



# Assembly Book

*revised May 8, 2018*



the Cambridge II      10' x 16'

**Manufactured by Reynolds Building Systems, Inc.**

205 Arlington Drive      Greenville, PA 16125

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## IMPORTANT INFORMATION ABOUT YOUR SHED KIT

Thank you for purchasing our Cambridge shed kit. **If you received two books, use the one with the latest revision date.**

See back page for the breakdown of material that is included in our kit. Our component kit does not include the shingles, giving you a choice of color and quality. The breakdown of the material you need to supply is listed on the last page.

**IMPORTANT:** Some of the 2x4s needed for wall bracing and tie plates were used to make the shipping pallet. Unpack the material from the pallet, then disassemble the pallet. The bit for the screws is packed in the hardware bag.

Organize all material according to size and shape. This will make parts easier to find when needed. **Do Not** discard any material until your building is complete.

If you have any questions about assembling the kit, call 800-245-1577. If you are calling after normal business hours, call 724-866-HELP (4357) or email to [help@barnkits.com](mailto:help@barnkits.com).

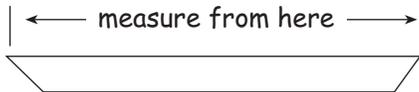
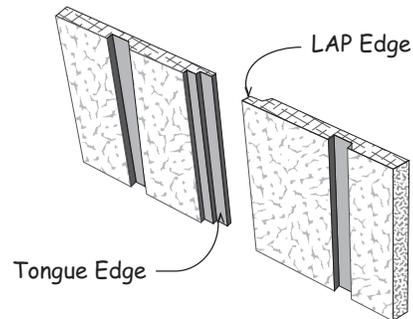
Before you begin construction, be sure to study this assembly manual. Also, obtain a building permit and check all pertinent building code regulations.

Thank you for your purchase.

Bill & Linda Rinella, owners

*The siding is made in 4x8 sheets with grooves cut into the face, the long edge is beveled so that the siding overlays where they butt.*

*To identify which edge we want you to use, we will refer to the edge as either the 'LAP' Edge or the Tongue Edge. Nail siding with 8d galv. nails, spaced 12" apart.*



When measurements are given for a board length, it is from the longest side.

## Tool List

- |  |  |
|--|--|
| <input type="checkbox"/> Hammer & Phillips Screwdriver | <input type="checkbox"/> Power Drill/Screwdriver |
| <input type="checkbox"/> Framing Square & Level        | <input type="checkbox"/> Measuring Tape          |
| <input type="checkbox"/> Hand Saw                      | <input type="checkbox"/> 2-6' Step Ladders       |

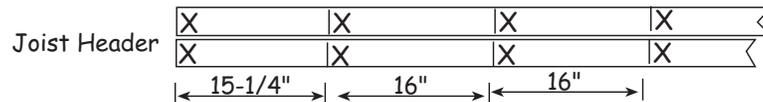
**Always wear safety glasses when cutting or nailing!**

## Construction Details for Deluxe Floor System

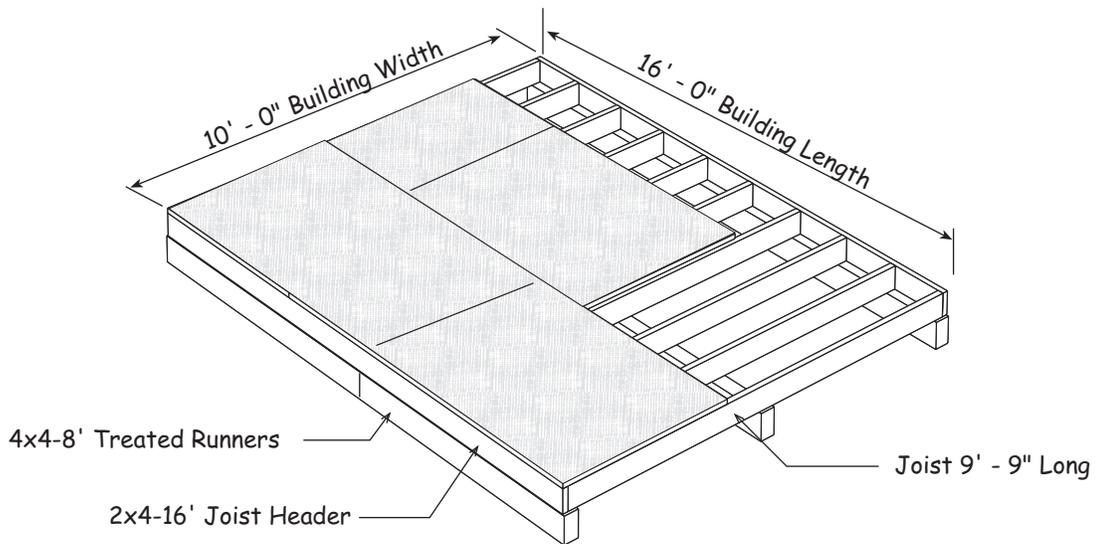
*Deluxe floors include 4x4 runners, standard floors do not*

Check local building codes in your area, the construction may have to change. For a concrete slab, install sill sealer as a moisture barrier between the concrete and the wall plates. Foam sill sealer can be purchased at home centers in rolls 3-1/2" or wider.

1. Treated lumber is not cut to exact length. Cut (2) two 2x4-16' joist headers to 16'-0". Layout for 16" on center joist spacing. 'X' marks where floor joist will be placed.



2. Cut 2x4-10' floor joist to 9'-9". Treated lumber may be thicker than 1-1/2". Take this into account when cutting the length of floor joists. Shorten joist measurements if necessary to obtain 12'-0" building width.



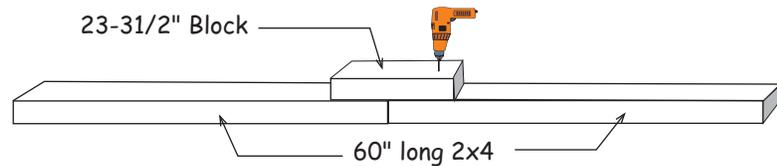
It is important that the floor be level and square. Before nailing the flooring, measure the floor diagonally (corner to corner). Then measure the opposite corners. These measurements will be the same if the floor is square.

Material Description	10' x 16' shed
2x4 Joist Headers	2 pcs. 16'
2x4 Floor Joist	13 pcs. 10'
4x4 Treated Runners	6 pcs. 8'
Flooring 5/8" or 3/4"	5 pcs. 4x8
Screw Floor Nails	2 lb. 8d
Galv. Box Nails	1 lb. 16d

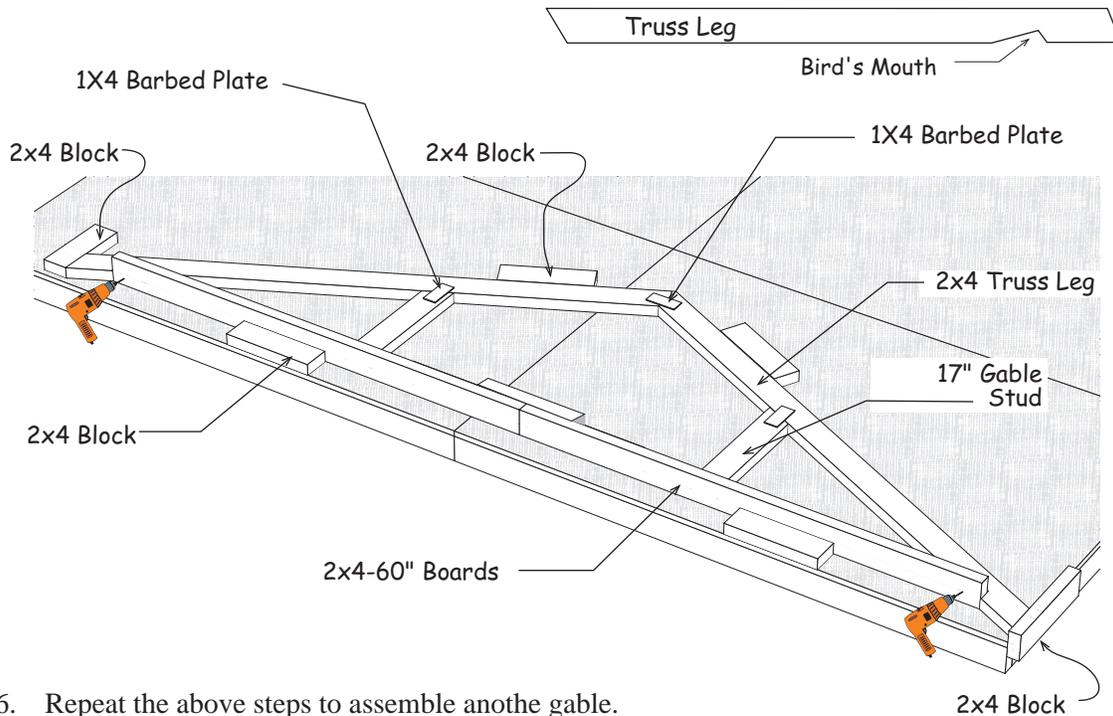
## Step 1 Assemble Front & Rear Gables

**Building Tip:** To aid in the assembly of the trusses, temporarily screw 2x4 blocks to the floor. There are short 2x4s, *that may have an angle on one end*, supplied in the kit for this purpose. This will trap the truss parts and insure that all the trusses will be assembled the same. Use the 2-1/2" deck screws packed in the kit.

1. Butt (2) two 60" long 2x4s together and secure by screwing a 23-1/2" long 2x4 across the top where they butt together. Use (4) four 2-1/2" deck screws.



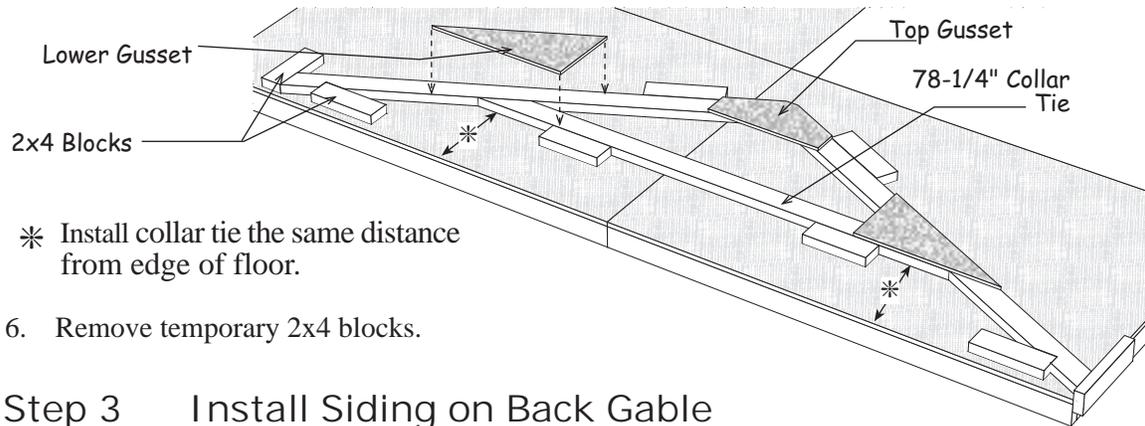
2. Repeat to assemble another gable plate
3. Place (2) two 72-3/8" long truss legs (with bird's mouth) and a gable plate assembled above as shown below. Temporarily screw 2x4 blocks, *to the floor*, to hold the 2x4 members in place. These blocks are 8"-12" long and may have an angle cut.
4. Secure the tops together with a 1x4 metal barbed plate.
5. Install (2) two 2x4x17" gable studs. Nail through the bottom plate into the 2x4 studs. Use (2) two 10 sinkers on each board. Secure the top using 1x4 metal barbed plates. Screw gable plate ends to truss legs. Use (1) one 2-1/2" deck screw.



6. Repeat the above steps to assemble another gable.

## Step 2 Assemble Roof Trusses

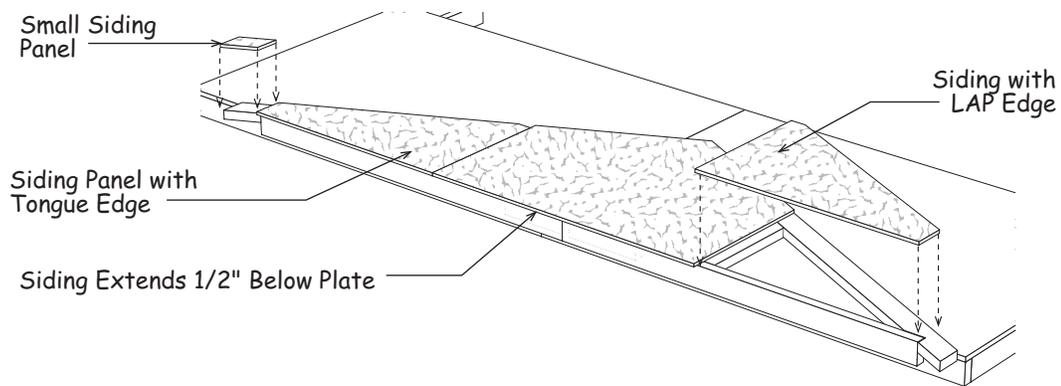
1. Place (2) two truss legs together as shown below. Screw 2x4 blocks, *into the floor*, in the bird's mouth to hold the truss members in place.
2. Secure the tops together with a wood gusset. Apply wood glue between the 2x4 boards and the gusset. Nail the gusset to the 2x4s with 6d common nails. Use 14 nails per gusset. Angle nail slightly so nails do not protrude through the 2x4 boards.
3. Install a 2x4x78-1/4" collar tie between the 2x4 boards. Add 2x4 blocks to hold the collar tie in place. Install 12"x24" gussets on both ends. Glue and nail using 14 nails per gusset.
4. Turn this truss over and apply wood gussets to the opposite side.
5. Repeat above steps to assemble (6) six more trusses.



6. Remove temporary 2x4 blocks.

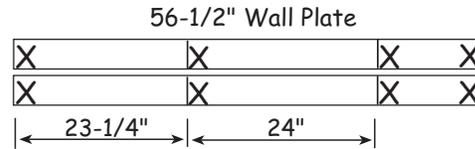
## Step 3 Install Siding on Back Gable

Select (1) one gable assembled in **Step 1** and place on floor so the metal plates are facing floor. Locate (5) five gable siding with angle cuts. Position the siding so it extends 1/2" below the bottom plate. The top edge of the siding may be below the top of the gable frame. The trim, installed later, will cover and hide this. If necessary, shift the siding so the small siding panels on the ends are flush with the 2x4s. Install gable siding using 6d galv. nails across the top of the frame where the 2x4s are flat. Use 8d galv. nails along the bottom gable plate. The front gable will be sided later.

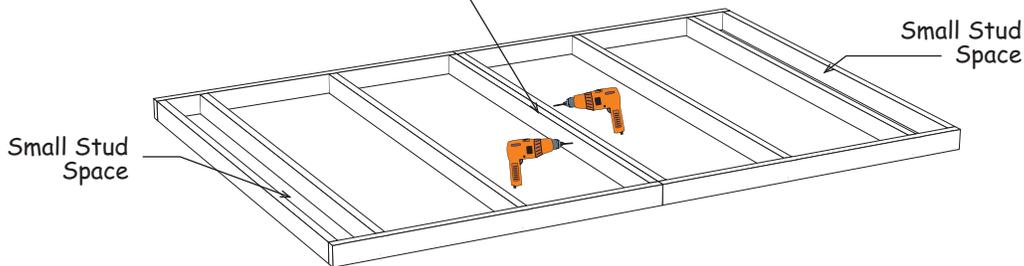


## Step 4 Assemble Back Wall

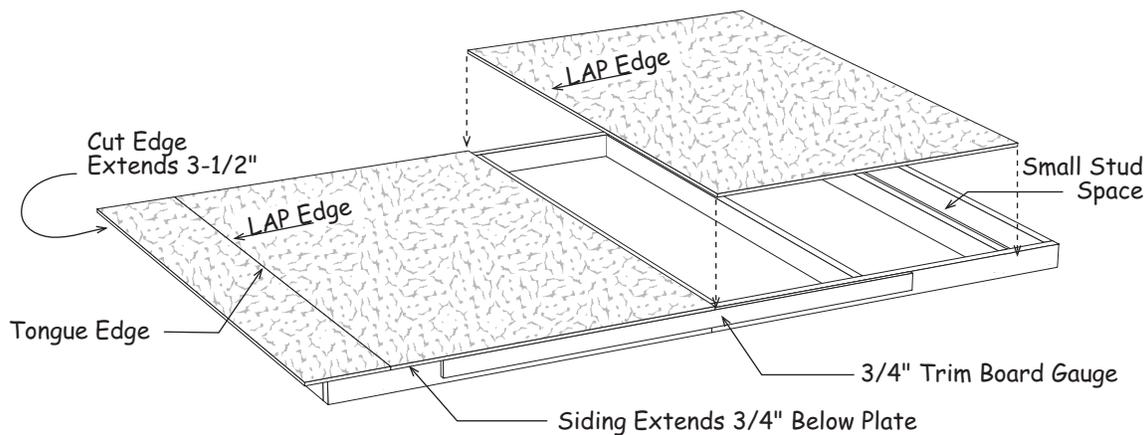
1. Position (2) two 56-1/2" long 2x4s together and indicate with 'X' marks where the wall studs will be located.



2. Install (4) four 72" long wall studs between the wall plates, over the 'X' marks. Use 10d sinkers, two nails on the end of each 2x4.
3. Repeat above steps to assemble another wall frame.
4. Screw both wall frames together with the small stud space towards the ends of the wall. Use (4) four 2-1/2" deck screws on each side of the double studs. For additional strength nail (4) four 10d sinkers each side.

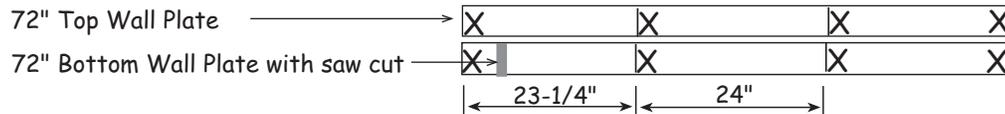


5. Square wall frame before installing siding. *Measure diagonally (corner to corner). The measurements will be the same when the wall is square.* Starting on left side of frame install a 12" wide siding panel with tongue edge. The siding should extend 3-1/2" beyond the end of the wall and extend 3/4" below the bottom plate. Use 8d galv. nails spaced 12" apart. Tip: use a 1x4 trim board as a gauge.
6. Install (2) two full width siding panels.
7. Install a 12-1/2" wide siding panel to finish. It will extend 3-1/2" past the end of the wall.

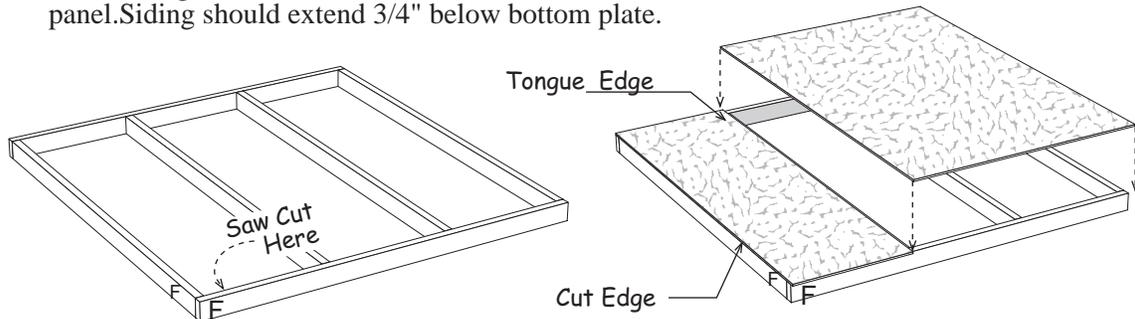


## Step 5A Assemble 6' Long Sidewall Panels

1. Position 2x4-72" boards together (**one 2x4 has a saw cut**) and indicate with 'X' marks, where the wall studs will be located.

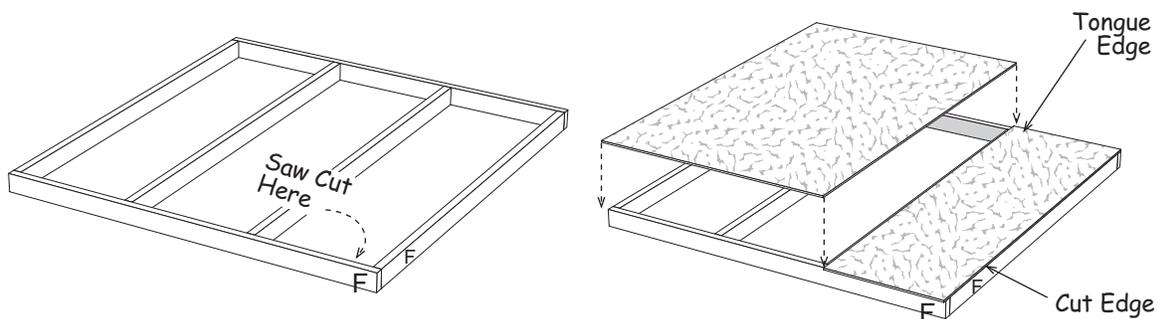


2. Assemble a wall frame using a bottom plate, with a saw cut, and a 72" long top plate. Install 72" long wall studs between the wall plates. Mark the end of the wall with saw cut with the letter 'F'. Use 10d sinkers. Two nails per stud.
3. Repeat to assemble another wall frame.
4. Square (1) one wall frame. Select a 24" wide siding panel with the 'Tongue' edge. Install with cut edge flush with the end of the wall frame marked 'F'. Next, install a full width panel. Siding should extend 3/4" below bottom plate.



-  When the sidewalls are erected the saw cut in the 2x4 bottom plate needs to be located at the front of the building. This will allow the doors to open properly when installed in a later step. Follow the instructions below carefully.

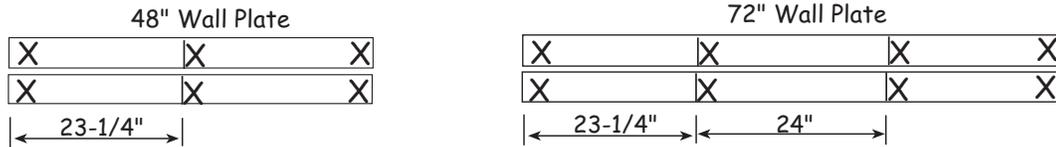
5. Select 2nd wall frame and turn over so 'F' is on right as shown below. Square frame.



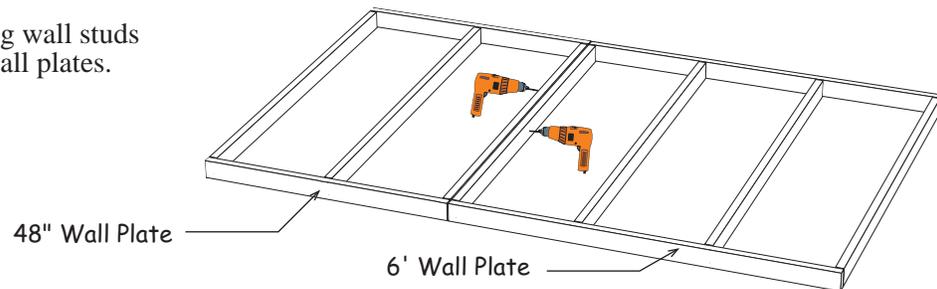
6. Square the wall frame. Select a 24" wide siding with the 'Tongue' edge. Install the cut edge flush the end of the wall frame.

## Step 5B Assemble 10' Long Sidewall Panels

1. Position (2) two 2x4-48" boards and (2) two 2x4-72" boards together and indicate with 'X' marks, where the wall studs will be located.



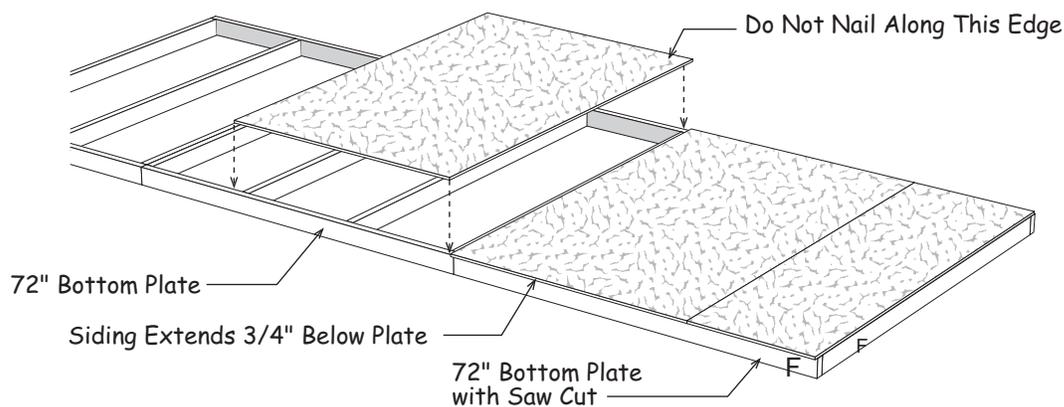
2. Install 72" long wall studs between the wall plates.



3. Screw both wall frames together. For additional strength add 10d sinkers.
4. Repeat above steps to assemble another 10' sidewall frame.

## Step 6 Assemble The Left Sidewall

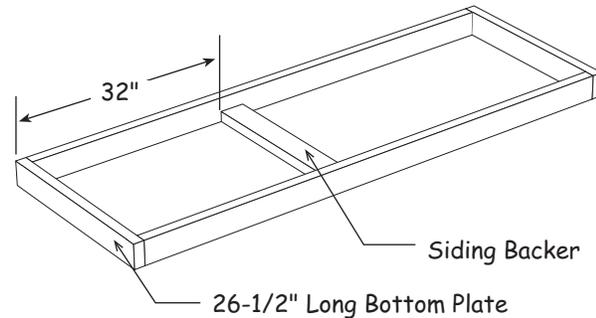
1. Butt a 10' wall frame against a 6' panel assembled in **Step 5**. Install a siding panel but do not nail along the long edge that overlaps the sided frame. You can nail this edge after the wall panels are installed. This will enable you to separate the wall panels making them easier to handle. Install another full width siding panel. Install 24" siding as the last panel.



2. Repeat to apply siding to the other 10' sidewall frame.

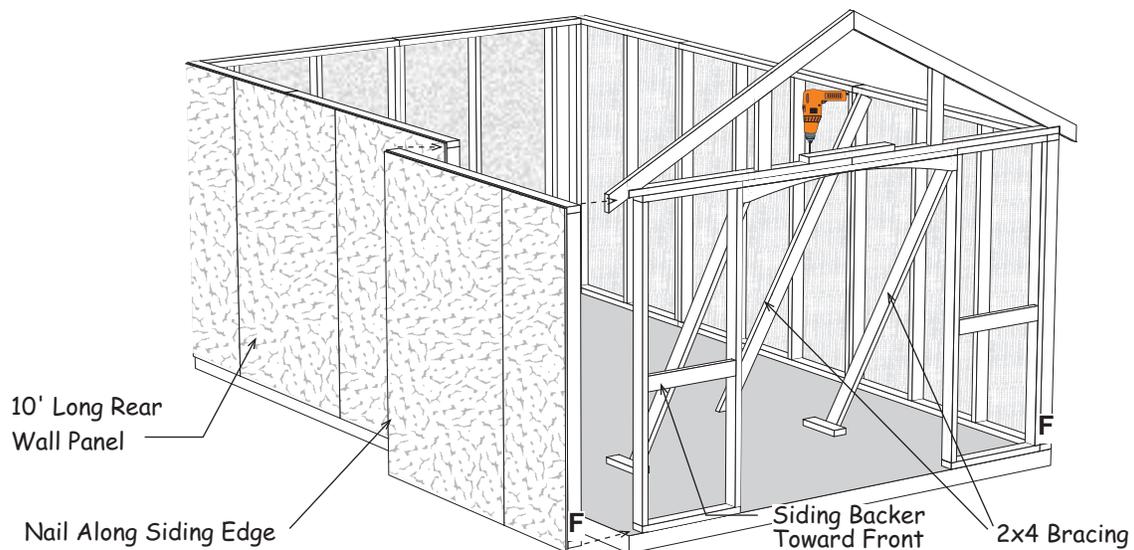
## Step 7 Assemble Front Wall

1. Install (2) two 72" wall studs between 26-1/2" 2x4 plates.
2. Install a 23-1/2" long 2x4 as a siding backer between the wall studs. Measure 32" from outside of bottom 2x4 plate.
3. Repeat to assemble another wall frame.

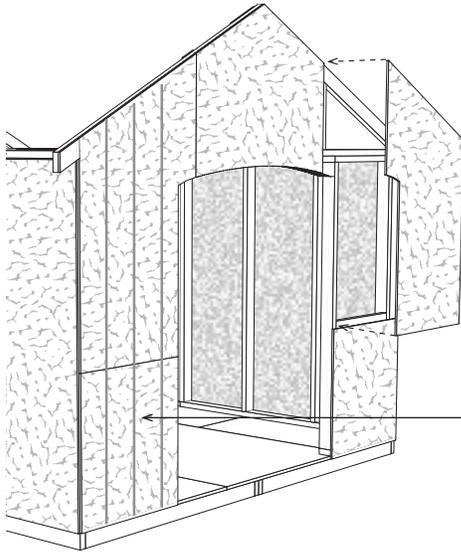


## Step 8 Set Wall Panels

1. Set back wall and (2) two 10' long sidewalls. Secure walls together at the corners. Use (4) four 10d sinkers per corner.
2. Set 6' long sidewalls and secure to 10' long sidewalls. **Important:** The panels must have the letter 'F' at the front of the floor. Use (4) four 10d sinkers on each side of studs. Nail along the siding edge where it overlaps the 10' long sidewall.
3. Install the front wall frames, assembled above, to the sidewalls. Insure the sidng backer board is facing front. Use 10d sinkers. Set the front gable on lower wall frames. Secure with 2-1/2" wood screws.
4. Remove 2x4 boards attached to the shipping pallet. Install 2x4s to brace walls and hold straight.
5. Locate the 60" arch door header and remove packing blocks from the ends. Install the header between the front wall frames and under gable plate. Use 10d sinkers through studs and 2-1/2" wood screws through gable plate. The siding on the bottom projects past the 2x4 frame on one side. This side needs to be towards the outside to receive the upper siding.
6. Nail along the siding edge where it overlaps the 10' long panel.



## Step 8 Set Wall Panels Continued



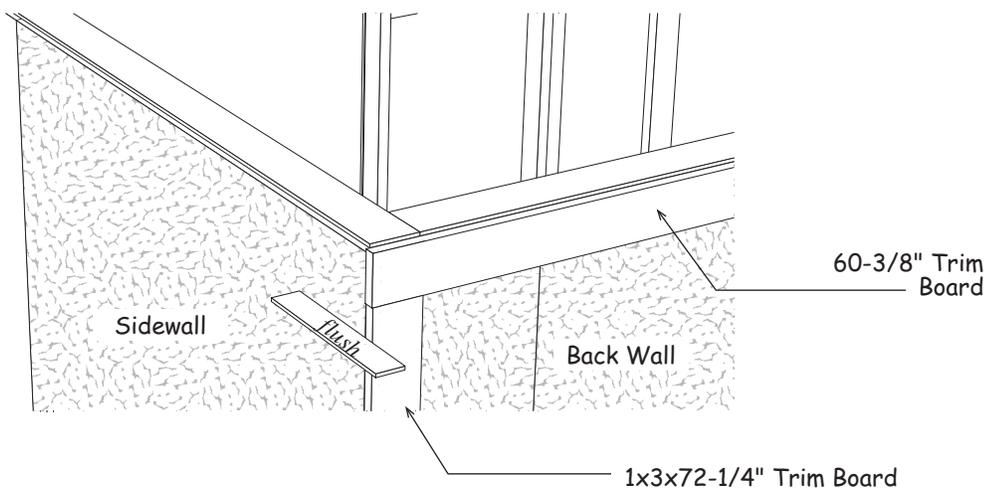
### Install Front Wall Siding

6. Install the front wall siding on the wall frame and gable. Begin with lower panels extending  $\frac{3}{4}$ " below bottom plate. Siding should be flush with door opening

**Before you install the lower panels, select the one that the siding grooves will line up with the upper panel.**

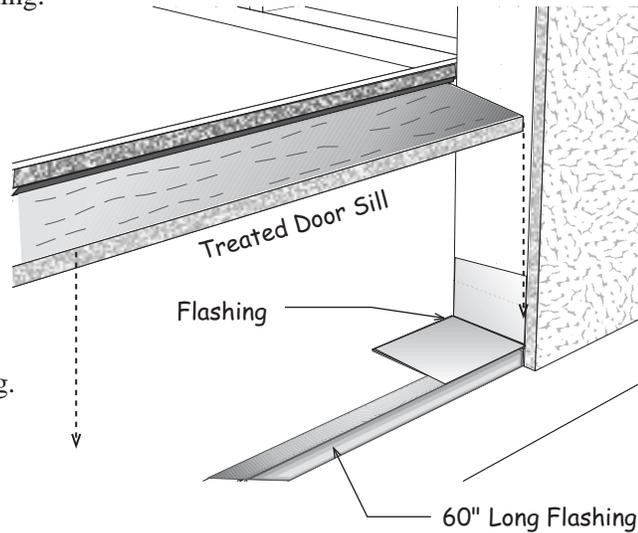
## Step 9 Install Back Wall Trim

1. Install (2) two 60-3/8" long trim boards on the top of the back wall. Install this trim flush with the top of the 2x4 wall plate. Use 8d galv. nails.
2. Install (2) two 1x3x72-1/4" trim boards on the rear wall. Install the trim flush with siding on the sidewalls. Use 8d galv. nails.



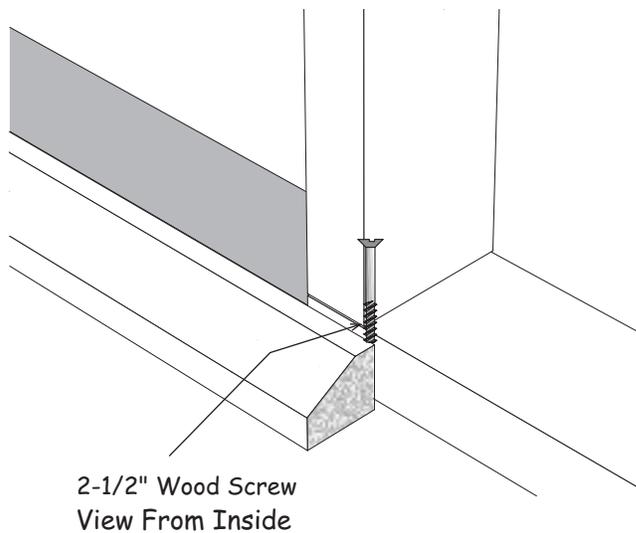
## Step 10 Install Treated Door Sill

1. Protect the edge of the floor by installing 60" long x 3/4" flashing between the door opening.



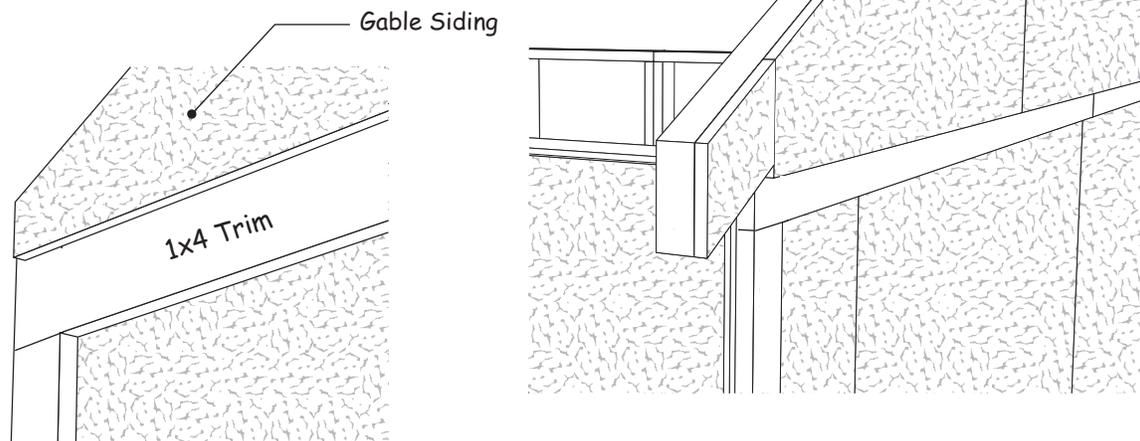
2. Bend a 3-1/2" x 5" metal flashing and install at each corner of the door opening.

3. Install the treated door sill between the door opening. There needs to be a space between the treated sill and the inside wall. To position the sill, insert a 2-1/2" screws between the treated sill and the inside wall. Drill 1/8" holes and screw sill to the floor with 2-1/2" long screws. Remove the screw used as a spacer.

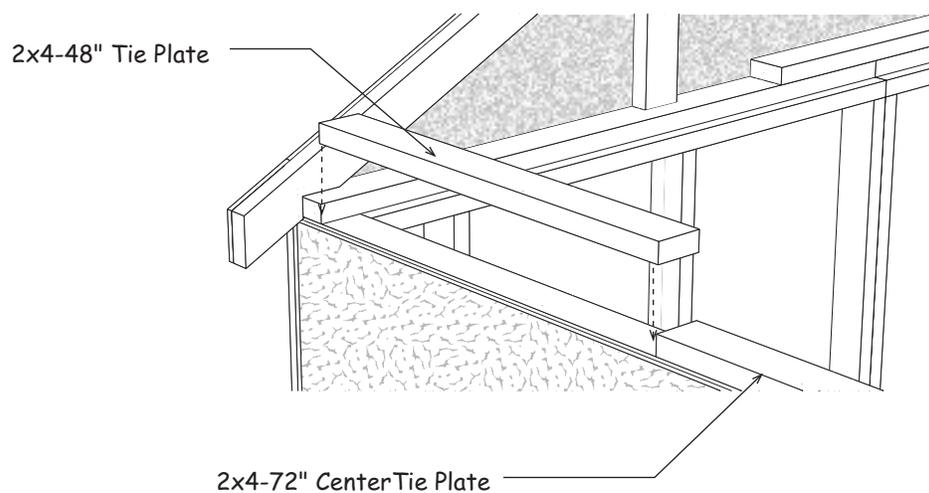


## Step 11 Install Rear Gable & Tie Plates

1. Install rear gable on the rear wall. The siding will extend over the 1x4 trim. **NOT behind the trim!** Nail bottom gable plate to the lower wall with 10d sinkers. Nail bottom edge of siding to the trim with 7d galv. nails.

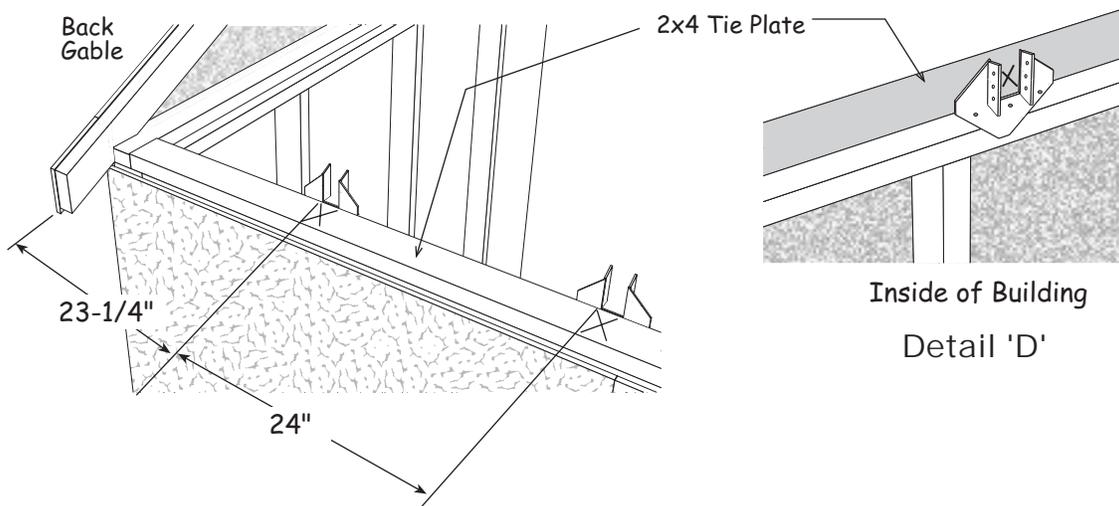


2. Starting at the front of the building, install a 48" long 2x4 as a tie plate, on top of the sidewall panels. Use 10d sinkers.
3. Install (2) two 6' long 2x4 next. Cut the last one to fit.
4. Install 2x4s on the opposite sidewall the same way.

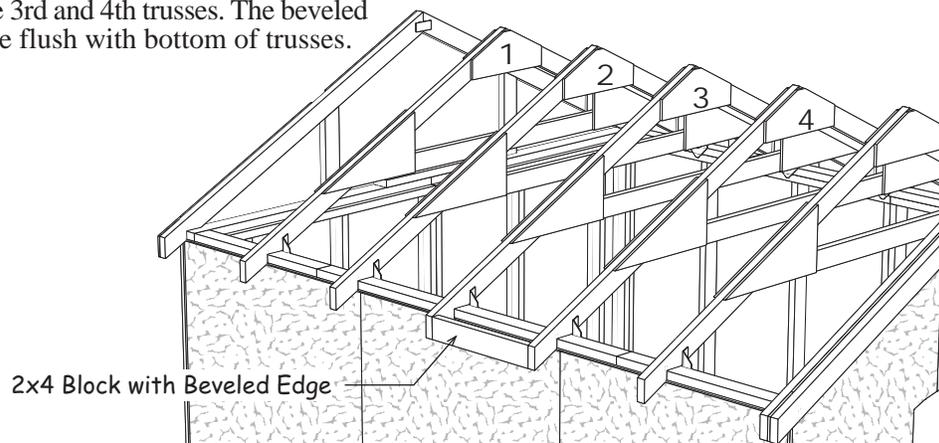


## Step 12 Install Trusses

1. Layout the truss spacing. Start at the back gable. Measure from the outside face of the gable siding when marking the location of the first truss. **Important:** When marking the opposite wall, place the 'X' mark on the same side of the line so your trusses are parallel when they are installed.
2. Using 6d common nails, install metal hangers to the 2x4 tie plate. The opening should line up with the 'X' mark at the bottom of the opening, flush with the 2x4 tie plate. See **Detail 'D'**.

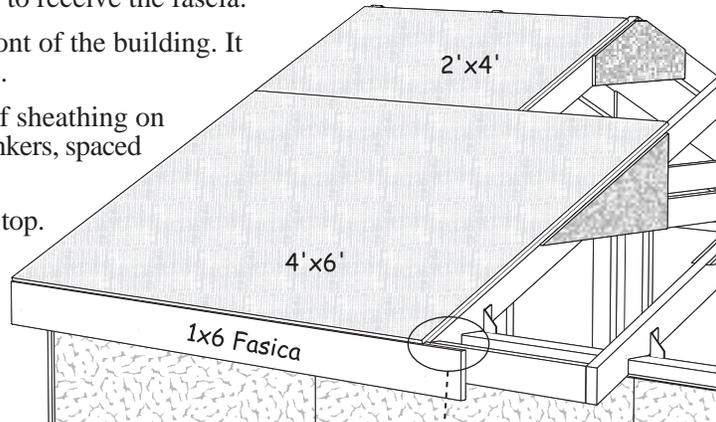


3. Install trusses over the 'X' marks. Nail the metal hanger to the truss using 6d common nails.
4. Install a 22-1/2" long 2x4 with beveled edge between the 3rd and 4th trusses. The beveled edge will be flush with bottom of trusses.

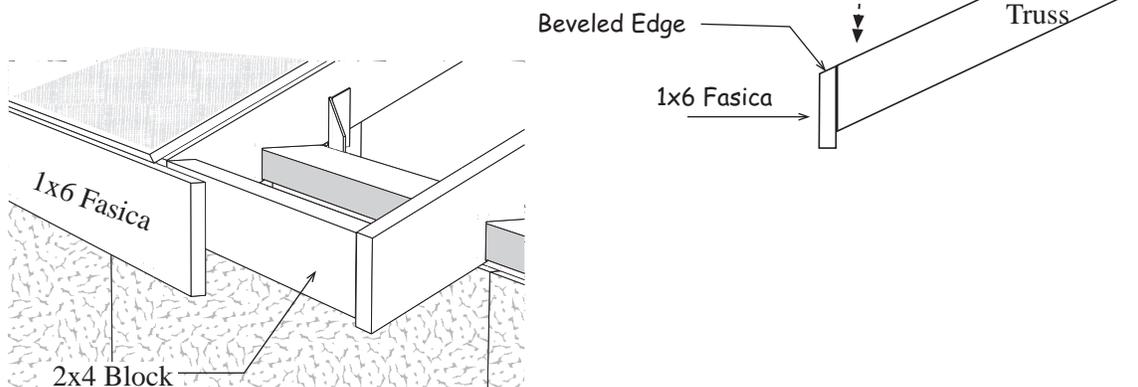


## Step 13 Install Roof Sheathing & 1x6 Fascia

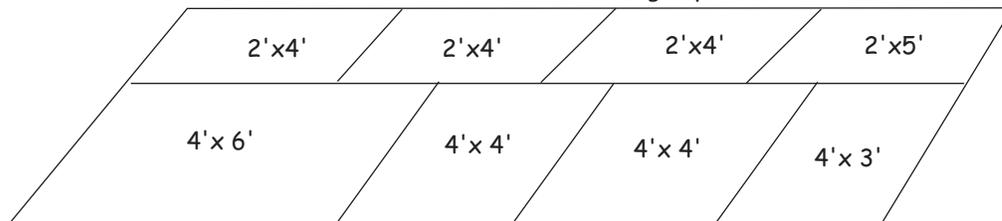
1. Install 1x6x78" fascia boards to the 2x4 trusses, flush with the siding on the rear of the building. Install the fascia so the bottom edge of the roof sheathing will rest on the beveled edge. See detail below. Use 8d galv. nails.
2. Install a 48" long 1x6 fascia in the center of the building. You will need to install additional 2x4 blocks between the trusses to receive the fascia.
3. Install 1x6x78" fascia at the front of the building. It will extend past the front gable.
4. Install a 48" x 72" piece of roof sheathing on the lower back corner. Use 7d sinkers, spaced 12" apart.
5. Install a 24" x 48" roof panel at top.
6. Install other roof panels per the layout below.
7. Repeat on opposite side.



 The upper row of roof sheathing will not reach the peak to allow for ventilation if ridge vent is installed.

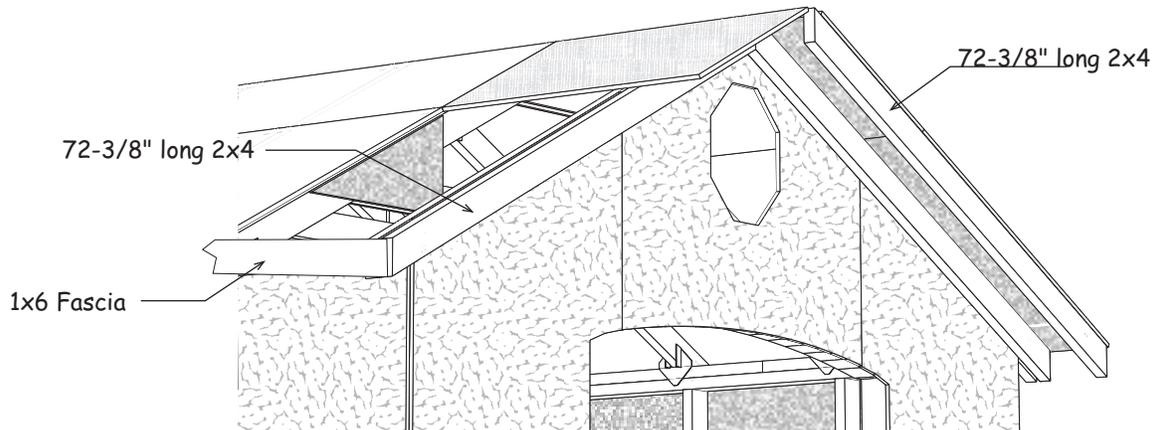


Roof Sheathing Layout



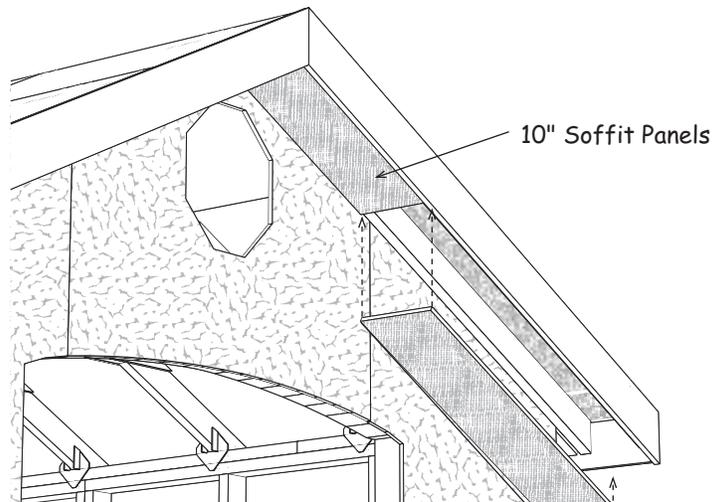
## Step 14 Install Gable Overhang & Trim

1. Install (2) two 72-3/8" long 2x4s on the front wall, under the roof sheathing. Use 10d sinkers.
2. Install two more 2x4s at the front edge of the roof sheathing. While a helper holds the 2x4 against the roof sheathing, screw the roof sheathing to the 2x4 with 1-5/8" long screws.



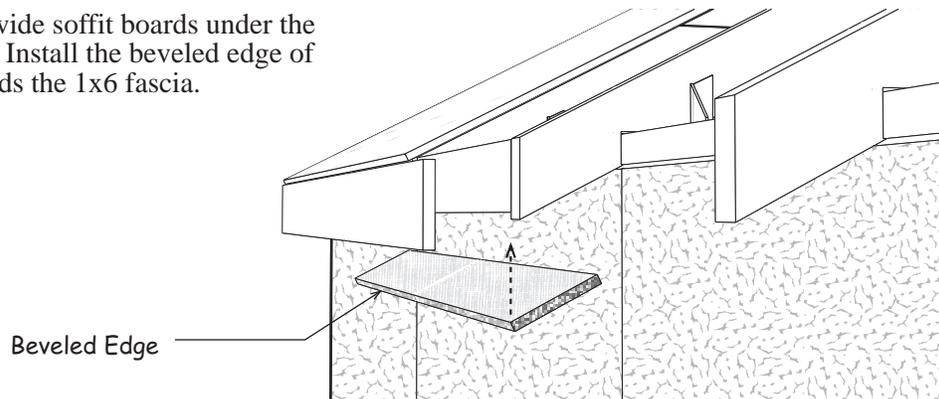
3. Cut the 1x6 fascia flush with the 2x4 gable overhang installed above.
4. Install 1x6 gable trim over the 2x4s. Install trim flush with the top of the roof sheathing.
5. Install 1x6 gable trim at the rear of the building.

6. Locate (4) four 10"x48" soffit panels. Install panels under the overhang. Cut to fit (2) two panels.  
Use 6d galv. nails.



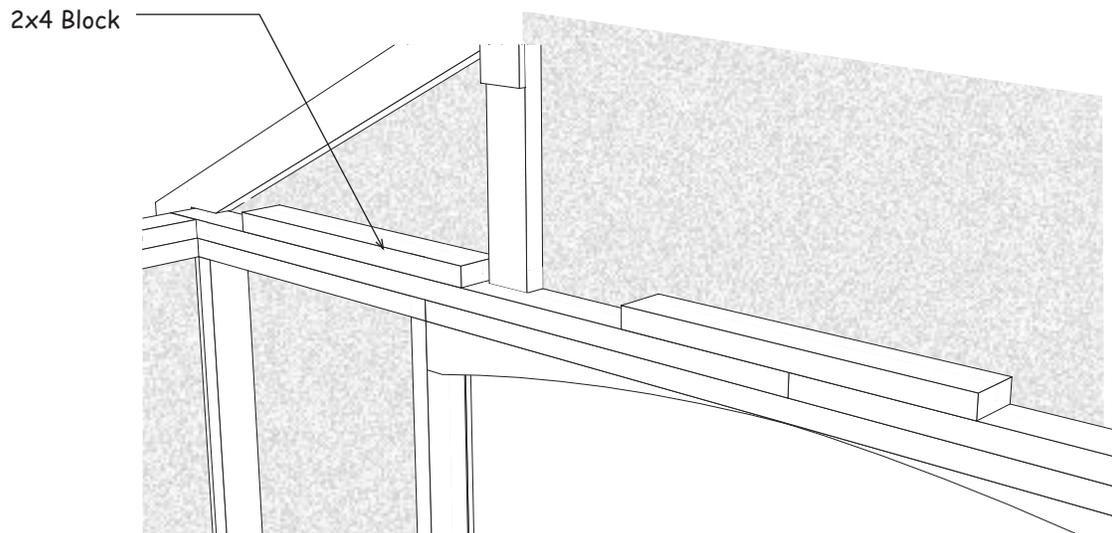
## Step 15 Install Eave Soffit

Install 4-1/2" wide soffit boards under the truss overhang. Install the beveled edge of the soffit towards the 1x6 fascia.



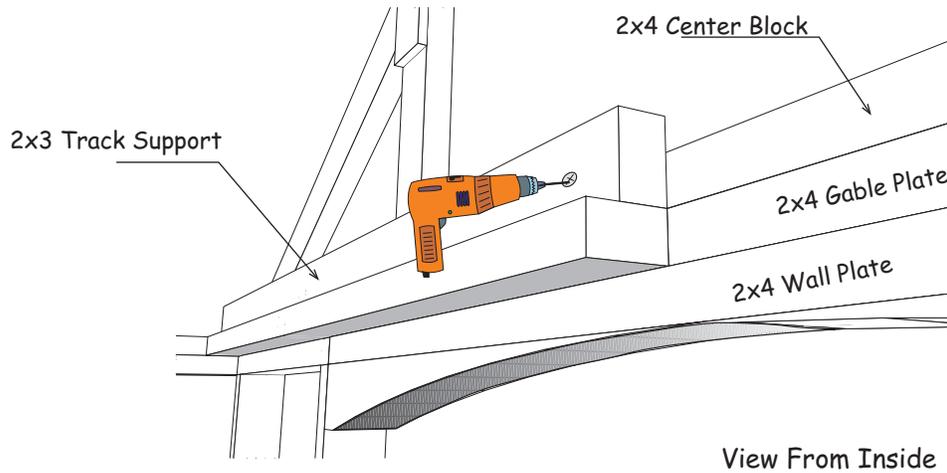
## Step 16 Install 2x4 Blocks on Front Gable

Install a 23-1/2" long 2x4 block on each side of the front gable. This will support the door track assembly. Use 10d sinkers.



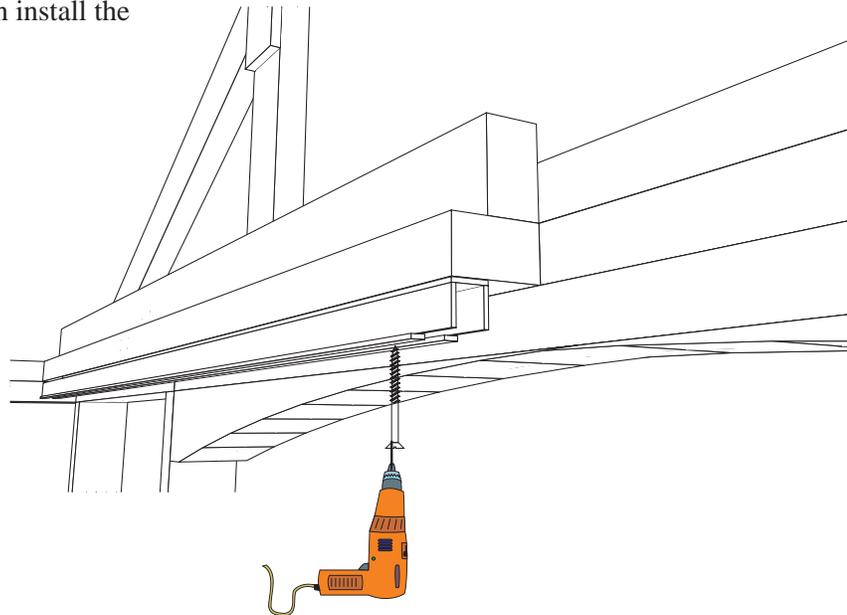
## Step 17 Install Sliding Door Track

1. Install a 56-1/4" long track support assembly. Install the bottom of the 2x3 board at the bottom of the gable plate. Use 2-1/2" screws. The 2x3 boards will butt against the side-wall plates.



2. Install the other track support assembly.
3. Install a section of sliding door track under the track support boards. Install track flush with the face of the track support. Use 1-1/4" screws, with washers, supplied in the kit.

After you install the right door, in **Step 18**, you can install the opposite track.

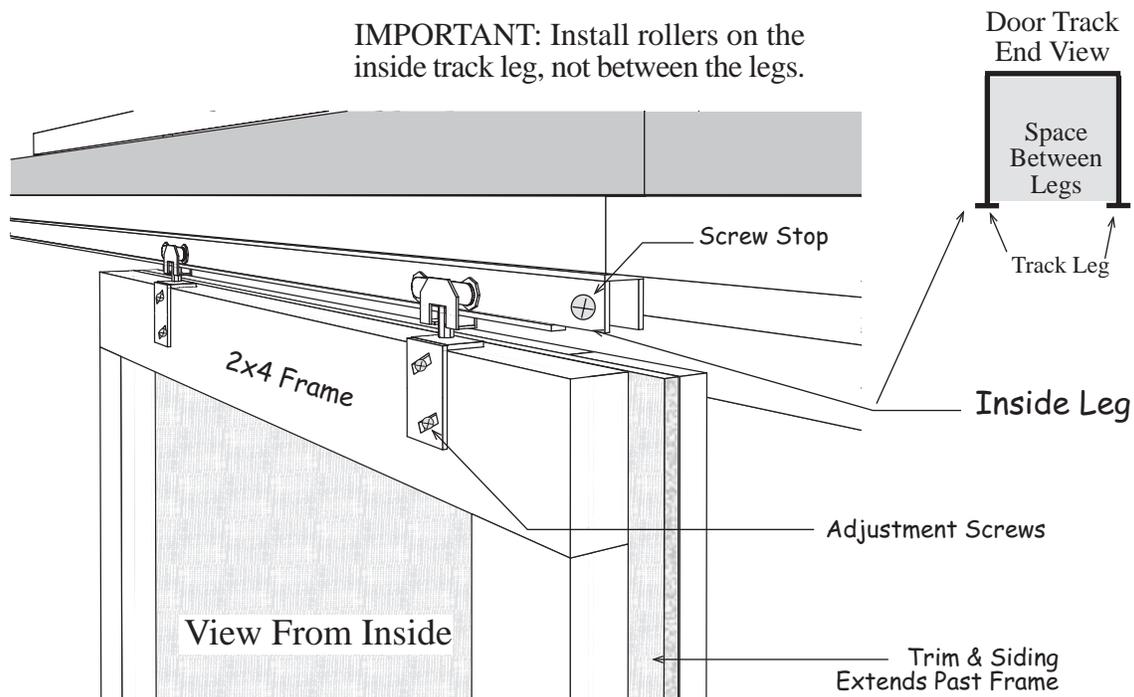


## Step 18 Install Doors

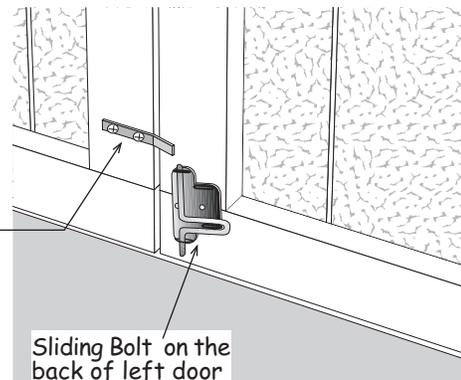
1. Locate the door that will be positioned on the right when facing the outside of the building. This will be the door with the siding and trim board extending past the 2x4 frame, *see detail below*. Hang this door first. Slide the rollers on the track as shown below.

If it is necessary to adjust the door height, loosen two screws that secure the carrier to the door. Adjust door so the aluminum angle, on the bottom of the door, does not rub on the treated threshold. Tighten the two screws.

Tip: Inserting a screw, *shown below*, will prevent the doors from falling through the opening between the track, if the door is opened too far.

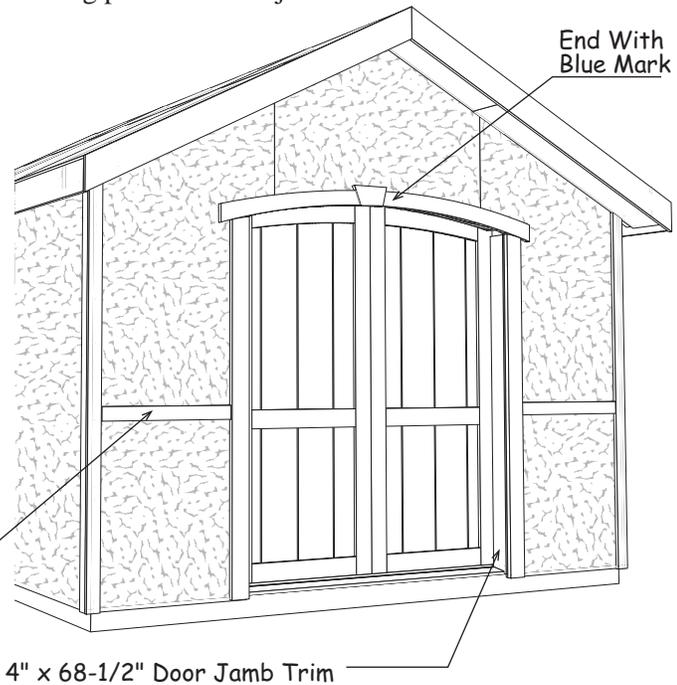


2. Hang the other door. On this door, install a sliding door latch, on the lower back of the door to secure this door in place when closed. You will need to drill a hole in the floor for the round shaft to drop into.
3. Install a metal plate to the bottom of the right door. The angle end will hold the bottom in-line with the left door when closed.
4. Install the door handles and door hasp on the outside of the doors.



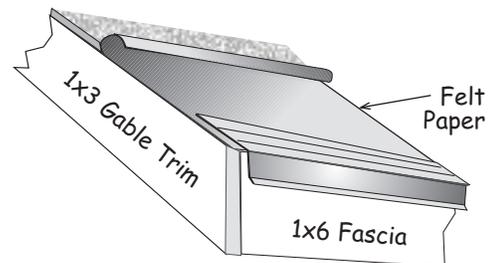
## Step 19 Install Front Trim

1. Install (2) two pieces of 4" x 68-1/2" siding panels as door jamb trim on each side of the door opening.
2. Cut 1x4-75-1/2" long trim boards to length and install at the corners on the sidewall, flush with the siding on the front wall.
3. Install 1x3-76" trim boards, they have an angle cut on one end, on the front corners.
4. Install 1x4 door trim on each side of the door opening and the keystone and curved trim above the door. The ends with the blue mark butts the keystone.
5. Install 1x4-25" trim boards between the corner trim and door trim. Cut to length.



## Step 20 Install Roofing — Not Supplied in Kit

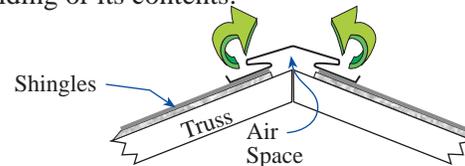
1. Install metal roof edging perimeter of the roof area. If you are not installing shingles at this time, you can purchase felt paper to protect the roof sheathing. Install the felt paper before you install the metal roof edge.



2. Install shingles according to the instructions on the wrapper. If you need more detailed instructions on installing shingles, there are good publications at book stores or newsstands.

**Building Tip:** Install a ridge vent in lieu of shingle caps. Ridge vent provides ideal ventilation, preventing heat or moisture from damaging your building or its contents.

*Optional ridge vent provides ideal ventilation.*



Cambridge 10' x 16' Barn kit

Packing List

05/10/18

Qty.	<i>2x4 Framing</i>		Size
18	Truss Legs w/ bird's mouth		72 3/8"
4	Front Gable Overhang Rafters		72 3/8"
7	Collar Tie		78 1/4"
44	Wall Studs and Plate Material		72 "
4	Gable Plate		60 "
4	Wall Plate Material		56 1/2"
6	Wall Plate Material		48 "
4	Wall Plate Material		26 1/2"
4	Fascia Backers w/ bevel edge		22 1/2"
6	Siding Backers & Gable Block		23 1/2"
4	Gable Studs		17 "
<b>7/16" Roof Sheathing</b>			
2	48" x 72"	6	24' x 48"
4	48" x 48"	2	24' x 60"
2	48" x 36"		
<b>7/16" Wood Gussets</b>			
14	8" x 16"	28	12" x 24"
<b>Primed Exterior Siding</b>			
8	48" x 75-1/4"	2	36" x 62"
4	24" x 75-1/4"	2	30" x 34"
2	12" x 75-1/4"		
1	Full width x 39" for above door opening		
1	Full width x 34" for center rear gable		
2	36" x 20-1/2" Rear gable end panels		
10	4-1/2" x 48" Soffit Panels w/ beveled edge		
4	10" x 48" Soffit Panels for front gable		

Qty.	<i>White Pine Trim</i>		Size
4	1x6	Gable Trim	74 "
4	1x6	Fascia	78 "
2	1x6	Fascia	48 "
2	1x4	Corner Trim	76 "
4	1x4	Corner Trim	75 1/2"
2	1x3	Corner Trim	72 1/4"
2	1x3	Door Trim	70 3/4"
2	1x4	Lower Gable	60 3/8"
2	1x3	Front Trim	26 1/4"
2	Curved Top Door Trim		33 3/4"
<b>Pre-built Components</b>			
2	32" Barn Doors		71 3/4"
1	Arch Door Header		60 "
2	Pre-built Track Support		56 1/4"
1	Treated Door Sill		60 "
<b>Hardware</b>			
3	lb. 10d Sinkers	14	H1-hangers
3	lb. 7d Sinkers	2	Door Handles
4	lb. 8d Galv.	2	Step Flashing
4	lb. 6d Common	1	Sliding Latch
1	lb. 6d Galv.	1	4" Door Latch
		6	Barbed Plates
1	Metal Flashing 60"	12	1-1/2" Screws
3	16 oz. Wood Glue	24	Drywall Screws
2	Sliding Door Track	50	2-1/2" Screws
4	4" x 5-1/2" Gable end pieces		
2	4" x 68-1/2" Door Jamb material		

<b>Material Purchased By Owner</b>			
9	bdl.	Roof Shingles	7 pcs. Roof 'drip' edge