

# **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 Cordless Drill Hammer Level Measuring Tape 6'-8' Ladder(s) Safety Glasses Dust Mask Phillips Screwdriver Framing Square

Pencil Additional Materials - Not included in kit:

Required: 8' x 7' Garage Door with 6" low headroom track

Shingles or metal roofing, Drip Edge, Roofing Nails or Screws

Paint, Silicone Paintable Sealant

Optional: Windows, Walk-in Door, Ridge Vent

Terminology:

Square - Confirm corners are at 90 degrees

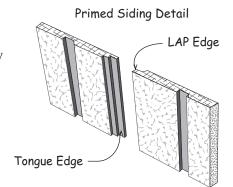
Plumb - Confirm walls and trusses are straight vertically Wall Plate - Top and bottom 2x4s used to frame walls

Tie Plate - 2x4s connecting wall sections together

Header - Spans top of door opening

OSB - Oriented Strand Board

LAP - Edge of siding that overlaps Tongue 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.

IMPORTANT: Before painting seal the top of all horizonal edges of trim where water can lay.

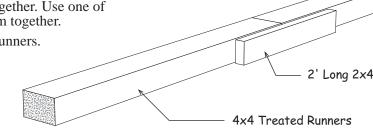
If you have any questions we are happy to assist you. Please contact us at:

800-245-1577 - Mon - Fri 8AM - 5PM EST 724-866-4357 - After hours and weekends Email - help@barnkits.com

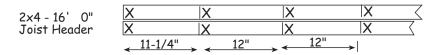
## **Optional Wood Floor System**

Shown below is a typical wood floor. Depending on your area, the construction may have to be changed to meet local codes. The foundation size should be  $12' - 0" \ge 16' - 0"$ .

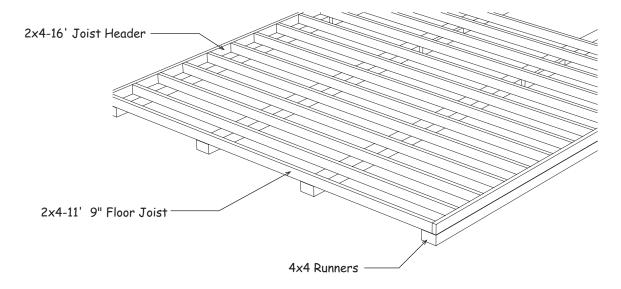
- 1. Cut (2) two treated 2x4-8' boards in half.
- 2. Butt 4x4-8' treated runners together. Use one of the 4' long 2x4s to secure them together.
- 3. Repeat to join the other 4x4 runners.



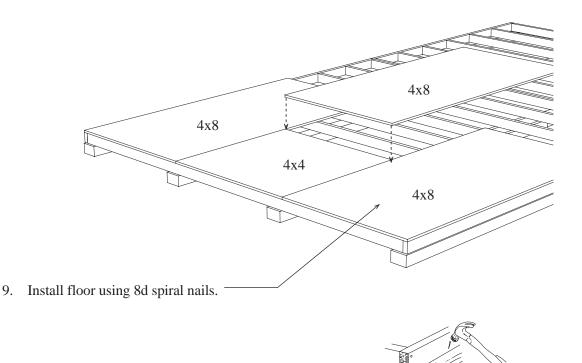
- 4. Cut (2) two 2x4-16' joist headers to 16' 0".
- 5. Layout for 12" on center joist spacing. 'X' marks where floor joist will be placed.



- 6. Cut all the 2x4-12' boards to 11'-9". These boards will be the floor joist. *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.
- 7. Install floor joist boards between the joist headers. Install this section over the 4x4s.



8. Square the floor. See note below. The angle measurement should be 20' - 0". Nail several floor joist to the 4x4 runners to hold the floor frame in place.



Material Description	12' x 16' shed		
2x4 Treated	2 pcs. 8'		
2x4 Treated	17 pcs. 12'		
2x4 Treated	2 pcs. 16'		
4x4 Treated Runners	8 pcs. 8'		
Flooring 5/8" or 3/4"	6 pcs. 4x8		
Screw Floor Nails	3 lb. 8d		
Galv. Box Nails	4 lb. 16d		

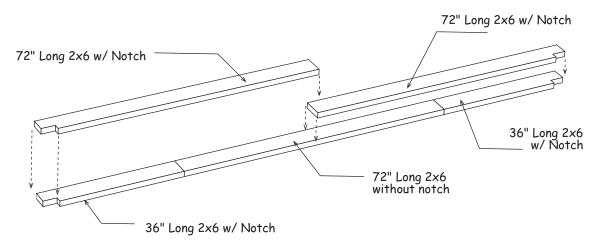
#### Notes To Floor

It is important that the floor be level and square. Square the floor as follows: 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.

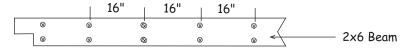
When using a concrete slab for a floor, use the same overall foundation measurements. Install foam sill sealer as a moisture barrier between the concrete and the wall plates. Foam sill sealer is available in rolls, 3-1/2" or wider.

#### Step 1 Assemble Loft Beams

- 1. Locate (2) two 36" long 2x6 boards with a notch on one end and a 2x6 board without a notch. Position these 2x6 boards on a flat surface as shown below.
- 2. Locate (2) two 72" long 2x6 boards with a notch on one end. Install these 2x6 boards over the bottom boards as shown.



3. Install (2) two rows of 2-1/2" wood screws spaced 16" apart as shown below.



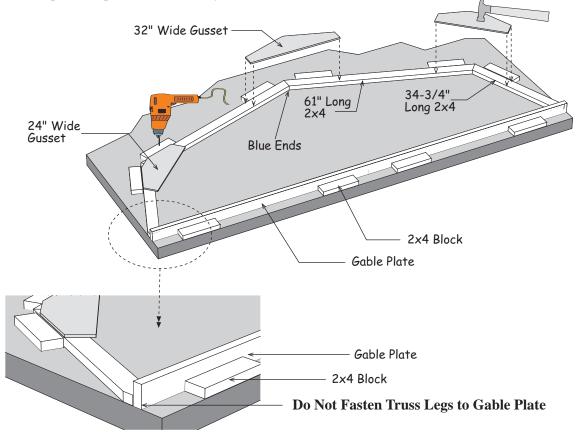
4. Repeat steps to assemble another 2x6 Loft Beam.

#### Step 2 Assemble Door Header

- 1. Cut (2) two 2x10-10' boards to a length of 8' 3''
- 2. Locate (2) two pre-cut 9" x 48" OSB fillers.
- Install OSB fillers in the center of the 2x10 boards. Nail header together with 10d sinkers. Use (16) sixteen nails on each side.
   1-1/2" Space Both Ends

#### Step 3 Assemble Trusses

- 1. If necessary cut (2) two 2x4-12' long 2x4s to 144". Position one as a Gable Plate on the floor with the narrow edge side down.
- 2. Gather (2) two 61" and (2) two 34-3/4" long 2x4 rafters and arrange as shown below. The 61" long rafters will have a blue end which butt together at the peak. Measure diagonally from where the 61" and 34-3/4" boards meet to the opposite end of the Gable Plate. Repeat on the other side. The measurement should be the same or within 3/8". Adjust position of the boards if necessary.
- 3. Temporarily screw short 2x4s that may have angle cuts around the truss. These will insure the remaining trusses are built identically.
- 4. Secure rafters together with (2) two 24" wide gussets and a 32" wide gusset at the peak. Use (25) twenty-five 6d common nails spaced evenly on each gusset.
- 5. Turn truss over and secure gussets to other side.
- 6. Set aside truss leaving the Gable Plate in the jig.
- 7. Repeat this process to assembly (6) six more trusses.

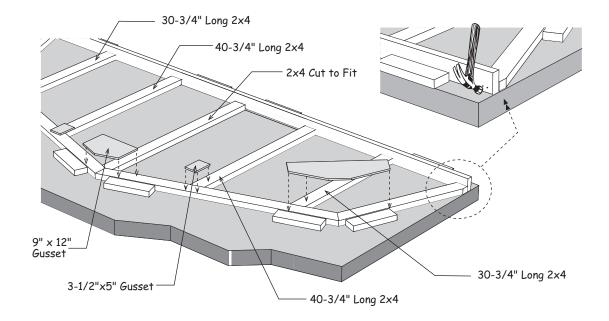


#### Step 4A Assemble Roof Gable without Loft Doors

- If you do not want to install the loft doors on the front gable for outside access to the loft area build (2) two gables as described in this step.
- 1. Place (2) two 61" and (2) two 34-3/4" long 2x4 rafters in jig as done for trusses.
- Place (2) two 40-3/4" long 2x4s with angle cut on one end. Secure the bottom to the 2x4 Gable Plate by nailing through plate with (2) two 10d sinkers. Secure the top with 3-1/2"x5" gussets using (4) four 6d common nails.
- 3. Place (2) two 30-3/4" long 2x4s with an angle cut on one end. Nail through Gable Plate. Secure 61" and 34-3/4" long rafters and top of 30-3/4" long 2x4 with 24" wide gussets
- 4. Cut a 50" long 2x4 with angles on one end to fit between Gable Plate and under center of truss peak. Nail through Gable Plate with (2) two 10d sinkers. Secure the top with a 9"x12" gusset.
- 5. Nail truss leg to 12' Gable Plate with 10d sinkers.

6. Either repeat to build another gable without loft doors or proceed to next step to build with working loft doors.

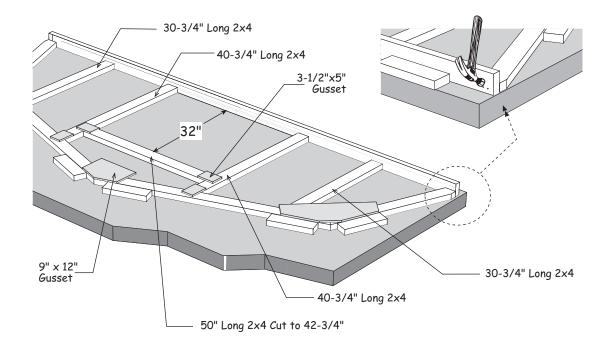
Remove short 2x4 blocks if you have built (2) two gables without loft doors.



#### Step 4B Assemble Roof Gable with Loft Doors

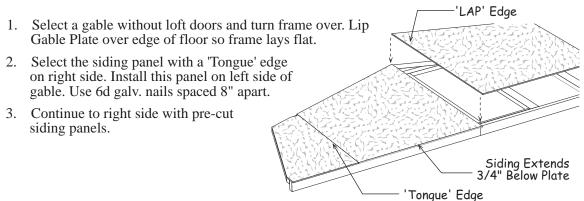
- 1. Place (2) two 61" and (2) two 34-3/4" long 2x4 rafters in jig as done for trusses.
- 2. Secure the top with a 9"x12" gusset.

- 3. Place (2) two 40-3/4" long 2x4s with angle cut on one end. Secure the bottom to the 2x4 Gable Plate by nailing through plate with (2) two 10d sinkers. Secure the top with 3-1/2"x5" gussets using (4) four 6d common nails.
- 4. Place (2) two 30-3/4" long 2x4s with an angle cut on one end. Nail through Gable Plate. Secure 61" and 34-3/4" long rafters and top of 30-3/4" long 2x4 with 24" wide gussets
- 5. Select a 50" long 2x4 with angles on one end. Cut off end with angles so board is 42-3/4" long. Position board 32" from gusset on Gable Plate. Secure to 40-3/4" boards using 3-1/2"x5" gussets.
- 6. Nail truss leg to 12' Gable Plate with 10d sinkers.
- Remove short 2x4 blocks.



## Step 5A Apply Siding to a Gable without Loft Doors

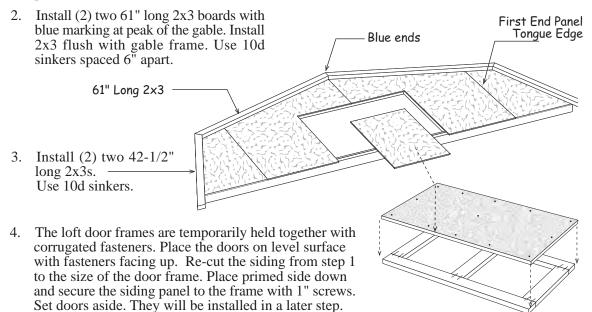
**Building Tip:** Gather pre-cut gable siding and position them on gable frames before nailing. Siding should extend 3/4" below Gable Plate. If siding extends above frame cut siding flush with frame.



#### Step 5B Apply Siding to Gable with Loft Doors

If you are installing the loft doors and trim as a decorative plant (not operating) do not cut siding to make a loft door opening. Nail loft door frames to siding.

1. Select a siding panel with a 'Tongue' edge and install on right side of gable. Before you install the center siding panels ,lay them on the frame and trace the top and side of the door opening on the siding panels. Cut panels from bottom of siding to top of door opening. Save these pieces to be installed on loft doors below.



## Important Information on Framing and Siding Walls

The length of pre-cut studs will vary from 92-1/4" to 93" depending the what part of the country you are located.

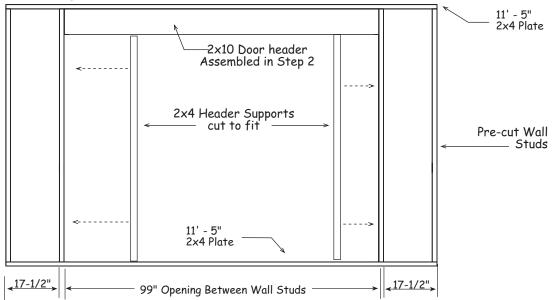
If installing the building on a wood floor siding should extend 3/4" below bottom plate. If installing on a cement slab cut the siding flush with the bottom plate.

Square wall frames before installing siding. Measure diagonally (corner to corner). The measurements will be the same when the wall is square.

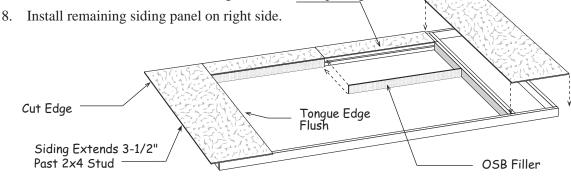
If you are installing the optional walk-in door refer to the door manufacturers installation instructions for correct rough opening size. Depending on your preferred location you may need to purchase additional framing lumber.

#### Step 7 Assemble Front Wall

- 1. Cut (2) two 2x4-12' boards to 11'- 5" in length for wall plates.
- 2. Install (4) four pre-cut wall studs between the plates as shown below. Nail to studs using (2) two 10d sinkers on each end.
- 3. Install the 2x10 door header assembled in **Step 2**. Nail through top plate with 10d sinkers spaced 12" apart and through pre-cut stud.
- 4. Cut to fit (2) two 84" long 2x4s and install between door header and bottom plate. Attach to left and right studs. Use (4) four 10d sinkers each.

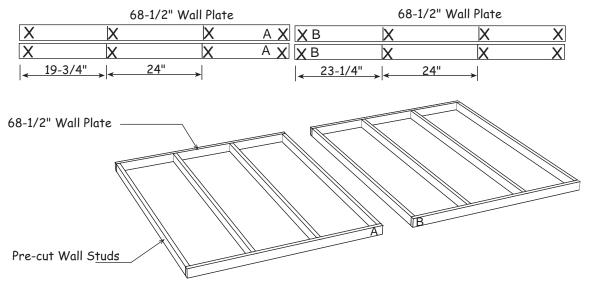


- 5. Cut a 4x8 siding panel in half. Install the half with the tongue edge flush with door opening and extending 3-1/2" beyond the end of the wall stud. Siding should extend 3/4" below the bottom plate unless installing building on concrete slab. Use 6d galv. nails spaced 8" apart.
- 6. Install (2) two 3-1/2" x 48" OSB fillers under the door header.
- 7. Install (2) two 10-3/4" x 48" siding over the door opening.

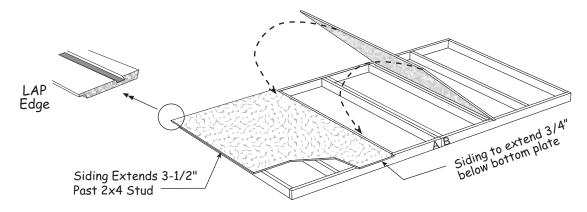


#### Step 7 Assemble Back Wall

- 1. Position (4) four 2x4x68-1/2" 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 (8) eight pre-cut wall studs, between the wall plates, over the 'X' marks and where the plates meet. Use (2) two 10d sinkers at each end of stud. Nail wall sections together using (4) four 10d sinkers on each side of studs.



- 3. Square wall frame. *Measure diagonally (corner to corner)*. *The measurements will be the same when the wall is square.*
- 4. Install the 1st siding panel with the 'LAP' edge extending 3-1/2" past the wall frame. Use 6d galvanized box nails spaced 8" apart. The bottom will extend 3/4" below the bottom plate, or trim flush for cement slab.
- 5. Install (2) two more siding panels. Cut the last panel to extend 3-1/2" beyond the wall frame.

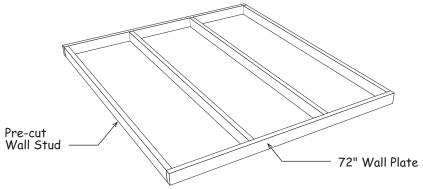


### Step 8A Assemble Side Walls

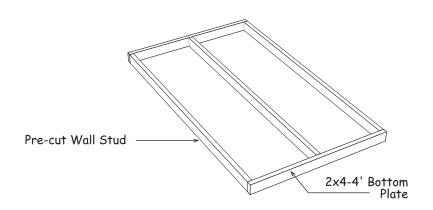
1. Position (2) two 2x4-72" boards together and indicate with 'X' marks, where the wall studs will be located.

	72" Wall Plate			
Х	X	X	Х	
Х	X	X	Х	
←	23-1/4"	24"		

2. Install (4) four pre-cut studs between the wall plates Use (2) two 10d sinkers at each end of stud.



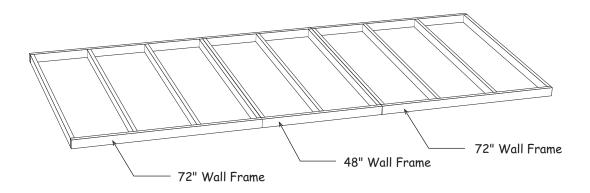
- 3. Repeat process to assemble (3) three more 72" wall frames.
- 4. Install (3) three pre-cut wall studs between (2) two 48" long 2x4s boards. Install the stud in the center of the wall frame.



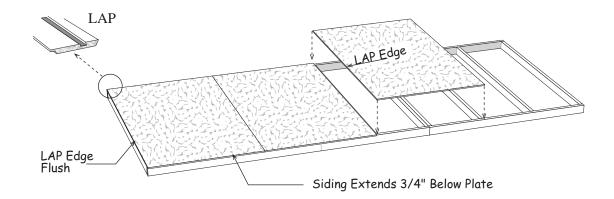
5. Repeat to assemble another 4' wall frame.

### Step 8A Assemble Side Walls Continued

6. Position a 48" wide wall frame between (2) two 72" wall frames as shown below. Nail frames together with 10d sinkers.



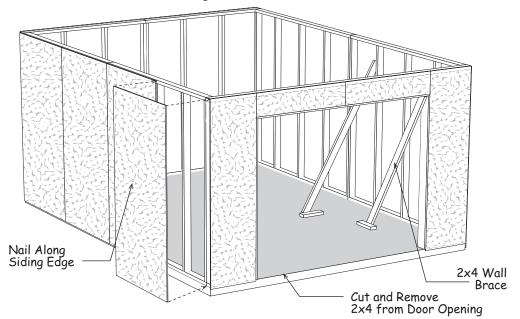
- 7. Install the first siding panel with the 'LAP edge' flush the end of the wall and extending 3/4" below the bottom plate.
- 8. Install (2) two more siding panels. You can install the last siding panel now or after the walls are erected making the panel easier to handle.



9. Repeat steps 6-8 to assemble the another side wall.

## Step 9 Set Walls

- 1. Set the back wall panel between the side walls. Secure wall panels together at the corners. Use (4) four 10d coated nails per corner.
- 2. Install the front wall frame between the side walls. Secure wall panels to the floor. DO NOT nail through 2x4 in door opening. Use10d sinkers or, if erecting on a concrete slab, concrete anchor (not included) spaced 24" apart.
- 3. Install the last siding panel on the side walls. Nail along the siding edge where the side wall siding panels overlap.
- 4. Brace walls with (2) two 84" long 2x4s.



24"

5. Cut and remove the bottom 2x4 in the door opening.

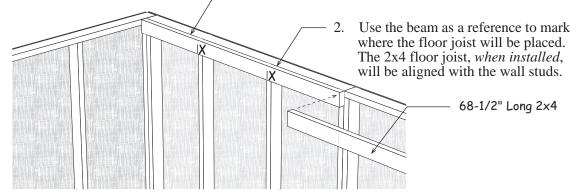
#### Step 10 Layout Loft Joist Spacing on 2x6 Beam

- 23-1/4"

Layout both beams for the spacing of the loft floor joists. The 'X' marks where the floor joist will be placed.

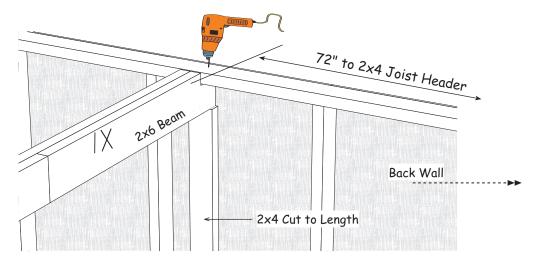
#### Step 13 Install Loft Joist Headers & 2x6 Loft Beams

1. Install (2) two 68-1/2" long 2x4s on the back wall to support the floor joist. Install the 2x4s flush with the top of the 2x4 wall plate. Secure to wall studs with 10d sinkers.



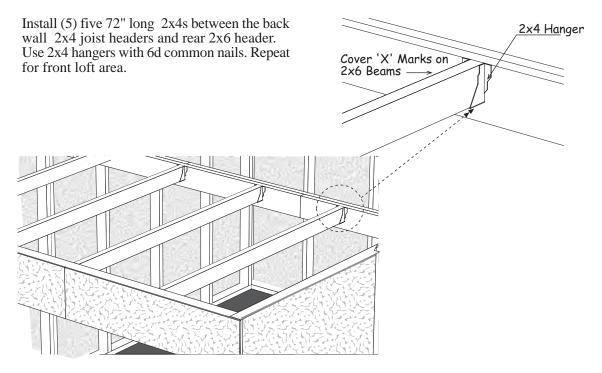
- 3. Repeat to install joist header support boards on the front wall.
- 4. To allow access to the loft area, a 16' long building requires cutting (10) ten 7' long 2x4s to a length of 6'.
- 5. Install the rear 2x6 beam, <u>72" from the 2x4 joist header boards</u>, with the 'X' marks on the beam facing the back wall. You can use a 2x4-6' board as a gauge to properly space the beam. Refer to **Step 15** to see how the loft floor joist will be installed.

Place the notch under the top plate and support the beam by cutting a pre-cut wall stud and placing under the beam. Further secure the beam with a 3" wood screw through the top of the wall plate and toenail to the bottom plate and beam with 10d sinkers.



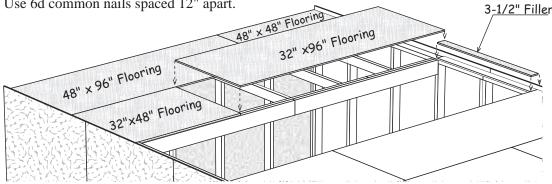
6. Repeat to Install the other beam with the 'X' marks on the beam facing the front wall. When the front beam is installed there will be 56" between the beams

## Step 14 Install Loft Floor Joists



#### Step 15 Install Loft Flooring

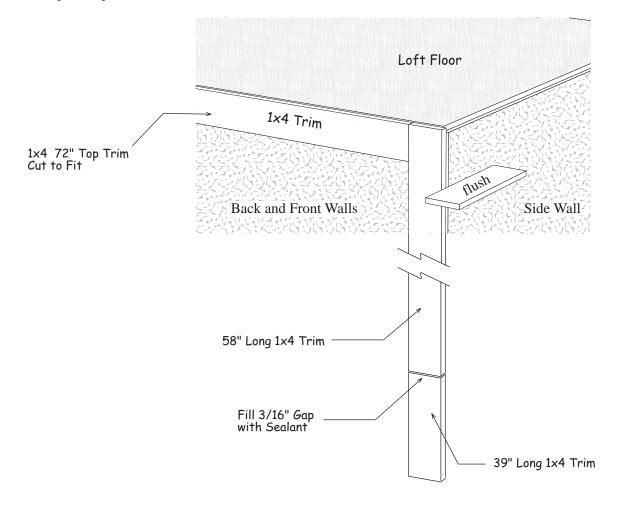
Cut a 4x8 sheet of 7/16" OSB in half to get (2) two 48"x48" pieces. Cut (1) one of these to a width of 32". Cut a 4x8 OSB sheet to a width of 32". Install at rear of building as shown below. Use 6d common nails spaced 12" apart.
 3-1/2" Filler



- 2. Repeat to install loft flooring at the front of the building.
- 3. Cut (2) two 3-1/2" x 56" OSB floor fillers to fit if necessary and install on top of side wall plates between the loft flooring. Use 6d common nails.

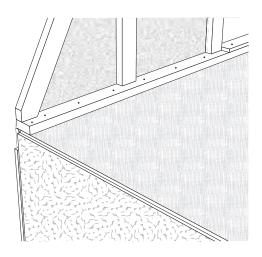
#### Step 16 Install Wall Trim

- 1. Install (2) two 1x4-58" corner trim on the back wall, flush with the siding on the side wall and flush with the top of the loft flooring. Use a double row of 6d galv. nails spaced 12" apart.
- 2. Install (2) two 1x4-72" trim boards across the top of the back wall. Cut second one to fit. Install the 1x4 boards flush with the top of the loft flooring. *See diagram below*.
- 3. On the bottom edge of the 58" trim board apply paintable sealant (not included). Leaving a 3/16" gap between boards install a 1x4-39" trim board to bottom of 58" board. Insure there is sufficient sealant to fill gap. Bottom edge of 39" board should be flush with bottom of siding. Trim if necessary. Nail (2) two 6d galv. nails 3/8" from edge and ends on each board into siding and 2x4 framing.
- 4. Repeat steps for front wall trim.



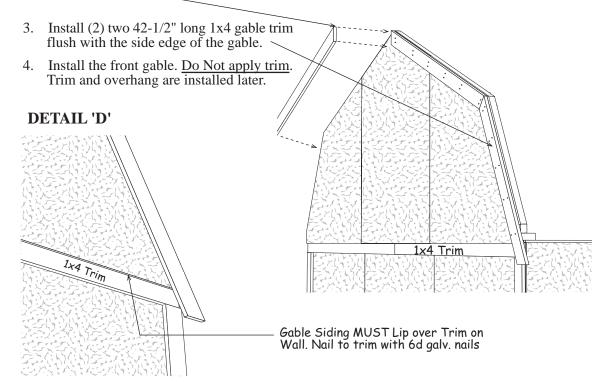
## Step 17 Set Gables

**IMPORTANT: Do Not** set gables until all the siding and trim are installed on walls.

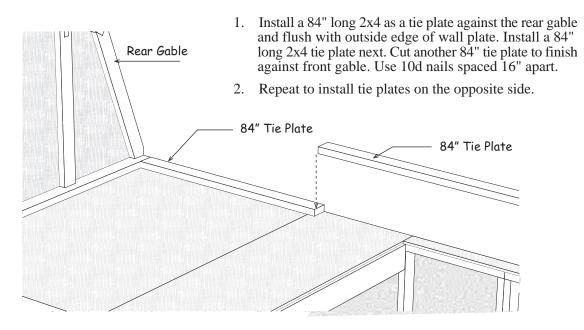


**Caution:** The gable ends are heavy and awkward. You'll need helpers to lift and set gables in place.

- 1. Install the gable without loft doors on the rear wall. The siding on the gable must <u>extend</u> <u>over the 1x4 trim</u> board, not behind it. *See* <u>detail 'D' below</u>. Nail bottom gable to loft flooring. Use 10d sinker nails spaced evenly in stud openings.
- 2. Install (2) two 61" long 1x4 gable trim flush with the top edge of the gable. Butt the ends with <u>blue marks</u> together. Install trim with 6d galvanized nails spaced 12" apart.

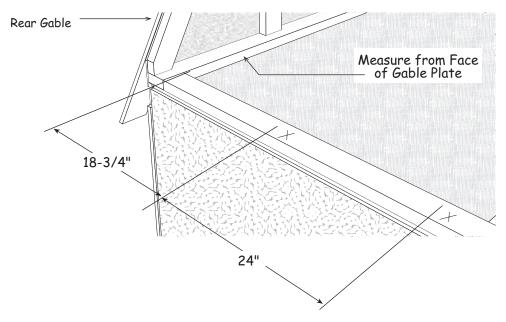


## Step 18 Install 2x4 Truss Plates



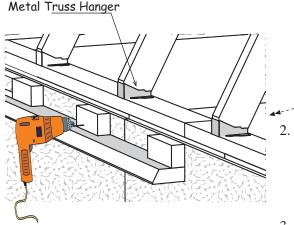
3. Layout the truss spacing. Measure from the <u>inside face of the 2x4 gable plate</u> to mark the location of the first truss. The last truss space will be more than 24".

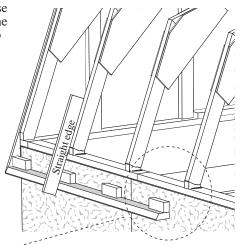
**Important:** When marking the opposite wall, place the 'X' mark on the same side of the line so your trusses are parallel when they are installed.



## Step 19 Install Trusses & Soffit Boards

- Before installing the soffit boards to the side wall, use a straight edge to make sure the trusses align with the bevel cut on the soffit board. Adjust soffit board up or down if necessary.
- 1. Place trusses over the 'X' marks and secure trusses to 2x4 tie plate using 2x4 hangers and 10d sinker nails.

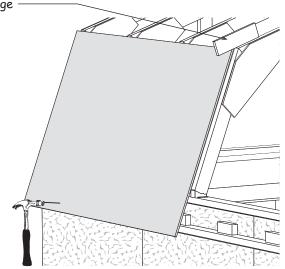




- Locate (3) three 65-1/4" long soffit boards. Butt the first board against the rear gable trim. Secure board to the top wall plate with 3" long screws. Install the next board. Cut to fit and install the last board to butt against the 2x3 boards on the front gable.
- 3. Repeat to install on opposite side wall.

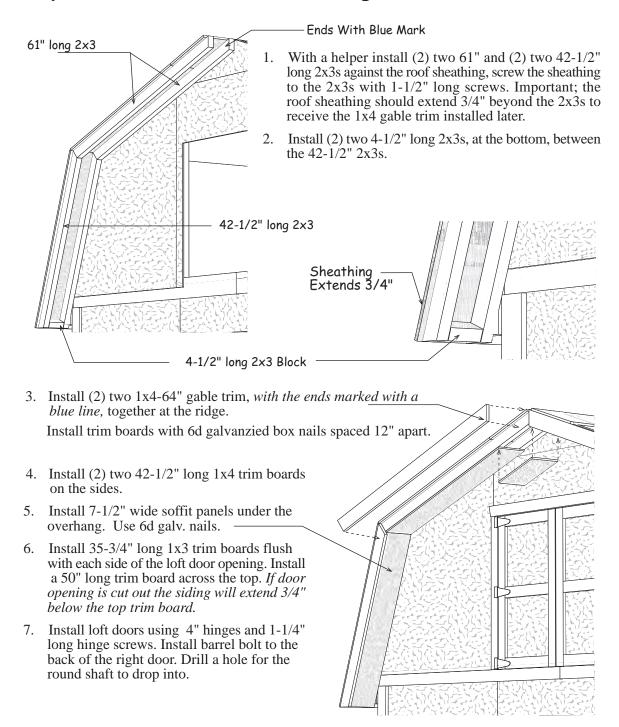
#### Step 20A Install Roof Sheathing Straight Edge

- 1. Install a 42" x 72" OSB roof panel flush with the face of the rear gable trim. Use a straight edge to align the top of the sheathing with the top of the truss. Continue adding sheathing following the layout on the next page. *OSB will extend past front gable*. Use 6d common nails, spaced 8" apart.
- To prevent the nails from protruding thought the bottom of the soffit board, nail at an angle when nailing roof sheathing to the soffit boards.



#### Step 20B Install Roof Sheathing (continued) and Side Wall Trim

- 2. From (1) one 4x8 sheet of OSB cut (2) two 48"x48" sheets. Install in location indicated by an '\*'.
- 3. Before installing the last row of 13" OSB sheets insert (2) two plyclips onto roof sheathing between every truss. The top row of roof sheathing will be about 1" below the ridge to allow for ridge venting if installed.
- 4. Repeat pattern on opposite side of roof.  $\begin{array}{c}
  13'' \times 72'' & 13'' \times 72'' \\
  48'' \times 48'' & 48'' \times 72'' \\
  48'' \times 72'' & 48'' \times 84'' \\
  \hline
  Install This Row First \\
  42'' \times 72'' & 42'' \times 60'' \\
  \hline
  Install Corner Trim
  \end{array}$
- 5. Referring to Step 16 Install Wall Trim locate (4) four 58" long and (4) four 39" long 1x4 trim boards. Install these boards on the side walls with the top butted to the soffit boards at the top and the edge flush with the face of the back and front wall trim.

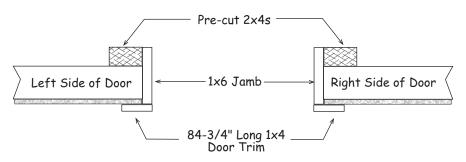


#### Step 21 Install Front Gable Overhang

### Step 22 Install Door Jamb & Trim

If you ordered the optional floor install the galvanized door sill on floor across door opening. Use pan head screws.

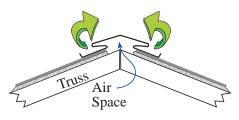
- 1. Locate (2) two 1x6-7' boards. Cut to fit 100 Ш and install each board as door jambs on the sides of the door opening flush with the face of the siding. Jamb will extend into interior of wall. See Detail Below. Å 1x4 Door Trim Keystone Install 1x6-4' boards across the top of the 2. opening flush with face of siding. Jamb will extend into interior of wall. Cut one board to fit. 1x6-7 Jamb 3. Locate (2) two 84-3/4" long 1x4 trim boards. Install each board on each side of the door 84-3/4" Long opening flush with face of 1x6 jamb and 1x4 Door Trim top of door opening. See Detail Below. Install (2) trim boards and a keystone across 4. the top of the door opening. Optional Galv. Door Sill
- 5. Butt a pre-cut 2x4 to back of the 1x6 jamb inside the building. Cut length to be flush with top of jamb above door opening. Secure to wall framing with 10d sinkers. Repeat on other side of door opening. *See Detail Below.*
- 6. Install (2) two 2x4s on top of 1x6 jamb across door opening and top of previously install pre-cut 2x4s. Cut one board to fit.



## Install Roofing - Not Supplied in Kit

Install shingles according per the instructions on the wrapper. Additional information and tutorials can be found on various online sources.

**Building Tip:** Install ridge vent (purchased separately) in lieu of shingle caps. Ridge vent provides ideal ventilation, preventing heat and moisture build-up from damaging your building or its contents.



Optional ridge vent provides ideal ventilation.

Roof Material: 10 bundle shingles, 8 pcs. 10' metal roof edge, optional felt paper 1 roll

## Material Supplied by Local Supplier Included with Purchase

12	pcs. LP Primed Exterior Siding	34	pcs.	Pre-cut Wall Studs
7	pcs. 7/16" OSB Sheathing	2	pcs.	2x4 - 12" Boards
		2	pcs.	2x10 - 10" Boards

#### Hardware List

5 lbs	10d Sinkers
5 lbs	6d Galvanized
10 lbs	6d Common
24	1" Drywall Screws
36	1-5/8" Drywall Screws
36	1-1/4" Hinge Screws
50	3" Deck Screws
50	2-1/2" Deck Screws

6	4" Door Hinge
2	4" Barrel Bolt
32	7/16" Plyclips
34	Joist Hangers

# Material List

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Qty	2x4 Framing	Size	Qty	1x3 Trim	Size
10	Tie Plates	84"	1	Loft Door Trim	50"
18	Wall Plates	72"	2	Loft Door Trim	35-3/4"
8	Wall Plates & Floor Joist Ledgers	68-1/2"	Qty	OSB	Size
18	Truss Rafter	61"	2	Roof Sheathing	48"x84"
2	Gable Studs	50"	2	Roof Sheathing	48"x72"
4	Wall & Tie Plates	48"	4	Roof Sheathing	42"x72"
4	Gable Stud	40-3/4"	2	Roof Sheathing	42"x60"
18	Truss Rafters	34-3/4"	4	Roof Sheathing	13"x72"
4	Gable Studs	30-3/4"	2	Roof Sheathing	13 x72 13"x60"
10	Blocks for Truss Jig	8"-12"	2	Roof Sheathing	13"x48"
Qty	2x6 Framing	Size	2	Door Header Fillers	9"x48"
6	Loft Beam (4 with notch)	72"	14	Gussets	9"x32"
4	Loft Beam with notch	36"	32	Gussets	9"x24"
Otv	2x3 Framing	Size	2	Gussets	9"x12"
4	Top Gable Overhang	61"	2	Loft Floor Fillers	3-1/2"x56"
4	Bottom Gable Overhang	42-1/2"	2	Door Header Fillers	3-1/2"x48"
2	Gable Blocks	4-1/2"	6	Gussets	3-1/2"x5"
Qty	1x6 Trim	Size	Qty	Siding	Size
2	Door Jamb	84"	4	Gable Panels	48"x55-1/4"
2	Door Jamb	48"	4	Gable Panels	24"x37"
1	9" Wide Keystone		2	Header Siding	10-3/4"x48"
Qty	1x4 Trim	Size	4	Gable Soffit	7-1/2"x48"
2	Door Trim	84-3/4"	2	Gable Soffit	7-1/2"x24"
8	Door Trim with Angle Cut	58"	2	Door Jamb	5-1/2"x84"
2	Door Trim with Angle Cut	48-3/4"	2	Door Jamb	5-1/2"x48"
8	Door Trim with Angle Cut	39"	Qty	Pre-Built Components	
4	Lower Wall Trim	72"	6	Soffit Boards	3-1/2"x65-1/4"
4	Gable Trim	61"	2	Loft Door Frames	
4	Gable Trim	42-1/2"			