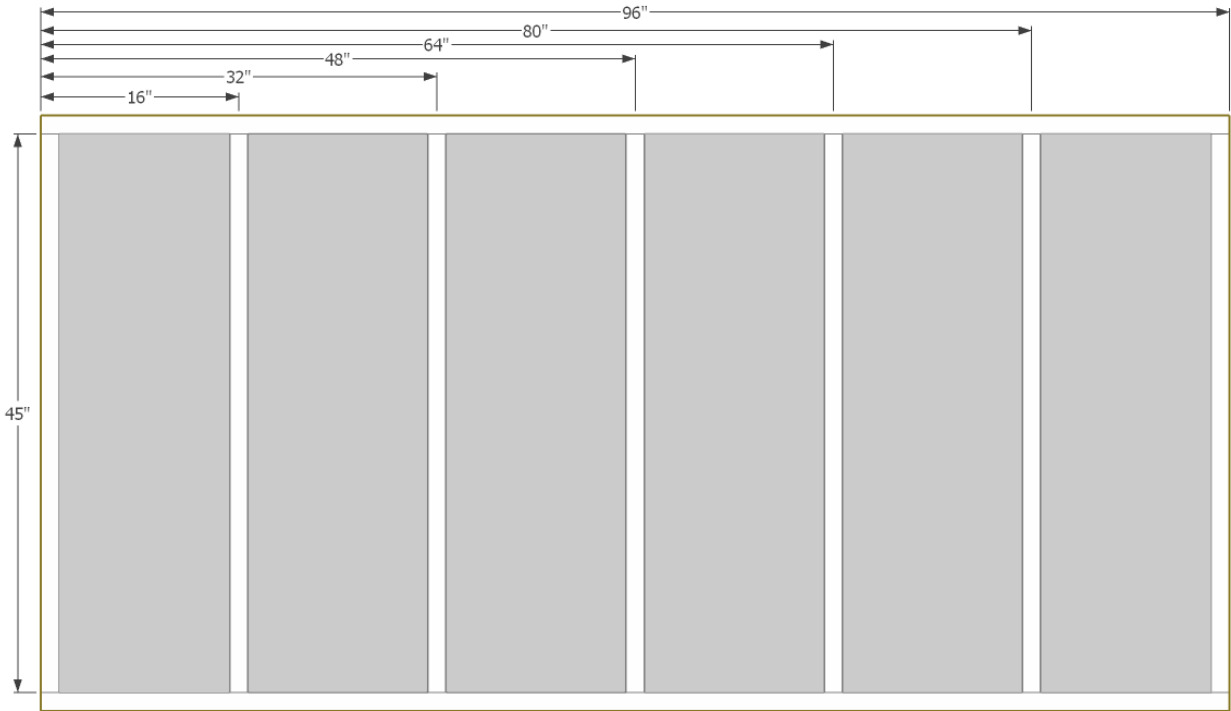


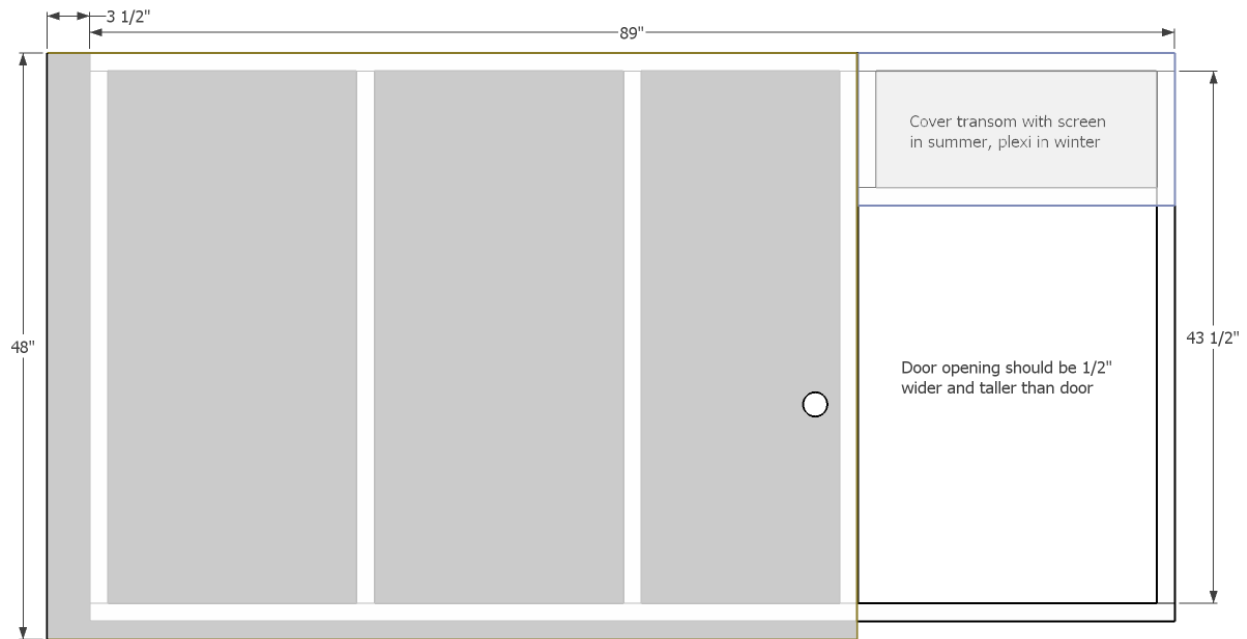
# Living Unit Floor/Porch



## Notes

This is a rectangular frame with 2x4 joists at 16" centers, topped with 5/8" plywood. Use 16D nails to frame this and attach the 2x4's with two nails at each connection. Sheath the frame in 5/8" (19/32") plywood on one side. Use small nails for this such as 8D, 6D, or 4D nails. The porch should be painted, since it will be exposed to the elements.

# Front Panel

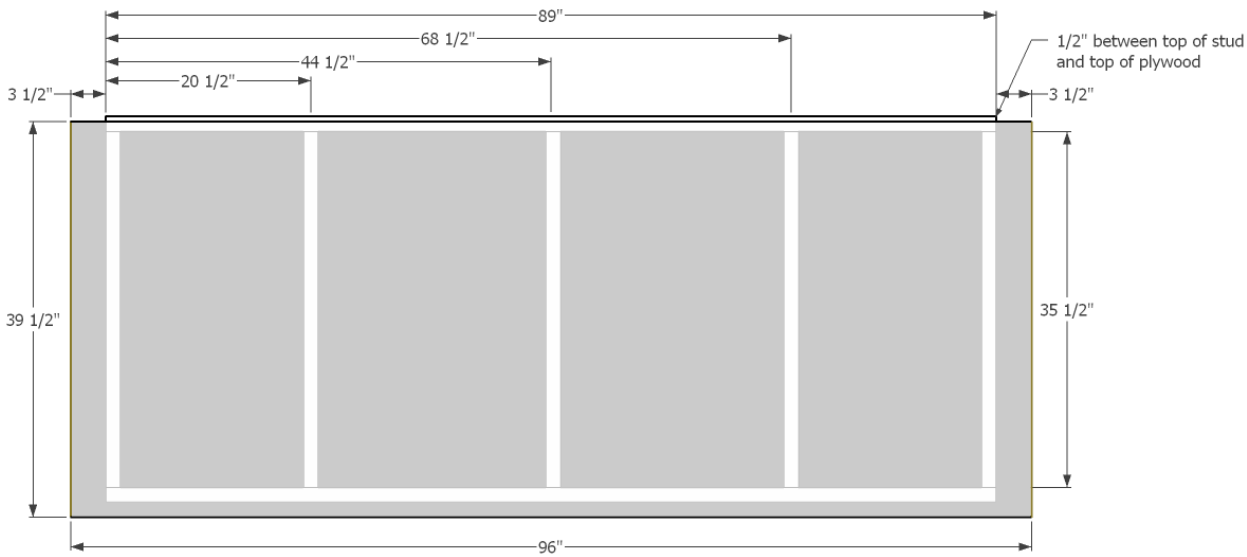


## Notes

The front panel, like the back panel, has the plywood overlapping the frame by 3.5" on the side that will cover the stud of the side panels. For the sake of neatness, you may wish to have a 5" strip for the opposite side (where the door hangs) to cover the join.

The location of the interior studs depends upon the width and position of the door. Build the box, first - the outermost studs - and then carefully measure the rough opening for the door, making it 1/2" wider than the door itself. Then allocate the inner studs as appropriate. The plywood sheath goes right up to the doorway, covering the inner door stud. The door will hang from the outer stud, and swing outwards.

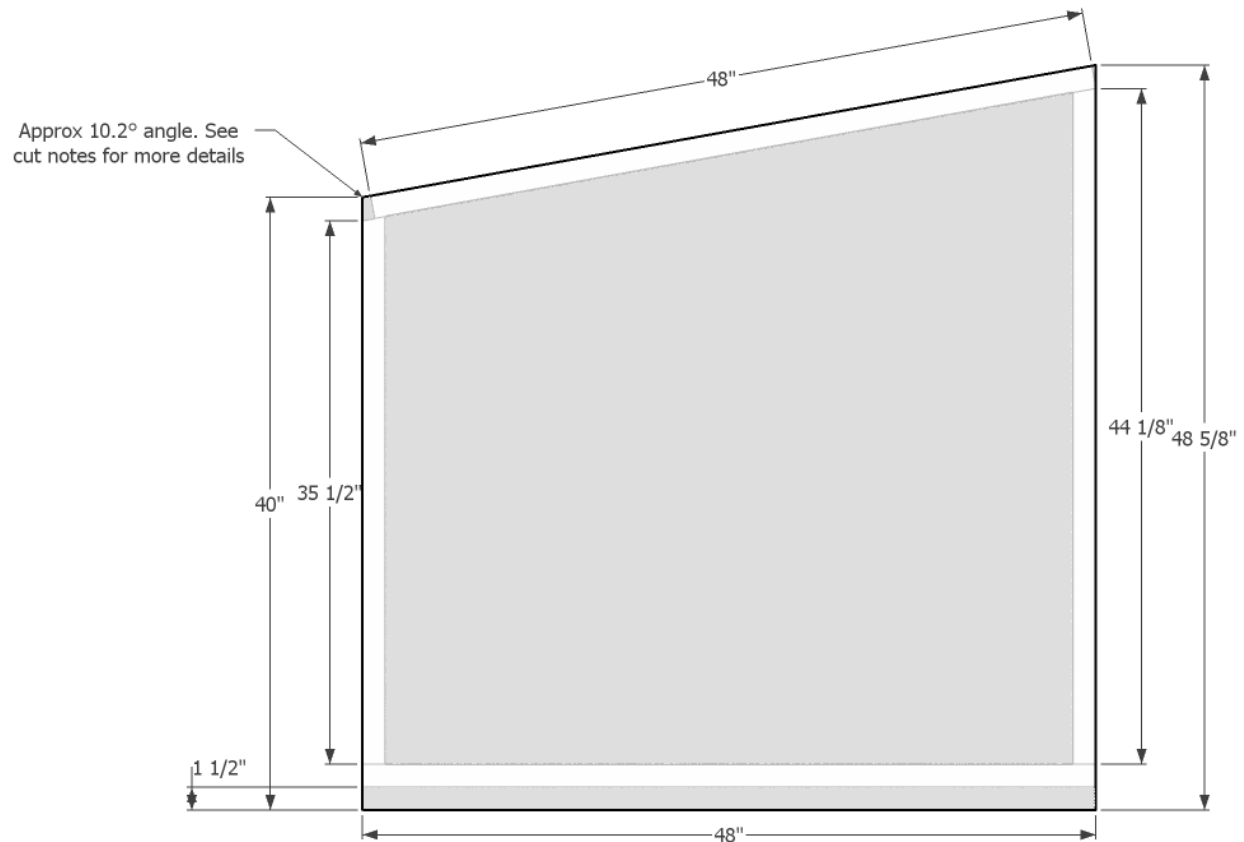
# Back Panel



## Notes

The back panel is a little awkward to build, because the plywood sheathing does not actually align to any edges of the stud. The top edge is nudged downwards 1/2", to avoid any rafters from resting on the sheathing instead of on the stud; the 3.5" overlap on both sides is to cover the side panels' studs; and the bottom, like the bottoms of the other walls, drops 1 1/2" inches below the bottom plate to cover the floor's plywood.

# Side Panels



## Notes

Side panels are a little tricky. If approached carefully, they can be consistently built with little effort. Please review [the side panel cut guide](#) for notes on making the angle cuts.

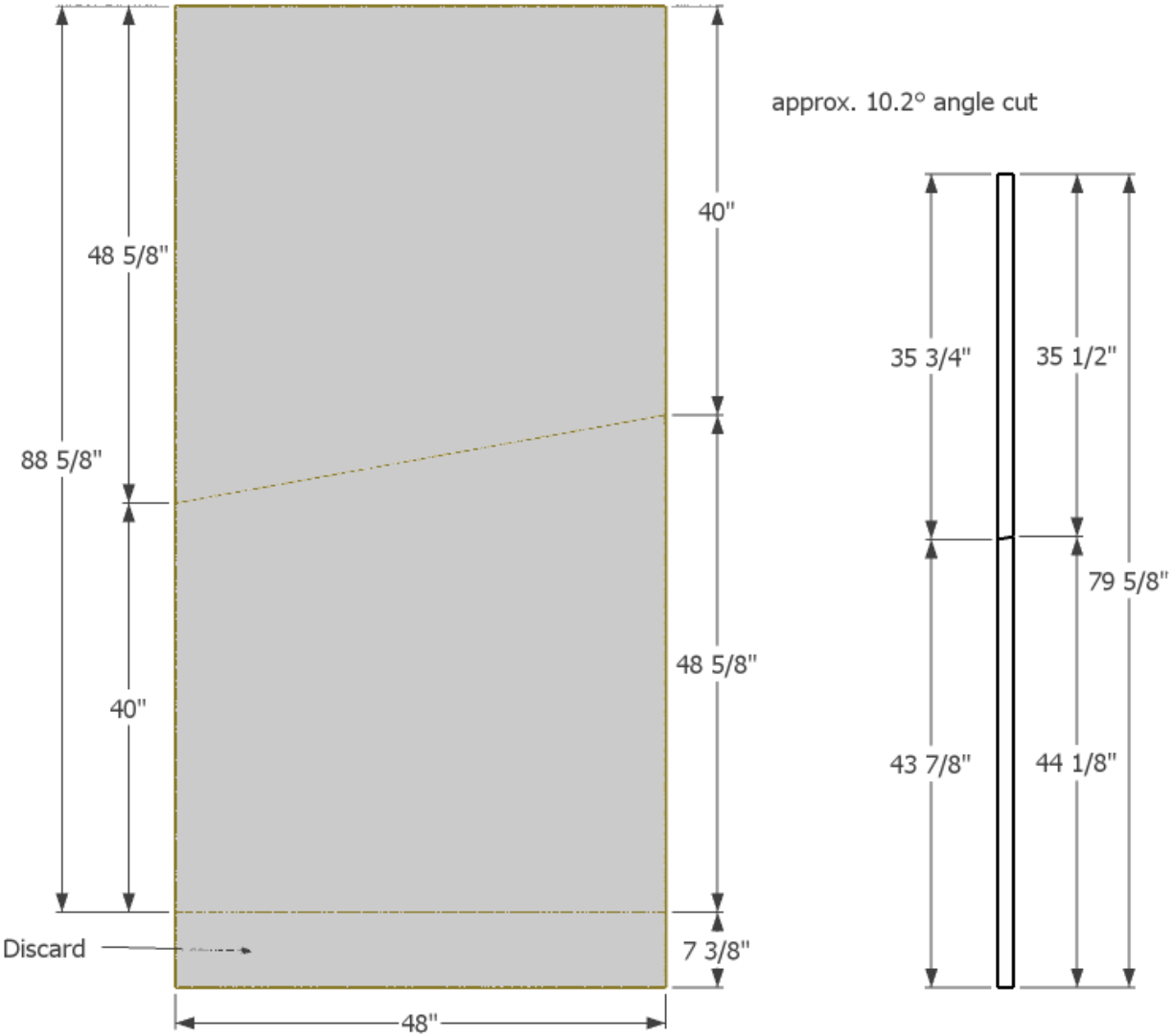
To build a side panel:

- Frame a "U" shape using the bottom 48" stud, and the two angle-cut verticals. Make sure that the slope of the verticals are pointing the same way, with the shorter vertical's slope pointing towards the longer vertical. **Do not attach the top stud yet!**
- Attach the "U" to the sheathing
- The bottom of the sheathing extends 1 1/2" past the bottom of the bottom plate. Since a 2x4 stud is actually 1 1/2" thick, you can use the top stud as a convenient spacer. First connect the bottom stud to the sheathing, then the sides.
- Bring the top stud to the top of the "U"; it won't quite cover both of the vertical studs completely, but that's all right. Nail the top to the verticals, and then nail the sheathing to the top stud.
- Repeat for the opposite panel, **making sure that it's a mirror image of the first panel!**

There are two common mistakes made with side panels:

- The top edge of the sheathing doesn't quite align with the top edge of the stud. This is usually OK, as long as the discrepancy isn't over 1/4". 1/2" is probably OK, but any further is problematic.
- You've built two identical panels - "two left feet". You'll have to take one apart and rebuild. Good thing there are only four studs!

# Side Panel Cut Guide

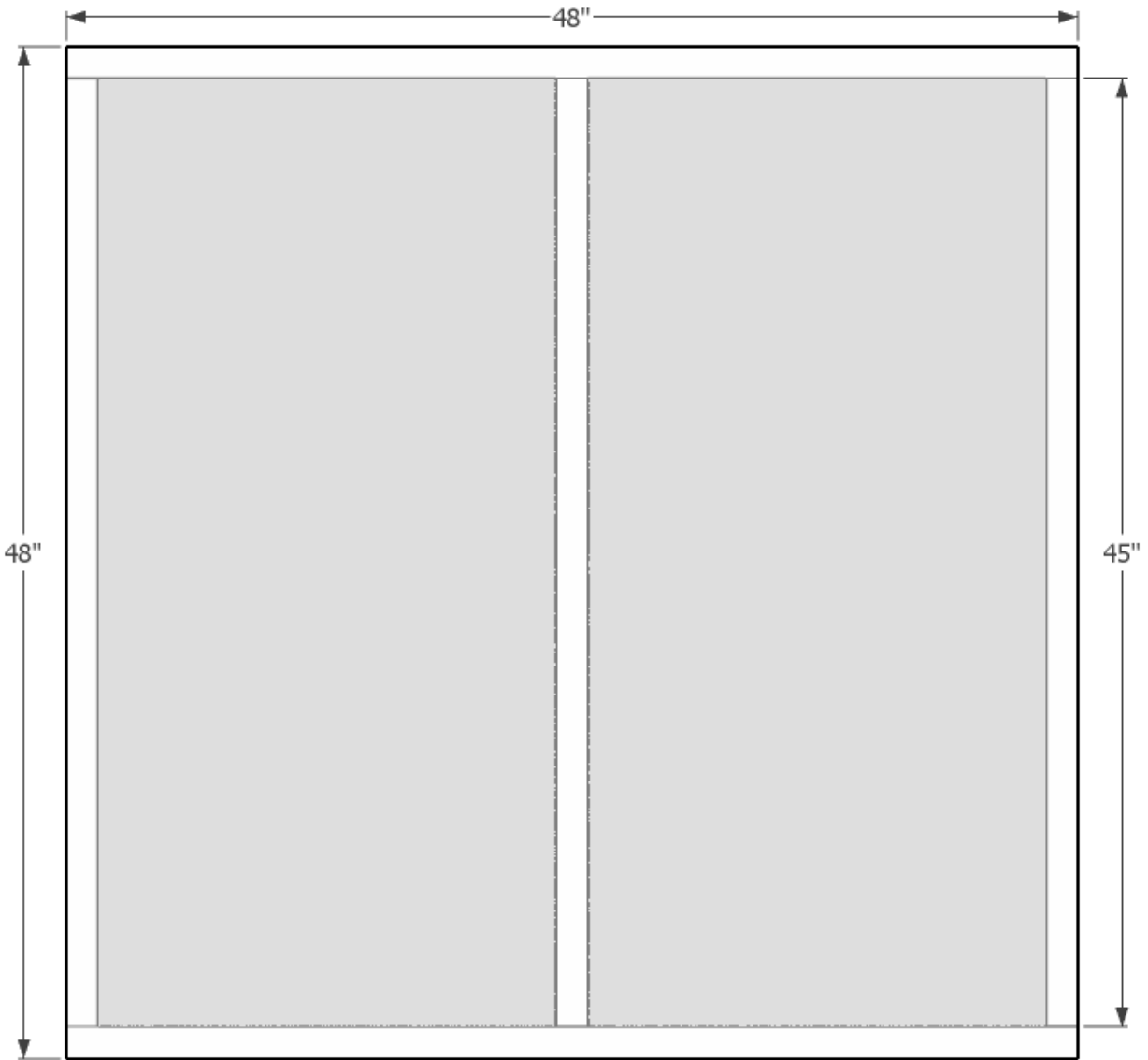


## Notes

The slope of the roofline is around 10.2 degrees off of normal, or a rise/run of about 1/6. It's important to get the angles right when cutting the plywood and stud for the side panels. Keep in mind that you can get two pieces for each successful angle cut. Also keep in mind that you're going to be cutting the stud across the narrow side, not the broad side. A miter saw is very useful for making the stud cuts.

# Storage Unit Floor

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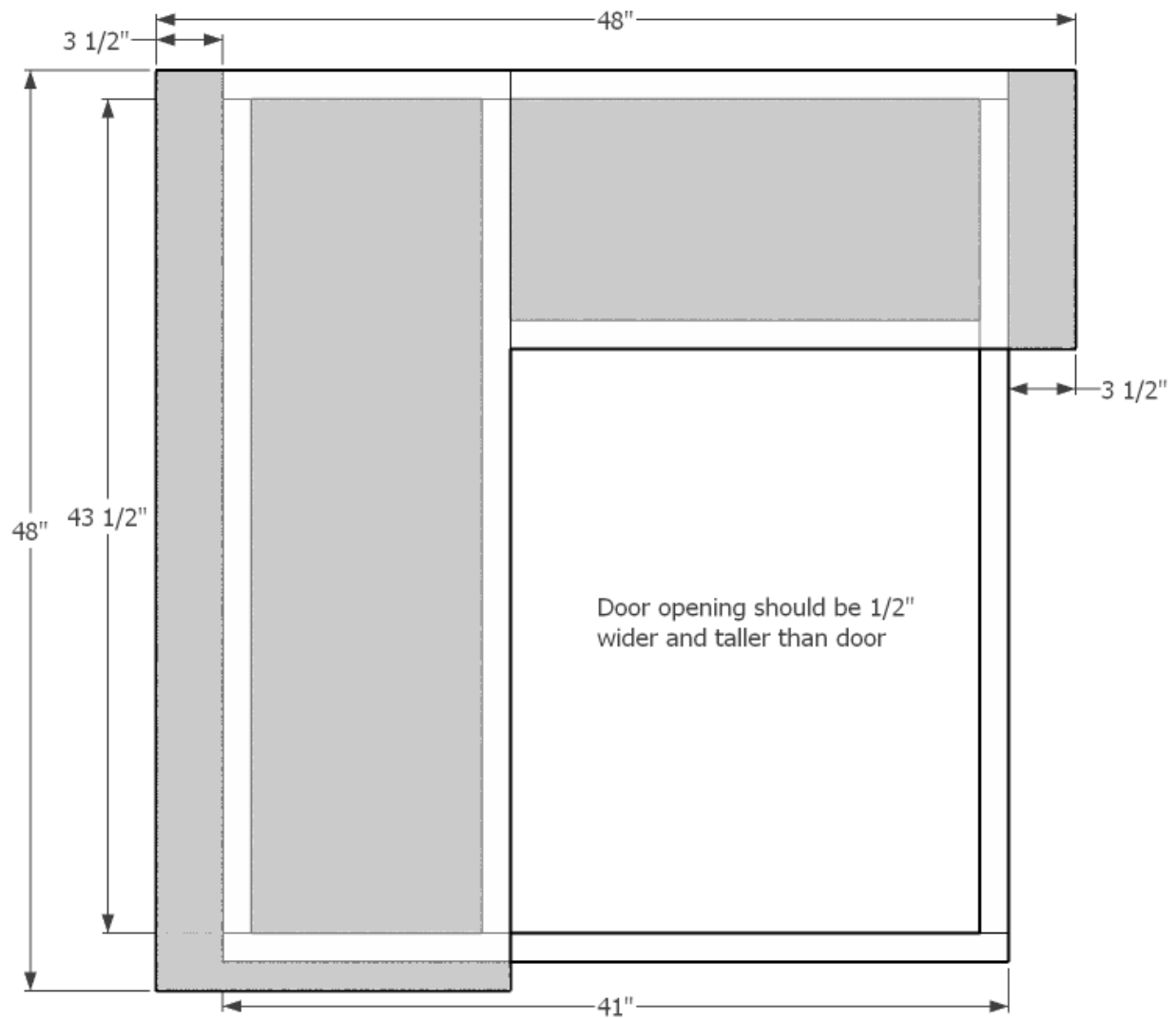


## Notes

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A square frame, with one center joist, sheathed on one side with 5/8" plywood. Use 16D nails for the framing and 8D, 6D, or 4D nails for the sheathing.

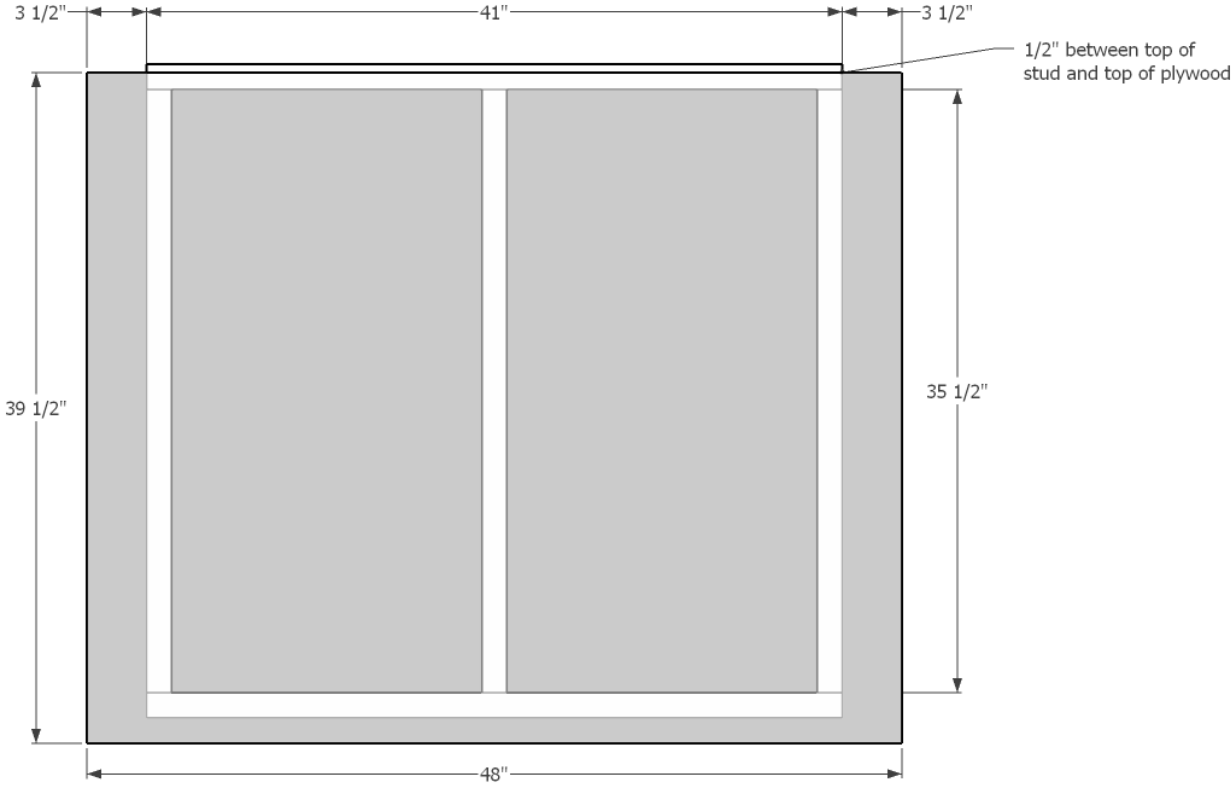
# Storage Unit Front Panel



## Notes

Like the living unit front panel, the location of the interior vertical stud depends on the size of the door opening. Since people don't need to lock this unit from the inside, there's no need to drill a hole through the panel to let a chain through; instead, install a hasp.

# Storage Unit Back Panel



## Notes

Like in the living unit back wall, the sheathing does not actually align to any edges of the stud. Take care when measuring and squaring the panel.