

12' x 16' GABLE END STORAGE SHED

ITEM	QUANT	MATERIAL DESCRIPTION	COST EA.	COST TOTAL
1	4	4" x 4" Pressure Treated, (2) 16'-0" Long, (2) 12'-0" Long		
2	7	2" x 4" Pressure Treated, 12'-0" Long		
3	6	3/4" Thick CDX Plywood, 4' x 8' Sheet (for floor)		
4	38 *	2" x 4", Stud Grade or better, Doug-Fir, 8'-0" Long		
5	5	2" x 4", #2 or better grade, Doug-Fir, 12'-0" Long		
6	6	2" x 4", #2 or better grade, Doug-Fir, 16'-0" Long		
7	18	2" x 6", #2 or better grade, Doug-Fir, 8'-0" Long		
8	1	2" x 8", #2 or better grade, Doug-Fir, 16'-0" Long		
9	4	2x6 Soffit Vent, 22-1/2" long, or Full 2x6 Aluminum Soffit Vent		
10	14	Hurricane Tie, 2x6, Rafter to Wall (Simpson Model H1 or equal)		
11	2	2x8 Face Mount Beam Hanger (Simpson Model LUS28 or equal)		
12	14	2x6 Face Mount Beam Hanger (Simpson Model LUS26 or equal)		
13	16	4' x 8' Sheet of Siding (T-111, CDX, Wafer, etc.)		
14	8	7/16" Thick (or greater) Wafer Board, 4' x 8' Sheet (for roof)		
15	9	1" x 4" Cedar Trim Board (or equal), 8'-0" Long		
16	12	1" x 4" Cedar Trim Board (or equal), 10'-0" Long		
17	1	36" Wide by 6'-8" Tall Entry Door with Frame		
18	1	Door Hardware (Lockable Opener and Deadbolt if desired)		
19	0-2	2'-0" x 2'-0" Window (Actual Dimensions 23.5" x 23.5") (Optional)		
20	250 ft ²	Asphalt Shingles		
21	250 ft ²	15# Tar Paper		
22	~1,250	8d 2-1/2" Common Nails, Galvanized (for framing and sheeting)		
23	~300	1" Long Roofing Nails, Galvanized (for roofing)		
24	20	10d 3" Finishing Nails, Galvanized (for door installation)		
25	~200	6d 2" Common Nails, Galvanized (for trim work)		
26	2	Package of cedar shims for door installation		
27	-	Exterior Paint as Desired		
28	2	Exterior silicone based caulking, Paintable		

MATERIALS LIST NOTE:

This Materials List assumes a purchased pre-hung door is to be installed. If you will be making your own door (either 36" or double 30"), the following additional materials will be needed.

Homemade 36" door: (1) 4'x8' sheet of 1/2" CDX plywood
(5) 1"x3" Cedar Trim Board (or equal) 8' long
(3) Hinges, (1) Door Latch as desired

Homemade 30" doors: (2) 4'x8' sheet of 1/2" CDX plywood
(10) 1"x3" Cedar Trim Board (or equal) 8' long
(6) Hinges, (1) Door Latch, (1) Slave Latch, as desired.

We are working on a customer "do-it-yourself" photo album web page which will feature photographs of our customers projects. If you would like to participate, take a picture of your project and either mail the photograph to us or scan it and e-mail it to us at:

mail to: L & R Designs, LLC
356 Holcomb Rd.
Kelso, WA 98626

e-mail to: doityourself@choosefreedom.com

L & R Designs, LLC is not responsible or liable for the safety of any person building or using the items based on our plans.

There are no stated, assumed, or implied guarantees of the structural integrity of this shed. If there is concern about abnormal environmental conditions, contact your local building official.

A building permit may be required for construction of this shed. These plans should help acquire a permit, but may not be a complete package as required by your building official.

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* 38 2x4-8' WITH 0 WINDOWS
43 2x4-8' WITH 1 WINDOW
48 2x4-8' WITH 2 WINDOWS

**TOTAL COST
OF MATERIALS**

COMPARE TO COST
TO PURCHASE!!

TOOLS REQUIRED:
HAMMER
CIRCULAR SAW
LEVEL
CAULKING GUN

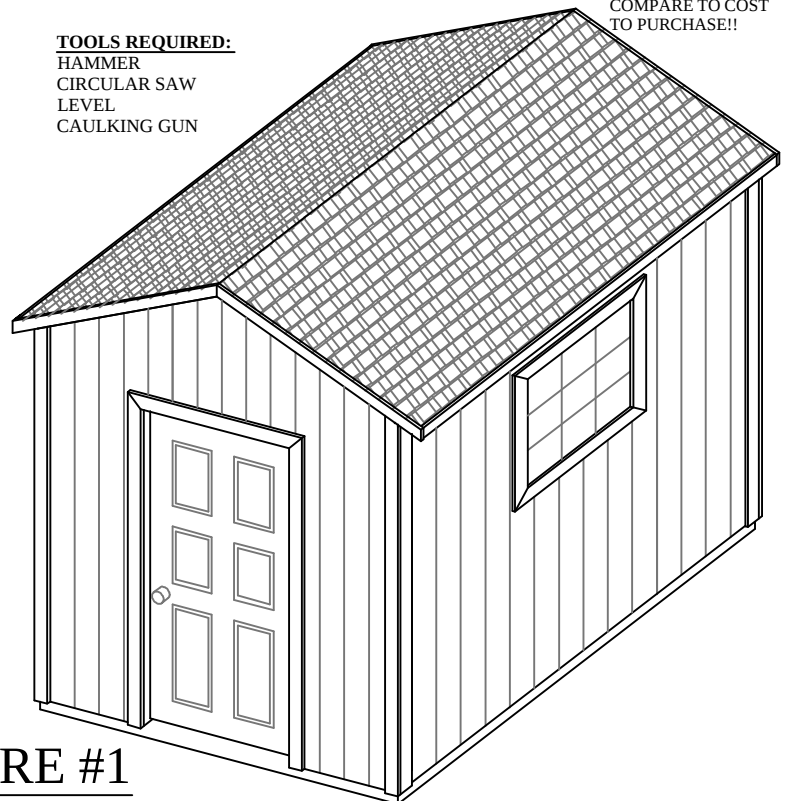


FIGURE #1

FINISHED SHED

STEP #1

PREPARE LOCATION FOR STORAGE SHED. THIS SHED MEASURES 12' BY 16'. ENSURE FINAL LOCATION IS LEVEL BEFORE BEGINNING. FRAME THE FLOOR SYSTEM ON THE CHOSEN FINAL LOCATION OF THE SHED WITH PRESSURE TREATED LUMBER AS SHOWN IN FIGURE #2 TO THE RIGHT. TOE-NAIL ALL CONNECTIONS, THE SHEETING WILL AID IN HOLDING THE FLOOR TOGETHER.

STEP #2

INSTALL SHEETING ON FRAMED FLOOR AS SHOWN IN THE ISOMETRIC SKETCH IN FIGURE #3 BELOW. USE 3/4" THICK MINIMUM PLYWOOD (OR EQUAL) FOR FLOOR SHEETING. NAIL WITH 8d COMMON NAILS AT 6" O.C. AROUND PERIMETER OF EACH SHEET AND 12" O.C. AT INTERIOR OF EACH SHEET. CAREFUL TO MATCH SHEET ORIENTATION SHOWN IN FIGURE #3. HIDDEN LINES IN SKETCH DEPICT FRAMING BENEATH PLYWOOD SHEETING.

STEP #3

FRAME LEFT AND RIGHT WALL PANELS AS SHOWN IN FIGURES #4 AND #5 BELOW. FIGURE #4 SHOWS THE OPTIONAL 2'x2' WINDOW IF DESIRED. IF NO WINDOW IS DESIRED, USE FIGURE #5. FRAME WALLS ON FLAT SURFACE (PREFERABLY PAVEMENT OR CONCRETE). NAIL THROUGH TOP AND BOTTOM PLATES INTO END OF STUDS, TWO NAILS PER EACH END OF EACH STUD. ALL FULL WALL STUDS FOR THIS SHED WILL BE 7'-6 1/2" TO ENSURE FULL 4x8 SHEETS OF PLYWOOD CAN BE USED FOR SIDING.

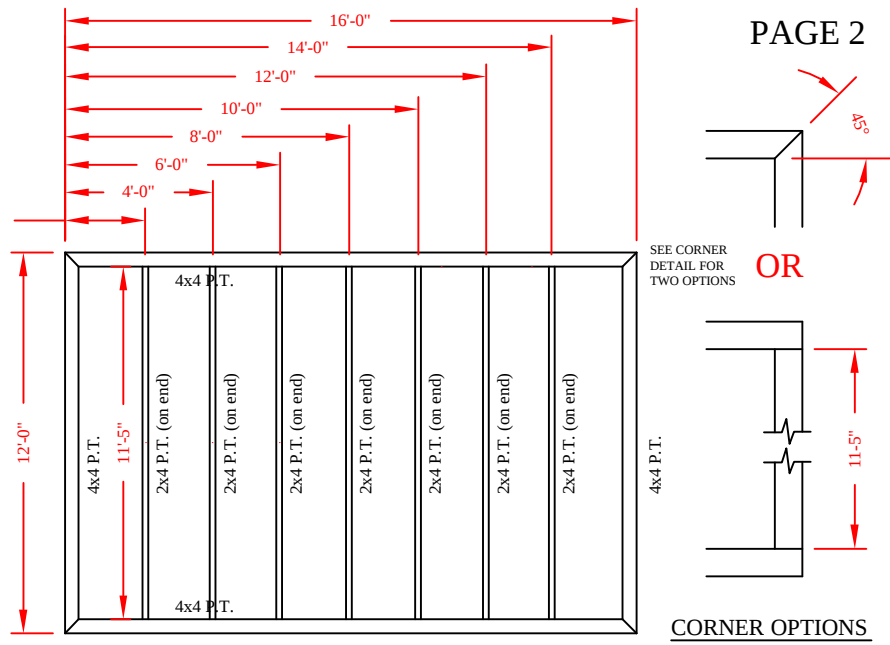


FIGURE #2

FLOOR FRAMING

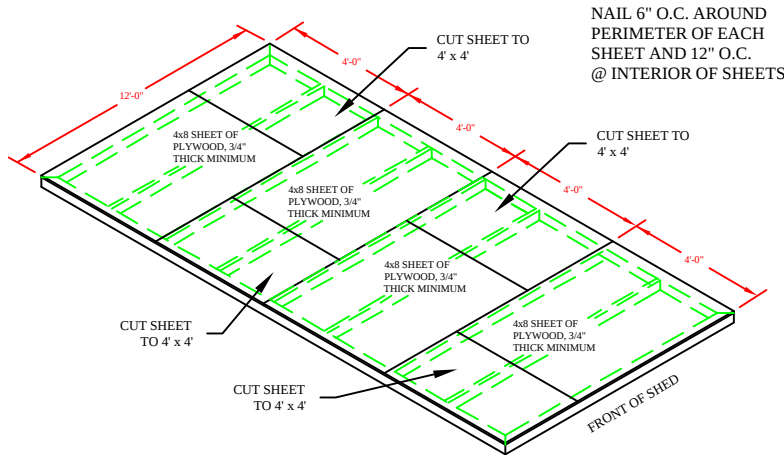


FIGURE #3

FLOOR SHEETING - ISO.

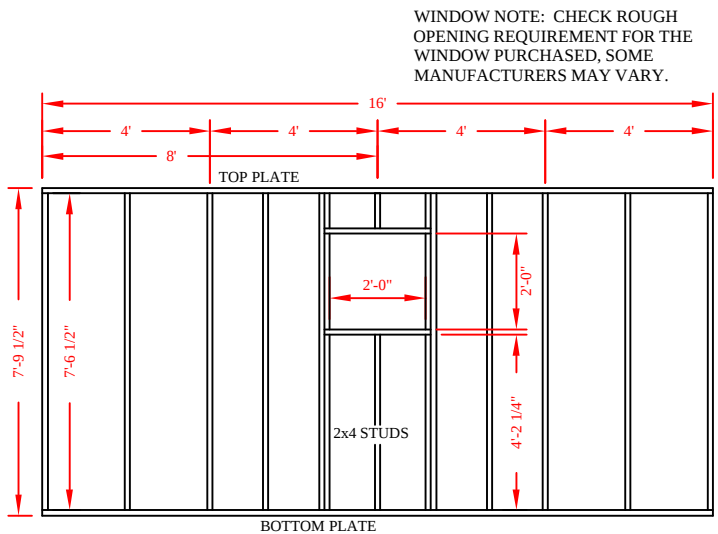


FIGURE #4

LEFT/RIGHT WALL FRAMING
WITH 2' x 2' WINDOW OPTION

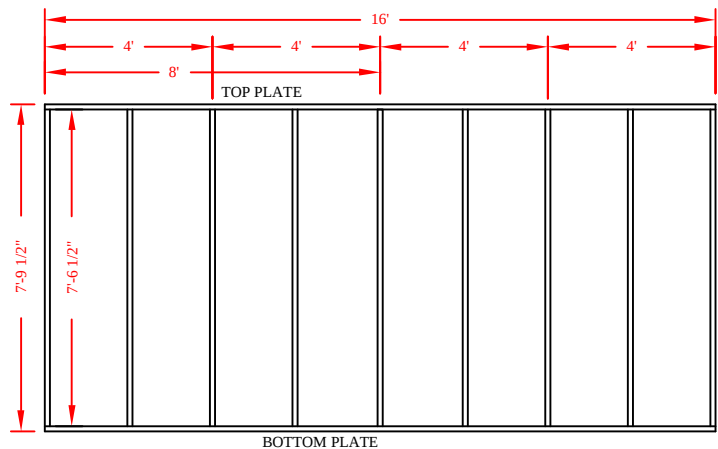


FIGURE #5

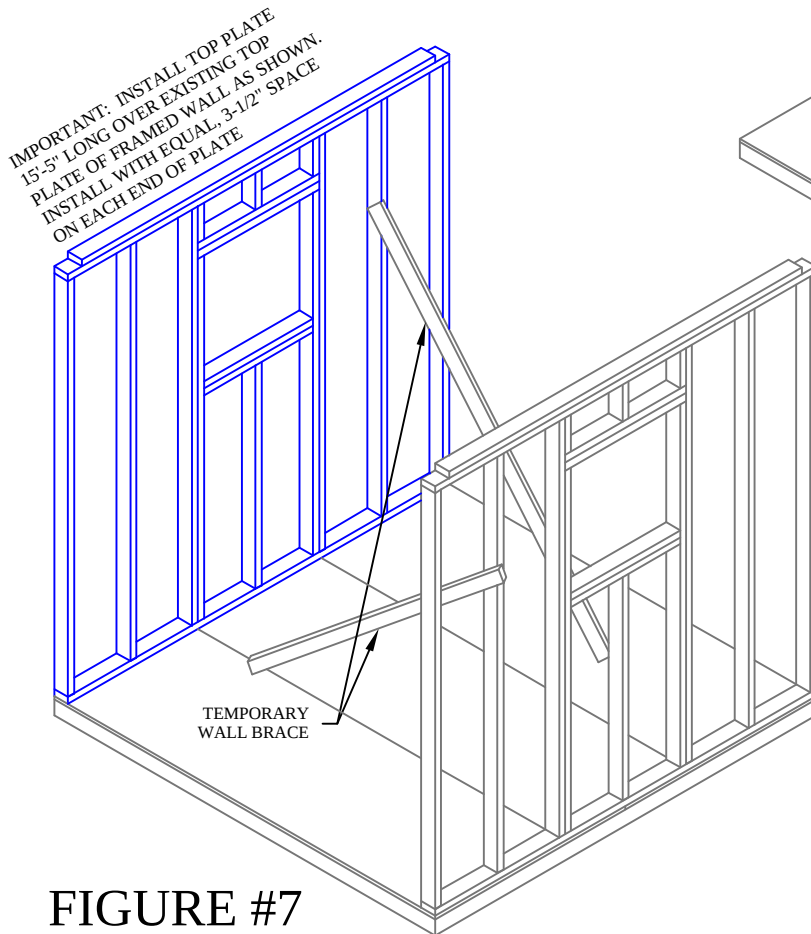
LEFT/RIGHT WALL FRAMING
WITHOUT WINDOW OPTION

TO FRAME THE DOOR ON A
SIDE WALL SEE PAGE 10,
"ALTERNATE FIGURE 4A"
FRAMING DETAILS.

STEP #4

PAGE 3

BEFORE INSTALLING FRAMED LEFT AND RIGHT WALLS, INSTALL SECOND TOP PLATES ON TOP OF FRAMED SIDE WALLS AS NOTED IN FIGURES #6 AND #7 WITH EQUAL (3-1/2") SPACES ON EACH END. INSTALL FRAMED LEFT AND RIGHT WALL PANELS (UN-SHEETED) AS SHOWN IN FIGURES #6 AND #7. STAND WALLS UP SUCH THAT BOTH ENDS ARE FLUSH WITH FLOOR PANEL AND OUTSIDE IS ALSO FLUSH WITH FLOOR PANEL. NAIL THROUGH BOTTOM PLATES INTO FLOOR PANEL WITH 8d COMMON NAILS, 6" ON CENTER, STAGGERED. USE LEVEL TO ENSURE WALLS ARE PLUMB. USE A SPARE 2x4 NAILED TO A STUD AND NAILED TO THE SHED FLOOR TO BRACE WALL UNTIL FRONT AND BACK WALLS ARE INSTALLED.



IMPORTANT: INSTALL TOP PLATE 15'-5" LONG OVER EXISTING TOP PLATE OF FRAMED WALL AS SHOWN. INSTALL WITH EQUAL, 3-1/2" SPACE ON EACH END OF PLATE

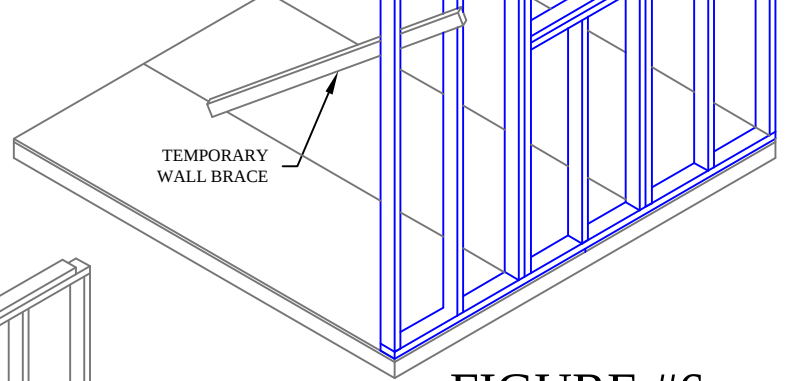


FIGURE #6

RIGHT WALL INSTALLATION

STEP #5

FRAME FRONT AND BACK WALL PANELS AS SHOWN IN FIGURES #8 AND #9 BELOW. FRAME WALLS ON FLAT SURFACE (PREFERABLY PAVEMENT OR CONCRETE). NAIL THROUGH TOP AND BOTTOM PLATES INTO END OF STUDS, TWO NAILS (8d) PER EACH END OF EACH STUD. ALL FULL WALL STUDS FOR THIS SHED WILL BE 7'-6 1/2" TO ENSURE FULL 4x8 SHEETS OF PLYWOOD CAN BE USED FOR SIDING.

FIGURE #7

LEFT WALL INSTALLATION

NOTE:

IF YOU WILL BE INSTALLING A DOUBLE HOME MADE DOOR, SEE PAGE 10 FOR ALTERNATE FIGURE #8A FOR FRONT WALL PANEL FABRICATION WITH LARGER DOOR OPENING.

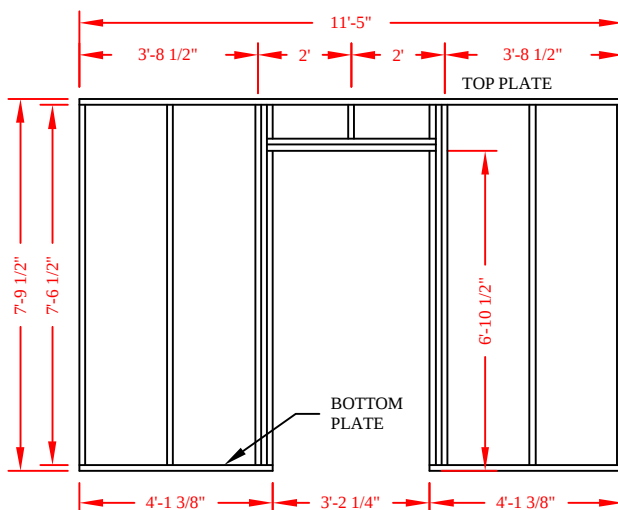


FIGURE #8

FRONT WALL INSTALLATION

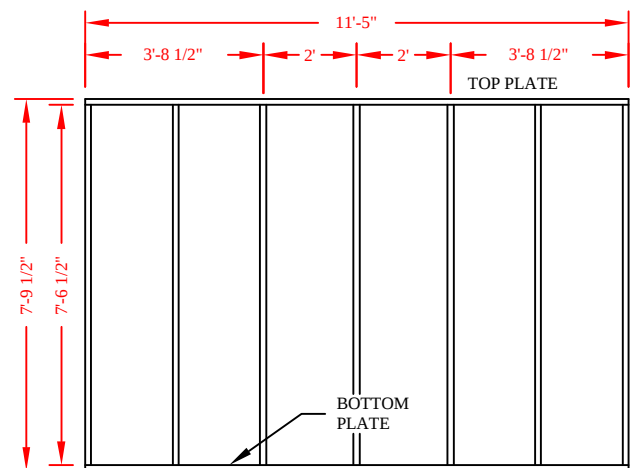


FIGURE #9

BACK WALL INSTALLATION

STEP #6

INSTALL FRAMED FRONT AND BACK WALL PANELS (UN-SHEETED) AS SHOWN IN FIGURES #10 AND #11. STAND WALLS UP SUCH THAT OUTSIDE IS FLUSH WITH FLOOR PANEL. NAIL THROUGH BOTTOM PLATE INTO FLOOR PANEL WITH 8d COMMON NAILS, 6" ON CENTER, STAGGERED. USE LEVEL TO ENSURE WALLS ARE PLUMB. NAIL THROUGH OUTSIDE STUDS ON FRONT AND BACK WALL PANELS INTO OUTSIDE STUDS OF LEFT AND RIGHT WALL PANELS @ 6" ON CENTER. TEMPORARY BRACES FOR LEFT AND RIGHT WALL PANELS CAN NOW BE REMOVED.

FIGURE #10

FRONT WALL INSTALLATION

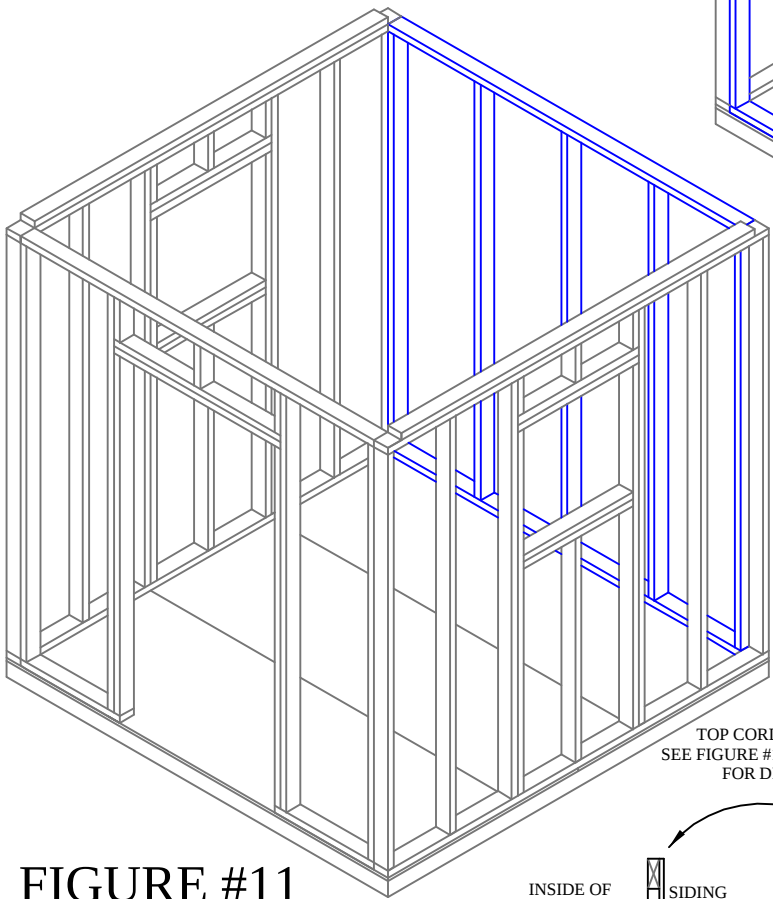
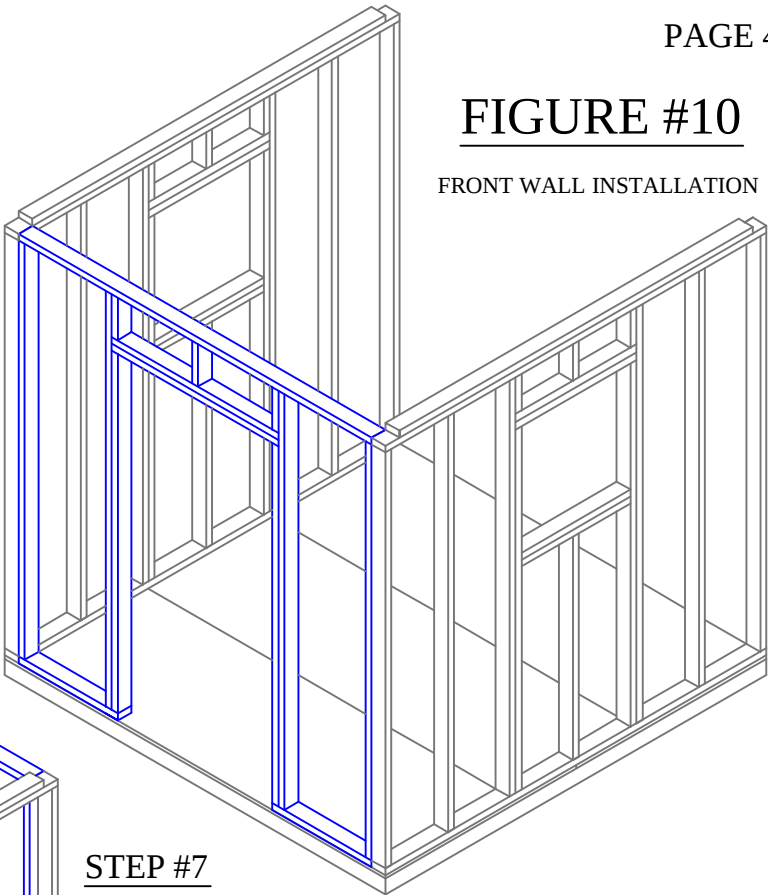


FIGURE #11

BACK WALL INSTALLATION

STEP #7

FRAME TWO END TRUSSES AS SHOWN IN FIGURE #12. CUT TOP CORD ACCORDING TO FIGURE #12a. BOTTOM CORD OF TRUSS TO BE 12'-0" LONG AND SITTING ON EDGE AS SHOWN IN SECTION VIEW. MIDDLE VERTICAL MEMBER TO BE 2'-5 9/16" LONG. ASSEMBLE TRUSS ON FLAT SURFACE, TOE-NAILING JOINTS FOR TEMPORARY SUPPORT. CUT SIDING (THIS WILL BE THE FINAL EXTERIOR SIDING ABOVE THE DOOR AND ON BACK OF THE SHED) AS SHOWN IN FIGURE #12b, TWO TRUSSES REQUIRED. TURN TRUSSES OVER AND INSTALL SIDING ON FLAT SURFACE OF TRUSSES. NAIL WITH 6d COMMON NAILS AT 12" ON CENTER.

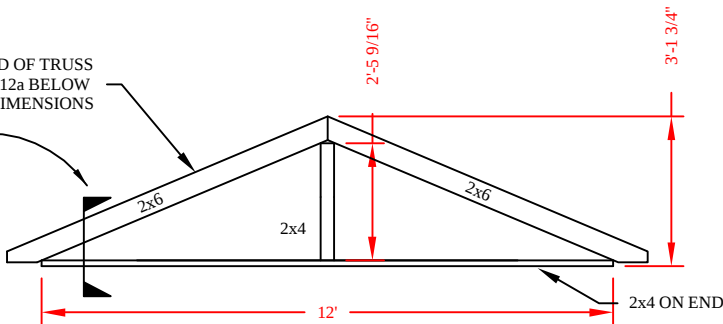
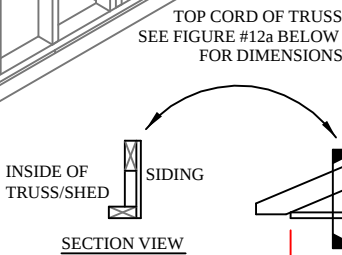
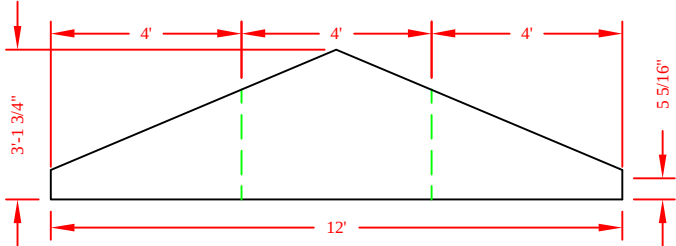


FIGURE #12

OUTSIDE TRUSS FRAMING - (2) REQUIRED

USE THE ASSEMBLED TRUSS IN FIGURE #12 AS A GUIDE FOR CUTTING SIDING SHOWN BELOW. THE DIMENSIONS SHOWN BELOW SHOULD BE VERIFIED.



THIS DIMENSION IS SET, ALL OTHERS CAN BE ADJUSTED BASED ON ASSEMBLED TRUSSES

FIGURE #12b

TRUSS SHEETING CUT DETAIL

NOTE: IF GROOVED SIDING (T-111 or equal) IS USED, INSTALL WITH GROOVES VERTICAL, WITH SEAMS SHOWN IN FIGURE.

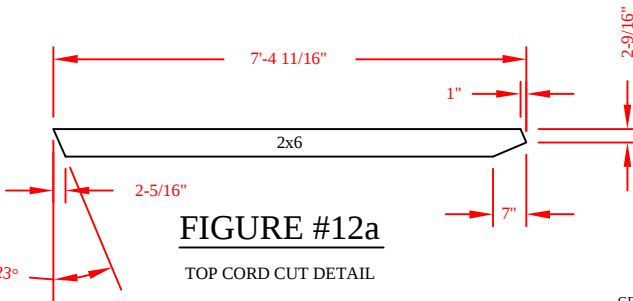


FIGURE #12a

TOP CORD CUT DETAIL

STEP #8

INSTALL FRAMED AND SHEATHED END GABLES AS SHOWN IN FIGURE #13. PLACE SHEATHED TRUSS ON TOP PLATE OF FRONT AND BACK WALL PANELS. ENSURE GABLES ARE CENTERED ON WALLS AND NAIL THROUGH BOTTOM CORD OF TRUSSES INTO TOP PLATE OF FRONT AND BACK WALLS. NAIL WITH 8d COMMON NAILS @ 6" O.C. STAGGERED. THE GABLED ENDS SHOULD BE STABLE WITHOUT ADDITIONAL BRACING.

NAIL THROUGH BOTTOM CORD OF TRUSS INTO TOP PLATE OF WALL PANEL, NAIL @ 6" O.C. STAGGERED, BOTH TRUSSES

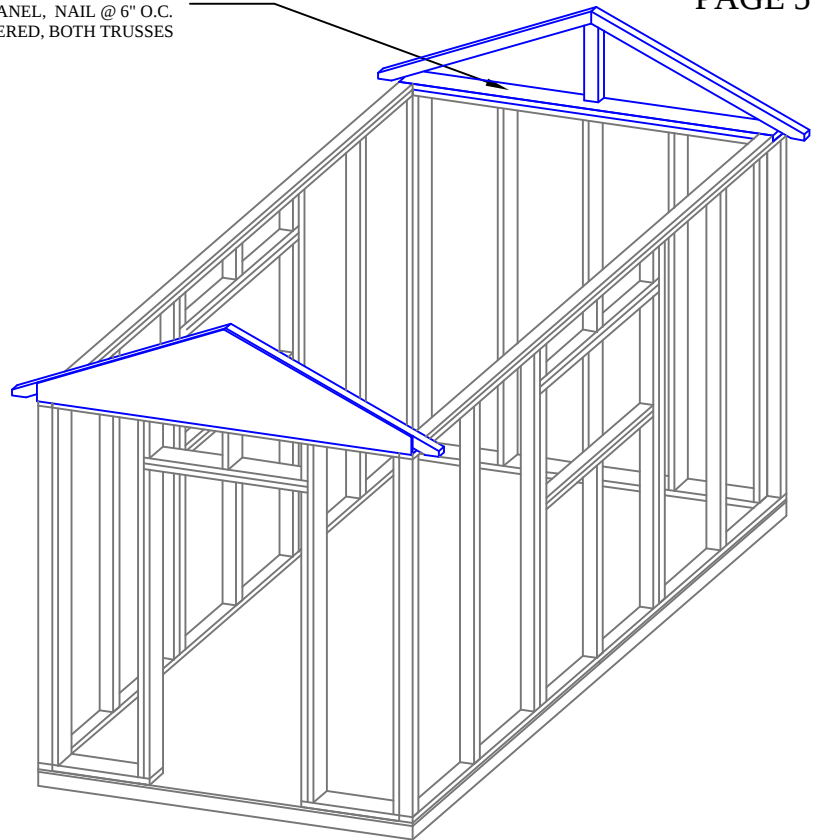


FIGURE #13

GABLE END INSTALLATION

USE FACE MOUNT HANGER FOR ALL RIDGE TO BEAM CONNECTIONS, "SIMPSON" #LUS26 OR EQUAL FOR 2x6, TYP. (14) PLACES

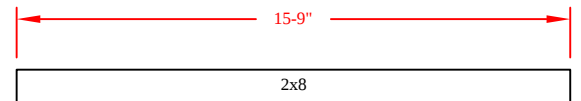
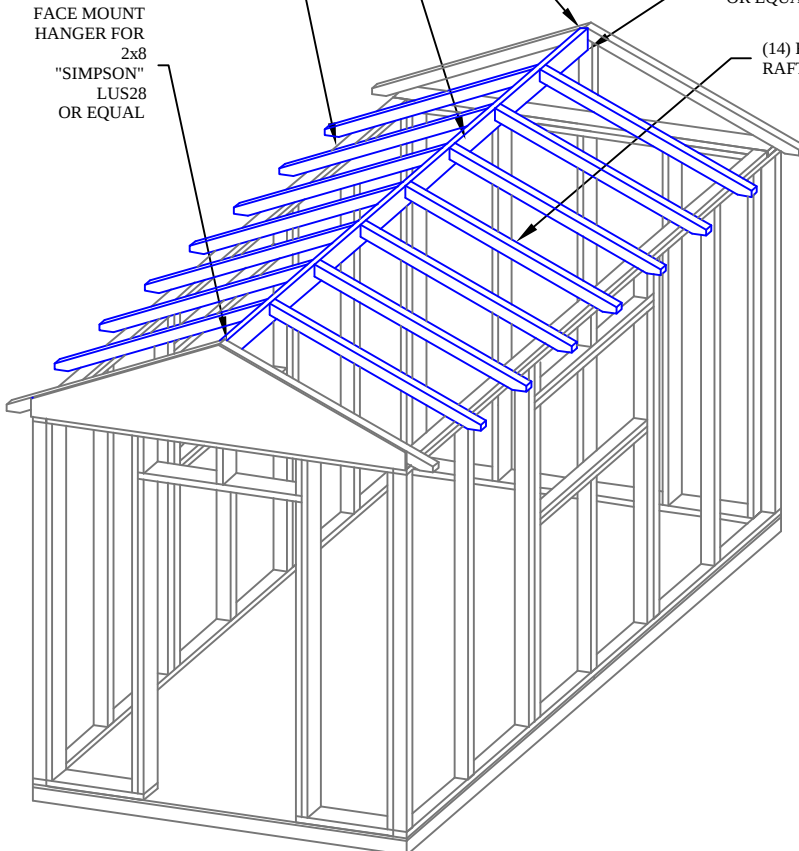
HURRICANE CLIPS TO ATTACH RAFTERS TO TOP OF WALLS TYP (14) PLACES

2x8 RIDGE BEAM

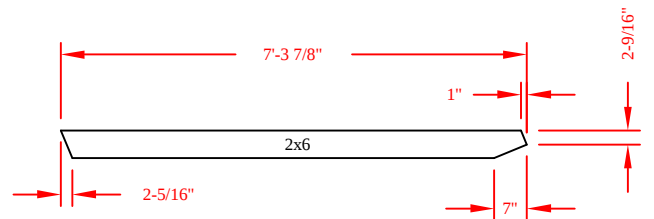
FACE MOUNT HANGER FOR 2x8 "SIMPSON" LUS28 OR EQUAL

(14) ROOF RAFTERS

FACE MOUNT HANGER FOR 2x8 "SIMPSON" LUS28 OR EQUAL



RIDGE BEAM
MAKE: (1) ONE



RAFTERS
MAKE: (14) FOURTEEN

STEP #9

MAKE (1) RIDGE BEAM AND (14) RAFTERS PER DETAILED PART SKETCHES ABOVE. INSTALL RIDGE BEAM BETWEEN GABLED ENDS AS SHOWN IN FIGURE #14 USING FACE MOUNT STEEL HANGERS (OR EQUAL). INSTALL (14) RAFTERS, EQUALLY SPACED APPROXIMATELY 24" ON CENTER, USING FACE MOUNT STEEL HANGER (OR EQUAL). USE HURRICANE CLIPS TO SECURE RAFTERS TO TOP OF SIDE WALLS.

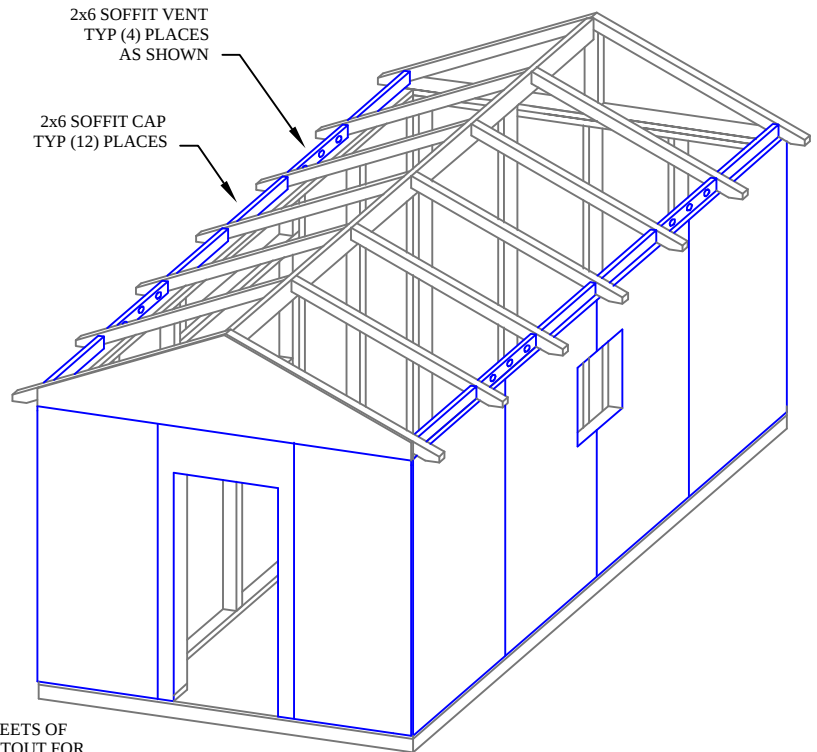
FIGURE #14

ROOF RAFTER INSTALLATION

STEP #10

INSTALL SHEETING ON ALL STUD WALLS AS SHOWN IN FIGURE #15. ALL SHEETS SHOULD BE FULL 4x8 SHEETS. MEASURE LOCATIONS OF DOOR AND WINDOWS (IF PRESENT) AND CUT OUT BEFORE PLACING SHEETS ON WALLS. NAIL WITH 8d NAILS @ 6" O.C. AROUND PERIMETER OF ALL SHEETS AND 12" O.C. ON INTERIOR OF ALL SHEETS WHERE SHEETS ARE OVER STUDS.

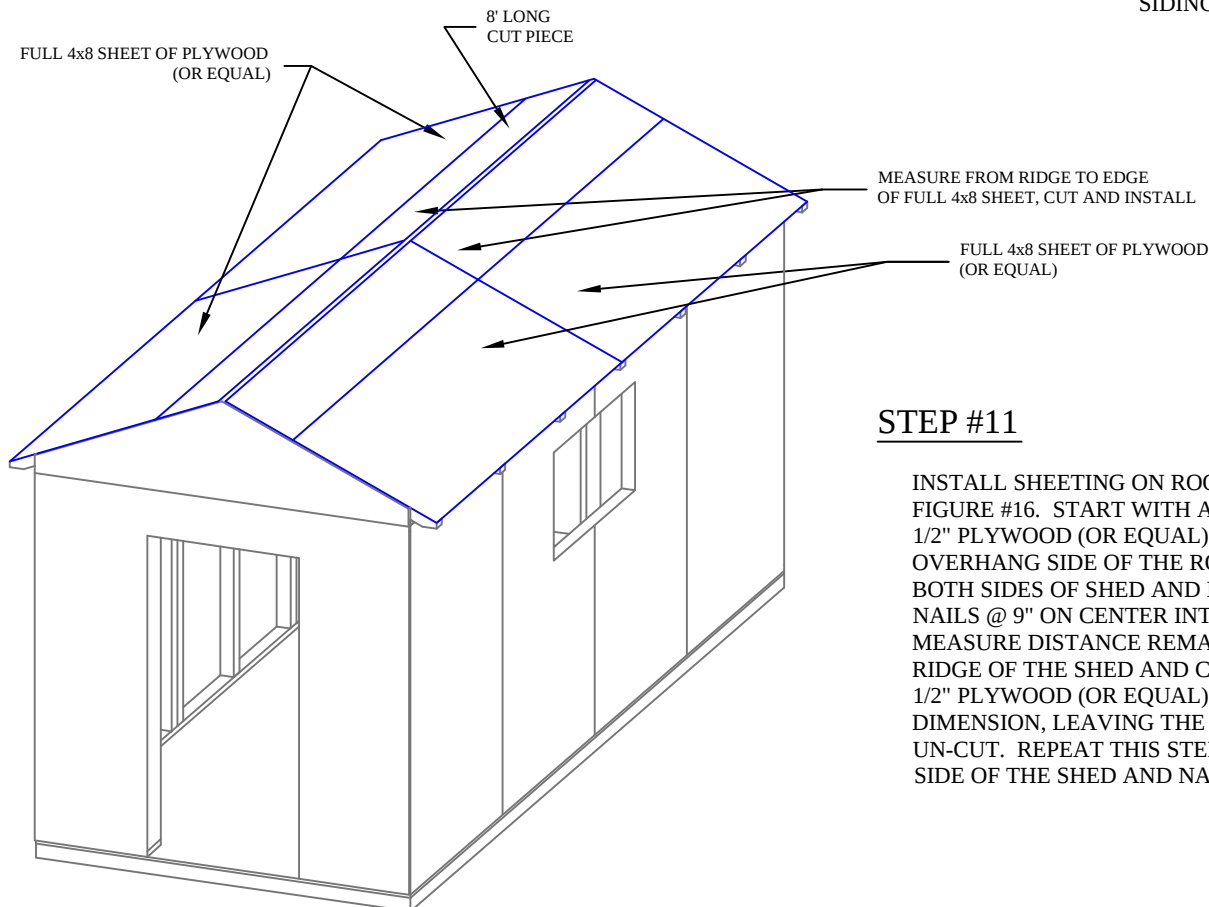
MEASURE GAP BETWEEN RAFTERS AND CUT SOFFIT CAPS OR SOFFIT VENTS TO FIT AS SHOWN IN FIGURE #15. SOFFIT CAPS TO BE MADE FROM REGULAR 2x6's. SOFFIT VENTS CAN BE PURCHASED FROM LUMBER YARD OR MADE WITH SCREEN MATERIAL. NOTE THAT FIGURE #15 DOES NOT SHOW THE CORRECT AMOUNT OF RAFTERS, PLACE SOFFITS VENTS NEAR ENDS AS SHOWN.



START WITH FULL 4x8 SHEETS OF PLYWOOD, MEASURE CUTOUT FOR WINDOWS AND DOORS IF REQUIRED

FIGURE #15

SIDING INSTALLATION



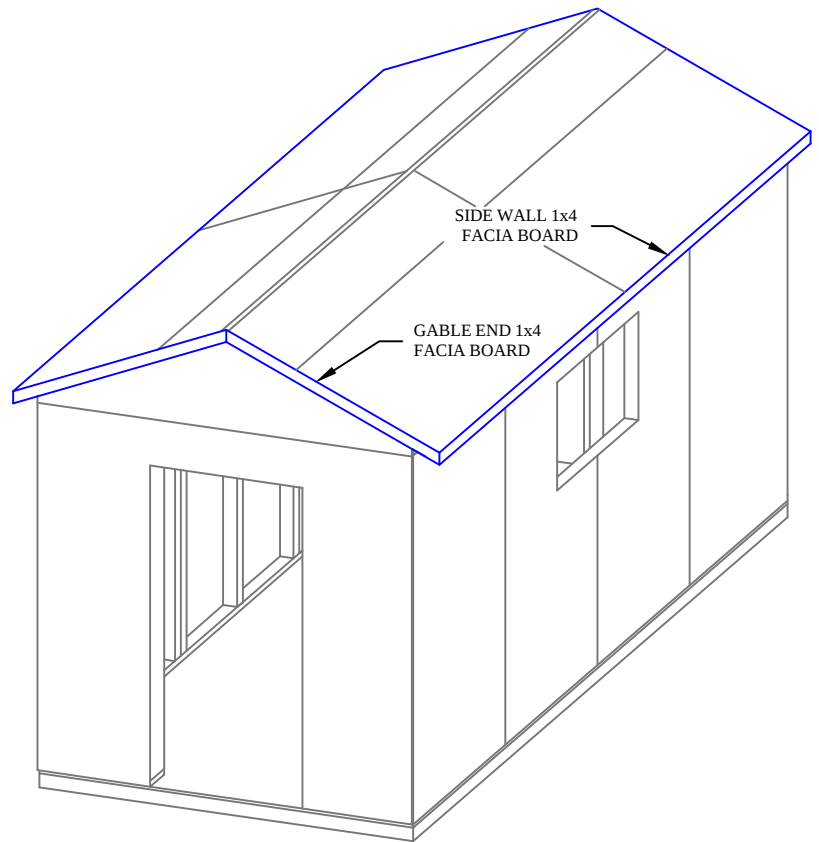
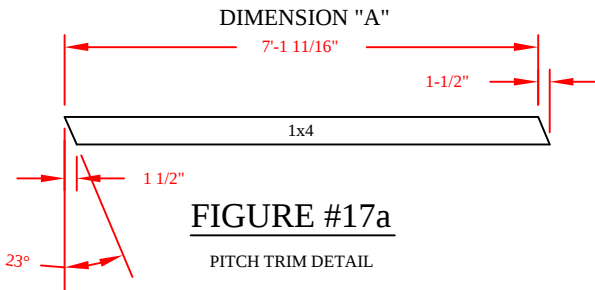
STEP #11

INSTALL SHEETING ON ROOF AS SHOWN IN FIGURE #16. START WITH A FULL SHEET OF 1/2" PLYWOOD (OR EQUAL) ON THE OVERHANG SIDE OF THE ROOF. INSTALL ON BOTH SIDES OF SHED AND NAIL WITH 8d NAILS @ 9" ON CENTER INTO RAFTERS. NOW MEASURE DISTANCE REMAINING TO THE RIDGE OF THE SHED AND CUT A 4x8 SHEET OF 1/2" PLYWOOD (OR EQUAL) TO THIS DIMENSION, LEAVING THE 8' DIMENSION UN-CUT. REPEAT THIS STEP FOR THE OTHER SIDE OF THE SHED AND NAIL.

FIGURE #16

ROOF SHEATHING INSTALLATION

INSTALL TRIM AROUND ROOF AS SHOWN IN FIGURE #17. START WITH THE SIDE WALL FACIA TRIM. MEASURE THE DISTANCE FROM THE OUTSIDE OF SHEATHING ON THE FRONT OF THE SHED TO THE OUTSIDE OF THE SHEATHING ON THE BACK OF THE SHED AND CUT A 1x4 TRIM BOARD TO THIS DIMENSION (MAY HAVE TO INSTALL THIS TRIM IN (2) PIECES). INSTALL AND NAIL WITH (2) 6d NAILS INTO THE END OF EACH ROOF RAFTER. NOW MEASURE DISTANCE FROM THE PEAK OF THE RIDGE ALONG THE TOP OF THE ROOF LINE TO THE OUTSIDE OF THE FACIA TRIM BOARD JUST INSTALLED ON THE SIDE. SUBSTITUTE THIS LENGTH FOR DIMENSION "A" IN FIGURE #17a BELOW AND CUT GABLE FACIA BOARD PER FIGURE #17a BELOW AND THE MEASUREMENT TAKEN. INSTALL GABLE FACIA BOARD, NAIL WITH 6d COMMON NAILS @ 12" O.C., STAGGERED. REPEAT THIS FOR ALL (4) GABLE FACIA BOARDS.



STEP #3

INSTALL SHIMS ON TOP OF DOOR FRAME. ENSURE DOOR CLOSSES SMOOTHLY AND TOP OF DOOR FRAME IS LEVEL, THEN NAIL (WITH LARGE FINISH NAILS) THROUGH SHIMS.

STEP #2

INSTALL SHIMS AT SAME ELEVATIONS AS HINGES OF DOOR FRAME. ENSURE DOOR CLOSSES SMOOTHLY AND HANDLE SIDE IS LEVEL, THEN NAIL (WITH LARGE FINISH NAILS) THROUGH SHIMS.

FOLLOW MANUFACTURERS INSTRUCTION FOR INSTALLATION OF DOOR HANDLE HARDWARE

NOTE:

IF YOU CHOSE TO MAKE YOUR OWN DOOR, SEE PAGE 9 FOR INSTRUCTIONS. ALSO, IF YOU CHOSE TO UTILIZE THE DOUBLE DOOR OPTION, YOU MUST MODIFY THE TRIM DIMENSIONS SHOWN ON THE FOLLOWING PAGE FOR THE WIDER DOOR.

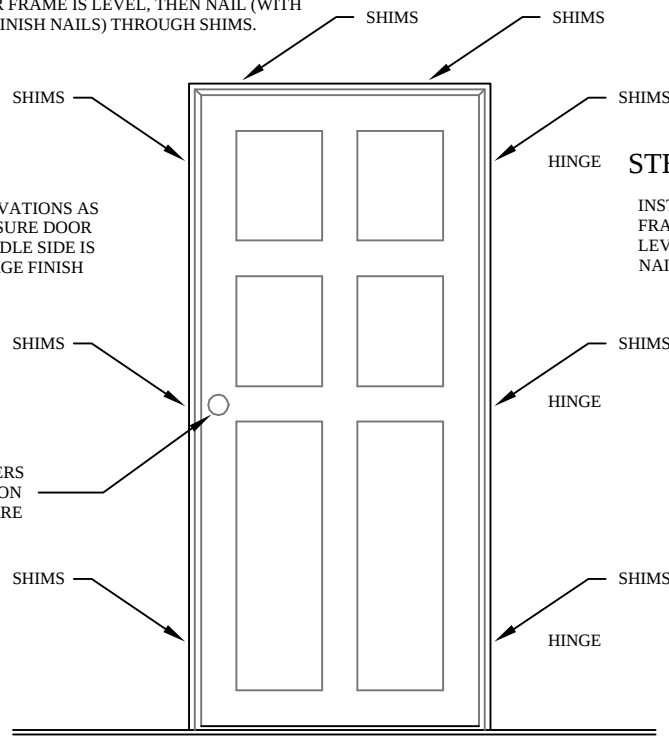


FIGURE #17

ROOF TRIM INSTALLATION

STEP #1

INSTALL SHIMS BEHIND HINGES OF DOOR FRAME. ENSURE HINGE SIDE OF DOOR IS LEVEL, THEN NAIL (WITH LARGE FINISH NAILS) THROUGH SHIMS.

STEP #13

INSTALL DOOR IN FRONT WALL PER STEPS SHOWN IN FIGURE #18.

STEP #14

PAGE 8

INSTALL TRIM AROUND DOOR, WINDOWS (IF INSTALLED), AND CORNERS OF SHED AS SHOWN IN FIGURE #19.

FOR DOOR VERTICAL TRIM BOARD, MEASURE DISTANCE FROM THE BOTTOM OF THE SIDING TO THE BOTTOM OF THE DOOR FRAME AND SUBSTITUTE THIS LENGTH FOR DIMENSION "A" IN FIGURE #20.

FOR THE TOP TRIM BOARD ON THE DOOR AND THE TRIM BOARDS AROUND THE WINDOWS, MEASURE THE INSIDE DIMENSION OF THE OPENING AND SUBSTITUTE THESE LENGTHS FOR DIMENSIONS "B" IN FIGURE #20 AND FIGURE #21.

FOR THE GABLE SIDE CORNER TRIM BOARDS, MEASURE THE DISTANCE FROM THE BOTTOM OF THE SIDING ALONG THE CORNER OF THE SHED TO THE GABLE TRIM BOARD PREVIOUSLY INSTALLED. SUBSTITUTE THIS LENGTH FOR DIMENSION "C" IN FIGURE #20.

FOR THE SIDE WALL CORNER TRIM BOARDS, MEASURE THE DISTANCE FROM THE BOTTOM OF THE SIDING TO THE UNDER SIDE OF THE ROOF RAFTER AND SUBSTITUTE THIS LENGTH FOR DIMENSION "D" IN FIGURE #21.

INSTALL TRIM WITH 6d GALV. NAILS AT 9" O.C., STAGGERED.

APPLY EXTERIOR CAULKING AROUND ALL 1x4 TRIM BOARDS.

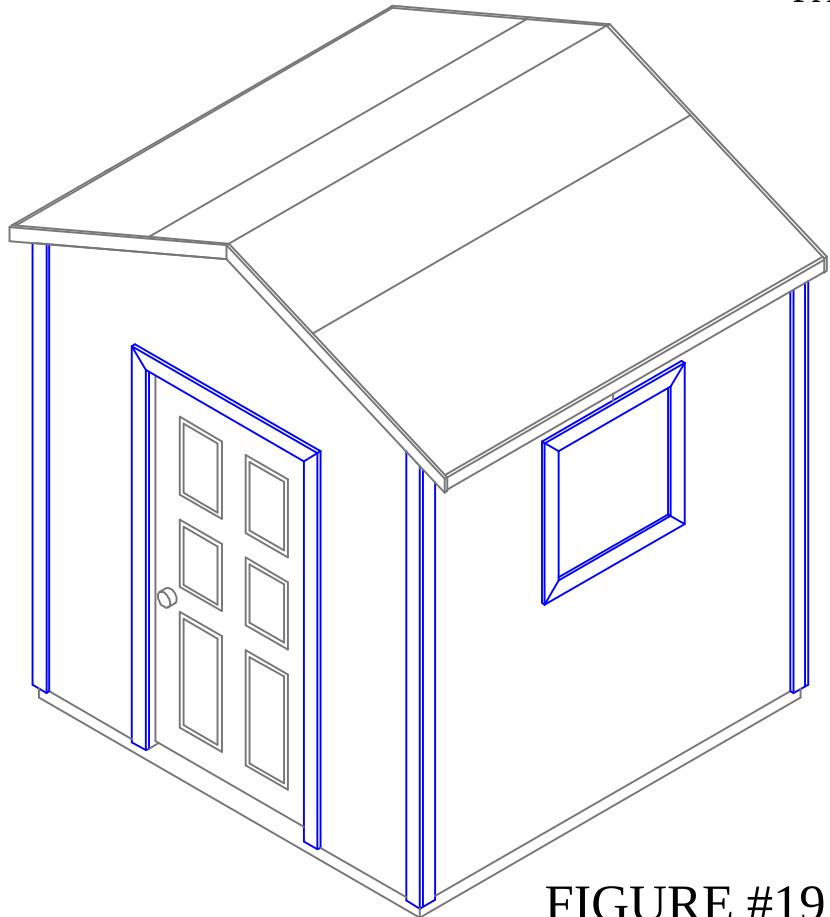
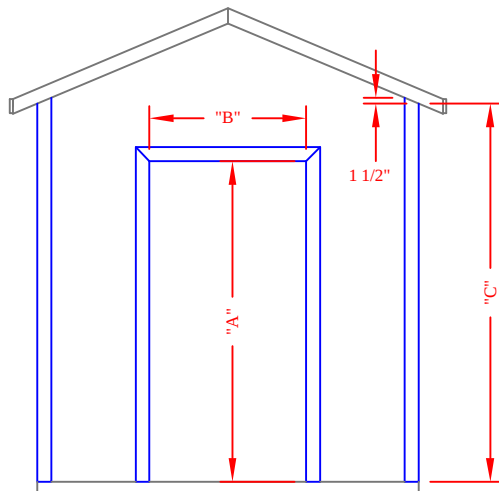


FIGURE #19

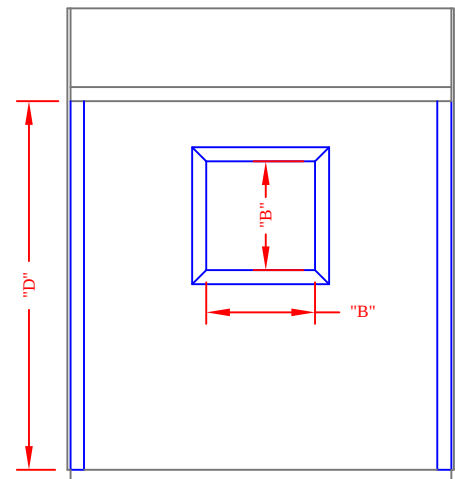
WALL TRIM INSTALLATION



FRONT OR BACK

FIGURE #20

GABLE END DETAIL



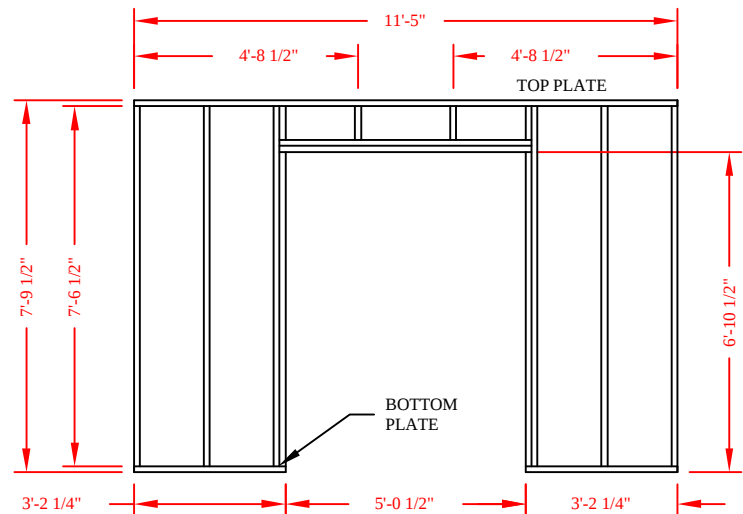
SIDES

FIGURE #21

SIDE DETAIL

STEP #15

INSTALL 15# TAR PAPER ON ROOF SHEETING. INSTALL ASPHALT ROOFING. PAINT SHED AS DESIRED.



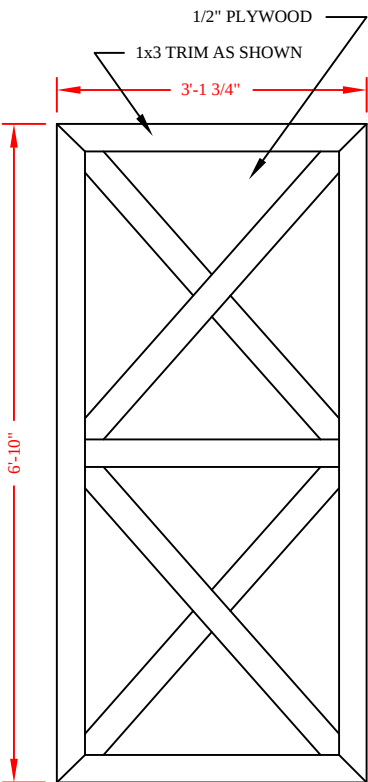
ALTERNATE FIGURE #8A

FRONT WALL INSTALLATION WITH DOUBLE DOOR

**HOME MADE
DOOR STEP**

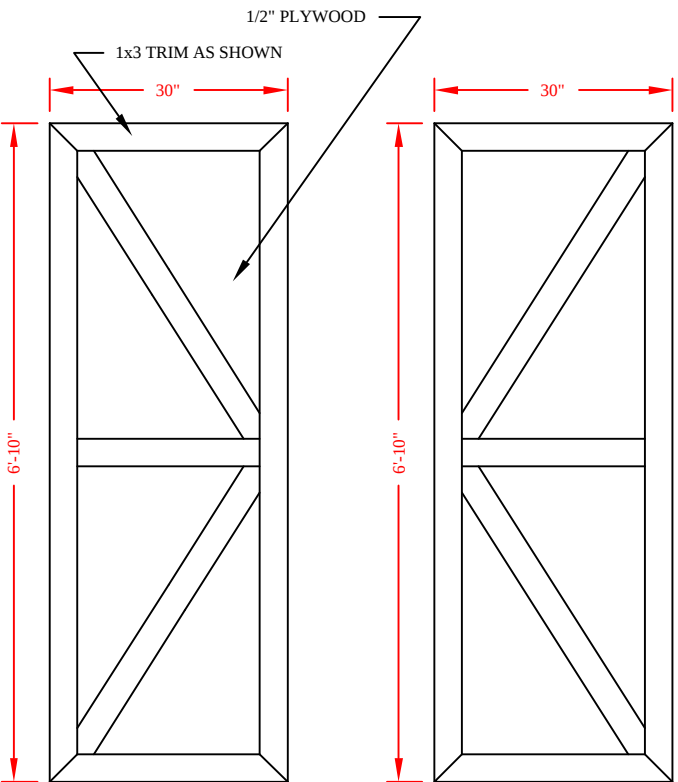
IF YOU CHOOSE TO
MAKE YOUR OWN
DOOR (LOOKS MORE
LIKE A BARN DOOR),
MAKE THE DOOR AS
SHOWN IN FIGURE TO
RIGHT IF YOU CHOSE
A SINGLE 36" DOOR.
THE BEST WAY TO
GET ALL THE ANGLE
CUTS JUST RIGHT IS
TO LAY THE BOARD
OVER THE DOOR AND
MARK THE ANGLES.

MAKE THE DOUBLE
DOORS AS SHOWN IN
FIGURE TO RIGHT IF
YOU CHOSE DOUBLE
30" DOORS. INSTALL
A 1x2 STRIP ON ONE
DOOR, OVER HANG
THIS STRIP 3/4" OVER
ONE LONG END OF
ONE DOOR. INSTALL
DOORS WITH
PURCHASED HINGES
AND HARDWARE
ACCORDING TO
MANUFACTURERS
INSTRUCTIONS.



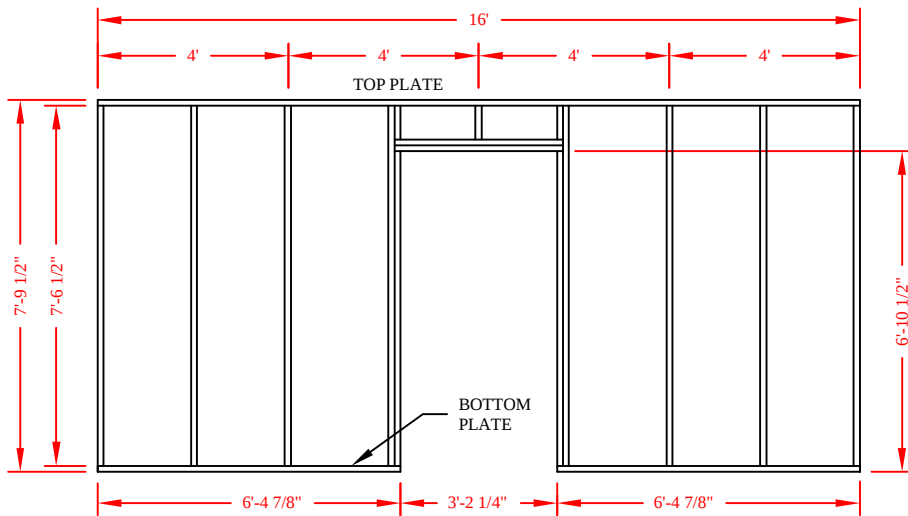
SINGLE DOOR

SINGLE 36" HOMEMADE DOOR



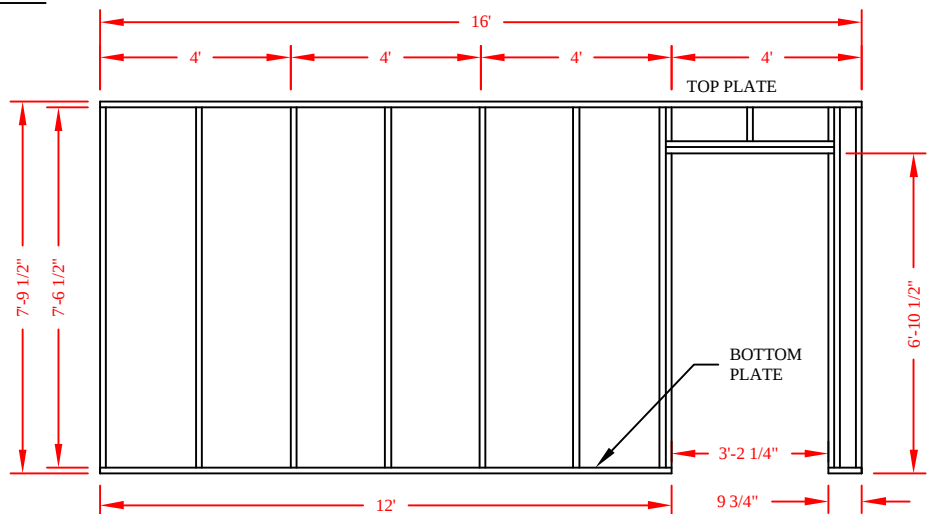
DOUBLE DOOR

DOUBLE 30" HOMEMADE DOORS

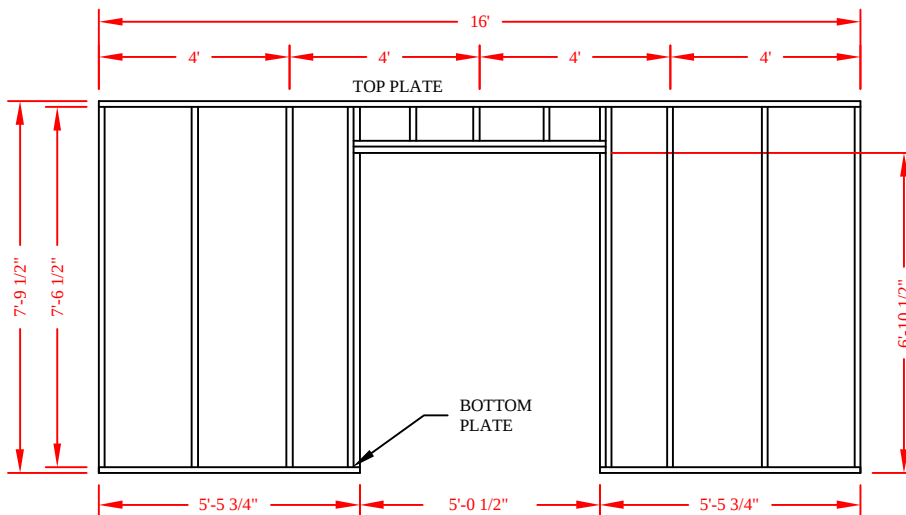


OPTIONAL PAGE IF
YOU CHOSE TO
PLACE YOUR
DOOR ON THE 16'
SIDE OF THE
SHED.

36" DOOR CENTERED



36" DOOR OFFSET



DOUBLE 30" DOORS

ALTERNATE FIGURE #4A