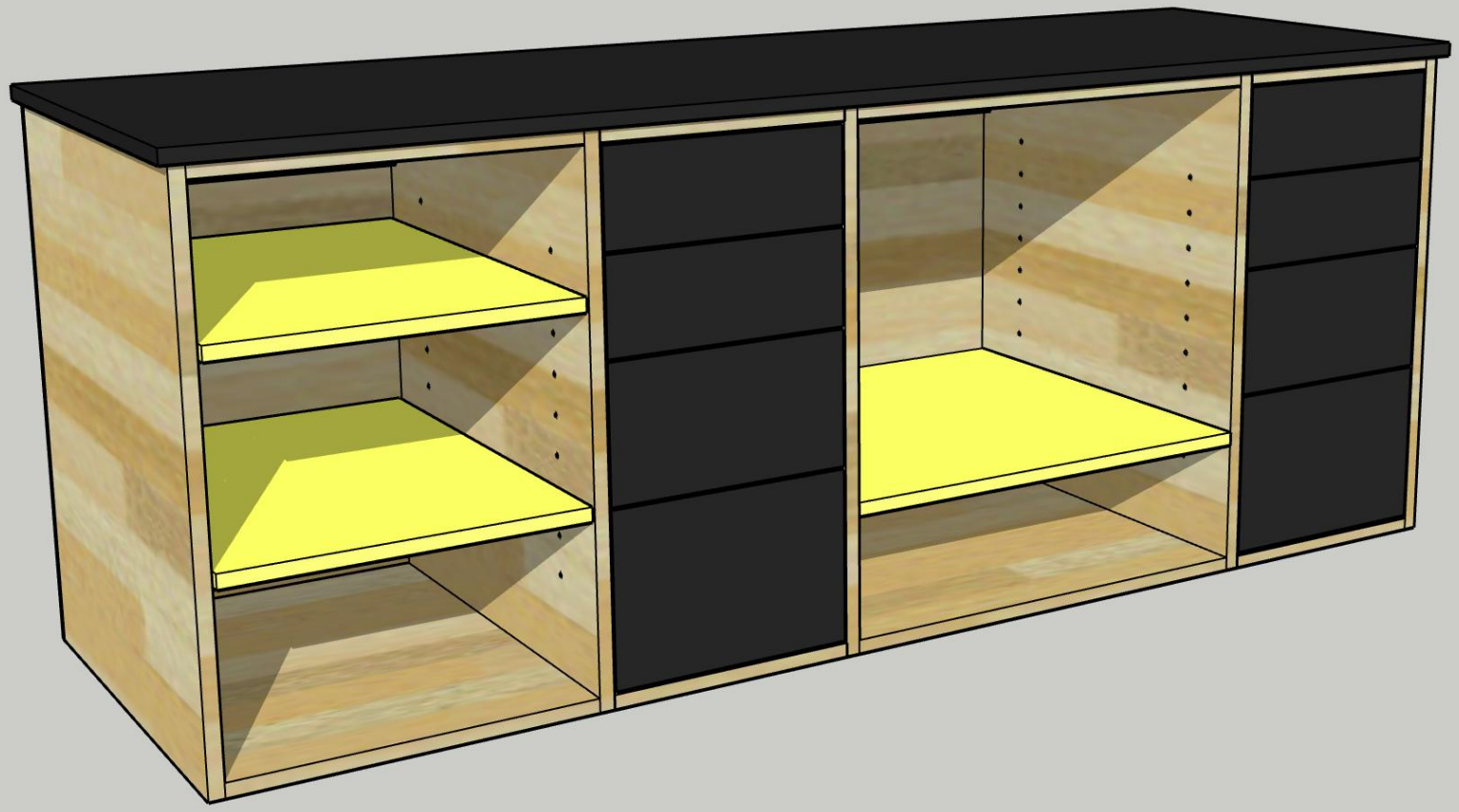
Miter Saw Station

DIMENSIONS

In this step, we'll install the adjustable shelves (if you haven't already) and finalize the middle section of the cabinet. The shelves are supported with shelf pins, making them easy to adjust as needed.

Start by edge banding all exposed plywood edges on your shelves for a clean finish. Next, measure the width of the cabinet openings and subtract about 1/8 inch to account for the shelf pins. Cut your shelves to size and slide them into place using the shelf pins.

For the middle section, while I opted for an open-front design, adding cabinet doors is a great option if you want to close off the space for dust collection or aesthetics. This step is entirely customizable to fit your needs and preferences.



Miter Saw Station

DIMENSIONS

The next step is to build the modular top, which offers a lot of flexibility and can be customized to suit your specific needs. To begin, I used 3/4-inch plywood and cut it into strips that matched the height of my miter saw. When making these cuts, I made sure to account for the thickness of the 3/4-inch melamine top, so the plywood strips would line up perfectly with the miter saw base.

Once I had the strips cut to size, I used the off cuts from these pieces to create the actual top sections of the modular design. These pieces fit into the support sides, providing a solid base for the miter saw and additional workspace.

For assembly, I used a combination of wood glue, brad nails, and screws. First, I applied wood glue along the edge of each strip before securing it with brad nails to hold it in place. This allowed for immediate stability, and then I reinforced the structure further by driving screws through the sides into the top sections.

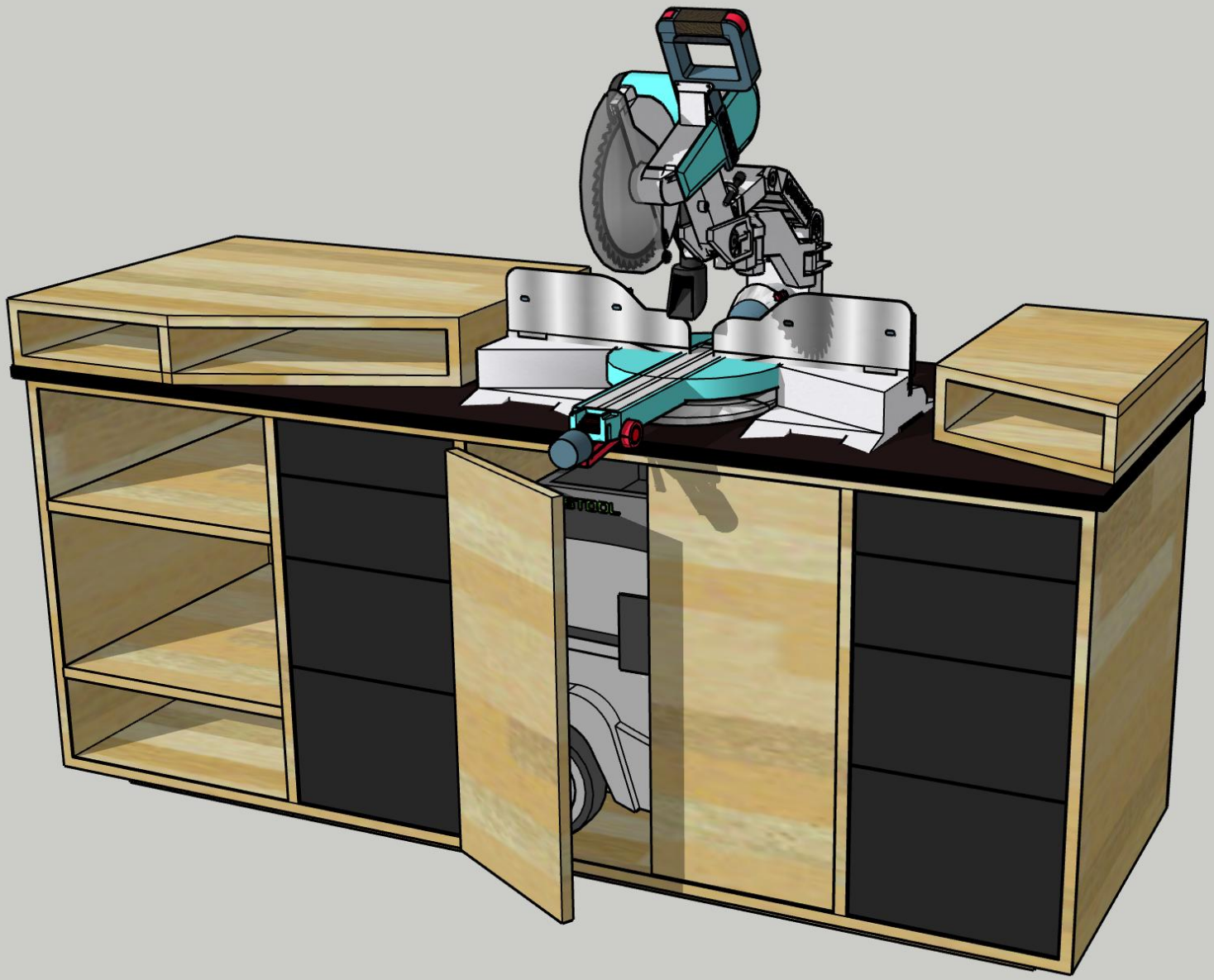
I did not secure the supports in place immediately, as I wanted to test and adjust the layout until I was satisfied with the overall design and positioning of the top. This step allows you to adjust the height and placement of the top for the best ergonomics and workflow in your shop.

One of the key advantages of this modular top design is its adaptability. Once the supports are in place, you'll have the option to add your own drawers, tool storage, or even customize the work surface with additional features in the future. Once you've finalized the setup and layout to your preference, you can then securely fasten the supports in place to ensure everything stays solid and stable.

This modular system makes it easy to modify and expand the top as your needs change, providing long-term versatility for your workshop.

Miter Saw Station

DIMENSIONS



Miter Saw Station

DIMENSIONS