



Best Barns

Assembly Book

revised October 8, 2021



the Elm R

10' x 16'

Manufactured by Reynolds Building Systems, Inc.
205 Arlington Drive - Greenville, PA 16125

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IMPORTANT INFORMATION ABOUT YOUR KIT

Thank you for purchasing our kit. Please read the following information before beginning construction. Always check with your local HOA or building code office for any requirements or restrictions.

Floor: Wood flooring is sold optionally. You may choose to build your own or pour a cement pad.

Always wear safety glasses when cutting or nailing!

Tools Required:	Hand or Circular Saw	Level	Safety Glasses
	Cordless Drill	Measuring Tape	Dust Mask
	Hammer	6'-8' Ladder(s)	Phillips Screwdriver
	Pencil		Framing Square

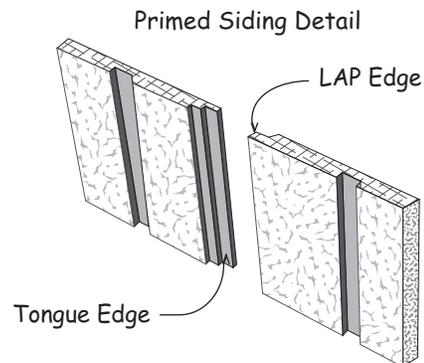
Additional Materials - **Not included in kit:**

Required: Shingles or metal roofing, Drip Edge, Roofing Nails or Screws, Paint

Optional: Caulk, Ridge Vent

Terminology:

Square - Confirm corners are at 90 degrees
Plumb - Confirm walls and trusses are straight vertically
Wall Plate - Top and bottom 2x4s used to frame walls
Tie Plate - 2x4s connecting wall sections together
Header - Spans top of door opening
OSB - Oriented Strand Board
LAP - Edge of siding that overlaps
Tongue - Edge of siding that is overlapped



Organize:

Unpack all items & organize according to size and type. This will make items easier to find when instructed.

Review the parts list on the back page. Should there be missing items or sub-par material contact Best Barns Customer Service.

DO NOT discard any material including the pallet until your project is complete.

Assembly:

Review all instructions before you begin. Please follow steps carefully and in sequence for successful results.

If you have any questions we are happy to assist you. Please contact us at:

800-245-1577 - Mon - Fri 8AM - 5PM EST

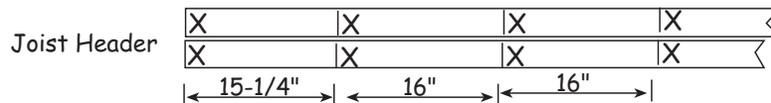
724-866-4357 - After hours and weekends

Email - questions@barnkits.com

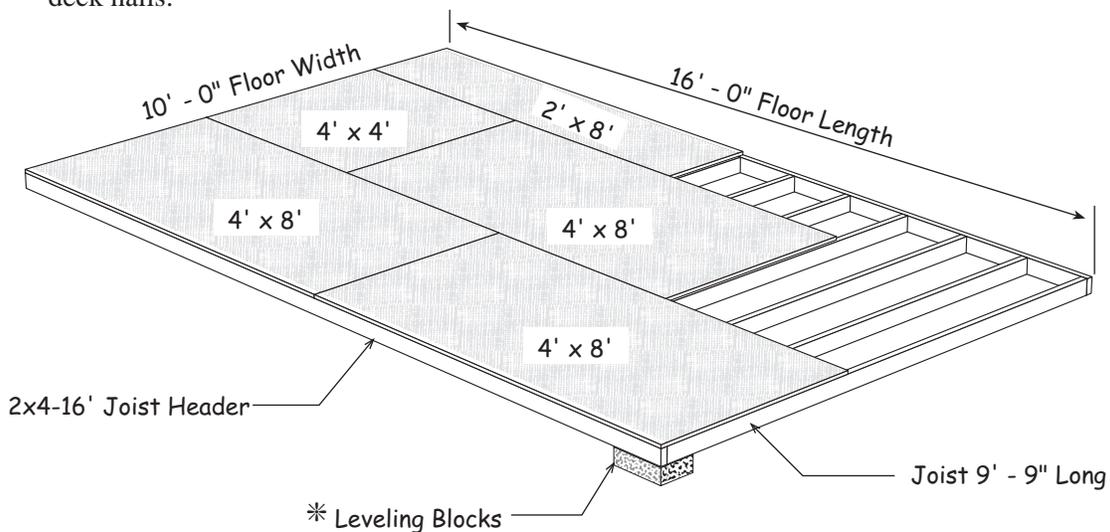
Construction Details for Optional Floor System

Check local building codes, 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. **DO NOT** make floor larger than shown below!

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



2. Cut the 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 10'-0" building width.*
3. Install the floor joist, *over the 'X' marks*, between the 16' long joist headers. Use 16d galv. deck nails.



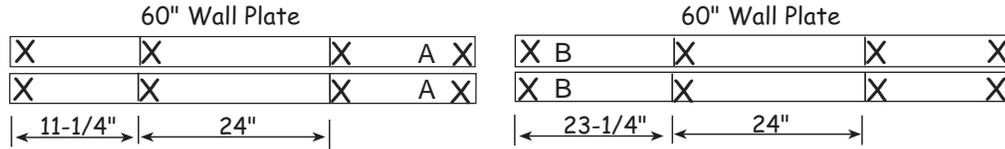
* If necessary use bricks, patio stones or similar material to level or provide additional support to the floor. If your ground has low areas consider adding gravel and or 4x4 treated timbers to rest the floor on. If you use 4x4 timbers you will need (3) three pieces 16' long.

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 (226-1/2").

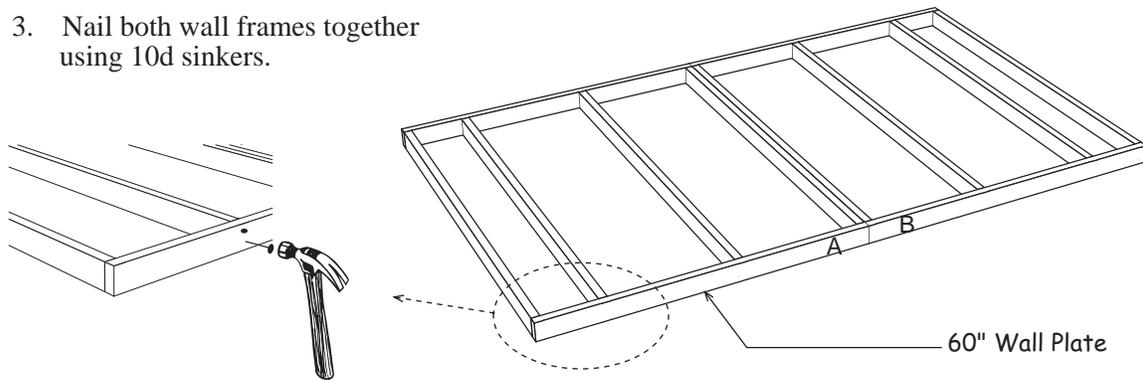
Material Description	10' x 16' Floor
2x4 Treated Headers	2 pcs. 16'
2x4 Treated Floor Joist	13 pcs. 10'
Flooring 5/8" 4x8	5 pcs. 4x8
8d Screw Floor Nails	2 lb. 8d
16d Galv. Box Nails	2 lb. 16d

Step 1 Assemble Back Wall

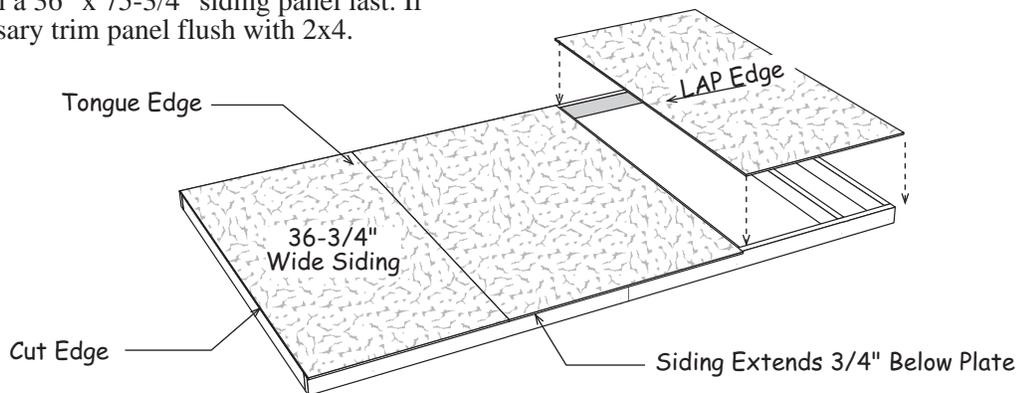
1. Position (4) four 60" boards together and indicate with 'X' marks, where the wall studs will be located. Mark the ends that will butt together with the letters 'A' and 'B'.



2. Install 72" wall studs between the top and bottom plates. Assemble wall frames with 10d sinkers. Use (2) two nails at end of each wall stud.
3. Nail both wall frames together using 10d sinkers.

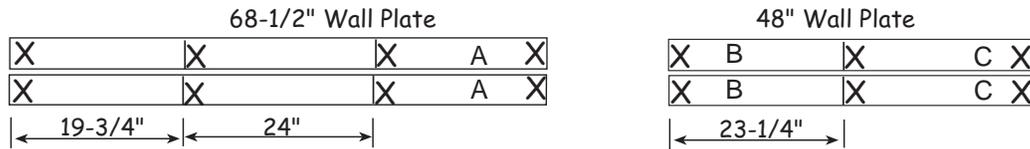


4. Square frame, *measure diagonally (corner to corner)*. The measurement should be 141-1/2".
5. Select a 36-3/4" wide siding panel with a 'tongue' edge. Install this panel with the 'Cut' edge flush with the end of the wall frame. Install siding flush with the 2x4 top plate. Use 6d galv. nails spaced 8" on center.
6. Install a full width x 75-3/4" long siding panel next.
7. Install a 36" x 75-3/4" siding panel last. If necessary trim panel flush with 2x4.

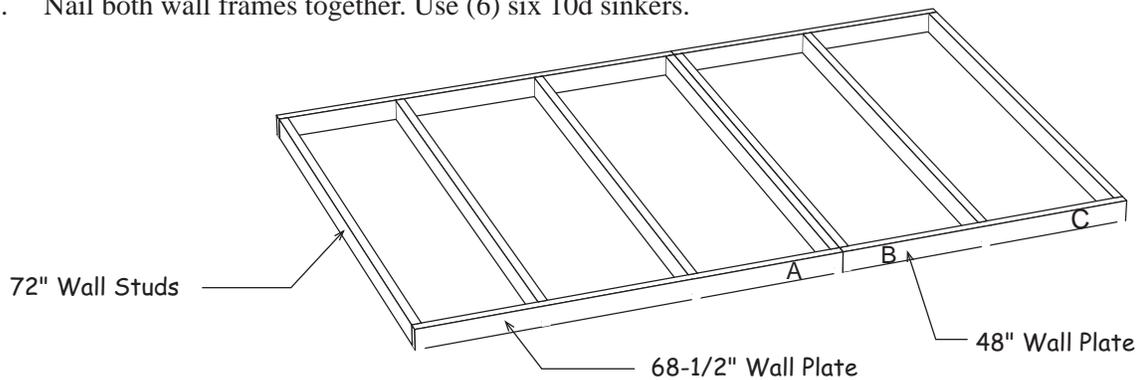


Step 2A Assemble Side Walls

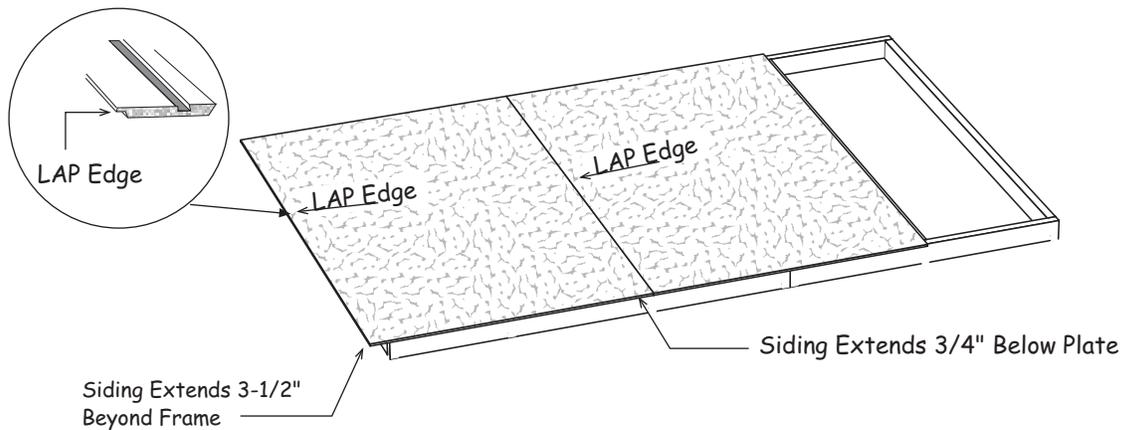
- Position (2) two 68-1/2" and (2) two 48" long 2x4s together and indicate with 'X' marks, where the wall studs will be located. Mark plates with the letters 'A', 'B' and 'C' so frames are correctly oriented.



- Install 72" wall studs between the top and bottom plates. Assemble wall frames with 10d sinkers.
- Nail both wall frames together. Use (6) six 10d sinkers.

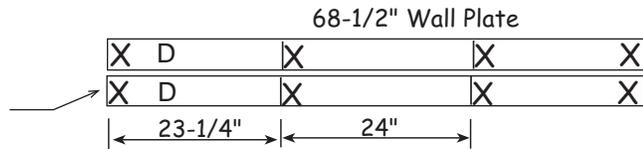


- Square wall frame. The measurement should be 138-1/2". Install (2) two full width siding panels. Install the first siding panel with the 'LAP' edge extending 3-1/2" past the end of the wall frame. Install a full width panel next. The siding should extend 3/4" below the bottom plate and flush with the top plate. The last siding panel will be installed in a later step.
- Repeat steps 1-4 to make another wall panel.

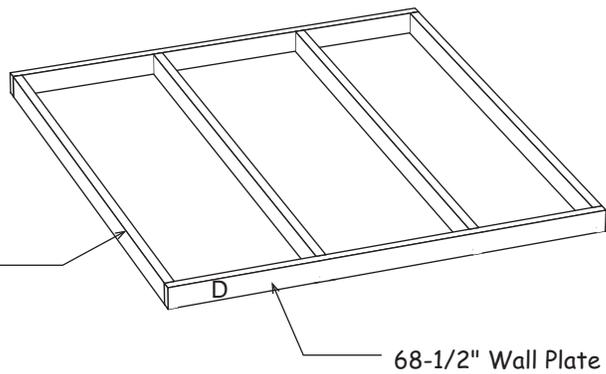


Step 2B Assemble Side Walls Continued

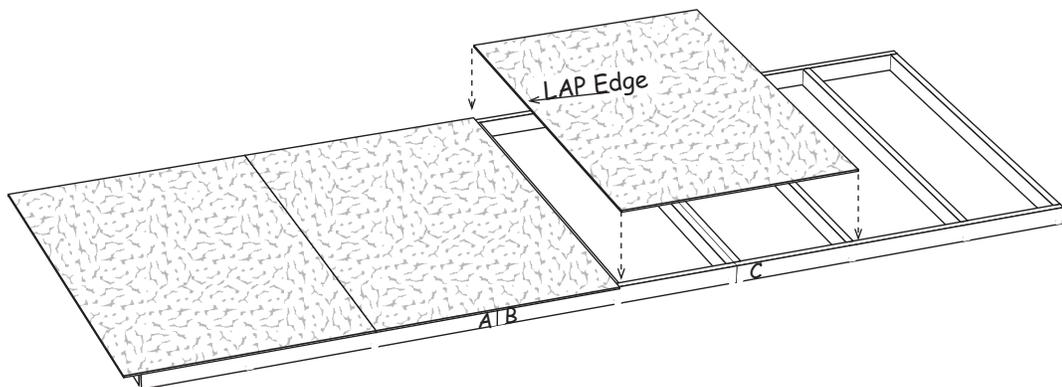
- Position (2) two 68-1/2" long 2x4s together and indicate with 'X' marks, where the wall studs will be located. Mark the left ends with the letter 'D'.



- Install 72" wall studs between the top and bottom plates.



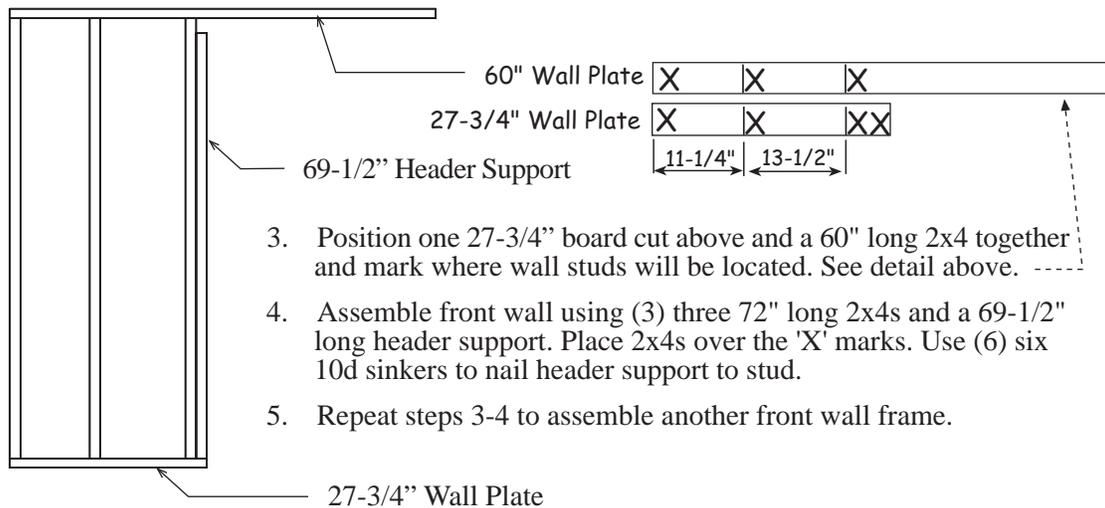
- Select one 116-1/2" wall frame. Nail, with 10d sinkers, the 68-1/2" frame assembled above to the end of the wall panel.
- Install a full width siding panel. The last siding panel will be installed after the walls are erected on the floor.



- Repeat steps 6-9 to assemble the other side wall panel.

Step 3 Assemble Front Wall Frames

1. Cut (2) two 27-3/4" long boards from (1) one 60" long 2x4 board.
2. Cut (2) two 72" 2x4s to a length of 69-1/2" used for header supports.

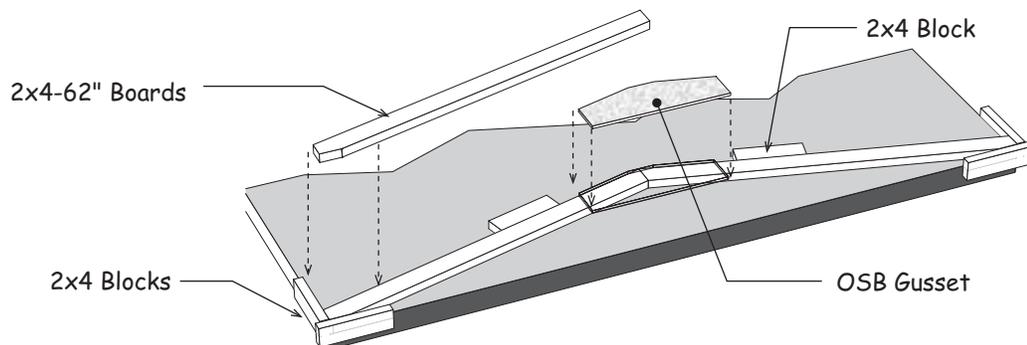


3. Position one 27-3/4" board cut above and a 60" long 2x4 together and mark where wall studs will be located. See detail above. -----
4. Assemble front wall using (3) three 72" long 2x4s and a 69-1/2" long header support. Place 2x4s over the 'X' marks. Use (6) six 10d sinkers to nail header support to stud.
5. Repeat steps 3-4 to assemble another front wall frame.

Step 4 Assemble Roof Trusses

Tip: If possible, temporarily screw 2x4 blocks to the floor using 2-1/2" deck screws. Short 2x4s, *that may have an angle on one end*, supplied in the kit for this purpose. This will secure the truss boards in position so all the trusses will be assembled the same.

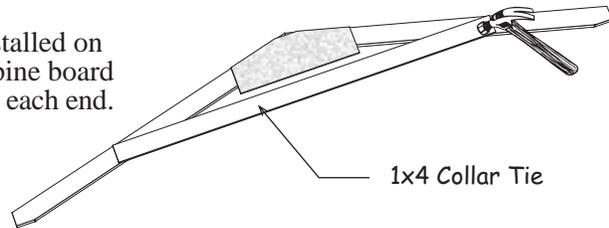
1. Place (2) two 62" long 2x4 boards with angled ends together as shown below. If possible, hold in place with 2x4 blocks as shown. Make sure the trusses measure 10'-0" wide when assembled to fit properly when installed.
2. Secure the tops together with a 24" wide OSB gusset. Nail the gusset to the 2x4s with (14) fourteen 6d common nails. Angle nail slightly so nails do not protrude through the 2x4 boards.
3. Repeat above steps to assemble (8) eight more trusses.



4. **Select (7) seven trusses** and apply wood gussets to the opposite side.

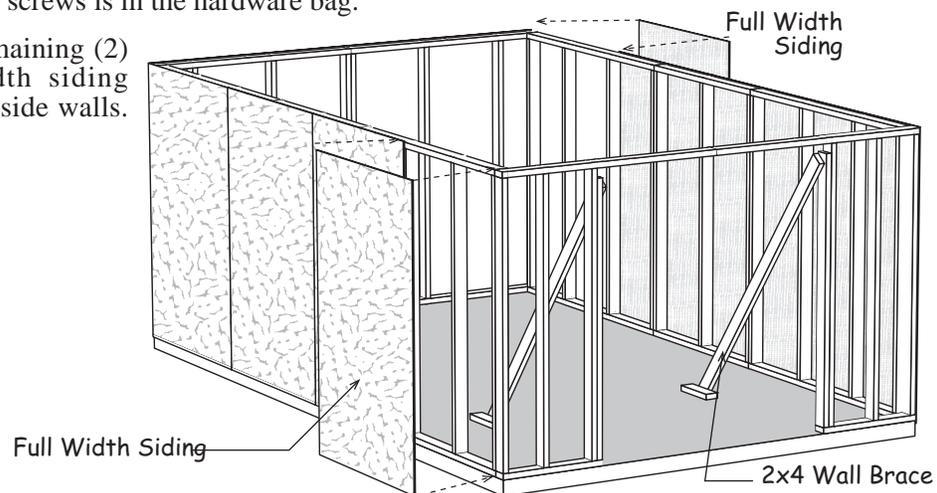
Step 5 Install Collar Ties

1. Select (5) five trusses that have gussets installed on both sides and install a 1x4-72" long with pine board as shown. Use (4) four 6d common nails on each end.
2. Remove 2x4 blocks. Save blocks, some will be used when installing gables. The remaining (2) two trusses with one gusset will be used in a later step.

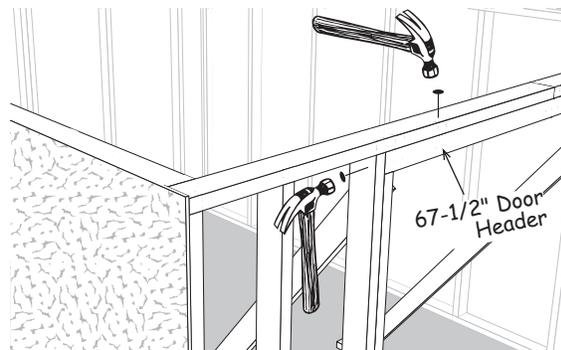


Step 6 Set Walls

1. Erect wall panels. **IMPORTANT: Make sure walls are plum and square.** Secure wall panels together at the corners. Use (4) four 10d sinkers per corner. Nail wall panels to the floor. Nail through the bottom plate. Use 10d sinkers or, if erecting on a concrete slab, concrete anchor bolts (not included) spaced 24" apart.
2. Remove (2) two 2x4s screwed to the pallet. Use these to brace the walls next to door opening. The bit for the screws is in the hardware bag.
3. Install the remaining (2) two full width siding panels on the side walls.

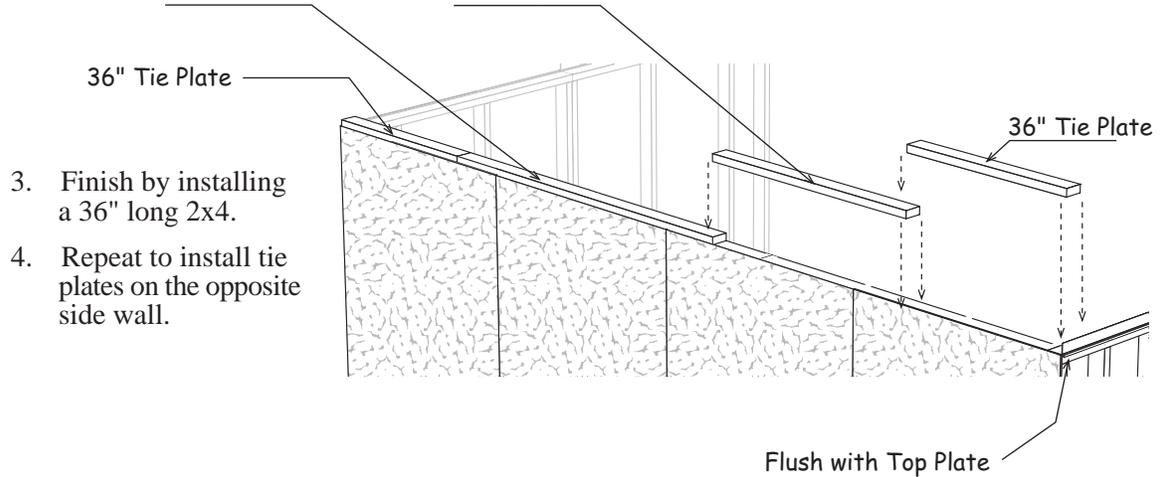


4. Install a 67-1/2" door header between the front wall frames on top of header supports. Secure with 10d sinkers. Nail through the top 2x4 plate and the wall studs with 10d sinkers.



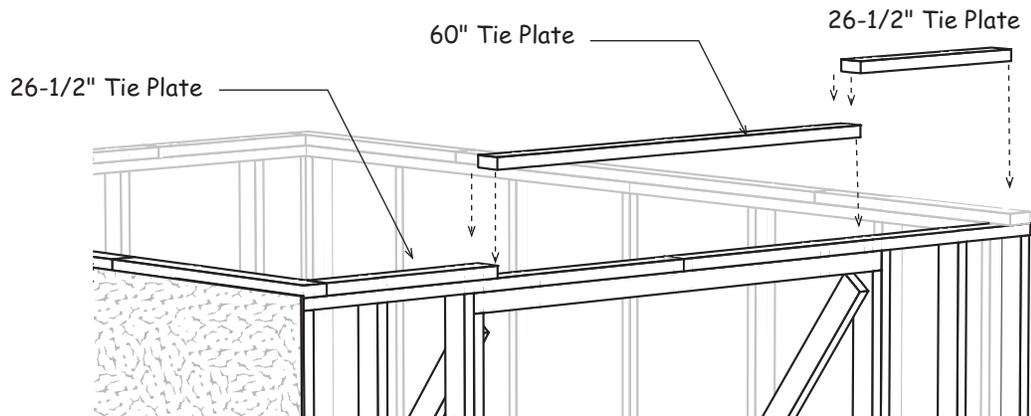
Step 7 Install Tie Plates on Side Walls

1. Cut a 2x4-72" board in half to make (2) two 36" long board and install one of the boards over the side wall. Install the 2x4 flush with the 2x4 wall plate on the back wall. Use 10d sinkers spaced 16" apart.
2. Install a 72" long 2x4 and then a 48" long 2x4.



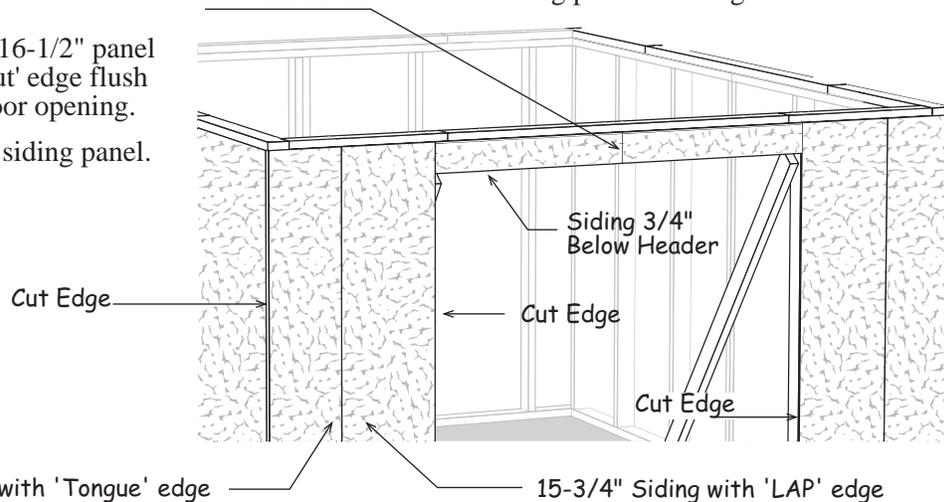
Step 8 Install Tie Plates on Front and Back Walls

1. Cut (2) two 26-1/2" long 2x4s from a 2x4-60" board.
2. Install a 26-1/2" long 2x4 over the front wall.
3. Install a 60" long 2x4 next and finish with another 26-1/4" long 2x4.
4. Repeat to install tie plates on the back wall.



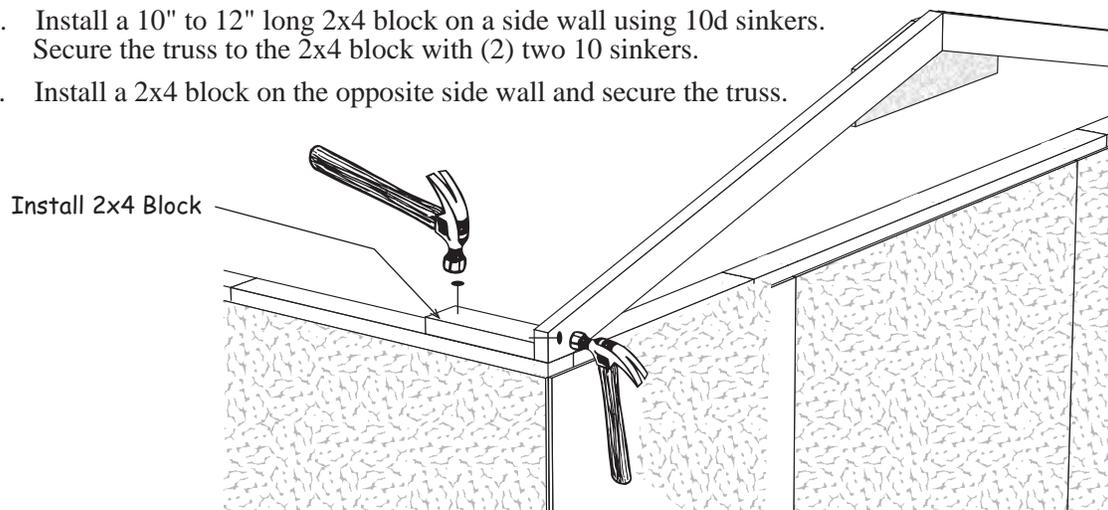
Step 9 Install Siding on Front Wall

1. Select a 12-1/2" siding panel with a 'Tongue' edge and install at the front left corner. Cut edge will be flush with side wall siding. Install a 15-3/4" siding panel with a 'LAP' edge next. Cut edge should be flush with door opening.
2. Install (2) two 4-3/4" x 32-1/4" siding panels over the door opening. Bottom of siding should extend 3/4" below header. Trim will cover where the siding panels butt together in the center.
3. Install the 16-1/2" panel with the 'cut' edge flush with the door opening.
4. Install last siding panel.



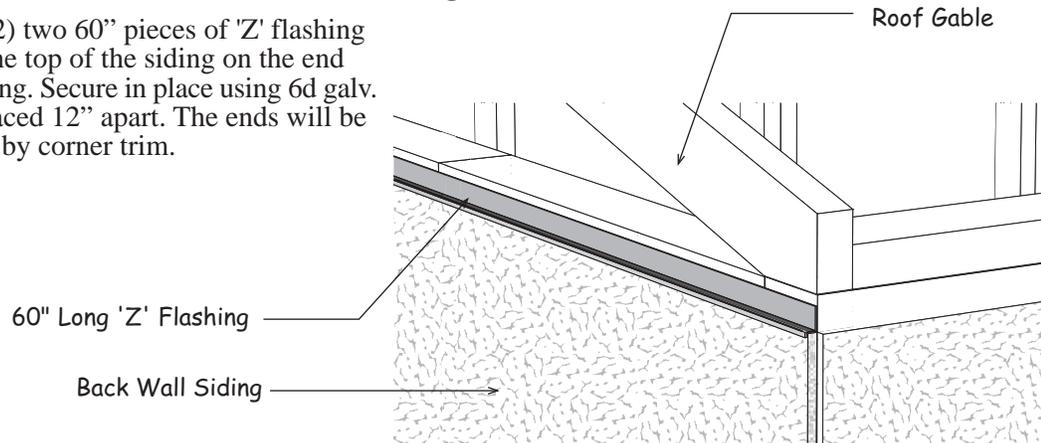
Step 10 Install Roof Gable

1. Select a truss with a gusset installed on one side. Position this truss with the gusset facing towards the inside of the building and flush with 2x4s on back wall.
2. Install a 10" to 12" long 2x4 block on a side wall using 10d sinkers. Secure the truss to the 2x4 block with (2) two 10 sinkers.
3. Install a 2x4 block on the opposite side wall and secure the truss.



Step 11 Install 'Z' Flashing

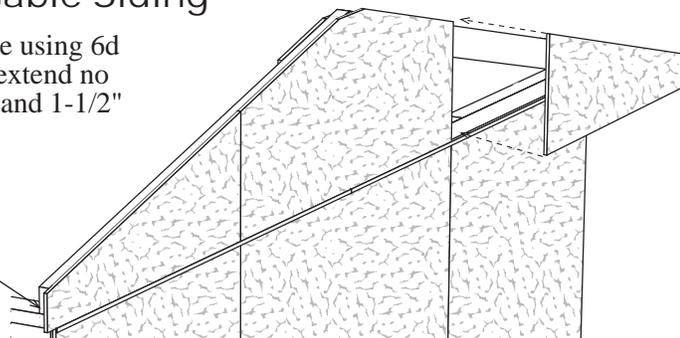
Install (2) two 60" pieces of 'Z' flashing across the top of the siding on the end wall siding. Secure in place using 6d galv. nails spaced 12" apart. The ends will be covered by corner trim.



Step 12 Install Rear Gable Siding

1. Install gable siding on the back gable using 6d galv. nails. The gable siding should extend no more than 1/2" above the 2x4 frame and 1-1/2" past gable ends.
2. Repeat **Steps 10 thru 12** to install the gable on the front wall.

1-1/2" Past End of Gable

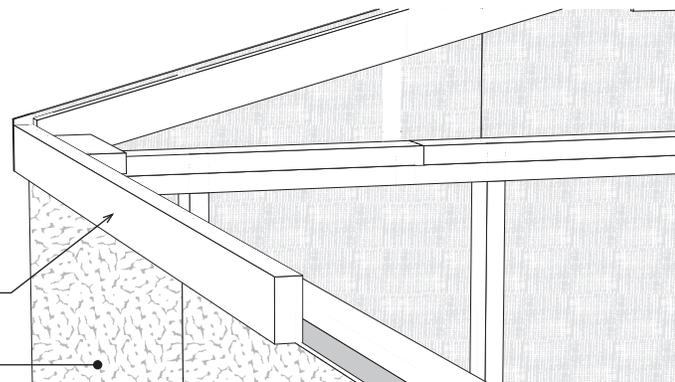


Step 13 Install 2x4 Truss Headers

1. Place a 72" long 2x4 on top of the siding on the sidewall. It will butt against the siding on the rear gable. Nail this 2x4 to the 2x4 tie plate with 10d sinkers.
2. Install a 48" long 2x4 next.
3. Remove a 2x4 used to brace the front wall. Cut to fit and install next to the 2x4 installed above.
4. Repeat to install 2x4s on the opposite side wall.

2x4-72" Board

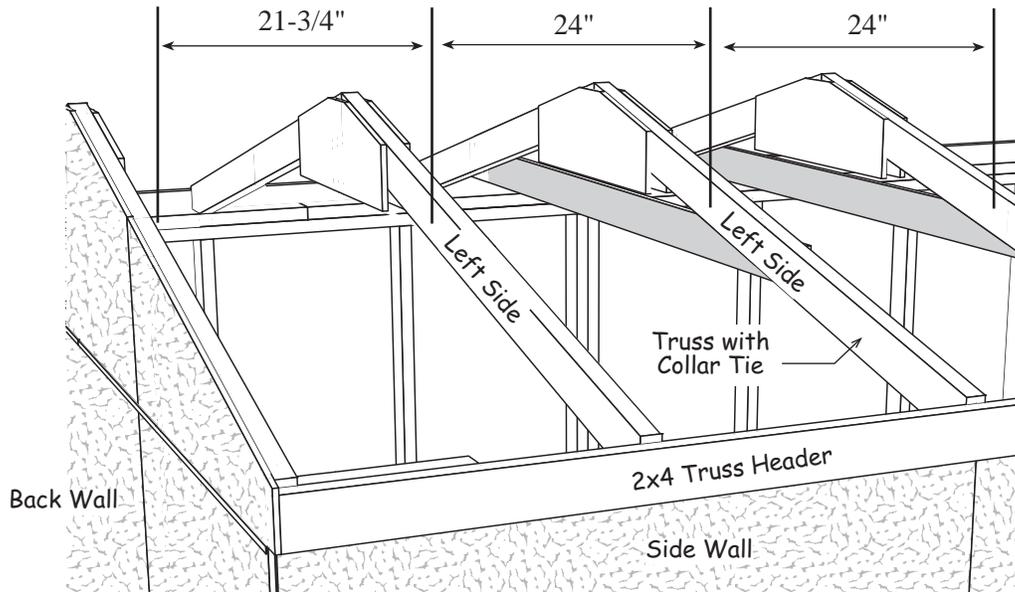
Side Wall Siding



Step 14 Install Trusses

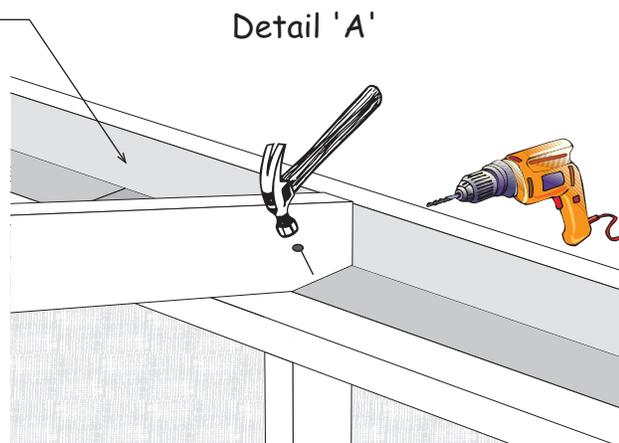
 **The first and last truss will not have a collar tie attachd.**

1. Starting from back wall install the first truss (without a collar tie) measuring 21-3/4" from the face of the 2x4 on back gable and the left side of 2x4 truss. Secure the trusses using 2-1/2" screws and 10d sinkers, See Detail 'A' below.
2. Install the remaining trusses measuring 24" from left side to left side of each truss. Last truss will not have a collar tie.



2x4" Truss Header

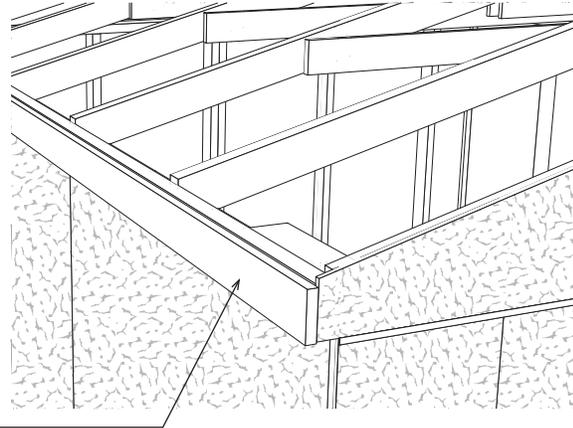
Using a 2-1/2" screw, secure all trusses to 2x4 Truss Header installed in **Step 13**. Toe nail truss into 2x4 tie plate using 10d sinkers.



Step 15 Install 1x4 Fascia

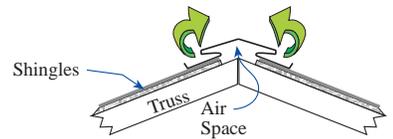
1. Install 72" long 1x4 fascia trim over the 2x4 Truss Headers. Install 1x4 trim boards flush with the bottom of the 2x4 and flush with face of siding on the front gable. Use 6d galv. nails spaced 12" apart.
2. Install a 48" long 1x4 next.
3. Cut a 74" long 1x4 to length and install flush with the face of siding on the back gable.
4. Repeat to install 1x4 fascia on the opposite side wall.

1x4 Fascia Trim



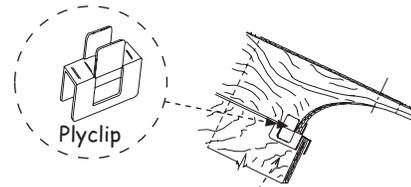
Step 16A Install Roof Sheathing

-  Install roof sheathing with 6d common nails, space nails 12" apart. When installing sheathing across the top, insert a plyclip into the roof sheathing between each truss. The top row of sheathing will be about 1" below the ridge to allow for optional ridge venting.

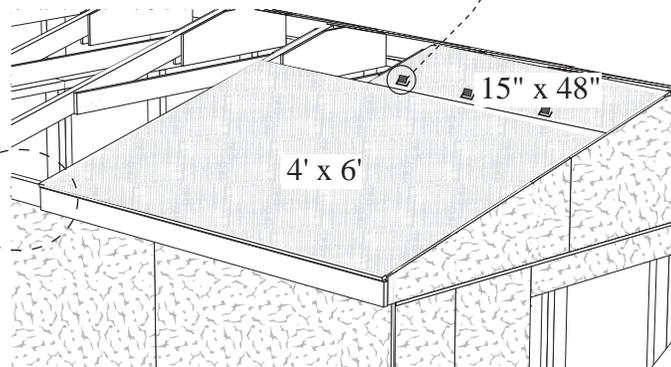
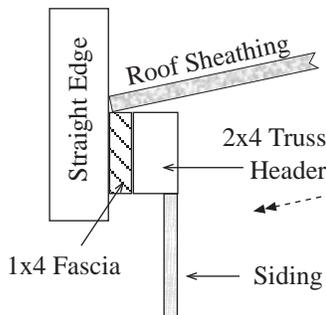


See supplier of shingles to purchase ridge venting.

1. Install the first 4x6 roof sheathing panel against the back of the siding. Note: Using a straight edge install the top edge of the roof sheathing flush with the face of the 1x4 fascia. See Detail 'B'.
2. Install a 15" x 48" sheathing panel at the top.
3. Continue to install sheathing per layout on next page.
4. Repeat on opposite side.



Detail 'B'



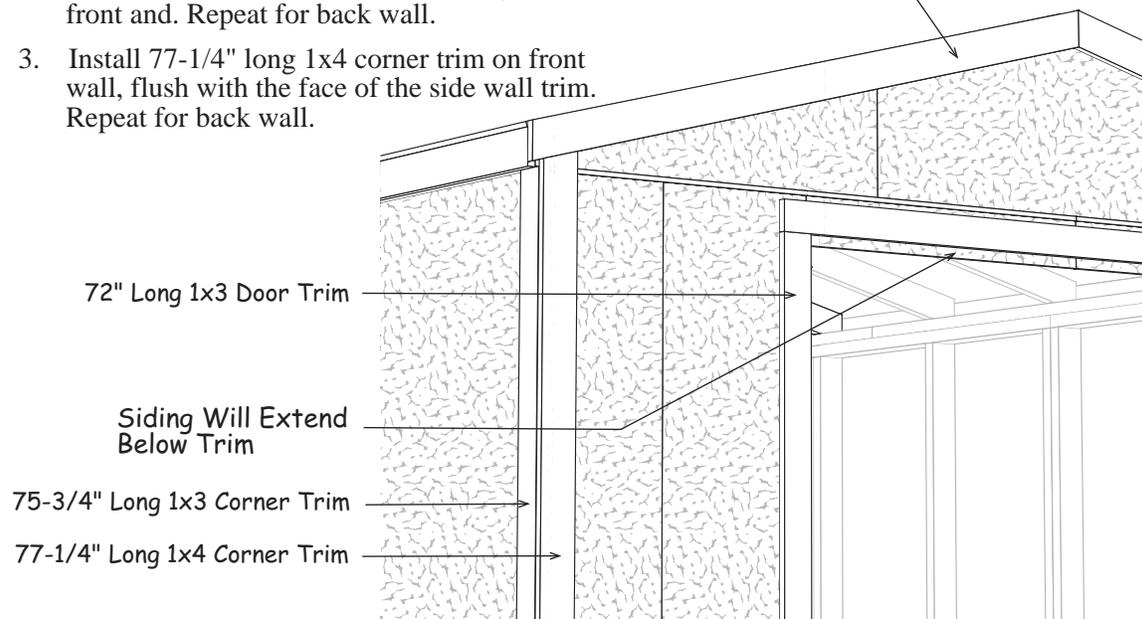
Step 16B Install Roof Sheathing Continued

Install roof sheathing on each side of the building as per pattern below

Roof Ridge			
15" x 48"	15" x 48"	15" x 48"	15" x 48"
48" x 48"	48" x 72"		48" x 72"

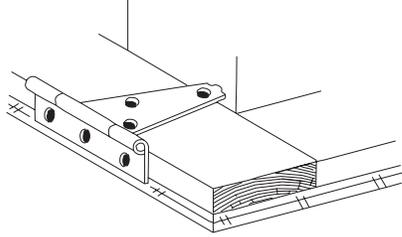
Step 17 Install Trim

1. Install 64-3/8" long 1x4 gable trim flush with the top of the roof sheathing on the front and back. Use 6d galv. nails
2. Install 75-3/4" long 1x3 corner trim, on the side-walls, flush with the face of the siding on the front and. Repeat for back wall.
3. Install 77-1/4" long 1x4 corner trim on front wall, flush with the face of the side wall trim. Repeat for back wall.

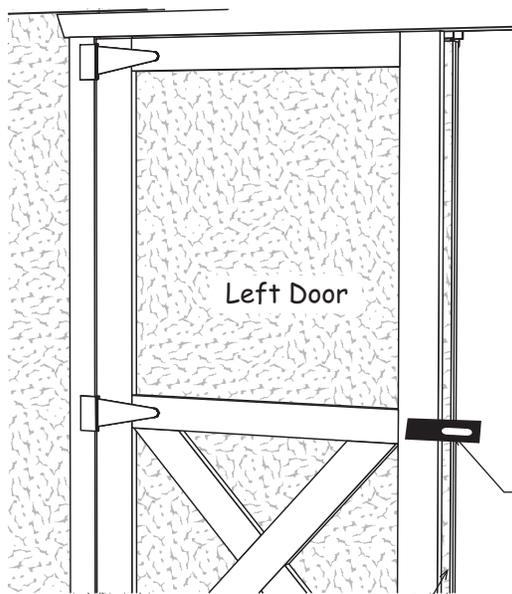


4. Install (2) two 72" long 1x3 trim boards, *with top edge 3/4" above door opening*, along each side of the door opening. Use 6d galv. nails. Tack these boards with a couple nails; you may want to move the trim later when you install the doors.
5. Install a 72" long 1x3 trim board across the top of the vertical trim. 3/4" of siding will be revealed at top of door.

Step 18 Install Doors & Hardware



1. Locate the door that has a 2x4 fastened, *on edge*, to the back side of the door. When doors are closed this 2x4 will be in the center where doors meet. Lay the door with the trim facing up and install (3) three 5" hinges to the right side. To position the hinge properly, hold the rectangular plate against the frame. Use 1-1/4" black screws.
2. Install hinges on the left side of the other door.

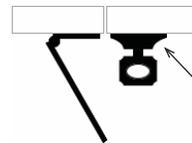


3. Before fastening the hinges to the side trim, temporarily prop the doors in the opening. Leave a space at the top and bottom of the doors and between the doors and the side trim to allow room for the doors to expand due to humidity.

If your door opening is out of square, the space around the doors will not be even. You can remove and re-position the side trim to make allowances for this. The side trim does not have to be flush with the frame of the door opening. You can move the trim in or out to make the door spacing equal.

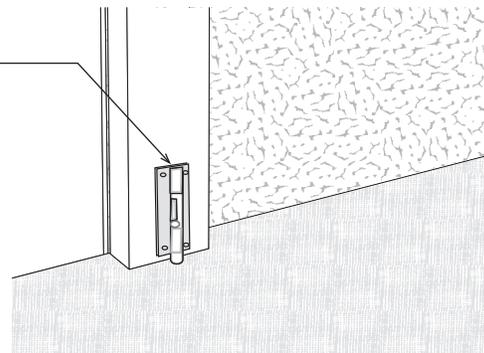
4. Determine position of hinges and install to side trim with 2" screws.
5. Install door hasp on double doors. When properly installed the hasp will fold in half to receive locking latch and the screw heads will be covered.

Siding Extends Past Trim



Fold Hasp to Cover Screws

Barrel Bolt on the back of left door



6. Install a barrel bolt on the lower back of the door to secure this door in place when closed. You will need to drill a hole for the round shaft to drop into.
7. Install another barrel bolt at the top of the door.

Packing List

Qty.	Description		
4	2x4	78"	Attached to Pallet
18	2x4	62"	Truss Rafters
44	2x4	72"	Studs & Plate Boards
8	2x4	68-1/2"	Plate Boards
12	2x4	60"	Plate Boards
6	2x4	48"	Plate Boards
6	2x4	10"-12"	Blocks for Truss Jig
4	1x4	64-3/8"	Gable Trim
4	1x4	77-1/4"	Corner Trim
4	1x3	75-3/4"	Corner Trim
3	1x3	72"	Door Trim
5	1x4	72"	Collar Ties
2	1x4	74"	Fascia Trim
2	1x4	72"	Fascia Trim
2	1x4	48"	Fascia Trim
1		67-1/2"	Pre-built Door Header
2			Pre-built Barn Doors
7	48"x74-3/4"		Primed Wall Siding
2	36"x74-3/4"		Primed Wall Siding
2	16"x74-3/4"		Primed Wall Siding
2	12-1/2"x74-3/4"		Primed Wall Siding
2	4-3/4"x32-1/4"		Primed Wall Siding
2	48"x19-3/4"		Primed Gable Siding
4	38"x14-1/4"		Primed Gable Siding
4	48"x72"		OSB Roof Sheathing
2	48"x48"		OSB Roof Sheathing
8	15"x48"		OSB Roof Sheathing
16	8"x24"		OSB Wood Gussets

Qty.	Hardware Description		
3	lbs.	10d	Coated Sinkers
3	lbs.	6d	Galvanized Nails
4	lbs.	6d	Common Nails
6		5"	Hinges
1		4"	Door Hasp
2		6"	Barrel Bolts
25		1-1/4"	Hinge Screws
25		2"	Hinge Screws
50		2-1/2"	Deck Screws
16		2"	Hinge Screws
14		3/4"	Pan Head Screws
4		60"	'Z' Flashing

Material Purchased By Owner

7	bdl.	Roof Shingles
7	pcs.	Roof 'drip' edge